

**BME Sourcing Conference 2009**

**Evolution of Chinese Sourcing Market –  
Driven by Increased Supplier Capabilities**

Shanghai, September 2009

## Within the topic „Sourcing in China - Development from Commodity Sourcing to *Nation of Engineers*“ we would like to discuss 4 theses.

### Content

#### Introduction BNEAC

Leading in supply chain solution

#### Thesis 1

The sourcing potential of high-tech products in China will increase within the upcoming years

#### Thesis 2

China's government will continue to promote key technologies – also by enhancement of education targets

#### Thesis 3

Legal regulations foster the “high-tech process” and encourage the competitiveness between Chinese and foreign suppliers

#### Thesis 4

Key challenges like increasing costs, appropriate quality standards and IPR recognition will remain in mid-term perspective

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## BrainNet EAC, as a Joint Venture between BrainNet and EAC- Euro Asia Consulting, is a leading expert for supply chain management-solutions in emerging markets.

### Success factors of BrainNet EAC

#### Competence:

- 1 BrainNet EAC is leading in **supply chain management consulting** providing expertise in all relevant fields of purchasing, operations and supply chain management.



#### Experience:

- 2 BrainNet EAC's is successfully engaged in the world's main procurement markets since approx. 15 years.



#### Professional structures:

- 3 BrainNet EAC offers its clients **global services** in the emerging markets.



#### International references:

- 4 BrainNet EAC advises large corporations worldwide in all aspects of supply management.



## BrainNet EAC provides four distinct consulting services supported by its Joint Venture Partners.





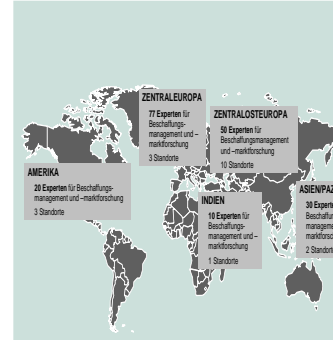
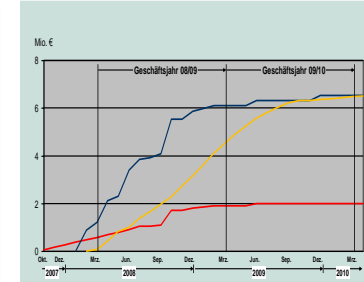
### Consulting Services of BrainNet EAC

Global Supply Chain Consulting	BVCS – Best Value Country Sourcing	BrainNet EAC Qualification Center	“EOP” for Procurement Organizations
<ul style="list-style-type: none"> <li>■ Supply chain efficiency and fit</li> <li>■ Value chain and cost structure analysis</li> <li>■ Logistics cost reduction</li> <li>■ Warehousing optimization and logistic flow improvement</li> <li>■ SCM finance models (e.g. ROCE) and implementation</li> </ul>	<ul style="list-style-type: none"> <li>■ Purchasing portfolio analysis</li> <li>■ Supplier benchmark, selection and evaluation</li> <li>■ RFx, supplier negotiations</li> <li>■ Supplier audits with BrainNet EAC Supplier Assessment Tool</li> <li>■ TCO calculation</li> <li>■ Operational procurement support</li> </ul>	<ul style="list-style-type: none"> <li>■ Supplier qualification and certification</li> <li>■ Supplier Audits (TÜV Certified)</li> <li>■ Quality management and assurance</li> <li>■ Commercial and legal support</li> <li>■ Implementation controlling</li> <li>■ Trouble Shooting</li> </ul>	<ul style="list-style-type: none"> <li>■ Commodity management and optimization</li> <li>■ IPO establishment</li> <li>■ Assessment of FIE's procurement organizations</li> <li>■ Efficiency optimization for Chinese enterprise' procurement/ SCM</li> <li>■ Performance measurement and controlling</li> </ul>

EOP = Efficiency Optimization Program

# BrainNet EAC offers all success factors to accomplish the project with the best possible outcome for our customers.

## USPs of BrainNet EAC in Asia/ East Europe

Procurement best practices	High procurement seniority	Market know-how	Worldwide presence	Substantial success
 <p>Our clients are „Best Practice“ players</p>	<p><b>Expertise / Innovation</b></p>  <p><b>Team</b></p>  <p>We have more than 15 years market experience</p>	 <p>We know your industry</p>	 <p>We are present with our local teams in the emerging markets</p>	 <ul style="list-style-type: none"> <li>- We generate real cost savings</li> <li>- Minimization of global exchange rate- and price risks</li> </ul>

## Optimal coverage of our customers' requirements

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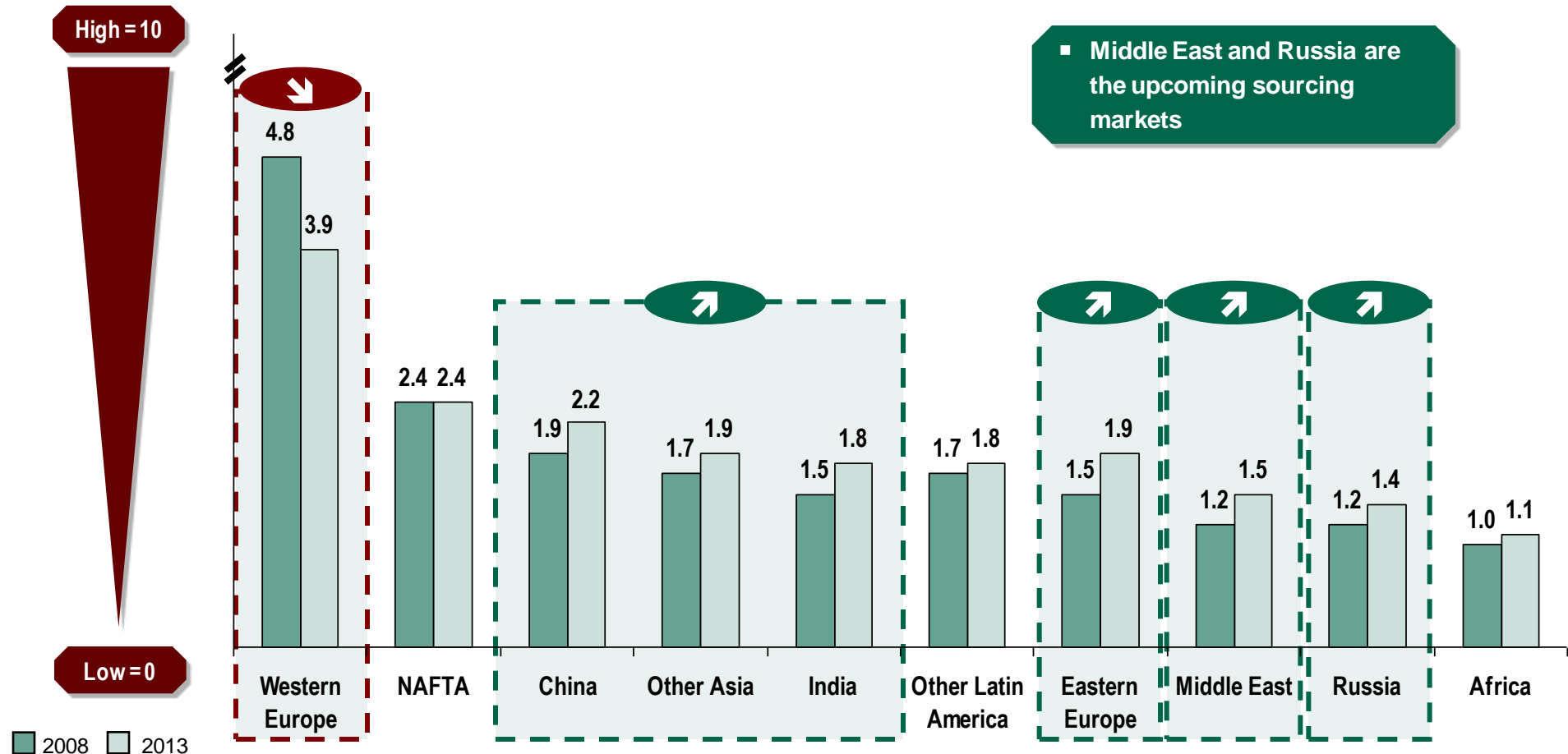
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# Global Sourcing has its significance in particular for MNEs, but within five years time Asia and Eastern Europe will gain even more importance as BVCS markets.

Importance of regions as BVCS markets, 2008-2013



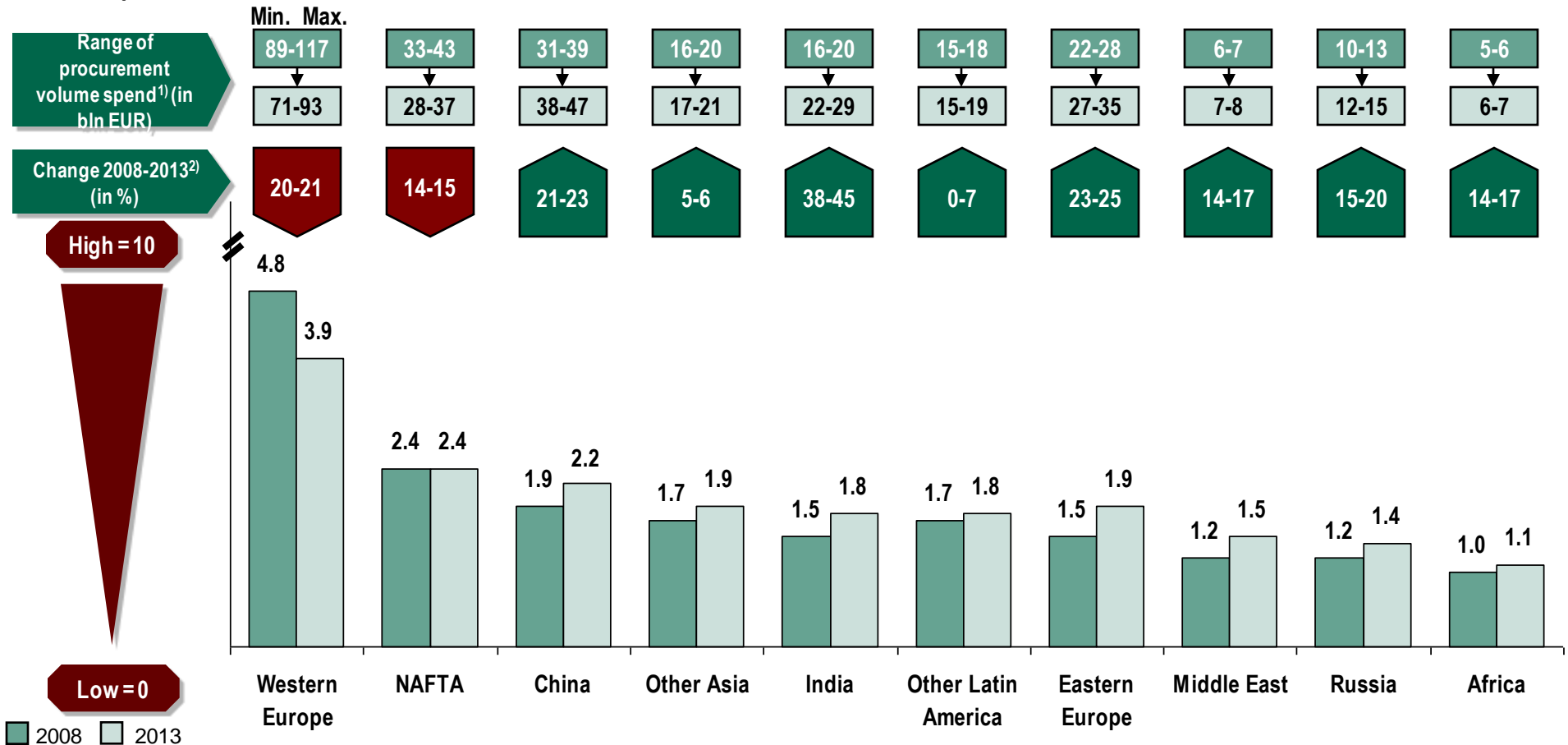
■ 2008 □ 2013

Remark: Ranking of BVCS markets bases on weighting of range of share of procurement volume spend by market; 10 = highest weighting for 91-100% of procurement volume spend by no. of respondents

Source: BrainNet EAC

# Until 2013 a shift of up to 24 billion euro procurement volume out of Western Europe will take place; markets to benefit are China, India and Eastern Europe.

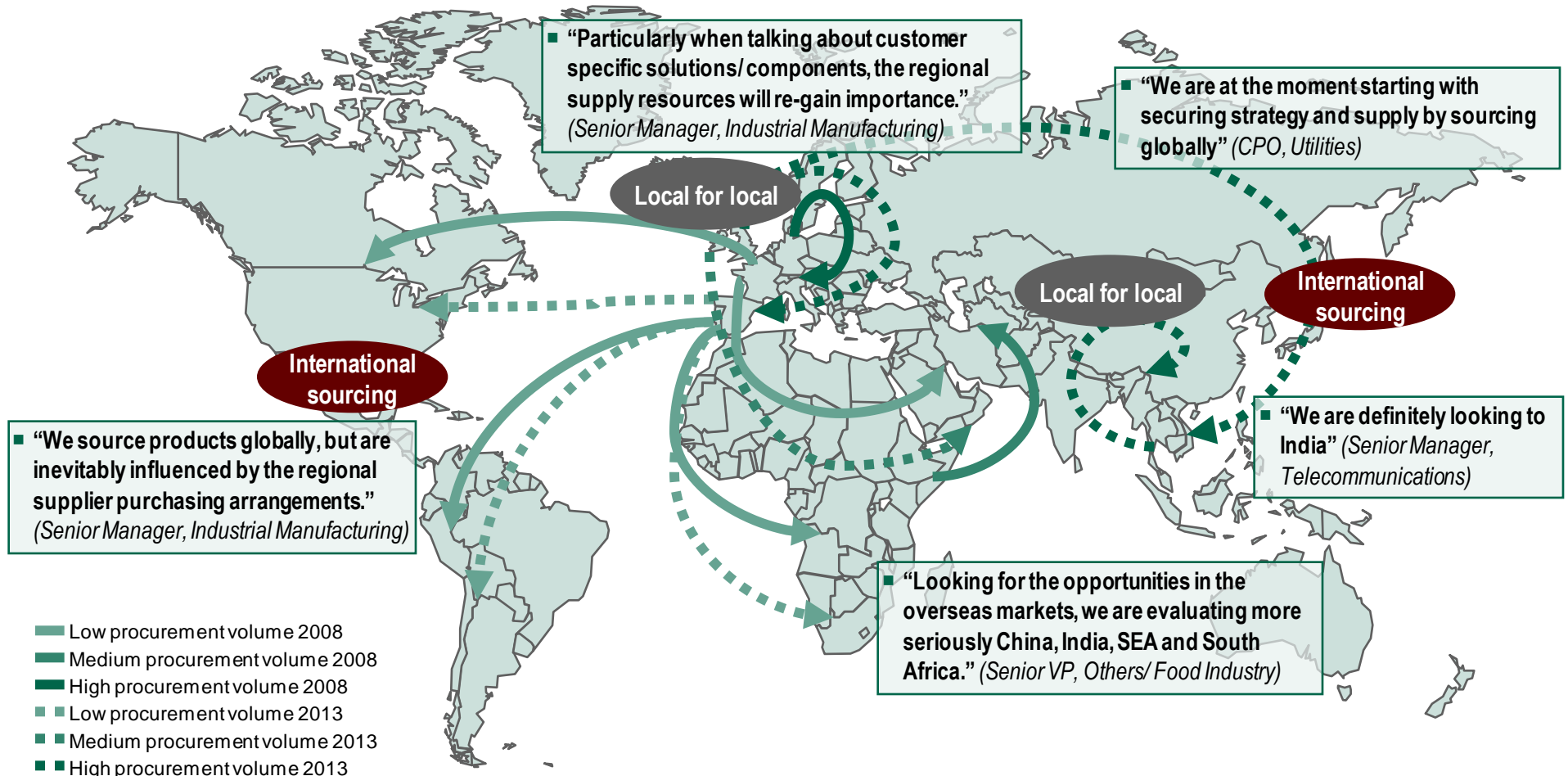
## Shift of procurement volumes 2008-2013



1) Calculation model: Sum of participating companies' range of procurement volume set against the percentage sourced in each market  
2) Country growth ratios considered for change rate 2008-2013

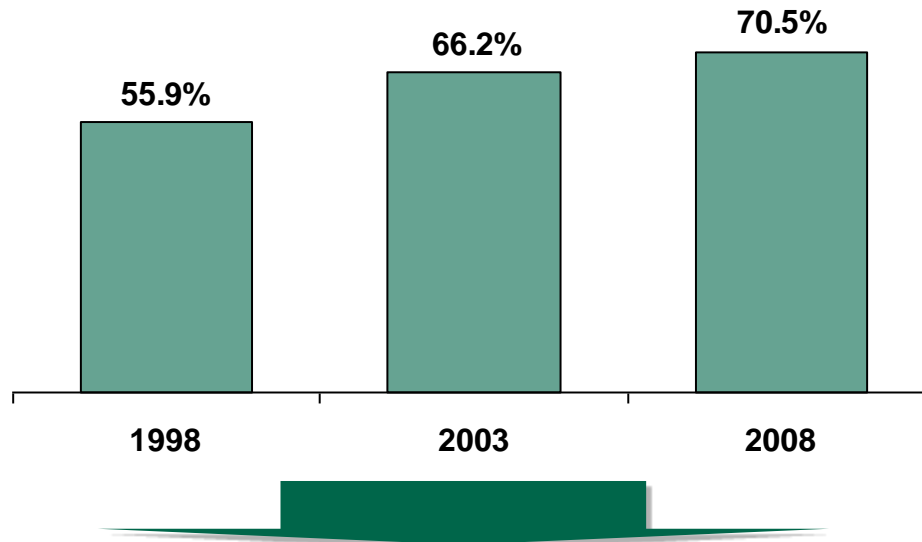
## From the Western European perspective, local for local and local for global sourcing approaches offer new opportunities with focus on the CEE, MENA and Asian regions.

Western European perspective, 2009 versus 2013



## Chinese exports to EU-27 and Turkey countries are increasingly dominated by technology intensive commodities, labor intensive commodities are declining.

Chinese exports to EU-27: share of technology intensive commodities



### Export volume China to EU-27

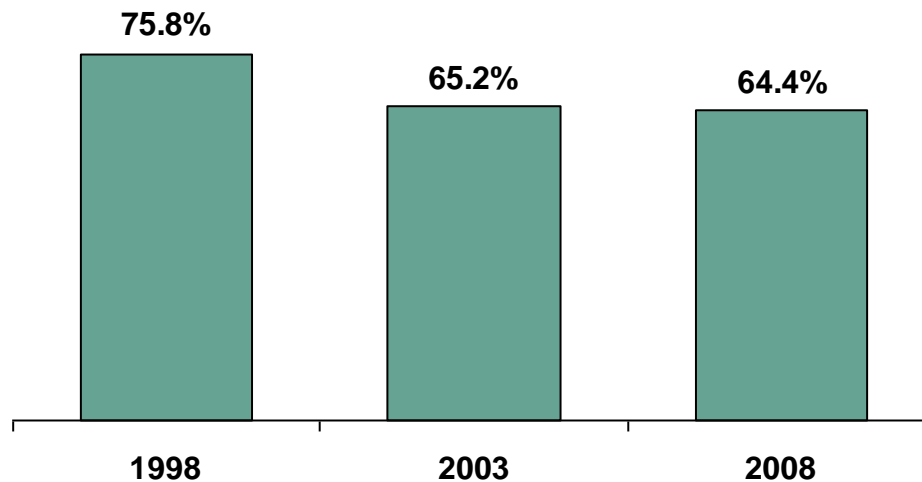
- 1998: 15.7 bln USD
  - 2003: 52.7 bln USD
  - 2008: 211.2 bln USD
- CAGR 29.6%

**Technology intensive goods replace labor intensive goods exported from China**

- ▶ Driven by increased availability of high technology in China

## Chinese imports from EU-27 and Turkey still contain over 50% technology intensive goods but with a declining importance.

Chinese imports from EU-27: share of technology intensive commodities



### Import volume China from EU-27

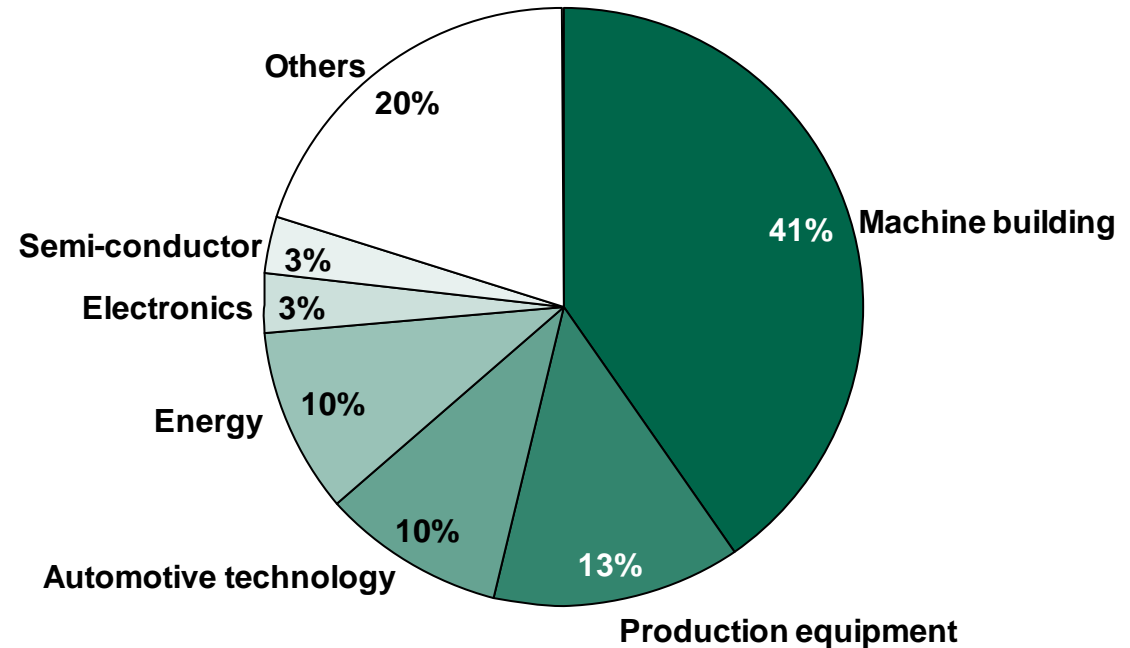
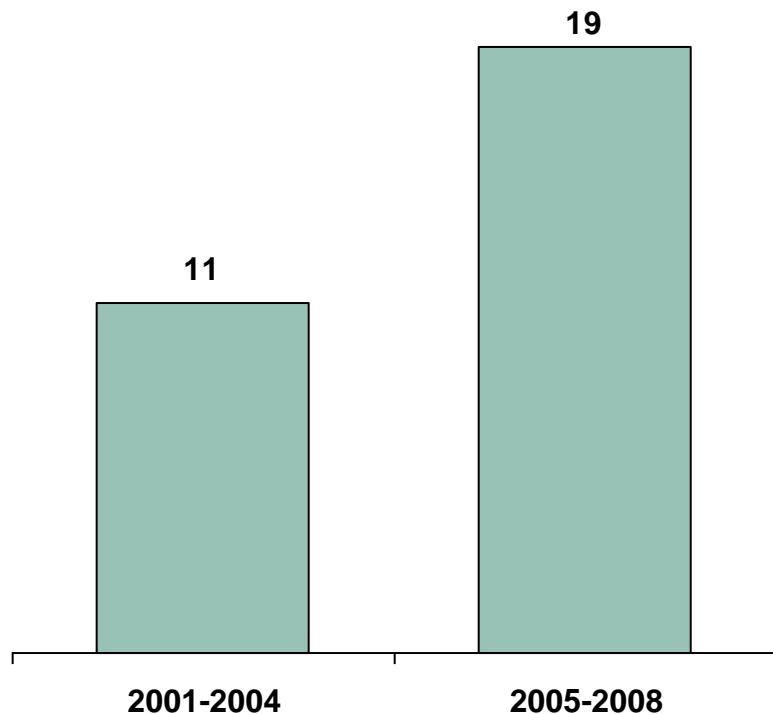
- 1998: 19.8 bln USD
  - 2003: 54.9 bln USD
  - 2008: 133.3 bln USD
- CAGR 21%

**Technology intensive goods are less imported due to increasing availability in China**

- ▶ Imported High Tech utilized for technology intensive manufacturing

**Acquisitions of Chinese companies in Europe almost doubled in the time from 2005-2008 compared to the four previous years focusing on technology intensive companies.**

**Selected acquisitions of Chinese companies in Europe**



- Major reasons for acquisitions:**
- Market access
  - Technology and know-how access
  - Product fit
  - Obtain brand name

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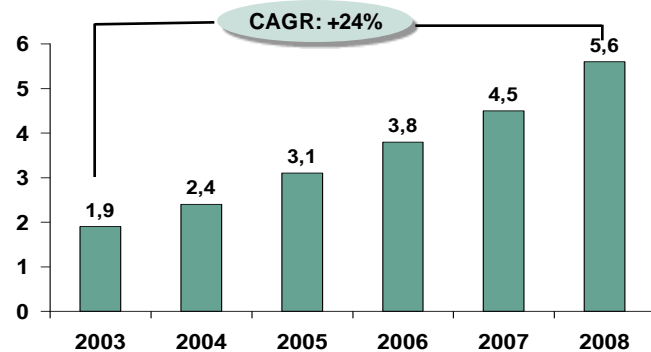
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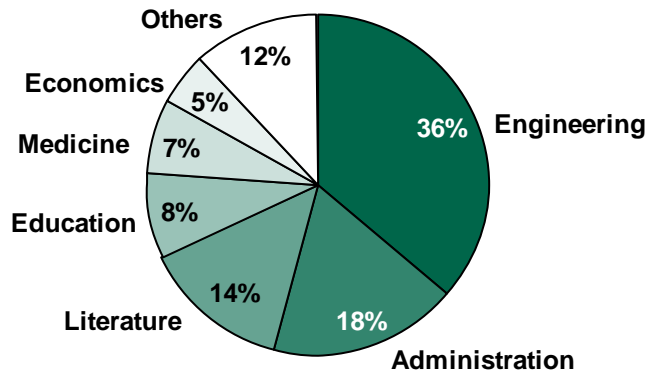
Majority of the graduates can be employed, however, there is still the room for enhancing the matching between the job and education program.

### Development of university graduates

No. of university graduates in China  
2003-2008, (in mio.)



Chinese university graduates by field of study  
(in %)



Ranking of employment of university graduates, 2008

Program	Employment rate (%)	Matching between the job and education (%)
Engineering	90	77
Administration	89	70
Economics	88	64
History	87	65
Agriculture	87	63
Literature	86	72
Science	84	63
Education	84	62
Medicine	82	90
Law	79	47
Philosophy	76	32
<b>Total graduates</b>	<b>85</b>	<b>64</b>

## Many local enterprises in high-tech industry have collaborations with top universities in Beijing- focusing on R&D but also talent search.

Examples for collaborations: local enterprises and universities (1)



### Top Engineering and R&D universities in Beijing:

- Tsinghua University
- Beijing University
- Beijing Jiaotong University (BJTU)
- China Technology of Science

### Collaborations and networks: Chinese companies & top universities

Location	University	Company	Technology focus	Reason
Beijing	Tsinghua University	Datong Telecom	Telecommunication	R&D
		China Oilfield Service Limited	Energy	R&D
		Sunwise	Energy	R&D
	Beijing University	Founder	IT	R&D
		APTECH	IT	R&D
	Beijing Jiaotong University School	CNPC	Energy	R&D
	Chinese Technology of Science	Keyan Chemical Material Development Co., Ltd.	Chemical	R&D

## Collaborations are mainly focused on Shanghai as well as its vicinity region due to high concentration of technology driven companies.

Examples for collaborations: local enterprises and universities (2)



### Top Engineering and R&D universities in Shanghai:

- Shanghai Jiaotong University
- Tongji University
- Fudan University

### Collaborations and networks: Chinese companies & top universities

Location	University	Company	Technology category	Reason
Shanghai	Shanghai Jiaotong University	AVICI Commercial Aircraft Co., Ltd.	Civil Aviation	R&D
		SINOVEL	Energy	R&D
	Tonji University	Tieda Telecommunication	Telecom	R&D
		Shanghai Fuel Cell Vehicle Poertrain Co., Ltd.	Automotive	R&D
		Shanghai Tongji Science & Technology Co., Ltd.	IT	R&D
Fudan University	Mayland	LED system	R&D	

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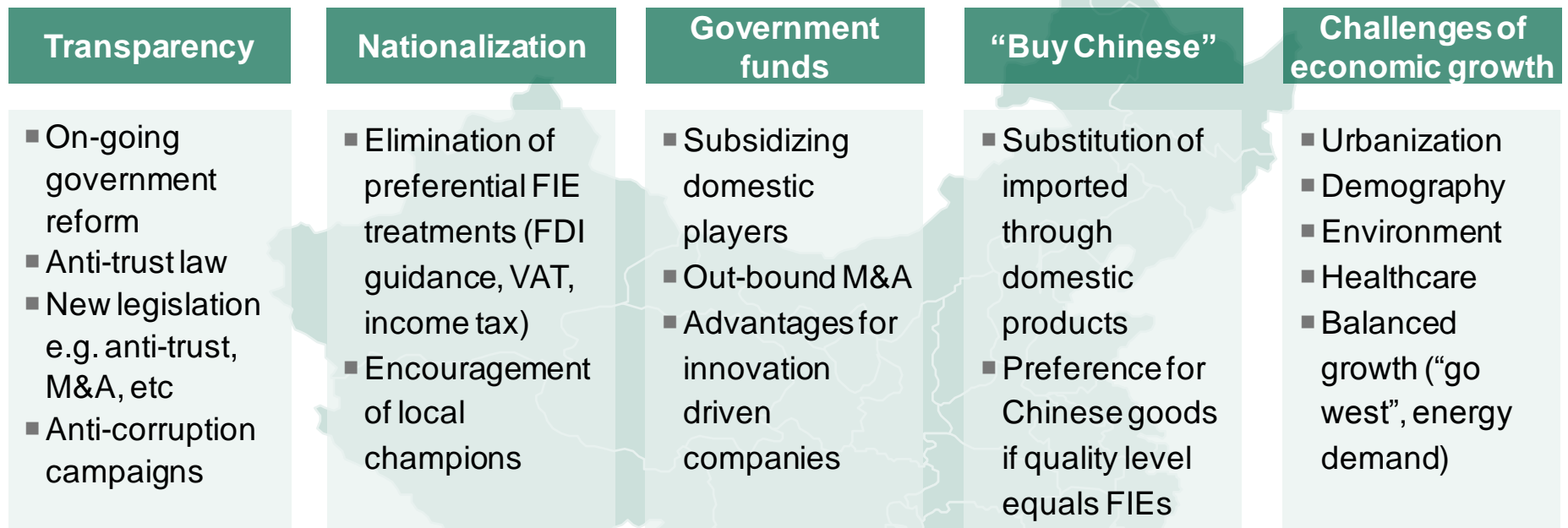
## Over the 30 years' development, China is experiencing dramatic changes of the economy development – the service and high-tech industry gain more and more importance.

The 6 <sup>th</sup> Five-year Plan (1981-1985)	The 10 <sup>th</sup> Five-year Plan (2000-2005)	The 11 <sup>th</sup> Five-year Plan (2006-2010)
<ul style="list-style-type: none"> <li>■ <b>Major emphasis</b> <ul style="list-style-type: none"> <li>▶ Continue to enforce the principles of readjustment, reform, rectification and improvement, further resolve various issues against economic development left unsolved from past years</li> </ul> </li> <li>■ <b>Expected development</b> <ul style="list-style-type: none"> <li>▶ GNP being with 10% of growth rate on average and reaching RMB 778 billion by 1985</li> </ul> </li> </ul> <p><b>Industrial investment: Basic industries</b></p> <p>Total investment: RMB 199 billion</p> <ul style="list-style-type: none"> <li>▶ Power industry: RMB 59 billion</li> <li>▶ Transportation: RMB 30 billion</li> <li>▶ Construction &amp; Environment protection: 18 billion</li> <li>▶ Metallurgical industry: 18 billion</li> <li>▶ Others: 74 billion</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Major emphasis</b> <ul style="list-style-type: none"> <li>▶ Optimize and upgrade industrial structures</li> <li>▶ Enhance the levels of economic and social informationization and infrastructure further improved.</li> <li>▶ Effectively control the unbalanced economic development among the regions and raise the levels of urbanization</li> </ul> </li> <li>■ <b>Expected development</b> <ul style="list-style-type: none"> <li>▶ GDP being with 7% of growth rate on average and reaching RMB 13 trillion by 2005</li> </ul> </li> <li>■ <b>Industrial investment</b> <ul style="list-style-type: none"> <li>▶ Agriculture: RMB 694 billion (accounting for 2.5% of total investment)</li> <li>▶ Industry &amp; Construction: RMB 10,852 billion (accounting for 38.5% of total investment)</li> </ul> </li> <li>■ <b>Service</b> <ul style="list-style-type: none"> <li>▶ Service: RMB 16,640 billion (accounting for 59% of total investment)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Major emphasis</b> <ul style="list-style-type: none"> <li>▶ Build new socialist rural areas</li> <li>▶ Continue to optimize and upgrade industrial structures, promote concordant development of regions</li> <li>▶ Build an overall well-off society</li> </ul> </li> <li>■ <b>Expected development</b> <ul style="list-style-type: none"> <li>▶ GDP being with 7.5% of growth rate on average and reaching RMB 26 trillion by 2010</li> </ul> </li> <li>■ <b>Industrial development focus</b> <p><b>High-technology industry (e.g. electronic information, bio-technology, aeronautic and astronautic area)</b></p> <ul style="list-style-type: none"> <li>▶ Manufacture (e.g. Automotive, Ship)</li> <li>▶ Energy (e.g. Coal, Electrical power, Natural gas, Renewable Energy)</li> <li>▶ Raw material (e.g. Metallurgy, Chemistry)</li> <li>▶ Light industry</li> </ul> </li> </ul>

- China's GDP has increased 13 times comparing with 30 year's ago and economic system had shifted from centrally planned to socialist market economy.
- Chinese government is focusing more on the upgrade industrial structure and build the harmonious society.

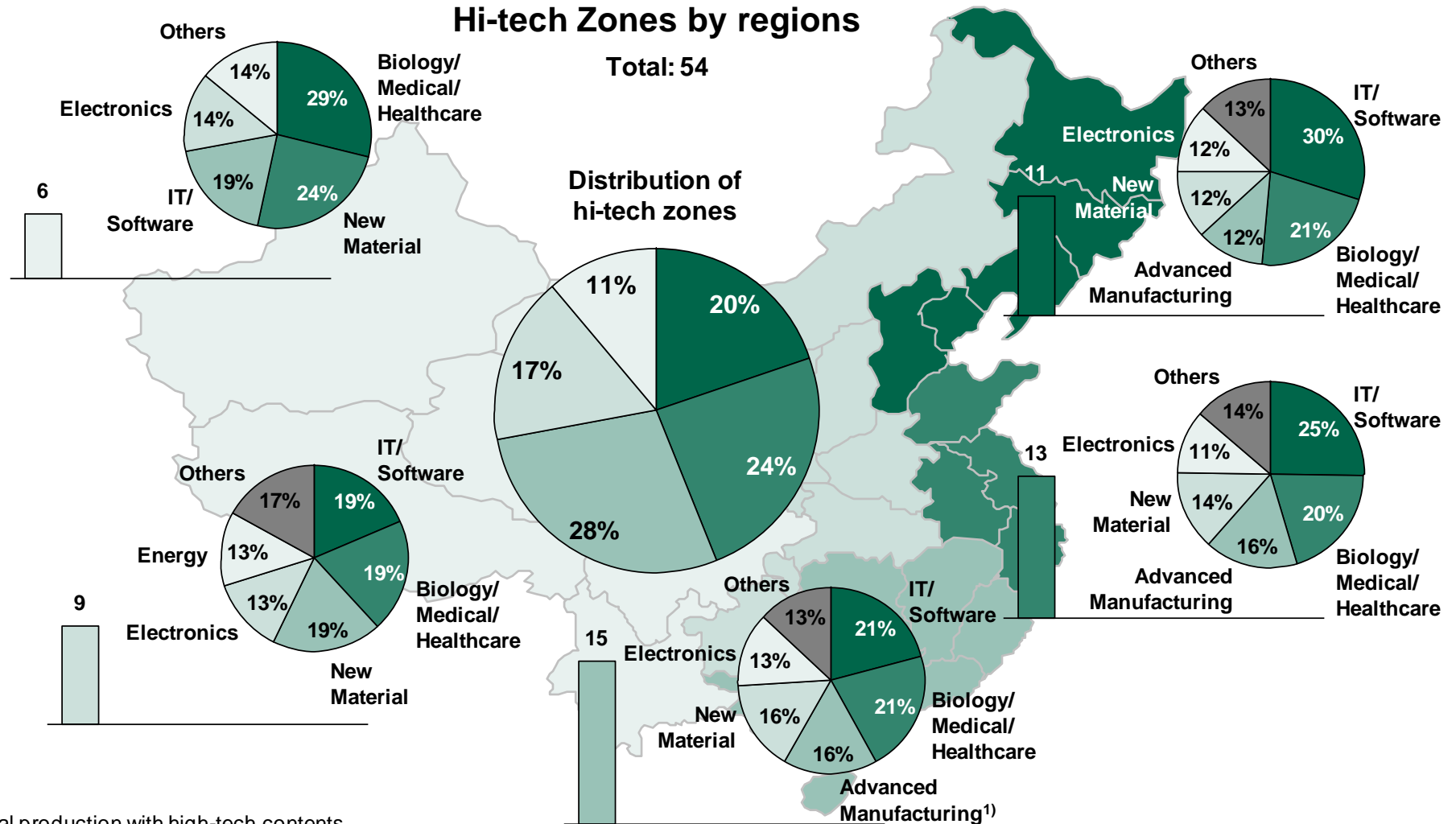
## Besides the Stimulus Program, Chinese government fosters “buy Chinese”, outbound M&A as well as innovation climate in China.

Changing China: 2009



**Creation of a strong domestic market**  
**Transfer of latest technologies and management methods**  
**Preserving environment**

# More than 50% of Chinese Hi-tech zones are located in Pearl River Delta area and Greater Shanghai area.



1) Industrial production with high-tech contents  
Source: BrainNet EAC, China Development Zone Association

## Companies with focus on high technologies and R&D have access to Chinese high-tech zones – certain preferential policies are provided.

### Chinese High-tech Zones (1)

#### Company types to be admitted in high-tech Zones

- R&D centers
- Companies which belong to certain high-tech industries
  - ▶ Electronics, IT, Renewable Energy, Environmental Protection, etc.
- Production with “high-tech” content/ processing
- Incubation base for small enterprises with advanced technologies
- Other companies which meet the requirements of each individual high-tech zone, e.g. focusing industry of the high-tech zone

#### Advantages/ preferential policies

- Enterprises enjoy 15% income tax rate, preconditioned that the enterprises are certified as “High-tech Enterprise” (normal income tax rate for the other enterprises: 25%)
- Each high-tech zone offers different preferential treatments, e.g.
  - ▶ Certain costs could be (partially) deducted from EBIT
  - ▶ Business tax exemption for certain income, e.g. income by technology transfer
  - ▶ HR-related preferential treatments, e.g. Hu Kou, residential permit

**An turnover of 5.5 trillion RMB was achieved in 54 high-tech zones in 2007**

To encourage high-tech enterprise development, the government implements a series of policies covering finance, taxation, resource disposal etc.

## Chinese High-tech Zones (2)

### Innovative Financial Policy

- Encouraging banks to set up branches in high-tech zones
- Establishment of right fit institution for small and medium sized high-tech companies (e.g. risk assessment, etc.)
- Release of new types of loans (e.g. mortgage on intangible assets)
- Setting up special funds to support start-ups of high-tech enterprises

### High-tech Zones in China

### Technical Resource Deployment

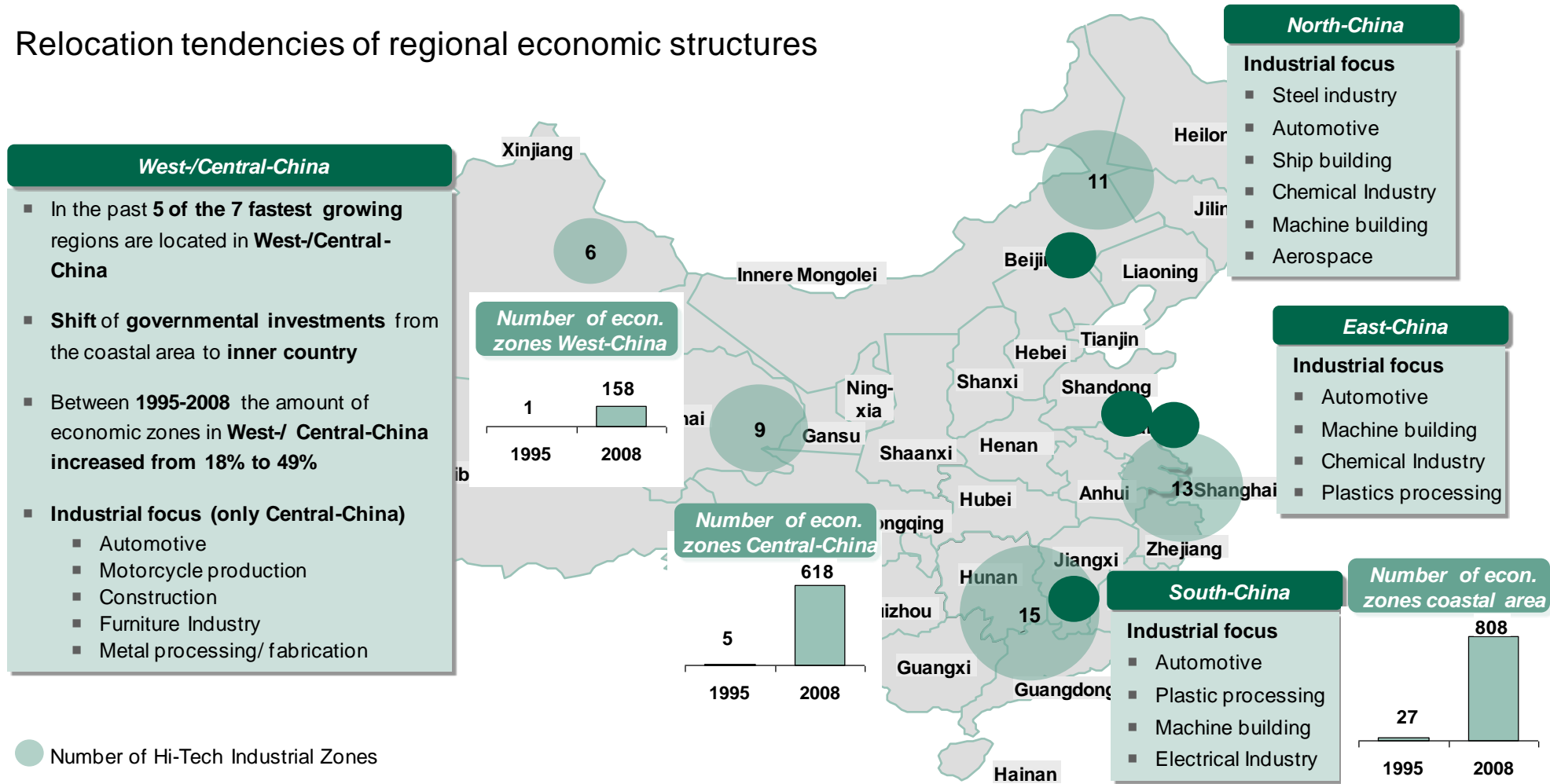
- Encouraging high-tech enterprises to join national projects
- Strengthen funds support to promote innovation at high-tech enterprises

### Taxation Financial Support

- Tax exemption for the incubator of high-tech enterprises
- Local governments prioritizing high-tech products application in governmental projects to support sales
- Compensation for financial risks out of high-tech products

# As traditional economic areas transform into Hi-Tech/R&D centers drives the Government the establishment of new economic zones in Central and West China.

Relocation tendencies of regional economic structures



● Number of Hi-Tech Industrial Zones

● R&D/ innovation centre

Source: BrainNet EAC

## The clear goal of the Chinese Government is to restructure the SOEs and make them fit for the global markets.

### Trends for State Owned Enterprises (SOE)



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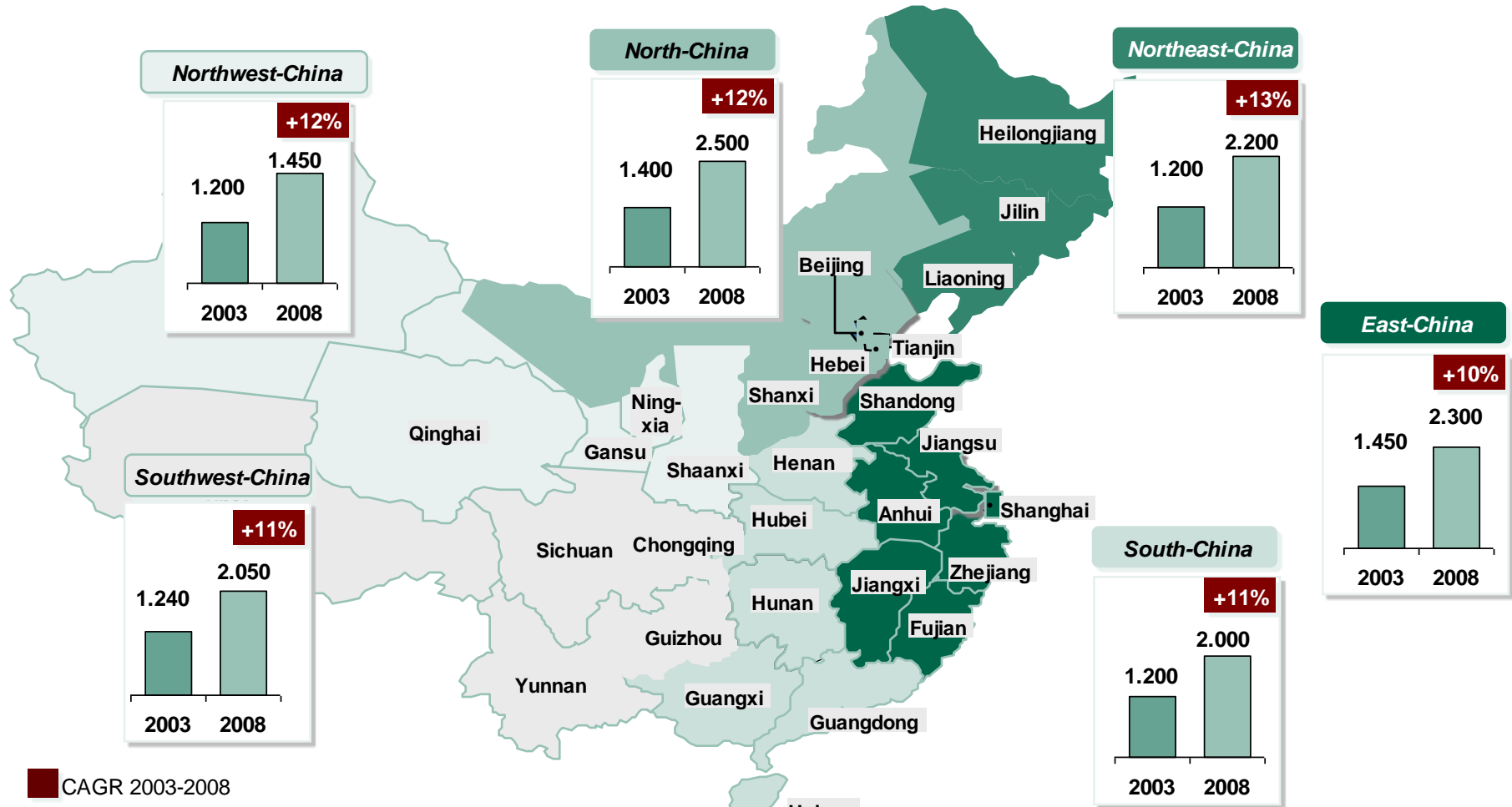
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**Income in the coastal areas (app. 2.500 EUR) shows over 25% higher levels than in central regions (app. 2.000 EUR) – South China has relatively low income level.**

Status Quo: Average wages in manufacturing by region (in EUR/ p.a.)

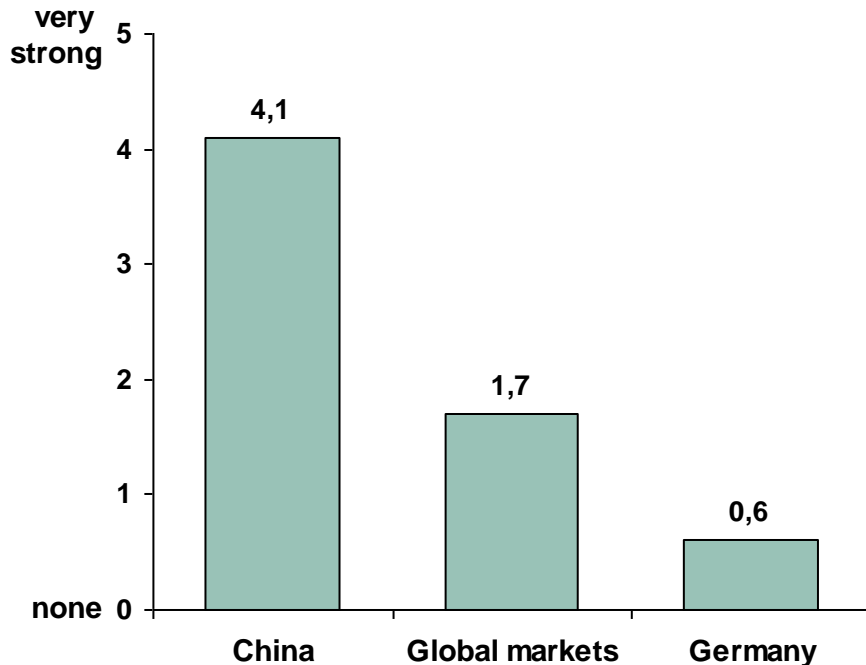


## German companies do not feel Chinese competition on the world markets and in Germany, however already massively in China.

To what extent do you perceive the Chinese competition?

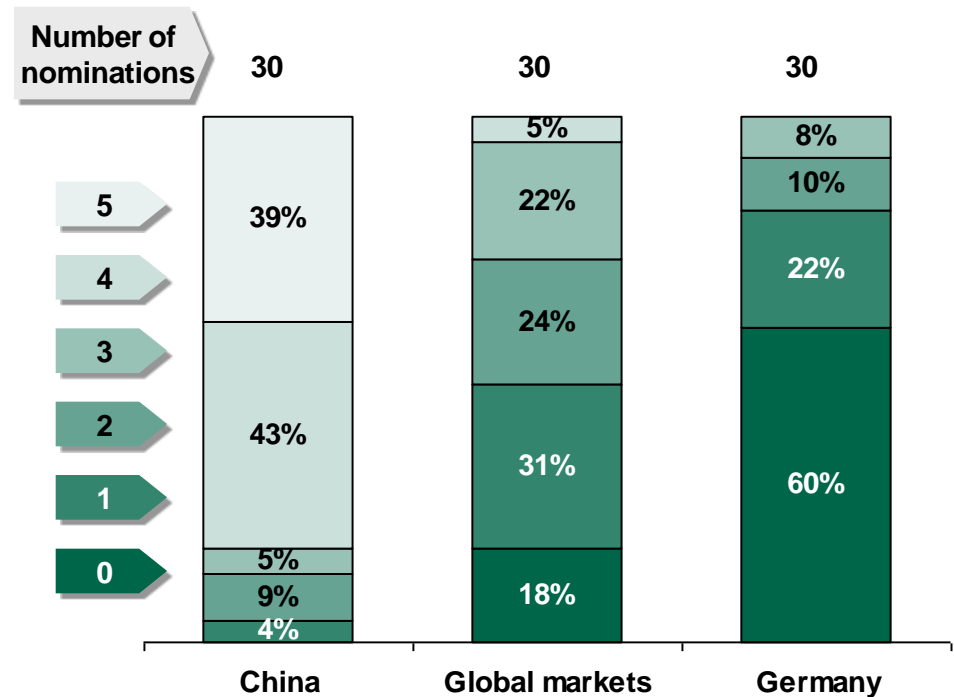
### Average intensity (scale 0-5)

n = 30



### Distribution of nominations

n = 30

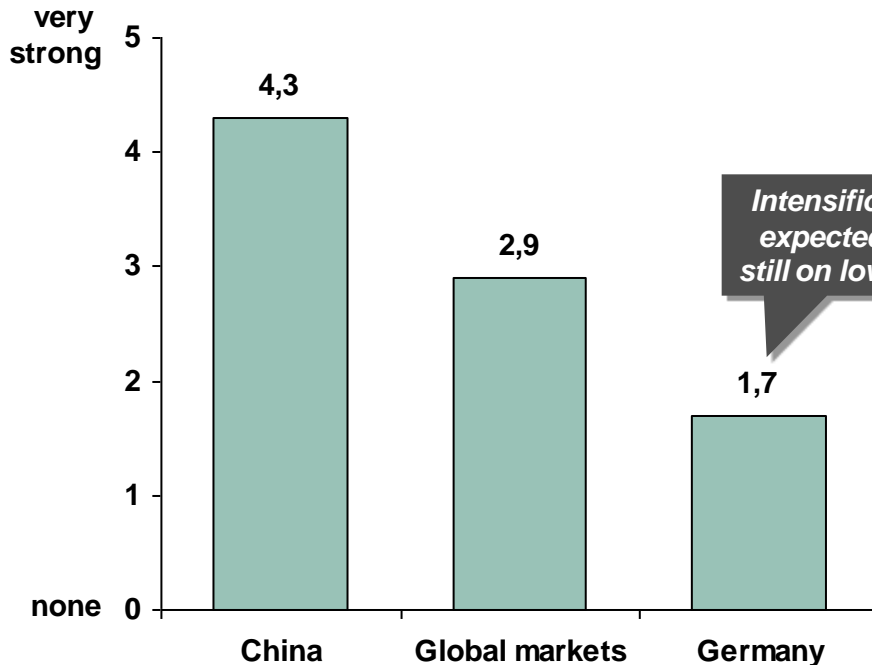


# In the next 5 years, industry expects a considerable increase of competition with Chinese companies - also in Germany.

How do you estimate the medium-term intensity of Chinese competition?

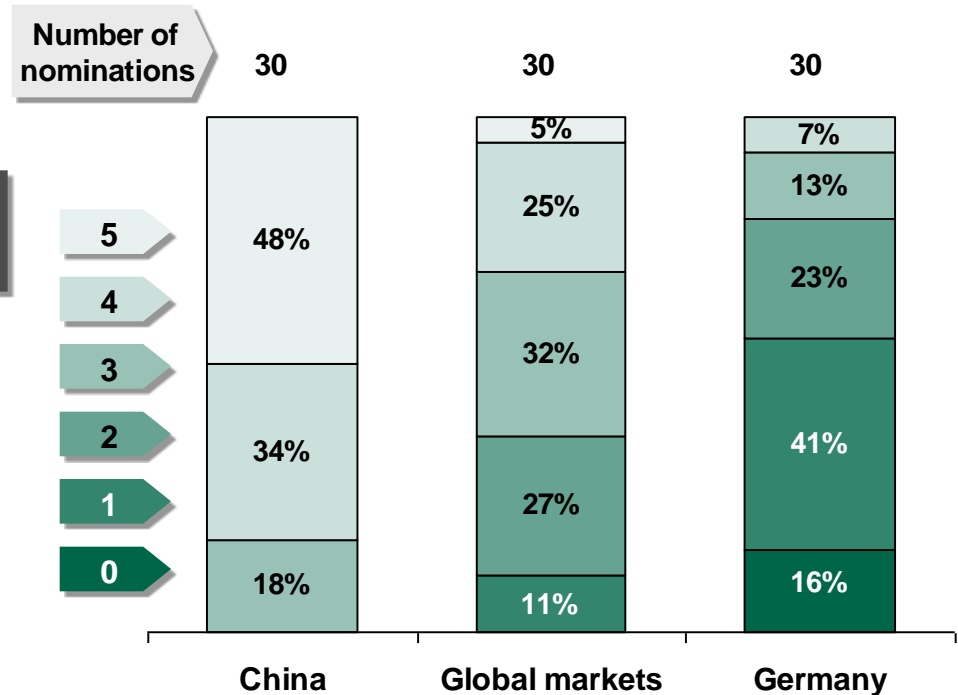
## Average intensity (Scale 0-5)

n = 30



## Distribution of the nomination

n = 30



## The success of MNEs in China will largely depend on their ability to focus on the Chinese market with a strong “Local for Local” approach for all areas of the company

Local for local in China



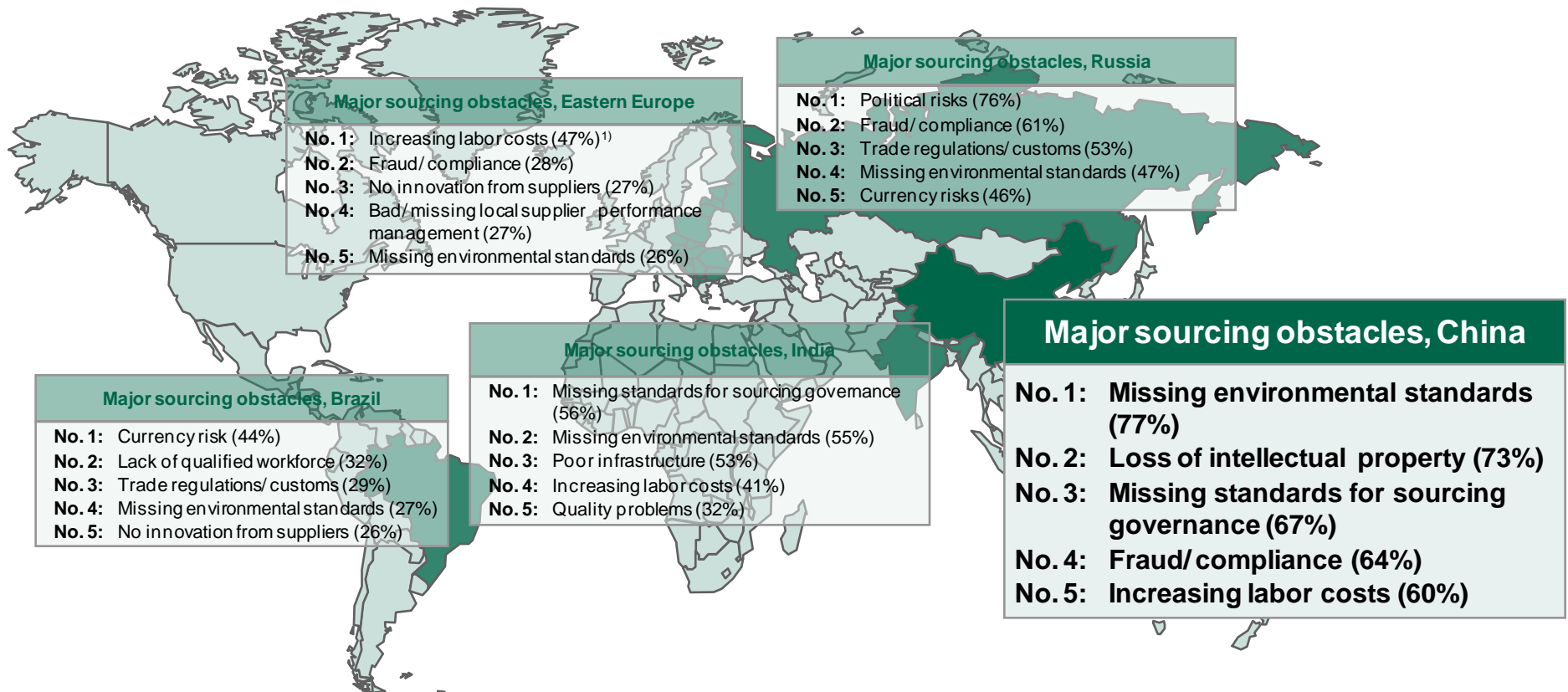
**Market understanding and  
competitiveness in the China**

### Approach “Local for Local”

- Reduce cost to be competitive on the domestic market
- Understand the true market requirements in China
- Adapt and or newly develop products specifically for the Chinese market
- Dare to reduce own quality standards to meet market requirements, break with year rules
- Cooperate with domestic suppliers in product development and cost reduction activities
- Provide training to employees

# Despite the strong development in the last years, China still remains with considerable sourcing obstacles, lacking protection

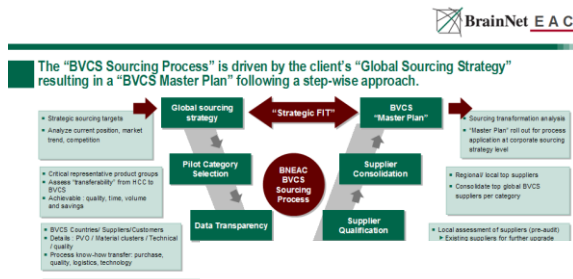
Overview: Top Five sourcing bottlenecks by region



1) (x%) = percentage of responses by region  
Source: BrainNet EAC

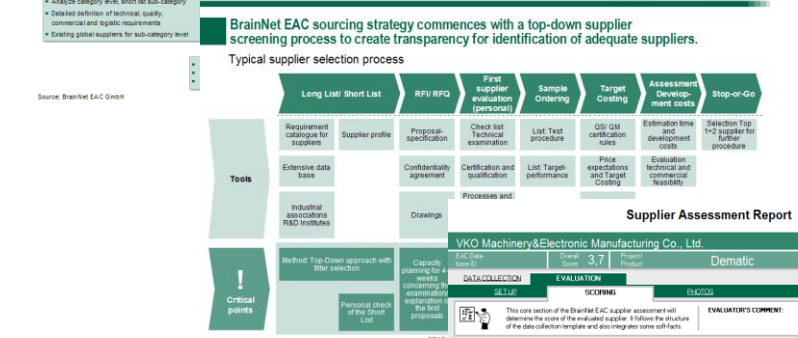
# Finding and developing the right and best fit supplier requires an advanced sourcing process backed by a high developed global procurement organization.

## Overview: BrainNet EAC advanced Sourcing Process



- Develop and understand the global sourcing strategy
- Analyze the purchasing portfolio
- Evaluate existing suppliers
- Establish Master Plan

**Sustained and company wide global sourcing**



- Find and select relevant suppliers
- Evaluate their capabilities, ensure best cost

**"Best Cost" supplier**

- Detailed supplier evaluation
- Scoring compares suppliers

**"Best Value" partner**

## The development of a powerful and true global Procurement organization with global setup of processes and responsibilities is required.

### Purchasing strategy

- Strong Group coordination, leverage of local market insights
- Differentiated buying tactics in order to drive down cost

### Cross-functional approach

- Full support from engineering/sales for Purchasing strategy and vice versa, common targets and responsibility (
- Consistent and staged communication to suppliers (one face to...)

### Purchasing footprint

- Develop global key suppliers
- Strong presence in **non-traditional supply markets**

### Supplier management

- Aggressive re-sourcing approach towards incumbent suppliers
- Welcoming, coaching attitude towards new, **emerging suppliers**

### Controlling & incentive systems

- Breakthrough savings instead of small annual savings
- **Performance of suppliers directly linked to amount of business awarded**

### Human resources

- Buyers are in full command of technical aspects of products
- Highly skilled buyers in strategic roles

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