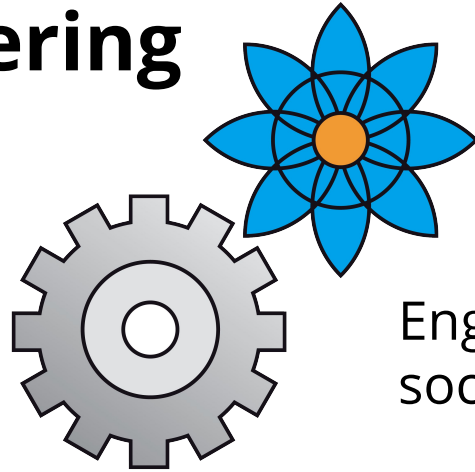
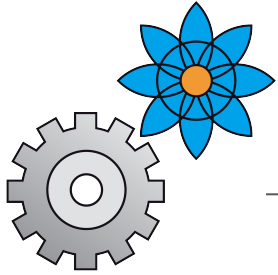


# Blue Engineering



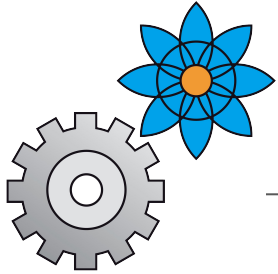
Engineers with  
social and ecological responsibility



# **What is responsibility?**

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short time for reflection and brainstorming



## **Mumble Groups on Responsibility**

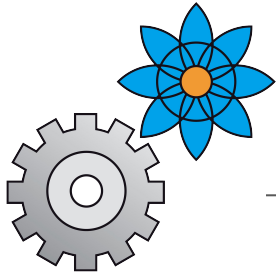
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a few minutes of conversation and exchange

listen with interest what others say

keep yourself brief and address only a few points

identify commonalities and differences



## **ecological....**

gentle and sustainable use of earth's finite resources

need-oriented and locally adapted technology

durable, repairable, reusable, convertible and recyclable

## **...responsibility**

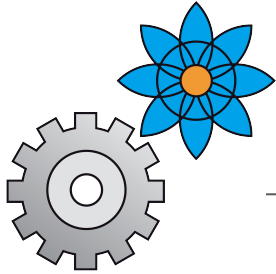
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good and fair working conditions

equal rights in decision-making processes

collective action and solidary networks

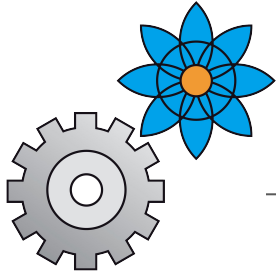
## **social...**



## **Blue Engineering**

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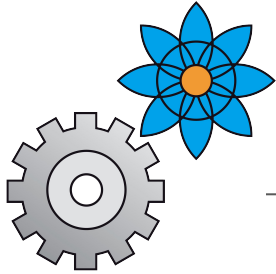
started of as student-driven project in 2009/2010  
collectively and critically reflecting on technology and society  
democratic decision-making & collective action  
projected as network of universities, companies, practitioners



## **The Single Blue Engineer....**

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- ...has competences and room to act
- ...connect and network with others
- ...exchange across universities, companies and borders
- ...help and support each others
- ...offer courses, seminars and workshops



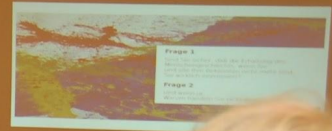
## **Blue Engineering is a framework, to...**

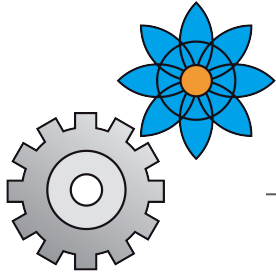
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- ...practice social and ecological responsibility
- ...question - rethink - redesign technology
- ...change society from within
- ...personal responsibility and democracy





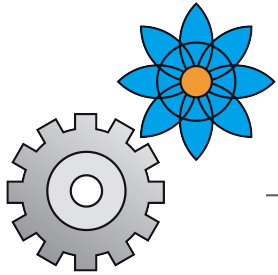




## **Democratic Conversion of Industry**

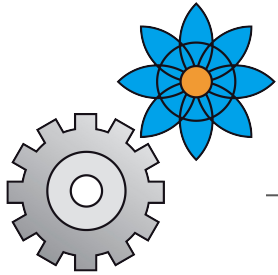
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Lucas-Plan as starting point, but not limited to weapons-industry  
overcoming borders within companies and society  
active participation on “what” and “how”  
use of locally existing skills, expertise and machinery  
change of technical and organisational structures



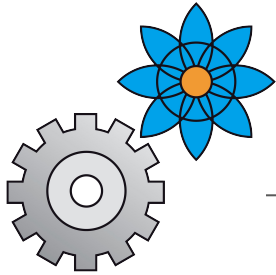
# Oval of Commonalities

---



# **Blue Engineering Course**

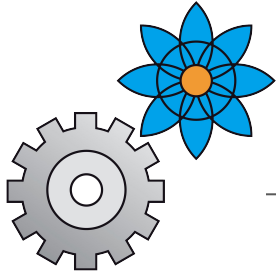
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## **Core Question throughout the Summer University**

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Who produces what  
for what purpose  
with which speed  
using which means  
and based on which technology?



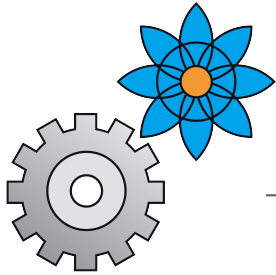
## Building Blocks

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15 - 90 minute sessions on a complex issue  
well documented, easy to use manuals – little preparation  
combination of different methods and didactical concepts  
over 150 building blocks, perspective chests, games...

...[all available on our website](#)



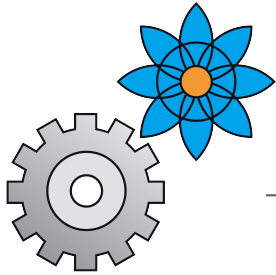


## Course Design

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interactive and transferable course design design  
variety of alternative teaching methods / content  
group and discussion oriented – minimum level of hierarchy  
not teacher-centred but peer-to-peer learning  
students conduct about half of the courses on their own





## **Outlook - Topics**

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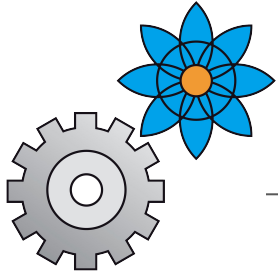
25 Questions by Max Frisch - Responsibility and Ethical Codes

Critique of the Green Economy - Engineering Design Principles

Pesticides - Gender, Diversity and Technology - Work / Life

Group Dynamics - Democracy - Energiewende / Energy Transition

Science and Policy Making - Rural/Urban Dualism - Food



## **Outlook - Excursions**

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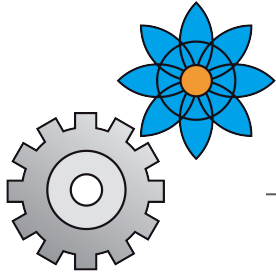
Water Supply and Water Treatment in Berlin

Lignite Mine and Power Plant

Central Recycling Plant for Berlin

EUREF-Campus and Gasometer

Labour Union



## Examination Requirements

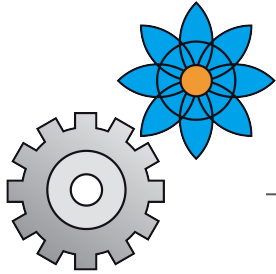
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...keep a learning journal

...create a building block in a small group

...document a building block

details will be presented tomorrow



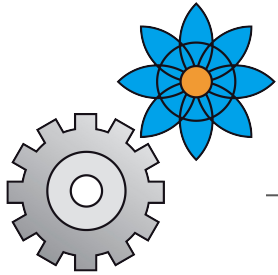
## Course Times

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Monday, Tuesday and Thursday - plenary sessions

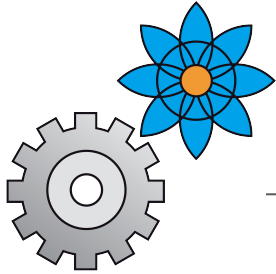
Wednesdays - reserved for your own group work

Starts 10.00 a.m. - Ends Latest at 17.00 a.m. (except excursions)



# Watching a Video Online

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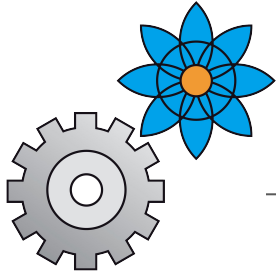


## **Watching a Video on the Internet**

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a friend of you has told you over lunch that there is new video on the internet that you definitely need to watch

once you get home you immediately go to watch the video

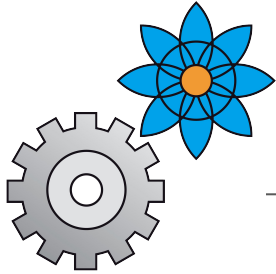


## **Assignment: List 30 Requirements**

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partner up in groups of two / three

What are 30 material, infrastructural and / or social requirements to watch this video?



## **Prerequisites of Modern Technology**

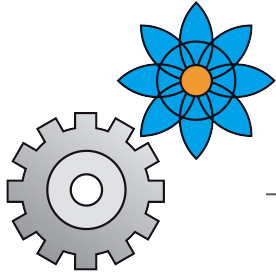
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modern technology is ridden with prerequisites

material requirements are temporally and spacial far-reaching

social preconditions are disguised as habits – hard to identify

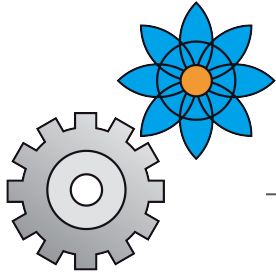




## Chain of Matrial Requirements

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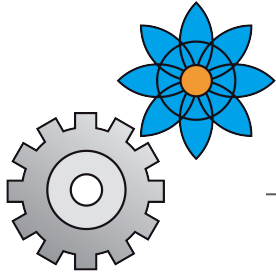
Laptop - Keyboard - Letter-Color for the little letters  
Spray nozzles for the Color - Lorry which transports them  
Streets and Tar - Color for the Lines on the streets  
Guard Railling / Crash Barrier - Posts and Reflectors  
Recycling Factory or Landfill for the Reflectors ... and Cats



## Chain of Social Preconditions

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Friend - time - people who want to watch videos online  
who can use computers - people who know how to produce  
spray nozzles - educational System who educates them  
people who work and need to work to cover their costs  
Driving Schools - Police - Hospitals - Insurance/Welfare



## **Outlook - Tomorrow**

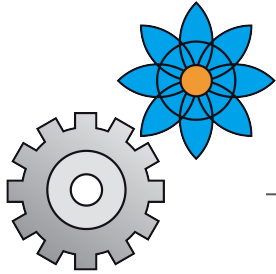
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Technology as Problem Solver

TINS-D Constellation

Groups and Power Relations

Sustainability in Engineering and Agricultural Technology



## Day 1 - Finissage

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Responsibility

Blue Engineering as a Student-Driven Project

Oval of Commonalities

Conversion

Cat Video

...and course requirements