



invest  
in  
bavaria

# Invest in Bavaria

## eMobility in Bavaria and Germany

### 2018



# Bavaria

## your ideal location for growth in EMEA



### Market Overview:

### Bavarian Automotive Industry

#### Key Success Factor #1:

Strong economy in the heart of the EU

#### Key Success Factor #2:

Powerful and diverse company landscape

#### Key Success Factor #3:

Europe's leading innovation hub

#### Key Success Factor #4:

Supportive government and politics

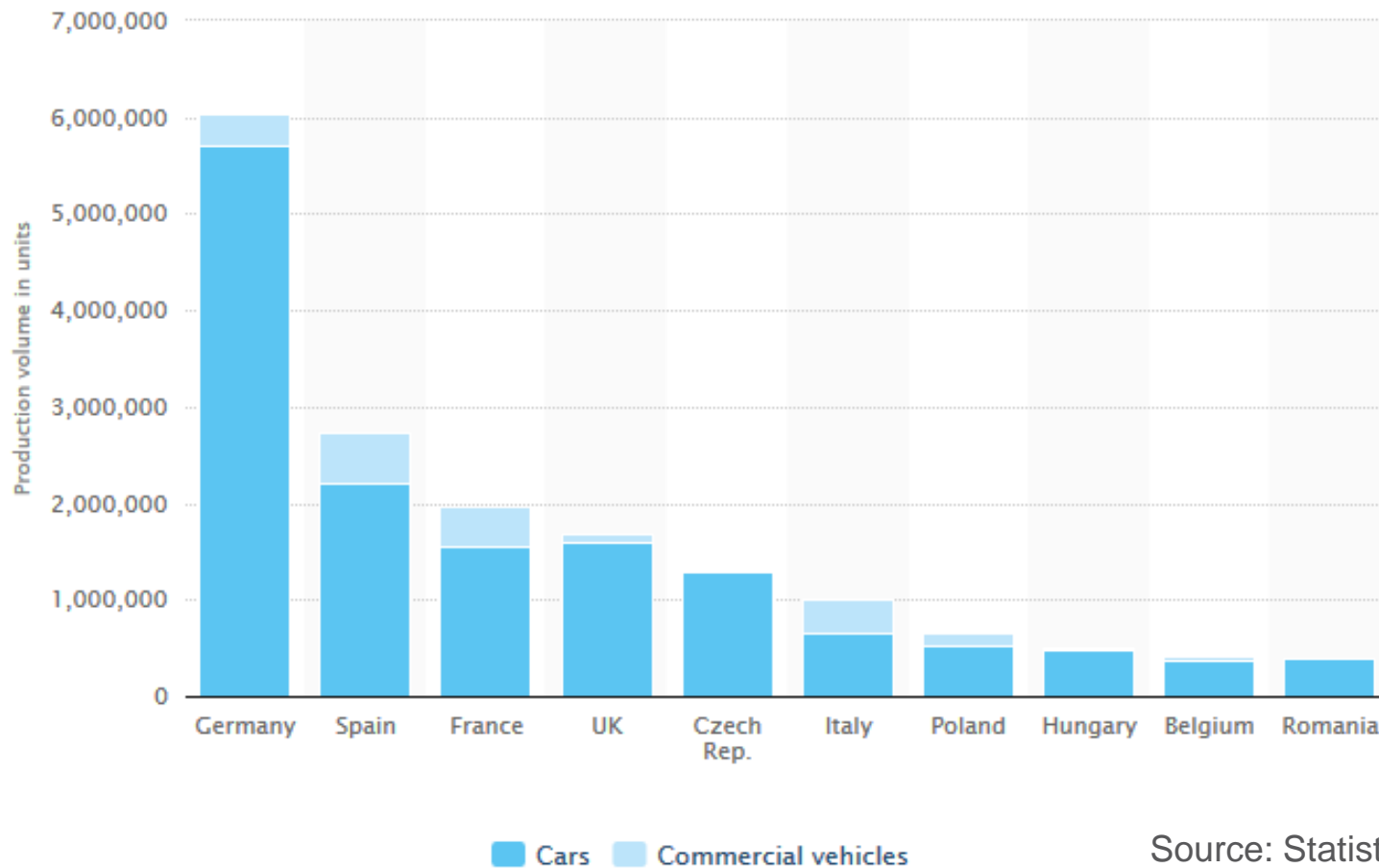
#### Key Success Factor #5:

High quality of living

# Market Overview: Automotive Industry

## European Market

### Production volume of leading automotive manufacturing countries in Europe (2015)



- Germany is the 3<sup>rd</sup> biggest passenger car producer of the world (2015)

# Market Overview: Automotive Industry

## Bavarian Automotive Industry



197,460

employees in automotive industry  
(2015)

€ 102 bn

sales (2015)

66.1%

export quota (2015)



20

research institutions

1,100

suppliers

230

providers with service level "Tier 1-4"

# Market Overview: Automotive Industry

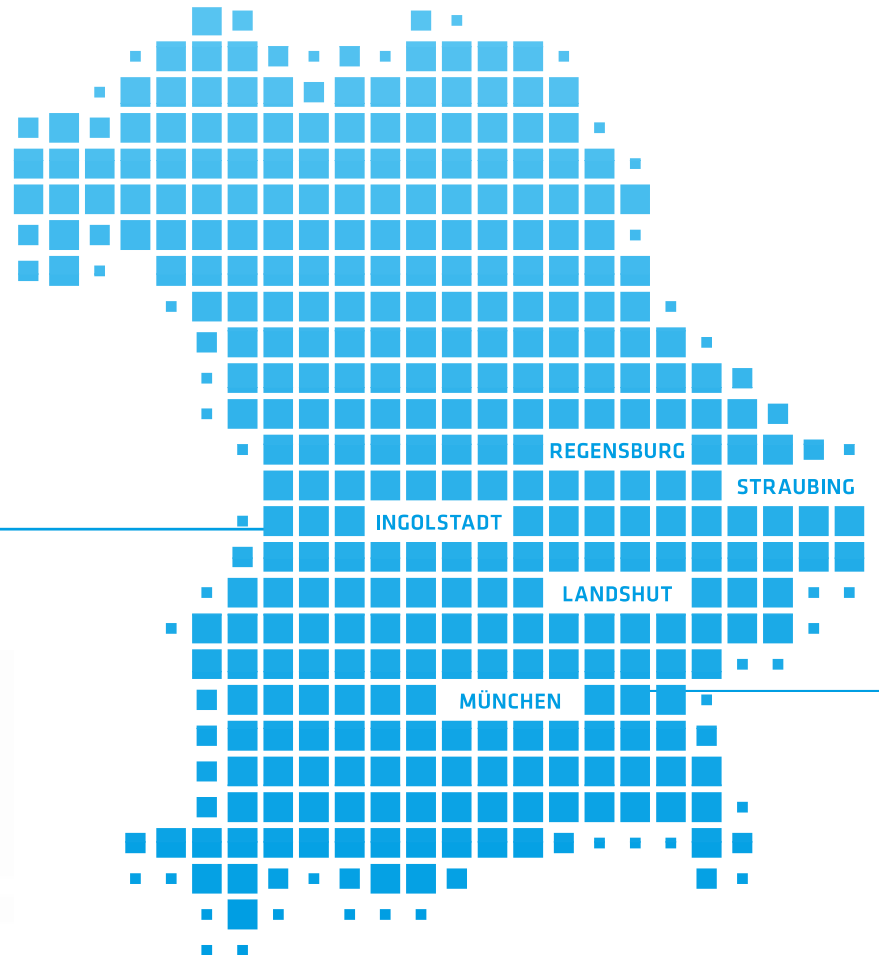
## OEMs in Bavaria



belongs to

**VOLKSWAGEN**

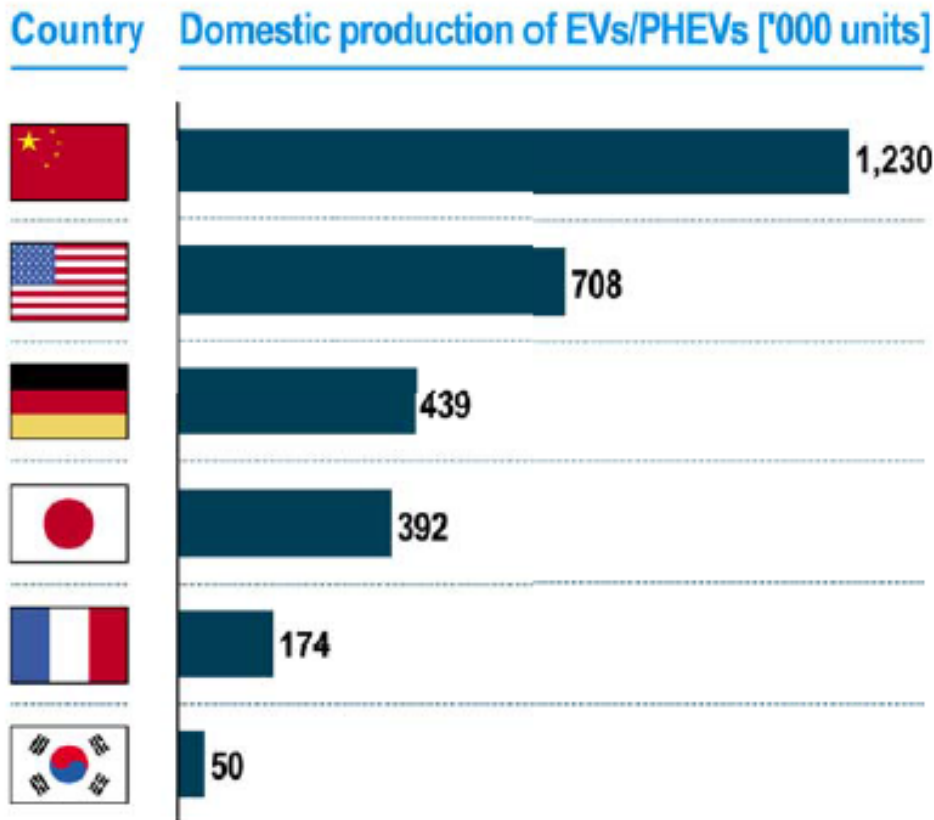
GROUP



# Market Overview: Automotive Industry

## Germany's position in the eMobility Market

Projected production of EVs and PHEVs through 2017:



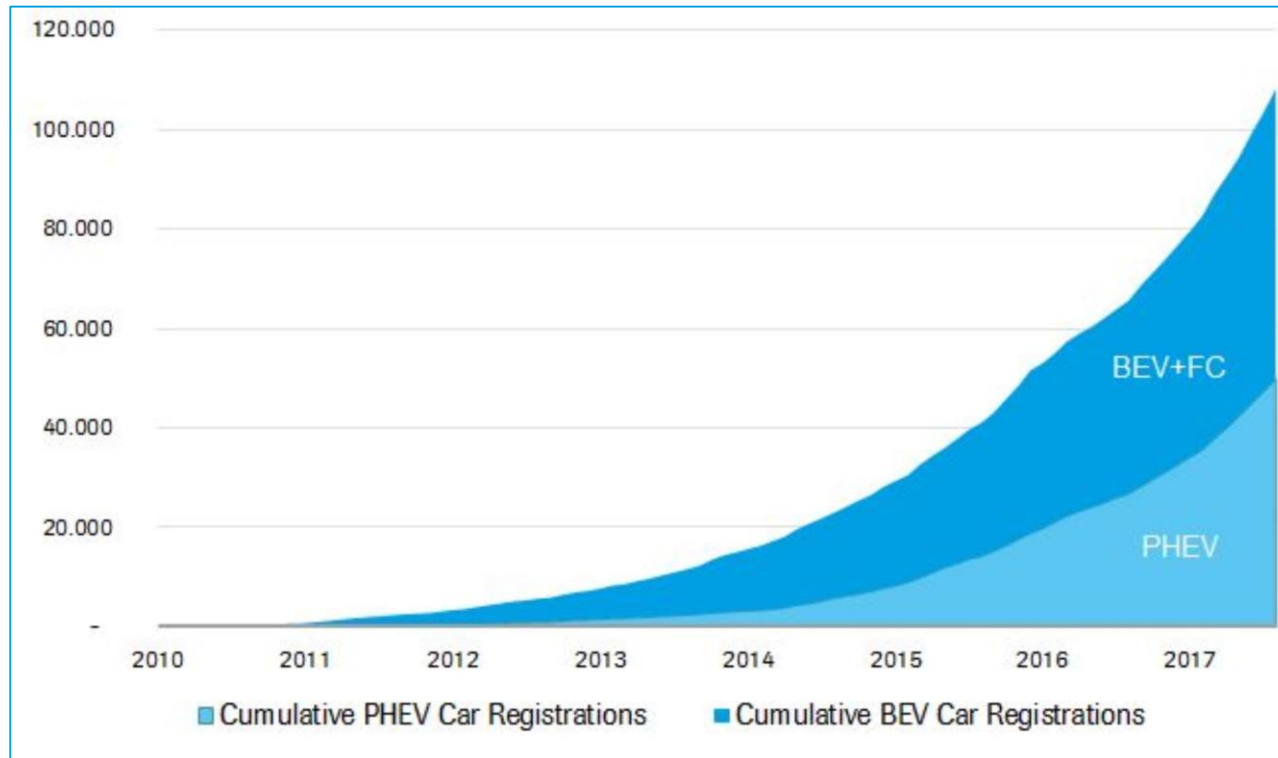
Note: No significant EV/PHEV production is expected in Italy

- While China remains the leader in the global market, German OEMs mainly dominate the European market.

# Market Overview: Automotive Industry

## Germany's Position in the eMobility Market

### New registrations of electric vehicles in Germany



- The cumulative new registrations in Germany reached 108.683 electric vehicles on August 31<sup>st</sup>, 2017.

Source: vda

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# #1 Strong economy in the heart of Europe

## Bavaria at a Glance



**27,200 sqm**

Germany's largest Federal State

**12.8 mn**

inhabitants (16% of Germany)

**3.5%**

unemployment (2016)

**€ 568 bn**

GDP (2016) / #7 in EU

**14.7%**

growth (2010 to 2016)

**€ 183 bn**

export volume (2016)

# #1 Strong economy in the heart of Europe

## In the Centre of Europe



**Well connected to 500 mn customers within the EU**



**1,554 miles Autobahn**  
making Bavaria a **hub** for east-west and north-south trade

### **International Airport Munich**

**250 destinations** to **68 countries** in the world

→ Daily nonstop flights to **11 airports** in the US

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## #2 Powerful and diverse company landscape

### Potential Clients & Partners



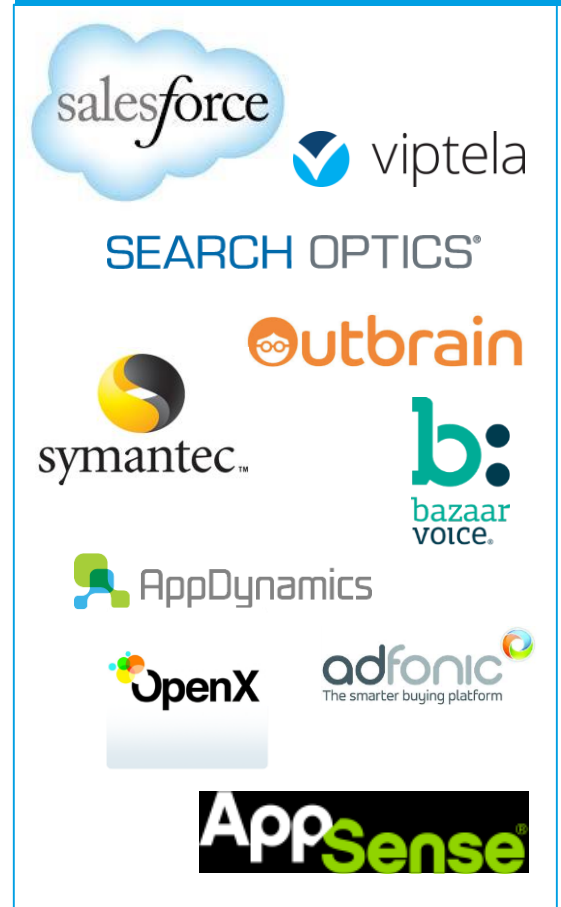
#### Native Global Players



#### Global Giants



#### Attraction for New Tech



## #2 Powerful and diverse company landscape

### OEMs in Bavaria – World Leaders in Innovation



- Seen as the most *“groundbreaking innovator & technology leader”* in the automotive industry (Source KPMG)
- “iNEXT 100 Vision”: In order to focus on R&D regarding autonomous driving, BMW decided to set up a research center Munich (fully operational in July 2017).
- Partnering with Mobileye and Intel
- Project “Providentia” received funding to improve sensor systems



- Developed *“AUDI Connect”*
- Part of the “Electronics Research Lab”, located in Silicon Valley.
- Started a new subsidiary focused on autonomous driving “Autonomous Intelligent Driving”

## #2 Powerful and diverse company landscape

Innovation in E-Mobility



# IONITY

### Launch of the joint venture IONITY

- In November 2017 BMW Group and Audi, together with Daimler AG, Ford Motor Company, Volkswagen Group and Porsche announced the launch of the Munich based joint venture IONITY
- IONITY plans to launch approximately 400 High-Power Charging stations across Europe by 2020
- It is the first pan-European network for High-Power Charging

For more info click [here](#).

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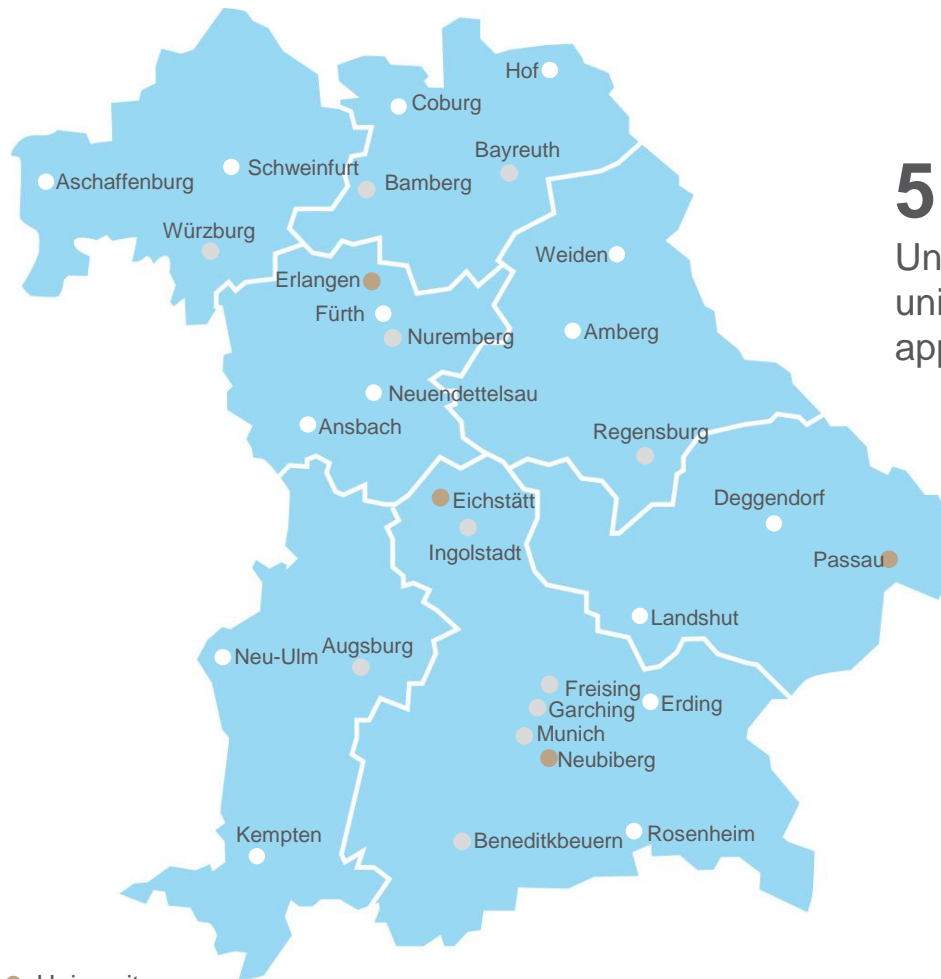
Supportive government and politics

### Key Success Factor #5:

High quality of living

# #3 Europe's leading innovation hub

## Developing Talent and Know-How



- University
- Location with multiple universities
- University of applied sciences

**51**

Universities and  
universities of  
applied science

**377,700**

Students in Bavaria  
(2015/2016)

**28,000**

STEM Graduates (2014)

**25**

national research  
institutes

**32.4 %**

of all German  
patent applications (2015)

**15,341**

patent applications (2015)



# #3 Europe's leading innovation hub

## Bavarian Automotive Research Hub



### 8 universities

lecturing automotive special knowledge



### 20 non-university research institutions

focused on automotive



# #3 Europe's leading innovation hub

## E-Mobility Research Institutions



### Universities



TUM Science Center  
for Electromobility



NEMO – User-oriented  
Electromobility at TUM



Faculty of Electrical  
Engineering and  
Information  
Technology



Technology Center for  
Energy,  
Landshut University of  
Applied Sciences

### Non-university research institutions



Fraunhofer Institute for Integrated Systems  
and Device Technology IISB

Fraunhofer Institute for integrated  
Systems and Device Technology  
IISB



Fraunhofer R&D Center for Electro-  
Mobility Bavaria

## #3 Europe's leading innovation hub

### Related Research Centres



### iwb Anwenderzentrum Augsburg

IWB at the Technical University of Munich is one of the largest research institutions for production technology in Germany. The thematic focuses lie in the areas of manufacturing technology, machine tools, assembly technologies and robotics, joining and separation technology, as well as in the field of production management and logistics.

For more info [click here](#)



### ZAE Bayern

Non-profit association that works on the interface between evidence-based fundamental and applied industrial research. The association was established to promote energy research as well as education, further training, consultation, information and documentation in all fields significant to energy research.

For more info [click here](#)

## #3 Europe's leading innovation hub

### Digital Hub Mobility



### Digital Hub Mobility

Founded by Audi, BMW, Daimler, SAP, Stadtwerke München, IBM and Nokia the **Digital Hub Mobility** focuses on the networking and pooling of initiatives and projects on the issues of big data, eMobility and autonomous driving. Support Partners are MAN, ADAC, Adidas, TÜV Süd, TUM Munich & Infineon.

Innovation and start-up events like start-up pitches, demo days and make tanks are systematically expanding the networking between the mobility industry and IT, software and web companies, and initiating new joint projects.

For more info [click here](#)

## #3 Europe's leading innovation hub

### Competence Atlas – eMobility Bavaria



## Competence Atlas – eMobility Bavaria

Supported by the Bavarian Ministry of Economic Affairs and Media, Energy and Technology, the Competence Atlas – eMobility Bavaria helps interested companies to find potential partners for new projects and to grow their network in the field of electromobility in a targeted and efficient manner.

For more info [click here](#)

## #3 Europe's leading innovation hub

### Electric Charging Stations- eMobility Bavaria



## Ladeatlas – eMobility Bavaria

Founded by Bayern Innovativ in cooperation with the startup CIRRANTIC and supported by the State of Bavaria, the atlas offers an [overview of 3000 electric charging points](#) across Bavaria and provides real-time data on the availability of charging points.

The service is aimed at drivers of electric cars and infrastructure providers alike and its service is constantly expanded.

The atlas can be accessed [here](#).

# #3 Europe's leading innovation hub

## Automotive Industry - Bavarian Clusters



### Cluster Automotive

- Cluster with regional focus – partners and stakeholders mainly from Bavaria
- Synergies with BAIKA congresses
- Four main topics: E-Mobility, Electrics / Electronics, Powertrain Concepts, Interior / Comfort

For more info [click here](#)



### eMobility Cluster Regensburg

- Focused on electric vehicles, smart grid/charging station infrastructure and ICT for e-mobility
- Involved in regional as well as national and international projects and collaborations

For more info click [here](#).



## #3 Europe's leading innovation hub

### Automotive Industry – Other German Clusters



#### EffizienzCluster Logistikruhr

The solution ideas developed in the cluster show how the high-tech logistics sector is tackling ecological and social challenges such as climate change, resource depletion, urbanization and demographic change with new supply and transport concepts or intelligently networked systems.

For more info [click here](#)



#### Elektromobilität Süd-West

Members of the cluster include universities and research institutes, SME's, and large companies such as Bosch, Daimler, EnBW, Porsche and IBM. The partners from the fields automotive engineering, energy, information and communications technology (ICT) as well as production work together on new concepts for ecologically sustainable and, at the same time, economically competitive electric mobility.

For more info [click here](#)

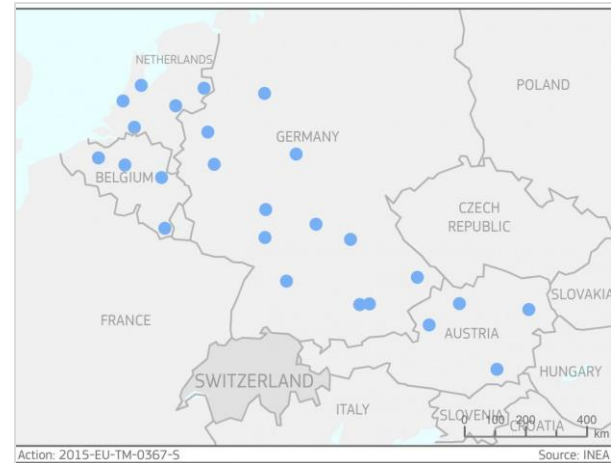


## #4 Supportive government and politics

### Efforts on the European level

#### ULTRA-E

- The pilot project ULTRA-E is promoting the use of long-distance EVs in Europe
- roll-out of ultra-fast charger stations in Bavaria, Austria, Belgium and in the Netherlands
- Funded by the European Union with approximately EUR 6 m
- Implementation between March 2016 and December 2018



For more info click [here](#)

## #4 Supportive government and politics

### Efforts on the European level



Co-financed by the European Union the e-MOTICON project brings together 15 partners from 5 countries to act on issues of low and inhomegenous deployment of eMobility in the alpine region.

e-MOTICON will deliver a White Book on efficient and innovative planning of electric charging stations and work together with industry experts, research institutes and public administration to improve the capacity and coordination of electric charging stations in the alpine region.

Find out more [here](#).

## # 3 Europe's leading innovation hub

### Events in Germany and Bavaria



#### TU Automotive Europe 2017 Munich

- November 1<sup>st</sup> – 2<sup>nd</sup> 2017, Munich
- For 14 years the Conference & Exhibition has been the central meeting place for those at the forefront of automotive technical innovation and business strategy.

For more info click [here](#)



#### Mobilitaet Querdenken Conference 2017, Munich

- November 14<sup>th</sup> 2017
- Aimed at senior representatives company representatives from the automotive and it-sector as well as at public administration officials
- the conference addresses challenges and opportunities in the mobility sector

For more info click [here](#).

## # 3 Europe's leading innovation hub

### Events in Germany and Bavaria



#### eMove360° Europe 2017

- October 17-19, 2017, Munich
- 2nd International Trade Fair for Mobility 4.0, focusing on electric – connected – autonomous driving.
- Parallel there will be the **MATERIA-LICA Design + Technology Award 2017** and the **World Mobility Summit 2017**

For more info click [here](#)



#### Conference on Future Automotive Technology – Focus eMobility

- May 08-09<sup>th</sup>, 2018, Fuerstenfeld
- an opportunity to meet over 400 automotive experts and scientists from all over the world
- plenary discussions and keynote-speeches on strategic and technical novelties in the field of eMobility

For more information please click [here](#)

## #3 Europe's leading innovation hub

### Events in Germany and Bavaria



### International Motor Show IAA Cars

- Fall 2018, Frankfurt a.M.
- Offers a globally unique place for technology firms, the automobile industry, mobility businesses, startups and the digital economy, science, media and society to meet and re-think, present, discuss the future of mobility and bring it to life. Focus on connected cars - **carIT congress** - & fuel efficiency.



### 19<sup>th</sup> – 22<sup>nd</sup> of June 2018, Munich

ees Europe is Europe's largest exhibition for batteries and energy storage systems. Key players of the industry present battery innovations along the whole value chain and smart renewable energy solutions. The exhibition and conference both focus on renewable energy storage, from residential and commercial applications to large-scale storage systems for stabilizing the grid.

For more information click [here](#)

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## #4 Supportive government and politics

Digitization Initiative “Bayern Digital I + II”



**5.5 Billion €** (2015-2022)

**“Bayern Digital I + II”**

Bavarian Government’s Digitization Initiative  
Investment program until 2022

- Projects include high speed internet infrastructure (Gigabit speed in all Bavarian regions), grants and new facilities for research in various fields, and projects promoting digital education
- The Munich ICT hub will gain a massive boost and increase its scope for business
- International companies are more than welcome to tap into these resources and are invited to become a partner

## #4 Supportive government and politics

### Government Funding & Financial Incentives

#### R&D Grants

- **Electro mobility and innovative drive technology for mobile applications –** the State of Bavaria offers funding for research and development in the field of electro-mobility, especially the development of innovative drive technology, such as electric drive and the development of new battery technologies.  
For more information click [here](#).

#### Bavarian state-backed Venture Funds

- **Bayern Kapital** and its funds have invested over EUR 250 m in more than 250 companies and currently manages funds to the value of EUR 340 m.
- The five investing funds currently managed by Bayern Kapital are: Seedfonds Bayern (€ 250k), Clusterfonds Start-Up! (€ 500k), Innovationsfonds, Innovationsfonds EFRE (€ 2m) and Wachstumsfonds Bayern (€ 2m-8m).
- **BayBG** VC financing from € 250k to € 1.5m, an increase up to € 7m is possible if signs of business progress are seen

#### Other Bavarian Funding Programs

- **Start?Zuschuss!** (up to €36k for digital startups)
- **BayTOU** – Program for technology based startups (€ 26k- € 150k for R&D)
- **FLÜGGE** – startups out of university (18months a 50% researcher position for recent graduates)



## #4 Supportive government and politics

### Our Services for You

Planning & Preparation	Location Search & Site Selection	Implementation	Growing in Europe
<ul style="list-style-type: none"><li>• Market and business environment</li><li>• Sector and technology networks</li><li>• Legal and taxation issues</li><li>• Brokering of contacts</li></ul>	<ul style="list-style-type: none"><li>• Presentation of ideal locations in Bavaria</li><li>• Organizing of site visits</li><li>• Networking with local partners</li></ul>	<ul style="list-style-type: none"><li>• Coordination with all project partners</li><li>• Appointments with support and financing partners</li><li>• Human resources</li></ul>	<ul style="list-style-type: none"><li>• Information about programs</li><li>• A worldwide network of Bavarian offices for economic development</li><li>• Invitations to networking events</li></ul>
free of charge   confidential   without obligation			

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## #5 High quality of living

### Bavaria Ranks First in Germany



One of Germany's favorite **tourist destination**



Unmatched **leisure** and **recreation** opportunities



Breathtaking landscapes, **historic cities**, rich culture



**Safe**, secure, **financially stable**





CULTURE



SPORTS



NATURE



RECREATION



OKTOBERFEST



# Any Questions?

Your contact in the US (West)



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