



Marine Information Management



**eShare**

Change the way  
you think about  
digital information

For Shipyards and Ship Design Companies

**Feel Empowered**



# Data-driven shipbuilding

Our goal is to assist our customers to embrace the immense possibilities offered by advanced digitalization in the shipbuilding life cycle.

Data quality, consistency, and interconnectivity, as well as the maximized automation of data handling throughout the entire ship design and shipbuilding process are key factors in unlocking next-level efficiency, increasing productivity and boosting shipyard profitability.

In data-driven shipbuilding, digital data streams are consistent, reliable, and reusable across disciplines, project phases and ship series. Data drives and connects the entire shipbuilding process while manual data handling is minimized or eliminated to safeguard data integrity and optimize shipbuilding.



## 3D CAD model at the core of data-driven shipbuilding

The core of all a ship's data is created in and resides in the 3D CAD model. A myriad of calculation and analyses programs and other systems can run on top of the CAD core, incrementally adding to and creating the digital twin of the vessel.

Data integrity ensures that the ship 3D model can be used to support and drive scheduling, planning, production, prefabrication, and building for optimal results.

## Digital twin

In traditional design and production, information flows from the digital model to the physical object in one direction.

A digital twin emphasizes a bi-directional approach. The information flows not only from the digital asset to the physical world, but loops back, where information from the shipyard and production merges with the digital model.

## Drawingless production

In our vision, consistent data streams lead to drawingless production and paperless operations. Our solution is based on CADMATIC eShare, a platform for the digital twin of projects in an easily accessible web portal. AR/VR/MR technologies are leveraged for review, supervision and communication functions.

## Unlocking next-level efficiency

Data-driven shipbuilding enables close collaboration between all disciplines, integrates processes and assures end-to-end continuity by sharing the same source of real-time information. This single source of truth assists shipyards to accelerate the time-to-market, drive down costs, shorten lead-times, and reduce quality issues in design, manufacturing and supply chains. It unlocks next-level efficiencies, boosts communication, increases productivity, and secures profitability via data-driven processes and decision-making.



# CADMATIC eShare

Link, visualize and share ship design, engineering, planning, production, inspection, and operational information in a web-based platform.

CADMATICeShare is revolutionizing how shipyards, design companies, shipowners and other project participants think about and use design, production and operational ship information. eShare's powerful information linking, visualization and sharing leads to faster and more accurate decision-making.

## Link

Access all project data in one place

eShare seamlessly links design, engineering & planning data, procurement and production data as well as inspection, operational and maintenance data of a ship. All project data is accessible in one place via the 3D model hosted in the eShare web portal.

The independent solution does not put data security at risk as no data relocation or cloud storage are required. Simply link and visualize information while maintaining control over sensitive data. You can locate any item in the model, drawing, or external data and visualize it immediately.

## Visualize

Speed up and enhance understanding

Having access to information is important, but the ability to visualize information provides additional benefits. In eShare, you can visualize any data available in the 3D model, external databases, linked management systems, or information that was added by users.

Different statuses and real-time information about design and engineering, production, installation, inspection or operation can be visually displayed in different colors for immediate understanding and fast decision-making.

## Share

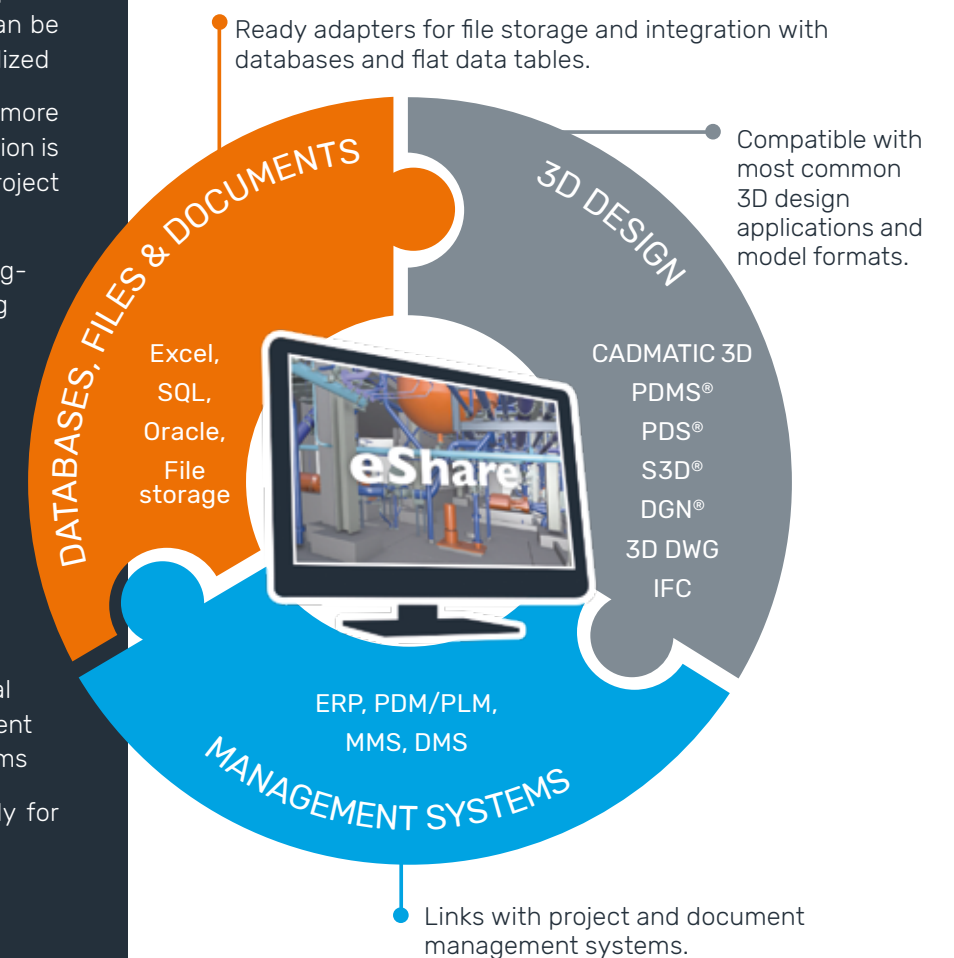
Bridging information gap & easing communication

eShare bridges the flow gap between information created in design applications and information produced during the production, installation, operation, and maintenance of a ship. Enhanced information transparency translates into greater project efficiency.

eShare's advanced and inbuilt communication tools ensure smooth and efficient communication by all project participants. As information is added during the life cycle of the ship, eShare facilitates sharing and benefitting from all relevant facility information

## eShare – Key benefits

- Access all project data in one place – any data in any database can be linked, searched for and visualized
- Make decisions faster & more accurately – the right information is available, all the time, for all project participants
- Boost efficiency of project progress monitoring by visualizing statuses based on several variables
- Retain full control over sensitive information: No data relocation or cloud storage. Effective support available whenever needed
- Independent solution means no reliance on single vendor. Easy participation by several project parties using different design and engineering systems
- Solution developed specifically for marine industry needs





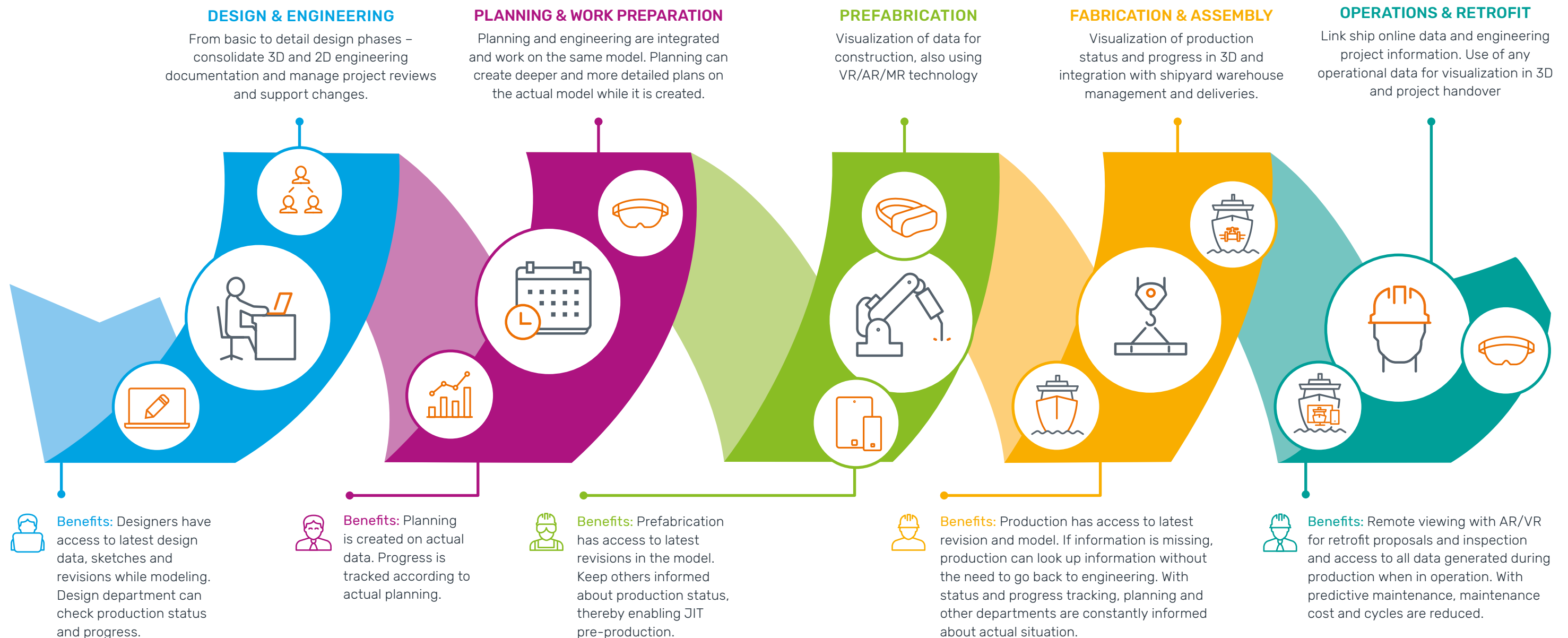
# Digital Twin

Platform for ship digital twin through all phases of project life cycle.

The vast amounts of information produced during all phases of a project life cycle can be used as building blocks of the vessel's digital twin. The information evolves when the project status changes from a concept or basic design to detailed design and production, and asset management.



Image courtesy of DSNS





# Selected eShare Use Cases

## Support information flow at any project stage

### Production and project workflow status tracking

Shipyard can benefit from integrating eShare with production systems, such as nesting and assembly controls. The hull production statuses for cutting, bending/pre-assembly, approval and section assembly are visualized and monitored via eShare.

### Integration with ERP, PLM/PDM

For 3D evaluation, monitoring progress and checking availability of parts and materials shipyard can integrate eShare with ERP systems, such as Baan®, Teamcenter® & IGPA® (Integrated Global Production Application). eShare linked to documents and system parts including dimensional drawings, and piping parts. Status of IGPA is visualized in eShare.

### Direct Planning with CADMATIC Floorganise

Create task-level planning based on work breakdown and BOM from the actual engineering model. Used to create kits and work packages and for status and progress tracking. eShare used for visualization of planning, progress and the retrieval of tasks (welding, grinding, painting), and resource planning.

## Facilitate / support for production / installation

### Visualization of installation instructions and replacement of paper drawings

Outfitting installation instructions can be visualized on mobile eGo tablets, thereby replacing paper drawings in outfitting production stage. Direct data from eShare server is provided online to the installation teams on site and input of outfitting part installation status can be added for progress monitoring and as feedback to design team.

### Integration with work packages

For work preparation and planning: work package management and kitting and project follow-up. eShare can be integrated with Dynamics ERP for outfitting/piping work package kitting visualization and re-packing.

### Link with RFID component tracking

eShare linked with SMART Projects®. Using RFID codes, any object can be found in digital model and all related data from any linked system – attributes, drawings, instructions can be accessed on site.

### Integration with Manufacturing Execution System (MES)

eShare integrated with Floorganise MES system to visualize schedule status of parts and blocks with color coding. Visualizes work scheduling, progress monitoring, and tracking and comparing working hours spent on tasks.

## Boost communication

### Communication within shipyard and shipyard groups

eShare facilitates communication within shipyard. Instead of paper- or email-based information flow, engineering office and shipyard can use 3D mark-ups and Microsoft HoloLens. Within shipyard group, eShare provides a reliable platform for communication: to visualize purchasing, delivery, production and installation statuses.

### Project handover

From design and engineering to class society approval, for the use of shipowner and shipyard production workshops: Provide access to complete or partial information on the project, including 3D model, documentation, extra information from production and construction and all related notes.





# Information management product family

The CADMATIC information management product family includes products for visualizing, managing and sharing information in marine projects. They are key solutions in supporting the digitalization of the shipbuilding and offshore industries.



## eShare

eShare is the flagship product of the CADMATIC information management product family. It complements design and engineering solutions by providing an innovative and easy way to utilize digital twins and optimize business processes. It allows organizations to combine, find, visualize and share project and asset information in a single and easily accessible web portal.



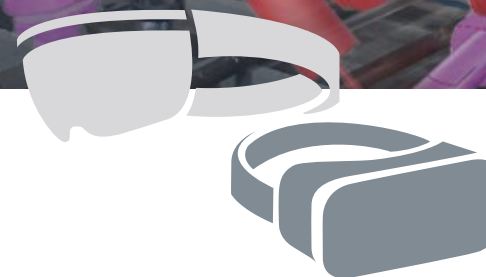
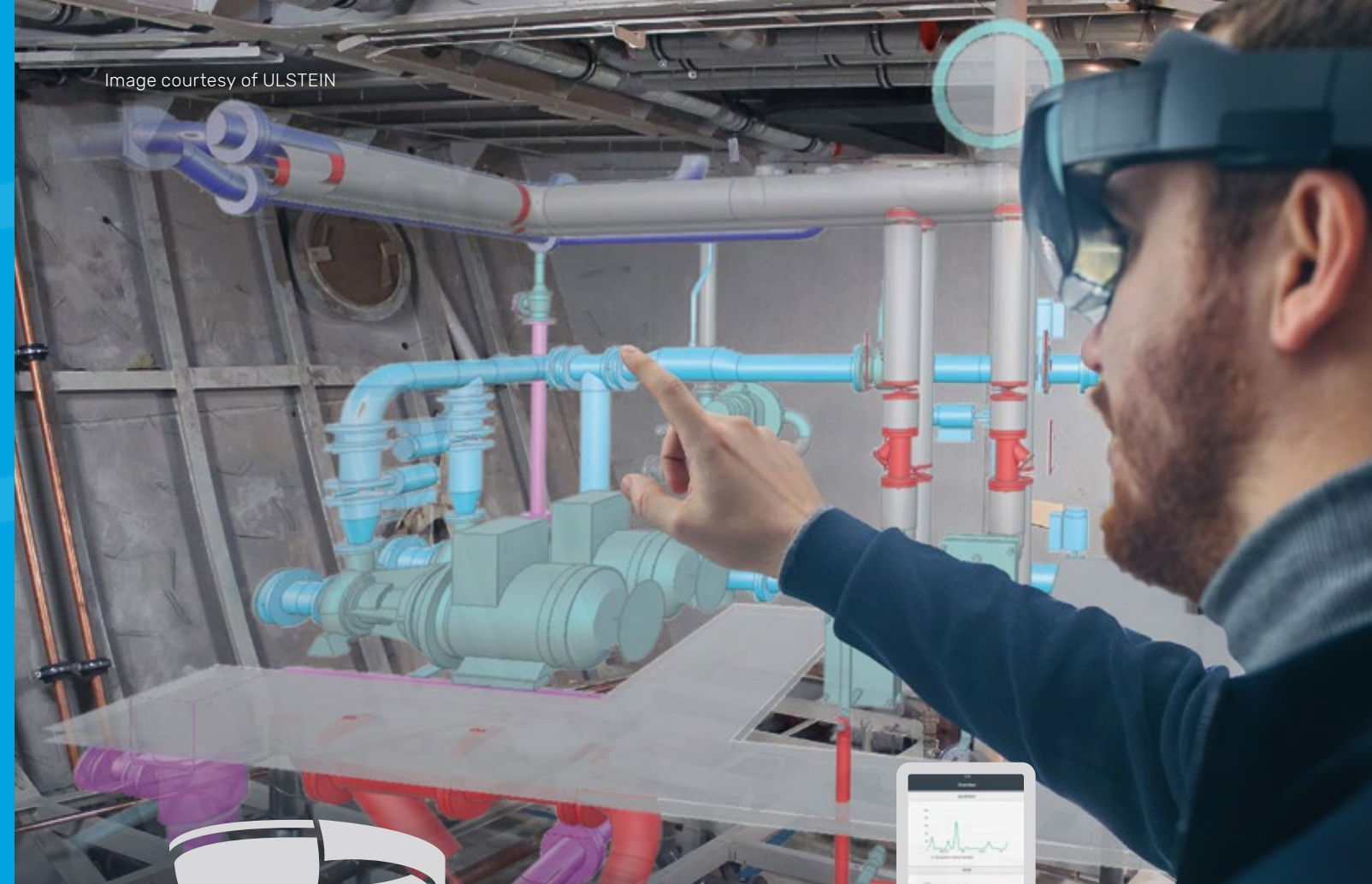
## eBrowser

Project managers, owners, production workshops and on-site construction staff can benefit from viewing the whole digital twin model in 3D. The ultimate project review tool allows users to walk through the 3D model, combine several models in one, or compare models. You can check collisions, easily locate and check details about any object, get dimensions and also make markups for project coordination and change management.



## eGo

Get the complete project for review on a Windows tablet. eGo facilitates review discussions and the entire production process and makes on-site trips more effective by bringing real mobility to design projects. Benefit from using eBrowser on the go – browse 3D models on your Windows tablet. Also compatible with eShare: Load models from the eShare server and use them offline on eGo and synchronize with eShare when online again.



## AR/VR/MR technologies

Use the latest technologies to access 3D design models or review designs on site. eShare for HoloLens is an app that allows you to interface Microsoft HoloLens\* with CADMATIC eShare. It offers an entirely new interactive design and engineering experience in augmented reality where digital 3D models reside in the real-world environment.



## FollowApp

Stakeholders in CADMATIC design projects can use FollowApp to view project metrics on their mobile phone. The metrics, which include the total length of pipes, total mass of pipes and pipe fittings, and number of pipelines, etc., are automatically uploaded at scheduled times from CADMATIC Outfitting projects.



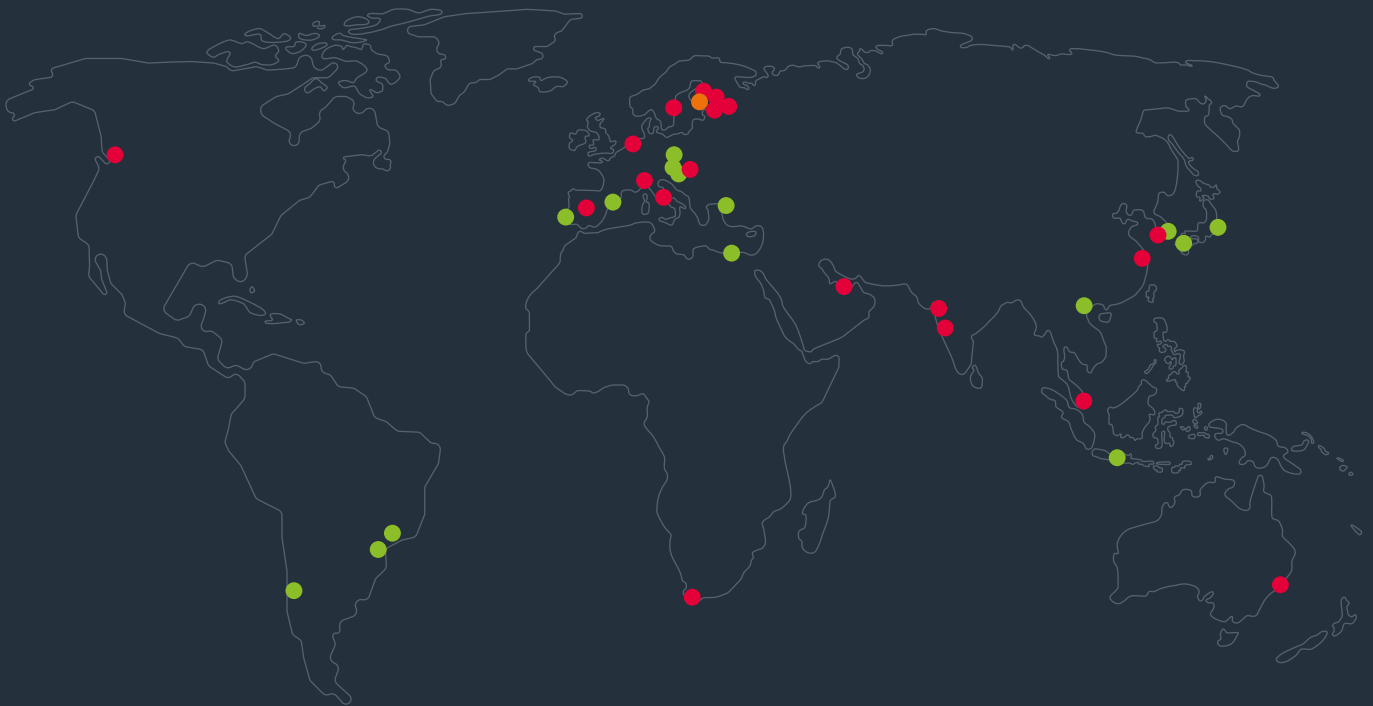
eShare effectively links, visualizes and shares all information in a web platform. eShare adds efficiencies and streamlines communication between project partners throughout the life cycle of a vessel. From design, procurement, production, inspection, operation, and maintenance.



## Marine Software Solutions

**CADMATIC** is a leading 3D design and information management software developer and supplier for the marine, process, energy and construction industries.

- **CADMATIC's headquarters** are located in Turku, Finland.
- **We have staff** in Australia, Canada, China, Estonia, Hungary, India, Italy, the Netherlands, Russia, Singapore, South Africa, South Korea, Spain, Sweden and the UAE.
- We have **certified resellers** and support partners in 15 countries in Europe, Asia, America and Africa. Our growing customer base includes over 6000 customer organizations in 60 countries.



Try eShare  
for free in a  
demo model  
environment



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