



September 11, 2009, Zurich, Switzerland

Beyond the cycle Positioned for long-term leadership

Agenda

- ABB: Beyond the cycle Joe Hogan, CEO
- Changing the way energy is supplied Peter Leupp,
Head of Power Systems
- The next level of industrial efficiency Veli-Matti Reinikkala,
Head of Process Automation
- The emerging market opportunity Michel Demaré, CFO,
Head of Global Markets
- Summary and Q&A Joe Hogan, CEO

ABB: Beyond the cycle

Positioned for long-term leadership

ABB's markets face a historic, long-term shift in demand

- Climate change and rising energy demand have risen to the top of political, economic agendas
- This fuels increasing demand for renewable energies and industrial efficiency
- Emerging markets, rapidly outgrowing G7 economies, will play a decisive role in both areas
- Infrastructure spend will increase to keep pace
- Technology enables new ways to deliver and use power efficiently and reliably

ABB is positioned for long-term leadership in this new market reality

Market forces are converging towards a low-carbon, high-efficiency economy

Market forces

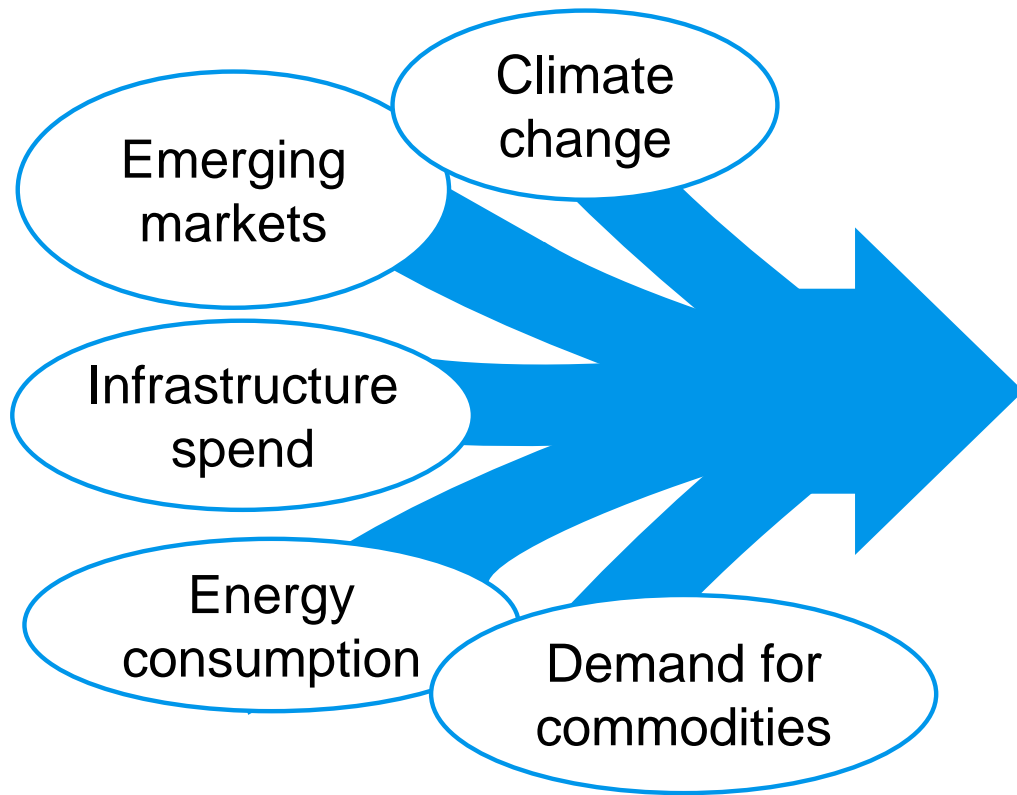


Chart 4

ABB's businesses take advantage of these opportunities

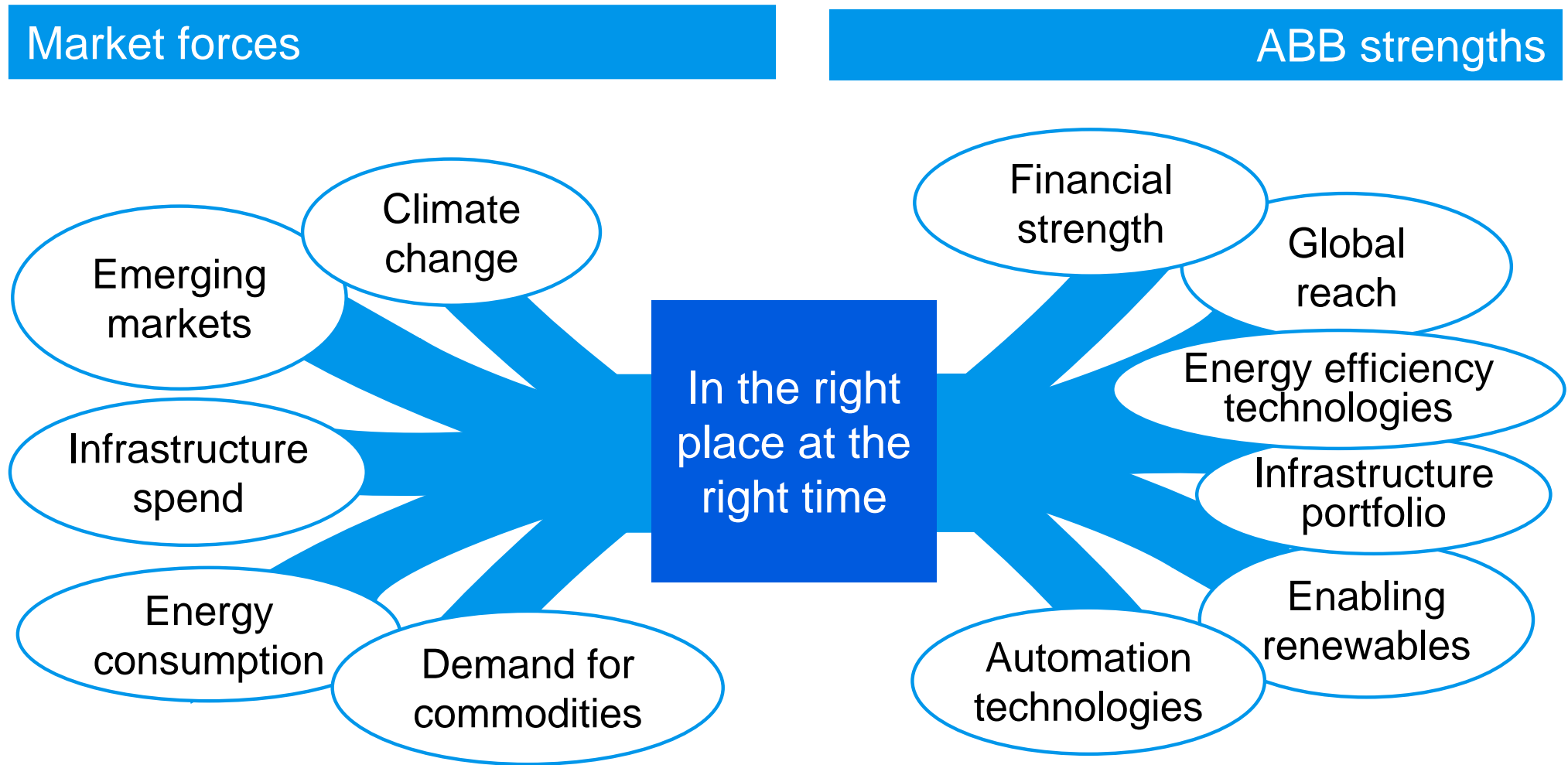
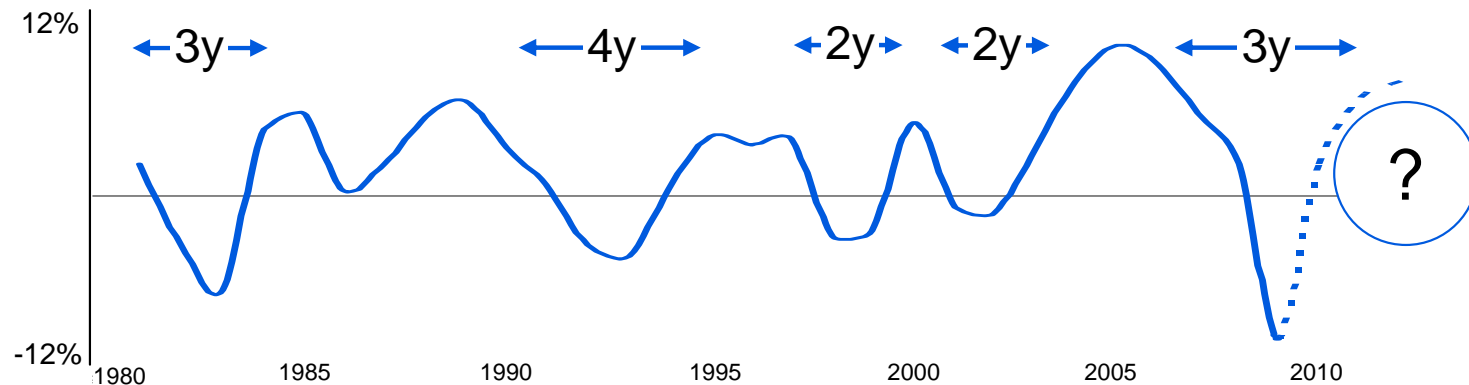


Chart 5

What's new this time around?

Source: Global
Insight

Industrial capex 1980-2012



Key differences in today's downturn

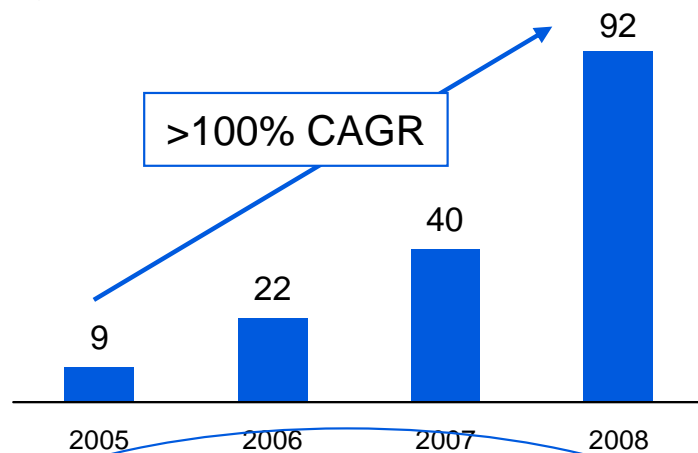
- Widespread acceptance of climate change and unprecedented willingness to support renewables
- Huge focus on infrastructure in emerging and developed areas
- Strong emerging country rebound on solid financial footing
- Potential commodity inflation as economies rebound

These differences are creating opportunities for ABB

What's new: Climate change is driving carbon schemes, energy prices heading higher

Trading value of global CO₂ market 2005-08¹

US\$ bn



At \$20/t, carbon trade expected to increase U.S. electricity prices by 10-40%²

¹ McKinsey 2009; ² Wall Street Journal Feb 27 2009, Business Week March 5 2009

Examples of carbon taxes

- Sweden – per-ton tax on fossil fuels
- U.K. – fuel tax
- Canada – gasoline tax (British Columbia)
- U.S. – electricity tax, industrial carbon emission tax (municipal level only)

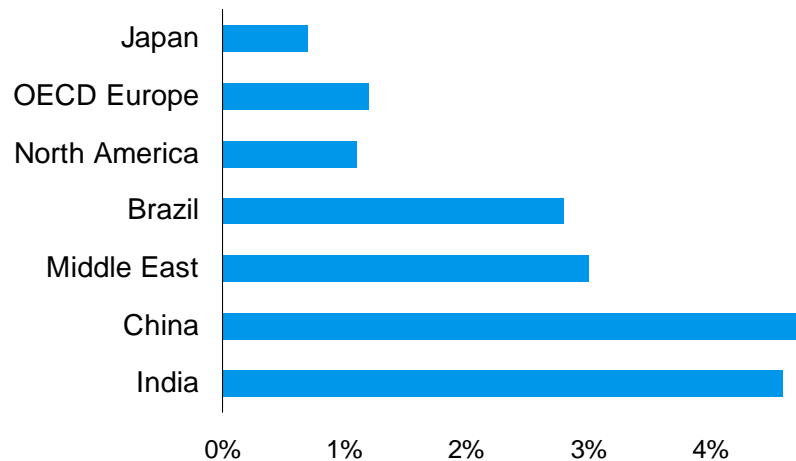
Cap-and-trade schemes

Targets

EU	21% vs 2005 by 2020
U.S.	83% vs 2005 by 2050
Australia	60% vs 2000 by 2050
New Zealand	1990 level by 2012

Infrastructure growth driven by new capacity in emerging economies, refurbishment in mature markets

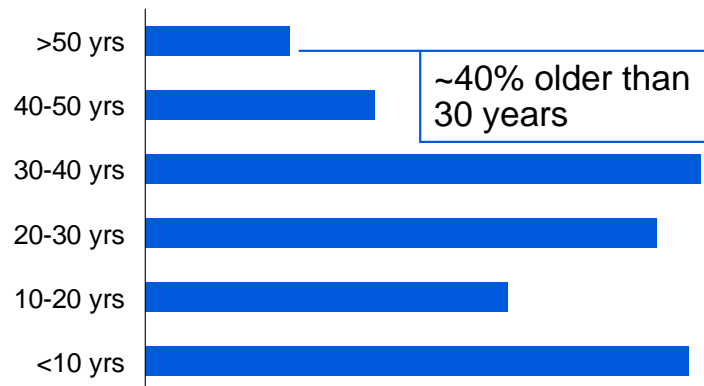
Electricity consumption growth/yr 2006-30
by country/region



- Electricity consumption to grow 2x faster than total energy to 2030
- Emerging market power demand grows up to 3x OECD

Requires the equivalent of 1 large fossil fuel power plant and all related infrastructure every week for the next 20 years

Age distribution of OECD power plants
2006

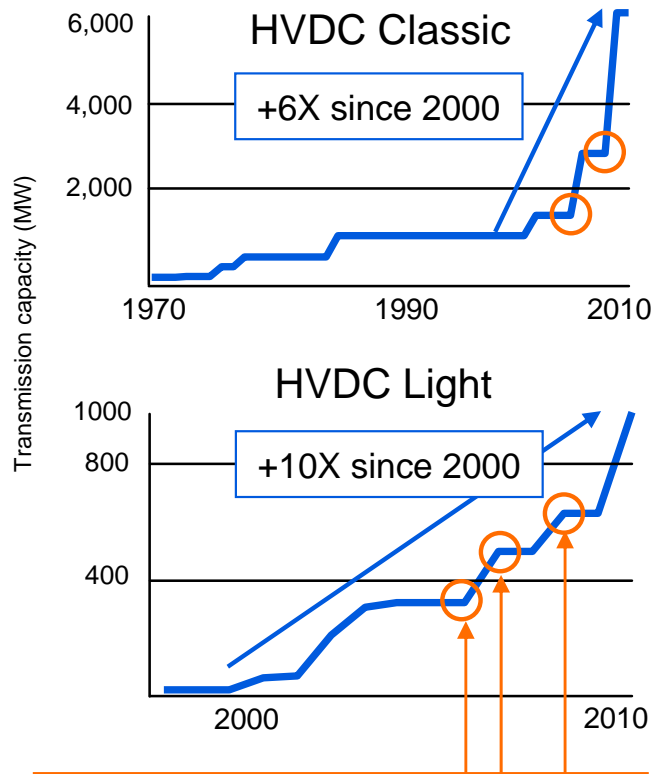


- Grid upgrades in mature markets will fuel significant further investments
- E.g., \$900 bn in T&D spend needed to upgrade U.S. grid 2010-2030*

* *Transforming America's Power Industry*, Brattle Group/Edison Foundation Nov 2008, incl forecast smart grid investments

What's new: Technologies that enable integration of renewables

Example: HVDC



Innovation in thyristors, valves, heat dissipation enable long-distance power transmission, renewables integration

Example: Inverters

- 3-phase solar inverter
- Simplified grid connection
- Global lifecycle service



Example: Generators

- Gearless wind generator for 1.5-3 MW
- High efficiency, low maintenance costs



Example: Circuit breakers

- Compact HV circuit breaker for wind applications



New products to meet the demand for more efficient and intelligent infrastructure

World
1st



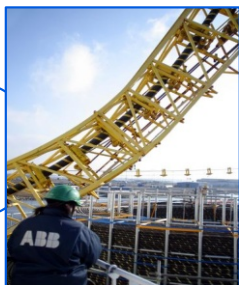
Ultra-high voltage DC (± 800 kV) for >6,000 MW transmission

Power quality technology with integrated high-voltage storage

World
1st



World
1st



Substation automation for remote network control (open communications protocol)

Flexible subsea cables to link floating production equipment to land-based power



High-efficiency, eco-friendly transformers (biodegradable oil, more power per volume)

U.S. standard ANSI intelligent motor control center for increased safety

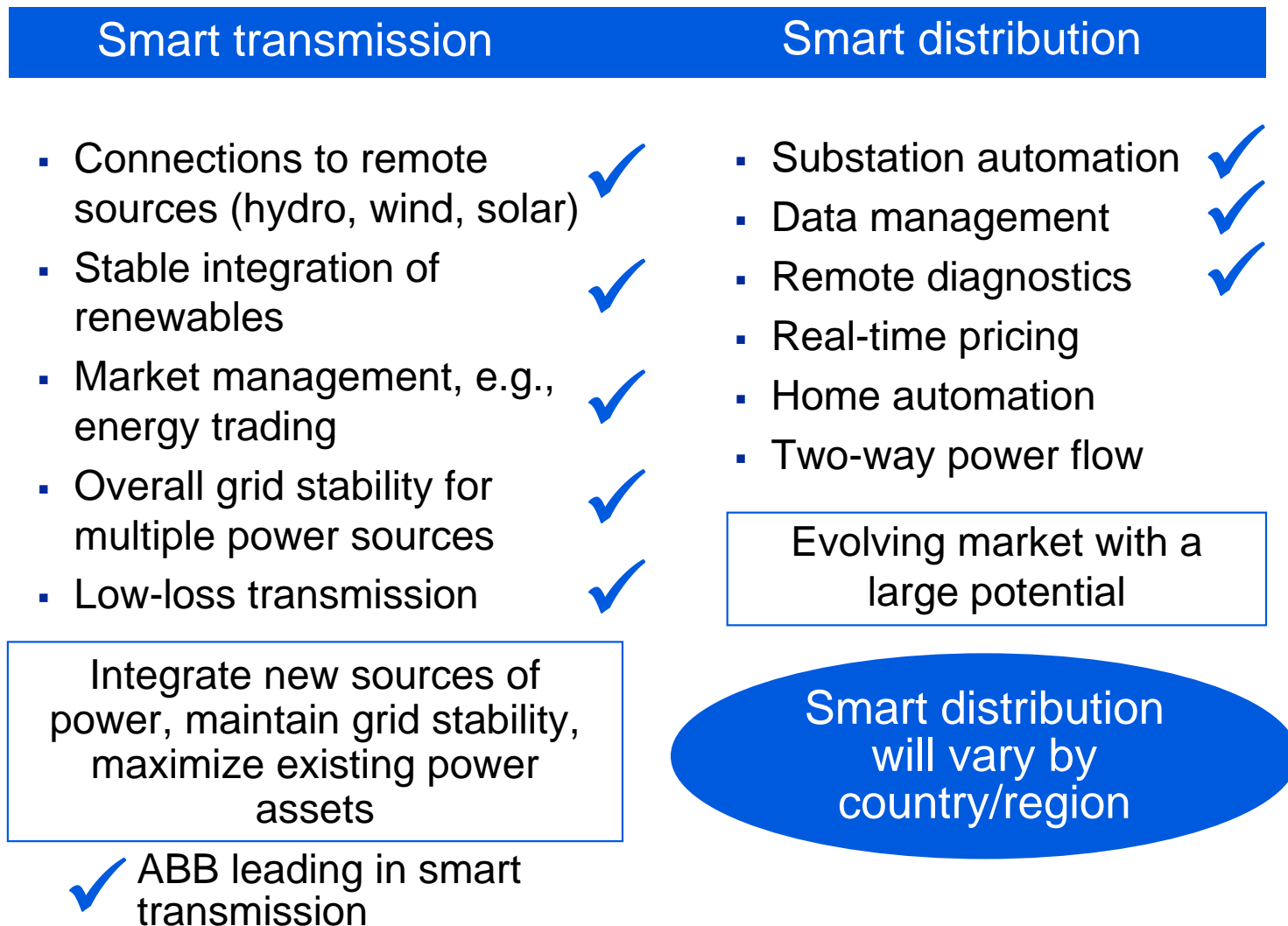


New high-efficiency traction motor for rail applications

New compact robot for 3C industry (computer, communications, consumer electronics)



Evolution of the power grid poses opportunities and challenges



Energy efficiency already plays a key role in ABB revenues today

Share of total ABB revenues generated from demand for energy efficiency

Based on 2008 revenues

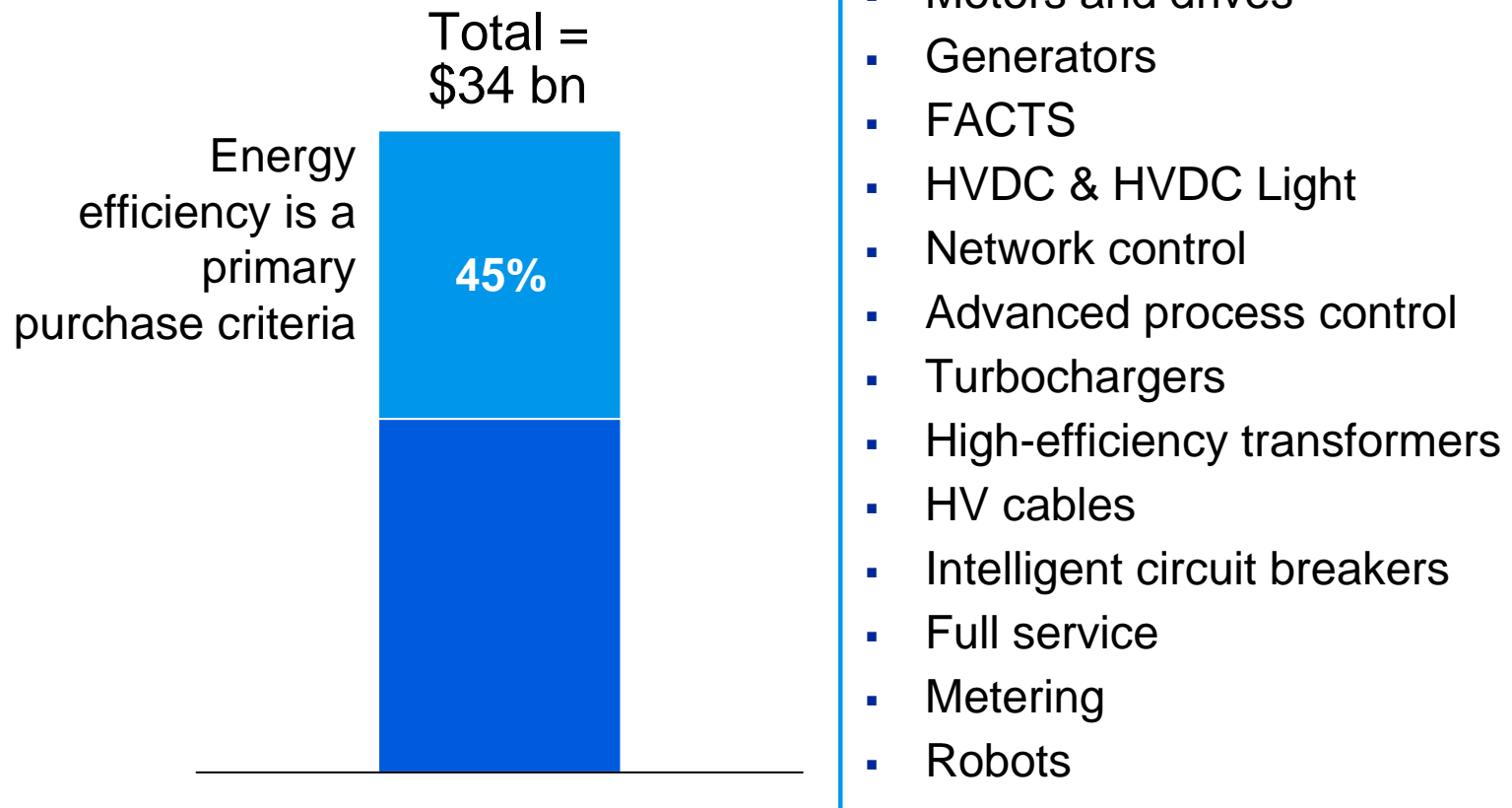


Chart 12

ABB's power and automation businesses are converging across many infrastructure industries

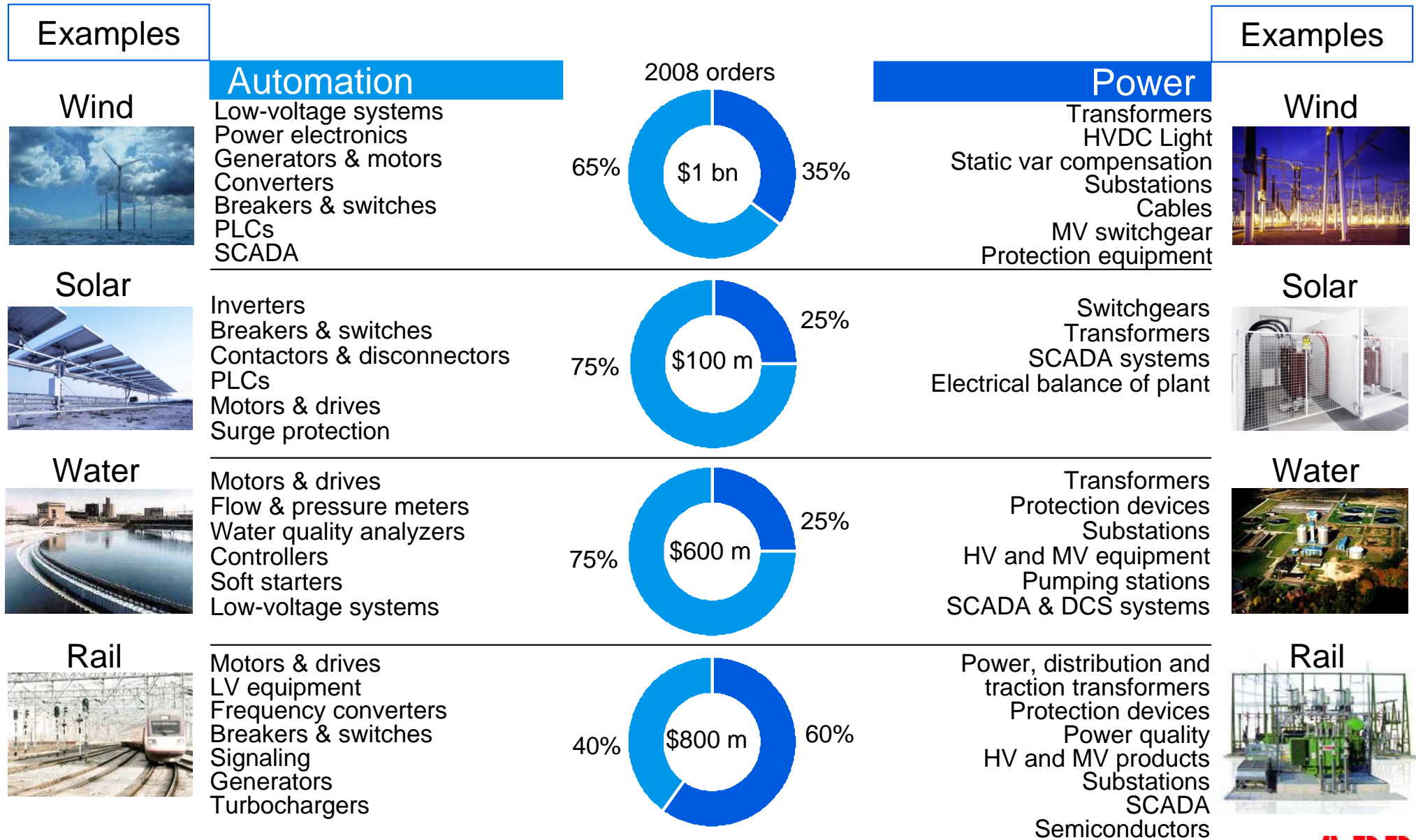


Chart 13

ABB is playing in the right markets with the right offering for long-term growth

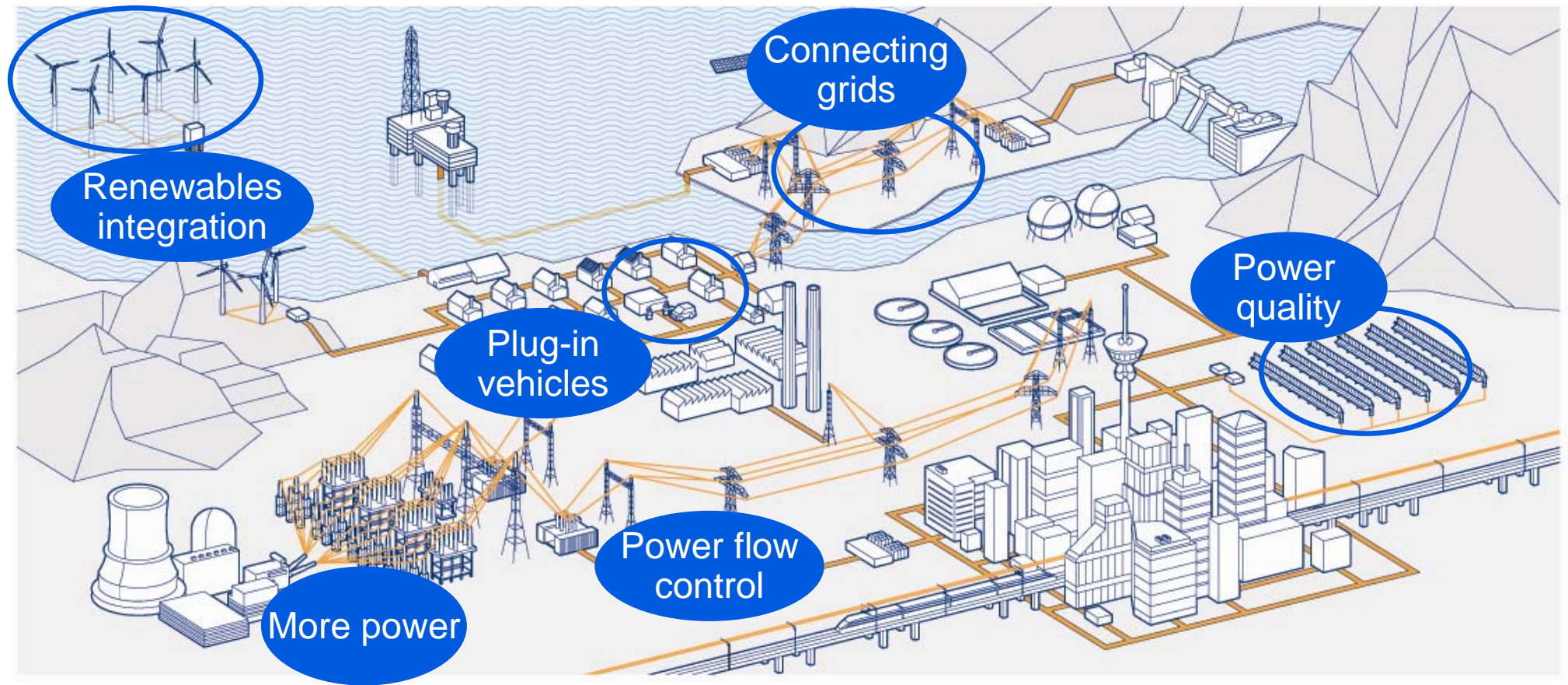
- ABB is a high-tech infrastructure company
- Power and automation are the right markets to be in
- Our offerings cover the whole value chain from power supply to consumption
- We have a strong footprint in high-growth emerging markets
- ABB has the technology and market leadership on which to build

Timing is open, but both private and public funding for energy efficiency, renewables and commodities development will increase – ABB in a great position

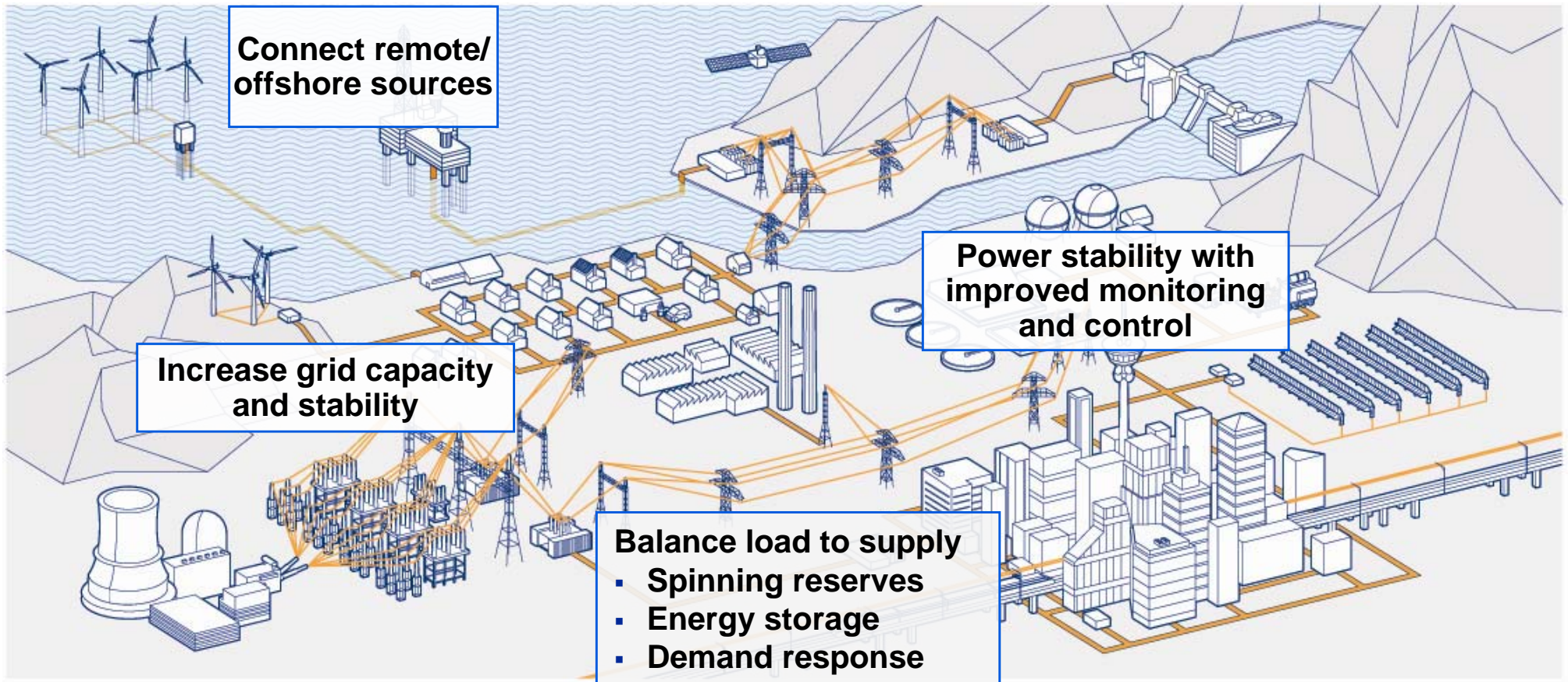
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Balancing the need for more power with lower climate impact



Integration of renewables



Renewables: a fast-growing market opportunity

Global wind power market 2007-13

Source: MAKE Consulting March 2009

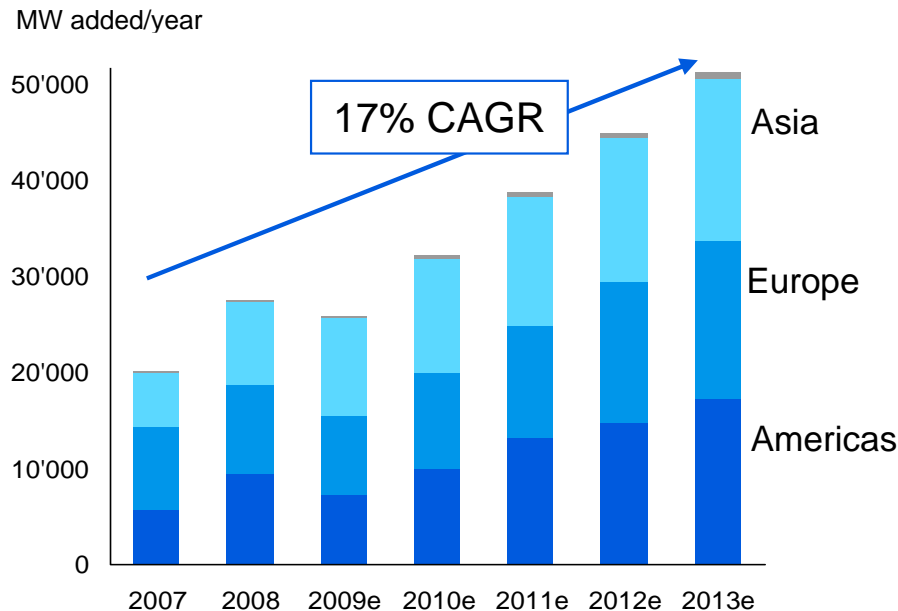


ABB is leading supplier of products and systems to onshore and offshore wind

Global photovoltaic market 2007-13

Source: EPIA 2009

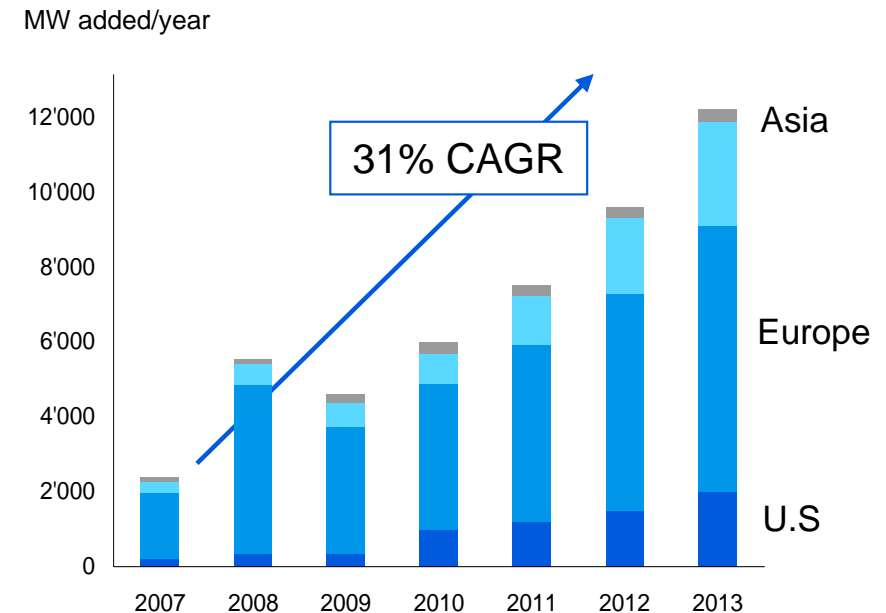
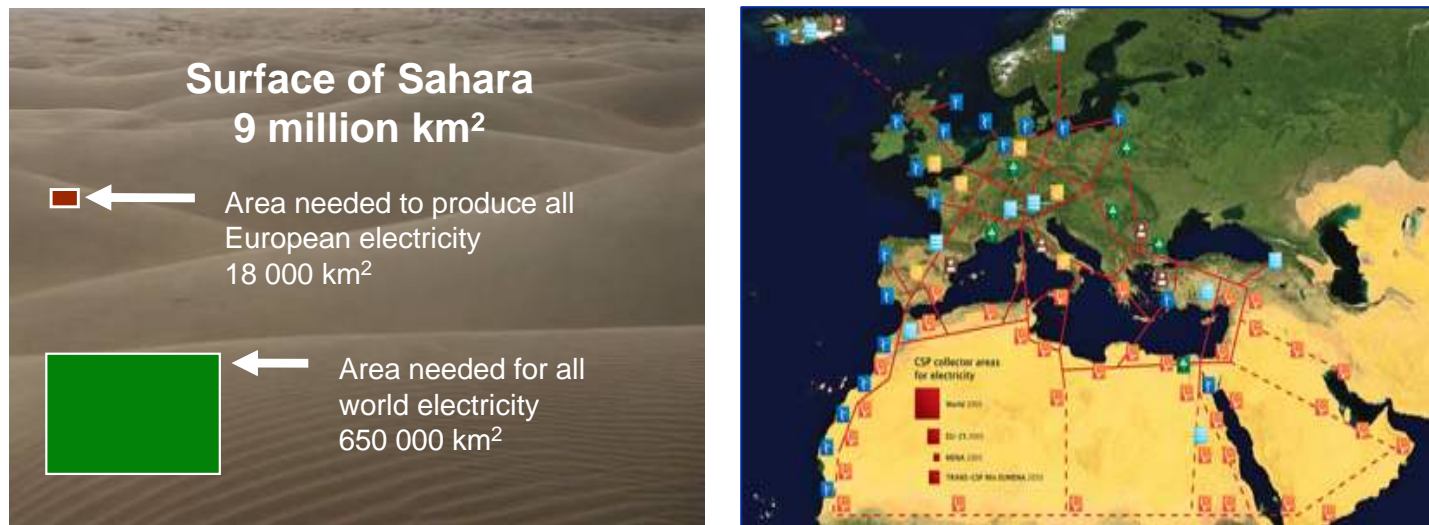


ABB adapting proven technology for solar applications

Desertec: Capturing solar power for Europe and Africa



Connecting large-scale solar generation e.g. deserts, with distant load centers via an efficient transmission system like HVDC

Hydro will remain a key renewable and involves transmission distances of 2,000-3,000 km

Potential additional hydro capacity by country/region 2006-2030

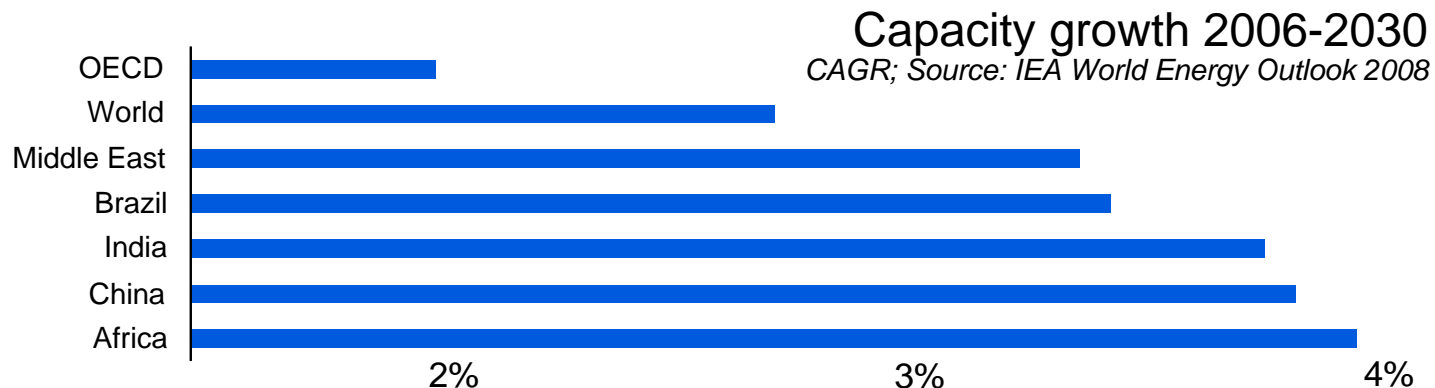
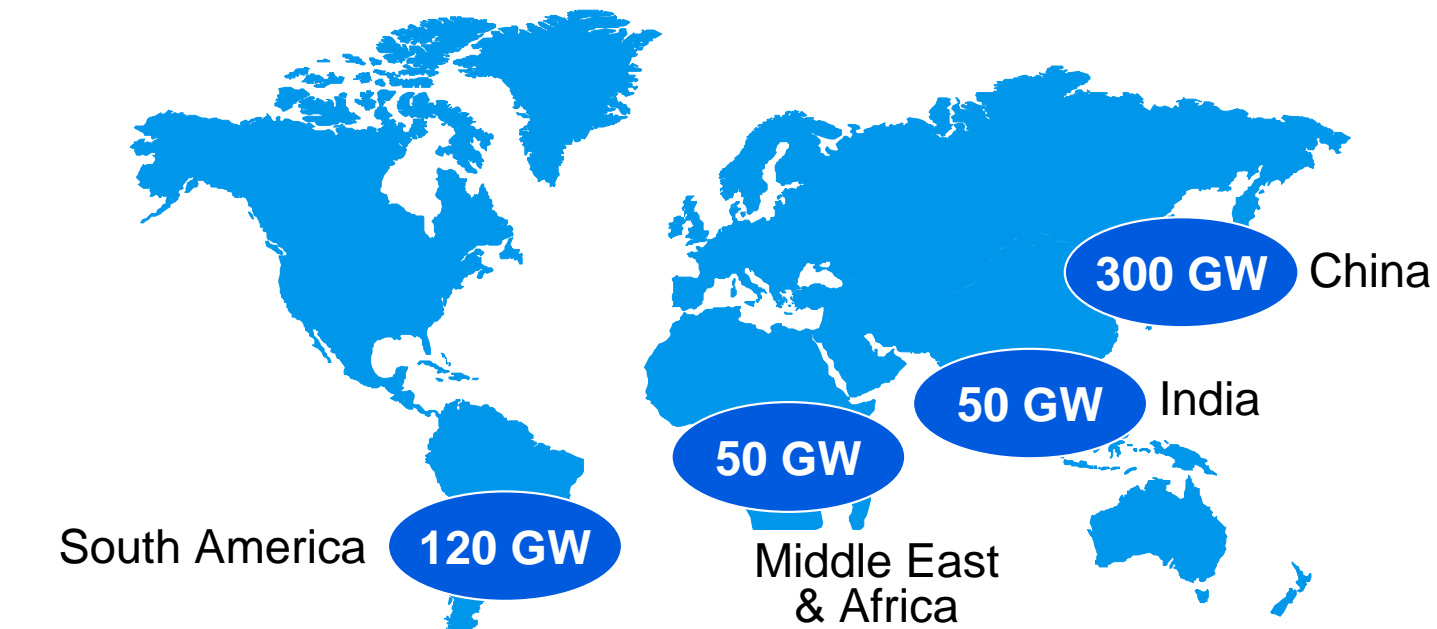
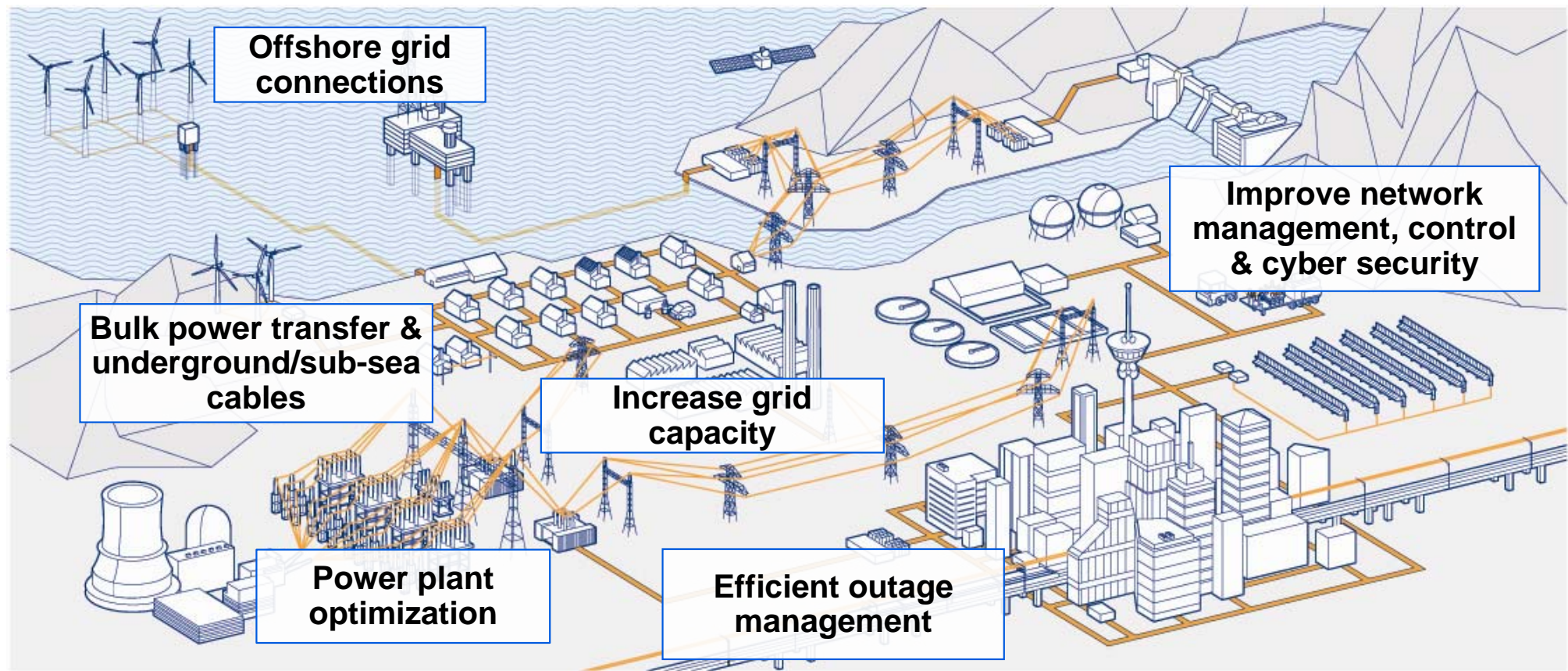


Chart 20

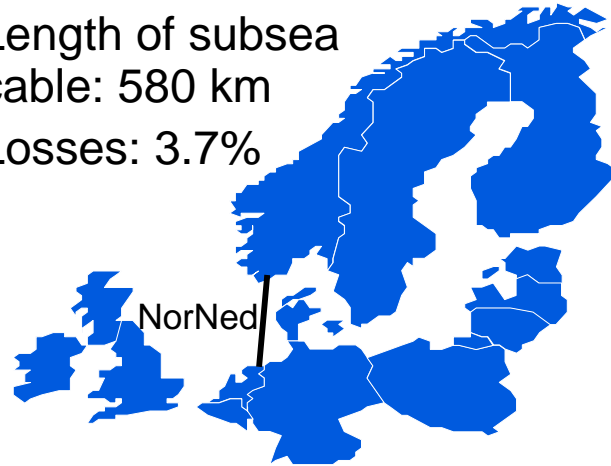
Ensuring power reliability and efficiency



More efficient use of power generation resources, integration of renewables

HVDC Norway to Netherlands link

- Commissioned: 2008
- Power rating: 700 MW
- Length of subsea cable: 580 km
- Losses: 3.7%



Order value:
\$400 mill.

HVDC Light offshore wind park, Germany

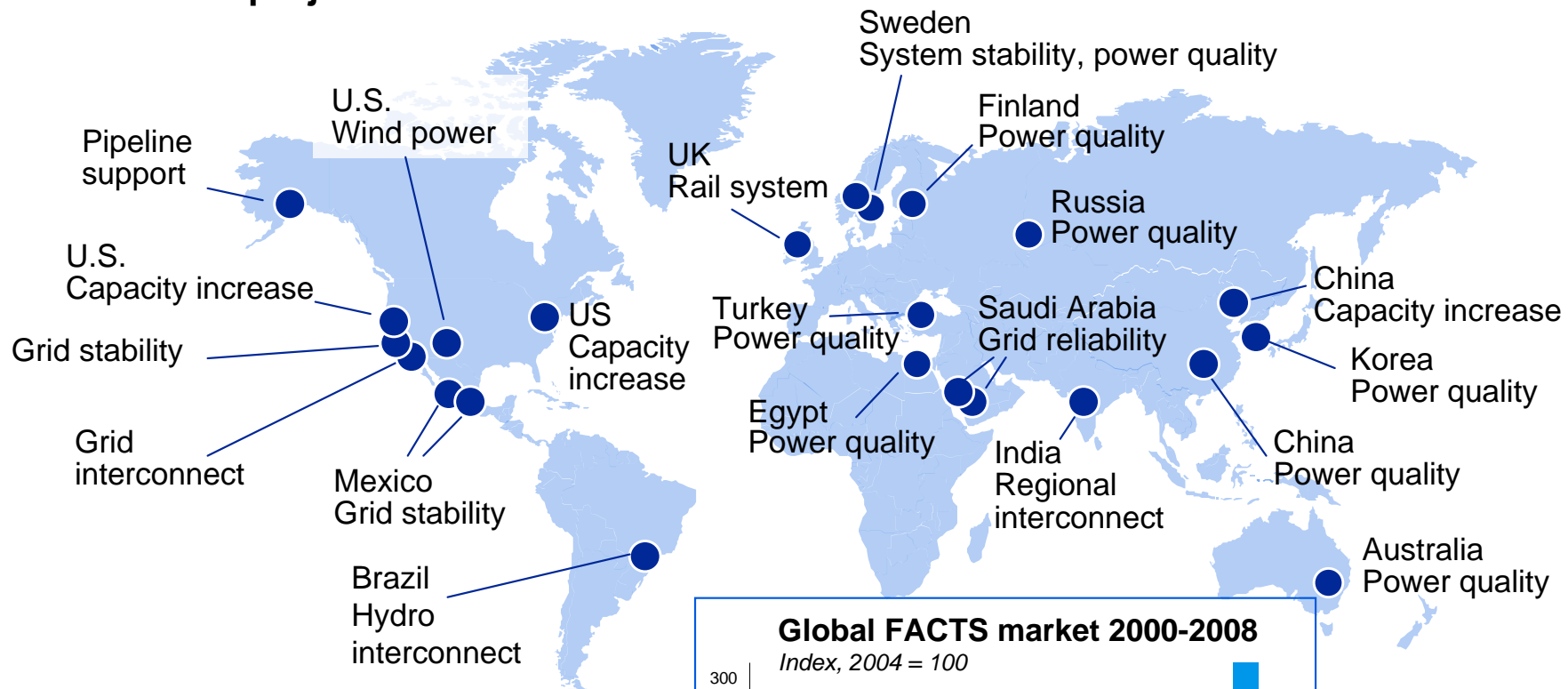
- Commissioning: end-2009
- Power rating: 400 MW
- Length of subsea cable: 130 km, underground cable: 70 km
- Lowers CO₂ emissions by ~1.5 mill t/yr by replacing fossil-fuel generation



Order value:
\$440 mill.

Using existing infrastructure more efficiently FACTS increases existing capacity by up to 40%

ABB FACTS projects 2008-2009



Each project
opportunity avg ~\$40
mill in orders

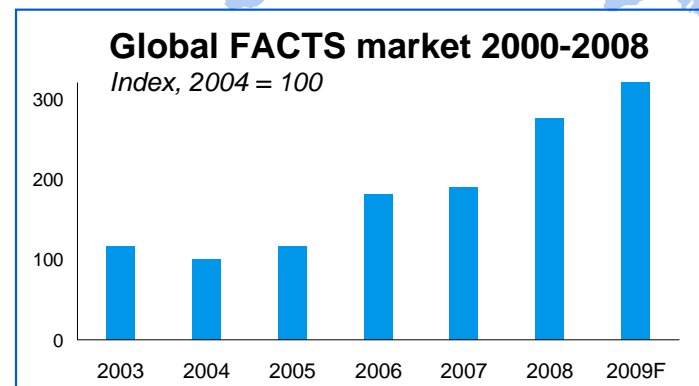
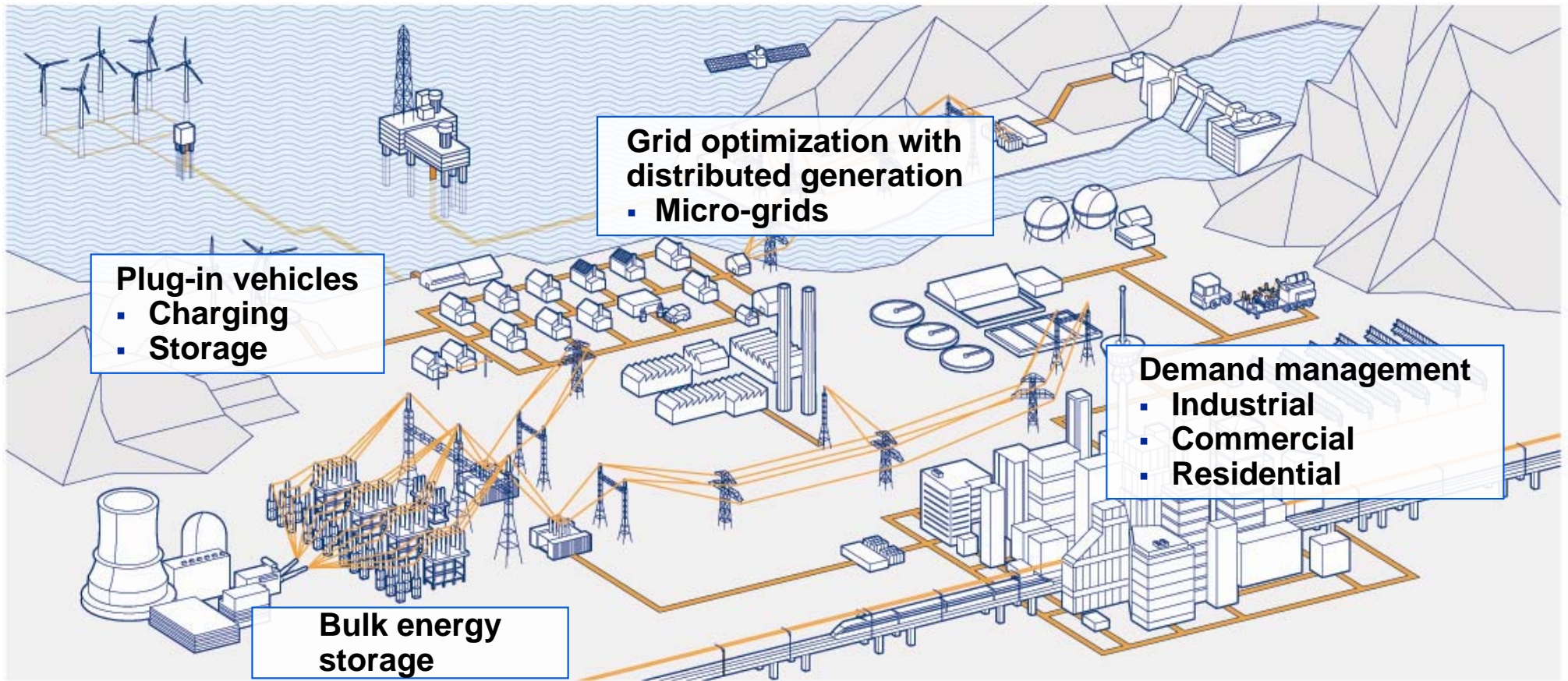


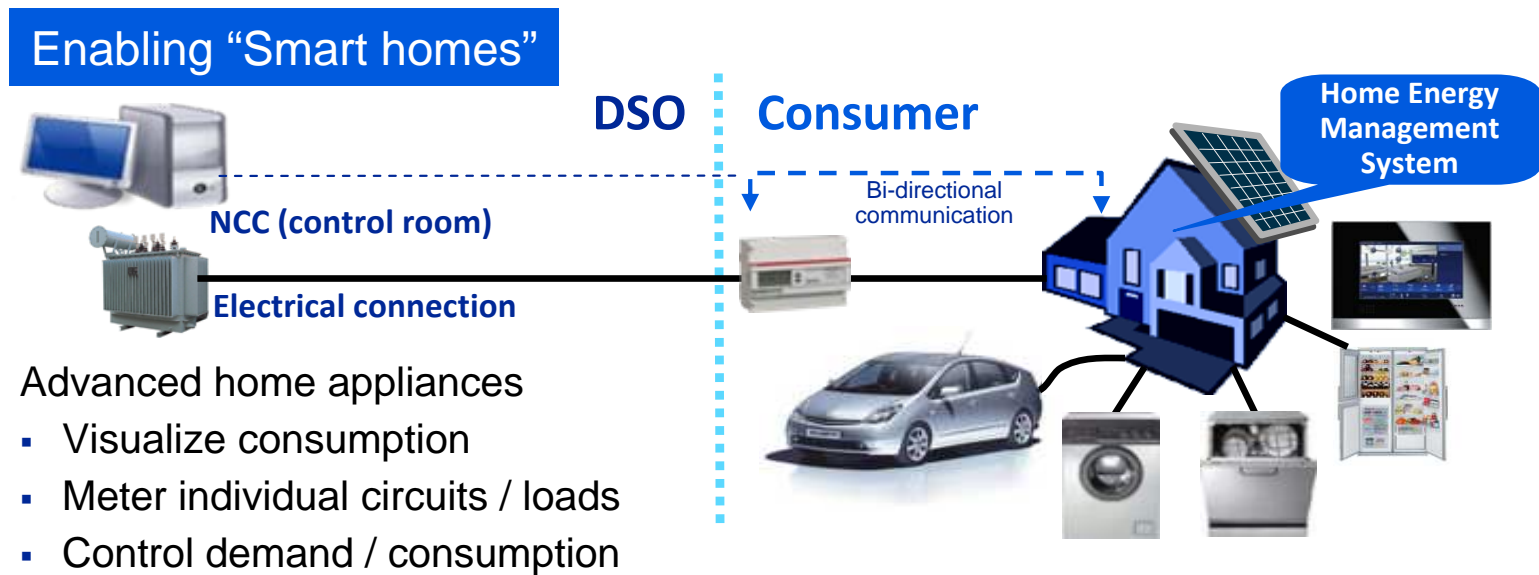
Chart 23

Emerging trends



Demand response

ABB has technologies for smart homes and buildings



Singapore National Library

Maximizing building efficiency

- ABB KNX technology cut energy consumption by 17% ~\$370,000/yr
- Monitor, control & maintenance from single control room
- Lighting, shutters, heating, ventilation & air conditioning, security & surveillance

A look into the future: Integration of plug-in electric vehicles and two-way power flow

Charging infrastructure

- Energy storage to offload grid
- Charging time options (10 mins to 5 hrs)
- Billing system for mobile customers
- Business models under evaluation

Network Management

- Load management
 - Charge at times of overcapacity
 - Use vehicles as consumer storage
 - Voltage control for distribution grids
- Real-time pricing

- Currently at pilot stage - different technical solutions, revenue models
- Difficult to predict timing



1.7 mill plug-in hybrids
expected worldwide by 2015

- U.S. largest market
- China No. 2

Source: Pike Research 2009

ABB well-
positioned in this
developing
market

ABB will play a key role in the transition to tomorrow's grid

The challenge

- Supply and demand needs to be balanced at all times
- Growing need for electricity, especially in emerging economies
- Imperative to reduce environmental impact gathers momentum
- Aging grids require attention
- Grids need to become more intelligent to handle complexities

	Today	Tomorrow
Supply	<ul style="list-style-type: none">▪ Centralized generation, few players▪ Mainly fossil, nuclear, hydro▪ Relatively easy to control	<ul style="list-style-type: none">▪ More distributed power, more players▪ More renewables, remotely located▪ Unstable supply - more control needed
Demand	<ul style="list-style-type: none">▪ One-way energy flow/communication▪ Metering used for billing only▪ Load-shedding/supply response	<ul style="list-style-type: none">▪ Two-way energy flow/communication▪ More intelligent metering▪ Demand influenced load balancing

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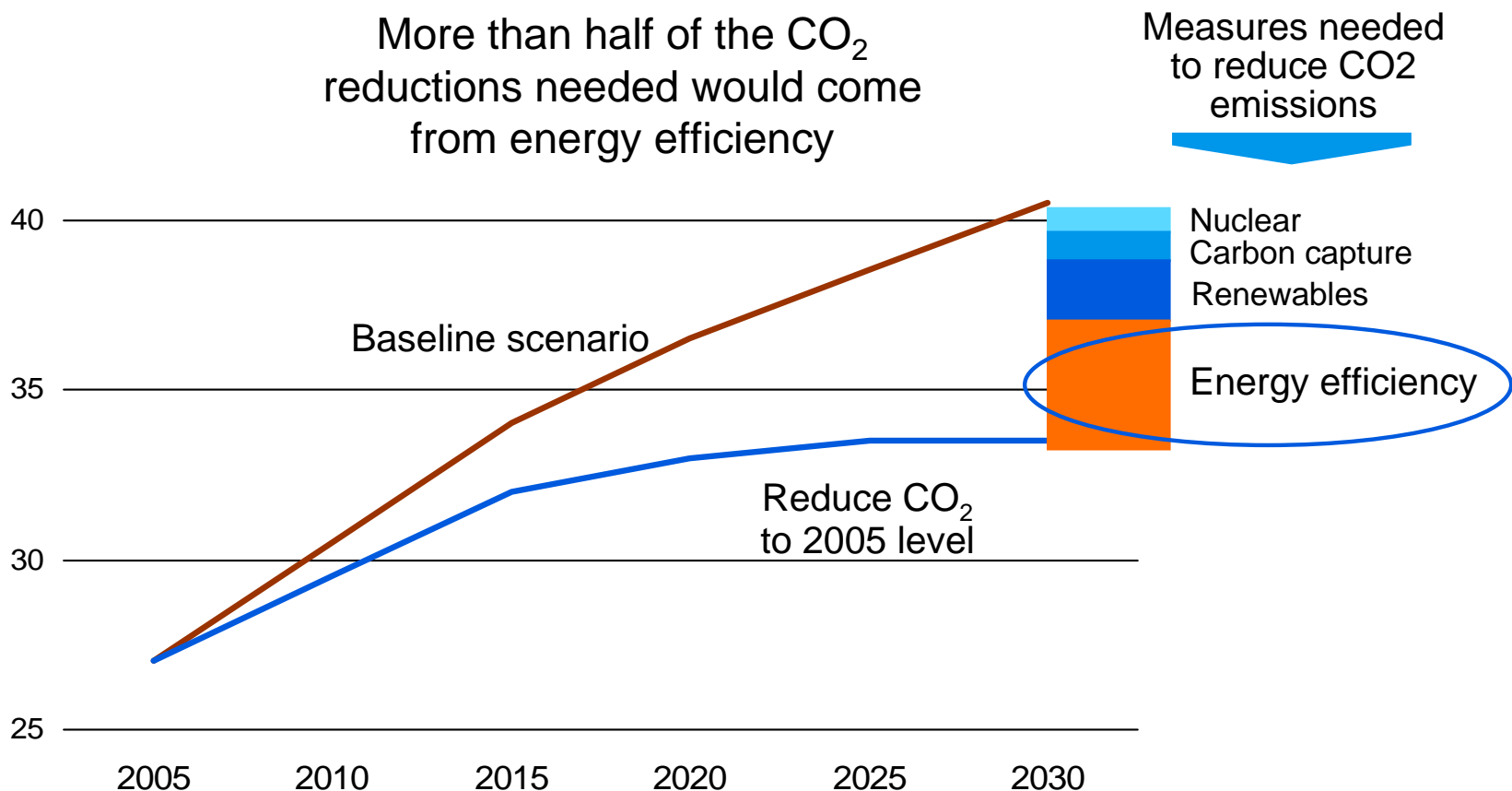
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The energy efficiency challenge

- Climate change has moved to top of the political agenda
- World is hungry for energy, especially emerging markets
 - Rapid urbanization
 - High commodity consumption
 - Energy-intensive industry
- Financial crisis has focused industry on long-term energy savings and productivity potential
- End-to-end system knowledge and process optimization now seen as key to maximizing energy efficiency

Energy efficiency is the most important way to cut greenhouse emissions

Contribution of different measures to cut CO₂ emissions

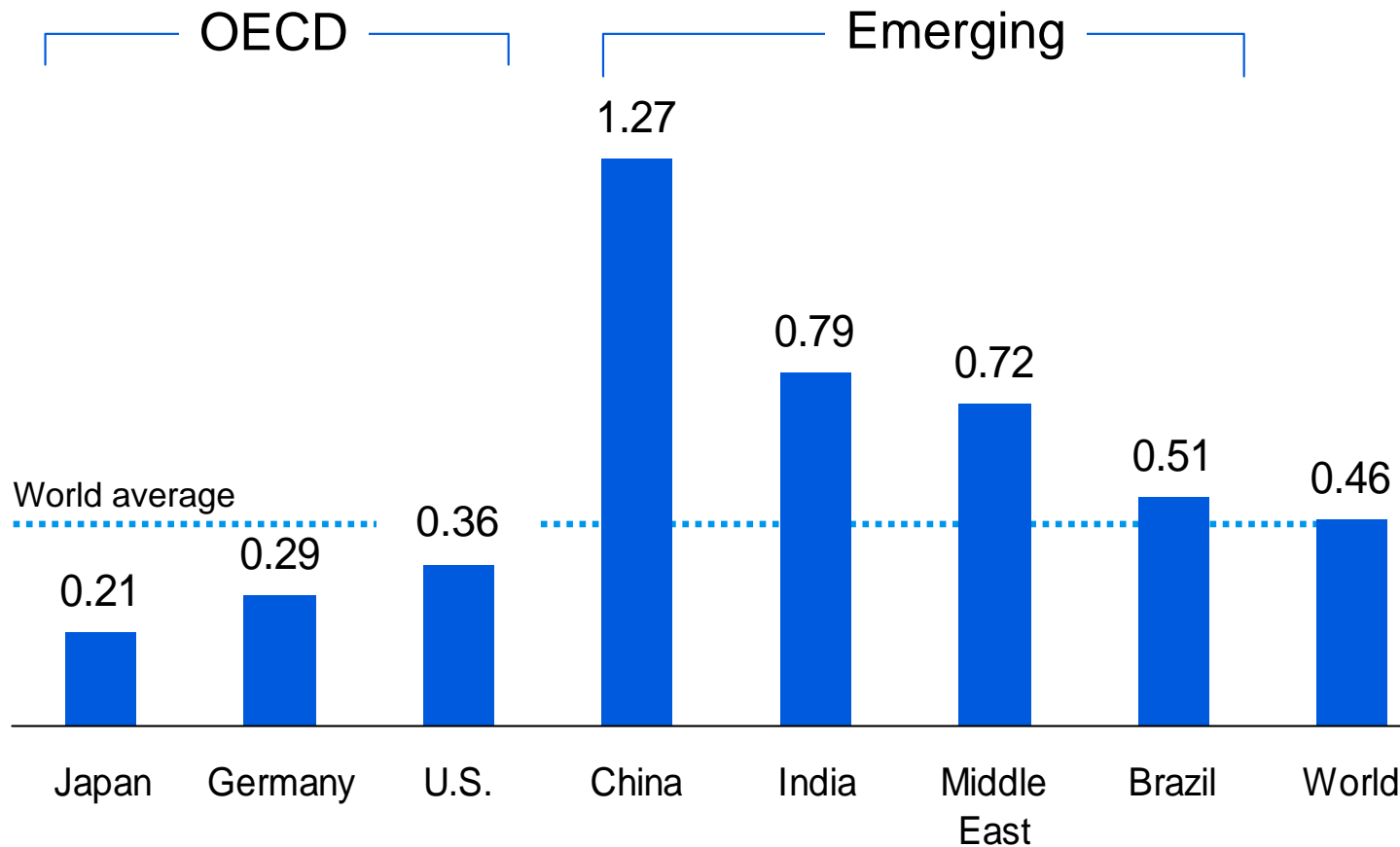


Source: Energy Technology Perspectives, IEA, 2008



As energy prices rise, they will need to significantly boost efficiency to be globally competitive

Amount of electricity used (kWh) to produce \$1 of GDP



Source: International Energy Agency, Key World Energy Statistics, 2008; based on 2006 data, constant USD year 2000

Significant efficiency savings are available across all of ABB's market segments

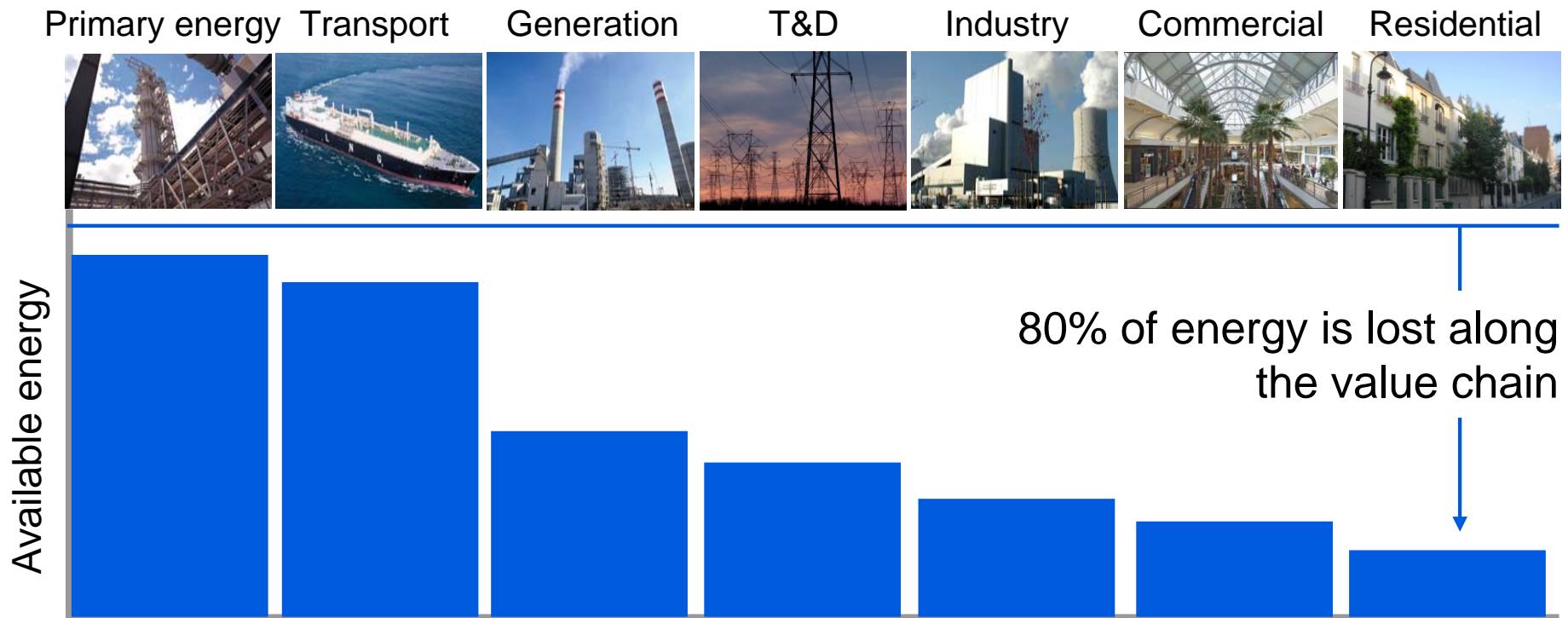
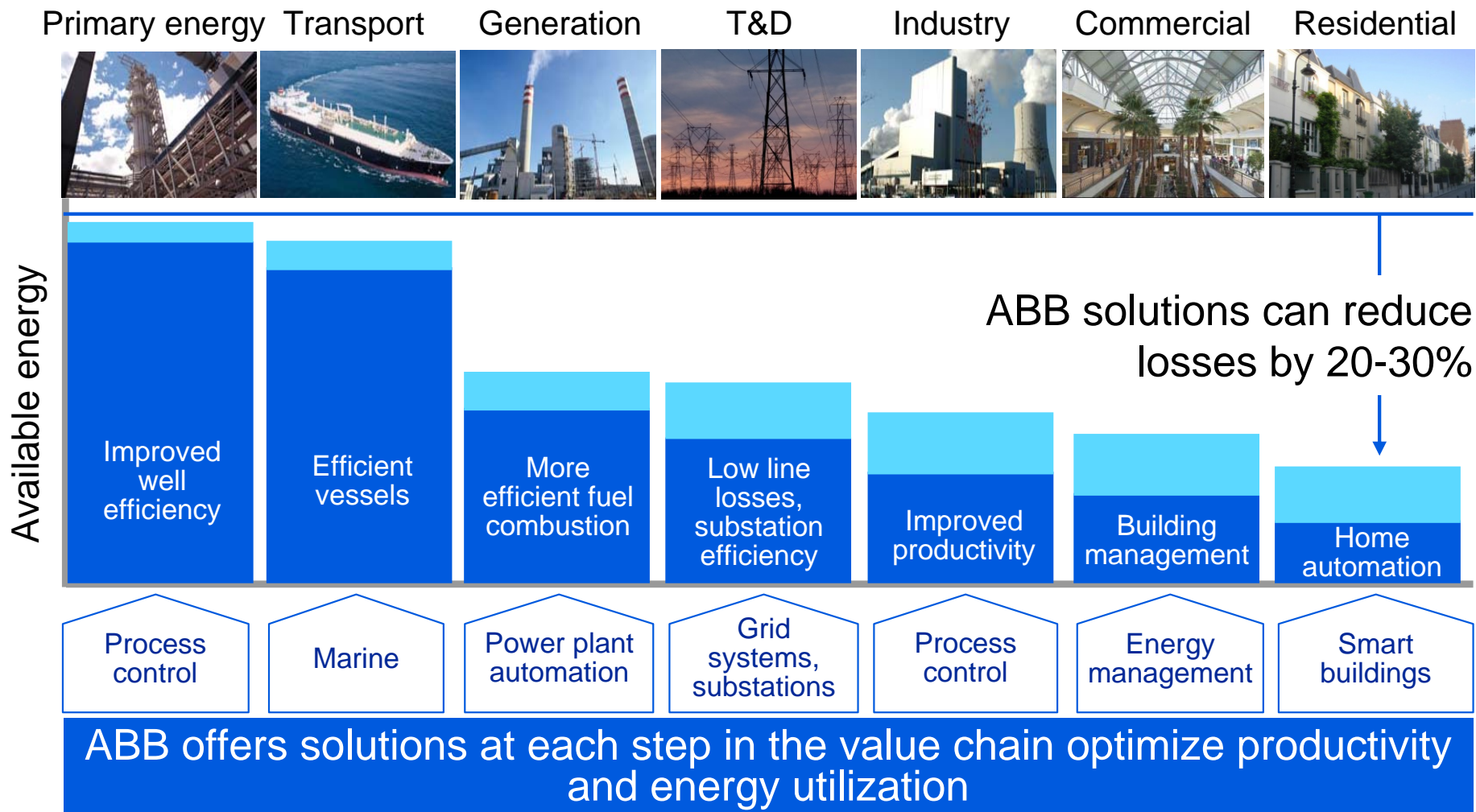


Chart 32

Significant efficiency savings are available across all of ABB's market segments

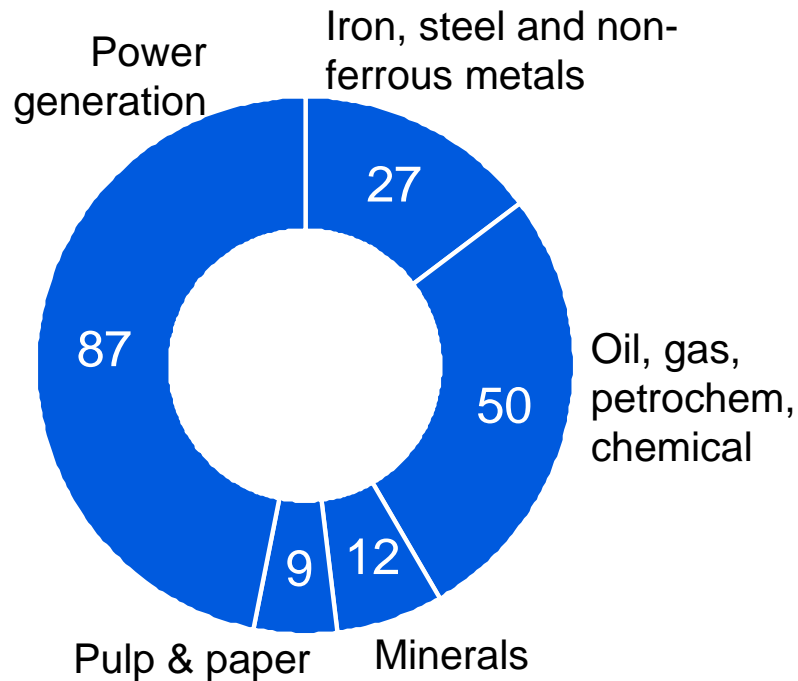


Annual energy savings up to ~\$180 bn

ABB has the #1 or #2 position in all sectors

Potential annual energy savings opportunities by industry sector

US\$ billions; Source: IEA, McKinsey, ABB estimates



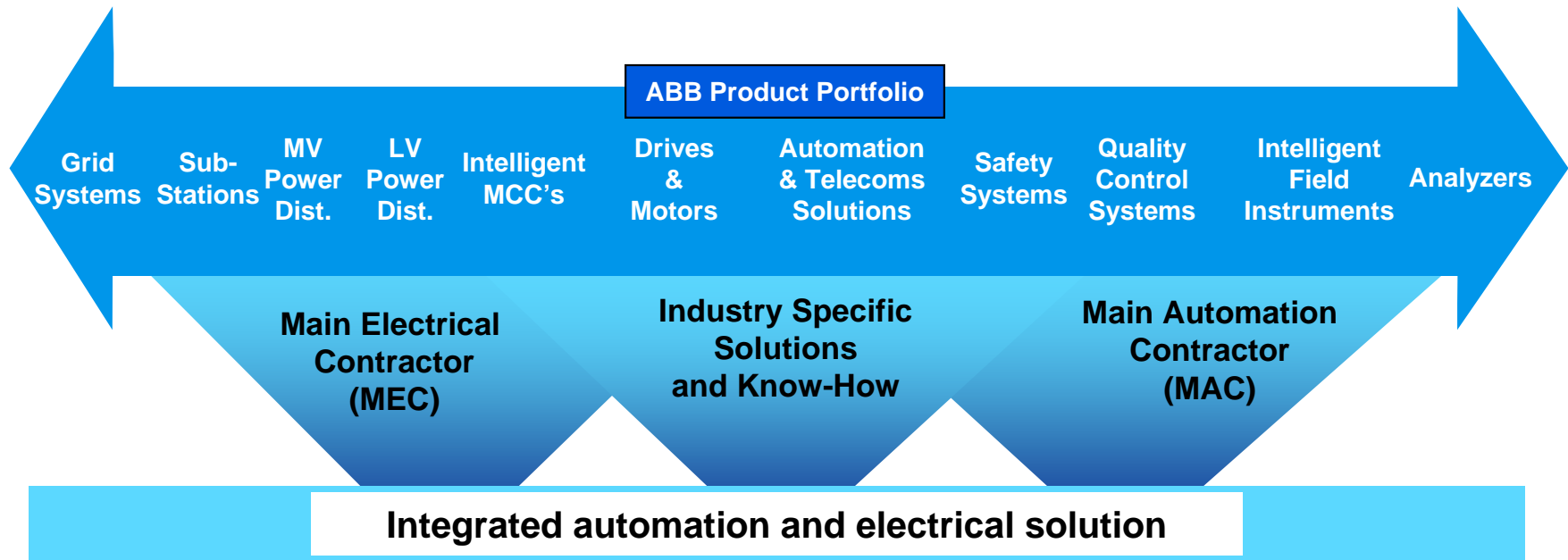
Customer Opportunities

- More efficient equipment
- More productive operations & control
- Reduced thermal losses
- Reduced emissions
- Optimized energy utilization

Significant improvement in profitability

DCS market position, ARC report 2009

Integrated automation and electrical systems are a competitive advantage



Project Benefits (Greenfield)

Reduced CAPEX (20% typical)

- Faster project startups
- Reduced engineering
- Less equipment required
- Single source responsibility for integration

Operational Benefits

Reduced OPEX (20% typical)

- Energy Management
- Operator efficiency/productivity
- Increased safety
- Reduced lifecycle costs (training, spare parts, personnel, maintenance)
- Single source responsibility for operation

Technology plus process expertise leads to the maximum efficiency improvement

Component improvements are important ...



Example: High-efficiency motors

- 2/3 of industrial electricity to run motors
- 1 high-efficiency 75 kW motor can save 23,000 kWh = 11.5 t CO₂/yr
- Typical efficiency gain 2-5%

... but end-to-end engineering of electrical, mechanical and control system yields much higher results



Example: ABB Energy Management

- Monitor, manage and optimize production output and energy utilization
- Improve energy efficiency by ~10-25%, depending on industry
- In some cases as high as 60%

This is ABB's competitive edge

Metals & mining are the most energy-intensive sectors

Customer savings potential ~\$40 bn/yr

Cement

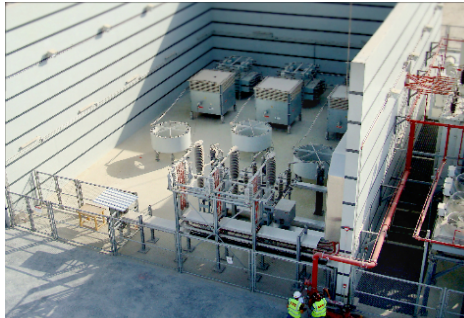


Cement plant

- Cement = 5% of global CO₂ emissions
- Could be cut by ~120 mill t/yr
- ABB installed base of 350 analyzer-equipped kilns reduces CO₂ emissions by ~20 mill t/yr
- = annual CO₂ output of one coal-fired power plant

ABB market position
No. 1*

Aluminum



Qatalum Aluminum, Qatar (4Q09 startup)

- Qatalum is world's largest aluminum plant
- 5 ABB rectifiers - most powerful ever built - convert AC from grid to DC for use in the smelter
- 18% increase in energy efficiency ~ power consumed by more than 50,000 homes

ABB market position
No. 2*

Steel



Rautaruukki Raahel Steel

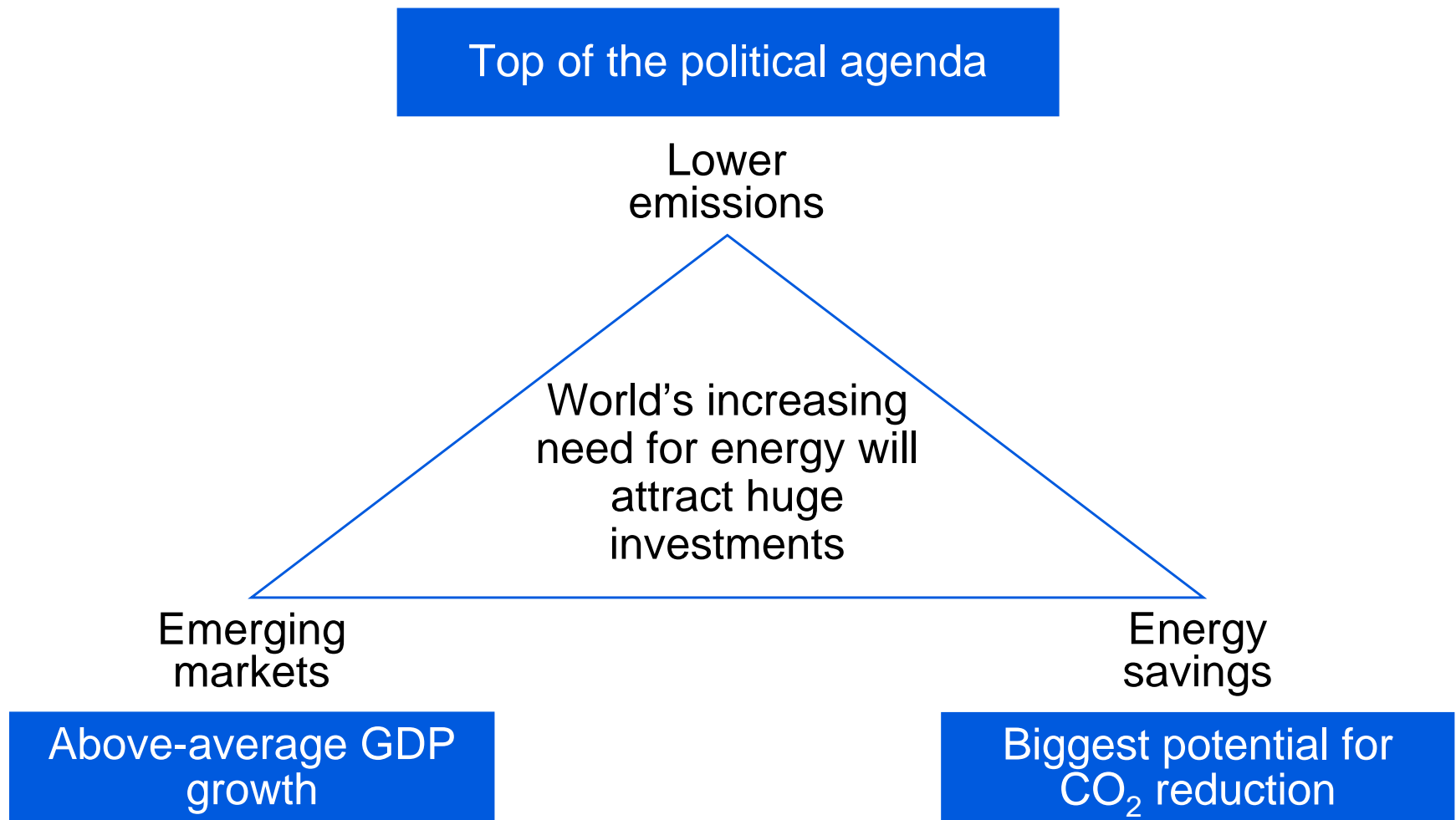
- Total mill electricity bill = \$40 mill/yr
- ABB integrated electrical and automation system to increase productivity
- Cut annual electricity consumption by \$2 mill
- Lowered annual CO₂ emissions by 10,000 t

ABB market position
No. 2*

*ARC DCS Worldwide Outlook 2009

Three trends that shape future industry demand

ABB best positioned to meet these needs



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Emerging economies will drive the power market for the next 20 years

Forecast electricity consumption by region/country, 2006-2030

Source: World Energy Outlook 2008, million tons of oil equivalent

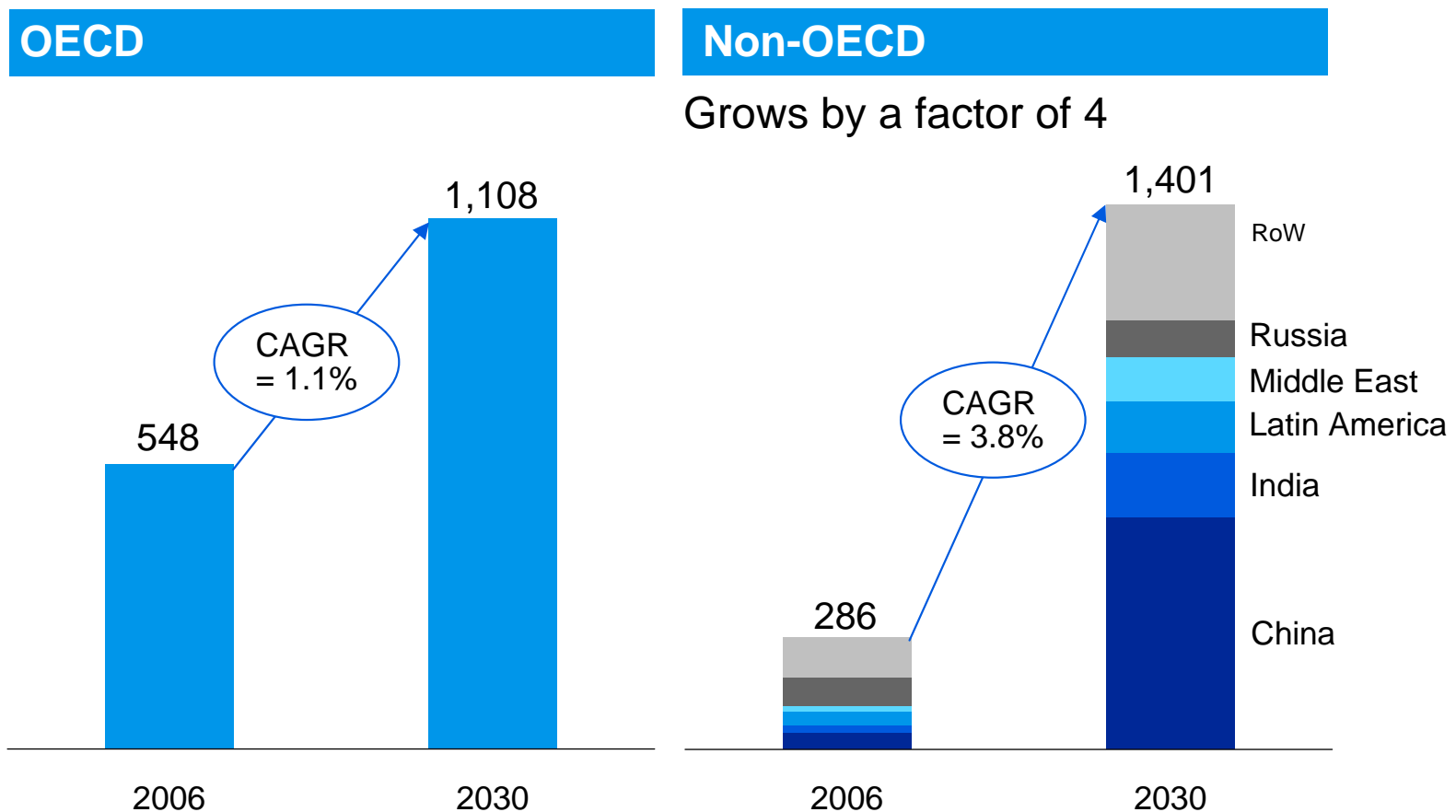


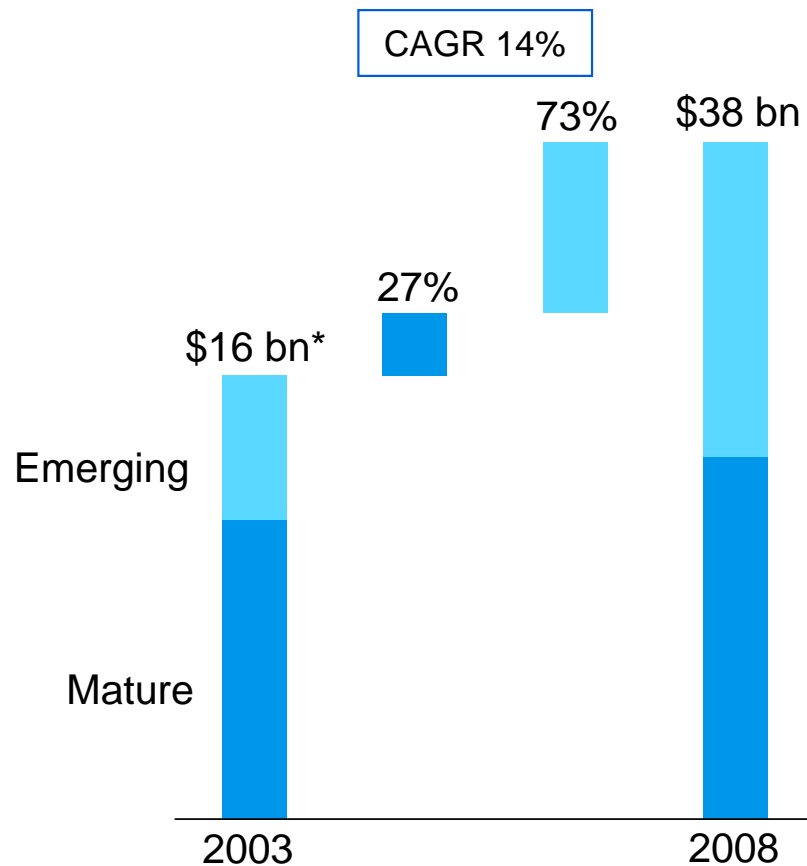
Chart 40

ABB is uniquely positioned in the world's fastest-growing markets

- ABB was an early mover into eastern Europe and Asia and has built leading market shares
- We have strong local manufacturing, engineering, service and R&D presence – “at home everywhere”
- Design and development of products & services specific to the local market
- We have generated significant growth from power and industrial infrastructure build-out in emerging markets
- Our solid footprint also yields cost advantages
- Last but not least, we are meeting future competitive challengers on their home turf

ABB's recent growth has been driven primarily by emerging markets

Share of order growth 2003-08

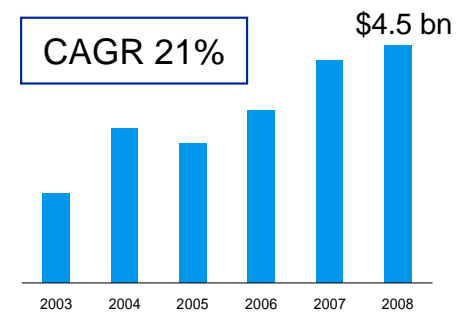


* Adjusted for disposals of non-core businesses

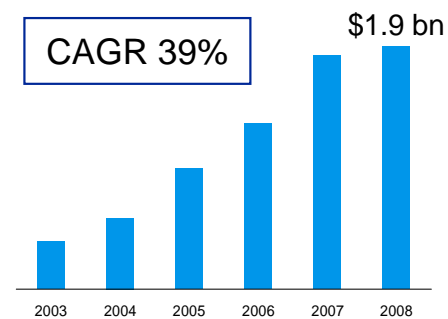
Orders by country 2003-08

Change in local currencies

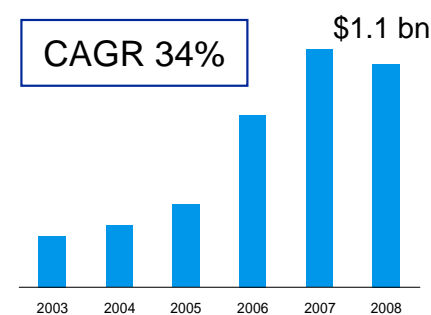
China



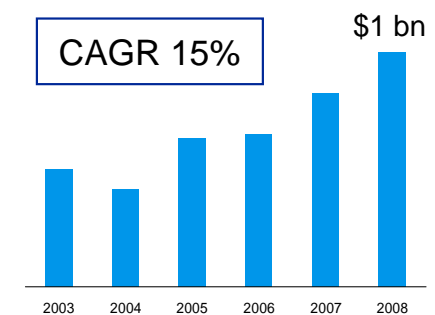
India



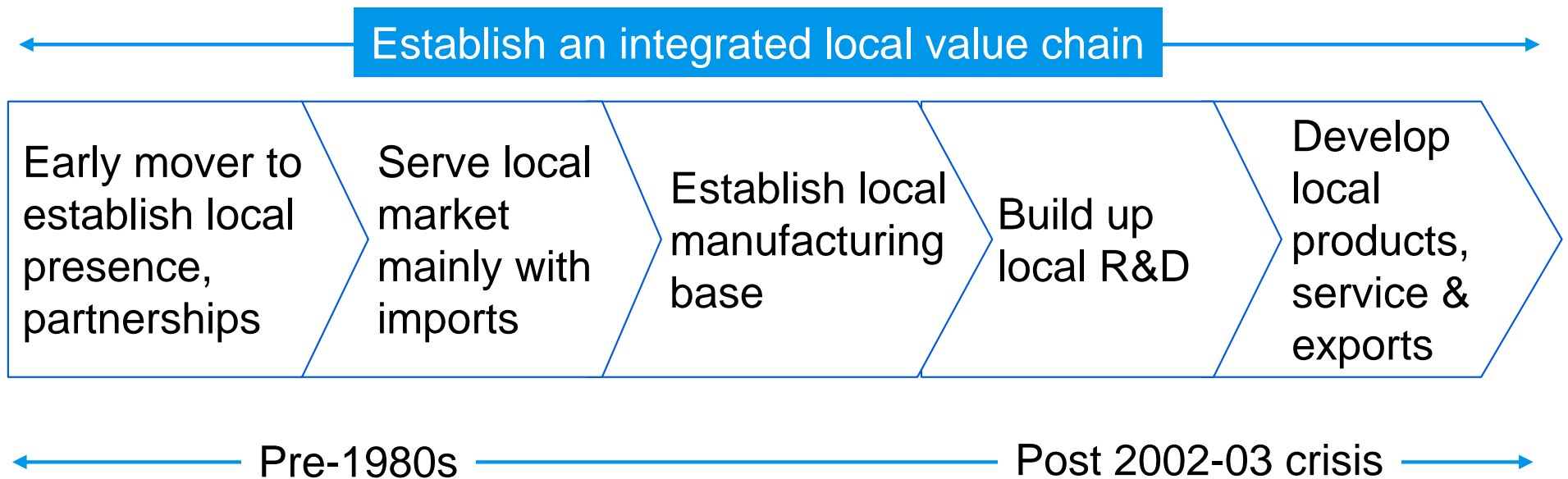
Russia



Brazil



ABB's approach is to build an integrated local value chain for domestic and export markets



Example China: ABB was an early mover and is now a strong domestic player

- Present more than 100 yrs
- 15,000 people, 60 locations
- 27 local companies (>20 JVs), 33% held by local partners
- Local purchasing = \$2.7 bn
- Total investment >\$1 bn
- >80% local engineered, manufactured

>\$40-bn market for ABB

A strong customer base



No. 1 in

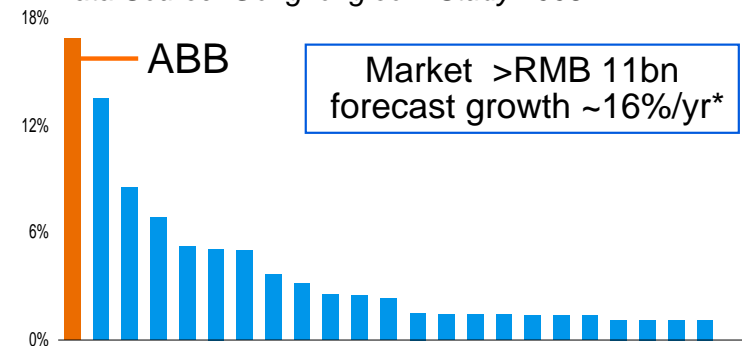
- High-voltage equipment
- Low-voltage motors and drives
- Robotics
- HVDC

No. 1 or 2 in

- Process automation
- Low-voltage systems

Example: Drives market shares in China

Data Source: Gongkong.com Study 2008



India will show continued strong demand, especially in power, but also in other infrastructure

- Present more than 100 yrs
- 8,000 people, 40 locations
- \$1.9 bn orders in 2008 (39% CAGR 2003-08)
- Mumbai stock listing

Market opportunities in India

- World #5 in wind, + >20%/yr
- >16 GW new hydro planned, long-distance links required
- >\$80 bn in water 2007-12
- \$60 bn for rail
- \$30 bn for steel
- Add 50 mill t cement capacity over next 3 yrs

>\$10-bn market for ABB

11th Plan¹ - Infrastructure Investment

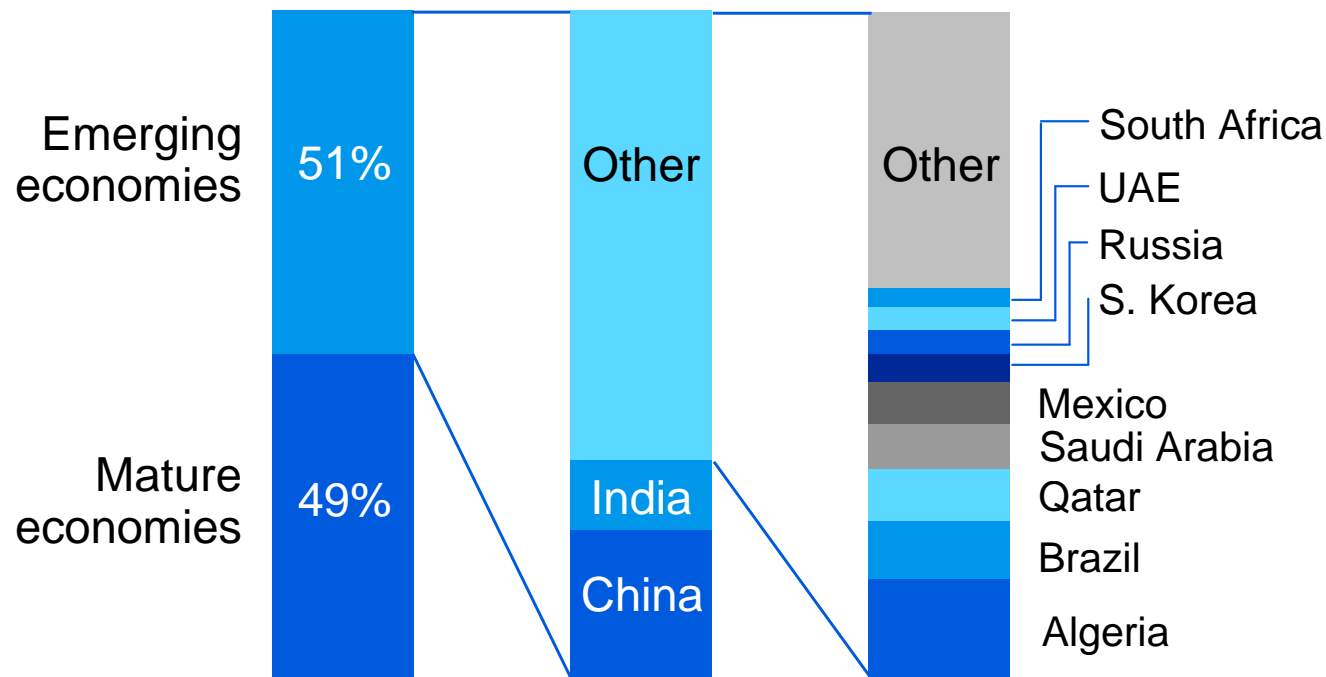
	Investment	
	US \$ bn	% Share
✓ ABB opportunities		
✓ Electricity	167	32
Roads & bridges	79	15
Telecommunication	65	13
✓ Railways	65	13
✓ Irrigation	63	12
✓ Water supply/sanitation	36	8
✓ Ports	21	4
Airports	8	1
Storage	6	1
✓ Gas	4	1
Total	514	100

Source : Gol – Committee on Infrastructure

¹ 2007-12

But ABB's emerging market exposure goes much farther than China and India

Share of ABB H1 2009 orders received by country/region



2008 level of ABB orders received in emerging markets

Volume of orders	\$200-500 mill	\$500 mill - \$1 bn	\$1 bn +
No. of emerging countries	10	4	4

Strong emerging market growth across all regions

Emerging economies represent a market of ~125 bn

Solid growth in all regions ...

... even in the downturn

Country	Order growth 2003-08 CAGR		Countries with >10% order growth H1 '09* vs H1 '08
Qatar	73%	Combined market >\$40 bn	Algeria
Peru	38%		Argentina
Turkey	37%		Bulgaria
South Korea	35%		Chile
Ukraine	33%		Colombia
Chile	30%		Hungary
Singapore	26%		Iraq
UAE	25%		Kuwait
Romania	25%		Mexico
Argentina	21%		Oman
South Africa	19%		Peru
Brazil	15%		UAE
Hungary	13%		

* Change in local
currencies, countries with
H1 '09 orders > \$20 mill

Chart 47

Targeted growth in several emerging markets

Focus: Energy-intensive industry, power infrastructure

Example: Turkey

Large, fast-growing economy

- GDP 5-6%

Major industries

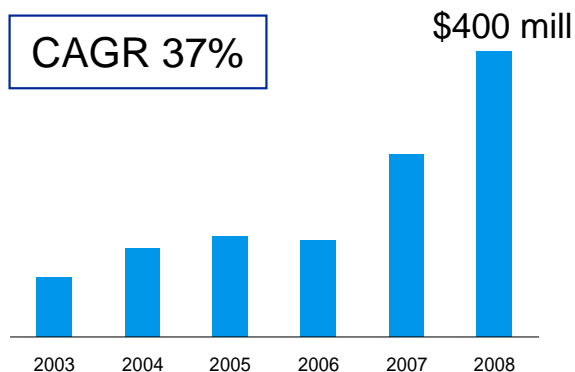
- Cement 55 m t/y
- Steel 28 m t/y
- Automotive >1 m cars/y

Opportunity to increase volumes
2-3x next 5 yrs

ABB with \$15 mill capex in 2008

ABB orders in Turkey 2003-08

CAGR 37%



Example: Brazil

13 hydro projects
planned to 2015

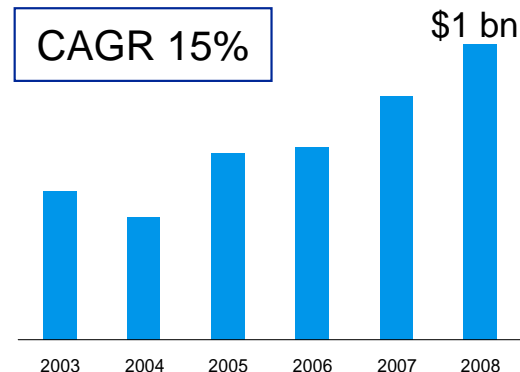
Total capacity
>20 GW

>100 bn barrels
deepwater oil,
among largest
reserves in the
world



ABB orders in Brazil 2003-08

CAGR 15%



Mexico: Serving both the local and regional market



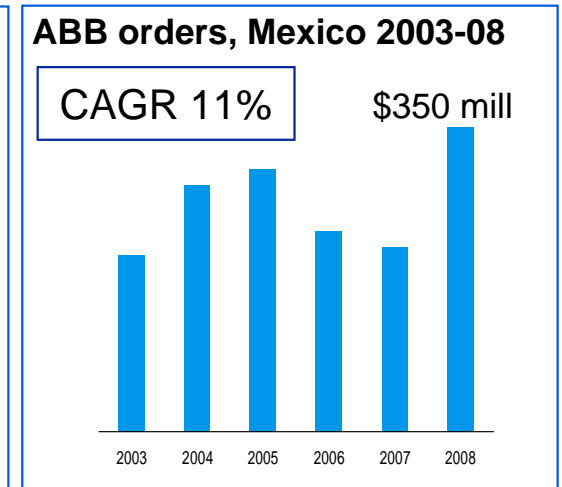
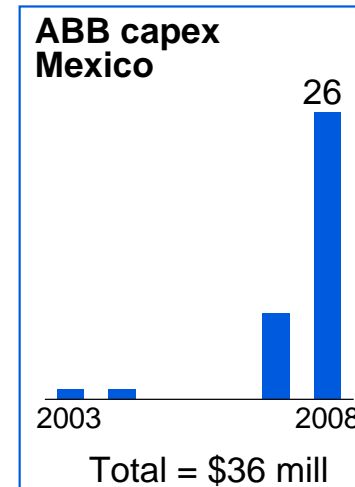
- San Luis Potosi, Mexico
- Manufacturing and engineering center for all divisions
- Up to 1,000 employees

Business Case

- 25% - 50% lower engineering, manufacturing and assembly costs
- 15% lower cost sourcing
- Greater access to Mexico's \$4-5 bn market

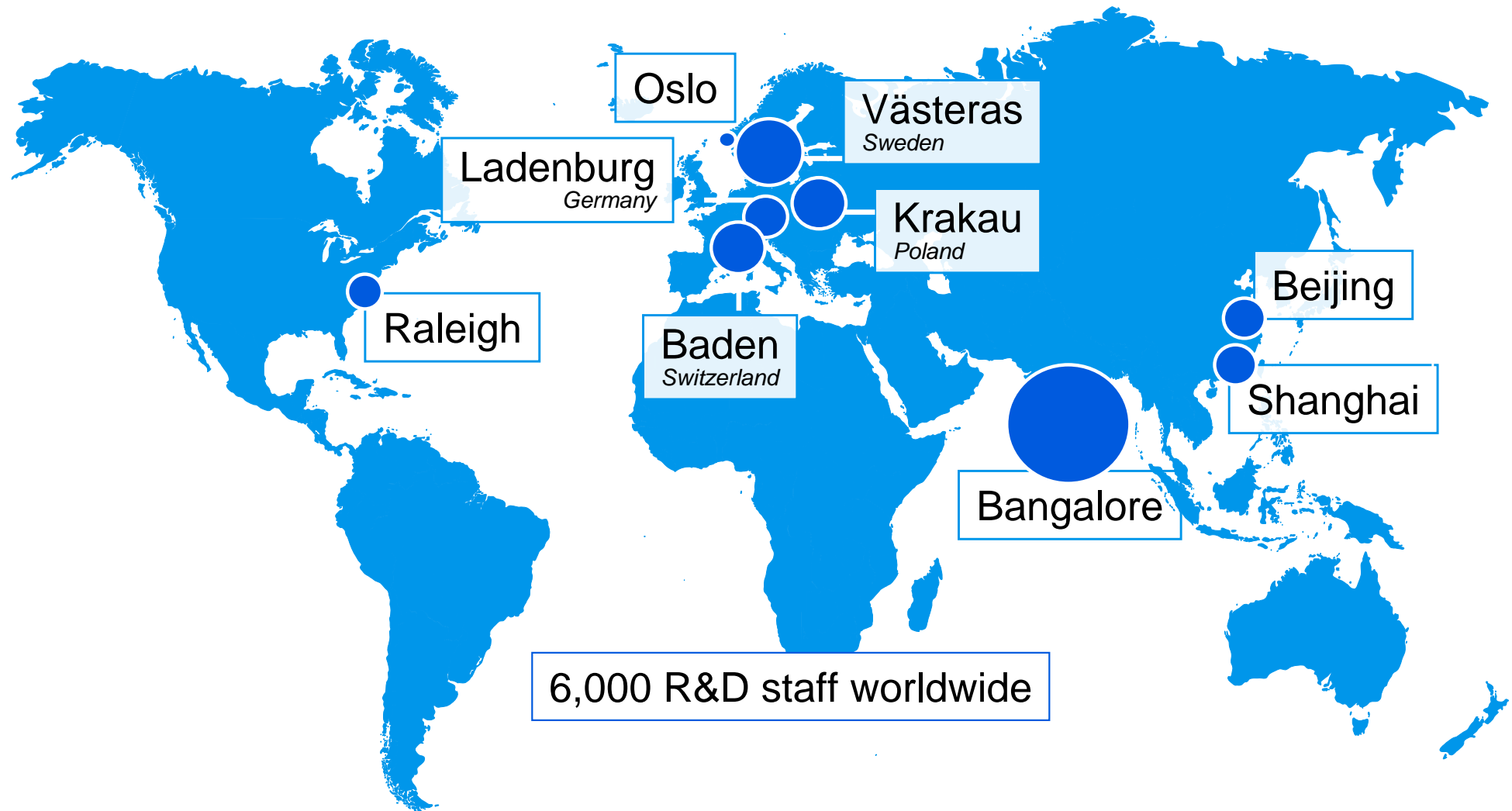


- AP & PP mfg, assembly, testing
- PA, PS & RO assembly, testing
- Common sales, engineering, project management

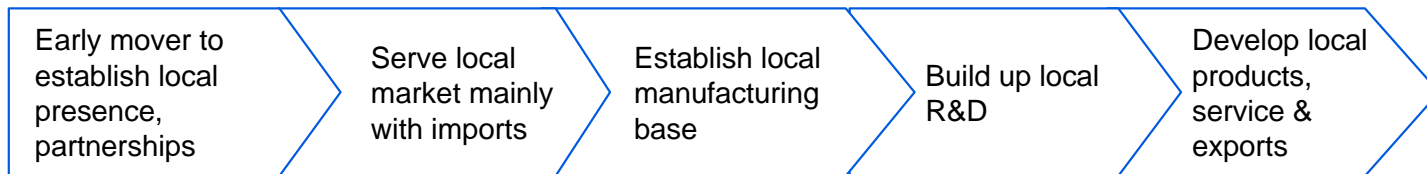


Our R&D scope allows us to grow regional markets with locally developed products

Location and relative size of ABB's corporate research centers, 2008



Emerging market roadmap



- Expand offerings tailored to emerging market needs
- Proactively tackle competitive challengers in home markets
- Build on know-how to strengthen leadership in renewables and energy efficiency
- Focus on growth potential beyond China and India
- Target CAPEX investments into key growth markets

Expand share in fastest growing markets and position ABB as a net exporter from emerging markets

Agenda

- ABB: Beyond the cycle Joe Hogan, CEO
- Changing the way energy is supplied Peter Leupp,
Head of Power Systems
- The next level of industrial efficiency Veli-Matti Reinikkala,
Head of Process Automation
- The emerging market opportunity Michel Demaré, CFO,
Head of Global Markets
- Summary and Q&A Joe Hogan, CEO

ABB future direction and focus

- Operational cost-out focus through the cycle
- Continued expansion in emerging markets
- Technology leadership with focus on renewables, energy efficiency & Smart grids
- Leading high-tech infrastructure company
- Commitment to a strong balance sheet

Beyond the cycle: Opportunities and uncertainties

	Opportunities	Uncertainties
Market	<ul style="list-style-type: none">▪ Focused investment in energy▪ Climate change consensus & actions▪ Emerging markets lead rebound▪ Power & automation converge	<ul style="list-style-type: none">▪ Amplitude & timing of macro rebound▪ Increasing protectionism▪ Execution of fiscal stimulus and climate policies
ABB	<ul style="list-style-type: none">▪ Strong position in renewables▪ Industry-leading balance sheet▪ Extend emerging market reach▪ Lead technology & geographic balance	<ul style="list-style-type: none">▪ Competitor pricing▪ Current market
ABB strongly positioned to capture these opportunities as the economy rebounds		

Power and productivity
for a better world™

