SMART Σ!

advanced manufacturing program

EUREKA Σ!

innovation across borders

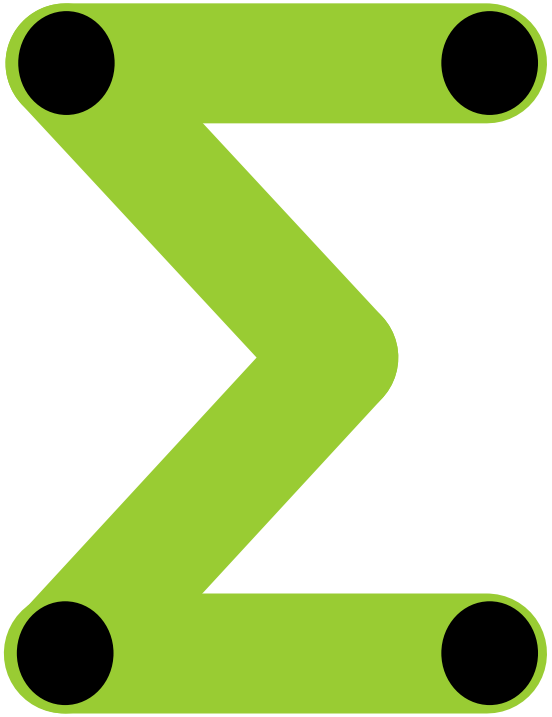
SMART

advanced manufacturing program

- What are Eureka Clusters
- Why a new Program on Advanced Manufacturing
- SMART Program
- Benefits of participating in the Program
- SMART Development Process, Status and Next steps

International technology cooperation platform

Intergovernmental grouping

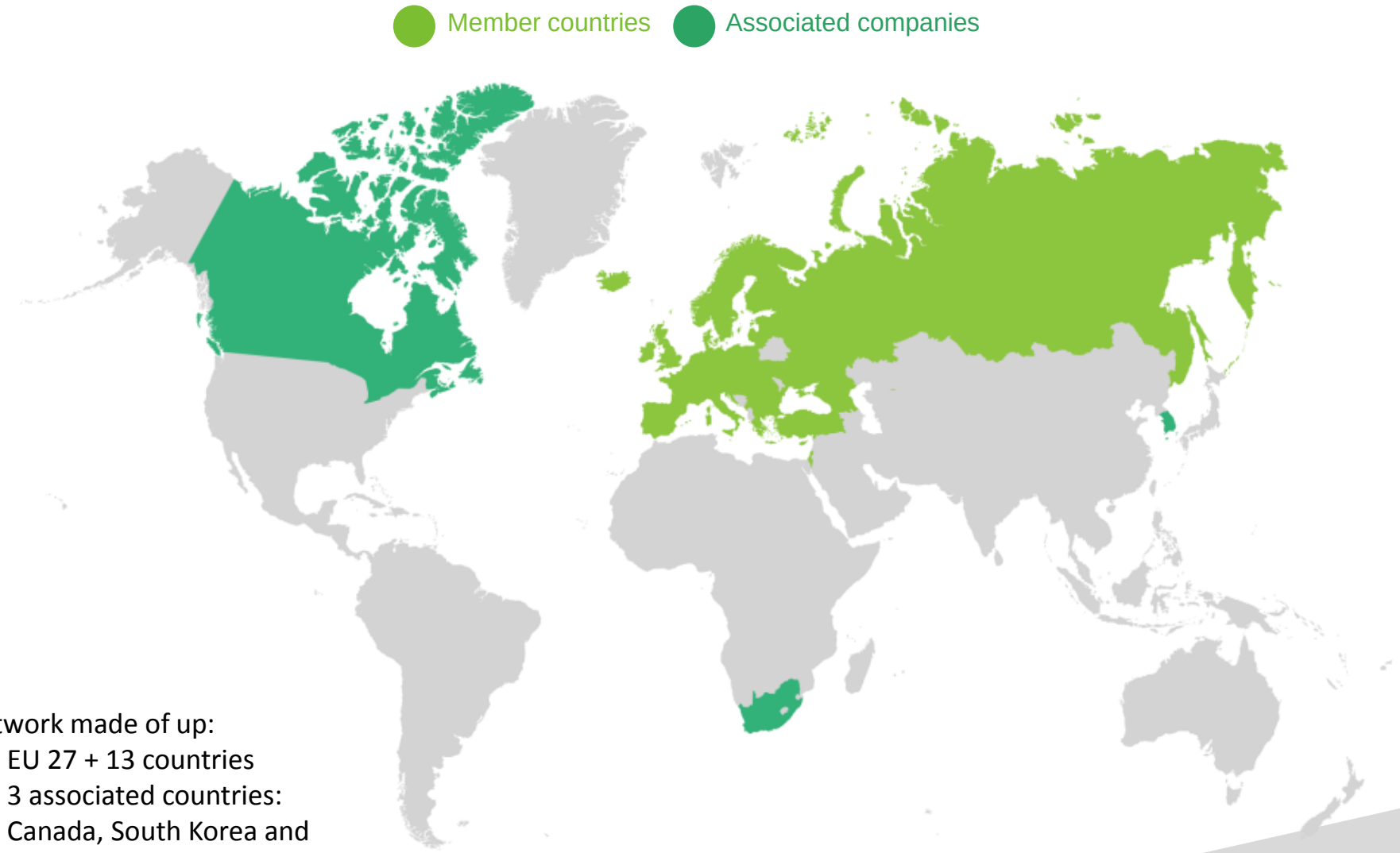


Provides support to **market-oriented R&D&I** projects

Facilitates access to **National Financing**

EUREKA (1985): promote competitiveness of the European industry
Financing: National public funds + private contribution
Market-oriented: result is a marketable service, process or product

advanced manufacturing program



Network made of up:

- EU 27 + 13 countries
- 3 associated countries: Canada, South Korea and South Africa

September 2017

Eureka Clusters: STRATEGIC programs

Industry-led initiatives

- Managed by participating industry.
- Autonomy:
  - Mission and Vision
  - Calls
  - Evaluation
- STRATEGIC nature.
- In coordination with national financing agencies.

Large number of participants

- Large projects with sub-projects.
- Main players of the sector.
- Extensive participation of SMEs (30–50%).
- Large companies as driving forces.
- They form a legal entity.

Promoting European competitiveness

- With close to market projects
- Covering the entire value chain

Public - Private Partnership

Legal Entity to enter into the PPP

Technical evaluation in the actual cluster

Financing in each country (decentralised)

The seven EUREKA Clusters

Telecommunications

Electronic systems

Low carbon energies

Software for systems and services

Micro and nano electronics enabled systems

Materials

Advanced Manufacturing

SMART

Why a New Program on Advanced Manufacturing

SOCIO-ECONOMIC IMPACTS[1]:

- 21% contribution to EU`s GDP
  - More than 1.760 billion € of value added in EU
- 14% of employment
  - More than 32 million persons employed in EU.
  - Each job in industry is linked to two more in related services
- 2,1 million enterprises, mostly SMEs
  - Which represent 9% of all non financial business enterprises in EU
- 64% of private R&D investiment
- Bigger purchase and user of Key Enabling Technologies

(1) http://ec.europa.eu/research/industrial_technologies/innovation-in-manufacturing_en.html

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Why a EUREKA Program on Advanced Manufacturing

Key Enabling Technology (KET) by the EC

What are KETs?

- *Six strategic technologies*
- *Driving competitiveness and growth opportunities*
- *Contributions to solving societal challenges*
- *Knowledge- and Capital-intensive*
- *Cut across many sectors*

- **Nanotechnologies**
- **Advanced Materials**
- **Micro- and nano-electronics**
- **Photonics**
- **Biotechnology**
- **Advanced Manufacturing**

EC Communications
(2009)512 & (2012)341
KET High-level Group

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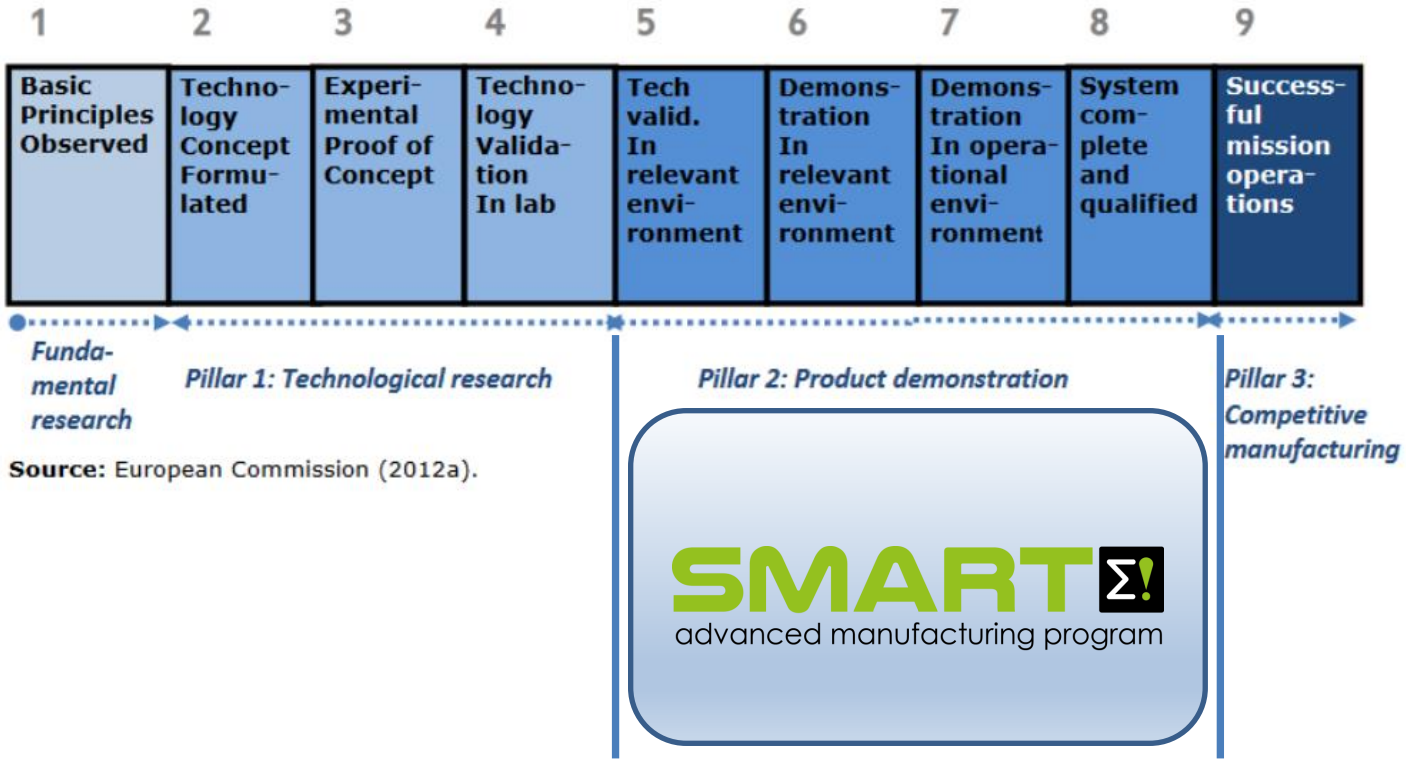
Why a EUREKA Program on Advanced Manufacturing

SMART is focussed on close to market projects, within 5 to 8 TRLs



Source: European Commission (2012a).

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Why a EUREKA Program on Advanced Manufacturing

In the coming 10 years Manufacturing Industries will change their manufacturing processes more than in the last 100 years.

SMART is the new EUREKA Cluster Program, supporting R+D projects :

- In a flexible industry-driven Technology Roadmap
- In international cooperation between large and small companies, RTOs and Academia.
- Facilitating the deployment of existing technologies
- In high Technology Readiness Levels (5-8)
- In rather short time projects: 1-3 years

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Technology Roadmap

Manufacturing sectors

- Aeronautic
- Automotive
- Capital Goods
- Consumer goods
- Railway
- Others

Technologies and trends

- Material processing technologies
- Mechatronics technologies & systems
- Flexible, adaptive & collaborative robotics
- ICT
- Production Technologies

Research and Innovation Domains

- **Advanced Manufacturing Processes**
- **Intelligent and adaptive manufacturing systems**
- **Digital, virtual and efficient companies**
- **Person-Machine collaboration**
- **Sustainable manufacturing**
- **Customer based manufacturing**

More than 140 organizations support SMART in 21 Countries by June 2017

Tractor Team

Coordinators

MONDRAGON

AFM Advanced Manufacturing Technologies

Companies

AERnnova

AIRBUS

B/S/H/

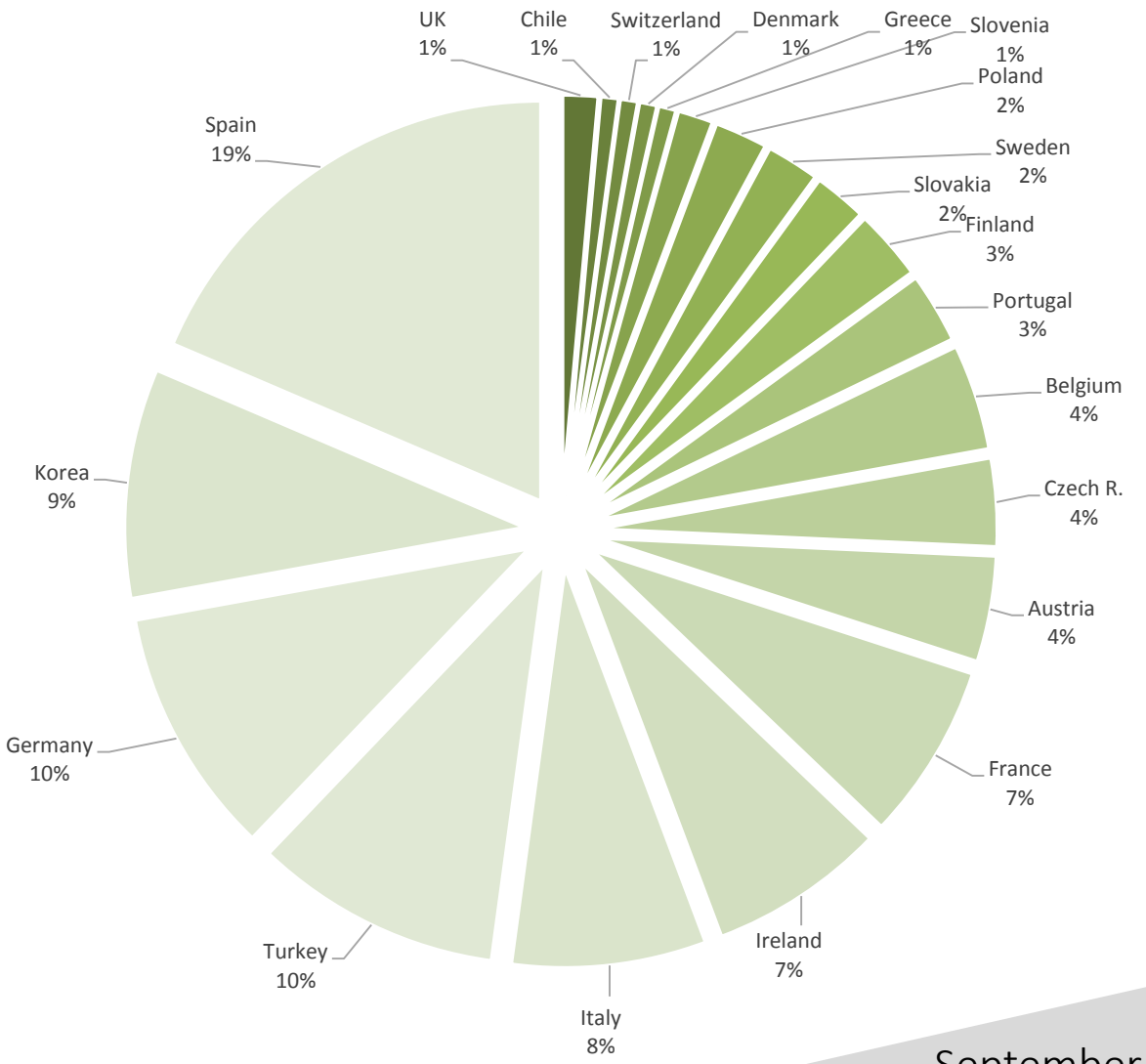
ensa

GRUPO ANTOLIN

IDESA ingeniería y diseño europeo, s.a.

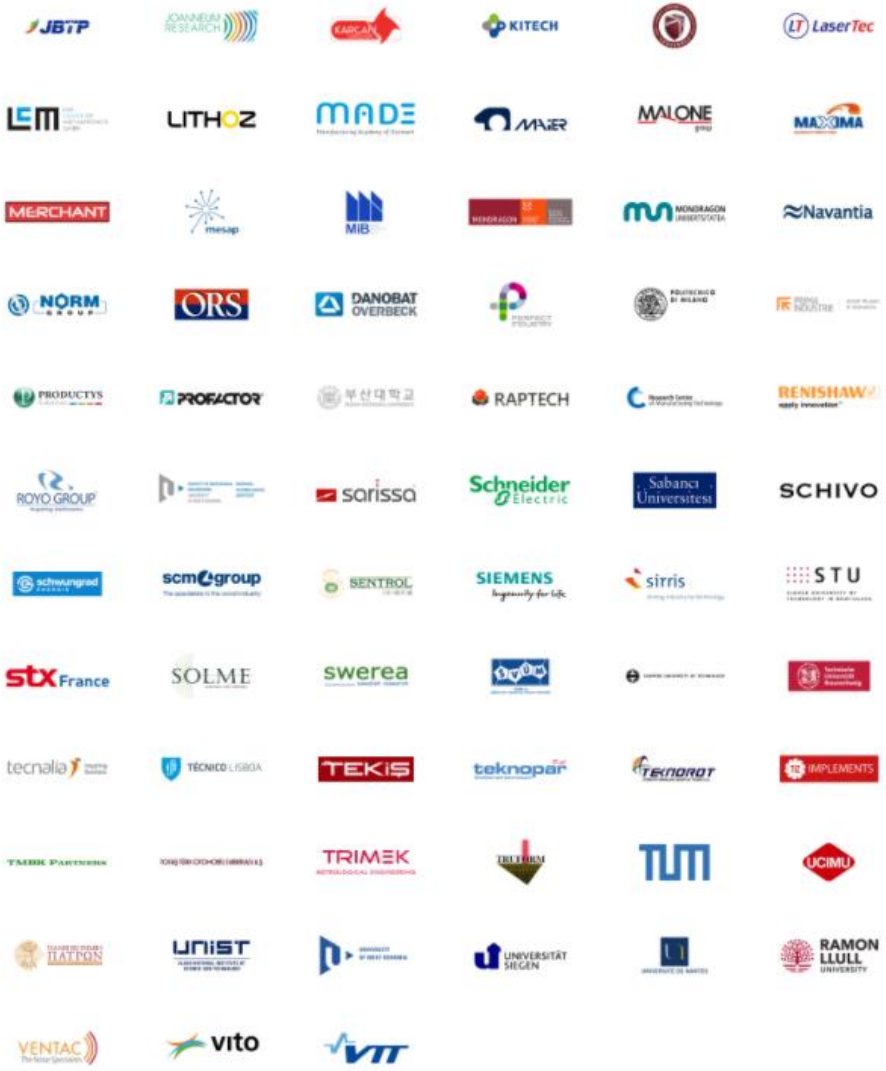
Navantia

ROYO GROUP inspiring bathrooms



Organizations Supporting SMART

Organizations Supporting SMART



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Benefits for companies

- **FAST Return On Investment (ROI):** Cluster projects are focused on high TRLs. This allows fast return on investment for the allocated R&D money
- **High success rate** 65% to 70% on project evaluation
- **Agile labeling process:** (two steps approach, guidelines and recommendations from technical experts), quick (less than one year to run the full process from first idea to label) and criteria are clear.
- **Bottom-up projects:** partners define research priorities within a wide framework and not restricted to specific topics
- **Establish relationship** within an Advanced Manufacturing **community**, including large leading companies
- **R+D collaboration with customers** and potential customers

Benefits for companies

- **Manageable Consortia:** partners from two countries can form the consortium without any limit in terms of number of participants.
- **Manageable Technical Risk:** in a **bottom-up approach**: the **scope of the R&T project is defined by the Consortium** itself, to solve an identified technical entry barrier to market. Projects are close to innovation and business creation.
- **Manageable IP:** EUREKA allow a limited number of countries and partners. Confidentiality and intellectual property rights are manageable.
- **Generate Win/Win situations.** **Member States** may influence the Technology Roadmap and the selection of strategic flagship initiatives.

Typical Cluster Projects:

Yearly expected SMART projects
50 projects

4 – 14 participants

3 – 4 countries

Average duration
31 months

Annual costs
2 - 15 million Euros

2008-2014: Source EUREKA Secretariat

Initially, a total budget of Euros 300 millions over 7 years has been estimated for SMART.

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Development Process: Working agenda

Working Plan for the Definition Phase	
Milestone	**Date**
Organisation created and installed (Cluster Board, Office, PAB Board, etc.)	October 2017
First SMART Call for Projects Submitted to the HLG	October 2017
Launch of the First SMART Call for Projects	December 2017
Submission for the SMART "Full Eureka Label" to ESE	May 2018
SMART "Full Eureka Label" submitted to HLG for endorsement	June 2018
SMART Label Granted to projects	July 2018
Execution: First SMART Projects started	November 2018

SMART Program dimension

Participating Countries	Total Nº Projects 7 years	Average Budget Per project & Country (m€)	Total Program Budget (m€) 7 years	Nº Projects per year	Program budget per year (M€)	%
Spain	60	1,5	90	8,6	12,9	34,7%
Sweden	12	1,5	18	1,7	2,6	6,9%
Czech R.	28	0,8	22,4	4,0	3,2	8,6%
South Korea	15	1	15	2,1	2,1	5,8%
Ireland	14	0,8	11,2	2,0	1,6	4,3%
Portugal	18	0,8	14,4	2,6	2,1	5,5%
Turkey	52	1,5	78	7,4	11,1	30,1%
Norway	7	1	7	1,0	1,0	2,7%
Slovakia	7	0,5	3,5	1,0	0,5	1,3%
TOTAL	85	3,4	260	12	37	100%

Organizations Supporting SMART:

JOIN US

- Being EUREKA Clusters Industrial initiatives, SMART needs Industry to confirm their interest to the National Funding Agencies.

- We Invite you to join SMART initiative sending as your Support Form:

http://www.smarteureka.com/en/join-us/

More information: **info@smartam.eu**

www.smarteureka.com

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SMART is an initiative to create a new EUREKA Cluster