DAY 3

WELCOME
AND SUMMARY FROM DAY 2

OVERVIEW OF 3 DAY PROGRAMME

Day 1 Introductions (presenters and yourselves)
Useful frameworks to understand impact
Presentations
Introduction to your Case Study

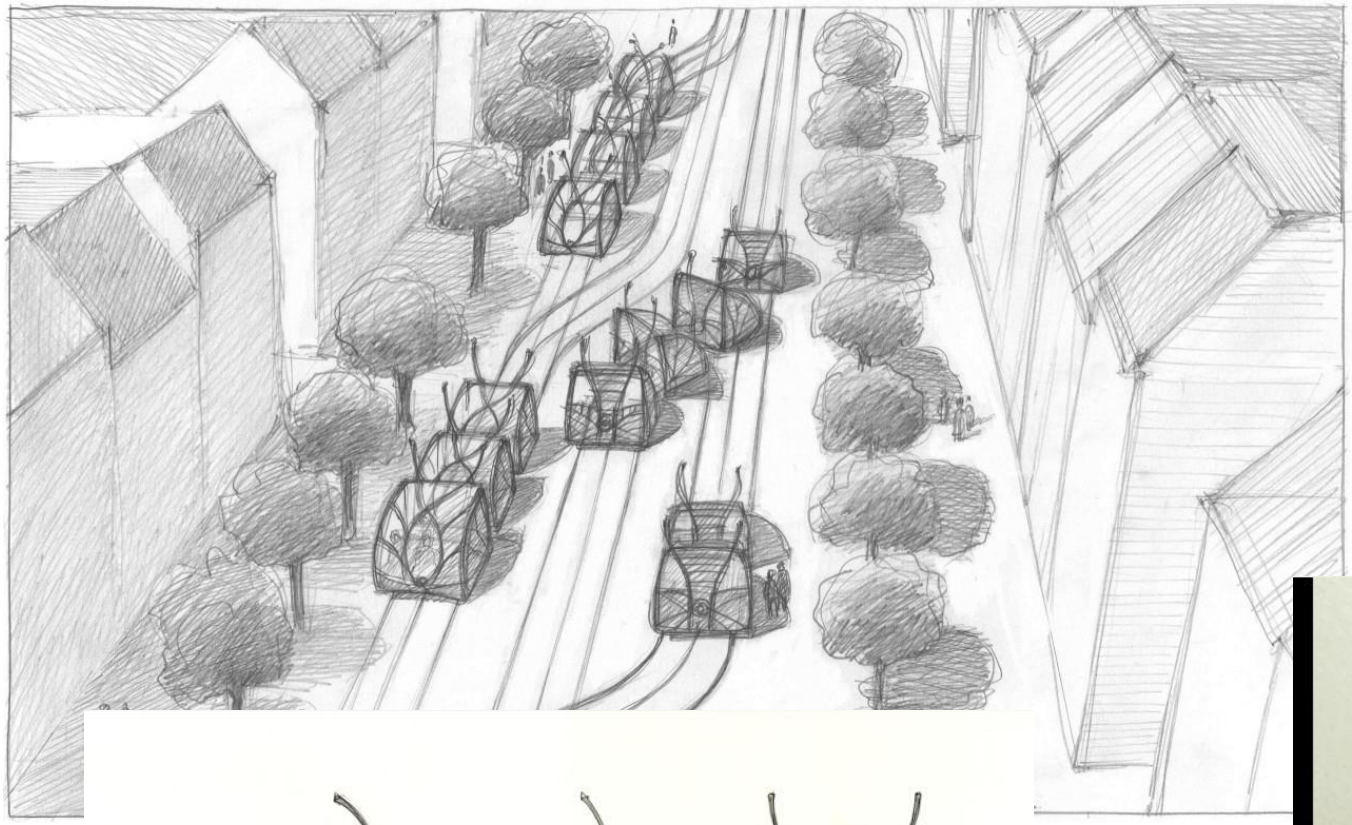
Day 2 *Presentations*
Work on your Case Study and prepare your presentation

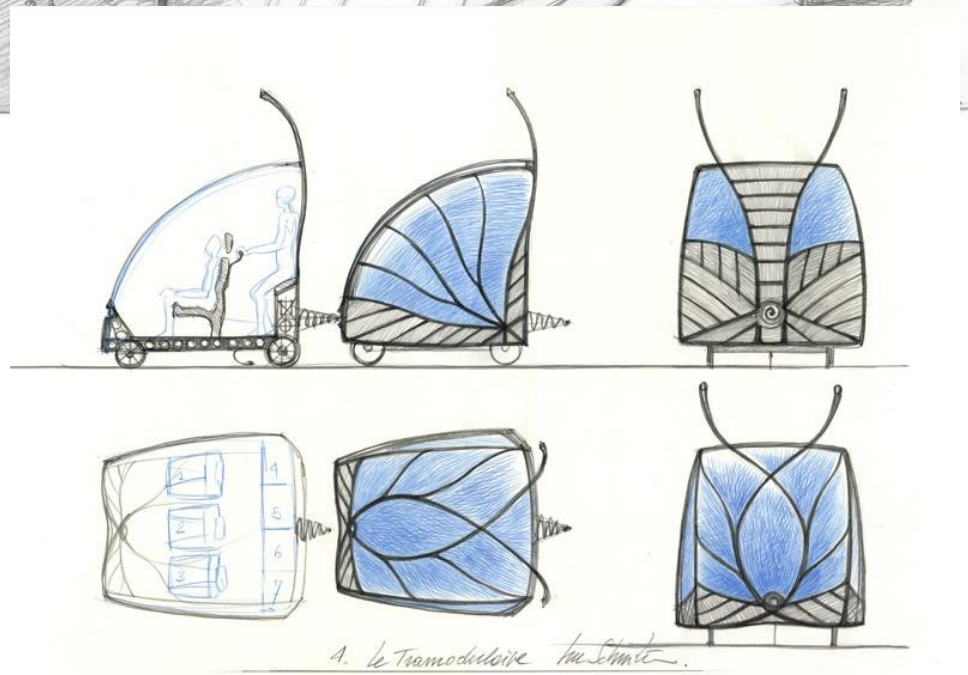
Day 3 Feedback, main issues & questions, close

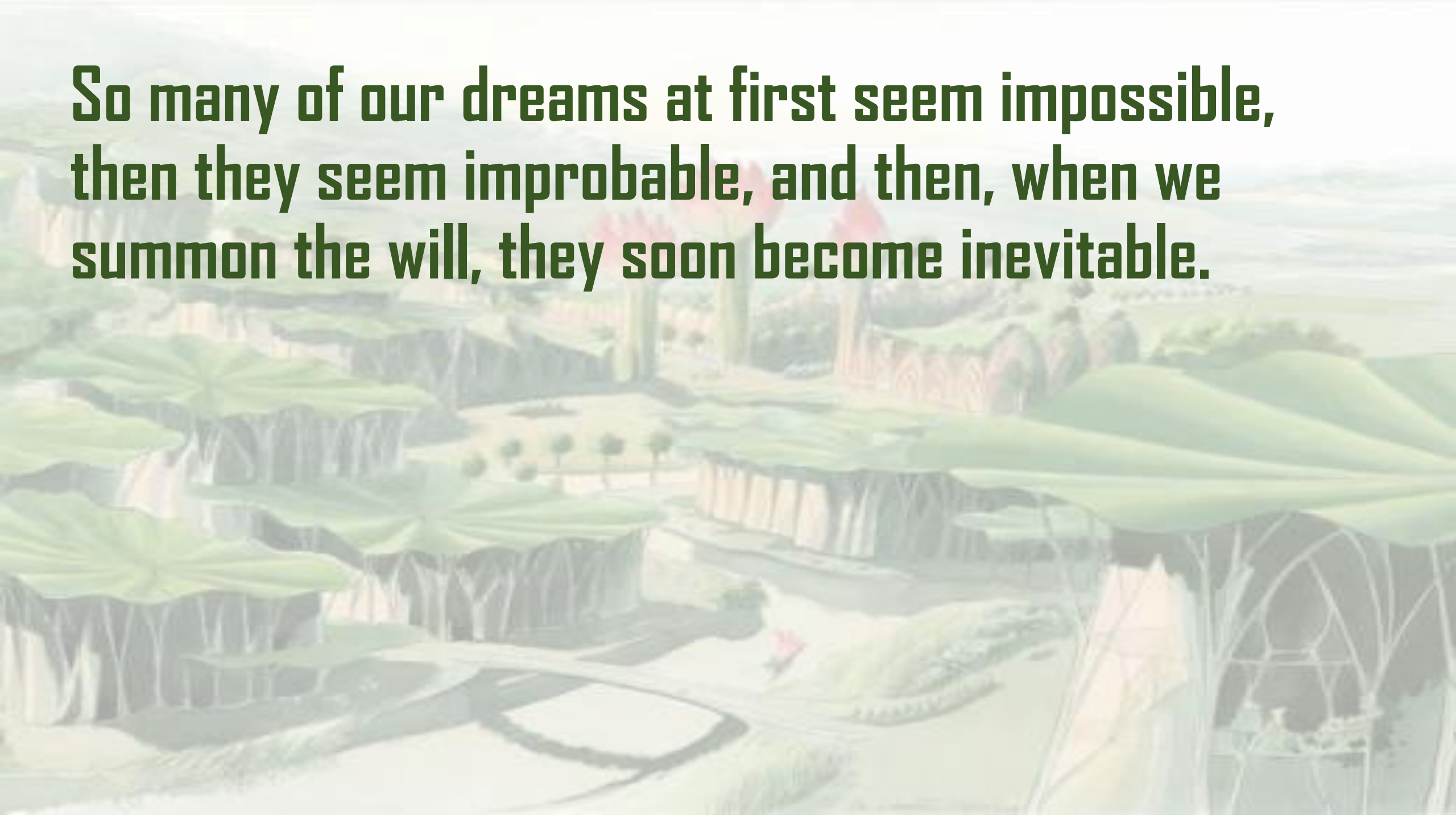
UP NEXT…

CASE STUDY SESSION 3: PRESENTATIONS OF PARTCIPANTS

FACULTY PANEL




1. le Tramodulaire


So many of our dreams at first seem impossible,
then they seem improbable, and then, when we
summon the will, they soon become inevitable.

Dream Train Proposal

Impact

Clean and accessible transport to the city contributing to:

- Less pollution
- Shorter commutes
- More shoppers in the city
- Fewer accidents

Proposal

To create an innovative, smart, driverless light train to the city resulting in fewer people taking cars

To turn the city into pedestrian zones and attract tourists

Key indications/metrics

Number of people taking the train

Effect on people's happiness (via surveys)

Increase in city visits

Increase in diversity of people accessing city for work, leisure and education (via surveys)

How we are going to make it a success: **engagement with citizens**

Citizen science: pollution measurement with home made kit.

Data collection: computer game, mapping pathways and habits through the city.

Schools: helping with the creating of scale models of the city and trains located in family destinations.

Public mapping exercises

How we are going to make it a success: process

Multidisciplinary co-creative research involving

- Engineers
- Data scientists
- Sociologists
- Arts and humanities
- Urban planners
- Communication department

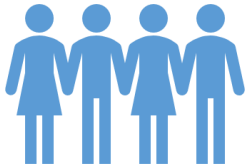
Stakeholders outside academia

- City council
- Regional/national authorities
- Citizen groups
- A wide range of companies
- Chamber of commerce

How we are going to make it a success: implementation

- Pedestrian zone
- Employer incentives to help with season tickets
- Bike and train
- Integration of new train with existing rail links, bike routes and other transport infrastructure
- Help available to carry purchases (e.g. rickshaw)
- Parking spaces made into recreation areas, green, child friendly
- Personalised journeys
- Funding to cross the valley of death, to develop prototypes of trains and technologies

Risks



Citizens affected by the route – working with affected groups and urban planners to find a solution.

Ecological disruption – involve the environmental groups.

Furniture shops – offered new locations at Park and Ride

Key benefits

City: increased tourism, more businesses, more people, more revenue, saving on health and emergency services

Citizens: wellbeing, social inclusion, increased value of property, more jobs

Industry: new manufacturing contracts, more funding for innovative technology

Entrepreneurs: more funding to cross the valley of death

Academia: more research funding and engagement with citizens

Education: opportunity for students to be involved in design and learn a lot

Case of Pontevedra

- In the same streets where 30 people died in traffic accidents from 1996 to 2006, only three died in the subsequent 10 years, and none since 2009.
- CO2 emissions are down 70%, nearly three-quarters of what were car journeys are now made on foot or by bicycle
- Central Pontevedra has gained 12,000 new inhabitants.
- Withholding planning permission for big shopping centres has meant that small businesses – which elsewhere have been unable to withstand Spain's prolonged economic crisis – have managed to stay afloat.

We want to engage with you – will you help us make a Dream Train a reality?

Key points of the discussion

- Outputs vs outcomes vs impact
- Easy to skip implementation phase
- How to pilot/test the ideas?

GREEN TECHNOLOGY FOR YOUROPELAND

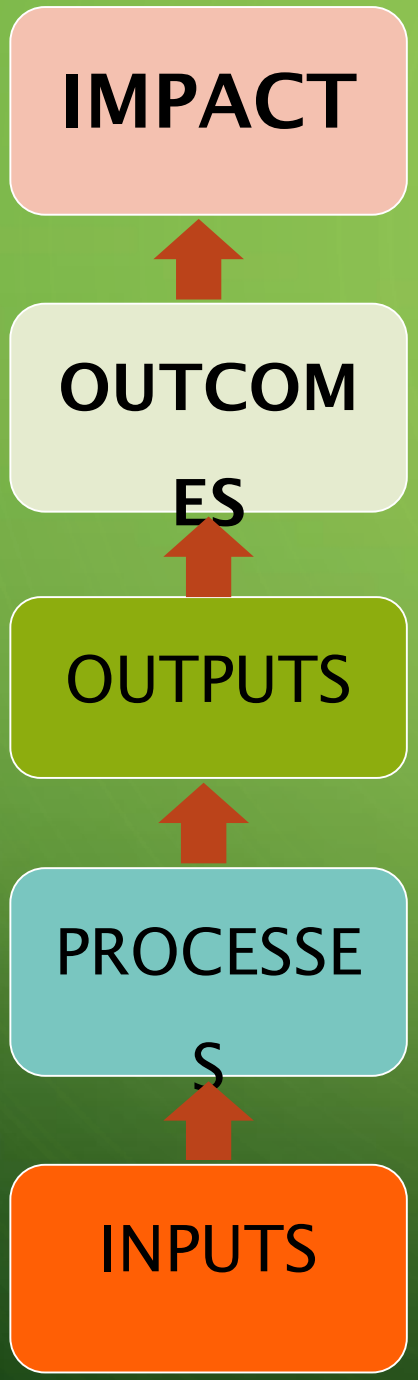
SMART STRATEGY GROUP:

ASTRID SOUREN

BAIBA HERMANNS-VAGULE

GER HANLEY

STEIN DE CUYPER



Reducing CO^2 Emissions in Youropeland

More Efficient Batteries for Public Transport Vehicles

Battery Technology

State of the Art Research through Public-Private-Partnership

Funding; People; Infrastructure

GREEN TECHNOLOGY TO REDUCE CO^2 EMISSIONS

- High income cities are Emission Hotspots
- KPIs
  - Number of buses replaced by e-buses using our batteries
  - Reduction of volume diesel
  - Shift of employment towards green technology

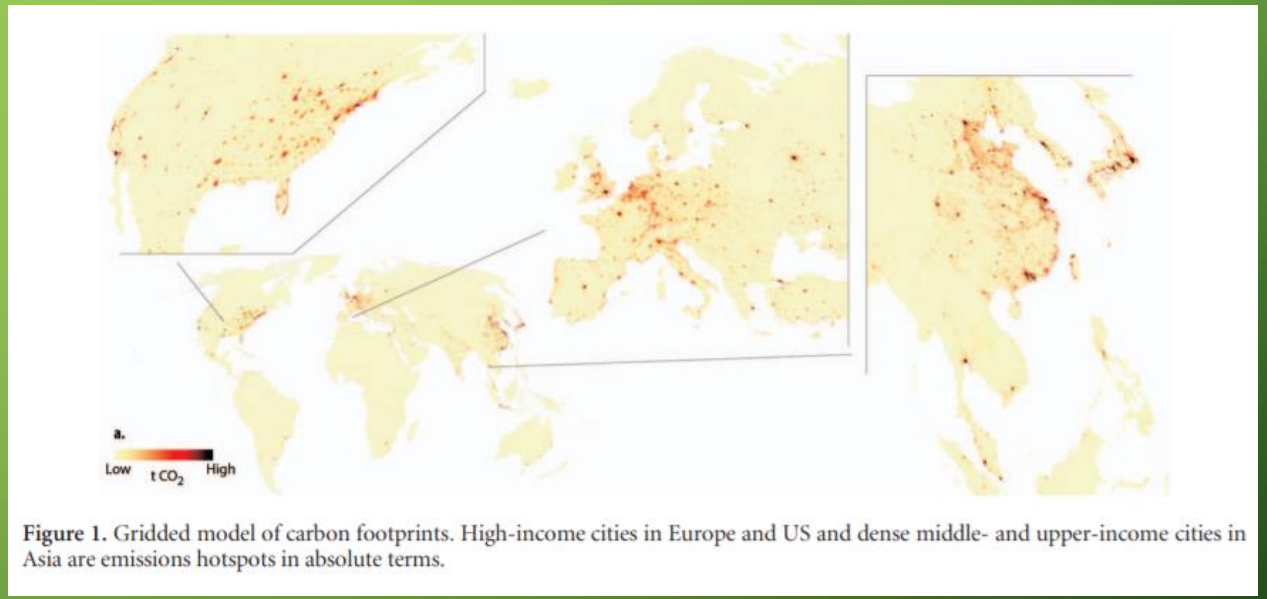


Figure 1. Gridded model of carbon footprints. High-income cities in Europe and US and dense middle- and upper-income cities in Asia are emissions hotspots in absolute terms.

Carbon footprints of 13k cities, Daniel Moran et al 2018 Environ. Res. Lett. 13 064041

WHAT ARE WE PROPOSING?

- State of the Art Research Programme for improving battery technology
- Utilise our strong manufacturing sector to produce the batteries
- Create a training programme for Greening Buses
- Create an incubator hub in the Youropeland for battery technology
- PR for Zero Carbon Region

REFLECTIONS

- Impact is open to interpretation so difficult to always get a consensus

Youropeland Case Study

Anke Dählmann
Sofie Bekaert
Valeria Di Caro
Andres Bjerrum
Tamami Fukushi

Purpose of the Project

Traffic Planning

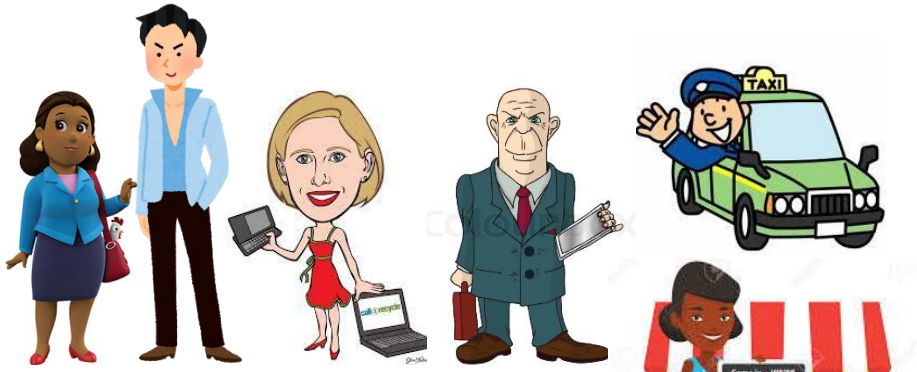
- Autonomous cars
- Urban Planning

Potential Impact

Make the city more viable and sustainable

Want safer, more cost-effective, comfortable and environmental-friendly transportation

Stakeholders



Mayer
Citizen (extrovert person)
Entrepreneur
Citizen (Young family and Elderly)
Public transportation company
City officers in charge of transportation
Shop owner/Retailer

Key Performance Indicators

Air Pollution (Strawberry)
Citizen's Happiness (Survey)
Economic growth (Employment rate, number of startups, new companies)

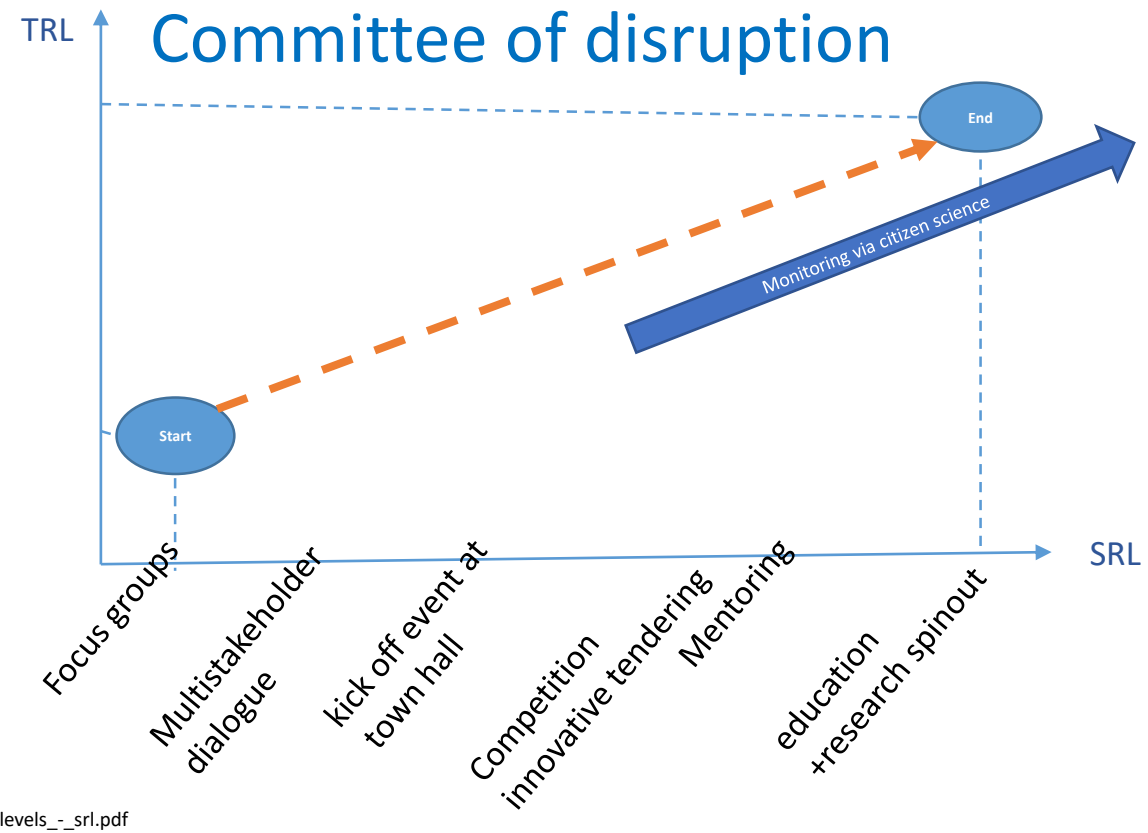
Pathway to impact

= TRL versus SRL mapping: expected shift during project towards impact

Mapping Impact =

2-level approach:

Societal/Technology Readiness Levels



https://innovationsfonden.dk/sites/default/files/2018-08/societal_readiness_levels_-_srl.pdf

Main discussion points:

identification of the stakeholders

how to reach them

how to make them all

Relevance for our organization:

university is in charge of supporting the winning entrepreneurs

it will take part in the creation of the innovating products

Thank you for your attention!

Youropeland University

Supplement

Mapping Impact = 2-level STRL approach

Technology Readiness Levels in the EC	
Technology Readiness Level	= how mature is your technology?
TRL 1.	BASIC RESEARCH = basic principles observed
TRL 2.	TECHNOLOGY CONCEPT formulated
TRL 3.	experimental PROOF OF CONCEPT
TRL 4.	technology validated in lab
TRL 5.	TECHNOLOGY VALIDATED in relevant environment (preclinical test in the case of healthcare-oriented project, model system in case of agriculture-oriented project)
TRL 6.	TECHNOLOGY DEMONSTRATED in relevant environment ((early phase) clinical testing or field tests respectively)
TRL 7.	SYSTEM PROTOTYPE demonstration in operational environment
TRL 8.	SYSTEM COMPLETE and qualified (including regulatory requirements)
TRL 9.	ACTUAL SYSTEM PROVEN in operational environment (ready for implementation in practice)

Idea (TRL 1–3)

POC (TRL 4–5)

Validation (TRL 6–7)

qualifying (TRL 8–9)

Levels
SRL 1 – identifying problem and identifying societal readiness
SRL 2 – formulation of problem, proposed solution(s) and potential impact, expected societal readiness; identifying relevant stakeholders for the project.
SRL 3 – initial testing of proposed solution(s) together with relevant stakeholders
SRL 4 – problem validated through pilot testing in relevant environment to substantiate proposed impact and societal readiness
SRL 5 – proposed solution(s) validated, now by relevant stakeholders in the area
SRL 6 – solution(s) demonstrated in relevant environment and in co-operation with relevant stakeholders to gain initial feedback on potential impact
SRL 7 – refinement of project and/or solution and, if needed, retesting in relevant environment with relevant stakeholders
SRL 8 – proposed solution(s) as well as a plan for societal adaptation complete and qualified
SRL 9 – actual project solution(s) proven in relevant environment

Stages SRL 1-3 reflect the early work in a research project, including suggesting and testing on a preliminary basis a technical and/or social solution to a technical or a societal problem. Here reflections about the general societal readiness towards the idea and its proposed solution(s) are required, including identifying relevant stakeholders and how to include them (such as end users, the right communities, etc.).

Stages SRL 4-6 represent the actual solution(s), the research hypothesis, and testing it/them in the relevant context in co-operation with relevant stakeholders, while keeping a focus on impact and society's readiness for the product. In these stages expectations on the societal adaptation must be described in specific terms and, to the extent possible, be part of the test phase.

= progress to market versus discovery to society ('practice/real-life')

UP NEXT
Break

M.M van Hamaele Hall

UP NEXT....

PROBLEM SOLVING:

GOING INTO COLLECTED PRACTICAL ISSUES OF THE PAST DAYS

30 MINUTES DISCUSSION

Think about your role and how you can apply the lessons you learned to design your impact strategy?

UP NEXT....

CLOSING AND DISCUSSIONS

1. What we learnt in the course
2. Discussion
3. Summary of most important lessons

Reflections on the exercise from you

- Outputs-outcomes-impact [see outstanding questions]
- Implementation phase of change: easy to forget
- What about testing / piloting
- How to agree on the impact
- How to identify the stakeholders: reach them all, how to make them all happy
- Relevance for our organization: in charge of supporting the winning entrepreneurs, take part in the creation of innovating products

Outstanding questions

- Yesterday we learned that impact can be achieved by change. Does an organisation always have to strive for change? Sometimes you just exist to maintain a certain status quo
- Inputs process outputs outcomes impact
  - Lineair or feedback loops
  - Difficult to is distinguish between outputs outcomes impact
- How to develop and **implement** an impact strategy at dept / school / univ level
  - Who should monitor impact
  - Other elements for building an **institutional culture**

UP NEXT

Lunch & End of the Course

13.30

M.M van Hamaele Hall

Thank you for your participation in the AESIS Winter Course 2018!

Next AESIS events

3-5 April 2019
Bilbao, Spain

International Course:
Implementing a National Research Impact Strategy

Quantitative and qualitative criteria for designing an effective policy framework for impact measurement

6 & 7 June 2019
Berlin, Germany

Annual Conference:
Impact of Science

Finding shared approaches to assess, enable and accelerate impact on society