

Yokogawa Electric Corporation

Our Industrial Automation and Control Business

Advantages for expansion of our business

November 8, 2013

Takashi Nishijima, President and Chief Operating Officer

(Billion ¥)

		FY13 1H budget (A)	FY13 1H results (B)	Difference (B-A)
Orders		190.0	216.1	26.1
Sales		185.0	179.6	(5.4)
Operating income		9.5	11.0	1.5
Ordinary income		8.5	10.7	2.2
Net income		5.0	6.5	1.5
Exchange rate	1\$= 1€=	¥90 ¥120	¥99.05 ¥130.56	¥9.05 ¥10.56

■ Improving profitability

- 1 . Expand high value-added solution service business in Japan market
- 2 . Enhance in-house product business
- 3 . Raise the efficiency of the entire IA and control business

■ Responding to changes in target markets

To further expand IA and control business:

- 1 . Reinforce organizations in North America
- 2 . Reinforce organizations in emerging and resource-rich nations and regions

■ Improving profitability

2. Enhance in-house product business →

Increase sales of in-house products

A great opportunity to expand in-house product sales

• Dept. responsible for promoting in-house products (Give greater authority to)

→ Set product sales quotas → Increase sales of in-house products



- Set up system for monitoring progress
- Assign person in charge with following roles/responsibilities:
 - Sharing of info on current situation and challenges/negotiation of delivery, price/provision of technical support
 - Ensure strong cooperation between affiliates and production/IA division

- Expand local modification function
 - Final assembly, range setting/adjustment/inspection
 - Affiliates in North America and other regions

■ Improving profitability

- 1 . Expand high value-added solution service business in Japan market
- 2 . Enhance in-house product business
- 3 . Pursue a more efficient IA and control business as a whole

■ Responding to changes in target markets

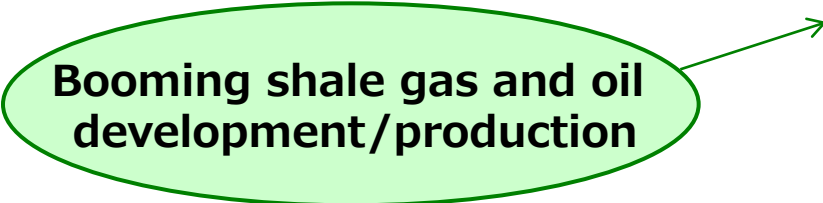
To further expand IA and control business:

- 1 . Reinforce organizations in North America
- 2 . Reinforce organizations in emerging and resource-rich nations and regions

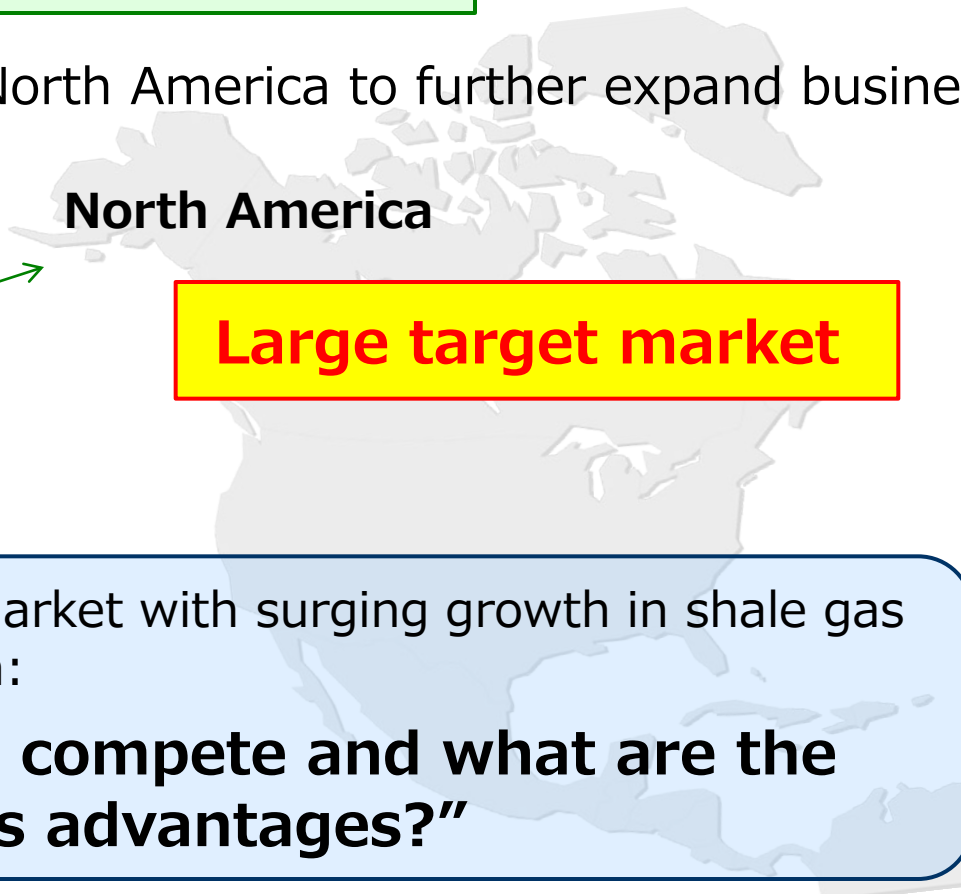
■ Responding to changes in target markets

1. Reinforce organizations in North America to further expand business

Booming shale gas and oil development/production



North America



Large target market

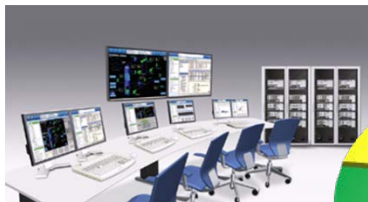


In North America, a booming market with surging growth in shale gas and oil development/production:

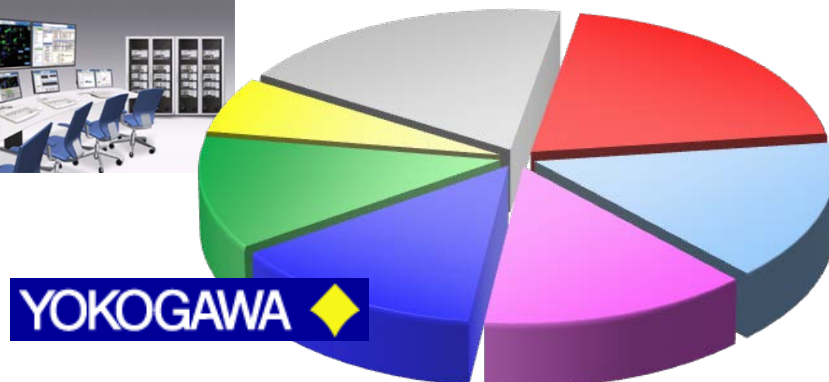
“How can Yokogawa compete and what are the company’s advantages?”

Our advantages

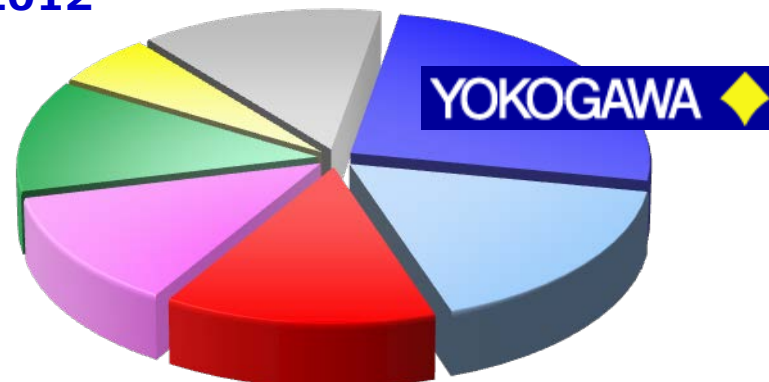
YOKOGAWA ◆



Global market share in 2012

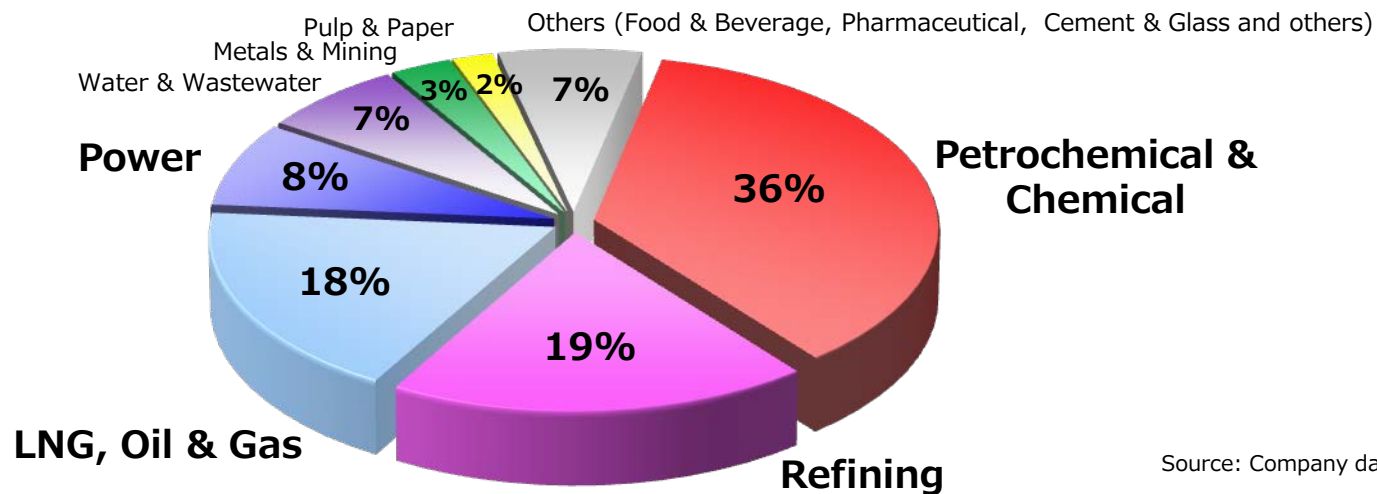


Global chemical market share in 2012



Source: ARC Distributed Control Systems Worldwide Outlook MARKET ANALYSIS AND FORECAST THROUGH 2016

2012 Yokogawa DCS sales: 218 billion yen



Source: Company data

- ① **Line-up of highly reliable, high quality products**
- ② **Superior project management capabilities**
- ③ **Extensive knowledge of industries and high-level engineering capabilities**

**Deep industry-specific know-how
acquired through extensive experience
in Japan market
→ Apply globally**

— Target markets—

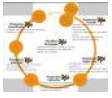
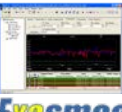
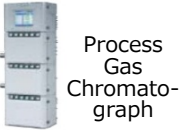
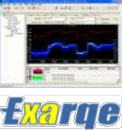
Large and high growth markets

**Upstream, electric power,
specialty chemicals**

Markets where we already have a strong position

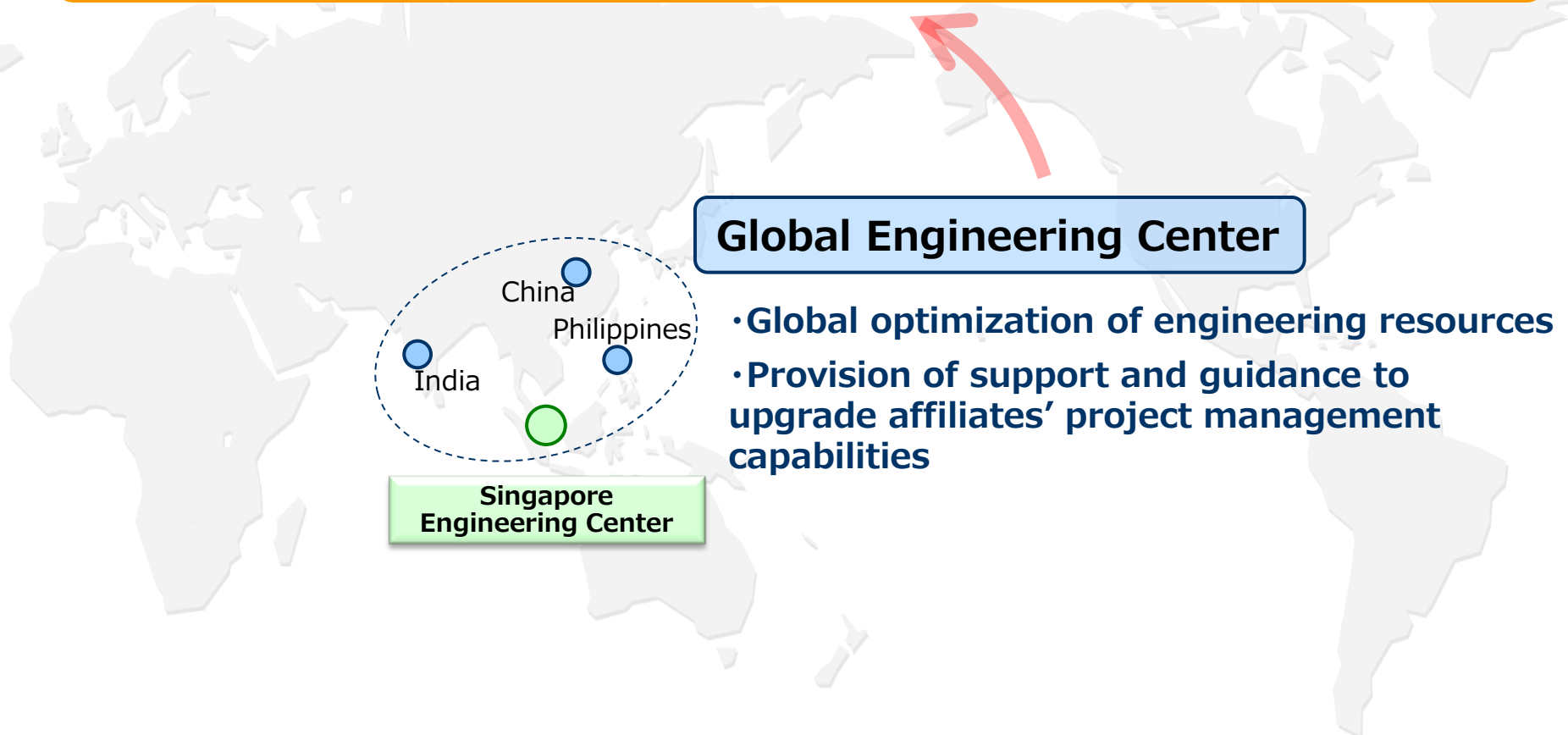
Downstream, LNG

① Line-up of highly reliable, high quality products

ERP		Optimize		Control		Measure			
		Production Management	Asset Management and Operational Efficiency	Production Control and Safety Management	Data Acquisition and Logic Control	Analysis and Quality Control	Sensing and Actuation		
MES / PIMS	Operational Efficiency	 Real-time Production Organizer Platform Application	 Exapilot	 CENTUM VP	 Paperless Recorder	Analytical	 Turbidity Analyzer	Pressure Level	 Variable Area Rota Meter
		 Exaquantum	 Exaplog	 STARDOM	 Chart Recorder		 2-Wire Liquid Analyzer		 Pressure/Differential Pressure
Advanced Control	Asset Management	 Exasmoc	 CAMS for HIS	 ProSafe RS	 Data Acquisition and Monitoring	 Process Gas Chromatograph	Positioner	Temperature	 Differential Pressure
		 Exarqe	 PRM	 FA-M3 VITEC	 Single Loop Controller & Temperature Controller	 Near Infrared Analyzers			 ISA100 wireless
Energy saving system		 Enerize	 EconoPilot		 Signal Conditioner	 Laser Analyzer			 Magnetic AXR
					 Power Monitor	 Gas Density Meter			 Ultrasonic US300
						 Oxygen Analyzer			 DTSX 200
							 Advanced Valve Positioner		 Temperature Transmitter
							 I/P Converter		

② Superior project management capabilities

From 2000: **Upgrading of project management capabilities to ensure reliable implementation of super-large projects**



③ Extensive knowledge of industries and high-level engineering capabilities

AA industry

Company A ○○PJT

- Specifications



Company B △△PJT

- Specifications



- Common elements -

Strong experience and track record

Accumulated industry-specific application/system integration expertise and know-how

Standardization

Improving engineering/service efficiency and quality

Positioning engineering centers as a global function and globally utilizing expertise and know-how gained through delivery of projects and services

**Transform tacit knowledge into explicit knowledge,
and standardize and share it for higher efficiency**

④ Localization

- ① Line-up of highly reliable, high quality products
- ② Superior project management capabilities
- ③ Extensive knowledge of industries and high-level engineering capabilities

+ ④ Localization

Why localization is important

- ① Collaboration
 - Greatly influenced by the culture of a country or region
- ② Provision of local support over the entire plant lifecycle
 - Keeping control systems healthy
 - Responding to changes in processes
- ③ Maintaining the same quality worldwide (products, services, delivery)
- ④ Development of personnel who can provide process automation support
- ⑤ Provision of 24/7/365 support

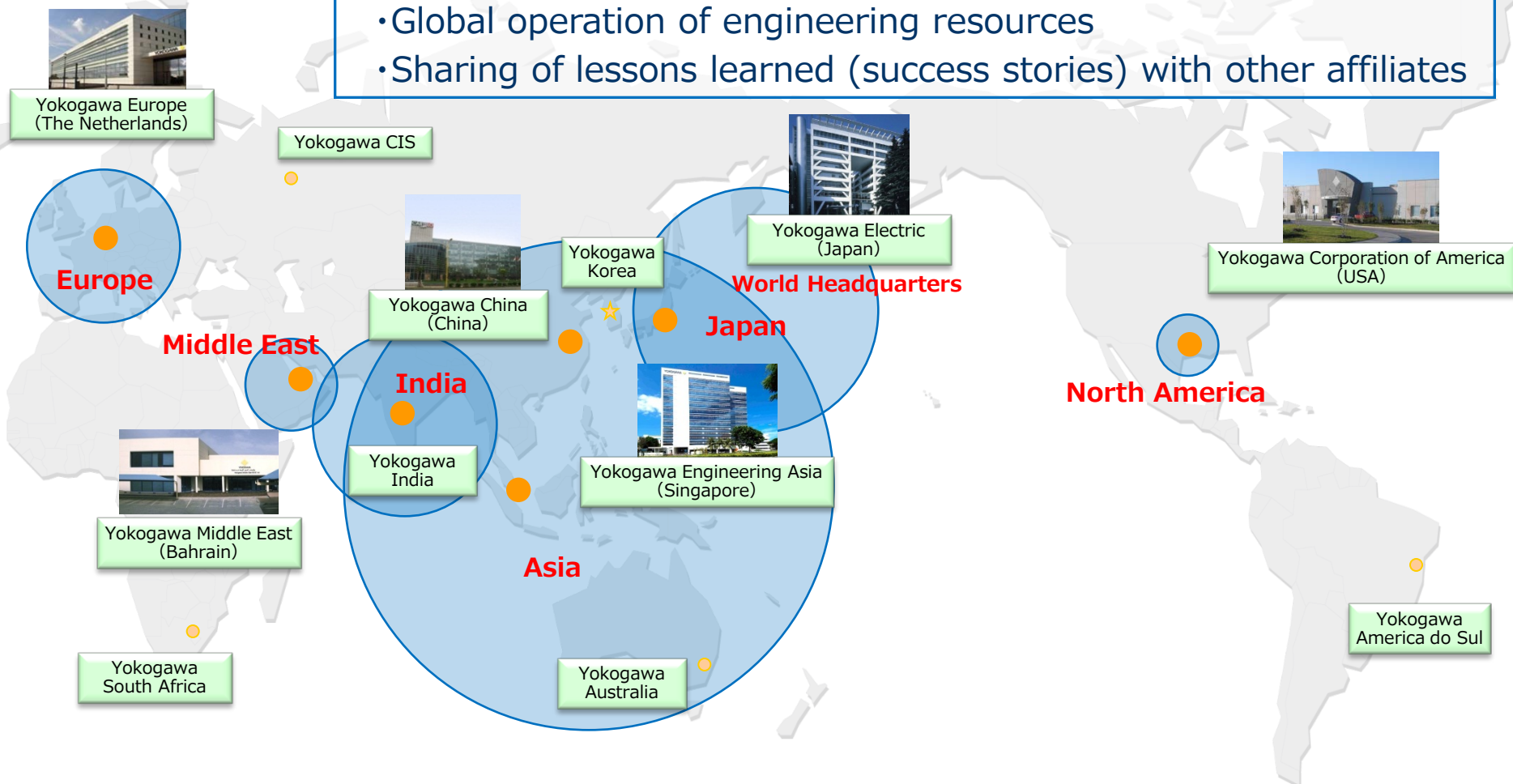
Localization of customer support



Localization of engineering: Global workforce of over 4,000 engineers

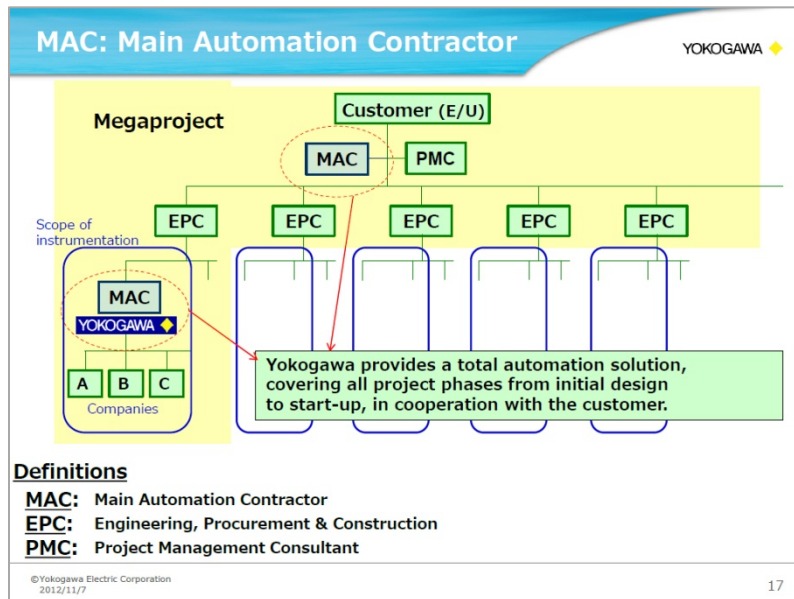
Global Engineering Centers:

- Global operation of engineering resources
- Sharing of lessons learned (success stories) with other affiliates



- ① Line-up of highly reliable, high quality products
- ② Superior project management capabilities
- ③ Extensive knowledge of industries and high-level engineering capabilities
- ④ Localization

➡ Use these four advantages to
expand mainly in those markets where we already have a strong position



MAC* contracts require
high-level project execution
capabilities



The capability to consistently provide these four
benefits to customers is **key to our
acquisition of MAC contracts**

MAC* = Main Automation Contractor

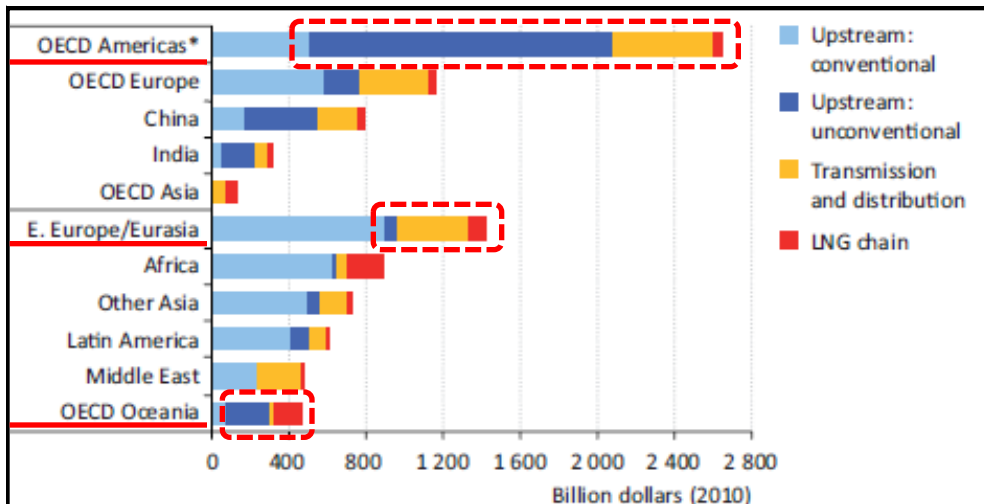
Promising up/midstream markets

- Huge shale gas investment is expected in North America
- North America is turning into a “low-cost” fuel/feedstock supplier, which is driving large projects for the production of fertilizers, ethylene, etc.
- Low priced shale gas will stimulate the entire energy supply chain: wellheads, LNG terminals, FPSO/LNG carriers, pipelines

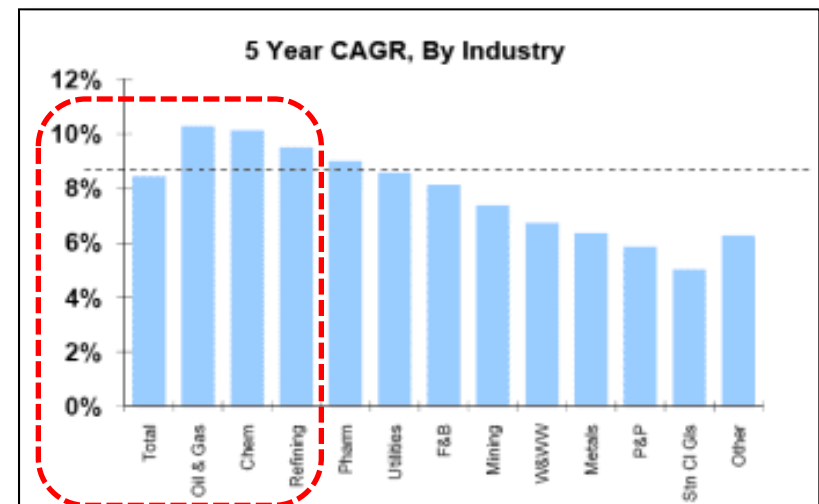
An MCAA* report states:

Major industries may maintain a 8-9% CAGR for the next 5 years.

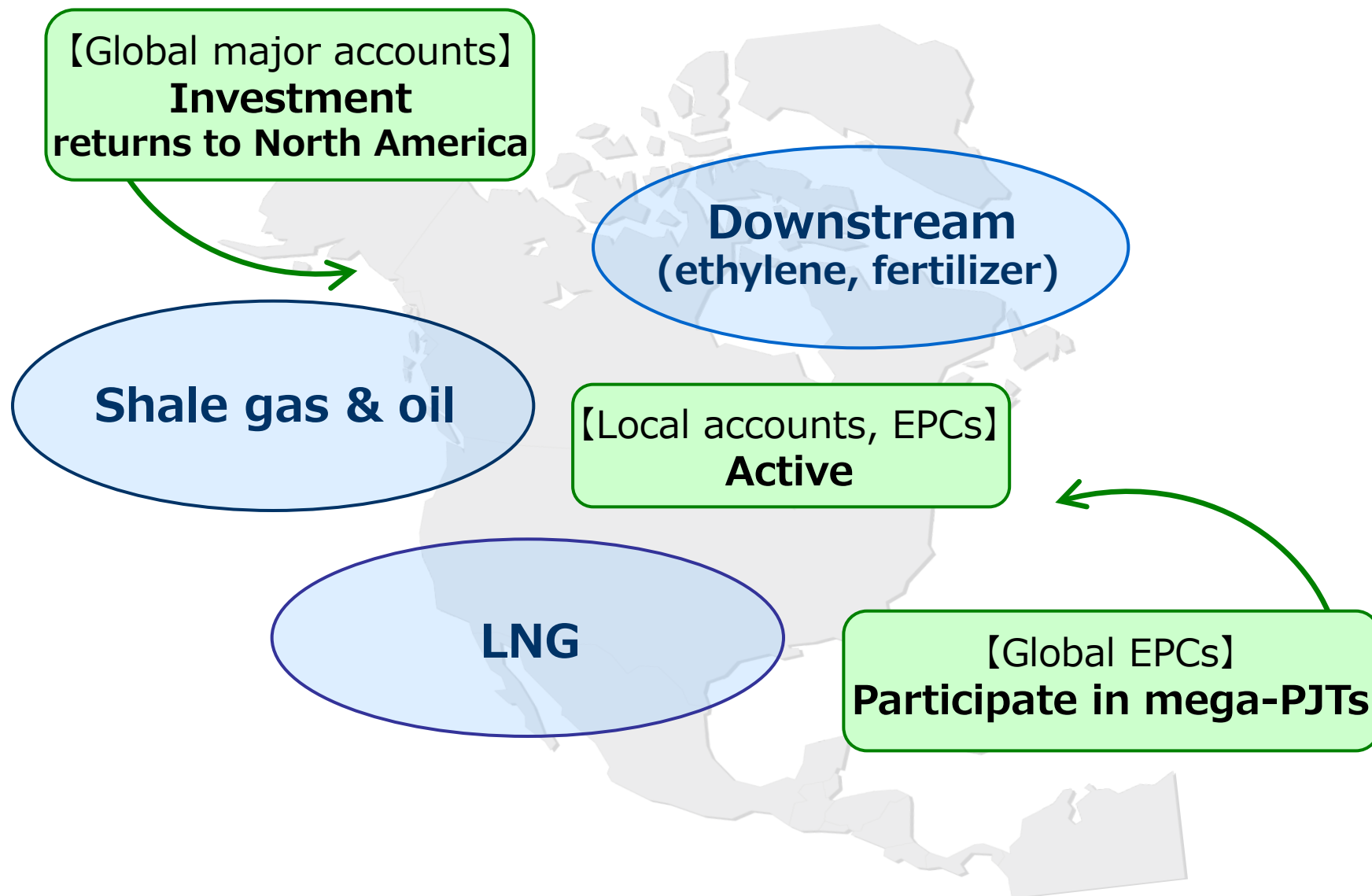
* MCAA= Measurement, Control & Automation Association



Source : IEA WEO2012_GoldenRulesReport



Source : MCAA “Market Forecast for Process Instrumentation and Automation in the US and Canada”



North America has become a market that can demonstrate
Yokogawa's advantages

**Experience and
track record**



**Yokogawa now enjoys a higher
profile in the North American
market**

- ① **Line-up of highly reliable, high quality products**
- ② **Superior project management capabilities**
- ③ **Extensive knowledge of industries and high-level engineering capabilities**
- ④ **Localization**



How to strengthen our project execution capabilities based on
the above four factors:

This is key to our business expansion

① Line-up of highly reliable, high quality products

DTSX200 distributed temperature sensor ProSafe-RS safety instrumented system



- Combines optical measurement and environmental resistance technologies
- In 1 m increments, can accurately measure temperature at sites up to 6 km away, and can be used in locations that lack a secure power supply and have widely varying temperatures.

→ Highly applicable for non-conventional resource applications

- Suitable for a wide variety of applications including tank and pipeline leak detection, detection of conveyor belt overheating, solar power generation, and desert site oil/gas

extraction



- Prevents accidents at safety critical plants by detecting operating failures and initiating emergency shutdowns
- Complete integration with CENTUM series process control systems
- Very well received in the marketplace; has been implemented in more than 1,200 projects to date
- Meets customer needs for everything from upstream to downstream

Localization in North American market

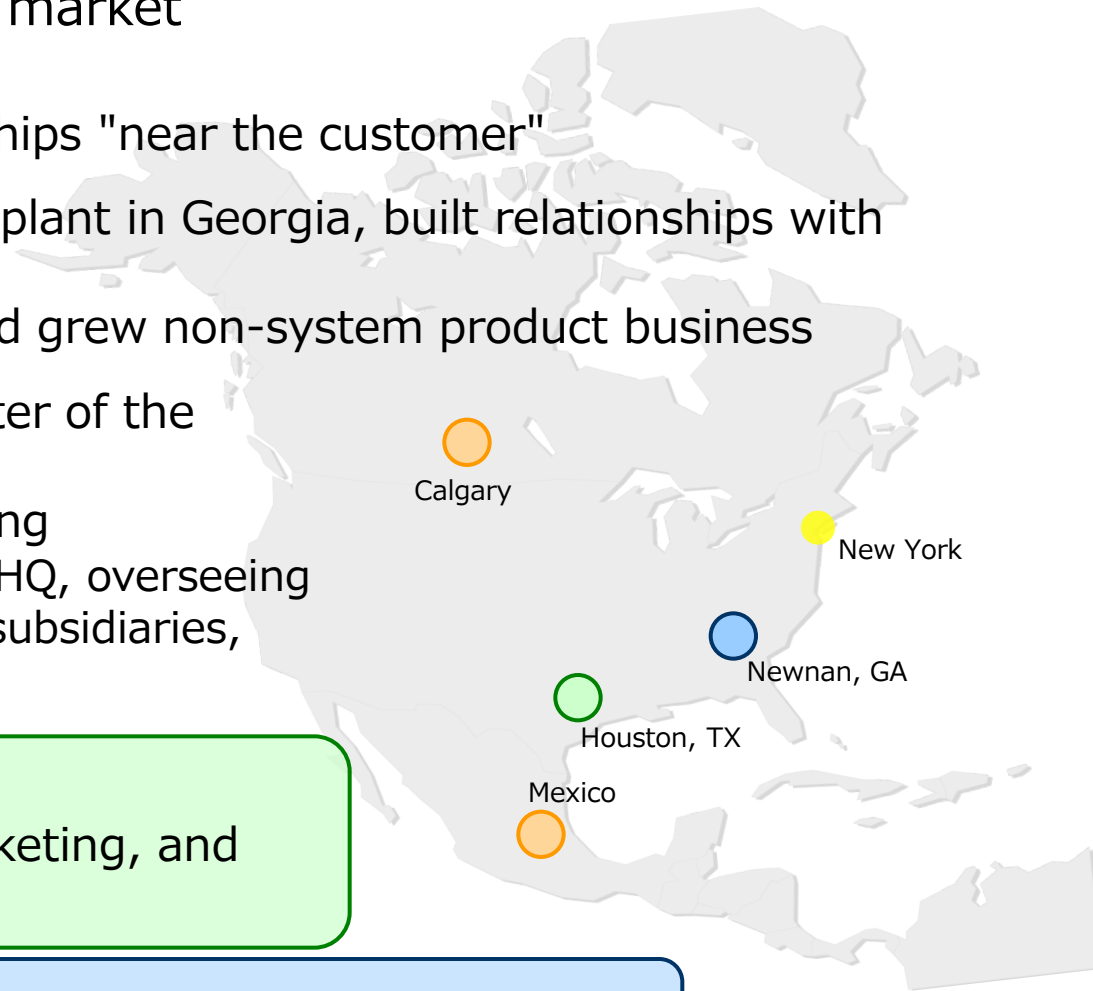
- Localization started in 1957
→ Building trust-based relationships "near the customer"
- After constructing a production plant in Georgia, built relationships with local sales distributors
→ Established sales network and grew non-system product business
- Headquartered in Houston, center of the petrochemical industry
→ Focus on sales and engineering
→ Functions as North American HQ, overseeing U.S., Canadian, and Mexican subsidiaries, with a total of 800 personnel

Strengthen local resources

- Strengthening of local sales, marketing, and engineering capabilities

Expand local modification

- Quickly provide customers with products that meet their needs



Project:	Sabine Pass LNG
Customer:	Cheniere Energy Partners
Plant:	Facility for liquefaction/export of natural gas and gasification of imported LNG
Start of operation:	Undecided
Location:	Cameron, LA
Production facilities:	4 x 4.5 mtpa liquefaction trains (mtpa: million tons per annum)

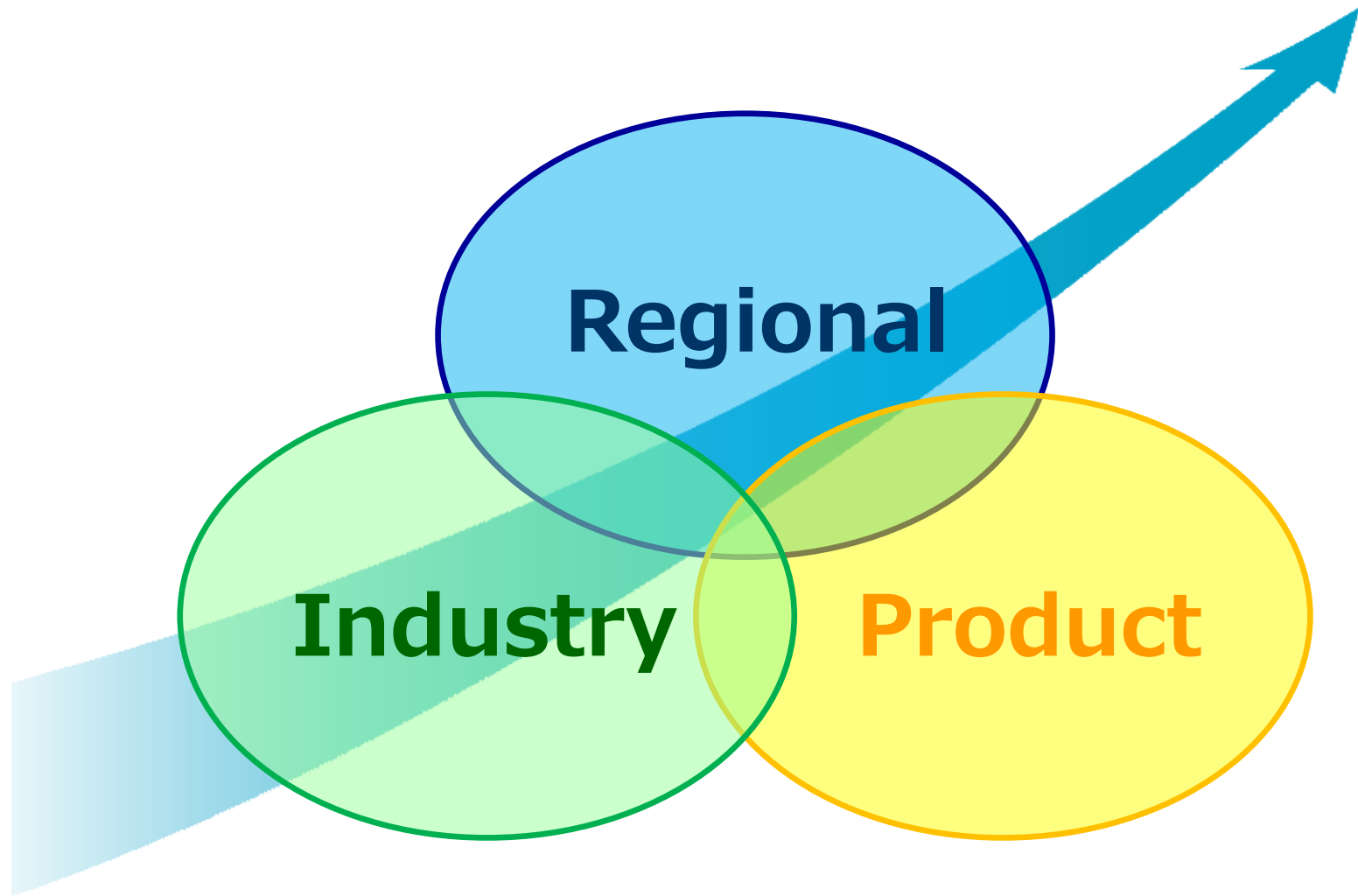
Yokogawa's scope

- Integrated production control system
- Safety instrumented system

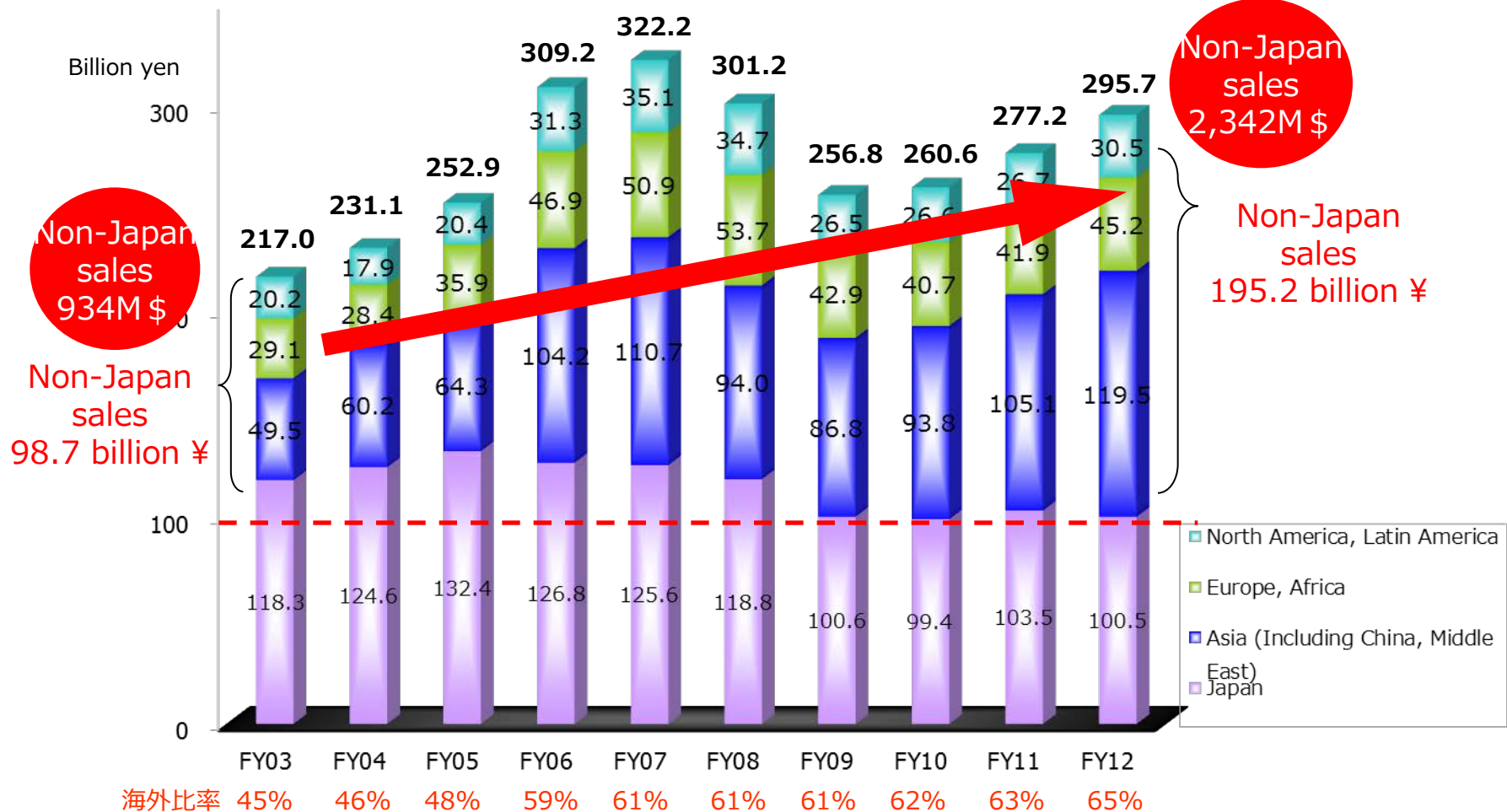
Why the customer selected Yokogawa

- Long-term relationship with Cheniere Energy Partners
- A leading provider of LNG plant solutions
- Highly reliable control system with easy to use HMI
- A pioneer in the development of integrated monitoring, control, and safety systems

Implement the following 3 strategies:



Non-Japan sales: Grew 2.5 times in 10 years (in dollar terms)



(Billion ¥)

		FY12 results	FY13 budget	Change
Orders		354.5	400.0	45.5
Sales		347.9	385.0	37.1
Operating income		18.4	25.5	7.1
Ordinary income		18.0	23.0	5.0
Net income		14.7	14.5	(0.2)
Exchange rates	1\$= 1€=	¥83.33 ¥107.40	¥97 ¥130	¥13.67 ¥22.60

The information pertaining to our business plans and forecasts that has been provided in this presentation and at analyst meetings contains forward-looking statements that are based on our management's current knowledge and require the making of assumptions about future events. As such, it cannot be guaranteed that these statements will not differ materially from actual results.