Black and Caspian Sea 2024
PORTS & LOGISTICS
Creating Synergies by Connecting The Black, Baltic and Caspian Economies

“From Data to Value”

How the use of data and optimization can support decisions, improve efficiency and return competitive advantage.

Costanza Thursday, July 4 2024

Gabriella Meduri, DSP
Senior Project manager

Part 01

Meet DSP

Who we are

4 Business Entities

380+ Projects completed worldwide

50+ Industry Experts

14+ Languages

38+ Years in the shipping and port industry

20+ Navis Certified consultants

24/7 Global help desk and support services

+40% DSP Product Live Installations in 2023

DSP is compliant with ISO 27001-2022 certification to grant Information security, cybersecurity, and privacy protection to its customers

Our core business

TOS CONSULTING

DSP team supports the Terminal Operations in all the phases of the Terminal Operating System implementation, optimization, support and training.

BUSINESS INTELLIGENCE

Product: DATAVIEW

DATAVIEW is a DSP product. It's a Business Intelligence solution for your terminal showing you any data everywhere in one view.

DIGITAL TWIN

Product: GEMINI

GEMINI is a Digital Twin solution. GEMINI is a platform, bespoke on the characteristics of every single terminal organization, able to mirror decisions, strategies and show workers practice during real operations.

SYSTEM INTEGRATOR

DSP is a System Integrator Company with a well-established network specialized in connecting specific solutions to address individual cases.

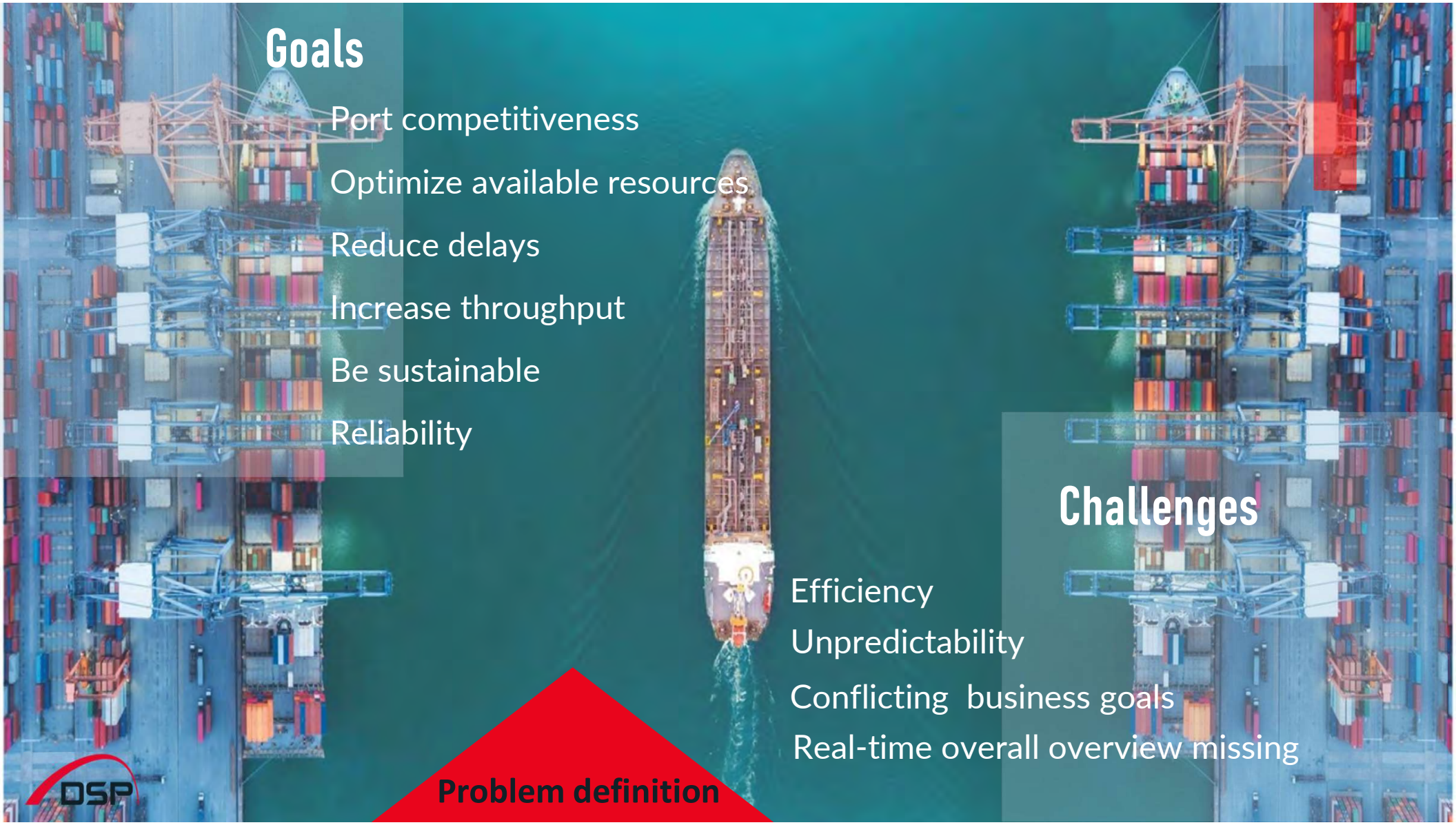
DSP school of TOS

we talktic

Part 02

Digitalization for Ports Competitiveness

Approach and Lessons Learned

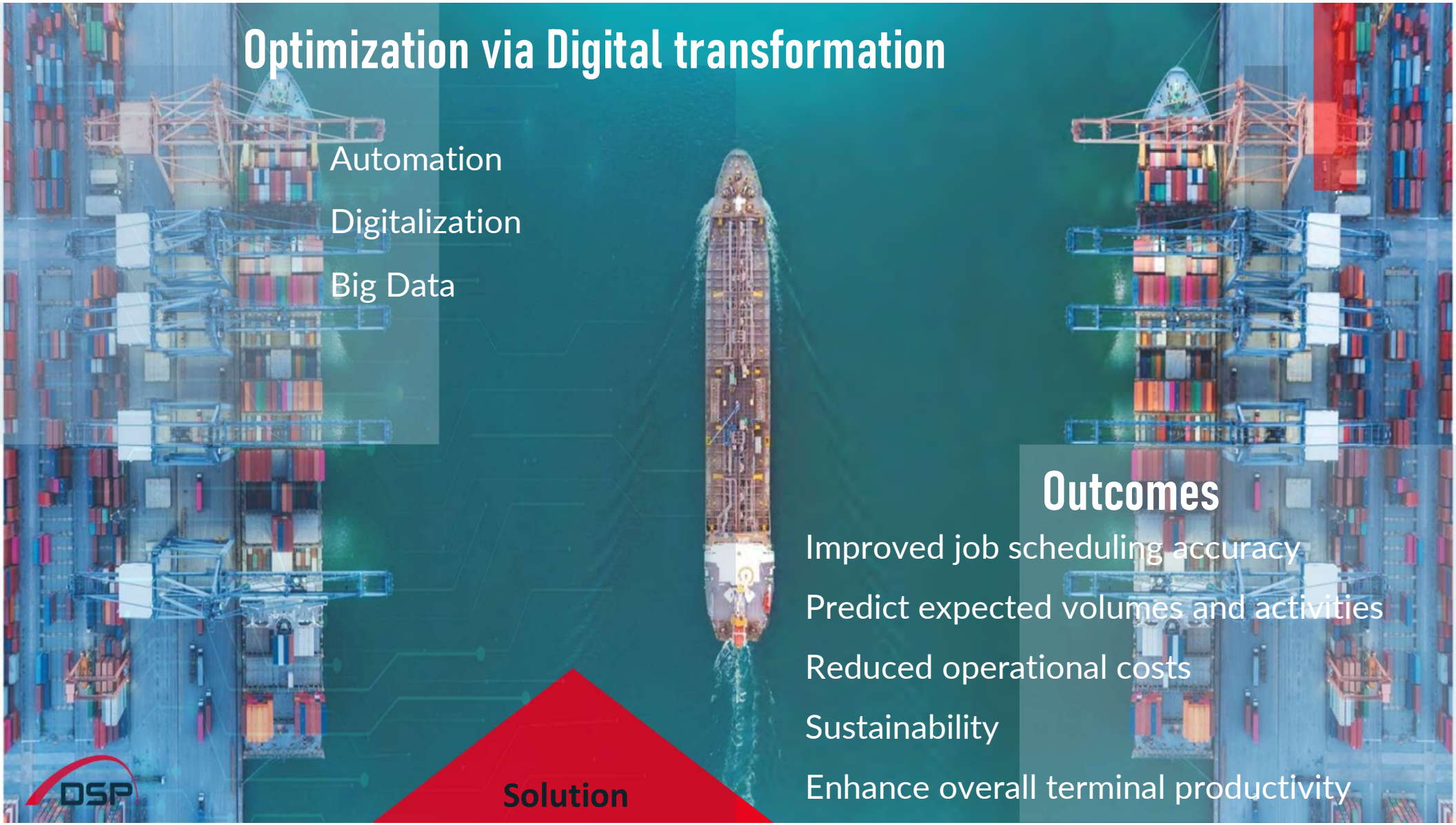

Goals
Port competitiveness
Optimize available resources
Reduce delays
Increase throughput
Be sustainable
Reliability
Challenges
Efficiency
Unpredictability
Conflicting business goals
Real-time overall overview missing
Problem definition
DSP

Optimization via Digital transformation

Automation

Digitalization

Big Data



Outcomes

Improved job scheduling accuracy

Predict expected volumes and activities

Reduced operational costs

Sustainability

Enhance overall terminal productivity

Solution

Complexity of the resource assignment

Complexity of the problem

Data quality

Standardization of the processes

Multi objective optimization

Resources expertise

NOT OPTIMAL RESOURCE ALLOCATION

Optimization for Smart Ports

- Digitalization
- Simulation and Modelling
- Statistical analysis

GEMINI AIR - Artificial Intelligence Resourcing

Operations efficiency	Anticipate and remove bottlenecks. Proactive decision making
Cost Saving	Optimize resources by Planning and deploying only mission critical resources
Commercial Empowerment	Engage and commit with your customers on predictive service level performance indicators
Sustainability	Do More with Less, to reduce environmental impact and measure your CO2 footprint
Control	Increase safety and control of your operations through live and predictive operations dashboards. Reduce risks.

Optimization for Smart Ports

Can the Berth Planner assign the resources in the best optimal way, considering the whole operations?

How can the Vessel Planner verify the impact of the vessel crane split on the whole terminal?

Can the Shift Leader identify delays, in advance?

GEMINI CONSIDERS ALL THE VARIABLES AND GOALS AND PROVIDES THE TOOLS TO CHECK WHAT HAPPENS IF….

Part 03

Predictive Optimization

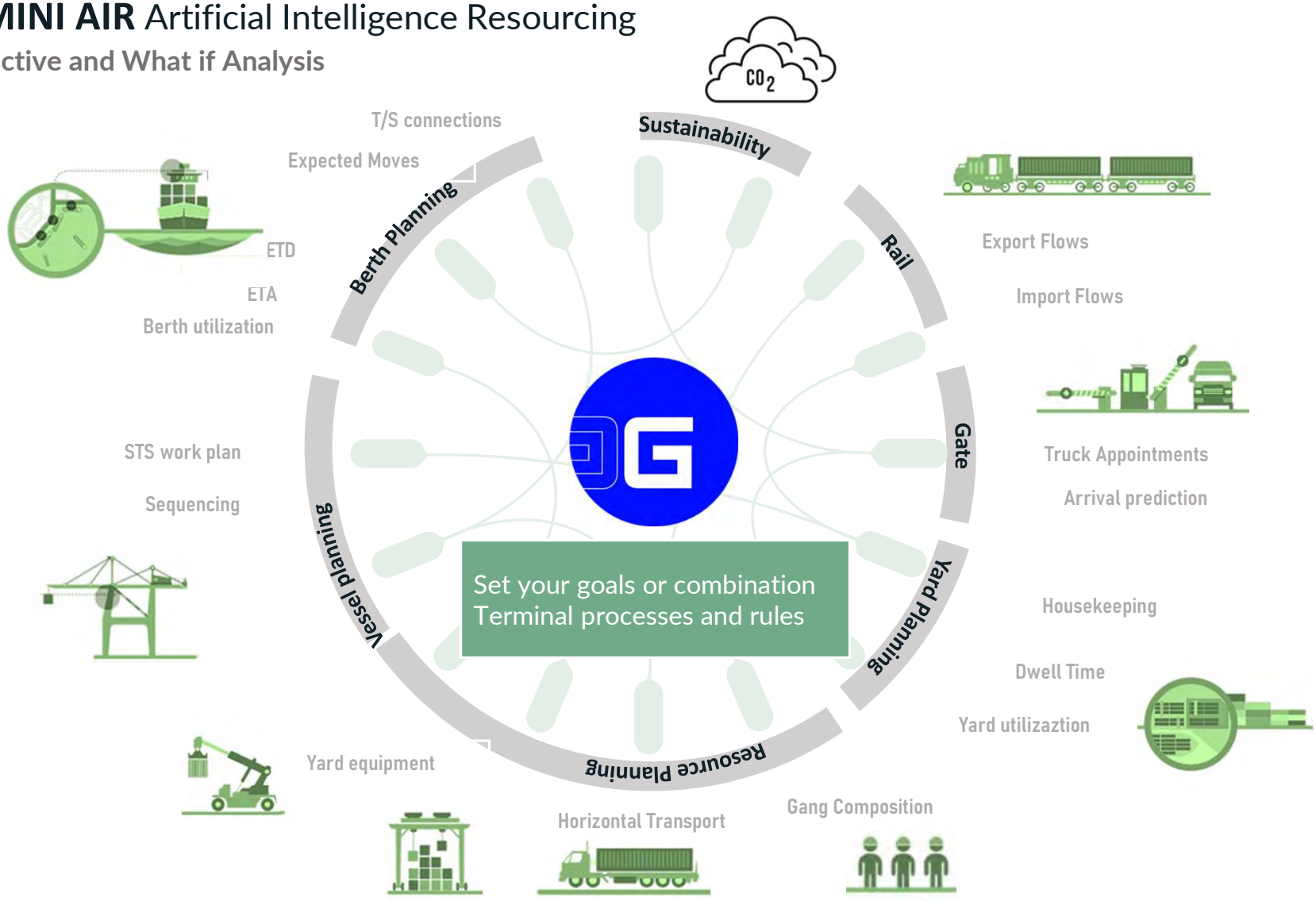
Correlate events using an Holistic Model

GEMINI

DSP

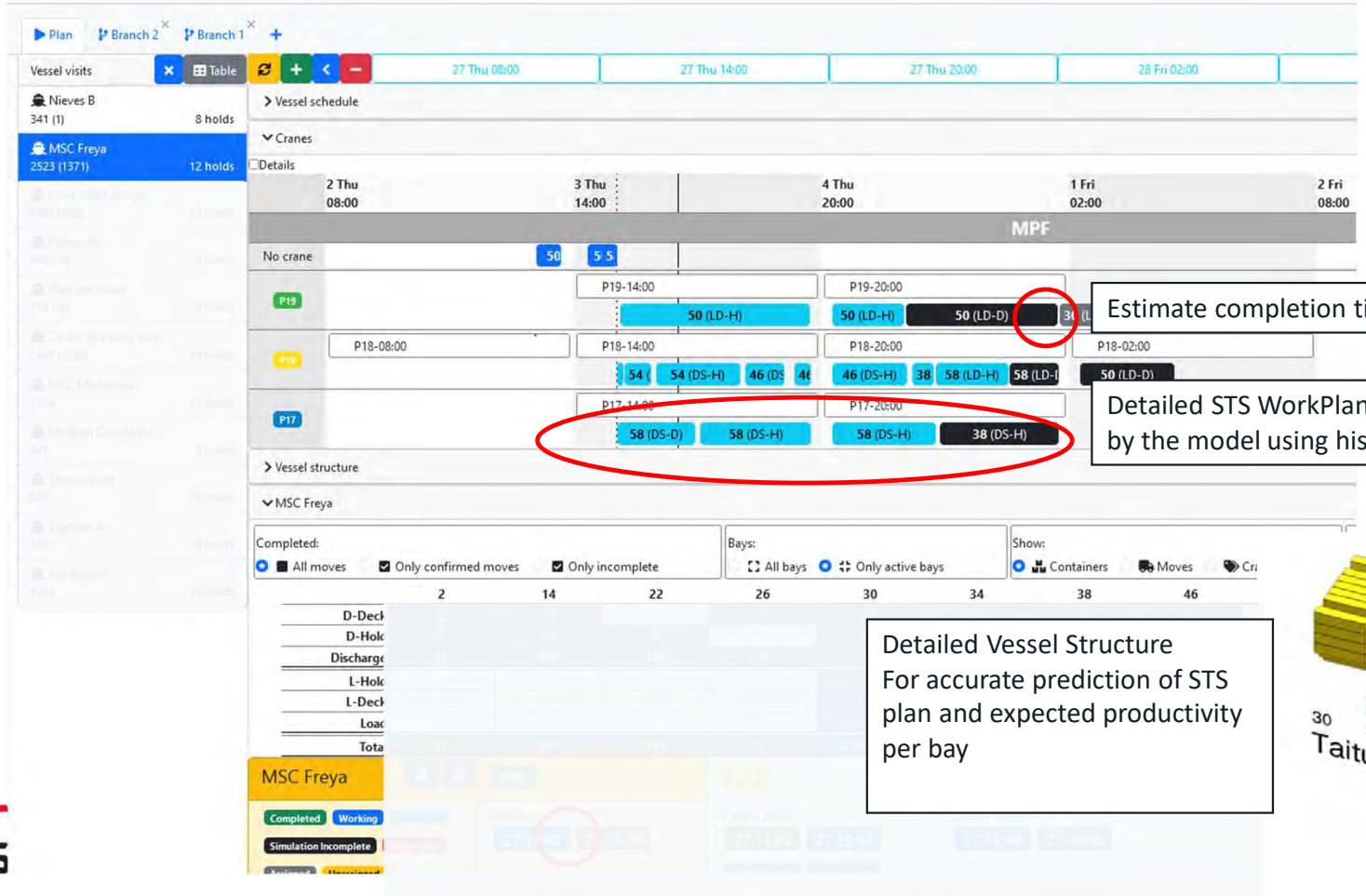
GEMINI AIR Artificial Intelligence Resourcing

Predictive and What if Analysis



Predictive Optimization with Digital Holistic Model

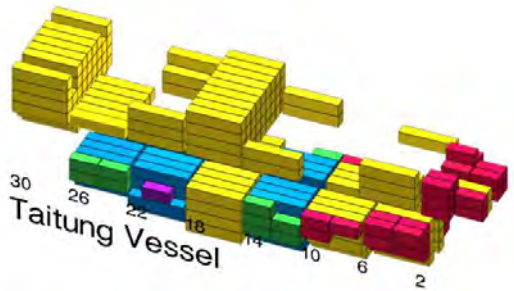
Use live and historical data to predict correlated events



Estimate completion time per bay, per STS

Detailed STS WorkPlan: if plan is not ready, it is generated by the model using historical data

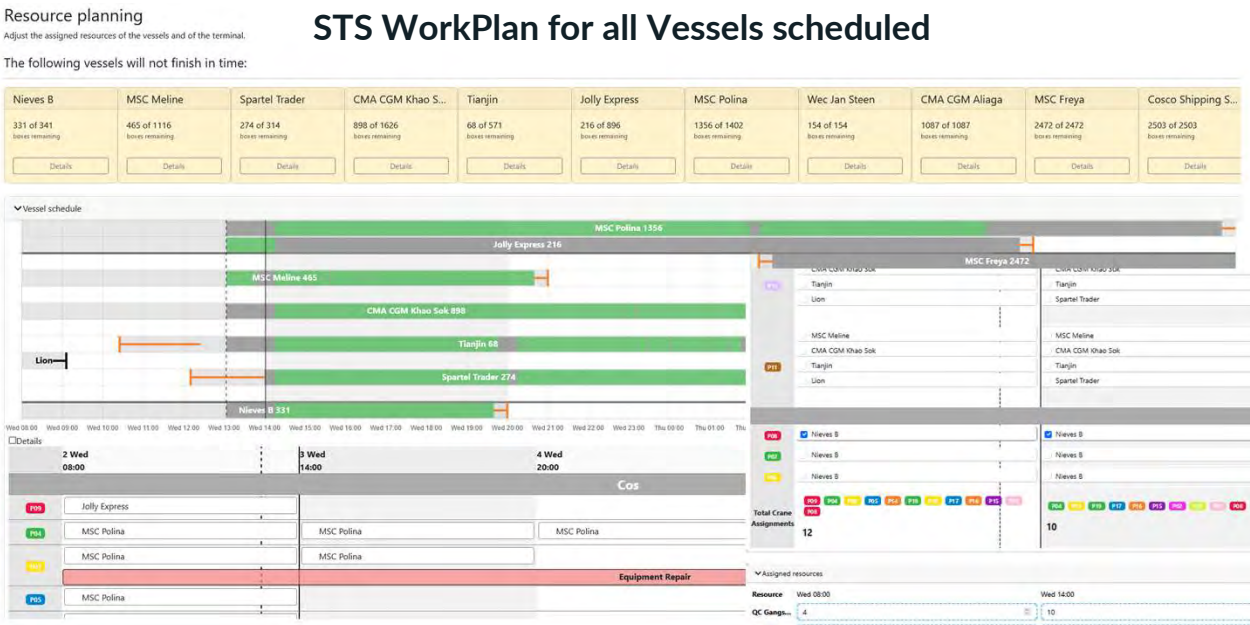
Detailed Vessel Structure
For accurate prediction of STS plan and expected productivity per bay

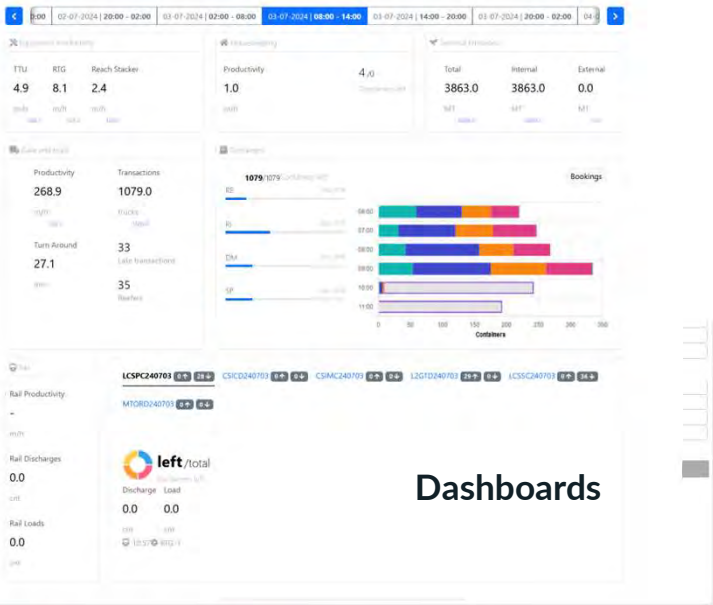


Predictive Optimization with Digital Holistic Model

Use live and historical data to predict correlated events

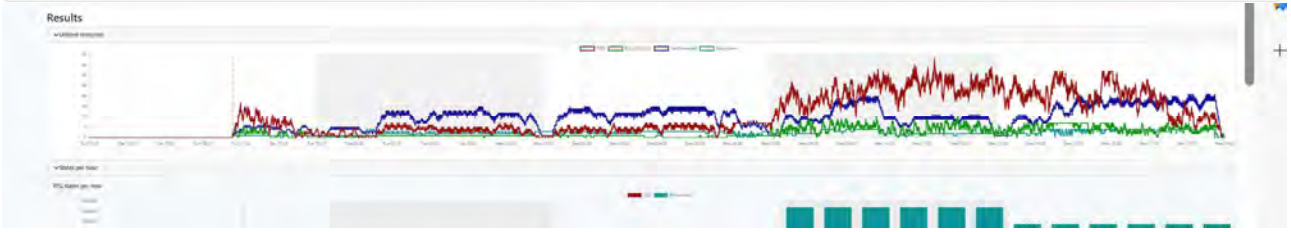
STS WorkPlan for all Vessels scheduled





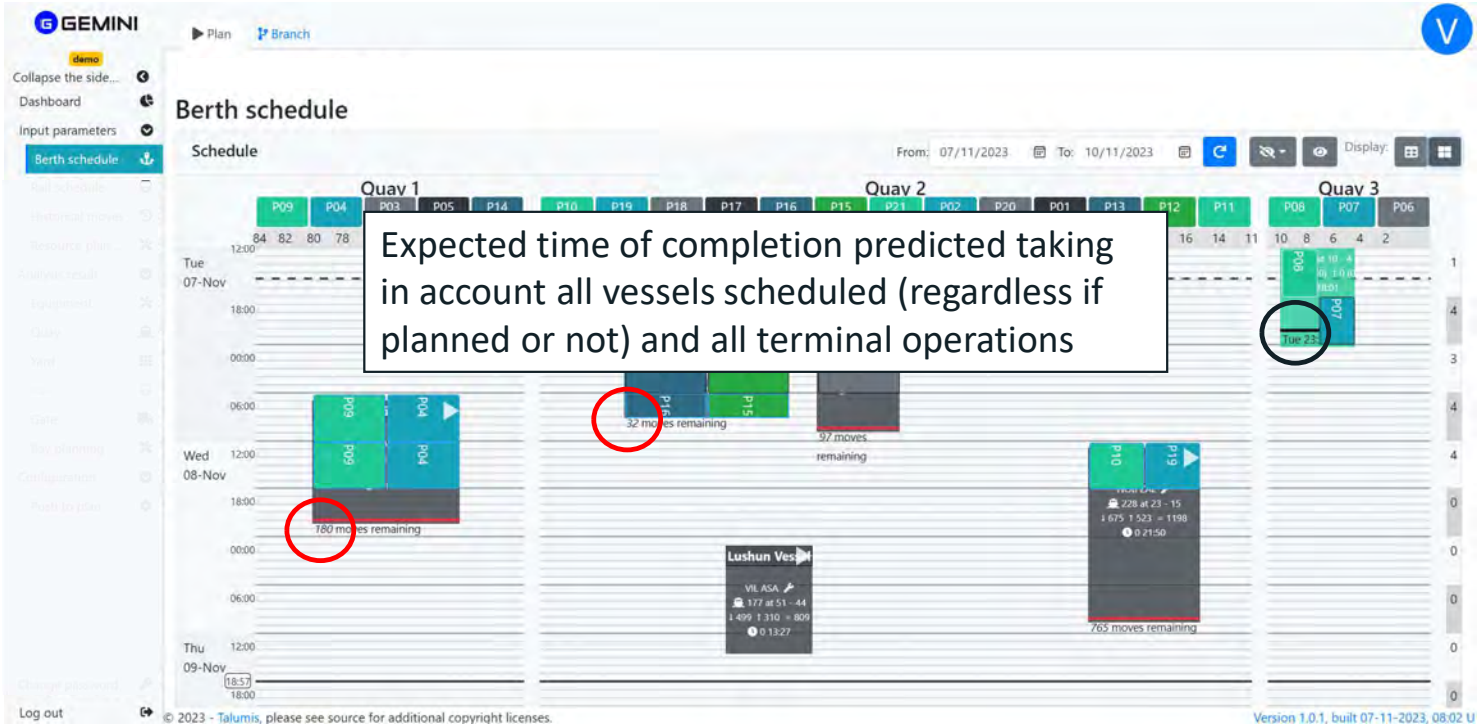
Dashboards

Planned Yard Resources



Advanced Predictive Analytics with Digital Holistic Model – Result

Use live and historical data to predict correlated events

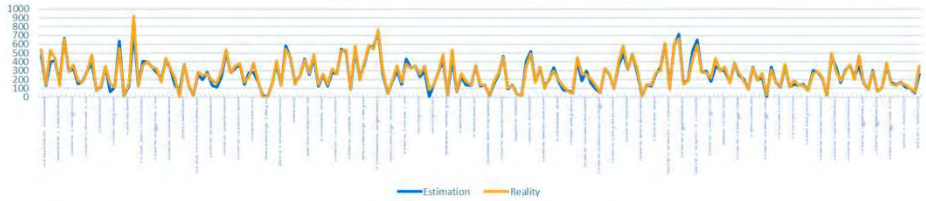


How to implement GEMINI AIR

Project Roadmap and best practice

6 months

- Know your challenge, define your objectives, set expectations
- Collect Data — Historical data, Live Data
- Create the predictive model — AI, interpolation
- Validate the predictive model
- Run what-if scenario and support decisions
- Continuous Improvement



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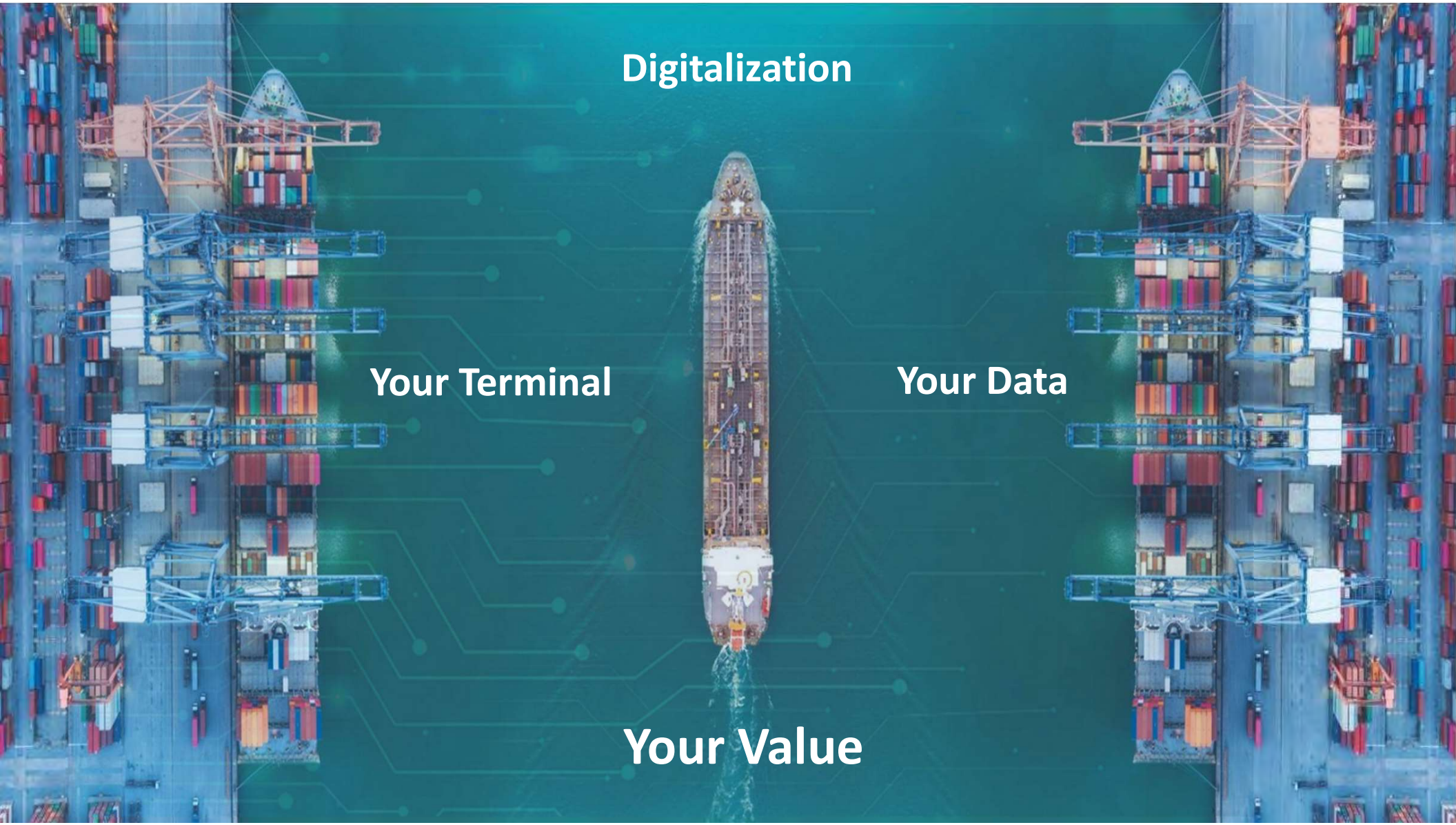
Digitalization
Your Terminal
Your Data
Your Value

Thank you!

www.dsp.team