



GE Supply Chain Operations in APEC

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May 17, 2015

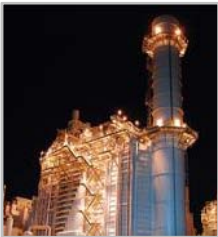
Imagination at work.

GE Global Business Overview

- 8 businesses operating in more than **175** countries ...**125+** years
- **305,000** employees worldwide
- 2014 revenue \$ **148.6 B**

2014 Revenue

Power & Water
\$27.6B



- Thermal
- PG Services
- Renewables
- Water
- Nuclear
- Aeroderivatives
- Jenbacher
- Waukesha

Oil & Gas
\$18.7B



- Drilling & Sub-surface
- Global Services
- Measurement & Control
- PII Pipeline Solutions
- Subsea Systems
- Turbomachinery

Energy Management
\$7.3B



- Digital Energy
- Power Conversion
- Industrial Systems

Aviation
\$24.0B



- Commercial
- Military
- Service
- Avionics/ Systems

Healthcare
\$18.3B



- Healthcare Systems
- Life Sciences
- Healthcare IT
- Molecular Diagnostics

Transportation
\$5.7B



- Locomotives
- Services
- Propulsion Systems

Lighting
\$8.4B



- Appliances
- Lighting
- Intelligent Platforms

GE Capital
\$42.7B

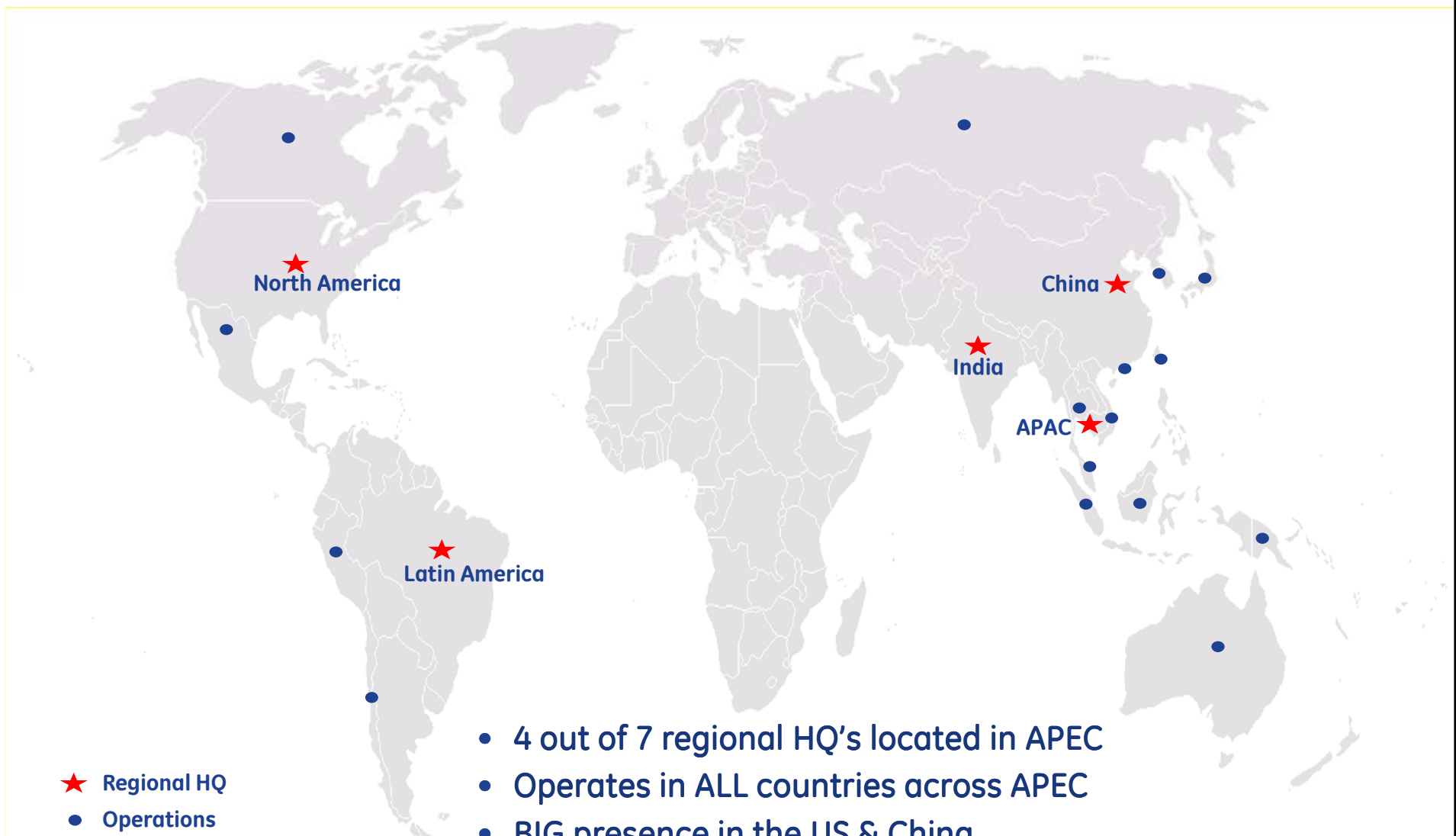


- Commercial
- Consumer
- Real Estate
- GECAS
- EFS



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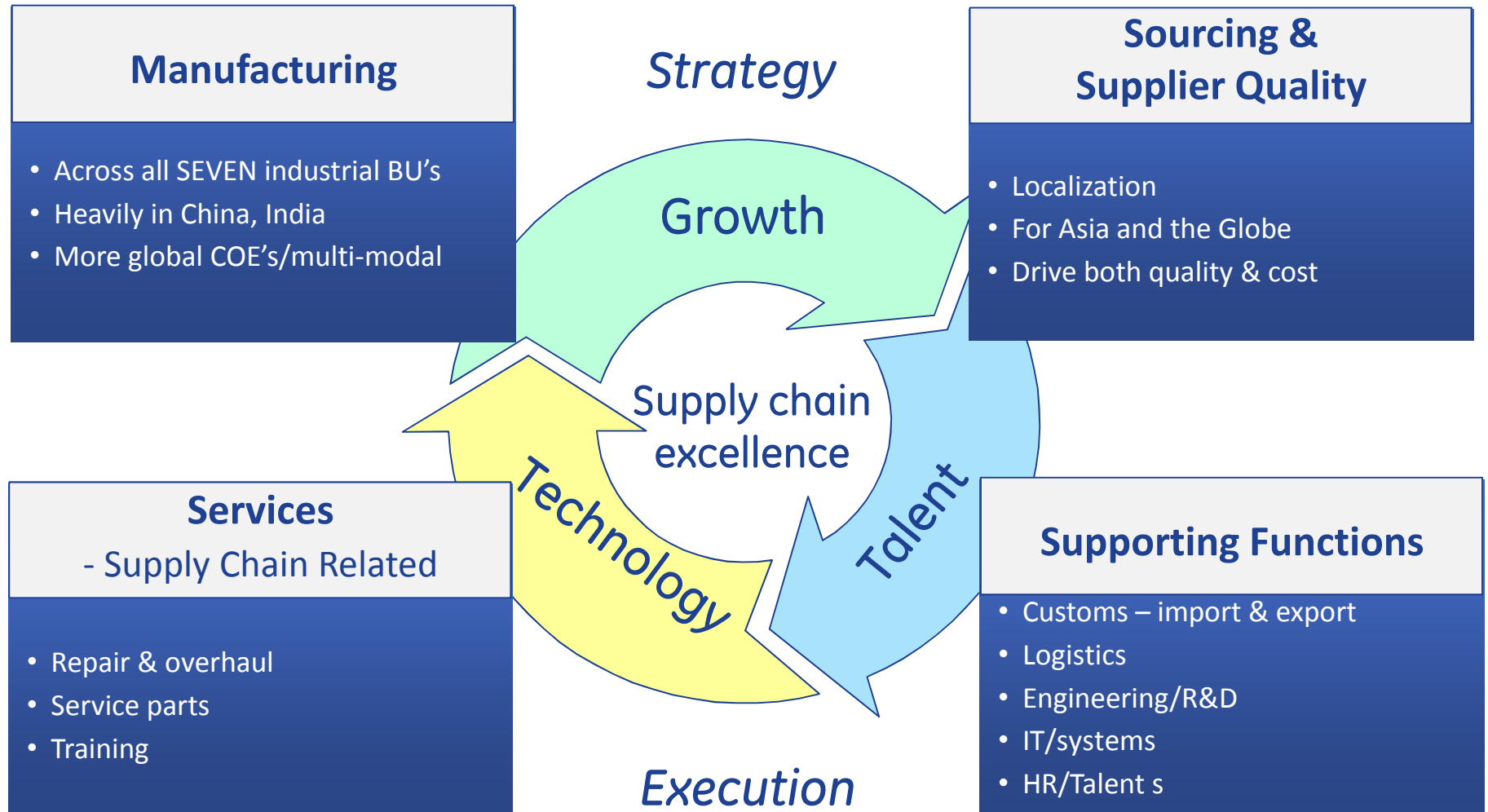
GE Footprint in APEC



- 4 out of 7 regional HQ's located in APEC
- Operates in ALL countries across APEC
- BIG presence in the US & China

China...\$7Bn revenue , 30+ sites, 18,000 employees

GE Supply Chain Operations in APEC



In Country For Country & Globe – Tianjin China

Site Brief

- Ops started in...June 2014.
- Plant size...40,000 m²
- Location...Airport Economic Area.
- # of employees...80 + services
- Business unit...Healthcare

Products & Operations

- Integrated production, design support in China, Japan, US
- Current focus on MRI magnets & system growth
- Assembly, Magnet winding, Welding, Cryogenics, Testing



- Investment driven by strength of China customer market.
- Growth focused on China + Asia.
- Simplify Global Supply Chain footprint (product focus).
- Gradual growth, driven by NPI and strategic transfers.

Site Vision

- Selling locally-made products in the local market
- Covering fixed costs (utilities, depreciation) at pilot volumes
- Focus on training: Technical, Compliance, Culture

Challenges



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In Country For Globe – Haiphong Vietnam

Site Brief

- Ops started...2010
- Land size...80,000 m²
- Location...Haiphong, Vietnam
- # of employees...650
- Business unit...Power & Water

Products & Operations

- Generator/Motor - wind turbines
- Electrical Assembly for turbines
- Valve assembly for Oil & Gas
- Fabrication



- Operation Excellence...Be a multi-modal manufacturing plant
- Be 1 of top 5 Haiphong's exporters
- Contribute to local community

Site Vision

- Challenging local administrative regulations & laws
- Speed in supporting industry...challenges in localization

Challenges



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In Country For Country – Hino Japan

Site Brief

- Ops started in 1982
- Land size...40,000 m²
- Location...Hino, Tokyo
- # of employees...2,000
- Business unit...Healthcare

Products & Operations

- Premium Ultrasound Probes
- CT detectors
- CoE for multiple products
- Strength in mid-tier medical systems



- Innovations to generate new growth
- Center of Excellence - Liver
- Global Star site
- Model Plant, Hino Brand, One Team

Site Vision

- Economic environment
- *Strong* competition vs. others
- Forex fluctuations
- Increasing labor cost

Challenges



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In Region For Globe – Jurong Singapore

Site Brief

- Ops started in 1970
- Land size...55,000 m²
- Location...Jurong, Singapore
- # of employees...560
- Business unit...Oil & Gas

Products & Operations

- Pressure control wellhead/trees
- Oil drilling equipment
- Subsea production equipment
- Repairs & spare parts
- Field service

- Global Manufacturing Site
- Prime manufacturing site for Pressure Control, Drilling & Subsea Production Equipment for customers in Asia Pacific, Australia & Middle East

Site Vision

- Uncertainties of mkt. demands
- Difficulty in building up talent pipeline for skilled technicians
- Increasing competition on timing, cost & quality

Challenges



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Sourcing & Supplier Quality

APEC Ops Brief

- Major supplier base...~35% in APEC
- Strategic suppliers...40%+ volume
- In region for region...75%, in region for the globe...25%+
- Widespread footprints...Greater China, Japan, India, Korea, Vietnam
- The same GE standards on quality, Environment, Health & Safety and with compliance to local regulations



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Sourcing & Supplier Quality

Challenges

- Imbalanced economy development
- Regulatory differences across countries
- Shortage of technical professionals
- Lack of uniform industry standards
- Culture differences on quality & EHS
- Local preference
- Value chain capability
- Increasing pressure on cost
- Limited number of APEC vendors qualified as global suppliers due to:
 - Absence of scale, and ability to secure competitive pricing for raw materials
 - Financial capacity and familiarity with global manufacturing standards
 - RESULT – most vendors selected are large MNCs with manufacturing in low-cost countries
- Logistics issues; distance from major GE markets, e.g., North America (lead time and transport cost considerations)
- Local value-added requirements in specific markets, limiting choice of suppliers to in-country vendors (regardless of competitiveness)



Asia Customs Operations

APEC Ops Brief

- 242 customs sites in the region
- \$18Bn Volume in 17 countries
- 312k annual filings performed across 116 ports
- ~195 full time employees in region

Strategy & Approach

- Standard process, operated by 1 team
 - One classification database
 - ... to meet country requirements
 - Standard platform
 - ... 1 global trade tool
 - Simplified
 - ... 3rd party network... ↓ agents >50%

Challenges

Infrastructure

- Organization - 1 team
- 3rd party logistics readiness
- Customs

Integration complexity

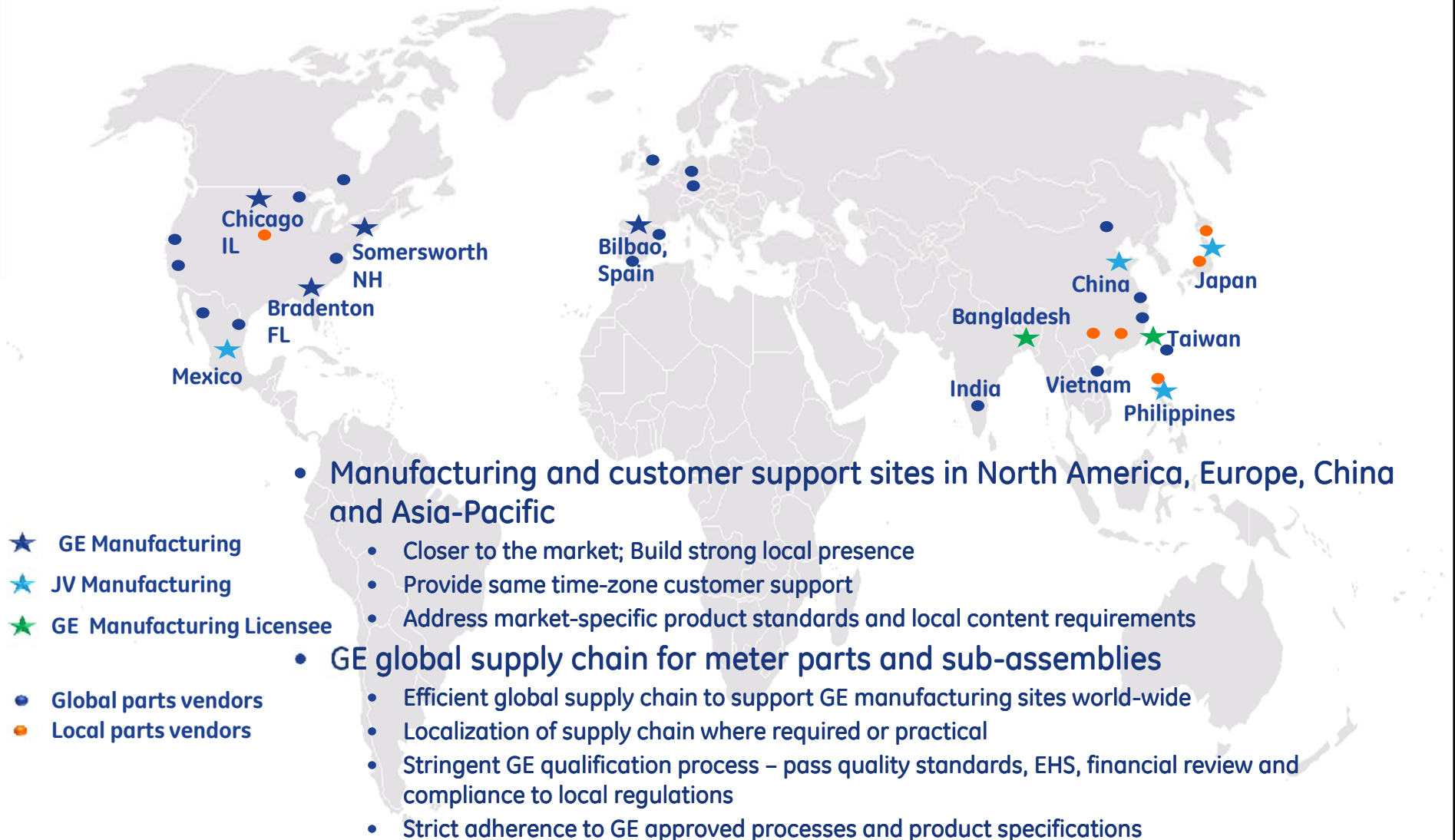
- Pre-integration DD
- Work migration
- Classification

Operations

- Process simplification
- Performance evaluation
- Single platform
- Duty savings

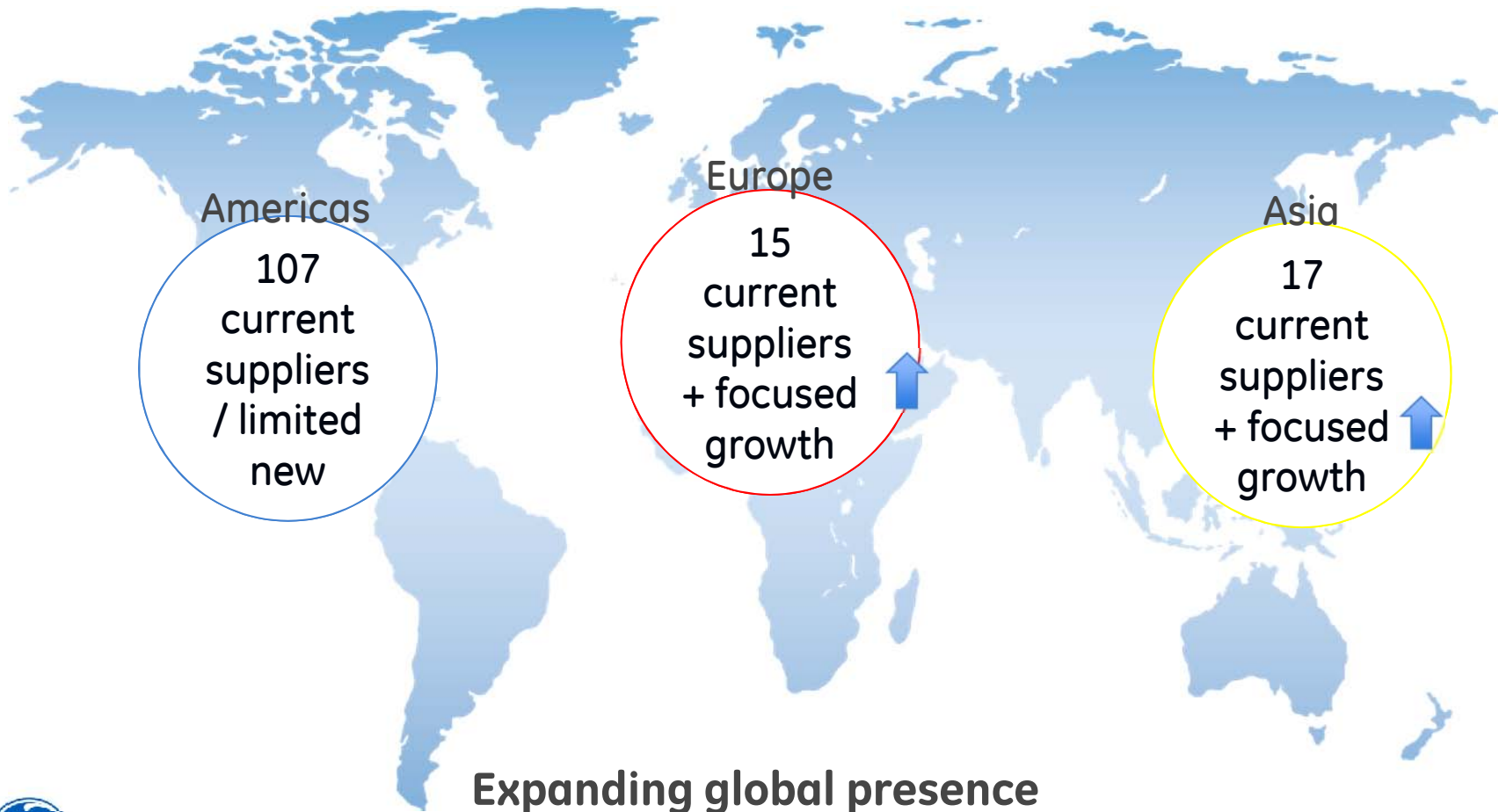


GE Meter Global Supply Chain



GE Meter Global Supply Chain

- **12** internal GE shops
- **139** current prime OV suppliers – primarily Americas
- **75%+** to be dual sourced; selection targeted 2015



Creating a thriving SME ecosystem requires multiple enablers

Critical levers of a SME Ecosystem

| | | Description |
|---|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 1 | Access to Finance  | Provide easy and continuous access to Finance |
| 2 | Advisory and Training Services  | Implement or allow for structured training and advisory programs at regular intervals |
| 3 | Partnerships with Enterprises and Institutions  | Collaborate with Large enterprises such as MNCs and develop networks and skills |
| 4 | Establishment of Institutional Body  | Establish a Government led institution that supervises the SME industry |
| 5 | Platform to Showcase and celebrate success  | Set up attractive events or forums that incentivize SMEs to showcase their existence and growth |
| 6 | Workspace Facilities  | Provide Office space and related facilities and develop such hubs that upcoming entrepreneurs can utilize |
| 7 | Exploring new markets for SMEs  | Look for and Support ancillary service markets where SMEs can grow |

Source: McKinsey & Company

Wrap Up...

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- A light gray world map is visible in the background of the slide, showing the outlines of continents and countries.
- Invest in infrastructure
 - Build a strong value chain (up & down-stream)
 - Drive localization
 - Government policy support
 - Political stability
 - Customer expectations on quality & cost
 - EHS and regulatory compliance
 - Customs operations



