

# *Master's in Sustainable Product-Service System Innovation (MSPI)*

A master's programme to  
prepare people  
to be sustainable product  
innovators  
(1+1 year)

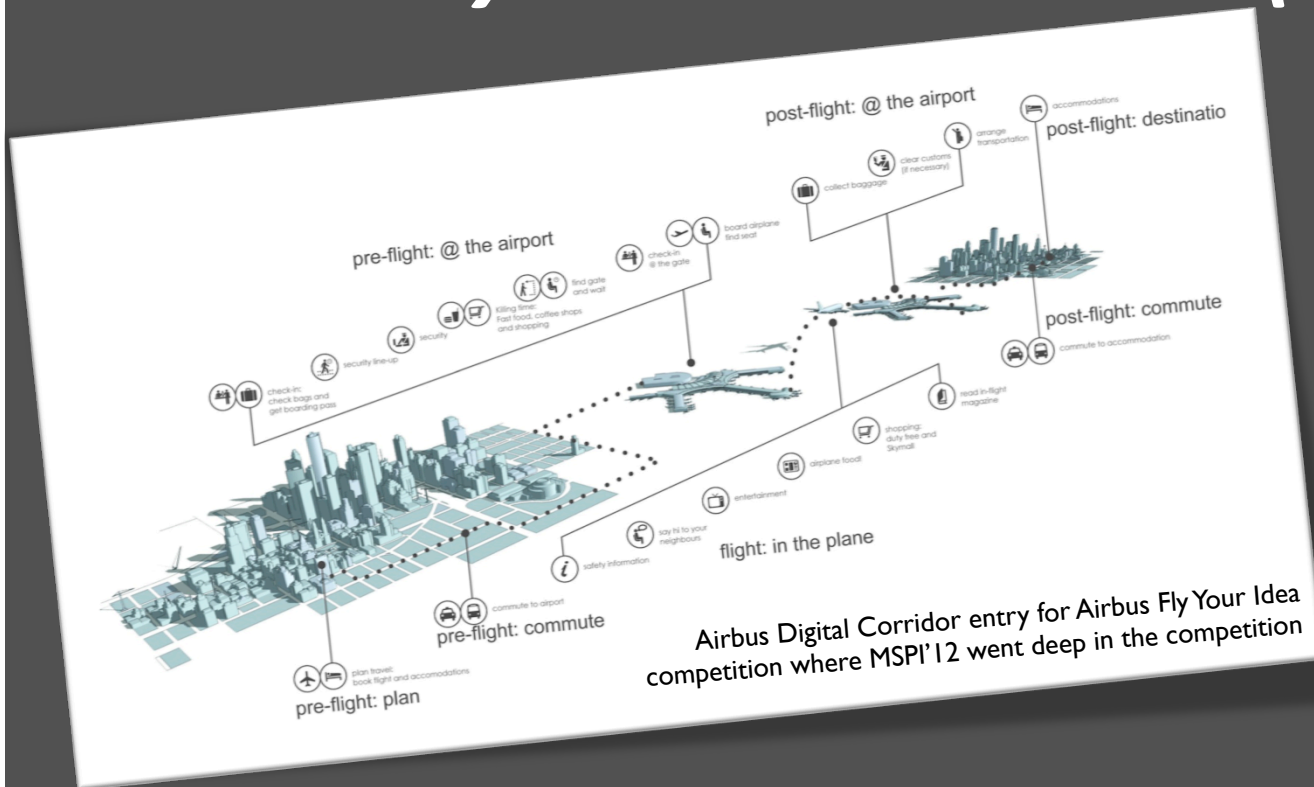


Learn more at

[mspi.se](https://mspi.se)



# Master's in Sustainable Product-Service System Innovation (MSPI)



MSPI students learn how to harness their creative talent to design products, services, and product-service systems that help companies create value, and society to reach socio-ecological sustainability.

Graduates of the program are prepared to drive product innovation that both meets user needs and generates key competitive advantages in the expanding sustainability-driven market.

Learn more at  
[www.bth.se/mspi](http://www.bth.se/mspi)



# Toolbox 2.0 for engineer of tomorrow



*What goes into  
the toolbox?*

- Building the engineers  
desktop 2.0 for ability  
to innovate sustainable  
product-services

We train ability to identify needs/opportunities and transform them into solutions

Where do ideas come from?

**INSPIRATION**

|

**IDEATION**

|

**IMPLEMENTATION**

Getting ideas out into the world.

Having good ideas.



# Overall programme vision/purpose

- to support the sustainable development of global economy and society
- to strengthen industry in the increasingly sustainability-driven global market
- for students to gain insight and knowledge of how different companies work

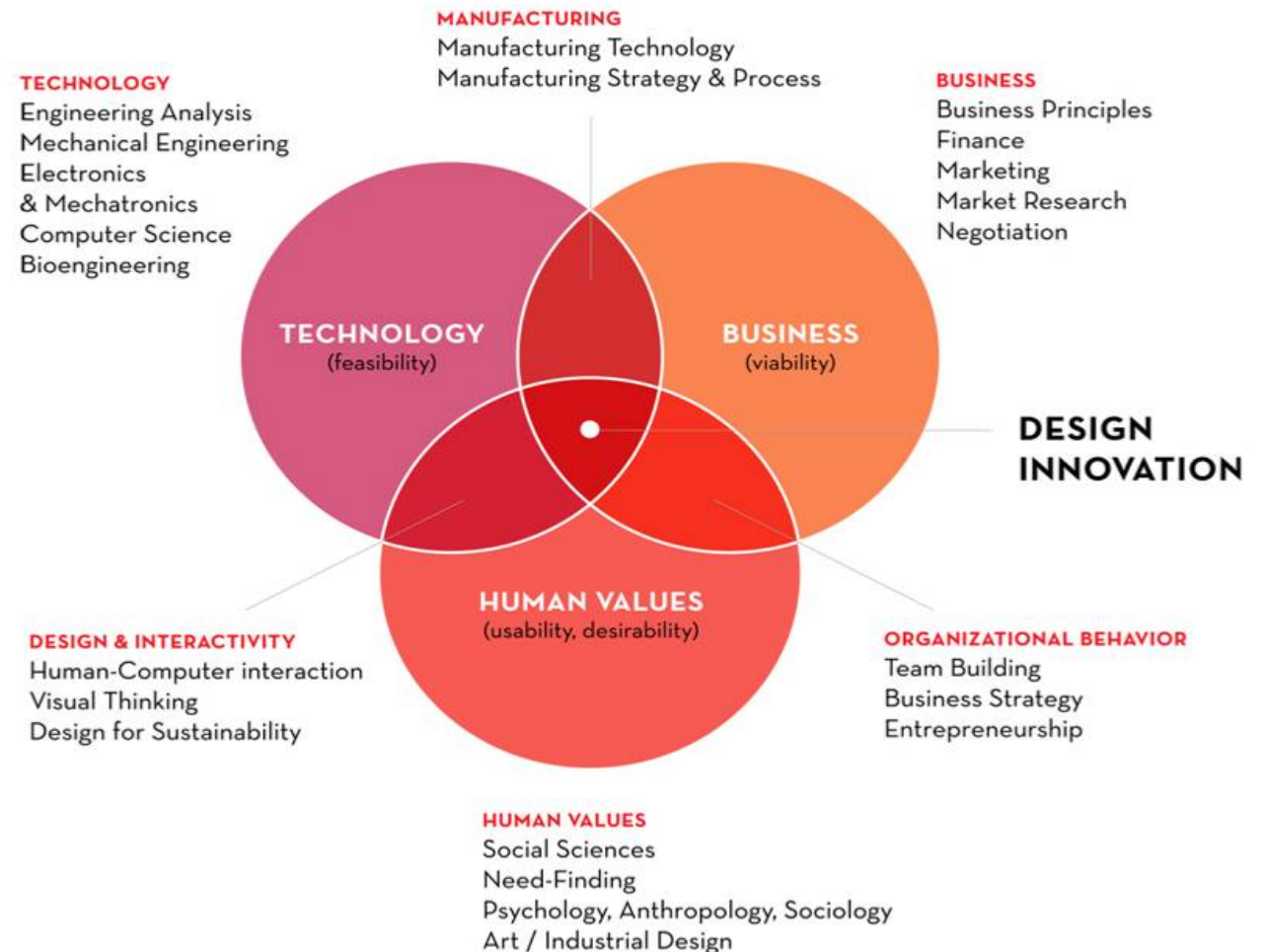


# MSPi mixing disciplines to deliver innovation!

1. **Human Values:** "What is desirable to people? What are people's needs?"
2. **Technology:** "What is possible to do with technology?"
3. **Business:** "What is the capacity for survival?"

## What happens in the intersections?

Design Innovation = the sweet spot we're all looking for?





# Close industry/academia collaboration

- Programme planned and executed in close collaboration with Swedish industry
  - » Aura Light
  - » Blekinge Business Incubator
  - » Cleantech Inn Sweden
  - » Coresource
  - » Dynapac Compaction Equipment
  - » Ocean Harvesting Technologies
  - » Sapa Heat Transfer
  - » GKN Aerospace Engine Systems
  - » Volvo Construction Equipment
  - » Volvo Truck Corporation
- Thesis and course project collaboration
- Also close collaboration with state-of-the-art in research on national and international level
  - » Stanford University, Tokyo University, McGill University etc.



VOLVO CONSTRUCTION EQUIPMENT



VOLVO TRUCKS



# Academic goals for graduated students

- **Introduce** a strategic perspective of sustainability to a product innovation process in a company.
  - » **apply** a strategic sustainability perspective within different technical competence areas
- **Analyze** sustainability challenges for an organization in a scientific manner
  - » **run** sustainable innovation programmes/projects in **companies** and **public organizations**
- **Use** new methods and tools, and engineering skills, to work with sustainable product-and service innovation in **close collaboration with industry**.
  - » **contribute** to a change through application and knowledge of different support tools and methods for sustainable product-service system innovatio
- **Support** a transition towards a more service-oriented economy.
  - » **create** innovative strategies for attractive Product-Service System (PSS) offers



How will you  
innovate for a  
better world?

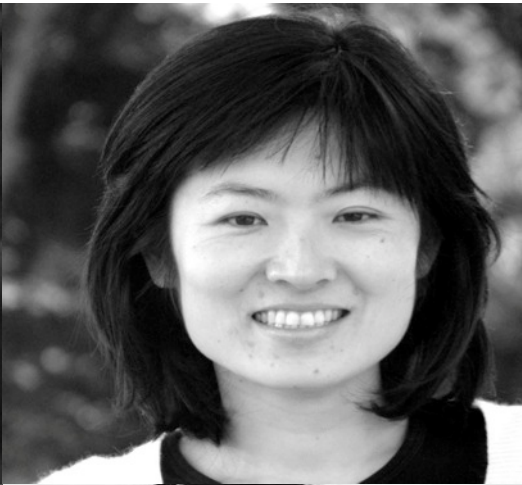
[bth.se/mspi](http://bth.se/mspi)



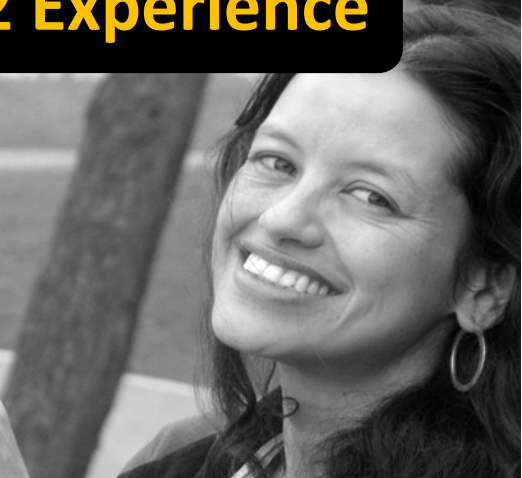
# Industry goals for graduated students:

- **Specific skills:**
  - » Ability to perform value innovation for industrial situations
  - » Be able to understand product development processes and how sustainability can be included in them;
  - » Coordinate close functional teams for product/service development, production, customer support, marketing/sales;
  - » Participate in product & service planning: connecting engineering, business development, customer needs to anticipate future customers' needs.
- **Basic skills:**
  - » Be familiar with tools for ideation, customer value, innovation, product development, service development, sustainability assessment.
  - » Have excellent presentations skills and be able to communicate PSS and do sustainability reporting, as well as to run workshops, demonstrate and use visualization tools for communication;
  - » Extend traditional engineering competence into areas such as service development, including sustainability, innovation -and customer value thinking.





**MSPI'12 Experience**





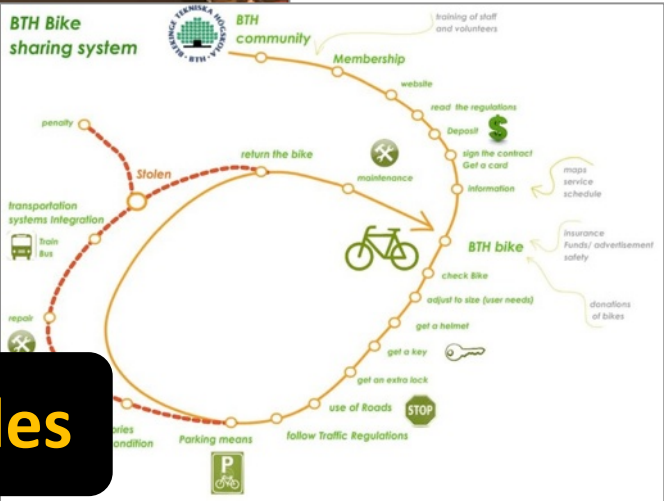






Bullitt - Component Breakdown - Materials and Manufacturing Processes

**MSPI + Larry vs Harry**  
**STM Project: Bullitt Cargo Bicycle**  
 by: Joshua Foss, Maja Feldman, Chris Rhodes and Mark Simmons



# Course project examples

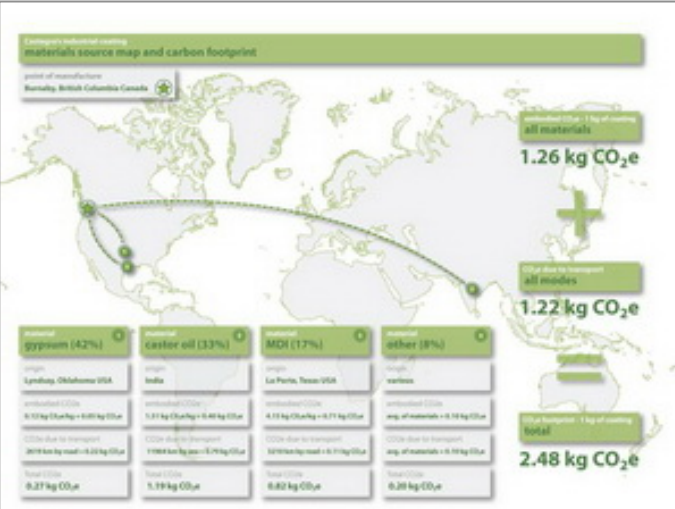
Find more examples and theses on [mspi.se](http://mspi.se)

**THE WORLD OF P2P CARSHARING**

passenger vehicle ownership by country (2012)

car in the world

designed by Mark Simmons - 2012  
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Finalists in Airbus Fly Your Idea 2010







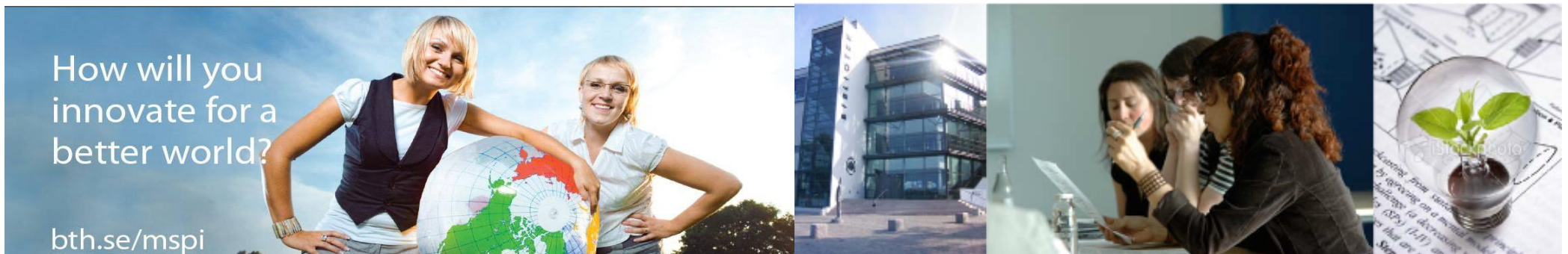






# Some details about MSPI

- **1+1 year**
  - » Students can come for 1 year and finish with a 60-credit Master's, or
  - » Stay for 2 years and finish with a 120-credit Master's
- The goal is to graduate students who can go out and begin / continue working in industry!
- We also strive to keep some MSPI graduates on as PhD students – which in Sweden involves an additional 4-5 years of study (and a comfortable salary!).





# Programme Overview I+I year

## First year one year Master

Period 1	Period 2	Period 3	Period 4
<b>Introduction to strategic sustainable development</b>  (7.5 credits)	<b>Strategic management for sustainability</b>  (7.5 credits)	<b>Methods for Sustainable Product Development</b>  (7.5 credits)	<b>Systems Engineering</b>  (7.5 credits)
<b>Creativity for Product- and Service Development</b>  (7.5 credits)	<b>Engineering for a Sustainable Society</b>  (7.5 credits)	<b>1 year = 15 credits Master project</b>  <b>OR</b>  <b>For 1+1 year Master = 2 elective courses and second year (next slide)</b>	
September	November	March	June



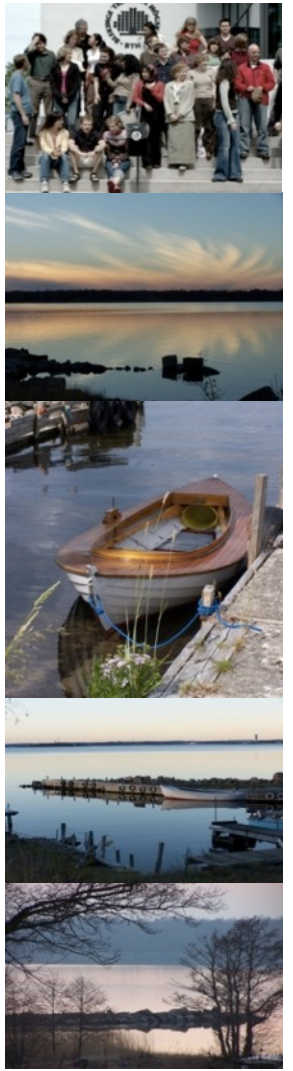
For more info on courses, [mspi.se](http://mspi.se)





# Programme Overview I+I year Second year two year Master

Period 1	Period 2	Period 3	Period 4
<b>Value Innovation</b> (7.5 credits)	<b>Product-Service System Design Research</b> (7.5 credits)	<b>Master Thesis in Sustainable Product-Service System Innovation</b> (30 credits)	
<b>Project PSS Extreme Innovation</b> (15 credits)			
September	November	March	June



For more info on courses, [mspi.se](http://mspi.se)



# Programme Requirements and Application

- MSPIs need to:
  - » Have a bachelor's degree (or equivalent experience) in engineering, industrial design, industrial economy, or a closely-related field
  - » Sufficient English language skills
- Applications for MSPI will be open until (at least) the end of February 2013. Information about the application can be found at [www.bth.se/mspi](http://www.bth.se/mspi) and [www.mspi.se](http://www.mspi.se)





# Contacts



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