

"To begin, begin." – William Wordsworth



&



**Romanian brief presentation regarding training and  
competences in demilitarization**

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## Patromil & MoD



- Patromil is the strategic partner of the Romanian MoD in developing the military capabilities in relation with NATO and EDA

# VISION & MISSION



## **VISION:**

- PATROMIL will become the main technical consultant for national/ regional and international decision makers for the Romanian Industry of Defense.

## **PATROMIL MISSION STATEMENT:**

- To be the “specialist” in defining, initiating and implementation of defense strategies in Romania/SEE Region.
- To encourage and to develop trusted and mutually rewarding relationships with our members, clients and partners.

# Employees in Romanian Defence Industry Sector



Year 1989 – 200.000 employees

Year 2000 - 60.000 employees

Year 2009 - 20.000 employees

\* 2013 - PATROMIL 40 Members 10.000 employees

## Presentation of the PATROMIL Association (NGO)



### Capital structure:

- 37% state owned or mainly state owned companies (15 companies)
- 63% private companies (25 companies)
- Annual budget by monthly subscription of the members, sponsors ships, donations, etc

# Highlights



## **PATROMIL – the Association:**

- represents directly or indirectly the interests of over 100 Romanian suppliers, specialized in military technique production of goods, parts, technologies and services.
- its affiliate members military production is set up to the NATO requirements, and both civil and military products are made according to ISO-9001 quality standards.
- represents the Romanian DEFENCE sector suppliers in domestic (government, trade unions) and international relationships (with similar associations around the world).

# Romanian Ministry of Defense



- Department for Parliament Liaison and Public Information
- Department for Defense Policy and Planning
- Armament Department – competence in contracting Demilitarization**
- General Staff – in charge with monitoring and planning of ammo stockpile**
- Land Forces Staff – some own capabilities in demilitarization**
- Air Force Staff - some own capabilities in demilitarization**
- Naval Forces Staff\_ - some own capabilities in demilitarization**
- General Secretariat of the Ministry of National Defense
- Defense General Intelligence Directorate
- Other structures

# GENERAL STAFF



- Personnel and Mobilization Directorate
- Military Intelligence Directorate
- Operations Directorate
- **Logistic Directorate**
- **Strategic Planning Directorate**
- Communications and Information Technology Directorate
- Directorate for Training and Doctrine
- Structures and Acquisition Planning Directorate
- Other subordinate structures:
  - Romania's Military Representations
  - Secretariat Service
  - Religious Assistance Section
  - Finance and Accounting Section
  - Military Police Section
  - Judicial And International Humanitarian Law Section
  - Metrology And Firefighting Office
  - Romanian Military Thinking
  - Humanitarian International Law Center



# EDUCATION AND TRAINING STRUCTURES



## LAND FORCES

- Land Forces Academy
- NCO (Non Commissioned & Technical Officers School)
- Training Schools
- Military High Schools
- Training and Evaluating Center for International Missions.

## AIR FORCES

- Air Force Academy
- Air Force Officer Training School
- Air Force NCO's School

## NAVY

- Naval Academy
- Naval Training School

# Military Technical Academy



## **Faculty of Mechatronics and Integrated Armament Systems**

Department of Armament Systems Engineering and Mechatronics

Department of Aircraft Integrated Systems and Mechanics

Department of Military Auto Vehicles, Transport and Engineering

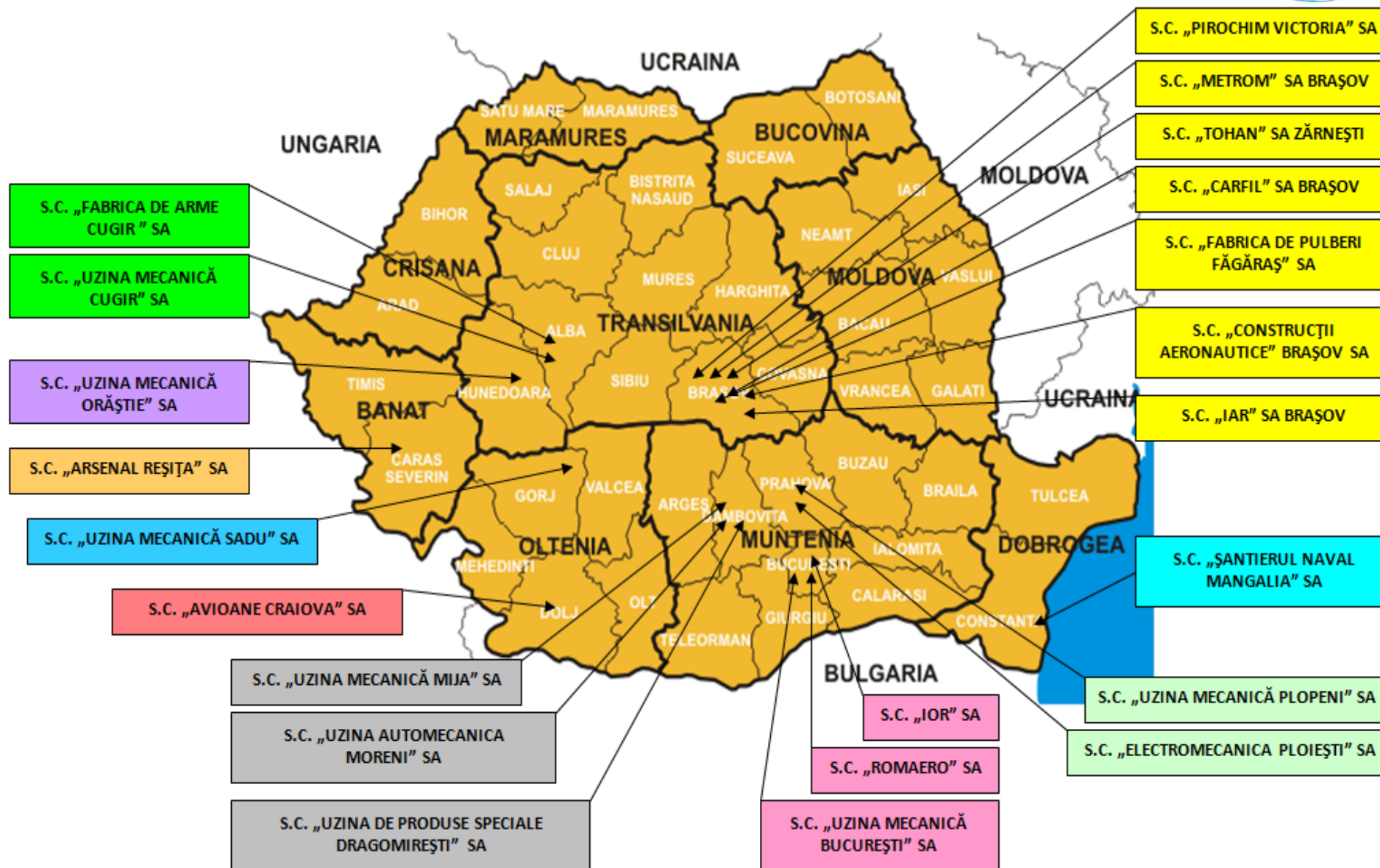
Department of Fundamental Sciences, Management and Military Training

# Military Technical Academy Courses



- Logistics of systems of Armaments, Missiles and Ammunition
- Theory of systems, missiles and ammunition optimization
- Simulation of explosion phenomena
- Test, reception and of reliability ammunition, missiles, powder and explosives
- Standardization and codification of armament systems, ammunition and explosives
- Logistics of military units
- Exploitation and maintenance of armament systems, missiles and ammunition

# Defense Industry Companies



## Advantages of demilitarization by Defense Industry Companies



- Don't involve the military facilities & personnel who can execute other missions
- Industry is in charge with transportation of ammo
- Greater speed of demilitarization due to important industrial capacities size
- Immediate availability of military storage spaces
- More types of ammunition to be demilitarized than the military own capabilities
- Keeping of high skilled personnel inside national industry
- Source of financial resources through selling of remained metal, copper, aluminum, etc

## **Ammunition which are/can be demilitarized**



**1. - projectiles calibers:** 20mm; 23mm; 25mm; 27mm; 30mm; 35mm; 37mm; 40mm; 57mm; 75mm; 76mm; 85mm; 90mm; 100mm; 105mm; 120mm; 122mm; 130mm; 152mm; 155mm; 203mm. These projectiles could be loaded with TNT, B composition, RDX, HMX and could be explosive, cumulative, armor piercing incendiary;

**2. -mortar bombs calibers:** 60mm, 81mm; 82mm, and 120mm;

**3. - aircraft bombs;** 50kg, 100kg, 250kg, 500kg;

**4. - mines;** antitank, offensive grenade, defensive, incendiary, etc;

**5. - not guided projectile** SSM, S-5K, S24;

**6. - rockets:** R-13M, R-73E, R27RI, A91, K-13A, A-90, 9MB, 3MO- KUB,  
RAD 9M-14P, RAD 9M-II1, 9M22;

**7. Missiles** air-air; ground-air; air-ground

## **Weapons which are/can be demilitarized**



- 1. – Armored vehicles:** tanks (T55;T72; TR85); vehicles on wheels &tracks
- 2. – Mortars & Cannons**
- 3. - aircraft bombs;** 50kg, 100kg, 250kg, 500kg;
- 4. - ships**
- 5. – helicopters and aircrafts**

## Quantities of ammunition which could be processed daily



Quantities of some ammunition which could be processed daily are:

1. - cal. 20mm-40mm - 12,000 pcs/hour;
2. - calibers 57-75mm, 76mm, 85mm inclusive mortar bombs 60 mm,  
81mm, 82mm, 120mm -1,500 pcs/hour;
3. - calibers 100mm-152mm -700 pcs/hour.

It is important to know that these positions could be demilitarized simultaneous in different workshops.

4. - aircraft bombs:

- |       |                |
|-------|----------------|
| 50kg  | -60 pcs/shift; |
| 250kg | -16 pcs/shift; |
| 500kg | -8 pcs/shift   |



## Quality assurance, work safety, and other systems



### **Quality is in respect of STANAG 4107; AQAP serie 2000; ISO**

There are four main aspects to our safety and quality assurance system

#### **Management review**

Our management team places strong emphasis on the safety and quality assurance process. The General Manager formulate and supervise the safety and quality policies .

Based on these safety and quality policies, our project managers will devise specific operating and implementation strategies and supervise the actual implementation of such strategies for each project

## Work safety, and other systems



- In the conduct of our activities, we place the most emphasis on the safety and health of our employees and the public, as we recognize that we deal with potentially dangerous materials in our highly specialized fields of activities.
- We have developed and adopted stringent safety and quality assurance manuals and standard operating procedures
- These safety and quality assurance manuals and standard operating procedures were developed based on (i) our key staff' s extensive experience in dealing with ordnance and explosives; (ii) the standards set by international bodies such as the UN, as well as the US and British military; (iii) requirements prescribed by the Romanian Arms and Explosives Act and other relevant regulations of the countries in which we may operate in.
- In addition to our safety and quality assurance manuals and standard operating procedures, we have in place designated ammunition specialists to perform the role of an internal safety auditor. Our internal safety auditor plays a vital role in our safety and quality assurance system, by ensuring that our actual operations conforms with safety procedures and that our system is effective and able to meet the needs of our businesses and the legislative and regulatory framework in which we operate.

## Romanian Opportunities & Threats in Demilitarization



### Opportunities

- large quantities of ammunition stockpile in Romania and in the Region
- profit and security generating partner ;
- important partner for developing new types of ammo demilitarization technologies, through its specialized companies
- High skilled personnel, competitive educational system
- Flexible and Friendly Legal environment for stockpile reduction
- Creation of a Regional Cluster of Excellence in demilitarization through a Regional Bilateral Initiative ( Bulgaria- Romania)

### Threats

- High security and environmental risk for military personnel, civilians, etc
- Dissolution of industrial capability, because of inadequate financing, mirroring the financial difficulties of MoD and industry
- Global and national economic crisis

## Romanian Strengths & Weaknesses in Demilitarization



### Strengths

- comprehensive knowledge of the Romanian and Regional Market in the field of demilitarization;
- best contacts in the Romanian Market for competitive & affordable services
- many types of ammo to be demilitarized;
- expertise in design, engineering, project management, contract management
- competitive demilitarization time & prices

### Weaknesses

- technology level not very competitive, but improving
- Lack of financial resources in MoD
- man hour wage / salary package still not attractive for highly skilled & specialized employees (risk of brain drain)

## Conclusions



- Romania is supporting Stockpile Reduction
- Every year Romanian Industry is strengthening its capacity and level of expertise in demilitarization
- PATROMIL through its members might become long term partner in developing highly profitable businesses, both in Romania and in the Region
- PATROMIL's good knowledge of Central Eastern Europe and its needs (similar for most of the former Warsaw Treaty countries) could be a key for doing business in the Region
- Without an appropriate support of NATO and EU, the reduction of stockpile will take a lot of time (and maybe lives)
- **A Romanian – Bulgarian initiative is a Must for National and Regional stockpile reduction**

**ROMANIA - YOUR PARTNER IN SMART  
DEFENSE**



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# Q & A



OR

