SPARSAM

Sustainability Parameters for Parts Analyses and Selection for Additive Manufacturing,
Business criteria for selection of 3d-printed components (SPARTSAM)

In order to identify which components are suitable for additive manufacturing (AM), both technical and business selection criteria needs to be used. The purpose of this project is to investigate the possibility of expanding the technical selection criteria with business values such as reduced inventory costs, transport and environmental impact.

Click on the link to learn more

Business criteria for selection of 3d-printed components (SPARTSAM) | RISE
Criteria's for AM-Part selection

To be able to identify which components are suitable and profitable to 3d-print both technical and business selection criteria’s needs to be used.

Technical selection Criteria's:
- Complex shape
- Expensive material
- Low weight is essential
- Technical properties can be improved
- Individual variations (tailored)
- Potential to parts consolidation
- A need to reduce assembly time/increase productivity
- Smaller series

Business Selection Criteria's:
- Reduced Warehouse cost
- Reduced Inventory Costs
- Increased Part Availability
- Lead time
- Optimized Demand Management
- Reduced Transportation
- Reduced Production Cost
- Increased Uptime
- Sustainability
4 Production Scenarios will be explored

<table>
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<tr>
<th>Scenario 2</th>
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<tr>
<td>3D-print production</td>
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**Values**

- Reduce Warehouse costs
- Reduce Inventory Costs
- Reduce parts transportation
- Increase Availability
- Improve Service Level
- Increase Uptime
- Agility + Flexibility in PDP
- Sustainability

*Inkurans är en värdeminskning av en vara beroende på att den är tex skadad, tekniskt eller modernärsigt föråldrad.*
The Project Team

**Chairmen:** Mari-Louise Bergholt (F), Co-director RISE AM Center
Anders Hjalmarsson Jordanius (M), RISE Mobility & System
Yuan Zhong (M), Volvo AB
Andreas Bergman (M), Alfa Laval
Torbjörn Larsson (M), Volvo Cars
Lars Nyborg (M), Chalmers

**Project Manager & creative lead:**
Markus Eriksson (M)
RISE Digital Innovation

**Steering Group**

**Work Packages**

- **WP1:** Establishment
- **WP2:** Current situation
- **WP3:** Feasibility study
- **WP4:** Next Step

**Competences & resources**

- **Circular business models and supply chains**
  - Patricia Van Loom (F), Chalmers
  - Markus Eriksson (M), RISE
  - Magnus Widfeldt (M), RISE
  - Daniel Dunnersjö (M), Volvo Cars
  - Romain Pierron (M), Volvo AB

- **Additive Manufacturing**
  - Thamon Benjapongsapun (F), Alfa Laval
  - Johan Ekstein (M), Volvo Cars
  - Hans Boström (M), Volvo Cars
  - Yuan Zhong (M), Volvo AB

- **Gender Equality**
  - Melinda From (F), RISE

- **Expert Reviews & Dissemination**
  - Mari-Louise Bergholt (F), RISE
  - Birgitta Öjmartz (F), RISE
  - Inko Marcaide (M), Volvo Cars
  - Martin Kureve (M), RISE
  - Ola Isaksson (M), Chalmers
Time Plan

The project GANTT

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<tr>
<th>WP</th>
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<th>WP Responsible</th>
<th>October</th>
<th>November</th>
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<td>WP1</td>
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<td>WP2</td>
<td>Current situation and knowledge</td>
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<td>Feasibility of supply chain model and parameters related to circular scenarios</td>
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<td>WP4</td>
<td>Identification of Step 2 initiatives, consortium and disimination</td>
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Feasibility Study

Next step activities:
- RISE book a start-up meetings with each partner. (Half-day)
- Joint meeting and workshop (Half-day)
- Magnus & Markus resp.