

Life Is On

Schneider
Electric

MARINE SERVICES AND SOLUTIONS

Save money with Schneider Electric Marine Services and Solutions for your ships.

schneider-electric.com/marine



Secure your peace of mind throughout the whole installation lifecycle

Some Marine Solutions provided by Schneider Electric

LV/MV electrical distribution (Antenna & Ring architecture)

Energy Efficiency solutions (Ex: Engine Room Cooling system)

Connected devices for Condition-Based Maintenance (Remote Asset Management)

Machinery protection & control

Scrubber

Motor control and LV/MV drives

Automation solutions

Retrofit solutions (modernisation)

UPS solution

Shore power connection

Isolation monitoring

Active/Passive filtering

Ultra Rapid Circuit Breaker

CCTV

Schneider Electric helps you optimise your Total Cost of Ownership throughout the whole life cycle



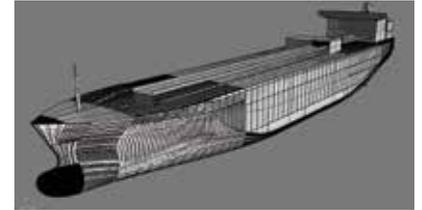
Ship after 10 or 15 operating years

We help you define and implement the best solution against vessel obsolescence, while controlling the aging infrastructure associated costs



Ship after few operating years

We give you proactive and tailored recommendations to reduce risk, improve solution performance and reliability



Ship at engineering stage

We help you plan, define and design the right solution for your vessel



Ship in operation

We help you maximise uptime and performance, with expenditure control



Ship at building stage

We help you install efficient, reliable and safe solution on board

Why services are vital for your ship?

- Increase productivity (uptime) and safety
- Keep equipment up to date and extend its lifespan
- Cut costs and increase savings to improve your ROI

Key figures about failures in electrical equipment

77% can be avoided with regular maintenance
17% are due to poorly performed services

Source: FM Global insurance company



PLAN the future with the best technical choices for your investment

Do you want to renovate, convert your complete ship or invest in a new ship building?

Schneider Electric experts can help you plan, define and design the right solution for your vessel.

Ship at engineering stage

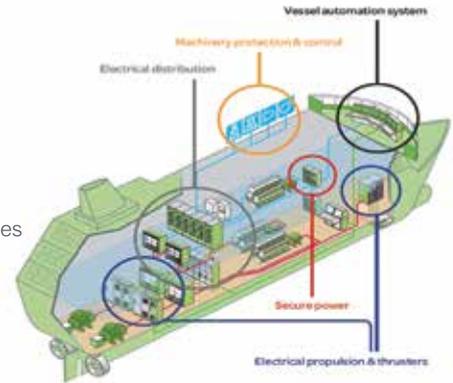
Our Offers

Engineering expertise for:

- **Design:** architecture, sizing equipment, EMC studies, software
- **Safety:** high safety level requirement (SIL4), reliabilities studies
- **Network Power Quality:** Harmonic studies, electrical network calculation (Icc, selectivity), load flow, static and dynamic studies

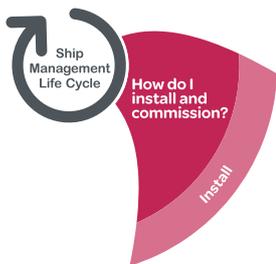
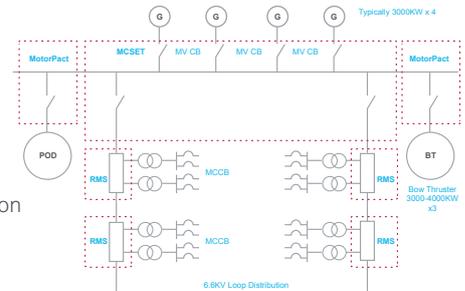
Smarter, safer but also innovative and reliable solutions for:

- MV to LV electrical distribution
- Automation system
- Machinery protection and control
- Secure power and power quality



Your Benefits

- Ship process reliability and availability
- Reduced investment costs thanks to power equipment sizing optimisation
- Reduced operating costs with energy consumption optimisation
- Compliance with international standards related codes and constraints



Start operating on time with a reliable INSTALLATION

Do you want to secure your operating revenues from day one?

Reduce the risk of delays and premature failures with Schneider Electric Field Services Experts.

Ship at building stage

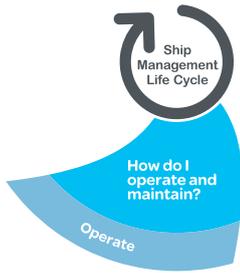
Our Offers

- Project execution management
- On board installation supervision
- On board testing and commissioning
- Software installation and set-up

Your Benefits

- Reduced risk of delays
- Reduced risk of premature failures
- Reliable installation performance
- On board recommendations for set-up, operation and maintenance
- Traceability of our interventions





OPERATE your vessel with peace of mind

Do you want to reduce your ship process downtime and prolong the life span of your devices?

Schneider Electric helps you maximise your ship process uptime and performance, with capital and operational expenditure control through proactive set of actions.

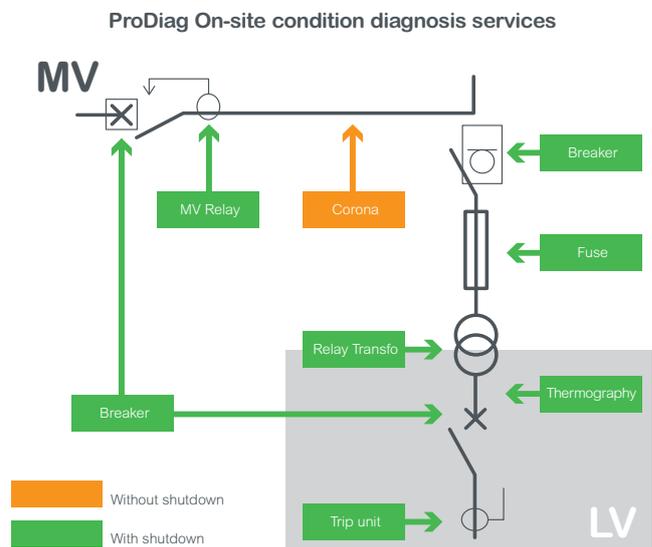
Ship in operation

Our Offers

- **Preventive maintenance:** time based to prevent failures
- **Diagnosis:** predictive maintenance to avoid failures
- **Corrective maintenance:** on board troubleshooting and remote technical support by experts
- **Spare parts:** supply worldwide
- **Training:** for the crew, about operation and basic maintenance tasks
- **Service Plan:** recurring contract or agreement
- **Software:** update and support

Your Benefits

- Worldwide: wherever your ship is located
- Cost savings with reduced downtime and restart time
- System troubleshooting, repair and maintenance by a manufacturer's expert with the guarantee of performances
- Improvement of installation safety, availability, reliability and quality
- Expert recommendations
- Installed base registration and monitoring by Schneider Electric and Partners, using service registration tool (IBSuite)



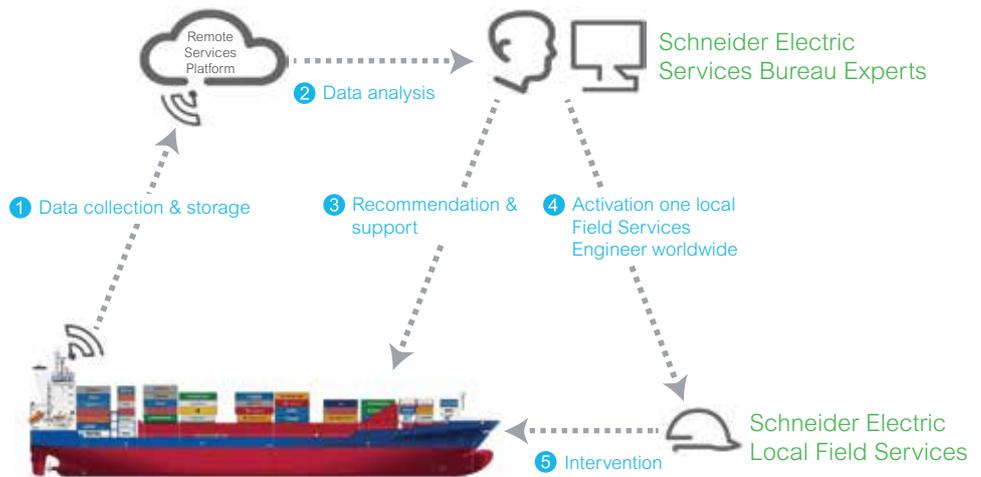
High-performing Diagnostic tools

Condition Based Maintenance with Digitised Services to minimise your costs and optimise the life of your asset.

Transform data into benefits!

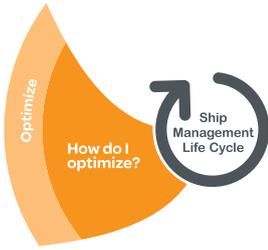
Your ship connected to our platform and experts, results in better informed decisions and earliest maintenance actions on board wherever your ship is located.

Your benefits from innovative approach are **avoiding unscheduled downtimes, optimising maintenance costs, preparing modernisation phase, optimising the ship life cycle costs and complying with specific regulations.**



Services Provided

-  **Condition Based Maintenance**
 - Optimise maintenance cycles
 - Anticipate failures and replacement
 - Enhance your uptime
-  **Remote Technical Support**
 - Remote Diagnosis, Troubleshooting & Alarming
 - A phone support tailored to your needs
 - A single point of contact for your complete fleet
-  **On Board Intervention Management**
-  **Energy Management**
 - Energy consumption monitoring & analysis
 - Reduce your Energy consumption
 - Improve your power quality
-  **Experts Periodical Report**



OPTIMISE your operating and investment costs

Do you want to reduce fuel consumption or downtime risk?

Schneider Electric proposes solutions to save energy consumption for your pumps, fans or motors, and recommendations to improve safety and reliability of your ship's electrical network.

Ship after few operating years

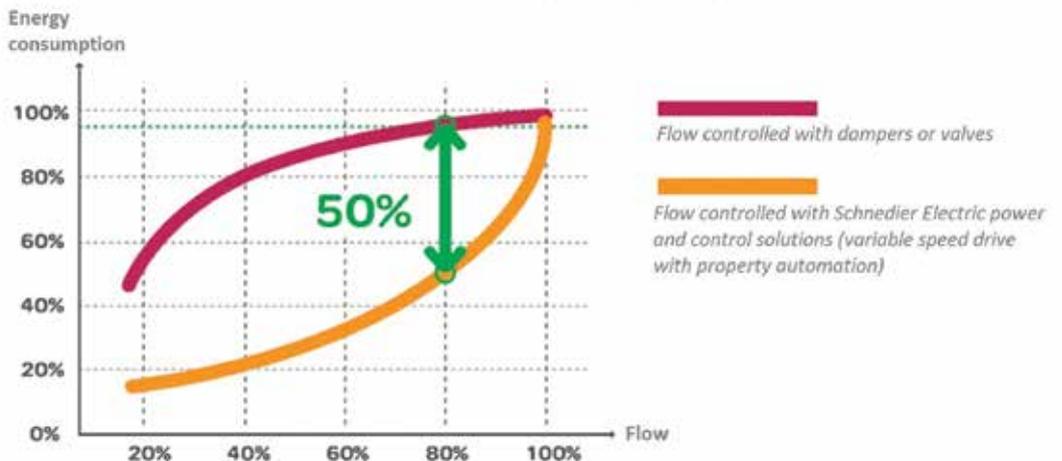
Our Offers

- **Energy Efficiency:** solutions for pump, fan and motor applications
- **Power Monitoring:** power meters to monitor and understand the electrical energy consumptions
- **Power Quality:** active filters to mitigate harmonic currents
- **MP4:** electrical network assessment, improvement and risk management programme

Your Benefits

- Quick ROI : 1 or 2 years max
- Reduced operating costs and optimised investments
- Reduced risk of blackouts
- Tailored solutions with access to highly qualified experts
- Safety improved for your crew
- Reduced CO₂ emission

Estimation of energy efficiency for pumps or fans



Energy Savings

-40%

Fans

-70%

Pumps

ROI < 12

months

Engine Room Ventilation Fans and Cooling Sea Water Pumps

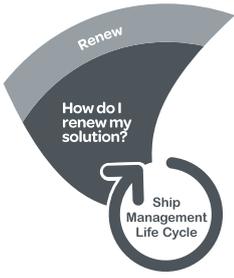
In the maritime industry, engine room ventilation fans and cooling sea water pumps used aboard vessels are generally oversized during the design stage, and constantly operate at peak flow. The process, however, requires maximum capacities only for a very short time period during the operating cycle, resulting in constant energy loss.

Tanker reference case



	Engine room fans	Sea Water pumps
Size	4 x 18,5kW	2 x 65kW
Annual Reduction of energy consumption	358MWh	320MWh
Annual savings	~ \$58.300	~ \$50.800
Reduction of CO ₂ emissions	~ 500 tons per year	





RENEW your vessel to extend equipment lifetime

Is downtime increasing because of the obsolescence of your devices?

Do you have difficulties finding suitable spare parts to maintain your equipment?

Schneider Electric proposes cost-effective solutions to upgrade your obsolete installed base.

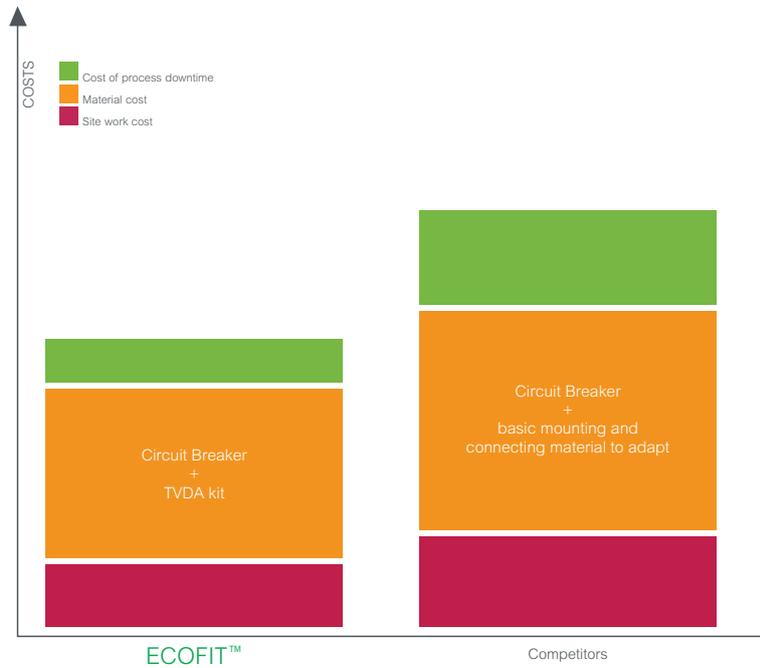
Ship after 10 or 15 operating years

Our Offers

- ECOFIT™, Retrofit: large offer to replace obsolete MV or LV circuit breakers and protection relays (substitution kits and new range devices) from Schneider Electric or any other brand
- Switchboard enhancement that's cost effective and compliant with the latest regulations and technology
- Upgrade solutions: for shore connection, automation system (AMS, PMS), power control (VSD), power quality (Active Filters) or secure power (UPS)

Your Benefits

- Switchboard lifetime extension by more than 50%
- Reduced downtime and maintenance costs
- Enhancement of availability and operational reliability
- Reduced investment with power equipment sizing optimisation thanks to our engineering expertise (study, architecture, design, sizing equipment)
- Tailored solutions with access to highly qualified experts
- Compliance with evolving international standards codes and constraints
- Improved safety for your crew
- TVDA Retrofit offers (Tested, Validated and Documented Architectures)



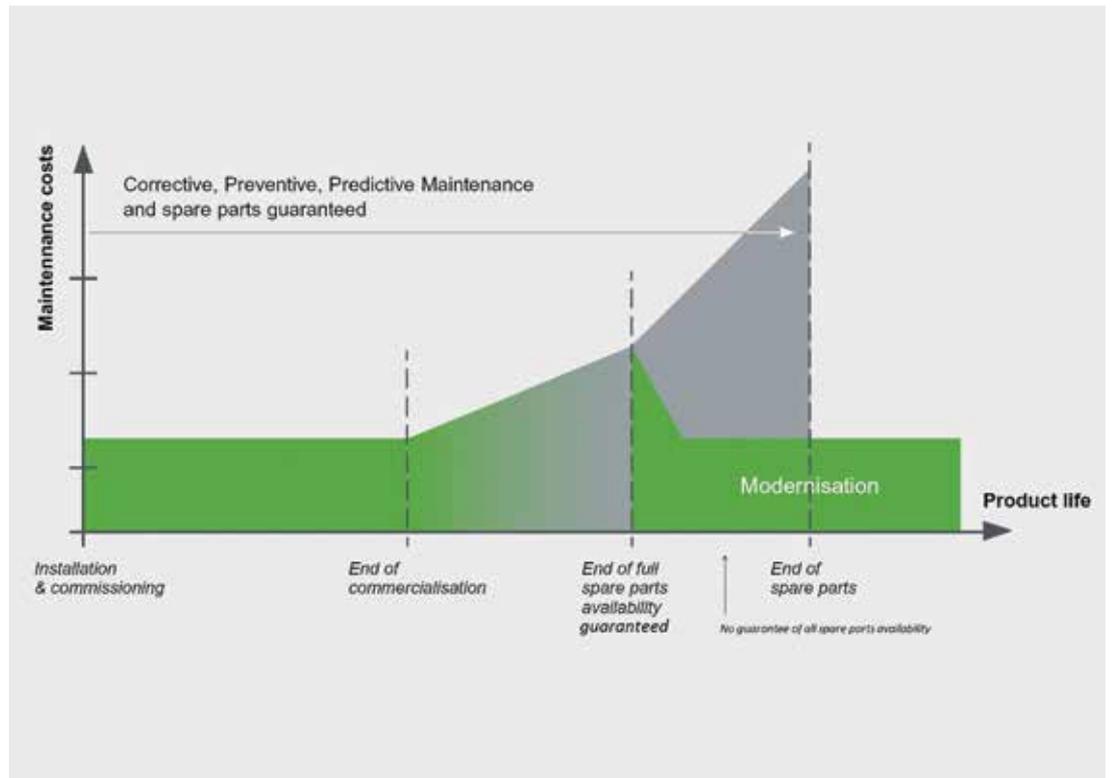


LV circuit breakers



MV circuit breakers & protection relays

Do not forget to modernise your vessel to save money



Some Worldwide References



Cargo/ Containers

Maersk (Denmark)
MSC (Italy)
CMA Ships (France)
Peter Dohle (Germany)
Rickmers (Germany)
COSCO (China)
CSCL (China)
PIL (Singapore)
Wan Hai Lines (Taiwan)
Yang Ming (Taiwan)



Tanker/Chemical

Stolt Nielsen (Norway)
Euronav (Belgium)
Gazocean (France)
Sea Tankers (France)
Marnavi (Italy)
Thenamaris (Greece)
Hyproc (Algeria)
MISC (Malaysia)
CSC Nanjing (China)
COSCO (China)



Bulk carriers

Arklow (Ireland)
Craig Ship Management (UK)
Vega (Germany)
STC (Switzerland)
Navarone (Greece)
HOSCO (China)
Shanghai Leading (China)
COSCO (Hong Kong)
Pacific Basin (Hong Kong)
Fleet Management (Hong Kong)



LNG/LPG

Sovkomflot (Russia)
British Gas (UK)
Shell (UK)
GDF (France)
MISC Petronas (Malaysia)
NYK (Japan)
TMT (Taiwan)



Offshore Platform/ FPSO

SBM (Moncao)
Total (France)
Technip (France)
BP (UK)
Shell (UK)
Statoil (Norway)
Conoco Phillips (USA)
Tanker Pacific Offshore (Singapore)
Petronas (Malaysia)
Exon Mobil (USA)



Cruise Ships

Carnival (USA)
RCCL (USA)
Princess Cruises (USA)
NCL (USA)
HAL (USA)
Cellebrity Cruises (USA)
P&O cruises (USA)
Aida Cruises (USA)
Disney Cruises (USA)
Cunard Cruises (USA)
Regent Seven Seas (USA)
MSC Cruise (Italy/USA)
Costa Crociere (Italy/USA)
Pullmantur (Spain)
Tropic Charter (Singapore)



Ferry/RoRo

Britany ferries (France)
CMN (France)
SNCM (France)
Sea France (France)
EuroFerry (Spain)
Hawai Superferry (USA)
P&O Ferries (UK)
Teso (Netherlands)
TT Line (Germany)
Stena Line (Sweden)
CTN (Tunisia)
ENTMV (Algeria)
New World First Ferry (Hong Kong)



AHTS/OSV

Bourbon (France)
POSH (Singapore)
Pacific Richfield (Singapore)



Drillship

Ensco (UK)
Seadrill (Norway)
Maersk Contractor (Denmark)
Opus Offshore (Thailand)



Service vessels

Jan de Nul (Belgium)
GIE (France)
CGG Veritas (France)
Luois Dreyfus (France)
LDA (France)
France Telecom (France)
Alcatel (France)

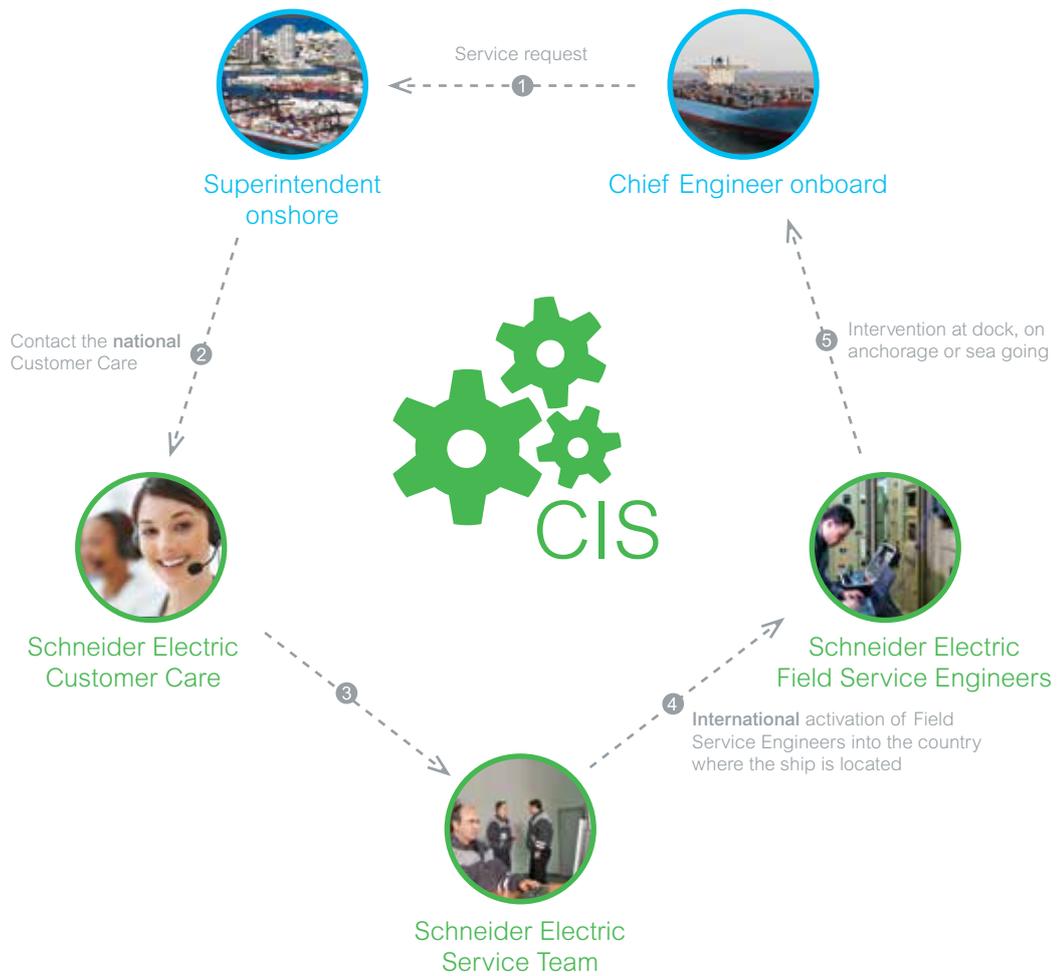
Customer International Support CIS

Schneider Electric has set up a tailored internal organisation and tool to support marine companies in need of worldwide services.

Benefits:

- Quick action upon equipment failures abroad
- Reduced costs by using local technicians
- Ensured warranty on equipment
- Simple – one local contact

Process and tool



Find your local contact point

Present in 190 countries, Schneider Electric serves its international customers throughout the world. On schneider-electric.com, section "Support", then "Customer Care Centre"



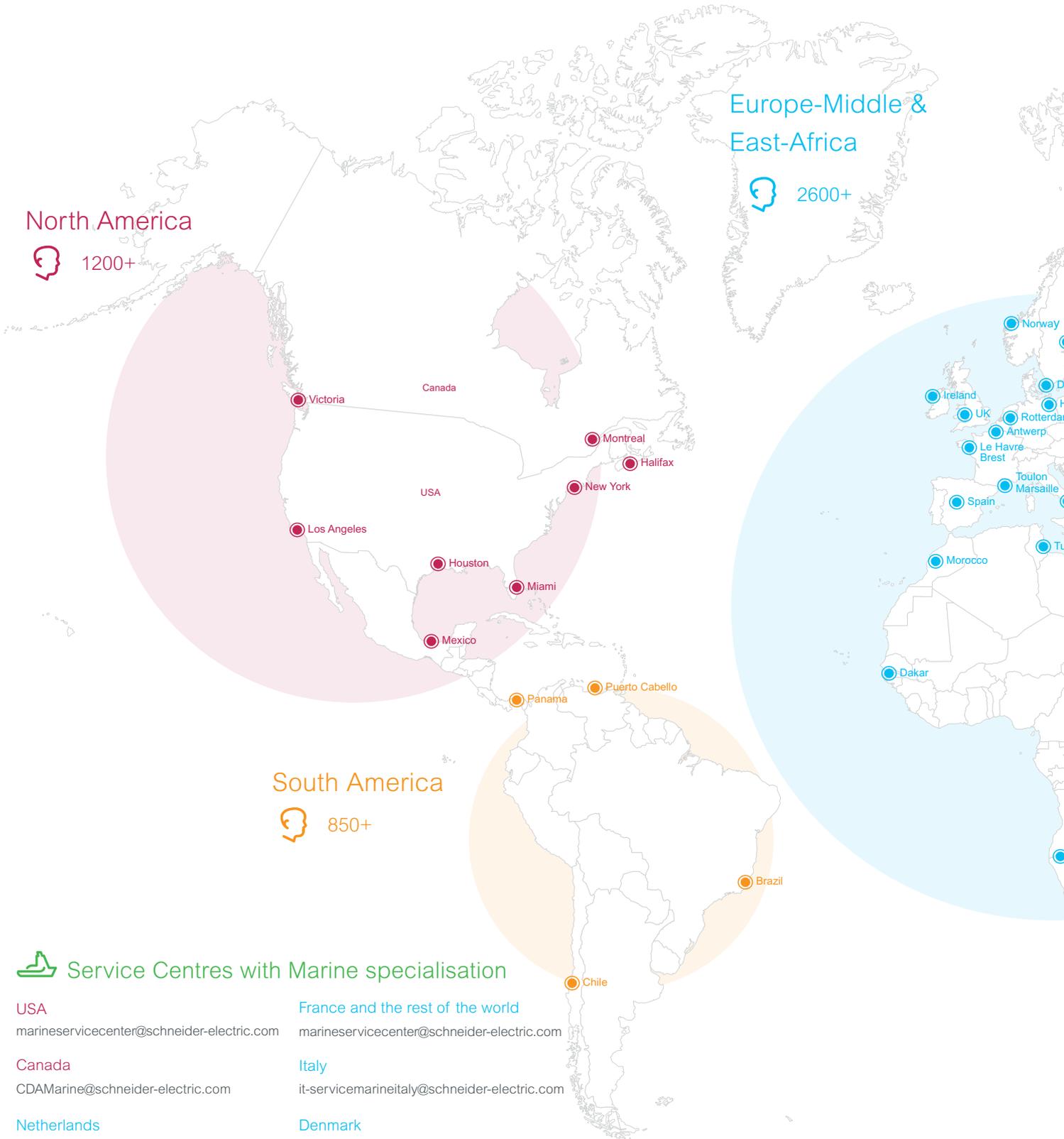
Schneider Electric Services around the world



6200+ Schneider Electric Field Services Representatives certified (FSR)



Major sea ports where Schneider Electric can execute Marine Services jobs (any port on request)



Service Centres with Marine specialisation

USA

marineservicecenter@schneider-electric.com

Canada

CDAMarine@schneider-electric.com

Netherlands

nl-servicessales@schneider-electric.com

France and the rest of the world

marineservicecenter@schneider-electric.com

Italy

it-servicemarineitaly@schneider-electric.com

Denmark

Energy.dk@schneider-electric.com

WE ARE WHERE YOU ARE

Schneider Electric can help you save time by providing tailored services worldwide via One Single Point of Contact

Onboard intervention management, procurement with one global spare parts price list, technical support, project quotation and execution management, etc.



Asia-Pacific

 1600+

Norway

kundesenter.no@schneider-electric.com

China

Service.Dispatch@schneider-electric.com

Singapore and the rest of Asia Pacific

SGService.Sales@schneider-electric.com

marineservicecenter@schneider-electric.com



Find more information about Marine solution documentation and certificates

On schneider-electric.com, section "Support", then "Documents & Downloads"
webpage: www.schneider-electric.com/b2b/en/support/

Schneider Electric

Head Office
35 rue Joseph Monier
92500 Rueil Malmaison Cedex- France
Tel.: +33 (0)1 41 29 70 00
www.schneider-electric.com

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