

Universities of science and technology advancing the Clean Industrial Deal

Position dated 28 April 2025

The over fifty leading universities of science and technology from all over Europe united in CESAER welcome the publication of the Clean Industrial Deal (CID) as a pivotal initiative to accelerate the decarbonisation of European industry while strengthening its competitiveness. The success of this initiative depends on ensuring that science and technology (S&T) are at its core, driving innovation, sustainability, and economic resilience.

As highlighted in our [declaration](#) on sustainability and [position](#) on 'competitiveness, reindustrialisation and strategic autonomy through leadership in science & technology', competitiveness and sustainability must advance hand in hand, ensuring that Europe remains at the forefront of industrial transformation. Universities of S&T play a key role in driving decarbonisation, advancing circularity, and fostering disruptive innovation as exemplified in our [white paper](#) 'Leading by example', through research, education and innovation in advanced science and technologies.

However, the current political and economic context poses significant challenges for European industry and innovation. Many industries are struggling with high energy prices, costs related to carbon dioxide emissions, and an uneven European playing field. Additionally, shifting global political dynamics—such as the evolving US stance on sustainability policies—introduce further uncertainties for industrial and research investments. The CID must address these realities head-on, providing clear, long-term support for research and innovation while maintaining Europe's commitment to climate and economic resilience. In this context, the full environmental and societal impact across the entire lifecycle of technologies must be considered. Moreover, conflict and geopolitical instability pose increasing challenges that should be factored into innovation strategies advancing industrial and sustainability goals.

This position outlines how the CID must align with broader European strategic objectives, ensuring that scientific leadership, talent development, and innovation ecosystems are prioritised. It must also work in synergy with the upcoming Startup and Scaleup Strategy and the European Innovation Act, as the green transition and innovation-driven competitiveness must be pursued jointly.

With this paper, the leading universities of science and technology united in CESAER recognise the urgency of the challenge and the need for increased efforts. We provide recommendations to ensure that universities of S&T can fully contribute across all dimensions to advancing the CID, particularly by strengthening scientific and technological leadership, developing talent, and driving sustainable industrial innovation.

1. Support the Clean Industrial Deal through leadership in science and technology

To transform ambition into action, leadership in science and technology must remain central to the Clean Industrial Deal, notably underpinned by reinforcing European research and

innovation including increased investment in the European framework programme for research and innovation, as highlighted in our [position paper](#) on competitiveness.

We call upon the EU institutions to:

- Strengthen the European framework programme for research and innovation to foster excellence and leadership in science and technology, particularly through its proven bottom-up approaches engaging the best researchers and innovators in Europe.
- Ensure that all new financial tools supporting the seven thematic areas of the CID include dedicated provisions for research and innovation to address top-down, strategic priorities and connect to cutting-edge science and technology
- Ensure alignment with European greenhouse gas net emissions, energy security, and competitiveness objectives, reinforcing the link between sustainability and industrial growth.
- Engage universities of S&T to ensure that innovation, scientific excellence and advanced technologies are main drivers in the implementation of the Clean Industrial Deal along the full knowledge value chain.
- Strengthen Europe's global competitiveness by prioritising excellence, fostering talent, and ensuring robust support for transformative research and innovation.

2. Invest in people, talent, and skills for a sustainable industrial future

Universities of S&T are instrumental in training the skilled workforce needed to achieve Europe's industrial and sustainability goals. However, skills shortages and mismatches remain a major barrier to delivering on Europe's climate and digital ambitions. The CID must significantly scale up efforts to take a forward-looking approach to align education, training and labour market needs notably through the Union of Skills, focusing on needs of today, tomorrow and the years and decades ahead.

As Europe moves forward with the Union of Skills strategy, it is critical that universities of S&T play a central role in its implementation. This includes active engagement in skills intelligence, training, and research-driven upskilling, focusing not only on today's needs but also on long-term industrial transformation.

Additionally, the Marie Skłodowska-Curie Actions (MSCA) in Horizon Europe plays a key role in fostering interdisciplinary training and equipping researchers with the skills needed for industry and academia alike. MSCA doctoral networks, including industrial doctorates, are particularly valuable in training the next generation of creative, entrepreneurial, and innovative researchers through close collaboration between universities and industry. It is essential that these initiatives are reinforced in future framework programmes.

We call upon the EU institutions to:

- Ensure effective implementation of the Union of Skills, with universities of S&T contributing as key actors in developing strategic workforce planning, training, and research-driven upskilling to meet industrial and scientific advancements.
- Ensure that Net-Zero Industry Academies actively engage universities of S&T to align skills development with industrial and scientific advancements.
- Strengthen lifelong learning, vocational training, and adult education, including micro-credentials, to equip workers with future-proof skills.

- Promote [cross-sector collaboration](#) by engaging industry, policymakers, and research institutions to co-create skills frameworks tailored to industrial and societal needs.
- Reinforce the [MSCA](#), including [industrial doctorates](#), to support collaborative training between academia and industry in emerging fields critical for Europe's industrial transformation.

3. Support green innovation startups, spinouts and scale-outs

Startups and university spinouts play a crucial role in designing and commercialising green technologies, resource efficiency solutions, and circular economy innovations. However, access to funding, risk capital, and tailored support mechanisms remains a challenge.

Our positions on [‘Boosting disruptive innovation by fostering new mindsets and co-creating innovation’](#) and on [‘Deep tech unlocked by universities of science & technology’](#), highlight how universities of S&T drive breakthrough innovations and high-risk, high-reward ventures.

We call upon the EU institutions to:

- Ensure that early-stage green startups and university spinouts have dedicated access to tailored financial instruments that support industrial transformation while reinforcing existing investments in research and innovation. This should involve aligning funding mechanisms, such as the European Innovation Council (EIC), with the needs of university spinouts and deep-tech startups.
- Reduce barriers to accessing innovation financing, simplifying administrative processes to make funding more accessible for university-affiliated startups.
- Enhance technology transfer and knowledge valorisation mechanisms, ensuring that deep-tech and disruptive innovations transition into market applications.
- Facilitate public-private partnerships to strengthen green innovation ecosystems and accelerate the development of transformative technologies. While Horizon Europe and its successor must remain focused on research and innovation, additional deployment efforts should be financed through programmes such as the Digital Europe Programme and EU4Health, in line with the Treaty on the Functioning of the European Union.

4. Strengthen circularity as a core principle

The CID must embed circular economy principles to enhance industrial resilience, reduce waste, and increase resource efficiency. The CID acknowledges the importance of securing access to materials and resources and highlights the upcoming Circular Economy Act as a key instrument to achieve this. However, we underline that achieving true and full-scale circularity is not possible with today's science and technology. Reaching this goal requires substantial further progress in research, innovation, and the education of new top talent in science and technology, with universities of S&T playing a pivotal role in developing, testing, and scaling new solutions. This must be guided by a systems-thinking approach and grounded in robust lifecycle analysis, ensuring that industrial strategies do not shift environmental burdens along the value chain or geographically. Universities of S&T are uniquely placed to support this through interdisciplinary expertise and an integrated approach to research, education and innovation in advanced science and technologies.

We call upon the EU institutions to:

- Strengthen collaboration with universities of S&T to advance scientific and technological solutions for genuine and full-scale circularity, ensuring their expertise is leveraged in the implementation of the Circular Economy Act and related initiatives.
- Facilitate R&I-driven industrial adoption of circularity, ensuring that research breakthroughs translate into scalable, real-world applications.
- Promote risk-taking and innovation-friendly regulatory environments, allowing for agile responses to industrial and technological challenges.

5. Integrate “Do No Significant Harm” (DNSH) principles

The DNSH principle, embedded in EU financial regulations, plays a crucial role in ensuring that investments align with Europe’s sustainability and environmental goals. However, its implementation must not create unintended barriers for frontier research, disruptive innovation, and technological breakthroughs. As outlined in our [position](#) on ‘Provide clarity on DNSH to boost the contribution of science & technology’, maintaining clear, workable guidelines is essential to allow researchers and innovators to contribute fully to the green and digital transitions. Particular attention should be paid to the time scales over which potential harm is assessed, ensuring that disruptive or early-stage technologies are not prematurely excluded from support due to unsuitable, narrow and short-term DNSH interpretations. Our goal is to uphold strong environmental protections while promoting a constructive and forward-looking application of the principle that supports responsible research and innovation.

We call upon the EU institutions to:

- Ensure continuity of DNSH exceptions for frontier research, protecting the flexibility necessary for supporting early-stage, disruptive innovation.
- Adopt a practical and proportionate approach to DNSH implementation, ensuring that compliance does not create unnecessary burdens for researchers and innovators.
- Provide guidance and support universities in sharing their best practices to help integrate DNSH effectively into research activities when and where relevant.

6. Strengthen global collaboration

Universities of S&T act from the local to the global, playing a crucial role in international collaboration and scientific diplomacy. Europe must lead in tackling global challenges by fostering open research cooperation with long-standing and like-minded partners.

We call upon the EU institutions to:

- [Strengthen science diplomacy mechanisms](#), positioning Europe as a global leader in research, innovation, education, technology transfer and sustainability.
- Promote [systems-thinking approaches](#) in policy, aligning research, innovation, education and societal needs for greater impact.
- Ensure meaningful engagement of universities of S&T in shaping EU policies and strategies, including through structured dialogue and involvement in strategic advisory bodies and consultation processes.

- Advance open science principles, following the approach outlined in our [white paper](#), ensuring that collaboration remains “as open as possible, as restricted as necessary” to balance knowledge sharing with competitiveness and security considerations.

The Clean Industrial Deal presents a defining opportunity for Europe to lead sustainable industrial transformation. By reinforcing science and technology leadership, ensuring strategic financial support, investing in people, talent, and skills, and strengthening innovation ecosystems, the CID can secure Europe’s global competitiveness while delivering on its industrial transformation goals.

We stand ready to contribute to shaping this vision and its implementation, ensuring that competitiveness and sustainability remain mutually reinforcing priorities supported by research, education and innovation in advanced science and technologies.

For more information and enquiries, please [contact](#) our Senior Advisor for Innovation & Sustainability Louise Drogoul.

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