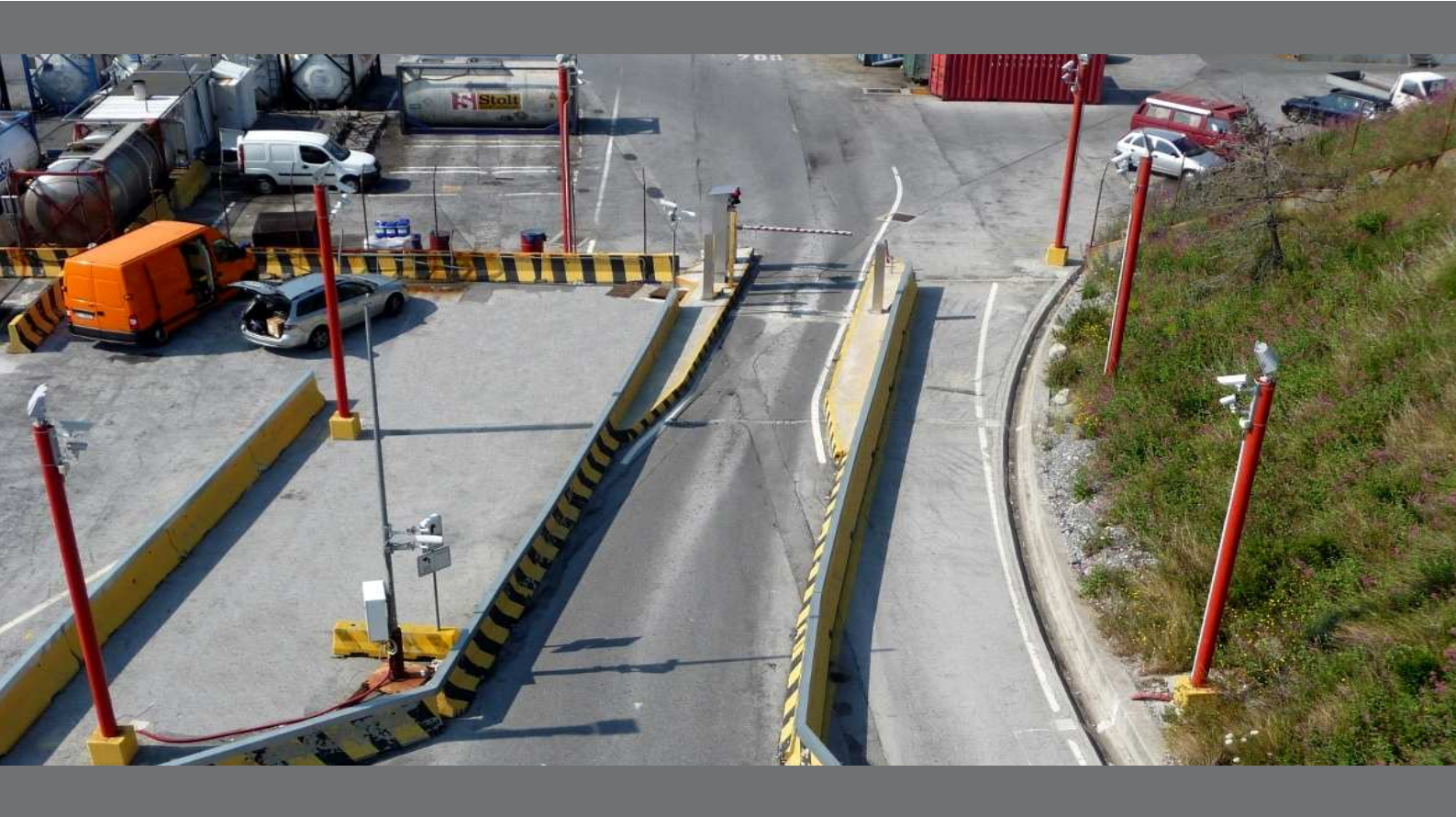


## Case Study

### Reefer Terminal – Port of Savona-Vado

#### TECHNOLOGIES FOR THE DAMAGE CHECK OF CONTAINERS IN TRANSIT AT THE ENTRANCE GATE

The Aitek solution employs software modules for acquiring images of the visible surfaces of the containers, thus allowing structural damage to containers to be detected before access to the Reefer terminal. The system simplifies container inspection procedures: in case of complaints, checks can be immediately performed by viewing the recordings associated with the transits.



**Ricerca transiti:**

Da:  ore:

A:  ore:

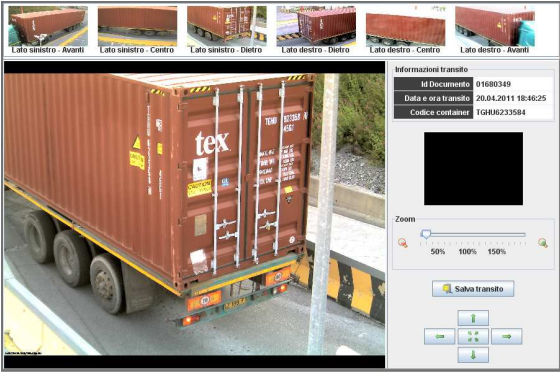
Codice Transito:

Codice Container:

Filtro transiti: Tutti i transiti Solo ortari

Transiti 35.454 risultati visualizzati da 1 a 5 (Prima/Precedente) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 (Successive/Ultimo)

ID TRANSITO	CODICE TRANSITO	CODICE CONTAINER	DATA TRANSITO	FOTO	ASSOCIA DOCUMENTO
97917	01680601	FSCU9544730	21/04/2011 alle 09:28:39		
97916	01680673	CMCU4907715	21/04/2011 alle 09:18:19		
97915	01680668	GESU9495234	21/04/2011 alle 09:07:28		
97914	01680669	SUCU9504263	21/04/2011 alle 09:01:54		
97913	01680660	ZCSU7003721	21/04/2011 alle 08:36:07		



## Check for structural damage to containers

The solution developed by Aitek for the Reefer Terminal of the Port of Savona-Vado associates transits with a set of high-definition images of the visible surfaces of each container, therefore allowing to detect possible damage to containers before they access the entrance gate.

A total of 6 high-resolution (Megapixel) video cameras have been installed, conveniently placed to acquire images of the visible surfaces of containers in transit.

When an incoming vehicle occupies the gate, the vehicle driver is asked to present identification. The gate controller waits for an identification code of the transit documentation to be acquired, either by bar code reader or by manual input of the code via keyboard by the driver.

During such procedures the system acquires the high-resolution images and associates the shipment data with the transit data, storing them in a database. After completing the identification and scanning processes, the system grants access to the terminal.

The data for each transit (date, time, gate identifier, container ISO code, images of the container surfaces) are stored in a database, which can be accessed by any online workstation via

a dedicated web interface.

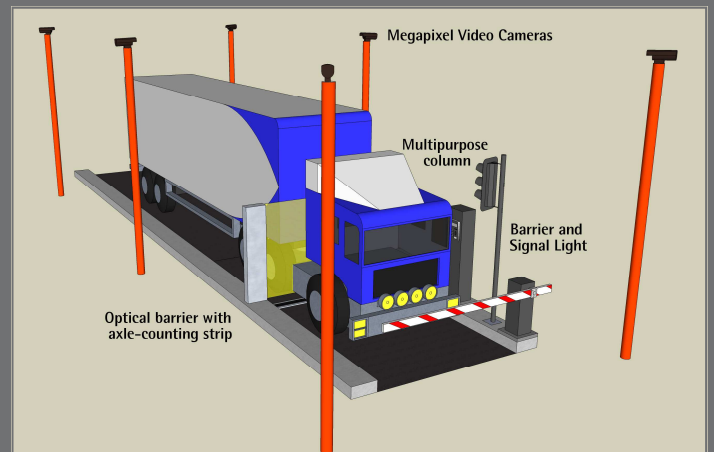
In case structural damage to a container is detected, the state of the container when it entered the gate can be verified simply by checking the stored data and images, thus allowing to quickly settle complaints.

### **Fully-automated procedure for transit management:**

1. Gate with red signal light and lowered barrier
2. The gate is occupied by the incoming vehicle: the transit procedure begins
3. The driver presents identification to the reader on the multipurpose column
4. The system searches the database for the shipment data
5. Acquisition of images of the container surfaces
6. The system associates the shipment data with the transit data and it stores them in the database
7. The system authorizes the transit: the signal light turns green and the barrier is raised
8. The vehicle leaves the gate

## Features

- Barrier and signal light for transit control
- Optical barrier with axle-counting strip for transit detection
- Multipurpose column with optical document reader, display for sending messages to the users, intercom for audio communication
- 6 megapixel video cameras for front, side and rear scans of containers up to 40'
- A device for video camera management
- A gate controller for transit data management



## About Aitek

Aitek is a leading company in the design and implementation of innovative technological solutions.

It designs and implements intelligent systems for transportation and traffic, video surveillance for security, digital signage for communications.

Since 1986 Aitek has consolidated its presence on national and international markets thanks to its continuing partnership with leading companies and its constant attention to technological evolution. Aitek is one of the few Italian companies to have been awarded by the European Union the prestigious IST Prize for technological production.

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