ELLEN MACARTHUR FOUNDATION
Rethink the future
‘Absent almost entirely from our conversations in 2010, the concept of the circular economy has taken quick hold among CEOs focused on innovation and the potential of new business models. Already, a third of CEOs in this year’s survey report that they are actively seeking to employ circular economy models.’
$3.2 \text{ trillion value}

$2.7 \text{ trillion lost as waste}$
McKinsey Commodity Price Index (years 1999 - 2001 = 100)\(^1\)

1 Based on arithmetic average of 4 commodity subindices: food, nonfood agricultural items, metals, and energy; 2011 prices based on average of first 8 months of 2011
Production concentration of critical raw mineral materials

- Canada: Cobalt
- Russia: Platinum Group Metals
- USA: Beryllium
- Mexico: Fluorspar
- Brazil: Niobium, Tantalum
- South Africa: Platinum Group Metals
- Democratic Republic of Congo: Cobalt, Tantalum
- Rwanda: Tantalum
- India: Graphite
- Japan: Indium
- China: Antimony, Beryllium, Fluorspar, Gallium, Graphite, Germanium, Indium, Magnesium, Rare earths, Tungsten
Cheap materials
Cheap energy
Cheap labour
Plentiful credit
CIRCULAR ECONOMY
RESTORATIVE
BY DESIGN
ENERGY FROM RENEWABLE SOURCES

MAKE -> CONSUME

ENRICH

BIOLOGICAL MATERIALS

MAKE -> USE

RETURN

TECHNICAL MATERIALS

Cu Zn
FIGURE 6 The circular economy—an industrial system that is restorative by design

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

Source: Ellen MacArthur Foundation circular economy team
The power of the inner circle
The power of the circling longer
The power of the pure circles
The power of cascades
Use → Repair → Remanufacture
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Apparel and performance models

Comparison of online retail and online rental profit
USD operating profit per rental customer

Cost Savings | Increased cost

| Conventional retail | 1,010 | 353 | 424 | 0 | 0 | 50 | 182 |
| Online rental model | 1,010 | 216 | 131 | 145 | 153 | 151 | 213 |

1. Revenue
2. COGS
3. Delivery
4. Laundry

Store operations and SG&A
Warehousing & fulfilment
Profit
A circular economy would not just ‘buy time’

Effect of circular system on primary material demand in widget market
Volume of annual material input required

Effect of circular system on material stock and landfills
Cumulative volume of material used

Virgin material substituted by circular material
Enablers

Material and energy prices
Economic analysis
Multilateral support
Consumer preference
Modern technology
Procurement

Public procurement not a quick lever
Education of procurement officers
Systems view is vital
Need to develop guidelines on smart public procurement
  • Allow for performance-based contracts
  • ‘recycled content’: a problem?
  • Legislation in favour of ‘waste=food’
C2C site near Schiphol Airport

www.c2c-centre.com/project/park-2020
Circular Economy 100

THE CE100 PROGRAMME BRINGS TOGETHER KEY STAKEHOLDERS WITH ENABLING INTER-RELATIONSHIPS

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PROVIDE emerging technologies & solutions

CORPORATIONS

EMERGING INNOVATORS

REGIONS

HELP UNDERSTAND BUSINESS NEEDS

NEW MARKETS & ENABLING POLICY

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Circular Economy 100

THE FOUNDATION SUPPORTS THE CE100 MEMBERS ACCELERATE NEW COMMERCIAL OPPORTUNITIES THROUGH THREE CORE OFFERINGS

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