



**ELLEN MACARTHUR
FOUNDATION**

Circular economy – a competitive edge

Slovenia, chamber of commerce

January 15, 2016

Global Partners of the
Ellen MacArthur Foundation:



AGENDA

- Circular economy – A competitive edge
- Business case studies
- Introduction to the Ellen MacArthur Foundation



A GOOD BUSINESS CASE?



The average European car is parked **92%** of the time



31% of food is wasted along the value chain



The average office is unused **50-65%** of the time, even during working hours

SOURCE: Ellen MacArthur Foundation, SUN, McKinsey Center for Business and Environment - Growth Within: a circular economy vision for Europe



THE LINEAR ECONOMY: “TAKE – MAKE – DISPOSE”



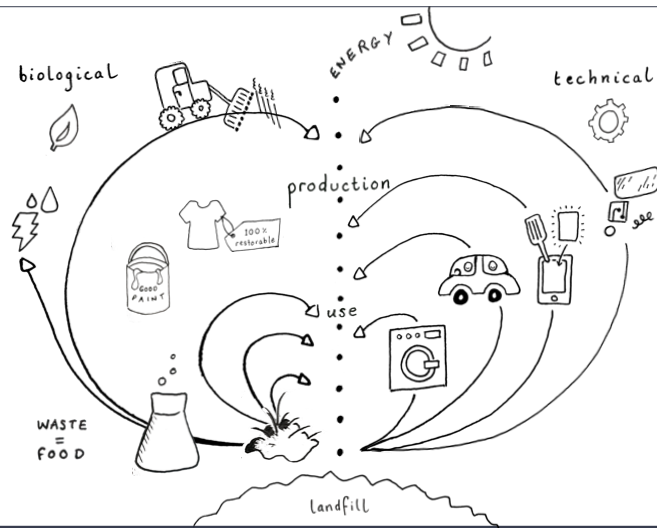
New products = new raw materials

Recycling at “end-of-pipe”

Waste levels are chronically high



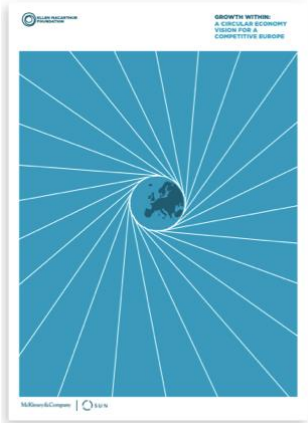
THE CIRCULAR ECONOMY: RESTORATIVE
AND REGENERATIVE BY DESIGN



SOURCE: Ellen MacArthur Foundation; drawing from Braungart & McDonough Cradle to Cradle (C2C)



‘GROWTH WITHIN’: A CIRCULAR ECONOMY VISION
FOR A COMPETITIVE EUROPE



SOURCE: Ellen MacArthur Foundation, SUN, McKinsey Center for Business and Environment - Growth Within: a circular economy vision for Europe



A CIRCULAR ECONOMY SCENARIO FOR EUROPE

Scenario description



- **Multi-modal mobility**
- Electric, on-demand, **automated cars as flexible last-mile solution**
- **“Mobility-as-a-service”**
- Design optimised for **durability, remanufacturing, easy maintenance**



- Higher **production efficiency** and **waste reduction**
- Food **systems that close the nutrient loops** and create a market for rehabilitating degraded stocks
- Better access to **high-quality food**

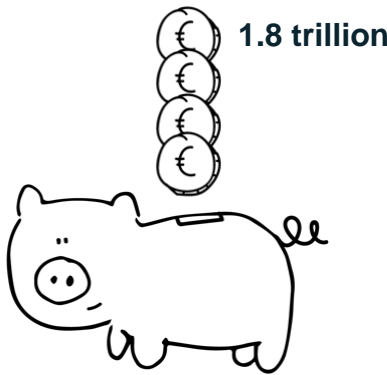


- More **affordable, durable, modular and shareable buildings**
- **Unlocking high-value land in urban areas**, reducing land-take rate and protect land from degradation and fragmentation

SOURCE: Ellen MacArthur Foundation, SUN, McKinsey Center for Business and Environment - Growth Within: a circular economy vision for Europe

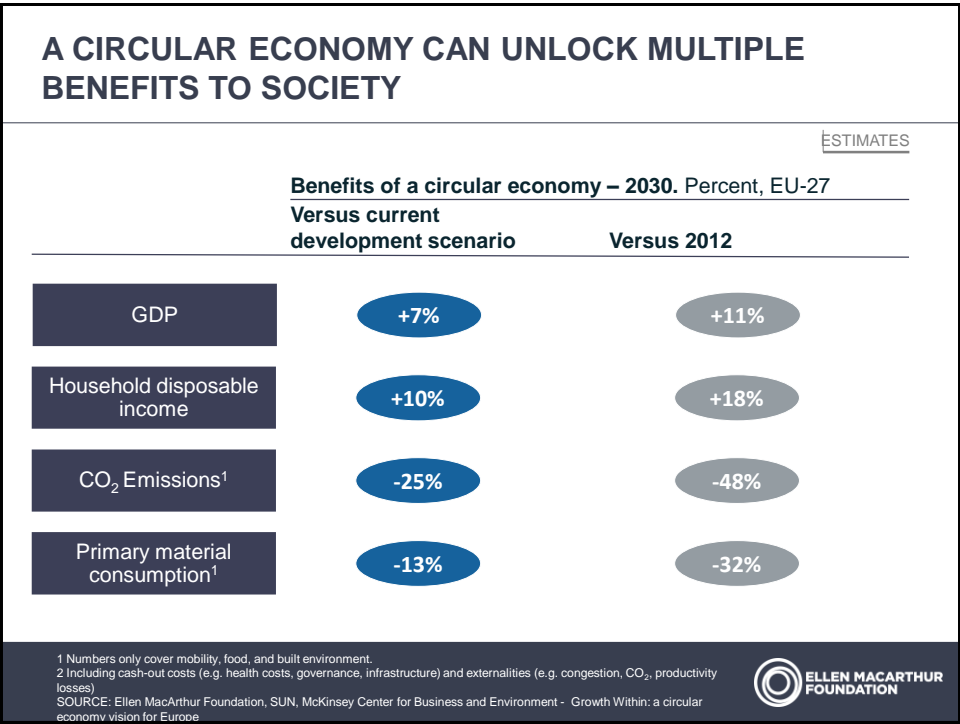
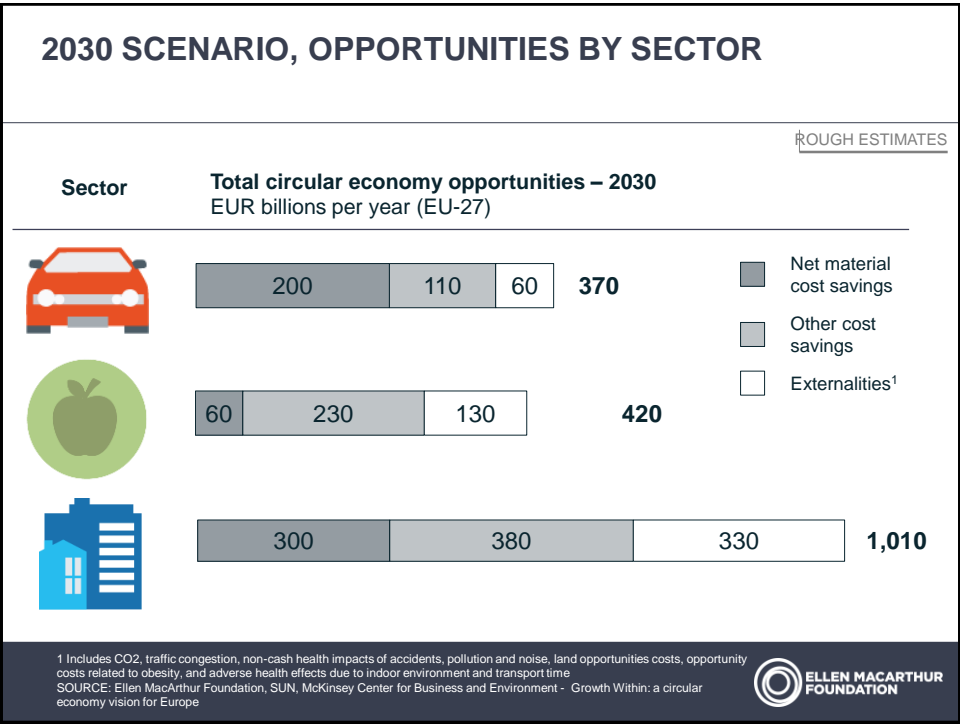


A SIGNIFICANT SAVINGS OPPORTUNITY









SOURCE: Ellen MacArthur Foundation, SUN, McKinsey Center for Business and Environment - Growth Within: a circular economy vision for Europe





WHAT BUSINESSES CAN DO –
ReSOLVE FRAMEWORK

REgenerate 	Regenerate and restore natural capital
Share 	Maximise product utilisation
Optimise 	Optimise system performance
Loop 	Keep components and materials in closed loops
Virtualise 	Deliver utility virtually
Exchange 	Select resource input wisely

SOURCE: Ellen MacArthur Foundation, SUN, McKinsey Center for Business and Environment - Growth Within: a circular economy vision for Europe



UNLOCKING CIRCULAR ECONOMY
BUSINESS POTENTIAL - EXAMPLES

REgenerate 	     
Share 	    
Optimise 	     
Loop 	      
Virtualise 	      
Exchange 	    

SOURCE: Ellen MacArthur Foundation, SUN, McKinsey Center for Business and Environment - Growth Within: a circular economy vision for Europe; company websites



REGENERATE: SUNPOWER



CC BY 2.0 Michael Mazendargb / Flickr

Solar power from C2C-certified panels

2nd Largest solar panel manufacturer in the US

4.7 gigawatts of installed solar capacity

Cradle2Cradle design

Sunpower leases solar panels and retains ownership of the material

SOURCE: Company website



SHARE: FLOOW2



Extra turnover from underutilised assets

B2B marketplace that enables sharing of overcapacity of equipment and personnel

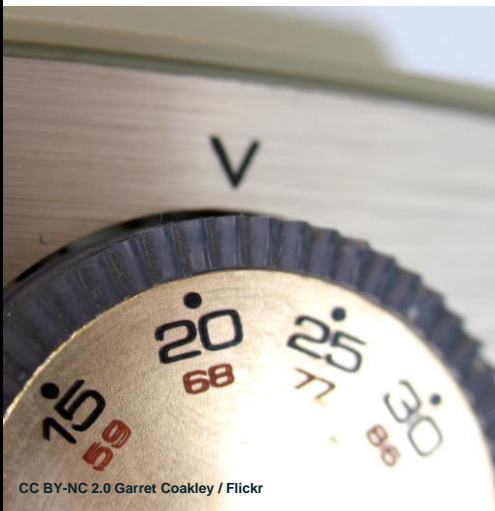
Creates extra revenue for the company with spare capacity

Members pay Floow2 for the ability to advertise on the marketplace

SOURCE: Company website



OPTIMISE: HONEYWELL



Smart sensors for smarter heating

Using smart sensors which monitor temperature, light, ventilation, etc, the building can be heated optimally

This yields:
20-40% building energy reduction
8-9% operating cost reduction

SOURCE: Company website



LOOP: RENAULT



Remanufacturing: win-win

Remanufacturing plant near Paris

Produces car components at 30-50% of cost while passing the same quality tests

Remanufacturing process uses:
80% less energy
88% less water
92% less chemical products

SOURCE: Company website



VIRTUALISE: AMAZON



CC BY 2.0 Mike Seyfang / Flickr

Virtualising the retail process

Amazon saves costs of having physical stores

Effective logistics system allows for fast delivery

Revenue of 89 billion USD in 2014:
Passed Walmart as most valuable US retailer in 2015

SOURCE: Company website



EXCHANGE: PHILIPS



CC BY-NC Scurzuzu / Flickr

Pay per lux

Philips allows customers to purchase light as a service

Creates a continuous relationship with the user

Provides incentives for Philips to offer durable, most energy-efficient solution possible

SOURCE: Company website




THE ELLEN MACARTHUR FOUNDATION

The Ellen MacArthur Foundation works across four areas, with the aim of accelerating the transition towards a circular economy:

1

INSIGHT & ANALYSIS


Providing robust evidence about the benefits of the circular economy transition



2

EDUCATION & TRAINING


Inspiring learners to re-think the future through the circular economy framework



3

BUSINESS & GOVERNMENT


Catalysing circular activities across the global economy




4

COMMUNICATIONS & PUBLISHING

Developing the conceptual framework and celebrating best practice





Q&A



