

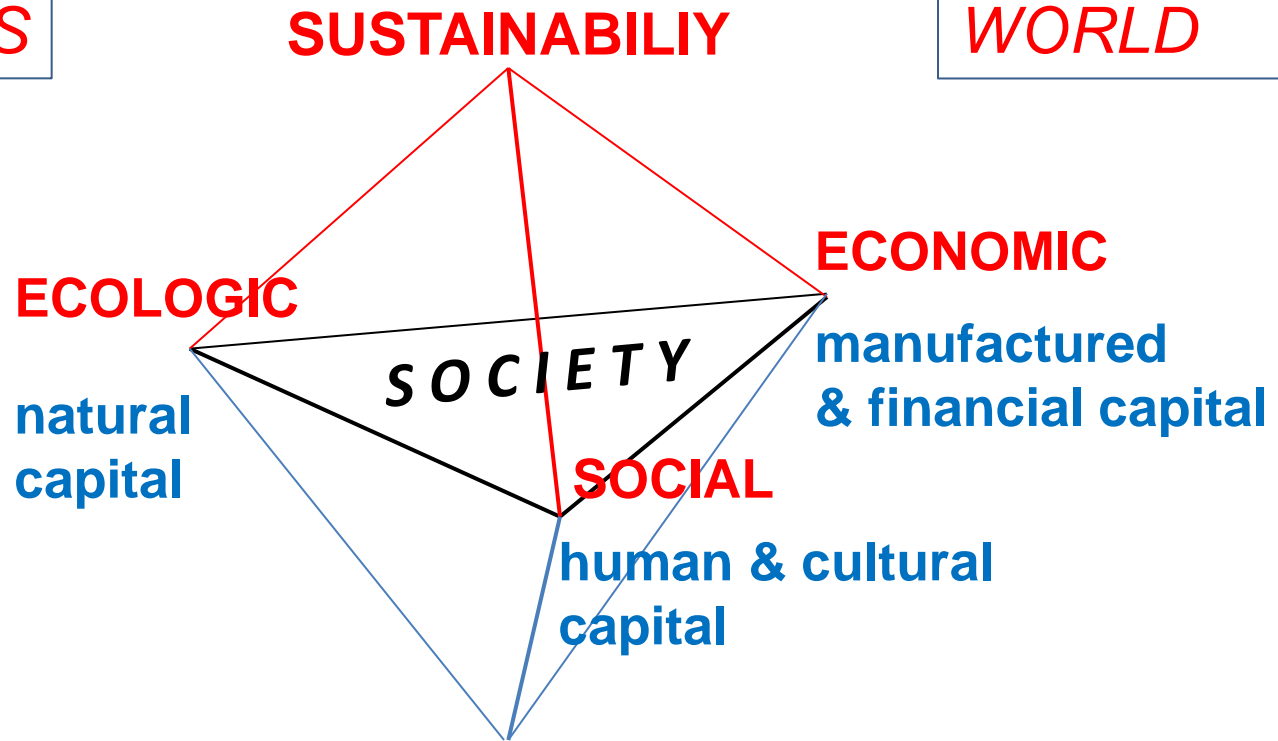
EEB 2016 conference
an introduction to the circular economy
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**OBJECTIF:
HAPPINESS**

**QUALITATIVE
WORLD**



**OBJECTIF:
MANAGING
CAPITALS**

**CIRCULAR
ECONOMY**

**PHYSICAL
WORLD**

SITUATING SOCIETY, SUSTAINABILITY AND CIRCULAR ECONOMY

Objective: ***Celebrating Christmas***

and building a circular economy together:

- preventing waste (*all waste is man-made*)
- maintaining value
- managing resource stocks

- *Let us look at Christmas trees*



Waste management solution : incineration.

- small labour input,
- economic value lost,
- resources lost,
- some waste produced (ashes and heat)

If burnt in a co-gen heat and power plant, some energy may be recovered.



Value preservation solution: reuse of goods and materials

Christmas tree dismantled for 'reuse'

- labour intensive,
- highest value preservation,
- zero waste, high resource security.

whose decision? whose investment?

whose liability? whose risk? whose profit?



Sharing economy



rent-a-tree
serial
economy

Photo Rent-a-Christmas-tree San Francisco

Sharing society

A photograph of a winter night scene. A group of people is walking through a snowy forest. The trees are covered in snow and illuminated by warm, golden lights, creating a magical atmosphere. The people are silhouetted against the bright lights, and some are holding up their phones to capture the scene. The overall mood is cozy and festive.

sharing the
· event,
· trees,
· candles,
· people,
· emotions,
· music

Photo cvjm hochdorf.de

Who
takes the
decision?



The Circular Economy is local, low key



Com ports, ships, trains



Logistics and Shopping Centers



little global distribution logistics
little packaging, little publicity

Warehouse on wheels, trucks at the Brenner



Delivery drohnes ?

Societal benefits of the Circular Economy

(macro-economic) in comparison to the present economy

I/O Study by Skanberg-Wijkman 2016, France (7 countries)

	circular scenario	energy efficiency	material	combined scenario
reduced GHG	— 50,1%	— 28%	— 5%	— 66%
additional jobs	+ 100'000	+ 200'000	+>300'000	+>500'000
impact on trade balance	+ 0.4% of GDP	+ 0.4% of GDP	+ 0,2% of GDP	+ 0,25% of GDP

Source: <http://www.clubofrome.org/>

Societal benefits of the Circular Economy (micro-eco):
 product-life extension is a strategy to create
**local jobs, substitute manpower for energy
 & material and prevent waste**

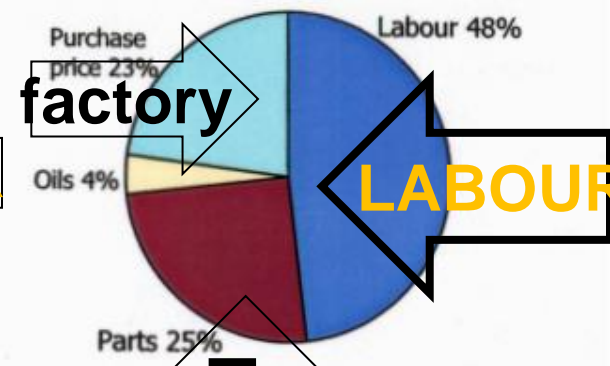
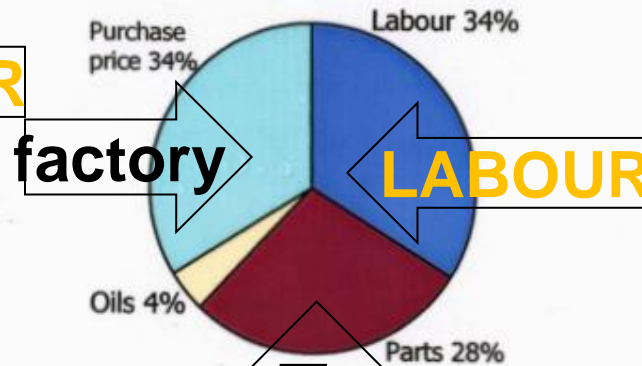
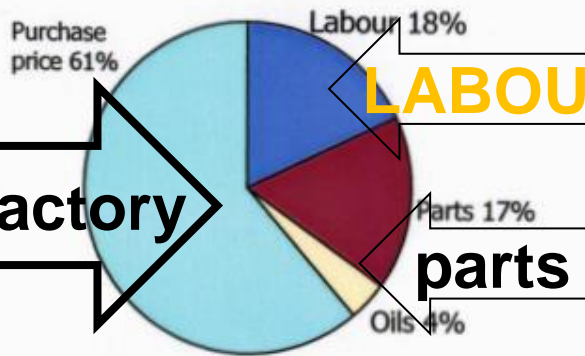
**Analysis of the running costs of a 30 year old
 automobile: Toyota Corona Mk II 1969**



10 years

20 years

30 years





Public procurement

Cheap & green: ICE1 Redesign

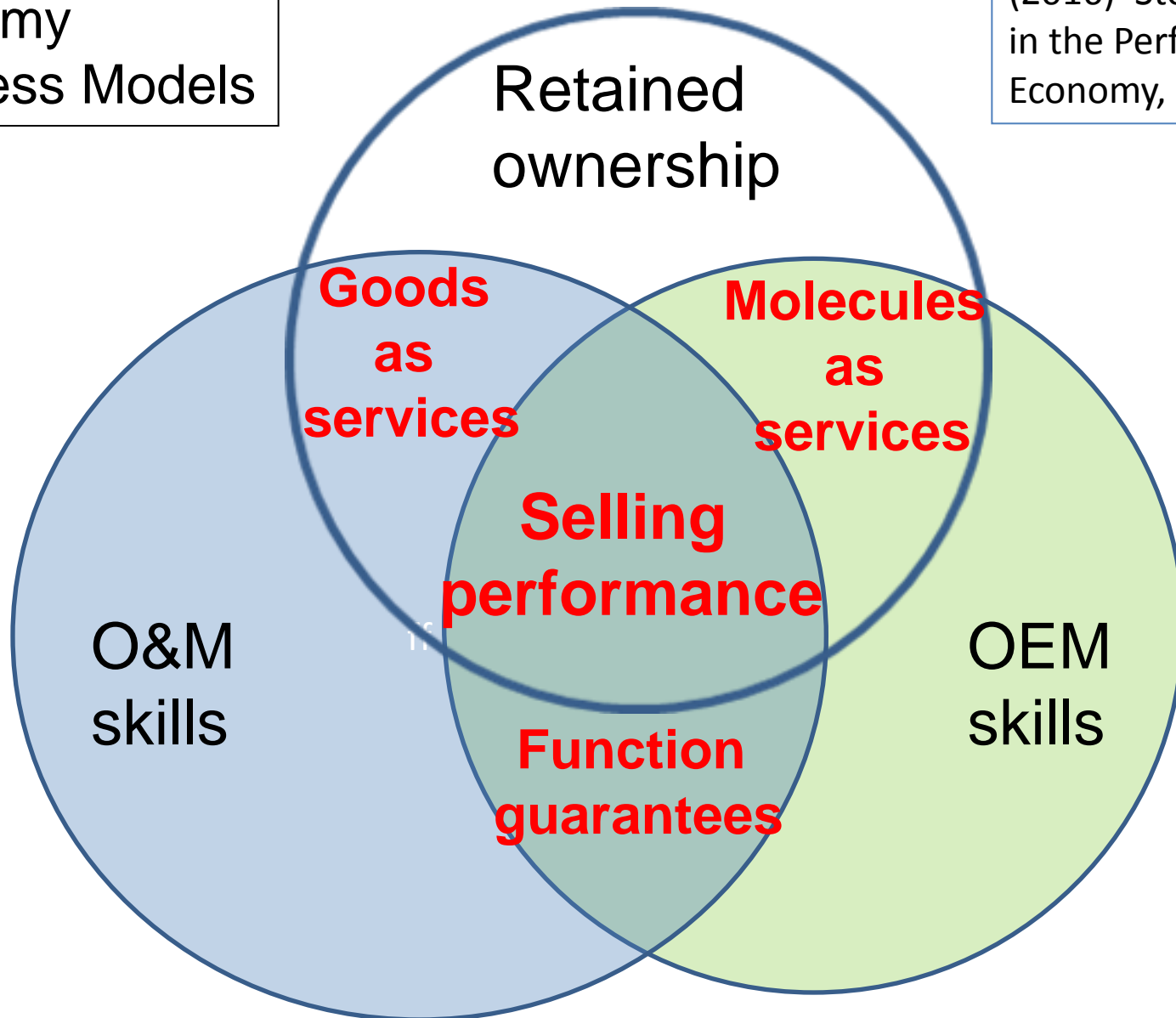
In 1995, the 59 trains of German Rail had been in service for 15 years, covering 15 million km each.

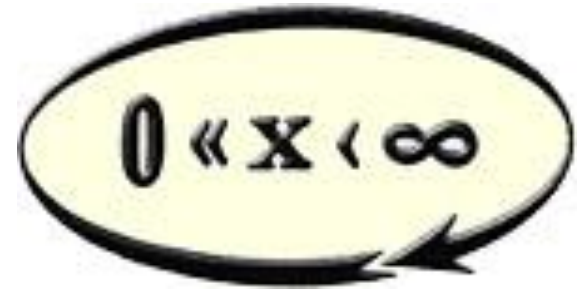
- Redesign costs were **€ 3 million per train**, versus **€ 25 million** for a similar new train.
- Redesign **preserved 80% of resources** -- 16'500 tons of steel, 1180 tons of copper -- **prevented 35'000 tons of CO₂ emissions & 500'000 tons of mining waste per train.**

The Redesign included a technological upgrading of the rolling stock, and allowed to add more seats.

Performance
Economy
Business Models

Source: Stahel and Clift
(2016) Stocks and Flows
in the Performance
Economy, Springer





Thank you for listening

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