

User Story – Bangkok, Thailand

## How Sahathai Terminal Transforms Gate Operations with Verily Vision Container Truck Gate Automation

### About Sahathai Terminal Public Company Limited

Opened in 2008, Sahathai offers one-stop solution of logistic activities that connects the ocean and inland transportation. The company's services currently include terminal operation, in-land transportation, warehouse and yard rental services, and other related service in container logistic with strategic location on the Chao Phraya River – Bangkok, Thailand, Sahathai Terminals expands its business services to cover all needs of customers via subsidiary and associate companies such as Bangkok Barge Terminal, Bangkok Container Depot Service and Bangkok River Terminal.

With 2025 vision. Sahathai Terminal aspires to become a sustainable total logistics solution provider with the focus in port and terminal services, in-land road and water transport, warehousing and distribution, and other related services that create value added to its customer.



### The Container Truck Gate Automation Project

Sahathai Terminal Container Truck Gate Automation Project was initiated to increase terminal gate operation efficiency in corresponding to growth of terminal container throughput of 500,000 TEUs per year.

To realize the gate automation project Verily Vision's team implemented series of technology and module to facilitate container and vehicle information verification process at terminal gate which includes

- Container Number Recognition Module
- Truck License Plate Recognition Module (with Thai Language Recognition Module)
- Container Image Capture Module
- Truck License Plate Capture Module
- Booth Gate Monitoring System and Report
- In-Lane Display Screen System
- System Integration with TOS

With thorough discussion and collaboration with Sahathai Terminal's operation and information technology teams, Verily Vision was able to implement gate automation system based on the terminal gate existing infrastructure without extra construction resulting minimal cost of hardware and infrastructure budgets possible. Besides the benefit regarding gate operation efficiency and security, automatic container and vehicle data recognition system are also a foundation that can support future development of logistics network connectivity and visibility.

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#### Manual Operation Process Prior To The Project

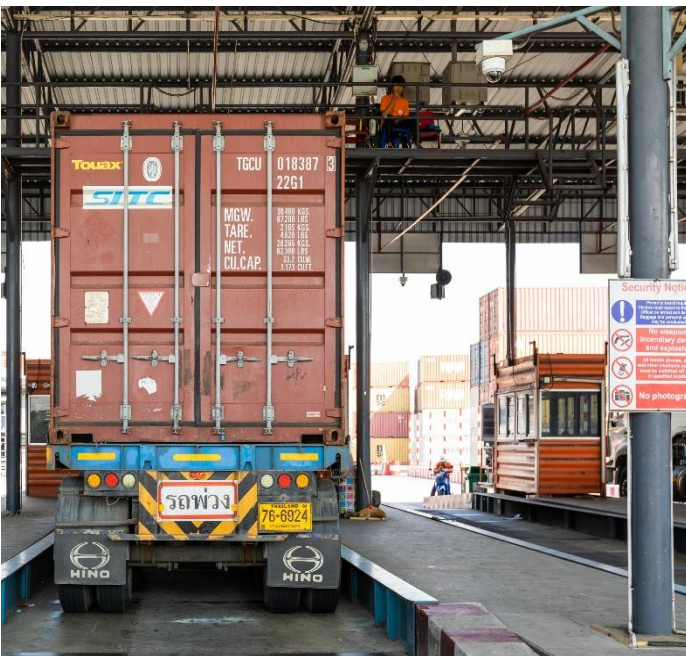
On a regular basis for port and terminal in Thailand, especially for privately owned river terminal like Sahathai Terminal, gate operation processes are completed via manual operation method by terminal gate teams.

When container truck approaching terminal gate, ground surveyor staff manually collects and records container and truck information including container seal and container damage along with set of images with handheld system. The transaction is now queued for booth gate verification. This process leads to longer time of operation and inefficiency

After the truck arrives at terminal booth gate where cargo is weighted on the weighbridge to comply with VGM standard, the driver handover export/import entry document to booth gate officer for customs verification.

Booth gate officer then manually fill container and truck information to TOS system to retrieve container information derived from surveyor handheld and verify cargo data with Thai Customs via E-Matching system.

Terminal fee is paid by truck driver to complete the transaction via cash or QR code basis.

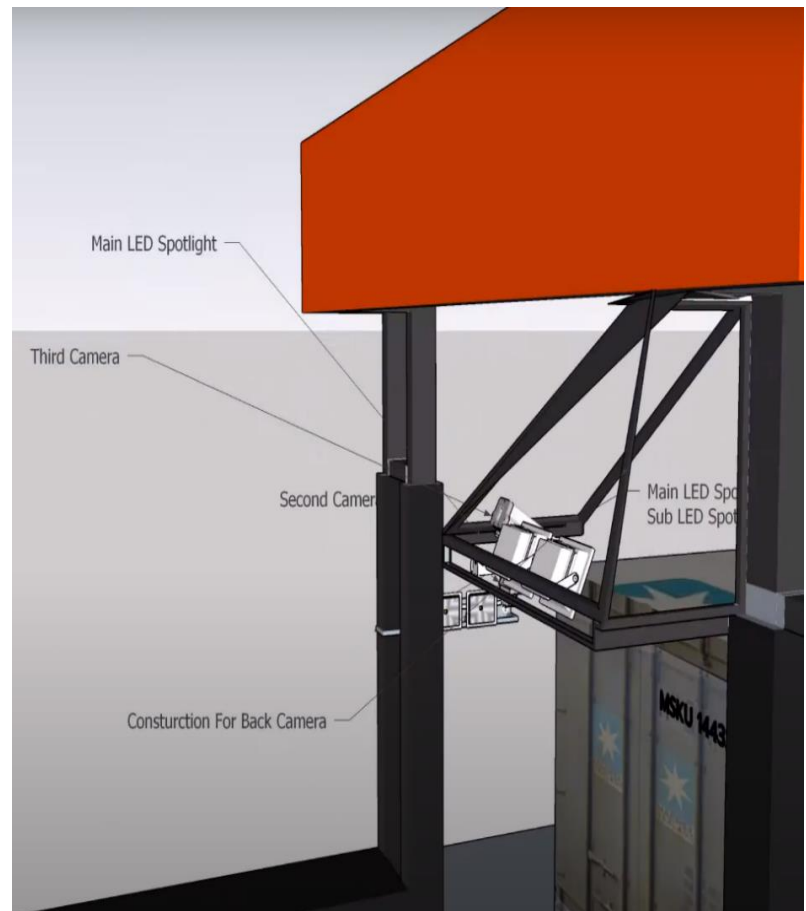


#### Container Truck Gate Automation Project Initiative

With the goal to optimize gate operation efficiency, security and maximize asset and infrastructure utilization, applying new automatic technology is one of the key solutions.

After the success of technology Proof of Concept (PoC) implementation and collaboration with Verily Vision team, the terminal gate renovation project is realized. However, with the concern regarding the cost of additional gantry infrastructure, Verily Vision's team decided to customize the installation model to best fit Sahathai Terminal's existing gate infrastructure resolving budget concern.

Besides the customized system installation model, hardware specification selection is also one of the crucial factors for system performance due to the different operation environment and installation model for each terminal. With the goal to deliver best system performance and meet operation objectives, fortunately, as Verily Vision's solution is software-based technology, Verily Vision's team is able to select local hardware especially CCTV brand with best specification for Sahathai Terminal's installation model.





## User Case Study – Bangkok, Thailand

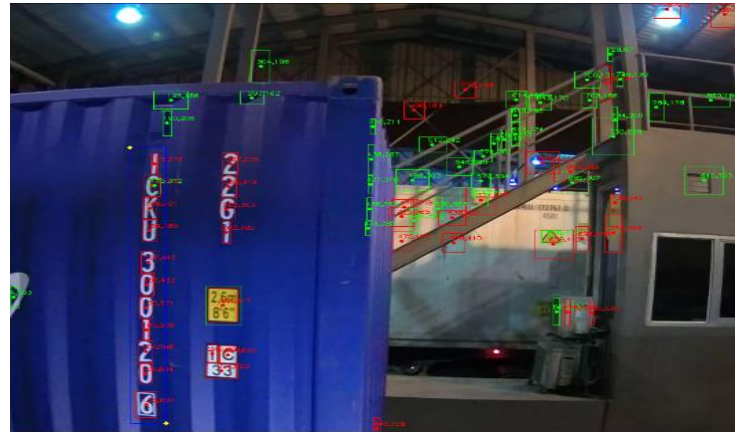
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#### Project Development

With 5 CCTV cameras installed per truck lane to capture all container images for each side of the container including truck license plate along with recognize their information, it is very critical to customize and calibrate the deep learning software for delivering highest system performance possible for each installation.

After the completion of system calibration and customization, system performance assessment process was conducted via transaction comparison between actual gate operation transaction and Verily Vision's system raw report. After several weeks of performance assessment and system consistency test-run monitoring, the system is able to achieve more than 95% accuracy with round-the-clock operation.



#### The New Automation

Integrated with Sahathai Terminal's TOS and gate display system, Sahathai Terminal is ready to launch its new gate operation with Verily Vision's Container Truck Gate Automation.

With the use of CCTV camera integrated with Verily Vision Automatic Container Number and Truck License Plate recognition modules, Sahathai Terminal is able to collect necessary container and truck information automatically in real-time and complete preliminary verification process prior to truck arrival at booth gate instead of waiting for manual operation performed by booth gate officer.

Container, and truck license plate along with transaction information are automatically recorded in ready-to-use database for creating report and connected with internal and authorized external networks for further use cases.

Then seal number from container along with container damage is reported by gate surveyor via handheld system. After that, the terminal gate fee is paid by truck driver via cash or QR code system, the transaction is now completed and shown on the gate display screen. The truck is now allowed to proceed further into the terminal.

With Verily Vision Container Truck Gate Automation integration, Sahathai terminal is able to achieve semi-automatic process for terminal gate operation and ready for fully automated process transformation with future development.



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#### Key Values and Benefits for Sahathai Terminal

From the implementation and integration of Verily Vision Container Truck Gate Automation, Sahathai Terminal's teams can optimize their services to best facilitate valued customers by

Providing maximum access control and security management with gate operation CCTV surveillance with vehicle and container image snapshot recorded in the ready-to-use database.

Improving terminal entry security, by providing 24-hour non-stop container number and vehicle information recognition.

Facilitating real-time tracking along with enhancing terminal's operations through consistent performance

Increasing gate operation efficiency with semi-automatic process, due the remaining manual operation of cash payment and document verification, Sahathai Terminal can complete gate operation process resulting in truck turnaround time under 30 minutes.

Lastly but most importantly, founding a solid Information Technology infrastructure to support fully automatic operation and further development in corresponding to corporate 2025 vision of becoming a sustainable total logistics solution provider with the focus in port and terminal services, in-land road and water transport, warehousing and distribution, and other related services that create value added to its customer.



Mr. Taveechai Karuchit  
Assistant to CEO - Sahathai Terminal Plc.

**“We have two goals when partnering up with Verily Vision. One is to develop a system to improve security and efficiency for the customers at Sahathai Terminal. Second is to join hands with the Thai startups hoping to promote local talent and be a catalyst for innovation. And so far Verily Vision has proven to be the right partner, and OCR has proven to be the right innovation to implement to the logistics industry”**

## Let us help you in your transformation Journey

### Contact Our Team - Verily Vision

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### Frist. let's take a look at our demo videos

Gate Automation Demo Video  
<https://urlzs.com/W7X74>

Installation Model  
<https://urlzs.com/JfHjH>

