Circular design resources

This toolkit is for those who want to learn, apply, and contribute to bringing circular design to life.
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Within this toolkit you will find a selection of curated resources to support you in your exploration and application of circular design. You’ll find links to online learning courses, conversations with experts, workshops and methods, as well as online spaces where you can connect with other circular designers.

We have arranged this guide into four sections:

**Explore the fundamentals:** learn about the circular economy and get inspiration from leaders working in different design disciplines, biomaterials, architecture, urban planning and more.

**Apply the principles:** get to grips with the approach and get a sense of what designing for a circular economy can mean for your industry, work, or research.

**Connect with others:** exchange ideas and inspiration with your peers, and get feedback on your circular design thinking and work.

**Contribute and be part of the transition:** Do you want to contribute to the acceleration of the transition? In this section you will find different types of opportunities to be part of the global circular design movement.
Why is design essential for the circular economy?
Everything around us has been designed:

from the clothes we wear to the buildings we live and work in, to systems that deliver food and mobility.
Today most things have been designed for a linear ‘take-make-waste’ model.

In industries such as fashion and plastics packaging, products and systems are designed in such a way that >80% of material flows are destined for landfill, incineration or even leaked into natural environments.
“Why is design essential?”

Everything around us has been designed by someone.

Important decisions are made during the design stage.

Once designed, it’s hard to reverse: “We can’t unscramble an omelette”
What are you looking for?

- Exploring the fundamentals
- Applying the principles
- Connecting with others
- Contributing to & being part of the transition
Inspiration & learning

**Basic**
- Circular economy diagram
- The Learning Hub
- Case study library

**Intermediate**
- EMF online sessions
- Circular Design Guide - intro & stories

**In-depth**
- Apply for the EMF learning programme: From Linear to Circular
- EMF & other resources
- TU Delft Circular Economy MOOCs
Circular economy diagram

1 Hunting and fishing
2 Can take both post-harvest and post-consumer waste as an input

SOURCE
Ellen MacArthur Foundation
Circular economy systems diagram (February 2019)
www.ellenmacarthurfoundation.org
Drawing based on Braungart & McDonough,
Cradle to Cradle (C2C)
The Learning Hub

DISCOVER THE CIRCULAR ECONOMY
Explore our learning hub to learn more about the vision for a circular economy

WHAT IS THE CIRCULAR ECONOMY?
Learn about the three principles that are the foundation of the circular economy concept and some of the benefits of shifting away from the current, linear, economy.

FASHION AND THE CIRCULAR ECONOMY
Explore the vision for a fashion industry built on the principles of the circular economy and the opportunities that exist to shift the current industry towards this vision.

CIRCULAR DESIGN
Examine the role of design in creating a circular economy, the four-stage circular design process and six strategies for designing circular products and services.
Recommended videos

- Re-connecting designers with materials
- Ecosystems design
- Three stories: how we apply circular design
- Co-designing a better city
- Remaking our living spaces
- Circular Design in Sub-Saharan African countries
- The magic of materials and making
- Introducing the next era of design

View more talks from DIF, the Ellen MacArthur Foundation's interactive online event series that aims to shift mindsets and inspire action towards a circular economy.
Case study library

BioPak
Closing the loop on single-use food packaging

New York City: The #WeareNext campaign
City and industry in collaboration to save clothes from landfill

Ahrend
Bringing office furniture full circle

DSM-Niaga
Redesigning medium-life bulky products from scratch

Shenzhen electric mobility policy
Developing an electric mobility system in the city

City Hall Venue: From Cradle To Cradle
Building future prosperity for citizens, the economy, and the environment

Toronto Circular Economy Procurement Implementation Plan and Framework
Creating systemic change through public purchasing power

San Francisco ‘green carpet’ requirements
Cradle to cradle carpets for city buildings

Full case study library
‘From Linear To Circular’ programme

From Linear To Circular (FLTC) is a global learning programme designed for young professionals and postgraduate students from different disciplines.

Are you at the start of your career, a postgraduate student or an emerging innovator? Do you want to stay ahead of the curve, be a changemaker, and bring greater purpose to your working ventures?

Whether you are an educated designer, policy maker, architect, economist, business person or engineer, you can take part of the programme. Click on the link to find out more about it and the dates for the next edition.

What have some of the participants said about it?

“I felt empowered and ready to take my work in the CE to another level.”
Participant working in digital transformation consultancy

“It gave me the final conviction to start a reusable packaging business.”
Founder of Bumerang

“My voice was more empowered to influence groups of the private and public sectors to bet on long term strategies for a circular economy transition in our island.”
Participant working in digital transformation consultancy

Read or listen to the stories of some FLTC participants that became EMF Pioneers after the programme
TU Delft Circular Economy MOOCs

Circular economy: An introduction
Engineering design for a circular economy
Sustainable packaging in a circular economy
Circular economy for a sustainable built environment
Practising circular design

Resources

**EMF Design:**
Circular Design Guide

**EMF Fashion:**
Jeans Redesign

**EMF Cities:**
Suite of resources

**EMF Plastics:**
Reuse book

**EMF Food**
Circular Design Challenge

Workshops

Circular Design Strategies

Product journey mapping

Materials journey mapping

Smart material choices
The Circular Design Guide website

On the Circular Design Guide website, you will find methods and resources to help create more elegant, effective, creative solutions for the circular economy.
Workshops: Circular design strategies

Circular Design Strategies workshop
cards, sheets and facilitator notes

Available here
Workshops: Product journey mapping

Circularity means rethinking a linear use cycle of your product or service with a beginning, middle, and end. If a product or service is truly circular, it will never actually have an end to its life, but continuously take a new form. Mapping this journey will ensure that your product stays in a useful state for as long as possible and adds value at every stage.

Product Journey Mapping sheets and facilitator notes

Available here
Workshops: Safe & Circular Materials Journey Mapping

Safe & Circular Materials Journey Mapping

EXPLORE
MAP THE SYSTEM, WHAT DO YOU NEED TO MAKE AND USE THE PRODUCT? WHAT HAPPENS WITH IT AFTER ITS USE PHASE?

IDENTIFY
WHICH AREAS REQUIRE CHEMICALS OF CONCERN AND WHY IS ANY INFORMATION MISSING ON THE MAP?

APPROACH
WHICH APPROACH IS MOST SUITABLE FOR EACH AREA: TRANSPARENCY, CHEMICAL MANAGEMENT OR INNOVATION? WHAT IS THE ROLE OF DESIGNER?

Available here

Safe & Circular Materials Journey Mapping sheets and facilitator notes
Workshops: Smart material choices

Safe & Circular Materials Journey Mapping sheets and facilitator notes

Available here
The Jeans Redesign sets out guidelines which set minimum requirements on garment durability, material health, recyclability, and traceability. The Guidelines are based on the principles of a circular economy and will work to ensure jeans last longer, can easily be recycled, and are made in a way that is better for the environment and the health of garment workers.
Cities: Designing buildings, mobility, and products for the circular economy

The Circular Economy in Cities is a suite of resources for urban policymakers and change-makers. Circular Economy in Cities focuses on opportunities in three key urban systems - buildings, mobility, and products - and looks at how city governments can enable a circular economy transition.

Designing for reuse and circulation of products and materials

Designing buildings for adaptable use, durability, and positive impact

Designing mobility assets for components and material recirculation

Project Guide
Plastics: Reuse - Rethinking Packaging

While improving recycling is crucial, we cannot recycle our way out of the plastic pollution. Wherever relevant, reuse business models should be explored, reducing the need for single-use plastic packaging.

Innovative reuse models can unlock significant benefits, enabled by digital technologies and shifting user preferences, including: delivering a superior user experience, customising products to individual needs, gathering user insights, building brand loyalty, optimising operations, and saving costs.

Find out more in our Reuse book, which provides a framework to understand reuse, identifies six major benefits, and maps 69 examples from around the world.

Watch: REUSE - how to rethink and innovate plastic packaging
Whether you represent a business or public organisation, or are simply a concerned individual, the Ellen MacArthur Foundation Food Stories collection is bound to inspire you.

In it, you can find examples from all over the world of restaurants, city halls, national governments, and other actors working to promote a circular economy for food for the benefit of people and the planet.

From setting up effective organic collection systems to re-designing restaurant menus, our Food Stories collection illustrates what is possible when we holistically rethink our food system.
Circular Design Challenge

Getting into the routine of reimagining how products and services can look in a circular economy can be a great starting point when becoming a circular designer.

The Circular Design Challenge is a project that aims to encourage people to put their circular economy knowledge into practice by releasing a weekly circular design challenge. Do you dare to try?
Connect with like-minded people

Stay in touch

Register your interest

Social Media

Circular Design Guide
LinkedIn group

#circulardesigners
Instagram campaign
Stay in touch & be part of it!

Circular Design Guide LinkedIn group

THE
CIRCULAR
DESIGN
GUIDE

Register your Interest
Share your story and find inspiring designs

Are you a designer, student or start-up applying systems thinking and circular economy mindsets? We want to showcase pioneers that are pushing the boundaries of circular design. Find circular designers from different geographies and industries.
How can I contribute?

I have run a circular design workshop and would like to share it
Inspire others by sharing the story and the takeaways/learnings with our community on LinkedIn

I want to run a circular design activity with my team
Find workshops on the Circular Design Guide. Feel free to ask tips on the CDG community

I want to share more in depth the circular design project/processes I’m working on
Apply to speak at the EMF live online events

I want to join a community of designers where to practise circular design
Check out openIDEO communities

I am multilingual and would like to contribute with bringing circular design to my country/community
Help make our live content accessible for everyone by translating it into other languages

I want to become an EMF circular economy Pioneer
Apply to the From Linear to Circular programme
I would like to use my Social Media channels to help spread the word

Excellent! Share your story.

These are our handles:

Twitter: @circularreconomy
Instagram: @ellenmacarthurfoundation

These are the hashtags we use:
#circularreconomy #circulardesign #circulardesigners