



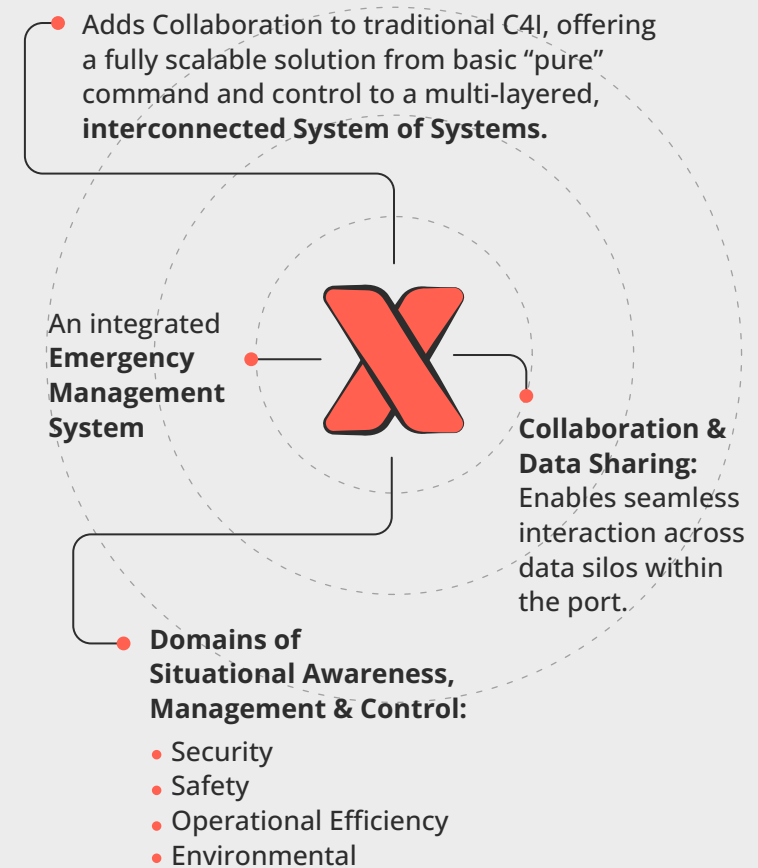
MAGAL
SOLUTIONS
Integrate to Innovate

Seaport Solutions



Seaport Solutions

Best-of-breed C5I system and an integration platform:



Security-Related Features

Landside Security

Unified Control Centers:

Unified Management of landside and seaside security awareness from a single platform.

Landside Security:

- Access control for pedestrians, trucks, vehicles & rail.
- Advanced perimeter security with multiple sensors
 - Fence sensors (various types)
 - Daylight/Night sensors
 - Radars
 - Drones & counter drones measures

Visitor Screening:

Identify risks in truck drivers, vessel crews, and contractors.

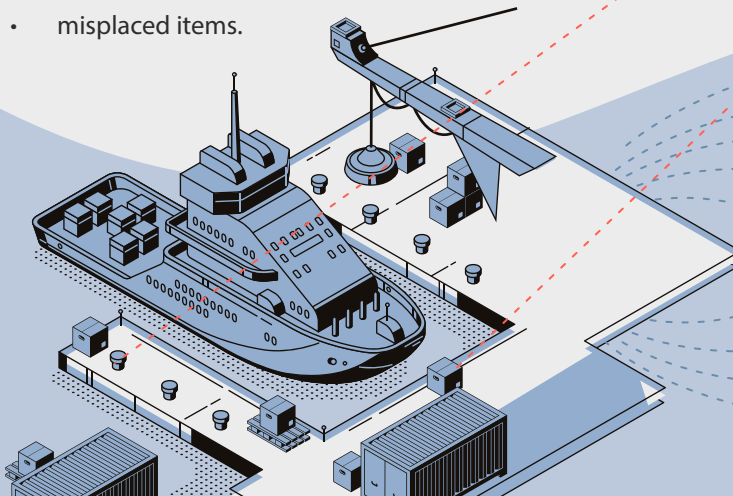
Real-Time Security Video Analytics:

- Detects firearms
- intrusions
- movement
- misplaced items.

Seaside Security

Seaside & Waterways Security:

- Integration with VTS/VTMS for awareness of authorized maritime traffic
- Underwater diver and UUVs detection
- Sensors and video analytics to detect unauthorized maritime traffic/ intrusion/ floating debris
- Underwater fences & gates for maritime access control
- Remotely piloted submersibles with various sensors



HSE Benefits

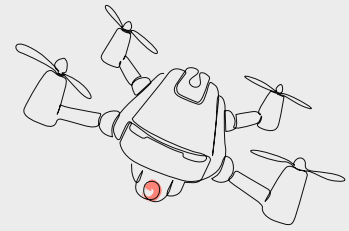
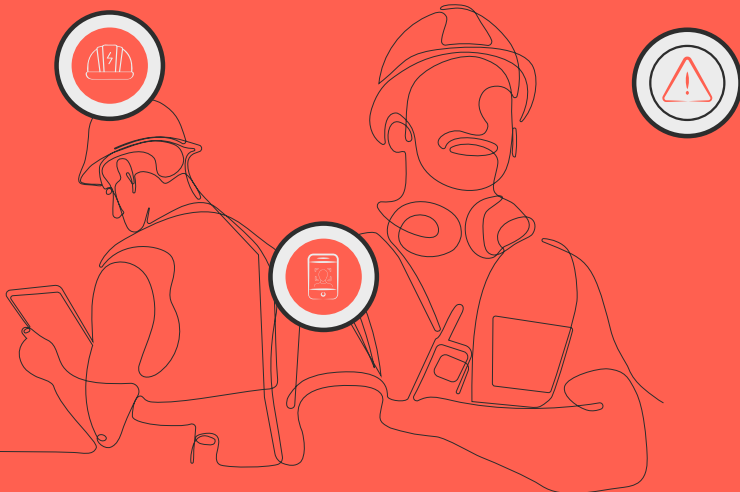
Safety Management Tools

Streamlined integration with safety systems and applications:

- Cellular-based Permit to Work system.
- Shift "hand-over" management.
- Hazardous material management
- Task-specific safety training
- Cellular based Virtual SOS and hazard reporting.

Environmental Monitoring:

Integrates with environmental air & water pollution detection systems & sensors.



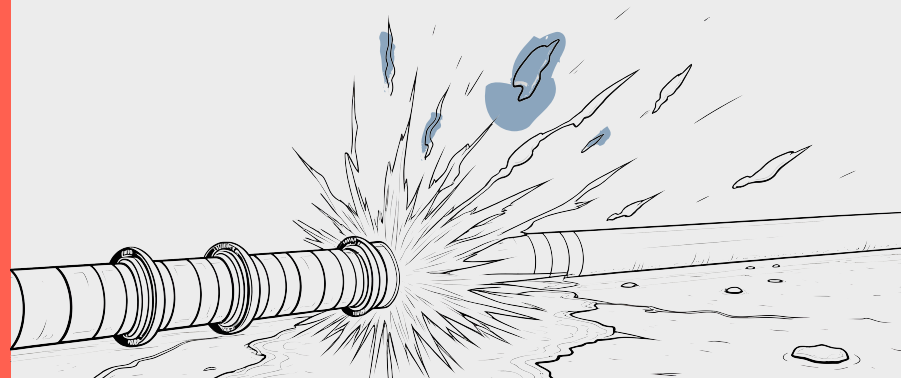
Real-Time Hazard Detection & Drone Inspections

Real-Time Safety Video Analytics:

- PPE compliance
- "Man-down" alert
- Cross-traffic driving
- Smoke & fire detection
- Potential hazard detection

Multi-spectral inspections by Drones:

- Structural cracks
- Leakage from pipelines
- Abnormal emission detection
- Oil spills
- Vegetation overgrowth
- Overheating and temperature variations



Operational Efficiency Benefits

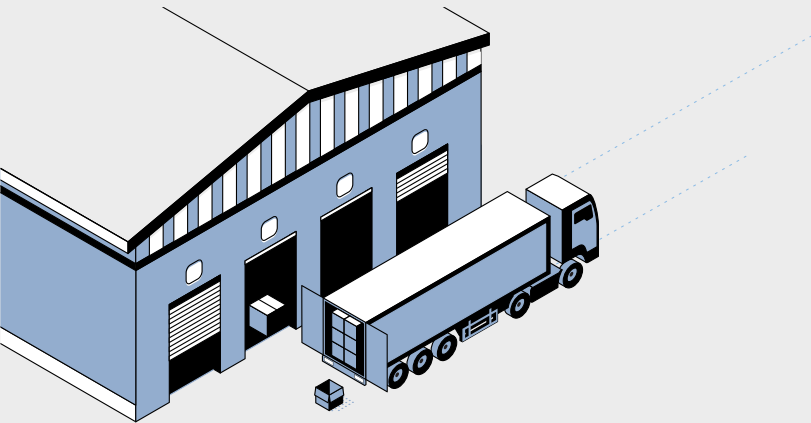
Traffic Free-Flow & Asset Utilization

Traffic Free Flow & Cargo Throughput Increase:

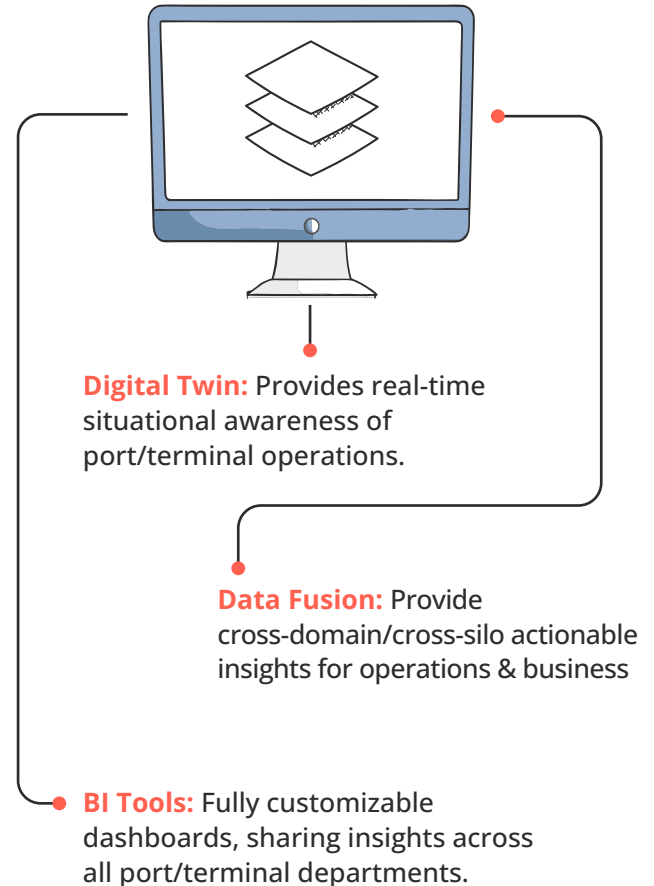
- Automated Gate Systems (AGS)
- Gates Operating System (GOS)
- Vehicle booking system
- Vehicle tracking systems (within the port)

Asset Management & Utilization:

Tracking of cargo handling equipment (CHE) and vehicles enables Big Data analysis to optimize operational processes



Insights & Digital Twin Integration



Emergency Management



Centralized Incident Management:

All systems integrated into a unified view.



Data Fusion:

Unified security, safety, and environmental data for faster response.



Critical Data Sharing:

Provides cross-organizational situational awareness.



Collaboration:

coordinate with external stakeholders & entities



Messaging system:

for cellular based site-wide alerts.



Evacuation Plans:

Supports dynamic mustering via cellular communication.

