

Scalable and Modular Solution Configurations

The **Network Enabled Service Suite** allows scalable and modular tailoring of building blocks for individual, customer-driven solutions. Three major solution configurations can be applied:



NETWORK ENABLED SERVICE SUITE

ACHIEVING INFORMATION SUPERIORITY IN MILITARY OPERATIONS



Mobile Solution

The mobile solution includes vehicle-based or dismantled systems and services. It provides flexible and robust access to vital tactical communication and information services while maximising quality of service. Examples include mobile headquarters and command posts, especially in land-based operations.



Deployable Solution

The deployable solution includes container-based or carry-on systems and services. It provides mission-tailored modules for accessing a broad range of communication and information services. Examples include deployable field headquarters for joint or single service staff at operational or tactical levels, and functional control centres such as command&control centres (CRC) and towers.



Stationary Solution

The stationary solution includes infrastructure-based systems and services. It provides high quality services to single or multiple control centres and nationwide networks. Examples include command structures, headquarters and control centres for national (air) defence, homeland and border security, and military air traffic services.

The **Network Enabled Service Suite** catalyses information sharing and command, thus bringing superior effects to defence and security operations. Find out more about our Frequentis-Ready-to-Use and Frequentis-Tailored products and services, our widespread competence in all relevant domains, and our advanced solution framework. Together we can make Network Enabled Capabilities your reality!



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Technical specifications and requirements are correct at the time of going to press, but may change without prior notice as our products and services are continually updated. Frequentis has endeavoured to ensure that the information in this document is, to the best of its knowledge, correct, but does not accept any liability whatsoever for any error or omission.



Network Enabled Service Suite Superior Effects in Military Operations

In today's complex and dynamic military scenarios, the "Need-to-Share" paradigm is imperative. Integrated, interoperable capabilities are major prerequisites for superior information and superior command. These capabilities must enable agile collaboration and effective decision making across the whole mission spectrum, including joint and combined operations as well as civil-military cooperation (CIMIC). Network Enabled Capabilities (NEC), a Comprehensive Approach and an Effects-Based Approach to Operations (EBAO) are guiding concepts here. Communication and information services, physical networks and coherent integration of operational elements such as sensors, decision makers, weapon systems and support entities constitute the technological foundation.

- Basic tenets are:
- **Advanced Information Sharing and Efficient Information Management**
 - **Common Operational Picture Exploitation**
 - **Agile Collaboration and Effective Decision Support**
 - **Process Automation and Self-Synchronisation of Forces**

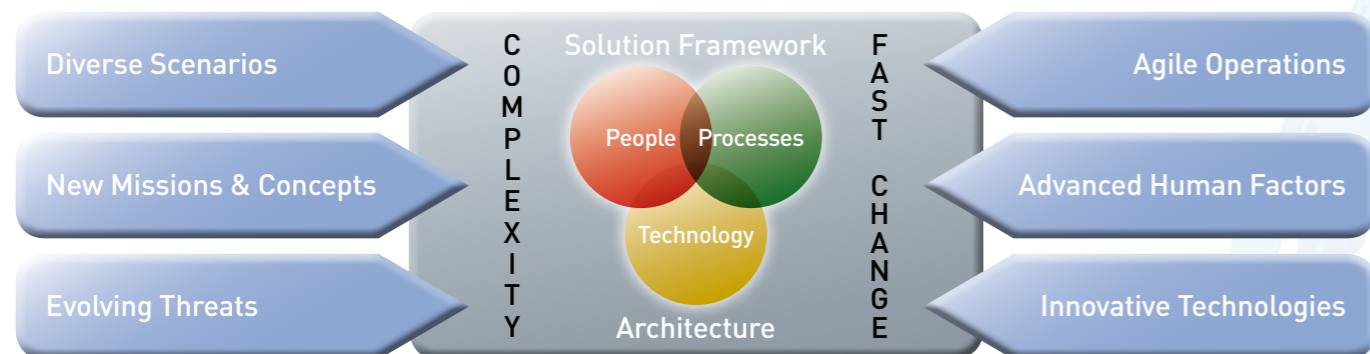
The paradigm shift from platform-centric to network enabled poses complex and manifold challenges in the people, processes and technology domains. The main goal of **Frequentis** is to develop, deliver and support integrated solutions that bring all three into balance.

Unifying People, Processes and Technology

Adequate technology is a cornerstone of NEC. The technology domain involves complex, diverse and partially-concurring requirements in the areas of interoperability, quality of service, IT security, mobility, robustness, resilience, sustainability and cost efficiency. A well balanced, high performing federation of systems requires holistic planning, systematic employment and effective servicing of (sub)systems. However, technology is just one element: effective unification of people, processes and technology is the key to success. Efficient information management needs Information Exchange Requirements (IER). Agile collaboration and effective decision support needs orchestrated processes. Self-synchronisation needs optimal human machine interfaces and automation. Architecture methodology can help to manage both complexity and the systematic improvement of capabilities.

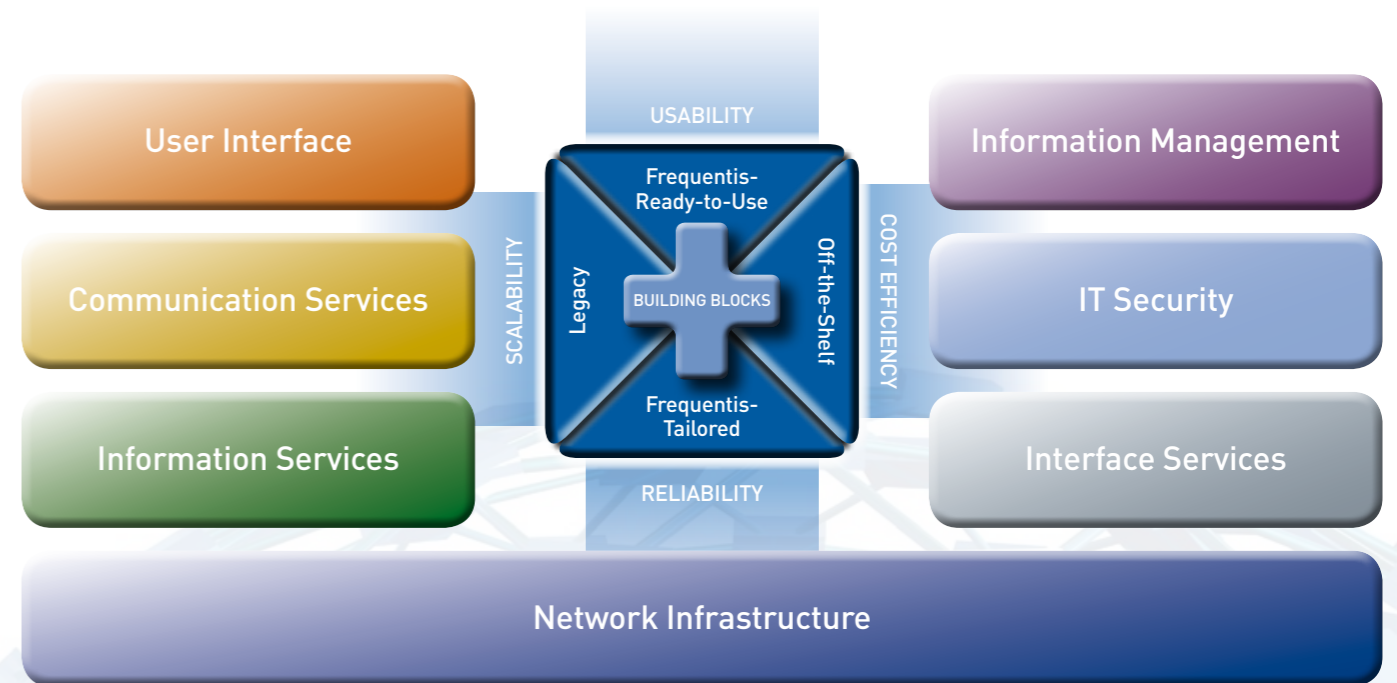
Frequentis has a large product portfolio for communication, information and network services, as well as great competency in the technology domain as such. Additional knowledge and experience with regards to user interface design, control room design and human factors analysis enhance our capabilities in the people and processes domains.

Frequentis Network Enabled Service Suite is a solution framework to support change management and foster technology advancement. It allows systematic analysis of user requirements, efficient development, integration and employment of systems and services, and dynamic management and stepwise migration towards network enabled capabilities. This solution framework is our answer to complex missions, evolving threats, concept and technology innovation, and modern procurement needs.



Functional Building Blocks

The Network Enabled Service Suite mandates the application of open standards and service-oriented architectures. The solution framework supports planning and analysis of complex system architectures through decomposition into functional building blocks. Frequentis has acknowledged cost efficiency as one major procurement criteria. This is why Frequentis-Ready-to-Use products and services, the customer's legacy systems, and off-the-shelf building blocks from other vendors together build the foundation of the envisaged system architecture. For individual solutions, however, Frequentis-Tailored products and services might complement the system architecture or fill capability gaps with innovative technology. Finally, the solution design will deliver cost-efficient services that bring major benefits regarding scalability, reliability and, above all, usability. The Network Enabled Service Suite supports cross-domain unification, interoperability, IP convergence and stepwise migration policies for technology upgrades, thereby ensuring a high return on investment for our customers.



Operator Position

Leading human-machine interfaces that deliver a 6th sense to the operator. Selected features: Role-Based Service Access, Rich User Experience, Attention Allocation, Information Overflow and Error Avoidance, Risk Mitigation, and Operators' Trust.

Communication and Information Services

Integrated communication and information services with value added along processes and workflows. Selected features: Common Operational Picture, Collaboration, Decision Support, Voice over IP Communication, Voice and Video Conferencing, Web 2.0 Services.

Information Management Service

Agile information and data management to provide the operational user with relevant information at the highest quality level. Selected features: Content Management, Service Management, Push/Pull/Broadcast-Mechanism.

Interface Service

Advanced interface services to boost interoperability. Selected features: IP Gateways, Multilateral Interoperability Program (MIP), Standard Protocols, ADatP3, XML, Radio Interfaces (including Remote Control).

IT Security Service

Balanced IT security services to support the "Need-to-Share" paradigm. Selected features: Authentication, Red/Black Voice Separation, Information Exchange Gateway (IEG), Secure Voice and Data.

Networking Infrastructure

Convergent networking infrastructure with scalable quality of service. Selected features: Ubiquitous Access, Virtualisation, Quality of Service Management, Wide and Local Area IP Networks, Mobile Ad-hoc Networking (MANET), Tactical Radios and Data Links, Satellite Communication, Trunked Radio Networks, WiFi.