



# **DELIVERING THE CIRCULAR ECONOMY A TOOLKIT FOR POLICYMAKERS**

EXECUTIVE SUMMARY

## **DISCLAIMER**

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This document contains the executive summary for the report *Delivering the circular economy: a toolkit for policymakers*.

The report has been produced by a team from the Ellen MacArthur Foundation, which takes full responsibility for the report's contents and conclusions. While the key contributors and contributors listed in the acknowledgements provided significant input to the development of this report, their participation does not necessarily equate to endorsement of the report's contents or conclusions. The McKinsey Center for Business and Environment provided analytical support. NERA Economic Consulting provided support for the macroeconomic and policy analysis for Parts 2 and 3 of the report.

The report describes a methodology for circular economy policymaking. It also explores a range of policy options that Denmark – the country of the report's pilot study – could choose to pursue. The report does not recommend any specific policy intervention to Denmark or to any other country.

## **PROJECT FUNDER**

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Business leaders and governments alike are acknowledging that continued long-term value creation requires a new economic model that is less dependent on cheap, easily accessible materials and energy, and that is able to restore and regenerate natural capital. In its research to date, the Ellen MacArthur Foundation has demonstrated that the circular economy is a clear value creation opportunity. As many policymakers become interested in this promising model, they envisage the important role they can play in creating the right enabling conditions and, as appropriate, setting direction to unlock it. This report looks at the circular economy opportunity from a country and policymaker perspective, and aims to provide policymakers with an actionable toolkit to help accelerate the transition towards the circular economy.

*Delivering the circular economy – a toolkit for policymakers* is the result of a collaboration led by the Ellen MacArthur Foundation, with the Danish Business Authority and the Danish Environmental Protection Agency as key contributors, especially in the Denmark pilot phase. The toolkit was developed in cooperation with Danish and international stakeholders, including leading policymakers, businesses and academics. The McKinsey Center for Business and Environment (“MCBE”) provided analytical support. NERA Economic Consulting provided support for the macroeconomic and policy analysis for Parts 2 and 3 of this report. The MAVA Foundation funded the project.

Eight key insights emerged from developing the toolkit and testing it in the Denmark pilot:

1

**A transition towards the circular economy can bring about the lasting benefits of a more innovative, resilient and productive economy. Modelling conducted in this study suggests that it could lead, in Denmark, to 0.8–1.4% additional GDP growth, the creation of 7,000–13,000 job equivalents, 3–7% reduction in carbon footprint, and 5–50% reduction in virgin resource consumption for selected materials.**

These estimates are for 2035 and only consider producing sectors and hospitals, covering 25% of the Danish economy. They do not take into account a further shift towards renewable energy. While such estimates rely by necessity on a number of assumptions and are associated with uncertainty, they confirm the findings from a growing body of research that the impact of a transition to the circular economy on economic growth, job creation and the environment is likely to be positive.

2

**Many circular economy opportunities have a sound underlying profitability, but there are often non-financial barriers limiting further scale-up or holding back development pace. Policymakers can play an important role in helping businesses overcome these barriers.**

Barriers include unintended consequences of existing regulations (e.g. definitions of waste that hinder trade and transport of products for remanufacturing), social factors such as a lack of experience among companies and policymakers to detect and capture circular economy opportunities, and market failures such as imperfect information (e.g. for businesses to repair, disassemble and remanufacture products) and unaccounted externalities (e.g. carbon emissions). In addition to creating enabling conditions, policymakers can, as appropriate, set direction for a transition to the circular economy.

3

**Sector-by-sector analysis can be a valuable approach to address the variety of opportunities and challenges involved in transitioning towards the circular economy. Within each sector, effective circular economy policymaking requires the combination of many policy interventions, and does not rely on a ‘silver bullet’ or blanket solutions.**

Policymakers can address market and regulatory failures to create the right enabling conditions for circular economy initiatives to reach scale. They can also more actively steer and stimulate market activity by setting targets, implementing circular and total cost of ownership-oriented public procurement, and investing in innovative pilots and R&D.

4

**Broader changes to the existing fiscal system and the measurement of economic performance could help enable a systemic transition towards the circular economy.**

While many circular economy opportunities already have a sound underlying profitability, a number of international organisations, such as the European Commission, the OECD, the International Monetary Fund (IMF), and the International Labour Organization, have suggested further opportunities could be unlocked by shifting fiscal incentives towards labour from resources. However, any such shift is a sensitive matter and needs to be seen in the light of international competitiveness, administrative issues, tax revenue stability and distributional effects. Complementing today’s flow-based metrics such as GDP as a measure of economic success with measures of a country’s stock of assets could be an instrument for policymakers to account for the restoration and regeneration of natural capital.

5

**Industry involvement and cross-government department collaboration are crucial. As the Denmark pilot has shown, involving businesses intensively throughout the process is especially important, for three reasons: (i) get insights and knowledge to identify the most relevant circular economy opportunities and barriers in each focus sector; (ii) create early alignment on common direction for the country and the focus sectors; (iii) further demonstrate circular economy benefits to businesses and build skills as well as capacity.**

As businesses are already starting the transition, the circular economy offers an opportunity for policymakers to collaborate with businesses. Furthermore, there is a need for cooperation between different government departments (including business/industry, finance and environment) so that no new unintended policy barriers are created and – like the business solution – the policy response is designed to maximise system effectiveness. Other society stakeholders, including citizens and consumers, labour unions and environmental organisations, should also be engaged.

6

**Even in a country with a starting position as advanced as Denmark, there are significant opportunities to scale up the transition towards the circular economy, and policymakers can play an important enabling role. Opportunities were investigated in five focus sectors, and the economic potential appears to be the largest in Construction & Real Estate and in Food & Beverage.**

In Construction & Real Estate, building sharing, switching from low-value recycling to reuse and high-value recycling, and industrial production and 3D printing of building modules could unlock significant value. In Food & Beverage, maximising value from organic by-products and waste streams through cascaded value extraction in bio-refineries could be an important opportunity. The potential identified in Denmark could, with the right enabling conditions and direction, mostly be captured within the next 20 years.

7

**In European Union member states, EU-level policy interventions would need to complement national policies, as the value chains of many products extend across borders.**

Product policy and promoting the market for secondary raw materials are just two examples that could be coordinated at the European level so as to simplify and reduce the cost of doing (circular) business.

8

**The outcomes of applying this toolkit will differ for each country depending on economic and policy starting positions. The process to get to these answers will be similar, with adaptations to local circumstances.**

In a first assessment, three factors seem to be the most likely to influence the process itself: (i) level of circularity already achieved and support for circularity; (ii) institutional set-up; and (iii) available resources. While more basic starting positions allow a country to leapfrog to high-performing circular systems, strong starting points provide confidence that circular economy is a viable option to create economic value, and allow a country to move from strength to strength.

These insights are further elaborated in the upcoming sections of this report, which is structured as follows. Part 1 introduces the core concepts of the circular economy and discusses the role of policy within that framework. Part 2 lays out a how-to guide for policymakers who want to design a strategy to accelerate the transition towards the circular economy. Part 3 covers the core findings of the pilot study in Denmark.

