ICZ

[DEFENCE]

WHERE WE ARE

ICZ

ICZ Group is a major player offering integrated software
and network solutions within Central and Eastern Europe.
Its portfolio of services and solutions is being continually
developed to enable delivering of the broadest possible
range across the entire field of information
and communication technologies. ICZ Group provides
its customers with services based on a broad spectrum
of platforms and technologies, including tailor-made
applications as well as information protection and
security projects.

A B O U T   I C Z   G R O U P

[HELPFULNESS AND COMPLEXITY IN RELATION TO THE CUSTOMER]

The ICZ Group's philosophy is based on a building of complex, long-term partnership. The main goal is to meet all the customer's requirements and needs. And, at the same time, the intention is to deliver more than just a solution. The primary wish is to treat every business as a whole.

Therefore, all the complex services also include services exceeding the traditional conception of information technology.

ICZ Group is interested in the internal functioning of business, its processes and market environment, and primarily, in possibilities for improvement and the search for new opportunities.

Thus, the ICZ Group's solutions mean a strong tool helping to make the customers' goals and intentions to happen. ◄

[BROAD RANGE OF SOLUTIONS ACROSS A VARIETY OF FIELDS]

For the business solutions, the ICZ Group has a broad portfolio of services at disposal, ranging from a supply of classic information systems up to the complete, outsourcing-based takeover of responsibility for networks, including internal company systems and remote administration.

The offering covers the solutions in application software field, system integration, security, communication, infrastructure as well as document content management and administration, mainly for public administration, healthcare, transport, telecommunications, energy, financial, production and logistics sectors. The ICZ Group also provides consultation and analytical services, of course. ◄

[EXPANSION TO OTHER MARKETS]

The ICZ Group ideas of further expansion are featured with a priority to become one of the leading suppliers of information and communication technology in Central and Eastern Europe.

Besides the Czech and Slovak Republics, where the ICZ Group is strengthening its position permanently, the principal endeavour is to establish itself in markets beyond the borders of Central and Eastern Europe, too.

Its attention is focused on important markets such as CIS, China, the Near and Far East as well as North Africa. However, the most significant centre for the ICZ Group's activities remain both the Czech and Slovak markets, on which the expansion of commercial activities goes on, continually. ◄

ICZ

ICZ AEROSPACE AND DEFENCE IS TRUSTWORTHY PARTNER FOR NATIONAL (MILITARY) AIR NAVIGATION SERVICES PROVIDERS (ANSP), MINISTRY OF DEFENCE (MOD) AND EMERGENCY AND RESCUE SERVICES PROVIDERS.

Aerospace and Defence are very demanding sectors. They require highly specialized and technically unique solutions based on in-depth expert knowledge of the IT support and following management and execution of the command / control processes and procedures (armed force operations).

Years of experience in this field, a varied product portfolio, solutions and complementary services as well as consistent development concept have allowed to collaborate on contracts that demonstrate the quality of our work and, primarily, confirm that systems, implemented by us provide our clients with realistic, reliable solutions that are in accordance with their requirements.

We offer complex (comprehensive) portfolio services in development, implementation and integration of military and civil air traffic management systems, systems for the information support of the command and control processes, as well as geographical and special information systems.

Our systems are fully compliant with EU legislation for so-called Single European Sky, NATO standards as well as valid international and standards and regulations.

The ICZ Aerospace and Defense was established in 2008 based on the acquisitions of the two leading companies long acting on the Czech and Slovak defense market.

CERTIFICATES, APPROVALS AND LICENSES

► EN ISO 9001:2008 QUALITY MANAGEMENT CERTIFICATION
► SLOVAK DEFENCE STANDARD SOŠ AQAP 2110:2015 NATO QUALITY ASSURANCE REQUIREMENTS FOR DESIGN, DEVELOPMENT AND PRODUCTION
► TYPE APPROVAL CERTIFICATE FOR SYSTEM USE IN CIVIL AVIATION FOR THE LETVIS® SYSTEM
► LICENSE FOR DEFENCE ARTICLES TRADING
► NATIONAL SECURITY CLEARANCE CERTIFICATE – "SECRET"
► FACILITY SECURITY CLEARANCE CERTIFICATE – "NATO SECRET"

PRODUCT PORTFOLIO

► MILITARY AIR TRAFFIC CONTROL
SYSTEMS

► AIR / AIR DEFENCE COMMAND
AND CONTROL (C2) SYSTEMS

► GROUND FORCES COMMAND
AND CONTROL (C2) SYSTEMS

► COLLABORATION SYSTEMS

► AGS GROUND TARGETS MONITORING

Produced by:

ICZ | ALES   MEMBER OF ICZ GROUP

ICZ | DelINFO   MEMBER OF ICZ GROUP

ICZ

Military air traffic control systems ATM/ATC

PRODUCT CHARACTERISTICS

▶ Open, modular and scalable architecture

▶ High precision, reliability and availability

▶ User-oriented and customized human machine interface (HMI)

▶ Full compliance with international / national standards and regulations

ALES provides a comprehensive military ATM/CNS solution including a complete and highly accurate processing of the most surveillance sensor data, production of automated, user friendly and fully distributed radar air picture as well as neatly prepared and integrated flight safety and planning tools and aids.

LETVIS system is equipped with unique multi-sensor data processing and distribution modules able to receive, process, filter, validate, fusion and distribute radar data from both EUROCONTROL and ex-soviet radars information exchange.

LETVIS ATC/ATM system is designated for radar and procedural control of air traffic on all types of ATC centres (ACC, APP, TWR, AMC and ARO), for monitoring and evaluation of airborne objects movement and to perform special functions according to place and mode of its specific implementation.

Military ANS users benefit from the unique performance of the LETVIS system that results from the fact that its architecture and performance are designed primarily for Air Force purposes, with the ability to track fast manoeuvering and to ensure the highest accuracy, efficiency and reliability demanded by defence systems. The LETVIS processes any radar and surveillance source, supports civil-military coordination at all levels and provide numerous enhancements in form of add-on functionality such as IP based radar networking, training, mobile towers integration, SAR support, etc.

[OFFERED SOLUTIONS]

Throughout more than twenty years of history, ALES has developed and supplied best-in-class systems and solutions which fully meet the needs of military air traffic controllers:

▶ LETVIS MIL ATM/ATC System (LETVIS MIL ATM)

▶ LETVIS ATC Simulator (LETVIS SIM)

▶ Civil / Military ACC Coordination and Integration

▶ ATC and technical furniture

▶ LETVIS ATC/ATM modules and standalone solutions

    ▶ LETVIS Air Situation Picture Display (LETVIS RDD)

    ▶ LETVIS Data Operator Display (LETVIS FDD)

    ▶ LETVIS Universal Radar Data Interface (LETVIS URDI)

    ▶ LETVIS Multisensor Tracker (LETVIS MST)

    ▶ LETVIS Flight Data Processing (LETVIS FDP)

    ▶ LETVIS Data/Voice Recording (LETVIS REP) & Analysis (LETVIS ADP)

    ▶ LETVIS Precision Approach Radar Display (LETVIS PAR)

    ▶ LEVIS Search and Rescue System (LETVIS SAR)

    ▶ LETVIS Surveillance Data Sources Performance Analysis System (LETVIS SDAA)

[COMPLEMENTARY SOLUTIONS]

▶ LETVIS Integrated Air Command and Control System (LETVIS IACCS)

▶ LETVIS Automated Command and Control Firing System (LETVIS ACCFS)

▶ Air Operations Command and Control Posts

REFERENCES

▶ CZECH REPUBLIC
- Military ATM system (Air Force - MACC, MAPP and MTWR at all airbases)
- Civil ATC system (Civil ATS Vodochody)
- ATC simulators (Civil ATS Vodochody, Air Force, Military University)
- SAR centre (Military)
- Surveillance data accuracy analysis systems (Air Force)

▶ SLOVAK REPUBLIC
- Military ATM system (Air Force - MACC, MAPP and MTWR at all airbases)
- Civil ATC systems (Civil ATS - ACC Bratislava, APP int'l airports Košice, Poprad and Sliač)
- ATC simulators (Civil ATS, Air Force, Military University)
- SAR centre (Civil ATS, Military)
- Surveillance data accuracy analysis systems (Civil ATS, Air Force)

▶ UKRAINE
- ATC simulator in the Flight Academy (Kirovograd)
- National ASM/AMC system (Kyiv-Boryspil)

▶ YEMEN
- Civil ATC system ACC and ATC Simulator (Sana'a)

▶ NEPAL
- Civil ATC system ACC, APP, TWR Main, Backup, Civil ATC simulator (Kathmandu)

▶ AZERBAIJAN
- Civil ATC system TWR (Qabala)

▶ BANGLADESH
- Civil ATC system APP, TWR (Chittagong)

▶ GEORGIA
- Civil ATC system TWR (Kutaisi)
- Civil ATC ACC, APP Contingency System (Tbilisi)
- Civil ATC simulator (Tbilisi)

▶ UNITED ARAB EMIRATES
- Civil ATC system TWR, APP (Fujairah)
- Civil ATC simulator (Fujairah)

ICZ

Air / Air Defence Command And Control Systems

PRODUCT CHARACTERISTICS

▸ Air operation planning, coordination, execution and support

▸ Full compliance with NATO standards and regulations as well as with former Warsaw Pact

▸ Area control centres (ACC) integration

▸ Simulation and training capabilities

Air / air defence command and control systems providing all air operations support within the area of interest: allied tasks, nation-wide security, local objects-related air defence. Our goal is to assist air forces in protection of national airspace.

ICZ AD is playing a leading role in the design and deployment of command and control solutions for the defense sector. Czech and Slovak airspaces are fully and long-time controlled by ALES national systems in nation-wide configuration, providing NATINADS interoperability.

ALES provides integrated Air Force Command and Control System based on LETVIS technology.

Typical functionality depends on the national and allied standards. These include airspace situation recognition, submission of the measures, commands preparation and dissemination, initial weapon systems control, evaluation of the air target impact results, simulation and training.

Basic functions include recognised air picture (RAP) creation and distribution thanks to multi-sensor tracking and data fusion of local and remote tracks. Target allocation, monitoring of combat activities and graphical presentation of data is available for command and decision making support. System enables weapon systems control with automated ground-controlled interception. Mission planning support includes planning, evaluation and scenario management of training activities. Basic functions for communication include radar networking, remote radar monitoring and control, implementation of entire Air Force topology, networking of mobile command posts and weapon systems. System enables interoperability with external adjacent and superior systems and communication with special and non-standard interfaces for surveillance sensors, control systems and weapon systems.

[OFFERED SOLUTIONS]

Throughout more than twenty years of history, ALES has developed and supplied best-in-class systems and solution for the support of the command and control of air operations:

▶ LETVIS Integrated air Command and Control System (LETVIS IACCS)

▶ LETVIS Automated Command and Control Firing System (LETVIS ACCFS)

▶ Interoperability Of National Air Defence Command And Control Systems (LLAPI)

▶ ATC and Technical Furniture

[COMPLEMENTARY SOLUTIONS]

▶ LETVIS MIL ATM/ATC System (LETVIS MIL ATM)

▶ LETVIS ATC Simulator (LETVIS SIM)

▶ Civil / Military ACC Coordination and Integration

REFERENCES

▶ CZECH REPUBLIC
  • Tactical Planning system and military part of AMC centre (Air Force)
  • Air Command and Control system (nation-wide)
  • Integration of surveillance and air defence radars into ATC and C2 systems (Air Force)
  • Integration of national Air C2 system into NATINADS (Air Force)
  • MET & AIS information system (Air Force, Police Squadron)

▶ SLOVAK REPUBLIC
  • Tactical Planning system and military part of AMC centre (Air Force)
  • Air Command and Control system (nation-wide site)
  • Mobile Command and Control systems (Air Force)
  • Integration of surveillance and air defence radars into ATC and C2 systems (Civil ATS, Air Force)
  • NATO interoperability applications (Air Force)
  • Radar systems refurbishment (Air Force)
  • Radar upgrades - PSR and PAR (Air Force)

▶ Ukraine
  • Military part of AMC system

▶ Hungary
  • Military ATM system (Air Force – MAPP, MTWR at Kecskemét airbase)
  • ATC simulator (ZMNE Air Force Academy Szolnok, Airport Kecskemét)

▶ Bangladesh
  • Military ATC system (Dhaka airbase)

▶ CONSOLES:
  • Slovak Republic, Hungary, Georgia, Germany, Azerbaijan, Ukraine, Russia, Yemen, Portugal

ICZ

Ground Force Command and Control Information System - ICZ*DELINFOS®

ICZ DELINFOS

IS GFCC is designed for automation of processes related to planning, control, and management of Ground Force combat activities at the operational and tactical level of command linked to the strategic level.

PRODUCT CHARACTERISTICS

▸ Open, modular and scalable architecture
▸ High reliability and availability
▸ Customized human machine interface
▸ Full compliance with alliance / national standards

IS GFCC provides the users with tools to support collection, processing, visualization and distribution of tactical information for the benefit of all levels of command and control. Implementation of the Multilateral Interoperability Programme (MIP) specifications is one of the ways to ensure the required capabilities of command and control national systems interoperability. The MIP is focused on the interoperability of the systems which mainly support the view of Ground Force during allied operations, but which also process information from Air Force, the Navy and other communities of interest.

[OTHER SOLUTIONS]

▸ **STAFF COMMAND AND CONTROL INFORMATION SYSTEM (ICZ*DELINFOS-STAFF)**

It is a basic tool for automation of work of Ground Forces users at both operational and tactical level (e.g. a brigade, a battalion, a company taskforce). Its functions support planning and control of activities, the creation of a common operational situational picture, creation and exchange of documents, signals and messages, work with maps and fulfilling of tactical tasks and calculations. It enables information sharing between all selected users at the command post, creation of interest communities and information exchange in an interoperable environment of a multinational operation (ADatP-3, NFFI, MIP 3.1, NVG, ADEM).

▸ **BATTLE MANAGEMENT VEHICULAR INFORMATION SYSTEM (ICZ*DELINFOS-BMVIS)**

It is a basic tool for automation of work of Ground users at lower tactical level (e.g. a company, a platoon, a team, a platform). Its functions support planning

and control of activities, the creation of a common operational situational picture, creation and exchange of documents, signals and messages, work with maps and fulfilling of tactical tasks and calculations.

▸ SITUATIONAL AWARENESS AND MESSAGE TERMINAL (ICZ*DELINFOS-SAMET)

It is designed to support battle management at the level of a platoon/team/platform. Primarily, it is designed to be controlled via a touchscreen display, but it can be easily controlled using a mouse or a keyboard, too. The vehicle can involve in data communication with both superordinate and subordinate units. With these units, it is able to exchange textual as well as situational messages, to send pre-defined signals and to receive and send a layer of situational-tactical drawing in the XML format via a radio connection.

▸ BATTLE DIGITAL ASSISTANT (ICZ*DELINFOS-BADIAN)

It is designed to ensure information and geographical support for a "dismounted soldier". Such a soldier will be in a data communication with their superordinate as well as with the members of their unit. The soldier will be able to exchange textual and situational messages with them, as well as send pre-defined signals and receive and send the layer of the tactical drawing.

▸ THE INTERACTIVE VIRTUAL SIMULATION (VIRTUAL BATTLESPACE 3 - VBS3)

An interactive tactical virtual simulator based on the game engine "Real Virtuality 2, RV2" of the game ARMA 3 developed by the company Bohemia Interactive Simulations

[COMPLEMENTARY SOLUTIONS]

▸ Ground Forces Command and Control Systems

▸ Integration of sensors and ensuring interoperability

▸ Integration with existing tactical radio networks

REFERENCES

▸ CZECH REPUBLIC
- Staff information system of the Czech Army, consortium of the companies EDS, DIGITAL, APP, PVT, DELINFO
- Study of protection and safety of information in the IS of the resort of the Ministry of Justice of the Czech Republic
- Operational-tactical Ground Forces command and control system of the Czech Army, together with VTÚE Praha
- Integrated system of operational- tactical communication management and control, together with TTC Telekomunikace and VTÚE Prague
- Projects of defence R&D for the MOD CZ
- International military exercise CWIX, Steadfast Cobalt, Allied Spirit etc.

▸ SLOVAK REPUBLIC
- Complex analysis of the IS of the mechanized brigade and the mechanized battalion of the OS SR
- Information system C2 SYS - STAFF of the mechanized brigade and the mechanized battalion of the OS SR
- Information system C2 SYS - MIS of the mechanized company and the mechanized platoon
- Information system RCHB SR
- Information system of the battalion of the RCHBO
- Implementation of APV MIP for C2 SYS

ICZ

Supplies for NATO Projects

participation in Development and Implementation within the Programme for AGS Ground Targets Monitoring

SOLUTION CHARACTERISTICS

▶ Exceptionally elaborated solution at the national level

▶ Factual orientation on areas of monitoring and management of important healthcare fields and the operation of hygienic services in the Czech Republic

▶ Selected registers are the cornerstones of Czech electronic healthcare

▶ Technical orientation on maximum safety and availability.

▶ Integration with the information system of basic registers

▶ Implemented in the Common Technology Platform environment

▶ A brand new and modern user experience

A part of the programme for development and implementation of AGS ground target monitoring concluded between the NATO AGS Management Agency (NAGSMA) and the companies of Northrop Grumman ISS International Inc. is also the field of the mobile ground segment.

Within the European companies, this field is dealt with under the leadership of the company EADS Deutschland GmbH, currently Airbus Group SE. For the Czech Republic, ICZ a.s. has become its exclusive contractor within the field of software and information safety. Within the scope of the AGS project, ICZ a.s. provides a sub-system for management and administration of systems and sub-systems used for training of operators. It also participates in the integration and support of the project.

Only the companies which have met all the strict qualification criteria of the demanding tender may participate in the project.

The reconnaissance system AGS is the high priority for NATO. Its key Task is to maintain continuous reconnaissance of large ground areas using drones at high above sea level. Thus it can take radar pictures continuously or monitor and recognize any targets in the monitored areas, both stationary and moving, including determination of their coordinates. The obtained data are transmitted into the ground sector in real time to be analyzed in detail and are further distributed within the interoperable systems of NATO as well as within the national C4ISR systems.

The Czech Republic's participation – and consequently the participation of the company ICZ a.s. – in the AGS project means a high level of recognition which helps to strengthen Czech Republic's position in NATO, strengthens its credibility and confirms its reliability. For future, it is also possible that the AGS system will be used for civil purposes, for example, to support the integrated rescue system of the Czech Republic when dealing with impacts of large natural disasters or accidents of industrial character.

Solutions for Collaboration

Unified Communications & Collaboration solution brings a new dimension of collaboration, communication, and information sharing. Transmission of short messages and files, video conferences, content sharing, interactive collaboration, that all means fast, safe and easy communication of high quality.

UC & Collaboration meets the requirements on the modern functioning of the military and provides several complementary communication channels. Besides traditional voice calls, it includes video calls, video conferences and transmissions of short messages. Thus it allows for selection of the appropriate way of communication for the respective situation. As a result, it enables more efficient sharing of information and saves time significantly. Fast messages are ideal means of immediate cooperation between individual staffs.

The military can communicate from any place regardless of the distance or type of connection without the necessity to use VPN. The mobility is ensured by its capability to establish secured connection – all communication is protected by means of encoding based on PKI infrastructure using certificates. Thus both civil and military participants can attend video conferences, send fast messages or share files from wherever it is necessary.

The architecture of the entire solution allows for the implementation of only those parts which are really essential as well as for an easy extension with further services and abilities, if necessary. Robustness and redundancy of individual services can be further increased by means of implementation of backup servers.

The services can also be used in heavy-duty devices, since they are not damaged by frequent use in an adverse environment. In the case of a software client, most of the services can be applied to all mobile devices using Android or iOS operational system.

SOLUTION CHARACTERISTICS

▸ Easy information sharing
▸ Secured communication
▸ Mobility without VPN
▸ Multiple communication channels
▸ Increased operational capacity
▸ Time saving
▸ Robust solution
▸ Easy extensibility with new services

ICZ

In order to ensure the precision of our services, we must collaborate with partners who are leaders in their field and are a guarantee of quality in the provision of services. It is therefore necessary to be maximally informed about contemporary trends, needs and requirements for top-quality services.

KEY PARTNERSHIPS, CERTIFICATES AND AWARDS

[KEY PARTNERSHIPS]

The following organisations belong to the partners with whom we regularly cooperate and with whom we have built strong relationships:

We continually endeavour to maintain quality standards and further specific, specialised and binding norms.
Proof of our professionalism are the certificates and awards received by the ICZ group in the course of our activities.

[CERTIFICATES]

- ČOS 051622 (AQAP 2110)
- NBÚ CR „Confidential", „Top Secret"
- Facility Security Clearance Certificate „NATO Confidential", „NATO Secret"
- NBÚ SR „Secret"

[AWARDS]

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