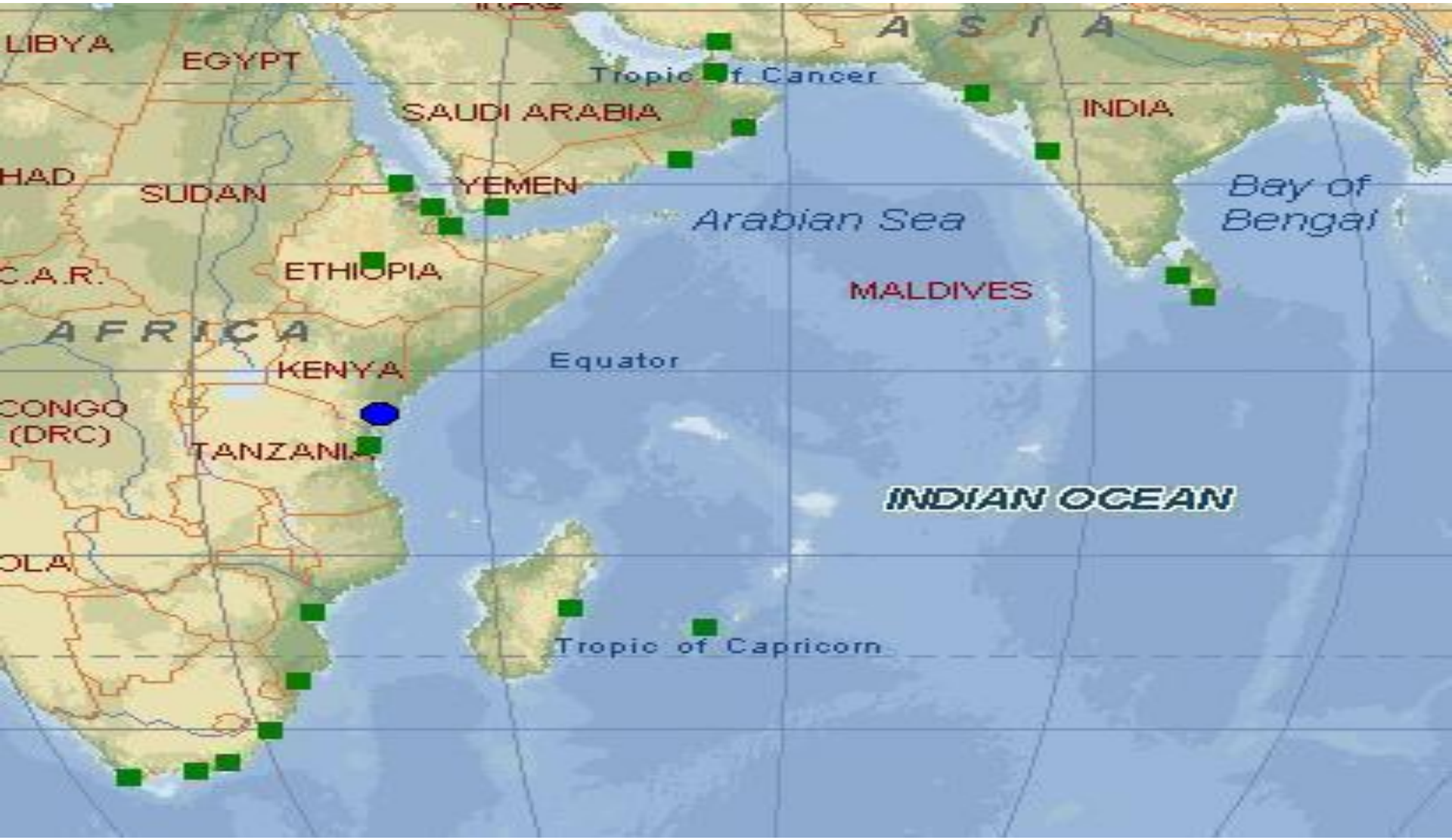
AFRICAN FORUM ON BUSINESS AND SECURITY CONFERENCE; LAICO REGENCY HOTEL, NAIROBI 2012

13th September 2012

A strategic approach towards improving security at the Port of Mombasa- The main international seaport Kenya

Capt. Twalib Khamis

Port of Mombasa: Geographic Position



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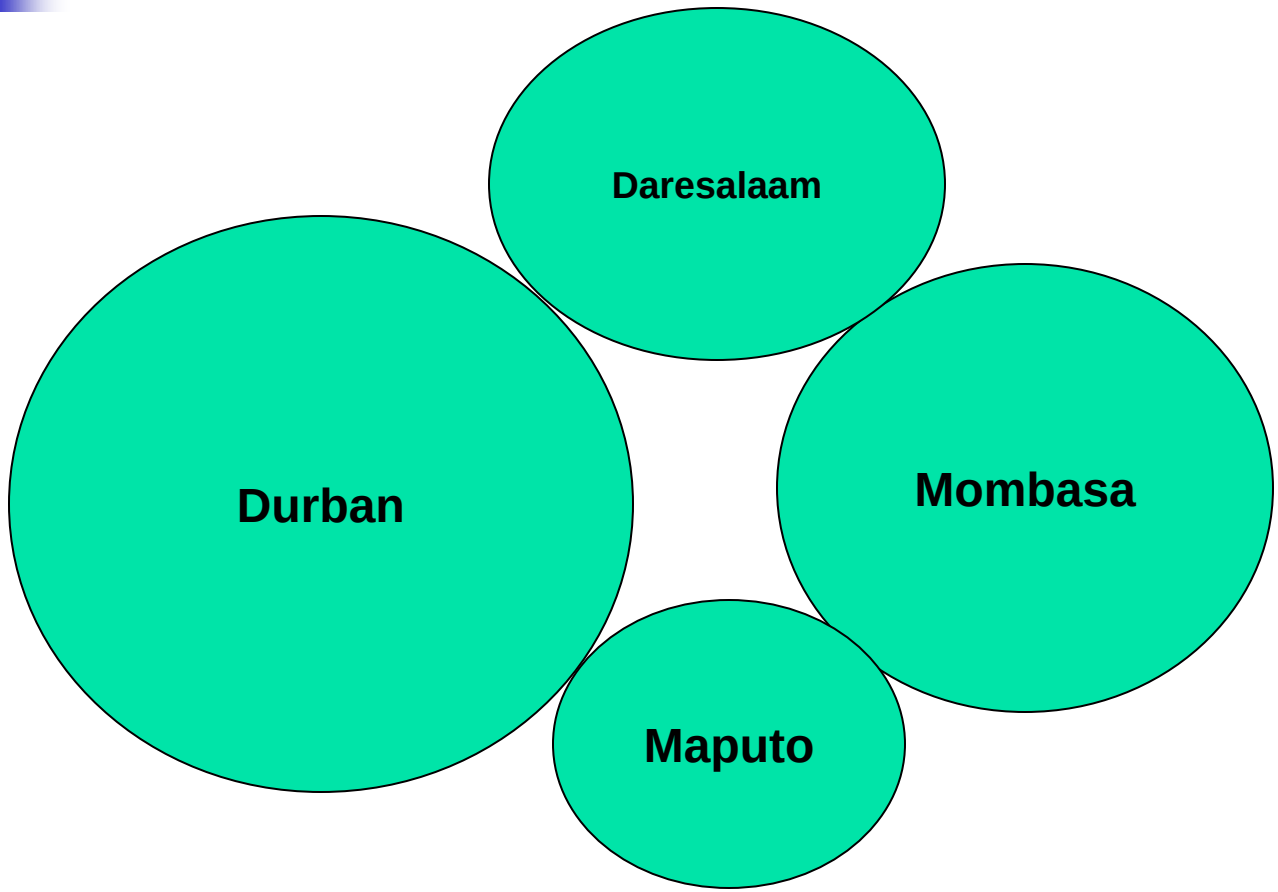
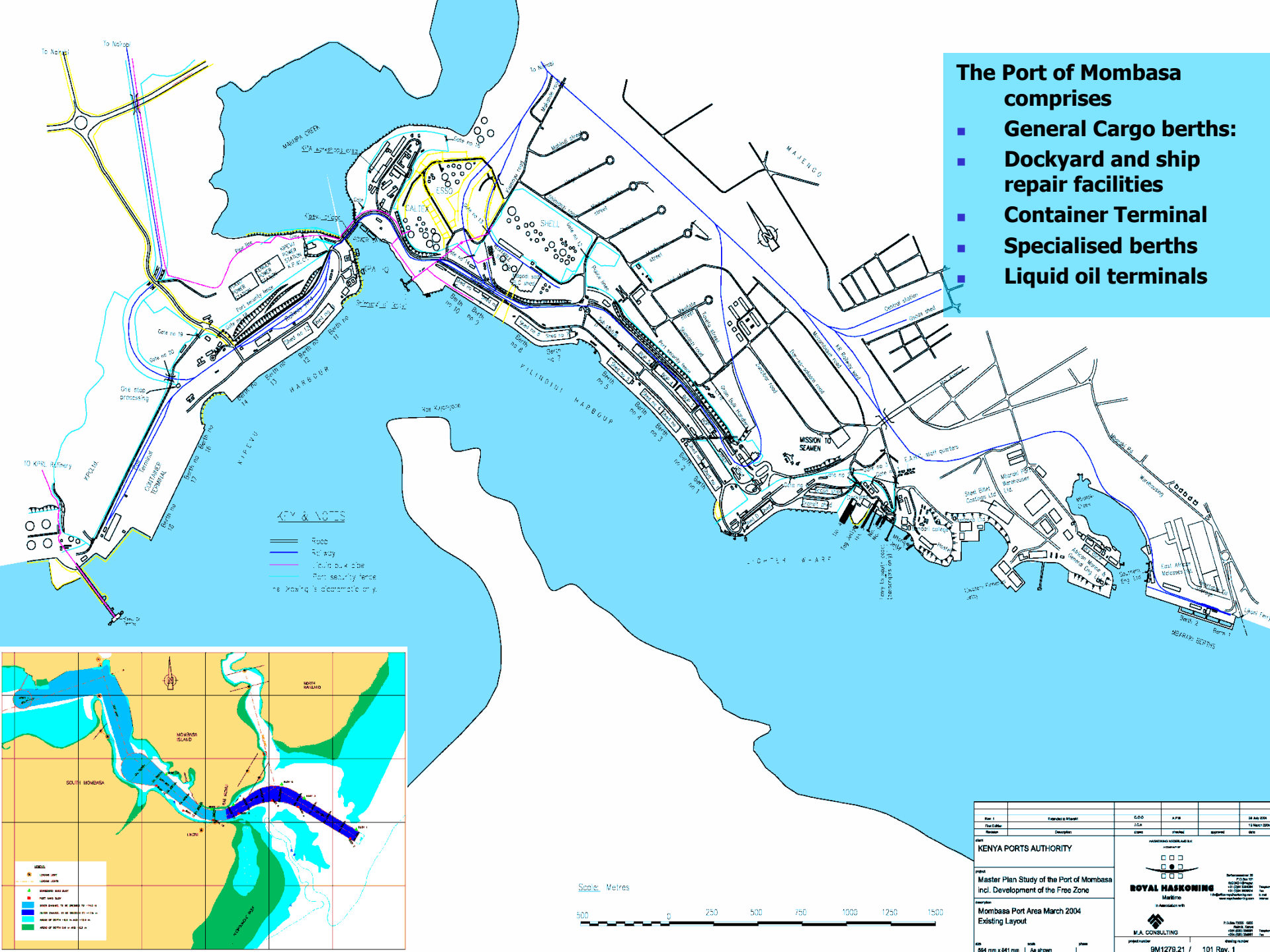
OTHER MAJOR EAST & SOUTHERN AFRICA PORTS

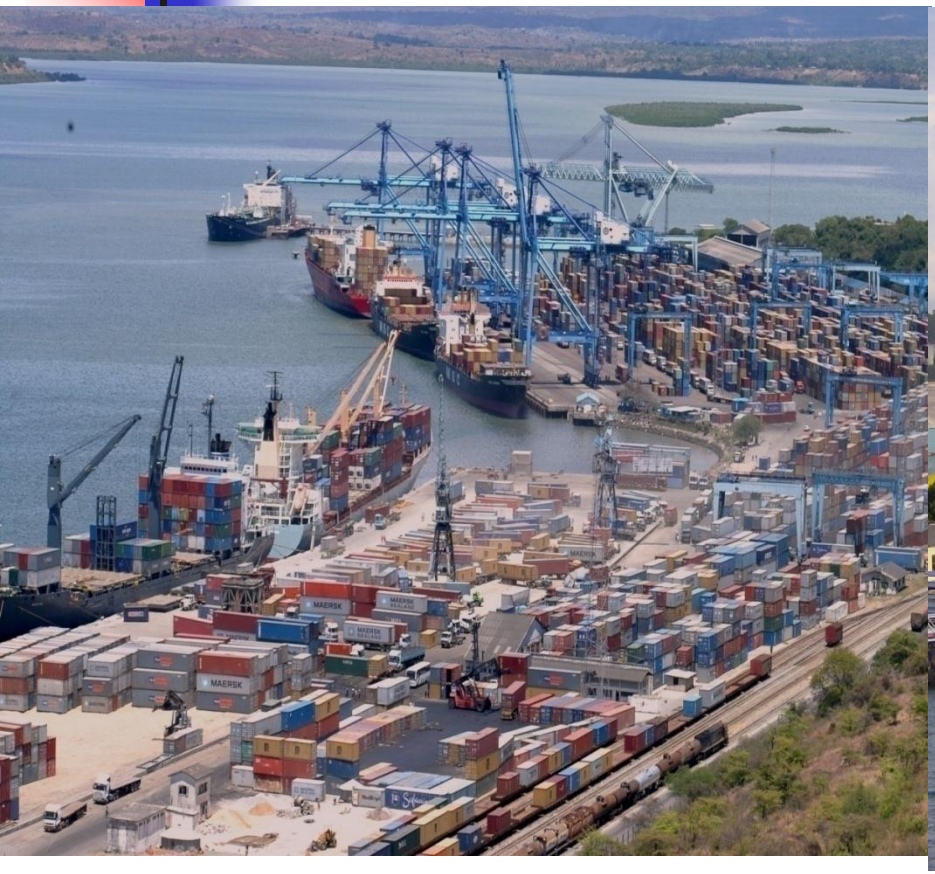


PORT PERFORMANCE – TOTAL THROUPUT

TOTAL THROUGHPUT ('000' DWT)	2005	2006	2007	2008	2009	2010	2011
Imports	10700	11846	13062	13311	16507	16183	16938
Exports	2270	2255	2472	2685	2450	2575	2788
Transit In	3,202	3,473	4,042	4,471	4,612	5,004	5,166
Transit Out	334	335	381	404	368	377	430
Transshipment	303	318	426	419	105	158	227
Total Throughput ('000' DWT)	**13,281**	**14,419**	**15,962**	**16,415**	**19,062**	**18,916**	**19,953**

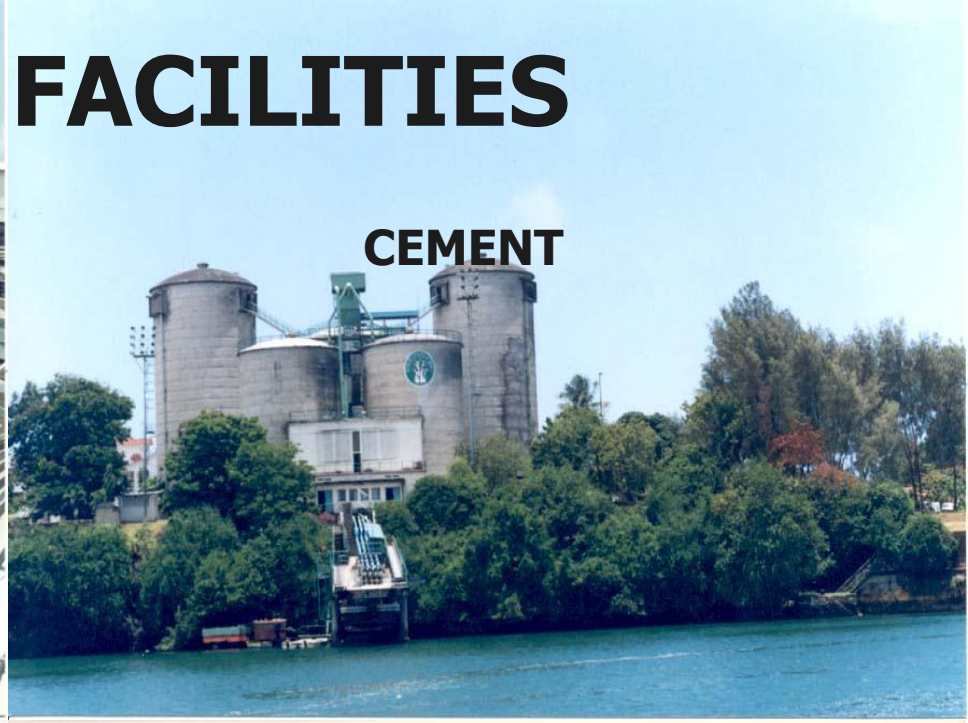

The Port of Mombasa comprises
General Cargo berths:
Dockyard and ship repair facilities
Container Terminal
Specialised berths
Liquid oil terminals
KEY & NOTES
Scale: Metres
KENYA PORTS AUTHORITY
Master Plan Study of the Port of Mombasa incl. Development of the Free Zone
Mombasa Port Area March 2004 Existing Layout
ROYAL HASKONING
M.A. CONSULTING

Multi-purpose Port



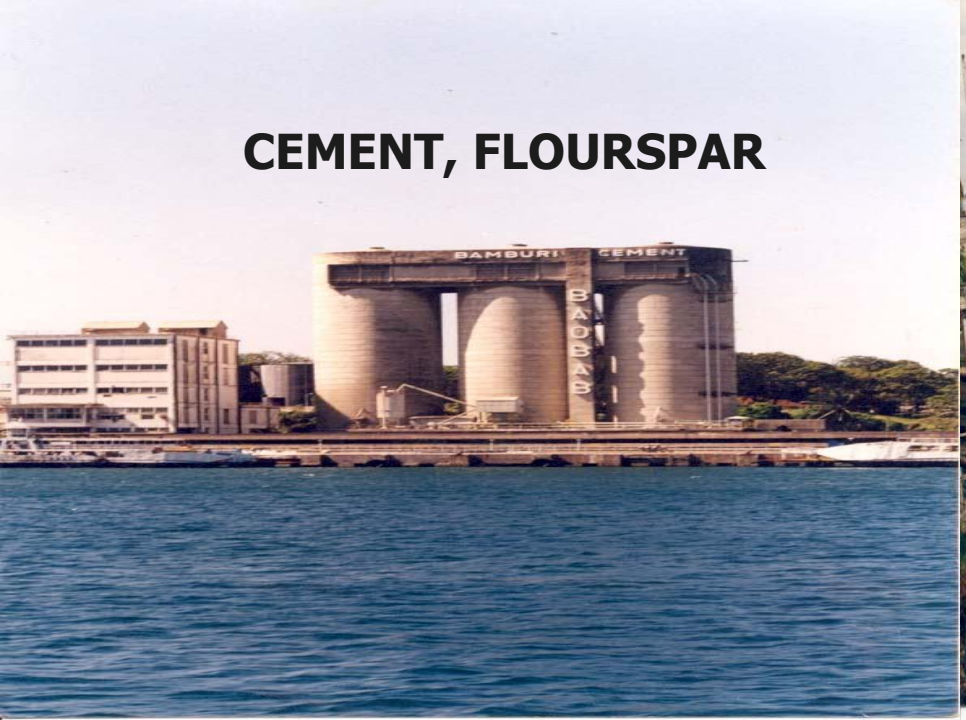
BULK HANDLING FACILITIES

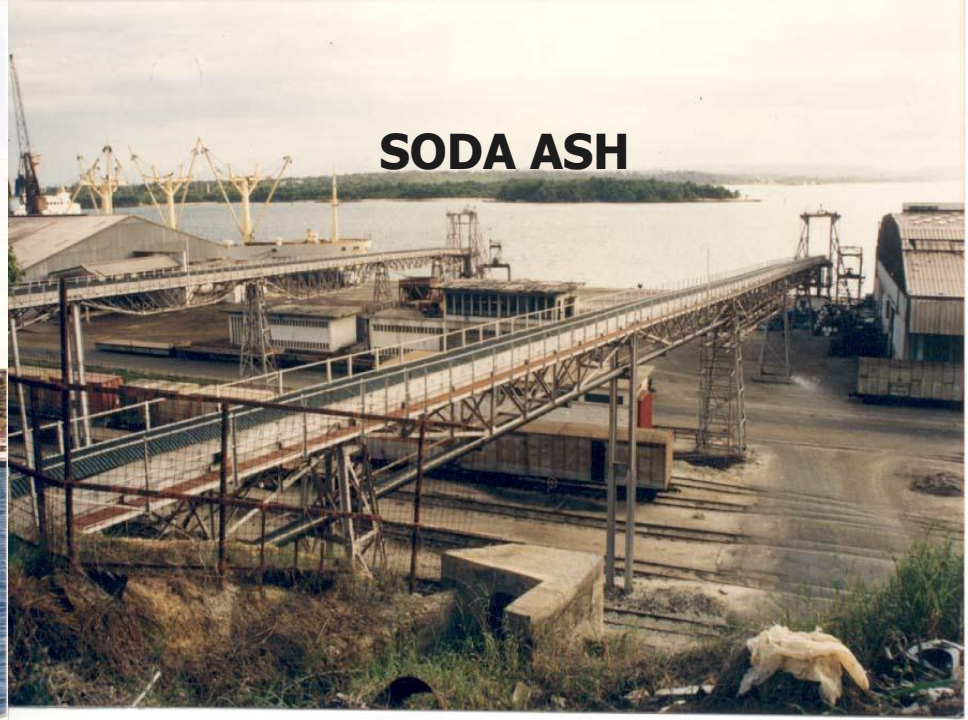
GRAIN



CEMENT

CEMENT, FLOURSPAR





SODA ASH

OIL HANDLING FACILITIES

Cruise Ship Facilities

Modern Marine Craft

CONTAINER HANDLING EQUIPMENT

CONTAINER HANDLING EQUIPMENT

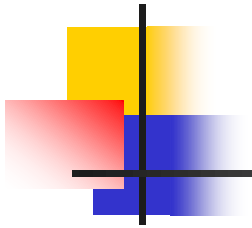
CARGO HANDLING EQUIPMENT

Strategic Importance of Port of Mombasa

- Key link in the East African Transport Chain
- Efficiency of the Port is important for regional Economic Growth and development
- Transport can be reduced by reducing port transit time, delays and removal of bottlenecks
- Security is vital for an efficient Port and facilitation of trade through the port

Security challenges

- Large port facility. Critical national asset
- Large number of port users
- Important regional transit & transhipment hub
- Surrounded by beaches and tourist resorts
- Foreign vessels
- Multi-modal transport systems
- Porous coastline
- Past terrorist attacks
- Multi-cultural multi-ethnic region
- Politically unstable and strife torn neighboring countries.

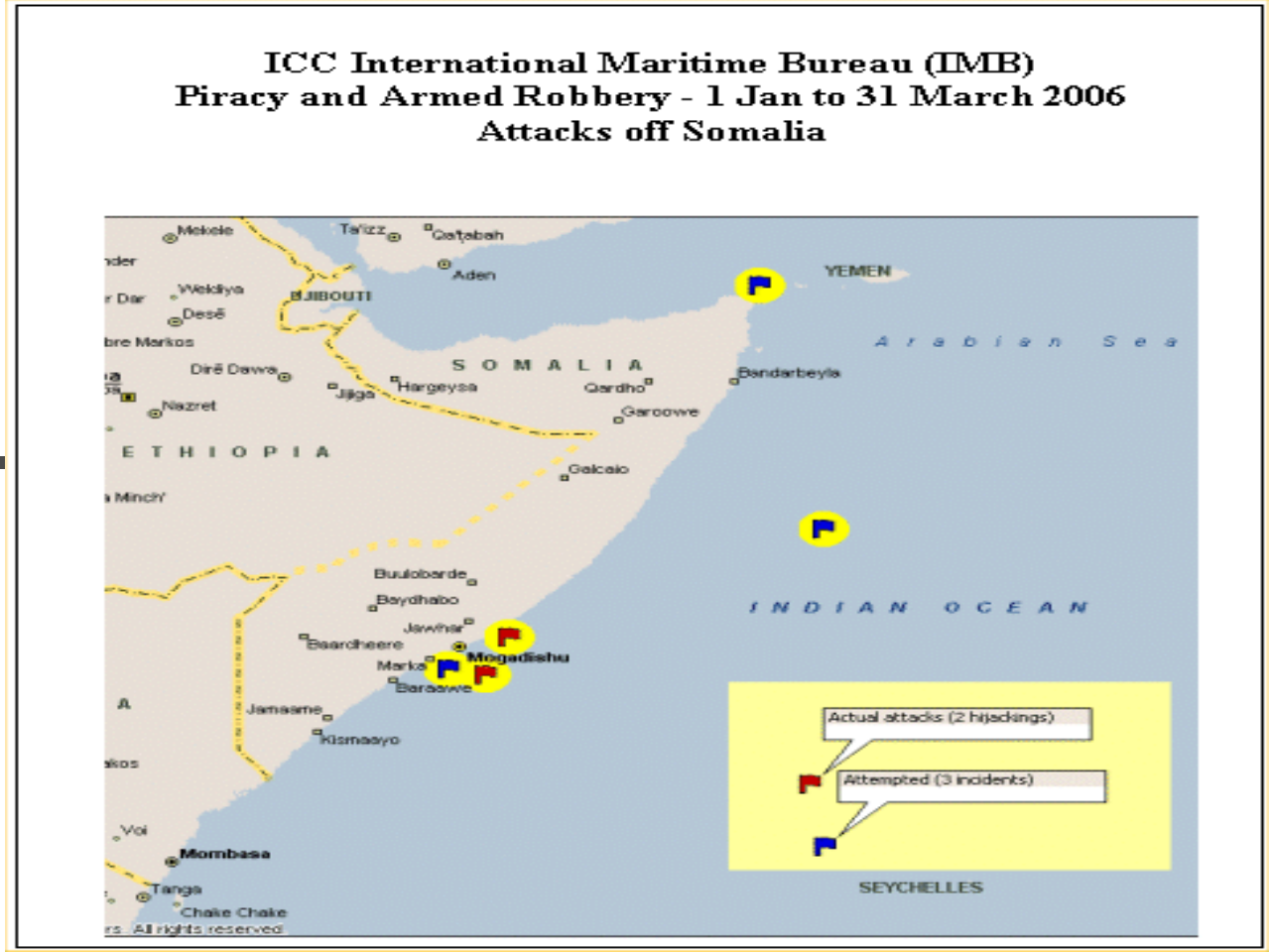


MARITIME SECURITY
THREATS AT KPA

Terrorist Attacks

- Terrorist target

PIRACY ATTACKS OFF SOMALIA COASTLINE

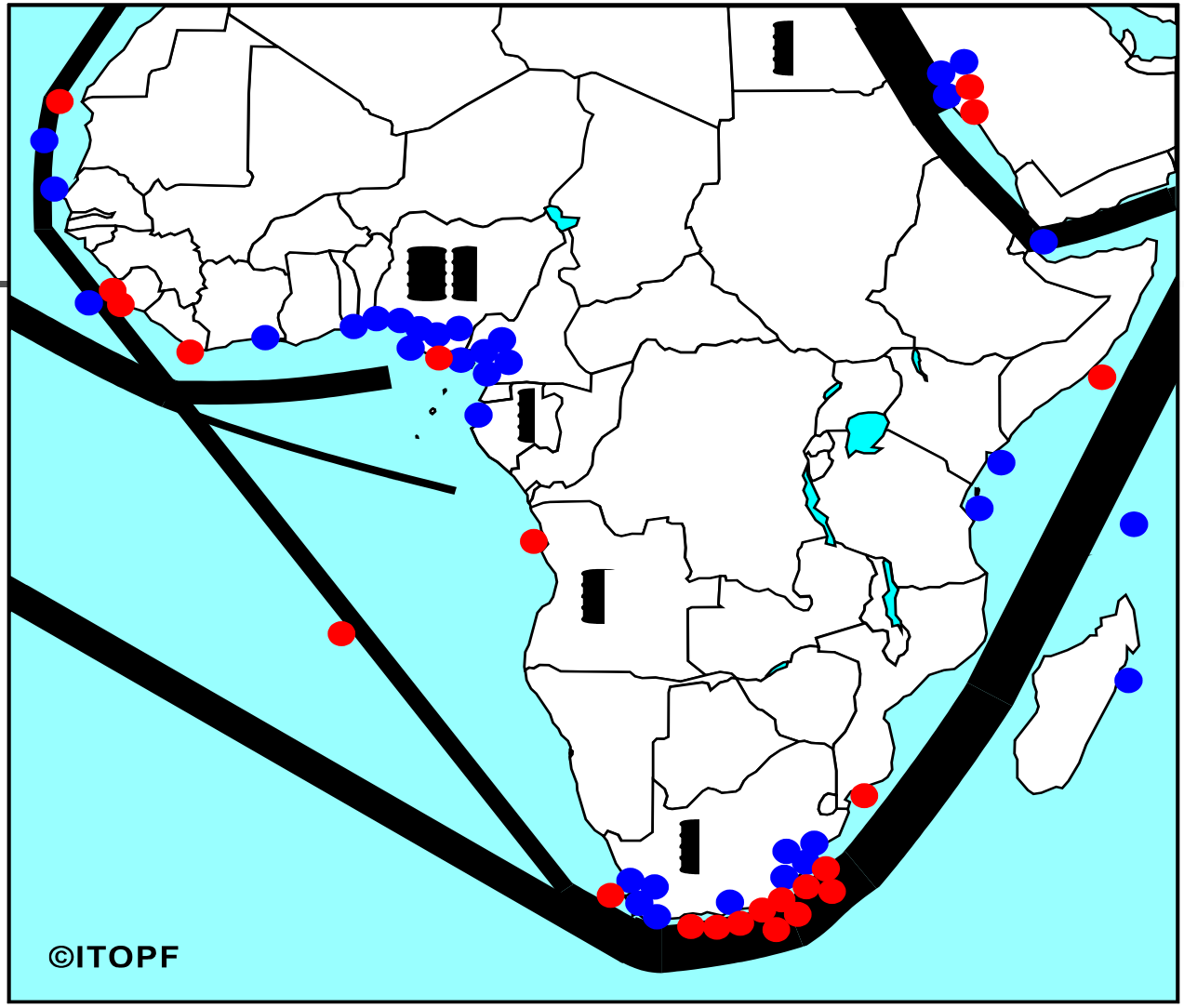


SOMALI PIRACY IS ON THE INCREASE IN THE WEST INDIA OCEAN

Stowaways & Illegal immigrants

Drugs & Weapons Smuggling

THE RISK OF OIL SPILLS IN AFRICA



Spills >5000 barrels and from 50 to 5000 barrels in relation to oil exports and to major tanker routes

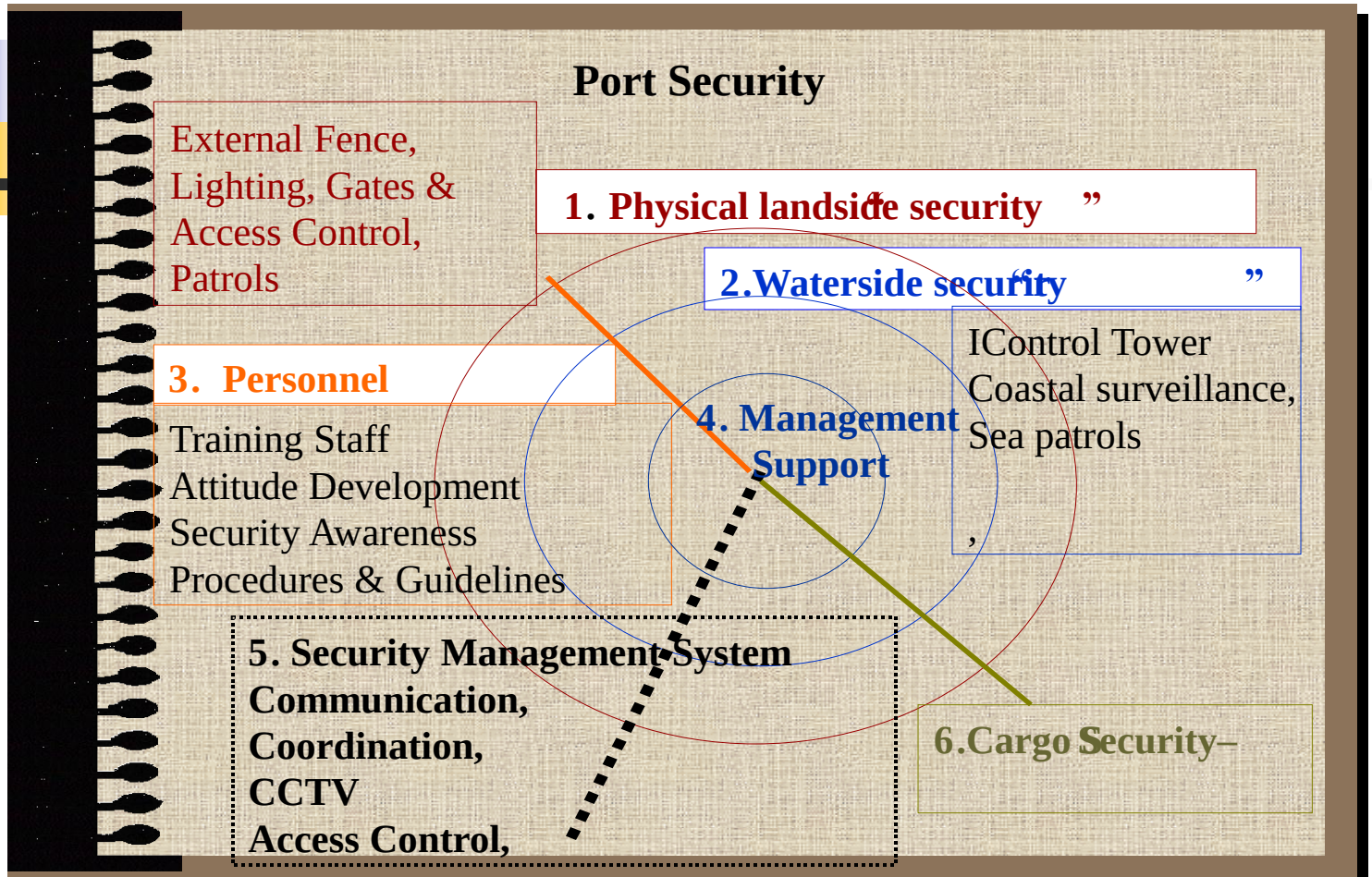
THEFT & ROBBERY

September 11 2001, The turning point

MULTI –LAYERED SECURITY APPROACH

- Development of Regulations & Legal framework
- Preparation of Guidelines & Procedures
- Compliance with the ISPS Code
- Enhancement of seaside security
- Enhancement of Physical & Landside security
- Training and development of security staff
- Promoting security awareness to Port staff & users
- Implementing an integrated security system in the Port

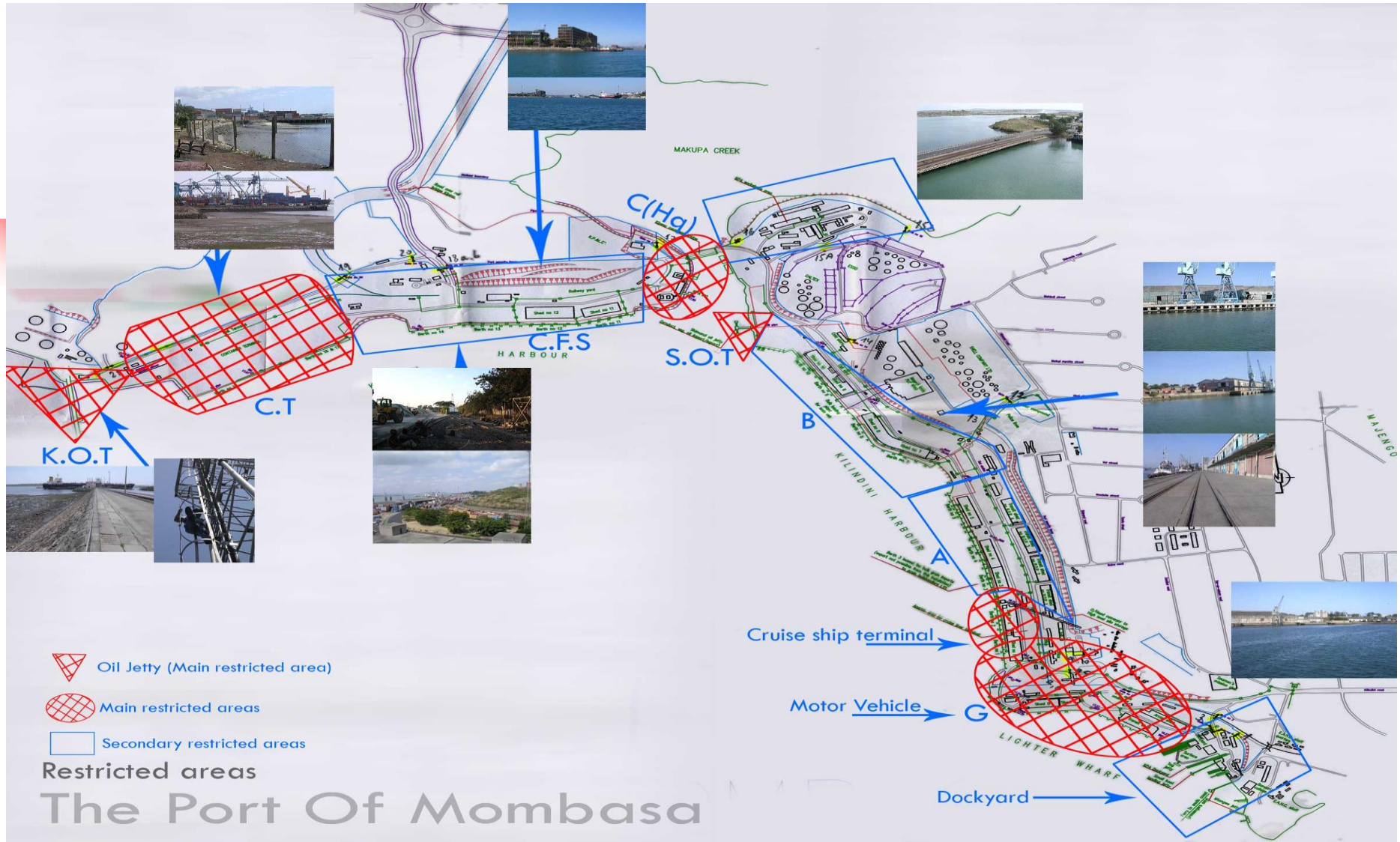
MULTI LAYERED SECURITY APPROACH



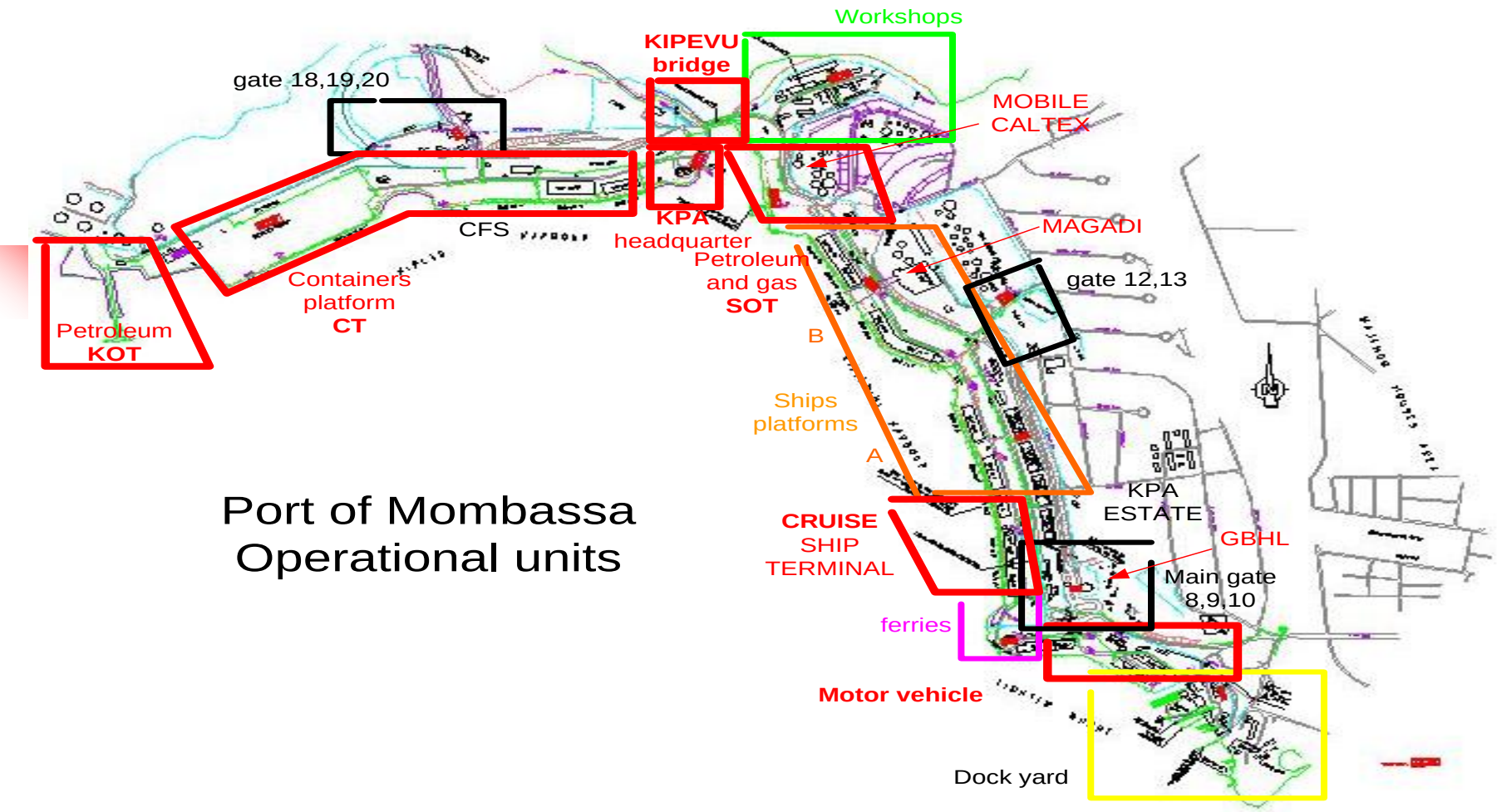
Seaside Security

- Coastal Radar system
- VTMIS/Control Tower
- Pollution Control & Marine Emergency Center
- Sea Patrols

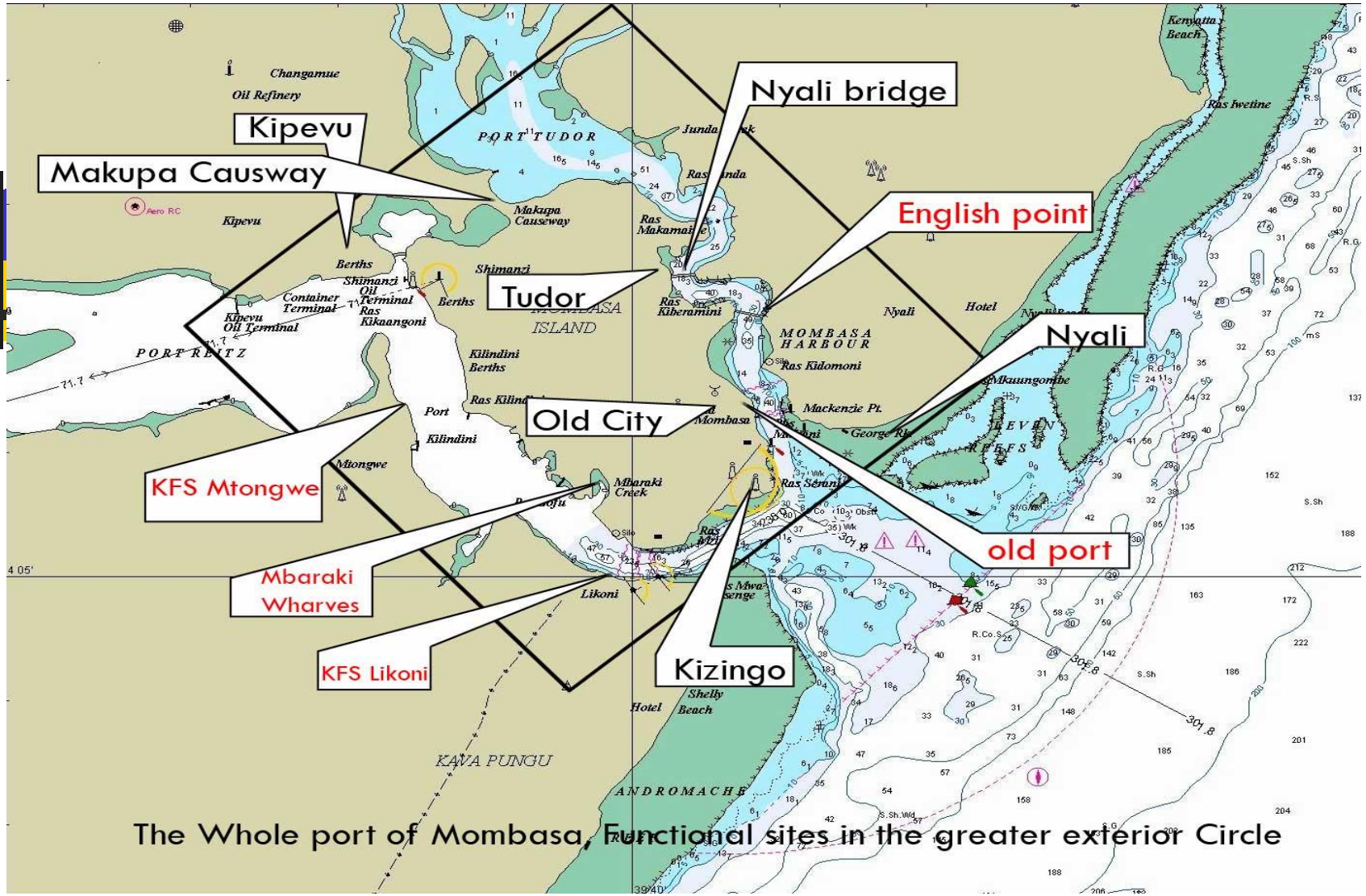
PHYSICAL SECURITY



PHYSICAL SECURITY



Port of Mombassa
Operational units

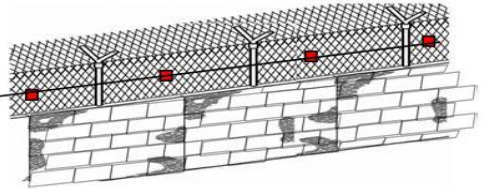


The Whole port of Mombasa, Functional sites in the greater exterior Circle

GOALS OF ISS

- Protect from intrusions along the perimeter
- Control access of vehicles and pedestrians to the port
- Keep watch over all areas of the port via CCTV
- Survey dock areas and sea area next to the port
- Communicate with security guards and patrols
- Provide full public address, intercom and alarm systems
- Provide high-capacity digital communications network to link all ISS elements and update KPA personnel management systems
- Provide full centralized command and control system

ISS SYSTEM SCHEMATIC DESCRIPTION



Field controller

Container Storage Area

NVR

VMD

VMD

NVR

CDR viewing station

Switch

Port LAN

Router

LPR

Gate Surveillance

CDR

ACS controller

NVR

LPR controller

Switch

Switch

Switch

Dedicated Data Communication Network

Backbone Main

Backbone Secondary

ACS client

NVR Viewing Station

Local Security Center

LCD

LCD

Fiber optic converters

Video Matrix

NVR viewing station

SMS client

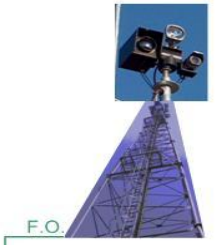
ACS client

SMS server

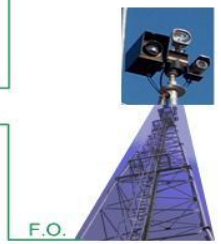
ACS server

LPR server

Main Security Center



F.O.



F.O.

COMPONENTS OF THE INTEGRATED SECURITY SYSTEM

Combining Man & Machine

Perimeter intrusion detection system.

Docks water barriers and sliding gates.

CCTV system, including thermal cameras & Digital video recording

Access control system & Gate access devices. .

Video motion detection system & Intrusion detection system .

COMPONENTS OF THE INTEGRATED SECURITY SYSTEM

Combining Man & Machine

Public address, intercom system and radio communication system .

Security management software.

Guard patrol monitoring system that will enable the security supervisors a real time inspection of their security forces activities.

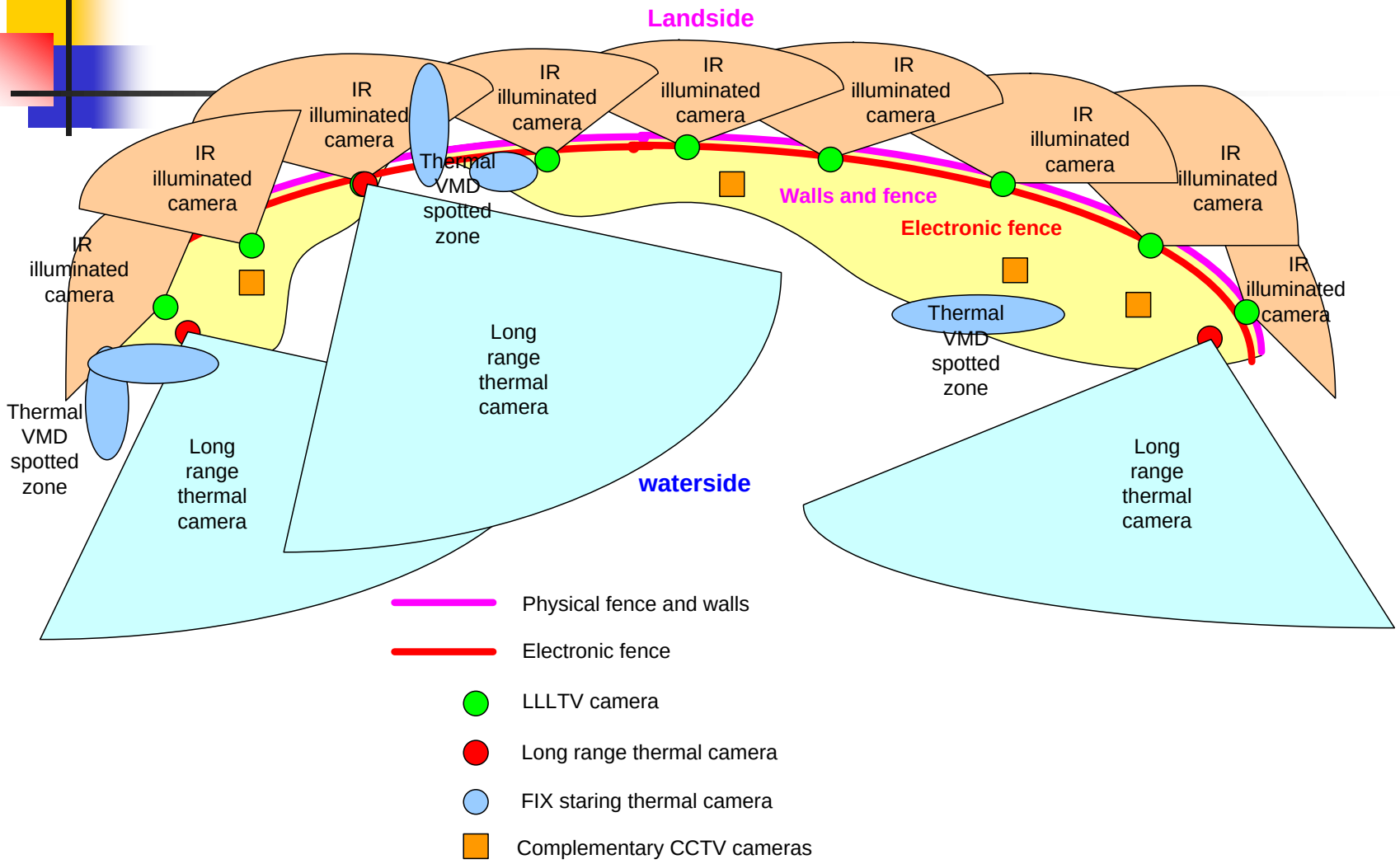
Luggage screening system, for the cruise ship terminal.

Main and local security command and control centers systems.

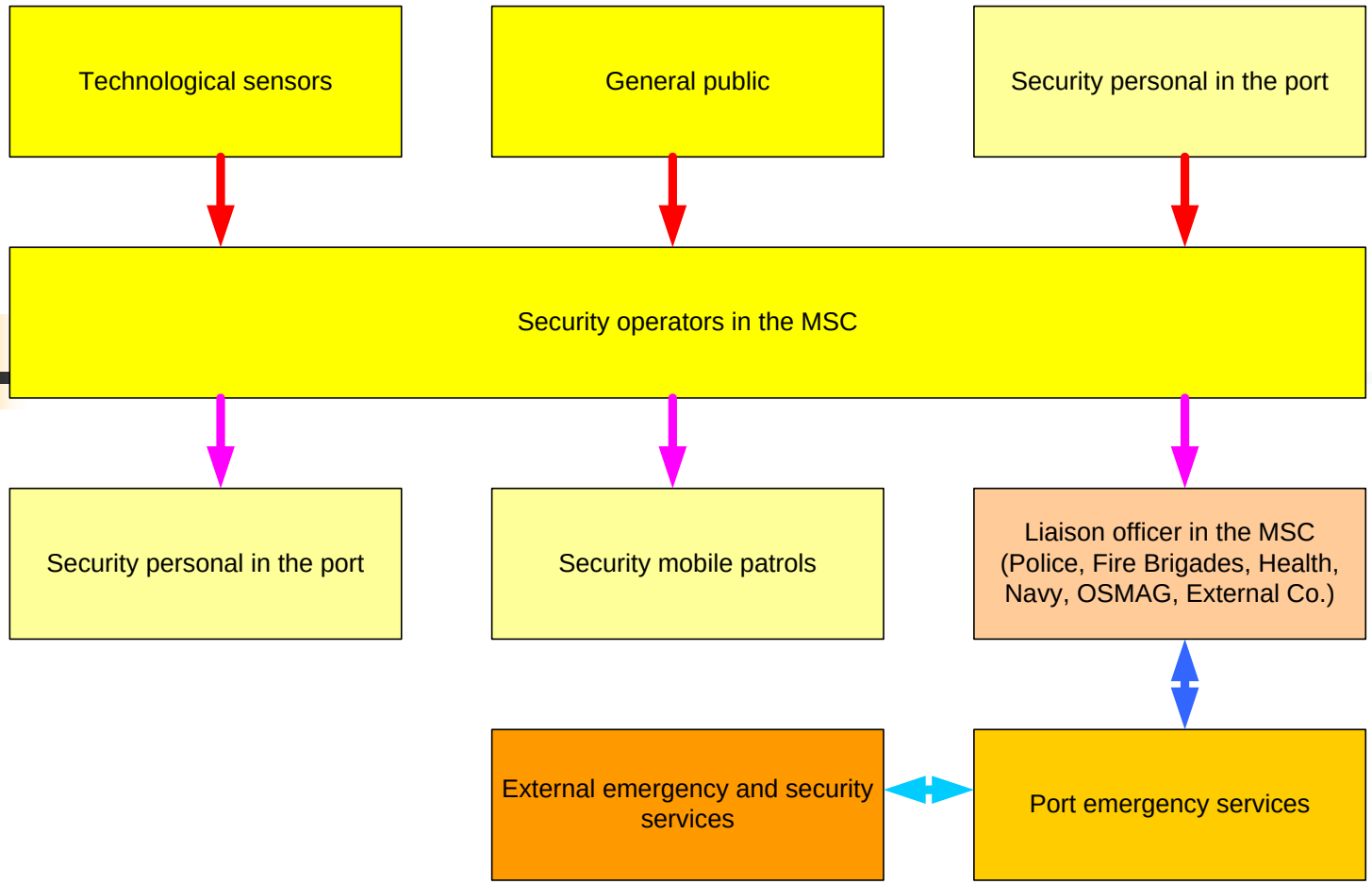
Integration of the security management software

System for the security of print documents

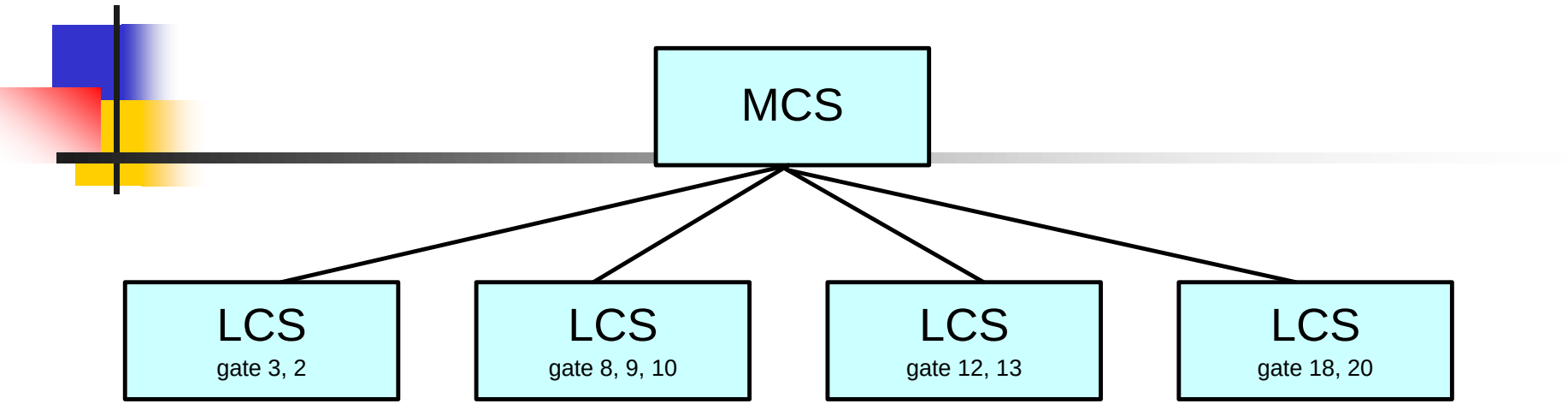
Port of Mombassa - Security Concept overlay



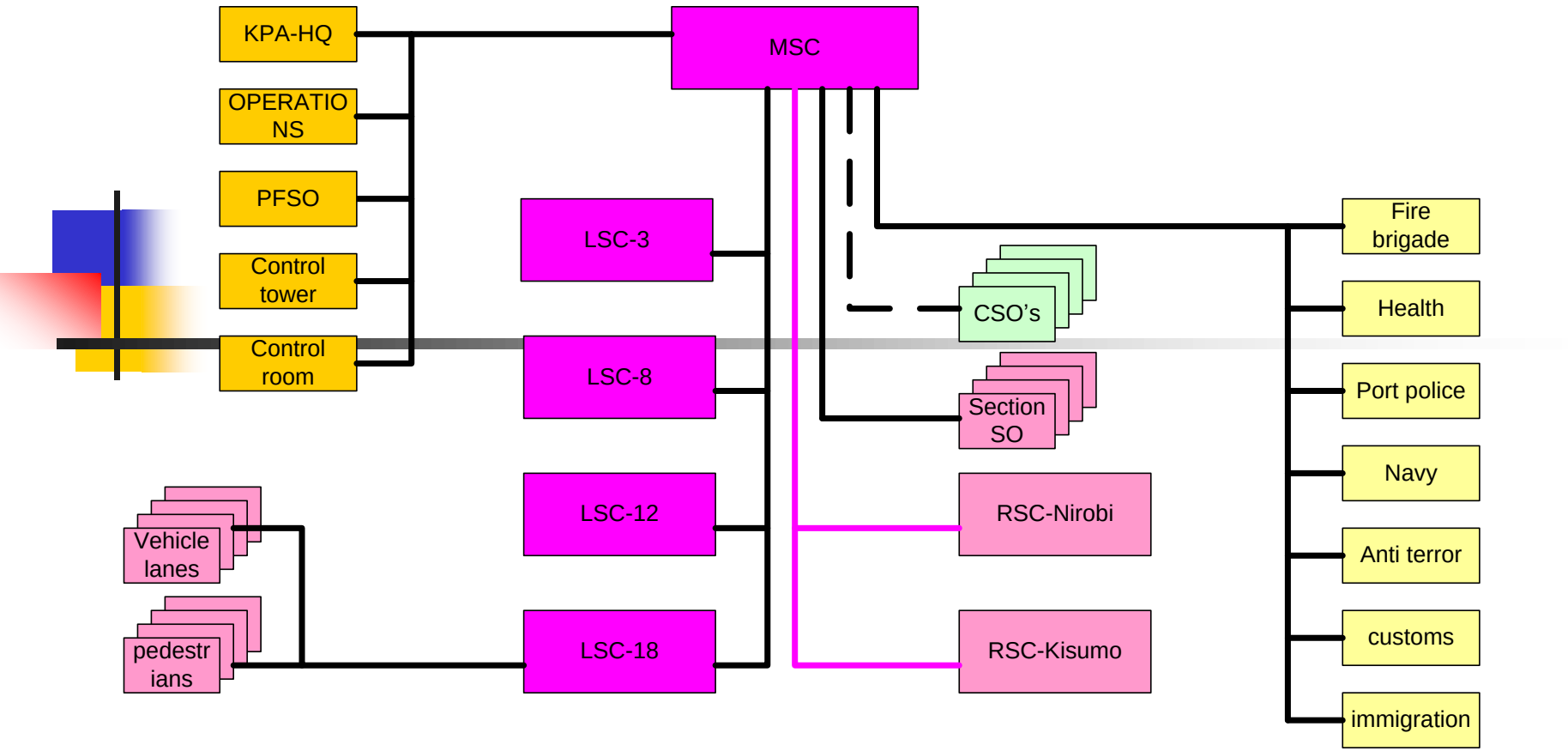
Mombassa port security - flow of information



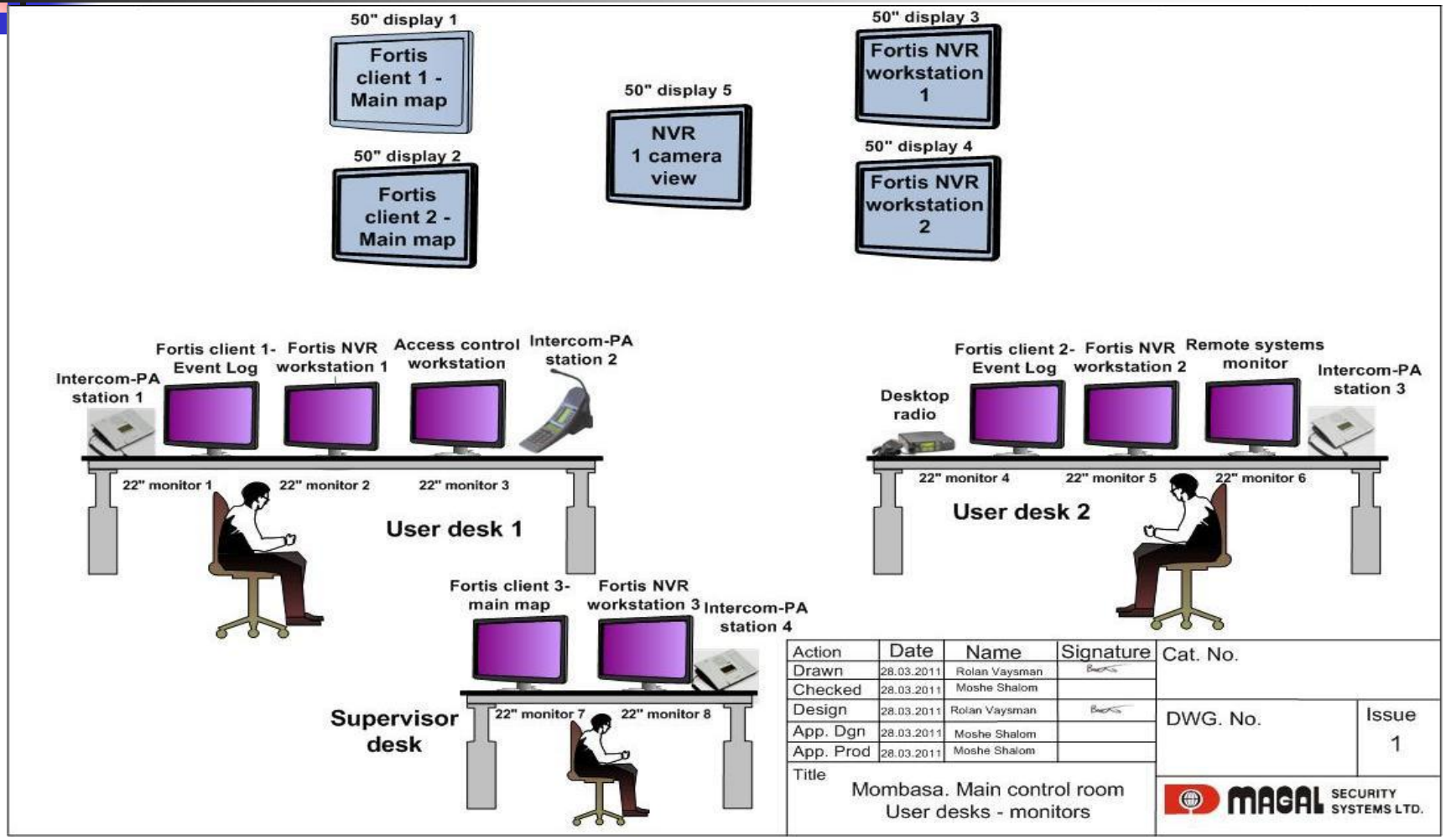
PORT OF MOMBASSA COMMAND CENTER HIERARCHY



The security intercommunication network



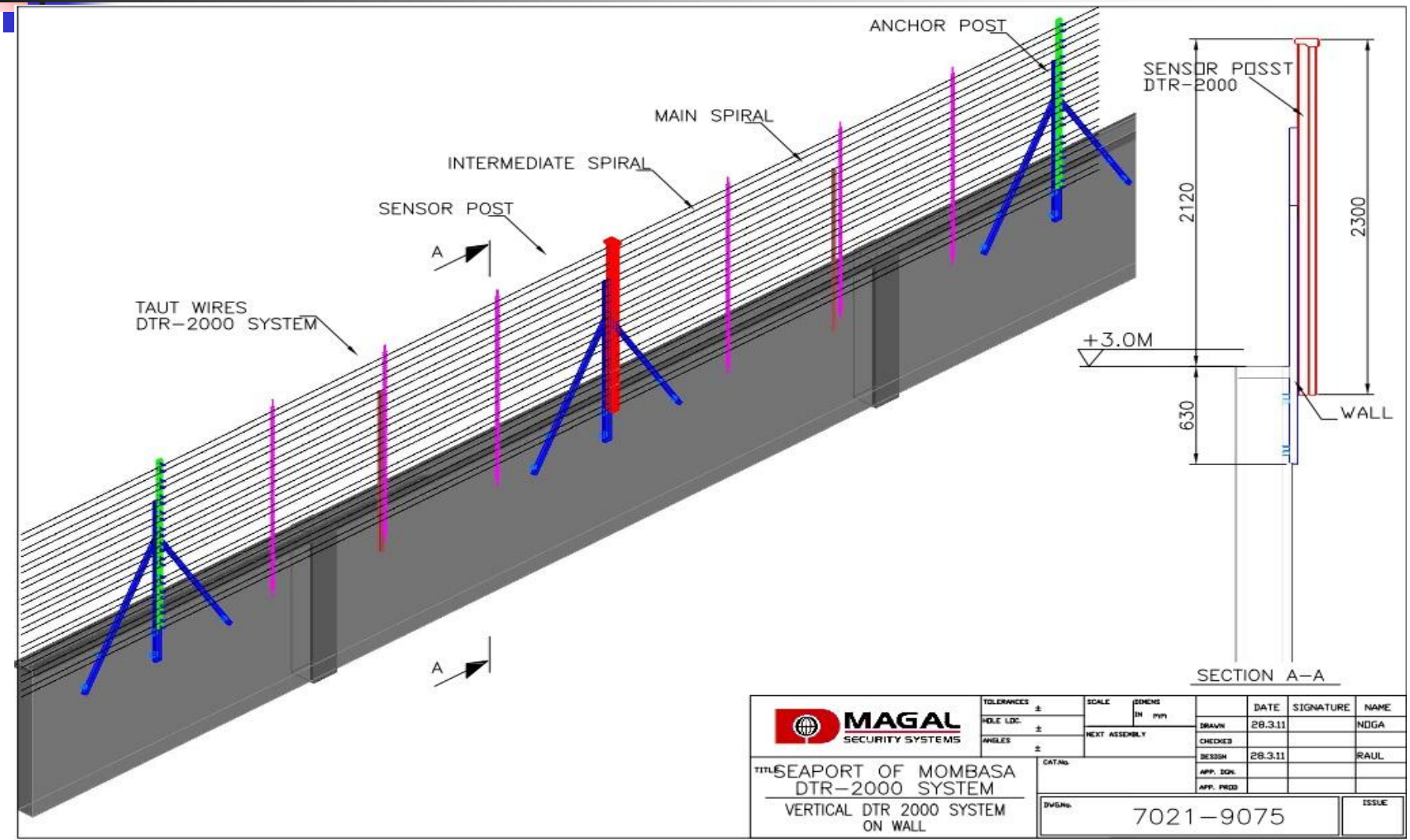
Main Security Control Station



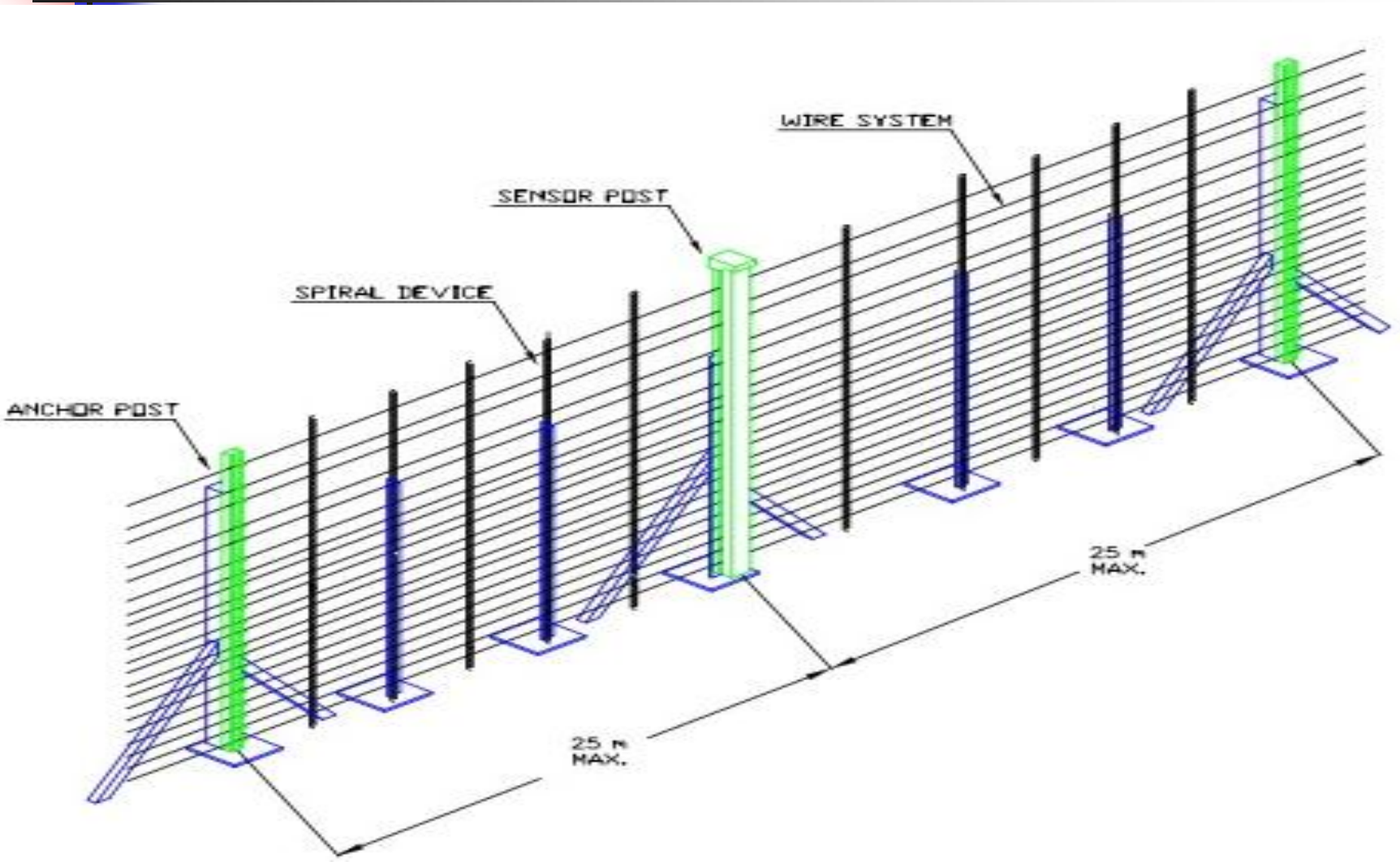
COMPONENTS OF THE INTEGRATED SECURITY SYSTEM

PERIMETER DETECTION SYSTEM

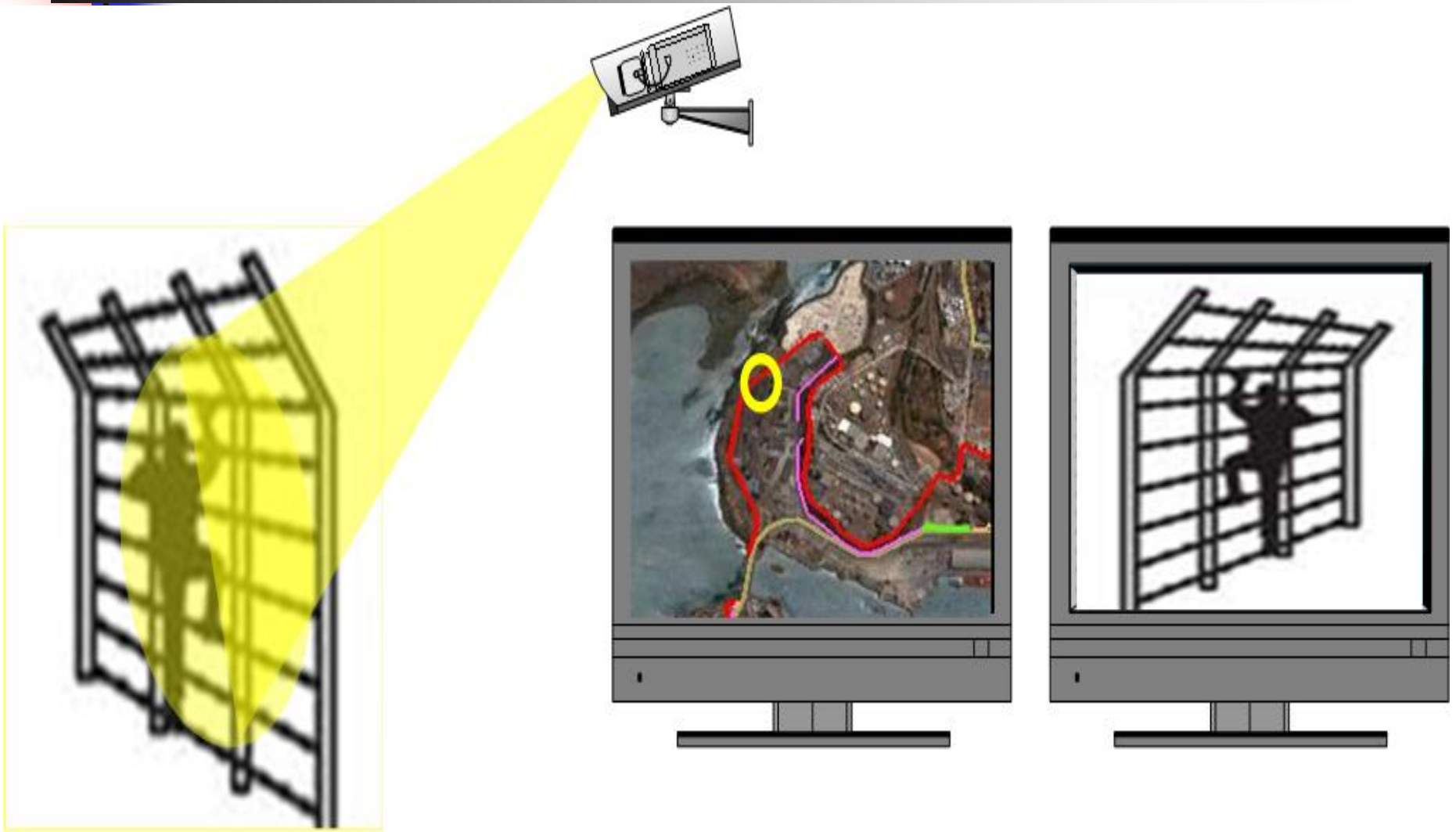
DTR FENCE


ANCHOR POST
MAIN SPIRAL
INTERMEDIATE SPIRAL
SENSOR POST
A
TAUT WIRES
DTR-2000 SYSTEM
A
SENSOR POSST
DTR-2000
2120
2300
+3.0M
630
WALL
SECTION A-A
MAGAL
SECURITY SYSTEMS
TOLERANCES
HOLE LOC.
ANGLES
SCALE
DIMENS IN mm
NEXT ASSEMBLY
DATE
SIGNATURE
NAME
DRAWN
28.3.11
NOGA
CHECKED
DESIGN
28.3.11
RAUL
APP. DGN.
APP. PROD
TITLE
SEAPORT OF MOMBASA
DTR-2000 SYSTEM
VERTICAL DTR 2000 SYSTEM
ON WALL
CAT.No.
DWG.No.
7021-9075
ISSUE

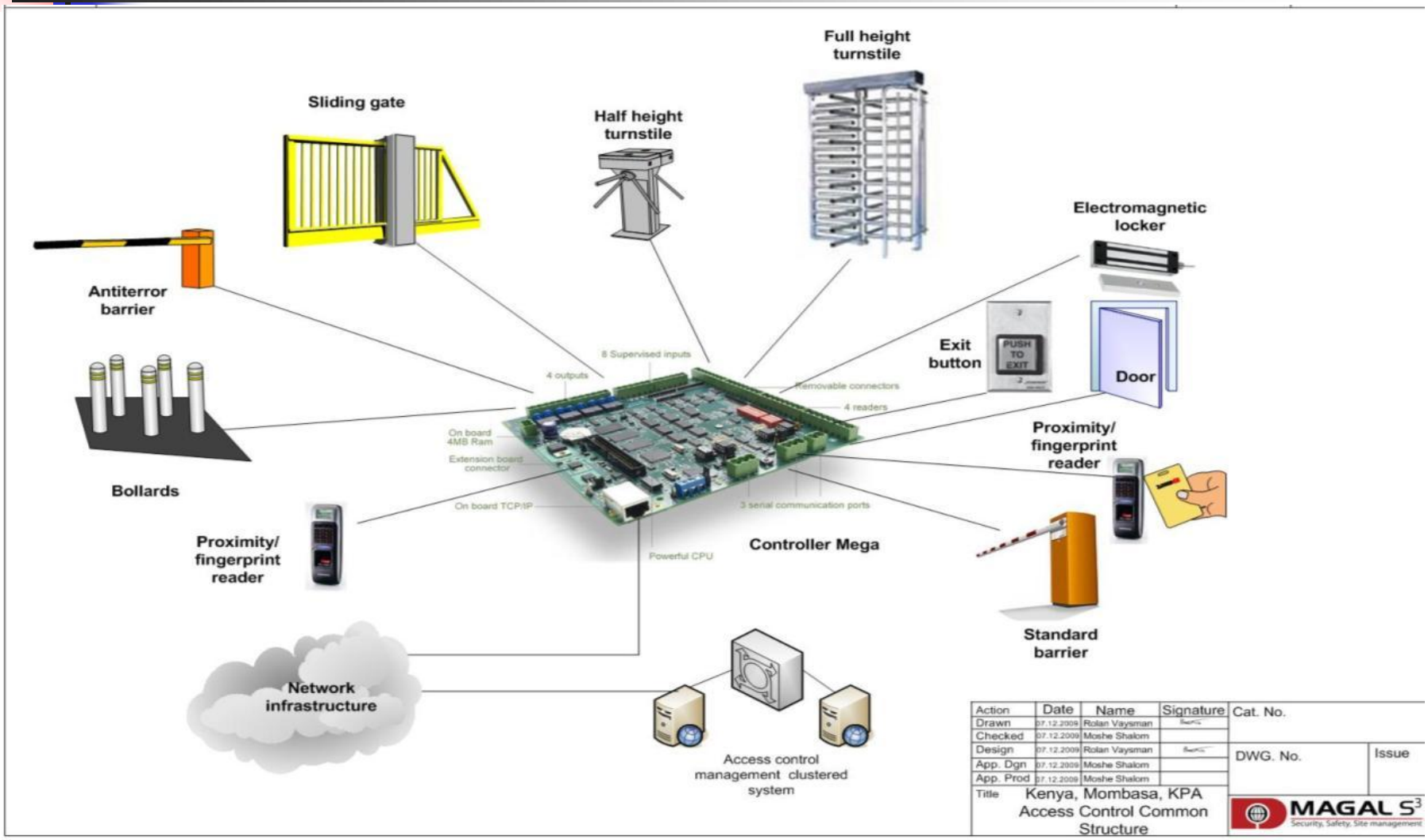
DTR FREE STANDING FENCE



DTR ALARM SCENARIO



ACCESS CONTROL SYSTEMS



COMPONENTS OF THE INTEGRATED SECURITY SYSTEM

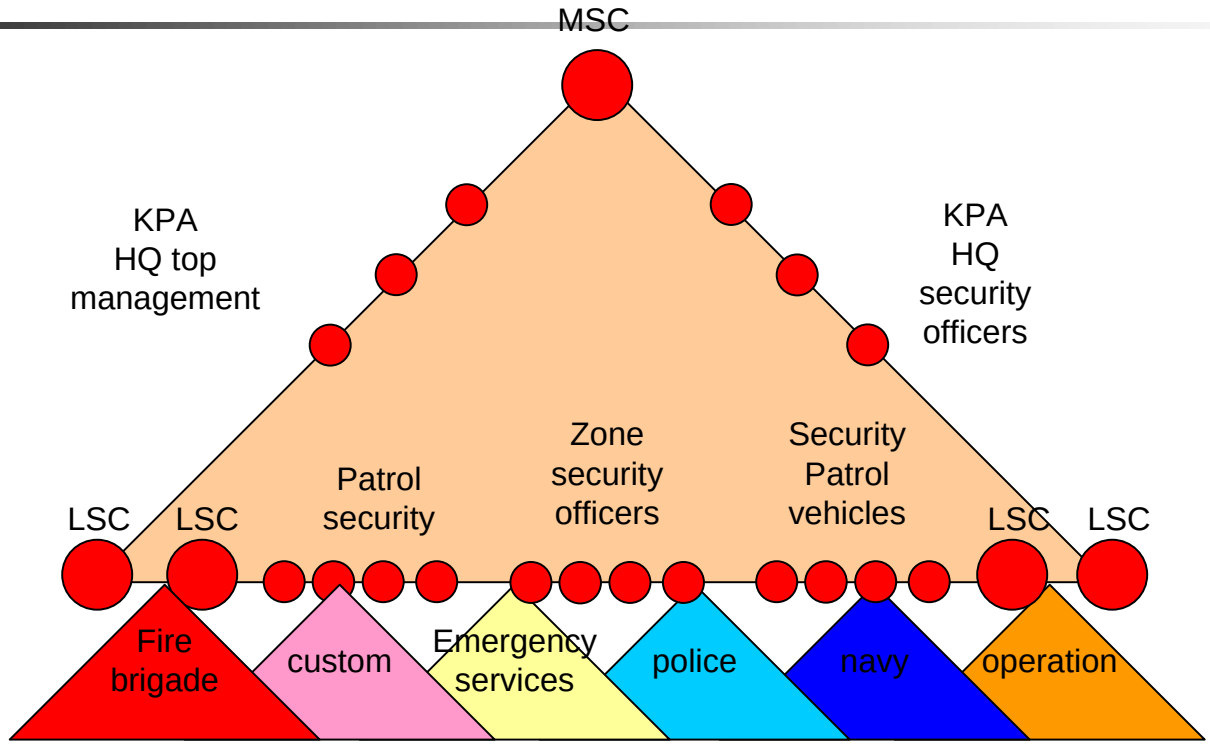
ACCESS CONTROL

GATES AND BARRIERS

COMPONENTS OF THE INTEGRATED SECURITY SYSTEM

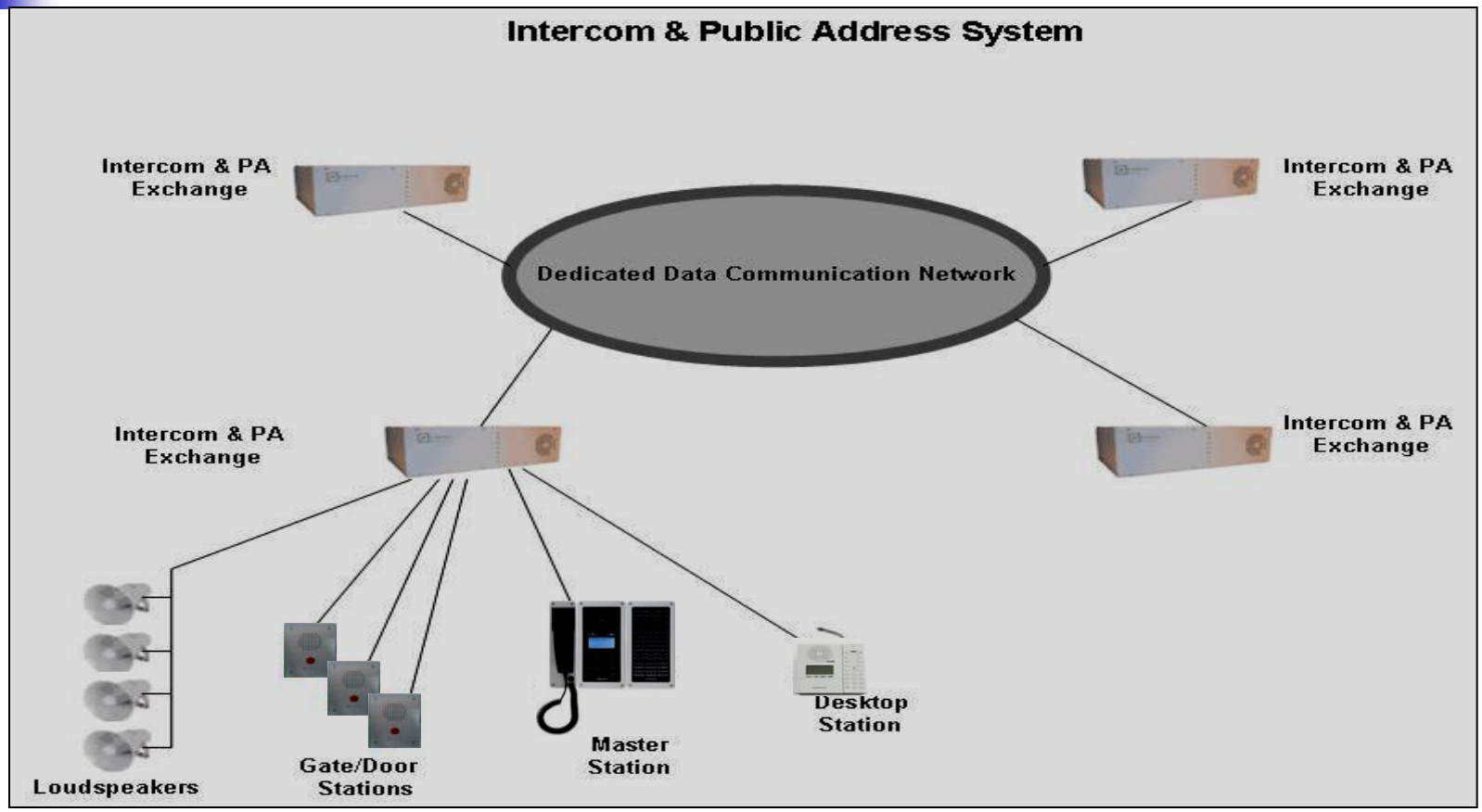
DOCK GATE AND SLIDING GATE

The security radio communication network

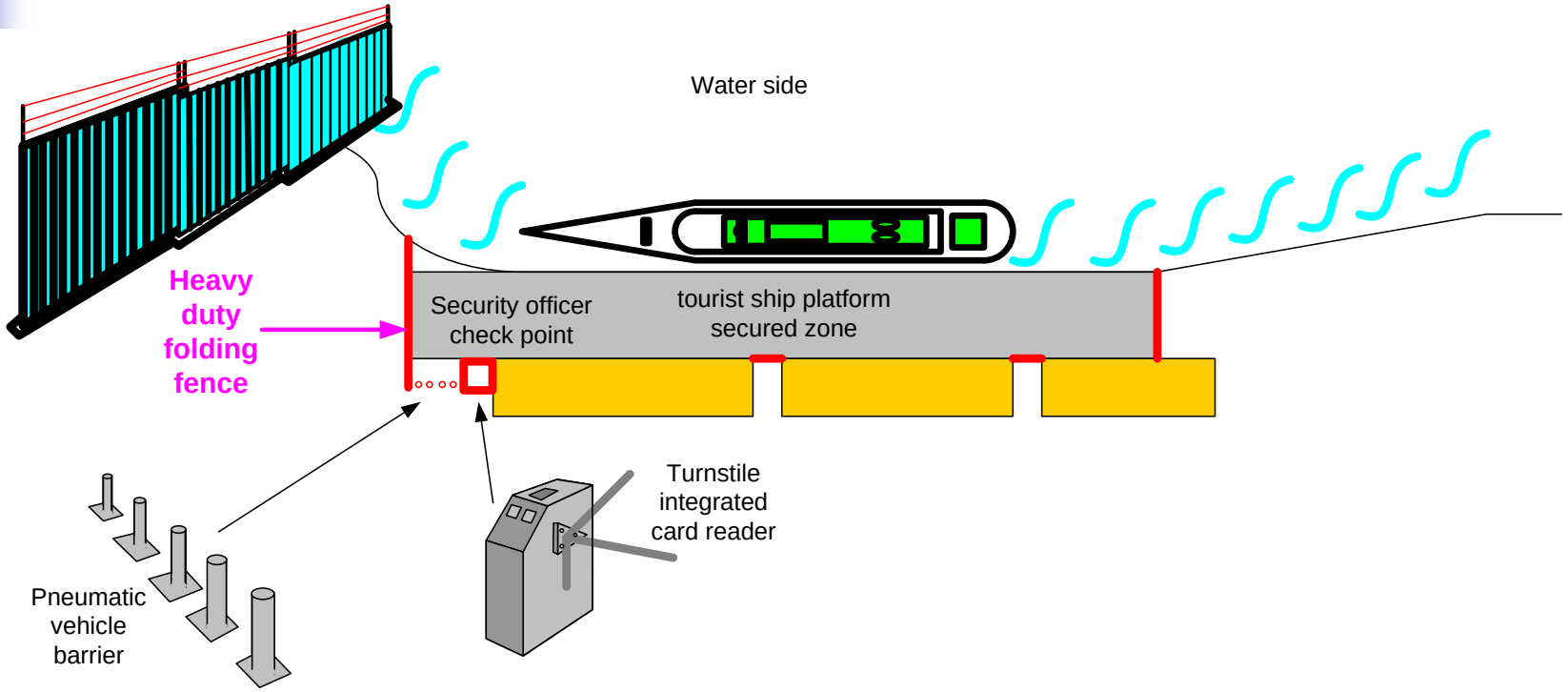


RADIO COMMUNICATION SYSTEM

INTERCOM AND PA SYSTEM

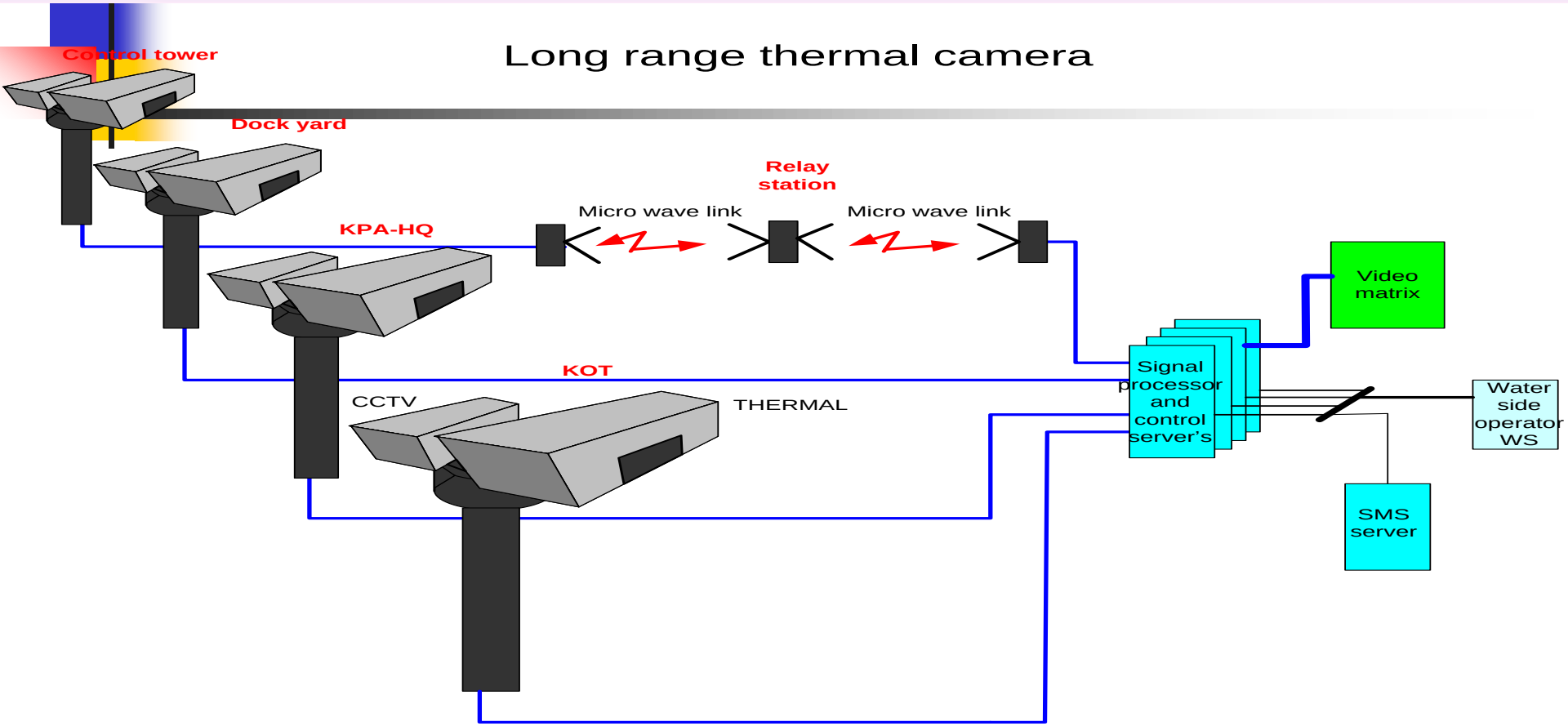


tourist ships duck



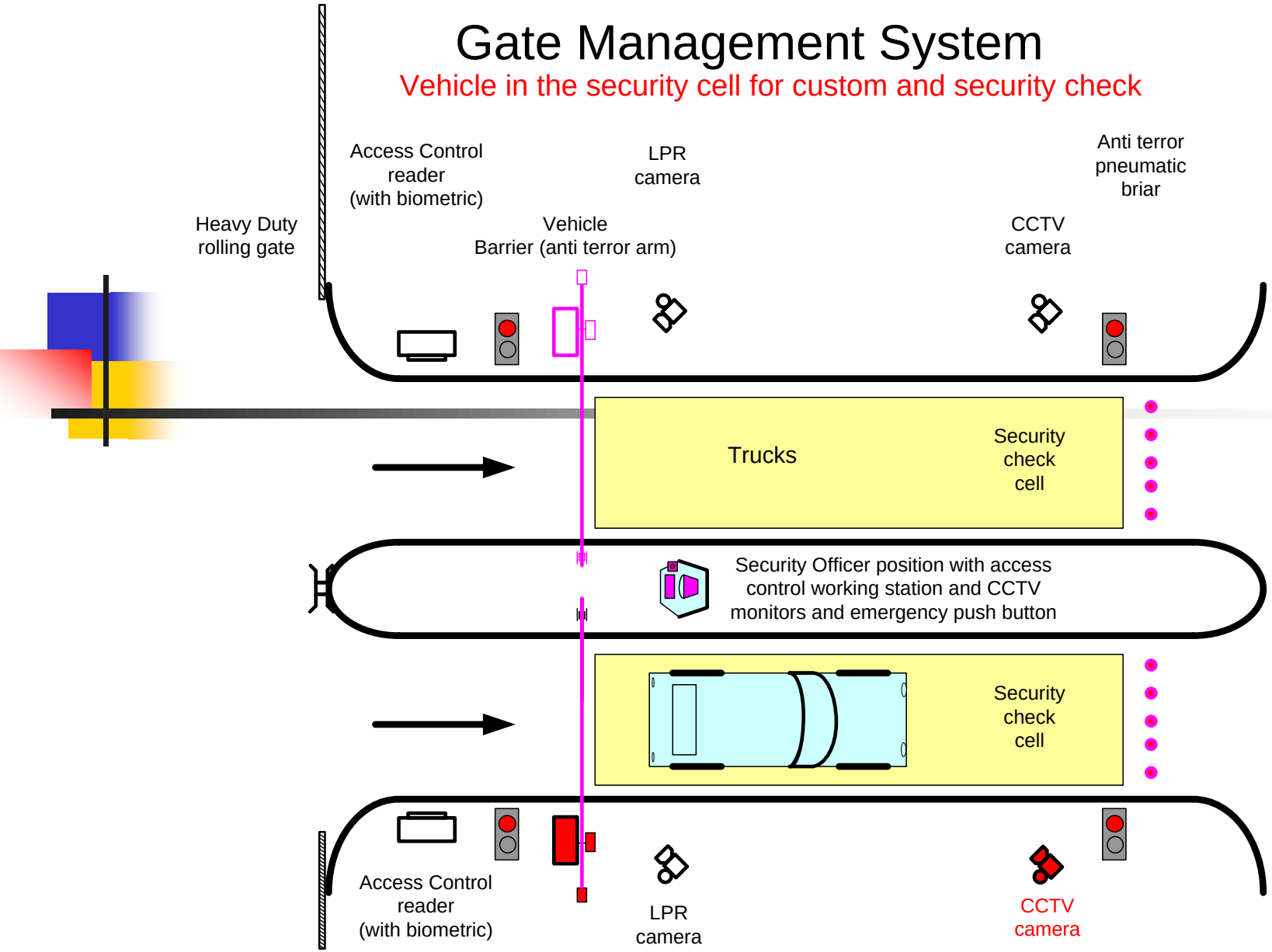
COMPONENTS OF THE INTEGRATED SECURITY SYSTEM

CCTV CAMERAS



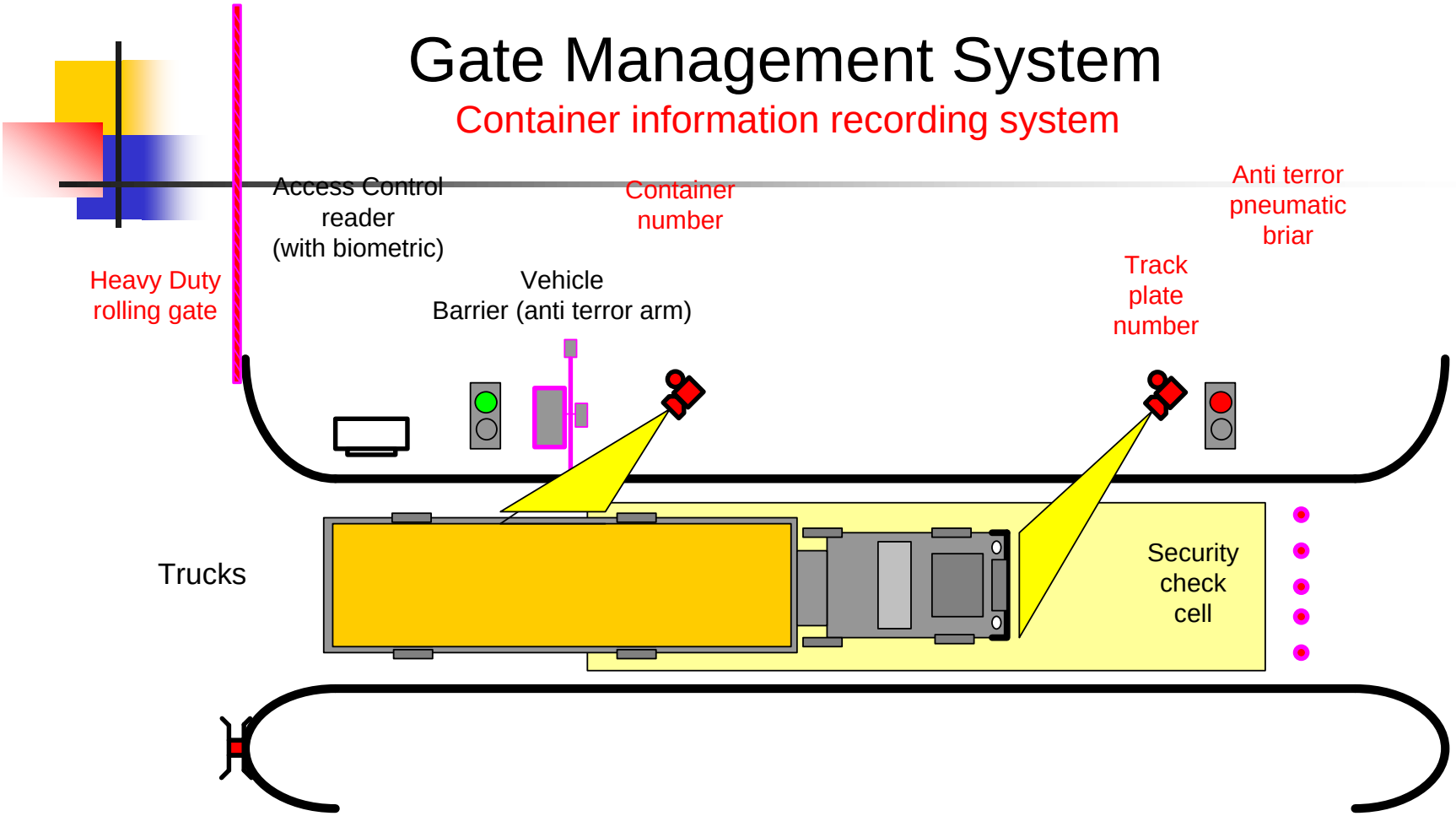
Gate Management System

Vehicle in the security cell for custom and security check



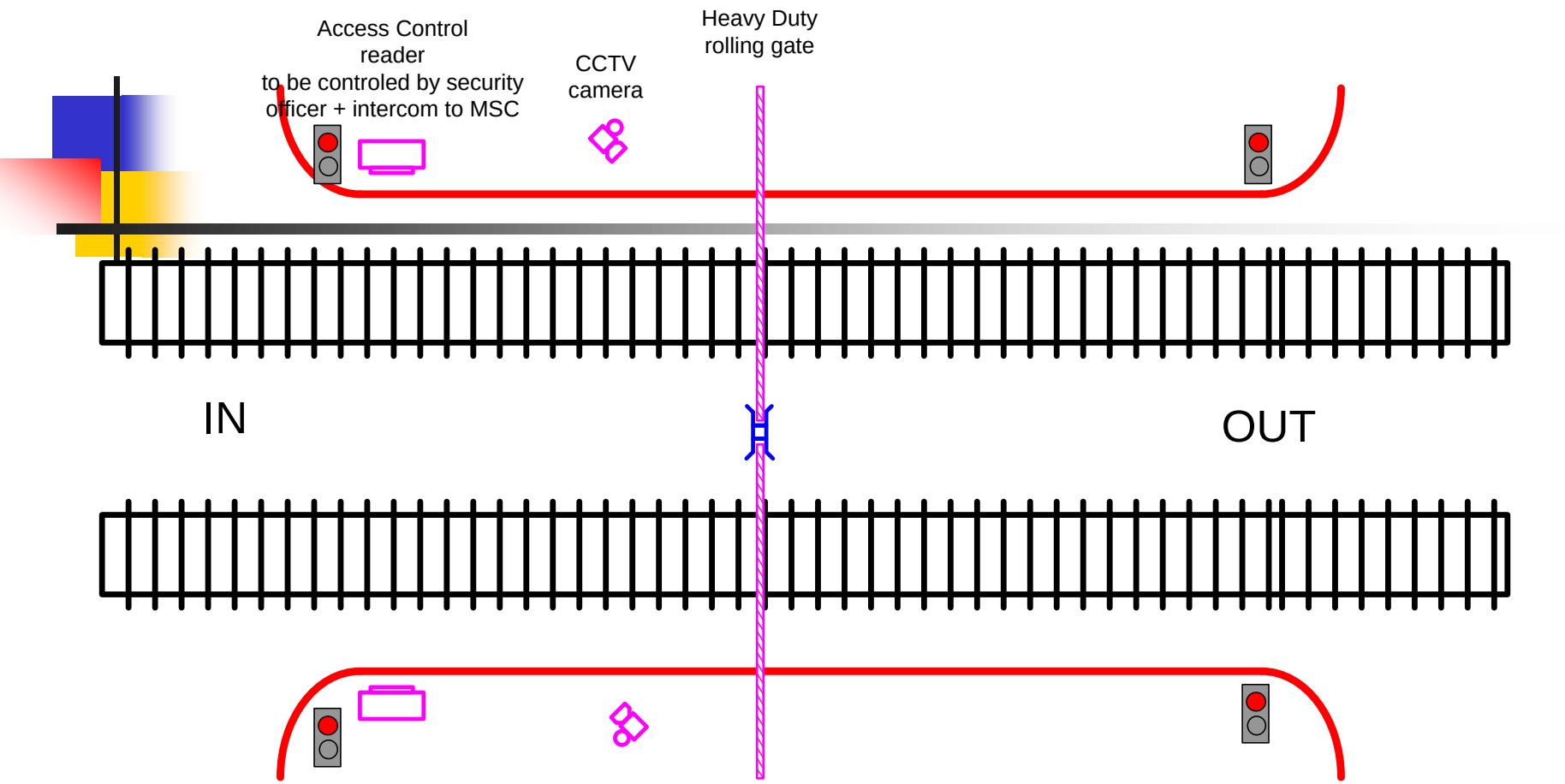
Gate Management System

Container information recording system

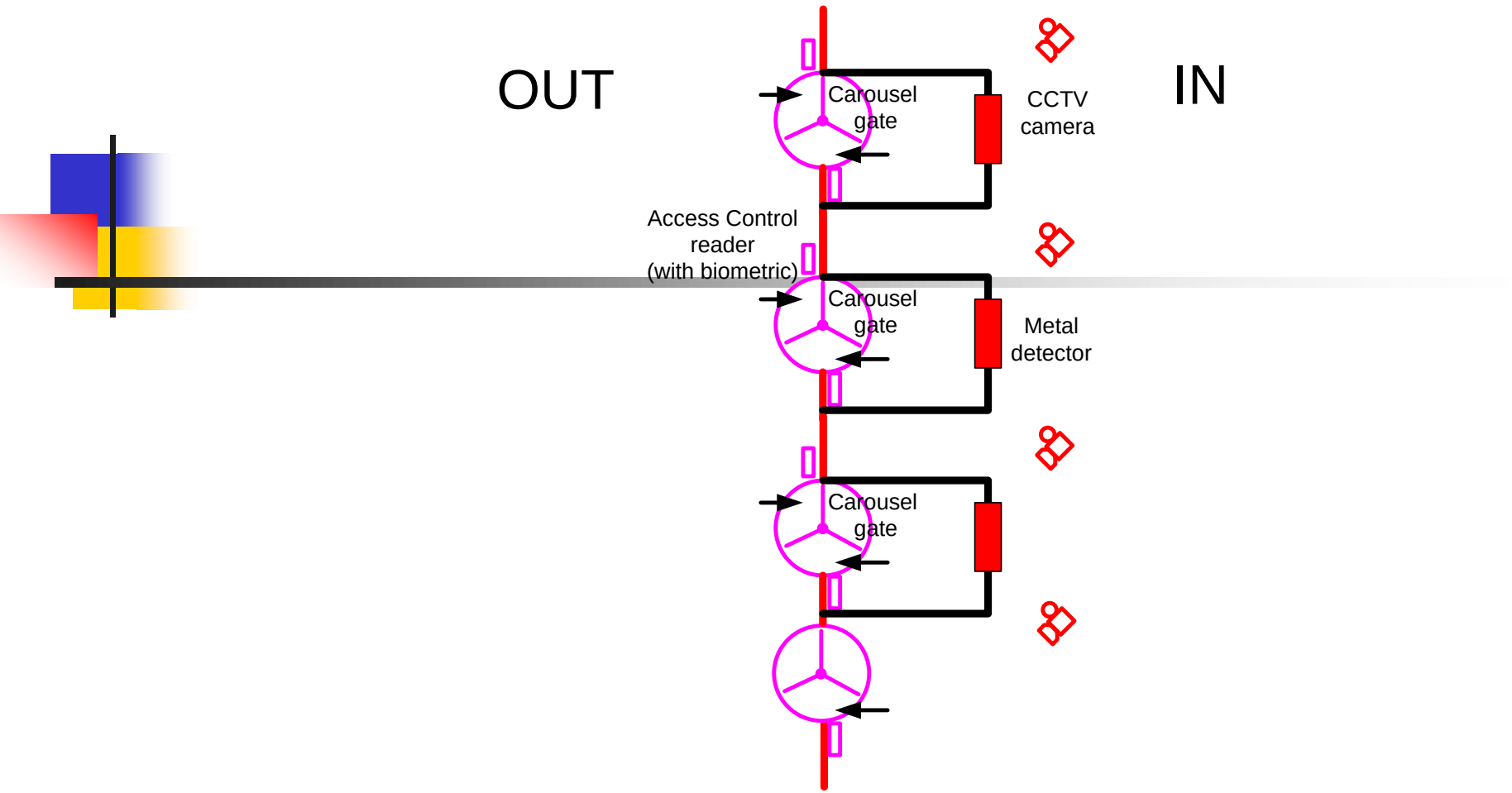


Gate Management System

Rail way gate

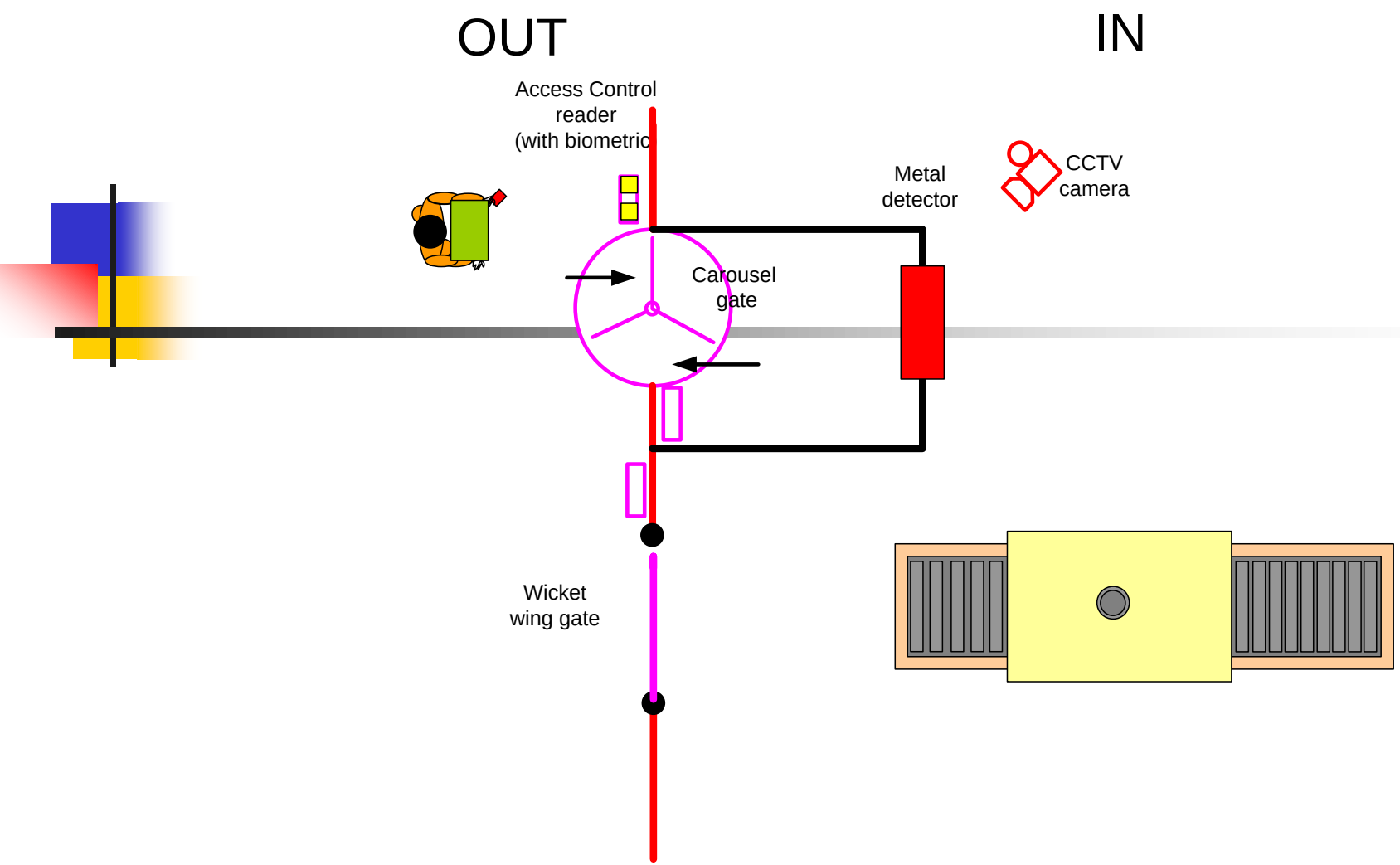


Pedestrian gate Management System at gate # 8

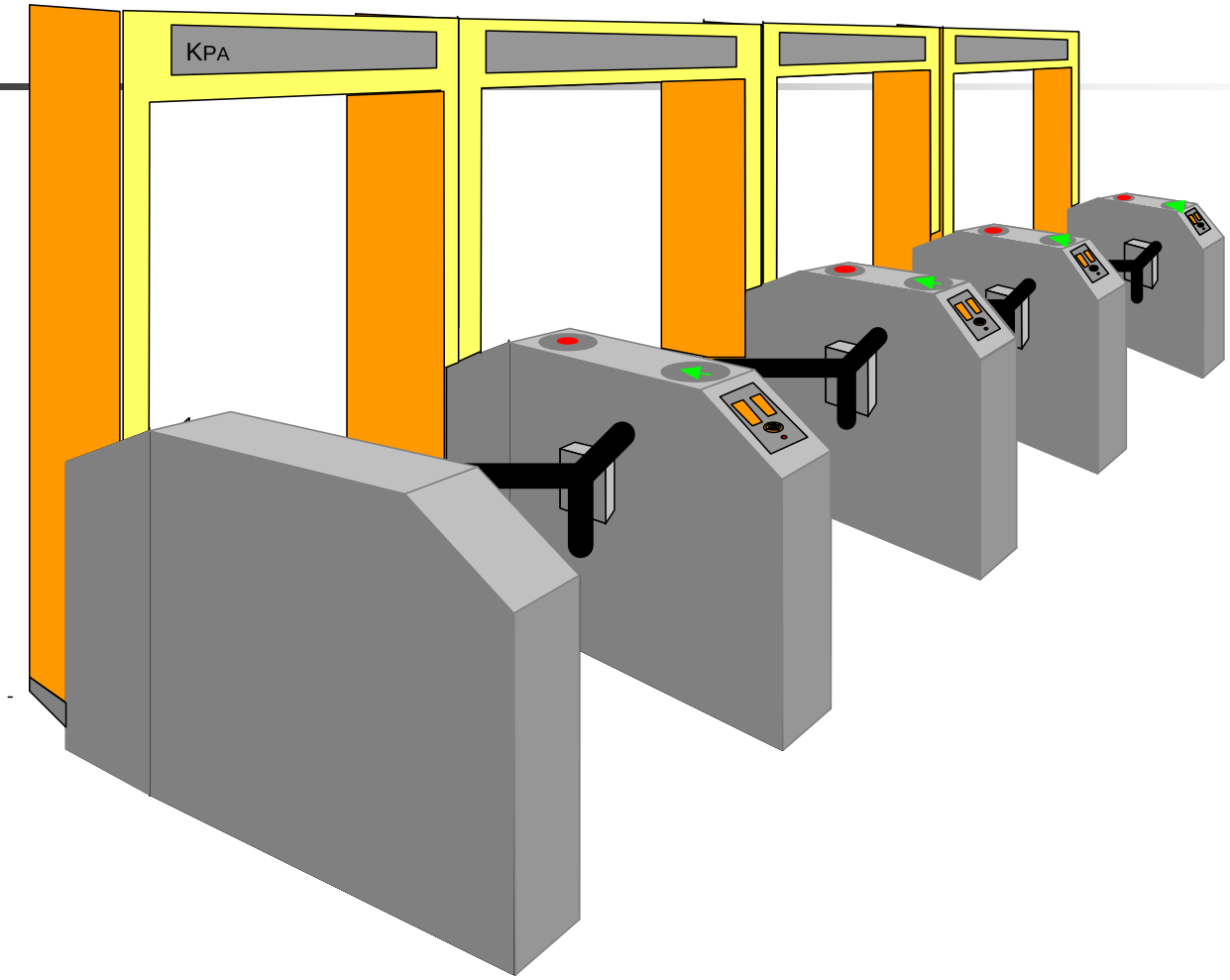


PEDESTRIAN ENTRY

Pedestrian / passenger flow of entrance



KPA-Head Quarter entrance



Benefits of the ISS System

- Trade enhancement and facilitation
- Protection of key port installations and infrastructure
- Deterrent to potential criminal and illegal activities
- Prevention of cargo theft and pilferage

ANY QUESTIONS