Implementation through an industry cluster approach
Martin Rabe, it’s OWL Clustermanagement
Digitising Manufacturing 2016, MTC, Coventry, 15th November 2016
Leading-Edge Cluster Competition
Initiated by Federal Ministry of Education and Research (BMBF)

- Flagship high-tech strategy of Federal Government
- Regional pooling of economy and science along the value chain
- 3 rounds of competition (2007 to 2012)
- 15 leading-edge cluster represent high-tech competence ensuring growth and employment
- Solutions for future areas of focus (climate/energy, health/nutrition, mobility, security, communication)
- Funding: €40m over 5 years for each cluster
15 Leading-Edge Cluster in Germany

- Aviation Cluster Hamburg
- Intelligent Technical Systems OstWestfalenLippe (it’s OWL)
- Efficiency Cluster Logistik Ruhr
- Software Cluster
- Cluster Individual Immunintervention CI3
- Biotech-Cluster Rhein-Neckar BioRN
- Forum Organic Electronics
- MicroTec South-West
- Electric Mobility South-West
- BioEconomy Cluster
- Cool Silicon Saxony
- Solarvalley Mitteldeutschland
- Medical Valley EMN
- Munich Biotech Cluster m4
- MAI Carbon
- Electric Mobility South-West
Key Objective it's OWL 2017:
Top Position in Intelligent Technical Systems

Systems at the Service of Humanity:
- Resource efficiency
- Usability
- Reliability

Further objectives:
- 80,000 jobs secured
- 10,000 new jobs
- 50 new companies
- 5 new research institutes
- 500 additional researchers
- 4 new courses of study / 500 enrollments (p.a.)
Aims of Technology Transfer

Aims:
• Provide access to intelligent technical system development contained in the technology platform
• Especially dedicated to family-run businesses and a wide range of small and medium-sized companies
Operationalization by Projects

Global Market for Intelligent Technical Systems

Subsystems
- Examples
  - Intelligent Sensors
  - Drivetrains
  - Automation components

Subsystems form the basis of an intelligent technical system.

Systems
- Examples
  - Manufacturing equipment
  - Household appliances
  - ATMs

Systems found the basis for partially geographically dispersed networked systems.

Networked Systems
- Examples
  - SmartGrids
  - Production plants
  - Cash management systems

Networked systems are alterable during course of validity.

5 Platform Projects
creating technology platform for innovation projects and transfer

- Self-Optimization
- Human-Machine Interaction
- Intelligent Networking
- Energy-Efficiency
- Systems Engineering

33 Innovation Projects
of industry partners lead to superior market performance

8 Sustainability Measures
creating development dynamics exceeding funding period

- Strategic Foresight
- Technology Transfer
- Internationalization
- Acceptance
- Prevention of Product Piracy
- Education and Training
- Market Orientation
- Business Start-Ups
Organizational Structure Cluster Management

it’s OWL e.V. (Cluster Partners)

Cluster Board (Board of Directors)

it’s OWL Clustermanagement GmbH

Roman Dumitrescu
Head of Strategy, Research and Development

Günter Korder
Head of Operations

Herbert Weber
Head of Marketing

Marketing Team
Internationalization Team
Transfer Team
System Architecture Team

advice / support

Project Office

Projects
(Innovation Projects, Cross-sectional Projects, Sustainability Measures)
Track record 2016

- 239 partner within the cluster
- 47 projects, 15 completed
- 170 Transferprojects, 73 completed, 57 running and 40 starting 2017
- Additional 264 scientists at the involved research facilities
- 6 new research facilities (e.g. Fraunhofer)
- 23 new study programmes
- 534 press reports, 15 in nationwide key media
- 31 start-ups, 24 concepts
- Funding: 44 million € (Cluster), 2 million € (Management), at least 29 million € (additional projects)
- 100 % at ECEI-Audit (Cluster Gold Label)
Technology Transfer: A Four-Stage Approach

1. Broad transfer
   - Attention and initial information
2. Deepened understanding
3. Testing and trying
4. Application and integration

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Technology Transfer: A Four-Stage Approach

- **Fair presentations** generate national and international **attention**
- **Intensive involvement** of chambers, sponsors and regional networks as **multipliers**, especially for **events**
Technology Transfer: A Four-Stage Approach

- Establishment of **task forces** and groups for experience exchange
- Presentation of „**Best Practice“ solutions from „Mittelstand“
- Publications in trade journals regarding content of transfer
Technology Transfer: A Four-Stage Approach

- Demonstration centers for testing and trying: Verification of practicability of results from research
- Demonstration of practical application of Industry 4.0-Solutions through company visits

<table>
<thead>
<tr>
<th>Broad transfer</th>
<th>In-depth transfer</th>
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Technology Transfer: A Four-Stage Approach

Focussed transfer projects:
- **Cooperative projects** between company and research institute
- Solution of one specific **task given by a company**
- Implementation of approximately **170 transfer projects** in several application periods (competitive procedure)
- **Term** each project: **5 to 10 months**
- **Funding** for research institution (40k – 50k € each project)
Technology Transfer for SME
Example of topocare
Awareness in professionale circles, media and politics

**Leading fairs**

**Industry 4.0 Conference**

**Politics**

**Press and media**

- Alle für OWL
- Orientierung bei Industrie 4.0
- Wirtschafts Woche
- Frankfurter Allgemeine
- Handelsblatt

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## Success factors of it‘s OWL

<table>
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<th><strong>Entrepreneurship</strong></th>
<th>In family-owned businesses the managing directors think long-term and assume the risk.</th>
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<td><strong>Strategic Competence</strong></td>
<td>The strategic leadership is based on strategic foresight, a distinct strategy and an ongoing strategic controlling to meet the challenges of tomorrow.</td>
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<td><strong>Systems-Engineering-Competence</strong></td>
<td>Innovative products and services are the results of the interaction of different disciplines. This requires system thinking and an interdisciplinary product development.</td>
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<td><strong>Cultural Affinity</strong></td>
<td>Companies and research facilities pull together for their common goals.</td>
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Thank you for your attention