



Lessons learnt from the interim evaluation of Horizon 2020

**International Symposium 'Research
Evaluation: Issues, methods and tools'
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European Commission**



INTRODUCTION

- From the evaluation of individual researchers and organisations to the evaluation of **programmes** supporting research and innovation
- Socio-economic context: **budgetary arbitrations**, need to deliver tangible results on the ground and better communicate them
- Need to know better **what is the difference we are making** through our investments, not only in the scientific arena but also for the economy and society.
- **Key questions: What are the impacts of R&I investments? How can this be assessed? When?**



KEY FEATURES OF HORIZON 2020

#1

The first EU **integrated programme**, covering both basic research and close to the market innovation.



Total budget of ~ **EUR 77 billion** over 2014-2020.



A **3 pillar approach** with a general objective: *"To contribute to building a society and economy based on knowledge and innovation across the Union"*



Excellence as guiding principle + impact + implementation



INTERIM EVALUATION OF HORIZON 2020

Where do we stand after 3 years - Allocation of funding 2014-16

Additional priorities

on widening participation, including society, EURATOM and the pilot for fast-track-to innovation:

EUR 994.1 million to 270 projects

3. Priority /pillar Societal Challenges

responds directly to grand societal challenges and aims to stimulate a critical mass of research and innovation efforts to help address these:

EUR 7.4 billion to 2941 projects

5%

37%

36%

EUR 20.4 billion

22%

1. Priority/pillar

Excellent Science aims to reinforce and extend the excellence of EU's science base and to consolidate the European Research Area:

EUR 7.5 billion to 5964 projects

2. Priority/pillar

Industrial Leadership aims to speed up the development of the technologies and innovations that will underpin tomorrow's new technology and help innovative European SMEs to grow into world-leading companies:

EUR 4.5 billion to 1933 projects

+100,000 proposals, 11,000 projects (success rate of 11.6%)
1 out of 4 high quality proposals funded, + EUR 60 bn more needed to fund them all



**European
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Research and innovation

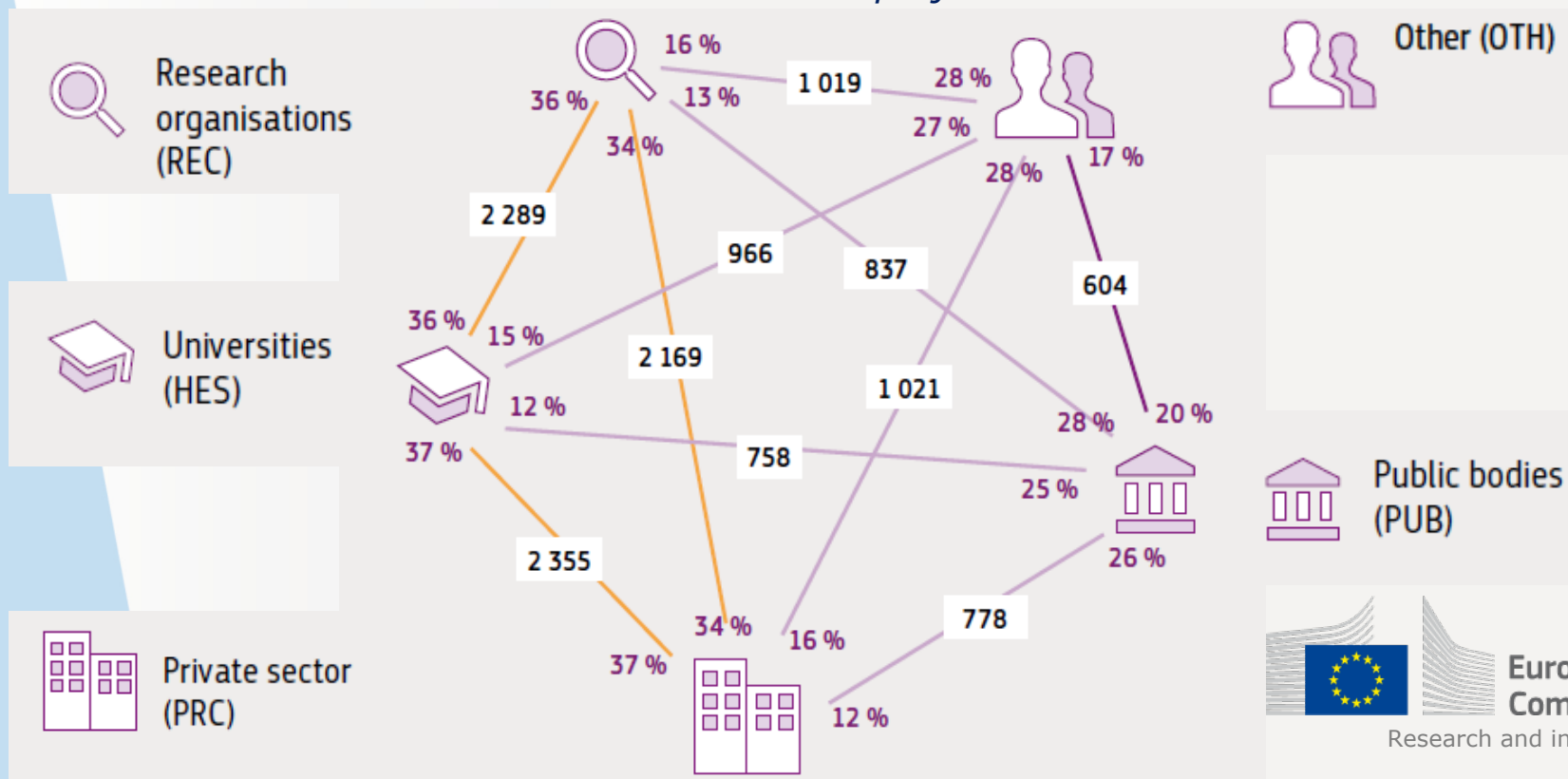


INTERIM EVALUATION OF HORIZON 2020

Collaboration under Horizon 2020

- **75%** of funding to **collaborative projects**, all technology readiness levels
- Participants from **131 countries**
- **Diversity of organisations:** 1/3 higher educations institutions, 1/3 private sector, 22% research organisations, 6% public bodies, 5% others
- 52% of participants are **newcomers** (not in previous programme FP7)

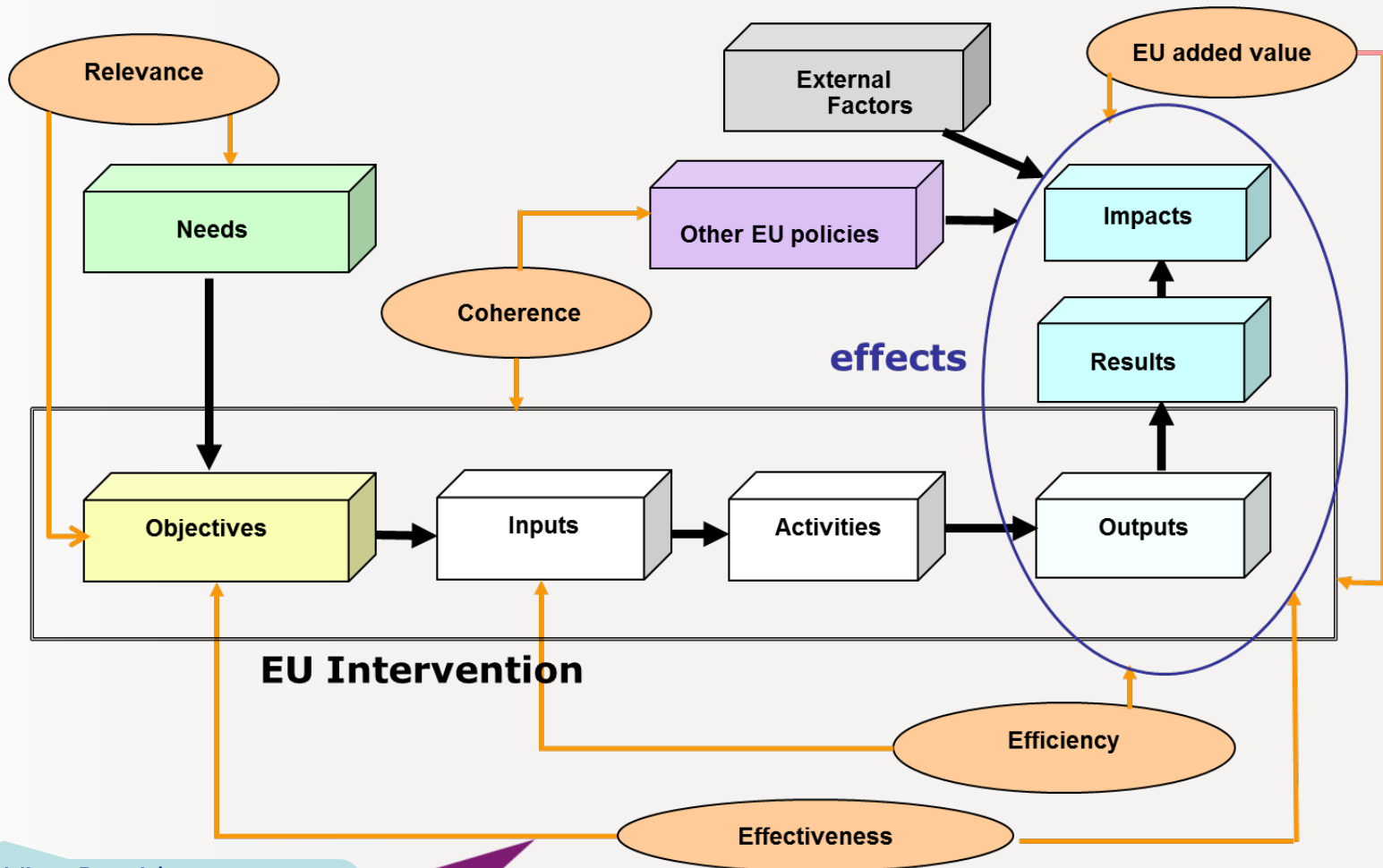
Collaborative projects





BETTER REGULATION AND THE EVALUATION FRAMEWORK

What do we need to know? The 5 evaluation criteria



First EC Vice-President Timmermans: "We must be honest about what works and what doesn't."



INTERIM EVALUATION OF HORIZON 2020

Key challenges = opportunities to learn & improve in real-time

Time-lags for R&I impacts, very few projects completed (represent 0.6% of EC budget committed so far):

- Looking for indications of progress, whether right conditions are in place

Attribution of the changes observed to the programme (less than 10% of public R&D spending in Europe), non-linear impact pathways:

- Managing expectations + counterfactual analysis + triangulation

Data availability & reliability: KPI focus on inputs/outputs, lack of fully-fledged indicator system to track progress towards (societal) impact; output data mainly self-reported; no data collection after project's end:

- Improvement of monitoring system to have the right information from the right level and at the adequate time + evaluation culture + thematic assessments to take into account specificities of each area

Lack of benchmarks and pre-defined targets to compare performance:

- Using FP7 as benchmark



COLLECTING EVIDENCE FROM MULTIPLE SOURCES

Triangulation, transparency, referencing, qualitative/quantitative

DATA SOURCES

Surveys, interviews, case studies, expert groups, Horizon 2020 monitoring data (e.g. CORDA), Commission administrative data (e.g. budget), existing databases (e.g. OECD, Eurostat, ORBIS) and publications (incl. European Parliament, European Economic and Social Committee, Court of Auditors)

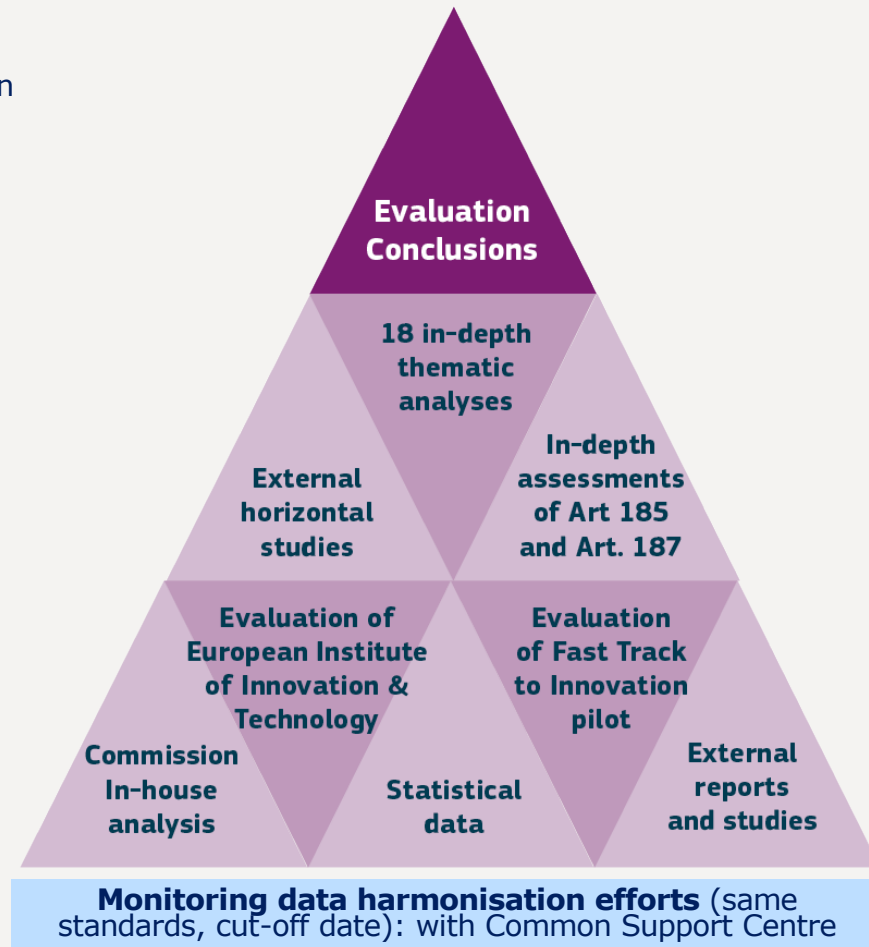
METHODS

Macro-economic modelling, counterfactual analysis, network analysis, descriptive statistics, bibliometric analysis, text and data mining analysis, document review, case studies, synthesis of thematic assessments

STAKEHOLDER CONSULTATIONS To contextualise findings

Stakeholder consultation on the Interim Evaluation of Horizon 2020 (~3500 survey replies, 300 position papers)

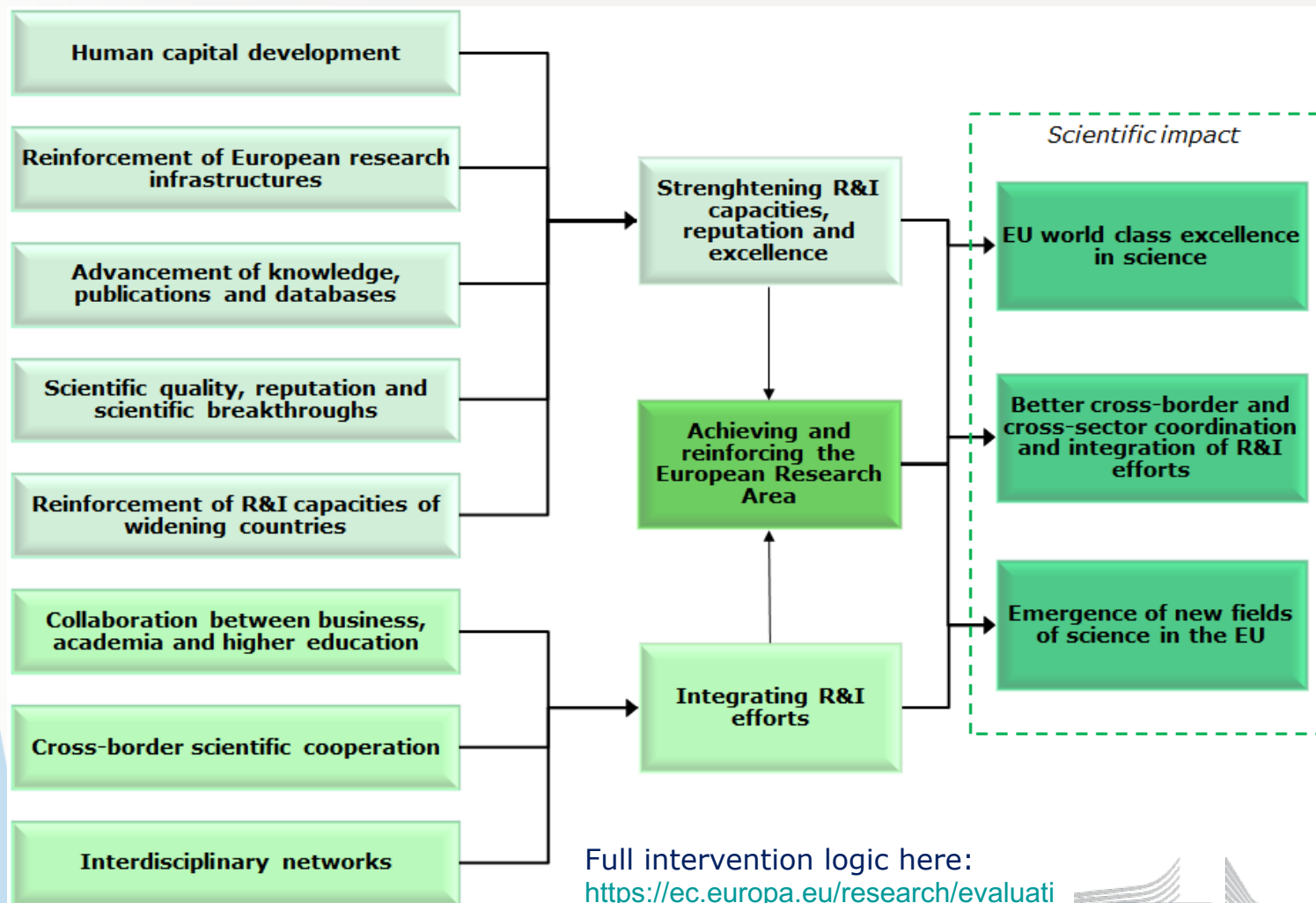
Surveys of National Contact Points, Simplification Survey, Call for Ideas on the European Innovation Council





EFFECTIVENESS - PROGRESS TOWARDS SCIENTIFIC IMPACT

Taking a broad systemic perspective



Full intervention logic here:

https://ec.europa.eu/research/evaluations/pdf/archive/h2020_evaluations/intervention_logic_h2020_052016.pdf

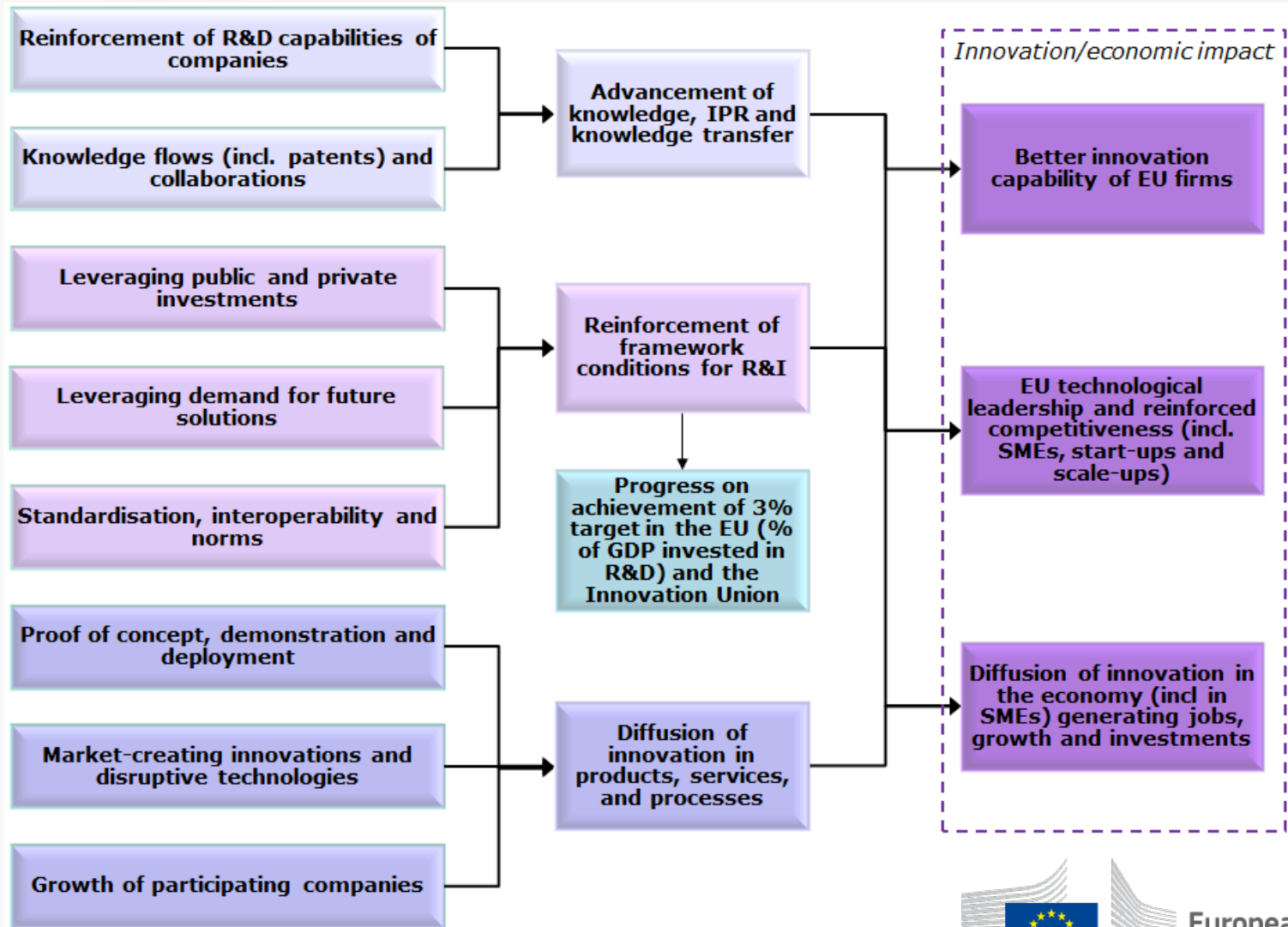


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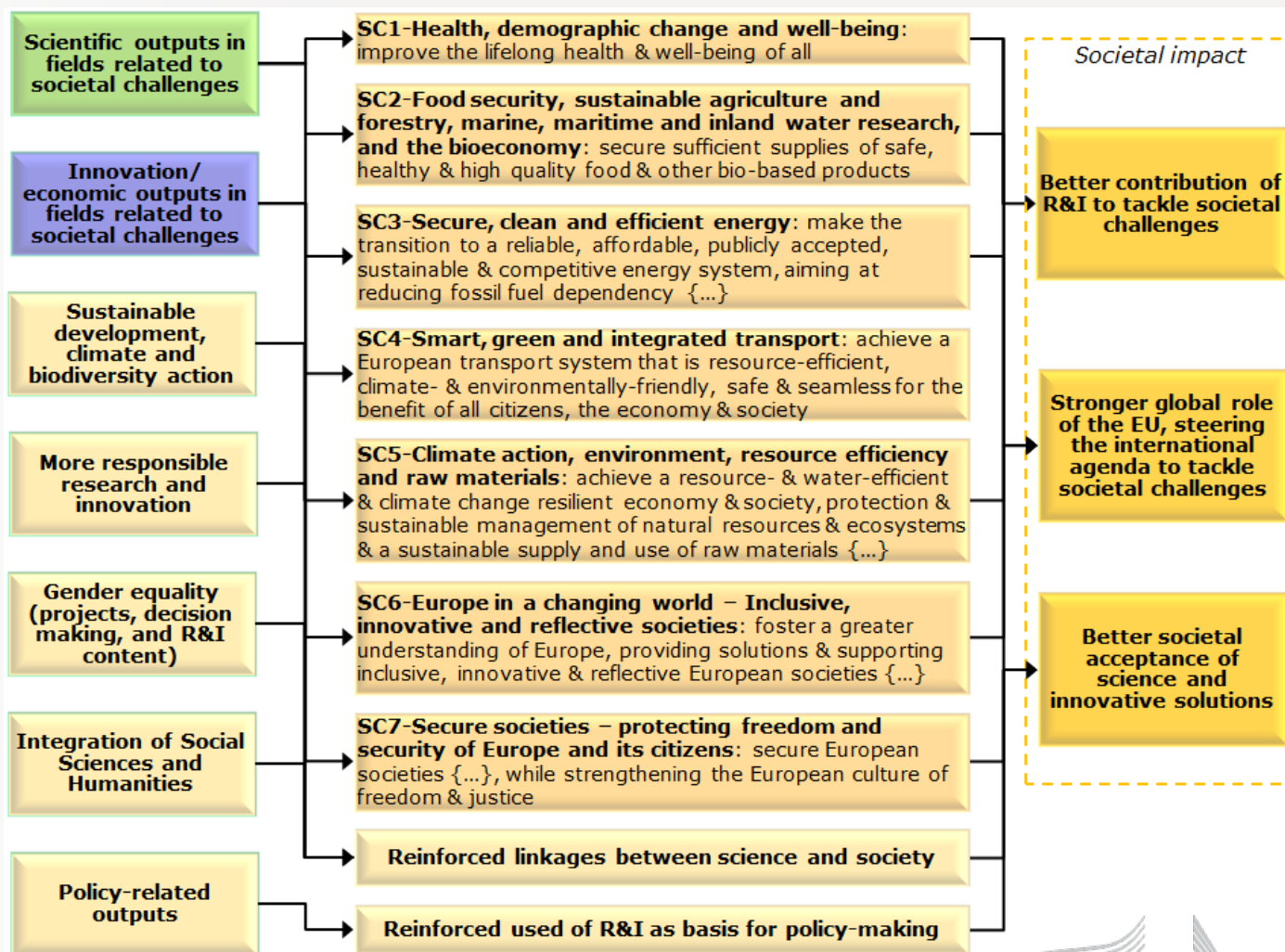


EFFECTIVENESS - PROGRESS TOWARDS ECONOMIC/INNOVATION IMPACT





EFFECTIVENESS - PROGRESS TOWARDS SOCIETAL IMPACT

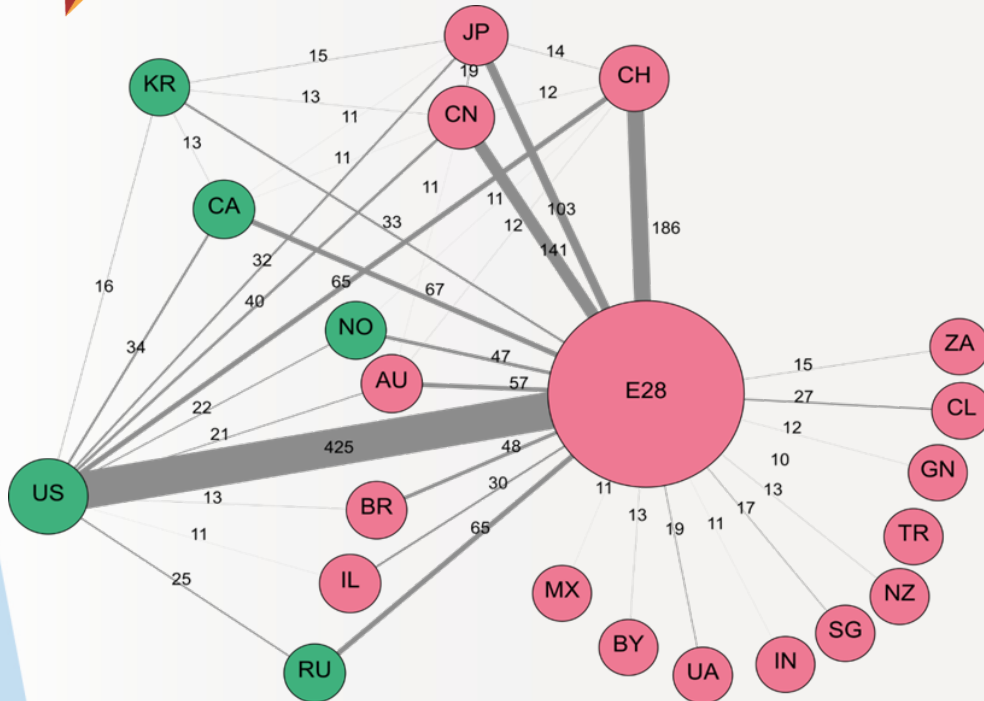




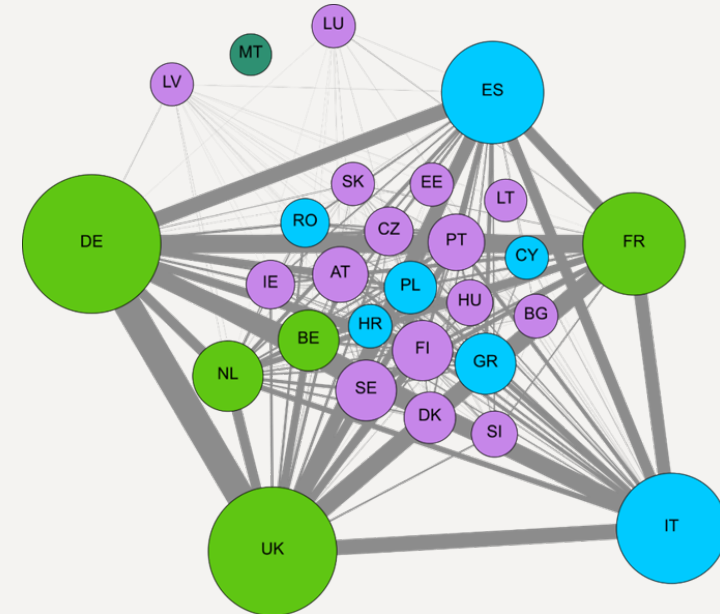
INTERIM EVALUATION RESULTS

Adding value through collaborations: first publications

Global



Within EU28



- **4,000+**, overall **Field-Weighted Citation Index: 2.46**, **2/3** in open-access
- **1 in 5** based on **private sector / academia collaboration**
- **7.55%** are **inter-disciplinary** (7.45% in the first three years of FP7). FWCI of 1.78
- Publications including authors from Associated & Third Countries cited up to **more than three times as much as the world average**.



INTERIM EVALUATION RESULTS

Further examples of early indications of progress towards scientific, economic and societal impacts



Integration of R&I efforts between countries, sectors, scientific disciplines; **340 000 researchers**, international mobility for 27,000 researchers (MSCA), **365 national research infrastructures** made accessible, scientific **reputation & breakthroughs**



Funded projects **~40 % more likely to be granted patents**; beneficiary SMEs have **higher growth paths** than unsuccessful applicants; generation of first **IPR and innovations**; reinforcement of **framework conditions** for R&I



Cross-cutting impacts on the Societal Challenges expected in most projects: publications, patents, prototypes, products, processes and methods in domains of societal relevance



GDP gain estimated between EUR 400 to EUR 600 billion by 2030 (**1 EUR -> EUR 6 to 8.5**)

83% of projects would not have gone ahead without EU funding



KEY MESSAGES ON EVALUATING IMPACTS

Need for an intervention logic with clear objectives, expected outputs, results and impacts, taking into account the baseline and context of the intervention.

Need for a sophisticated approach for R&I impacts' measurement, allowing real time monitoring of progress towards (expected & unexpected) impacts not only in scientific terms, but also for the economy & society.

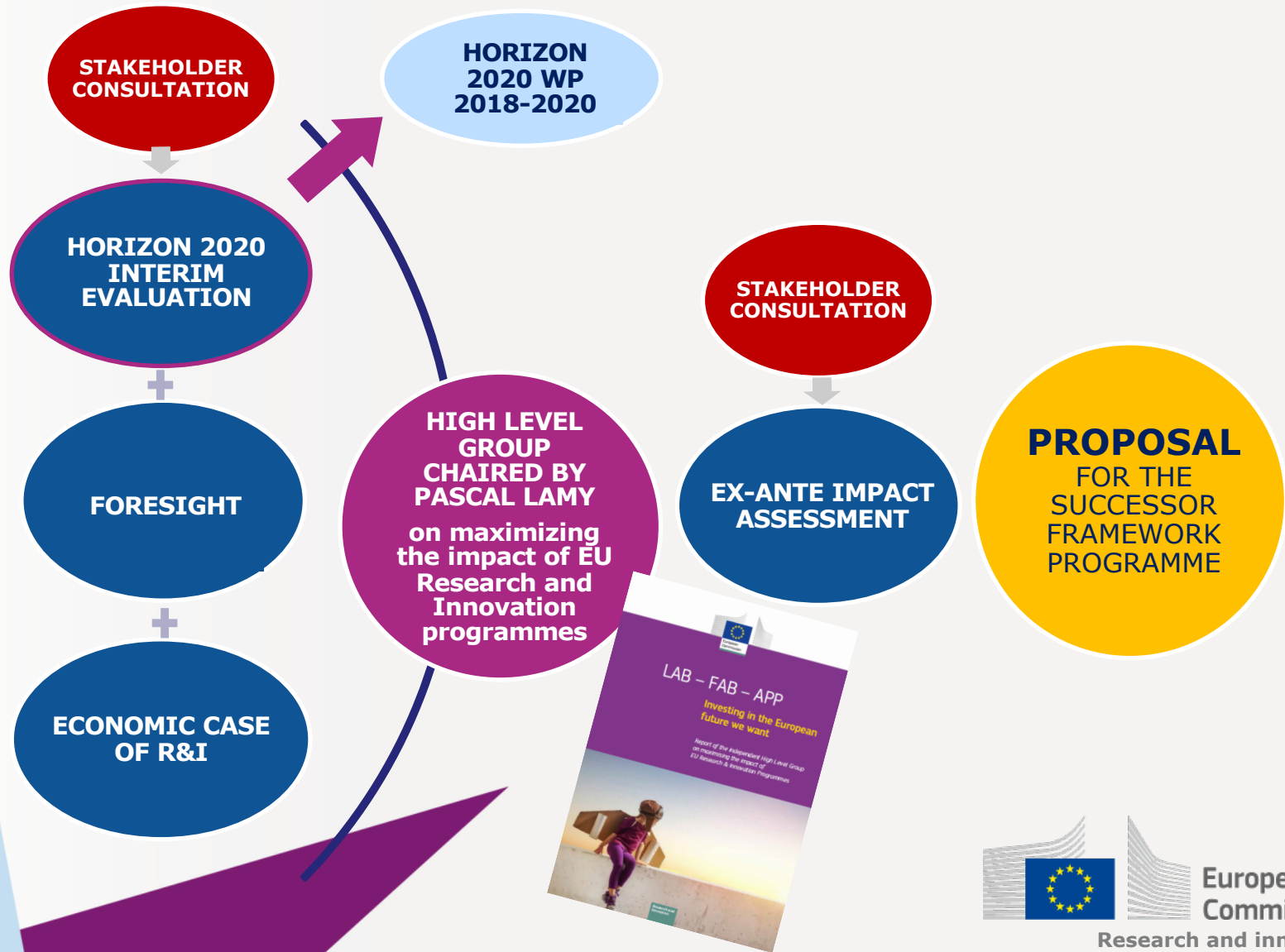
Need to bring R&I closer to the public, and involve users & citizens more in the co-creation of R&I solutions.

Need to minimise burden on beneficiaries: potential of new ICT tools to also track impact beyond the project's lifetime.

Need to manage expectations on what can be captured when, while encouraging risk-taking. Need to be ready to evaluate, learn & adapt.



LEARNING FROM THE PAST, CONSIDERING THE FUTURE & BENEFITING FROM CO-DESIGN





THANK YOU FOR YOUR ATTENTION

Full Horizon 2020 interim evaluation results to be found on:
ec.europa.eu/research/evaluations/index_en.cfm?pg=h2020evaluation



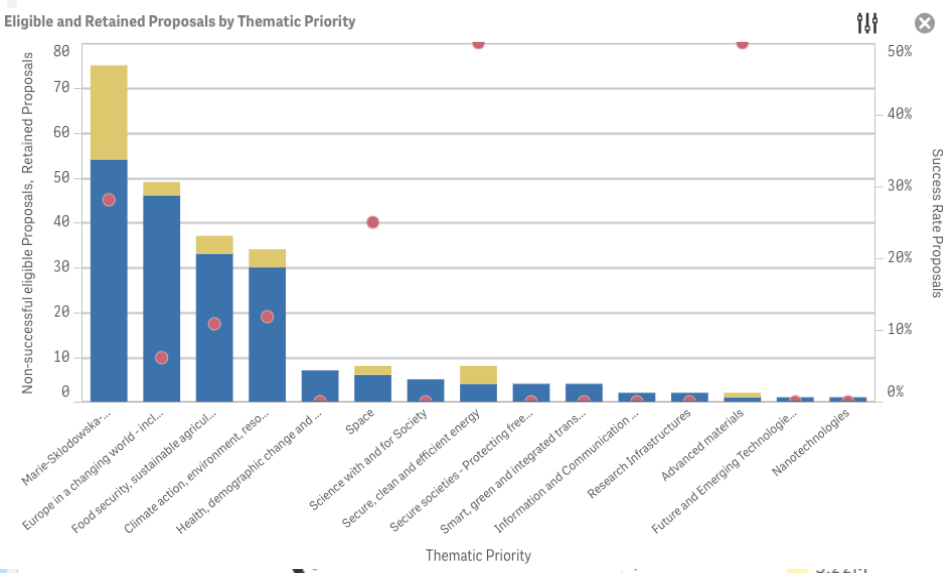
Horizon 2020 Dashboard (detailed implementation data on proposals & projects) allowing drilling into the monitoring data available + publication of information on projects, their results and their public deliverables:

<http://ec.europa.eu/research/participants/portal/desktop/en/projectresults/index.html>

Horizon 2020 Dashboard – Morocco

Summary

Eligible and Retained Proposals by Thematic Priority



Funded Projects

38,25%
of total

Project Participations

41,06%
of total

EU Contribution (EUR)

3,22M,01%
of total

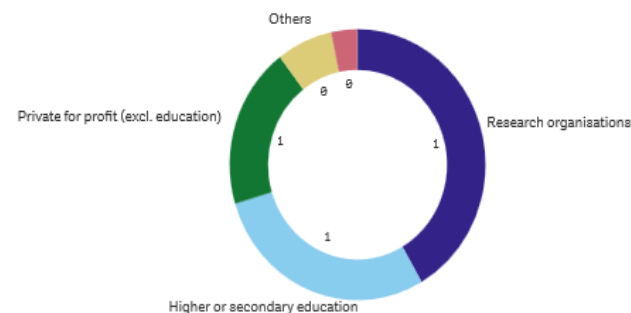
Number of project participations and EU Contribution by organisation

Legal Name		EU Contribution (EUR)	Project Participations
Totals		3.222.390 €	41
INSTITUT DE RECHERCHES EN ENERGIE SOLAIRE ET ENERGIES NOUVELLES	Moro...	1.062.613 €	2
MOROCCAN AGENCY FOR SOLAR ENERGY SA	Moro...	592.100 €	2
INSTITUT AGRONOMIQUE ET VETERINAIRE HASSAN II	Moro...	307.500 €	2
MOROCCAN FOUNDATION FOR ADVANCED SCIENCE INNOVATION AND RESEARCHFONDATION MASCIR	Moro...	200.000 €	2

Number of project participations and EU Contribution by country

Country Name	EU Contribution (EUR)	Project Participations
Totals	3.222.390 €	41
Morocco	3.222.390 €	41

EU Contribution by Type of Organisation (Mil EUR)



Success rate: 16.8% > average