



# How Romania is developing rotary air forces



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# Agenda

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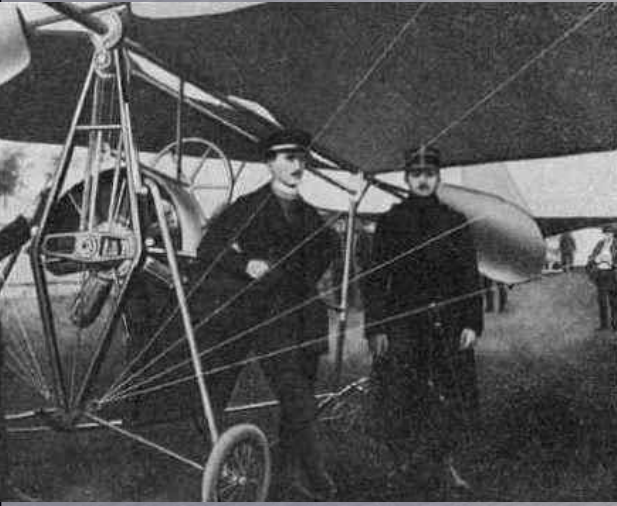


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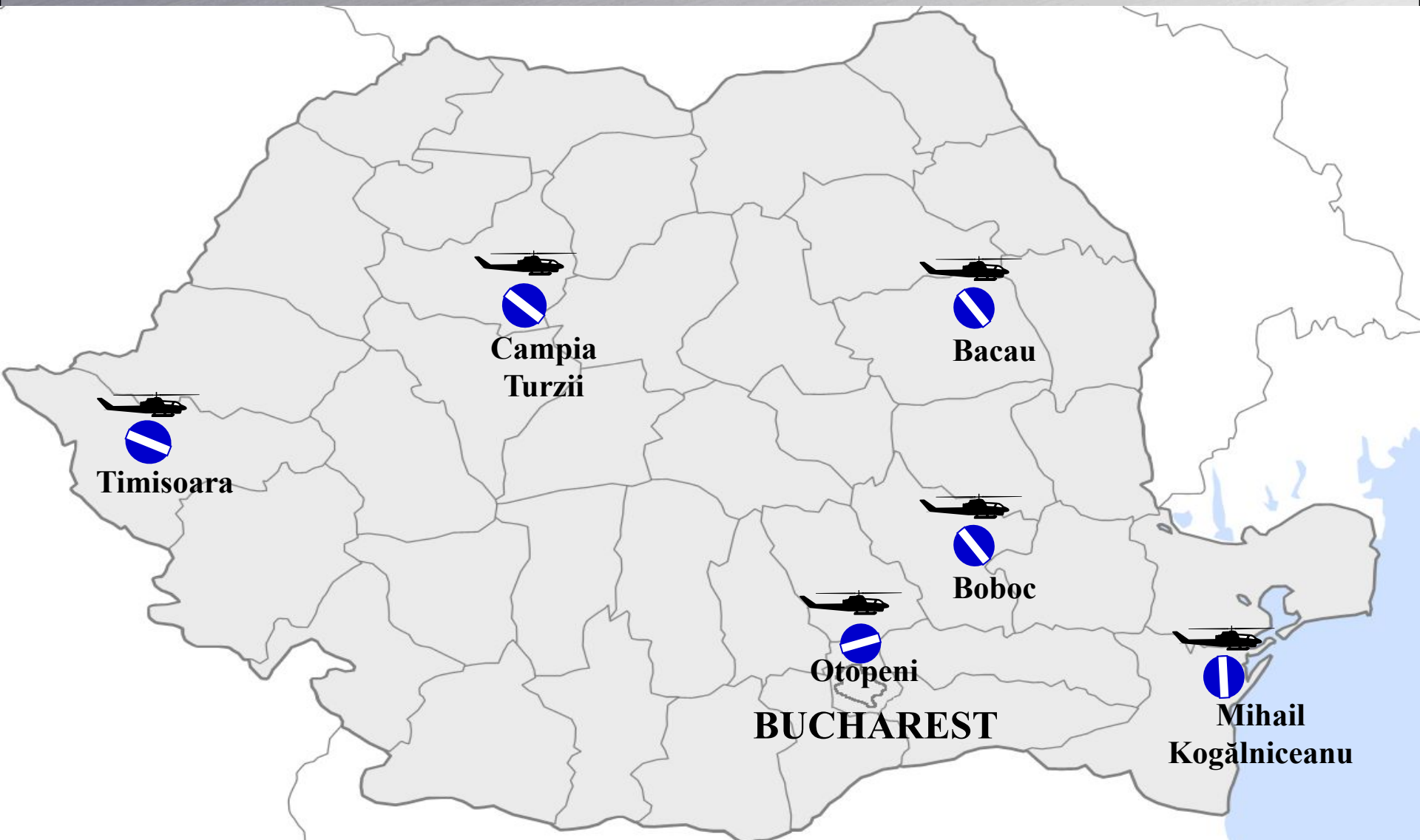
- Overview of the Romanian Air Force helicopters
- Rotary platform upgrades to enhance capabilities
- Streamlining maintenance for helicopters
- How Romania plan to move forward within the air domain



# History



# Location



# Helicopters

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**IAR 316B  
Alouette**

Light utility /  
training  
helicopter





# Helicopters

IAR 330L Series



IAR 330 SOCAT

IAR 330 NATO

IAR 330L-RM

IAR 330 MEDEVAC



# Operational Capabilities

	IAR 330 L	IAR 330 M	IAR 330 SOCAT	IAR 330 L - RM
Max. distance	Media of 750 km (W/ET or IT)			
Max. endurance	Media of 3.30 h (W/ET or IT)			
Maximum speed	265 Km/h			278 km/h
Cruise speed	220 Km/h			
Rate of climb	6.1 m/s			
Service ceiling	5000 m			
Empty Weight	3900 Kg	4400 Kg	4700 Kg	4600 kg
MTOW	7400 Kg			
Power Plant	2 TURMO IV engines x 1546 HP			



# Operational Capabilities

<p><b>COMMs</b></p>	 <p>IAR 330 L</p>	 <p>IAR 330 NATO</p>	 <p>IAR 330 SOCAT</p>	 <p>IAR 330 L - RM</p>
<p><b>Radios</b></p>	<p>VHF (GTN 750) AR 1500</p>	<p>TALON RT 8200 &amp; 2 ACR 430 - encryption &amp; hopping feature (VHF &amp; UHF)</p>		<p>TALON RT 8200 HF-9000D SATCOM</p>
	<p>GUARD receiving frequencies</p>			
	<p>HAVE QUICK I/II &amp; SATURN capable</p>			
<p><b>Location system</b></p>			<p>PLS (QUICK DRAW capable) – RSC 112 G</p>	<p>DF SAR</p>
<p><b>Navigation</b></p>	<p>GTN 750 AHRS ADF</p>	<p>EGI ADF</p>	<p>EGI ADF</p>	<p>AHRS ESIS NAV 4500 ADF</p>
<p><b>IFF</b></p>	<p>MODE 5</p>	<p>MOD III / C compatible</p>		<p>MODE 5</p>



# Operational Capabilities

## Tasks:

- ✓ EOP/OS;
- ✓ Search light;
- ✓ ADF SAR;
- ✓ FAST ROPE;
- ✓ Winch;
- ✓ Sling;
- ✓ MEDEVAC;
- ✓ FARP.

## Attack:

- ✓ 20mm cannon;
- ✓ missiles;

## Self-protection:

- ✓ Door guns;
- ✓ Armored;
- ✓ ELT;
- ✓ A/C;
- ✓ Flight data rec./CVR
- ✓ CF&FL

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# Replacing obsolescence

## SOCAT OCRP

- ✓ New HDTs
- ✓ New MFDs
- ✓ New MFCD





# Replacing obsolescence



## IAR 330 L

- ✓ GTN 750x
- ✓ GWX 75
- ✓ AR 1500
- ✓ NAV 4500
- ✓ LTR 4000C
- ✓ AHRS
- ✓ 2 PFDs/2 ND



# Maintenance system

3 types of Mnt:

- 1<sup>st</sup> line
- 2<sup>nd</sup> line
- Depot

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Ensure:

- Safety
- Efficiency
- Cost-effectiveness



# Maintenance system

## 2<sup>nd</sup> line

□ repair, testing & final checks  
with minimal movement

### Workshops

- ✓ special tools
- ✓ advanced testing equipments
- ✓ trained personnel





# Maintenance system

## Depot

- IAR SA Braşov
- Regional Maintenance Centre



- Advantages:**
- ✓ reducing costs
  - ✓ reducing A/C unavailability
  - ✓ reducing workload on 2<sup>nd</sup> line
  - ✓ self-sustainability

- Challenges:**
- ✓ dedicated testing systems and tools
  - ✓ human resource availability
  - ✓ technicians' certification



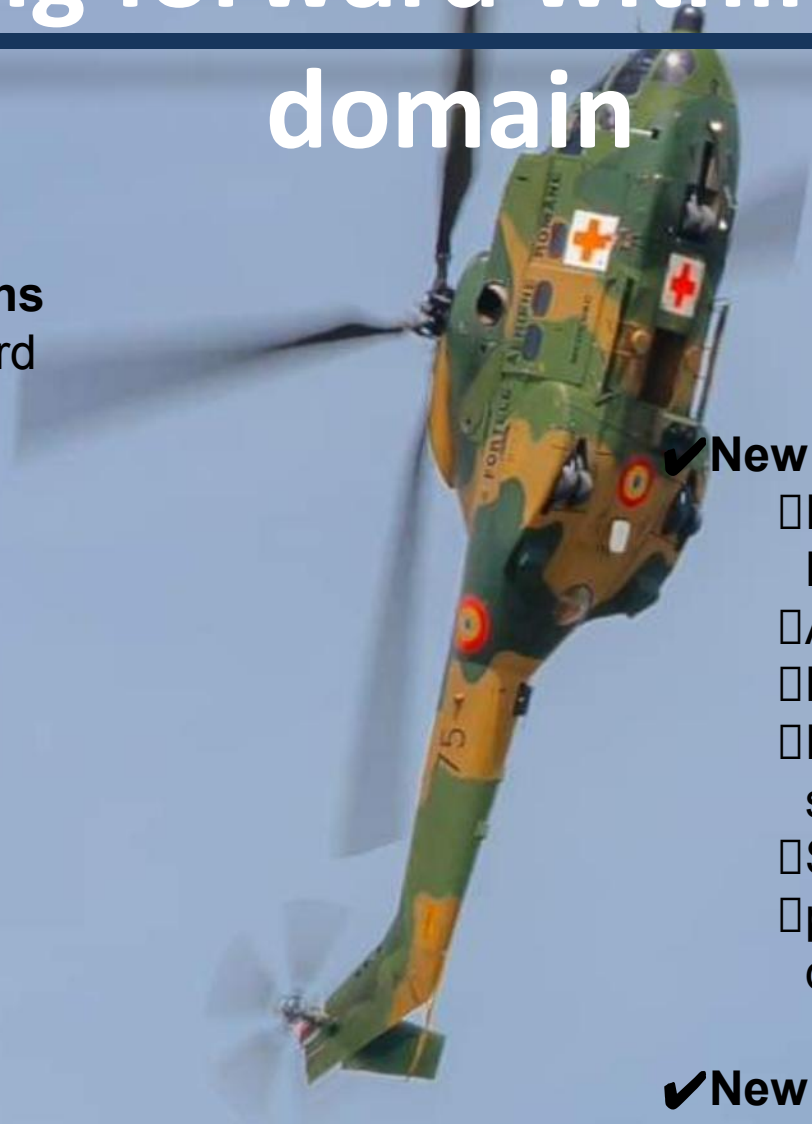
# Moving forward within the air domain

## ✓ 3 x F16 Squadrons

- M 6.6 standard

## ✓ F35

- C4ISTAR
- STEALTH
- ASA
- APS
- ADX



## ✓ New multi role helicopter

- Fully compliant with NATO systems
- Advanced FMS
- Nav suite
- Flight and tactical situational awareness
- Synt. vision
- platform monitoring and diagnostics system

## ✓ New training helicopter



Thank you for your attention!