

SOMOPRO

South Moravian Programme for Distinguished Researchers

Good practice

Member State, (NUTS2) Region: South Moravia, Czech Republic

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Main institutions heading the initiative:

The South Moravian Programme for Distinguished Researchers (SOMOPRO) was led by the JCMM – South Moravian Centre for International Mobility.

Organisations involved:

- · South Moravia Region
- European Commission through the Marie Skłodowska-Curie Actions (COFUND project)
- · Host Universities:
 - Mendel University
 - University of Veterinary and Pharmaceutical Sciences Brno
 - Obrany University
 - The academy of sciences of the Czech Republic
 - Masaryk University
 - Brno University of Technology
- Centre of Excellence: CEITEC (Central European Institute of Technology)

Project duration:

SOMOPRO II: 2009-2013 SOMOPRO III: 2012-2017 SOMOPRO III: 2015-2020

Main sector targeted: Competitiveness and innovation; Demographic dynamics

Goals of the initiative:

The primary goal of the South Moravian Programme for Distinguished Researchers (SOMOPRO) was to **enhance the quality of research in the South Moravian region by attracting highly qualified international researchers**. The initiative aimed to stimulate regional excellence by facilitating researchers' training, mobility, and career development and spreading the best practices of the Marie Skłodowska-Curie Actions (MSCA). Through these efforts, SOMOPRO intended to **create a vibrant and dynamic research environment** that would contribute to the region's overall innovation and competitiveness.

Official website:

https://www.somopro.cz/





Implementation costs

Total budget: Total budget: EUR 12.1 million, split by

SOMOPRO I: EUR 3.6 million, SOMOPRO II: EUR 4.7 million and SOMOPRO III: EUR 3.8 million

Sources of funding: Regional (57%) & EU Funding, COFUND¹ (43%).

Amounts:

	Regional Funding (EUR)	COFUND (EUR)
SOMOPRO I	2,150,696.79	1,433,797.86
SOMOPRO II	2,859,937.36	1,906,624.91
SOMOPRO III	1,829,000.00	1,829,000.00
Total	6,839,634.15	5,169,422.77
	(57%)	(43%)

Short summary of the project

The SOMOPRO initiative aimed to enhance the quality of research in the South Moravian region by attracting highly qualified international researchers. The programme offered fellowships to experienced researchers, facilitating their mobility and career development. These were open to experienced researchers, namely PhD holders and fellows with extensive research backgrounds. The programme brought into the country both foreign and Czech researchers who had been active abroad, supporting them in establishing themselves in the region.

The initiative was co-funded by the European Commission through the Marie Skłodowska-Curie Actions (COFUND project) and regional sources. By **aligning with the Regional Innovation Strategy (RIS)**, SOMOPRO aimed to foster innovation and scientific excellence in strategic sectors for the regional economy of South Moravia. The success of the initial phase led to the launch of SOMOPRO II and SOMOPRO III, which funded additional scientific research projects.

Regional context

The South Moravian Region, particularly Brno, stands out as a significant hub for research and innovation in the Czech Republic. Historically, the region has been a centre of cultural and economic activity, with Brno serving as a crucial industrial city. The transition from a communist to a capitalist economy in the 1990s brought significant structural changes, prompting increased investment and policy efforts to strengthen industrial and research infrastructure and positioning the region as a key player in innovation. Brno's transformation into a research hub is attributed to several factors. The city is home to 13 universities, including Masaryk University and Brno University of Technology, which attract a large number of students and researchers. The presence of these institutions has fostered a vibrant academic environment, contributing to the city's reputation as the "Czech Silicon Valley".²



In 2011, the establishment of the Central European Institute of Technology (CEITEC) further cemented Brno's status as a research powerhouse. CEITEC focuses on life sciences, advanced materials, and nanotechnologies, attracting international talent and fostering collaboration between academia and industry. At the same time, supportive regional policies, such as the implementation of the SOMOPRO in 2009, have enabled the region to attract innovative researchers. Despite significant investment into infrastructure, strong academic institutions, and a supportive environment for researchers, South Moravia faced two key challenges in its emergence as an important research hub in Europe. On the one hand, the region struggled to attract foreign researchers, and, on the other hand, it lacked sufficient support for Czech researchers returning from abroad to reintegrate. The SOMOPRO program aimed to address these challenges along with enhancing the overall research quality of the region.

Effectiveness

Types of activities

SOMOPRO implemented a comprehensive range of activities to achieve its goals of attracting, training, and retaining highly qualified researchers. These activities were designed to foster a dynamic and supportive research environment in the South Moravian region.

Research Fellowships:

The SOMOPRO programme provided research fellowships for experienced scientists, enabling them to carry out projects at host institutions for periods of 12 to 36 months. These fellowships were open to both foreign and Czech researchers who had spent at least two of the past three years outside the Czech Republic and either held a doctoral degree or had at least four years of research experience. Fellows received a monthly contribution of €5,750, covering living expenses, research activities, training, and overheads. At the core of SOMOPRO's mission was the transfer of knowledge and expertise, strengthening Brno's universities and research institutions by embedding internationally trained researchers into local ecosystems. This approach fostered innovation and collaboration, as fellows engaged in collaborative projects, joint publications, mentoring relationships, and the adoption of novel methodologies. Many researchers also partnered with local industries, for example in Brno's globally recognised electron microscope sector, facilitating synergies between academia and industry. The programme focused on cutting-edge technical fields, including life sciences, biomedicine, material research, ICT, electronics and photonics, and advanced manufacturing technologies. By integrating both foreign and returning scientists with local research networks, SOMOPRO contributed to strengthening the region's research capabilities and innovation ecosystem. More details about individual researchers, their projects, and their stories can be found here.

Supporting the wellbeing of researchers:

A key to the success of SOMOPRO was its focus on the personalised support provided to researchers relocating to the South Moravian region. A project member dedicated to this task offered comprehensive assistance to help researchers settle into their new environment. This support included finding suitable housing, navigating local administrative procedures, and integrating into the local community. This personal accompaniment ensured that researchers could focus on their work without being overwhelmed by the challenges of relocation, thereby enhancing their overall experience and productivity.

Continuing Cooperation and Long-term Impact:

SOMOPRO focused on continuing cooperation among fellows and host institutions, ensuring long-term relationships and sustained impact. The programme's activities led to the creation of a dynamic and supportive research environment, involving researchers from the programme, local researchers and host universities.

Overall, SOMOPRO's diverse range of activities contributed significantly to the programme's success in attracting, training, and retaining highly qualified researchers, fostering a vibrant and innovative research environment in the South Moravian region.



Important outputs, results & achievements

SOMOPRO has achieved significant outputs and results throughout its implementation, contributing to the enhancement of the research and innovation potential of the South Moravian region. One of the key achievements of the programme was the successful facilitation of knowledge creation and knowledge transfer between fellows and host institutions.

This exchange enriched local research groups through international exposure, fostering innovation and collaboration. The programme's focus towards fields with the highest potential for innovation and economic impact enabled the transfer of research findings into practice, bolstering the regional industry.

Another achievement of SOMOPRO was the high retention rate of researchers. Approximately half of the fellows (35 out of 71) decided to continue working in the region after the programme ended. This outcome was particularly significant given that the programme was initially designed as a temporary mobility scheme. The retention of researchers not only contributed to the region's research capacity but also helped to address the brain drain phenomenon by encouraging highly skilled individuals to remain in the region.

SOMOPRO also played a crucial role in enhancing the quality of higher education in the region. Researchers involved in the programme supervised PhD students, helped to improve the quality of education in universities, and fostered new ties with other research teams. This contribution to education and training further strengthened the region's research ecosystem.

In terms of academic outputs, SOMOPRO I contributed to a wealth of research publications³:

- 61 peer-reviewed publications in highly regarded academic journals.
- Research spanning multiple important disciplines, including biomedical research, genetics and genomics, quantum mechanics, environmental sciences, material science, computational biology, and analytical chemistry.
- The research has industry applications in biotechnology, pharmaceuticals, quantum computing, clean energy, advanced materials manufacturing, medical diagnostics, environmental sustainability, and high-performance electronics.



The programme's impact is also demonstrated by the fact that the achievements of **SOMOPRO I** paved the way for subsequent phases, **SOMOPRO II** and **SOMOPRO III**, which supported additional scientific research projects for both Czech and foreign fellows. These later stages expanded on the progress of the initial programme, further strengthening the region's research and innovation potential.

In terms of publications, the second and third phases also contributed significantly to academic outputs. They resulted in **69 academic publications**⁴ across various thematic fields that have industry relevant applications, such as:

- biomedical research and neuroscience (industry-relevance: advancing drug development, neuroimaging, and neurodegenerative disease treatments);
- materials science and nanotechnology (developing nanostructured coatings, transparent ceramics, and biodegradable materials for medical, aerospace, and electronics applications);
- quantum mechanics and theoretical physics (contributing to quantum computing, secure communication, and advanced sensor technology);
- environmental science and sustainability (addressing water contamination, pollution control, and eco-friendly materials for green industries);
- wireless communication and signal processing (enhancing 5G networks, IoT, and vehicle-to-vehicle communication);
- biochemistry and molecular biology (improving understanding of protein interactions, genetic regulation, and biomolecular processes for biotechnology and medical research).

Moreover, across all three phases, SOMOPRO made 21 datasets and several software applications available through OpenAIRE⁵, thereby contributing to the accessibility of important research resources.

Overall, SOMOPRO's important outputs, results, and achievements underscore its contributing role in advancing the research and innovation landscape of the South Moravian region. The programme's comprehensive approach to talent attraction, training, and retention has created a vibrant and dynamic research environment, laying foundations to the region's long-term overall competitiveness and economic growth.





The success of SOMOPRO can be attributed to several key factors that collectively contributed to its effectiveness in attracting, training, and retaining highly qualified researchers.

Holistic Approach

One of the primary success factors was SOMOPRO's holistic approach to supporting their fellows. The programme addressed various aspects of researchers' training, mobility, administrative support and career development, ensuring that all elements of the initiative were interconnected and mutually reinforcing. Examples of voluntary trainings provided were the offering of a training in soft skills and a course on how to write a good research proposal that would fit the requirements of <u>GAČR - The Grant Agency</u> of the Czech Republic. This holistic approach allowed SOMOPRO to create a supportive and dynamic research environment that catered to the diverse needs of researchers.

Collaboration and Partnerships

Close collaboration between JCMM, the South Moravia Region as promoter of the Regional Innovation Strategy (RIS), and participating institutions played a crucial role in the programme's success. This partnership facilitated effective communication, resource sharing, and the development of tailored solutions to meet the needs of both researchers and host institutions. The involvement of multiple stakeholders, including universities, research centres, and regional authorities, ensured that the programme was well-supported and aligned with regional priorities.

Regional Initiative

A key factor in SOMOPRO's success was securing regional funding. The regional authority provided financial support, with approval from its Council, reflecting a strong commitment to advancing science and research in South Moravia. This proactive backing meant the SOMOPRO team did not need to justify the programme's value, allowing them to focus on preparing and submitting the COFUND application. The regional support not only facilitated access to funding but also reinforced SOMOPRO's ambitions, enabling the successful implementation of multiple programmes.

Key challenges

SOMOPRO faced several challenges throughout its implementation. One challenge was the complex administration due to multiple rules and regulations at the Czech, EU, and host institution levels.

Navigating these different sets of rules required administrative effort and coordination, such as, for example, to support international candidates with their residence permit and right to work in the Czech Republic. Indeed, 15 out of the 71 researchers involved in the project came from non-EU countries, and thus required more intense support for their mobility permits.

Additionally, **the Czech environment posed a language barrier**, as foreign languages are not widely spoken by the region's residents, making it sometimes difficult for international researchers to integrate and communicate effectively. Despite these challenges, SOMOPRO managed to achieve its goals through careful planning, supporting researchers in their administrative tasks, integration, collaboration, and leveraging the best practices of the Marie Skłodowska-Curie Actions.⁶

Scalability⁷ and replicability⁸

Scalability

SOMOPRO has demonstrated a strong potential for **scaling up to a national level**, given its success in attracting high-caliber international researchers and strengthening South Moravia's research ecosystem. The program's core components—competitive fellowships, integration with regional innovation strategies, and personalised support for researchers—provide a **scalable model** that could be extended across the Czech Republic (or at a national level more generally) to enhance research excellence nationwide.

For national expansion, **sustained and diversified funding** would be essential. The program's co-funding model, combining regional and EU resources, has been effective at a regional scale, but a national rollout would require broader financial commitment, potentially through national research funds or expanded EU partnerships. Securing long-term financial stability would ensure continuity and prevent dependency on temporary funding cycles.

Another critical factor for successful scaling is **ensuring high-quality research environments** across multiple regions. SOMOPRO's appeal lies in its strong academic and institutional infrastructure in South Moravia, particularly in Brno, where leading universities and research centers provide cutting-edge facilities. Expanding the initiative nationally would require assessing which institutions have the necessary research capacity and ensuring that new host institutions can offer similarly competitive conditions to attract top-tier researchers.

Additionally, **administrative capacity** must be expanded to manage a larger number of fellows across multiple locations. The program's success has been driven in part by its **personalised support for researchers**, including assistance with relocation and integration. A national version would need well-coordinated administrative structures to provide similar levels of service across different regions, ensuring that researchers receive the necessary logistical, legal, and professional support.

In summary, **SOMOPRO's core model is well-suited for national expansion**, provided that funding is secured, research institutions maintain high standards, and administrative support is scaled appropriately. By carefully **aligning with national research priorities** and ensuring consistent program quality, a nationwide rollout could significantly strengthen the Czech Republic's position as a leading research hub.



Replicability

The **SOMOPRO model is highly replicable**, offering a structured approach to attracting international research talent and strengthening regional innovation ecosystems. Its alignment with regional development strategies, integration with international mobility programs, and comprehensive researcher support services make it a **strong template for other regions or countries** looking to enhance their scientific competitiveness.

For successful replication, the first important factor is **the presence of strong research infrastructure**. Regions aiming to adopt a similar initiative must have universities and research institutions capable of hosting international researchers with access to high-quality facilities, funding, and collaborative networks. SOMOPRO functioned in South Moravia due to its well-established research hubs, including CEITEC and multiple universities in Brno. Without a comparable research environment, a similar program elsewhere might struggle to attract and retain top-tier talent.

Another key consideration is **long-term financial commitment**. SOMOPRO's funding model, which combined regional government contributions with EU co-funding, provided stability and enabled the program to operate across multiple phases. Regions or countries seeking to replicate this approach must secure sustainable funding, either through **government grants, regional development funds, or EU research programs like Marie Skłodowska-Curie COFUND**. Ensuring continuity beyond an initial funding cycle is crucial to maintaining program impact over time

Additionally, **administrative and legal frameworks** must be adapted to support researcher mobility. A significant portion of SOMOPRO's success stemmed from its **personalised support services**, assisting researchers with relocation, housing, visas, and administrative procedures. For replication in other regions or countries, dedicated support structures must be established to ensure smooth integration for international researchers. In some cases, modifications to work permit regulations, funding distribution mechanisms, or institutional collaboration agreements may be needed to facilitate implementation.

Finally, **political and institutional backing** plays a vital role in the program's sustainability. In South Moravia, regional authorities strongly supported SOMOPRO, recognising research and innovation as key drivers of economic growth. Other regions looking to implement a similar model must ensure that local governments, universities, and private-sector partners are aligned in their commitment to fostering research excellence and talent attraction.



In conclusion, SOMOPRO provides a well-structured and effective model that can be replicated in other regions or countries, provided there is a strong research environment, sustained financial support, and an administrative framework capable of facilitating researcher mobility. By adapting these elements to local conditions, other regions can successfully implement similar initiatives, strengthening their position in the global research landscape.

Sustainability

SOMOPRO demonstrated strong sustainability by ensuring **long-term impact and continued support for researchers**. Its success was underpinned by broad backing and political will of key stakeholders, including regional authorities, research institutions, and the researchers themselves. This widespread support was essential in securing funding and resources, enabling the programme to maintain its operations and influence beyond its initial implementation.

A key factor in SOMOPRO's lasting impact was its focus on knowledge transfer, international collaboration, and sustained engagement between fellows and host institutions. These principles not only strengthened the local research ecosystem but also influenced subsequent initiatives. For example, insights gained through SOMOPRO contributed to later regional projects, such as CEITEC's participation in the ORION programme (2017–2022), ensuring that the programme's benefits continued to extend beyond its original scope.

Another pillar of sustainability was the **establishment of a robust stakeholder network**, encompassing universities, research centres, regional authorities, and industry partners. This network played a crucial role in supporting the programme's activities and fostering long-term collaboration. The strong relationships built through SOMOPRO created a foundation for future research initiatives, reinforcing the region's position as a <u>hub for scientific</u> excellence.

Ultimately, SOMOPRO's sustainability was driven by a combination of strategic stakeholder engagement, financial viability, and a well-established research network. These elements ensured that its impact on the region's research and innovation ecosystem remained long after the programme's conclusion, solidifying its role as a model for international talent attraction and scientific cooperation.

Innovativeness

The South Moravian Programme for Distinguished Researchers (SOMOPRO) introduced several innovative elements that significantly enhanced its effectiveness in strengthening the region's research and innovation landscape. By aligning with the Regional Innovation Strategy (RIS), SOMOPRO ensured that its research efforts were strategically concentrated on fields with the highest potential for economic impact and technological advancement. This deliberate alignment not only maximised the programme's relevance but also reinforced its role in driving regional competitiveness, ensuring that investments in research translated into tangible benefits for the local economy and industry. Additionally, the programme adopted a structured framework inspired by the Marie Skłodowska-Curie Actions, providing a well-defined approach to talent attraction and career development. This methodological rigor helped SOMOPRO maintain high standards in researcher mobility and institutional collaboration while ensuring long-term sustainability.

A particularly innovative feature of SOMOPRO was its dual focus on attracting international researchers while simultaneously facilitating the return of Czech scientists who had gained experience abroad. This two-pronged approach fostered a dynamic and diverse research ecosystem, enriching local institutions with both global perspectives and deeprooted local expertise. While international researchers contributed to expanding scientific horizons and strengthening cross-border collaboration, the reintegration of Czech researchers played a crucial role in long-term talent retention. These returning scientists, already familiar with the cultural and institutional landscape, were far more likely to establish permanent ties in the region after completing their projects.



Sources

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Contact

E-mail: secretariat@harnessingtalentplatform.eu

Website: https://ec.europa.eu/regional_policy/policy/communities-and-networks/harnessing-talent-platform_en

Endnotes

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- The COFUND action provides funding for regional, national and international programmes for training and career development, through co-funding mechanisms. It spreads the MSCA's best practices by promoting high standards and excellent working conditions. COFUND promotes sustainable training and international, interdisciplinary and inter-sectoral mobility.
- 2 See: https://ricaip.eu/robots-and-prince-charles-the-brno-technology-park-laid-the-foundations-of-the-moravian-silicon-valley/
- 3 https://cordis.europa.eu/project/id/229603/results
 - See: https://cordis.europa.eu/project/id/291782/results; https://cordis.europa.eu/project/id/665860/results
- 5 See: https://www.openaire.eu/about
- The Marie Skłodowska-Curie Actions guidelines on supervision, in line with the principles set out in the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers (Charter and Code), are a set of recommendations to be adopted on a best-effort basis by participants in the programme, in order to help institutions and supervising in guiding MSCA researchers. The guidelines can be found here: https://op.europa.eu/en/publication-detail/-/publication/bb02d56e-9b3c-11eb-b85c-01aa75ed71a1/language-en
- 7 Scalability entails that a policy approach can be adapted to a bigger scale than just the local context.
- 8 Replicability entails that a policy approach can be applied to a different setting in a rather straightforward manner.