



Briefing: Future of Europe's industry

Introduction to the industrial strategy debate for businesses

In September 2017, the European Commission released the *Investing in a smart, innovative and sustainable Industry - A renewed EU Industrial Policy Strategy*¹ communication. The communication includes strategies for plastics and sustainable finance, measures to improve production of renewable biological resources, bio-based products and bio-energy, new proposals for competitive and connected low emissions mobility, trade policy initiatives and more.

The recent rise of Industrial Strategy in the European and global agenda, with discussions and policy initiatives now being developed at EU and national levels, make the importance of this agenda to businesses clear. This briefing sets out some key areas to consider from the perspective of corporate leaders and offers initial ideas on this live debate.

What is industrial strategy?

Industrial strategy involves government policies and assistance in strategically selected areas to increase productivity, and strengthen a country and/or region's position in the global market. In the European Union, industry policy is shared with Member States, making it an area dominated by national interests.

Historically perceived as highly interventionist, protectionist of failing companies and at odds with a market-based approach, **current, 'new' industrial strategy thinking emphasises purposeful innovation** to achieve 'missions' such as decarbonisation, but is not yet mainstreamed. **Achieving a clear consensus on the goals and nature of industrial strategy and its policies is an important first step.**

Key 'new' industrial strategy thinking aspects include:

- Placing industrial strategy at the core of governments' work programme
- Building on local economies and improving productivity everywhere
- Science, research and innovation
- Linking competition policy, regulatory functions and

consumer policy

- Increasing and coordinating public investment
- Linking financial regulation with strategy objectives to encourage private investment
- Increasing both general technical skills and geography/sector-specific skills
- Procurement policies that drive innovation and long-term growth

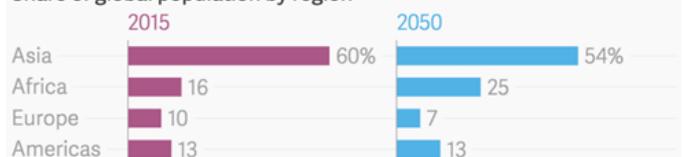
The global community's commitment to achieving a **net-zero carbon economy** will require new technologies as we transition from fossil fuels to renewable energy sources. **Digitalisation** of the manufacturing industry will require Europe's workforce to acquire new skills. An industrial strategy for Europe will address global **sustainability challenges**, maintain Europe's competitive advantage relative to **emerging markets**, and allow Europe to capitalize on **current innovation trends. Businesses can benefit from policies and assistance to drive innovation.** These policies and assistance may include tax breaks, subsidies, deregulation, investment and public-private partnerships.²

Wider context

Global climate change, caused principally by carbon emissions³, is posing a broad spectrum of challenges including rising sea levels and extreme weather events leading to flooding, freshwater scarcity caused by drought, changes in food availability due to varying crop yields, and threats to human health.⁴

The **growing global population combined with rapid economic growth, particularly emerging economies**, is yielding increased demand for critical natural resources including energy, food, land and water. **These challenges affect existing infrastructure, society, and the economy.**

Share of global population by region



ATLAS | Data: United Nations World Population Prospects 2015 Revision

The global population is projected to reach 9.8 billion by 2050. Europe's population of 742 million people represents 10% of the global population. Asia is home to 4.5 billion people and is projected to increase by 750 million by 2050. Image source: ATLAS



Kaya Identity – total emission level of CO₂ as the product of human population, GDP per capita, energy intensity, and carbon intensity. The Kaya identity is key in the development of future emissions scenarios in IPCC Reports. GDP, energy and carbon intensity are key variables for industrial policy. Image source: Carbon Tracker Initiative

Emerging markets in Asia, specifically India and China, are positioning themselves to play a key role in meeting the needs of the global market during the transition to a net-zero carbon economy. Both India and China have been setting five-year economic plans for decades and utilize industrial strategy to boost economic productivity. They are now factoring sustainability into ambitious domestic targets and aim to be the manufacturing hubs of the future.

India launched the *Make in India* strategy in September 2014 to encourage local manufacturing. Strategy targets linked to a net-zero carbon economy include increasing hybrid/electric vehicles in India by 6-7 million by 2020 via government incentives to promote research and development and the creation of new infrastructure.⁵ In April 2017, India's Energy Minister Piyush Goyal also announced the country's intent to ban petrol and diesel vehicles by 2030.⁶

China Manufacturing 2025 (CM2025), a strategic initiative announced in May 2015, is modelled after Germany's *Industrie 4.0* plan and involves government investment in sectors such as "next generation IT," "energy-saving vehicles," and "new materials."⁷ A key component of this strategy involves improving the quality of goods manufactured in China.

It is therefore critical for business leaders in Europe to **engage in the discussion** on developing an **industrial strategy for Europe** to ensure **Europe will continue to thrive in the global market**.

What are the main aspects of industrial strategy in Europe?

1. Digitalisation

Germany is the frontrunner in developing an industrial strategy that will meet the needs of the future and launched *Plattform Industrie 4.0* in 2013. Germany's industrial strategy is projected to yield up to 390,000 new jobs and boost productivity by between 5 and 8 percent. France and Italy have developed their own versions of *Industrie 4.0*: *Alliance Industrie du Futur* and *Piano Industria 4.0*, respectively. In addition, France, Germany and Italy launched a collaboratively developed *Shared Action Plan* in June 2017.⁹

Industry 4.0 describes the technological framework that transforms production processes through autonomously communicating devices along the value chain: a model of the 'smart' factory of the future.¹⁰ Industry 4.0 makes use of the **Internet of Things (IoT)**, where sensors placed on physical objects connect them to one another via the Internet,¹¹ and is leading to **digitalisation** of the manufacturing industry, making robotics and automation increasingly common¹² —

creating new and different roles for the workforce. New business models add value through **servitisation**: adding services to products or processes involved in manufacturing. For example, a company that produces cars may also have employees who are trained to perform maintenance on the vehicles, and can provide that service to customers.¹³

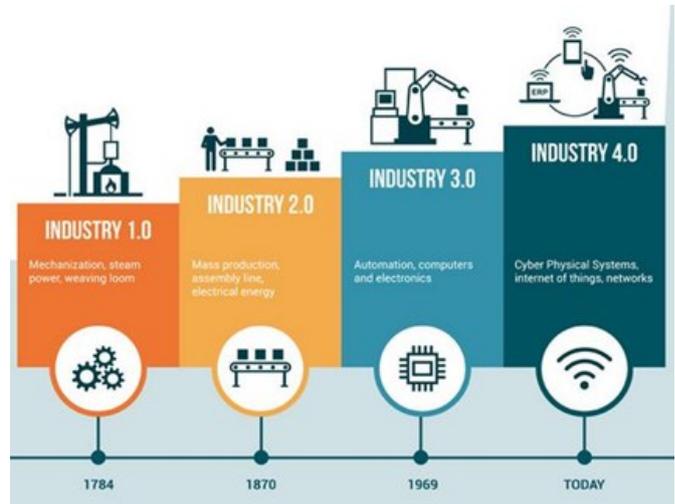


Image Source: IntelSat

2. The Energy Transition

To successfully deliver on the commitment to a **net-zero carbon economy**, the global energy industry must invest \$13.5 trillion through 2030 in efficiency measures and low-carbon technologies.¹⁴ Europe is rapidly transitioning to a low-carbon economy and investment in Europe will aid in this transition from fossil fuels to renewable energy sources and more efficient energy systems. The European Fund for Strategic Investments (EFSI), for example, is providing potential funding opportunities for businesses, particularly those in the energy, transportation and building sectors.¹⁵

The drive to improve **energy efficiency** is providing opportunities for businesses to collaborate and create new business models, including **industrial symbiosis** where outputs generated from one manufacturing process are utilised as inputs for a different manufacturing process – turning waste into resource. Developing **strategic partnerships** with other businesses can improve energy efficiency and **resource efficiency** to save critical natural resources and capital.¹⁶

3. Research, Development and Innovation

Europe's public and private research and innovation landscape is vast and varied. France, Germany, Italy and the United Kingdom are among those leading on driving innovation through investment in research and development. France launched the *New Face of Industry in France* plan, investing €3.7 billion¹⁷ in creating solutions for 34 sectors such as smart grids, nano-electronics, supercomputers, robotics and high-speed trains¹⁸, working with companies to make these advances in innovation possible. Germany created an "innovation-friendly framework" for businesses by addressing its legal framework to facilitate innovation through deregulation^{19,20} in addition to providing funding for small to medium-sized enterprises (SMEs).

4. Competitiveness vs. Protectionism

A primary purpose of a European industrial strategy is to increase Europe's competitiveness in the global market. Fundamentally different from protectionism, the European Commission aims to encourage free trade and remove trade barriers.²¹ **Europe has the opportunity to create an industrial strategy that improves productivity, unites competition policy, regulatory functions, and consumer policy to stimulate economic growth.** This would increase Europe's competitiveness in the global market, spark innovation and help Europe's workforce develop critical skills to meet the needs of the future.

Why should companies engage in discussions on industrial strategy?

A European industrial strategy **has the potential to help businesses minimize risk** during a period of rapid change. **Engaging in the discussion on an industrial strategy for Europe can help:**

Ensure future employees will have the skills to help business thrive in a digital age

Although digitalisation will increase productivity and improve efficiency, it will yield a vastly different work environment for employees. Across Member States up to 12% of jobs may become obsolete due to automation and digitalisation²² while up to 90% of European companies "indicate they lack digital skills."²³ The European workforce must **develop new skills to meet the needs that the digitalisation and servitisation** of the European economy will require. European industrial strategy can help overcome this challenge through policies that increase the supply of general technical skills and develop the geographic and sector-specific skills needed.

Improve knowledge and technology transfer through public-private partnerships and other collaborations

Cutting edge research is being carried out at research centres and academic institutions throughout Europe that can benefit businesses. The European Institute of Innovation and Technology (EIT) Knowledge Information Communities (KIC) has involved over 500 companies and over 170 higher education institutions. Companies such as Siemens have engaged in collaborations related to digitalisation and health.²⁴ European industrial strategy can facilitate this type of exchange between the public sector, universities, and businesses.

Create the conditions for developing innovative solutions

Europe will need to maintain its role as a leader in high-tech manufacturing as the Make in India and China Manufacturing 2025 industrial strategies are implemented, in addition to traditional competitors in the United States and Japan.²⁵ Low-interest loans, grants and tax credits can enable the creation of new technologies and processes.²⁶ Moreover, at the EU-level, legislation can be streamlined "to improve the functioning of the internal market and to stimulate a more growth-friendly regulatory environment for industry".²⁷

Through informed and engaged stakeholders, a European industrial strategy can increase access to capital and remove regulatory barriers so businesses can focus on delivering the

products and services of the future.

Secure your competitive edge in the global market by engaging in the discussion on an industrial strategy for Europe.

We will call on companies to explore a European Industrial Strategy along with experts and policymakers as part of our Green Growth Platform activities.

To join the discussion, contact:

+32 2 894 9323 or clg@cisl.cam.ac.uk

The Green Growth Platform brings together ministers from European governments, businesses, and the European Parliament to discuss and debate the economic opportunities and challenges involved in the transition to a low carbon, resilient economy. The platform works through a combination of regular high-level meetings, smaller roundtables and well attended summits. Advice and evidence is gathered through an ongoing consultative process with European and global experts, business leaders and associations. In the past, sectoral discussions have included industrial demand side, industrial low-carbon innovation, and innovation pathways to deep decarbonisation in industry.

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