



Internal Market, Industry, Entrepreneurship and SMEs Directorate General

Supporting KETs in regions

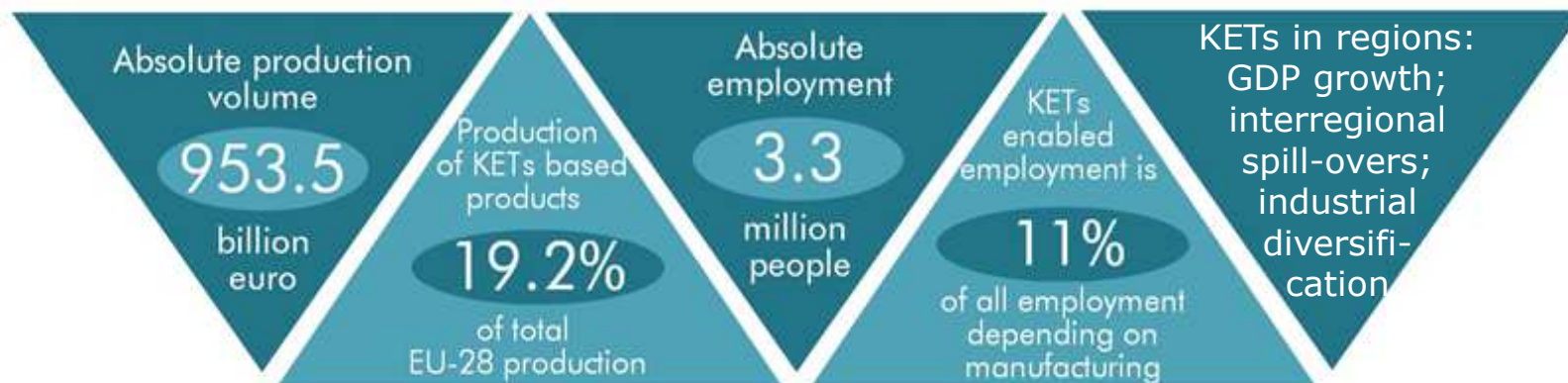
Heidi MOENS, Policy Officer

**KETs, Digital Manufacturing
& Interoperability Unit**

JRC Workshop 'Development of KETs for industrial modernisation, regional dimension and link to emerging technologies', 9 June 2016

Value created through KETs in Europe

Value created by the deployment of KETs in 2013



Source: KETs Observatory

Further growth potential (10 - 20% in coming years)

- ➡ Key to strengthen high-performing industrial base
- ➡ Opportunities for regional growth, industrial modernisation and competitiveness



Specialisation in KETs is positively linked to regional innovation performance

- ✓ **Regions with a positive specialisation in KETs are found across the whole of Europe** but in particular in Austria, Belgium, Southern France, Germany, the Netherlands, Portugal, Spain and some regions in Finland, Greece, Italy and Poland.
- ✓ **Positive link between KETs specialisation and regional innovation performance**, in particular in Advanced materials, Industrial biotechnology, Photonics, and Advanced manufacturing.
- ✓ **Less innovative regions have become more specialized in KETs**, thereby laying the foundation for possible innovation performance increases in the future.

Source: Regional Innovation Scoreboard 2016 (publication July 2016)

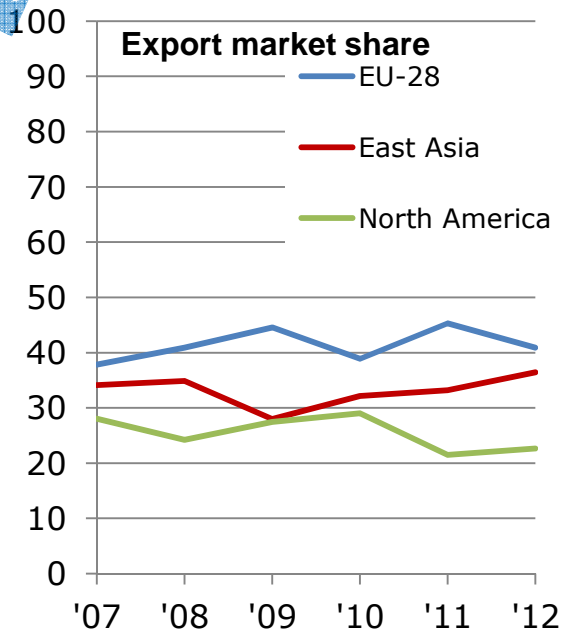


KETs Observatory : a tool to assess performance in KETs at EU, national and regional level

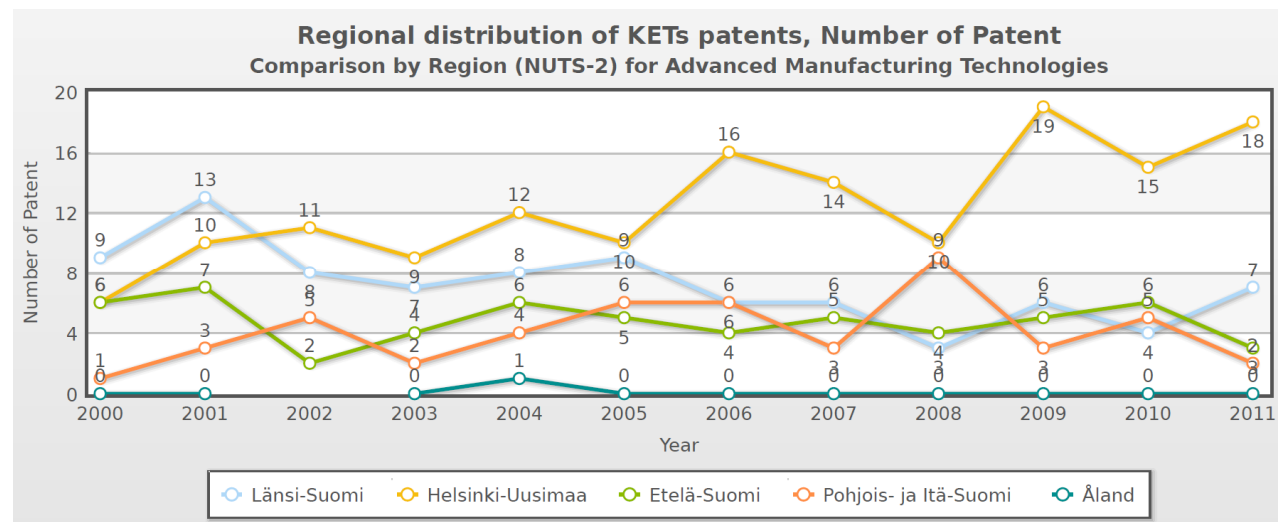
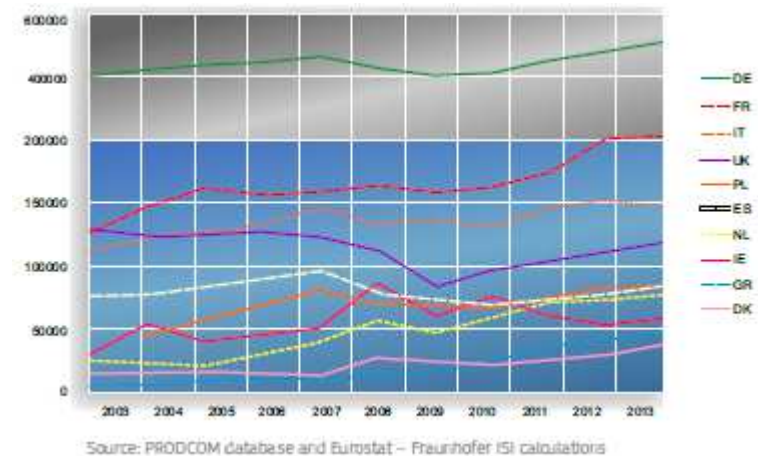


KETs Observatory

<https://ec.europa.eu/growth/tools-databases/kets-tools/>



Absolute employment for EU 28 in Advanced Manufacturing



Challenges



Low uptake and investments by EU industry in advanced technologies and new business models

R&D investments by EU companies in high-tech sectors is only 40% invested by US companies

Source: EU Industrial R&D Investment Scoreboard 2015

Almost half of European manufacturing companies have not used advanced manufacturing technologies in the past and do not plan to use them in the next years

Source: Innobarometer 2015

Fewer than one in five manufacturing companies have used advanced manufacturing technologies (digital, sustainable or high-performance enabling technologies)

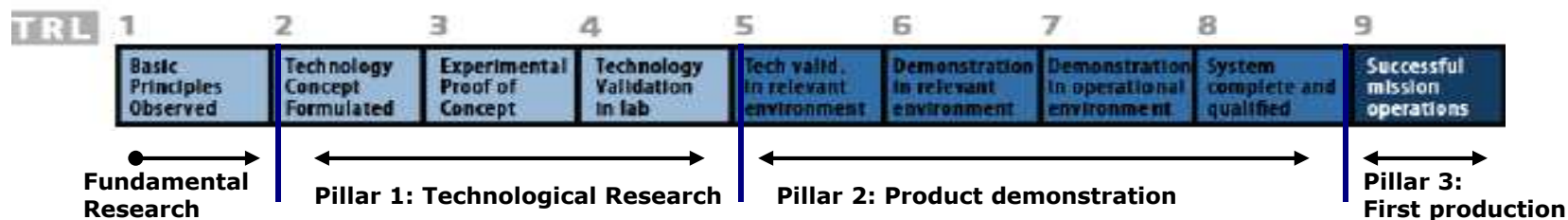
Source: Innobarometer 2016

👉 **Speeding up investments in advanced technologies and uptake of advanced solutions for a modern, competitive and sustainable industry**

Progress had been made...



European KETs Strategy (2012): Instruments have been adapted & aligned to boost KETs deployment



1. Horizon 2020 (TRL 1 – 8)

2. Structural Funds (TRL 2 – 9)

3. European Investment Bank (TRL 2 – 9)

4. State aid rules modernised: higher notification thresholds & aid intensity

Regional aid & IPCEI

- 1.** Priority for KETs under LEIT (€ 6 bn):
- × Closer to market
 - × Greater focus on impact
 - × Synergies encouraged

- 2.** KETs, a R&I priority of ERDF:
- × 65% of regions (15/25 MS) intend to invest in KETs
 - × Highest R&I priority (23%)

- 3.** MoU with EIB on KETs: EIB loans to KETs projects reached already €9 bn for 2013/15

- 4.** × Doubled state aid thresholds (GBER)
- × Increased max. aid intensities incl. for pilot lines (R&D&I)

Smart Specialisation Strategies designed

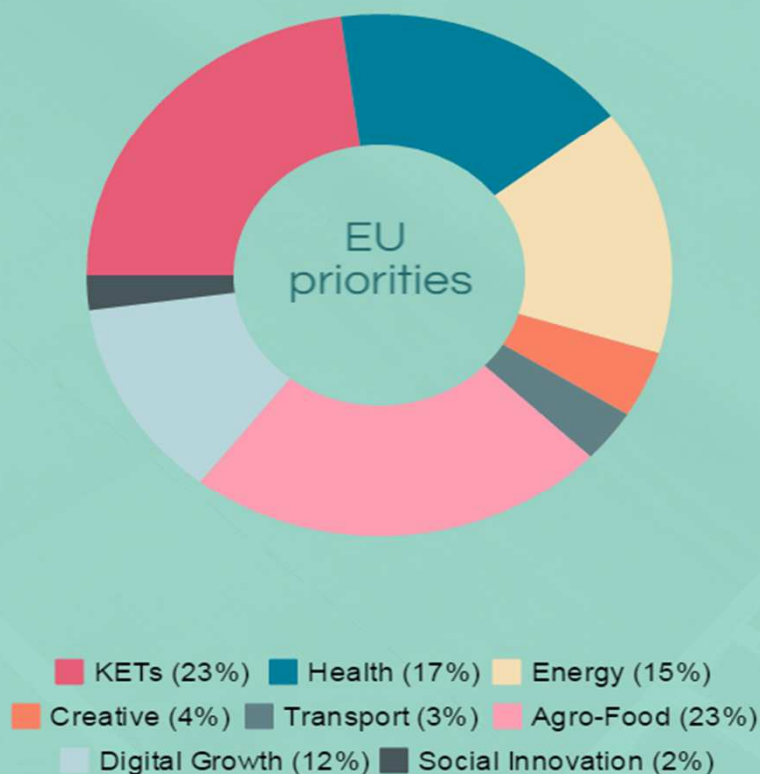


S3 Platform

1,260+

The number of
priorities
encoded in the
Eye@RIS3
database

Main RIS3 categories (2015)

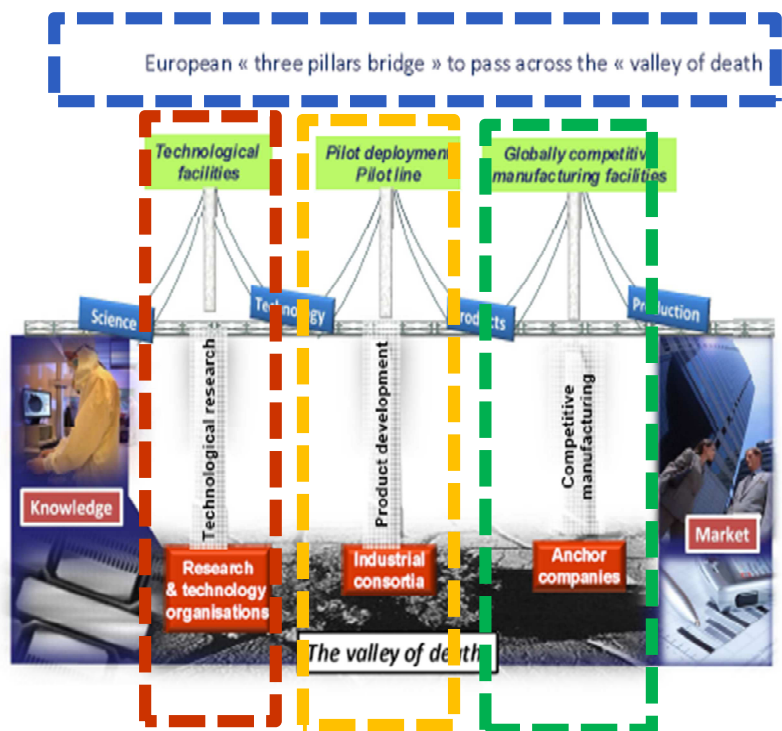


Many RIS3
priorities are
linked to several
such categories

... but more needs to be done



Four recommendations KETs High Level Group (June 2015) for an integrated approach to cross the European KETs "valley of death"



Boost European technology infrastructures to support industry

Strengthen KETs pilot lines and demonstration activities

Unleash significant investment into manufacturing through new EU tools (IPCEI, EFSI)

Escalate regional smart specialisation strategies to a European level

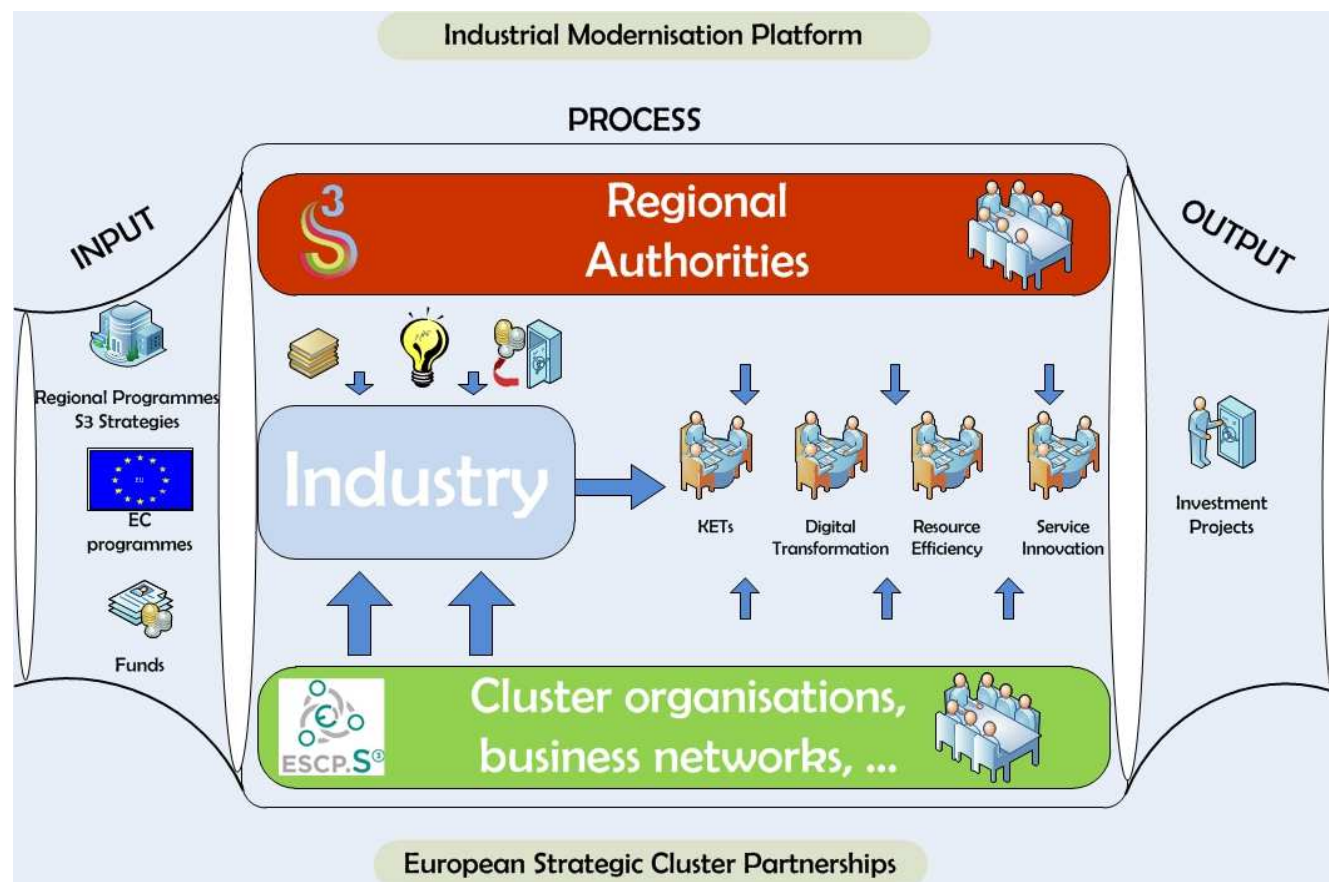
Bridging the uptake & investment gap



Speeding up deployment and uptake of advanced technologies for a modern, competitive and sustainable industry

1. Strengthening regional ecosystems and foster partnerships
 - ✓ **Thematic Smart specialisation platform for industrial modernisation & investment**
2. Helping companies to innovate
 - ✓ **Access to technology: Ensure SMEs have easy access to state-of-the art facilities**
 - ✓ Access to skills and access to finance
3. Ensuring adequate regulatory and policy framework

Industrial Modernisation Platform



Examples

- ✓ Projects across and between regional value chains
- ✓ Important projects of common European interest
- ✓ New investment platforms under the investment plan
- ✓ Development of new or sharing of existing infrastructures (testing facilities, pilot lines, data centres...)



Industrial modernisation focus

Priorities such as

- *Key Enabling Technologies*
- *Digital transformation*
- *service innovation*
- *resource efficiency*

This includes advanced manufacturing, digital transformation/ industry 4.0, digital platforms, big data analytics, space data services, advanced material and disruptive business models and service concepts including in creative industries, textiles & tourism.



How to get involved?



Lead Regions/MS



Business networks, cluster organisations and technology centres



Timeline



- ✓ **11 May 2016: InfoDay**
- ✓ **1-2 June 2016: Official launch at 'Smart Regions Conference'**
 - ... Progressively, collaboration subthemes will be (further) identified (can be led by one (or group of) regions)
 - ... S3P-Industrial Modernisation will provide support to lead regions and their innovation actors (e.g. analytical support, advisory support services, organisation of matchmaking events)
- ✓ **10-13 October: Open Days workshops** ('From smart specialisation to investments projects for industry modernisation', 13 Oct) to advance further on partnering
- ✓ **30 November-2 December 2016: European Cluster Conference**, including matchmaking pre-event
- ✓ **Mid 2017: Stocktaking at "GROW your REGION" conference**
- ✓ ...

☞ Pipeline of investment projects being progressively created

Bridging the uptake & investment gap



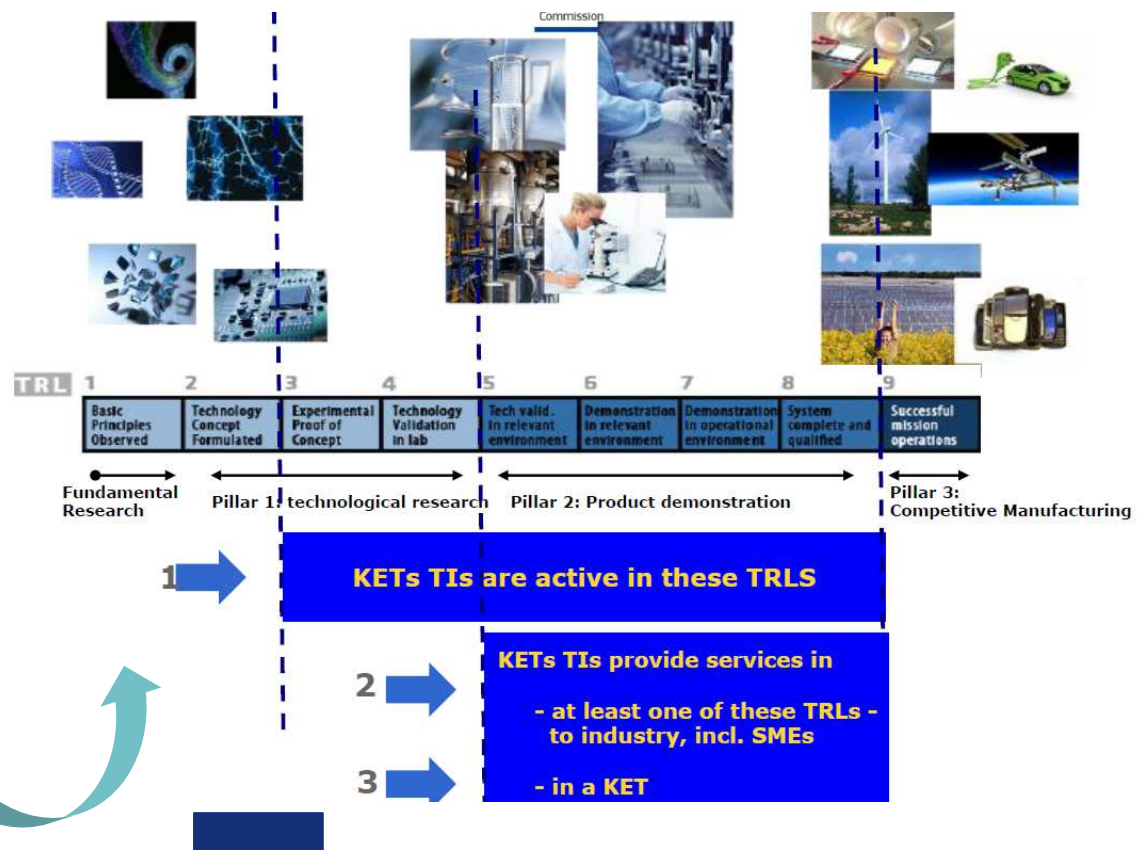
2. Helping companies to innovate: Ensure SMEs have easy access to state-of-the art facilities

Shared facilities help companies to

- 👍 *reduce the costs of innovation projects (equipment)*
- 👍 *increase probability of success (expertise)*
- 👍 *reduce market uncertainty (clients)*

SMEs have difficulties to access (limited human resources, financial capacities or lack of awareness)

Mapping of KETs technology infrastructures providing services to companies



Mapping of European KETs Technology Infrastructures providing services to SMEs (Sept 2015)

Webtool online at <https://ec.europa.eu/growth/tools-databases/ketsobservatory/kets-ti-inventory/map>

Example - Warwick Manufacturing Group

Example - Acreo PEA

Example - Biobase Europe Pilot Plant

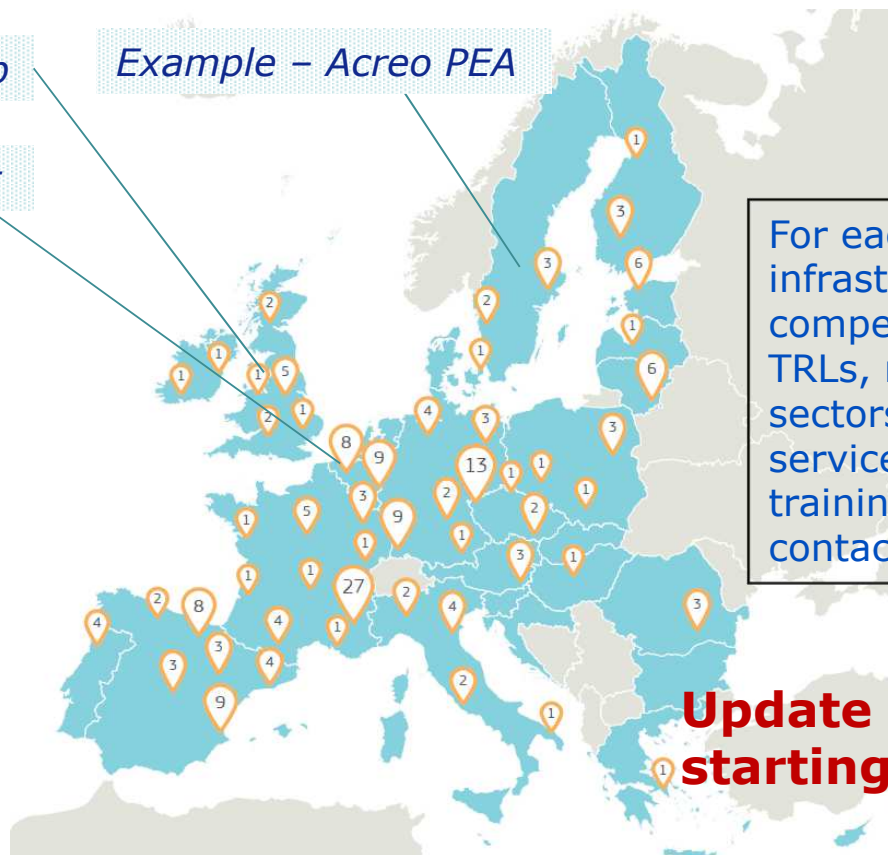
**Total of 187 KETs
Technology Infrastructures**

**60% in only 4 countries (DE,
ES, FR, UK)**

**Need for
networking and
pan-European
access to SMEs**

For each
infrastructure:
competences,
TRLs, market
sectors,
services,
trainings, SME
contact...

**Update
starting soon!**



Warwick Manufacturing Group: good practice of how universities and business can successfully work together to develop new products & processes



Case Study 1: Barton Coldform Ltd



- Manufacturer of critical fastenings and special cold forgings
- Worked with WMG to introduce Additive Manufacturing to prototyping process
- Reduced lead time of proof of concept parts by 12 weeks
- **Led to contract win with Ford Motor Company worth £300k**

**Case Study 2:
Austin factory**
**Watch the Euronews
Business Planet:**
<http://www.euronews.com/2016/01/08/the-importance-of-key-enabling-technologies-for-smes/>

*WMG is co-funded
via ERDF*

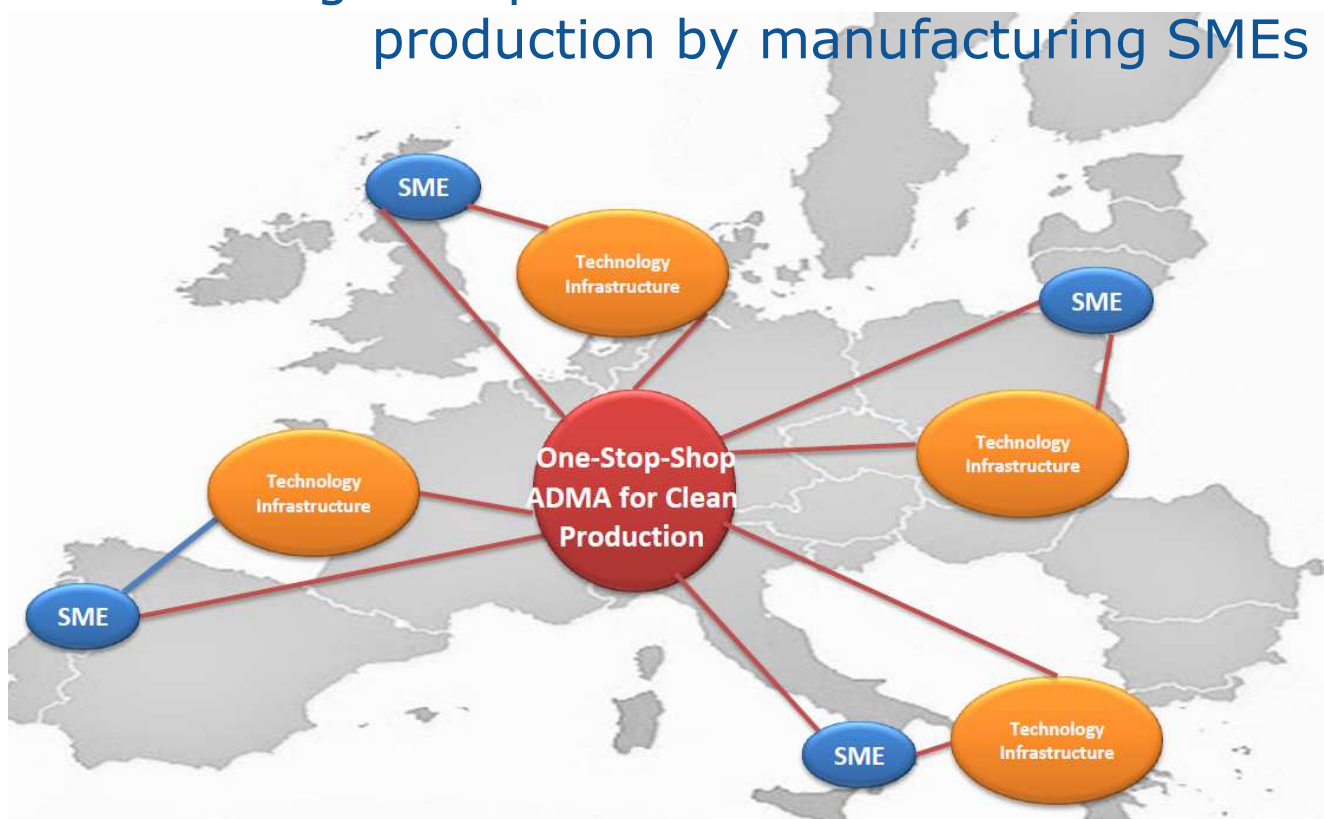


Ensure SMEs have easy access across borders to state-of-the-art technology services in KETs

- ✓ **Catalogue of EU KETs technology centres** sharing their equipment and expertise with companies launched (Sept 2015), making it easier for SMEs to access these centres across Europe; Update will start soon (finalisation 2017)
- ✓ **Awareness raising campaign** (2016-2017), incl. to foster collaboration between centres and ease their access by SMEs
- ✓ Exploring feasibility of creating **cross-border networks of technology centres with easy access for companies** (2016-2017)
- ✓ **Pilot of cross-border network launched** under Horizon2020 (2017, €4,9 mio): Technology services to accelerate the uptake of advanced manufacturing technologies for clean production by manufacturing SMEs
- ✓ Exploring **Advanced Manufacturing Support Centre** (2018)

Promoting cross-border networks of technology infrastructures – Pilot launched

Accelerating the uptake of advanced manufacturing for clean production by manufacturing SMEs



INNOSUP-03-2017: Technology services to accelerate the uptake of advanced manufacturing technologies for clean production by manufacturing SMEs

**Overall Budget :
4.9 million EUR
(3 years)**

**One-stop shop
access for SMEs
from network of
technology
infrastructures**

**Ecosystem of
infrastructures, SME
users and suppliers**

**Single-stage
submission
procedure**

**Services such as
prototyping & pilot
production, training
and advice**

**resource-efficiency;
modular products;
process control
technologies; ...**

**Publication:
14-10-2015
Planned Opening:
8-11-2016
Deadline: 28-03-2017**

**Grants awarded to
SMES : maximum
60 000 euros (full
costs not covered)**

**Service driven by
business needs -
Best value for
money for each
SME proposal**



Helping companies cross the KETs valley of death to stimulate innovation and growth

- ✓ Providing **appropriate instruments and encouraging stakeholders to make best use** of it (e.g. Horizon2020 incl. SME Instrument, Structural Funds, EIB, Investment Plan, COSME)
- ✓ Promoting **strengthened cooperation and joint actions**: thematic platform for industrial modernisation, fostering dialogue between business stakeholders, research and innovation communities and regional authorities, fostering regional co-investments, facilitating important projects of common European interest
- ✓ **Facilitating easy access to key enabling technologies for all industrial companies, and especially SMEs**, wherever they are located in Europe – building on networks of technology infrastructures



THANK YOU !

European Commission

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KETs :

http://ec.europa.eu/growth/industry/key-enabling-technologies/index_en.htm

Digital transformation:

http://ec.europa.eu/growth/sectors/digital-economy/entrepreneurship/index_en.htm

ICT Standardisation

http://ec.europa.eu/growth/sectors/digital-economy/ict-standardisation/index_en.htm



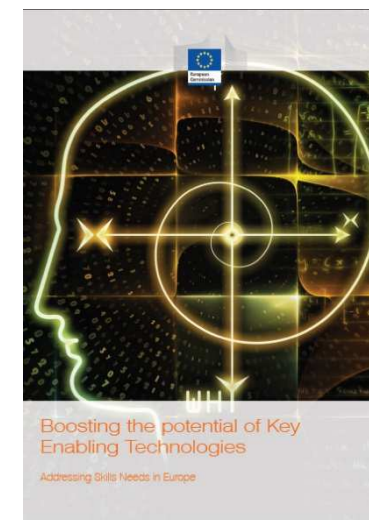
2. Helping companies to innovate: access to skills

- **Report & brochure (March 2016):**

Skills for KETs in Europe: state of play, supply and demand, strategy, recommendations and sectoral pilot

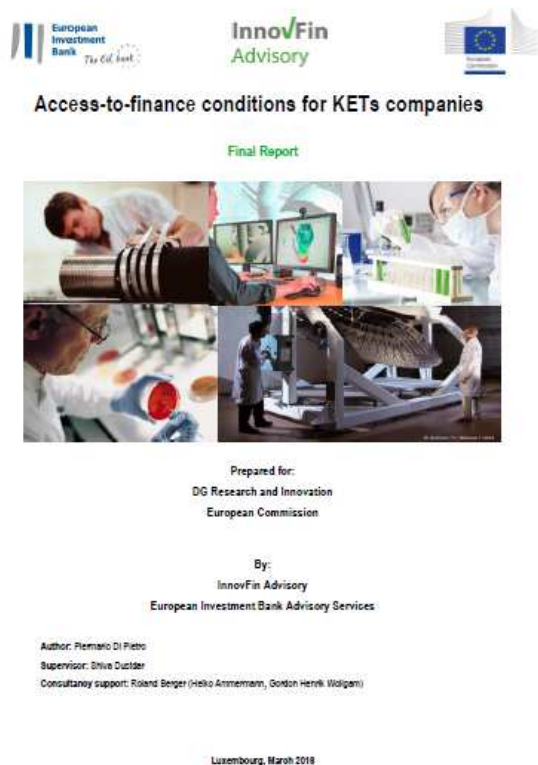
Depending on how the field develops

- ✓ Next ten years additional 953,000 to 2,991,000 KETs professionals are needed to satisfy **demand**
- ✓ Potential **gap** of approx. 21,000 – 83,000 per year for high skills and approx. 10,000 – 44,000 per year for medium skills



- **Discussion at EU Dutch Presidency Conference on e-skills and KETs**, The Hague, 16 March
- **Action on curriculum guidelines** for KETs and advanced manufacturing (publication second half of 2016)
- **EU Skills Agenda** (to be adopted soon by the EC)

2. Helping companies to innovate: access to finance



*Report European Investment Bank (March 2016) - **Access-to-finance conditions for KETs companies***

Key insight: Many KETs companies struggle or fail to obtain adequate debt financing. Due to its general risk aversion, the banking sector does not cater to the specific needs of many KETs companies.

*Actions in frame **Start-up Initiative**
(Single Market Strategy) being explored
Your ideas are welcome (public
consultation until 31 July 2016)!*

3. Ensuring adequate regulatory and policy framework

- ***Removing regulatory barriers*** to market uptake of and investment in KETs, such as barriers which could prevent the success of IPCEIs
- ***Ensuring that policy initiatives trigger market opportunities, e.g.***
 - ✓ Circular Economy package (adopted Dec 2015)
 - ✓ Energy Union Communication – Integrated Energy Union strategy for Research, Innovation and Competitiveness
 - ✓ Dual-use opportunities for KETs (COSME, 2015-2016)
 - Study to identify examples of technologies with dual-use potential as potential input to future R&I programmes

