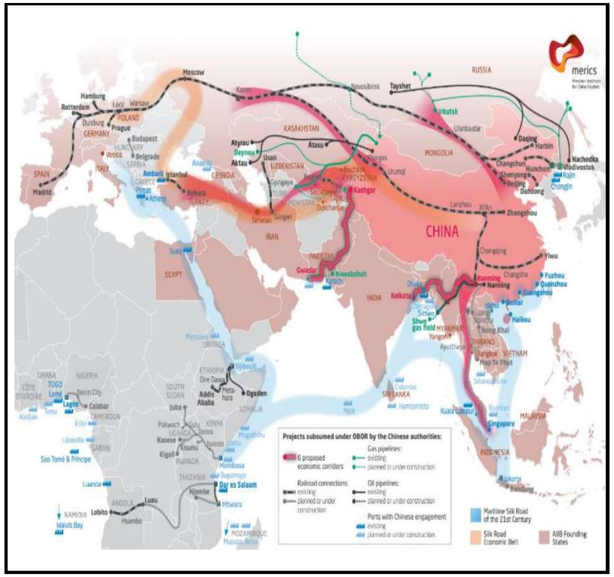

Connecting Asia & Europe

Keynote Address for Panel 3

„Maritime Dimension“

Dr. Ernst Schmied | Chair DMRBW 2015-2020

(in cooperation with)

Dr. Ting Ho | CEO QBT
Dominik Schmied | Program Director DMRBW

Österreichische Nationalbank, Vienna
14.12.2018

Conference organized by the Oesterreichische Nationalbank (OeNB) and the Reinventing Bretton Woods Committee (RBWC)

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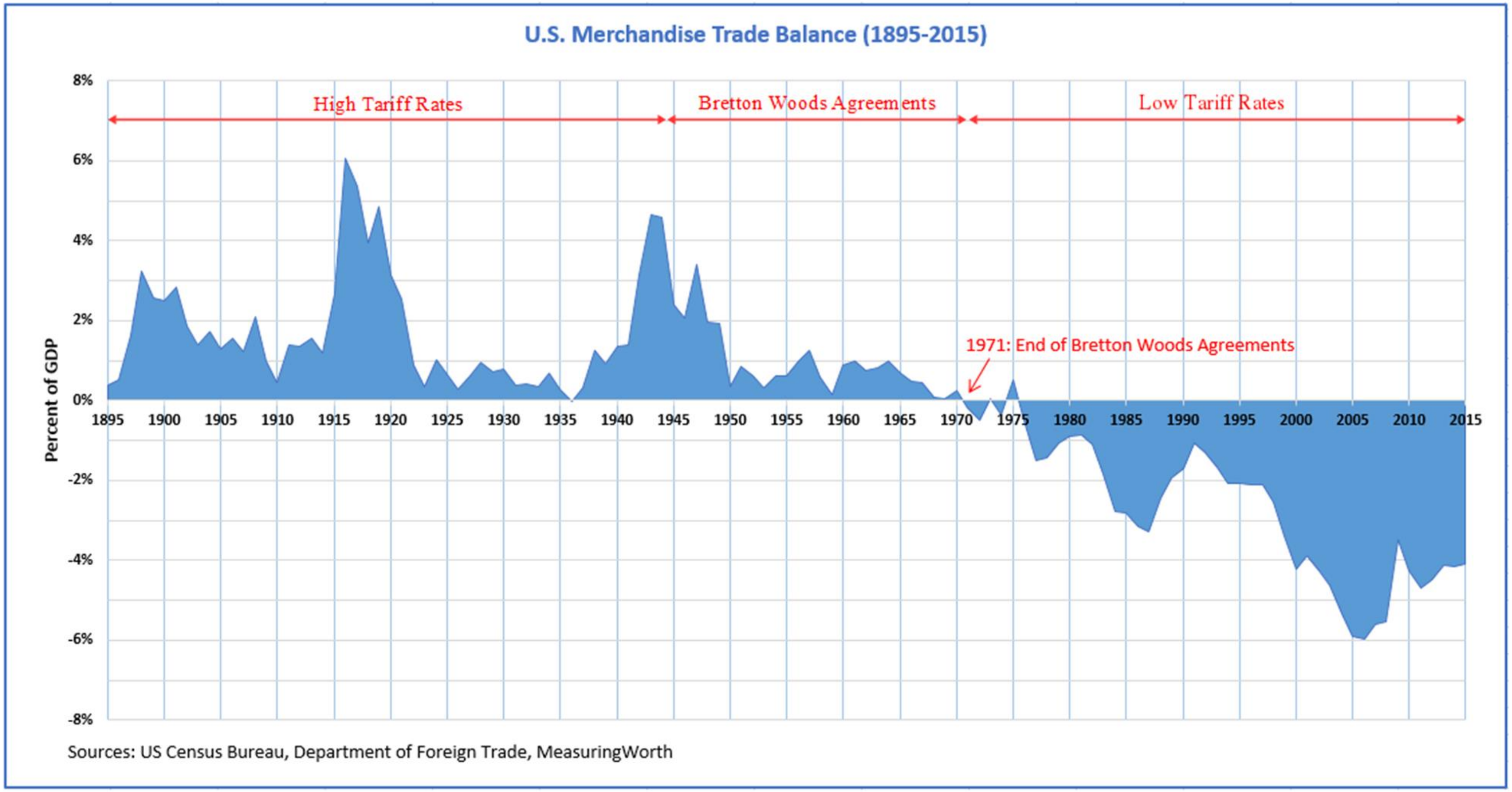
REINVENTING BRETTON WOODS COMMITTEE

OENB OESTERREICHISCHE NATIONALBANK EUROSYSTEM

Agenda

1. **New Trade Realities in a Multipolar Framework**
   I. Adjustment of Global Material Flows
   II. Alignement of Global Infrastructure
   III. Evolution of Global Macro Regions
2. **The Maritime Dimension**
   I. Marine Connectivity & One Belt One Road
   II. Container Market Potential and Northern Adriatic Ports
3. **The Danube Macro Region**
   I. Industrial Capacities Moving East
   II. New Ways of Global Collaboration
   III. EU Strategy Danube Region (EUSDR)
   IV. EU Strategy Danube Region (EUSDR)
4. **Supply Chain Management & Design**
   I. Today's Impact of Supply Chain Design
   II. Logistics since 1970s – 2010 in Europe
   III. Supply Chain Architecture
   IV. Learning from the Crisis
   V. Infrastructure is Key
   VI. Appeal to SCM & Logistics Community
5. **Conclusion**

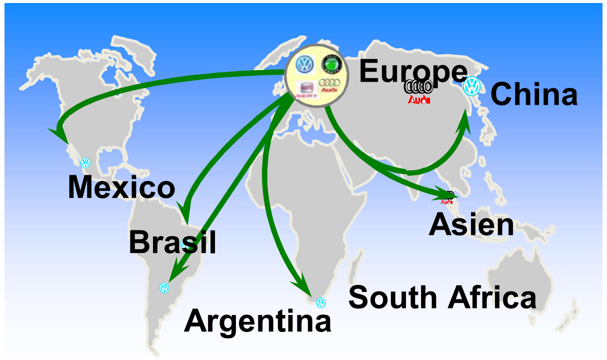
Introduction



Adjustment of Global Material Flows

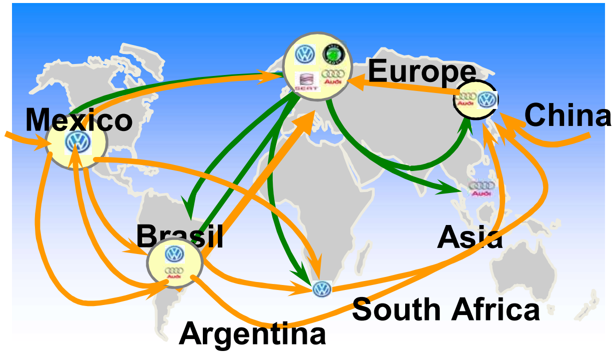
Transport Volumes

1998



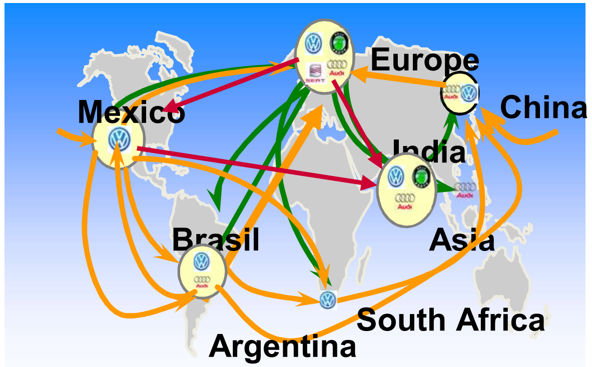
Total 110.000 TEU
6 main trades

2007



Total 125.000 TEU
18 main trades & cross trades

2012ff.



Total >140.000 TEU
21 main trades & cross trades

Increased Supply Chain Complexity due to Additional Number of Trade Lines

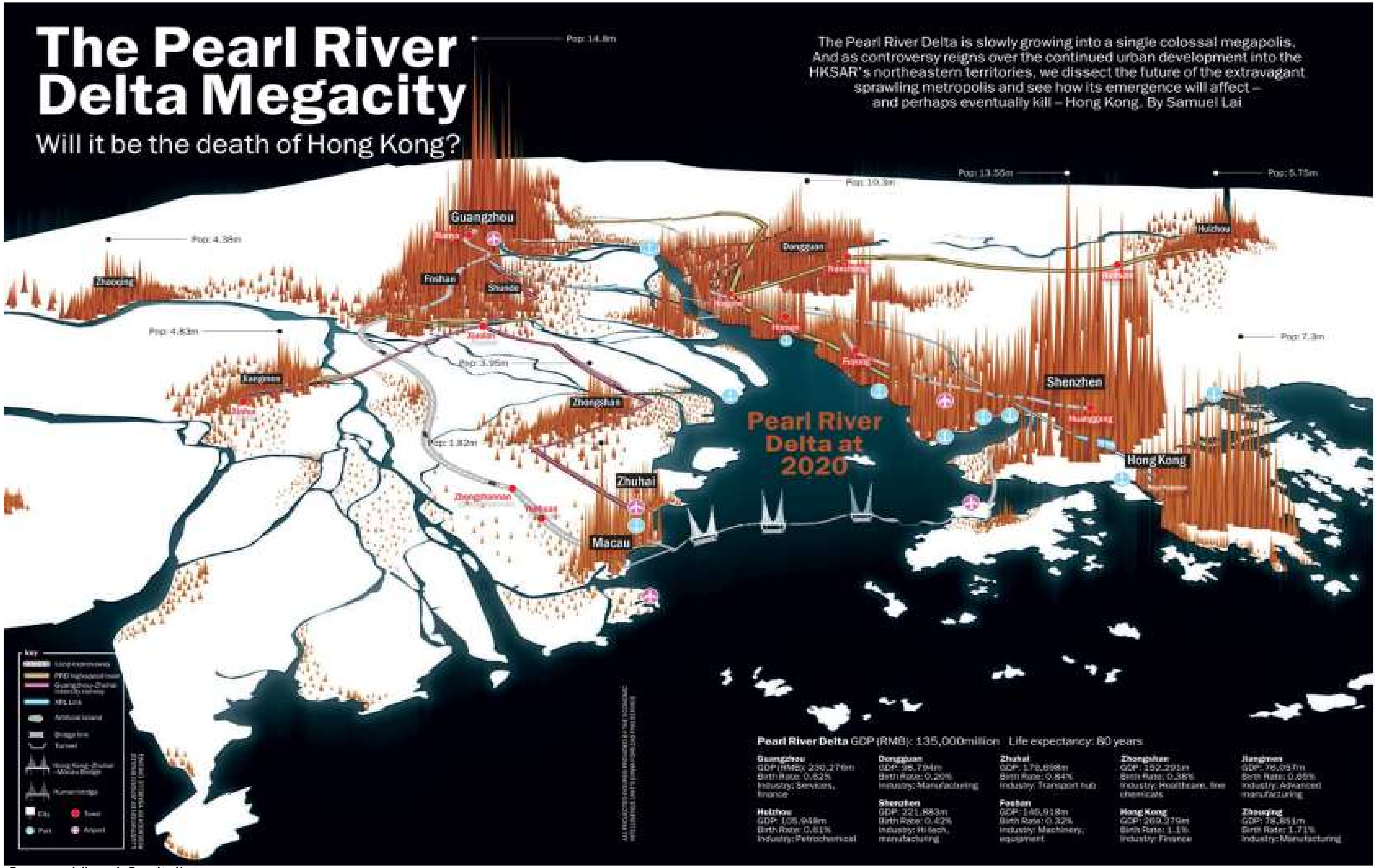
- South Africa
- India
- Central Asia
- Russia
- Malaysia
- Middle East

Sources: Factfinding CVI/NAPAs March 2008

	Value of exports to world	Value of intra-regional exports	Value of extra-regional exports	Share of intra-regional trade in exports to world			Annual % change in exports to world		Annual % change in intra-regional exports		Annual % change in extra-regional exports	
	2010	2010	2010	2008	2009	2010	2009	2010	2009	2010	2009	2010
North America												
Automotive products	205.3	156.6	48.7	72.2	75.6	76.3	-32	43	-28	45	-40	39
Vehicles	132.4	94.2	38.1	66.4	70.7	71.2	-33	45	-29	46	-42	42
Parts and components	73.0	62.4	10.6	83.1	84.4	85.5	-29	41	-28	43	-34	31
Europe												
Automotive products	538.8	385.9	153.0	75.2	77.1	71.6	-31	18	-29	10	-36	46
Vehicles	351.1	247.3	103.7	73.5	76.5	70.5	-32	16	-29	7	-39	46
Parts and components	187.8	138.5	49.2	78.6	78.3	73.8	-29	22	-29	15	-28	47
Asia												
Automotive products	276.5	89.8	186.7	24.5	31.8	32.5	-34	45	-14	48	-40	43
Vehicles	170.7	43.9	126.8	17.6	24.0	25.7	-41	45	-19	55	-45	42
Parts and components	105.8	45.9	59.9	39.5	44.2	43.4	-19	44	-10	42	-26	46

Alignement of Global Infrastructure

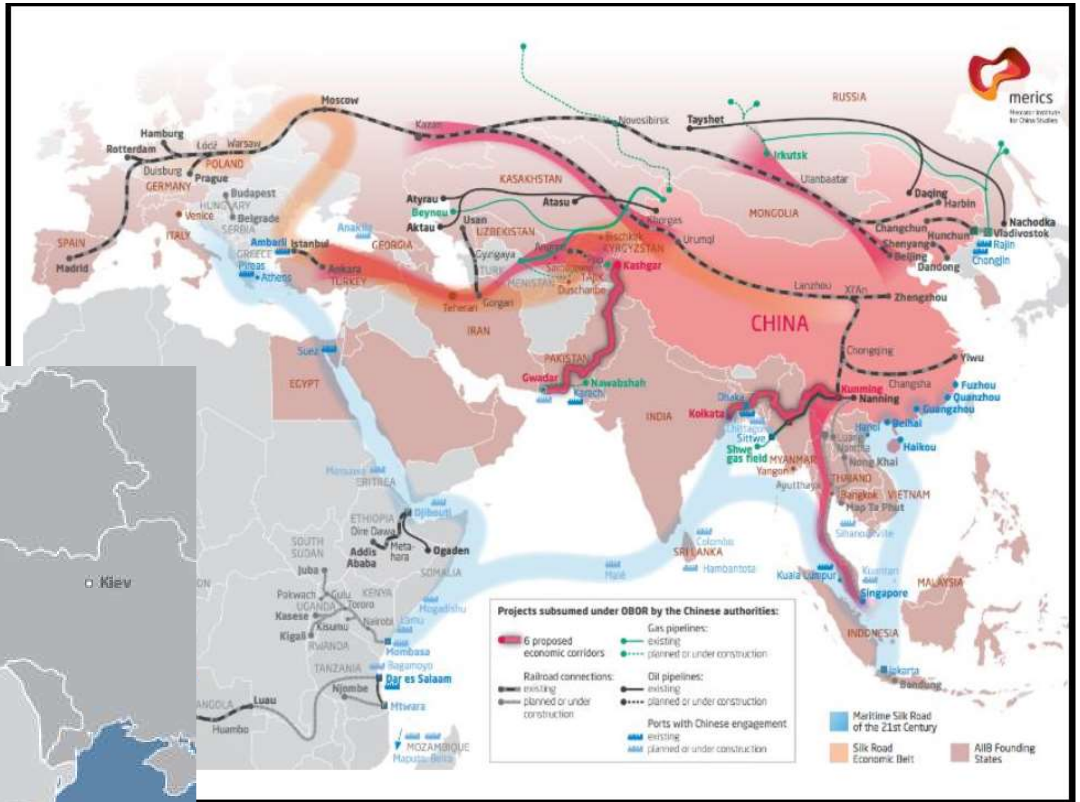
Evolution of Global Macro Regions



Source: Visual Capitalist

Marine Connectivity & One Belt One Road

Route	West Bound	East Bound
Asia-North America	7,490,000	19,482,000
Asia-North Europe	9,924,000	5,139,000
Asia-Mediterranean	5,504,000	2,409,000



Source: Northern Adriatic Port Association

2000 Nm SHORTER ROUTE
up to 8 days shorter transit times*
* if "slow steaming" at 12 knots

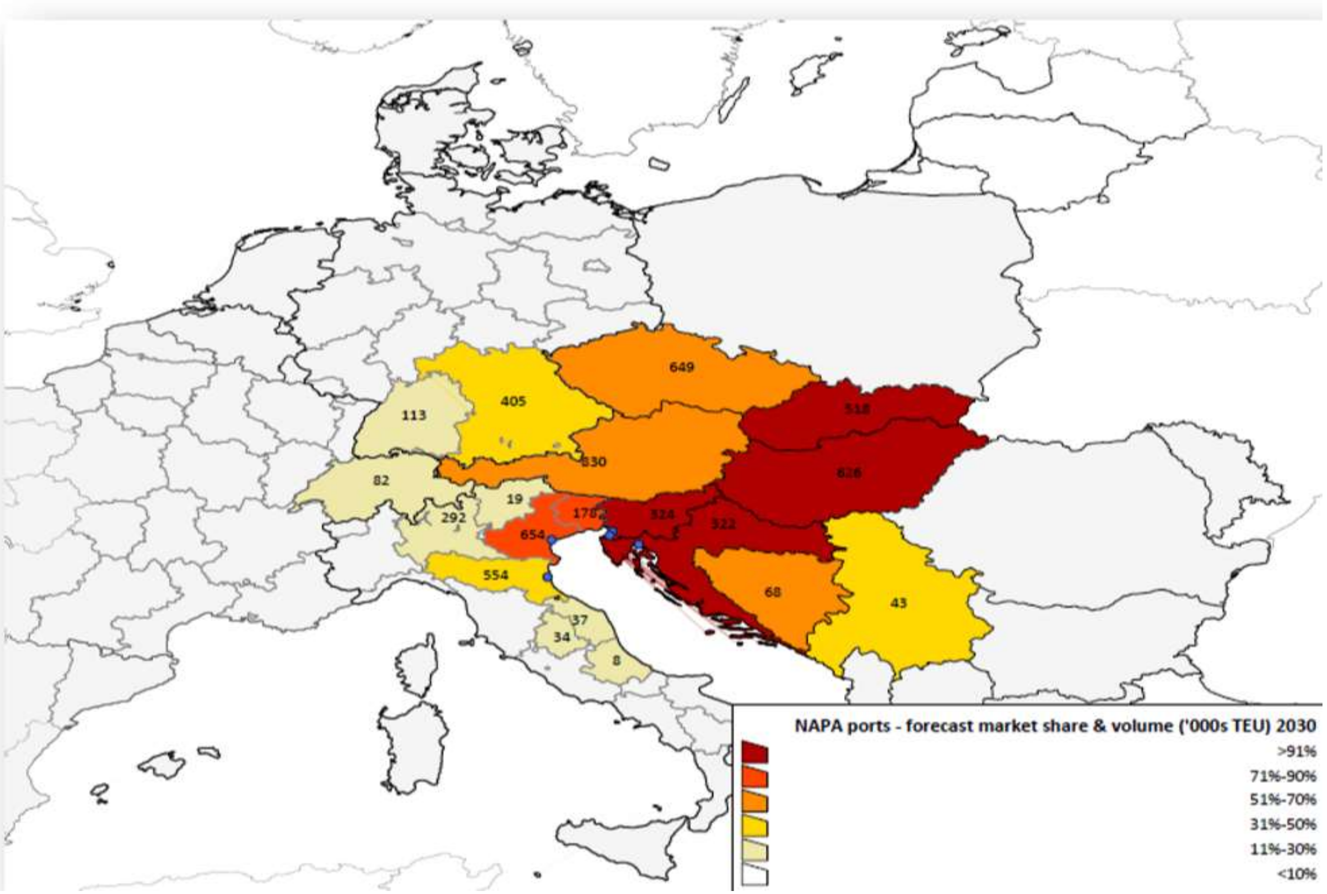
Shipping 1 TEU (18 gross ton) from Korea to Koper saves 320 kg of CO2

Container Market Potential of NAPA Ports

According NAPA dedicated market study

(project: ITS Multiport Adriatic gateway; consulting: MDS Transmodal):

potential for container traffic 6 mio TEUs by 2030



Source: Northern Adriatic Port Association

New Ways of Global Collaboration

Baltic Region (2009)	Danube Region (2011)	*Gulf Region (2010)*
• Denmark • Sweden • Finland • Estonia • Latvia • Poland • Mecklenburg • Brandenburg	• Romania • Bulgaria • Hungary • Slovenia • Slovakia • Czech Republic • Austria • Bavaria • Baden Württemberg	• *Bahrain* • *Kuwait* • *Oman* • *Qatar* • *Saudi Arabia* • *UAE*
• 71 Mio. Inhabitants • 1375 bn EUR GDP	• 89 Mio Inhabitants • 1620 bn EUR GDP	• *42 Mio. Inhabitants* • *917 bn USD GDP*
• Norway • Russia • Belarus	• Bosnia & Herzegowina • Croatia, Serbia • Moldova, Montenegro • Ukraine	• *Arab League* • *Iran*

Industrial Capacities moving East

EU Strategy Danube Region (EUSDR)

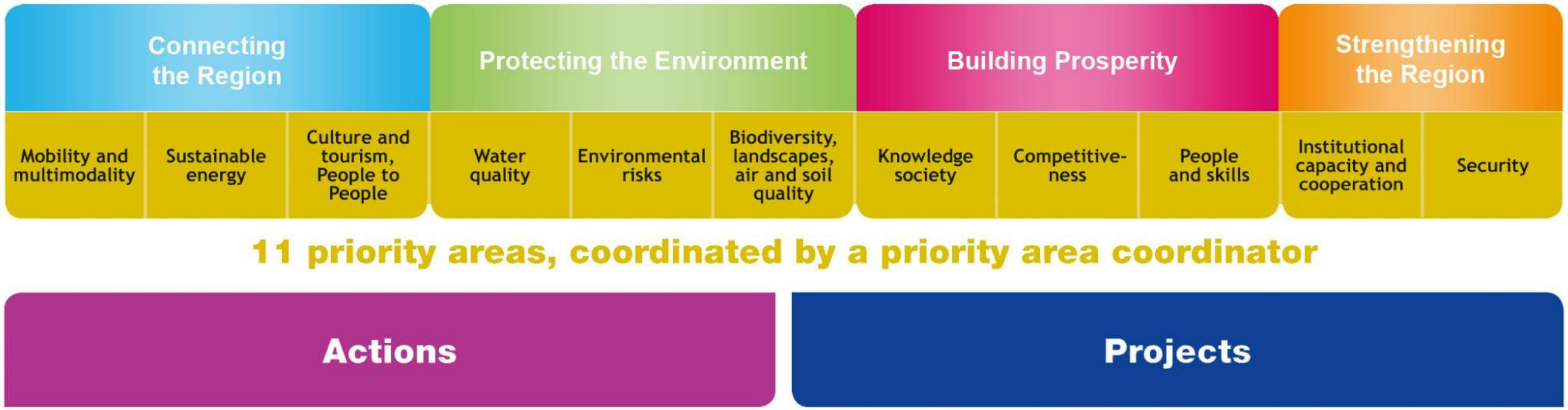
Strategy

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

Definition

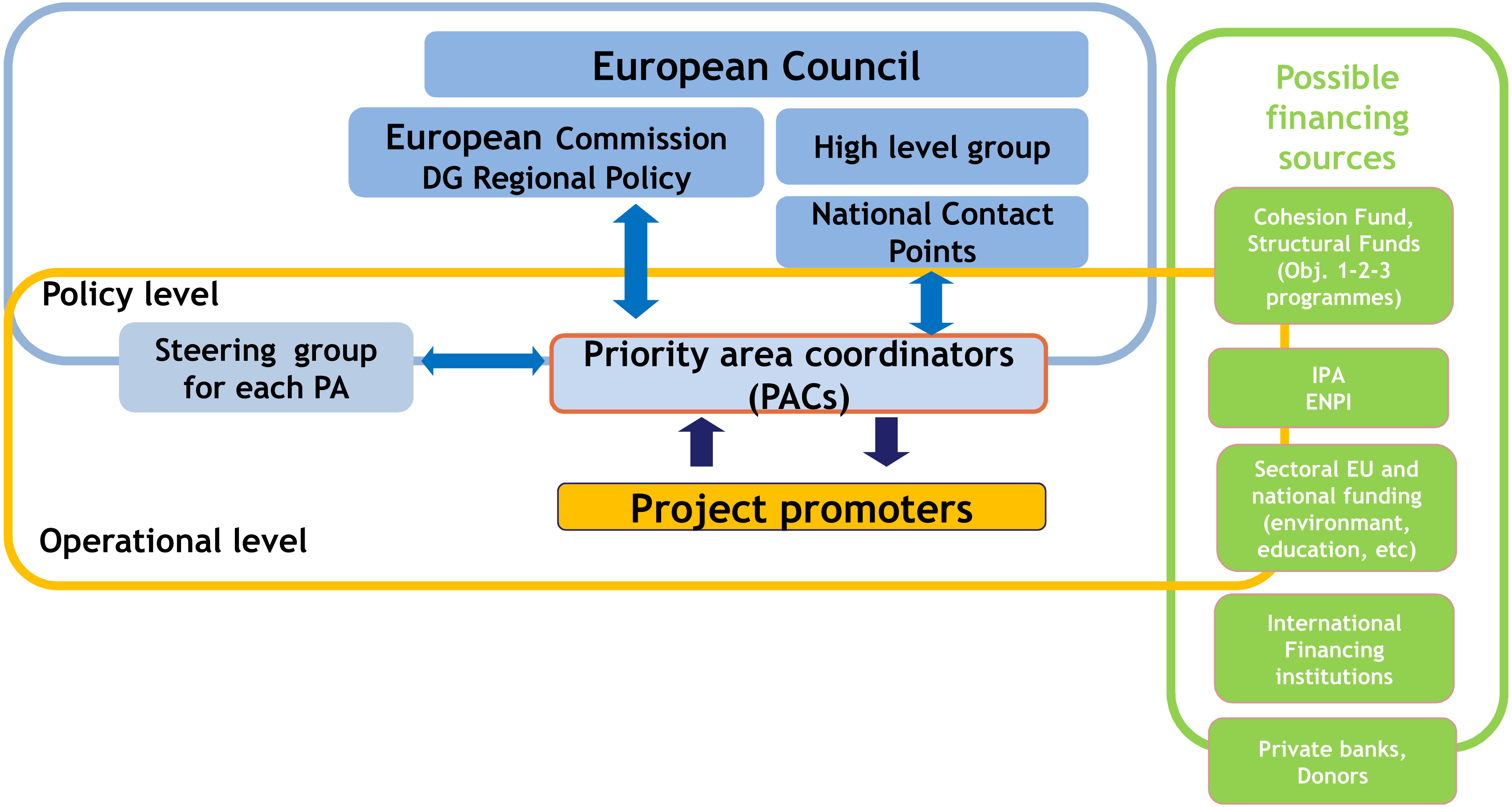
Macro Region not yet determined
by Policy and „Völkerrecht“
Aim is to support
practical application of territorial
cohesion on transnational level

THE FOUR PILLARS



EU Strategy Danube Region (EUSDR)

The governance model of the EUSDR



Today‘s Impact of Supply Chain Design

Technologies and Competition are driving Industries, Clusters and Organisations and their Supply Chains to integrate and desintegrate based on certain Clock Speeds

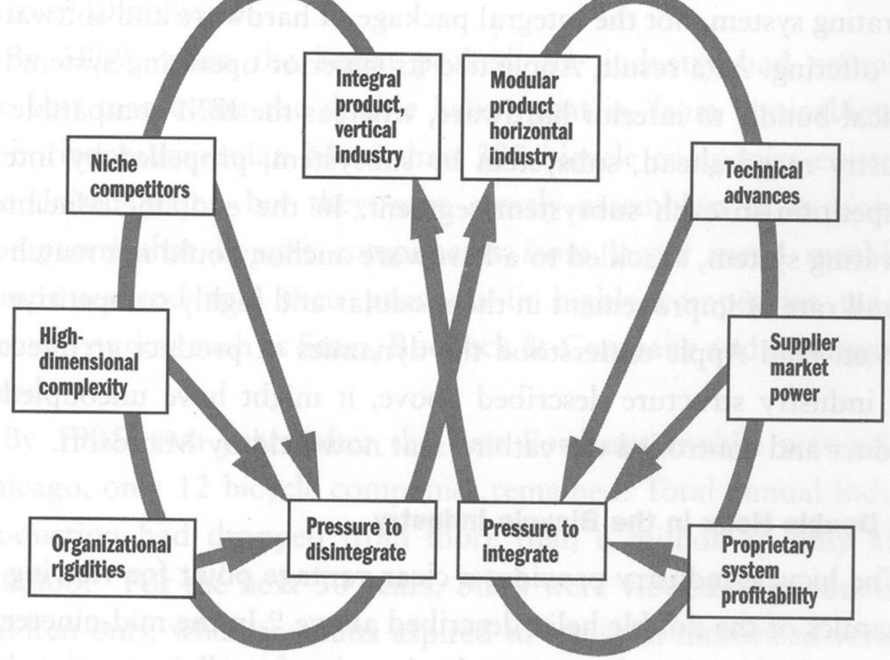


Figure 4.3. The Double Helix, Illustrating How Industry/Product Structure Evolve from Vertical/Integral to Horizontal/Modular, and Back[10]

Source: Fine, Clockspeed

Clockspeed of

- Products: life cycle
- Processes: asset obsolete rates
- Organisation: CEO changes

Supply Chain consisting of

- Organisations: Legal entities
- Technologies: BoM & working plans
- Capabilites: R+D, JIT, Assembly

Logistics since 1970s – 2010 in Europe

- **LOGISTICS was NOT the Inventor of…but**
  - Containerisation & Multimodality — **SEALAND**
  - Integrators and Aircargo — **FEDEX**
  - Warehousing- and Material Handling — **MANNESMANN**
  - Packaging; one way & returnables — **GE PLASTICS**
  - Internet and Real time — **INTEL/MICROSOFT**
  - CIM incl. CAD/CAQ/CAM/Barcode/RFID — **SAP/IBM**
  - Artificial Intelligence, Robots & 4.0

- **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

Supply Chain Architecture

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

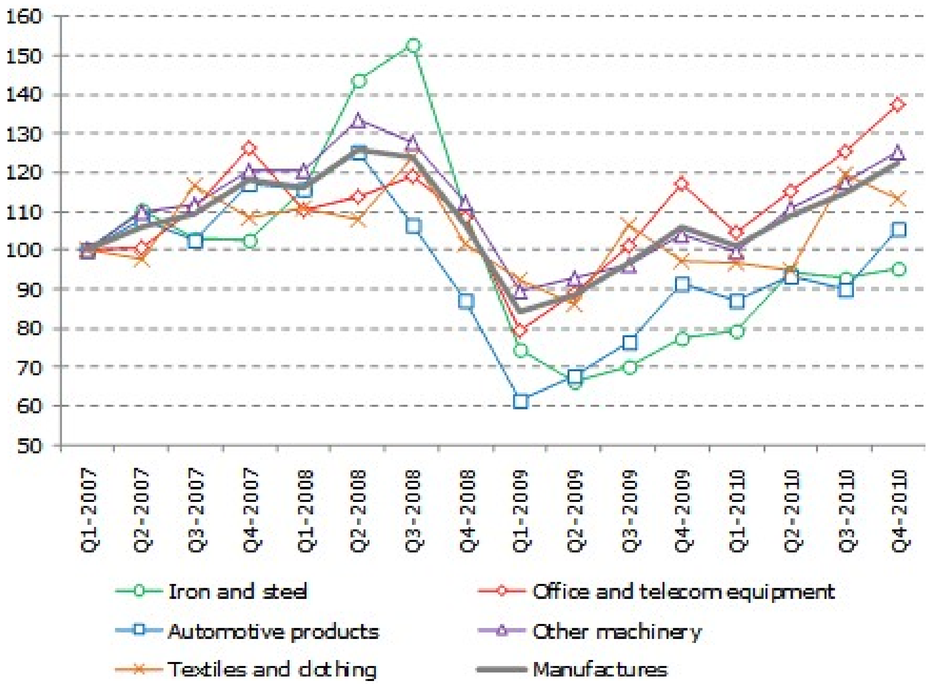
The power in the chain shifted to a horizontal structure and upwards in the chain, as the financial rewards. Here is what happened in the Supply Chain Architecture:

Vertical Structure (old)	**IBM**	**DEC**	**Bunch**
Microprocessors	IBM	DEC	
Operating systems	IBM	DEC	
Peripherals	IBM	DEC	
Application software	IBM	DEC	
Network services	IBM	DEC	
Assembled hardware	IBM	DEC	

Horizontal Structure (new)					
Microprocessors	Intel	Moto	AMD	etc.	
Operating systems	Microsoft	Apple	Unix		
Peripherals	HP	Epson	Seagate	etc.	etc.
Application software	Microsoft	Lotus	Novell	etc.	
Network services	DEC	HP	IBM	EDS	etc.
Assembled hardware	HP	Compaq	IBM	Dell	etc.

Learning from the Crisis

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

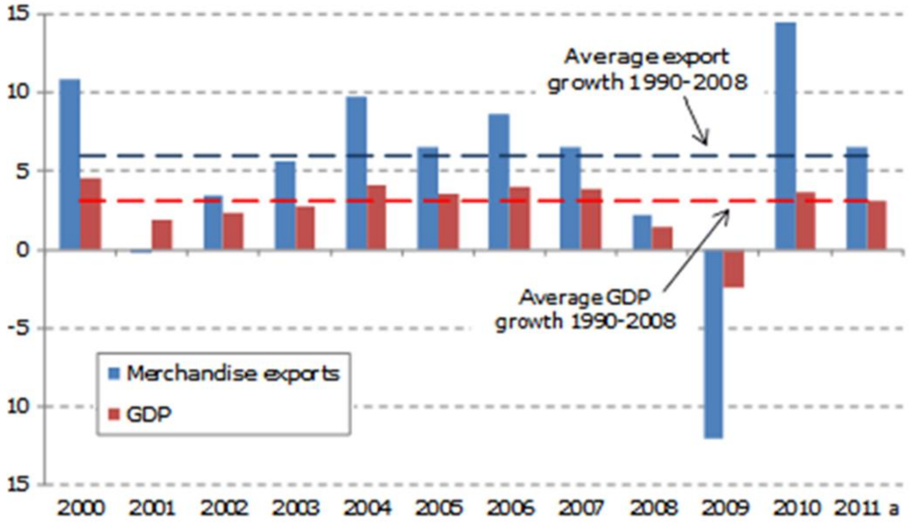
Logistics is:

- 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

Learning from the Crisis



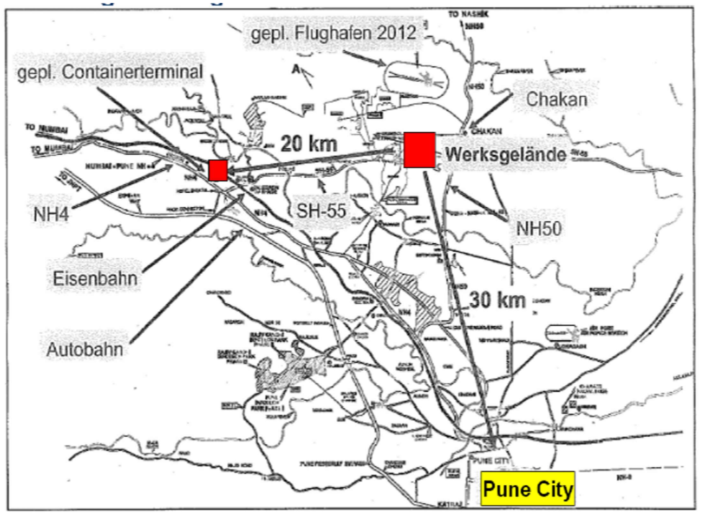
	GDP			Exports			Imports		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
World	1.4	-2.4	3.6	2.2	-12.0	14.5	2.2	-12.8	13.5
North America	0.1	-2.8	3.0	2.1	-14.8	15.0	-2.4	-16.7	15.7
United States	0.0	-2.6	2.8	5.8	-14.0	15.4	-3.7	-16.4	14.8
South and Central America a	5.1	-0.2	5.8	0.8	-7.9	6.2	13.2	-16.3	22.7
Europe	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
Commonwealth of Independent States (CIS)	5.5	-7.1	4.3	2.0	-5.2	10.1	16.4	-25.6	20.6
Africa	4.8	2.1	4.7	1.2	-4.2	6.5	14.6	-5.0	7.0
Middle East	5.3	0.8	3.8	3.5	-4.3	9.5	14.2	-7.8	7.5
Asia	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
Newly industrialized economies (4) b	1.9	-0.8	7.7	4.9	-5.7	21.3	3.5	-11.4	18.0
Memo: Developed economies	0.2	-3.7	2.6	0.8	-15.1	12.9	-1.2	-14.4	10.7
Memo: Developing and CIS	5.7	2.1	7.0	4.2	-7.8	16.7	8.5	-10.2	17.9

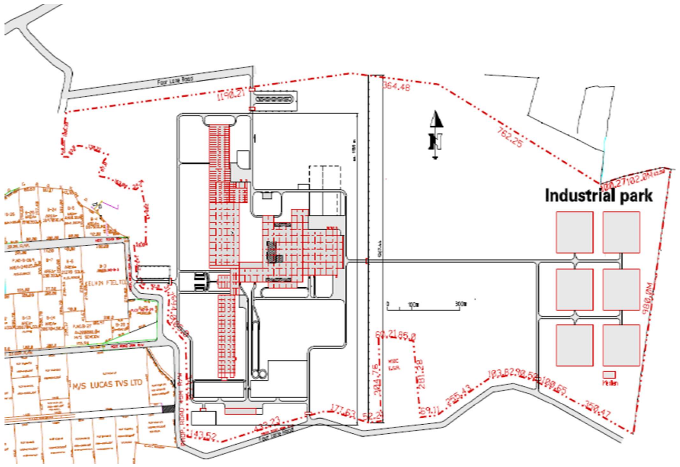
Learnings from the crises

- 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)

Infrastructure is Key





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**

Appeal to SCM & Logistics Community

1. **Free trade is under threat.**
   The Doha round is going no where. Politicians are still looking for blames rather than confronting realities.

2. **Freer trade flows will still be the route to lift countries out of poverty.**
   It is counterproductive to adopt baggar-the-neighbor policy which will only reduce volume of world trade and thus cargo movements.

3. China, **India** and Southeast Asia **will become major center(s) of growth.**

4. **Development of supply chain infrastructure and services in these countries will be enormous.**

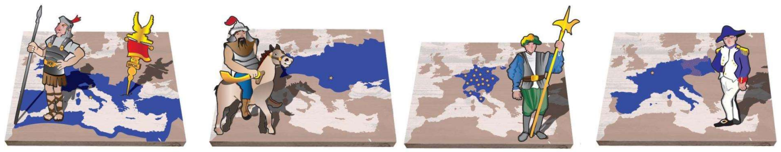
5. **Supply Chain professionals have an important role to play in communicating with decision makers the value of collaboration and cross country business.**

6. **Since the world has become more inter-connected, to survive and prosper new supply chain professionals need to develop cross cultural skills and a global mindset of where opportunities are in the increasingly globalized world.**

7. **Do not ignore the power of IT revolution in revolutionize the world of logistics including visibility and on-time deliveries.**

Source: Manuscript of Dr. Ting HO from the Opening Session on Sept 26th 2010 at the CSCMP Annual in San Diego/US: „Mastering the New Global Realities by **Carlos M. Gutierrez**, former secretary of the US Department of Commerce"

Competitiveness



South East European Corporative Initiative (SECI)

EU Parlament 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 Macro Region

Q & A

More information

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