Challenge and Ambition

WP5 PLASTICS

CHALLENGE

The plastics subsector is currently undergoing a profound structural transformation driven by regulatory, economic, and technological change. Adapting to the green and digital transitions has become a fundamental condition for ensuring the sector's long-term resilience and sustainability.

At the core of this evolution lies an increasingly complex regulatory framework. The shift towards a circular economy has introduced a wide range of new obligations, including requirements on recycled content, eco-design standards, and strengthened ESG reporting, all of which place greater emphasis on compliance, traceability, and transparency across value chains.

At the same time, these ambitions are unfolding in a challenging global context marked by economic volatility and geopolitical uncertainty. The sector must handle rising energy costs and growing regulatory pressure with the need to remain competitive in highly dynamic international markets. In response, companies are accelerating the adoption of Industry 4.0 technologies, such as artificial intelligence, digital twins, and advanced process control systems. These innovations are increasingly essential to improving resource efficiency and enabling the development of new, more sustainable materials.

However, this transition is constrained by a significant human capital gap. There remains a structural mismatch between traditional education and training pathways and the increasingly specialised, interdisciplinary skills now required by industry. As a result, the sector is facing shortages in key areas such as regulatory expertise, digital competencies, and sustainability-related knowledge.

Finally, beyond technical and economic challenges, the sector must also address important societal and communication issues. Public scepticism towards plastics, particularly regarding the safety and effectiveness of reuse and recycling systems, is often reinforced by fragmented or misleading information. In this context, building trust through clear, transparent, and evidence-based communication, is essential to supporting a credible and effective transition towards a truly circular plastics economy.

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AMBITION

A key priority is establishing closer and continuous cooperation between industry and educational institutions. This includes actively defining curricula and training paths to better align students' skills with the evolving needs of the industry. By fostering stronger partnerships with universities and technical institutes, the sector should be able to anticipate future skills needs and reduce the current gap between educational outcomes and labor market demands. In this regard, it is essential to recognize that the professional profiles currently required by the industry are increasingly multidisciplinary: current roles rarely correspond to a single traditional discipline and instead require the integration of technical skills from multiple fields, combined with a strong set of soft skills, including critical thinking, cross-functional collaboration, adaptability, and effective communication. Curricula and training programs should therefore be designed to reflect this convergence, moving beyond siloed specializations and equipping students with the hybrid skills needed to operate in technical, managerial, and sustainability-related roles.

In this context, the development of a system for monitoring and tracking emerging and in-demand skills, designed jointly with industry and academia, represents an important step forward. This mechanism would help identify evolving skill needs in real time, supporting more agile and targeted training strategies.

Equally important is the goal of facilitating the entry of young talent into the labor market. Expanding access to paid internships, structured training programs, and hands-on learning experiences is considered essential to bridging the gap between theoretical knowledge and industrial practice, while also increasing the sector's attractiveness for younger generations. However, efforts to attract young talent cannot rely solely on improving career paths and educational opportunities: they must also be accompanied by a fundamental rethinking of how the plastics industry communicates with the public, particularly younger generations. Current perceptions of plastics are too often influenced by biased or misleading narratives that overlook the material's technical performance, its role in enabling sustainable outcomes across multiple value chains, and ongoing innovations in circularity, recyclability, and bio-based solutions. A more balanced and evidence-based communications strategy, grounded in the true properties, applications, and environmental performance of plastics, is therefore needed to reshape the sector's public image, counter misinformation, and position the industry as a credible, forward-thinking, and purpose-driven career destination for the next generation of professionals.

Regulatory-wise, the industry aspires to greater simplification, clarity, and predictability. Simplified reporting requirements and faster, more consistent regulatory decision-making processes would significantly improve operational efficiency and allow companies to focus resources on innovation and implementation rather than administrative complexity.

Finally, a key objective is to directly address the persistent shortage of advanced skills in key areas such as digital technologies, regulatory compliance, sustainability expertise, and soft skills. By investing in reskilling, upskilling, and continuing education, the sector aims to build a more resilient and future-ready workforce capable of supporting the green and digital transition on a large scale.

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