DIGITAL TRANSFORMATION:
TANKS AND TERMINALS

IAA spoke with **Loren Sjoquist**, Emerson Automation Solutions Director Digital Transformation and Strategic Accounts, Asia Pacific and **Manuel Arroyo**, Emerson Automation Solutions Director, Oil and Gas Industry Programs on digital transformation with the oil & gas industry.

Q: First of all, what does a top performing terminal look like?

First, let me explain that top-quartile performance occurs when a terminal achieves performance within the top 25 percent of their peers in measurable Key Performance Indicators (KPIs).

These KPIs are provided by a third-party benchmarking organisation to ensure customers are meeting accurate and credible goals in comparison to top performers in the industry.

That said, Emerson commissioned an independent benchmarking source to analyze and determine top quartile metrics by collecting data from 23 independent bulk liquid storage terminals across the world.

It found that the common driver for top-performing terminals is the cross-functional integration of digital technologies, including pervasive sensing, software, services, and expertise that helps optimise asset utilisation while maximising revenue.

Q: How can digital transformation help terminal operators achieve significant improvements in their performance metrics?

Digital transformation is a customer-owned strategy of integrating digital capabilities to improve project execution and operational performance. There are four main areas where digital transformation helps terminal operators to achieve

operational excellence (see Figure 1):

- **Safety:** Remove workers from high-risk activities like climbing tanks for manual readings, avoid product contamination and loss of primary containment, and reduce the number of recordable incidents.
- **Capacity:** Eliminate time-consuming manual processes that harm asset capacity, inventory turnover, custody transfer, terminal throughput, and revenue capture.
- **Reliability:** Employ technology to gain predictable asset availability, lower maintenance costs, and reduce risk due to equipment failure events.
- **Energy:** Use technology to become more sustainable by reducing energy

*Loren Sjoquist,
Emerson Automation Solutions Director Digital
Transformation and Strategic Accounts, Asia Pacific*

*Manuel Arroyo,
Emerson Automation Solutions Director,
Oil and Gas Industry Programs*

It found that the common driver for top-performing terminals is the cross-functional integration of digital technologies, including pervasive sensing, software, services, and expertise that helps optimise asset utilisation while maximising revenue.

consumption, emissions levels, and energy costs.

Q: What best practices should terminal operators follow when implementing digital transformation to maximise their ROI?
A successful path to digital transformation starts with a clear business case in an area with potential for improvement. Operators should then leverage industry and technology experts to identify proven methodologies of improvement.

Finally, they should ensure that their investment considers organisational readiness and connectivity to company culture.

In response to industry demand for clear guidance on facilitating digital transformation, Emerson developed a "Digital Transformation Roadmap" to help companies develop and execute a tailored digital transformation plan to ultimately achieve top–quartile performance driven by operational excellence.

The roadmap consists of two primary focus areas: impact domains and enabling domains. Impact domains cover capabilities and performance relative to industry benchmarks.

Enabling domains focus on capabilities in organizational effectiveness, systems, and data integration. Following this proven approach allows terminal operators to have a clear starting point to realise quick wins and maximise their ROI.

Q: How do you convince operators to embrace digital transformation who are concerned about the complexity and project cost?
Complexity and cost are always a concern even in traditional projects. We engage with customers in the early stages to help them understand the pros and cons of using digital technologies, but most importantly, the cost of not using digital technologies.

We also help them to identify how to start the journey to avoid complexity and cost overruns using our Project Certainty methodology.

This methodology helps customers to ensure success in project implementation and management by eliminating cost, reducing complexity, and accommodating late changes.

Q: A successful digitalisation project is more than just technology implementation. It also

includes a change in mindsets, particularly in more traditional industries, as well as a workforce that is well trained to operate in a highly digitalised environment. What is Emerson doing to ensure the entire digitalisation effort in traditional sectors like Oil & Gas are ultimately successful beyond the technological component?
As you pointed out, a digitalisation project is more than technology implementation. To be successful, customers must commit to preparing their people and fostering behaviours to fundamentally change their business processes.

Emerson supports this by providing the evaluation and the required continuous training to the current and next–generation workforce to become familiar and confident with new technology and processes.

Additionally, Emerson has focused on employing human–centered design in our products and software, and is committed to developing technology that is easier to implement, operate, and maintain. ⓑ

Figure 1: Four areas where digital transformation can improve terminal operations.

? **Got a Question
Make An Enquiry**

**ENQUIRY
NUMBER 8606**