

Background paper: Second working session

Technological development to accelerate
industrial decarbonisation and strengthen the
EU's competitiveness



Informal Meeting of Ministers responsible for Competitiveness (Research)

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Background Paper – Second working session: ‘Technological development to accelerate industrial decarbonisation and strengthen the EU's competitiveness’

Nowadays, the European Union's (EU) technological development is crucial not only to enhance its global competitiveness and ensure its open strategic autonomy but also to respond to major societal challenges such as security, health, climate change and industrial decarbonisation. At a global level, the EU's competitors have dramatically increased investments and efforts to support domestic innovation in these fields. These developments are defining new technological leaderships at world level and are impacting on the EU efforts for various key technologies (batteries, solar panels, hydrogen, wind turbines, chips, etc.). EU competitiveness is shaped by both underpinning innovative technologies, as well as by the final industrial products and services.

In that regard, technological sovereignty becomes an important lever to achieve the ambitious decarbonisation goals of the EU, for example. The development and deployment of new materials and of technologies such as carbon capture, utilisation and storage solutions, the electrification of industrial processes, the increased use of renewable energy and the adoption of more energy-efficient production practices are key elements to reach the EU's sustainability goals, especially, the ambition of net-zero emissions by 2050. The EU adopts a progressive approach with intermediate milestones, such as a 55% reduction by 2030 and specific targets for 2040.

In this context, Research and Innovation (R&I) emerge as essential catalysts for technological and industrial development, strengthening the EU's technological sovereignty. The development of new technologies is currently highly dependent on the supply of raw materials and resources from foreign powers. By reducing dependence on external technologies and raw materials, the EU can ensure its strategic autonomy and global competitiveness, while significantly contributing to facing common global challenges in the areas of health, security and climate change.

Recently, the open strategic autonomy of the EU revolves around flagship initiatives and frameworks, such as the Innovation Fund, Horizon Europe, the Net Zero Industry and Critical Raw Materials Acts and Important Projects of Common European Interest. These

initiatives aim to accelerate the technological and industrial transition, thereby supporting a transformation towards a decarbonised and digitalised economy.

By investing in and supporting technological development, the EU can further establish global leadership, foster the creation of local technological ecosystems and implement large-scale transnational projects. It is also important to ensure the efficiency and accessibility of these technological development, including for Small and Medium-sized Entreprises (SMEs). This strategic approach positions the EU as a key player in the sustainable innovation race, fostering its competitiveness and the leadership of its companies on the international stage. Trans-European projects also play a crucial role in supporting the Union's objectives, fostering collaboration among Member States for the development of innovative and sustainable solutions.

Questions for discussion

In light of the above, ministers are invited to give their views on the following questions:

1. How should the EU better promote the integration and deployment of green technologies in its industries and in society, in particular for advancing decarbonisation?
2. How can the EU foster a culture of innovation and research within the industrial sector, in particular in SMEs, while creating spill-over effects across sectors, to reassert its global industrial leadership?
3. How can the EU better harness the innovative potential of public procurement to achieve economic impact of its decarbonisation goals? How does this align with national/regional policy?