



3D Printing / Additive Manufacturing in Germany

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GERMANY
TRADE & INVEST

www.gtai.com

1. 3D Printing Market

2. German Players

3. Business Opportunities in Germany

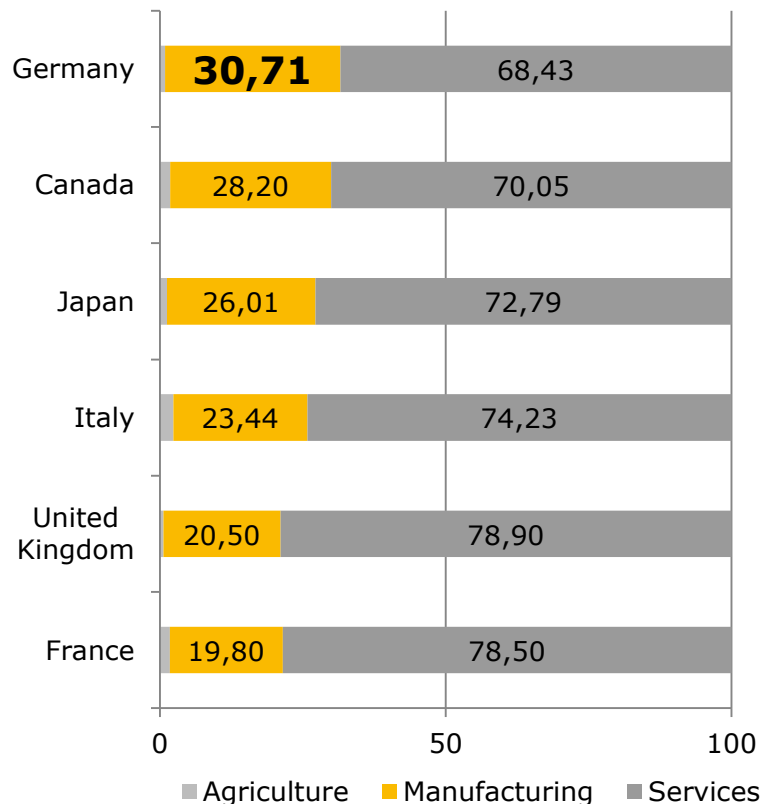
4. Japanese Investment into Germany

5. How Germany Trade & Invest Can Help You

6. Project examples

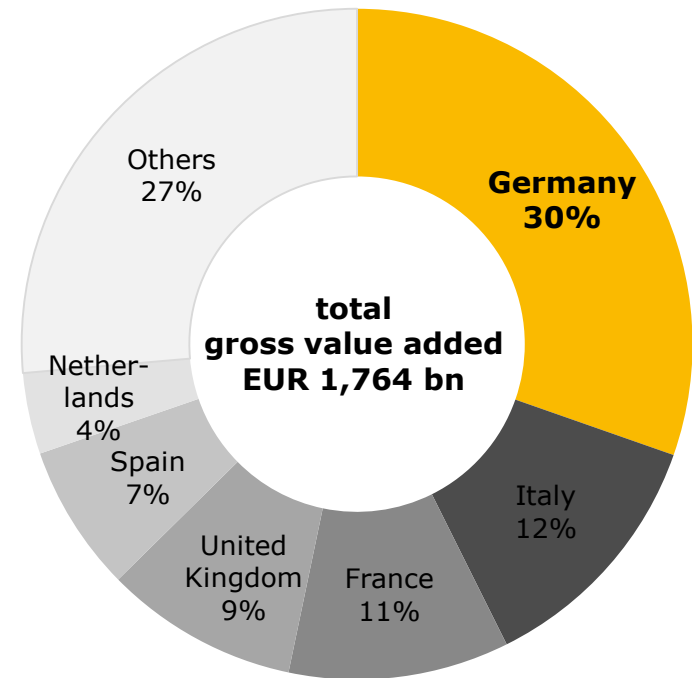
Germany's share of GDP from industrial production is highest of Western industrialized countries, making it the largest manufacturer in Europe

GDP of G8-Countries by Sector in %

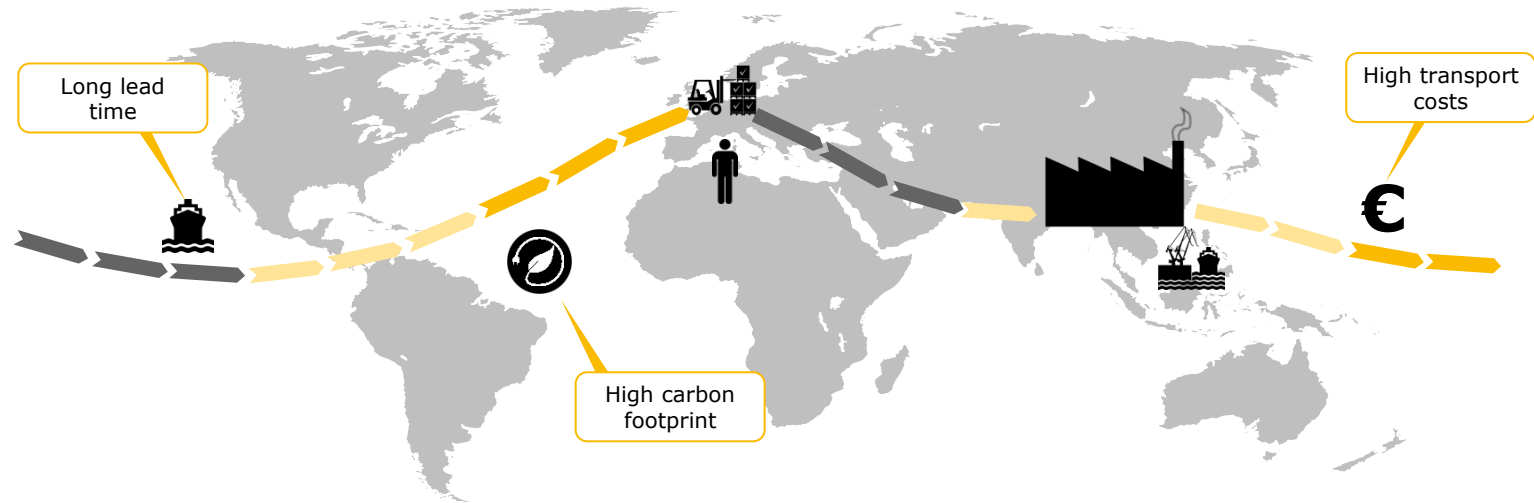


Source: World Bank, Eurostat 2014

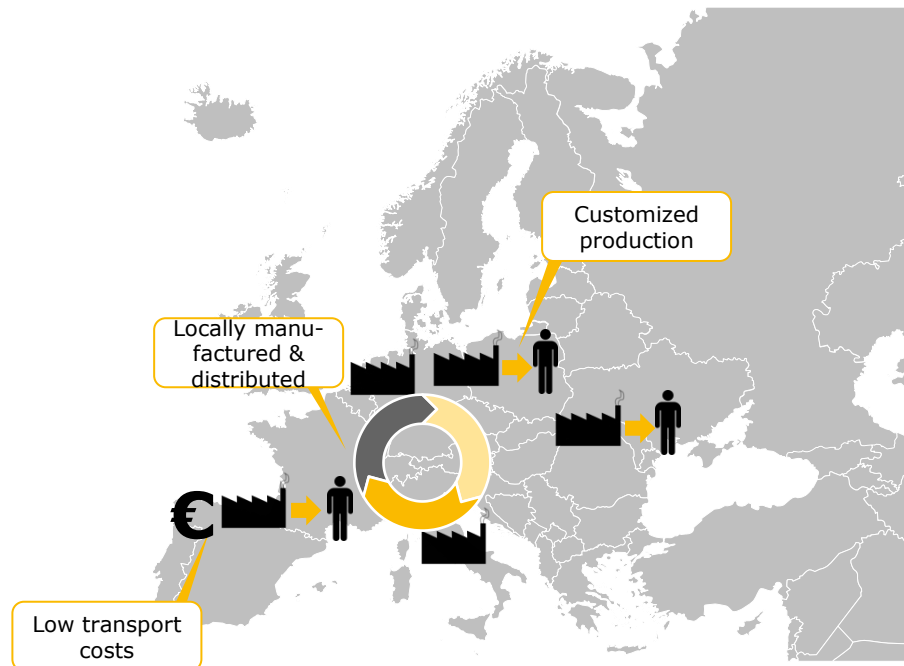
Gross Value Added of EU Manufacturing by Country



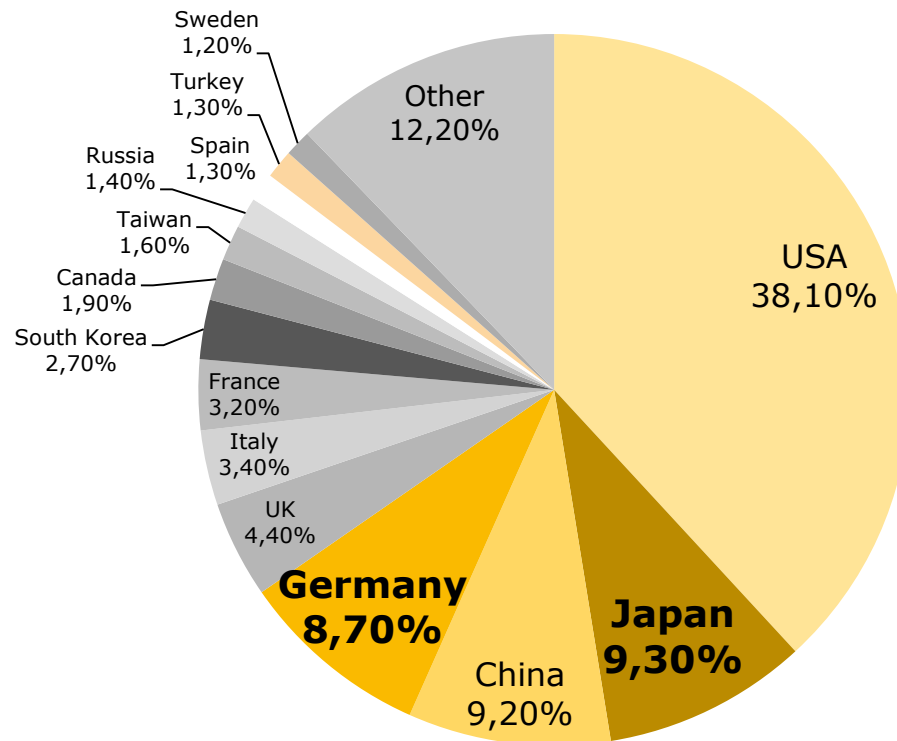
Traditional supply chain



3D Printing supply chain



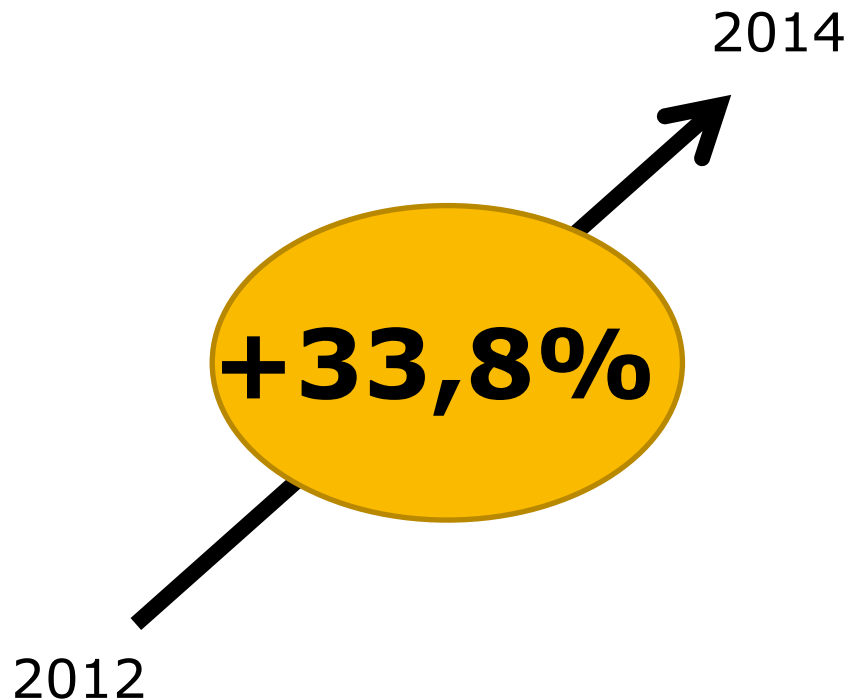
Installed base of Additive Manufacturing Systems



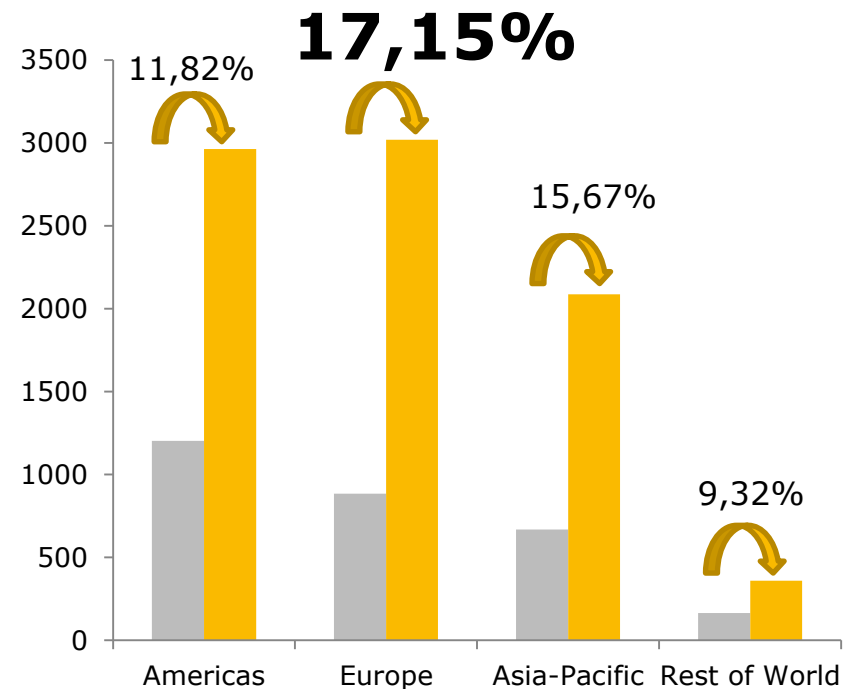
USA clear leader in installed systems, Germany and Japan leaders in the field with strong export orientation but smaller local markets

Additive Manufacturing industry growth is spectacular

World-wide compound annual growth



Regional growth 2013-2020 (in million US-\$)



Europe is the world region with the highest growth

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Germany has a world-class R&D environment for Additive Manufacturing



DMRC is an institution in the faculty of mechanical engineering at the University of Paderborn.

■ Partners:

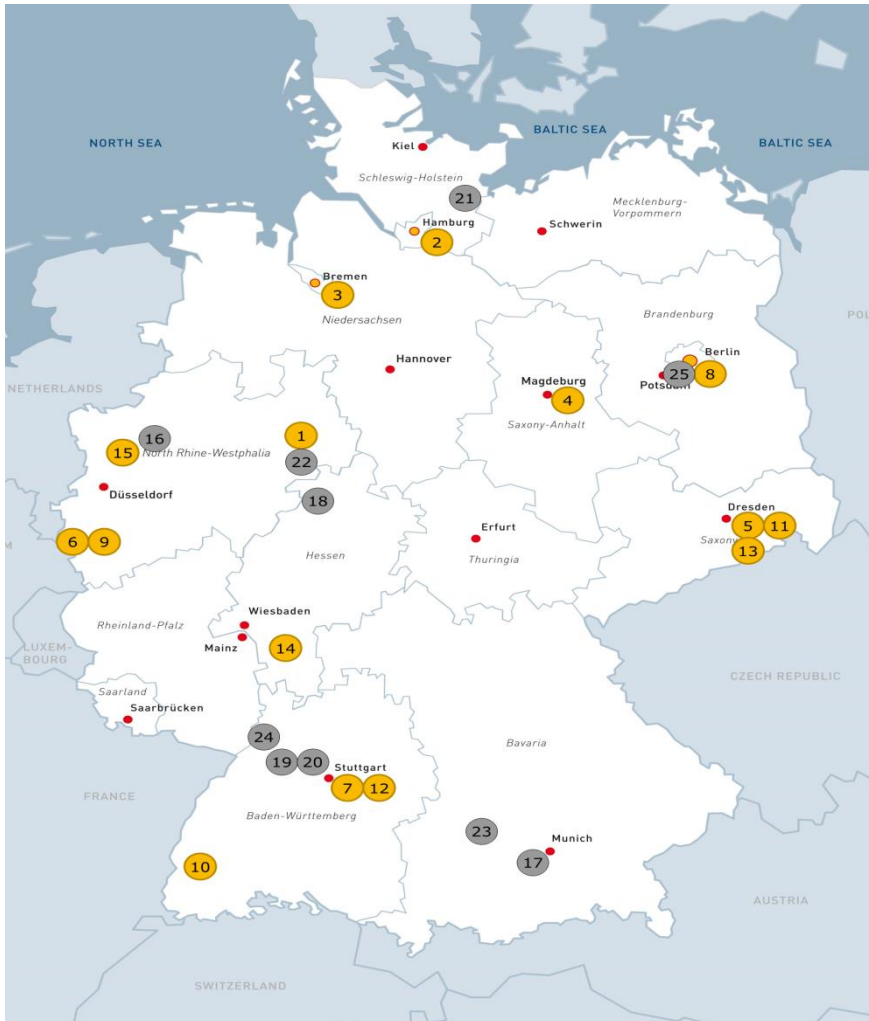


Fraunhofer Additive Manufacturing Alliance encompasses 13 institutes.



Laser Zentrum Nord is working closely with Airbus on lightweight parts.

Industrial additive manufacturing system makers



- Germany is home to several world leaders in the additive manufacturing industry
- German industrial system makers are focusing on metal-based additive manufacturing technologies

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Aerospace, Automotive, and Medical are the biggest opportunities

Aerospace



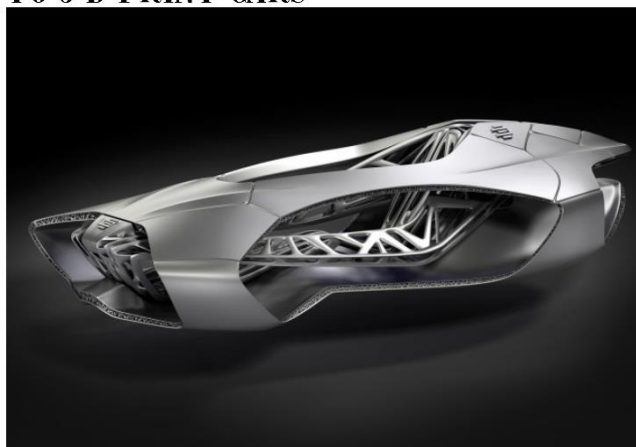
MoU between Hamburg and Nagoya Region

Market volume:

Automotive

WIRED

THE GERMANS HAVE FIGURED OUT HOW
TO 3-D PRINT CARS



Market volume:

Medical



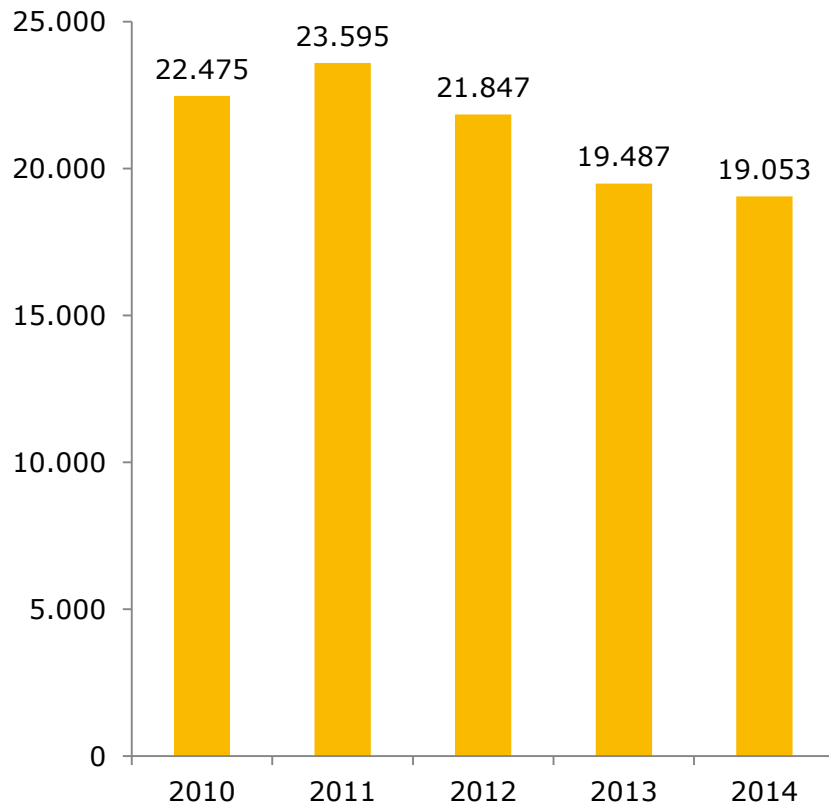
Market volume:

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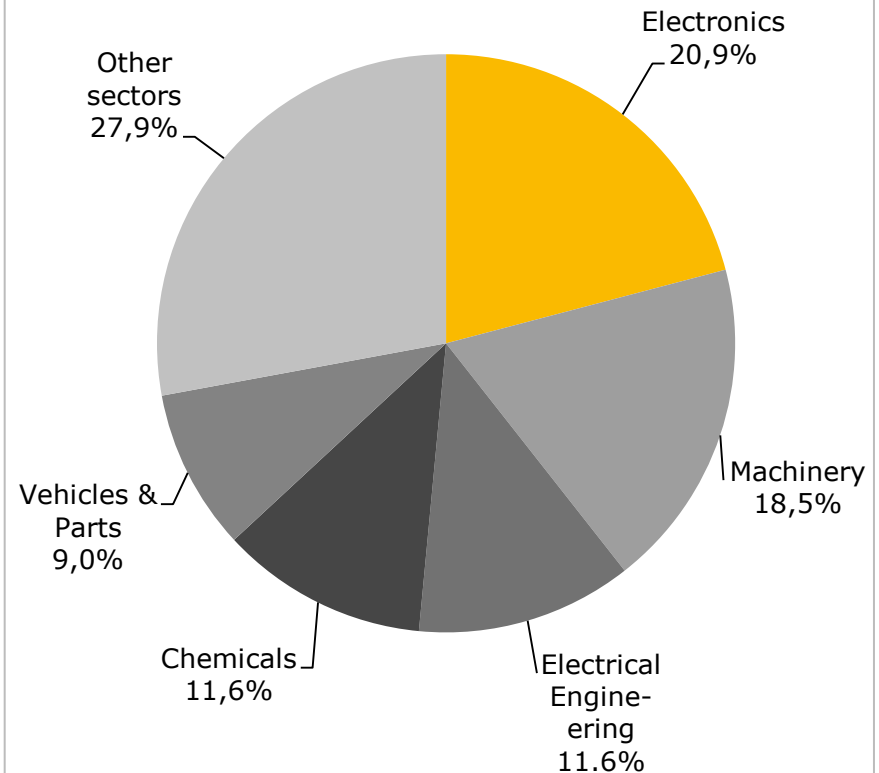
II. Individual Analysis of Selected Countries - Japan

In 2014, Germany imported primarily electronics and machinery from Japan.

**Imports from Japan to Germany
(2010-2014, in EUR m)**

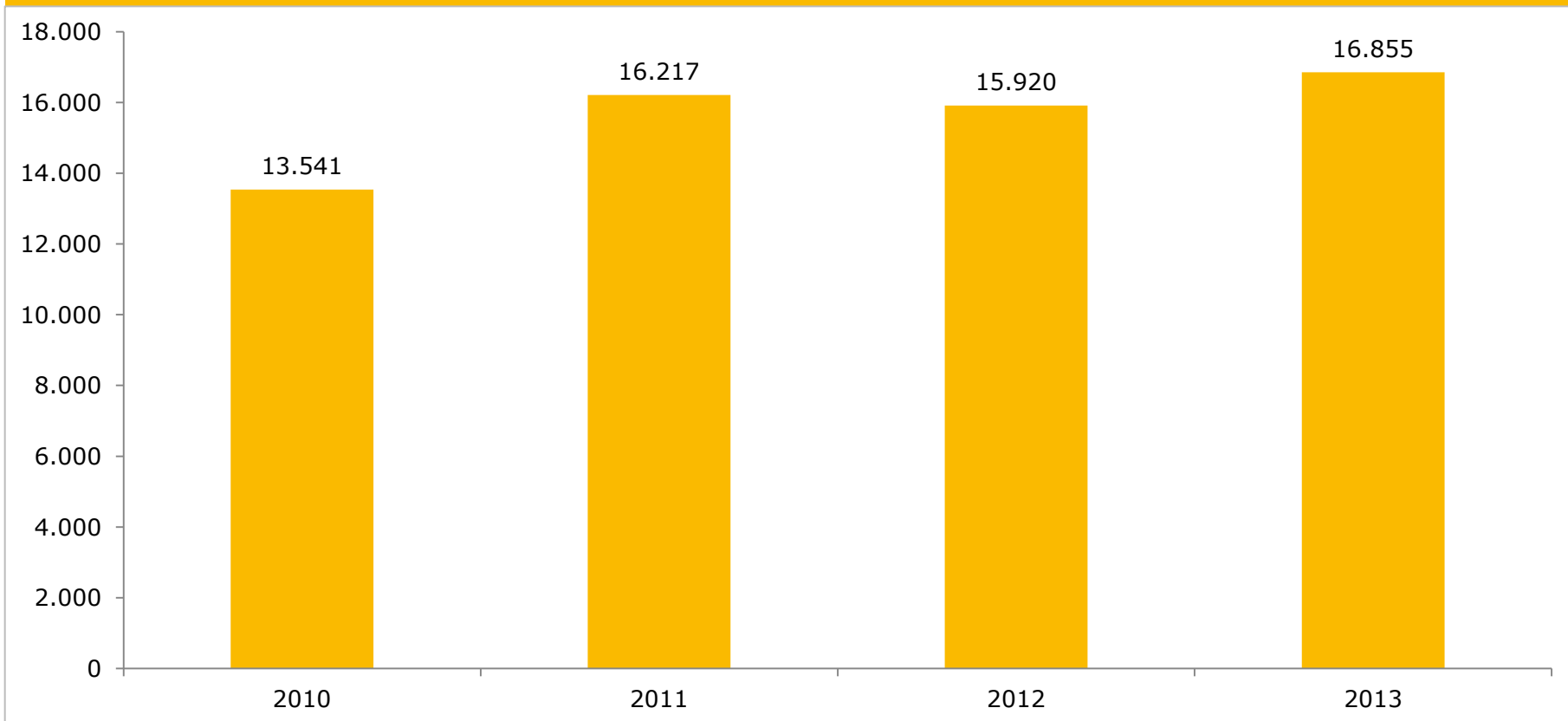


**Imports from Japan to Germany by
Sectors (2014)**



Source: Federal Statistical Office 2015; Germany Trade & Invest 2015

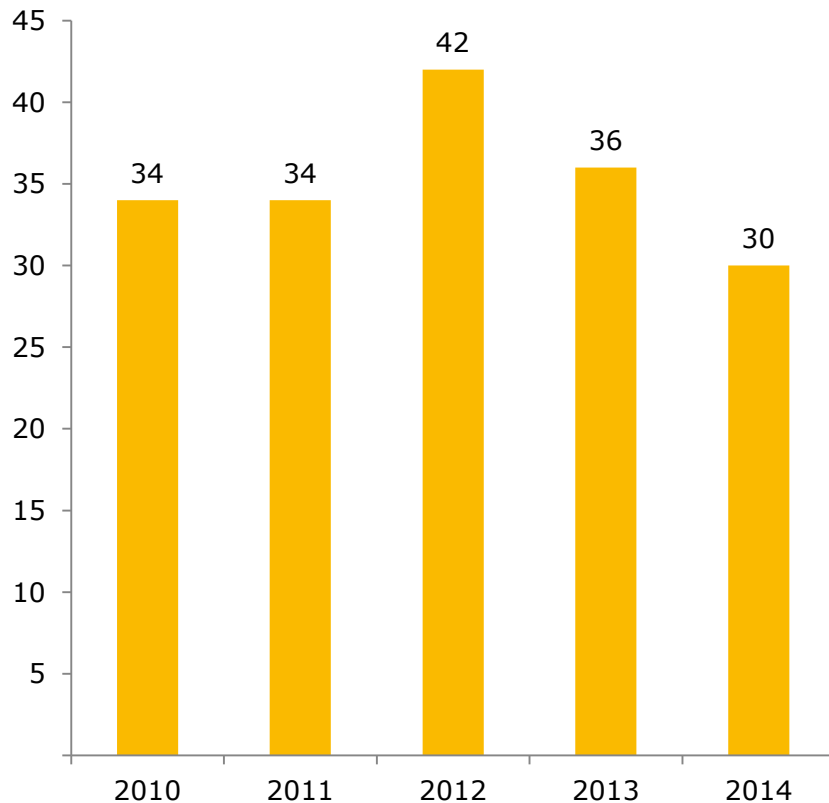
Japanese FDI Stocks in Germany (2010-2013, in EUR m)



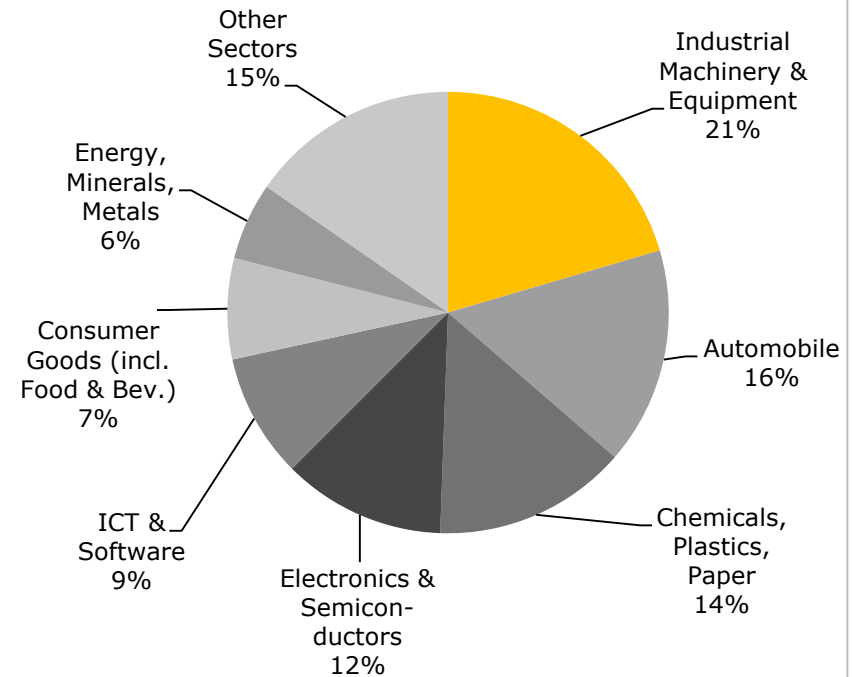
II. Individual Analysis of Selected Countries - Japan

North Rhine-Westphalia ranks first in terms of Japanese FDI projects, followed by Hessen and Baden-Württemberg.

Number of Japanese Projects in Germany (2010-2014*)



Japanese Projects in Germany by Sector (2010-2014*)

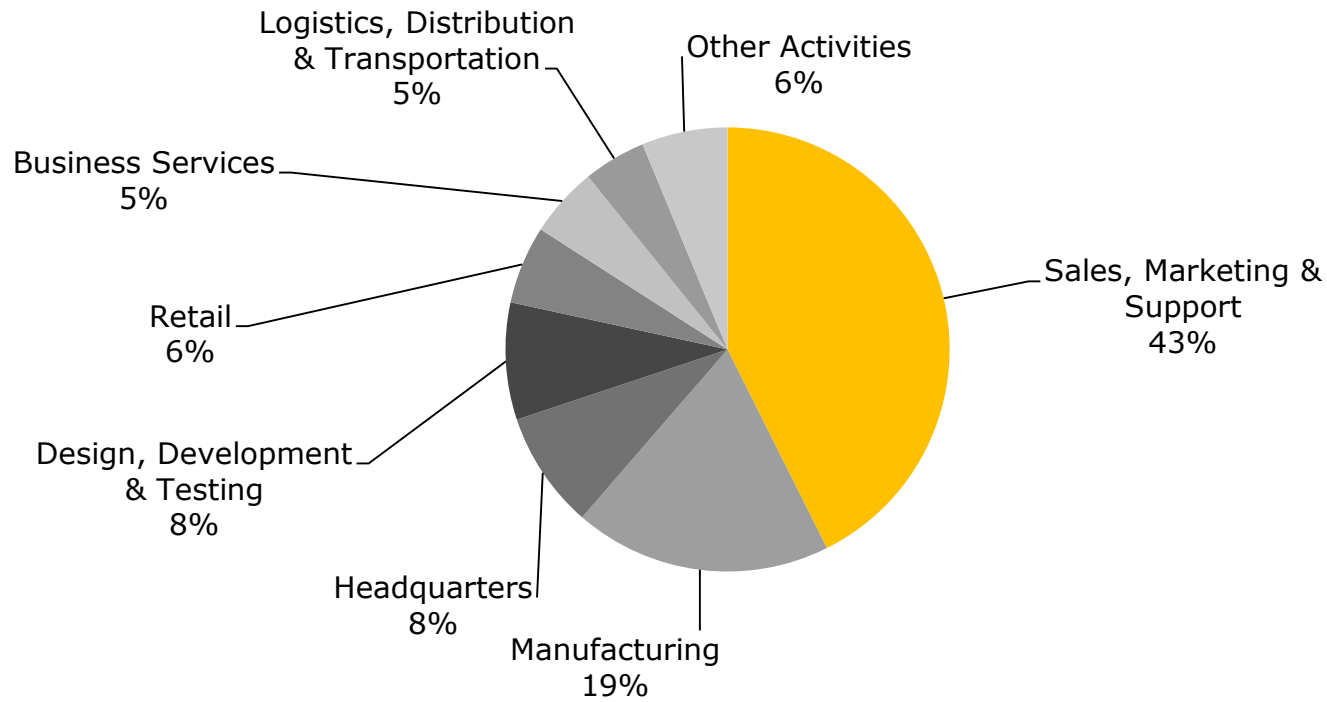


Source: fDi Markets, July 2015

Note: FDI projects refer to greenfield and expansion investment projects. M&A projects are not included. *preliminary data for 2014

Industrial machinery & equipment was the main investment sector between 2010 and 2014.

Japanese Projects in Germany by Business Activity (2010-2014*)

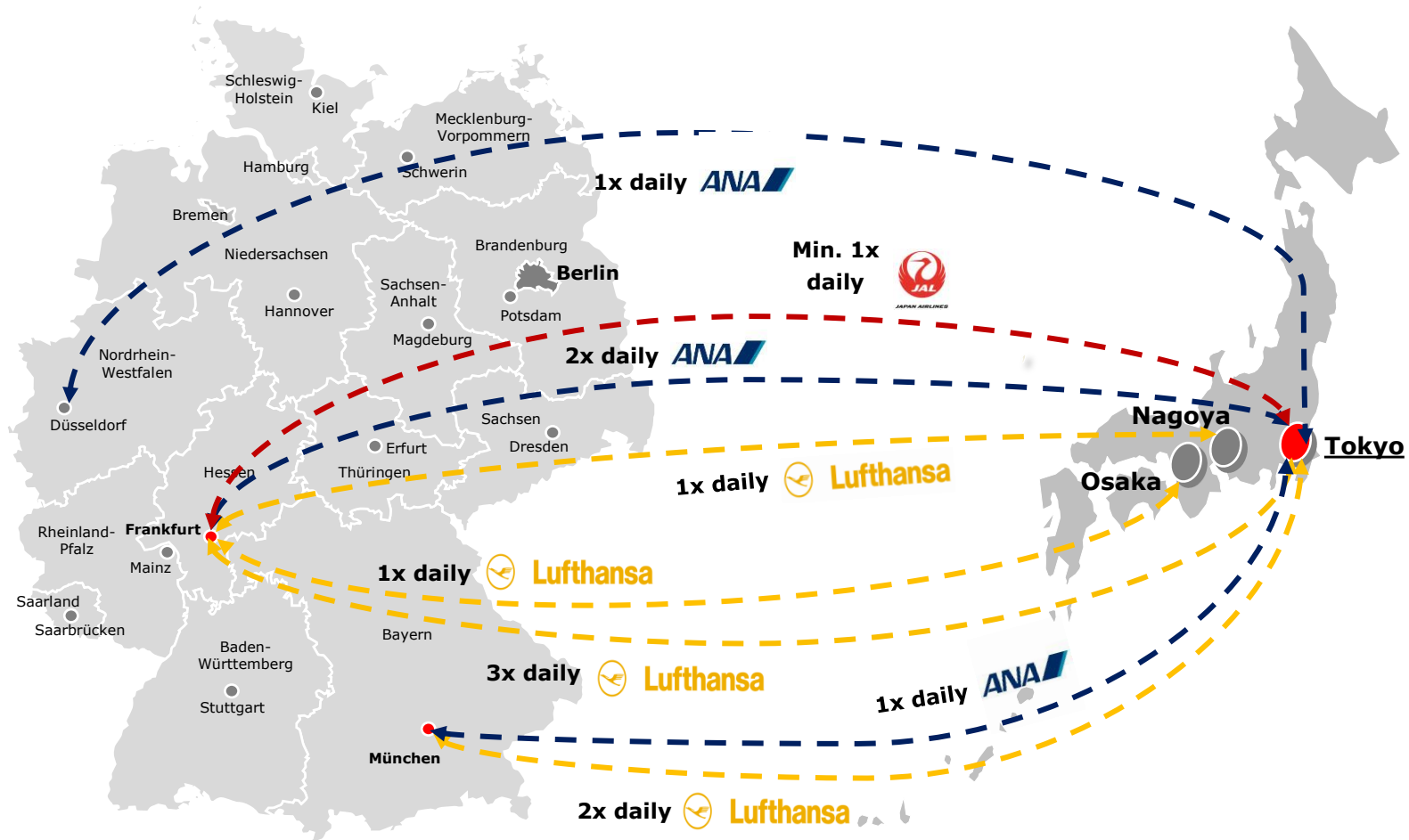


Source: fDi Markets, July 2015

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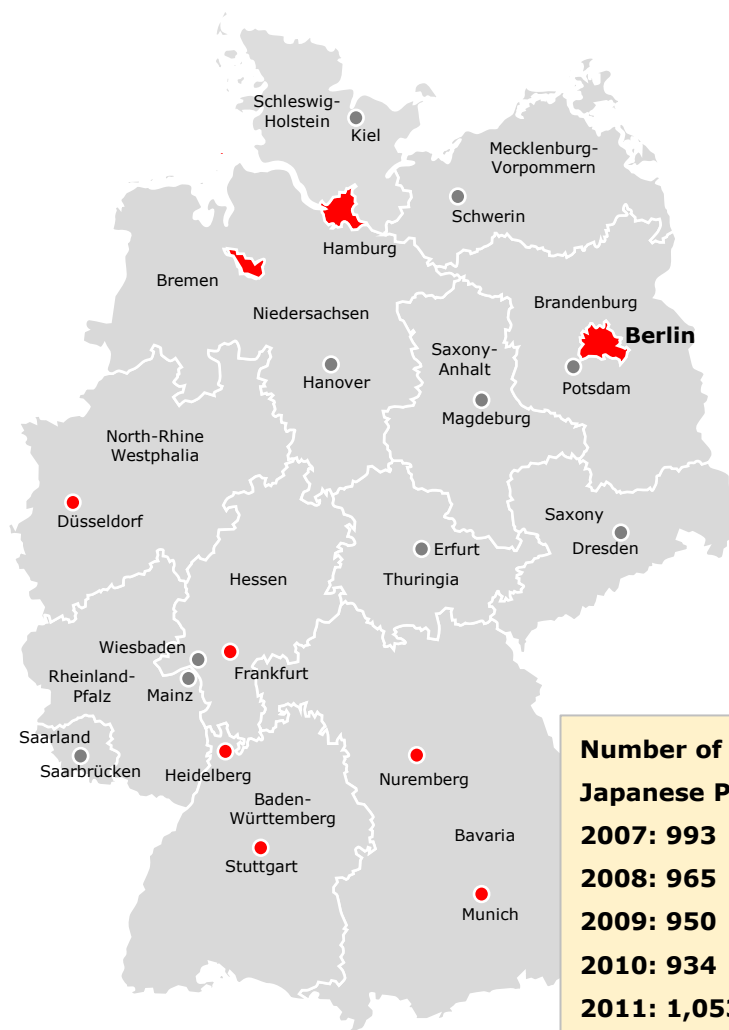
Direct Flights between Japan and Germany

Direct flights are offered to the 3 biggest Japanese cities Tokyo, Osaka and Nagoya.



Source: Japanese Tourism Agency (JNTO) 2013

Almost in every big city in Germany exists at least one Japanese school.



Japanese Schools in Germany*

Japanische Internationale Schule Frankfurt e.V.
(Langweidenstr. 8–12, 60488 Frankfurt am Main)

Japanische Ergänzungsschule in Berlin e.V.
(Joachim-Friedrichstr. 35/36, 10711 Berlin)

Zentrale Schule für Japanisch Berlin e.V.
(Gieselerstr. 4, 10713 Berlin)

Japanische Internationale Schule zu Berlin e.V.
(Charlottenstr. 10, 14109 Berlin)

Japanische Schule in Hamburg e.V.
(Dockenhudener Chaussee 77 – 79, 25469 Halstenbek)

Japanische Ergänzungsschule in Bremen e.V.
(Ellenerbrokweg 28, 28325 Bremen)

Japanische Internationale Schule in Düsseldorf e.V.
(Niederkaßeler Kirchweg 38, 40547 Düsseldorf)

Japanische Schule Bonn e.V.
(Rheinallee 26, 53173 Bonn)

Japanische Ergänzungsschule Heidelberg e.V.
(Plöck 40-42, 69117 Heidelberg)

Japanische Schule Stuttgart e.V.
(Rotebühlplatz 28, 70173 Stuttgart)

Japanische Internationale Schule München e.V.
(Bleyerstr. 4, 81371 München)

Japanische Ergänzungsschule in Nürnberg
(Holbeinstr. 23, 90441 Nürnberg)

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Typical project case – GTAI delivers great services

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Case Study: Formlabs (Berlin)

„A central location within Europe, an international environment, and a vibrant start-up scene were important for us. Amsterdam and London were contenders towards the end. However, Berlin is just the cooler city.



Source: Formlabs, n-tv.de

Case Study: Formlabs (Berlin)

**Desktop
3D Printers**

**founded 2011 by team
of engineers and
designers from MIT
Media Lab and Center
for Bits and Atoms**

**set-up of European HQ:
first office outside of USA
to service and support
European customers**

**record-
breaking
\$3 million
Kickstarter
campaign
in 2012**



1 First contact

Sept
2014

2

**Kick-off Phone
conference**

3

**Analysis of
different
cities, cost,
salaries, tax &
legal etc.**

4

**Connecting with
state agency
Berlin Partner**

5

Office opening

Mar
2015

Case Study: Formlabs (Berlin)



Currently, Berlin just attracts a lot of talent, people who are naturally open-minded, internationally oriented and think a little differently. That is exactly the mix we want for our Berlin team."

Case Study: Sales Office Brunswick, Lower-Saxony

Company profile (prior to investment)

- Founded in 1947 as Koide Electric Works in Minato-ku Tokyo
- Production and sales of electronic components for the automotive, as well as for the motorcycle industry
- Toyo Denso also produces generators
- Main customers: Honda Motor Co.,Ltd. and other world leading automotive manufacturers

Project data

- Investment: > EUR 1.000.000
- Location: Office in Brunswick, Lower-Saxony
- Product: Switch panels, steering panels etc.
- New employees: initially 5 FTE
- First contact with Germany Trade & Invest: May 2014
- Grand opening: June 2015

Milestones

May 2014	1	First contact through request
June 2014	2	Initial conversation via telephone
June 2014	3	Delivery of necessary information
Jan. 2015	4	Site visit in Germany with investor
Feb. 2015	5	Final location decided by investor
June 2015	6	Grand opening of new office in Brunswick, Lower-Saxony

Product and location



Japanese voices



Tokyo

Mr. Iwami Asakawa

Japan Representative

Delegation of German Industry & Commerce Japan
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