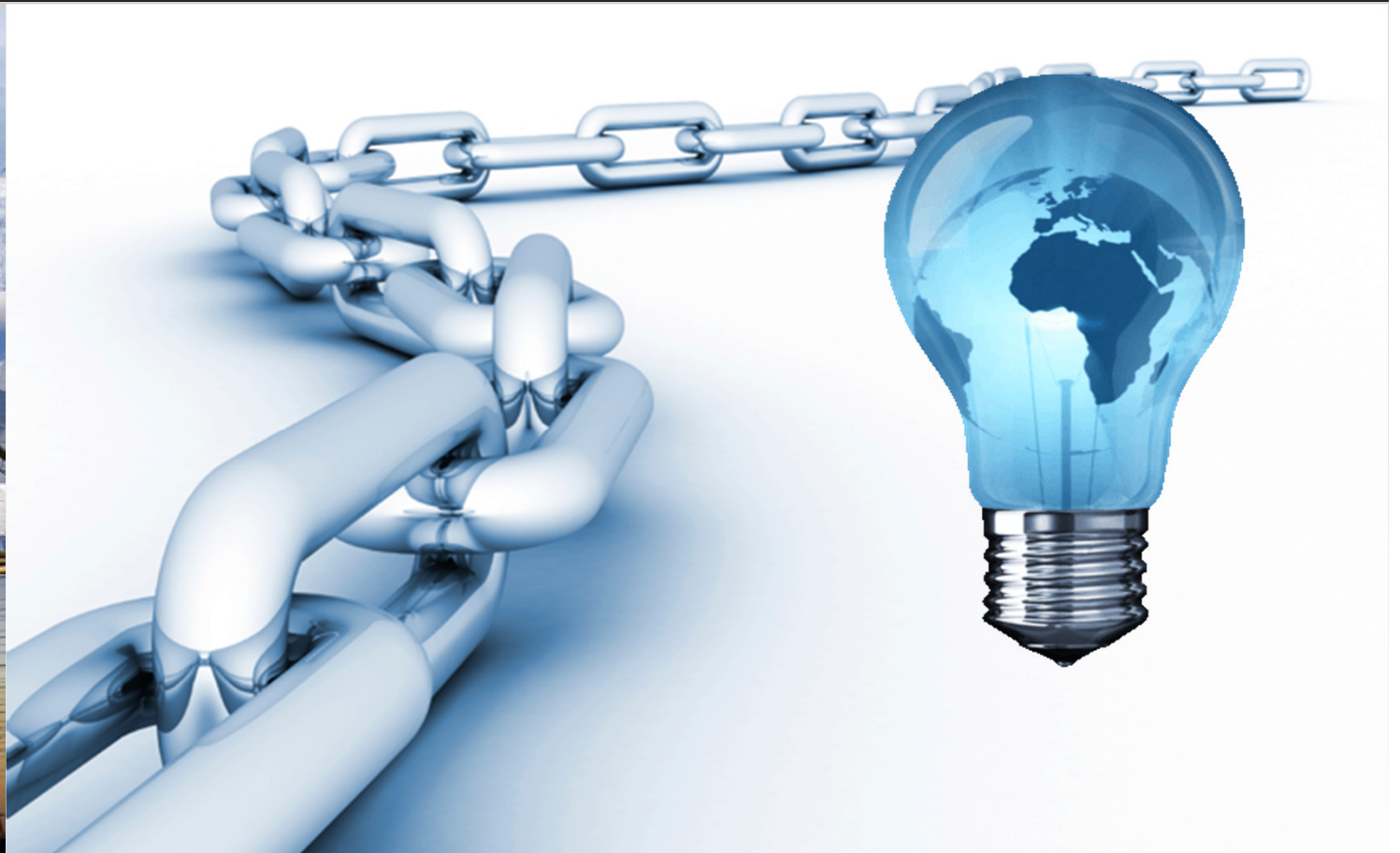


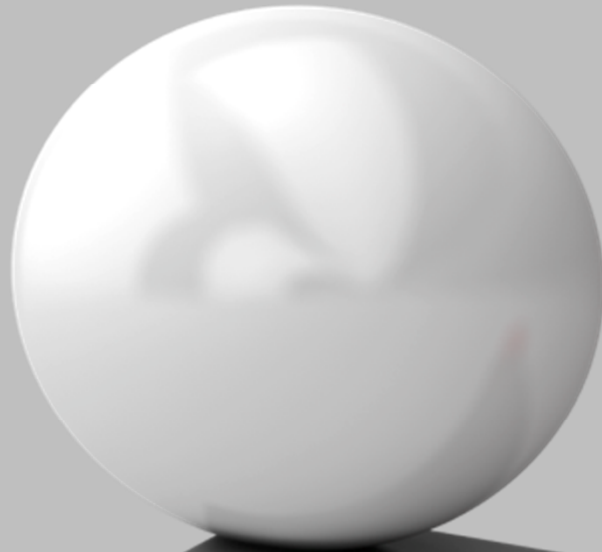
Japan core market for any strategy in Renewable Energy and E-Mobility



CBI
Partners

Cross Border
Implementation

Some facts about **Japan**



UP Side

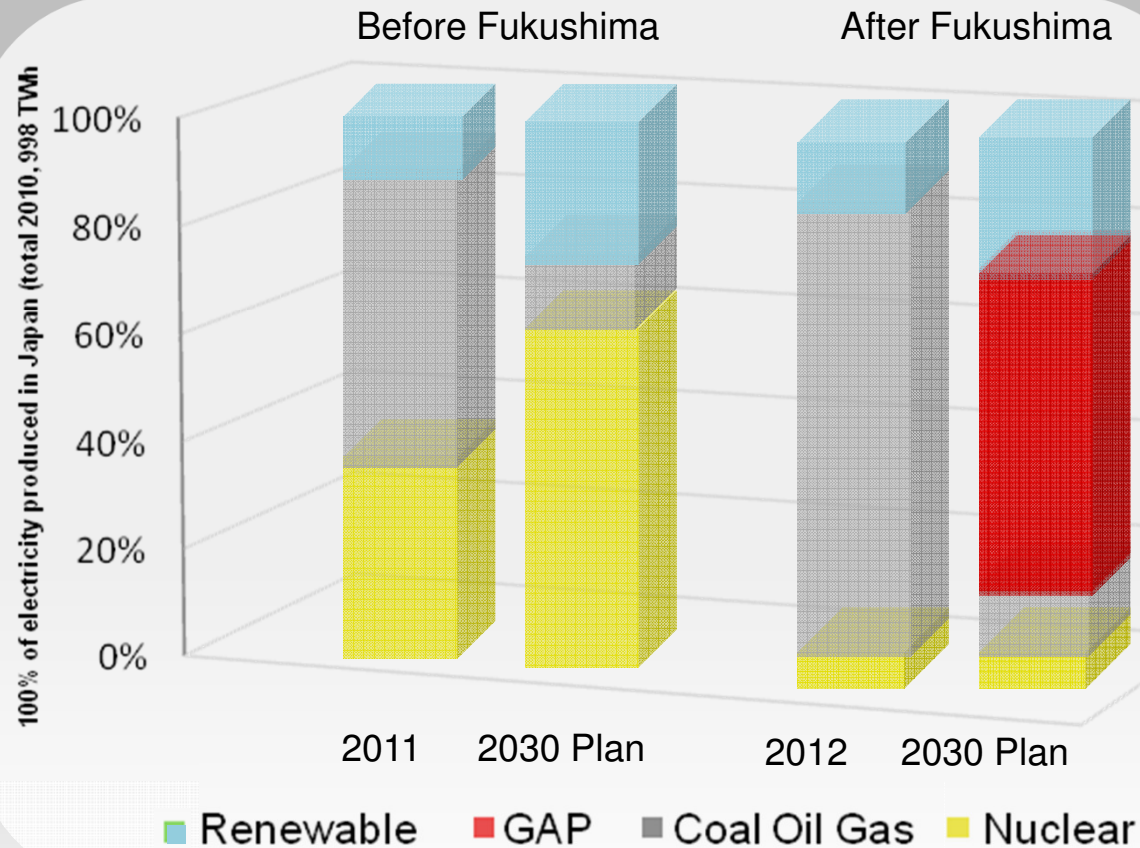
- ❑ 3rd biggest economy
 - ❑ biggest single production nation automotive
 - ❑ Most global production structure
 - ❑ Lithium Ion Battery invented in Japan
 - ❑ Most Battery & EV industry patents
 - ❑ International standards supporter in G8
 - ❑ Established technology & production player in China
- **Fukushima is changing Japan's energy landscape**



Down Side

- ❑ Highly regulated energy market
- ❑ Difficulties HR market, culture, language
- ❑ Galapagos Effect
- ❑ China is more important sales market

Fukushima changes the energy landscape of Japan



Japan is well equipped with **Natural Energy Resources**



- **Hydro-power:** additional capacities, revival is possible!
- **Geothermal:** resources: ~20 GW, using: 0,5 GW, deregulation will open market
- **Block Heat, Power Plants, Heat Pumps:** commonly used, new importance smart grid solutions
- **Biomass:** top resources not cultivated, possible sustainable labor force

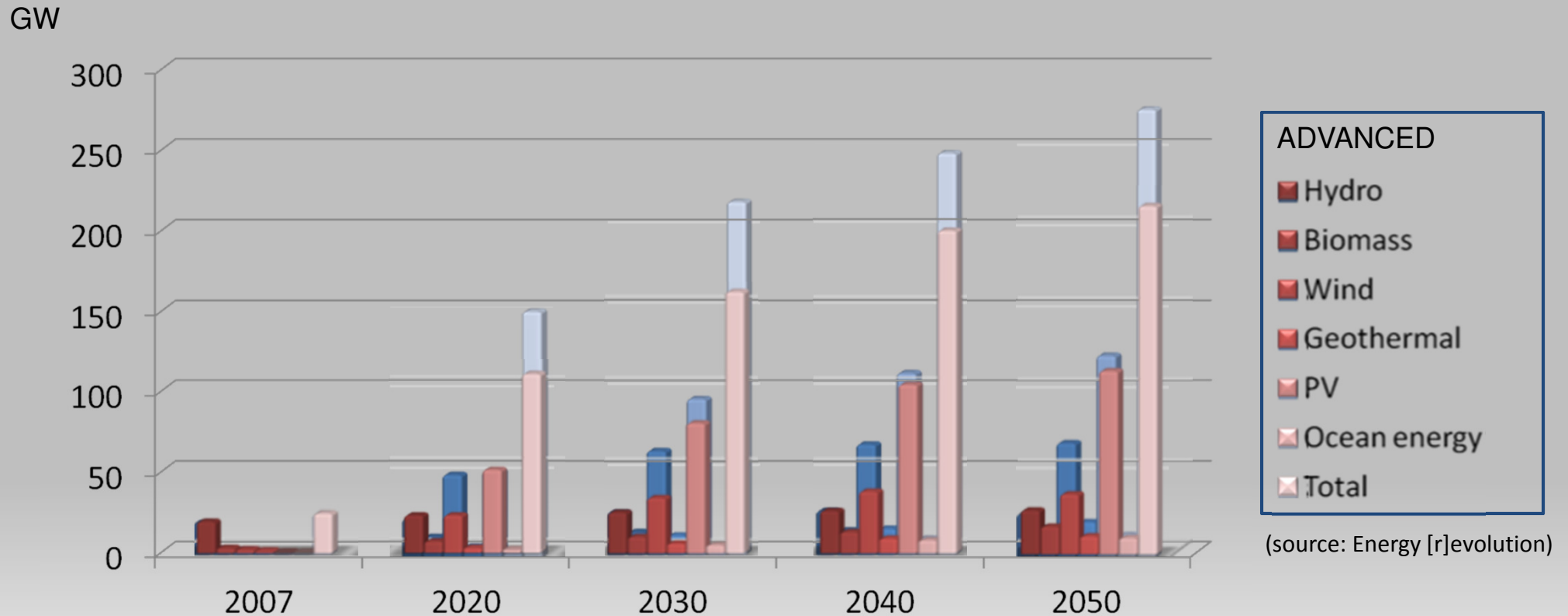
 Japan offers higher renewable energy potential than Germany!!!

Japan is well equipped with **Natural Energy Resources**



- **Great starting point:** 34.000 km coastline, strong wind, extensive sunshine, hydro-power, geothermal resources
- **PV & Solar Thermal:** experienced engineering & production partners, Japanese-European alliances
- **Wind Power:** coastline windy areas for onshore & Tokyo area offshore, grid investment needed

 **Japan offers higher renewable energy potential than Germany!!!**

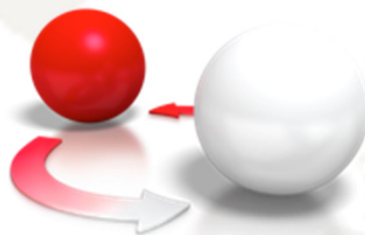
An optimistic (but possible) **Scenario...**

... huge investments in infrastructure and renewable energy production needed!

Japan far behind
Europe in renewable
energies



Japan has a history
of fast adjustment
when it was
necessary



Opportunity for
European
companies to enter
Japanese energy
market



1

2

3

4

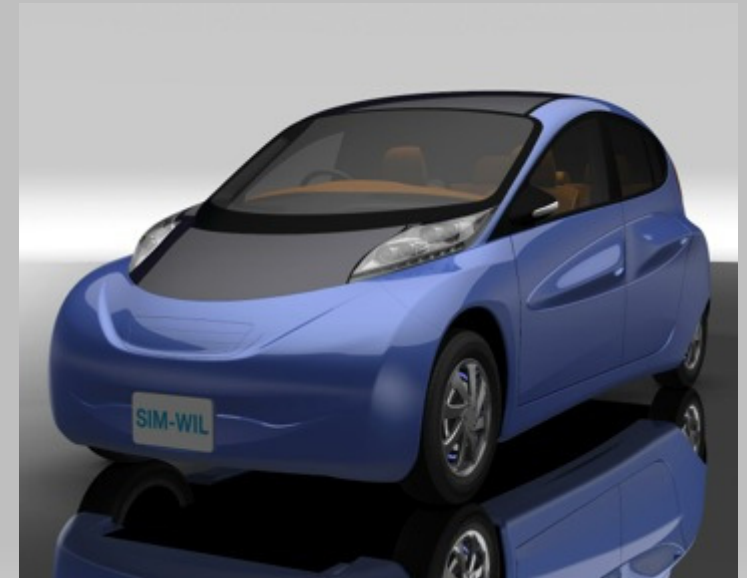


Europe is leader in
applied alternative
energies

Japan as strategic market:
demand for new renewable
energy needs to be explored!!!



- **~1 Mio. Units Hybrids and EVs sold in 2011 worldwide!**
- **~400 000 units sold in Japan!!!**
- **Japanese Makers produced ~750 000 units!**
- **Japan is the single biggest consumer and producer market for EVs!**

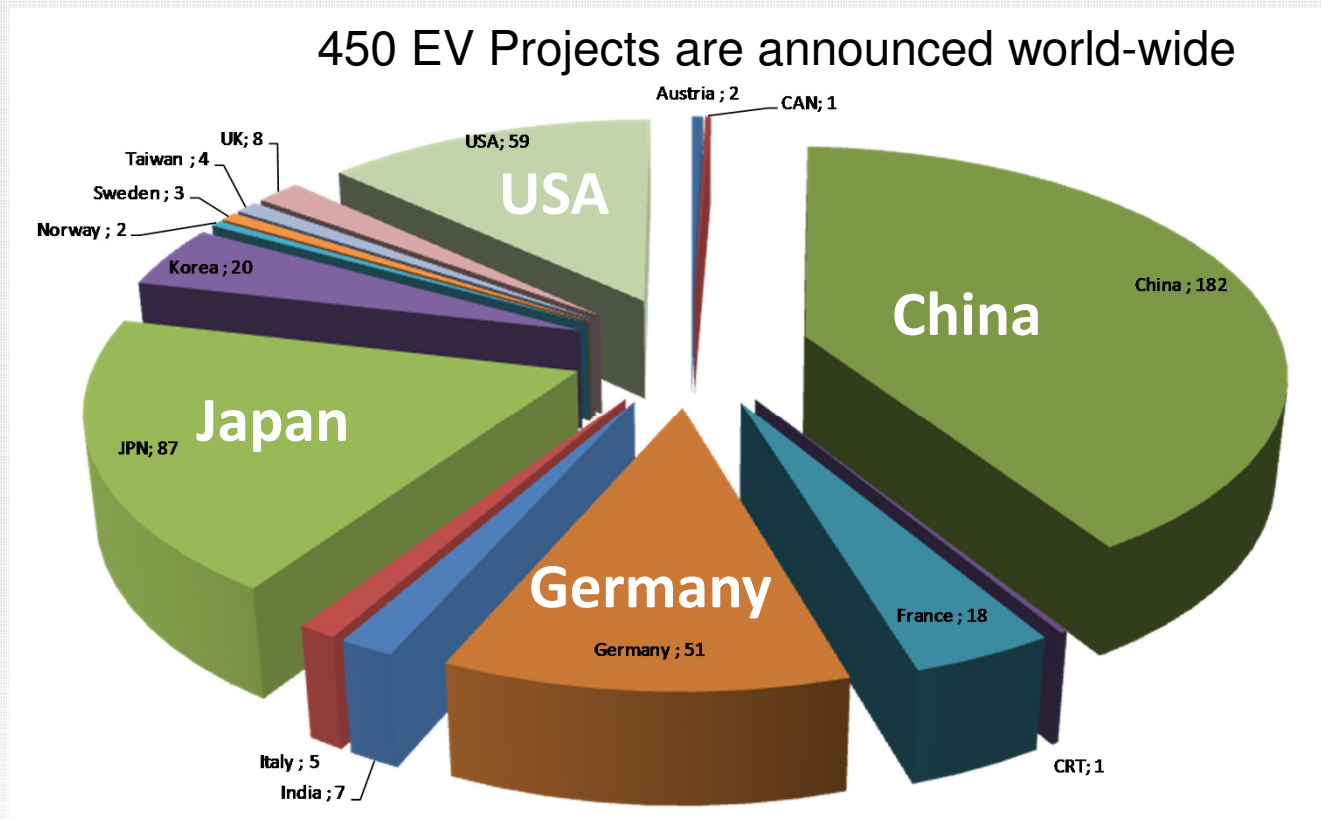


The world leading open source EV - Project with more than 100 international top-companies is located in Japan

Announced future & ongoing EV production projects

450 EV Projects are announced worldwide

(Source: Marklines)

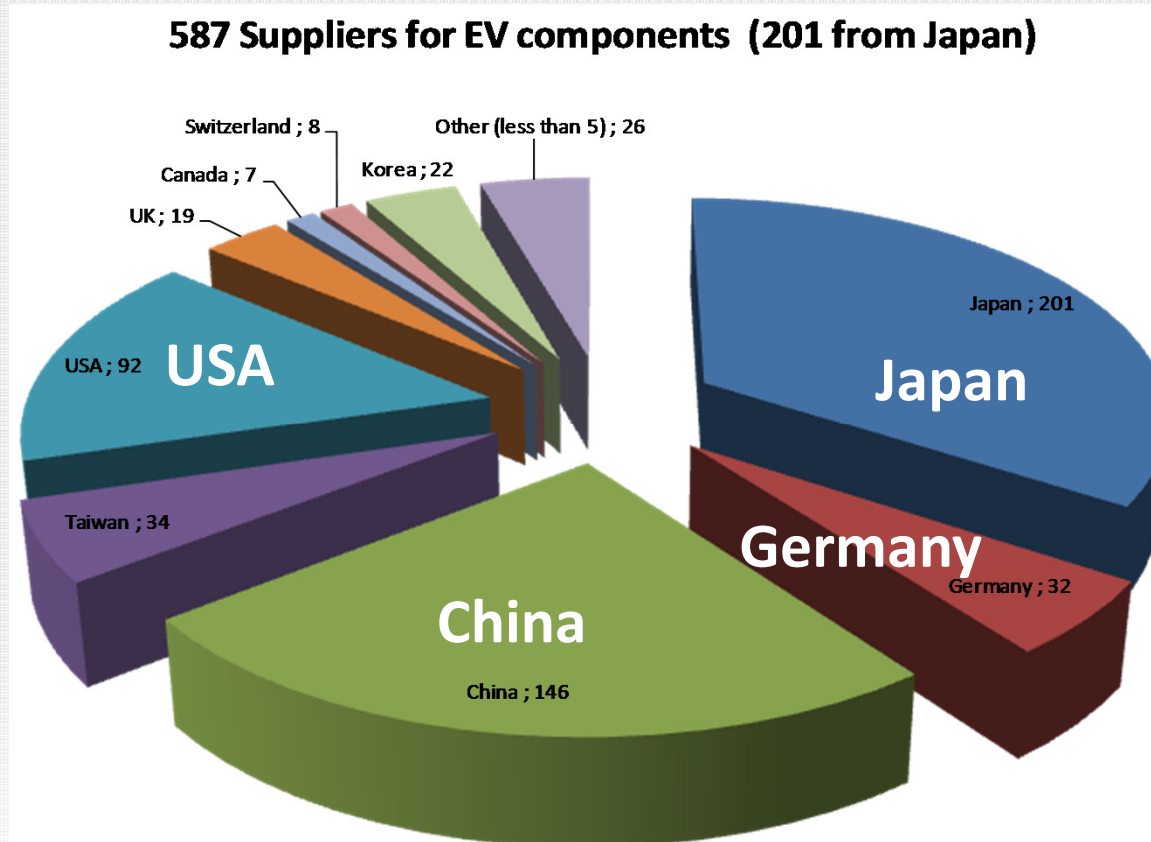


- China, Japan, Germany and the USA show the highest activity-level in EV projects

Suppliers activity in EV vehicle-development

587 Suppliers for EV components (201 from Japan)

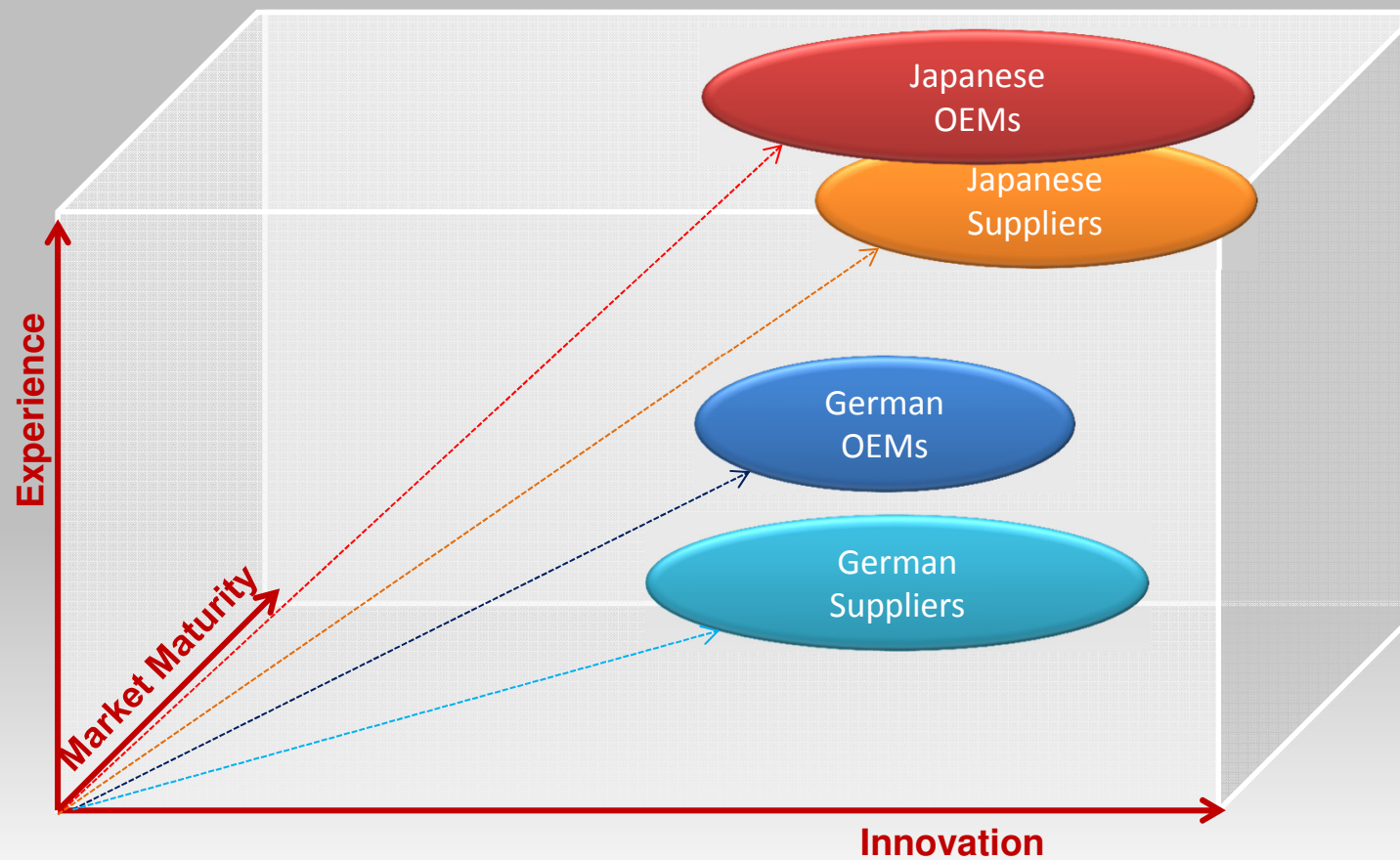
(Source: Marklines)



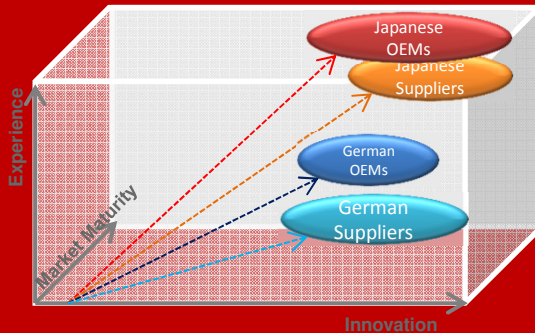
Geman SMEs are merely participating in the global EV market!

- ❑ Japanese Suppliers are leading in most technologies required for EV
- ❑ But at the same time we expect a consolidation of EV suppliers world wide

Innovation - Experience - Market Maturity



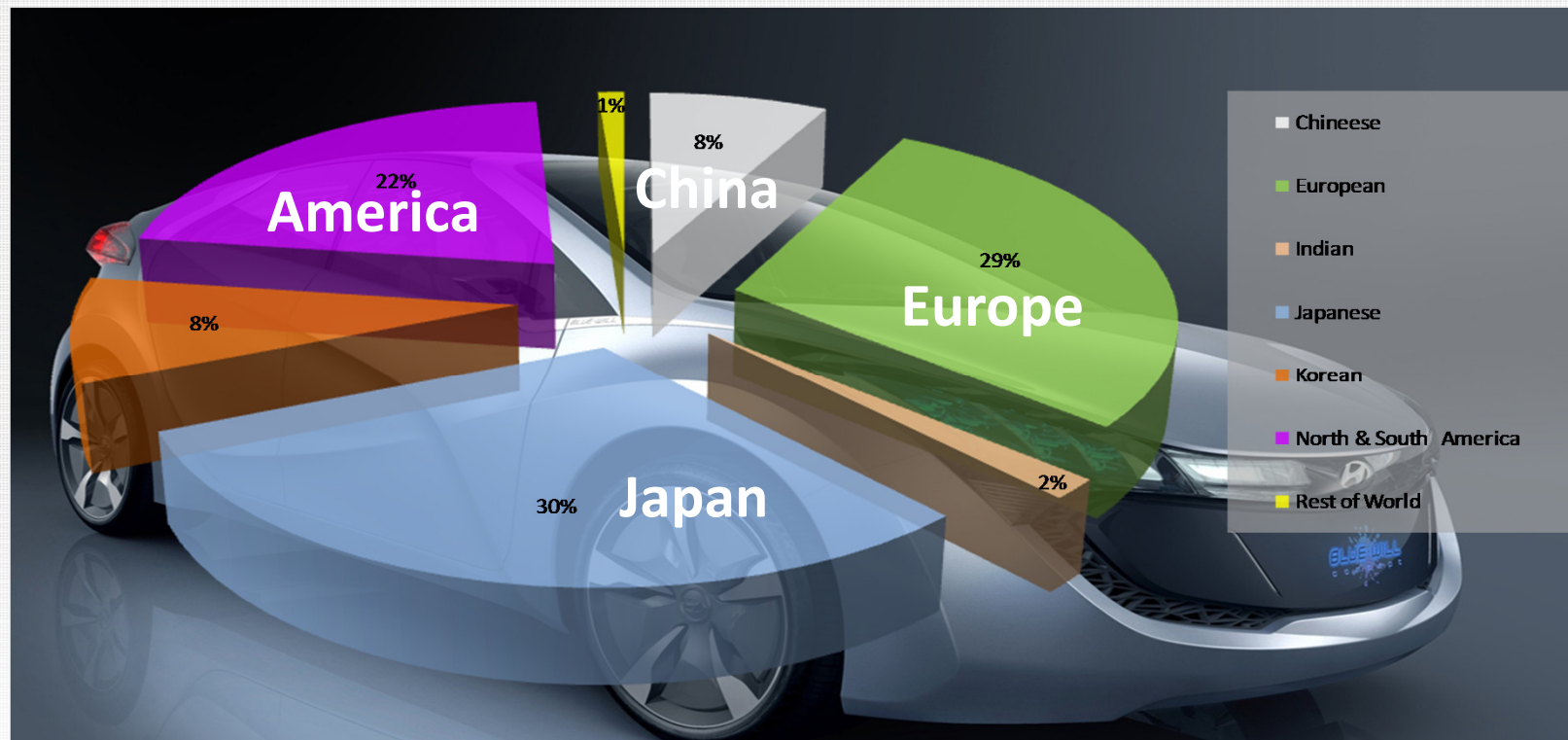
Innovation - Experience - Market Maturity



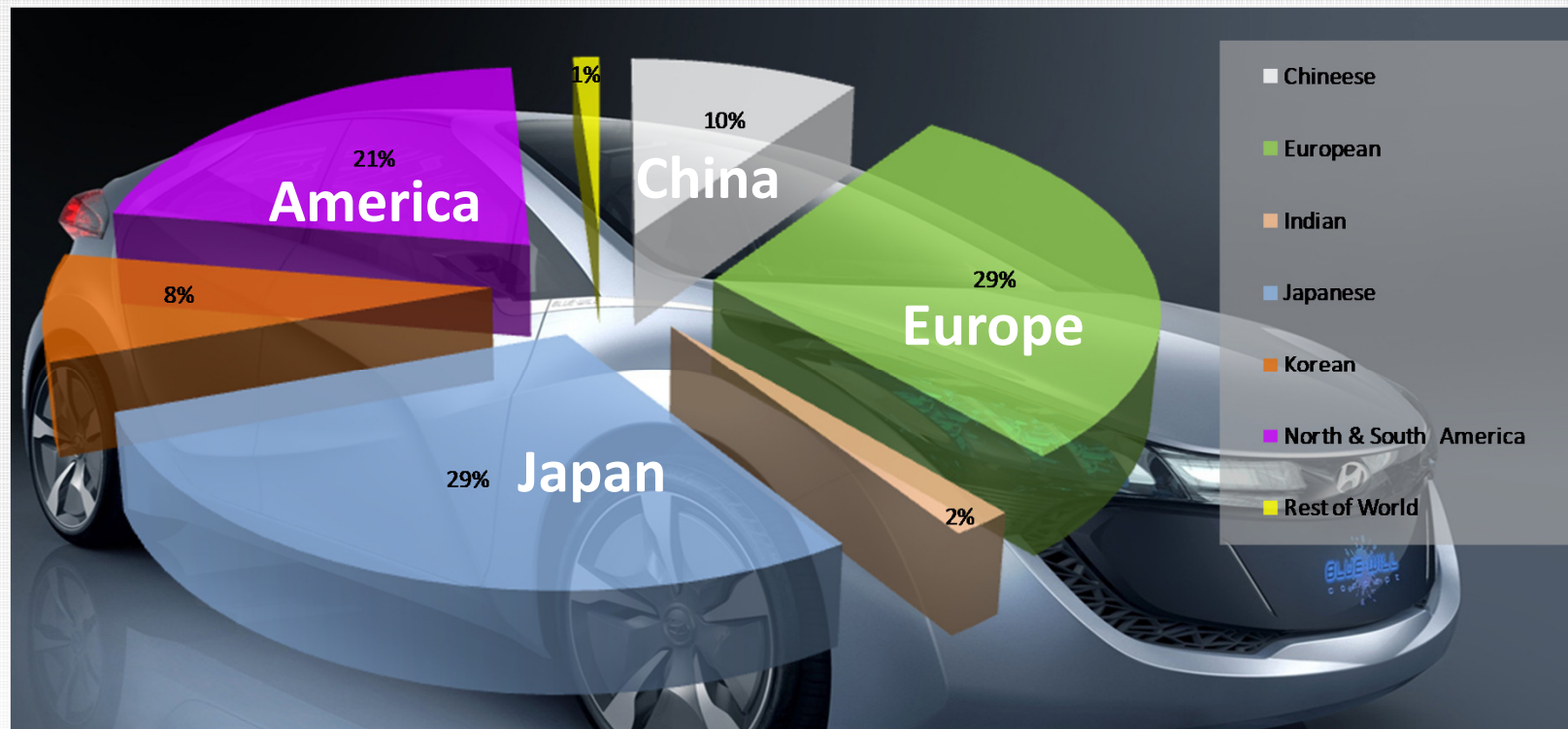
- ❑ Especially German SMEs are far behind in all EV technologies
- ❑ Technology Driven German Industry has big potential to catch up
- ❑ Higher flexibility and deregulation of energy market makes Germany leader in all alternative energies
- ❑ Japanese Housing and Energy Market is heavily investing into SMART GRID now
- ❑ Partnerships with J-Companies also increases Market Potential for China



About 68 Mio Vehicles were produced in 2010

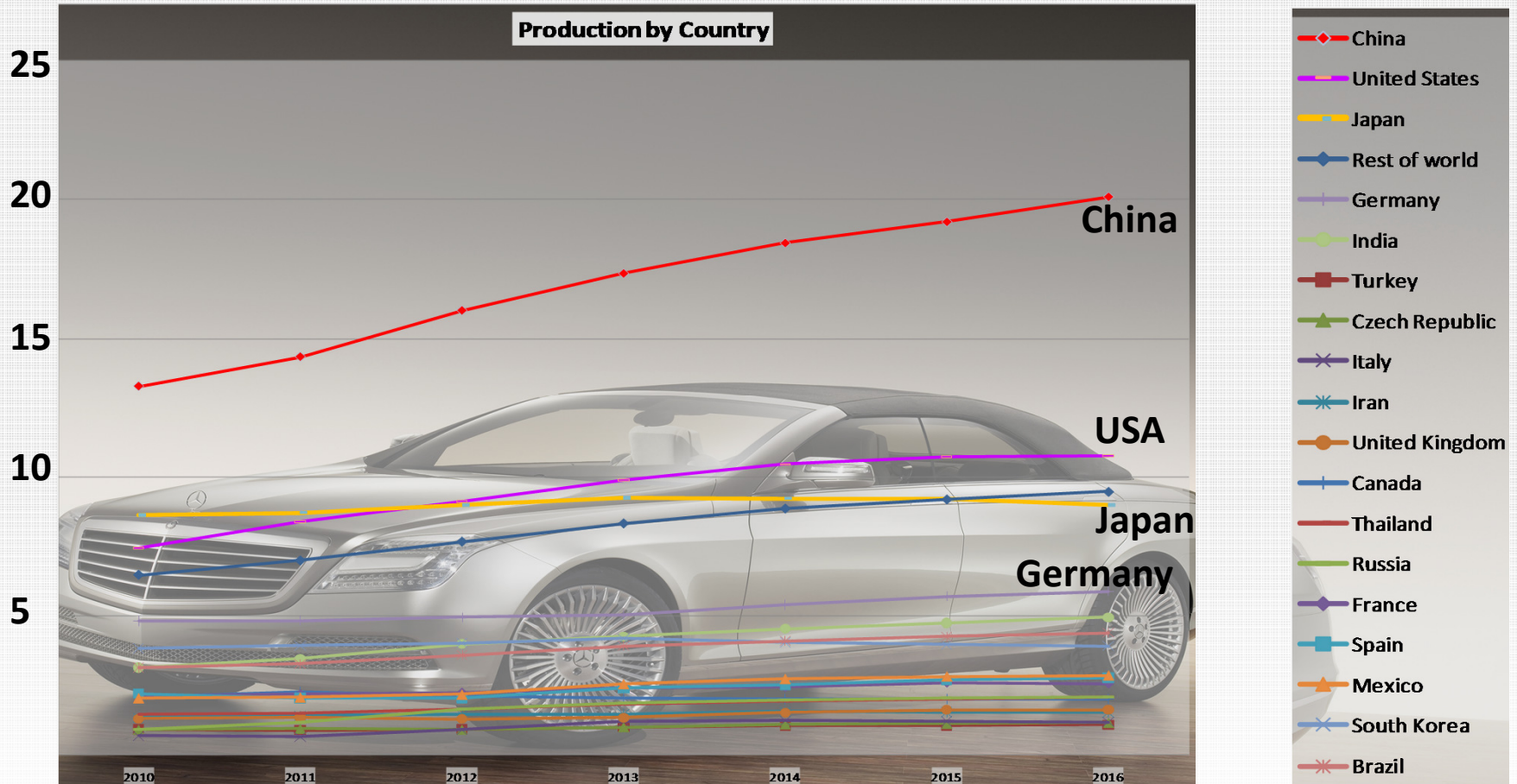


About 90 Mio Vehicles will be produced in 2016



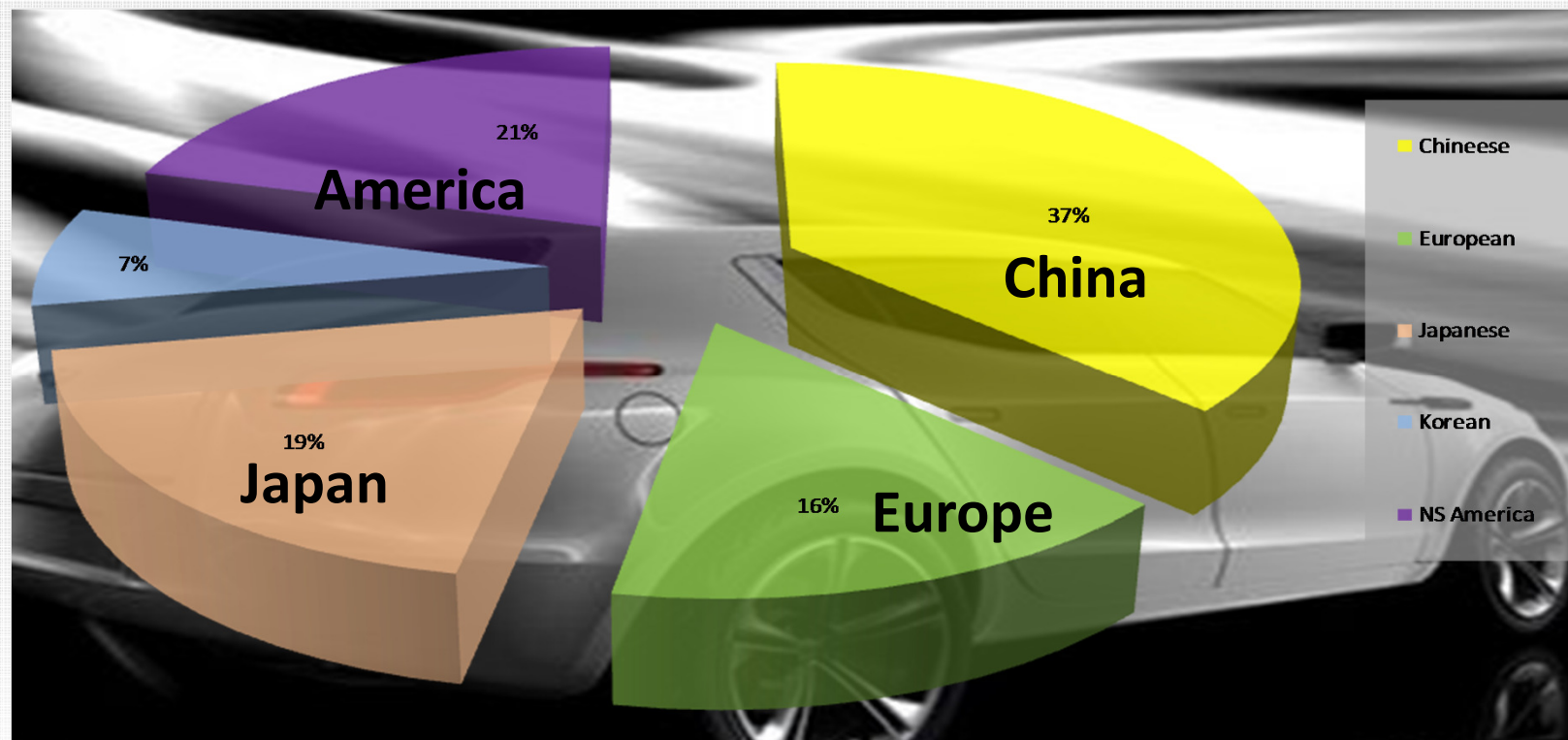
Where is the **growth**? Production by Country

Mio cars
per year



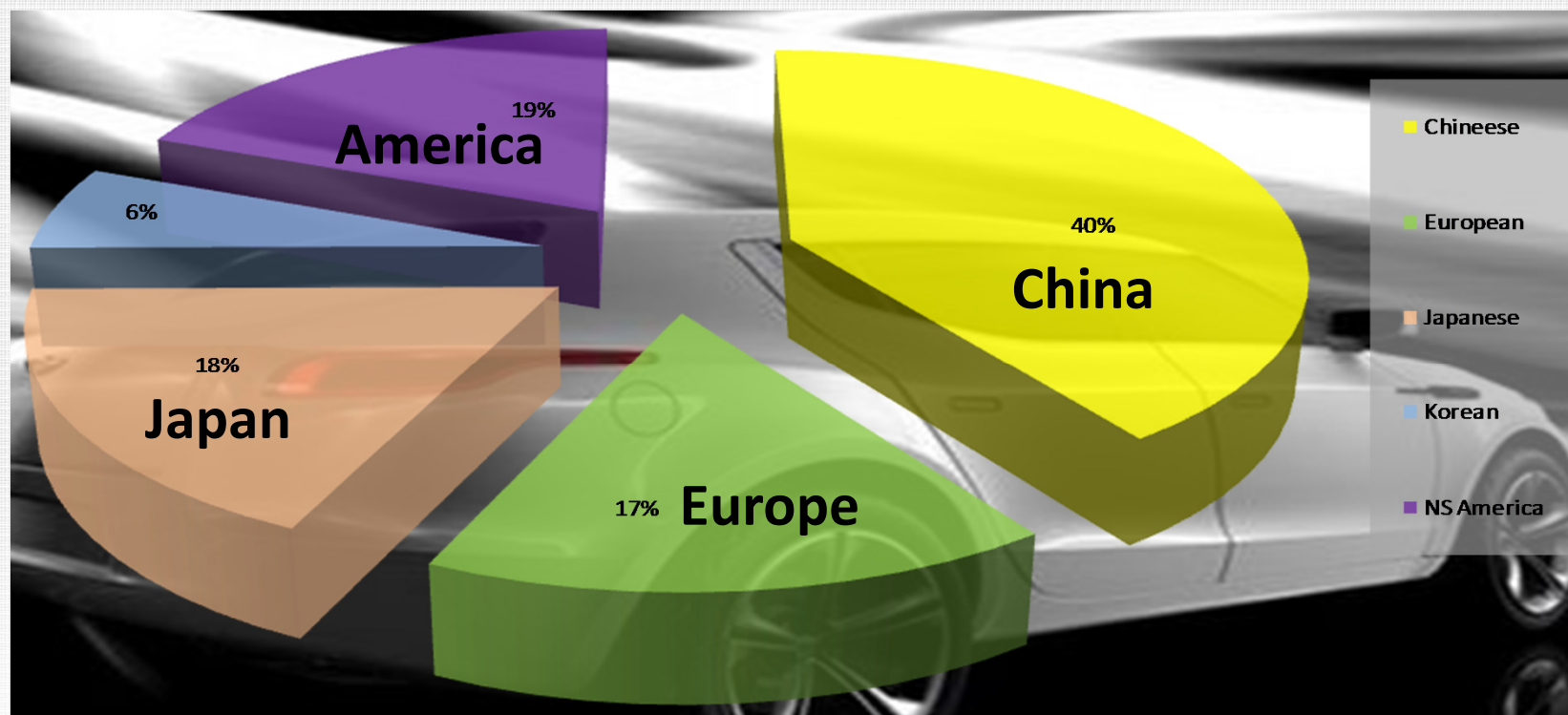
Production in China 2010

Shares of production by origin of technology / capital



Production in China **2016**

Shares of production by origin of technology / capital



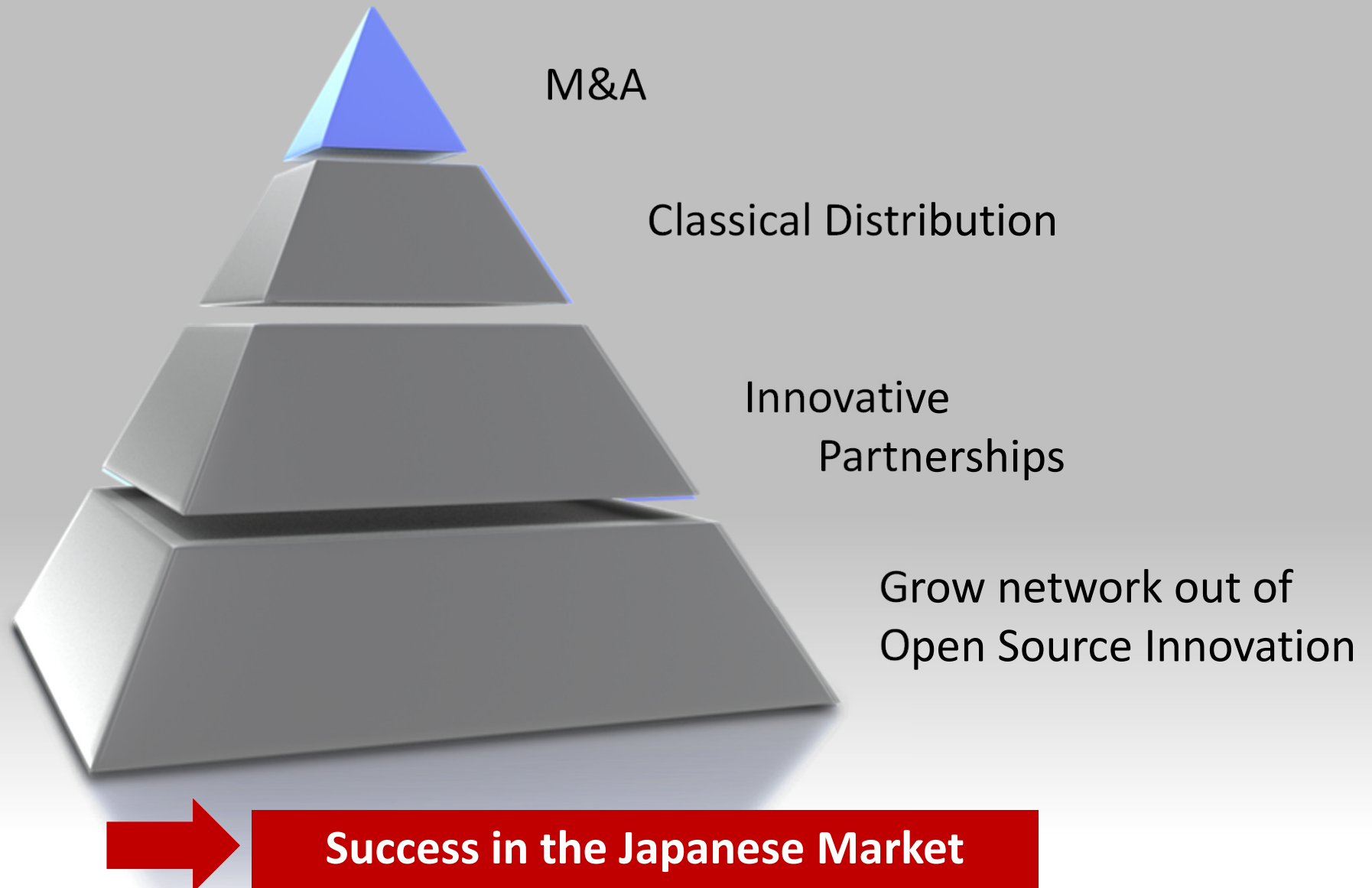
- ☐ Japan has to cover an electricity gap of around 450 TWh per year
- ☐ Japan does not have the alternative energy concepts and experiences like Germany to do this
- ☐ Japan is the leading country in EV and Hybrid car technology
- ☐ Japanese customers are essential for your portfolio for China



How to establish business in Japan?



How to participate in the **Japanese Market**



We are looking forward to seeing you in **Japan**



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