N4
It’s time for more.
“It has allowed the business to work more effectively and efficiently by providing an added advantage into vision of not only what one terminal is doing, but to the business as a whole.”

Senior IT Manager
Transnet Port Terminals
Powering the world’s most successful port facilities.

Navis N4 is a sophisticated and modern technology platform that optimizes efficiency and helps to power the intelligent movement of goods through the supply chain. Bigger ships and tighter supply chains are increasing the pressure on terminals to operate at peak productivity and efficiency. Shipping lines depend on a terminal’s promised productivity; they need their vessels turned as quickly as possible to maintain schedules, maximize slow steaming to reduce costs and to have vessel assets deployed as efficiently as possible.

As one of the global supply chain’s most important service sectors, a productive marine container terminal is key to on-time, efficient delivery of cargo and goods to the end user. To meet these needs, container terminals worldwide are successfully relying on Navis N4 to drive smarter decisions, faster moves and peak performance. N4 supports a terminal’s IT infrastructure, productivity goals and technology leadership.

Quality at Navis is of the utmost importance. Each release of N4 is extensively tested and certified for up to 10 million TEU. In addition, the power of N4 is backed by more than 25 years of experience working with the leading terminal operators. Navis SPARCS was the industry’s first computerized system and was installed at more than 250 sites globally. Based on that legacy, N4 is the trusted terminal operating system (TOS) for more than 105 of the most advanced marine terminal operators in the world.

N4 Features & Functionality

- N4 is a modern platform that scales as operations change. It’s the only TOS that supports multi-terminal operational visibility and control.
- Avoid expensive customization and tailor N4 to meet specific needs with system options that involve advanced configuration, customization and integration.
- Advanced EDI Options provide an innovative approach to EDI management that significantly reduces the amount of on-going maintenance with a highly configurable and accessible EDI format.
- Mobility Execution Options offer real-time monitoring and management of all equipment.
- Facility Planning and Control offers real-time features in the XPS client application providing world renowned operational efficiency.
- A complete suite of optimization modules provide help to automate decisions and improve efficiency and productivity.
- Advanced Rail Options offer advanced monitoring and management of rail operations.
- Advanced Yard Options enable optimized use of yard space and CHE’s and optimized Equipment Control.
- Automated Terminal Option supports unmanned technology, such as automated equipment.

*For more details, see the corresponding N4 Features and Functionality Datasheet.*
“Gate and yard activities have been streamlined. Delivery rate of containers has increased. Reporting is simplified. Navis N4 has leveraged operations to perform better.”

IT Manager
Riyadh Dry Port Facility, BAAS International Group
Streamline and Optimize Terminal Operations

A Modern Platform
Navis N4 scales with your business to optimize utilization of IT infrastructure and eliminate unnecessary, upfront capital expenditures. The flexible N4 architecture allows terminals to create clusters of database and application servers, allowing your TOS to grow to meet demand.

Optimize Operations
The open architecture of Navis N4 allows you to readily connect to your existing systems and add new applications as your business grows. Whether looking at various levels of gate automation or managing highly complex business to business integration requirements, N4 has the APIs and tools for the task at hand.

Optimize Container Handling Equipment Utilization
*PrimeRoute* pools equipment across cranes, while combining yard and equipment constraints with operating business rules to optimize work assignments in real-time for efficient use of equipment, shorter travel distances, fewer unladen moves, and lower fuel, labor and maintenance costs.

Optimize Yard Utilization
*Expert Decking* helps space-constrained terminals increase utilization of yard space in order to handle growth without adding new land. Without Expert Decking, yard assignments are made manually and are subject to the limits of ad-hoc human judgment, leading to under utilized yard space, inefficient decking and higher operating costs. With Expert Decking, each container is assigned to its optimal position based on the business rules and constraints of the terminal, providing a much higher utilization of yard space, up to 90% reduction in re-handles, and enhanced equipment utilization.

Optimize Vessel Planning
*AutoStow* option combines stowage factors (e.g., type, weight) with yard constraints and operating strategy to select the best container to load in real time, resulting in improved vessel stow plans, up to 70% reduction in planning time, higher yard productivity and increased responsiveness to operational challenges.

Automate Crane Scheduling and Monitoring
*Quay Commander* provides real-time monitoring of crane schedules, vessel container moves, vessel activities, and vessel labor assignments, enabling dynamic adjustments to predicted load, discharge times and crane sequences. With Quay Commander, vessel planners can achieve more accurate predictions of container move and completion times, increased labor productivity, and more tightly integrated equipment control.
Avoid Expensive Customization

N4 employs extensive data-driven business logic to create a highly configurable solution, thereby avoiding many of the common customizations required by less flexible TOS alternatives. In addition, N4 software development kits (SDKs) make it possible to extend and integrate your TOS solution with other internal and external systems. If customization is truly required, N4 allows you to embed source code specific to your operation within your deployed version of N4. All of these options are available using your choice of internal IT resources, third party contractors, or Navis Professional Services, thus giving you the control and flexibility you require.

Reduce Administration and Support Costs

The multi-facility capability of N4 provides a single, homogeneous system across global operations, allowing you to standardize and centralize hardware and software infrastructure, IT administration, and common business functions across multiple operations. In addition, the N4 Community Access Portal (CAP) enables customer self-service system access the reduces customer support costs.

Get more with N4

N4 improves productivity and efficiency of terminal operations. More than 90 sites are experiencing improvements in operational visibility, efficiency of equipment utilization in the yard, efficiency with gate processes, event monitoring and inventory management.

- **21%** of Navis N4 terminals have seen greater than a 75% increase in productivity at the gate and 44% have increased productivity by at least 50%.

- **61%** of Navis N4 terminals have increased their productivity by at least 50% and 24% have shown greater than 75% improvement.

- **61%** of Navis N4 terminals have increased their productivity by at least 25% and 17% have shown greater than 75% improvement.

- **21%** of IT staff using Navis N4 have increased their productivity greater than 75%.
“N4 is a very robust solution providing all functionalities related to operational efficiencies as well as great flexibility to integrate with all systems, and aligns our region to share all initiatives.”

Senior IT Executive
Terminals Rio de la Plata
Navis® part of Cargotec Corporation, is the global technology standard for managing the movement of cargo through terminals, standing the test of time. We combine industry best practices with innovative technology and world-class services to enable our customers to maximize performance and reduce risk. Whether tracking cargo through a port, automating equipment operations, or managing multiple terminals through an integrated, centralized solution, Navis provides a holistic approach to operational optimization, providing our customers with improved visibility, velocity and measurable business results.