

# European Union Strategy for the Danube Macro-Region in a Multipolar World

**Dr. Ernst Schmied, Chair DMRBW2017  
Harald Leupold, Board Member, OWWF  
Dominik Schmied, Program Management**



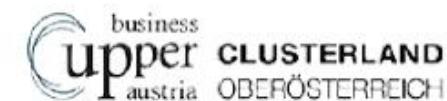
**Clubabend des OWWF Bayern  
Bayerischer Landtag – Maximilianeum  
Munich, Nov 14 2017**



Macro Danube Region Business Week 2017 (DMRBW2017) fand in Wien und Linz ([www.dmrbw.net](http://www.dmrbw.net)) und das 6. EU-Donaustrategieforum 2017 in Budapest statt. Reflektionen der Ergebnisse beider Veranstaltungen reflektieren und Schlussfolgerungen für unsere Aktivitäten.

# Danube Region Business Week

## Hosts



## Content Partners



# Agenda

1. Introduction
2. Multipolar World
3. Danube Macro Region
4. EU Strategy Danube Region (EUSDR)
5. Transport & Logistics
6. Supply Chain Design & Logistics
7. Global Challenges
8. Conclusion
9. Annexes (1-6)

# Week Overview DMRBW2017

**Monday, October 2<sup>nd</sup> 2017, Hofburg/SECI, Vienna**



CONFERENCE DAY 1

<http://www.danubeforum.org/>

ECOLOGY & ECONOMY | Why Paris is part of the Danube Region - The Next Steps

**Tuesday, October 3<sup>rd</sup> 2017, WKO, Vienna**



CONFERENCE DAY 2 (conference language: GERMAN)

<https://www.wko.at/service/Veranstaltung.html?id=b4421bff-bfd0-4c08-9625-8684dfbd5d05>

FORUM | Export in the Danube Region

**Wednesday, October 4<sup>th</sup> 2017, Linz**

CONFERENCE DAY 3 (limited number of participants)

<https://www.dmrbw.net>

BUSINESS DIALOG | Logistics & Infrastructure | Technologies & Capabilities



**Wednesday, October 4<sup>th</sup> 2017, Linz**

CONFERENCE DAY 3 (by invitation only)

<https://www.dmrbw.net>

Evening Dinner Reception | voestalpine Stahlwelt



**Thursday, October 5<sup>th</sup> 2017, Linz**

CONFERENCE DAY 4 (limited number of participants)

<https://www.dmrbw.net>

BUSINESS DIALOG | Supply Chain Design & Finance | Processes & Application

SITE VISIT | voestalpine Stahlwelt



**Thursday, October 5<sup>th</sup> 2017, Vienna**

CONFERENCE DAY 4 (by invitation only)

<https://www.dmrbw.net>

Evening Dinner Reception | Austrian Purchasing Association (BMOE)

Annual Event 2017, Vienna (tba)



**Friday, October 6<sup>th</sup> 2017, DA, Vienna**

CONFERENCE DAY 5

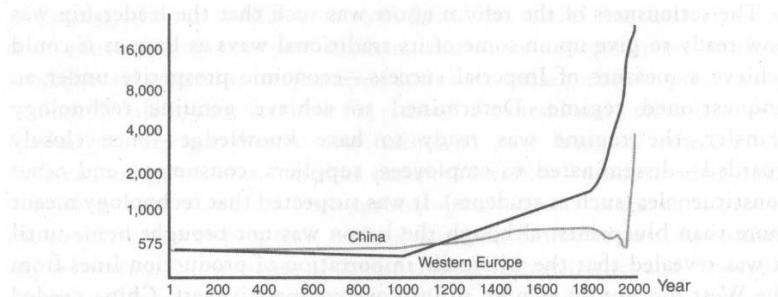
<http://www.danubeforum.org/>

SMART DANUBE REGION | Economy & Entrepreneurship in the Danube Region



# Changes in the Global Landscape

## Impact of Rising China



Source: Figure 1 (p. 42): GDP per capita: China and Western Europe: 1–1998 A.D. in Maddison, Angus (2001), *The World Economy: A Millennial Perspective* OECD. Copyright, OECD 2001.

Exhibit 2-1 GDP per Capita (in 2002 Dollars): China and Western Europe: 1–1998 A.D.

### Relative Certainties in the 2025 Global Landscape

- Emerging of a global multipolar (oligopolar) world
- Shift of wealth and power from West to East
- US will remain the single most powerful but less dominant
- Continued economic growth and 1,2 billion more people will put pressure on energy, food and water resources

(NIC 2008/US Government Printing Office)

China's rise has more in common with the rise of the United States of America a century earlier than with the progress of its modern-day predecessors and followers.

What we are witnessing is the sustained and dramatic growth of a future world power, with unmatched breadth of resources, lofty aspirations, strong bargaining position, and the financial and technological wherewithal of an established and business-savvy diaspora.

The impact of a rising China on countries of the world – both developed and developing – will be enormous, and so will be the need to develop strategies and responses to meet the challenge.

Wharton School Publishing,  
The Chinese Century (2006)



# Adjustment of Global Material Flows

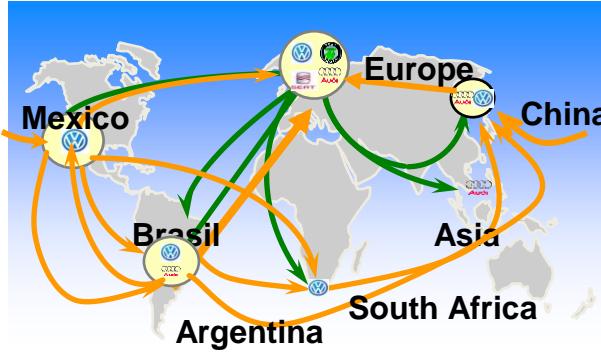
## Transport Volumes

1998



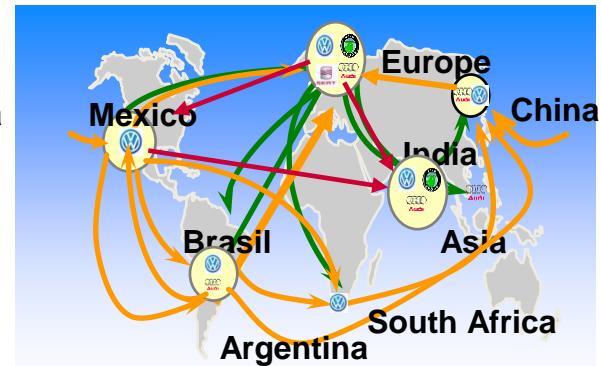
Total 110.000 TEU  
6 main trades

2007



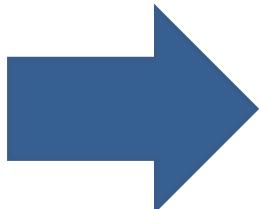
Total 125.000 TEU  
18 main trades & cross trades

2012ff.



Total >140.000 TEU  
21 main trades & cross trades

## Emergence of Additional Trade Lines



- South Africa
- India
- Central Asia
- Russia
- Malaysia
- Middle East

**Increased Supply Chain Complexity due to Additional Number of Trade Lines**

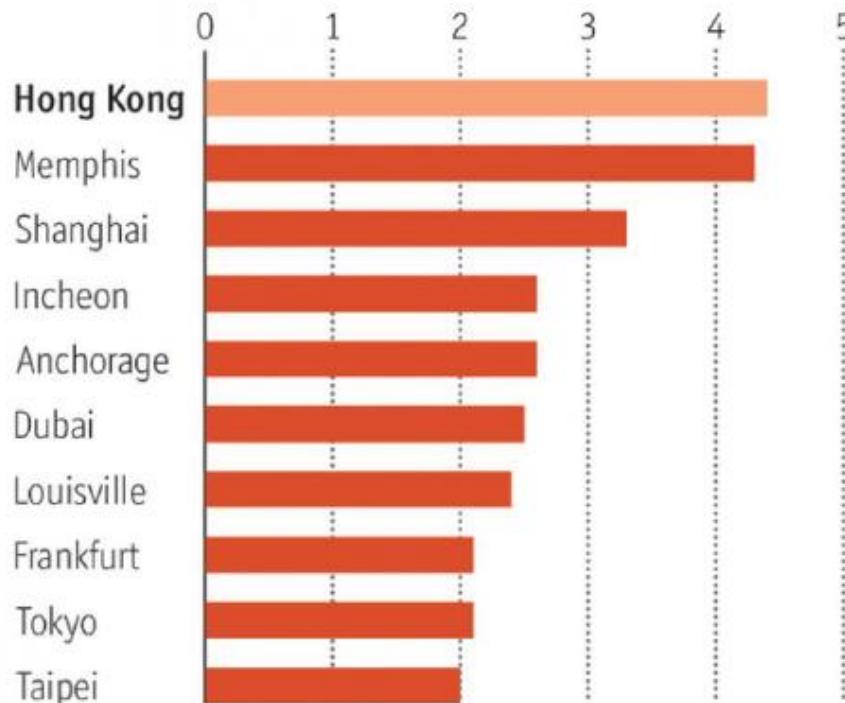
Sources: Factfinding CVI/NAPs in March 2008 and WTO April 7th 2011

# Alignment of Global Infrastructure

## World infrastructure champions

### Busiest airports

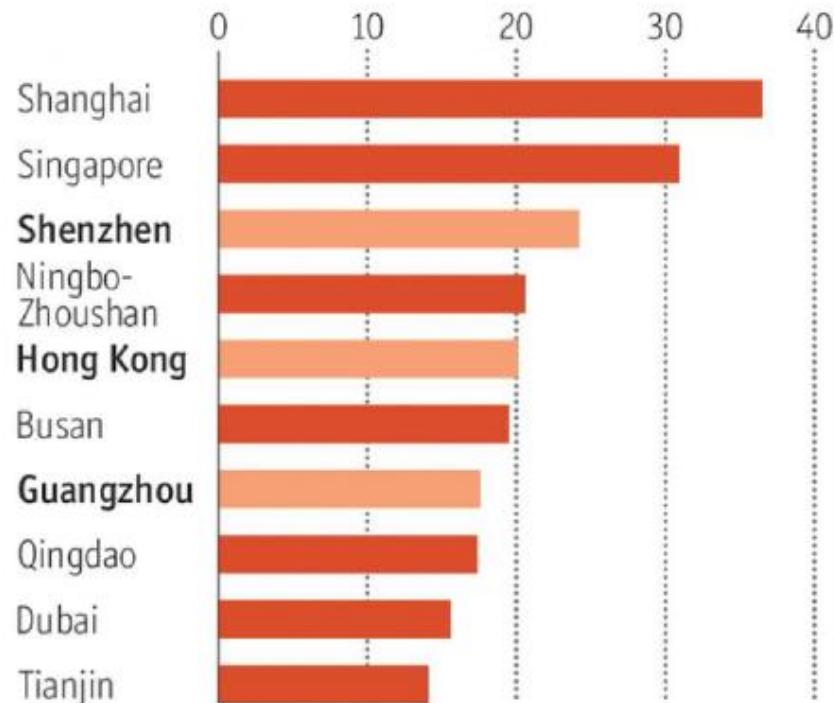
By freight and mail, tonnes m, 2015



Sources: Airports Council International; Marine Department of Hong Kong

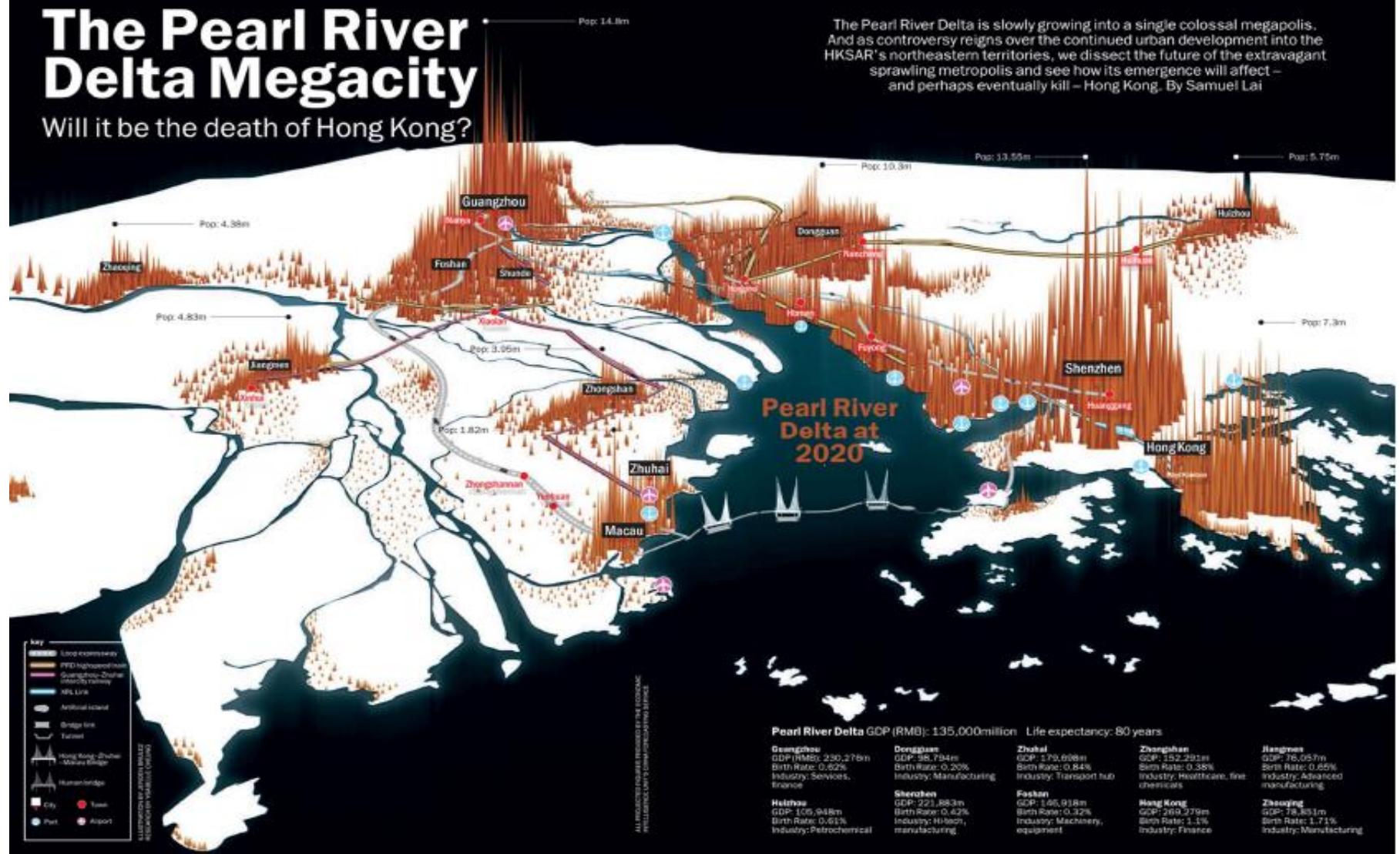
### Busiest container ports

TEUs\*, m, 2015



\*20-foot standard container equivalent

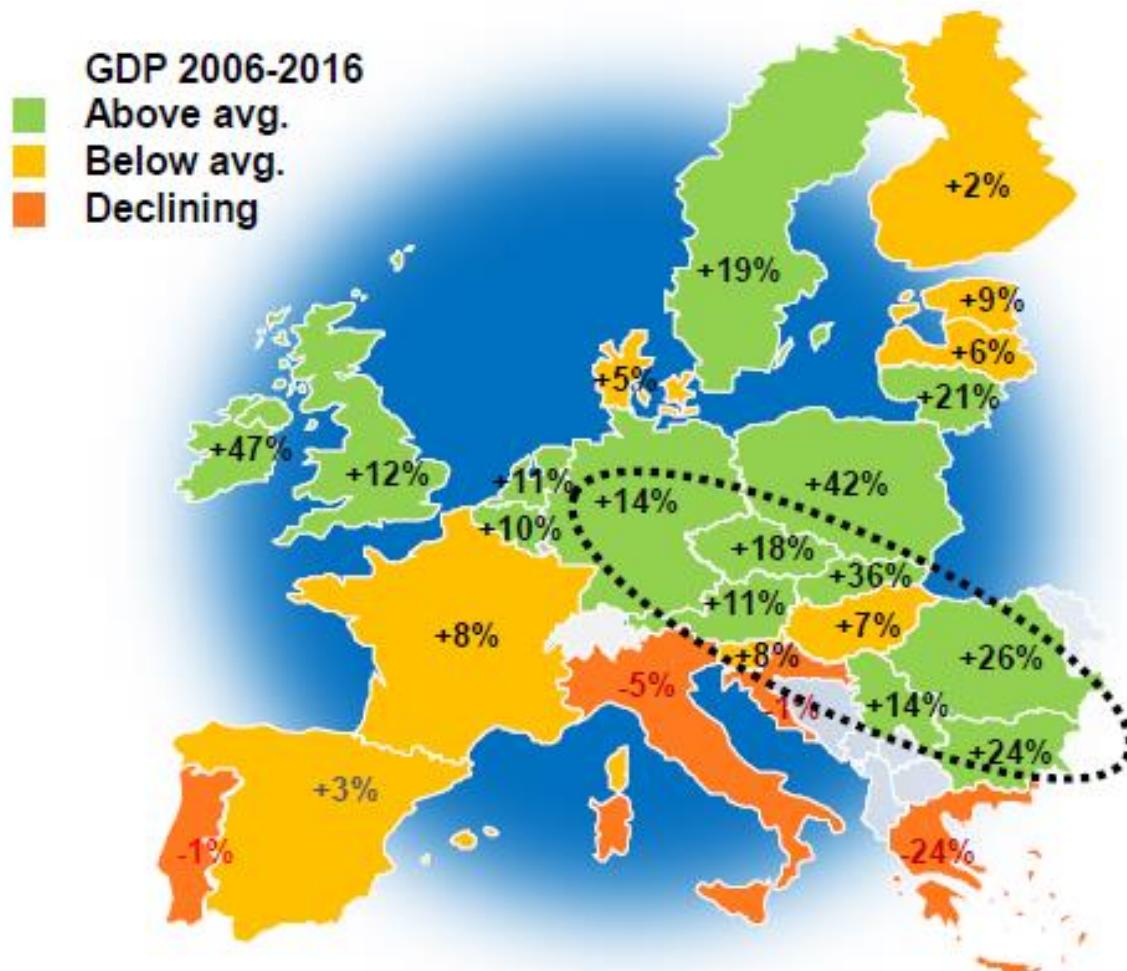
# Evolution of Global Macro-Regions



# New Ways of Global Collaboration

Baltic Region (2009)	Danube Region (2011)	Gulf Region (2010)
<ul style="list-style-type: none"> <li>• Denmark</li> <li>• Sweden</li> <li>• Finland</li> <li>• Estonia</li> <li>• Latvia</li> <li>• Poland</li>   <li>• Mecklenburg</li> <li>• Brandenburg</li>   <li>• 71 Mio. Inhabitants</li> <li>• 1375 bn EUR GDP</li>   <li>• Norway</li> <li>• Russia</li> <li>• Belarus</li> </ul>	<ul style="list-style-type: none"> <li>• Romania</li> <li>• Bulgaria</li> <li>• Hungary</li> <li>• Slovenia</li> <li>• Slovakia</li> <li>• Czech Republic</li> <li>• Austria</li> <li>• Bavaria</li> <li>• Baden Württemberg</li>   <li>• 89 Mio Inhabitants</li> <li>• 1620 bn EUR GDP</li>   <li>• Bosnia &amp; Herzegovina</li> <li>• Croatia, Serbia</li> <li>• Moldova, Montenegro</li> <li>• Ukraine</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Bahrain</i></li> <li>• <i>Kuwait</i></li> <li>• <i>Oman</i></li> <li>• <i>Qatar</i></li> <li>• <i>Saudi Arabia</i></li> <li>• <i>UAE</i></li>   <li>• <i>42 Mio. Inhabitants</i></li> <li>• <i>917 bn USD GDP</i></li>   <li>• <i>Arab League</i></li> <li>• <i>Iran</i></li> </ul>

# Danube Region GDP Growth 2006-2016



**GDP growth in EU-28:**  
2006-2016: +9% (+0.8% p.a.)

**GDP growth ranged between +47% (PL) and -24% (GR)**

**GDP in relevant OMV market:**  
2006-2016: +14% (+1,3% p.a.)  
(incl. TR +19%)

**Countries with higher share of manufacturing performed better**

**GDP-Outlook 2016-2020: +9%**

\*) A,BG,CZ,D,H,MD,RO,SLO,SK;SRB

# Danube Region GDP Growth Forecast

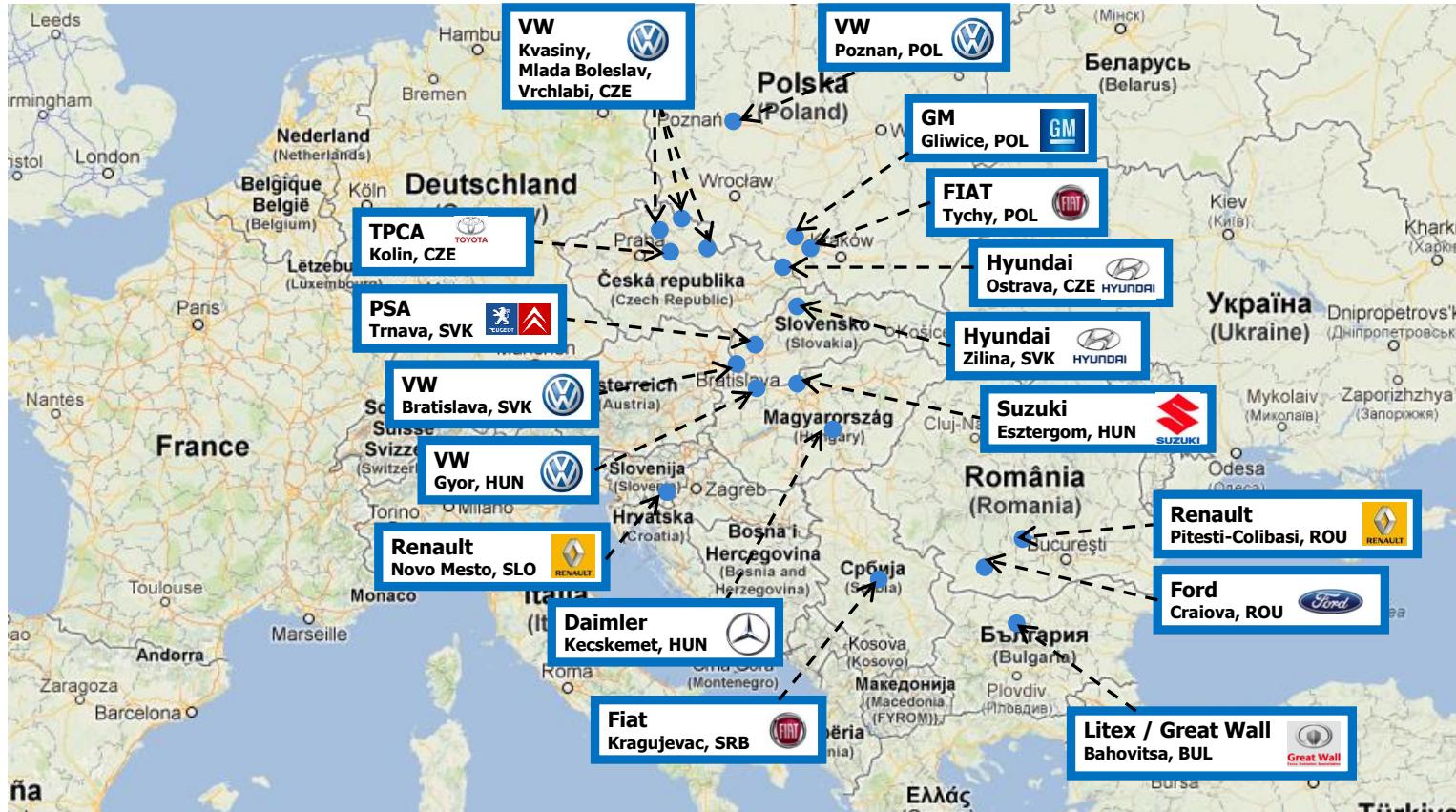
	2017	2018	2019
Romania	4.0	4.0	4.0
Kosovo	3.9	3.8	3.7
Albania	3.5	3.9	4.0
Hungary	3.3	3.4	3.1
Slovakia	3.1	3.6	3.9
Macedonia	3.1	3.3	3.0
Montenegro	3.1	2.9	3.3
Bulgaria	2.9	3.1	3.3
Poland	2.9	3.0	3.1
Slovenia	2.9	2.9	3.0
Croatia	2.8	2.9	3.0

	2017	2018	2019
Bosnia and Herzegovina	2.8	3.0	3.1
Serbia	2.8	3.0	3.3
Lithuania	2.7	2.8	3.1
Latvia	2.5	2.7	2.8
Ukraine	2.5	3.0	3.0
Czech Republic	2.4	2.6	2.3
Estonia	2.2	2.3	2.4
Turkey	2.1	2.6	3.1
Kazakhstan	2.0	3.0	3.0
Russia	1.7	1.7	2.0
Belarus	0.5	1.6	2.2

Forecast: wiiw (March 2017).

© wiiw

# Industrial Capacities Moving East



# EU Strategy Danube Region (EUSDR)

**Strategy**  
 addresses these various topics through  
**4 pillars**  
**11 priority areas,**  
 and of course actions and projects

**Definition**  
**Macro Region not yet determined by Policy and „Völkerrecht“**  
**Aim is to support practical application of territorial cohesion on transnational level**

## THE FOUR PILLARS

Connecting the Region			Protecting the Environment			Building Prosperity			Strengthening the Region	
Mobility and multimodality	Sustainable energy	Culture and tourism, People to People	Water quality	Environmental risks	Biodiversity, landscapes, air and soil quality	Knowledge society	Competitiveness	People and skills	Institutional capacity and cooperation	Security

**11 priority areas, coordinated by a priority area coordinator**

**Actions**

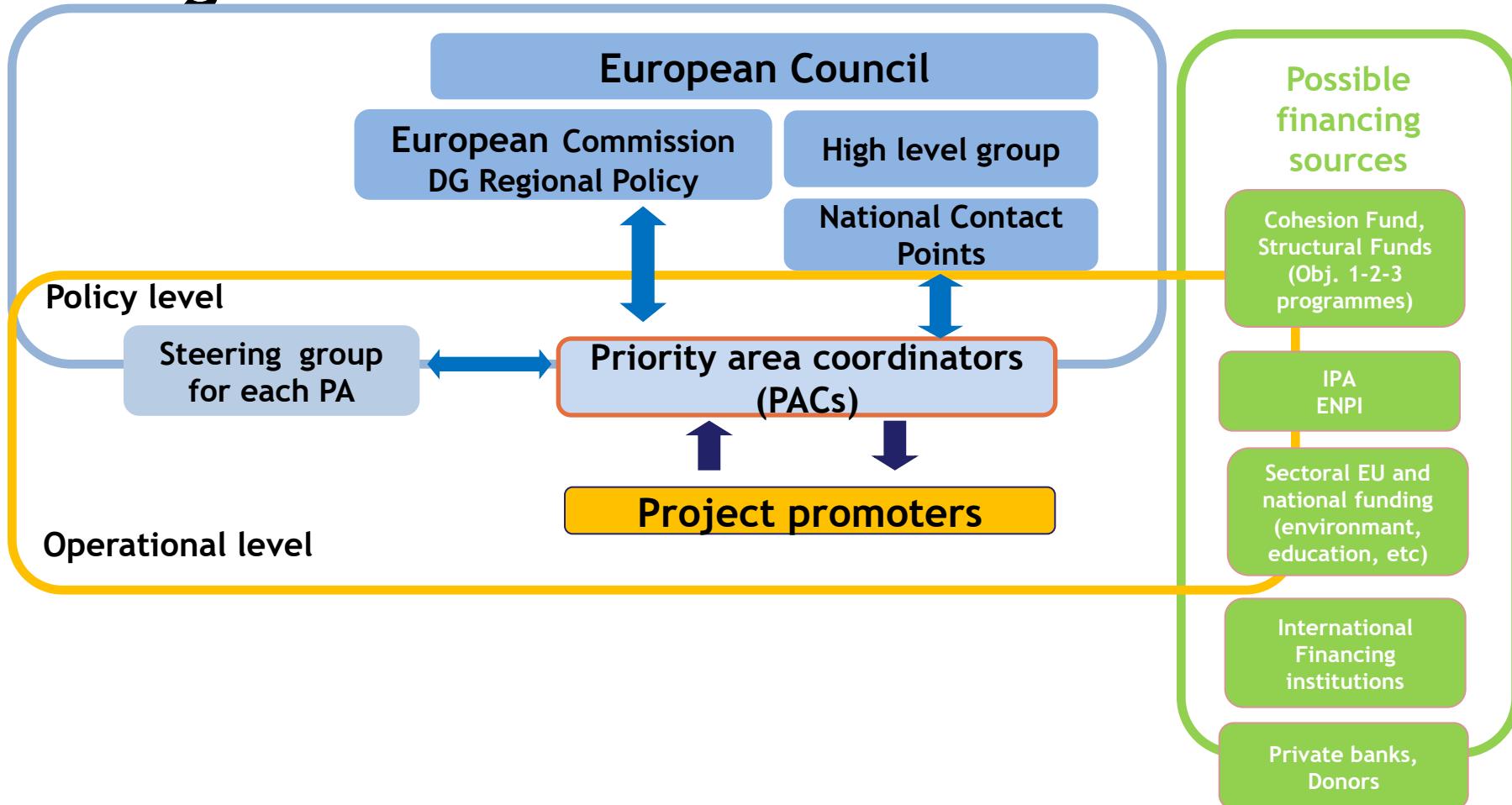
**Projects**

# EU Strategy Danube Region (EUSDR)

<b>Priority Area</b>	<b>Countries in charge of coordination</b>
<b>P1   Mobility and intermodality</b>	<u>Inland waterways</u> : Austria, Romania <u>Rail, road and air</u> : Slovenia, Serbia
<b>P2   More sustainable energy</b>	Hungary, Czech Republic
<b>P3   Culture and tourism, people to people</b>	Bulgaria, Romania
<b>P4   Water Quality</b>	Hungary, Slovakia
<b>P5   Environmental risks</b>	Hungary, Romania
<b>P6   Biodiversity, landscapes, quality of air and soils</b>	Germany (Bavaria), Croatia
<b>P7   Knowledge society (research, education and ICT)</b>	Slovakia, Serbia
<b>P8   Competitiveness of enterprises</b>	Germany (Baden-Württemberg), Croatia
<b>P9   People and skills</b>	Austria, Moldova
<b>P10   Institutional capacity and cooperation</b>	Austria (Vienna), Slovenia
<b>P11   Security and organised crime</b>	Germany, Bulgaria

# EU Strategy Danube Region (EUSDR)

## The governance model of the EUSDR



# Logistics Management in EUSDR

- **LOGISTICS was NOT the Inventor of...but**

- Containerisation & Multimodality
- Integrators and Aircargo
- Warehousing- and Material Handling
- Packaging; one way & returnables
- Internet and Real time
- CIM incl. CAD/CAQ/CAM/Barcode/RFID
- Artificial Intelligence, Robots & 4.0

**SEALAND**  
**FEDEX**  
**MANNESMANN**  
**GE PLASTICS**  
**INTEL/MICROSOFT**  
**SAP/IBM**

- **LOGISTICS is INTERCONNECTING** the core processes of R+D, Purchasing, Manufacturing and Sales (and Financing and HR) to exploit the Advantages

## **measured by**

- Service levels
- Capacity utilization of workforce & assets
- Inventory levels
- Logistics costs (direct and indirect)

## **managed by**

- Macrologistics for mobility of societies
- Micrologistics
- Logistics enterprises

- **....All together have achieved over few decades**

- Improvement of service levels including shortening time to market
- Saving inventories/GDP by app 50 % and freeing cash plus stabilizing logistics costs

# U.S. Logistics Costs & Capacities

	\$ Billions
<b>Carrying Costs - \$ 1.965 Trillion All Business Inventory</b>	
Interest .....	47
Taxes, Obsolescence, Depreciation, Insurance .....	252
Warehousing .....	122
	<b>Subtotal</b>
	<b>420</b>
<b>Transportation Costs</b>	
Motor Carriers:	
Truck - Intercity .....	460
Truck - Local .....	220
	<b>Subtotal</b>
	<b>680</b>
Other Carriers:	
Railroads .....	63
Water .....	39
Oil Pipelines .....	10
Air .....	40
Forwarders .....	32
	<b>Subtotal</b>
	<b>184</b>
<b>Shipper Related Costs</b>	<b>8</b>
<b>Logistics Administration</b>	<b>52</b>
	<b>TOTAL LOGISTICS COST</b>
	<b>1,344</b>

## US Network Capacity/Miles

>1 Mio/Highways

> 100.000/Railways

> 10.000/Inland Waterways

> 1 Mio/Pipelines

## Volume & Value daily

50 Mio Tons

30 Mrd USD Value  
25 % of global GDP

**U.S. Logistics Costs <10 % of GDP**  
**Railway Costs app. 0,5 % of GDP, Intermodal 0,1 % of GDP**

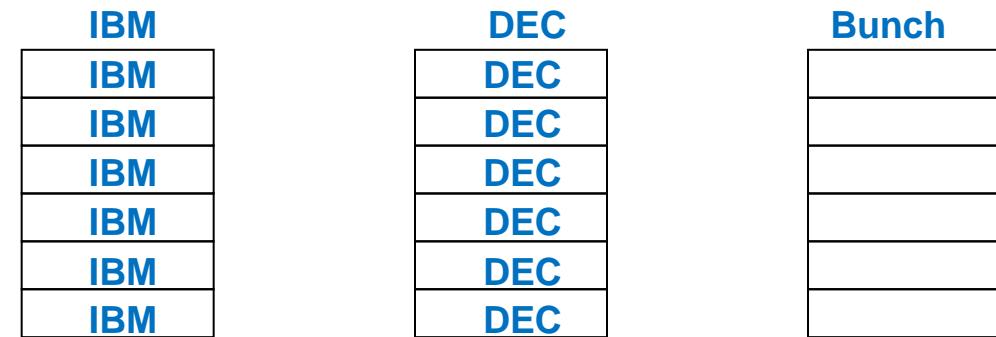
# Supply Chain Architecture

## Why the Big Blue lost app. USD 100 bn in Market Cap ?

The power in the chain shifted to a horizontal structure and upwards in the chain, as the financial rewards. Here is what happened in the Supply Chain Architecture:

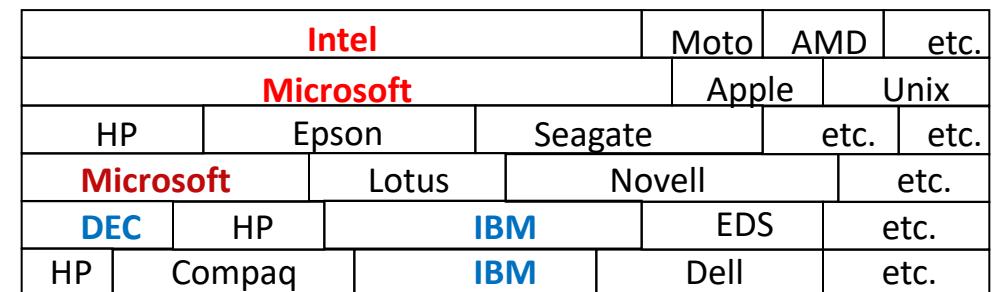
### Vertical Structure (old)

- Microprocessors
- Operating systems
- Peripherals
- Application software
- Network services
- Assembled hardware



### Horizontal Structure (new)

- Microprocessors**
- Operating systems**
- Peripherals
- Application software**
- Network services
- Assembled hardware



# Supply Chain Design & 3DCE

**Supply Chain Development** consists out of **Supply chain architecture decisions**:

- decision whether to make or buy a component
- sourcing decisions: which companies to include in the supply chain
- contracting decisions: structuring relationships among supply chain members to determine who in the chain performs which task.

**Logistics and coordinating decisions** include

- the inventory, deliveries and
- information systems to support ongoing operation of the supply chain.

The art is to identify core competencies and to keep them in-house. (be aware „Intel inside“)

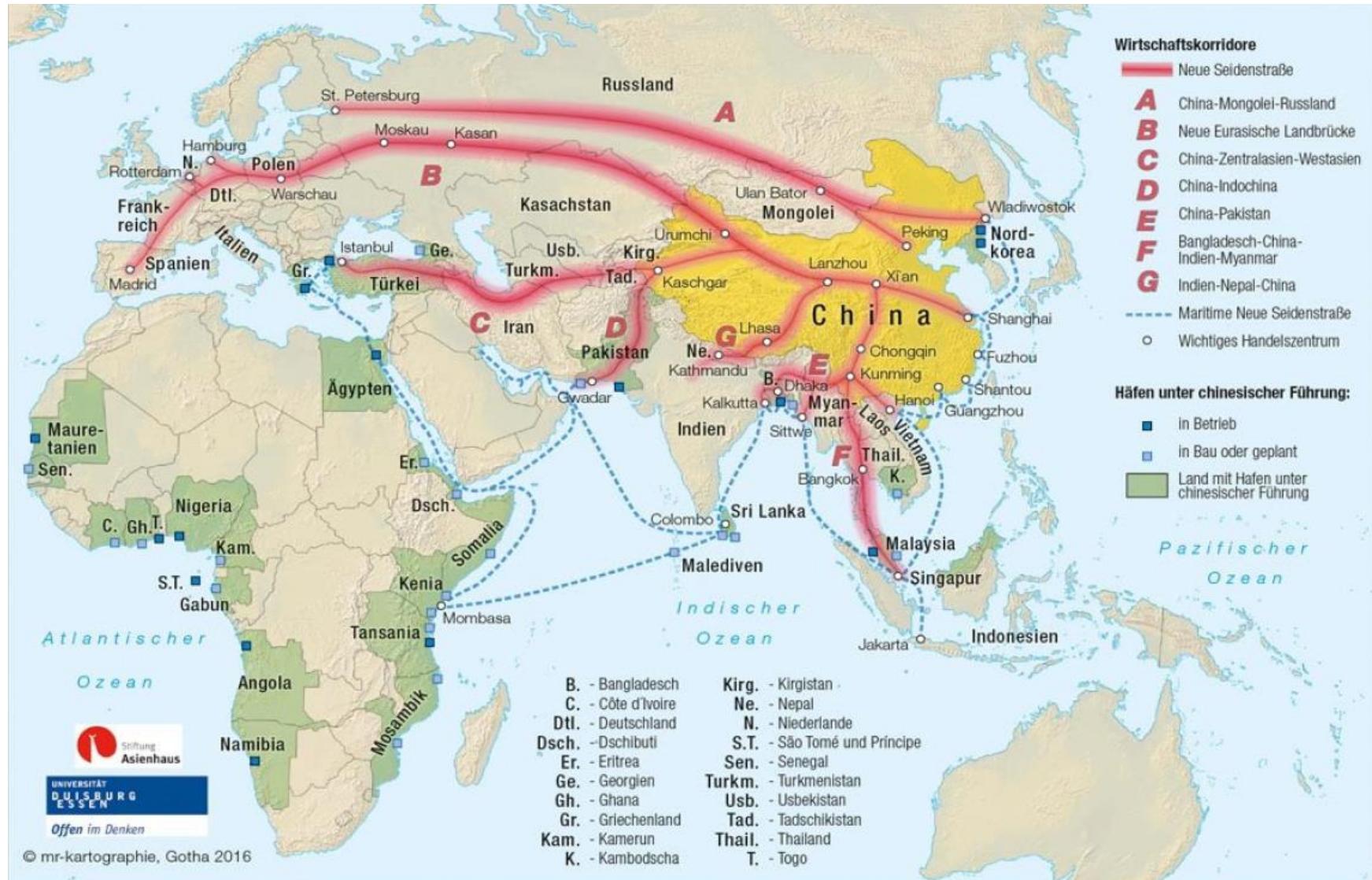
## 3-Dimensional-Concurrent-Engineering – 3DCE

- Traditionally, product designers have thrown new products over the fence to the manufacturing guys. It took what it took to realize the design, often at huge cost penalties.
- This disadvantage was recognised and addressed by concepts like Concurrent Engineering and Design for Manufacturability.



Ideally the supply chain (chain of organizations, technologies and capabilities) is designed together with the product & manufacturing process.

# Macro-Logistics and the New Silk Route

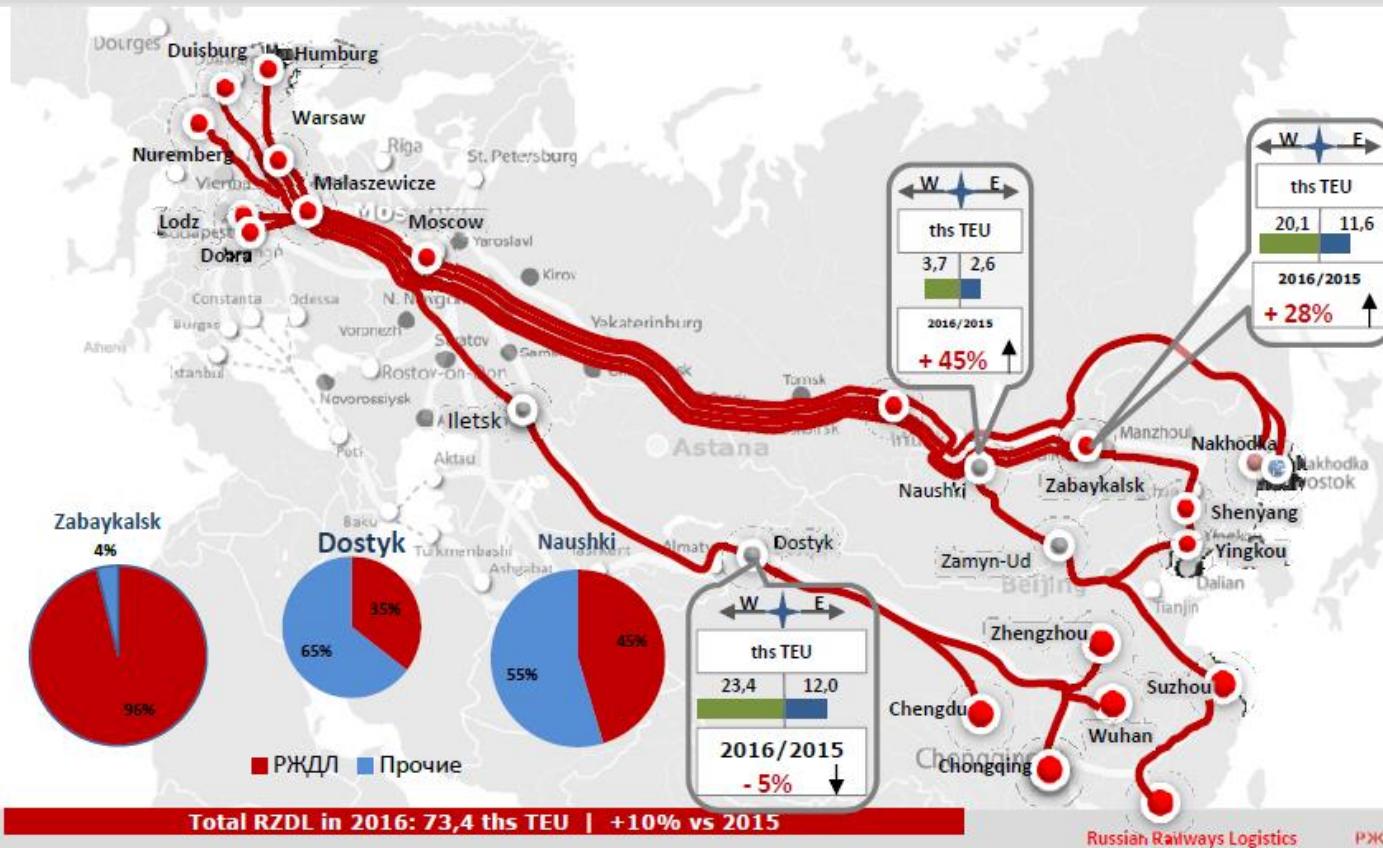


# The New Silk Route and EAEU

Container transit China-EU-China  
2016



Russian Railways Logistics



# Metropolitan Region Nuernberg Region

## Remarks and Positioning

**Harald Leupold:** „The European Metropol-Region Nuernberg (EMN) should take an active part in the Development the Danube Region, in particular focusing on the following aspects:

- Positioning in the framework of the Danube Region Strategy (Transport, Markets, Tourism, Environment)
- HUB-Function (Gateway) between Western-Europe and Danube Region
- Participation in the Development of the „New Silk-Route (OBOR) Strategy“

***Thank You for coming together and OWWF for  
excellent preparation of this event in this  
exceptional location.***

***With best greeting from Dr. Erhard Busek and Dr.  
Richard Schenz from Vienna, we are looking  
forward to teaming up in the Danube Region.***

***You and the Freistaat Bayern play an essential role.***

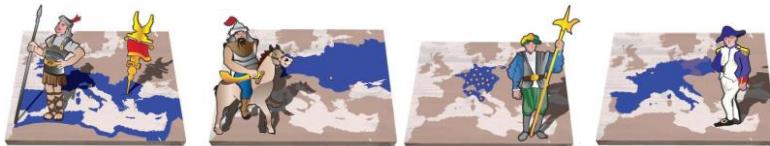
**Dr. Ernst Schmied**

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<https://www.linkedin.com/in/ernstsadmied>

# Annexes

- Annex 1: Competitiveness
- Annex 2: Infrastructure
- Annex 3: Logistics Functions
- Annex 4: The Great Recession
- Annex 5: 1000 Years GDP
- Annex 6: Smart PRD Region

# Annex 1: Competitiveness



**South East European Corporative Initiative (SECI)**  
[From Dayton to Brussels \(www.secinet.info\)](http://www.secinet.info)

## EU Parliament Strategy for the Danube Region

EU REGIO, Countries, Districts, NGOs, Clusters

**Identify the Core Competencies along the Chain**

- Try to avoid cost competition only
- Innovate and seek time sensitive segments

**Defend your Technology & Capability Chain**

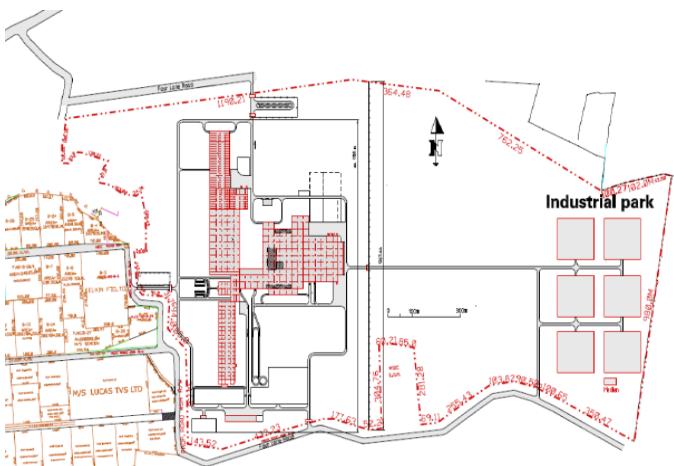
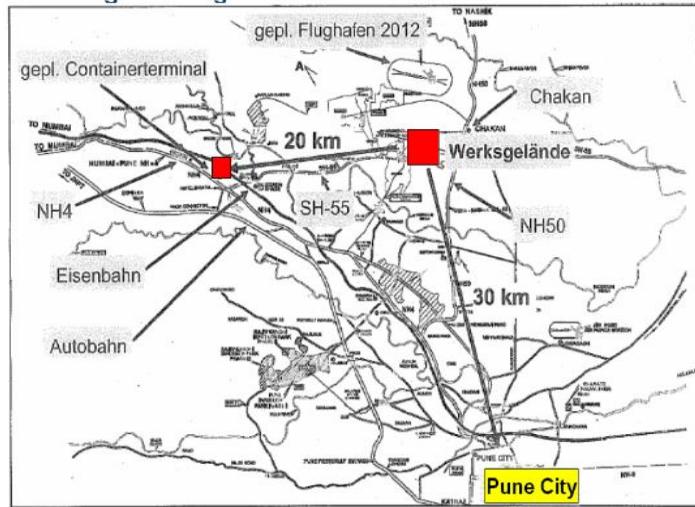
- Learn to live with nearly no IPR protection
- Develop an intelligence mentality

**Restructure the whole Supply Chain**

- Improve global access
- Selective outsourcing in region, MED & Globally

**Take Advantage of the Chinese & Indian Market,  
dont forget the Potentials of Danube Makro Region**

# Annex 2: Infrastructure



## Property/asset development aligned between Macrologistics like:

- ports for import & export of parts and CBUs
- motorways, railway tracks, short sea shipping
- multimodal terminal infrastructure inc. overnight/in-night CEP services
- industrial parks on site & off site, localization

.....and commercial, technical, legal and financial relationship with **Micrologistics** entities

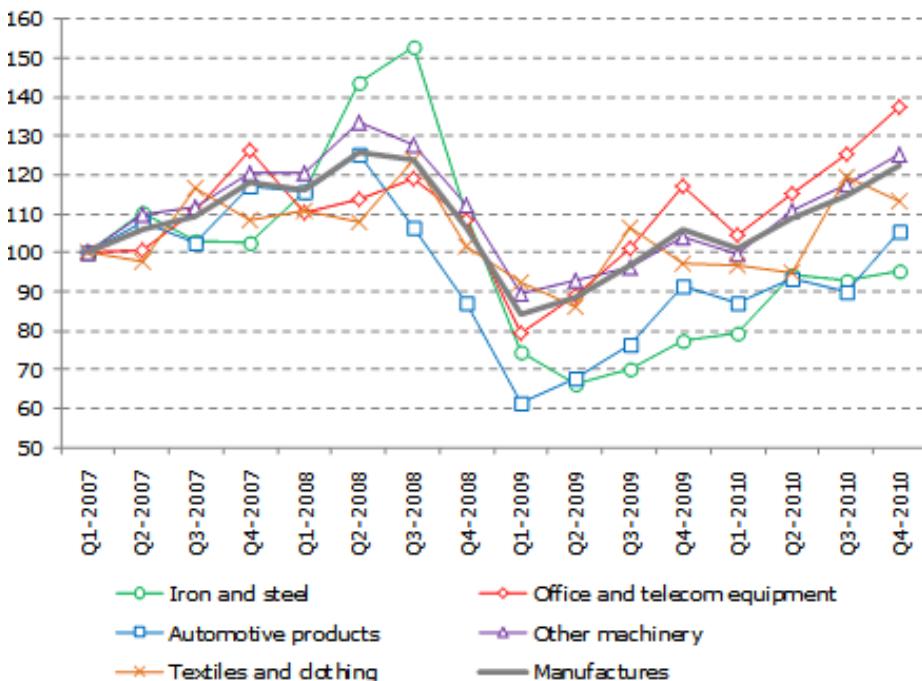
**Logistics Service** companies asset & non asset based

## Interface and shake hand

- policy makers on the macro level
  - users on the micro level
- including knowledge bases, communicated into the cycle of **RESEARCH, THEORY BUILDING and EDUCATION**

# Annex 3: Logistics Functions

The crises has told us, that we are living in exponential & nonlinear times with high volatilities like 60 % + f.e.: Steel & Automotive



Source: World exports of manufactured goods by product, 2007-10  
 Indices, 2007Q1=100, WTO April 7th 2011

## Logistics is:

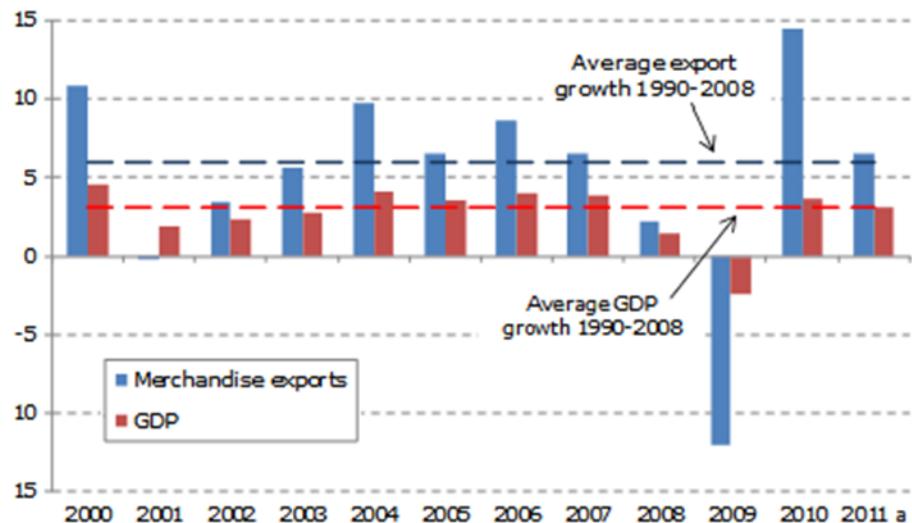
- owning forecasts based on S & O Planning.
- coordinating/chairing the manufacturing program committee meetings.
- running the permanent inventory control.
- managing dispo buffers & stock allocations.
- in charge of the smooth capacity utilisation of manpower (direct labor) and critical assets.
- in charge of setting/securing delivery dates.
- managing & executing the physical flows.
- setting up information systems & intelligence.

Redefinition of the interface between Supply Chain Management and the Finance World for Supply Chain Ownership based on

- process quality
- system integrity
- safety and security

RESEARCH & THEORY BUILDING & EDUCATION WILL BE KEY f. e. TO HELP THE FINANCE TO GET REINTEGRATED

# Annex 4: The Great Recession



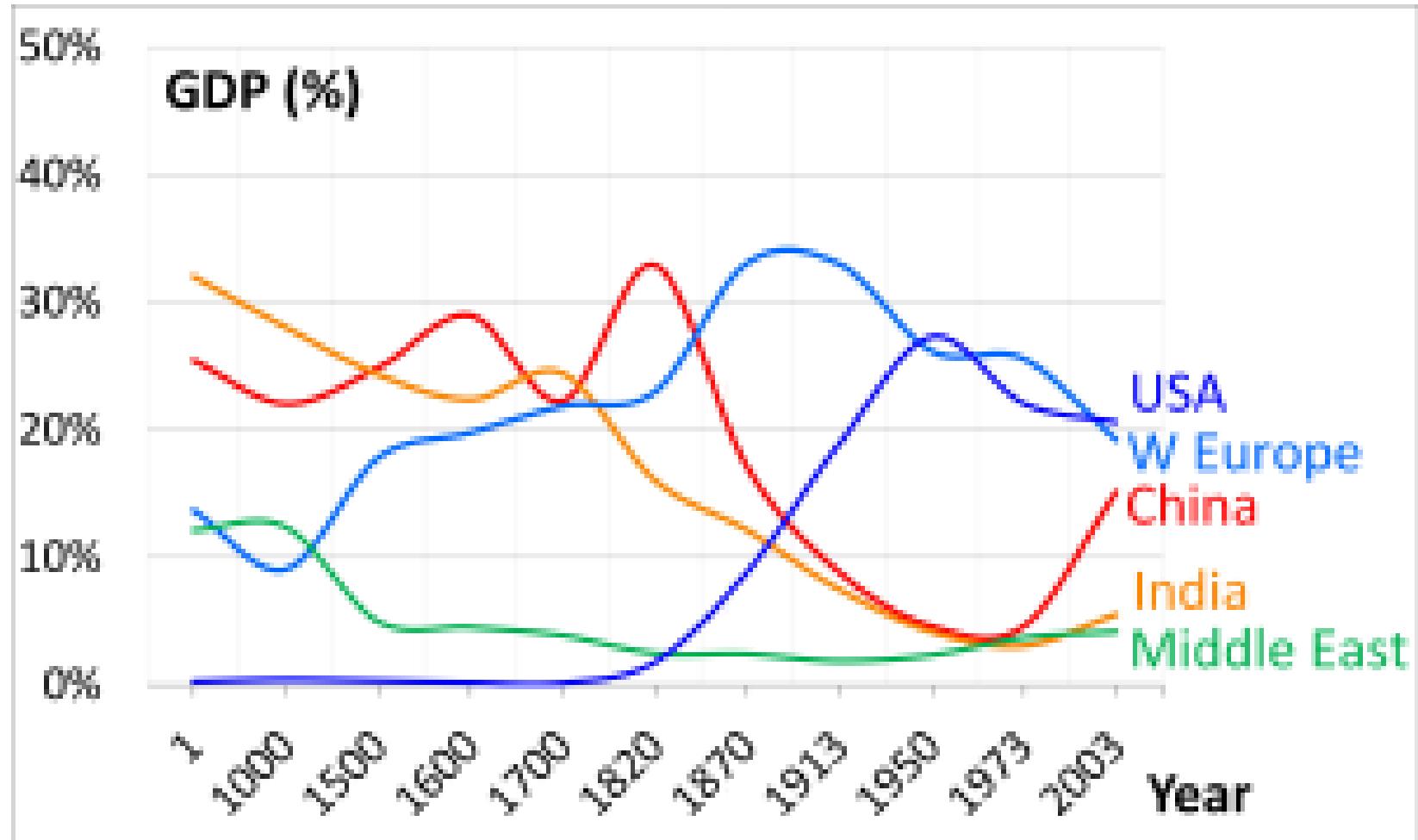
	GDP			Exports			Imports		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
<b>World</b>	1.4	-2.4	3.6	2.2	-12.0	14.5	2.2	-12.8	13.5
<b>North America</b>	0.1	-2.8	3.0	2.1	-14.8	15.0	-2.4	-16.7	15.7
United States	0.0	-2.6	2.8	5.8	-14.0	15.4	-3.7	-16.4	14.8
<b>South and Central America a</b>	5.1	-0.2	5.8	0.8	-7.9	6.2	13.2	-16.3	22.7
<b>Europe</b>	0.5	-4.0	1.9	0.2	-14.1	10.8	-0.6	-14.2	9.4
European Union (27)	0.5	-4.2	1.8	0.0	-14.5	11.4	-0.9	-14.2	9.2
<b>Commonwealth of Independent States (CIS)</b>	5.5	-7.1	4.3	2.0	-5.2	10.1	16.4	-25.6	20.6
<b>Africa</b>	4.8	2.1	4.7	1.2	-4.2	6.5	14.6	-5.0	7.0
<b>Middle East</b>	5.3	0.8	3.8	3.5	-4.3	9.5	14.2	-7.8	7.5
<b>Asia</b>	2.8	-0.2	6.3	5.5	-11.2	23.1	4.7	-7.5	17.6
China	9.6	9.1	10.3	8.5	-10.5	28.4	3.8	2.9	22.1
Japan	-1.2	-6.3	3.9	2.2	-24.8	27.5	-1.0	-12.2	10.0
India	6.4	5.7	9.7	14.4	-6.8	19.9	17.3	-1.0	11.2
<b>Newly industrialized economies (4) b</b>	1.9	-0.8	7.7	4.9	-5.7	21.3	3.5	-11.4	18.0
<b>Memo: Developed economies</b>	0.2	-3.7	2.6	0.8	-15.1	12.9	-1.2	-14.4	10.7
<b>Memo: Developing and CIS</b>	5.7	2.1	7.0	4.2	-7.8	16.7	8.5	-10.2	17.9

## Learnings from the crises

- The factors that contributed to the unusually large drop in world trade in 2009 may have also helped boost the size of the rebound in 2010.
- These include **the spread of global supply chains and the product composition of trade compared to output.**
- Global supply chains cause goods to cross national boundaries several times during the production process, which raises measured world trade flows compared to earlier decades.
- The quantification of this effect would require **data on trade in value added that are not currently available.**

(Source: WTO April 7th 2011)

# Annexes 5: 1000 Years GDP



# Annex 6: Smart PRD Region

