Tideworks on a growth trajectory

Tideworks' business is growing, driven by the diversity and IT needs of its expanding customer base

Seattle-based Tideworks Technology chose the theme of "Navigating the Technology Landscape" for its customer conference in Seattle this month, and it used the event to outline how it plans to lead its customers through the rapidly evolving IT landscape.

That task is becoming more challenging, as Tideworks' customers become both more diverse, as well as being more technologically challenging. With over 60 marine terminals and 40-plus rail terminals now using its software and/or services, Tideworks serves a particularly diverse range of facilities, from small remote operations running with forklifts and ships' gear to a 2M TEU transhipment hub with automated stacking cranes (ASCs).

A good number of these include businesses that have moved from other TOS products and/or in-house systems to Tideworks, with some (including Crowley Maritime) opting for Tideworks to deliver the TOS and much of the supporting infrastructure via an SaaS model to a network of small and medium sized terminals (see page 30).

Automation also features increasingly on the list of customer requirements that Tideworks must support. Tideworks' first site to use ASCs in the yard is Manzanillo International Terminal (MIT) in Panama, operated by Tideworks' sister company SSA Marine.

SSA's new Tuxpan Port Terminal in Veracruz is also now open, with a full ASC yard, also managed using Tideworks' software.

Railing onwards

It is in the rail sector, however, where Tideworks has done the most work on process automation and terminal optimisation. From its initial deployment at North West Ohio, CSX Intermodal has now rolled out Tideworks' IPro rail TOS at half of its network of over 40 sites, and it has worked with Tideworks

to scale process automation for some of its smaller facilities, as well as its main hub developments.

CSX is now planning its first deployment of automated cranes for its new facility in North Carolina, and there are a lot of lessons for marine terminals in how the railroad has planned its journey, which will be covered in next month's edition of *WorldCargo News*.

Though much of it flies under the radar, the requirements from its existing customer base, together with new opportunities that the company is pursuing, have required Tideworks to expand quite rapidly.

As well as growing its Seattle headquarters, Tideworks has expanded its development team in Ukraine.

Speaking exclusively with *WorldCargo News*, president Michael Schwank said Tideworks is in the process of recruiting more core development staff in Seattle, but it is also looking at moving up another gear, with a satellite office on the US east coast, to get closer to its growing customer base in that region.

Moving to Vanguard

Since it was announced in early 2011, Tideworks has developed its next generation TOS, Mainsail Vanguard, to the point where it is now used at all new customer deployments, including the new automated terminal in Tuxpan. Tideworks is certainly encouraging its existing customer base to move to Vanguard, but its approach is much more carrot than stick.

Mindful of the fact that, first and foremost, terminals do not want operational disruption, Mainsail Vanguard was developed with a migration plan that lets

terminals run beta versions of Vanguard modules, configured for their operation, with view-only access, before moving to a hybrid arrangement, where some modules of the operation are fully migrated to Vanguard, while others run in Mainsail Classic.

Tideworks now has seven full Vanguard installations, and four terminals making the migration through beta and hybrid versions. Schwank said that, in the coming years, Tideworks will be working with some of its larger customers on gap analysis, to identify functionality gaps and differences between the core functionality in Vanguard and their version of the Mainsail Classic. That analysis will be coloured by the wider IT system at each terminal.

In the area of process automation and data input technologies, in particular, there will be changes and/or additions to the systems that some terminals want to replace and/or carry over as they move to Vanguard. Some customers are conducting pilot projects with new systems at the moment, which need to be working successfully before they consider migrating to a new TOS environment.

Integration challenge

Integration was one of the key themes of the customer conference, and Tideworks listed over 20 process automation, positioning systems and other applications in use today, that terminals want to integrate with the TOS.

From the TOS supplier's perspective, integration requires balancing competing priorities. On the one hand, terminals push for "open standards" to make integration easier, while, at the same time, process automation systems are complex

Tideworks president Michael Schwank

and change operational processes, which has wider TOS implications.

Tideworks is responding on two key levels. On the integration side, it has developed a new layer to facilitate integration with third-party technologies. This will deliver a standard set of APIs (application processing interfaces) to support integration to third-party products, making it simpler and more cost-effective for other suppliers to 'connect' with the TOS.

Connecting, however, is really just the start, and Tideworks is encouraging its customers to think more holistically about process automation products, in particular. Rather than customers conducting their own analysis and selecting a number of third-party applications that need to be integrated with the TOS individually, Schwank believes a better approach is to talk to the TOS supplier at the outset about the "mission" behind implementing a process automation system.

Through its customer base in over 60 marine terminals and more than 40 rail sites, Tideworks has built up experience working with different vendors around the world for gate automation hardware, GPS and positioning systems and other applications. That experience has taught the company a lot, not just about system integration, but about what operational and business process changes are needed

to get value out of third-party technologies. It makes sense for terminals to leverage that experience, stressed Schwank, both from an integration perspective and in terms of providing ongoing support and maintenance.

On the horizon

The customer conference surveyed some of the headline technologies in the software industry today, including Big Data and Internet of Things, but Tideworks speakers made it clear that the company sees its role as an enabler, rather than a direct provider, in some of these areas.

Looking out at the Big Data landscape, in particular, Tideworks sees its role as one of facilitating terminals to use the wide array of Business Intelligence tools on the market. It has recently completed a development (called Tideworks Insight) that is essentially a data platform for delivering real-time and historical data at a level and at a speed where it can be used for live operational planning.

In another, perhaps less obvious, area, Tideworks is putting resources into investigating changes in Human Computer Interaction. This goes well beyond refining existing graphical user interfaces, and explores new technologies that allow people to work with software in easier, more intuitive ways.

Tom Van Buskirk, Tideworks vice president, product engineering, outlined how combining the Internet of Things with Augmented Reality opens up the possibility of replacing the need for manual entry of data into complex forms.

Conference delegates got a glimpse of how vessel and yard planning could be performed in the future, with planners moving virtual containers on large 3D models using augmented reality systems instead of sitting at a screen.

In terms of how people work with the software, said Van Buskirk, Augmented Reality has "the potential to become the single greatest driver of UI [user interface] change in business applications that we've seen since the invention of the colour monitor". □