INTRODUCING THE ELLEN MACARTHUR FOUNDATION PLUG-AND-PLAY TOOLS

Facilitated application of selected tools from the Toolkit for policymakers report
WHAT IS THE TOOLKIT?

We have developed a circular economy Toolkit for policymakers, with Denmark as a case study, giving policymakers who wish to embark on a circular economy transformation access to the tools and methods they need.

The report underlines that circular business opportunities are mainly hindered by non-financial barriers. It suggests that a sector-by-sector approach is the most appropriate to identify the most relevant opportunities, barriers and policy options. Furthermore, system-wide measures, such as broader changes to the fiscal system, could support the transition towards the circular economy.

PROJECT MEMBERS

The Toolkit was developed in collaboration with the Danish Business Authority and Danish Environmental Protection Agency as key contributors to the pilot phase; analytical support was provided by the McKinsey Center for Business and Environment, with macroeconomic and policy analysis were provided by NERA Economic Consulting, and funding from MAVA Foundation. In addition, a large number of stakeholders were involved as contributors, including 25+ Danish and international businesses, a number of policymakers, academics and other society stakeholders.
Since the Toolkit launch in June 2015, there has been a great deal of interest from policymakers to apply the methodology. To make this new analytical approach presented in Toolkit more accessible for a broader audience, The Ellen MacArthur Foundation has developed a suite of easy-to-use Plug-and-play tools. They move the methodology one step further by offering flexible and customizable advanced templates to guide the analyses.

The Plug-and-play tools facilitate assessment of circular economy potentials for the steps where it is most needed.

- The methodology includes: aligning on starting point, ambition and focus; assessing sector-specific opportunities; and analysing economy-wide implications.
- It is critical for policymakers to take a collaborative approach, engaging all relevant business and society stakeholders.

**DISCLAIMER:** None of the plug-and-play tools provide the first-hand data needed to conduct the analysis. They provide a methodology and framework for assessment. While the plug-and-play tools can be used for stand-alone analyses, the most powerful impact can be achieved when using them as part of the overall methodology described in *Delivering the circular economy – a toolkit for policymakers*. The Ellen MacArthur Foundation does not assume responsibility for any of the outcomes of applying the tools.

**Please reference the Plug-and-play tools as follows:** “Ellen MacArthur Foundation, Delivering the circular economy – a toolkit for policymakers (2015)”
THREE PLUG-AND-PLAY TOOLS AS A COMPREHENSIVE “HOW TO” GUIDELINES

I Sector selection

II Impact quantification

III Barrier identification and policy prioritisation
THE PLUG-AND-PLAY TOOLS IN A NUTSHELL

I SECTOR SELECTION

Target outcome: To assess which sectors in the economy would be most relevant to screen for circular economy opportunities.

Methodology

• Sectors are assessed on two dimensions: Role in the economy and Circularity potential
• Each dimension is an aggregate of a number of metrics chosen by the user
• Metrics are either purely quantitative (e.g. employment, contribution to GVA, resource consumption) or semi-quantitative (quantities derived from a series of qualitative inputs)

Input and expertise required

Economic, environmental and other data at sector level, ideally with a historical time series. Expert input from economy and environment specialists to qualitatively assess scope for circularity.

II IMPACT QUANTIFICATION

Target outcome: To quantify the potential impact of a given circular economy opportunity at sector level, based on detailed, bottom-up estimates.

Methodology

• A bottom-up estimate is made of the value of each opportunity in one sub-sector
• The sub-sector impact is then scaled up to sector level using a top-down estimate of ‘scalability’
• A range of ‘modules’ can be employed to assess different types of opportunity

NOTE: This tool analyses one activity at a time – the user needs to run a separate analysis for each identified opportunity.

Input and expertise required

Data by sub-sector or product category for the sector assessed (will vary by type of opportunity assessed). Company interviews are required to assess and validate potential cost savings and adoption rates.
THE PLUG-AND-PLAY TOOLS IN A NUTSHELL

III BARRIER IDENTIFICATION AND POLICY PRIORITISATION

Target outcome: Assessment of key barriers to the implementation of each opportunity, and identification and scoring of potential policy options to address these barriers

Methodology

- A framework with 16 barrier types is used to identify key barriers on a 3-grade scale
- For each barrier, the user identifies potential ways to address them using policy instruments of 6 types
- The policy options are scored on their potential impact (short- and long-term) and their cost of implementation

NOTE: This tool analyses one activity at a time – the user needs to run a separate analysis for each identified opportunity

Input and expertise required:
Interviews with companies, relevant authorities and policymakers to identify and assess barriers and policy options.

ASSESSMENT SUMMARY TEMPLATE

A complementary is available which provides a template to summarise the results from the impact quantification, barrier identification and policy prioritisation exercises.

It is not a tool in itself, but as the user will likely handle several complex spreadsheets, this is a helpful way of summarising and presenting the results.

All Plug-and-play tools come with extensive instructions, guidelines and worked examples

This sheet contains charts for each sub-dimension plotting the relative contribution of each sector. This charts can be used, for example, by copying them into a presentation to provide additional background on the sector selection.

 Sector contribution to economy
 Sector contribution to employment and job creation
 Trade openness and security of supply
 Role in economy
THE TOOLS TARGET A WIDE AUDIENCE

NATION, REGION OR CITY?
The Plug-and-play tools are designed to be flexible and adaptable to the user’s context and needs. As such, they can be used at any level of government.

However, data constraints typically make it difficult to assess cities using traditional metrics. In addition, few sectors or value chains are confined to city boundaries.

WHO ELSE CAN USE THE TOOLKIT?
Companies and educators might find it useful to use the Plug-and-play tools for analysing circular economy opportunities.

• The Sector selection tool could be tuned by companies to compare business opportunities across regions/markets.

• The Impact quantification tool is designed to evaluate business opportunities on a high level, and so could be used by companies and academics.

FLEXIBILITY IN APPLYING THE PLUG-AND-PLAY TOOLS
The plug and play tools are designed to be flexible, to suit any context and starting point, and to allow for analysis of a wide variety of opportunities. The user has the option to go in-depth in the analytical work or to remain on a moderate to high level.

The tools draw on knowledge from years of research within the Ellen MacArthur Foundation. For example, the Impact Quantification tool has a database of 50+ estimated impacts from previous research, which can be used to guide further analyses.

However, the tools cannot produce meaningful results without significant user input. The more carefully researched and credible the input data, the more meaningful will be the results.

READ MORE
For more details and the other tools in the Toolkit, policy case examples, and an FAQ, please see the original report and the Toolkit website.