



# Advanced Technologies for Industry

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European Commission

# Advanced Technologies for Industry: **Context**

**EU Industry** is being **profoundly transformed by the new-generation of advanced technologies** (both digital and Key Enabling Technologies).

- **Shaping Europe's Digital Future**- vision for how Europe can retain its technological and digital sovereignty and be the global digital leader.
- **European Green Deal** - advanced technologies and industrial value chains play a key role in this strategy by accelerating the transition towards clean technology solutions.
- **Industrial Strategy for Europe** - aims to ensure that **European industry** can transform our industry, support our small and medium-sized enterprises (SMEs) and keep Europe sustainable and competitive. The **updated Industrial Strategy 2021** – advanced technologies in the scope of identifying strategic dependencies.

# Advanced Technologies for Industry: Objectives and tools



<https://ati.ec.europa.eu/>

# The following 16 advanced technologies have been identified by ATI:





Thank you

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# Advanced Technologies for Industry

**Findings about the uptake of advanced technologies  
and sectoral analysis**

**11<sup>th</sup> May 2021**

**Irene Magnani, IDC**

**#ATleu**

# Advanced Technologies for Industry monitor

The 4th industrial revolution is driven by digital and advanced technological developments that will radically transform industrial value chains, business models, production facilities and the entire society.

- The **Advanced Technologies for Industry** analyses and systematically monitors the state of uptake of advanced technologies by EU industry.

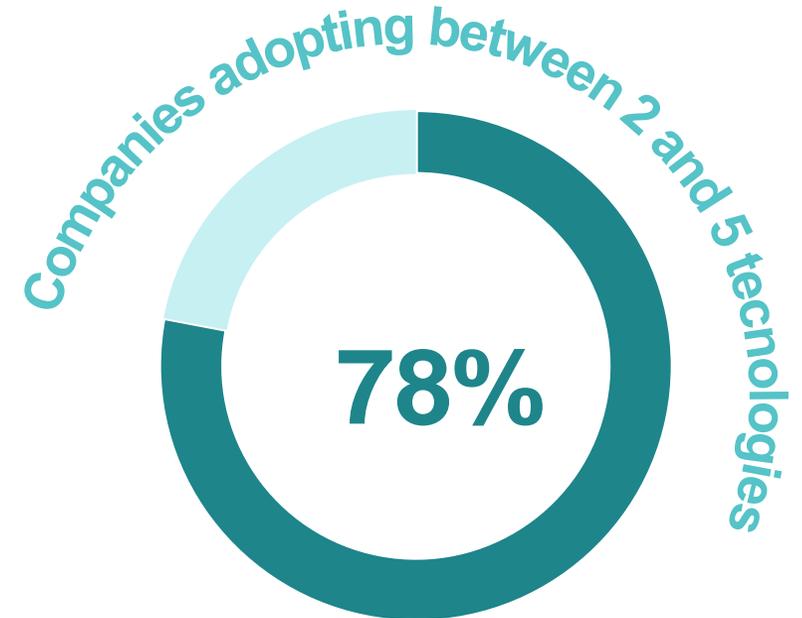
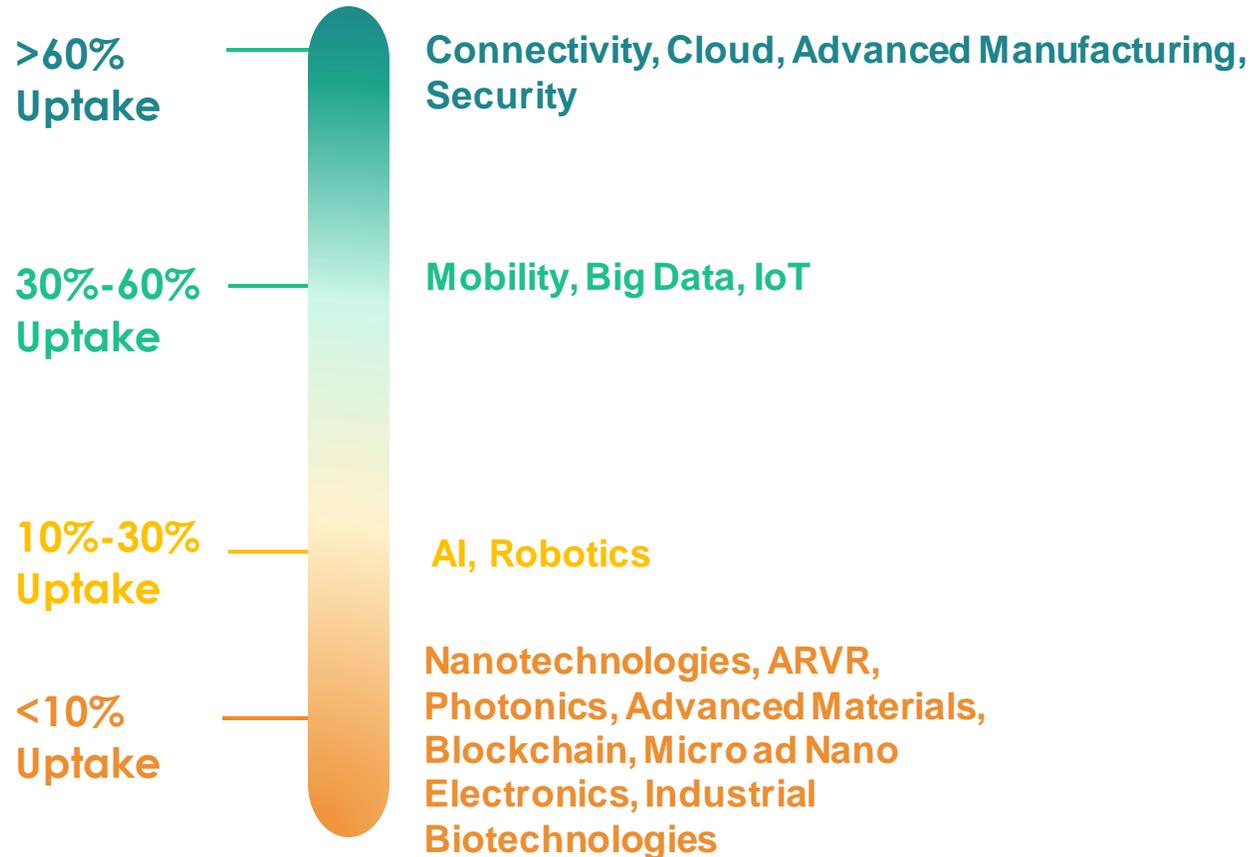
<https://ati.ec.europa.eu/>

## Advanced Technologies for Industry:

- Data dashboard
- Mapping of technology centres
- ATI Technology watch
- ATI Sectoral reports
- EU and international reports
- Policy briefs
- ATI Product watch

# Advanced Technologies Uptake - An Overview

## Advanced Technologies Current Uptake

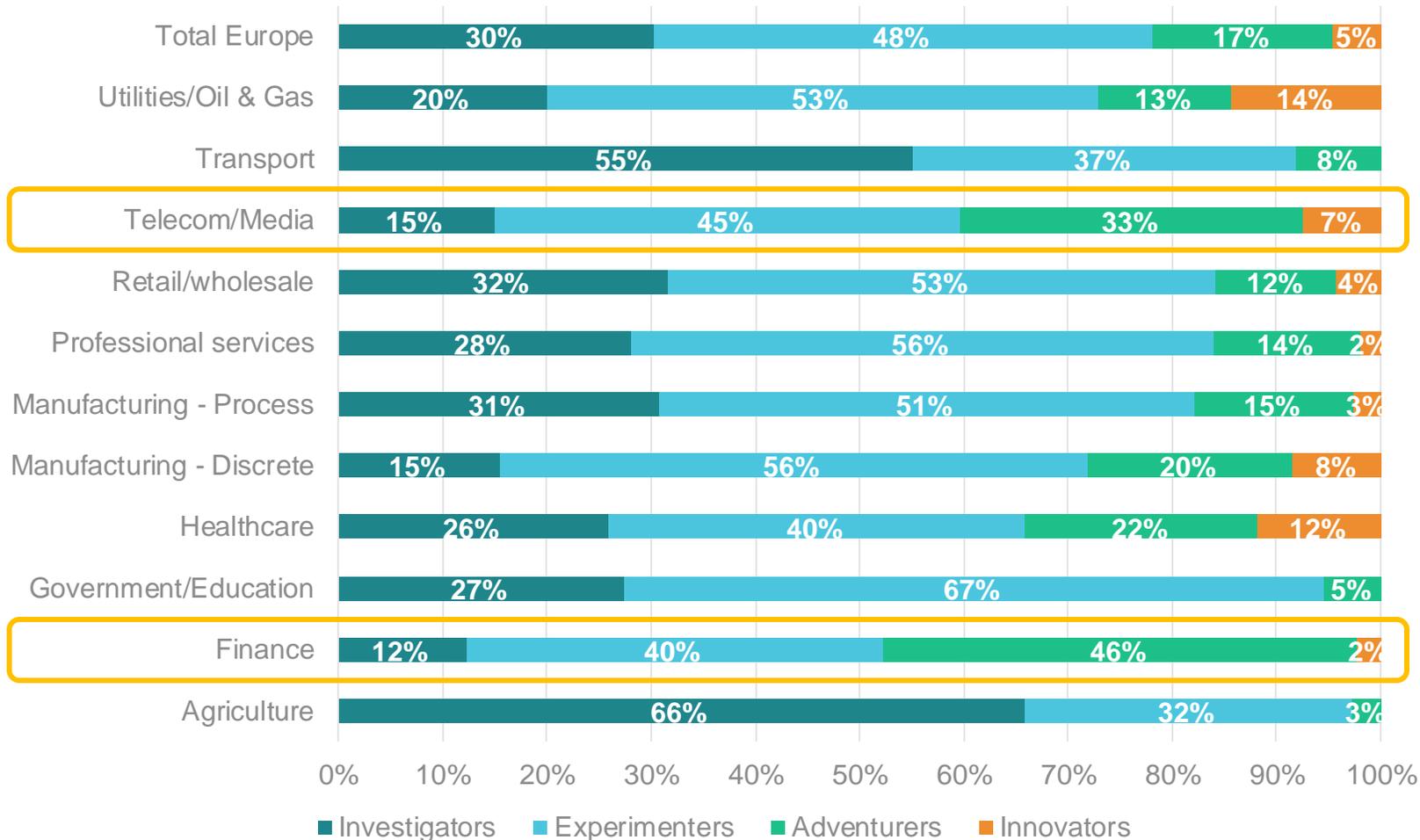


The technologies that are more likely to be implemented together are **Cloud** and **Security** solutions representing the technology backbone often in synergy with **IoT, AI** and **Big Data**

# Where is more likely to spot Innovators?

## Cluster Distribution by Industry

Cluster Distribution by Vertical



### Telco/Media & Finance

High innovation propensity as new technologies are generating opportunities to boost current revenue sources and generating new revenue streams

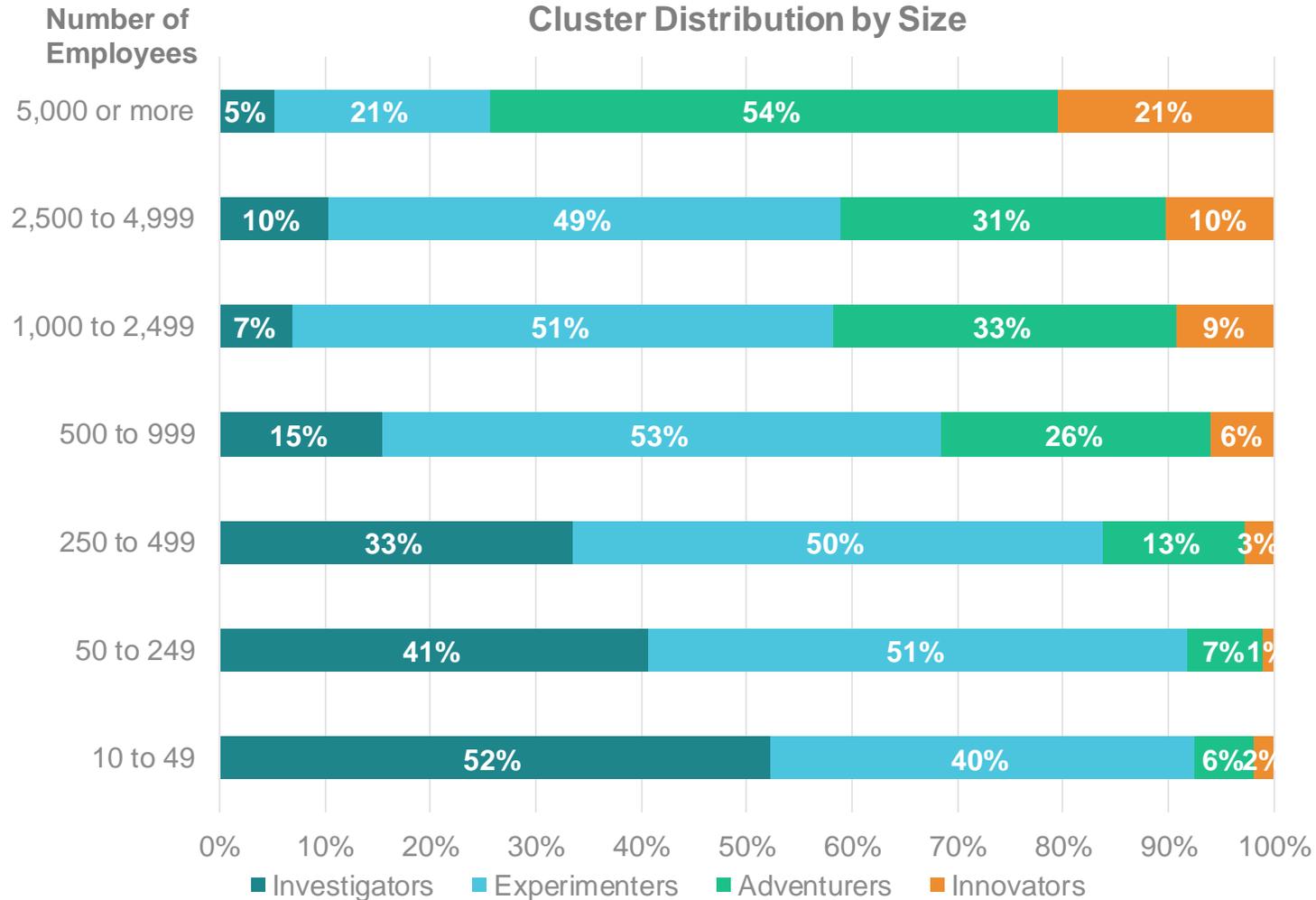
### Healthcare & Utilities/Oil & Gas

Industries with the highest share of Innovators

### Agriculture & Transport

Industries where there are more companies resistant to change

# Key differences by Size



## SIZE CHARACTERISTICS

**MATURITY** increases with **SIZE**. The highest the number of employees the highest is the share of Adventurers and Innovators

## TECH CO-PRESENCE

**AVERAGE NUMBER** of **TECHNOLOGIES** adopted increases from being around 2 for investigators to more than 9 for innovators.

# Analytical reports

- Analytical reports such as on
  - **Technological trends**
  - **Sectoral insights**
  - **Products**
- Analyses of **policy measures and policy tools** related to the uptake of advanced technologies
- Analysis of technological trends in **competing economies** such as in the US, China or Japan
- **B2B platforms**



# Sectoral Watch

- The reports analyse trends in the generation and uptake of advanced technologies, related entrepreneurial activities and skills needs in ten sectors.
- The starting point has been 16 advanced technologies

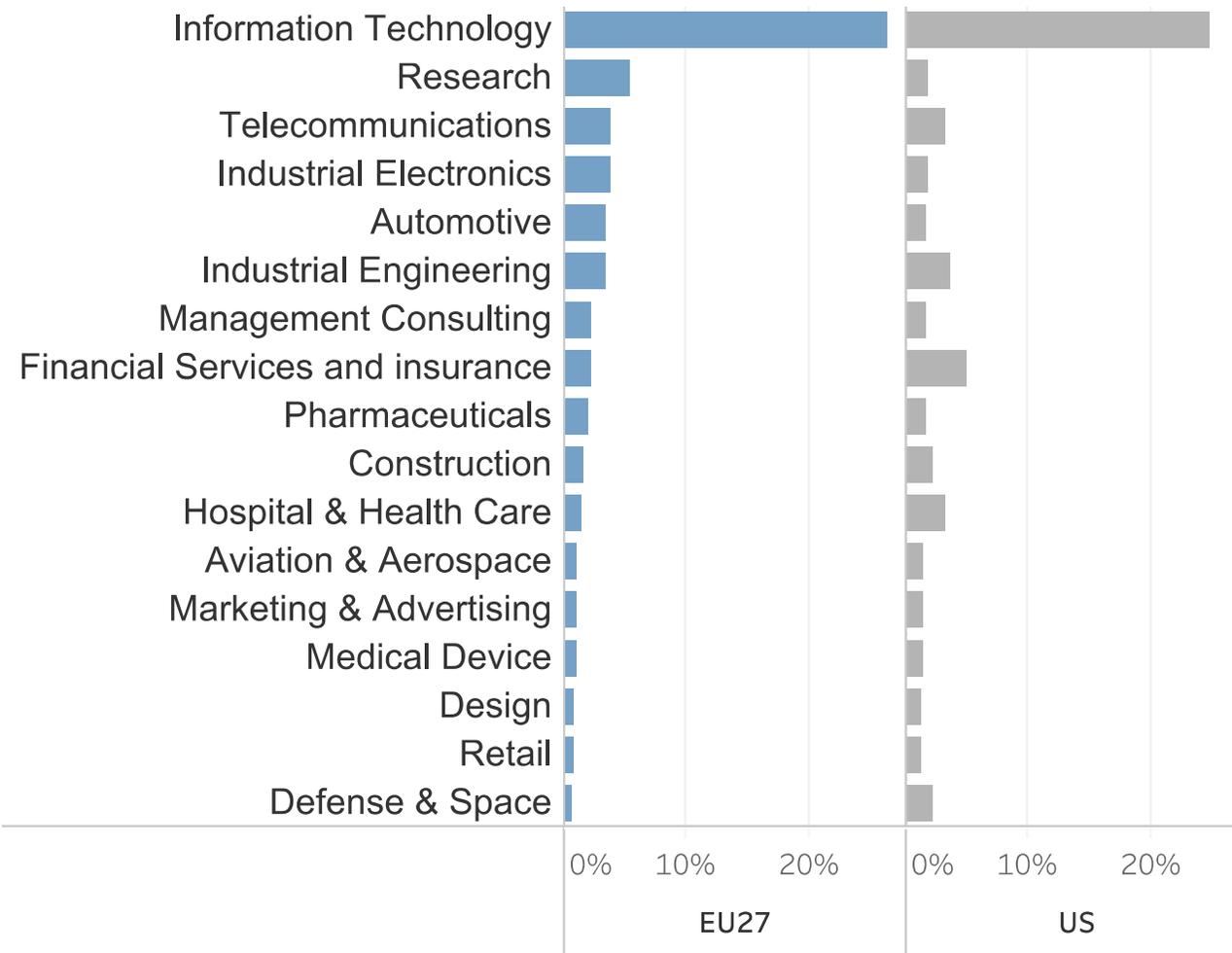
## **Structure:**

- Industrial context
- Technological trends
- Private equity investment and startup/spinoff activity.
- Supply and demand of skills related to advanced technologies
- Future outlook

**Sectors:** automotive, medical devices, electronics, textile, agri-food, chemicals, creative, finance, telecommunication, machinery



# In which sectors do professionals with advanced technology skills concentrate?

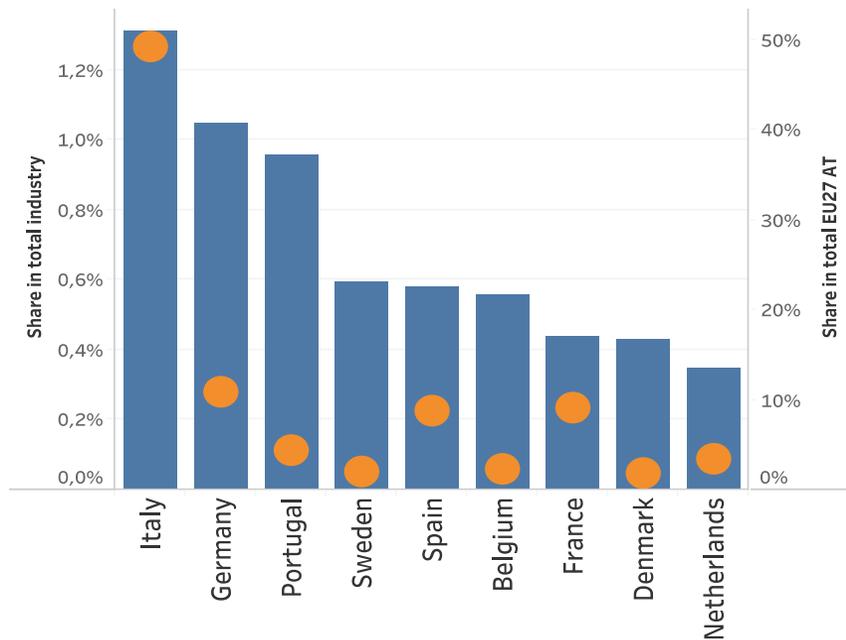


Besides the ICT sector and research and academia...

- Professionals with advanced technology skills have been employed most in the **Telecommunication, Electronics and Automotive industries.**
- Sectors employing the lowest number of AT talent include public policy, music, printing, furniture and farming.
- When looking at manufacturing industries, we find that it is the **Electronics industry** that employed the highest number of AT skilled professionals followed by Automotive, Pharmaceuticals and Machinery.

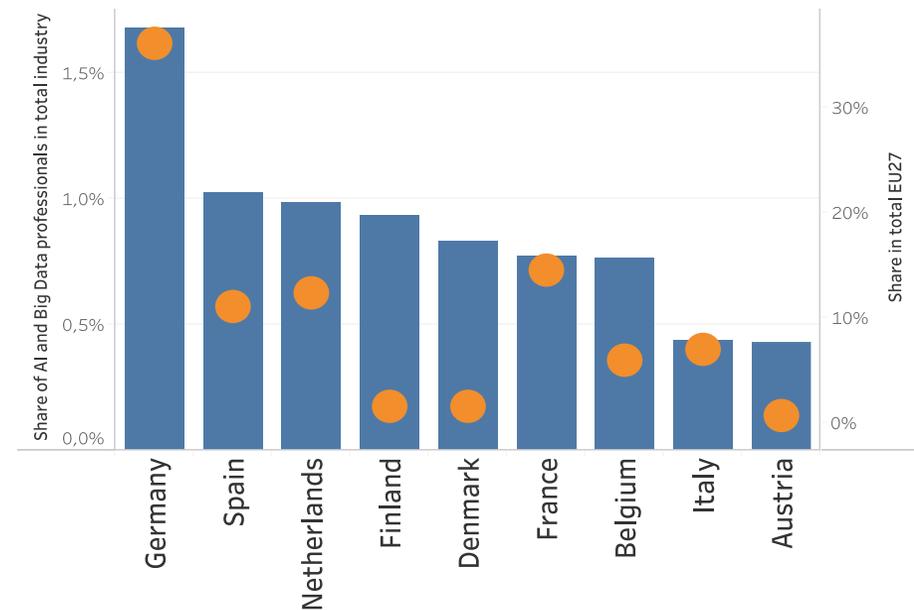
# Sectoral insights: which technologies in which countries have the most skilled professionals in specific industries?

Textile industry professionals with skills in Advanced Manufacturing and Robotics in top EU27 countries



Colour legend  
 ■ Share in total EU27 AT  
 ■ Share in total industry

Chemical industry professionals with skills in AI & Big Data in top EU27 countries



Colour legend  
 ■ Share of AI and Big Data professionals in total industry  
 ■ Share total EU

Source: Technopolis Group analysis based on LinkedIn data

# International reports

- The reports analyse technology and policy landscape (both EU and non-European countries).
- The starting point has been 16 advanced technologies

## **Structure:**

- Strengths and challenges in Advanced Technologies
- Technological trends
- Policy framework
- Example of national policy initiatives
- Regional policy examples

**Countries:** *Europe, China, Canada, Russia, United Kingdom, South Korea, Japan, United States.*



# EU Report – Technological trends and policies

## Overview of EU performance

- The strengths of the EU27 lie in Advanced Manufacturing, the Internet of Things and Advanced Materials.
- Open strategic autonomy: Building **resilient industrial ecosystems** and ensuring **technological sovereignty**
- Covid-19 is expected to further widen the digital divide
- Industrial innovation ecosystems → **smart clusters** to actively support the transformation of industry and act as an agent of change





# Thank you!

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<https://ati.ec.europa.eu/>

# Advanced Technologies for Industry

## Introduction to the ATI Technology Centres mapping

EXXTRA meets “ATI-Advanced Technologies for Industries

28<sup>th</sup> April 2021

Els Van de Velde, Senior Expert at IDEA Consult

# ATI Technology Centres

<https://ati.ec.europa.eu/technology-centre/mapping>

**Objective** is to map ATI Technology Centres to help SMEs to cross the Valley of Death and go from lab to market to develop and produce new ATI-based products

**ATI Technology Centres** are public or private organisations carrying out applied research and close-to-market innovation (Technology Readiness Levels TRL 3 to 8, not necessarily the whole range) in Advanced Technologies for Industry

## Search Options

Country  
Choose some options ▼

Sectors  
Choose some options ▼

Technology Centre Activities  
Choose some options ▼

Technology Readiness Level  
Choose some options ▼

Apply

## Technology Centres

What are "Advanced Technologies for Industry (ATI)" Technology Centres?

What are the criteria for inclusion in the mapping?

Please note that by "Adding/Updating your technology Centres" the Technology Center consents to the processing of its personal data, including the publication of contact information on the public online database. Technology Centres are invited to read and accept the [Privacy Policy](#) if they agree to such processing.



# ATI Technology Centres

Technology Centres typically provide the following services to SMEs:



Access to  
technology  
expertise and  
facilities for  
validation



Pilot  
production  
and  
demonstration



Proof of  
concept and  
lab testing



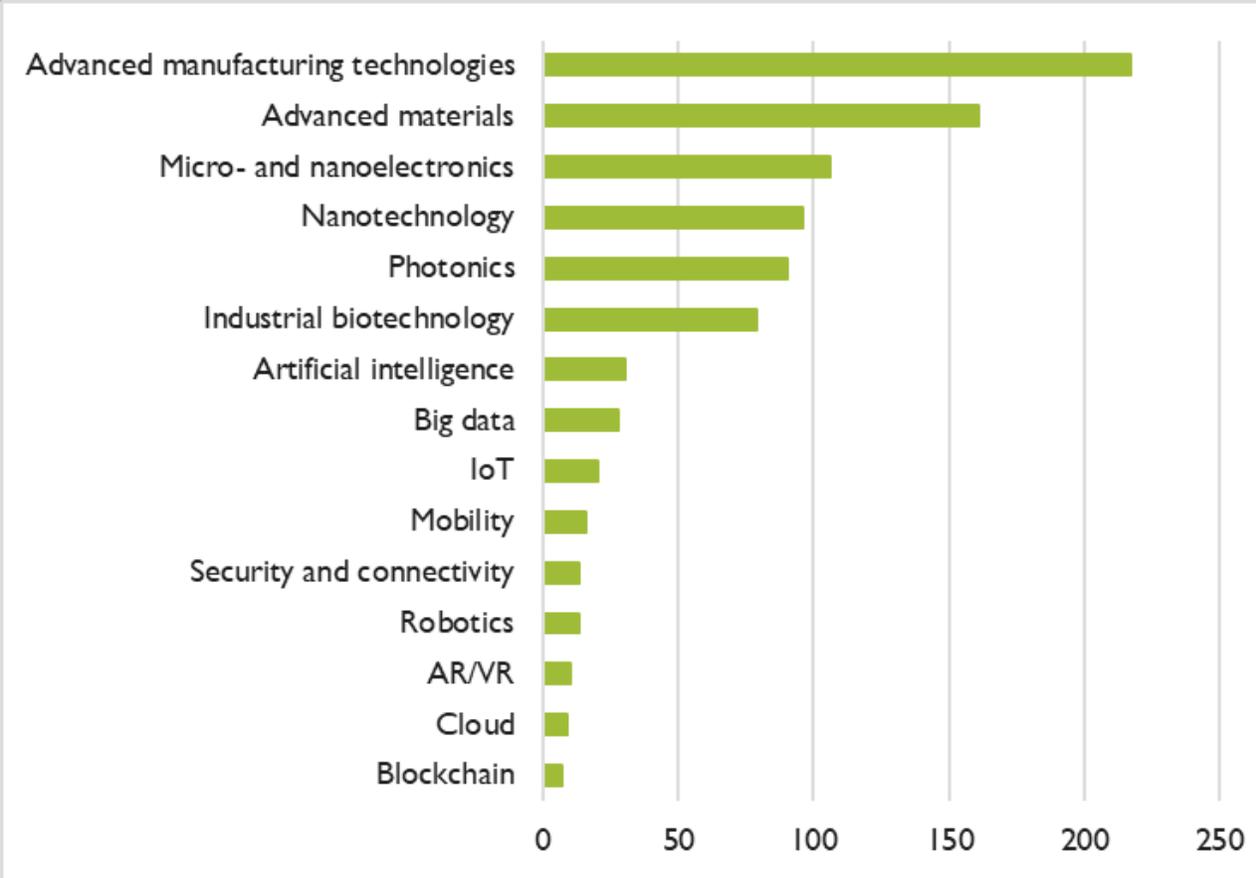
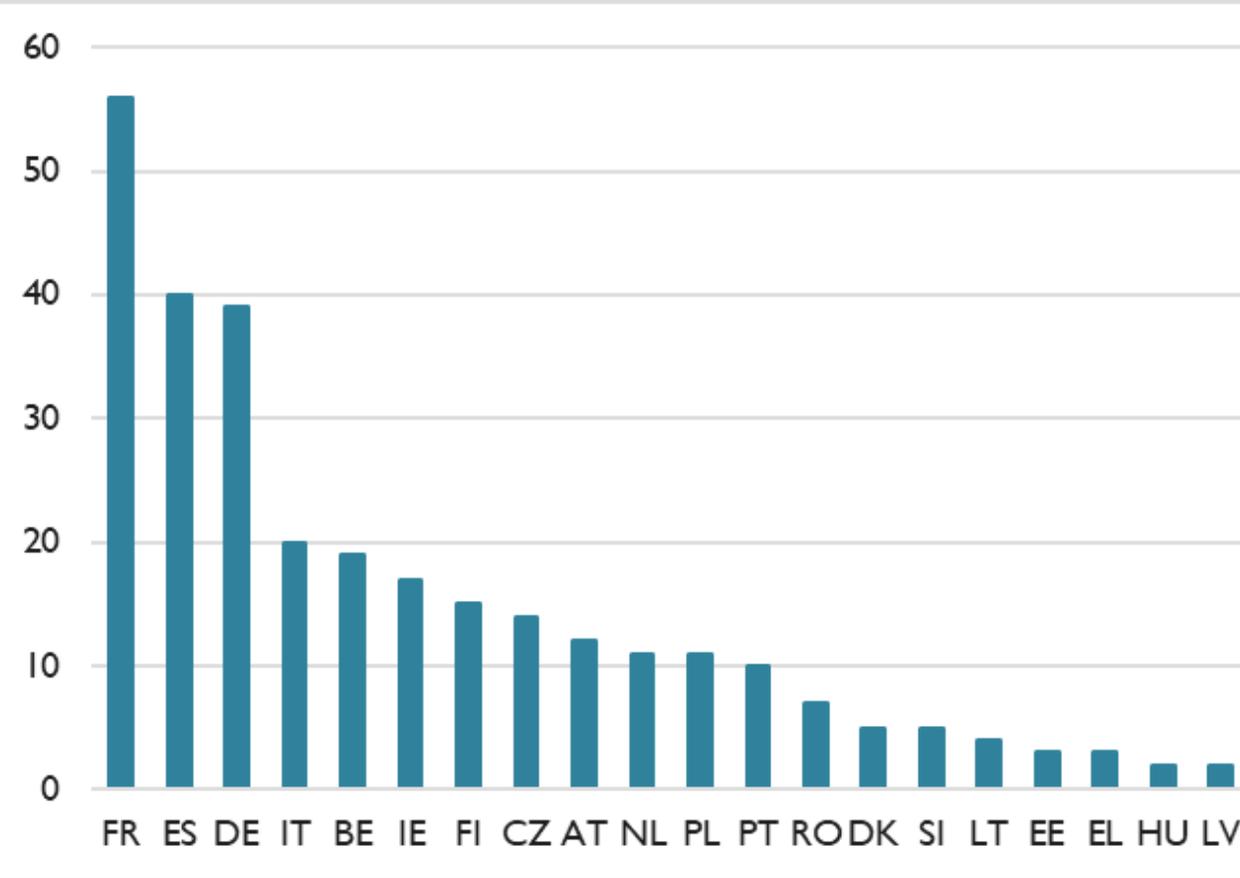
Prototype  
development  
and testing



Product  
validation and  
certification



Demonstra-  
tion



# Distribution of published TCs

# What is the use of the online mapping?

## 1. Overview



Getting a comprehensive overview of the technology centres and expertise available to SMEs in Europe.

## 2. Network



Finding the right contact person for getting technology services and expertise anywhere in the European Union.

## 3. Promotion



Promoting expertise and service offers.

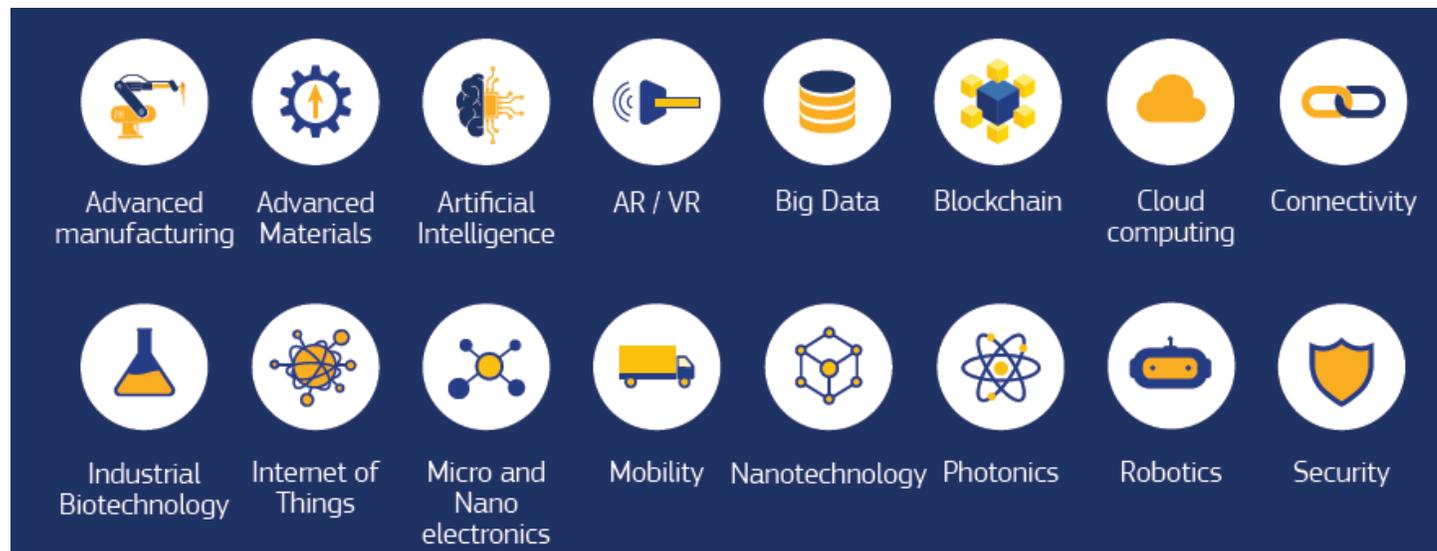
## 4. Collaboration



Exploring opportunities to collaborate with other technology centres.

# Who can use the online mapping?

- **SMEs, innovation intermediaries and public authorities** can get a comprehensive overview of the technology centres and expertise available to SMEs in Europe to innovate through advanced technologies.
- **SMEs** can find the **right contact person** for getting technology **services and expertise** anywhere in the **European Union**.
- **Technology centres** can promote their **expertise** and service offer and **explore opportunities to collaborate** with other technology centres.



# Who can apply for the online mapping?

- All public and private organisations providing services to industry and SMEs to perform research and innovation activities in the higher Technology Readiness Levels (TLR) 5 to 8 in one or more of the specified advanced technologies.
- Criteria for inclusion in the mapping are available at:  
<https://ati.ec.europa.eu/technology-centre/mapping>



Thank you!

Discover more at <https://ati.ec.europa.eu/>

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