Use of technology and Integrated Systems in Security

29h January, 2010

Presented By: Amit Varma

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Coverage

Prologue

Integrated Security Systems

Specific Integrated Solutions

Prologue

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2009 - Terrorism Threat Map

India under SEVERE terrorism threat !!!

* Source: aon.com

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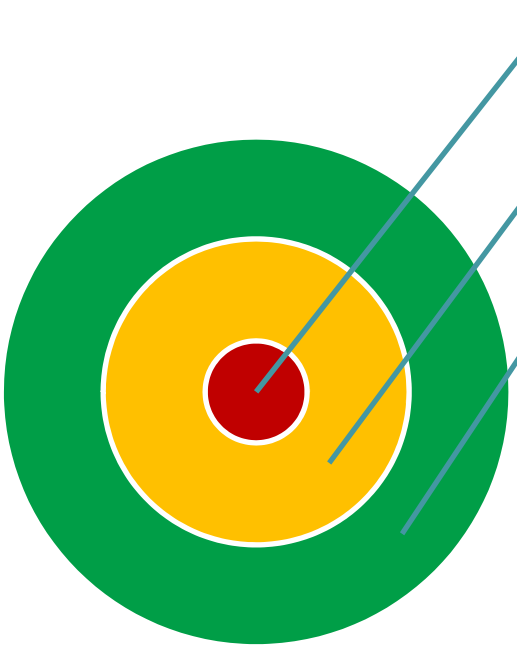
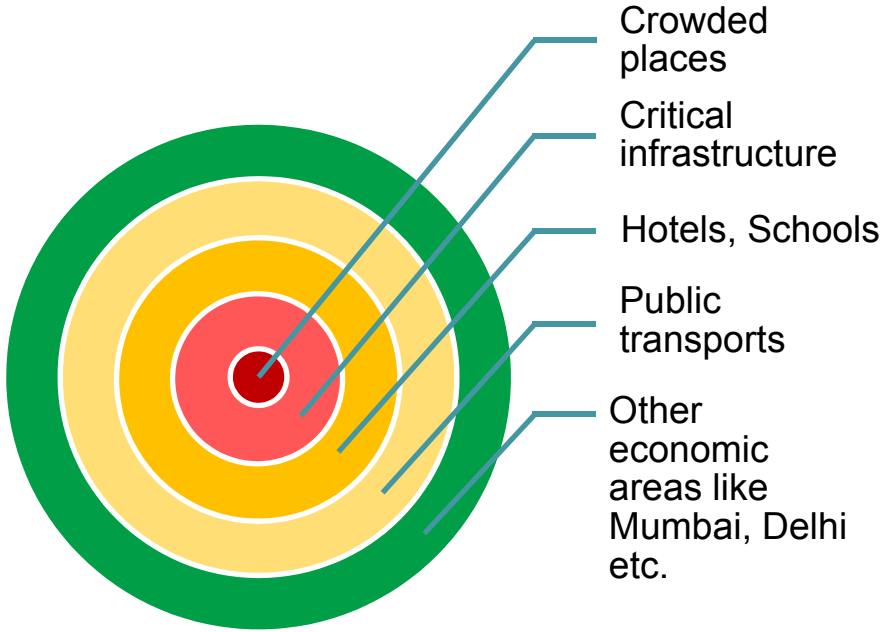
Paradigm Shift In Terrorist Target

Earlier



Now



Shift: Government → Economic Areas

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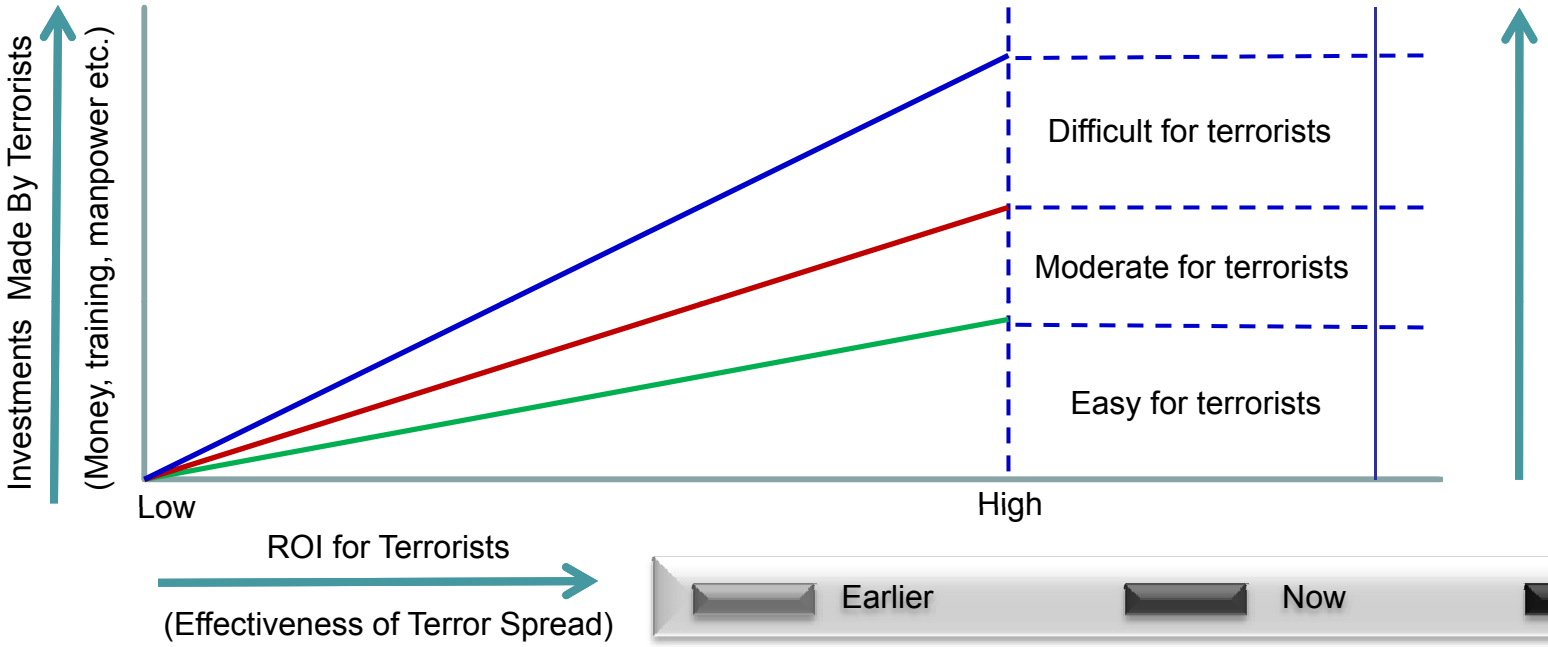
Raising The Bar – Making it difficult to attack

Decreasing the Return on Investment For Terrorists



October 2002 Bali Bombings
Cost borne by terrorists < $ 50,000

August 1998 Twin Bombings In Kenya & Tanzania
Cost borne by terrorists < $ 50,000

2008 Mumbai Attacks

Cost borne by terrorists ~ Rs. 3.5 Crs

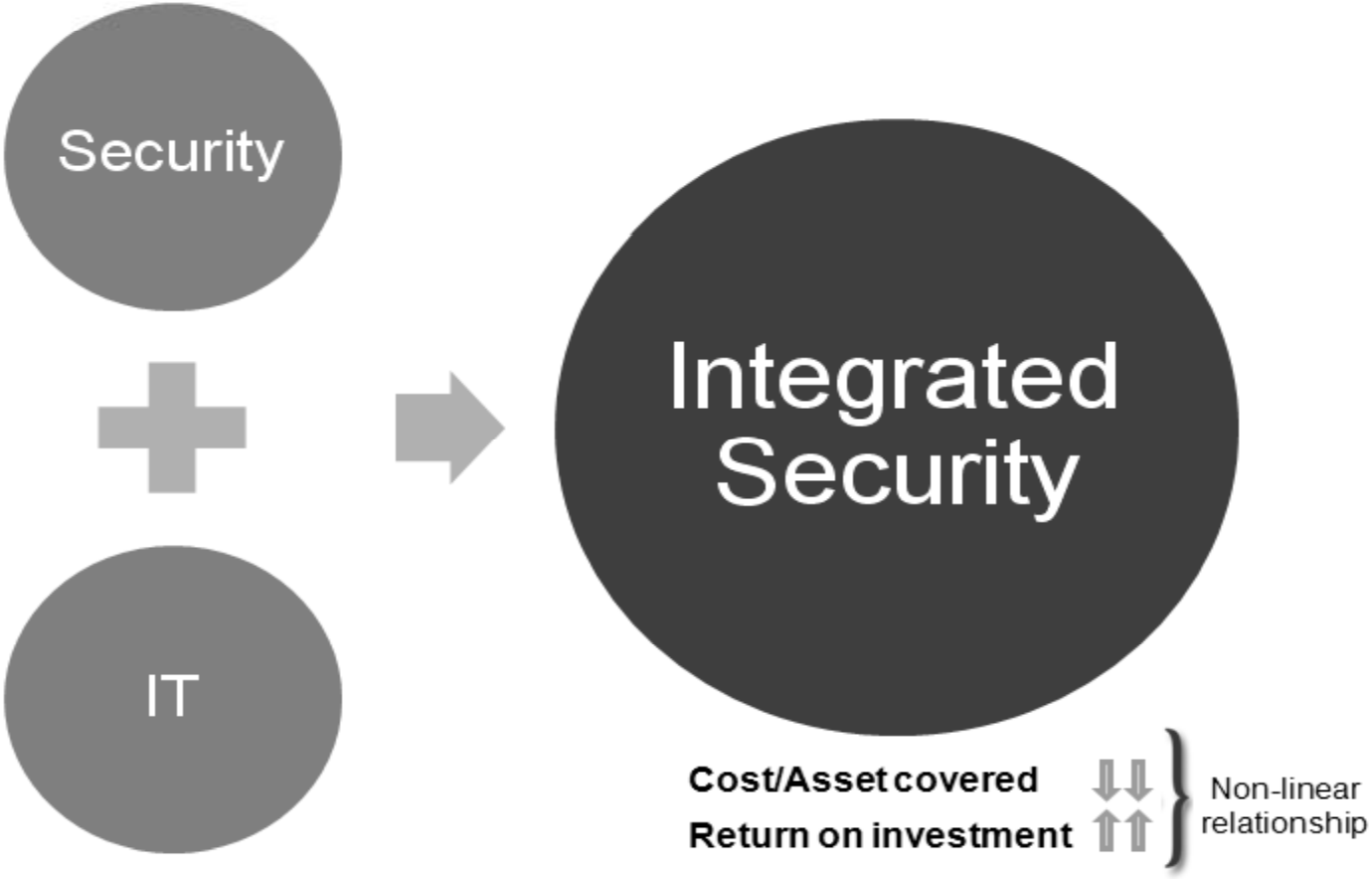
Cost of consequences > Rs. 50,000 Crs

2004 Madrid Train Bombings
Cost borne by terrorists ~ $ 10,000

November 2003 Istanbul Attacks
Cost borne by terrorists < $ 40,000

Synergy Between Security & IT

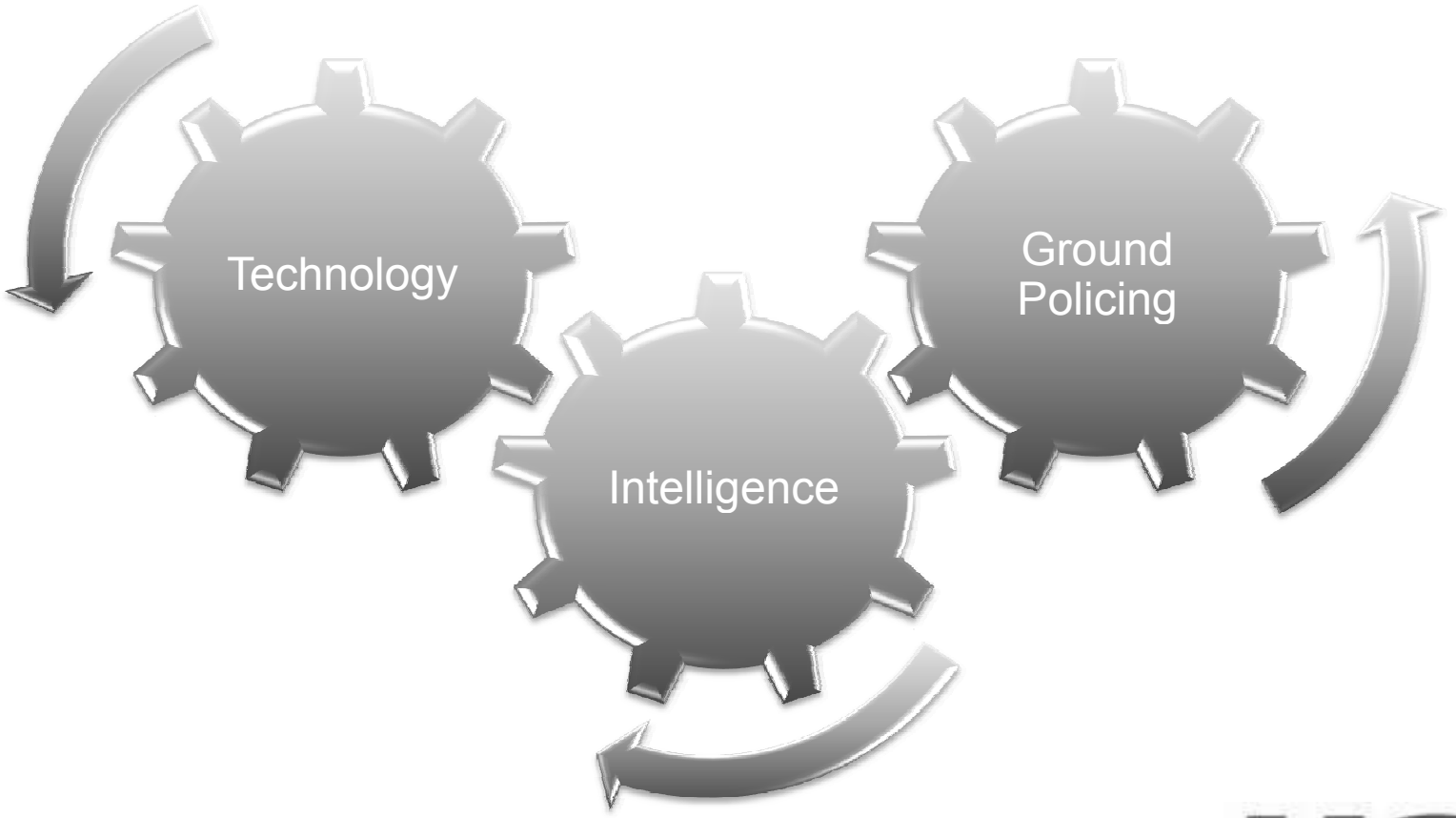
To adequately secure an environment, we must collect, analyze & make decisions based on information which is constantly flowing, whether it comes from sensors, intelligence or environmental events. The key to addressing this surge in dynamic risk is the convergence of security & information technology



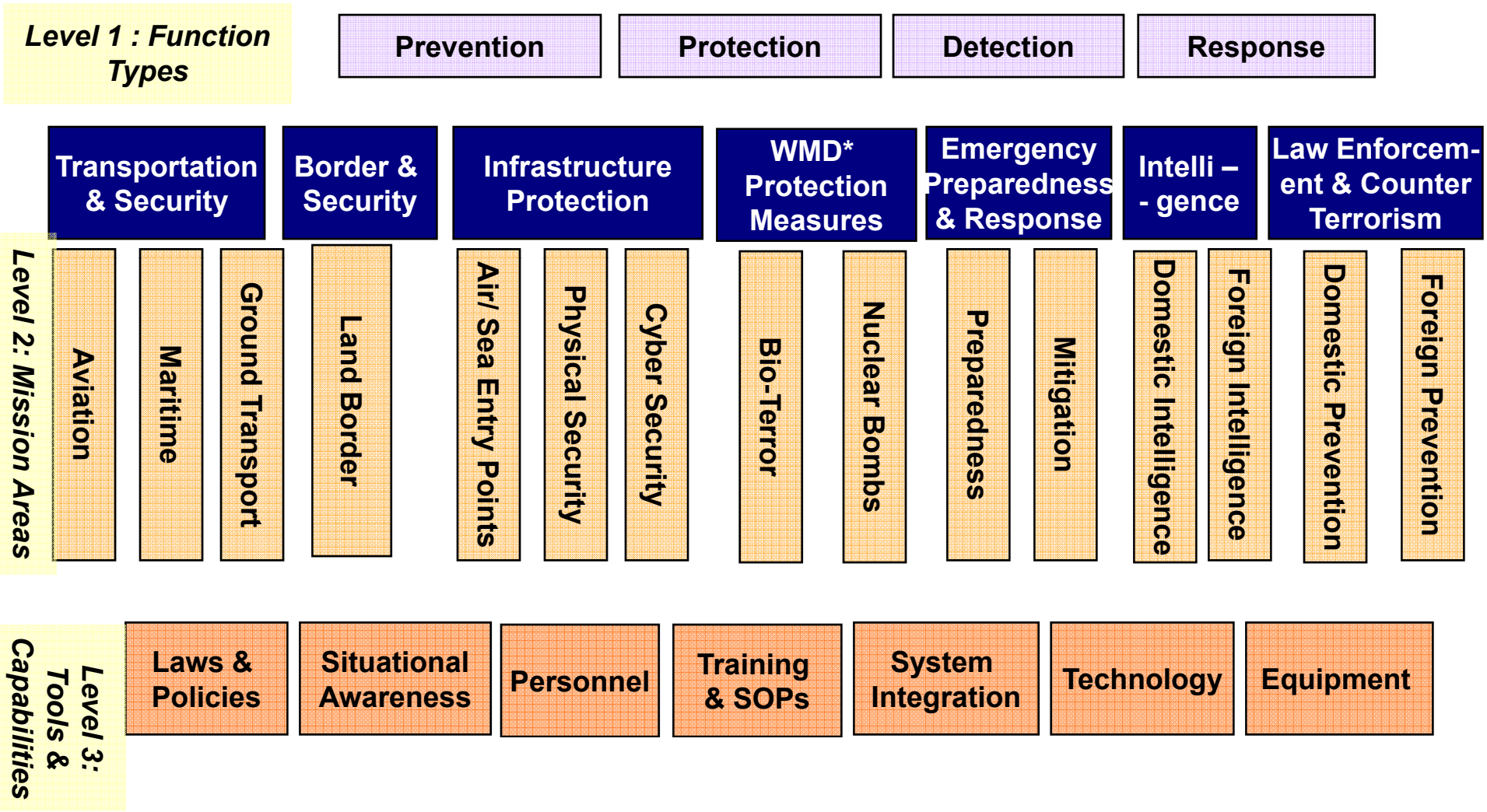
Need for Integration becomes greater in this scenario

Security Wheel Model – Safe State

- A chain is as strong as its weakest link
- Efficiency in all the three wheels provides “Effectiveness” to Security

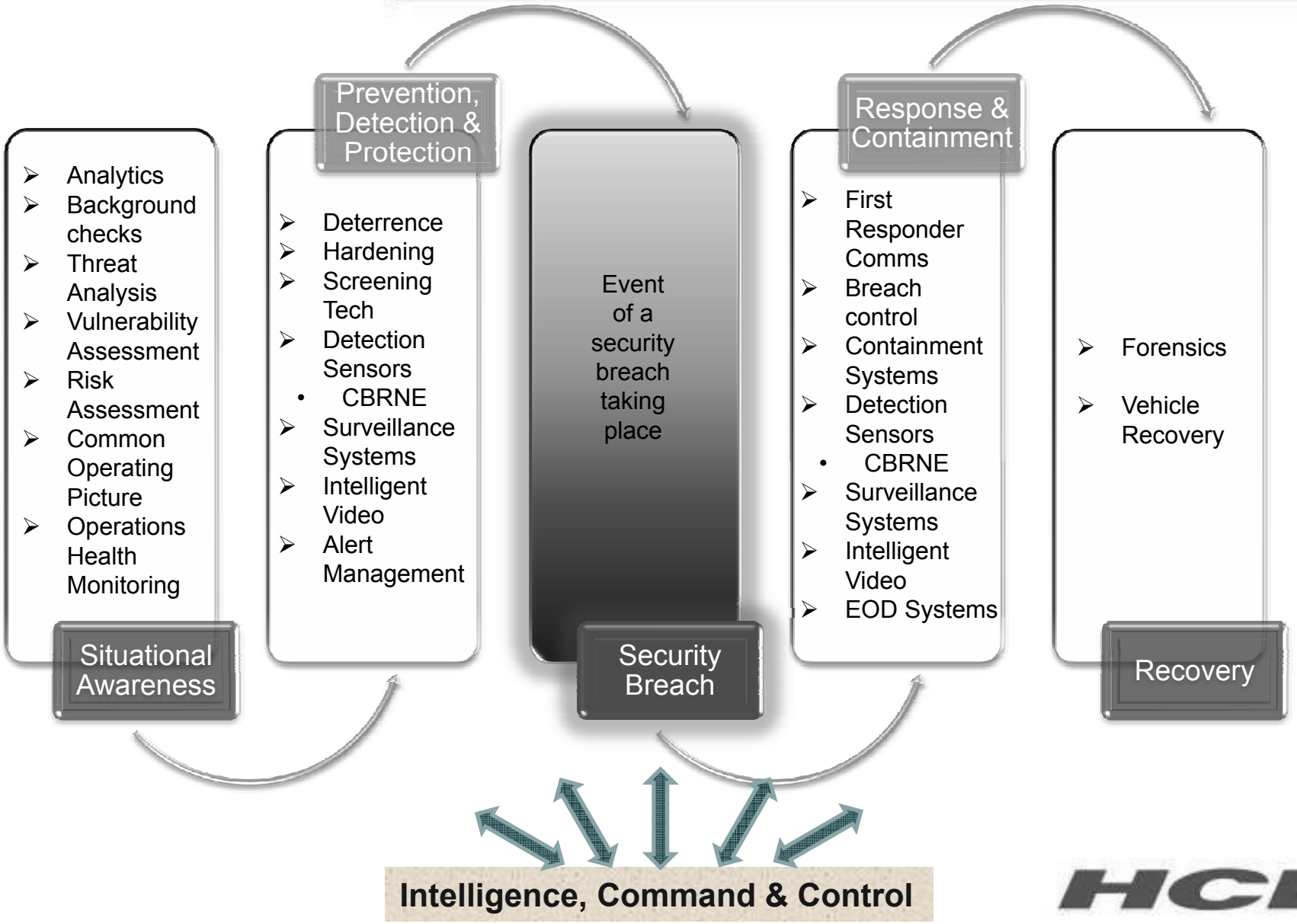


Security & Surveillance – A Landscape



WMD = Weapon of Mass Destructions

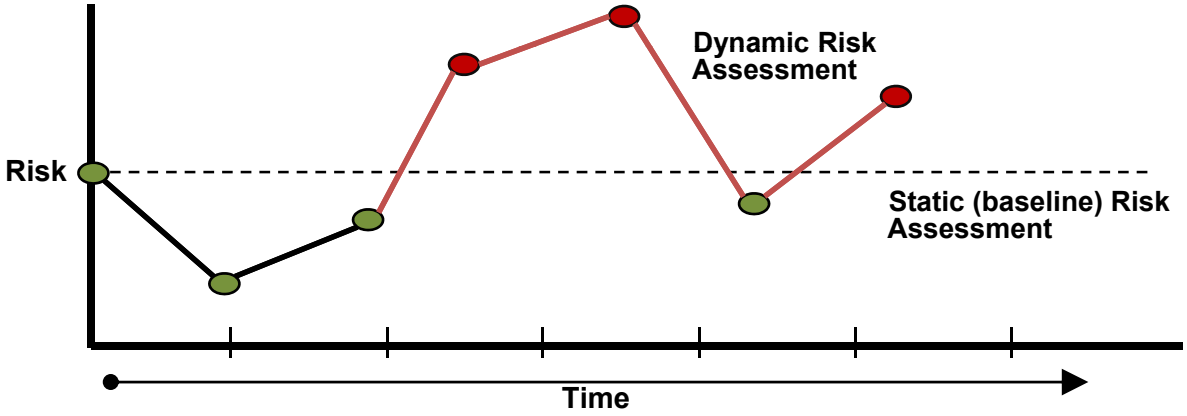
Event Model


Situational Awareness
Analytics
Background checks
Threat Analysis
Vulnerability Assessment
Risk Assessment
Common Operating Picture
Operations Health Monitoring
Prevention, Detection & Protection
Deterrence
Hardening
Screening Tech
Detection Sensors
CBRNE
Surveillance Systems
Intelligent Video
Alert Management
Security Breach
Event of a security breach taking place
Response & Containment
First Responder Comms
Breach control
Containment Systems
Detection Sensors
CBRNE
Surveillance Systems
Intelligent Video
EOD Systems
Recovery
Forensics
Vehicle Recovery
Intelligence, Command & Control

Why an Integrated Security System

Non-addressal of dynamic risk

- Static risk assessments are calculated based on known risk levels based on pre-existing knowledge base and these serve as the baseline for dynamic risk assessments; dynamic risk assessments are continuously updated based on real time information



Absence of a common operating picture

No sense of ownership in case of failures

Low effectiveness of standalone systems

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Integrated Security Systems

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Key Technologies

1. Identification & Authentication

2. Screening

Video Servers

Networked Cameras

3. Surveillance

4. Sensing

5. Intelligence

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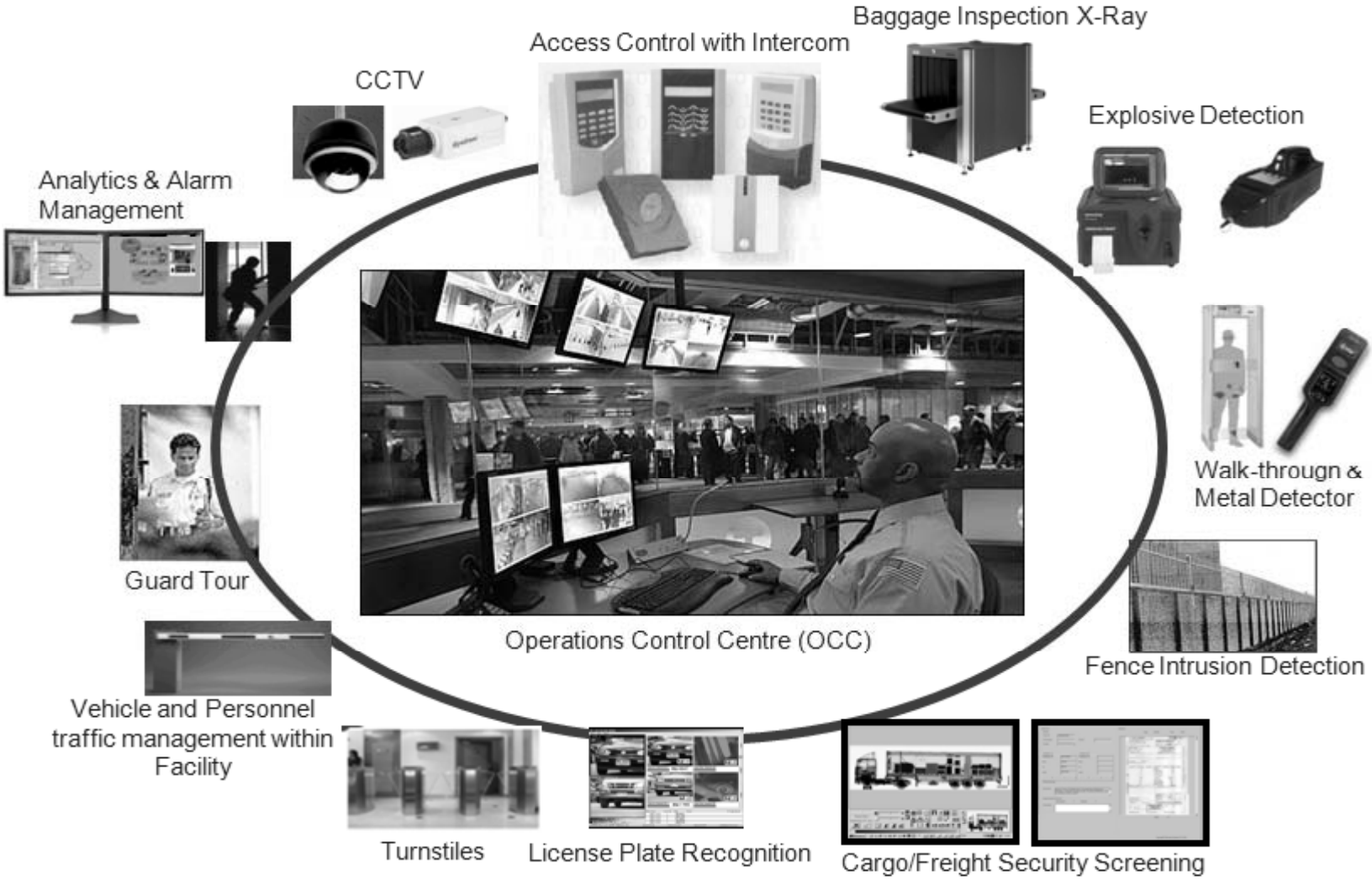
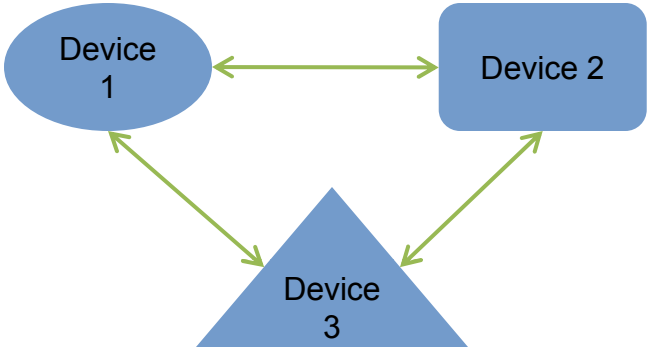
Integrated Security System



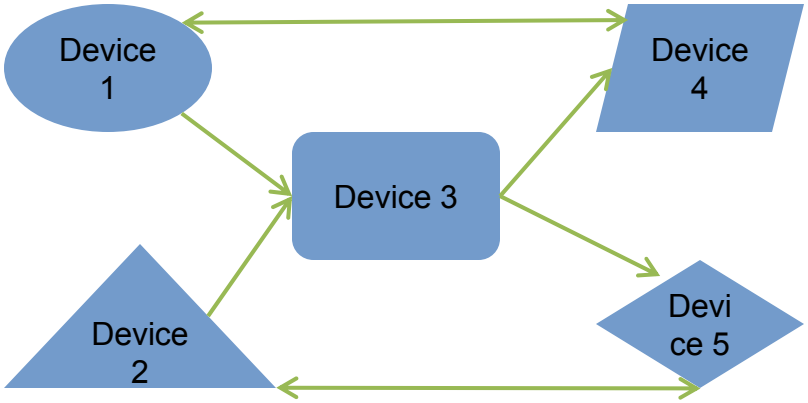
Key Attributes Of Integrated Security Systems Architecture

Communication between disparate devices

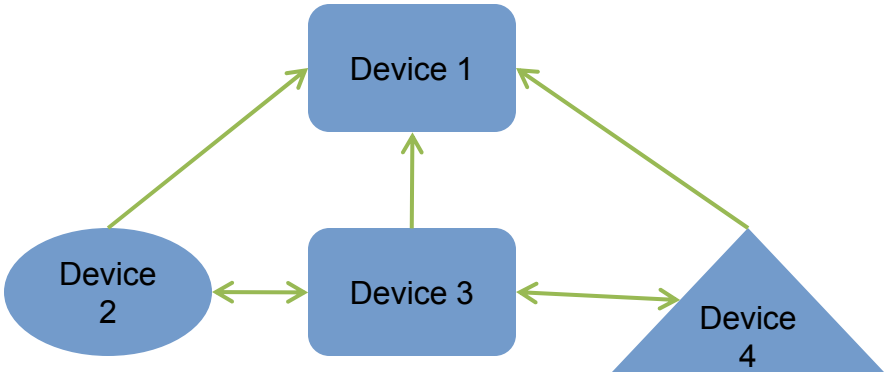


Output of one subsystem becomes input of another

Interoperability of various products/sub-systems



Master System is a System of Systems



It must have all of these

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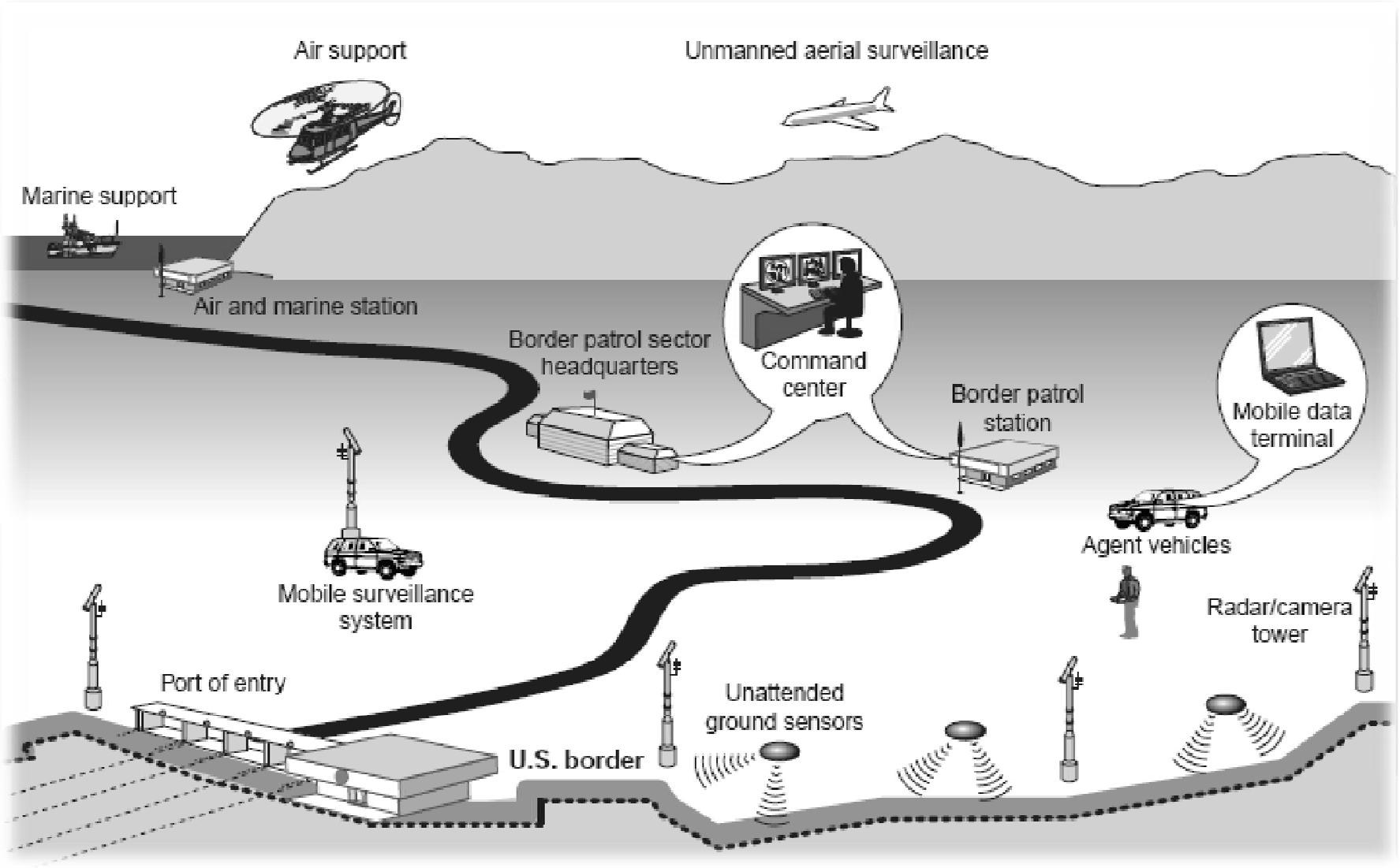
Benefits of an Integrated Security System

Traditional Security System		Integrated Security System
Proprietary	⟷	Open Standards
Silo, Isolated Systems (Islands of Security)	⟷	Integrated and Interoperable Systems
Limited Safety, Security and Integration	⟷	Integrated Safety and Security Compliant
Reactive, Error Prone, Poor Visibility & Control	⟷	Proactive, Strategic, Managed and Predictive
Functional Data Only	⟷	Real-time Information, Optimized
Disparate Systems with Minimal Communication	⟷	Communication between Existing and New Systems
High false alarms	⟷	Lower false alarms
Uncoordinated sensor inputs	⟷	Coordinated sensor inputs
Isolated view of incidents	⟷	Incidents analyzed taking the overall picture into account
Uncoordinated response	⟷	Coordinated response
Tend to be fixed solutions - therefore can potentially be gamed	⟷	Multiple layers of security

Specific Integrated Solutions

Integrated Border Security System Depiction



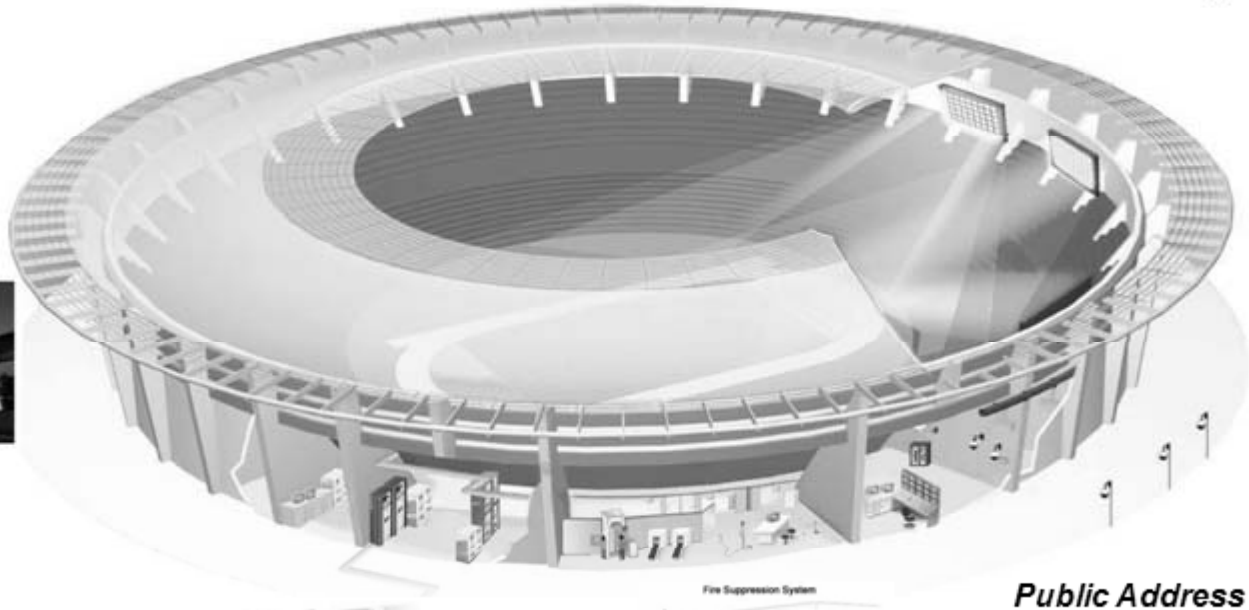
Stadium Specific Security Solutions

CCTV Surveillance and Video Analytics

Under Vehicle Surveillance Systems

Baggage Screening

Integrated CBRNE Detectors

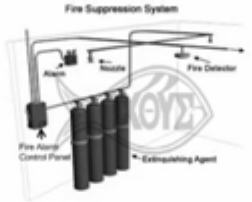


Perimeter Surveillance

Command and Control Vehicle

Portable X-ray Inspection

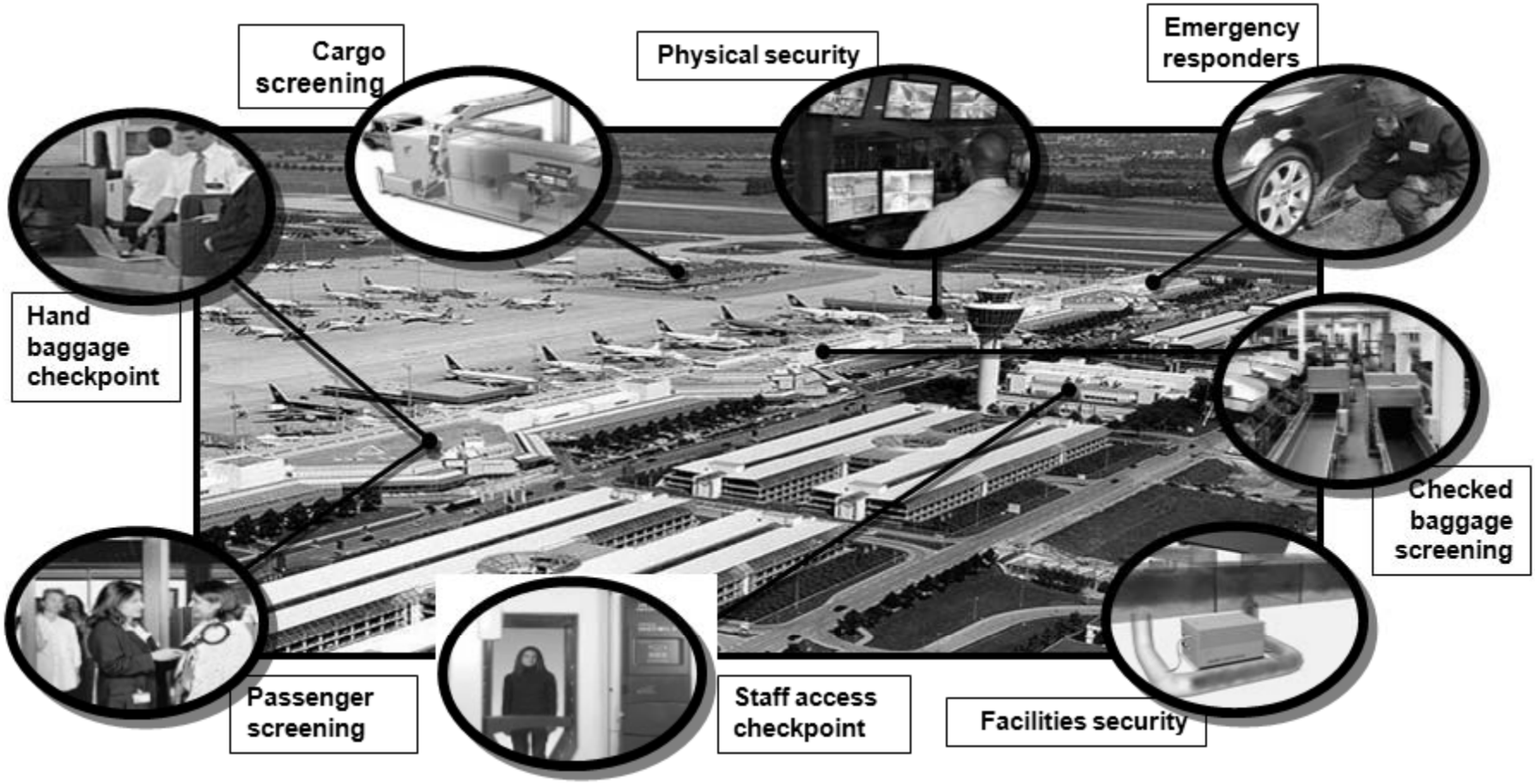
Millimeter Wave Man Portal



Fire Detection & Suppression

Public Address System

Airport Integrated Security Solution

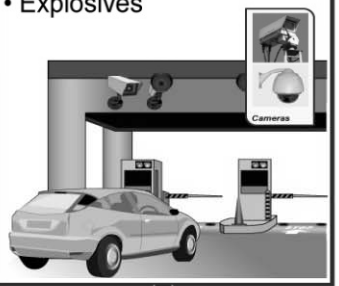


Airport Integrated Security Solution

CONTROL CENTER
- Receives Alerts and Warnings
- Coordinates First Responders
- Dynamic Risk Analysis

RESERVATIONS
- Initial Intelligence and Authorized External Database Checks

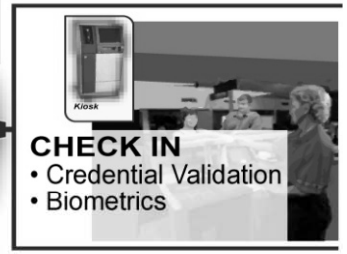
AIRPORT ARRIVAL
Vehicle Inspection
- Explosives



CURBSIDE CHECK IN
- Credential Validation
- Biometrics
- RFID Tagging (Baggage)

LOBBY
- Environmental Monitoring
- Behavior Monitoring

GATE
- Biometrics
- RFID Tag Reader

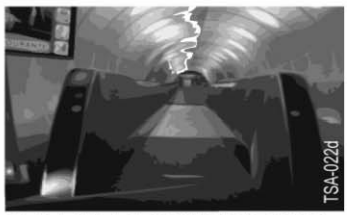


CHECK IN
- Credential Validation
- Biometrics

OPEN PLUG AND PLAY ARCHITECTURE
- Integration of New Sensors to Address Evolving Spectrum of Threats Enabled by Standardized Data Exchange Protocols and Open Plug and Play Architecture

CONCOURSE
- Environmental Monitoring
- Behavior Monitoring
- Passenger and Carry-On Items Location Verification

SCREENING EQUIPMENT
- The DRA Processes Data in Combination with other Information and Automatically Adjusts Equipment Sensitivity Settings



STERILE TRANSITION
- Environmental Monitoring
- Behavior Monitoring
- Tagged Carry-on Bags

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Maritime/Port Integrated Security Solution

- Maritime Surface Search Radar
- Closed Circuit Cameras
- Infrared sensors
- Automatic Identification System (AIS)
- Transponders & Transceivers
- Underwater Intruder Detection
- Land-based Mobile Sensors
- Direction Finding Sensors
- Chem / Bio Sensors
- Swimmer Detectors

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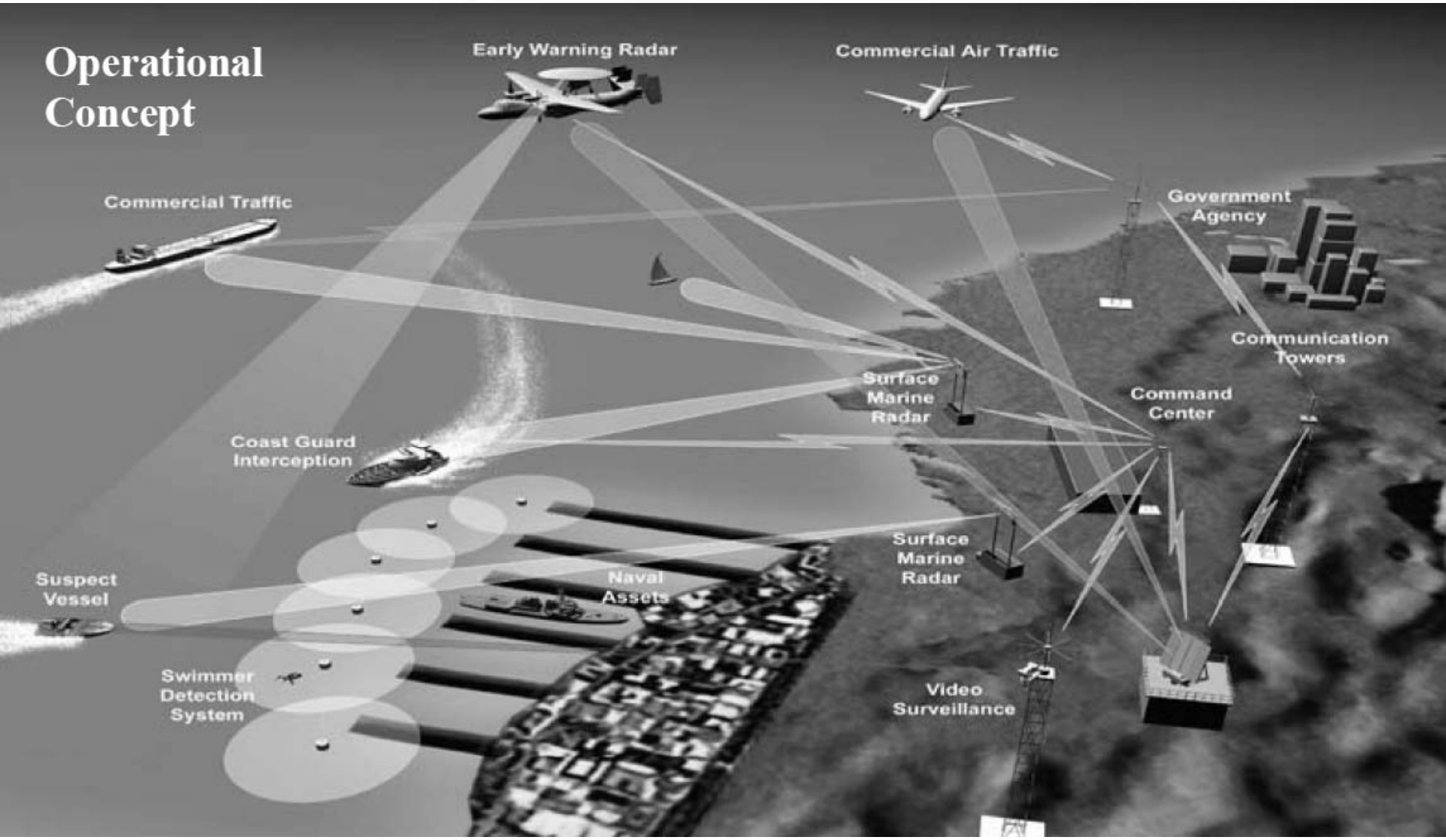
Maritime/Port Integrated Security Solution



Concept by: Lockheed Martin

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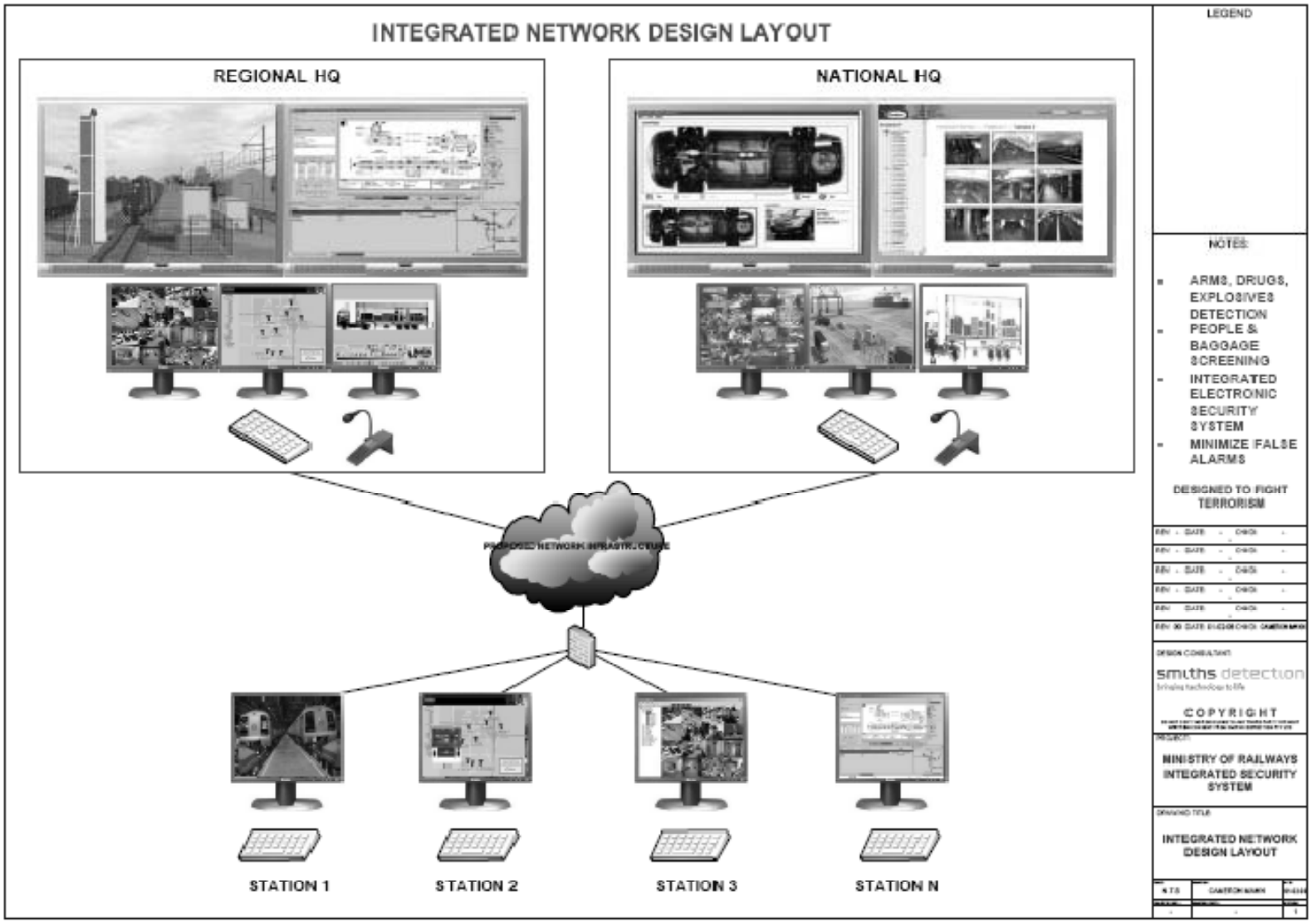
Railway Integrated Network Design Layout

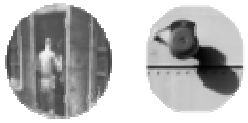


Integrated Hotel/Buildings Security

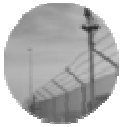
Energy Management &
Asset Management

Fire Safety

Intrusion Detection, Alarm Systems
Evacuation Systems



Surveillance Solutions

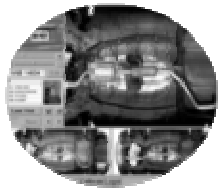


Perimeter Surveillance

Access Control

Tyre Busters
Bollards
Boom gates

Screeners



Under Vehicle Surveillance

Baggage Screening Solutions

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Integrated Systems for Corporate

- Perimeter fencing & Intrusion Detection System
- UVSS
- Perimeter Cameras
- Access Control
- Access Barriers
- Man Portals
- Explosives Detection

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