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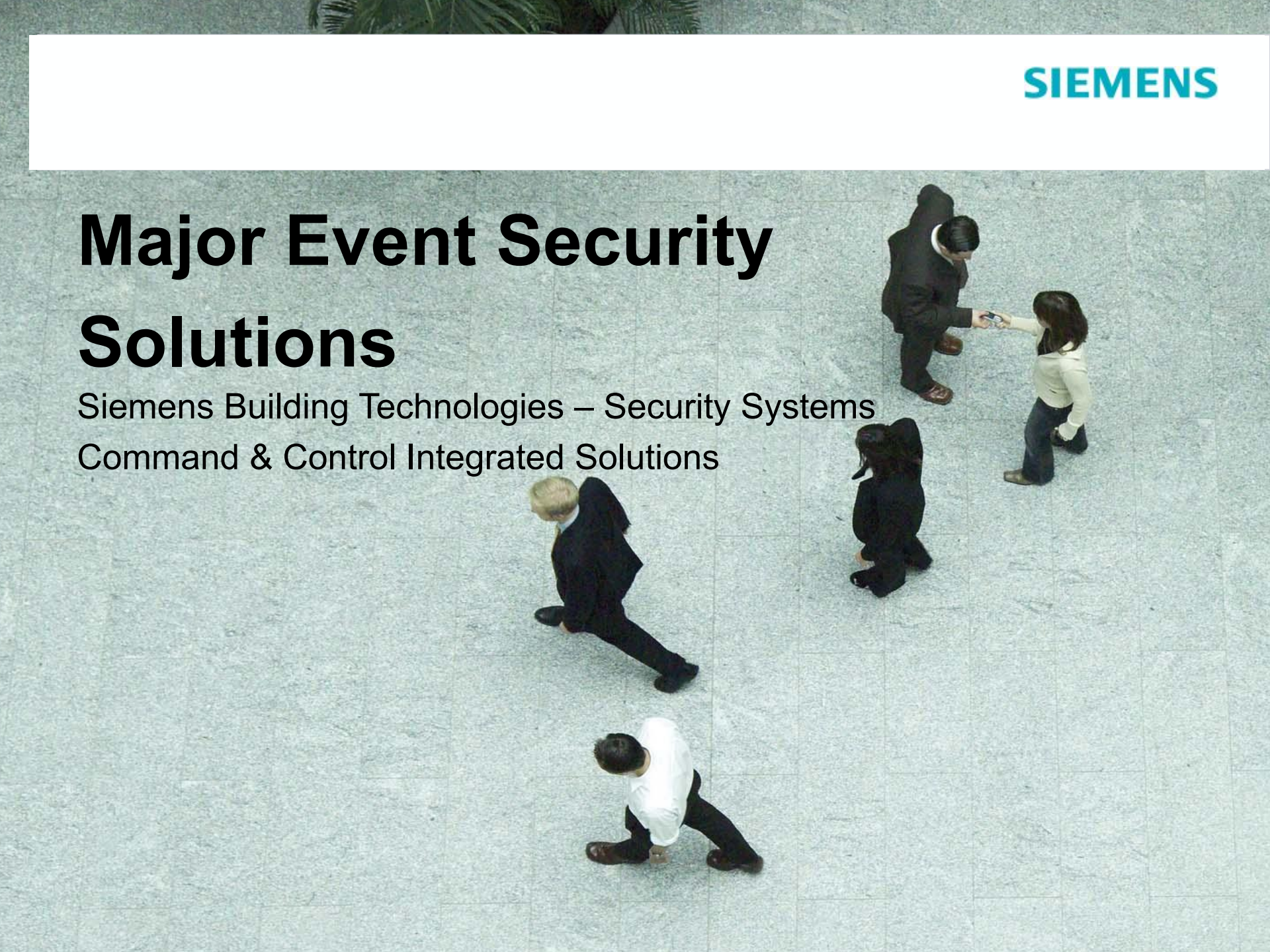
Major Event Security Solutions

Siemens Building Technologies – Security Systems

Command & Control Integrated Solutions



Topics of Discussion

- Overview of Siemens
- Our Approach to Major Event Security
- Athens
- Doha
- Program Management

Key Lessons Learned

Active in Six Business Areas

Automation and Control	Power	Transportation	Medical	Information and Communications	Lighting
					
Automation and Drives	Power Generation	Transportation Systems	Medical Solutions	Communi-cations [1]	OSRAM
Industrial Solutions and Services	Power Transmission and Distribution	Siemens VDO Automotive		Siemens IT Solutions and Services	
Siemens Building Technologies					

External sales of Operations Groups excluding Other Operations (as of September 30, 2006)

1) Since Oct.1, 2006 represented by Siemens Networks GmbH Co. KG and Siemens Enterprise Communications GmbH & Co. KG

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How we help our customers

C4I - Integrated Security Solutions
Where are they applicable?

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- **Public Sector**

  Upgrading and integrating public safety, border control and / or security operational framework

- **Major Events**

  Ensuring safety and security on an “Olympic” scale

- **Utilities**

  Modernizing metropolitan and transportation infrastructure, electricity facilities and power networks

- **Oil & Gas/Metals/Mining**

  Safeguarding industrial & energy assets, resources and people

- **Transportation infrastructure**

  Providing better and safer traffic and transportation solutions

The need for security solutions

POTENTIAL SECURITY THREATS	PREVENTIVE OBJECTIVES	SUCCESSFUL STRATEGIES
Governmental: first response systems, fire rescue, traffic support, catastrophe support	**Maximum Security**	**Integrated Emergency Centers for different organizations and related optimized processes**
Political: unstable governmental situations, terrorism, catastrophe support, border control	**Regulatory Compliance**	**Support for decision-making and reaction processes**
Environmental: floods, earthquakes, tornados, forest fires, aridity	**Assured Service Delivery**	**Comprehensive Fail-over strategies**
Security: mass gatherings, sporting events, conferences, concerts, clubs	**Optimal Speed & Efficiency**	**Full system and media integration of I&C infra-structure in business processes**
Private dimension: production sites, business facilities, private estates		

The need for security solutions

- Fire rescue
- Catastrophe support
- First resonse systems
- Traffic support

- Sporting events
- Concepts
- Clubs
- Conferences
- Mass gatherings

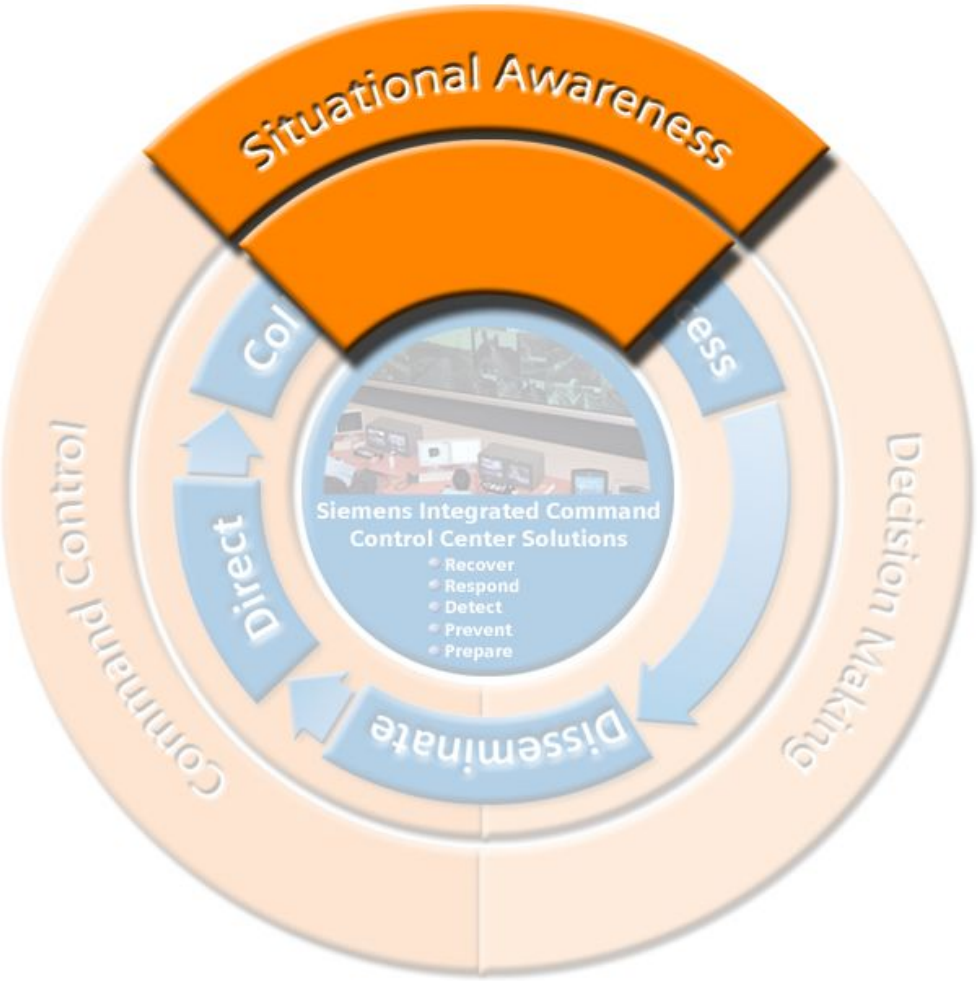
- Border control
- Terrorism
- Catastrophe support
- Unstable governmental situations

- Business facilities
- Production sites
- Private estates

- Earthquakes
- Floods
- Hurricans
- Aridity
- Forest fires

The circle of thorough security management

Situational Awareness



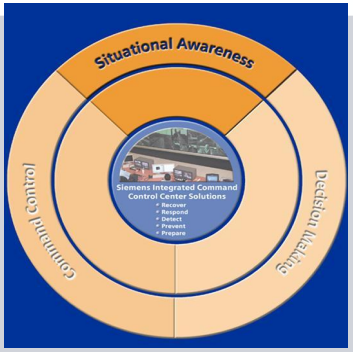
Situational Awareness

Situational Awareness consists of

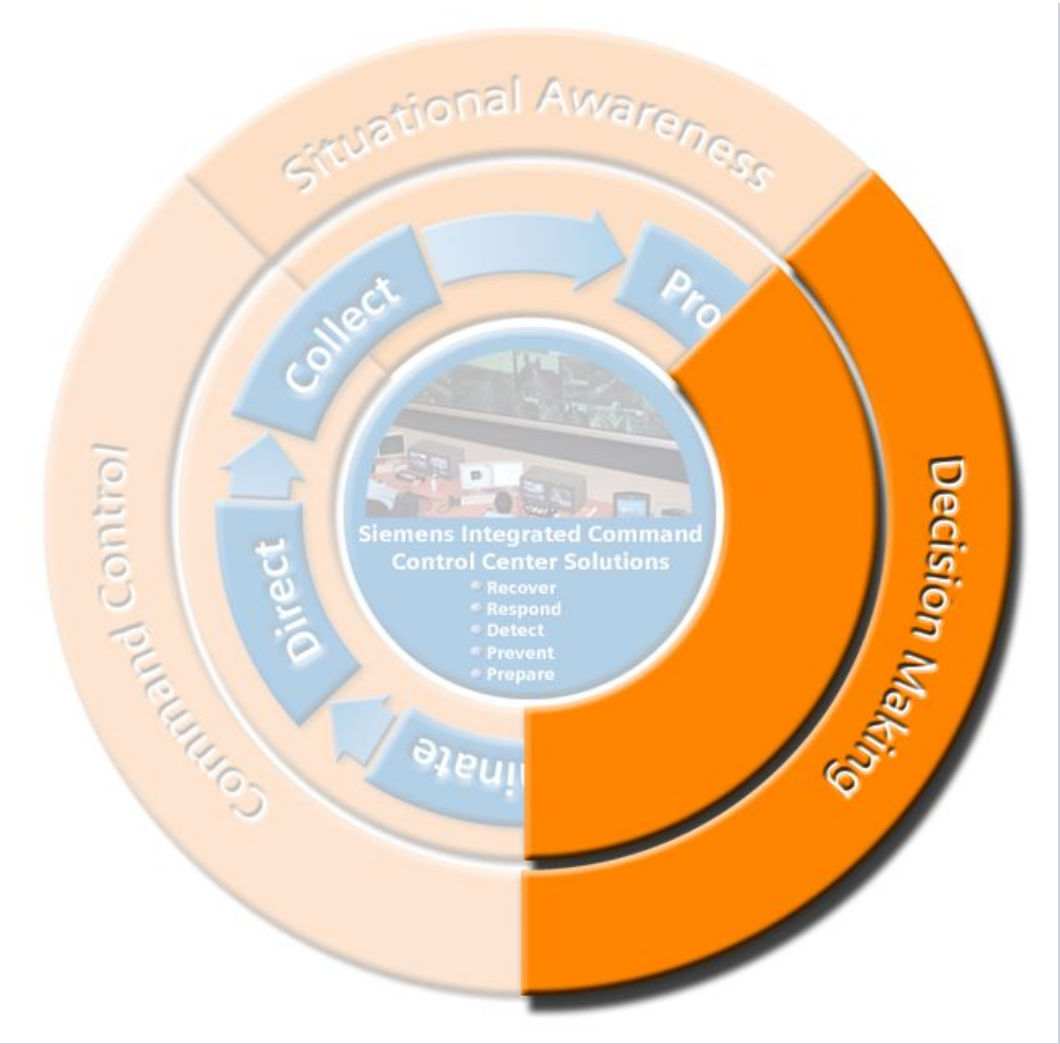
- Continuous qualified collection of incidents
- Monitoring, surveillance and detection
- Incident collection, completion (call handling)
- Processing of information

Objectives:

- Fast collection of information
- Accurate, reliable and qualified data
- Incorporating various sources of information via different media



Decision Making



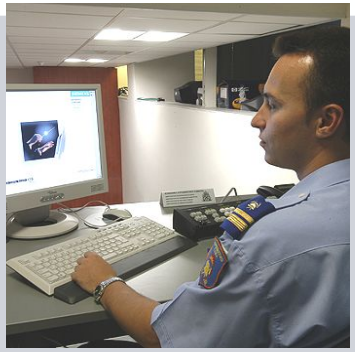
Decision Making

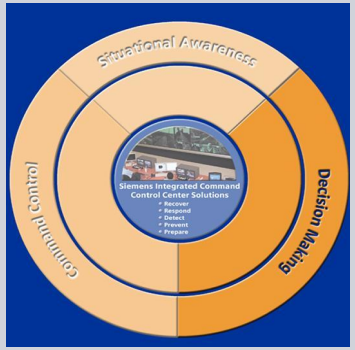
Decision Making consists of

- Incident evaluation
- Situation analysis
- Decision on appropriate response
- Resources allocation
- Dissemination of information

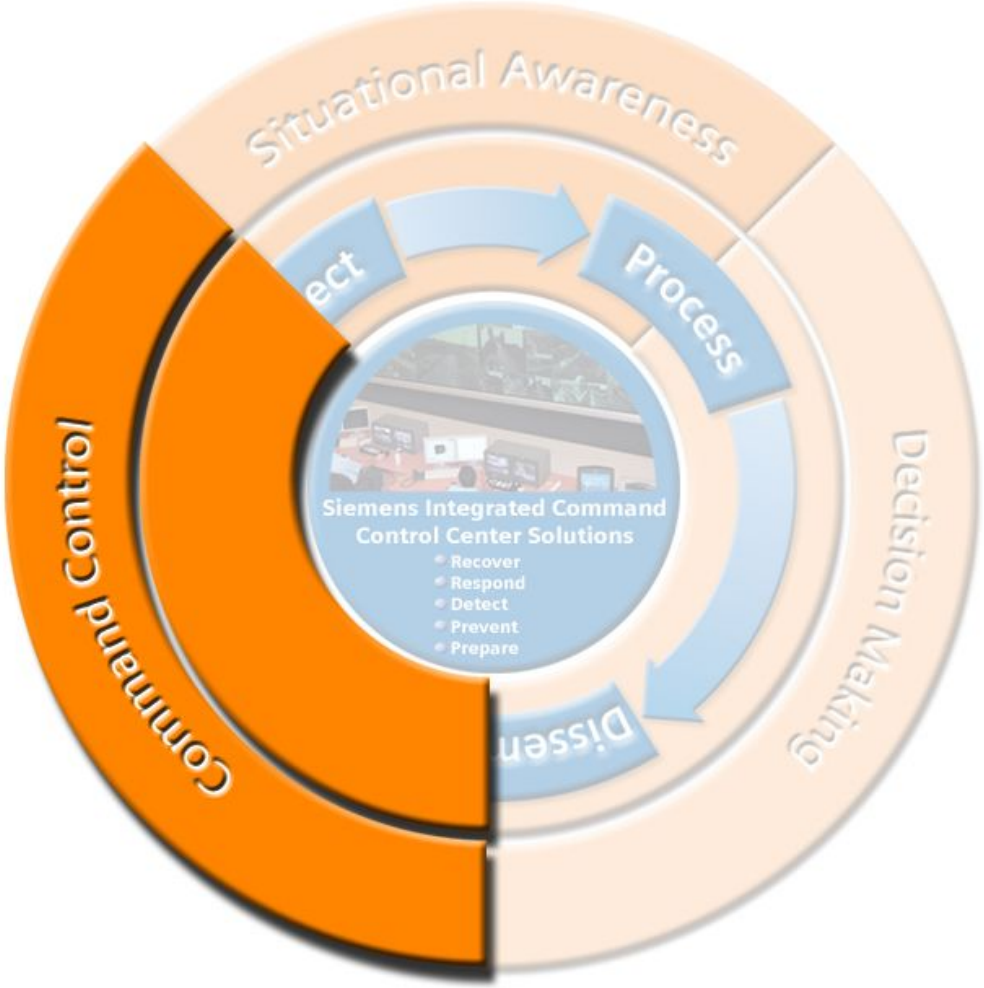
Objectives:

- Appropriate actions based on information initialized
- Availability of response units checked
- Optimal & target oriented measures chosen





Command Control



Command Control

Command Control consists of

- Dispatching resources
- Coordinating and directing adequate response
- Managing assignment
- Accounting, Reporting

Objectives:

- Responding as fast and efficient as possible
- Reacting appropriately to evolving situation
- Making units available for further assignments quickly

Local competence centers transfer the know-how to the different customers

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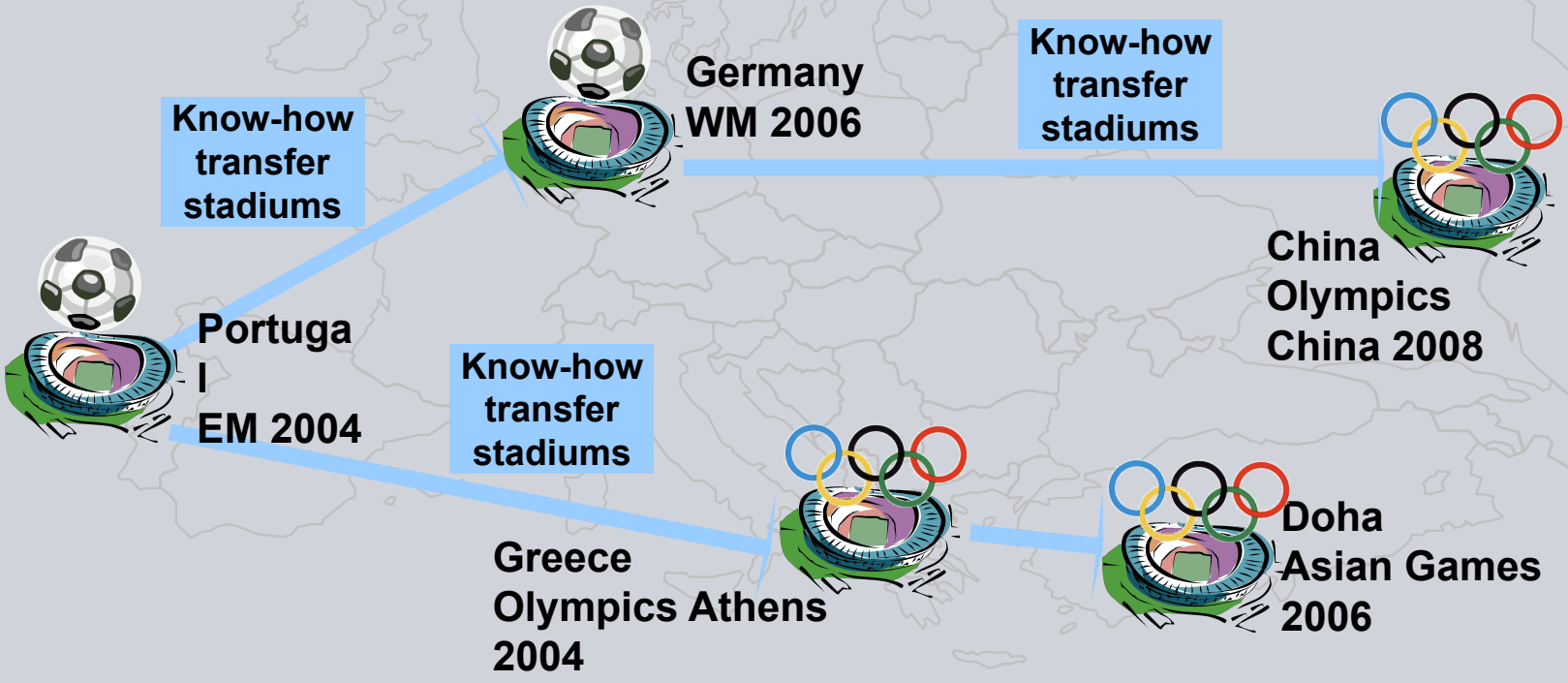
Specialized competence centers for stadiums and events

Technology center at building technologies HQ globally supports all security activities and maintains life cycle operations



C4I - Integrated Security Solutions
Customer Operational Benefits

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- Efficient and secure coverage of large areas
- Fast and reliable information, video stream & data sharing
- Common Operational picture & resource status
- Phased implementation ensuring minimal impact on current operations
- Totally integrated command, control, decision support & communication environment

C4I - Integrated Security Solutions
Customer Direct Program Benefits

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- One single contract and project control mechanism
- Partnering with Siemens truly Global Network of products, technology, solutions
- Use of robust, proven, open architecture products and systems
- Integrated Customer – Siemens project management
- Upgradeable and ‘future proof’ end solution

C4I - Integrated Security Solutions
From Concept to Reality in three steps

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- Step 1 - Requirements:
  Together with the customer, we develop functional/performance requirements and the appropriate system architecture
- Step 2 - Customization:
  We group the necessary systems and products into a single, customer-specific integrated solution
- Step 3 - Implementation:
  Using the rigorous PM@ Siemens, we deliver a unique integrated security solution on time, within budget, and at optimal performance

C4I - Integrated Security Solutions
Multi Agency Co-ordination Through Information Sharing

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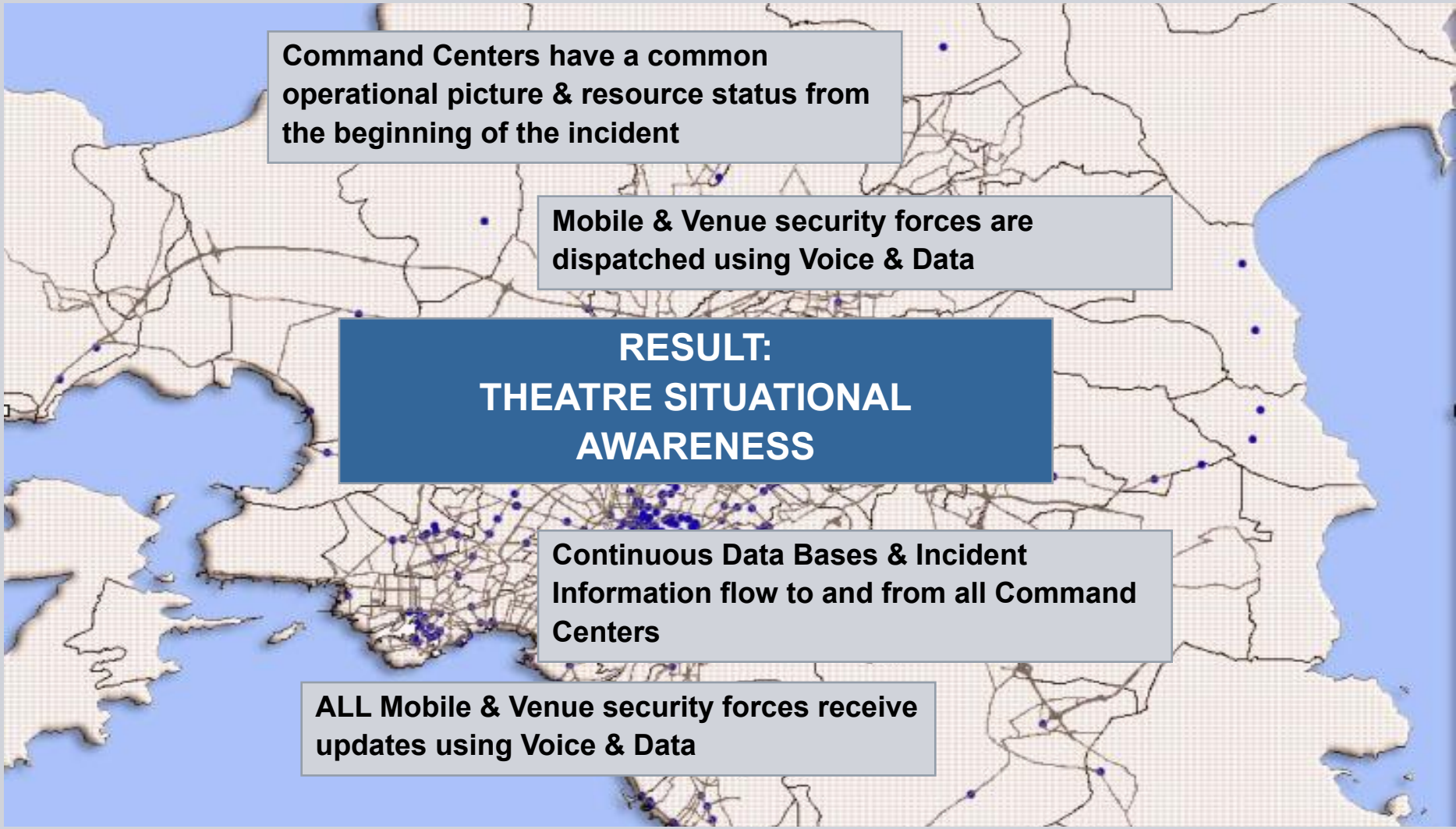
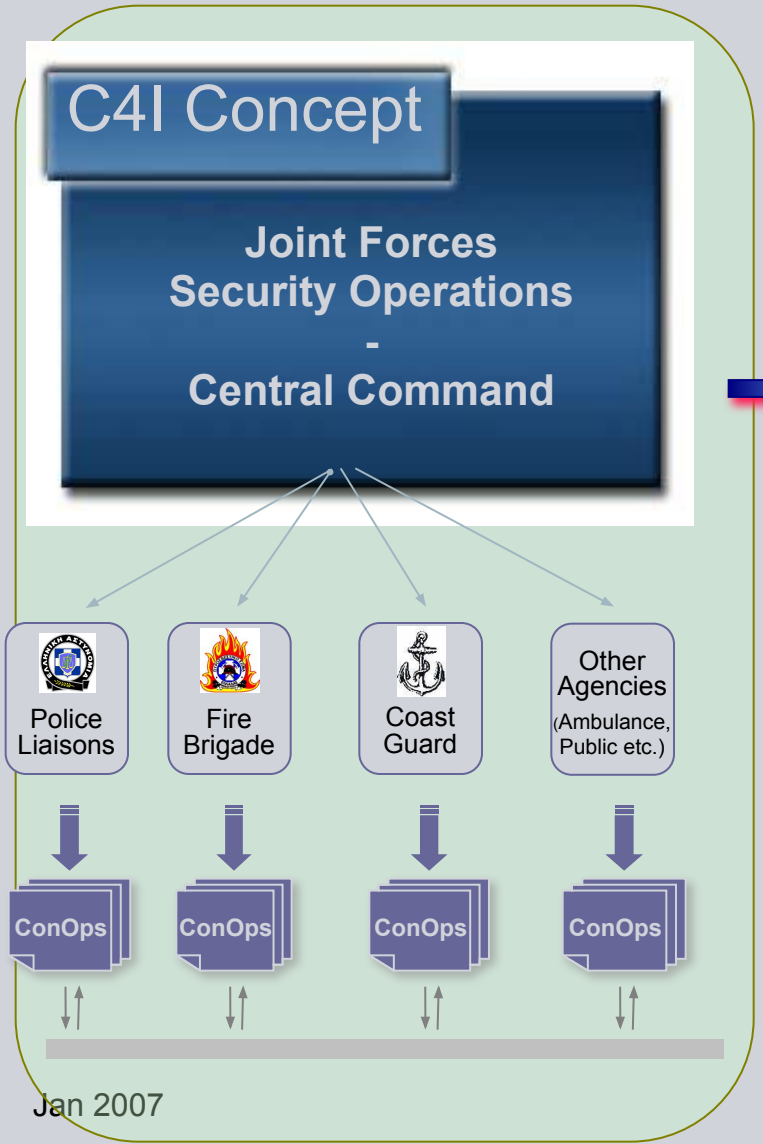
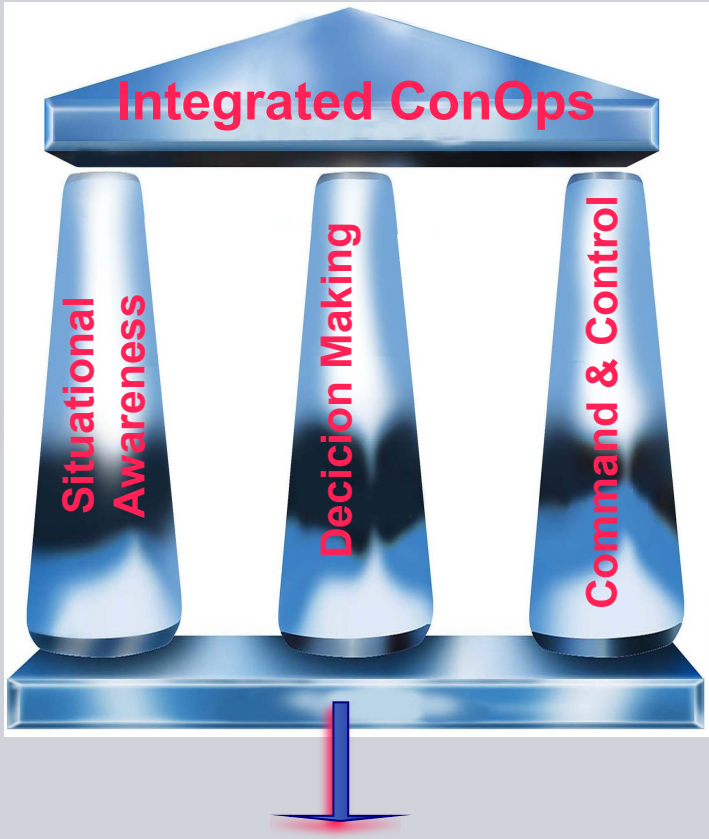
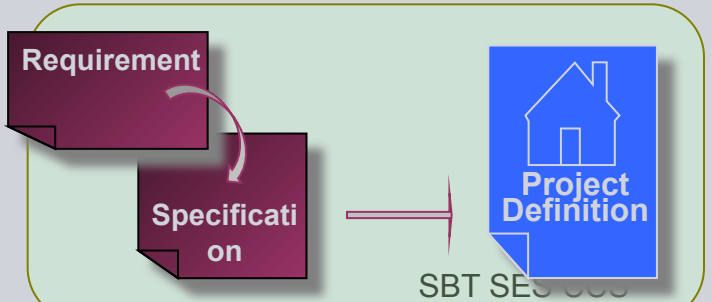


C4I - Integrated Systems Projects Definition







C4I - Integrated Security Solutions
Concept Overview

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FLIR Video

Airborne Video Surveillance

Vehicle Tracking

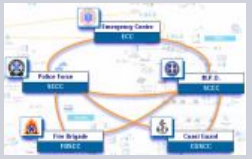
Traffic CCTV

Security

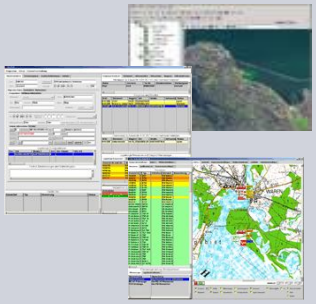
Port & Sea Surveillance

Surveillance Locations

LAN / WAN Networks



Command &
Decision Support



Mobile Command
Cer

C4I - Integrated Security Solutions

Technology Integration in Security Communication Systems

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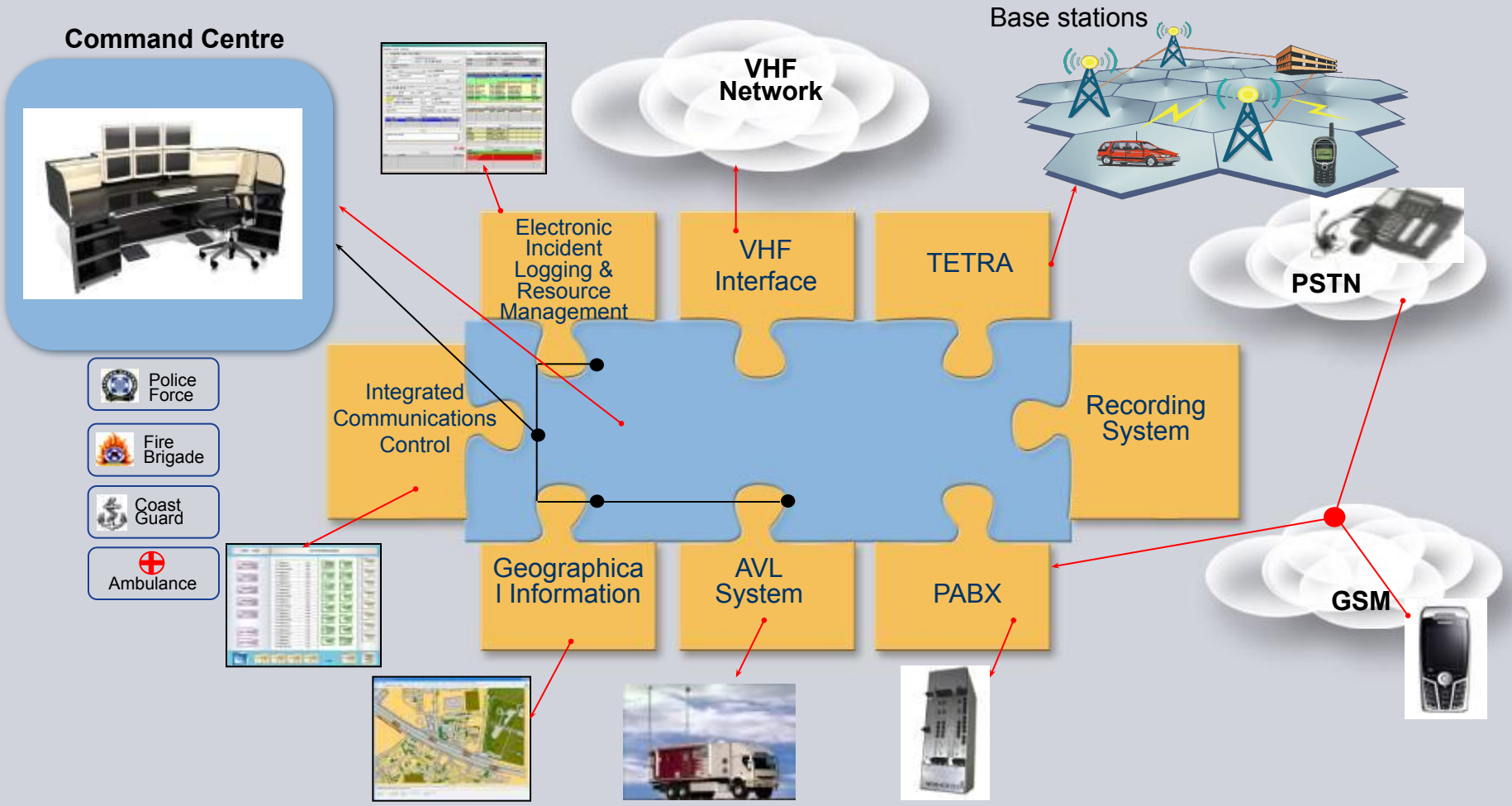

C4I - Integrated Security Solutions
Mobile Security Command Centers

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C4I - Integrated Security Solutions
Physical Security Lay-Out in Venues

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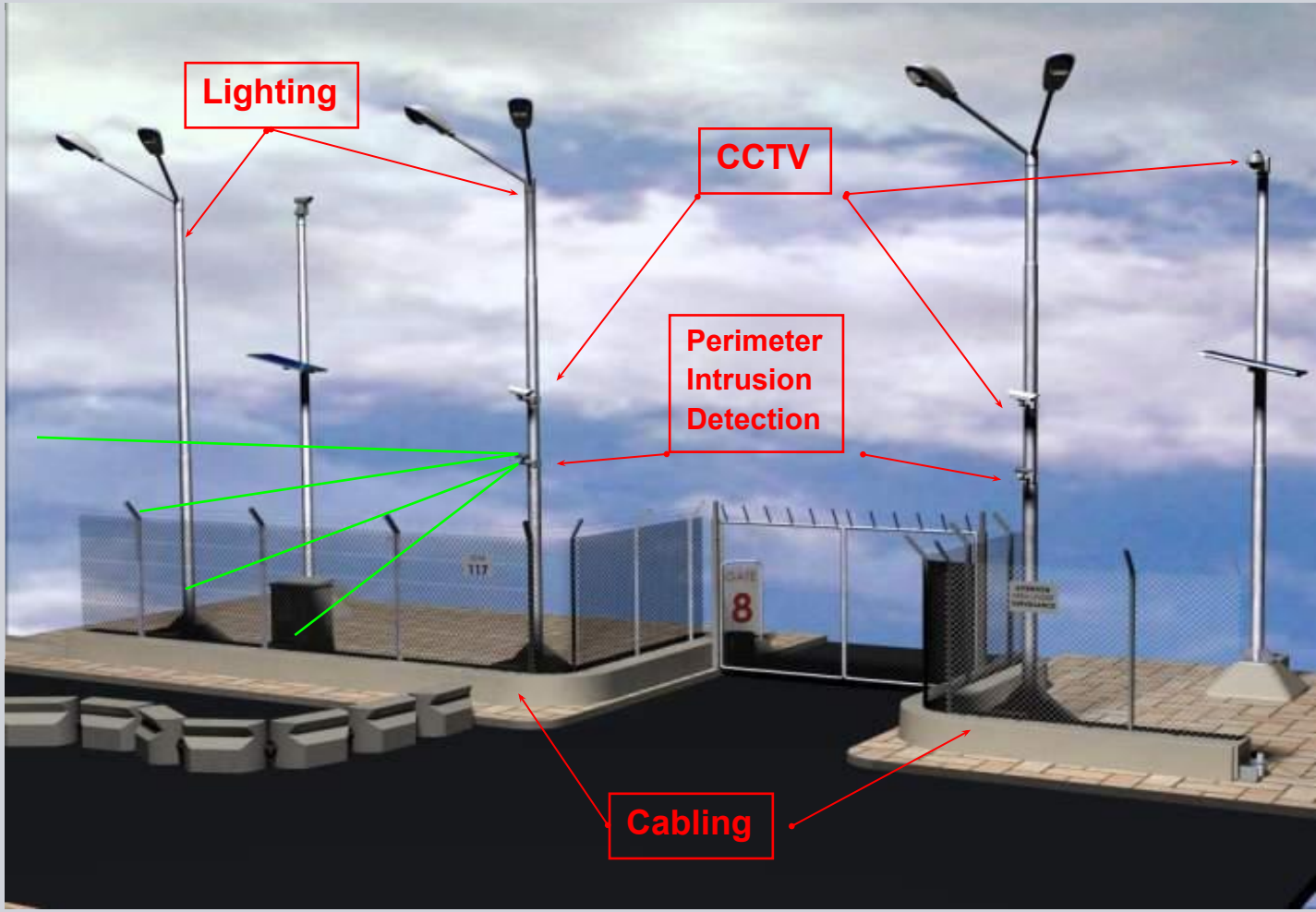
Pre-Per ™.
Modular
Perimeter
Barrier System

- Excellent legacy value
- Re-deployable
- Upgradeable



C4I - Integrated Security Solutions
Physical Security Lay-Out in Venues

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- Pre-Per ™. Modular Perimeter Barrier System Excellent legacy value (re-deployable)

C4I - Integrated Security Solutions
Airborne Video Surveillance Systems

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Encrypted Downlink to Ground Receiver Station

C4I - Integrated Security Solutions
Customer Reference

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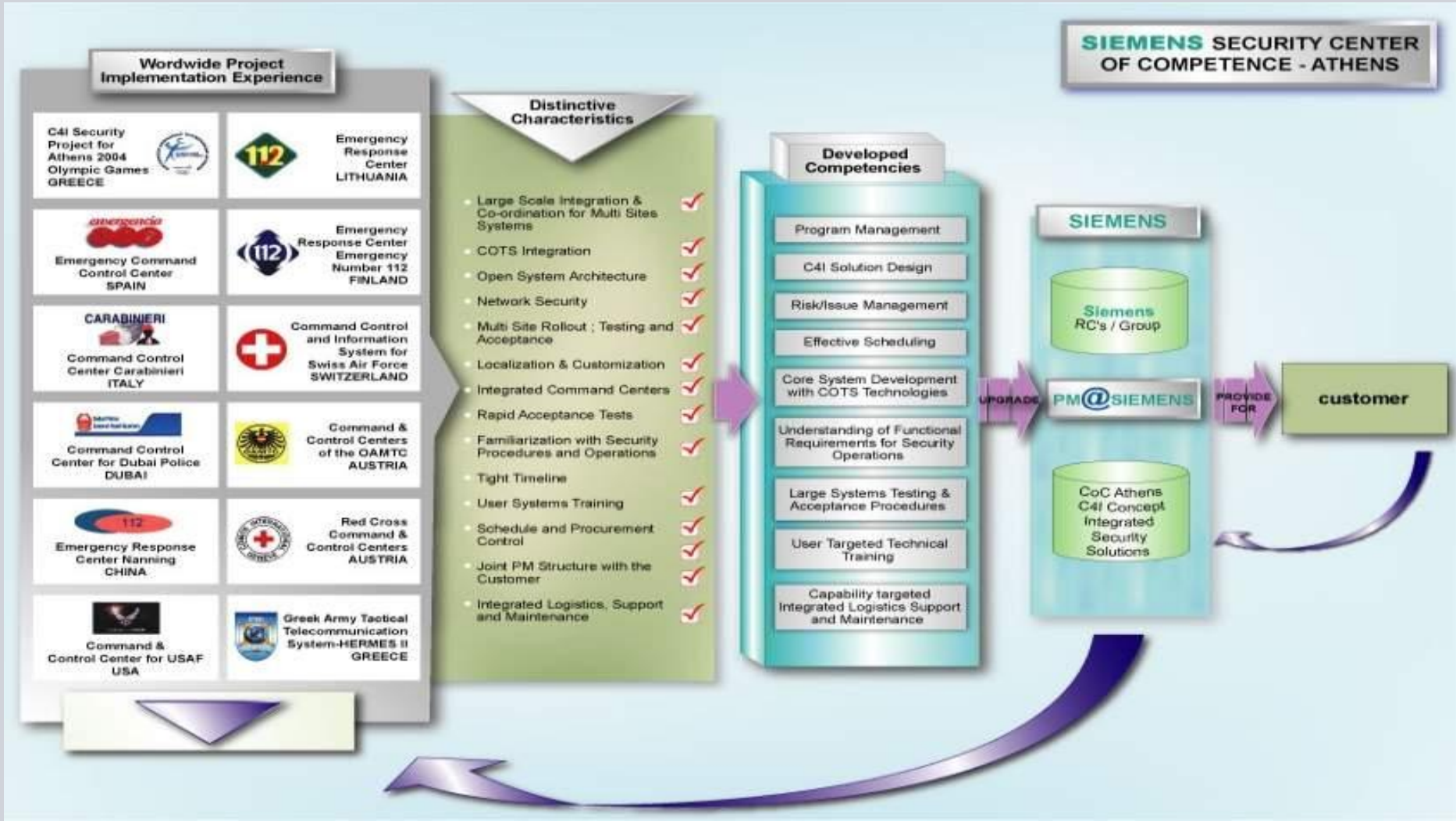

C4I - Integrated Security Solutions
Athens 2004 Success Story

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The whole world was watching.

"With these [C4I] world class systems citizens and visitors to Greece will see new levels of Security cooperation, coordination and operations and ultimately a safe and friendly Athens 2004 Olympic Games."

Ioannis Spanudakis,
Managing Director Athens 2004 Olympic Organizing Committee

C4I - Integrated Security Solutions
Athens 2004 Facts and Figures

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- Siemens developed a cohesive architecture to implement a thorough security system for the Olympic Games
- The timeframe for this entire project was only 12 months
- Tens of thousands of kilometers of cables were laid out
- 1,600 surveillance cameras were installed
- A TETRA network of 30,000 subscribers was implemented
- An AVL system of 6,000 vehicles was designed and installed
- 9 integrated license plate recognition systems were implemented
- 120 Olympic venues and 9 cities and ports throughout Greece had to be controlled around the clock
- 24/7 technical support, training and transfer knowledge
- Upgradeable cohesive system architecture

Command, Control, Communication Computers and Information Systems (C4I Systems)

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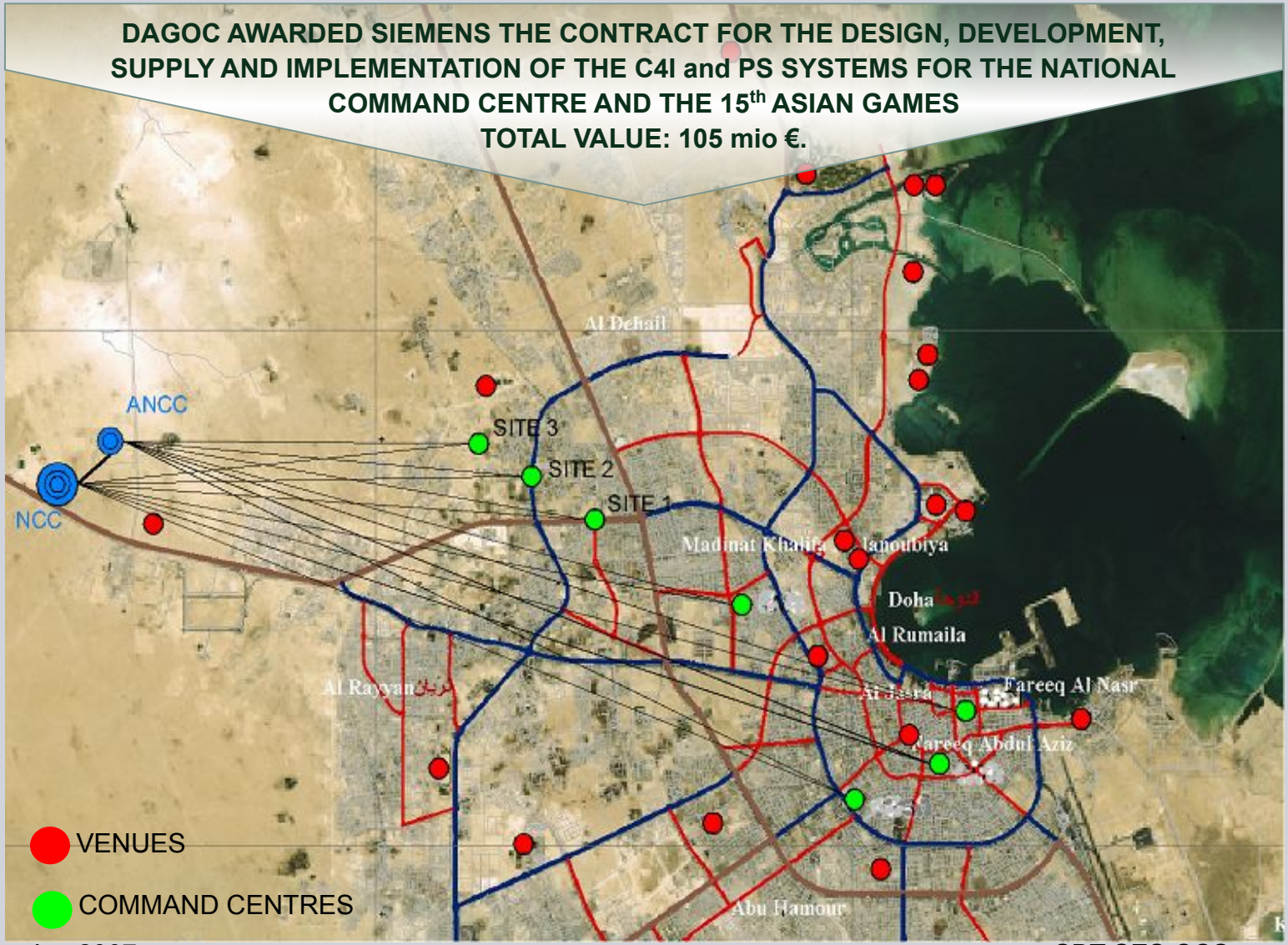

C4I Systems Operation and Design Overview

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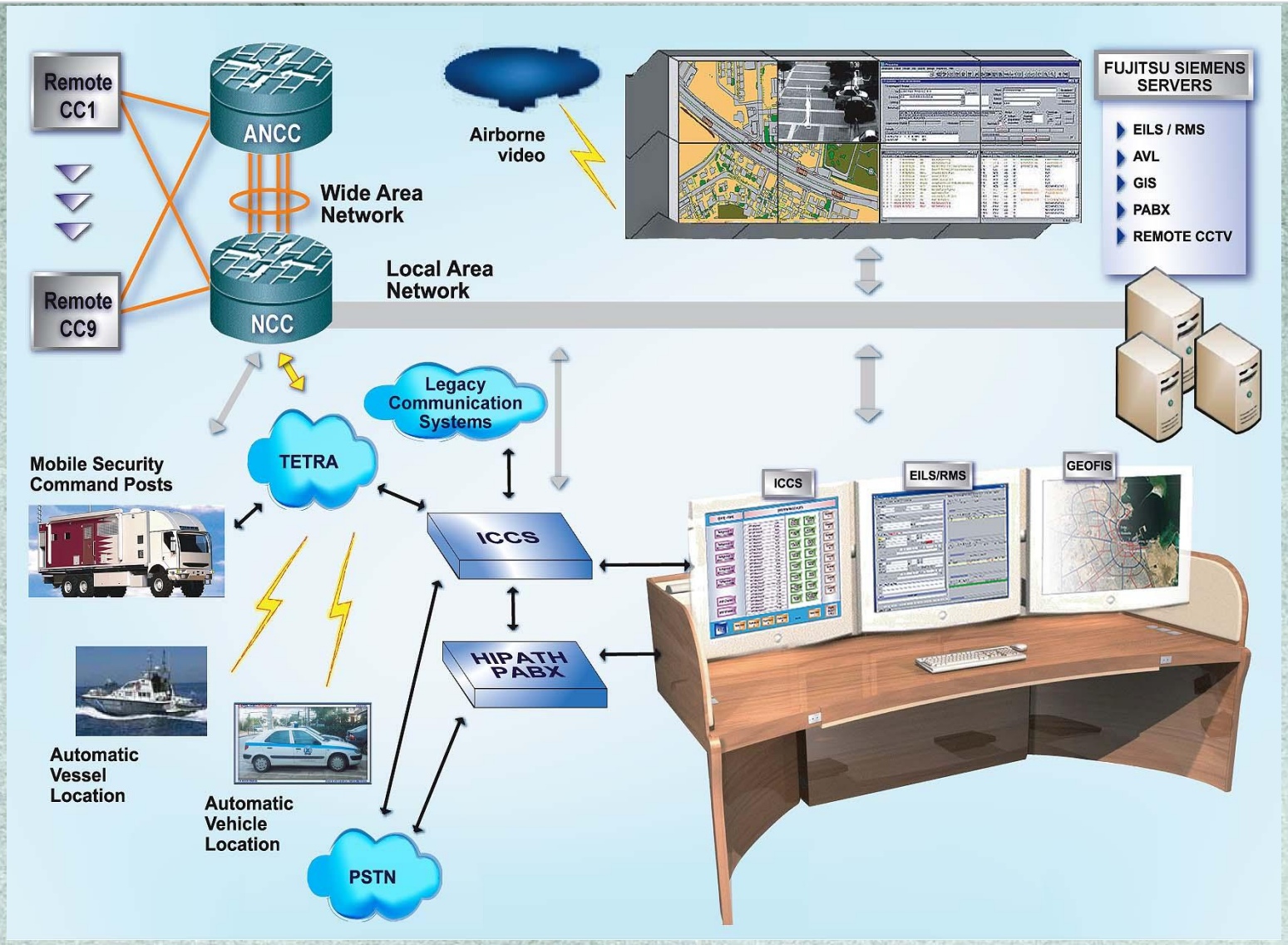
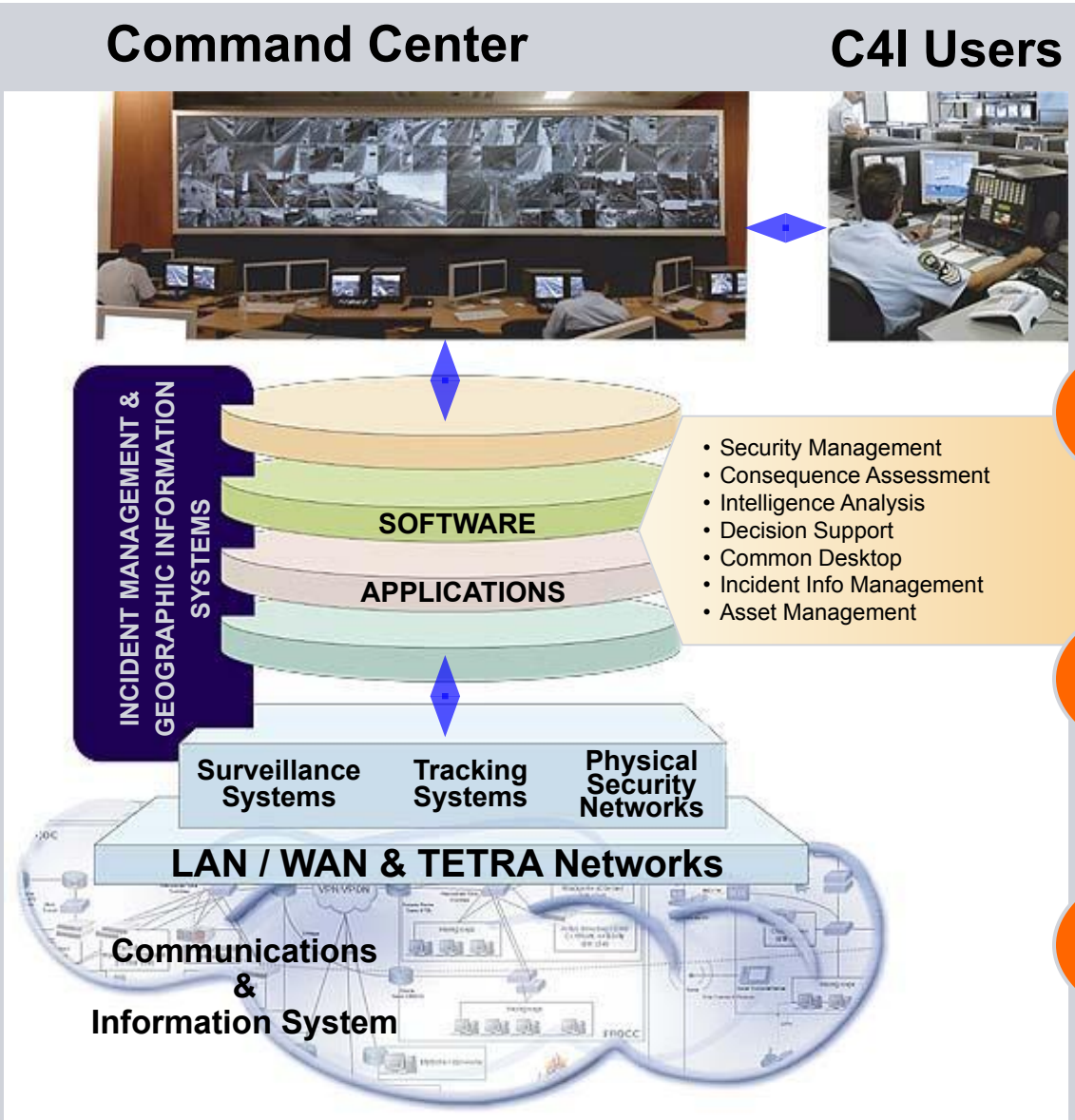


Siemens C4I Principle of Operation



Wide Area Network (WAN) / Local Area Network (LAN) Design

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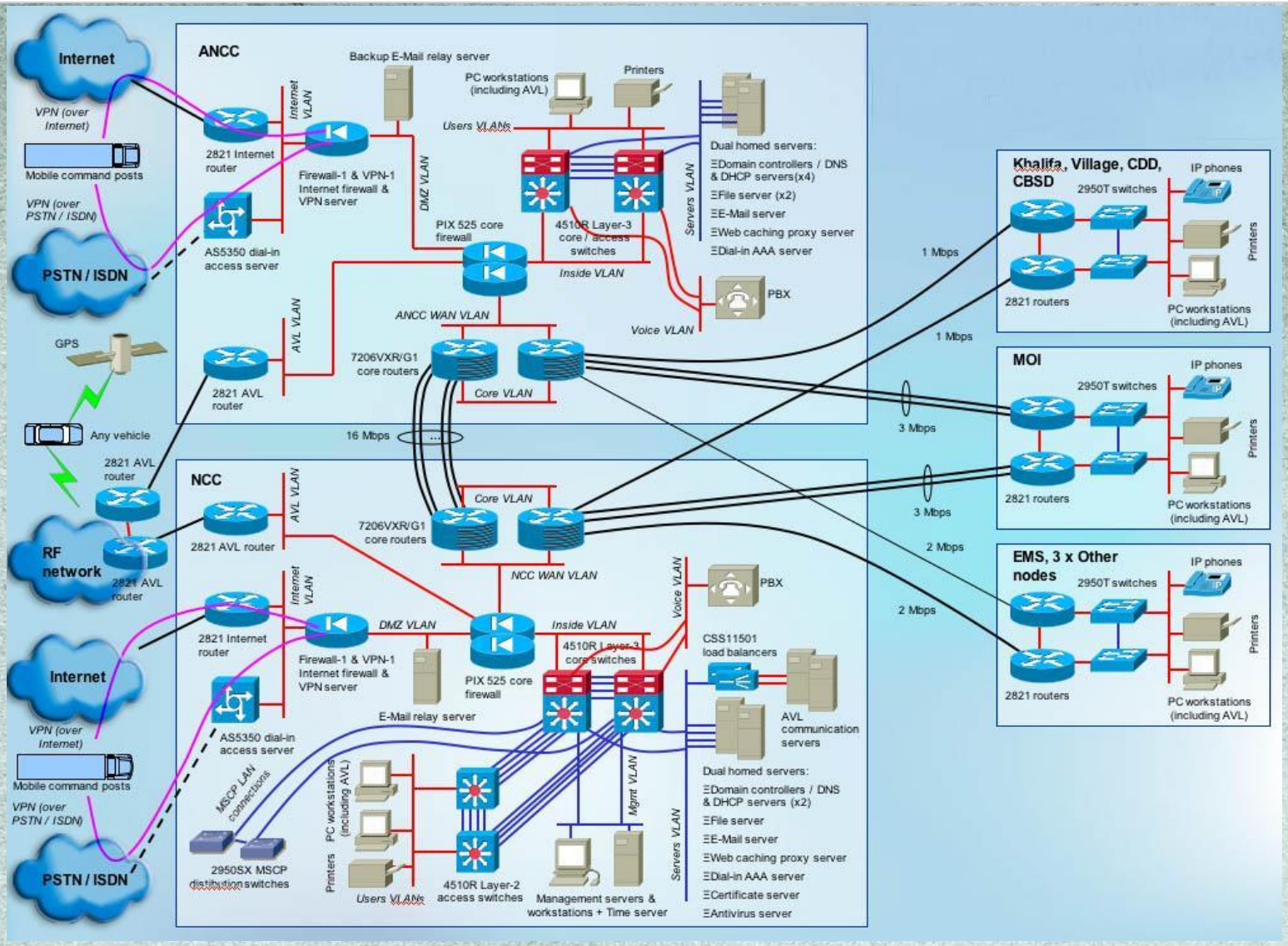

ELS/GEOFIS

The dispatcher console (example)

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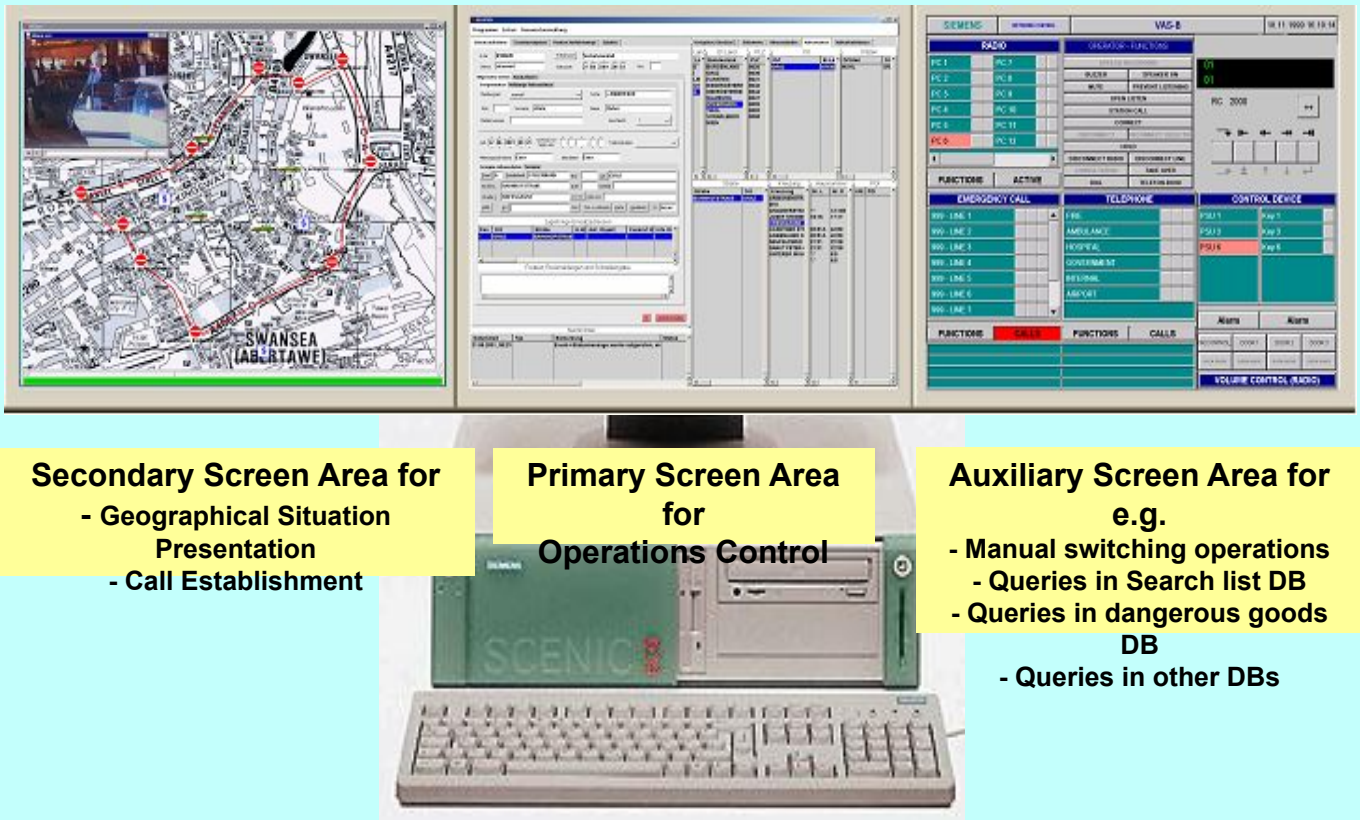

Secondary Screen Area for
- Geographical Situation Presentation
- Call Establishment

Primary Screen Area for Operations Control

Auxiliary Screen Area for e.g.
- Manual switching operations
- Queries in Search list DB
- Queries in dangerous goods DB
- Queries in other DBs

Automatic Vehicle Location System

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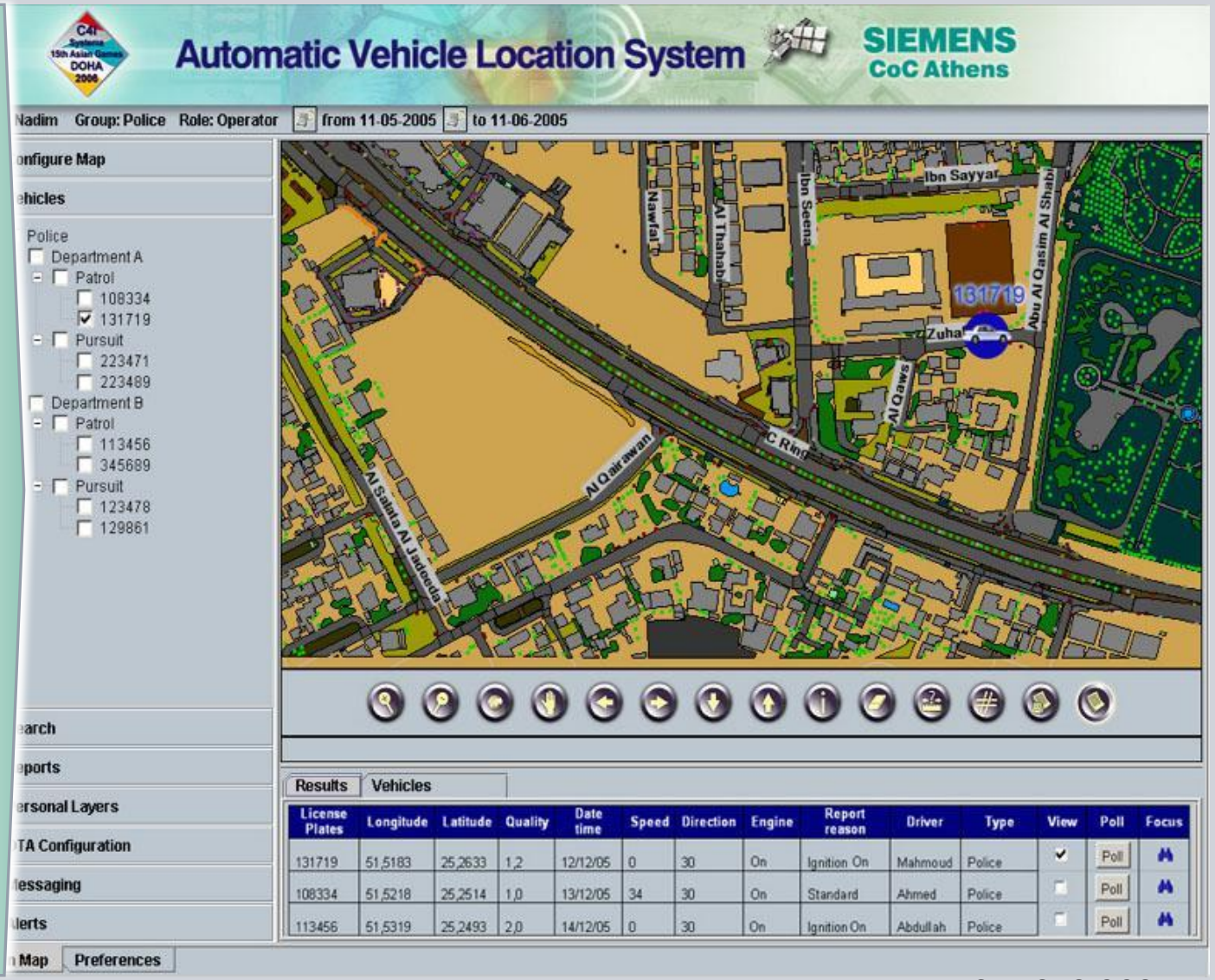
Real Time Monitoring of Location and Operational Status of Security Agencies, Vehicles and Vessels on Digital Maps



System Integration

A / B	C. E. R.	Cabling System	C. C. S.	Office Premise Equipment	Server Infrastructure	WAN	LAN	PABX	ICCS	EILS	RMS	NCC - Video/Audio Matrix Switcher	Graphical Image Display System	Office Automation Software	AVL	MSCP
C. .E. R.		I			∫	∫	∫	∫				∫				
Cabling System			∫	∫	∫							∫	∫			
C. C. S.		∫		∫												
Office Premise Equipment		I	∫					∫	•	•	•	∫		∫	•	•
Server Infrastructure	∫	I					∫		•	•	•				•	•
WAN	∫	I					∫		I	I	I				I	
LAN	∫	I		∫	∫	∫		∫	∫	∫	∫				∫	∫
PABX	∫	I		∫	∫		∫		∫	∫						
ICCS				•	∫			∫		▲					▲	
EILS				•	∫				▲		∫				▲	∫
RMS				•	∫					∫					▲	∫
NCC - Video and Audio Matrix Switcher	∫	I		∫									∫			
Graphical Image Display System		I		∫			∫					∫				
Office Automation Software				∫												
AVL	∫	I		•		∫	∫			▲	▲					∫
MSCP					∫		∫		▲	▲	▲				▲	

Table 1 : Preliminary System Integration: *The symbols indicate the following : ∫ is Integration A and B, ▲ is A Pass Data to B, I is Information pass from A to B and, • Compatibility of A and B*

Program Management Organization

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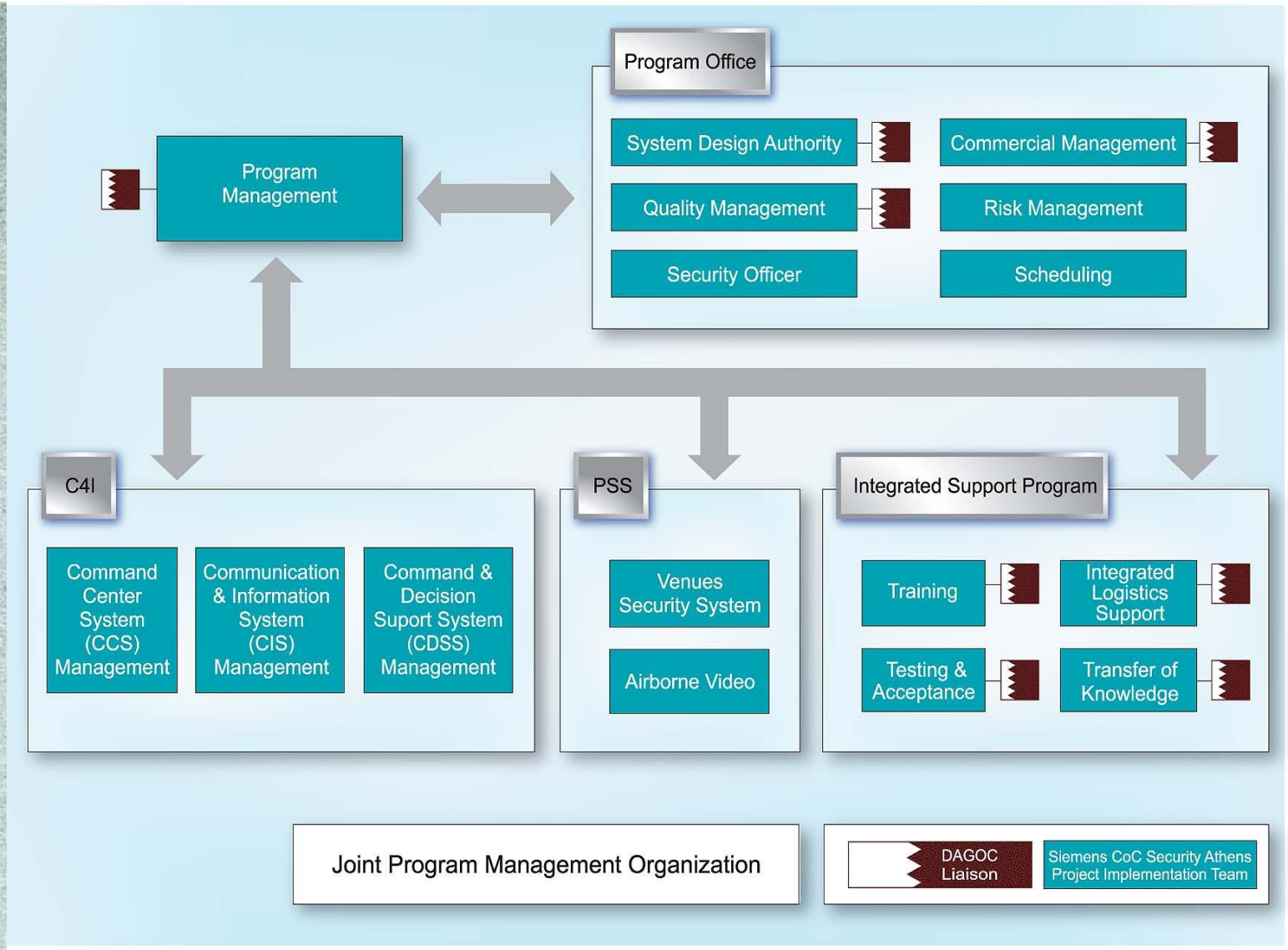

Program Schedule

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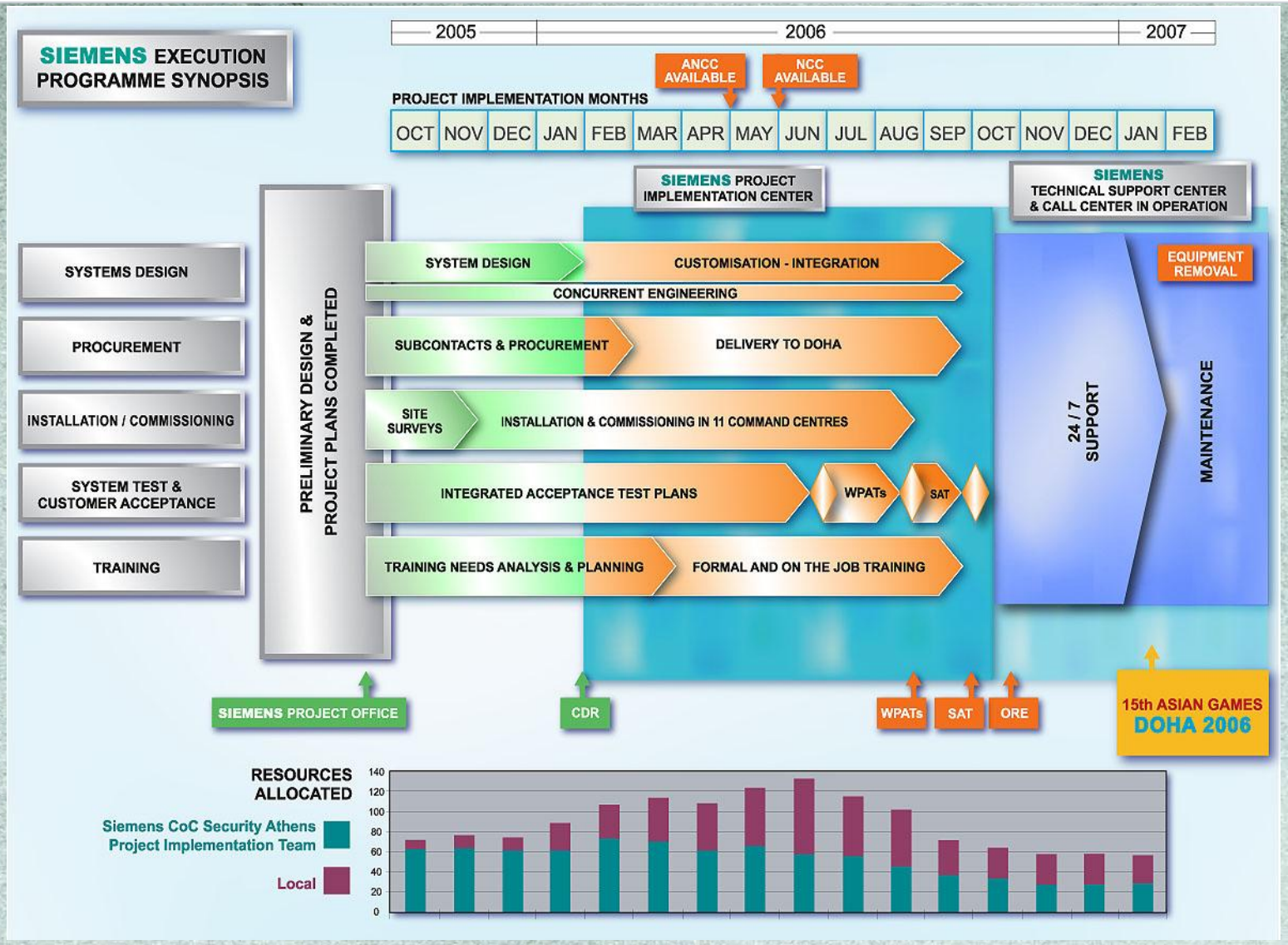

Key Lessons Learned

- Define and adhere to the event's concept of operations

- Create situational awareness - fully integrate
  - Event specific systems
  - Transportation systems
  - Accommodations – hotels and Olympic Village
  - Communication
  - Processes
  - First responders & volunteers

- Establish a security program management office

- Start early
  - Construction
  - Routine operations – 4 months before opening ceremony

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Thank you for your attention!