Hungary offers EUR 1 million to first-class brains

Excellent researchers who could make great careers anywhere in the world but decide to choose Hungary may receive funding HUF 50 to 60 million (EUR 165,000 to 195,000) per year – shared József Pálinkás in an interview with Portfolio.hu on the new research excellence funding programme.

According to the President of the National Research, Development and Innovation Office, the funding of nearly EUR 1 million "may be attractive even to Hungarian researchers working abroad" but it will not be an easy game. Similarly, project proposals submitted to the Hungarian Innovation Fund (having a budget of more than HUF 80 billion, EUR 263 million) will be assessed more strictly, involving even preliminary on-site inspections. Pálinkás said: "it's going to be a challenging task" but the fund supervised by the NRDI Office has the potential to inject HUF 7 billion (EUR 23 million) into the economy as venture capital, on an annual average.

Portfolio: <u>The recently held kick-off event of two Hungarian projects</u> was attended also by the EU's Director-General for Research and Innovation. It was about Hungarian Teaming projects that have been selected for EU funding. What is their kick-off all about and how are these projects progressing?

József Pálinkás: This is the initial year of the two winning Hungarian projects meaning that this year's aim is to set up the project organisation and select the participating research groups. Director-General Smits came to see the event because the Teaming action is their initiative. The name reflects to the requirement that the research institutions of EU Member States with high and lower research intensity (which is determined by the given country's RDI-spending-to-GDP ratio and scientific output) had to join forces for submitting their project proposal.

The programme generated extremely intense international competition: 169 proposals were submitted from all over Europe, out of which only 31 made it to the second round and only ten were selected for funding. Two of the ten were Hungarian projects which is a major success as only Hungary managed to achieve this success rate. This is also an important feedback for the National Research, Development and Innovation Office. It confirms that our selection system performs well: we selected three project proposals and two of them won, so apparently we did our job well.

How does the cooperation of institutions from countries with higher and lower research intensity work in practice?

The collaboration in practice means that one of the two consortia was formed by two Hungarian and one European institution, while the other one is made up by four Hungarian and one European institution. Each consortium is now working to establish a centre of excellence (see details in the article below – editor's note).

Consortium partners in each project set the organisational framework of collaboration differently – luckily, the Teaming action provides a flexible background for this. The centres of excellence enjoy maximum independence in terms of scientific and organisational operation, so they can even take the form of joint ventures. When these two projects were selected for funding, the European Commission relied on the opinion of independent assessors. One of the projects focuses on digital production, the other one on molecular medicine. The two projects received EUR 26 billion from the EU so their total funding, including Hungary's contribution, amounts to EUR 74 billion (nearly HUF 22 billion). The major part of the Hungarian contribution is financed from the National Research, Development and Innovation Fund.

The research centres being established will employ excellent researchers which is key to success, but it is equally important that, during the work, they adopt such operational and management methods of the foreign partner which have been long applied by the institution in the high R&D intensity country. So as to have not just excellent but also sustainable projects, a good management is needed too and in Hungary we still have many lessons to learn in the methods of selecting researchers and creating research groups.

About the two Hungarian research projects

The project **EPIC - Centre of Excellence in Production Informatics and Control** aims to create a centre of excellence with the potential to achieve significant results in the fields of cyber-physical manufacturing and logistics systems. The consortium is represented by László Monostori, Director of the Institute for Computer Science and Control at the Hungarian Academy of Sciences (HAS), János Józsa, Rector of the Budapest University of Technology and Economics, and Jens Neugebauer, Director of the Fraunhofer Institute. At the kick-off event they pointed out that their joint intention is to speed up innovation, create new industrial solutions, develop a sustainable and competitive production ecosystem, and "bring up" a generation of young researchers full of initiative and experienced in applying international best practices. They are also eager to propagate information technologies in manufacturing technology. In the framework of the EPIC project, the National Industry 4.0 Technological Platform was established at the initiative of the HAS Institute for Computer Science and Control, with the aim to adapt the "Industrie 4.0" (the fourth industrial revolution) trend in Hungary. The project has a total budget of EUR 21.7 million, i.e. HUF 6.5 million.

The project **HCEMM-MOLMEDEX - Creating the Hungarian Centre of Excellence for Molecular Medicine** aims to establish a centre of excellence in the field of molecular medicine with a strong focus on translational medicine, so that laboratory research findings can penetrate into everyday medical treatment as soon as possible. One of the professional coordinators of the project is Tamás Martinek, Vice Rector of the University of Szeged, one of the consortium partners. The event was further attended by Gábor Szabó, Rector of the University of Szeged, Dr Ágoston Szél, Rector of the Semmelweis University, Prof. Pál Ormos, Director of the HAS Biological Research Centre in Szeged, and Jana Pavlic, Joint Head of Government & EU Relations of the European Molecular Biology Laboratory (EMBL). The consortium particularly focuses on research directions promising a breakthrough in the curing of cardiovascular, tumour and inflammatory diseases

especially affecting older generations. Additional ambition of the consortium is to become a regional centre of scientific excellence, training and employing highly qualified researchers and engaged in cutting-edge research in molecular medicine. The new Centre of Excellence will be set up in three locations: Debrecen, Szeged and Budapest, seated in the ELIPOLIS in Szeged. The project has a total budget of EUR 52 million, i.e. approximately HUF 15.6 million.

Is it correct to say that the Teaming action facilitates the importation of foreign best practices and this is even supported by the EU with serious funds?

Exactly, there is also a financial compensation that means the institutions get money, but they also get research and management support which are equally important in my opinion.

How does the NRDI Office come into the picture? How has it helped and how is it going to help the two projects?

First of all, the commitment of the Hungarian state was essential to have the project proposals submitted. This means that the Hungarian state had to confirm its intention to support these programmes. The provision of this guarantee, that is, the adoption of the relevant Government Decision, and the financial background, that is, the allocation of the NRDI Fund sources were coordinated by the NRDI Office. But prior to this the Office had organised the announcement of the Teaming call in Hungary, the information to the institutions and the domestic preselection procedure. And now that the funding decisions have been made, we assist the organisation of the research centres and the clarification of many details. Knowing the Hungarian circumstances it may happen that things get "high-strung" when some institutions are unable to come to an agreement. Then there is a real need for an outside actor warning them saying "no agreement, no money". In this sense, the Office acts as a supervisor in the whole process. But hopefully this will be unnecessary as we can agree on the management tools to apply.

Recently, the National Gazette communicated that a research excellence programme called *Élvonal* ('Cutting Edge') is launched, more precisely, such programme is funded by the Government. However, the piece of legislation, namely Government Decision 1185/2017 failed to specify details about the programme or the framework of funding. Could you summarise the aim of the initiative and its financial background?

The NRDI Office initiated a scientific excellence programme intended to serve as the Hungarian equivalent of the programme funded by the European Research Council (ERC). Presently, our concept – in line with the Government Decision – is that the programme will reach its complete form in five years. In every year 10-12 researchers will have the opportunity to win the grant for a period of five years in an amount of HUF 50 to 60 million (EUR 165,000 to 195,000), depending on whether 10 or 12 researchers will be supported in a given year. This means nearly EUR 1 billion of funding for each awarded individual researcher or researcher group. The programme will be open exclusively to the best of top scientists: only those applicants will be eligible to apply whose achievement history warrants capabilities to work in the global forefront.

I hope that submitted project proposals will be assessed in a two-step procedure by an international panel which can obviously include Hungarian members too. The first round will be a preselection of applicants to be invited for a personal interview in the second round, so the eligibility criteria will be quite strict. In the next five years we aspire to build a research programme in Hungary that includes at least 50 individual researchers or research groups and which can be attractive even to Hungarian researchers working abroad. The long-term goal is that after the first five-year period all grants should be competed again for in an open call, so that the first 10-12 awarded researchers will also need to run for it. The reason behind is that in some programmes in Hungary the funded research groups consider that they remain eligible for the funding even after its expiry so they claim it should be extended. In this excellence programme, however, the grant is given for a fixed term of five years, but naturally anyone can reapply for another five years on the basis of merits. This league is only for researchers who could perform outstandingly anywhere in the world but they want to implement their research projects in Hungary.

According to the latest news only HUF 1.86 billion (EUR 6 million) has been awarded from the innovation venture capital fund set up from HUF 30 billion (nearly EUR 100 million) EDIOP funds and another HUF 20 billion (EUR 66 million) of MFB funds, managed by the fund management company HiVentures. As the allocation of funds from this fund is coordinated by the NRDI Office, and the 2014-2020 programming period is nearly in its midterm, how do you see a feasible allocation for the rest of the funds?

The Fund offers three products which are adapted to the different maturity levels of businesses, and all of them are fully operational. As far as I know, there are several investments under negotiation, and the first investment using EDIOP sources has already been made as the target company operated in the convergence region. In addition, the Fund has a number of other investments financed from the MFB funds since those projects involved were implemented in the Central Hungary region.

As the current programming period in practice will be closed at the end of 2023, there are seven more years left to award the remaining fund of HUF 50 billion. This means HUF 7 billion per year, which is going to be a tough task, but apparently the fund manager works with ambitious young people so I trust they will manage to invest the funds successfully. The operation of this Fund offers great opportunities for many startups and SMEs, but at the same time it is clear that these investments involve high risks. This time the risk is taken by the state by launching the programme. Hopefully, it will be worth the while.

In line with the Government's plans, all EU calls had been announced by the end of March. Is it realistic to maintain the plan you mentioned in your end-of-year interview last December that Hungary would follow Poland's example in performing preliminary on-site inspections before assessing the project proposals or adopting the grant decisions to screen the seriousness of the projects?

In the 2014–2020 cycle it is no longer realistic to introduce such a system before the assessment of the EU-funded project proposals, as hundreds of proposals are pending our RDI policy opinion. However, in the case of the National Research, Development and Innovation Fund managed by the Office and having a budget of more than HUF 80 billion (EUR 263 million), we want to introduce a new procedure as of 2018: we would interview the representatives of the applicants to have a broader overview of the project proposals. Personal presentations have already played an important role in the professional assessment process in some major EU funding schemes, as it was covered by several articles on our website. The method is also applied to the reporting stage of running projects. It is important to note that the Polish model of preliminary on-site inspections involved major calls only.

It may be very instructive to visit a company or business to see their current conditions, development and infrastructure capacities, whether it is realistic for them to be a leading Industry 4.0 company or to achieve breakthrough research results. They obviously need sufficient human capacities, infrastructure and a clear plan to attain the objectives set out in their project proposals. In many cases only an on-site inspection can reveal whether the applicant has the necessary conditions for implementation.

Source: portfolio.hu