



# Login TVV: Automated Container Code Recognition

AI-Powered OCR on Mobile Machinery for Customs Integration

## CHALLENGE

Container terminals in Brazil require strict compliance with customs regulations and efficient logistics workflows. Traditionally, containers are identified at gate checkpoints, creating bottlenecks, manual processes, and higher operational costs.

Login TVV aimed to automate container code registration directly on **Reach Stacker** mobile machinery, eliminating the need for gate identification. The challenge was unprecedented: achieving **ISO 6346 OCR code recognition from a constantly moving vehicle** with real-time data capture and accuracy above 99%.

## SOLUTION

The project team designed a solution integrating **MOBOTIX cameras** with the **Vaxtor VaxOCR application**:

- **Real-time OCR Recognition:** Captures container codes in ~900 ms at speeds up to 20 km/h
- **On-Machine Deployment:** System embedded directly in a Login TVV Reach Stacker
- **Enhanced Stability:** Connectivity modules and sensors ensure consistent performance in port conditions
- **Customs Integration:** Captured data flows automatically to the Brazilian Customs “API Recintos”, eliminating manual intervention

Key Data

### Industry

Port Operations / Customs / Logistics

### Customer

Login TVV (Terminal de Vila Velha)

### Location

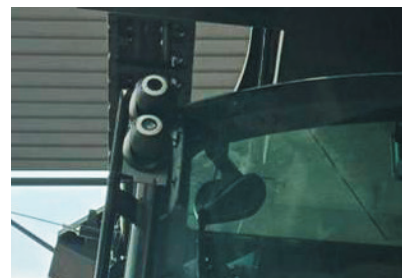
Vila Velha, Espírito Santo, Brazil

### Partners

Mantis Tecnologia & ALCA  
NETWORK (Exclusive MOBOTIX  
Distributor in Brazil)

### Products

MOBOTIX Camera with Certified  
Vaxtor Container Code  
Recognition (VaxOCR)



## BENEFITS

- **Unprecedented Automation:** OCR embedded in mobile machinery eliminates gate queues and checkpoints
- **Operational Efficiency:** Reduces costs and speeds up workflows by integrating directly with customs systems
- **Regulatory Compliance:** Delivers the precision and speed required by the Receita Federal (**Brazilian Customs**)
- **Confidence & Reliability:** Builds trust among clients, investors, and port authorities
- **Scalable Innovation:** First of its kind in Brazil, with potential expansion to other terminals

## IMPLEMENTATION AND OUTLOOK

- **Timeline:** Project initiated in 2022 with Mantis Tecnologia; finalized in 2025 after extensive testing and validation.
- **Support:** ALCA NETWORK provided technical expertise, equipment homologation, and product validation.
- **Challenges Overcome:** Reliable OCR from a moving vehicle was achieved through hardware/software fine-tuning and the robustness of MOBOTIX technology combined with Vaxtor intelligence.

## FUTURE OUTLOOK

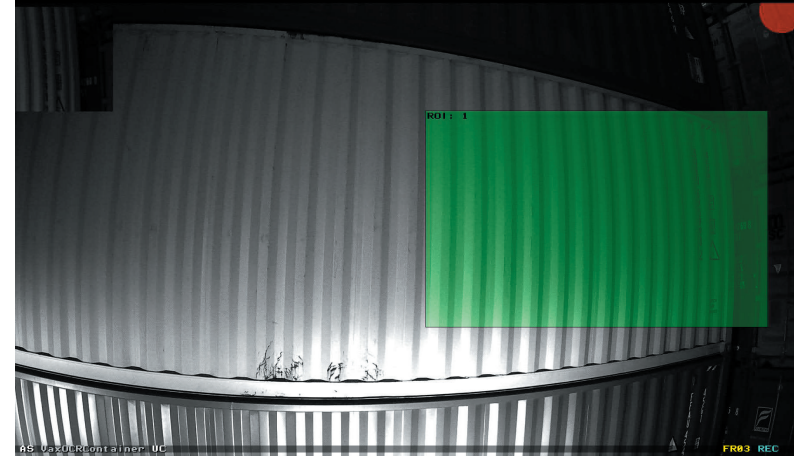
Currently undergoing final homologation with Brazilian Customs, the solution will soon be scalable to additional machinery and terminals. This case sets a new benchmark for **automation in the Brazilian port and customs sector**, positioning MOBOTIX as a trusted innovator and Mantis Tecnologia as a pioneering integrator.







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