Digitising the chemical industry

Unlocking the potential of transformation in a specialty chemical company

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CeBIT‘s guiding themes illustrate the core of digitalization

CeBIT Global Event for Digital Business

2011	**Cloud Computing** – *work and live with the cloud*	**Platforms**
2012	**Managing Trust** – *competition for trust*	**Data security**
2013	**Shareconomy** – *utilize knowledge and resources instead of owning assets*	**Value creation without owning assets**
2014	**Datability** – *responsible and sustainable use of data*	**Connectivity and big data**
2015	**d!conomy** – digital transformation of economy and society	**New business models and fundamental change**
2016	**d!conomy: join - create - succeed** – *human centered digital economy*	**Human centered**
2017	**d!conomy: no limits!** – *digital is gaining speed but still a long way to go*	**Get moving!**

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Digitalization means creating, communicating, delivering, exchanging offerings that have value for customers.

Evonik‘s strategic approach aims to enable digital acting

Strategic focus	Challenge	Implication	Examples
• Business model innovation	• Expand traditional view and focus towards disruptive new possibilities of the digital economy *“Business Prototyping”*	• External focus • Provide “freedom to operate” for agile business experimentation → Evonik Digital GmbH	• New digital service offerings and platforms
• Customer Touchpoint Excellence • Functional Excellence	• Adoption of existing businesses to digital environment *“Just do it”*	• Leveraging the whole organization to digitize our businesses • Focus: Internal processes	• E-Business • Industry 4.0 • Work 4.0

Building Blocks for digital Thinking and Acting

Customer centricity	Speed & agility	Ecosystem	Skills & competencies	Digital culture
Focus on customer experience	Fast iterative approaches	Leverage external network	Build up digital know-how	Cross-functional, start fast, fail fast attitude

„Industry 4.0“ will further increase safety and effciency in chemical production

„Industry 4.0“ means digitalization on shop-floor level

Modular Engineering

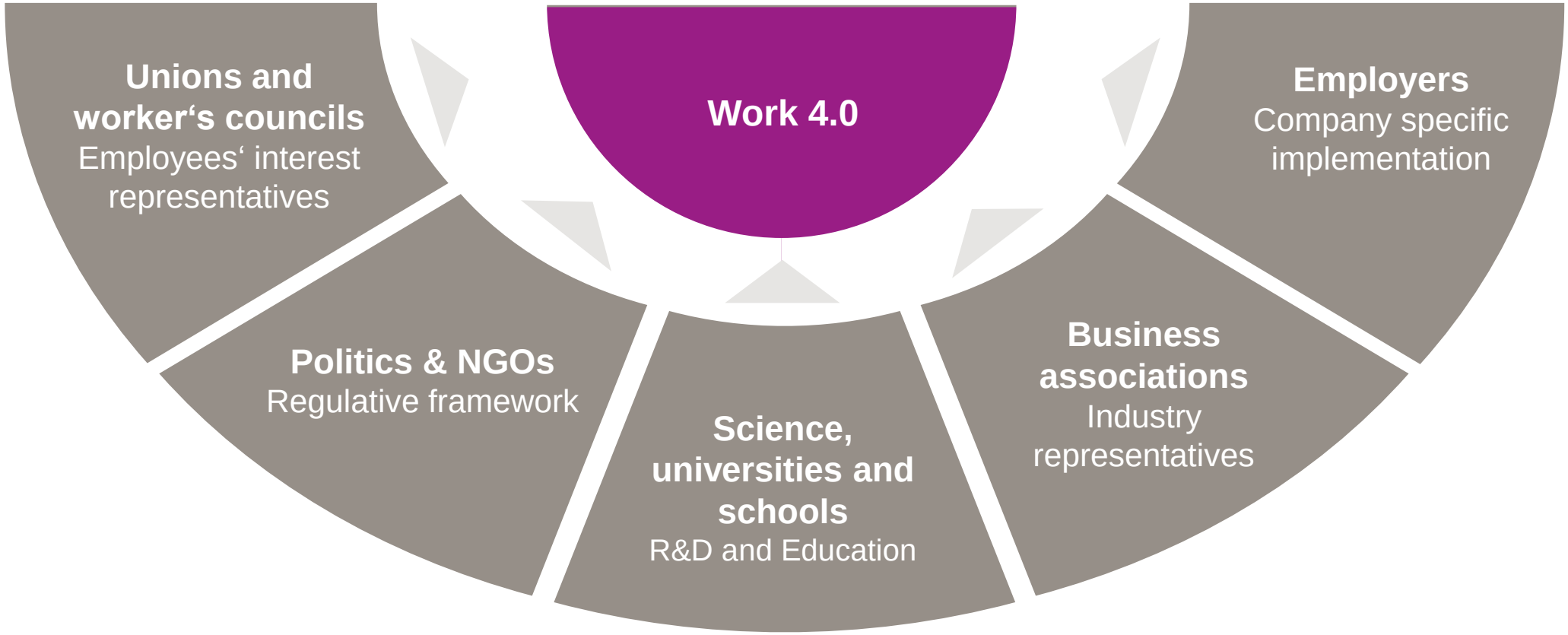
- Flexible plant configuration
- Shorter „time to market“ to supply technical samples and individualized products
- Integrated, consistent plant documentation along the asset life cycle

Remote Assistance and Control

- Introduction of a 2nd safety layer in the plant surroundings
- Focus on further improvement occupational health and safety
- Adopt real-time remote plant control architectures to chemicals
- Connected devices and predictive data analytics as pre-condition

“Work 4.0” will only succeed by collaboration of different stakeholders

Evonik prepares for the digital challenges in an aging society



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Expected implications from digitalization for the chemical industry in Europe

- Chemical industry and its products will remain an enabler for innovation and resource efficiency in customer industries

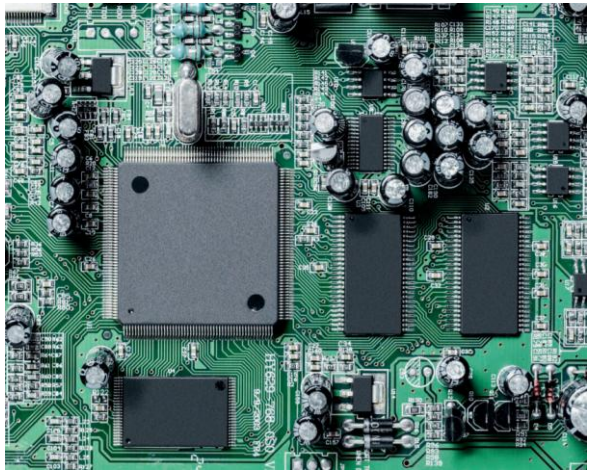
  → ***Stimulate innovation, qualification of talent and trust***

- Digitalization will enable more customized and individualized products also bearing potential to empower local, specialized value chains

  → ***Support local collaborations and value networks, asset sharing, cross-industry cooperations***

- Internet of things and remote digital services bear the potential to increase the competitiveness of isolated chemical production sites

  → ***Provide decent digital and logistic infrastructure also outside large agglomerations***

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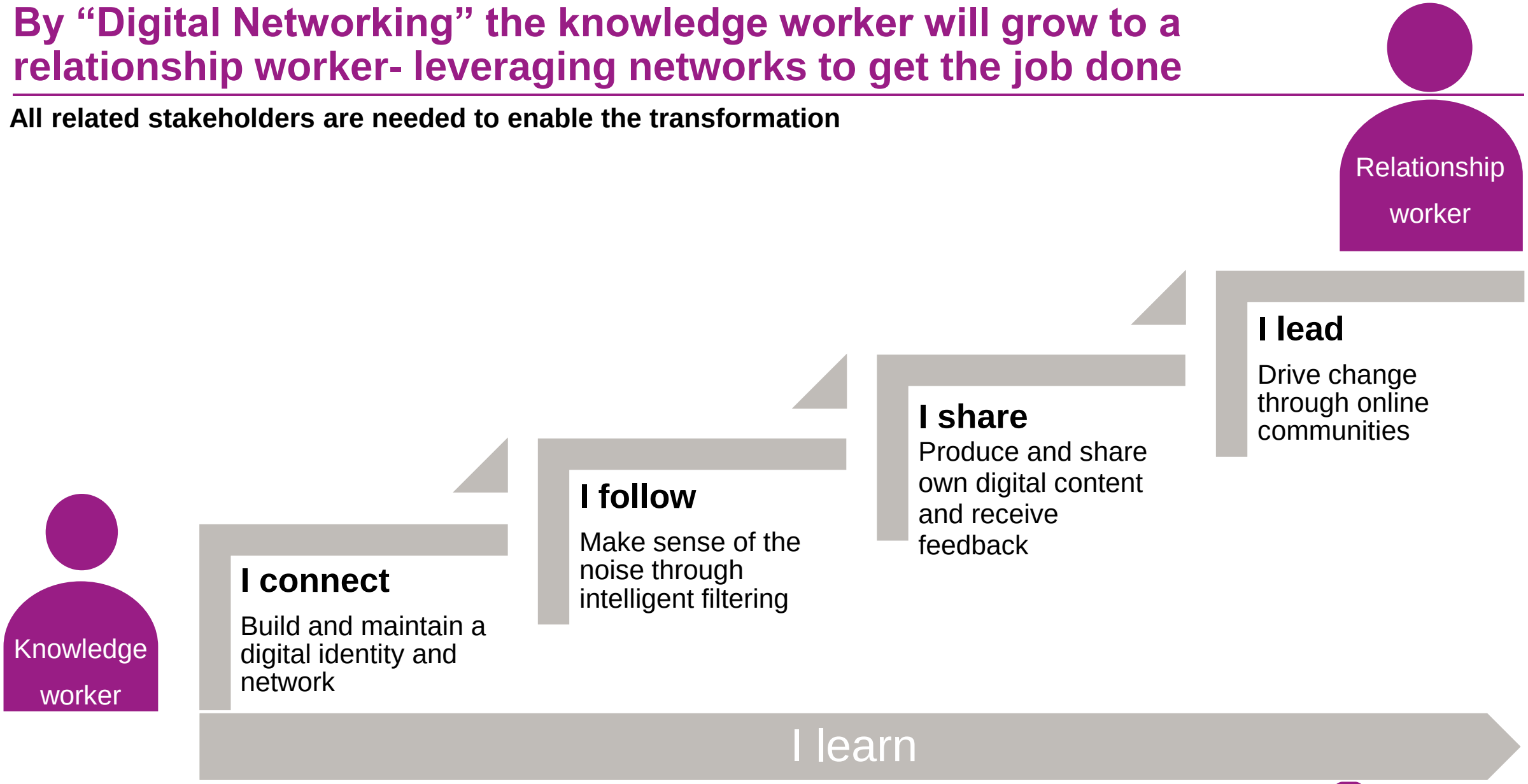
By “Digital Networking” the knowledge worker will grow to a relationship worker- leveraging networks to get the job done

All related stakeholders are needed to enable the transformation



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