

Product Optimization Workshop

Nov 29-30 2022 at RISE Mölndal



Day 1

- | | | |
|-------|--|-----------------|
| 11.45 | Registration | |
| 12.00 | Lunch | |
| 13.00 | Welcome | |
| 13.10 | Status in the swedish industry – Examples and limitations with topology optimization | |
| | <i>Harald Hasselblad, Volvo Cars</i> | <i>(20 min)</i> |
| | <i>Mikael Thellner, Scania</i> | <i>(20 min)</i> |
| 13.50 | Software suppliers – How to perform topology optimization and transfer the result to a new design? | |
| | <i>Simulia/Dassault</i> | <i>(20 min)</i> |
| | <i>Altair</i> | <i>(20 min)</i> |
| | <i>EDRMedeso/Ansys</i> | <i>(20 min)</i> |
| 14.50 | Coffee break | |
| 15.20 | Software suppliers (cont.) | |
| | <i>Hexagon/MSC Software</i> | <i>(20 min)</i> |
| | <i>Siemens</i> | <i>(20 min)</i> |
| | <i>nTopology</i> | <i>(20 min)</i> |
| 16.20 | Research in the area of topology optimization and result transfer | |
| | <i>Niclas Strömberg, Örebro University</i> | <i>(30 min)</i> |
| 16.50 | Discussion and summary | |
| 18.30 | Dinner | |

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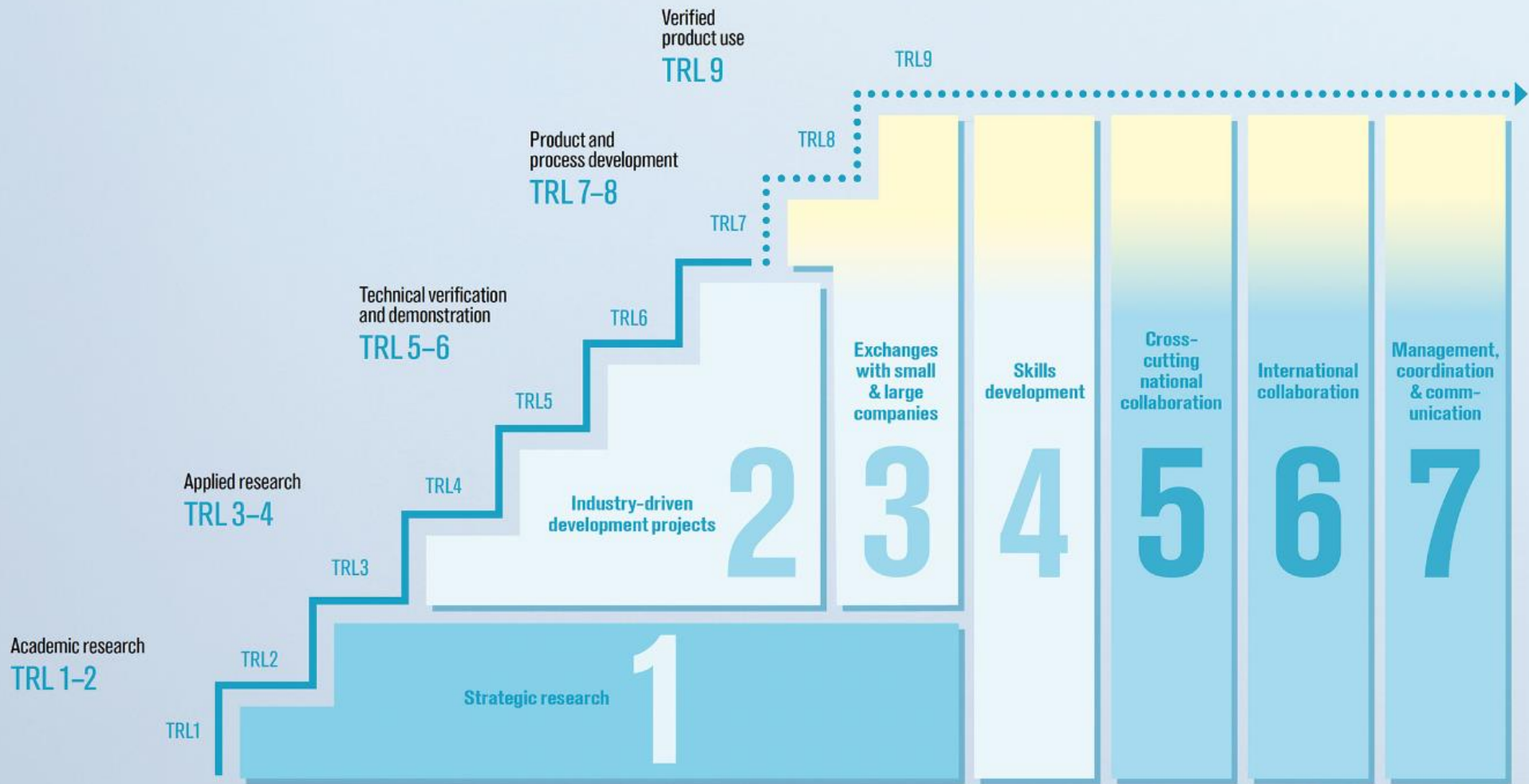
Day 2

- 8.30 Welcome
- 8.35 Status in the Swedish industry - how do we use simulation and optimization? What new skills and competences do we need?
Mikael Thellner, Scania (20 min)
Harald Hasselblad, Volvo Cars (20 min)
- 9.15 Courses on product optimization at the universities
Carl-Johan Thore, LiTH (15 min)
Johan Persson, LiTH (15 min)
Mathias Wallin, LTH (15 min)
- 10.00 Coffee break
- 10.30 Courses (cont.)
Mårten Olsson, KTH (15 min)
Gauti Asbjörnsson, CTH (15 min)
Niclas Strömberg, ÖrU (15 min)
- 11.15 Panel discussion and gap analysis
- 11.50 Summary
- 12.00 Lunch

LIGHTer

A strategic research and innovation programme for lightweighting

LIGHTer has been a **strategic research and innovation programme for lightweight technology** since 2013. The programme was one of the first five of 17 strategic innovation programmes awarded a grant from **Vinnova**, the Swedish Energy Agency and Formas.



Technology readiness level staircase

Innovation themes
– what we focus on

Innovation mechanisms
– how we work

Lightweight needs
– huge potential in many industries

Strategic research

Industry-driven development projects

Exchanges with small & large companies

Skills development

Cross-cutting national collaboration

International collaboration

Management, coordination & communication

Lightweight solutions that provide:

- Aviation
- Automotive
- Maritime
- Infrastructure
- Construction
- Industrial processing
- Energy
- Health
- Agriculture
- Forestry

RESOURCE MANAGEMENT

PRODUCT OPTIMISATION FOR SUSTAINABILITY

IMPROVED PROPERTIES

INNOVATIVE FUNCTIONS

CIRCULAR BUSINESS DEVELOPMENT

Lightweight Agenda's mission:

Through lightweight innovation, we develop technical solutions, business models and strategic forms of collaboration to achieve sustainable development. With the UN's sustainable development goals as our point of departure and with climate challenges in focus, we pursue end-to-end solutions that reduce climate impact and enable circular material flows, circular processes for product development and production, and circular use patterns. By 2040, we will have sustainable value circles in several Swedish industrial areas of strength.

2040

LIGHTWEIGHTING ENABLES ATTAINMENT OF THE UN'S SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



5 GENDER EQUALITY




6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



10 REDUCED INEQUALITIES



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



14 LIFE BELOW WATER



15 LIFE ON LAND



16 PEACE AND JUSTICE STRONG INSTITUTIONS

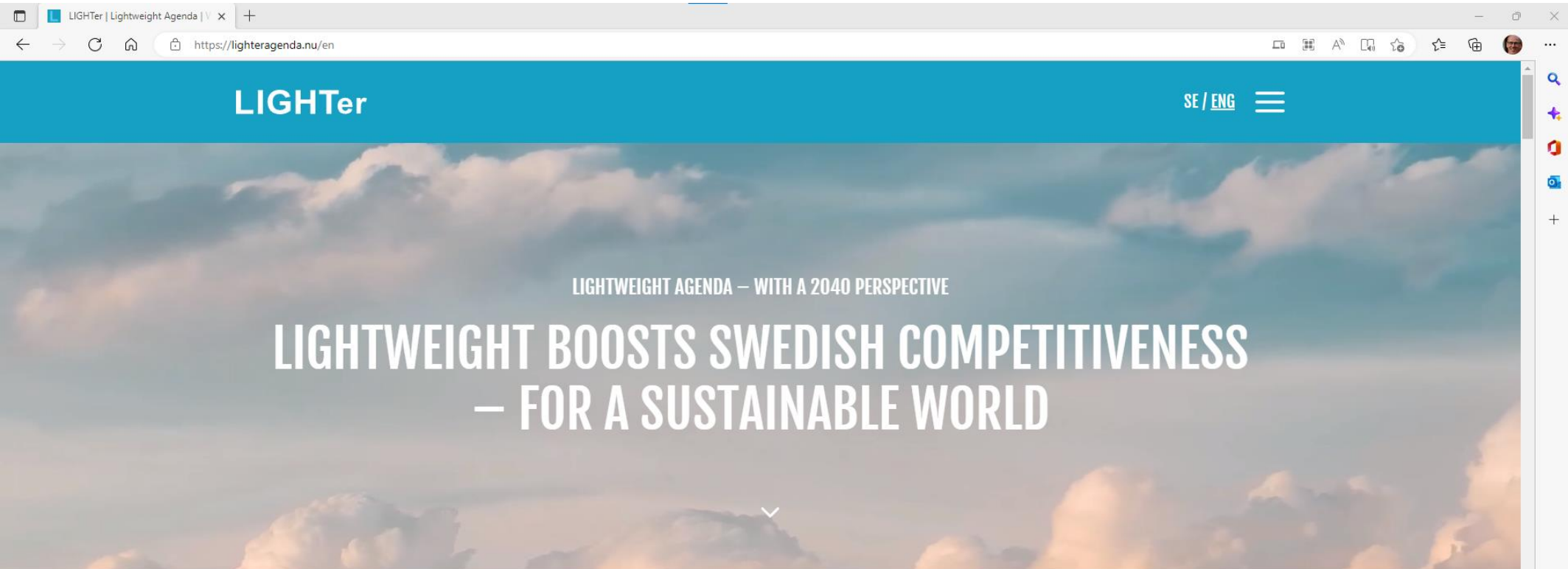


17 PARTNERSHIPS FOR THE GOALS



THE GLOBAL GOALS

LIGHTer | Lightweight Agenda | With a 2040 perspective
(lighteragenda.nu)



LIGHTer Product Optimization

Aim

An arena to support dialog and building network around methods, tools and processes for product optimization and simulation driven development.

This competence is a strong competitive advantage for Sweden.

Focus activities

- Coordinate network
- Understand State-of-the-Art within product optimization
- Develop course within product optimization
- Organize workshops and seminars.



Activities

Spring Seminar – Presentation of Master Thesis

Autumn Seminar – ”workshop”

Course – An Introduction to Product Optimization



En unik plattform för produktoptimering

LIGHTer Produktoptimering är ett nätverk som tar fram metoder, verktyg och processer för en optimeringsdriven utveckling. Det är industridrivet och arbetar utifrån insikten att de deltagande företagen har gemensamma generiska utmaningar inom optimeringsdriven produktutveckling.

- Material from previous seminars
- Web course

<https://lighter.nu/sv/meny/sip-lighter-gor/lighter-produktoptimering>

Course – An Introduction to Product Optimization



Mål:

Målet med kursen är att skapa intresse och ge en introduktion till ämnet produktoptimering.

Kursen går som webbkurs för att du som kursdeltagare ska kunna ta del av de olika delarna i din egen takt, från din egen dator. Webbkursen är uppdelad i sju olika delar om ca 10-40 minuter vardera. Du kan förstås också se om särskilt intressanta delar.

Innehåll:

<https://lighter.nu/sv/meny/sip-lighter/arbetsatt/lighter-industriutbildningar>