Hardware

Software

Systems

Solutions

INSTITUTE VLATACOM
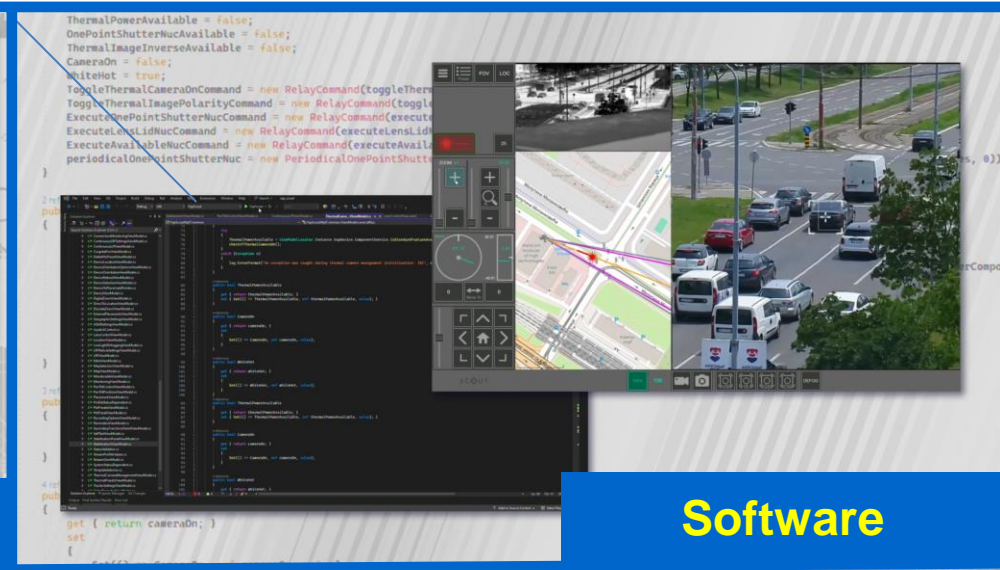
- ➢ **1997** Company founded in Belgrade, Serbia

- ➢ **2002** Infrastructure for eDocuments in Serbia

- ➢ **2004** First hardware product Vlatacom Document Reader – VDR

- ➢ **2005** Intellectual property sold to Motorola

- ➢ **2008** First Projects abroad

- ➢ **2010** Got license for production & trade in military equipment

- ➢ **2011** Accredited as R&D Center

- ➢ **2015** Accredited as R&D Institute (reaccredited 2019, 2023)

- ➢ **2023** We have more than **200** employees among which
  - ○ **30** PhD
  - ○ **33** at PhD studies
  - ○ More than **100** MSc and dipl. ing.

- ➢ **2023** We have established UAE office Vlatacom Technology, Abu Dhabi

- ➢ More than 99% income from abroad in last 10 years

INSTITUTE VLATACOM

ISO 9001 — CERTIFIED COMPANY
2006.

ISO 20000 — CERTIFIED COMPANY
2014.

ISO 14001 — CERTIFIED COMPANY
2016.

ISO 27001 — CERTIFIED COMPANY
2012.

REPUBLIC OF SERBIA

MINISTRY OF DEFENSE

SECTOR FOR MATERIAL RESOURCES

ADMINISTRATION FOR DEFENSE TECHNOLOGIES

In accordance with Article 16 of the Law on the Production and Trade of Weapons and Military Equipment), Official Gazette of the RS, number 36/18), and based on the decision of the Minister of Defense (Act of the Directorate for Defense Technologies SMR MO P number 1637-16/23 00) 01/04/2024) is issued

PERMIT

reg. no. 2 in 2024.

......VLATACOM INSTITUTE / 17167120..

(abbreviated name of the legal entity / registration number)

for the production of weapons and military equipment in the area of:

research, development and production of means of telecommunications and crypto-protection and electronic equipment and its components (means for electronic and anti-electronic effects, radars and other means specially designed for the military purpose), specialized equipment for military training or simulation of military scenarios, software specially designed for military purposes, development and acquisition of technologies for production, repair and improvement of aerial bombs, lighters and unmanned aerial vehicles, production of technical documentation for the production of NGOs for the specified means and equipment of capacities for the production of NGOs in the mentioned area

with a validity period of **five** years.

First edition: 2019.

Valid edition: 2024.

Valid until: 2029.

MINISTER OF DEFENSE

The importance of this permit is confirmed by the obligation to inform the issuer of the permit with a new document about the status of the service, which would then restore the existing status.
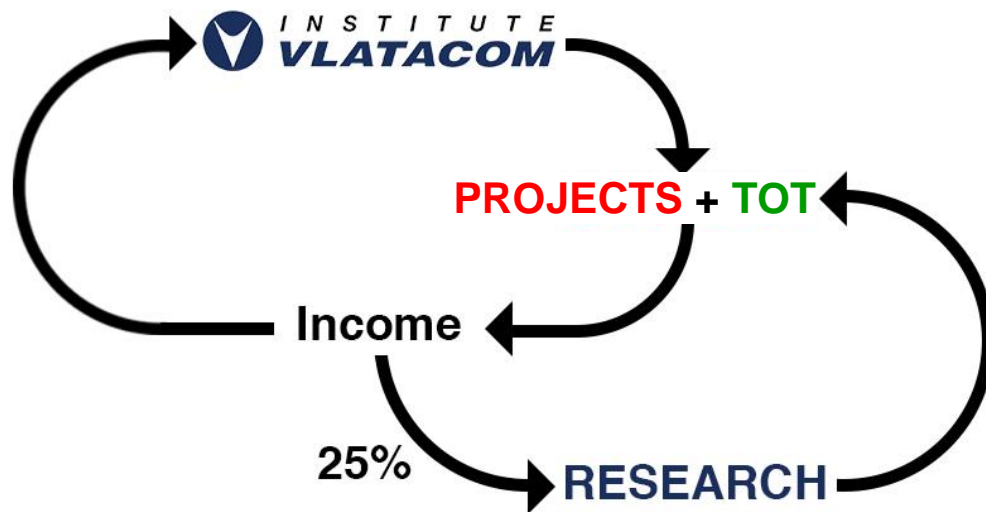
Company motto:

Research is creative and systematic work undertaken to increase the wealth of **knowledge** and apply this to devise **new applications.**
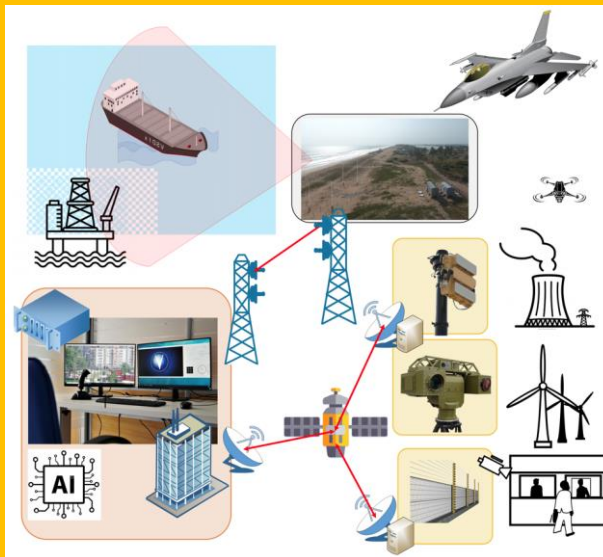

- ➤ Permanent education and professional guidance of all employees
- ➤ Research oriented towards **innovations** and new products for the **World Market**

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Electro-optics

Maritime security

System integration

Vlatacom Institute is focused on development of cutting-edge technologies and products

Crypto

Technology transfer

Scientific result	Quantity
Monographs	7
International journal papers	34
National journal papers	20
International conferences	129
Technical solutions	36
Doctoral dissertations	8
Total	**234**

Title	Number
University professors	14*
Senior research associate	6
Research associate	7
Research assistant	7
Junior research assistant	14
Principal technical associate	8
Senior technical associate	21
Technical associate	13

*Note: some researchers have both University and Institute title

➢ The *mission of the Scientific council is to lead research politics of the Vlatacom Institute*

➢ Total 234 scientific result achieved in previous five years (2019 – 2024)

➢ According to Serbian Ministry of Education, Science and Technological development 76 employees have Institute title (scientific or technical)

➢ Additionally there are more than 120 intellectual property items: new algorithms, application software, hardware solutions, new measurement methodologies, original work flow procedures, etc.
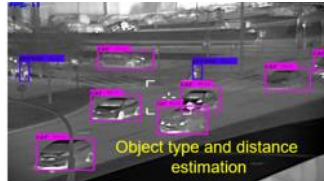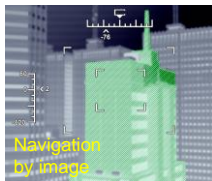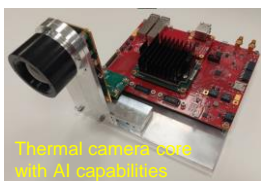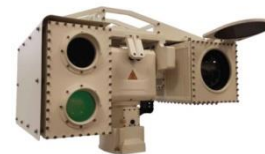
- Image sensors (visible, SWIR, MWIR, LWIR)

- Uncompressed raw digital video signal acquisition

- Real-time image processing

  – Motion detection

  – Automatic object tracking

  – Image enhancement

  – Video stabilization

  – AI based target detection and classification

- Additional non-image sensors option (LRF, DMC, GPS)

- Pan tilt platform with Nx360° azimuth rotation and gyro stabilization

- Customizable form factor for perfect match with the application

Thermal camera core with AI capabilities

Navigation by image

Object type and distance estimation

vVSP for distributed signal processing
*FPGA / GPU / multicore CPU /
Networking / analog and digital control*

Multi Sensor Optical Surveillance System (vMSIS)

R & D

Communication Encryption Device (vREBECCA) and Key Distribution System (vKDD)

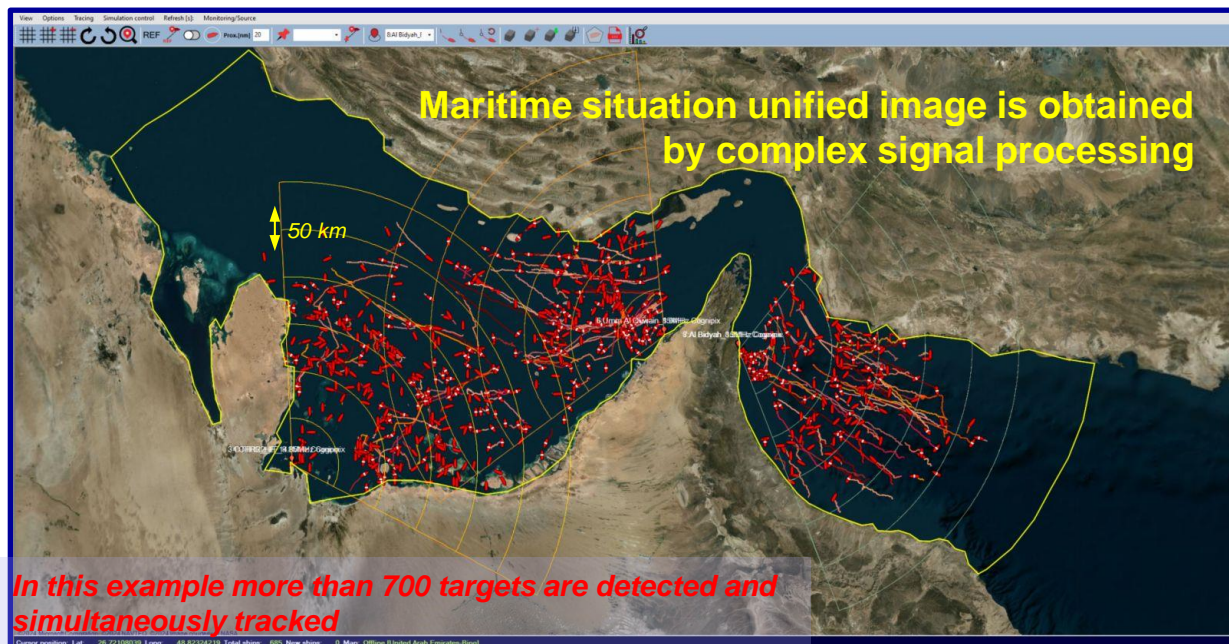Voice & short message encryption device (vPCP-V)

Document Encryption Device (vPCP-FC)

Vendor independent voice encryption for HF-radio (vHF-crypto)

Novel and legacy technologies for Cryptographic Keys Management

Maritime situation unified image is obtained by complex signal processing

50 km

In this example more than 700 targets are detected and simultaneously tracked

All algorithms, hardware and software are solely Vlatacom Institute's intellectual property

Dual frequency transmitter Antennas array

Dual frequency receiver antenna array and shelter

Rx board for four channels

Inside shelter

Shelters

INSTITUTE VLATACOM

R & D

- Scalable, configurable, modular
- Applications:
  - Green border zone control
  - Urban and non-urban area surveillance
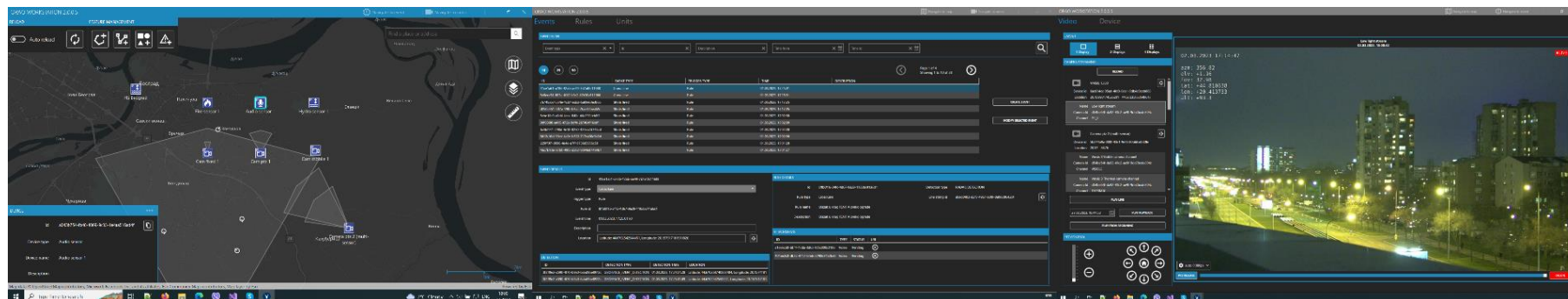 - Large facility monitoring
  - Anti-drone systems

Enter/exit restricted area

Fire incident

Traffic violation

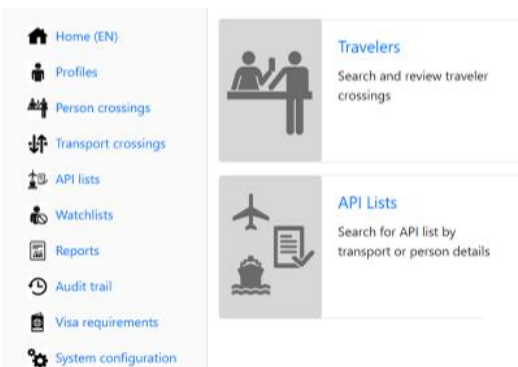Spotted wanted target

Violent crime

➤ Vlatacom Integrated Document Production System (VIDPS) and Vlatacom National Registry (vNR) is a turn-key platform for:
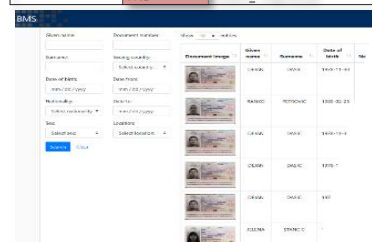
➤ Creation, management, and maintenance of trustful identities and citizen documents

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PROJECTS

➤ Vlatacom Border Control System (vBMS) is a turn-key platform for:

➤ Registration of passenger and vehicle border crossings and facilitation of all activities related to this function

Verification type	Result code	Message key	Indicati
WATCH_LIST	PASS	NO_WATCHLIST_HITS	✓
	FAIL	HAS_WATCHLIST_HITS	!
DOC_VALIDITY	PASS	DOCUMENT_VALID	✓
	FAIL	DOCUMENT_EXPIRED	●
VISA_REQUIREMENT	INFO	TRAVELER_IS_NATIONAL	
	INFO	VISA_NOT_REQUIRED	
	WARNING	VISA_REQUIRED	
VISA_DATA	PASS	HAS_VALID_VISA	
	FAIL	NO_VISA	
NATIONAL_DOC	INFO	NOT_NATIONAL_DOC	
	INFO	NATIONAL_DOC_V_NOT_PERFORMED	
API_LIST_PC	INFO	NO_API_LIST	
	PASS	PASSENGER_IS_ON_API_LIST	
	WARNING	WRONG_NAME_OR_DOB_FOR_DOC	
	FAIL	NO_PASSENGER_WITH_DOC	
OVERSTAY	PASS	NO_PREVIOUS_OVERSTAYS	
	WARNING	HAS_PREVIOUS_OVERSTAYS	
	PASS	NO_OVERSTAY	
	WARNING	NO_DATA_FOR_ALLOWED_TO_STAY_I	
	FAIL	PERSON_OVERSTAYED	

DMO

REPEATER

GATEWAY
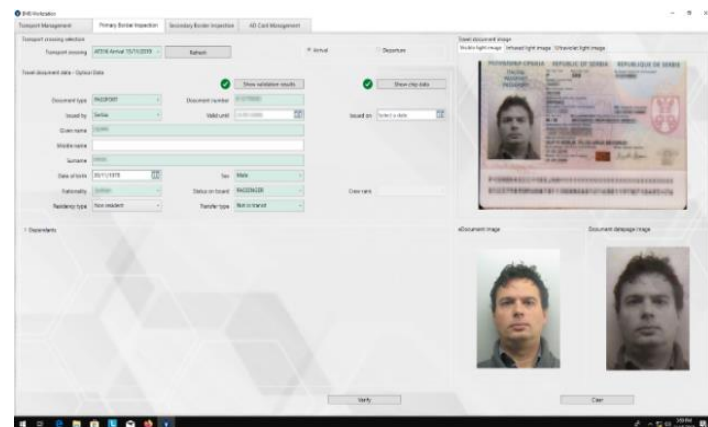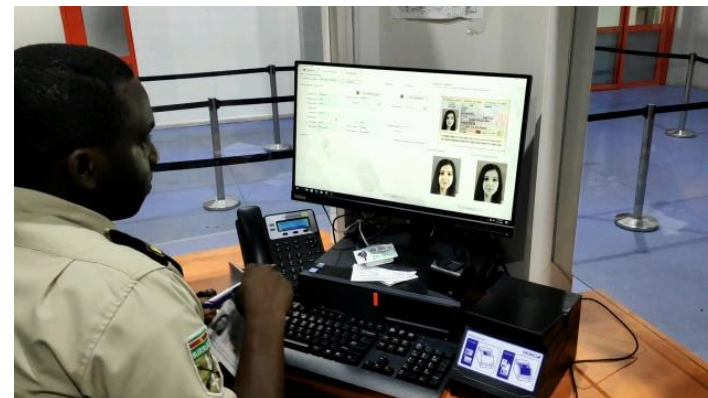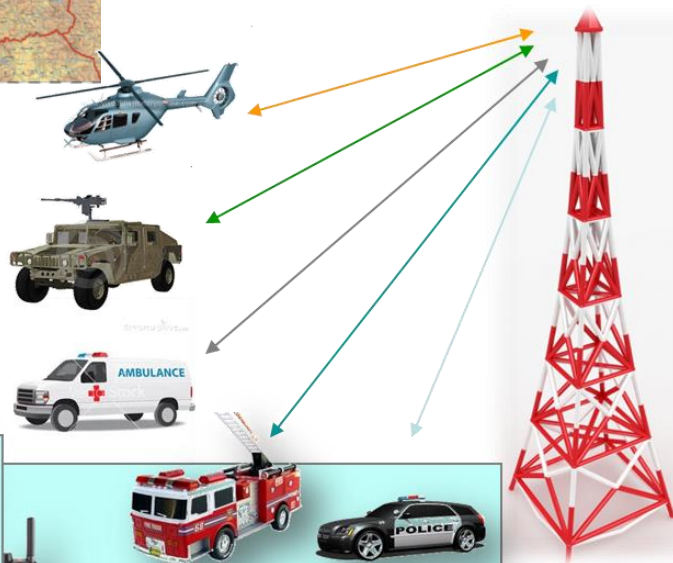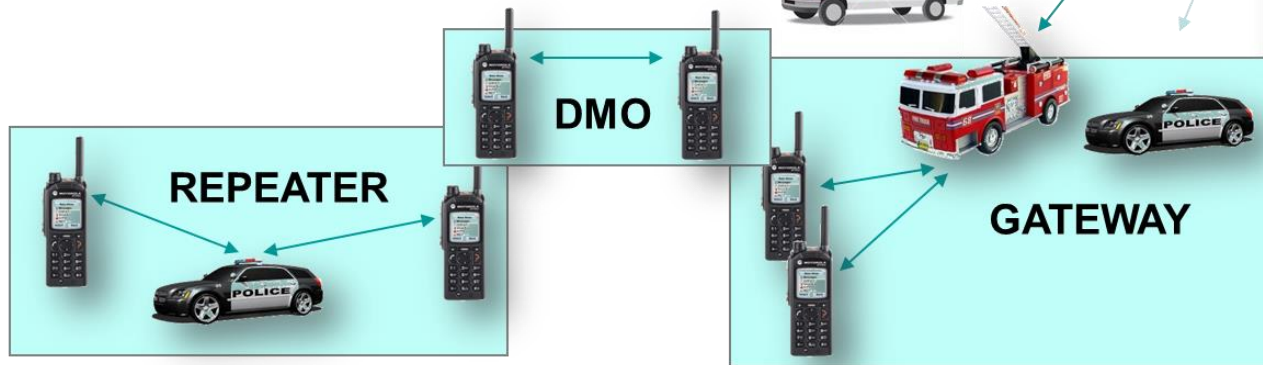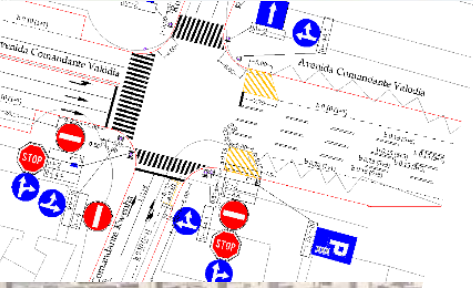
Traffic monitoring and control projects have evolved to smart city projects with extensive application of AI systems
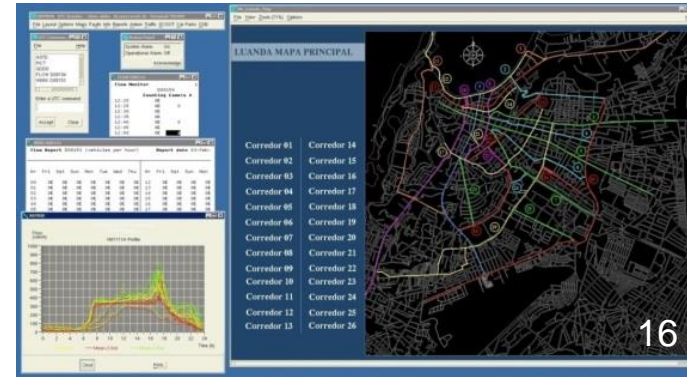
➤ As a research and development institute, our activities primarily focus on innovation and the development of products that often fall under export control regulations

➤ Our company is active in developing advanced technologies, with a special focus on security, mainly internationally
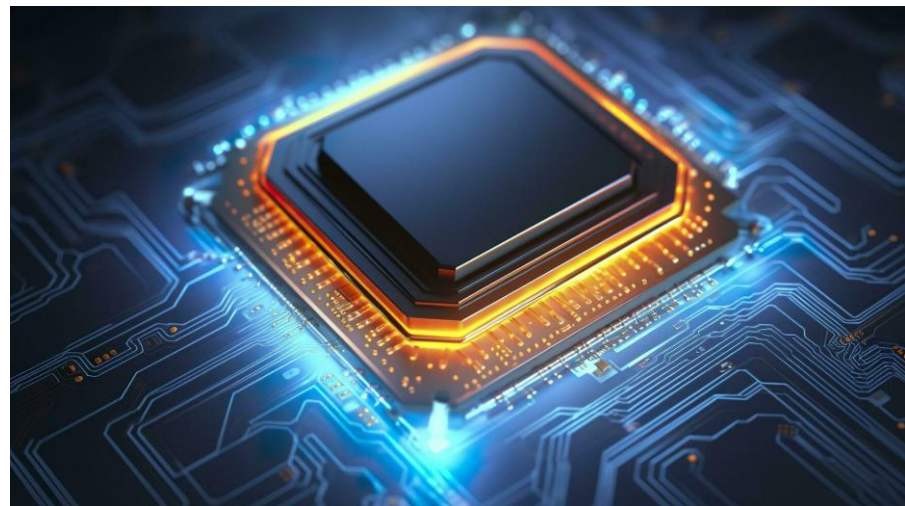
➤ Like many other companies in this field, we face numerous challenges, especially in complying with both international and domestic regulations

➤ Our mission is to contribute to global security while remaining competitive in the global market

- Dual-Use Projects

- Participation in Trade Shows

- Sending Goods for Servicing and Returning to the Client

- Re-export of Foreign Equipment

➢ One of the biggest challenges we regularly encounter is the lengthy and often complicated process of obtaining export licenses

➢ As is widely known, any product or technology that has dual-use potential, is subject to strict international and national controls

➢ These controls are necessary but can become a significant obstacle for companies like ours that develop new technologies in a dynamic environment

➢ During the development of vOTHR, we faced a situation where one of the system's key components was supplied by a German company

➢ The export license for this component took months to obtain, which delayed our projects

➢ Consequently, we made the decision to allocate internal resources to develop the component ourselves

➢ Although we successfully completed the development, when we calculated the total costs, it turned out to be more expensive than continuing to purchase the component from our German partner

➤ For a research and development company, speed is crucial

➤ Our ability to quickly respond to market changes and implement innovations can be seriously compromised if we face lengthy procedures for obtaining licenses

➢ Another challenge we face is the growing risk of turning to China, where the process of obtaining necessary materials and technologies is much simpler and faster

➢ As you know, China is becoming an increasingly important player in the global market, and given the recent free trade agreement between Serbia and China, this option is becoming more attractive to many companies

➢ This situation brings several challenges

➢ First, Chinese products and technologies often do not adhere to the same standards as those from Western countries, which can lead to issues with quality and compliance with international regulations

➢ In the long run, reliance on simpler but perhaps less regulated sources may reduce industry standards

➢ Additionally, the growing orientation toward the Chinese market could jeopardize our relationships with Western partners

➢ Although it is currently easier and faster to obtain necessary materials from China, this shift could have long-term consequences on our position in the global market, particularly in the context of geopolitical tensions between the West and China

➢ Our company has extensive experience working with international partners, allowing us to see how processes unfold in different parts of the world

➢ Interestingly, even in the United States, where regulations are often very strict, the process of obtaining export licenses can be faster than in our country

➢ The Bureau of Industry and Security (BIS) has a practice of conducting post-use verification of dual-use goods, which is a good approach, provided it speeds up the licensing process

➢ The Italian customs halted the delivery of a radar system we purchased from an Italian supplier, despite them having the necessary export license

➢ We were required to provide customs with a copy of the contract with the end user, an EUC, and the export license for the end user before the goods were released

➢ There were suspicions of military collaboration with Russia, which increasingly causes complications, although this is not the case

➢ The issue was resolved after a few days, but we had to engage a new truck for the delivery

➢ Training on export control compliance

➢ Courses, seminars, workshops and webinars to help exporters understand their obligations under export control legislation

➢ The Goods Checker Tool helps to establish if your items are controlled and identify the appropriate control entry ('rating') from the UK Strategic Export Control Lists

➢ The OGEL Checker helps to identify if an appropriate Open General Export Licence (OGEL) exists

Export Control Joint Unit

Watch our previous webinars

- Strategic Export Control and Licences - an introduction
- Strategic Export Controls and Licences: Making Licence Applications
- Technology, Software and Strategic Export Controls
- FIA Connect
- UK sanctions against Russia

- This experience shows that there is room to improve our national procedures

- To remain competitive in the global market, we need to speed up the licensing process while ensuring greater transparency and predictability

- Our recommendation is to invest in digitizing the process, and improving coordination between different government institutions

- Organizing training and seminars in the field of export control would be desirable

➤ Many countries have export licensing systems designed to simplify the export of certain goods or technologies while ensuring control over potentially sensitive products

➤ UK: Open General Export Licence (OGEL)

➤ US: General License (GL)

➤ EU: General Export Authorisation (GEA)

➤ Canada: General Export Permit (GEP)

➤ Japan: Bulk Export License

➢ Our company faces many challenges regarding export control

➢ However, we believe that with appropriate changes and adaptations, we can overcome these obstacles and remain leaders in our sector

➢ New aspect that will become increasingly important in the future – AI technologies are becoming more significant in all industries

➢ Their use in analysis, process automation, and even the development of new materials may represent a new challenge for export control

Is AI a New Opportunity or Challenge

- ➤ AI has tremendous potential to enhance our capabilities in numerous areas, but it can also create new risks when it comes to export control

- ➤ For example, AI technologies can be used to improve command and control software for managing dual-use systems or develop new methods of bypassing control

- ➤ This raises many questions for the future: how can we effectively control the export of AI technologies?
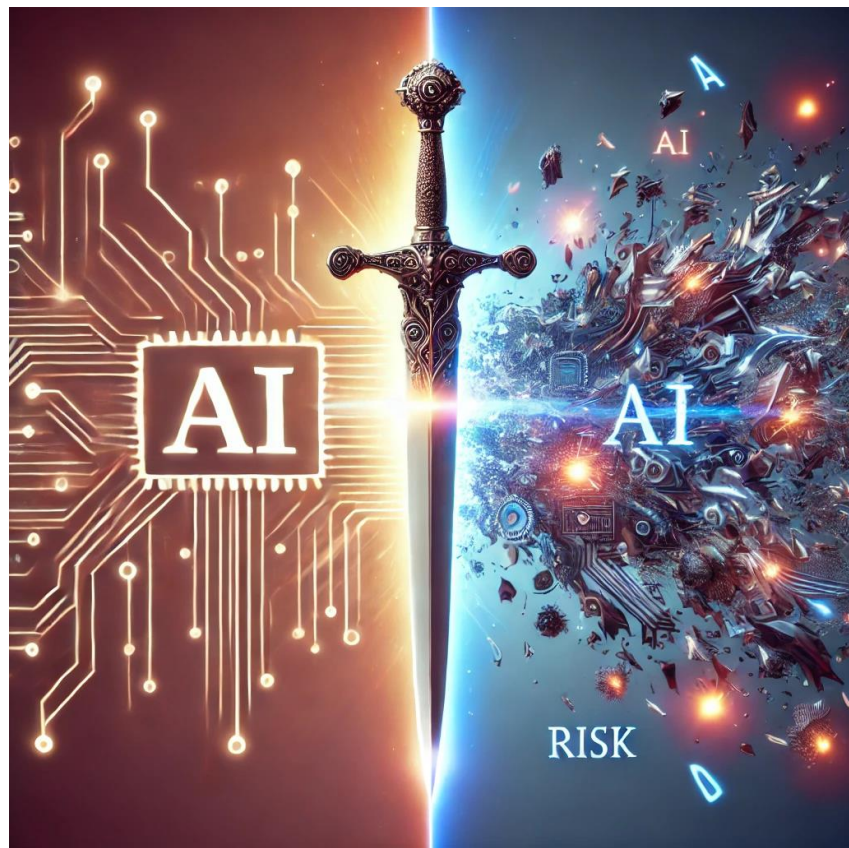
➢ In the future, we can expect stricter regulations and additional controls related to AI technologies

➢ As an R&D company, we must be prepared to face these new challenges, including the possibility of dealing with new types of licenses and certifications

➢ This process may be lengthy and demanding, but we believe that our work in innovation will continue to be crucial for global security
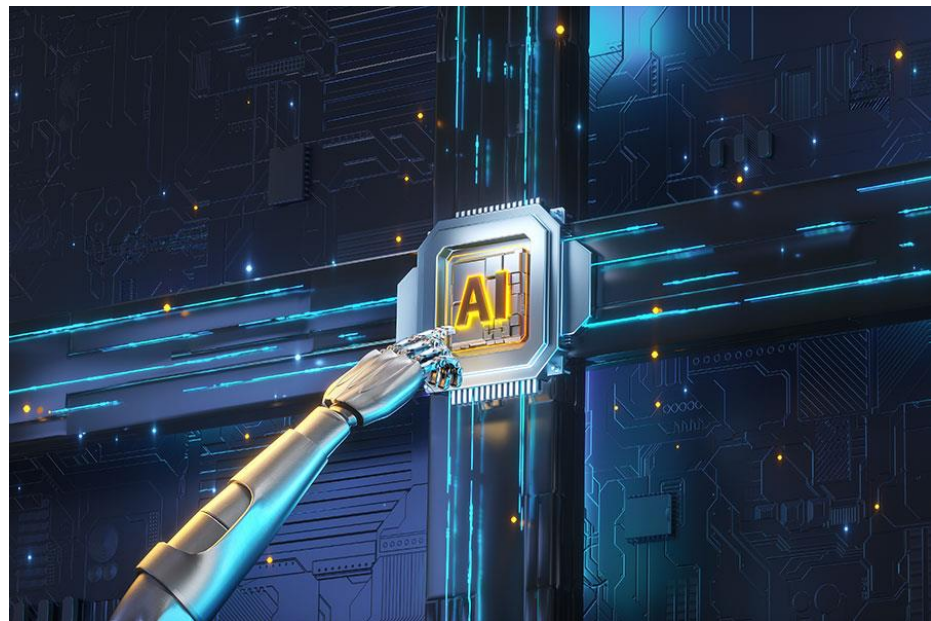
➢ It is necessary to align technological progress with appropriate regulations to ensure security while enabling the development and growth of our industry

➢ Dual-use export control remains a key challenge for our company, as well as for all other firms in this sector

THANK YOU FOR YOUR ATTENTION !

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