

# Transfer of Technology Stream

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# Sustainable Technology Transfer: The German Way

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# Five Key Points and Take-Home Messages

1. Successful technology transfer in **Europe should not necessarily follow the US model** due to major cultural, political and economical differences.
2. Technology transfer policies should **help the successful European industries like automotive and manufacturing** to secure their role as global leaders (example Industry 4.0 in Germany).
3. Public Private Partnerships (PPPs) are a key element of European technology transfer with a **tight coordination of public research, private companies and political regulatory frameworks** (examples FI PPP, BIG DATA PPP Forum, DFKI).
4. **Liberal IPR policies** make European research centers attractive for **investments of global high-tech companies**.
5. The funding of **mission-based consortia projects** as planned in Horizon 2020 by the EC and European Governments between the **best Research Centers, SMEs and large companies** enable successful technology transfer networks.

# President Obama has introduced the “re-industrialization” strategy for the US

In the **US**, the great **spike in unemployment** over the past five years was disproportionately due to loss of manufacturing jobs. Across the entire industrial landscape there are now gaping holes and missing pieces. It's not just that factories stand empty and crumbling; it's that critical strengths and capabilities have disappeared that once served to bring new enterprises to life.

Innovation in **Germany** builds on legacies: in industrial specializations, longstanding relationships with customers, workforce skills, and proximity to suppliers with diverse capabilities.

The potential of German patterns extends well beyond defending niches against lowcost competition with incremental advances.

They create new businesses, **not usually through start-ups - the U.S. model** - but **through the transformation of old capabilities and their reapplication, repurposing, and commercialization**

The Germans had not only their own legacy resources, but also access to a rich and diverse set of **complementary capabilities in the industrial ecosystem**: suppliers, trade associations, industrial collective research consortia, industrial research centers, Fraunhofer Institutes, University-industry collaboratives (like DFKI), technical advisory committees (like the Research Union)



MIT Taskforce on  
 Innovation and  
 Production Reports  
**MAKING IN AMERICA**  
 MIT Press, 2013

# Aligning Major National and European Initiatives for Technology Transfer



German Future Project 1  
400 M€



Service@Digital



Trusted Cloud

German Future Project 2  
300 M€



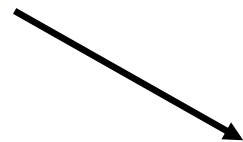
FUTURE  
INTERNET  
PPP



PPPs



BIG  
DATA  
PPP  
Forum

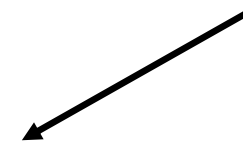


software  
campus

Training and Coaching  
for CTOs  
of the Future



E-Learning and Jobs for  
Young Professionals  
from Southern Europe



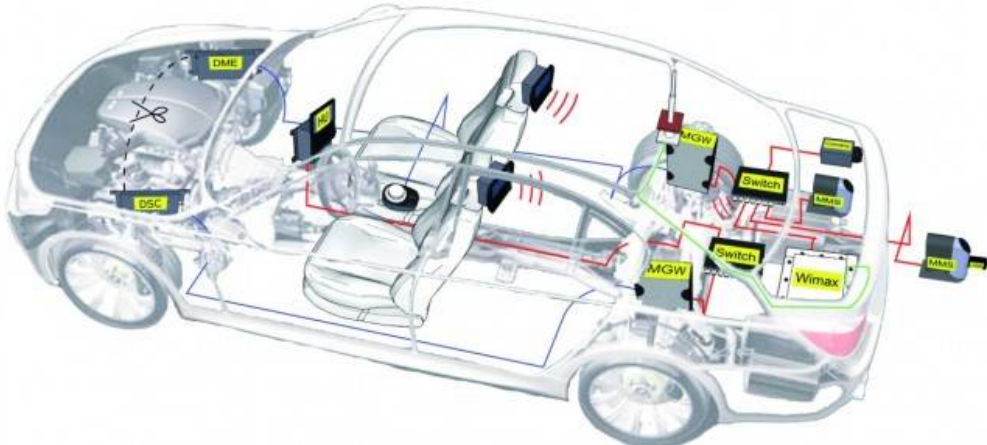
# Boosting Successful Classical Key Industries by Future Internet Technologies

Examples in Germany: Automotive Industry and Factory Automation


## Two Revolutions: The Internet of Things and Services for the IP Car and the IP Factory

~~Special Bus Systems  
(eg. CAN, MOST, LIN, FlexRay)  
in the Car~~

~~Special Field Buses  
in factories (eg. Profibus, Interbus, CANopen,  
ControlNet, CC-Link, DeviceNet)~~



**SEIS & SimTD:  
Internet in and between Cars**



**Industry 4.0:  
Internet and Cyber-Physical Production Systems  
in Smart Factories**

# Transforming FP 7 PPPs into Sustainable PPPs with Economic Impact

## Lifting the Successful German PPP Models to a European Level

**PPP contract with real shareholders and  
PPP as a non-profit legal entity (gGmbH)  
Run by CEO and CFO as a Company with a Supervisory Board**

### Shareholders

- Key Companies in an Industrial Sector and their SME Ecosystem (Private)
- Top-Notch Research & Innovation Institutions (Public)
- Funding Agencies (States and/or Federal Government)

**Joint Innovation Hubs, Co-Location Centers, Living Lab owned and  
managed by PPP**



**Economic & Business Impact:  
Jobs, Workforce, Spin-Off Companies, Products,  
Patents, Standards**

### Successful Examples in Germany:

**Intel Visual Computing Institute**



(since 2009)

**DFKI GmbH**



(since 1988)

**Telekom Innovation  
Laboratories**

Telekom Innovation Laboratories



(since 2004)

**EIT ICT Labs Germany GmbH**



(since 2011)

**Thank you very much for your attention.**

