

STRENGTHENING STRATEGIC VALUE CHAINS FOR AN EU INDUSTRY FIT FOR THE FUTURE

To strengthen our industrial base, Europe needs to build on its assets. Batteries and cybersecurity are some of the many strategic and future-oriented business areas where boosting Europe's competitive advantage can generate growth across industrial sectors, value chains and regions, all while strengthening the EU's role on the global stage.

Europe needs more industrial cross border cooperation, with strong European players in such key business areas. EU Member States and companies must join forces to stay at the forefront of the technological revolutions that will drive our competitiveness and economic development.

With concrete recommendations to develop these strategic areas, the report of the Strategic Forum for Important Projects of Common European Interest is an important contribution to a common vision for the EU's industrial future.



STRATEGIC FORUM'S RECOMMENDATIONS

Following an analysis of Europe's industrial landscape, the Strategic Forum identified six value chains as priorities for pooling resources and provided recommendations for action. These key strategic value chains complement three other areas – namely high-performance computing, microelectronics and batteries – where large-scale coordinated investments are already ongoing.

The identified areas have been prioritised based on their potential to drive Europe's industrial competitiveness while helping reaching the EU's climate ambitions. The EU framework for Important Projects of Common European Interest under the EU state aid rules can be used to support the development and strengthening of strategic value chains.



**CLEAN,
CONNECTED
AND AUTONOMOUS
VEHICLES**



**SMART
HEALTH**



**LOW CO₂
EMISSIONS
INDUSTRY**



**HYDROGEN
TECHNOLOGIES
AND SYSTEMS**



**INDUSTRIAL
INTERNET
OF THINGS
(INDUSTRIAL IOT)**



CYBERSECURITY

EU STRATEGIC VALUE CHAINS IN FOCUS

The Strategic Forum's report provides cross-cutting as well as specific recommendations for individual value chains.

CROSS-CUTTING RECOMMENDATIONS ACROSS VALUE CHAINS

COORDINATED INVESTMENTS

The EU should play a key role in coordinating efforts and pooling investments from private and public sources, at EU, national and regional levels. These investments should be targeted at the critical phase of first industrial deployment and commercialisation of new technologies.

ENABLING POLICIES

The Single Market for goods, services, energy and data must be deepened and integrated. New policy measures are also needed to map and ensure the right skills for the future of our industries. A coherent regulatory framework in the EU, based on new standards, improved permit procedures and better use of public procurement, should also support new strategic value chains.

BROAD SUPPORT FOR R&D

Europe should develop a dynamic industrial innovation ecosystem with access to state-of-the-art technology infrastructures. This should build on regional strengths and experience with existing European public-private partnerships.

VALUE-CHAIN SPECIFIC RECOMMENDATIONS

CLEAN, CONNECTED AND AUTONOMOUS VEHICLES

- Great potential to reduce CO₂ and air pollution.
- Could help minimise road accidents, congestion.
- European car industry is a global player, with 4% of EU GDP and 12 million jobs.

RECOMMENDATIONS:

- Invest in new generation high-efficiency electric motors, hydrogen storage and fuel cells.
- Invest in new infrastructures like high-power charging stations, vehicle-to-grid charging and hydrogen refuelling stations.
- Build an accelerator network and dedicated fund for clean and autonomous vehicles.



SMART HEALTH

- EU facing ageing population, health staff shortages, rises in preventable diseases.
- Healthcare costs in Europe represent 9.6% of GDP and will likely rise further.
- Key in Sustainable Development Goals and European Pillar of Social Rights.

RECOMMENDATIONS:

- Create a European Health Data Space, based on a network of federated and GDPR-compliant health databases with a public-private data governance model.
- Create an EU Investment Platform for Smart Health to support new products and services.
- Stimulate demand and uptake of Smart Health products and services.
- New European Smart Health Innovation Hub to assess and promote Smart Health solutions.



LOW CO₂ EMISSIONS INDUSTRY

- Potential for major contribution to EU's climate neutrality by 2050.
- Two-thirds of industrial CO₂ emissions produced by steel, chemicals and cement industries.
- These industries account for €750 billion annual turnover & 2 million jobs.

RECOMMENDATIONS:

- Invest in key technologies to reduce CO₂ in core industries by 95%.
- support R&D for low CO₂ emission industry and scale up demonstration and roll-out projects.
- Develop guidelines and assessments for low CO₂ emissions technologies.
- Establish supportive regulatory framework by creating lead markets through public procurement and product standards, ensuring a global level playing field and access to low-carbon energy..

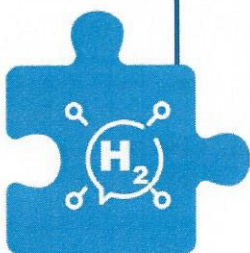


HYDROGEN TECHNOLOGIES AND SYSTEMS

- Potential to replace fossil-based energy with low-emission renewable hydrogen.
- Could enable and optimise large-scale renewable electricity generation.
- Could increase EU energy security and resilience.

RECOMMENDATIONS:

- Develop a roadmap for a future European Hydrogen Economy.
- Build a supportive regulatory framework by reviewing legislation on renewable energy, develop common standards.
- Support R&D investments and build an innovative industrial system through cross-border collaboration and partnerships in Horizon Europe.
- Ensure safety and public acceptance through demonstrations and standardisation.



INDUSTRIAL INTERNET OF THINGS (Industrial IoT)

- Potential for industry productivity, safety and better working conditions.
- IoT market estimated at €80 billion by 2025.
- €1 trillion value for whole EU economy.

RECOMMENDATIONS:

- Build a common, secure and trusted EU industrial IoT and data ecosystem.
- Speed up establishing the European cloud infrastructure and develop new generation data exploitation tools and artificial intelligence applications.
- Support the roll-out of industrial 5G infrastructure.



CYBERSECURITY

- Increasing importance of cybersecurity with new digital advances.
- A global market that exceeds €100 billion.

RECOMMENDATIONS:

- Support coordinated investments and support measures in secure 5G.
- Sharing information on threats, vulnerability and incidents among Member States and industry.
- Focus on highly critical applications and essential services like electricity, gas, water, transport.
- Establish a European data space with secure end-to-end communications and data protection solutions.



Hydrogen Technologies and systems

SWOT analysis

Strengths

- S1: EU strategy to keep up with decarbonisation
- S2: Strong R&D and skills across EU
- S3: Strong EU industrial base
- S4: Existing wide (stakeholder) ecosystem
- S5: Strong emphasis on demonstration (TRL --> MRL)

Weaknesses

- W1: Uncertainties on concrete decarbonisation strategies
- W2: No real regulatory incentives
- W3: primary materials partly from outside EU
- W4: Industry and supply chain needs to be optimized
- W5: Over standardization or slow development of standards (depending on use case)
- W6: low (roundtrip) efficiency
- W7: R&D needed for innovative technologies (eff., costs), full SVC
- W8: Scale-up needed (MRL)
- W9: Asian players rapidly moving ahead
- W10: Lack of technology-, market-, business- strategies
- W11: Lack of clear, transparent, updated LCA comparison

Opportunities

- O1: Climate and energy policy drivers (decarbonisation)
- O2: New regulatory framework
- O3: push for circular economy
- O4: Basis for future strong industrial H2 ecosystem
- O5: First mover advantage for additional standards
- O6: Local interest & invest basis for coordinated actions
- O7: ensure public acceptance
- O8: Sector coupling and sectoral integration
- O9: Job & growth creation (skills, businesses)
- O10: new end uses & businesses with H2 infrastructure
- O11: Momentum to develop clean hydrogen
- O12: Access to multiple sources of low carbon H2

Threats

- T1: Lack of regulation, tariffs, certificates and GOs, etc.
- T2: Technology alternatives (are being developed or will reach readiness earlier)
- T3: Industrialization may not bring costs down
- T4: Chicken and egg problem for H2 ecosystem
- T5: development and deployment outside EU