



## Cheers to a new solar system – and EU investment strategy

David Rinaldi and Jorge Núñez Ferrer

It is the archetypal tragedy of the 'Union': if something doesn't work, the EU is to blame, if something does work, nobody knows about it. No credit goes to the Union.

Nobody notices the million great things that the EU budget concretely supports, unless... unless a new planet is discovered. Well, seven planets, to be precise. No, in fact, nobody noticed this either – not even this.

But it is now high time to give credit to the EU's innovation policy and its financial arm, as well as to Belgium and its researchers, who are responsible for the discovery of the new solar system, TRAPPIST-1. Of course, reports that "[Nasa discovers new solar system TRAPPIST-1 - where life may have evolved](#)" did appear in the news, since it was NASA that made the announcement and also co-funded the project.

It was, however, [Michaël Gillon](#), a Belgian astronomer at the University of Liège, who led the research and the use of the robot telescope called TRAPPIST, which allowed the team to observe the TRAPPIST-1 solar system. Michaël must be one of those researchers it's actually fun to have around. The name stands for **TR**Ansiting **P**lanets and **P**lanetes**I**mals **S**mall **T**elescope, but it's no secret that the telescope they invented was named after the [trappist beer](#), of which Belgians are rightly proud.

In fact, the University of Liège [OrCA Department](#) (which stands for Origins in Cosmology and Astrophysics) runs another amazing project inspired by a Belgian speciality: Search for Planets Eclipsing **U**ltra-**c**OOl Stars, or [SPECULOOS](#). We can well imagine the brainstorming sessions, perhaps powered by trappist inspiration, that led to creation of these acronyms. Genius. Cheers to Belgian researchers!

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Research & Innovation funding programme in the former multiannual financial framework – essentially the forerunner of the current Horizon 2020 programme. The research was also sponsored through an Action de Recherche Concertée (ARC) grant from the Wallonia-Brussels Federation. As Michaël Gillon himself said: “Without EU funding it would not have been possible to arrive at this discovery.”<sup>2</sup>

The innovative TRAPPIST telescope went into operation in 2010 at the [European Southern Observatory](#) site in La Silla, Chile, also funded by the European Research Council.

Euro-sceptics may not see it, detractors may not admit it, but there is a political process, a long-term ambition and vision behind setting the framework that can bring about these results. As Table 1 shows, there was a great boost given to financing research and technological development in Europe with the FP7 programme, which happened for a reason and was not a politically neutral process.

*Table 1. Evolution of EU Budget for Research and Innovation*

Framework Programme	Period	Budget (€, billion)
FP1	1984–1987	3.8
FP2	1987–1991	5.4
FP3	1990–1994	6.6
FP4	1994–1998	13.2
FP5	1998–2002	15
FP6	2002–2006	17.9
FP7	2007–2013	50.5
FP8 (Horizon 2020)	2014–2020	80

*Note:* FP7 does not include Euratom and the European Institute of Innovation and Technology, which had a separate budget; FP8 is estimated.

*Source:* European Commission.

With the Treaty of Amsterdam, member states agreed in 1997 that the EU-level was the right governmental tier to conduct research policy and to implement research programmes.

Then came the Lisbon Agenda, which was a political process to define a development plan for the Union. Often regarded as a failure, that process was in fact able to devise an economic model for Europe which, under the leitmotiv of fiscal consolidation, is still actively supporting progress in the EU.

John Maynard Keynes observed that:

Practical men who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist.<sup>3</sup>

<sup>2</sup> Quote reported in EPSC (2017), [The European Story – 60 years of shared progress](#), European Commission; companion document to the recently published [White Paper on the Future of Europe](#).

<sup>3</sup> John Maynard Keynes (1936), *The General Theory of Employment, Interest and Money*, Palgrave Macmillan, London.

The economist and intellectual driver behind the Lisbon Strategy was Joseph Schumpeter, to whom we owe the concepts of knowledge economy, the techno-economic paradigm and technology governance. It is to Portuguese academic and European politician Maria João Rodrigues, and other intellectuals who contributed to the Lisbon Strategy, that we owe the transformation of these concepts into EU objectives.

Research and innovation is one of those areas in which the added value of acting together at the EU level is rather evident. First, cross-country collaboration enhances research and accelerates technological developments; second, benefits and spillovers from innovation cannot be contained within national borders.

Over the next few months EU leaders will face several pressing decisions: whether to do more together or in smaller groups, or to retrench and do more at national level. They will also have to find agreement on the EU budget for the post-2020 period. It is difficult to see how common missions such as R&I, security and defence, social progress, climate protection, energy security, managing globalisation and migration can fall within strictly national boundaries. We hope that our democratically elected leaders will understand that we need a shared budget that can meet shared objectives.

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