



Delivering superior value for large shipyards

Ship design & information management software

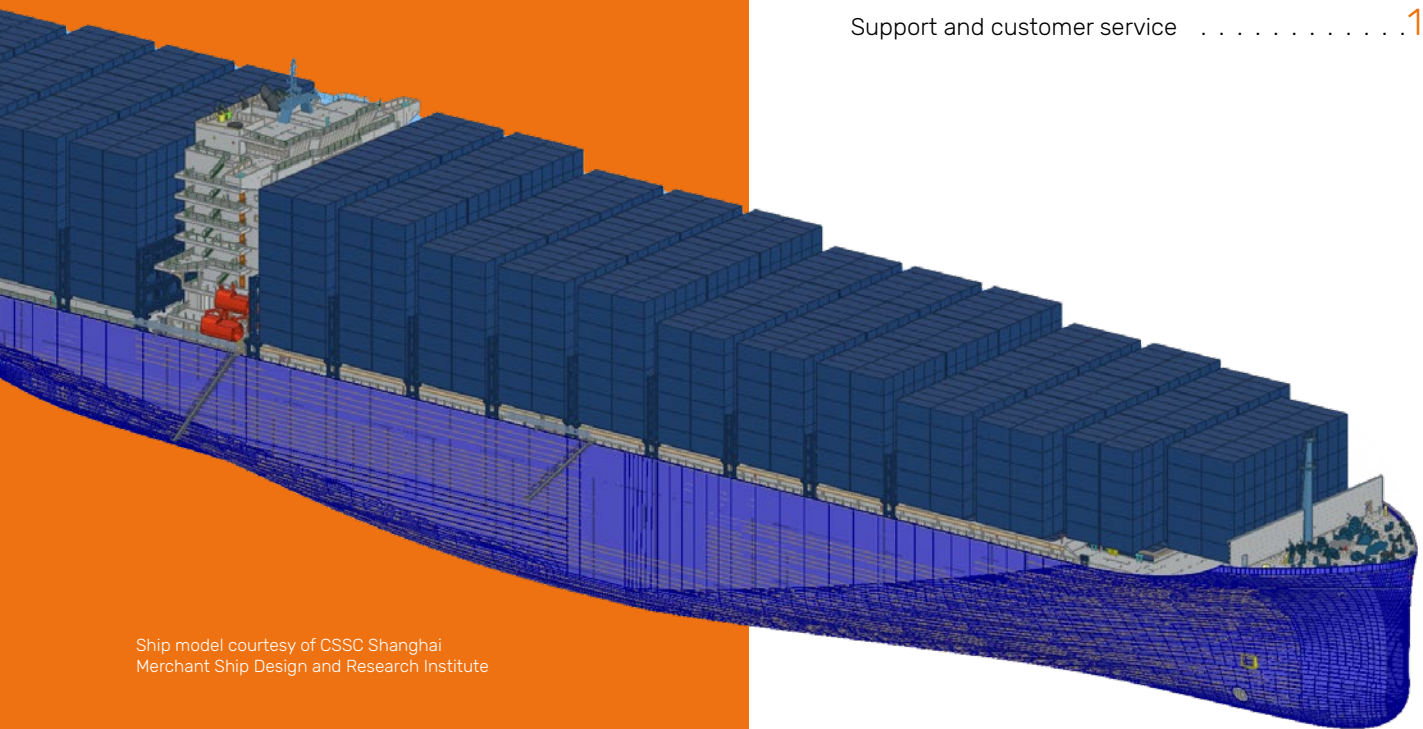
Cadmatic distinguishes itself by focusing on shipbuilding and the needs of shipyards and ship designers. Only shipbuilding experts understand the complex requirements of shipyards and their extensive subcontractor networks.

Owing to this clear focus in shipbuilding spanning four decades, over 40% of shipyards with active orders in commercial shipbuilding/offshore have chosen Cadmatic as their trusted partner for CAD, production, and information management solutions.

Cadmatic has embarked on an ambitious growth trajectory. We are expanding our product portfolio, increasing our local presence in key markets, and developing CADMATIC Wave, a shipbuilding process & data management system. We are doing this to better meet the needs of large shipyards around the globe.

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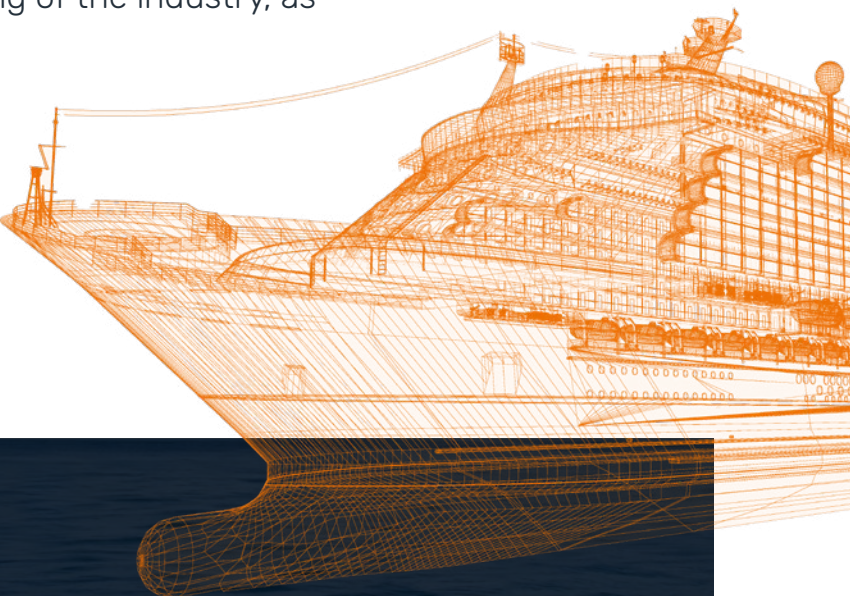
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Ship model courtesy of CSSC Shanghai Merchant Ship Design and Research Institute


Shipbuilding experts who understand shipbuilding needs and challenges


Cadmatic has over four decades of experience providing ship design and information management systems for shipyards and ship design companies. Our in-depth understanding of the industry, as well as of our customers' challenges and requirements, guides the development of solutions that address these specific needs.


A dark blue rectangular area with a wavy, water-like texture. It contains five orange icons and their corresponding statistics.

- 

40+
years' experience in
shipbuilding and ship design
- 

900+
customers in
marine industry
- 

40%
of active shipyards
use Cadmatic
- 

57
new marine customers
in 2022
- 

320+
employees

Creating solutions for smart shipbuilding

Cadmatic provides comprehensive solutions for the entire shipbuilding life cycle, from design to assembly, construction, and beyond. Hull and Structural Design, Outfitting and Piping Design, Electrical & Automation, and Information Management & Digital Twins are some of our traditional solutions.

Strategic partnerships have set Cadmatic on the path of also developing CADMATIC Wave, a game-changing shipbuilding process & data management solution.



Hull and Structural Design



Outfitting and Piping Design



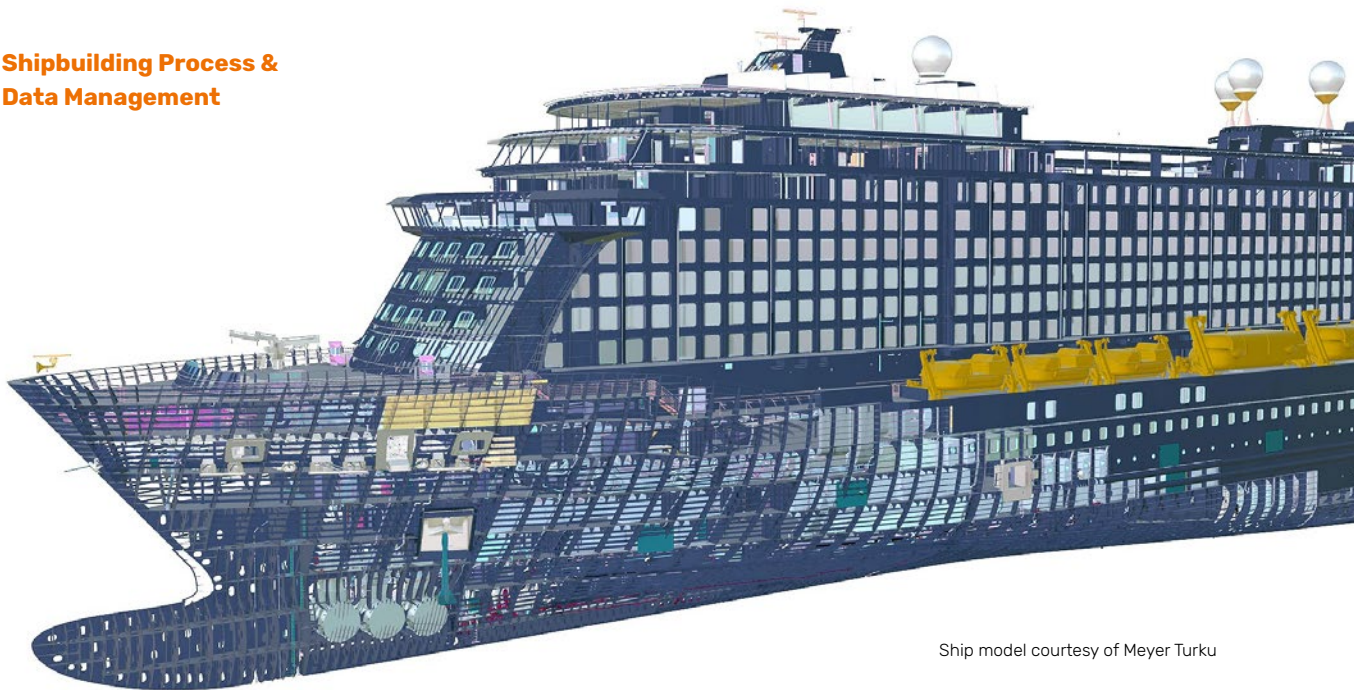
Electrical & Automation



**Information Management
& Digital Twins**



**Shipbuilding Process &
Data Management**



Ship model courtesy of Meyer Turku

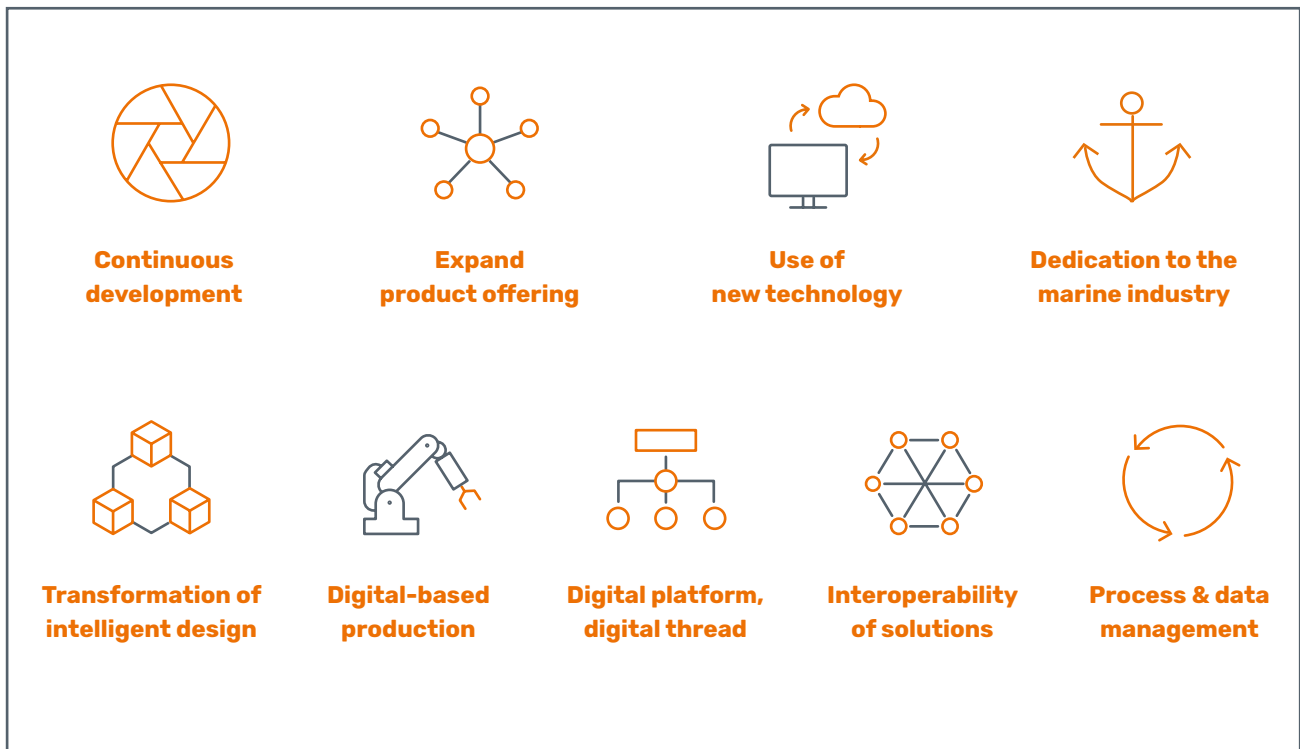
Expanding to meet your needs and serve you wherever you are

Cadmatic's 5-year growth plan leading up to 2027 will see us increase our headcount by 300%. We are investing heavily in customer service, R&D, product portfolio expansion, and our local presence in key markets.

Meeting the specific needs of the world's largest shipyards is a key driver of our expansion.

- Information management/digital twin/virtual shipyard
- Shipbuilding process & data management solution
- Work planning for ship production, Drawingless production
- Close integration with initial design

To meet these demands, we are committed to utilizing cutting-edge technologies to deliver smarter shipbuilding. Artificial Intelligence (AI) and machine learning, Augmented Reality and Virtual Reality AR/VR, cloud technologies, and user experience technologies are examples of such technologies.



Collaborations that enhance our offering

We believe in leveraging the skills of the industry's best practitioners. We have formed strategic alliances with such players to develop and enhance our product offerings and services to comprehensively cover all needs from initial design to the generation of production information.

These alliances include partnerships with other software vendors, technology providers, class societies, universities, and regional development entities.



Data-driven shipbuilding

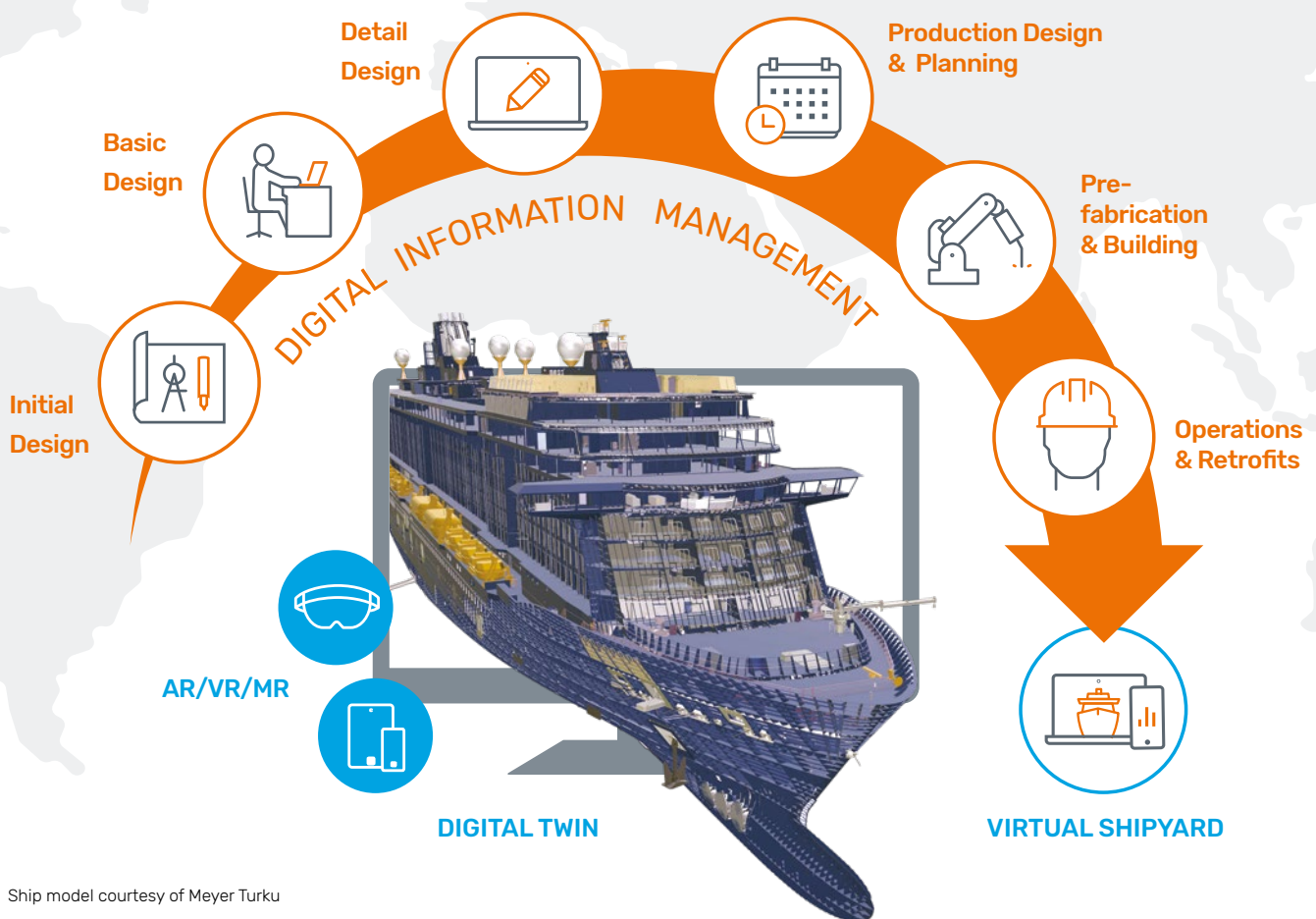
Cadmatic is leading the charge to help our customers optimize ship design and shipbuilding processes. These efforts are guided by our vision of a data-driven, transformed shipbuilding industry.

Data-driven shipbuilding

Data streams are consistent, reliable, and reusable in data-driven shipbuilding, and they connect the entire shipbuilding process. Throughout the design and production cycle, automated data handling reduces or eliminates the need for manual input while maintaining data integrity.

The 3D CAD model is fundamental to data-driven shipbuilding. A plethora of calculation and analysis programs, as well as other systems, can run on top of the CAD core, incrementally adding to and creating the vessel's digital twin.

This single source of truth assists shipyards in reducing quality issues in design, manufacturing, and supply chains, as well as accelerating time-to-market. Through data-driven processes and decision-making, it unlocks next-level efficiencies, boosts productivity, and ensures profitability.



Ship model courtesy of Meyer Turku

CADMATIC Wave: Shipbuilding process & data management

Cadmatic is developing a process and data management solution called CADMATIC Wave, which is designed to tackle shipbuilding industry-specific challenges. While other industries may benefit from generic systems, shipbuilding demands specialized process and data management solutions. Every vessel is a unique project with its own set of challenges, requiring focused tools for effective management.

Created via a strategic partnership between Cadmatic and CONTACT Software, it will serve as the shipyard's central hub, harnessing the power of digital assets and processes to ensure optimal efficiency, profitability, and quality.

Transform your shipyard with CADMATIC Wave



Boost efficiency and cut costs

Synchronize your resources, minimize redundancies, and execute projects ahead of deadlines.



Enhance collaboration and transparency

Break down the barriers between departments and achieve synergy in workflows.

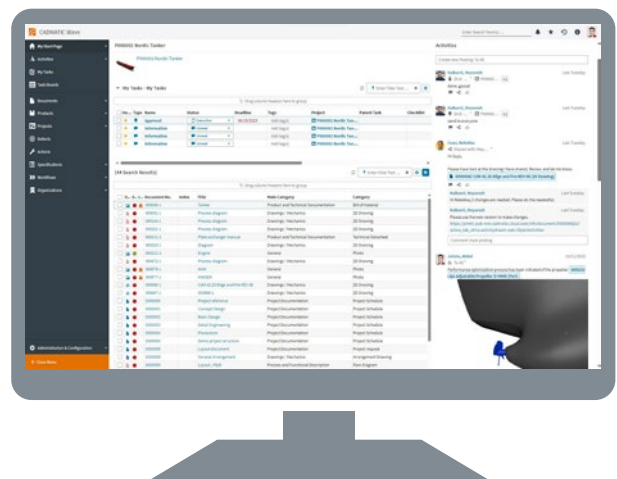


Make better decisions

Equip your team with the advanced tools they need for proactive and informed decision-making.

Key features:

- Advanced data visualization
- Unified engineering data
- Intelligent document management
- Controlled change management
- Efficient workflow management



Key areas where Cadmatic offers superior value for large shipyards

Cadmatic software was developed by ship design and shipbuilding experts. Our solutions are optimized to streamline design and information management in shipbuilding projects and to offer superior value for large shipyards.



CADMATIC Hull

Speed of modelling

Cadmatic is significantly faster in copying and moving model objects. It is also easier to model and modify ship hulls in Cadmatic. The mirroring functionality provided by other solutions does not deliver the same speed of modelling as Cadmatic. The copy functionality in Cadmatic is also superior delivering easier rotation and moving of objects in all directions. Object grouping is also more flexible in Cadmatic.

Hull Viewer

Cadmatic's Hull Viewer is intuitive and extremely easy to use. It boasts excellent bi-directional integration with hull drawings. The Hull Viewer is fully integrated into CADMATIC Hull, giving the engineer the flexibility to work in 2D or 3D depending on the situation. In other solutions, the engineer needs to work either in 2D or 3D.

Shell Module

Superior Shell module for creation and modification of seams & butts (hull lines) and shell plates. Much faster than other solution providers, which is complicated and requires specialists and more manual inputs. In Cadmatic, no manual work is required, and all seams & butts and shell plates are topological i.e., changes in one element are reflected in the other elements. If seams & butts are placed in good locations, shell plates can be created with a single click in Cadmatic!

Automatic Views

In Cadmatic, views are automatically created. In other solutions, all views need to be created manually. You can request the system to generate automatic views and the content of the view is always up to date with the latest data. Cadmatic also includes a steel design mode where the system automatically makes the view of an instance and does not save the data. The user clicks on a part that he/she wants to change in hull viewer or in the view itself, and then the user can move rapidly from one view to another. This is a very powerful feature in the basic design phase.

Bevels on relation

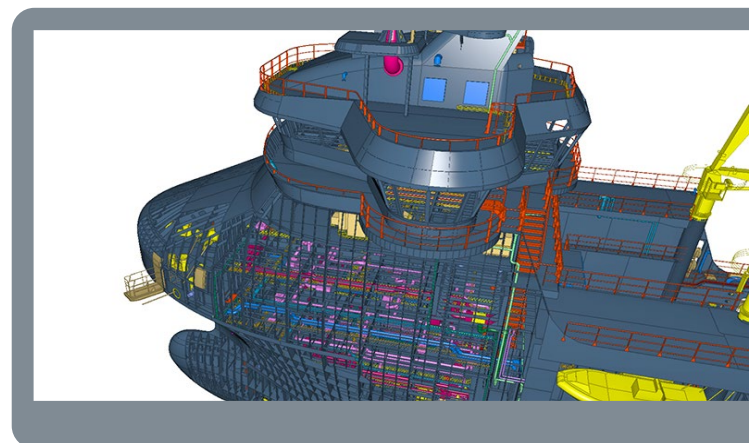
If a relation is composed of several relations, Cadmatic can assign the bevel to the right relation. In a similar scenario for other solutions, it does not have this capability and assigns the bevel to the entire relation. The Cadmatic system is rule-based, which means it follows engineering rules and puts the bevels in the correct place. The system is fully automatic and ensures that plate contours fit different bevel definitions. This feature comes fully integrated with CADMATIC Hull and is not a separate add-on. In other systems, manual work is required to assign bevels to the right relation.

Undo feature

Cadmatic has a handy undo feature to quickly undo actions. In other systems, there is no undo button. The user must manually simulate this action by copy-pasting and running scheme files again.

Automated assembly work breakdown

Cadmatic features automated assembly work breakdown out of the box, which speeds up and improves the accuracy of assembly. This feature is missing from other solutions, which means that it has to be done manually.



Ship model courtesy of Wärtsilä
Ship Design Norway AS

CADMATIC Outfitting

Pipe routing

In other outfitting products, the head and tail of pipes need to be defined per pipe. Only after this time-consuming task is done can routing commence. In Cadmatic, routing can start immediately, and the flow direction is also automatically assigned.

Cable routing

Cadmatic's cable routing system automatically generates a nodal network with all possible connections and penetrations. It also automatically identifies the shortest route. In other solutions, manual work is required to define how cables are connected. Cadmatic's jumping rules ensure automatic cable jumps between cable trays and between penetrations.

Work sharing (distributed engineering)

Cadmatic's work sharing system is significantly easier to manage. In many other solutions, the work sharing hierarchy needs to be defined at the beginning of the project and it is a complex process to make changes at short notice. Cadmatic work sharing is more flexible. New teams or designers can be added at short notice without difficulty.

3D Import performance

When importing models from other systems, the performance of Cadmatic is clearly superior. Other products slow down and navigation becomes sticky. In the Cadmatic environment, modelling continues smoothly.

Layout and arrangement drawings

Cadmatic layout and arrangement drawings are more AutoCAD-like. 2D drawings are seamlessly connected with the 3D model; there is no need to use a different system for drawings and modelling. It includes automatic labelling of 2D views with easy change management.

P&ID - 3D

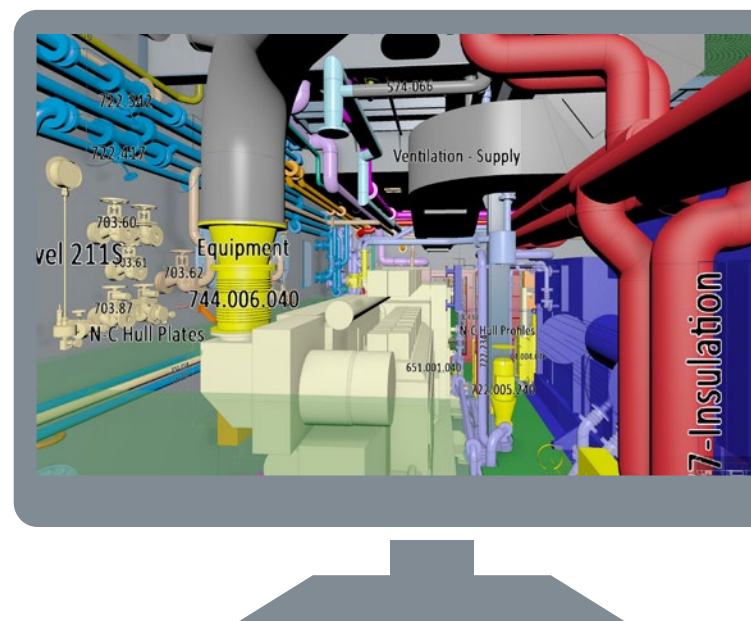
The Cadmatic P&ID and 3D model integration is superior. The system is easy to set up and requires no extra work. Users can select components in the P&ID diagram or the 3D model, in each case both the model and diagram are updated. AutoCAD-like object handling also eases modifications.

Reliability

The Cadmatic system is very robust and stable, even if designers or teams are not familiar with the software. Other solutions are less robust and prone to freezing or crashing if unusual or incorrect procedures are followed or the wrong commands are given by inexperienced users.

Visual appearance

Cadmatic's strong visual appearance and realistic views facilitate working in the 3D environment. Shadows assist in assessing the proximity of objects and the cursor color changes when moving through different objects, making it easier to follow.



What our customers say



Journey to data-driven shipbuilding

"After using Cadmatic for more than three years I am convinced that it is the best choice for our complex and extreme scale ship projects. Our partnership with Cadmatic is a key element in our journey to the next level of data-driven shipbuilding"

– Jan Meyer, CEO
Meyer Shipyards



Easing the work of production supervisors on site

"With eShare, the production supervisors can use touchscreen tablets to access production drawings, spool and ISO drawings, project planning and the building strategy. eShare is also linked to our ERP system so all the required information contained in drawings and details about purchasing and project progress are available with a single click. This is very useful and saves time."

– Arun Sidharthan, Lead Engineer
DAMEN Shipyards



Easier to check which parts have been cut and what their nesting status is

"The link between CADMATIC eShare and nesting software means we can see exactly what parts have been imported and cut. Everyone can check the progress without the need to request this information from elsewhere. We also can see the Lloyd inspection number of the plate"

– Paul Buijs, CADMATIC Hull Administrator
Scheepswerf SLOB



Improved design quality

"Cadmatic has enabled us to advance to a much higher level of 3D design maturity earlier in the project. The high level of data integration between 2D drawings, 3D model, and the parts library has resulted in fewer quality problems and more effective data management."

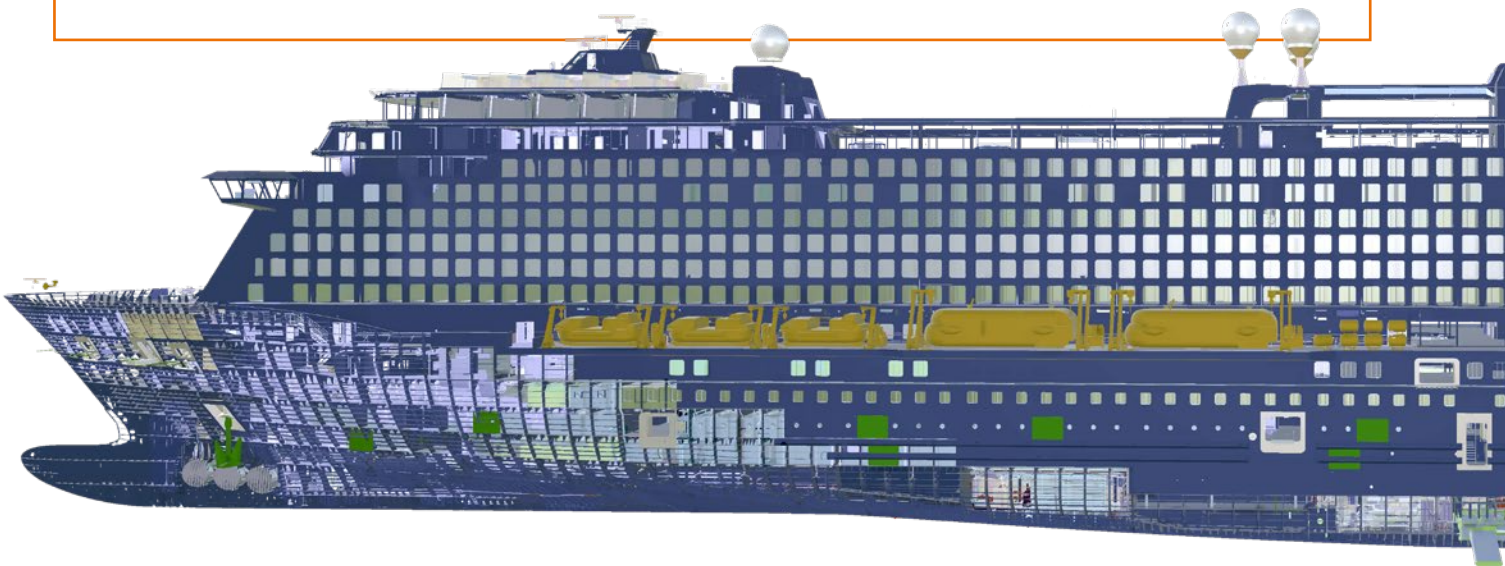
- Adam Law, Chief Engineer
Vancouver Shipyards Co. Ltd



30% increase in efficiency

"After changing to Cadmatic we are 30% more efficient on our ship design projects. The concurrent engineering system allows us to run 10 concurrent projects with the same resources that before could only handle 7 concurrent projects."

- Burak Anik, Design Manager
Tersan Shipyard



Ship model courtesy of Meyer Turku

Information management – Information flow from 3D design to production

The complexity of modern shipbuilding, along with changes in the business environment and the growing capabilities of digital solutions, challenges work processes and enables efficiency gains by eliminating gaps in information flows.

CADMATIC eShare digital twin platform

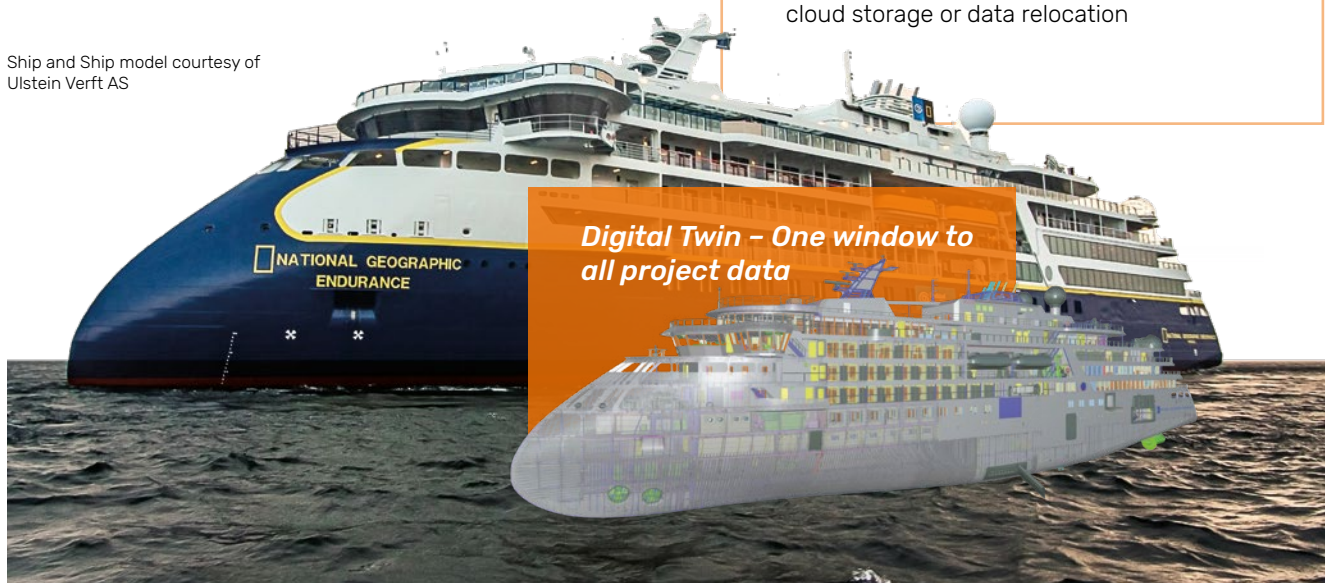
The CADMATIC eShare digital twin platform is revolutionizing how shipyards think about and use design, production, and operational ship information. eShare's powerful information linking, visualization and sharing leads to faster and more accurate decision-making.

It provides support for the flow of information at any project stage, facilitates production and installation, and improves communication. The independent web-based portal can link, visualize, and share any ship-related information via the 3D model.

Key benefits:

- Link, search for, and visualize any data from any database
- Monitor project progress and boost efficiency
- An independent industry-specific solution for marine design needs with professional tech support available when you need it
- Fast and accurate decision-making thanks to comprehensive data sharing
- No reliance on single vendors
- Full control over sensitive information – no cloud storage or data relocation

Ship and Ship model courtesy of
Ulstein Verft AS



Bridging information flow gaps between engineering and production with CADMATIC eShare

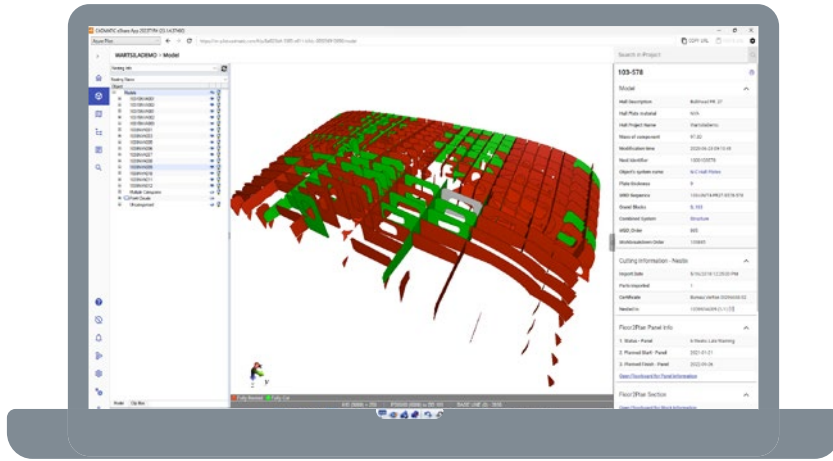
Addressing and improving information and data flows between existing systems provides tangible gains in productivity for shipyards and a gradual increase in digitalization gains.

But access to information does not guarantee that it can be used in time. For example, work package information may be available in a manufacturing system, but it is disconnected from the 3D model and provides only textual status updates to production teams. The ability to visualize this data in 3D and provide access to any other data in the required format, such as on a tablet or via a VR/AR set is a game changer for the production process due to the ability to visualize the data in digital format and thus enhance interactions.

It also opens the door to industrial metaverse applications and provides for the use of 3D digital data residing in physical environments in the production process.

In the following section, three practical examples will be provided of how CADMATIC eShare can bridge the gap between engineering and production by placing data in the context of production tasks with the use of color coding.





Example of color coding and data visualization for production in CADMATIC eShare.

Equipment weight information for installation teams

For on-site installation teams, it is critical to have information about the weight of equipment scheduled for installation before planning activities. This can be solved by merging available data from several sources and visualizing it for planning on-site activities: the ERP system containing the weight information after the procurement and the 3D engineering model.

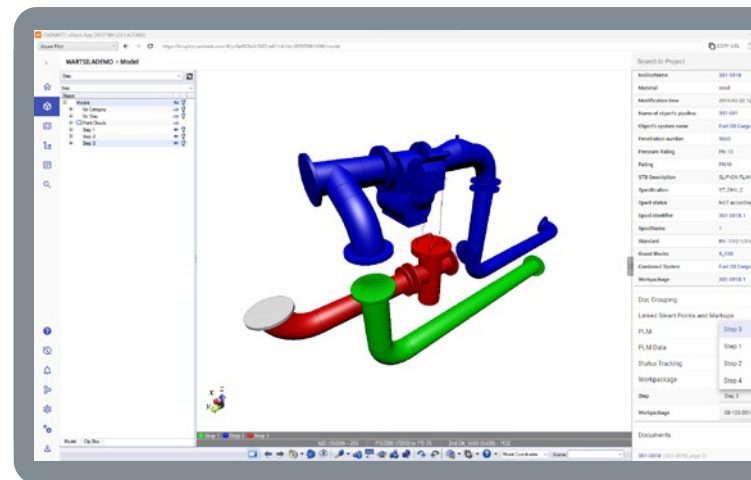
The design of information flow includes access to the ERP data, the selection of equipment for which it is required (with weight over 25kg), and comparison criteria for engineering the defined weight and data from the ERP system. The results for the planning and installation can be included in a pre-set visualization style in the information management platform with one-click colored 3D models according to the weight data. The installation teams can plan their work by considering access to heavy lifting machines and cranes and by avoiding situations where installation teams must make unplanned hull cuts or wait for heavy equipment lifting.

Example of 3D model and installation planning data in the context of work package visualization.

Planning installation packages

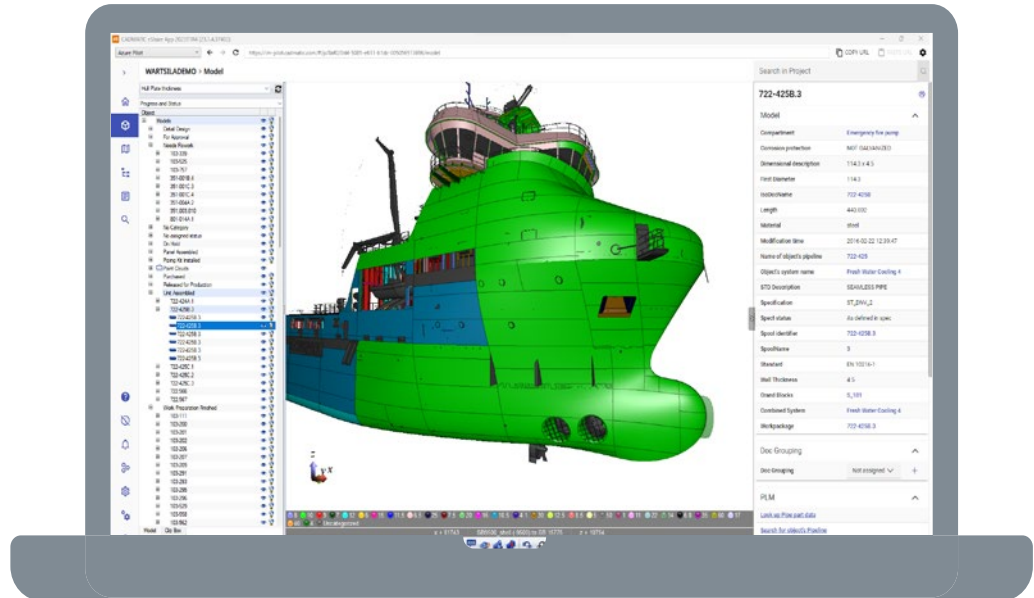
A typical modern shipbuilding project includes 500-1000 piping work packages for installation. Manufacturing and installation planning for the production based exclusively on engineering data may result in delays and disruptions due to the lack of information about deliveries from pipe shops or suppliers. Including the data from ERP (or another type of system) enables data merging: engineering and work breakdown, and delivery progress from workshops or subcontractors and placing it in the context of the work process.

This example represents a case where consolidating data from engineering and installation planning using innovative technology can significantly save time. It is a laborious task if there is only one project, while if a shipyard has several subcontractors delivering pipe packages and tens of simultaneous projects – it becomes essential for production planning and control.



Example of 3D model of hull construction with coloring according to the hull material data and information about the readiness of micro panels for production from shop floor planning.

Ship model courtesy of Wärtsilä Ship Design Norway AS



Communication between design and production in the shipbuilding network

Providing information “on-demand” and in context reduces the number of paper drawings and creates an interactive digital environment. Having “single-source-of-truth” data can significantly increase the quality of decisions and reduce the time spent searching and verifying information. At the same time, providing the context for production execution can increase production quality and at least partially address the lack of skills or understanding of the overall process by production teams.

Adding a link between the design model and nesting status provides a solution to track the hull building process accurately. It allows designers to instantly see what parts have been cut and welded. The progress of building and inspection is also visible, which reduces the number of uncertainties and questions.

Other information management solutions from Cadmatic

- The CADMATIC eBrowser viewer is the ultimate project review tool. It allows users to walk through the 3D model, make comments, and combine several models into one.
- CADMATIC eGo brings mobility to project reviews on Windows tablets while project metrics can be monitored with FollowApp on mobile phones.
- eShare for HoloLens provides a new interactive design and engineering experience in augmented reality where digital 3D models reside in the real-world environment.



Support and customer service

Cadmatic believes that shipbuilders and ship designers require the services of shipbuilding experts. We are proud to offer the best CAD support and customer service in the shipbuilding industry.

Service by shipbuilding experts

Some marine software service providers are losing staff with shipbuilding knowledge. Cadmatic is taking the opposite approach; we are prioritizing the hiring and retaining such employees.

This is based on our firm belief that the shipbuilding industry desires and deserves to be served by individuals with extensive shipbuilding knowledge. This is not

a figment of our imagination. Our customers tell us they appreciate the fact that we understand the shipbuilding industry and its processes. Our focus on shipbuilding and the development of shipbuilding knowledge enables us to create and deliver solutions that advance their shipbuilding operations.



Providing the highest level of CAD support and customer service in the shipbuilding industry

Great customer service is more than just answering the phone or responding to tickets. It all comes down to putting customer-centric systems and materials at the heart of our service.

Direct contact with support personnel

Cadmatic provides a direct link to your support team without intermediaries, which is a critical component of effective CAD support. Tickets left with us are handled quickly, and our support staff communicates with you until the problem is resolved. Our customers are not required to wait indefinitely for software updates or assistance.

We test results and keep improving

Cadmatic conducts a survey every year to gauge satisfaction levels with our products and services to continue to improve our customer services.

This is a good indicator of where we are succeeding and where we can improve. According to our most recent survey, the following aspects of our support services are highly valued:



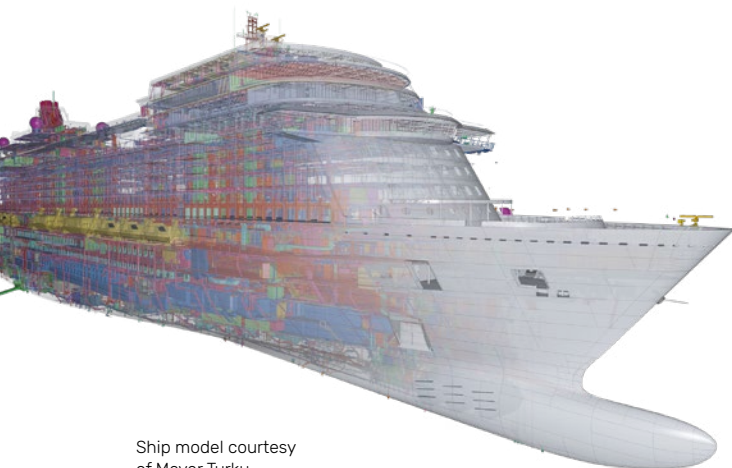
Easily accessible



Friendly



Solutions are useful



Ship model courtesy of Meyer Turku



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

Cadmatic

Linnankatu 52 A
20100 Turku, Finland
Tel. +358 2 412 4500
sales@cadmatic.com
www.cadmatic.com

For Cadmatic worldwide offices see
www.cadmatic.com/contactus