



Command and Control Integrated Solutions

Transforming security needs
into unique custom-made solutions

Building Technologies

SIEMENS



A Changing World – A Basic Need

Our cities become more complex; our transportation infrastructure must meet ever increasing demands, events grow larger and more prestigious; national governments, commercial and civil organisations and the wider public place safety and security at the forefront of their considerations.



Safety & Security

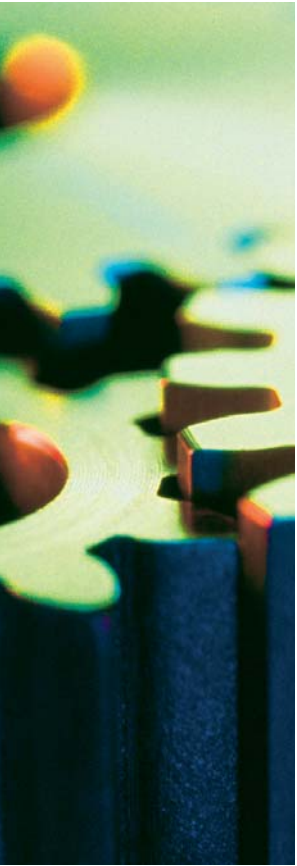
Asking the right questions is the quickest way to reach the right answers

Making decisions about security is not an easy thing to do. Nor is it exclusively reserved for security commanders. Government and non government officials, from business and security managers to event organizers are increasingly faced with security related questions such as:

- How much security is enough considering credible threats?
- How does one measure the effectiveness of security operations?
- How do security needs and ideas become coherent operational requirements?
- How does one avoid over-reacting to incidents?
- Should one spend all available security budget immediately or progressively?
- How is it possible to maintain normal business levels and provide services without imposing a restrictive security regime?

The growing need for security brings with it new solutions, systems, and processes that facilitate free, safe and efficient flow of people, commodities, and information. Siemens CCS, integral part of Siemens Building Technologies Security Systems, develops solutions that integrate security systems into one comprehensive, administrative entity. A more secure and efficient operational environment is therefore created in which the global economy but also the individual citizen can safely move and evolve. Siemens CCS fuses expert use of technology and extensive implementation knowledge into integrated solutions that provide the tools to safeguard all aspects of social life without infringing on individual rights.

Siemens SBT/SES Command and Control Integrated Solutions (CCS) can help answer your questions – and much more!



Siemens Command and Control Integrated Solutions – From Concept to Reality

Siemens CCS Integrated Solutions support normal daily life and business operations while ensuring at the same time quick and efficient response to emergency situations

Based on the experience gained from the successful implementation of many Medium and Large-Scale Integrated Security Projects, Siemens CCS has produced a new service-based approach. In simple terms, the CCS 'Integrated C4I Approach', using functional analysis and detailed design, takes the 'Operational Concept' of the customer and translates it into a technical reality. The resulting Integrated Security Solution is:

- Rapid in implementation
- Effective in operation
- Efficient in cost

Siemens CCS develops Integrated Security Solutions from user requirements analysis, capability description and project definition to project design, implementation, commissioning, training, and real life support services.

Siemens CCS has the know-how and experience to provide the most appropriate solution for each unique set of requirements on time, within budget, and at optimal performance.

Phased Implementation through a C4I processed methodology

Whether the requirement is a National Homeland Security solution, the integration of many Public Utility providers, or the secure operation of an Industrial Complex, Siemens CCS can design and implement the necessary, user-specific solution.

But what constitutes a Siemens SBT/SES/CCS Integrated Solution? Surprisingly it is not just about merging equipment, systems and technology into a single entity.

It is about a design concept and an implementation approach developed over the years by a carefully selected team of experts who have successfully delivered, time and again, Integrated Security Solutions on time, within budget and at optimal performance.

The Integrated C4I Approach:

C4I is the Command, Control, Communication, Computers and Intelligence concept developed in order to manage and support the planning and conduct of security operations. The CCS Integrated C4I Approach looks critically at the 'hub' or node of any medium, large or complex security operation and specifies the required Integrated Security Solution from there: It is a 'top down' approach performed in three simple steps:

- **Step One – Requirements**
Siemens CCS studies the users 'operational concept'. This operational concept forms the basis upon which Siemens CCS develops the necessary functional specifications, performance requirements and systems architecture.
- **Step Two – Customization**
Siemens CCS groups appropriate systems and products into a single Command and Control Integrated Solution that addresses given operational requirements and ensures long-term operational flexibility and technological adaptability.
- **Step Three – Implementation**
Siemens CCS, together with the local Siemens Company, implements the Integrated Security Solution using the rigorous and proven PM@ Siemens project management methodology.



Siemens CCS works with you to develop the most appropriate Integrated Solution and its supporting architecture.

Siemens CCS Integrated Solutions- The Direct Operational Benefits:

- Efficient and secure coverage of large areas
- Phased implementation that ensures minimal operational impact on on-going operations
- Distribution of information, video stream & data over fast, reliable and secured Local and Wide Area Networks
- Effective conduct of Joint Forces Security operations in an totally integrated environment providing Command, Control, Decision Support, Communication & Intelligence Management tools
- Command and Control Centers have a common operational picture & resource status from the beginning to the closing of any incident
- Mobile and static security forces management using Voice & Data with continuous Incident Information flow to and from all Command Centers

Siemens CCS Integrated Solutions- The Direct Program Benefits:

- One single contract and project control mechanism (reduced vendor interfaces)
- Reduced technical and integration risk due to size and experience of Siemens Global Network
- Use of open architecture, products and systems
- Integrated Customer - Siemens project management ensuring user requirements and specifications compliance and efficient transfer of knowledge
- Upgradeable and 'future proof'.

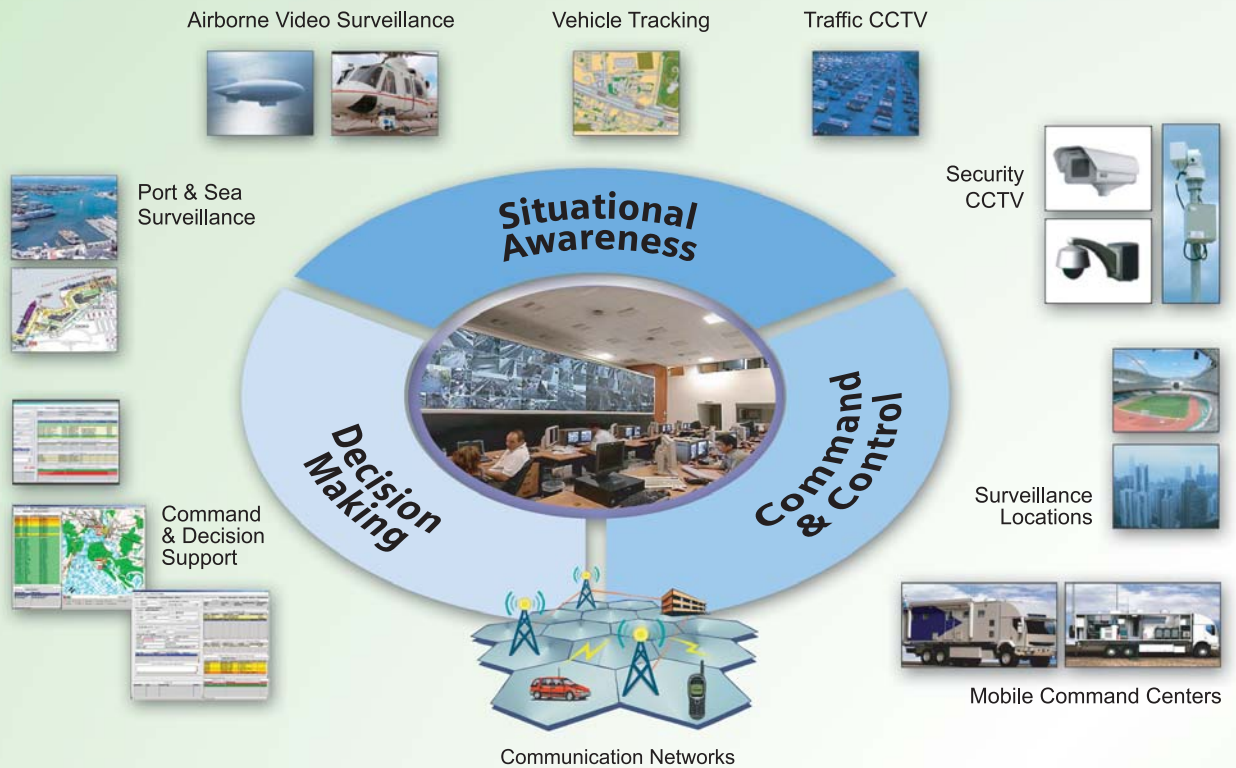


Siemens Command & Control Integrated Solutions - What is it all about?

The following systems comprise the core architecture of nearly all Siemens SBT/SES/CCS-designed and implemented Integrated Solutions. The exact size, scope, and functionality of all these systems is determined according to the operational requirements - unique for each and every customer.

- **Integrated Command and Control Centres** – These are the physical locations used to centralise and process all security information. They may be a small single agency centre or a large national multi agency command centre. These centres may be fixed or mobile.
- **SW Solutions for Command and Management Support** – These are the applications that support and facilitate security decision-making. These applications present security related information in a logical form to commanders/managers and provide ongoing or incident related situational awareness. They assist in ensuring 'common view' of incidents for all commanders and managers, regardless of their location.
- **Integrated Security Communications (Voice/Data/Video) Systems** – These are the 'carriers' of security related information between command and operations centres, to and from security forces and across agency responsibilities. Examples include a Digital Trunk Radio System (DTRS), secure data networks, CCTV monitoring and control.
- **Wide Areas & Public Utilities Surveillance Systems** – Safety and security systems that detect, trigger event alarms and provide real-time information flow across wide areas. These comprise of intricately combined technological means that gather incident-related information necessary for effective command and control decision making. Examples include traffic and transportation surveillance (CCTV) systems with number plate recognition and anomalous behaviour detection capabilities and airborne surveillance systems.
- **Resource Tracking and Asset Management** – Systems that enhance response mechanisms and provide a safety faculty for deployed security forces. Examples include Automatic Vehicle / Personnel Locating Systems.
- **Perimeter and Physical Security Systems** – Systems that define and protect either the operational perimeter of an entity (building, region etc.) or the entity itself. These systems may include fully integrated barrier, lighting, CCTV, cabling, access control, building protection and Perimeter Intrusion Detection solutions.

Siemens CCS Integrated Security Solutions provide 'layered protection in depth'



**Siemens
SBT/SES/CCS
Integrated
Solutions -
tailored to
your specific
operational needs**

A Siemens CCS Integrated Solution can be a small-sized security operations room for an industrial site with access control, perimeter security systems and a Local Area Network; but it can also be a solution as large and complex as a national, full Multi Agency security system upgrade with remote CCTV and Surveillance systems, Intelligence support, Digital Trunk Radio System, multiple Command Centres and software applications for incident and resource management. A typical CCS Integrated Solution will display the following characteristics:

- **Proven Commercial of the Shelf Technologies** – The hardware and software comprising a CCS Integrated Solution have been proven in previous projects. They are leading edge, robust and flexible products.

- **Open Architecture – CCS**
Integrated Solutions may crosscut several customer sectors such as public utilities and security. We design solutions that are scalable and modular; adaptable, upgradeable, expandable.
- **Expert Project Management and supporting services** – All project phases, from user requirements analysis, contract management and support are rapidly implemented, efficiently conducted, and based on lean management structures.
- **Supported by Siemens Global Network of Innovation –**
Integration, Interfacing and Customization may be required for the involved applications and systems. The Siemens Global Network of Innovation can address these needs.

A Siemens SBT/SES/CCS Integrated Solution - Who could gain from it, and where is it applicable?



Major Events: The safety and security planning for a major event taking place in the near future, with thousands of spectators and multiple stakeholders is a responsibility not to be taken lightly. Siemens CCS has learned first-hand the intrinsic challenge of designing and implementing an Olympic-sized integrated security solution for the Athens 2004 Olympic Games. The successful completion of this and other large scale major event security projects is the best validation of the specialized know-how and experience Siemens CCS possesses.

Public Sector: Upgrading and integrating Public Safety, border control or security agencies operational framework while balancing freedom of movement requires conceptual flexibility and design adaptability. These are standard features of any integrated security solution designed and implemented by Siemens CCS.

Utilities: In light of the changing global safety and security environment, but also as part of the never-ending effort to maximize resource

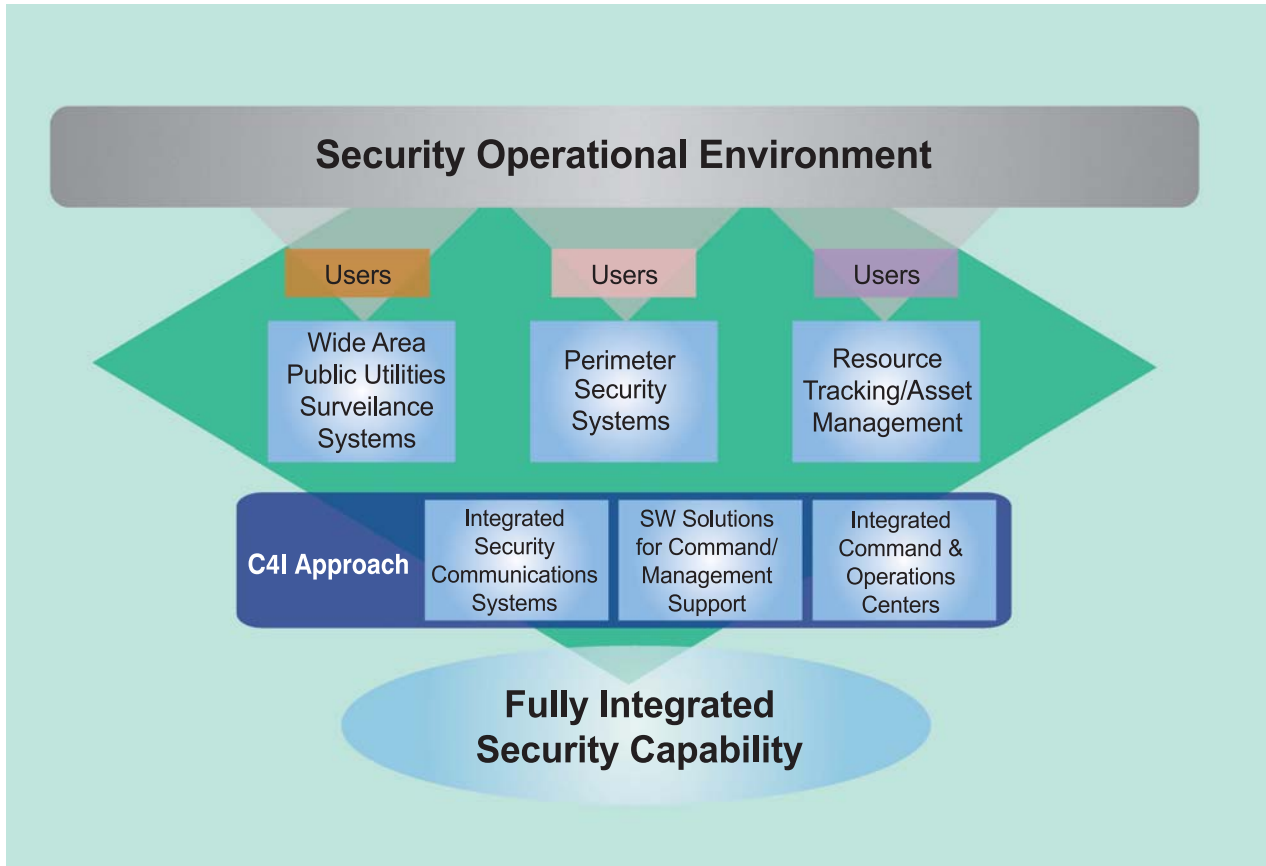
productivity, local and national governments throughout the world place the upgrade of utility infrastructures, such as Metropolitan and transportation infrastructure, electricity facilities and power networks, at the top of their priorities. Siemens CCS has proven expertise in providing the most efficient upgrade solutions addressing precisely these needs.

Power Plants / Oil & Gas / Metals / Mining: Providing safety and security for industrial / energy assets (plants, pipelines, etc.), resources and people across a vast geographical area- even remote from HQ- is not an easy task. Siemens CCS can assist in all the multifaceted aspects of providing integrated security solutions for the protection of high-profile, high-risk, national assets.

Transportation infrastructure (Land / Water / Air): When trying to enhance traffic safety and transportation infrastructure security, one is always aware of the possibility that almost any security measure might hamper or even limit the level of

services currently provided. Siemens CCS has demonstrated the necessary know-how in building integrated security solutions specifically designed for the needs of transportation infrastructure that maintain, and even improve current service levels.

Siemens CCS transforms
unique security and
safety needs into a
custom-made Command
and Control Integrated
Solution



A Security Solution designed and implemented by Siemens SBT/SES/CCS integrates easily with:

- **E-Borders** - Safety and security systems that enable authorities to assess in advance of arrival the immigration and security threats posed by passengers and, when identified, take all appropriate actions. These systems provide the framework for information sharing between immigration, police, security, and intelligence agencies.
- **Disaster Management** – Successfully responding to unforeseen disasters can only be achieved by effectively utilizing technology, processes, and people in a combined fashion and within a very short notice. That can only be done by having in place an overall architecture with a wide range of capabilities covering everything from traffic monitoring and CCTV management to security sensors that allows fast and efficient command and control of multiple mobile units.
- **Defence and Military** – Exercising effective control in the field and maintaining a functional chain of command of a deployed force. This can be accomplished through secure communication systems, robust information sharing architecture (voice, data, audio), and the use of mobile command posts assuring redundancy, situational awareness, and flexibility of response.
- **Humanitarian /Relief Operations** – Interoperable systems that facilitate cross-organizational cooperation of national/international security communities. These systems provide deployed forces and the decision-making authorities with reliable information, secure communication, and the necessary command and control tools.

Siemens CCS Integrated Solutions can be invaluable to the successful fulfillment of diverse missions

Siemens CCS delivers turn-key solutions unique in requirements



Designing & Implementing Integrated Safety & Security Solutions for Major Athletic Events

Athens 2004: The whole world was watching

Siemens CCS, working closely with consortium partners, Greek Public Safety officials and Military agencies, combined and integrated a vast range of solutions, products, and experience into a comprehensive public safety and security 'umbrella'. The delivered systems were put to the most rigorous test of performing their demanding task for the intense period of the Olympic Games. Millions of spectators attending the venues, thousands of athletes competing, but also billions of TV viewers gave these systems the most rewarding 'thumbs up'.

A cohesive architecture facilitated the smooth workflow for all security

forces and related agencies. The sheer quantity of materials used is indicative of the scope of the project:

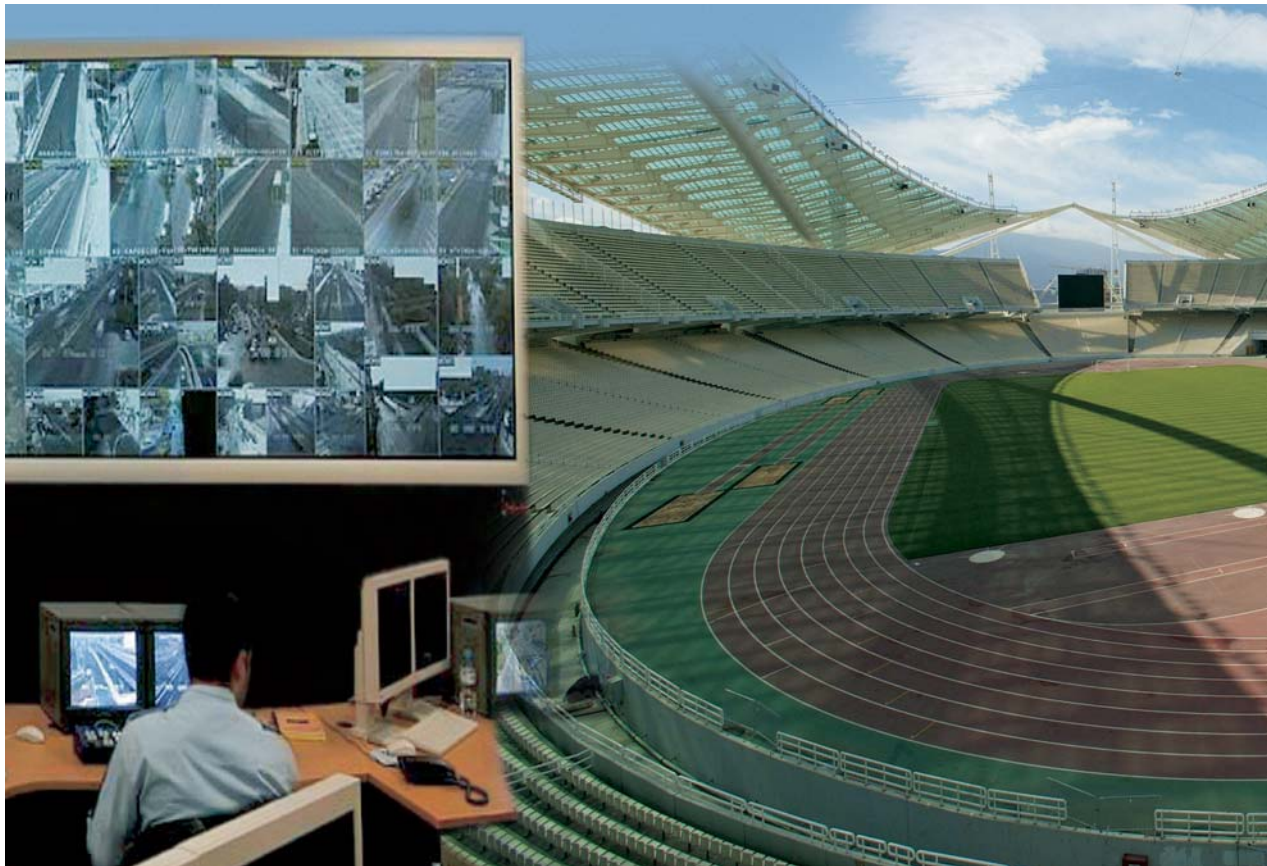
- A total of 5,000 kilometers of cabling
- 1600 surveillance cameras installed
- 40 Olympic Venue Physical Security Systems designed and implemented
- 9 cities and ports throughout Greece equipped with license plate recognition systems
- 120 different local, regional, and major command centers equipped with the associated IT infrastructure (more than 3,000 office, network, and server equipment items)
- 30,000-user secured Digital Trunk Communications System (TETRA) installed
- An Automated Vehicle Locating System of 4,000 Police, Fire Brigade, Coast Guard, Ambulance, Army, and Government sea, land, and air vehicles designed and deployed

All this effort was not just an Olympic Games success. By the end of the Games, the city of Athens had inherited a C4I Integrated Security

Solution few countries can boast off. This system will serve Greece for many years to come.

Doha 2006: Continuing our success story

Siemens CCS has been entrusted with the responsibility of designing and implementing the entire C4I and PSS security solution for the 15th Asian Games, held in Doha, Qatar. Working together with the Siemens Local Company, the CCS project team delivered a cost-effective C4I and Physical Security Integrated Solution consisting of fixed and mobile Command and Control Centers, secured Digital Trunk Communications, Automated Vehicle Location, CCTV and many other systems. The Siemens CCS solution is fully compliant with the operational needs of the customer as well as highly adaptable to future emerging requirements. Moreover, Siemens CCS provides efficient 24/7 technical support, comprehensive training, as well as transfer of knowledge to the Qatari Public Safety end users.



**Siemens SBT/SES/CCS:
Integrating Needs,
Resources, and Ideas
into the right
Solution**

Our project management approach aims to fulfil one fundamental goal: to transform unique customer requirements into an equally unique solution that maximizes operational effectiveness. With this motivation, and based on our human and technical resources, Siemens CCS can deliver top quality solutions on a truly global scale.

Conceptual adaptability and flexible architectural design make CCS Integrated Solutions ideal for use in a wide range of applications: The security organization of major athletic and cultural events, summits, or other high-profile functions, or the protection of critical infrastructure, such as airports, harbours and industrial installations. Moreover, the integration, modernization and restructuring of government agencies seeking to maximize their operational capabilities can be easily facilitated through the use of CCS comprehensive Solutions.

But that is not all: the force multiplying effect of CCS Solutions can also contribute to the integration of border control, disaster management, de-

fence and military applications, humanitarian and relief operations. In effect, any kind of operation involving professional organizations in need of fast decision-making, reliable and secure information sharing, resource tracking and asset management, and effective command and control tools can benefit by using a Siemens CCS Solution.

Coupled with Siemens' global presence, vast reservoir of technical expertise, high-tech products and systems, Siemens CCS combines knowledge, implementation experience, effective project management, and an expert yet fresh pool of people and ideas. These assets make the Siemens CCS team capable of implementing reliable Integrated Security Solutions that truly address the end-user's operational demands.

We have so much more to tell you!

For more information on Siemens CCS Integrated Solutions, please
visit our website:

www.siemens.gr/ccs

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