

NEXT GENERATION INTERNET

ENRICHERS TRANSATLANTIC



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enrichers.ngi.eu



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How to avoid brain drain from Europe through mobility programmes and to make Europe more attractive for the innovators and researchers

EXECUTIVE SUMMARY

“Your program was filling an important gap in the funding of research: practitioners/innovators had the possibility of spending a research period in an institution in the US and Canada”

Keeping and attracting the high-skilled talents such as researchers, scientists, innovators to Europe is an important direction of the current European strategies. One of the approaches includes the need to minimise the brain drain – the outflow of talented people from Europe abroad.

The policy brief on avoiding brain drain from Europe to North America highlights key aspects of mobility programmes (based on the experience of NGI Enrichers Programme¹) and offers several recommendations.

Within the document the following questions are targeted to be answered:

- Are the programmes similar to NGI Enrichers beneficial for fellows? For hosts? For society?
- What such fellowships could bring back to Europe?
- Should such programmes be paid by money of European taxpayers?
- What are the potential benefits for fellows to return and develop their careers in Europe?

The policy brief discovers the following aspects:

- Emphasises dual focus: Brain drain should not necessarily be avoided but managed to maximise the benefits for the European society. The dual focus on return on investment (impact assessment) and improving European working and living conditions is important.
- Integrates the NGI Enrichers data: The programme data (survey, feedbacks) are used to analyse benefits for fellows, hosts, and society, strengthening the credibility of the arguments.

¹ <https://enrichers.ngi.eu/>, the Programme has been designed to support the fellowships for the European researchers and innovators in the US and Canada



- Provides several recommendations: Suggestions for reverse fellowships in Europe and targeting underrepresented groups (e.g., Ukrainians, women) highlight inclusivity.
- Recognises the challenges: Acknowledging short fellowship durations and their impact on achieving significant research progress adds a realistic perspective.

To avoid brain drain from Europe, a combination of the policy measures, incentives and actions could be implemented. The recommendations are summarised as the following:

1. Additional career support, funding and tax benefits for returning European specialists.
2. Strengthening ties with industry, research organisations, educational institutions.
3. Visibility of European innovation success stories, including the valorisation of results, that could be key to strengthen connections between academia and industry.
4. Consequences on non-return.
5. Attracting foreign talents to Europe.
6. Focus on inclusivity.
7. Distinguishing the programmes for researchers and innovators.
8. Additional structural policy actions: European talent visa, dual-residency fellowships, seed funding for innovators and researchers, encouraging specialists to bring back insights on emerging markets.

CONTEXT

According to the recently published report “The future of European competitiveness”², “The EU is weak in the emerging technologies that will drive future growth. Only four of the world’s top 50 tech companies are European”.

One of instruments to stimulate the development of the innovative companies and research in Europe, is to minimise the brain drain. Brain drain could be defined as the phenomenon where highly skilled and educated individuals, such as researchers, scientists, and professionals, leave their home country to pursue better opportunities abroad. Still, the period of migration is not defined to be identified as a brain drain, normally in this case the long-term emigration is considered.

The “brain drain” challenge is also highlighted in the recent EC Report “Align, act, accelerate. Research, technology and innovation to boost European

² https://commission.europa.eu/topics/strengthening-european-competitiveness/eu-competitiveness-looking-ahead_en



competitiveness”³ which introduces the “Choose Europe” Programme, to attract and retain talents to foster European research careers and strengthens the need “to turn European brain drain into a brain gain, by strengthening the European RD&I Ecosystem. The urgent need is supported by the Christian Ehler’s report⁴.

To address the brain-drain of researchers and innovators from Europe abroad, the European Union and its member states have implemented several instruments and initiatives, including the following:

- Horizon Europe Programme⁵, 95.5 billion research and innovation framework programme for 2021-2027 that offers various funding opportunities;
- European Charter for Researchers⁶ - a set of principles underpinning the development of attractive research careers to support excellence in research and innovation across Europe;
- National initiatives like France's "Setting up European or International Scientific Networks" (MRSEI)⁷;
- Various other programmes including inter-sectoral mobility and public-private partnerships.

There are also mobility programmes in place, as an example, the Marie Skłodowska-Curie Actions⁸ - a programme that funds cutting-edge research through excellent doctoral and postdoctoral programmes, collaborative research and innovation projects and research fellowships. The mentioned programme includes the component of the obligation to return back after the fellowship as previewed, for example, with the Marie Curie Staff exchanges⁹: “should return to their sending organisation after the secondment, to pass on their knowledge and foster collaboration”.

Still, the challenge to motivate the researchers and innovators to build their careers and projects in Europe remains. This Policy Brief explores the experience of the NGI Enrichers fellows from Europe: both researchers and innovators, who accomplished their fellowships in the US and Canada, hosts’ experience, related to the Transatlantic fellowship, and opinions of the programme’s Advisory Board members and relevant partners, involved in the NGI Enrichers. The investigation encompasses the reasoning behind the selection the US and Canada and the

³ <https://op.europa.eu/en/publication-detail/-/publication/2f9fc221-86bb-11ef-a67d-01aa75ed71a1/language-en>

⁴ [PR_INI](#)

⁵ https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en

⁶ <https://euraxess.ec.europa.eu/hrexcellenceaward/european-charter-researchers>

⁷ <https://anr.fr/en/call-for-proposals-details/call/setting-up-european-or-international-scientific-networks-mrsei-2023/>

⁸ <https://marie-sklodowska-curie-actions.ec.europa.eu/>

⁹ <https://marie-sklodowska-curie-actions.ec.europa.eu/actions/staff-exchanges>

motivations of fellows to choose the location for their further work, including possible motivation to continue the work in Europe.

NGI Enrichers is a European project which supports European NGI researchers and innovators to spend 3-6 months in the US or Canada to work and collaborate with US and Canadian hosts, to promote knowledge-sharing and establishing long-term collaborations on NGI technologies, services, and standards.

POLICY RECOMMENDATIONS

The Policy Brief provides an overview of motivations of European innovators and researchers to apply for the fellowship to the US and Canada, including the detailed analysis in Annex 1.

The brain drain phenomenon could have a negative impact on the economic growth and innovation capacity of the home country. Nevertheless, it is not easy to distinguish between the brain drain and the temporary experience exchange. Mobility programmes itself could significantly expand the opportunities, innovation and growth potential of the innovators and researchers. As a result, **the efficiency of the mobility programmes similar to the NGI Enrichers may be estimated by the overall impact assessment of the programme.**

Therefore, the general outcome of the Policy brief is a confirmation that **mobility programmes could be of significant value for the careers of researchers and innovators**, and for the development of their projects.

To maximise the efficiency of the similar programmes, **the “impact component” could be intensified.**

Important factors which could attract researchers and innovators to Europe are related to the funding opportunities, research factors, living and working environment, including rich European culture. Some areas include the ties with SMEs located in Europe. Therefore, the mentioned factors should be chosen as the focus for further work.

The following recommendations for the exchange mobility programmes for the researchers and innovators could be suggested:

- 1. Introduce additional career support, funding and tax benefits for returning European specialists:**
 - a. Implement tax incentives or grants for researchers and innovators** who established startups, spin-offs, or joint ventures upon their return to Europe, including priority access to Horizon Europe and national innovation funds for fellows who demonstrate impactful projects or research proposals and offering leadership positions to fellows.



- b. **Support in creating long-term collaborative networks.** Mobility programmes should focus on creating enduring partnerships. Fellows should return with concrete, multi-year collaboration plans supported by European and host institutions.
 - c. **Invest in state-of-the-art infrastructure, facilities, and resources in Europe.** Improved conditions in Europe could make returning more appealing.
- 2. **Strengthen ties with industry, research organisations, educational institutions.** Highly talented researchers and innovators leaving the EU have a huge negative impact on companies.
 - a. The corporate sector is as important a stakeholder group as any other in addressing the problem. A deeper partnership with industry and industry organisations could be pursued. As an example, the co-designed programmes between private sector companies, research organisations, educational institutions could ensure better connectedness with the innovation system.
 - b. Collaborations with European industries, particularly in sectors like AI, quantum computing, and others, could help foreign researchers and innovators see a clearer path for impactful careers and projects' development in Europe. Creating of a dedicated platform to match returning fellows with European research institutions, universities, and innovative SMEs in their field could be considered.
- 3. **Enhance visibility of European innovation success stories,** including the valorisation of results, that could be key to strengthen connections between academia and industry.:
 - a. Campaigns showcasing global achievements by European-based researchers and innovators could build pride and attract talents.
 - b. Establishing the “European Innovator”, “Research Champion” or similar award.
- 4. **Impose consequences on non-return.** The suggested actions could be considered by fellows as discouraging participation and are not recommended, suggesting focusing on creation of a strong pull factor rather than enforcing a push-back mechanism:
 - a. To include binding agreement in the fellows' contracts requiring fellows to return to Europe in a defined timeframe, otherwise require repayment of funding. Tracking system could be used to monitor the compliance of fellows with the requirements and non-compliant fellows could be disqualified from the future EU funding.
 - b. To add the additional check related to the fact if the potential fellow plans to emigrate, at the application stage, along with the requirement of the development of the post-fellowship return plan.



5. Attract foreign talents to Europe:

- a. Implementation of the mechanism of reverse fellowships fostering an ecosystem where collaboration happens in Europe.
- b. Creating the programmes which integrate cultural exchange with professional opportunities. Rich European culture and living conditions are considered as an attractive factor for the foreigners, that could be valorised.

6. Focus on inclusivity:

- a. An additional focus on people who have difficulties to access the US and Canada could give them international experience to boost their careers, eg female, Ukrainians. Such type of support could include additional training in applying to Horizon Europe Programme and other available programmes for the selected target groups.

7. Distinguish the programmes for the researchers and innovators:

- a. Demands and potential benefits could be different for researchers and innovators that should be taking into account while framing the programmes. For example, research could require longer duration than the fellowship needed for an innovator.

Additional actions could be suggested to maximise the impact of mobility programmes:

1. Create a European talent visa:

- o Establish a streamlined visa program for innovators, modelled on Canada's Start-Up Visa¹⁰, to attract high-potential individuals from the US and other countries.

2. Develop dual-residency fellowships:

- o Offer dual-residency opportunities where fellows alternate between Europe and North America, ensuring continuous engagement with the European ecosystem.

3. Provide seed funding for returned specialists (and for foreign specialists coming to Europe):

- o Allocating resources for specialists coming back (or for foreign specialists), to apply for fast-track grants upon their return could help them launch impactful projects in Europe. The programme

¹⁰ <https://www.canada.ca/en/immigration-refugees-citizenship/services/immigrate-canada/start-visa.html>



could resemble the Marie Curie incoming grants¹¹, meantime supporting also the innovators.

4. Focus on emerging markets:

- Encourage specialists to bring back insights on emerging markets in the US and Canada, translating them into competitive advantages for European SMEs and startups.

¹¹ https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/marie-sklodowska-curie-actions_en



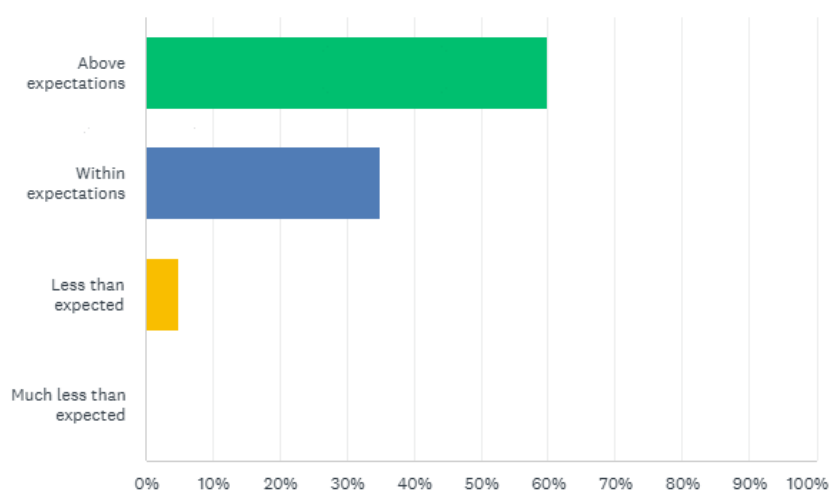
ANNEX

ANNEX 1. KEY FINDINGS

The NGI Enrichers programme selected and financed the fellowships for 65 fellows in total. For the Policy Brief goals, the feedback was gathered from 20 fellows, 9 hosts, members of NGI Enrichers Advisory Boards, and related NGI Enrichers Consortium partners, including partners from Ukraine. 60% of fellows' replies confirmed that the fellowships results were above expectations, 35% that within expectations, and 5% said that the result was less than expected.

Did your NGI Enrichers fellowship satisfy your expectations?

Answered: 20 Skipped: 0



Within the investigation, the results of the following questions are included in this Policy Brief:

- Why the fellows decided to go to the US and Canada;
- What fellows could bring back to Europe as a result of their fellowship;
- What could be attractive for the innovators and researchers to stay in Europe.

In addition, Policy brief questions if the limitations on the returning back of fellows should be imposed and how it could be done; and if the reverse type of fellowship from the US and Canada to Europe could be of interest.

Why the fellows decided to go to the US and Canada

There are various reasons of interest in the US and Canada, including the following: scientific collaborations related to the well-known technological progress of the selected countries and specific host organisations, new experiences, acquisitions of new skills, exploring the business ecosystem and opportunities of the business expansion to the US market, networking opportunities.

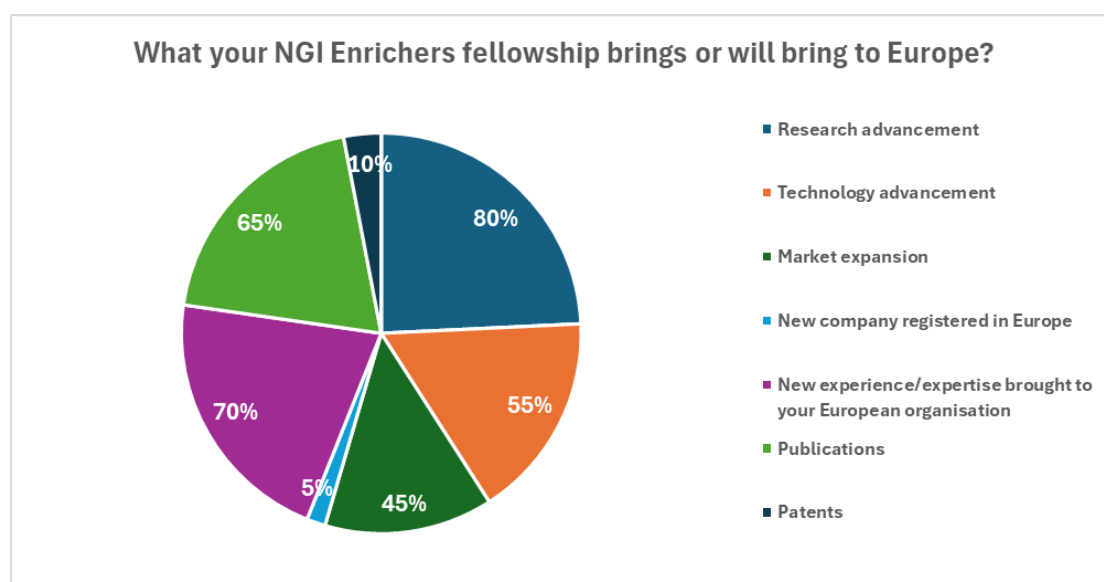


Quite often fellows mentioned the specific research portfolio of the selected host organisations, therefore, they were searching for the specific expertise for their projects and research. Some of the fellows had established the contacts with their hosts before the fellowships, therefore, their fellowships could be considered as the next step to strengthen the existing collaborations.

In addition, the reasoning was based on the prestige of the fellowship which could be helpful for further career development, along with the personal development and exploring another culture.

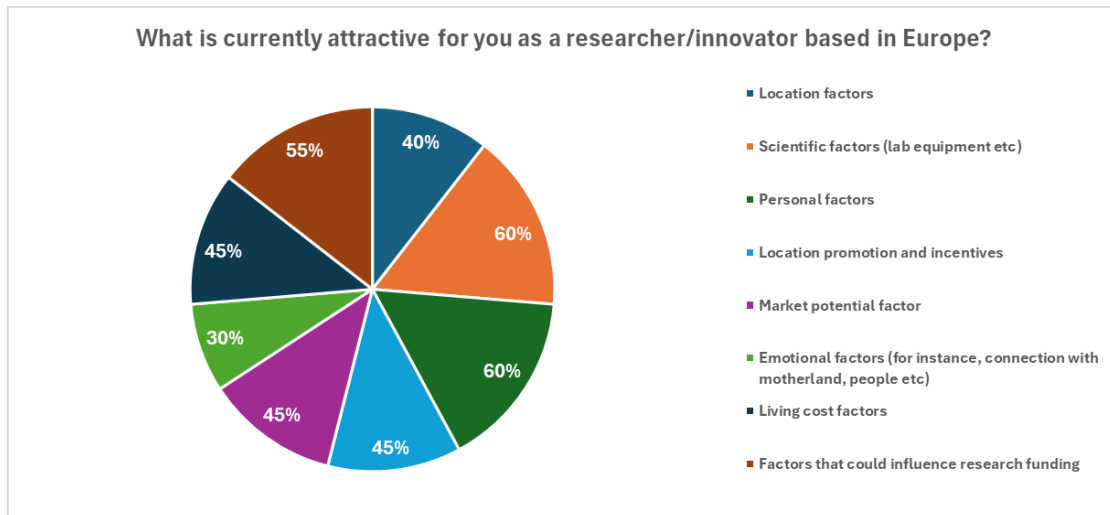
What fellows could bring back to Europe as a result of their fellowship

Important outcome of the fellowships is the understanding of the reverse benefits for Europe, as the Programme is funded by European public money. 80% of fellows confirmed the research advancement, and 70% obtained the new skills which they bring back to their European organisations, 55% achieved the technology advancement, and 65% of fellows progressed with their publications.



What could be attractive for the innovators and researchers to stay in Europe

Another part of investigation included the fellows' opinions on the attractiveness of Europe, to understand better their plans and preferences. Based on the results, it could be assumed that there is always a combination of various reasons, still more than 50% selected the following ones: scientific factors (laboratory equipment etc), personal factors, and factors which could influence the research funding. Nevertheless, there is still a significant importance of the market potential, location promotion and incentives, living cost and emotional factors.

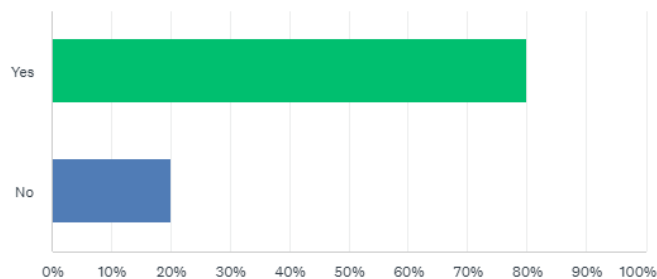


As the potential benefits which could be attractive in Europe, the fellows mentioned funding for research and startups, high R&D quality in more safe and affordable environment with high standard of living, European historical culture, large pool of talents coming from the European universities, ties with SMEs in Europe.

In addition, the fellows were asked if the programmes similar to NGI Enrichers should be financed by public money, and 80% said that “yes”, and 20% chose “no”.

Considering taxpayer perspective, do you think that taxpayer money shall be invested in the new NGI Enrichers programme?

Answered: 20 Skipped: 0



The idea to include the limitation to the programmes related the need to impose restrictions on the fellowships to avoid the brain drain has been discussed along the preparation of this Policy brief. As an example, the return of the provided funding back in case if the fellow does not return after the fellowship, has been discussed as a possible option. Meantime, the feedback from the hosts confirms that the period of 3-6 months could be not sufficient for the significant progress in the research. In addition, some fellows agreed with the hosts on the continuation of the joint work. Therefore, it is possible to conclude that in specific cases continuation of the joint work for some period of time could bring back as a result more impact to Europe.



“The NGI Enrichers program offers the opportunity to have some time together, build trust and plan for joint research activities in future through developing joint research proposals, joint scientific publications, and conference presentations. However, we also see that it is important that both sides exchange in advance clear and transparent about their expectations and availabilities in order to plan the stay and meetings with other experts and local partners in the best possible way to allow for maximum efficient use of time and resources”. NGI Enrichers Host

All hosts confirmed that **the “reverse fellowship” in Europe** could be of interest for them or their students. This could be considered as an opportunity to attract talented people from the US and Canada to Europe.

Programmes similar to NGI Enrichers could be beneficial **for underserved target groups, for instance for Ukrainian researchers and innovators, for female innovators and researchers.**

In a view of Ukraine, there was an intention within the NGI Enrichers to attract fellows from Ukraine, meantime the number of applicants was low. Most of technologies are represented within startups in Ukraine, not within the research. Still, there are areas in which Ukraine is quite competitive, eg e-government, blockchain, AI, cybersecurity etc. To support/stimulate the research, **additional support for the universities could be useful**, eg: to preview **additional support for the preparation of the application for 1-2 researchers from 3-5 technical universities** in Ukraine. This could be embedded in the structure of the programme, as Ukrainian researchers are not well aware about the application process to the similar programmes.



ANNEX 2. FEEDBACK FROM THE FIELD

Leon Sandner¹²

*After 4 months in Silicon Valley, I realized something:
We're taking Europe for granted.*

Everyone's talking about Europe's decline.

But I've noticed a pattern talking to European founders in SF: most of them see the US as a chapter, not the whole story. They want to "make it" there, learn from the best, but ultimately return to Europe.

And it makes sense.

In Europe:

- > our cities are built for humans, not just cars. Getting around on foot or by bike is the norm, not an act of rebellion.*
- > the buildings here don't feel like they were assembled with popsicle sticks. (Sleeping without 3 hoodies, thanks to proper insulation, is nice too.)*
- > you can actually trust the quality of your food. And real bread! Not that spongy white stuff pretending to be bread.*
- > the stark contrast between extreme wealth and poverty isn't burning your eyes at every corner. You know you have a social system that catches you when you fall.*
- > there's a different rhythm to relationships: less about where the connection might lead, more about enjoying where it is right now. People connect over shared moments and genuine conversations, not just potential opportunities and status.*
- > public discourse still has a foundation of shared reality. News isn't entertainment, "facts" aren't tribal identities, and most people still live in the same world - even if they see it differently.*

You can't sustainably build the future while sacrificing many things that make life worth living.

*Yes, Europe isn't perfect. We have our issues.
We're often too risk-averse, too comfortable, too stuck in our ways.*

But we already have the foundation most places dream of:

- Exceptional quality of life*
- Robust infrastructure*
- Strong social fabric*
- Cultural depth*

Now imagine combining this with:

- > a bolder mindset*
We need to dream bigger and build with more conviction. It's time to shed our risk-averse culture and embrace ambitious moonshots.
- > concentrated innovation hubs*
Stop spreading resources thin across countless "innovation centers." We need 3-4 dense, powerful ecosystems where talent, capital, and ambition collide - not 100 mediocre ones.
- > streamlined governance*
Not just less bureaucracy, but smarter less fragmented regulation that enables innovation while preserving what makes Europe great.

*We don't need to abandon Europe to build great things.
We need to build great things to make Europe even greater.*

¹² [\(16\) Post | LinkedIn](#)

