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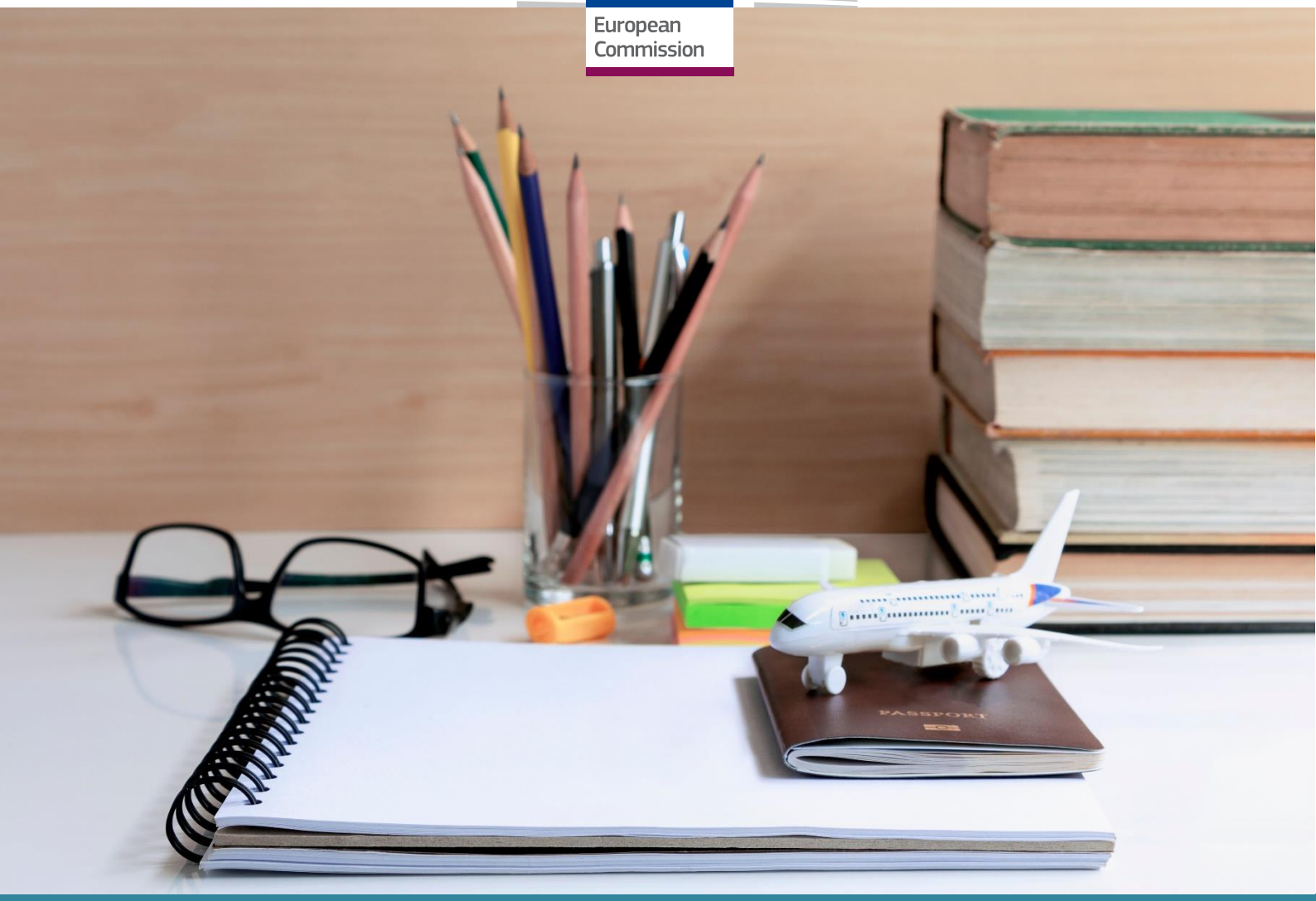

Review of Marie Skłodowska-Curie actions unit costs in preparation for Horizon Europe

Final Report

Marie Skłodowska-Curie actions

EUROPEAN COMMISSION

Directorate-General for Education, Youth, Sport and Culture
Directorate C — Innovation, International Cooperation and Sport
Unit C.2 — Marie Skłodowska-Curie actions

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Final Report

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Directorate-General for Education, Youth, Sport and Culture

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Abstract

The European Commission is preparing for the launch of the largest research & innovation programme ever, Horizon Europe, a part of which – the Marie Skłodowska-Curie Actions (MSCA) – will continue supporting the career development and training of researchers in all scientific disciplines, based on trans-national, cross-sectoral and interdisciplinary mobility.

In order to offer attractive working conditions for researchers from all over the world and reduce the red tape related to using reimbursement on the basis of real costs, the simplified funding system of the MCSA was established under the previous framework programmes and refined into the current unit costs system since 2014 for the use during the whole period of Horizon 2020. The current unit costs system has proven to be flexible and efficient, therefore, it will be continued in Horizon Europe.

In view of Horizon Europe, which will cover the years 2021-2027, a new Commission Decision on unit costs for the MSCA will have to be adopted in 2020. The Commission wishes to ensure that the MSCA continue to support:

- excellent researchers with competitive salaries and attractive working conditions;
- host organisations with appropriate research, training and networking costs, management and indirect costs.

In the interest of non-discrimination and equal opportunities, the Commission also intends to adapt the system to make it fairer, more gender-friendly and more inclusive, particularly in the case where a change in the personal situation of the researcher/staff member occurs. The available budget under Horizon Europe is expected to enable the MSCA to maintain and, if possible, improve further the conditions for funding and participation. In concrete terms, this will mean keeping the grants competitive and attractive, and making them even more supportive.

The objective of this study is to carry out a review of the MSCA unit costs system in line with the Commission's policy priorities and Horizon Europe proposal, and to determine the future eligible researcher and institutional unit costs for each Marie Skłodowska-Curie action. In addition, the study explores possibilities for calculating and covering new types of costs, such as those linked to changes in the personal situation of a researcher during the lifetime of the grant (e.g. additional costs for the employer in case of maternity, parental or sick leave of a researcher), special needs of researchers/staff members with a disability, and costs related to research dissemination and outreach or public awareness events (such as the European Researchers' Night).

1. Introduction and methodology

1.1. Policy context and objectives

Types of Marie Skłodowska-Curie Actions[1]

Innovative Training Networks (ITN) support competitively selected joint research training and/or doctoral programmes, implemented by partnerships of universities, research institutions, research infrastructures, businesses, SMEs, and other socioeconomic actors from different countries across Europe and beyond.

Individual Fellowships (IF) support the mobility of experienced researchers through European Fellowships and Global Fellowships. IF helps the experienced researchers gain new knowledge and skills, expand networks and advance their research careers.

Research and Innovation Staff Exchanges (RISE) fund short-term exchanges of personnel between academic, industrial and commercial organisations throughout the world. RISE action helps researchers and staff develop their knowledge, skills and careers, while building links between organisations working in different sectors of the economy, including universities, research institutes and SMEs.

Co-funding of regional, national and international programmes (COFUND) provides organisations with additional financial support for their own researcher training and career development programmes. The extra funds are available for new or existing schemes for training researchers. COFUND supports doctoral programmes for PhD candidates, as well as fellowship programmes for experienced researchers.

The European Commission is preparing for the launch of the largest research and innovation programme ever, Horizon Europe, a part of which – the Marie Skłodowska-Curie Actions (MSCA) – will continue supporting the career development and training of researchers in all scientific disciplines, based on transnational, cross-sectoral and interdisciplinary mobility. This study was implemented in the light of the expected budget increase from a total of EUR 6.2 billion to 6.8 billion for the period 2021-2027, according to the Commission's proposal for Horizon Europe. While this scenario is still possible, uncertainties as to the final size of the budget have to be considered. The final budget allocated for both Horizon Europe and the MSCA may vary depending on the political priorities to be set by the Commission. As a consequence, **this study acknowledges the limits of the foreseen budget and has in mind the overall objective of the MSCA to remain a very competitive and attractive programme while supporting a large number of researchers.**

In order to offer attractive working conditions for researchers from all over the world and reduce the red tape related to using reimbursement on the basis of real costs, the simplified funding system of the MCSA was established under the previous framework programmes and refined into the current unit costs system since 2014 for use during the whole period of Horizon 2020. The current unit costs system has proven to be flexible and efficient, therefore, we suggest continuing and fine-tuning it for Horizon Europe.

The first MSCA unit costs Decision[2] required a mid-term review of the adopted rates compared to real costs and researchers' salary developments in Europe and beyond. This review was carried out by the Commission through a consultancy study. Based on the evidence provided by the study, in 2017 the Commission adopted a second Decision[3],

[1] While the names of the actions may change under Horizon Europe, their contents are expected to stay substantially the same as those in in Horizon 2020.
[2] Commission Decision of 27.11.2013 authorising the use of reimbursement on the basis of unit costs for Marie Skłodowska-Curie actions under the Horizon 2020 Framework Programme, C(2013) 8194 final. See: https://ec.europa.eu/transparency/regdoc/rep/3/2013/EN/3-2013-8194-EN-F1-1.PDF and https://ec.europa.eu/transparency/regdoc/rep/3/2013/EN/3-2013-8194-EN-F1-1-ANNEX-1.PDF
[3] Commission Decision of 16.10.2017 amending Decision C(2013)8194 authorising the use of reimbursement on the basis of unit costs for Marie Skłodowska-Curie actions under the Horizon 2020 Framework Programme,

which increased the monthly living allowance for early-stage and experienced researchers as well as the monthly top-up allowance for seconded staff members by 5%, to take account of inflation over the years 2014-2017. In view of Horizon Europe, which will cover the years 2021-2027, a new Commission decision on unit costs for MSCA will have to be adopted in 2020. The Commission wishes to ensure that the MSCA continue to support:

- excellent researchers with competitive salaries and attractive working conditions.
- host organisations with appropriate research, training and networking costs, management and indirect costs.

In the interest of non-discrimination and equal opportunities, the Commission also intends to adapt the system to make it fairer, more gender friendly and more inclusive, notably in case a change in the personal situation of the researcher/staff member occurs. The available budget under Horizon Europe will have to enable the MSCA to maintain and, if possible, improve further the conditions for funding and participation. In concrete terms, this will mean keeping the grants competitive and attractive, and making them even more supportive.

The objective of this study is to carry out a review of the MSCA unit costs system in line with the above-mentioned Commission policy priorities and Horizon Europe proposal, and to determine the future eligible researcher and institutional unit costs for each Marie Skłodowska-Curie Action. In addition, the study also explores new possibilities for calculating and covering new types of costs, such as those linked to changes in the personal situation of a researcher during the lifetime of the grant (e.g. additional costs for the employer in case of maternity, parental or sick leave of a researcher), special needs of researchers/staff members with a disability, and costs related to research dissemination and outreach or public awareness events (such as the European Researchers' Night).

The study team has worked under the following assumption: it is a priority that the MSCA keeps offering very competitive and attractive conditions, while at the same time a large number of researchers still benefits from the programme. Taking into account a rather limited (if any) total expected increase in the MSCA budget in Horizon Europe, the study team was extremely cautious with suggesting significant structural increases in the rates of specific unit costs, as significant increases in some of the unit cost rates may result in a smaller overall number of researchers and organisations being financed from the MSCA. The viability of this general principle to be economical is reinforced by the low MSCA success rates in the key actions[4] (7.7% in ITN and 14.8% in IF)[5] and very high satisfaction rates with all types of funding, as reported below by this study. In view of high oversubscription rates and very high satisfaction with funding, it is generally more economical to keep the same unit cost rates or even decrease them so that more researchers and organisations can benefit, rather than increasing the rates and therefore potentially decreasing the success rates even further due to the strengthened attractiveness of the programme.

For all the proposed recommendations, the study offers several options, discusses their pros and cons, and suggests the preferred option. For some of the options, we also suggest ranges of possible changes in certain unit cost rates for further consideration by the

C(2017) 6855 final. See:
https://ec.europa.eu/research/participants/data/ref/h2020/other/legal/unit_costs/unit-costs_msca_en.pdf

[4] Please note that under Horizon Europe the names of the actions may change, but the nature and structure of the actions themselves will remain substantially unchanged. Whenever a new rate for Horizon Europe is presented, for simplicity, the study refers to the names of the actions currently used in Horizon 2020.

[5] Calculations based on the data presented in the Horizon 2020 open data dashboard: https://webgate.ec.europa.eu/dashboard/sense/app/e02e4fad-3333-421f-a12a-874ac2d9f0db/sheet/941d3afe-da24-4c2e-99eb-b7fcbd8529ee/state/analysis

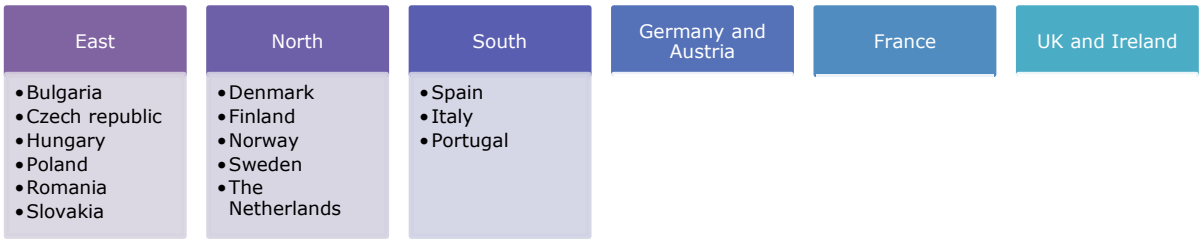
Commission in light of the emerging clarity about the size of the future budget allocated for Horizon Europe and the MSCA, as well as in light of any changes in policy priorities.

1.2. Methodology

To summarise, the methodology for this study included the following key methods, which are explained in more detail below:

- Large-scale survey/structured interview programme with the MSCA researchers and organisations (3,913 responses in total).
- Expert interview programme (32 interviews) with the key stakeholders, NCPs and disability experts.
- Desk/market research to establish the real prices of various cost items incurred by MSCA researchers and organisations.
- Analysis of monitoring data from CORDA and Compass databases.

As a key source of evidence for this study, **we have surveyed the MSCA organisations and researchers participating in all types of MSC actions**: ITN, IF, RISE and COFUND. To construct a representative sample of the participants in the MSCA programme, we have classified organisations and individual researchers according to their host country[6]. We have targeted the following geographical areas:



The survey has also aimed to collect a sufficient amount of data on:

To comply with the requirements set in the Technical Specifications, which requested to have a control group of third countries, we have also disseminated the survey to organisations and researchers in third countries**.**

We have supported the survey programme with the computer-assisted telephone interviewing (CATI) approach, i.e. a telephone surveying technique in which our interviewers followed a script provided by a dedicated software application. CATI approach speeded up the collection of microdata and also provided an opportunity for a respondent to review and complement his/her answers. Importantly, the software also customised the flow of the questionnaire based on the answers provided, as well as information already known about the respondent (which came from CORDA). This approach has also allowed us to seamlessly integrate into the interview-based survey an additional web-based data collection template, the personalised dedicated link to which was shared with the respondent by email. This has also enabled a respondent to forward the link and engage other, more knowledgeable organisation staff members (such as accountants) in providing

[6] The host country/region was selected as the main characteristic for sampling, because it has the highest impact on the costs incurred by the researchers and organisations. Much of the funding is being spent in the host country.

certain selected information, in particular on various real costs. Additionally, to facilitate answers and their consistency, we had a dedicated help-desk mailbox open during fielding of the survey with a qualified expert being available to provide answers and guidance for respondents.

In total, we received 3,913 survey responses, of which 2,690 came from the individual researchers and 1,223 came from the organisations. The majority of respondents chose to complete the web-based survey template by themselves, but hundreds of respondents were also supported via email/phone calls (CATI approach) by the PPMI team whenever they had any questions or misunderstandings. Annex 1 provides a full analysis of the survey sample. As shown in Annex 1, the survey sample adequately represents the MSCA programme in terms of all key aspects mentioned above.

The main innovative idea structuring the methodology of this study (compared to the previous review) was that through the survey we have focused on collecting factual data about the real costs incurred by the MSCA organisations and researchers (in EUR), in addition to also collecting perceptional data on satisfaction. Full survey questionnaires are provided in Annex 8.

In addition to the survey, **we carried out an expert interview programme** consisting of 32 interviews overall, including 10 interviews with the key stakeholder organisations, 14 interviews with National Contact Points from the representative list of countries and 8 interviews with disability experts familiar with the situations of researchers with special needs. The role of the expert interviews was to draw the study team's attention to the most important issues related to the MSCA funding system; to review, validate and complement the overall insights stemming from the review of previous studies and broader literature; and to identify new tendencies and previously undetected issues. Insights from the contextual/expert interviews also fed into fine-tuning the survey questionnaires for researchers and organisations and provided background information for the analysis of the survey results. As it is difficult to quantify the interview findings, where we present the information from the interviews, we present only those arguments/statements where there was a consensus by a clear majority of the interviewed experts.

As part of the methodology, we have also:

- organised two visits to the Commission's and REA's premises to extract the relevant data on the MSCA projects from CORDA and Compass databases, and from the printed resources on European Researchers' Night projects;
- implemented desk research and market research on the real living, research, training, networking and management costs;
- implemented an integrated analysis of all collected data to arrive at conclusions and recommendations.

1.3. Developing and testing various methods to update the unit costs under each cost category on the basis of the external economic and contextual indicators

In addition to assessing the necessity for structural changes under each unit cost category, the Technical Specifications for this study have requested to test the need for updating the unit costs on the basis of economic and contextual indicators such as inflation, cost of living[7], average earnings, and other factors that might have an impact on the rates used to calculate the MSCA unit costs. The Technical Specifications asked to:

- assess the advantages and disadvantages of each method to update the unit costs;

[7] The cost of living indicator is most meaningful for assessing the price differences among countries, which will be addressed by the country correction coefficient defined by the Commission services. The temporal change in the cost of living (=prices) is captured by the inflation indicator.

- calculate and propose, on the basis of the best method identified, the updated unit costs for each MSC Action.

Based on the discussions with the Commission, and to ensure the clarity and consistency of the report, it was decided to integrate this task into the analysis horizontally throughout the report rather than having a separate section dedicated for the task. This means that each forthcoming section on different categories of unit costs will assess the necessity to update the suggested rates according to the economic and contextual indicators, such as inflation.

The following three main methods to update the rates under each category of unit costs will be considered throughout the study:

- Update on the basis of inflation.
- Update on the basis of the annual growth of the labour costs (wages component) calculated by the Eurostat, i.e. the labour cost index. This method will be considered only for the researchers' unit costs, as it mainly has an impact on the salaries of researchers.
- Update to match the conditions of the most favourable competing fellowships.
- "No change" scenario: do not update the rates according to economic/contextual indicators.

As mentioned above, **the necessity to update the unit cost rates on the basis of the economic and contextual indicators was analysed in addition to the necessity for any structural changes**. Our strategy was to:

- First, assess the necessity for any structural changes. Structural changes may be suggested by the evidence on some important inconsistencies/imbalances in the programme's funding structure, i.e. internal functioning of the MSCA funding system.
- Second, assess the need to update on the basis of the economic and contextual indicators, which may be suggested by the changing external economic and policy context (like the overall increase in prices or researcher salaries).

The study team is aware that the "no change" scenario would result in the reduced real purchasing power of the unit costs. However, having in mind very low success rates in the key parts of the programme (ITN and IF) and a very high overall satisfaction with the funding among both researchers and organisations, the "no change" scenario may still be justifiable in order to ensure that, within the limits of the available budget, more researchers benefit from the programme.

To test the updating of the unit costs on the basis of inflation, we suggest using the Harmonised Index of Consumer Prices (HICP). HICP is designed for the international comparisons of consumer price inflation. HICP is used, for example, by the European Central Bank for monitoring inflation in the Economic and Monetary Union and for the assessment of inflation convergence as required under Article 121 of the Treaty of Amsterdam. For the purposes of this study, we suggest using the HICP for Belgium, since Belgium (and Luxembourg) inflation rates are also used to update the salaries of the Commission services. This method was also used in the previous study on updating the MSCA researchers' unit costs. Therefore, updating the unit cost rates on the basis of the HICP inflation indicator would be in line with the historically well-established method to update the unit cost rates. As historical stability is a clear benefit for any funding system, it would be wise for the European Commission to consider this option in most of the cases.

As the current rates have been used since 2018, we would need to adjust the rates for the year 2018, 2019 and 2020, so that the new rates could be applied from the launch of Horizon Europe in 2021. Table 1 shows the HICP for Belgium in 2018 and the forecasts

regarding the inflation in Belgium for 2019 and 2020. According to the forecasts of the National Bank of Belgium, the HICP for Belgium should be around 1.5% in 2019 and 1.6% in 2020[8]. These inflation values will be used to test the updating of the unit cost rates under each category.

Table 1. HICP for Belgium

	2018	2019 (forecast)	2020 (forecast)
HICP for Belgium:	2.3%[9]	1.5%	1.6%

Source: calculations by PPMI.

The change in the average earnings (or wages/salaries) in the EU and its Member States is most commonly (e.g. by DG EMPL) assessed through Eurostat's analysis of the labour cost index, i.e. the annual growth in labour costs. This indicator could be seen as an "inflation for wages/salaries." In this study, we will use the indicator on the average growth of wages component of the labour cost index. Table 2 provides an overview of the labour cost index (wages component). As can be seen from the table, the salaries in the EU-28 have increased at a higher pace than the prices (in Belgium, i.e. the HICP inflation indicator). Since the Commission Decision C(2013) 8194 foresees that the MSCA researchers' unit costs need to be updated in line with the trends in researcher salaries, on the one hand it would be sensible to consider updating the living allowances and the RISE top-up allowance in line with the growth in labour costs and not in line with the HICP inflation indicator. Labour cost index (wages component) is a better predictor of growth in salaries (including for researchers) than inflation. Knowing that salaries are increasing in the EU at a faster pace than prices, using the inflation indicator may leave the MSCA researchers at a disadvantage compared to other workers in all sectors in the EU.

On the other hand, the key disadvantage of this option would be deviation from a historically established methodology of updating the MSCA unit cost rates on the basis of the HICP inflation indicator, as is also done for the Commission's salaries. Selecting a different method than previously to update the researchers' unit cost rates may lead to uncertainties among the stakeholders and a non-harmonised approach with updating other unit costs.

Table 2. Growth of the labour costs in the EU-28. Labour cost index (wages component).

	2018 Q4	2019 Q1	2020 (forecast)
Annual growth in labour costs in the EU28[10]	3%	2.7%	2.7%[11]

Source: calculations by PPMI.

In order to further assess the competitiveness of the MSCA researchers' unit costs, throughout the study we will also compare the MSCA rates to the conditions of the most favourable competing fellowships. Annex 7 provides a full list and analysis of the major competing fellowships at the doctoral and post-doctoral level. Table 3 provides the analysis of the most favourable conditions offered by the competing fellowships at the doctoral and post-doctoral levels. The following overall conclusions stem from the comparison of the MSCA to other very competitive fellowship programmes:

- Looking at the overall package offered by the MSCA – researchers' unit costs + institutional unit costs – it is arguably the most generous fellowship programme in

[8] For full analysis of the National Bank of Belgium, please refer to their website: https://www.nbb.be/en/publications-and-research/economic-and-financial-publications/economic-projections-belgium
[9] Eurostat: https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00118&plugin=1
[10] Eurostat: https://ec.europa.eu/eurostat/documents/2995521/9832262/3-17062019-AP-EN.pdf/12869f6b-527a-4972-95f9-95fbcc6e052b
[11] As there is no official forecast, we are using the same rate for 2020 as for 2019.

the world. Other very competitive fellowship programmes may offer some better rates than the MSCA for certain types of costs (e.g. living allowance), but they do not offer a better overall package. This was also confirmed by the interviews and surveys, which revealed that the MSCA is clearly the most prestigious fellowship programme in the world for researchers starting their careers.

- The MSCA cannot be easily compared to other analysed fellowships, since all of them fund a much smaller number of researchers. Increasing the MSCA allowances to match all the most favourable rates of each type of allowance would not be feasible, since this would drastically reduce the number of researchers benefiting from the MSCA.

Table 3. Most favourable conditions offered by the competing fellowship schemes

Living allowance		Top-up allowance	Mobility allowance	Family allowance
ESR	ER			
EUR 3554-3781 /month. Doc.Mobility, Swiss National Science Foundation (SNSF).[12]	EUR 5966-7870/month. AAAS Science & Technology Policy Fellowships, American Association for the Advancement of Science (AAAS)[13].	N/A	EUR 10 000 settling-in allowance. PRESTIGE Postdoc programme (outgoing), Campus France.	EUR 907/month. Early Postdoc.Mobility and Postdoc.Mobility programmes, Swiss National Science Foundation (SNSF).
EUR 3 750/month. Aides individuelles jeunes chercheurs, Fondation ARC pour la recherche sur le cancer.	EUR 4135-6446/month. FWO post-doctoral fellowship, Research Foundation Flanders (FWO).	N/A	EUR 3 598. AAAS Science & Technology Policy Fellowships, American Association for the Advancement of Science (AAAS).	EUR 800/month for children under the age of 3. Elise Richter and Hertha Firnberg programmes, Austrian Science Fund (FWF).
EUR 2 345/month. Mobility Plus Programme for staff and PhD candidates, Ministry of Sciences and Higher Education of Poland[14].	EUR 6 198/month. Elise Richter Programme, Austrian Science Fund (FWF).	N/A	EUR 2 800 settling-in allowance. PRESTIGE Postdoc program (reintegration), Campus France.	EUR 500/month family allowance. The childcare allowance per month is EUR 154 for one child; EUR 205 for two children; EUR 256 for three or more children. Heisenberg Programme, Deutsche Forschungsgemein schaft (DFG).

1.4. Structure of the report

This final report proceeds as follows:

- Immediately after this introduction, the second section of the report provides analysis of the researchers' unit costs.
- The third section analyses the institutional unit costs.
- The fourth section assesses possibilities to define new simplified forms of reimbursements to cover employer's pay obligations for researchers' maternity, parental and sick leave, and the possibility to develop a simplified cost option to cover the costs of researchers with special needs.
- The fifth section provides the analysis of datasets of the actual costs incurred by beneficiaries of the European Researchers' Night under FP7 and Horizon 2020, with

[12] The monthly living allowance is dependant 'on the marital status, family obligations and the costs of living in the country of residence'. For more information, please see http://www.snf.ch/SiteCollectionDocuments/stip_ansaetze_d.pdf

[13] Living allowance depends on a combination of factors including the type of fellowship, fellowship sponsors (AAAS, partner, society, or agency) and/or number of years of post-doctoral professional experience. Living allowance received in the form of a stipend.

[14] The above amounts may be increased by 30 % if the research is conducted in a member state of the Organisation for Economic Co-operation and Development (OECD).

identification of any trends or patterns and recommends possibilities of simplified funding.

At the end of each of these sections, we have included a sub-section on conclusions and recommendations stemming from the analysis. Full recommendations are presented in these sections (and not at the end of the study) in order to maintain the flow of the argument. **Finally, section 6 provides a one-page recommendation on the overall MSCA funding system that we suggest for the launch of Horizon Europe.** This final recommendation encompasses all the preferred options of each recommendation.

The report has eight annexes:

- Annex 1 provides a detailed analysis of the survey and interviews' sample.
- Annex 2 provides a full output of statistical analysis on the relationship between rent, family and relocation costs and the perceived insufficiency of income from the MSCA.
- Annex 3 provides analysis of the real prices of open access publications charged by the major academic journals.
- Annex 4 provides analysis of the real prices of training and networking events.
- Annex 5 provides analysis and tables on the maternity, paternity and sick leave benefits paid by the employers.
- Annex 6 provides a list of disability items and services, which was used to analyse possibilities of introducing simplified cost options to cover the additional costs of researchers with special needs.
- Annex 7 provides analysis of the historical data on the European Researchers' Night projects.
- Annex 8 provides an overview of the financial conditions offered by the competing fellowship schemes.
- Annex 9 provides the questionnaires used in the survey/interview programme.

2. Review of researchers' unit costs

In the MSCA, there are four types of researchers' unit costs:

- **Living allowance** is the EU contribution to the gross salary costs of the researcher. It is adjusted through the application of a country correction coefficient (CCC) according to the cost of living in the country where the beneficiary is located. The host organisation may pay a top-up to the recruited researcher in order to complement this contribution. The living allowance is subject to national taxation laws.
- **Mobility allowance** is paid in addition to the living allowance to each researcher. This amount is expected to contribute to the private costs related to mobility: relocation costs, accommodation costs, travel costs and similar. The mobility allowance is not adjusted by CCC. In those cases where it is paid as part of the salary, it is subject to national taxation laws.
- **Family allowance** is paid only to those researchers that have family obligations. The family status of a researcher is currently determined at the date of the deadline of the call and is not revised during the lifetime of the action. In those cases where it is paid as part of the salary, the family allowance is also subject to national taxation laws.
- **Top-up allowance** is only paid to RISE researchers and is intended to cover additional travel and subsistence costs that RISE researchers might incur due to mobility. The top-up allowance is not a substitute for regular RISE researchers' and staff members' salaries, but rather an additional funding meant to cover mobility costs. Top-up allowance is also subject to national taxation laws.

The table below presents the current amounts of unit costs that the MSCA researchers receive under each type of action.

Table 4. Current amounts of researchers' unit costs

MSC Action	Living allowance	Mobility allowance	Family allowance	Top-up allowance
IF	EUR 4 880	EUR 600	EUR 500	N/A
ITN	EUR 3 270	EUR 600	EUR 500	N/A
COFUND	50% of EUR 5 480 for Experiences researchers 50% of EUR 3 870 for Early Stage Researchers	N/A	N/A	N/A
RISE	N/A	N/A	N/A	EUR 2,100

As per the Technical Specifications, the aims of this section were to:

- **Assess the competitiveness and attractiveness of the researchers' unit costs**, and their appropriateness in matching the expectations of both newcomers and top scientists in their early career.
- **Gather evidence on the researcher salaries in the EU and beyond** – the established control group of at least 5 non-EU main competitors – taking into account collective agreements in the EU countries establishing particularly favourable remuneration systems for researchers.

2.1. Evidence from the expert interviews: main insights on the researchers' unit costs

As part of the study, we implemented expert interviews with key stakeholder organisations (such as EUA, LERU, The Guild of European Research-Intensive Universities, the Coimbra Group, CESAER, EURODOC, ACA, EARMA), MSCA National Contact Points and a number of

long-term managers of the MSCA projects. The following key consensus insights have emerged from the expert interviews as regards researchers' unit costs:

- **Most of the interviewed experts agreed that, given the circumstances, the current levels of the living allowances are attractive and competitive**. This is true in the Eastern and Southern European countries, and largely true in the Central/Western European countries like Germany and Austria. Experts familiar with the German and Austrian systems clarified that the rates are competitive for the PhD students and young post-docs. They may become unattractive for more experienced researchers (especially as a result of requirements of collective agreements). The living allowances are too low in Northern Europe, the UK and Ireland, as well as in some of the most expensive cities. Organisations in these regions often have to top-up the living allowances of the fellows from other sources. However, there is no easy escape from this situation when using the unit costs system. Already now the salaries of the MSCA researchers in some regions with lower prices/salaries are very high, and it would not be efficient to use the Northern European salaries/prices to set the salaries of researchers in other regions. Furthermore, the adequacy of the current system was supported by the following arguments that the experts made: (1) MSCA oversubscription rate is very high, meaning that everyone wants to participate in the programme (how could it be if it was not generous?); (2) taking into account the whole package of funding offered by the MSCA, it is very generous; (3) even those organisations, who have to top up salaries, benefit from employing top researchers, which they would otherwise have to hire with their own money; (4) income of the MSCA fellows should be considered by adding together the living, mobility and family allowances.
- **The experts noticed that the rent prices may be higher in many places in Europe than the currently offered mobility allowance, and in particular in the most expensive areas**. Therefore, one of the solutions to improve the competitiveness and attractiveness of the overall income of the MSCA researchers would be to increase the mobility allowance for everyone, so that it is more in line with the rent prices.
- **The experts believed that the family allowance is attractive for smaller families, e.g. with one child. Also, they have noticed that other fellowship schemes rarely offer anything similar to the MSCA family allowance** (or if they do, it is one-off and very small). This makes the MSCA family allowance attractive, even if it may not cover all costs of large families, or anything beyond childcare.
- The experts mentioned two main issues with the RISE top-up allowance. First, it may be insufficient when the researcher is seconded to another country for a short duration of time (1-2 months), since he or she would have to cover the price of flights only from the 1-2 months' worth of top-up allowance. Furthermore, short-term accommodation for 1-2 months can be much more costly than longer-term rent. Secondly, as also noticed in the forthcoming study on international cooperation in the MSCA, the RISE top-up allowance may be insufficient for researchers coming from the non-EU low-income countries to high-income countries in the EU (which happens quite often in the RISE scheme). Researchers in low-income countries may earn strikingly lower salaries than in the EU, and therefore the top-up allowance together with their salary may not be sufficient to cover the costs of their secondment. This may leave the researchers from the developing countries at a disadvantage regarding their participation in RISE.

2.2. Evidence from desk research on researcher salaries in the EU and beyond

The remuneration systems, especially in the public sector, are complex and vary across countries. Normally, academic researchers who are just starting their careers, receive the

lowest salaries, which are close to minimum salary rates in each country. Salary rates for both entry-level and senior staff are normally higher than the rates for PhD students. In many cases (including Germany, the UK, the US), PhD students are funded through scholarships rather than contracts[15], and therefore do not pay taxes from their scholarships. The MSCA living allowance is always taxed, which is not always clear to researchers applying to the MSCA, as our interview evidence shows.

According to Angermuller[16], different countries have developed different ways to define academic salaries. The salary scale can be influenced by the state authorities (national laws and regulations), academic hierarchy (institutional pay scales), and the market itself. Institutional and national scales have the most influence over PhD packages and entry-level academic salary rates (PhD-level researchers usually have little power to negotiate changes in the salary, equipment, etc.). Salaries of more experienced researchers are usually a subject of negotiations and the overall situation in the market, especially in countries such as Germany and the UK[17].

National authorities, as well as labour unions, play important roles in determining the researchers,' and especially academic, salaries. The national governments can set the minimum wages of the academic staff, as in the cases of Poland, Portugal and Spain. However, desk research shows that such minimum salaries are much smaller than the MSCA funding for both Early Stage and Experienced Researchers. As well as national laws and regulations, **several EU Member States have collective agreements in place that set the minimum salaries for researchers**. Salaries agreed in such collective agreements tend to be competitive at the national level (and, in some cases, international level), and in rare cases may be higher than what is offered by the MSCA. Only those countries that have collective agreements setting the salary requirements higher than the size of the MSCA living allowance are briefly introduced in Table 5.

Collective agreements are also used in some of the third countries. However, usually sectoral agreements in the third countries are not centralised at the national level and are agreed at the university or subject level. Nevertheless, there tend to exist certain organisations or labour unions that can support the university employees if they want to negotiate collective agreements with university administrations. For example, in the US, the American Association of University Professors plays a major role in helping academics to negotiate the minimum salaries with the university administrations. In Japan, the collective agreements are reached between an organisation and a labour union formed from the organisation's employees. Some other countries, for example, Australia, have no or rather weak unions and there are no significant collective agreements related to researchers' pay.

Table 5. Existing collective agreements and the salary rates that they set

Country	Details	Indicative salaries that are higher than MSCA living allowance (Gross)
Austria	The collective agreement for employees of universities regulates the salary structure of scientific and artistic staff. All employees are added to a certain employment group depending on the type of activities agreed in the employment contract. This classification is carried out by the university management based on the available qualifications.	ESR: EUR 3 686.70 ER: EUR 4 288.80 – EUR 6,577.00
Belgium (Flemish)	The salaries of the independent academic staff and assisting academic staff in the universities are laid down by decree and decision (Higher Education Codex, BVR of 4 May 2001 and BVR of 31 January 2003).	ESR: EUR 4 053 ER: EUR 5 593

[15] Angermuller, J. High Educ (2017) 73: 963. https://doi.org/10.1007/s10734-017-0117-1, retrieved from: https://link.springer.com/content/pdf/10.1007%2Fs10734-017-0117-1.pdf
[16] Ibid.
[17] Musselin, C. (2009). The Market for Academics. London: Routledge.

Denmark	The Collective Agreement for Academics in the State sets each position's basic salary level for five seniority grades. Employees receive two supplements on top of this base salary: A position-based supplement (which is stipulated by collective agreement) and a qualification-based supplement (which is set by each university).	-NA- (as the supplement part is set by each institution)[18].
Germany	Provisions on the salaries of lecturers at higher education institutions are laid down in the Civil Servants' Remuneration Act of the Federation, the civil servants' remuneration acts and regulations on bonuses of the Land and in the corresponding rules of the individual higher education institutions.	ESR: EUR 4 219 to EUR 4 909 ER: EUR 4 967 to EUR 6 181
Ireland	The salaries of staff employed in higher education institutions are determined by the Minister for Education and Skills with the consent of the Minister for Public Expenditure and Reform.	ER: EUR 6 900
The Netherlands	Every post in higher professional education has a corresponding salary scale, determined in accordance with the job evaluation system specified in the Collective Labour Agreement of Dutch Universities (CAO-NU). The salary scale attached to a post is based on the nature of the position and duties the staff member is required to perform. Within the salary scale, the salary is determined based on the staff member's experience and the number of preliminary years applicable before the main pay rate applies.	ESR: EUR 3 475 to EUR 5 405 ER: EUR 4 815 to EUR 7 072
Norway	Salaries are determined according to collective agreements between unions and state authorities. Within the salary scale, academic rank and seniority determines compensation.	ESR: EUR 3 590 ER: EUR 5 000
The US	While collective bargaining does exist in the US, the salary scales are bargained for each institution separately.	-NA- (as there is no one national/state standard)[19]

Source: Eurydice: Conditions of Service for Academic Staff Working in HE; compiled by PPMI.

As the table above suggests, researchers and academic staff have their compensation (salaries and bonus packages) determined by several factors: the level of education, level of experience, loyalty (years worked in the same institution) as well as personal bargaining skills and the overall labour market situation. Therefore, the comparison of the salaries and working conditions between the countries becomes complex and hard to achieve.

There is no comprehensive and up-to-date source that allows to directly compare the market level salaries of researchers across the EU. However, the general conditions of researchers' careers in the EU (and beyond) are closely followed by the European Commission. For example, the latest study that provides contextual insights about researchers' salaries and their sufficiency – the MORE3 study – was published in 2016. It provides evidence based on the surveys of researchers in the EU and other countries in the world.

According to MORE3 EU Higher Education survey results[20], 67% of researchers in Europe consider themselves well paid or paid a reasonable salary. The rest of the MORE3 survey respondents claim that their salaries are either enough to make ends meet (24%) or inadequate (9%). The overall situation is improving as the salary satisfaction rate had increased from 53% in 2012 to 67% in 2016. Based on the MORE3 survey results[21], we see that the trend in researchers' satisfaction with their salaries is similar across the career stages. This increasing satisfaction with salaries in the EU higher education institutions may create a pressure to increase the MSCA living allowances to make sure that they stay prestigious.

However, there are significant country differences in line with economic development. While in some Western and Nordic countries up to 90% of the researchers feel well or at least reasonably paid, this share is less than or almost one third in Eastern and Southern

[18] For example, ESR (a PhD student) in the University of Copenhagen receives around EUR 5 750, in Aalborg University EUR 3 500–4,200. ER receives around EUR 8 600 in the University of Copenhagen and EUR 6,000–6,600 in Aalborg University.
[19] According to the American Association of University professors report, the average salary an ER should expect is around EUR 5 100, more at: https://www.aaup.org/report/visualizing-change-annual-report-economic-status-profession-2016-17.
[20] Survey on researchers in European Higher Education institutions. Annex to MORE3 study: support data collection and analysis concerning mobility patterns and career paths of researchers (2016).
[21] Ibid.

European countries. Perception-wise, EU Member States such as Belgium, the Netherlands, Denmark and Ireland stand out as a home for the best-paid researchers, where the share of researchers who feel well or reasonably paid is well above the EU average. On the opposite side there are those Member States such as Greece, Slovak Republic and Lithuania that have relatively the worst-compensated researchers in the EU.

Researchers outside Europe are on average slightly more positive about their salaries. According to the MORE3 Global survey[22], 72% of the surveyed third country researchers perceive themselves as well or reasonably paid. However, like in Europe, there are some major differences in the satisfaction rates depending on the country of a researcher's employment. Nearly four out of five researchers in Anglo-Saxon and non-EU OECD countries think that they are well or reasonably paid. Researchers from BRIC and some other less economically advanced countries are less positive about their remuneration, the percentage of researchers who feel well or reasonably paid is around 57%. In addition, such countries have the highest share of researchers whose salaries are not enough to make ends meet. For example, the shares of researchers that perceive their remuneration as insufficient are rather high in BRIC countries (12%) and some of the developing and the European Neighbourhood Policy countries, including Argentina, Colombia, Thailand and Ukraine (15%).

The table below puts the percentages discussed above into perspective. Table 6 presents the average salaries of ESR and ER reported by the participating institutions from Europe. Table 7 lays down corresponding salaries in some control-group countries outside of Europe. In line with the trends of the perception data, researchers in Eastern and Southern Europe receive the lowest salaries. In contrast, researchers in Northern and Western Europe are compensated the most. The differences in academic salaries outside of Europe also relate to the economic situation in a country. For example, in the selected BRIC countries (Brazil, India, China) salaries are much lower than in the developed countries (the US, Canada, Japan, Australia).

Table 6. Average salaries of non-MSCA ESRs and ERs in the participating institutions[23]

Host region	Average salary of ESR (super gross salary)	Average salary of ER (super gross salary)
East	EUR 1 670	EUR 3 480
France	EUR 3 120	EUR 4 240
Germany and Austria	EUR 4 100	EUR 5 850
North	EUR 4 300	EUR 5 940
South	EUR 2 400	EUR 3 650
UK and Ireland	EUR 3 000	EUR 4 520

Source: PPMI analysis survey data from MSCA ITN IF COFUND and RISE participant organisations (n=550)

[22] Survey on researchers outside of Europe Annex to MORE3 study: support data collection and analysis concerning mobility patterns and career paths of researchers (2016)
[23] Survey question: What is the average monthly salary in EUR of an Early Stage Researcher/Experienced Researcher in your organisation?

Table 7. Indicative average salaries in control countries

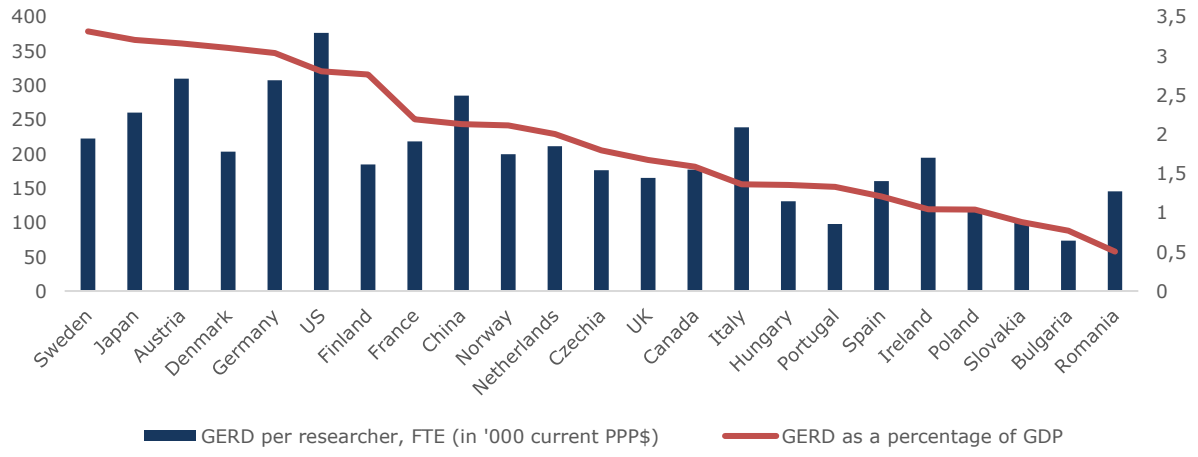
Host country	Average of ESR (gross salary of PhD students)	Average of ER (gross salary of senior research scientist)
The US	EUR 2 290	EUR 7 750
Canada	EUR 1 360	EUR 7 220
Japan	EUR 1 200[24]	EUR 6 770
Australia	EUR 1 400	EUR 6 760
China	EUR 425	EUR 4 340
India	EUR 400	EUR 1 300
Brazil	EUR 600	EUR 2 000[25]

Source: Glassdoor, Inc. compiled by PPMI.

It is also worth looking at the data on Gross Domestic Expenditure on R&D (GERD), which allows making an informed assumption on how researchers' salaries might change in the future. For this purpose, we used UIS (UNESCO Institute for Statistics) data, in particular, two variables: (1) GERD per researcher and (2) GERD as a percentage of GDP. In this case, GERD per researcher shows the overall capacity of a country when it comes to funding the R&D activities (which also includes the remuneration to the researchers). GERD as a percentage of GDP is a useful indicator that signalises the priorities in the country (despite the economic capacity). The high percentage might be an indication that R&D is an important area to a country, which might later translate into potentially higher salaries of those working in a field.

The figure shows that in 2017, Sweden, Austria and Germany were the leading countries in Europe regarding both expenditure per researcher and expenditure as a percentage of GDP. This suggests that researchers' salaries could steadily increase over time as these countries have the capacity for it as well as the policy interest to support the R&D field. On the other hand, such data suggest that in countries like Denmark that still invest a large share of GDP in R&D, the amount per researcher is much lower than in other leading countries. This suggests that the supply of researchers in Demark is high and if such trend continues over time, it might lead to a stagnation of the researchers' salaries.

Figure 1. Gross Domestic Expenditure on R&D (GERD), 2017



Source: UIS[26]; compiled by PPMI.

[24] This the amount received by the most prestigious PhD scholars in Japan (MEXT or the 'Mombukagakusho' scholarship).
[25] Glassdoor Inc classifies this figure as 'low confidence'.
[26] UNESCO Institute for Statistics, retrieved from: http://data.uis.unesco.org/#

2.3. Evidence from the survey on the competitiveness and attractiveness of the researchers' unit costs

Having reviewed the overall situation in the market, in this section we assess the competitiveness and attractiveness of the researchers' unit costs provided in the MSCA. This sub-section is based on the data collected through the MSCA researchers' survey. The survey data show that compensation for the MSCA researchers is normally more generous than the salaries of their peers working at the same institution**.** According to the MSCA researchers' survey data[27], **an average MSCA researcher (both ESR and ER) receives an income that is 20% higher compared to other researchers at the same position/institution**. Table 8 provides a more in-depth analysis on the situation in the different country groups.

Survey data analysis indicates that, overall, the MSCA researchers in the Eastern European[28] countries receive around twice as much money as their peers, while the average compensation for the MSCA researchers in Northern Europe aligns with the average researcher salaries in the market of the Northern European countries. As shown later in the study, this mainly happens because the organisations in the Northern countries are willing to top-up the allowances of the MSCA researchers either from their own resources or from the institutional unit costs.

Table 8. Ratio of monthly Super Gross income of the MSCA researchers vs their peers at the same institution, breakdown by country group

Host region	ESR	ER
East	2.3	2.1
France	1.2	1.3
Germany and Austria	1.1	1.0
North	1.0	1.0
South	1.4	1.6
UK and Ireland	1.3	1.2
Third countries	N/A	0.9
Overall	**1.2**	

Source: PPMI analysis, MSCA researchers' survey data[29] (n=410).

The MSCA researchers' survey has also collected some data on the salaries in the Third Countries, where the MSCA-IF-GF researchers spend the outgoing phase of their fellowship. On average, Global fellows receive allowances of around 90% of what their peers at the same institution earn. These data are mostly driven by the survey responses of fellows hosted in the USA, Canada and Australia, since the majority of Global fellows move to the high-income countries for the outgoing phase of their fellowship.

The scientific panel/field of work is another important aspect that normally determines the researcher's salary. The MSCA projects cover all major scientific panels[30]; therefore, in this study, we also aim to determine whether the researchers' allowances are competitive in their respective fields. **The survey data analysis indicates that the MSCA researchers in almost all scientific fields receive slightly higher salaries compared to their**

[27] Data come from the researchers participating in the following actions: ITN, IF, COFUND.
[28] For a finite list of countries within each country group see Annex 1.
[29] Corresponding questions in a survey: (1) What was the average total monthly income paid to you by the host organisation during your MSCA fellowship period (including all types of allowances, as well as any top-up sum contributed by the host organisation)? And (2) Were you aware of the average salaries paid to other (depending on the situation: experienced researchers/early stage researchers) in your host organisation? If yes, please provide the monthly average salary in EUR for (depending on the situation: experienced researchers/early stage researchers) in your host organisation during your fellowship?
[30] Scientific panels are chemistry, economics, engineering, environmental sciences, life sciences, mathematics, physics and social sciences.

colleagues from the same institutions (see Table 9), except for economists, who reported receiving the same level of salaries as their peers.

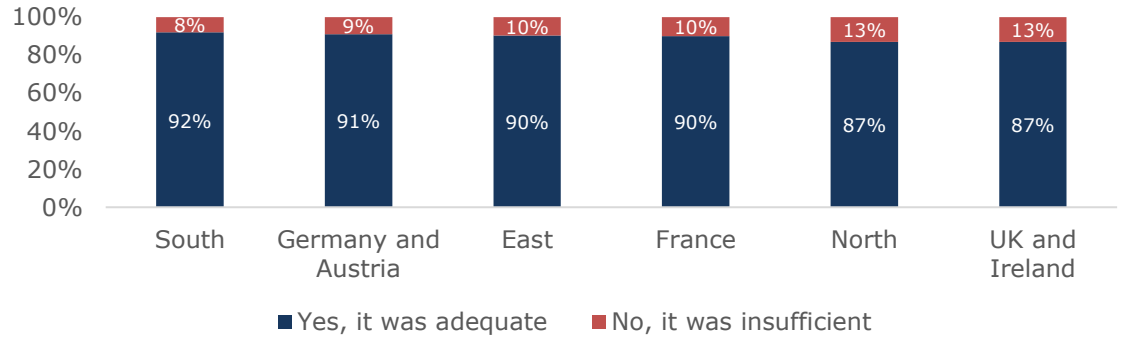
*Table 9. Ratio of monthly Super Gross income of MSCA researchers vs their peers at the same institution, breakdown by scientific panel**

Scientific panel	ESR	ER	Overall
CHE	1.2	1.3	1.2
ECO	1.0	1.0	1.0
ENG	1.2	1.2	1.2
ENV	1.3	1.1	1.2
LIF	1.2	1.2	1.2
MAT	1.1	1.0	1.1
PHY	1.4	1.3	1.4
SOC	1.0	1.3	1.1

* Scientific panel data were not available for the MSCA COFUND participants.
Source: PPMI analysis, MSCA researchers' survey data (n=338).

To have a full picture of the sufficiency and adequacy of the MSCA unit costs, we have asked the surveyed MSCA researchers to indicate whether overall income received from the MSCA project was sufficient/adequate for their situation[31]. **Overall, a strong majority (86%) of respondents agree that their income was adequate** (see the figure below). Only a small share (around 14%) of the respondents hosted in Europe have reported that their allowances were insufficient. As explained by the MSCA researchers in the open questions of the survey, three main reasons are normally responsible for the perceived insufficiency of income: (1) having problems supporting their family, (2) high relocation costs, or (3) mobility to cities with exceptionally high living standards.

Figure 2. Perceived adequacy/insufficiency of the income from MSCA[32], breakdown by country group

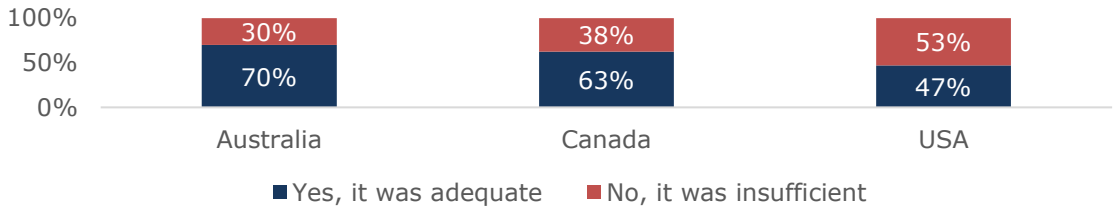


Source: PPMI analysis, MSCA researchers' survey data (n=1 330)[33].

The MSCA researchers hosted in other, non-EU countries[34] are relatively less positive about their MSCA income. They explain that mobility to countries outside the EU (e.g. the US), in addition to high living costs in some metropolitan cities, comes with some extra cost (long-haul flight tickets, health insurance, etc.). Such costs, in many cases, were a source of their dissatisfaction with the MSCA funding.

[31] The survey question: "Was the average total monthly income paid to you by the host organisation … of your MSCA fellowship period sufficient to cover all your personal costs? (response options: "Yes, it was adequate" or "No, it was insufficient") (n=1,330).
[32] Based on a survey question: Was the average total monthly income paid to you by the host organisation of your MSCA fellowship period sufficient to cover all your personal costs?
[33] East n=51; France n=166; Germany and Austria n=256; North n=242; South n= 362; UK and Ireland n=253.
[34] The researchers' survey also captured survey responses of MSCA-IF-GF researchers that were hosted in Australia, Canada and the US during their outgoing phase.

Figure 3. Perceived adequacy/insufficiency of the income from the MSCA[19] in Australia, Canada and the US



Source: PPMI analysis, MSCA researchers' survey data (n=132)[35].

2.3.1. Living allowance

The living allowance functions as the gross salary of an MSCA researcher. It is adjusted using a Country Correction Coefficient (CCC) to match the living standards of the host country. It can also be topped up with additional funding by the host organisation. **Around 19%[36] of the surveyed organisations have topped up their MSCA researchers' living allowances**.

Funding on top of the MSCA allowances is most common in the Northern European region (35% of the surveyed organisations said that they had provided funding to top up the living allowances). These findings are in line with what was discussed in the sub-section above. Due to high living costs, the MSCA living allowances are the least competitive in the Northern countries compared to the researchers working outside the MSCA programme. Therefore, host organisations in the Northern countries choose to top up the living allowances of their researchers.

The shares of organisations that provided top-up funding are also very high in Germany and Austria (27%). No organisations in Eastern Europe claimed that they had provided top-up funding. Top-up funding was also not common in the UK and Ireland. There was a general tendency to contribute more to the salaries of ESRs than to the salaries of ERs.

This ability of the MSCA to ensure that the institutions provide additional funding on top of what is required can be seen as the European added value of the programme through a leverage effect. This means that the MSCA can extract further funding for the EU researchers, in addition to the resources provided by the EU budget.

Table 10. Percentage of organisations that have topped up the researchers' allowances from either institutional costs or their own resources

Host region	Total from organisations' survey	Total for ESR (MSCA-ITN)	Total for ER (MSCA-IF)
East	0%	0%	0%
France	7%	7%	7%
Germany and Austria	27%	27%	28%
North	35%	38%	29%
South	14%	22%	11%
UK and Ireland	2%	0%	2%
Overall in Europe	19%	25%	13%

Source: PPMI analysis, MSCA organisations' survey data (n=412).

Global fellows, during their outgoing phase, tend to have their salaries topped up more frequently than during the returning phase. Host organisations in Canada, Australia and US tended to contribute to the researchers' salaries. Such organisations topped up on average an additional amount of EUR 1 050 from either their own resources or the MSCA institutional costs. The table below indicates the percentage of the researchers that had

[35] Australia n=10; Canada n=16; and USA n=106.
[36] According to the data from MSCA-IF and MSCA-ITN researchers.

their living allowances topped up during the outgoing phase in the US, Canada and Australia.

Table 11. Q: To the best of your knowledge, have you received a top-up to your monthly allowance during the outgoing phase?

Host country	ER (MSCA-IF-GF)
Australia	18%
Canada	29%
The US	15%
Overall outside Europe[37]	**18%**

Source: PPMI analysis, MSCA researchers' survey data (n=141).

Overall, according to the open responses to the survey, **the living allowance seems to be adequate for most researchers. However, those moving to cities with very high living standards (e.g. Copenhagen, London, Paris, Boston, San Francisco, etc.) tend to find their living allowances too low more often.** The main complaint from the MSCA researchers was that the CCC does not reflect the real situation in some particularly expensive locations. Economic macro-level indicators (at a country level) in many cases do not reflect the living costs in the most expensive metropolitan areas. Such observation is based on both the previous studies and our MSCA survey data. On the other hand, the country correction coefficient (CCC) has a well-established methodology and is based on the Eurostat inflation data. The coefficient corresponds well to the differences in living costs and the levels of purchasing power in different countries.

As already discussed in the introduction of this report, we have tested three different ways to update the living allowance to maintain the real purchasing power and the competitiveness of the living allowance. The following three methods to update the living allowances were considered:

- Update on the basis of inflation.
- Update on the basis of the annual growth of labour costs (wages component) calculated by Eurostat.
- Update to match the conditions of the most favourable competing fellowships.

As the current rates have been used since 2018, we would need to adjust the rates for the year 2018, 2019 and 2020, so that the new rates could be applied from the launch of Horizon Europe in 2021. Table 12 shows the HICP for Belgium in 2018 and the forecasts regarding inflation in Belgium for 2019 and 2020. According to the estimates of the National Bank of Belgium, the HICP for Belgium should be around 1.5% in 2019 and 1.6% in 2020[38]. Adjusted according to the HICP for Belgium, the researchers' unit costs should be set at the following level:

- ITN[39] living allowance: EUR 3 450.
- IF living allowance: EUR 5 150.

[37] Overall figure also includes 18 additional answers not represented in the table (Brazil: 2; Chile: 1; Colombia: 1; Japan: 1; S. Korea: 1; Madagascar: 1; Mali: 1; New Zealand: 4; Singapore: 1; South Africa: 1; Switzerland: 3; Vietnam: 1). These were not separated in the table because of the very small response rate.
[38] For full analysis of the National Bank of Belgium, please refer to their website: https://www.nbb.be/en/publications-and-research/economic-and-financial-publications/economic-projections-belgium
[39] Please note that under Horizon Europe the names of the actions may change, but the nature and structure of the actions themselves will remain substantially unchanged. Whenever a new rate for Horizon Europe is presented, for simplicity, the study refers to the names of the actions currently used in Horizon 2020.

Table 12. Updating the MSCA researchers' unit costs according to the HICP for Belgium

	Current amount	2018	2019 (forecast)	2020 (forecast)
HICP for Belgium:	-	2.3%[40]	1.5%	1.6%
ITN (ESR) living allowance, EUR	3 270	3 45.21	3 395.39	3 449.71
IF (ER) living allowance, EUR	4 880	4 992.24	5 067.12	5 148.20

Source: calculations by PPMI.

As can be seen from Table 13, the salaries in the EU-28 have increased at a higher pace than the prices (in Belgium). If we use the labour cost index to calculate the MSCA researchers' unit costs for the beginning of 2021 (launch of Horizon Europe), the following rates should be set:

- ITN living allowance: EUR 3 550.
- IF living allowance: EUR 5 300.

Table 13. Updating the MSCA researchers' unit costs according to the growth of the labour costs in the EU-28 (wages component)

	Current amount	2018 Q4	2019 Q1	2020 (forecast)
Annual growth in labour costs in the EU28[41]	-	3%	2.7%	2.7%[42]
ITN (ESR) living allowance, EUR	3 270	3 368.1	3 459.04	3 552.43
IF (ER) living allowance, EUR	4 880	5 026.4	5 162.11	5 301.49

Source: calculations by PPMI.

On the other hand, the key disadvantage of updating the unit cost rates on the basis of the growth of the labour costs would be deviation from a historically established methodology of updating the MSCA unit cost rates on the basis of the HICP inflation indicator, as is also done for the Commission's salaries. Selecting a different method than previously to update the researchers' unit cost rates may lead to uncertainties among the stakeholders and a non-harmonised approach with updating other unit costs. Therefore, we suggest using the HICP inflation indicator to update the unit cost rates for the living allowances.

In order to further assess the competitiveness of the MSCA researchers' unit costs, throughout the study we have also compared the MSCA rates to the conditions of the most favourable competing fellowships. The following overall conclusions stem from the comparison of the MSCA to other very competitive fellowship programmes:

- Looking at the overall package offered by the MSCA – researchers' unit costs + institutional unit costs – it is arguably the most generous fellowship programme. Other very competitive fellowship programmes may offer some better rates than the MSCA for certain types of costs (e.g. living allowance), but they rarely offer a better overall package. This was also confirmed by the interviews and surveys, which revealed that the MSCA is clearly the most prestigious fellowship programme in the world for the researchers starting their careers.
- The MSCA cannot be easily compared to other analysed fellowships, since all of them fund a much smaller number of researchers. Increasing the MSCA allowances to match all the most favourable rates of each type of allowance would not be

[40] Eurostat: https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00118&plugin=1

[41] Eurostat: https://ec.europa.eu/eurostat/documents/2995521/9832262/3-17062019-AP-EN.pdf/12869f6b-527a-4972-95f9-95fbcc6e052b

[42] As there is no official forecast, we are using the same rate for 2020 as for 2019.

feasible, since this would drastically reduce the number of researchers, who could benefit from the MSCA.

2.3.2. Mobility allowance

In addition to the living allowance, each ITN and IF researcher receives a mobility allowance that is fixed at EUR 600[43] per month. This amount is expected to contribute to the private costs related to mobility: relocation costs, accommodation costs, travel costs and similar. Mobility allowance is not adjusted according to the country correction coefficient. In those cases where it is paid as part of the salary, it is subject to national taxation laws.

According to the open replies in the survey, one-off relocation costs are an important part of the mobility-related expenses. The respondents claim that such costs can vary from almost no cost to EUR 30 000. There are many variables that influence relocation costs: mobility distance, family situation and size (see more about this in the sub-section below), living costs in the host country, etc.

Analysis of the survey data shows that the MSCA researchers spent on average EUR 1 850 to relocate to another country in Europe. The breakdown by country group (as indicated in Table 14) does not show a substantial variation, except for the UK and Ireland where the relocation costs reported by the MSCA researchers were the highest. Keeping in mind the huge variation of costs reported in the survey, we have also calculated median values. Median relocation cost in all regions is EUR 1 000 with the exception of the UK and Ireland, where such cost increases to EUR 2 000. This suggests that over half of respondents have spent less than the averages reported in Table 14. Hence, the average relocation costs are profoundly affected by some exceptionally high costs.

Our analysis shows that **the relocation costs relate to the overall satisfaction of the researchers with their MSCA income.** As illustrated in Table 14, researchers that claim to have insufficient income had substantially higher costs related to their mobility. The same observation can be made regarding the Global fellows during their outgoing phase in countries outside Europe (see Table 15).

Table 14. One-off relocation costs[44], EUR

Host region	Average for all respondents	Average for respondents with insufficient income (+ absolute difference from the overall average)	Average for respondents with adequate income
East	1 560	1 560	1 560
France	1 680	1 970 (+290 EUR)	1 650
Germany and Austria	1 430	1 830 (+400 EUR)	1 390
North	1 740	2 900 (+1 160 EUR)	1 580
South	1 660	2 770 (+1 110 EUR)	1 530
UK and Ireland	2 460	3 780 (+1 320 EUR)	2 270
Overall in Europe	**1 850**	**2 720 (+870 EUR)**	**1 550**

Source: PPMI analysis MSCA researchers' survey data (n=1 430).

Table 15. One-off relocation costs, EUR

Host country	Average for all ER (MSCA-IF-GF)	Average for respondents with insufficient income (+ absolute difference from the overall average)	Average for respondents with adequate income
Australia	5 430	6 330 (+900 EUR)	4 670
Canada	2 920	2 930	2 920
The US	4 650	5 520 (+870 EUR)	3 680

[43] This amount is taxed according to the law in each country.
[44] Based on a survey question: Please estimate in EUR the total amount of one-off relocation costs (i.e., transporting your belongings, insurance, visas and similar) you incurred when relocating from your previous/home country to host country.

Overall outside Europe[45]	**4 220**	**5 070 (+850 EUR)**	**3 390**

Source: PPMI analysis, MSCA researchers' survey data (n=154).

As explained by the survey respondents in the open questions, the relocation costs are among the major inconveniences. Due to the nature of these costs, they are incurred before the first allowance. This means that the researchers are expected to either use their savings or borrow from their relatives or banks to exercise mobility.

Rent prices constitute another major element of the mobility costs. They largely depend on the location of the host institution. In the table below, we present an approximate situation in the housing markets of the analysed country groups. The data lay down the intervals of average prices in the cheapest and the most expensive capitals and other major cities in each of the country groups. These calculations are based on the data of the Estate agency rent survey, published in 2019 by Eurostat[46]. For example, in the East region, to rent a 2-bedroom flat can cost, on average, between EUR 570 (in Sofia, Bulgaria) and EUR 1 250 (in Prague, Czechia).

Table 16. Monthly rent prices in Europe, EUR

Host region	1-bedroom flat	2-bedroom flat
East	360-910	570-1 250
France	710-1 200	1 450-2 700
Germany and Austria	810-1 350	970-1 650
North	1 050-1 500	1 4002 350
South	580-1 050	740-1 500
UK and Ireland	880-1 650	1 050-2 050

Source: Estate agency rent survey, 2018.[28]

The same Estate agency survey also provides some data about rent prices outside Europe. There are data available for the US, Canada and Japan. In all three MSCA partner countries, the accommodation costs are very high and might cause some financial problems during the mobility phases. The housing prices in the emerging economies such as Brazil, China and India are not available on Eurostat. However, the data provided by the costs of living comparison site "Numbeo" gives us an understanding of how much it costs to rent a flat in these countries (see Table 18).

Table 17. Monthly rent prices in the US, Canada, Japan and Australia, EUR

Country	1-bedroom flat	2-bedroom flat
US*	1 900-2 650	2 500-3 750
Canada*	1 030-1 130	1 500
Japan*	3 450	4 960
Australia**	980	

Source: *Estate agency rent survey, 201 828; **Australian bureau of statistics[47].

[45] Overall figure also includes 18 additional answers not represented in a table (Brazil: 2; Chile: 1; Colombia: 1; Japan: 1; Mali: 1; New Zealand: 5; Singapore: 1; South Africa: 1; Switzerland: 4; Vietnam: 1). These were not separated in the table because of a very small response rate.

[46] Retrieved from Eurostat: https://ec.europa.eu/eurostat/documents/6939681/7243182/Booklet_2019_rents_2018_e_DRAFT.pdf/1321ca38-8039-4f95-aade-434e9550462e

[47] The database only provides an overall figure per week in Australian dollars, the amount provided in a table has been transformed into a monthly figure in EUR. Data retrieved from: https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4130.0~2017-18~Main%20Features~Housing%20Costs~4

Table 18. Monthly rent prices in Brazil, China and India, EUR

Country	1-bedroom flat	3-bedroom flat
Brazil	300	580
China	450	880
India	150	330

Source: Numbeo, costs of living comparison site[48].

Based on the MSCA researchers' survey data, we learn that, on average, they paid around EUR 570 per month in the East to around EUR 900 in the UK and Ireland region. Rent costs outside Europe (in Australia, Canada and the US) far exceeded these numbers. **Overall, the survey data show that most of the researchers' rent costs already exceed the size of a mobility allowance provided by the MSCA.** On the other hand, monthly rent prices that the MSCA researchers pay are very much in line with the average market prices discussed above. The reader should also bear in mind that the mobility allowance is only expected to ameliorate the costs of living incurred by the researchers, while some of them should be covered from the living allowances.

According to the open replies to the MSCA researchers' survey, high rent prices, such as high one-off relocation costs, are among the key reasons why some researchers perceive their income as insufficient. In the table below, we present the average monthly rent prices that the MSCA researchers pay in different country groups, according to the survey data. The data show that **those who have reported insufficient income, tend to pay more for their accommodation compared to the average MSCA researcher.** Further analysis indicates that such differences in rent prices within the same region are mostly affected by the city (and not the country) of the host institution. As discussed before, the researchers based in large cities normally incur exceptionally high costs, which leads them to perceive their MSCA income as insufficient.

Table 19. Monthly rent prices paid by MSCA researchers[49], EUR

Host region	Average for all respondents	Average for respondents with insufficient income (+ absolute difference from the overall average)	Average for respondents with adequate income
East	570	740 (+170 EUR)	550
France	710	950 (+240 EUR)	680
Germany and Austria	710	980 (+270 EUR)	680
North	860	1,290 (+430 EUR)	790
South	670	960 (+290 EUR)	670
UK and Ireland	900	1,150 (+250 EUR)	870
Overall in Europe	**760**	**1,080 (+320 EUR)**	**730**

Source: PPMI analysis, MSCA researchers' survey data (n=1,421).

[48] Numbeo: https://www.numbeo.com/cost-of-living/comparison.jsp
[49] Based on a survey question: Please indicate in EUR the amount of money you have paid monthly to cover your rent in your host city.

Table 20. Monthly rent prices paid by MSCA Global fellows during the outgoing phase, EUR

Host country	Average for all ER (MSCA-IF-GF)	Average for respondents with insufficient income (+ absolute difference from the overall average)	Average for respondents with adequate income
Australia	1,590	2,130 (+540 EUR)	1,440
Canada	930	1,040 (+110 EUR)	860
The US	1,550	1,780 (+230 EUR)	1,290
Overall outside Europe[50]	**1,340**	**1,640 (+300 EUR)**	**1,180**

Source: PPMI analysis, MSCA researchers' survey data (n=156).

The analysis above shows that almost all MSCA researchers incur mobility costs that exceed EUR 600 per month. On the other hand, the mobility allowance is not designed to be the sole source of income that covers the rent and other mobility costs. It is rather a contribution to the living allowance (since typically people cover their rent out of the salary, and the MSCA researchers are not expected to be an exception). In addition, only a small share of researchers (14% as discussed in the previous section) perceive their income as insufficient. The two mobility-related costs that contribute to income insufficiency are high one-off relocation costs that researchers have to cover before the start of mobility (and therefore before receiving any income from the MSCA) and high rent prices, especially in the most expensive metropolitan areas.

In order to further assess the competitiveness of the MSCA mobility allowance, we have also compared the MSCA rates to the conditions of the most favourable competing fellowships[51]. We have learned that the MSCA is a unique programme in this case as none of the other fellowships provide their researchers with unit cost-based mobility allowances. The usual practice in other programmes is to provide a fixed amount of "settling-in allowance" that is designed to cover relocation and settling-in costs. In addition, we found that the MSCA mobility allowance (if expressed as a whole sum over the project length[52]) is the second highest mobility-related allowance there is.

2.3.3. Family allowance

Our survey asked to consider the following costs as "family costs":

- *Contributing to covering costs of children's activities in the new country (finding school, kindergarten, more expensive schools and kindergartens).*
- *Contributing to the reduced income, while the spouse finds a job.*
- *Contributing to the reduced income if the spouse cannot find a well-paying job for the long term.*
- *Situations, when a spouse is on parental or maternity leave and receives payments from another country, where they are lower compared to the cost of living of a new country, or a spouse, does not receive income at all.*
- *Loss of child benefits that may have been received in the country of origin (or other family-related payments).*
- *Costs of travelling for family members.*
- *Cost of finding a suitable place to live.*

MSCA researchers, who have families, are eligible to receive the family allowance of EUR 500 per month. This allowance is paid to families that are (i) married, or (ii) are in a relationship with an equivalent status to a marriage recognised by the national or relevant regional legislation of the country where this relationship was formalised; or (iii) have dependent children, who are actually being maintained by the researcher. The eligibility rule was contested by some of the interviewees and survey respondents. There are two situations that the MSCA rules do not foresee and potentially leave some of the researchers at a disadvantage. Such families are:

[50] Overall figure also includes 20 additional answers not represented in a table (Brasil: 2; Chile: 1; Colombia: 1; Japan: 1; S. Korea: 1; Mali: 1; Madagascar: 1; New Zealand: 5; Singapore: 1; South Africa: 1; Switzerland: 4; Vietnam: 1). These were not separated in the table because of a very small response rate.
[51] See Annex 7 for a detailed overview.
[52] The total sum of the mobility allowance would be: 36X500=18 000 ITN, IF-GF; 24X500=12 000 IF-EF.

- Families created after the MSCA project gets approved for funding[53].
- Households that are not legally binding families. Example of such household can be a researcher who is taking care of elderly people (e.g. their parents).

With regard to the first scenario, the Commission has already committed to take due account of changes in the family status of the researcher during the lifetime of the project. Such a move will help to better fulfil the overall objective of the family allowance in reducing family-related obstacles to the MSCA researchers' mobility.

According to the MSCA survey data, an average researcher, who has a family, spends around EUR 1 380 per month to support it. This number widely varies by country and family size. An average family in the Eastern region spends the least – around EUR 615, while families in countries outside Europe spend around EUR 2 000.

Table 21. Family costs[54], EUR

Host region	Average family costs	Receive family allowance	No family allowance
East	615	615	-
France	1 430	1 575	810
Germany and Austria	1 140	1 050	1 430
North	1 400	1 477	880
South	1 420	1 535	670
UK and Ireland	1 530	1 700	1 090
Overall	**1 380**	**1 780**	**1 020**

Source: PPMI analysis, MSCA researchers' survey data (n=308).

To better understand the real family costs, we derived a proxy using the OECD data on childcare costs. The OECD data are expressed as the percentage of the average wage of a couple of parents. We used these percentages in combination with the average MSCA income and established the approximate family costs in Europe and beyond.

Childcare costs vary greatly from country to country, and in contrast to the other researcher costs, are not proportional to the macroeconomic situation in a country. This means that people in some otherwise expensive countries have relatively low family costs (e.g. Swedes spend 4.1% of their income on childcare). While some other researchers, hosted in otherwise inexpensive countries, pay a fair share of their income to cover their childcare costs (e.g. in the Slovak Republic, 19.5% of income is spent on childcare).

Table 22. Childcare costs in Europe.

Host region	Share of average wage[55]	Approximate cost per month[56]
East	0 %-19.51%	160
France	11.64%	630
Germany and Austria	2.71%-4.55%	210
North	4.1%-19.64%	530
South	2.87%-5.17%	190
UK and Ireland	35.78%-24.92%	1 750

Source: OECD data (Net childcare costs), 2018[57].

Despite the major differences within the country groups, we find that average childcare costs are below the EUR 500 threshold (fixed family allowance amount

[53] More precisely, under H2020, in order to establish the eligibility for the family allowance, the family status is assessed at the date of recruitment of the researcher (in ITN) or at the date of the call deadline (in IF).
[54] Based on survey questions: During your MSCA fellowship, have you received a family allowance?
And Please estimate in EUR, how much money during your fellowship have you spent monthly to cover the costs related to family.
[55] % of household income, based on assumption of a family with two parents.
[56] Calculated from the average monthly Super Gross income of an experienced MSCA researcher.
[57] Retrieved from: https://data.oecd.org/benwage/net-childcare-costs.htm

provided by the MSCA) in three regions: East, South, and Germany and Austria. MSCA researchers in other regions spend more to support their children.

Parents in the UK and Ireland have their family costs compensated the least by the MSCA. As indicated in the table above, the average MSCA researcher, who is a parent, spends around EUR 1 750 on childcare costs in the UK and Ireland. According to the OECD data[58], the UK and Ireland do indeed have the highest childcare costs in Europe and one of the highest in the world. The survey responses also support this conclusion. Some of the MSCA researchers hosted in the UK and Ireland report that they spend up to EUR 1,400 per month for day care services.

Following the same approach, we have also investigated the approximate childcare costs in some other OECD countries. The data analysis indicates that in other developed countries, an average researcher should pay more for childcare than in Europe in many cases (see Table 23). Childcare costs are lower in the developing countries. Brazil provides free childcare and education services, including some private schools. China is more expensive; there, in the bigger cities, parents may pay around EUR 600 monthly. In India childcare costs may vary from EUR 20 to EUR 200, depending on the city and quality of education.

Table 23. Childcare costs outside Europe

Country	Share of average wage[59]	Approximate cost per month (based on ER income)[60]
US	31.79%	1 300
Canada	19.02%	1 370
Japan	34.39%	2 330
Australia	31.60%	2 140

Source: OECD data (Net childcare costs), 2018.[61]

Nevertheless, MSCA researchers' survey data suggest that fellows, who have families, tend to find their MSCA income insufficient significantly more often. Nearly half of the fellows, who reported insufficient income, have families to support. While those researchers who find their income adequate do not tend to have families (see Table 24).

Table 24. Share of researchers with families by adequate MSCA income vs insufficient MSCA income

	Percentage share
Researchers with insufficient income who have families	48%
Researchers with adequate income who have families	24%
Difference	24%*

* the difference between the two groups is statistically significant (t-test p-value=0).
Source: PPMI analysis, MSCA researchers' survey data (n=935).

Overall, family costs seem to be related to the overall satisfaction with the MSCA income, and the main variation in family costs come from the country (and city) of residence. Each MSCA participant country has very different childcare systems and costs associated with it. This means that the family allowance (EUR 500) compared to the real cost that the MSCA researchers incur in some cases is insufficient. This is firstly because of high childcare costs in certain countries (only the UK and Ireland in Europe), and some other costs that MSCA researchers associate with mobility when having a family.

[58] Ibid.
[59] % of household income, based on assumption of a family with two parents and two children aged 2 and 3.
[60] Calculated from the average monthly income of an average researcher.
[61] Retrieved from: https://data.oecd.org/benwage/net-childcare-costs.htm

2.3.4. What factors contribute the most to the perceived income insufficiency?

The evidence collected through the surveys, expert interviews and consultations with the Commission, suggests that the main drivers of the perceived income insufficiency are (1) the costs related to family, (2) rent costs and (3) relocation costs. We ran a logistic regression to assess the relative impact of these three variables on the perceived income insufficiency reported by the MSCA fellows. The regression model included these three main variables and other relevant contextual information such as host country, level of experience (ESR vs ER), etc.

Based on the regression results (shown in Table 25), **we conclude that having a family during the MSCA fellowship period is by far the strongest explanatory variable associated with the perceived insufficiency of the MSCA income.** The regression results indicate that having a family corresponds to 68% lower odds that an MSCA researcher will consider their income as adequate. Secondly, the relative increase in the rent costs also has a negative effect on the perceived adequacy of the MSCA income. Based on the calculated coefficient, we conclude that an increase of EUR 100 in the rent costs makes an MSCA researcher 21% more likely to report insufficient income. Third, the regression results have also revealed a somewhat expected conclusion that the experienced researchers are more satisfied with their income than the early stage researchers. Finally, the regression results also show that the relative increase in the relocation costs does not have a significant impact on the perceived insufficiency of the MSCA income.

These results suggest that, if any change is considered at all, the first change should be to increase the family allowance, since having a family is clearly the number one cause why any MSCA researcher would be unhappy with the income received. Secondly, the attractiveness of the MSCA would also be slightly increased by increasing the mobility allowance, as the rent costs also have a significant (although small) negative impact on the researchers' satisfaction with the MSCA income. However, as noted above, researchers are also expected to cover rent costs from their living allowances. Therefore, if only one change is possible due to budget limitations, we would suggest acting only on the family allowance. Finally, the size of the relocation costs does not have a substantial impact on the perceived insufficiency of the MSCA income.

Table 25. Important determinants of MSCA income adequacy/insufficiency. Log regression results

	Odds ratio	Coefficient
Family (has family=1, no family=0) **	**0.318**	-1.144
Rent cost**	0.997	**-0.002**
Relocation cost*	0.999	**-0.000**
Experience (ER=1, ESR=0) **	**5.799**	1.757

Note: the table presents only statistically significant variables, find a full regression specification and output in the Annex 9.
** p-value=0.00, * p-value=0.05.
Source: PPMI analysis, MSCA researchers' survey data (n=750).

Based on the results above, we suggest increasing the family allowance. The only question remains: by how much? Table 26 shows that all mobility-related costs (including rent, relocation) are much higher for researchers with families. The data presented in the table can also be used to calculate the suggested increase in the family allowance.

We have worked under the assumption that the updated family allowance should be calculated on the basis of the needs of all researchers with families, both those, who found their income sufficient and insufficient (we have to take into account that there were researchers with families, who found their income sufficient). As evidenced in the table below (see the last row), researchers that do not have families were able to cover almost

all of their costs (they have reported that their income was insufficient, on average, by EUR 50), while researchers with families, on average needed an additional EUR 210 (taking into account also researchers with families, who found their income sufficient). We suggest using these numbers as a basis for increasing family allowance and for calculating the suggested increase of the family allowance as the difference between the perceived lack of income reported by all MSCA researchers (EUR 50) and those researchers, who have families (EUR 210). Therefore, if a structural change of the family allowance is foreseen in Horizon Europe, the suggested increase of the family allowance would be EUR 160.

Table 26. Costs differences incurred by the MSCA fellows with and without families

	Insufficient MSCA income		All MSCA researchers	
	With family	Without family	With family	Without family
Rent cost	1 370	955	1 025	700
Relocation cost	3 990	2 095	3 180	1 440
Q: "Insufficient by how much"	1 320	910	210	50

Source: PPMI analysis, MSCA researchers' survey data (n=938).

2.3.5. Top-up allowance in RISE

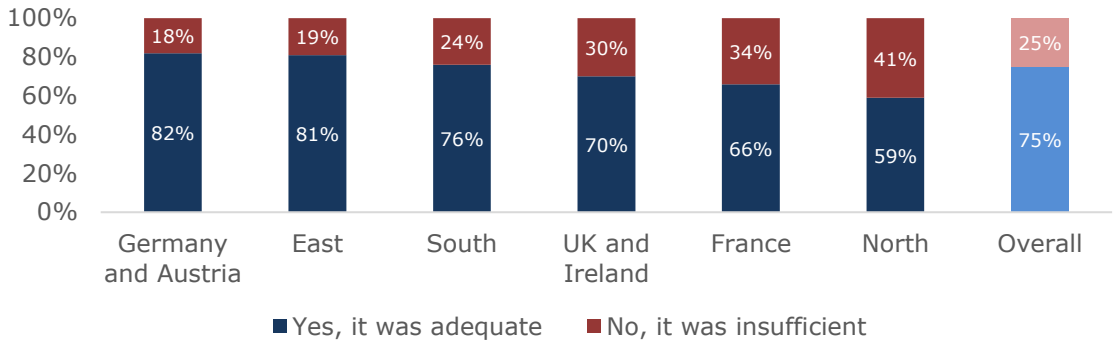
The structure of income that RISE researchers and seconded staff members receive differs substantially from the income of IF, ITN and COFUND fellows discussed in the sub-sections above[62]. During the secondments/mobility, RISE researchers receive their regular salaries, while the EU also contributes to their mobility-related costs with a top-up allowance of EUR 2 100[63].

In this sub-section, we assess the sufficiency and adequacy of the top-up allowance that seconded researchers and staff members receive during their mobility phase. For this purpose, we have surveyed the RISE researchers. The following analysis presents the survey results regarding the sufficiency of the RISE top-up allowance.

Approximately three out of four RISE researchers hosted in Europe find their top-up allowances adequate. Such trend varies with the location of the host institution (see Figure 4). The biggest share of satisfied researchers was hosted in the Eastern region and Germany and Austria[64], while those, who were hosted in the Northern countries, were underfunded most frequently.

[62] As summarised in the introductory paragraphs of this section 2 of the report, according to the MSCA rules, the RISE top-up allowance is payable to the individual seconded staff member to cover travel, accommodation and subsistence costs related to the secondment.
[63] The amount may be subject to national taxes.
[64] Such finding mostly relates to the fact that the surveyed RISE secondees in Eastern European countries as well as Germany and Austria report the smallest costs related to accommodation, travel and other expenses for relocation.

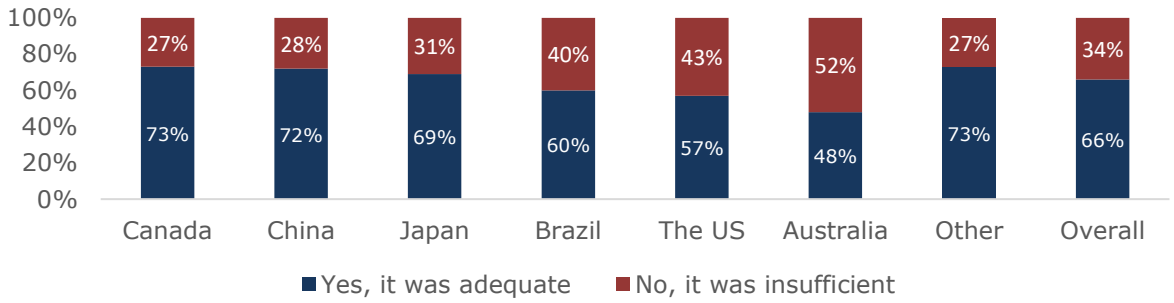
Figure 4. Q: In your opinion, was the top-up allowance paid during your MSCA secondment period sufficient to cover all your travel, accommodation and subsistence costs relating to the secondment?



Source: Analysis by PPMI, MSCA-RISE researchers and staff members survey data (n=422)[65].

The overall satisfaction is somewhat lower for RISE researchers who were hosted in the countries outside Europe. Still, **two out of three researchers seconded outside Europe claim that the RISE top-up allowance was sufficient.**

Figure 5. In your opinion, was the top-up allowance paid during your MSCA secondment period sufficient to cover all your travel, accommodation and subsistence costs relating to the secondment?



Source: Analysis by PPMI, MSCA-RISE researchers and staff members survey data (n=728)[66].

According to the MSCA rules, the host (or sending) institution can contribute with some extra funding to the top-up allowance. Approximately, 20% of all RISE secondees have received an average amount of EUR 1 580[67] in addition to the top-up allowance. Such figure is higher, at around 30%, for those, who found their top-up allowances insufficient. Nevertheless, their overall income was insufficient due to some exceptionally high costs incurred during the mobility phase. Those, who find their income insufficient, have self-reported that on average they would need an extra amount of around EUR 1 170 to cover all costs related to mobility in Europe and EUR 1 120 for mobility outside Europe (see Table 27).

[65] East n=42; France n=41; Germany and Austria n=73; North n=17; South n= 158; UK and Ireland n=91.
[66] India n=4; Canada n=30; China n=68; Japan n=65; Brazil n=40; the US n=176; Australia n=44; Other n=301.
[67] ER received around EUR 1 490 and ESR around EUR 1 600.

Table 27. Insufficient top-up allowance. Extra support needed in Europe. Q: Insufficient by how much? Please indicate a monthly amount in EUR.

Host region in Europe	Average amount in EUR	Host country outside Europe	Average amount in EUR
East	910	US	1 290
France	1 570	Canada	890
Germany and Austria	800	Japan	1 180
North	1 600	Australia	1 030
South	1 050	Brazil	990
UK and Ireland	1 280	China	1 330
		India	-
		Other	950
Overall in Europe	**1 170**	**Overall outside Europe**	**1 120**

Source: analysis by PPMI, MSCA-RISE researchers and staff members survey data (n=310).

The costs of secondment mainly consist of travel, accommodation and subsistence costs; therefore, it depends on the location the researcher or a staff member goes to and the distance and frequency of travelling.

The survey data show that, on average, the MSCA researchers spend around EUR 830 to cover their accommodation costs in the host country of secondment (see Table 28). Unsurprisingly, those who claim to have received insufficient top-up allowances had higher accommodation costs than those who were satisfied with their MSCA-RISE top-up allowances. In some cases, the monthly rent can be up to EUR 1 500, which accounts for around half of the monthly top-up allowance received by a secondee.

Such variations in accommodation costs can be explained with the two following points:

- First, as we have already established in other sections of this analysis, some locations, and especially the metropolitan areas, are a lot more expensive to live in than others.
- Second, respondents also explain that rent/accommodation prices are higher for them than for regular city residents due to the nature of the mobility period related to the RISE secondments. Secondments usually last for a rather short time (up to a year, but, on average, around 3.17 months), and short-term rent prices are normally higher than long-term prices. Nevertheless, even the higher rent prices reported by RISE secondees are in line with market figures (see Table 28 and Table 29, last columns), except for Brazil and China.

Table 28. Monthly rent prices of MSCA-RISE secondees in Europe, EUR

Host region	Average for all RISE secondees[68]	Rent costs when top-up allowance is insufficient	Market cost of a 1-bedroom flat, monthly rent
East	680	830	360-910
France	990	1 260	710-1 200
Germany and Austria	700	1 000	810-1 350
North	1 070	1 500	1 050-1 500
South	840	980	580-1 050
UK and Ireland	870	1 250	880-1 650
Overall	**830**	**1 120**	**-**

Source: analysis by PPMI, MSCA-RISE researchers and staff members survey data (n=400), Estate agency rent survey, 2018[69].

Table 29. Monthly rent prices of the MSCA-RISE secondees outside Europe, EUR

Host country	Average for all RISE secondees	Rent costs when top-up allowance is insufficient	Market cost of a 1-bedroom flat, monthly rent
US	1 230	1,400	1,900 – 2,650

[68] Based on a survey question: Please indicate in EUR the amount of money you have paid monthly to cover your rent in the host country.
[69] Ibid.

Canada	990	1 130	1 030-1 130
Japan	830	1 100	3 450
Australia	1 330	1 600	980
Brazil	860	980	300
China	880	1 000	450
India	220	-	150
Other	750	960	-
Overall	**940**	**1 180**	**-**

Source: analysis by PPMI, MSCA-RISE researchers and staff members survey data (n=678).

With the MSCA survey, we have also attempted to measure the costs that RISE researchers incur for relocating to the secondment country. This includes transportation, visa, insurance and similar costs. We find that, on average, a RISE secondee spends around EUR 1,120 to relocate to another country (see Table 30). The table below also shows that the relocation costs vary by a host country.

Table 30. One-off relocation costs for RISE researchers. Q: Please estimate in EUR the total amount of one-off relocation costs you incurred when relocating from your previous/home country to host country:

Host region	Average for all RISE secondees	For secondees from Europe and associated countries	For other secondees
East	1 050	850	1 590
France	1 260	470[70]	1 850
Germany and Austria	900[71]	780	1 070
North	1 060	730	1 250
South	1 160	1 020	1 300
UK and Ireland	1 230	920	1 830
Overall	**1 120**	**880**	**1 440**

Source: analysis by PPMI, MSCA-RISE researchers and staff members survey data (n=363).

The survey data also indicate that mobility to countries outside of Europe is more costly. In the table below, we see that RISE researchers and staff members, on average, have spent EUR 1 410 to relocate to the place of a secondment.

Table 31. One-off relocation costs for RISE researchers hosted outside Europe. Q: Please estimate in EUR the total amount of one-off relocation costs you incurred when relocating from your previous/home country to host country:

Host country	Average amount in EUR
US	1 560
Canada	1 000
Japan	1 340
Australia	1 710
Brazil	1 610
China	1 750
India	1 240
Other	1 220
Overall	**1 410**

Source: analysis by PPMI, MSCA-RISE researchers and staff members survey data (n=597).

The survey data also show that due to the short duration of a secondment, most RISE researchers and staff members (around 61%) do not come back to their home countries before the end of the secondment period[72]. Furthermore, travel expenses seem to be a financial burden for some researchers. This point was mostly stressed by those, who were

[70] The relocation costs of researchers from EU and associated countries to France are the smallest, compared to other host regions. The smaller relocation cost, most likely, relate to the fact that half of the secondees represented in a sample (n=15) came from the neighbouring countries.
[71] The relocation costs to Germany and Austria are the smallest among the analysis regions, and at first glance seem like they might not portray the true situation. However, after further analysis of the survey data, we conclude that the number is true for the overall situation: (1) n is relatively big (n=64); (2) all survey responses are relevant, as there are no obvious outliers; (3) one-off relocation costs to Germany and Austria are also relatively the smallest for researchers in other actions (ITN/IF/COFUND).
[72] Travel once 18%, twice 9%, three times 6%, and the rest are negligible.

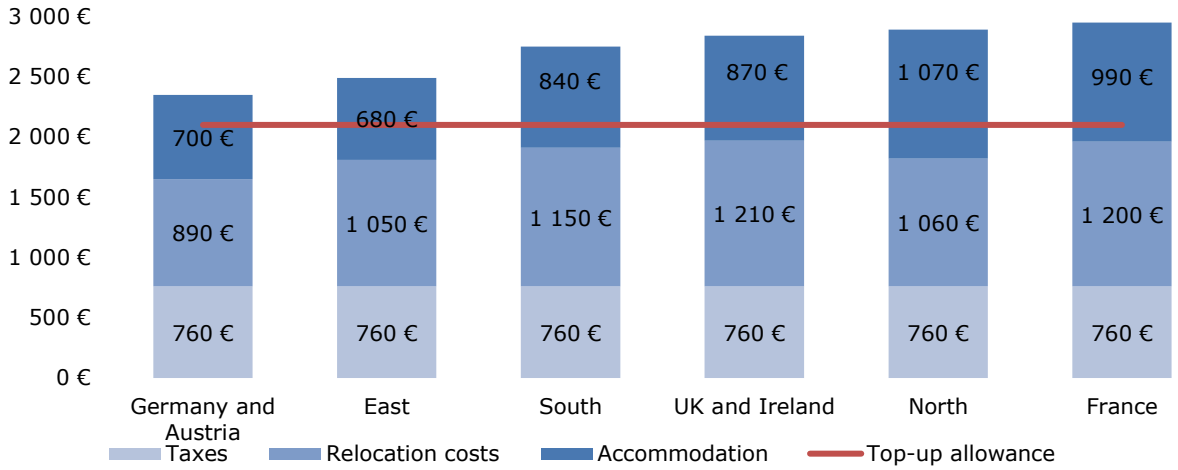
seconded for a short period. They claimed that, for example, if a secondment lasts only for a month, researchers receive only one top-up allowance, which may not be enough to cover the accommodation and a return ticket.

Unlike living allowance in other MSC actions, the top-up allowance is not subject to the country correction coefficient. This leads to differences in purchasing power of RISE researchers and staff. The Study on International Cooperation in the MSCA[73] adds that higher living standards in some European countries, especially Western European countries, means that RISE funding (top-up allowance) is not always sufficient to cover all the costs related to the mobility to Europe from the developing and ENP[74] non-associated countries. Researchers use their own resources to cover a sizeable share of costs. However, the mobile staff must often cover both their obligations at home and substitute some additional mobility costs from salaries that are much lower compared to their European counterparts. Such a situation is especially common for researchers seconded from lower-income countries.

In the figure below, we present the overview of costs that the MSCA-RISE secondees incur. The figure illustrates the average monthly amount of tax paid from the top-up allowance[75]. It also represents the relative weight of costs discussed above: one-off relocation and monthly accommodation. The amounts above the red line stand for money that RISE researchers must add from either their own pockets or receive from other resources to cover the necessary costs. The estimations were based on the comparison of the current gross top-up allowance (EUR 2 100) versus the sum of all real costs reported by the survey respondents and an average tax wedge reported by the OECD[76].

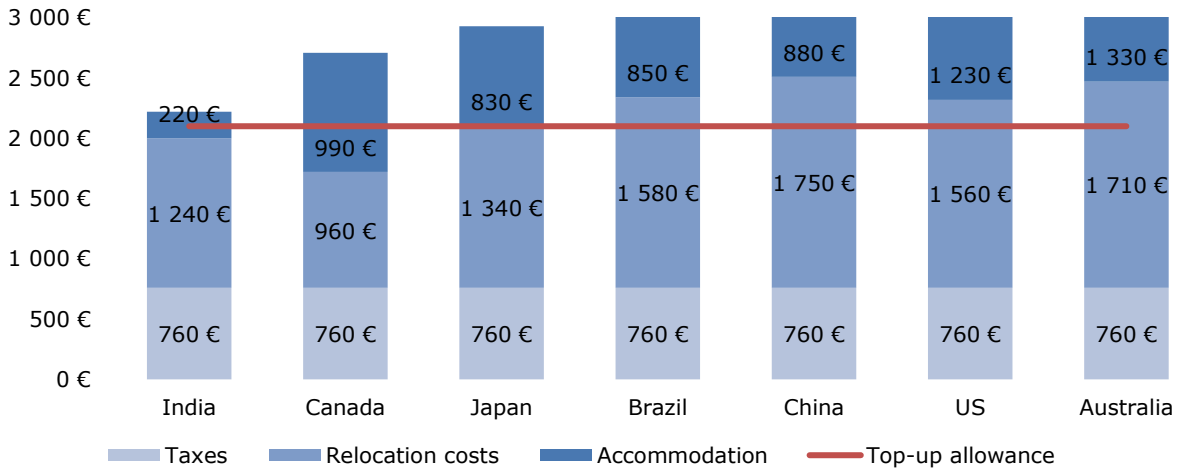
[73] Study on International Cooperation in the Marie Skłodowska-Curie Actions prepared by PPMI (2019).
[74] Countries covered by the European Neighbourhood Policy https://ec.europa.eu/culture/policy/international-cooperation/neighbourhood_en
[75] For the sake of comparison, we use average tax wedge rate for OECD countries.
[76]The OECD's Taxing Wages 2019, retrieved from: https://www.oecd.org/tax/tax-policy/taxing-wages-brochure.pdf

Figure 6. Composition of MSCA-RISE researchers' costs (host institution is in Europe)



Source: analysis by PPMI, MSCA-RISE researchers and staff members survey data, OECD tax wedges.[77]

Figure 7. Composition of MSCA-RISE researchers' costs (host institution is outside Europe)



Source: analysis by PPMI, MSCA-RISE researchers and staff members survey data, OECD tax wedges.

According to the overall analysis of costs incurred by the MSCA-RISE seconded researchers and staff, the secondees that travel to Eastern European countries and Germany and Austria incur the lowest costs. This relates to the smaller rent and relocation costs in these regions. Therefore, their secondments require only a small financial contribution from other resources. On the other hand, researchers seconded to the Northern region incur the highest costs. According to the figure above, on average, the RISE top-up allowance in the North and France is around EUR 800 short to fully cover the mobility costs. In addition, secondment costs for researchers hosted in Brazil, China, the US and Australia exceed the top-up allowance by roughly more than EUR 1 000.

The conclusion made above, however, must be taken with some caution. First, the calculations do not include all expenses that secondees could possibly incur (e.g. local transportation costs). Second, **the burden of one-off relocation costs can be mitigated when the secondment lasts for more than a month**, as those costs can be spread out over time and therefore can be covered from several top-up allowances.

[77] Ibid.

2.4. Competitiveness, attractiveness and validity of the current methodology underlying the researchers' rates in co-funded projects

The current COFUND unit costs system is structured as shown in Table 32. The European Commission currently provides funding of EUR 1 935[78] for the living allowances of the Early Stage Researchers and EUR 2 740[79] for the living allowances of the Experienced Researchers. The applying beneficiaries are obliged to provide a minimum of EUR 774 for the Early Stage Researchers and a minimum of EUR 1 096 for the Experienced Researchers. The European Commission also provides EUR 325 per researcher month to contribute to the management costs of the co-funded programmes.

Table 32. COFUND unit costs system

	Living allowance	Management and indirect costs
Co-funding of regional, national and international programmes	50% of EUR 3,870 for early-stage researchers 50% of EUR 5,480 for experienced researchers	50% of EUR 650 for management costs only

On the basis of feedback received from stakeholders, the study team has piloted and analysed an idea that in Horizon Europe the MSCA funding would cover the currently requested minimum amounts that the beneficiaries need to contribute to the living allowances, i.e. the Commission would finance the whole amount now corresponding to EUR 2 709 and 3 836[80]. The new financing regime would however not mean that the funding rate of the living allowance would be 100%. Indeed, in wealthier countries, beneficiaries will still need to co-fund part of the living allowance to ensure that it is competitive. Competitiveness of the suggested full living allowances would still be checked by the Commission during the application procedure. The applying beneficiaries would have an option to also contribute by providing co-funding for the institutional unit costs: research, training, networking, management and indirect costs.

During the study, we have focused on the following key questions related to the researchers' rates in the co-funded projects as well as the overall attractiveness and validity of the COFUND scheme:

- Is the funding provided by the current scheme attractive to those fellows and organisations, who are already participating in the COFUND action?
- Why are organisations rather reluctant to apply to COFUND, compared to the very high application rates in other MSC actions?
- Would COFUND become more attractive if the Commission fully covered the living allowances without an explicit need for the beneficiaries to contribute?

Our analysis has revealed that the funding provided by the current scheme was generally found attractive by those fellows and organisations, who are already participating in the COFUND action. Only around 13% of the surveyed COFUND fellows found their overall income insufficient. Based on the open responses in the survey questionnaires, we can see that researchers with families were the group that tended to be least satisfied with the income. The surveyed COFUND researchers have mainly pointed towards the need for some additional financing for those who have families, as the living allowance alone is not enough to support a family. High living costs in expensive cities were seen as another key reason why income was seen as insufficient. The reasons for

[78] 50% of EUR 3 870.
[79] 50% of EUR 5 480.
[80] 1 935+774 for ESR, and 2 740+1 096 for ER. These amounts correspond to 70% of the amounts that ITN and IF fellows currently receive for their living and mobility allowances (i.e. 3 870 and 5 480, respectively).

dissatisfaction with funding were very similar among the COFUND fellows and this was also true of the IF and ITN fellows. COFUND researchers, who found their income insufficient, claimed that, on average, they would need an additional EUR 900 to make ends meet. This would be in line with the idea to cover the currently requested minimum amounts that the beneficiaries need to contribute to the living allowances (EUR 774 for ESRs and EUR 1 096 for ERs), and also takes into account the finding from the survey of COFUND organisations, which shows that COFUND organisations are generally willing to further contribute with their own resources or from the management and indirect unit costs provided by the Commission.

There were 23 COFUND organisations participating in our survey, 65% of which claimed to have contributed further to what was necessary to the living allowances either from their own resources or the institutional unit costs. These organisations have explained that the main reason why they have contributed additional funding was the insufficiency of the formally required contribution to the living allowance to meet the national requirements/sectoral agreements or to make the programme attractive for the best researchers.

To summarise the above analysis, the survey of those researchers and organisations, who are already participating in the COFUND action, revealed their overall satisfaction with the funding provided by the scheme. However, there is still the question of why then the application rates to COFUND are rather low compared to other types of action. We have tackled this question through consulting the experts in the key stakeholder organisations (such as EUA, LERU, The Guild of European Research-Intensive Universities, Coimbra Group, CESAER, EURODOC, ACA, EARMA), MSCA National Contact Points and a number of long-term managers of the MSCA projects. The following key consensus insights have emerged from the expert interviews as regards the validity and attractiveness of the COFUND scheme:

- **The experts emphasised that the major challenge is, of course, to find the funding resources to co-fund the project and in particular the living allowances.** They have also explained two main types of beneficiaries and the situations they find themselves in, when applying to COFUND. First, some of the beneficiaries may be research funding organisations or research performing institutions, who are already running mobility programmes. In these cases, organisations are most willing to apply to COFUND, since they already have either their own resources (if they are research funding organisations) or they have already secured funding from other sources (in those cases where research performing organisations are regularly running the mobility programmes). Second, some organisations, who want to apply to COFUND, are research performing organisations (e.g. universities) that are not regularly running mobility programmes. In these cases, organisations tend to first ensure co-funding from other sources before applying to the MSCA COFUND. In many cases, it is difficult to ensure other funding resources, or, in other cases, the funding resources secured nationally may already be sufficient and then there is not much willingness to apply to COFUND. To summarise, the organisations are willing to apply to COFUND only in special cases: (1) when they are already regularly running research mobility programmes and are sure to have co-funding for this; (2) when the organisations attract certain additional funding and they know that it could be used to co-fund the MSCA project.
- **The willingness to apply to COFUND (even in the two beneficial cases mentioned above) is diminished due to the need to go through the demanding application procedure (and the need to wait quite some time for the outcome).** Even in those cases, where the organisations have secured other funds, they are assessing if further funds are completely necessary (having in mind the demanding application process).

- **In some countries (especially, in Eastern Europe), the minimum mandatory co-funding amount (EUR 774 for the Early Stage Researchers and EUR 1 096 for the Experienced Researchers) may be too high**, since the regular national fellowships for PhD students and post-docs in these countries may be lower, and therefore the organisations are unwilling or unable to contribute more that they would have to nationally.
- **On the other hand, in the majority of countries (especially, in Western and Northern Europe), the amount paid by the institutions especially for the ERs (based on the collective agreement and the job structure) is much higher than the minimum amount required by the programme.** This means that in reality, according to the national law and agreements, the beneficiaries have to contribute a much higher amount of funding than the minimum foreseen by the MSCA rules.
- **We found that often even the experts did not know that COFUND actions could be co-funded from the European Structural and Investment Funds (ESIF)**. **The Commission should better communicate this opportunity for the potential beneficiaries to achieve synergies between the MSCA COFUND and ESIF. On the other hand, the experts emphasised that the limiting factor is the ineligibility to co-fund the living allowance and the management costs from the ESIF.** As provided by the COFUND guide for applicants: "The underlying objective of synergies and complementarities between MSCA COFUND and ESIF is to achieve more competitiveness, jobs and growth in the EU in a strategic and cohesion-oriented manner. Regions/countries setting up a COFUND project may enlarge the scope and increase the impact of their programme with additional co-funding from ESIF. These synergies can be implemented through sequential funding or parallel cumulative funding and could be of particular interest to regions/countries that have planned such kinds of objectives and priorities in their ESIF Operational Programmes (incl. widening countries). In practice, cost items other than the living allowance and management costs may be supported through ESIF, provided that such modalities/possibility are foreseen in the relevant regional/national operational programmes. For example, costs relating to the development of research infrastructures or research costs relating to equipment purchase could be supported through the European Regional Development Fund (ERDF). Costs relating to training and networking activities of the programme, the travel and mobility allowances to take up the trainings could be supported through the European Social Fund (ESF)."
- **The experts have also pointed to a lot of other costs that need to be funded by the beneficiaries during the COFUND projects.** Institutions have to cover a large amount of management and overhead costs. As the programme does not cover the mobility and family allowance, despite having the same mobility requirements as other MSCA actions, many institutions offer to cover 100% of those costs. Research costs are not covered by COFUND, nor is travel to or participating in conferences. All these costs need to be covered by the institution or by the researcher, who then has to acquire additional funding. This leads to a lot of stress for the researchers because either they do not have enough money to thoroughly conduct their research or they spend less time on research because in between they have to find additional funding.
- **The experts were very supportive of the piloted idea that the MSCA programme could cover the currently requested minimum amounts that the beneficiaries need to contribute to the living allowances**. The experts agreed that this would encourage more organisations from the Widening Countries to participate, while it would also decrease the top-up amount that is necessary in Northern and Western countries. Finally, the experts agreed that the institutions would have more flexibility to co-fund the institutional unit costs, not least because they are in any case doing research on an everyday basis and possess research

infrastructure, consumables and other types of inputs necessary for research. This would also create better synergies with the ESIF, which could co-fund institutional costs and infrastructure costs. Finally, in many Western and Northern European countries (where there are sectoral agreements) the institutions may still need to co-fund the living allowances. However, the additional funding from the Commission would make this more feasible.

- **The experts have also criticised the complicated way in which the COFUND unit costs system is explained**. The Commission says that it is funding 50% of the living allowances, while the minimum amounts that the organisations have to contribute are lower than 50%, which means that the Commission may provide more than half of the funding for the living allowance[81]. The experts suggested simplifying the presentation by stating the exact number in EUR that the Commission could provide together with the minimum amount, which the beneficiaries have to contribute (if any, under the new regime).
- **According to the experts, research performing organisations (e.g. universities), who have not ensured additional funding from other sources, are then applying to ITNs, which could cover up to 100% of the costs**.

To conclude, the analysis of the survey results has revealed that the funding provided by the current scheme was generally found attractive by those fellows and organisations who are already participating in the COFUND action. This means that the organisations that are currently running COFUND projects are able to ensure attractive and competitive conditions for the involved fellows. However, the capacity of the scheme to attract more organisations is limited mainly because of the necessity to co-fund the living allowances. The idea piloted by the study team that the MSCA could cover the currently requested minimum amounts that the beneficiaries need to contribute to the living allowances would particularly benefit the Widening countries. In the latter countries, the minimum mandatory co-funding amount (EUR 774 for the Early Stage Researchers and EUR 1 096 for the Experienced Researchers) may be too high compared to what they pay nationally. Finally, the new funding scheme would also benefit wealthier countries, since they would have to top up smaller amounts of funding.

2.5. Conclusions and recommendations related to the researchers' unit costs

The study found that, on average, income received by the MSCA fellows in ITN, IF and COFUND is 20% more generous than the income of their peers working at the same institution[82]. In Eastern Europe, the compensation of the MSCA fellows is, on average, more than twice as generous as that received by their peers working at the same institution. In Northern Europe, the MSCA fellows receive around the same salaries as their peers.

To achieve this competitive and attractive level of remuneration for fellows, the MSCA organisations sometimes had to top up the living allowances either from their own resources or from the institutional unit costs provided by the MSCA. In some cases, the top-up was necessary to make sure that the remuneration of researchers is in line with the national laws and sectoral agreements. In total, 19% of all surveyed organisations said that they have topped up the living allowances of the MSCA researchers from their own resources. More organisations said that they have topped up the MSCA

[81] The COFUND researcher unit cost is described as follows by the Commission: a co-funding rate of 50% is applied to the researcher unit cost (calculated as living and mobility allowance). Beneficiaries are required to pay the fellow at least 70% of the researcher unit cost which shall include both the EU contribution (corresponding to 50% of the researcher unit cost) and the beneficiary's own contribution (corresponding to at least 20% of the researcher unit cost)

[82] Taking into account the MSCA allowances (living, mobility, family) and a possible top-up provided by the host organisations.

allowances for ESRs (25%) than for ERs (13%). As many as 35% of organisations from Northern Europe and 27% of organisations from Germany and Austria said that they have topped up the living allowances of the fellows. No organisations in Eastern Europe claimed that they provided top-up funding, while interestingly top-up funding was also not common in the UK and Ireland.

Based on the above, the overall conclusion of the study is that MSCA living allowances are attractive and competitive as they are, and there is no need for structural changes. However, as in the previous review of the MSCA unit costs, we recommend updating the MSCA living allowances on the basis of inflation or the labour costs index, so that the allowances sustain their purchasing power in Horizon Europe.

Recommendation 1:

Option A (preferred): Increase the living allowance based on inflation for the MSCA ITN to EUR 3 450 and IF actions to EUR 5 150.

We suggest using the Harmonised Index of Consumer Prices (HICP) to update the MSCA living allowances on the basis of inflation. HICP is designed for the international comparisons of consumer price inflation. Living allowances, adjusted based on inflation, will maintain the same purchasing power. For the purpose of this study, we suggest using the HICP for Belgium, since Belgium (and Luxembourg) inflation rates are used to update the salaries of the Commission services. This method was also used in the previous study on updating the MSCA researchers' unit costs. The recommended amounts are set to the forecasted price level of 2021 (launch of Horizon Europe).

	Current amount	2018	2019 (forecast)	2020 (forecast)
HICP for Belgium:	-	2.3%[83]	1.5%	1.6%
ITN (ESR) living allowance, EUR	3 270	3 345.21	3 395.39	3.449,71
IF (ER) living allowance, EUR	4 880	4 992.24	5 067.12	5 148.20

Option B: Increase the living allowance based on the labour costs index for the MSCA ITN to EUR 3 550 and IF actions to EUR 5 300.

Alternatively, we suggest using the Labour Cost Index to update the MSCA living allowances. The change in the average earnings in the EU and its Member States is most commonly (e.g. by DG EMPL) assessed through Eurostat's analysis of the labour costs index and the annual growth in labour costs. Labour costs index (wages component) is a better predictor of an increase in salaries (including for researchers), as salaries change at a different pace than price levels. For the last few years, wages have been growing faster than prices, therefore keeping up with the overall wage growth in Europe would ensure the same level of competitiveness of the MSCA living allowance as currently. As a counter-argument to this option, if such a method were used to update the allowances, the unit costs would deviate from the historically well-established system of updating the unit cost rates on the basis of HICP that is already used (and proposed to continue) for updating other types of MSCA unit costs. Nevertheless, if the Commission decides to use the labour costs index to calculate the MSCA researchers' unit costs for the beginning of 2021 (launch of Horizon Europe), the rates should be set at EUR 3 550 for MSCA ITN and EUR 5 300 for MSCA-IF, based on the calculations presented below.

	Current amount	2018 Q4	2019 Q1	2020 (forecast)
Annual growth in labour costs in the EU28[84]	-	3%	2.7%	2.7%[85]
ITN (ESR) living allowance, EUR	3 270	3 368.1	3 459.04	3 552.43
IF (ER) living allowance, EUR	4 880	5 026.4	5 162.11	5 301.49

Option C: Keeping in mind the high oversubscription rate in the programme, the Commission may consider keeping the same rates for living allowances in order to increase the number of researchers benefiting from the MSCA.

In 2017, the MSCA oversubscription rate was 444%[86], which suggests that the programme is highly attractive and competitive. In addition, the survey results indicate that the absolute majority (86%) of researchers are

[83] Eurostat: https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00118&plugin=1
[84] Eurostat: https://ec.europa.eu/eurostat/documents/2995521/9832262/3-17062019-AP-EN.pdf/12869f6b-527a-4972-95f9-95fbcc6e052b
[85] As there is no official forecast, we are using the same rate for 2020 as for 2019.
[86] FP7 ex post and H2020 interim evaluation of Marie Skłodowska-Curie actions (MSCA) Final Report (2017).

satisfied with their MSCA income. Therefore, keeping the same rate of living allowance for ITN and IF fellows would not have a significant effect on the quality of the projects and at the same time would save resources. Consequently, this solution could be used to maximise the number of MSCA projects and increase the number of fellows funded. On the other hand, if the Commission decides to keep the size of a living allowance unchanged, the researchers will experience some decrease in purchasing power. The attractiveness and competitiveness of the programme may be reduced in this scenario.

As few as 14% of IF, ITN and COFUND fellows hosted in Europe found their MSCA income insufficient. We further analysed the survey data to understand what drives the perceived insufficiency of the MSCA income. The evidence collected through the open replies to surveys, but also supported by the outcomes of the expert interviews and consultations with the Commission, suggests that the main drivers of the perceived income insufficiency are (1) the costs related to family, (2) rent costs and (3) relocation costs. To further assess the relative impact of these three variables on the perceived income insufficiency reported by the MSCA fellows, we ran a logistic regression[87], which, as part of the model, included these three variables in addition to other relevant contextual variables such as host country, level of experience (ESR vs ER), etc.

Based on the regression results, **we conclude that having a family during the MSCA fellowship period is by far the strongest explanatory variable associated with the perceived insufficiency of the MSCA income.** The regression results indicate that having a family corresponds to 68% lower odds that an MSCA researcher will consider their income as adequate. Secondly, the relative increase in the rent costs also harms the perceived adequacy of the MSCA income. Based on the calculated coefficient, we conclude that an increase in the rent costs by EUR 100 makes an MSCA researcher 21% more likely to report insufficient income. Third, the regression results have also revealed a somewhat expected conclusion that the experienced researchers are more satisfied with their income than the early stage researchers. Finally, the regression results also show that the relative increase in the relocation costs does not have a significant impact on the perceived insufficiency of the MSCA income.

These results suggest that if any change is considered at all, the first change should be to increase the family allowance, since having a family is clearly the number one cause why any MSCA researcher would be unhappy with the income received. Secondly, the attractiveness of the MSCA would also be slightly increased by increasing the mobility allowance, as higher rent costs also have a significant (although small) negative impact on the researchers' satisfaction with the MSCA income. However, as noted above in section 2.3.2, researchers are expected to cover rent costs also from their living allowances. Therefore, if only one change is possible due to budget limitations, we would suggest acting only on the family allowance. This would also make the programme more socially inclusive and would certainly enable more researchers who are parents to be part of the MSCA[88]. Finally, the size of the relocation costs does not have an important impact on the perceived insufficiency of the MSCA income.

Having considered all of the above, we recommend focusing all attention on significantly increasing the family allowance, while keeping the mobility allowance unchanged to take into account the limited budget.

Recommendation 2:

Option A (preferred): Increase the family allowance for the MSCA ITN and IF actions to EUR 660.

[87] For a detailed analysis, please see section 2.3.4. of this report.
[88] Increase in the family allowance would also benefit persons without children who are in a legally recognised relationship. This may also increase their freedom to consider having children, while on mobility.

As shown above, having a family during the MSCA fellowship period is by far the strongest explanatory variable associated with the perceived insufficiency of the MSCA income. The logistic regression results indicate that having a family corresponds to 68% lower odds that an MSCA researcher will consider their income as adequate. Furthermore, out of all researchers who thought that their income during the MSCA was not adequate, 48% had families. Only 24% of the researchers, who claimed that their income during the MSCA was sufficient had families. These findings provide a strong quantitative basis for a significant increase in the family allowance.

Based on the results above, we suggest increasing the family allowance. The only question remains: by how much? We have worked under the assumption that the updated family allowance should be calculated on the basis of the needs of all researchers with families, both those, who found their income sufficient and insufficient (we have to take into account that there were also researchers with families, who found their income sufficient). As shown in the sections above, researchers that do not have families were able to cover almost all of their costs (they have reported that their income was insufficient, on average, by EUR 50), while researchers with families, on average needed an additional EUR 210 (taking into account also researchers with families, who found their income sufficient). We suggest using these numbers as a basis for increasing family allowance and calculating the suggested increase of the family allowance as the difference between the perceived lack of income reported by all MSCA researchers (EUR 50) and those researchers, who have families (EUR 210). Therefore, the suggested increase of the family allowance in Horizon Europe would be EUR 160.

Option B: Increase the family allowance based on inflation to EUR 530.

Alternatively, if in the light of budget limitations the Commission considers not making any structural changes to the family allowance (per Recommendation 2, Option A), we suggest at least updating this unit cost based on inflation in order to maintain the same purchasing power of MSCA researchers with families. Family cost analysis in sections 2.3.3. and 2.3.4 indicate that there is a clear need for the family allowance to be updated, as explained above.

Similar to the previously discussed MSCA unit cost categories, we suggest using the Harmonised Index of Consumer Prices (HICP) of the forecasted level of inflation for 2021. An increase in family allowance under Recommendation 2 Option B would have a smaller effect on the overall MSCA budget; therefore, it would allow financing more MSCA fellows (compared to Option A). However, in this case, we strongly prefer Option A.

Adjusted according to the HICP for Belgium, the family allowance should be set at EUR 530, as shown in the calculations below.

Table 33. Updating the mobility unit costs according to the HICP for Belgium

	Current amount	2018	2019 (forecast)	2020 (forecast)
HICP for Belgium:	-	2.3%[89]	1.5%	1.6%
Mobility allowance, EUR	500	511.50	519.17	527.48

Source: calculations by PPMI.

Recommendation 3:

Option A (preferred): Keep the mobility allowance unchanged.

The mobility allowance, by its design, is meant to contribute to covering the mobility costs (relocation, rent) of the MSCA researchers. Although the real costs and market data analysis show that the mobility allowance alone cannot cover the entire cost of rent and at the same time contribute to other mobility costs, the researchers are expected to cover their rent costs from their living allowances as well. In addition, high overall satisfaction (86 %) with the MSCA income justifies a 'no change' option. As a result, keeping the rate of mobility allowance unchanged would not significantly undermine the adequacy of the current allowance, and would enable funding a larger group of researchers and allocating the limited funding for the increase of the family allowance, which will have a much higher impact in the current circumstances, as explained in detail above.

Option B: Increase the mobility allowance based on inflation to EUR 630.

The mobility allowance has not been updated since 2014. The MSCA unit costs review conducted in 2017 indicated that the mobility allowance was still in line with the market costs, therefore no changes were made.

[89]Eurostat: https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00118&plugin=1

Nevertheless, since 2017, costs of living have continued to increase and thus have reduced the purchasing power of the mobility allowance. According to the Eurostat statistics, the costs of living in 2021 are forecasted to increase by more than 5%, compared to 2017 prices (since the last review of MSCA unit costs).

As for other unit cost rates, we have tested updating this unit cost on the basis of inflation. To have the harmonised approach for updating the unit costs, here (as well as for other unit costs) we have used the Harmonised Index of Consumer Prices (HICP). Adjusted according to the HICP for Belgium, the mobility unit costs would be set at EUR 630, as shown in the table below.

Table 34. Updating the mobility unit costs according to the HICP for Belgium

	Current amount	2018	2019 (forecast)	2020 (forecast)
HICP for Belgium:	-	2.3%[90]	1.5%	1.6%
Mobility allowance, EUR	600	613.80	623.01	632.97

Source: calculations by PPMI.

Therefore, if the MSCA budget constraints allow, after taking account of the increase of the family allowance, the mobility allowance could be updated based on inflation, using the Harmonised Index of Consumer Prices (HICP). The mobility allowance adjusted to the forecasted level of inflation for 2021, will ensure that the MSCA researchers are able to maintain the same level of purchasing power, also with respect to mobility-related costs. HICP is the most suitable index, because it can be applied to all of the MSCA unit costs, which leaves no room for confusion and it is convenient to use in the future reviews of the MSCA unit costs.

The funding provided by the current COFUND scheme was generally found attractive by those fellows and organisations who are already participating in the COFUND action. This means that the organisations, that are currently running COFUND projects, are able to ensure attractive and competitive conditions for the involved fellows. However, the capacity of the COFUND scheme to attract more organisations is limited mainly because of the necessity to co-fund the living allowances. Based on the inputs from the stakeholders, the study team has piloted the idea that the Commission could cover the requested minimum amounts, which the beneficiaries currently need to contribute to the living allowances. The experts have agreed that this would increase the attractiveness of COFUND. It would particularly benefit the Widening countries. In the latter countries, the minimum mandatory co-funding amount (EUR 774 for the Early Stage Researchers and EUR 1 096 for the Experienced Researchers) may be too high compared to what they pay nationally. The new funding scheme would also benefit wealthier countries since they would have to top up smaller amounts of funding. Finally, the experts agreed that the institutions would have more flexibility to co-fund the institutional unit costs because they are in any case doing research on an everyday basis and possess research infrastructure, consumables and other types of inputs necessary for research. This would also create better synergies with the ESIF, which could co-fund institutional costs and infrastructure costs.

Recommendation 4: Cover the minimum amounts currently co-funded by the beneficiaries and effectively cover 70% of the living allowances + mobility allowances paid in ITN for ESRs and in IF for ERs.

Currently, the COFUND rates are set at 50% of (living allowance + mobility allowance) in ITN (ESRs) and IF (ERs) or 50% of EUR 3,870 for ESRs and 50% of EUR 5,480 for ERs. The beneficiaries have to contribute minimum amounts corresponding to 20% of each allowance, to ensure the required minimum salary is covered. The evidence of the study above has supported the idea to cover the minimum amounts currently co-funded by the beneficiaries and effectively cover 70% of the living allowances + mobility allowances. For the purpose of this recommendation, we take the HICP-adjusted living allowances, which were already recommended above for the launch of Horizon Europe.

We suggest retaining this methodology in Horizon Europe and setting the following rates in COFUND, by using the new rates for other actions proposed by this study:

[90]Eurostat: https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00118&plugin=1

- For ESRs: (3 450 + 600) * 0.7 = EUR 2 835.
- For ERs: (5 150 + 600) * 0.7 = EUR 4 025.

The actual sums in EUR for this recommendation were calculated on the basis of the preferred recommendations suggested above for updating the living and mobility allowances.

This recommendation is suggested bearing in mind the possibly high added value and the limited impact of it on the MSCA budget due to the fact that there are significantly fewer fellows funded in COFUND than in other actions. In addition to this, the recommendation may have a significant added value, if the re-designed system were to attract more applicants to the COFUND scheme. In such a scenario, a stronger leverage effect would be achieved because of the increased attractiveness of the programme through the additional funds provided by the beneficiaries, i.e. funds that would not have been available for the MSCA in other circumstances would become available under this scenario. If the policymakers' calculations show that this recommendation would have too high an impact on the budget, we would suggest dropping it in favour of increasing the family allowance and upgrading the living allowances on the basis of inflation.

RISE-seconded researchers and staff tend to be less satisfied with the RISE top-up allowance than the ITN, IF and COFUND fellows with their living allowances. **On average, 25% of RISE researchers hosted in Europe and 34% of RISE researchers hosted in the analysed control group of third countries said that their RISE top-up allowance was insufficient.** This was felt the strongest by the researchers hosted in high-income countries: Northern Europe, France, UK and Ireland, Australia, and the US. The analysis of real costs incurred by RISE researchers showed that the RISE top-up allowance was almost always insufficient to cover the rent and relocation costs of short duration secondments (1-2 months). On the other hand, for many RISE researchers going to secondments of three and more months, the top-up allowance would be able to compensate even higher relocation costs and rent. We also consider that some of the mobility costs should be covered by the salaries of researchers.

We found that **the most vulnerable RISE researchers, who were not satisfied with their RISE top-up allowance, were exercising mobility from low-income countries to high-income countries.** This finding is corroborated with the conclusions and recommendation that we have recently made in our study on international cooperation in the MSCA[91]. The latter study has revealed that the total individual funding (usually consisting of home salary and a top-up allowance) was often insufficient to cover the real costs incurred by the seconded researchers from developing and the non-associated European Neighbourhood Policy countries going to Europe (a very low home salary was a major reason of insufficient income). This was subsequently seen as an obstacle by institutions from developing and the European Neighbourhood Policy countries not associated to Horizon 2020. It has been preventing them from participating in RISE projects and therefore hindering the MSCA objective to foster international cooperation; they understood that their seconded researchers and staff would incur financial losses as a result of going to Europe. The study on international cooperation has, therefore, recommended looking for ways to increase the total income of RISE researchers going from low-income countries to high-income countries in Europe. In addition to other possible ways to increase the income of RISE researchers (e.g. negotiating co-funding agreements with third countries), we have suggested looking for ways to increase the RISE top-up allowance for researchers from low-income countries.

Recommendation 5:

Option A (preferred): Increase the RISE top-up allowance for all seconded researchers at a more ambitious pace than inflation to EUR 2 220-2 320

The study findings showed that the RISE-seconded researchers and staff tend to be less satisfied with the RISE top-up allowance than the ITN, IF and COFUND fellows with their living allowances. On average, 25% of RISE researchers hosted in Europe and 34% of RISE researchers hosted in the analysed control group of third

[91] Study on International Cooperation in the Marie Skłodowska-Curie Actions (PPMI, 2019).

countries said that their RISE top-up allowance was insufficient. Based on these findings, there may be a need to structurally increase the RISE top-up allowance for all RISE seconded researchers and staff at a more ambitious pace than simply updating the rate according to the HICP inflation index.

Adjusted according to the HICP for Belgium, the top-up allowance to RISE researchers and staff members should be set at EUR 2 220.

Table 35. Updating the MSCA researchers' unit costs according to the HICP for Belgium

	Current amount	2018	2019 (forecast)	2020 (forecast)
HICP for Belgium:	-	2.3%[92]	1.5%	1.6%
Top up allowance, EUR	2 100	2 148.30	2 180.52	2 215.41

Source: calculations by PPMI.

However, on the basis of evidence presented above, we suggest setting an increased top-up allowance rate for all RISE secondees at around EUR 2 220-2 320 (the actual amount to be decided by the Commission on the basis of further budgetary considerations). Setting a RISE top-up allowance at EUR 2 220-2 320 would both maintain the purchasing power of all secondees (by taking into account the inflation index) as well as increase the attractiveness of the RISE action especially to third country secondees and those hosted in more expensive areas. Furthermore, this option would not lead to any major structural changes of the whole funding framework, as suggested in option C below.

Option B: Increase the general RISE top-up allowance based on inflation to EUR 2 220.

As a second option, the Commission may also consider updating the RISE top-up allowance only on the basis of inflation by using the Harmonised Index of Consumer Prices (HICP). The RISE top-up allowance, adjusted based on inflation, will maintain the same purchasing power as currently, although it would not take into account the need to further increase the attractiveness for third country secondees. For the purposes of this study, we suggest using the HICP for Belgium, since Belgium (and Luxembourg) inflation rates are also used to update the salaries of the Commission services. This method was also used in the previous study on updating the MSCA researchers' unit costs and is a harmonised approach that can be applied to all MSCA unit costs. The recommended amount is set to the forecasted price level of 2021 (launch of Horizon Europe).

Option C: Increase the RISE top-up allowance by a further EUR 300 for researchers and staff members coming from third countries that are eligible for funding under the Horizon Europe programme to the EU and Associated Countries.

As an additional option, we suggest defining the increased rate of RISE top-up allowance by looking at the responses to the survey of RISE researchers. In the survey, the MSCA-RISE secondees from the third countries have indicated the amount in EUR that they would need in addition to their top-up allowance in order to cover the costs related to the secondment. Researchers claim to have lacked from EUR 100 to EUR 3,500. However, keeping in mind the large overall satisfaction rate with the MSCA-RISE top-up allowance (110 researchers out of 142 find the top-up allowance adequate), we also account for those who were not short of funds. Therefore, the average RISE secondee from an eligible third country needs an additional EUR 300, to cover all additional costs related to the secondment.

Introduction of an increased RISE top-up allowance (EUR 2 220 + EUR 300) for researchers from such lower-income countries would strongly contribute to the overall objective of RISE to foster international exchanges. It would also be justified should the MSCA like to increase its international dimension. On the other hand, a structural increase, as it is recommended here, would require a larger share of the MSCA budget to be allocated to secondees from these third countries, and thus, would lead to a reduced overall number of RISE-funded researchers/staff. In addition, it should be considered that such a structural change, implying two distinct rates, would add an additional layer of complexity to the overall financial system of the programme.

[92] Eurostat: https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00118&plugin=1

3. Review of institutional unit costs

In the MSCA, there are two types of institutional unit costs:

1. **Research, training and networking costs** that are expected to contribute to expenses related to, for example, the participation of researchers in training activities, conferences, workshops, expenses related to research costs (access to research facilities and data, research dissemination, covering the costs of publishing in open access), costs for visiting researchers, tuition fees (where applicable), visa/residency cards for recruited researchers, secondment costs.
2. **Management and indirect costs** that are expected to contribute to expenses related to the management of the action. Such expenses may include hiring a full-time or part-time project manager, paying higher salaries to current employees involved in the management of the project, operating and maintaining the physical plant (building upkeep, campus security, ground care and custodial services), departmental administration of grant preparation and expenditure tracking.

Table 36 shows the current amounts of institutional unit costs paid to the MSCA beneficiaries under each type of MSCA.

Table 36. Current amounts of institutional unit costs

	Research, training and networking costs per researcher month	Management and indirect costs per researcher month	Total institutional costs per researcher month
ITN	EUR 1 800	EUR 1 200	EUR 3 000
IF	EUR 800	EUR 650	EUR 1 450
RISE	EUR 1 800	EUR 700	EUR 2 500
COFUND	N/A	50% of EUR 650 for management costs only	EUR 325

As per the Technical Specifications, the main aims of this section were to:

- **Assess the appropriateness of the institutional unit costs compared to the actual costs incurred** since the entry into force of the current unit costs system, with regard to both research, training and networking costs, and management and indirect costs.
- **Verify the existence of additional costs incurred by the MSCA beneficiaries for dissemination**, including those additional costs necessary to ensure open access to scientific publications to comply with the MSCA grant agreement obligations.
- **Analyse recent trends in institutional costs related to doctoral and post-doctoral research** (such as research, training and networking costs), considering, if relevant, differences between early stage/doctoral and experienced/post-doctoral researchers[93].

3.1. Evidence from the expert interviews: main insights on the institutional unit costs

As part of the study, we carried out expert interviews with key stakeholder organisations (such as EUA, LERU, The Guild of European Research-Intensive Universities, the Coimbra Group, CESAER, EURODOC, ACA, EARMA), MSCA National Contact Points and a number of long-term managers of the MSCA projects. Whenever we mention the insights from the interviews, we point out only those arguments, where a strong majority of (if not all) experts shared the same opinion. The following key consensus insights have emerged from the expert interviews as regards research, training and networking unit costs:

[93] To be in line with the requirements of the Technical Specifications related to the length of the report, analysis of the recent trends in institutional unit costs related to doctoral and pots-doctoral studies are provided in: Annex 2 (costs of publishing in open access) and Annex 3 (costs of conferences and training events). Key insights stemming from these annexes are included in the main text of the report.

- **No good argument seems to exist to explain why research, training and networking unit costs are significantly lower for IF (EUR 800) compared to ITN and RISE (EUR 1 800 each).** While the experts agreed that the PhD students in ITNs may need more funding, particularly for training activities, the interviewees also thought that the experienced researchers in IFs would usually need more funding to ensure open access to their publications in higher-impact journals, to access more expensive research materials (consumables), databases and infrastructures, as well as to buy more expensive tickets to high-level conferences. All interviewed experts agreed that the research, training and networking costs for IFs should be increased.
- **If the action produces a high number of high-impact publications, research, training and networking unit costs may not be sufficient to cover the availability of these publications in paid open access. This risk seems to appear only for individual fellows** who are producing the highest-impact publications. Most expensive open access publications could cost around EUR 5 000, while an individual fellow in a project lasting 36 months may receive up to EUR 28 800 for research, training and networking. The majority of European fellows would receive even less in 24 months – up to EUR 19 200. In some cases, individual fellows may either face a situation where they are unable to publish or where almost all the funding is consumed by publishing, and therefore there is a lack of funding for other costs. As explained by the experts, this issue seems to be rare in other types of actions.
- On the other hand, both expert interviews and open responses to the survey questions revealed **a strong sentiment among the fellows and other participating researchers against paying to publish in open access**, if it is possible to avoid it. Both experts and researchers participating in the MSCA reported that they try to avoid publishing in paid open access journals, if possible, and are rather directing the saved funding to core research activities (consumables, use of laboratories, buying data, going to conferences and training, etc.). As an alternative, the MSCA researchers are aiming to publish in well-regarded unpaid open access repositories provided by the universities. The experts commented that publishing in open access repositories of the leading universities may be seen as prestigious as publishing in well-known paid open access journals. There was a general sentiment that the costs of publishing in open access (particularly, gold open access) are too high and ungrounded, and that using the provided funding for the actual research is more sensible. However, many experts and researchers said that they would pay (and have paid) for publishing in open access in those cases, where their article was accepted by the most prestigious journals. There was a strong consensus among the experts and surveyed researchers that the Commission should not increase the research, training and networking unit costs on the basis of more funding for publishing in open access, since this funding would be simply absorbed by the leading publishers and would likely incentivise them to increase the prices of publishing even further.
- **In order to simplify and clarify the funding rules, it would be sensible to better align or even equalise the amounts of research, training and networking unit costs for all types of actions**, where these unit costs are paid (i.e. ITN, IF and RISE), while management and indirect costs could also be aligned/equalised for the host-driven actions, i.e. ITNs and RISE.
- **Research, training and networking unit costs currently provided for ITN actions may be somewhat too generous, in particular for ITNs with a large number of recruited fellows.** However, the majority of experts provided two main arguments for why the research, training and networking unit costs should not be decreased for ITNs. First, ITN funding is provided for up to 36 months, while normally in Europe it takes 48 months or more to complete a PhD degree. Therefore, it has to be considered that the organisations are usually spreading the

received funding over 4 years or more, and not 3 years[94]. Second, the experts emphasised the need to make sure that the research activities, innovative training activities and collaborations taking place under the ITNs are sustainable. Therefore, the additional funding could be used to sustain the collaborations and innovative training activities that have started as a result of receiving an ITN grant. According to the experts, the key added value of the MSCA ITNs is the innovative approach to PhD training, which tends to diminish after the MSCA funding stops. Of course, if the no profit principle is considered, the funding to ensure the ITNs are sustainable must be invested while the project is still ongoing.

- **The overall architecture of RISE was questioned by the experts**. While, in principle, RISE should focus on promoting intersectoral and international secondments, currently RISE is often seen by the participating organisations as a regular Horizon 2020 research project with secondments as an add-on. This stems from the overall architecture of RISE, i.e. the need to develop a research project, on which the secondments would be based. A situation is thus created where the research project takes priority over the secondments and therefore the secondments begin to be seen as a burden, while they actually should be the core focus of RISE. This also creates a situation, where RISE beneficiaries claim that research, training and networking unit costs are insufficient, but, according to the experts, this only happens because RISE is seen as a research project rather than a mobility project. The experts therefore suggested rebalancing the RISE funding system so that it encourages the participating organisations to focus at least to the same extent on both the secondments and on the research project[95]. One of the ways to do this would be to decrease funding for research, training and networking, while increasing funding for the management and indirect costs, which have the highest impact on the capacity to organise secondments.

The following key consensus insights have emerged from the expert interviews when it comes to management and indirect unit costs:

- **Experts emphasised problems stemming from the fact that management costs are included in the same category as indirect costs (also known as overheads).** Especially in large institutions (primarily universities, but also businesses), internal rules and regulations require that all indirect costs/overheads would be directly transferred to the central budget of the institution. This means that the research teams (often at the faculty/unit level) of large organisations end up either transferring all management and indirect costs to the central budget (which means that they lose any funding for management of the project, e.g. to hire a project manager) or entering into the prolonged discussions with the central management unit on how the management and indirect unit costs should be shared between the research team and the central budget. The experts have piloted the following suggestions for changing the MSCA funding system: (1) decouple management costs and indirect costs (overheads); (2) indicate only management costs as a unit cost, but establish indirect costs (overheads) as a percentage of the overall project budget (for example, as in other Horizon 2020 projects, where the indirect costs are charged at a flat rate of 25% of the eligible direct costs); (3) to avoid prolonged discussions between the central units and research teams, indicate the percentages of management vs indirect costs in the Grant Agreement.
- **Experts thought that the level of the management intensity in ITN and RISE actions is similar.** Some experts claimed that RISE is even more complicated to manage because of the need to ensure that the planned number of secondments actually take place and to liaise frequently with partners from third countries and

[94] However, it has also to be considered that the final year of the PhD is usually devoted to writing the PhD thesis and is least costly in terms of other activities, e.g. training.

[95] Consultations with the Commission held in the framework of this study revealed that the Commission is committed to making the core nature of the RISE action (i.e. focus on the secondments) clearer in Horizon Europe.

businesses. While RISE applicants have to indicate the number of planned secondments in their applications, these plans are highly sensitive to changes in the researchers' and staff members' lives, which may render the planned secondments impossible. In these cases, RISE beneficiaries and partners look for other persons to be seconded. Regarding international and business partners, higher education and research institutions reported that they may need to liaise with them more frequently in order to make sure that everyone is on the same page regarding the implementation of research objectives.

- **There was a consensus among the experts that the management of IF projects is not cost intensive; however, the experts claimed that the EUR 650 per month seems to be a sensible amount to cover mainly the indirect costs with a smaller share of this funding used for management.** The experts agreed that it may be sensible to cover only indirect costs in IF projects. According to the interviewees, experienced researchers are very self-sufficient and do not require much supervision from the institution.

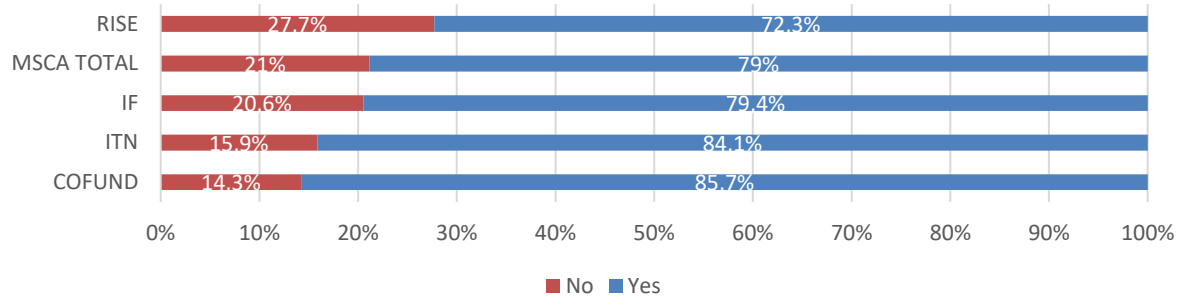
In our empirical research presented below, we aimed to take into account the issues mentioned by the experts and examined them in the light of the evidence stemming from other sources: surveys of MSCA organisations and researchers, as well as desk research.

3.2. Evidence from the survey on the appropriateness of the institutional unit costs compared to the actual costs incurred

3.2.1. Research, training and networking costs

Among other things, the survey of the MSCA organisations and researchers aimed to measure the general satisfaction level with, and sufficiency of, the research, training and networking unit costs both from the organisations' and from the researchers' perspective. Before delving deeper into analysis of the real costs incurred during the MSCA projects, this section begins with presenting evidence on the perceived overall sufficiency of the MSCA support for research, training and networking costs. As revealed by Figure 8, **79% (or almost four in five) of all MSCA organisations responding to the survey said that they were able to fund all research, training and networking activities necessary for the project**. The share of organisations that were able to fund all relevant research activities ranged from 72% in RISE to 86% in COFUND. It is a very positive finding that COFUND beneficiaries have managed to ensure sufficient funding for research, training and networking activities even without receiving the EU funding, which means that the EU managed to create a European added value in this case by creating a synergy effect with the available co-funding sources.

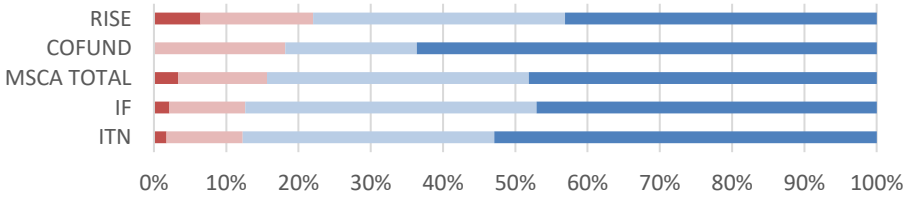
Figure 8. During this MSCA project, was your organisation able to fund all research, training and networking activities relevant to research implemented during the project?



Source: PPMI survey of MSCA organisations (n=998).

Figure 9 shows that 48.1% of all surveyed organisations said that the MSCA funding for research, training and networking was sufficient, while 36.2% said that, while the funding was not completely sufficient, this has not caused problems related to the quality of research being implemented. The latter number seems to reveal the European added value of the MSCA (a leverage effect), which means that 36.2% of the surveyed organisations relied not only on the EU funds but contributed with their own resources to make sure that high quality research is being implemented and that sufficient project budget is ensured. **This means that, in total, around 84.3% of all surveyed MSCA organisations were generally satisfied with the funding received for research, training and networking.** Less than one in five of all organisations said that the MSCA funding was insufficient to the extent that they have experienced moderate (12.3% of organisational respondents) or major (3.3%) negative impacts on their research. The share of generally satisfied organisations ranged from almost 88% in ITNs to 78% in RISE.

Figure 9. Overall, were resources allocated to fund research, training and networking costs of your organisation incurred during this project sufficient?



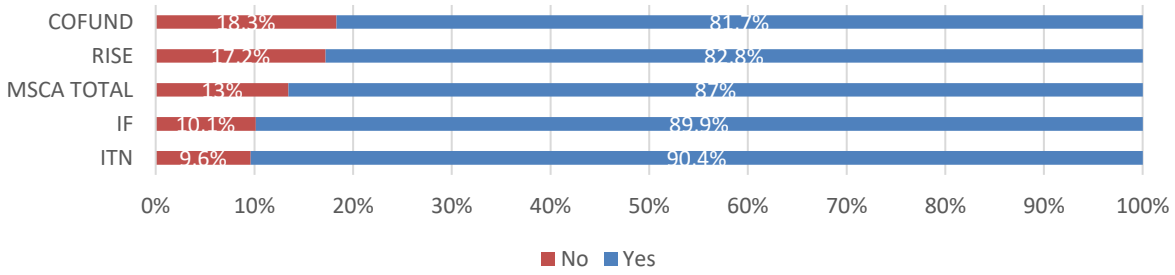
	ITN	IF	MSCA TOTAL	COFUND	RISE
Highly insufficient, which had a major negative impact on the research done during the project	1,8%	2,2%	3,3%	0,0%	6,4%
Insufficient, which had from minor to moderate negative impact on the research done during the project	10,5%	10,5%	12,3%	18,2%	15,6%
Insufficient, but did not cause problems related to the quality of research being implemented	34,8%	40,3%	36,2%	18,2%	34,9%
Sufficient	52,9%	47,1%	48,1%	63,6%	43,1%

Source: PPMI survey of MSCA organisations (n=1 016).

Analysis of responses by the MSCA researchers and staff reveals a similar, but even more positive, picture. As shown by Figure 10, **in total between eight and nine out of 10 (or 87%) of the MSCA researchers per all types of actions said that they were able**

to receive funding for all relevant research activities. RISE researchers and staff and COFUND fellows were least positive.

Figure 10. During your research, where you able to receive funding for all research, training and networking activities relevant to your research?



Source: PPMI survey of MSCA researchers (n=1 659).

Table 37 shows the list of key research items that the MSCA researchers and organisations said that they were unable to fund during their MSCA projects. The table shows how many researchers or institutional representatives (as an absolute number and percentage from the total number of respondents per action) said that they were unable to fund certain items. The table includes the top 3 items for researchers and organisations from each type of MSC action. The following are the key insights stemming from the table:

- In most cases, organisations and researchers have different opinions on where they lacked funding. It is evident that the organisations are thinking about the institutional research goals, while researchers are thinking about their personal research career goals.
- From the responses of both researchers and organisations, one can conclude that individual fellows mainly lacked funding for publishing peer-reviewed publications in open access. Lack of funding for publishing in open access was not a significant problem for ITN, RISE and COFUND researchers.
- ITN fellows mainly lacked funding for taking training relevant to their research.
- Looking at the responses of researchers throughout all actions, it is evident that the main cost category, where researchers lacked funding, was to participate in conferences or other events to disseminate research results.

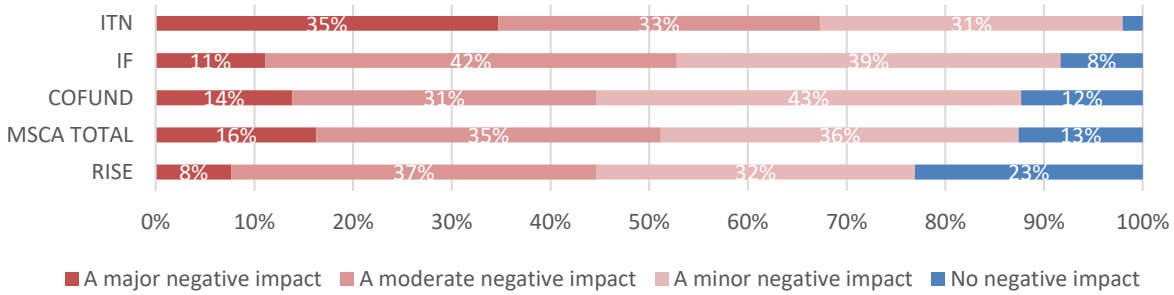
Table 37. Which research, training and networking items were you unable to fund?

	ITN	IF	RISE	COFUND
Researchers	- **Take training relevant for my research (26; 4%)** - Participate in conferences or other events to disseminate research results (23; 4%) - Access materials/inputs necessary for research (20; 3%)	- **Publish a peer-reviewed publication in open access (14; 3%)** - Participate in conferences or other events to disseminate research results (13; 3%) - Take training relevant for my research (11; 3%)	- **Participate in conferences or other events to disseminate research results (28; 6%)** - Do field research in other countries (26; 6%) - Access materials/inputs necessary for research (14; 3%)	- **Participate in conferences or other events to disseminate research results (38; 9%)** - Take training relevant for my research (28; 7%) - Do field research in other countries (21; 5%)
Organisations	- **Participate in conferences or other events to disseminate research results (22; 6%)** - Publish Intellectual Property Rights (20; 5%) - Take training relevant for research (17; 4%)	- **Publish a peer-reviewed publication in open access (29; 7%)** - Publish Intellectual Property Rights (23; 6%) - Access relevant research infrastructures (22; 5%)	- **Access relevant research infrastructures (41; 11%)** - Access necessary data (27; 8%) - Publish a peer-reviewed publication in open access (25; 7%)	*Sample of COFUND organisations was too small to reveal relevant trends.*

Source: PPMI survey of MSCA researchers.

Figure 11 reveals that, according to the opinions of the surveyed researchers, the lack of funding for the research items mentioned above will in many cases have a negative impact on their final research outputs and outcomes. **On average, 87% out of those MSCA researchers, who lacked funding for research, training and networking, said that the lack of funding for certain research items will have from minor (36%) to moderate (35%) to major (16%) negative impact on their research.** In ITNs, almost all researchers said that the insufficiency of funding for research items will have a negative impact on their research, with one third of researchers thinking that the impact will be of major importance.

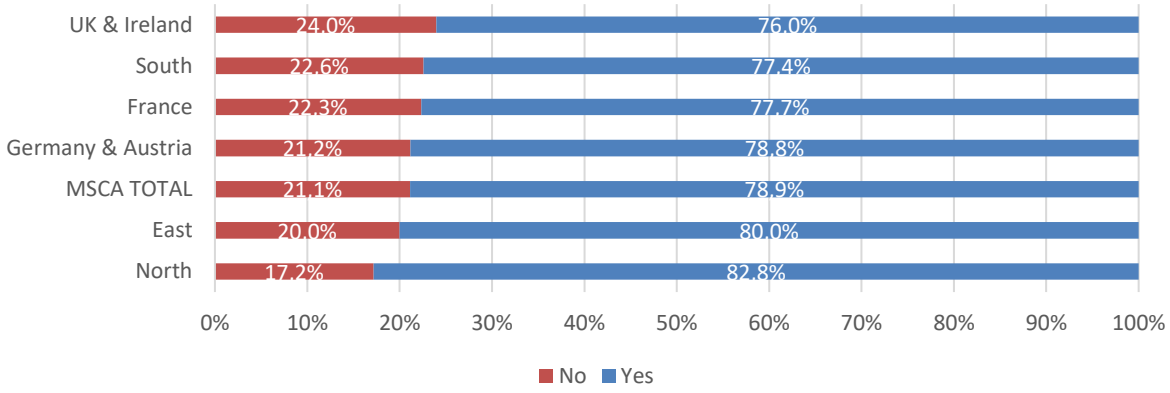
Figure 11. Overall, how negative was/will be the impact of a lack of funding for items indicated above on your final research outputs and outcomes?



Source: PPMI survey of MSCA researchers. (n=215).

For both researchers and organisations, we have also looked at the differences in terms of satisfaction with research, training and networking unit costs at the level of country groups and scientific panels. **As a general tendency, the analysis has not revealed strong differences in terms of satisfaction with research, training and networking unit costs among country groups, neither for fellows nor for organisations** (see Figure 12)**.** Research, training and networking costs do not seem to depend as much as the cost of living (which influences the researchers' unit costs) on the country, where the researcher is based.

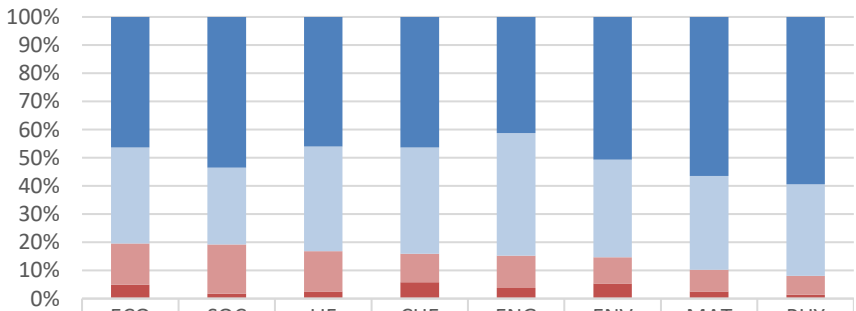
Figure 12. During this MSCA project, was your organisation able to fund all research, training and networking activities relevant to research implemented during the project?



Source: PPMI survey of MSCA organisations (n=998).

Figure 13 shows the analysis of the satisfaction of organisations with research, training and networking unit costs at the level of scientific panels. While satisfaction levels are similar per all scientific panels, a relevant insight stemming from the figure is that **organisations from the natural scientific panels – LIF, CHE, ENG, ENV and PHY – are as satisfied with research, training and networking unit costs provided by the MSCA as organisations in ECO, SOC and MAT scientific panels**.

Figure 13. Overall, were resources allocated to fund research, training and networking costs of your organisation incurred during this project sufficient? (per scientific panel)



	ECO	SOC	LIF	CHE	ENG	ENV	MAT	PHY
Sufficient	46%	53%	46%	46%	41%	51%	56%	59%
Insufficient, but did not cause problems related to the quality of research being implemented	34%	27%	37%	38%	44%	35%	33%	32%
Insufficient, which had from minor to moderate negative impact on the research done during the project	15%	17%	14%	10%	12%	9%	8%	7%
Highly insufficient, which had a major negative impact on the research done during the project	5%	2%	3%	6%	4%	5%	3%	1%

Source: PPMI survey of organisations (n=1 016).

To summarise the analysis above, **the evidence stemming from the survey of the MSCA organisations and researchers reveals a very high overall satisfaction with the research, training and networking funding provided by the programme.** This is in line with the findings of all recent studies on the MSCA, and most notably the interim

evaluation of the MSCA. Due to the very high and constant satisfaction levels of participants with the funding provided by the MSCA, the perceptional survey data on the overall satisfaction becomes almost insensitive to any changes in the MSCA programme. This means that the perceptional data on the overall satisfaction with the programme cannot be effectively used as a basis to argue for any changes in the MSCA funding system. For this, we need to look at the real costs and the actual trends of spending by the MSCA organisations and researchers. Therefore, below we provide an in-depth analysis of the real costs for research, training and networking in all types of MSC actions.

Table 38 provides a detailed overview of real research, training and networking costs incurred by the MSCA researchers and organisations, based on the survey data. In the surveys of both researchers and organisations, we asked to estimate the costs and the number of instances of the most common research, training and networking activities: publishing in open access, participating in (and organising) training, dissemination and networking events.

Table 38. Average prices and number of instances of research, training and networking activities as indicated by the surveyed MSCA researchers and organisations

	ITN	EF	GF	RISE	COFUND
	Publications[96]				
Average price per publication in open access (indicated by researchers), EUR:	2 120	2 405	1 937	1 119	1 773
Average number of peer-reviewed publications published in paid open access per person (as indicated by researchers)	1.9	1.71[97]	1.95	1.6	1.5
Average total amount paid for publishing in open access by the responding organisation as a result and within the time frame of the MSCA project (as indicated by organisations), EUR[98]	2 604	1 956	1 394	1 971	*
Range of total amount paid for publishing (as indicated by organisations), EUR	0-20 000	0-15 400	0-10 000	0-12 000	*
Average amount paid for publishing by those organisations, who indicated more than zero, EUR	4 241	3 698	3 882	3 049	*
	Conferences research dissemination and networking events				
Average price per attended conferences, research dissemination and networking events (as indicated by researchers), EUR	1 070	1 354	1 572	**	1 049
Average number of attended conferences, research dissemination and networking events (as indicated by researchers)	7	5.22	3.58	**	5.53
Average number of organised conferences, research dissemination and networking events per project per organisation (as indicated by organisations)	2.59	1.66	1.21	**	3.54
	Training events				
Average price per attended training events, such as various courses, summer and winter schools (indicated by researchers), EUR	1 256	1 169	1 479	**	926
Average number of attended training events, such as various courses, summer and winter schools (indicated by researchers)	7.78	3.56	6.63	**	1.67
Average number of organised training events per project (as indicated by organisations)	3.04	1.93	5.44	**	2.5
	Training courses, workshops, conferences and seminars in RISE				
Average number of training courses, workshops, conferences and seminars attended (as indicated by researchers)				2.03	
Average price of training courses, workshops, conferences and seminars attended (as indicated by researchers), EUR				903	

[96] Annex 2 provides desk research analysis of prices per open access publication charged by all major and smaller publishers. The average prices of open access publication stemming from desk research is EUR 1 978, which is strongly in line with the survey research results. We have also established that the prices of open access publications can range from EUR 40 to 15 000 according to the findings derived from the databases SHERPA/RoMEO and Cambridge Open Access Service.

[97] The somewhat lower average number of paid open access publications for the European Fellows can be explained by the shorter duration of fellowships, i.e. 24 months compared to 36 months in ITN and GF.

[98] The average amount paid by organisations for publishing in open access is often lower than the indicated average price per publication, since many of the surveyed organisations indicated that they have paid 0 EUR for publishing in open access. This is in line with the finding that was quoted previously in the study, i.e. that generally researchers are aiming to avoid publishing in paid open access.

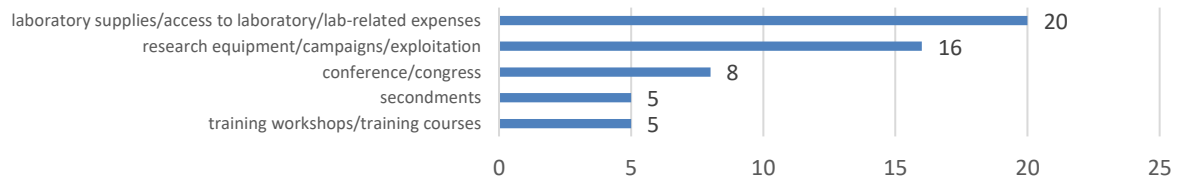
Average number of training courses, workshops, conferences and seminars (co)organised by the organisation (per project)		4.69	

Source: PPMI surveys of MSCA researchers and organisations. * The number of responding organisations in COFUND was too small to establish an accurate estimate. ** In RISE questionnaires, all types of events were put in one category: training courses, workshops, conferences and seminars. To facilitate the reading of the table, data coming from the researchers' questionnaire is indicated in blue, while data coming from the organisations' questionnaire is indicated in red.

Our survey has also provided an opportunity (an open question) for the organisations to list other significant research, training and networking costs funded during their MSCA project. Analysis of the organisations' responses is presented in Figure 14. There are several key insights stemming from the figure:

- A small number of organisations have indicated other significant research inputs, outputs or throughputs in addition to the ones analysed above, which signals that the ones analysed in the table above were responsible for the major share of costs.
- Many organisations repeated the same categories of costs that were covered in the table above (e.g. conferences, trainings).
- **Two major categories of costs can be indicated in addition to what was analysed above**:
  - **Laboratory supplies and research equipment (consumables)**. Our analysis of open replies showed that in the majority of cases laboratory supplies per project did not exceed EUR 20 000–30 000, while there were several cases where organisations quoted up to EUR 50 000–60 000 for ensuring access to research infrastructures/running core facilities for the whole duration of the project.
  - **Secondments for fellows** (excluding RISE). Our analysis of open replies showed that in the majority of cases secondment costs per project did not exceed EUR 20 000, while in one case a price as high as EUR 51 000 was quoted.

Figure 14. Please provide the list of other significant research inputs, outputs or throughputs funded during the project in question from the MSCA unit costs for research, training and networking.



Source: PPMI surveys of MSCA organisations.

The data above allows assessing the adequacy of the MSCA research, training and networking unit costs in relation to the incurred real costs per researcher. Table 39 shows the detailed calculations based on the survey data. It provides a summary of the real costs incurred, on average, by the ITN, IF and RISE researchers for publications and events during their fellowship/secondment and analyses the amount remaining for other research expenses after subtracting the costs of events and publications. The analysis is done from the perspective of a researcher (also giving priority for the information provided by the researchers), i.e. by assuming that the researchers themselves know best what publications they have published and what events they have attended. The reader should note that the analysis is implemented with the assumption that, potentially, some of the relevant research, training and networking costs may not have been reported in the survey.

Table 39. Assessment of the adequacy of the MSCA research, training and networking unit costs in relation to the incurred real costs per researcher per project

	Duration of the MSCA fellowship/secondment in months	Received research, training and networking costs per researcher, EUR	Overall publication costs per researcher, EUR	Overall events costs per researcher, EUR	Overall publication and events costs per researcher, EUR	Funding remaining for other research, training and networking expenses per researcher, EUR
ITN	36	64 800	4 028	17 262	21 290	43 510
GF	36	28 800	3 777	15 434	19 221	9 579
EF	24	19 200	4 113	11 229	15 342	3 858
RISE	3.17[99]	5 706	1 790	1 833	3 623	2 083

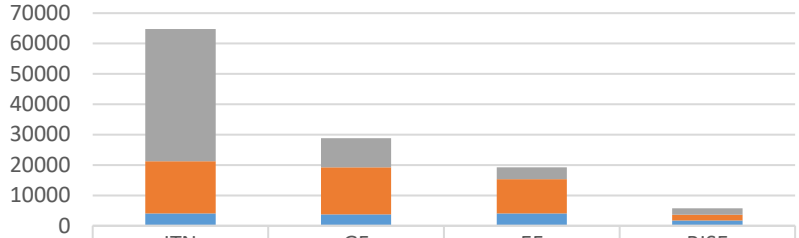
Source: PPMI survey of MSCA researchers and organisations. Calculations based on the table above. COFUND is not included, since the MSCA does not cover research, training and networking costs in COFUND.

Figure 15 illustrates graphically the findings from the table above, so that they are easier to comprehend. The overall height of the columns shows the total difference in terms of funding for research, training and networking received per researcher in different types of MSCA. The stacked columns also show the shares of funding provided for publications and events. Finally, the grey part of the columns shows the remaining funding, which cannot be explained by publications or events costs, and therefore is used for other research costs arising during the projects, such as consumables, secondments, organising training activities, and others.

The graph shows that the overall funding per researcher currently provided for ITNs is more than two times higher for ITN fellows than for global fellows, who have the same overall duration of the fellowship. Researchers in other types of actions (EF and RISE) receive lower overall funding, but the duration of their mobility is also shorter (24 months for EFs and, on average, 3.17 months for RISE researchers and staff). The analysis also shows that after subtracting the costs of events and publications incurred per researcher from the total amount received, the remaining amount for other research activities and research programme-related expenses is much higher for ITNs (EUR 43 510) than for global fellows (EUR 9 579), European fellows (EUR 3 858) and RISE researchers (EUR 2 083). The reader should also bear in mind the assumption that some of the existing research costs may not have been reported by the surveyed researchers and organisations. Further analysis below will aim to establish whether such a high remaining amount per researcher for ITNs (compared to other actions) is fair or whether there is some room for redistributing part of this amount to other types of MSCA in order to make the distribution of funding fairer.

[99] Average duration of a RISE secondment is reported to be 3.17 on the basis of CORDA data.

Figure 15. Assessment of the adequacy of the MSCA research, training and networking unit costs in relation to the incurred real costs per researcher per project



	ITN	GF	EF	RISE
Remaining for other research costs	43510	9579	3858	2083
Events costs	17262	15434	11229	1833
Publication costs	4028	3777	4113	1790

Source: PPMI survey of MSCA researchers and organisations. Calculations based on the table above. COFUND is not included, since the MSCA does not cover research, training and networking costs in COFUND.

Based on CORDA data, an average ITN has 12.28 fellows[100]. This means that after subtracting the publications and event costs incurred by researchers from the total amount allocated per researcher for research, training and networking costs, an average ITN would have around EUR 534.303 (12.28*43 510)[101] remaining for other research expenses throughout the whole duration of an ITN project. On the basis of evidence presented earlier in the study, the following arguments would explain the use of this funding:

- As explained by the interviewed experts, some of whom have managed the ITN projects themselves, universities need significant funding resources to make sure that their doctoral programmes function in line with the Innovative Doctoral Training Principles. In order to do this, the MSCA organisations often need to set up new subjects, adjust the curricula, introduce new subjects on entrepreneurship and transferable skills, hire new competent lecturers.
- The ITN consortia often have to organise the internal meetings and training activities for all fellows involved, which often entails international travel of fellows and other research staff. For example, as shown in the Table 38, ITN organisations said in the survey that per average project they have organised around 2.6 conferences and around 3 training events.
- The experts have also emphasised that the ITN funding is provided for up to 36 months, while normally in Europe it takes 48 months or more to complete a PhD degree. Therefore, it has to be taken into account that the organisations are usually spreading the received funding over 4 years or more, and not 3 years.
- As revealed by the evidence presented above, normally the ITN project would use around EUR 20 000-30 000 from the MSCA funding for consumables and around EUR 20 000 for secondments, which together would cost around EUR 50 000 per project.

[100] Based on the CORDA data extracted on 10 July 2019. The reader should also note that this number is influenced by the fact that in EID there are typically around five fellows, while in ETN and EJD there are typically around 15 fellows. European Training Networks (ETN), European Industrial Doctorates (EID) and European Joint Doctorates (EJD) are the different forms of action taking place within ITN. The overall EU contribution is limited to a maximum of 540 person-months for ITN actions (i.e. 15 fellows per 36 months). For EID with only two beneficiaries, this limit is set to 180 person-months (i.e. 5 fellows per 36 months). (The minimum number of beneficiaries in ETN and EJD consortiums is three.)

[101] This would be different for typical EID projects compared to ETN and EJD. Typical EID, which on average has around five fellows, would have around EUR 217 550 remaining for other research activities, which is much lower than the amount of funding remaining for a typical ETN or EJD (EUR 652 650). However, even EID would have much more funding remaining compared to other types of MSCA.

- Finally, and very importantly, the part of this study on the researchers' costs revealed that 25% of ITN organisations in Europe reported using the institutional unit costs to top up the salaries of the early stage researchers in ITNs. This was particularly prominent in Northern Europe (38%) and Germany and Austria (27%). The institutional unit costs may still be necessary in Horizon Europe to top up the salaries, where needed, due to the cost of living or sectoral agreements. In comparison, 13% of organisations said that they have topped up the salaries of the experienced researchers.

To summarise, ITNs do incur some significant research, training and networking costs, which are not incurred in other types of actions (IF and RISE), e.g. setting up and running PhD programmes in line with the innovative doctoral training principles and organising consortium-wide events. ITNs also spend more funding on consumables and secondments of fellows, and for topping up the living allowances.

However, the analysis above also revealed that the funding remaining for other research, training and networking costs (after subtracting costs of publishing and events) is very low for the European fellows, i.e. EUR 3 858 per 24 months or around EUR 161 per month. The funding remaining for other research costs of the Global fellows is EUR 9 579 per 36 months or around EUR 271 per month. The study has revealed that individual fellows have similar, and, due to seniority, in many cases even higher needs for some types of research costs than the early stage researchers. For example, individual fellows may need more funding to disseminate their research results, both via participating in conferences and publishing in higher-impact (and therefore possibly more costly) journals. They may also need costlier consumables.

Furthermore, while the figures above show that there is funding remaining for other research, training and networking unit costs for individual fellows, a very low amount in EUR for the whole fellowship duration may signal that, in fact, the remaining funding is negligible to buy anything important. This would suggest that, in real terms, after funding publications and events, the individual fellows would not have anything left. The data show that some funding remains only because organisations and the researchers can rarely spend more than they receive. It is clear that in terms of the real costs the individual fellows usually reach the "ceiling" of funding and stop there because of the unavailability of additional funds. **In our view, to ensure that the experienced researchers are capable of implementing excellent research and thus implementing the overall objectives of the MSCA, the unit costs they receive for research, training and networking should be increased in Horizon Europe.** However, taking into account the analysis of real costs and insights from expert interviews, it would be too generous to increase research, training and networking unit costs for IF close to the level of EUR 1 800, which is currently received in ITNs.

Integrated analysis of the survey evidence and insights from the expert interviews calls for a better alignment between the research, training and networking unit costs received in ITNs (currently, EUR 1 800) and IF (currently, EUR 800). While ITNs indeed incur more types of costs (not least because more researchers and organisations are involved), the current gap is too wide. As indicated at the beginning of this section, the interviewed experts think that as individual researchers ITN and IF fellows have similar needs for research funding, while the current funding system seems to leave IF fellows (and especially the European fellows) in a disadvantaged position.

Another argument for a better alignment between the research, training and networking unit costs received in ITN and IF actions is the difference between the success rates of application in these two actions. As revealed by the interim evaluation of the MSCA, the success rate of applications is 8% in ITN and 16% in IF. This study has also revealed that

the satisfaction rates with funding are very high and similar for ITN and IF fellows and organisations, with ITN fellows and organisations being even more satisfied. This situation also provides a basis for a better alignment of funding between ITN and IF actions.

After assessing the adequacy of the management and indirect unit costs in the next section, the conclusions and recommendations part of this chapter will provide an integrated and balanced recommendation on a better alignment of research, training and networking unit costs for ITN and IF, taking into account also any possible changes in terms of management and indirect costs.

Regarding the RISE action, the analysis above shows that the research, training and networking unit costs provided per researcher in RISE are almost exactly in line with the costs incurred for publications and events. Around EUR 2 083 would remain from each secondment for other research, training and networking activities under an average RISE project. Based on the CORDA data, RISE projects implement around 95 secondments, on average[102], which means that around EUR 197 885 (95 * EUR 2 083) would be remaining for other research, training and networking activities in a typical RISE project. Taking into account the survey evidence presented above, this remaining funding may not be sufficient, in particular for those projects that decide to organise a high number of events (e.g. project conferences) or those that need to add funding to top-up allowance to make them more competitive. This insufficiency was also revealed by the survey data on the overall satisfaction with the funding, where RISE organisations tended to be least satisfied with funding provided for research, training and networking.

However, as discussed in the first section of this chapter, when commenting on the sufficiency of research, training and networking unit costs provided for a RISE action, the experts tended to question the overall architecture of RISE. While, in principle, RISE should focus on promoting intersectoral and international secondments, currently RISE is often seen by the participating organisations as a regular Horizon 2020 research project with secondments as an add-on. This stems from the overall architecture of RISE, i.e. the need to develop a research project, on which the secondments would be based. This creates a situation where a research project takes priority over the secondments and therefore the secondments begin to be seen as a burden, while they actually should be the core focus of RISE. This leads to the RISE beneficiaries claiming that research, training and networking unit costs are insufficient (and this is to some extent confirmed by the analysis of real costs), but, according to the experts, this only happens because RISE is treated as a research project rather than a mobility project. **The experts therefore suggested to rebalance the RISE funding system so that it encourages the participating organisations to focus at least to the same extent on both the secondments and on the research project**[103]. One of the ways to do this would be to decrease funding for research, training and networking, while increasing funding for the management and indirect costs, which have the highest impact on the capacity to organise secondments. After analysing the adequacy and competitiveness of the management and indirect unit costs in the next section, the study team will provide an integrated recommendation on the future funding system of RISE in the final part on conclusions and recommendations.

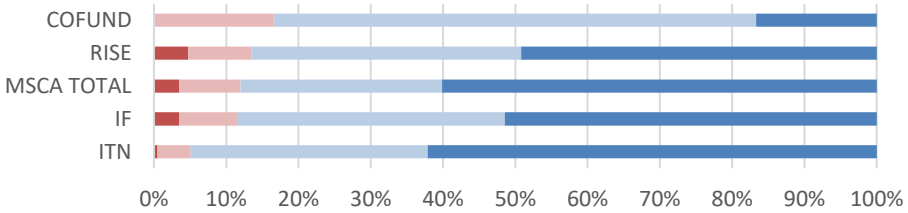
3.2.2. Management and indirect costs

Figure 16 shows that, on average, 60.1% of the MSCA organisations said that management and indirect unit costs were sufficient, while 27.9% said that they were slightly insufficient, but this did not cause any problems. Only 12% of responding organisations reported having experienced from minor to major negative impacts on research carried out during the project as a perceived result of insufficient funding for management. The percentage of

[102] Based on the CORDA data extracted on 10 July 2019.
[103] In this context, the core nature of the RISE action could be made clearer in Horizon Europe.

organisations, who were not satisfied with the funding for management, was very similar to the overall average for COFUND, RISE and IF actions, while **only 5% of organisations managing ITNs said that they have experienced problems with management** due to insufficient funding and only around 0.5% said that these problems were major.

Figure 16. Were resources allocated to fund management and indirect costs of your organisation sufficient?

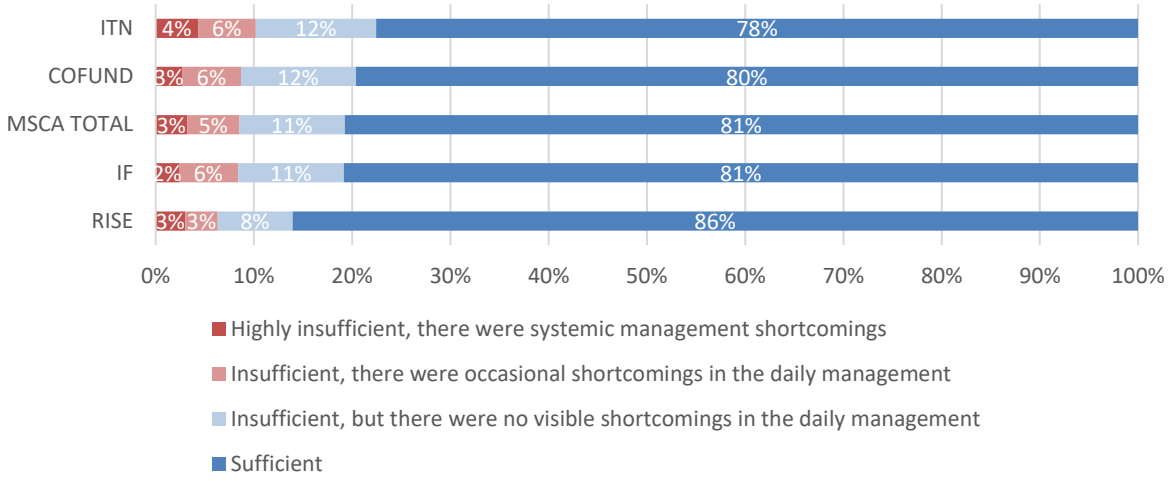


	ITN	IF	MSCA TOTAL	RISE	COFUND
Highly insufficient, which had a major negative impact on the research done during the project	0,5%	3,4%	3,5%	4,8%	0,0%
Insufficient, which had from minor to moderate negative impact on the research done during the project	4,5%	8,0%	8,5%	8,7%	16,7%
Insufficient, but did not cause problems related to the quality of research being implemented	32,8%	37,1%	27,9%	37,3%	66,7%
Sufficient	62,1%	51,4%	60,1%	49,2%	16,7%

Source: PPMI survey of MSCA organisations (n=710). Note: There are only 12 total replies from COFUND organisations.

Figure 17 addresses the perception of management quality of the MSCA projects from the perspective of the researchers. Overall, researchers were even more positive than organisations with **92% of the MSCA researchers throughout all actions claiming that there were no visible shortcomings in the daily management of the project.** The level of the positive assessment of the management from the perspective of researchers was very similar per all types of actions.

Figure 17. Were resources devoted by your host organisation to ensure effective daily management of the issues related to your fellowship/secondment sufficient?



Source: PPMI survey of MSCA researchers (n=1 674).

In order to estimate the real management and indirect costs incurred by the MSCA organisations, the survey of the MSCA organisations has inquired about:

- The number of person-months spent in organisations to administer the MSCA grant.
- Other management and indirect costs incurred by the organisations (indicated openly by the responding organisations).

As revealed by Table 40, the average total number of person-months spent administering the MSCA grant per organisation ranged from 2.8 in IF projects to 11.7 in COFUND projects. According to our estimations based on the Eurostat salary data[104] and the average number of organisations per project (based on analysis of CORDA data), the management activities per average project have cost from EUR 13 795 in IF to EUR 466 366 in ITNs (if we consider that all participating organisations, including partner organisations, incurred management and indirect costs). The table also provides calculations that take into account only coordinators and beneficiaries (these calculations are always provided in brackets). If we assumed that only coordinators and beneficiaries have incurred management and indirect costs, then the average real cost of management would range from EUR 12 101 in IF to EUR 308 210 in ITN.

In our conclusions, we have assumed that partner organisations (and not only coordinators and beneficiaries) have also incurred management costs. This is based on the information stemming from the interviews and surveys, which showed that in all types of actions (perhaps least – in ITNs) partner organisations have assumed strong management responsibilities and therefore received reimbursement for the management from the project beneficiaries. For example, COFUND partner organisations are often hosting fellows and taking up the major burden of management; RISE partner organisations host secondees and send their own researchers and staff on secondments, which also creates a managerial burden; in Global Fellowships, international partner organisations host fellows and therefore have to address the related management burden.

[104] Based on analysis of the Eurostat data on salaries of managers (ISCO08) it the area of Education; human health and social work activities; arts, entertainment and recreation; other service activities (NACE_R2). See: https://ec.europa.eu/eurostat/web/labour-market/earnings/database. Data for 2018 was estimated on the basis of 2014 data by adjusting it according to the labour cost index.

After calculating the average real costs per project, which were claimed by the surveyed organisations, we have compared this to the average funding for management and indirect costs per project that was actually provided by the EU (based on CORDA data).

As further revealed by our survey, many ITN organisations claim that, among other things, they use the MSCA funding to at least partially cover the costs of running a PhD programme per person month, which, as indicated by the survey of organisations, is on average EUR 3 175[105]. This number seems somewhat too high in the light of the evidence recently provided by the OECD, who calculated that, on average, the yearly cost of tertiary education student (including R&D activities) in EU-23 is USD 15 863 or around EUR 14 365 (EUR 1,197 per month)[106]. If we take into account this cost for the whole duration of an ITN project, then a regular ITN project would have to cover around EUR 43 095[107] per PhD student per project to develop and run their PhD programmes (i.e. EUR 529 206 per project, taking into account that a regular ITN has around 12 PhD students). While according to the interviewees this cost would be partially covered by the universities (since in any case they are running PhD programmes in their everyday work), it must be also partially covered by the MSCA. We come to this conclusion because the ITNs have to be set up according to the Principles for Innovative Doctoral Training. As revealed by the experts, this is challenging even for the best European universities, while for younger and financially less-advanced institutions this is a very big challenge. Therefore, management and indirect costs devoted to ITNs must take into account the costs of running (innovative) doctoral training in order to make sure that ITNs provide a truly innovative and transformative experience for the PhD students involved. However, these costs should be also partially covered by own resources available at the MSCA organisations as well as by using some of the research, training and networking unit costs.

Table 40. Real costs of managing the MSCA grant

	ITN	IF	RISE	COFUND
Average number of person-months spent by a participating organisation to administer the MSCA grant, as claimed in the survey:	8.15[108]	2.8[109]	6.34[110]	11.7[111]
Average EU salary of managers in education activities on the basis of the Eurostat data, EUR:	4 322			
Price of management per organisation on the basis of the Eurostat data on the average EU salary of managers in education activities (gross), EUR:	35 224	12 101	27 401	50 567
Average number of participating organisations (in the brackets – number of coordinators/beneficiaries):[112]	13.24 (8.75)	1.14 (1)	10.48 (7.34)	6.17 (1)

[105] N = 146 organisations. To arrive at this number, we have deleted unrealistic survey responses, which claimed the need for more than EUR 10 000 per month to train a PhD researcher. This number still seems rather high in light of the evidence recently provided by the OECD which calculated that, on average, the yearly cost of tertiary education student (including R&D activities) in EU-23 is USD 15,863 or around EUR 14 365 (EUR 1,197 per month). For more information, please see the OECD report "Education at a Glance 2019": http://www.oecd.org/education/education-at-a-glance/

[106] For more information, please see the OECD report "Education at a Glance 2019": http://www.oecd.org/education/education-at-a-glance/

[107] Average monthly cost of tertiary student in EU-23, as provided in the OECD's "Education at a Glance 2019" (EUR 1,197 X 36 researcher months.

[108] N = 164 organisations. This number was calculated after manually removing unrealistically high responses. Somewhat lower than expected number results from the fact that some of the responding organisations were coordinators (with more person months spent for management), while other organisations were regular beneficiaries (with less person months spent for management).

[109] N = 147 organisations. This number was calculated after manually removing unrealistically high responses, i.e. those that stated exactly 24 or 36 full months to manage the IF grant or even more months.

[110] N = 191. This number was calculated after manually removing unrealistically high responses.

[111] N = 23 organisations. This number was calculated after manually removing unrealistically high responses.

[112] Calculations based on CORDA data.

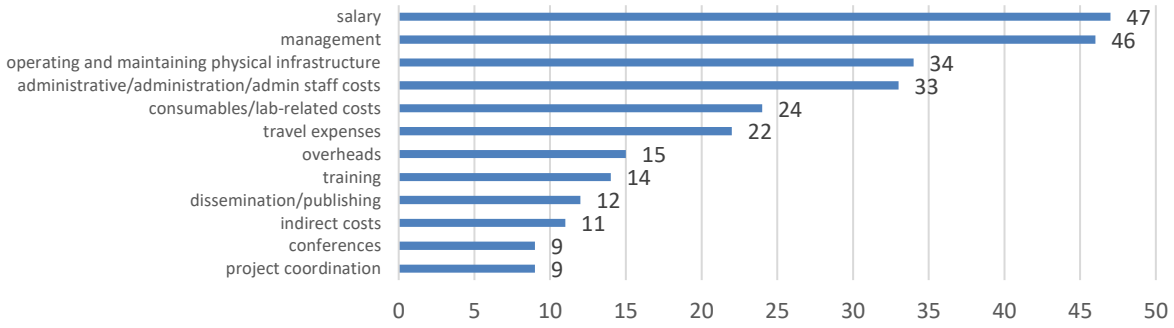
Average amount of funding actually received for management and indirect costs, EUR[113]	545 850	16 269	153 301	334 315
Difference between the claimed real costs of management and EU funding provided for management and indirect costs, EUR (in the brackets – number for coordinators/beneficiaries)	**79 484 (237 640)**	**2 474 (4 168)**	**-133 861 (-47 822)**	**22 317 (284 431)**
Average real cost of management per project, EUR (in the brackets – number for coordinators/beneficiaries):[114]	466 366 (308 210)	13 795 (12 101)	287 162 (201 123)	311 998 (50 567)
Average monthly price of organising doctoral training (as indicated by organisations in the survey), EUR	3 175			
Average monthly price of tertiary student in EU23 (as indicated by the OECD), EUR	1 197			
Cost of education for a tertiary student (according to the OECD price), EUR	43 095			
Average number of researchers in ITN (based on CORDA data)	12.28[115]			
Funding that would be needed to fully cover the cost of education per student for ITN, EUR:	529 206[116]			

PPMI survey of MSCA organisations and analysis of CORDA data. All calculations are based on the CORDA data extracted on 10 July 2019 at the Commission's premises.

Our survey has also enabled organisations to provide unstructured information about any other management and indirect costs incurred during their projects. As shown by Figure 18, the majority of organisations pointed out:

- Increasing salaries of existing staff due to the need to manage the MSCA project;
- Indirect costs/overheads, including operating and maintaining physical infrastructure.

Figure 18. Please provide the list of other significant management and indirect costs funded during this MSCA project.



Source: PPMI survey of MSCA organisations (n=276).

For a better analysis/understanding of the information presented in Table 40, Figure 19 provides a graphical illustration of the data. The following insights stem from the analysis of the real management and indirect costs:

- **Management and indirect costs provided by the MSCA for IF, COFUND and ITN actions are in line with the real management and indirect costs incurred by the projects.** While the figure below shows that after subtracting the

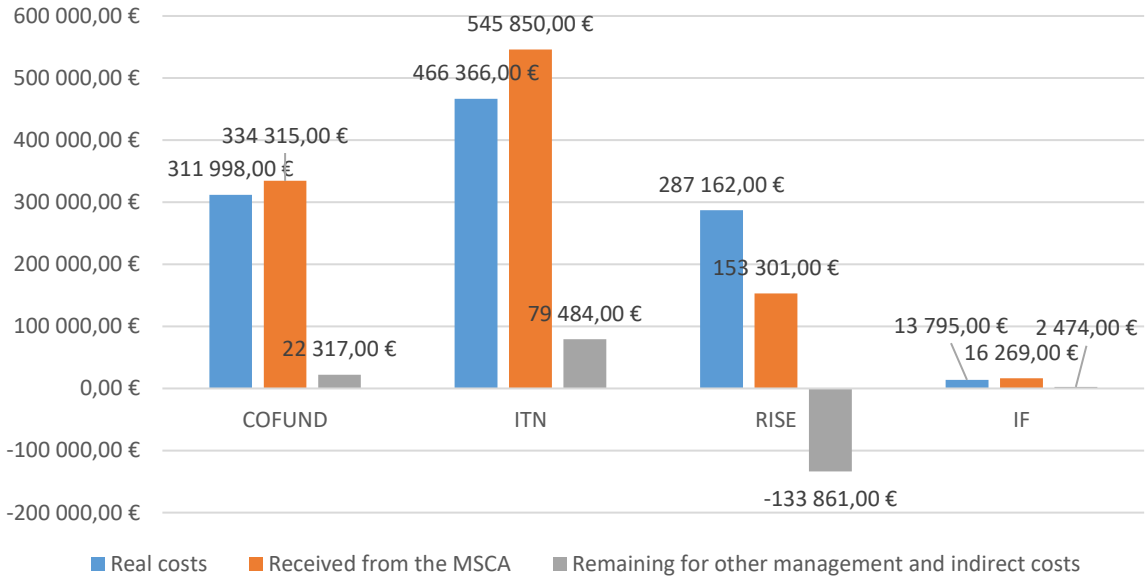
[113] Based on financial data from CORDA.
[114] Average cost of management per organisation X average number of participating organisations.
[115] Based on the CORDA data extracted on 10 July 2019. The reader should also note that this number is influenced by the fact that in EID there are typically around 5 fellows, while in ETN and EJD there are typically around 15 fellows. However, this does not alter any conclusions presented in the study.
[116] In our view, this cost should be partially covered from three sources: (1) own resources of universities; (2) management and indirect unit costs; (3) research, training and networking unit costs.

real costs of management from the EU funding an average ITN would have EUR 237 640 remaining for other management and indirect costs (here we assume that all costs are spent mainly by coordinators and beneficiaries), this amount would not seem too high to fund the indirect costs arising for coordinators and beneficiaries (8.75, on average) participating in a regular ITN project during the overall duration of the project fellowships (36 months), in particular taking into account the necessity to partially fund the costs of running an innovative doctoral programme as described above.

- **Management and indirect costs provided by the MSCA for RISE action are, on average, too low compared to the real management and indirect costs incurred by the RISE projects.** As shown in the table, an average RISE project should spend in real costs around EUR 133 861 more than covered by the EU (here we assume that all participating organisations, and not only coordinators and beneficiaries, would incur management and indirect costs). According to CORDA data, an average RISE project consists of around 219 researcher months[117]. This means that in the ideal case (on the basis of analysis of the real costs) the management and indirect costs should be increased for RISE by around EUR 611 to be sufficient to cover the real costs claimed by the RISE organisations (133,861/219). As it may not be feasible to increase the management and indirect costs for RISE by such a large amount having in mind the budgetary limitations, and also taking into account the fact that not all partner organisations may incur costs equally to beneficiaries, **we suggest increasing the management and indirect costs in RISE by up to EUR 500, where the actual increase would be decided by the Commission after further consideration of what is possible in terms of the future budget**. Therefore, we suggest setting the updated RISE management and indirect unit cost rate in the range of EUR 800–1 200. The complementary nature of the RISE funding should also be taken into account when deciding on the final amount of the management and indirect unit cost rate. This means that the management and indirect unit cost rate for RISE should not surpass that of the ITN, where the Commission expects to fund full management and indirect costs incurred.
- Finally, taking into account our recommendation above that the Commission would cover the minimum amounts of living allowances that currently have to be co-funded by the beneficiaries in the COFUND action, our analysis in this section reveals that there may be scope for reducing management and indirect unit costs for a COFUND action. Having in mind the assumption that the MSCA seeks to reach as many organisations and researchers as possible, the Commission may even consider abolishing management and indirect costs for COFUND if they decide to cover the minimum co-funding amounts for living allowances that are currently paid by the beneficiaries. This would mean that instead of co-funding the living allowances, the beneficiaries would need to provide more co-funding for institutional unit costs, and in particular for the management and indirect costs. Looking at the findings of our interview programme presented above, this would be completely in line with the interests of beneficiaries.

[117] This number is based on the proposal data, i.e. the average number of researcher months that the RISE projects planned to spend in their proposals. Even if the actual number of the researcher months is lower, this would not have a significant impact on the conclusion.

Figure 19. Real costs of managing the MSCA grant vs funding received from the MSCA



PPMI survey of MSCA organisations and analysis of CORDA data.

3.3. Conclusions and recommendations related to the institutional unit costs

In total, 4 out of 5 surveyed MSCA organisations said that they were satisfied with the research, training and networking unit costs provided by the MSCA, and 9 out of 10 surveyed MSCA researchers per all types of actions said that they were able to receive funding for all relevant research activities. This shows **a strong overall satisfaction with funding for research, training and networking provided by the MSCA**.

As a general tendency, **the analysis has not revealed differences in terms of satisfaction with research, training and networking unit costs among country groups or scientific panels**, neither for fellows nor for organisations. Research, training and networking costs do not seem to depend as much as the cost of living in the country, where the researcher is based. We also found that organisations from the scientific panels representing natural sciences – LIF, CHE, ENG, ENV and PHY – are as satisfied with research, training and networking unit costs provided by the MSCA as organisations in the ECO, SOC and MAT scientific panels.

Further analysis showed that in cases where researchers have not been able to fund certain activities, 7 out of 10 said that it will have from minor to major impact on the quality of their research. The following are the key insights stemming from the in-depth analysis of the items that the researchers have lacked for their research:

- From the responses of both researchers and organisations, one can conclude that individual fellows mainly lacked funding for publishing peer-reviewed publications in open access. Lack of funding for publishing in open access was not a significant problem for ITN, RISE and COFUND researchers.
- ITN fellows mainly lacked funding for taking training relevant to their research.
- Looking at the responses of researchers throughout all actions, it is evident that the main cost category, where researchers lacked funding, was to participate in conferences or other events to disseminate research results.
- In most cases, organisations and researchers had different opinions on where they lacked funding. It is evident that the organisations are thinking about the

institutional research goals, while researchers are thinking about their personal research career goals.

Around 8-9 out of 10 surveyed MSCA organisations were also satisfied with the allocated funding for management and indirect costs. An even larger share of researchers (92%) said that they have not experienced any management shortcomings.

The evidence stemming from the survey of the MSCA organisations and researchers reveals a very high overall satisfaction with the institutional funding provided by the programme. This is in line with the findings of all recent studies on the MSCA, and most notably the interim evaluation of the MSCA. Due to the very high and constant satisfaction levels of participants with the funding provided by the MSCA, the perceptional survey data on the overall satisfaction become almost insensitive to any changes in the MSCA programme. This means that the perceptional data on the overall satisfaction with the programme cannot be effectively used as a basis to argue for any changes in the MSCA funding system. For this, we need to look at the real costs and the actual trends of spending by the MSCA organisations and researchers.

Analysis of the real costs for research, training and networking per each type of MSC action revealed that a **better alignment/fairness is necessary between the unit costs for research, training and networking received per researcher month in ITNs (EUR 1 800) and IF (EUR 800)**. The overall funding per researcher currently provided for ITNs is more than two times higher for ITN fellows than for Global fellows, who have the same overall duration of the fellowship. The analysis also shows that after subtracting the costs of events and publications incurred per researcher from the total amount received, the remaining amount for other research activities (i.e. flexibility in terms of planning research activities) is much higher for ITNs than for global fellows, European fellows and RISE researchers.

However, further analysis indeed showed that ITNs do incur some additional significant research, training and networking costs, which are not incurred in other types of actions (IF and RISE), e.g. setting up and running PhD programmes in line with the innovative doctoral training principles and organising consortium-wide events. ITNs also spend more funding on consumables and secondments of fellows, and for topping up the living allowances. Therefore, there is no scope for a very significant decrease in ITN research, training and networking unit costs, having in mind the need to keep the ITN rates competitive.

The analysis above also revealed that the funding remaining for other research, training and networking costs (after subtracting costs of publishing and events) is very low for the European fellows, i.e. EUR 3 858 per 24 months or around EUR 161 per month. The funding remaining for other research costs of the Global fellows is EUR 9 579 per 36 months or around EUR 271 per month. The study has revealed that individual fellows have similar, and, due to seniority, in many cases even higher needs for some types of research costs than the early stage researchers. For example, individual fellows may need more funding to disseminate their research results, both via participating in conferences and publishing in higher-impact (and therefore possibly more costly) journals. They may also need costlier consumables.

This finding is supported by the insights stemming from the expert interviews. According to the experts, no good argument seems to exist to explain why research, training and networking unit costs are so significantly lower for IF compared to ITN and RISE. While the experts agreed that the PhD students in ITNs may need more funding, particularly for training activities, the interviewees also thought that the experienced researchers in IF would usually need more funding to ensure open access to their publications in higher-

impact journals, to access more expensive research materials (consumables), databases and infrastructures, as well as to buy more expensive tickets to high-level conferences. There was a general consensus among the experts that research, training and networking costs for IFs should be increased.

Integrated analysis of the survey evidence and insights from the expert interviews, calls for better alignment between the research, training and networking unit costs received in ITNs and IF. While ITNs indeed incur more types of costs (not least because more researchers and organisations are involved), the current gap is too wide. As discussed above, the interviewed experts think that as individual researchers ITN and IF fellows have similar needs for research funding, while the current funding system seems to leave IF fellows (and especially the European fellows) in a disadvantaged position.

Another argument for a better alignment between the research, training and networking unit costs received in ITN and IF actions is the difference between the success rates of applications in these two actions. As revealed by the interim evaluation of the MSCA, the success rate of applications is 7.7% in ITN and 14.8% in IF[118]. This study has also revealed above that the satisfaction rates with funding are very high and similar for ITN and IF fellows and organisations, with ITN fellows and organisations being even more satisfied. This situation also provides a basis for a better alignment of funding between ITN and IF actions.

Recommendation 6: Ensure a better alignment/fairness between the research, training and networking unit costs in ITN and IF actions by adjusting the rate for ITNs in favour of the rate of IFs.

We suggest considering the following options under this recommendation:

- **Option A (preferred): Small-to-medium redistribution (EUR 100-300).** As a middle-way solution, we suggest redistributing EUR 200 from research, training and networking costs in ITN to IF. This would mean that the rate for research, training and networking unit costs for ITN would be EUR 1 600 and for IF the rate would be EUR 1 000. This option is flexible and is open to further consideration by the Commission on the actual level of redistribution in the range of EUR 100-300 in light of the budget. In the light of analysis presented above, this option considers that there is a higher need for research, training and networking funding for ITNs than for IFs. Analysis showed that ITNs do incur some significant research, training and networking costs, which are not incurred in other types of actions (IF and RISE), e.g. setting up and running PhD programmes in line with the innovative doctoral training principles and organising consortium-wide events. ITNs also spend more funding on consumables and secondments of fellows, and for topping up the living allowances. Therefore, there is no scope for a very significant decrease in ITN research, training and networking unit costs, having in mind the need to keep the ITN rates competitive. However, the analysis made clear that the insufficiency of research, training and networking funding in particular for the European Fellows is quite pronounced, and therefore some redistribution from the ITN funding to the IF funding would be sensible.
- **Option B: Ensuring the same capacity to fund research, training and networking for each individual researcher, either early stage or experienced**. This option would mean fully harmonising the rates for research, training and networking for ITN and IF. The rates for both actions would be set at EUR 1 300. This would mean that IF and ITN fellows have the same funding available for research, training and networking, without considering the need for more of organisational funding in ITNs. The main advantage of this option would be ensuring that the individual fellows would have full capacity to fund all the necessary research, training and networking costs in order to achieve excellent research. However, in this case there would be a drastic decrease in funding for ITNs, which would further emphasise that the research, training and networking unit costs for ITN work rather as a contribution than as a measure to ensure funding close to the research costs incurred. The main disadvantage of this option would be a potential financial "shock" resulting from a strong decrease in the ITN funding. Many beneficiaries and the Member States may have become used to a certain level of funding in ITNs and a strong decrease in funding may harm the attractiveness of ITNs, in particular in the short term.

[118] Calculations based on the data presented in the Horizon 2020 open data dashboard: https://webgate.ec.europa.eu/dashboard/sense/app/e02e4fad-3333-421f-a12a-874ac2d9f0db/sheet/941d3afe-da24-4c2e-99eb-b7fcbd8529ee/state/analysis

- **Option C: Update the set unit cost rates according to inflation**. To safeguard the purchasing power of the funding provided for research, training and networking unit costs under each action, the Commission may decide to adjust the set rates according to the HICP inflation indicator for 2018, 2019 and 2020, which is described in detail in the introduction of the study. This would effectively mean increasing the rates set by around 5.5%. Since the analysis presented above clearly points to the need for more structural changes (in particular to ensure sufficient research, training and networking funds for the European fellows), this would not be a preferred option but could be used if the structural changes suggested above were found to be unfeasible. Should the structural changes be implemented, they would be fully in line with the funding needs established by analysis, and therefore further updating the unit costs on the basis of inflation would not be necessary.

Regarding the RISE action, analysis above revealed that the research, training and networking unit costs provided per researcher in the RISE action were largely in line with the costs incurred for publications and events. Analysis showed that around EUR 2 083 would remain per each secondment for other research, training and networking activities under an average RISE project. Based on the CORDA data, the regular RISE project implements around 95 secondments[119], which means that around EUR 197,885 would be remaining for other research, training and networking activities in the average RISE project[120].

The interviewed experts, however, tended to question the overall architecture of RISE. While, in principle, RISE should mainly focus on promoting intersectoral and international secondments, currently RISE is often seen by the participating organisations as a regular Horizon 2020 research project with secondments as an add-on. This stems from the architecture of RISE, i.e. the need to develop a research project, on which the secondments would be based. This creates a situation where a research project takes priority over the secondments and therefore the secondments begin to be seen as a burden, while they actually should be the core focus of RISE. This also creates a situation, where RISE beneficiaries claim that research, training and networking unit costs are insufficient (and this is to some extent confirmed by the analysis of real costs), but, according to the experts, this only happens because RISE is treated more as a stand-alone research project rather than a mobility project. **The experts therefore suggested to rebalance the RISE funding system so that it encourages the participating organisations to focus at least to the same extent on both the secondments and on the research project**[121]. One of the ways to do this would be to decrease funding for research, training and networking, while increasing funding for the management and indirect costs, which have the highest impact on the capacity to organise secondments.

The following further conclusions stem from the analysis of the real management and indirect costs incurred by the MSCA projects:

- **Management and indirect costs provided by the MSCA for IF, COFUND and ITN actions are in line with the real management and indirect costs incurred by the projects.** While the figure below shows that after subtracting the real costs of management from the EU funding an average ITN would have EUR 237 640 remaining for other management and indirect costs (here we assume that all costs are spent by coordinators and beneficiaries), this amount would not seem too high to fund the indirect costs arising for coordinators and beneficiaries (8.75, on average) participating in a regular ITN project during the overall duration of the fellowships during the project (36 months), in particular taking into account the necessity to partially fund the costs of running an innovative doctoral

[119] Based on the CORDA data extracted on 10 July 2019.
[120] Taking into account the survey evidence presented above, this remaining funding may not be sufficient, in particular for those projects that decide to organise a high number of events (e.g. project conferences) or those that need to add funding to the top-up allowances to make them more competitive. This insufficiency was also revealed by the survey data on the overall satisfaction with the funding, where RISE organisations tended to be least satisfied with funding provided for research, training and networking.
[121] In this context, the core nature of the RISE action could be made clearer in Horizon Europe.

programme as described above. As a conclusion, the study team did not find grounds for any changes in the management and indirect unit costs provided for ITNs and IFs.

- **Management and indirect costs provided by the MSCA for the RISE action are, on average, too low compared to the real management and indirect costs incurred by the RISE projects.** The analysis has revealed that an average RISE project should spend in real costs around EUR 13 861 more than is covered by the EU (here we assume that all participating organisations, and not only coordinators and beneficiaries, would incur management and indirect costs). According to CORDA data, an average RISE project consists of around 219 researcher months[122]. This means that in the ideal case (on the basis of analysis of the real costs) the management and indirect costs should be increased for RISE by up to EUR 611 to be sufficient to cover the real costs claimed by the RISE organisations (133,861/219). As it may not be feasible to increase the management and indirect costs for RISE by such a large amount having in mind the budgetary limitations, and also taking into account the fact that not all partner organisations may incur the same costs as the beneficiaries, **we suggest increasing the management and indirect costs in RISE by up to EUR 500, where the actual increase would be decided by the Commission after further consideration of what is possible in terms of the future budget**. Therefore, we suggest setting the updated RISE management and indirect unit cost rate in the range of EUR 800-1 200. The complementary nature of the RISE funding should be also taken into account when deciding on the final amount of the management and indirect unit cost rate. This means that the management and indirect unit cost rate for RISE should not surpass that of the ITN, where the Commission expects to fund the full management and indirect costs incurred.

Recommendation 7: Rebalance the RISE funding system so that it encourages the participating organisations to focus at least as much on the secondments as on the research project.

Option A (preferred): As shown in the analysis above, an average RISE project should spend in real costs around EUR 133 861 more on management and indirect costs than is currently covered by the EU. Further calculations revealed that, in the ideal case, the management and indirect costs should be increased for RISE by up to EUR 611 to be sufficient to cover the real costs claimed by the surveyed RISE organisations. Taking into account that (1) not all partner organisations may incur the same costs as the beneficiaries, (2) that the objective of RISE funding is to complement and not to fully cover all costs, and (3) the need to ensure the efficient use of the MSCA funds, **we suggest increasing the management and indirect costs in RISE by up to EUR 500, where the actual increase would be decided by the Commission after further consideration of what is possible in terms of the future budget, as well as taking into account the complementary nature of the RISE funding.** Therefore, we suggest setting the updated RISE management and indirect unit cost rate in the range of EUR 800–1 200, subject to further policy discussions.

In order to ensure the efficient use of the budget and a better balance between the secondments and the research projects in RISE, we suggest that the Commission also considers reducing the research, training and networking unit costs for RISE by up to a maximum amount of EUR 500 (for example, in the range of EUR 1 300-1 700).

The suggested changes would encourage the participating organisations to focus at least to the same extent on both the secondments and on the research project.

The proposed changes do not need to result in the actual redistribution of funding from research, training and networking costs to management and indirect costs. In practical terms, **the decrease of research, training and networking costs would not need to be compensated by an equivalent increase of management and indirect costs.**

As stated above, the complementary nature of the RISE funding should also be taken into account when deciding on the final amount of RISE institutional unit cost rates. This means that the institutional unit cost

[122] This number is based on the proposal data, i.e. the average number of researcher months that the RISE projects planned to spend in their proposals.

rates for RISE, taken together, should not surpass those of the ITN, where higher overall costs have to be taken into account.

Option B: **Update the set unit cost rates according to inflation**. To safeguard the purchasing power of the funding provided for management and indirect unit costs under each action, adjust the set rates according to the HICP inflation indicator for 2018, 2019 and 2020, which is described in detail in the introduction of the study. This would effectively mean increasing the rates set by around 5.5%. Since the analysis presented above points to the need for more structural changes, this would not be a preferred option. However, it could be followed if the structural changes suggested above were found to be unfeasible. Should the structural changes be implemented, they would be fully in line with the funding needs established by the analysis, and therefore further updating the unit costs on the basis of inflation would not be necessary.

Finally, taking into account our recommendation above that the Commission would cover the minimum amounts of living allowances that currently have to be co-funded by the beneficiaries in the COFUND action, our analysis in this section reveals that there may be scope for reducing management and indirect unit costs for the COFUND action. Having in mind the assumption that the MSCA seeks to reach as many organisations and researchers as possible, **the Commission may even consider abolishing management and indirect costs for COFUND if they decide to cover the minimum co-funding amounts for living allowances that are currently paid by the beneficiaries.** This would mean that instead of co-funding the living allowances, the beneficiaries would need to provide more co-funding for institutional unit costs, and in particular for the management and indirect costs. Looking at the findings of our interview programme presented above, this would be completely in line with the interests of beneficiaries.

Recommendation 8: If it is decided to provide more co-funding for the living allowances in COFUND, consider abolishing the management and indirect costs in the COFUND action.

As revealed by the analysis above, the experts agreed that the institutions have more flexibility to co-fund the institutional unit costs, not least because they are in any case doing research on an everyday basis and possess research infrastructure, consumables and other types of inputs necessary for research. Therefore, the main benefit of this recommendation is that it would open the possibility for the Commission to cover the minimum shares of the living allowances that currently need to be co-funded by the beneficiaries. The analysis shows that this structure of the programme would clearly be more acceptable for the beneficiaries themselves.

The obvious disadvantage of this recommendation is that the beneficiaries will need to find co-funding sources to finance the management and indirect costs stemming from the projects. However, as shown above, this is much easier for the organisations to do compared to the need to find funding for the living allowances. Therefore, this recommendation, if implemented, should increase the overall attractiveness of the COFUND scheme (together with the recommendation on funding the currently required minimum rates for the living allowances).

During the interview programme, experts have emphasised problems stemming from the fact that management costs are included in the same category as indirect costs (also known as overheads). Especially in large institutions (primarily universities, but also businesses), internal rules and regulations require that all indirect costs/overheads be directly transferred to the central budget of the institution. This means that the research teams (often at the faculty/unit level) of large organisations end up either transferring all management and indirect costs to the central budget (which means that they lose any funding for management of the project, e.g. to hire a project manager) or entering into prolonged discussions with the central management unit on how the management and indirect unit costs should be shared between the research team and the central budget. The experts have piloted the following suggestions for changing the MSCA funding system: (1) decouple management costs and indirect costs (overheads); (2) indicate only management costs as a unit cost, but establish indirect costs (overheads) as a percentage of the overall project budget (for example, as in other Horizon 2020 projects, where the indirect costs are charged at a flat rate of 25% of the eligible direct costs); (3) to avoid prolonged discussions between the central units and research teams, indicate the percentages of management vs indirect costs in the Grant Agreement. While these arguments from the experts, many of whom have managed MSCA projects themselves,

are of course sensible, such changes would make the MSCA funding system more complex and would not be in line with the overall simplification objective of Horizon Europe. The funding system of Horizon Europe is expected to be even simpler than in Horizon 2020 and there do not seem to be sufficient arguments for complicating it by decoupling the management and indirect costs. Further analysis by the study team showed that the majority of the research teams do not face serious problems in communicating with the central management units regarding the allocation of the management and indirect costs. Finally, the study has revealed an extremely high overall satisfaction with the management and indirect unit costs, which present a further counterargument against any structural changes in the funding system.

4. Defining possible new simplified forms of reimbursement to make the MSCA more socially inclusive

4.1. Unit cost to cover employer's pay obligations for researchers' maternity, paternity, parental, sick and special leave

In the interest of non-discrimination and equal opportunities, the Commission intends to adapt the MSCA funding system to make it fairer, more gender friendly and more inclusive, notably when a change in the personal situation of a researcher/staff member occurs. In some countries, the employers are responsible for paying the benefits to their employees in case of maternity, paternity, parental, sick and special leaves. In such cases, the employers may be discouraged from participating in the MSCA or from hiring persons that may potentially go on such leaves, because then the employers would incur additional costs that cannot be charged to the action. The amount and the duration of the payment in such situations vary across the EU Member States, which means that institutions are differently impacted by their obligation to pay an employee when their personal circumstances change during the MSCA project. In countries where the employer pays the benefit, institutions hosting mobile researchers need to find additional funds to cover their obligation to pay a researcher/staff member. Currently, there is no provision to cover these costs for the MSCA researcher/staff member. This means that any periods of absence that are over 30 days cannot be charged to the action. As a result, institutions in countries where pay for such leaves is the obligation of the employer could benefit from a new form of reimbursement. Therefore, the main objectives of this task were to:

- assess the relevant additional costs of the recruiting institution emerging from the change of the researchers' personal situation during the lifetime of the project (maternity, paternity, parental, sick and special leave);
- analyse trends in compulsory pay obligations of employers related to maternity, paternity, parental, sick and special leave of the researchers in the EU;
- assess the possibility to develop a simplified cost option (preferably, unit cost) to cover the employer's pay obligations for researchers' maternity, paternity, parental, sick and special leave.

The study team has gathered information on compulsory pay obligations of employers related to maternity, paternity, parental, sick and special leaves of researchers in the EU countries. We have collected information on whether the obligation to pay the mentioned social benefits is the responsibility of the employer, the social security system or it is shared between the two. We have also collected additional information on more specific details such as the amount and the duration of payment by an employer and how the responsibility of paying the benefit is described in the legislation. This information was mainly gathered through the Mutual Information System on Social Protection database[123], the website of the Directorate-General for Employment, Social Affairs and Inclusion[124], the European Job Mobility Portal (EURES)[125] and the websites of national institutions (e.g. Ministries of Social Affairs, state social/health insurance bodies, etc.). **Very detailed information and analysis on all types of leaves in all countries, where the employers have to pay a certain contribution, is presented in the tables in Annex 4.**

The following insights stem from the analysis of the different national rules for maternity, paternity, parental, sick and special leaves:

[123] Mutual Information System on Social Protection database. Available at: https://www.missoc.org/missoc-database/comparative-tables/results/
[124] European Commission website. Available at: https://ec.europa.eu/social/main.jsp?catId=858&langId=en
[125] The European Job Mobility Portal. Available at: https://ec.europa.eu/eures/public/en/homepage

- **Regarding the maternity benefit, in most cases employers have to cover periods that are longer than 30 days and can last up to 5 months (e.g. in Italy).** The duration of the maternity leave varies across countries in terms of how many weeks the employee can be out of work. National regulations indicate whether this leave is mandatory, non-mandatory or a combination of both. Variations also exist in terms of the level of remuneration women can receive on maternity leave. The amount is calculated based on the earnings of the woman (% of the salary) or is paid as a flat rate. It can be fixed for the entire time or change throughout the leave period. In countries where employers have an obligation to pay maternity leave, they might need to: (1) fully cover the benefit; (2) pay the difference between the amount paid by the social security system and the wage of the employer; (3) cover the benefit, which is then partly or fully reimbursed from the state.
- **In countries, where paternity leave is offered, it is usually covered by the social security system and lasts less than 30 days.** The only exception is Spain, which allows fathers to take 5 weeks off work on the birth of their child.
- Parental benefits and parental leave are not necessarily connected, which means that parents can receive benefits from the social security system regardless of whether they work or take time off work during the entitlement to this benefit. At the same time, most countries allow parents to go on paid or unpaid job-protected leave. Even though the duration of parental leave can be up to 3 years (e.g. Lithuania, Estonia, Germany, Slovakia, and Spain), these periods are either partly or fully covered by the social security system or are unpaid. There are also several countries that identify and compensate parental benefits as maternity/paternity benefits (e.g. Denmark, Finland, Italy, Portugal, Sweden, and the UK).
- Employers are required to pay sick leave benefits for more than 30 days in Austria, Croatia, Germany, Italy, Luxembourg, Malta, the Netherlands and Poland.
- All EU countries allow for some special leave (e.g. personal or family events, studies or examinations, military service). Even though in some cases employers are obliged to pay their employees on special leave, it does not exceed 30 days.

The study team initially considered several options for the MSCA funding where a change in the personal situation of a researcher/staff member occurs, which were dismissed after further analysis: (1) no changes; (2) introduce a reimbursement based on real costs. Further analysis showed that these two options are not viable. The "no change" option would not be acceptable since the draft regulation of Horizon Europe indicates that "where appropriate, for MSCA training and mobility grants, the EU contribution shall take due account of any additional costs of the beneficiary related to maternity or parental leave, sick leave, special leave or change of the recruiting host organisation or family status of the researcher during the lifetime of the grant agreement"[126]. Reimbursing the expenses on the basis of real costs would not be an optimal solution due to the fact that the overall MSCA funding system is based on unit costs. Therefore, it would be financially sensible to arrive at the unit cost solution for all types of costs incurred in the MSCA.

As mentioned above, to arrive at the unit costs solution we have catalogued all cases of all types of leaves in the EU Member States when an employer has to pay a certain contribution to maternity, paternity, parental, sick or special leave benefits. Please refer to Annex 5 for a full catalogue of cases. The following key conclusions relevant for defining a funding system based on unit costs emerged from the analysis:

- In all cases, when an employer has to pay a maternity, paternity, parental, sickness or special leave benefit, the amount of the benefit to be paid by the employer is a

[126] European Parliament legislative resolution of 17 April 2019 on the proposal for a regulation of the European Parliament and of the Council establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination (COM(2018)0435 – C8-0252/2018 – 2018/0224(COD))

function of the salary received by the employee. **Therefore, it would be most sensible to set the general rate of the new unit costs to cover the employers' obligations at the rate, which is most in line with the salary received by the researcher, but in no case higher (in order to respect the no profit principle).** We thus find that the rate of the new unit costs should be set at the same level as the rates of living allowances for the Early Stage Researchers and the Experienced Researchers. The living allowances would reflect the actual salaries very well, and there will not be cases when the living allowances are higher than the salaries paid. In many cases, the actual salaries received by the researchers would be higher than living allowances for at least two reasons: (1) mobility allowances are often paid as part of the salary (and therefore the employers would have to consider them when paying/contributing to the social benefits); (2) quite often, the employers top up the salaries of researchers in order to be in line with the sectoral agreements or in order to make sure that the researchers' salary is competitive in a given country. To summarise, setting the rate of the new unit cost at the rate of the living allowance will ensure that the payment from the Commission will be close to the real costs, but not higher (which will respect the no profit principle). Setting the new unit costs at the rate of the living allowance will also respect the simplification principle by using the rate that is already used in the funding system, and without creating new rates.

- **The other two variables relevant for establishing the real costs of the employers incurred by paying the social benefits are: (1) the duration of payment (calculated in days, to be precise); (2) the share of the salary that the employer has to pay.** The latter is not always defined explicitly as a share but may be defined as a flat rate (which in any case may be translated into a share by dividing the actual salary by the established flat rate).
- **Since any leave shorter than 30 days can be charged to the action and does not need to be reported by the organisations to REA, we assume that the organisations will tend to report only leaves that are longer than 30 days.**

Our overall conclusion stemming from the analysis is that the rate of the new unit costs to cover employer's pay obligations for researchers' maternity, paternity, parental, sick and special leave should be set at the same rates as the current living allowances. Then, in order to be close to the real costs incurred by the employer, this rate should be multiplied by the duration of the benefit paid by the employer and the share of salary that the employer has to cover. In the application submitted to the European Commission, the employers would have to individually indicate these two indices, on which the amount paid would depend. In the application form, the REA will also explain that only costs, which will not be later reimbursed by the national social security system, are eligible.

Recommendation 9: In line with the evidence presented above and the EU priorities for Horizon Europe, we propose establishing a unit costs system to cover the employer's pay obligations for researchers' maternity, paternity, parental, sick and special leave. The rates of the new unit costs would be set at an identical level to the newly set living allowances for ESRs and ERs[127], i.e.:

- **For early stage researchers: EUR 3 450.**
- **For experienced researchers: EUR 5 150.**
- **For COFUND researchers: EUR 2 835 for ESRs and EUR 4 025 for ERs.**

In the application submitted to the European Commission, the employers would have to indicate the duration of the benefit paid by the employer (in researcher months) and the share of the salary (in %) that the employer has to cover.

The evidence shows that employers' obligations vary across the EU countries in terms of the level of remuneration and the duration. Employers are usually obliged to pay a specific % of the salary for a determined

[127] With regard to COFUND, the base rate could be set at the level of the future COFUND researcher's allowance, which, on the basis of the study recommendations, would correspond to the 70% of the ESRs/ERs living + mobility allowances.

period of time. As a result, we suggest that the applying organisation would submit the application indicating the costs that they have incurred in terms of the share of living allowance (1-100%) and the duration of the leave (in researcher months). Our analysis presented in Annex 5 provides an overview of the current legislation with respect to the share and duration of the employer's pay obligations.

At the beginning of a grant, the units would be indicated as zero, but these would be increased in the event of the need for the employers to cover maternity, paternity, parental, sick and special leave related costs. The reporting system would allow beneficiaries to declare that they have incurred these costs and indicate the number of units (researcher months) as well as (possibly) the share of the unit that they had to pay.

4.2. Special needs unit cost

In 2019, a new lump sum grant – the special needs allowance – was introduced under the MSCA to cover the higher costs of mobility faced by researchers and staff members with disabilities. This change was based on the findings stemming from the mid-term review of the MSCA unit costs, which found that the majority of coordinators and fellows were in favour of introducing a disability allowance. The information about the technical implementation of the special needs allowance is provided in the box below.

The goal of the special needs allowance is to support researchers and staff members with long-term physical, mental, intellectual or sensory impairments, whose participation in the MSCA entails extra expenses. It can be used to cover, for example, the costs to adapt the work environment or the costs of assistance by third persons. Costs that are already covered by the national health care/social security system cannot be requested within the special needs application.

The special needs allowance is currently provided in the form of a lump sum and covers up to 100% of the eligible costs. It is limited to a maximum of EUR 60 000 per researcher/staff member. Only researchers/staff members with disabilities, who are eligible under a Horizon 2020 MSCA grant (ITN, RISE, IF and COFUND), are also eligible for the special needs allowance.

The request for the special needs allowance must be individual based, include an estimated budget and explain the specific participation needs of the researcher/staff member concerned. It must be prepared and submitted by the beneficiary. The eligibility criteria for the applicants are:

- At the time of the deadline for the special needs allowance, it must be a beneficiary in an ongoing H2020 MSCA grant, or its proposal must be in the Grant Agreement Preparation stage.
- It has recruited/seconded (or for a proposal in Grant Agreement Preparation stage, will recruit/second) the researcher/staff member with disabilities in the framework of the MSCA action.

Partner organisations and entities with a capital or legal link are not eligible to apply for the special needs allowance with an exception of RISE. If a researcher/staff member with disabilities from the third country partner organisation is to be seconded to the RISE beneficiary, the concerned beneficiary is eligible to apply for the concerned third country researcher.

With the help of independent experts, the Research Executive Agency evaluates the request and decides based on the need(s) of the researcher/staff member and the budget availability. The award criteria are based on three aspects:

- Excellence, which looks at the appropriateness and relevance of the proposed measures or special needs items or services that are necessary for the researcher/staff member to carry out the work in the linked MSCA project.
- Impact, which looks at the effectiveness of the proposed measures with respect to the work in the linked MSCA project.
- Quality and efficiency of the implementation, which looks at the appropriateness of the resources deployed.

The main objectives of this study task were to:

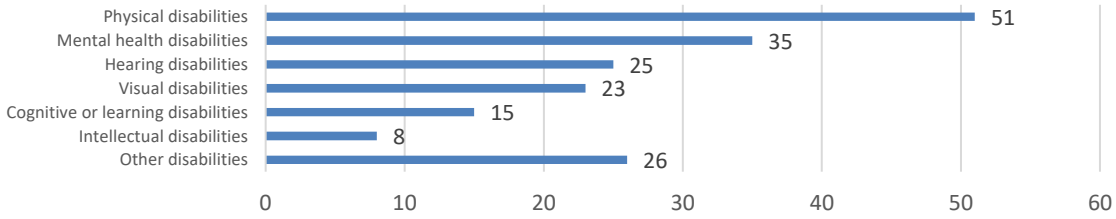
- substantiate the costs originating from the special needs of the MSCA researchers/staff members with disabilities (covering the period before 2019);
- assess the feasibility of the current lump sum funding approach (available as of 2019);
- analyse trends in costs that researchers/staff members with disabilities (such as long-term physical, mental, intellectual or sensory impairments) have to bear to participate in training and research activities;
- suggest a simplified form of funding (preferably, unit costs) to cover the costs of researchers with disability/special needs in Horizon Europe.

4.2.1. Evidence from the survey

In our survey, MSCA organisations were first asked whether they had employed/hosted researchers with disabilities. Out of 566 organisations, who chose to reply to this question, 108 organisations provided positive answers. Figure 20 shows what kind of disabilities were most common among the employed/hosted researchers. When considering these numbers, it is important to consider that not everyone in the organisation may be aware of employing people with disabilities. Some respondents may have chosen to respond that they have

not employed people with disabilities, since they are not aware that a disabled person was in fact employed.

Figure 20. Organisations that have employed people with disabilities (by type of disability)



Source: PPMI survey of MSCA organisations.

Analysis of the open replies revealed that the majority of respondents, who answered 'other disabilities,' chose this option because: (i) they did not know the exact type of the disability; (ii) the information on researchers/staff members with disabilities was not available to them; (iii) they have provided the name of a specific illness/condition, which falls into one of the categories. The items and services used to accommodate staff with disabilities varied across institutions. Most commonly mentioned items and services for each type of the disability were:

- Physical disabilities (limiting mobility): alterations to the existing building infrastructure (e.g. lifts, ramps, wide entrances, barrier free access to auditoriums), ergonomic equipment, transportation, accessible parking spaces, carer services and extra costs for attending conferences.
- Visual disabilities: medical checks, funding for glasses, carer services, emergency lights, specially adapted computers, braille documents.
- Hearing disabilities: infrared stereo transmitting system, cochlear implants, inductive hearing system, which transmits the spoken word directly from the microphone to the hearing aid and mobile induction loop, sign language interpreters.
- Mental health disabilities: counselling.
- Intellectual disabilities: adapted office or separate office (in organisations where a shared office is the norm)[128].
- Cognitive or learning disabilities: extra project time and support from individual tutors.

Most of the surveyed institutions stated that they were not aware of the exact costs that they had incurred in providing the above-mentioned items and services, since these costs were spread over time and included in many separate invoices and other accounting documents. The ones that could indicate the exact costs were mainly organisations that have provided items and services to accommodate physical disabilities. The cost of these items and services varied from EUR 300 to EUR 60 000, as shown in the table below.

Table 41. Funding required to accommodate researchers/staff members with disabilities

€150 for extra cushioned chair	€6 000 additional computing facilities
€200 for a ramp	€8 000 for adjusting working environment and extending a contract
€300 for covering one-off transportation costs	€8 000 per year to organise counselling, provide extra time off and extend the contract
€500 per month to cover taxi and personal assistance costs	€8 000 for unspecified items or services
€500 for unspecified items or services	€10 000 to install sound amplifiers
€1 000 for additional travelling costs per travel tickets	€10 000 for hiring additional staff member to carry out some tasks

[128] People with intellectual disabilities might have difficulties in social situations and communicating with others, including in the work environments. Sharing an office with a colleague might be stressful for a person with mental health problems, which can have a negative impact on their psychological well-being.

€2 000 for special magnifiers and software	€10 000 for unspecified items or services
€2 000 for unspecified items or services	€12 000 per year to adjust facilities and extra costs for attending conferences and training in other places
€2 500 for counselling support	€15 000 per year to cover more expensive travel costs, provide mobility aid, adapt work tools and spaces (e.g. tables, chairs, extra safety/emergency door openers), additional staff to carry out some tasks
€2,500 for software and hardware	€20 000 to provide wheelchair access to offices and washrooms
€2 500 for access ramps and better human resource facilities	€20 000 to introduce tactile elements for analogous accessibility
€3,000 for changing desks and chairs	€20 000 support in communication activities, (e.g. installing special infrastructure of sound amplifiers)
€3 000 for special insulation system for the office of the employee	€60 000 infrastructural adjustment for wheelchair accessibility
€3 000 for special emergency call system	€600000-2 500 000 per year to implement institutional plan for inclusion of people with disabilities

Source: PPMI survey of MSCA organisations.

Analysis above shows that there is a large variety of items and services that might be needed for each specific individual. It also shows that the same items and services can cost different amounts in different circumstances. For example, as the reader can see above, two organisations provided different amounts (EUR 20 000 and EUR 60 000) for ensuring wheelchair access to a building. These differences occur because different organisations are differently adjusted to employ people with disabilities and therefore one of them might need to introduce a larger number of alterations due to the size and structure of the building.

The surveyed researchers were also asked whether they had a disability during their MSCA project and if it was appropriately taken into account. Only 30 respondents – a tiny share of all surveyed researchers – indicated that they had a disability, which may signal that disabled researchers may avoid being mobile when applying to the MSCA in the absence of support for their special needs. **The survey revealed that 22 of the responding researchers/staff members with disabilities indicated that it would have been helpful to receive an allowance to cover their special needs** (all of the responding researchers with disabilities participated in the MSCA before the special needs allowance was in place)**.** Only 16 out of 30 researchers/staff members with disabilities said that their special needs were considered in their host organisation, which points to the relevance of having some kind of support for covering the costs of researchers with special needs participating in the MSCA.

As seen in the open replies, the main items and services that the researchers/staff members with disabilities would have found useful were additional office equipment to accommodate special needs (e.g. ergonomic chairs, better isolation headphones), financing higher travelling costs for work, paying for a carer and covering medical costs and insurance. Researchers, who have indicated that they do not need additional funding, answered that their health insurance system is covering their needs, the institution/project covered all the necessary expenses, or their condition was temporary. When asked what allowance would have been sufficient to cover their special needs, the amounts indicated varied significantly. Fellows, who needed funding to cover medical insurance and assistance of a carer, said that the monthly payments in the range of EUR 55 and EUR 2 000 were sufficient while fellows, who needed funding to cover new or adjusted equipment, said that they preferred a lump sum that ranged between EUR 1 000 and EUR 5 000. The examples provided below from the MSCA fellows survey show that the needs of researchers/staff members with disabilities vary greatly in terms of both items/services and funds that they require.

Table 42. Funding required to accommodate the needs of researchers/staff members with disabilities

Lump sum	**Monthly**
€1 500 for software and hardware for dyslexia	€2 000 for a caregiver service
€4 000 for special computer monitor and software for visual impairment	€250 for unspecified services
€5 000 for additional health insurance	€300 for unspecified services
€2 000 ergonomic work equipment	€500 for unspecified services

€1 000 for unspecified services	€600 for unspecified services
€3 000 assistive technology	€750 for additional health insurance
	€900 for medication due to chronic disease, which was not covered by health insurance
	€1 000 for unspecified services
	€55 for travelling

Source: PPMI survey of MSCA fellows.

4.2.2. Evidence from the interviews

As part of field research on the additional costs faced by the researchers with disabilities and any other issues related to responding to their needs, we carried out interviews with disability experts and the MSCA NCPs. The key findings from the interviews can be summarised as follows:

- **Experts agree that the introduction of the MSCA special needs allowance was an important step in making the programme more inclusive.** Even though equal opportunities were always applied and people with disabilities have already participated in the programme, some researchers and research organisations did not always have the funds necessary to make adjustments and undertake mobility opportunities. People with disabilities almost always face more constraints when moving to another country. They are often faced with higher living and moving costs. Another important aspect is that there are different national legislations in relation to healthcare and items or services available in the home and host countries. This is particularly important to people with disabilities, because they usually require continuous access to healthcare and services in relation to their disability, and they may face (temporary) barriers to receive these in a different country. For example, in many countries public healthcare does not cover mental health support in English, which means that a person has to independently find and pay for such services and their costs are usually more expensive than the ones available in the local language; or a person was receiving medication or treatment for their disability in their home country but is ineligible for the same medication or treatment in the host country.
- Experts have also agreed that **it is very important to provide support to both organisations and researchers/staff members with disabilities.** Adjustments in both the work and private environment are equally important for people with disabilities in order to be able to carry out the project activities successfully. The lack of individual-related items and services might be the main cause preventing researchers/staff members from participating in the mobility programmes. Many European cities are rather poorly adapted for people with disabilities, which means that the rent and travelling prices for researchers/staff members with disabilities are usually higher.
- **The involvement of experts in the evaluation process helps to determine that funding is allocated only in cases when a disability creates special needs.** There are people with disabilities that do not require any special items or services to accommodate them in their living or work environment. Moreover, some experts suggested that funding should be provided only in cases when special needs require adjustments relevant to project activities; in other words, when the lack of such items or services would negatively impact the implementation of the project and the individual's ability to carry out the activities.
- Many experts suggested to introduce a section in the MSCA proposals, where institutions would have to explain their experience in employing people with disabilities and possible ways in which they plan to ensure the inclusion of researchers/staff members with special needs in their project. Identification and evaluation of accessible institutions would also allow prospective fellows with disabilities to find the most suitable organisation for them.
- Interview respondents agreed that **the current funding system of a lump sum is the most representative of different needs of researchers/staff members**

with disabilities. There is a wide variety of disabilities, which require different types of items or services. People with the same disability might require different items or services depending on the severity of the disability, individual adjustments and requirements. Moreover, many people with disabilities have several conditions that require a combination of different items and services.

- **The interview respondents highlighted that there are differences across organisations in terms of their approach to inclusiveness and level of accessibility.** These differences exist both across the EU countries and within countries. Organisations that have strong internal policies and dedicated budgets for inclusiveness can better accommodate people with disabilities. They provide various and substantial in-house services and have sufficient infrastructure and experience in accommodating students and staff with disabilities. These are usually larger organisations that have higher budgets. However, publicly funded organisations with smaller institutional budgets might lack services and infrastructure to accommodate people with disabilities.

4.2.3. Evidence from the Independent Observers Report

Evidence from the (non-confidential) extracts of the Independent Observer Report on the first MSCA special needs lump sum evaluation[129] made available by the Commission shows that:

- The decision by the Commission to introduce the MSCA special needs allowance was welcomed by the experts. There was a consensus that it was important to provide additional funding to researchers/staff members with disabilities. **However, several experts thought that the incorporation of disability-awareness and the relevant funding for this within the main MSCA action would be more inclusive. This is a strong argument in favour of the unit costs system.**
- There is no standard definition across the EU countries of the recognised disabilities and terminology. These differences would create difficulties in allocating funding for researchers/staff members moving between countries. For example, dyslexia is not recognised as a disability in some countries (e.g. Spain, Austria) or there is no common sign language adopted across the EU. This would create challenges to update and reflect the evolving nature of the disability across the EU countries when considering applications.
- The examples of possible types of support currently available in the Guide for Applicants of the current special needs allowance call are clear and helpful.

4.2.4. Evidence from the desk research

Desk research confirmed that **there is a wide variety of disabilities and they all require a wide variety of items and services.** Through desk research in openly accessible sources and with the help of the interviewed experts, the study team has prepared a list of possible items and services that could be necessary for people with disabilities (see Annex 5)[130]. The list was then used to establish the (indicative) categories of items and services that together take into account a wide range of possible costs. The ability of a researcher/staff member with disabilities to participate in the programme depends on the available items and services at both the host institution and their individual/personal environment. For this reason, we have divided the items and services into two categories: individual-related items/services and work-related items/services. People with disabilities often face higher costs in their everyday life. Extra costs may relate to both general items that every person needs (e.g. paying rent, healthcare, travel) as well

[129] Call deadline 24 April 2019, Call H2020-IBA-MSCA-SNLS-2019. An independent observer provides opinion over the conduct and fairness of the evaluation process and gives independent advice for improvement.
[130] Please note that this list is not exhaustive and there may exist other important items and services, which were not included in the list. The reason for this is that the needs of persons with various disabilities are very specific and can be unique for each person. Even the same type of disability might require different items and services.

as disability-specific items (e.g. assistive technology, medication, personal assistance or house adaptation). These costs also largely depend on government policies and programmes[131], which means that moving to another country might put researchers/staff members with disabilities at a disadvantage.

The costs associated with the specific items or services necessary for people with disabilities vary across the EU countries. Even though the cost of devices and equipment (e.g. hearing aid, ergonomic furniture) might have lower variations, the costs of services for assistance and infrastructure (e.g. carer, counsellor or construction services) can vary greatly across the EU countries due to differences in wages. To illustrate these differences, the study team has compared the preliminary average caregiver wages and the average prices for counselling in several EU countries (see tables below).

Table 43. Average monthly salaries of caregivers in EU countries

Country	Average salary in €	Country	Average salary in €
Austria	2 492	Italy	1 487
Estonia	739	Malta	1 118
France	1 647	Poland	639
Germany	2 167	Romania	481

Source: compiled by PPMI.

Table 44. Average prices for a counselling session in EU countries

Country	Average price per session in €	Country	Average price per session in €
Austria	80-120	Italy	60-120
Croatia	15-67	The Netherlands	50-120
Denmark	100 on average	Poland	25-33
France	60 on average	Slovenia	40-60
Greece	35-135	Spain	50 on average

Source: European Association for Psychotherapy[132].

We have also prepared a table showing preliminary price ranges for some of the items and services that people with disabilities might need.

Table 45. Preliminary prices of different items and services

Item or service	Price in €	Item or service	Price in €
Electric wheelchair	1 029-21 422[133]	Loop hearing system	2 257-31 610[134]
Stairway chairlift	1 859-5 522[135]	Eye tracking system (software and hardware)	2 619-4 199[136]
Assistive listening device	206-711[137]	Ergonomic work equipment (examples)[138]	Chair: 84-2 100. Table/workstation: 234-404. Computer monitor glare filter: 51-1 060

[131] Mitra, S., Palmer, M., Kim, H., Mont, D., Groce, N. (2017) Extra costs of living with a disability: A review and agenda for research, *Disability and Health Journal,* 10(4), pp. 475-484.
[132] European Association for Psychotherapy. Available at: https://www.europsyche.org/situation-of-psychotherapy-in-various-countries/
[133] These prices were collected from Amazon online shop. Available at: www.amazon.com. The sharp differences are related to the specifications and often quality of the product. Please note that wheelchairs which have multipurpose are more expensive (they are better suited for people with quadriplegia).
[134] These prices were collected from American Hearing Loop company's website. Available at: http://www.americanhearingloop.com/hearing-loop-design-and-installation/. Please note that these prices are quoted for the US. Prices were converted from US dollars to euros on 2019.11.06 using www.xe.com converter. The variations of prices depend on the size and construction of the room.
[135] These prices were collected from Amazon online shop. Available at: www.amazon.com.
[136] These prices were collected from gazepoint website. Available at: https://www.gazept.com/#/. Please note that these prices are quoted for the US. Prices were converted from US dollars to euros on 2019.11.06 using www.xe.com converter. The variations of prices depend on the size and construction of the room.
[137] These prices were collected from Amazon online shop. Available at: www.amazon.com.
[138] These prices were collected from Amazon online shop. Available at: www.amazon.com.

Augmentative and Alternative Communication (AAC) devices	177-749[139]	Text-to-speech/screen readers software	Free-1 200 (+maintenance services)
Braille assistive technology/display	908-5 428[140]	Augmentative and Alternative Communication (AAC) devices	177-749[141]

Source: compiled by PPMI.

This table is not exhaustive and does not include a variety of items and services and their:

- **Costs related to individual needs.** When it comes to individual needs of a researcher, indicating exact prices for some items and services is difficult. The reason for this is that each person has individual needs based on the type and severity of disability/disabilities, services available in a host country and household composition. For example, if a person has a chronic disease, he/she might require a constant supply of medication, physical therapy or counselling. People with disabilities often require several items and services, which means that the total cost also depends on the combination of required items and services.
- **Costs related to modifications of infrastructure.** Available data on preliminary costs for installing modifications in a building is scarce (most are estimates for infrastructure modification in individual houses). Costs vary between countries and also largely depend on the specifications of the place to be modified (e.g. size, quantity, complexity, etc.). Different prices for such services are usually quoted for each specific case.
- **Costs related to high technology.** High technology is often individualised, and prices are quoted individually. Some of the more advanced high technology is only available in some countries (usually, with larger markets), which means that it has to be shipped from abroad, which adds up to the final price.

4.2.5. Conclusions and recommendations: arriving at the unit costs solution to cover the disability costs

The main conclusion stemming from the analysis presented above is that there exists a wide variety of items and services required by people with disabilities, and that these items and services may be used together in various different combinations depending on the specific circumstances. Furthermore, the prices of these items and, especially, services vary significantly depending on the economic situation of a country. This points to the necessity to ensure that the MSCA funding to cover higher mobility costs incurred by persons with disabilities needs to be as flexible as possible in order to be able to respond to the varying circumstances these persons find themselves in.

Insights from the interviews with the disability experts confirmed that the current system, when the needs of the disabled researchers were funded on the basis of the real costs, in principle worked well and was able to accurately respond to the special needs faced by these researchers. Thus, keeping the same funding system for the special needs should be considered as one of the options in further policy discussions.

However, there are two main significant arguments for the introduction of the unit costs system to fund special needs. First, most of the funding for the MSCA is based on unit costs, and therefore developing a unit costs solution for funding the special needs would contribute to the coherence and efficiency of the MSCA funding system. The MSCA funding system is also widely praised by the stakeholders for its simplicity, and further simplifying it would contribute even more to the positive image of the MSCA brand. As this study also suggests simplifying the funding scheme for the European Researchers' Night projects, it is expected that no part of the MSCA would continue to be funded on the basis of real costs in Horizon Europe.

[139] These prices were collected from Amazon online shop. Available at: www.amazon.com.
[140] These prices were collected from Amazon online shop. Available at: www.amazon.com.
[141] These prices were collected from Amazon online shop. Available at: www.amazon.com.

The second reason for introducing the unit costs system to fund the special needs of researchers is that **the incorporation of disability-awareness and the relevant funding for this within the main MSCA action would be more inclusive, as noted by the independent observers' report.**

On the basis of quantitative and qualitative evidence presented above, the study team has developed a list of seven categories that together most accurately represent the different levels of costs historically incurred by the researchers with disabilities. Development of these categories has entailed two main steps. The first step involved clustering of the available quantitative data into the most accurate distinctive categories. There were two types of quantitative data available for the study team:

- Survey responses by researchers and organisations, where they have indicated the exact items or services that were necessary to respond to their special needs and the amount in EUR that they have paid to buy these items and services.
- Data on the actual budgets requested by the applicants to the first two calls for the MSCA special needs allowance[142].

As a second step, on the basis of qualitative evidence (insights from interviews and open replies to the survey questionnaires) the study team has developed explanations on what type of items or services could be funded from these categories, by also providing specific examples of the actual items and services that were historically funded in these categories.

The seven categories presented in Table 46 are the result of this analysis and will help to create a solid foundation for the unit costs system to fund the special needs of researchers. The first column of the table indicates the number of the category. The second column shows the ranges in terms of EUR, where the real needs of beneficiaries would fall on the basis of the historical data.

The third and fourth columns suggest two options of what overall amount in EUR could be used to develop a unit cost for each category. In order to derive the monthly rate to be paid, the applicable amounts will be transformed into a monthly rate on the basis of the duration of the grant.

Option A would mean that the total amount to be received by a beneficiary would be set at the minimum amount of an established range. The main benefit of this option is that it seems to fit most naturally with the no profit principle and should be clearest for the applicants. It would work as follows. If the applicant finds itself in a certain category, it would simply apply to the minimum amount, which would make sure that no profit is possible.

Option B would set the total amount to be received by a beneficiary at the average of an established range. The main benefit of this option would be that it may better represent the dispersion of various actual needs in the indicated range. If this option is selected, in order to respect the no profit principle, the funding rules should clearly say that only those, who need more than this established average, should apply for a certain amount. Those who need less than the set amount will have to apply to the lower one.

The final column of the table provides qualitative descriptions of what each category would entail. These descriptions also provide the actual examples of items and services that were historically funded at similar prices.

[142] These budgets were made available to the study team by the Commission. As this data is confidential, the list of the actual budgets will not be revealed here. Only calculations based on these data will be presented. However, this data is available for the Commission and therefore our analysis can be reproduced.

Analysis of the historical data has also revealed that there may be the need to have two smaller categories instead of a single category I. At the lower end, fluctuations in the order of EUR 1 000-2 000 may be rather significant for the applicants and therefore existence of more categories would be beneficial in order to ensure that the applicants do not need to search for significant co-funding possibilities or to cover the necessary sizeable amounts themselves. Thus, we would suggest establishing the unit costs for both the minimum and the average amounts at the lower end, i.e. to have categories close to the total amounts of both EUR 3 000 and EUR 4 500.

Evidence gathered during the study allows concluding that it would not be efficient to have a category that would provide funding lower than EUR 3 000. Analysis of quantitative data gathered during the survey and the actual budgets that were requested so far under the special needs allowance showed that very few researchers needed lower funding than EUR 3 000 (there was only one such budget requested under the current special needs allowance). In the open replies to the survey questionnaires, many organisations claimed that they would preferably not apply for lower amounts, as the costs and the administrative burden of applying may be even more significant than the funding received. The organisations also claimed that they can usually fund the lower amounts from their own budgets.

As mentioned above, on the basis of agreement with the Commission, the final categories, their total amounts and the monthly unit cost rates will be established on the basis of further policy discussions.

Table 46. Categories that represent the different levels of costs historically incurred by the researchers with disabilities

Category:	Established ranges, where the real needs of the beneficiaries fall, EUR:	Amount that the organisation may get:		Description
		Option A: The minimum amount of a category	Option B: The average amount of a category	
I	3 000-5 999	3 000	4 500	This category typically includes low-cost services, which are usually widely available devices and equipment for both individual-related and work-related use. They can include wheelchairs, assistive listening devices, loop hearing system, text-to-speech readers, augmentative and alternative communication (AAC) devices, wheelchair ramps, eye tracking systems or ergonomic work equipment.
II	6 000-12 999	6 000	9 500	This category also typically includes low-cost services, which are usually widely available devices and equipment for both individual-related and work-related use. Same as for Category I, they can include electric wheelchairs, assistive listening devices, augmentative and alternative communication (AAC) devices and ergonomic work equipment as well as sound amplifiers or adjustment to work spaces (e.g. access to or modification of office or/and laboratory spaces), additional computing facilities or covering higher travelling costs (e.g. taxi services).
III	13 000-23 999	13 000	18 500	This category typically includes medium-cost services, some smaller infrastructure adaptations as well as covering health insurance costs. The data collected from the survey and desk research show that expenses

				under this category can include the installation of wheelchair access to offices and washrooms, tactile elements for analogous accessibility, assistive technology, and services for individual needs such as expenses for personal assistance services, travelling and medical costs. It would also allow covering the costs of several services that fall into category I and Category II.
IV	24 000-30 999	24 000	27 500	These categories typically include medium-cost infrastructure adaptations, technology devices and equipment, additional costs related to individual needs or a combination of several services from Categories I, II and III. The evidence from the survey and desk research shows that the expenses under Category IV and Category V are mainly related to personal assistance services, health insurance costs, additional work-related travel expenses or infrastructure adaptations in the host organisation. Expenses for the above-mentioned services can vary across institutions and countries and differ for a specific individual, thus organisations would apply for the category, which best reflects the actual needs.
V	31 000-39 999	31 000	35 500	
VI	40 000-54 999	40 000	47 500	This category typically includes expensive infrastructure adaptations, high technology devices and equipment and personal assistance services or a combination of several services from lower categories. The survey evidence shows that one organisation needed a combination of services such as adapted work environment (e.g. larger rooms, automatic doors, adaptation of emergency exists), covering extra travel costs and hiring additional staff to implement certain tasks, which cost an organisation approximately €15,000 a year.
VII	55 000-65 000[143] and above	55 000	60 000	This category typically includes extensive and expensive infrastructure adaptations, customised high technology devices and equipment, personal assistance services or a combination of several services from Categories I-VI. Organisations that require extensive adaptations might require larger amounts, which would not be covered by other categories, especially when several spaces need to be adapted. Based on the survey and desk research, personal assistance services in some countries and for some individuals would also fall into this category (when looking at the average salaries in the EU countries or taking into account different needs of an individual). Moreover, interviewees highlighted that high technology devices and equipment fall into this category. The high technology devices and equipment are usually very specific to a particular case, which means that prices are often quoted individually.

[143] While a number of data points fall into the category of EUR 55 000-65 000, there was only one amount quoted in the survey that was higher than EUR 60 000 (EUR 64 000, to be precise). Therefore, the reader should note that the upper limit of the highest category, i.e. EUR 65 000, does not have very strong evidence-based support and will have to be established on the basis of a political decision. Evidence shows that organisations very rarely needed EUR 60 000 or more to cover the disability costs faced by a researcher throughout the duration of the grant.

Recommendation 10: To cover the costs incurred as a result of the special needs related to disabilities, introduce a unit cost system with seven or more different categories of rates, which are indicative of different ranges of price levels of disability items and services.

We suggest establishing monthly unit cost rates on the basis of evidence and the seven categories described above. As mentioned, currently we have indicated two options for the possible total amounts to be received by the beneficiaries on the basis of historical ranges of prices that the organisations and researchers actually paid to cover the costs of disability items and services. In order to derive the monthly rate to be paid, the applicable amounts will be transformed into a monthly rate on the basis of the duration of the grant.

Option A would mean that the total amount to be received by a beneficiary would be set at the minimum amount of an established range for each category. The main benefit of this option is that it seems to fit most naturally with the no profit principle and should be clearest for the applicants. It would work as follows. If the applicant finds itself in a certain category, it would simply apply for the minimum amount, which would make sure that no profit is possible.

Option B would set the total amount to be received by a beneficiary at the average of the established range. The main benefit of this option would be that it may better represent the dispersion of various actual needs in the indicated range. If this option is selected, in order to respect the no profit principle, the funding rules should clearly say that only those, who incur more than this established average, should apply for a certain amount. Those who incur less than the set amount will have to apply to the lower one.

On the basis of the established categories, a set of amounts to which beneficiaries would apply for their financial claim is defined. In order to ensure the no profit principle, beneficiaries will have to apply to the closest lower amount compared to their financial needs. Considering the margins that exist due to the different price levels for disability items/services across countries, and the purpose of ensuring that the claimable amounts are not too far from beneficiaries' financial needs, the amounts are set so as not to have too wide a gap among them. In this regard, further intermediate amounts, especially at the lower end of the scale, may be introduced to reduce such a gap.

We propose that the system should work as follows. When an institution hires a person with disabilities or sends such a person on an exchange, it submits an application indicating the disability items/services needed to address the special needs of a researcher and the related costs. On the basis of the institution's claim, the Commission will pay the contribution corresponding to the closest lower amount for the duration of the fellowship or secondment. Organisations will not be eligible to receive amounts for several categories at the same time.

5. Analysis of the datasets of the actual costs incurred by the beneficiaries of the European Researchers' Night under FP7 and Horizon 2020 and identification of any trends or patterns, and possibilities of simplified funding

The European Researchers' Night (NIGHT), funded under the Marie Skłodowska-Curie actions, is a Europe-wide public event to enhance researchers' public recognition and to stimulate interest in research careers, especially among young people. NIGHT events take place yearly, typically on the last Friday of September. The European Researchers' Night action in FP7 and H2020 is being financed on a real cost basis. Such financing mechanism usually implies a relatively heavy administrative burden as substantial resources must be allocated to planning and reporting of financial inputs of the action rather than concentrating on the activities, outputs and results of the project. Therefore, the main objective of this task was to assess whether (and how) the financial regime of the action could be simplified by using simpler forms of grants (for instance, by using the standard cost options – lump sums, standard scales of unit costs and/or flat-rate financing). To achieve this objective, this task was focused on an in-depth analysis of the historical datasets of actual costs incurred by beneficiaries of the European Researchers' Night under FP7 and Horizon 2020, clustering and interpretation of the above data and proposing options for optimisation of the action drawing on the obtained results. The analysis covered projects financed under three H2020 NIGHT calls (H2020-MSCA-NIGHT-2014, H2020-MSCA-NIGHT-2016 and H2020-MSCA-NIGHT-2018) and three FP7 NIGHT calls (FP7-PEOPLE-2011-NIGHT, FP7-PEOPLE-2012-NIGHT and FP7-PEOPLE-2013-NIGHT). The detailed analysis for this task is presented in Annex 6 of this report.

The analysis of the NIGHT project data and the actual project costs incurred by the beneficiaries revealed that, overall, as a very open action with no pre-defined budget amounts, no budget 'ceilings,' no requirements for composition of partnerships and geographical coverage of projects, the NIGHT action resulted in a great variety of projects and budgets. Therefore, our analysis aimed at identifying the trends and patterns for the variation of costs of NIGHT events linked to project characteristics (such as the number of partners, cost level in a respective country, size of the country, number of cities covered by the respective NIGHT events, costs per output and result of the project, etc.).

Our analysis revealed no clear interrelations between the number of participants and the budget of a NIGHT event. The analysis of relations between the costs of a NIGHT event and input- and output-related project indicators (respectively, the number of R&D participants and staff involved in the H2020 project and the number of visitors attracted by the NIGHT events) revealed very significant variation between the projects, which could be related both to different reporting practices and specific characteristics/approach employed by the projects.

The average costs of H2020 NIGHT events tended to rise in countries with higher cost levels, however, similar to the overall sample, the costs of specific NIGHT events varied significantly within country groups with similar cost levels. Our analysis also revealed that countries with lower cost levels tended to opt for a higher reimbursement rate (which could be related to less opportunities to attract co-financing for NIGHT events), therefore the difference in requested EU contribution between country groups is lower than comparing the total costs of NIGHT events.

The average costs of NIGHT events tended to be higher in larger countries. However, similar to the overall sample, the costs of specific NIGHT events varied very significantly in larger countries (with population over 5 million), which was related to the specificity of

NIGHT events – some NIGHT events in larger countries covered many of the biggest cities of a respective country, while other events covered just one or a few cities. The costs of specific NIGHT events implemented in smaller countries (with population under 5 million) tended to be more homogenous and could indicate the minimum cost level necessary to implement a NIGHT project (around EUR 80 000).

Higher costs of NIGHT events in larger countries also reveal a link between the geographical coverage of a NIGHT event and its costs. The larger the geographical coverage, the higher the costs of the project. Our analysis has revealed that the costs of NIGHT events tended to be higher in those projects which covered more cities and more venues (information on a median value of historical actual costs of H2020 NIGHT events depending on the number of cities and venues covered by the event is presented in the table below).

Table 47. Information on the total costs of a NIGHT event depending on the number of cities and venues covered by the event

Project category	Number of cities covered by NIGHT event	Median value of the total costs of a H2020 NIGHT event (EUR)	Number of venues covered by NIGHT event	Median value of the total costs of a H2020 NIGHT event (EUR)
Smaller-scale NIGHT event	1-4 cities	93 212	1-8 venues	93 225
Medium-scale NIGHT event	5-10 cities	119 253	9-20 venues	125 493
Larger-scale NIGHT event	Over 10 cities	153 672	Over 20 venues	164 974

Source: PPMI based on data presented in periodic reports of H2020 NIGHT actions.

This relationship between the costs of a NIGHT event and the number of cities and venues covered by the event could be used as a basis for developing simplified cost options for the NIGHT action. Similar to the overall sample, the costs of specific NIGHT events varied significantly within the same group of NIGHT events covering a similar number of cities and venues, therefore attribution of a project to a certain project type based on strict quantitative parameters would not be adequate and therefore quantitative parameters should be combined with qualitative parameters of the project.

Drawing from the evidence collected during the study, the study team suggests considering the following options for simplified funding of the NIGHT action.

1. Introduction of a lump sum-based financing system for NIGHT projects

A simplified financing system for the NIGHT action could be based on a lump sum approach, where lump sums would be differentiated into three categories taking into account the estimated scope of NIGHT event (smaller-scale NIGHT event, medium-scale NIGHT event and larger-scale NIGHT event).

The amount for such lump sum could be defined on the basis of a median value of historical actual costs of H2020 NIGHT events presented in Table 46 above. While setting the specific value of a lump sum, these historical costs of NIGHT events could be adjusted taking into account:

- **Co-financing attracted by the NIGHT events**. Although the financial support for NIGHT projects may represent up to 100% of the eligible costs of the action, only 35% of the selected NIGHT projects opted for 100% EU funding. Project beneficiaries on average contributed 21.5% of the total project costs, beneficiaries

of larger projects tended to contribute more (higher share of the total project costs). Thus, to encourage further beneficiary contributions to NIGHT events, lump sums could be adjusted taking into account the co-financing attracted by the NIGHT projects.

- **Simplified management of NIGHT projects, which would be brought by the lump sum system**. Introducing a lump sum system for the NIGHT action would contribute to simplified management of the projects and reduction of the administrative burden to beneficiaries, which would have a direct impact on the reduction of project management and indirect costs. As revealed by the analysis of the actual costs of NIGHT projects, the Indirect Costs on average constituted 14.8% of H2020 project costs, while Management Costs (WP4) on average constituted 10.1% of FP7[144] project costs, hence, a substantial share of these amounts could be potentially saved through simplifying the financial management of NIGHT action.
- The two factors indicated above, combined, could amount for up to 46.4% of the total project costs. However, the simplification of financial project management would only partially reduce project management and indirect costs, therefore we reduced historical costs of NIGHT events by 30% when calculating proposed lump sum amounts to take account of co-financing which can be attracted by the NIGHT events and the benefits of simplified financial management of the projects. Alternatively, to provide for a wider range of grants, the reduction of historical costs of NIGHT events could be progressive (10% for larger-scale NIGHT events, 20% for medium-scale NIGHT events and 30%[145] for smaller-scale NIGHT events).

The proposed lump sums, which could be used for financing the future NIGHT projects, are presented in the table below.

Table 48. Proposed lump sums for one NIGHT event

Project category	Proposed lump sum amount for one NIGHT event (EUR)[146] (preferred option)	Alternative lump sum amount for one NIGHT event (EUR)[147] (alternative option)	Criteria for project assignment to the respective category
Smaller-scale NIGHT event	65 000	50 000[148]	All projects can be assigned to this category without any reasoning and justification.
Medium-scale NIGHT event	85 000	100 000	To be attributed to this category NIGHT projects must be substantial in their scale and geographical coverage: • **Wide geographical coverage**. The project should ensure wide geographical coverage. Indicatively, NIGHT events should be implemented in 5 or more cities and/or 9 venues, unless justified otherwise by the chosen methodological approach/specificity of the project (such as covering fewer large cities and covering multiple venues and offering a very wide range of activities, which would allow attracting a high number of researchers and visitors);

[144] The costs of H2020 projects are not attributed to specific WPs in H2020 project reports, thus FP7 project data is used.
[145] To provide for an even wider range of grants, the reduction of historical costs for smaller-scale NIGHT events could be up to 46.4%, arriving at the lump sum of EUR 50 000 for the smaller-scale NIGHT events.
[146] The proposed lump sum amounts were calculated by reducing historical actual costs of H2020 events by 30% and rounding up the amount to the nearest EUR 5 000.
[147] The alternative lump sum amounts were calculated by reducing historical actual costs of H2020 events progressively by 10% for larger-scale events, 20% for medium-scale events and 30% for smaller-scale events and rounding up the amounts to the nearest EUR 5 000.
[148] EUR 50 000 if historical actual costs of smaller-scale H2020 NIGHT events were reduced by 46.4%.

			• **Wide reach of both researchers and the audience**. The project should involve a large number of R&D participants, especially researchers funded by the EU programmes and MSCA fellows. The project should also be aimed at attracting a high number of visitors to NIGHT events; • **Activities offered at the NIGHT events.** The project should offer a wide range of activities; • **Awareness campaign**. The project must be supported by a wide awareness campaign, involving a wide range of offline and online communication tools, promotional material, etc.; • **Impact Assessment**. The project must be accompanied by a comprehensive impact assessment.
Larger-scale NIGHT event	110 000	145 000	To be attributed to this category NIGHT projects must be very substantial in their scale and geographical coverage: • **Very wide geographical coverage**. The project should ensure very wide geographical coverage. Indicatively, NIGHT events should be implemented in 10 or more cities and/or 20 venues, unless justified otherwise by the chosen methodological approach/specificity of the project (such as covering fewer large cities and covering multiple venues and offering a very wide range of activities, which would allow attracting a very high number of researchers and visitors); • **Very wide reach of both researchers and the audience**. The project should involve a very large number of R&D participants, especially researchers funded by the EU programmes and MSCA fellows. The project should also be aimed at attracting a very high number of visitors to NIGHT events; • **Activities offered at the NIGHT events.** The project should offer a very wide range of activities aimed at diverse target groups; • **Awareness campaign**. The project must be supported by a very wide awareness campaign, involving a wide range of offline and online communication tools, promotional material, wide media coverage, etc.; • **Impact Assessment**. The project must be accompanied by a very comprehensive impact assessment, employing extensive quantitative and qualitative data assessment methods.

Source: PPMI.

The applicants would choose the category of the project in their applications and would provide reasoning and justification for their choice. The choice of the category would be reviewed during the application evaluation stage by the experts. During the evaluation, the experts could propose to assign the project to a different category.

2. Use of lump sums for promoting MSCA and EU research programmes at festivals and events promoting science/research

Although the European Researchers' Night events are not organised in every EU Member State or associated country, some of the latter countries host festivals related to the

promotion of science/research. As agreed during the kick-off meeting, the study also analysed, how the EU could contribute ('buy-in') to these festivals, so that the organisers promote the MSCA and EU-supported research during these events.

There are a few aspects to be considered in relation to developing a simplified funding system for such events:

- First, the EU has not previously contributed to such festivals[149], hence there is no historical data on the actual costs or the EU contribution to such events.
- Second, as festivals are already being organised and implemented in the respective H2020 programme countries, it is impossible to objectively decide which part of the event cost should be attributed to and covered by the EU grant.
- Third, the label of NIGHT 'Associated' event proved to be successful and attractive to NIGHT applicants even without additional funding. Having that in mind, the EU contribution to festivals and events promoting science/research should not be very high.

Information on the sponsorship of events on the platform SponsorMyEvent is provided in the information box below.

Information box: sponsorship of events on the platform SponsorMyEvent

Sponsorship deals for Science & Technology events on the platform SponsorMyEvent (https://www.sponsormyevent.com/) start from around EUR 1 000 to over EUR 20 000. The price of sponsorship deals depends on the size of the audience, speakers and participants, topics, media exposure, visibility and prestige of the event, etc. In addition, many events present different sponsorship opportunities, with varying level of visibility and price (such as Sustaining Sponsor, Patron Sponsor and Presenting Sponsor, Bronze Package, Silver Package and Gold Package, etc.).

In order to ensure a simple and transparent financing system for contribution to such festivals, the EU grant could be based on a lump sum per festival providing that the EU grant covers only part of the overall cost of the event (e.g. 10-20%). The amount of this lump sum could be between EUR 10 000and EUR 20 000. Once set, the lump sum amount could be subsequently revised and adjusted depending on whether such a financing system and the level of financing ensures a sufficient level of interest of potential applicants and attracts applications from the relevant target events.

[149] Except for NIGHT 'Associated Events'. According to the Guide for Applicants, coordinators of projects that passed the evaluation thresholds but were not retained for funding due to lack of financial resources receive an information letter from REA, indicating that they may request their event to be associated with the European Researchers' Night. No funding is provided for associated events.

6. Recommendation on the MSCA funding system for the launch of Horizon Europe

Based on the analysis above, the study recommends the following MSCA funding system for the launch of Horizon Europe in 2021:

Marie Skłodowska-Curie Action	Researchers' unit costs (person/month)			Institutional unit costs (person/month)	
	Living allowance	Mobility allowance	Family allowance	Research, training and networking costs	Management and indirect costs
Innovative Training Networks	EUR 3 450	EUR 600	EUR 660	EUR 1 600	EUR 1 200
Individual Fellowships	EUR 5 150	EUR 600	EUR 660	EUR 1 000	EUR 650
Co-funding of regional, national and international programmes	EUR 2 835 for ESRs EUR 4 025 for ERs	N/A	N/A	N/A	N/A
Research and Innovation Staff Exchange	Top-up allowance			Research, training and networking costs	Management and indirect costs
	EUR 2 220 – EUR 2 320			EUR 1 300 – EUR 1 700	EUR 800 – EUR 1 200

This table summarises all the preferred options of each recommendation provided throughout the study.

In addition to this core funding system, establish:

- A unit costs system to cover the employer's pay obligations for researchers' maternity, paternity, parental, sick and special leave. The rates of the new unit costs would be set at an identical level to the newly set living allowances for ESRs and ERs, i.e.: (1) For early stage researchers in ITN: EUR 3 450; (2) For experienced researchers in IF: EUR 5 150; (3) In COFUND: EUR 2 835 for ESRs and EUR 4 025 for ERs. In the application submitted to the European Commission, the employers would have to indicate the duration of the benefit paid by the employer (in researcher months) and the share of the salary (in %) that the employer has to cover.
- To cover the costs incurred as a result of the special needs related to disabilities, introduce a unit costs system with seven different categories of rates corresponding to the different price levels of the disability items and services, as described in the dedicated section of the report.

Finally, we recommend establishing the following new lump sums to fund the European Researchers' Night events:

Lump sums per NIGHT event		
Smaller-scale NIGHT event	Medium-scale NIGHT event	Larger-scale NIGHT event
EUR 65 000	EUR 85 000	EUR 110 000

The development of the newly proposed simplified cost options is explained in detail in the main text of the study above, where an alternative range of lump sums[150] is also presented.

Although the European Researchers' Night events are not organised in every EU Member State or associated country, some of the latter countries host festivals related to the promotion of science/research. As agreed during the kick-off meeting, the study also

[150] I.e. EUR 50 000, 100 000 and 145 000.

analysed, how the EU could contribute ('buy-in') to these festivals, so that the organisers would promote the MSCA and EU-supported research during these events. Seeking to ensure a simple and transparent financing system for contribution to such festivals, the EU grant could be based on a lump sum per festival providing that the EU grant covers only part of the overall cost of the event (e.g. 10-20%). The amount of this lump sum could be between EUR 10 000 and EUR 20 000. Once set, the lump sum amount could be subsequently revised and adjusted depending on whether such financing system and the level of financing ensures a sufficient level of interest of potential applicants and attracts applications from the relevant target events. We suggest establishing a lump sum in the following range to support science festivals organised outside of the scope of the European Researchers' Night:

Lump sums per supported festival
EUR 10 000 – 20 000

Annex 1: Remarks on the validity and reliability of the data collected via survey and interviews

As a key source of evidence for this study, we have surveyed the MSCA beneficiary organisations and researchers participating in all four MSC actions: IF, ITN, COFUND and RISE. We have targeted organisations and individual researchers hosted in the following geographical areas:

- East (consisting of Bulgaria, Czechia, Hungary, Poland, Romania and Slovakia).
- France.
- Germany and Austria.
- North (consisting of Denmark, Finland, the Netherlands, Norway and Sweden).
- South (consisting of Spain, Italy, and Portugal).
- UK and Ireland.

To comply with the requirements set in the Technical Specifications, which required to have a control group of third countries, organisations and researchers in third countries have also received a survey. In total, we sent over 23,500 survey invitations, which allowed for potential respondents to choose between filling in the survey online or being interviewed by the study team. We received 3 913 survey responses, of which 2 690 came from the individual researchers and 1 223 came from the organisations. The majority of people chose to complete the survey by themselves, but hundreds of respondents were also supported via email/phone calls by the PPMI team whenever they had some questions or misunderstandings. For this kind of study, which aimed to learn factual information about the incurred costs, the responses provided via survey were more valuable than via interviews. Interviews work better when one needs to clarify information or receive expert insights. In this case, web-templates worked very well, since:

- The respondents had to comment on sensitive aspects (salary, what they have lacked), and during interviews there is a tendency to be reluctant to reveal the real situation or to be more optimistic.
- The respondents had to provide complex financial information, which is difficult to remember on the spot. It was extremely effective (especially for organisations), when they could send the questionnaire around or ask colleagues about certain numbers and complete the questionnaire later.

In the following figures, we present a more detailed breakdown of the sample.

The sample composition. Data from the organisations' survey

In the figure below, we present the breakdown of the organisations' survey data sample by the number of responses received from each of the MSC actions. We see that IF, ITN and RISE beneficiary organisations are represented almost equally. However, we only received 23 survey responses from the COFUND participant organisations. This outcome is not surprising. Based on the list extracted from CORDA, in total, there were only 68 organisations that participated and hosted researchers under the COFUND projects.

One of the most important variables in the MSCA unit costs' analysis was the country of residence of the host institution. We received responses from a well-represented mix of countries and then grouped them into the geographical regions described at the beginning of this Annex. The Organisations' sample is rather well-balanced in terms of the representativeness of the country groups; the only region from which we received relatively fewer responses is the East. However, this is explained by the lower participation rates of organisations from the East in the MSCA.

Table 49. **Organisations' survey sample composition, by action and region**

Host region	ITN	IF	RISE	COFUND	Total in each region
East	26	11	40	-	**77**
France	59	37	30	3	**129**
Germany and Austria	135	52	48	4	**239**
North	146	79	51	6	**282**
South	30	99	149	6	**284**
UK and Ireland	13	122	45	4	**184**
Other	-	16	12	-	**28**
Total	**409**	**416**	**375**	**23**	**1 223**

Source: analysis by PPMI.

With this survey, we aimed to cover every research discipline. The table does not present the data on COFUND, since COFUND projects by their nature can cover several disciplines, and therefore do not have one scientific panel assigned to them.

Table 50. **Organisations' survey sample composition, by action and scientific panel**

Scientific panel	ITN	IF	RISE	Total of each scientific panel
CHE	41	24	17	**82**
ECO	7	13	25	**45**
ENG	124	53	103	**280**
ENV	59	64	50	**173**
LIF	99	119	65	**283**
MAT	3	16	23	**42**
PHY	37	32	24	**93**
SOC	39	95	68	**202**
Total	**409**	**416**	**375**	**-**

Source: analysis by PPMI.

The sample composition. Data from the researchers' survey

The MSCA researchers participated actively in this survey. In fact, every target set in the inception report and the Technical Specifications of this assignment was reached and, in many cases, far exceeded. In the tables below, we present the number of survey responses received from the researchers by type of MSC action and geographical region. The researchers' survey also captured researchers hosted in countries outside Europe. Note, that there were only 3 responses from IF researchers hosted in the East, despite the small overall population of researchers, those hosted in the East were also less active in participating in the MSCA survey.

Table 51. **Researchers' survey sample composition, by action and region (Europe)**

Host region	ITN	IF	RISE	COFUND	Total in each region
East	14	3	43	37	**97**
France	68	59	52	49	**228**
Germany and Austria	152	52	78	68	**350**
North	157	49	17	45	**268**
South	127	128	171	145	**571**
UK and Ireland	90	123	97	64	**374**
Total in Europe	**608**	**414**	**458**	**408**	**1 888**

Source: analysis by PPMI

Table 52. **Researchers' survey sample composition, by action and country (third countries)**

Host country	IF-GF	RISE	Total in each country
Australia	12	50	**62**
Brazil	2	46	**48**
Canada	16	33	**49**
China	-	73	**73**
India	-	4	**4**
Japan	1	75	**76**
The US	107	192	**299**
Other	17	329	**346**
Total outside Europe	**155**	**802**	**957**

Source: analysis by PPMI

As in the organisations' survey, we have covered each of the scientific panels in the researchers' surveys as well. We received relatively few responses from ECO and MAT, which is in line with the structure of participations in the overall MSCA programme. COFUND researchers are not represented in this table, since COFUND projects operate in many scientific panels and this data are not available in CORDA.

Table 53. **Researchers' survey sample composition, by action and scientific panel**

Scientific panel	ITN	IF	RISE	Total of each scientific panel
CHE	64	41	124	**229**
ECO	11	8	86	**105**
ENG	193	56	304	**553**
ENV	83	63	165	**311**
LIF	155	107	110	**372**
MAT	9	10	89	**108**
PHY	30	34	201	**265**
SOC	63	101	175	**339**
Total	**608**	**420**	**1 254**	**-**

Source: analysis by PPMI

Overall, both samples cover a wide range of disciplines and countries as well as equally represent female and male researchers as well as researchers at all stages of their career. This, in addition to large sample sizes, makes the data relevant and representative in order to arrive at the generalisable conclusions and recommendations.

Sample validity

The total population of organisations that participate in the MSCA projects, according to our estimate[151] is 17 501 organisation that participate in projects starting in 2015-2020. We have only surveyed those organisations whose projects had started before December 2018[152]. Also, note that if an organisation participated in more than one project it was sampled only once.

Our sample represents 7% of the MSCA participating organisations. MSCA COFUND received the least number of survey responses, nevertheless, it has the biggest share of total number of organisations covered. Organisations from other actions are represented almost equally.

[151] Such estimate is based on Cordis administrative data. Note, if same organisation participates in more than one project, it is counted more than one time. If there are several participants from the same organisation in one project, organisation is only counted once.
[152] This allowed including a significant number of ended projects, which helped in gathering more meaningful data for the survey.

Table 54. MSCA organisations

Host region	Total population	Set target	Sample size	Population covered
MSCA ITN	6 635	50	409	6%
MSCA-IF	6 203	50	416	7%
MSCA-RISE	4 599	35	375	8%
MSCA COFUND	64	35	23	36%
Total organisation	**17 501**	**150+**	**1 223**	**7%**

Source: analysis by PPMI.

In terms of regions covered, France and UK and Ireland are slightly underrepresented. This is especially the case for ITN organisations. Relatively most of the survey responses came from the East. Nevertheless, despite the small variations in the percentages, all regions are covered sufficiently[153], and the analysis results can be treated as valid.

Table 55. Representativeness of organisations' sample. The share of population covered, %

Host region	ITN	IF	RISE	COFUND	Total in each region
East	13	17	17	-	**16**
France	10	7	10	50	**9**
Germany and Austria	11	8	14	50	**11**
North	12	10	16	40	**12**
South	3	13	19	43	**11**
UK and Ireland	1	7	11	33	**6**

Source: analysis by PPMI

According to the CORDIS administrative data, there were 28 180 unique researchers enrolled in the MSCA projects that started between 2015 and 2020. When sampling the researchers to be surveyed we dropped all the projects that started after 2018 December. In total, our sample represents around 10% of the total population. MSCA COFUND relative to other actions was slightly overrepresented in the sample.

Table 56. MSCA researchers

Host region	Total population	Set target	Sample size	Population covered
MSCA ITN	7 595	50	608	8%
MSCA-IF	5 247	50	420	8%
MSCA-RISE	12 788	35	1 254	10%
MSCA COFUND	2 550	35	408	16%
Total researchers	**28 180**	**150+**	**2 690**	**9.5%**

Source: analysis by PPMI

Region-wise, the East and UK and Ireland were slightly underrepresented. The percentages covered by our survey are slightly below the overall average. Nevertheless, based on strictly mathematical approach[154], all regions are represented sufficiently and enable a valid survey analysis.

Table 57. Representativeness of researchers' sample. The share of population covered, %

Host region	ITN	IF	RISE	COFUND	Total in each region
East	7	5	7	20	**9**
France	10	13	8	20	**11**
Germany and Austria	11	11	10	22	**12**
North	18	10	6	14	**14**
South	10	16	7	11	**11**

[153] A valid sample size can be determined by such formula 1/sqrt(N), where N is a population size. In this case, the sufficient population size should be around 1% for ITN, IF, and RISE and 13% for COFUND.
[154] A valid sample size can be determined by such formula 1/sqrt(N), where N is a population size. In this case, the sufficient population size should be around 1% - 3% depending on the action.

UK and Ireland	7	8	8	8	**8**

Source: analysis by PPMI.

Our sampling approach ensured that a variety of organisations and researchers was surveyed. We achieved this outcome by setting representative quotas for each action, country group and scientific panel. We also ensured that the researchers' gender balance and balance between ERs and ESRs was achieved. In addition to that, large sample sizes of both surveys as well as the nice coverage of the overall populations (7% of organisations and 9.5% of researchers) suggest that the results of the analysis can be treated with confidence and, if needed, extrapolated to the whole programme.

Expert interviews

In addition to the survey, **we carried out an expert interview programme** consisting of 32 interviews overall, including:

10 interviews with stakeholders from the EUA, the Coimbra Group, CESAER, EURODOC, EARMA, The Guild of European Research-Intensive Universities, LERU, the Academic Cooperation Association (ACA), Trinity College Dublin and Leibniz Forschungsverbund Berlin

14 interviews with NCPs from Estonia, Germany, Hungary, Ireland, Israel, Italy, the Netherlands, Poland, Spain, Sweden, Turkey, the UK, Argentina, Belgium (Flanders)

8 interviews with disability experts who were familiar with the situations of researchers with special needs

The role of the expert interviews was to draw the study team's attention to the most important issue related to the MSCA funding system; to review, validate and complement the overall insights stemming from the review of previous studies and broader literature; and to identify new tendencies and previously undetected issues. Insights from the contextual/expert interviews also fed into the fine-tuning of the survey questionnaires for researchers and organisations and provided background information for the analysis of the survey results. As it is difficult to quantify the interview findings, where we present the information from the interviews, we present only those arguments/statements where there was a consensus by a clear majority of the interviewed experts.

Annex 2: Statistical analysis of the impact of rent, family and relocation costs on the perceived insufficiency of income from the MSCA.

The table below presents the statistical output of a t-test. We used this technique to assess whether there is a statistically significant difference between two groups: researchers with families who had reported their income as adequate and those who said it was insufficient. The table below reads as follows:

- There were 88 respondents who said that their MSCA income was insufficient, of which 48.8% were researchers with families.
- There were 847 respondents who said that their MSCA income was adequate, of which 24.3% were researchers with families.
- T-test result indicates that these two groups are significantly different (see p-value of Ha: diff!=0). Furthermore, the families with insufficient income are more frequent than families with adequate income (as evidenced by the small p-value under Ha: diff>0).

Table 58. t-test of the differences in income sufficiency between researchers with and without families

Two-sample t test with equal variances

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
insuff~m	88	.4886364	.0535918	.5027355	.3821169	.5951558
suff_fam	847	.2432113	.0147501	.4292751	.2142603	.2721624
combined	935	.2663102	.0144636	.4422649	.2379252	.2946951
diff		.245425	.0489051		.1494483	.3414018

diff = mean(insuff_fam) - mean(suff_fam) t = 5.0184
Ho: diff = 0 degrees of freedom = 933

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 1.0000 Pr(|T| > |t|) = 0.0000 Pr(T > t) = 0.0000

Source: PPMI analysis.

We ran two regressions with the same specifications (logistic and logit) in order to see the effect size of having a family on the overall sufficiency of MSCA income. The table below presents the results of the logistic regression. Such regression is helpful when dealing with variables that take values of 0 and 1. Such variables are: income sufficiency, which is the dependent variable (1 stands for adequate income, 0 – insufficient), has family (1 indicates that the researcher has a family), ER (1 indicates that the researcher is an Experienced Researcher, 0 – ESR), Gender (1 represents that the researcher is male), country group (1 represents that the researcher is hosted in a specified region, 0 – in any other region), top-up, scientific panel. The table below reads as follows:

- Significant and relevant to this model, variables are: has family and ER.
- Having family is associated with higher odds of having insufficient MSCA income. More precisely, the regression results indicate that having a family corresponds to 68% lower odds that MSCA researchers will consider their income adequate.
- Being an Experienced Researcher is associated with higher odds of receiving adequate income from participation in MSCA. According to the odds ratio in the regression table, such odds are over five times higher than for the ESRs.

Table 59. Logistic regression output

Logistic regression — Number of obs = 750; LR chi2(19) = 93.14; Prob > chi2 = 0.0000; Log likelihood = -183.78522; Pseudo R2 = 0.2022

satisfied	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.has_family	.3184977	.1045354	-3.49	0.000	.1673901	.606014
rent_cost	.9978217	.0004419	-4.92	0.000	.9969561	.9986881
relocation_cost	.9998929	.0000536	-2.00	0.046	.9997878	.999998
1.ER	5.799051	2.497513	4.08	0.000	2.493244	13.48805
gender_enc						
Male	.5999153	.1786956	-1.72	0.086	.3346141	1.075563
countrygroup_enc						
France	.8450739	.9916079	-0.14	0.886	.0847416	8.427383
Germany&Austria	.7487458	.8423239	-0.26	0.797	.0825562	6.790768
North	.8223039	.9274747	-0.17	0.862	.0901497	7.50068
South	1.173463	1.346706	0.14	0.889	.123766	11.12595
UK&Ireland	1.242559	1.425431	0.19	0.850	.1311719	11.77045
topup_enc						
No, I have not received a top-up	.5544161	.2102845	-1.56	0.120	.2636232	1.165972
Yes, I have received a top-up	.3164249	.1987371	-1.83	0.067	.0923967	1.08364
scientificpanel_enc						
ECO	.4452003	.3932855	-0.92	0.360	.0788157	2.51477
ENG	1.71572	.8459363	1.09	0.274	.6527714	4.509533
ENV	1.500054	.87521	0.70	0.487	.4780475	4.706981
LIF	1.526589	.7406814	0.87	0.383	.5898345	3.951065
MAT	4.773811	6.632841	1.13	0.261	.3134632	72.70158
PHY	3.821478	4.190346	1.22	0.221	.4455203	32.77896
SOC	.6024743	.298418	-1.02	0.306	.2282027	1.590583
_cons	145.2279	177.1623	4.08	0.000	13.29464	1586.44

Source: PPMI analysis.

In the table below we present results of a logit regression. It is useful only for estimating the effect of continuous variables in our model. These are: rent cost and relocation cost. Both variables are statistically significant determinants of whether MSCA income is adequate or insufficient. However, the coefficient next to relocation costs, although negative, is very small, and we consider it as statistically irrelevant in this assignment. Rent costs, however, seem to be more important. The coefficient next to the rent costs variable suggests that if rent prices increase by 20%, researchers are 21.8% more likely to report insufficient income. Nevertheless, in this particular assignment we urge to focus more on the significance and the direction of the effect, rather than the size of the effect. The models explain around 20% of the variation between income being adequate and insufficient. Most likely, there are some other variables that are not controlled by the MSCA programme and funding scheme that can mitigate the numerical values of the coefficients.

Table 60. Logit regression output

```
Iteration 0:   log likelihood = -230.35563
Iteration 1:   log likelihood = -196.63269
Iteration 2:   log likelihood = -184.15036
Iteration 3:   log likelihood =   -183.787
Iteration 4:   log likelihood = -183.78522
Iteration 5:   log likelihood = -183.78522

Logistic regression                             Number of obs     =        750
                                                LR chi2(19)       =      93.14
                                                Prob > chi2       =     0.0000
Log likelihood = -183.78522                     Pseudo R2         =     0.2022
```

satisfied	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
1.has_family	-1.14414	.3282141	-3.49	0.000	-1.787428	-.5008523
rent_cost	-.0021807	.0004428	-4.92	0.000	-.0030486	-.0013127
relocation_cost	-.0001071	.0000536	-2.00	0.046	-.0002122	-2.05e-06
1.ER	1.757694	.4306762	4.08	0.000	.9135845	2.601804
gender_enc						
Male	-.5109668	.297868	-1.72	0.086	-1.094777	.0728438
countrygroup_enc						
France	-.1683312	1.173398	-0.14	0.886	-2.468149	2.131486
Germany&Austria	-.2893557	1.12498	-0.26	0.797	-2.494276	1.915564
North	-.1956452	1.127898	-0.17	0.862	-2.406284	2.014994
South	.1599591	1.147634	0.14	0.889	-2.089362	2.40928
UK&Ireland	.217173	1.147174	0.19	0.850	-2.031246	2.465592
topup_enc						
No, I have not received a top-up	-.5898397	.3792899	-1.56	0.120	-1.333234	.1535549
Yes, I have received a top-up	-1.150669	.6280701	-1.83	0.067	-2.381664	.0803256
scientificpanel_enc						
ECO	-.8092311	.88339	-0.92	0.360	-2.540644	.9221815
ENG	.5398327	.4930504	1.09	0.274	-.4265282	1.506194
ENV	.4055008	.5834525	0.70	0.487	-.7380451	1.549047
LIF	.423036	.4851871	0.87	0.383	-.5279132	1.373985
MAT	1.563145	1.389423	1.13	0.261	-1.160073	4.286363
PHY	1.340637	1.096525	1.22	0.221	-.8085126	3.489787
SOC	-.5067103	.4953208	-1.02	0.306	-1.477521	.4641006
_cons	4.978304	1.219892	4.08	0.000	2.587361	7.369248

Source: PPMI analysis.

Annex 3: Analysis of the real prices of open access publications charged by the major journals

Publisher	Description/Type	Publication cost	Publication cost (average)
American Astronomical Society	Gold Open Access	(€40-€44) per quanta	€ 42,00
American Arachnological Society	Immediate Public Access	(€36-€91)	€ 63,50
Chartered Financial Analysts Institute	Posting of PDF on Internet	€ 91	€ 91,00
Università di Bologna, Department of Agricultural Sciences	Open Access	€ 120	€ 120,00
Economic Issues Education Trust	Gold Open Access	€ 141	€ 141,00
Trans Tech Publications	Open Access	€ 200	€ 200,00
Canadian Acoustical Association	Instant Open Access	205 €	€ 205,00
Canadian Psychiatric Association (Association des psychiatres du Canada)	Open Access Option	205 €	€ 205,00
Clay Minerals Society	Open Access and Self-archiving	€ 227	€ 227,00
Common Ground Research Networks	Hybrid Open Access	€ 227	€ 227,00
Association for the Sciences of Limnology and Oceanography (ASLO)	Free Access Publication	€ 318	€ 318,00
Linguistic Society of America	Open Access	€ 364	€ 364,00
Amsterdam University Press	Paid OA	€ 450	€ 450,00
Science Reviews 2000	Gold Open Access	(€254-€646)	€ 450,00
Spandidos Publications	Open Access	€ 450	€ 450,00
American Society of Neuroradiology	Open Access option	€ 455	€ 455,00
PNG Publications	Online Open Access Option Fee	€ 455	€ 455,00
Synergy Publishers	Open Access Policy	€ 455	€ 455,00
University of Colorado at Boulder, Institute of Arctic and Alpine Research	Open Access Charge	€ 455	€ 455,00
Entomological Society of America	Open Access Reprint	(€455-€500)	€ 477,50
Education and Upbringing Publishing	Open Access Option	€ 500	€ 500,00
International Bee Research Association	Open Access Option	(€528-€493)	€ 510,00
International Union of Crystallography	Open Access	(€150-€910)	€ 530,00
American Society for Horticultural Science	Open Access	€ 546	€ 546,00
KT Press	Gold Open Access	€ 546	€ 546,00
SAE International	Gold (Immediate) Open Access	€ 546	€ 546,00
Japan Society of Applied Physics	Open Select	(335-838€)	€ 586,50
CISES	Open Access	€ 600	€ 600,00

Cryo Letters	Author Open Access	€ 600	€	600,00
National Inquiry Services Centre (NISC)	NISCoa	612 €	€	612,00
Audio Engineering Society	AES Open Access Publications	(€136-€1 092)	€	614,00
Oekom Verlag	GAIA Hybrid Open Access	€400-€850	€	625,00
Chemical Society of Japan (日本化学会)	Open Access Option	(419-838€)	€	628,50
Agricultural Institute of Canada	Open Access Option	€ 682	€	682,00
Columbia University, Teachers College	Open Access Option	(€455-€910)	€	682,50
Dennis Barber	Open Access	€ 705	€	705,00
Manchester University Press	MUP Open	€ 705	€	705,00
American Institute of Mathematical Sciences (AIMS)	Optional Open Access	€ 728	€	728,00
American Meteorological Society	AMS Open Choice	€ 728	€	728,00
Electrochemical Society	Author Choice Open Access	€ 728	€	728,00
Soil Science Society of America	Open Access Option	€ 728	€	728,00
EDP Sciences	Charges and discounts for hybrid Open Access journals	€ 750	€	750,00
Schlütersche Verlagsgesellschaft	Open Access Option	€ 750	€	750,00
Practical Action Publishing	Gold access for journal articles	€ 780	€	780,00
American Society of Parasitologists	Open access	(€682-€910)	€	796,00
SciTechnol	Open Option	€ 836	€	836,00
Physical Society of Japan 日本物理学会 (JPS)	Open Select	(419-1257€)	€	838,00
Bernoulli Society for Mathematical Statistics and Probability	Open Access	€ 864	€	864,00
Institute of Mathematical Statistics (IMS)	Open Access	€ 864	€	864,00
Akadémiai Kiadó	OOpenArt (Optional Open Article)	€ 900	€	900,00
Finnish Zoological and Botanical Publishing Board	Open Access	€ 900	€	900,00
IOS Press	Open Library	€ 900	€	900,00
Crop Science Society of America	Open Access Option	€ 910	€	910,00
University of Miami, Rosenstiel School of Marine and Atmospheric Science	Gold Open Access	€ 910	€	910,00
American Society of Agronomy	Open Access Option	(€728-€1 183)	€	955,50
EPJ	Open Access Option	€ 1 000	€	1 000,00
AOAC International	Fee-Based Open Access Option	(€955-€1 092)	€	1 023,50
Landes Bioscience	Open Access Policy	(€682-€1 365)	€	1 023,50
MDPI	Open Access	(273-1820€)	€	1 046,50
Intellect	Open Access Option	€ 1 057	€	1 057,00

Publication Office of Progress of Theoretical Physics	Open Select	(503-1677€)	€	1 090,00
Berghahn Journals	Open Access	(€1 057-€1 198)	€	1 127,00
Massachusetts Institute of Technology Press (MIT Press)	Open Access	€ 1 137	€	1 137,00
Textrum	Open Access Option	€ 1 161	€	1 161,00
Royal College of Surgeons of England	Gold Open Access	€ 1 198	€	1 198,00
Nordic Association of Occupational Safety and Health (NOROSH)	Open Access Option	€ 1 200	€	1 200,00
Bloomsbury Publishing	Gold Open Access	€ 1 219	€	1 219,00
Acoustical Society of America	Gold Open Access Publishing Option	(€455-€2 002)	€	1 228,50
RCN Publishing (RCNi)	RCNP Open Access	(€1 128-€1 410)	€	1 269,00
Hindawi	Open Access	(499-2 041€)	€	1 270,00
Maney Publishing	MORE OpenChoice	(€728-€1 820)	€	1 274,00
Inter Research	Gold open access	€1 000-€1 550	€	1 275,00
American Society for Investigative Pathology (ASIP)	Open Choice	€ 1 365	€	1 365,00
Botanical Society of America	Open Access Policy	€ 1 365	€	1 365,00
Multi-Science Publishing	Open option	€ 1 365	€	1 365,00
Society for Chaos Theory in Psychology and Life Sciences	Open-Source Agreement	€ 1 365	€	1 365,00
University of Wisconsin Press	Open Access Option	€ 1 365	€	1 365,00
World Scientific Publishing	WorldScientific Open Access	€ 1 365	€	1 365,00
Edinburgh University Press	Edinburgh Open	€ 1 410	€	1 410,00
Edward Elgar Publishing	Open Access	€ 1 410	€	1 410,00
Emerald	Open Access Policies and FAQs	€ 1 451	€	1 451,00
Thomas Telford (ICE Publishing)	Gold OA and Hybrid options	(€1 274-€1 638)	€	1 456,00
International Union Against Tuberculosis and Lung Disease	Open Access	€ 1 500	€	1 500,00
University of the Basque Country Press (UBC Press)	Open Access Option	€ 1 500	€	1 500,00
National Academy of Sciences	PNAS Open Access Option	(€1 001-€2 002)	€	1 501,50
SAGE	Hybrid Open Access	(363-2 722€)	€	1 542,50
Taylor & Francis	Open Access	(454-2 676€)	€	1 565,00
American Society of Civil Engineers	ASCE Open Access	€ 1 592	€	1 592,00
American Society for Biochemistry and Molecular Biology	Author Choice	(€1 365-€1 820)	€	1 592,50
Central Ornithology Publication Office	Open Access	(€1 365-€1 820)	€	1 592,50
Chelonian Research Foundation	Open Access	(€1 365-€1 820)	€	1 592,50

Genetics Society of America	Open Access	(€1 820-€1 365)	€	1 592,50
Brill Academic Publishers	Brill Open	€1 300-€1 950	€	1 625,00
Schattauer	Open Access at Schattauer	€ 1 630	€	1 630,00
Biological Society of Washington	Open Access	€ 1 638	€	1 638,00
Biophysical Society	Biophysical Journal Open Access	€ 1 638	€	1 638,00
Journal of Visualized Experiments (JoVE)	Open Access Option	€ 1 638	€	1 638,00
NACE International	Open Access	€ 1 638	€	1 638,00
BioScientifica	BioScientifica Open Access Policy	(€493-€2 820)	€	1 656,50
Optical Society of America	Optional Open Access	€ 1 682	€	1 682,00
Equinox Publishing	Open Access Model	€ 1 692	€	1 692,00
IWA Publishing	IWA Publishing Open	€1 385-€2 005	€	1 695,00
John Benjamins Publishing	Open Access Policy	€ 1 700	€	1 700,00
American Society of Plant Biologists	OPEN	(€1 638-€1 820)	€	1 729,00
Akademie Verlag	De Gruyter Open Access	€ 1 750	€	1 750,00
De Gruyter	De Gruyter Open Access	€ 1 750	€	1 750,00
Fabrizio Serra editore	Open Access Option	€ 1 750	€	1 750,00
Oldenbourg Verlag	De Gruyter Open Access	€ 1 750	€	1 750,00
BioMed Central	Open Access	(1 170-2 341€)	€	1 755,50
IM Publications	Open access	€ 1 762	€	1 762,00
Liverpool University Press	Gold Open Access	€ 1 762	€	1 762,00
NIR Publications	Open access	€ 1 762	€	1 762,00
BMJ Publishing Group	Open Access	(€846-€2 749)	€	1 797,50
Wageningen Academic Publishers	Your Choice for Open Access	€ 1 800	€	1 800,00
AIP Publishing	Author Select	(€1 365-€2 275)	€	1 820,00
American Institute of Aeronautics and Astronautics	Open Access	€ 1 820	€	1 820,00
American Society of Hematology	ASH Author Choice	€ 1 820	€	1 820,00
Cold Spring Harbor Laboratory Press	Open Access Option	€ 1 820	€	1 820,00
Human Kinetics	Open Access	€ 1 820	€	1 820,00
Institution of Engineering and Technology (IET)	Open Access Option	€ 1 820	€	1 820,00
Paleontological Society	Gold Open Access	(€1365-€2 275)	€	1 820,00
Radiation Research Society	Open Access	€ 1 820	€	1 820,00
Future Medicine	Open Access Option	(€1 339-€2 516)	€	1 927,50
Future Science	Open Access Option	(€1 339-€2 516)	€	1 927,50
Newlands Press	Open Access Option	(€1 339-€2 516)	€	1 927,50

European Physical Society	IOP Publishing 'hybrid' open access	€ 1 950	€	1 950,00
American Phytopathological Society	Open Access	(€1 729-€2 184)	€	1 956,60
University of Wales Press	Gold Open Access	(€1 841-€2 115)	€	1 978,00
Foundation Compositio Mathematica	Open Access option	€ 2 000	€	2 000,00
American Physical Society	Open Access	(€1 547-€2 457)	€	2 002,00
Association of Learned and Professional Society Publishers (ALPSP)	ALPSP Author Choice	€1 775-€2 285	€	2 030,00
Molecular Biology and Evolution	Oxford Open	€1 300-€2 763	€	2 031,50
Herpetologists League	Open Access	(€1 820-€2 275)	€	2 047,50
Weed Science Society of America	Open Access	(€1 820-€2 275)	€	2 047,50
PLOS	Open Access	(€1 452-2 722)	€	2 087,00
Society for Neuroscience	Open Choice	(€1 246-€2 943)	€	2 094,50
Antiquity Publications	Free-to-access publication	€ 2 115	€	2 115,00
European Society of Endocrinology	Open Access Option	(€1 410-€2 820)	€	2 115,00
Geological Society	Open Access	€ 2 115	€	2 115,00
Imprint Academic	Gold Open Access	€ 2 115	€	2 115,00
Mineralogical Society	Gold Open Access	€ 2 115	€	2 115,00
Pion	Open Access	€ 2 115	€	2 115,00
Policy Press	Gold Open Access Publishing	€ 2 115	€	2 115,00
Universities Federation for Animal Welfare (UFAW)	Open Access	€ 2 115	€	2 115,00
Westburn Publishers	Open Access	€ 2 115	€	2 115,00
White Horse Press	Gold Open Access	€ 2 115	€	2 115,00
Begell House	Gold Open Access	(€1 365-€2 912)	€	2 138,50
Haworth Press	Taylor & Francis Open Select	€ 2 150	€	2 150,00
Marcel Dekker	Taylor & Francis Open Select	€ 2 150	€	2 150,00
Society of Vertebrate Paleontology	Taylor & Francis Open Select	2 150	€	2 150,00
Routledge	Routledge Open Select	€ 2 150	€	2 150,00
Royal Astronomical Society	Oxford Open	€ 2 175	€	2 175,00
University College London, Faculty of Mathematical and Physical Sciences, Department of Mathematics	Open Access option	€ 2 184	€	2 184,00
Adis	Adis Open Choice	€ 2 200	€	2 200,00
American Association of Pharmaceutical Scientists	Springer Open Choice	€ 2 200	€	2 200,00
ASM International	Springer Open Choice	€ 2 200	€	2 200,00
Current Medicine Group	Open Choice	€ 2 200	€	2 200,00
Humana Press	Springer Open Choice	€ 2 200	€	2 200,00

Scuola Internazionale Superiore di Studi Avanzati (SISSA)	Springer Open Choice	€ 2 200	€	2 200,00
Springer Verlag (Germany)	Open Choice	€ 2 200	€	2 200,00
EPL Association	'hybrid' open access	€ 2 250	€	2 250,00
IOP Publishing	'hybrid' open access	€ 2 250	€	2 250,00
American Association of Petroleum Geologists	Open Access Gold Model	€ 2 275	€	2 275,00
American Association of Physicists in Medicine	Open Access	€ 2 275	€	2 275,00
American Physiological Society	Authors Choice	(€1 820-€2 730)	€	2 275,00
American Public Health Association	APHA Open Access	€ 2 275	€	2 275,00
American Society for Pharmacology and Experimental Therapeutics (ASPET)	Open Acces Option	(€1 820-€2 730)	€	2 275,00
American Society of Tropical Medicine and Hygiene	Open Access Fee	€ 2 275	€	2 275,00
American Speech-Language-Hearing Association	Gold Open Access	€ 2 275	€	2 275,00
ASN	Oxford Open	€ 2 275	€	2 275,00
EJIL	Oxford Open	€ 2 275	€	2 275,00
Federation of American Society of Experimental Biology (FASEB)	Open Access Option	€ 2 275	€	2 275,00
Geological Society of America	Gold Open Access	€ 2 275	€	2 275,00
Longwoods Publishing	Open Access Policy	€ 2 275	€	2 275,00
Old City Publishing	Open Access Option	€ 2 275	€	2 275,00
Past and Present	Oxford Open	€ 2 275	€	2 275,00
Society for Industrial and Applied Mathematics	Open Access	€ 2 275	€	2 275,00
Society for Leukocyte Biology	Open Access Option	€ 2 275	€	2 275,00
Society of Exploration Geophysicists	Gold open access	€ 2 275	€	2 275,00
Inderscience	Author Open Access	€ 2 300	€	2 300,00
Cambridge University Press	Hybrid Open Access	€544-4079	€	2 311,50
Elsevier	Hybrid Open Access	(€1-4 536)	€	2 313,50
British Institute of Radiology	BIROpen	(€2 608-€2 115)	€	2 361,50
Royal Society, The	open access option	€ 2 380	€	2 380,00
American Dairy Science Association	Open Access	(€1 592-€3 185)	€	2 388,50
Portland Press	Gold Open Access	€2 200-€2 590	€	2 395,00
British Agricultural History Society	Gold Open Access	€ 2 397	€	2 397,00
University of Chicago Press	Gold Open Access Option	(€910-€3 913)	€	2 411,50
Mary Ann Liebert	Liebert Open Access Option	(€2 002-€2 912)	€	2 457,00
Society for Sedimentary Geology (SEPM)	Gold Open Access	€ 2 457	€	2 457,00

Royal Society of Chemistry	Open Access	(€1 410-€3 525)	€	2 467,50
American Society for Microbiology	Optional Open Access	(€2 093-€2 866)	€	2 489,50
European Association of Geoscientists and Engineers (EAGE)	Gold Open Access	€ 2 500	€	2 500,00
European Respiratory Society	ERJ Open	€2 000-€3 000	€	2 500,00
Hogrefe	Hogrefe OpenMind	€ 2 500	€	2 500,00
American Chemical Society	ACS AuthorChoice	(€1 365-€3 640)	€	2 502,50
Elsevier España (Elsevier Doyma)	Open Access	(€455-€4 550)	€	2 502,50
Elsevier Masson	Open Access	(€455-€4 550)	€	2 502,50
Society of Economic Geologists	Open Access Publishing Policy	(€ 2275-€2 730)	€	2 502,50
WB Saunders	Open Access	(€455-€4 550)	€	2 502,50
Thomas Land Publishers	Open Access Policy	€ 2 548	€	2 548,00
Cambridge University Press (CUP)	Cambridge Open	€ 2 579	€	2 579,00
Microbiology Society	Open Microbiology	€ 2 579	€	2 579,00
American Society of Animal Science	Open Access (OA)	(€2 275-€2 957)	€	2 616,00
American College of Sports Medicine (ACSM)	hybrid open access option	(€1 820-€3 458)	€	2 639,00
Incisive Media	Gold Open Access	€ 2 639	€	2 639,00
Lippincott, Williams & Wilkins	Hybrid Open Access	(€1 820-€3 458)	€	2 639,00
Cancer Research UK	BJC Open	€2 070-€3 350	€	2 710,00
Springer	Hybrid Open Access	2 722 €	€	2 722,00
Alcohol Research Documentation	Author-Pays Open Access Option	€ 2 730	€	2 730,00
AlphaMed Press	Wiley OnlineOpen	€ 2 730	€	2 730,00
American Anthropological Association	Wiley OnlineOpen	€ 2 730	€	2 730,00
American Association for Cancer Research	AuthorChoice	€ 2 730	€	2 730,00
American Association of Immunologists	Author Choice	€ 2 730	€	2 730,00
American Geophysical Union (AGU)	Open Access	(€2 275-€3 185)	€	2 730,00
American Society for Bone and Mineral Research	Wiley OnlineOpen	€ 2 730	€	2 730,00
American Society for Clinical Pharmacology and Therapeutics	Wiley OnlineOpen	€ 2 730	€	2 730,00
American Society of Andrology	Wiley OnlineOpen	€ 2 730	€	2 730,00
American Society of Mechanical Engineers (ASME)	Open Access	€ 2 730	€	2 730,00
American Society of Nephrology	Author Choice	€ 2 730	€	2 730,00
Arnold Publishers	SAGE Choice	€ 2 730	€	2 730,00
Association for Information Science and Technology (ASIS&T)	Wiley OnlineOpen	€ 2 730	€	2 730,00

Association for Psychological Science	SAGE Choice	€ 2 730	€	2 730,00
Australian Psychological Society	Wiley OnlineOpen	€ 2 730	€	2 730,00
Biometrics	OnlineOpen	€ 2 730	€	2 730,00
Blackwell Publishing	OnlineOpen	€ 2 730	€	2 730,00
CSIRO Publishing	Open Access	€ 2 730	€	2 730,00
Ecological Society of America	Wiley OnlineOpen	€ 2 730	€	2 730,00
Endocrine Society	Open Choice	€ 2 730	€	2 730,00
Ernst und Sohn	Wiley OnlineOpen	€ 2 730	€	2 730,00
FEBS Journal	OnlineOpen	€ 2 730	€	2 730,00
Histochemical Society	SAGE Choice	€ 2 730	€	2 730,00
INFORMS (Institute for Operations Research and Management Sciences)	INFORMS Open Option	€ 2 730	€	2 730,00
International Association for Energy Economics	Gold Open Access	€ 2 730	€	2 730,00
John Wiley and Sons	OnlineOpen	€ 2 730	€	2 730,00
Johns Hopkins University Press	Gold Open Access	€ 2 730	€	2 730,00
Karger Publishers	Authors Choice	2 730 €	€	2 730,00
Linnean Society of London	Wiley OnlineOpen	€ 2 730	€	2 730,00
Nordic Ecological Society	Wiley OnlineOpen	€ 2 730	€	2 730,00
NRC Research Press (Canadian Science Publishing)	OpenArticle	€ 2 730	€	2 730,00
Preprint Only	OnlineOpen	€ 2 730	€	2 730,00
Radiological Society of North America (RSNA)	RSNA Open Access Policy	€ 2 730	€	2 730,00
Royal Meteorological Society	Wiley OnlineOpen	€ 2 730	€	2 730,00
Royal Statistical Society	Wiley OnlineOpen	€ 2 730	€	2 730,00
SAGE Publications (UK and US)	SAGE Choice	€ 2 730	€	2 730,00
Society of Nuclear Medicine	Immediate Open Access	€ 2 730	€	2 730,00
University of Toronto Press	Open Access Option	€ 2 730	€	2 730,00
Wiley	OnlineOpen	€ 2 730	€	2 730,00
Wiley-VCH Verlag	OnlineOpen	€ 2 730	€	2 730,00
London Mathematical Society	Open Access	€ 2 775	€	2 775,00
Royal College of General Practitioners	Open Access Publication	€ 2 820	€	2 820,00
Society for Endocrinology	Open Access Option	€ 2 820	€	2 820,00
Society for Reproduction and Fertility	Open Access Option	€ 2 820	€	2 820,00
Nature Publishing Group	Hybrid Open Access	(998-4 718€)	€	2 858,00
Wiley	Hybrid Open Access	(1 179-4 718€)	€	2 948,50
EMBO Press	EMBO Open	€ 3 000	€	3 000,00
Marques Aviation Press	IJUSEng Open Access	€ 3 034	€	3 034,00
American Academy of Neurology (AAN)	Open Access Mandates and Options	(€2 730-€3 458)	€	3 094,00
Journal of Rheumatology	Full Release Publication Option	€ 3 185	€	3 185,00
International Glaciological Society	Gold Open Access	€ 3 243	€	3 243,00

British Editorial Society of Bone and Joint Surgery	BJJ Open Access	(€3 172-€3 627)	€	3 399,50
American Heart Association	Open Access	(€2 730-€4 095)	€	3 412,50
Cochrane Collaboration	Wiley OnlineOpen	(€2 275-€4 550)	€	3 412,50
Company of Biologists	Open Access	€ 3 525	€	3 525,00
American College of Chest Physicians (ACCP)	Open Access Option	(€2 730-€4 550)	€	3 590,00
American Psychological Association	Article Sponsorship	€ 3 640	€	3 640,00
American Society of Clinical Oncology	Gold Open Access	(€3 185-€4 550)	€	3 867,50
Elsevier (Cell Press)	Open Access	(€3 458-€4 550)	€	4 004,00
Royal College of Psychiatrists	Open Access	€ 4 095	€	4 095,00
Nature Communications	Open Access	4 290 €	€	4 290,00
American Chemical Society	Hybrid Open Access	4 536 €	€	4 536,00
Cell	Open Access	4 536 €	€	4 536,00
American Medical Association (AMA)	Open Access	€ 4 550	€	4 550,00
American Society for Nutrition	Free Access Publication Option	€ 4 550	€	4 550,00
Rockefeller University Press	Immediate Open Access	€ 4 550	€	4 550,00
EMBO	Hybrid Open Access	4 718 €	€	4 718,00
Society of Antiquaries of Scotland	Gold Open Access	(€4 230-€7 050)	€	5 640,00
Società Geologica Italiana	Gold Open Access	€1 000-€15 000	€	8 000,00
Society of Photo-optical Instrumentation Engineers (SPIE)	Open Access for SPIE Journals	(€600-€873) per page	€600-€873 per page	
Magnolia Press	Open Access	€18 per page	18€ per page	
Mineralogical Society of America	Gold Open Access	€227 per page	227€ per page	
The Lancet	Open Access	€564 per page	564€ per page	
WIT Press	Open Access	€90 per page	90€ per page	
*** €/per page values are excluded from the analysis. Data has been obtained from SHERPA/RoMEO and Cambridge Open Access databases.**				
		AVG	€	1 978,20
		MEDIAN	€	2 115,00
		MODE	€	2 730,00

Annex 4: Analysis of the real prices of training and networking events

This annex presents the real costs of training events[155] and networking events[156] using data which have been gathered via randomly generated web search. It can be observed that the cost of training events alone fluctuates between EUR 300 and EUR 650 depending on whether the events are located inside or outside of the EU, with the latter being more expensive. The cost for conferences varies between EUR 300 and EUR 400. In addition to the event costs, there are also travelling and accommodation costs.

A study titled '*The Economic Cost of Attending Educational Conferences*'[157] explored the different types of costs when attending a conference, including travelling and accommodation. As a reference point, the study observed and analysed the SRHE Annual Research Conference[158] attendance rates over the course of three years. It has been found that the average cost of travelling domestically amounts to roughly EUR 150, and EUR 880 for international delegates. The study also outlined the different average accommodation costs. For Europe, the average is roughly EUR 105 per night, and EUR 110 per night on an international scale[159]. Desk research suggests that conferences, on average, can last from one to three days with training events lasting from one to five days. Given the data covered so far, it can be suggested that the end cost for a researcher to attend a conference can vary between roughly EUR 550 and EUR 1 600. In terms of training events, the variance ranges from roughly EUR 550 to EUR 2 100[160].

To conclude, a researcher travelling to either a training or a networking event with EUR 2 100 at his disposal should not face any expenditure difficulties. The study itself suggests an average cost per conference delegate to be around EUR 2 050. Another study, titled '*The Value, Scope and Cost of Conferences: looking beyond the Events industry*'[161] suggest the costs to be around EUR 2 100.

	Domestic	International
Conference cost	300 EUR	400 EUR
Travelling cost	150 EUR	880 EUR
Accommodation per night	105 EUR	110 EUR
Conference length	1-3 days	
Accommodation total	105-330 EUR	
Total costs	555-765 EUR	1 390-1 610 EUR
Variance	555-1 610 EUR	

	Domestic	International
Training event cost	300 EUR	650 EUR
Travelling cost	150 EUR	880 EUR
Accommodation per night	105 EUR	110 EUR
Training event length	1-5 days	
Accommodation total	105-770 EUR	
Total costs	555-975 EUR	1 640-2080 EUR
Variance	555-2 080 EUR	

Source:

The tables below provide a very detailed catalogue of training and networking events, on which this analysis was based.

[155] The definition 'training events' encompasses workshops, seminars and summer/winter schools.
[156] The definition 'networking events' encompasses conferences, symposiums and meetings.
[157] For more information, please see https://www.ijonses.net/index.php/ijonses/article/view/3/pdf_1
[158] The conference takes place in the UK.
[159] On a global level, the daily rates of hotel accommodation (in US dollars) were $100.57 – Asia; <…> $126.43 – Americas; $140.94 – Middle East/Africa. For more information, please see https://www.statista.com/statistics/245759/average-daily-rate-of-hotels-worldwide-by-region/
[160] The variance is higher because summer/winter schools often last longer.
[161] For more information, please see https://www.srhe.ac.uk/conference2017/abstracts/0068.pdf

Training events

Country	Title	Training Events[162]	Average
Austria	Fonds zur Förderung der wissenschaftlichen Forschung Coaching Workshops	90 EUR	90
Austria	5th CrysAC workshop on "Crystallography of ancient metals and metal corrosion"	20 EUR	20
Austria	67th International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research (Young Researchers' Workshop YRW)	15 EUR	15
Austria	The Summer School TrustRobots	250 EUR	250
Austria	3rd HBP Curriculum Workshop Series - NEUROSCIENCE, ROBOTICS, AI AND MEDICAL INFORMATICS: NEW INSIGHTS WITH DIVERSITY & ETHICS	250 EUR	250
Austria	MEDICRES COURSE & WORKSHOP: CLINICAL & BIOSTATISTICAL APPRAISAL FOR CLINICAL RESEARCH PROFESSIONALS	990 EUR	990
Austria	Graz University of Technology: Workshop Crisis Management	90 EUR	90
Austria	2nd REECAP workshop in Vienna 26-27th September 2018	90 EUR	90
Austria	3RD HUMAN BRAIN PROJECT CURRICULUM WORKSHOP SERIES	250 EUR	250
Austria	30th DEXA Workshops	250-560 EUR	405
Belgium	EDEN DOCTORAL SEMINAR ON QUALITATIVE RESEARCH IN ACCOUNTING	1 100 EUR	1 100
Belgium	INCREASE Summer School, Ghent, Belgium	200 EUR	200
Belgium	Coppieters Academy 2019: Climate action in a changing Europe	150-300 EUR	225
Belgium	SYSTEMATIC REVIEW WORKSHOP OF QUANTITATIVE AND/OR QUALITATIVE EVIDENCE 2019	250-300 EUR	275
Belgium	Summer School, University of Antwerp, Belgium	450-500 EUR	475
Belgium	five-day courses/workshops on qualitative data analysis at the University of Antwerp, Belgium	940-1 100 EUR	1 020
Belgium	Invitation Short Course Methods in Social Epidemiology: 15 - 17 May 2019 at the University of Antwerp	300 EUR	300
Belgium	DyViTo Workshop – November 2019	750 EUR	750
Belgium	DyViTo (Dynamics in Vision and Touch) Workshop	630 EUR	630
Bulgaria	Thirty-Eighth International Workshop on Nuclear Theory	450 EUR	450
Bulgaria	Thirty-Seventh International Workshop on Nuclear Theory	420 EUR	420
Bulgaria	4th International Workshop & Summer School on Plasma Physics	450-500 EUR	475
Bulgaria	8th International Summer School on Plasma Physics	550-650 EUR	600
Bulgaria	Workshop 2016. Cross-species Epigenetics, Gametogenesis and Embryogenesis	220 EUR	220
Bulgaria	ReIReS School in Sofia, September 2019	395 EUR	395
Croatia	DIVING MEDICINE SUMMER SCHOOL	600-650 EUR	625
Croatia	13th International Conference on Growth, Competitiveness, Innovation and Well-Being. PhD Workshop.	180-200 EUR	190
Croatia	2019 Study Week, Croatia: Transcendentals in the 21st Century	375 EUR	375
Croatia	Bal-Adria Summer School on Digital Humanities	200 EUR	200

[162] The definition 'training events' encompasses workshops, seminars and summer/winter schools.

Cyprus	8th International Research Conference. Pre-Conference Workshops	100 EUR	100
Cyprus	Summer School on Academic Integrity	250-500 EUR	375
Cyprus	22nd Conference on Geo-information Science & Workshops	160-420 EUR	290
Czechia	CFP – PORCINE FUTURES 1: RE-NEGOTIATING "WILDERNESS" IN MORE-THAN-HUMAN WORLDS	750 EUR	750
Czechia	Masaryk University Training Week	150-250 EUR	200
Czechia	PAGES ECN workshop: Funding starts here - Grant writing for early-career researchers	135 EUR	135
Denmark	Summer School of Acid-Base and Homeostasis	127 EUR	127
Denmark	WORKSHOP with Arthur Frank: The use of narratives in health practice and research for people with life-threatening illness	107 EUR	107
Denmark	5th MARE WINT/EuroTech Technical Workshop/Training Course	250 EUR	250
Denmark	Design Modelling Symposium Copenhagen 2015	320-460 EUR	390
Denmark	Workshops: 1)The Private Sector and Financing the SDGs; and 2) Does the State still have a Role as Welfare Provider in Developing Countries?	300 EUR	300
Estonia	Cyber Security Summer School 2015	100 EUR	100
Estonia	Workshop: Assisting Adults to Learn	350 EUR	350
Estonia	The 20th International Workshop on Matrices and Statistics	200-250 EUR	225
Finland	POPULATION AGEING AND ITS SOCIAL CONSEQUENCES	150 EUR	150
Finland	Nordic workshop on competitive and sustainable animal production	320-400 EUR	360
Finland	7th Science Factory: TMS–EEG Summer School and Workshop	850-880 EUR	865
Finland	Workshop 2020: The Forgotten Season - Microbial Life in Boreal and Arctic Winter	260 EUR	260
Finland	Sooma Clinical tDCS Workshop	100 EUR	100
Finland	NSAIS-ROW 2019 – Workshop on Adaptive and Intelligent Systems and Real Options	200 EUR	200
Finland	Finnish Inverse Problems Summer School 2019	60 EUR	60
France	Creative Communication Training Course	50 EUR	50
France	WORKSHOP CAUSAL INFERENCE: KEY DESIGN ISSUES FOR CLINICAL TRIALS AND DAG-BASED COHORT STUDIES	120 EUR	120
France	The International Workshop on Image Analysis Methods for the Plant Sciences (IAMPS)	200 EUR	200
Germany	Workshop on Skill mismatch: measurement issues and consequences for innovative and inclusive societies	70 EUR	70
Germany	ReMaT - Research Management Training for Early-Stage-Researchers workshop	500 EUR	500
Germany	Workshop on Ion Exchange Membranes for Energy Applications	395 EUR	395
Germany	Workshop: Hands-on Semantic Web Technologies for Biobanking	150 EUR	150
Germany	U4 Summer School 'Clinical and Translational Neuroscience	250 EUR	250
Germany	Gaussian Workshop in Ulm, Germany	450 EUR	450
Greece	27th EDAMBA Summer Research Academy	1 200-1 400 EUR	1 300
Greece	1st Workshop Innovation and R&D Networks for Policy Design and Implementation	100 EUR	100
Greece	COST CLINIMARK TRAINING SCHOOL Approaches for Biomarker Discovery and Validation	550 EUR	550

Hungary	XXIV. International Summer University	250 EUR	250
Hungary	Challenges in national and international economic policies 2nd Central European PhD Workshop on Economic Policy and Crisis Management	50 EUR	50
Hungary	The 11th C1 Inhibitor Deficiency and Angioedema Workshop	560-650 EUR	605
Ireland	Eurolife Summer School 2019	500 EUR	500
Ireland	1st Summer School on Software Evolution: From Monolithic to Cloud-Native	400 EUR	400
Ireland	International Spatial Humanities Sprint Camp	45 EUR	45
Ireland	NCPST 5th Radio Frequency Discharges Workshop 2015	170-220 EUR	195
Ireland	ECC19 Workshops	100 EUR	100
Ireland	ReSToRE Summer School 2019	350 EUR	350
Ireland	NCPST 5th Radio Frequency Discharges Workshop 2015	170-220 EUR	195
Italy	EAERE-FEEM European Summer School in Resource and Environmental Economics	300 EUR	300
Italy	ERSA Summer School 2016	200 EUR	200
Italy	HBP School – The Brain Simulation Platform of the Human Brain Project	400 EUR	400
Italy	CRS ITALY CHAPTER ANNUAL WORKSHOP 2019	105 EUR	105
Latvia	NJF SEMINAR 496. Animal welfare and longevity	330-380 EUR	355
Latvia	Baltic Summer School of Digital Humanities 2019	60 EUR	60
Latvia	International Summer School 2018 Riga Economic Modelling in Health Care	250 EUR	250
Lithuania	5th VMU IFL & 13th LKPA International Conference "Sustainable Multilingualism 2019." Workshop.	80-120 EUR	100
Lithuania	11th International Workshop: Data Analysis Methods for Software Systems	140 EUR	140
Luxembourg	Post-doc Workshop by the University of Luxembourg	120 EUR	120
Luxembourg	24th Essential Seminar, European Nutrition Leadership Platform	1 750 EUR	1 750
Luxembourg	ETIS SUMMER SCHOOL 2017	360 EUR	360
Malta	Summer school: Understanding marine hydrogeology through the lens of geophysics	500 EUR	500
Netherlands	COPE European Seminar 2019	170 EUR	170
Netherlands	Workshop: Cross-border Innovation Procurement in Health: EU funding opportunities & best practices	300 EUR	300
Netherlands	Open Science and Research Data Management Train-the-Trainer Bootcamp	50 EUR	50
Netherlands	ESSETS – European Summer School of Emergency and Trauma Surgery	125 EUR	125
Netherlands	Summer schools from Eurolife institutions in 2018	200 EUR	200
Netherlands	Utrecht Winter School on Earth System Governance 2018	300 EUR	300
Netherlands	Workshop: Network for Young Researchers in Instrumentation for Astrophysics (NYRIA)	50 EUR	50
Netherlands	PAHRTEA: Polycyclic Aromatic Hydrocarbon Research: Theory and Experiments in an Astronomical context	50 EUR	50
Netherlands	10th edition of the workshop on Innovative Mouse Models (IMM2019)	200-250 EUR	225
Poland	Visegrad Summer School - Rethink Past & Design Future	125 EUR	125
Poland	Workshop on Ion Exchange Membranes for Energy Applications	395 EUR	395

Poland	6TH INTERNATIONAL WORKSHOP ON INTELLIGENT EDUCATIONAL SYSTEMS, TECHNOLOGY-ENHANCED LEARNING AND TECHNOLOGY TRANSFER MODELS	100 EUR	100
Poland	Isotope Workshop XV	230-275 EUR	252,5
Poland	IT Research Workshop, Poznan University of Technology	300-330 EUR	315
Poland	17th International Conference on Nanosciences & Nanotechnologies. Workshop 3 Nanomedicine	250 EUR	250
Portugal	International Summer Course "Community-based Socio-environmental Planning: Natural Resources and Sustainable Tourism"	160-800 EUR	480
Portugal	Fifth Lisbon Research Workshop on Economics, Statistics and Econometrics of Education	200-305 EUR	252,5
Portugal	EuroFoodChem XX Conference. Pre-congress workshop	450-550 EUR	500
Portugal	2019 NYRIA WORKSHOP	60 EUR	60
Portugal	DESIGN SYSTEMS — RESEARCH IN DESIGN SYSTEMS. Workshop	35 EUR	35
Portugal	7th International Workshop on Structure and Function of Ion Channels and Transporters (SFICT)	250-300 EUR	275
Romania	20th International Balkan Workshop on Applied Physics and Materials Science	70-400 EUR	235
Romania	2020 International Workshop on Antenna Technology	1 750 EUR	1 750
Romania	Workshops: 1) Syntactic Variation in Romance; and 2) Attitude and Stance in Discourse	40 EUR	40
Romania	Summer School on Flow Cytometry, 2nd Edition. Advanced level cytometry workshops	42 EUR	42
Romania	7th International Workshop on Numerical Modelling in Aerospace Sciences	11 EUR	11
Slovakia	8th Slovak Winter Seminar of Regional Science	105 EUR	105
Slovakia	20th Conference Information Technologies - Applications and Theory. Workshop	225-395 EUR	310
Slovakia	The three "CO" (Composability, Comprehensibility, Correctness) Winter School	80 EUR	80
Slovakia	10th International Workshop on Agglutinated Foraminifera	260-280 EUR	270
Slovenia	DESIGN SPRINT Interactive, intense, challenging, and hands-on two-day workshop	690-790 EUR	740
Slovenia	Workshop: Innovative Flame Retardant Systems	100 EUR	100
Slovenia	Quantum Espresso Summer School at JSI	50 EUR	50
Slovenia	Three-day short course: Blast resistant design methods	570 EUR	570
Slovenia	G2G2 Summer School	230-250 EUR	240
Slovenia	ADBIS workshops	140-160 EUR	150
Spain	EDEN DOCTORAL SEMINAR ON BOARDS AND CORPORATE GOVERNANCE	1 100 EUR	1 100
Spain	IBPSA-NVL – Workshops on Quality Assurance of Simulations of Buildings and Systems	475 EUR	475
Spain	5th Summer School on Degrowth and Environmental Justice	200 EUR	200
Spain	International Workshop: A focus on statistical methods to analyse accelerometer-measured physical activity	100-120 EUR	110
Sweden	11th Nordcode Seminar & Workshop and IDBM Research Seminar	250-300 EUR	275
Sweden	Workshop: Biodiversity Based Integrated Pest Management in Field Crops	185-230 EUR	207,5
Sweden	15th Cloud Control Workshop	515-615 EUR	565
Sweden	TEMSpec - 4th International workshop on TEM spectroscopy in Material Science	200 EUR	200
Sweden	Swedish Bioinformatics Workshop 2017	47-113 EUR	80

Sweden	ECSS 2018 Pre-Summit Workshop	200 EUR	200
Sweden	EU-STEAM 2019 European Workshop on Technologies for STEAM Education and Human Learning	200 EUR	200
United Kingdom	Neuromuscular Translational Summer School	400-500 EUR	450
United Kingdom	CASTEP Training Workshop 2019	110 EUR	110
United Kingdom	Bellingcat Workshops	2 200 EUR	2 200
United Kingdom	Developing Research Skills Workshop	70 EUR	70
United Kingdom	4th biennial workshop of Polar Educators International (PEI)	90-100 EUR	95
United Kingdom	19th Annual UK Workshop on Computational Intelligence	305-360 EUR	332,5
United Kingdom	Summer School on Climate Change and Behaviour	445-500 EUR	472,5
United Kingdom	ESSCE – Edinburgh Summer School in Clinical Education	870-930 EUR	900
United States	ISBNPA 2019 Annual Meeting Pre-Conference Workshops	30-100 EUR	65
United States	Workshop for experienced scholars: Achieving Interdisciplinary and Transdisciplinary Service Research	497 EUR	497
United States	Time-Frequency Principal Components Analysis: A Practical Introduction to Applications with Event-Related Potential Data	135-239 EUR	187
United States	Workshop on Clinical Translation	221 EUR	221
Canada	Bellingcat Workshop for Toronto	2000 EUR	2000
Canada	MSA Toronto 2019. Pre-Conference Workshops	81-185 EUR	133
Canada	UXRConf 2020. Pre- Conference Workshops	703-728 EUR	715,5
Japan	10th International Workshop on Empirical Software Engineering in Practice	25 EUR	25
Japan	International School on Spintronics and Korea-Japan Spintronics Workshop - Topological Phenomena in Magnetism	25-41 EUR	33
Japan	Marchantia Workshop 2019	17-41 EUR	29
Japan	2019 MMIRA Asia Regional & JSMMR2019 Conference and Workshop	41 EUR	41
Australia	User Research Bootcamp	156 EUR	156
Australia	Quantitative PCR Workshop	239 EUR	239
Australia	Bellingcat Workshops for Sydney	2 075 EUR	2 075
Australia	Sydney GLWS™ Level 1 & 2 Accreditation Workshop	1 590 EUR	1 590
China	2020 Workshop on Graphene Applications	271-542 EUR	406,5
China	International CPEC Workshop – ICPECW	2 709 EUR	2 709
China	The 6th International Conference on Cognitive Research on Translation and Interpreting. Eye-Tracking Workshops	208 EUR	208
China	Bright Internet China Workshop	52-78 EUR	65
India	ApEx-Cedars Sinai: Nephrology Board Review Course and Urology for Nephrologists Workshop	542-993 EUR	767,5
India	Workshop on Efficiency and Productivity Analysis using R	226 EUR	226
India	Fluidization Seminar and Workshop	2 032-2 257 EUR	2 144,5
Brazil	13th Workshop on Logical and Semantic Frameworks with Applications	903 EUR	903
Brazil	LSFA 2019: 14th Workshop on Logical and Semantic Frameworks, with ApplicationsLSFA 2019: 14th Workshop on Logical and Semantic Frameworks, with Applications	45 EUR	45
		Total Average	**374.76 EUR**
		Average EU	328.43 EUR
		Average International	645.04 EUR

Networking events

Country	Title	Networking Events[163]	Average
Austria	2nd International Conference on Research in Social Sciences	110-250 EUR	180
Austria	2014 IFERA Global Conference. Involvement, Essence and Identity: Developing Core Constructs in Family Business Research	300 EUR	300
Austria	2019 Salzburg Conference in Interdisciplinary Poverty Research: Migration and Poverty	100 EUR	100
Austria	MEDICRES INTERNATIONAL CONFERENCE ON GOOD BIOSTATISTICAL & ADVANCED CLINICAL PRACTICE IN ONCOLOGY - HEMATOLOGY	290 EUR	290
Belgium	7EMESconf - Conference	550-650 EUR	600
Belgium	10th EUSPR Conference	125-245 EUR	185
Belgium	The 2nd International Conference on Applied Research in Engineering, Science and Technology	120-290 EUR	205
Bulgaria	The XI International Conference for Young Researchers "Technical sciences, industrial management"	80-100 EUR	90
Bulgaria	ITA 2019 XXII-nd Joint International Scientific Events on Informatics	360 EUR	360
Bulgaria	19TH IFAC CONFERENCE ON TECHNOLOGY, CULTURE AND INTERNATIONAL STABILITY	300-350 EUR	325
Bulgaria	9th BALKAN CONFERENCE IN INFORMATICS	300-350 EUR	325
Croatia	13th International Conference 'Growth, Competitiveness, Innovation and Well-Being'	180-440 EUR	310
Croatia	Conference: Truth and Beauty; Transcendentals in the Twenty-First Century.	175 EUR	175
Croatia	Research Synthesis 2019 (incl. Pre-Conference Symposium: Big Data in Psychology)	250-350 EUR	300
Croatia	11th International Odyssey Conference on Economics and Business	200-390 EUR	295
Croatia	7th Annual Research in Management Learning and Education (RMLE) Unconference	230 EUR	230
Cyprus	ICoN 2015 - International Conference on Nanotheranostics	425 EUR	425
Cyprus	22nd Conference on Geo-Information Science	360-420 EUR	390
Cyprus	IIPE 2019: Cyprus	150 EUR	150
Cyprus	Conference "Contemporary aspects of Analysis II"	50 EUR	50
Cyprus	IAAE 2019 Annual Conference. International Association for Applied Econometrics	320 EUR	320
Cyprus	EAA Annual Congress 2019	200 EUR	200
Czechia	IACSS:International Academic Conference on Social Sciences 2019	150-300 EUR	225
Czechia	PLANT BIOTECHNOLOGY: GREEN FOR GOOD V	350-400 EUR	375
Czechia	11th EUROPEAN SYMPOSIUM ON ELECTROCHEMICAL ENGINEERING	550-650 EUR	600
Denmark	European Business Ethics Network Research Conference	100-350 EUR	225
Denmark	7th IEA International Research Conference. A FORUM FOR EDUCATIONAL RESEARCH	50-100 EUR	75
Denmark	Nordic Conference on Geodemographics	455 EUR	455
Estonia	CFA: Emotions: Rationality, Morality and Social Understanding	75 EUR	75

[163] The definition 'networking events' encompasses conferences, symposiums and meetings.

Estonia	Diversity of science cultures during and after the Cold War	25 EUR	25
Finland	YOUTH2019 - Finnish National Youth Work Days Conference – Symposium - Forum	110 EUR	110
Finland	ASIS&T European Workshop 2013. Information Science and Technology Conference	110 EUR	110
Finland	2017 EAPRIL	465-550 EUR	507,5
France	ICR 2019	50 EUR	50
France	1st Franco-AMSUD Energy and Environment Meeting	350-400 EUR	375
France	14th PARIS – FRANCE International conference on "Innovative Engineering Technologies and Healthcare" (IETH-19)	250-295 EUR	272,5
France	14th PARIS International Conference on Agriculture, Biological and Environmental Sciences (PABE-19)	250-295 EUR	272,5
France	4th ISMMS biennial international Conference, 17-20 June 2019 "Locating Heavy Metal Music and Culture"	200 EUR	200
France	Innovative Research in Economics, Innovation Managements, Social Science & Humanities (IRSSH)	360-450 EUR	405
France	XXXIst International Conference on Photonic, Electronic, and Atomic Collisions	500-580 EUR	540
France	26th International Symposium on Ion-Atom Collisions (ISIAC)	230-280 EUR	255
France	The 5th International Symposium on Intense Short Wavelength Processes in Atoms and Molecules (ISWAMP)	250-320 EUR	285
France	20th International Symposium on Correlation, Polarization and Ionization in Atomic and Molecular Collisions (COPIAMC)	250-350 EUR	300
Germany	ICCOPT 2019	385-435 EUR	410
Germany	ICNFT 2018 - 5th International Conference on New Forming Technology	690 EUR	690
Greece	2nd International Academic Conference on Multidisciplinary Approaches in Social Science, Business and Economics MASE-19	300-500 EUR	400
Greece	2nd International Hellenic Conference on Political Sciences: Communicating in Politics?	400 EUR	400
Greece	7th Annual International Conference on Chemistry	400-1200 EUR	800
Hungary	RENT XXIII - RESEARCH IN ENTREPRENEURSHIP AND SMALL BUSINESS	585 EUR	585
Hungary	CONFERENCE ON THE INTERNATIONAL DAY OF OLDER PERSONS	60 EUR	60
Hungary	The 1st European Conference on Silicon and Silica Based Materials	600-800 EUR	700
Hungary	World Conference on Sustainable Life Sciences (WOCOLS 2019)	100 EUR	100
Hungary	47th European Muscle Conference	350-580 EUR	465
Hungary	3rd Danube Conference on Epigenetics	200-350 EUR	275
Ireland	EFPSA Junior Researcher Programme Conference 2017	80 EUR	80
Ireland	30th EURO Conference	375-500 EUR	437,5
Italy	Complementary currencies and societal challenges: Crossing academic and practitioners knowledge/perspectives	100 EUR	100
Italy	17th European Turbulence Conference	630 EUR	630
Italy	47th EDTNA/ERCA International Conference	695 EUR	695
Italy	2nd International Conference on Research in Humanities and Social Sciences,	120-250 EUR	135
Italy	Chemistry meets Industry and Society	300-430 EUR	365
Italy	2017 IFERA Global Conference	300 EUR	300

Italy	SAET CONFERENCE ISCHIA 2019	180-495 EUR	337,5
Latvia	VIII STARPTAUTISKĀ ZINĀTNISKI!PRAKTISKĀ KONFERENCE	25 EUR	25
Latvia	30th European Society for Social Drug Research Conference	100 EUR	100
Lithuania	Energy, Clusters and Social Innovations for Sustainable Development: Round Table	190 EUR	60
Lithuania	International conference: Diaspora and Migration	40 EUR	40
Lithuania	ICIST 2019	60-200 EUR	130
Lithuania	Smithy of Ideas Conference	110 EUR	110
Lithuania	COMPLEXITIES OF RISK AND UNCERTAINTY. MID-TERM CONFERENCE OF ESA RN22	180-250 EUR	215
Lithuania	ERPUG 2019	400 EUR	400
Lithuania	27TH ICCP WORLD PLAY CONFERENCE	250-300 EUR	275
Malta	7th International Language in Focus Conference	270-300 EUR	285
Malta	8th International Conference on Model-Driven Engineering and Software Development	410-695 EUR	552,5
Malta	Social Inclusion, Education and Digital Society	160-250 EUR	205
Netherlands	CMD26 - The 26th Conference of the Condensed Matter Division of the EPS	450 EUR	450
Netherlands	2nd International Conference on Performance Indicators in Business and Social Science Research CPIS-19	300-500 EUR	400
Netherlands	2nd International Conference on Management, Economics and Finance	120-280 EUR	200
Netherlands	15th Annual Conference of the Metabolomics Society	680-910 EUR	795
Netherlands	International Conference on Social Science, Arts, Business and Education	365-385 EUR	375
Poland	14th Economic Forum of Young Leaders	40 EUR	40
Poland	MCE 2018	195-335 EUR	265
Poland	48th meeting of the European Histamine Research Society	500-550 EUR	525
Poland	eCAADe 2018	220-410 EUR	315
Poland	5th EUROPEAN JOINT THEORETICAL/EXPERIMENTAL MEETING ON MEMBRANES	130 EUR	130
Portugal	15th PORTUGAL International Conference on Chemical, Agricultural, Biological and Environmental Sciences (LCABES-19)	230-455 EUR	342,5
Portugal	SEPI XXXV ANNUAL MEETING	315-365 EUR	340
Portugal	XVIII Grudis Conference	80-100 EUR	90
Portugal	UACES 2019	170-245 EUR	207,5
Romania	4th Annual Emerging Trends in Marketing and Management International Conference	390 EUR	390
Romania	International conference Electron Microscopy of Nanostructures, ELMINA 2018	70 EUR	70
Romania	The challenges of working with diversity in social systems	300 EUR	300
Romania	10th INTERNATIONAL CONFERENCE ON HYDROGEN PRODUCTION	470-550 EUR	510
Romania	23rd edition of the International Workshop on Teamworking (IWOT)	300 EUR	300
Slovenia	Cutting Edge 2019	35 EUR	35
Slovenia	26. INTERNATIONAL CONFERENCE ON MATERIALS AND TECHNOLOGY	490 EUR	490
Slovenia	ENCALS meeting 2017	245 EUR	245

Slovenia	HOPE AGORA 2019	350 EUR	350
Slovenia	Central European Cybersecurity Conference 2018	200-300 EUR	250
Spain	ICVNS'16 4th International Conference on Variable Neighbourhood Search	300-400 EUR	350
Spain	6TH INTERNATIONAL CONFERENCE ON "GLOBAL TRENDS IN ACADEMIC RESEARCH" (GTAR -2019)	360-405 EUR	382,5
Spain	3rd International Engineering, Mathematics & Applied Sciences Conference IEAS-19	300-500 EUR	400
Spain	3rd International Conference on Multidisciplinary Issues & Practices in Social Sciences, Education and Human Resource ISHR-19	300-500 EUR	400
Spain	Hetero Nano Carb 2019	395 EUR	395
Spain	19th International Conference & Exhibition	870 EUR	870
Spain	INTERNATIONAL OSTEOLOGY SYMPOSIUM BARCELONA	240-720 EUR	480
Sweden	Fourth Annual RUCARR Conference	140 EUR	140
Sweden	Nordic Zebrafish and Husbandry meeting 2018	95 EUR	95
Sweden	Optics & Photonics in Sweden conference (OPS) 2017	325 EUR	325
Sweden	ECSS 2018	550-650 EUR	600
Sweden	NOFA7, Nordic Conference on Teaching and Learning in Curriculum Subjects	445-585 EUR	515
United Kingdom	3rd International Conference on Gender Studies	200 EUR	200
United Kingdom	SymBioSE Symposium of Biology Students in Europe	170 EUR	170
United Kingdom	7th International Conference on Research in Behavioural and Social Sciences	135-345 EUR	240
United Kingdom	8th UK Swallowing Research Group Conference	255-280 EUR	267,5
United States	International Machado-Joseph Disease Research Conference - Satellite Meeting of the International Ataxia Research Conference (IARC) 2019	113-194 EUR	153,5
United States	2019 2nd International Conference on Computer Information Science and Artificial Intelligence (CISAI 2019)	163 EUR	81,5
United States	9th International Conference of the International Lymphoedema Framework Conference	386-756 EUR	571
United States	IConSES 2019	226-352 EUR	289
Canada	Nanomaterial Conference 2020	497-812 EUR	654,5
Canada	GLOBAL CONFERENCE ON TECHNOLOGY & INFORMATION MANAGEMENT	271-452 EUR	361,5
Canada	International Conference on Engineering and Natural Sciences (ICENS 2019)	542-722 EUR	362
Canada	International Conference On Education, Business and Management	361-542 EUR	451,5
Japan	International Conference on Electronics Communication Technologies	90-497 EUR	293,5
Japan	3rd International Conference on Telecommunications and Communication Engineering	343-497 EUR	420
Japan	4th Asia Conference on Environment and Sustainable Development	289-470 EUR	379,5
Japan	4th International Conference on New Energy and Applications	289-470 EUR	379,5
Australia	The 4th International Conference on Frontiers of Composite Materials	271-542 EUR	406,5
Australia	The 5th International Conference on Smart Material Research	271-542 EUR	406,5
Australia	7th International Conference on Mechanical, Automotive and Materials Engineering (CMAME 2019)	289-542 EUR	415,5
Australia	International Conference on Advances in Health and Medical Science (ICAHMS)	361-451 EUR	406
China	3rd International Conference on Advances in Image Processing	262-488 EUR	375

China	2nd International Conference on Big Data and Machine Learning	289-433 EUR	361
China	6th International Conference on Mechatronics and Mechanical Engineering	280-397 EUR	338,5
China	6th International Conference on Biomedical and Bioinformatics Engineering (ICBBE 2019)	433-497 EUR	465
India	NTERNATIONAL CONFERENCE ON ADVANCED TRENDS IN MECHANICAL AND AEROSPACE ENGINEERING (ATMA-2019)	90-135 EUR	112,5
India	22nd NATIONAL SYMPOSIUM ON RADIATION PHYSICS	361 EUR	180,5
India	2nd International Conference on Futuristic Trends in Materials and Manufacturing	108 EUR	108
India	ICCC - SEC 2019	181-316 EUR	248,5
Brazil	MANAGING THE IP LIFECYCLE IN LATIN AMERICA	357-537 EUR	447
Brazil	Fertilizer Latino Americano	1 579-2 347 EUR	1963
Brazil	CannX Sao Paulo: 2nd International Congress of Cannabinoid Medicine	104-208 EUR	156
Brazil	Global Spine Congress	248-772 EUR	510
		Total Average	**324.80 EUR**
		Average EU	305.65 EUR
		Average International	403.45 EUR

Annex 5: Analysis and tables on the maternity, paternity and sick leave benefits paid by the employers

In most European countries, maternity, paternity, parental and sick leave benefits are covered by the social security systems, often with the precondition that a person has worked enough time or paid social security contributions. In case of maternity leave, for example, it can vary from one month of insurance required in Romania to 12 months of insurance required in Croatia, Bulgaria or Lithuania. **All EU countries also have some type of special leave provision**. The reasons for granting such leave vary across countries. The most common reasons are personal or family events (e.g. wedding, funeral or moving to a new house), military or civilian service obligation, studies or examinations, care for dependents and raising young children. Special leaves can be both paid and unpaid. Shorter periods are usually remunerated by the employer while longer periods are usually unpaid.

Some institutions across the EU countries have included in their internal rules or specific work contracts the clause to pay a particular sum of money to their employees in case of maternity, paternity, parental or sick leave. The amount and conditions of payment vary across institutions and does not fall under the national legislation.

We have identified that the main issues that could be relevant for the MSCA researchers/staff members and organisations in relation to maternity, paternity, parental and sick leave are:

- Maternity, paternity, parental and sick leave benefits are paid by the employer, which means that the recruiting institution faces additional costs emerging from the change of researcher's/staff member's personal situation.
- There is a non-eligibility period when neither the employer nor the national social security system has to pay maternity, paternity, parental and sick leave benefit to a researcher/staff member, which means that they can be exposed to a period without any source of income.
- Some institutions have internal rules that oblige them to pay a researcher/staff member in case of maternity, paternity, parental or sickness leave, which means that the recruiting institution faces additional costs emerging from the change of researcher's/staff member's personal situation.

However, in our view, the last two options fall out of the scope of this study because:

- Non-eligibility periods are dependent on the national requirements and apply to all persons and are not related to the implementation modalities of the MSCA.
- The decision of some institutions to pay their researcher/staff member in case of maternity, paternity or sick leave, especially in countries where it is not required by the national legislation, usually reflects their social responsibility goals and institutional budgets, for which the MSCA is not responsible.

Maternity leave

Maternity leave is a pre- and post-natal break from work taken by mothers of newborn children[164]. Usually this leave is intended only for women and is linked to pregnancy, childbirth and the first months of motherhood. Under the EU Maternity Leave Directive (92/85/EEC), women have the right to a minimum of 14 weeks maternity leave, of which at least two weeks are compulsory, and can be allocated before and/or after giving birth. While this directive serves as guidance for Member States, there is still substantial variation in the way that maternity leave policy is designed across the EU countries. The existing

164 Eurofound (2015) *Maternity leave provisions in the EU Member States: Duration and allowances*, Luxembourg: Publications Office of the European Union.

variations are mainly in the areas of duration and legal status of leave, degree of compensation, eligibility, flexibility and the entity in charge of paying the benefit.

In terms of the duration and legal status of leave, there is variation in how many weeks are available in total and separately in pre- and post-natal periods as well as whether the leave is mandatory, non-mandatory or a combination of both. There is also variation in terms of the level of remuneration women can receive on maternity. It can be fixed for the entire time or change throughout the leave period. These differences are usually influenced by the length of leave (e.g. mothers in Poland and Portugal can receive between 80% and 100% of their usual income depending on the length of their leave). There are also cases where the benefit is not in accordance with a woman's previous earnings but is based on a flat rate (e.g. Ireland)[165]. Receiving maternity benefit can also be dependent on certain eligibility criteria such as the length of time worked, or the contributions paid to social security prior to taking maternity leave. When it comes to flexibility, it is mainly related to being able to choose when to start maternity leave and how much leave to take.

There is also variation regarding the entity responsible for maternity leave pay. Maternity leave is usually covered by a country's social security system. However, in some EU countries, it is the responsibility of the employer to pay maternity benefits to its employees. In some cases where the employer pays the maternity benefit, it can seek reimbursement from the social security system. Otherwise, the employer and the social security system shares the responsibility of paying the benefit. In some other countries, organisations can choose to top up maternity pay voluntarily (e.g. Ireland). Table 61 lists all countries where the employer has to contribute to maternity pay.

Table 61. Maternity benefit paid by the employer

Country	Type of benefit payment	The duration paid by the employer	The amount paid by the employer
Finland	Employer	72 days	100% of the salary
Germany	Responsibility shared between employer and social security system	14 weeks	Employer has to pay the difference between the flat daily rate (€13) paid by the social security system and the employee's wage
Greece	Employer only pays in cases when a woman is not eligible for maternity benefit paid by the social security system	15 days if the duration of the employment is more than 10 days; 30 days if the duration of the employment is more than 1 year	100% of the salary
Italy	Social security system pays but the employer makes an additional contribution	5 months	80% of the salary paid by the social security system and 20% difference is substituted by the employer
Malta	Employer	14 weeks	100% of the salary
Spain	Benefit is paid by the social security system, but the employer continues to pay social security contributions, and, in some cases, collective agreements provide for the payment of a supplement of up to 100% of the salary	16 weeks	Employer's social security contribution is 29.90%
UK	Employer pays but can claim reimbursement from the social security system (employer can reclaim up to 92% of the pay)	39 weeks	At least 90% of average weekly earnings for the first 6 weeks; At least €161 per week or 90% of average weekly

165 Strang, L., Broeks, M. (2016) *Maternity Leave Policies: Trade-Offs Between Labour Market Demands and Health Benefits for Children*, RAND Corporation.

			earnings (whichever is lower) for the next 33 weeks

Source: compiled by PPMI.

Paternity leave

Paternity leave is a period of time that a father can take off from work in relation to their newborn child. It is usually defined as a short period immediately after the birth that is only available to fathers and is in addition to parental leave. Paternity leave is often taken in parallel with maternity leave. The length of paternity leave varies from 2 days in Malta to 5 weeks in Spain. In countries where paternity leave is offered, it is usually covered by social security systems. Similar to maternity leave, it can also be covered by the employer, which in some countries is reimbursed from the social security system, or both the employer and the social security system share the payment. Table 62 lists all countries where the employer has to make any kind of contribution to paternity pay.

Table 62. Paternity benefit paid by the employer

Country	Type of benefit payment	The duration paid by the employer	The amount paid by the employer
Belgium	Employer	3 days	100% of the salary
Finland	Employer	6 days	100% of the salary
Greece	Employer	2 days	100% of the salary
Italy	Employer	5 days	100% of the salary
Luxembourg	Employer	2 days	100% of the salary
Malta	Employer	2 days	100% of the salary
The Netherlands	Employer	5 days	100% of the salary
Spain	Benefit is paid by the social security system, but the employer continues to pay social security contributions	5 weeks	Employer's social security contribution is 29.90%
The United Kingdom	Employer pays but can claim reimbursement by the social security system (employer can reclaim up to 92% of the pay)	2 weeks	90% of average weekly earnings or €161 per week or (whichever is lower)

Source: compiled by PPMI.

Parental leave

Parental leave is a job-protected period of leave for parents, which is usually supplementary to maternity and/or paternity leave. There is variation in the way that parental leave policy is designed across the EU countries. The existing variation is mainly related to the duration and the legal status of leave, degree of compensation, eligibility, flexibility and the entity in charge of providing it. All EU countries currently provide parental leave. Parental leave can be either an individual right or a family entitlement. In the latter case, it is tied to a family and can be transferred between parents (in some cases grandparents). In order to increase uptake of parental leave by fathers, some countries divide parental leave into shared part and non-shared part (e.g. if the father does not take leave, it cannot be transferred to the mother). Most countries offer some kind of compensation. The average compensation rate is 50% of earnings, which can vary from 25% to 100% of earnings. There are also countries that offer a flat rate for parental benefit. In some countries, parental leave is compensated as a maternity/paternity benefit (e.g. Denmark, Finland, Italy, Portugal, Sweden, the UK). Otherwise, parental benefit is covered by the social security system. It is important to note that parental leave and parental benefit are not necessarily connected. Parental benefits can be paid to parents who do not

take time off. At the same time, parents can be allowed to take unpaid time off from work with protection against dismissal.

Sick leave

Sick leave is time off work that employees can use to address their health needs without losing pay. All EU countries provide some form of paid sick leave. Entitlement to sick leave benefit schemes vary considerably across countries. They may vary regarding duration, eligibility conditions and benefit levels between different types of workers and depending on the type of sickness in question. Rights to sick leave benefit schemes can be enshrined both in social protection legislation and labour law. Moreover, in some countries, conditions of payment and duration are primarily negotiated through collective agreements (e.g. Denmark, Finland, and the Netherlands). Most countries have a mixed system where benefits are paid by both the social security system and the employer. Table 63 provides a list of countries where the employer has to make any kind of contribution to sick pay.

Table 63. Sick leave benefit paid by the employer

Country	Type of benefit payment	The duration paid by the employer	The amount paid by the employer
Austria	Employer	6 to 12 weeks + additional 4 weeks	100% of the salary for 6 weeks; 100% of the salary for 8 weeks if the duration of employment is 1 year; 100% of the salary for 10 weeks if the duration of the employment is 15 years; 100% of the salary for 12 weeks if the duration of the employment is 25 years. 50% of the salary is paid for further 4 weeks after the periods mentioned above expire
Belgium	Employer	30 days	100% of the salary
Bulgaria	Employer	3 days	70% of the salary
Croatia	Employer	42 days	At least 70% of the salary (the amount depends on the sectoral collective agreement)
Czechia	Employer	11 days	60% of hourly average earning
Denmark	Employer	Unspecified	100% of the salary
Estonia	Employer	5 days	70% of the salary
Finland	Employer	Up to 365 days	50% of the salary for up to 10 days if the duration of employment is under 1 month; 100% of the salary for up to 40 days and 75% of the salary thereafter (up to 365 days) if the duration of the employment is under 1 year; 100% of the salary for up to 50 days and 75% of the salary thereafter (up to 365 days) if the duration of the employment is under 5 years; 100% of the salary for up to 60 days and 75% of the salary thereafter (up to 365 days) if the duration of the employment is more than 5 years
Germany	Employer	6 weeks	100% of the salary
Hungary	Employer	15 days a year	70% of the salary
Latvia	Employer	10 days	At least 75% of the salary for 2nd and 3rd days; At least 80% from 4th to 10th day
Lithuania	Employer	2 days	100% of the salary
Luxembourg	Employer	77 days	100% of the salary
Malta	Responsibility shared between employer and social security system	48 days	Employer has to pay the difference between the flat daily rate (€20.79 for single parent or married person or €13.46 for single person) paid by the social security and the employee's wage

The Netherlands	Employer	104 weeks	70% of the salary with €2014.28 maximum daily wage (or more depending on the collective agreement)
Poland	Employer	33 days for people under 50 or 14 days for people over 50	80% of the salary
Romania	Employer	5 days	100% of the salary
Slovakia	Employer	10 days	25% of the assessment base (daily earnings calculated on the basis of the previous year, monthly ceiling 2-times of the national average monthly wage) for 3 days; 55% of the assessment base from 4th to 10th day
Slovenia	Employer	30 days	100% of the salary for occupational diseases, accidents at work; 90% of the salary for illness; 80% of the salary for injuries or nursing family members
Spain	Employer	12 days	60% of the salary from the 4th up to the 15th day of sick leave
Sweden	Employer	14 days	80% of the salary
The United Kingdom	Employer	28 weeks	€102 per week

Source: compiled by PPMI.

Special leave

Special leave is an arrangement granted to an employee who needs to be absent during working hours for reasons that do not fall under other types of leave (e.g. annual leave). This leave can be planned (e.g. military service, wedding) and unplanned (e.g. death or illness of a relative). There are numerous reasons for an employee to be released from an obligation to work. The most frequent reasons included in the legislation across the EU countries include:

- Bereavement leave for the reasons of death of close family;
- Special leave for urgent domestic problems such as fire, flood, theft, etc.;
- Special leave for personal or family events such as marriage or moving;
- Leave for care of dependents or close family members in case of illness;
- Special leave for parents of young children;
- Leave for studies and examinations;
- Leave for military or civilian service obligation;
- Special leave to attend jury service if a person is summoned to courts or other public duty;
- Some countries identify maternity, paternity, parental and sick leave as special leave.

Special leave can be both paid and unpaid. The duration of leave and its compensation vary across the EU countries. However, we have found that usually employers do not have to pay their employees in such occasions, or the duration of the payment is short and does not exceed 30 days.

Annex 6: List of items and services for people with disabilities

Individual-related items/services:

- Health insurance for people disabilities, when it is not covered by the healthcare system;
- Equipment necessary for a person with disabilities:
  - Wheelchair;
  - Electric wheelchair;
  - Stair climbing wheelchair;
  - Inclined platform (wheelchair) lifts;
  - Stairway chairlifts;
  - Hearing aid device;
  - Assistive listening device;
  - Augmentative and Alternative Communication (AAC) devices;
  - Crutch;
  - Braille assistive technology;
  - Finger reader;
  - Alerting devices;
  - Personal sound amplifier;
  - Haptic Proximity Module (HPM);
  - Eye tracking device;
  - Word prediction software;
- Carer/personal assistance services;
- Counselling;
- Advice on the support available from the state;
- Sign language interpretation services;
- Relocation support;
- Adopted housing costs;
- Mobility/transport costs;
- Personal emergency response system (assistive technology that is connected to an alarm system: e.g. vibrating or visual alarms);
- Medication for chronic disease;
- Guide dog;
- Personal navigation devices;
- Prosthetics.

Work-related items/services

- Physical modifications in the built environment:
  - A ramp/barrier free access for users of wheelchairs to:
    - Entrances;
    - Emergency exits;
    - Corridors and hallways;
    - Cafeteria;
    - Classroom/meeting rooms;
    - Office space;
    - Bathrooms;
    - Laboratories;
    - Libraries;
  - A lift;

  - Inclined platform (wheelchair) lifts;
  - Stairway chairlifts;
  - Vertical platform lifts;
  - Automatic doors;
  - Bathroom aids:
    - Railings;
    - Emergency alarms;
    - Adapted toilets;
    - Hoist;
  - Parking space for people with reduced mobility;
- Ergonomic/adjustable work equipment:
    - Adjustable/ergonomic desk/computer workstation;
    - Adjustable/ergonomic seating;
    - Adaptive/ergonomic computer accessories (e.g. mouse, keyboard);
- Augmentative and Alternative Communication (AAC) devices;
- Flexible working hours;
- Longer or more frequent breaks;
- Additional time for sickness leave/time off work;
- Personnel to support staff with disabilities;
- Awareness/sensitivity training for staff regarding work with colleagues who have disabilities;
- Modifying/adjusting performance targets;
- Quiet/separate working space (e.g. separate office with all the necessary equipment);
- Manager training in mental health and management of staff with mental health issues;
- Additional working hours for staff supervising a colleague with disability (e.g. for more frequent meetings, discussions about tasks, etc.);
- Training/workshops for researchers/staff members with disabilities;
- Important information in easy-to-read format;
- Sign language interpretation services;
- Documents in braille;
- Talking books;
- Software and hardware;
  - Text-to-speech/screen readers software;
  - Screen magnification software;
  - Eye tracking device;
- Loop hearing systems;
- Amplified telephone equipment;
- High Fidelity speakers and headphones;
- Personal emergency response system (assistive technology that is connected to an alarm system: e.g. vibrating or visual alarms);
- Work-related travelling expenses for people with disabilities;
- Work-related travelling expenses for a carer/personal assistant.

Annex 7: Analysis of the datasets of the actual costs incurred by the beneficiaries of the European Researchers' Night under FP7 and Horizon 2020, identification of any trends or patterns and possibilities of simplified funding

The European Researchers' Night (NIGHT), funded under the Marie Skłodowska-Curie actions, is a Europe-wide public event to enhance researchers' public recognition and to stimulate interest in research careers, especially among young people. Information on the structure of the NIGHT action and applicable financial conditions is provided in the information box below.

Information box: conditions applicable to the NIGHT actions

The financing regime of the NIGHT action's **direct costs** is based on the actual eligible costs incurred by the beneficiaries ('real costs' financing mechanism). In addition to the direct costs, **overheads** (indirect costs of the project) are financed on a flat rate basis and represent 25% under H2020 and 7% under FP7 of the direct costs (except direct subcontracting costs). The financial support (EU contribution) for NIGHT projects may represent up to 100% of the eligible costs of the action.

The eligible direct costs of the action could be related to personnel costs (either personnel of the institution or temporary staff), subcontracting (price paid for subcontracted services invoiced by external bodies to one of the participating organisations) and other direct costs (costs that are directly linked to the implementation of the action and can therefore be attributed to it directly). The human resources (staff efforts) dedicated to the project are usually planned in person-months per participating organisation. The activities and costs of the project are typically concentrated around 4 work packages (WPs): WP1 Awareness campaign; WP2 Activities during the NIGHT; WP3 Impact assessment and WP4 Management.

NIGHT projects can be implemented either by one single beneficiary or by several participating organisations one of them being the coordinator of the project.

As noted above, currently a NIGHT action is financed on a real cost basis. Such financing mechanism usually implies a heavy administrative burden as substantial resources must be allocated to planning and reporting of financial inputs rather than being concentrated on the activities, outputs and results of the project. Therefore, the main objective of this task was targeted at assessing whether (and how) the financial regime of the action could be simplified through simpler forms of grants (such as the use of the standard cost options (SCOs) – lump sums, standard scales of unit costs and/or flat-rate financing). For this task we have analysed data on the actual costs incurred by NIGHT beneficiaries provided in periodic reports of the NIGHT actions.

Coverage and object of analysis: NIGHT project vs NIGHT event

Our analysis covered projects financed under three H2020 NIGHT calls (H2020-MSCA-NIGHT-2014, H2020-MSCA-NIGHT-2016 and H2020-MSCA-NIGHT-2018); respective calls could cover one or two editions of the NIGHT events in consecutive years (i.e. H2020-MSCA-NIGHT-2014 call could cover NIGHT events taking place in 2014 and/or 2015). The majority (over 95%) of H2020 NIGHT projects expand over two-years and cover two NIGHT events.

Two-year H2020 NIGHT projects are essentially different in their scope compared to one-year projects as they cover twice as many NIGHT events. Thus, to ensure comparability of data and taking into account that for 2018 call projects data were available only for the first NIGHT events, the main object of our analysis is **one NIGHT event**, covered in the respective periodic report.

Our analysis of the actual project data also revealed that two H2020 NIGHT events of the same project had very similar characteristics – in around 2/3 of all projects the budget of two NIGHT events differed by less than 10% and in 3/4 of all projects – the difference was less than 15%; two NIGHT evens within the same project were based on similar approach, activities and geographical coverage. In 63% of the projects involving two NIGHT events the budget of the second NIGHT event tended to be higher, on average by 6%.

Our analysis also covered FP7 NIGHT projects financed under three 2011-2013 calls (FP7-PEOPLE-2011-NIGHT, FP7-PEOPLE-2012-NIGHT and FP7-PEOPLE-2013-NIGHT). FP7 projects could cover one edition of NIGHT event, thus FP7 NIGHT event equals FP7 NIGHT project.

Analysis of the total costs of NIGHT events data

The average total costs of one H2020 NIGHT event constitute 144 881 EUR (median value – 102 734 EUR), however the dataset is very dispersed and the costs of NIGHT events vary significantly (as demonstrated by the standard deviation, which is almost as high as the average and median values).

Table 64. Information on the total costs of one H2020 NIGHT event (EUR)

Call ID	2014-2018 NIGHT calls	H2020-MSCA-NIGHT-2014	H2020-MSCA-NIGHT-2016	H2020-MSCA-NIGHT-2018
Number of NIGHT events in the sample	189	91	81	17
Average	144 881	136 261	146 460	183 499
Median value	102 734	105 382	96 061	113 579
Standard deviation	117 361	101 706	127 490	142 705

Source: PPMI based on data presented in periodic reports of H2020 NIGHT actions

The average total costs of one FP7 NIGHT event (2011-2013 calls, Table 65) constitutes 121 057 EUR (median value – 82 048 EUR), however similar to H2020 the dataset is very dispersed and the costs of FP7 NIGHT events vary significantly.

Table 65. Information on the total costs of FP7 NIGHT event

Call ID	2011-2013 NIGHT calls	FP7-PEOPLE-2011-NIGHT	FP7-PEOPLE-2012-NIGHT	FP7-PEOPLE-2013-NIGHT
Number of NIGHT events in the sample	96	31	31	34
Average	121 057	111 590	132 682	119 090
Median value	82 048	81 839	92 756	77 649
Standard deviation	108 541	107 417	122 437	97 893

Source: PPMI based on data presented in project final reports of FP7 NIGHT actions

The average costs of H2020 NIGHT events tended to rise over 2014-2018 and compared to FP7, however, same as with the total sample, the costs of individual NIGHT events varied very significantly, therefore at the level of specific NIGHT events the costs difference was primarily related to the specificity of the project contrary to the project implementation period.

Further analysis was aimed at identifying any trends and patterns for the variation of costs of NIGHT events linked to project characteristics (such as number of partners, cost level in respective country, size of the country, number of cities covered by respective NIGHT events, costs per output and result of the project, etc.).

Relations between the costs of a NIGHT event and the number of partners

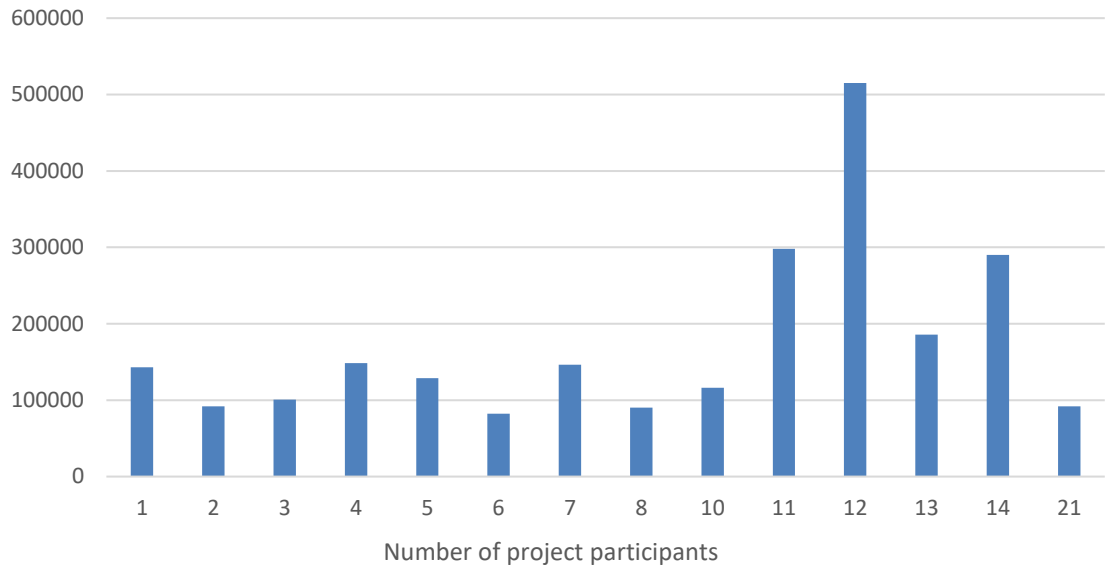
NIGHT projects can be implemented either by one single beneficiary or by several participating organisations. One could expect that the average budget of a NIGHT event would rise with the increase in the number of partners due to a wider geographical coverage, etc., however our analysis revealed no clear interrelations between the number of participants and the budget of the NIGHT event.

Table 66. Information on the total costs of a H2020 NIGHT event depending on the number of project participants (partners)

No of participants	No of events in the sample	Average value (EUR)	Median value (EUR)	Standard deviation (EUR)
1	52	142 984	116 355	116 620
2	13	91 869	79 445	49 637
3	26	100 540	86 167	68 215
4	18	148 499	101 299	99 347
5	21	128 693	106 752	67 330
6	17	82 497	69 701	29 544
7	10	146 589	94 643	94 387
8	6	90 361	78 003	27 495
10	3	116 077	63 646	97 393
11	2	298 186	298 186	145 940
12	6	515 219	534 460	72 410
13	8	185 591	202 808	74 271
14	6	290 086	209 054	138 461
21	1	91 816	91 816	

Source: PPMI based on data presented in periodic reports of NIGHT actions.

Figure 21. Average total costs of a H2020 NIGHT event depending on the number of project participants (EUR)



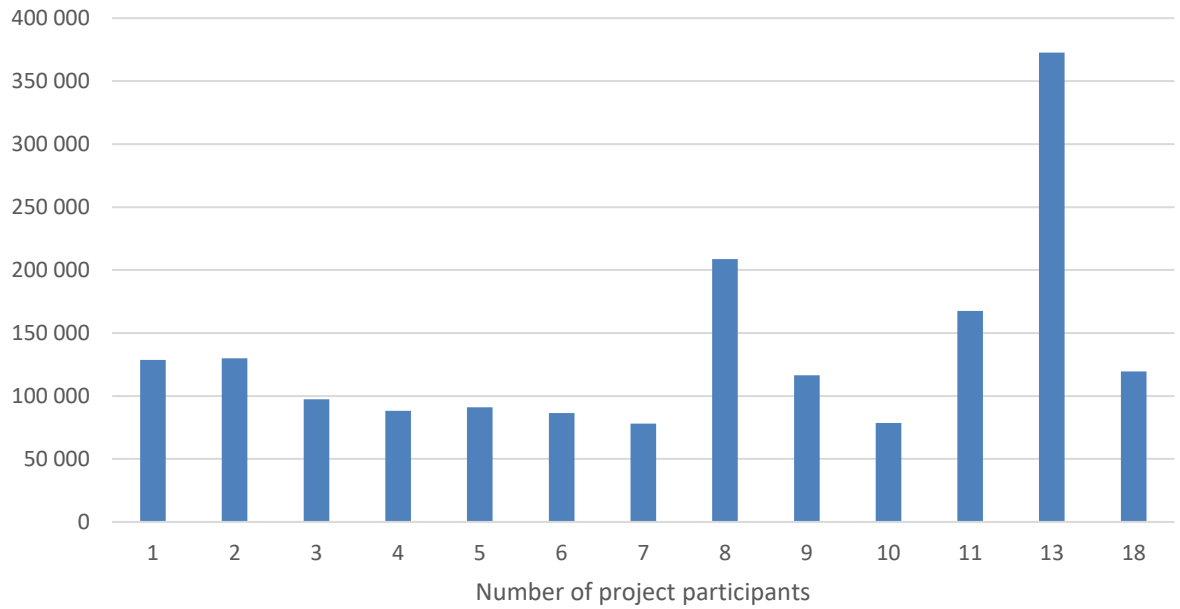
Source: PPMI based on data presented in periodic reports of H2020 NIGHT actions

Table 67. Information on the total costs of a FP7 NIGHT event depending on the number of project participants (partners)

No of participants	No of projects in the sample	Average value (EUR)	Median value (EUR)	Standard deviation (EUR)
1	36	128 671	71 555	136 788
2	10	129 935	88 592	114 983
3	16	97 400	84 931	71 943
4	6	88 123	91 749	43 675
5	6	91 096	72 981	35 417
6	5	86 380	78 137	38 799
7	2	78 168	78 168	49 399
8	3	208 604	161 404	144 584
9	1	116 346	116 346	
10	2	78 644	78 644	19 381
11	5	167 466	156 702	129 297
13	1	372 704	372 704	
18	3	119 512	120 874	11 105

Source: PPMI based on data presented in project final reports of FP7 NIGHT actions.

Figure 22. Average total costs of a FP7 NIGHT event depending on the number of project participants (EUR)



Source: PPMI based on data presented in project final reports of FP7 NIGHT actions

Relations between the costs of a NIGHT event and country cost level

The average costs of H2020 NIGHT events tended to rise in countries with higher cost levels, however, similar to the overall sample, the costs of specific NIGHT events varied significantly within country groups with similar cost levels. Our analysis also revealed that countries with lower cost levels tended to opt for a higher reimbursement rate (which could relate to lower opportunities to attract co-financing for NIGHT events), therefore the difference in requested EU contribution between country groups is lower than comparing the total costs of NIGHT events.

Table 68. Information on the total costs of a H2020 NIGHT event depending on the living costs in respective countries (expressed by the country correction coefficients – CCC)

CCC group	No of events in the sample	Average value	Median value	Standard deviation
CCC less than 90%	77	95 075	79 953	59 502
CCC 90%-110%	63	160 113	130 280	94 707
CCC more than 110%	32	214 222	141 605	184 353

Source: PPMI based on data presented in periodic reports of H2020 NIGHT actions (H2020-MSCA-NIGHT-2014 and H2020-MSCA-NIGHT-2016 calls)

Relations between the costs of a NIGHT event and country size

The average costs of NIGHT events tended to rise in larger countries. Similar to the overall sample, the costs of specific NIGHT events varied very significantly in larger countries (with populations over 5 million), which was related to the specificity of NIGHT events – some NIGHT events in larger countries covered many of the biggest cities of the respective country, while other events covered just one or a few cities. However, the costs of specific NIGHT events implemented in smaller countries (with populations under 5 million) tended to be more homogenous and could indicate the minimum grant level necessary to implement a NIGHT project (around EUR 80 000). Higher costs of NIGHT events in larger

countries reveal the link between geographical coverage of a NIGHT event and its costs. Use of a country size as a parameter for variation of the NIGHT grant level, however, would discriminate against smaller countries and thus would not be a viable option for development of SCOs.

Table 69. Information on the total costs of a NIGHT event depending on the population of respective countries

Population of respective countries	No of events in the sample	Average value	Median value	Standard deviation
H2020				
Population under 5 M	28	81 445	82 121	27 527
Population 5 M-20 M	64	155 043	97 744	130 172
Population over 20 M	80	150 747	120 823	114 085
FP7				
Population under 5 M	22	70 289	66 365	35 300
Population 5 M-20 M	37	145 375	106 069	141 882
Population over 20 M	37	126 925	91 841	89 519

Source: PPMI based on data presented in periodic reports of H2020 NIGHT actions and project final reports of FP7 NIGHT actions

Relations between the costs of a NIGHT event and the number of cities and venues covered by the project

The average costs of NIGHT events tended to be higher in those cases, where NIGHT events covered more cities[166] and venues, although, similar to the overall sample, the costs of specific NIGHT events varied significantly within the same group of NIGHT events covering similar numbers of cities and venues. This dependency between the costs of a NIGHT event and the number of cities and venues covered by the event combined with the qualitative parameters of the project could be used for developing of SCOs for NIGHT action; such SCO system would also encourage wider geographical coverage and thus wider reach of NIGHT events contributing to political priorities of the NIGHT action. Taking into account the substantial variation of costs and the fact that the average costs are affected by some NIGHT events with unusually high costs, the median value could be used for defining the most common costs of NIGHT events.

Table 70. Information on the total costs of a NIGHT event depending on the number of cities covered by the project

Number of cities covered by NIGHT event	No of events in the sample	Average value	Median value	Standard deviation
H2020				
1-4 cities	96	110 000	93 212	64 786
5-10 cities	58	147 256	119 253	90 273
Over 10 cities	33	236 620	153 672	199 215
FP7				
1-4 cities	61	99 301	70 062	79 464
5-10 cities	18	119 488	77 649	81 021
Over 10 cities	11	202 723	120 874	176 804
Number of venues covered by NIGHT event	No of events in the sample	Average value	Median value	Standard deviation

[166] In cases where several cities fall within the same metropolitan region, these cities were counted as 1.

H2020				
1-8 venues	69	104 669	93 225	56 724
9-20 venues	50	175 547	125 493	140 297
Over 20 venues	48	197 675	164 974	148 052

Source: PPMI based on data presented in periodic reports of H2020 NIGHT actions and project final reports of FP7 NIGHT actions.

For the whole range of the total costs of a NIGHT event, depending on the number of cities covered by the respective event, please see Table 71 below.

Table 71. Information on the total costs of a NIGHT event depending on the number of cities covered by the event

No of cities covered by NIGHT event	No of events in the sample	Average value (EUR)	Median value (EUR)	Standard deviation (EUR)
H2020				
1	62	109 274	98 181	62 539
2	11	123 080	90 716	92 552
3	13	122 226	83 091	63 031
4	10	84 218	83 696	42 570
5	15	168 918	135 119	90 469
6	20	137 387	113 102	91 560
7	9	100 063	87 935	44 507
8	11	148 068	185 206	73 311
9	1	107 213	107 213	
10	2	311 398	311 398	191 091
11	10	250 993	192 675	183 039
12	4	415 142	500 210	243 735
13	4	208 845	150 871	184 425
14	4	156 798	79 712	163 363
15	2	68 831	68 831	15 011
16	1	76 146	76 146	
17	2	512 074	512 074	2 475
19	1	84 905	84 905	
20	2	167 458	167 458	19 497
21	1	113 579	113 579	
29	1	617 152	617 152	
30	1	93 623	93 623	
33	1	76 619	76 619	
45	1	89 870	89 870	
FP7				
1	40	88 913	66 542	64 727
2	4	178 897	163 436	58 270
3	9	134 191	82 635	126 071
4	8	72 195	50 562	67 239
5	3	212 787	161 404	139 688
6	4	71 469	70 159	5 127
7	4	68 409	70 449	8 903
8	5	143 299	138 267	68 675
9	1	69 345	69 345	
10	1	167 063	167 063	
11	2	230 165	230 165	201 580

13	1	116 346	116 346	
16	3	198 712	152 835	161 669
20	1	93 518	93 518	
22	1	620 523	620 523	
27	1	92 349	92 349	
28	1	120 874	120 874	
29	1	129 874	129 874	

Source: PPMI based on data presented in periodic reports of H2020 NIGHT actions and project final reports of FP7 NIGHT actions.

Relationship between the costs of a NIGHT event and input- and output-related project indicators

Further analysis was aimed at assessing whether the average costs of a NIGHT event could be linked to project inputs (such as the number of R&D participants and workers involved in the project) and/or outputs- and results- (such as the number of visitors to the events) related characteristics.

Analysis of information on the number of R&D participants and workers involved in H2020 projects presented in periodic technical reports[167] revealed very significant variation (from 10 to several thousand R&D participants and workers), which could be related both to different reporting practices and specific characteristics/approach employed by the projects. R&D participants and workers include staff of project partners involved in the NIGHT events' activities (hands-on experiments, science demonstrations, shows, and simulations, presentations, competitions, etc.), MSCA fellows, etc. The very high number of participants in many projects also suggests that the majority of these participants participate in the NIGHT events on a voluntary basis and are not paid from the project funds.

Similarly, analysis of information on the number of visitors attracted by the NIGHT events also revealed different reporting practices – some beneficiaries present information on visitors that physically attended the NIGHT events, while other projects also include those visitors which visited the website of the event, etc. This resulted in a great variation in the reported number of visitors ranging from several hundred to hundreds of thousands. Thus, the data on the visitors of the NIGHT events in most cases cannot be compared between the projects.

Information on the total costs of a NIGHT event per R&D participant and worker involved in the project and per visitor is presented in the Table below. Large differences between the average and median values and very high standard deviation demonstrate that the dataset is extremely dispersed.

Table 72. Information on the total costs of a NIGHT event per R&D participant and worker involved in the project and per visitor

	No of events in the sample	Average value	Median value	Standard deviation
H2020				
Total costs per researcher and worker involved in the project (total cost of a NIGHT event/Number of R&D participants and workers involved in the project)	108	1 070	305	2 236

[167] Data presented in part I.5 'Gender of R&D participants involved in the project' or (depending on the template of periodic technical report) in part I.4 'Gender-related Issues' of the reports.

Total costs per visitor (total cost of a NIGHT event/Number of visitors attracted by the NIGHT event)	182	12.9	6.9	18.4
FP7				
Total costs per visitor (total cost of a NIGHT event/Number of visitors attracted by the NIGHT event)	92	14.8	9.0	21.8

Source: PPMI based on data presented in periodic reports of NIGHT actions.

Analysis of project expenditure per budget category and per work package

Analysis of project expenditure per budget category

The **direct costs** of the NIGHT actions include direct personnel costs, direct costs of subcontracting and other direct costs. Direct costs are financed on the basis of actual expenditure of the NIGHT project partners ('real costs' financing mechanism). In addition to the direct costs, **indirect costs** of the project (overheads) are financed on the flat rate basis and represent 25% under H2020 and 7% under FP7 of the direct personnel costs and other direct costs (i.e. the calculation of indirect costs excludes direct subcontracting costs). Information on the distribution of costs per budget category is presented in Table 73 below. Overall, the distribution of project expenditure per budget category is quite similar for H2020 and FP7, the biggest difference relates to indirect costs (which have different flat rates for H2020 and FP7).

Table 73. Share of the respective budget category costs in total cost of a NIGHT event

	Direct costs			Indirect Costs (%)
	Direct Personnel Costs (%)	Direct Costs of Subcontracting (%)	Other Direct Costs (%)	
H2020				
Average	36,31%	25,93%	22,95%	14,81%
Median value	36,37%	20,56%	22,52%	15,89%
Standard Deviation[168]	0,1534	0,1935	0,1294	0,0388
FP7				
Average	40,90%	29,26%	25,22%	4,63%
Median value	44,61%	24,59%	24,67%	4,93%
Standard Deviation[169]	0,1894	0,2155	0,1493	0,0141

Source: PPMI based on data presented in periodic reports of H2020 NIGHT actions (N=189) and project final reports of FP7 NIGHT actions (N=96).

The table below presents information on the direct costs of one NIGHT event. Analysis shows that the costs variation within a budget category is very high, which is primarily related to the variation of the total budget of the NIGHT events. The variation is especially high in direct costs of subcontracting as a significant share of projects involve minimal use of subcontracting.

Table 74. Information on the direct costs of a NIGHT event per budget category (EUR)

	Direct Personnel Costs	Direct Costs of Subcontracting	Other Direct Costs
H2020			
Average	52 068	42 190	30 098

[168] 1=100%
[169] 1=100%

Median value	34 693	18 700	23 433
Standard deviation	50 790	67 028	24 178
FP7			
Average	45 918	44 994	25 169
Median value	33 713	20 011	19 096
Standard deviation	46 480	82 299	18 933

Source: PPMI based on data presented in periodic reports of NIGHT actions (N=189) and project final reports of FP7 NIGHT actions (N=96).

Information on the typical costs per budget category is presented in the Table below.

Table 75. Description of costs under budget categories

Budget Category	Typical Costs
Personnel costs	Salary-related costs of both permanent staff of participant institutions (most common category of personnel) and temporary (contractual) staff.
Subcontracting costs	Professional advertising campaigns and the related services Development and hosting of events' websites Performers' fees Rent of equipment/premises and the related services Design and realisation of promotional material (such as t-shirts, posters, leaflets, flyers, gadgets with logos, etc.) External catering Externally organised transport Assembly/disassembly services Video and photo coverage of the events External concept/implementation of awareness campaigns addressing specific target groups Acquisition of other external services
Other direct costs	Consumables (reagents, various products for hands-on experiments and demos, etc.) Gifts/awards for competition winners Internal catering Internal printing services Rent of premises/equipment without linked services Travel costs

Source: PPMI based on information presented in periodic reports of NIGHT actions

Analysis of FP7 project expenditure per work package

While H2020 project reports provide information on project expenditure at a project level, FP7 project reports provide information per each work package (WP). The largest share of FP7 project expenditure (see Table below) was attributed to WP1 "Awareness campaign" and WP2 "Activities during the NIGHT" (respectively 28% and 56% on average). The share of costs attributed to WP1 and WP2 in different projects was rather homogenous in different NIGHT projects. The share of costs attributed to WP3 "Impact assessment" and WP4 "Management" was much smaller (respectively 6% and 10% on average), and the analysis also showed that the share of costs attributed to WP3 and WP4 varied significantly within the projects, which was related to different methodological approaches adopted in specific projects.

Table 76. Share of the respective WP costs in total cost of a NIGHT project

	WP1 Awareness campaign (%)	WP2 Activities during the NIGHT (%)	WP3 Impact assessment (%)	WP4 Management (%)
Average	28,08%	56,06%	5,75%	10,11%
Median value	27,67%	57,25%	5,08%	8,63%

Standard Deviation[170]	0,1101	0,1454	0,0433	0,0741

Source: PPMI based on data presented in project final reports of FP7 NIGHT actions (N=96).

Impact and co-funding of the NIGHT events

FP7 ex post and H2020 interim evaluation of Marie Skłodowska-Curie actions (MSCA)[171] revealed that the NIGHT projects direct contacts between researchers and the public at large to be established and contributed to increasing visibility and understanding of researchers' work. According to the NIGHT survey evaluations, the predominant types of dissemination activities carried out by the researchers' organisations within the scope of their projects were: hands-on experiments including science demonstrations, shows and simulations (92%); presentations (89%); provision of information through the media including TV, radio, and written press (84%); presentations and interaction through games, competitions and quizzes (82%). With regard to the EU added value of the NIGHT programme, although many participating NIGHT organisations run similar science outreach events, a majority of survey respondents stated that their participation in the European Researchers' Night project enabled their organisation to involve a large number of younger people in the implementation of the project compared to previous or other events.

The interim evaluation concluded that European Researchers' Night, with an annual budget of EUR 4 million, could be considered cost-effective as it managed to reach out to more than one million citizens every year, right across the EU, in particular informing young people about a possible career in research, and have enabled the participating organisations to better involve various groups of stakeholders compared to previous or other events, in particular the young.

NIGHT case studies[172] revealed that MSCA funding for the NIGHT actions provided good momentum to attract additional funding and to organise larger events, as it sent the signal to other potential supporters that the project is backed by a larger funder and that the events were likely to be successfully implemented. This was also demonstrated in beneficiaries' contributions to the total eligible project costs. Although the financial support for NIGHT projects may represent up to 100% of the eligible costs of the action, only 35% of selected NIGHT projects opted for 100% EU funding. Project beneficiaries contributed to over 10% of the total project costs in half of the NIGHT projects, whereas in 37% of the projects' beneficiaries contributed to over 25% of the total project costs. The beneficiaries' contribution for eligible project costs came from a variety of regional and state level foundations, partner institutions, sponsoring, revenues from advertisement, revenues from selling licences to catering providers, etc. It is also important to note that some contributions to the NIGHT events (such as in-kind contributions – provision of venues for the events, allocation of staff resources, etc.) are usually not included in the eligible project costs.

Use of SCOs for information and dissemination events in other EU co-funded programmes

Information on the use of SCOs for information and dissemination events in some other EU co-funded programmes is provided in the information boxes below.

Information box: use of SCOs for Multiplier events under Erasmus+ Strategic Partnership projects

[170] 1=100%.
[171] FP7 ex post and H2020 interim evaluation of Marie Skłodowska-Curie actions (MSCA), Final report.
[172] Case studies, presented in Annex 3 of FP7 ex post and H2020 interim evaluation of Marie Skłodowska-Curie actions (MSCA).

Strategic Partnerships under Erasmus+ programme aim to support the development, transfer and/or implementation of innovative practices as well as the implementation of joint initiatives promoting cooperation, peer learning and exchanges of experience at European level.

Within Strategic partnership projects, support may be provided to **Multiplier events**, under which a contribution is provided to cover the costs linked to national and transnational conferences, seminars, events sharing and disseminating the intellectual outputs realised by the project (excluding costs for travel and subsistence of representatives of participating organisations involved in the project). A project without grant support for intellectual outputs cannot receive support for organising multiplier events.

The multiplier events' financing mechanism is based on the contribution to unit costs: EUR 100 per local participant (i.e. participants from the country where the event is taking place) and EUR 200 per international participant (i.e. participants from other countries).

Relevance of the SCO to NIGHT actions. E+ Multiplier event unit cost is an output-related SCO, which is linked to very specific activities of Erasmus+ Strategic partnership projects (organising of national and transnational conferences, seminars, events sharing and disseminating the intellectual outputs realised by the project) and well-defined outputs (local and international participants of multiplier events).
The analysis of information on the number of NIGHT visitors presented in periodic technical reports revealed huge variation between the projects, which was related both to (1) different reporting practices and (2) specific characteristics/approach employed by the projects. Thus, output-related SCO (number of visitors) would not be really suitable for NIGHT actions. Further, such output-related SCO could trigger specific behaviour targeted at reaching greater number of visitors (i.e. pursuing quantitative targets) potentially compromising qualitative aspects (suitability of the approach of the event to enhance researchers' public recognition and to stimulate interest in research careers, especially among young people).

Information box: use of SCOs for Europe Direct Information Centres

The Europe Direct Information Centres (EDIC) network is one of the main tools of the EU to inform European citizens about the EU, and in particular about the rights of EU citizens and the EU's priorities and to promote participatory citizenship at local and regional level. The centres are an outreach point for all the EU institutions and cooperate with other active information partners. They complement and support the work of the European Commission Representations and European Parliament Information Offices (EPIO) at local and regional level. The EDIC network is managed by the Commission.

The financing of the centres is provided in the form of lump sums. The lump sum system is based on a modular approach, where some modules (basic information services with at least one module of "Communication products group" and at least one module of "Events") are mandatory, while others (specific communication products and events) are optional and applicants may select the modules according to their action plan. Each module has corresponding minimum requirements and a set lump sum.

The action grant for the host structure per centre could range from a minimum of EUR 15 000 per year to a maximum of EUR 25 000 per year (from EUR 12 000 to EUR 20 000 per year for countries with an adapted lump sum[173]) and is awarded on the basis of the action plan submitted by the host structure for a specific year.

[173] An adapted lump sum (80% of the standard lump sum) is applied in countries where the price level is

Information on the mandatory module of basic information services and some of the optional modules is presented below:

Module	Description and requirements for the module	Standard lump sum (EUR)	Adapted lump sum (EUR)
Basic information services (mandatory module)	Centre is open minimum 20 hours/week; Centre may be closed up to a maximum of 6 weeks per year. Outside the opening hours: message on telephone answering machine and out of office reply in email both indicating opening hours and alternative services such as the Europe Direct Contact Centre (EDCC) and Your Europe for online information. Adequate signposting, premises and facilities. Providing information services. Signposting of questions outside of centre's remit to appropriate EC network or EDCC. Assistance to the EC Representation and EP Information Office locally. Dedicated webpage with basic minimum information about the centre. Participation in coordination/training meetings (incl. Annual General Meeting) organised by the Commission (Headquarters and Representations). Monthly reporting on activities including feedback about the key concerns of citizens and feedback upon request of the EC Representation. Production of an annual evaluation/ impact assessment of at least 50% of the activities.	14 000	11 200
Organisation of events for specific audiences (optional module)	Organisation of conferences, debates, presentations. The event should focus on EU related topics, in particular EU citizens' rights and/or EU priorities targeted to local/regional audience. Minimum 4 events which should target in total minimum 100 people. Minimum 1 hour of activity is requested for each event.	1 000	800
Organisation of events for broad audiences (optional module)	Organisation of an event (open day, 9th of May, ...). Event should focus on EU related topics, in particular EU citizens' rights and/or EU priorities targeted at o local/regional audience. Minimum 200 participants at the event. Minimum 3 hours of activity is requested for an event.	2 000	1 600

Relevance of the SCO to the NIGHT actions.
A lump sum system of EDICs could be taken into account when designing a financing system for the NIGHT actions.

While the EDIC network is a different action related to the continuous year-round operation of EDICs, the experience gained in the provision of action grants to the EDIC network could be employed for designing a simplified financing system for the NIGHT actions. A lump sum system for NIGHT activities could be based on a financial contribution to cover the estimated costs of the NIGHT action (estimated personnel related and other costs) and setting the minimum requirements for the activities of the action.

less than 80% of the EU average.

Information box: draft budget-based SCOs established on a case-by-case basis in European Structural and Investment (ESI) Funds

ESI regulations[174] provide the possibility to establish project-specific simplified costs, which would be based on a draft budget presented by the applicant and agreed by the responsible authority. This method allows using SCOs in cases where no general simplified grant system has been created or if operations are very specific.

Relevance of the SCO to the NIGHT actions.
The analysis of the NIGHT project data and the actual project costs incurred by the beneficiaries revealed that, overall, as a very open action with no pre-defined budget amounts, no budget 'ceilings,' no requirements for composition of partnerships and geographical coverage of projects, the NIGHT action resulted in a great variety of projects and t budgets. Thus, draft budget-based SCOs could potentially be suitable for the NIGHT action. However, use of draft budget-based SCOs would provide simplification only during project implementation stage, while application and evaluation stages would follow similar procedures as used currently and stakeholders would not benefit from the simplifications.

[174] Article 67(5)(aa) of regulation (EU) No. 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006.

Annex 8. Overview of competing fellowships

Table 77. Overview of competing fellowships at the doctoral level

Country	Funding organisation	Name of fellowship	Scientific discipline	Duration	Monthly living allowance (in some cases can be CCC corrected)	Mobility allowance equivalent	Family allowance	Annual budget for research, training and networking	Management and indirect costs
CH	Swiss National Science Foundation (SNSF)	Doc.Mobility	All disciplines	6 months to 1.5 years	3 554-3 781 EUR/month[175]	Travel expenses	907 EUR/month/per child	2 720 EUR/year	N/A
FR	Fondation ARC pour la recherche sur le cancer	Aides individuelles jeunes chercheurs	LIF	1 to 3 years	3 750 EUR/month	N/A	N/A	N/A	N/A
PL	Ministry of Sciences and Higher Education of Poland	"Mobility Plus" Programme	All disciplines	6 months to 3 years	2 345 EUR/month	Travel expenses (including family)	Spouse: 469 EUR/month Child: 234 EUR/month	N/A	N/A
JP	Japan Society for the Promotion of Science	Summer Program[176]	All disciplines	2 months	2 207 EUR/month	Round-trip flight	N/A	1 306 EUR	N/A
UK	The Leverhulme Trust	Study Abroad Studentships	All disciplines	1 to 2 years	2 030 EUR/month	Round-trip flight	8 118 EUR/year 677 EUR/month	As applied for by fellow and paid at the trust's discretion	N/A
FR	Association Nationale Recherche Technologie (ANRT)	CIFRE - Conventions Industrielles de Formation par la Recherche	All disciplines	3 years	1 957 EUR	N/A	N/A	N/A	N/A
DE	German Academic Exchange Service (DAAD) and national aeronautics and space research centre (DLR)	Research Fellowships in Space, Aeronautics, Energy and Transportation Research	ENG	1 month to 3 years	1 760 EUR/month	Round-trip flight	Flat rate for travel and family allowance, amount not specified	N/A	N/A

[175] The monthly living allowance is dependant 'on the marital status, family obligations and the costs of living in the country of residence'.
[176] Programme lasts from 9 June to 19 August.

JP	Japan Society for the Promotion of Science	Strategic Program	All disciplines	3 months to 1 year	1 653 EUR/month	Settling-in allowance 827 EUR and round-trip flight	N/A	N/A	N/A
JP	Japan Society for the Promotion of Science	Short-term Program	All disciplines	1 month to 1 year	1 653 EUR/month	Settling-in allowance 1 653 EUR and round-trip flight	N/A	A research support allowance is available to cover cooperative research-related expenses.	N/A

Table 78. Overview of competing fellowships at the post-doctoral level

Country	Funding organisation	Name of fellowship	Scientific discipline	Duration	Monthly living allowance (in some cases can be CCC corrected)	Mobility allowance equivalent	Family allowance	Annual budget for research, training and networking	Management and indirect costs
US	American Association for the Advancement of Science (AAAS)	AAAS Science & Technology Policy Fellowships (STPF)[177]	SOC	1 year	5 996-7 870 EUR/month	3 598 EUR	N/A	3 598 EUR/year	N/A
BE	Research Foundation - Flanders (FWO)	FWO post-doctoral fellowship	All disciplines	3 years	4 135-6 446 EUR/month	N/A	N/A	N/A	N/A
AT	FWF (Austrian Science Fund)	Elise Richter Programme	All disciplines	1 to 4 years	6 198 EUR/month	Funding may be requested for project-specific travel and accommodation, field work, expeditions, etc. The project description must include a detailed travel plan broken down by project participant. This plan must indicate which persons, for what purpose, when (in which year of the project), for	9 600 EUR/year for children under the age of 3.	15 000 EUR/year project-specific costs and 2 000 EUR/year personal development	N/A

[177] Living allowance received in the form of a stipend. Also 'Fellows whose stipends are administered by AAAS receive a minimum travel/professional training allowance of USD 4,000. The funds may be used only for fellowship-related travel and for professional training (e.g., attending scientific conferences that pertain to the fellowship).'

						how long and where they will be travelling, and how much this will cost.			
AT	FWF (Austrian Science Fund)	Lise Meitner Programme	All disciplines	2 years	5 506-6 053 EUR/month	Travel subsidy. A one-time lump sum payment of EUR 2 200 (before taxes) is paid to help defray the additional costs of relocation.	1 500 EUR/per child per year	12 000 EUR/year project-specific costs and 2 000 EUR/year personal development	N/A
AT	FWF (Austrian Science Fund)	Hertha Firnberg Programme	All disciplines	3 years	5 639 EUR/month	N/A	9 600 EUR/year for children under the age of 3.	10 000 EUR/year project-specific costs and 2 000 EUR/year personal development	N/A
CH	Swiss National Science Fondation (SNSF)	Postdoc.Mobility	All disciplines	2 years	3 248-5 325 EUR/month depending on the costs of living in the country of residence	A maximum amount of 1 815 EUR per year can be claimed for conferences. the SNSF assumes a share of the travel costs for the outward and return journey. This also applies to family members who are not gainfully employed, provided that they stay at the fellowship holder's place of work for at least six months.	10 887 EUR/per child per year	2 723 EUR/year research costs 1 813 EUR/year conference costs	N/A

CH	Swiss National Science Fondation (SNSF)	Early Postdoc.Mobility	All disciplines	1 to 1.5 years	3 248-5 325 EUR/month depending on the costs of living in the country of residence	A maximum of 1 815 EUR per year can be claimed for conferences. The SNSF assumes a share of the travel costs for the outward and return journey. This also applies to family members who are not employed, provided that they stay at the fellowship holder's place of work for at least six months.	10 887 EUR/per child per year	2 723 EUR/year research costs 1 813 EUR/year conference costs	N/A
NL	Netherlands Organisation for Scientific Research (NWO)	Rubicon fellowship	All disciplines	1 to 2 years	5 250 EUR/month	NWO/ZonMw covers travel costs once; twice if the stay is longer than 12 months	N/A	230 EUR/month	N/A
DE	Helmholtz Association	Helmholtz Young Investigators Groups	ENG	6 years	4 500-5 500 EUR/month	N/A	Monthly payment of EUR 190 per child for the first two children, EUR 196 for the third child and EUR 221 for every subsequent child.	N/A	N/A
DE	Deutsche Forschungsgemeinschaft (DFG)	Heisenberg Programme	All disciplines	3 to 5 years	4 450 EUR/month	N/A	A family allowance of up to 6 000 EUR/year may be requested. The childcare allowance per month is 154 EUR for one child; 205 EUR for two children; 256 EUR for three or more children.	1 000 EUR/year research funding for direct project costs. An allowance of 250 EUR is provided to finance items such as books, consumables and conference attendance in other countries.	N/A
US	American Association for Cancer Research (AACR)	AACR Basic Cancer Research Fellowships	LIF	2 years	4 121 EUR/month	N/A	N/A	N/A	N/A

US	National Institutes of Health	Ruth L. Kirschstein Post-doctoral Individual National Research Service Award	LIF	Up to 3 years	2 998-3 747 EUR/month	N/A	N/A	N/A	N/A
US	American Cancer Society (ACS)	Audrey Meyer Mars International Fellowships in Clinical Oncology	LIF	1 year	3 333 EUR/month	N/A	N/A	N/A	N/A
FR	Campus France	PRESTIGE Postdoc programme (reintegration)	All disciplines	1 to 2 years	3 333 EUR/month	Settling-in allowance of 2 800 EUR	N/A	4 720 EUR/year	N/A
JP	Japan Society for the Promotion of Science	Pathway to University Positions in Japan	All disciplines	1 to 2 years	3 192 EUR/month	Round-trip flight. Settling-in allowance of 1 647 EUR.	N/A	N/A	N/A
FR	Campus France[178]	PRESTIGE Postdoc programme (incoming)	All disciplines	1 to 2 years	3 083 EUR/month	Settling-in allowance of 2 000 EUR	N/A	2 000 EUR/year	N/A
JP	Japan Society for the Promotion of Science	Standard Program	All disciplines	1 to 2 years	2 983 EUR/month	Round-trip flight. Settling-in allowance of 1 647 EUR.	N/A	16 474 to 57 659 EUR/year	N/A
JP	Japan Society for the Promotion of Science	Short-term Program	All disciplines	1 month to 1 year	2 983 EUR/month	Round-trip flight. Settling-in allowance of 1 647 EUR.	N/A	A "research support allowance" is available to cover cooperative research-related expenses. Application is made by the applicant (host researcher) through his/her institution	N/A
DE	Alexander Von Humboldt Foundation	Humboldt Research Fellowship for Post-doctoral Researchers	All disciplines	6 months to 2 years	2 650 EUR/month	Travel expenses	monthly allowance: up to 346 EUR for marital partners and up to 274 EUR for each child	800 EUR per month (for research in the natural sciences and engineering) and 500 EUR (for research in the humanities and social sciences);	N/A

[178] The PRESTIGE Postdoc programme was split into three different mobility schemes.

DE	VolkswagenStiftung	Post-doctoral Fellowships in the Humanities at Universities and Research Institutes in the U.S. and Germany	SOC	9 months to 1.5 years	2 100 EUR/month (stipend)	2 round-trip flights and a rent subsidy of 1,000 EUR/month	If applicable, allowance for childcare and other benefits are assigned according to the information on family-related benefits.	Up to 40 000 EUR/year plus 10 000 EUR for workshop	3 000 EUR per year
FR	Fondation ARC pour la recherche sur le cancer	Aides individuelles jeunes chercheurs	LIF	6 months to 1 year	2 500 EUR/month	N/A	N/A	N/A	N/A
IT/Europe	European University Institute	Jean Monnet Post-doctoral Fellowships	SOC	1 year	2 500 EUR/month	The maximum amount for travel reimbursement is 1 200 EUR	Household allowance of 300 EUR/month + 200 EUR/month per child	N/A	N/A
FR	Fondation ARC pour la recherche sur le cancer	Aides individuelles jeunes chercheurs (Sejours a l'etranger)	LIF	1 year	2 500 EUR/month	N/A	N/A	N/A	N/A
ES	Spanish Government	Ayudas Juan de la Cierva	All disciplines	2 years	2 417 EUR/month	N/A	N/A	N/A	N/A
UK	The Leverhulme Trust	Early Career Fellowships	All disciplines	3 years	2 410 EUR/month	N/A	N/A	6 942 EUR/year	No
CA	Research Manitoba	Health Research Post-doctoral Fellowships	LIF	2 years	1 987-2 083 EUR/month	N/A	N/A	N/A	N/A
DE	German Academic Exchange Service (DAAD) and national aeronautics and Leibniz Association	Leibniz-DAAD Research Fellowships	All disciplines	1 year	2 000 EUR/month	Family-related allowances <…> are not provided.	<…> support for travel costs are not provided.	460 EUR/year	N/A
IT/Europe	European University Institute	Max Weber Programme	SOC	1 to 3 years	2 000 EUR/month	The maximum amount for travel reimbursement is 1 200 EUR	Household allowance of 300 EUR/month + 200 EUR/month per child	Personal research fund of 1 000-2 000 EUR/year possible depending on the field of research	N/A

IT/Europe	European University Institute and Canon	Co-sponsored Research Fellowships	SOC	1 year	2 000 EUR/month	The maximum amount for travel reimbursement is 1 200 EUR	Household allowance of 300 EUR/month + 200 EUR/month per child	N/A	N/A
FR	Campus France	PRESTIGE Postdoc program (outgoing)	All disciplines	6 months to 1 year	1 000 EUR/month	Setting in allowance of 10 000 EUR	N/A	N/A	N/A

Annex 9: Questionnaires used for the survey/interview programme with the MSCA researchers and organisations

Questionnaire for ITN, IF and COFUND fellows

No.	Topic	Question(s) (for each question, there will be a box called 'context and explanations,' where the respondent or the interviewer will be able to further explain the answers)	Purpose of the question and other relevant points to keep in mind
		Introduction	
1	Introduction about the MSCA unit costs that are relevant for the respondent; per type of action: ITN, IF, COFUND	*To be developed.*	This part will be written by the study team. It will explain the MSCA unit costs system, focusing in particular on unit costs relevant for the specific respondent.
2	Information about the project where the fellow was involved	You were involved in: - Project title: - Project acronym: - Project ID: - Type of MSCA:	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.
3	Information about the fellow	You are: - First and family name: - First nationality: - Gender: - Researcher category: Early Stage Researcher/Experienced Researcher - Scientific panel: CHE/ENG/SOC/ECO/MAT/ENV/LIF/PHY - Phone number: - Email:	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.
4	Information about the host organisation	Your host organisation during your MSCA fellowship or doctoral studies was: - Name of the host organisation: - Country of the host organisation:	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.
5	*(only for global fellowships)* Information about the host organisation during the return phase	Your host organisation during your return phase was: - Name of the organisation: - Country of the organisation:	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.
		Researcher unit costs	

6	Researcher unit costs Covered by the EU for ITN and IF: - Living allowance - Mobility allowance - Family allowance 50% covered by the EU for COFUND: - Living allowance	What was your average total monthly income paid to you by the host organisation during your MSCA fellowship period (including all types of allowances, as well as any top-up sum contributed by the host organisation)? *Please indicate or provide your best estimate **for only one of the following amounts**; if the monthly averages varied during your MSCA fellowship, please provide averages for the final year;* *(1) Monthly average Super Gross amount, i.e. amount in EUR before deducting any employee or employer taxes & social contributions* *(2) Gross amount, i.e. amount in EUR before deducting any employee & social contributions, but excluding applicable taxes and social contributions to be paid by an employer (usually this amount is indicated in your employment contract)* *(2) Monthly average Net amount, i.e. amount in EUR after all taxes and deductions that you have actually received on average every month* Please indicate **only one of the options below**, which you are aware of, in EUR: - Super Gross: - Gross: - Net:	This question will allow establishing the actual average monthly total income received by an ITN, IF or COFUND fellow. As previous research shows[179], quite often all allowances are paid in one monthly payment by the host organisation. Therefore, some of the fellows may not be (fully) aware of the exact amounts dedicated separately for living, mobility and family allowances, as well as a possible top-up contributed by the host organisation. Responses to this question will allow us to estimate the top-ups paid by the host organisation. The size of a top-up will indicate the extent to which the MSCA researcher unit costs may be insufficient. This will also provide information on countries, where organisations needed to provide the largest top-ups, meaning that further correction of unit costs in these countries may be needed. Top-up will be estimated according to this formula = total monthly super gross average income – (living allowance + mobility allowance + family allowance). NB: the resulting top-up may be paid either from the organisation's own funds or from the institutional MSCA unit costs. **For global fellows, this question will be repeated to ask about the return phase.**

[179] Financial Management of Marie Skłodowska-Curie actions (MSCA) in Horizon 2020. The practitioner's perspective. November 2017. Produced as an output of the COST action BESTPRAC – The Voice of Research Administrators. See: https://bestprac.eu/fileadmin/mediapool-bestprac/documents/WS-Brussels/WG2_MSCA_Financial-Management_Practice-Guide.pdf

7		The host research organisations can, if they chose to do so, top-up monthly salaries of fellows either (1) from institutional unit costs funded by the EU or (2) from their own resources. If you are aware of this, please provide the average monthly amount in EUR topped up by your host research organisation… … **from institutional unit costs** funded by the EU: a) The organisation has provided the following monthly amount: *(please insert amount in EUR)* b) The organisation has provided a top-up from the institutional costs funded by the EU, but I am not aware of the exact amount c) The institution has not provided top-up funding from institutional unit costs d) I do not know … **from their own resources**: a) The organisation has provided the following monthly amount: *(please insert amount in EUR)* b) The organisation has provided a top-up from their own resources, but I am not aware of the exact amount c) The institution has not provided top-up funding from their own resources d) I do not know … The organisation has provided the following monthly amount, but **I am not aware of the source**: *(please insert amount in EUR)*	Together with Q6, this question will allow us to estimate more precisely top-up funding provided by research organisations to top up researcher salaries (1) from institutional unit costs funded by the EU or (2) from their own resources. To the extent this is known by the fellows, this question will also allow us to estimate the exact source of this top-up. **For global fellows, this question will be repeated to ask about the return phase.**
8		*Only for those, who answered that the organisation has provided complementary funding in one of the questions above:* Why did the host organisation decide to top up your salary from institutional unit costs or from their own resources? a) To make sure that your salary is in line with the salaries of other researchers in the same position b) To make sure that your salary is in line with sectoral agreements in the country c) Other reason. Please explain: d) I do not know	To the extent that a fellow is aware of this, this question will allow us to understand the reason why the host organisation has topped up the researcher unit costs with institutional unit costs or their own resources. **For global fellows, this question will be repeated to ask about the return phase.**
9		Were you aware of the average salaries paid for other (depending on the situation: experienced researchers/early stage researchers) in your host organisation? If yes, please provide the monthly average salary in EUR for (depending on the situation: experienced researchers/early stage researchers) in your host organisation during your fellowship: a) I was not aware of this	By comparing the responses of this question to responses in Q6, we will be able to estimate the difference between the salary of an MSCA fellow and their peers at the same host organisation. This will provide information about the adequacy of the MSCA researcher unit costs.

		b) Monthly average salary of my peers was (please provide any that you are aware off or leave blank): a. Super Gross salary: b. Gross salary c. Net salary:	**For global fellows, this question will be repeated to ask about the return phase.**
10		**Only for ITN and IF fellows:** During your MSCA fellowship, have you received a family allowance? *This means that at the call deadline (for IF) or the time of recruitment (for ITN) you had persons linked to you by (i) marriage, or (ii) a relationship with equivalent status to a marriage recognised by the legislation of the country or region where this relationship was formalised; or (iii) dependent children, who were actually being maintained by you.* Please select one option: a) Yes b) No	This question will indicate if a fellow has received family allowance. It will be necessary for assessing the data provided in Q6 – in order to know what funding was a fellow eligible for. For ITN and IF fellows, this answer will be pre-selected based on CORDA data (if such data are available).
11		*(only for those, who said 'yes' in Q10)* How many family members were in your family? - at the beginning of your fellowship? (counting yourself, spouse and children)? Please indicate the number: - at the end of your fellowship or now (if the fellowship has not ended yet)? (counting yourself, spouse and children)? Please indicate the number:	This question will provide additional information to assess the family situation of the fellow at the beginning and end of the fellowship.
12		*(only for those, who said 'yes' in Q10)* Please estimate in EUR, how much money you have you spent monthly to cover the costs related to family during your fellowship. *Please consider the following costs:* - *Contributing to the reduced income, while your spouse finds a job;* - *Contributing to the reduced income if your spouse cannot find a well-paying job for the long term;* - *Situations when a spouse is on parental or maternity leave and receives payments from another country, where they are lower compared to the cost of living of the new country, or a spouse does not receive income at all;* - *Contributing to covering costs of children activities in new country (finding school, kindergarten, more expensive schools and kindergartens);*	This question will provide information on the real costs incurred by the fellows to cover family-related expenses. This data will allow us to assess the adequacy of the current family allowance. This question will also be asked for COFUND fellows in order to estimate whether they would be in need of more funding for family-related costs. Comment from the Commission: should this prove to be difficult, a qualitative question could be kept in reserve, for example, to what extent did the family allowance cover your costs?

		- *Loss of child benefits that may have been received in the country of origin (or other family-related payments);* - *Costs of travelling for family members;* - *Cost of finding a suitable place to live.* Please estimate the monthly amount in EUR that you have spent to cover family-related costs:	
13		Please estimate in EUR the total amount of one-off relocation costs (i.e. transporting your belongings, insurance, visas and similar) you incurred when relocating from your previous/home country to the host country:	This question will contribute to estimating the real costs of mobility. This question is related to assessing the adequacy of the mobility allowance.
14		How many times during your fellowship have you travelled from your home country to your host country and back for personal reasons? Please indicate the number of trips (please count one round-trip as one trip):	This question will contribute to estimating the real costs of mobility. This question is related to assessing the adequacy of the mobility allowance. The disclaimer 'for personal reasons' is added, since research-related trips (e.g. to conferences, training) should be funded from the institutional funding to cover research, training and networking costs.
15		Please indicate in EUR the amount of money you have paid monthly to cover your rent:	This question will contribute to estimating the real costs of mobility. This question is related to assessing the adequacy of the mobility allowance. **For global fellows, this question will be repeated to ask about the return phase.**
16		Was the average total monthly income paid to you by the host organisation during your MSCA fellowship period by and large sufficient to cover all your personal costs? a) Yes, it was adequate b) No, it was insufficient	This will be a simple question to ask whether fellows were in principle satisfied with the salary that they have received. **For global fellows, this question will be repeated to ask about the return phase.**
17		*(only for those, who answered 'no' in Q17)* Insufficient by how much? Please indicate a monthly amount in EUR: Please explain your answer. Please list the types of costs incurred, which you were not able to cover with your income: (open text)	The intention of this question is to estimate the difference between the real personal costs incurred by the fellow and his/her total monthly income. The open question will help explain, which kinds of costs a fellow was unable to cover with his/her salary. **For global fellows, this question will be repeated to ask about the return phase.**
Research, training and networking costs			
18	Research, training and networking costs, including	During your fellowship, were you able to receive funding for all research, training and networking activities relevant to your research?	This question will allow us to judge the sufficiency of the research, training and networking unit costs

	research dissemination costs (covered only for ITN and IF)	- Yes - No If not, which of the following things were you ever unable to do due to lack of funding from the host organisation (check all that apply): a) Publish a peer-reviewed publication in open access b) Publish Intellectual Property Rights (e.g. patents) c) Take training relevant for your research d) Participate in conferences or other events to disseminate your research results e) Go to do field research in other countries f) Access data necessary for your research g) Access relevant research infrastructures (research facilities, laboratories, etc.) h) Access materials/inputs necessary for your research (laboratory supplies, small research equipment, electricity, heat, lighting) i) Other: (please explain) Please tell us more about the situations when you were unable to get funding for your research, training or networking activities. Please explain the reasons why the funding has not been provided:	from the fellow's perspective. We will also be able to indicate specific outputs which the host institution could not fund due to insufficiency of institutional funding.
19		*(only for those, who selected a)-i) in Q18)* Overall, how negative was/will be the impact of a lack of funding for items indicated above on your final research outputs and outcomes? a) No negative impact b) A minor negative impact c) A moderate negative impact d) A major negative impact Please explain:	This question will allow us to estimate the negative impact caused by the lack of funding for research, networking and training (if any) on the final research output of the fellow.
20		Please provide a number and (to the extent you are aware of this) an average price in EUR of conferences, trainings and networking events that you have attended during your fellowship: Research dissemination events, conferences and networking events: a) Number: b) Average price (to the extent you are aware of this): c) Please add a qualitative explanation, if any: Training events, such as various courses, summer and winter schools: a) Number: b) Average price (to the extent you are aware of this): c) Please add a qualitative explanation, if any:	These questions will allow us to estimate the approximate costs of research, training and networking events per fellow. We would treat these replies more as a guidance to be analysed together with information from desk research and market research, and not as very accurate information. However, it would help guide desk research and market research.

21		Please provide one or a few illustrative examples of conferences, trainings and networking events that you have attended during your fellowship. *Please provide approximate information, to the extent that you can remember. If you cannot remember some information, please leave such cells blank.* Title of event | Location | Duration in days | Total price in EUR 1. 2. 3. …	This question will provide us with examples of conferences, training and networking events that a fellow has attended. Such information will contribute to desk research and market research and help establish the real costs of events attended during the fellowships.
22		Please provide information about all publications, for which your organisation had to pay to have them published in open access during your fellowship period. *Please provide approximate information, to the extent that you can remember. If you cannot remember some information, please leave such cells blank.* Title of the publication | Journal | Price of publishing in open access (to the extent you are aware of) 1. 2. 3. …	This question will allow us to estimate the costs of publishing in open access per fellow.
Management and indirect costs			
23	Management and indirect costs	Were resources devoted by your host organisation to ensure effective daily management of the issues related to your fellowship: a) Sufficient b) Insufficient, but did not cause problems in the daily management of my fellowship by the host org c) Insufficient, there were occasional shortcomings in the daily management of my fellowship by the host organisation d) Highly insufficient, there were systemic management shortcomings	This question will allow us to judge the appropriateness of the management from the fellow's perspective. Otherwise, fellows will not be able to comment much on the costs of management of the MSCA grants. This information will be collected mainly from the organisations. **For global fellows, this question will be repeated to ask about the return phase.**
24		*(only for those, who answered b-d in Q23)* Please explain the reasons for your dissatisfaction:	This will further explain, what was lacking in the management activities implemented by the organisations. **For global fellows, this question will be repeated to ask about the return phase.**
Potential new unit costs			

-	Costs incurred by an organisation in case of maternity, parental or sick leave	-	This issue will be addressed only for organisations, since fellows will not be able to provide informed opinion about this.
25	Costs incurred to cover special needs of researchers with disabilities	During your fellowship, did you have any special needs related to disability? a) Yes b) No	This question will allow us to indicate fellows with disabilities/special needs.
26		*(only for those, who answered 'yes' in Q25)* Were your special needs appropriately taken into account by your host organisation? a) Yes b) No Please explain:	This question will allow us to judge if the needs of fellows with disabilities were appropriately taken into account. **For global fellows, this question will be repeated to ask about the return phase.**
27		*(only for those, who answered 'yes' in Q25)* Would it have helped, if you had received an allowance to cover your special needs? a) Yes b) No	We will only survey those fellows who have finished their fellowship before the special needs allowance was established. Therefore, we will inquire if such special needs allowance would have been useful.
28		*(only for those, who answered 'yes' in Q27)* What allowance in EUR would have been sufficient to cover your special needs? Please provide the one, which is more appropriate: a) Monthly: b) Lump sum for the whole fellowship: Please explain, what costs this allowance would have covered:	
Wrapping-up			
29	General issues	Please provide any remaining points related to all the allowances you received during the MSCA fellowship which we have not covered, but which may be relevant for improving the MSCA unit costs system in Horizon Europe:	This question will make sure that a fellow was able to mention all relevant issues.

Questionnaire for ITN and IF coordinators and beneficiaries, COFUND beneficiaries and partner organisations that were hosting fellows, and partner organisations participating in Global Fellowships

No.	Topic	Question(s) (for each question, there will be a box called 'context and explanations,' where the respondent or the interviewer will be able to further explain the answers)	Purpose of the question and other relevant points to keep in mind
1	Introduction about the MSCA unit costs that are relevant for the respondent; per type of action: ITN, IF, COFUND	*To be developed.*	This part will be written by the study team. It will explain the MSCA unit costs system, focusing in particular on unit costs relevant for the specific respondent.
2	Information about the project where the organisation was involved	You were involved in: - Project title: - Project acronym: - Project ID: - Type of MSCA: - Scientific panel: CHE/ENG/SOC/ECO/MAT/ENV/LIF/PHY	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.
3	Information about the organisation	Your organisation: - Name of the organisation: - Type of the organisation: HES/REC/PRC/PUB/OTH - Country of the organisation: - Organisation's role in the project: coordinator/beneficiary/partner organisation (only for GF and COFUND) - Number of MSCA fellows hosted under this project: - Number of comparable researchers employed in your organisation:	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.
4	Information about the respondent	You are: - First and family name: - Role in the organisation: - Role in the project: - Phone number: - Email:	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.
5	Research, training and networking costs, including research dissemination costs	What is the amount of funding in EUR that your organisation has received during this MSCA project to cover research, training and networking costs related to the project? Please indicate the amount in EUR:	This information will be pre-filled from CORDA. However, please note that CORDA information includes the amounts of funding allocated to beneficiaries on the basis of Grant Agreements, while organisations can agree on different shares of funding in Consortium Agreements. For example, coordinators may receive more funding than originally allocated due to their larger responsibilities

			both in terms of management, but also in terms of final research outputs. This is why we should clarify in this questionnaire the exact amount received by the surveyed organisations.
6		Have you used your own resources or received any co-funding from other sources to cover the research, training and networking costs related to this MSCA project? a) No b) Yes. Please indicate: a. The amount in EUR: b. The source of co-funding:	This question will indicate whether the organisations have used their own resources/received any co-funding from other sources. Availability/necessity of other sources of funding may indicate that the MSCA institutional unit costs are insufficient.
7		**Only for organisations involved in ITNs and COFUND doctoral programmes:** Please indicate the number of fellows that were involved in doctoral training at your institution, and the total duration of time (in researcher months) that they have spent at your institution to do doctoral training. Please indicate: a) Number of fellows: b) Total duration of doctoral training for all fellows (in researcher months):	To the extent possible, this information will be pre-filled from CORDA/CORDIS or REA data. Doctoral training is the key output produced under the majority of ITN projects. In many cases, from CORDA we will be able to know the researcher months spent on doctoral training. We will cross-check this information during the survey.
8		**Only for organisations involved in ITNs and COFUND doctoral programmes:** Please indicate in EUR the average monthly price of organising doctoral training per researcher in your organisation. *We would like to know-how much it costs in EUR per month for your organisation to host a PhD candidate in your organisation, including organisation of all classes, access to laboratories and libraries, etc.* Please indicate in EUR:	Information collected through this question will support our market research in order to indicate how much one month of doctoral training costs in different organisations/countries. Such information will be useful also for other parts of the study, in particular to analyse the trends of costs of doctoral training in the EU (and to some extent in the world).
9		Please indicate the number of publications produced by researchers at your organisation as a result and within the time frame of this MSCA project. Please provide the number of: a) Peer-reviewed publications (*published in open access, as required by the MSCA rules*): b) Non-peer-reviewed publications:	To the extent possible, this information will be pre-filled from CORDA/CORDIS or REA data. However, from the monitoring data we will be able to know only the number of publications, trainings or events funded during the project, but we will not be able to always indicate which specific organisation has contributed to producing these outputs. Notion "within the frame of this project" is added (here and to other similar questions) since eligible costs are only those incurred during the

			implementation of the project (i.e. the duration of the grant).
10		Please provide (1) the total amount in EUR that you had to pay for publishing in open access (preferably) and/or (2) an average price in EUR of publishing one publication in open access. Total amount in EUR: Average price per publication in EUR:	With this question, we will aim to estimate the total amount in EUR paid by the organisation to make publications accessible in open access. We will allow the respondents to provide either the total amount or an average amount per publication. It may be that the organisations will be aware of only one of these amounts.
11		Please indicate the number of Intellectual Property Rights applications (if any) produced by researchers at your organisation as a result and within the time frame of this MSCA project. Please provide the number of applications for: a) Patents: b) Trademarks: c) Copyrights: d) Designs: e) Know-How and Trade Secrets: f) Other IPRs:	To the extent possible, this information will be pre-filled from CORDA/CORDIS or REA data. However, from the monitoring data we will be able to know only the number of publications, trainings or events funded during the project, but we will not be able to always indicate, which specific organisation has contributed to producing these outputs. Host organisations have wide discretion in spending the institutional unit costs; we focus on detecting specific outputs and estimation of their costs. We will not ask the organisations to estimate costs but will use our market research data from previous studies or this assignment to establish real costs. We will not ask organisations to estimate costs, because: (1) most likely, they will not be able to indicate the price that they have paid to produce outputs of a specific project (even financial units will often not know this, since organisations often pay for outputs from the overall budget of an organisation and in their accounting they are not necessarily linked to the project); (2) organisations may provide the information, which satisfies formal criteria, but which does not reveal the true scope of outputs funded.
12		Please indicate the number of *conferences, training and networking events (co)organised by your organisation* during this MSCA project. Please also provide locations and average durations of events. Conferences and networking events: a) Number: b) Average duration: c) Locations: (provide in free text) Training events: a) Number: b) Average duration: c) Locations: (provide in free text)	
13		Please indicate the number of *external conferences, training and networking events attended by researchers from your organisation* as a	

		result and within the time frame of this MSCA project. Please also provide locations and average durations of events. Conferences and networking events: a) Number: b) Average duration: c) Locations: (provide in free text) Training events: a) Number: b) Average duration: c) Locations: (provide in free text)	
14		Please provide the list of other significant research inputs, outputs or throughputs funded during the project in question from the MSCA unit costs for research, training and networking. Please also indicate the cost in EUR of the funded inputs, outputs or throughputs. *Such inputs, outputs or throughputs may include: access to data; access to research infrastructures/laboratories that are not directly available in your organisation; laboratory supplies, research equipment; intellectual property rights; investment in physical and digital library collections and digital repositories of data and results; sending fellows to field visits, etc.* Type of output, input or throughput/price in EUR/explanations 1. 2. 3. …	
15		In addition to what we have discussed above, have you incurred costs in funding any other items related to the MSCA project? Please select or explain in an open answer, by also indicating the amount in EUR: a) Tuition fees: b) Costs for visa-related fees and travel expenses: c) Additional costs arising from secondments (e.g. travel and accommodation costs): d) Any other costs (please explain and indicate the amount in EUR for each costs category):	In addition to what was discussed above, additional categories of costs may be funded by organisations as research, training and networking costs. With this question, we will aim to indicate such additional costs. For example, the following cost categories may be funded in IF and ITN: For ITN: - tuition fees - costs for visa-related fees and travel expenses - additional costs arising from secondments (e.g. travel and accommodation costs) For IF: - costs for visa-related fees and travel expenses

			- additional costs arising from secondments (e.g. travel costs and accommodation costs)
16		Have you used research, training and networking unit costs to top-up researcher(-s) salary(-ies)? a) Yes b) No *If yes, a question about the exact amount in EUR will follow in the part of the questionnaire devoted to researchers' salaries.*	This question will directly indicate whether institutional unit costs were used to top up researcher salaries.
17		During this MSCA project, were you able to fund all research, training and networking activities relevant to research implemented during the project? - Yes - No If not, which of the following items were you unable to fund due to insufficient unit costs for research, training and networking (check all that apply): a) Peer-reviewed publications in open access b) Publish Intellectual Property Rights (e.g. patents) c) Fund training relevant for the fellows' research or career d) Fund conferences or other events to disseminate research results e) Fund fellows' field research in other countries f) Access necessary data g) Access relevant research infrastructures (research facilities, laboratories, etc.) h) Access materials/inputs necessary for your research (laboratory supplies, small research equipment, electricity, heat, lighting) i) Other: (please explain) Please tell us more about the situations you have indicated above when you were unable to fund research, training or networking activities. Please also explain the reasons why the funding could not have been provided:	This question will allow us to judge the sufficiency of the research, training and networking unit costs from the organisation's perspective. We will also be able to indicate specific outputs, which the host institution could not fund due to potential insufficiency of institutional unit costs for research, training and networking.
18		Overall, were resources allocated to fund research, training and networking costs of your organisation incurred during this project: a) Sufficient b) Insufficient, but did not cause problems related to the quality of research being implemented c) Insufficient, which had from minor to moderate negative impact on the research done during the project d) Highly insufficient, which had a major negative impact on the research done during the project	This question will indicate if the organisations are in general satisfied/not satisfied with the amount of funding that they have received to cover research, training and networking costs, as well as the reasons why funding was seen as insufficient, and the level of impact in had on the research being implemented.

		Please explain your answer:	
19	Management and indirect costs	What is the amount of funding in EUR that your organisation has received during the MSCA project in question to cover your management and indirect costs? Please indicate the amount in EUR:	This information will be pre-filled from CORDA. However, please note that CORDA information includes the amounts of funding allocated to beneficiaries on the basis of Grant Agreements, while organisations can agree on different shares of funding in Consortium Agreements. For example, coordinators may receive more funding than originally allocated due to their larger responsibilities both in terms of management, but also in terms of final research outputs. This is why we should clarify in this questionnaire the exact amount received by the surveyed organisations.
20		Have you used your own resources/received any co-funding from other sources to cover the management and indirect costs of this MSCA grant? a) No b) Yes. Please indicate: a. The amount in EUR: b. The source of co-funding:	This question will indicate whether the organisations have used their own resources/received any co-funding from other sources. Availability/necessity of other sources of funding may indicate that the MSCA institutional unit costs are insufficient.
21		Please indicate the total number of person-months spent in your organisation to administer this MSCA grant:	This question will indicate the effort in person-months used to manage the MSCA grant in question. Host organisations have wide discretion in spending of the institutional unit costs; we focus on detecting specific inputs (such as amounts of persons months spent); whenever possible, we will not ask respondents to estimate costs but will use our data from statistics or market research (such as average salaries in certain occupation and sectors).
22		Please provide the list of other significant management and indirect costs funded during this MSCA project. Please also indicate the price in EUR of these management and indirect costs. *Such costs may include: operating and maintaining physical infrastructure; any necessary increase in salaries of existing staff due to the contributions to manage the MSCA grant; etc.* Type of cost/price in EUR/explanations 1. 2. 3. …	This question will indicate any other possible management and indirect costs incurred by the participating organisations.

23		Have you used management and indirect unit costs to top up researcher(-s) salary(-ies)? a) Yes b) No *If yes, a question about the exact amount in EUR will follow in the part of the questionnaire devoted to researchers' salaries.*	This question will directly indicate whether institutional unit costs were used to top up researcher salaries.
24		Overall, were resources allocated to fund management and indirect costs of your organisation: a) Sufficient b) Insufficient, but did not cause problems c) Insufficient, which caused occasional problems with the daily management of the project d) Highly insufficient, which caused systemic management problems Please explain your answer:	This question will indicate if the organisations are in general satisfied/not satisfied with the amount of funding that they have received to cover management and indirect costs, as well as the reasons why funding was seen as insufficient.
25	Costs incurred by an organisation in case of maternity, parental or sick leave of the fellow	In some countries, the employer (and not the state) has to cover payments for researchers in case of maternity/parental, paternity or sick leave. During this survey, we are aiming to indicate such countries. In the interests of non-discrimination and equal opportunities, the Commission is exploring the possibility to adapt the unit costs system to make it fairer and more inclusive, notably in case a change in the personal situation of the researcher/staff member occurs during the implementation of the project. Therefore, this study will aim to indicate countries where the employer, and not the state, has to fund costs related to maternity/parental, paternity or sick leave. Then, on the basis of desk research, we will analyse the costs potentially incurred by research organisations participating in the MSCA as a result of such situation in selected countries. Please indicate, who has to pay the researcher in your country in case of: Maternity/parental leave: a) The state b) The employer c) Partially the employer, partially the state. Please explain: Paternity leave: a) The state b) The employer c) Partially the employer, partially the state. Please explain	The purpose of the question will be to indicate the countries, where employers have to cover all or part of the payments resulting from the researchers' maternity, paternity or sick leave. All other analysis will be done on the basis of desk research. We will analyse legal regulations in the indicated countries and will establish the costs that have to be covered by employers in the selected countries as a result of maternity, paternity and sick leave.

		Sick leave: a) The state b) The employer c) Partially the employer, partially the state. Please explain	
26	Costs incurred to cover special needs of researchers with disabilities	Since 2019, a new lump sum grant was introduced under the MSCA to cover additional costs that researchers/staff members with a disability face due to the increased costs of their mobility. This 'special needs allowance' is limited to a maximum of EUR 60,000 per MSCA researcher/staff member. Among other things, this study aims to assess whether it is relevant and feasible to have a unit cost predefined rate(s) (paid as a total or monthly) to cover the costs incurred by fellows and organisations as a result of disability. Now we will ask about your general experience, not necessarily related to the MSCA projects. In the recent 5 years, have you employed/hosted researchers with the following disabilities (check all that apply): a) No b) Physical disabilities c) Visual disabilities d) Hearing disabilities e) Mental health disabilities f) Intellectual disabilities g) Cognitive or learning disabilities h) Other, please explain:	This question will indicate organisations, who have employed persons with disabilities in the past 5 years. This question will also specify, which types of disabilities are most common among research organisations participating in the MSCA. This question will be mainly addressed via desk research and contextual interviews.
27		*Only for those, who checked b-h in the Q26 above.* Please explain, what kind of actions (if any) you have taken in the past 5 years to make sure that your facilities and overall environment are accessible to researchers with the above-indicated disabilities and how much it cost in EUR (as a lump sum or monthly/yearly): We will ask about each disability selected in Q26. Action/cost in EUR 1. 2. 3. …	This action will indicate actions taken to make sure that the research environment is accessible to people with disabilities and the costs of such activities targeting various types of disabilities. This question will be mainly addressed via desk research and contextual interviews.
28	Researcher unit costs Covered by the EU for ITN and IF:	The host research organisations can, if they chose to do so, top up monthly living allowances of fellows either (1) from institutional unit costs funded by the EU or (2) from their own resources.	This question will allow us estimate more precisely the top-up funding provided by research organisations to top up researcher salaries (1) from institutional unit costs funded by the EU or (2) from

	- Living allowance - Mobility allowance - Family allowance 50% covered by the EU for COFUND: - Living allowance	If you are aware of this, please provide the average monthly amount in EUR topped up by your organisation… … from institutional unit costs funded by the EU: a) We have provided the following monthly amount: *(please insert amount in EUR)* b) We have provided a top-up from the institutional costs funded by the EU, but I am not aware of the exact amount c) We have not provided top-up funding from institutional unit costs d) I do not know … from your own resources: a) We have provided the following monthly amount: *(please insert amount in EUR)* b) We have provided a top-up from our own resources, but I am not aware of the exact amount c) The institution has not provided top-up funding from their own resources d) I do not know	their own resources. To the extent this is known by the organisations, this question will also allow us to estimate the exact source of this top-up. This data will be triangulated with the data provided by the fellows, but it is likely that organisations will know the amount of top-up more accurately.
29		*Only for those, who answered a or b in one of the questions above:* Why did your organisation decide to top up the researcher(-s) salary(-ies) from institutional unit costs or from your own resources? a) To make sure that researcher(-s) salary(-ies) are in line with the salaries of other researchers in the same position working at our organisation b) To make sure that researcher(-s) salary(-ies) are in line with sectoral agreements in our country c) Other reason. Please explain: d) I do not know	This question will allow us to understand the reason why the host organisation has topped up the researcher unit costs with institutional unit costs or their own resources.
30		During the MSCA project in question you have hosted (*depending on the situation: Early Stage Researcher(s)/Experienced Researcher(s)*). *Early Stage Researchers are researchers, who have less than 4 years of researcher experience (FTE) and have not been awarded a doctoral degree by the time of their recruitment.* *Experienced Researchers are researchers, who are in possession of a doctoral degree or have at least 4 years of research experience (FTE) at the time of their recruitment.* For those, who hosted ESRs:	This question will allow us to estimate the usual average monthly salaries of Early Stage Researchers and Experienced Researchers in the organisations that hosted the MSCA fellows. We will then compare the usual monthly salaries received by ESRs and ERs in the host organisations to the salaries received by the fellows. This will allow us to judge the adequacy and attractiveness of the fellows' salaries during their fellowship period. In addition, this question will allow us to collect data about the average level of salaries paid by the research organisations participating in the MSCA. This data will be extremely useful for establishing

		What is the average monthly salary in EUR of an Early Stage Researcher in your organisation? Please provide **only one of the amounts that you are aware of** (Super Gross, Gross or Net)? For those, who hosted ERs: What is the average monthly salary in EUR of an Experienced Researcher in your organisation? Please provide **only one of the amounts that you are aware of** (Super Gross, Gross or Net)? *Please indicate or provide your best estimate for only one of the following amounts:* *(1) Monthly average Super Gross amount, i.e. amount in EUR before deducting any employee or employer taxes & social contributions* *(2) Gross amount, i.e. amount in EUR before deducting any employee & social contributions, but excluding applicable taxes and social contributions to be paid by an employer (usually this amount is indicated in the employment contract)* *(2) Monthly average Net amount, i.e. amount in EUR after all taxes and deductions that researchers actually receive on average every month* Please indicate **only one of the amounts** in EUR: - Super Gross: - Gross: - Net:	the salary trends in Europe, together with data coming from the desk research. To receive even more complete data on salary trends for ERs and ESRs in Europe, we may ask organisations not only about the types of researchers that they have hosted, but rather ask all organisations about both ERs and ESRs.
31	General issues	Please provide any additional points related to your experience with the financial management of the MSCA project, which we have not covered, but which may be relevant for improving the MSCA unit costs system in Horizon Europe:	This question will make sure that a representative of an organisation was able to mention all relevant issues.

Questionnaire for RISE coordinators and beneficiaries

No.	Topic	Question(s) (for each question, there will be a box called 'context and explanations,' where the respondent or the interviewer will be able to further explain the answers)	Purpose of the question and other relevant points to keep in mind
1	Introduction about the MSCA unit costs that are relevant for the respondent participating in RISE action	*To be developed.*	This part will be written by the study team. It will explain the MSCA unit costs system, focusing in particular on unit costs relevant for the specific respondent.

No.	Topic	Question(s) (for each question, there will be a box called 'context and explanations,' where the respondent or the interviewer will be able to further explain the answers)	Purpose of the question and other relevant points to keep in mind
2	Information about the project where the organisation was involved	You were involved in: - Project title: - Project acronym: - Project ID: - Type of MSCA: - Scientific panel: CHE/ENG/SOC/ECO/MAT/ENV/LIF/PHY	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.
3	Information about the organisation	Your organisation: - Name of the organisation: - Type of organisation: HES/REC/PRC/PUB/OTH - Country of the organisation: - Organisation's role in the project: coordinator/beneficiary/partner organisation - Number of MSCA researchers or staff members hosted under this project: - Number of comparable researchers/staff members currently employed in your organisation: - Number of own researchers/staff members sent on secondment to other organisations during this MSCA project:	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.
4	Information about the respondent	You are: - First and family name: - Role in the organisation: - Role in the project: - Phone number: - Email:	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.
5	Research, training and networking costs, including research dissemination costs	What is the amount of funding in EUR that your organisation has received during this MSCA project to cover your research, training and networking costs? Please indicate the amount in EUR:	This information will be pre-filled from CORDA. However, please note that CORDA information includes the amounts of funding allocated to beneficiaries on the basis of Grant Agreements, while organisations can agree on different shares of funding in Consortium Agreements. For example, coordinators may receive more funding than originally allocated due to their larger responsibilities both in terms of management, but also in terms of final research outputs. This is why we should clarify in this questionnaire the exact amount received by the surveyed organisations. It will be taken into account that in RISE, the beneficiaries claim costs also for the secondments from partner organisation/entity with a capital or

No.	Topic	Question(s) (for each question, there will be a box called 'context and explanations,' where the respondent or the interviewer will be able to further explain the answers)	Purpose of the question and other relevant points to keep in mind
			legal link in a third country listed in General Annex A to the H2020 Work Programme.
6		Have you used your own resources/received any co-funding from other sources to cover the research, training and networking costs related to this MSCA project? a) No b) Yes. Please indicate: a. The amount in EUR: b. The source of co-funding:	This question will indicate whether the organisations have used their own resources or received any co-funding from other sources. Availability/necessity of other sources of co-funding may indicate that the MSCA institutional unit costs are insufficient. As discussed in the kick-off meeting, it will be taken into due account that the institutional unit costs do not necessarily need to cover the full costs of the research and large increases will mean fewer grants can be funded.
7		Please indicate the number of publications produced by researchers/staff members at your organisation as a result and within the time frame of this MSCA project. Please provide the number of: a) Peer-reviewed publications (*published in open access, as required by the MSCA rules*): b) Non-peer-reviewed publications:	To the extent possible, this information will be pre-filled from CORDA/CORDIS or REA data. However, from the monitoring data we will be able to know only the number of publications, trainings or events funded during the project, but we will not be able to always indicate, which specific organisation has contributed to producing these outputs.
8		Please provide (1) the total amount in EUR that you had to pay for publishing in open access (preferably) and/or (2) an average price in EUR of publishing one publication in open access. Total amount in EUR: Average price per publication in EUR:	With this question, we will aim to estimate the total amount in EUR paid by the organisation to make publications accessible in open access. We will allow the respondents to provide either the total amount or an average amount per publication. It may be that the organisations will be aware of only one of these amounts.
9		Please indicate the number of Intellectual Property Rights applications (if any) produced by researchers/staff members at your organisation as a result and within the time frame of this MSCA project. Please provide the number of applications for: a) Patents: b) Trademarks: c) Copyrights: d) Designs:	To the extent possible, this information will be pre-filled from CORDA/CORDIS or REA data. However, from the monitoring data we will be able to know only the number of publications, trainings or events funded during the project, but we will not be able to always indicate, which specific organisation has contributed to producing these outputs.

No.	Topic	Question(s) (for each question, there will be a box called 'context and explanations,' where the respondent or the interviewer will be able to further explain the answers)	Purpose of the question and other relevant points to keep in mind
		e) Know-How and Trade Secrets: f) Other IPRs:	Host organisations have wide discretion in spending the institutional unit costs; we focus on detecting specific outputs and estimation of their costs. We will not ask the organisations to estimate costs but will use our market research data from previous studies or this assignment to establish real costs. We will not ask organisations to estimate costs, because: (1) most likely, they will not be able to indicate the price that they have paid to produce outputs of a specific project (even financial units will often not know this, since organisations often pay for outputs from the overall budget of an organisation and in their accounting they are not necessarily linked to the project); (2) organisations may provide the information, which satisfies formal criteria, but which does not reveal the true scope of outputs funded.
10		Please indicate the number of *training courses, workshops, conferences and seminars (co)organised by your organisation* during this MSCA project. Please also provide locations and average durations of events: a) Number: b) Average duration: c) Locations: (provide in free text)	
11		Please indicate the number of *external training courses, workshops, conferences and seminars attended by researchers/staff members from your organisation* as a result and within the time frame of this MSCA project. Please also provide locations and average durations of events: a) Number: b) Average duration: c) Locations: (provide in free text)	
12		Please provide the list of other significant research inputs, outputs or throughputs funded during the project in question from the MSCA unit costs for research, training and networking. Please also indicate the cost in EUR of the funded inputs, outputs or throughputs. *Such inputs, outputs or throughputs may include: access to data; access to research infrastructures/laboratories that are not directly available in your organisation; laboratory supplies, research equipment; intellectual property rights; investment in physical and digital library collections and digital repositories of data and results; sending researchers to field visits, etc.* Type of output, input or throughput/price in EUR/explanations 1. 2. 3. …	
13		Have you used research, training and networking unit costs to complement the top-up allowance received by the seconded researchers/staff members? a) Yes b) No *If yes, a question about the exact amount in EUR will follow in the part of the questionnaire devoted to researchers' unit costs.*	This question will directly indicate whether institutional unit costs were used to complement a top-up allowance received by a researcher/staff member.
14		During this MSCA project, were you able to fund all research, training and networking activities relevant to research implemented during the project? - Yes	This question will allow us to judge the sufficiency of the research, training and networking unit costs from the organisation's perspective. We will also be able

No.	Topic	Question(s) (for each question, there will be a box called 'context and explanations,' where the respondent or the interviewer will be able to further explain the answers)	Purpose of the question and other relevant points to keep in mind
		- No If not, which of the following items were you ever unable to fund due to insufficient unit costs for research, training and networking (check all that apply): a) Peer-reviewed publications in open access b) Publish Intellectual Property Rights (e.g. patents) c) Fund training relevant for the researchers'/staff members' research or career d) Fund conferences or other events to disseminate research results e) Fund researchers'/staff members' field research in other countries f) Access necessary data g) Access relevant research infrastructures (research facilities, laboratories, etc.) h) Access materials/inputs necessary for your research (laboratory supplies, small research equipment, electricity, heat, lighting) i) Other: (please explain) Please tell us more about the situations you have indicated above when you were unable to fund research, training or networking activities. Please also explain the reasons why the funding could not have been provided:	to indicate specific outputs, which the host institution could not fund due to potential insufficiency of institutional unit costs for research, training and networking.
15		Overall, were resources allocated to fund research, training and networking costs of your organisation incurred during this project: a) Sufficient b) Insufficient, but did not cause problems related to the quality of research being implemented c) Insufficient, which had from minor to moderate negative impact on the research done during the project d) Highly insufficient, which had a major negative impact on the research done during the project Please explain your answer:	This question will indicate if the organisations are in general satisfied/not satisfied with the amount of funding that they have received to cover research, training and networking costs, as well as the reasons why funding was seen as insufficient, and the level of impact in had on the research being implemented.
16	Management and indirect costs	What is the amount of funding in EUR that your organisation has received during the MSCA project in question to cover management and indirect costs? Please indicate the amount in EUR:	This information will be pre-filled from CORDA. However, please note that CORDA information includes the amounts of funding allocated to beneficiaries on the basis of Grant Agreements, while organisations can agree on different shares of funding in Consortium Agreements. For example, coordinators may receive more funding than originally allocated due to their larger responsibilities both in terms of management, but also in terms of

No.	Topic	Question(s) (for each question, there will be a box called 'context and explanations,' where the respondent or the interviewer will be able to further explain the answers)	Purpose of the question and other relevant points to keep in mind
			final research outputs. This is why we should clarify in this questionnaire the exact amount received by the surveyed organisations.
17		Have you used your own resources/received any co-funding from other sources to cover the management and indirect costs of this MSCA grant? a) No b) Yes. Please indicate: a. The amount in EUR: b. The source of co-funding:	This question will indicate whether the organisations have used their own resources/received any co-funding from other sources. Availability/necessity of other sources of funding may indicate that the MSCA institutional unit costs are insufficient.
18		Please indicate the total number of person-months spent in your organisation to administer this MSCA grant:	This question will indicate the effort in person-months used to manage the MSCA grant in question. Host organisations have wide discretion in spending the institutional unit costs; we focus on detecting specific inputs (such as amounts of persons-months spent); whenever possible, we will not ask respondents to estimate costs but will use our data from statistics or market research (such as average salaries in certain occupation and sectors).
19		Please provide the list of other significant management and indirect costs funded during this MSCA project. Please also indicate the price in EUR of these management and indirect costs. *Such costs may include: operating and maintaining physical infrastructure; any necessary increase in salaries of existing staff due to the contributions to manage the MSCA grant; etc.* Type of cost/price in EUR/explanations 1. 2. 3. …	This question will indicate any other possible management and indirect costs incurred by the participating organisations.
20		Have you used management and indirect unit costs to complement the top-up allowance received by the seconded researchers/staff members? a) Yes b) No *If yes, a question about the exact amount in EUR will follow in the part of the questionnaire devoted to researchers' unit costs.*	This question will directly indicate whether institutional unit costs were used to top up researcher/staff member's allowances.
21		Overall, were resources allocated to fund management and indirect costs of your organisation:	This question will indicate if the organisations are in general satisfied/not satisfied with the amount of

No.	Topic	Question(s) (for each question, there will be a box called 'context and explanations,' where the respondent or the interviewer will be able to further explain the answers)	Purpose of the question and other relevant points to keep in mind
		a) Sufficient b) Insufficient, but did not cause any problems with the daily management of the project c) Insufficient, which caused occasional problems with the daily management of the project d) Highly insufficient, which caused systemic management problems Please explain your answer:	funding that they have received to cover management and indirect costs, as well as the reasons why funding was seen as insufficient.
22	Costs incurred to cover special needs of researchers with disabilities	Since 2019, a new lump sum grant was introduced under the MSCA to cover additional costs that researchers/staff members with a disability face due to the increased costs of their mobility. This 'special needs allowance' is limited to a maximum of EUR 60 000 per MSCA researcher/staff member. Among other things, this study aims to assess whether it is relevant and feasible to have pre-defined rate(s) (paid as a total or monthly) to cover the costs incurred by researchers and organisations as a result of disability. Now we will ask about your general experience, not necessarily related to the MSCA projects. In the past 5 years, have you employed or hosted researchers/staff members with the following disabilities (check all that apply): a) No, we have not employed or hosted researchers/staff with disabilities b) Physical disabilities c) Visual disabilities d) Hearing disabilities e) Mental health disabilities f) Intellectual disabilities g) Cognitive or learning disabilities h) Other, please explain:	This question will indicate organisations, who have employed persons with disabilities in the past 5 years. This question will also specify, which kind of disabilities are most common among research organisations participating in the MSCA. This question will be mainly addressed via desk research and contextual interviews.
23		*Only for those, who checked b-h in the Q22 above.* Please explain, what kind of actions (if any) have you taken in the recent 5 years to make sure that your facilities and overall environment are accessible to researchers with indicated disabilities and how much did it cost in EUR (as a lump sum or monthly/yearly): We will ask about each type of disability selected in Q22. Action/cost in EUR 1.	This action will indicate actions taken to make sure that the research environment is accessible to people with disabilities and costs of such activities targeting various types of disabilities. This question will be mainly addressed via desk research and contextual interviews.

No.	Topic	Question(s) (for each question, there will be a box called 'context and explanations,' where the respondent or the interviewer will be able to further explain the answers)	Purpose of the question and other relevant points to keep in mind
		2. 3. …	
24	Researcher unit costs covered by the EU: top-up allowance	The sending research organisations in RISE can, if they chose to do so, complement monthly top-up allowances of seconded researchers/staff members either (1) from institutional unit costs funded by the EU or (2) from their own resources. If you are aware of this, please provide the average monthly amount in EUR complemented by your organisation… … <u>from institutional unit costs</u> funded by the EU: a) We have provided the following monthly amount: *(please insert amount in EUR)* b) We have complemented the top-up allowance from the institutional costs funded by the EU, but I am not aware of the exact amount c) We have not complemented the top-up allowance from the institutional unit costs d) I do not know … <u>from your own resources</u>: a) We have provided the following monthly amount: *(please insert amount in EUR)* b) We have complemented the top-up allowance from our own resources, but I am not aware of the exact amount c) We have not complemented the top-up allowance from our own resources d) I do not know	This question will allow us to estimate more precisely the top-up funding provided by sending research organisations to top-up researcher salaries (1) from institutional unit costs funded by the EU or (2) from their own resources. To the extent this is known by the organisations, this question will also allow us to estimate the exact source of this top-up. This data will be triangulated with the data provided by the seconded researchers, but it is likely that organisations will know the amount of a top-up more accurately.
25		*Only for those who replied a or b in one of the questions above:* What was the reason that your organisation has decided to complement the top-up allowances of researchers/staff from the institutional unit costs or from your own resources? a) To make sure that the researcher's/staff member's allowance was more adequate to cover the mobility-related costs (e.g. rent) in a more expensive host country/city b) Other reason. Please explain: c) I do not know	This question will allow us to understand why the sending organisation topped up the researcher unit costs with institutional unit costs or their own resources.
26		During the MSCA project in question, you have seconded and/or hosted (*depending on the situation: Early Stage Researcher(s)/Experienced*	This question will allow us to estimate the usual average monthly salaries of Early Stage Researchers and Experienced Researchers in the organisations

No.	Topic	Question(s) (for each question, there will be a box called 'context and explanations,' where the respondent or the interviewer will be able to further explain the answers)	Purpose of the question and other relevant points to keep in mind
		Researcher(s)/Administrative, managerial or technical staff supporting the R&I activities under the action). *Early Stage Researchers are researchers, who have less than 4 years of researcher experience (FTE) and have not been awarded a doctoral degree by the time of their recruitment.* *Experienced Researchers are researchers, who are in possession of a doctoral degree or have at least 4 years of research experience (FTE) at the time of their recruitment.* *Staff members must be (early-stage or experienced) researchers or administrative, managerial or technical staff supporting the R&I activities under the action. They must be actively engaged in or linked to R&I activities for at least one month (full-time equivalent) at the sending institution, before the first period of secondment.* For those, who hosted/seconded ESRs or staff members equivalent to ESRs in terms of experience: What is the average monthly salary in EUR of an Early Stage Researcher/Staff in your organisation? Please provide **only one of the amounts that you are aware of** (Super Gross, Gross or Net)? For those, who hosted/seconded ERs or staff members equivalent to ERs in terms of experience: What is the average monthly salary in EUR of an Experienced Researcher/Staff in your organisation? Please provide **only one of the amounts that you are aware of** (Super Gross, Gross or Net)? *Please indicate or provide your best estimate for **only one of the following amounts, which you are best aware of**:* *(1) Monthly average Super Gross amount, i.e. amount in EUR before deducting any employee or employer taxes & social contributions* *(2) Gross amount, i.e. amount in EUR before deducting any employee & social contributions, but excluding applicable taxes and social contributions to be paid by an employer (usually this amount is indicated in the employment contract)* *(2) Monthly average Net amount, i.e. amount in EUR after all taxes and deductions that researchers actually receive on average every month*	that seconded and/or hosted the MSCA researchers. We will then compare the usual monthly salaries received by ESRs and ERs in the host organisations to the salaries received by the seconded researchers. This will allow us to judge the adequacy and attractiveness of the researchers' salaries during their secondment period. In addition, this question will allow us to collect data about the average level of salaries paid by the research organisations participating in the MSCA. This data will be extremely useful for establishing the salary trends in Europe, together with data coming from the desk research. To receive even more complete data on salary trends for ERs and ESRs in Europe, we may ask organisations not only about the types of researchers that they have hosted, but rather ask all organisations about both ERs and ESRs.

No.	Topic	Question(s) (for each question, there will be a box called 'context and explanations,' where the respondent or the interviewer will be able to further explain the answers)	Purpose of the question and other relevant points to keep in mind
		Please indicate **only one** amount in EUR: - Super Gross: - Gross: - Net:	
27	General issues	Please provide any additional points related to your experience with the financial management of the MSCA project, which we have not covered, but which may be relevant for improving the MSCA unit costs system in Horizon Europe:	This question will ensure that a representative of an organisation was able to mention all relevant issues.

Questionnaire for RISE-seconded researchers and staff members

No.	Topic	Question(s) (for each question, there will be a box called 'context and explanations,' where the respondent or an interviewer will be able to further explain the answers)	Purpose of the question and other relevant points to keep in mind
1	Introduction about the MSCA unit costs that are relevant for the respondent participating in RISE	*To be developed.*	This part will be written by the study team. It will explain the MSCA unit costs system, focusing in particular on unit costs relevant for the specific respondent.
2	Information about the project where the researcher/staff member was involved	You were involved in: - Project title: - Project acronym: - Project ID: - Type of MSCA:	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.
3	Information about the researcher/staff member	You are: - First and family name: - First nationality: - Gender: - Researcher category: Early Stage Researcher/Experienced Researcher/staff: managerial, administrative or technical staff member - Scientific panel: CHE/ENG/SOC/ECO/MAT/ENV/LIF/PHY - Phone number: - Email:	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.
4	Information about the host organisation	Your host organisation during your secondment was/were: - Name of the host organisation: - Country of the host organisation:	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.

			The unit targeted by the questionnaire will be a single secondment instance, and therefore here only one host organisation and its location will be indicated, indicating a specific secondment within the project. It would be confusing if a single questionnaire would target all secondments exercised by a researcher/staff member.
5	Information about the sending organisation	You were seconded from: - Name of the sending organisation: - Country of the sending organisation:	This part will be pre-filled from CORDA and the respondent will be able to correct the information in case of any inaccuracies.
Researcher/staff member unit costs			
6		During your secondment, you have received a top-up allowance from your sending organisation. The sending research organisations can, if they chose to do so, complement monthly top-up allowances of seconded researchers/staff members either (1) from institutional unit costs funded by the EU or (2) from their own resources. If you are aware of this, please provide the average monthly amount in EUR complemented by your sending research organisation… … **from institutional unit costs** funded by the EU: a) The organisation has provided the following monthly amount: *(please insert amount in EUR)* b) The organisation has complemented the monthly top-up allowance from the institutional costs funded by the EU, but I am not aware of the exact amount c) The organisation has not complemented the top-up allowance from the institutional unit costs d) I do not know … **from their own resources**: a) The organisation has provided the following monthly amount: *(please insert amount in EUR)* b) The organisation has complemented the monthly top-up allowance from their own resources, but I am not aware of the exact amount c) The organisation has not complemented the top-up allowance from their own resources d) I do not know	Responses to this question will allow us to estimate top-ups paid by the sending organisation to complement the monthly top-up allowance received by the seconded researchers/staff. The size of a complementary funding will indicate the extent to which the MSCA-RISE top-up allowance may be insufficient. This will also provide information on situations, when beneficiary organisations needed to provide largest top-ups, meaning that it may be necessary to introduce larger corrections if seconded staff is going to a number of more expensive countries.

		… The organisation has provided the following monthly amount, but **I am not aware of the source**: *(please insert amount in EUR)*	
7		*Only for those, who answered that the organisation has provided complementary funding in one of the questions above:* Why the sending organisation decide to complement your top-up allowance from institutional unit costs or from their own resources? a) Because the host country/city was significantly more expensive, and therefore the top-up allowance was not sufficient to cover your mobility-related costs b) Other reason. Please explain: c) I do not know	To the extent that a seconded researcher/staff member is aware of this, this question will allow us to understand the reason why the host organisation has complemented the top-up allowance with institutional unit costs or their own resources.
8		During your secondment, have you received any other monetary income (in addition to salary and a top-up allowance) coming from your professional activities granted by national or international organisations? If yes, please indicate monthly amount in EUR and purpose of the monetary benefits: a) No b) Yes. Please indicate: Amount in EUR per month | Purpose 1. 2. 3. …	This question will allow us to understand whether a seconded researcher/staff member has received any other monetary benefits, in addition to income paid by the sending organisation. This will allow his/her financial situation during the secondment to be better assessed.
9		When was the top-up allowance paid to you? a) Before the secondment b) An advance payment before the secondment, and the remaining allowance after the secondment c) In monthly instalments during the secondment d) After the secondment	This question will allow us to assess how much funding the seconded researcher/staff member actually had during the secondment. In cases of (b) and (d), the researchers may have faced shortage of income, in cases when they did not have savings.
10		*(only for those, who answered b in Q9)* What was the share of the advance payment in %? Please indicate:	This question will indicate the sufficiency of the advance payment.
11		Please estimate in EUR the total amount of one-off relocation costs (i.e. transporting your belongings, insurance, visas and similar) you incurred when relocating from your home country to host country:	This question will contribute to estimating the real costs of mobility for seconded researchers/staff, including when they need to travel home for personal reasons (in this case the secondment would be split).
12		How many times during your secondment have you travelled from your host country to your home country and back for personal reasons? Please indicate the number of trips (please count round-trip travel as one trip):	This question will contribute to estimating the real costs of mobility for seconded researchers/staff, including when they need to travel home for personal reasons (in this case the secondment would be split).

			The disclaimer 'for personal reasons' is added, since research-related trips (e.g. to conferences, training) should be funded from the institutional funding to cover research, training and networking costs.
13		Please indicate in EUR the amount of money you have paid monthly to cover your rent in host country:	This question will contribute to estimating the real costs of mobility. This question is related to assessing the adequacy of the top-up allowance. The duration of the secondment and whether it is a split stay or not will be taken into consideration when analysing this question.
14		In your opinion, was the top-up allowance paid during your MSCA secondment period by and large sufficient to cover all your travel, accommodation and subsistence costs relating to the secondment? a) Yes, it was adequate b) No, it was insufficient	This will be a simple question to ask whether researchers/seconded staff were in principle satisfied with the top-up allowance.
15		*(only for those, who answered 'no' in Q14)* Insufficient by how much? Please indicate a monthly amount in EUR: Please explain your answer. Please list the types of costs incurred as a result of mobility, which you were not able to cover with your top-up allowance: *(open text)*	The intention of this question is to estimate the difference between the real personal costs incurred by the seconded researcher/staff member and his/her top-up allowance. The open question will help explain, which kinds of costs the seconded researcher was unable to cover with top-up allowance.
Research, training and networking costs			
16	Research, training and networking costs, including research dissemination costs	During the MSCA project in question, were you able to receive funding for all research, training and networking activities relevant to your research? - Yes - No If not, which of the following things were you ever unable to do due to lack of funding (check all that apply): a) Publish a peer-reviewed publication in open access b) Publish Intellectual Property Rights (e.g. patents) c) Take training relevant for your research d) Participate in conferences or other events to disseminate your research results e) Go to do field research in other countries f) Access data necessary for your research g) Access relevant research infrastructures (research facilities, laboratories, etc.) h) Access materials/inputs necessary for your research (laboratory supplies, small research equipment, electricity, heat, lighting)	This question will allow us to judge the sufficiency of the research, training and networking unit costs from the researcher's/seconded staff member's perspective. We will also be able to indicate specific outputs, which the project consortium could not fund due to insufficiency of institutional funding.

		i) Other: (please explain) Please tell us more about the situations when you were unable to get funding for your research, training or networking activities. Please explain the reasons why the funding has not been provided:	
17		*(only for those, who selected a)-i) in Q16)* Overall, how negative was/will be the impact of a lack of funding for items indicated above on your final research outputs and outcomes? Did/will it have no negative impact, a minor negative impact, a moderate negative impact or a major negative impact? a) No negative impact b) A minor negative impact c) A moderate negative impact d) A major negative impact Please explain:	This question will allow us to estimate the negative impact caused by the lack of funding for research, networking and training (if any) on the final research output of the researcher.
18		Please provide a number and (to the extent you are aware of this) an average price in EUR of training courses, workshops, conferences and seminars that you have attended during your secondment: a) Number: b) Average price (to the extent you are aware of this): c) Please add a qualitative explanation, if any:	This question will allow us to estimate the costs of research, training and networking events per seconded researcher/staff member. We would treat these replies more as a guidance to be analysed together with information from desk research and market research, and not as very accurate information. However, it would help guide desk research and market research.
19		Please provide one or a few illustrative examples of training courses, workshops, conferences and seminars that you have attended during your secondment. *Please provide approximate information, to the extent that you can remember. If you cannot remember some information, please leave such cells blank.* Title of event | Location | Duration in days | Total price in EUR 1. 2. 3. …	
20		Please provide information about all publications, for which your organisation had to pay to make them published in open access during the MSCA project in question. *Please provide approximate information, to the extent that you can remember. If you cannot remember some information, please leave such cells blank.*	This question will allow us to estimate the costs of publishing in open access per seconded researcher.

		Title of the publication | Journal | Price of publishing in open access 1. 2. 3. …	
		Management and indirect costs	
21	Management and indirect costs	Were resources devoted by your home and host organisations to ensure effective daily management of the issues related to your secondment: a) Sufficient b) Insufficient, but there were no visible shortcomings in the daily management of my secondment c) Insufficient, there were occasional shortcomings in the daily management of my secondment d) Highly insufficient, there were systemic management shortcomings	This question will allow us to judge the appropriateness of the management from the researcher's/staff member's perspective. Otherwise, researchers will not be able to comment much on the costs of management of the MSCA grants. This information will be collected mainly from the organisations.
22		*(only for those, who answered b)-d) in Q21)* Please explain the reasons for your dissatisfaction:	This will further explain, what was lacking in the management activities implemented by the organisations.
		Potential new unit costs	
-	Costs incurred by an organisation in case of maternity, parental or sick leave	-	This issue will be addressed only to organisations, since researchers/seconded staff members will not be able to provide informed opinion about this.
23	Costs incurred to cover special needs of researchers with disabilities	During your secondment, did you have any special needs related to disability? a) Yes b) No	This question will indicate seconded researchers/staff with disabilities/special needs.
24		*(only for those, who answered 'yes' in Q23)* Were your special needs (related to disability) appropriately taken into account by your host organisation? a) Yes b) No Please explain:	This question will allow us to judge if the needs of researchers/seconded staff with disabilities were appropriately taken into account.
25		*(only for those, who answered 'yes' in Q23)* Would it have helped, if you had received an allowance to cover your special needs? a) Yes b) No	This question will allow us to inquire whether the special needs allowance or some other type of funding would be useful in RISE. Respondents will be reminded that these costs should not have been covered by another source, such as social security or health insurance.
26		*(only for those, who answered 'yes' in Q25)*	

		What allowance in EUR would have been sufficient to cover your special needs? Please provide the one, which is more appropriate: a) Monthly: b) Lump sum for the whole secondment: Please explain, what costs this allowance would have covered:	
27	General issues	Please provide any additional points related to your top-up allowance and costs during the secondment, which we have not covered, but which may be relevant for improving the MSCA unit costs system in Horizon Europe:	This question will ensure that the researcher/seconded staff member was able to mention all relevant issues.

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