"Digitalising Manufacturing in Germany and on global level - achievements, challenges and the way forward“

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Digitizing Manufacturing in Germany and on a Global Level: Achievements, Challenges and the Way Forward

Markus Heß, Deputy Director General Industrial Policy, Federal Ministry for Economic Affairs and Energy

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Modern European Industry: Turning Challenges into Opportunities

Demographic change

Decarbonization

Industry

Political insecurities

Digitization
German Industrial Policy

- Industry is a key component for our economic ecosystem
- The industrial share in German GDP is more than 22%
- Germany is the factory supplier of the world
- Our aim: Industrial sector in Germany shall become
  - Leading Market for Industrie 4.0 applications and
  - Leading Provider of Industrie 4.0 solutions.
Benefits for Enterprises and Society
The Vision for the 4th Industrial Revolution

Economic

Environmental

Social
Policy Instrument - Plattform Industrie 4.0

**Chair**
Ministers Zyprès, Wanka
Representatives of commerce, trade unions, science

**Steering body (companies)**
- Chaired by business representatives, participation of Economic Affairs and Research Ministries
- Chairs of working groups, other guests/promoters
Industrial strategy development, technical coordination, decision-making and implementation

**Strategy group (Government, business, unions, science)**
- Chaired by BIS Machnig, BIS Schütte
- Representatives of steering body
- Representatives of Federal Chancellerly, Interior Ministry
- Representatives of the Länder
- Representatives of associations (BDEW, BDI, BITKOM, DIHK, VDA, VDMA, ZVEI)
- Representatives of trade union (IG Metall)
- Representatives of science (Fraunhofer)
Agenda setting, political steering, multipliers

**Working groups**
- Reference architecture, standardisation and norms
- Research and innovation
- Security of networked systems
- Legal framework
- Work, education and training
- Others as required
Working units with technical/practical expertise; participating ministries: Economic Affairs, Research, Interior, Labour

**Activities on the market**

**Industrial consortia and initiatives**
Implementation on the market: test beds, examples of applications

**International standardisation**
Consoritum, standardisation bodies, DKE and others

**Scientific Advisory Committee**

**Secretariat as service provider**
Network coordination, organisation, project management, internal and external communication

**Labs Network Industrie 4.0**

**Standardization Council 14.0**
Highlights from Platform Industrie 4.0

• Expertise: more than 30 publications (also published in English at http://www.plattform-i40.de/I40/Navigation/EN/InPractice/Online-Library/online-library.html)

• Reference Architectural Model Industrie 4.0 (RAMI 4.0)

• Administration shell (Communication of components)

• Best practices (Online-Map Industrie 4.0)

• Founding of private associations out of the platform: Standardization Council Industrie 4.0 (SCI 4.0) and Labs Network Industrie 4.0 (LNI 4.0 e.V.)
German SME-Transfer Network Industrie 4.0

- Plattform Industrie 4.0
- Chambers of Industry and Commerce
- SME 4.0 - Competence Centers
- Federal Ministries
- Regional Projects and Clusters
- Business Associations
- German Federal States
- Labs Network Industrie 4.0
Internationalization strategy

• Global, open and interoperable standards are of fundamental importance

• IT security: key factor for networked production

• Bilateral and multilateral cooperation is needed to tackle transnational opportunities and challenges

• Value chains are increasingly global
International Cooperation – Multilateral/Bilateral

United States
> Industrial Internet Consortium

France
> Alliance Industrie du Futur

Italy
> Piano nazionale Industria 4.0

China
> Made in China 2025

Japan
> Robot Revolution Initiative

Australia
> Prime Minister’s Industry 4.0 Taskforce
German G20 Presidency

• Digitization is a key requirement for strong, sustainable, balanced and inclusive global growth

• Global digital markets need global understanding

• Industrie 4.0 offers tremendous potential if we succeed in building international cooperation and by reaching international standards

• G20-States reached an agreement about a roadmap to digitalisation
Key Messages

• Industrie 4.0 offers the opportunity for true added value in production

• Industrie 4.0 needs a level playing field: global, innovative and fair

• Digitized manufacturing of the future needs a smart digital regulatory framework at national and international level

• Think globally, act on a regional level, be internationally successful

• International cooperation is a key success factor
Thank you for your attention!
“Smart industry in Sweden– securing people in the digital transition”

Eva Lindstroem,
State Secretary, Ministry for Enterprise & Innovation, Sweden
Smart industry in Sweden
- securing people in the digital transition

Eva Lindström
State Secretary for enterprise and innovation, Sweden
Smart industry
An industrial skills boost needed
An image problem…
This is our challenge
Made Smarter: the independent industrial digitalisation review

Prof. Juergen Maier,
Chief Executive, Siemens plc
UK perspective on Digital Manufacturing

Lord Prior of Brampton, former Parliamentary Under Secretary of State
What is the impact of industrial digitalisation on work and the society?

Dr. Lina Huertas CEng FI MechE
Head of Technology Strategy for Digital Manufacturing
Manufacturing Technology Centre
Digitalising Manufacturing 2017
What is the point of industrial digitalisation?

Let’s keep our eye on the target.

From a societal point of view, it’s about prosperity.
They say 47% of jobs are at risk.

We stand between risk and reality.

We need to be proactive in the transition.
Made Smarter has already made strong recommendations focus on skills and career.

We need to continue the debate to be prepared.
There will be winners and losers, how do we transition to minimise the impact?

Made Smarter talks about upskilling one million workers - this is very ambitious, how can it be achieved?
What will be the shape of future labour and how does the business model need to evolve?

How do we transform workers from victims to the driving force of the transition?
Industrial digitalisation is an opportunity to realise the increased potential of human talent in a globalised future of the UK.