

THE CIRCULAR ECONOMY AND SAFETY AND HEALTH: PROJECT OVERVIEW AND NEXT STEPS

Thinking ahead. Circular economy scenarios and future workplace and safety and health: project overview

▪ Background to EU-OSHA's foresight studies

For several years, the European Agency for Safety and Health at Work (EU-OSHA) has been applying foresight approaches as part of its mission to contribute to the improvement of safe and healthy working conditions in the EU. Within its foresight approach, it looks at developments that may take place in the future (e.g. related to new technologies, new ways of working and societal change) and considers what their consequences could be, with the aim of improving policy, regulation and raising awareness to reduce work-related accidents and ill health. With this approach, EU-OSHA's objective is not only to identify new risks as they emerge, but also to anticipate changes that could have an impact on workplace safety and health.

EU-OSHA's foresight projects draw on a variety of methods, including literature reviews, consultation with experts and scenario-building. EU-OSHA organises workshops to gather knowledge, help promote the results and stimulate debate.

Topics already covered in the past by the foresight studies include green jobs and information and communications technology (ICT)/digitalisation. The ongoing (third) foresight study focuses on the topic of the circular economy (CE) ⁽¹⁾.

Alongside the foresight studies, EU-OSHA publishes expert review papers to provoke debate on the future of work and on emerging issues in workplace safety and health among occupational safety and health (OSH) experts and policy-makers throughout the EU. Topics already covered by the review series include crowdsourcing, robotics, performance-enhancing drugs, 3-D printing, monitoring technologies and the e-retail sector.

Previous foresight projects, such as the foresight study on ICT/digitalisation², have led to follow-up projects, such as the current OSH overview on the topic of ICT/digitalisation, which contains four projects on major topics in the field of digitalisation and OSH.

Foresight study on the circular economy: project context and aims

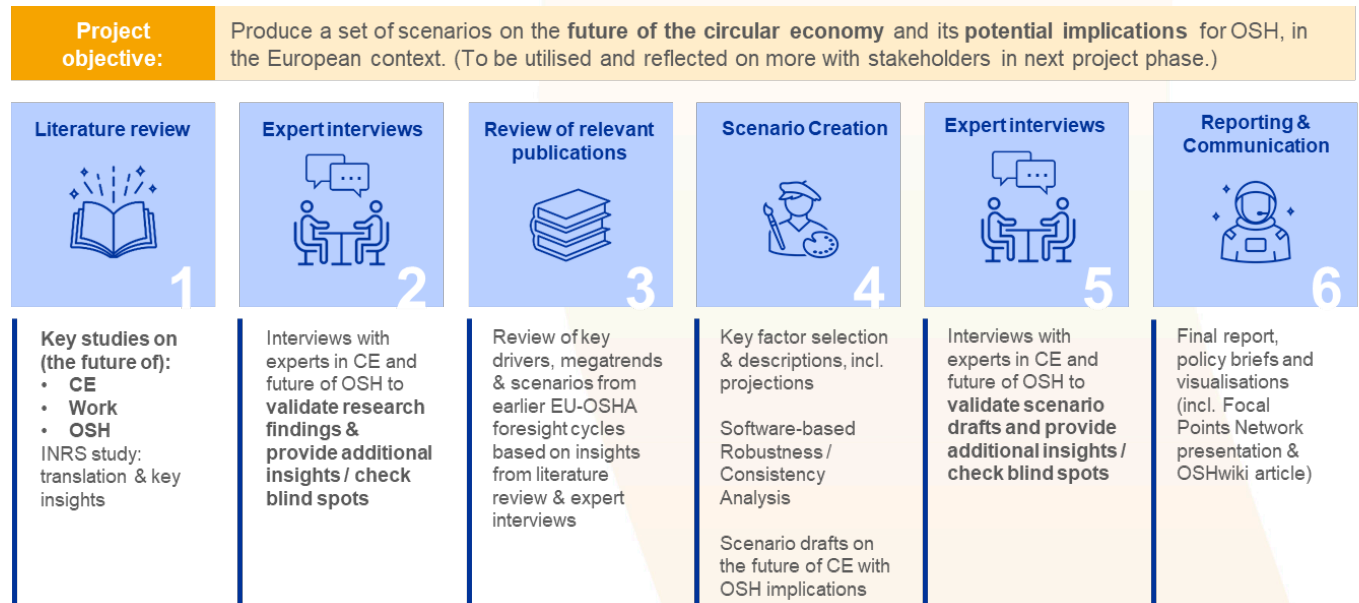
The current foresight study focuses on the topic of the circular economy (CE). It was created against the background of an EU policy shift towards more environmentally sustainable practices, with a number of policy initiatives driving efforts in the CE arena ⁽³⁾. These initiatives, and indeed the CE as a whole, are widely considered to be critical and influential developments that will be beneficial to the action against climate change, and will ultimately have an impact on jobs and on OSH.

-
- (1) For the purpose of this project, we have also followed the definition of a CE put forward by the Ellen MacArthur Foundation: 'A circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems (see: <https://www.ellenmacarthurfoundation.org/circular-economy/what-is-the-circular-economy>).
- (2) EU-OSHA — European Agency for Safety and Health at Work (2018). Foresight on new and emerging occupational safety and health risks associated with digitalisation by 2025. Retrieved 2 December 2020, from: https://osha.europa.eu/sites/default/files/publications/documents/Foresight_new_OSH_risks_2025_report.pdf
- (3) The key policy initiative in this space is the EU Commission's European Green Deal initiative, which has the overarching aim of making Europe climate neutral by 2050 (see: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en). Alongside the Green Deal initiative sits the Commission's 2015 Circular Economy Package, comprising an EU action plan for the circular economy ('Closing the loop') with 54 concrete actions to achieve a CE, many with significant policy and regulatory implications for the EU's waste and recycling sector (see: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52015DC0614>).

Thus, this study aims to explore different ways in which future work and jobs may be affected by efforts towards implementing a CE, and what consequences this may have for OSH in the future. This will be achieved through the development of macro-scenarios focused on the CE and its effects on OSH.


Phase 1 of the project focuses on the development of macro-scenarios and phase 2 on the dissemination and tailoring of the scenarios via stakeholder dialogue and workshops.

Figure 1 Overall project approach



Four scenarios on CE in 2040

Four scenarios were generated by Future Impacts, together with the EU-OSHA project team, via a key-factor-based scenario methodology drawing on an extensive literature analysis, as well as expert interviews. For each scenario a narrative was developed that described the scenario world in 2040, including how the respective development pathways came to be, as well as levers and turning points. Figure 2 below shows an overview of the four scenarios. Special emphasis was placed on the effects on working conditions and job quality, as well as a first look at implications for OSH. The scenarios were also supplemented with visuals and an illustrative vignette depicting daily life in 2040 to aid communication. They illustrate four clearly distinct alternative future pathways in a CE with its implications on OSH, considering risks as well as opportunities. It is important to note that the four scenarios are not to be interpreted as any type of prediction on what the future might or might not be; rather, they are designed to encourage dialogue and reflection with stakeholders about future possibilities, with the aim of informing today's decision-making, enabling a more future-oriented policy and making tomorrow's work healthier and safer.

Figure 2: Illustration showing an overview of the four scenarios.


The Roaring 40s — fully circular and inclusive	Carbon neutrality — of a hazardous kind	Staying afloat — amid economic and environmental crises	Regional circularities — with European divides
In 2040, the products that sell best are those that are cradle to cradle and 'net-positive' in terms of social and environmental sustainability.	In 2040, Europe has achieved carbon neutrality. But, with environmental outcomes taking top priority, job quality and working conditions have suffered — at least in some areas.	In 2040, work is what people want — any job will do. Keeping your head above the water is all that matters, and the environment, social rights or job quality come a distant second.	By 2040, work has become a two-tier system: contracted employees are well looked after, those in non-standard employment are not. Neither is the environment, with circularity being mostly regional.

The following text provides the core aspects of the scenario narratives, illustrating the future worlds in 2040. For full details on the four scenarios developed see EU-OSHA's main report on the CE and its effects on OSH Phase 1 (macro scenarios).⁴

- **Scenario 1: The roaring 40s — fully circular and inclusive**

Working conditions across all sectors are significantly better than they were two decades ago, pollution has been reduced to a minimum, businesses find that keeping a small footprint is good for the balance sheet, and public trust in policy-makers and national and European leaders is greater than ever. Implementing serious sustainability and realising the principles of 'reduce, reuse, recycle' across all sectors takes a lot of collaborative fine-tuning, as does keeping workers safe and secure in a multifaceted labour environment with myriad platforms and forms of employment. But one key difference from the situation in 2020 is a palpable sense of optimism: with so many challenges successfully met, the future cannot be anything other than bright.

- **Scenario 2: Carbon neutrality — of a hazardous kind**

In the early 2020s, a warming climate, extreme weather events and habitat loss took centre stage in the public mind. Eco-consciousness reigns, leading to a surge in environmental regulation and environmentally friendly industry practices. But, with the bulk of funding spent on renewable energy infrastructure and circular economy initiatives, social aspects fell by the wayside. Social infrastructures and services, social rights, inclusion and job quality have declined for many.

- **Scenario 3: Staying afloat — amid economic and environmental crises**

Recessions, cuts in public spending, environmental crises and rising unemployment: headlines in 2040 make for grim reading. In the business community, it is everyone for themselves, competitiveness and profits alone count. New technologies, rationalisation and digitalisation create an ever-growing pool of workers who lack the qualifications necessary to make it in this new, cut-throat economy. Platform work brings rewards to only a few, and, even in the sectors where it is booming, the 'Russian doll effect' of sub-contracts within sub-contracts means that workers never see their fair share. The circular economy remains a distant dream, and the transition everyone went through was neither green nor just.

⁴ EU-OSHA — European Agency for Safety and Health at Work (2021). Foresight Study on the Circular Economy and its effects on Occupational Safety and Health Phase 1: Macro-scenarios. Available at: <https://osha.europa.eu/en/publications/what-will-circular-economy-ce-mean-occupational-safety-and-health-osh/view>

▪ Scenario 4: Regional circularities — with European divides

To both policy-makers and the general public, a safe, growing economy was the overriding concern of the last two decades. The environment fell by the wayside, but not everywhere. Richer European regions could afford to outsource waste and pollution to other world regions or poorer EU Member States and now boast some sort of localised circular economies, but the loops are never fully closed — problems are simply offshored. Social inclusion was also neglected. With good jobs available to only a minority of well-trained, highly skilled individuals, a growing number of workers are driven towards the informal economy and to unregulated, underpaid, and increasingly precarious employment.

Next steps

The four scenarios showed that the potential pathways for the CE in Europe and their effects on working conditions could vary widely, with a similarly wide-ranging set of first implications for OSH and possible future policy areas. For further details, including the key messages from phase 1 of this project, please refer to the report *Foresight study on the circular economy and its effects on OSH. Phase 1: Macro-scenarios. Final report*. Work on the scenarios will continue in phase 2 of this project, which centres on the dissemination and tailoring of the scenarios via stakeholder dialogue and workshops.

Authors: Cornelia Daheim, Jessica Prendergast and Jörg Rampacher (Future Impacts).
Visualizations: Michelle Winkelsdorf

Project Management: Annick Starren, European Agency for Safety and Health at Work (EU-OSHA)

This project overview was commissioned by the European Agency for Safety and Health at Work (EU-OSHA). Its contents, including any opinions and/or conclusions expressed, are those of the authors alone and do not necessarily reflect the views of EU-OSHA.