



REPUBLIC OF SLOVENIA
MINISTRY OF DEFENCE

A photograph of Slovenian military equipment in a field. In the background, a military vehicle with the number '10345' is visible. In the foreground, a soldier in camouflage gear is lying prone, aiming a machine gun. The image is overlaid with a large, dark blue diagonal graphic element.

CAPABILITIES OF SLOVENIAN DEFENCE COMPANIES AND INSTITUTIONS

CAPABILITIES OF SLOVENIAN DEFENCE COMPANIES AND INSTITUTIONS

After more than a decade of Slovenian membership in EU and NATO, Ministry of Defence of Republic of Slovenia assembled general data of Slovenian companies and institutions, which built valuable knowledge, technology and products for Defence, Security and Dual Use. The data can be used as first information about capabilities of Slovenian enterprises and institutions at the areas specified.

LEGEND:

Employees

- * (1-5 employees)
- ** (5-25 employees)
- *** (25-100 employees)
- **** (more than 100 employees)

Turnover

- * (to 1 mil EUR)
- ** (1-2 mil EUR)
- *** (more than 2 mil EUR)



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Company Arex d.o.o. Šentjernej has been developing and manufacturing defense related products for almost 20 years.

PRODUCTS



Metal Links

Arex is producer of metal links in various types: Link M27, Link M13, Link M9 and Link MK15.



Flexible Chute

Arex also offers Flexible Chute for ammunition in calibers 7.62 x 51 and 12.7 x 99. Length of the chute is according to customer's requirement.

Linking machines

Arex is producer of Manual Linking Devices for calibers 7.62 x 91 mm and 5.56 x 45 mm and Automatic Linking Lines for calibers 12.7 x 99 mm, 7.62 x 91 mm and 5.56 x 45 mm. other special custom tailor machine are available upon request.

Plastic Blank Ammunition

Arex is producer of plastic blank ammunition in calibers 5.56 x 45 mm, 7.62 x 51 mm, 7.62 x 39 mm, 9 x 19 mm, 12.7 x 99 mm and .38 Special.



Dummy / Drill Cartridges

Drill cartridges are made of plastic PA with base made from brass or aluminum. Available calibers are: 9 x 19, .45 APC, 5.56 x 45, 4.6 x 30, 7.62 x 39, 7.62 x 51, 12.7 x 99, .12 Shotshell and other calibers upon Customers request.



Non-Lethal Rubber Bullet Ammunition

Non-Lethal Ammunition is used for training, target shooting and riot control. Arex offers Non-Lethal ammunition in following calibers : 9 x 19 mm, 5.56 x 45 mm, 7.62 x 39 mm.

Cold forged Barrels

Barrels in various calibers available (9 x 19 mm, .40 SW, .308 Win, 7.62 x 39 mm, .30-06 Spr., .300 Win, 5.56 x 45 mm.

Pistol

Arex produce pistol Rex Zero 1 in caliber 9 x 19 mm and Rex 765 (caliber 7.65 Browning)



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NATO Code
NCAGE 1064Q

Employees

Turnover

The main group of activities
Weapons & Ammunition

Other activities
Educational, Simulation and Training

Research field
/

The company Arko d.o.o. has been operating in the Slovenian and international market for 25 years, covering the areas of sale, engineering, superstructures and servicing of goods and other vehicles.

Vehicles & Accessories: Our primary activity is equipping vehicles with superstructures, such as loader cranes, hooklifts, truck-mounted forklifts, tail lifts, winches, purpose-built trailers and components for special vehicles. We offer a complete service, ranging from vehicle purchase to engineering and superstructures as well as subsequent repairs. In the vehicle militarisation process, we transform a new or used civil vehicle into a military vehicle. If required, we also equip vehicles, making them usable for both military and civil purposes (rescue, logistics, disaster relief, etc.).

We are the official representative of the company **HIAB**, which, as a part of their **Cargotec UK Ltd (GBO)** military programme, equips vehicles of many armies as well as rescue and civil services around the world with Hiab loader cranes, **Multilift** hooklifts, **Moffett** truck-mounted forklifts, and **Zepro** tail lifts. We are also the official representative of the company Meiller, which also equips military trucks with hooklifts, hydraulics, tandem trailers and semi-trailers. We make various superstructures and special trailers for long goods, various aggregates, cable drums, etc. Furthermore, we are also official representatives of the trademarks **Sepson** and **Rotzler**, which equip military and rescue vehicles with winches throughout the world.

Engineering, Services, Training: We provide after-sales servicing of vehicles and components. We organize any necessary education and training for operating superstructures. Furthermore, we also supply spare parts for the above-mentioned companies and other companies as well.

R&D: We are also engaged in the engineering and making of special superstructures, which require extra engineering knowledge. We turn the idea of a client who has specific requirements regarding vehicle equipment into reality.

Successful projects: In 25 years we have equipped over 500 vehicles with loader cranes and other superstructures. In cooperation with Iveco, we have equipped military vehicles. A large part of our production is represented by superstructures for our rescue (fire and civil) vehicles. We are a supplier for many Slovenian public and private companies in the area of logistics, infrastructure, civil engineering, public utilities, forestry, the energy sector, rescue, etc.



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NATO Code
/

Employees
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Turnover

The main group of activities
Vehicles & Accessories

Other activities
Engineering, Services, Training

Research field
R & D: special superstructures

The company BIJOL main activities are construction, production and assembling upgrades on the vehicles. We do upgrades for multiple purposes and on different kind of vehicles.

With our extended knowledge of engineering, we work on difficult projects that requires unique solutions.

Our research and development focus is now on multipurpose vehicles, where we are trying to find innovative solutions for using one vehicle for different kind of activities.

We have done many projects for Slovenian Army.

The largest project was assembling 48 container-handling systems Palfinger Palift on the Mercedes Benz trucks. This project was followed by upgrading knuckle-boom cranes Palfinger with baskets for decontamination of vehicles and assembling radar systems for which basics of hydraulic lifting and descending was constructed and manufactured by us. Beside military, we have done various different projects for civil protection and Fire fighters.



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NATO Code
NCAGE 1160Q

Employees
**

Turnover

The main group of activities
Engineering, Services, Training

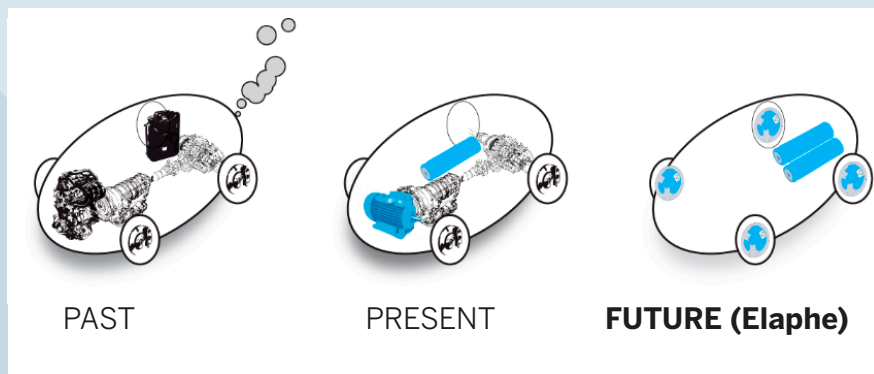
Other activities
R&D, Various products & Services

Research field
Multifunctional vehicles

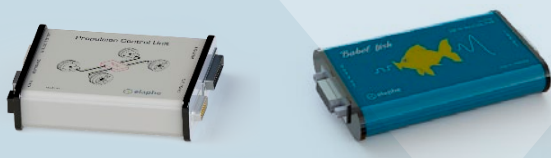


Elaphe Propulsion Technologies is focused on in-wheel motors for electric propulsion systems

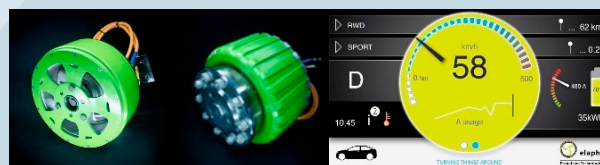
Elaphe has long traditions and roots of development since the end of 1980s. The main achievement of Elaphe is a family of in-wheel motors with high specific torque of above 30 Nm/kg for the use in any ground vehicle. Beside the motors, Elaphe offers the complete solution for powertrain and vehicle control and human machine interface.



Visualization of in-wheel drive propulsion architecture



Propulsion control unit



700 Nm and 1100 Nm motor and HMI



Some of the Elaphe demo and test vehicles

Some of the other references:

- 4 patents and several additional innovations
- Elaphe is member of four large European research projects and is leading two work packages
- All development and prototyping capacity in-house for optimum service to the customer



elaphe

Propulsion Technologies

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NATO Code
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Employees
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Turnover
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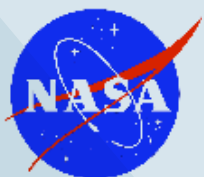
The main group of activities
Vehicles, Vessels, Aircrafts &
Accessories

Other activities
R & D, Component Suppliers, IKT, Software
Autonomous and Robotic Systems

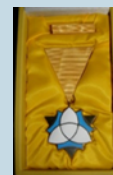
Research field
Electric propulsions

Pipistrel d.o.o. Ajdovščina - Designer and producer of advanced light aircraft and special mission aircraft.

Pipistrel has been in operation for 27 years. It was established in 1989 as the first private aircraft producer in the former Yugoslavia. Pipistrel's primary activity is design and production of different types of aircraft – single seat, double seat and 4-seat; motorplanes, gliders and electric-powered aircraft. Pipistrel is EASA Design Organization Approval and Production Approval certificate holder. The distributor network in 60 countries on all continents offers worldwide customer support and service. The aircraft currently fly in 85 countries. 1.500 aircraft have been produced. The capacity of factories in Slovenia and Italy is one aircraft per day. Pipistrel is the market leader of efficient aircraft design and innovative electric and hybrid aircraft propulsions.



The company won the “**European Business Award**” for Innovation in November 2010, being chosen as the most innovative company in the European Union among 15,000 competitors. **NASA** awarded Pipistrel aircraft “the best aircraft in the world” title three times. Because of many important achievements, awards and competition victories, the president of the Republic of Slovenia, dr. Danilo Türk, decorated the Pipistrel team in 2011 with the highest civil award in the country: the **Golden Order** for services to the Republic of Slovenia.



Because Pipistrel aircraft burn Mogas instead of Avgas, they are very quiet and with extreme characteristics. They can reach 30.000 feet altitude, have 5.000 km range and can remain in the air for over 40 hours. They have STOL characteristics and low cost operation. Because of all this they are ideal to be modified into special mission platforms for any kind of aerial work and surveillance. Different Government customers from all over the world use Pipistrel platforms as a low-cost high-performance substitute to bigger and costly optionally-piloted or unmanned aircraft. They can be equipped with any type of surveillance sensors and devices.



Pipistrel aircraft are also field-proven best small aircraft for basic pilot training. More than 600 aircraft are used in the harshest conditions all over the world. Pipistrel Trainer was selected by the Indian Air Force, Indian Navy and Indian National Cadets Academy as the basic pilot trainer. 200 aircraft will be delivered in the years 2016 and 2017.



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NATO Code
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Employees

Turnover

The main group of activities
Aircrafts & Accesories

Other activities
Engineering, Services, Training,
Education, R&D, Component Suppliers

Research field
Engineering solutions and projects in
- aerodynamics efficiency
- self-sustainable green energy propulsion
- high performance aircraft design

VILPO is private company, founded in 1991. The company is primarily a development-oriented. Some project we developed for our own production, some for other producer. In attachment we present this projects.

In years 1991 to 1995 we developed the lifting equipment, tail lifts, dock levellers, special hydraulic systems and some automation of production lines where our lifting equipment was included.

Also biggest special lifts for big loads in the industrie was developed and produced by us for Slovenian companies.

Tail lifts, lifts, dock levellers, scissor lifts and other hydraulic equioment was mostly produced for Slovenian-Jugoslawien market. There are over 1.200 such products produced by VILPO till now.

We can preise ourselves for the exceptional quality of our products, that were not manufactured according to the principle cheapest, but to meet customers wishes for quality and endurance.

In 1989 first forestry tractor, skidder with hydrostatic drive was developed by Roman Pogačar, now in company VILPO for company LESNA from Slovenj Gradec. 1995 VILPO developed first forestry tractor WOODY, special skidder with computer stering hydraulic drive system. That was first such system on the world by this kind of the machines.

Since than we delivered over 150 forestra skidders **WOODY** mostly to Switzerland, Austria, Germany, Slowenia, France and Italy. This are very effective profesional machines for logging.

In 2001 we developed first demining machine **SAMSON** 160 for Croatia market. First prototype is still working very effectively and with low operation costs. Since then we developed further from first SAMSON 160 to SAMSON 300 in 2004 and SAMSON 420 in 2012. Our machines are special designed for demining with special charasterictics for different terrains and demands, safety and big efficiency by low operating costs.

Our machines are employed in Croatia, Bosnia, Sudan and Angola.

As said, we are mostly development-oriented. We are developing, building the prototypes and organizing the service for our products. In our company we have due this only 12 employes. Production is mostly organized by cooperator. On this way we can fulfil also big volume of orders. By cooperation partner we employ occasionally, depending on the scope of the contract 30 to 50 people.

Some projects we realized also through foreign companies, our partners. Some we have also in UAE.



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NATO Code
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Employees
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Turnover
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The main group of activities
Logging skidders, Machines for Demining,
Hydraulic lifting devices, Parking systems,
Loading platforms for trucks

Other activities
Specific performance vehicles and
hydraulic appliances on request

Research field
Computer-controlled hydrostatic drives
for special vehicles

Trixy Aviation Ltd. develops and manufactures aircrafts. The company is well known for high quality, unique designs and innovation of aviation products.

Trixy Aviation Ltd. manufactures gyrocopters that are intended for personal recreational flying as well as aircrafts for professional use in several fields. In 2017 Trixy Aviation Ltd. created an efficient and affordable **Manned, Airborne, Real-time, Surveillance and Observation system. MARSO** is a versatile surveillance system for a large class of missions such as police air support, border control, coast guarding, search and rescue, wide area fire observation, drug war, traffic observation, pipe and power line surveillance, relay station etc. and it is operated very efficiently all-weather, day and night observation from a relocatable/mobile base with almost no infrastructure requirements.

THE PLATFORM TRIXYEYE

- TrixyEye platform is a certified two-seat gyrocopter developed for professional use
- Flying capabilities in stormy winds of 55 knots (100 km/h)
- Operation temperature range from -20° to +50° C
- Night flying capability with modern instruments and IR screen
- Take-off roll less than 75 meters (250 ft.) unpaved
- Landing roll less than 30 meters (100 ft.) unpaved
- Endurance of up to 6 hours with anti-explosion auxiliary fuel tank
- Slow flying capability for observation at 22 knots (40 km/h)

THE GIMBAL

- Four-axis-gyro-stabilized = Excellent vibration free images
- Full motion = 360° continuous horizontal rotation and 120° vertical tilt
- Equipped = HD video 30x zoom, IR sensor, Laser range finder, Object tracking
- Multi-control input = Remote operation via link, back seat operator or pilot controls

THE DRONE

- Operated by drone-pilot from rear seat
- Gyrocopter circles in safe distance
- Visual contact (up to 2 km) allows legal operation in most civil air space
- Drone image recording and transmission to ground station

THE RADAR

- Wide-swath = Large area coverage (40 km swath-width)
- Image quality = Constant resolution over swath, Large dynamic range
- Detecting the invisible = Day, night, behind clouds and through fog detection
- Modes = Ship and oil spill detection

THE UP-AND DOWNLINK

- Long range = 200 km line of sight communication for radar, gimbal, drone
- Remote control = Operating the airborne gimbal and the radar from the ground station over 200 km

THE GROUND STATION

- Ground station = Featuring real-time monitors, recorders and remote controls
- Exploitation = Live video exploitation

and off-line high quality radar processing

- Annotation and Situational awareness management
- Flexible = Fixed base or mobile/relocatable



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NATO Code
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Employees
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Turnover
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The main group of activities
Aircrafts & Accessories

Other activities
Engineering, Services, Training, Education, R & D

Research field
Observation and surveillance systems



Based on nearly 30 years of experiences achieved in performing commercial activities related to modernization/upgrading programs of defense equipment and other imports of goods and services requested by the Slovenian Ministry of Defence and Slovenian Ministry of Interior (Police) or any other Governmental authorities from the field of National Security, TRIMPEKS is the most reliable partner for implementing Governmental agreements and procurement contracts.

TRIMPEKS IMPORTS:

- Helicopters from Western manufacturers including parts and upgraded versions of these
- Unmanned air vehicles
- Transport aircraft
- Communication networks, RNV and related equipment
- Special tools, kits & equipment for maintenance
- Greases and lubricants
- Parachutes & equipment
- Additional equipment: nets & straps for cargo loading
- Cargo hook systems & rescue hoists
- Airfield lightning equipment & airfield applications
- JTAC simulators

SERVICES PROVIDED:

- Maintenance of helicopters - regular inspections, OH, HMLs and all other repairs, calibration, troubleshooting
- Maintenance of Pilatus aircrafts
- Field of expertise: maintenance of Pratt & Whitney and Rolls Royce engines and associated components & equipment
- Organization of simulator trainings for pilots and technicians

COMMERCIAL ACTIVITIES AND SERVICES PROVIDED:

- Market research for finding foreign suppliers;
- Organization and performance of all the activities related to the procurement procedures according to the current Slovenian, Croatian and other EU legislation;
- Negotiation and conclusion of procurement contracts/agreements;
- Performing all financial, commercial, customs activities related to the procurement contracts;
- Obtaining all permissions and other documents according to legislation
- Management of deliveries of the goods and services to the governmental authorities according to the provisions of the contracts;



TRIMPEKS offers commercial assistance for imports at high quality standard with a minimum financial effort.

SUCCESSFULLY CONCLUDED & ONGOING PROJECTS:

- Contract for maintenance of aviation - technical means of the Slovenian army : maintenance and servicing of helicopters & maintenance of radionavigation equipment
- Contract for supply of goods and the provision of services in the maintenance of the Slovenian police helicopter fleet
- Contract for supply of oils, fats, lubricants and technical fluids
- Contract for supply of parachutes & equipment
- Contract for engine & associated components maintenance services of Croatian military fleet



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NATO Code
NCAGE 1338Q

Employees
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Turnover
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The main group of activities
Aircrafts & Accessories

Other activities
Component supplier, Simulation and training

Membership & Licenses
Member of Slovenian defence cluster - GOIS
Registered supplier of NSPA
Permission to trade weapons

Alpina is a Slovene company with almost 70 years of tradition in development, manufacture and marketing of footwear. The brand Alpina is a guarantee for high quality manufacture, innovative solutions and user friendly design.

Military footwear

The wealth of experience in footwear production and development has been applied also to the manufacturing of military boots. Alpina has been supplying the Slovene armed forces with military boots from very beginning and has been keeping up with the requirements and trends of a modern military. Systematic testing and high-tech development have enabled Alpina to develop high quality military footwear that meets the strict requirements and trials that a modern military force is subjected to.

Technology on a mission

Work in army offers challenges along with harsh conditions and even accidents - untamed nature and hazardous areas are all hostile environments for a gentle, unprotected human foot. Under such conditions each day poses countless conflicts between the vulnerable nature of a foot and the demanding forces surrounding it. ALPINA develops shoes that intervene in these conflicts as an ever-present, flexible, and caring force with one mission to accomplish: to help complete the mission while keeping feet **safe and satisfied**.

Carefully selected materials, anatomically designed footbed, firm rubber sole and protective toe cap insure **extreme rigidity and comfort at the same time**.



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NATO Code
NCAGE 1124Q

Employees

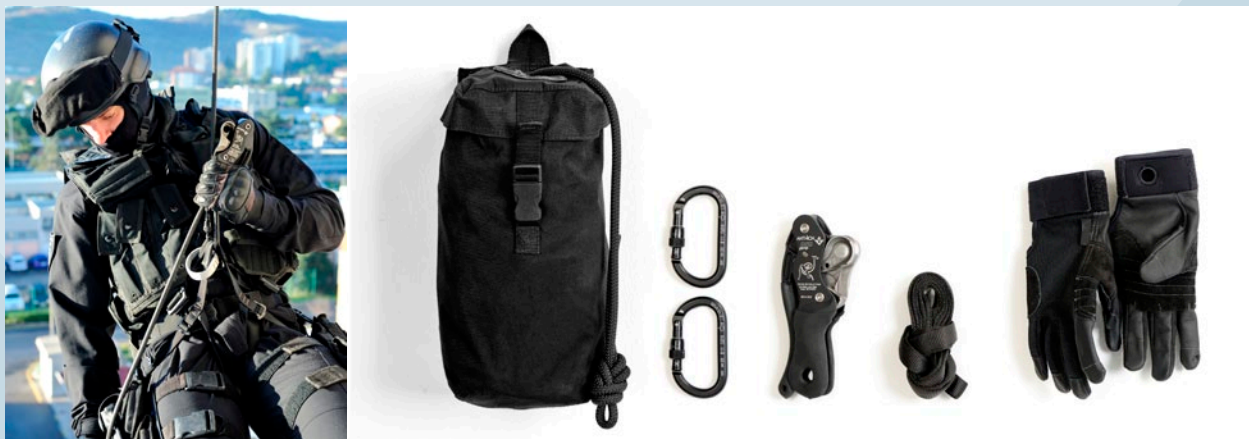
Turnover

The main group of activities
Various Products & Services

Other activities
Education and Training Analytical Services

Research field
Materials research for environmental and energy applications, Chemical Engineering, Biotechnology, Structural and Theoretical Chemistry, Analytical Chemistry

ANTHRON is a company specialized in developing and producing quality rope access and rescue equipment.



The idea for the company sparked in the wake of the 1977 earthquake when the founder Mr Jože Lorbek pondered about efficient rescue systems for safe mass evacuations from high-elevation buildings. The original idea still represents the stance of the company's orientation and rope access and rescue be it at work, sport or combat are at the heart of its strategic orientation.

In collaboration with special forces an intervention-centred **descender DSDpro** was developed and offered along with carefully chosen materials in a kit. It is the only descender on the market that can be fully operated with one hand only. Contrary to most double stop descenders the press-stop function is emphasized making it operationally more intuitive and its gentle yet extremely strong grip on the rope means no creep. These features coupled with a sturdy design, abrasion resistance and a ruberized finish make it virtually indestructible and make stealthy movement possible.

On one hand ANTHRON d.o.o. supplies the global market with its standard products that span the range from descenders, rope clamps to an array of pulleys. On the other hand being small makes the company more flexible in responding to the needs of customers seeking equipment tailored for their specific applications.



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NATO Code
NCAGE 1059Q

Employees
**

Turnover
**

The main group of activities
Personal Equipment

Other activities
Engineering, Services, Training
R&D

Research field
Personal Protective Equipment

The JERIČ NEVENKA s.p. is a family company since 1981.

The main production of various kinds of items for personal equipment, travel and carrying accessories, special equipment for weapons, equipment for carrying medical materials and additives for equipment protection for military need and others

Made with hitec technology and inovation solutions.

The company is qualified for after sale services.

PERSONAL EQUIPMENT



Medical pouch (NSN 6545-42-000-1830)

One of article that was developed in our company. It's made by special request materials, IRR treated coating.



Backpacks

Special designed heavyduty backpack, made by CORDURA® fabric, ITW company elements and YKK company parts.



Gun holsters and belts

Gun holsters and similar articles made on clients request, draft on to the finish product, base material CORDURA® fabric or other materials

We know that the best quality of articles and service is the key for perfect feeling by our clients and users. We develop, produce articles for domestic and international partners and customers including the defence industry, Slovenian Ministry of defence, Post of Slovenia...

Articles can be made as standard or by clients wish.



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NATO Code
NCAGE 1212Q

Employees
*

Turnover
*

The main group of activities
Personal equipment

Other activities
R & D, Various Product & Services

Research field
Personal equipment articles,
Equipment protection

Mebius company is a micro SME with main activity in R&D of core technology for portable and small stationary fuel cells based power systems.

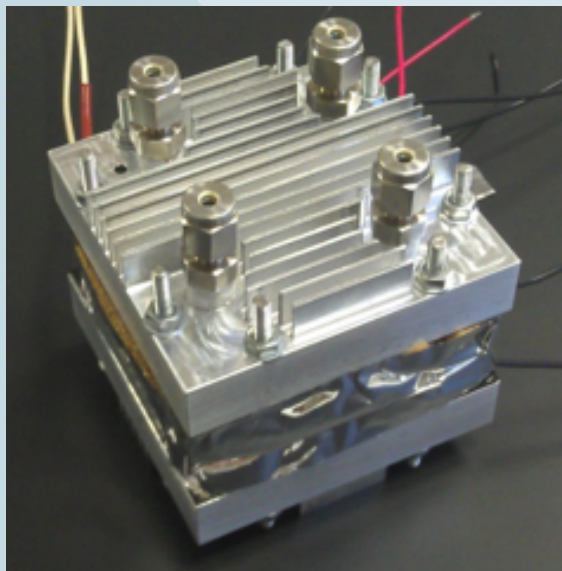
R&D of low-temperature and high-temperature PEM fuel cell stack core components:

- electrocatalysts,
- electrodes,
- ion conducting polymer nanocomposite membranes,
- membrane-electrode assemblies,
- fuel cell stacks,
- fuel cell based power systems.

Other areas of activity: Engineering of fuel cell systems, fuel cell training and education.

Completed projects: HyCore (2009-11) financed by TIA, VTsklad (2010-12) financed by Slovenian MoD, CONOT (2010-13)

References: CO-NOT (SI), Advent (USA/Greece), Danish Power Systems (Denmark),



25 We HT-PEMFC stack



mebius

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www.mebius.si

NATO Code
/

Employees
*

Turnover
*

The main group of activities
Personal Equipment

Other activities
Engineering, Services, Training
Education, R & D

Research field
Manwearable power systems,
Fuel cell core technology,
Fuel cell systems

A.D. Acovia design d.o.o. produces modular tents made of textile material (canvas) on aluminium frame. Our tents are certified for use in all weather conditions. All tents are breathable and are very comfortable for use. Tents can be modified with adding modules needed.

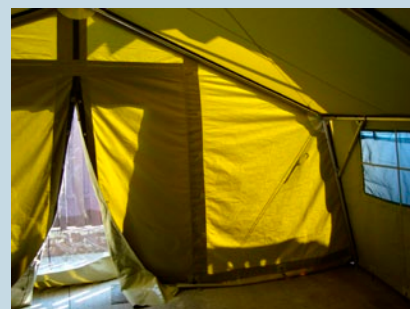
All tents are easy erected and can be stated on hard surfaces (no pins needed).

Range of use:

- Modular tents for refugees,
- Modular tents - sanitation tent, medical tent
- Modular tents - decontamination tent
- Modular tent - bathroom & showers

Tents for Civil Protection of Ljubljana, Medvode and other Slovenian cities, MORS, URSZR

MORS, URSZR, Slovenian Scout Organization (ZTS), Civil protection (major cities in Slovenia)



A.D. Acovia design d.o.o.
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www.acovia-design.com

NATO Code
NCAGE 1172Q

Employees
*

Turnover
*

The main group of activities
Engineering and NBC Equipment, Tools, Services

Other activities
Medical, Pharmaceutical & Humanitarian
Equipment and Products

Research field
/



REPUBLIC OF SLOVENIA
MINISTRY OF DEFENCE

CAPABILITIES OF SLOVENIAN DEFENCE COMPANIES AND INSTITUTIONS

017

Arctur d.o.o. is a R&D oriented SME, specialized in the field of ICT. Established in 1992, Arctur has progressed to become the main Slovenian commercial supplier of HPC (High Performance Computing) services and solutions. In collaboration with AISense d.o.o., their world's first true real-time handheld gamma-ray locator has been developed.

AISense Gamma IV is the world's first true real-time gamma-ray locator. The device is distinct from all other available in the marketplace in that it **is the first handheld instrument that provides the direction towards a gamma-ray source in real time.** The search process is typically sped up by an order of magnitude, resulting in a dramatic shortening of operations and consequently also a significantly lower dose received by the personnel. Beside localization, the device is able to do the radionuclide identification as well as the neutron detection.



Arctur is the leading Slovenian commercial supplier of HPC (High Performance Computing) services and solutions.

Data Centre Services

Hosting of virtual and physical servers

High Performance Computing

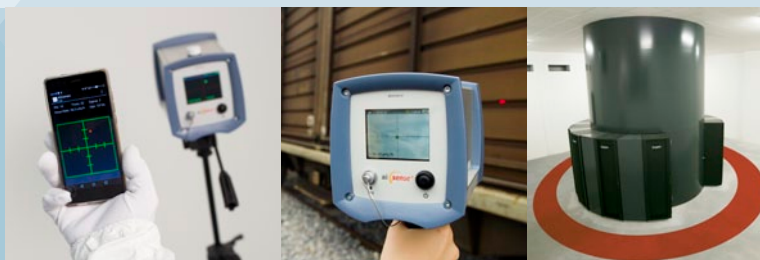
Flexible HPC services and solutions to industrial and scientific users in various technologically intensive industries.

Cloud Computing

Care-free computing environment.

HPC for SMEs

Services tailored to SME end-user



ARCTUR

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www.arctur.si

NATO Code
/

Employees
**

Cash flow

The main group of activities
Engineering and NBC Equipment
Tools
Services

Other activities
ICT, Software

Research field
Radiation Detection, Cyber Security
Cryptography

The company EM.TRONIC works in the field of development, mechanical and electrical engineering, automation, and equipment for CBRN protection.

RADIOLOGICAL, CHEMICAL AND BIOLOGICAL PROTECTION - Company develops systems for detection, analysis and decontamination of radiological, biological and chemical agents.

DETECTION - Risks arising from terrorist or war activities with radiological, chemical or biological agents must be timely detected and localized. For this purpose, we have developed and manufactured:

- Stand alone systems - stationary devices are deployed around the sites we want to protect and monitor. Devices detect the presence of radiological, chemical and biological agents. NSN: 6665-420000599
- Light reconnaissance vehicle with detection device integration, which has been developed and tested in the Slovenian Armed Forces and NATO units, successfully detects the presence of harmful radiological, chemical and biological agents.

Light reconnaissance vehicle NSN: 6665-42-000-0944

Marking system NSN: 9905-42-000-0603

Sampling system NSN: 6665-42-000-0602

ANALYSIS - We have developed and produced mobile and deployable laboratories for analysis of samples from contaminated area.

DECONTAMINATION - After identifying the type and range of contamination, it is necessary to deploy the decontaminating station of adequate size. For Slovenian army, we have developed a high capacity system, which requires a lot of decontaminating equipment and a large number of qualified personnel.



em.tronic
electromechanical systems

EM.TRONIC d.o.o.
Počehova 12
2000 Maribor
Slovenia

www.em-tronic.si

NATO Code
NCAGE 1128Q

Employees
**

Cash flow
**

The main group of activities
Engineering and NBC Equipment, R&D

Other activities
CBRN Detection
CBRN Decontamination
CBRN Analysis

Research field
Reconnaissance vehicles
Mobile / Deployable Laboratories
Stand Alone Systems



Iskra PIO is a progressive European company active in clean and cleaning technology area. Our company has been the expert in the development, project engineering, production, validation and servicing of equipment for 25 years. We are specialized in the producing and integration of laboratory equipment in to the mobile container laboratories, including glove boxes and microbiological safety cabinets.

CBRN mobile laboratory container

The CBRN mobile laboratory container, from Iskra PIO is a fully equipped mobile laboratory used for the detection, analysing and identification of chemical warfare agents, toxic industrial chemicals, radiological and nuclear materials. Mobile laboratory will provide a workspace in which operators can work safely, regardless of environment.



Ultrasonic cleaning equipment

We have good reputations in **ultrasonic cleaning and disinfection of respiratory equipment** (breathing masks,...). That method removes body fluids, soot, toxic substances and debris from hard to reach areas, restoring parts to factory new cleanliness. Another field of application is **ultrasonic gun and rifle cleaning**. Quickly and effortlessly removes dirt, carbon and grease even the most soiled guns. Ultrasonic waves penetrate deep into those hard to reach places for thorough and effortless cleaning.



Microbiological safety cabinets

The microbiological safety cabinets assure a high safety level for operator,

surrounding and product. The cabinets are designed according to SIST EN 12469:2000 standard. The cabinet executed in protective **class II** according to SIST EN 12469:2000, DIN 12980:2005 assure ISO 5 (ISO 14644-1:1999), class A (GMP) clean conditions inside working area. Clean conditions are assured by H14 (EN 1822) HEPA filtration of recirculating and exhaust air. Laminar vertical airflow in working area and air curtain on the front aperture assure controlled clean conditions in the chamber and prevents material leakage from the chamber. Microbiological safety cabinet executed in protective **class III** according to SIST EN 12469:2000 assure safe conditions to operator, environment and product during handling hazardous materials.



Iskra pio d.o.o.
Industrial equipment manufacturer
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SI - 8310 ŠENTJERNEJ

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NATO Code
NCAGE 1152Q

Employees

Turnover

The main group of activities
Engineering and NBC equipment,
Medical and pharmaceutical equipment,
R&D

Other activities
Ultrasonic cleaning machines, CBRN laboratories,
Microbiological safety, cabinets class III, Glove boxes

Research field
Ultrasonic decontamination, Microbial adhesion capacity, Influence of shear and temperature stress

The SkyLabs has a rich legacy of knowledge and experiences developing custom solutions for a broad range of customers in defense, automotive and aerospace market.

SkyLabs principal activity is development of innovative solutions in the field of microelectronics. SkyLabs is incorporating a new concepts and technologies, reducing system complexity and providing fault tolerant design in cost effective solutions.

SkyLabs offers expert knowledge and solutions in the area of embedded electronics design, embeded software development, payload data processing, on-board data management and space/ground segment communication. We are following latest technology trends (miniaturization) while still preserving high avaiability and reliability in versatile conditions. Our electronic subsystems with innovative technologies are built around the proprietary soft-core fault tolerant **PicoSkyFT processor** which enables operation in the most safety critical applications. The processor's core can be fully customizable to suite various FDIR techniques to fulfil mission requirements that make the processor fully suitable for defense, aerospace and automotive applications.

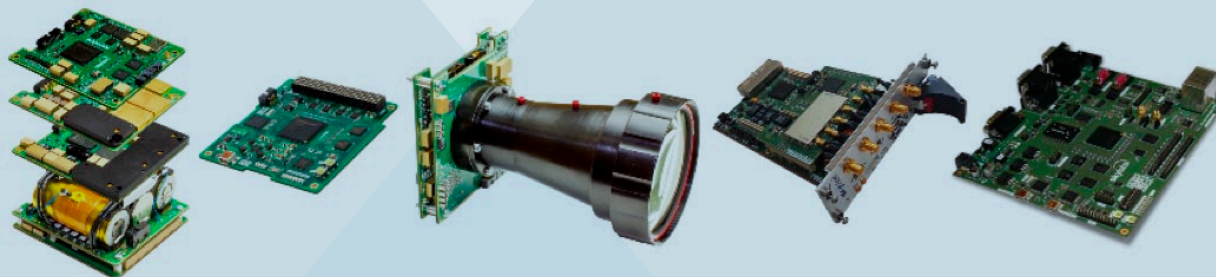
SkyLabs portfolio includes different turnkey solutions covering:

- Small camera systems (MMSI)
- Distributed RTU systems (nanoRTU)
- Telecommunication subsystems (SKY9202)
- Development boards (A3PE3000, M2GL050, SKY9213)
- Miniaturized satellite platforms (nanoSKY I) with complete avionics stack (OBC, TM/TC, S-Band, EPS)

Multispectral SWIR imager (MMSI) presents miniaturized solution for Intelligence, Surveillance, and Reconnaissance (ISR) Military and Security Systems.

Target applications:

- Enhanced situational awareness with lowest light imaging capability
- Imaging through extreme conditions including haze, smoke and dust



REFERENCES: ESA, OHB, Teletel, Syderal, CBK-PAN, UNLP (Arg), IAC



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NATO Code
NCAGE 1235Q

Employees
**

Turnover
*

The main group of activities
Engineering, Services, Optical equipment
and Opto-Electronics

Other activities
Embedded digital and analog electronics
development, Embedded software development,
Radiation hardened by design IP Cores
development and verification

Research field
Data handling and storage, Fault tolerant and
mitigation techniques by design for safety critical
systems, Miniaturization, Digital Signal Processing

With over 4000 installations worldwide, LXNAV is the market leader for glider and ultralight aircraft navigation, collision avoidance, standalone vario and engine management systems.. The main activities are software and hardware development, along with production of LXNAV's extensive range of products.

Main products are vario - navigation systems from the LX 80xx/90xx series.

The most popular product is the LX 9000.



LX 9000 main features:

- Navigation system with competition proven software
- Vario unit for precise lift or descent measurement
- Integrated flight recorder for later analysis
- Integrated Gps module
- Integrated Flarm collision avoidance system
- Fully customizable user profile
- Fully customizable navigation screen layout
- Real-time flight optimization according to gliding competitions
- Plenty of statistics during active task flying
- Integrated Artificial horizon option
- Inertial platform installed in the vario unit
- Anti-collision visual and voice warnings

References:

- Schempp-Hirth Flugzeugbau GmbH
- Alexander Schleicher Segelflugzeugbau
- DG Flugzeugbau
- Jonker Sailplanes
- Alisport srl



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www.lxnav.com

NATO Code
NCAGE 1211Q

Employees
**

Turnover

The main group of activities
R & D

Other activities
Personal equipment, Test equipment, Engineering,
Services, Various Products & Services

Research field
Aerospace instrumentation



Artos Group develops and manufactures advanced water purification systems for providing safe drinking water from fresh as well as from salt water sources.

Artos water purification systems are based on two different principals of filtration: Ultrafiltration and Reverse Osmosis. Our range of products, developed for the needs of defense units in mind, offers practical logistics solutions for providing clean drinking water in emergency situations and meet the strictest STANAG and WHO standards. Our product range includes EWM models suitable for fresh water sources and RO Hybrid, which is suitable for both, fresh as well as for salt water treatment.

Artos water purification systems are based on two different principals of filtration: Ultrafiltration and Reverse Osmosis. Our range of products, developed for the needs of defense units in mind, offers practical logistics solutions for providing clean drinking water in emergency situations and meet the strictest STANAG and WHO standards. Our product range includes EWM models suitable for fresh water sources and RO Hybrid, which is suitable for both, fresh as well as for salt water treatment.

All our products are high performance systems designed to sustain the pressure and requirements of heavy duty field work and capable of providing up to 4000 liters of clean drinking water per hour. All systems are easy to install and integrated with user friendly control unit which is fully automatic and allows even an operator with minimum technical knowledge to operate the machine without any difficulties. Additionally, our advanced systems offer increased mobility features, which helps to simplify the process of obtaining clean drinking water where most needed and more importantly enable a significant improvement in responsiveness to crisis situations.

EWM systems are based on Ultrafiltration membrane process. They have been proven as an outstanding on-field solution for civil protection units in supplying people with safe drinking water in emergency situations. Regardless of the water source location, EWM provides an excellent logistics solution for supplying armed forces with clean drinking water from contaminated fresh water sources, which significantly increases self-sufficiency of the forces as well as their efficiency in combat operations or distant missions.

RO Hybrid 4000 is first of its kind system which combines two membrane processes, ultrafiltration and reverse osmosis. System automatically chooses the optimum purifying program, depending on the water source characteristics. This exceptional feature enables all salt waters like sea and brackish water to be desalinated and safe for drinking.

Depending on specifics of the water problem, we also offer custom solution systems for providing safe and fresh drinking water.



EWM 1500 is an excellent solution in crisis situation



Emergency purification system EWM 4000 mobile



RO Hybrid 4000 can be set up for land or sea operation



ARTOS GROUP

MOVING INNOVATIONS

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www.artos.si

NATO Code
NCAGE 1207Q

Employees

Turnover

The main group of activities
R&D

Other activities
/

Research field
Water purification systems

Bio Planet d.o.o., together with GreenLand Systems Australia, developing and representing solar vacuum collectors.

GreenLand Systems collectors are single-glass full vacuum high performance collectors. They providing the highest thermal performance of any non-concentrated type solar collector available currently. Uniquely, GLS Heat Pipe solar collectors will operate with solar tubes installed at any tilt angle from near horizontal to vertical.

Top product is GreenLand Systems collector **GLX 100-16 (Orange Series)**

Collectors are designed for integration into large to very large commercial and industrial solar fields. Designed to effectively and permanently support Thermal Loads up to 180 degrees C. Extremely high thermal performance of Orange Series Solar Collector guarantees highest thermal output even in most severe climatic conditions and at high operating temperatures of the heated fluid. Performance Tested to ISO and to AS/NZS at IZES Institute in Saarbrücken, Germany.

Typical application Possibilities of GreenLand Systems Orange Series Solar Collectors include:

- Thermal power supply for High Efficiency double-stage solar chillers
- Food Processing / Dairy Industries
- Steam Generation, sanitation processing, pharmaceutical industries
- Water purification
- Commercial Laundries, Hospitality
- and countless other high temperature applications

Largest solar thermal projects in Australia almost without exception use Greenland Systems Solar Collectors, with nominal solar thermal output power of up to 500 kW per installation. Large-scale installations of Greenland Collectors deliver all-seasons heat effectively and reliably in all climatic conditions.

Greenland Systems solar collectors are easy to install, are very durable, they will provide trouble-free service for decades. For reasons of performance and durability, Greenland Collectors use highest quality materials for all collector components, including Tinox Almeco solar absorbers.



The most important references are:

- Ecuha hospital – Victoria
460kW – domestic water & solar cooling
- Cheese factory Australia
140kW – domestic water
- 2 Retirement home – Slovenia
2 x 70kW – domestic water

BIOPLANET

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Rado Stržinar, procurist

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NATO Code
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Employees
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Turnover
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The main group of activities
**Medical, Pharmaceutical & Humanitarian
Equipment and Products**

Other activities
Component Suppliers

Research field
Solar Thermal Products

Development, construction and production of special containers for military, logistics, offshore, nuclear and mobile containerized applications in power and water.

The company Container d.o.o. has been cooperating with the military industry and different military forces for several years. Our containers ensure a higher level of safety for soldiers, enable the installation of complex equipment and safe storage and transport. Especially, attention is turned to solutions ensuring an extreme flexibility and functionality.

Scope of application:

- transport of personnel,
- transport of ammunition and military equipment,
- transport of nuclear materials,
- mobile hospitals,
- mobile rescue units,
- communication centres,
- service-storage centres,
- control units and
- ballistic protected residential and other units.

The company Container d. o. o. developed several types of special military containers.

Residential, storage and transport containers as well as containers for the installation of different equipment have been developed and manufactured.

Complex military systems such as:

- mobile hospitals,
- containers for radar systems,
- ballistic protected containers,
- command containers

have been developed and manufactured in cooperation with recognised partners for armed forces of Slovenia, Switzerland, Netherland and Germany.



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www.container.si

NATO Code
NCAGE 1106Q

Employees
**

Turnover

The main group of activities
Medical, Pharmaceutical & Humanitarian
Equipment and Products

Other activities
Component Suppliers

Research field
-

DUOL Ltd is one of the world's biggest suppliers of fabric structures. The main products are Air Domes, Radomes and Modular Pneumatic Tents (MPT). Applications of DUOL structures are military, civil protection, lifeguard service and other terrain users.



AIR DOMES

Air domes are ideal structures for covering big areas. They are earthquakes resistant, energy autonomy object and can be included in local disaster plans or used as refugee centers. Prefabricated containers can be installed inside (for toilets, dressing rooms, kitchen, office, beds...).



RADOMES

A radome is a structural, weatherproof enclosure that protects antenna surfaces from weather and conceal antenna electronic equipment from public view.



MPT

Distinctive feature of MPT is mutual connectedness and universal applicability due to different possibilities of interior equipment. Because of its mobility, simplicity of use and long lifespan it represents an ideal solution mainly for military use.

ADVANTAGES OF DUOL FABRIC STRUCTURES:

- High resistance to a wide operating temperature range (from -40 to + 60 c)
- Total water proofness
- Fast assembly and disassembly
- Easy relocation
- Low volume when packed
- Small weight considering volume and stability
- Modular flexibility
- Easy cleaning and simple maintenance
- Long life expectancy



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www.duol.eu

NATO Code
NCAGE 1079Q

Employees
**

Turnover

The main group of activities
Air domes
Radomes
Modular Pneumatic Tents

Other activities
/

Research field
/



Today Krka, d. d., Novo mesto is one of the world's leading generic drug manufacturing pharmaceutical companies, maintaining its advantage in over 70 countries.

We have been developing a global business network, which in addition to our product facilities in Slovenia, also includes production and distribution centers in the Russian Federation, Poland, Croatia, and Germany. Krka has 28 subsidiaries and 19 representative offices in 41 countries.

We operate successfully in traditional markets in Slovenia, South-Eastern Europe, Central Europe and Eastern Europe, where we hold leading market positions among pharmaceutical producers and product brand names in key therapeutic groups. We have also been growing in the markets of Western Europe.

Krka's high-quality, safe and effective products under the company's own trademarks cover the majority of therapeutic areas relating to modern diseases. The most important therapeutic groups of Krka's products are medicines for the cardiovascular system, medicines for gastrointestinal and metabolic diseases, and medicines for the treatment of diseases of the central nervous system. The company also produces general anti-infectives, medicines for the blood and blood-forming organs and medicines for the genito-urinary system and sex hormones and continually supplements its wide product range and moves into new therapeutic areas: oncology and diabetes medicines.

Prescription pharmaceuticals with more than 84% of sales represent the core of Krka's operations followed by non-prescription products, veterinary products and health resort and tourism services. Today Krka's sales exceed EUR 1 billion, with a share of products launched on markets in the past 5 years accounting for more than 40% of sales. The company has been allocating 8 to 10% of its revenues to research and development, and today Krka has more than 170 new products in the pipeline.



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NATO Code
NCAGE 1075Q

Employees
**

Turnover

The main group of activities
Medical, Pharmaceutical & Humanitarian
Equipment and Products - Production of
pharmaceutical preparations

Other activities
IHealth resort and tourism services

Research field
Optical equipment and Opto-Electronics



National Institute of Biology - NIB - is the leading biological research institution in Slovenia active in basic and applied natural sciences.

Committed to scientific excellence NIB performs basic research that helps humanity understand the living planet, its ecosystems, organisms, their relationships, biological processes and products. Newly produced knowledge also improves our understanding of stressors affecting the natural world including human health and well-being.

Our laboratories in Ljubljana and in Piran are equipped and staffed to allow research into any biological question and to provide solutions for threats to mankind. Our expertise allows for rapid assessments and mitigation of damage to humans and their environment, considering the military as well as civilian settings.

Our services range from detection and bioremediation of chemical and biological agents and manipulation of cellular and molecular mechanisms that they trigger to development of environmental biosensors, modelling ocean dynamics and improving the performance of autonomous underwater vehicles.

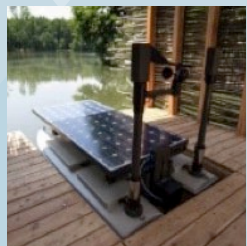
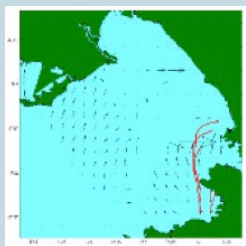
NIB Departments:

- Department of Biotechnology and Systems Biology
- Department of Organisms and Ecosystems Research
- Department of Genetic Toxicology and Cancer Biology
- Marine Biology Station Piran

NIB research competences of service to the military:

- Plant pathogens (ongoing project with Ministry of Defence)
- Microbiological toxins in water (ongoing project with Ministry of Defence)
- Stem cells for regenerative medicine
- Detection of microbes in air and water
- Detection of microbes in natural air filters – spider webs
- Bio- and agro - defence expertise
- Development of biosensors to control water pollution and bioremediation
- Environmental impact assessments
- Methods for rapid detection of action mechanisms of new chemical and biological weapons
- Nowcasting/forecasting the movement of floating bodies in coastal sea in search and rescue operations.

For ongoing projects and references, please visit <http://www.nib.si/>



NATIONAL INSTITUTE OF BIOLOGY

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NATO Code
/

Employees

Turnover

The main group of activities
Medical, Pharmaceutical & Humanitarian
Equipment and Products

Other activities
Education, R & D, Energetic Materials

Research field
Biodiversity, Phytoplankton ecology, Anthropogenic
impacts, Oceanography, Microbial ecology, Invasive
species, Communication networks, Conservation
biology, Ecosystem services, ...

Company Prevent&Deloza is developing and producing solutions for personal safety of soldiers, firefighters and industrial workers in specific environment.

Last generation of uniforms are integrated with sensors for tracking vital life functions, outdoor and indoor location, threatening gases etc...

Smart Gear (IT suit)

Protected from unexpected.

Decreases the accidents and injuries in the extreme environments

- Positioning of firefighters in and outdoor.
- "Rescue me" - scenario in critical situation
- monitoring of vital life functions
- data exchange



Design / Production / Sales www.prevent-deloz.si

Smart solutions

Protected from unexpected.

Electronics&Textiles


- NFC (near field communication)
- SMART GEAR (IT suit)

Materials for cooling

- Cooline

Other materials

- Antistatic
- Antibacterial
- Flameretardant
- High visibility
- etc.



Design / Production / Sales www.prevent-deloz.si



PREVENT&DELOZA d.o.o.
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www.prevent-deloz.si

NATO Code
/

Employees

Turnover

The main group of activities
Personal equipment

Other activities
ICT, Software, Various Products & Services

Research field
Personal protective equipment



WEBO & EURO GV

We develop firefighting vehicles and supply all the necessary equipment for firefighting, civil protection, military and other protection corps.



We provide:

- Personal protection gear
- Tactical equipment
- Rescue equipment
- Special vehicles for all types of use

References:

- Ministry of defence RS
- Administration RS for protection and rescuing
- Lithuanian Air Force
- Firefighting brigades and other rescue units
- Ministry of defence Azerbaijan
- Volkswagen Zwickau



WEBO

Webo d.o.o., Dragomelj 84, 1230 Domžale
Euro Gv d.o.o., Mala Bukovica 1, 6250 Ilirska Bistrica

Webo Maribor d.o.o.
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www.webo.si

NATO Code
/

Employees

Turnover

The main group of activities
Ecology, fire safety and civil protection

Other activities
Production and sale of multifunction in special
firefighting vehicles and equipment

Research field
Firefighting equipment and new technologies
Firefighting vehicles and rescue vehicles



Savatech – the environmental protection and rescue programme

We are one of the leading producers of inflatable rubber products noted for many years of experience and a wide sales mix of products, services and solutions. Thanks to our professional approach and substantial investments in the development we are able to excellently satisfy customer demand for specific products that can cover various applications. As all built-in components are supervised throughout the production process, our products are distinguished for constant quality.

Lifting bags - Are ideally suited for rescuing persons trapped under a vehicle in road accidents, plane crashes, collapsed tunnels in situations where conventional rescue methods cannot be employed.

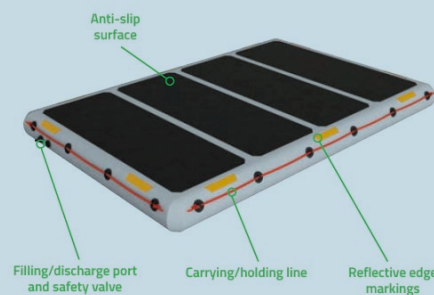
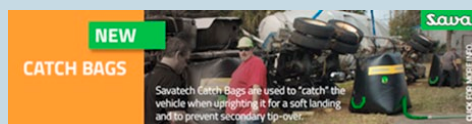
Decontamination - Inflatable decontamination units are used for emergency decontamination in cases of exposure to hazardous waste materials, chemical spills, as well as chemical and biological WMDs. Commonly used as a standard equipment for Hazmat response teams.

Rescue stretcher - The inflatable stretcher is designed for use in all conditions and it provides total safety and protection of the wounded during a rescue action ashore, in the water or air. Its compact design assures simple loading in a vehicle, a boat, a helicopter or a plane.

Rescue walkway - The rescue walkway is an inflatable rescue path used on unstable terrain for casualty recovery operations. It is used by fire brigades and other rescue units. The design of the walkway assures superb stability in all circumstances and can be used either as a raft or a work platform on ice, water, sand, to name just a few. It can be easily inflated and deployed.

Sealing products - they are suitable for sealing cracks in pipelines, gas pipes, containers, barrels and various oval-shaped tanks.

Tanks - are suitable for transport and storage of various liquids, including water. They are pillow-shaped and highly resistant to chemicals, mineral oils and industrial water; they can be used in temperatures ranging from -30°C to +90°C.



Savatech, d.o.o.

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NATO Code
NCAGE 1103Q

Employees

Turnover

The main group of activities
Environmental protection and rescue products

Other activities
Medical, Pharmaceutical & Humanitarian
Equipment and Products

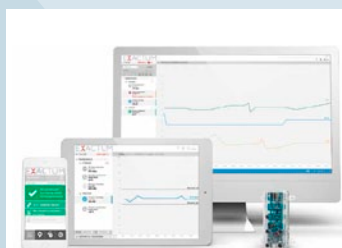
Research field
Research field
Rubber products

LOTRIČ Metrology Ltd is a family company, which have been calibrating and testing with a love for metrology for nearly 3 decades. We develop state of the art, highly perfected, but easy to use metrology products and services.

With support of our 83 employees from 4 countries, we provide more than 46.800 metrology checks in last year. We also represent top Slovene and foreign producers of measurement, pharmaceutical and laboratory equipment.

EXACTUM (Smart sensor hub)

The innovative solution automatically protects your processes and products and helps you meet standards and requirements. It enables highly efficient monitoring of temperature, humidity, air pressure, illuminance, CO2 level and other key parameters. It helps to maintain perfect storage conditions.



Advantages:

- Continual on-line measurements in real time.
- Automatic alarm system reduces the chance of human error. Settings are adaptable for every parameter and can be suited to daily personnel schedules.
- Reports are generated automatically. Parameter records are set according to your needs.
- Simple, user-friendly way of adding, removing and joining measuring locations.
- Lower costs due to fewer delayed reactions and time savings.
- The mobility of the application.
- Compatible with existing systems.

METROLOGY SOLUTIONS

Calibrations for the widest possible range of your needs: Mass & Pressure, Temperature & Humidity, Acoustics & Vibrations, Volume & Density, Force & Torque, Acceleration & Mass Balance, pH & Gas analysers, Length & Form, Time & Frequency, Flow & Velocity, Angle & Inclination, Hardness & Roughness & Toughness, Electricity & Photometry.

Measurements are conducted by qualified experts using state-of-the-art equipment on location or at our accredited laboratories.



Testing of products and materials

Through the entire life-cycle of your sample: from raw material to material, half-product, or product and waste.

Conformity assessment for most of your needs: we ascertain the conformity of a wide range of legal measuring instruments, equipment under pressure, health and safety regulations, fire regulations, concordance of vehicles with ATP, good practices in the pharmaceutical industry, and technical specifications of producers



LOTRIČ Metrology d.o.o.

Selca 163

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Ana Faganel

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NATO Code

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Employees

Turnover

**

The main group of activities

Technical testing and analysis

Other activities

suppliers for measuring devices

providing SW solutions

M&Q Academy (education and training for our partners)

Research field

R&D in the field of metrology solutions



TBR is a design, development and production company with extensive experience in the classic and rocket artillery.

Company working on multiple projects of research, development, production and technology transfer of different types of mortars, guns, howitzers, rocket launchers.

Working areas:

DESIGN - DEVELOPMENT

PRODUCTION - DELIVERY

TESTING

MATERIAL, TOOLS,
EQUIPMENT DELIVERY

TECHNOLOGY TRANSFER



120mm M5 Mortar System

**ACCURACY PE
15 M AT RANGE 9000 M**



TBR-Tehnični biro Ravne d.o.o.
Krekova 4
2000 Maribor
Slovenia

www.tbr-si.com

NATO Code
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Employees
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Turnover
**

The main group of activities
Weapons & Ammunition
R & D

Other activities
Engineering Equipment, Tools, Services
Test Equipment
Engineering, Services, Training
Component Suppliers

Research field
Weapon Systems

The Ljubljana Faculty of Mechanical Engineering (FME) aims to create and disseminate knowledge that enables its students and research partners to competitively participate in the international scientific field and marketplace.

The vision of the Ljubljana FME is to become the prime teaching and research faculty for mechanical engineering in Slovenia and Southeast Europe while maintaining the highest educational and professional standards. This will enable the faculty to become an even stronger magnet for the cooperation with Slovenian and international companies and R & D organizations.

The faculty has 18 chairs that include at least one or more laboratories conducting R & D in the following fields:

1. Synergetics
2. Machine Elements and Development Evaluation
3. Power Engineering
4. Cybernetics, Mechatronic and Industrial Engineering
5. Manufacturing Technologies and Systems
6. Materials, Science and Technology
7. Heating and Process Engineering
8. Mechanics
9. Mechanics of Polymers and Composites
10. Optodynamics and Laser Applications
11. Tribology and Technical Diagnostics
12. Fluid Dynamics and Thermodynamics
13. Heat & Mass Transfer and Environmental Studies
14. Machining Technology Management
15. Engineering Design and Transportation Systems
16. Modelling in Engineering Sciences and Medicine
17. Working Machines in Technical Acoustics
18. Aviation Division

The faculty has over 325 employees including 29 full professors, 20 associated professors, 37 assistant professors, 108 lecturers and assistants. Others are full and part time researchers, young researchers, technical collaborators and members of the supporting staff.

There is a total of almost 2000 students on Level 1 University study programme and Professional study programme, Level 2 Master's degree study program and on Level 3 Doctoral study programme. At FME, over 7400 students have graduated at BSc level, over 6200 at MSc level and over 390 students at the doctoral (Doctors of science) level.

The yearly budget is over 16 Million EUR incoming from the private sector (~26%, R & D), from public educational activities (~48%) and public research activities (~26%).

The FME chairs and laboratories have conducted many different R & D projects (basic & application – 30 to 50 international projects running per year on average level) with and for domestic and international partners and customers including the defence industry, Slovenian army and Ministry of defence.

University of Ljubljana
Faculty of *Mechanical Engineering*



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NATO Code
/

Number of employees

Cash flow

The main group of activity
Engineering, Services, Training

Other activities
R & D (from the field of chairs and labs. interest)

Fields of research
(from the field of chairs and labs. interest)

The company is primarily engaged in the design and construction of Radio communication systems, integration, maintenance and education of end users. This enable our clients to achieve the best results.

Far needs of our customers, we are planning antenna systems, perform installations and measurements on the Radio communication field.

Our references: Ministries of Defense, Airports, Police, Agency's for Radio frequency spectrum supervision and the mobile operators

PRODUCTS DEVELOPED FOR SPECIAL PURPOSES

RK3 - ANTENNA SYSTEM CONTROLLER

RK3 System general description

RK3 is newsystem device developed with care to fulfill demanding requirements of antenna systems. RK3 offers many devices integrated into a single unit offering 3 independent channels for controlling antenna rotators and motorized masts (more motor channels on special request). Five additional module compartments for various RF signal distribution modules. Custom designed functional modules can also be integrated on request. Compact design saves valuable rack space, especially in mobile applications and simplifies system design and integration.



Complete solution for your antenna system, rotator and mast controller in one device!

ANS-P-1 000W PORTABLE POWER SUPPLY SYSTEM

ANS-P-1000W is designed to provide DC 12V and AC 230V. System is based on Li-Ion batteries with BMS (Battery Management System) and control display. Output power 1000W.



REMOTE CONTROLLED STATIONARY AND MOBILE SYSTEMS FOR MEASURING AND MONITORING OF RADIO FREQUENCY.



TRANSPORTABLE
- Standalone
measuring unit



REMOTE - Standalone
Solar and Wind powered
measuring Unit with
Weather station. Where
no other electricity
supply is available.



Measuring
vehicle -
inside mast



Measuring vehicle -
outside mast



S-TMM sistemi d.o.o.
Zabrv 120
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www.s-tmm.si

NATO Code
/

Employees
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Turnover
*

The main group of activities
Engineering, Services, Training

Other activities
Design, installation, maintenance
Various Products & Services

Research field
/

Jožef Stefan Institute (JSI) - the leading research institution for natural sciences in Slovenia.

The Institute's greatest asset is the interdisciplinary skills of its highly qualified personnel, covering a broad spectrum of basic and applied research.

The Institute is collaborating with organizations worldwide, pursuing its activity by engaging in research programmes, research projects, development programmes and projects for the establishment and maintenance of the research infrastructure. In 2016, the Institute was involved in over 900 projects, over 300 projects were international.



Jožef Stefan Institute has been successfully collaborating with Republic of Slovenia's Ministry of Defence and NATO.

For the Ministry of Defence, for instance, we carried out projects "KeraPro" and "Unos" (test measurements on artificial nose for detection of explosives). The project "Kerapro" was focused on the design of miniature fuel reformer, used to produce hydrogen by reforming of logistic fuel, such as diesel and methanol. We also have an ongoing collaboration of financing the Ecological laboratory with mobile unit – ELME.



JSI is currently partner on NATO project E-SiCure - Engineering Silicon Carbide for Enhanced Border and Ports Security (2016-2019). JSI also collaborated on project: Atmospheric Pressure Plasma Jet for Neutralisation of CBW (chemical or biological warfare) (2013-2017).



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<https://www.ijs.si/ijsw/V001/JSI>

NATO Code
/

Employees

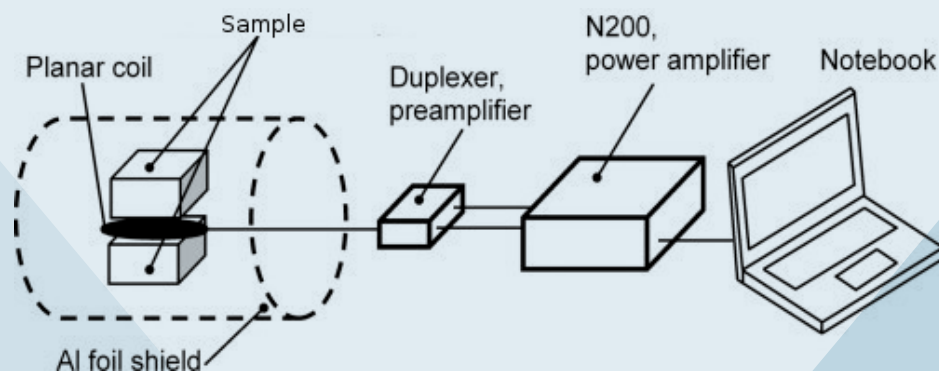
Turnover
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The main group of activities
Education, R & D

Other activities
Optical Equipment and Opto-Electronics
Engineering, Services, Training, ICT, Software
Autonomous and Robotic Systems

Research field
Physics, Chemistry, Life Sciences, Advanced
Materials, Computational Science, Information
and Communication Technologies, Nuclear
Engineering.

Research in radio-frequency (RF) spectroscopy, predominantly NQR, spanning from the basic material research to application of NQR for detecting explosives, drugs and other illicit materials. Studies, development and miniaturization of improved NQR detector: Application of the alkaline vapour magnetometer as the most sensitive sensor for detecting the low frequency (below 2 MHz) RF signals.



Biomagnetism: magnetocardiograms, magnetoencephalograms and other biomagnetic fields; calculations (modeling) of the current sources causing the measured magnetic field, model studies in cardiac electrophysiologic research

Magnetism: research of magnetic properties in condensed matter physics, low dimensional systems, magnetic memory effect and magnetic memory cell, multifunctional materials (multiferroics).



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NATO Code
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Number of employees

Cash flow
*

The main group of activity
R & D

Other activities
IKT, Software

Fields of research
NQR
Biophysics
Magnetism

The National Institute of Chemistry (NIC) is a Slovenian research institution that is leading and known world-wide in the field of Chemistry and related disciplines.

Basic and applied research is focused on life sciences and materials sciences with engineering. Materials research encompass preparation, characterisation and testing of highly performing materials for various environmental and energy applications, including energy storage and conversion (sensors, batteries, fuel cells, electrochemical solar cells), water and air cleaning, biomass conversion, hydrogen production, etc. The expertise also includes micro-process engineering (process-on-a-chip, micro-reactors, catalyst screening), process and product modelling, sensitivity analysis, process optimisation, process intensification and economical valorisation. In the field of life sciences, the focus is on the application of modern biochemical, immunological, microbiological, biophysical, structural and theoretical methods to problems, which have potential application in medicine, pharmacy or biotechnology. The research excellence is supported by the state-of-the-art spectroscopic, microscopic, diffraction and other facilities.

There are a number of Slovenian and foreign companies (Krka, Lek, Honda R&D Europe, Alstom, etc.) with whom the institute has entered into close long-term cooperation.

NIC is strongly involved in EU funded projects with international consortia (EUROLIS, MefCO₂, HELIS, etc.). In addition, NIC has been coordinator of three out of the eight Slovenian centres of excellence.

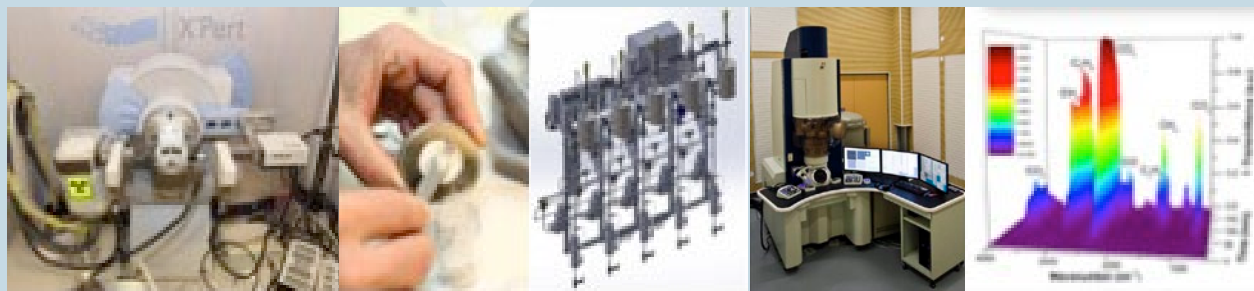
NIC cooperates with major Slovenian universities and is classified as an important institution in the field of post-graduate education and training of young researchers, with one quarter of employees being doctoral students.

NIC was the first research institution in Slovenia to obtain ISO 9001 standards in 2003 with the goal of improving the conditions, as well as organization and effectiveness, of its work.

Selected projects:

Enhanced Portable Energetically Self-sustained Devices for Military Purposes. The overall concept underpinning this NATO Science for Peace and Security Programme project (984738) is oriented toward the final project outcome, ready-to-use prototype(s) of enhanced portable energetically self-sustained devices for military purposes, intended for field testing. National Institute of Chemistry is the coordinator of this project.

Novel Materials for Durable Proton Exchange Membrane Fuel Cells. The overall concept underpinning this NATO Science for Peace and Security Programme project (984925) is oriented toward optimizing proton exchange membrane fuel cells (PEMFC), which are currently the leading type of fuel cells in terms of unit sales (approaching 100,000 sold units yearly). National Institute of Chemistry is the coordinator of this project.



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NATO Code
/

Employees

Turnover

The main group of activities
R&D in Chemistry and related disciplines

Other activities
Education and Training Analytical Services

Research field
Materials research for environmental and energy applications, Chemical Engineering, Biotechnology, Structural and Theoretical Chemistry, Analytical Chemistry

Main activities of the Faculty of Electrical Engineering / University of Ljubljana relevant to MDRS and NATO

Laboratory for Telecommunications and Laboratory of Multimedia (www.ltfe.org; product and service groups 6,8,9,11).

Focus: design and test of tactical backbone communication systems, smart communications for emergency situations, multimedia knowledge and sharing, mobile, SmartTV, HBBTV applications, research and pilot systems. **MDRS Refs:** development of tactical backbone communication system (in cooperation with Iskratel).

Laboratory of Information Technologies (www.lait.fe.uni-lj.si; 3,7,8,9,11). **Focus:** research of human-computer interfaces (HCI; acoustic versus visual interfaces in vehicles, low cognitive load and low distraction HCI, HCI with gestures), human motion detection and recognition (real-time biofeedback and human motion analysis in sports, recreation and rehabilitation), and information systems (information security, nonredundant achieving and backup systems, information system design). **MDRS Refs:** design of MDRS TETRA communication system.

Laboratory of Metrology and Quality (www.lmk.si; 6,8,9). **Focus:** national standard for temperature and humidity, calibration laboratory for traceability of SI units, electrical and material testing. Development of solutions in measurement of temperature and humidity. **MDRS Refs:** development of a calibration system for microclimate monitoring in ammunition storages; cooperation in development of a sensor for quadrupole-resonance-based detection of explosives.

Laboratory of Microsensor Structures and Electronics (lmse.fe.uni-lj.si; 3,4,5,7,9). **Focus:** design and fabrication of custom photodiode sensors for precision measurements, development of systems in microsensorics and microfluidics for healthcare and chemical process engineering. **MDRS Refs:** development of a piezoelectric microelectromechanical system for motion detection, silicon-based fuel microprocessor, high-temperature fuel cell with a reformer of methanol on silicon wafers. Industrial partners: Renishaw, Pangolin Laser Systems, Fagor Automation, RLS MT.

Laboratory for Microelectronics (lmfe.fe.uni-lj.si; 2,3,4,9,10). **Focus:** design and fabrication of THz surveillance systems

with highly efficient microbolometer-type sensors, systems for electronic sensing of chemical substances in the air with emphasis on explosives and capability to simultaneously detect several substances. **MDRS Refs:** development of a THz system for stand-off hidden thread detection, development of electronic system for the different explosives vapor detection

Laboratory for Modelling, Simulation and Control and Laboratory for Autonomous and Mobile Systems (msc.fe.uni-lj.si; 2,7,9,15). **Focus:** research and development of advanced and state-of-the-art algorithms in the immersive field of cyber-physical systems, including guidance navigation and control, simultaneous localization and mapping, obstacle avoidance and collision prevention, path and trajectory tracking, inertial localization and map-less navigation. **Industrial partners:** ESA, Pipistrel, Karantanija.

Laboratory of Photovoltaics and Optoelectronics (lpvo.fe.uni-lj.si; 2,5,9). **Focus:** photovoltaic modules monitoring systems, electronics and algorithms for drones, accelerometer systems, energy management in buildings, power delivery over fiber systems, modelling of photovoltaic and optoelectronic devices and systems, solar cells design, balance-of-system components and entire photovoltaic systems towards higher energy conversion efficiencies. **Industrial partners:** Bisol, Cinkarna Celje, Trimo, HTZ.

Machine Vision Laboratory (vision.fe.uni-lj.si; 3,7,9,11,15). **Focus:** computer and machine vision (tracking, human motion analysis, automatic surveillance, visual sensor networks, industrial machine vision applications) and bioinformatics (support for fast tracking of infectious agents with deep sequencing approaches of bacterial, fungal, and viral sources of infections). **Industrial partners:** Kolektor Vision, several startups.

User-adapted Communication and Ambient Intelligence Laboratory (lucami.fe.uni-lj.si; 3,11,12). **Focus:** context-dependent communication, interactive real-time fluent communication systems accounting for human non-verbal communication capabilities based on stable personality traits and dynamic social signals (emotional state, hesitation, fear, anxiety, ...).

University of Ljubljana,
Faculty of Electrical Engineering



UL Faculty of Electrical Engineering
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1000 Ljubljana
Slovenia

www.fe.uni-lj.si

NATO Code
NCAGE 1144Q

Number of employees

Cash flow
/

The main group of activity
Undergraduate and graduate education in electrical engineering:
- biomedical engineering;
- control engineering;
- electronics;
- mechatronics;
- power engineering;
- robotics;
- telecommunications.

Research and development:
- 33 active research laboratories;
- 4,2 million EUR funding in 2014
- 14 national research programmes;
- 41 national research projects;
- 34 EU research projects (H2020, FP7, SEE, ALPINE SPACE, EMRP, CIP, COST, TEMPUS, ...)

Industrial cooperation:
- 120 R&D contracts with domestic and foreign companies;
- 3,2 million EUR funding in 2014



REPUBLIC OF SLOVENIA
MINISTRY OF DEFENCE

CAPABILITIES OF SLOVENIAN DEFENCE COMPANIES AND INSTITUTIONS

039

The Faculty of Social Sciences (FSS) of the University of Ljubljana is the largest interdisciplinary public institution for education and research in the Social Sciences in Slovenia, and among the largest in Europe.

Through its human resources, its in-house research institute, central Social Sciences library and publishing house, it contributes to the knowledge, applicable both in academic and policy-making environment.

The FSS offers 13 Bachelor Degree programmes, 12 Master's programmes and an Interdisciplinary Doctoral Programme "Humanities and Social Sciences". At the FSS 11,956 students have graduated at the BSc level, 1,885 at the MSc level, and 394 at the PhD level. The faculty has 251 employees, including 41 full professors, 28 associate professors, 35 assistant professors, 15 lecturers and assistants, 56 researchers and 76 members of the supporting staff.



The Social Sciences Research Institute is the largest research institute for Social Sciences in Slovenia. Research at the institute is carried out within the framework of national and international research programmes. The Institute participates in about 80 research projects annually, funded partly by the State and partly by contracts with other organizations or institutions, including many within the EU research programmes. There are 21 research centres within the framework of the institute, active in four areas of Social Sciences – sociology, political science, cultural studies and communication.

The Defence Research Centre (DRC) is a research institution focusing on social dimensions of security, defence, military and peace in the contemporary world. The DRC was established in 1985. It cooperates with both domestic and foreign scientific institutions. It plays an important role in addressing domestic as well as international defence and security dilemmas. The mission of the DRC is also education and training of future research experts in the field of defence and security.

University of Ljubljana
Faculty of Social Sciences



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www.fdv.uni-lj.si/en

NATO Code
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Number of employees

Cash flow

The main group of activity
Educational, Simulation and Training

Other activities
R & D

Fields of research
Sociology, Political Science, Communication,
Cultural Studies

The Ljubljana Faculty of Mechanical Engineering (FME) aims to create and disseminate knowledge that enables its students and research partners to competitively participate in the international scientific field and marketplace.

CENTER FOR EXPERIMENTAL MECHANICS

(1) Advanced noise insulation: World best advanced noise insulation panels, which damping performance surpasses all currently existing solutions for at least 10-30dB, depending on frequency of noise.

(2) Vibration insulation: New generation adaptive damping elements, utilizing patented viscoelastic granular material technology with energy absorption capacity several times larger than that of the existing ones.

(3) Materials for Biomedical Applications: Using patented multimodal polyamides (PA) (invented jointly with BASF) we invented new nano-structured products:
(i) Nano-porose drug delivery membranes for covering wounds against infections that can deliver different drugs over extended and controlled period of time.

(ii) Nano-porose filters for 'cold sterilization' and filtering of gasses (air) and fluids (water)

(ii) Osseo-integrable drug delivery orthopedic and dental implants with gradient mechanical properties that mimic properties of bones.

(4) Durability (life) prediction of polymeric products: Using self developed measuring techniques and theory we can predict life-span (durability) of products made of polymers and composites.

LABORATORY FOR STRUCTURE EVALUATION

Research from the field of road and off-road vehicles: structural integrity, fatigue strength, operational strength, crash worthiness product's reliability.

Industrial projects: assessment of rear-seat crash worthiness, assessment of front-seat crash worthiness for whiplash test, assessment of structural component's durability when loaded with impact and fatigue loads etc.

LABORATORY FOR INTERNAL COMBUSTION ENGINES AND ELECTROMOBILITY

Development of detailed and system level simulation models for vehicle powertrains including development of professional codes for a global market leader; R&D in advanced engine control, combustion and turbocharging concepts as well as hybrid powertrains; prototyping; testing on the laboratory test-beds and in real world operation including PEMS measurements.

- most advanced mechanistically based hardware-in-the-loop capable simulation tools for vehicle powertrains
- thermodynamic concepts of marine and aircraft diesel engines featuring very high specific power
- development of hybrid and fully electric powertrains

LABORATORY FOR TRIBOLOGY AND INTERFACE NANOTECHNOLOGY (TINT) has competences in the fields of:

- Durability, sustainability and wear of materials and components,
- Energy efficient materials and efficiency of contacts,
- Enhanced surface properties and surface functionalization (water-repellent, dust-repellent surfaces...),
- Adhesion of materials (non-stick surfaces or increasing strength of adhesive junctions),
- Materials behaviour at low or high temperatures.

University of Ljubljana
Faculty of *Mechanical Engineering*



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NATO Code
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Number of employees

Cash flow

The main group of activity
Engineering, Services, Training

Other activities
R & D (from the field of chairs and labs. interest)

Fields of research
(from the field of chairs and labs. interest)

The Faculty of Logistics at the University of Maribor (UM FL) is the leading academic and research institution in the field of logistics in Slovenia. We strive for useful, practical and innovative study and to provide graduates with knowledge that offers good employment prospects. To meet this end, we foster close and long-term partnerships with key business entities providing logistics services in Slovenia, which is essential for achieving our mission and goals. At the same time, our scientific researches and their results provide support to the economy in meeting its challenges.

UM FL delivers accredited study programmes at all three Bologna levels with around 620 students enrolled and 1183 graduates. Study programmes are designed in line with current trends, while the interdisciplinary nature of logistics provides our students with a broad understanding of logistic processes and systems.

UM FL has 5 departments and various institutes, centers and laboratories, which conduct R&D mainly focusing on trustworthy transport chain, defense and military logistics, supply chain management, risk management and management of investments in supply chains, lean intralogistics, port economics, competencies in logistics, supply chain autonomous systems, green logistics and sustainable transport, the use of green technologies in supply chains, city logistics, mobilistics and tourism logistics, cargo securing in transport, warehousing and order picking, material handling system and packaging.

In the field of defense and defense systems, one of the departments is the Department of Defense and Military Logistics which deals with logistics in defense, military and security systems, and is the only such department organized within civilian institution in the south-eastern

Europe. It organizes and conducts lectures and research activities (in cooperation with defense, public and private sector) in the following fields:

- Defense and Military Logistics;
- Humanitarian Logistics;
- Logistics in the National Security System;
- Human Resources in the National Security System;
- Risk Management;
- Crisis Management;
- Search & Rescue and Civil Protection;
- Security and Safety in Logistics;
- Security and Safety in Business Processes.

The study of defense and military logistics is organized for defense and military personnel as well as for civil population from various fields (i.e. civil protection services, search & rescue services, security services, police, and business entities). The chair also offers different services (analysis of safety in logistics and other processes, consultations, security and safety planning, threat assessment, education etc.) to entities from defense and civil sector (i.e. military organizations, national agencies, critical infrastructure organizations, corporations).



University of Maribor

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fl.um.si

NATO Code
/

Employees
**

Turnover

The main group of activities
Educational, simulation and Training

Other activities
R & D

Research field
Defense and Military Logistics, Quantitative Modelling in Logistics, Technical Logistics, Supply Chain and Sustainable Development, Management in Logistics



The Faculty of Mechanical Engineering Maribor is one of the more successful members of the University of Maribor, as measured by the successes of the undergraduate students as well as by the number of postgraduate students, by its income and laboratory equipment. There are several internationally acknowledged professors who take part in well organised international exchanges and cooperation.

The Faculty places special emphasis on research, development, and scientific work. At the Faculty, there are several research groups contributing to the excellence and international recognition of the Faculty with their high-level research work.

The Research and Development (R&D) is carried out in the following Institutes and Centres:

- Institute of Production Engineering
- Institute of Power, Process and Environmental Engineering
- Institute of Mechanics
- Institute of Structures and Design
- Institute of Material Science
- Mechanical Engineering Research Institute
- Institute of Engineering Materials and Design
- Centre of Sensor Technology
- University Centre for Electron Microscopy

The scientific and professional research and development activities within the fields of mechanical, textile and industrial engineering involve basic and applied scientific research, development research, training of new researchers, professional work, consulting, analyses and knowledge transfer to the industry.

The ever more sensitive cooperation of the Faculty

with Industry requires a correct scientific and research direction by the Faculty. The research results are transferred to the different branches of Slovenian mechanical engineering, metal processing and textile industries.

The Faculty is open and integrated within the international research arena with many EU programs such as Horizon 2020 (3 projects running), sixth and seventh EU Framework Programme (16), the Era-Net (11), Eureka (19), Tempus (2), Erasmus (2), Cost (3), Ceepus networks (5), Leonardo da Vinci (3), and other bilateral cooperation programs (72). Most of all cooperation with the Ministry of Defence and the successfully finished NATO project SPS Reference No.: SPS.NUKR.SFP – 984398, must be emphasised.

The Faculty has 189 Employees, amongst whom there are 49 professors, 45 assistants, 45 full-time and young researchers and 50 technical collaborators and supporting staff.

The yearly budget of the faculty is over 8.3 Million EUR, from which 33 % is income from R&D and app. 10 % from cooperation with national and foreign industrial companies.



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NATO Code
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Employees

Turnover

The main group of activities
**Higher education, Engineering, Research,
Development, Services, Training**

Other activities
Transfer of knowledge into practice

Research field
**Mechanical Engineering, Mechatronics, Industrial
Engineering, Metal processing, Environmental
Engineering, Design and Advanced Textile Materials and
Technologies**

The Faculty of Organisation Studies Novo mesto (FOS) is a higher education institution established by the Institute of Management Excellency and Municipality of Novo mesto.

FOS's study programs in Quality Management are oriented towards educating and training top professionals and leaders in the field of organization studies with an emphasis on developing competences needed for continuous guidance and development of quality and business excellence. FOS offers the following accredited programs: Bachelor's, Master's and PhD Degree in Quality Management.

FOS recognizes its mission in education and knowledge transfer of which quality is the decisive foundation towards excellence in all areas. To achieve this mission and contribute to a knowledge based society, we integrate the principles of contemporary paradigms of quality and excellence into our daily work routines (Acknowledged also by two ISO standards certificates; SIO 9001 and ISO 27001). Active integration into the European Research Area and European Higher Education Area is one of the key developmental priorities of FOS.



Fakulteta za
organizacijske študije
Faculty of organisation studies

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www.fos.unm.si/si

NATO Code
/

Number of employees
*

Cash flow
*

The main group of activity
Educational, Simulation and Training

Other activities
R & D

Fields of research
/



Sistemska tehnika ARMAS d.o.o. has rich experience in the development of materials for artillery barrels, technology of steelmaking, forging, heat treatment and machining. It is placed among the leading producers of rough-machined and heat treated barrels as well as other highly stressed parts of artillery weapons.

Armas delivers finish machined and hydrostatically tested smooth barrels, breech rings and firing pins, etc. for mortars from 50 mm to 120 mm calibre in conformance with customer drawings and technical requirements. These products can be also delivered as rough-machined and heat treated only. Armas delivers barrels, breech rings and breech blocks as rough-machined and heat treated for aircraft cannons and anti-aircraft guns, recoilles guns, howitzers, guns, tank guns and gun howitzers from 20 mm to 203 mm calibre.

Armas is producing special torsion bars and torsion tubes for combat systems, tanks, armoured carriers, howitzers, guns, rocket launchers, etc. They are made of special steels with own developed technology in compliance with internal regulations and customer requirements.

Main characteristics:

- lenght 50-2500 mm,
- max. diameter 100 mm,
- max. torque 60 kNm.

Based on rich experience of production of light armoured vehicles, artillery systems and main battle tanks, Armas is offering development and system integration of various equipment in uniform system, tailored to customers' needs.

Armas implements servicing, reconstruction and upgrading of artillery weapons and armoured wheeled or caterpillar vehicles together with armament, the communication and vision system. Armas is carrying out a regular maintenance service of Valuk 6x6 vehicles.



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www.st-ravne.si, www.armas.si

NATO Code
NCAGE 1133Q

Employees

Turnover

The main group of activities

Component Supplier:

Artillery Weapon
Parts; Barrels, Breech
Rings; Breech Blocks
Torsion Bars

Other activities

System Integration & Development,
Service and Maintenance

Company DAT-CON d.o.o. has through in-house research, experiences, skills of the staff and knowhow successfully developed thermal imaging systems which are used for surveillance and control on different fields of use (border, airport, port, industry,...).

Surveillance systems

We provide special systems for police and state security agencies; for land and sea observation with long-range thermal cameras, adapted software, nautical radars and complete navigation system

Pan-Tilt units

DAT-CON delivers high performance Pan-Tilt units on the market. Suitable for a variety of uses and integrations adapted to customer needs. Units offer a unique integration of electro-optical sensors and radar with a single telescopic mast to avoid any dead zone in observation area. DAT-CON pan tilt systems have been in daily use protecting the Schengen border 24/7 for more than 10 years.

BOPAS

Portable observation systems are used every day by police and military to protect areas of interest. BOPAS is a remote control target acquisition system with manual and automatic monitoring capabilities. Compatible with all leading manufacturers of multisensory camera systems makes it ideal for integration.



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www.dat-con-defence.com

NATO Code
/

Employees

Turnover

The main group of activities
Component Suppliers

Other activities
Vehicles, Vessels, Aircrafts & Accessories
Optical Equipment and Opto-Electronics
ICT, Software

Research field
/



Le-tehnika's Cryogenics department is specialized in the development of miniature cryogenic coolers technology.

With almost 30 years of experience we have become experts of cryogenics and have specialized in the development of miniature cryogenic coolers technology, their production, composition of components and their integration into the higher level systems. According to the business strategy of the company, we are operating with more than 15 countries worldwide.

The main products of our program include specialized miniature coolers based on the Joule-Thomson effect (self-regulated, fixed orifice, actively controlled, fast cool down, nonstandard) and coolers based on Stirling effect (rotary drive).

Products are intended for Infrared detector's cooling used in IR cameras, missiles with an IR head, cryosurgery, special filters in the base stations for surveillance (defense, police security, border airport and harbour control), scientific labs, medical equipment and in other applications.

Products are made on client request according to their specific needs (custom made). We present our cooling systems at conferences or at trade fairs such as SPIE, EUROSATORY, DSEI and others.

Le-tehnika has received prestigious national and international enterprise awards earned for specific achievements and have international certification marks such as ISO 9001 and ISO 14001 standards, which provide high quality management.



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NATO Code
NCAGE 1203Q

Employees

Turnover

The main group of activities
Joule Thomson cryocoolers
Stirling cryocoolers
Pure Air Monitor (PAM)

Other activities
Consulting of different cooling solutions

Research field
Coolers for IR surveillance and reconnaissance

Predilnica Litija is a manufacturer of special yarns made of natural and synthetic fibers and their blends, established in year 1886. Our focus is mainly on high performance fibres for protective clothing with different functionalities.

For several years now, a part of our product range has been focused on producing special yarn blends for uniforms. Careful selection of the best raw materials combined with the best spinning processes and practices enables us to help our customers create products with the desired functional characteristics for uniforms, professional and active wear.

Personal Protection Equipment (PPE) Abrasion Resistancy:

- durability
- comfort
- lightweight strength in polyamide 6.6 high tenacity and qualifying yarn blends such as:
 - cotton / polyamide 6.6
 - polyamide 6.6 / cotton / lyocell
 - cotton / polyamide 6.6 / elasthan
- other blends like:
 - cotton/polyester with regulated IR remission

High Performance Products offering Flame Retardancy:

with Modacrylic FR in 100% and in blends with cotton, viscose FR, viscose, modal etc.

- soft, warm and resilient
- easily dyed, outstanding resistance to chemical agents, metal splash resistant, arc-flash protective, non-toxic & non-allergenic, no moth or mildew threat

with Meta-Aramids in 100% and in blends with cotton, viscose FR, viscose, modal etc.

- good resistance to abrasion, low flammability, non-melt, wearability and folding endurance

with Para-Aramids:

- improved strength-to-weight properties

Additional antistatic property achieved by adding 2-3% of antistatic fibres in the final yarn.

Above mentioned fibres, along with their characteristics, enable us to produce high performance protective clothing, which protect people from fire, cut injuries, bad weather conditions or even electromagnetic waves.

Together with our partners, we can offer you also a final product.

We are a regular supplier of yarn for military uniforms in EU countries.



PREDILNICA LITIJJA d.o.o.
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NATO Code
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Employees

Turnover

The main group of activities
Personal Equipment
Component suppliers

Other activities
/

Research field
/



TRIVAL ANTENE d.o.o. main activities are development and production of antennas, masts and accessories for wireless telecommunications; development, engineering, project-making and consulting in the field of wireless telecommunications

TRIVAL antennas made of composite materials (polyester and epoxy resins reinforced with fibreglass) were first produced back in 1965, on the premises of the SVIT Kamnik company. Today Trival Antene d.o.o. has on its list more than 200 different types of antennas, antenna masts and accessories. Apart from military items, the company supplies products for civil professional use (marine applications, industry and organisations, ministries, radioamateurs, mobile comm's, etc.)

TRIVAL ANTENE products are subdivided as follows:

- military antennas (HF, VHF and UHF antennas, stationary, tactical and mobile antennas),
- antennas for marine applications (MF, HF and UHF antennas for vessels and yachts),
- antennas for civil-professional communications (HF, VHF and UHF antennas, stationary, mobile antennas and antennas for hand-held radios, omnidirectional dipole and co-linear antennas, directional yagi and log-periodic antennas),
- antenna masts (tubular sectionalised and winch driven telescopic glass-fibre masts from 5 to 18 m)
- antenna accessories (cables, connectors, etc.)
- custom designed antennas (antennas for EMCmeasurements, etc.)

ANTENNAS

The TRIVAL ANTENE company develops and produces military antennas in HF, VHF and UHF frequency range for tactical transportable, mobile or stationary use. The antennas are whip-type monopoles, omni-directional or directional antennas (yagi or log-periodic type). They are usually made of composites (epoxy or polyester, glass-fibre reinforcement), with stainless steel metal joints. All antennas for military use comply with MIL-STD-810F.

ANTENNA MASTS

TRIVAL antenna masts may be divided into two types: tubular sectionalised and telescopic winch driven masts. All masts are made of composite materials, up to 18 metres high. All mast types are intended for tactical use with included - guying accessories kit. Telescopic masts are also suitable for mobile use (including mounting kit accessories).



Trival antene d.o.o.
Gorenjska cesta 25
1234 Mengeš
Slovenia

Miran Kozjek, Managing Director

www.trival-antennas-masts.com

NATO Code
NCAGE 1003Q

Employees
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Cash flow

The main group of activities
IKT, Software

Other activities
-

Research field
-



Harpa Sea, d.o.o. is Slovenian leading company in field of underwater survey with over twenty years of experience on the market. Specialised in constructing measurement systems and developping of 2D and 3D visualisation platforms.



3D GIS for emergency responders is a software based solution developed throughout research based project and strong cooperation with final users - fire & rescue services. Works as system integrator and is designed to handle events that require immediate response with aim of organizing large critical events. Application main function is to plan response and share important information over to dispatch centers on fire&rescue services level. Works as an information database - for any type of event provides the operator with broad data collection and possibility to dispatch data to field units. Its an archiving tool and data depository. Open platform makes integration possible to existing systems and technologies.



APSYS is autonomous robotic boat designed for operations in shallow waters. The GPS navigation system allows to monitor the boat and to locate its position with great precision. In addition a high-resolution sonar is installed on board, able to measure the depth of 20 cm up to 50 m with an accuracy of 1 cm. APSIS is equipped with a low noise electric propulsion motor, which makes it highly mobile and in condition to carry out autonomously a number of measuring operations allowing non-invasive use. APSIS can serve as logistical support for user friendly and safe performance of under/above-water activities. With the aid of integrated camera and thanks to precise positioning, the marine activities are reliable and safe.



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www.harpasea.si

NATO Code
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Employees
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Turnover
**

The main group of activities
ICT, Software

Other activities
3D GIS solutions; Various Products & Services,
Autonomous and Robotic Systems

Research field
GIS solutions, photogrammetry, survey and
3D visualisations



Milsistemika will provide soldiers with software aids. Make C2/C4I systems a true force multiplier, no soldier will want to fight without.



MIL Sistemika focus on Command & Control software, covering all levels from the individual soldier to the top (planning) levels of military command structure. It covers Sensor & Weapons integration, GIS navigation and mapping system, Communications suits, and integrated training tools.

Battle field Managements System (Battle Eye System)

JOC SA, IHTA, BES and PES constitute a complete digital command and control system with integrated digital line of command, from the top level, down to individual soldier.

C4I Connectivity (Bridge)

Bridge component can be used on levels from C4 – C2 and insures data exchange with 3rd party systems supporting NATO NFFI, Link11b and MIP protocols.

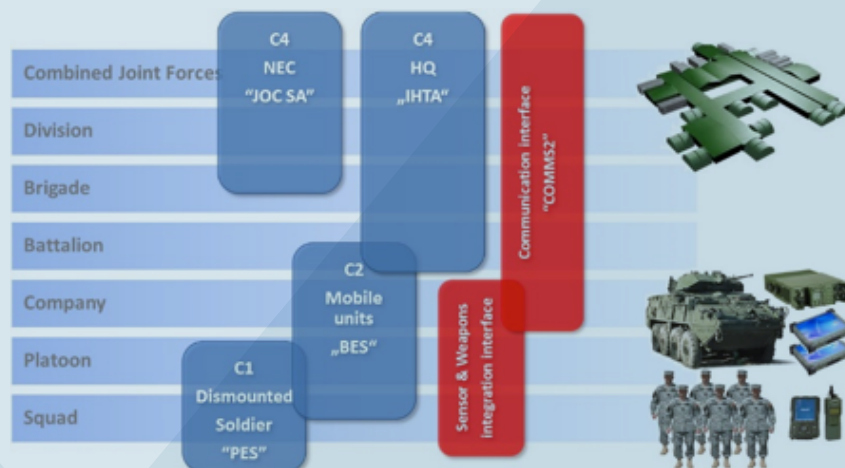
COMMS2

Is a combat net radio integration and abstraction layer integrating disjoint radio networks into one data network. (Drivers for Tadiran, Harris, Thales, Rohde&Schwarz, etc.)

Sensor & Weapons Integration

It is an advanced server that integrates various military vehicle information, and communication systems, connecting Kongsberg Protector 151, inertial navigation, and NBC sensors into a complete BMS suite.

Current customers: Slovenian Army, Polish ministry of Agriculture, MOD of Oman, Rohde&Schwarz, Estonian Army



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www.milsistemika.com

NATO Code
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Employees
5

Turnover
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The main group of activities
ICT, Software

Other activities

Engineering and NBC Equipment, Tools, Services
Optical Equipment and Opto-Electronics
Simulation and Training
Autonomous and Robotic Systems

Research field
Sensor Networks



REPUBLIC OF SLOVENIA
MINISTRY OF DEFENCE

CAPABILITIES OF SLOVENIAN DEFENCE COMPANIES AND INSTITUTIONS

051

NIL provides comprehensive ICT (Information and Communication Technologies) solutions for business environments, state administration, public institutions and service providers comprise: consulting and professional services, managed and learning services.

For over two decades, the NIL has been a shaper of new trends in communication and information technologies. Engineering excellence forms the core of company's success.

SOLUTIONS

DATA CENTER: optimal data center implementation with more than 15 years of experiences in private, hybrid or public cloud solution.

NETWORKING: core network solutions consists of LAN, WAN and wireless networks, or complex VPNs. Company also supply modern optical transmission systems, RFID solutions, and they assist in the transition to IPv6.

SECURITY: NIL's security solutions covers all phases of the risk management process, from consultancy services, life cycle countermeasures, and design, to the implementation and management. Our strength is also in the field of Information Security, with special focus on cloud security.

MOBILITY & COLLABORATION: comprehensive solution for mobile device management answers all needs of modern business networks and supports company's key elements of the business system from E-mail/calendar, Data-file exchange, Collaboration to other business applications.

Reference customers:

- Ministry of Defence, Ministry of Interior, Ministry of Public Administration
- Cisco Systems, Royal Moroccan Gendarmerie, Gendarmerie National Algérienne, NATO Belgium

SERVICES

CONSULTING: NIL's advisory services in the field of IT infrastructure (compute, network, storage, automation, self-service), Platforms (operating systems, APIs) and Information Security.

ASSISTANCE: NIL gives assistance to IT managers and provides an uninterrupted operation of the IT environment with numerous forms of preventive measures or, in case of an incident, the remedy of issues as soon as possible.

MANAGED SERVICES: NIL helps IT administrators achieve better exploitation of the existing infrastructure. Automating the processes and optimizing the configuration of IT environment.

NIL LEARNING delivers leading edge Cisco training to IT professionals and companies around the globe. Through field-proven experts — each both active engineer, content developer and instructor – NIL enhances the standard learning curriculum with real-life experience and help clients to maximize their training investment.

NIL

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NATO Code
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Employees

Turnover

The main group of activities
ICT

Other activities
System Integration, Consulting and Professional Services, Managed Services, Software Development, Analytics, IoT, Learning Services

Research field
R & D in the field of ICT



We are a team of skilled professionals with more than 20 years experience in software / hardware development, integration, data security and embedded solutions.

Having state of the art R&D in production of prototypes, small-scale and medium-scale high-tech products allows us to provide solutions on on demand basis. All phases of the product life-cycle are covered : starting with the design of printed circuit boards (PCB) to software development, production, assembly, testing and dispatch respective to the electronics, IoT, medical and manufacturing segments.

Our matrix structure allows us to support our clients with innovative ideas, thus improving time to market and reducing after sales support.

Our main advantages:

- Experience in the IT industry and various other (Manufacturing, Healthcare, Metrology, Telemedicine, Insurance, Security)
- Broad knowledge of innovative technologies and value added engineering on Windows, Linux, and mobile platforms
- Customized Quality Assurance (Testing Automation)
- Agile software development (.NET, C/C++, Python)
- Embedding (device communication BT, WiFi and Lora, integration with smart devices and cloud)
- Project management
- Support and consulting



Smart Data Security Adriatic,
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www.krypterix.si
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www.ascalab.com

NATO Code
/

Employees
77

Turnover
7.8 mio euro

The main group of activities
Engineering and NBC Equipment
Tools, Services
ICT, Security
Software development and integration

Other activities
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Research field
Software and hardware R&D

Biokoda d.o.o. is a software development company specializing in security, cryptography, databases and distributed systems.

Biokoda has two flagship products: **Biocoded** and **ActorDB**.

Biocoded is a highly secure end-to-end encrypted communication platform. It is comprised out of native apps (iOS, Android, Windows Phone, OS X, Windows) and server software. It supports messaging with text and multimedia, voice calls, conference calls, self-destruct messages.

Biocoded advantages:

- All-in-one package that requires no external clouds.
- End-to-end encryption with perfect future secrecy and perfect forward secrecy.
- Encrypted on-device storage with distributed keys.
- Private servers can link with each other or our global cloud to enable communication between servers.
- Advanced features like location sharing and a calendar organizer



ActorDB is a highly scalable distributed SQL database that can operate with no single points of failure.

ActorDB advantages:

- Strong consistency model
- Relational with JSON columns, common table expressions, foreign keys and triggers.
- Connectable over MySQL protocol

biokoda

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NATO Code
NCAG 1189Q

Employees
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Turnover
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The main group of activities
ICT, Software

Other activities
Education, R & D
Various Products & Services

Research field
Security, Cryptography, Databases

Comtrade is a leading IT company in the Southeast Europe with offices in 11 countries across Europe and North America.

Comtrade is a recognized name on the global stage, founded in 1990. Our technology centers are located in three major cities, one of those is Ljubljana (Slovenia).

Comtrade Group operates in the areas of software solutions, system integration and hardware distribution. With a proven track record of delivering industry-leading IT solutions and software engineering services, Comtrade has become a trusted developer of end-to-end technology products and solutions.

Comtrade helps companies across different industries reinvent their business models using innovative technology so they can successfully address business challenges, embrace digital transformation and become industry leaders in their industries. Our skilled and experienced engineers deliver added value services trusted by a number of Fortune 500 companies.

We work based on the open innovation partnership model.

Comtrade offers **geospatial solutions and data management services**.

We provide support for importing diverse raster and vector geospatial STANAGs into the system and output the data through various OGC services. The importing process supports pluggable services and includes the ability to orchestrate a custom workflow. Services are modular and independent and can be updated or replaced even at runtime.

Comtrade develops in accordance with AQAP 2110, including analysis, specifications, architecture, design, development, testing and verification.

Industries: Government including Defence, Finance, Logistics, Medical, Travel and Mobility and Telecommunications



Projects/references:

More than 900 clients in 11 countries worldwide.
NATO Alliance Ground Surveillance
Ryanair
HP
Itron
Financial Administration of the Republic of Slovenia
Supreme Court of the Republic of Slovenia
Post of Slovenia
Vanderlande
Citrix
Deutsche Telekom
Telekom Slovenia



COMTRADE GROUP

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NATO Code
NCAG 1189Q

Employees

Turnover

The main group of activities
Strategic software engineering services

Other activities
Big Data, Cloud Computing, Configuration and Change Management, Distributed Systems, Embedded System Development, Gamification, Geospatial Solutions, Integration Services, Project Management, Quality Assurance and Testing, Security, Smart Grid Technologies, Software Monitoring, Training

Research field
Big Data



REPUBLIC OF SLOVENIA
MINISTRY OF DEFENCE

CAPABILITIES OF SLOVENIAN DEFENCE COMPANIES AND INSTITUTIONS

055

XLAB's software solutions empower hundreds of businesses across the globe with their SaaS-based remote desktop ISL Online, 3D diagnostic imaging MedicView and telemedicine systems TeleTransfusion and visualization of spatial data 3D-GIS Gaea+.

In over ten years of existence, continuous innovation and extensive research activities have built XLAB a reputation of one of the strongest computer science research teams in Slovenia.

Our Civil Protection services

3D-GIS Gaea+ platform provides an extensible multilayer architecture for three-dimensional visualisation, manipulation and spatial analysis of the environment. A unique combination of open standards support and optimized rendering engine makes Gaea+ platform ideal for any geographic information system based on existing or new spatial data. It is based on open-source NASA World Wind Java.

Smart Locator is a standalone web based solution for an instant and accurate smartphone call location acquisition. It can be also integrated with other existing GIS solutions and installed on customer's private server.

Emergency Rescue Application is a solution for smartphones (iOS, Android, Windows mobile) that allows users to call the emergency number and immediately share their location with the emergency response center.

Achievements:

- Receiving an award from NASA - Real-Time Geospatial Renderer by Gaea+
- An award from EENA (www.eena.org) for OUTSTANDING EMERGENCY SERVICES INNOVATION
- Golden Award for the Best Innovations in Slovenia from the Chamber of Commerce and Industry of Slovenia



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NATO Code
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Employees

Turnover

The main group of activities
Software development

Other activities
Hardware development (UAV & IOT)

Research field
Artificial Intelligence, Big Data, Computer Vision,
Cloud Computing, Distributed Systems, GIS
Solutions, Security, Simulation & HPC, Smart Grid
Technologies, SW Monitoring, Turn Key Solutions,
Visualization



The company 4D Urisk BrE was established in 1994. Our main activities are: digital printing, big sized prints, digital cuttings, laser cutting and engraving, screen printing, offset printing, CNC cuttings and engraving, and many more. In the years of 2005 and 2006 our company expanded many other branches of marketing, development, representative and transport so we co-founded the company 4D LLC.

For Army department or the needs of the Slovenian Army, we developed a **protractor**, ruler, which is used by all soldiers and is the main part by a military operation. It passed all the testing and standards with the best grade so it became a must have equipment in the most army units. Moreover we developed a **headquarter ruler** for the officers and the junior officers. All the rulers are now used by all the members of the Slovenian Army.

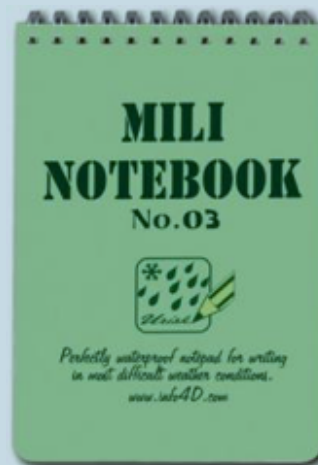
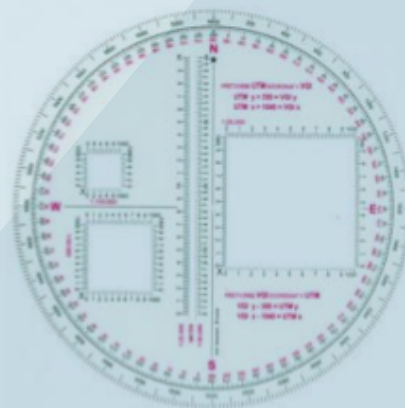
For the needs of the army, we developed a completely waterproof notebook (**MILI Notebook**) for writing in the worst weather conditions (snow, rain, under the water) with any types of pencils. It exists in three different sizes: Mili 1 8x12 cm, Mili 2 15x10 cm, Mili 3 15x21 cm. For this product we received a reward "the Zlati Ceh" which is the highest award by the Slovenian Chamber of Trade. Now we export them in many European and US countries.

By bunch of our products we represent a US company CAMTECH Caplock, which has the best camouflage creams and supplies. Their products are used by most of the members in NATO.

We are a representative for more than 20 (mostly American) companies which offer you the best equipment for a modern warrior or a professional user of outdoor equipment.

For the needs of the Slovenian Army we make signs, marking signs, billboards, stands, magnetic inscriptions for vehicles, targets, flags, and many more.

www.info4d.com



TRGOVINA S PROFESIONALNO OPREMO
Shop with professional equipment

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<http://www.info4d.com>

NATO Code
NCAGE 1157Q

Employees

Turnover
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The main group of activities
Optical Equipment and Opto-Electronics,
Test Equipment, Education, R & D,
Component Suppliers, ICT, Software,
Various Products & Services,
Simulation and Training

Other activities
/

Research field
/

Alpos Alu is one of the important producers of aluminum ladders and aluminum boxes in Europe, with a half-century-long tradition. Our high quality ladders and multipurpose boxes are manufactured exclusively from materials of European origin or verified. The products are tested and certified in accordance with the standards required by the German institution (TÜV).

Alpos Alu aluminium multipurpose boxes are the best option to be used as astorage or transport solution. We also could offer a variety of accessories to increase the usability, mobility and security of cases!

Our boxes are used for the industrial, commercial, military, public and private sectors, for a wide range of applications. The cases are economic solutions, while they deliver excellent durability and weight savings!

We have a lot experience and satisfied clients in field of production of boxes for special kind of use (different militaries in Europe, also Slovenian, police forces,off shore needs,aid and farmacy organisations,...) For the last few years needs and requirements in that field are increasing very much !

**We invite your company to visit and contact Alpos Alu!
Together we will find the best solution for your needs!**



alpos alu

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alu.alpos.si

NATO Code
NCAGE 1167Q

Employees

Turnover

The main group of activities
Manufacturing of aluminium products
aluminium MULTIPURPOSE boxes and
alluminium ladders for different kind of use.

Other activities
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Research field
/



REPUBLIC OF SLOVENIA
MINISTRY OF DEFENCE

CAPABILITIES OF SLOVENIAN DEFENCE COMPANIES AND INSTITUTIONS

058

FerroČrtalič plays active and indispensable role in development custom made solutions and production machinery as a leading company in the Surface finishing industry.

Aerospace and Defense industry, where no mistakes are tolerated the equipment must comply with the highest demands and standards. With satisfying high level requirements alongside our dedication to constant research and development (in-house laboratory and probably the largest shot peening cell in Europe). Our solutions consist of:

Automated, robotized and manual blasting (Sand/Shot blasting)

Sand/Shot blasting of tubular forms like gun and cannon barrels, gun components, chassis – combat armored vehicles, large caliber artillery shells,... Specials materials and structures are needed for withstanding high pressures and stresses. For this kind of product to have a long life cycle and in order to withstand severe conditions of use, special outer coatings and surface preparation must be applied.

Hardening the surface (Shot peening)

Shot peening of landing gear, turbine blades and components, springs, chassis components, structural components, gear, shafts,... This technology offers significant increases in part life, while protecting it against fatigue and stress corrosion. It is the most economical and practical method of ensuring surface residual compressive stresses.



ARSP&ARGB tandem system

Superior robotic peening

Through feed peening machine

Pipeblast

References:

TURKISH AIRLINES, TEC, PRATT&WHITNEY, ARCAM AB, ALSTOM



FerroČrtalič d.o.o.
Sela pri Dolenjskih 47
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Slovenia

Aleksej Metelko, Sales and Marketing Director

www.ferroecoblast.com

NATO Code
NCAGE 1234Q

Employees

Turnover

The main group of activities
Surface finishing industry

Other activities
Sand/Shot Blasting
Hardening the surface
Dry Ice Cleaning
Decintamination

Research field
Aerospace industry
Defence Industry

Geodetic Institute of Slovenia (GIS) is a leading Slovenian public institute for geodetic, cartographic, geoinformation, and hydrographic research, established in 1953. GIS plays a bridging role between public, private, international and research sectors. GIS is a Slovenian representative in EU platform EuroSDR.

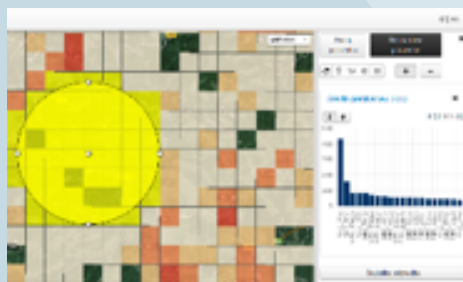
GIS is authorized to operate **national spatial data infrastructure services** such as distribution of real estate and spatial data, distribution of precise GPS/GNSS data, and dissemination of maritime hydrographic data. Projects are elaborated for the Surveying & Mapping Authority and for ministries and agencies responsible for environment, spatial planning, infrastructure, science, defence, transport, agriculture, culture, education, and regional development.

Recently, GIS is producing **geoservices, geodata and geovisualizations** for as diverse themes as national statistics, e-content for education and for the blind people, open data & reuse of data, digital geolibraries, e-health, space weather, demography of Roma population, e-tourism, volunteered geographic information for hazard mapping, small glacier mapping, augmented reality for real estate, safe food, navigation (land, sea, air) and animal tracking.

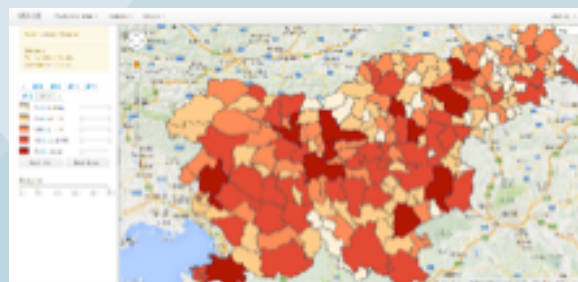
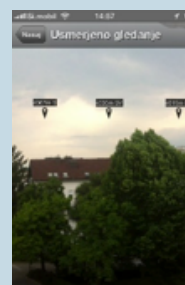
References:

StaGe

Cartographic application for spatio-temporal mapping and analytics with Statistics & Geography data. Grant by EUROSTAT & National Statistical Office. Includes on-line changing levels of detail and time series. Works with arbitrary spatial units and official statistical grid.



A mobile & augmented reality application showing real estate values and official transactions in the vicinity of mobile user on smart phone screen.



Awards:

GIS holds three awards for "Excellence in Cartography" by the International Cartographic Association.



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NATO Code
/

Employees

Turnover
**

The main group of activities
geoinformation services, spatial data, e-content, mapping, location based services, GNSS, geodesy, real estate data, photogrammetry, nautical hydrography

Other activities
/

Research field
/

HMEZAD JEKLO d.o.o. RUŠE is one of the oldest forging mills and manufacturers of forged hand tools in Europe. With 175 years of tradition supplemented with modern technology we are placed in the top of European producers. Today our products are present in more than 20 states of Europe.

Our production program is including two sections.

a) FORGED HAND TOOLS

These products are made by manual forging, and they are designed for most demanding and professional customers, which are looking for quality in the first line. Main characteristics of our tools are manual forging, special tempering and finishing of the tools according to the technology invented by own research and development. The tools are suitable for the forestry, agriculture and gardening and general proposes.

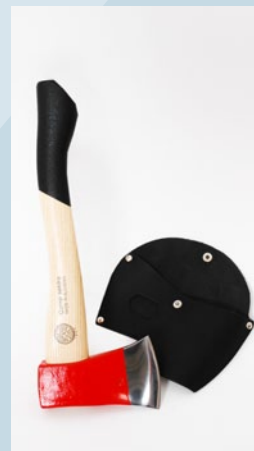
b) FORGINGS

The section of forgings is a special part of the production for the purpose of the car industry, industry of agriculture machines and shipbuilding. The quality of the products is assured with the modern technology and equipment and with the permanent quality control.

We are aware, that every market and every customer has its own specifics which we are taking into consideration and which we are respecting. Therefore we have developed special kinds of tools for different markets according to local requirements on one side and we are developing an adequate approach to the different markets with our customers and partners on the other side.

References: AD 4 Merkur, Mercator tehnika, Bauhaus, AD10: Krone, Muthing, Cimos, Unior

Products, suitable for Army – NATO: axes (classic, camping, fireman axe, pick axe), hamer, shovel, garden rake, fork...



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NATO Code
/

Employees
**

Turnover
**

The main group of activities
Engineering and NBC Equipment, Tools, Services
Component Suppliers

Other activities
/

Research field
/

Lindab IMP Klima Group is a recognized international provider of solutions and products for all types of buildings in the field of heating, ventilation and air conditioning. As a part of the Lindab Group we are committed to the development of innovations which improve the quality of life in the area of living comfort.

With economical, energy saving and environmental friendly solutions and products we contribute to the sustainable development of natural and social environments. Within the corporate structure Lindab IMP Klima represents a group of companies for research, development and production of HVAC equipment with an international sales network and qualified technical support teams.



In the area of indoor climate solutions we boast more than 50 years of tradition. In the past decades we have grown from a manufacturer to a provider of product and system solutions for different types of buildings (such as business and public buildings, luxury hotels, shopping centres, hospitals, sports complexes, industrial and residential premises) and turn-key solutions for rooms with specific demands (clean rooms, swimming pools, hazardous industrial areas, etc.). Our product range focuses on the following product groups: air handling units, air distribution and regulation units, heating and cooling units

and clean room technology. In the field of complex HVAC solutions we look back at numerous larger projects and deliveries to 80 countries worldwide.

Among our strongest advantages is the ability of rapid development of individual project solutions and customized products for buildings and rooms with most demanding requirements. The adequacy of such tailor-made solutions is tested and proven in our own R&D centre, Lindab Institute Klima. With its 15 modern equipped laboratories the latter represents one of the largest industrial research facilities in this part of Europe.

Worldwide references

Buckingham Palace Road 121 -135, London
Universite Jussieu, Paris
Klinik Heilbronn
Hotel Sacher, Vienna
Pediatric hospital, Ljubljana



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NATO Code
/

Employees

Turnover

The main group of activities
Various Products & Services

Other activities
Education, R & D, Engineering, Services,
Training, ICT, Software

Research field
Automation, robotics, control engineering,
Production technology, Energy research,
Material Technology, mechanical engineering,
hydraulics, vacuum technology, vibrations,
acoustical engineering



P TEAM Company was established in 1991 and has grown in one of the leading producers for lifting and fixing equipment in region. We are specialized in products made of polyester webbing. Our experience and satisfied customers are the guarantee for the quality and usability of our products. Our clients range from the world's largest corporations to smaller companies.

We have quality control system ISO 9001 implemented in development, manufacturing and sale of equipment for lifting and fixing loads. This standard is approved by the TÜV as leading international group. With ISO 14001 we are committed to responsible environmental management.

Our production range includes the following product groups of standard or customized size:

- Lifting slings
- Lashing
- Transport and fixing nets
- Lifting slings for single us
- Lifting clamps and grabs for construction, wood, metal and chemical industry
- Sports and recreation program

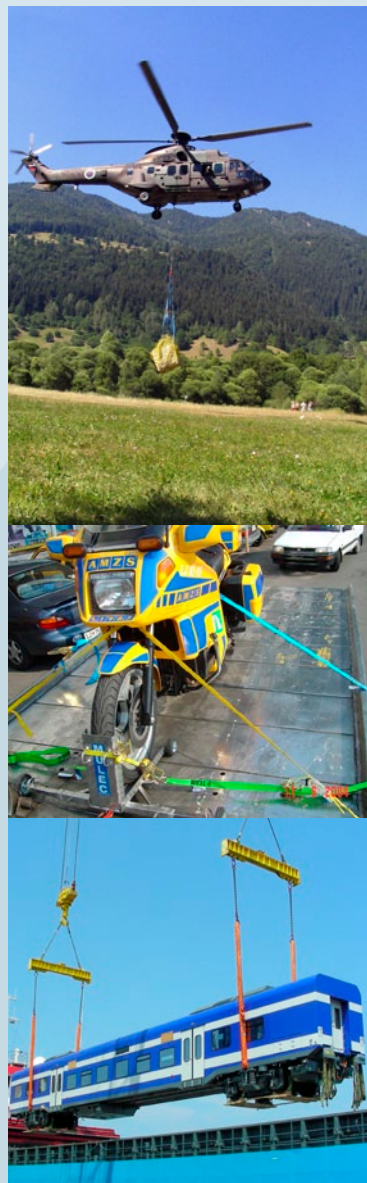
All products are equipped with the necessary documentation (User's manual and CE declaration) and on-demand of customer with EAN or NATO codes.

Projects:

- development and production of self-balancing lifting device
- development and production Street Workout Park Trbovlje

References:

- MORS, transport net, long lines
- Luka Koper, lifting beams, lifting equipment
- Nuklearna elektrarna Krško, lifting equipment
- Elan d.d., lifting equipment
- Kolektor ETRA, development and manufacture of lifting equipment



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NATO Code
NCAGE 1105Q

Employees
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Turnover
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The main group of activities
Lifting and fixing equipment

Other activities
Sports and recreation program

Research field
Developing equipment for sport,
lifting and fixing



TIPS d.o.o. is one of the leading manufacturers in the field of development and production of ground support equipment for airports.

It is recognized by high quality and advanced technology used to make their every product safe and user-friendly. Every product is custom-made to best suit the needs of each individual customer.

TIPS products are designed in accordance with European regulations (Machine directive 2006/42/ES), IATA recommendations, SAE Standards and compliant with the latest EN safety standards. Besides adhering to all applicable standards and regulations, the company devotes a lot of attention to the development of new and better operating modes to make their equipment as efficient and cost saving as possible.

The equipment is made of top quality materials and components provided by recognized European manufacturers. All materials and components are regularly inspected and final products are always tested before commissioning to ensure their quality and proper functioning.

In 2014/15, TIPS participated on a Chamber of Commerce's call for best innovations, where it received a golden award on a regional level and a silver award on the national for one of their latest innovations, the diesel tow tractor named Honey Badger. Later on, the tow tractor was upgraded to an electro version to offer their customers more environmentally friendly alternative. In October 2015, TIPS officially introduced to a wider public a brand new passenger stairs. The product already raised a lot of interest among ground handlers, who were able to admire the stairs at Inter airport Exhibition in Munich and see exactly why this product is the latest sensation amongst GSE.

In this year we made 52 successful projects, a few of them are for next customers:

- 7 units Passenger stairs for Copenhagen Airports
- 2 units Passenger stairs for Airport Bremen
- 2 units Passenger stairs for Airport Vienna
- 2 units of Belt loader for Airport Salzburg
- 1 unit of Belt loader for Airport München

TIPS will continue to put their best efforts into innovative thinking to find creative new solutions that would bring all their products as close to perfection and customers' demands as possible.

TIPS priority is to solve problems and make our customers' work easier.



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NATO Code
/

Employees

Turnover

The main group of activities
Ground support equipment

Other activities
/

Research field
/

VTZ d.o.o. company strives to offer customers a full range of technical security services. We design, install and maintain intruder alarm systems, video surveillance systems, sensed security fences and perimeter protections, access control systems and fire detection systems. We also have our own R&D department.

We are esteemed for: Project orientation and designing of special solutions for your security problem. Project according to requirements of the security profession, standards and according to all security risks. Design and implementation of security systems - in compliance with all requirements and desires. Finding the most cost effective solution for you. Providing all the necessary certificates for all installed technical security systems that you need.

The company offers on high-quality equipment and services that are enriched by experience, tradition, reliability and innovativeness. In 25 years from establishment we have successfully realized project with Ministry of defence, Nuclear Power Plant Krško, Port of Koper, Government of the Republic of Slovenia, Ministry of the Interior (Schengen border) and banks branches.



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NATO Code
NCAGE 1104Q

Employees
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Turnover
**

The main group of activities
Various Products & Services

Other activities
Engineering, Services, Training
ICT, Software

Research field
/

Dr DM Ltd, Simulation and analysis of societal dimensions

In order to react in **timely** and **professional** manner security elements have to prepare themselves over the time by the proper training. The most efficient way is to certify individual security forces true intensive **computer assisted exercises (CAX)** course in their own expert area (Crisis Response Operations, Emergency management and Corporate Security).



Lead researcher, **Dr. Dušan Marinčič** has a PhD since 2005 in political science and provides exceptional expertise in the area of political and social science, especially for the crisis response operations, emergency management and corporate security, where societal analysis of involved municipalities had an essential role.

A part of the team is also **univ. Andreja Šabić**, a bachelor of political science (defence studies) has now for more than 5 years' experience and help developed the methodology for multi-variant analysis for municipality level. She has analyzed several countries worldwide and made an appropriate risk assessment.

Dr DM Ltd offers to all security forces:

- **Training methodology** for decision making process for Crisis Response Operations, Emergency Management and Corporate Security.
- **Scenario and exercise documentation**, and mentorship throughout the exercise process.
- Best practice for **strategic and operational planning process**.
- Planning, organizing and delivering CAX in collaboration with the client, on the basis of ISO standards 22320, 31000 and 31010.



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NATO Code
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Employees
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Turnover
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The main group of activities

We provide SME for Decision making process for Crisis Response Operations and Emergency Management

Other activities

Operational planning, Simulation&Analysis, R&D

Research field

CAX (CPX), LIVEX, 3 D MSM GAEA+

Company and the trademark Guardiaris were established in the year 2006. Guardiaris' core business is development and co-development of simulation software and mobile training simulation systems with its mission to enhance training efficiency and soldiers' readiness.

Our main unique selling proposition (USP) is to provide most immersive and cost-effective training tools on the market by merging highly efficient methods and procedures with the modern information management tools. Key development and research fields include 3D graphics, virtual reality technology, real-time data processing and rendering, artificial intelligence and software engineering.

The package of HW & SW composes an advanced simulator taking place in a virtual environment. It represents an affordable, state of the art invention available to governmental and non-governmental organizations with which we have established an excellent working relationship. Our vision is to draw the attention of the worldwide audience to the importance of effective armed forces training and demonstrate that with the availability of sophisticated, yet easy to use tools, a path towards a safer world is a reality.

TECHNOLOGY

Guardiaris closely cooperates with various institutes and research agencies from Slovenia. All of our simulators are uniquely designed by experienced team of engineers and consist of HW components which are "guardiarized", meaning that we incorporate the required computer components into replicas of real weapons and bundle them together with cutting edge SW technologies using our in-house knowledge.

By combining replicas of realistic equipment, connected wirelessly to virtual reality we have greatly increased the effectiveness, efficiency and safety of training operations. Guardiaris' proprietary real-time technology enables exact recreation and simulation of all parameters needed for successful training process, regardless of trainees' actual location. Our high-end technology enables fully functional

interaction in the virtual environment, with complete visual and aural information for full immersion into the virtual environment. Furthermore, the system enables training and education under conditions that are difficult to reproduce and train in real life, such as urban areas, sudden changes in visibility and weather conditions. Additionally our technology has a modular design allowing fast modifications and upgrades.

TRAINING SYSTEMS

All described technology allowed us to develop a multitude of projects for various clients from EU, USA, Middle & Far east, the most important being:

- **Armored Warfare Training System**
- **Mobile Training System RGW90 and PZF3**
- **Small Arms Simulator**
- **Remote Weapon Station Trainer**
- **Artillery Simulator – developing**



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NATO Code
NCAGE 1236Q

Employees
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Turnover
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The main group of activities
Educational, simulation and Training
R & D

Other activities
IKT, Software
Autonomous and Robotic Systems

Research field
Optical equipment and Opto-Electronics

C-Astral is an aerospace enterprise and solution provider based in Ajdovscina, Slovenia, the “hub” of advanced aerospace development and integration in this part of the world. The company is one of the market leaders in advanced small unmanned systems (UAS/UAV) and services field and has a global presence, a robust research and development program and advanced integration/customization capacities.

The company is built around the fields of expertise and practical experience in aerospace, unmanned systems, electronics and sensor development, aerial based surveying and processing, remote sensing and telecommunications. The company has been active also in the R&D field, collaborating with institutions across the European Union and in the United States and is actively working on several larger research support projects in the remote sensing field, including work in the Antarctic.

C-Astral operates a software and hardware laboratory for aerodynamics and systems integration work and a prototyping CAD/CAM workshop facility for composite and metal materials work, modeling and systems integration. C-ASTRAL was responsible for the first Slovenian Unmanned Aircraft System flight in 2005 with the Spectral System platform. C-Astral is a dynamic aerospace and unmanned systems partner with systems operational, generating revenue and flying on all continents, including Antarctica and over the Arctic.

PRODUCTS

The C-ASTRAL unmanned systems have the following common characteristics:

- **Carbon / Kevlar / Vectran construction**
- **100% Autonomous**
- **Up to 3h Endurance**
- **Automatic parachute landing**
- **Terrain based guidance**
- **Safe catapult launch**
- **Rain proof**
- **Wind resistance 60km/h**
- **Operational temp -25°C to +45°C**
- **Tracking antenna system**
- **Autonomous convoy following capability**



BRAMOR C4EYE

The field proven Bramor C4EYE UAS line is appropriate for operations where real-time or near real time video observation and surveillance capability is of utmost importance. With an endurance of 3 hours, a standard datalink of 30 km and advanced EO/IR sensor, with an optional laser illuminator and tracking capabilities, the C4EYE is easily the most capable and affordable small UAS in its class in the world, fielded by several NATO and non nato sovereign actors, private organizations and NGO's. The system is ITAR controlled due to its capabilities.



BRAMOR rTK/gEO

The BRAMOR rTK (PPK Post Processing Kinematic) UAS is ideally suited for surveying and remote sensing applications that need a quick and industry leading high precision set of results down to sub-centimeter level also in the absence of a grid of ground control points. The rTK/gEO systems are fielded in more than 40 countries on all continents and have been responsible for some of the most precise and complex surveys done by a small UAS up to now. The unrivaled 2.5hr endurance enables the system to survey areas twice to three times as large than the nearest competitors.



C - A S T R A L
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NATO Code
NCAGE 1198Q

Employees
**

Turnover
**

The main group of activities
Autonomous and Robotic Systems

Other activities
Vehicles, Vessels, Aircrafts & Accessories
R & D, Engineering, Services, Training
ICT, Software
Various Products & Services
Simulation and Training

Research field
Aerodynamics, guidance and navigation control,
IT, data processing



REPUBLIC OF SLOVENIA
MINISTRY OF DEFENCE

CAPABILITIES OF SLOVENIAN DEFENCE COMPANIES AND INSTITUTIONS

068

The Maribor Faculty of Electrical Engineering and Computer Science (FERI) provides students with knowledge based on internationally recognized scientific research work, thus enabling them to be successfully integrated within future working environments in Slovenia and/or abroad.

The FERI vision is:

- to strengthen the positions of our internationally-recognized university education and research institutions within the fields of electrical engineering, computer science, information technology, communications, media, telecommunications and mechatronics, throughout Central Europe.
- to maintain high quality and be of interest for undergraduate and graduate students from Slovenia and abroad.

Research work at FERI is predominantly organised into 8 research programmes. Various defence research activities include:

- Information extraction from Synthetic Aperture radar data
- Moving object detection and activity interpretation
- Simulation of tactical networks
- Object detection using Ground Penetrating Radar (GPR)
- Formal Verification of Safety-Critical Systems
- Radiation and Fault Tolerant Electronics, Components and Embedded System Design
- On-Board Data Handling System Design for Space and Ground Segment Applications
- Error Mitigation based on Fault Detection, Isolation and Recovery Technologies
- Antennas for Space and Ground Segment Applications
- Software Defined Radio Systems Design for Space and Ground Segment Applications
- Digital Signal Processing and Hardware Accelerated System Design
- Electromagnetic Simulations
- EMC and ESD pre-compliance Testing
- Vacuum Thermal Cycling of Electronics, Components and Embedded Systems
- Power generation, transmission and distribution, renewable and alternative energy sources, local and self-sufficient energy supply, energy management

- Characterization of magnetic materials, magnetic fluids and magnetic nanoparticles
- Electromagnetic field measurement (0-18Ghz) in the space Atmospheric electrical discharges connected with grounding systems
- Autonomous and Robotic Systems
- Intervention simulator and training tool (SIN)
- Computer-based virtual environments for conceptual learning and training
- Monitoring of psychophysical condition, attention, and level of fatigue
- Unobtrusive sensing of human functional-health parameters
- Development of state-of-the-art processing methods of remote sensing data such as laser-based Light Detection And Ranging (LiDAR)
- Data visualization, compression and parallel processing
- Developing new software in the field of Geographic Information Systems (GIS)

The faculty has over 279 employees.

The yearly budget is over 12 Million EUR incoming from the private sector (~11%, R&D), from public educational activities (~66%) and public research activities (~23%).



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NATO Code
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Employees

Turnover

The main group of activities
R&D, IKT, Software, Optical Equipment and Opto-electronics, Autonomous and Robotic Systems

Other activities
Educational, Simulation and Training

Research field
see R&D fields



Institute of Informatics is part of UM FERI and is an internationally recognized, ambitious institute, which successfully transfers top ICT knowledge and research results into industry.

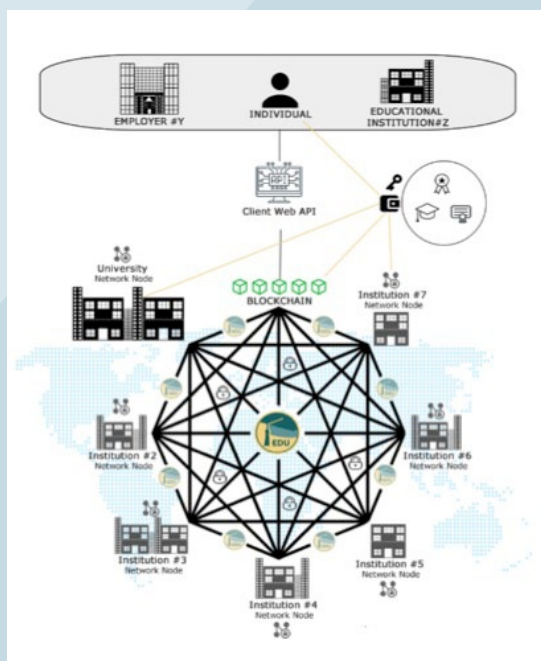
By strongly interlacing ICT disciplines we are creating an arena of deep knowledge, where their synergies allow for the innovative breakthrough. The institute has over 25 years of experience in implementation of R&D projects related to analysis, design, implementation, integration, and evaluation of innovative software solutions. It has a leading role in the world in processing massive amounts of structured and unstructured data, as well as designing transparent classification models.

Top expertise:

- AI and machine learning approaches, algorithms, methods and tools.
- In-depth knowledge on transferring emerging technologies (e.g. blockchain) into practice.
- Large experience in implementing and managing IT projects.

Recent projects

- **Arivu** - AI powered system, that enhances the work of information gathering from various document sources with the use of text mining, natural language processing and deep learning.
- **EduCTX** - A global, decentralized platform for assigning, managing, storing, sharing and showcasing digital micro certificates based on blockchain technology.
- **IQDom** - Technological solutions linked together by the "Intelligent home of a new generation based on smart devices".
- **EkoSMART** - The smart city ecosystem with all the mechanisms necessary for efficient, optimized and gradual integration of individual areas into a unified and coherent system of value chains.
- The Definition of Standard Procedures for the Development of Military Information Systems - The software process model for developing solutions under the command and control domain.
- **KC CLASS** - Service and product solutions in the area of cloud computing. The focus is on safety, mobility, multi-tenancy, identity management, reliability, data management and open interfaces.
- **24alife** - All in one service to prevent stress and promote a healthy personal and work lifestyles.



University of Maribor

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ii.feri.um.si/en/

NATO Code
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Employees

Turnover
/

The main group of activities
Education, R & D
Other activities
ICT, Software

Other activities
/

Research field
/



REPUBLIC OF SLOVENIA
MINISTRY OF DEFENCE

CAPABILITIES OF SLOVENIAN DEFENCE COMPANIES AND INSTITUTIONS

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