

AI for Resilience – From Predictive Maintenance to Data Ecosystems and Cyber-Secure OT



Per Gullander

RISE



Sten Grahn

RISE

Digital Manufacturing Cluster

The Digital Manufacturing Cluster

Four RESEARCH AREAS: Development and management over the life cycle

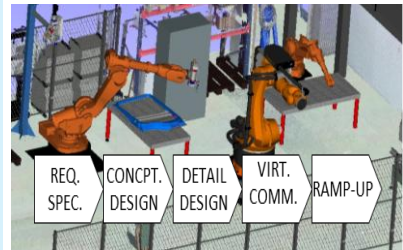
The Digital Manufacturing Cluster is one of eight Manufacturing R&D clusters.

The cluster focuses the development and management over the life cycle of manufacturing systems with extensive use of digital technologies and related methods and processes.

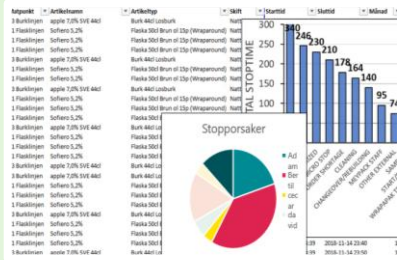
Capability of virtual tools




Work process and methods for the development of production



Manufacturing data, use and analysis



Design of Automated system



The cluster

- Shares information (surveys, research, education, programs/calls)
- Supports networking and project and consortium development
- Defines strategy, needs, and research roadmaps

Delivered via seminars, workshops, pulse meetings, and conference sessions

Members from > 20 organizations: manufacturing companies, solution providers, universities, and institutes

Industrial chair: Simon Lidberg, Volvo Group
Coordinators: Per Gullander and Sten Grahn, RISE

Digital Manufacturing Cluster

Industrial chairperson



Coordinators



MANUFACTURING COMPANIES

- Scania
- Volvo Group (CHAIR)
- Volvo Cars
- FKG
- GKN Aerospace
- 3M
- Väderstadsverken
- Hitachi energy

SOLUTION PROVIDERS/CONSULTANTS

- Siemens Digital Industries Software
- Ideal Grp
- Unibap
- Utvyakta
- Virtual Manufacturing
- Good Solutions
- Eye At production

UNIVERSITY

- KTH Royal Inst of Techn
- Chalmers Univ of Techn
- Univ of Skövde
- Univ West
- Uppsala University
- Jönköping University
- Linnéuniversitetet
- Linköping University

INSTITUTE/OTHER

- RISE (COORDINATOR)
- Innovatum
- EIT Manufacturing
- Swerim

In the pipeline:

- Alfa Laval
- Nexans
- SKF
- Astra Zeneca



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AGENDA

May 20, 11.00 – 12.30

- 11.00 **From Active Resilience to Autonomous Operations: AI, Knowledge Graphs, and Human-Centred Frameworks for FutureReady Manufacturing**
Arpita Chari, Chalmers
Magnus Wahlgård, SKF

- 11.30 **Creating Digital Value in Manufacturing: Insights from the STRIDE Collaboration – Skultuna Induflex’s journey toward reinventing Quality Inspection**
Daniel Flemström, RISE
Mohsin Saleemi, Skultuna Induflex

- 12.00 **Human-Machine CoLearning for Sustainable and Resilient Decision Making in the AI Era**
Amos Ng, University of Skövde

AI Enablement Support to Industry: Cases, Coaching, and Computation (AI ShiftLabs and MIMER)



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AGENDA

May 20, 15.45 – 16.30

- 15.45 **From idea to industrial impact: MIMER makes AI accessible for Swedish industry**
Benedikt Neyses, MIMER-Materials
- 16.10 **From Drawings to Data with AIShiftLabs: Template Generation and Tolerance Validation using Machine Learning at Gaston Components**
Peter Anderson, RISE and Mykola Kantsir, Gaston Components