ERICSSON BORDER AND AREA SECURITY

FUTURE SECURITY SYSTEMS - INDUSTRIAL CHALLENGES AND OPPORTUNITIES

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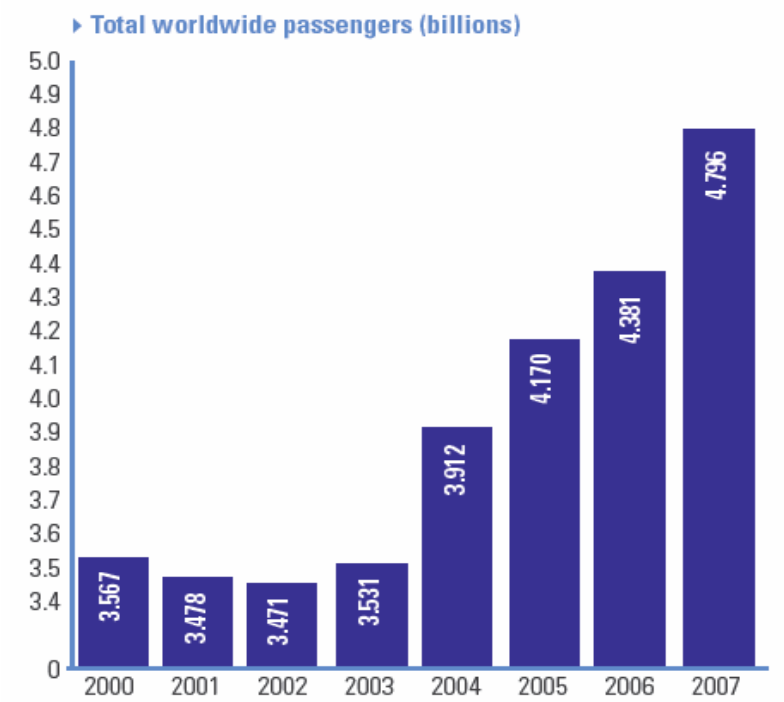
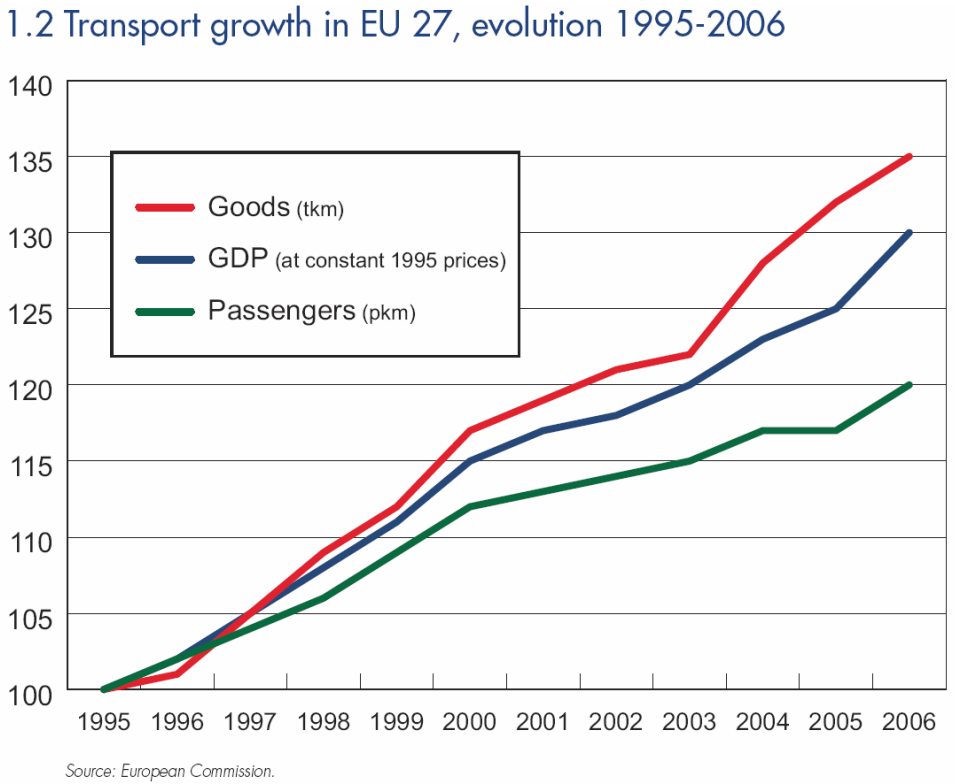
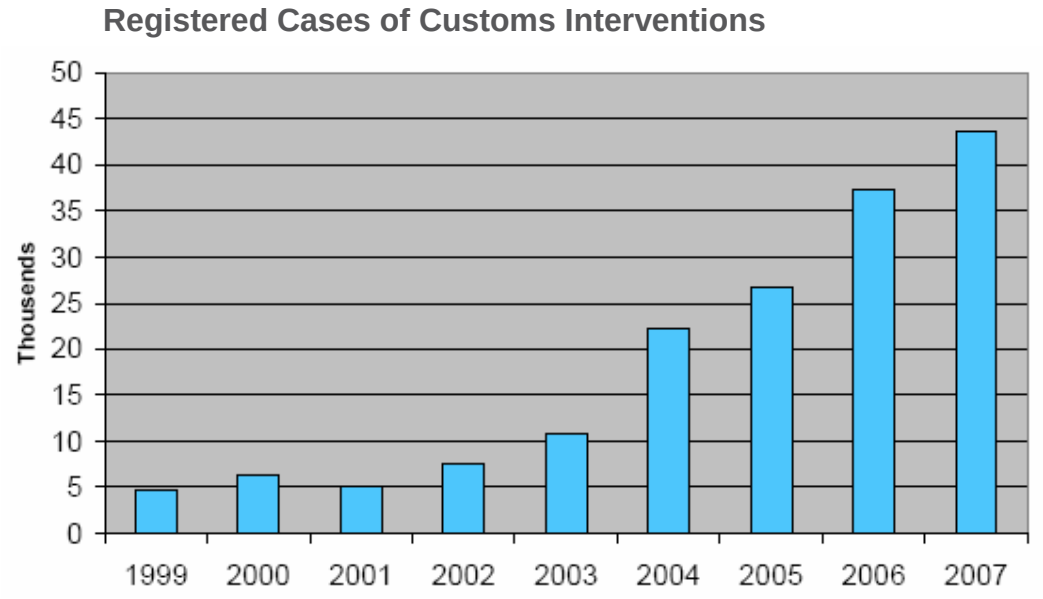
BORDER TRAFFIC IS ON THE RISE …



ACI, July 2008



...AND SO IS HARMFUL ACTIVITY



Source: European Commission Taxation and Customs Union, 2008

- The U.S./Mexican border is one hot spot for illegal border activities.
  - According to Time magazine, more than 4,000 illegally cross into Arizona every day.
  - These kinds of breaches are overwhelming the border patrol and straining communities.

BORDER AND AREA SECURITY IS CRITICAL IN THE 21ST CENTURY

- Economic growth and prosperity
- Political stability
- Public health
- Security and safety
- Sovereignty

OPERATIONAL OBJECTIVES

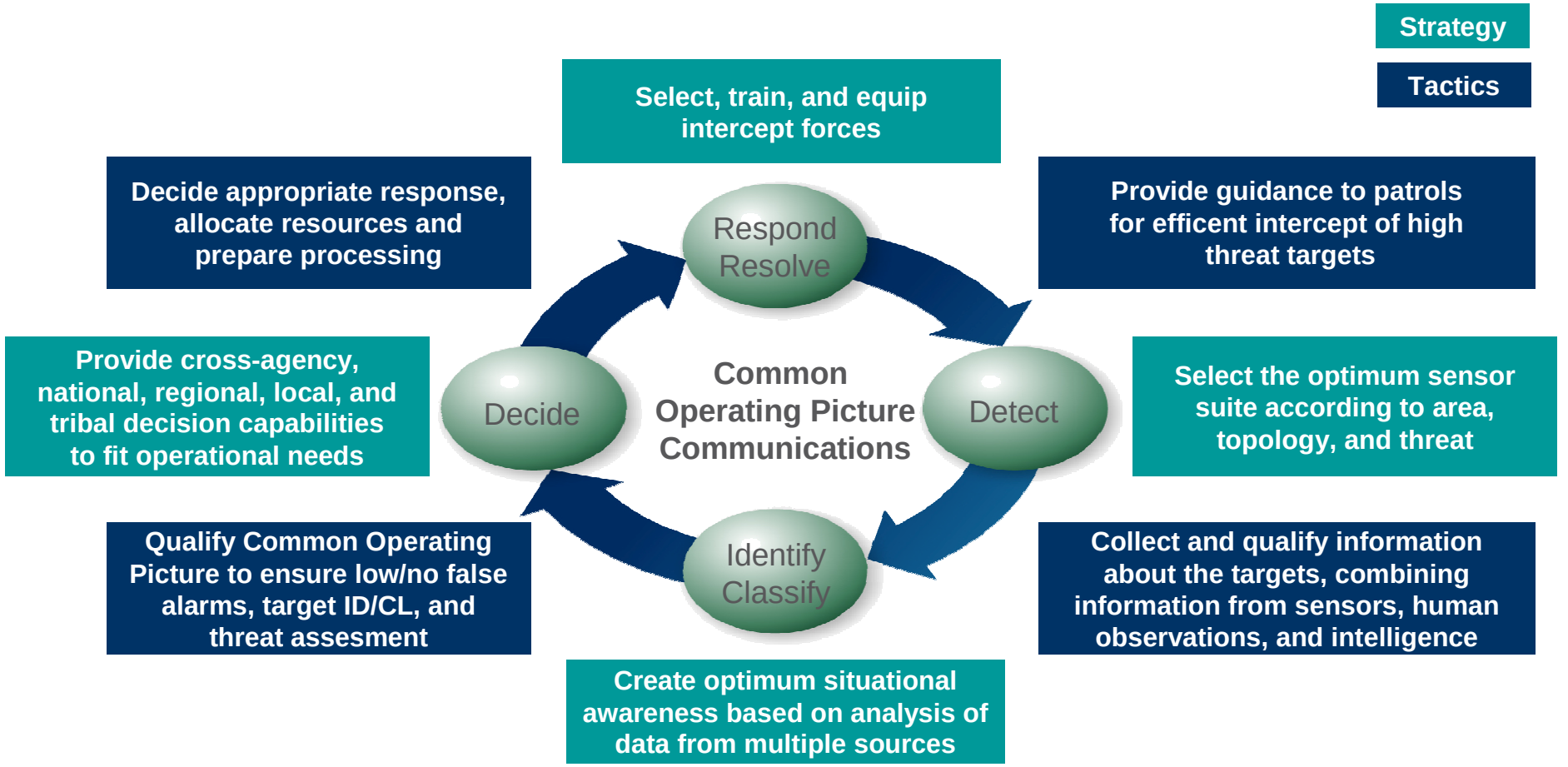
No. 1: Deterrence
No. 2: Operational control

Enablers:

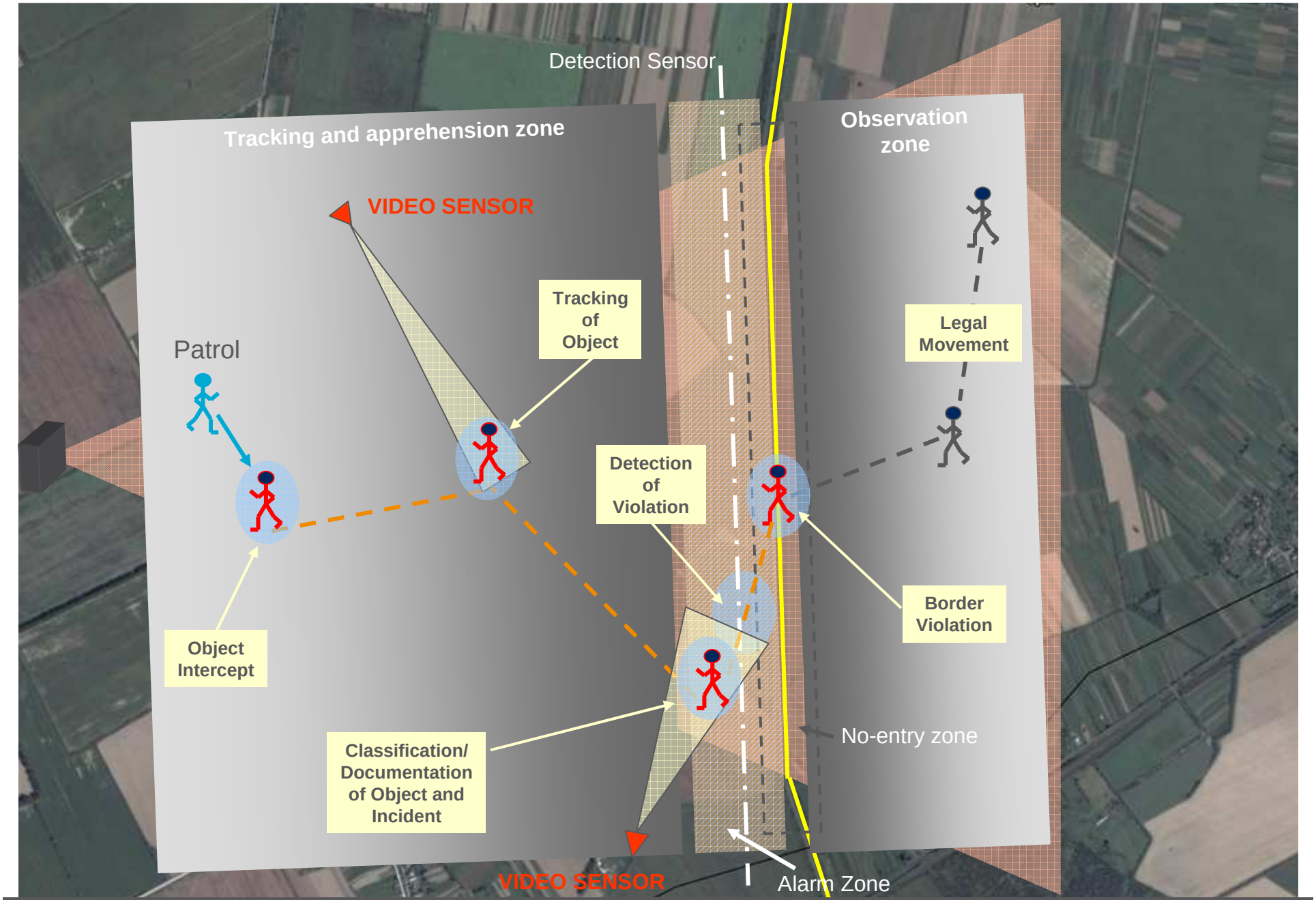
- Presence and visibility
- Mobility and unpredictability
- Interoperability
- Real and perceived surveillance capability
- Physical and virtual barriers
- Information operations

Optimal balance – personnel, processes, technology, infrastructure

ERICSSON OPERATIONAL CONCEPT



Short loop times are key to deterrence, efficiency, and incident resolution



Concept of Operations (ConOps)-driven design approach

SOLUTION DESIGN

There are many challenges

- BAS solutions are complex. Methods, technology, competence and organization all need to be adapted
  to new, uncertain and unexpected requirements continuously.
- Existing solutions, regardless of sophistication, have often been compromised by equally sophisticated criminal elements.
- Forces of nature, such as weather and terrain impact BAS solutions and must be factored in to the solution.
- New and asymmetric threats must be proactively managed.
- Increased interdependencies put new requirements on operations and co-operation.

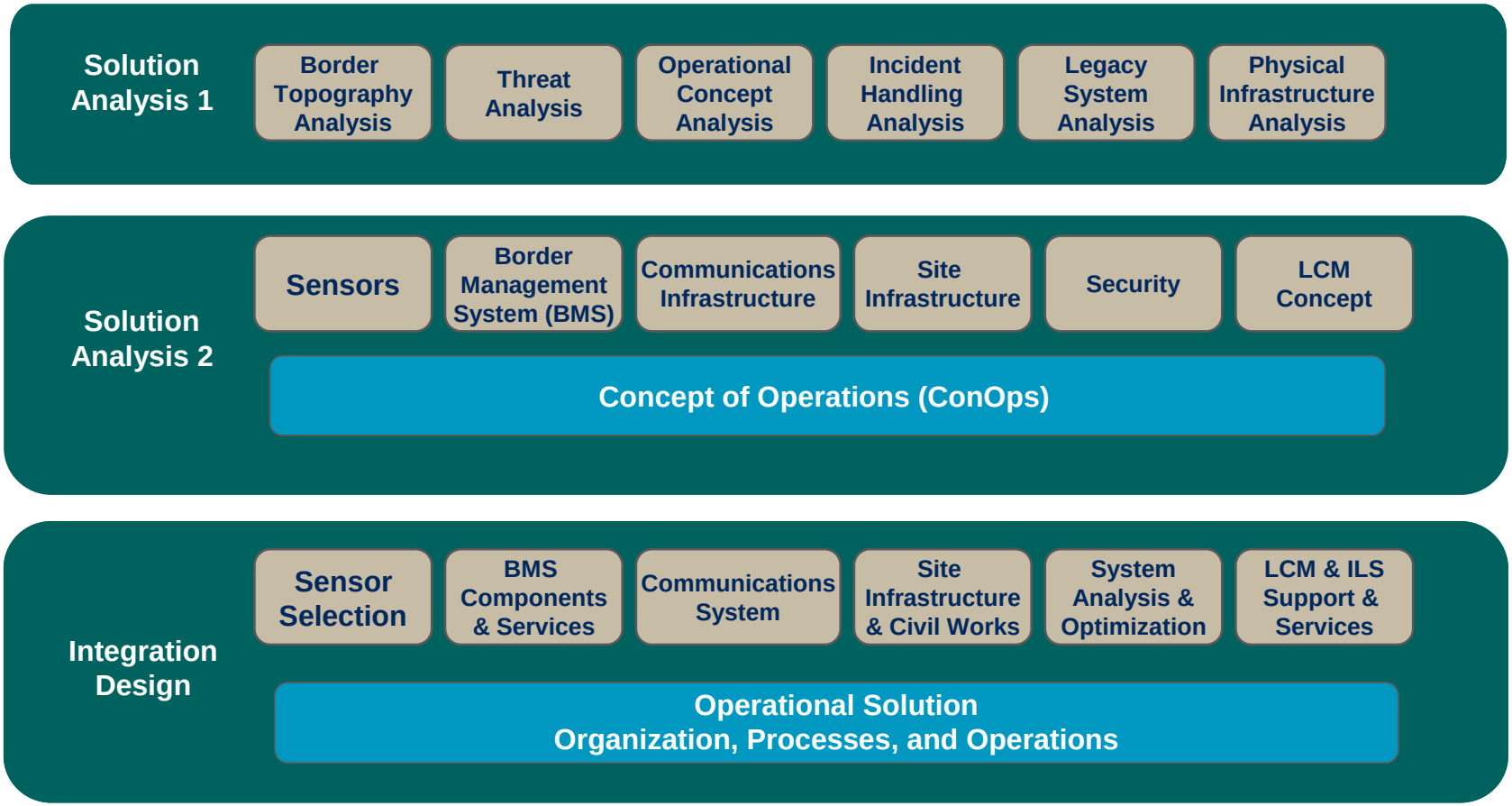
A COOPERATIVE APPROACH

Ericsson works hand-in-hand with the customer to design a flexible, efficient BAS solution through:

- Gathering and analyzing all relevant information
- Systematically creating a working view of the border area
- Establishing design criteria
- Developing an architectural overview for the solution
- Describing security requirements
- Developing a Concept of Operations (ConOps)
- Identifying customer specific Border Management System (BMS) requirements

COLLABORATIVE ENGINEERING PROCESS

Analysis driven, balanced design approach, continuous improvements, and evolution



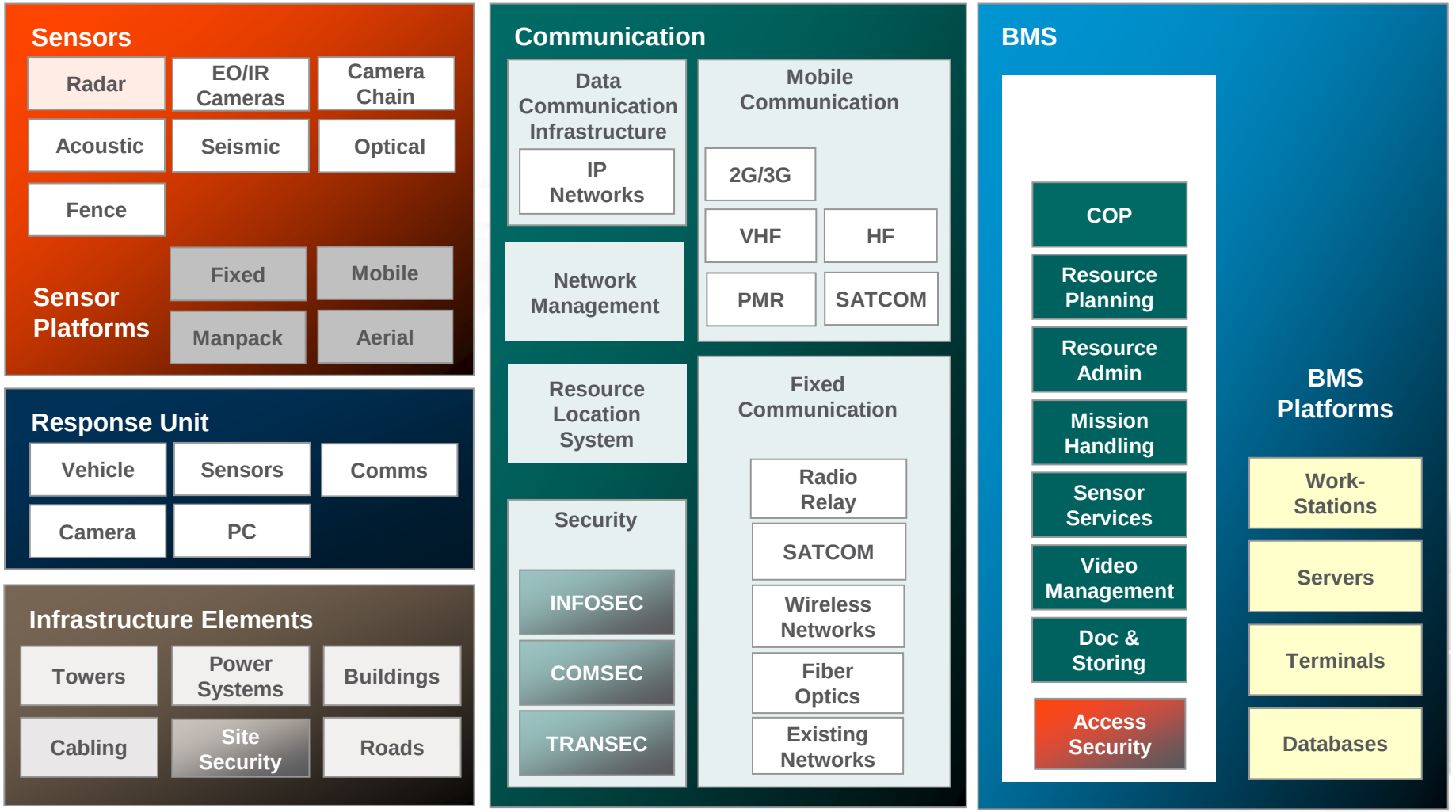
Knowledge transfer, reliability, maintainability, and cost-effectiveness

SOLUTION ANALYSIS

Solution Analysis is performed in 2 phases:

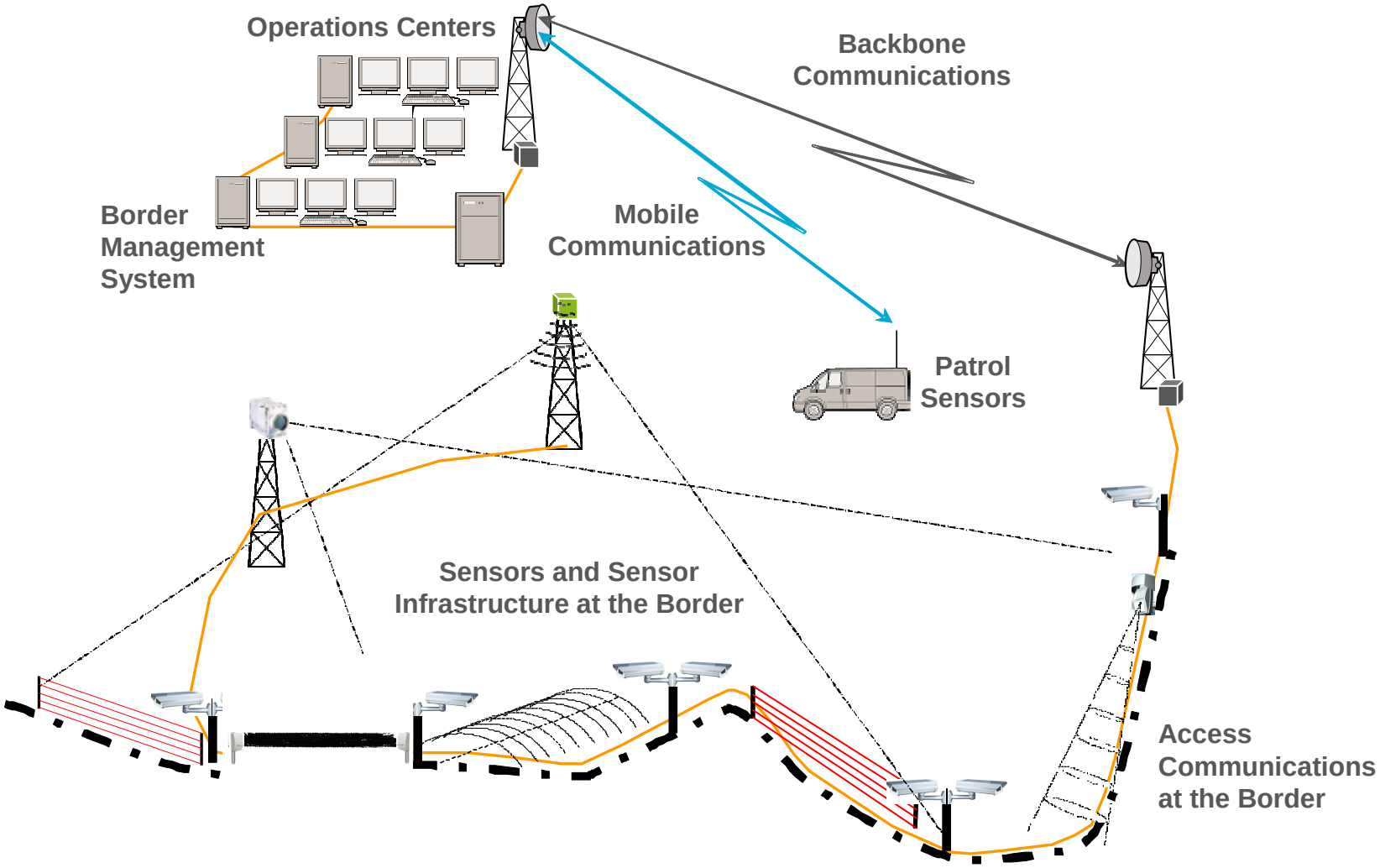
- Phase 1 Solution Analysis provides the most effective means of gathering and analyzing the information needed to develop a customized BAS solution.
- Phase 2 Solution Analysis provides the most effective means of interpreting the overall requirements for the solution, and developing a Concept of Operations.
- The output from the Solution Analysis activity is input to Integration Design resulting in an efficient, effective operational solution.

BAS COMPONENTS FRAMEWORK



The best product is selected for the job throughout the process

THE ERICSSON BAS SOLUTION



Solutions designed according to threat, topography, and mission requirements

BAS MANAGEMENT SYSTEM

- Common Operating Picture (COP)
- Video Management
- Mission Management
- Resource and Response Management
- Multimedia Management
- Core Services
- Sensor Services
- **Interaction with External Systems**

BAS SENSOR SUBSYSTEM

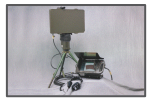
*A sensor is a device which measures a physical quantity and converts it into a signal which can be read by an observer or by an instrument **

Examples of supported sensors types


CCTV


Thermal Imagers


Intelligent Fence


Radar


HH EO/IR


RF


Microwave Barrier


UGS


Buried Sensor Cable

Detection

The process of establishing that an object is present

Classification

The process of determining if an object falls within a general class (human, animal, vehicle, etc)

Recognition

The process of establishing the specific class of an object (man, woman, child)

Identification

The process of establishing which individual is observed (mr. A or mr. B)

Ericsson sensors expose prioritized threats

BAS COMMUNICATIONS

REAL-TIME SERVICES

Secure Communication

Government Networks

Mobile Systems

Application End-To-End Services

Communication Services

Sensor Integration

Sensor Wireline Access

Sensor Wireless Access

Transport

Management

Emergency Response

Network Control & Management

A border security common services network

Sensor Access

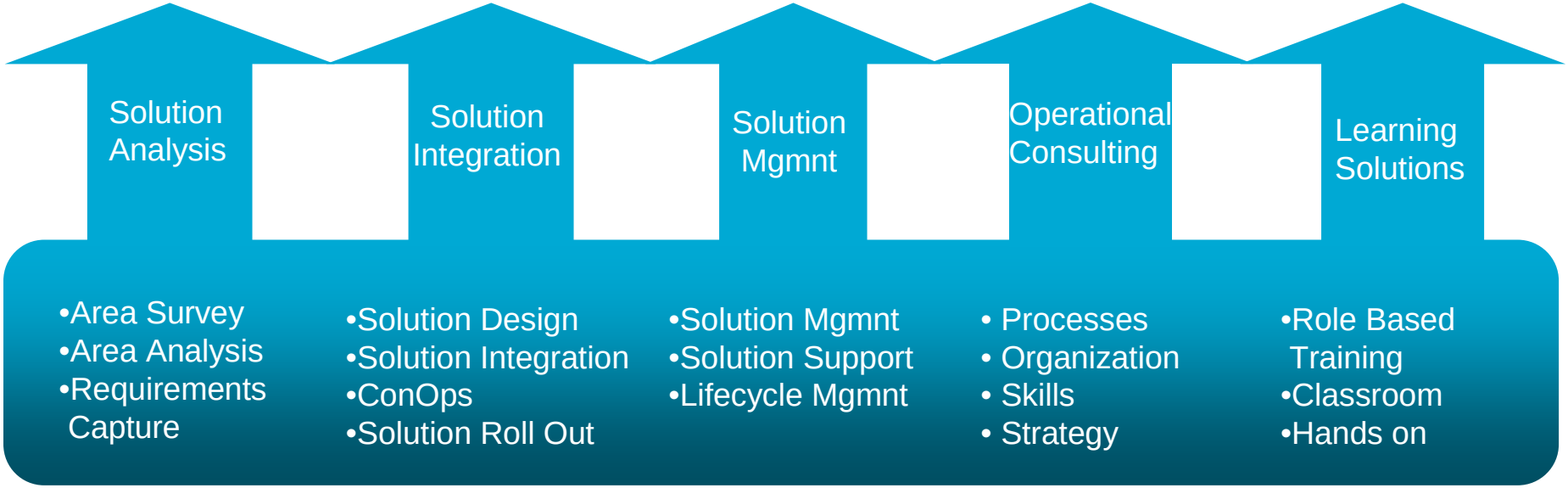
Command and Control

Patrol and Intercept

Border Crossing Points (BCP)

BAS SERVICES

Customer



Globally recognized Best Practices, tools, methods, and processes

BAS MARITIME AND COASTAL SECURITY SOLUTION

MARITIME AND PORT SECURITY

Integrated Port security, Maritime security and Coastal Security

- Provides the ability to react to potential maritime threats or incidents in an appropriate, timely, and safe manner
  - Integrated System with information sharing
  - Rapid response to threats
- Mission-Relevant Situational Awareness
  - Risk and threat assessment
  - Intelligent knowledge of normal maritime and port conditions
  - Provides an accurate and validated situational picture
    - Common Operating Picture (COP)
    - Serivice-oriented, user defined operational picture
- Maritime and Port Anomaly Detection and Deterrence
  - Deter unwanted traffic and access
  - Detect Potential abnormal or unidentified traffic
  - Flag authorized traffic when not acting properly

ERICSSON COASTAL SECURITY

Integrated or standalone VTMIS

- VTMIS: Vessel Traffic Management and Information System
- VTMIS main functionality:
  - Monitor all maritime (ship) movements – register and identify
  - Continuous dialog with all registered traffic
  - React when a situation dictates response
- Key components
  - Sensors
    - Radar, AIS (Automatic Identification System), Cameras, Meteorological stations, Ship Reporting System/ other information sources,
  - Management system
    - Operator Workstations
    - Port Management Information System (PMIS)
    - Traffic Management

ERICSSON COASTAL SECURITY

BAS Coastal Platform

- BAS: Border and Area Security
  - Detection
  - Classification
  - Recognition
  - Identification
  - Tracking
- Main Functionality
  - Coastal border survellience
  - Port perimeter security and intrusion detection
  - Port access control
  - Port security control system
  - Port internal surveillance
- Key Components
  - Perimeter security with various sensors
  - Video surveillance
  - BMS management system and dispatch
  - End to end sensor integration
  - Multiservice Communication backbone

KEY VALUES

- More secure borders
  - Proof: Improved situational awareness
  - Proof: Enhanced operational control and deterrence
- Flexibility and investment protection
  - Proof: Highly reliable solutions tailored to threat conditions
  - Proof: Designed to meet current requirements and scale for future expansion
  - Proof: Service-oriented, open standards architecture
  - Proof: Compliance with international obligations and regulations
- Lower operating costs
  - Proof: Optimum balance between manpower and technology
  - Proof: Efficient deployment and use of resources
  - Proof: Reduction of national costs through effective border control

Modular, flexible, cost-effective, open standards solution for today and the future

WHY ERICSSON?

- Patented design process
- Proven capabilities with border security
- Secure, cost-balanced solution
- World leader in efficient information services handling and distribution
- Functionality driven, product-independent approach
- Comprehensive, efficient, and effective large-scale program management
- Global organization with strong local presence

Ericsson is the perfect partner for collaborative deployment of Border Security worldwide

BAS REFERENCES

NORWEGIAN DEFENCE MINISTRY

NATIONAL GOVERNMENT – END-TO-END SYSTEMS INTEGRATION

Border Control Solution

Ericsson Border 21 system protects the Norwegian–Russian portion of the EU Schengen border. As the prime integrator, Ericsson provided an end-to-end solution that included solution analysis, solution design, sensors and communication infrastructure, installation, decision support systems, detection analysis systems, and end-to-end systems integration.

Benefits

- Able to patrol the remote northern border with no additional manpower
- Enhanced security provides protection from smugglers and illegal immigrants
- Compliance with Schengen security mandates

"Ericsson's open architecture made it possible to scale the project to the right size."

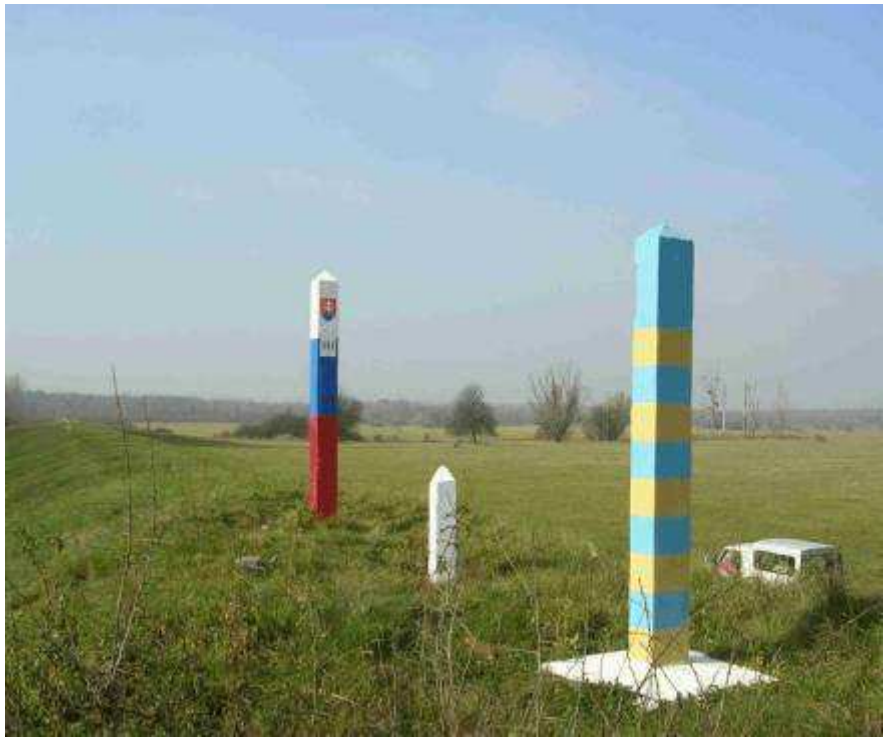
Lieutenant-Colonel Terje Alvsaker, Commander, Norwegian Border Guard

SLOVAK MINISTRY OF DEFENCE

NATIONAL GOVERNMENT – END-TO-END SYSTEMS INTEGRATION

EU Schengen Border Protection

Ericsson's Border 21 system protects the Slovak-Ukraine portion of the EU Schengen border. As the prime integrator, Ericsson provided an end-to-end solution that included solution analysis, solution design, sensors and communication infrastructure, installation, decision support systems, detection analysis systems, and end-to-end systems integration.



Benefits

- Improved operational efficiency with real-time decision making
- Enhanced security via faster, more appropriate response times
- Lowered overall costs by centralizing operation and maintenance

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