Antwerp Euroterminal – smoother data integration and better services thanks to edbic

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How Europe's largest multi-purpose terminal is preparing for the future

The variety of cargo and services offered, timing- and planning-related constraints and many external parameters make operations at Antwerp Euroterminal (AET) complex. This complexity directly translates into the IT infrastructure of Europe's largest multi-purpose terminal which is extremely sophisticated. With customers expecting ever greater levels of service and flexibility, Tim Pieters, responsible for day-to-day IT operations at AET, strives to automate as many business processes as possible, thus avoiding needless work and freeing up resources or the real work at hand.

Data matching increases security

The implementation of a new terminal operating system (TOS) environment provided a unique opportunity to address some of these challenges. One of the primary goals of the project was the introduction of a secure and reliable data gateway in the centre of the IT landscape.

> „With **edbic**, we were suddenly able to offer services before our customers even asked for them. By now, the proactive develop-ment of new services has become a matter of course. Something like this wouldn't have been possible in the past."
>
> Tim Pieters,
> IT System Engineer of Antwerp Euroterminal NV

Such a platform would not only facilitate data exchange between the terminal's infrastructure and individual applications, but could also take communication with customers and partners to the next level. Additionally, such a solution would open up a whole new range of possibilities by adding the ability to correlate data from any actor connected to the platform. "At the time, it was very time-consuming – if not impossible in some cases –

to match operational data and events with information from administrative systems", Pieters recalls.

Equally important was reducing the need for specific development skills, as was mitigating the risk of know-ledge silos and achieving a higher level data security. The reason: until then Pieters had programmed all inte-grations by himself. "It was clear that an organizational structure that is too heavily reliant on a single person to accomplish certain results is not future-proof at all."

HPC Hamburg Port Consulting, who were onboarded in the project as a consultancy partner, came to the rescue. They organised a meeting between Pieters and

Company profile Antwerp Euroterminals

Antwerp Euroterminal NV **(AET)** is the largest multi-purpose terminal in Europe. It is home to the vessels of the **Grimaldi Group**. Its inland location and multimodal connectivity, complemented with state-of-the-art CFS, VPC and empty equipment facilities, make it a key logistic hub specializing in handling general cargo, containers, project cargo, heavy lifts, cars and other RoRo units. Antwerp Euroterminal NV is also a partner of Antwerp Container Repair (ACR) and Antwerp Lashing & Securing (ALS).

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compacer. It quickly became apparent that compacer's portfolio and expertise were exactly what the port operator needed. Pieters: "I closely studied the functions and features of **edbic**. At that point, it already became clear that we would likely be able to tackle all of our integration requirements with compacer's solutions."
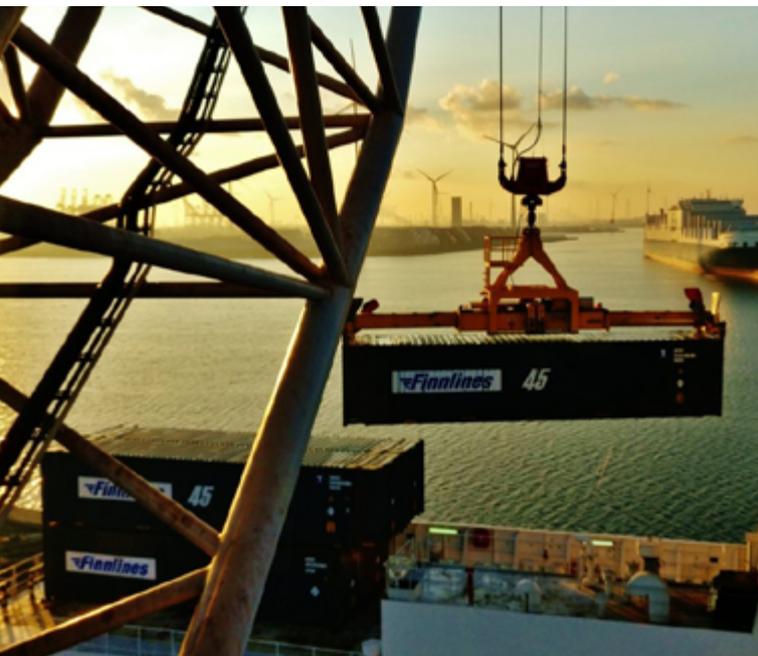
Customer requirements are a top priority
The IT specialist then defined a catalogue of specific requirements and also took the opportunity to attend a two-day workshop with compacer's integration experts. Afterwards, he was confirmed in his initial assessment that both the **edbic** business integration cluster and the edpem process event monitoring tool would be capable of solving the current and future challenges of Antwerp Euroterminal.

Aside from the security aspects and future-proofing measures, Pieters never lost focus of the wishes of his customers. "I was quite aware of our customers' expectations and I had them high on my priority list", explains Pieters. "In the past, we only took action when a customer requested a specific service. We then got to work, did some development and offered that." Despite having already come a long way, consolidating reusable code into libraries and having established the foundations of a messaging infrastructure, Pieters still wanted to move away from this reactive development scheme and instead offer integration services proactively. In other words, he wanted to reverse the previous process and offer those services to their customers as a standard by default.

This was not only well-received by the customers, but also at the executive level. "There's simply no one who doesn't like **edbic**", enthuses Pieters, who says the tool has become one of the key components in AET's IT landscape. Many port employees have no idea what the new "data hub" actually does because it operates more or less in the background. It transparently merges data from individual systems into the respective target system, among other things. Pieters' IT colleagues, however, have more of a grasp on the advantages: they benefit from the fact that the weight of integration and the responsibilities that come with it are now on several shoulders. But basically, they work fully automatically and independently anyway. "However, you have to look ahead and make smart decisions in this whole process", Pieters warns. He is aware that the more systems you integrate, the more you need to be careful not to drown in a flood of data.

Thumbs up from the CTO
A proper balance between too much and too little integration is hard to find. This is because automating processes or merging data kindles new desires. AET CTO Mark Engels, who has supported Pieters in his endeavours at all times, knows the dilemma well. Once new data were available for detailed analysis, he too wanted to be able to make all sorts of complex evaluations to make forward-looking decisions. But as a first step, he contents himself with their recently gained capability to actively provide customers with new services, such as in cargo bundling or labelling.

Pieters is more than satisfied with the cooperation with compacer. "I'm particularly impressed with the creativity and the commitment of the entire team to finding solutions", Pieters says. "As a certified port terminal, we are legally obliged to report certain transactions to customs. After a technology upgrade, we had a hard time coming up with a way to do this due to some rather exotic security requirements from their side. However, the compacer team stepped in and came up with a cool, creative and reusable solution." Having such a reliable partner at his side is giving him a feeling of comfort and peace at mind, he adds with a wink.

> *"Since implementing edbic, we have seen improvements that we didn't anticipate before – for example in service billing, in the business analysis of data or in the creation of new services for our customers."*
>
> Tim Pieters,
> IT System Engineer of Antwerp Euroterminal NV

Positive side effects and new plans
This good feeling is further substantiated by the added value that **edbic** creates in other areas. They wired up data output from weighing sensors to their TOS applications, hooked up perimeter security systems to their

CCTV backbone to leverage next-level intrusion detection and correlated ANPR events to access control information and TOS transactions to provide additional visibility, enable traffic control and increment security – a key concern in port terminals. All under the control of **edbic**.

> ## "*edbic* has grown to become one of the core components of AET's IT infrastructure."
>
> Tim Pieters,
> IT System Engineer of Antwerp Euroterminal NV

"We even see positive effects in HR when it comes to timekeeping and payrolling.", Pieters observes. A con-

siderable part of the terminal's HR effort goes into shift planning, managing timesheets and wage payments for our highly-specialized docker pool. Thanks to **edbic**, the port operator managed to take the hassle out of this complex and time-consuming task. Integrating the HR's system with access control and TOS has led to a significant reduction in the department's workload and has sped up the billing process considerably.

With results like these, it's no surprise Antwerp Euroterminal has further plans with compacer's tools. Aside from the ever-growing set of integrations in **edbic**, they are also planning to put the process event monitoring tool edpem to work in the near future. Pieters says that even his CTO is looking forward to this, as he expects the expansion of this integration project to provide new analysis options and thus additional process optimisations.

AET is looking forward to the future with confidence.

The challenge

Antwerp Euroterminal NV (AET) is Europe's largest multi-purpose terminal and must ensure smooth handling operations for a diversity of cargo, as well as offering a broad range of value-added services. To keep up with the international competition nowadays, AET tries to continuously optimise and digitalise their complex processes while keeping a strong focus on automation.

The solution

Fluid data exchange between the TOS (terminal operation system) and the terminal's various departmental IT applications is key. This is why AET decided to introduce edbic as a "data hub": a central integration platform allowing data of any system to be integrated and exchanged.

The result

Since Antwerp Euroterminal NV introduced compacer's data and process integration platform edbic, data is orchestrated across the individual systems and transferred to the respective target system. Business processes now have an increased degree of automation and integration, but the mere fact that documents and data are exchanged digitally and thus more quickly is a huge advantage. In addition, more detailed analyses can now be carried out, leading to conclusions that enable further optimisations and better business decisions. Logistics data can be better processed, matched and planned, resulting in process transparency and optimal day-to-day operations at the Belgian port.

The outlook

Another solution provided by compacer, the process event monitoring system edpem, is already operational at the terminal's premises. edbic's footprint will be expanded in the nearby future to make data usable for business analysis purposes. But that's not all: in addition to traditional business integration, edbic can also be used for IoT goals. The first steps towards connecting sensors and capturing their data have already been taken, but there is no doubt this will be expanded in a forward-looking and successive manner.

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