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BUILDING HIGH-VALUE IT DEPARTMENTS IN TERMINAL OPERATIONS

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As marine terminal technology advances and becomes more sophisticated, the demands on terminal IT departments have grown exponentially. IT infrastructure has always been mission-critical to marine terminals, but as terminals increasingly automate and optimize their IT systems, the IT departments find now more than ever that they are at the centre of the marine terminal's success.

In a recent Tech Validate survey "Leveraging Managed Services for Terminal Operations", 94% of N4 customers say the health of their N4 infrastructure is very important or mission-critical to the overall health of their terminal. However, nearly a third of these same respondents also stated that their current monitoring and diagnostics are not meeting their needs. There is clearly a disparity between the mission criticality of the systems these groups support and the tools and services they use to support them. Why does this disparity exist?

**THE TECH VALIDATE SURVEY
CAN BE FOUND [HERE](#)**

MOVING IT DEPARTMENTS FROM BASIC PLUMBING TO STRATEGIC WORK

From the same Tech Validate survey, 90% of respondents agreed that their IT teams should focus on providing strategic value to the terminal, rather than just supporting the basics. But 60% also agreed that the availability of their existing IT staff often holds them back on executing on their strategic IT plan. As in other industries, the focus on tactical day-to-day work competes with time required to build truly world-class solutions to common problems. While building such a solution is a strategic goal for many marine terminal IT teams, like other strategic goals, it is often thwarted due to time and resource constraints.

Following the example of other industries, IT departments within the container terminal industry have the opportunity to move towards the use of outside parties and managed services to deliver basic services like monitoring, diagnostics, database administration and other tactical IT tasks in order to focus their IT staff on strategic work. There are many areas that can easily be transferred to external managed services providers, freeing up IT departments to focus on strategic initiatives.

UPGRADE TESTING

Testing Navis software prior to a software upgrade is a significant undertaking which is critically important but should not require significant internal IT resources to manage. In the Tech Validate survey, 49% of Navis customers say they spend over 100 hours testing prior to each upgrade, and 38% of customers say they

“AVAILABILITY OF RESOURCES OFTEN HOLDS BACK MARINE TERMINAL IT DEPARTMENTS FROM EXECUTING ON THEIR STRATEGIC PLAN.”



spend over 200 hours. Yet 62% of customers have not automated any of their manual tests and only 5% have automated all of their tests. This manual testing represents a huge investment in time and resources and often the testing requires the best and the brightest, both from IT and from Operations.

Automation of manual tests remains a goal that never seems to get done, because local IT teams are busy just delivering the basics. By automating tests, marine terminals could save hundreds of hours of time each upgrade cycle. Some customers have worked with Navis 360 Managed Services Upgrade Testing Service, which not only automates manual tests, but shortens the cycle of fixing any issues found during that testing. The sooner a potential problem can be found and fixed, the less it costs to resolve.

MONITORING AND DIAGNOSTICS

A good monitoring and diagnostics programme can provide a similar benefit, by identifying IT Infrastructure issues before they become mission critical problems. Navis recently conducted a study of the root cause all Priority 1 (P1) cases reported in the past 12 months across the Navis customer base. P1 cases are defined as mission-critical problems in which the terminal systems are down and not operating, and the terminal is critically affected. The root cause analysis found that more than 50% of all P1 cases reported had their root cause ultimately not in Navis software, but instead in the surrounding IT Infrastructure -- the network, servers, databases, operating systems, and other critical IT systems that form the backbone of the terminal IT ecosystem.

Mission-critical issues have a huge impact on marine terminals, costing them both time and money. Monitoring and Diagnostic tools and services target the IT systems that are most likely to have issues and provide ways of proactively finding poten-

tial problems before they turn into mission critical issues. Identifying and preventing just one or two mission critical issues a year often provides a return on any managed services investment terminals would make for system monitoring and diagnostics.

The Navis Monitoring and Diagnostics Managed Services offering has been built based on real-world feedback from our more advanced N4 customers, and our diagnostics use a library across multiple customers to locate the most frequent symptoms and remedies across a wide variety of marine terminal situations. By outsourcing Monitoring and Diagnostics to Navis, marine terminals not only remove the time and focus it takes to build their own one-off monitoring and diagnostics solution, but also benefit from all of the lessons learned from the rest of the Navis customer base. As issues are found and resolved for one marine terminal, the resolution and related diagnosis is saved to Navis's master library so it can be used at all other terminals using the diagnostics services.

EDI MAINTENANCE

Navis Managed Services for Electronic Data Interchange (EDI) Maintenance provides similar leverage. EDI Maintenance is designed for customers with higher volumes of EDI where EDI can take 20 to 40 hours of dedicated time a week from a seasoned IT resource. Navis's service allows IT departments to offload the repetitive work of EDI error monitoring and resolution.

Similarly, with the Navis Extensions Maintenance Managed Services, customers can offload the time and effort required to maintain complex libraries of groovy extensions, including groovy written by the terminal itself or third parties. Beyond that Extensions Maintenance optimizes those libraries and assures that they are compatible with future release prior to upgrade.

SUMMARY

As marine terminals continue to get more and more sophisticated in their use of

technologies, their IT departments are becoming increasingly sophisticated in their approach to keeping up with increasing technical demand. No longer are IT departments in the business of simple maintenance and troubleshooting. To provide value to their terminals, they must constantly be on the lookout for new strategic ways of improving terminal performance. Using Navis Managed Services is one way they can help focus on these new goals.

ABOUT THE AUTHOR

Andy has been with Navis for over 20 years, working as a Project Manager, Director of Support, Director of Training, Director of Professional Services, and most recently as VP of Technical Services. With decades of experience on TOS implementation, training and support, Andy brings a wealth of real-world knowledge about the industry, about the challenges of training, and about the Navis TOS.

ABOUT THE ORGANISATION

Navis provides operational technologies that unlock greater performance and efficiency for our customers, the world's leading terminal operators. The Navis N4 terminal operating system (TOS) represents more than 27 years of experience and innovation that enables terminals to optimize their operations and move cargo smarter, faster and more efficiently.

As an industry leading technology, more than 270 container terminals worldwide, including some of the world's most advanced automated facilities, have partnered with Navis to improve performance, reduce costs and minimise risk.