

PROJECT ORCHESTRATION PLATFORM FOR HIGHLY COMPLEX DEFENCE INDUSTRIES PROJECTS

**Basic information for conceptual work on the example of
highly complex maintenance projects**

Hamburg/ Mannheim; Q3 2023



AGENDA

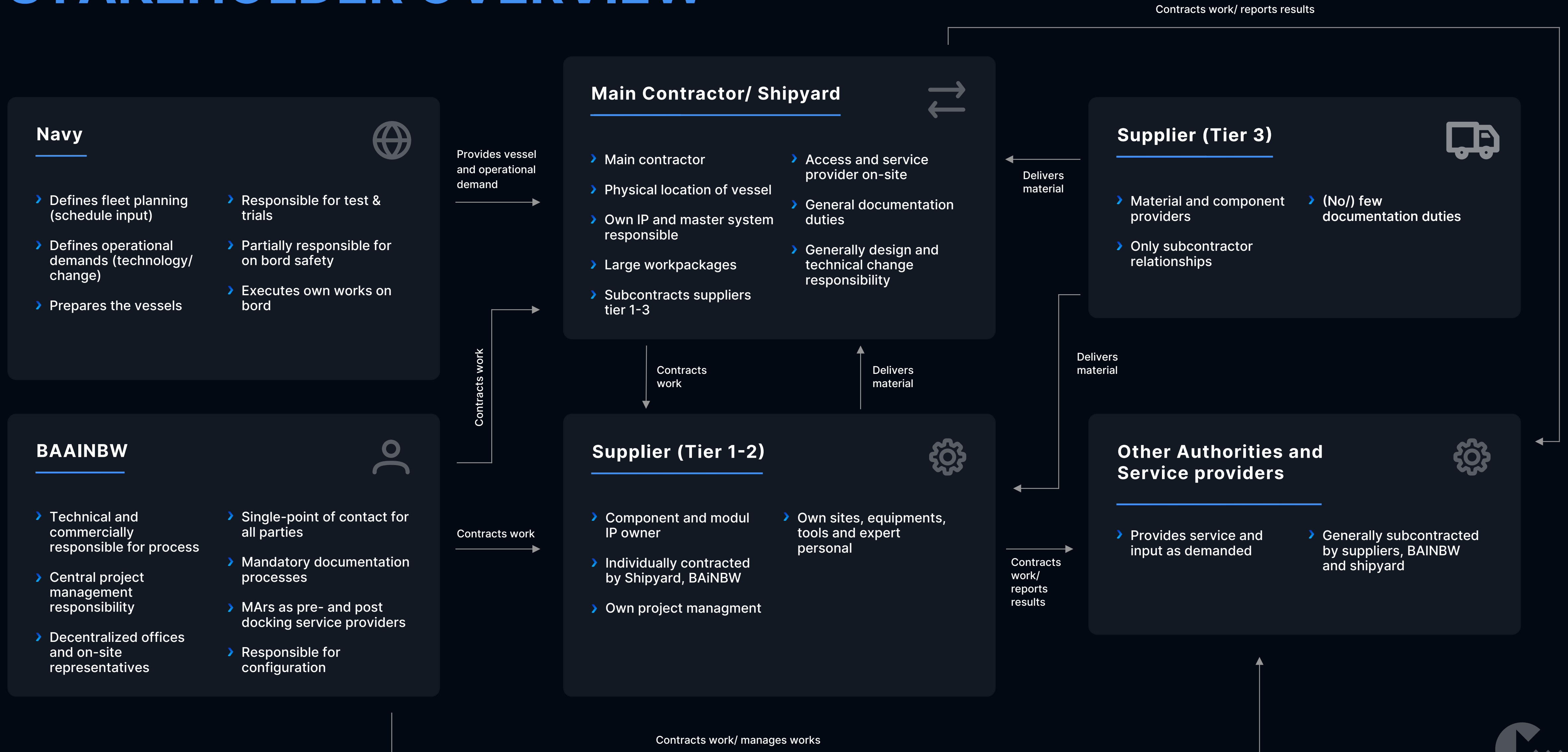
- 1 Stakeholder overview**
- 2 Flowcharts w/ variations**
- 3 Requirements + potential purpose**
- 4 Input Avatar/ Hypertrust**



STAKEHOLDER OVERVIEW



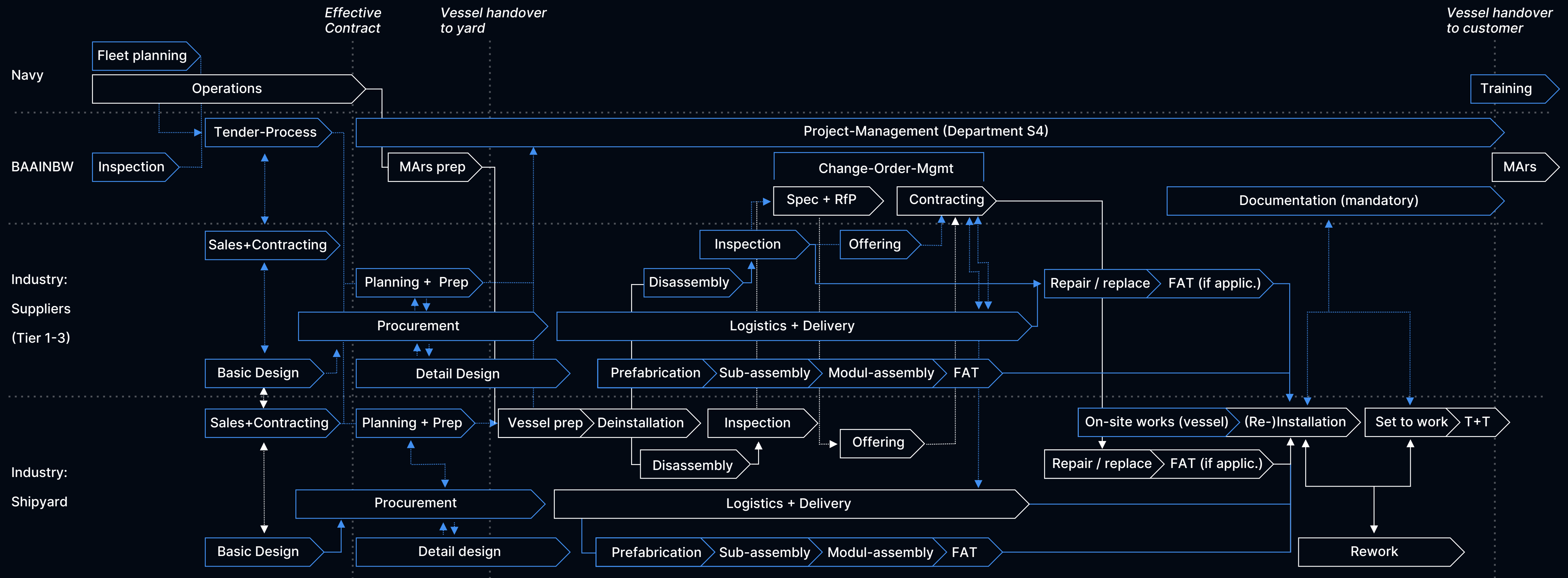
STAKEHOLDER OVERVIEW



FLOWCHARTS W/ VARIATIONS



A CRITICAL-PATH BASED OVERVIEW ON HIGH COMPLEX “CONVERSION-/MODIFICATION-” AND MRO-PROJECTS IN THE MARITIME DEFENSE ENVIRONMENT

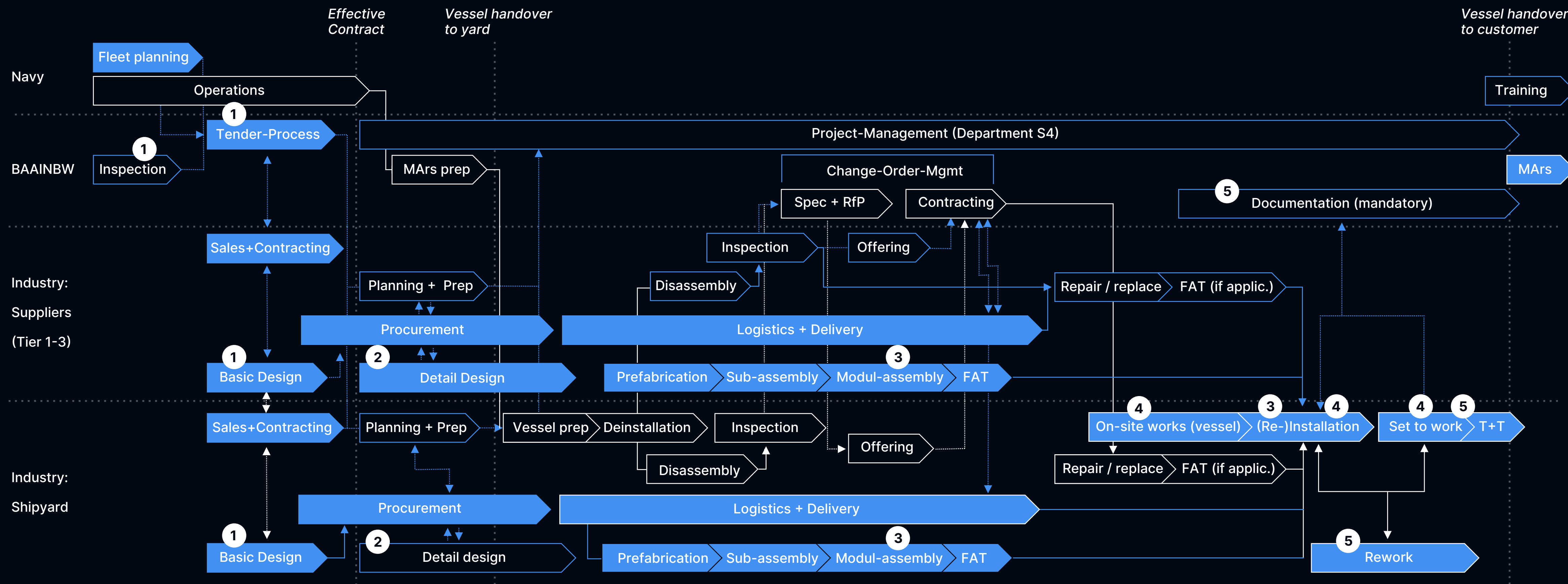


- Painpoints**
- Scope of work definition incomplete due to lack of information (and access)
 - Parallel and not aligned planning and design lead to conflicts in later stages
 - Parallel and individually contracted work-flows, with dependent information
 - Loss of time due to lengthy change-order processes
 - Clash of works due to workload and accessible space
 - Wasting of time due to additional mandatory documentation

Information flow: Material flow: major milestones:



HIGH COMPLEX "CONVERSION-/MODIFICATION-" AND MRO-PROJECTS SCENARIO: System/ Module modification initially contracted (Shipyard and Supplier Tier 1/2 parallel involved)

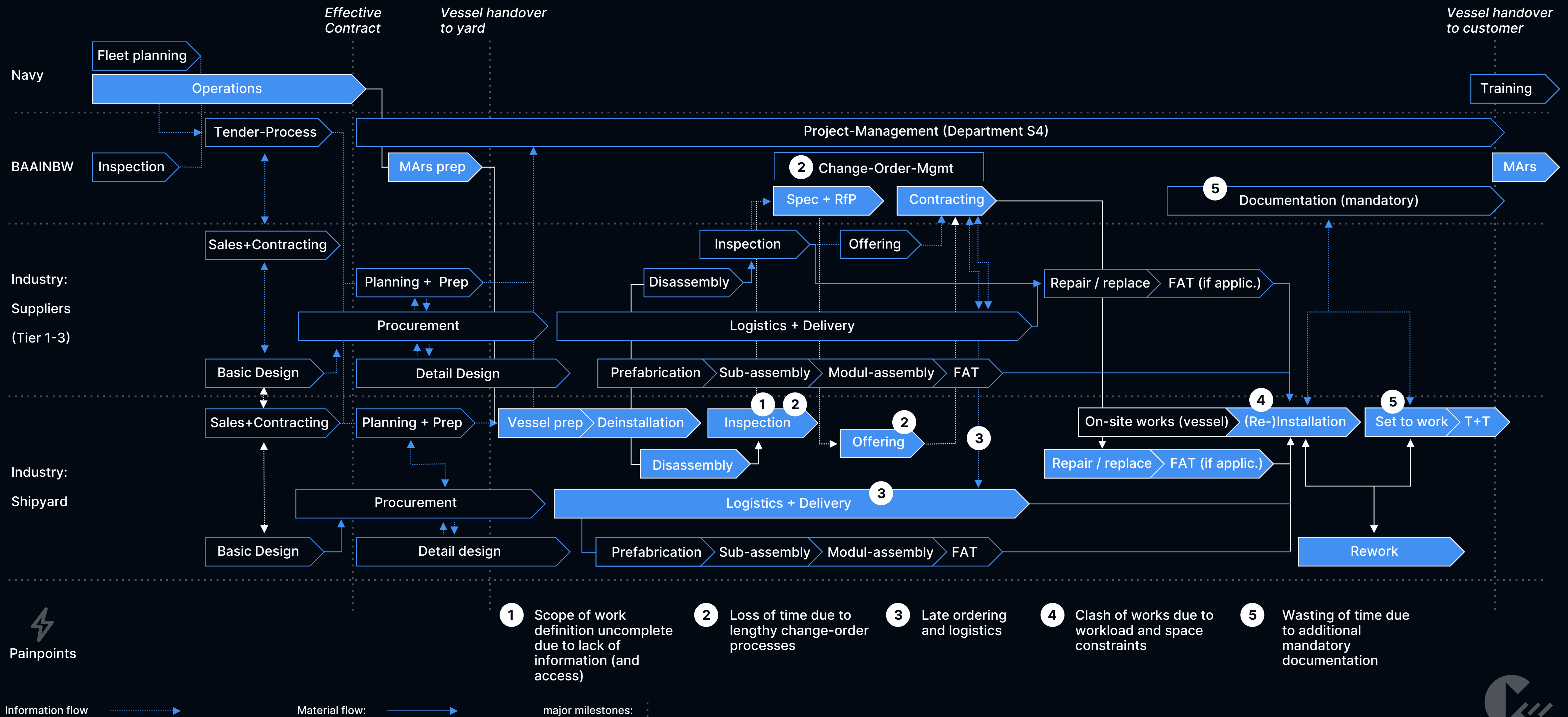


- Painpoints**
- 1** Unprecise design due to missing information
 - 2** Parallel and not aligned work partially highly dependend
 - 3** Limited feedback flow on status, unplanned and parallel work
 - 4** Clash of works due to workload and accessible space
 - 5** Wasting of time due to additional mandatory documentation

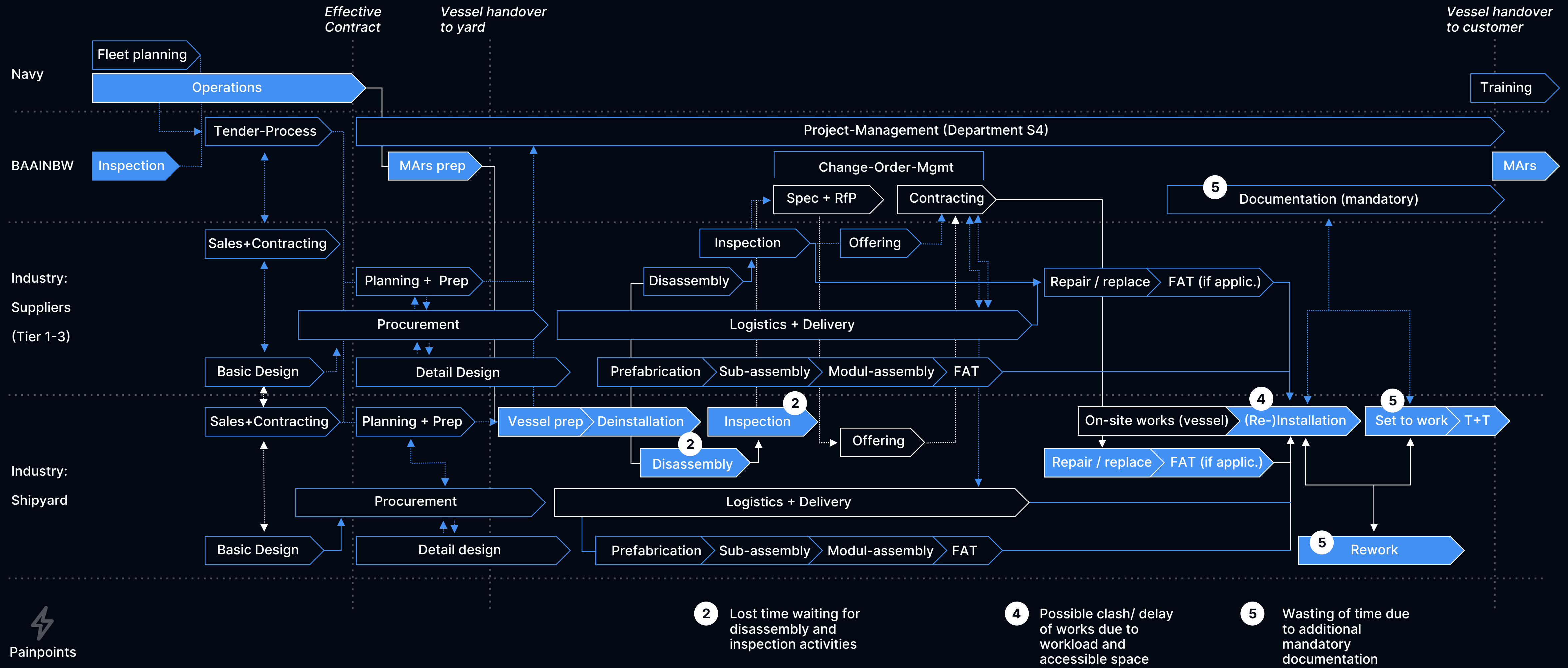
Information flow: Material flow: major milestones:



HIGH COMPLEX "CONVERSION-/MODIFICATION-" AND MRO-PROJECTS SCENARIO: Unplanned component replacement after inspection w/ findings (change-order process)



HIGH COMPLEX "CONVERSION-/MODIFICATION-" AND MRO-PROJECTS SCENARIO: Planned component replacement after inspection w/o findings



REQUIREMENTS + POTENTIAL PURPOSE



BUSINESS REQUIREMENTS AND ASPIRED PURPOSE

- › Design and provide an overarching process landscape for project success, as far as possible commonly agreed between major stakeholders
- › Connect all stakeholders independent of contractual basis to improve information and project management performance
 - › Project management: manage change-orders, manage schedule
 - › Define standard set of information for project success (schedule, order specification with all change-orders)
- › Steering function for project client
- › (Additionally/ extended service offering: management of documentations)
- › Comply with safety and security regulations (managing confidential information, BSI-certification, security clearances for persons involved)
- › Much faster availability of safety critical objects (e.g. Navy vessels) (today up to 300% time-overrun)
- › Much reduced costs for MRO- and Modification projects (today up to 200% cost-overruns)
- › Increased transparency over project status (schedule and dependent works)
- › Increased planning and steering capabilities for project teams over various (contractually independent) stakeholders
- › Reduced leadtimes and process costs due to:
 - › Increased process speed for information exchange
 - › Increased sharing of inspection results
 - › Tremendously increased process cycle time for change requests and orders
- › Reduced documentation management and reporting effort (today up to 500 pages excel based scope of work)
- › Future development potential e.g. predictive maintenance based on collected data



INPUT AVATAR/ HYPERTRUST



CROSS-PROJECT FLOW ORCHESTRATION

Transparency and Process Control in a Make To Order Environment

Planning Engine

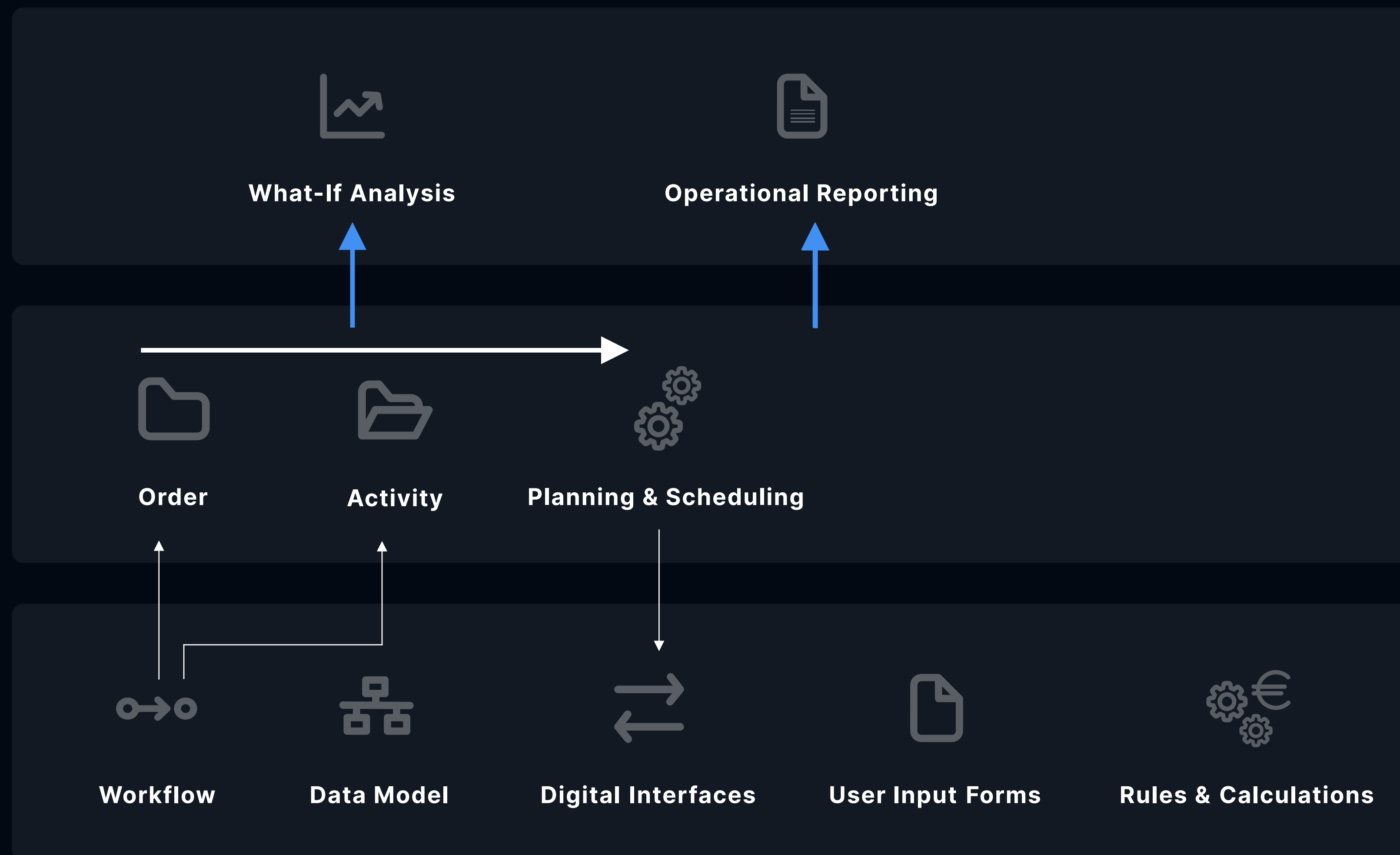
Strategical and Tactical Support through analytics and reporting

Planning Core

Distributed In-Memory data model allowing for real-time planning and scheduling realizing feedback loops of self-driving supply chains

"Workchain" Concept

A distributed workflow engine containing all required components for real-time execution



CROSS-COMPANY SUPPLY CHAIN FLOW EXECUTION

Transparency and Process Control in a Make To Order Environment



CROSS-COMPANY SUPPLY CHAIN FLOW FEATURES

Transparency and Process Control in a Make To Order Environment



ANY MORE QUESTION?

Feel free to reach out to us or visit our webpages!

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