

# The Social/Ethical Dimension of the BioBased Economy

**ESBF presentation, 7-9-23, Vienna**

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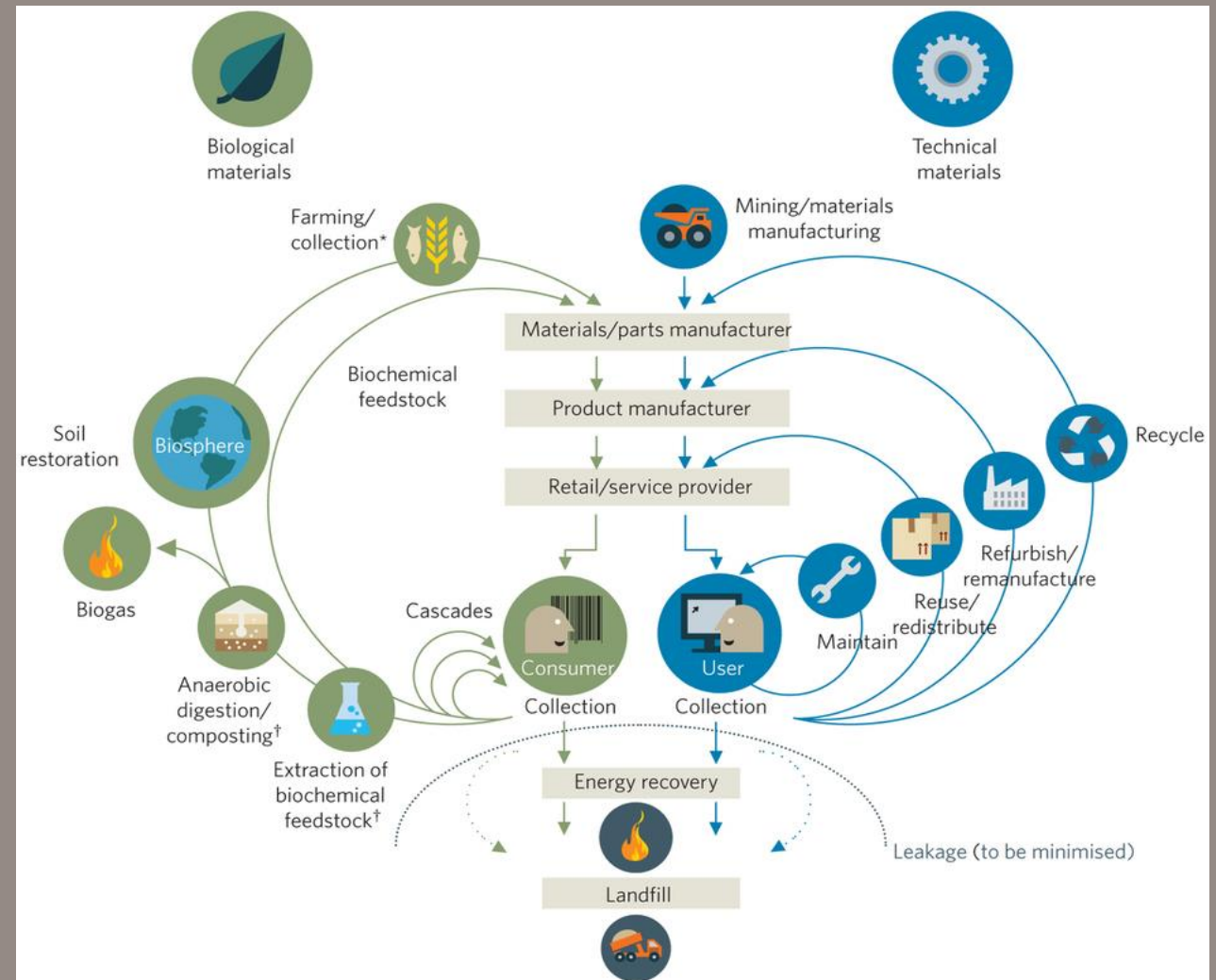
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# 1. The *Ideal* of a Biobased Economy

**To *Base* (human) Economy upon *Bio*-logical principles**



Ellen MacArthur Foundation – adapted from the Cradle to Cradle Design Protocol by Braungart & McDonough (2014)

# 1.A Life Cycles: Natural 'economies'

'Eco' from Greek  
'Oikos': 'house'  
or 'home'

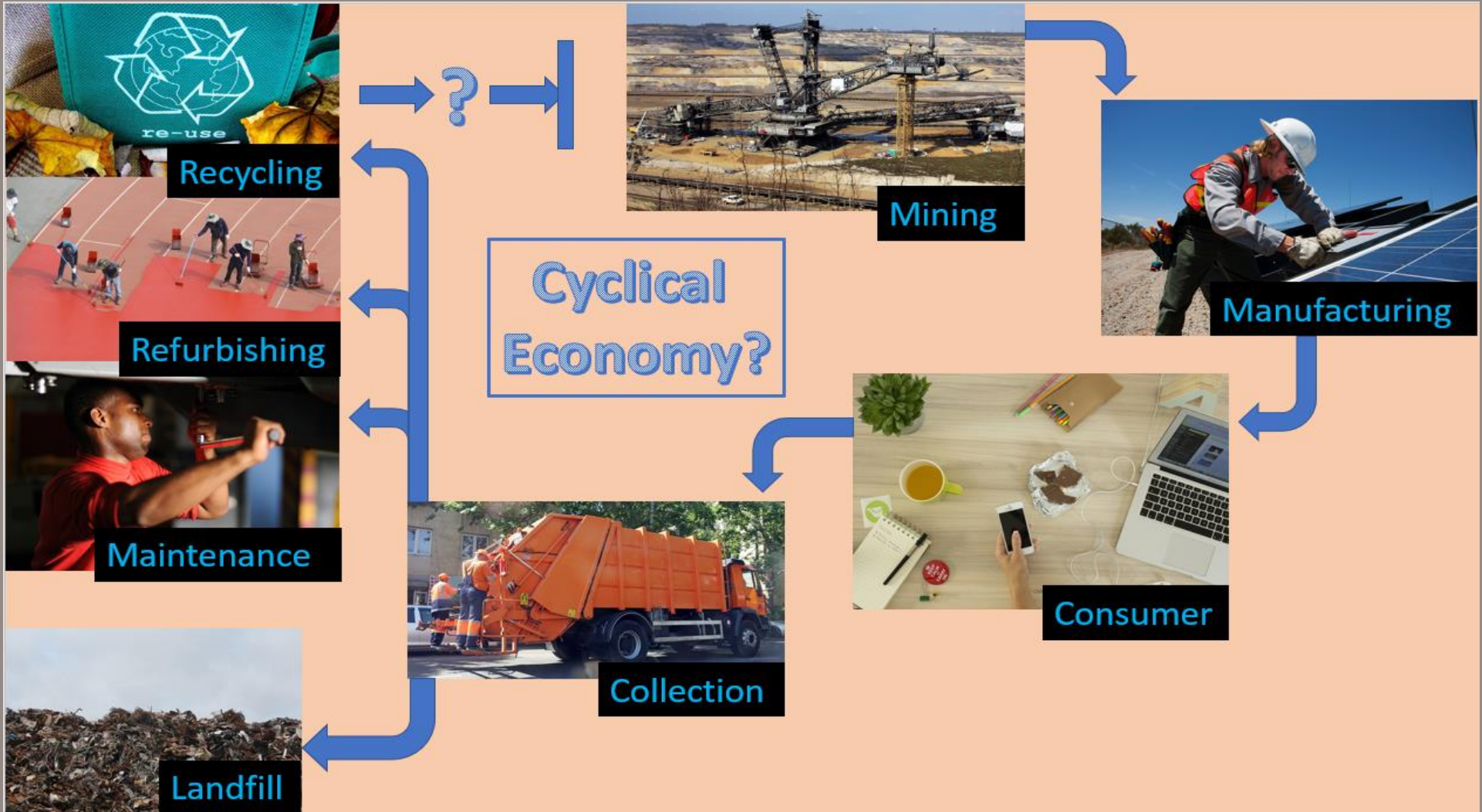


- Digestion
- Food
- Shelter
- Oxygen
- Labour
- Living being



- Natural cycles operate within Earth's carrying capacity
- Nature is full of competition, exchange, communication, manipulation, distribution, i.e. *economic processes*

# 1.B Ecology VS Economy: Practical Challenges

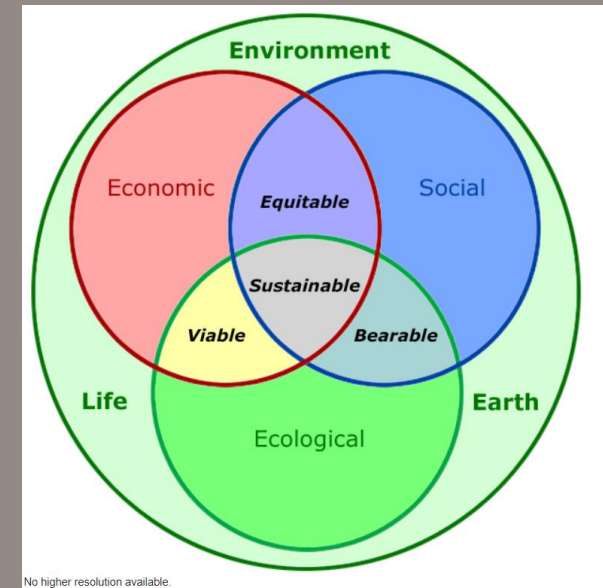


## 2. Self-evident concept of Nature in Bioeconomy-discourse

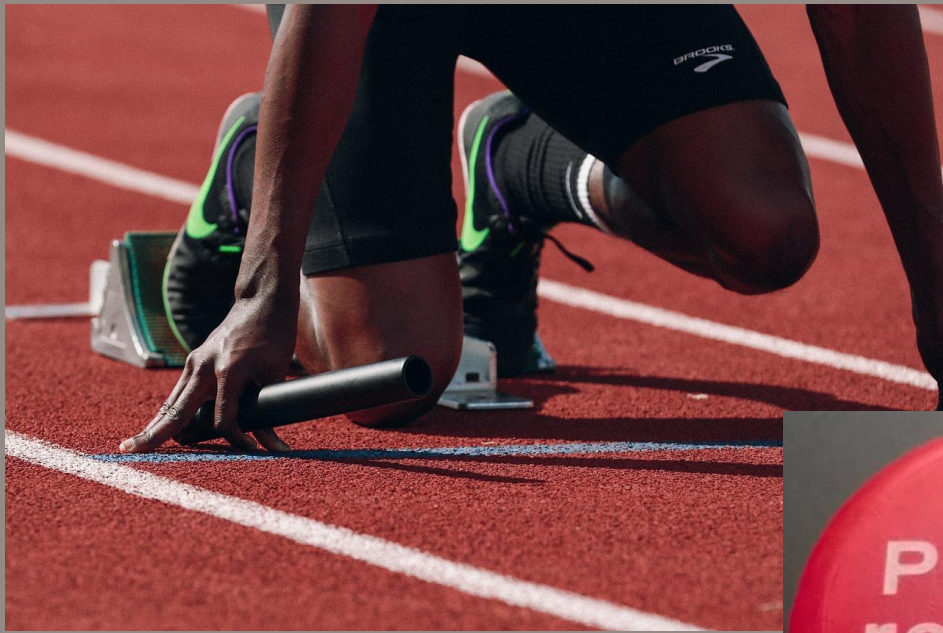
- Biosphere (nature) and economic sphere ideally overlap in CE/BBE (eco-logy/eco-nomy)

In most Types of bioeconomy:

- Analogy: Biosphere as metabolic system and BBE as metabolic economic system
- Biosphere remains seen as *resource* for technological metabolism
- Biosphere doesn't provide fundamental restrictions to economic metabolism



## 2.A Is the Ideal of CE and BBE a *Metaphor* (e.g. ancillary recycling) or an actual, normative *Guideline* (transition into future economy)?



## 2.B Contradictions in BBE-discourse

- *“To conquer this new frontier [i.e. seas and oceans], advanced knowledge on marine living resources is necessary to maximise its exploitable value in a sustainable way, optimise the response to climate change and mitigate human impact on the marine environment (...)”*
  - (European Commission, [Sustainable Growth](#), 2012a)
- Consequence for Human Condition: Reduction to *homo economicus*
- BBE as HBE (*Human-Based Economy*) ?





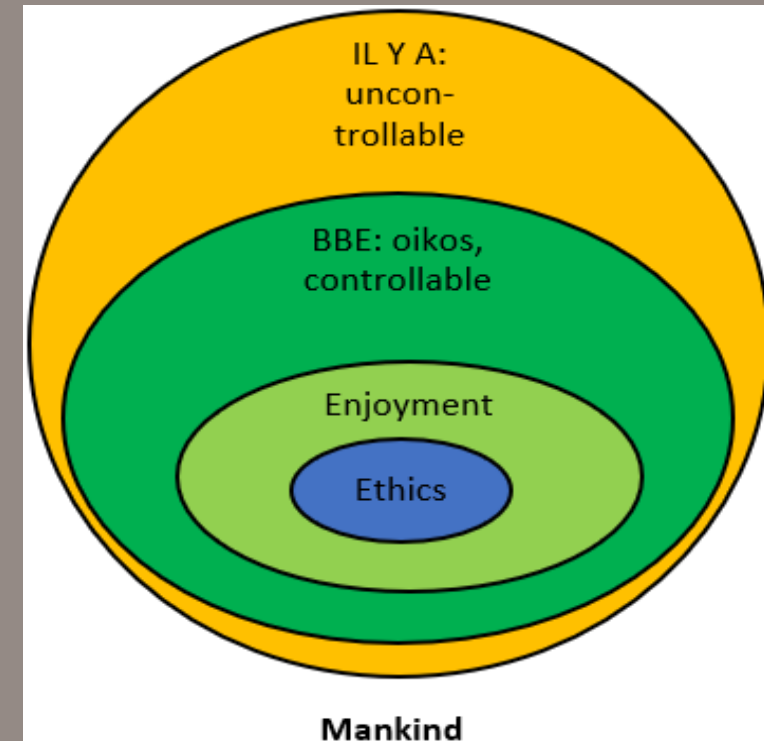
## 2.C What BE policy tends to Forget

### BBE:

- Unlimited Eco-Efficiency
- Biosphere and economic sphere coincide
- Human metabolism (technology) coincides with natural metabolism in eco-efficient Homo Economicus: not 'evil', but required for economic survival.

### Alternative:

- Limited Eco-Efficiency by:
- *Il y a: Uncontrollable nature*
- Human *Enjoyment* transcends metabolism



# 3. Role of Technology: Degrowth VS. Ecomodernism



Chemical



Industrial



Digital



## 3.A Pros and cons

<b>Degrowth theory</b>	<b>Ecomodernism</b>
<b>+ Proposes way of sustainability that could feasibly be achieved, in principle</b>	<b>- Proposes way of sustainability that is a promise rather than a certainty</b>
<b>- Is not realistic within confines of current economic system</b>	<b>+ Is realistic within confines of current economic system</b>



## 3.B Technologies are never *neutral*

- But, rather, they *mediate* experiences and have social, political, cultural, psychological, cognitive and moral consequences.



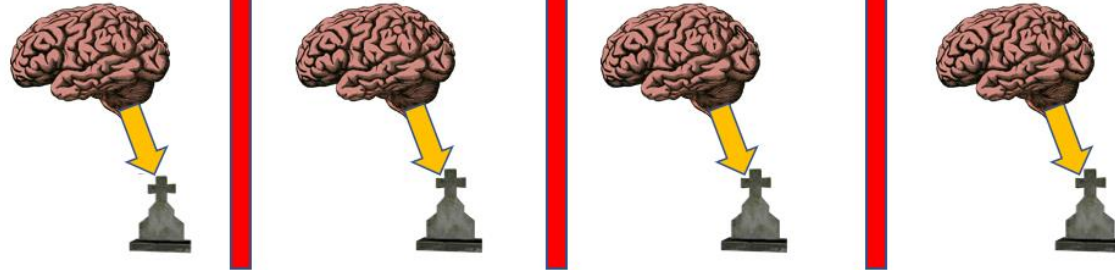
# 3.C Challenges for Ecomodernism

- 'Technology' *caused* the problem.
- Is a 'tech-fix' *biobased*? Risk of posing TBE (Techno-based Economy)?
- Inventions and their use are always *ambivalent*.
- Jevons' Paradox

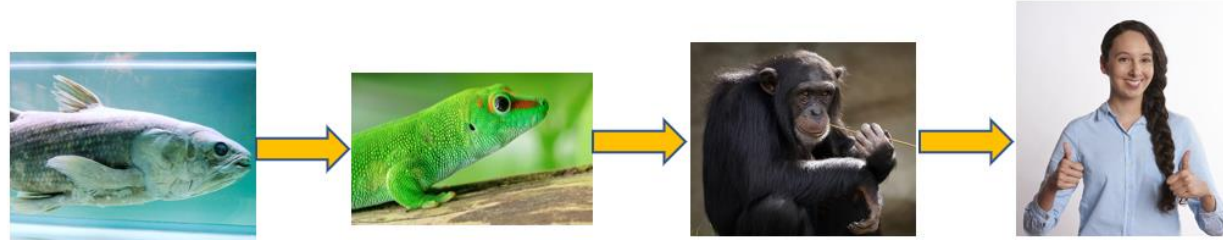


# 4. The Techno-Economic System

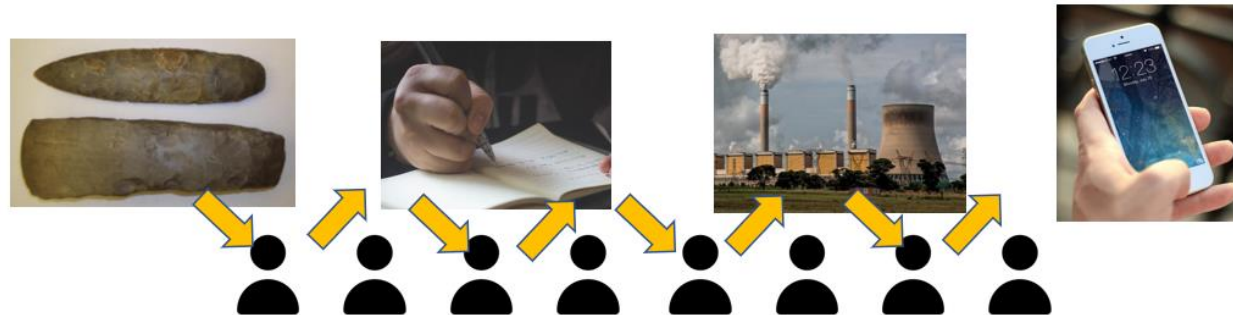
**Individual memory**  
(lost with the death of the organism)



**Genetic memory**  
(transferred through each organism in the sequence)



**Technological memory**  
(enables individual memories to interact with ancestral knowledge)



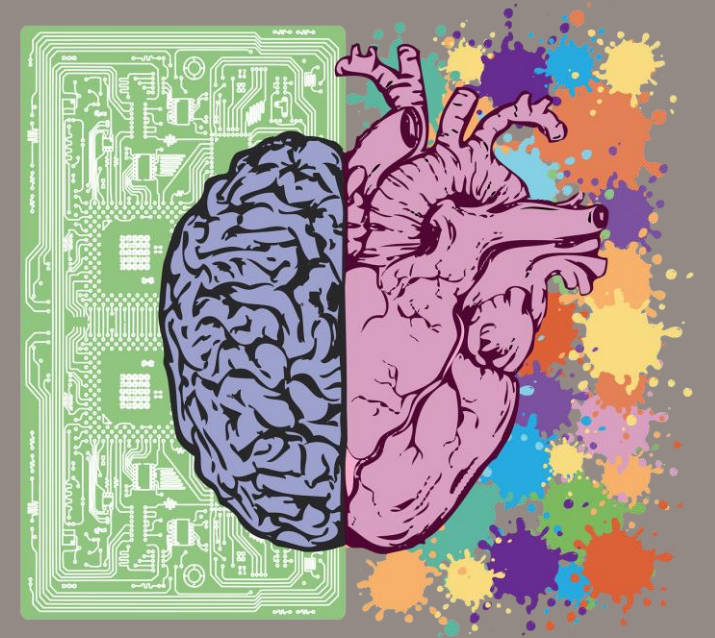
We were born in a world filled with technologies that determine our daily lives.

Is our eco-unfriendly behaviour inherent/natural or, rather, contingent/techno-economic?

# 4.A The theory of the *Libidinal Economy*

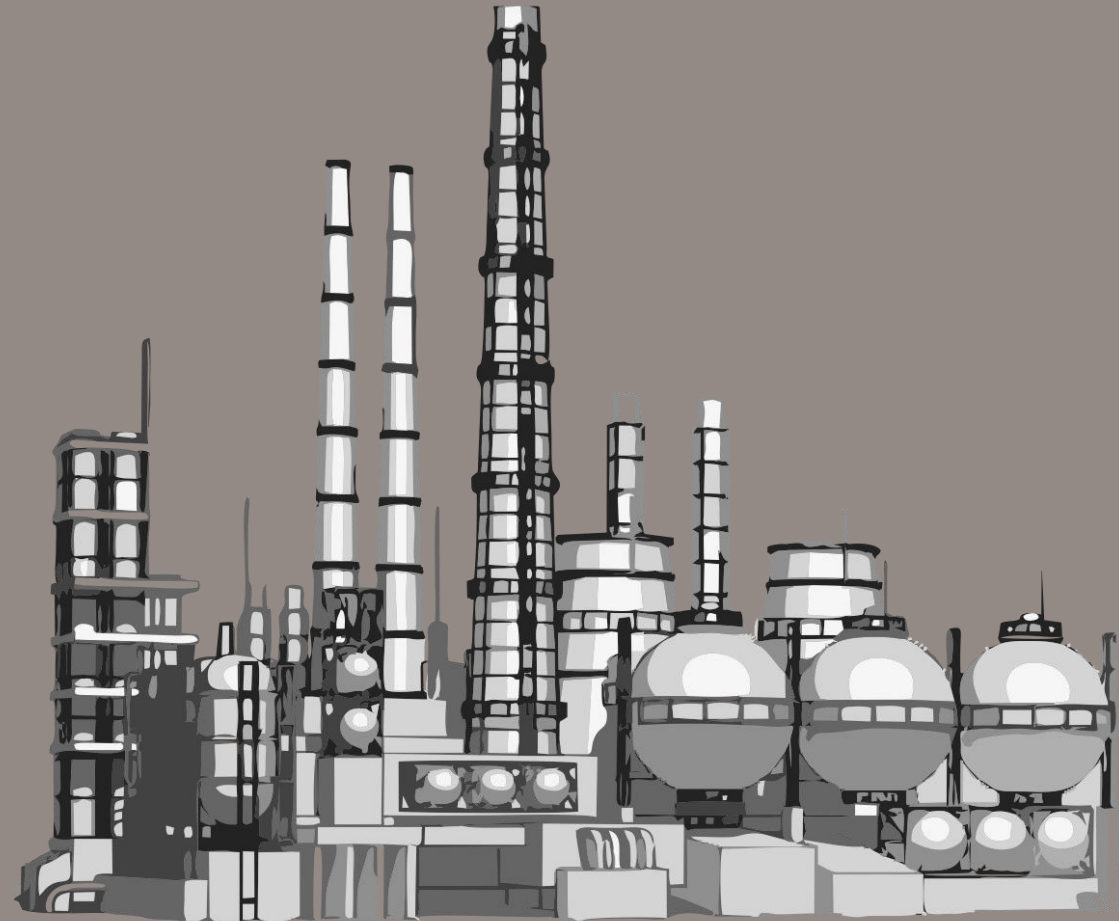
**Desires  
Hopes  
Dreams  
Expectations  
Fantasies  
Urges  
Wants**

**Technologies  
Industry  
Vehicles  
Smartphones  
Advertisements  
Fast food**



## 4.B The Bioeconomy as within the Libidinal Economy

- Institution of production
- Obtain & output resources
- Needs feasible business case
- Pay employees
- Meet quarterly targets
- Keep investors
- Continuous growth
- Short-term goals on free market





# Many Thanks!



**WAGENINGEN UR**  
*For quality of life*