

What is the German Manufacturing Industry all about?!



Audi



PORSCHE



Das Auto.



Mercedes-Benz



Wir leben Autos.

Security-Vision-Systems



Grunewald
Group



Hirschvogel
Komponenten

The Meaning of SMEs for the German Manufacturing Industry



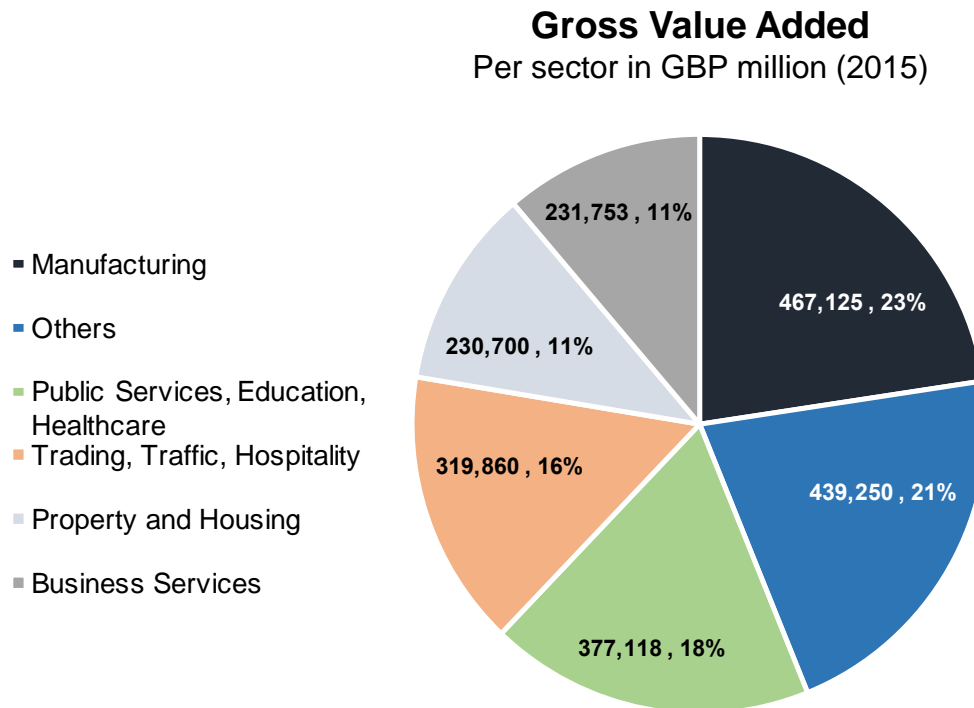
Fabian Lensing

23rd February 2016

www.cranfield.ac.uk

The Manufacturing Industry represents the Core of the German Economy...

Almost $\frac{1}{4}$ of the German GVA is created by the **Manufacturing Sector**

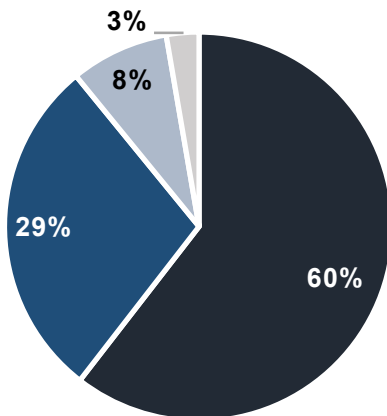


The manufacturing industry constantly accounts for 23% of the entire German GVA.

Traditionally strong sectors are the automotive industry, plant & machinery engineering and chemicals.

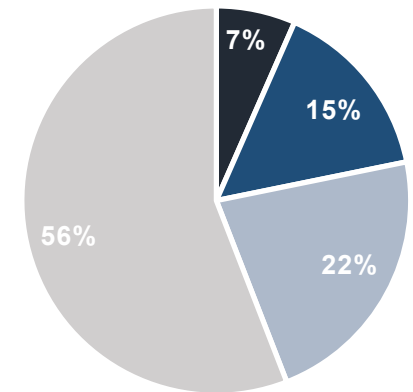
...and is driven by SMEs

of Companies



Total: 250,000

Employees per Category



Total: 5.5 m

SMEs...

*... are the backbone
of German Manufacturing.*

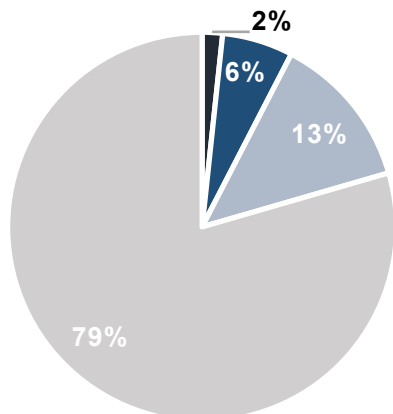


Enabler for...

... Jobs

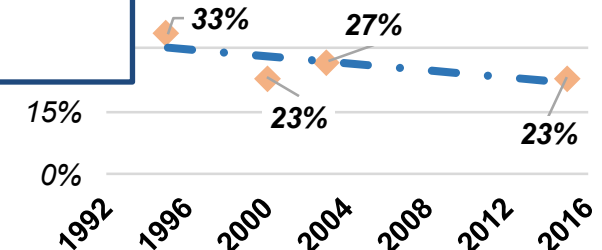
... Sales & Value

Sales Revenue



Total: GBP 1,500 bn

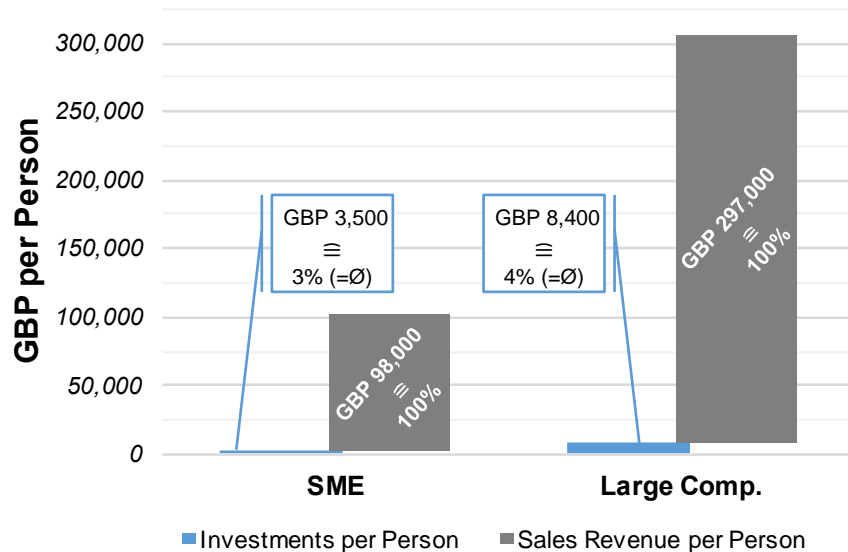
Evolution of Final In-House Value Added
Example Automotive OEMs



Revenue, Investment & International Market Access

Manufacturing

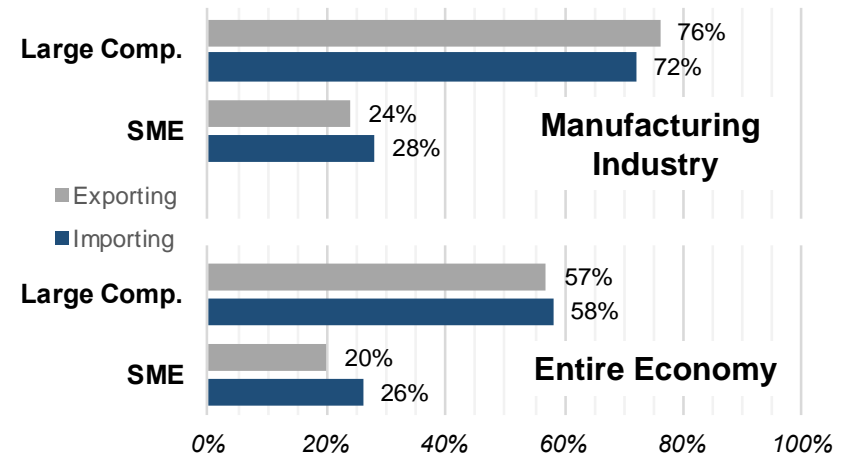
Sales Revenue and Gross Investments per Person



Why is the revenue per person lower for SMEs?

International market access?

Internationality



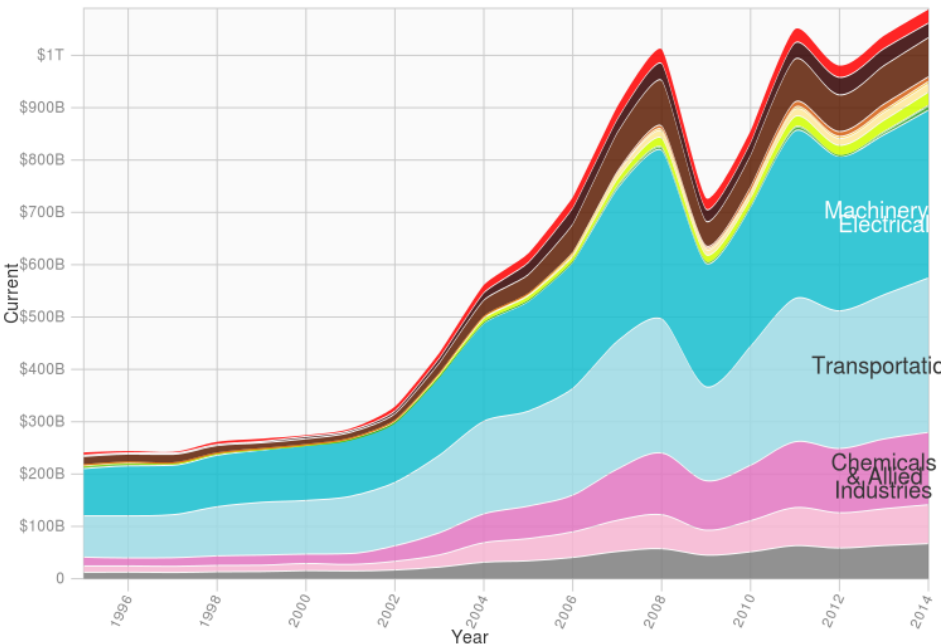
SMEs are less “international” than large companies!

However, International Market Access is Crucial

Challenges: Enable Market Access and Address Industry Trends

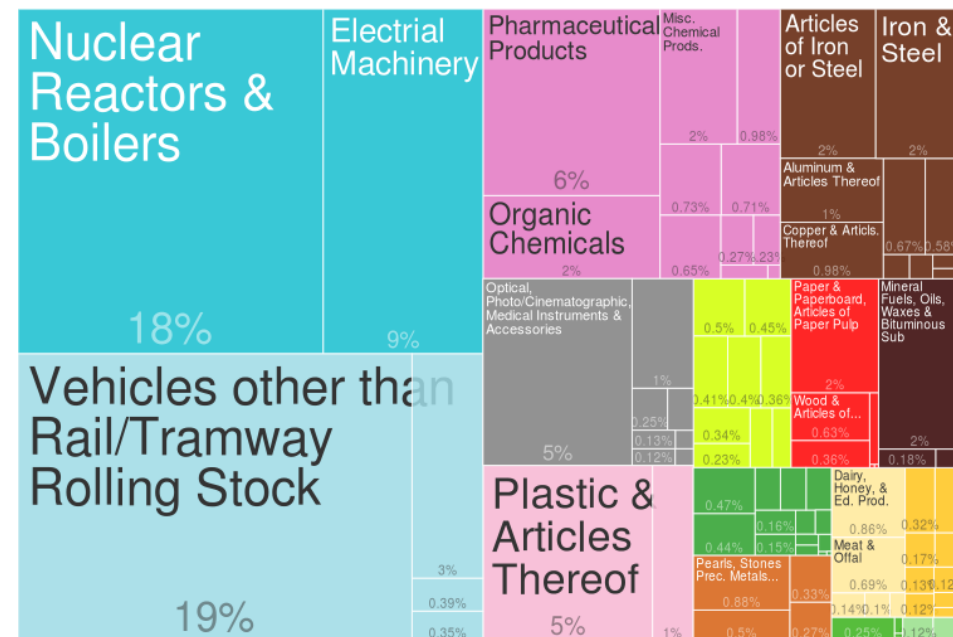
Germany's Exports – Development Over Time

Gross Export Trade Value by Product Category



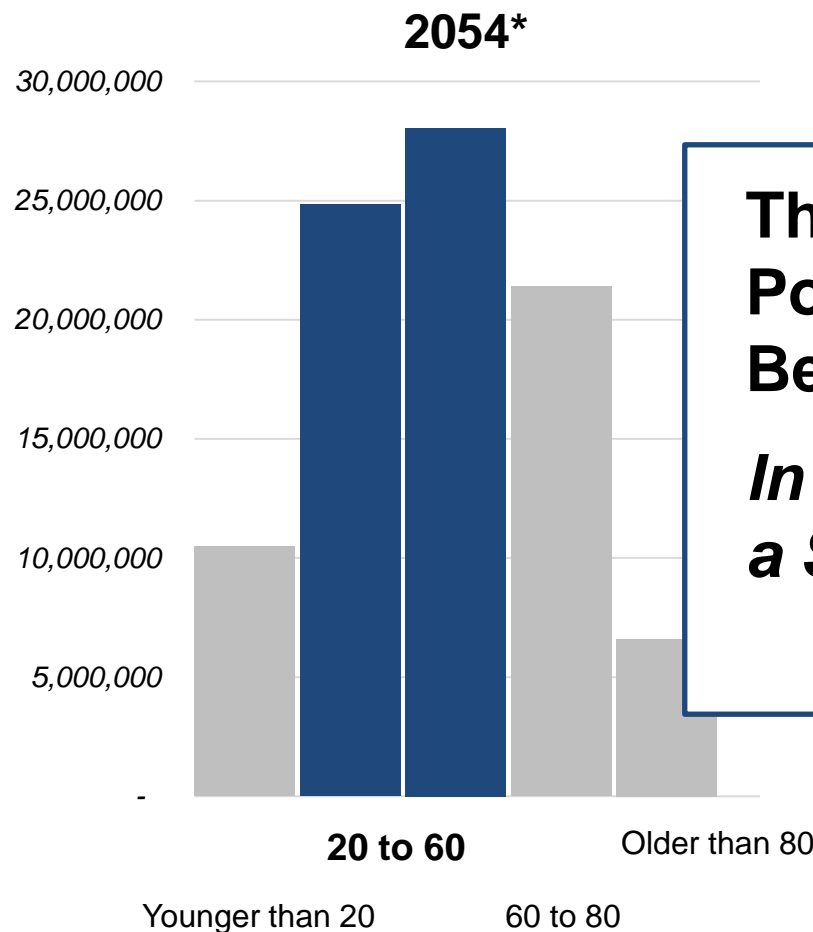
Germany's Exports 2014

Gross Trade Volume by Product Category



Total: US\$ 1.34 T

Development of the German Population over Time



The German Population is Becoming Older.



In the Future there will be a Shortage of Labour

* Extrapolation

Current Mega Trends in Manufacturing Challenge SMEs

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> - Service-driven Models - eCommerce | <ul style="list-style-type: none"> - Additive Manufacturing - Nanotechnologies - Sustainability, Efficiency | <ul style="list-style-type: none"> - Internet of Things - Industry 4.0 - Big Data - Security |
|--|--|--|

Business Models

Technologies

Digitisation

Manufacturing Mega Trends

Collaboration

Markets

People

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> - Re-/Near-Shoring Core Procurement, but - Outsourcing Back Office Operations - Cluster Manufacturing - Connected Value Chains | <ul style="list-style-type: none"> - Shift in Demand to the East - Demand Proximity - Growing Middle Sector in Emerging Markets | <ul style="list-style-type: none"> - Talent Competition - New Skillsets - Adaption of Factor Costs - Shrinking Population |
|---|--|---|

Current Mega Trends in Manufacturing Challenge SMEs

Selection of Supported Programmes by the EU and German Government

- Service-driven Models
- eCommerce

- Additive Manufacturing
- Nanotechnologies
- Sustainability, Efficiency

- Internet of Things
- Industry 4.0
- Big Data

COSME

INVEST
Zuschuss für Wagniskapital



Bundesministerium
für Wirtschaft
und Energie

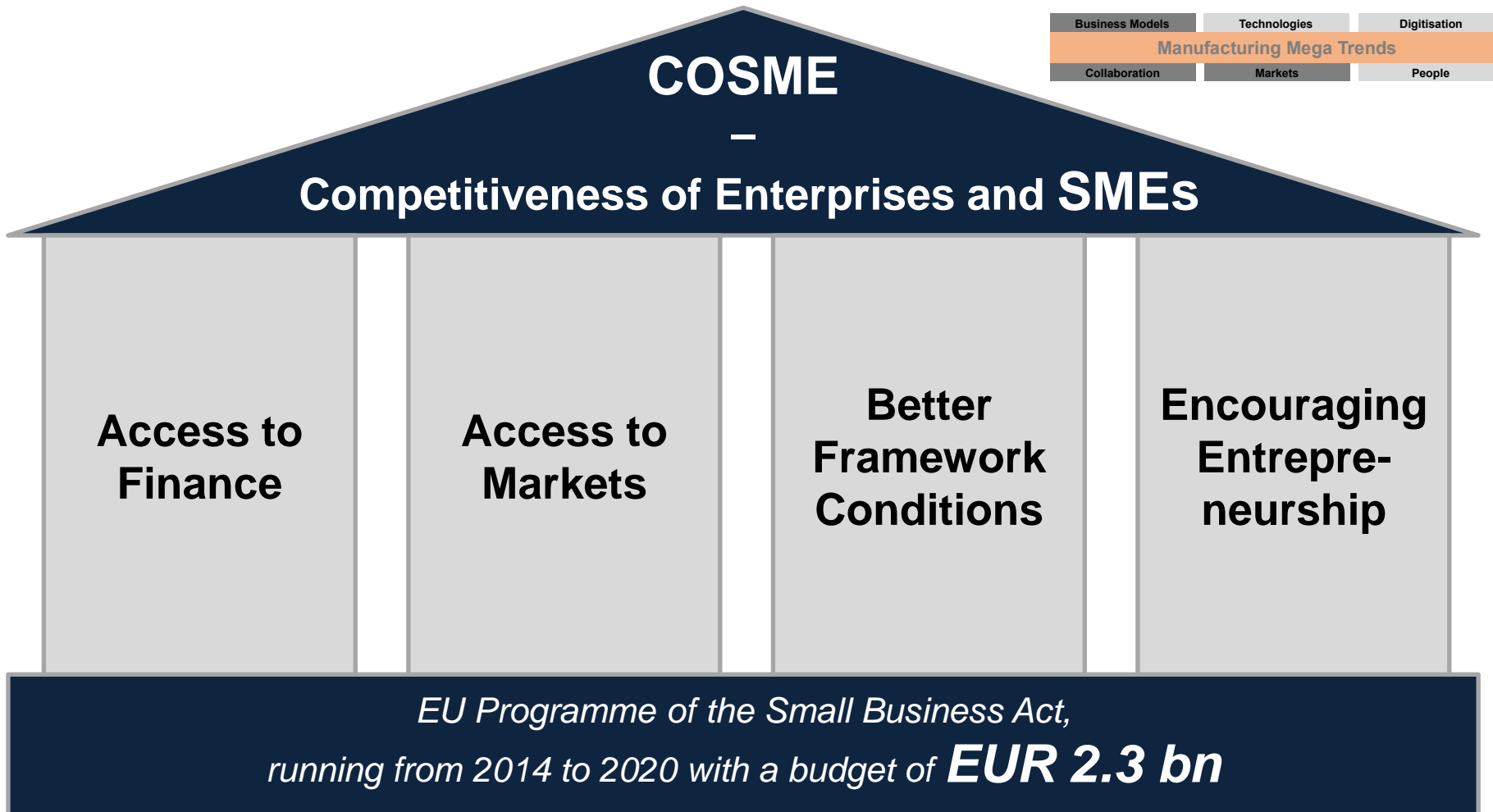
- Re-/Near-Shoring Core Procurement, but
- Outsourcing Back Office Operations
- Cluster Manufacturing
- Connected Value Chains



- Shift in Demand to the East
- Demand Proximity
- Growing Middle Sector in Emerging Markets

- Talent Competition
- New Skillsets
- Adaption of Factor Costs
- Shrinking Population

Support – Approaches To Address these Challenges



Business Models	Technologies	Digitisation
Manufacturing Mega Trends		
Collaboration	Markets	People

Support – Approaches To Address these Challenges



Subsidies for Venture Capital for young and innovative companies and private investors



Business Models	Technologies	Digitisation
Manufacturing Mega Trends		
Collaboration	Markets	People

Volume: 20% of the equity stake –
max. **EUR 50k per Business Angel per year**



Bundesministerium
für Wirtschaft
und Energie

Altogether & Outlook



SMEs are the **Backbone of German Manufacturing**

Manufacturing faces big **Challenges**

People and Venture Capital are the scarce resource

There are **Initiatives** – but we need more