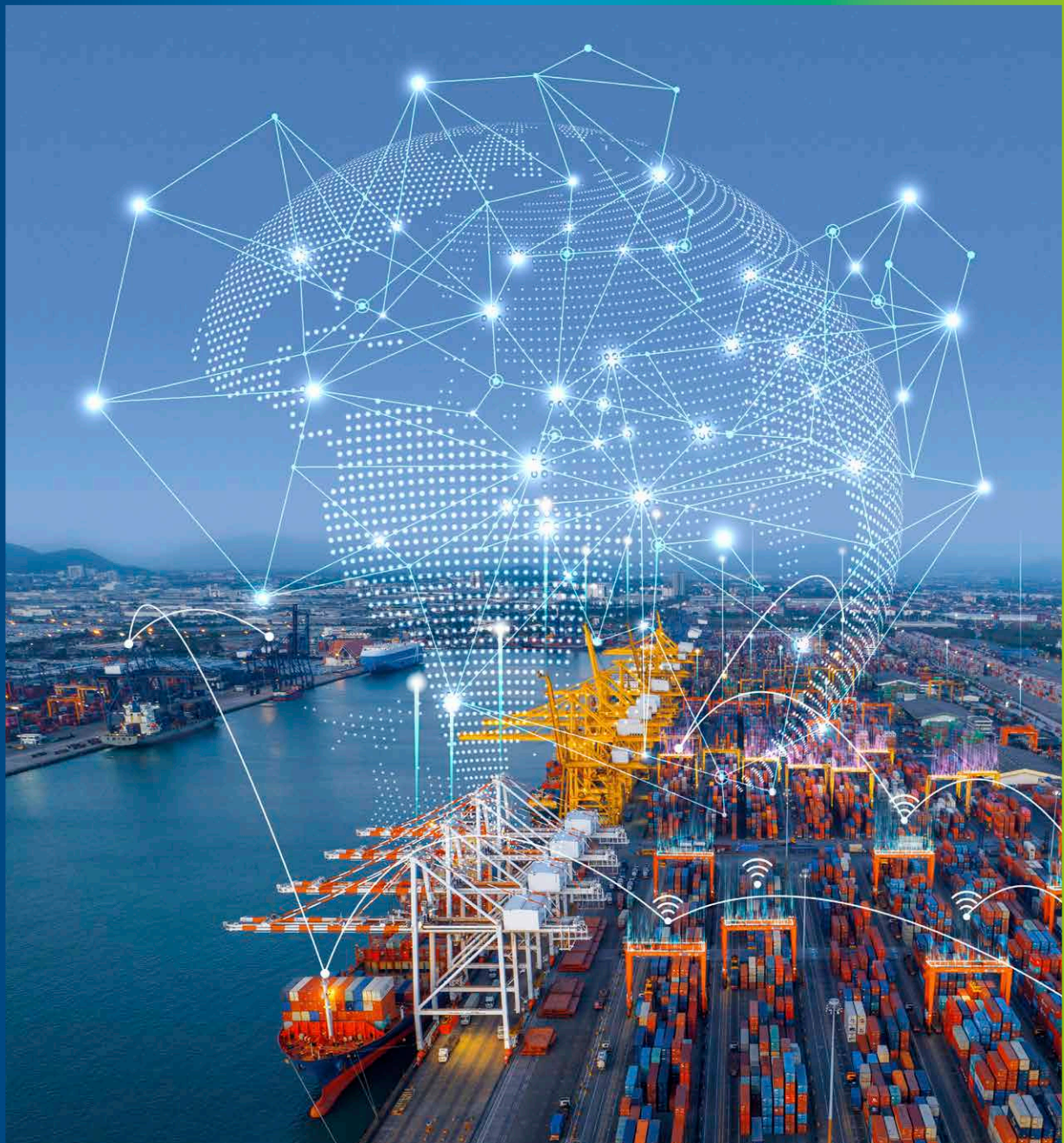


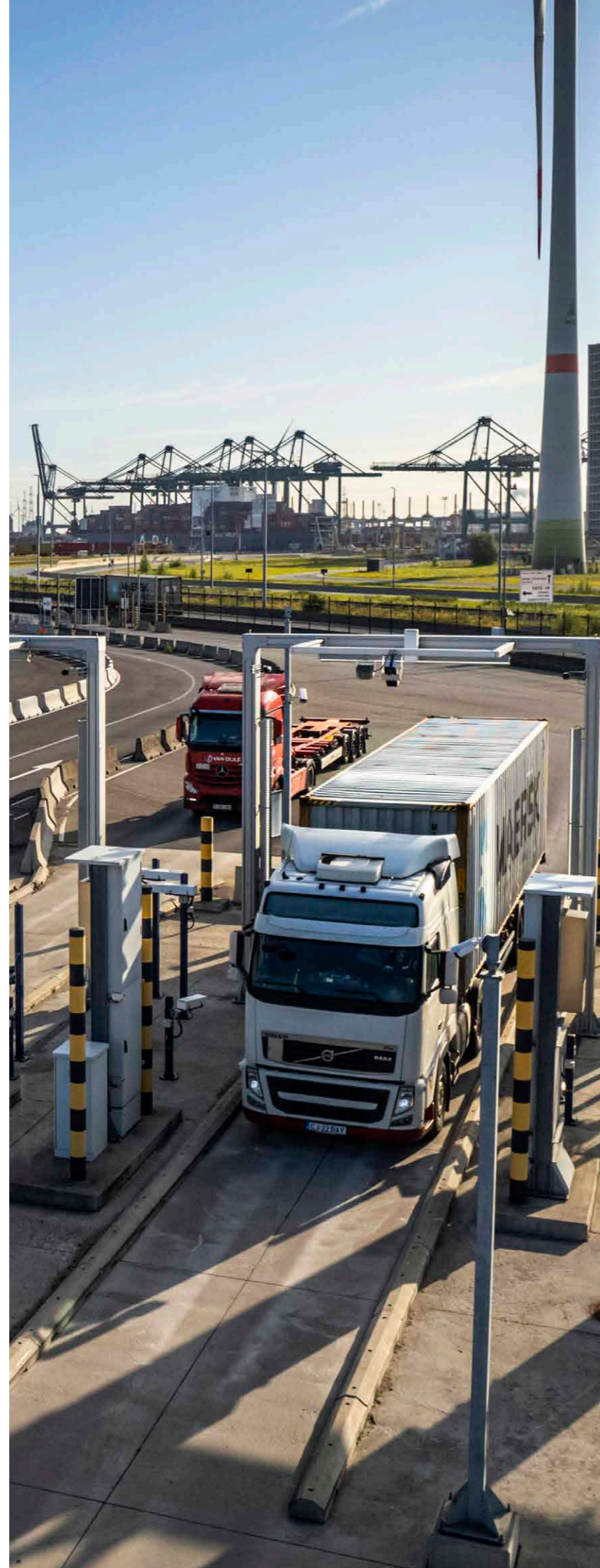
CAMCO Times

June 2023



Ready for
the age of AI?





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Jan Bossens, CEO

Welcome to a new world

2023 will go down in history as the year ChatGPT brought artificial intelligence (AI) to the masses. Even if you wanted, nobody could ignore the vast media focus on this new application. So do we need to be afraid of AI? Or can we embrace it and make the best of it? A few years ago, the most hyped word in the economy was *disruptive*. But today, that term is hardly mentioned even though probably nothing will ever be as disruptive as AI is today to our daily professional and private lives.

Some five years ago, Camco started with a dedicated AI team to rewrite all traditional OCR engines that use traditional image processing techniques. Still today, this team is very active but works on much other image-related processing as, for instance, Automatic Damage inspection.

But the amazing thing we saw last year within Camco is the appearance of AI technology within other development groups. For instance, the software for steering the motor of BoxCatcher uses AI to position the camera at the correct height. Likewise, our radar development team uses AI to interpret complex radar signals that look like fast-moving clouds of points. It's impressive how AI can recognize objects within these meaningless clouds of points.

Another team, our RTLS team, works on truck and straddle carrier positioning and alignment systems under an STS crane using UWB (RF pulses) technology. This product uses sensor fusion, meaning that location data from different sensors are combined (UWB and GNSS). Also, here AI is used to optimize the location algorithms delivering centimeters accuracy.

To give a last example, our RT Digital Twin team is in the full development of a Camco Digital Twin solution. This 3D container terminal yard model will be fed with real-time data of all our systems active on a terminal. The 3D model becomes a digital life copy of the real-life terminal. This team will implement later AI algorithms on all the data we have in our RT Digital Twin model, allowing an analysis of truck and other terminal equipment operations on a terminal leading to more efficient container moves.


Those examples are only the start; we can conclude that AI no longer belongs to a dedicated team; AI has become part of every development within Camco. As a result, this is the first time we can speak about disrupting technology in a decade.

Welcome to the World of Camco Technologies


Camco Technologies is the leading technology partner in innovative terminal automation solutions and services. Since 1999, our systems have empowered marine and intermodal terminal operators to increase logistics performance and safety while reducing operating costs.

As a pioneer in OCR and RTLS, image processing, and software/AI development, Camco's mission is to develop solutions that improve terminals' efficiency, cost-effectiveness, and safety. We do this by automating the registration process of containers, trucks, wagons, and trailers. As a result, data becomes available more quickly and serves more purposes, so the process management of terminals increases efficiency.


Already 200+ terminal operators worldwide have successfully optimized their gate, rail, crane, and yard processes using Camco's solution in the container terminal:

 Highly accurate **OCR/OFR camera technology** for automatic identification and registration of containers, trailers, trucks, and trains


- BoxCatcher STS Crane OCR
- Train Camera Portal
- RMG Cam

 Advanced **Real-Time Location Solutions** for containers and equipment

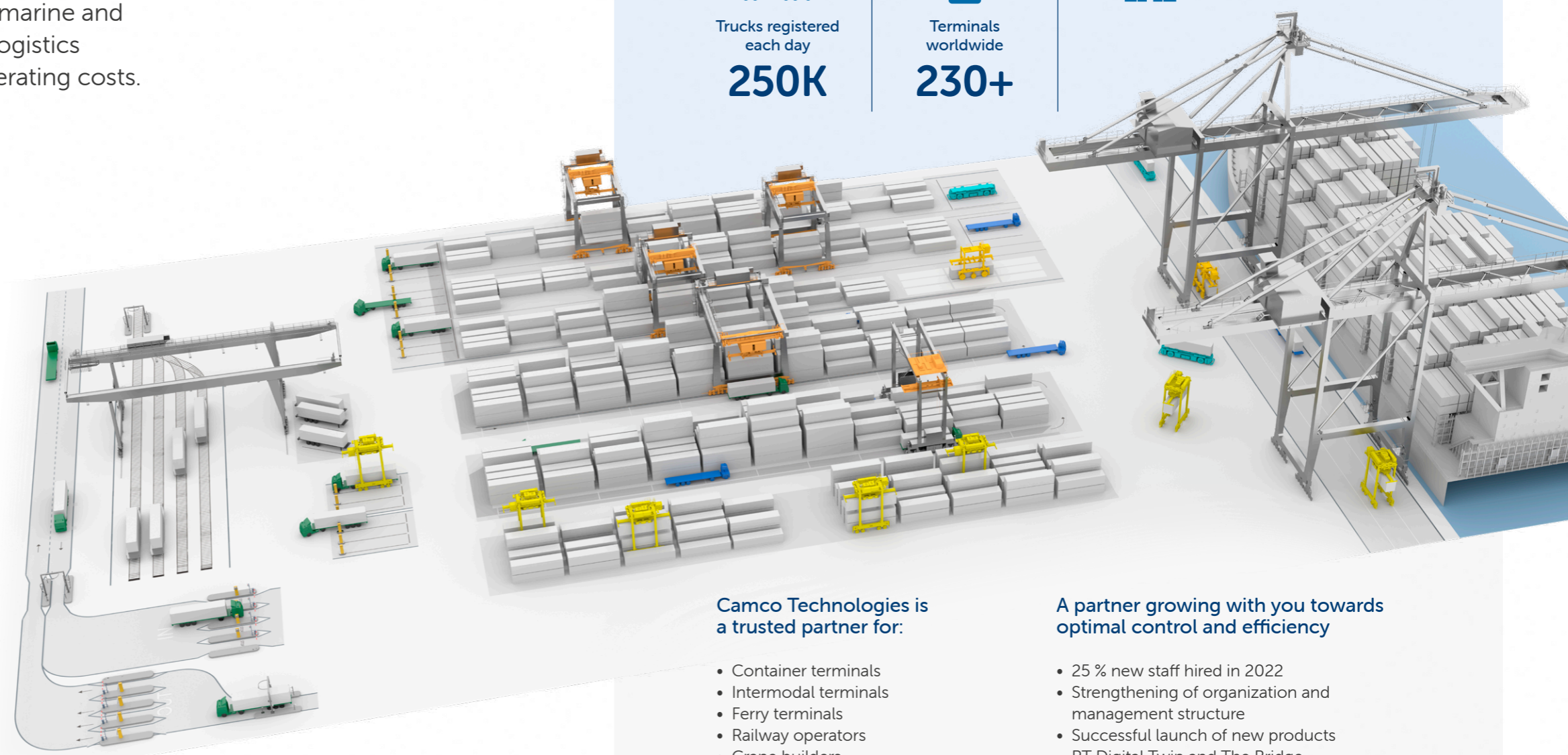
- Straddle carrier track & trace
- ITV track & trace
- Anti-collision
- Straddle alignment

 Robust and intuitive **Kiosk registration technology** for registration of trucks, drivers, and loads at the entrance of terminals

- Gate Kiosk
- LSTP Kiosk

 Innovative and ground-breaking **Software applications** for the optimization of terminal operations processes

- Vehicle Booking System
- GOS
- The Bridge operator interface



Terminal efficiency based on accurate real-time data and artificial intelligence

Pioneering since

1999



Trucks registered each day

250K

Gate and grid kiosks

2000+



Terminals worldwide

230+

Regional offices for global footprint

5



Highly skilled and specialist staff

250+



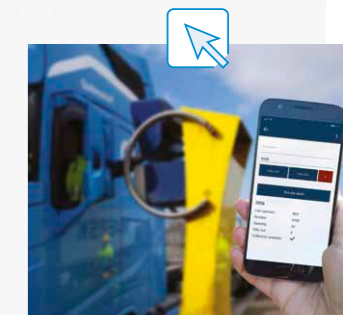
Camco Technologies is a trusted partner for:

- Container terminals
- Intermodal terminals
- Ferry terminals
- Railway operators
- Crane builders
- Logistic service providers

A partner growing with you towards optimal control and efficiency

- 25 % new staff hired in 2022
- Strengthening of organization and management structure
- Successful launch of new products RT Digital Twin and The Bridge
- Reinforcement and growth of our Asian branch

Camco's systems accurately register containers entering or exiting the terminal by any means of transport – truck, train or vessel – enabling Terminal Operating Systems to make the right planning decisions, reducing unproductive moves and idle time to optimize operations and improve customer service level.



Innovating terminal operations: meet Camco's ground-breaking RT Digital Twin technology

As the leading provider of innovative container terminal solutions, Camco Technologies takes the next step in state-of-the-art operations management. Enter the new RT Digital Twin technology: a real-time virtual representation of the entire container terminal environment updated from real-time data and offering unparalleled comprehension and awareness.

Terminal operations are complex and highly dynamic, with multiple processes, equipment, and stakeholders involved. As complexity keeps growing, so is the need for better tools for operators to keep managing and improving day-to-day operations. This need is also felt in the container shipping world, where the quest for better cost-efficiency never settles. Today, more effective and more efficient terminal operations still are attainable. Thanks to the reality of automatic data delivery by existing Camco systems, a new technology called RT Digital Twin is set to improve performance in the container industry further.

Monitoring and understanding performance in real-time

By providing a real-time, comprehensive three-dimensional view of the entire terminal ecosystem, RT Digital Twin technology empowers terminal operators to have a unique overview of all movement of containers and equipment involved in the process. This allows them to make data-driven decisions and optimize their operations on the spot. Since its development, the engineers at Camco kept unprecedented efficiency and performance gains for terminal operators in mind. It should come as no surprise that that goal has been met: systems like OCR/OFR, RTLS, TOS, and IOT harvest a multitude of information that, com-

bined into one single monitoring environment like Camco's The Bridge, provides a complete overview of the actual situation on the ground. With that information, terminal operators can move more and move faster.

Creating real-world scenarios, virtually

Next to creating a complete virtual replica of the entire terminal ecosystem, RT Digital Twin technology adds new layers of comprehension. By integrating and combining all available data from all monitoring equipment in the ecosystem, the RT Digital Twin system creates a metalevel of information that provides unrivaled insights into how the terminal operation process performs. In hindsight, a particular situation can

be re-visualized in 3D via playback mode to analyze previously taken actions. This 3D playback mode enables the operators to understand and learn from the past and make better decisions in the future in changing conditions such as gate and yard congestion or equipment breakdown. But that's not all: one of the significant advances is that the technology enables engineers and operators to have a detailed view of an ecosystem that might be physically far away. Operating in an RT Digital Twin environment discards the need for the engineer or operator to be near the container terminal. Or even in the same country.

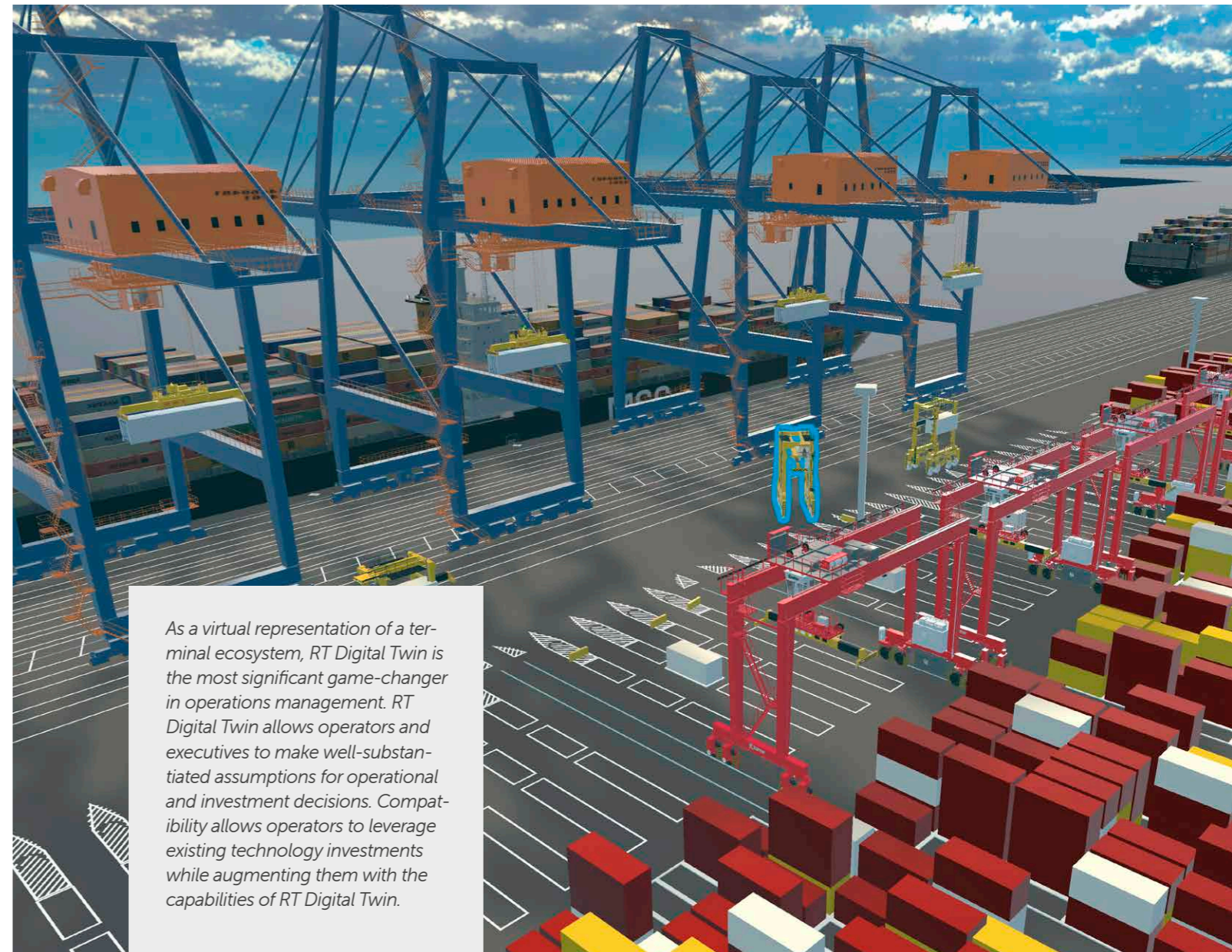
The future of learning with RT Digital Twin

Camco's software engineers have been doing ground-breaking work with the RT Digital Twin technology. As a result, Camco's RT Digital Twin offers a cutting-edge 3D representation with real-time, end-to-end visibility into all aspects of terminal operations. Today, the technology already integrates seamlessly with existing terminal management systems. Soon, this new technology is planned to evolve towards predictive analytics capabilities as an ability using artificial intelligence. As the terminal industry continues to grow, Camco's RT Digital Twin is poised to be at the forefront of this transformation, unlocking new levels of performance and competitiveness for terminal operators.

"RT Digital Twin technology is set to transform how terminals are managed, offering unparalleled visibility, control, and optimization capabilities. With its real-time and predictive analytics, the technology promises to enhance terminal operations, optimize processes and drive efficiencies."

**Jan Bossens, CEO
Camco Technologies**

The greatest innovation of RT Digital Twin technology lies in its real-time visualization of all data available. Even though the technology is relatively new RT Digital Twin has already overwhelmingly proven its effectiveness and maturity.



As a virtual representation of a terminal ecosystem, RT Digital Twin is the most significant game-changer in operations management. RT Digital Twin allows operators and executives to make well-substantiated assumptions for operational and investment decisions. Compatibility allows operators to leverage existing technology investments while augmenting them with the capabilities of RT Digital Twin.

In the spotlights

The Bridge, a web-based unified operator workstation for all your automation technologies

The idea of automation is to have smooth integrated processes with minimal operator interaction. That's where Camco's new unified user interface platform The Bridge comes in...

Historically, the user interfaces for GOS, rail OCR (ROS), RTLS and Crane OCRs (COS) differ. To further optimize the user experience and efficiency, Camco Technologies designed The Bridge, a unified web-based user interface platform linking all automation systems in one place. This web-based platform enables operators to manage and monitor their terminal under one platform, even on one computer screen. The Bridge can even operate and monitor multiple terminals at once. In addition, the Bridge is web-based, which simplifies cyber security patching and upgrades. They don't even have to be on premise or even in the country.

Introducing a new, integrated solution

Besides being a multiterminal system, The Bridge is also a comprehensive platform. For example, The Bridge operates as an operator exception handling tool. But The Bridge is also an analytics dashboard, single access location for pictures and data of containers and – in the near future – an interface to other third-party solutions. In short, The Bridge is an all-in-one user interface that allows operators to monitor, adjust and validate operations.

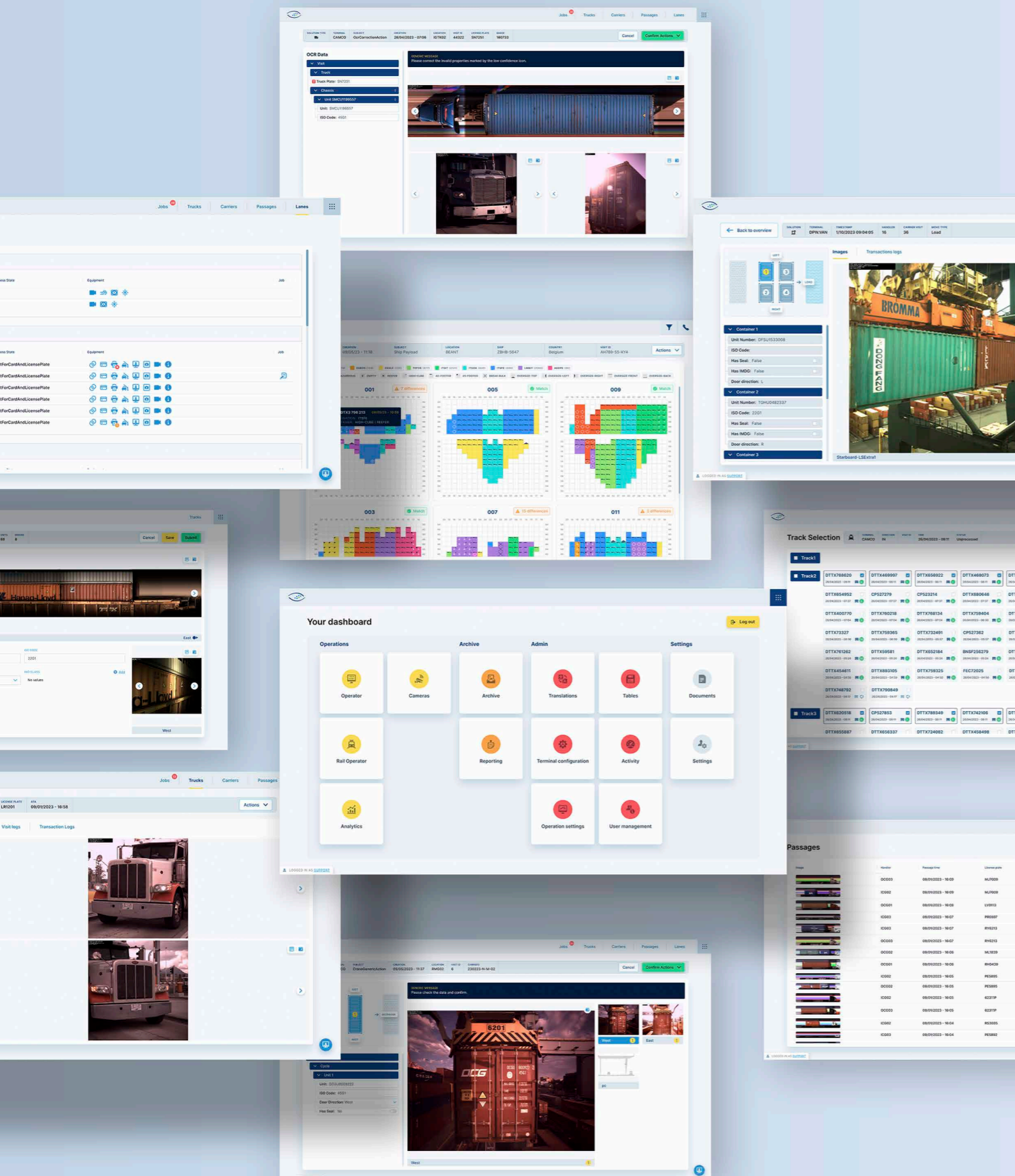
A game changer in the industry

Reactions from first users are very positive. Until now, Camco offered stand-alone systems such as truck gates, camera systems, rail or RTLS solutions. But today, The Bridge connects all those islands into a single user interface, which makes it possible to gain insights into situations on multiple terminals simultaneously, and from any device. The Bridge will be a real game changer, as its comprehensive solutions can be used by all levels of responsibility.

The web-based platform The Bridge enables an operator to perform exception handling tasks under one platform, even on one computer screen.

Main features

- Single web application to operate and monitor any number of terminals and Camco installations
- Fine-grained role-based control so the terminal can decide which operators can handle which exceptions (only damage jobs, only for a specific terminal, ...) or tasks (manual barrier opening, ...)
- Single location to find pictures and data of a specific container on any of your Camco camera systems
- Get live metrics and daily reports
- Security and access control built-in. Supports Camco Access Control System, Windows Active Directory, or Azure Active Directory
- Complete visibility of gate, crane, yard and rail operations and operator actions



Gamechanger in cybersecurity for critical sectors

Last November, The European Union adopted a new and improved version of the Network and Information Systems Directive. Dubbed NIS2, this new directive aims to enhance cybersecurity in several critical sectors.



NIST Cybersecurity Framework in the USA

What is NIS2 to the EU is the NIST Cybersecurity Framework for the USA. As voluntary guidance, the NIST Cybersecurity Framework is based on existing standards, guidelines, and practices to help organizations manage and reduce cybersecurity risk better.

Five essential functions organize the Framework – Identify, Protect, Detect, Respond, and Recover. These five terms provide a comprehensive view of the lifecycle for managing cybersecurity over time and offer a good starting point for any organization.

“Recent studies indicate the most common form of cybercrime that target companies are malware attacks closely followed by ransomware attacks. Other common incidents included distributed denial-of-service attacks (DDoS) and crypto-jacking attacks.”

Steffie Joosen – Cyber Security Engineer – Camco Technologies

As cyberattacks are among the fastest-growing forms of crime worldwide, businesses and governments must invest in creating safe digital environments. Primarily as some of society’s most critical sectors – transport, energy, health, and finance – increasingly rely on digital technologies with interconnectedness worldwide. With a potentially growing economic and societal impact of cybersecurity incidents, NIS2 aims to provide a secure framework. Entered as a first proposal in December 2020 and approved by the EU in November 2022, the NIS2 will be implanted across all member states by 2024.

What kind of cybersecurity risks face terminal operators?

For a couple of years, multiple shipping container companies, large and small, were affected directly or indirectly by cyberattacks. “Even though sometimes they are not the target, during the attack, their operations and associated logistics can get disrupted,” says Jef De Geeter, CTO of Camco Technologies. “This causes significant shipping and logistics delays and can result in losses of millions, especially as infected systems mostly need a complete audit and overhaul to disinfect them. Consequently, today, cybersecurity has moved from the IT desk to the boardroom. So it should come as no surprise that terminal operators and automation suppliers have made substantial investments and keep doing so to counter the danger of cyberattack.”

How does Camco Technologies help its clients?

Systems such as Camco’s terminal gate kiosks can be desirable targets for malicious attacks. Steffie Joosen, Cyber Security Engineer at Camco Technologies: “To minimize the risk for our clients, Camco works with its partners to keep all our systems secure. This includes clear communication of the motives and agreeing with the clients on the security measures and specifics. Camco established a dedicated in-house cybersecurity team in the second half of 2022 to facilitate this close collaboration, improve our internal security, and strengthen our products and services. Our track towards ISO27001 certification also helps document our

cyber security management practices—a great plus for our clients who seek reassurance.”

The first line of defense is resilience by being prepared

Even though everyone in our industry takes all necessary measures to eliminate as many threats as possible, zero risk is illusionary. “But we can build a strong and well-protected house,” adds Steffie Joosen. “Firstly, our best option is to separate IT from OT by building firewalls (DMZ) between those two. Secondly, we must limit the potential damage by mitigating and isolating any potential threat. We achieve that by adding layers of protection around any target core. Thirdly, a special interest goes to the embedded operating systems (OS) supplied by industry household names like Linux and MS Windows. After a certain time, the provider stops supplying updates and security patches. Together with our clients, we set up a plan at each terminal for those operating systems. This way, the OS remains supported and secured. Of course, building a defense against cyberattacks is never finished. Cyber-enabled crime continues to increase in scope and sophistication, emanating from around the world. Nevertheless, working in close collaboration with our client’s IT teams, we are confident we are on the right path and know how to walk it.”

“Even though all Camco technology is developed internally with minimal dependency on third-party solutions, some proprietary solutions come as industry standards.”

Jef De Geeter – CTO - Camco Technologies

New All-In-One kiosk introduces smartphone-enabled solutions

The Camco registration kiosk has become a cornerstone in the gate process automation of marine and inland terminal operators. More than 2,000 gate and transfer kiosks have been installed in over 40 countries. Today, a third line of compact and economical kiosks called All-In-One is ready to meet the needs of the most discerning customers.

Camco registration kiosks are to be found in all four corners globally. So far, terminal operators could choose between the highly modular GEN3 kiosk and the recently renewed LSTP (land Side Transfer Point) or GK3 line. However, given the market demand for a more compact, economical, and smartphone-enabled solution, Camco designed a new line of All-In-One kiosks. The All-In-One kiosk boasts all the technical innovations and features of the existing Camco kiosk lines. With one main new feature: this third line of kiosks introduces a credit-sized ID card reader taking pictures of both sides in one move. This innovation allows operators to use driver's licenses or national ID cards as access control cards to their terminals.

Features, advantages, and benefits

The new solid and robust All-In-One kiosk has been designed keeping harsh working environments in mind. As a pre-build modular system, the kiosk can be fitted with various components and technologies to meet the exact needs of each terminal operation. When ordering, you can have it configured as you want, including up to 2 optional printers, finger scan, barcode reader, and RFID or ID cards. Also, the All-In-One line is fully cyber-secured as it uses the latest Windows 10 IOT OS. The high-quality intercom lets you talk with the truck drivers in a boisterous environment.

Designed for optimum readiness

Like all Camco kiosks, easy maintenance is one of the design's strong points. All kiosk system components are continuously and remotely monitored to guarantee the highest operational readiness. In case of a problem, the kiosk's handy Maintenance Mode allows a quick scan and diagnosis of the problem, keeping downtime of the kiosk to an absolute minimum. In addition, the rear lid of the kiosk opens as easily as a car trunk, and no screwdriver is needed to replace any of the components in case of failure. When the AIO breaks down, you can replace the complete front panel by releasing some lockers, reducing downtime to a few minutes.

Main features

Alu Panel design – the kiosk is based on a ruggedized aluminum panel with integrated devices. In case the system is broken, the complete panel can be exchanged easily in a few minutes' time.

Standard devices – the All-In-One features a 15-inch touchscreen with 6 mm glass, a high-quality VoIP intercom, and a 3MP high-sensitive autofocus camera.

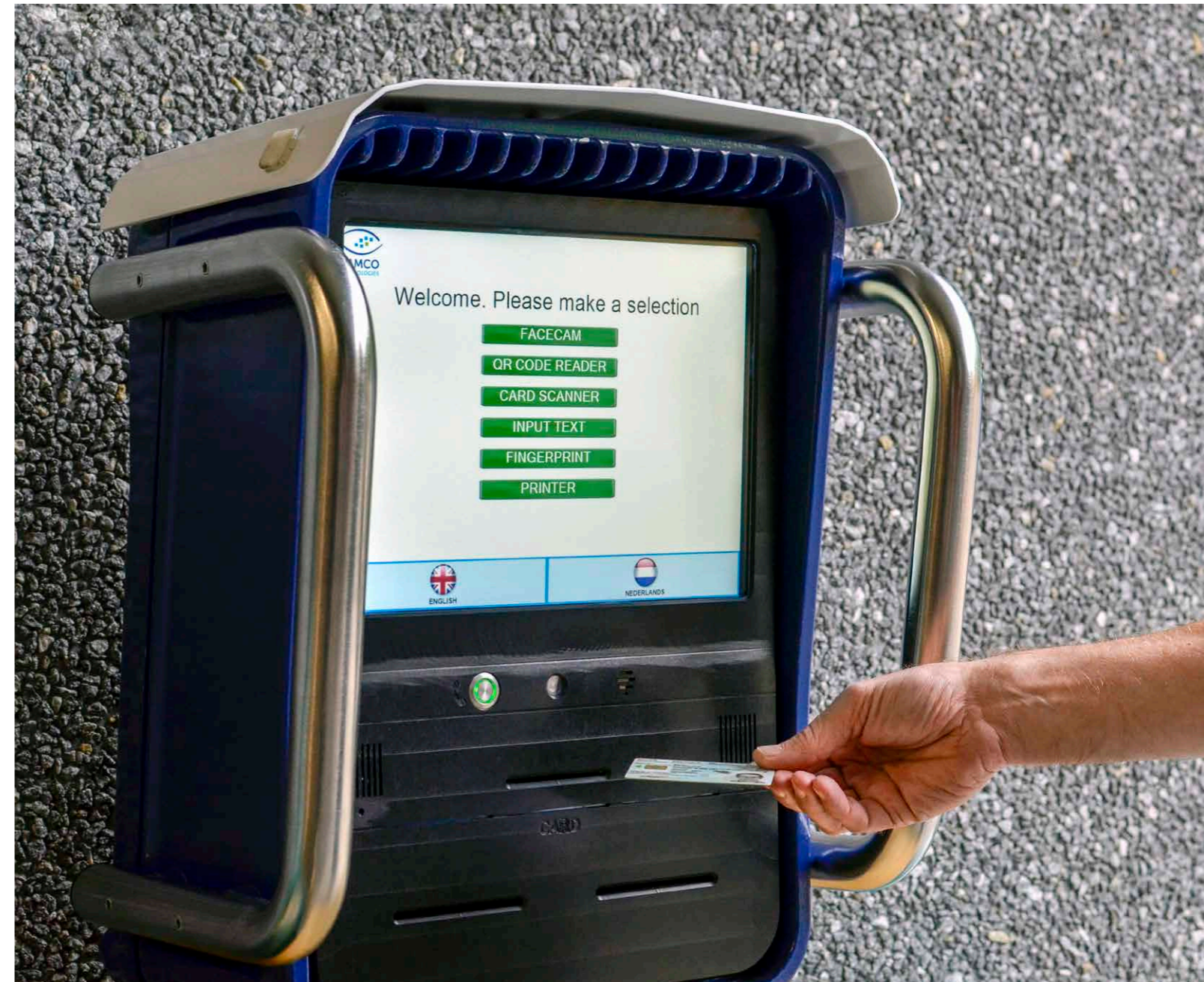
Optional devices – a barcode reader, Mifare card reader, fingerprint reader, and optimal ID card or driver's license card reader can be chosen at order time.

Processing – the All-in-One is based on an 11th generation Intel I3 processor with 8GB DDR4 Ram, removable M.2 SSD, and pre-configured Windows 10 IOT embedded.

Communication – the All-In-One has a 4-port integrated POE Ethernet switch allowing to connect external IP cameras, RFID readers, and more. The switch supports Fibre or Ethernet modules. Optionally it also supports Bluetooth.

Physical – the All-in-One is a ruggedized kiosk. The front and housing are solid aluminum, and the touchscreen features exceptionally thick glass (6 mm). The back of the kiosk opens as a car trunk lid giving easy access for paper roll exchange or maintenance. The two sides have protection bars to protect the kiosk from hitting mirrors. The kiosk can be installed on a concrete base (American version) or in a frame (rest of the world).

The all-In-One kiosk with smartphone-enabled solutions is made for terminal operators wanting a compact yet versatile kiosk with increased flexibility in gate deployment.



From the upgrade of an existing system to an entirely new front yard gate automation

Vancouver is well known for its diversity and high quality of living, but it's also Canada's largest gateway for Trans-Pacific trade. In Vancouver, DP World operates an 83-acre, full-service container terminal with direct connections to road and rail that relies on automation solutions from Camco Technologies.



DP World Vancouver has two container berths, seven quay cranes, five RMGs, and nineteen RTGs to serve its customers trading across the Pacific Ocean. "And a typical type of operations where Camco Technologies can make a difference by closely collaborating over a longer period," says Anton Bernaerd, Business Development Director at Camco. "We have a long-standing relationship as a preferred partner with DP World Vancouver, dating back to 2016.

Work in phases due to the size of the terminal expansion project

Due to the magnitude of the planned terminal expansion project – including changing the front yard with a substantial amount of civil works – DP World Vancouver chose to upgrade their gate systems in phases. First in line was the upgrading of the existing rail portal. Anton Bernaerd: "As we had a successful professional relationship, DP World Vancouver presented its requirements to us. With proven commercially competitive added value, DP World Vancouver awarded the contract to Camco. Even though we were limited to working with their existing infrastructure, we integrated our camera systems with far better operational results than they were used to. Camco worked with DP World Vancouver to redesign the truck and rail gate systems to meet the newly expanded terminal's requirements. As a result, Camco became DP World Vancouver's preferred supplier for container terminal automation systems."

A project spanning nearly five years

In the project's second phase, Camco automated the In and Out truck gate operations in 2022 with truck OCR, gate lanes, and the GOS. "And in the third phase in late 2022, after the new truck gate opened, we upgraded the existing rail OCR portal," adds the project engineer at Camco Frederik Agerskov. "Finally, we finished the automation of the rail operations by equipping five brand new RMGs with OCR systems. The fixed RMG cameras register each container moving between the terminal trucks and the rail cars when passing through the RMG legs. In addition, the camera takes a picture of the ends of the container when it passes through the two crane legs. These images provide all the info needed for optimum operations: container number, iso code, and even door direction."

"Even though we were limited to working with their existing infrastructure, we managed to integrate our camera systems with far better operational results than they were used to."

Anton Bernaerd – Business Development Director at Camco

Special attention to container door orientation

When unloading a train, the story becomes a little different. Frederik Agerskov: "To prevent terminal tractors from receiving containers with their doors in the wrong direction, a series of purpose-specific cameras fixed to the RMG register the door direction of each container from the rail wagon. If a container door is in the opposite direction of the terminal tractor's requirement, the RMG's spreader turns 180° to position it correctly before landing on the terminal tractor."

The Bridge is the cherry on the cake

The long lead time of the whole project meant Camco needed to be very flexible in planning and implementing new features of its technology. Anton Bernaerd: "At a certain point, we started putting new software into operation. For illustration, I showed them our newest operator dashboard solution, The Bridge. At DP World Vancouver, they were quite impressed and requested The Bridge as their window to operations. This was Camco's first implementation in a high-volume terminal and the first in North America. What is more important is that everyone at DP World Vancouver is satisfied with our products and services. As a result, they have selected us to do more projects in both the Vancouver area and beyond."

Staying close to our customers, on all four corners of the world

With over 280 projects on six continents, we pride ourselves in staying close to our customers. We also keep close to our values and our own strengths. That's why at Camco Technologies we continue to innovate and invest. Because we automate, you operate.

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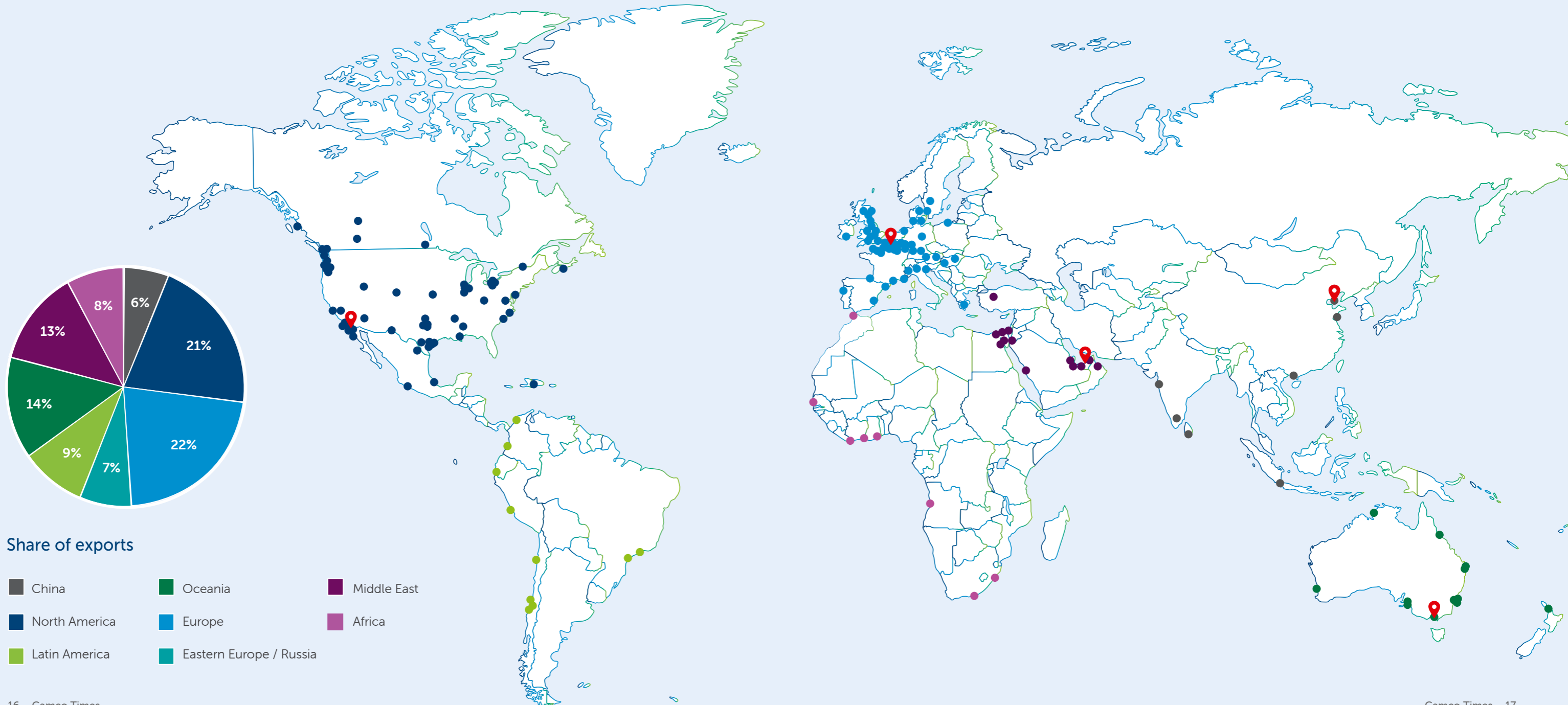
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Why team up with Camco Technologies to automate gating processes in the U.K.?

Genesee & Wyoming Inc. (G&W) operates U.K.'s largest rail-centric intermodal logistics franchise and the leading heavy haul freight rail provider. Today, they rely on Camco Technologies for improving and automating their gating processes. We at Camco Times were happy to find out why and how.

CT: Hey Craig, what needs did G&W identify before implementing Camco's technology?

Craig Compton: "The immediate needs were efficiency and automation of the gating processes, leading to a more optimized terminal operation. We aimed to deliver a structured data outcome for all gate transactions with a much faster processing time. We also identified an opportunity to use a centralized National Operating Centre to manage gating processes remotely. That proved to be intensely valuable at any time terminals have other priorities or face staff shortages."

CT: What were the primary motivations for partnering up with Camco Technologies for the project?

Craig Compton: "Camco's technology was seen to be the leading edge. With technology mainly in the equipment, our terminals would not have to be server intensive for processing vast amounts of data/pictures. Also, Camco's interactions and presentations were professional and concise. In short, Camco's team was perceived to be easy to work with and do business with."

CT: Can you please exemplify how you value the results so far?

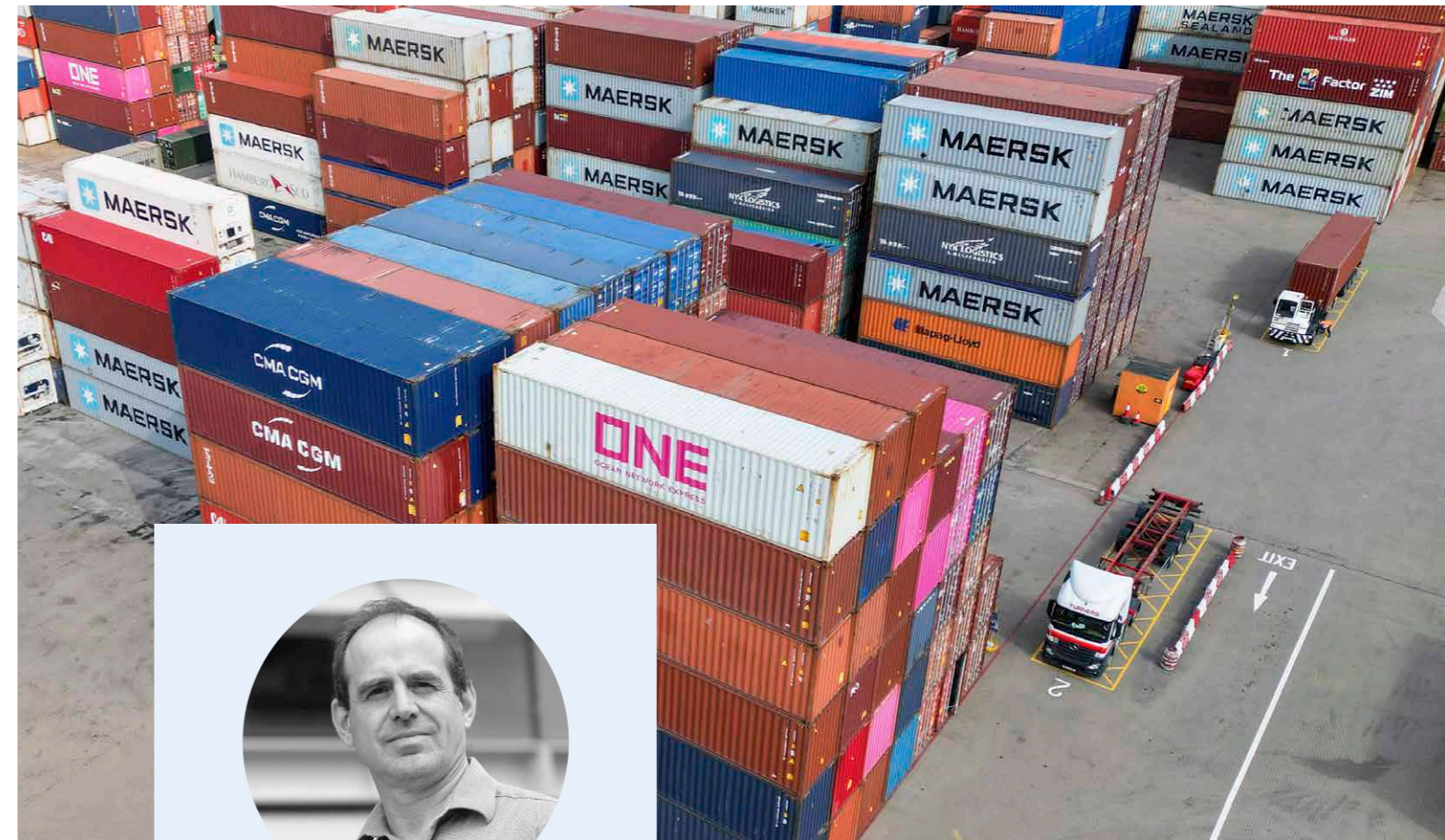
Craig Compton: "Benefits have exceeded our business case. In addition to the efficiencies through automa-

tion, the data outcomes have been excellent. This data allows us to demonstrate terminal performance to our customers in a way we have never been able to do before. We saved millions in efficiency savings but have also provided a better service to haulers and customers. Turn times in terminals are reduced by over one-third, and integrating the gating technology with a terminal Operating System, VBS System, and Billing System has driven an automated end-to-end process.

Terminal capacity has increased due to a much better optimization process in which the gates play a significant part. Camco has been great in helping us think forward, doing some data analysis to finetune confidence levels in the OCR technology, which also increases automation. The technology enabled us to establish a National Operating Centre managing gate transactions remotely across the U.K. terminal base."

CT: How do you see the future of terminal process automation?

Craig Compton: "We see the future in a consistent supply chain process where logistics providers work commonly through integration and automation of data, asking the same questions, getting the same outputs. Best-of-breed technology, such as Camco, is leading the way here. And significant terminal processes are consistent across inland and port terminals, but each stakeholder interacts uniquely.



Who is who?

Craig Compton is the Managing Partner of Bentley Compton Ltd, a Technology Transformation Company specializing in the Logistics Intermodal Market. Craig has 25 years of experience in the Technology Industry and has worked with Genesee & Wyoming for five years.

Genesee & Wyoming Inc. (G&W) owns or leases 115 freight railroads with 7,300 employees serving 3,000 customers. The company's North American operations include 110 short-line and regional railroads that serve 43 U.S. states and four Canadian provinces over more than 13,000 track miles, while its U.K./Europe operations include the U.K.'s largest rail-centric intermodal logistics franchise and the leading heavy haul freight rail provider, as well as regional rail services in Continental Europe. In addition, G&W subsidiaries and joint ventures also provide rail service at more than 30 major ports, rail-ferry service between the U.S. Southeast and Mexico, transload services, and railcar switching and repair.

We see this beginning to standardize in the future, and automation will drive that. The focus will then shift to predictive analytics, anticipating supply chain needs with forward visibility of vessel calls and the impact on the geography they arrive at. As a result, we see all stakeholders moving to a more unified way of working. Machinery automation is already well advanced and will continue to drive increased automation."

CT: Finally, how did all stakeholders react to the new technology?

Craig Compton: "The initial skepticism and fear were replaced by a "Wow, this works like you predicted" within three weeks of implementation. Employees moved from administration roles to more value-added tasks such as train planning. Haulers found turn times increased rapidly from 45 minutes plus to under 25 minutes.

Customers and Haulier management loved the structured data and behavior patterns we could provide them about the operation of their fleets. For example, drivers entered the terminal waving a Q.R. code at a screen and were automatically directed to lift points where a waiting lifter serviced them. It has delighted them, and subsequently, they met each terminal rollout with excitement, not fear, by the haulage community."

Top-notch customer service: our pursuit at the heart of the organization

Regardless of industry, a vital component of any successful business is a reliable and accessible client service solution. And when a company grows, client needs grow and change with it. That's no different story at Camco Technologies. So how does the organization's customer service center keep up the pace? We asked Service Director Nadine Paredis.

In the beginning stages of commercial relations development, providing consistent customer support can be tricky because nobody knows what type of problems a client will face. And to determine what kind of assistance needs to be developed, you'll need to go through a period of trial and error. "That is precisely what we experienced as a growing organization," states Nadine Paredis, Service Director at Camco Technologies. "Like almost every company, our maintenance and service contracts were part of the business development process. But as this phase is the starting point of any project implementation, it is easy to overlook parts that should be included."

What we define, we deliver

In 2020, Camco Technologies established a dedicated Maintenance & Service Team. Nadine Paredis: "Our intent was evident. Taking the service standard determination out of the business development process, we found out with the client's operational team what kind of service level is needed. Also, from our side, we can mobilize more specialized and experienced people in the negotiation process. Since 2020, we have offered three decisive programs with different service levels: Essential, Complete, and Premium. As a result, our clients and we start the relationship with far more realistic expecta-

tions, clear and transparent. That's why we can claim: what we define, we deliver."

A dedicated team operational worldwide

Over twenty in-house support specialists work with dozens of service technicians, including subcontractors worldwide, to support Camco's claim. "All of them boast the same skills, qualifications, and professional attributes and enjoyed the same training at our headquarters in Belgium", states Nadine Paredis. "And, of course, we keep investing time and resources in the continuous training of our support teams. Refreshing their skill set and updating them on new developments in our portfolio, but also in client's demands, help them stay relevant in their field. Finally, our support engineers work in dedicated teams. They get to know the cus-

"By taking the service standard determination out of the business development process, we found out with the client's operational team what kind of service level is needed."

Nadine Paredis
– Service Director

tomers in person and are familiar with typical issues that might come up.

Prepared for both the expected and unexpected

As part of the customer service program, Camco always keeps spare parts onsite at the operator's premises. Nadine Paredis: "That helps us keep downtime due to a failure or incident to an absolute minimum. When we send an engineer or technician, we don't have to consider spare parts availability and transport. That saves us time. Also, as most of our systems are plug & play, our customers can do some interventions themselves. The inventory is automatically monitored to keep parts available for preventive and corrective maintenance."

A more significant role for the first-line service operators

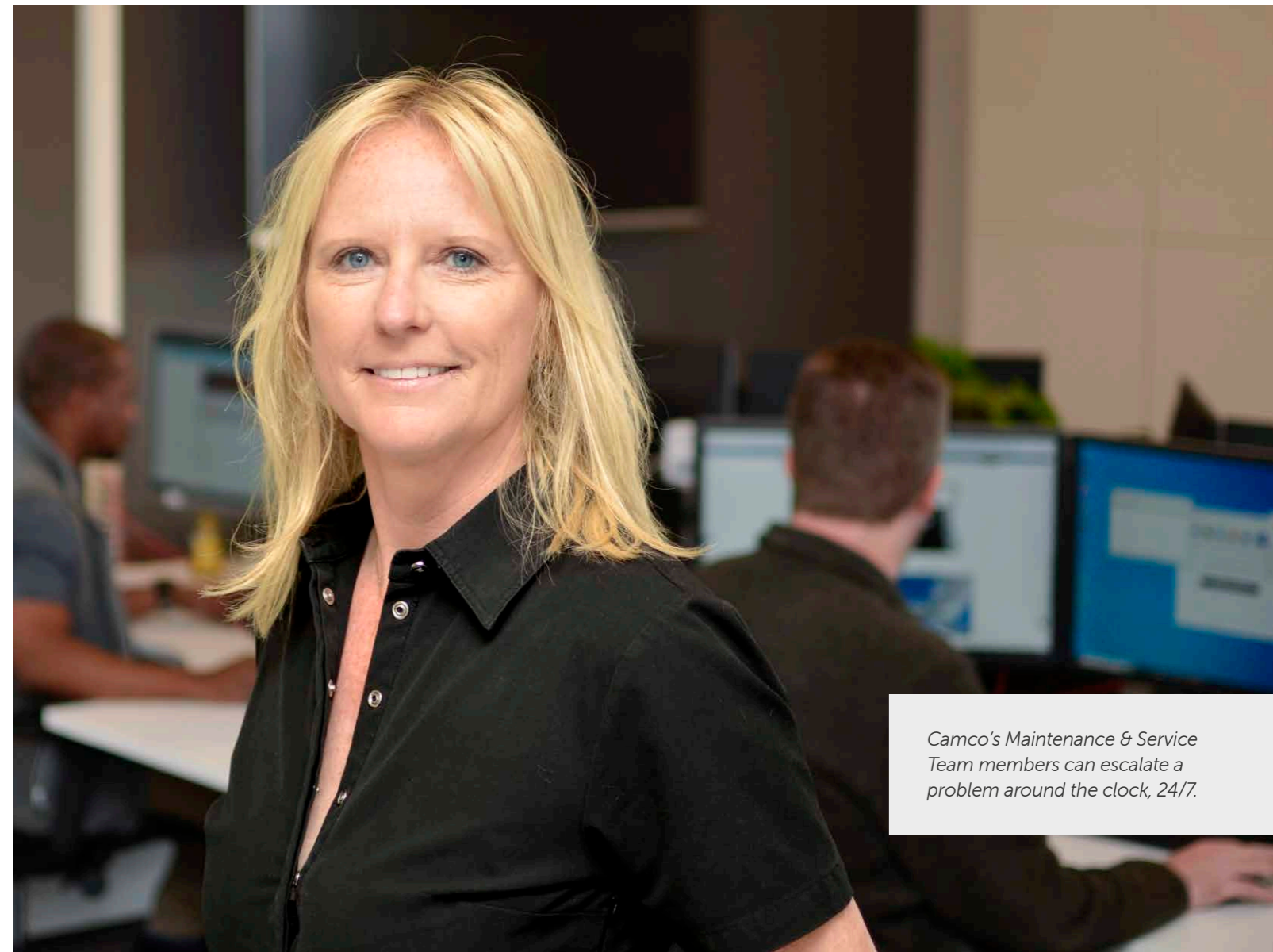
From one perspective, Camco's Maintenance & Service Team is a-typical. "A standard incident can have many causes, some of which are curable from a distance," says Nadine Paredis. "That's why our first-line support teams consist of ICT engineers, ICT specialists, and electromechanics. Together they can figure out how to solve the problem best. Troubleshooting a problem for our customers relies on, for the most part, clear and precise communication between our experts and the client. So, we engage

As an engineering and manufacturing company, we always had a clear focus: zooming in on the needs of our customers and the end users of our technology. That's why we pride ourselves on having a state-of-the-art Maintenance & Service department at Camco.

as many different native speakers as possible. We employ native English, French, Spanish, Portuguese, and Dutch speakers, a list that we will continue to grow. That helps to communicate with the client's staff in the field to work out a solution together."

A path towards a solution, anytime, at any time

Even though many incidents can be solved swiftly and from a distance, that's not always the case, tells us Nadine Paredis: "Our service support team members can escalate a problem around the clock, 24/7. If they find out with the client the situation needs an intervention, they can decide whenever needed. In that case, the issue goes one level up to a person or team with the resources and knowledge to tackle the problem. We always take the path towards the solution, no matter what time of the day or day of the week. Together with our clients, we do what it takes to fix the problem. It's a collaboration where communication is critical. This way, our staff at Camco and those on the client side commit to a long-term relationship. In many ways, they are partners and rely on each other."



Camco's Maintenance & Service Team members can escalate a problem around the clock, 24/7.

New Camco projects

Beibu Gulf Port – Qinzhou, China

Last March, Camco Technologies finalized its installation works at Beibu Gulf Port in Qinzhou, China. In December 2020, Camco was selected for the first phase of the STS crane and gate automation at the fully automated Beibu Gulf Port terminal.

After completing the phase 1 installation, including deploying four OCR gate portals and five STS crane BoxCatcher systems, Camco was awarded the phase 2 crane and gate automation project.

In the new contract, two additional truck OCR portals are added to the four already in place, and the automation of seven new STS cranes. Each STS crane is equipped with two camera systems: a set of two BoxCatcher systems register all container moves when being hoisted through the crane's frontal legs. In addition, a collection of platform cameras captures the container moving onto the platform. Finally, a third set of cameras is used to check the Internal Transport Vehicle or ITV carrying the container.

Finally, the BoxCatcher system is equipped with the BoxCatcher Washing Station. In maritime conditions, salt and dust can easily cover camera lenses. Like a car-wash, the Washing Station sprinkles and dries clean the BoxCatcher screens at regular configurable intervals.



Deutsche Bahn AG - Germany

Deutsche Bahn AG is the national railway company of Germany and describes itself as the second-largest transport company in the world. In Europe it is the largest railway operator and infrastructure owner.

In 2021, Camco Technologies was awarded the contract to install truck OCR portals in Stuttgart, Leipzig, Frankfurt, and Hamburg. The installation on all those four locations went successfully live in 2022. In the first half of 2023, Deutsche Bahn AG granted Camco a new contract to install 50 extra truck OCR portals in four locations: München, Köln, Duisburg-KVD, and Berlin. Also, Camco's latest software, The Bridge, will be integrated into those four sites' operating systems.

The collaboration between Deutsche Bahn AG and Camco is a textbook example of a close working relationship. Both parties work under a framework agreement to facilitate the installation of Camco's newest technology and solutions.



Sea-Invest Antwerp Container Terminal – Antwerp, Belgium

Sea-Invest is one of the largest terminal container operators in the world when it comes to break bulk, fruit, and liquids. The operator has activities in 24 ports worldwide. Antwerp Container Terminal is a recent concession of SEA-Invest dedicated to container handling. The terminal is located near Bevrijdingsdok, north of the Antwerp port, and has excellent access to rail and road. Camco has been selected as a partner for implementing automated gates, including A-check, OCR portals, and driver kiosks.

Covivins – Andenne, Belgium

Covivins is a one-stop logistics partner in alcoholic beverages like spirits, wines, and Champagnes for wholesalers and specialty stores in Belgium and abroad. Covivins opened a new warehouse in Andenne, Belgium, to facilitate its growth. This warehouse is fully automated for the inbound process up to storing goods. In addition, Camco has been selected as a partner for implementing auto gates interfacing with the existing ERP system. Camco will also provide a method to track trucks from the gate to the dock.

Côte d'Ivoire Terminal-CIT – Abidjan, Ivory Coast

The Autonomous Port of Abidjan is a commercial port at Treichville in southern Abidjan, Ivory Coast. It is a full-blown container terminal facility and is managed as a joint venture between APM Terminals and Bolloré Logistics. Camco has been selected for the gate automation, including Auto Gates with seven OCR portals (four ins and three outs) and kiosk gate lanes. As the first on the African continent, CIT uses Camco's newest software application, The Bridge.

Port of Portland – Portland, USA

The Port of Portland is the largest in the Oregon metropolitan area in the United States and gives access to the Pacific Ocean. Camco was awarded the installation of OCR portals for the automated registration of trucks and containers. In a second phase, Camco introduced a complete gate automation system, including AIO kiosks, GOS & The Bridge software. As a first on U.S. soil, it is regarded as a proof of concept.

Sogester S.A. – Luanda, Angola

Sogester – Sociedade Gestora de Terminais – S.A. is a joint venture between APM Terminals and the Gestor de Fundos of Angola. Sogester is one of four container terminals operating from the Port of Luanda, having procured a 20 + 5 years license from the Port Authorities. Camco has been selected for the gate automation, including two OCR portals and six kiosk lanes.



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CMA CGM Alexandria TMT – Alexandria, Egypt

Camco Technologies has been awarded the project for supplying and maintaining the Auto Gate solution and Auto-handover at the Trans Misr Terminal in Alexandria, Egypt. The intermodal terminal – operating under the joint venture between CMA CGM Group and EGMPT – will cover an area of 560.000 square meters with quays of over 2 km in length. It will have a capacity of around 1,5 million TEUs and facilitate the deployment of the Group's larger vessels. Eventually, Camco will have installed four OCR portals and twelve kiosk gate lines with RFID and RTLS.



PSA-VTE – PSA Genova-Prá

PSA Genova Prá is the largest container terminal in Genova. In 2022 the terminal handled more than 1,5 million TEU. That year, PSA Genova Prá awarded Camco the rail OCR project. The project introduces two standard rail OCR portals, including civil works, infrastructure, and I.T. equipment. Camco's systems will need to detect and automatically read the following information: container number, ISO code, position on the rail car, rail car I.D., IMDG label presence, and classification number and images for conditioning recording. At this time, the project is in commissioning phase.



ACFS Australië Port Logistics – Sydney, Australia

ACFS Port Logistics is Australia's largest container logistics operator, operating 24 terminals nationwide. For ACFS Port Botany & ACFS Tyne Camco is implementing In and Out gate automation by a kiosk. Also, both ports will use Camco's new operator workstation software, The Bridge, allowing multi-terminal exception handling and operational overview.



Port of Cork – Cork, Ireland

Camco has been awarded the contract to supply crane OCR on two brand new Liebherr container cranes in the terminal of Ringaskiddy in Cork, Ireland. The system allows the Port of Cork to capture the condition of boxes. It will enable the Port of Cork to identify container I.D. and ISO code while verifying the presence of seals, IMDG label presence, and classification and door direction of boxes.



PSA Antwerp – Antwerp, Belgium

PSA Antwerp selected Camco to install Landslide Transfer Point kiosks for new ASC stacks. Also, four new cranes will receive Camco's crane OCR, including stacker detection. Finally, Camco will install Auto Gate In automation at PSA K913 and Container OCR at Overvoer. PSA is the largest container handling company in Port of Antwerp and can handle the largest container ships in the world.

Eurogate Container Terminal Wilhelmshaven - – Wilhelmshaven, Germany

Eurogate Wilhelmshaven is Germany's only deep-water container terminal. Camco installed a full auto gate here at the start of the terminal in 2011. Having the first Proof of Concept in 2018 (one STS crane equipped with Box-Catcher OCR), Camco won the contract in 2021 to install all STS cranes (8). Eurogate has also outsourced the installation of two rail OCR portals to Camco.

Eurogate Container Terminal Hamburg – Hamburg, Germany

Eurogate Container Terminal Hamburg is one of Northern Europe's main transport hubs. The Hamburg terminal offers excellent road, rail and feeder connections to the economic centres of Scandinavia, Central and Eastern Europe and Russia. Eurogate Container Terminal Hamburg awarded Camco the contract for the installation of two truck OCR portals.

Moerdijk Container Terminal (MCT) – Moerdijk, The Netherlands

For the trimodal CCTR Moerdijk terminal, Camco has been awarded the upgrade of the front yard gate system, including In and Out Truck OCR Portal and gate kiosks integration. MCT serves as an Extended Gate for the ECT terminals in Rotterdam and as the hinterland terminal for the seaports of Rotterdam and Antwerp. Also, MCT keeps barge connections with Rotterdam and Antwerp as well as rail connections with the European hinterland. Finally, MCT has short sea connections to the U.K., Norway, Portugal, Lithuania, and Poland.

South Asia Gateway Terminals – Colombo, Sri Lanka

South Asia Gateway Terminals (SAGT) commenced operations at Queen Elizabeth Quay in 1999 as the first public-private partnership container terminal operator in Sri Lanka and is one of four container terminals in the Port of Colombo. SAGT awarded Camco the contract to deliver a gate system with WIM (Weight In Motion) scales; twelve cranes will be equipped with BoxCatchers and an entire RTLS yard automation system.

ECT Terminal Sri Lanka – Colombo, Sri Lanka

ECT Terminal is fully owned by SLPA, the Sri Lanka Port Authorities. Construction of the terminal, which will be conducted in three phases, is scheduled to be completed in 2024. Camco - together with their partner Access - will deliver a complete gate automation project and yard automation system (RTLS).

Vizhinjam (Adani) – Kerala, India

Adani Ports and Special Economic Zone Limited (APSEZ) is India's largest commercial port operator, accounting for nearly one-fourth of the cargo movement in the country. The deep-sea water Vizhinjam Port in Kerala is being developed into India's first Mega Transshipment Container Terminal. Camco will deliver a complete auto gate system; eight STS cranes will be equipped with BoxCatchers, and an entire RTLS yard automation system, including an RT Digital Twin. It will be the most advanced terminal in India.





Meet Eva Neiryck, an illustrator from Gentbrugge, Belgium

Last year, someone had the idea to brighten and invigorate office life at Camco with fresh and inspiring wall drawings! Also, showing visitors what Camco stands for: the wonderful world it operates in, the products and services it offers, and the values carried by everyone within the organization. A challenge? Yes, but Eva made it all happen.



Hey Eva, what do you do as an illustrator?

I illustrate stories in books & magazines. Often, I draw soft and sensitive subjects but with a smile. Stories work to connect; I genuinely believe in that. I also love to draw giant wall drawings and chalkboards. When I am not drawing, I work as a teacher of Sketch Research at the KASK in the city of Ghent.

Cool! What makes your work so typical, Eva?

My style is immediately recognizable: clear line drawings with a deeper meaning. Those lines can be soft, loose, sensitive, hard, graphic, and tight. I also love to work based on textures and with a pared-down color palette. I'm optimistic, and I think my illustrations convey that happy feeling. I like to hide small meaningful, and even funny details that some people will notice.

What exactly did you do for Camco?

I was allowed to work in different areas of the building. The idea was that each team would have one or more appropriate drawings. So the story begins in the entrance hall, with

an eight-meter-high wall drawing on the curved wall. Then throughout the building, you can find several large and smaller wall drawings: in the hallways, at the desks, in the meeting rooms, in the workspaces, or the factory hall, and even on the door of the cleaning team. You name it, and you'll find an illustration.



Where did you get inspiration for that?

I dove into the world of Camco for a few months. What an inspiring work environment you guys have! I have a preference for drawing construction cranes. So, it was great to place the figures I like to draw in a natural Camco environment: harbor cranes, containers, transport, and so on. The team at CAMCO gave me beautiful images and all kinds of documentation to read up on. From there, the wall drawings emerged.

What reactions did you get at work?

Very funny to be on the shop floor drawing. The reactions were very diverse. Someone asked me if I was allowed to draw on the walls. People also recognized colleagues in specific figures. People were wildly enthusiastic, and I received many compliments. Nice to work like that! Also, a shout-out to Camco's most enthusiastic team member, who built the gantry for me.

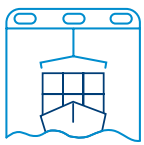
Where else can we admire your work?

I have very diverse clients, which makes it fun and varied work for me. You can now find my murals in many places: schools, residential care centres, restaurants, and cafes. I am currently working on illustrations for the Belgian lifestyle magazine LIBELLE. I am also sometimes a live illustrator at events, ranging from business meeting to concerts. And in addition – if there is any time left – I try to make un-commissioned work. You can find an overview of my illustrational work on my website or Instagram account. Feel free to have a peek!

www.evaneiryck.be
[@evaneiryck_illustrator](https://www.instagram.com/evaneiryck_illustrator)



Already more than 200 cranes outfitted



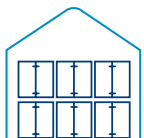
Maritime



Intermodal



Ro-Ro



Logistics

No box escapes the BoxCatcher

The flying STS crane camera.

It takes only 2 BoxCatcher per STS crane to register every box. Mounted on vertical rails and linked to the spreader PLC, the BoxCatcher travels automatically to the best position to identify every container and to provide 360° pictures. The system even includes a washing station for automatic front cover cleansing without disrupting crane operations. Designed for minimal Opex and maximum uptime, BoxCatcher operates 24/7 in terminals across the globe.

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To find out more, go to
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