



# GE Marine Power Conversion

October 2015



GE imagination at work

# Confidentiality

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# GE Marine: Power, Propel & Position

## 4 key business segments



### Exploration & Production

- FPSO
- Drillships
- Jack-Ups
- Semi-submersibles



### Offshore Support

- Anchor handlers
- Construction
- Platform supply
- Survey



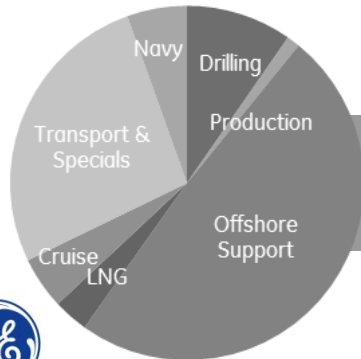
### Merchant

- LNG carriers / bunkering
- Cruise / Ferries
- Container vessels
- Chemical tankers



### Navy

- Aircraft carriers
- Destroyers
- Frigates
- Logistic / Auxiliary



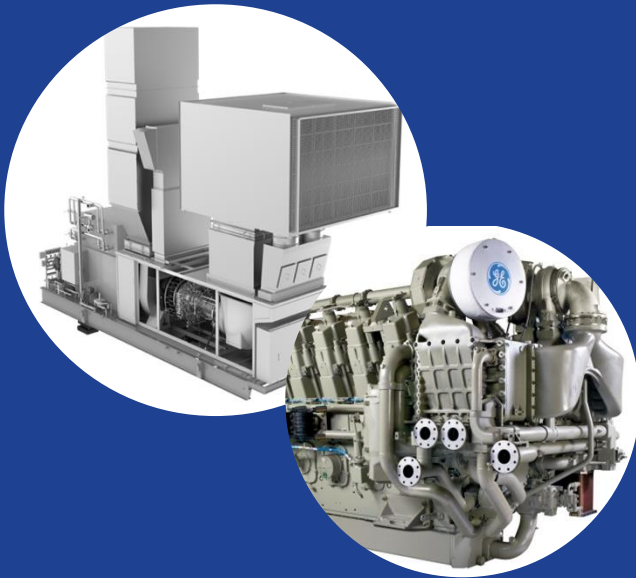
Installed base on 1,100 marine vessels



# GE Marine: Predict

## We Power

Gas turbines  
Diesel engines  
Generator sets  
Distribution



## We Propel

Podded Propulsion  
*Mermaid™ Pod*  
*Seajet™ Pod*  
Drives & motors



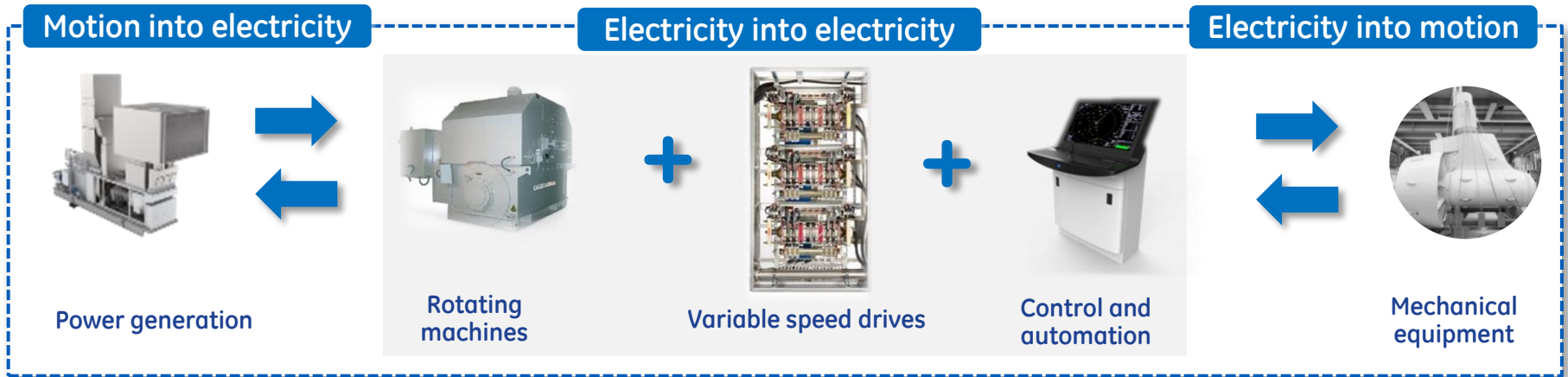
## We Position

Dynamic Positioning  
Automation &  
Control Systems



# We Predict

# GE Marine: Predict to optimize perf.



## Marine systems

### Power & Propulsion

- Enhanced thrust capability
- Hydrodynamic efficiency for operational performance

### Drilling Systems

- Reduced fuel consumption
- Reduced emissions
- Reduced maintenance levels

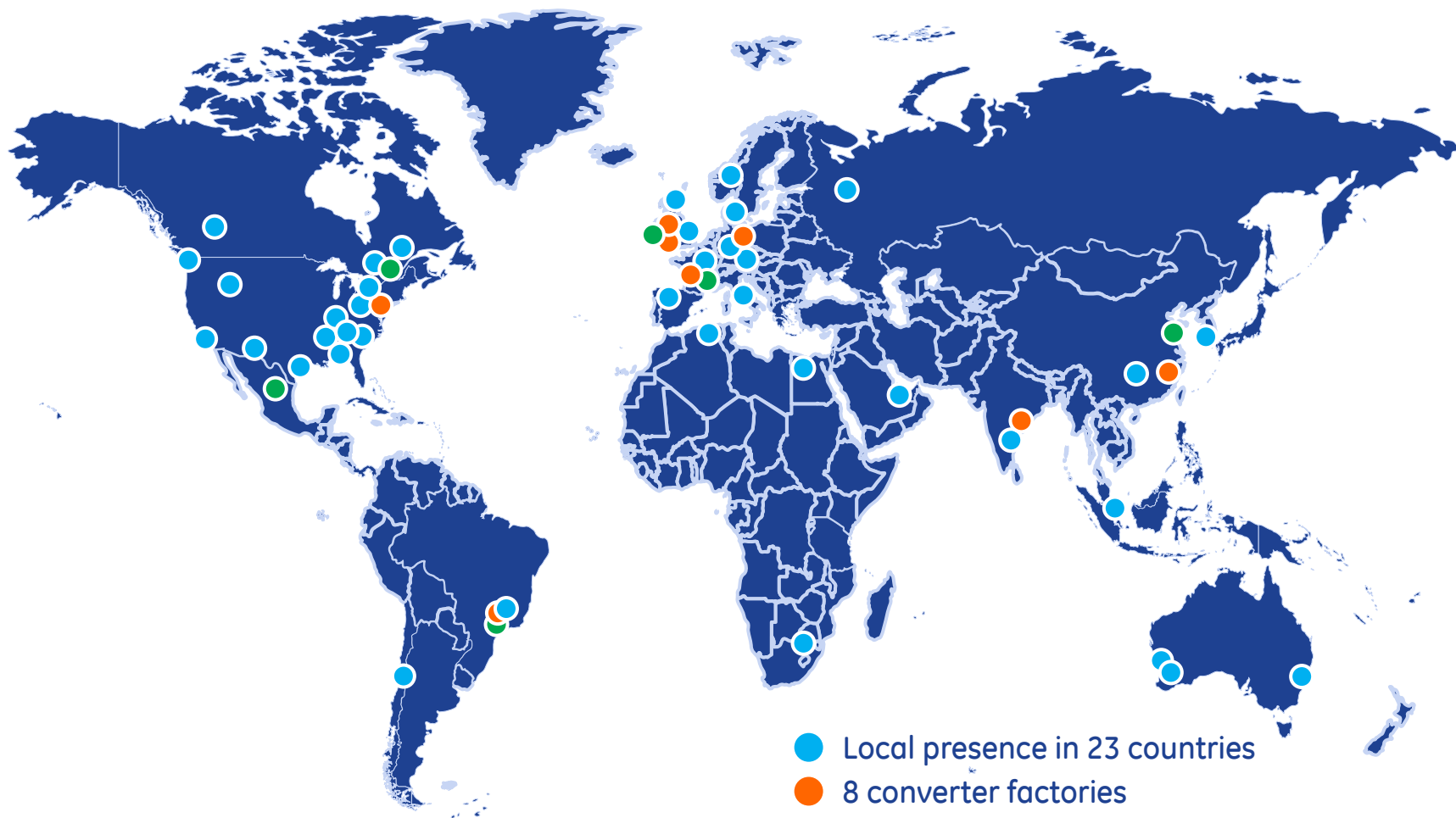
### Dynamic Positioning

- Mariner focused
- Energy efficient mode
- Safety

### Vessel Automation

- Reduced fuel consumption
- Integrated systems
- Intelligent power mgt

# GE Marine: Global footprint



For local support



# GE Marine: Power Conversion



## Dynamic Positioning

More than 900 Dynamic Positioning systems  
in operation world wide



## Automation System

More than 350 integrated automation systems  
in operation world wide

## Power & Propulsion System

More than 500 power and propulsion plants  
in operation world wide



# GE Marine: Merchant Marine



## Electric Prop for Passenger Vessels

70+ cruise/ferry/yacht in operation world wide  
or under construction

## PWM converter + induction motor

More than one hundred references in operation WW  
11+6 AFE PTO/PTI Container vessels

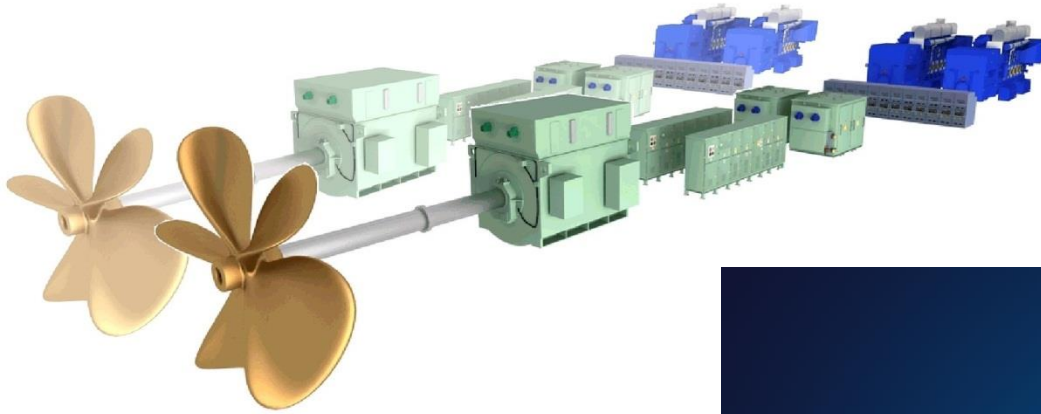
## Dual Fuel Electric Propulsion System

80+ vessels (Ferry, LNG carrier, FSRU, LNG FPSO) in  
operation world wide or under construction





# GE Marine: Merchant Marine Scope



## Prime movers, Power generation:

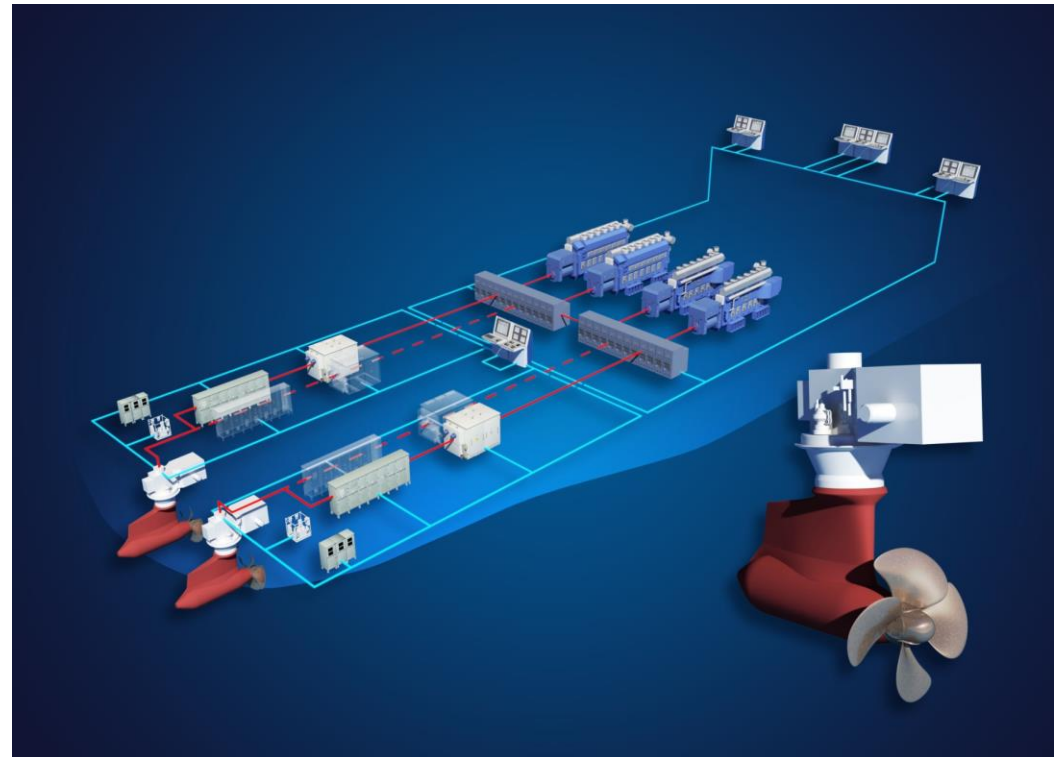
- Diesels, GT
- Alternators

## Power distribution:

- SWBD
- Transformers

## Propulsion:

- Converters
- PEM, Pods, PTO/PTI



# General Electric

## Passenger vessels GE main customers

# GE Pax customers



# General Electric

## LNGCs

# LNG Carriers & FSRUs

102 LNG Carriers  
Incl 8 FSRUs

38 on order



EPS

- Generators
- Switchboards
- Propulsion train

Reliquefaction converters



# Marine services Expertise in Marine applications

# Merchant marine

Services are performed by our skilled marine specialists anywhere in the world, at sea or during dry docks.

*Image courtesy of MSC Crociere*



Your dedicated Fleet Manager is in charge of service from delivery of the ship and throughout its life.

## Center of Excellence in Belfort, France

- Design and service engineering center
- Remote monitoring and diagnostics
- Simulation and training platform
- Service field technicians, engineers and experts



# Navy

GE has been supplying electrical power and propulsion systems for Naval ships for over 90 years. We are servicing assets worldwide.

- Aircraft Carriers
- Destroyers
- Frigates
- Submarines
- Support ships
- Specialist ships
- Naval test centers

## Centers of Excellence in:

- Rugby, UK
- Belfort, France
- Pittsburgh, USA





# Offshore

Global service organization with local delivery. We service all segments i.e. exploration, production and special and offshore support vessels.

- Survey
- Drilling
- Supply and installation
- Transportation

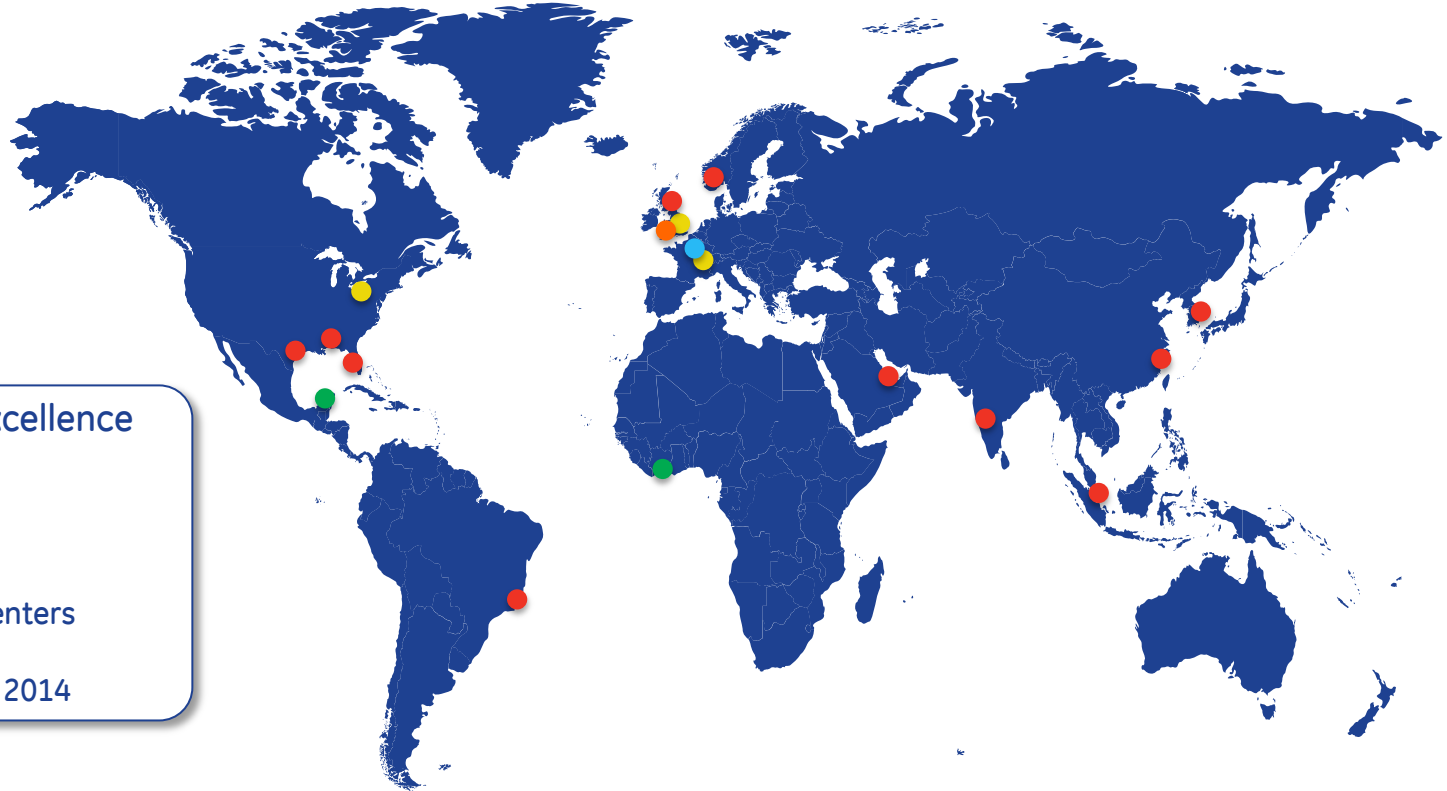
## Center of Excellence in Rugby, UK

- Design center
- Remote monitoring and diagnostics
- Service engineering
- Simulation and training platform
- Service field technicians, engineers, and experts

# Marine services Merchant Marine

# Marine Services - Global support

*Worldwide team of 350 and growing: Miami, Houston, Maceo*



## Global Centers of Excellence

- Navy
- Merchant
- Offshore
- Regional business centers
- Planned locations in 2014

350 service engineers, technicians, fleet managers, and contract managers, take care of your systems and operations locally.

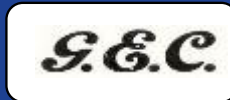
# Marine Services - Full service offering



# Marine Services - Legacy brands

We are committed to supporting all generations of drives, control and automation, motors and generators installed by us under our various previous names including:

- GEC
- CGE
- AEG
- GEC-ALSTHOM
- Cegelec
- ALSTOM
- Converteam



All legacy brands currently serviced by:



Marine Services



imagination at work