GO GREEN JORDAN ATM

Presented by ANS Safety Inspector:

Mohammed Farouq Othman Doqa

Agenda

- INTRODUCTION
- AVIATION CARBON FOOTPRINT
- JORDAN / CARC MEASURES TO REDUCE EMISSIONS / APPLIED
- JORDAN / CARC FUTURE VISION MEASURES
- QUESTIONS / THANK YOU

Introduction

Worldwide aviation associations and members highlighted the vital role of air traffic management (ATM) in reducing emissions from aviation, as well as contributing towards the UN’s sustainable development goals. New technologies, better procedures and increasing cooperation are making ATM more efficient. We all need to facilitate investment in and modernization of ATM to cater for the expected growth in air traffic and increasing connectivity.

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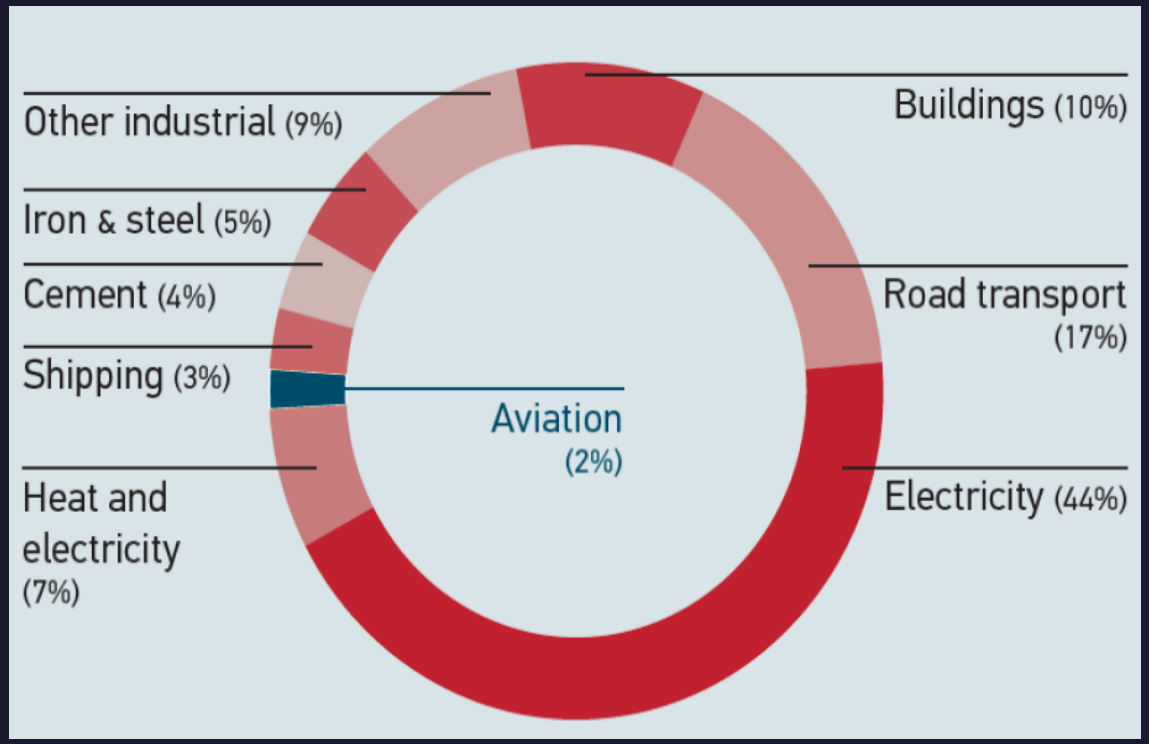
Efficient air traffic management has a crucial role to play in this by catering for expected traffic growth and enabling increased connectivity. By its very nature, more efficient air traffic management helps the aviation industry reduce its emissions.

Aviation Carbon Footprint

If we consider energy-related CO2 emissions – without emissions from agriculture or forestry which account for around a quarter of global greenhouse gases – the largest contributor to CO2 emissions is electricity (44%). Second is road transport at 17%, followed by buildings at 10%.

Aviation, producing 2% of all human-induced CO2, emits less than the iron and steel industry (5%), cement production (4%) and the shipping sector (3%) and around the same as the servers and transmission cables of the internet.



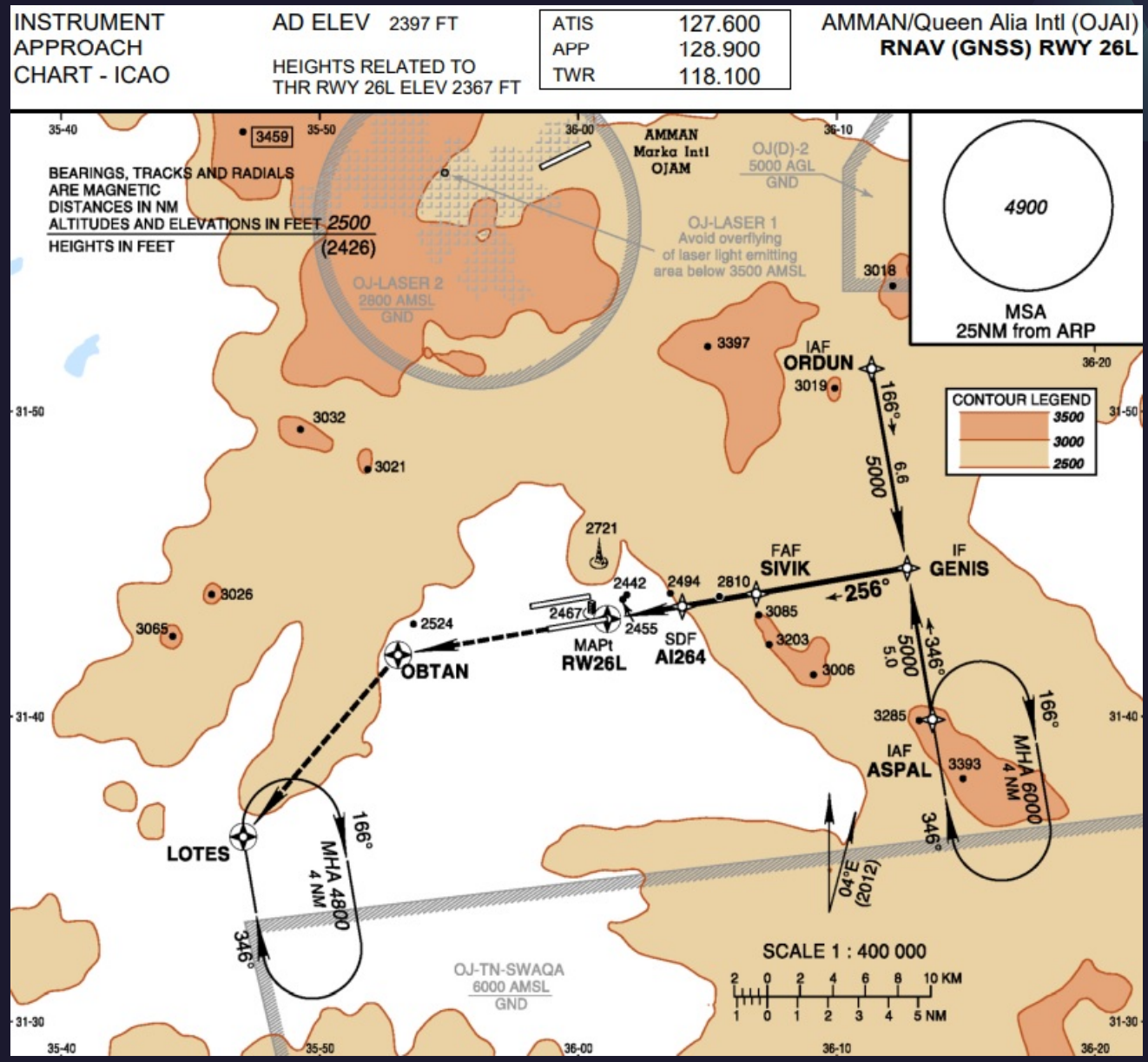
JORDAN / CARC APPLIED MEASURES

Here are some examples of the measures that CARC is implementing to improve efficiency and reduce emissions:

- New technologies are making air traffic management more efficient. Automation and modern surveillance systems enable aircraft to safely reduce their separation distances from each other, thereby increasing capacity and reducing delays.

- # Performance-based navigation (PBN)

The usage of satellites and RNAV routes rather than fixed ground-based beacons, allowing aircraft to fly more efficient routes with greater accuracy, thus reducing CO_2 emissions.



- Jordanian air traffic controllers offer ‘Tactical Directs’ during actual flights to ensure routes are the most efficient. Thus, reducing fuel burn through improved operational measures.

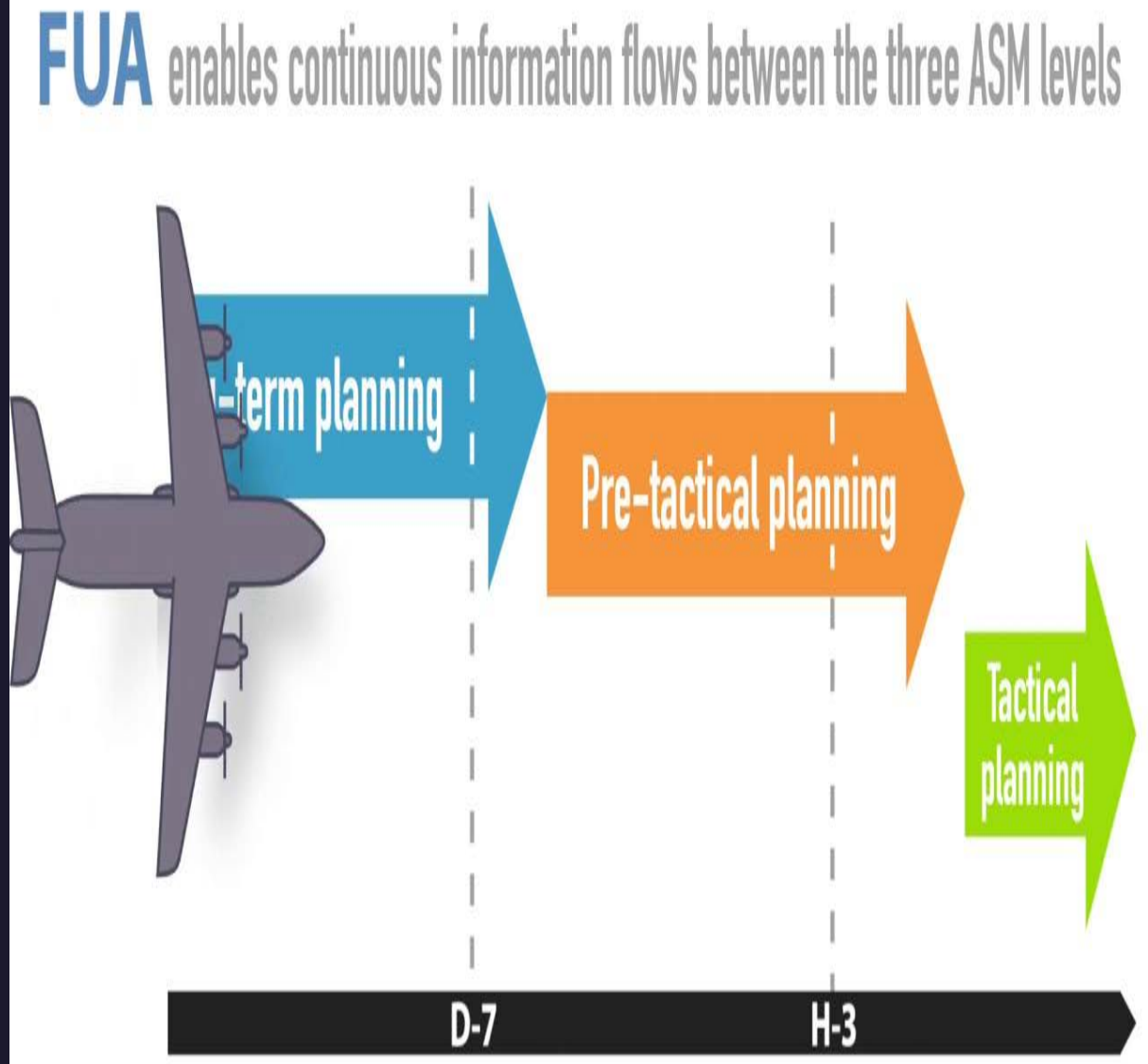
- Jordanian air traffic controllers' endeavour to allow the usage of the most efficient flight level for the flight.
- During a flight, an aircraft’s weight decreases as it uses fuel, and the most efficient flight level becomes progressively higher.

- Flexible Use of Airspace “FUA”

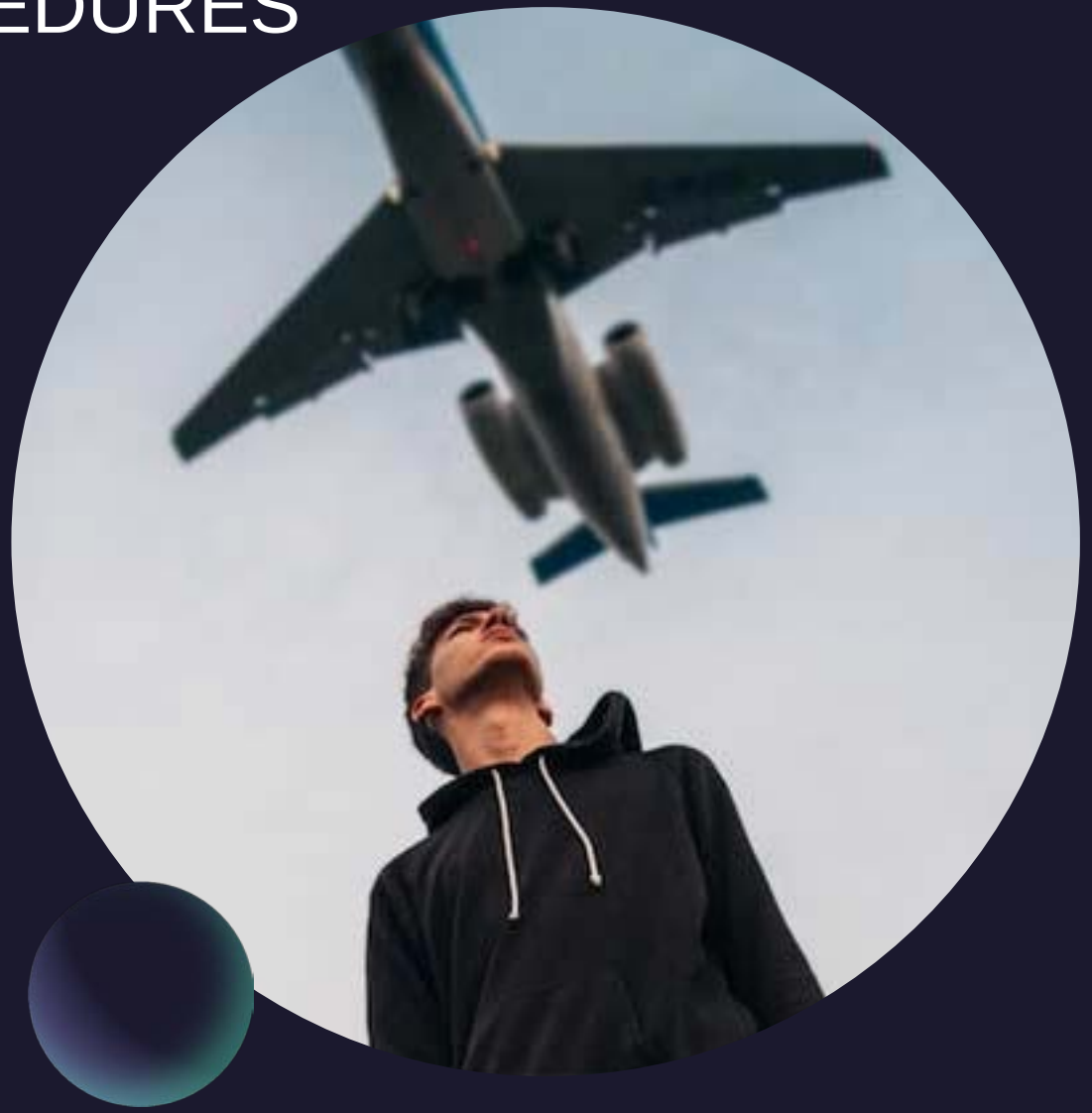
Jordanian air traffic controllers are playing their part by freeing-up military airspace when not in use.

Civil aircraft fly around these areas, reducing time and fuel burn factors.

By reducing the size of these areas, or making them flexible-use, more direct flights are possible, and this can bring significant fuel and CO2 savings.



- # NOISE ABATEMENT PROCEDURES



The noise abatement procedures are applied in JORDAN within our aerodromes, and they are published in our AIP.

For instance, Aircraft of all-up weight “AUW” more than 5700 KGS departing from AMMAN/Marka RWY 24 shall

Climb with take-off thrust to 4000 FT at V2 + 10KT, At 4000 FT QNH reduce to climb thrust and continue at V2 +

10KT. At 5500, FT QNH accelerates to normal climbing speed

JORDAN / CARC FUTURE VISION MEASURES

- Space-based surveillance technologies
- Air Traffic Flow Management “ATFM” road map within the region
- Free route airspace methodology and studies
- Continuous improvements and studies over our airspace
- Modernisation of ATM by implementing the ICAO Aviation System Block Upgrades “ASBUs”.

Thank You