

WHAT WILL THE CIRCULAR ECONOMY (CE) MEAN FOR OCCUPATIONAL SAFETY AND HEALTH (OSH)?

Summary of an overview of four foresight scenarios

Context

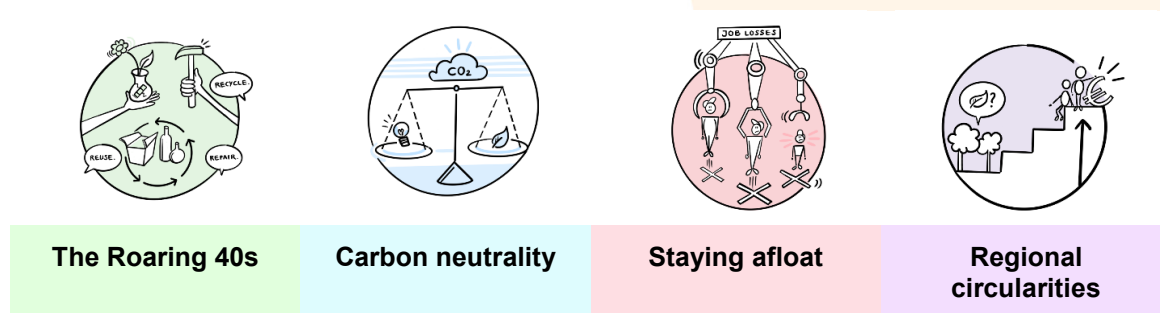
With its key policy initiative, the current European Commission has set Europe on a course towards a green future: the 2020 European Green Deal is primarily focused on making Europe climate neutral by 2050¹. One of its main building blocks is the new Circular Economy Action Plan², an expansion of the 2015 Circular Economy Package³. 'Closing the loop' to keep Europe's resource consumption within planetary boundaries has many significant policy and regulatory implications that will affect future jobs in different ways and have a wide range of consequences for workers' safety and health.

As part of its mission to ensure safe and healthy working conditions in the EU, the European Agency for Safety and Health at Work (EU-OSHA) has for some years been applying foresight approaches when analysing, preparing and disseminating information on possible future challenges for occupational safety and health (OSH). This document is part of a new foresight cycle that uses four scenarios to explore the effect that implementing a circular economy (CE) would have on OSH. The scenarios' primary role is to encourage dialogue and reflection around future possibilities; they show alternative pathways to the future and demonstrate the broad range of imaginable developments. They are not intended to predict what the future may or may not hold and are not the final result of the project. Rather, they are a first step towards the next phase of stakeholder engagement, which will reflect in more depth on what the results imply for OSH research, initiatives and policy-making today.

European circular economies in 2040: four scenarios

Four scenarios looking at Europe in 2040 were developed for this project (see Figure 1). They represent the outcomes of policy decisions taken over the next decade: in each case, the CE was implemented and plays out differently, and the scenarios' impacts on the world of work and OSH vary widely.

Figure 1: An overview of the four scenarios



For each scenario, a narrative was developed which described the scenario world in 2040⁴, whose core aspects are provided in the following text.

¹ For further information, including the Green Deal Action Plan, see COM (2019).

² For further information on the Circular Economy Action Plan, see European Commission (2020).

³ For further information on the Circular Economy Package, see COM (2015).

⁴ For full details on the four scenarios, see the final report in our dedicated [web section](#).

The Roaring 40s — fully circular and inclusive



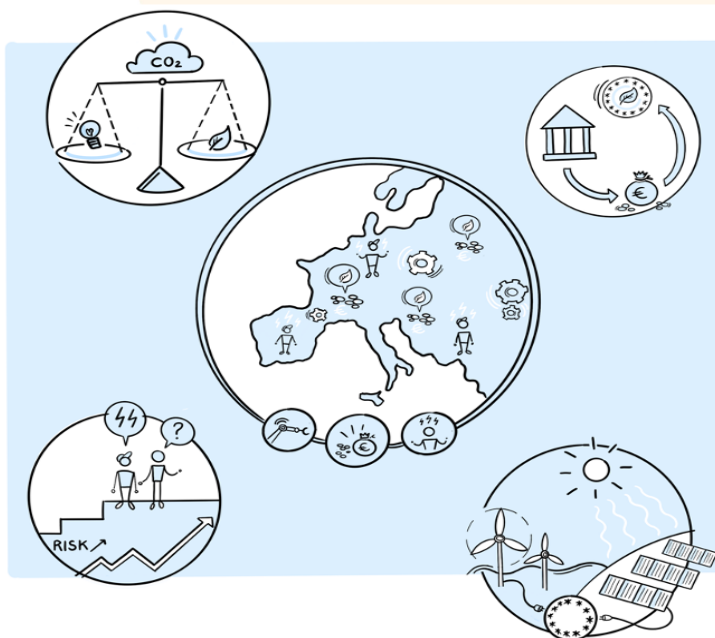
In 2040, the products that sell best are those that are 'cradle to cradle' and 'net positive' in terms of social and environmental sustainability.

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 measures 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 compared with the situation in 2020 is a palpable sense of optimism: with so many challenges successfully met, the future cannot be anything other than bright.

Carbon neutrality — of a hazardous kind

In 2040, Europe has achieved carbon neutrality. However, with environmental outcomes taking top priority, job quality and working conditions have suffered — at least in some areas.

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



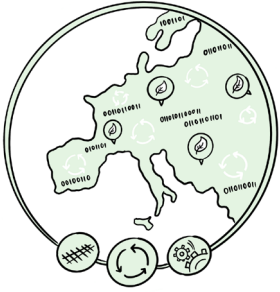
Recessions, cuts in public spending, environmental crises and rising unemployment: headlines in 2040 make for grim reading. In the business community, it is everyone for themselves; competitiveness and profits are all that count. New technologies, rationalisation and digitalisation have created an ever-growing pool of workers who lack the qualifications necessary to make it in this new, cut-throat economy. Platform work⁵ 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 receive their fair share. The CE remains a distant dream, and the transition everyone went through was neither green nor just.

By 2040, work has become a two-tier system: contracted employees are well looked after, whereas those in non-standard employment are not. The environment is not well looked after either, and circularity is mostly regional.

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Cross-sectional implications for OSH

Each scenario differs with regard to the opportunities and challenges it presents for the future of OSH, which are described in detail in the report. However, some implications can be found across all scenarios, albeit to different degrees, and may not have been mentioned in the figures connected to the individual scenarios, in order to keep the latter as concise as possible.

			
Regionalised supply chains: whether supply chains shorten because of the search for smaller environmental footprints, or as a result of economic fragmentation, increased regionalisation regarding sourcing and production offers the chance to improve cradle-to-grave documentation and enforce more stringent safety standards.			
Integration of OSH into legislation: so far, OSH considerations have not played a serious role in EU legislation on the CE or the environment. Initiatives to improve OSH integration are valuable in all four scenarios.			
New technologies: during maintenance, and in particular during recycling, new technologies (from biotechnology to nanomaterials) can present new risks. Carefully exploring and minimising these risks is a clear challenge for OSH authorities, and the difficulty of the task varies according to the specific scenario.			
Platform work: unless responsibility for OSH is handled in line with the EU's new platform initiative (see European Commission, 2021), any form of 'gig' economy will carry a number of risks to workers' physical safety and health. However, psychosocial risks due to 'lone working' (see also below for 'Remote work'), supervision by AI and the pressure of independent work will likely remain.			
Automation, digitalisation, AI and robotics: technological and organisational advances remain a double-edged sword. While there are likely to be reduced risks from working in hazardous or physically challenging environments, these reductions will be accompanied by new emerging hazards (and their increasing spread) from human-robot interaction and increased stress as a result of increased monitoring and performance pressure.			
Remote work: in each of the scenarios, CE-related work becomes more mobile and flexible, which can make OSH supervision and knowledge transfer more difficult and increase psychosocial issues.			
Reskilling: large-scale reskilling and lifelong learning will be increasingly necessary to provide workers with the OSH knowledge and awareness necessary to work safely.			
Sharing economy: similarly to platform work, safety in peer-to-peer sharing will have to be the subject of new regulation to clarify responsibilities; however, OSH supervision and knowledge transfer is likely to become more difficult owing to the diffusion of responsibility.			

Conclusion and next steps in the project

The four scenarios illustrate how widely the challenges for OSH may vary in the coming decades. The best-of-all-worlds situation ('The Roaring 40s') shows what could happen if today's environmental issues were handled responsibly and prudently by stakeholders and policy-makers: real, far-reaching sustainability is achieved in a CE that maintains a competitive edge while keeping workers' health and safety a key, constantly improved priority. The other, less positive, scenarios demonstrate that, while Europe might be able to kick its addiction to fossil fuels in an incredibly short time, this could come at the expense of workers' safety and health and lead to a far more regionalised and fragmented OSH landscape. Should Europe 'drop the ball' on sustainability, not even the green transition would be achieved, and environmental concerns and workers' safety and health would take a distant second place to economic considerations, to the detriment of all.

The current decade will be crucial for Europe's future: how can we realise a process in which the speedy transition to carbon neutrality is successfully managed and changes also contribute to improved safety and health for workers? These four scenarios are designed to encourage dialogue and reflection with stakeholders around future possibilities, with the aim of informing today's decision-making to make policy more future oriented. They show that the potential pathways for a CE in Europe and their effects on working conditions could vary widely, with a similarly wide-ranging set of initial implications for OSH and potential future policy areas.⁶

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.

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⁶ The key messages from phase 1 of this project can be found in detail in *Foresight study on the circular economy and its effects on OSH. Phase 1: Marco scenarios. Final report* (see Chapter 7: Conclusions and outlook).