

Missions

Some thoughts about keywords for FP9 (Part 2 of 3)

During the year 2017, the debate about the design of the next Framework Programme has evolved quite rapidly, notably following the presentation of the Interim Evaluation Report for Horizon 2020. At this relatively early phase of the discussion the focus is not yet on detailed contents and concrete figures, but rather on the broad concepts and key objectives for the European Research and Innovation Programme after 2020.

Against this background it seems timely and useful to shed some light at three keywords dominating the current debate. While this paper is having a closer look at the role of “missions” in research as a guiding principle for FP9, THINK Piece 3/2017 has a closer look at “impact”, and THINK Piece 5/2017 presents some reflections on “innovation” in this context.

0. Intro

Among the most prominent buzz-words in the emerging debate about the design of the next Framework Programme, one can find quite frequently the reference to “missions” or “mission oriented” research and innovation. The most prominent example quoted in this context is the “man on the moon” – the programme launched in 1961 by US President Kennedy to bring a man to the moon before the end of that decade.

There seem to be no clear definition of what is exactly meant by such a “mission” approach for the programme design, but there are apparently at least two prominent features:

- A “mission” in a research and innovation programme is based on the massive mobilisation of resources in a relatively narrow and clearly defined field. There is thus a clear notion of “selectivity” and also of “emphasis” linked to a “mission”, often also described as a “broad mobilisation”.

- What distinguishes a “mission” from a more conventional focus area of research is the explicit indication of a “tangible” objective, most often accompanied by a target date. In more simple words, whereas the classical priority themes are characterised by a “moving forward” rhetoric, a “mission oriented” approach goes along with a somewhat more ambitious aspiration of “getting there” ...

The following chapters will present a more analytical look at the potential and the pitfalls of this approach in the context of the next European Framework Programme for Research and Innovation (most commonly referred to as FP9).

1. Which missions?

The rather approximate description of “missions” in the previous chapter implies that in order to “qualify”, a given research field should present both a certain level of relevance or importance, so that a massive funding can be justified, and of maturity, so that objectives for the activity can be formulated with a minimum level of plausibility.

This leads to the somewhat puzzling conclusion, that the mission oriented approach might be better suited for already relatively well-established research fields rather than novel and rather explorative areas. The examples given in recent discussions confirm this observation, as “curing Alzheimer” is of course still a tremendous challenge, but no longer a truly “novel” research area.

The key issue here remains the fundamental problem on how to select topics or fields for such missions. The “man on the moon” example doesn’t really provide any meaningful guidance, as it was based on a classical “top down” decision by the President – who, in a sense, had no option to choose another topic in the aftermath of the Sputnik shock in the American society. At the European level in 2018, there are numerous potential candidates for such missions, and no clear procedure yet to select among these. In a strict sense a reasonable process would require not only to assess the societal, political and economic relevance of different research directions, but also to judge on the appropriate level of ambition and realism in the definition of targets. Given the current consensus culture in European Research policy, it is difficult to imagine how this could be achieved in a serious and honest manner.

2. How many missions?

The political reality in the European Union makes it extremely unlikely that the EU would focus – like the US in the sixties – on just one big research mission. Instead, the signals from Brussels hint at “up to ten” missions, which could cover a wide range of topics.

This approach is not surprising, as from the perspective of the political governance of the next FP it seems much easier to get an alignment from the Member States and the European Parliament on a certain set of missions rather than on just one. The approach also allows to eventually increasing the number of missions even further if the search for a broad consensus would require doing so.

There is, however, a major drawback of such a “bouquet of missions”, as it is far more difficult to translate this into a convincing message for the wider public. President Kennedy came across back in 1961 with the straightforward message that sending a man to the moon was THE national priority. In contrast, some eight or ten missions, spread over the whole range of scientific and societal challenges, will have a much lower impact on the European public – if any ...

3. Critical mass?

A constituent element of defining a specific “mission” as part of a broad research programme is the attribution of substantive funds. As missions are generally meant to materialise a certain level of ambition – again the “man on the moon” programme might serve as a good benchmark – their success will crucially depend on mobilising the critical mass for major breakthroughs.

Launching several “mission oriented” initiatives in FP9 will thus require a massive funding from the FP budget. It is obviously far too early to mention realistic figures, but the following “dummy” example might illustrate the size of the issue:

If we – somewhat enthusiastically ... -imagine that one quarter of the FP budget would be devoted for such missions, this would mean based on the Horizon 2020 budget some 20 billion € for a period of seven years. Assuming for the sake of illustration only that this amount would be equally spread over ten missions, this would lead to 2 billion € per mission – or some 300 million € per mission per year. These are without any doubt impressive figures – but are they really in the order of magnitude which is needed to give European research a specific boost and to mobilise all available intellectual resources on our continent?

If the preparation of FP9 will move into this direction, it might need collective efforts of all stakeholders involved not to “overpromise and underdeliver”.

4. Time frames?

The key feature of mission oriented research is to define a clear target – and a clear target date. To do this in a responsible and meaningful way is by no means an easy task, as the speed of scientific progress and the number of unforeseen problems are impossible to predict. Setting a target date in the remote future risks destroying the intended motivation and mobilisation effects, while putting the date too early might result in general frustration and criticism. This again is an argument why mission oriented research is likely to focus on fields with a certain track record and a fair chance of major progress within a couple of years. The chances for recent innovative approaches or for fundamental research issues to be addressed under this heading seem rather slim.

From the perspective of political economy, it is an interesting observation that this approach is a typical case for a risk-free implementation at the beginning of the life cycle – launching big missions with promises for the years to come is a high gain - low risk approach. The real problems will occur only after a couple of years, when progress will be slower than hoped for and critical questions will be raised about the alleged failure to deliver...

5. Public Participation?

The intended selection of some “missions” for FP9 offers a new possibility to engage with the wider public in Europe about the future priorities in European Research Policy. It is in fact a very appealing idea to allow citizens to express their views about scientific and technological progress to be achieved in the years to come. The hope is that this leads to some sort of public enthusiasm about research and innovation in general and specifically the FP activities.

This sounds great, and deserves the full support of all stakeholders involved. On the other hand, a word of caution seems appropriate, as this narrative might describe a too rosy picture.

The European Commission is at the forefront of participative activities within its legislative and regulatory processes, and organises a wide range of public consultations. Despite these remarkable efforts, success in terms of participation figures is so far rather limited, and there is a strong bias in the response rates towards stakeholders and potential or real beneficiaries.

From a point of view of science policy making, it is also difficult to imagine how to present realistic options in a format which would allow a broad participation of the civic society. There is notably a risk that issues of direct concern to the individual (notably health topics) might get stronger support than more technological challenges (for example new types of batteries).

While it is thus very likely that some form of public consultation might be organised on this issue, it seems extremely unlikely that the European Commission, the Member States and the European Parliament will refrain from their decisive roles in framing the political key activities of the next Framework Programme.

6. Europe?

When President Kennedy launched the “man on the moon” mission, the US were in the cold war confrontation with the Soviet Union, and the mission was clearly meant to re-establish the American superiority in space research.

The situation today is fundamentally different, and might be characterised by an ever-increasing global cooperation in research – combined with a fierce economic competition in a globalised world.

This leads to the very simple but pertinent question, whether it makes any sense to define “missions” for a European research programme. As a matter of fact, many, if not most, challenges we are facing in Europe are global ones, and hence the only appropriate level to tackle these would be a global one. Does it make sense to launch a European mission on Alzheimer’s disease, for as long as a major part of the research is taking place in the US? Does it make sense to launch a mission on climate change, a problem which is by no means limited to Europe?

Since in multi-polar world scientific expertise is located in almost all parts of the world, it does not seem appropriate to organise targeted research missions exclusively for European participants. To put it the other way around: the launch of such missions calls for different rules for the participation of partners from outside the EU, with the perspective to make the European efforts the nucleus of a world-wide mobilisation.

7. Some conclusions

This paper has raised a few issues which need to be addressed when introducing the idea of “mission oriented” research in FP9. These comments were not meant to object the idea as such, but rather to highlight the potential problems to be addressed upfront.

Prioritizing research fields ex-ante in a research programme remains a challenging task. The concept of “mission oriented” research does not solve the problem, but it might help to clarify some issues and might allow new ways of approaching the task. Implementing this demanding approach is by no means simple and will require a major rethinking of the established practices and procedures.

The biggest worry, however, is not that “missions” in the sense described and analyzed here will become a major element in FP9. The biggest worry is that the whole debate launched in recent months and the whole rhetoric about “missions” is just some sort of Public Relations activity. This would mean that, rather than reflecting on innovative ways of prioritizing European research activities, the final purpose of all this would just consist in selling old wine in new bottles and to resurrect the established thematic priorities of Horizon 2020 as the brand-new missions of FP9. Just a worry, and hopefully nothing more than that.

Version 1.0 – 06.12.2017 - Feedback: mail@peter-fisch.eu