

Circular Economy – ultimately selling functional services and performance rather than goods

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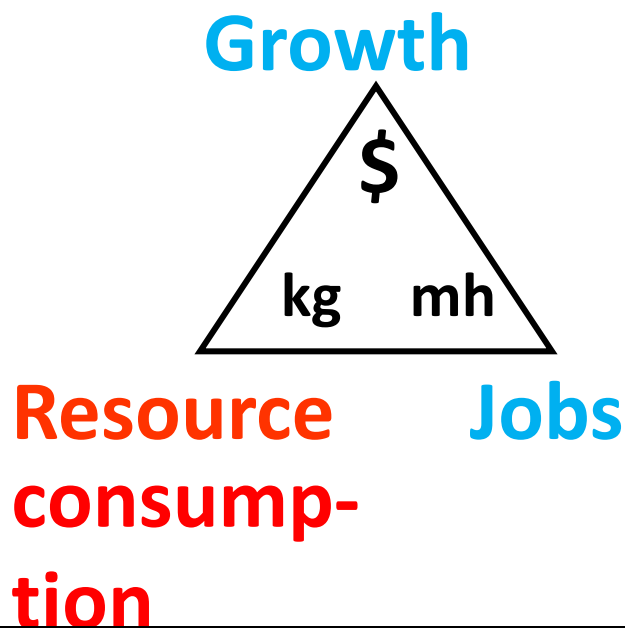
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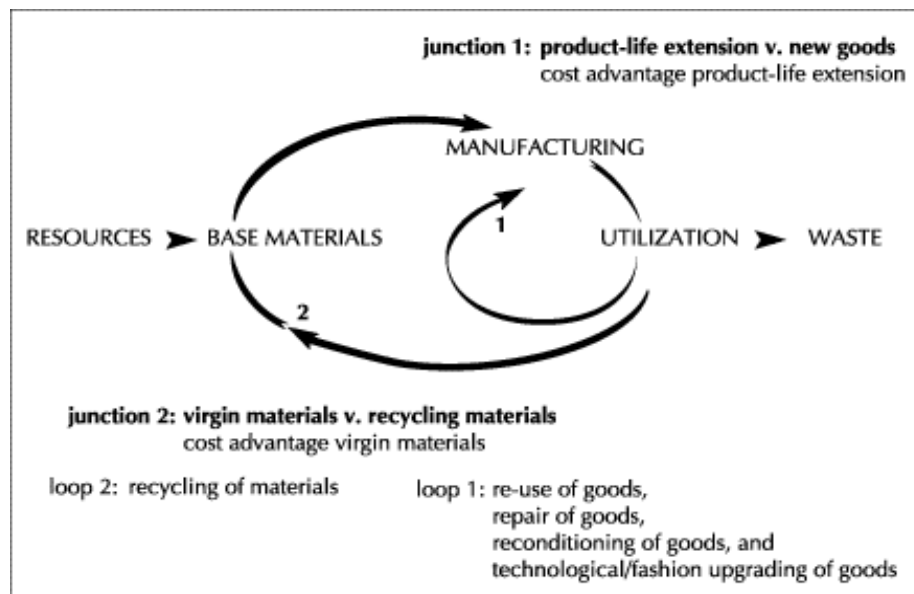
THE PRODUCT-LIFE INSTITUTE, GENEVA

Three parts of the puzzle

1 Objectives



2 Business model C.E.



3 Sustainable taxation – creating incentives

A circular economy is about ECONOMICS

- Reuse, repair and remanufacturing are cheaper than buying new goods !
- Greatly reduced resource consumption, greatly reduced waste volumes and environmental impairment are a RESULT.
- More regional jobs are a RESULT.
- Greatly reduced GHG emissions are a RESULT.

Five key impacts of CE on economy and society

Small loops

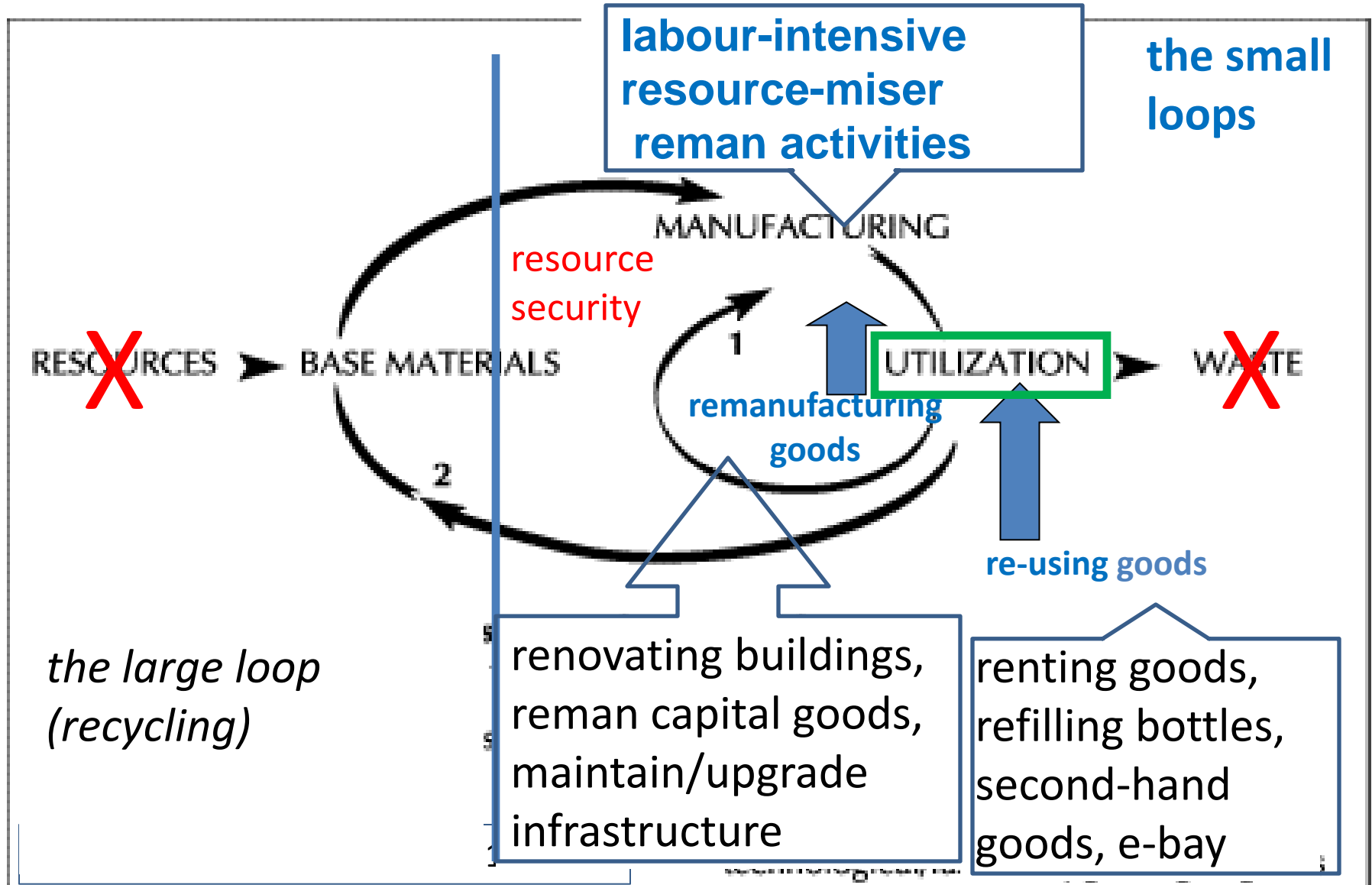
- 1 **use human labour** instead of energy and materials, at lower costs,
- 2 **create local jobs** of all qualifications,
- 3 **promote caring**: maintaining stock is based on maintaining existing values and qualities,
- 4 **reduce resource consumption, waste** and environmental impairment,
- 5 **create resource security** (national and corporate)

Local is beautiful in a C.E.
the smaller the loops, the more sustainable

The principles of a C.E.:

- **The smaller** the loop (geographically and as a loop) **the more profitable and resource efficient**
- **Stock optimisation** replaces flow optimisation (except for goods with innovative technology, destructions), bathtub calculation: **utilisation value** replaces exchange value, **maintaining wealth** 'completes' value added
- Loops have **no beginning and no end**
- **Slow loop speeds** are crucial for high material efficiency (coke cans, reversed accumulated interests)

Economics of the Circular Economy to manage stocks locally, not flows globally, **today**



The quality angle of a C.E.

The circular economy is

- **regional**, meaning less transport volumes and shorter distances in the processing chain,
- more **labour-intensive** than manufacturing because economies of scale are limited,
- a **high-quality** world: Stradivari instruments and expensive watches do not live forever by design, but through periodic remanufacturing,
- the **knowledge and know-how** of past technologies are necessary for retrofitting infrastructure and equipment (i.e. **employing silver workers**)

a C.E. uses and trains the highest quality resource

Work—human labour

- Is the most adaptable, innovative but also the most vulnerable of all resources,
- Has a major qualitative component (capabilities, satisfaction, caring)
- Is the only resource with such learning capabilities as creativity and innovation
- BUT: human capabilities degrade if not used and continuously educated – continued employment and education are key

The small loops of a C.E. promote **caring** which is key to any stock management

- Stock management involves caring
 - **preserving manufactured capital** (buildings, infrastructure, equipment, goods) preserves the embedded energy, water, GHG emissions,
 - **fostering people's quality of life** (skills, education and health services, knowledge),
 - **maintaining culture and cultural heritage capital** (incl. technology), museums,
 - **making best use of natural capital** (e.g. producing bio food from organic agriculture, wooden furniture, leather shoes, wool textiles)

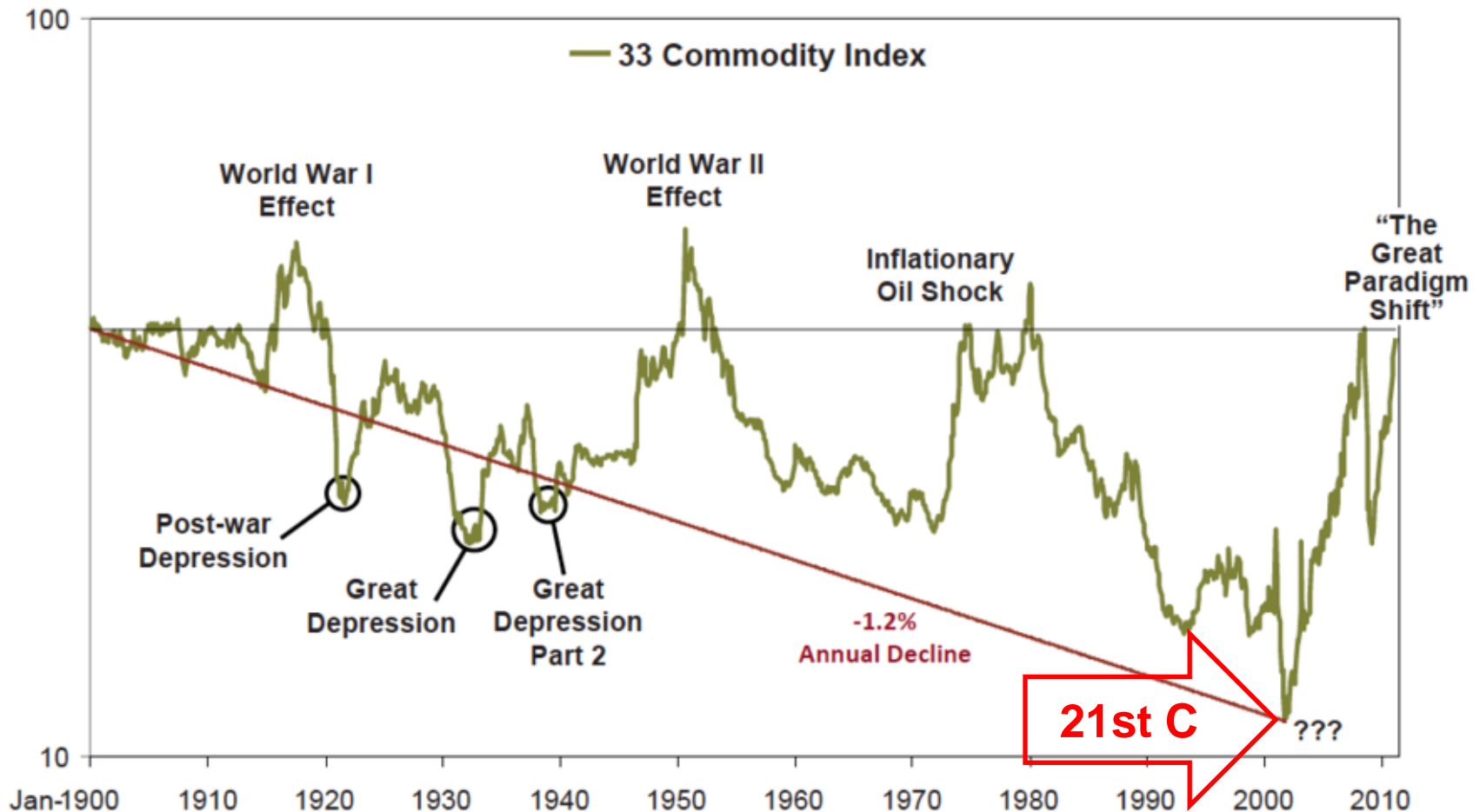
The environmental impairment angle

The small loops of a C.E. promote a circular regional economy instead of a linear global one, energy- and material-wise:

- **transport distances** of reuse and reman are a fraction of those in manufacturing chains,
- reuse and reman activities need **less energy** than manufacturing processes (produce less CO₂),
- reuse and reman activities **use a fraction of resources** of manufacturing the same good,
- **REE** in nanotechnology applications might only be recovered by reusing the components.

The shift from sinking to rising resource prices

GMO Commodity Index: The Great Paradigm Shift



Note: The GMO commodity index is an index comprised of the following 33 commodities, equally weighted at initiation: aluminum, coal, coconut oil, coffee, copper, corn, cotton, diammonium phosphate, flaxseed, gold, iron ore, jute, lard, lead, natural gas, nickel, oil, palladium, palm oil, pepper, platinum, plywood, rubber, silver, sorghum, soybeans, sugar, tin, tobacco, uranium, wheat, wool, zinc.

'Paradigm shift' of the Millennium

- Rising commodity prices indicate that continued ownership means future profits and a higher resource security

**The goods of today are the
resources of tomorrow at the
resource prices of yesterday**

Sustainable
taxation is a
booster to

increase:
resource
security,
and jobs

prevent
GHG
emissions

**SUSTAINABLE
TAXATION**

RESOURCE SECURITY

RESOURCE PRICE
PARADIGM SHIFT

RESOURCE
SECURITY
national and
corporate

**JOB
CREATION**

UNDER- AND
UNEMPLOYMENT

REGIONAL
JOB CREATION

CIRCULAR
ECONOMY

PREVENTION
OF CO₂ / GHG
EMISSIONS

GHG EMISSION REDUCTION

GLOBAL CLIMATE
CHANGE

The art of incentives

If you want to build ships, do not assemble men to procure timber, to define tasks and delegate work, but teach people the longing for the sea

“Créer la pente vers la mer”

Antoine de Saint-Exupéry, Citadel

The Performance Economy

Second Edition

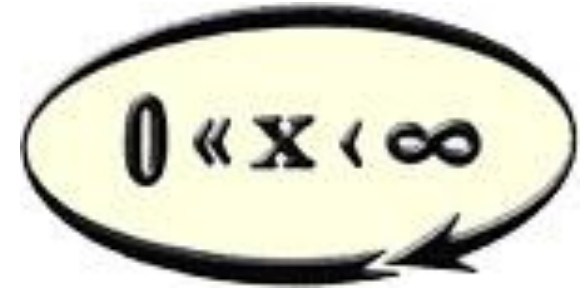
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Where to find more information:

The Performance Economy
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Thank you for your attention

