Answers for National Security

SIEMENS

Securing the Nation

National security in today's global environment is a highly complex and interconnected challenge – spanning cyberspace as well as land, sea and air. Protecting individuals and society – while enabling modern mobility and enhanced safety – requires full mastery of the processes behind the technology.

A challenge of the first importance
The first decade of the new millennium has been characterized by volatile economic shifts and climatic change, but one issue has dominated the media and the political agenda – security. The events of September 2001 brought the dilemma of security in a global age into every living room, while ongoing conflict and recurrent security threats continue to dictate public discourse.

Growing diversity and complexity
As the once discrete zones of defense and civil security merge in an environment of global mobility and deployment, the mission spectrum of defense and security organizations is now far more complex and asymmetrical than during the Cold War. Defense organizations are now called upon to transform rapidly for coalition deployment anywhere in the globe, while security services must master the complexities of mass travel and global migration.

Technology as a strategic enabler
Technology and information now dominate the operations of all entities in this field, with integration and real-time knowledge at a premium. New technologies such as Radio Frequency Identification and biometrics promise to transform military logistics and security operations, but successful implementation requires far more than mere purchase. Today's security and defense organizations must be ready for anything, and execute quicker than ever. As mission complexity and operating tempo accelerate, securing the nation has never been as necessary or challenging.

The globalization of security threats

As the Cold War threats of massive conflict recede into history, a mass of interconnected concerns has replaced the traditional paradigm of conventional territorial protection and defense. These range from terrorism and nuclear proliferation to regional destabilization and energy security – with no single threat independent of the next. National security in the 21st century is becoming an increasingly non-linear challenge, with simultaneous interdependency between the global and the local.

The new information-centric paradigm

Looking at the spectrum of threats and challenges facing security communities – from asymmetric defense missions against terrorism and ideological conflict to proliferating civil issues such as human trafficking, smuggling and organized crime – one recognizes the supreme need for speed, synchronicity and synergy

between parties. As nature herself enters the picture in the form of resource scarcity and increasing climatic volatility, defense and security agencies must generate and deploy response forces with ever greater frequency and at ever greater distances. Everywhere the need for real-time knowledge sharing and cross-organizational collaboration is paramount. In a globalized environment, national security must become information-centric.

Managing modern identity and data

As citizens travel and migrate in ever greater numbers, and as international trade continues to drive greater volumes of exported goods, identity management is a field of civil security requiring particular attention. And with so much of the world's knowledge assets now virtual and online, the concept of security itself must be expanded to embrace the logical and the physical with equal expertise.

Selecting the right partner

Whether you are a key decision maker in a Ministry of Defense or a strategic thinker in a Ministry of the Interior, you will need vision and precision to deliver on today's security agenda. Strategic partners can help harness the resources and implement the required platforms, but with such a complex mission spectrum and such a broad technology remit you might find it challenging to match your goals with partner scope. You need a partner who understands civic values as well as commercial technology. And, increasingly, you need someone who can help you respond anywhere. In short, you need the right partner.
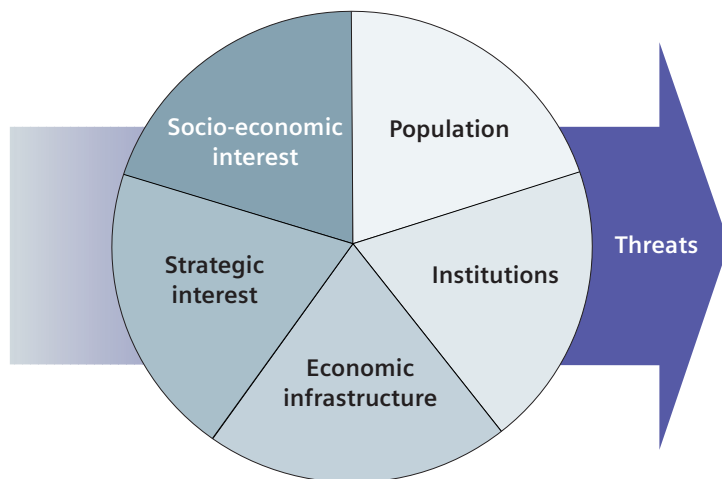
Current threats effect all areas of national security

The Right Partner

Defense forces and security agencies collaborate with external providers for a wide number of reasons. Finding a partner who understands the full equation from manufacturing and logistics to command and control as well as mission deployment is no simple matter. Finding one who can implement on a global basis is even more challenging.

Conventional partner limitations

The search for the right transformation partner in the national security environment is by no means an easy one. You might find potential partners are limited by a consulting focus without engineering follow-through. Expert specialist partners may lack global capabilities. Partners may be dependent on third-party collaboration, or not own software technology in the security field. The right partner for you will have faced similar challenges in the past – at whatever point in the mission spectrum and in whatever part of the globe.

Proven capabilities of Siemens

With over 55 years of defense collaboration, Siemens is built on over 150 years of industrial and technology innovation. Uniquely for a partner in the security space, we span physical and virtual worlds – while integrating information and communication technology with industrial infrastructure. That's why Siemens is a partner to the security and defense community of unusual scope and commitment. We not only modernize IT as well as transform the operations and administration of national security bodies. We are also able at once to synchronize product and material life cycles, to accelerate complex global logistics systems, to optimize border control for added safety and speed, to dynamically provision virtual access rights, to deliver robust military communication networks and innovate marine systems.

Unique Siemens One synergies

Such a broad sweep of capabilities across the field is rare indeed, and synergized for you through our enterprise Siemens One partnership approach. Thus as well as information, communication and industry solutions, we can also deploy energy and healthcare skills as required. Siemens can act in any role – as prime contractor, change manager, program manager or consortium partner. It is at once a process architect, solution provider, system integrator and operational outsourcer. From Australia and Indonesia to North America, Western Europe and South Africa, we are transforming security missions and outcomes.

Siemens can also leverage the R&D skills of its subsidiary Roke Manor, a key advisor to the UK Ministry of Defence and supplier of core military communications and sensing products. A technical consultancy, R&D business and leading product developer in one, Roke Manor delivers battlefield advantage in everything from defense information systems and acoustic weapon location to Low Visibility Landings for helicopters.

An industry partner with civic values

With over 150 years of industrial experience and global implementation, Siemens is also a public sector partner of rare depth and breadth. We understand the citizen values at the heart of government transformation, and have been to the fore of service excellence across the entire public sector space from security and mobility to healthcare and education. Such wide-angle civic experience and expertise is also of complementary value to our customers among the defense and security community.

An innovator in partnership and technology

A unique innovator in the field of Public Private Partnership, Siemens is currently involved in Europe's biggest PPP at the German Armed Forces. Europe's leading patent generator, Siemens is also a source of continuous technology innovation, with leading positions in critical security fields such as RFID, Public Key Infrastructures and biometrics.

End-to-end solution and service support

Siemens offers you unique scope and accumulated know-how from logistics to networks, from electronic identification to Product Lifecycle Management, from border control to virtual security. In the emerging global security arena, Siemens is an industry partner with a special emphasis on information leadership. We support Ministries of Defense and the Interior across the globe in their pursuit of force transformation and citizen safety. Covering the entire spectrum from GPS and RFID systems to military ERP as well as command and control information systems, we ensure you think and act as one from warehouse and repair shop to foxhole and front line.

Smarter, closer, fitter for the future

As security objectives multiply and fragment, simplify and unite your performance from decision superiority to resource utilization. As the world grows in complexity, empower your ability to prevent, protect, respond and recover. Together, our solutions and services will help you act smarter, work closer and become fitter for long-term mission fulfillment. Let's look at how.

Smarter Security

As the domains of national and civil security merge, better answers lie in the intelligent application of new technologies across the arena of security from supply and mission execution to information sharing and identity management. Leverage the cutting-edge knowledge and experience of Siemens in enabling military command, networking security missions and controlling national borders.

Siemens has introduced its smart-card technology at the Dutch Ministry of Defense, where the Defense ID card enables both physical and logical access. In addition to authentication, the Public Key Infrastructure of the card is also used for signing documents in a legally valid manner and sending them securely by e-mail. Siemens has also been responsible for systems integration, linking the new card system to the ministry's central infrastructure.

Digital identity management at Siemens has been perfected over a wide range of public-sector and defense engagements, the London Metropolitan Police, the Italian Ministry of the Interior and government bodies in Switzerland, the Czech Republic, and Canada. Border control in Croatia, for example, has been transformed with biometric entry/exit checks that support real-time verification and processing. London's Metropolitan Police benefits from much greater control over security and legitimate access to data.

Driving national security innovation
With information-centric operations now driving national security agendas, innovation and integration are top of the agenda. From cutting-edge identity systems and border controls to expeditionary logistics and military command, Siemens deploys an unparalleled range of technology innovations – based on cross-infrastructure integrative capabilities and powerful software resources in development and optimization. From the wide field of military and civil deployment, four solution approaches stand out – smart-card systems based on biometrics, identity and access management solutions, expeditionary logistics systems, and command and control solutions.

Secure ID solutions
A leader in national security transformation, Siemens commands core skill sets in secure ID solutions – identity and access management, biometrics and smart-card solutions including Public Key Infrastructures. These skills cover the entire field of 21st-century implementation and operation techniques. Our civil, corporate and international solutions are currently in place across a vast spread of geographic locations – from Switzerland, Italy and Macao to a global defense contractor with 200,000 users in 70 countries.

With its Joint Command & Control Information Systems (JCCIS) project, Siemens helped the German Armed Forces overcome the traditional gaps between army, air force and navy by providing architecture for a shared command and control information system. Based on innovative and sustainable technologies, the system offers fast and secure access to necessary information for mission assurance and situational awareness to support better decision making.

The Swiss Air Force Command & Control Information System (FIS-LW) supports the action-planning and action-leading processes over all levels of command and in every situation. The system is an integration platform for exisiting and newly introduced applications and systems as well as a gateway to systems for the planning staff, ground forces and civil organization.

Our access management solutions for defense and intelligence communities include the German Armed Forces and Canada's Department of National Defence. Built on centrally monitored and logged IT security, these answers deliver complex identity administration of large staff numbers defined by group and function levels. Secure your highly sensitive information and stay up to the minute with these fine-tuned digital solutions.

Integrated border control

Building on our advanced biometrics solutions, our border control systems cover fixed, automatic and mobile border control points. Specific service elements within this solution approach comprise biometric data capturing and verification, automated license-plate recognition, and a secure data exchange platform based on enterprise service bus to check people and vehicles against black or white lists. Person and vehicle entry and exit is fluent and secure as never before with our fully comprehensive and innovative approach.

Intelligent identity and access management

When it comes to efficiently managing digital identities, enforcing policies and controlling physical and logical access, our identity and access management (IAM) solutions enable the right people to have the right access to the right systems and data at the right time. Our DirX family of identity, access, audit and directory components offers automated user and rights management by means of dynamic, role-based provisioning, secure and reliable access management as well as identity auditing of user access and rights. Thus we enhance the security and quality of your processes while reducing your cost of operation.

Superior operations

SIBOSS – Siemens Basic Operations Support System – meets the composite mission pattern of defense organizations with information-centric command and control that optimizes your mission cycle from situation assessment and planning to tasking, execution and re-assessment. Operations solutions within this zone cover Joint Command and Control Information Systems, our Mission Planning System (MPS) MilCom and air-force command and control information systems.

Evolved defense logistics

Based on full-spectrum technology expertise in RFID as well as location systems, our Siemens Expeditionary Logistics System (SIELS) approach delivers total asset visibility from resource preparation and provision to in-transit shipment tracking and field synchronization. Master your resource and decision-making challenges – growing annually in global and technology complexity – with these fully integrated and synergized solutions.

Closer Networks

Information-centric operations lie at the core of tomorrow's security agenda. Joint deployment between service branches, multi-national expeditions and cross-agency collaboration all demand real-time information sharing and a common operational picture. Let Siemens help you put the implementation jigsaw together.

Nokia Siemens Networks is not only a world-leading provider of cutting-edge communication networks but a strategic partner to multiple defense and security bodies – from armed forces in Germany, Sweden, Finland, Portugal and India to NATO and the United States Army. Driving innovation across Military Next Generation Networks, the communication expert also specializes in infrastructure modernization, large network implementation and transportable voice/data solutions for every type of deployment arena.

Nokia Siemens Networks has also been instrumental in the U.S. Army's DISN-E (Defense Information Systems Network – Europe) project, upgrading the American military's communication network with voice-switching solutions at 80 locations in Germany, Italy, the Benelux countries and the US. The new universal platform complies with both US ANSI and European ETSI standards, while integrating military-unique features such as a pre-emption function and preparing the way towards converged next-generation networking.

Closer defense and security collaboration
More intelligent security in the form of biometric identity management, radio-frequency logistics or real-time command and control also requires network integration and synchronized multi-site collaboration for effective delivery of security and defense results. As your organization is increasingly forced to transform and network, we deliver a broad spectrum of answers in the fields of communication networking, Product Lifecycle Management, federated data management and marine solutions.

Communication networks leadership
Through our collaboration with Nokia Siemens Networks, a world leader in communication networks, we are in the position to deliver first class government communication solutions. Nokia Siemens Networks delivers answers to a broad global spectrum of over 50 security and defense customers – from the Indian Armed Forces and the German Armed Forces to the United States Air Force and Army, NATO as well as defense communities in Portugal, Sweden and Finland. Nokia Siemens Networks can help you deliver best results across the board in defense networking – from early adoption of military Next Generation Networks (MilNGNs) to large network implementation solutions; from infrastructure modernization to deployable, containerized network solutions.

Multiple network enablement
Military NGNs require special levels of high performance and security. We are ready to deliver 99.999% carrier-grade reliability through our comprehensive solutions covering assured service, truly converged network topology, bandwidth management and vendor-independent NGN migration. Built on sixty years of successful cooperation with military forces worldwide, our current engagements with large network implementation include the U.S. Army and the Indian Armed Forces. We engineer, furnish, install and test the entire U.S. Army voice backbone network in Europe, for instance. Infrastructure modernization projects also include the U.S. Army, while our transportable voice and data solutions enable expeditionary and special operations forces in all types of environment.

The German Air Force's CCIS system, a state-of-the-art information management system from Siemens, supports the planning, commissioning and reporting of all flight missions, including monitoring, information acquisition and situation display. Contributing to all-round efficiency and information-centric operations, the system also provides users with extended functionality including e-mail, search and directory services.

The HUSKY® platform combines optimal integration with maximum operational security. Requiring no central components, HUSKY leaves information in its original location. Linking completely autonomous and separately stored data sources, the system has comprehensive safety functions. A breakthrough in federated data management, HUSKY answers your need for greater speed and closer collaboration.

Advanced marine solutions from Siemens have been instrumental in keeping many of the world's navies on the cutting edge. The Indonesian Navy, for example, has upgraded its fast patrol boats and submarines upgraded with a host of Siemens technologies including switchboards, measuring equipment, propulsion systems and ship networks.

Global leadership in product lifecycle management (PLM)

With modern weapons systems spanning enormous range and complexity, our PLM answers for the national and civil security marketplace help you transform complexity into synergy and come closer for improved performance. Based on world-leading Teamcenter technology, these solutions are currently employed by American and Australian defense organizations to reduce cycle times and field more capability faster. A world leader in PLM software, Siemens helps you understand the interdependencies within your asset environment and deliver better defense results more often.

Communicate, simulate, integrate

On land, sea and in the air, we are bringing defense organizations closer together with communication systems, training and simulation systems as well as information systems which deliver mission assurance and situation awareness. The HUSKY® Trusted Service Integration platform sets a new standard in federated data management by delivering a universal platform for the exchange of confidential data and applications while leaving information in its original location.

Minimizing the threat of espionage

In the field of sustainable information management, our TEMPEST PCs along with their associated printers, scanners and media converters bring you long-term security against bugging and espionage. Temporary Emanation and Spurious Transmission – or TEMPEST for short – refers to emission security and our SITEMP family of products protects your confidential data in accordance with the criteria of the SDIP 27 Class A and the zone model of the German Federal Office of Information Technology Security (BSI).

Integrating marine performance

When it comes to securing the world's seas, Siemens has been empowering the world's navies since 1955 with everything from degaussing systems, advanced generators, switchboards, ship control networks, propulsion equipment and fuel-cell power systems – everything, in short, to bring your information-centric operations closer together.

Fitter Operations

Budgetary discipline and resource scarcity continue to shape the long-term development of security operations globally. Prominent organizations across the security and defense arena have already experienced the benefit of Siemens answers from technology management to energy performance contracting.

In Denmark, Siemens took over the operation of the military ERP system DEMARS (Danish Defense Resource and Management System). As the world's biggest user of SAP with 25 years' experience, Siemens is particularly well placed to synchronize and upgrade the core SAP environment of the Danish Armed Forces.

For the Finnish Defence Forces, Siemens has responded to the challenge of complex materials management – covering an extensive number of products – with an extensive mySAP solution covering finance, materials management, data security and training. Enabling better decision making and more detailed reporting, this SAP implementation delivers complete integration between multiple systems.

Making the most of public budgets
Better security solutions and closer net-working also need long-term operational fitness for budget compliance and resource maximization. As security and defense missions grow in number and complexity, public financing will continue to demand expert utilization and return for taxpayers' money. Siemens has answers in this field – with a complete set of solutions and services from software optimization and technology outsourcing to highly efficient energy contracting.

Leveraging private-sector capabilities
Siemens is a private-sector partner to public bodies of particular note, and is currently involved in Europe's largest Public Private Partnership (PPP) – the HERKULES project at the German Federal Armed Forces. Designed to leverage private-sector innovation and management discipline while maintaining public-sector values and control, Public Private

Partnerships offer government bodies unique benefits. This ten-year partnership with Siemens as shareholder of the joint venture BWI Informationstechnik – covering 1,500 locations and 140,000 PCs as well as 7,000 servers; 300,000 fixed-line telephones and 15,000 mobile phones – is delivering technology modernization as well as greater operational efficiency, allowing the German military to better concentrate on its core mission.

Complex SAP skills and insights
Denmark and Finland take advantage of our excellent SAP skills with over 25 years' expertise in the integration and management of this key technology. Material and finance management for the Finnish Defense Forces, for example, synergizes the complex management of around 300,000 products and delivers accurate timely reporting. Beyond operational management and outsourcing, we can help in other crucial ways.

The largest Public Private Partnership to date in Europe, the HERKULES project at the German Armed Forces delivers through the joint BWI service alliance a ten-year transformation of technology infrastructure and capabilities. Covering 1,500 sites and 140,000 workplaces, this innovative partnership spans everything from data-center administration, software management and IT processes to comprehensive SAP implementation and new platforms for e-mail, Internet and Intranet. Freeing up staff to concentrate on the expanded mission of today's German Armed Forces, the HERKULES project represents a crucial step in flexible, information-centric transformation.

Energy performance contracting is a new opportunity for defense and security bodies to cut running costs, increase operational effectiveness and lower carbon emissions in the changed environmental conditions of the 21st century. Siemens, through its building technology division, is expertly equipped to refit your legacy energy infrastructure and drive ongoing performance economy through its comprehensive and joined-up approach.

Sustainable defense and security performance

All our systems, solutions, products and services are designed for maximum efficiency and lifetime value. This is as true for Teamcenter PLM platforms as it is for RFID-enabled logistics systems, command and control information systems or communication networks. As resource scarcity begins to dominate the economic and political agenda, Siemens can also help you maximize the efficiency and environmental contribution of your energy consumption.

Energy performance contracting

We will contract with you to dynamically manage your energy consumption, ensuring you save on much-needed budget as you reduce your carbon footprint and sustain your operational environment. Our energy contracting skills are enriched with ten years' implementation experience of refitting energy infrastructures and reducing costs by an average of 20%. Public-sector clients of ours have also benefited from reductions of up to 40% – highly significant savings in the context of budget optimization. For example, Dyess Air Force Base in Abilene, Texas was able to realize a 50% reduction in water consumption as part of its energy management partnership with Siemens.

Complete answers for complex challenges

With Siemens as your technology and innovation partner, you are thus enabled with smarter security solutions, closer information-centric operations and higher levels of fitness for the complex, ever-changing demands of 21st-century security and defense.

Answering
Your Challenge

Siemens understands the complexity of seamless logistics and successful global deployment, as the world's largest manufacturer outside the automotive industry. As a unique software developer and process transformer, it also understands the interplay between physical assets and virtual capabilities. Secure your future with a proven partner.

Product Lifecycle Management solutions from Siemens have been central to the performance of the Royal Australian Navy (RAN). By enabling a central repository for all fleet configuration, maintenance history and planning, we have helped create a single consistent and accurate context for maintenance planning and readiness assessment. Shortened maintenance time and optimized resource allocation thus improve equipment uptime and add capacity to handle unscheduled maintenance events.

Long-standing defense and security customers
Our answers for your challenge – whether in digital identity, command and control, network integration or asset visibility – are built on full technology scope and deep partnership with organizations globally such as the British Ministry of Defence, the U.S. Department of Defense and the German Armed Forces. From ground-level GPS/GSM and RFID systems to military ERP and command-level information systems, we cover the entire vertical stretch of security and defense layers.

Our vertical solutions in logistics, identity management, basic operations and military Next Generation Networks are complemented by horizontal technology solutions in software harmonization and consolidation, application management and progressive outsourcing.

**A global partner
for a globalized environment**
Securing the nation in the twenty-first
century – in a globalized, digitized
environment – is no simple mission. Rely
on the proven global skills and technology
competence of the world's most interna-
tional industry player. An innovation
leader employing more software expertise
than any other organization, Siemens can
transform your strategic objective into
operational reality. Today's security
threats are asymmetric and unpredictable.
Protect your society and meet the
challenges of information-centric defense
operations with an all-round partner that
instinctively understands your environ-
ment. More than a source of technology
excellence and security process expertise,
Siemens is a stable, long-term partner
to public and civil organizations with an
in-depth resumé of solution assignments
and ongoing partnerships.

From information-centric military
operations and synchronized defense
logistics to identity security, next-genera-
tion communication, IT transformation
and energy excellence, fast forward your
transformation timeline and realize your
next performance level with a partner for
all missions.

Tempest PCs

Access management

Defense logistic solutions

Integrated marine solutions
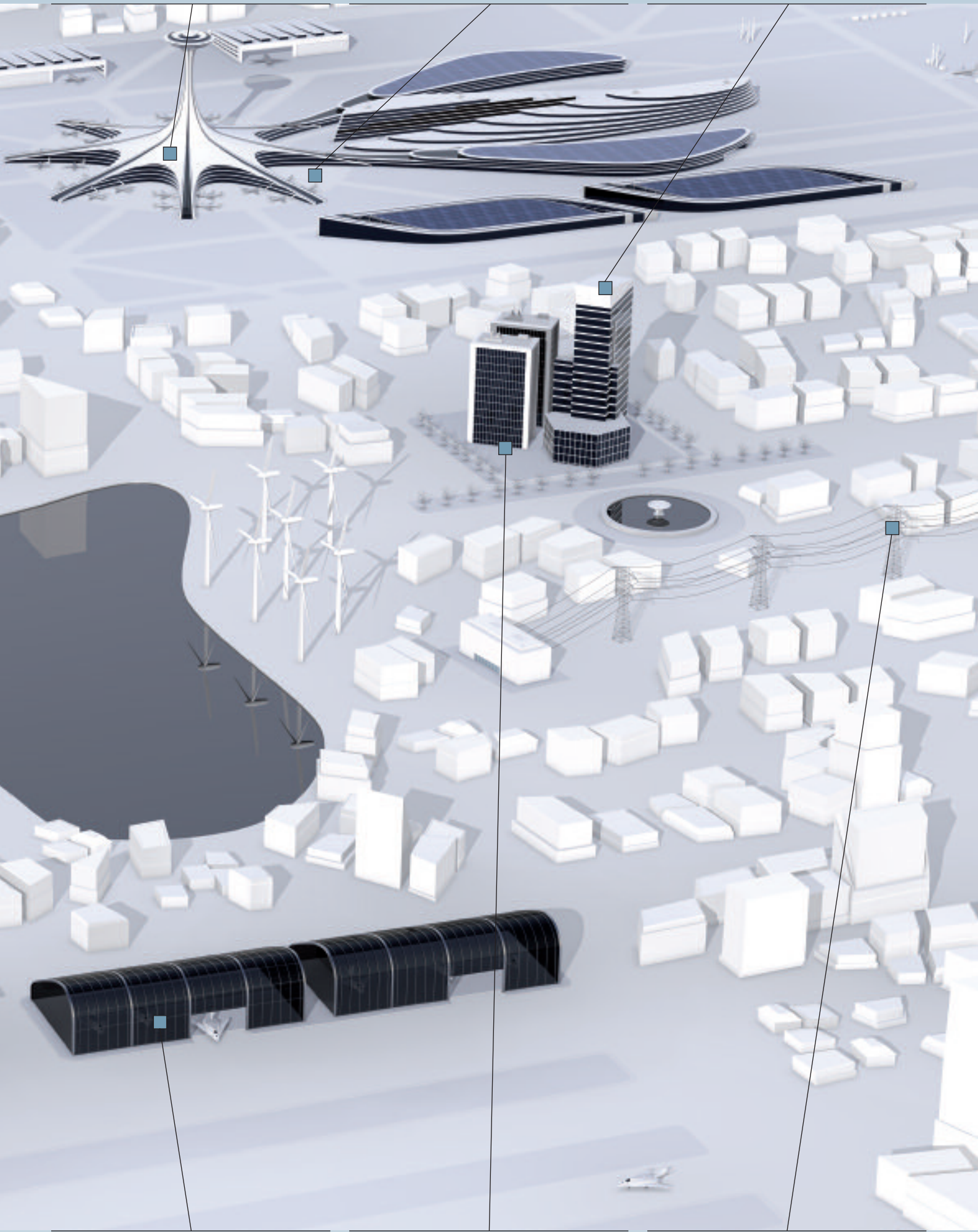
Mission planning systems

Military command and control information systems

Military next generation networks

Identity management and biometrics

Border control

Comprehensive SAP expertise

Product lifecycle management solutions

Public private partnerships (PPP)

Energy performance contracting