



Methods for mass courses

Photo by [Miguel Henriques](#) on [Unsplash](#)



Ethics panel

Photo by [Science in HD](#) on [Unsplash](#)

Exemplifying a potential situation for the students i.e. future experts

New technology with business prospects and without legislation is not an uncommon situation

In these cases, ethical considerations are needed in an individual and at a company level

A close-up photograph of several interlocking metal gears. The gears are made of a light-colored metal, possibly aluminum or steel, and show signs of wear and use. The teeth of the gears are sharp and well-defined. The background is dark, making the metallic surfaces stand out. The word "Connections" is overlaid in a bold, red, sans-serif font across the center of the image.

Connections

Photo by [Bill Oxford](#) on [Unsplash](#)

Example courses & fields of technology for the panel

Basics in information technologies: face recognition

Measurement of biological phenomena: gene technology

SCI-project: artificial intelligence

Roles



Roles and views

Researcher: we do research based on where we get the funding, and the others will decide on how they apply the outcomes

Entrepreneur: we are not doing anything illegal, and this is an innovative business opportunity

Ethics / legal expert: there are things to consider in the research and in the business

Facilitator: introduction, questions for panel and audience, disclaimer


Entrepreneur: we are not doing anything illegal, and this is an innovative business opportunity



Face
recognition
in drones



Gene
tinder



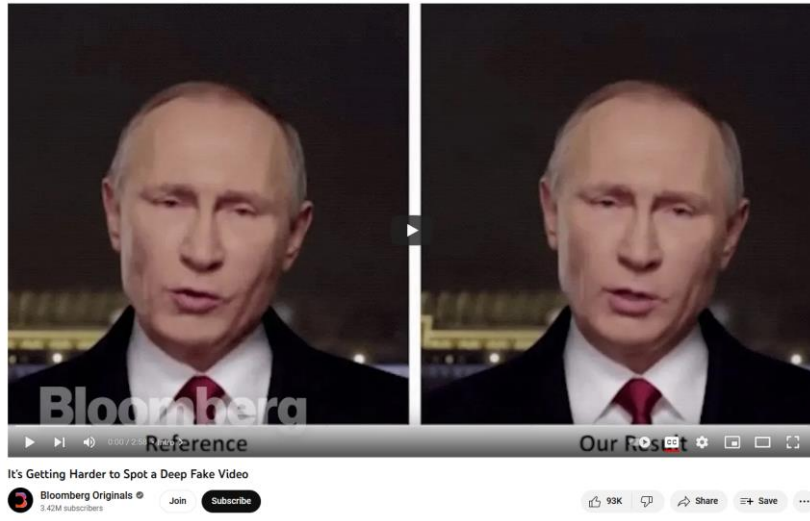
Personal
“deep fake”
videos

A close-up photograph of an open notebook with a fountain pen resting on it. The notebook pages are filled with handwritten text in cursive. The pen is silver with gold accents. The background is a warm, blurred brown color.

Pre-task & Script

Preparing for the panel: Students' pretask

Read or watch a material on the topic



Return one-page reflection

"Pohdi minkälaisia eettisiä valintoja joutuisit insinöörinä tekemään tämänkaltaisia tekoälyn sovelluksia kehittäessäsi. Tarkastele erityisesti millä tavoin sinun pitäisi henkilökohtaisissa valinnoissasi huomioida (oman etusi lisäksi) palkan maksavan yrityksen etu, kohdehenkilöille aiheutetut hyödyt ja haitat ja yhteiskunnan yleinen etu."

Preparing for the panel: Teaching team

Agreeing upon the choreography

- Introduction (by the facilitator)
- Short opening words (by each panelist)
- Opportunities (entrepreneur & researcher)
- Ethical considerations (ethics expert)
- Company presentation
- Questions to audience
- How could the risks be tackled
- Would you be willing to work for my company? (entrepreneur)
- ...



Photo by [Jakob Owens](#) on [Unsplash](#)

Sustainability lecture at Tuotantotalous 1

- Connected with the course project “Making a business plan”



How to include sustainability in our plans?

- Business plan
- Production as a part of a supply chain
- Production planning
- Processes and operations management



Learning objectives

- To recognize guidance available towards sustainable business operations
 - Regulations & voluntary criteria
 - Circular economy and eco-design concepts
- To understand the wider business environment affecting own business plan
 - Sustainability frameworks



A business idea: T-shirts!

*But how to make
it a sustainable
one?*

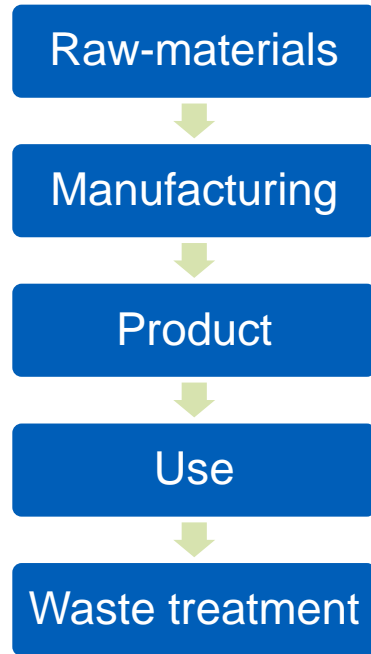




UN ALLIANCE
FOR SUSTAINABLE
FASHION



Supply chain and operations along it vs. product life cycle

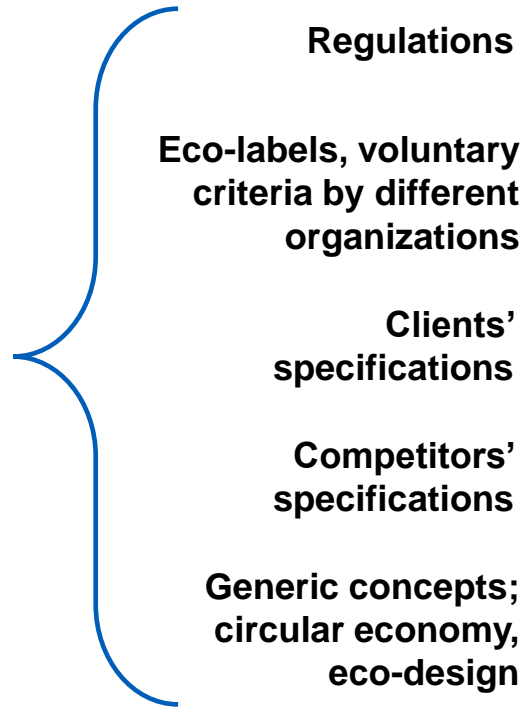
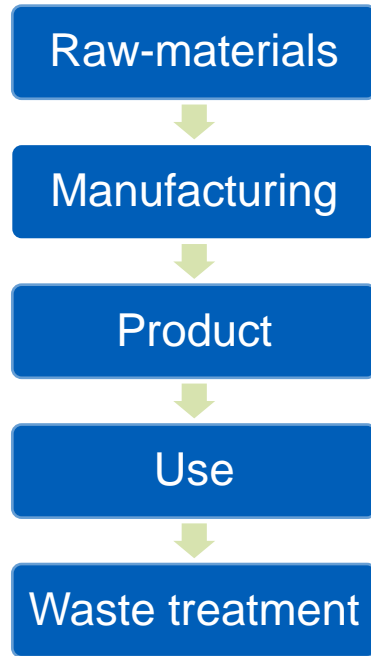


**No need to
invent by
yourselves**

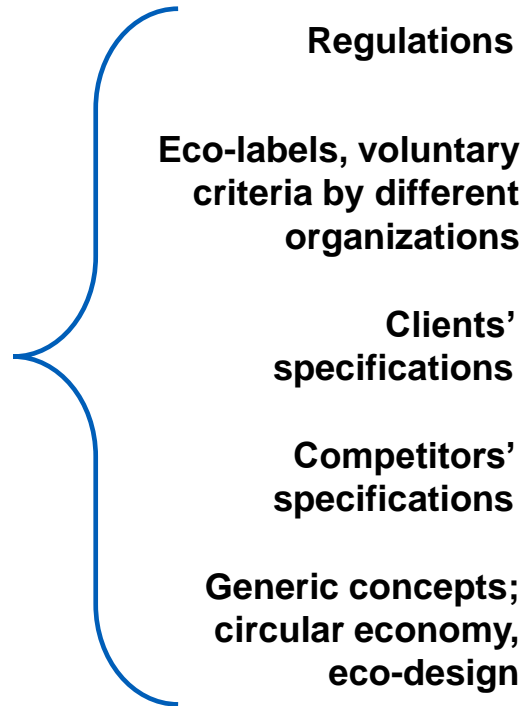
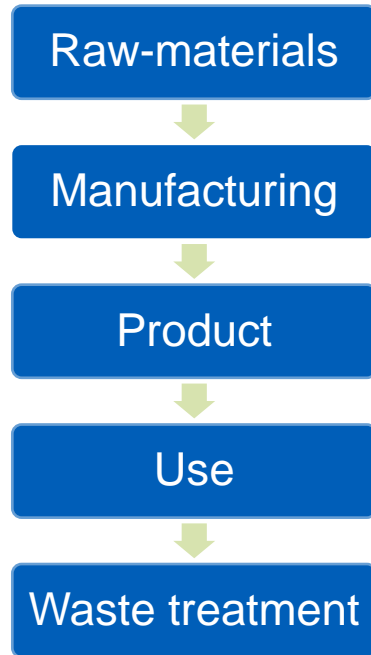
***– Plenty of
guidance available!***



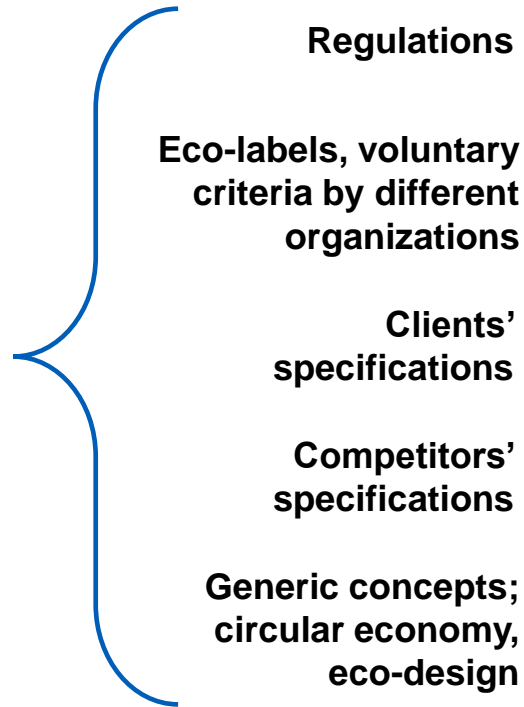
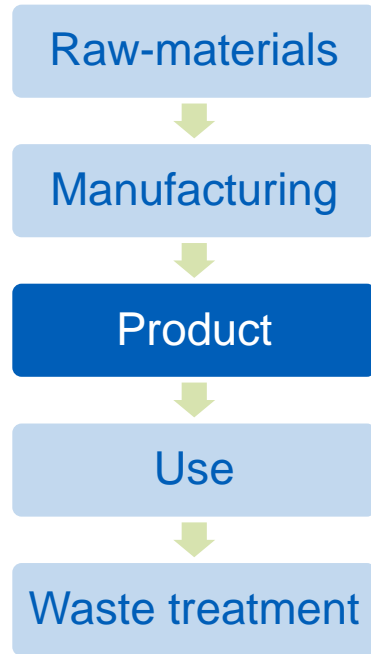
Guidance available throughout the entire supply chain / product life cycle



Guidance available throughout the entire supply chain / product life cycle



Examples for product specifications?



REACH (EU chemical regulation)¹

EU Eco-label for textiles, Öko-tex^{2,3}



Need for new products?

