European Commission

Digitising European Industry Platforms and Ecosystem Building

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Outline

1. Digitising European Industry

2. Leadership in digital industrial value chains

3. H2020

DIGITISING EUROPEAN INDUSTRY
European Commission proposal

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What is this about?

Measures that enable all sectors to benefit from digital innovation:

- For higher value products with "digital inside"
- Increased efficiency of processes
- Adapted and reshaped business models including relevant services

These measures benefit from:

- A true Digital Single Market
- World class broadband, cloud and data infrastructures
- Access to sources of financing

Coordination of various initiatives - MS, regional, EU

- Pool resources, avoid fragmentation and support DSM

Three dimensions of Value Creation from Digitisation

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"Digital inside": Innovations in products (all types)

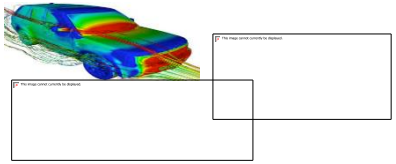
~40 % AV growth

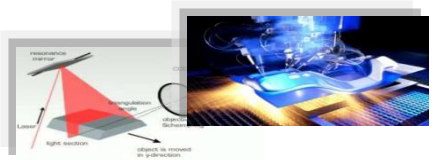
~50%

~40%

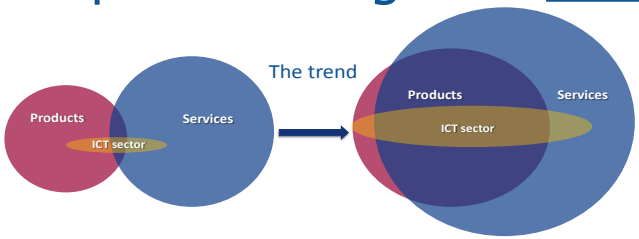
~80%

Digital transformations of processes

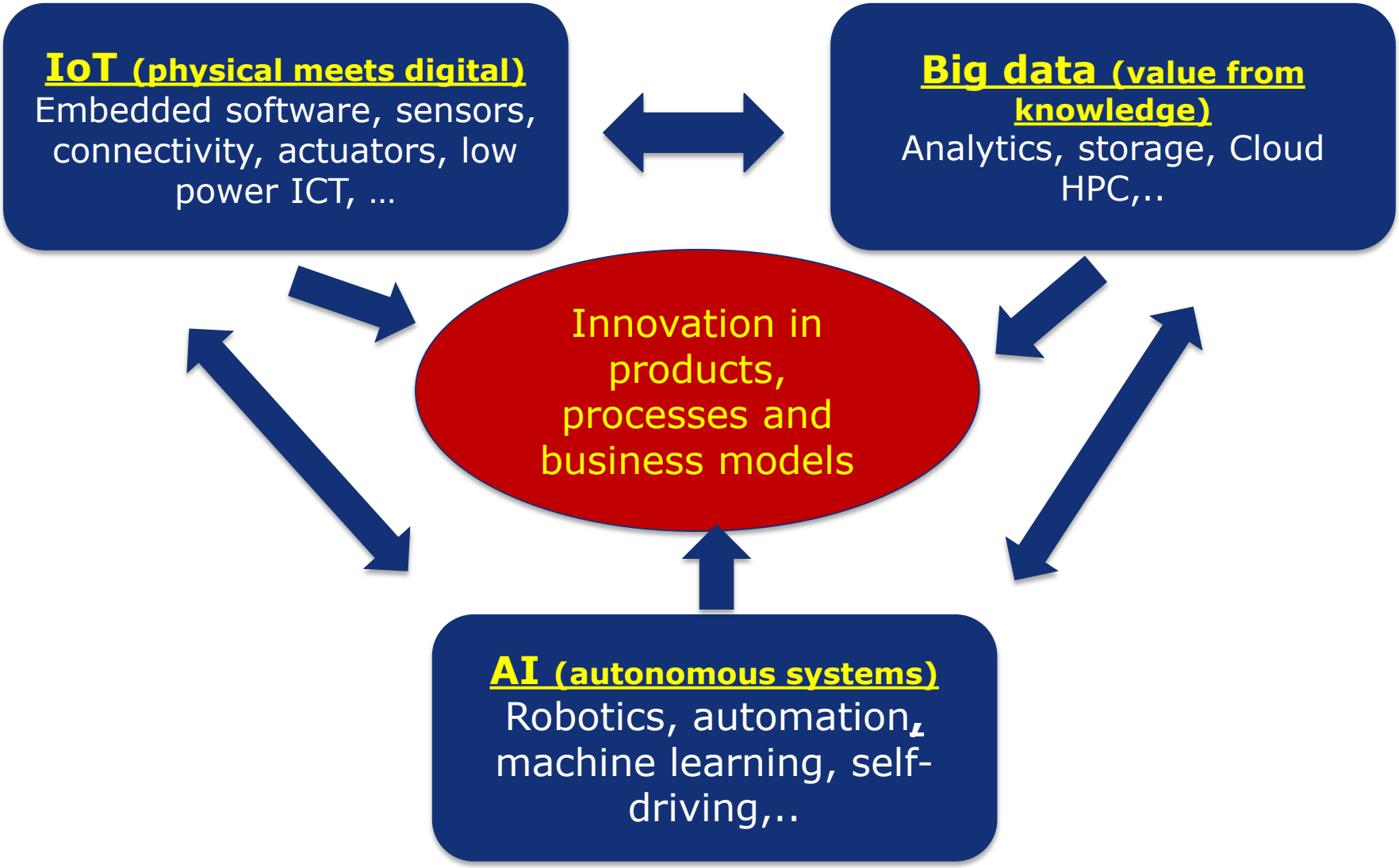




Radical/disruptive changes in business models



Technologies driving the change



Adding value at EU level: Rationale and approach

One overall objective

Ensure that any industry in Europe, big or small, wherever situated and in any sector can fully benefit from digital innovations to upgrade its products, improve its processes &

adapt its business models to the digital change

This requires:

- A strong digital industry and the full integration of digital innovations across all sectors of the economy

  &

- A comprehensive policy initiative:
  - Combining policy instruments: Financing, legislation, coordination
  - Steering bottom up innovation as well as supporting focused actions

Overview of *Digitising Industry* Initiatives across Europe

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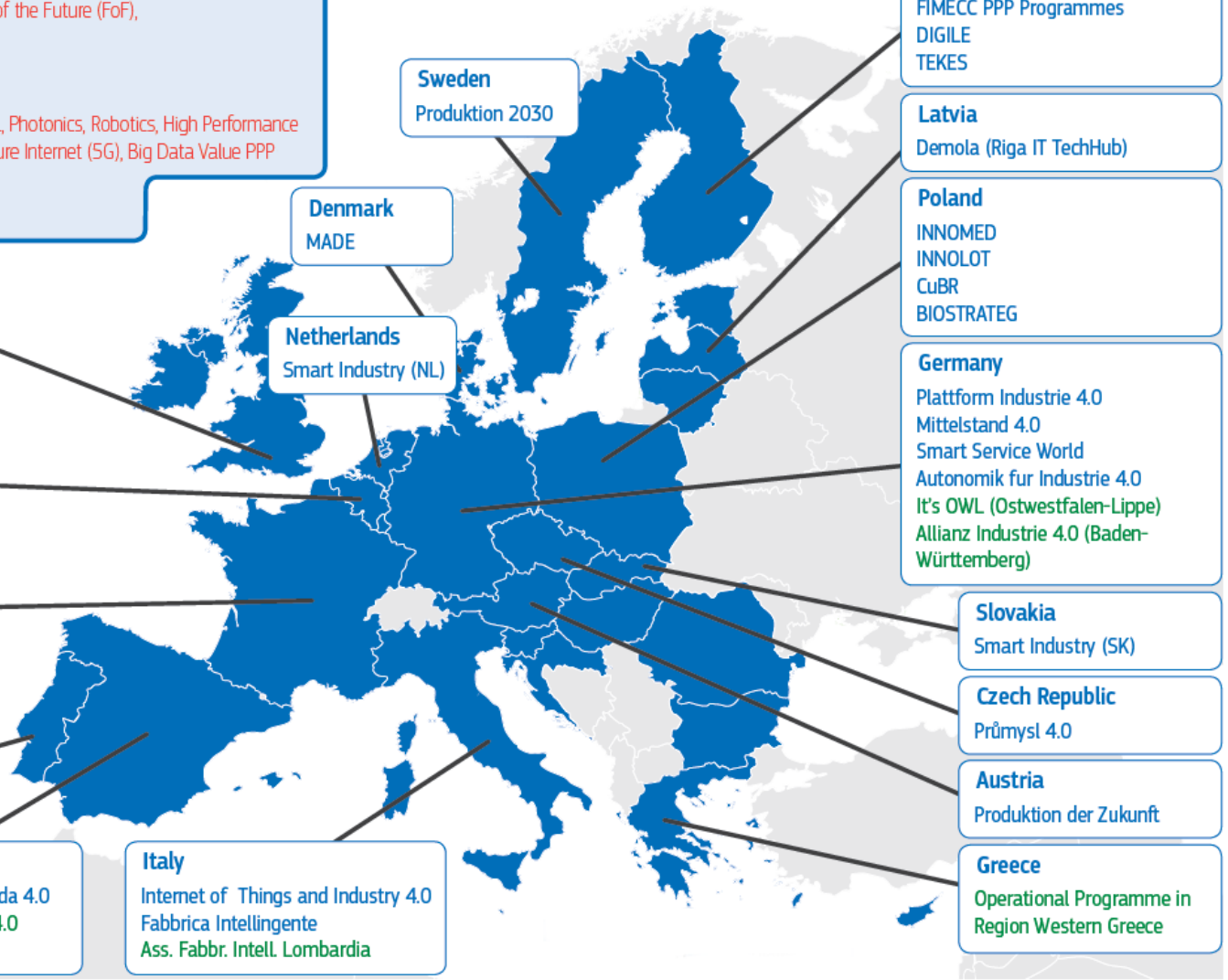


EU-level initiatives

Application Public Private Partnerships: Factories of the Future (FoF), Sustainable Process Industry (SPIRE)

ICT Innovation for Manufacturing SMEs (I4MS)

Smart Anything Everywhere

Digital Sector Public Private Partnerships – ECSEL, Photonics, Robotics, High Performance Computing (HPC), Advanced 5G networks for the Future Internet (5G), Big Data Value PPP

Multi-region Initiatives

Vanguard

United Kingdom

High Value Manufacturing Catapult
Innovate UK
EPSRC Manufacturing the Future
Action Plan for Manufacturing (Scotland)

Belgium

Made Different
Flanders Make/iMinds (Flanders)
Marshall 4.0 (Wallonia)

France

Nouvelle France Industrielle
Industrie du Futur
Transition Numérique
Le Programme des Investissements d'Avenir
Plan Industries Île-de-France

Portugal

PRODUTECH

Spain

Industria Conectada 4.0
Basque Industry 4.0 (TECNALIA)

Italy

Internet of Things and Industry 4.0
Fabbrica Intellingente
Ass. Fabbr. Intell. Lombardia

Sweden

Produktion 2030

Denmark

MADE

Netherlands

Smart Industry (NL)

Finland

FIMECC PPP Programmes
DIGILE
TEKES

Latvia

Demola (Riga IT TechHub)

Poland

INNOMED
INNOLOT
CuBR
BIOSTRATEG

Germany

Plattform Industrie 4.0
Mittelstand 4.0
Smart Service World
Autonomik fur Industrie 4.0
It's OWL (Ostwestfalen-Lippe)
Allianz Industrie 4.0 (Baden-Württemberg)

Slovakia

Smart Industry (SK)

Czech Republic

Průmysl 4.0

Austria

Produktion der Zukunft

Greece

Operational Programme in Region Western Greece

European Initiatives
National Initiatives
Regional Initiatives

Outline

1. Digitising European Industry
2. Leadership in digital industrial value chains
3. H2020

Leadership in digital technologies value chains

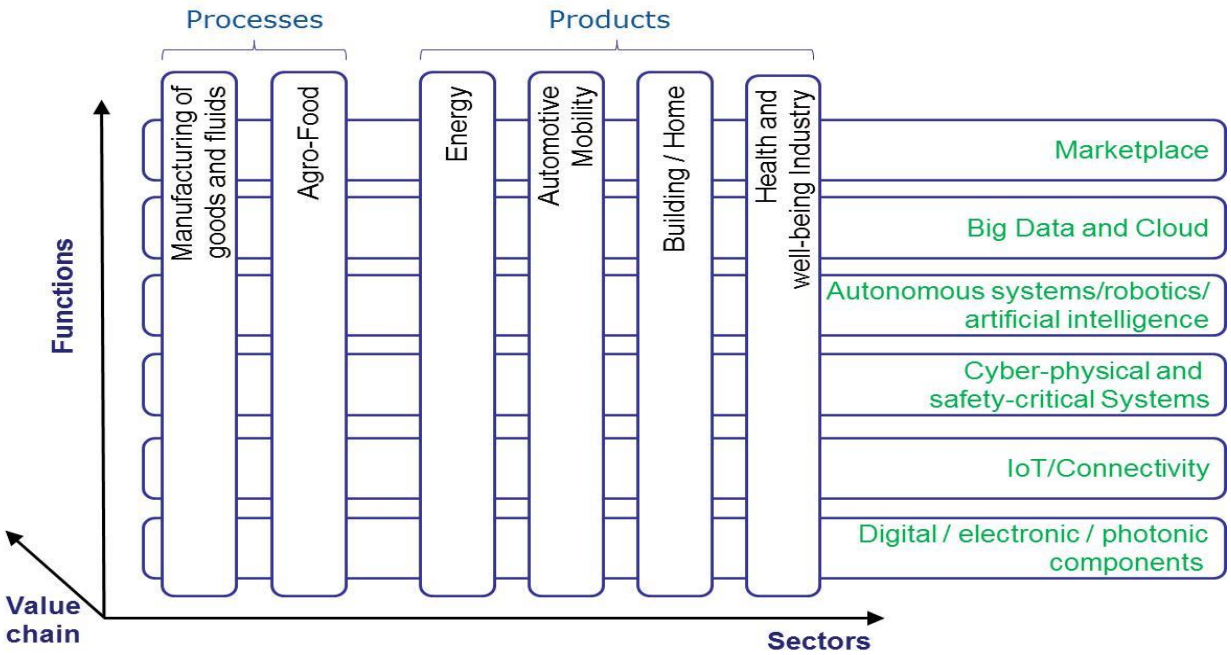
- Target
  - **Alignment of** EU-wide R&I effort, national initiatives and industrial **strategies** and

  - **Focus H2020 investments** on
    - **Key technologies and their integration across all sectors**
    - **Cross-sector digital platforms**
    - **Development environment:**
      → *reference implementation and experimentation environments in real setting***.**

Leadership in digital technologies value chains

- **Target**
  - European leadership in open digital platforms for industry, and "technology gateways" that any business can use

- **The challenge**
  - Building on strengths in vertical markets, develop Europe's presence in cross sector platforms (IoT, Data, web, consumer,..)



Pan-European Collaboration on Platform-Building across the R&D&I cycle

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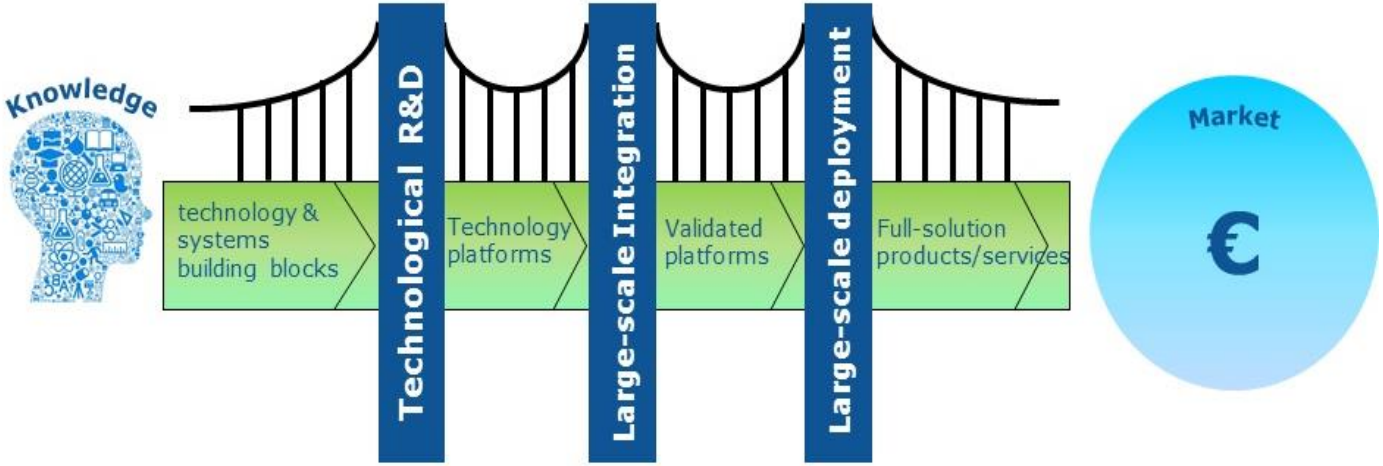
Targets

- **Alignment of** EU-wide R&I effort, national initiatives and industrial **strategies,** and
- **Focus investments** on
  - Key technologies and their integration across all sectors
  - **Cross-sector digital platforms**
  - **Ref implementations and exp environments in real setting**
- **Bring platforms to market quicker and standardise**
- **Innovation ecosystem around platforms, validation with I4MS**



Outline

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H2020 Three priorities

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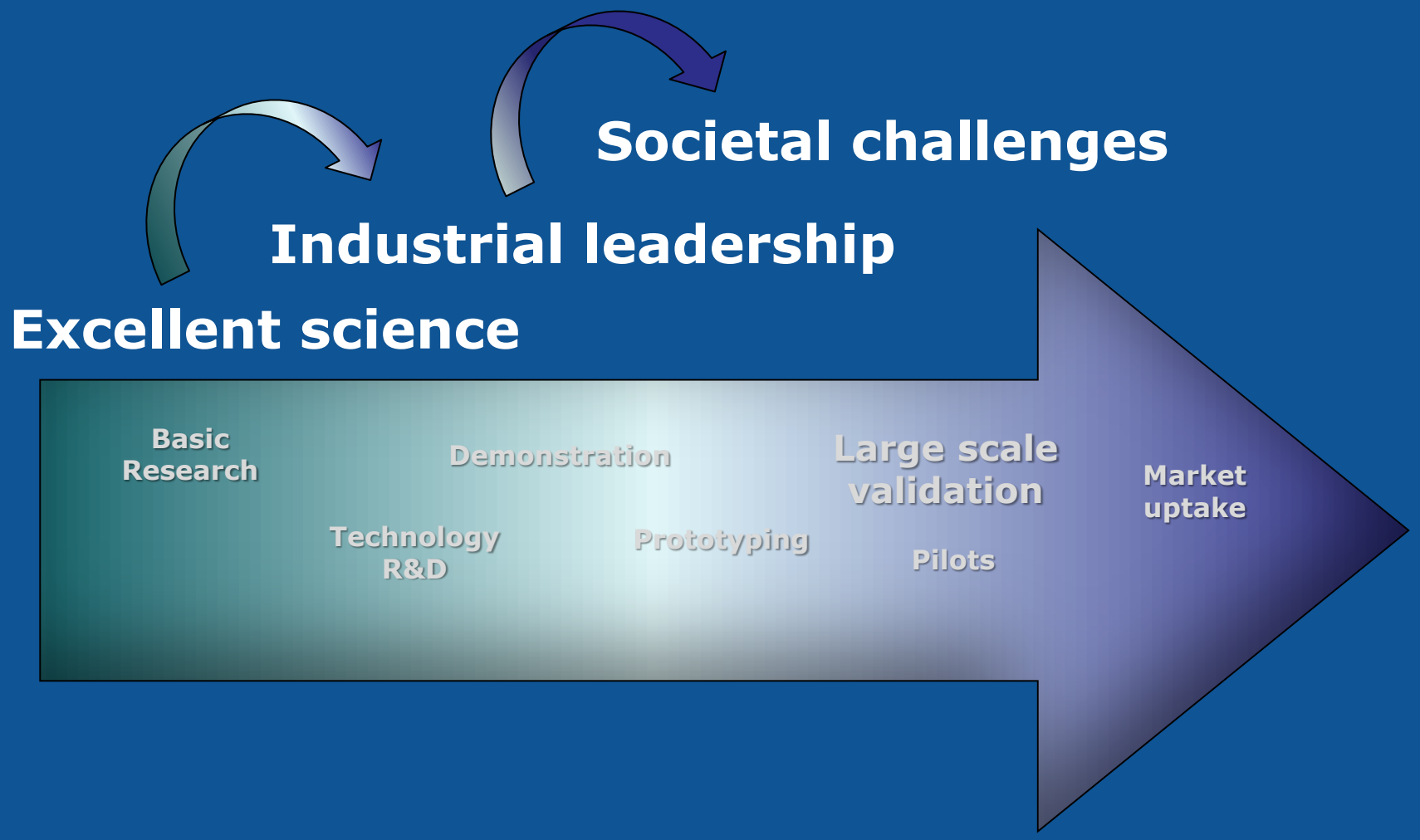
Coverage of the full innovation chain



ICT in H2020 > LEIT-ICT

Excellent Science

Frontier Research (ERC)

Future and Emerging Technologies (FET) ICT

Skills and career development (Marie Skłodowska-Curie)

Research Infrastructures ICT

Industrial Leadership

Leadership in enabling and industrial technologies

- ICT ICT ICT
- Nanotech., Materials, Manuf. & Processing
- Biotechnology
- Space

Access to risk finance

Innovation in SMEs ICT

Societal Challenges

Health, demographic change and wellbeing ICT

Food security, sustainable agriculture, and the bio-based economy ICT

Secure, clean and efficient energy ICT

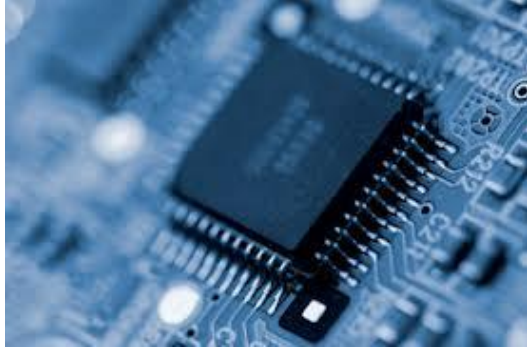
Smart, green and integrated transport ICT

Climate action, resource efficiency, and raw materials ICT

Inclusive, innovative and reflective societies

Secure societies ICT ICT

H2020 Industrial Leadership - ICT



- **A new generation of components and systems:**
  - engineering of advanced embedded and resource efficient components and systems
- **Next generation computing:**
  - advanced and secure computing systems and technologies, including cloud computing
- **Future Internet:**
  - software, hardware, infrastructures, technologies and services, IoT
- **Content technologies and information management:**
  - ICT for digital content, cultural and creative industries
- **Advanced interfaces and robots:**
  - robotics and smart spaces
- **Micro- and nanoelectronics and photonics:**
  - key enabling technologies

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Internet of Things
2016-2017

139 M€

- **Cross-cutting focus area**
  - Contributions from **SC1** and **SC2**
- Increased support with the ambition to **foster the take-up of IoT in Europe** and to **enable the emergence of IoT ecosystems** supported by open technologies and platforms
- Organised in three topics:
  - **Large scale pilots** (100 M€)
    - Smart living environment for ageing well
    - Smart farming and food security
    - Wearables for smart ecosystems
    - Reference zones in EU cities
    - Autonomous vehicles in a connected environment
  - IoT Horizontal activities (4 M€)
  - **R&I on IoT integration and platforms** (35 M€)

Smart Farming – Silicon Valley in Europe

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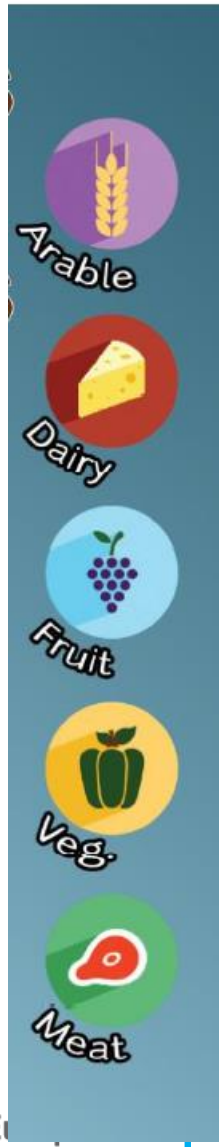
- **Vision**:

  Autonomous nodes, machines

  Ubiquitous sensing, prediction

  Precision farming, farm automation

  X-Generation Farming, Rural Development



THANK YOU

Digitising European Industry
http://ec.europa.eu/digital-agenda/en/digitising-european-industry

Twitter: #DigitiseEU

Horizon2020 web site
http://ec.europa.eu/programmes/horizon2020
Participants portal
http://ec.europa.eu/research/participants/portal