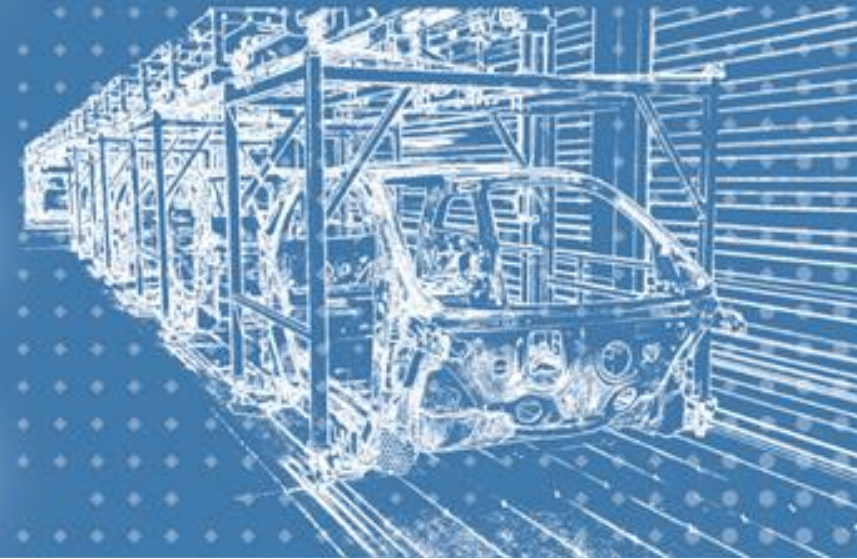


**KUNDENBEGEISTERUNG IN SERIE:  
WE DRIVE MANUFACTURING TO EXCELLENCE.**



March 26, 2015

# PRODUCTION@BMW

**DR FRANZ DECKER  
HEAD OF PRODUCTION NETWORK STRATEGY.**

**BMW  
GROUP**



# PREMIUM OEMS HAVE TO MANAGE SOPHISTICATED CUSTOMERS, INDIVIDUALIZATION OF PRODUCTS AND DYNAMIC MARKETS.

1

**Sophisticated customers** and **quality** claim.

2

**Increase of number of derivatives** and **customizing elements**.

3

**Uncertainty** because of **volatility** regarding **customer / segment** structure, **regional demand** and **market** behavior.

# BMW GROUP SUCCESSFULLY APPLIES FOUR CORE ELEMENTS TO ITS ONE GLOBALLY ALIGNED NETWORK.

**BMW Group is best in managing customers' individual needs in production**

**Our instruments:**

- A Flexibility management**
- B Complexity management**

**BMW Group balances global growth and optimizes risks.**

**Our instruments:**

- C Production follows market**
- D Management of cost & capital structure**



**...and all as ONE GLOBALLY ALIGNED NETWORK**



# WE MANAGE OUR FLEXIBILITY WITH VARIOUS INSTRUMENTS AT NETWORK, STRUCTURE AND EMPLOYEE LEVEL.

## FLEXIBILITY MANAGEMENT

### BMW Group success stories

- **Fast reaction to global automotive crisis and Euro crisis**
- **Production and sales volume at new record in 2014**
- **Stable achievement of margin targets**
- **No production stop** after Japan Tsunami
- **Integration of BMW i production**
- **Short term reaction swop of Russia production volume to US**



### Levers

Network	Architecture: Product and process modular system
	Splits of derivatives
	3 <sup>rd</sup> party manufacturer
Structure	Make vs. buy
	Derivatives per line
	Reaction time
Employee	Operating shift model
	Labor model and accounts
	Qualifications

# B MODULAR PRODUCTS, LEAN SYSTEMS AND EFFICIENT PROCESSES ENABLE STRONG COMPLEXITY MANAGEMENT.

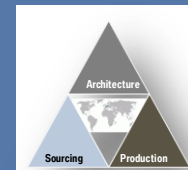
## COMPLEXITY MANAGEMENT

### BMW Group success stories

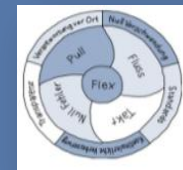
- **Broad market coverage through high number of derivatives**
- **Almost endless number of options and equipment variants**, i.e. BMW 7 Series at Plant Dingolfing, with theoretically up to  $10^{32}$  possible configurations
- **165 customer relevant options**
- **BMW Individual process and broad brand spread**
- **Changes up to six days prior to the start of assembly possible**
- **Built-to-order-approach**
- **Launch as new normal**



### Levers



**Modular product & production strategy  
Integrated product & production process design**



**Standards & lean production**

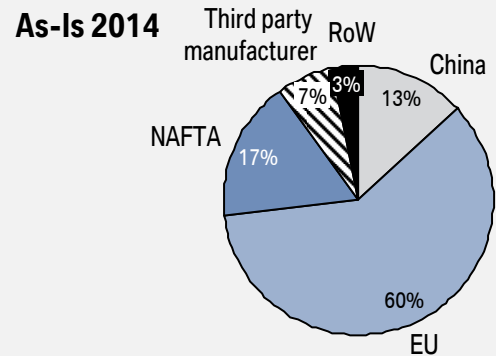


**Customer oriented retail & production process**

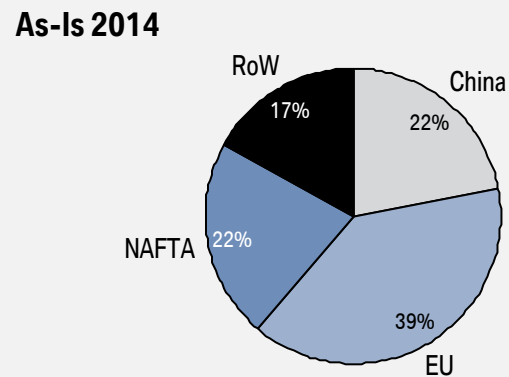
# © INVESTMENTS OUTSIDE EUROPE AND THIRD PARTY MANUFACTURER ARE STRATEGIC ELEMENTS FOR BALANCED GROWTH.

## GLOBAL BALANCED GROWTH – PRODUCTION FOLLOWS MARKET

Global production allocation



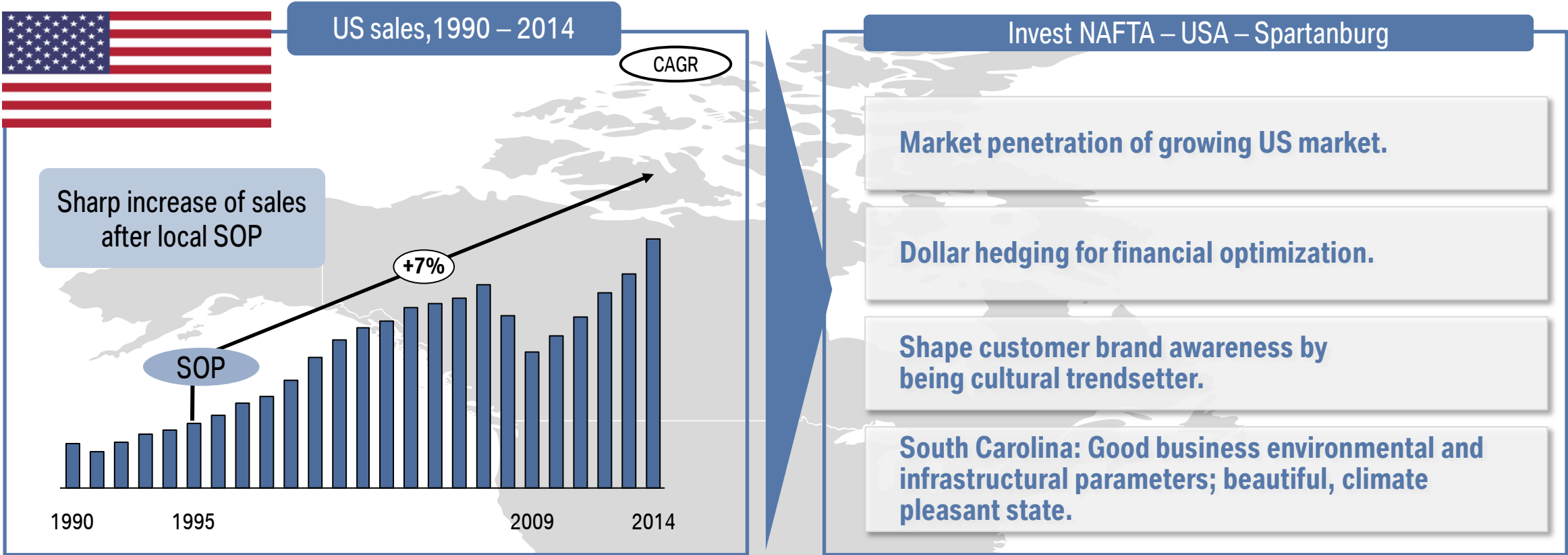
Global sales



### Our activities:

- Production **follows market**
- Recent and ongoing investments outside Europe:
  - All new production plant **roll-out in San Luis Potosí** (150,000 units, SOP 2019)
  - **SOP in Brazil Araquari plant in 10/2014** (30,000 units, MINI countryman, BMW 1series 3dr/5dr, 3ser. Sedan, X1, X3)
  - Production **increase in Spartanburg** (X7, X4, 800 new jobs)
  - **Extension of existing China facility (Dadong)** (Expansion to six models (from 3 currently))
  - **New engine plant in China (Tiexi)**
- **Third party manufacturer** as strategic element for flexibility and profitable growth

# OUR MOTIVATION FOR INVESTMENT INTO NAFTA US IS MARKET PENETRATION, RISK HEDGING AND BRAND SHAPING.



 Plant Spartanburg as X-hub for the production network; biggest automotive export plant / company within the US.

# FURTHER INVESTMENTS INTO MEXICO AND BRAZIL ARE BASED ON SALES AND COST ARGUMENTS.



**Further NAFTA market penetration due to increasing sales figures.**

**Realization of production cost advantages.**

**Extension of production base.**

**Start of site preparation**

**Marketability to South American market.**

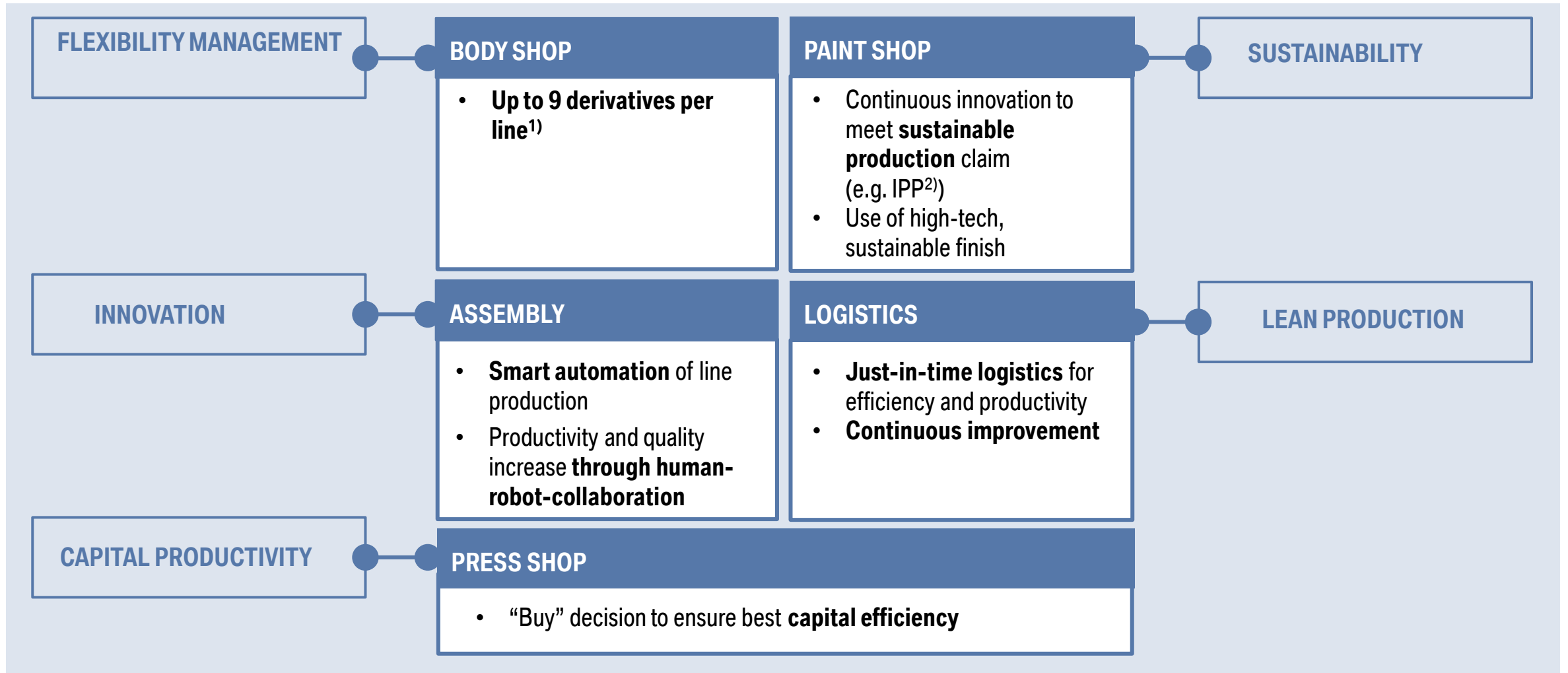
**Local content due to protectionism and high import taxes.**

**Exploitation of market by other OEMs.**

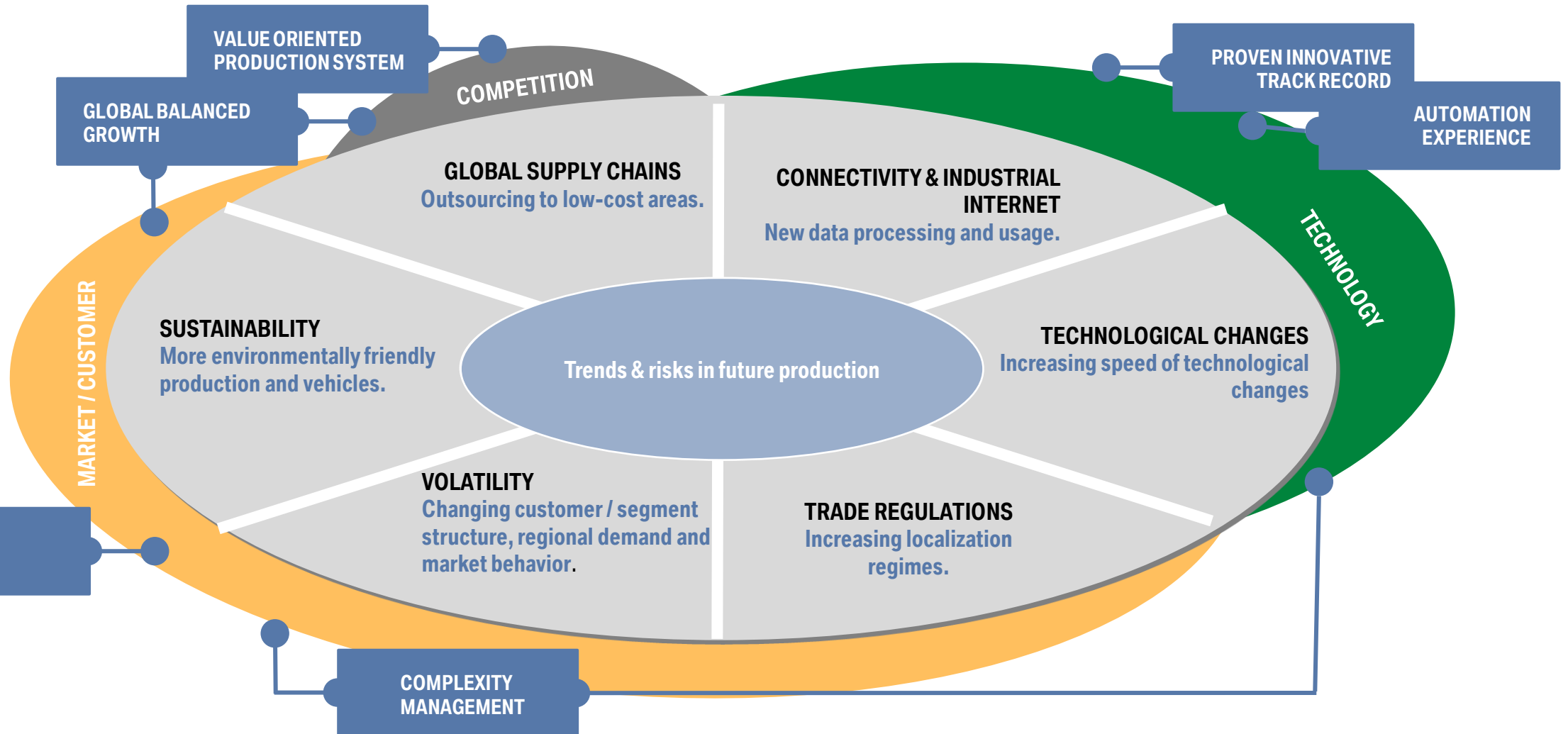
**Assembly start in 10/2014**



# OUR CORE ELEMENTS ARE EVEN VISIBLE AT EVERY STEP OF OUR VALUE CHAIN.



# BMW GROUP IS BEST PREPARED TO APPLY FUTURE TRENDS AND TO MEET FUTURE RISKS IN PRODUCTION.



# SUMMARY:

**BMW Group production acts as one global network with smart allocation of value creation.**

**We apply flexibility and complexity management to efficiently provide individualization for our customers.**

**Success factor is coherence of architecture, sourcing and production at all levels.**

**Mexico & Brazil will add strong pillars for our production network to foster sales.**

**BMW Group is best prepared to master future trends and to meet risks in production.**