

TERMINAL AUTOMATION • OCR • GOS

Know what you move.

Vision-based automation for gate, rail,
yard and quay



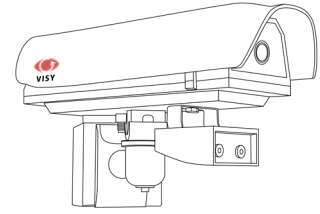
WHY VISY

Three decades in the terminal

Since 1994 Visy has developed and delivered vision systems for ports and terminals. Our computer vision and OCR systems capture vehicle, container and cargo data automatically, and send it to your TOS the moment it's captured. Fewer manual checks, faster gates and a clear record of every move.



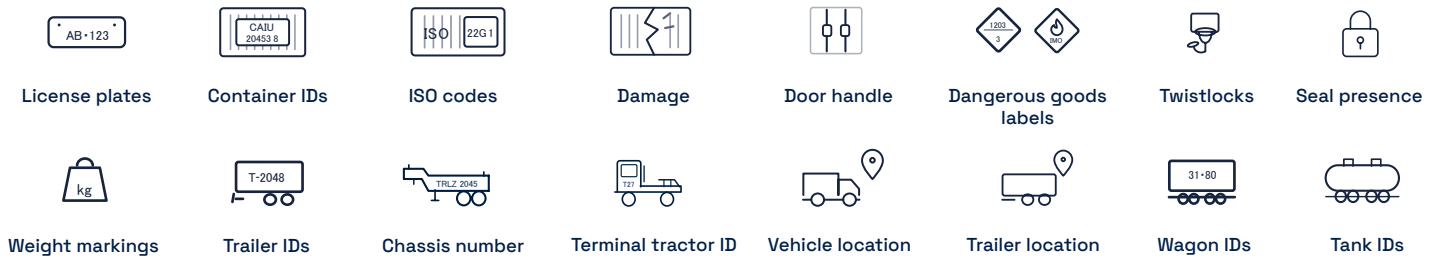
THE VISY OFFERING



Every truck, driver, train and container, identified automatically.

Visy systems work across gate, rail, yard and quay, and share seamless integration with your TOS. Start with one zone and add the next when you are ready.

WHAT VISY RECOGNIZES



WHAT YOU GAIN



01

Throughput

Faster truck turnaround and more moves per hour.



02

Lower operating cost

Less manual data entry and inspection work.



03

Safety and control

Fewer people in traffic areas, and a full image record of every move and traffic event.

PROVEN IN OPERATIONS

1994

developing vision technology since

30+

countries

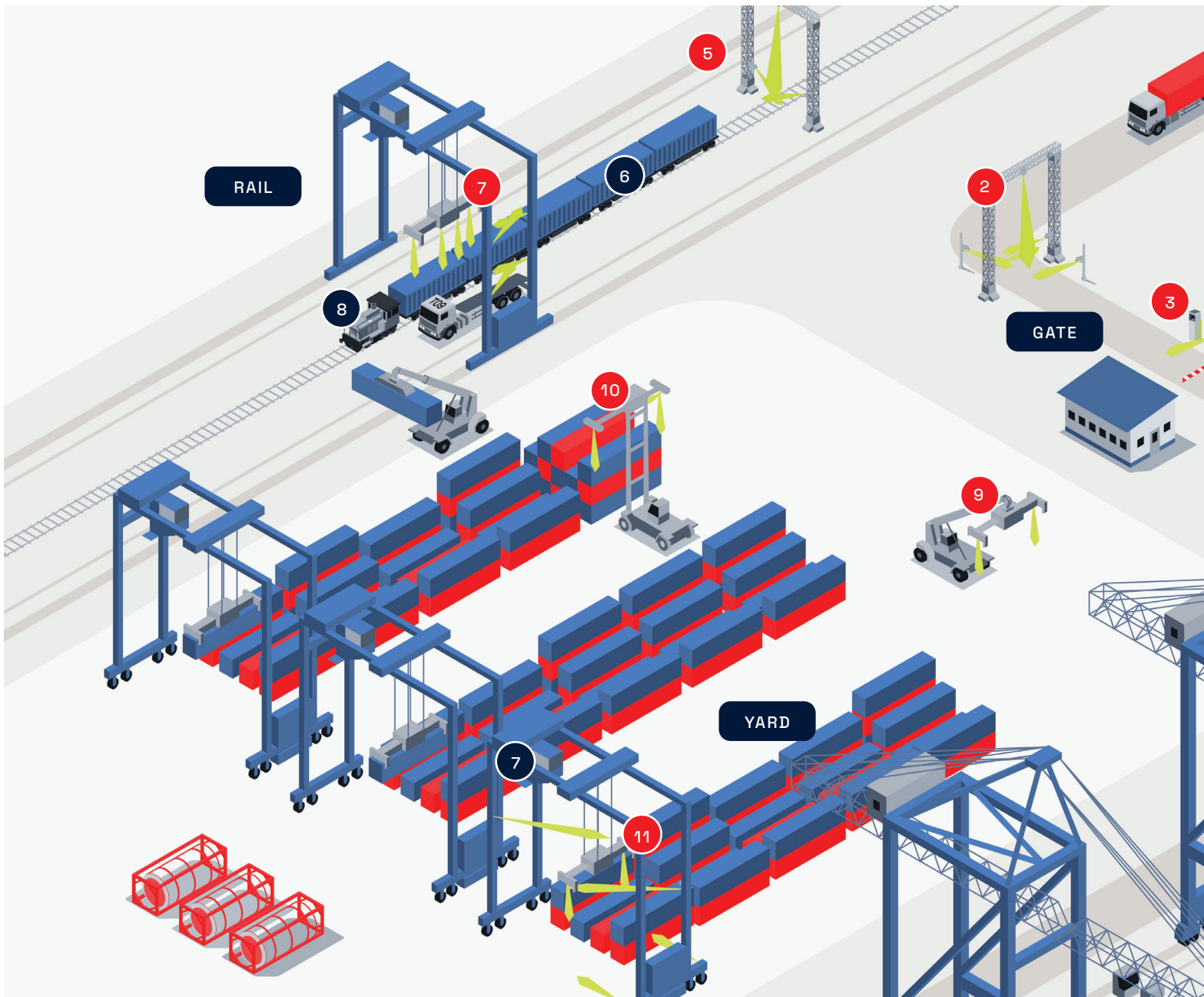
6M+

automation tasks handled every day

500+

sites automated

One partner from gate to quay



GATE

- 1

Visy Access Gate GOS
 gate operating system that manages vehicle and cargo traffic, permits and exceptions.
- 2

Visy Truck OCR Portal
 captures container IDs, plates, ISO codes and hazard labels while trucks keep moving.
- 3

Visy Gate Kiosks
 self-service check-in for drivers at the gate.
- 4

Visy AREA
 follows every vehicle from gate to bay with high-mast cameras, and reports the final location to the TOS.

RAIL

- 5

Visy Rail OCR Portal
 captures wagon and container data from moving trains.
- 6

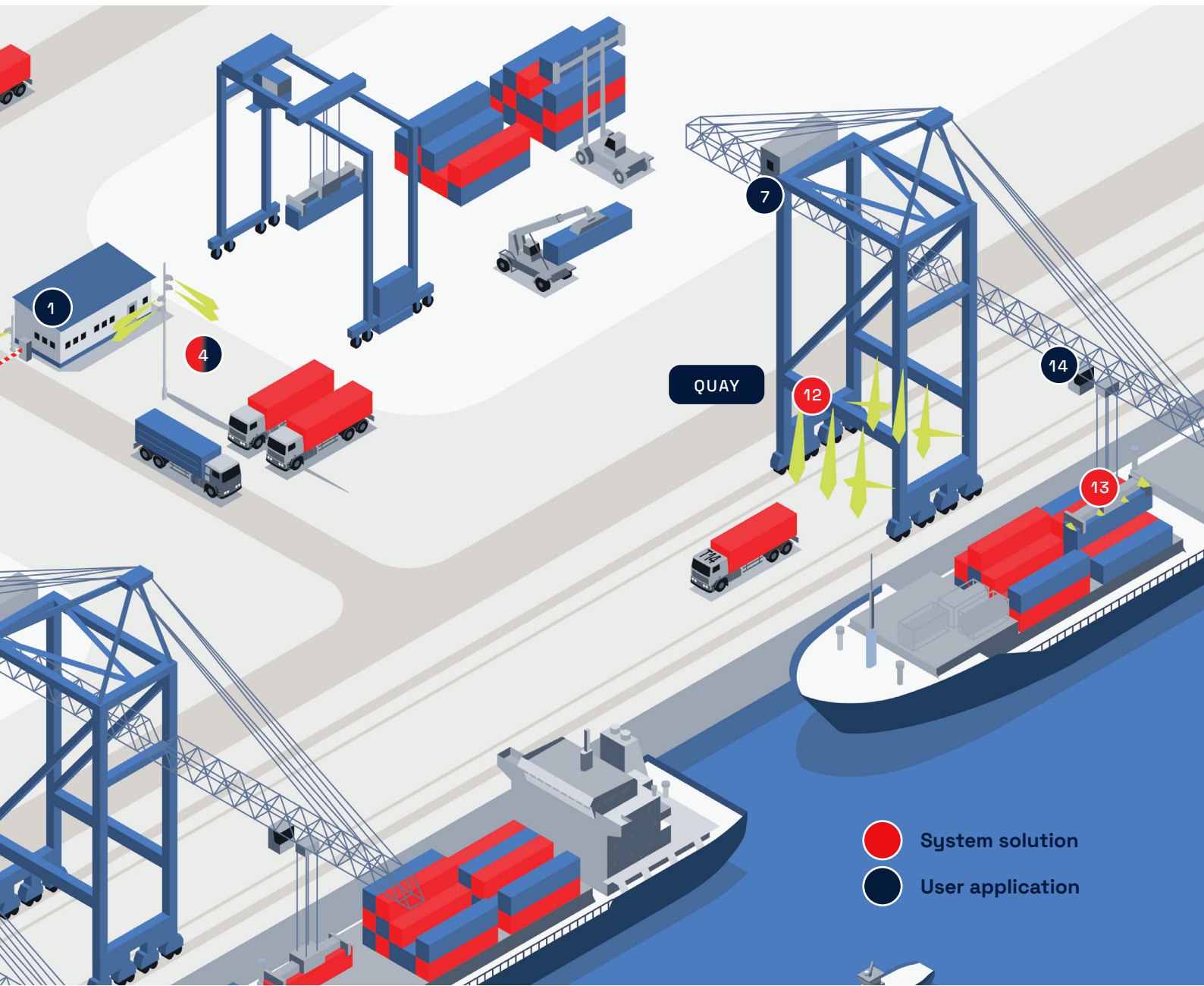
Visy Train Gate
 operator interface that turns rail events into train consist messages for your TOS.
- 7

Visy RMG OCR
 container identification, orientation and TT recognition on rail-mounted gantries at the rail interchange.
- 8

Visy Crane Gate
 operator interface for crane operations, connected to TOS.

Every Visy system runs on the same in-house recognition software and shares data through one database platform.

Start with one zone and add more as your operations grow.



YARD

- 9

Visy TopView for reach stackers
captures container IDs before each move, creating a digital record of every lift.
- 10

Visy TopView for other CHE
captures container IDs before each move, creating a digital record of every lift.
- 11

Visy RTG OCR
container identification and twistlock checks on RTG cranes.

QUAY

- 12

Visy STS OCR
STS crane imaging and recognition during every lift.
- 13

Visy TopView for crane spreaders
spreader-mounted OCR that reads the container ID.
- 14

Visy Wharf Suite
apps that connect crane operators, lashers and coordinators during vessel operations.

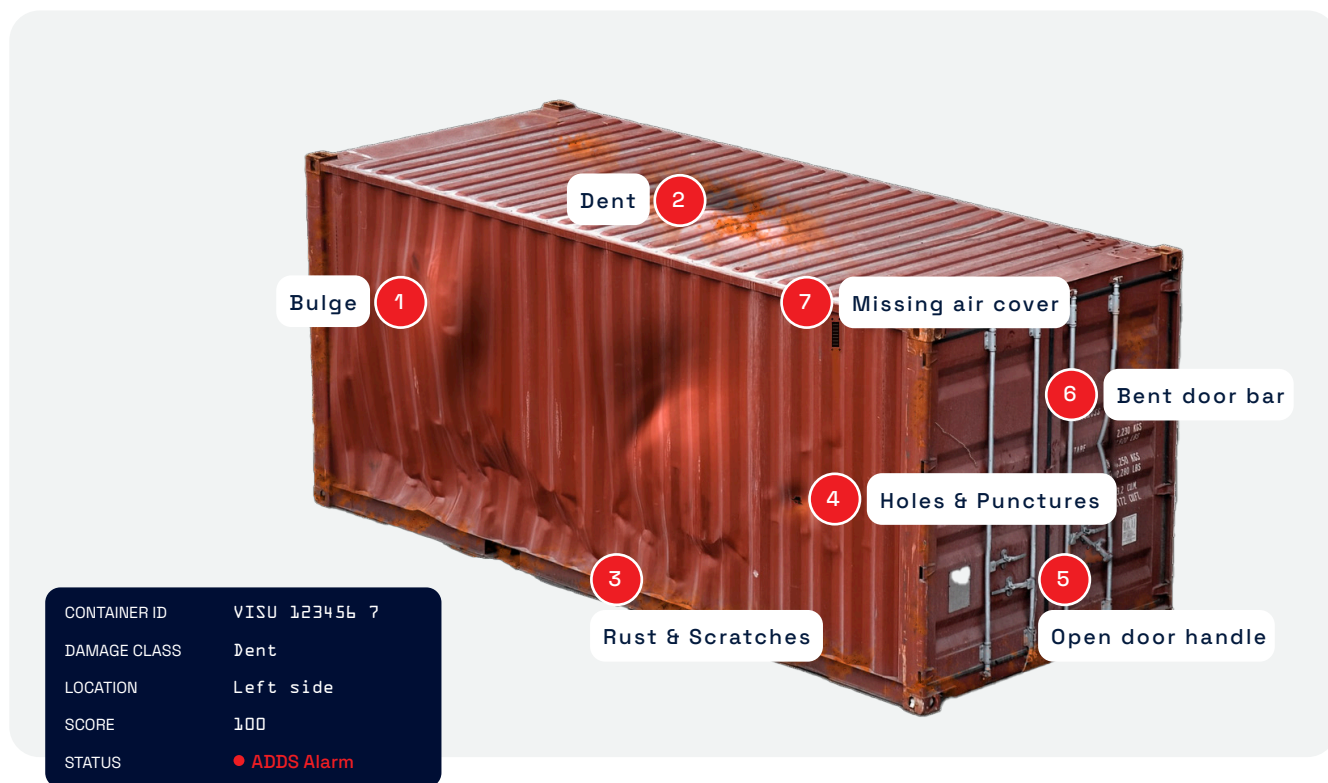
AVAILABLE FOR VISY OCR SYSTEMS

- +

Visy ADDS 2.0

Record the damage before it enters your terminal.

Visy ADDS 2.0 adds AI damage detection to your Visy OCR system, inspecting every container at the gate, crane and rail.



45 s → 27 s

reduced gate transaction time

Results from a Visy customer site that previously used to check conditions manually. Result achieved after combining OCR, ADDS and gate automation.

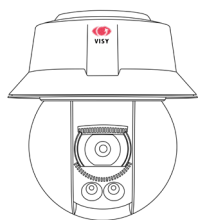
AVAILABLE FOR VISY OCR SYSTEMS

Truck OCR Portal

Rail OCR Portal

Crane OCR

TopView



Capture

Visy OCR cameras image every visible side of the container during operations, without stopping traffic.

Score

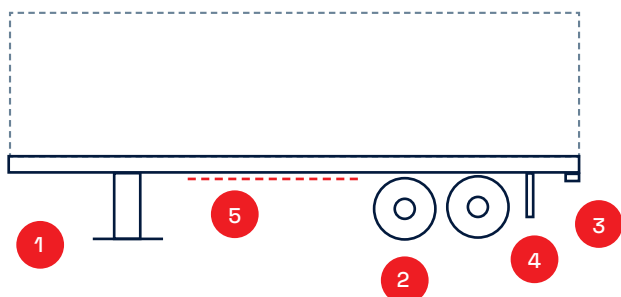
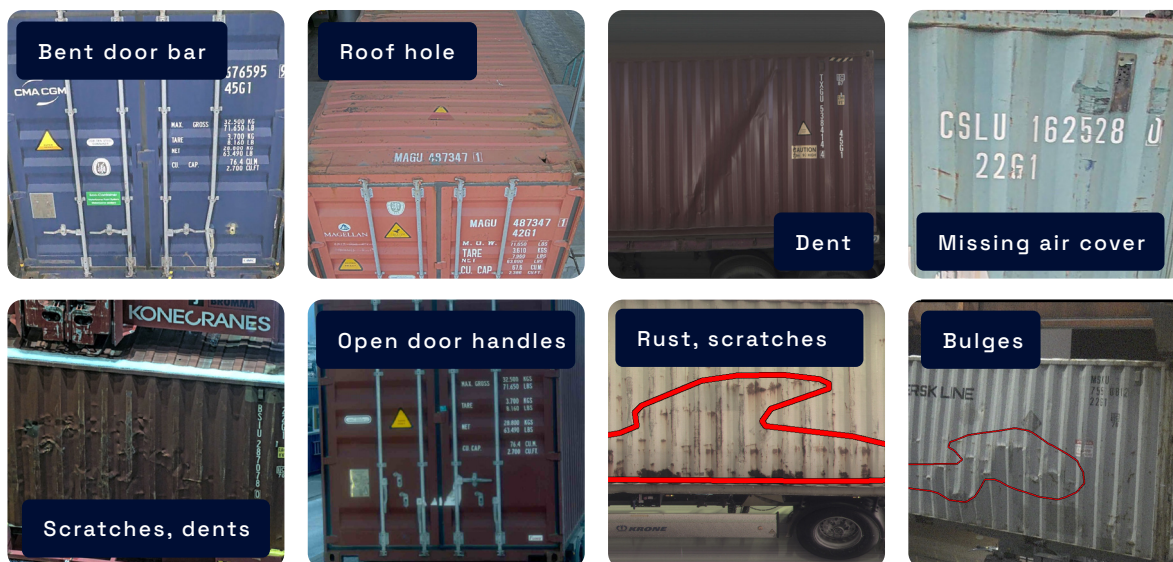
ADDS processes images and each damage gets a 0–100 score. You set the alert thresholds per damage class, per camera and per container side.

Act

Minor damage is processed automatically. When damage goes over the threshold, a clerk validates it from the images and decides on repair, denial or exception handling.

Every inspection leaves consistent, time-stamped image evidence for claims.

REAL DETECTION FROM LIVE TERMINALS



- 1 Landing gear
- 2 Tyres / wheels
- 3 Lights
- 4 Mud flaps
- 4 Taping

Beyond the container

The same AI engine looks at the truck too. It can be trained to detect missing or bent landing gear, bent rims and flat tires, missing ATIS lines, broken lights, missing mud flaps and DOT reflective tape. Detection classes are configured and trained on your site's own traffic.



OCR ACCURACY

98-100%

measured, real-life recognition accuracy at the gate, even at driving speeds of 50 km/h.

01 GATE

SMART GATE

Gates that don't slow you down

Identify every truck and container on arrival, flag damage and make the gate decision automatically. Gate staff only need to step in for exceptions.



Visy Access Gate GOS

- Gate control
- License plate recognition
- Access permit management
- OCR result processing
- Exception handling
- All gate equipment can be supplied by Visy: RFID, traffic lights, barriers...

01



Visy Truck OCR Portal

02

- Container ID, ISO code, licence plates, seal presence, door direction, IMDG labels and trailer ILU codes
- Up to 98-99.5% real-life recognition accuracy, at driving speeds of up to 50 km/h
- Works from -30 °C to +50 °C



Visy Gate Kiosks

03

- Drivers check in, confirm bookings and receive instructions without leaving the cab
- Kiosk App and interface tailored to your workflow and brand

SEE ALSO

AREA vehicle tracking

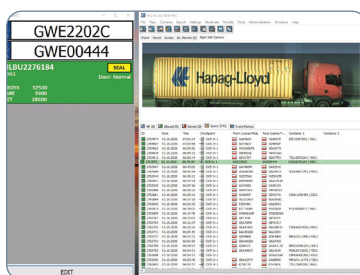
p. 09

ADDS 2.0 damage detection

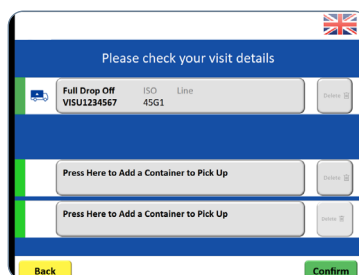
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SOFTWARE AND DATA FLOW

The gate decision is made in Access Gate GOS. Only exceptions go to an operator.



VISY ACCESS GATE GOS



DRIVER KIOSK APP

CAPTURED

Truck OCR Portal

ADDS 2.0

Kiosk check-in

VISY GOS DATABASE

Visy Access Gate

YOUR SYSTEMS

TOS

Booking

Customs

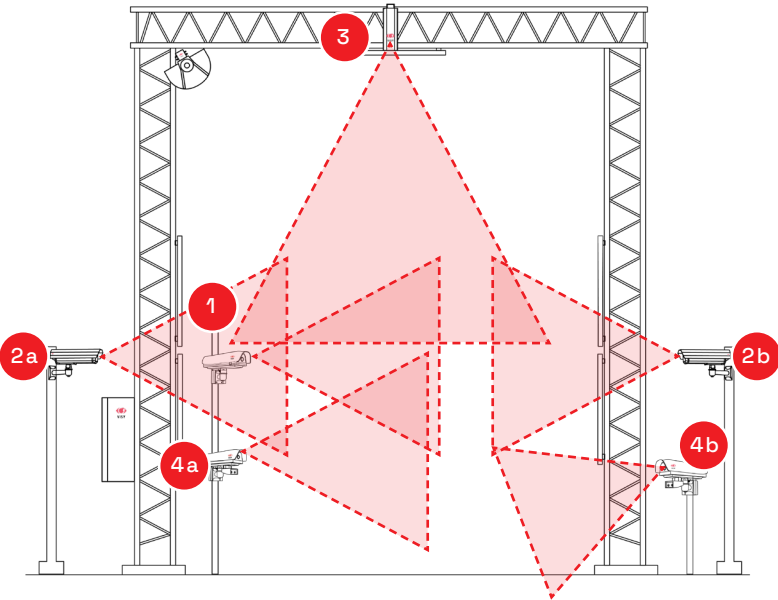
What the portal sees

One drive-through produces a full image record of the truck and its container(s). Each camera has its own imaging task, and the OCR results reach your GOS and TOS as one gate transaction.

RESULT

Faster gates, more trucks through the same lanes, less idling in the queue.

MANUAL	Truck stops at the gate booth or parks, and the driver visit gate house.	Clerk keys in the container ID and plate, and verifies drivers' ID.	Damage checked by walking around the container	Gate decision made and recorded manually.
WITH VISY	1 Truck drives through the portal	2 IDs captured and sent to the GOS instantly	3 ADDS 2.0 flags damage automatically	4 Automatic decision; only exceptions go to an operator



TRUCK OCR PORTAL • FRONT VIEW



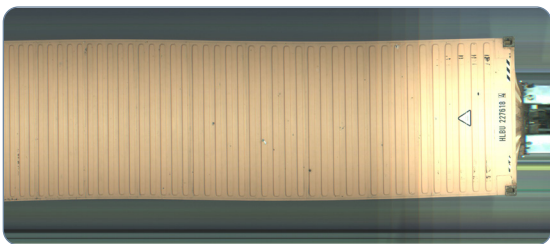
1 Rear camera



2a Right linescan camera



2b Left linescan camera



3 Top linescan camera



4a Rear license plate camera



4b Front license plate camera

- 01 GATE
- 02 RAIL
- 03 YARD
- 04 QUAY

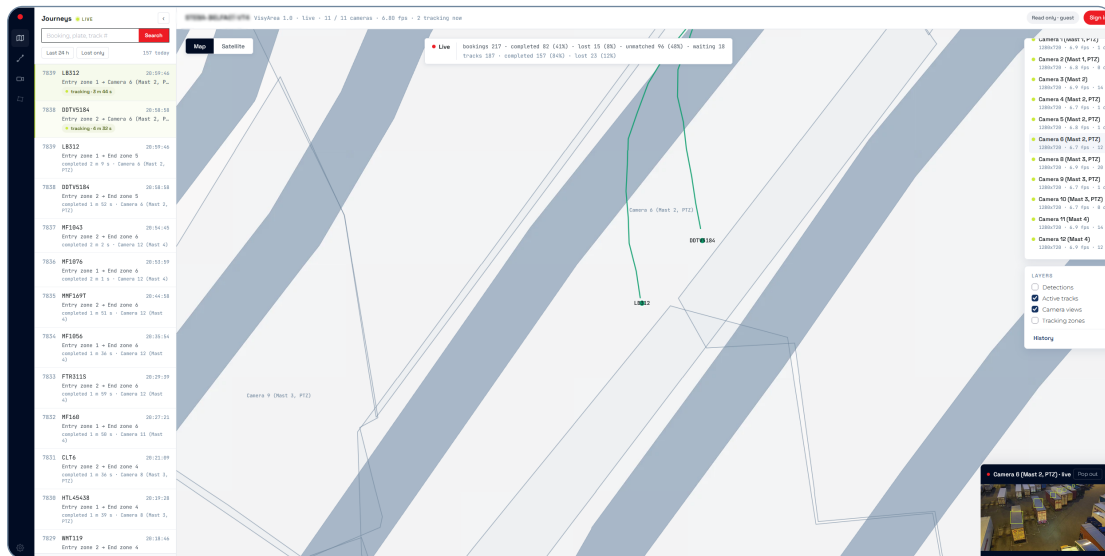


SMART GATE • VISY AREA

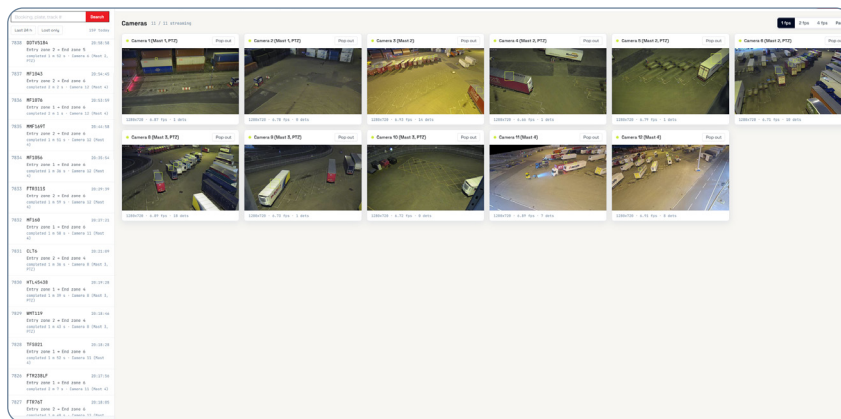
From the gate to the bay, one track

Visy AREA picks up every vehicle at the gate and follows it to its bay. The plate, container and trailer IDs read at the Truck OCR Portal stay attached to the vehicle the whole way, so you know what each truck is carrying as well as where it is.

IN THE AREA USER INTERFACE



LIVE MAP: EVERY TRACKED VEHICLE ON ONE SITE MAP



MULTIPLE CAMERAS KEEP TRACK FROM GATE TO BAY

IDs from the gate

The plate and container ID read at the gate stay attached to the vehicle as it moves through the yard.

One map

High-mast cameras, typically two to three per mast, merge their views into one GPS map.

Location to your TOS

When a vehicle settles in a bay, its location and IDs are sent to your TOS.

Less waiting at the gate.
More moving through it.

Expand 
Your vision

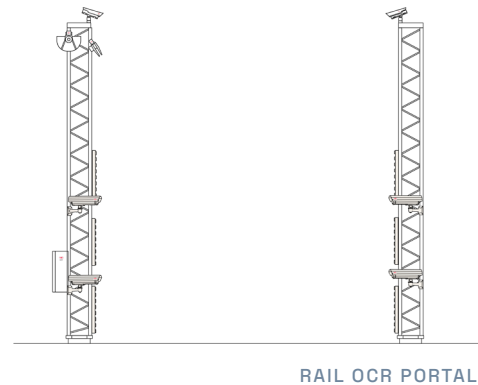


02 RAIL

SMART RAIL

Every wagon and container ID, captured on the move

Capture full train data while the train is moving, review it in one screen and send it to your TOS without walking the track.



RAIL OCR PORTAL

01

Train passes the portal.

02

Wagon and container information are captured.

03

Operator reviews events and sends data to TOS.

04 • TOS

Train consist message goes to the TOS.



Visy Rail OCR Portal

05



Visy Train Gate

06

- Container IDs, wagon IDs, ISO codes, hazard labels, and wagon length, weight and capacity markings
- Captures data even at train speeds of 70 km/h
- The image record supports retrospective damage review

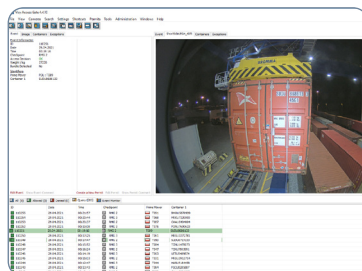
- Recognition data and images are available for review and edit in real time
- One click sends the train consist (wagon numbers and container positions) to TOS

SOFTWARE AND DATA FLOW

Train Gate and Crane Gate exchange train visits, consist lists and work queues with TOS.



VISY TRAIN GATE



VISY CRANE GATE

CAPTURED

Rail OCR Portal
RMG OCR →

VISY DATABASE

Visy Train Gate
Visy Crane Gate

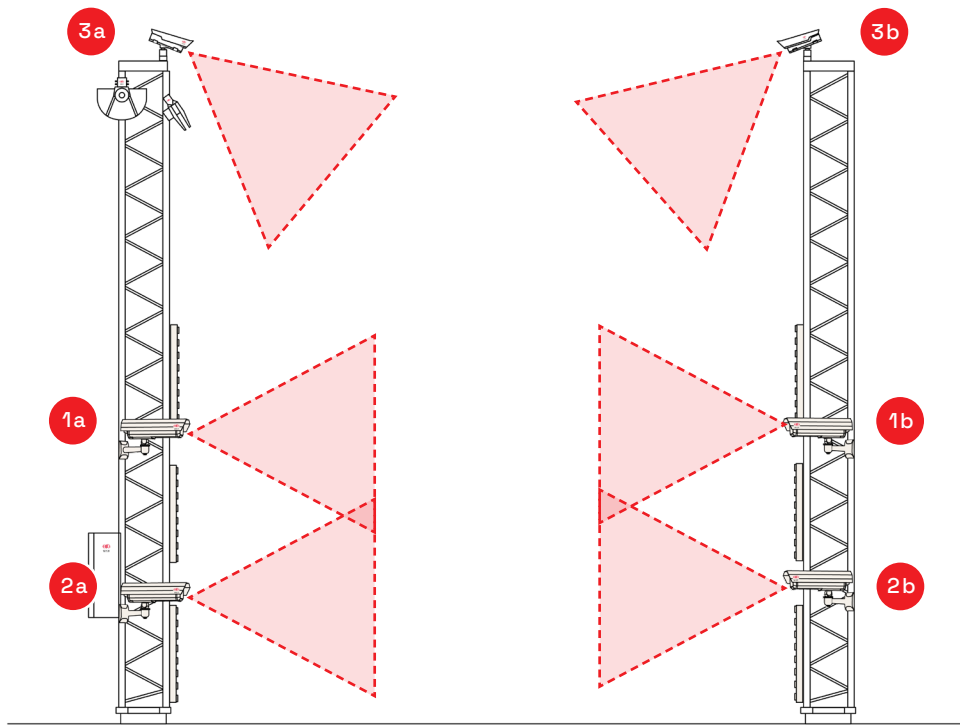
YOUR SYSTEMS

TOS

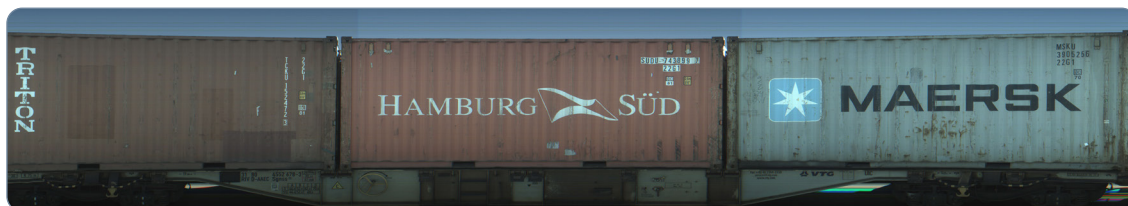
**Trains keep moving.
Inspections move
to the office.**

What the rail portal sees

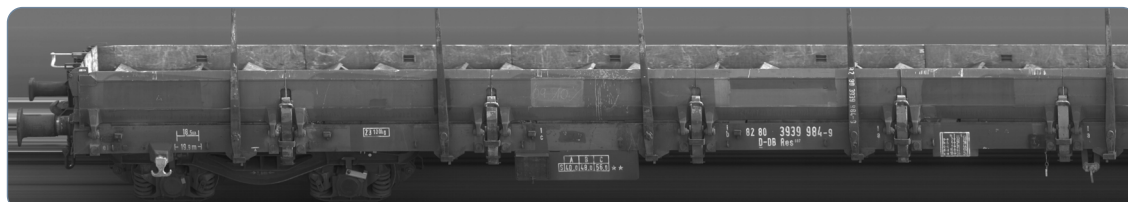
Cameras on both masts image each side of the train as it passes. Wagon and container data are combined into one train list for review.



RAIL OCR PORTAL • FRONT VIEW



1 Container imaging



2 Wagon imaging



3 Imaging from top

RMG OCR replaces manual container checks, so the TOS always knows what was lifted and where it went.

Captured at the crane – shared with TOS

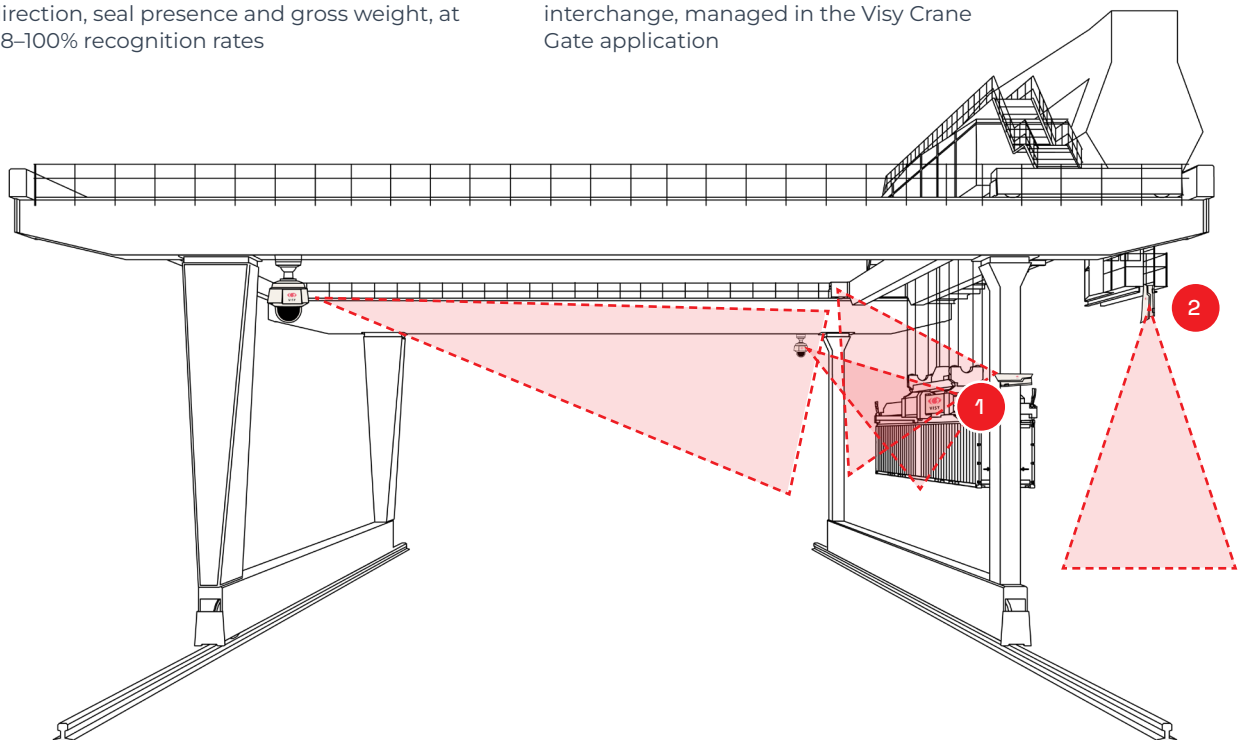
Fixed cameras on the crane legs and beams image the container on every lift. Imaging is triggered based on the status information of the crane and the spreader received from PLC or CCS.



Visy RMG OCR

07

- Container ID, ISO code, IMO/ADR labels, door direction, seal presence and gross weight, at 98–100% recognition rates
- Short and long side imaging at the rail interchange, managed in the Visy Crane Gate application



RMG CRANE • FRONT VIEW



1 Door side and container end imaging



2 Terminal tractor ID recognition

Expand 
Your vision

Every wagon number
and container
position, captured
on arrival.



03 YARD

01
GATE

02
RAIL

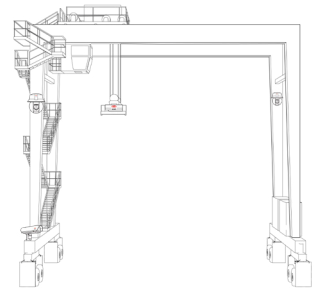
03
YARD

04
QUAY

CONTAINER HANDLING • YARD

Get every move and stack position right

Identify containers on yard cranes and handling equipment, prevent lift errors and keep stack positions accurate in the TOS.



RTG CRANE



Visy TopView for reach stackers and top handlers

09

- Reads the container ID from the roof and long side with cameras on the spreader
- Two cameras pointing down on the container ends and one towards the approaching long side



Visy TopView for side handlers

10

- Two PTZ cameras pointing towards the container roof to capture IDs



Visy RTG OCR

11

- Reads the container ID on every lift, on any RTG make and model, new or retrofit
- The ID is shared with the Position Detection System, which confirms where the box lands and updates the TOS
- Options: TopView, long-side imaging for ISO codes and IMO labels, terminal tractor recognition by OCR or RFID
- Twistlock detection stops the task through the crane control system when locks are mistakenly left on

SOFTWARE AND DATA FLOW

Every lift is confirmed by ID and position before the TOS is updated.

CAPTURED ON THE LIFT

CONFIRMED WITH

UPDATED

RTG OCR

TopView

Twistlock
detection



RTLS

PLC

CCS

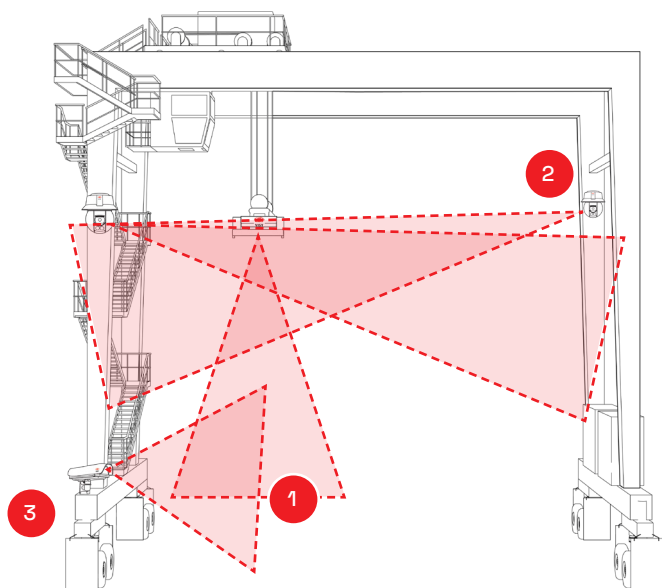


TOS stack position

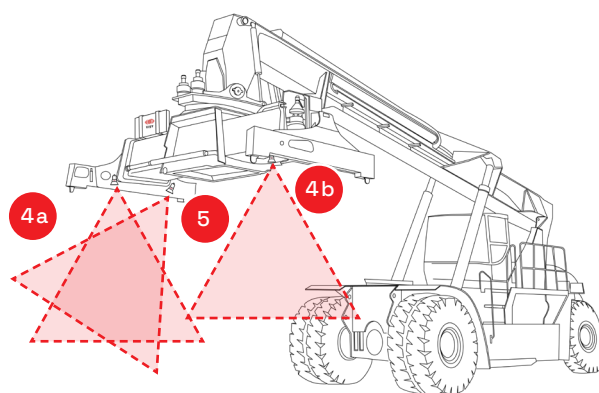
An inventory that matches the yard.

What the cameras see

Cameras on both RTG legs image the container sides on every lift. TopView can be inserted to cover container roof imaging.



RTG CRANE • FRONT VIEW



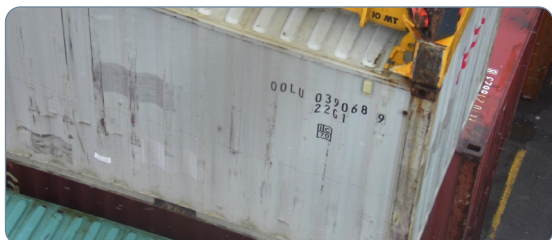
REACH STACKER • FRONT VIEW



1 TopView event image



4 Container ID from the roof



2 Longside imaging



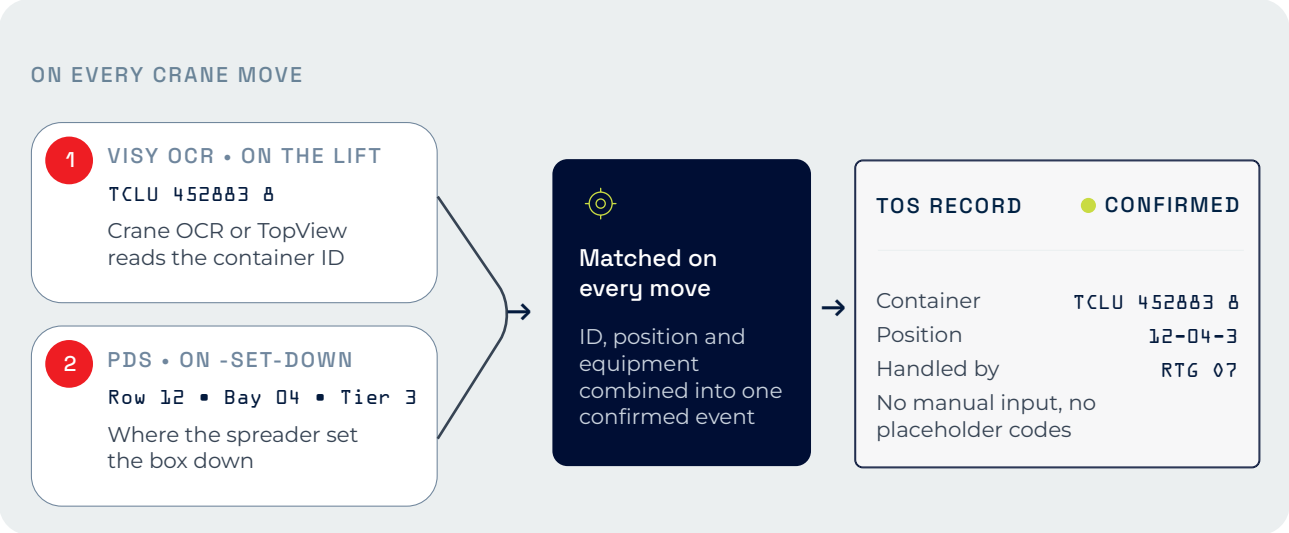
5 Container ID from the side



3 Twistlock detection

Position and identity, confirmed together

A Position Detection System (PDS) knows where a spreader set a box down, but not for certain which container it is. Visy OCR adds the verified container ID to every lift, so each position in your TOS is confirmed by both location and identity.



POSITION DATA ALONE	POSITION CONFIRMED WITH OCR
GPS-based system inaccurately picks the wrong box from a trailer carrying 2×20ft	The ID read on the lift shows which of the two containers was handled
Placeholder codes created for containers that shouldn't have been there (ghosts)	Every container is recorded under its real ID
A location shows a container that is not there, or one with wrong ID	Errors are corrected as containers are handled, instead of being found later in costly audits

WHAT CHANGES IN THE YARD			
Fewer wasted moves and rehandles	No ghost containers or inventory errors	Higher equipment utilization and lifts per hour	Faster vessel turnaround

A red container truck is positioned in a port area. A large blue crane, with 'ELME' and 'GRS-9972' visible on its arm, is lifting a yellow container. The truck's side features a large red container with the ID 'TCNU 4512335' and other markings. The scene is set against a cloudy sky.

Know every
container ID before
starting the move.



04 QUAY

01
GATE

02
RAIL

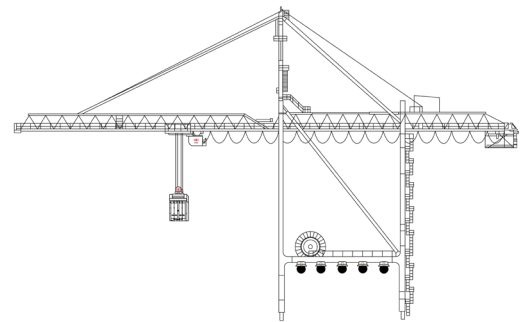
03
YARD

04
QUAY

CONTAINER HANDLING • QUAY

Know what's on the hook

Identify every container during the lift, verify each move against the work order and keep stack positions accurate in the TOS.



STS CRANE



Visy STS Crane OCR

12

- PTZ cameras on the portal beams and legs image each side of every container, with no moving parts on the crane
- Container ID, ISO code, IMDG/ADR labels, seal presence, door direction and weight markings
- Covers single, twin, tandem, quad and tank lifts, plus backreach and platform operations
- Interfaces with the crane PLC and CCS to time each image along the spreader flight path
- Terminal tractor numbers are read with the same cameras



Visy TopView on STS spreaders

12

- Reads the container ID from the roof as soon as the twistlocks engage
- Checks the ID against the work order and shares it with the TOS in real time
- Prevents false lifts
- Captures a full roof image that can support damage claims
- Feeds early ID verification to the Visy Crane Gate Wharf apps to enable loading instructions

FROM THE CRANE



SOFTWARE AND DATA FLOW

Visy Wharf apps run on the same TOS integration as Visy Crane Gate.

CAPTURED ON THE LIFT

STS Crane OCR

TopView

TT number
recognition



VISY APPLICATION

Visy Crane Gate

Visy Wharf apps



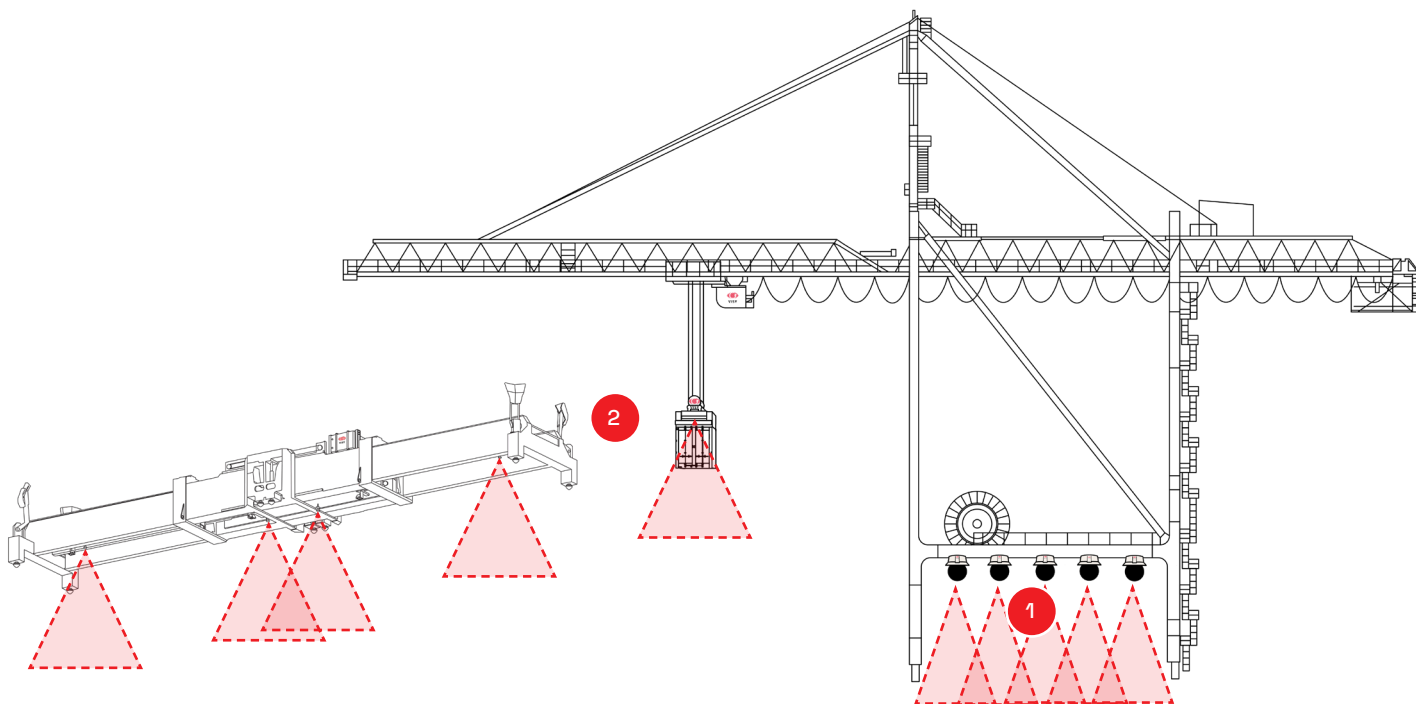
UPDATED

TOS

**Every box
confirmed at the
crane.**

What is captured from the box

PTZ cameras under the portal beam image the container sides as each box passes through the portal. TopView cameras on the spreader read the roof during the lift.



SPREADER • TOPVIEW

STS CRANE • FROM SIDE

01
GATE02
RAIL

03

04
QUAY

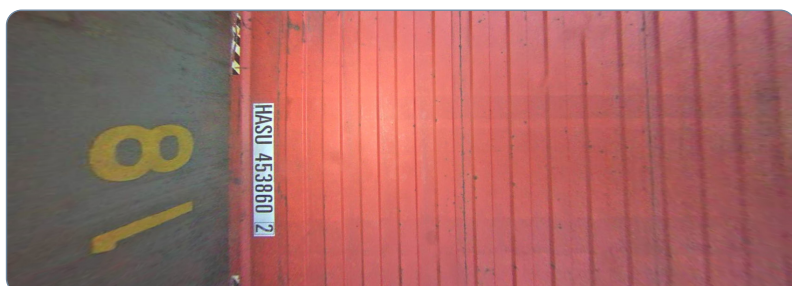
1 Container sides

Complete long side captured for damage claims



1 Door side

Seal presence is checked and other information is captured

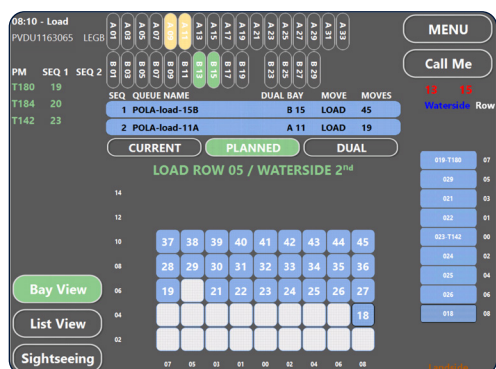


2 ID from the roof

Read from the spreader on every lift

One live workflow from cab to office

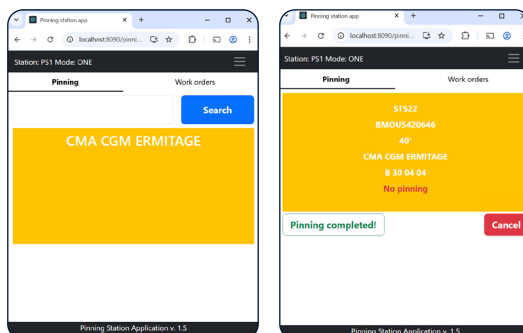
Visy Crane Gate already exchanges data with your TOS. We built the Wharf App suite on that integration, so crane operators, lashers and coordinators work from the same live information, in one shared workflow.



IN THE CRANE CAB

Wharf App

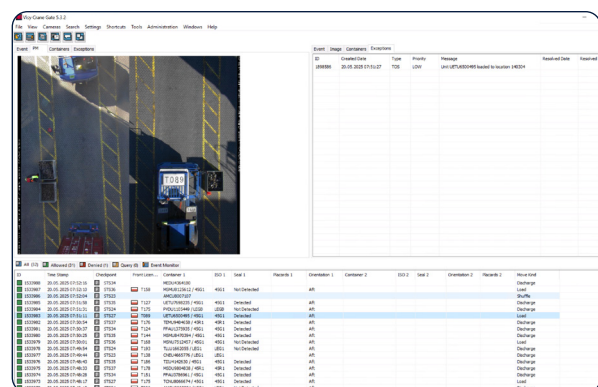
- Loading instructions on screen and as audio
- Containers not planned for discharge are flagged, eliminating false lifts
- Completed moves confirmed back to the TOS automatically



ON THE QUAY

Pinning App

- Precise twistlock instructions, with lock types and destination
- Container data retrieved automatically from the TOS
- Tied to the terminal tractor's task and its containers



IN THE OFFICE

Wharf Dispatcher View

- Loading sequences managed from one interface
- Every terminal tractor visible in real time
- Event images checked on the spot, exceptions handled immediately



Visy Crane Gate

Every app runs on the same TOS integration, so the cab, quay and office share one source of truth for live instructions and moves.



TOS





CASE STUDY

Baltic Hub

Wharf optimization with STS Crane OCR, TopView and Visy Crane Gate Wharf apps. The whole container journey between quay and vessel is now digitized.



Better visibility for the people who keep the quay in motion.



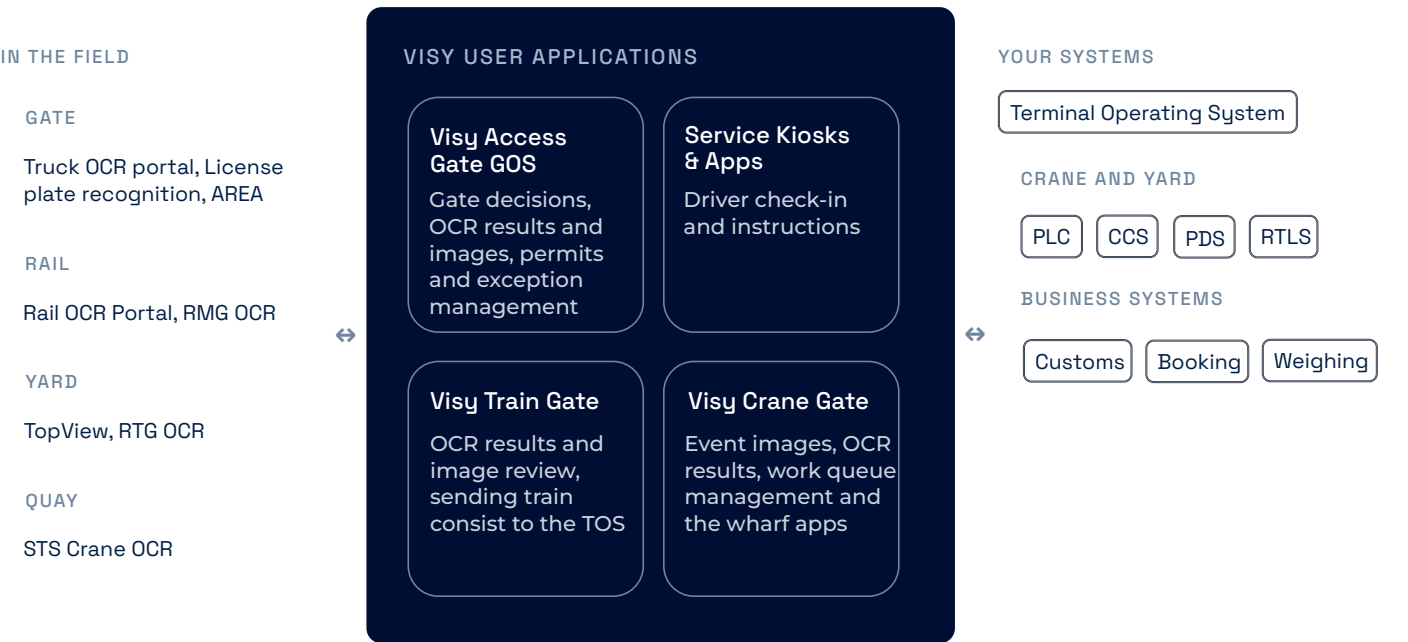
Expand 
Your vision

Where each system fits

		GATE	RAIL	YARD	QUAY
	Visy Access Gate GOS	● Gate lanes			
	Visy Gate Kiosks	● Gate lanes			
	Visy Truck OCR Portal	● Gate lanes			○ Quay lanes
	Visy ADDS 2.0	● Truck portal	● Rail portal		● STS OCR Quay portal
	Visy AREA	● Gate handover		● Yard tracking	
	Visy Rail OCR Portal		● Rail tracks		
	Visy Train Gate		● Rail operations		
	Visy RMG OCR		● Rail interchange		
	Visy RTG OCR			● RTG, ASC	
	Visy STS OCR				● STS
	Visy TopView		● RMG spreader	● RTG, reach stacker, top picks	● STS spreader ◇ Mobile harbor crane
	Visy Crane Gate		● RMG at rail		● Crane operations Wharf Apps
● Standard setup ○ Alternative setup ◇ In testing					

Integrated with the systems you already run

One platform holds the images, events and recognition data for every zone.



Start where it matters most

No need to automate everything at once. Start with your biggest bottleneck and build from there.



Want trucks through the gate faster?

Start with Visy Access Gate GOS, Gate Kiosks and Truck OCR Portals.



Want proof of container condition?

Add ADDS 2.0 to any Visy OCR system: gate, rail, yard or quay.



Want to stop lift errors in the yard?

Start with TopView on your spreaders.



Want train data without walking the track?

Start with the Rail OCR Portal and Train Gate.



Running mobile harbour cranes?

Capture container data at the quay with TopView or with Truck OCR Portals.



Want the quayside team to work with one plan?

Extend Crane OCR and TopView with the Wharf App suite, giving operators full control and visibility at the quay.

A partner for the long run



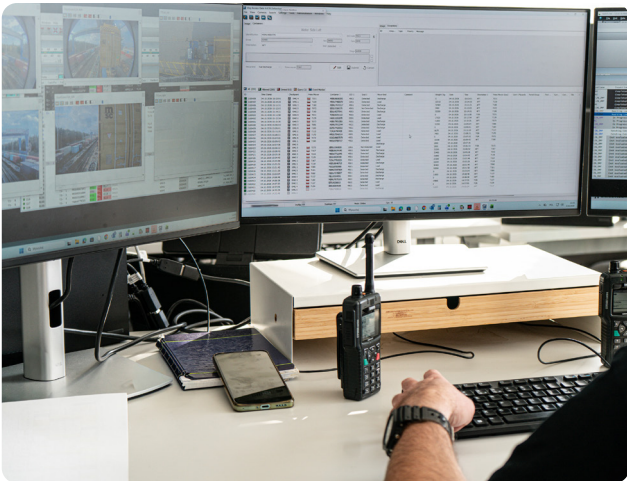
∞ Evolving together since 1994

We have developed and delivered vision systems for ports, terminals and industrial sites for three decades.



⬡ Developed in-house

Recognition software, equipment and user applications are developed by Visy. One team answers for the whole system.



⚙️ Support and maintenance

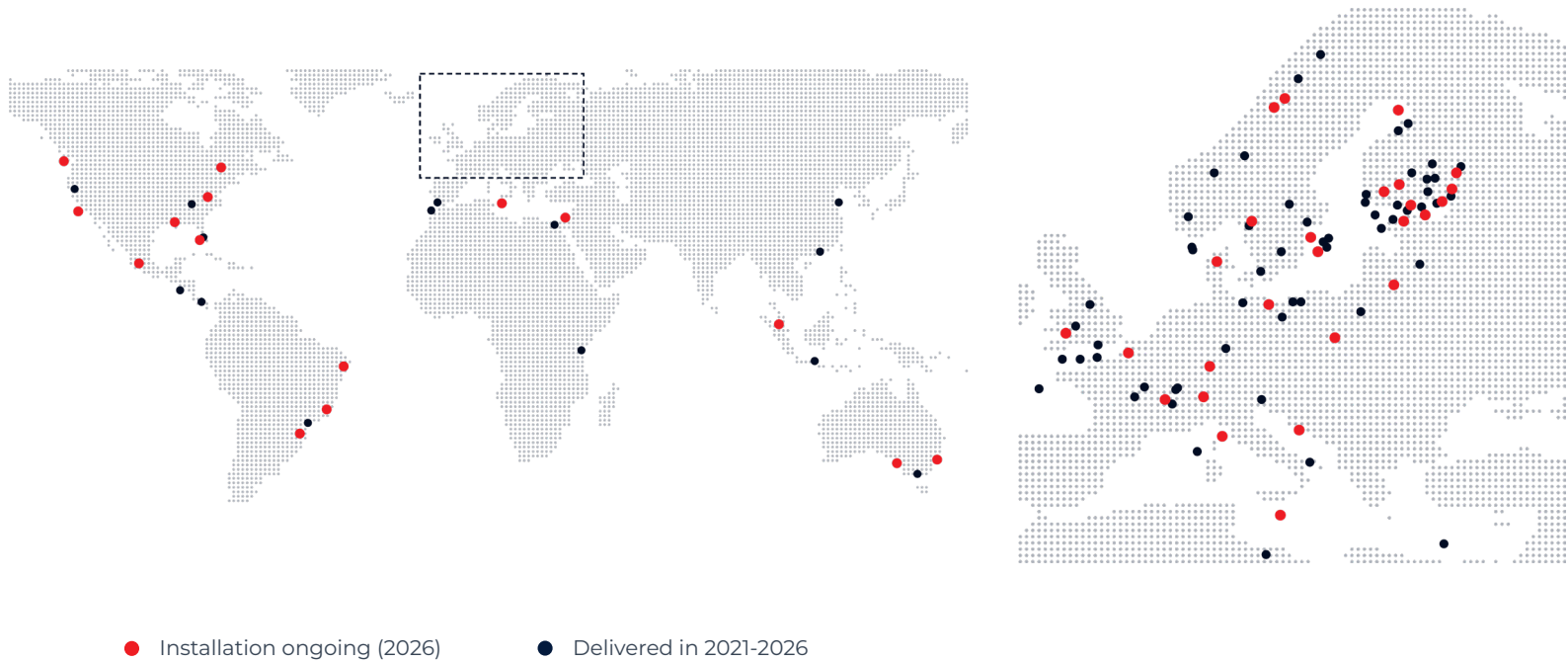
Our support team and helpdesk keep systems running after go-live, for the full lifecycle of the installation.



🌐 Local in 30+ countries

We deliver through our own team and trusted integrator and sales partners.

Covering every region



SELECTED CUSTOMERS



Trusted by terminals worldwide



“After implementing the Visy Access Gate GOS, Port of Cork has experienced improved terminal performance, reduced truck waiting times, and above all, more satisfied customers.”

PORT OF CORK, IRELAND

Visy Access Gate GOS
Visy Truck OCR Portals

Baltic Hub

Wharf Optimization with STS Crane OCR, TopView and Visy Crane Gate Wharf apps.

STS Crane OCR • TopView • Visy Crane Gate



FULLY AUTOMATED CONTAINER
TERMINAL • QUAY

12%

moves per hour increase with a
single crane, using Visy Crane OCR.



RORO TERMINAL • GATE

25%

shorter ship loading time, using
real-time trailer location data from
Visy AREA.



RAIL TERMINAL • RAIL

8.6%

Higher wagon throughput: After
go-live with Visy Rail OCR portals,
Nuremberg set a new monthly
record of 38,000 wagons, compared
with a typical 35,000 per site.



Every container you handle carries more than cargo.

Clean, verified container handling data drives better decisions. When your operations run on it, your business becomes more predictable, scalable and profitable.

Expand ●
Your vision

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Tell us what you want to automate

Our experts will review your operation and
suggest a setup that fits it.



www.visy.fi • sales@visy.fi

Expand 
Your vision