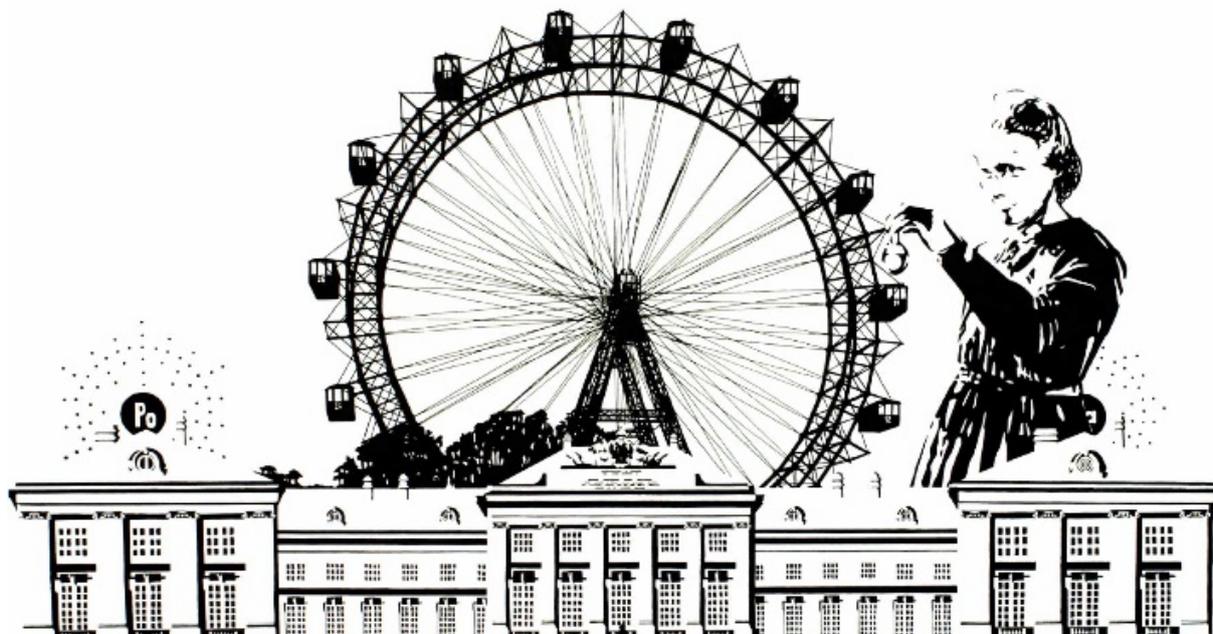


MSCA 2018 Conference Report



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The Conference in Brief

The Marie Skłodowska-Curie Actions 2018 Conference took place in Vienna on 1st and 2nd October in Billrothhaus, the headquarters of the College of Physicians in Vienna. It was organised by the Austrian Ministry for Education, Science and Research in collaboration with the European Commission and under the auspices of the Austrian Presidency of the Council of the European Union.

The theme of the conference was « Beyond 2020 », referring to the Conference's focus on preparing for the MSCA under Horizon Europe, the successor to Horizon 2020, the current EU Research and Innovation Programme. This theme was particularly reflected in the parallel discussion workshops, organised in addition to the opening, closing and keynote speeches and panel discussions. These workshops facilitated discussion and open exchange of experiences on eight areas of impact of the MSCA. The conference concluded with a presentation on perspectives on European early-career researcher training and future trends in this regard. Reoccurring themes were the need for tailored training for postdoctoral fellows, in particular, to prepare them for non-academic careers, and for a move away from the predominant view of the non-academic career as only second best. In addition, the importance of host institutions providing a holistic support structure for fellows including their well-being was underlined. Another key message was that MSCA would merit a significantly increased budget in Horizon Europe. Rules and procedures of other funding schemes should be aligned to support synergies with MSCA and create further funding possibilities. Finally, a particular novel aspect of this year's conference was the selection and conferment of the MSCA Awards, based on video or selfie submissions.

Monday 1st October 2018

Inaugural and Plenary Session Day 1

Thomas Farnell, Moderator

Barbara Weitgruber, Director General for Scientific Research and International Relations in the Austrian Federal Ministry of Science, Research and Economy

Viviane Hoffmann, Deputy Director General, European Commission Directorate General "Education, Youth, Sport and Culture"

Welcoming Words and Opening Speeches

Following a warm welcome to the conference, the opening speeches "set the scene" for the background context for the conference. The main priorities of the Austrian Presidency were outlined, in addition to the work of the Competitiveness Council on the European Research Area. Some key statistics and outcomes of the MSCA were presented, namely 40% of Marie Skłodowska-Curie fellows are women, 25% of fellows come from outside of the EU in Horizon 2020, 1500 patent applications have been filed and 100 spin offs have been created. The importance of the MSCA was highlighted, for example, on beneficiaries' careers through inter/multi/transdisciplinary working, better structuring of doctoral programmes and fellows acting as 'role models' for students and PhD candidates, particularly in STEM subjects. However, there is still the need to improve the communication of project results to the public and feed them into policy debates in order to ensure that future Framework Programmes also allocate sufficient resources to the MSCA.

Keynote Speech

Ulrike Guérot, Department for European Policy and the Study of Democracy, Danube University Krems

In the opening keynote, which was clearly designed to stimulate discussion, the speaker started by provocatively questioning the general trend of striving for excellence in research. On the one hand, it was questioned whether it would be relevant and economically sensible to invest in excellence at all, when a disproportionate amount of resources would be necessary; on the other, the problem of who would in fact be able to recognise and assess excellence was discussed. It was also pointed out that, in general, the current review and selection procedures tend to favour mainstream research and are thus detrimental to the freedom of research. Are the current framework conditions, which young scientists in particular are experiencing, actually suitable for carrying out really risky and excellent research? The serious issue of the lack of permanent or long-term positions for researchers was highlighted along with the need to retain the brightest brains and enable EU youth to thrive. To this end, the case can be made to award grants without restrictions and administrative burden, allowing researchers to work and publish on what they wish, even it goes against mainstream thinking. This is how innovation is fostered.

In this presentation, problematic issues were rightly addressed, with regard to the current funding situation and the difficult career prospects of young scientists, and also with respect to the claim of 'striving for excellence'. Unfortunately, however, neither answers to the questions raised nor alternative solutions were offered which could have opened a door for

further discussions. Thus, both looking for alternatives allowing quality assessment while avoiding mainstreaming, and allowing risk taking and entering new pathways while avoiding mediocrity or superficial approaches, remains an open challenge for the scientific community and funding agencies. This was followed up not only in the subsequent panel discussion, but also during many chats during the coffee and lunch breaks. In particular in this respect the keynote contribution gave a provocative and necessary input to the conference and also set the scene. Let's reflect on the current status and openly discuss what we can improve in the future and how this can be done.

Panel Discussion on the Overall Principles and Framework of Future EU R&I Policies and Horizon Europe

Barbara Weitgruber, Vivianne Hoffmann and Ulrike Guérot

The discussions began with the European Commission emphasising its support for bottom-up research and its wish to build an environment where innovation can thrive and game-changing research can be fostered. EU citizens also have the opportunity to feed into future EU research and innovation policies through online consultations and initiatives such as the Citizens Dialogue. The question was also raised if and how citizens could have the opportunity to decide on research topics for funding.

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Promote the
tangible successes
of the MSCA
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The peer review system as such is under enormous stress and very demanding in particular for the scientific community. However, structured international peer review is currently the only method suitable for evaluating the volume of funding applications and still has the highest level of acceptance within the community. Low success rates in Horizon 2020 are a well known fact. This is why the particular tangible successes of the MSCA and their unique features

i.e. open for all fields of research and focusing on ideas and people - must be widely communicated among all stakeholders. The role of scientists in today's political debate and in third mission activities was deliberated, for example, an Austrian working group on research integrity to fight against fake science has been established.

MSCA –Driving Excellence under Horizon Europe

Sophie Beernaerts, Head of Unit MSCA, European Commission

It is envisaged that 65,000 researchers will be supported in Horizon 2020, 25,000 of which will be PhD candidates. Participating in MSCA-funded projects has led to a boost to the fellows' scientific careers, acquisition of new professional skills and offered perspectives for non-academic career paths. An interim evaluation has been carried out, emphasising positive support for the MSCA and offering a number of recommendations for improvement (which have already been incorporated into the 2018-2020 Work Programme). These include support for disabled researchers to facilitate their participation in the Programme and widening the participation of the EU-13 to tackle a current regional imbalance in the number and quality of applications.

MSCA will carry on in the successor Programme to Horizon 2020, namely Horizon Europe. It will retain its bottom-up approach and focus on scientific excellence, mobility and career development. Moreover, novelty and innovation will continue to be fostered. Five broad lines of activity will be promoted, namely:

- mobility of researchers;

- training of researchers;
- strengthening human capital across the ERA;
- facilitating synergies; and
- promoting public outreach.

Horizon Europe will maintain its impact on a wide range of stakeholders. PhD candidates will continue to benefit from **doctoral training networks**, postdocs from **postdoctoral fellowships** and the wide spectrum of research staff from **staff exchanges**. The cofunding of training programmes will be realised through the **Synergies** action and public outreach festivals in the form of **Science Festivals** will also be funded.

The main changes in Horizon Europe will be linked to the implementation of the MSCA, for example, further simplification of the rules and actions, i.e. having one type of instrument in a scheme instead of several. One major negative characteristic of the MSCA in Horizon 2020 highlighted in the interim evaluation is oversubscription which has doubled from FP7. ITN and IF success rates have fallen to 8% (from 11% in FP7) and 16% (from 22% in FP7) respectively, with the total success rate across the Actions dropping to 11% (compared to 22% in FP7). Demand management measures such as restrictions on resubmissions (particularly relevant for the ITN Action) could be put into place to control this. Other areas which require strengthening in Horizon Europe are aligning and linking the MSCA with EU Structural Funds (for example building on the Seal of Excellence initiative and on synergies with cofunded projects); attracting new beneficiaries and training programmes; feeding results into the work of policy makers and ensuring a more equal participation of EU Member States.

Workshops on the Impact of MSCA

Four parallel workshops were organised to look at different aspects of the MSCA from a horizontal perspective. Presentations by a broad variety of experts were made, taking into account the entire funding landscape, as well as the European and national R&I structures. The workshops were essentially a stocktaking and brainstorming exercise, providing positive examples and success stories, but also discussing challenges which are not purely MSCA specific, also affecting the researcher and thus deserving attention. Although MSCA were the focus of the workshops, they were purposefully designed to allow a sharing of experiences from other initiatives, funding schemes or lines of collaborations. Because finally it is the overall ecosystem which must be research and researcher friendly and also supportive to make a difference and create impact.

WS A.1 : MSCA and the Impact on Career Development

Workshop A.1 dealt with the career development of researchers and addressed the question of whether career prospects increase through MSCA funding. Based on existing research results and complemented by one individual researcher's experiences, potential obstacles and challenges in the context of improving researcher's career development were discussed.

Koen Jonkers, Deputy Head of the Knowledge for Growth, Finance and Innovation Unit at the Joint Research Centre of the European Commission, firstly presented some outcomes of a recent JRC analysis of the publication behaviour of MSCA fellows, which included a study of their mobility patterns. The

MSCA enhance future collaborations beyond the fellowships

performance of 488 researchers (funded between 2007-2008) and their 10,000 respective published articles were analysed. One of the major observations was that the mobility flows of MSCA fellows tend to move from Southern and Eastern European (SEE) countries to Northern and Western European (NWE) countries, with MSCA fellows using the grant to find a better research environment and tending to move to institutions with higher citation impact. In addition, before receiving the MSCA grant, researchers from SEE countries showed a significantly lower research impact than researchers from NWE researchers. However, over time the median performance gap disappears and a convergence in the median performance of researchers from the two country groups can be observed. In addition, it is shown in this study that after the grant a considerable share of the increase in co-authored high impact papers are co-published with NWE researchers. Based on this observation it can be suggested that the MSCA mobility experience leads to productive research links.

Jan van der Boon, Director of Operational Management at Leiden University, presented a position paper by the League of European Research Universities (LERU) on careers of researchers inside and outside academia. According to LERU, researchers should be trained for a multitude of roles in society. Amongst other aspects, the paper highlights the crucial role of supervisors for researchers' career development, who tend to

Researchers should be trained for a multitude of roles in society

focus on academic career paths when giving career advice. Another important issue in the context of career development is the further improvement of skills training, especially for early-stage researchers. While formal training programmes for doctoral researchers are already quite common, this is not yet the case for postdocs. Therefore, there is a need for career development programmes to be established for this growing group of researchers. In addition, a (further) culture shift is needed with respect to mobility from academia to other sectors (private or public), as this should not be considered as 'failing', due to a lack of opportunities in academia. According to statistics, career prospects for researchers are good, provided that career options inside and outside academia are taken into account. By way of example, van der Boon showcased the training programme for doctoral researchers at Leiden University which offers compulsory transferable skills training free of charge, over a four-year period. It is planned to extend the programme to postdocs.

The third contribution was made by Dean Vuletic, former MSCA fellow, author and current postdoctoral researcher at the University of Vienna. Dean Vuletic gave insights into his individual career path and shared his personal reflections and observations on the issues

Researchers' well-being must get more attention!

that need to be focused on in order to optimise career prospects for researchers. His MSCA-funded project (Eurovision: A History of Europe through Popular Music) gave him much public visibility and contributed to the creation of his own brand ('Prof. Songcontest'). This was also due to the fact that, by coincidence, at the time of his fellowship, Austria won the Eurovision Song Contest and sudden media attention arose as a result, to his own surprise. In his presentation, Vuletic also focused in particular on the social challenges

that are often neglected in postdoc support discussions and dismissed as a private matter, but can have serious implications. Besides the need of freedom to do their research, researchers' social, as well as health, needs require appropriate attention. High levels of mobility present both emotional and physical challenges and put a burden on researchers' relationships, in that they often have to live separated from their families and the high

number of singles among them speaks for itself. Support programmes that foster the social integration of researchers at various levels are extremely important (e.g. language courses, measures aimed at learning how to cope with stress, or social activities to prevent loneliness). Public outreach, media training and personal branding are extremely important and this should be reflected in support measures.

WS A.2: MSCA as Facilitator for Mobility of Researchers

This workshop focused on one of the key features of the MSCA, namely supporting international and intersectoral mobility of researchers. The contributions shed light on MSCA-related issues and challenges MSCA fellows are facing. The discussion yielded a set of actions that could be taken to further facilitate international and intersectoral mobility, improving framework conditions for successful brain circulation of researchers in Europe and increasing their potential for global research collaboration and mobility. It is higher education institutions which should consider appropriate measures. Tools such as the HR Logo might help to implement changes which, according to the studies presented, are really urgently needed and require a quite different approach to be taken by HR departments. In fact, it requires a holistic approach which should affect the HEI as a whole. The need for both targeted training tailored for postdoctoral researchers and for individualised support measures, also discussed in Workshop A.1, is just one example of this; recognition of challenges related to international and intersectoral mobility is another.

The session began with Andrea Handsteiner, University of Natural Resources and Life Sciences, Vienna, talking from the HEI perspective on experiences gained through developing a Human Resources Strategy for Researchers and being accredited the logo 'HR Excellence in Research'. The HR Logo stands for professionalism and has a positive impact at various levels. It is well-known and recognised as a quality label across Europe and promotes a pan-European system of values within the research labour market. It allows an institution to demonstrate efforts taken to internationalise and importantly its commitment to treating researchers well. In this respect the HR Logo contributes to the institutions' reputation and forces it into a constant critical reflection of its own performance from the perspective of its own researchers, and that of external stakeholders. As one piece in the puzzle of measures and policy recommendations, such as the Code of Conduct for the Recruitment of Researchers, the HR Logo facilitates brain circulation within Europe, making ERA (more) interesting for non-European researchers.

The 'HR Excellence in Research' Logo stands for professionalism and is a symbol of quality for researchers

The second talk was given by Gabriella Kemény, Central European University, Budapest, about RESAVER (Retirement Savings Vehicle For European Research Institutions) and addresses a structural obstacle linked to mobility. Brain circulation is often accompanied by insecurities of mobile researchers with regards to pension schemes (2nd pillar) because of too many bureaucratic obstacles. To be successful and attractive to employers, today's researchers have to be mobile. By doing so, they accumulate pension claims in many different countries, possibly leading to financial penalties in the long run, in addition to all of the administrative burden mobile researchers have to take care of. RESAVER aims at a portability of pension claims, thus leading to one combined pension, which is financially attractive and less administratively challenging.

From the institutional and structural perspective the following two presentations focused on the individual fellows' experiences.

The third expert was Matthew DiFranco, Head of the Marie Curie Alumni Association – MCAA, who presented the MCAA alumni survey 2017. In a nutshell, the MCAA survey collected responses from 5,479 former MSCA funding recipients across 62 different countries about their current career, their mobility profile and barriers in their career. Important findings of the survey included that many researchers have not only been mobile once during their

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Postdocs are keen to
undertake international
and intersectoral mobility
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career, but about 3,600 have moved at least twice, affirming the will to be mobile, but also the need to do so to have a successful research career. Besides this brain circulation on an international scale, the intersectoral circulation played a crucial role. Interviewees initially aspired for an academic career in higher education or a research career in higher education. However there has been a clear shift towards a

research career outside higher education, e.g. in a private research organisations, after the doctorate. Regarding training related to career options, a supply-demand mismatch was reported. Too much focus still seems to be given to academic careers while relatively little training and advice is provided on career opportunities outside academia. Of course, it is known, that support widely varies from institution to institution. Nonetheless, this finding reconfirms the urgency for more and better career advice services in higher education institutions in general.

Finally, Janet Metcalfe, Head of Vitae, shared insights from studies conducted by Vitae in the UK. Surveys have shown that many young researchers are aiming at a long-term academic career, but only 10% of these researchers will accomplish such a career, for example, due to a lack of permanent positions. Though many are also initially open to a career outside of academia, they do not feel sufficiently well prepared for a non-academic career, which actually reinforces the findings of the MCAA survey. However, those who do make the move towards the non-academic sector tend to have a high job satisfaction and only 6% would go back to academia. An additional interesting observation was that those now working outside of academia developed a better awareness of valued competences which they have actually acquired during their research training at HEIs, such as motivation, self-confidence, adaptability and agility.

Taking the findings of the presentations, the ensuing general workshop, and indeed overall

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Improved support
measures are essential
for the promotion of
mobility in Europe
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conference discussions into consideration, the issue of improved support measures became very apparent. Improving career advice services, in particular for careers in the non-academic sector, and more training offers for researchers in generic competencies such as people and communication skills, are essential for the promotion of mobility in Europe.

It must be recognised that awareness raising of job opportunities outside academia usually lies outside of the scope of an academic's expertise. Thus, other measures must be taken to ensure sufficient exposure to a variety of career opportunities. This could be done by reinforcing and acknowledging, not only international mobility, but also intersectoral mobility

as emphasised in the MSCA and in the seven principles of innovative doctoral training. Another possibility is to develop professional support structures for early stage researchers.

An additional concern was the greater recognition of the value of intersectoral experiences for an academic career, in particular when re-entering the academic world after a job in the non-academic sector. This is of particular importance, because many researchers are uncertain about the impact on their careers when they are leaving academia for some time. Overall, MSCA schemes can be regarded as a great tool to support such efforts, since they encourage intersectoral circulation and enable exposure to new environments and training in competencies relevant outside academia. In fact, brain circulation must not be defined only in terms of geographics. Brain circulation has at least two dimensions 'international circulation and 'intersectoral' circulation.

'Brain drain' exists in the EU and return mechanisms/programmes to peripheral European countries are needed. These should be financed with European Structural Funds. Existing programmes like the Widening Fellowships (part of Spreading Excellence and Widening Participation) are appreciated in terms of tackling this issue. However there is an urgent and crucial necessity for a better complementarity between EU and national programmes.

WS A.3: MSCA Enhancing the Societal Impact of Researchers

The focus of the third workshop was the excellence of researchers funded by MSCA and how impact with citizens and society can be achieved. Different perspectives were given including that of the research institution, the European Commission, the national funding agency, and regional and national governments.

The first speaker was Barbara Abraham, Head of Academic Affairs, IST Austria, a young research institution inaugurated in 2009. In her experience, breakthroughs and paradigm shifts come from curiosity-driven research. It is important to have transparency so that, whilst not precluding their interaction with a research institution, no political or corporate entity influences an institution's research agenda. Researchers are tackling groundbreaking issues to improve human life. Scientific principles are already being used to address societal issues, but it would be important to include scientific principles in regular political discussions.

Excellence is the starting point to achieve impact

Bodo Richter, Deputy Head of Unit at the European Commission, then underlined the core objective of MSCA, namely to promote curiosity-driven research in all fields including humanities and social sciences. In addition to conducting basic research, it will become increasingly important task for researchers to reflect on the role of science in society and its contribution to it. Science diplomacy can play an important role in changing this situation. But

Role of science in society is important

researchers often lack relevant skills and feel insufficiently prepared to communicate their research to, and engage with, society. It must also be recognised that expectations on researchers are constantly rising. Thus, scientific communication outside of academia and other outreach activities can become an additional burden for researchers to cope with. The host institution should offer a possible way out of this potential dilemma as it is clearly in their interest to present the value and impact of research for society and to enter into dialogue with it. Through targeted measures, they should support

Yegor Domanov, L'Oréal, followed with three examples from France. Firstly, a programme from an engineering school, in which an internship at a company is a mandatory part of their degree programme, was presented. Secondly, he highlighted the CIFRE convention, through which individual doctoral projects are supervised both by experts from academia and the private sector. He then gave a third example of an association promoting doctoral candidates to get employed in the private sector. L'Oréal does not carry out basic research itself, but outsources it. The company mainly has one-to-one cooperations and this is one of the reasons why it does not participate in MSCA projects, in addition to IPR issues and the perceived complexity of the Programme.

Reinhard Tatschl then introduced the company AVL List Gmbh which has a strong tradition in fostering innovation. The company has been successfully participating in several MSCA ITN and RISE projects. All project participations have had a substantial outcome: they have contributed to product development and, more importantly, have brought highly skilled and enthusiastic people in touch with the company, most of them having been integrated in the hosting teams after the project ended. The early-stage researchers involved in the projects also contribute to strengthening networks of the company and cooperation with universities. The projects provide an opportunity to meet new people from new research areas. Thus, project participation has become a great source of recruiting talent to the company and its involvement in MSCA is a real success story for the company.

Using MSCA collaborations for sourcing talent

Brian Cahill, Member of the Governing Board, EuroScience, began by promoting the Marie Curie Alumni Association which offers a variety of training opportunities for researchers interested in pursuing a (research) career path in the private sector. The Alumni Association also initiated a crowd funding initiative for the production of the illustrated children's book series 'My Super Science Hero' to spark children's love of science and mathematics. As emphasised in the presentations of Workshop A.2, he underlined that many roles in industry require skills typical for researchers, though they are not advertised as research positions per se. Another previously mentioned theme was that transferable skills training should be provided. He also stressed that research career opportunities outside the academic sector need to be contextualised, as much depends on discipline and country. For example, German chemical and life science companies hire many PhD graduates and postdocs, whereas in other disciplines and in other countries this is not the case. Europe remains a very diverse continent in this regard.

Take home messages from the ensuing brainwalk were the following:

Firstly, in terms of public policies to stimulate research-business collaboration, financial incentives such as small grants aiming to solve industry problems and follow-up projects to exploit project results were seen as potential incentives.

In order to exploit synergies with the other instruments such as the European Innovation Council (EIC), the European Institute of Innovation and Technology (EIT) or the Horizon 2020 SME Instrument, a wide range of suggestions were put forward by participants: a proof of concept scheme similar to the ERC for MSCA fellows; aligning EIT/EIC priorities with the MSCA to provide a further funding possibility and to alleviate oversubscription of the latter; and provide information on the MSCA to SME Instrument beneficiaries and vice-versa.

With regards to the MSCA, further enhancing business-research collaboration, ideas included more flexibility of RISE secondments. For applied research projects, recognition of the industry-academia experience of a supervisor during the evaluation of proposals, not just academic excellence, is also important. In addition, the burden of writing proposals compared to the low success rates may be even more challenging for the private sector and needs to be mitigated.

A number of ideas for the MSCA and Innovation in Horizon Europe were put forward. The RISE scheme should be adapted to enable industry to hire early stage researchers and fund industry experts to come to academia. Projects should have the flexibility to increase innovation and impact. Stronger consideration of the non-academic, but not just 'industrial' sector, was heavily emphasised in the session. There was again extremely strong support for a proof of concept scheme for the fellowships, similar to that of the European Research Council.

MSCA Awards

In the tradition of past MSCA Conferences and in line with the general theme of the conference, namely implementation and outreach beyond 2020, the MSCA awards identified promising researchers who have benefitted or are currently benefiting from the MSCA. Applicants could choose between three categories which illustrate the richness of the MSCA project portfolio:

- I. Outreach of the MSCA project;
- II. Meeting societal challenges;
- III. Bridging (career) paths.

For the first time, applicants were invited to submit videos or selfies illustrating their research project and their creative approach. Over 100 applications were received and a shortlist was made during a virtual panel meeting involving experts from the European Commission and the Austrian Federal Ministry of Education, Science and Research. The following selection criteria were used:

- the CV and track record of the MSCA fellow;
- category chosen;
- gender diversity and geographical spread;
- creative approach;
- research topic.

At the MSCA Conference, each shortlisted finalist and his/her video were presented to the audience which was then asked to cast their paper votes. The winners were announced at the conference dinner the same evening.

The following researchers were selected as finalists, with the winners also indicated.

Category I: Outreach of the MSCA Project:

- Beatriz Rodriguez Alonso, University College Dublin, Ireland
- **Winner: Gwendolyn Bailey, KU Leuven, Belgium**
- Adrien Donneaud, Bremen International Graduate School of Social Sciences, Germany

Category II: Meeting Societal Challenges

- Alejandro Catalá, Research Center on Information Technology of the University Santiago de Compostela, Spain
- Elias Munthali; Catalan Institute for Water Research, Girona, Spain
- **Winner: Deepak Palaksha, University of Science and Technology Trondheim, Norway**

Category III: Bridging (career) Paths

- **Winner: Francisco Marcus Gonçalves, Centre for Psychological Research and Social Intervention, ISCTE-Lisbon University Institute, Portugal**
- Susana Ladra González, University of Coruna, Spain
- Enrico Risaliti, Siemens PLM Software, Leuven, Belgium

Tuesday 2nd October 2018

Plenary Session Day 2

Opening Address

Christoph Ramoser, Head of Department, Austrian Federal Ministry of Education, Science and Research

Christoph Ramoser began the second day of the conference with a speech on the theme of keeping researchers in research. A clear message of 'keep it simple, keep it open' was conveyed. Doing research is a creative process and should not be hindered by excessive administrative burden. The second emphasis was placed on 'keep it open'. New ideas often do not emerge from already established paths, but only where new ground has really been broken. Therefore, the bottom-up approach is essential if something really new and innovative is to emerge. Finally, he maintained that a broad participation of the scientific community, through research, will advance Europe.

Keep it simple!
Keep it open!

Keynote Speech

Morgane Bureau and Guillaume Fusai, Institut de la Santé et de la Recherche Médicale, INSERM

The presentation began with an overview of the how European research priority setting is organised in France exemplified in the field of life and health sciences. The Groupes thématiques nationaux (national thematic groups) coordinate with EU National Contact Points to define France's EU funding positions in terms of the two-year Horizon 2020 Work Programmes. However, Aviesan (the national alliance for life and health sciences) is responsible for coordinating the strategic analysis, scientific programming and operational implementation of life and health science research in France and is therefore the main advisor for the development of the Horizon Europe Programme. To ensure national interests are taken into account when setting priorities at EU-level, an organised consultation process is set up, taking into account feedback from the scientific community and feeding it back to the European Commission.

Ensuring alignment of national interests with European priorities

In the second part of the presentation INSERM was presented. It is the only public research organisation in France entirely dedicated to human health and the leading academic patent applicant in European biomedical research. INSERM has four cross-cutting research programmes on Microbiota, Ageing, Genetic Variability and Human Development Cell Atlas. INSERM is also involved in the steering and implementation of France's National Health Plans. INSERM has been awarded the label 'HR Excellence for Research' by the European Commission. Support is available for researchers who want to come out of research and for those scientists experiencing difficulties in their career and who want to get back on the right path.

Panel Discussion

Taking Up the Discussions on the First Day and Linking them to the Following Workshops on MSCA's Future Areas of Intervention

Morgane Bureau, Guillaume Fusai, Enikő Kallay, Dept. Pathophysiology and Allergy Research, Medical University of Vienna, Bodo Richter

The session began with highlighting the importance of MSCA projects in terms of transferable skills training and access to academic and non-academic networks. However there is a need in particular to provide more comprehensive support to early-stage female researchers and encourage them to apply for funding as it can indeed boost their careers. In addition, the importance of training being provided in English to allow international MSCA early-stage researchers to benefit was discussed. Providing support services to and generally 'welcoming' international incoming researchers requires the involvement of a number of different institutional stakeholders, both from the academic and non-academic spheres, and sometimes even a cultural change. To facilitate this, the MSCA can also be used as a strategic tool. For example, the provisions of the Charter and Code are translated into a dedicated article of the Grant Agreement, and therefore could influence human resource management and strategy.. The European Commission emphasised that the future development of the MSCA Programme relies upon input from people 'on the ground' who also have a responsibility to communicate their experiences and the long-term impact of MSCA projects to policymakers. This would make the case for attributing more funds to training and career development programmes such as the MSCA.

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Increase participation
of female researchers
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Workshops on MSCA Future Areas of Intervention

MSCA focus on excellent and open science and address any field of research and innovation from basic research up to market take-up and innovation services. MSCA furthermore contribute to the ERA in making it more effective, competitive and attractive. The areas of intervention beyond 2020 reflect on the need for MSCA to remain flexible, responding to global challenges and at the same time referring to excellence and attractiveness for researchers.

Four workshops were organised on this topic.

WS B.1: Nurturing Excellence through Mobility - FELLOWSHIPS

The aim of this workshop was to generate and exchange ideas on how MSCA Fellowships will look like in Horizon Europe, focussing on strengthening fellow's career prospects and enabling them to move and collaborate between countries and disciplines, whilst maintaining their aim and their structure. The Commission's proposal foresees that MSCA actions will continue, and that the evolution towards Horizon Europe will be in the actions' implementation. More specifically towards the Postdoctoral Fellowships action (successor of the Individual Fellowships in Horizon 2020) the emphasis will be on: strengthening mobility and career development for researchers; improving the action's attractiveness to both newcomers and excellent scientists, whilst coping with the increasing demand. These themes were discussed further in four breakout groups.

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Simplify: one
scheme for all
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Improving Accessibility - How to Simplify, Clarify and Manage Demand

The Commission proposed simplifying MSCA Individual Fellowships by offering one single scheme, one mobility rule and better definitions of the target group. The breakout group, comprising representatives of research institutions, agreed in general with the ideas proposed for simplification. Concerning the rising demand and the possibility of one measure to limit resubmissions, the group maintained that solutions which have already been applied and proven should be analysed and eventually implemented. A reasonable proposal for a resubmission rule should start with a good definition of the resubmission concept and process. However, measures should be developed carefully and consciously to avoid detrimental effects to a researcher's career. Given the early stage of their career, researchers should never be prevented from resubmitting for more than one call. The promotion of the MSCA schemes to newcomers could be improved by streamlining promotion with other schemes (ERC, Erasmus Fellowships) and involving stakeholders that may enhance outreach (e.g. EC delegations, EIT, Euraxess Links, embassies, international cooperation networks). MSCA already have attractive conditions, the promotion of which could be improved by using innovative means (e.g. television adverts). Simpler rules, a simpler structure of the proposal form and simpler management of the fellowships could also make the whole process of applying for the funding and moving to Europe easier. There is also a need to fund a family allowance should the family situation of the researcher change during the lifetime of the project.

Strengthening Career Development for Postdocs

The idea proposed to the group is that the scheme would focus on the group of PhDs (0-6 years of being active in research after obtaining a PhD) in order to support a younger generation instead of funding for example professors going on sabbatical leave. This would in particular also contribute to reducing the 'Postdocs-for-life' or 'permadoc' phenomenon of continuous temporary contracts for postdocs in many countries. However, career breaks and intersectoral mobility (outside of research) must be taken into account when assessing eligibility. Considering the scientific age is a possibility to reduce the number of submissions and raise the success rate, a current challenge for the Programme. However in order to maintain some openness, and following the ERC Programme, the MSCA could propose a balanced solution through a pilot scheme in the 2020 MSCA Work Programme that would be divided into two career stages: 1/3 of the budget (6-10 years after PhD) and 2/3 budget (until 6 years after PhD). This could be a mid-term solution and would allow enough time to analyse the results in preparation for Horizon Europe. Finally, in terms of strengthening career development, the group also suggested offering mentoring programmes aiming to help postdocs broaden their perspectives for career development and preparing them for different career tracks.

Delivering Talents: Preparing Highly-Skilled People for Different Careers, In and Outside Academia

As highlighted throughout the conference, preparing researchers for different sectors and ensuring that academic knowledge is transferred via people to other sectors must not be seen as a failure. On the contrary, it should be seen as a success. Thus, the Commission proposes to incentivise intersectoral mobility and exposure to a non-academic environment by for example extending fellowships for six months to allow this. Common challenges related to intersectoral mobility were once again raised: lack of appropriate career advice, potential mismatch of skills and competences and an unclear impact on the academic career.

The length of the fellowship extension in order to have a significant impact on the future career outside of academia remained a discussion point.

Talents for the Entire ERA: Contributing to Closing the Research and Innovation Divide

The Commission proposes to maintain the Seal of Excellence concept, extend the Widening Fellowships pilot and/or introduce brain circulation fellowships in Horizon Europe. These initiatives would build research capacity in so-called widening countries. These initiatives were welcomed but the actual implementation requires serious consideration of all scenarios in order to avoid additional efforts for applicants and host institutions. The group suggested investigating alternative funding schemes for Widening Fellowships which links with discussions in Workshop B.4.

WS B.2: Fostering New Skills - NETWORKS

The session began with an overview of Innovative Training Networks (ITN) in Horizon 2020. There are high application numbers and, moreover, high resubmission rates (47.3%). The main sub-action is the European Training Networks (ETNs). There is a clear demand for continuing to support doctoral training networks and it is essential to improving the success rates (currently around 7.3%). Breakout groups were asked to look at what are the main challenges for ITNs in Horizon 2020 and what are potential solutions and new ideas to improve ITNs in Horizon Europe. Current challenges in the ITN scheme were the first point of discussion and can be grouped in three areas:

Employment Conditions. Various salaries and conditions per country are causing a mismatch with non-ITN funded researchers (academia and industry). Country correction coefficients for salaries are often not realistic, leading to major funding gaps for the host institution. Another issue is related to the PhD status as students versus employees.

Implementation Problems. The communication between industry and academia is sometimes misaligned. In addition in some cases there is a lack of support for researchers on secondment and companies are reporting high administrative burden for EIDs. In general, doing a PhD within three years is already a challenge and becomes more difficult if secondments and network training are incorporated. On occasion, IPR issues between academia and industry hamper the start of the project and its implementation.

ITN Scheme Challenges. The major challenge is the extremely low funding rate and high demand. Participation in ITNs is currently dominated by a relatively small number of universities. This deserves further investigation to identify potential obstacles perhaps linked to national legal frameworks which potential recruiting beneficiaries have no power to change. On the other hand, it was also clear that the universities have to improve their procedures e.g. to shorten the length of time spent negotiating Consortium Agreements. Other challenges included a lack of SME involvement and a need to make the evaluation process more transparent and consistent.

A number of solutions to various challenges were then proposed, which could be implemented in Horizon Europe. Firstly the future budget of the MSCA Programme and the need for an increase was a major topic of discussion, both in this workshop and during the whole conference. National governments and MEPs should be lobbied to support a budget increase.

Funding rates for
ITNs must increase
significantly

A number of solutions for managing the demand for ITNs in Horizon Europe were presented. A resubmission system similar to the ERC could be introduced, however, as emphasised in the discussions on resubmissions to the fellowship schemes, realistic criteria for a resubmission need to be developed, e.g. what has been improved must be indicated in the new application, and evaluation feedback on applications must be clear, consistent and project-specific rather than generic. The idea of simplifying to just one ITN funding scheme was put forward and supported. Evaluation criteria would however need to be adapted and specific incentives would be needed to encourage non-academic participation and to encourage applications for joint doctorate schemes.

The application process needs to be simplified and deadlines should be aligned and moved away from holiday periods. It was stressed that administration guidelines are needed for ITN managers, including information on budget reallocation.

In order to improve cross-sectorality of ITNs in Horizon Europe recommendations included raising more awareness of ITNs among SMEs and involve the Enterprise Europe Network (EEN) in ITNs. A specific partner search facility for SME involvement in ITNs could also be offered. A specific standard contract for IPR Agreements in ITN projects would also be welcomed.

WS B.3: Strengthening Human Capital and Skills Development - EXCHANGES

This session looked at how the future staff exchange programme can effectively foster enhanced cross-sectoral, international and also cross-disciplinary collaboration in Horizon Europe. Martin Mühleck, Policy Officer of the European Commission, began by presenting a summary of the RISE scheme and introduced some changes that are being considered to overcome current issues and restrictions. Workshop participants then discussed four major topic areas.

The **focus of the exchanges** was firstly debated. There was a strong agreement that in the future the added value of the exchange needs to be the main criterion for selection, for instance new networks for innovative ideas next to scientific excellence of research activities. Risk tolerance could be increased and exchanges could test high-risk novel ideas. A widening participation element could be strengthened within the scheme. As with other schemes and a common discussion point at the conference, simplification should also be strived for, i.e. secondments should be flexible. For example secondments to different partners by the same staff member should count towards the minimum required duration of a stay, part-time working should be allowed and administrative complexity should be reduced.

The added value of the exchange should be in the focus

Ensuring **interdisciplinary exchanges could be achieved** by increasing funded exchanges within the same sector, between different Member States and Associated Countries, if they are interdisciplinary. Interdisciplinarity is challenging to define and would need to be predefined at application stage should it become an eligibility criterium. A first filter online (e.g. based on bibliographic data) could be provided to mitigate the administrative burden for researchers checking if they are eligible.

The RISE scheme should continue in its aim to **strengthen international exchanges**. Small 'tweakings' to the scheme could include increasing the subsistence allowance which is too

low for many countries and more involvement of local agencies who would take care of the administrative side of the exchanges, similar to the DAAD funded visiting scholarships.

The **facilitation of intersectoral exchanges** was also seen as a strong element of the current scheme. More promotion of the scheme amongst the non-academic sector is needed, in particular its added-value and highlighting of success stories. The scheme needs to be flexible and not burdensome to ensure participation in particular of industry partners. A skills gap analysis should be the first step of each exchange scheme: the training would then be based on this. It was particularly stressed across the board that it is extremely important that PhD candidates can participate in the staff exchanges.

WS B.4: Improving and Facilitating Synergies – SYNERGIES

The fourth and final workshop looked at adapting the current MSCA COFUND scheme to be more effective under Horizon Europe and also ensuring synergies between the MSCA Programme and other parts of Horizon Europe and other EU funding programmes. Bodo Richter of the European Commission introduced the current MSCA COFUND scheme as well as some initial ideas about the future MSCA Synergies action before three break out groups discussed topics relevant to its future development and synergies with other programmes.

Enhance flexibility during implementation to maximise efficiency and impact

Modifications to the current COFUND scheme and characteristics which should be retained were firstly discussed. The possibility to extend the duration of the COFUND-funded project in case of family leave, sick leave etc., or to reallocate person-months internally when a fellow leaves early, is essential. Flexibility during project implementation was in fact a key message in this workshop.

A separate evaluation panel for smaller projects would help to fund smaller projects, which may find it difficult to compete with larger projects in terms of impact. In the same vein, projects could be limited to a maximum of €5M, to allow more projects to be funded. Using national funding to match fund with COFUND can be a challenge if national programmes are normally funded to a lower level than MSCA or, for example, employment rules of PhD candidates at national level conflict with MSCA rules. Workshop participants were undecided on the suggestion to limit awards to two per beneficiary in Horizon Europe as much effort is required to set up a programme, so naturally beneficiaries want to continue and submit successor applications. Moreover, beneficiaries are very different in size throughout Europe and this needs to be taken into consideration.

Achieving **synergies within Horizon Europe** would be a challenge to implement, but ideas included MSCA fellows having the freedom and support to engage with other parts of the Programme; a ‘Seal of Excellence’-type label for MSCA projects relevant to the new Horizon Europe Missions could be developed; and training could be shared between ITNs and the EIT, for example, training developed in a Knowledge and Innovation Community (KIC) could be made available to ITNs.

Finally, and also a cross-cutting theme of the conference in general, **synergies with other EU funds were explored**. Structural Fund Programmes offer serious possibilities for synergies with the MSCA and Horizon Europe Programme: however achievement of this is only possible if financial rules and calls for proposals are fully aligned. Responsible parties and decision makers from all relevant funding schemes would need to collaborate closely in this regard. Further use of the Seal of Excellence e.g. to identify talent in Widening Countries

and synergies with the Erasmus Programme e.g. possibilities for teaching in Joint Masters Schemes were also discussed.

Keynote Speech: Perspectives on European Early-Career Researcher Training

David Bogle, University College London

In his keynote address, David Bogle, Pro-Vice-Provost of the Doctoral School at UCL and Chair of the LERU Doctoral Studies Policy Group, looked at the perspectives of European early-career researcher training. At the beginning, he recalled the benefits associated with MSCA. The programme has established itself as a brand and therefore prestige is associated with the acquisition of an MSCA grant. In addition, there is the opportunity to build sustainable connections and relationships that promote researchers in their careers. Koen Jonkers already impressively demonstrated on the first day of the conference that this could also be proven with data. This makes MSCA both an important programme for outstanding researchers who can take another important step in their career as postdocs, and an important academic talent pipeline.

He also illustrated how important the MSCA Programme is for universities in the UK, but only touched briefly on the expected negative consequences for science in the UK which are to be anticipated with BREXIT, probably because nobody in the audience had to be convinced of the associated damage for the ERA and especially for the UK as a research location. In his presentation, he referred to a series of LERU Doctoral Studies Reports that had a lasting influence on the European discussion about doctoral studies. It is important to stress that doctoral candidates are the drivers of their professional development, while universities must ensure that they are embedded in a research-rich environment, where the boundaries with other research fields are highly permeable.

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The impact of
research is made
by people
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The international perspective in doctoral education is as important as the link with other sectors of society to ensure that the skills developed by new doctorate holders are of high value to the knowledge society. This is particularly relevant because we know that graduates continue their careers in a variety of sectors. This ranges from employment in the public, private and charitable sectors, working as policy and government consultants, or in management functions or as entrepreneurs. From a national strategic approach, the skills of researchers should be seen as a national resource for the public and private sectors, essential for a business-friendly environment and are therefore linked in the UK to the British Industrial Strategy. Thus, it must be borne in mind, that the impact of research is not only through papers, patents and data, but mainly through people. David Bogle referred to the LAB – FAB – APP report and argued that we need to make education future-oriented and invest in people who, as innovators, will make the difference.

At the same time, we need to do more to capture the impact and communicate it. He then went into more detail on the topic of skills development for postdocs, thus confirming the position already articulated in many contributions at this conference. The skills that postdocs need to acquire relate to strategic research leadership, i.e. broadening perspectives, strategic thinking, or identifying new research lines. These skills also relate to leading the business of research, including finance, pitching and influencing, public engagement, research management and communication. Many of these skills are critical for the postdoctoral career level and typically belong to the transitional period from being an

individual researcher to becoming a PI and group leader. Universities, especially MSCA host institutions, are called upon to offer suitable support structures, such as those mentioned by Jan van der Boon on the first day of the conference.

At the end of his intervention, an outlook on future trends was given, which will also be reflected in the MSCA Programme in Horizon Europe. These include the need to further improve links to the professional world and to strengthen cooperation with the non-academic sector in order to facilitate research experiences in the professional context. The recognition of broad career opportunities as drivers of innovation, both for doctoral candidates and postdocs and the need to promote and support such careers proactively, e.g. through training opportunities will also be imperative. Europe must, and moreover cannot afford not to, consider all existing talents. Diversity therefore remains a pressing issue when it comes to attracting less represented groups to research. This refers to gender, ethnicity and disability. Last, but not least, the use of open science and applying methods and principles of open innovation to improve the novelty and impact of scientific research will further continue and researchers must be familiar with these concepts.

Closing Speeches

Sophie Beernaerts and Barbara Weitgruber

The conference was brought to an end with words of thanks to all the speakers, background support staff, and especially to the organiser Patrizia Jankovic and her team.

In her closing remarks, Sophie Beernaerts also thanked all participants of the conference, who provided important input for the work of the Commission through their active participation in the workshops and discussions. Of course, many discussions with the various stakeholder groups are still on the agenda, especially as we are just at the beginning of the road to a new Framework Programme. Nevertheless, the suggestions she could take with her to Brussels were varied and extremely helpful for the process yet to come.

Barbara Weitgruber, the host of the conference, joined the words of thanks. On this occasion she also congratulated the MSCA awardees on their achievement. She also thanked the Commission for its interest in using both the conference as a platform and the extensive expertise of the participants to get insights when starting to shape the MSCA in Horizon Europe. She emphasised that it is a very welcome sign to see the Commission indeed listening to the people who are really concerned with MSCA and in charge of implementing it. Last but not least, she expressed her confidence that the meeting would have an impact on the further development of the MSCA and closed the conference.