

APM Terminals' Asset Digitisation Journey

TOC Europe 2025

19 June 2025



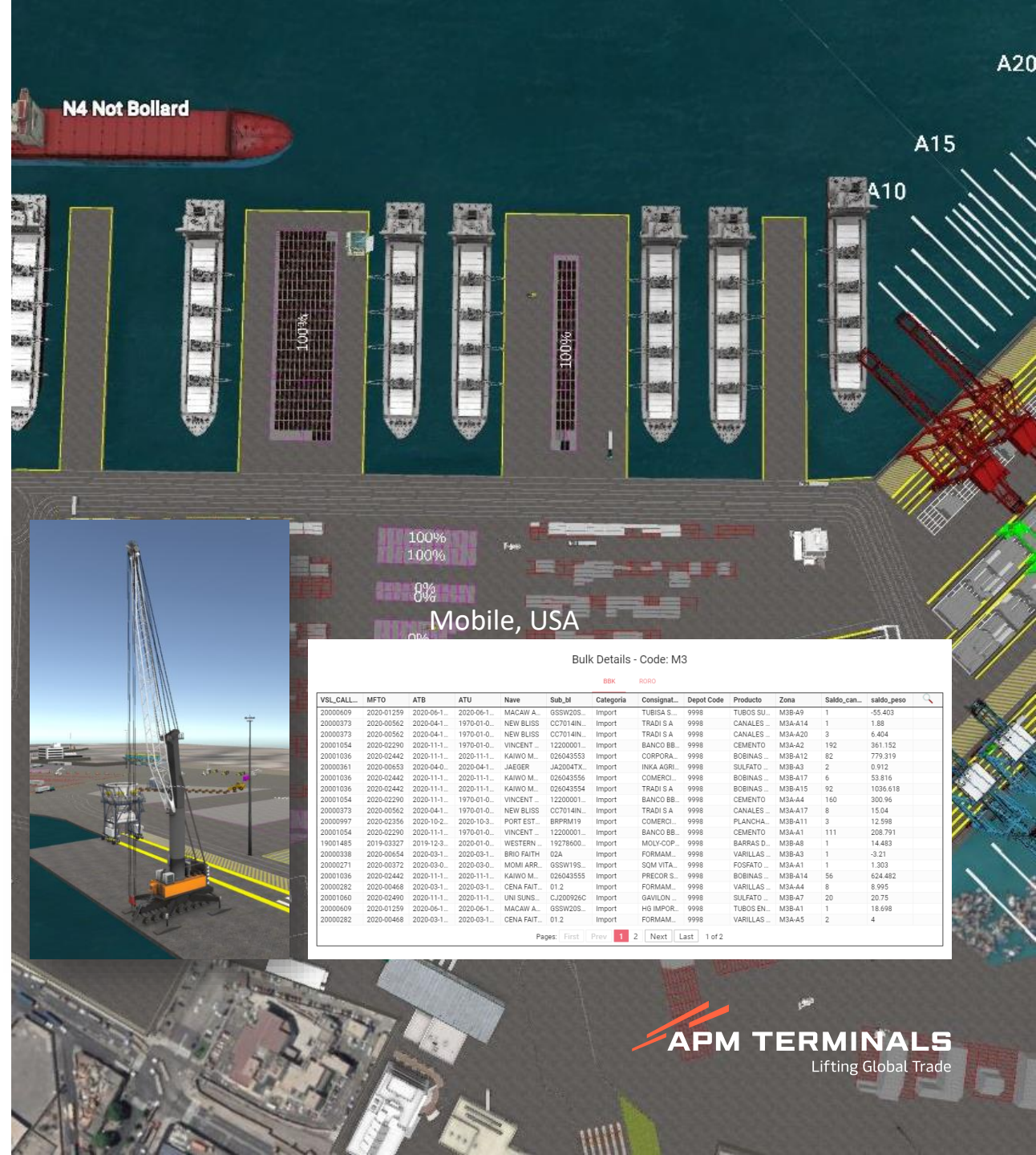
Agenda

APM Terminals Strategy & Approach

Use Cases & Technology Dependencies

Key Challenges

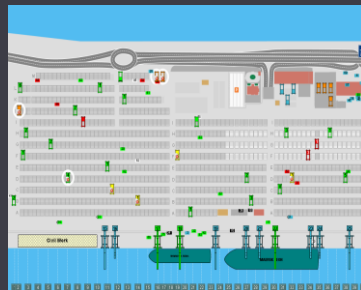
Learning Lessons & Support Needed



Pockets of Digital Excellence were available

We tapped into these and built the solution from the bottom up

A range of innovative solutions existed, however there was previously no Global APM Terminals standard to steer terminals



Localized solution issues:

- Data not standardized
- Integration from local to global
- Development of new products

How do we harvest learnings and leverage terminal innovation?

We decided to focus on a few key principles



Provide a global data standard



Develop an agnostic platform and architecture



Give the terminals the products they need (value)

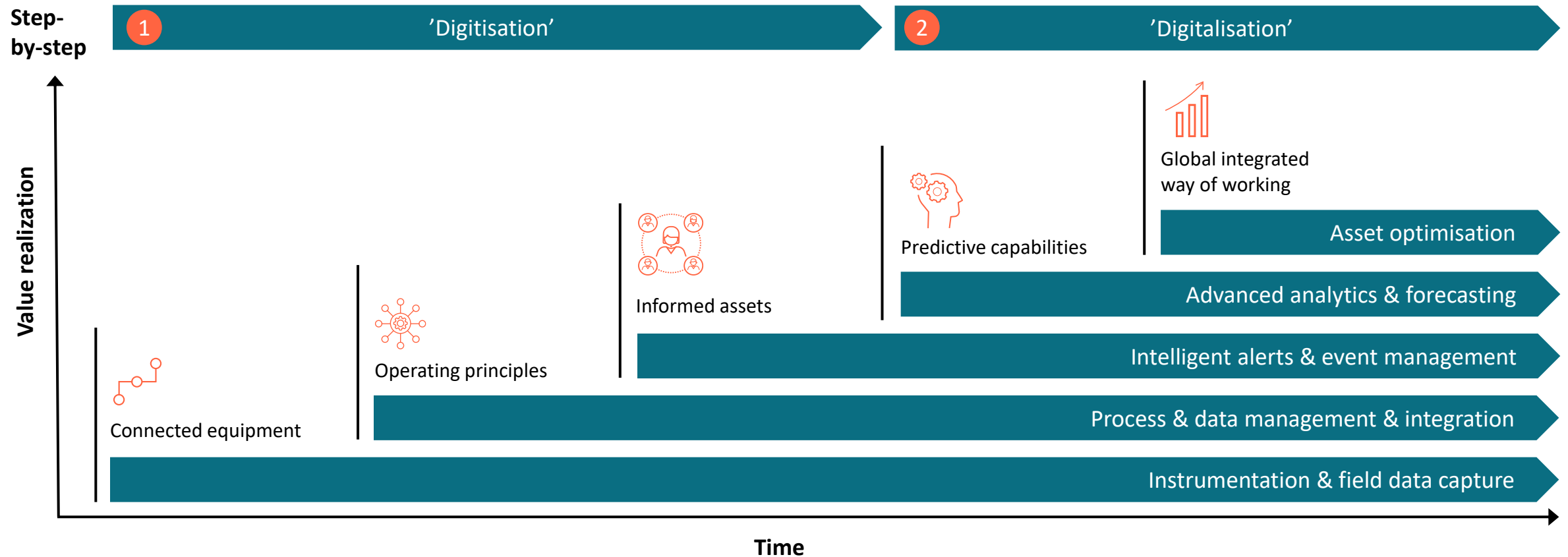


Create an environment for co-development



Business-driven

APM Terminals applied an incremental, stepped-approach to enablement & adoption



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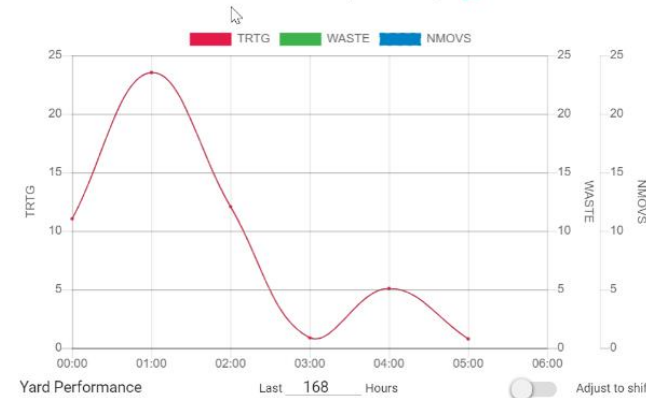
Key Challenges

Learning Lessons & Support Needed

Waste Time Split : RTG036



Name	Percentage
WHT load	0.00%
WHT dsch	1.33%
Alignment on the quay	2.66%
Alignment on vessel	3.99%
Alignment on bay	5.32%
Gantry	6.65%
Boom	7.98%
Stoppage	9.31%
Crane operator change	10.64%



Solution demand & value-add has evolved over time

Original Use Cases

Performance Monitoring

Asset productivity
Asset health

Exception Management

Asset productivity
Asset health

Situational Awareness

Asset productivity
Asset health

Automated Workflows

Asset productivity
Asset health



Expanded Use Cases

- 1 Lean Enablement
- 2 AM Reliability
- 3 Auto Job-Stepping
- 4 Decarbonization
- 5 Advanced Analytics



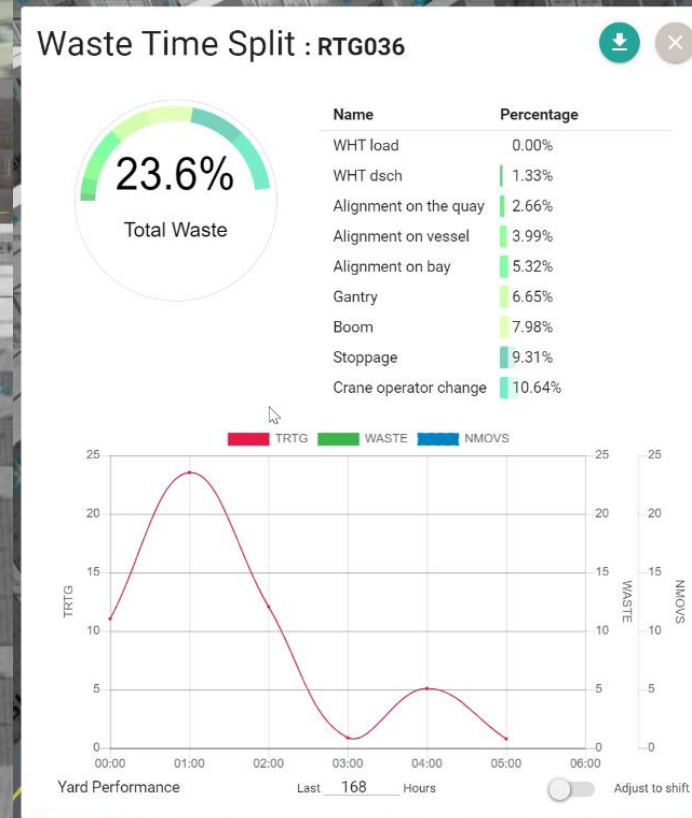
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Key challenges faced throughout our journey

Diverse Assets

500+ batches



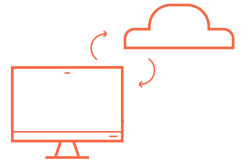
IT Infra & Security

Wireless, Cyber



Changing TECH Landscape

Cloud vs. Local
3G, 4G, 5G



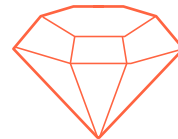
Terminal Adoption

Process Variance



Value Realization

Direct vs. Enablement



OT Skills & Experience

PLC, Comms, Cyber,
Interfacing, Cloud



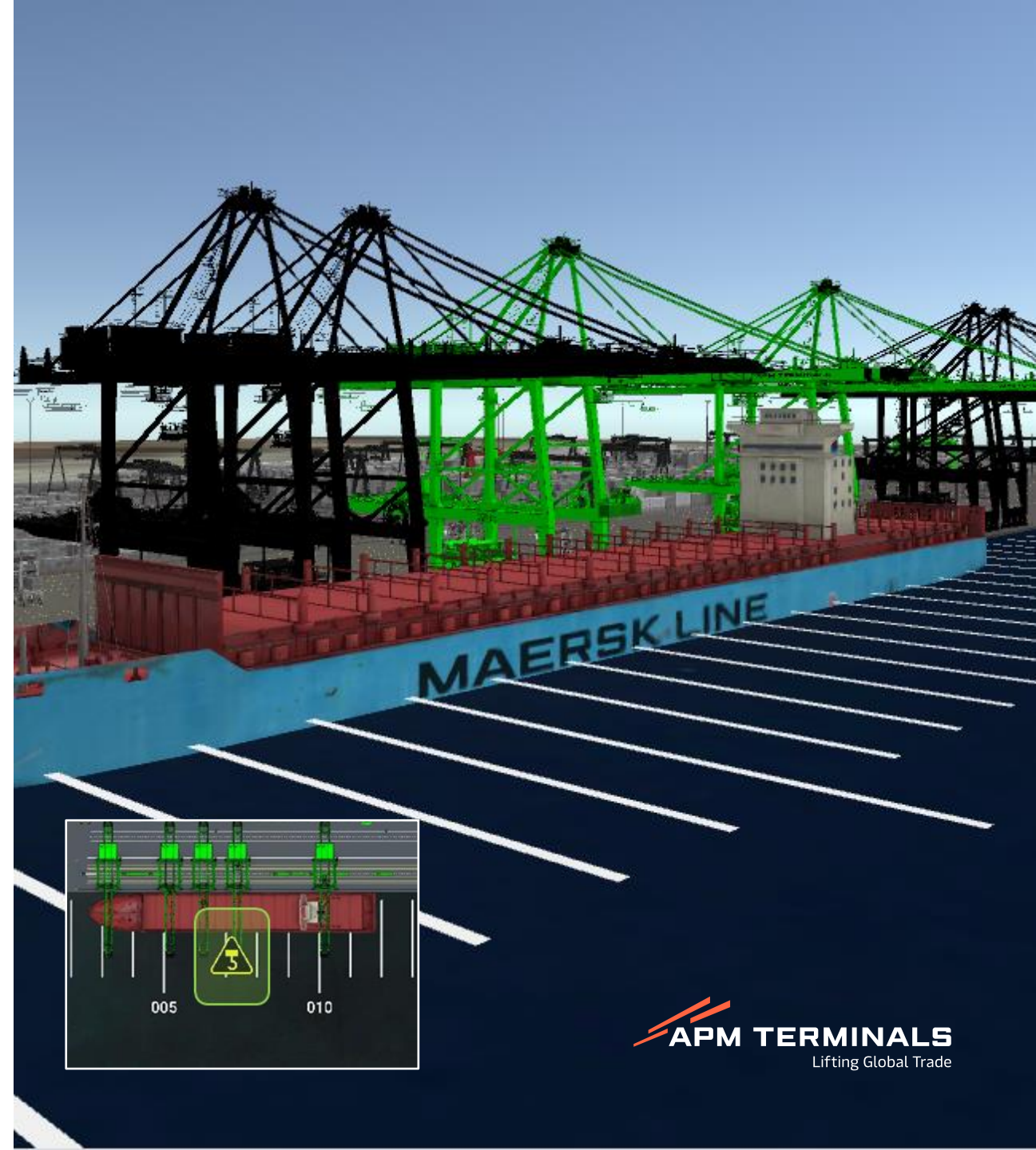
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Learning Lessons & Support Needed



Learning lessons & our ask going forward

Key Learning Lessons

1 Modularize

Offer key features & use cases as discrete 'products'

2 Simplify

Align infrastructure to use cases

3 Targeted Standardization

Offer specific modules which add value

Our Ask – Suppliers & Partners

1 Data

Open, accessible, integration-ready data & protocols

2 Digitization

Moving beyond connecting, adding value via data

3 Modularization

Offer specific modules which add value in a broader eco-system



APM TERMINALS

Lifting Global Trade