

Jebel Ali: technology and innovation drive success



Mohammad Al Muallem, Senior Vice President & Managing Director, DP World, Dubai, UAE

On March 30, 2015 Jebel Ali won the Award of Excellence for Terminal Operations at the 2015 Navis Inspire Awards

In today's highly connected world, increasingly driven by the rather exotic-sounding 'Internet of Things' (IoT), port operators across the world are finding themselves in the unfamiliar territory of transformative development. Historically landside maritime development has always been a slow process, perennially lagging behind technological advancements, it is not known for facilitating quick decisions.

But things are changing for port operators. We don't need to look far for examples of this. The arrival of ultra-large containerships (ULCS) with capacities of 16,000 to 18,000 TEU and above has thrown even the best container terminals into turbulence. The fact that this has happened in the past two to three years sets the pace for the kind of rapid evolutionary changes that port operators are faced with to survive the coming decades.

Transformative evolution

The road to transformation is paved with technology, innovation and human enterprise. Modern technology has armed us with the ability to shorten the time it takes to build a container terminal, upgrade and refit existing STS cranes to handle new generation mega ships, and increase safety at yards and berths by using automation and remote controlled operations.

Transformation need not be an alien word for the industry. The humble container turned the way we handle cargo on its head half a century ago. The heady expansion of the maritime sector since the 1970s, when international trade took wings, saw container carriers grow in size exponentially, as did the ports handling them. DP World's flagship Jebel Ali Port is a child of this golden era in global maritime history.

Jewel in the crown

Jebel Ali was an audacious project, coming as it did barely 7 years after Dubai built the most modern container terminal at Mina Rashid to meet the demands of a region exploding with economic activity. Since it opened to business in the early 1980s, Jebel Ali has played a leading role as a conduit for international trade flowing into the Middle East, with the states around the Arabian Gulf benefiting the most. Its strategic location and operational efficiencies enabled Dubai to establish itself as the commercial gateway of a region of more than 2 billion people.

Mega-ships

If you look at the last decade, the size of ships has changed dramatically. Capacity has gone from 4,000 TEU to 14,000 TEU to 19,000 TEU. Mega-ships deliver economies of scale to their customers and we, the port operators, deliver efficiencies to support them.

To handle the ever-increasing number of boxes arriving at Jebel Ali, DP World switched to quad lift quay cranes. Today, the quad lift system is standard in major terminals across our global portfolio, and the system is capable of a tandem lift of two 40 foot containers, effectively doubling the number of containers that can be unloaded from a ship at a time.

DP World's mantra is to constantly work towards improving turnaround times for ships at berths, which in turn delivers benefits down the supply chain to other stakeholders, starting from the vessel operator. With its semi-automated Terminal 3 (T3) nearing completion and the new Terminal 4 (T4) due to commence operations in phase 1, 2018, Jebel Ali will be able to handle more of the largest container vessels with the same efficiency that has placed it amongst the top ports in the world.

When fully operational, T3, with its 19 remote-controlled quay cranes, and

on completion T4, with its 15 remote-controlled quay cranes, will render Jebel Ali's total annual handling capacity at 22.1 million TEU. The productivity achievement is a reflection of DP World's unshakeable belief in investing in training and technology in order to deliver service excellence to customers.

Automation

As DP World's flagship port, Jebel Ali has led by example. The growing sophistication at the quayside is matched by initiatives like gate automation, RFID tracking of containers and trucks, automated stackers and now the latest semi-automatic STS giants controlled remotely by men and women. Automation has helped Jebel Ali crack the gender ceiling in dock-side operations, as well as bringing better safety to workers and fewer manual errors.

T3's remotely operated quay cranes and simulated equipment equipped with HD cameras and panoramic views delivers better accuracy of the data that is fed into the port's sophisticated systems through a high bandwidth networking infrastructure. Also, highly trained support staff with a commitment to embrace new technologies that increase system integrity and productivity remain perennially on hand.

A prime objective at Jebel Ali is to keep service levels ahead of customer demand and to streamline the supply chain. Jebel Ali is the first port in the world to achieve the ISO 27001:2005 Certification for its Information Security Management System (ISMS). This is reflective of the enhanced focus on all facets of security management at the terminals.

Big ships, big cranes, big throughputs, and now, Big Data. As our automated equipment generates increasing mountains of information, terminal managers see value in analysing the data to enhance efficiency levels, do more things in less time, eliminate human error and deliver cost and time benefits to customers.



About the author

Mohammad Al Muallem is Senior Vice President & Managing Director of DP World, UAE Region. He is an industry veteran, joining Mina Rashid in 1983. In 2003, Al Muallem inspired port operations everywhere when he introduced the Quad Lift Gantry in Jebel Ali, a concept never seen before in the world. Under his stewardship, the DP World flagship port has consistently earned a place among the world's Top 10 container ports. An engineer educated and trained in the US and the UK, Al Muallem loves the sea, ships and docks in the true tradition of the land he belongs to, the UAE.

About the organisation



DP World has a portfolio of more than 65 marine terminals across six continents, including new developments underway in India, Africa, Europe and the Middle East. Container handling is the company's core business and generates more than three quarters of its revenue. In 2014, DP World handled 60 million TEU. With its committed pipeline of developments and expansions, capacity is expected to rise to more than 100 million TEU by 2020, in line with market demand. DP World has a dedicated, experienced and professional team of over 36,000 people serving its customers around the world, and the company constantly invests in terminal infrastructure, facilities and people to provide quality services today and tomorrow, when and where customers need them.

Enquiries

Port of Jebel Ali
PO BOX 17000
Dubai, UAE

Email: info@dpa.ae
Tel: +971 488 111 10
www.dpworld.com



DP World's IT strategy is to provide secure, reliable, and increasingly fast and efficient services for the processing of business transactions with all customers, suppliers, Jebel Ali Free Zone companies and government agencies. Jebel Ali's online portal, Dubai Trade, connects every player that makes up the supply chain.

The IoT, the new phenomenon that promises so much, is already at work in Jebel Ali's highly automated operations. Efficient supply chains rely on such integrated models to deliver the benefits of operational efficiencies to customers and stay competent. The growth and success of Jebel Ali Port is a testament to the leadership of our corporate management team, the thousands of dedicated employees and our commitment to a long tradition of safety, innovation and customer-centric service.

DP World's relentless search for holistic

solutions has nurtured a corporate culture that places human enterprise, technology, planning, simulation, safety and security at the core of its terminal operations.

Conclusion

No one has a crystal ball to accurately say what markets will do in today's globalised economy. However, we do know that growth will continue and we must be prepared for it. At DP World we ensure this by honing the leadership skills of our management and empowering the staff to find new and efficient ways of operating. We work hand in hand with shipping lines and importers and exporters to ensure that we meet their needs today while preparing for tomorrow. Innovation, diversity and long-term relationships with customers and business partners have always been important and will continue to be.