



# Maritime Software Solutions

**Be smart. Use our smart data and unique cloud-based software to improve your business performance.**

MESPAS Technical Ship Management (TSM) enables cost-efficient operations and reliable fleet performance. MESPAS TSM covers all the key functions of technical ship management: procurement, maintenance, QHSE operations and crewing.

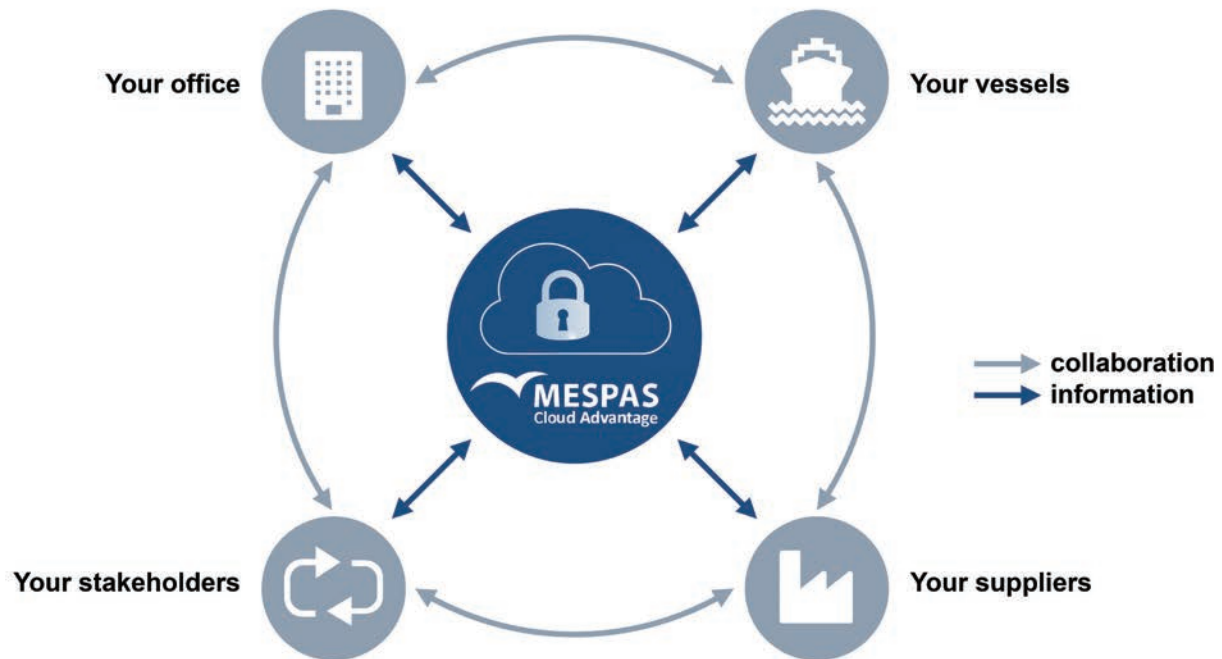
Our fully integrated online procurement solution puts you in direct contact with suppliers. View and compare prices instantly, place orders directly, receive invoices and approve payments quickly and efficiently.

MESPAS has created a unique master database in the cloud with the technical details of the millions of pieces of machinery and parts required on a ship. These can be installed in your system in just a few days.

No manual data entry is required. Consistency is ensured and overall business performance improved. Spare parts can be ordered at the click of a button, reference numbers are automatically correct. You don't even have to worry about implementing new software releases, the MESPAS cloud does it for you. So be smart and use our smart data.

# The unique concept behind our smart data

Imagine the advantages of a data library of millions of spare parts and pieces of machinery at your fingertips. Connect to our structured global master database in the MESPAS Cloud and ensure straight-through, fast and cost-efficient workflows.



All our products are connected to the MESPAS heart, a cloud based multi-tenant infrastructure. This core component collects and provides all information. Data synchronisation, initialised by the crew, is processed and monitored by the MESPAS operation team. Software updates are automatically deployed using the synchronisation channel, so that even vessels in regions with limited internet access can be reached.

This central infrastructure is also the basis for our unique global master data concept. Machinery components with all their attributes (manufacturer, documents, spare part lists etc.) are defined once on our database and then just mapped to the individual customer installation.

This means that not only is the configuration of a new installation much faster, but also that optimal data quality is ensured. Most importantly: all players access the same high quality smart data. There is only ever one, unique data set across the company.

Office staff access the MESPAS system online through a secure internet connection, no matter where and when. Locally installed MESPAS hardware is not required. Crews aboard vessels benefit from working with an easy-to-use application connected to the MESPAS Cube, a robust and secure server containing all relevant information, regularly mirrored to our central infrastructure.

Suppliers receive requests for quotations, make offers, accept orders and send invoices. They are fully integrated into the procurement process resulting in efficient information flows and full transparency.

Stakeholders can easily access our various online dashboards and reports based on the data collected on the MESPAS central infrastructure. Let owners, auditors, classification societies and public authorities access financial KPI's, reports, trends, comparisons and other analytics.

# Technical Ship Management functions and features

## Procurement

Reduce transaction costs and misunderstandings with our fully integrated procurement solution.



**Procurement** – procurement software accessible to all users (ship manager's office, crew, suppliers). Access a supplier directory of tens of thousands of suppliers, send offer requests and orders, receive invoices. Track your order online at any time. Manage contracts, pre-fill system with supplier negotiated prices and check adherence.



**Inventory administration** – our unique bar code system and automated process mean easy-to-handle stock management.



**Budgeting and invoice management** – assign financial resources, handle invoices and update your accounting solution.



**Mobile** – wherever you are, with our iOS or Android application you have the information you need at your fingertips.



**Interfaces** – we are integration ready; if our standard interface modules don't fit, we will tailor an individual solution.

## QHSE

Comply easily with regional and global quality, health, safety and environmental regulations.



**Task management** – for all your unplanned maintenance, non-conformities, deficiencies, near misses etc. Assign duties, track status and log completion.



**Inspection report** – record observations in a structured form and track findings to their resolution. Add pictures to vetting inspections or add state port controls reports.



**Document and form management** – split and load your safety manual to the document management system, ensure the validity of certificates, share circulars or create forms.



**Reporting engine** – more than 60 standardised reports. Create customer specific reports.



**Analytics** – comply effortlessly with regulations: TMSA, MRV and IMO DCS. IHM reports can be generated as and when required for reporting compliance.



**Dashboards** – an effective way to supervise your business. Use data for analysis, KPI's and consolidation and visualisation.

## Maintenance

Your crews can efficiently plan the technical maintenance of your vessels, while office staff have an overview of all tasks across the fleet.



**Planned maintenance (PMS)** – ensures that all aspects of fleet management are in compliance with regulations. Planned maintenance takes place on time, vessels are kept on schedule and in top condition.



**Views & planning** – use various views to control your machinery, running hours and the execution of PMS jobs. Confirm / reject crews' plans to reschedule jobs with a click of the button.



**Machinery library** – find the documents related to your machinery. Our master database contains over 125'000 OEM documents, everything from operation and maintenance manuals to work instructions.



**Task management** – control your unplanned maintenance: record duties, document and comment on their completion, and assign people and equipment.

## Operations

Analyse vessels and voyages, organise logistics, follow ship performance, monitor hull and propeller condition.



**Noon report** – tailored for the shipping industry, this report automatically sends all relevant information to stakeholders.



**Ship schedule** – stay up-to-date with the location of your vessels. Organise logistics or chartering, track orders or plan shore-based activities.



**Voyage analytics** – combine noon reports and additional parameters with other voyage information. Plan journeys, make comparisons and optimise future voyages.



**Installation data management** – provides a complete overview of the machinery in your entire fleet, hierarchically structured for comprehensive organization and modification.

## Crewing

Manage all aspects of your crew's activities: crew planning, database, training, assessment, logistics, payroll, travel plans and much more.



**Crew management** – a wide range of tools to help you manage all your crew schedules easily and efficiently.



**Work & rest hours** – a form manager lets you record and track every crew member's work and rest hours.



**E-Learning** – is becoming increasingly important for crew members so that they are continually up to date.

# How the MESPAS cloud compares to inhouse installed software

MESPAS Cloud Advantage	Concept	Traditional software
<ul style="list-style-type: none"> <li>Offsite central server infrastructure.</li> <li>Access to software and central server anytime, anywhere via standard IT equipment.</li> <li>State-of-the-art, future-proof solution</li> </ul>	<b>Technology</b>	<ul style="list-style-type: none"> <li>Customers run multiple servers, maintained and hosted on-site.</li> <li>Software installed on local computers; changes implemented individually</li> <li>Cost and time intensive solution</li> </ul>
<ul style="list-style-type: none"> <li>Multi-tenant architecture for sharing hardware, memory and software among multiple tenants (customers).</li> <li>Software is easily updated for all users via central server.</li> </ul>	<b>Multi-tenant versus single-tenant</b>	<ul style="list-style-type: none"> <li>In a single tenancy environment, each company / vessel has a separate and anonymous server. Time and infrastructure consuming; difficult to compare data and to ensure that users run the same version of the software</li> </ul>
<ul style="list-style-type: none"> <li>Available 24/7 via secure internet connection; server-farm meets highest standards: server redundancy, power backup, data backup, internet connection, fire protection, environmental control. All governed by strict Swiss data privacy law.</li> </ul>	<b>Availability, security &amp; disaster recovery</b>	<ul style="list-style-type: none"> <li>Local solutions feature significantly lower hardware and data security. High disaster recovery costs.</li> </ul>
<ul style="list-style-type: none"> <li>Suppliers send quotes, receive orders and send invoices in one online system. The database contains over 20,000 suppliers such as MAN, major supplier to the maritime industry, and is growing constantly.</li> </ul>	<b>Supplier integration</b>	<ul style="list-style-type: none"> <li>Suppliers quote and invoice by e-mail or 3rd party system. This is both time-consuming and expensive.</li> </ul>
<ul style="list-style-type: none"> <li>Improvements and changes are made available to customers free of charge via automatic software release and deployed with little or no customer involvement.</li> </ul>	<b>Updates &amp; releases</b>	<ul style="list-style-type: none"> <li>Software updates incur costs such as upgrade fees to software provider, deployment costs, as well as considerable testing time.</li> </ul>
<ul style="list-style-type: none"> <li>MESPAS continually optimizes its software. Customization requests are addressed on demand. Various options exist: e.g. interfaces to ERP &amp; accounting systems.</li> </ul>	<b>Customisation</b>	<ul style="list-style-type: none"> <li>Customization possible, but usually means "golden handcuffs" (high implementation cost keeps clients from switching to another software provider).</li> </ul>
<ul style="list-style-type: none"> <li>IT is MESPAS's core competence.</li> </ul>	<b>IT competence</b>	<ul style="list-style-type: none"> <li>IT is not the core competence of the company.</li> </ul>
<b>EXPENDITURES</b>		
<ul style="list-style-type: none"> <li>No capital expenditure</li> <li>Predictable operational expenditure in line with usage</li> </ul>	<b>Cost types</b>	<ul style="list-style-type: none"> <li>initial large capital expenditure</li> <li>capital expenditure for upgrades and adding new users / vessels</li> <li>large and unpredictable operational expenditure.</li> </ul>
<b>SOFTWARE</b>		
<ul style="list-style-type: none"> <li>All must-have modules available. MESPAS software guaranteed easy-to-use with little or no training.</li> </ul>	<b>Products / modules</b>	<ul style="list-style-type: none"> <li>Typically, considerable training is required to familiarize users with the system.</li> </ul>
<ul style="list-style-type: none"> <li>Feedback from users reflected in software development, all customers automatically benefit from improvements.</li> </ul>	<b>Experience</b>	<ul style="list-style-type: none"> <li>No cross-industry experience reflected in software.</li> </ul>
<b>DATA</b>		
<ul style="list-style-type: none"> <li>Experts implement master data in line with stringent rules and requirements. All data is entered only once: no data duplication, ensuring highest data quality, comparability and consistency.</li> </ul>	<b>Data quality</b>	<ul style="list-style-type: none"> <li>Company must define and enforce own standards and regulations. No industry comparisons; comparability restricted to own company; often not even vessel-to-vessel comparisons available.</li> </ul>

MESPAS Cloud Advantage	Concept	Traditional software
<b>OPERATIONS</b>		
<ul style="list-style-type: none"> <li>Implementation and deployment of software within 8-12 weeks, no need for time-consuming setup of in-house IT infrastructure.</li> </ul>	<b>Speed of deployment</b>	<ul style="list-style-type: none"> <li>Deployment can only be started when in-house IT infrastructure (evaluation, acquisition, setup, maintenance) is up and running.</li> </ul>
<ul style="list-style-type: none"> <li>No customer-based staff required to manage synchronisation. Synchronisation can be automated. Assured reliability of synchronization process and data quality.</li> </ul>	<b>Ship to shore synchronisation</b>	<ul style="list-style-type: none"> <li>Reliability of synchronisation process not guaranteed; very time-consuming process.</li> </ul>
<ul style="list-style-type: none"> <li>Sophisticated reporting tool and online analytics available to generate real-time reports (standard or customised) for single vessels or across fleet.</li> </ul>	<b>Reporting</b>	<ul style="list-style-type: none"> <li>Very limited reporting; comparisons restricted to data from only one server; manual intervention and processing necessary before data can be used for reporting.</li> </ul>
<ul style="list-style-type: none"> <li>24 hour support via web, telephone or email.</li> </ul>	<b>Support</b>	<ul style="list-style-type: none"> <li>Extensive in-house support needed in terms of IT, software and business know-how.</li> </ul>
<ul style="list-style-type: none"> <li>PMS is type approved by DNV GL and therefore by IACS. MESPAS also supports compliance with MPMS requirements.</li> </ul>	<b>Certification</b>	<ul style="list-style-type: none"> <li>Certification is a prerequisite; any reputable competitor needs to be certified.</li> </ul>
<b>IT &amp; SYSTEM ADMINISTRATION</b>		
<ul style="list-style-type: none"> <li>Customers do not need dedicated IT staff; a project manager is advisable during implementation.</li> </ul>	<b>Personnel</b>	<ul style="list-style-type: none"> <li>Dedicated system administrator, IT staff to manage dedicated IT infrastructure.</li> </ul>
<ul style="list-style-type: none"> <li>With MESPAS customers need no softwarespecific IT knowhow.</li> </ul>	<b>Knowhow</b>	<ul style="list-style-type: none"> <li>IT specialists required; diligent knowhow transfer must be ensured every time there is a staff change.</li> </ul>

## Cloud Advantage

- improve your business performance
- save time and money
- access from anywhere
- ensure reliable, consistent data
- always up-to-date
- easy to install

# The MESPAS Cube

## Professional plug and play solution

Many operators know that managing the IT-side of a technical fleet system on board a vessel can be a challenge. Installing a server, maintaining it and implementing stringent back-up procedures all require profound IT knowledge and can be expensive.

MESPAS has the ideal solution to this problem. The MESPAS Cube is an offshore server (small industrial design PC, dimensions W x H x D 198 x 42 x 145 mm) with no moving parts, compact, handy and perfectly suited to the maritime environment. It comes ready to use, pre-configured with a vessel specific database and the MESPAS Technical Ship Management software.

The crew requires no special training to install the cube, a visit by a MESPAS specialist is not required. The crew simply connects the MESPAS Cube to the network on board. It couldn't be easier, simply plug and play. It can only be accessed by MESPAS software customers, thus preventing security issues such as malware or viruses. Everything is pre-installed; all configuration is automatic. In addition, synchronization between ship and shore can easily be automated.

**The smart solution for the shipping industry. Secure, reliable, easy to use.**



### Features

- robust and stable
- closed casing
- accessible from all on board computers
- tailored to the maritime environment
- network capability and multi-user functionality
- secure Linux operating system
- no moving parts
- silent, fanless design

### Benefits

**MESPAS software offers the following key benefits for ship managers and their suppliers:**

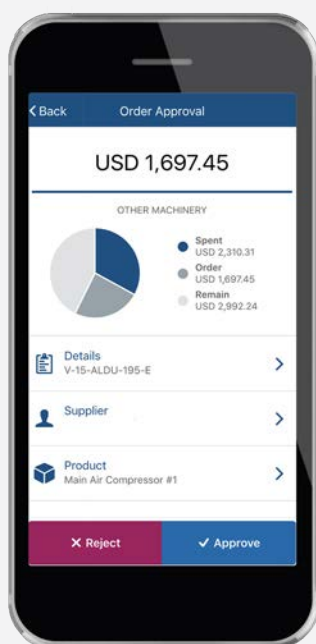
- software can be installed on ships within a matter of days
- consistent data throughout your fleet
- the risk of ordering a wrong part is eliminated
- global master data generate exceptional reporting and analysis material to aid decision making
- alerts and notifications on crucial issues
- prediction of service requirements for parts
- the value of stock across the fleet can be managed during the order process
- new catalogue information can be instantly made available to the ship manager and synchronised to vessels
- purchasing companies can rate the supplier they are ordering from
- process optimization on the supplier side leads to lower prices



## MESPAS Connect

The web-based trading platform MESPAS Connect brings ship managers and maritime suppliers together to create a truly efficient supply chain. Communication is fast and efficient, time and money are saved, misunderstandings and mistakes are eliminated.

MESPAS Connect works with thousands of suppliers to the maritime industry. Integrate your purchasing software with our electronic trading platform and say goodbye to time-consuming manual processing. Find suitable suppliers online, browse company profiles and create a favourite contacts list. Once chosen, connect directly with all your suppliers online, receive offers, place orders and receive and approve invoices. All at the click of a button. Fast, easy, efficient.



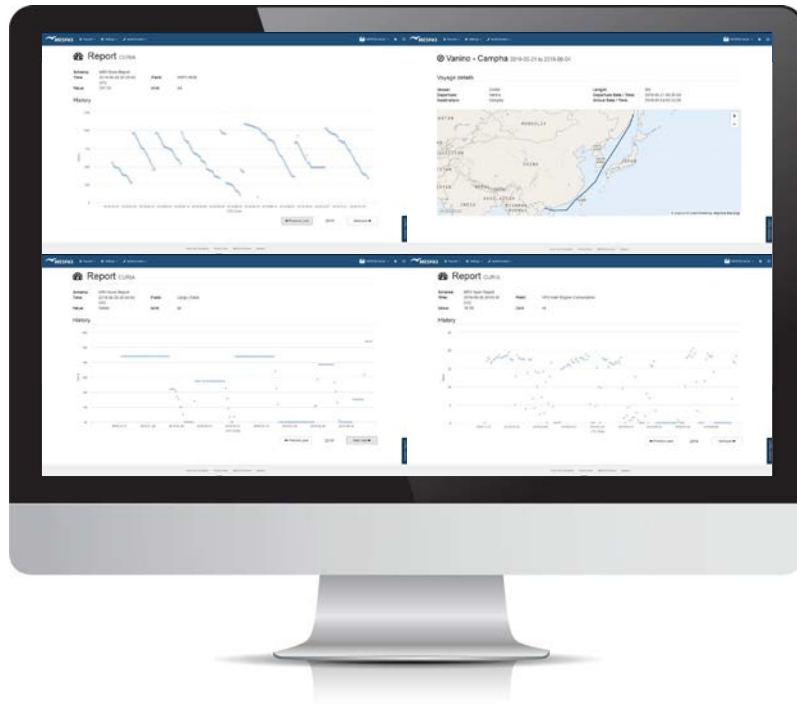
## MESPAS Mobile. Always in touch.

With the **MESPAS mobile application** you can connect to the system wherever you are. No matter what time of day. View offers or pending tasks, give your approval with the click of a button.

Keep up-to-date by connecting directly to noon reports. Check current status and ship schedules. View the position of your vessels directly on your phone screen.



All part of the MESPAS package



## MESPAS Analytics

MESPAS operates a large number of installations in the maritime industry. The information gathered gives stakeholders valuable insights into their business performance. Take advantage of this invaluable information to benchmark key performance indicators and promote best practice. Use it both for internal management as well as for providing information to external stakeholders such as ship owners, port authorities, classification societies and safety agencies.

MESPAS Analytics collects the data right at the source. No redundant data entry is required. This makes it exceptionally easy to comply with EU MRV, IMO DCS and IHM reporting requirements. Annual inspection reports can be generated at the click of a button.

## Integration and customisation

MESPAS is integration friendly: both our standard interfaces and data transfer protocols have been designed for seamless integration into other business software solutions.

Our IT teams are also happy to realise individual software components, should specific features be required. MESPAS facilitates straight-through processing to ensure uninterrupted business flows.

Our experienced team of developers are constantly developing and improving our software, adding features and enhancing functionality. These changes are immediately made available to our customers via regular software updates.

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