



Selex ES

A Finmeccanica Company

A technology partner for the Turkish market

The Integrated Port - a comprehensive approach

Genoa, 20th September 2013



Finmeccanica today

HELICOPTERS

AgustaWestland
AgustaWestland Tilt-Rotor
Company
NHIndustries

Revenues
EUR 4,243 mil.

Workforce
13,050



DEFENCE AND SECURITY ELECTRONICS

DRS Technologies
Selex ES

Revenues
EUR 5,754 mil.

Workforce
25,183



AERONAUTICS

Alenia Aermacchi
SuperJet International
ATR
Eurofighter GmbH

Revenues
EUR 2,974 mil.

Workforce
11,708



SPACE

Telespazio
Thales Alenia Space

Revenues
EUR 1,053 mil.

Workforce
4,131



DEFENCE SYSTEMS

Oto Melara
WASS
MBDA

Revenues
EUR 1,256 mil.

Workforce
3,963



ENERGY

Ansaldo Energia*

Revenues
EUR 715 mil.

Workforce
1,830



TRANSPORTATION

AnsaldoBreda
Ansaldo STS
BredaMenarinibus

Revenues
EUR 1,719 mil.

Workforce
6,568



Revenues and Workforce for business sector
at 31 March 2012

(*) In 2011 Finmeccanica sold 45% of the share capital of the Ansaldo Energia. As a result of this sale, Ansaldo Energia Holding and its subsidiaries have been consolidated on a proportional basis as of the transaction date.

Owned company

Joint venture

Key facts

- 17,700 people
- Revenues in excess of 3.5 billion Euros
- More than 12% of investment in R&D
- 70% engineers and personnel with technical qualifications
- Worldwide industrial footprint



Our divisions



Airborne and Space Systems

- Radar and Advanced Targeting
- Air Systems, Unmanned Systems and Simulators
- Electronic Warfare
- Avionics
- Space Systems
- Support and Service Solutions



Land and Naval Systems

- Naval & Air Defence Systems
- Land & Battlefield Systems
- Optronic Systems
- Defence Communications Systems
- Support & Service Solutions



Security and Smart Systems

- Homeland Security & Critical Infrastructure Protection
- Cyber Security & Information Assurance
- Air & Vessel Traffic Management Systems
- Automation Systems
- ICT & Networking Smart Solutions

Selex ES in Turkey

Selex ES Elektronik Turkey S.A.

- ✦ Established in 1989 as a Joint Venture Company.
- ✦ Fully owned by Selex ES since 2001.
- ✦ Factory in Gölbaşı/Ankara since 1992 occupying a covered area of 5100 m² on a land of total 36.000 m².

Capabilities

- ✦ System Engineering,
- ✦ System Test (In Circuit Tests, Automatic Test Equipment, Environmental Stress Screening)
- ✦ Production (PCB assembly, mechanic installation and test)
- ✦ Product and Hardware design including PCB
- ✦ Software design and development
- ✦ Product support, configuration management, documentation
- ✦ System installation, integration, and put in service



Selex ES Elektronik Turkey has accomplished and has been implementing local and international industrialization programs including design, development, technology transfer, subcontracting, system integration, production, qualification, installation and logistic support.

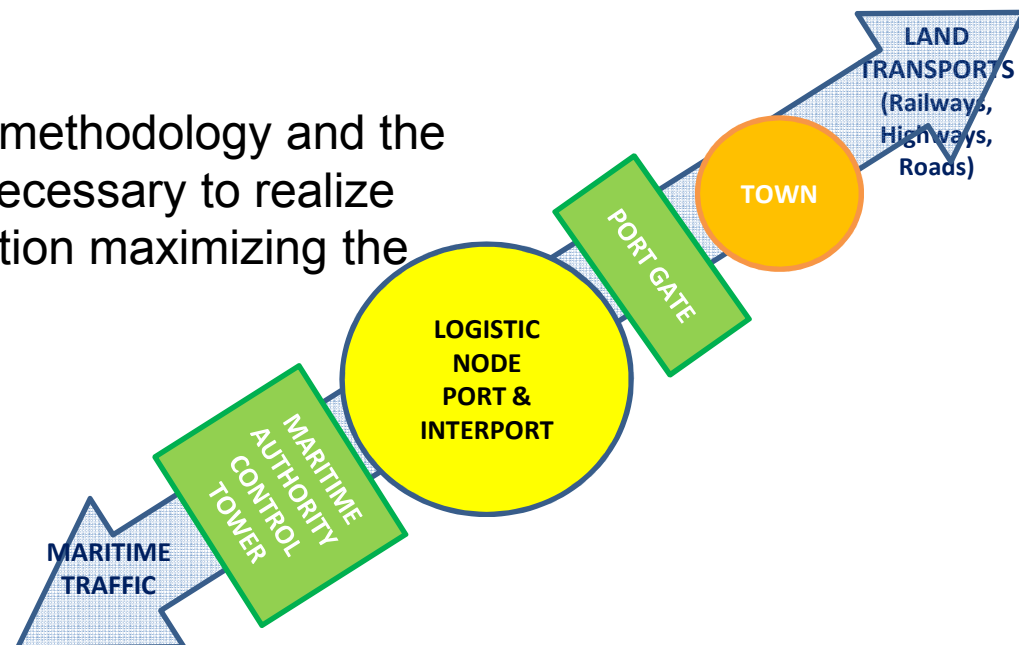


Integrated Port: The Context

✱ An increasing attention is paid today to the problem of operating critical infrastructures -as a commercial Port may be considered- because of the significant implications related both to “**security**” (intentional damages, robberies, terrorism, illegal activities, ...) “**safety**” (prevention of accidents, preserving the health, damages to people and goods, pollution, fault resilience, human errors, ...) and “**management**” of the whole infrastructure.

✱ SELEX ES masters the methodology and the instruments which are necessary to realize an **Integrated Port** solution maximizing the benefits in terms of:

- lower cost
- higher synergy
- better performance
- optimization of spaces



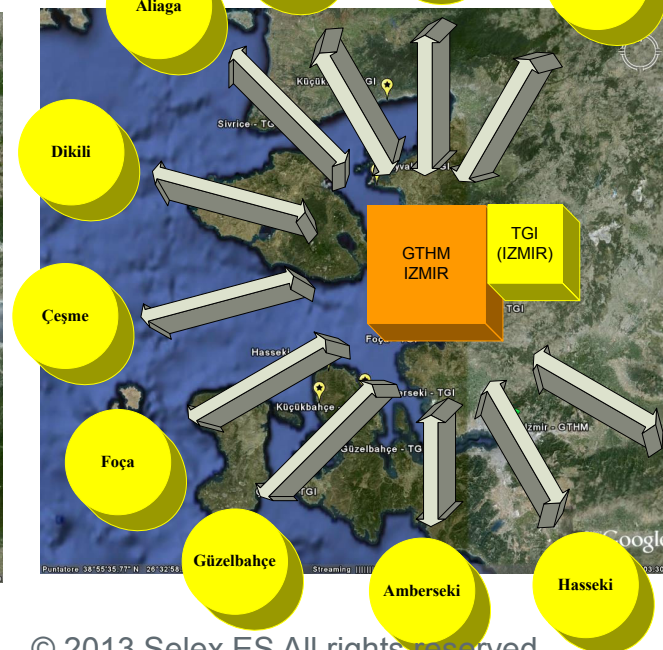
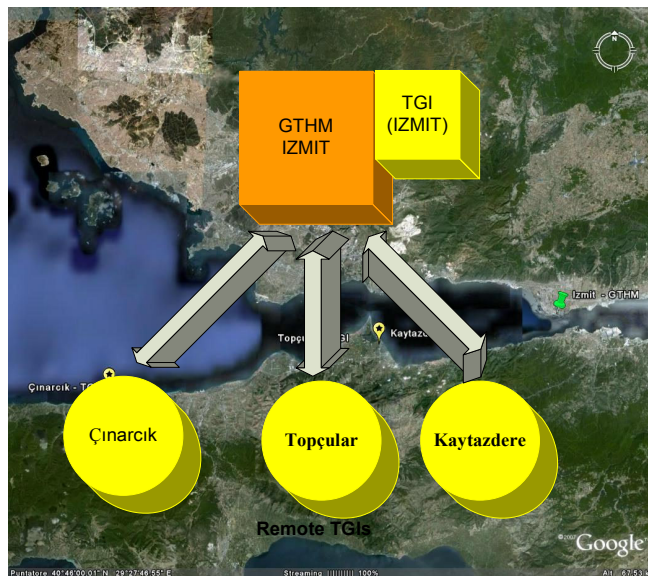
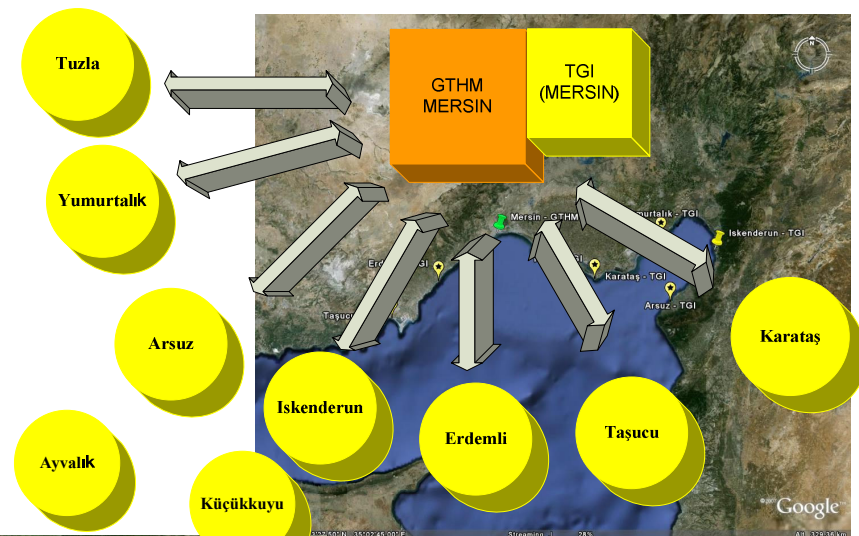
Maritime Domain - Past Performance

SELEX ES has a 50 years experience in providing systems to National Authorities concerned in maritime infrastructures management and their protection from air, sea and land threats. Most recently awarded contracts include:

- the supply of the National Coastal Surveillance System to Italian Navy and
- integrated Vessel Traffic Management System to Italian Coast Guard
- the supply of a National Border Surveillance System to the Polish Border Guard
- the supply of a National Maritime Surveillance System to Yemeni Border Guard
- the design and delivery of Integrated Maritime Surveillance System to Italian MOD
- the design and delivery of National Coastal Surveillance System to Panama
- the supply of National Vessel Traffic Management System (parts) to Turkey
- the supply of Port Management Systems to many Italian Port Authorities
- trials in the framework of NATO Conference regarding defence against terrorism for critical infrastructure
- NATO Harbour Protection Trials 2007/08/10



GTYS Hierarchical Architecture



- 1 Vessel Traffic Management Center (GTYS), located at Ankara
- 3 Vessel Traffic Service Centers (GTSMs), located at Izmir, Izmit and Mersin
- 24 Traffic Observation Stations (TGIs).

Port Logistics – Main References

Selex ES supplied systems and technologies in logistic and transports at two levels:

Main logistics projects:

- **SITMAR** (Security of Maritime Transport), a research project for the industrial innovation within sustainable mobility (EU Industry 2015). Project Coordinator
- **UIRNet Platform** to support truck operators and logistic nodes
- **UIRNet Security** for the security of Italian freight villages
- **SlimPORT** R&D project for the development of an innovative port model in the context of last sea mile-first ground mile
- **MOS 24** for the development of MoS (Motorways of the Sea) along the “Corridor 24” Rotterdam–Genova

Local Projects

- **EDI Service Center**, services to support Electronic Data Interchange
- **e-Port**, system for optimization of goods import/export process
- **Port Security in Genova**, surveillance of Port infrastructures
- **SetFerry**, handling of Ro-Ro Terminal operations
- **Metrocargo**, innovative intermodal rail method
- **Gaia Gate**, security access and embarkment procedures in the Port of Bari
- **Ulisse**, monitoring dangerous goods transport

Main elements in the Port context

Selex ES approach considers a port as a **System of Systems (SoS)**, able to:

- integrate port stakeholders' data and knowledge
- coordinate and plan the usage of port resources
- support the timely introduction of innovative services
- improve the “port as a whole”



Solutions for the Integrated Port

From the capability of providing a total, turn-key solution is also descending the capability to supply any “gap filler” component.

Any solution is conceived applying a general and integrated approach to reach a great advantage in the whole *Maritime Port Operative Cycle* in terms of:

SAFETY

- Port Approach, VTS / VTM, PMIS

SECURITY

- Sea, Land, People, Freight

SERVICES

- VTS, LGS logistic suite, H3.0

SUSTAINABILITY

- VTS, PMIS & “Smart Harbour”



Systems

- Traffic Management: VTS / VTMIS / Port Approach; RIS (river vts)
- Security: Harbour security; Anti piracy; Harbour protection
- Port Management systems for different Operators
- Integrated Port (ePort); Intermodal, Logistic & Transport systems

Main Components

- Operation Control Centers at various levels, complete CONTROL TOWER solutions
- Surveillance sensors (radar, electro-optical, underwater, AIS, perimeter/anti-intrusion, mobile units-autonomous ops)
- Information systems, connection to external systems & data banks, cyber security, IT infrastructure
- Identification systems, access control, cargo/baggage and people inspection systems
- RFID, multi-modal container tracking
- VHF/UHF/HF secure radio communications
- Simulation, logistic support
- Civil works

Product Portfolio



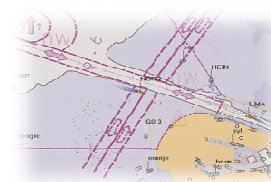
VTS in the Maritime context

Safety at Sea and Traffic Management

- › Improving traffic efficiency
- › Prevention of accidents
- › Support search & rescue (SAR)
- › Environment protection

Security and Law Enforcement

- › Security monitoring for ships, port and other infrastructures
- › Support actions of contrast
- › Fishery control
- › Dangerous cargo monitoring
- › Contrast of illegal immigration, piracy



Complete logistics offer



LGS gate solution:

- rail and road gate automation
- road: licence plates, container codes, damage inspection, dangerous goods panel recognition
- road: pre-gate trucks flow management
- rail: train composition, containers position, container codes identification



LGS hmms platform:

- Arrival and departure administrative procedures
- Vessel movement and status in port area
- Waste & water ballast management
- Berthing plan
- ISPS documents and certification management
- IMO standard compliancy

LGS cargo platform:

- port, dry port & freight village single window
- electronic documents interchange (EDIFACT standard)
- import/export process optimization
- gate access flow efficiency
- advanced appointment management



LGS cities platform:

- Peripheral HUB (freight Village or dry port) information management
- Green vehicles or shuttle trains planning and T&T for transfer to CDU (Urban Distribution Center)



LGS ferry platform:

- multi shipping lines check-in system
- gates, box offices, yard, self check-in operation management
- RORO management
- module for port security (passengers and vehicles access control)



- CDU information and management
- Green Area distribution and services management
- B2B and B2C web portal

Port security – Integrated System & functionalities

WATER

Harbour Protection

- Internal water surveillance
- External water surveillance

LAND

Land Side Security

- Access control (rail, road, people)
- Video surveillance
- Perimetral security

PEOPLE

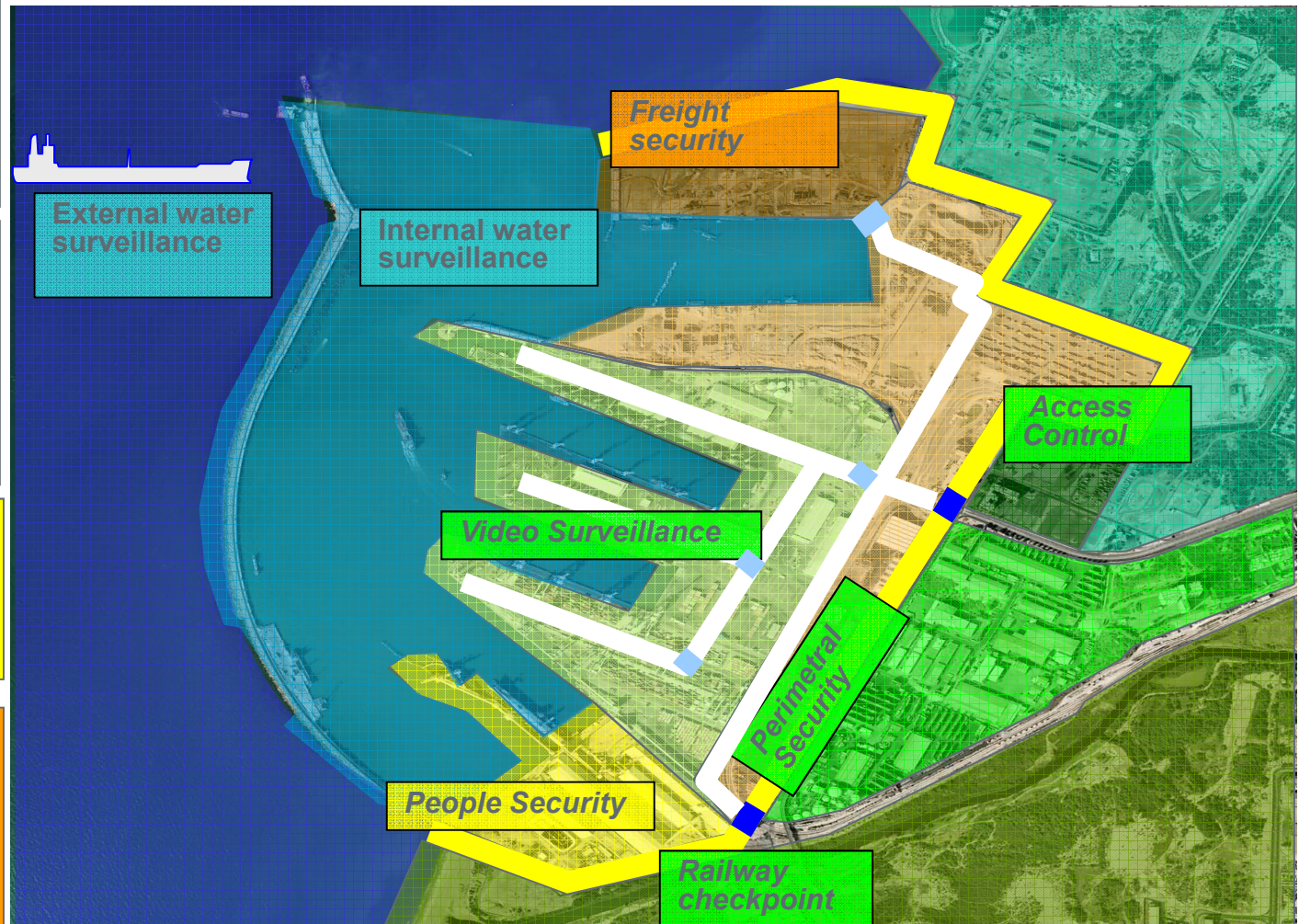
People security

- Profiling People
- Luggage control

FREIGHT

Freight security

- Automatic identification
- Goods inspection
- Container tracking



Port Community System

H3.0 is the logistic node of an intermodal system integrated with maritime and land transportation systems. It strategically integrates within Port Operations planning activities:

- Management of Security and Safety activities
- Economic Management

H3.0 main characteristics are:

- Integration of standalone Port processes
- Optimization of Port and economic processes
- Coordination, visibility and accessibility of Data
- Real time monitoring of Port processes and general supervision by means of a net-centric architecture
- Planning of Port infrastructures future development to reduce and solve bottle necks and inefficiencies

Main actors and immediate beneficiary are maritime Authorities, Port Authorities, Customs Authority and Custom Police, economic Operators such as Shipping Agents, Terminal Operators, Transport Companies



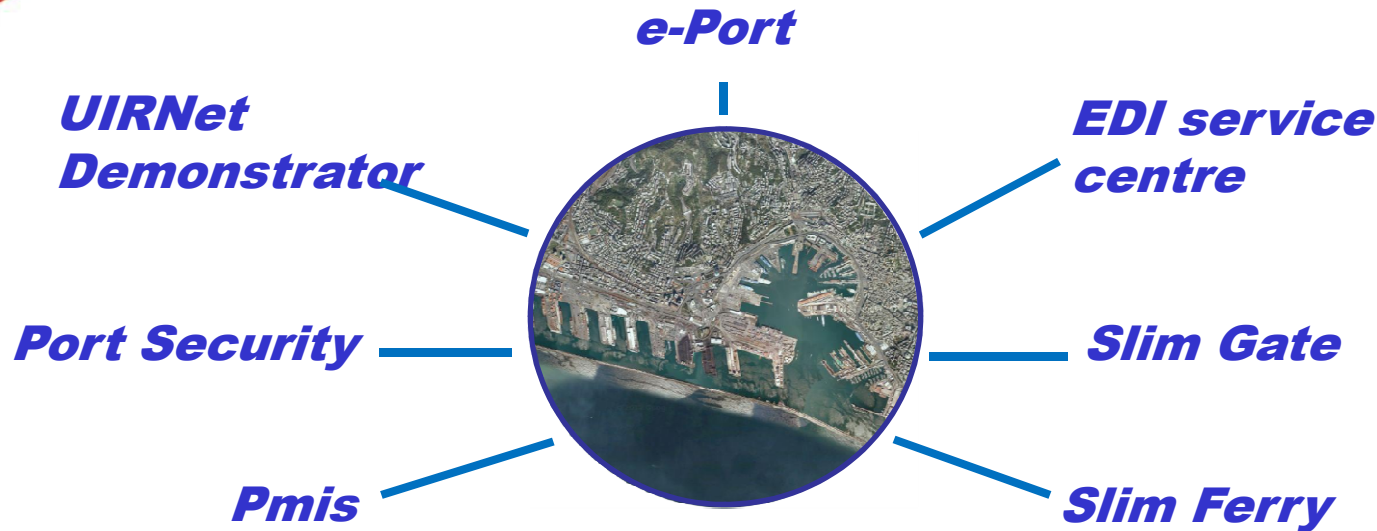
Benefits from H3.0

H3.0 is an **infrastructure** able to supply its users with:

- **SECURITY services:** by means of surveillance and monitoring components (sensors and advanced functionalities), complies with security requirements using systems aimed to identification and real time management of events generated by risky situations, also supporting SAR (Search And Rescue) tasks in case of at sea accidents
- **Document management:** providing paperless management of relevant documentation dealing with ship and port security (e.g. ship and port security plans)
- **Monitoring:** providing an effective mean to relate the in-progress port activity with the relevant security information (e.g. dangerous goods)
- **Reaction and Control:** providing a decision support system able to process an event raised by the Monitoring function and to execute a reaction procedure as a reaction to that event according to security plans.



A success case: Genoa



Success keys:

- Involvement of **all** the operators in the definition of the functionalities of the system
 - User Associations (Terminals, Forwarders, Agents, Truckers)
 - Institutional Bodies (Customs, Port Authority, Border Police)
- Creation of a new culture of "community"
- Mediation and direction of Genoa Port Authority with the modification of the operating rules
- Support, in all the phases, of a team made by Selex ES and local enterprises with specific knowledge and experience in the implementation of ITC systems in the logistic domain

Conclusions

- ✦ Selex ES has extensive knowledge in the maritime domains with experience spanning from port activities and security, transportation logistic up to traffic management and blue border protection
- ✦ Complete line of products with proven interoperability capability
- ✦ Solution-oriented engineering approach, paying special attention to growth capability, use of existing assets and lifecycle effectiveness
- ✦ Integration capability to mix internal products and third party best of breed solutions
- ✦ Synergies arising from Company activities in Defense, Homeland Security and Civil domains
- ✦ Capability to manage large and complex projects with structured methodologies
- ✦ Preferred partnership with Local Companies

