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# Maximizing performance in maritime

From vessel design to maritime operations

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AVEVA



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# Talk Topics



- Impact of Digital Technology on Maritime decarbonization
- Harness information to redefine performance  
Design, Build, Operate, Optimize
- Customer examples of enhanced efficiency through smarter decision making

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# Mariner's Digital Journey...

We are on the edge of dramatic change





# What's driving change?

In a word... **SURVIVAL**



Regulatory Compliance/  
Energy Transition



Operational Efficiency



Safety and Risk  
Management



Customer Expectations  
and Supply Chain  
Resilience



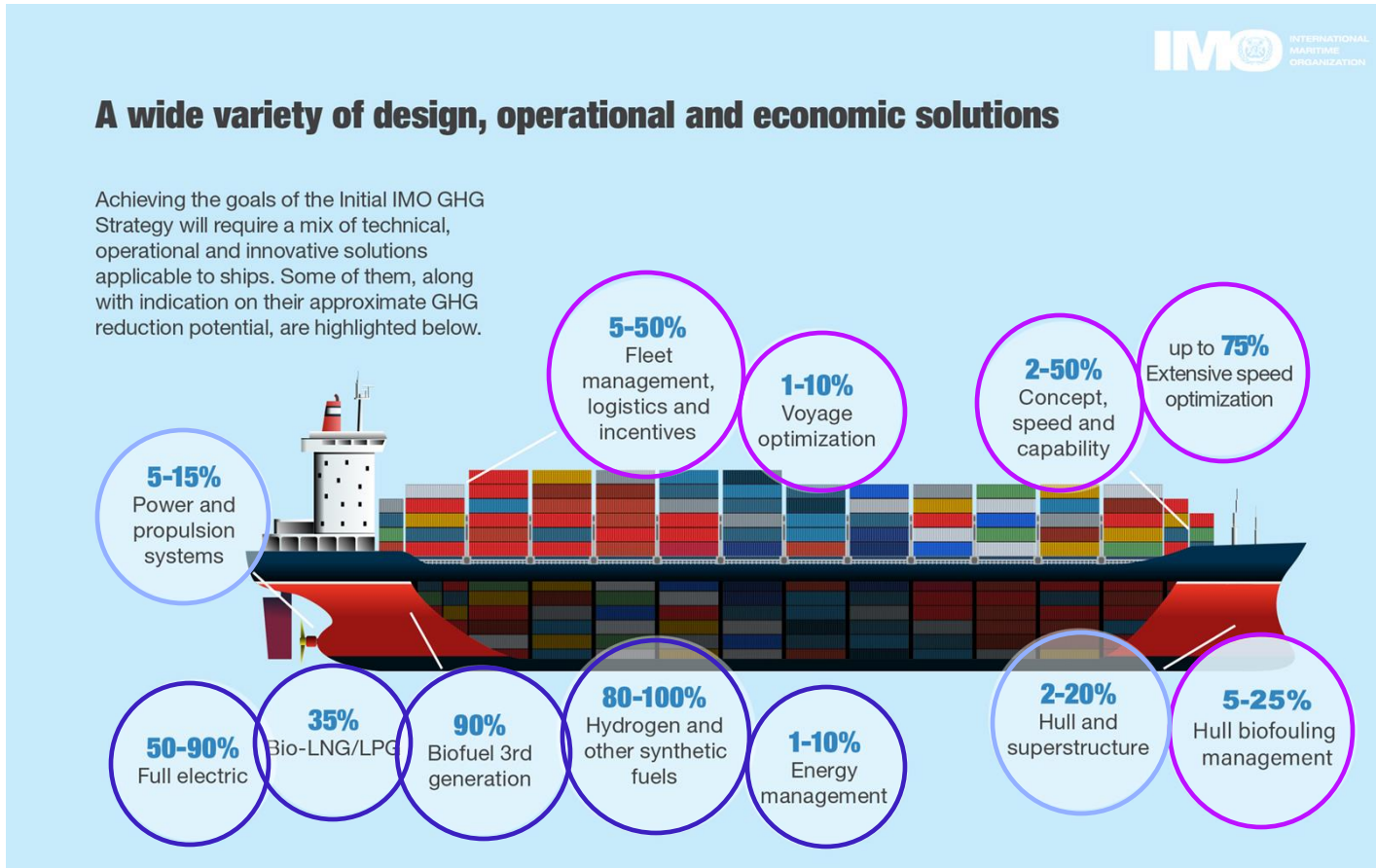
Changing Workforce



Competitive Advantage

# Sustainability & Decarbonization in Marine

## Where does AVEVA fit in?

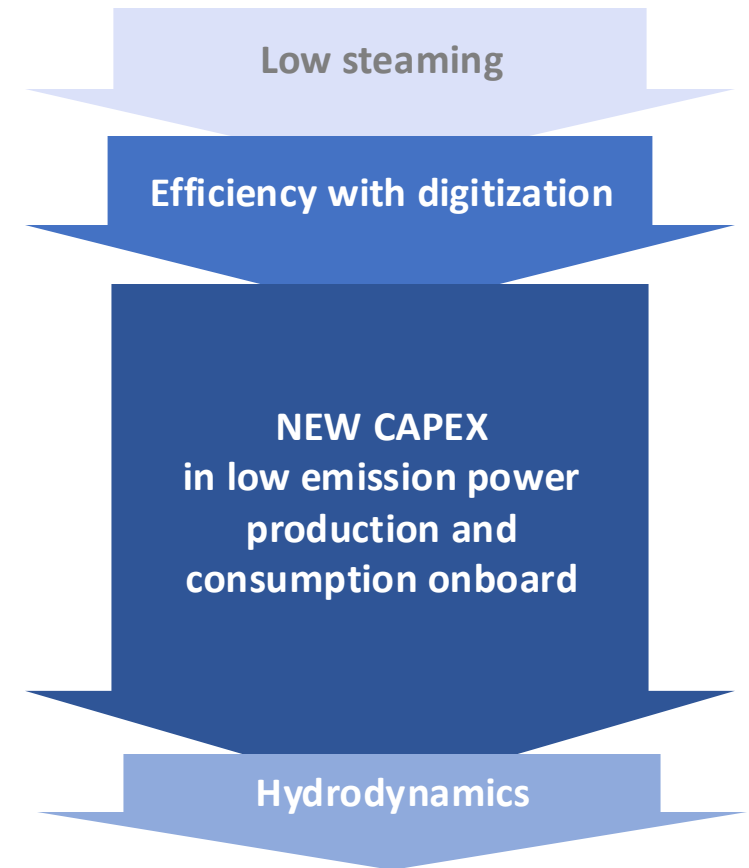
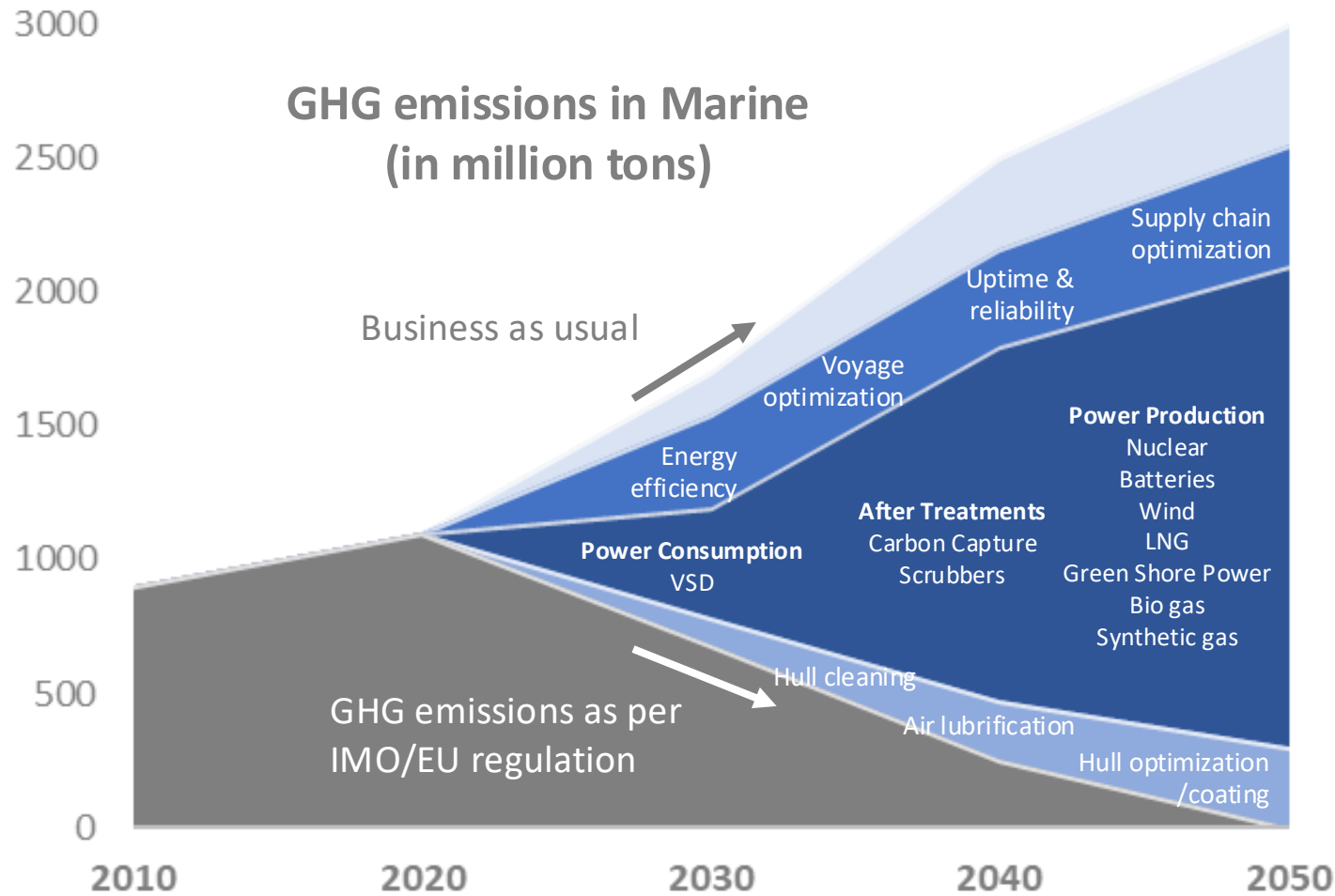


Through digital transformation, AVEVA can help ship owners/operators to reduce emissions and hit IMO decarbonization targets, with specific technologies that improve:

- Operations Management
- Energy Management and Transition
- Vessel concept and design (optimal design for its purpose)

# IMO/EU Requirements are driving the need to change...

Decarbonation regulation is a major market driver



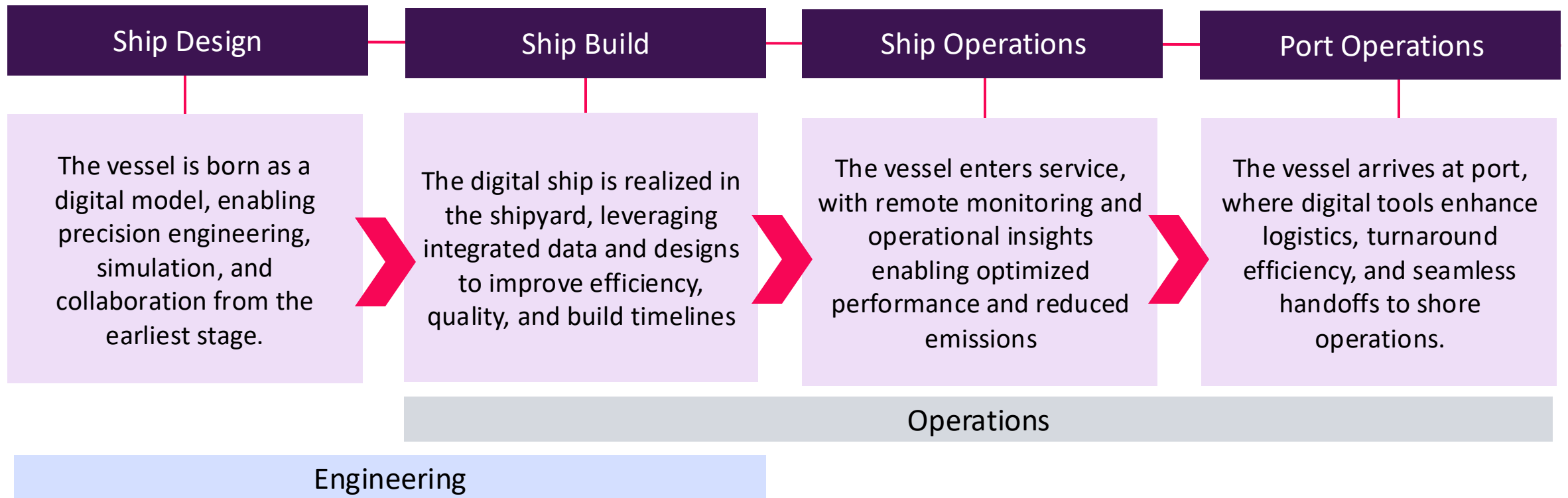
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Those who survive this storm will dominate the market



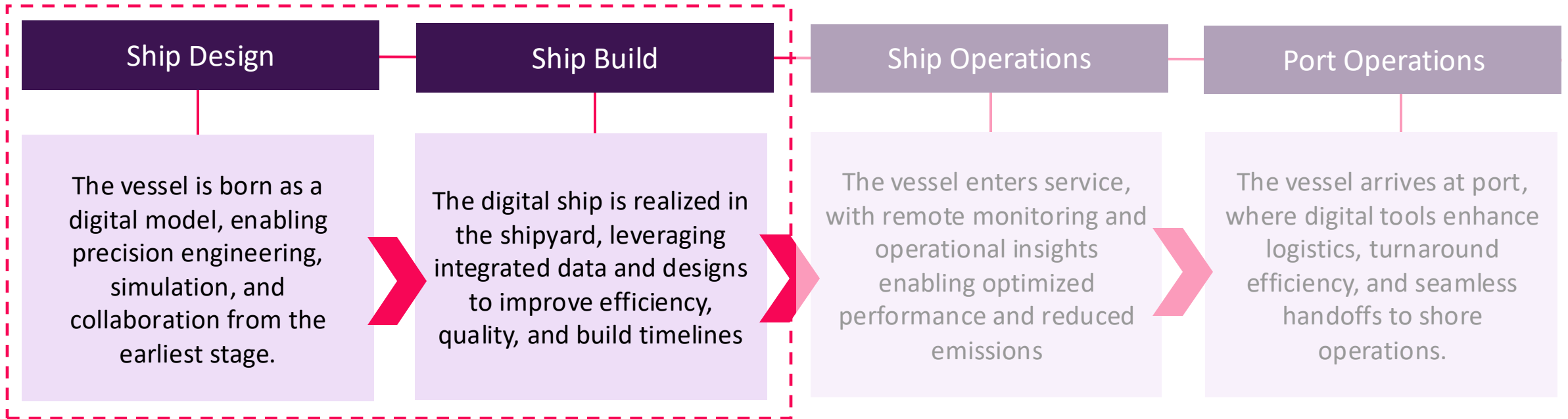
# Digital Innovation and Collaboration Tools

## The Complete Marine Lifecycle – From Engineering to Operations



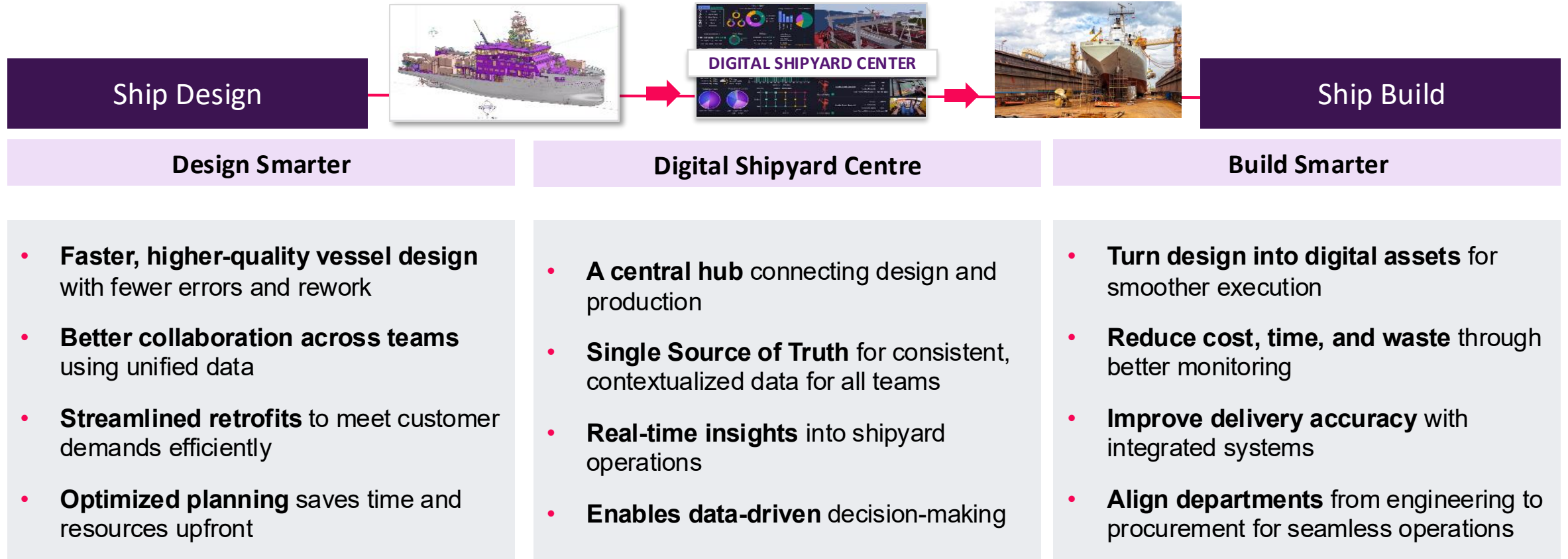
# From Design to Handover

## 3D Design and Production Efficiency



# From Design to Handover

## 3D Design and Production Efficiency



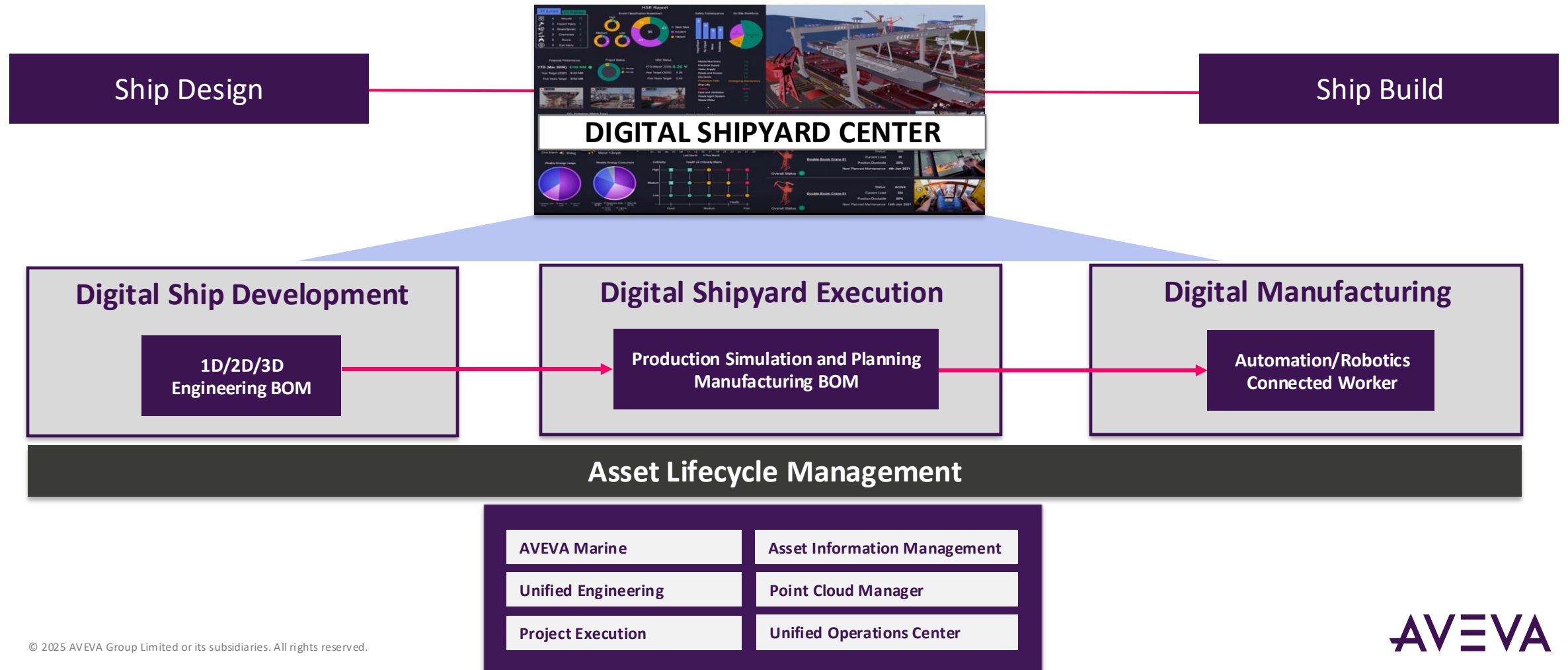
- **Faster, higher-quality vessel design** with fewer errors and rework
- **Better collaboration across teams** using unified data
- **Streamlined retrofits** to meet customer demands efficiently
- **Optimized planning** saves time and resources upfront

- **A central hub** connecting design and production
- **Single Source of Truth** for consistent, contextualized data for all teams
- **Real-time insights** into shipyard operations
- **Enables data-driven** decision-making

- **Turn design into digital assets** for smoother execution
- **Reduce cost, time, and waste** through better monitoring
- **Improve delivery accuracy** with integrated systems
- **Align departments** from engineering to procurement for seamless operations

# From Design to Handover

## An Engineering Centric Digital Manufacturing Solution



# Ship Design & Build

## Customer Success Stories

*60% of all vessels are build using AVEVA*



### Ship Design

### Ship Build

#### Design Smarter

#### Digital Shipyard Centre

#### Build Smarter

Namura Shipbuilding improved design quality and collaboration across disciplines with 3D design tools. By streamlining data flow from basic to detailed design, they **accelerated project timelines, reduced design errors, and enhanced efficiency** across multiple shipyards.

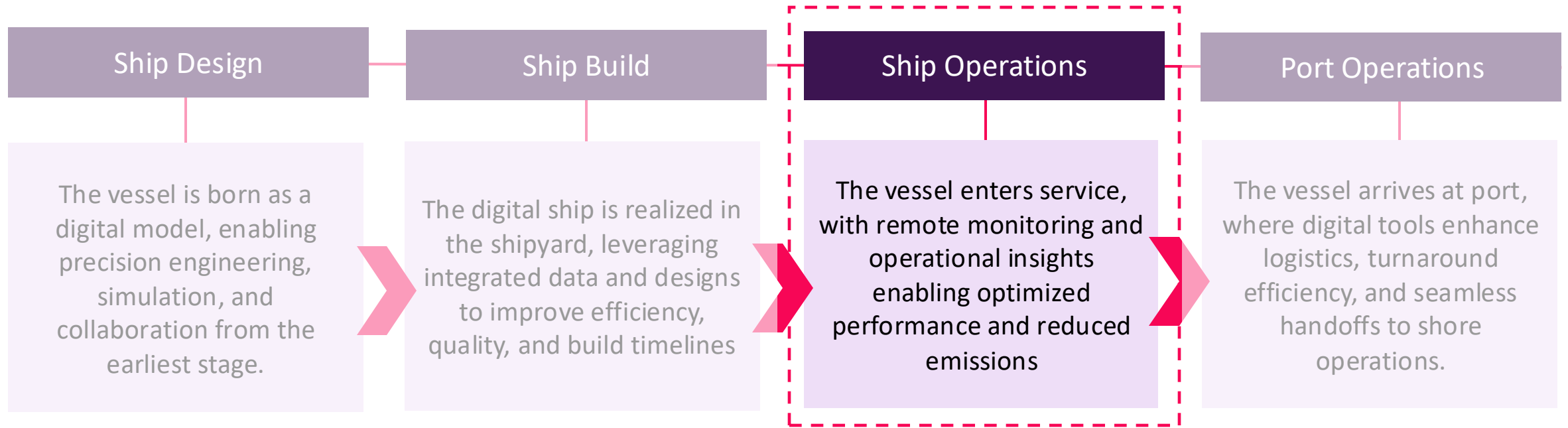
Yinson developed a centralized operations hub - integrating real-time data, 3D models, and predictive analytics. Enabling **smarter decision-making, improved project transparency**, and laying the foundation for autonomous offshore operations.

VARD has streamlined design-to-production workflows across global sites. By transforming engineering data into digital assets, they've improved **build accuracy, reduced waste, and enhanced coordination** between engineering, procurement, and production teams.



# From Ship to Shore

Operational excellence through digitalizing ship operations



# From Ship to Shore

Operational excellence through digitalizing ship operations

## Ship Operations

### Enable Smarter Operations

Use high-fidelity data from ship-to-shore systems to improve performance and sustainability.

- **Optimize operational efficiency** through unified data collection, visualization, and reporting
- **Real-time monitoring** enables insights for shore-based support centres

### Efficiency & Sustainability Benefits

- **Reduce emissions** and optimize fuel and resource use
- **Improve operational performance** with live data
- **Support sustainable practices and processes** through remote monitoring and analytics
- **Improve asset availability** through condition-based maintenance

### Unified Operational Infrastructure

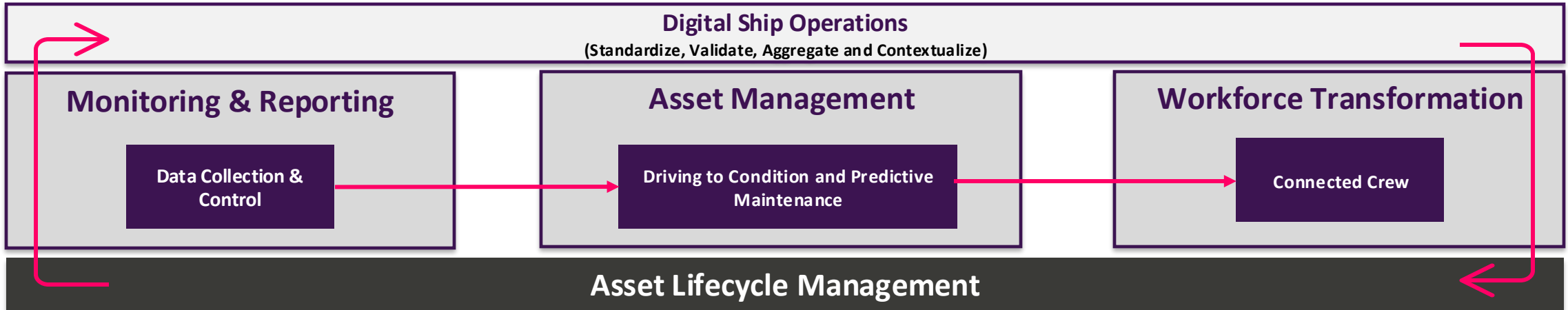
- **Full visibility** of ship and shore activities and documentation
- **Boost predictability** and logistics performance
- **Team alignment** with a single source of truth to improve communication and decision-making
- **Better Compliance** and Reporting

# From Ship to Shore

## Value Ecosystem Offering

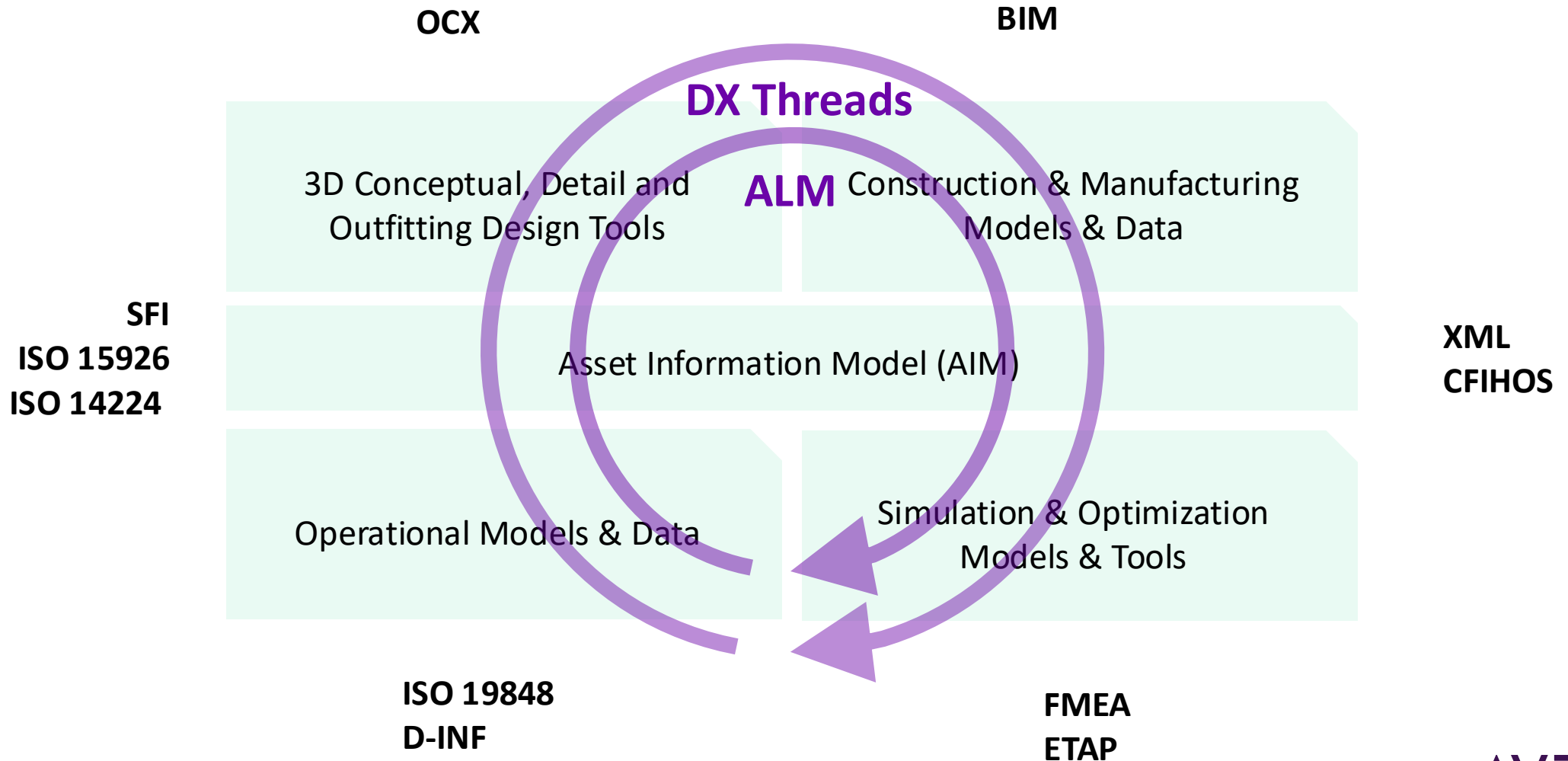


Ship Operations



PI DI	Asset Information Management
System Platform	Asset Performance Management
Unified Operations Center	

# Operating Model Integration

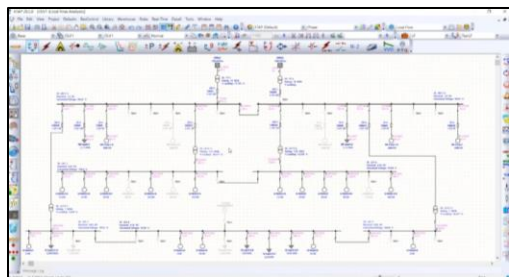


# Integration with leading Electrical Engineering and Simulation

Electrical lifecycle to support Digital Twin

Digital Twin

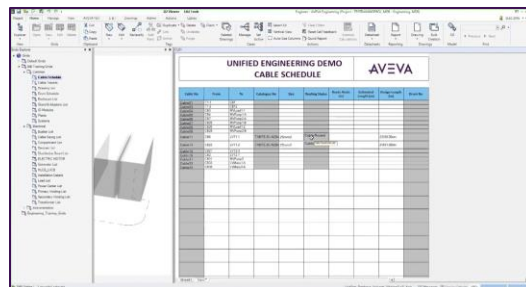
**etap**



Analysis/Simulation



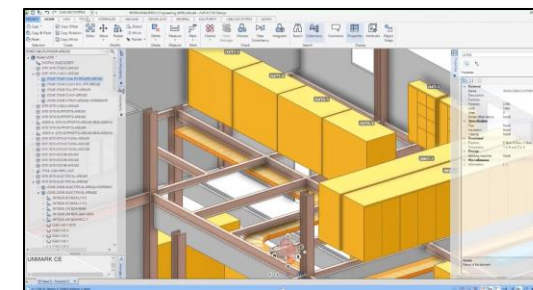
**AVEVA**



Functional Design

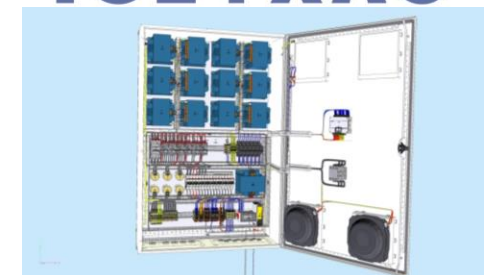


**AVEVA**



Physical Layout

**IGE+XAO**



**AVEVA**

# From Ship to Shore

Operational excellence through digital ship operations

*Over 3000 vessels are monitored using AVEVA*

## Ship Operations

### Enable Smarter Operations

DEME achieves **higher asset utilization** and performance by monitoring their fleet and coordinating activities



### Efficiency & Sustainability Benefits

CSL achieved **29% in carbon intensity reduction** by monitoring fleet performance and alerting experts attention when needed



### Unified Operational Infrastructure

Kongsberg Maritime builds robust **information management** and monitoring solutions using AVEVA to build best-in-class performance



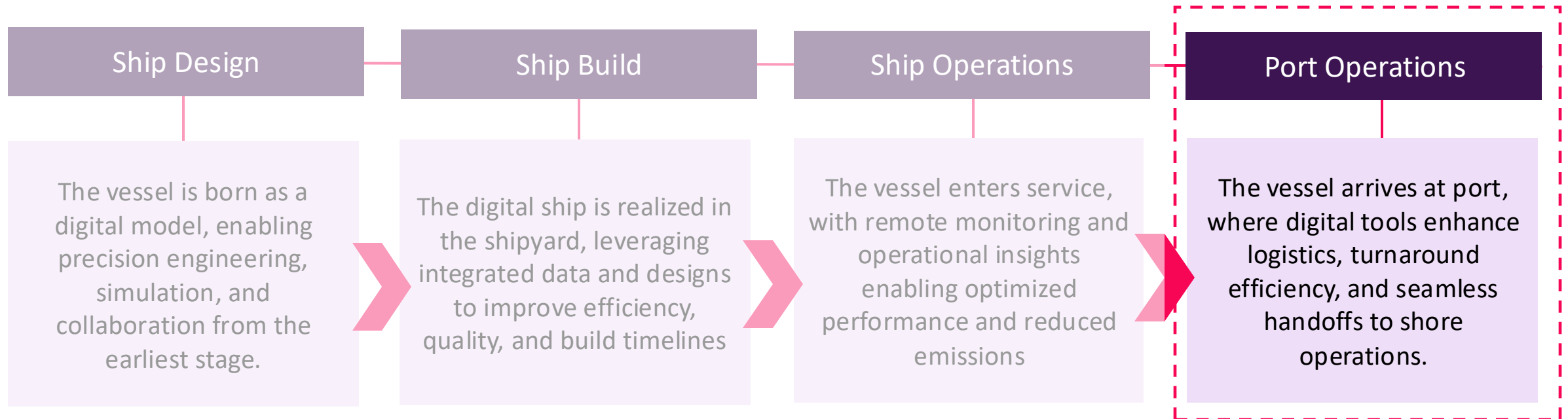
KONGSBERG





# From Berth to Port Operations

Operational excellence through Port ecosystem



# From Berth to Port Operations

Operational excellence through Port ecosystem

## Port Operations

### Enable Smarter Operations

- **Unlock real-time visibility** into terminal, cargo, and equipment operations
- **Drive smarter planning** and faster response with advanced analytics and monitoring
- **Enhance asset reliability** through improved coordination and situational awareness

### Efficiency & Sustainability Benefits

- **Reduce dwell time and cut emissions** through coordinated workflows
- **Increase asset utilization** and operational throughput
- **Enable sustainable growth** with data-driven performance improvements

### Unified Operational Infrastructure

- **Integrate data across port systems**, from terminal to hinterland
- **Enhance collaboration** with shared, real-time insights
- **Maximize existing infrastructure** with a scalable, secure digital foundation

# From Berth to Port Operations

Operational excellence through Port ecosystem

## Port Operations

### Enable Smarter Operations

TraPac used the PI System to create real-time dashboards and perform ad-hoc analysis, **cutting cycle times by 10%** while improving service reliability and sustainability.



### Efficiency & Sustainability Benefits

Adani Ports leveraged the PI System to boost productivity, streamline operations, and enable data-driven decisions, **driving efficiency and profitability** across expanding terminals.



### Unified Operational Infrastructure

ArcelorMittal Mining Canada deployed the PI System to unify operations from pit to port—maximizing output from existing assets and **increasing capacity by over 50%**.



# Building the Port Data Ecosystem

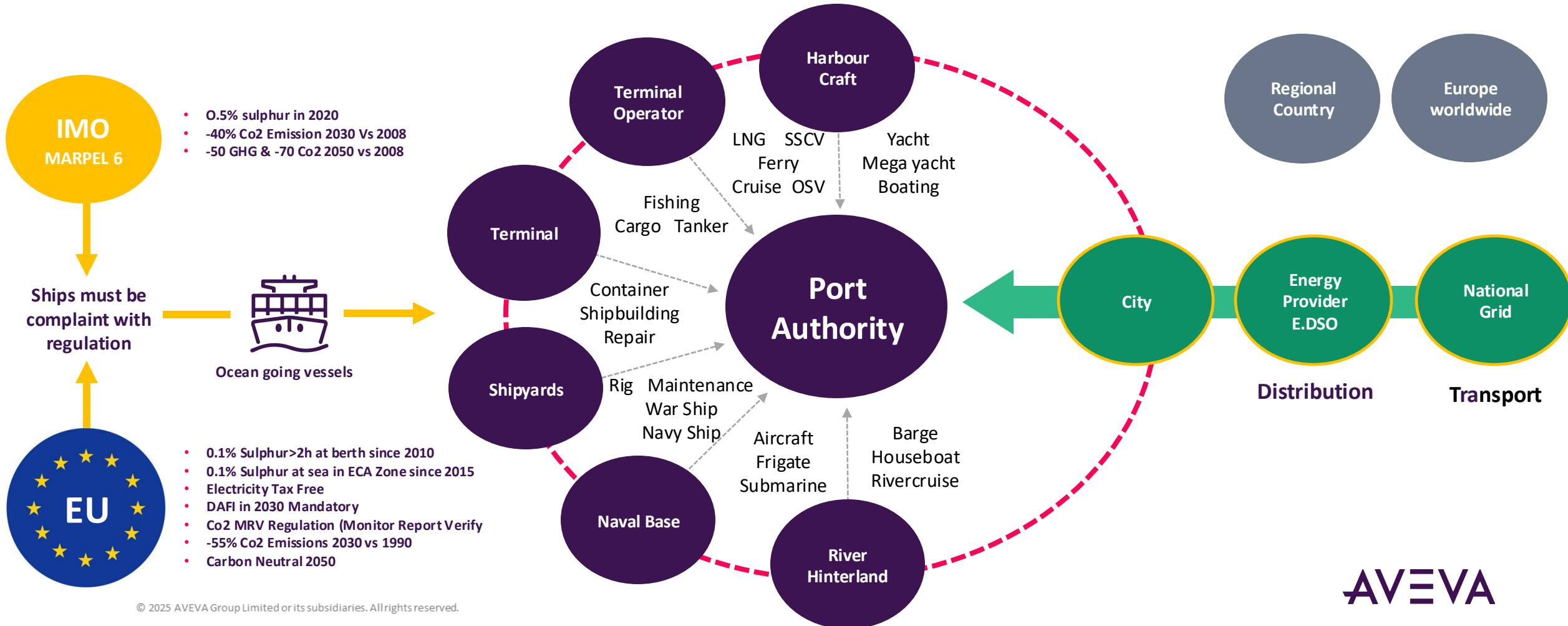
Investors, Financial Agencies, Decision Makers, Politicians, Stakeholders, Consultants

Shipping Industry Associations

Ports & Terminal Associations

Associations of Port Cities

Green Associations

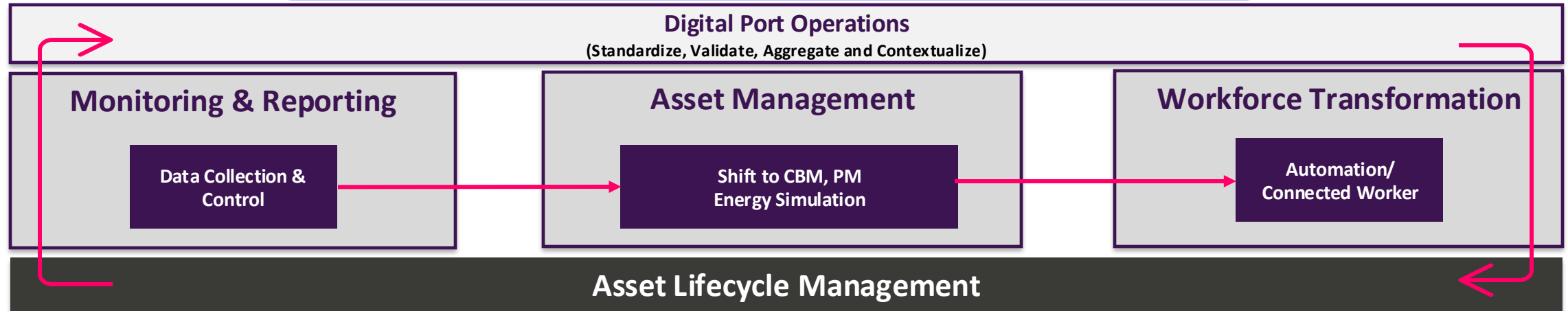


# From Berth to Port Operations

## Value Ecosystem Offering



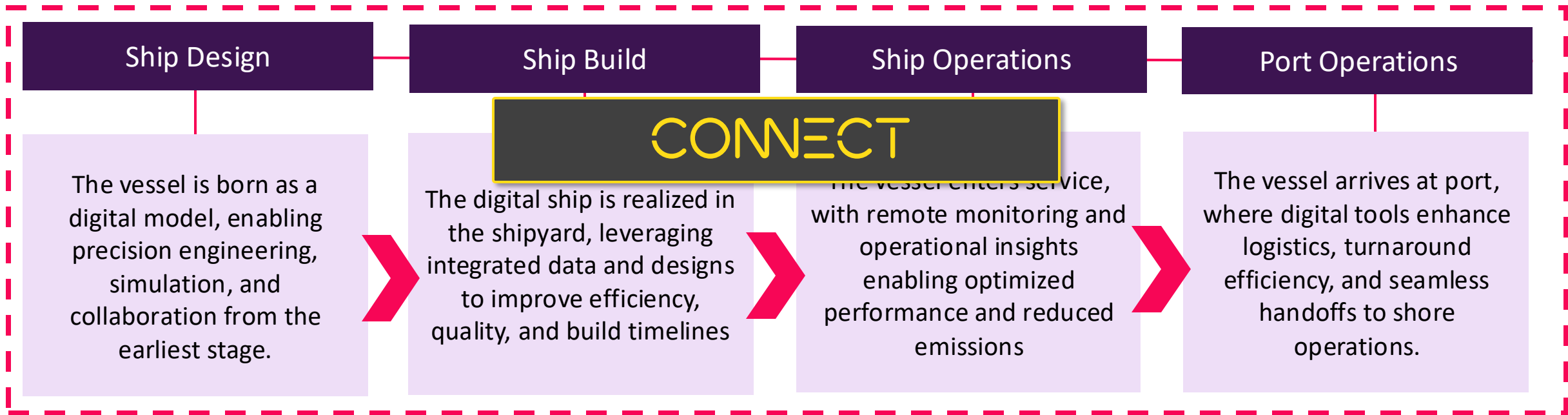
Port Operations



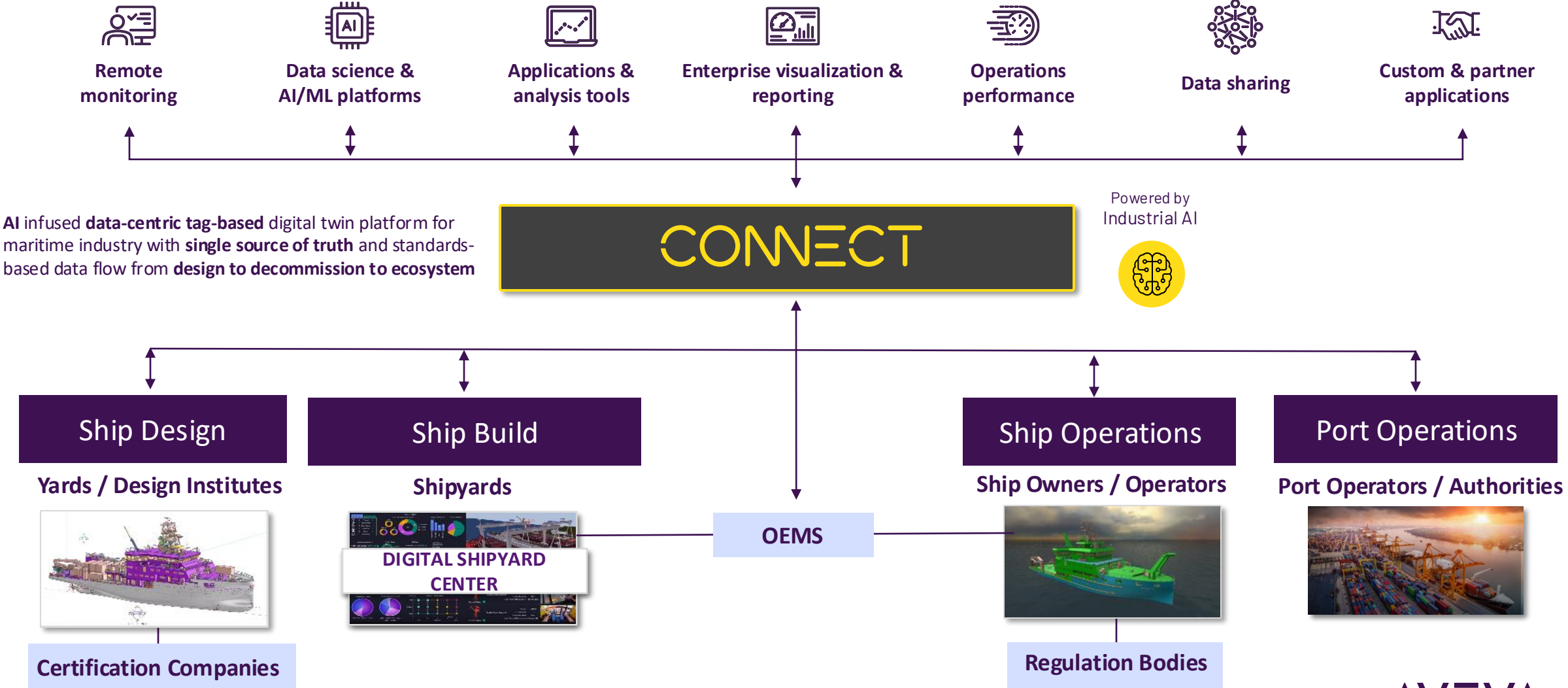
PI DI	Mobile Operator
System Platform	CONNECT – Port Ecosystem
Unified Operations Center	

# From Segmented to Connected

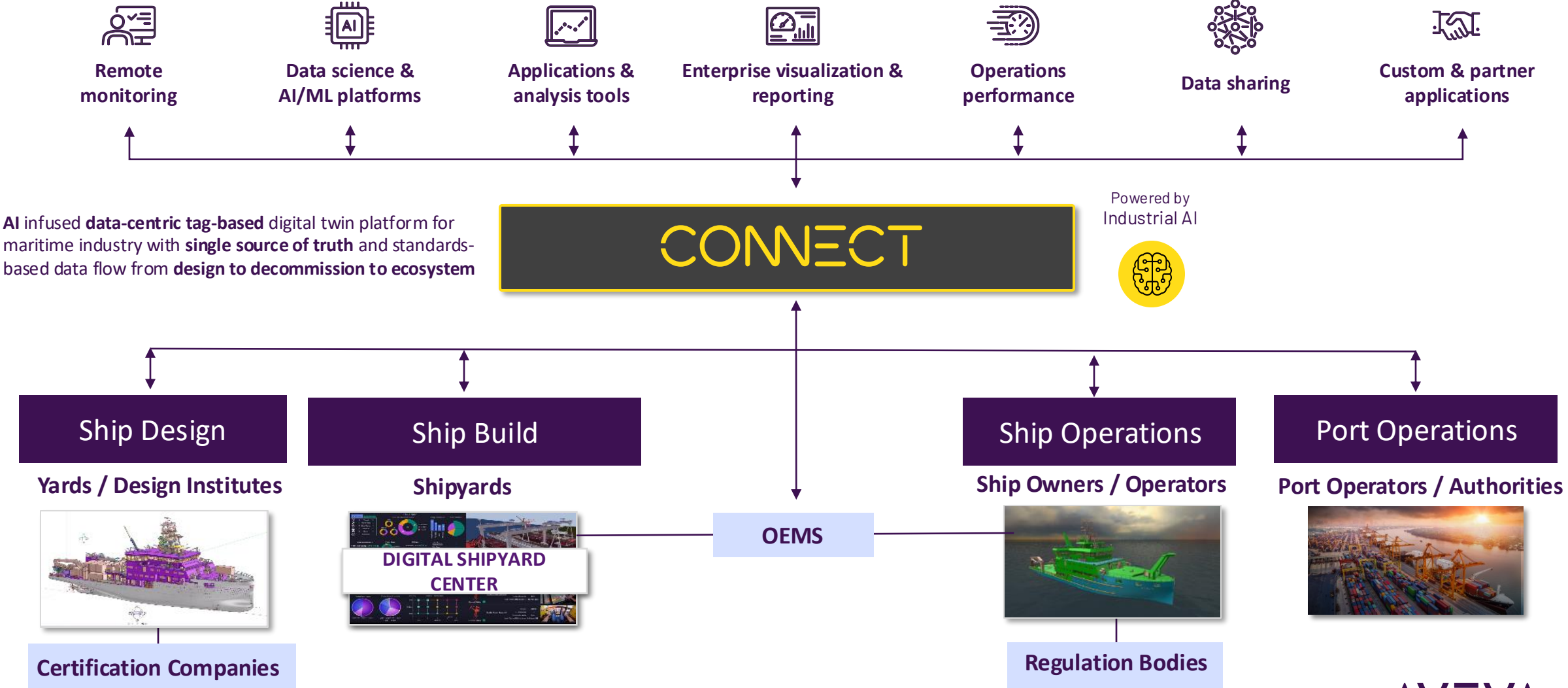
## The Complete Marine Lifecycle – From Engineering to Operations



# AVEVA Vision for the Marine Ecosystem



# AVEVA Vision for the Marine Ecosystem



# Summary

Marine industry is **digitizing quickly** using advanced modeling, analytics (AI) and digital threads to reduce complexity and improve decision making

Build a digital foundation on **Systems of Record (SoR)** with lifecycle resilience and feedback provides a competitive edge

**Build a culture of collaboration** using data for optimal performance through continuous improvement to ensure you thrive and survive



To learn more, scan here:



# AVEVA

Providing enterprise software that  
delivers on the promise of Digital Twins  
in Maritime

To learn more, scan here:



Thank you!