Keeping data at the CENTER

IT Partner is a Netherlands-based company with over 20 years' experience in building customised software for ports and other applications. As well as providing consultancy services, it has its own suite of container terminal applications, called CENTER SUITE.

The core of CENTER SUITE is the CENTER ERP, a windows or cloud-based administrative solution for container and multi-cargo terminals, as well as ports, agents and forwarders. CENTER ERP integrates with five other CENTER applications, including CENTER Masterplan for yard and vessel planning, CENTER Business Intelligence and the CENTER Client Portal customer service portal, plus IT Partner's Port Community System (PCS).

IT Partner has successfully integrated CENTER applications and its PCS with TOS software from other vendors, but it also offers the CENTER ERP TOS in competition with standard off-the-shelf TOS applications such as Navis N4. One terminal operator in Rotterdam is using the brand new CENTER ERP TOS as the core terminal management system for two container facilities at the port. Other customers include the VSH terminal in Surinam.

More flexibility

IT Partner says one of the key points of difference for its TOS is its flexibility to manage organisation-specific business rules and operational procedures without the need to develop or add anything new to the core TOS. The company built this flexibility into its CENTER ERP TOS after working extensively with terminals and other companies involved in logistics.

"All our key developers and product owners have a background in logistics. We know which different situations can arise in the daily operations of our customers," said Dennis Brommert, co-owner and managing partner of IT Partner.

To manage the variation across terminals, IT Partner uses parameters (yes/no to use functionality X) and variables instead of making programming changes to its core application code, to handle exceptions and variations. Brommert explained: "CENTER ERP has five layers in which the customer can decide how we have to configure the system so it supports and improves the way they work.

"The first layer is, of course, the choice of the modules. Each module has specific functionality and serves a purpose. Or it is not needed. That is up to the customer to decide. We do not want them to pay for something they are not going to use. That's why we have chosen separate modules that can be combined, if desired.

"The second layer consists of the system parameters that we configure for each module and functionality during the implementation. Because we know how a terminal works and because we are used to exceptions to the rule, this is a very extended system of options. We guide our customers through this based upon best practices and our experience and expertise.

"The third layer is completely defined by the customer because it contains all the rules they use when working for their customers. And they can use customer-specific rules for any customer. That is completely up to them, and the authorities, of course.

"Our Internal Audit System (IAS) is the fourth layer and it contains all the rules for validation, blockages, rules of customs and rules of the business workflow. We use variables – if A occurs then you must do B – to customise it to the customer requirements and the customs procedures of the specific country."

Handling variations

Brommert continued: "The fifth layer is a script mechanism to deal with all kinds of variations of job mechanisms. For example, to get an empty container from point A to B, a certain route on the terminal has to be followed. If that container has been indicated as damaged, you might want to have it brought to repair/services for inspection first, before you hand that container to a truck driver. That container will have to follow a different route on the terminal. No manual input is needed because, by using the script, it will automatically be part of the planned work. And if you change the layout of your terminal or add more space to it, we just change the script and you're good to go."

In the case where a customer-specific requirement cannot be met with one of these layers, IT Partner uses a low code platform and an agile approach for development, enabling it to deliver new features relatively quickly.

The end result is that IT Partner can manage different workflows and changes to specific business rules at terminals more easily than other TOS applica-
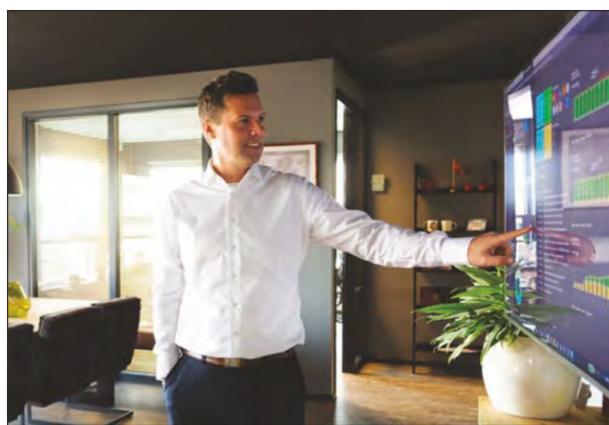
Dennis Brommert, co-owner and managing partner of IT Partner

tions, the company said. As an example, changing the layout of a terminal from a straddle carrier to a reach stacker system can be managed with scripts. "This is just ticking another box. It is as easy as that," said Brommert.

IT Partner uses a data model that allows a customer to share data between different applications and terminals, which is an advantage for its customers that operate more than one facility. This means that "when a new vessel, customer, line service, etc is configured at terminal A, all data is automatically/immediately also available at terminal B, C, D, and so on", said Brommert. "Even when the connection is lost for a moment, data is synchronised whenever the link is up and running again."

When data are being shared, authorisation and being able to track who has made which change and when becomes even more important. CENTER ERP keeps track of all the data entry, changes and deletions (including manual database manipulation) compressed to changes only. It uses a regular SQL server-oriented database for logging.

"The logging data can be written to a separate database, keeping the production environment fast and efficient. We also have a very extensive data monitoring mechanism that will allow certain actions to take place whenever data are changed, without the need to do this in programming code. This mechanism can, for example, also be used to assist customs in performing their controlling tasks," said Brommert.

TOS complexity?

While the CENTER ERP TOS is very flexible, flexibility can be a problem for terminals if it makes the TOS overly complex and, therefore, difficult to install, maintain and update. IT Partner believes, however, that it has struck a good balance between offering standardised and configurable features and allowing flexibility without the need for "hundreds of parameters that are difficult to maintain", said Brommert.

One of the key points of the five layers of control is that they run over the top of the core application. Brommert said this means that IT Partner is not creating a unique version of its software

for every customer when it "customises" CENTER ERP TOS. "There is only one version of the system, but within the system, we can provide customisations by using scripts or configuration. This gives the customer the experience of a unique version for them," he explained. "Also, as soon as new features and functionality are added to the system, we can make them available for all our customers. In this way, we keep improving and enriching the CENTER SUITE."

CENTER ERP TOS can be configured remotely and installed at a small/medium terminal in a relatively short timeframe. The upgrade process is also managed using a remote deployment platform. The customer can decide when a certain version is to be deployed to a specific environment (testing, user acceptance, production). "Because we use an agile way for development, we deliver new functionality and features every two weeks. An update can be done during a coffee or meal break, because it is a small step to perfection, time and time again," added Brommert.

IT Partner's approach to software reflects its belief that the core of a TOS should actually be quite narrow in scope. "IT Partner believes the core of a TOS is a system that will manage all information and processes at a container terminal that suits your specific needs. People decide how to operate the terminal, and the TOS organises and executes the operations, helping them to work smarter and more efficiently. Our core also includes an extensive billing module. This module enables our customers to invoice every task that has been executed on the terminal," concluded Brommert. ❑