

SEUS

Smart European Shipbuilding



Funded by European Union



D6.5 - TRAINING MATERIAL



This project has received funding from the Horizon Europe Framework Programme (HORIZON) EU programme under grant agreement No 101096224.



Project no. 101096224
Project acronym: SEUS
Project title: Smart European Shipbuilding
Topic: HORIZON-CL5-2022-D5-01-06
Start date of project: 01.01.2023
Duration: 48 months
Deliverable title: Training material
Deliverable No.: D6.5
Document Version: 02 (M24)
Due date of deliverable: 31 December 2024
Actual date of submission: 20 December 2024
Deliverable Lead Partner: Partner No. 5, CADMATIC OY
Work Package: 6
No of Pages: 41
Keywords: Training material, advanced training

Name**Organization**

Ludmila Seppälä

Partner No. 5, CADMATIC OY

Dissemination level

PUB

Public

History

Version	Date	Reason	Revised by
01	05.12.2024	First version	Inguna Strazdina (NTNU), Evgenii Egorov (CADMATIC OY)
02	19.12.2024	Final revision	Henrique Gaspar and Magnhild K. Wolff (NTNU)



Executive Summary

This document presents an overview of the training materials developed in SEUS, in form of documents, electronic data, usual media for the training of the platform (T6.5). It focuses on users of the SEUS Cloud Solution. A copyright-free case is here used as basis, entitled “Door Case”, developed as an example of the experience of using the platform within the task T6.5. Three appendixes (A-C) include examples from the open training materials developed, namely on Project Management Training (Appendix A), Document Management Training (Appendix B) and Stability recalculation training (Appendix C).

Table of Contents

Executive Summary	3
Table of Contents.....	3
1. Types of training materials	4
1.1. Comprehensive User Manuals and Documentation.....	4
1.2. Video Tutorials and Recorded Demonstrations	4
1.3. Interactive e-Learning Modules and Simulations.....	4
1.4. Quick Reference Guides	5
1.5. Instructor-Led On-site and Online Training Courses	5
1.6. Webinars	5
1.7. FAQs, Troubleshooting Guides, and Knowledge Bases.....	5
1.8. Role-Specific Training Materials	6
2. Purpose of training materials.....	6
2.1. Smooth Transition and Change Management:	6
2.2. Increased Productivity and Reduced Learning Curve:	6
2.3. Error Reduction and Compliance Assurance:	6
2.4. Standardization and Best Practices:	7
2.5. Empowerment and Retention of Knowledge:.....	7
3. Training materials in the SEUS project	7
Appendix A – Project Management training	8
Appendix B – Document Management training	21
Appendix C – Stability recalculation training.....	37



1. Types of training materials

Given digital platform complexity and the critical decisions users make based on the system's information, ensuring effective training is paramount. High-quality training materials not only speed up user adoption but also improve data accuracy, maintain compliance, and foster cross-functional collaboration. Three appendixes (A-C) include examples from the open training materials developed, namely on Project Management Training (Appendix A), Document Management Training (Appendix B) and Stability recalculation training (Appendix C).

1.1. Comprehensive User Manuals and Documentation

What They Are: Detailed, text-based guides that explain every aspect of the PLM system - from basic navigation and search functionality to more advanced features like change management workflows and supplier collaboration tools.

Why They're Needed:

- **Reference Material:** Users can consult these documents at their own pace, allowing new employees or less-experienced team members to become productive faster.
- **Consistency:** Uniform written guidelines ensure that best practices are followed consistently across departments and regions.

1.2. Video Tutorials and Recorded Demonstrations

What They Are: Short clips that visually and audibly demonstrate how to perform specific tasks or processes - such as configuring a new project or managing project documentation.

Why They're Needed:

- **Visual Learning:** Some users absorb information more effectively through demonstration rather than reading text.
- **Complex Concepts Made Simple:** Visual aids break down complicated workflows into digestible steps, reducing the learning curve.

1.3. Interactive e-Learning Modules and Simulations

What They Are: Online courses featuring simulations, quizzes, and scenario-based exercises. These can be hosted on a Learning Management System and can track user progress.

Why They're Needed:

- **Practice in a Safe Environment:** Users can "experiment" in a sandbox environment before applying new skills in the production system, minimizing risk.
- **Active Engagement:** Interactive elements increase retention rates by keeping learners engaged and providing immediate feedback on their performance.



1.4. Quick Reference Guides

What They Are: One-page or short documents summarizing the most frequently used commands, shortcuts, and workflows.

Why They're Needed:

- **Timesaving:** Quick references reduce the time spent looking up details in longer manuals.
- **On-the-Job Efficiency:** Ideal for users who already understand the basics and just need a memory jog to perform routine tasks faster.

1.5. Instructor-Led On-site and Online Training Courses

What They Are: Live training sessions, either virtual or in-person, led by an expert trainer who can adapt on the fly and address participant questions.

Why They're Needed:

- **Real-Time Interaction:** Instructors can clarify complex topics immediately and tailor the session's pace to the learners.
- **Team Cohesion:** Learning in a group setting encourages knowledge sharing, fostering a community of practice that can support each other outside the training room.

1.6. Webinars

What They Are: Online sessions, often shorter than workshops, focusing on a particular topic, recent software updates, or best practices.

Why They're Needed:

- **Ongoing Education:** Continuous education ensures that users remain informed about newly added features or modules.
- **Global Accessibility:** Participants from multiple locations can join simultaneously, making these sessions cost-effective and scalable.

1.7. FAQs, Troubleshooting Guides, and Knowledge Bases

What They Are: Curated lists of frequently asked questions and concise "how-to-fix" scenarios, often available in searchable online knowledge bases.

Why They're Needed:

- **Self-Service Support:** Users can independently resolve common issues, reducing support ticket volumes.

- Continuous Improvement: As new questions arise, FAQs and troubleshooting guides can be updated, improving the overall knowledge ecosystem.

1.8. Role-Specific Training Materials

What They Are: Tailored learning paths for different user roles - engineers, project managers, quality assurance staff, procurement specialists, etc.

Why They're Needed:

- Relevance: Different roles interact with PLM data differently. Engineers may need deeper insights into CAD integration and document management, while project managers focus on timelines and approvals. Role-specific materials ensure that training is directly applicable to job functions, maximizing relevance and return on investment.

2. Purpose of training materials

A robust set of training materials - ranging from thorough documentation and videos to interactive simulations and role-specific content - is essential for ensuring that the new digital platform is not just implemented, but fully embraced. By providing a diversity of learning avenues, backed by reliable external resources and industry best practices, organizations can optimize user adoption, enhance productivity, maintain compliance, and ultimately derive maximum value from their investment.

2.1. Smooth Transition and Change Management:

Introducing a new system often represents significant organizational change. Well-structured training materials help mitigate resistance by making the transition smoother, ensuring that stakeholders understand the benefits and can quickly adapt to new workflows.

2.2. Increased Productivity and Reduced Learning Curve:

Effective training shortens the time it takes for users to become competent and confident with the PLM tool. This, in turn, reduces errors, decreases time spent searching for information, and accelerates product development cycles. Companies with comprehensive training and adoption strategies are more likely to achieve time-to-market faster.

2.3. Error Reduction and Compliance Assurance:

PLM systems often govern critical product data and ensure regulatory compliance. Proper training ensures that users know how to enter, update, and maintain accurate product information. By following established guidelines and workflows, organizations can reduce costly mistakes, improve product quality, and maintain compliance with industry standards.



2.4. Standardization and Best Practices:

Consistent training materials lead to consistent PLM usage. With all users aligned on the same version of “best practices,” companies can ensure more uniform data quality, foster easier cross-team collaboration, and streamline innovation.

2.5. Empowerment and Retention of Knowledge:

By offering a range of training formats—written documentation, videos, interactive modules—organizations cater to various learning styles and preferences. This inclusiveness boosts user morale, encourages independent learning, and strengthens the knowledge base within the company. As a result, users become more autonomous problem-solvers, which can positively impact overall retention and job satisfaction.

3. Training materials in the SEUS project

Beginning in M18, the expertise of SEUS participants in the digital platform has shown significant growth. NTNU has developed the "Door Case" example, inspired by the NTNU research vessel *Gunnerus*, which serves as the foundation for creating a comprehensive set of training materials within the SEUS project.

The SEUS project has utilized the following types of training materials:

- Comprehensive User Manuals and Documentation
- Video Tutorials and Recorded Demonstrations
- Role-Specific Training Materials

As the digital platform evolves and participant expertise deepens, the range and scope of training materials will continue to expand. Insights gained during the implementation of the latest platform versions at Ulstein and Gondan will contribute to a broader dataset and enhanced user and administrator knowledge, supporting the development of additional training resources.

In the later stages of the project, the other training material types are planned for development, such as Instructor-led On-site and Online training courses,

This iterative approach ensures that the training materials remain aligned with ongoing advancements and the practical needs of users.

Appendix A – Project Management training



How to create and manage project in SEUS Cloud platform

Door Case 3, CADMATIC Wave version as per 04.12.24

NTNU

Inguna Strazdina (inguna.strazdina@ntnu.no)

Norway 2024, Version 0



Executive Summary - Topics

- Introduction
- The Door case 3
- STEP 1 to 4 with descriptions and videos





Introduction – the goal of "Door Case 3"

- In shipbuilding, numerous documents are created during the basic design and detail design phases, often starting from the General Arrangement drawing (in CAD format). Additional information is subsequently incorporated to create new drawings such as the Passive Fire Protection plan, Escape Route plan, and Door plan. While some of these drawings may later be integrated into the 3D model, enabling new revisions to be generated directly from the model, the process typically begins with 2D CAD drawings.
- This PowerPoint presentation will demonstrate the existing (as of 04.12.2024) SEUS Platform "CADMATIC Wave" functionality related to project management. It will focus on activities such as creating new project, project structure as well as developing time schedule, team.
- To provide a detailed view of the processes, videos have been added to this presentation, demonstrating the steps taken to perform the necessary activities.
- A separate PowerPoint presentation has been created to focus on the SEUS Platform's available functionality related to document management, as these activities are not included in this presentation.

3



Door Case 2 – part of Shipbuilding process



- Standard Shipbuilding project can be divided in following phases:
 - Concept Design,
 - Basic Design,
 - Detail Design,
 - Production,
 - Delivery,
 - Warranty/service
- In each phases there is prepared and delivered dedicated document package including CAD drawings, Word documents, Excel sheets, 3Dmodels, etc.
- "Door Case 3" will simulate a potential scenario within the Basic and Detail design processes.

4





Door Case 2 – four STEPS



- New from scratch
- New from template
- Project structure
- New task
- Related document
- Subtasks/open issues
- Gant Chart
- Document relationship
- Roles
- New members

5



“Door Case 3” project in CADMATIC Wave

• “Door Case 3” will be discussed using different projects such as Nr. P000033, P000039 (for details and videos related to project document management, see dedicated presentation “Door Case 2”)

IMPORTANT FIELD:

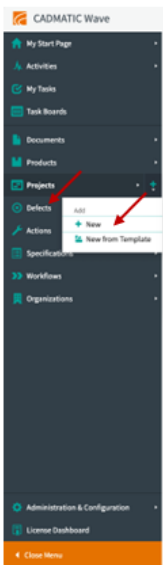
- Project Structure
- Team
- Documents
- Time Schedules

6





Door Case 3 - STEP 1: Create new project

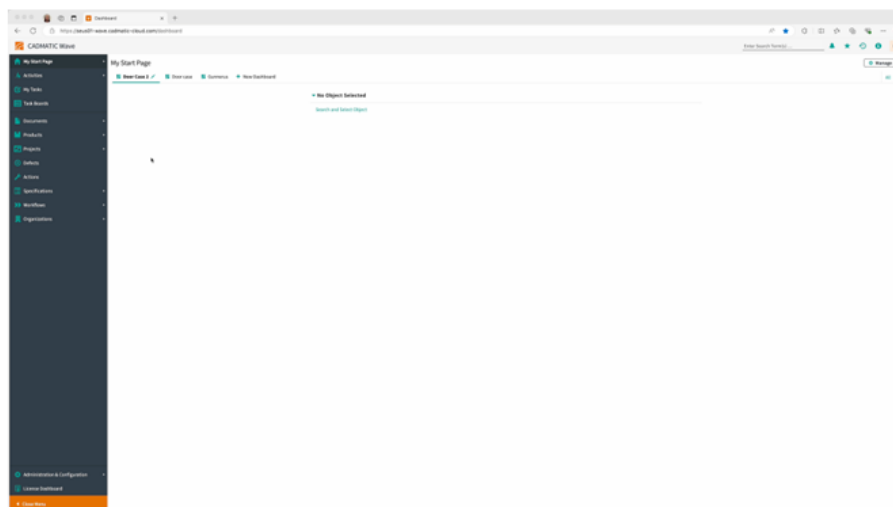


- A new project can be created from scratch by selecting "+New" and entering all the required details.
- A new project can also be created from a previously prepared template by selecting "New from Template" and providing the necessary information.

Fields to be filled in:

7 1.Project 2.Task 3.Schedule 4.Team

Door Case 3 video – STEP 1: Create new project



8 1.Project 2.Task 3.Schedule 4.Team



Door Case 3 video – STEP 2: Tasks in Project Structure

- For this case, the project structure is based on tasks that are created in the order of project execution.
- All tasks are divided in main phases:
 - Concept Design,
 - Basic Design,
 - Detail Design,
 - Production,
 - Delivery,
 - Warranty/service
- In our case, each task is named after the document that needs to be delivered during a specific project phase.

- The system allows copying tasks and subtasks from other projects, which saves time when creating a project structure. In this case, tasks should be added using "New from Template".

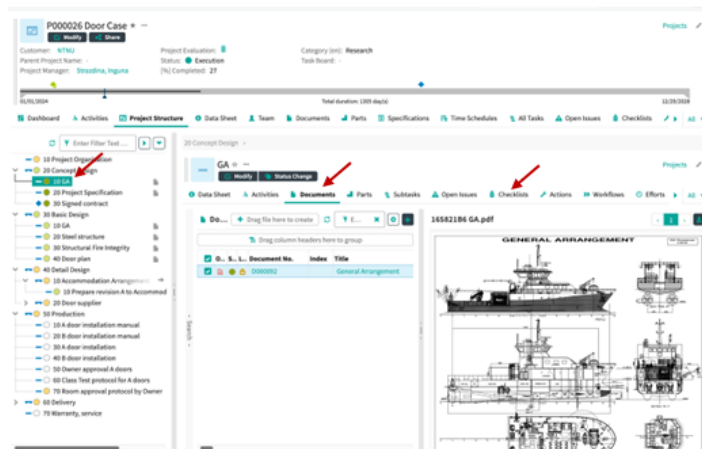
9 | 1. Project | 2. Task | 3. Schedule | 4. Team |

Door Case 3 video – STEP 2: Creating tasks in Project Structure

10 | 1. Project | 2. Task | 3. Schedule | 4. Team |



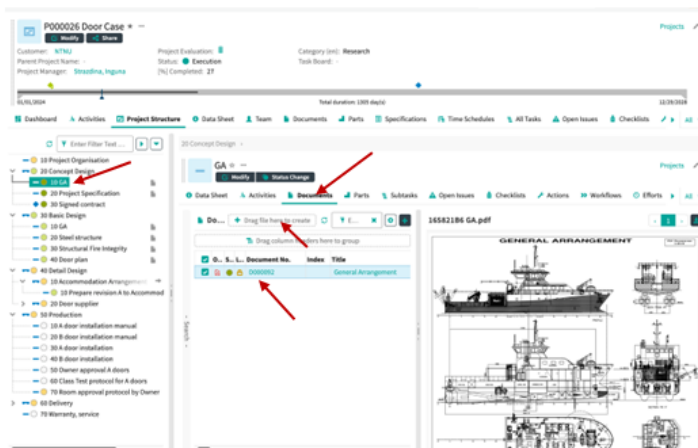
Door Case 3 – STEP 2.2: Documents related to the tasks



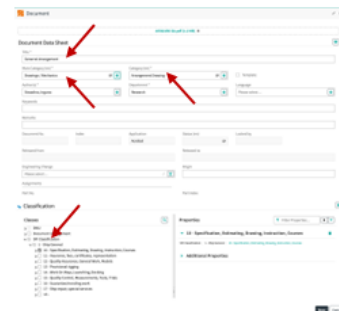
There are two different ways how the document can be connected to the task
A. Document created through Task Documents
B. Document created through Checklist Deliverable



Door Case 3 – STEP 2.2a: Document Container as a folder of files for related document



Fields to be filled in:



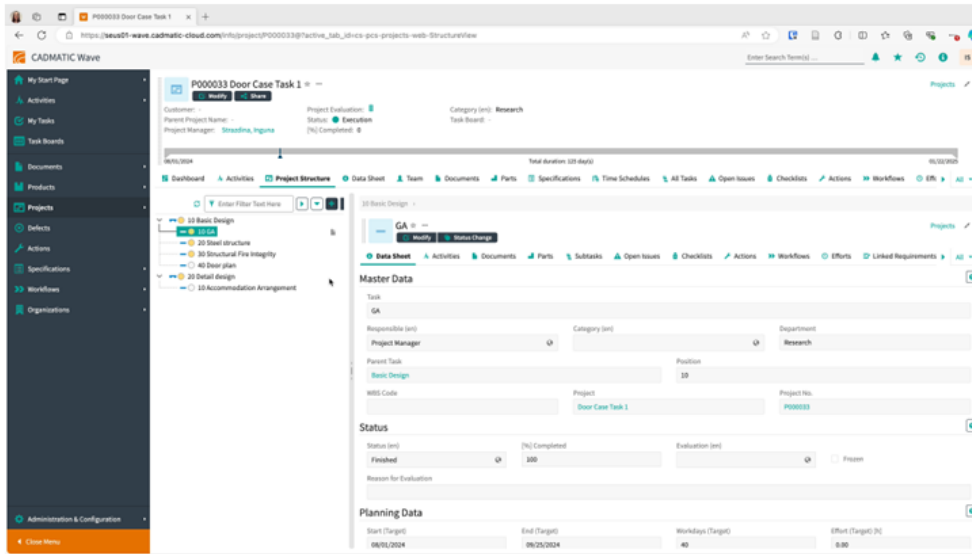
• For more details, please check the dedicated presentation "Door Case 2 - How to create and manage documents in SEUS Cloud platform".

- A document is added by dragging the PDF to the designated field and completing all required information for the Document Container, including the title, main category, category, and class in the SFI classification.
- Documents created through tasks are also collected and can be accessed in the Project "Documents" tab within the Project Folder.





Door Case 3 video – STEP 2.2a: Creating tasks related document



13

1 Project

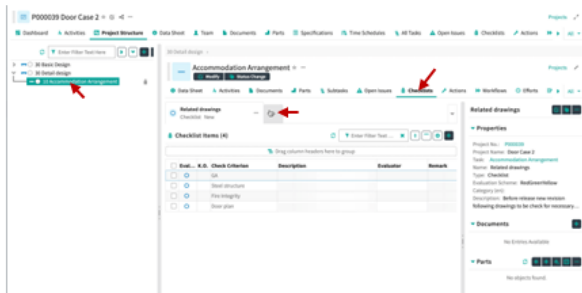
2 Task

3 Schedule

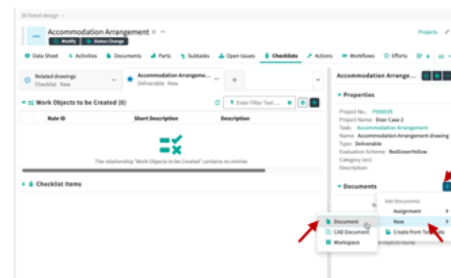
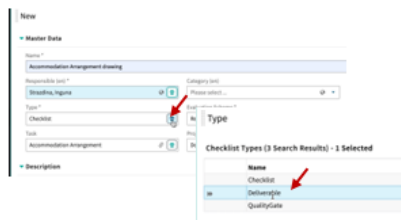
4 Team



Door Case 3 – STEP 2.2b: Document folder created through Checklist deliverable



- Go to related Task -> Checklist -> "+"
- Fill in the necessary information, click on Types and choose "Deliverable"
- Create new Document container in the section "Documents"



14

1 Project

2 Task

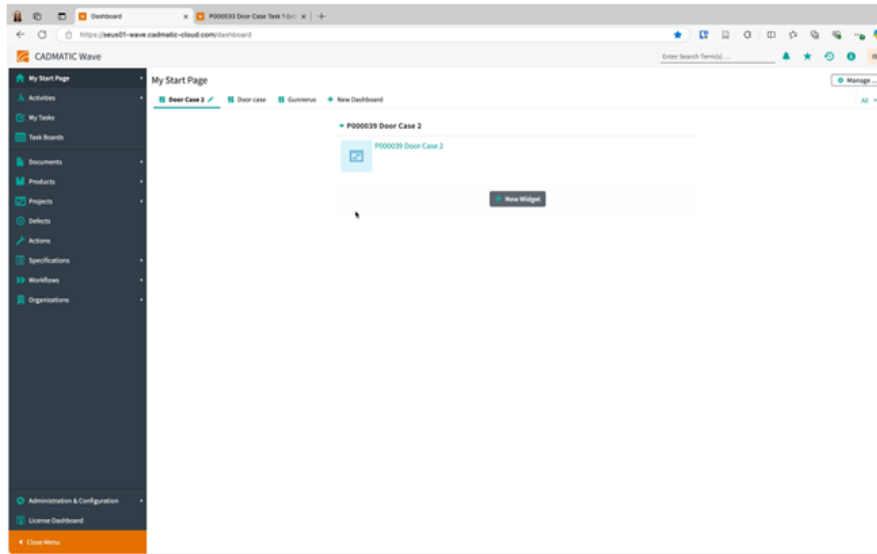
3 Schedule

4 Team





Door Case 3 video – STEP 2.2b: Creating a document container through the Checklist deliverable



15

1 Project

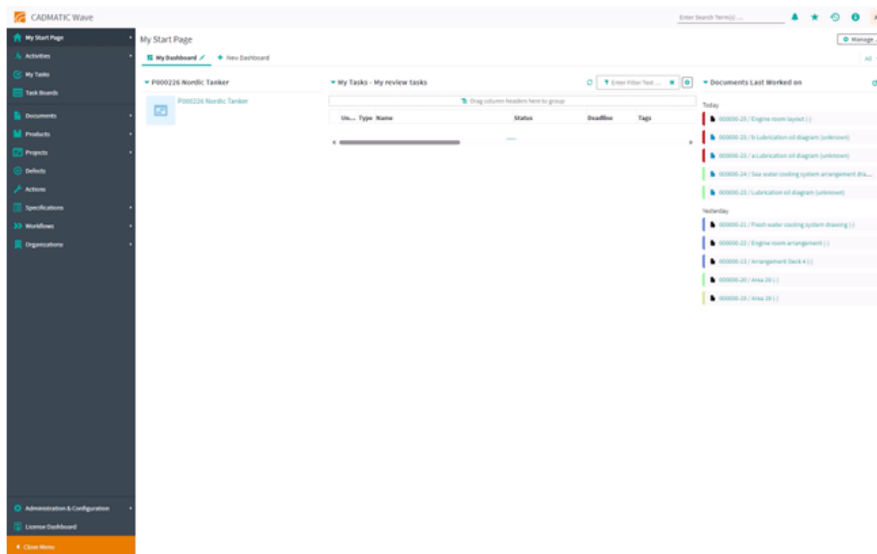
2 Task

3 Schedule

4 Team



Door Case 3 video – STEP 2.2b: Adding document to checklist deliverable through EShare



16

1 Project

2 Task

3 Schedule

4 Team





Door Case 3 - STEP 2.3: Subtasks

The screenshot shows the SEUS software interface for project 'P000026 Door Case'. The left sidebar displays a hierarchical project structure with '40 Detail Design' expanded to show '10 Accommodation Arrangement'. The main window shows the 'Subtasks' view for 'Accommodation Arrangement', listing one subtask: 'Prepare revision A to Accommodation Arrangement'. A red arrow points to the '+' icon in the subtasks list, and another points to the subtask entry. The right sidebar shows the 'Context' and 'Properties' for the selected subtask.

To follow up the implementation of changes in the System:

- New Subtask can be added,
- New open issues can be created
- New workflow can be created (For more details, please check the dedicated presentation "Door Case 2 - How to create and manage documents in SEUS Cloud platform")

New Subtask can be added by clicking Tasks related section "Subtasks" -> "+" and filling in necessary information.

17

1. Project

2. Task

3. Schedule

4. Team



Door Case 3 - STEP 2.4: Creating a new open issue

The screenshot shows the SEUS software interface for project 'P000026 Door Case'. The left sidebar shows the project structure with '10 Accommodation Arrangement' selected. The main window shows the 'Open Issues' view for 'Accommodation Arrangement', displaying a table with one open issue: 'New revision (A)'. A red arrow points to the '+' icon in the open issues list, and another points to the issue entry. The right sidebar shows the 'Context' and 'Properties' for the selected open issue.

- One or more new open issues can be created for each task.
- For tasks that are finished, the status should be changed to "New" before creating an open issue.
- Open issues are indicated by a dedicated icon in the Project Structure Task list.

18

1. Project

2. Task

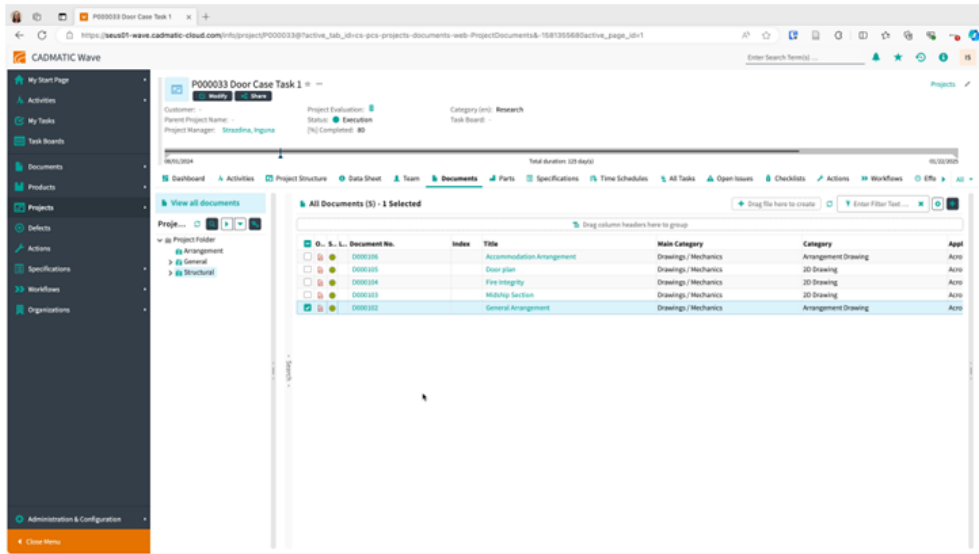
3. Schedule

4. Team





Door Case 3 video – STEP 2.4: Creating Open Issue



19

1 Project

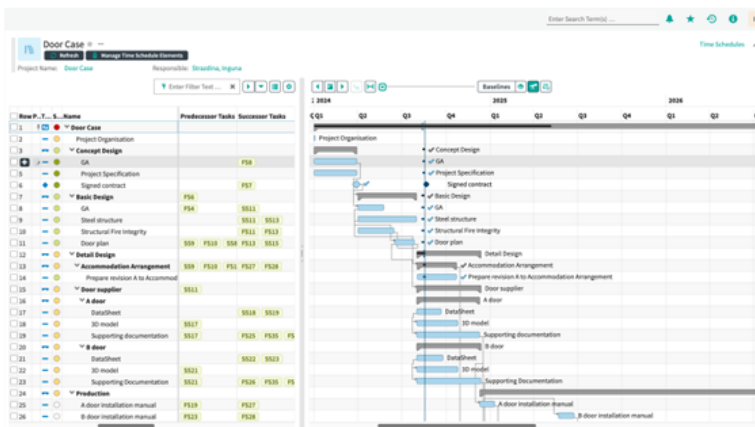
2 Task

3 Schedule

4 Team



Door Case 3 – STEP 3: Time Schedule – Gant chart of project process



• The Time Schedule offers detailed information on tasks from the Project Structure and allows for adjustments and the creation of relationships between tasks.

• It is possible to develop multiple Time Schedules, each tailored to a specific group of selected tasks.

20

1 Project

2 Task

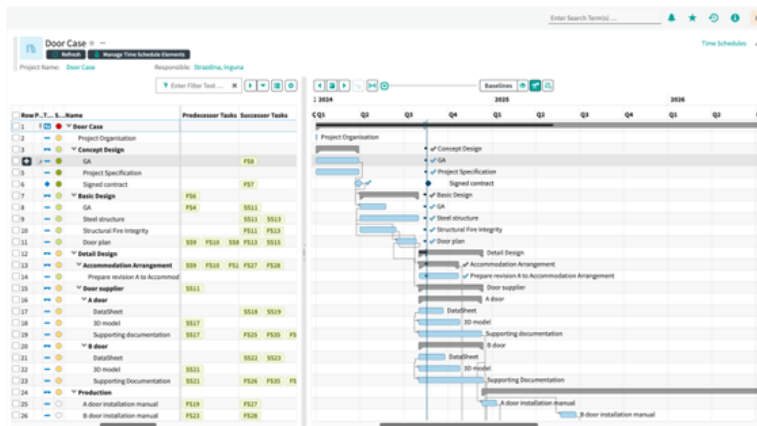
3 Schedule

4 Team





Door Case 3 – STEP 3: Time Schedule - tasks can be related to each other



• The relationship between tasks has been established to indicate which documents need to be prepared before proceeding to the next task:

- Finish Start (FS) – the following task begins only after the previous task is completed,
- Start Start (SS) – the following task can begin once the previous task has started.

- The system also allows (not used in this case):

- Finish Finish (FF) – the following task ends when the previous task is completed,
- Start Finish (SF) – the following task ends when the previous task has started.

21

1. Project

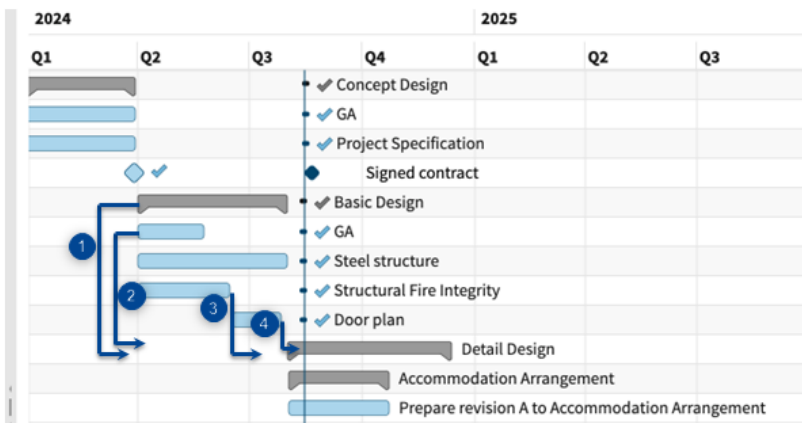
2. Task

3. Schedule

4. Team



Door Case 3 – STEP 3: Task relationship in the “Door case” for Accommodation arrangement drawing



- Finish Start (FS) – the following task begins only after the previous task is completed,
- Start Start (SS) – the following task can begin once the previous task has started.

• Relationships between other documents:

1. “SS” with General arrangement. Acc. arrangement can begin once the GA is available, enough with Concept design GA.
2. “SS” with Steel structure drawings. Acc. arrangement can begin once the related steel structure drawings are initiated. This often involves discussions about available positions for cut-outs, stiffeners, etc.
3. “FS” with Structural Fire Integrity. Acc. arrangement can only begin after the official Fire Integrity drawing is released, as many construction elements (walls, ceilings) depend on the fire class.
4. “FS” with Door plan. Acc. arrangement can start once at least the first door plan drawing is released. The size, opening direction, and fire class must be approved beforehand.

22

1. Project

2. Task

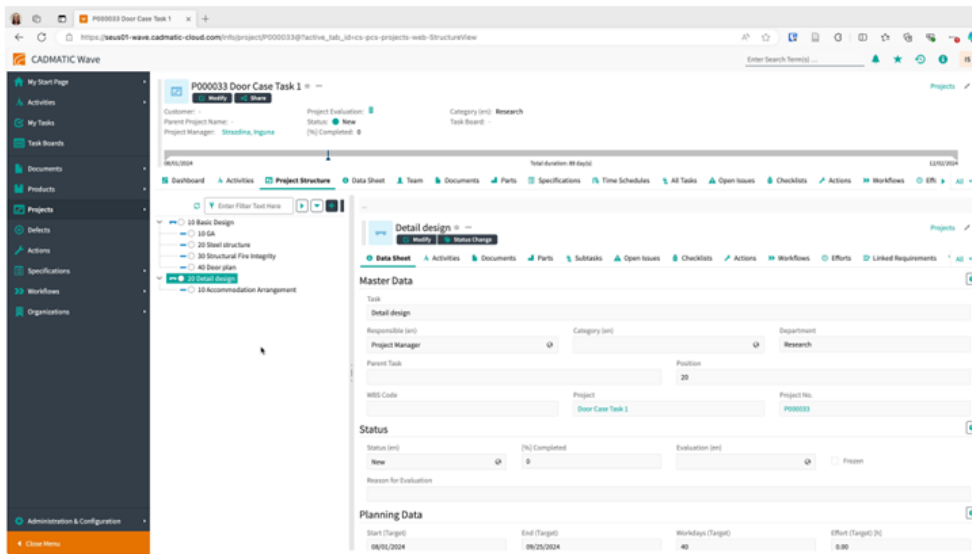
3. Schedule

4. Team





Door Case 3 video – STEP 3: Creating relationship between tasks in Time Schedules



23

1. Project

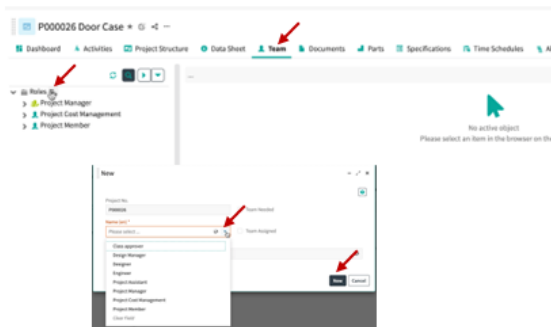
2. Task

3. Schedule

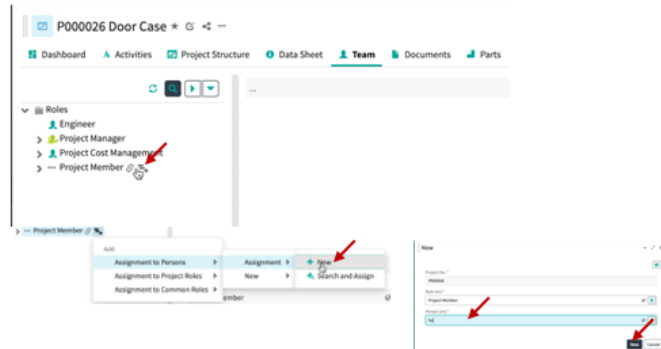
4. Team



Door Case 3 - STEP 4: Team – creating new roles and adding members



- To add a new role to the project team, click on the “+” button, select the role’s name, and then click “New”.
- To assign a new person to the project, click on the “+” button under Project Members, select the person, and click “New”.



24

1. Project

2. Task

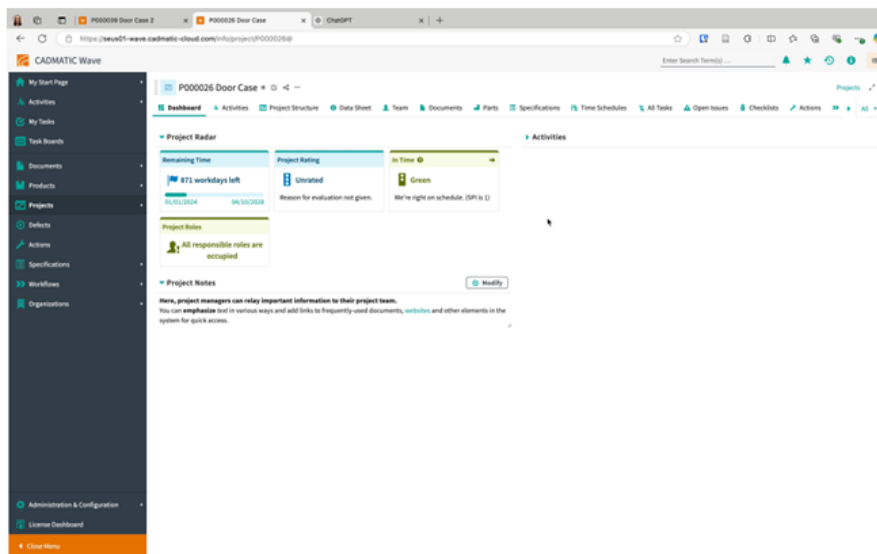
3. Schedule

4. Team





Door Case 3 video – STEP 4: Creating new Team Roles and adding members



Thank you!



Appendix B – Document Management training



How to create and manage documents in SEUS Cloud platform

Door Case 2, CADMATIC Wave version as per 22.11.24

NTNU

Inguna Strazdina (inguna.strazdina@ntnu.no)

Norway 2024, Version 0



Executive Summary - Topics

- Introduction
- The Door case 2
- STEP 1 to 3 with descriptions and videos





Introduction – the goal of "Door Case 2"

- In shipbuilding, numerous documents are created during the basic design and detail design phases, often starting from the General Arrangement drawing (in CAD format). Additional information is subsequently incorporated to create new drawings such as the Passive Fire Protection plan, Escape Route plan, and Door plan. While some of these drawings may later be integrated into the 3D model, enabling new revisions to be generated directly from the model, the process typically begins with 2D CAD drawings.
- This PowerPoint presentation will demonstrate the existing (as of 25.11.2024) SEUS Platform "CADMATIC Wave" functionality related to document management. Using the project "Door Case 2," it will focus on activities such as creating, reviewing, and releasing documents, as well as developing new revisions of existing documents.
- To provide a detailed view of the processes, videos have been added to this presentation, demonstrating the steps taken to perform the necessary activities.
- A separate PowerPoint presentation will focus on the SEUS Platform's available functionality related to project management, as these activities are not included in this presentation.

3



Door Case 2 – part of Shipbuilding process



- Standard Shipbuilding project can be divided in following phases:
 - Concept Design,
 - Basic Design,
 - Detail Design,
 - Production,
 - Delivery,
 - Warranty/service
- In each phases there is prepared and delivered dedicated document package including CAD drawings, Word documents, Excel sheets, 3Dmodels, etc.
- "Door Case 2" will simulate a potential scenario within the Detailed design process.

4





Door Case 2 – three STEPS



- Create,
- Release,
- Inform

- Change
- Comment

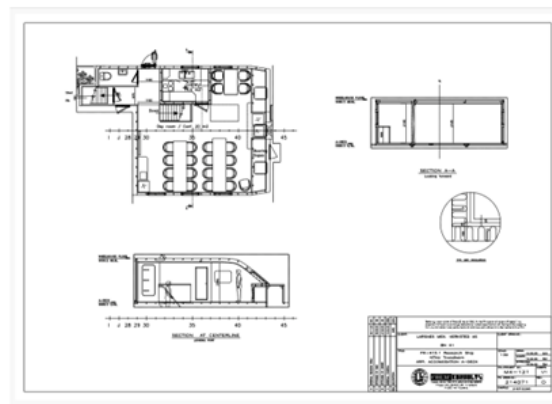
- Check
- Find

5



Door Case 2 – STEP 1: Create, release and send the document to external stakeholder

1. At the beginning of Detail design phase Accommodation Arrangement drawing needs to be created.
2. According to internal procedures, documents needs to follow a special flow (simplified version):
 - a. Engineer prepares the drawing and sends it for internal approval
 - b. Head of Department reviews, either approves it or provides comments, and sends it back
 - c. Engineer updates (if needed) and releases the document
 - d. Document is sent for external approval or shared as information



6

1.Create

2.Change

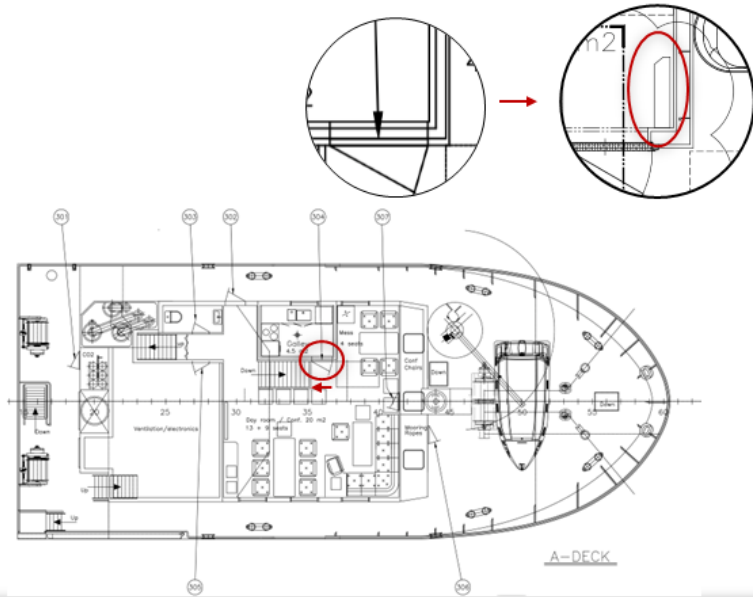
3.Extra





Door Case 2 – STEP 2: Prepare and release new revision of existing document

1. During the Detail design phase, the Owner requested to add a new shelf in the Galley, it means that the Galley door should be move AFT to have space for the shelf. Consequently, the “Accommodation Arrangement A-deck” drawing needs to be updated.
2. The updated information needs to be communicated, and any impacted drawings must be identified and noted accordingly.



7

1.Create

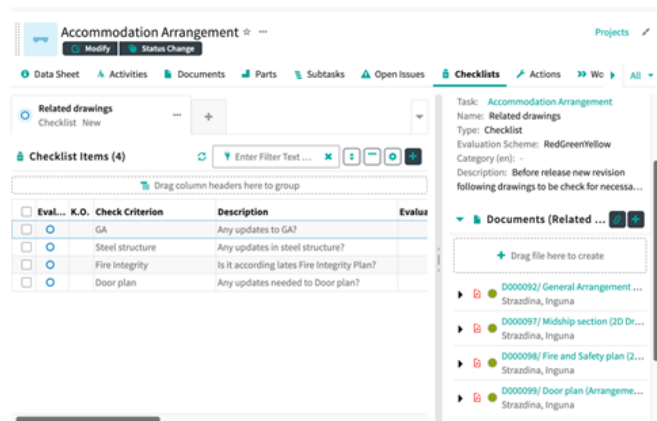
2.Change

3.Extra



Door Case 2 – STEP 3: Out of box functionality, such as, Checklist and Search function

1. Checklist - To ensure that all necessary actions are completed, for example, STEP 2 activity Nr.3, the checklist can be introduced.
2. Search – when a long list of documents is collected through a project, it is beneficial to have a search function that allows users to search not only by title but also by the text contained within the document.



8

1.Create

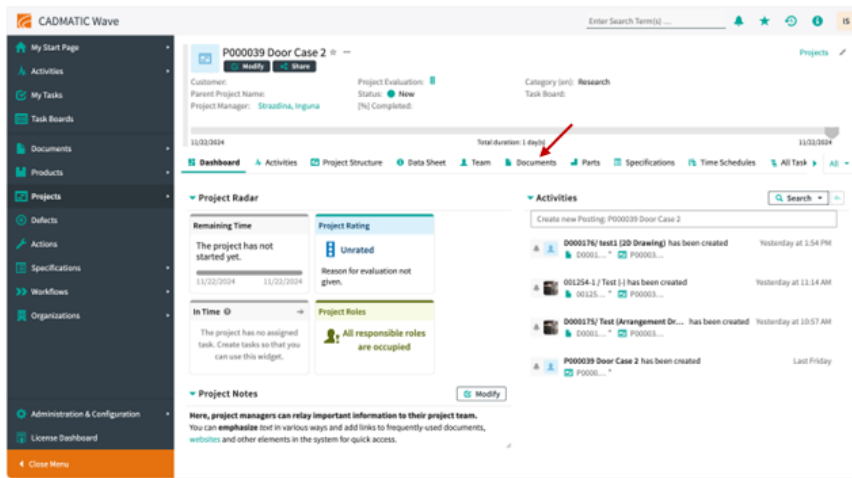
2.Change

3.Extra





“Door Case 2” project in CADMATIC Wave



- New project “Door Case 2” has been created with Nr. P000039 (for details and videos related to project management see dedicated presentation)

IMPORTANT FIELD:

- Documents

<https://seus01-wave.cadmatic-cloud.com/info/project/P000039@>

9



Door Case 2 - STEP 1.1 Create new document



- Document can be added by dragging file to necessary field or by clicking on “+” and then filling in all necessary information.

Fields to be filled in:

Title, Category

Document Data Sheet

Title*

Main Category (opt)*

Category (opt)*

Review/Inform

Review/Inform

Reviewed by (User Security) | Reviewed by (Authority) | Reviewed by (Operator) | Reviewed by (Owner) | Reviewed by (Text) | Reviewed by (Other)

Inform (User Security) | Inform (Authority) | Inform (Operator) | Inform (Owner) | Inform (Text) | Inform (Other)

Source Information

Classification

Classification

Classes

- CMU
- Document management
- SFI Classification

File upload

File upload

Document

Document Data Sheet

10

1.Create

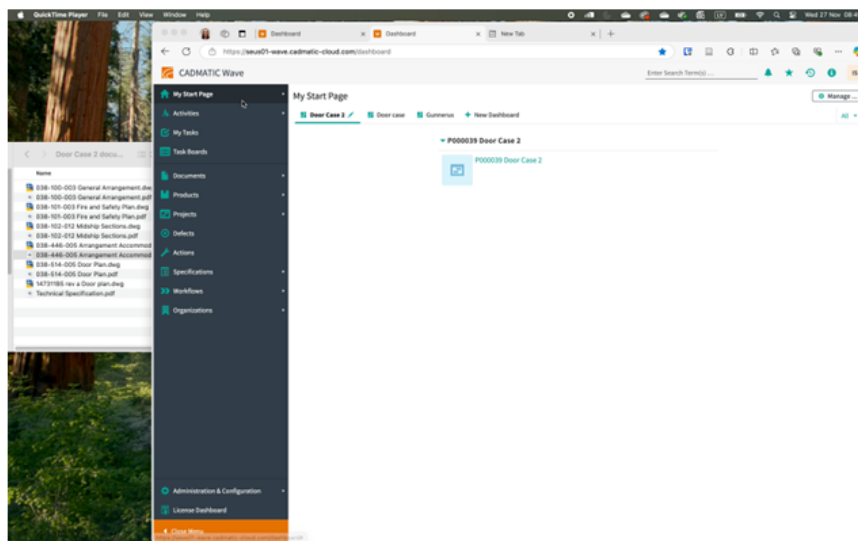
2.Change

3.Extra





Door Case 2 video – STEP 1.1: Create new document



11

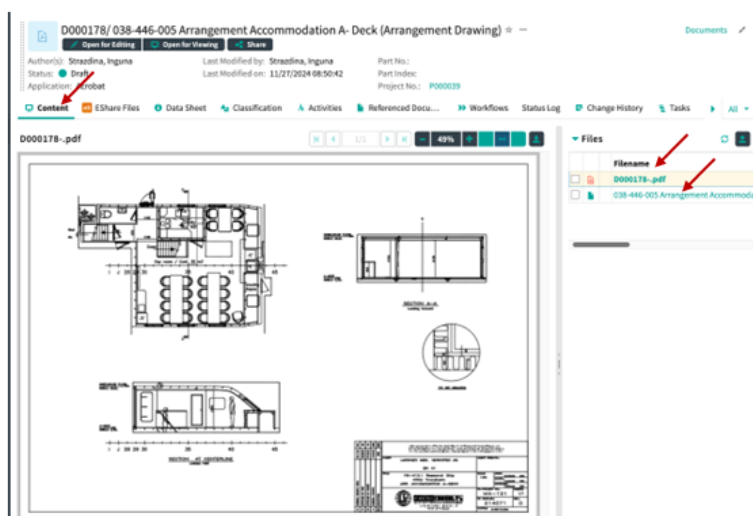
1.Create

2.Change

3.Extra



Document Container - place to collect related files



- The System creates so called "Document Container" for each new document, which serves as a folder for files related to the document.
- Document Container can contain, various file formats, in this case :
 - PDF
 - DWG
- In the "Content" tab, the pdf format should be the main file (indicated by the file name in bold) for easy and quick document preview.
- To preview the DWG file, the "EShare" tab must be used (see next slide).

12

1.Create

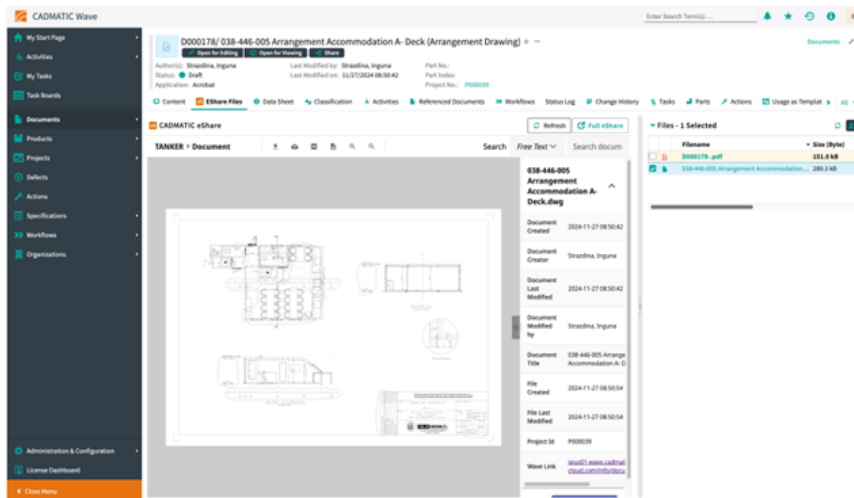
2.Change

3.Extra





EShare tab - to add mark-up and preview the file in dwg format



• “EShare” tab can be used to preview the dwg file format.

• “EShare” can be used to add comments and mark-ups to the document (this topic will be discussed later in the presentation).

13

1.Create

2.Change

3.Extra



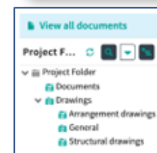
Project “Documents” folders and subfolders

O.	S.	L.	Document No.	Index	Title
			D000100	a	Accommodation Arrangement A-deck
			D000100		Accommodation Arrangement A-deck
			D000099		Door plan
			D000098		Fire and Safety plan
			D000097		Midship section
			D000096		General Arrangement
			D000095		Building Specification
			D000092		General Arrangement

• In the Project Folder, documents can be organised and grouped according to different systems. In this example 2 main folders are used:

- Documents
- Drawings

• The Drawings folder is further divided into 3 subfolders.



14

1.Create

2.Change

3.Extra





Door Case 2 – STEP 1.2: Release the document

There are 2 available ways to follow up the document release process:

A. Through Document status change, that includes defined steps, for example:



B. Or through workflow



15

1.Create

2.Change

3.Extra



Door Case 2 – STEP 1.2A: Document status change

1. When new document is created it will always have the status “Draft” and be marked with red colour



	D000178	038-446-005 Arrangement Accommodation A- Deck
--	---------	---

2. To release the document, it must be manually updated first to “Review” (yellow colour), then to “Internally Approved” (light green colour) and then “Released” (darker green colour)

	D000178	038-446-005 Arrangement Accommodation A- Deck
	D000178	038-446-005 Arrangement Accommodation A- Deck
	D000178	038-446-005 Arrangement Accommodation A- Deck

3. When a new revision of a document is created, the new document will have the status “Draft” and be marked with red colour, following the previously described changes, but previous version will be marked with light grey colour

	D000178	038-446-005 Arrangement Accommodation A- Deck
	D000178	038-446-005 Arrangement Accommodation A- Deck

16

1.Create

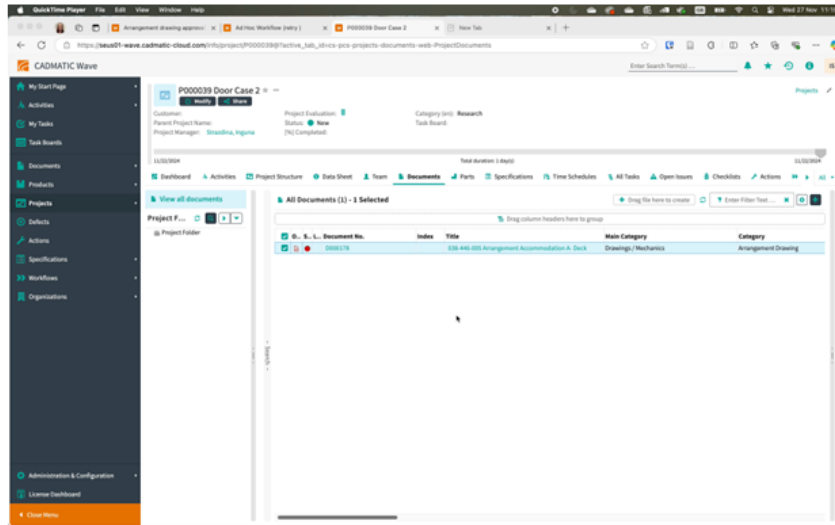
2.Change

3.Extra





Door Case 2 video – STEP 1.2A: Document Status Change



17

1.Create

2.Change

3.Extra



Door Case 2 – STEP 1.2B: Workflow

New workflow, created from scratch



Detailed workflow created from template



- A workflow can be created with starting with a single task or expanding to include multiple, parallel, and complex processes.
- It can be:
 - Created from scratch using the Workflow designer
 - Uploaded from a template and adjusted using the Workflow designer
- The workflow can include dedicated task related to sharing the document with external stakeholder, such as Class approval, Owner approval, etc.

18

1.Create

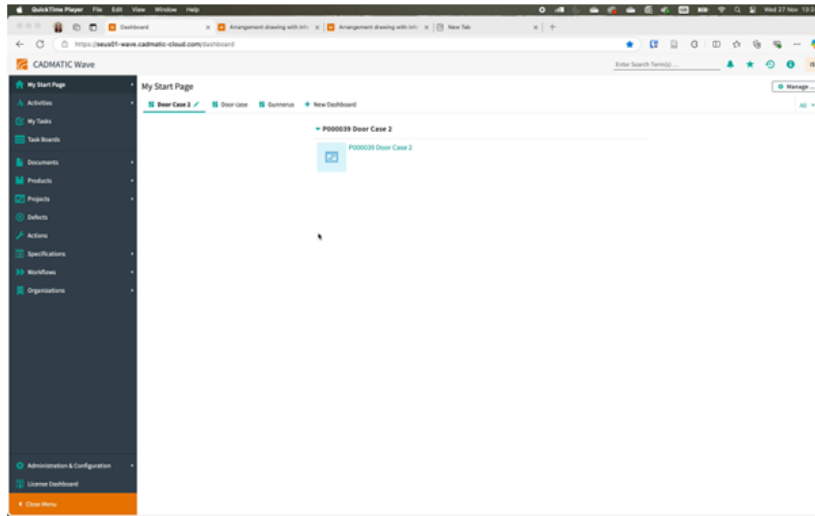
2.Change

3.Extra





Door Case 2 video – STEP 1.2B: Workflow



Two ways of indicating the need for sharing the document with external Stakeholders

- Indicating the necessary actions when creating the Document Container (auto-triggered workflow):

▼ Review/Inform ?

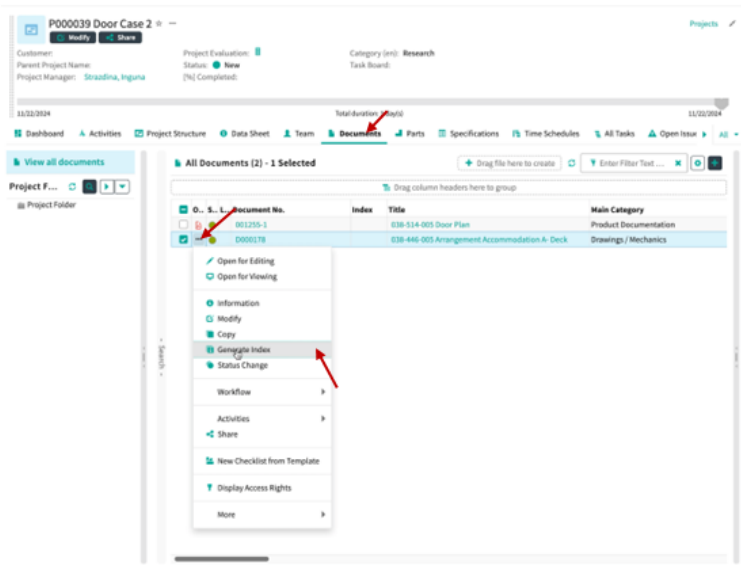
<input type="checkbox"/> Reviewed by Class Society	<input type="checkbox"/> Reviewed by Authority	<input type="checkbox"/> Reviewed by Operator	<input type="checkbox"/> Reviewed by Owner	<input type="checkbox"/> Reviewed by Yard	<input type="checkbox"/> Reviewed by Other
<input type="checkbox"/> Inform Class Society	<input type="checkbox"/> Inform Authority	<input type="checkbox"/> Inform Operator	<input checked="" type="checkbox"/> Inform Owner	<input type="checkbox"/> Inform Yard	<input type="checkbox"/> Inform Other

- Adding special task in Workflow





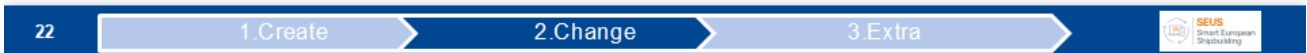
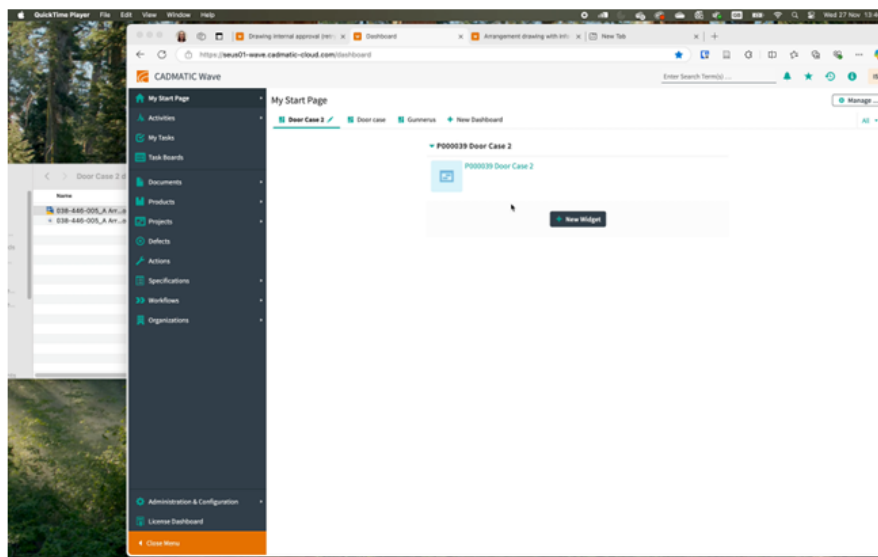
Door Case 2 - STEP 2.1: Creating a new revision of an existing document



- Go to existing Accommodation arrangement drawing through Project "Documents"
- Create new revision document container:
 - Click "..."
 - Click "Generate Index"
 - Click "Generate Index"

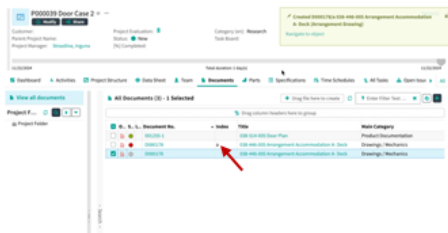


Door Case 2 video - STEP 2.1: Creating a new revision of an existing document

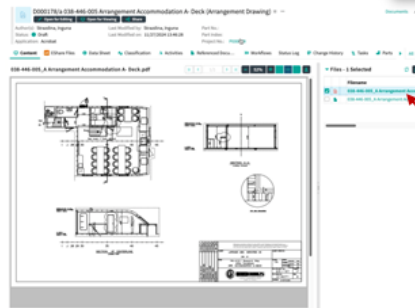




Door Case 2 - STEP 2.1: Document Container for a new revision



A new document container will be created for the new revision (index), containing the same files as the previous document container, with the exception of the updated document file name for the Main document.



Since this specific document cannot be prepared in the system (such as using 3D model in EShare), the existing files must be deleted, and new files need to be uploaded manually. It is important to remember to indicate pdf file as the Main file, to ensure it has a preview in Content tab view.

23

1.Create

2.Change

3.Extra



Door Case 2 - STEP 2.2: Inform related documents about the changes in the released new revision

- To ensure that changes made in the newly released revision of a document are also implemented in future revisions of related other documents, the EShare function adding Mark-up/Comment can be utilized. To guarantee that all necessary documents are properly updated, the out-of-the-box "Checklist" functionality can be used (see the dedicated slide below in this presentation).
- In shipbuilding practice, a new revision of a document is typically initiated only when a critical mass of small comments have been received or when significant, urgent changes need to be implemented immediately (such as a door movement in Task 2.1). Therefore, the ability to collect all new comments, issues, mark-ups, and changes in one dedicated place is crucial. The SEUS Platform provides this functionality through the Eshare Mark-up feature.
 - For example, changes of the updated door position in Accommodation Arrangement Drawings (Task 2.1) needs to be also reflected in the next release of new revision of related documents such as "General Arrangement", "Door plan" and others.

24

1.Create

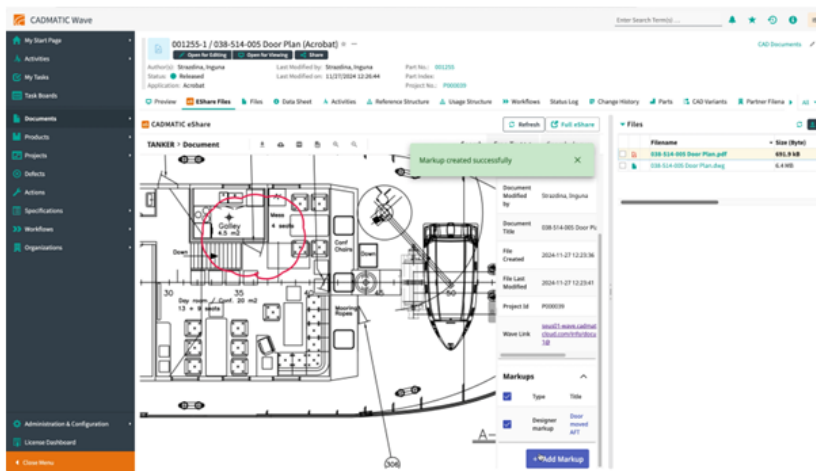
2.Change

3.Extra





Door Case 2 - STEP 2.2: Add EShare mark-up in a document



- Click on related document in project "Documents", choose EShare view and click "+ Add mark-up".
- Indicate area on drawing
- Fill in "Title" and "Comment"
- And click on "+ Create"

25

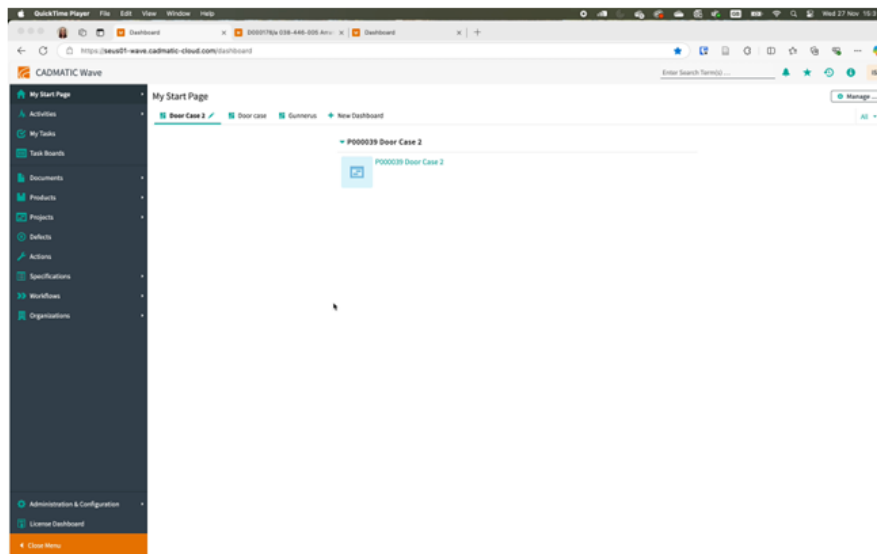
1.Create

2.Change

3.Extra



Door Case 2 video - STEP 2.2: Add EShare mark-up in a document



26

1.Create

2.Change

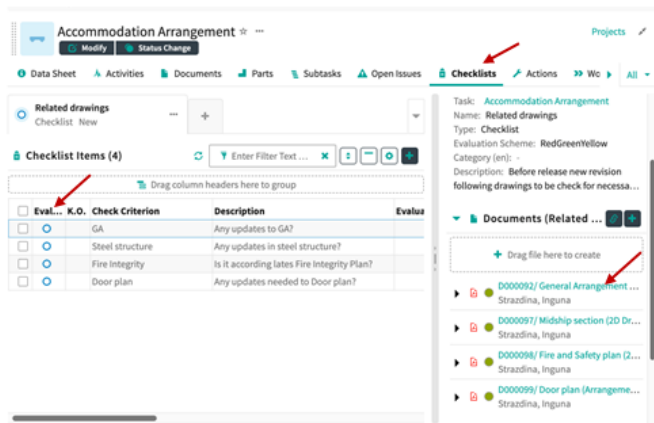
3.Extra





Door Case 2 – STEP 3.1: Out-of-box functionality - Checklist

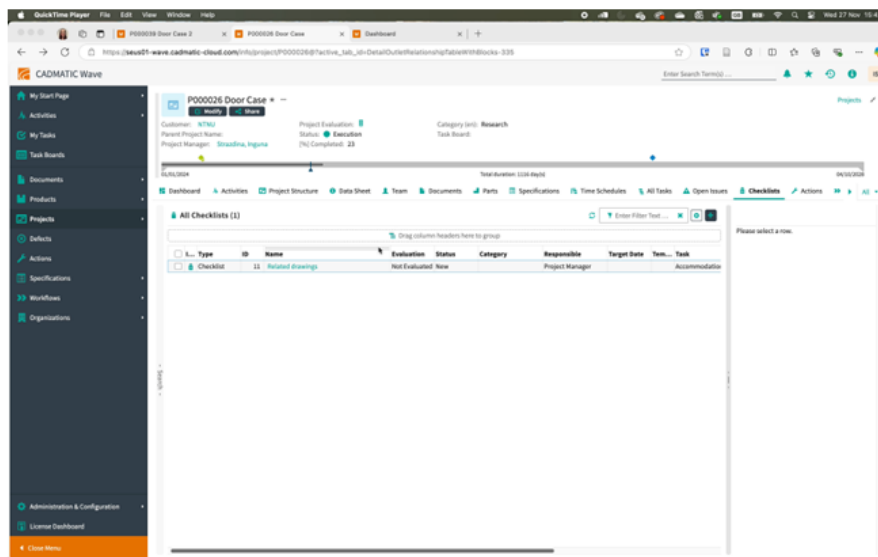
To ensure that the engineer has reviewed the related drawings, a checklist can be implemented.



- A checklist can be created from scratch or copied from another project.
- The checklist offers the option to add related documents for this purpose.
- The checklist is related to tasks that are part of the Project Management functionality. For more details, please refer to dedicated presentation.

27 1.Create 2.Change 3.Extra

Door Case 2 video – STEP 3.1: Out-of-box functionality - Checklist



28 1.Create 2.Change 3.Extra

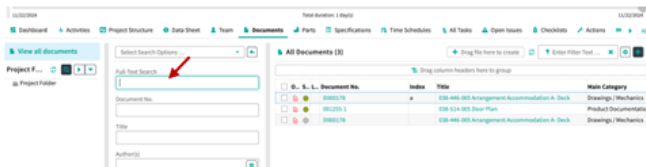


Door Case 2 – STEP 3.2: Out-of-box functionality – Search

- The Platform Search function allows users to search for specific documents by providing metadata, such as title, status, and other relevant details.



- There is also additional functionality that allows users to search for document containing specific information within their content.



29

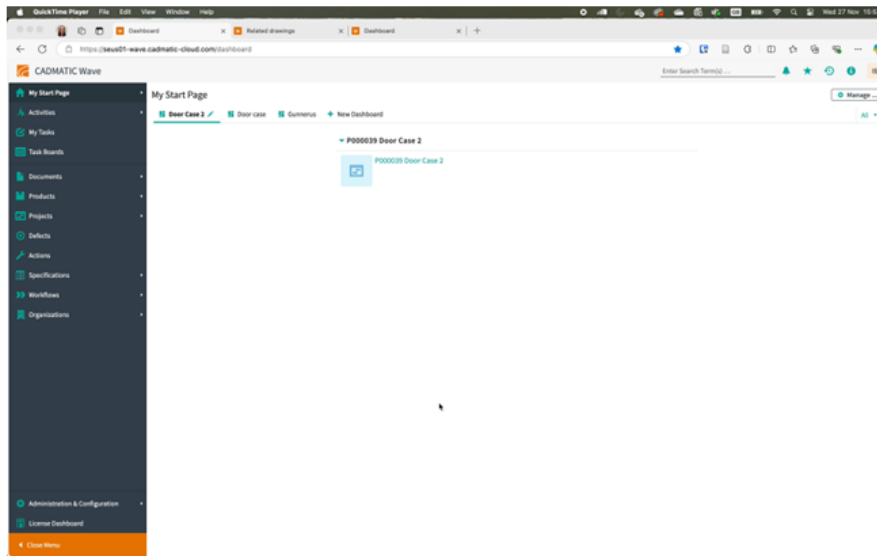
1.Create

2.Change

3.Extra



Door Case 2 video – STEP 3.2: Out-of-box functionality – Search



30

1.Create

2.Change

3.Extra





SEUS
Smart European
Shipbuilding



Thank you!



SEUS
Smart European
Shipbuilding



Appendix C – Stability recalculation training



Revising stability calculation during project execution

Door Case 4

SARC

Casimir Koelman (casimir@sarc.nl)

The Netherlands 2024, Version 0



Introduction – the goal of "Door Case 4" for PIAS

- During the execution of a shipbuilding project, there will be situation where substantial changes to the ship's steel structure or arrangement are necessary. Having the ability to quickly perform recalculations, such as stability analyses, is essential to ensure that these modifications do not significantly impact the vessel's overall stability or to promptly identify potential issues that may arise.
- The change in position of the door in example of "Door Case 2" does not lead to a change in stability because it has no impact in this case. However, someone might not be aware of this or it might have an impact in another case.
- For any unsure situations, revised calculations can be done that is presented in these slides. In general, rough outlines, they indicate what steps are taken.
- It assumes that a stability calculation has already been done and only needs to be adjusted quickly.





Door Case 4 – part of Shipbuilding process

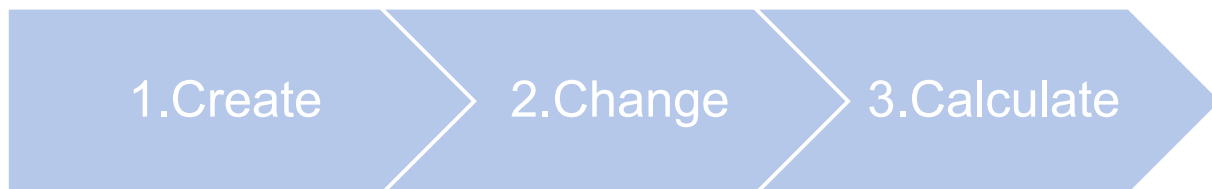


- Standard Shipbuilding project can be divided in following phases:
 - Concept Design,
 - Basic Design,
 - Detail Design,
 - Production,
 - Delivery,
 - Warranty/service
- In each phases there is done some dedicated calculations or needed to be done recalculation because of significant changes in ship construction or arrangement.
- "Door Case 4" will simulate a potential scenario within the Basic design processes.

3



Door Case 4 – three STEPS



- Create new revision

- Change, update necessary positions

- Calculate
- Compare

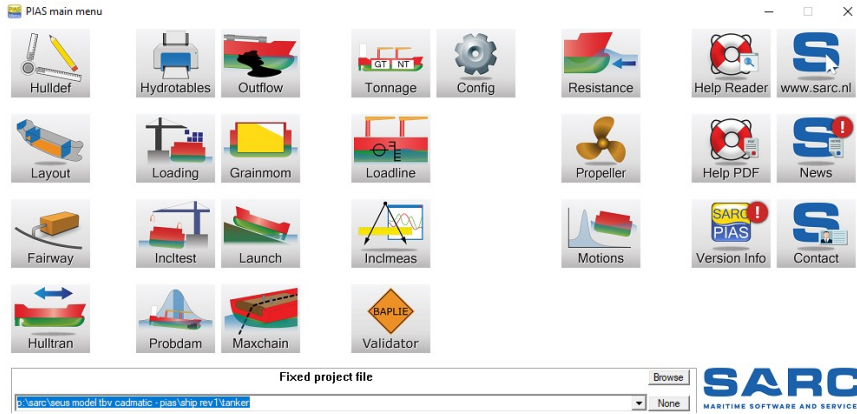
4





Door Case 4 - STEP 1 Create new revision of the PIAS-model

- Create a copy of the existing project if the initial version must be saved. If not, forget this step.



5

1. Create

2. Change

3. Calculate



Door Case 4 - STEP 2: Change position of door opening

Name	Length	Breadth	Height	Type	Of compartment	Acid compartment (Yes)
DECLINE PS	122.848	-7.900	10.950	Margin line	-	-
DECLINE SB	122.848	-7.900	10.950	Margin line	-	-
DECLINE PS	122.848	-8.995	13.580	Margin line	-	-
DECLINE SB	122.848	-8.995	13.580	Margin line	-	-
DECLINE PS	128.745	-7.250	13.580	Margin line	-	-
DECLINE SB	128.745	-7.250	13.580	Margin line	-	-
DECLINE PS	128.745	-8.000	14.590	Margin line	-	-
DECLINE SB	128.745	-8.000	14.590	Margin line	-	-
DECLINE PS	135.845	-6.500	14.720	Margin line	-	-
DECLINE SB	135.845	-6.500	14.720	Margin line	-	-
DECLINE PS	135.845	-4.705	14.830	Margin line	-	-
DECLINE SB	135.845	-4.705	14.830	Margin line	-	-
DECLINE PS	139.545	-0.010	14.904	Margin line	-	-
DECLINE SB	139.545	-0.010	14.904	Margin line	-	-
Emergency exit PS	23.000	-7.900	12.000	Emergency exit	-	-
Emergency exit SB	23.000	-7.900	12.000	Emergency exit	-	-
351P0011	135.350	3.300	16.165	Watertight	01 FFP WB CL	-
351P0021	139.545	0.010	17.911	Watertight	02 DB 1 WB CL	-
351P0031	120.385	5.660	12.990	Watertight	03 DB 1 WB CL	-
351P0041	121.331	5.660	12.990	Watertight	04 LT 1 WB PS	-
351P0042	112.354	5.660	12.990	Watertight	05 LT 1 WB PS	-
351P0051	121.332	5.660	12.990	Watertight	06 LT 1 WB SB	-
351P0061	110.479	8.996	12.985	Watertight	07 DB 2 WB CL	-
351P0062	108.100	8.200	13.100	Watertight	08 DB 2 WB CL	-
351P0071	109.233	8.300	12.990	Watertight	07 LT 2 WB PS	-
351P0072	99.268	8.300	12.990	Watertight	08 LT 2 WB PS	-
351P0081	107.238	8.300	12.990	Watertight	08 LT 2 WB SB	-
351P0082	99.268	8.300	12.990	Watertight	09 LT 2 WB SB	-
351P0091	93.522	8.300	12.990	Watertight	10 DB 3 WB CL	-
351P0092	84.444	8.300	12.990	Watertight	10 DB 3 WB CL	-
100 CHAIN LOCKER PS	139.762	-1.153	14.650	Watertight	100 CHAIN LOCKER PS	-
100 CHAIN LOCKER SB	139.762	-1.153	14.650	Watertight	100 CHAIN LOCKER SB	-
351P0111	92.323	8.300	12.990	Watertight	11 LT 3 WB PS	-
351P0112	83.118	8.300	12.990	Watertight	11 LT 3 WB PS	-
351P0121	96.608	8.300	12.990	Watertight	12 LT 3 WB SB	-
351P0122	83.118	8.300	12.990	Watertight	12 LT 3 WB SB	-
351P0131	90.718	8.300	12.990	Watertight	13 AH 4 WB PS	-
351P0132	73.206	8.300	12.990	Watertight	13 AH 4 WB PS	-
351P0141	90.718	8.300	12.990	Watertight	14 AH 4 WB PS	-
351P0142	73.206	8.300	12.990	Watertight	14 AH 4 WB PS	-
351P0143	60.114	8.317	12.990	Watertight	14 AH 4 WB SB	-
351P0144	55.715	8.300	12.990	Watertight	14 AH 4 WB SB	-
351P0151	48.954	-8.300	12.990	Watertight	19 DB 5 WB PS	-
351P0152	48.954	-8.300	12.990	Watertight	19 DB 5 WB PS	-

6

1. Create

2. Change

3. Calculate



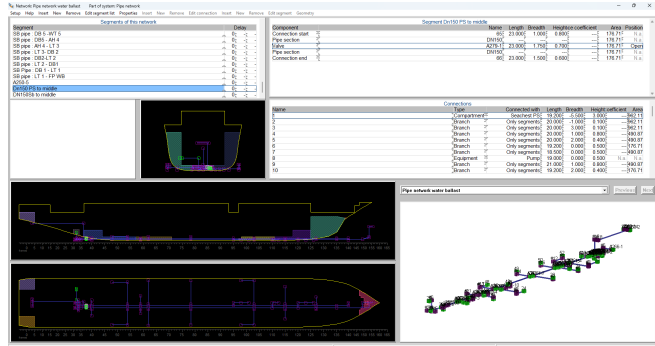


Door Case 4 - STEP 2: Change position of door opening

Compartment connections

No.	Name of compartment	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36			
01	FT WS																																							
02	025B WT WS																																							
03	025B WT WS																																							
04	025B DB WS																																							
05	03PS WT WS																																							
06	035B DB WS																																							
07	035B WT WS																																							
08	045B DB WS																																							
09	04PS WT WS																																							
10	045B DB WS																																							
11	045B WT WS																																							
12	055B DB WS																																							
13	05PS WT WS																																							
14	055B DB WS																																							
15	055B WT WS																																							
16	065B DB WS																																							
17	065B WT WS																																							
18	07PS DB WS																																							
19	07PS WT WS																																							
20	075B DB WS																																							
21	075B WT WS																																							
22	08PS DB WS																																							
23	08PS WT WS																																							
24	085B DB WS																																							
25	085B WT WS																																							
26	09L AP WS																																							
27	20PS WT MGO																																							
28	Pipe to 20PS WT MGO																																							
29	205B WT MGO																																							
30	Pipe to 205B WT MGO																																							
31	215B MGO DT																																							
32	225B MGO DT																																							
33	235B MGO OVERFLOW																																							
34	245B MGO Siphon																																							
35	25 LO TR PS																																							
36	26 LO TR PS																																							

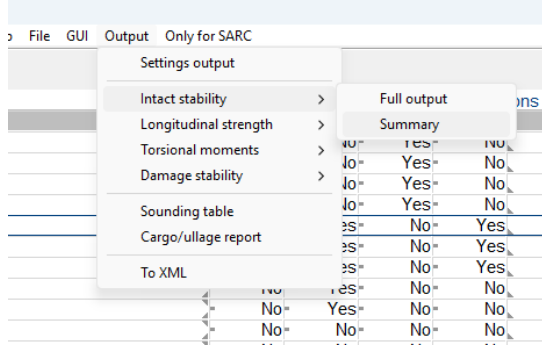
Pipe systems



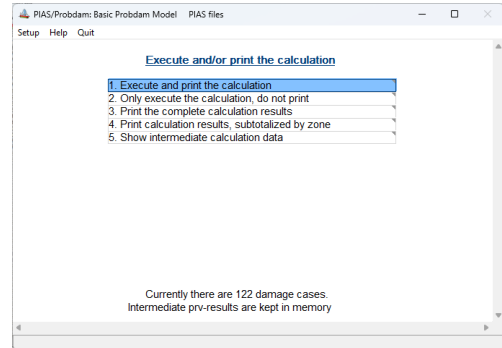
7 1.Create 2.Change 3.Calculate SEUS Smart European Shipbuilding

Door Case 4 - STEP 3: Re-run the (damage) stability calculation

Loading module: Output ->Intact stability -> Summary



Probdam module: Execute the calculations



8 1.Create 2.Change 3.Calculate SEUS Smart European Shipbuilding



Door Case 4 – STEP 3: Double-check the results from the stability calculations

Intact stability

Area under the GZ curve up to 30 degrees	0.055	0.249 mrad
Area under the GZ curve up to 40 degrees	0.090	0.464 mrad
Area under the GZ curve between 30 and 40 degrees	0.030	0.215 mrad
Maximum angle of inclination acc. to IMO's A.562 weather criterion	50.000	24.058 degrees SB
Maximum static angle due to wind	16.000	3.880 degrees SB
Maximum static angle 80% of angle of deck immersion	26.636	3.880 degrees SB
Minimum GM according damage stability calculations	0.800	1.571 meter

Loading condition complies with the stated criteria.

Probabilistic damage stability

Conclusion		
Subdivision length	=	100.000 m
Required subdivision index R	=	0.4921
Attained subdivision index A	=	0.4452
The vessel does NOT comply with the criteria.		

9

1.Create

2.Change

3.Calculate



Thank you!



10

