AUTOMATION UPGRADE, RETROFIT & CONVERSION SOLUTIONS
Wärtsilä is in a unique position to use proven in-house marine automation products to offer a ‘One-Stop’ solution with minimal integration, installation and commissioning risks to the customer.

Customers also benefit from Wärtsilä’s in-house expertise of engine and propulsion control systems, together with the global services reach and lifecycle product support.

Our experience of upgrade and retrofitting of installed automation systems is not limited to in-house Wärtsilä automation systems, but include third party obsolete or legacy systems such as

- Stromberg Selma
- Norcontrol DC7 and DC2000
- Valmet Dymatic
- Racal Decca Isis
- Norimos 2000
- Moland Macon 100, to name a few.

WÄRTSILÄ AUTOMATION SOLUTIONS
In addition to the Integrated Automation System (IAS) family of Wärtsilä IAS LT, Wärtsilä IAS and Wärtsilä IAS XT for a flexible and modular automation platform, Wärtsilä also has proven in-house capability of providing smart reliable Power Management System (PMS) with Wärtsilä PMS.

Typically, Wärtsilä PMS is designed to seamlessly integrate with the high end Wärtsilä automation system family; however, Wärtsilä PMS also has the flexibility to interface with an installed automation system from a third party supplier.

For certain older vessels with a manual control of the power network, significant efficiency and reliability gains are achievable by converting to an automatic power management system. The new PMS can be configured to suit the vessel duty and application. In these cases, Wärtsilä can provide a full turnkey solution.

WHEN A BLACKOUT IS NOT AN OPTION
Wärtsilä PMS contains all standard functions like load dependant start/stop, load sharing, synchronising, load shedding, etc., but is capable of much more.

In cases where a vessel is fitted with Wärtsilä engines, generators and propellers/thrusters, Wärtsilä PMS ensures an optimally tuned power system that reduces the risk of bad performance and blackouts.

Wärtsilä PMS has several advanced options, e.g. control of the patented Low Loss Concept (LLC) that will reduce distribution losses, increase the energy availability and save space and installation costs.
UNIQUE BLACKOUT PREVENTION & POWER LIMITATION SYSTEM

By integrating power, automation and propulsion, blackouts are prevented by quickly reducing load to avoid overload or blackout (msec. response time)

If a generator trips, the PMS takes action by reducing the power available output signal to frequency controlled thrusters/propellers.

MAIN FEATURES
- Includes both manual and automatic control and monitoring from ECR
- Unique blackout prevention and power limitation system
- Load control of “dynamic” consumers to prevent overload and blackout
- Unbalance of reactive power, Loss of Sensing (LOS) system
- Unbalance of active power
- Quick acting Sudden Load Variation System
- Load dependent start/stop
- Automatic changeover of generator
- Automatic load shedding of non-essential loads
- Heavy consumer start request

BENEFITS
- Proven in-house developed solutions best suited for complex diesel electric vessels
- Reliability – full hardware and software redundancy
- Single point of contact to owners & yards
- System design and hardware approved by most classification societies for marine installations
- User-friendly intuitive and standardized HMI screen design
- Patented Low Loss Concept (LLC) Power Management System with unique blackout prevention capability
- Class required documentation
- Failure modes and effects analysis (FMEA)
- Hardware-in-loop (HIL) testing to meet stringent offshore requirements

APPLICATIONS
- Complex diesel electric offshore supply and special vessels
- Large merchant vessels including LNG tankers, ro-ro & container vessels
- Large ferry & cruise vessels
- Coastguard and naval vessels.

For more information, please contact your nearest Wärtsilä Service Representative on http://addresses.wartsila.com

WÄRTSILÄ® is a registered trademark. Copyright © 2012 Wärtsilä Corporation.
Specifications are subject to change without prior notice.