

Supplier Handbook





This handbook sets out our expectations for a successful working relationship with our suppliers.

We ask you to study this handbook carefully as it provides guidelines for achieving the level of cooperation needed if we are to succeed in meeting the needs of our customers.

Our mission statement is that Wärtsilä shapes the marine and energy markets with advanced technologies and a focus on lifecycle performance, to enhance our customers' business and benefit the environment. Similarly, our vision is to be the most valued business partner of all our customers.

We strive for world class performance in quality, delivery, cost, lead-time, solutions and innovativeness. For this we need to have committed suppliers having Wärtsilä as a preferred customer. We believe that this can only be achieved by sharing common goals, and by building a strong business relationship with you and all of our suppliers.



President and CEO
Jaakko Eskola

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Purpose

The purpose of the Wärtsilä supplier handbook is to provide a general overview of what Wärtsilä expects from its suppliers in terms of developing an understanding of the related interactions and interfaces. As suppliers are responsible for providing quality products, on time and with optimal costs, this document is applicable both for existing Wärtsilä suppliers as well as for companies desiring to become suppliers. It is intended to provide guidance on building supplier operations that meet our company requirements. However, it does not overrule any signed agreements, project specific documentation, purchase orders, drawings, specifications, and/or in-

structions applied to specific products in detail. The aim is to trigger continual improvement in supplier operations so as to ensure “first time right” quality with fewer variations, and the elimination of waste in the supply chain. The supplier handbook also clarifies requirements regarding Wärtsilä’s Code of Conduct and Compliance and Sustainability strategy (e.g. statements on compliance with relevant legislation). Co-operation with existing suppliers should also be streamlined through closely linked processes, common rules and means of communication.

Content	Applicability	Chapters	
General information and minimum requirements to be a supplier for Wärtsilä	To all suppliers	2, 3, 4, 5	
Quality assurance related information on supplier deliverable products and material	To a selected group of suppliers	6, 7, 8	
Information on supplier performance processes	To all suppliers	9,10,11	
Operational way of working with suppliers	To all suppliers	12	

In case of comments to the supplier handbook, please send them to supplier.handbook@wartsila.com

1. Introduction

Wärtsilä purchases globally significant volumes of materials and services. In order to support Wärtsilä throughout the entire lifecycle of its products, clear supplier guidelines are required. The aim is to ensure that Wärtsilä's external suppliers provide the right quality, on time deliveries at the lowest total cost, and that they fulfil our lead time requirements. These guidelines clarify for suppliers the direction they should take to develop their systems and structure for sustaining Wärtsilä's requirements. Various elements are detailed in the following chapters.

The handbook chapters are arranged in the order of possible Wärtsilä interactions with a supplier. The chapters are also divided into four hierarchically defined sections to facilitate the search for information, see the section table on page 5.

Information in this publication is subject to change without notice. Always check the latest version. Suppliers are therefore re-

quested to obtain revisions of this handbook from Wärtsilä from time to time. Copies of this supplier handbook distributed to suppliers, printed or downloaded, are considered uncontrolled and will not be automatically updated.

Revision information is available at the bottom of page 4.



Supply related document hierarchy within Wärtsilä in relation to the supplier handbook

General framework for operations, valid unless no other more detailed instructions exist

General requirements

Supplier handbook

Special requirements applicable for each Wärtsilä business area

Business requirements

Energy solutions specifications, quality integration files, etc.

Marine solutions specifications, IMO, classification societies, quality instructions etc.

Services specifications, quality instructions, etc.

Supplier specific agreements and plans (details complementary to above)

Agreements and plans

Non-disclosure agreements, contracts

Part quality assurance plans

Supplier and project specific requirements (details complementary to above)

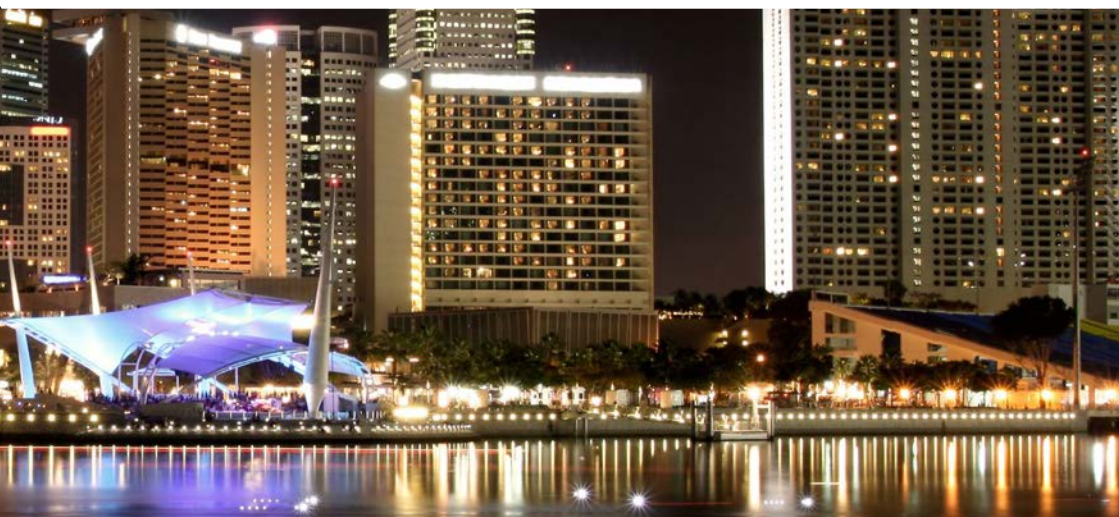
Project specific documents

Purchase orders

Project inspection and test plans

Project technical specifications

Project quality management programs



2. Definitions and acronyms

5 Whys

5 Whys is a question-asking technique used to explore the cause-and-effect relationships underlying a particular problem. The primary goal of the technique is to determine the root cause of a defect or problem.

8D

This is a structured problem solving tool. It focuses on the 8 disciplines that are needed in order to solve a problem. The steps in the 8D problem solving process are: define the problem, build a team, initiate containment action, determine the root cause, verify the root cause, corrective action, preventive actions and verification of the effectiveness of actions, congratulate the team.

AEO

Authorised Economic Operator. Based on the customs-to-business partnership introduced by the World Customs Organisation (WCO). Traders who voluntarily meet a wide range of criteria work in close cooperation with customs authorities to assure the common objective of supply chain security and are entitled to enjoy benefits throughout the EU. (source: <http://ec.europa.eu>, 6.6.2016)

BCP

Business Continuity Plan

Set of documents, instructions, and procedures which enable a business to respond to accidents, disasters, emergencies, and/or threats without any stoppage or hindrance in its key operations. Also called business

resumption plan, disaster recovery plan, or recovery plan.

(businessdictionary.com, 16.9.2016)

CAPA

Corrective Actions and Preventive Actions

Certified quality system

Third party registration – Certification by an independent registrar who is qualified by a national accreditation body to perform audits to an accepted standard, such as ISO 9001 and to register the audited facility for a given scope.

CLP

Classification, Labelling and Packaging of substances and mixtures. The CLP regulation ensures that the hazards presented by chemicals are clearly communicated to workers and consumers in the European Union through classification and labelling of chemicals. (<http://echa.europa.eu/regulations/clp>, 5.7.2016)

Complex products

Modules and systems that have a specific function, and that can be independently tested (typically Wärtsilä auxiliary equipment).

DFMEA

Design Failure Mode and Effects Analysis is the application of the Failure Mode and Effects Analysis method (see FMEA below) specifically to product design.

EDI

Electronic data interchange (EDI) is structured transmission of data between or-

ganizations by electronic means. Electronic documents or business data is transferred automatically, without human intervention, from one computer system to another.

FMEA

Failure Mode and Effects Analysis (FMEA) is a methodology designed to identify potential failure modes for a product or process, to assess the risk associated with those failure modes, to rank the issues in terms of importance, and to identify and carry out corrective actions to address the most serious concerns. See also: Design Failure Mode and Effects Analysis, as well as: Process Failure Mode and Effects Analysis.

Invoice

To deliver e-invoices to Wärtsilä the supplier can choose from the following options:

- Freely choose any service provider to handle all of your outgoing e-invoices. A list of preferred service providers exists on the Tieto website. (Wärtsilä then checks whether its service provider, Tieto, already has a roaming agreement with the chosen provider. If not, then Tieto will establish a connection (No extra fees apply to the supplier or Wärtsilä))
- Choose Tieto to be your service provider (Agreement made between Tieto and the supplier)
- Use our free of charge web portal to create your e-invoice and submit it to Wärtsilä (Agreement made between Tieto and the supplier, access granted by Wärtsilä)

ISIR

Initial Sample Inspection Report

ISO

International Organisation for Standardisation. ISO is an independent, non-governmental international organization with a membership of 161 national standards bodies (www.iso.org, 6.6.2016).

NCR

Non Conformity Report

Non Disclosure Agreement

A written commitment regarding confidentiality/non-disclosure

OHS

Occupational Health and Safety. An Occupational Health and Safety management system enables an organization to have control over, and knowledge of, all relevant hazards resulting from normal operations and abnormal situations, and to improve its performance. A standard on OHS Management systems is the ISO 45001 – Occupational health and safety. (Expected publication late 2017.)

PCPA

Process Control Plan Audit is an auditing tool used for evaluating the adequacy, effectiveness and efficiency of a process. It helps in ensuring that the process overcomes process variability due to external factors of governance.

PFMEA

Process Failure Mode and Effect Analysis is the application of the Failure Mode and Effects Analysis method (see FMEA above) specifically to manufacturing and assembly processes.

PQAP

Part Quality Assurance Plan is a plan intended to support the realization of parts, components, modules, assemblies, systems, units and products to assure the required quality during production.

Product

Product refers to all parts, components, modules, assemblies, systems, units, physical goods, etc that are supplied by the suppliers.

QHSE

Quality, Health, Safety, Environment

REACH

Registration, Evaluation, Authorisation and Restriction of Chemicals. REACH is a regulation of the European Union, adopted to improve the protection of human health and the environment from the risks that can be posed by chemicals. (<http://echa.europa.eu/en/regulations/reach>, 5.7.2016)

SDE

Supplier Development Engineer is the person at Wärtsilä responsible for ensuring that the suppliers execute various elements of the supplier development & quality requirements, such as the part quality assurance plan and corrective and preventive actions. In addition, Supplier Quality Engineers and Inspection Managers may also be designated to work with suppliers.

Service

Service refers to designs, documentation, services, software, hardware and/or consultancy that are supplied by the suppliers.

SM

Supply Management is responsible for supply management activities within Wärtsilä.

Supplier Portal

Wärtsilä's Supplier Portal is a free, web-based electronic service, offered by Wärtsilä Finland Oy. The service is intended for supplier-authorized users at <https://my.wartsila.com>.

The Supplier Portal contains the following services: Order Management – a tool for receiving purchase orders from Wärtsilä, sending order confirmations to Wärtsilä, sending forwarding instructions (Pick-Up Request) to the logistics service provider, and creating and sending invoices to Wärtsilä.

Supplier Data – a service for checking your contact details and commercial information, and informing us of the need for changes.

Claims – a service for receiving and responding to claims from Wärtsilä.

Supplier Declaration – a service for providing long-term declarations and single consignments for exporting purposes on behalf of Wärtsilä.

Other functionalities also exist, including customized email notifications for new orders, change orders and overdue deliveries.

Supplier Dashboard

A Wärtsilä supplier performance monitoring system that rates the supplier in the categories of quality and delivery, and on the status of its QMS/Environment/OHS certification and lead times.

Supply

Supply (noun) shall mean the goods, equipment, accessories and tools (including but

not limited to any raw materials and components of any of the foregoing) and designs, documentation, services, software, hardware and/or consultancy services to be purchased by Wärtsilä and manufactured, tested, stored and/or delivered by the supplier.

TPR

Trial Production Run is a snapshot in time of the supplier's production process under validation.

VMS rating

Vendor Management System rating is a management system's evaluation of Wärtsilä's external suppliers.

Wärtsilä

Wärtsilä Corporation and its subsidiaries

Wärtsilä Black and Grey list

defines restrictions on the use of substances in Wärtsilä's products, materials, and production processes.

Wärtsilä's Code of Conduct

<http://www.wartsila.com/sustainability/our-approach/code-of-conduct>

Wärtsilä Supplier Requirements

A set of mandatory requirements for suppliers to comply with the Wärtsilä's Code of Conduct, Health and Safety, and Wärtsilä's Environmental and Quality policies.



3. Wärtsilä's commitment to sustainability

Wärtsilä has an important role to play in meeting the world's increasing demand for the delivery of energy in a sustainable way. This is the cornerstone of our commitment to sustainability.

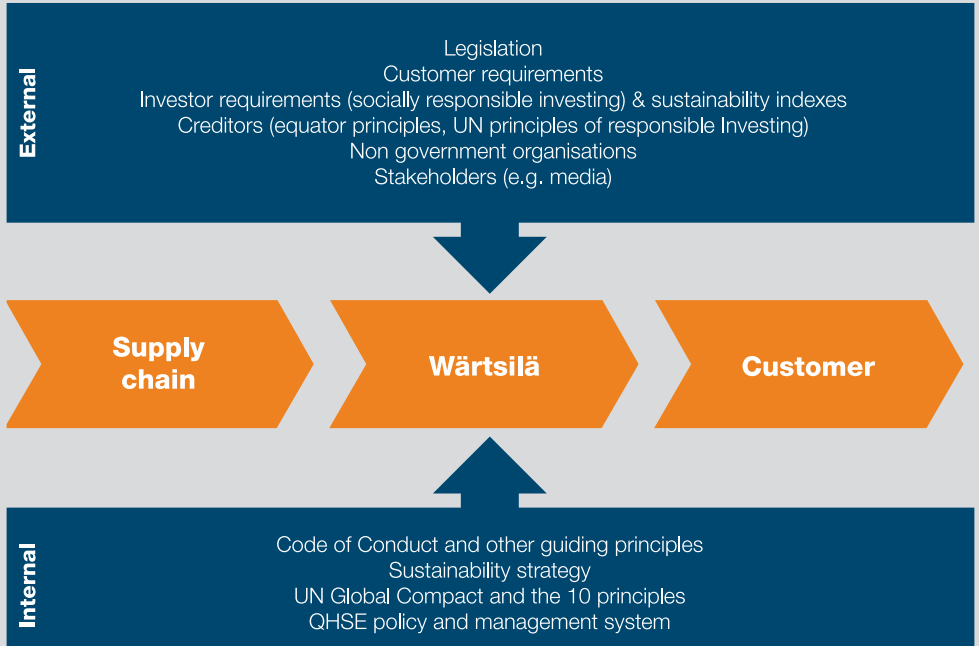
Climate change and a scarcity of natural resources call for innovative and creative solutions. As a technological enabler, our responsibility is to develop such products and solutions that allow our customers to develop their own business in a sustainable way.

Our sustainability approach is based on economic, environmental and social performance. We strive to improve our procedures and performance across a wide front. Our overriding focus is on ensuring profitability, providing environmentally sound products and services, and ensuring responsible business conduct.

The importance of the value chain is increasing. In order to achieve substantial improvements in sustainability performance, strong and coordinated efforts by various players in the value chain are required. Being part of the value chain requires meeting the expectations of the various stakeholders. These requirements are defined based on both the internal and external expectations placed on Wärtsilä and its supply chain. External stakeholders, such as legislators, customers, investors, creditors, non-governmental organizations and the media, all set expectations

for Wärtsilä and its supply chain concerning sustainable development and responsible business conduct. In addition, Wärtsilä has made commitments of its own, e.g. the United Nations (UN) Global Compact and its ten principles and the Wärtsilä Code of Conduct. All of these external expectations and requirements, together with Wärtsilä's own commitments, define the framework for supply chain management.

For detailed requirements, see chapter 4. Wärtsilä supplier requirements.



Suppliers and business partners are an important and integral part of the total value chain of the products and services of Wärtsilä. Suppliers shall perform their contractual obligations in a professional and careful manner according to the highest standards. Wärtsilä promotes the application of its code by monitoring the actions of its suppliers and business partners.



4. Wärtsilä supplier requirements

The purpose of Wärtsilä supplier requirements is to explain in more detail the legal, ethical, environmental, and employee related standards, as well as Wärtsilä's own expectations from suppliers. Wärtsilä promotes the application of these standards among its suppliers and monitors their actions in this regard.

The supplier specific requirements shall be determined in the agreement between Wärtsilä and the supplier. The supplier shall have the necessary design and/or manufacturing capabilities as required by Wärtsilä. The quality of the supplier's products and services shall fulfil Wärtsilä's performance and compli-

ance requirements, and shall be delivered in a professional manner. The supplier shall also ensure that the product complies with all applicable environmental and safety regulations and requirements.

The supplier shall not subcontract any major and/or essential part of the supply

without the prior written consent of Wärtsilä. The supplier shall ensure that its sub-suppliers (if any) fulfil the requirements of Wärtsilä. The supplier is responsible for the control and continuous improvement efforts of its sub-suppliers. Wärtsilä's suppliers shall require that their own suppliers for the production of goods and services conform to the requirements specified herein, and shall implement and document appropriate controls. The supplier shall permit Wärtsilä, its authorized representative, the end-customer of Wärtsilä, and any certifying or other authority to make inspections and audits at the premises of the supplier and of its sub-suppliers if requested by Wärtsilä.

The supplier shall handle Wärtsilä's claims professionally and without any delays.

Compliance

Compliance with relevant legislation

The supplier shall comply with all applicable laws and regulations, and conform with the requirements of good citizenship in each jurisdiction where the supplier performs its activities. This includes, but is not restricted to, compliance with laws and regulations on competition, corporate governance, taxation, financial disclosure, employee rights, environmental protection, occupational health and safety, and export control.

With respect to environmental requirements and regulations, including but not limited to noise and emissions, the supply shall conform to all applicable laws and regulations and to the latest standards for similar Products. Any modification, documentation, approval or procedure required by the ap-

plicable laws and regulations, shall be the responsibility and at the cost of the supplier.

Restricted substances and materials

The supplier shall certify and ensure that the Supply does not contain asbestos or any other hazardous material, substance or radioactivity in any form in the basic material or in the components used in the supply.

The supplier shall certify and ensure that no "conflict minerals", including tin, tantalum, tungsten or gold originated in conflict-affected or high-risk areas, are procured or contained in the supply, including those from its own suppliers.

The supplier shall follow and comply with all relevant laws and regulations related to substance, material and radioactivity restrictions. The supplier shall confirm compliance with **CLP** (Classification, Labelling and Packaging) and **REACH** (Registration, Evaluation, Authorisation and Restriction of Chemicals), and to **Black & Grey lists**, which the aforementioned refer to. These define restrictions on the use of substances in Wärtsilä's products, materials, and production processes.

The Black and Grey lists do not correspond to national regulations. Therefore, the most restrictive limitations of the national regulations and of the Black and Grey lists shall be in force.

The supplier shall regularly check updates to the Black and Grey list in the supplier Portal, or request updates from the Wärtsilä contact person.

Illicit payments prohibited

The supplier acknowledges the need to fully comply with all applicable laws prohibiting

bribery, money laundering and extortion, and also with the standards of conduct and spirit of the OECD Convention on Combating Bribery of Foreign Officials in International Business Transactions and the Commentaries thereon ("OECD Convention", see www.oecd.org under "Corruption") and the Rules of Conduct to Combat Extortion and Bribery of the International Chamber of Commerce ("ICC Rules", see www.iccwbo.org under "Anti-Corruption"), the OECD Convention and ICC Rules having been fully read and understood by the supplier.

The supplier represents and warrants that it and its employees, as well as consented assignees, sub-suppliers and alike, if any, do not directly or indirectly promise, offer, pay, solicit or accept bribes or kickbacks of any kind and/or utilize other techniques, such as sub-contracts, purchase orders or consulting agreements to channel payments or other benefits to government officials, to employees of Wärtsilä, and/or their relatives or business associates, with the intention to influence or induce the referred owner or employee to use his or her influence to assist the supplier or Wärtsilä in obtaining or retaining business or securing any improper advantage. The supplier acknowledges that such activities may constitute a criminal violation of local laws and regulations punishable by substantial fines and/or imprisonment.

Export control regulations

The supplier shall comply with all applicable export control laws and regulations. The supplier shall obtain all required export licenses or agreements necessary to perform the sup-

plier's obligations under the agreement, as applicable. The supplier shall notify Wärtsilä if any use, sale, import or export by Wärtsilä of supplies to be delivered under the agreement is restricted by any export control laws or regulations applicable to the supplier. The supplier shall ensure that its sub-suppliers (if any) shall comply with these requirements.

The supplier shall be honest and accurate, and his business activities transparent, when communicating with Wärtsilä. The accounting records of the supplier shall be accurate and reliable.

Occupational health and safety

Wärtsilä promotes application by the supplier of the third-party certified Occupational Health and Safety Management System according to relevant OHS standards.

The supplier shall be fully responsible for its liabilities as an employer. The supplier shall have management approved occupational health and safety programmes implemented, the aim of which is to create a hazard-free workplace for its employees.

The supplier shall have a valid and implemented safety plan. The supplier shall have procedures for identifying hazards, and for minimizing and preventing risks. The supplier shall have the necessary instructions and procedures to prepare for, and to respond to, emergency situations. The supplier shall record and investigate all emergency situations.

The supplier of complex equipment shall have installation and commissioning instructions, containing clearly stated safety precautions and instructions applicable to the

supply. Such installation and commissioning instructions shall be included in the Supply.

The supplier shall have adequate and fully operational safety equipment for the protection of its personnel and facilities. The supplier shall ensure that all tools and equipment used are fully operational and safe. The supplier shall ensure the sufficient competence of its employees to perform their tasks safely, and to respond to emergency situations. Based on the nature of the supplier's operations, the supplier shall ensure that the physical and mental working conditions allow employees to perform their tasks safely and efficiently.

The supplier shall ensure that accidents and near-misses are reported and that appropriate actions are taken as a result of these reports.

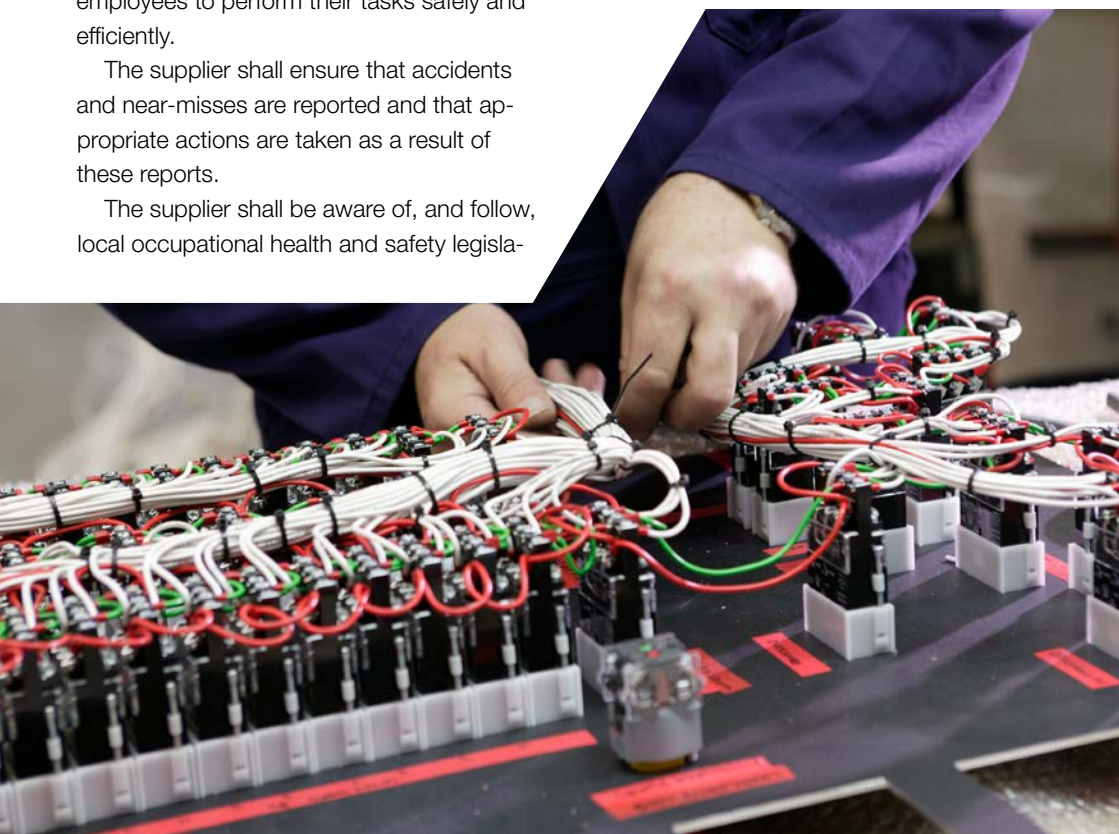
The supplier shall be aware of, and follow, local occupational health and safety legisla-

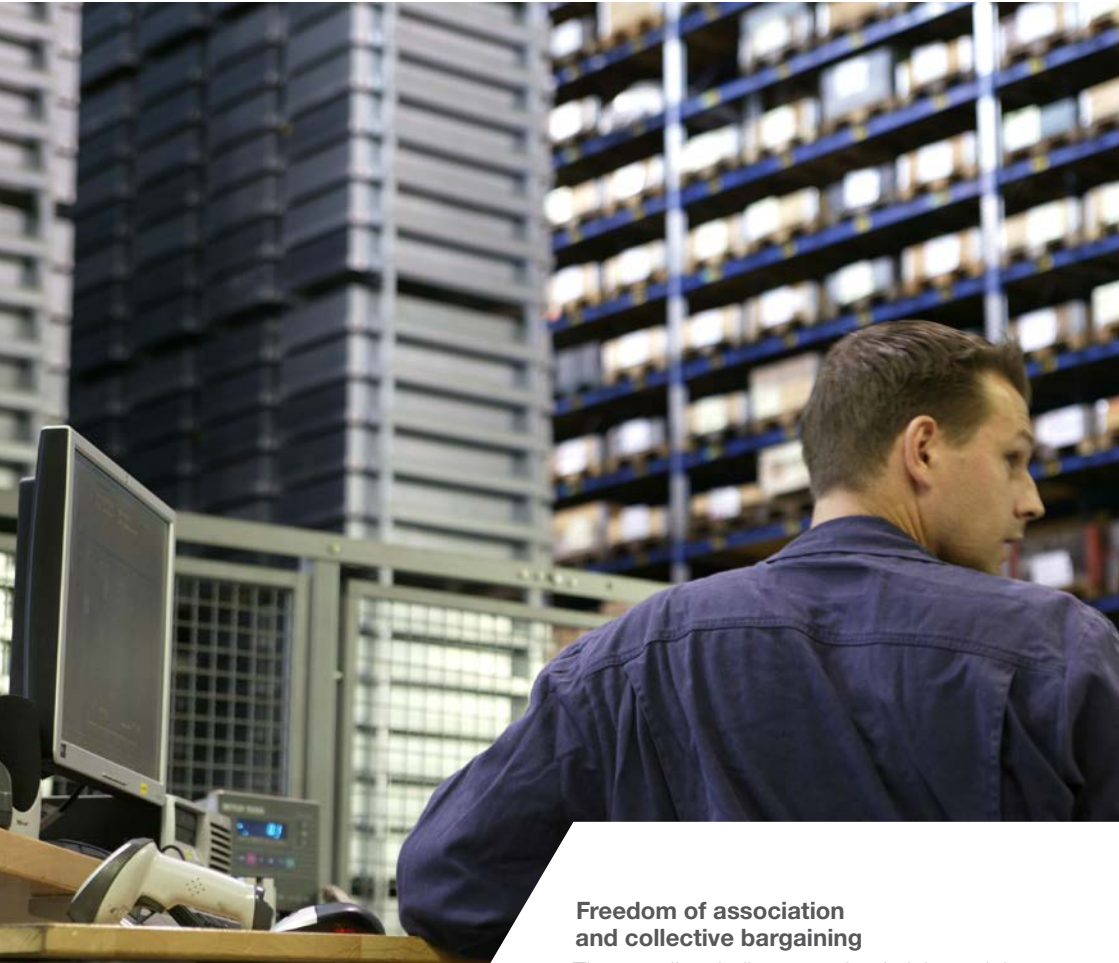
tion and applicable regulations, and be able to provide evidence of compliance.

Social issues

Respect for human rights

The supplier shall support and respect the protection of human rights, as defined in the United Nation's Universal Declaration on Human Rights (see <http://www.un.org/en/universal-declaration-human-rights/index.html>). The supplier is not allowed to take any action that violates these human rights principles, either directly or indirectly.





Freedom from discrimination

The supplier shall promote freedom from discrimination based on race, ethnic or national origin, colour, gender, family status, sexual orientation, creed, disability, age or political beliefs or any other characteristics protected by law. The supplier shall foster equal opportunity.

Freedom of association and collective bargaining

The supplier shall support basic labour rights as defined by the International Labour Organization (see www.ilo.org/ilolex/english/convdisp1.htm). In this respect the supplier shall uphold the freedom of association and the effective recognition of the right to collective bargaining. In the case that these rights are restricted by local law, the supplier shall offer its personnel alternative means to present their views.

Compensation

Wages paid for regular working hours, over-time hours and overtime differentials, shall meet at least the minimum required by the law. Illegal or unauthorised deductions from wages shall not be allowed.

Child labour

The supplier shall not be engaged in any practice inconsistent with the laws and regulations regarding child labour. The minimum age for admission to employment or work shall in any case not be less than 15 years. The minimum age for admission to any type of employment or work, which by its nature or the circumstances in which it is carried out is likely to jeopardise the health, safety or morals of young persons, shall not be less than 18 years.

Forced labour

The supplier shall not use any form of forced or compulsory labour.

Innovation and protection of proprietary information

The supplier shall support and encourage innovation in its activities. Wärtsilä's intellectual property is one of its most valuable assets, which shall be protected. At the same time, the supplier shall respect the intellectual property rights of others.

The supplier shall sign a written commitment regarding confidentiality/non-disclosure. All communications, information and/or data disclosed by Wärtsilä, whether written, visual or oral, shall be confidential. The supplier shall not disclose the confidential information of Wärtsilä to anyone, shall not use it for any

other purpose than the one determined by Wärtsilä, and shall keep the confidential information in confidence with the same degree of care as is used for its own confidential information and at least with reasonable care. The supplier shall comply with the specific requirements of the applicable confidentiality/non-disclosure agreement.

Quality

Wärtsilä promotes application by the supplier of a quality management system certified by an accredited certification body. The supplier shall have a quality management system that complies, as a minimum, with the international standard ISO 9001 latest valid edition, and which shall be utilized for continual improvement of its operations. The supplier shall immediately notify Wärtsilä if its registrar places the company on probation.

The quality management system of the supplier shall control the design, design validation, materials used, and the production process of the supply, as well as the finishing, final inspection and testing, as applicable, and the packing for delivery.

The quality management system shall ensure that the product and/or service is in accordance with the agreement, and as a minimum in compliance with all requirements of the specifications, the purchaser's quality instructions, the purchase order, and mandatory legal requirements.

The supplier shall have the processes mapped and implemented, and shall also deliver to Wärtsilä the quality plans for its products. The supplier shall notify Wärtsilä of any changes to the manufacturing process,

detailed design, materials and sub-suppliers related to Wärtsilä products prior to the execution of such changes.

As a minimum, the supplier shall demonstrate compliance with management's commitment, and with implemented procedures for documentation control, corrective and preventive actions, the handling of non-conformities, traceability, customer property handling, and quality plans for specific products or services.

The supplier shall have the readiness to obtain approval(s) from classification societies if requested by Wärtsilä.

Non-frequently used, project specific local sub-contractors, shall have a quality management system and/or shall have an implemented quality plan for the specified supply.

Environment

Wärtsilä promotes application by the supplier of the third-party certified environmental management system. As a minimum, the supplier shall have an environmental management system that complies with the International standard ISO 14001 or Eco-Management and Audit Scheme (EMAS) latest edition. The supplier shall immediately notify Wärtsilä if its registrar places the company on probation.

The environmental management system shall ensure the effective planning, operation, continual improvement, and control of all environmental aspects and risks. Based on its operations and capability, the supplier shall have the readiness and procedures to handle environmental emergency situations. The supplier shall be aware of, and follow, local

environmental legislation and all applicable laws and regulations regarding its products and services, and be able to provide evidence of compliance.

The supplier shall be able to provide information of the environmental impacts regarding its operations, products and/or services, including packing material, emissions, and energy consumption, as requested or specified by Wärtsilä.

Non-frequently used, project specific local sub-contractors, shall have an environmental management system and/or shall have an implemented environmental plan for the specified supply.

Consistent with Wärtsilä's commitment to contribute to a cleaner, healthier, safer environment, suppliers shall comply with the substance restrictions described in chapter 4 under Compliance.

Security

The supplier shall have a security management system that

- has security risks identified, evaluated and treated to an acceptable level
- ensures and documents the supply chain security processes, and
- prevents unauthorized access to, and tampering with, the supply chain's premises, cargo units, goods in transit, and/or the storage facilities.
- complies with special security instructions issued by Wärtsilä
- has information security management with document classification, access rights, data protection and identity management



- has a background screening policy for personnel in security critical positions
- has continuous improvement as a management value.

Wärtsilä may include additional requirements on security into agreements.

Business Continuity Planning

An uninterrupted production of components and/ or services is of vital importance to Wärtsilä, as the client, as well as to the supplier itself. To ensure this, each supplier shall have a written Wärtsilä specific Business Continuity Plan (BCP) based on a production related business impact analysis on components/services relevant for Wärtsilä.

The BCP should:

1. address interruption scenarios such as
 - partial/complete facility fire
 - natural catastrophe events
 - severe machinery breakdowns
 - supply chain dependencies
 - utilities needed for production
 - authorities imposed stoppages
 - strikes, lock-out or
 - any other major concerns identified in the business impact analysis

2. describe the normal production process and alternative production capabilities

3. specify the plan, and the time needed, for implementing substitutive production, with suggested actions in order to minimize the interruption time

4. be regularly reviewed and updated following any alterations in the production process or significant changes in capacity levels, or the discovery of any other issues that could impact the suppliers ability to recover the production of components/ services for Wärtsilä.

Submitting the necessary information

The supplier shall provide all necessary information to Wärtsilä upon request in order to allow an assessment of the supplier's compliance with these requirements. The supplier shall also inform Wärtsilä of any deficiencies in its performance. Wärtsilä handles this information confidentially.

5. Supplier assessment and selection

The supplier assessment is used to evaluate suppliers to ensure that they are capable of supplying to Wärtsilä. The supplier assessment consists of evaluating the compliance with Wärtsilä requirements, company's structure, relevant technical capability, and quality management system.

After signing the non disclosure agreement, the initial selection is followed by an assessment of the supplier. The method employed is to audit, investigate, and rate the supplier on:

- How the supplier assumes its responsibilities according to Wärtsilä's requirements, as already notified in chapter 4. Wärtsilä will assure its customers of the compliance with health and safety requirements by a tight follow-up of the supply chain health and safety implementation codes.
- How the supplier is organised in its processes (e.g. production, design, quality), its customer base, key customers, risk management, general business, and its level of commitment, including investment, capacity, quality management system effectiveness, complaint handling, lead time, willingness to work with tools specified by Wärtsilä, etc.

According to the supplier rating, suppliers are classified under a certain approval status. The assessment audit and supplier rating processes are carried out by Wärtsilä or Wärtsilä representatives or third party agencies.

Supplier rating is maintained through periodical assessments. See chapter 11. Continuous supplier performance evaluation, for details.

The supplier is approved for supplying to Wärtsilä once it:

- is approved in the supplier rating;
- has shown evidence of its technical competence to deliver the intended products (through technical assessment); and
- has shown adequate evidence of having an effective quality management system in place.

The approval of the supplier by Wärtsilä does not mean approval of the supply. However, product approval is explained separately in Chapter 6, under Part quality assurance plan.

For further information on supplier selection, visit wartsila.com.

6. Part quality assurance plan (PQAP)

Wärtsilä suppliers shall undergo a quality assurance process in order to provide Wärtsilä with reliable and sustainable products. The purpose of the PQAP is to secure that the products are according to specifications and quality requirements, and delivered at the right time. Once the PQAP is approved, the supplier must not make any modifications without prior approval from Wärtsilä.

The PQAP saves time and cost for both Wärtsilä and supplier alike, being an effective method to prevent problems and potential misunderstandings during the development of a part from design to production.

The purpose of the part quality assurance plan is to make sure that the supplier is able to produce the intended parts in a rational and efficient way from an approved production process.

The process serves to ensure that Wärtsilä's technical requirements are met, that its specifications are fulfilled, and that the supplier has a clear understanding of the responsibilities.

All products shall be quality assured according to the PQAP. The quality assurance

of purchased parts is a fundamental necessity and is mandatory throughout the Wärtsilä supply chain, as it enables Wärtsilä to secure undisturbed and defect free deliveries.

The PQAP is performed should there be changes to the parts, a new supplier, a modified part with changed requirements, or major changes to a process, the tooling, or a new manufacturing location.

The PQAP ensures that the parts are according to the specifications with delivered quality at the right time. It indicates that the part is approved and the production process is uninterrupted.

6. Part quality assurance plan (PQAP)

The PQAP consist of 14 interconnected activities that ensure the production readiness and shall, therefore, be completed before start of production.



In essence, the PQAP improves the understanding of the customer's needs, including defined critical characteristics, and their validation through design reviews. The PQAP enables development of the production process, focusing also on capability and capacity properties. Possible failure modes are analysed and means for mitigation are designed. The product quality is further controlled through inspections, initial sample testing and acceptance. The PQAP also addresses production lead-times and the packaging for shipment of the product.

During the execution of the PQAP the supplier must assure that the production process produces the part with the required quality, with the required lead-time, and on the required delivery date. During production

of the initial samples the complete production process is validated, and the availability of capable resources to produce, inspect, test and deliver initial samples (personnel, production equipment, tooling, measuring equipment, etc.) is checked. The production, inspection and testing conditions must receive approval from the Wärtsilä supplier development representative prior to production and delivery of initial samples.

All PQAP activities must be completed before the approval for start of production is given by the Wärtsilä representative.

NOTE: once the PQAP is approved, the supplier must not make any modifications without prior approval from Wärtsilä.

7. Supplier material traceability and record retention

The supplier shall establish and maintain documented methods for the unique identification of product batches or lots, including marking when necessary. Wärtsilä may conduct an audit or inspection of the supplier's traceability system for verifying that the requirements are being fulfilled.

When a product is marked with a serial number or other identification, this identification shall be sustained throughout the entire life time of the corresponding product. When required, the supplier shall demonstrate adequate product traceability. The specific requirement for component traceability marking (Unique Item Identifier, UII and data matrix barcode) must be fulfilled by suppliers when required according to the component specifications.

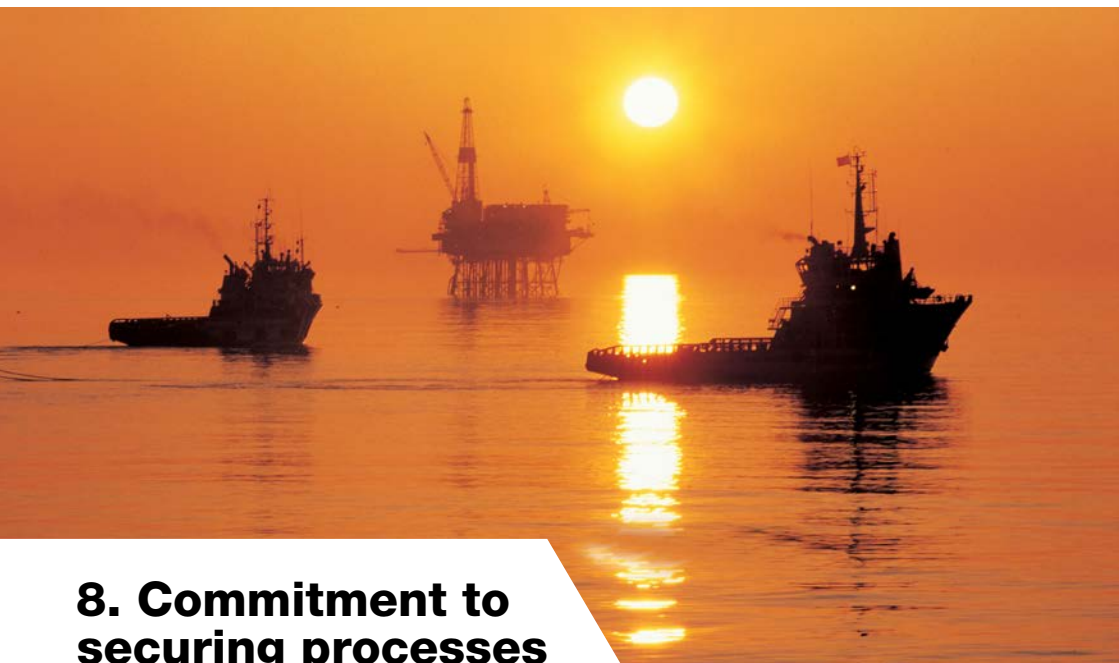
The supplier shall maintain validation records for as long as the product/product family is active for production/service requirements plus one calendar year, or according to the specific traceability and record retention requirement mutually agreed with Wärtsilä. This validation record maintenance includes, but is not limited to, the records pertaining to the use of relevant tooling, engineering changes, and purchase order amendments. Records shall be stored in a manner that ensures the required retention time is fulfilled.

Quality data records

Wärtsilä may need the product specific quality data, updates and time lines from the supplier.

These may be related to product manufacturing, in-process inspection & tests, functional tests and final inspection etc. as required by the drawings, applicable standards, quality instructions, classification societies, purchase orders and/or purchase contracts. The supplier shall perform such required validations and maintain this data thereof and provide the same upon Wärtsilä's request within 2 working days.

Wärtsilä will monitor the quality performance of its suppliers. Wärtsilä will report these measures to the direct material suppliers via Supplier Dashboard. These can also be accessed by direct material suppliers via the supplier portal.



8. Commitment to securing processes

The supplier shall implement the most efficient process and effective process controls in its manufacturing operations during the development cycle, using PQAP to produce products for Wärtsilä plants worldwide. It is expected that such developed processes will be sustained and maintained effectively by securing the manufacturing processes throughout the entire production release and operational phases. Wärtsilä supports this endeavour via its process control plan audit (PCPA) tool that helps in investigating and evaluating the effectiveness of operational processes, such as quality management, documentation, manufacturing process management, production planning and control, quality controls, testing and validation, logistics, and continuous improvement.

Suppliers, depending upon the product's criticality and/or the company profile, are subject to the PCPA process. The audited operational area is assigned a rating. Any supplier failing to achieve the target shall undertake corrective actions to achieve improvements in the specific identified area.

A re-audit will then follow to review the effectiveness gained in the areas identified for improvement. Wärtsilä reserves the right to decide the scope of such repeat audits as needed thereafter, and to investigate the operational processes.

9. Process change and design change management

Wärtsilä reserves the right to issue a written variation, suspension or cancellation order. In the case that the variation has a substantial impact on the scope of supply, the delivery schedule or price, the supplier shall issue an estimate containing

1. a description of the variation of the Supply
2. a detailed progress and resource plan for executing the variation
3. a calculation of the effects of the variation on the price and delivery schedule, if any.

When Wärtsilä orders a variation, the supplier shall confirm acceptance of the variation in writing within four (4) business days. Unless otherwise agreed, the supplier may not proceed with performing and executing the variation without the order and consent of Wärtsilä in respect of (1)-(3) above.

Changes may include alterations in:

- Legislation requirements
- Product design, technical specifications
- Sub-contractor products
- Materials
- Service provider
- Manufacturing location
- Production process; method of manufacturing; processing; testing
- Storage; packaging; preservation or delivery.

Product changes required by Wärtsilä will be documented in an engineering design

change. A technical change may be included in the updated drawing/quality instruction/standards/specifications. This will be informed to the supplier appropriately

In line with the change, the supplier shall conduct an appropriate review of his quality assurance system including, but not limited to, a review of the P-FMEA, and updates to the control plan and process flow. Implementing the change may call for modifications to the PQAP.

If the product is under the supplier's design control, all intended changes in the supplier's design and manufacturing process shall be communicated and properly notified to Wärtsilä by the supplier, prior to any implementation. This is important in order to minimize the risks of introducing changes that might impact Wärtsilä's technical product properties, assembly process, product handling, or any of its intended or foreseeable applications.

In the case of products that are installed and tested at the site, any as built modifications shall be documented and a final version of the product documents has to be updated by the supplier. This must be sent to Wärtsilä by the supplier within 4 weeks from receiving the feedback.

10. Handling of non-conforming products and services

Non-conformity may involve a deviation from the drawing or purchase order requirements, such as quality, appearance, packaging material, metallurgy, labeling, quantity, handling and shipping, delivery, cleanliness, and/or dimensional or performance issues. When non-conformity has been detected in the supplier's process/product, the supplier shall inform Wärtsilä instantly and without any delay. The supplier shall analyse the root cause and define corrective and preventive actions by using any suitable and recognized tools. The supplier shall supply only products or material that fulfils its purchase specifications, and/or other relevant specifications or features agreed upon.

The supplier shall have a process for managing internal rework/scrap. The process shall include, but is not limited to:

1. A proactive plan for preventing rework/internal scrap
2. Clear responsibilities for handling the defective products, material, work in process, reworked material etc
3. Separate and clearly marked containment areas for defective and reworked material to prevent it from mixing with the normal material flow in the process.
4. Instructions and a process to manage CAPA (either internal or sub-supplier scrap)
5. Instructions for the traceability, re-work, re-inspections and control of re-worked parts

Wärtsilä may demand a specific root cause analysing system, such as 8D, to be used when a non-conforming product or material has been detected. In such cases Wärtsilä will issue a non-conformity report (NCR) to the supplier.

The supplier shall have a receiving procedure for NCRs in order to ensure that the NCR is taken care of without any delay.

The criticality of the NCR may trigger the escalation of the issue from supplier quality assurance to Wärtsilä Category Management.

Should the non-conformity be detected at the site where the product/equipment is installed, Wärtsilä will instruct the supplier to initiate the replacement or repair process.

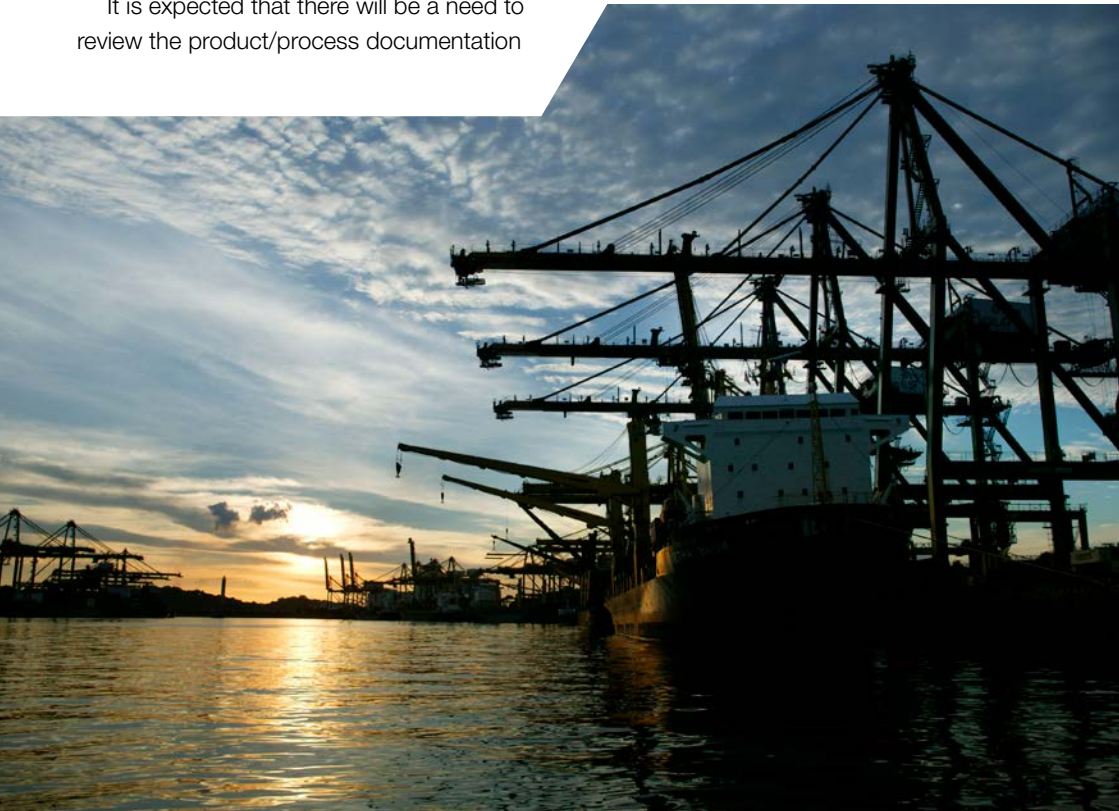
The supplier shall respond to a non-conformity claim along with corrections within 2 working days. The supplier shall provide the final root-cause analysis, including corrective and preventive actions (CAPA) within 7 days (for notified material supplied less than 6 months from the date of notification, and 21 days for the supplies thereafter).

The supplier has ownership of solving the claims issued by Wärtsilä. Root cause analyses by suppliers shall be conducted using professional problem solving methods such as 8D reports, fishbone diagrams, 5 Whys etc. and evidence of this shall be provided to Wärtsilä.

silä when responding to NCRs. Responses that are possibly inadequate will be returned and the supplier shall immediately provide an updated satisfactory response. Failure to comply with providing an adequate response to NCRs or improving performance may result in Wärtsilä involving a third party to conduct inspections at the supplier's premises for Wärtsilä products. This activity can also be subjected at the cost of the supplier.

It is expected that there will be a need to review the product/process documentation

after a corrective action. Hence, the supplier shall also review and ensure the adequacy and correctness of PQAP documents/process documents after the problem solving process, if applicable. The supplier shall confirm to Wärtsilä that such a review has taken place and shall provide evidence towards accomplishment of the same. Wärtsilä may verify/review these and approve as needed.



11. Continuous supplier performance evaluation

In order to achieve quality, delivery, and cost excellence, and to strengthen partnering with the supply chain, Wärtsilä expects suppliers to deliver at the right time and with the right quality every time. Wärtsilä recognizes that success is largely dependent on the supply chain, and therefore conducts a continuous supplier performance evaluation based on key performance indicators. Non-conformities also include the inability to comply with Wärtsilä supplier requirements observed during audits and assessments.

Quality level

Wärtsilä expects its suppliers to deliver the Supply in full accordance with its specifications. The philosophy is to concentrate on preventive and proactive quality assurance activities close to the source of responsibility.

In order to measure and monitor the quality of delivered products, Wärtsilä assesses supplier quality and performance using various performance indicators, complementing each other to get a multi-dimensional picture of the supplier's performance.

Failure to meet the agreed targets may result in corrective action activity, see chapter 10. Handling of non-conforming products and services.

Delivery reliability

Wärtsilä expects its suppliers to deliver the Supply on time every time. This philosophy is aimed at preventing and reducing the inventory throughout the entire supply chain. Additionally, in projects in which Wärtsilä is engaged, customers typically seek high liquidated damages for all delays.

On time delivery is measured at all Wärtsilä delivery centres by the receipt of the correct material having the right quality, at the agreed time, with the correct documentation, certificates (if applicable) and delivery date. In general, late deliveries are not permitted at all, and liquidated damages may be applicable to delayed deliveries. The supplier shall inform Wärtsilä immediately of any potential late delivery, and shall also obtain authorization for all early deliveries.

Failure to meet the agreed targets may result in corrective action activity, see chapter 10. Handling of non-conforming products and services. These targets will be increased periodically with the expectation that these suppliers will eventually meet the on-time delivery goal.

The monthly monitored information may be made available to direct material suppliers via the supplier portal.

Cost

Wärtsilä expects its suppliers to deliver the supply at the optimal cost. The target is to eliminate/reduce unnecessary costs

throughout the supply chain by implementing a lean philosophy. Wärtsilä promotes and encourages suppliers to initiate total cost of ownership calculations for its products. Based on the cost scenarios, Wärtsilä may opt to work with the supplier through participation in Wärtsilä supplier cost seminars. It is expected that the supplier shall invest the necessary resources to achieve the targets set. The supplier is expected to cooperate with Wärtsilä and continually work on the cost structure of the supply in a transparent manner for cost optimisation.

Lead time

Wärtsilä expects its suppliers to deliver the supply as per the agreed lead time. This philosophy is aimed at optimising lead times throughout the entire supply chain. Wärtsilä promotes and encourages suppliers to work on 'make or buy studies', and to initiate the 'lean supply chain' model for all its products. Wärtsilä may opt to work together with the supplier to reduce lead times. It is expected that the supplier shall invest the necessary resources to achieve the targets set.

In the regular production scenario, the

supplier is expected to check the Supplier Dashboard information from the supplier portal at least on a monthly basis, to review and direct their actions in a corrective and preventive way for improving performance on the KPIs. Additionally, there will be periodic evaluations carried out. The frequency of such evaluations is based on the criticality of the product that is supplied. It will be based on supplier performance, taking into consideration factors such as the Wärtsilä supplier requirements, quality and delivery, process lead times, the quality management system, communication and responsiveness, the level of commitment and investment, complaint handling, etc. The evaluation shall be carried out via an audit and the results shall be notified to the supplier in order that corrective actions can be taken. The criteria required from Wärtsilä suppliers, referred to earlier in this handbook, are very fundamental in nature, and failure to comply with any of these parameters will be deemed as a critical failure and the supplier may be banned from further business relations. This evaluation shall be used as a basis for supplier awards, rewards, and business development activities.



12. Continual improvement

In order to meet Wärtsilä's requirements, the daily operational process and way of working shall be optimised for best performance. Uniform practices shall be maintained and further developed to achieve this. Wärtsilä needs excellent sources of supplies to support its operations and the needs of Wärtsilä's customers. Fluent and streamlined processes between the suppliers and Wärtsilä enable continuous improvement. The result of continual improvement is excellent sources of supplies and excellent supplier relations.

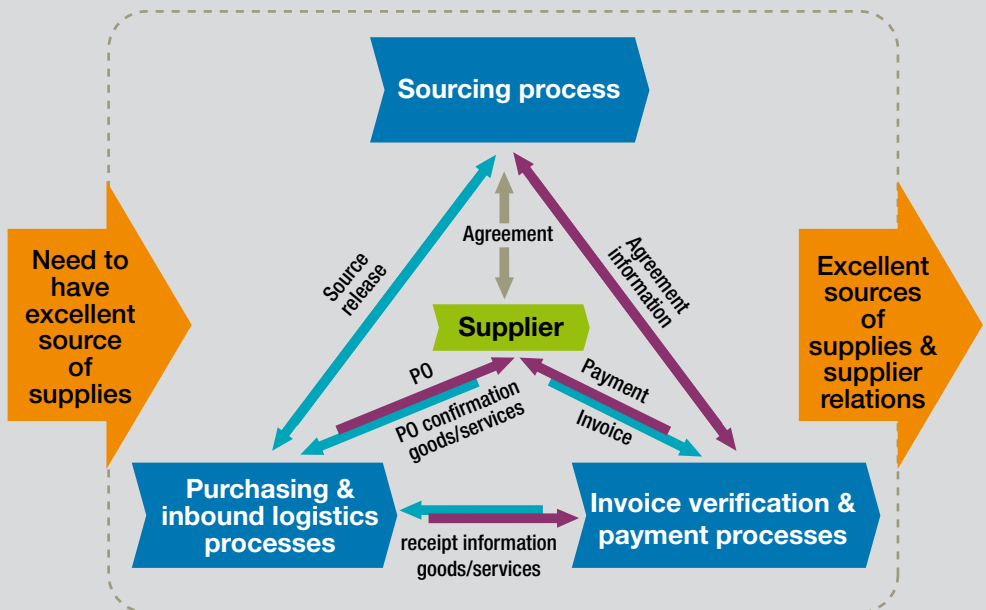
The following processes involve interaction with the supplier:

- Sourcing process
- Purchasing and inbound logistics processes
- Invoice verification and payment process.

Sourcing process

This process enables actions and interactions in, but is not limited to, the following items to achieve operational excellence.

- Lead time reliability and forecasting rules
- The achievement of supplied product quality standards



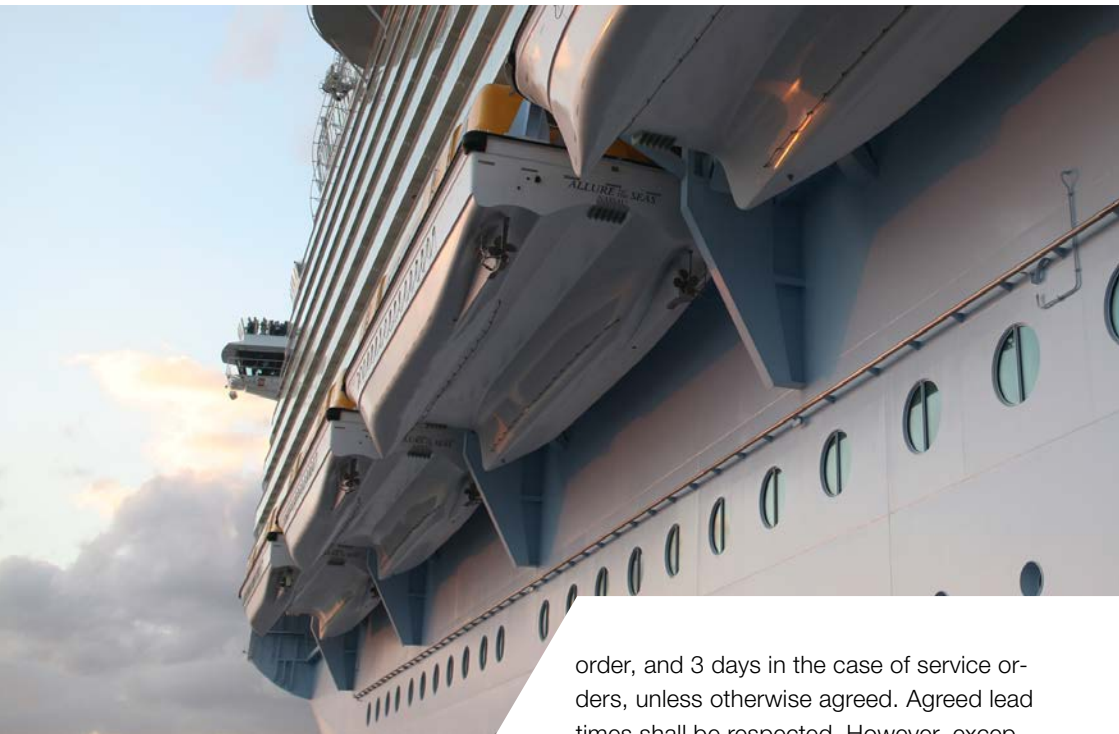


- Supporting suppliers in meeting product specifications via supplier development processes, audits, and follow up actions
- Technical information handling
- Monitoring, evaluating and reporting of supplier performance and related actions
- Receiving outputs of Wärtsilä customer relations and their correlation to supplier performance
- Cost reduction projects and product improvement processes
- Pivoting activities in standardization and commonality
- Stock reduction (e.g. vendor managed inventory, supplier taking responsibility for the maintaining of agreed inventories of the supplied products)
- Supplier agreements, etc.

The supplier shall, prior to signing an agreement, confirm that all the technical specifications, drawings and instructions related to the supply covered by the agreement, are understood.

Purchasing and inbound logistics processes

Purchasing activities between Wärtsilä and its suppliers are conducted between dedicated purchasers from Wärtsilä and their supplier counterparts. These operations cover everything from preliminary volume indications, purchase orders, confirmations, invoices, quality notifications, supplier certificates, etc. The communication from sup-



plier towards Wärtsilä concerning operational issues shall be addressed to the person identified in the purchase order. In all daily operations, the supplier shall have a clearly nominated contact person(s) for dealing with Wärtsilä, and an appropriate backup system implemented. These contact people shall be responsible for continually developing the needed co-operation between the supplier and Wärtsilä. Suppliers shall confirm their capacity to meet the indicated needs from Wärtsilä upon request. Upon receiving purchase orders from Wärtsilä, the supplier shall confirm each purchase order item within 7 days from the issuance of the

order, and 3 days in the case of service orders, unless otherwise agreed. Agreed lead times shall be respected. However, exceptions can be made if commonly agreed. In the case that Wärtsilä provides the supplier with a periodic overview of open purchase orders, the supplier shall verify the order book against its production schedule to ensure that all information is aligned. This includes checking the lists for possible discrepancies. The supplier shall continually monitor its order book to proactively ensure that its capacity and capabilities are, and will remain, at an adequate level to sustain the operations, despite changes in the market conditions or agreed changes in customer requirements. The supplier shall immediately and proactively inform Wärtsilä of any possible shortcomings. Further



development of the operational efficiency shall be continually pursued jointly between Wärtsilä and its suppliers through the enforcement of integrated system solutions, proactive working (e.g. for the purchasing process), best practices, etc.

The supplier shall furnish the packing material and adequately pack the supply to withstand the impacts of transportation, taking into account any instructions given by Wärtsilä, the nature of the goods, and the method of handling and storage during transportation. Unpainted metallic surfaces of each component of supply shall be well protected against corrosion. The supplier shall provide Wärtsilä and the freight forwarder used by Wärtsilä, details of the consignment not later than seven (7) days prior to the delivery. Containers provided by the supplier shall

have the container safety certificate valid for one (1) year from the delivery. The delivery shall include a case or unit specific packing list, as applicable, containing details, such as marks, item number, order number, packages, dimensions, gross and net weight, or any other information required specifically in the order.

Invoice verification and payment process

Invoicing

When invoicing Wärtsilä, the preferred method is electronic invoicing (e-invoicing). Supplemental methods in delivering the invoice to Wärtsilä Shared Service Center are: EDI, e-mail and mail. Whichever method is used, purchase invoice requirements must be followed and fulfilled. More information on the technical requirements regarding electronic invoicing and the purchase invoice requirements can be found on Wärtsilä's webpage <http://www.wartsila.com/en/about/suppliers/mission>.

Electronic data interchange

Wärtsilä expects high volume suppliers to have the capability to integrate their production systems with the production systems at Wärtsilä plants. At the very least, they shall possess the capability to connect to the supplier portal to avail themselves of the latest listings concerning the standards used to produce products for Wärtsilä, and to view the Supplier Dashboard for initiating pro-active preventive actions at their end, and for sending product related information electronically.

Wärtsilä is committed to creating a future that is both sustainable and successful, and we encourage our suppliers to share this commitment.



Wärtsilä is a global leader in advanced technologies and complete lifecycle solutions for the marine and energy markets. By emphasising sustainable innovation and total efficiency, Wärtsilä maximises the environmental and economic performance of the vessels and power plants of its customers. Wärtsilä is listed on the NASDAQ Helsinki, Finland.

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