

How Joint Undertakings boost RTOs-Industry Collaboration & Leverage Private RD&I Investments in Europe

10 March 2017

Following the publication by the European Commission of its Public Stakeholder Consultation on the Interim Evaluation of Joint Undertakings (JUs) operating under Horizon 2020, EARTO motivated its members, Research and Technology Organisations (RTOs), to give proper individual feedback on each Contractual Public Private Partnerships (cPPPs) and Joint Technology Initiatives (JTIs). In addition, EARTO analysed the participation of its members to these instruments using eCORDA database, which is summarised here.

As one of the key missions of RTOs is to support industry, EARTO members have been great supporters and beneficiaries of excellent collaborative research within H2020. This has also been the case in the cPPPs and JTIs in which RTOs have been involved since their creation. These instruments are efficient vehicles for excellent industry-led collaborative research in Europe since FP7. They give EARTO members much-appreciated opportunities to work with various sectorial industries: their Original Equipment Manufacturer (OEMs) and suppliers (large & small). In EARTO members' experience, the JUs have been supporting Europe's industrial supply chains and innovation ecosystems around a good set of key industrial sectors.

cPPPs and JTIs are well-suited instruments for:

- promoting the definition of more ambitious EU targets for various key European industries in terms of their renewal, sustainability, or digitalisation for example, via the definition of strategic research agendas,
- leveraging industrial R&I investments in Europe,
- strengthening Europe's industrial base by enabling excellent cross-border industry-led collaborative research,
- increasing the links of global companies with the European innovation ecosystems gravitating around their European supply chains,
- incentivising large industry to connect their various supply chains at EU level (with many SMEs).

It is important to note that cPPPs and JTIs have not been set up along the same governance and functioning models bringing industry to play a more marked leading role in JTIs than in cPPPs.

With regards to cPPPs, RTOs generally appreciate the openness of the management and the access to the research programme granted in equal conditions to all stakeholders. Looking at the participation of EARTO members via the eCORDA database, cPPPs seem to foster excellent collaboration between industries and RTOs as shown by RTOs' high level of participation in cPPPs (Table 1). The eCORDA database also shows that:

- EARTO members receive 15% of the EC funding available for cPPPs, which is quite high compared to the average 8% they receive in Pillar III Societal Challenges and the 13% in Pillar II Industrial Leadership (Table 2).
- Projects in which RTOs are involved receive from 71% to 87% of the EC funding available for collaborative projects initiated under cPPPs.
- Regarding participation in the management of these instruments, RTOs are generally well involved in the governing bodies of cPPPs with up to 26% of board members coming from RTOs in Factories of the Future, for instance.

Looking at JTIs, the picture is far more diverse with extremes showing low collaboration between industry and RTOs (Table 1):

- ECSEL is a positive example of industry-RTOs' collaboration with 99% of the EC funding available under this JTI awarded to projects with EARTO members involved. EARTO members themselves receive 30% of such available EC funding. It is worth noting that there is also national funding allocated to the different ECSEL calls, which are not considered in those figures and would probably bring an adapted view per country.
- In Clean Sky 2 or Fuel Cell Hydrogen JTIs, only 24% and 37% of EC funding are respectively invested in projects with EARTO members involved. These JTIs seem indeed less efficient in promoting wide participation, mostly because they require membership. In this case, wide participation could be improved to deliver more impact and ensure the success of those JTIs.

- The average EC contribution received by EARTO members is also quite low in JTIs, amounting to only 2% for Shift2Rail and 5% for SESAR, which could be explained by the fact that these JTIs are more service-industry oriented.
- The share of EARTO members represented in the governing bodies of JTIs is also quite low, with 3 cases where no EARTO member's representative is involved in the JTI's management.
- By implementing the H2020 funding rules, JTIs are on a good way to a comprehensive financial harmonisation. However, feedback from EARTO members stated that for some JTIs such harmonisation should be improved.
- Since JTIs have different management procedures and tools, EARTO members noted as well that using only one set of administrative procedures and tools would also bring great improvement. In addition, the participation rules for associated members used by some JTIs seem to hinder RTOs' participation in their open calls.

EARTO hopes this short analysis will bring forward some further thinking on those instruments for the Horizon 2020 interim evaluation and as first thoughts towards FP9. EARTO members active in JUs have also provided very useful insights on the various instruments in their direct answers to the consultation which we hope will also be considered.

Table 1: Overview of EARTO members' Participation in JTIs & cPPPs

	Name	Total EC Contribution (Million Euro)	% EC Contribution awarded to Projects with EARTO members involved	% EC Contribution awarded to EARTO Members	% EARTO Members in governing bodies
JTI	BioBased Industries	€ 229m	43 %	8 %	0%
	Clean Sky 2	€ 140m	24 %	11 %	13%
	ECSEL	€ 296m	99 %	30 %	8%
	Fuel Cell Hydrogen 2	€ 286m	37 %	7 %	10%
	SESAR	€ 164m	89 %	5 %	0%
	Shift2Rail	€ 88m	41 %	2 %	0%
cPPP	Energy-efficient Buildings	€ 163m	87 %	14 %	17%
	Factory of the Future	€ 428m	72 %	15 %	26%
	Green Vehicles	€ 272m	80 %	15 %	8%
	SPIRE	€ 214m	71 %	16 %	22%

Source: EC eCorda data 30th September 2016 (signed contracts and contracts under preparation), only with EU contribution (no national funding counted here).

As some cPPPs are not funded under specific individual calls but rather as part of larger calls like ICT, data on some cPPPs (Photonics, Robotics, High Performance Computing and 5G) could not be included in this table. Besides, data on JTI IMI was not available.

Table 2: Overview EARTO Members' Participation in Horizon2020 Pillars

H2020 PILLAR	Total EC Contribution (Billion Euro)	% EC Contribution awarded to Projects with EARTO members involved	% EC Contribution awarded to EARTO Members
Pillar I - Excellent Science	€7.03bn	21%	4%
Pillar II - Industrial Leadership	€4.59bn	59%	13%
Pillar III - Societal Challenges	€7.52bn	49%	8%
Total	€20.15bn	42%	8%

Source: EC eCorda data 30th September 2016 (signed contracts and contracts under preparation).

RTOs - Research and Technology Organisations

From the lab to your everyday life. RTOs innovate to improve your health and well-being, your safety and security, your mobility and connectivity. RTOs' technologies cover all scientific fields. Their work range from basic research to new products and services development. RTOs are non-profit organisations with public missions to support society. To do so, they closely cooperate with industries, large and small, as well as a wide array of public actors.

EARTO - European Association of Research and Technology Organisations

Founded in 1999, EARTO promotes RTOs and represents their interest in Europe. EARTO network counts over 350 RTOs in more than 20 countries. EARTO members represent 150.000 highly-skilled researchers and engineers managing a wide range of innovation infrastructures.