

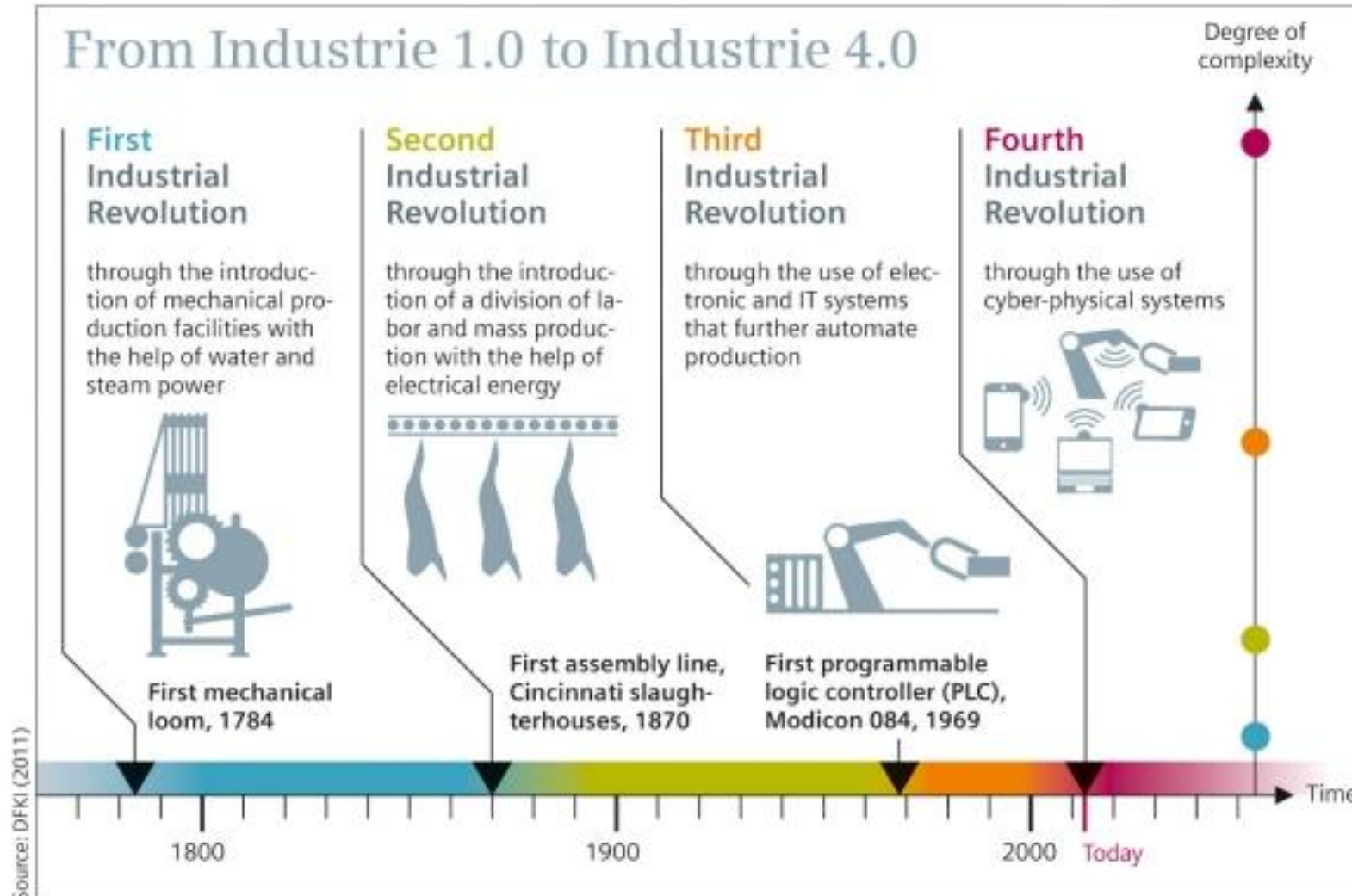
Digitalisation

Current Developments and Challenges for the German Industry

24 September 2018

Industry 4.0 - concept and use cases

Industry 4.0 - the fourth industrial revolution

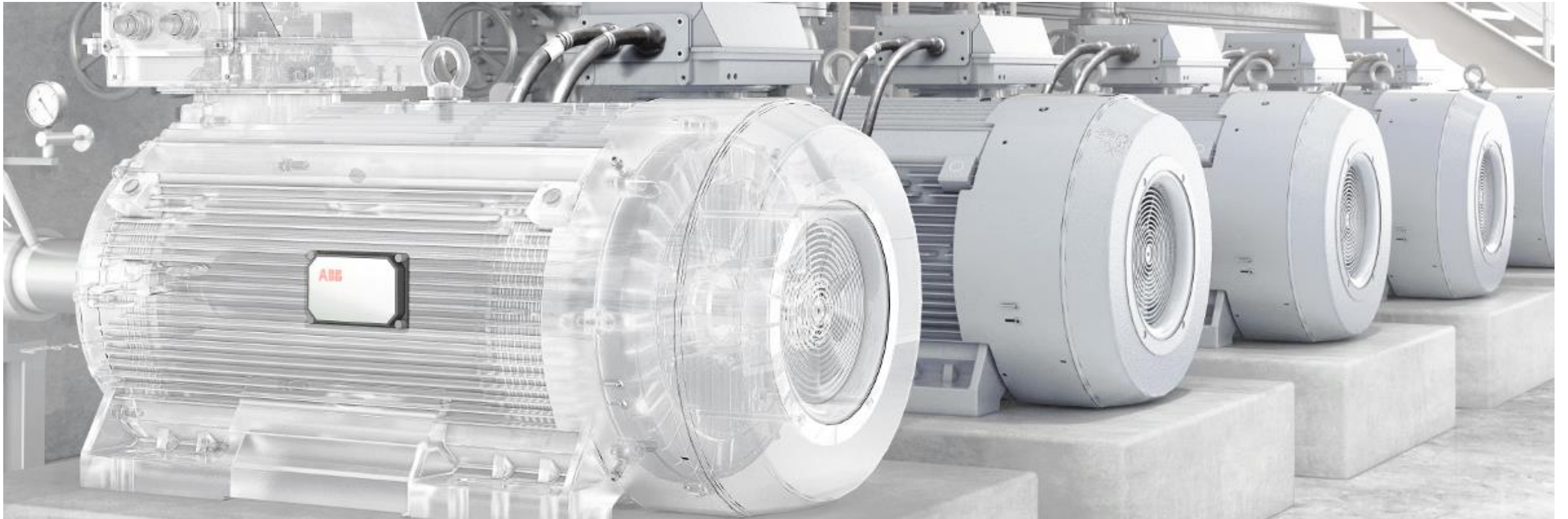


Example - Fraunhofer IML/Dematic MultiShuttle Move



Source: iml.fraunhofer.de

Example - ABB Smart Sensor



Source: ABB (2017)

Example - Rolls-Royce Jet Engine



Source: Rolls-Royce (2016)

Example - Workaround ProGlove

Possible fields of application:

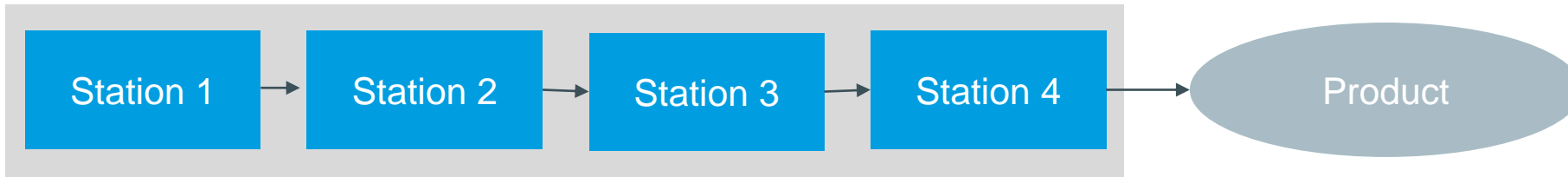
- Automated scanning of goods.
- Monitoring and training of workflow sequences.
- Identification of parts/tools.
- Documentation of goods and processes.



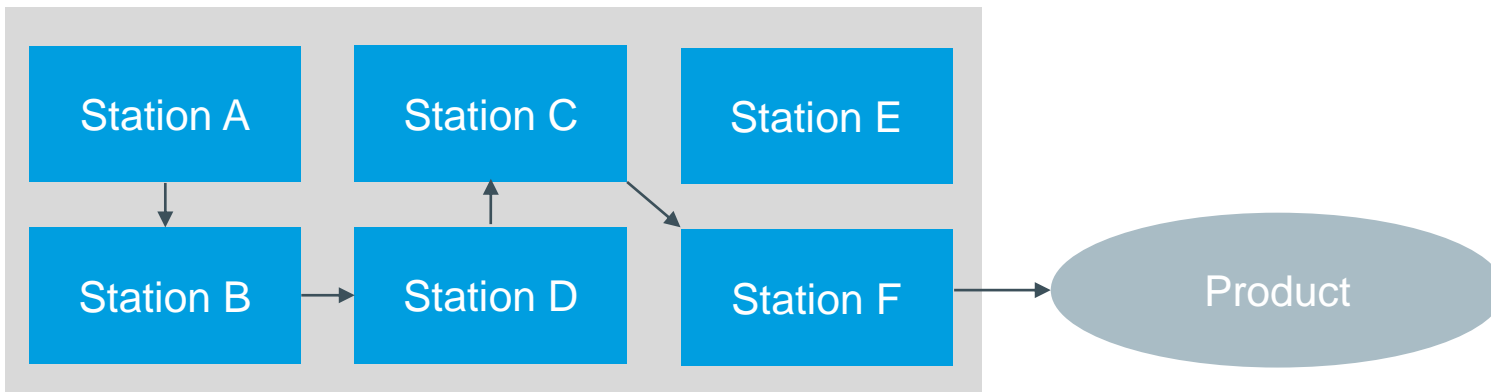
Source: Workaround (2016)

The product finds its own way through the factory

Manufacturing process today



Manufacturing process of the future



Source: Hewlett-Packard

Industry 4.0 - Challenges

Germany has the potential to evolve as a leading market and leading supplier for Industry 4.0

Germany's assets...

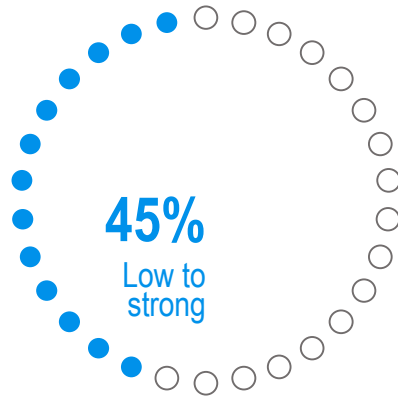
- High manufacturing share (25,7%)
- Market leadership in machinery and plant manufacturing
- Strong position in the field of enterprise software solutions
- Innovation leadership in embedded systems and automation engineering
- Highly skilled workforce
- Proximity to suppliers and users

What are the challenges?



Source: Bitkom Research

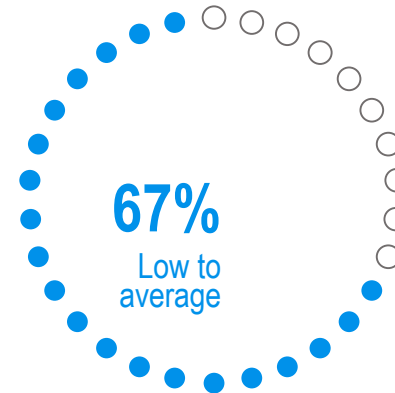
Self-assessment of 300 German companies shows: challenges are not recognized in a wide range



Missing the debate

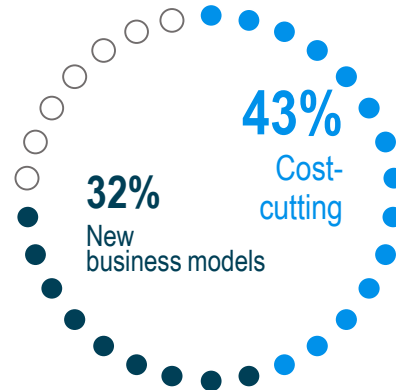
45 % have not examined the implications of digitalisation intensively.

Major companies debate this more intensively than SME



Two thirds of German companies rate their digital maturity as low to average.

Major companies rate their digital majority distinctively better



Main focus lies on efficiency

Effects of costs are mostly of central interest.

Search for earnings potentials stemming from new business models are only relevant for major companies

Plattform Industry 4.0

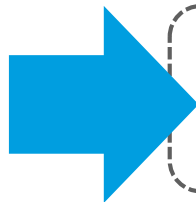
Plattform Industrie 4.0 - Goals

Industry 4.0...

- ▶ ... is a project of and for society as a whole...
- ▶ ... , which requires a close alliance amongst the private sector, academia, politics, trade unions and associations ...
- ▶ ... and needs to be translated into practice and be implemented now.

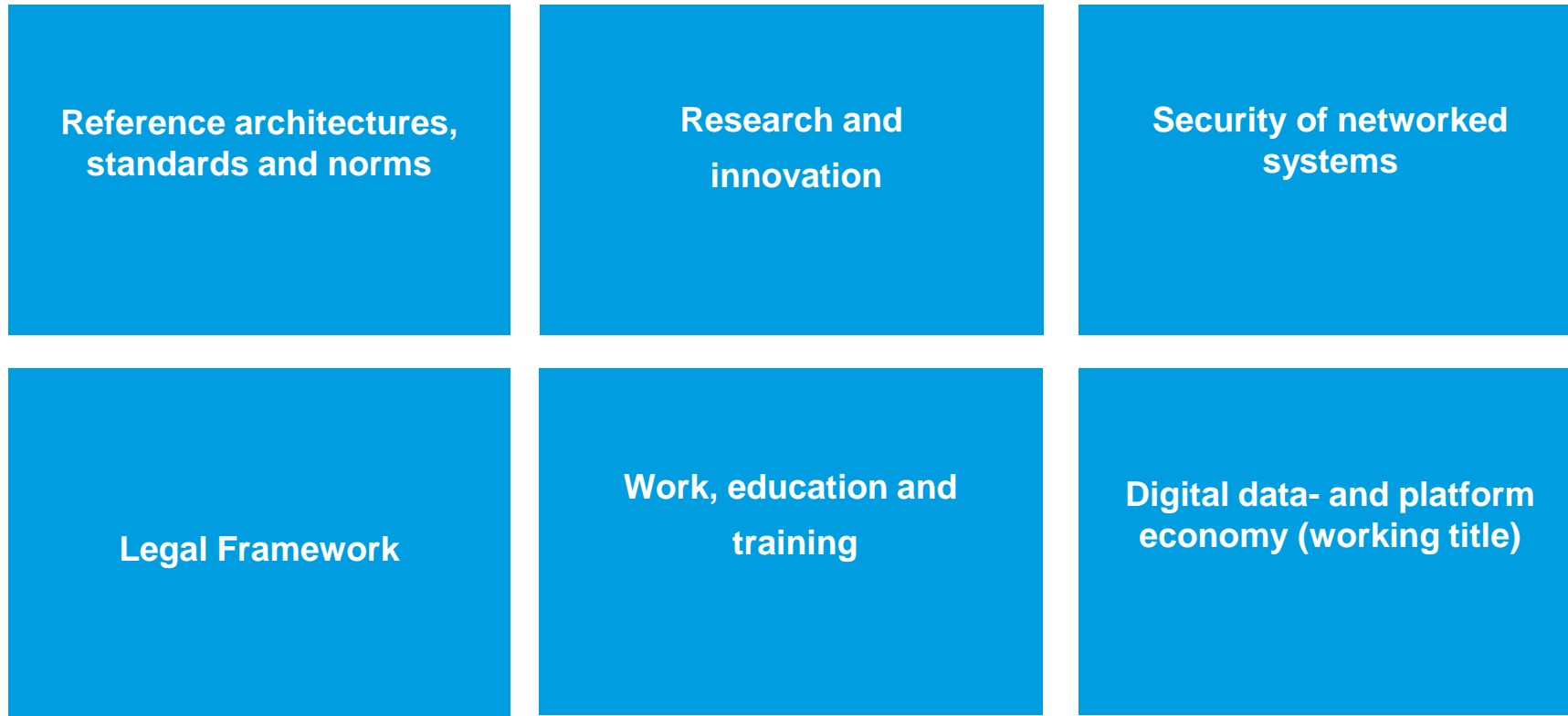


Source: Plattform Industrie 4.0



The **Plattform Industrie 4.0** provides support for the coordinated and organised transition into the digital economy in Germany

Plattform Industrie 4.0 - Working Groups



Source: Plattform Industrie 4.0

Conclusion

Digital Economy

What governments must do...

- Provide a high-performance broadband infrastructure
- Strengthen the startup ecosystem
- Creating a European Digital Single Market
- Secure qualification needs
- Strengthen IT-Security
- Increase innovative capability
- Implementing competence and collaboration centers

Thank you very much!

Federation of German Industries

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