

Marie Skłodowska-Curie Actions Fostering Ireland's Future Talent

A crucial component
of a rich and diverse
research system



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The Marie Skłodowska-Curie Actions (MSCAs) provide a vital source of funding for bottom-up research through innovative training projects anchored on international mobility. Ireland has been extremely successful in the MSCAs throughout Horizon 2020. The advent of Horizon Europe presents an opportunity for Ireland to aim even higher in this programme by supporting research actors, across all disciplines and sectors, and enabling more talent to follow in the footsteps of Madame Curie.

Introduction

Marie Skłodowska-Curie was a highly ambitious, passionate, and inspirational scientist, famous for her discoveries of polonium and radium and winner of two Nobel Prizes. In fact, she was the first woman to win a Nobel Prize and was the first person, and only woman, to win the prize in two different fields. Through her determination in overcoming barriers and her curiosity about the unknown, she demonstrated values that have become some of the central tenets of the European Commission's Marie Skłodowska-Curie Actions (MSCA), a programme which has enabled over 1,400 young researchers in Ireland to follow in her pioneering footsteps.

With a focus on curiosity-driven, bottom-up, excellent research, the MSCAs fund innovative research training projects involving career development and knowledge-exchange opportunities through international, intersectoral, and interdisciplinary mobility of researchers, to better prepare them to address current and future societal challenges. The research and innovation activities, and importantly the highly skilled human capital supported by the MSCAs, contribute greatly to a vibrant, broad-based research base in Ireland and across Europe, boosting jobs, growth, and investment.

Since the advent of the 'Marie Curie brand' in the EU's Fourth Framework Programme for research and technological development in the mid-1990s, the programme has set the benchmark for attracting top talent and promoting excellent working conditions for researchers. Over the years, the MSCA awards have become highly prestigious, widely known among the global research community for the calibre of the graduates and fellows who benefit from the MSCAs' strong emphasis on training and development.

Indeed, the proof is in the Nobel pudding, with no fewer than 12 beneficiaries of MSCA funding going on to win Nobel Prizes. The MSCA prestige even extends as far as the Academy Awards: Professor Anil Kokaram of Trinity College Dublin shared an Oscar with London-based company The Foundry for their work on visual effects software, which received prior MSCA funding, used in films such as *The Da Vinci Code* and *Charlie and the Chocolate Factory*.

Research culture

For a researcher, being part of an MSCA award brings many benefits, such as exposure to international networks, structured and in-depth collaboration across sectors and disciplines, international secondments, and increased visibility of their research. Combining this with world-class training and career development opportunities results in graduates and researchers who are highly employable across all sectors.

The bottom-up nature of the MSCAs, a key selling point of the Actions, means that researchers have the opportunity to freely choose their topic from across all disciplines. This presents a fantastic opportunity for academic researchers to shape their research vision and for those in non-academic sectors to respond to short-, medium-, and long-term innovation needs.

This has been key to supporting a diverse and exciting research culture in Ireland. Across sectors and disciplines, researchers are pushing the frontiers of new knowledge and contributing to solutions to important societal challenges. These include exploring how social class is taught and learned in private rock-music education, studying antibiotic-resistant bacteria in the global fight against antimicrobial resistance, investigating the link between early education and poverty, developing new materials to improve the safety of high-voltage systems in electric vehicles, and creating new ways to enable students with intellectual disabilities to become active in research.

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In breaking down cross-sectoral boundaries, the research funded by the MSCAs is creating a better society for Ireland by ensuring appropriate and timely use of the research findings. MSCA researchers have been embedded across sectors, collaborating with actors such as government departments on social policy on employment to widen participation in the labour market, with civil society organisations to develop innovative solutions to reduce the adverse social consequences of trauma-related psychological distress, and with companies in sectors that are key to a prosperous economy in Ireland, such as ICT, pharmaceuticals, and the meat and dairy industries.

Ireland has been very successful in the MSCAs, receiving over €196 million since 2014, making the MSCAs the area of highest drawdown nationally in Horizon 2020. To put this in context, over €1.18 billion has been awarded to researchers in Ireland across all sectors and disciplines across the entire suite of funding programmes under the H2020 umbrella. Ireland's excellent performance is further evidenced by the fact that its average national success rates in the MSCAs most often exceed the European average.

Thriving through collaboration

The higher education sector accounts for over 80% of Ireland's drawdown from the MSCAs, most of which has been awarded to our universities. The remaining 20% has been awarded to companies, civil society organisations, and other public bodies. With the launch of Horizon Europe, we are entering an exciting new phase for the MSCAs. The office will work with actors across the system to strengthen engagement, in particular with the technological universities, institutes of technology, private enterprise, and civil society organisations, with the ultimate goal of increasing participation across the various MSCA programmes to build on Ireland's success levels across all sectors.

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The MSCAs are considered a national asset and a vital funding source for enabling a diverse and thriving research and innovation community in Ireland. The Irish Marie Skłodowska-Curie Office (IMSCO), based at the Irish Universities Association, has as its overall objective to maximise Ireland's success in the programme. We do this by providing a 'conception to completion' service offering support and guidance to MSCA applicants and awardees from across the research system, including higher education institutions, research organisations, private enterprise, civil society organisations, public bodies, and beyond.

The Irish Research Council's (IRC) funding of the IMSCO is critical in sustaining and enhancing engagement in the MSCAs, which ultimately contributes towards Ireland's strategic aims of building a research and innovation talent pipeline, supporting researchers' career development, ensuring cutting-edge research activity, and stimulating and enhancing research and innovation activity across the public and private sectors. The IRC's continued commitment to resourcing the IMSCO means that more people and organisations, across all disciplines and sectors, will benefit from targeted support.

Given the highly competitive nature of the MSCAs, the research and innovation community in Ireland can be proud of its success and past achievements. But this is not a time to rest on our laurels. Achieving our vision of being Europe's top performer in the MSCAs in terms of drawdown per capita will require an *all-of-system* approach.

We will strive to achieve this by collaborating with universities to identify further target areas and disciplines and by working with the technological universities and institutes of technology to build capacity and develop skills necessary for supporting MSCA applicants. Furthermore, by actively engaging with representative bodies in the non-academic sector, we will promote the Marie Skłodowska-Curie Actions as an attractive mechanism to address talent shortages and support the research and innovation activities needed for Ireland's economy and society to prosper.