

Strategic bedfellows

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Strategic planning and setting operational tactics go hand-in-hand, as Barry Parker explains

In the business of port operations, there is always room for a better matching of big picture strategy with operational tactics: "not every port will be a super-hub", points out Rick Ferrin, vice president at consultant TranSystems, in its Jacksonville office.

While the world's top ports, mainly in the fast growing Asian marketplace, are blessed with burgeoning hinterlands or enormous throughputs fueled by the unprecedented boom that began around 2002, a look at the approaches among the top ports is instructive for smaller ports hoping to gain a growth trajectory.

Though Drewry's Neil Davidson, from the Port practice at Drewry Shipping, tells *Port Strategy*: "The lesson for smaller ports is that they don't have to be exactly like the big ports." As an example, he suggests: "Maybe a port would use reachstackers rather than rubber-tyred gantry cranes."

And location matters. The battle for box trades primacy has been centre-stage, with the most attention focused on Shanghai's meteoric rise. Estimated movement data for 2011 showed Shanghai dominating box movements with 31.7m teu, compared with Singapore's 29.9m teu. Shanghai's widening margin is due, in part, to Shanghai's successes in capturing intra-Asian trans-shipment business.

But Drewry's Mr Davidson warns: "One size does not fit all. What's worked in one port may not have the same effect elsewhere. It depends really on a balance." In efforts to make Shanghai into a major international shipping center, Shanghai International Port Group has driven the port's growth, intertwining government - typically the catalyst in large infrastructure projects - with private strategic investors.

Shanghai has also benefited greatly from China's planning that began in the late 1970s; its growth spurt during the 1990s positioned it well for the regional manufacturing and exporting boom in the next decade. Strategic investors who have come in include leading operators Cosco Pacific, HPH, and APM Terminals. But in the face of a wider Panama Canal - and blueprints for larger and deeper vessels - planners are now looking outward to the port's perimeter.

Most symbolic of SIPG's outward-looking planning efforts is Yangshan Deepwater Port, built 50 km from the "old" port, on a group of islands beyond Shanghai's historical port limits, which opened in late 2005. With water depths of 15 metres, Yangshan can handle deep drafted vessels up to roughly 13,000 teu. Its location also supports efforts to capture transshipment business, becoming a "hub" and processing port for coastwise Chinese cargoes. Included are those shuttled between the new port (with bonded areas in its logistics park) and the older terminals at Waigaoqiao.

Yangshan is reachable from the mainland by a newly constructed bridge. The Phase 2 expansion includes private companies APM Terminals and HPH. Drewry's Mr Davidson explains that where labour availability and work rules are not constraints "it's possible to be highly advanced, but not completely automated. The ports can have the latest kit, for example OCR and other sensor capabilities, and anti-sway or driver assist gear, but not go the fully unmanned route."

Ultimately, transshipment specialist Singapore is space-constrained though its location supports both hub/spoke and mainline handoffs. Port owner PSA (controlled by the state's Temasek Holding) took a joint venture route in the mid 2000s (a decade after Shanghai) bringing in strategic partners in berths at the Pasir Panjang terminal - with a draft of up to 16 metres and gantry reaches spanning 22 boxes. In 2008, PSA joint-ventured with regional specialist PIL on a container facility at its Keppel Terminal, highlighting the strategy of identifying the "sweet spots" of customers, such as intra-Asian boxes..

In contrast with Shanghai, which is now building up its maritime infrastructure, including the flood of service providers who've opened offices in recent years, Singapore took very forward-thinking steps in the 1990s to build up world class information connectivity around the port. Consultant John Corley at CH2M Hill, tells *Port Strategy* that planners in Singapore have begun crafting a long term plan, with some thinking about a possible relocation of the port as they implement the next generation of facilities.

Drewry's Mr Davidson, comments: "You don't really see many small transshipment ports...it's a high intensity operation, and the speed of handling really needs to be high. Quick turnarounds require a high-tech approach." Technology is very much a part of Singapore's streamlined future: last year, PSA Corp launched a Research and Development fund to look into automated systems and optimisation programs for its container ports, in Singapore and around the world.

In the US, labour interests have resisted automation. An exception has been the "semi-automated" APM Terminal at Portsmouth, Virginia, built on a greenfield site. Yard-work is handled by a fleet of 30 automated rail mounted gantry cranes, while conventional manned vehicles are used to transfer containers on/off trucks - all benefiting from a yard system linked in to gate operations.

The facility recently gained direct on dock access to the CSX railroad - now far along in the process of streamlining box movements to the Midwestern US.

Instead of moving the port way out of town, here the landside infrastructure has come to the port. TranSystems' Rick Ferrin, whose specialty is the Southeastern US, tells *Port Strategy*: "The common denominator for ports seeking to exploit their locations is enhanced rail connectivity. Ports need to make their intermodal connections as efficient as possible - a port with good rail connections, available 24 x 7, can be extremely viable even if it's not the biggest player in its region."

He explains that in Miami the real estate allocated to cargo space is constrained by a burgeoning cruise business, so that a road tunnel and a rail link (to a yard about 15 miles away) are part of the bigger strategy of getting containers into/out of the facility as expeditiously as possible.

The situation on the West Coast is more problematic. Moffat & Nichol consultant Larry Nye told an American Association of Port Authorities seminar late last year that: "On the West Coast... new terminals built with today's dollars cannot compete unless they are automated." Mr Nye, based in Southern California, outlined a complex dynamic increasingly driven by environmental considerations, where electrically powered yard equipment and vessel slow steaming (with fewer calls, but more boxes per call) figure into the calculations.

His presentation quantified the increased productivity that is needed, described as roughly 30%, requiring an increase to about 45-50 gross vessel moves per hour, or six to eight gross moves per quay crane per hour, adding that: "New terminals are being designed to turn vessels with 12,000 moves per call within four days with headroom."

Drewry's Mr Davidson explains that terminals which see major box imports need to be designed with dwell times in mind, saying: "The consignee may not want the box right away." Experts have suggested that shorter dwell times of three days will be the new paradigm, instead of the more typical five to six days.

Planners in North America grapple with the right ways to bring such efficiencies to mid-sized ports. TranSystems' Mr Ferrin raises the possibility, against the backdrop of scarce US government funding for dredging, "there will still be a lot of panamaxes", and that ports should seek to be "panamax capable".

His colleague Jim Lindner offers sage advice for ports of all sizes, all over world, telling *Port Strategy* that planners at ports need to "find their niche, stay within their means, and be realistic". The axis of specialisation could be along the lines of geography or commodity; for smaller ports, this will often mean not trying to compete head to head with bigger ports. Mr Ferrin sums up neatly: "Make the most of what you've got" - advice that could apply to New Orleans, where Mr Ferrin is working on an intermodal terminal with a rail interface, to ports half a world away that cannot go toe-to-toe with Shanghai, Shenzhen and Singapore.