Hardware

Software

Systems

Solutions

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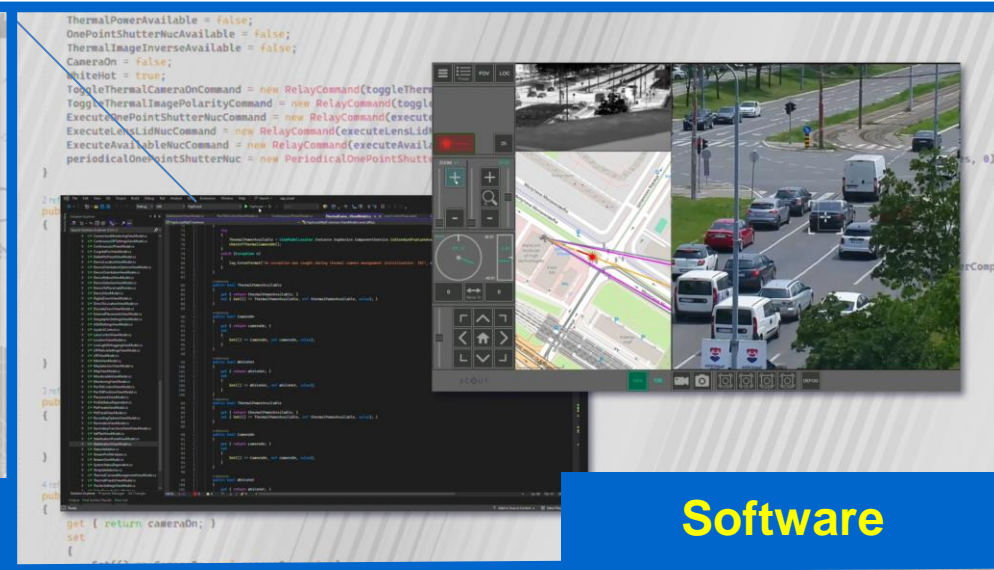
- ➤ **1997** Company founded in Belgrade, Serbia

- ➤ **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 ...... which would then restore the existing status.
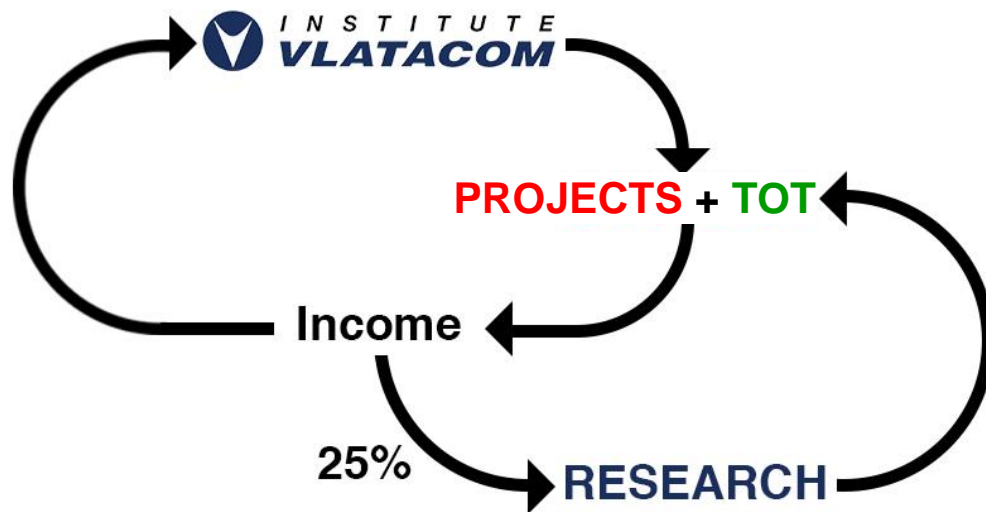
INSTITUTE VLATACOM

Company motto:

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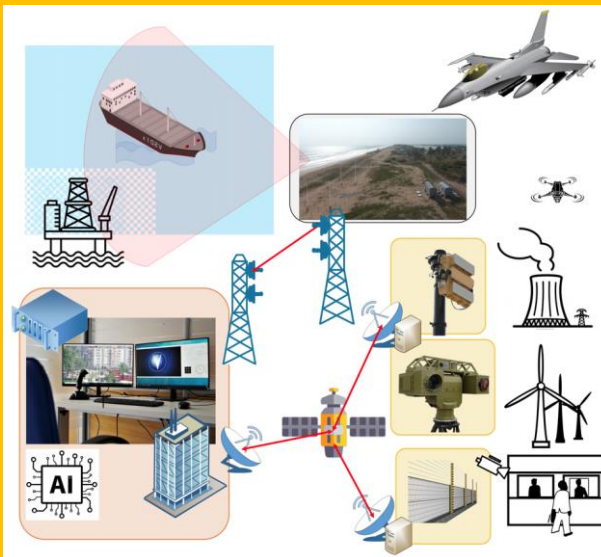

- ➤ Permanent education and professional guidance of all employees
- ➤ Research oriented towards **innovations** and new products for the **World Market**

4

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.
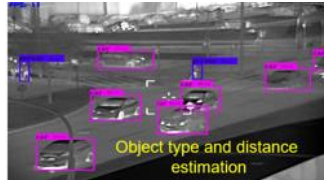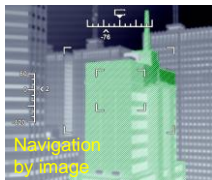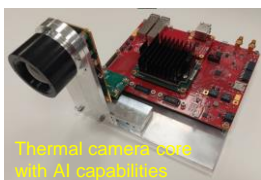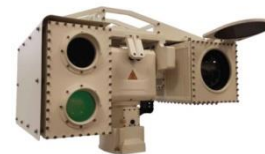
- Image sensors (visible, SWIR, MWIR, LWIR)

- 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)

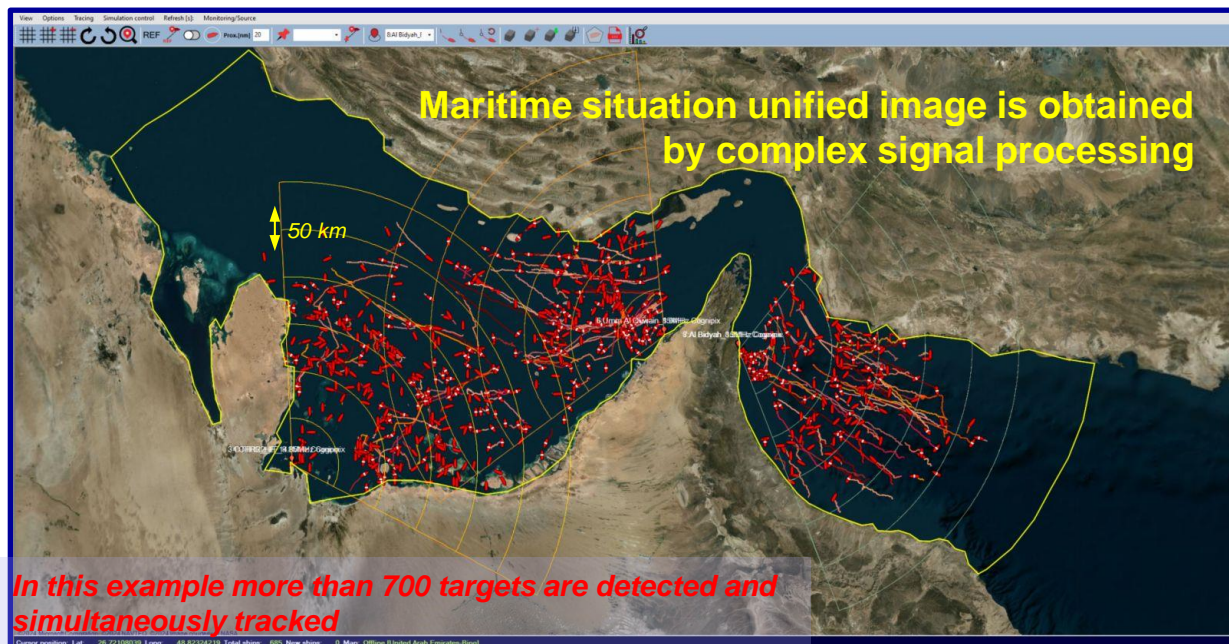Voice & short message encryption device (vPCP-V)

Document Encryption Device (vPCP-FC)

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

Novel and legacy technologies for Cryptographic Keys Management

OVER THE HORIZON RADAR
Unique maritime security sensor with range of 200 NM

R & D

Maritime situation unified image is obtained by complex signal processing

50 km

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

Dual frequency transmitter Antennas array

Dual frequency receiver antenna array and shelter

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

Rx board for four channels

Inside shelter

Shelters

R & D

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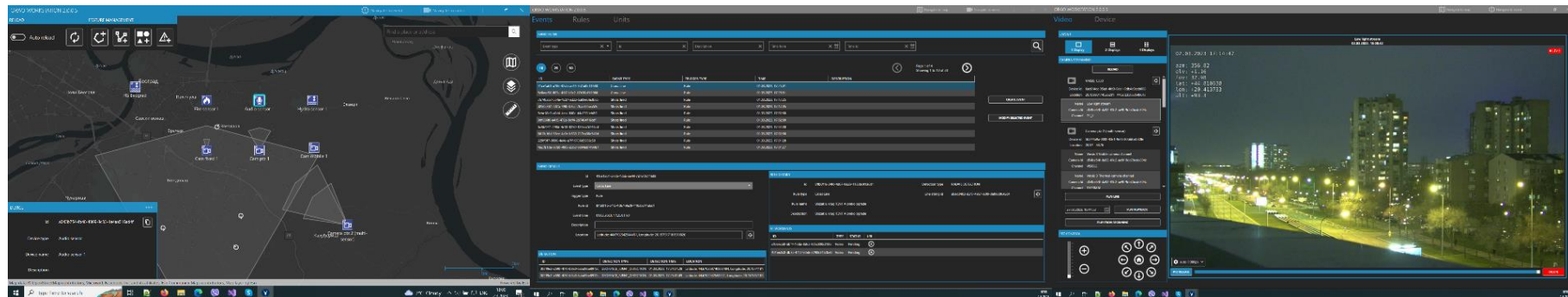 - Large facility monitoring
  - Anti-drone systems

Enter/exit restricted area

Fire incident

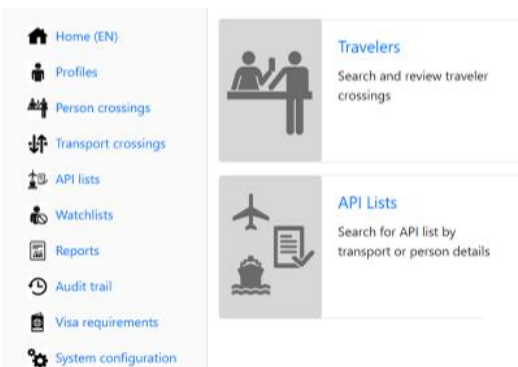Traffic violation

Spotted wanted target

Violent crime

PROJECTS

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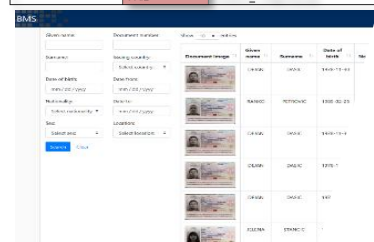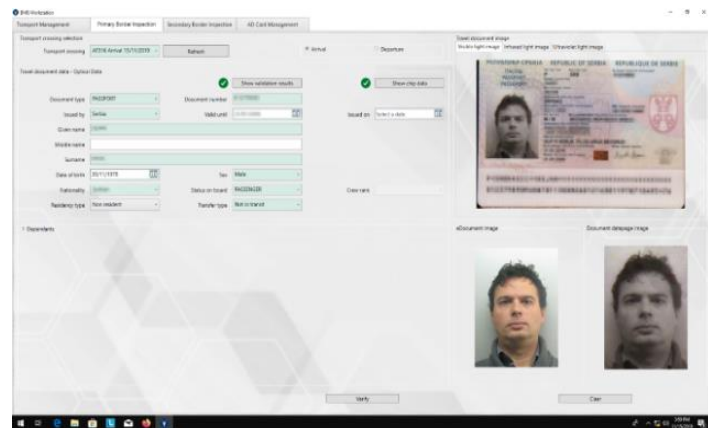
➤ Creation, management, and maintenance of trustful identities and citizen documents
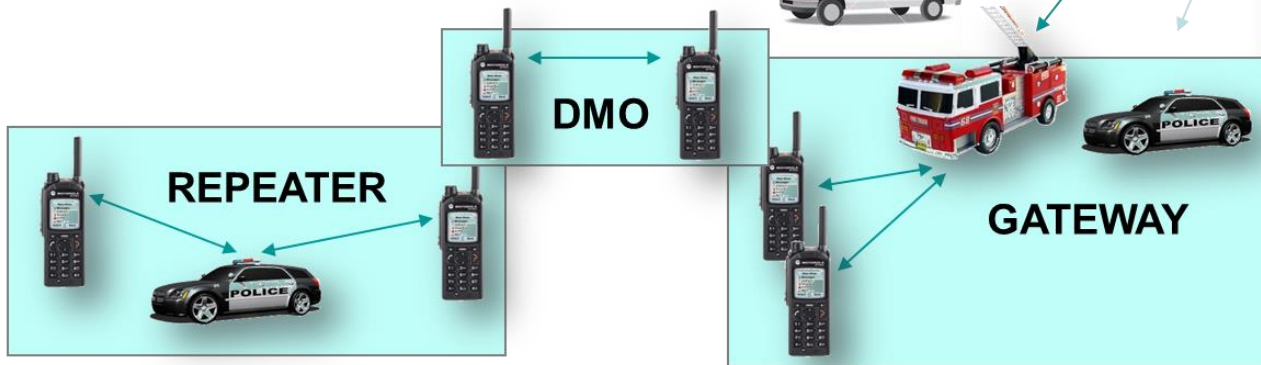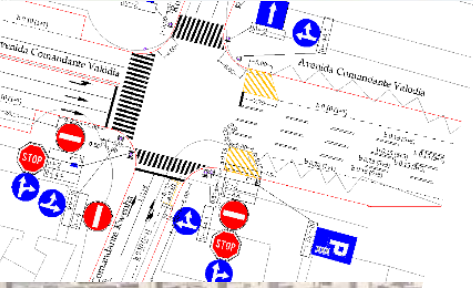
➢ Vlatacom Border Control System (vBMS) is a turn-key platform for:

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

DMO

REPEATER

GATEWAY

Traffic monitoring and control projects have evolved to smart city projects with extensive application of AI systems

Future Soldier

Robotic vehicles

MAX Power
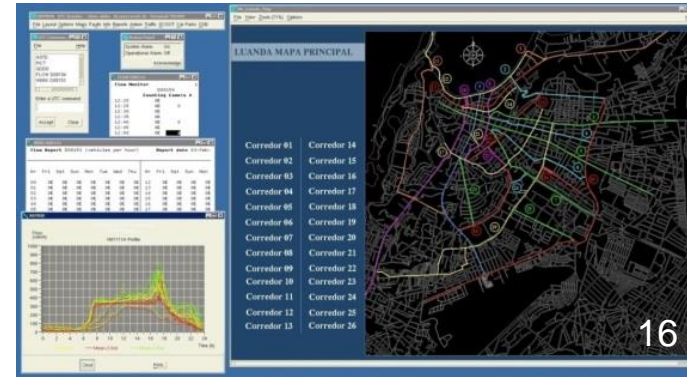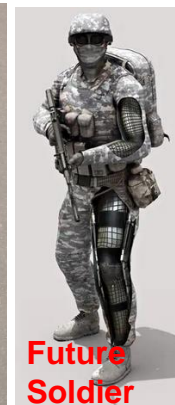
Military grade, engergy efficient, battery powered rugeddized embedded computer for various control, data collection and encryption applications

➢ Has its origins in the post-World War II era, with the establishment of international frameworks designed to regulate the spread of sensitive technologies and arms

➢ The United States was one of the first countries to implement strict export controls, notably with the Export Control Act of 1949, which was primarily aimed at preventing strategic goods and technologies from being exported to communist countries during the Cold War

➢ Following the U.S., many Western countries, especially within NATO and the European Union, established their own export control regimes

➢ In 1996, the Wassenaar Arrangement was established

➢ This was the first multilateral export control regime focusing on transparency and responsibility in arms exports

➢ As a company deeply engaged in technology transfer, we navigate an intricate web of international regulations that govern how we export sensitive technologies

➢ Our primary focus is on innovation in the security sector, but operating in this field brings specific challenges that go far beyond the development of cutting-edge solutions

➤ The AME industry is unique in that every step of the process, research, development, negotiation, and eventual export, is tightly regulated

➤ The complex nature of export controls means that we are not just innovators, but also risk managers, strategists, and legal experts

➢ One of the most significant challenges we face when exporting AME technologies is the length and complexity of the entire process

➢ Before we can even begin negotiations with potential partners or buyers, we must first obtain specific permits just to start the conversation

➢ This initial step alone can take months, if not longer, and is a critical bottleneck that affects the entire timeline of technology transfer

➢ The first hurdle is acquiring what are called „negotiation permits"

➢ These are required before any discussions regarding technology transfer can begin

➢ Obtaining these permits often involves a lengthy process of submitting detailed reports about the nature of the technology, its potential applications, and assurances that the export complies with both national and international laws

➢ Even after successful negotiations, the process isn't over

➢ The actual transfer of technology requires a whole new set of licenses, including export permits and end-user certificates

➢ Each step is sequential and dependent on the previous phase being completed, making the entire export process exceptionally long and resource-intensive
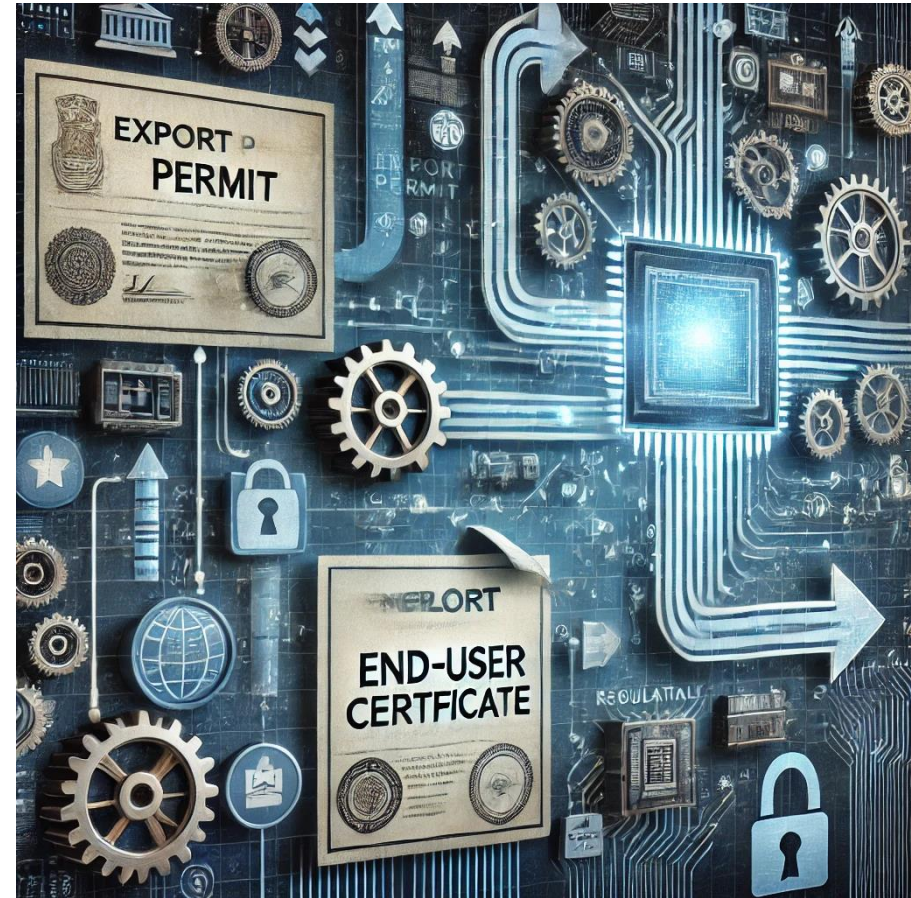
➢ At this stage, potential buyers might want further technical details or assurance that the technology fits their operational needs

➢ Any adjustments to the initial specifications may require additional approvals, restarting the permit process

➢ This can lead to a delay of several months, or even years, before the technology reaches its intended destination
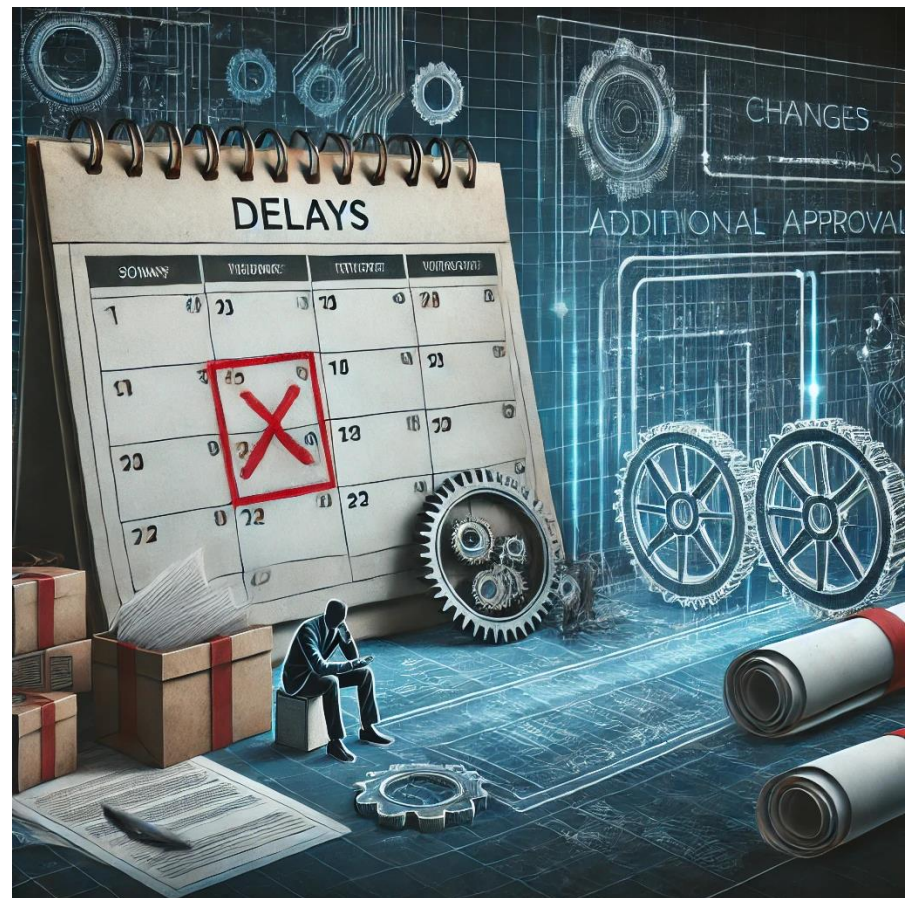
> In addition to regulatory hurdles, another significant challenge we face is the procurement of components and machines essential for developing AME technologies

> Due to the end-use of our products, sourcing these materials can be particularly difficult, especially when dealing with suppliers from countries that are sensitive to the military application of their goods

➢ When sourcing from international suppliers, particularly in regions like China, mentioning that a product or component could be related to military use can cause suppliers to hesitate or even refuse to sell

➢ As a result, procurement for technology transfer projects often becomes more complicated and time-consuming, requiring us to seek alternative suppliers or markets that may be more willing to engage

➢ These procurement challenges not only delay our timelines but also increase costs

➢ The difficulty in obtaining necessary components, especially for products with military applications, limits our ability to stay agile in a fast-paced industry

➢ This can result in a slowdown in innovation as we spend more time managing supply chain issues than focusing on the development of new technologies

➢ Our experience has shown that successfully navigating multilateral export control regimes requires a nuanced understanding of global geopolitics

➢ The arms and military equipment sector is not just influenced by commercial demands but also by the shifting priorities of national security policies

➢ Regulations can vary significantly from region to region

➢ For instance, while Europe and North America have stringent export controls aimed at preventing the proliferation of sensitive technologies, the geopolitical dynamics of the Middle East and Southeast Asia mean that regulations can vary significantly from region to region

➢ This makes global compliance a critical, albeit challenging, task

➤ Ensuring compliance with export control laws is non-negotiable for any company operating in the AME space

➤ However, this often requires substantial internal resources, such as legal and compliance teams, to manage the multiple layers of approval

➤ These regulatory constraints, while vital for global security, can slow down business processes and increase costs
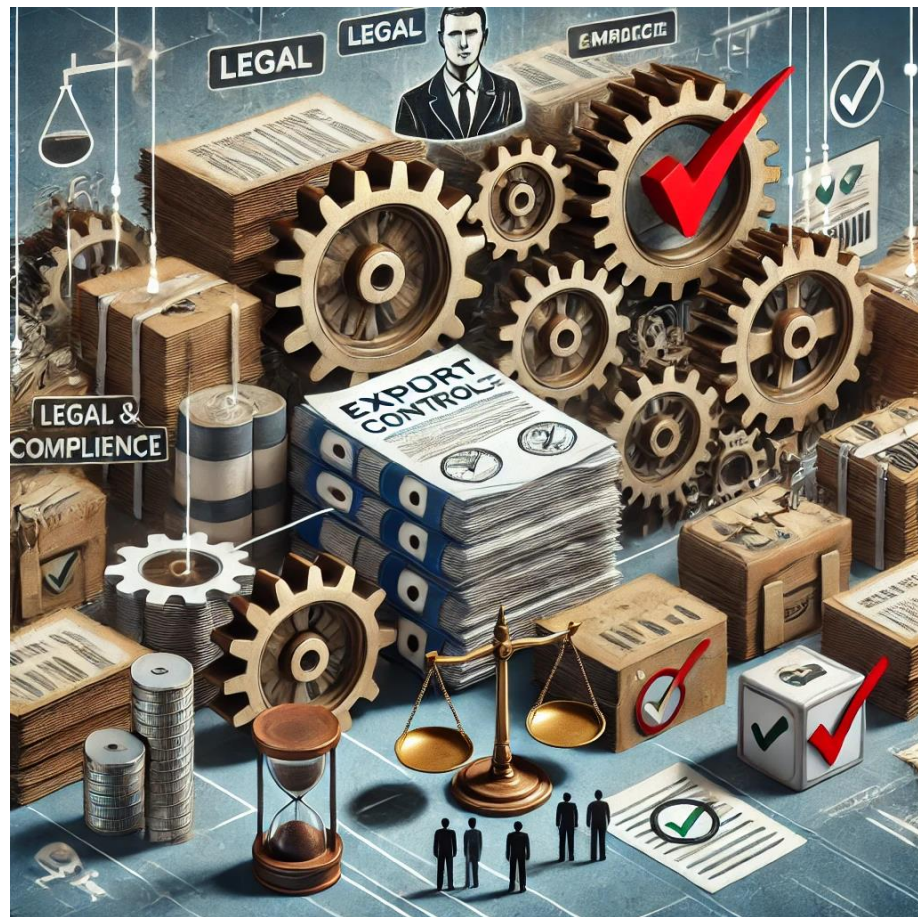
> In response to these challenges, one of the most promising solutions is the digital transformation of the export control process

> Some countries are already making strides in this area by implementing automated systems for managing export permits, reducing the time required to process applications and improving the overall efficiency of compliance checks

➢ Some countries are adopting AI-driven systems that can streamline the process of securing export permits and licenses

➢ These systems allow for quicker approvals without compromising security

➢ AI and machine learning have the potential to transform how companies like ours manage export control, automating compliance checks, and flagging potential violations before they become issues
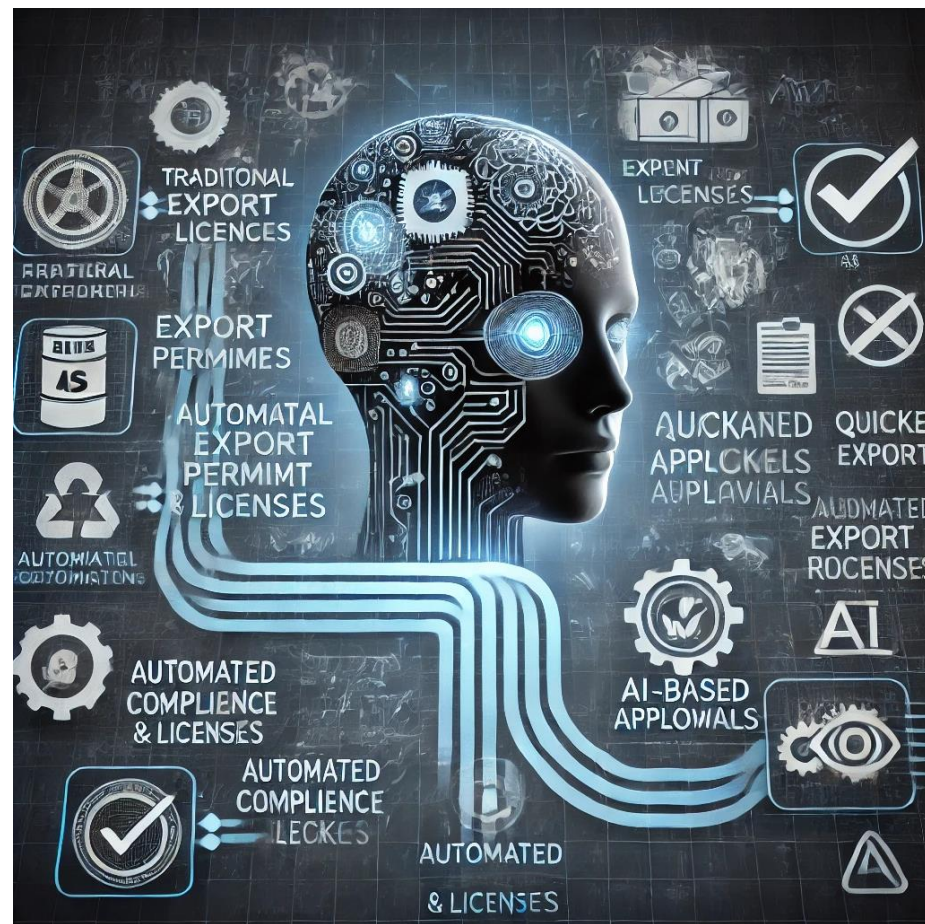
➢ Beyond digitalization, regulatory reform is essential

➢ Governments need to focus on streamlining their procedures and making them more transparent and predictable

➢ By doing so, they would enable companies like ours to plan and execute technology transfer projects more effectively, without being hindered by lengthy bureaucratic procedures
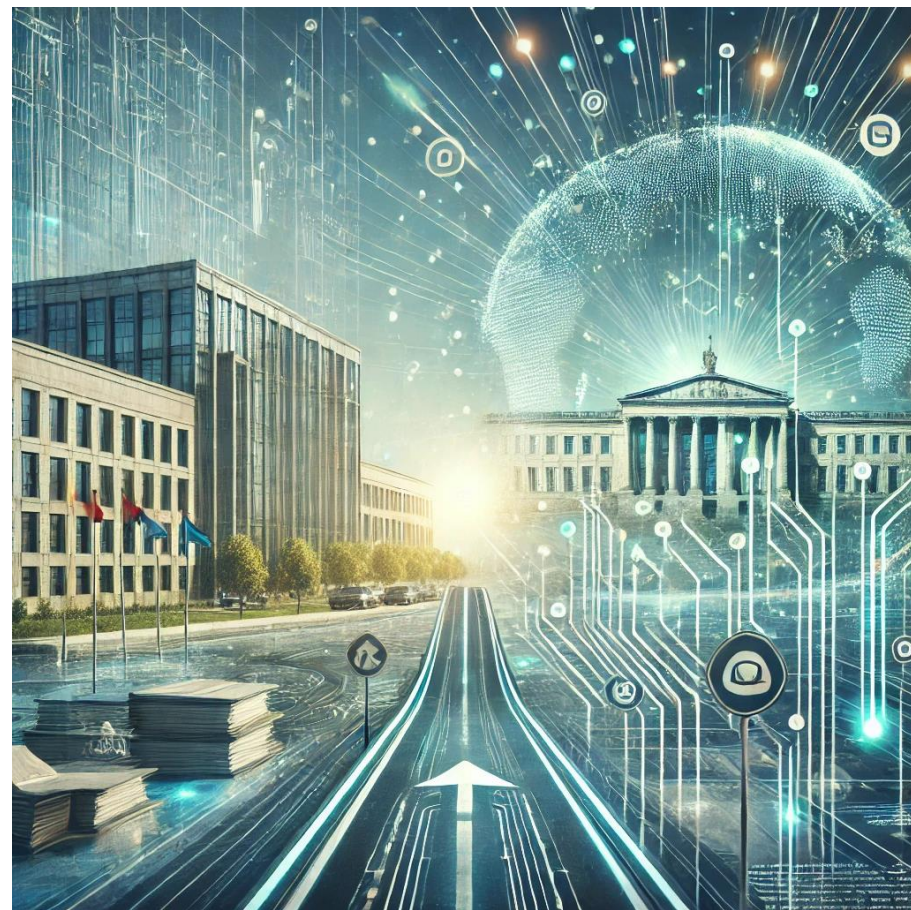
➤ While the export of AME technologies presents numerous challenges, particularly in securing permits, sourcing components, and balancing compliance with market needs, we believe that these obstacles can be mitigated through digitalization and regulatory reform

➤ The processes for acquiring permits, negotiating deals, and ultimately transferring technology are all critical components of maintaining global security, but they must also support innovation and competitiveness in the marketplace

THANK YOU FOR YOUR ATTENTION !

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