



Competition in global markets and the challenges of the German industry

Olaf Plötner

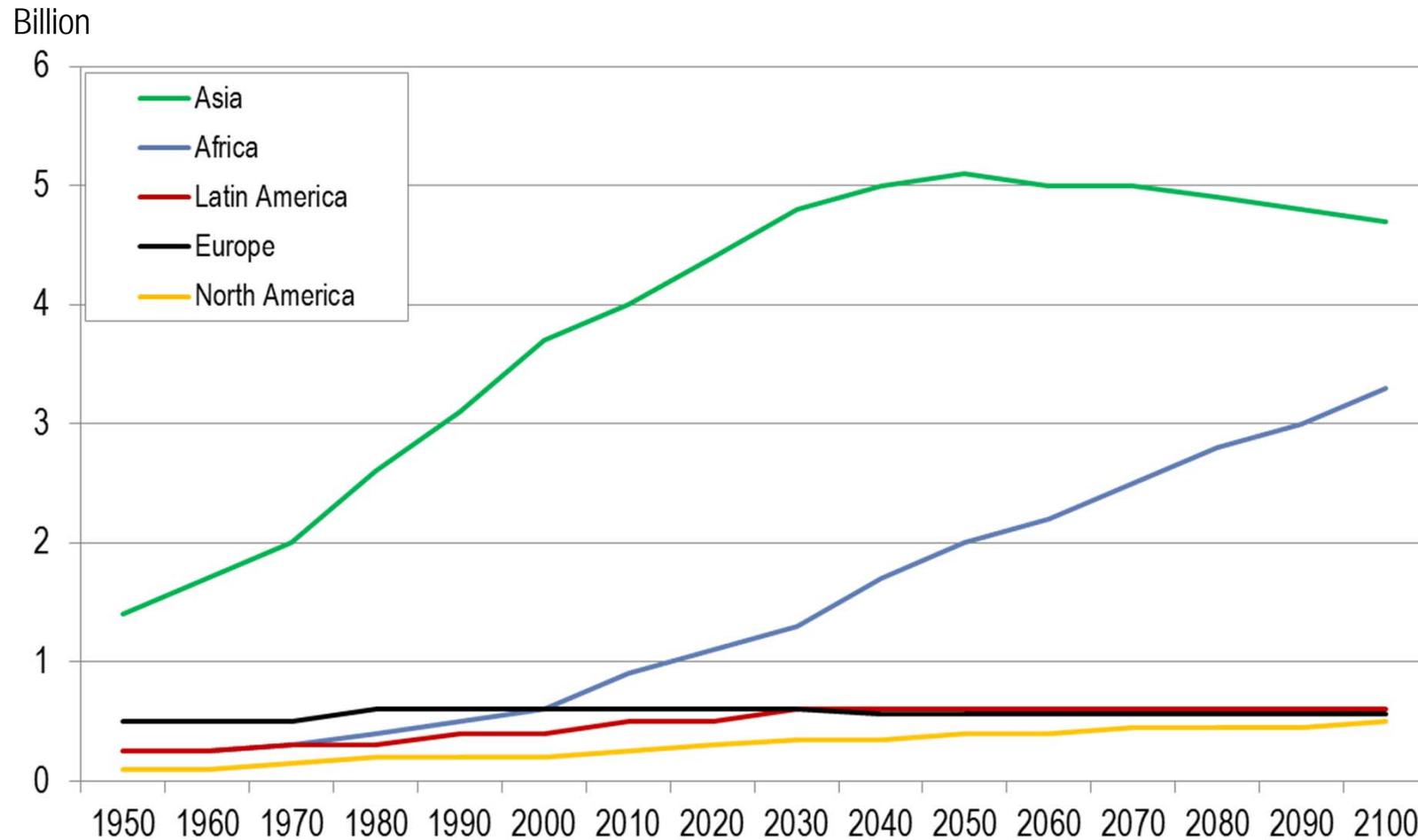
New competitors challenge traditional suppliers successfully

Case example: ZPMC (1992 – 2008)

- In 1992 ZPMC was founded by the 59-year old Guan Tongxian (who led ZPMC in the period under review) entering the market of container cranes for harbors with the mission “to revitalize the Great China”.
- The company got listed at the Shanghai stock exchange but, governmental institutions are the main share holders.
- ZPMC started its business by coping and selling spare parts of the established competitors (cost savings up to 85%). A few years later ZPMC was able to build complete crane systems. Earnings were strongly invested into R&D.
- Cranes delivered by ZPMC reached the ports assembled already; ZPMC offered a life long guarantee and offered customers standard repair and maintenance services for free.
- Ten years after the foundation ZPMC introduced several technical innovations to the market. In 2003 ZPMC presented the double container crane, which improved the efficiency of the loading/unloading process of vessels significantly.
- Guan Tongxian summarizes the approach of ZPMC by saying: “*We just get the best products from abroad. We imitate, assimilate, absorb and innovate them to become the products of our own brand.*”
- ZPMC has been profitable in all years 1992-2008. Today the worldwide market share of ZPMC is estimated to 75-80% in the business of container cranes for harbors (company information).
- Based on this success in the past ZPMC has started to enter the market for offshore heavy duty products and steel structures as well as for offshore wind farms in 2008.

Growth of population worldwide

It's all about Asia and Africa



Source: United Nations, Weltbevölkerungsbericht 2011,
quoted after <http://www.iqd-streaming.de/singapore/wiwo/bilder/grafik-1-gr.gif>

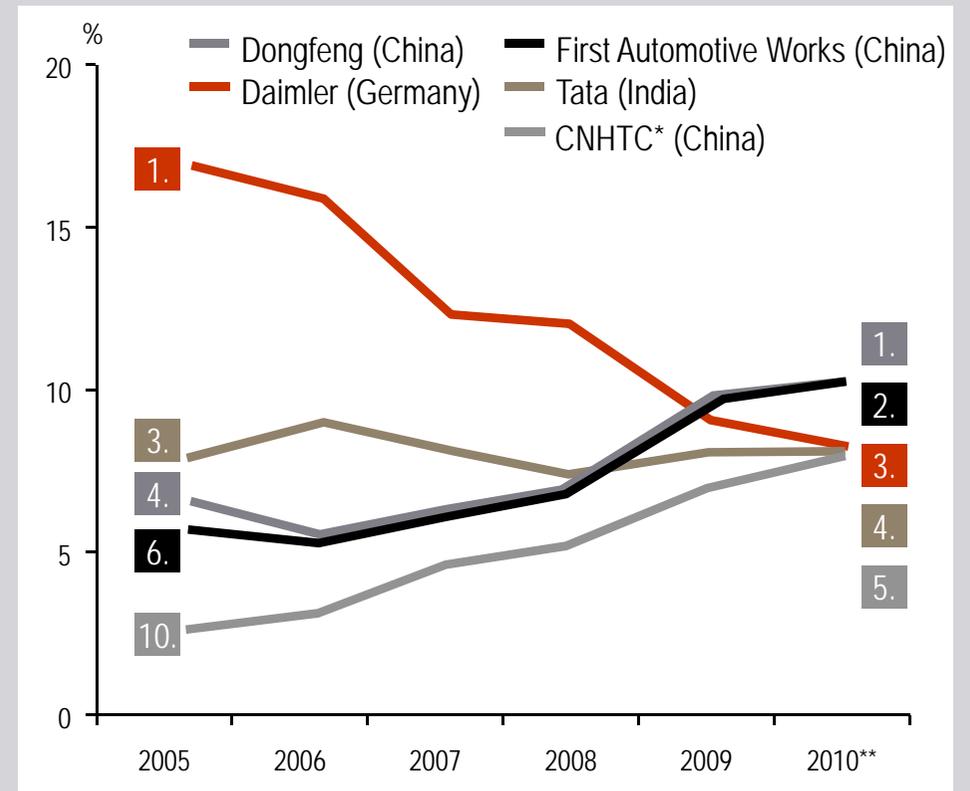
Differences in national economic developments impact competitive structures

Top 5 producers of trucks in 1999

Position	Producer
1.	Daimler Chrysler
2.	Fiat
3.	Paccar
4.	Volvo
5.	Navistar

Source: OICA (2011)

Development of Top 5 producers of trucks in 2010

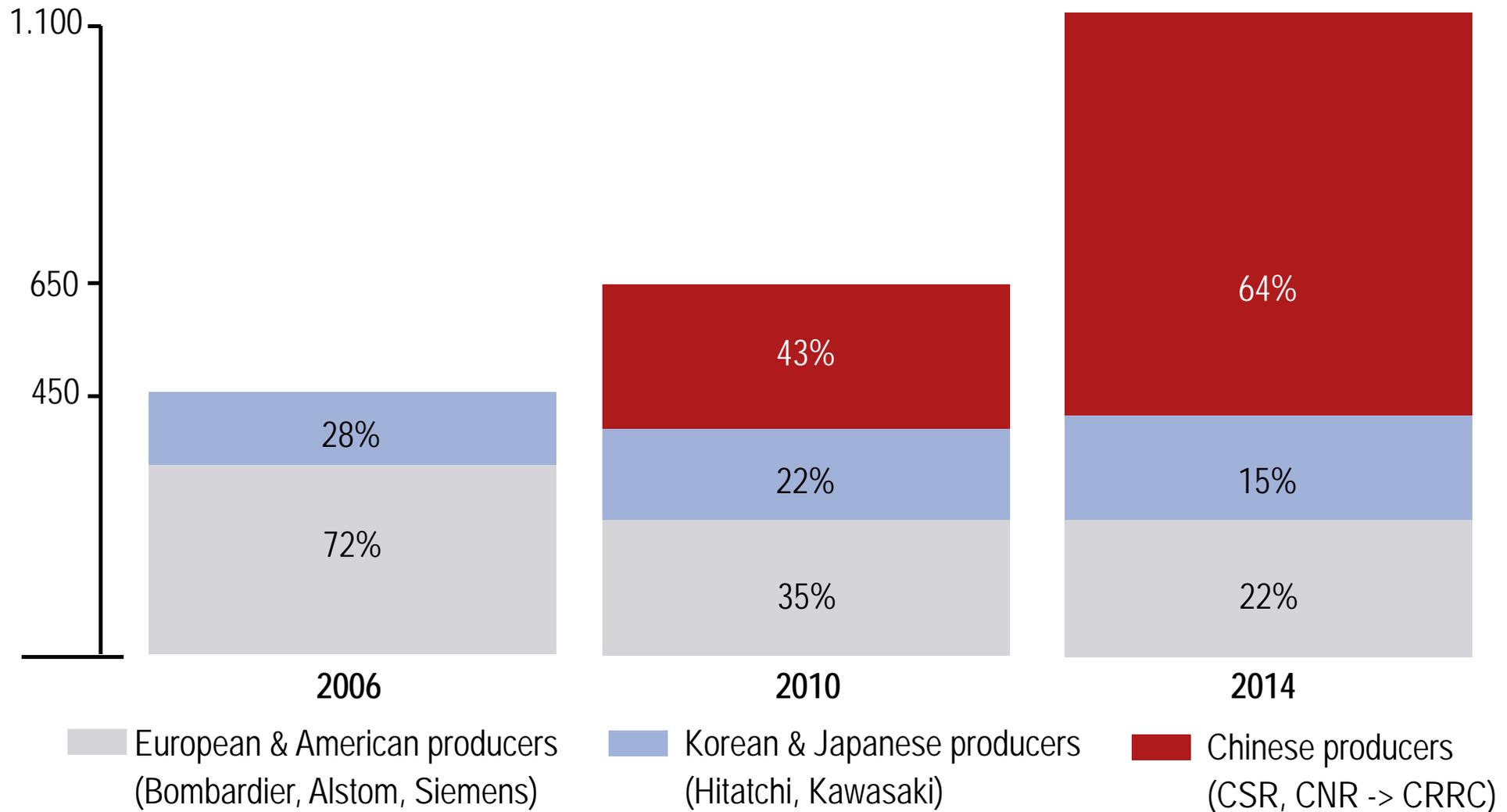


Source: J.D. Power; ** Prognosis (2010)

*China National Heavy Duty Truck Group

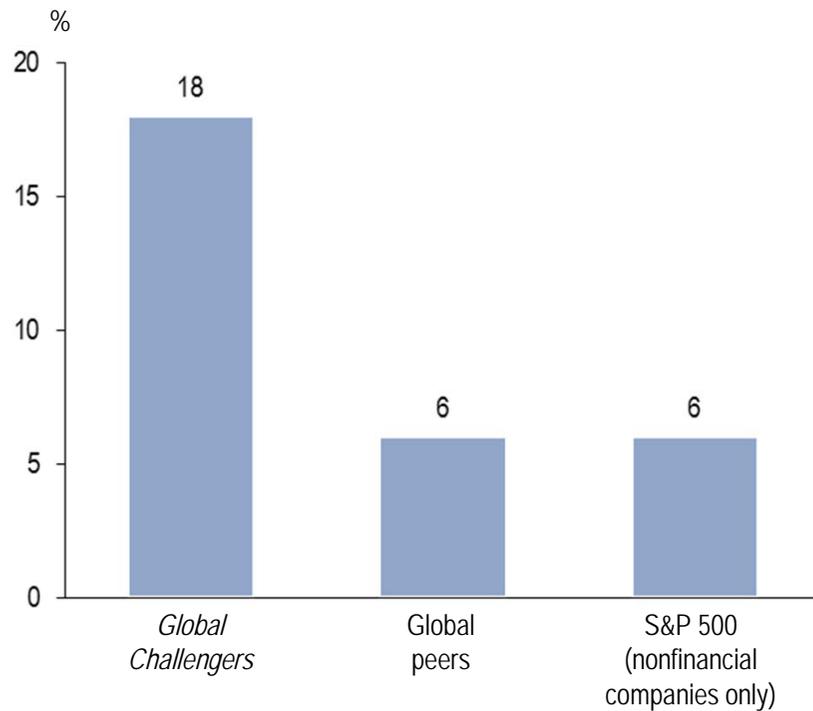
Market share development of companies selling high speed trains

Number of trains sold



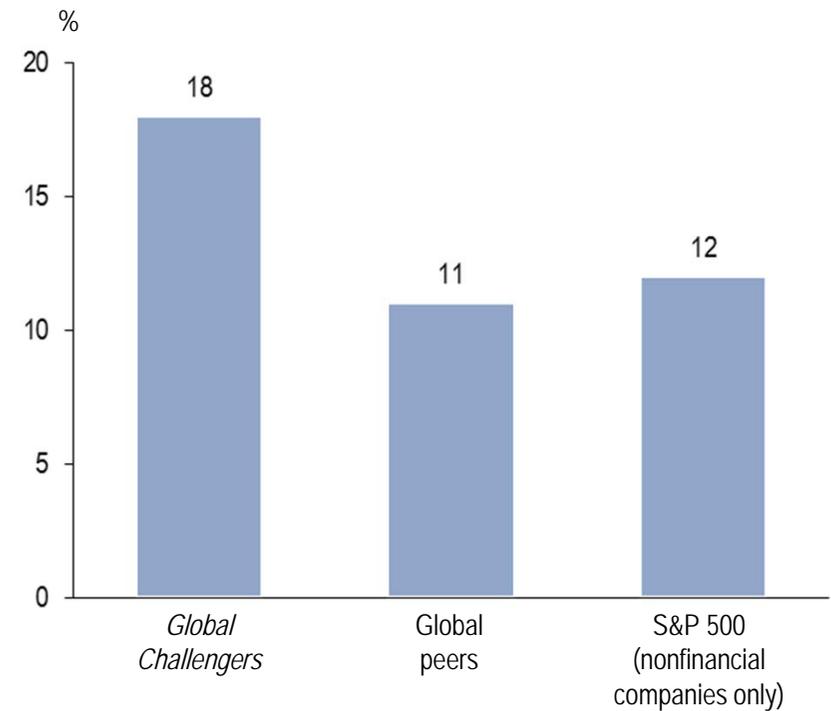
Expansion of top 100 *Global Challenges* is based on economic success

Annual sales growth, 2000 – 2009



Sources: Thomson Reuters Datastream; BCG analysis, 2011

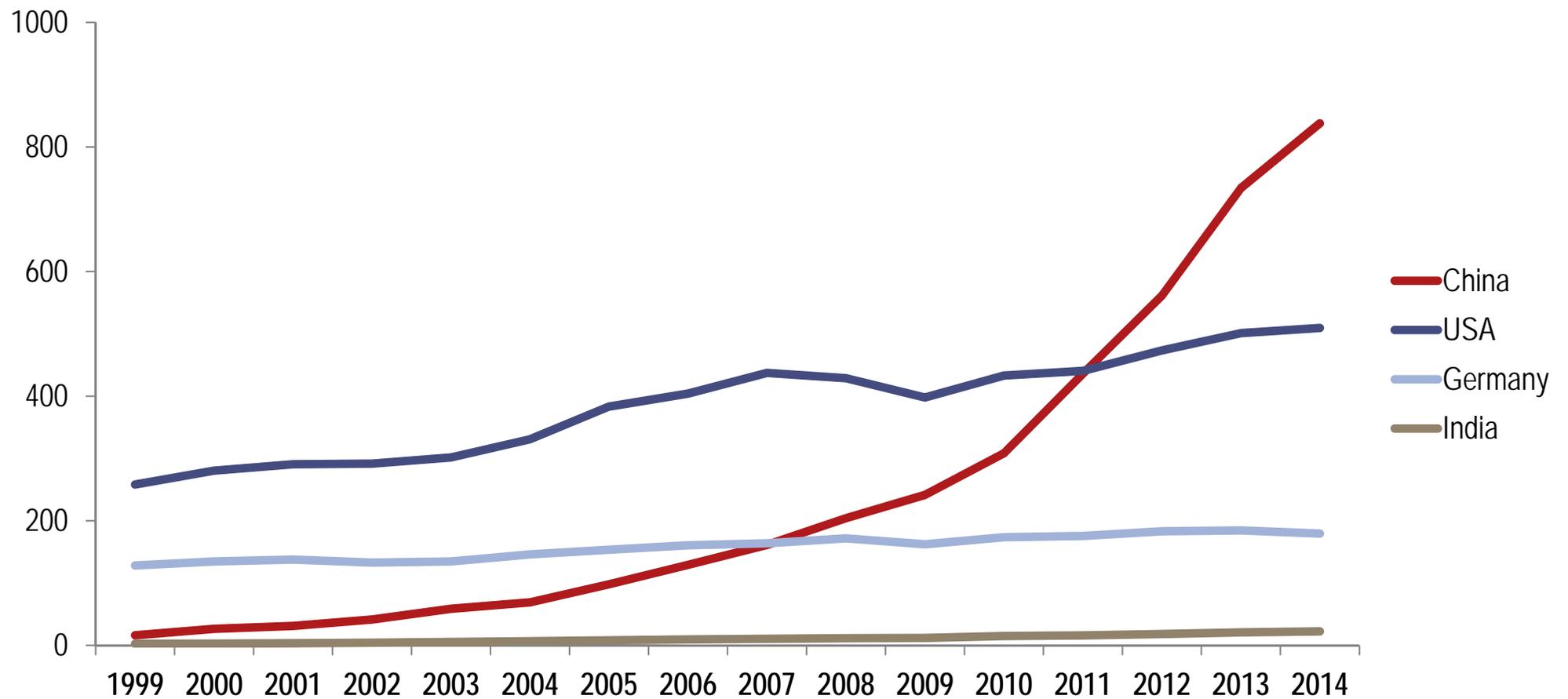
Average EBIT margin, 2000 – 2009



Sources: Thomson Reuters Datastream; BCG analysis, 2011

Innovation changes its location

Total patent applications per year by country* (in 1000s)



*=Total count by applicant's origin; Source: World Intellectual Property Organization, 2016

New competitors from emerging companies challenge established suppliers with regard to quality

In the crash test study 2013 of European New Car Assessment Programme a Chinese car has been awarded as the safest car

Samstag, 11. Januar 2014



Die Besten im EuroNCAP-Crashtest 2013 Sicherstes Auto ist ein Newcomer aus China

Autos aus chinesischer Produktion sind unsicher? Diese Meinung scheint überholt, sieht man sich die neusten Ergebnisse des EuroNCAP-Crashtests an. Das sicherste von 33 getesteten Modellen kommt nämlich aus dem Reich der Mitte: der Qoros 3.

Das sicherste [Auto](#), das 2013 von der Crashtest-Organisation EuroNCAP überprüft wurde, kommt aus chinesischer Produktion. Die kompakte Limousine Qoros 3 überzeugte in allen vier Testbereichen Insassen- und Kindersicherheit, Fußgängerschutz und Assistenzsysteme. 33 Autos haben die Tester im vergangenen Jahr im Dienste der Sicherheit insgesamt gegen die Wand fahren lassen und bewertet.

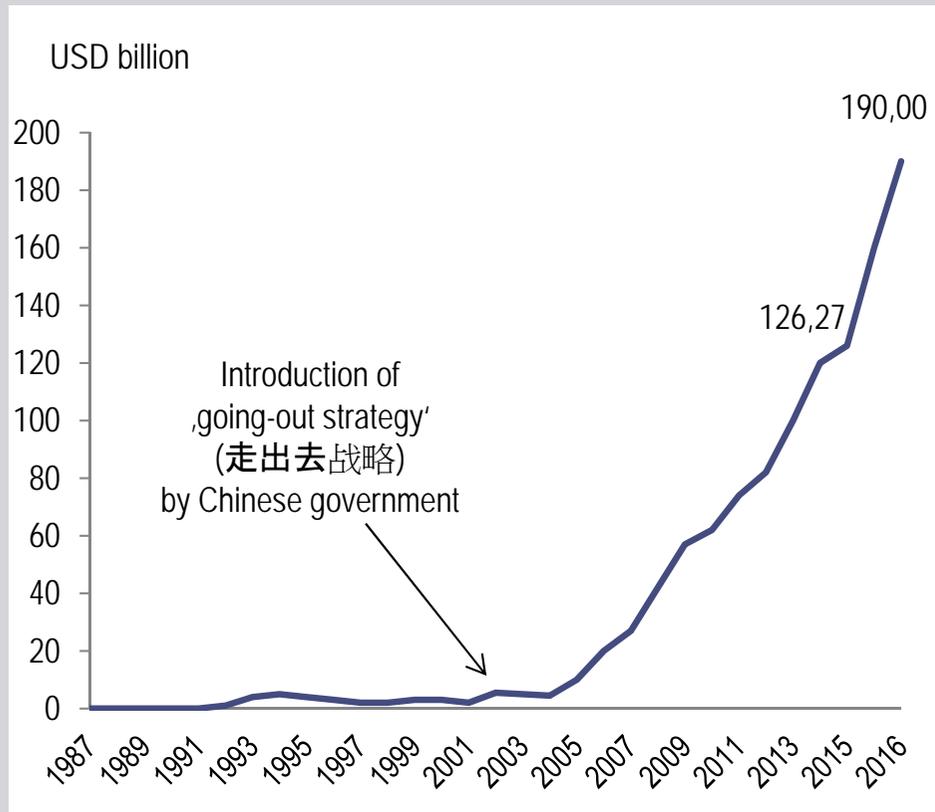


EUROPEAN
NEW CAR
ASSESSMENT
PROGRAMME

However, in 2015 Qoros couldn't reach its revenue targets; they sold 14,250 cars only and generated a loss of RMB 2,5 billion.

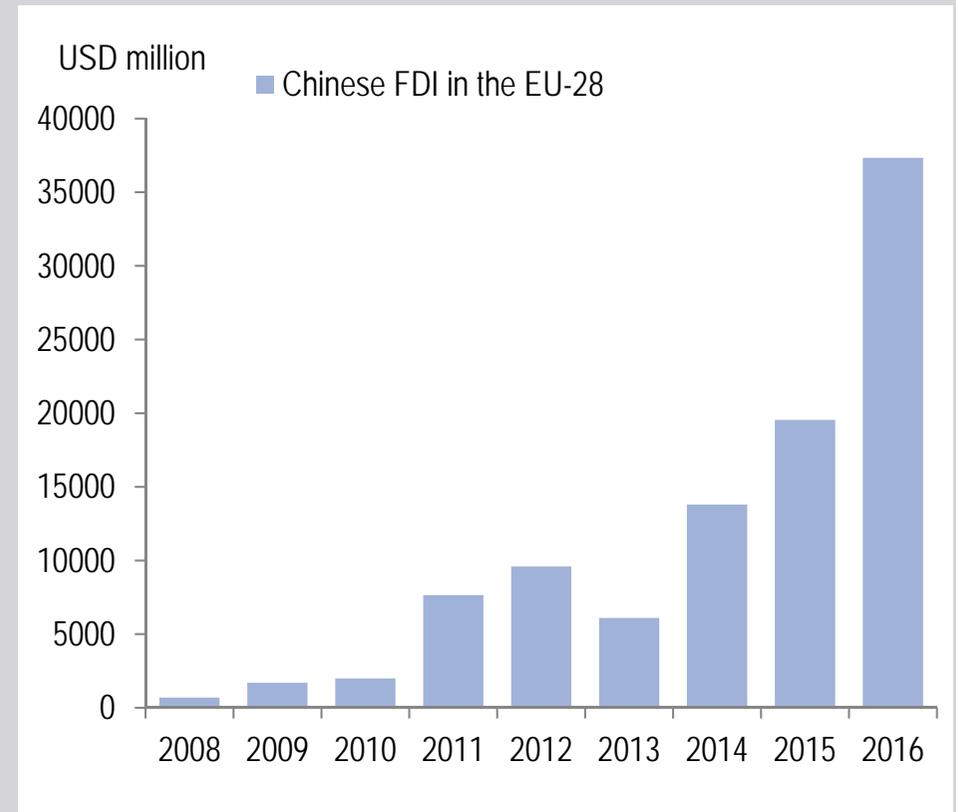
FDI of China is growing strongly, including Europe

China's outward FDI flows, 1987 – 2016



Source: MOFCOM, China; United Nations Conference on Trade and Investment, 2017; EY; Rhodium Group, Mercator Institute for China Studies, 2017

Annual Chinese FDI Flows to the European Union, 2008 – 2015

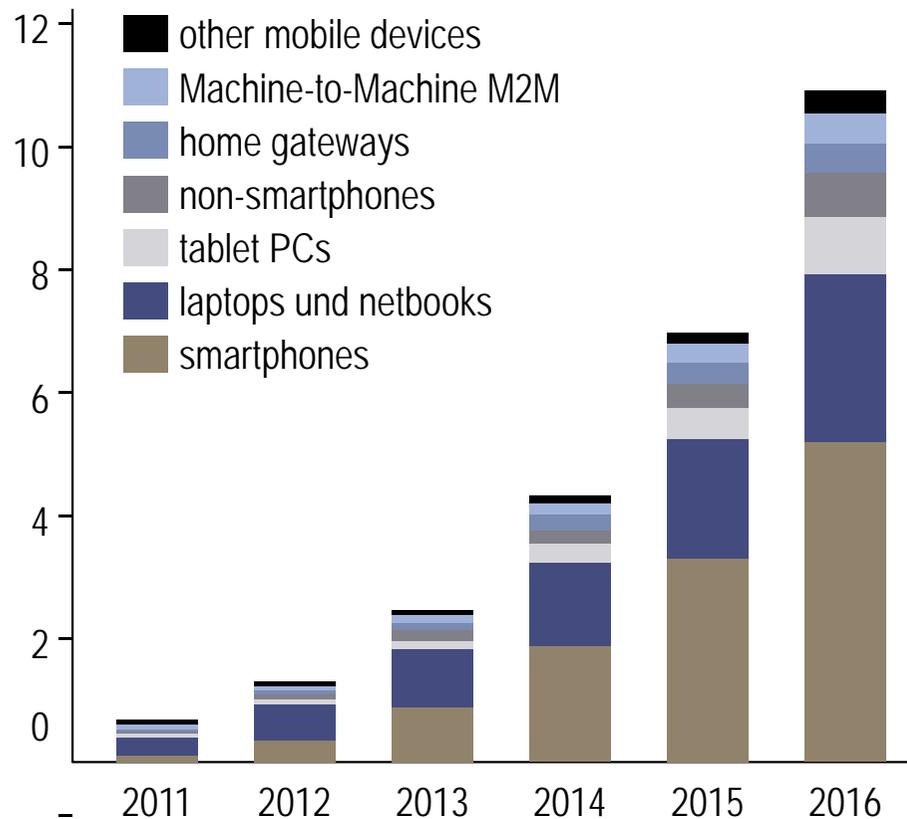


Source: Rhodium Group, 2016; Mercator Institute for China Studies, 2017

“Every two days now we create as much information as we did from the dawn of civilization up until 2003.” Eric Schmidt (CEO Google), 2013

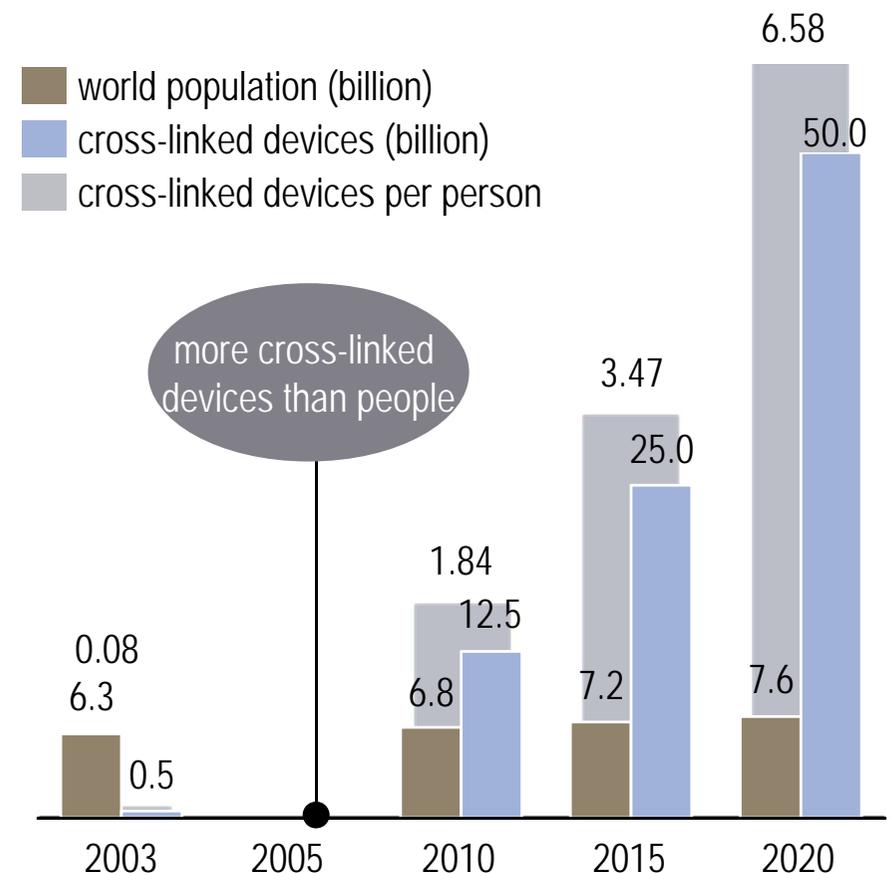
Worldwide data explosion

Exabytes per month



Sources: Cisco

50 billion cross-linked devices by 2020



Sources: Cisco

Companies in the ICT industry are pushing into new markets

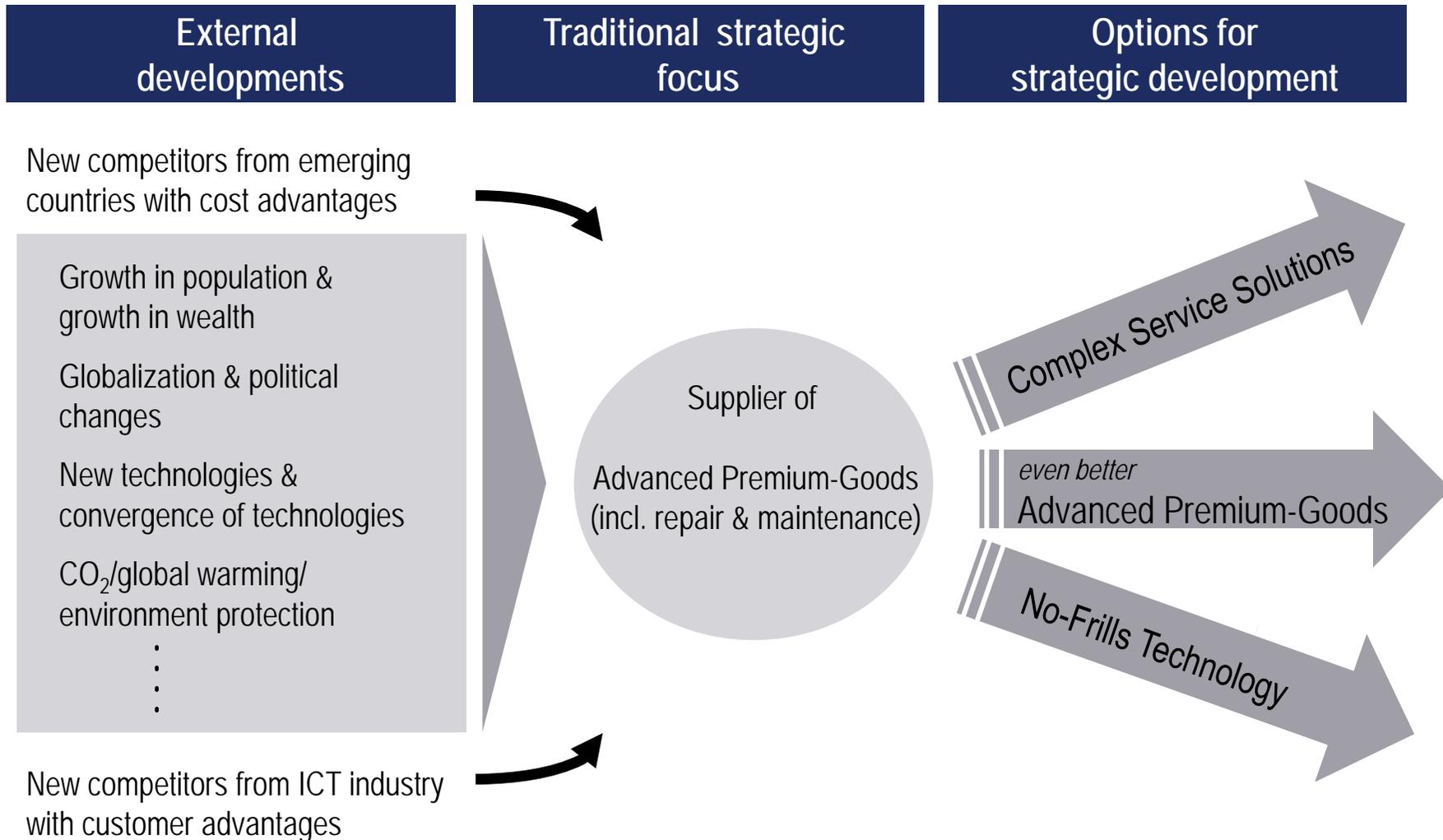
Example: Google buys Nest

- Nest was founded in Palo Alto, California in 2010 by the two former Apple executives Tony Fadell and Matt Rogers. The company designs and produces sensor-controlled heating thermostats and smoke detectors which are WiFi capable and self-learning.
- The sensors register temperature, brightness, humidity, and movements in a room. They also optimize energy consumption automatically based on customer requirements. In addition, the company has formed partner programs with energy companies that provide Nest customers with special incentives for reducing their energy consumption.
- Nest places special emphasis on sophisticated product design; this was an important reason why the company's products have been included in the product offering in U.S. Apple stores. In addition, sales and customer support is provided primarily by the Nest website.
- Nest's estimated revenues from its high-priced product segments (a thermostat costs \$250) were \$300 million in 2013. These profit margins are considered to be the industry norm within the home technology category.
- Nest was bought by Google in January 2014 for \$3.2 billion in cash.
- In 2013, Google bought 18 companies outside the IT industry (narrowly defined), including the robotics company Boston Dynamics.

Companies in the ICT industry are pushing into new markets (2)

- Which company can continue to sell better solutions to optimize energy generation, storage, and distribution (i.e., "smart grids"), Siemens or IBM?
- Who will be the first to bring the self-driven car onto the market, Mercedes or Google?
- Who will be able to give better medical advice in the future, a doctor or Microsoft?
- Who will produce the best audio systems in the future, Sennheiser or Apple?
- Who will sell tourists one-day accident insurance during a ski vacation in the future, Allianz or Google?

Strategic options for Western companies to respond to developments in global markets





Counter-Strategies of the German industry and the role of digital technologies

Olaf Plötner

Example: Hidden champion offering cutting-edge premium goods

Lürssen Werft GmbH & Co. KG; business entity mega yachts

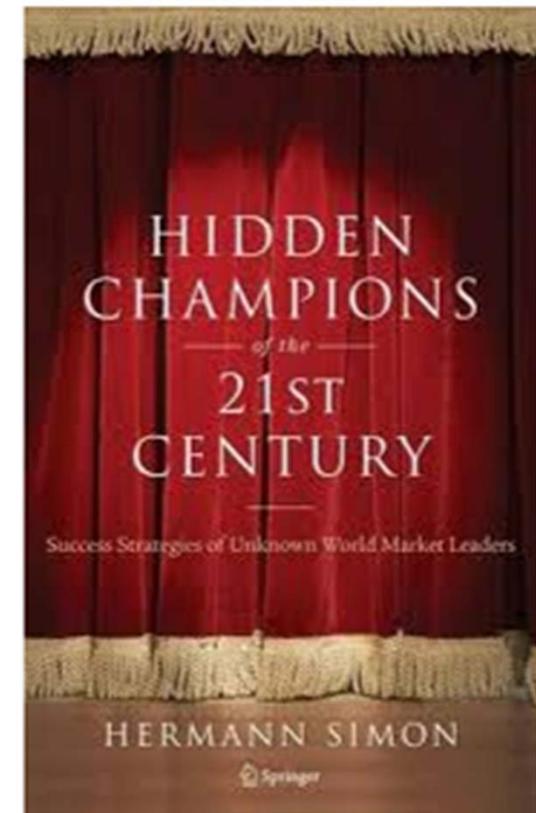
Since 1875 family owned shipyard in Bremen focused on building mega yachts

- from 65 to 180 m length; price > € 100 mill., plus cost for crew (> 24 members) plus maintenance.
- In average Lürssen delivers 2.5 mega yachts p.a.
- No mega yacht is build without a customer order; customers have to wait years before they get their yacht.
- In the first years the value of a Lürssen yacht is increasing, usually.
- Lürssen is building the ships (shape and interior might be developed by designers/artists) and offers to manage it but does not operate a mega yacht.



14 of the top 20 yachts of the world built since 1990 are Lürssens

Current economic strength of Germany driven by strong 'Mittelstand'



In Germany many technology-focused 'hidden champions' successfully deliver Advanced Premium Goods globally

Characteristics of hidden champions

- Small and medium sized companies
- Worldwide leading position in their market segment
- Not well known to the public
- Growth above average (have created over 1 mill. additional jobs in Germany in the past ten years)
- Often family owned/ often existing since many decades

Elements of market strategy

- High competence in leading-edge technology allowing for unique market offerings (high R&D budgets, high number of patents)
- Strong customer proximity (25-50% of employees have regular direct customer contact)
- High prices – high value (price premium 10-15%)
- Global orientation in sales & marketing with local subsidiaries in the growth markets
- High vertical integration and deep value chain/ skeptical attitude towards strategic alliances

Source: Herrmann Simon, 2009

M&As for realizing strategic option "Advanced Premium Goods"

Example: Weichai/KION - the largest Chinese FDI in Europe in 2012

ESMT-314-0147-1
ES1471
April 11, 2014

ESMT Case Study

China's largest investment in Germany: The strategic partnership between Weichai and KION

Olaf Plötner
Shirish Pandit

ESMT-314-0147-1C
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2014年4月11日

ESMT 案例研究

中国在德的最大投资：潍柴动力与凯傲集团之间的战略合作

Olaf Plötner
Shirish Pandit

恼人的分析报告与令人欣喜的来电

"我们对潍柴股票的建议，卖出！"，当戈登·里斯克和塞蒙在最新的花旗投资的2012年9月3日的分析报告中看到这句话时，他们愤怒地摇了摇头。里斯克是当时世界第二大叉车制造商德国凯傲集团的首席执行官，而塞蒙则是中国工业公司山东重工集团(SHIG)的总裁，也是其子公司潍柴动力的主管。他们两个负责了当时潍柴收购凯傲部分股份的收购，而这时这个交易才刚刚完成。8月31日，双方宣布潍柴以4.67亿的价格收购了凯傲25%的少数股权，并以2.71亿的价格获得了林德液压(LHY)70%控股权。这部分法人实体将从凯傲集团中分离出去，这总共7.38亿的交易是当时2012年来中国公司在欧洲最大的直接投资。

在发表了声明过后，两人便高兴起来了。里斯克开玩笑说："这些金融市场专家肯定会为我们合作后的成果感到惊讶。" "那是肯定的"塞说。"然后他们就不得不收回他们说过的话了。"

Strategic partnership Weichai-KION – who brings what to the table?

Weichai Power (潍柴动力)	KION Group
Financial strength	Leading-edge technology
Access to growth markets	Global reputation/brand
Cheap talents	Efficient management systems

KPMG survey, July 2015

1.267 CEOs from corporations > US\$ 500 mill. around the world

Key challenges in the next years?

30%

1. Financial growth

2. Operational excellence

3. Geographic expansion

4. Brand recognition

5. Innovation encouragement

- 74% say that the competitive environment will get tougher in the next 3 years
- 50% say strategic change for their company is required in the next 3 years
- 29% say their company will be 'significant different' in three years (Germany: 78%; highest rate of all countries)

Example NFT: Haier

Innovative washing machines for rural areas in China



As part of Haier's research to understand the customers of rural China, they noticed a complaint from a farmer, who was dissatisfied that his washing machine clogged when he used it to wash potatoes before bringing them to the market to sell.

Another manufacturer might have suggested that the farmer simply stop using the machine for washing potatoes, but instead Haier adjusted the design and they now offer a machine that can wash both clothes and potatoes. (2009)

In China alone, Haier divides customers into more than 70 different segments, a much more detailed approach than their western competitors.

Source: asiaNBC, 2012

Example No-Frills Technology: Siemens Building Technology

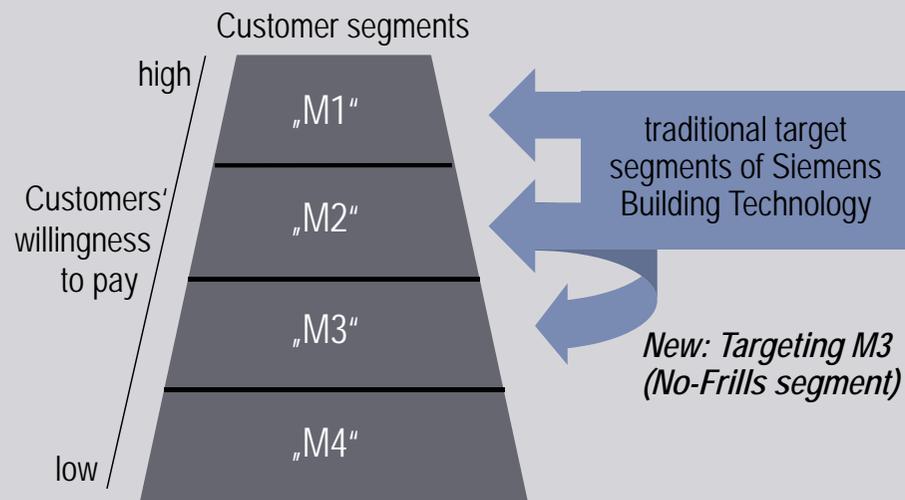
New fire detection system Cerberus ECO

ESMT Case Study

Siemens CerberusEco in China: Introducing low-frills products in a high-quality company

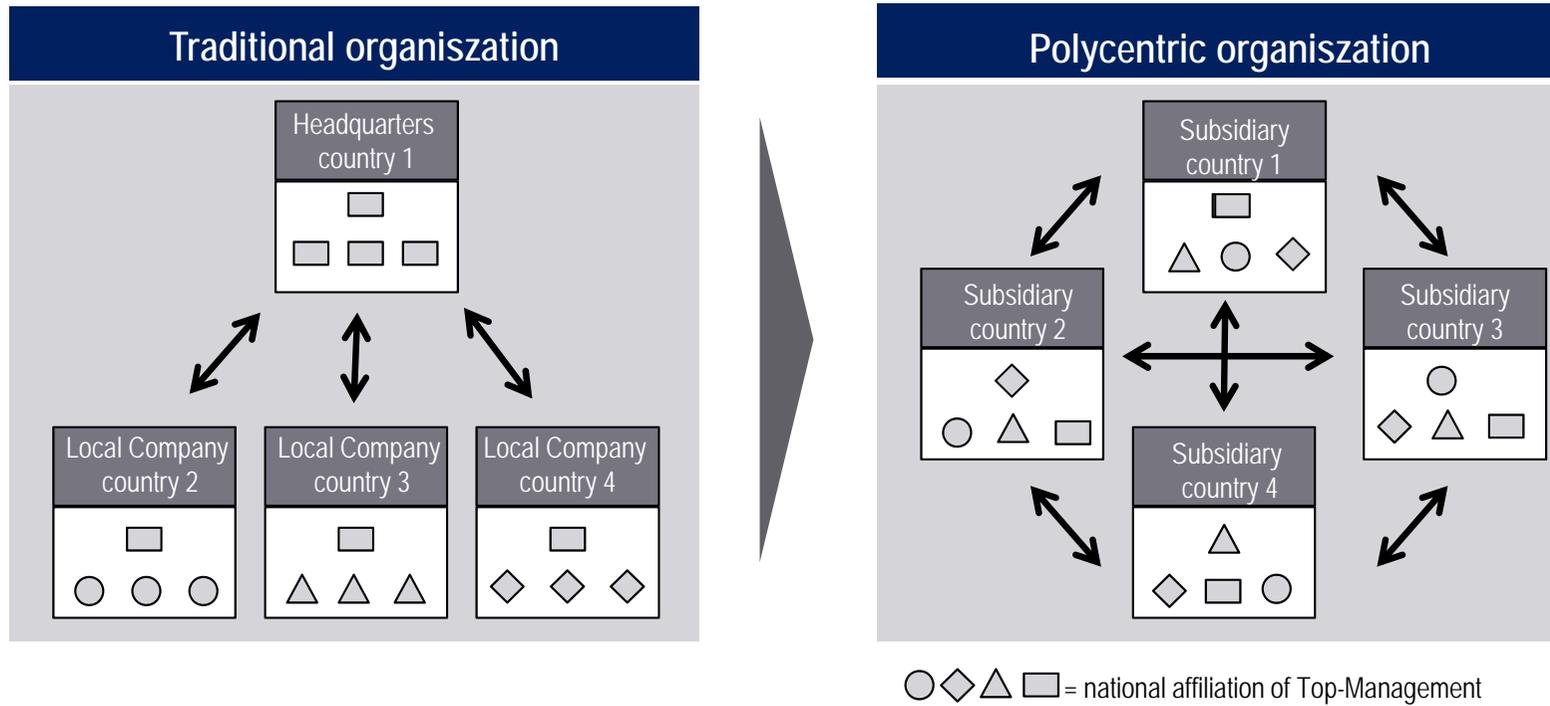
Introduction

On an unusually cold November day in 2007, Matthias Rebellius, head of the business unit Fire Safety & Security Products at Siemens Building Technologies Division, was sitting in a hotel room in Zurich overlooking the lake while reflecting on the meeting he had just attended. Overall, the



- Where do you locate the R&D?
- Do you use the same sales channels/ sales force?
- Do you use the same brand?
- Do you allocate to No-Frills Products the same overhead surcharges?

NFT pushes the change of organizational structures

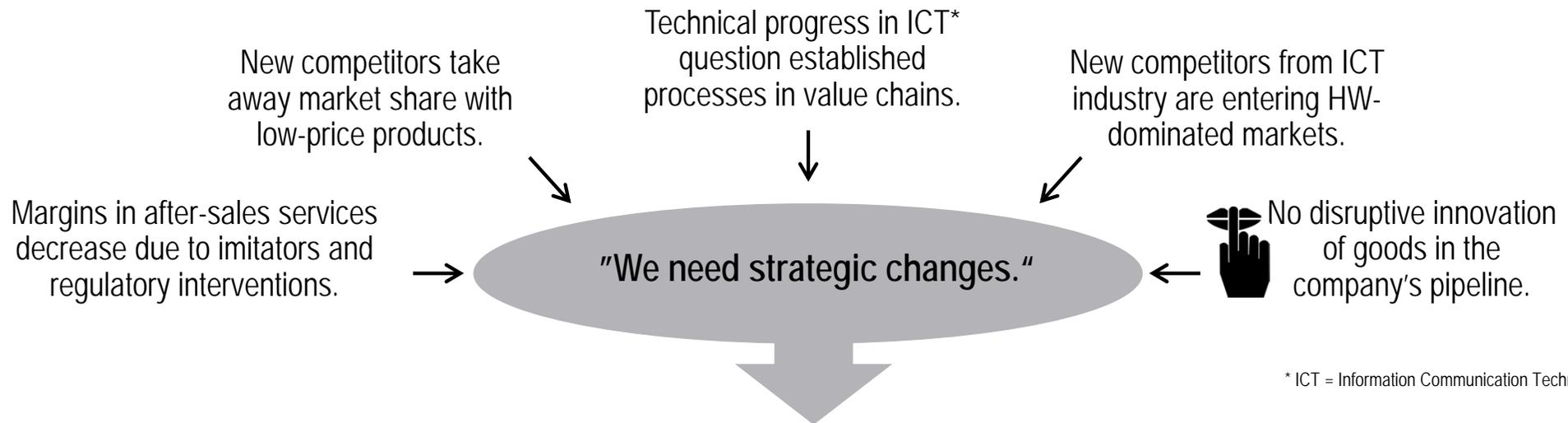




Innovative business models based on digitalization – challenges and cost traps

Olaf Plötner

Market developments push B2B companies to revise their business strategy



- **offering Complex Service Solutions**
(where our existing product and market know-how might provide us with a competitive advantage)
- **changing established business models**
(e.g. by forward integration, performance-based pricing, not selling ownership but use)
- **using latest IC Technology**
(e.g. sensor technology, auto ID, big data, data analytics, M2M, IoT/China 2025/Industry 4.0)

➡ **What are cost traps of *business models 4.0* in B2B markets?**

What is a Business Model?

'The organization and financial architecture of business'
or

Sharing gain and pain in the value chain



Who has to bare the costs for

- activities
- property
- risks
- ...

Who will get the gains of the

- profit pool
- data/ know-how
- reputation
- ...

Examples for bringing innovative business models to the market



Good enough furniture that you assemble at home



Buying a highly customized PC by web and get it delivered



Selling power by the hour instead of jet engines



Renting urban cars for one ride only

Case example: Siemens Soarian

- For more than 130 years, Siemens Healthcare has been recognized as a leader in the health care industry. The core of its business has been the development, production, and distribution of imagery equipment such as X-ray devices, CTs, and MRIs.
- In 2002, Siemens started to develop a comprehensive, workflow-driven IT-system to enable healthcare organizations to manage all processes and clinical data across departments, disciplines, care settings and linked to all technical products, including non-Siemens equipment.
- Smart data management was supposed to improve the treatment of patients and to make it more efficient at the same time.
- Siemens sold these solutions under the brand *Soarian*; two revenue models were used: payment for SW licenses, implementation & maintenance or performance-based payment driven by efficiency improvements achieved in a hospital.
- Within Siemens Healthcare a new department was established to drive this business.

Source of information and photos: Siemens AG

Case study: Siemens Soarian

Cerner to Acquire Siemens Health Services for \$1.3 Billion

Source: OMX

KANSAS CITY, Mo., Aug. 5, 2014 (GLOBE NEWSWIRE) -- Cerner Corporation (Nasdaq:CERN) and Siemens AG today announced they signed a definitive agreement for Cerner to acquire the assets of Siemens' health information technology business unit, Siemens Health Services, for \$1.3 billion in cash. By combining investments in R&D, knowledgeable resources, and complementary client bases, the acquisition creates scale for future innovation. As part of the agreement, Cerner and Siemens will form a strategic alliance to bring new solutions to market that combine Cerner's health IT leadership and Siemens' strengths in medical devices and imaging.



August 5th, 2014



6. August 2014

Verkauf an Konkurrenz

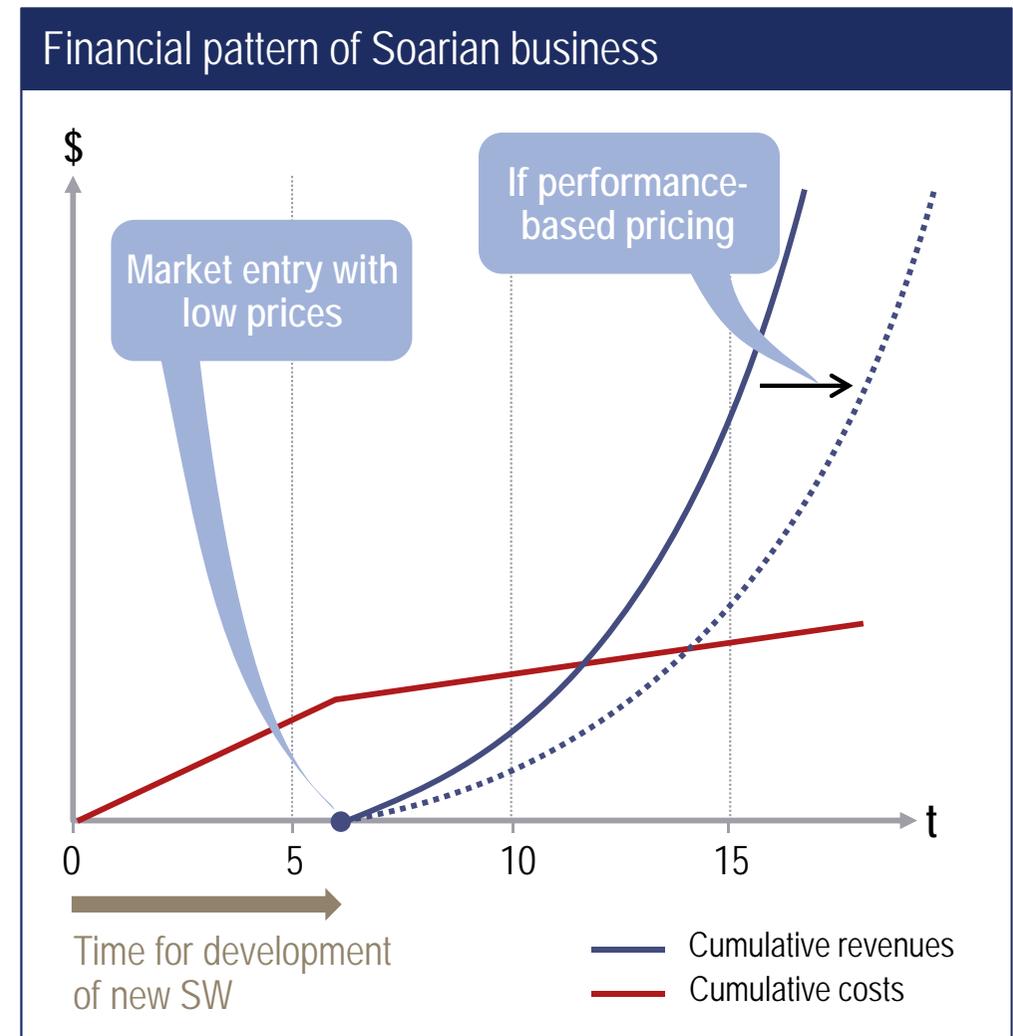
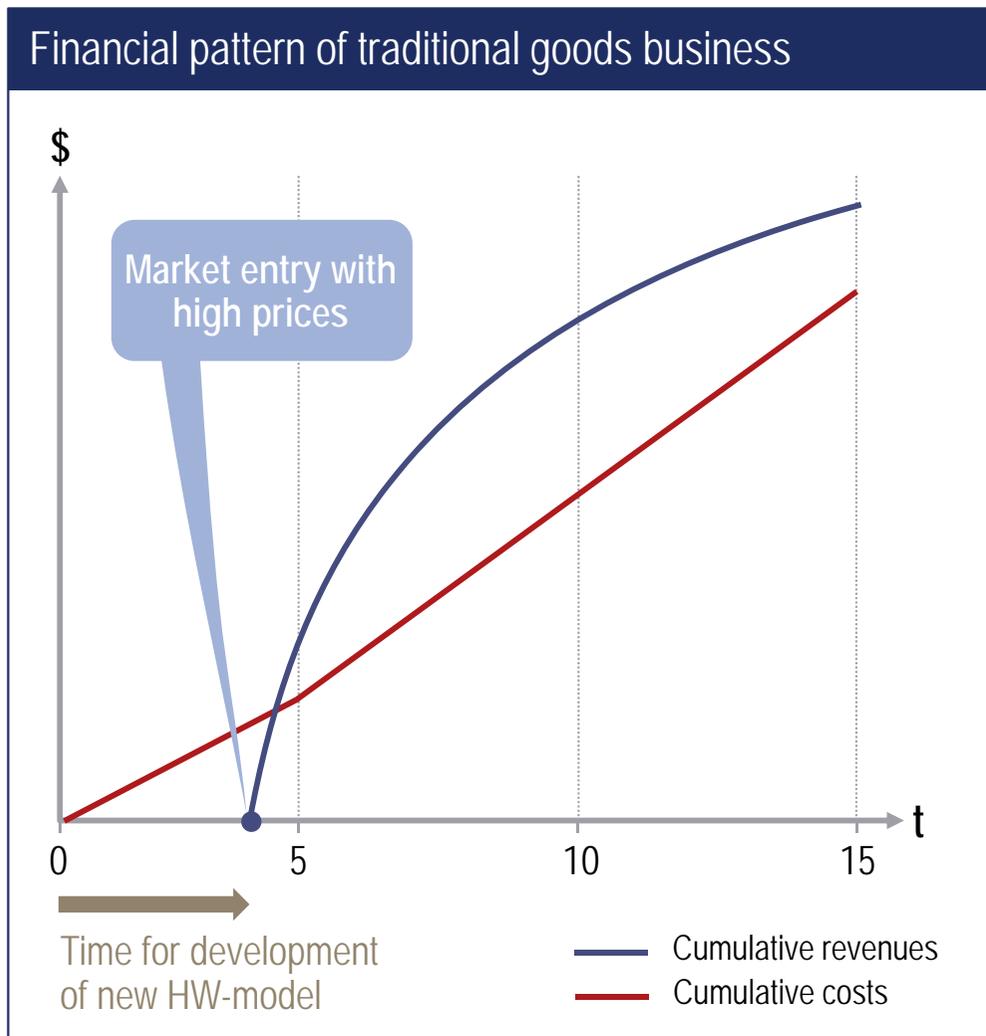
Siemens kapituliert bei Krankenhaus-IT

Es wollte einfach nicht sein: Die Umsätze von Siemens mit IT für Kliniken sind zwar gut. Nur bei den Gewinnen hapert es. Jetzt trennt sich der Technologiekonzern von dem Bereich - für weniger als den Einkaufspreis. Egal, das Geld kann Siemens derzeit gut gebrauchen.

Siemens treibt mit einem milliardenschweren Verkauf den Umbau seiner Medizintechnik-Sparte voran. Für 1,3 Milliarden Dollar geht das Geschäft mit Krankenhausinformationssystemen an den US-Spezialisten Cerner. Siemens-Sektorchef Hermann Requardt räumte ein, gegen den US-Konkurrenten chancenlos gewesen zu sein. Sein Haus musste feststellen, "dass der Geschäftserfolg unserer Krankenhausinformationssysteme nicht immer mit dem der Wettbewerber Schritt halten konnte", erklärte Requardt. Die zu verkaufende Sparte setzte zuletzt knapp eine Milliarde Euro um, tat sich aber mit nennenswerten Gewinnen schwer.

Complex service solutions 4.0 follow a different financial logic

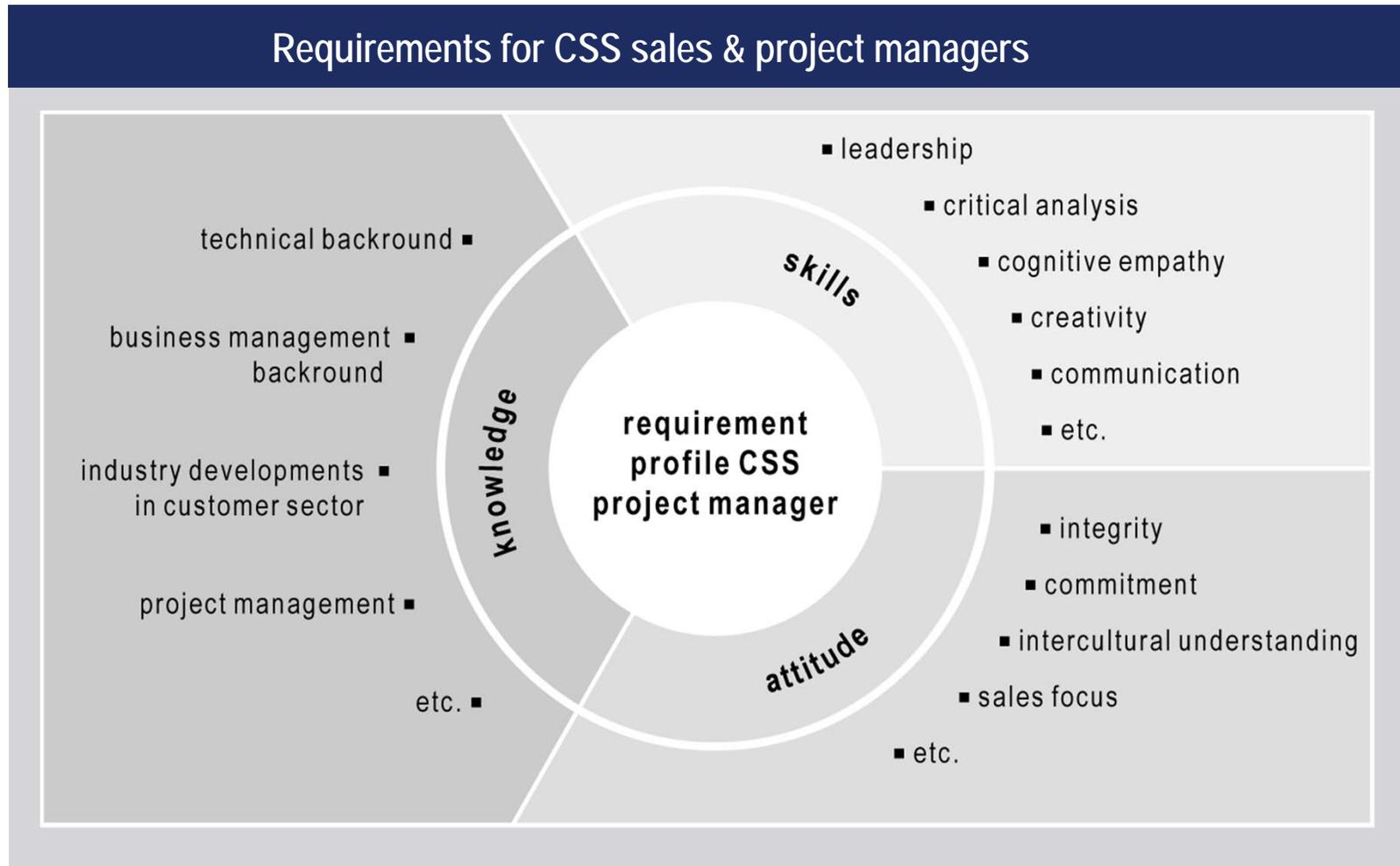
Example: Siemens healthcare – traditional product business vs. Soarian business



Study of Kahneman & Lovallo: “Timid choices and bold forecasts”

- Just as most people managers are risk averse.
(The amount of losses/disadvantages is valued higher than the same amount of gains/advantages.)
- Low risks awareness is driven by an inside perspective, anchoring on internally developed scenarios of success (isolation error).
- Managers believe that negative outcomes can be avoided by their managerial wisdom and skills (illusion of control).
- “The adoption of an outside view, in which the problem is treated as an instance of broader category, will generally reduce the optimistic bias and may facilitate the application of a consistent risk policy.”

Complex Service Solutions require extraordinary sales and project managers



➔ 'All-star decathletes' needed.

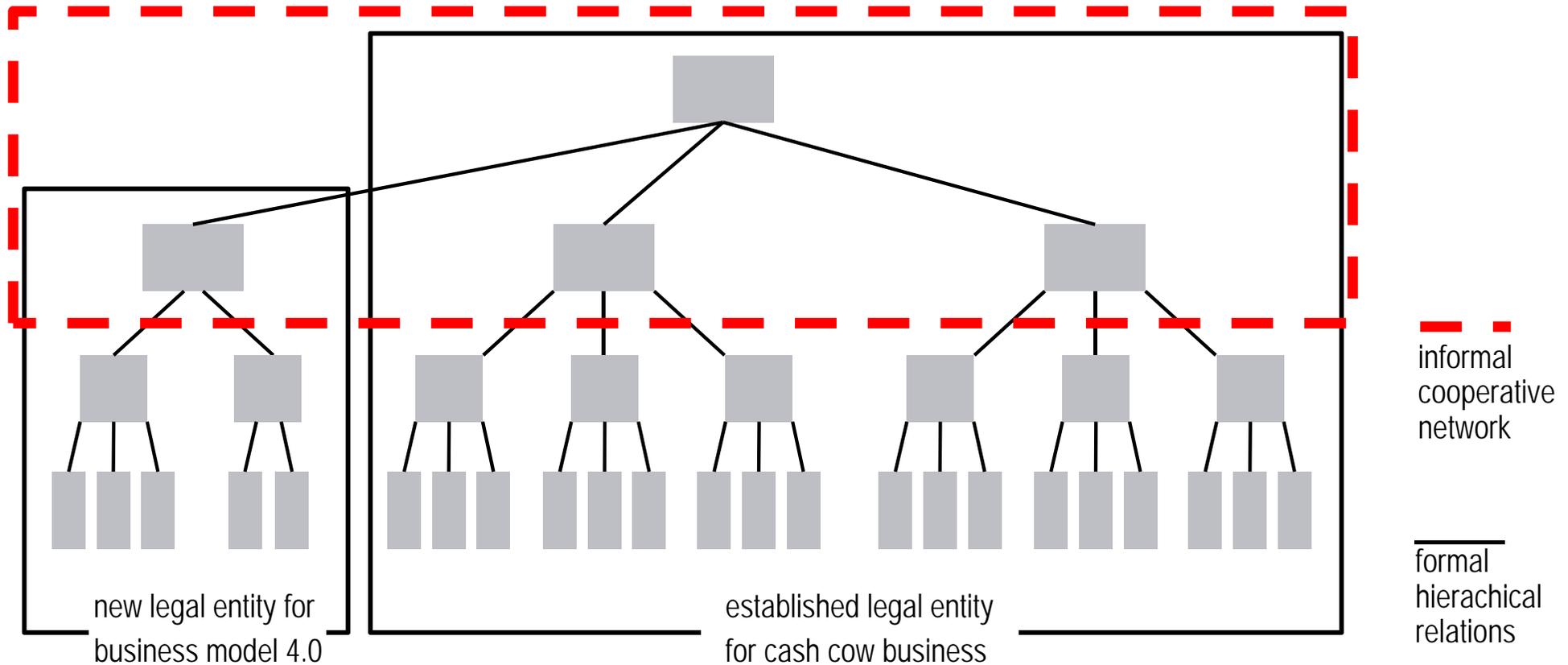
Performance-based pricing – the revival of an old concept claiming to change the zero-sum game between supplier and customer to a win-win relationship

- It is said that the doctor of the Chinese emperor had been paid on basis of the days the emperor was not ill.
 - It is proven that James Watt and Matthew Boulton sold their steam engines in 1776 based on an annual payment equal to one-third of customer's cost savings (they are not the inventors of the steam engine).
 - Rolls-Royce introduced 'power by the hour' 1962 and applied a trademark for this claim (end of the 1990ies GE and P&W followed; today it's the dominant payment concept for jet-engines in the airline industry.)
 - In the last decades many more manufactures introduced performance-based pricing (e.g., Xerox, Pirelli) as well as service companies (e.g., Bain linking payment to the stock price development of their customers)
 - In the last years performance-based pricing got strong visibility by cloud technology in the IT industry.
-
- Performance-based pricing can be based on:
 - Customer's usage of supplier's product
 - Economic impact of supplier's product at customer side
 - Success of customer's company when using supplier's product



Introducing performance-based pricing requires *deep customer understanding*

Innovation-driven business entities need a different organizational set-up but close internal links, however

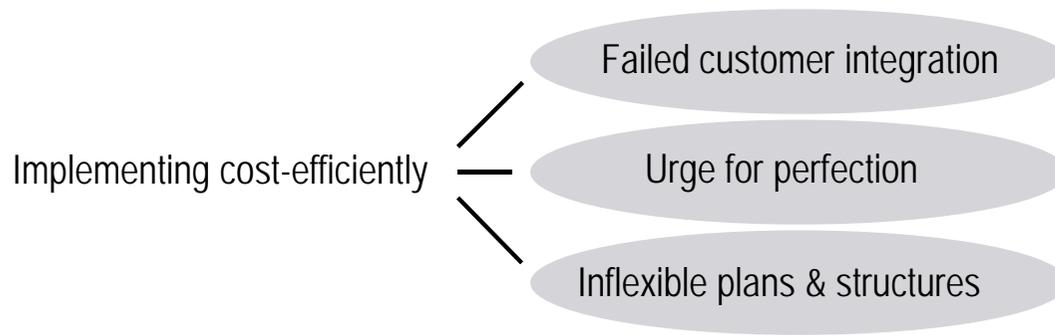
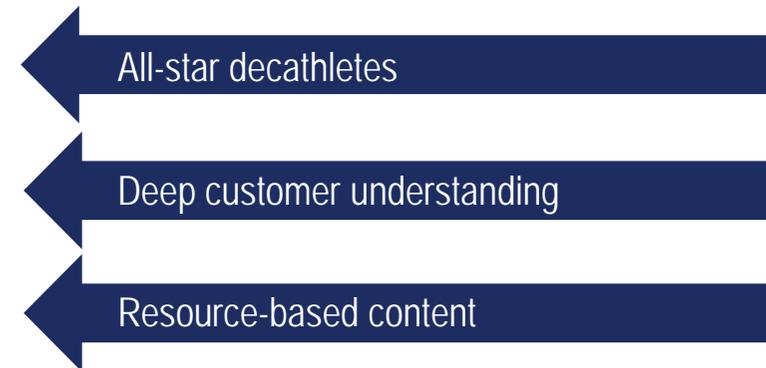
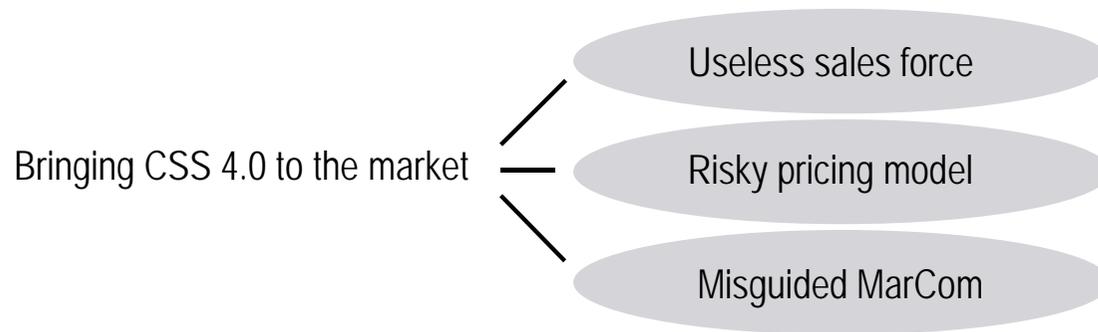
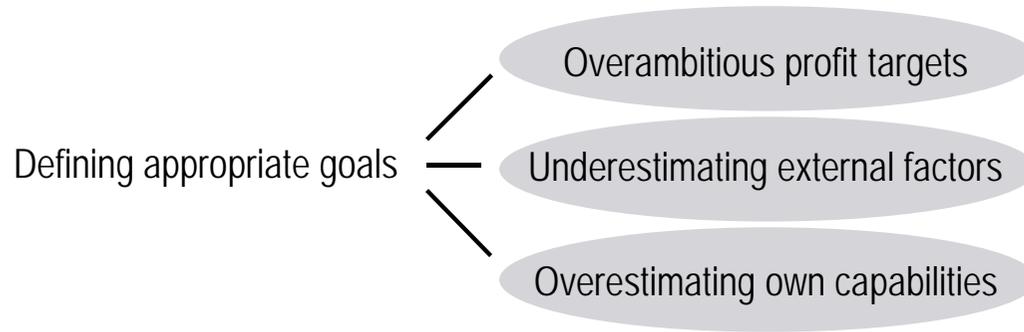


“While loosening the formal controls that would otherwise stifle innovations, companies should tighten the human connections between greenfield and mainstream.”

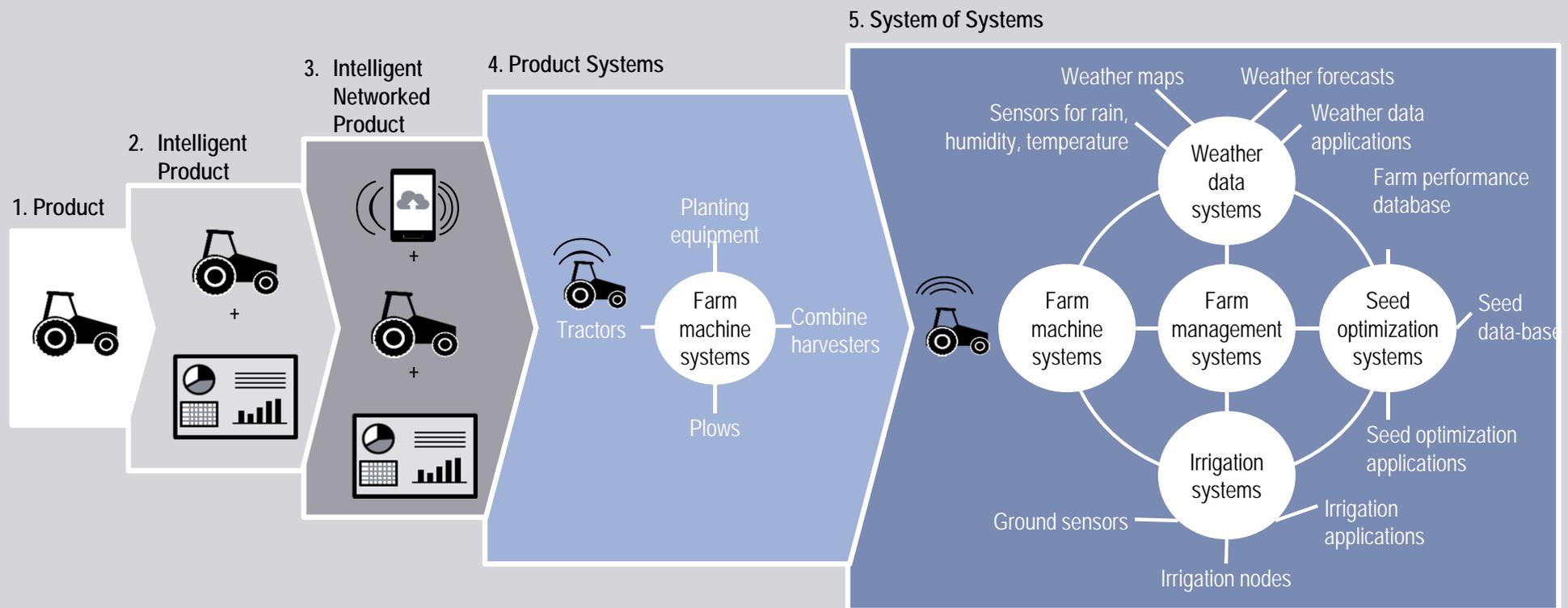
9 Traps when introducing Complex Service Solutions 4.0

Traps

Potential counter measures



Case Example for Complex Service Solutions (CSS): FarmNet 365 by CLAAS



Picture based on: Harvard Business Manager, Dec. 2014

In 2013 CLAAS started the open platform FarmNet365; the farmer can add several applications which help to monitor, control and optimize critical processes of the operation.



Professor Olaf Plötner is the dean of Executive Education at ESMT. Since 2010 this group is ranked among the top-30 institutions in executive education worldwide by Financial Times (No. 12 in 2016). Olaf joined ESMT as one of the first faculty members and managing director of ESMT Customized Solutions GmbH in 2002.

Olaf's current research and teaching focus on strategic management in global B2B markets. His work is reflected in his most recent book *Counter Strategies in Global Markets*, published by Palgrave Macmillan, Springer, and SDX Shanghai. His research has been portrayed in journals such as Industrial Marketing Management and Journal of Business and Industrial Marketing as well as in leading international media such as CNN, Wall Street Journal Europe, Times of India, Frankfurter Allgemeine Zeitung, China Daily Europe, People's Daily (China) and Financial Times.

Olaf is a visiting professor at Darden School of Business/University of Virginia as well as at Antai College of Economics and Management /Jiao Tong University in Shanghai and Chinese Executive Leadership Academy Pudong.

Olaf also worked as a consultant at the Boston Consulting Group in Frankfurt and as a director at Siemens AG in Boston.

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