



MEDITERRANEAN
Ports and Logistics **2024**

Intrinsic Optimisation in Container Terminals for Smarter, Greener and Enhanced Container Operations

Jay Pandya
May 30, 2024

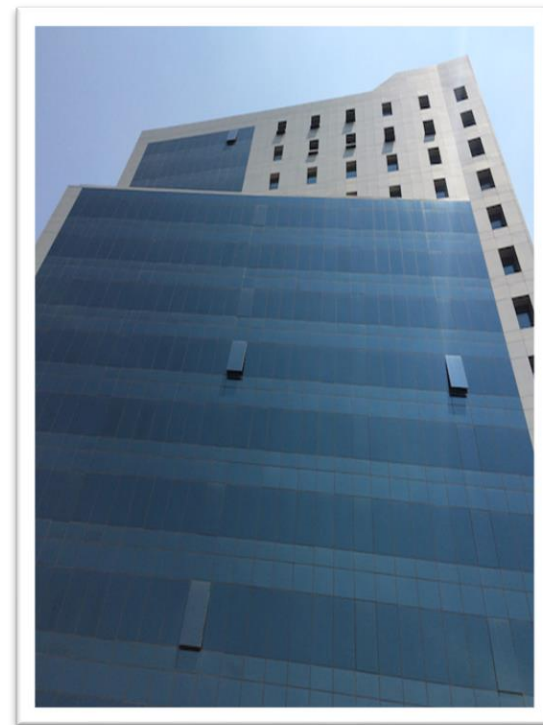


Agenda

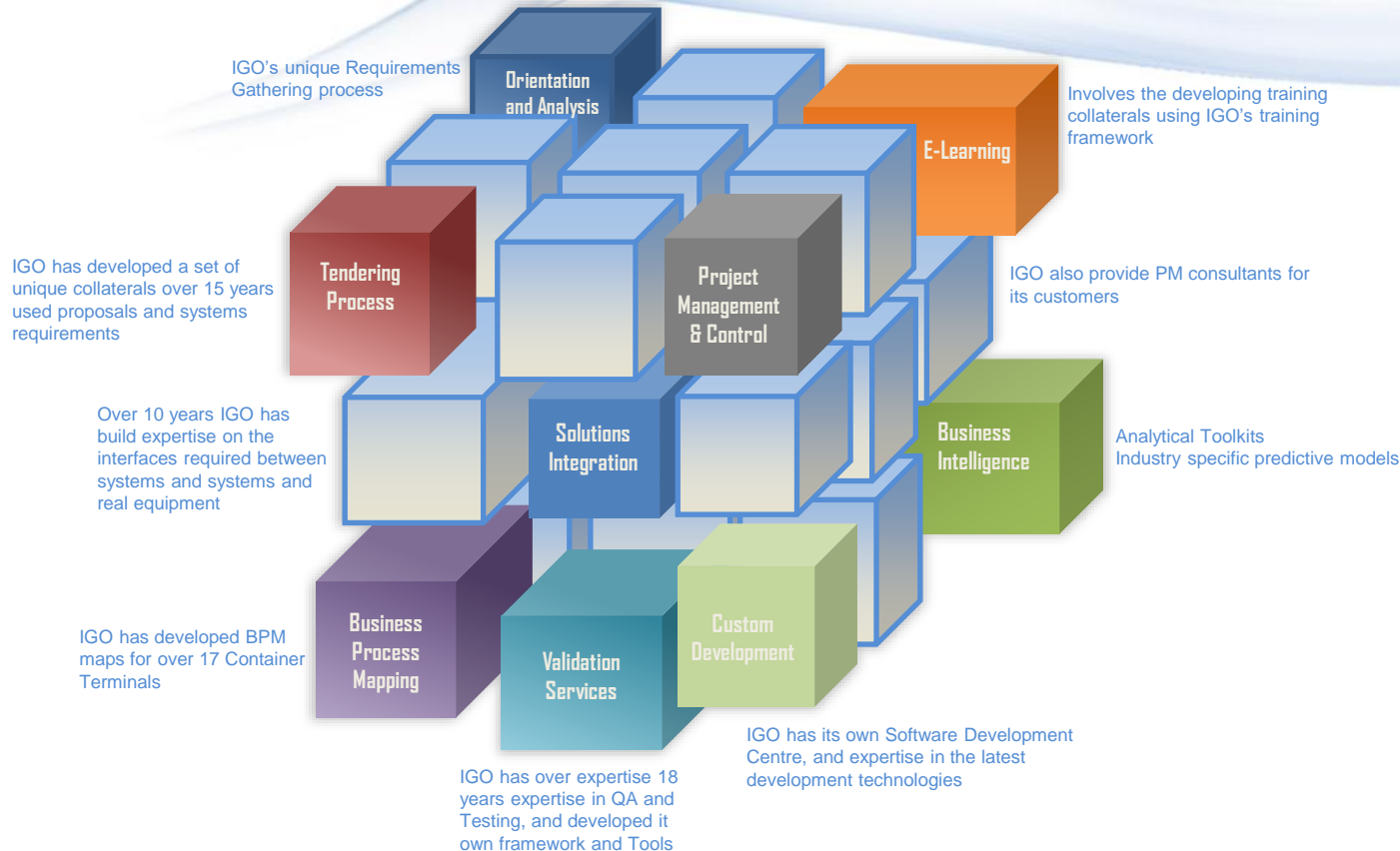
- About us
- High-level Problem Statement
- Root Cause Analysis
- The Solution Being Implemented
- Critical Success Factor - AI
- Results Achieved to date

About Us

- IGO SOLUTIONS started 18 years ago with interest in the global ports and logistics market segment. The company have physical presence with offices in Australia, United Arab Emirates, United Kingdom, New Zealand, and India.
- Market disruptor through continuous innovation, developing a new generation of products for container terminals based on Ai, Lidar and Simulation technologies.
- Executed projects worldwide including Netherlands, Kuwait, Turkey, Namibia, Philippines, UAE, Australia, NZ and India.
- Developed a product suite that addresses business process pain-points and optimizes the operations for its customers.
- 800+ Man-years of experience in Global Port Operations, Shipping and Logistics.
- 65+ Team of Dedicated Technical, Domain Experts and Data Scientists



Our Services



Our Sister Companies – IGO Investments



Leading Technology for Automating STS cranes, using Lidar, plus provides very detail STS performance Analysis



ONLY AI Solutions currently in production for Scheduling Equipment and Container Placement – AICON Solution Suite



Leading providing of RFID Location Tracking systems for container Equipment



A Global Marketplace for the procurement Spare Parts for container terminals.

IGO Solutions :The Founders



Rajan Rengarajan

Rajan's key Role in Igo Solutions is to ensure that the company's medium term and long-term strategy is implemented in the most efficient way. Rajan also manages key projects within Igo Solutions that are delivering innovation and value to its customers at the heartbeat of their operations.

Rajan has also played a key role in automating numerous terminals (Euromax Rotterdam, Abu Dhabi Terminal, Jebel Ali Terminals 3,4, Victoria International Container, Adani Vizhinjam Port), and in creating IGO's key Products that are now used by many of IGO clients.

Prior to Igo Solutions, Rajan was Chief Information Officer at P&O Ports India for South Asia (SA) and Middle East (ME). Rajan was also on the board of P&O Ports SA & ME.

Rajan holds degrees in Statistics from PSG College, Coimbatore, Tamil Nadu and a Masters of Computer Applications(MCA) from St. Joseph's College Trichy Tamil Nadu. Rajan has also holds a Post Graduate Diploma in Management from India's Leading Management school, IIM Ahmedabad.

Jay Pandya



Jay's key Role in Igo Solutions is to ensure that the company's medium term and long-term strategy is implemented in the most efficient way. Jay also manages key projects within Igo Solutions that are delivering innovation and value to its customers at the heartbeat of their operations.

Jay has also played a key role in automating terminals (Euromax Rotterdam, Abu Dhabi Terminal, London Gateway, Victoria International Container, Ports of Auckland), and in creating IGO's key Products that are now used by many of IGO clients.

Prior to Igo Solutions, Jay worked as a process improvement and innovation consultant Nedlloyd Lines and then later for P&O Nedlloyd. Jay has also held senior management positions at P&O Ferries and P&O Ports.

Jay holds degrees in Computing from the University of Wales, and Masters of Business Administration (MBA) from Macquarie University, NSW Australia.

Problem Statement that Requires Solving



- STS cranes waiting for containers to load or CHE to discharge containers (Hanging Hook)
- Long queues of CHE waiting at STS cranes
- CHE waiting for yard cranes to complete operations
- External trucks waiting in the yard to complete operations
- Sub-optimal routing in the terminal taken by CHE
- CHE waiting for no reason

Root Cause Analysis : Key Inefficiencies

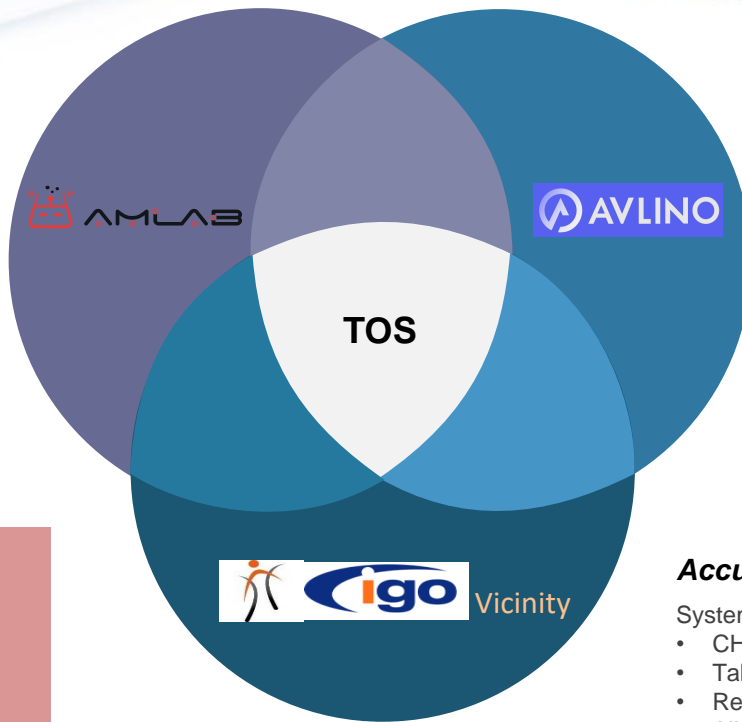
- Inefficient rules in TOS for generating Work Instructions
- Inefficient rules scheduling CHE
- Inefficient rules for decking containers
- Inefficient priorities for handling external trucks
- Insufficient Monitoring, Tracking and Analysis of CHE



Solutions Being Implemented at a 5M TEU Terminal

Realtime STS Performance

AMLAB analytics data shared with Avlino AI for accurately scheduling of the CHE through the TOS



Always 'ON' AI

- Information on location of all CHE tracked by DispatchSight
- Scheduling of CHE done by DispatchSight, (DS)
- STS requirements based of performance tracked by DS
- All TOS Scheduling instructions Overwritten
- All TOS container decking requirements Overwritten by Yardsight

Key Functions Removed from TOS

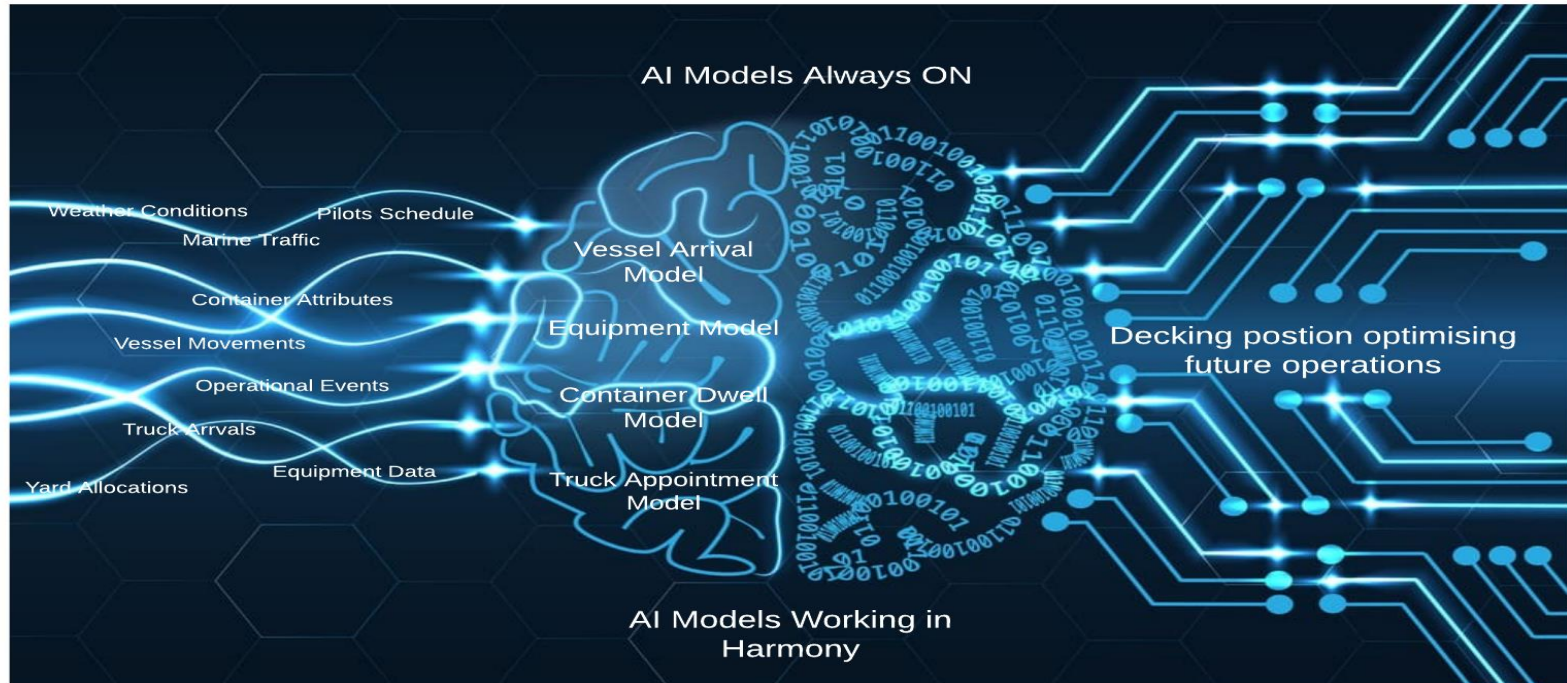
- Container Placement / Decking
- Scheduling of CHE

Accurately Tracking of CHE with RFID/GPS

System like Ones offered by IGO/Vicinity ensures

- CHE follow optimal routes assigned
- Tablet device Navigation Guidance
- Reduces unnecessary stopping
- Allows further analysis of trip duration

Critical Success Factor - AI



Real Results Delivered to date

- Yardsight in Production from Jan 2023
 - 25% - 40% reduction in unproductive moves
 - 25% - improvements in Truck turn around times
 - 15% - reduction in travel distances of ITV
 - Direct results in reduction in fuel usage and maintenance required

Expected Improvements with DispatchSight Integration

- Min 25% Reduction in Hanging Hook
- Further 10% improvement in ITV turnaround times
- Further reduction on ITV travel Distances

Any Questions



Thank You



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