

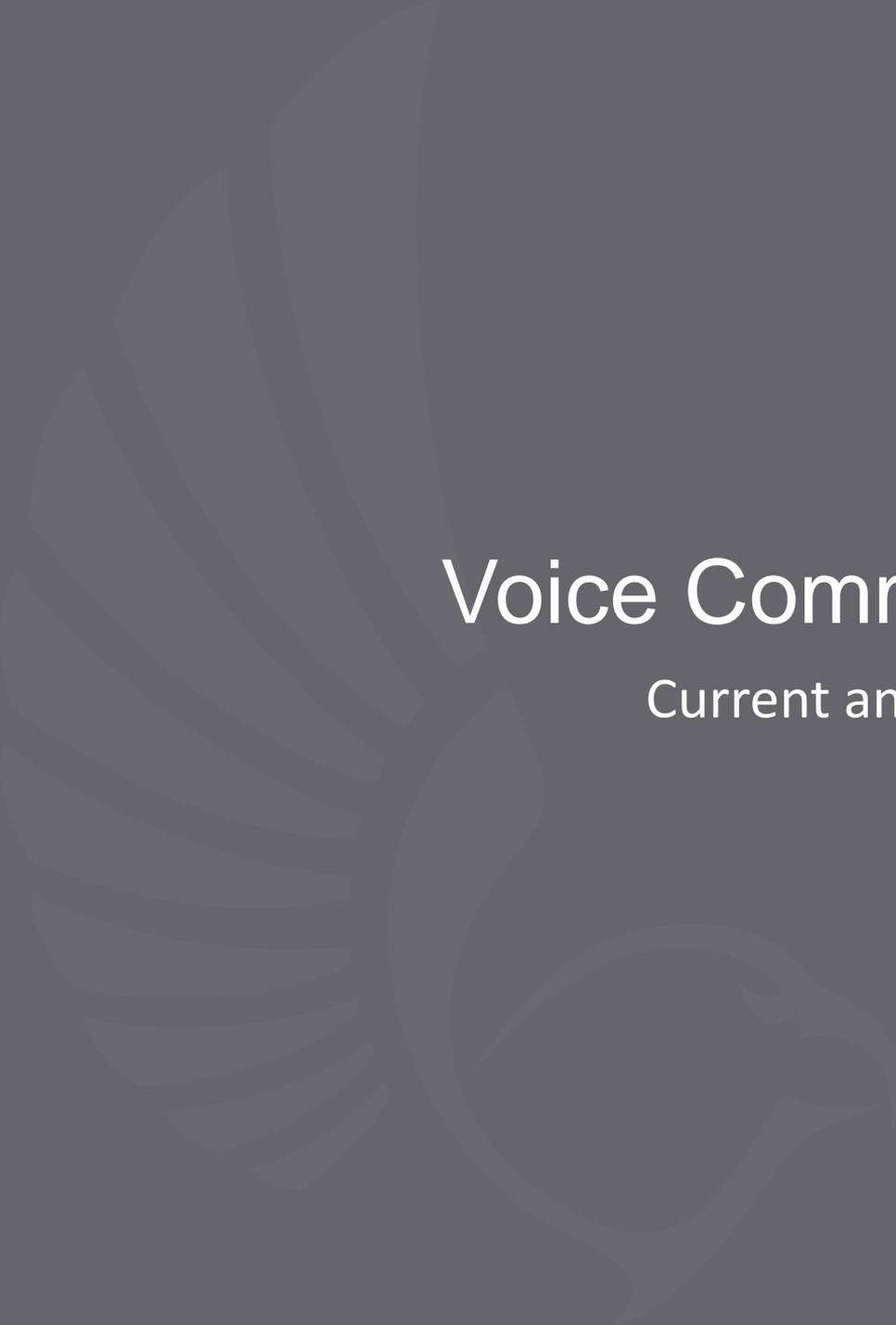


الهيئة العامة للطيران المدني  
GENERAL CIVIL AVIATION AUTHORITY

# CNS Activities

## Sheikh Zayed Air Navigation Centre

رؤيتنا: منظومة طيران مدني آمنة ورائدة ومستدامة  
OUR VISION: A LEADING, SAFE, SECURE AND SUSTAINABLE CIVIL AVIATION SYSTEM



# Voice Communications

Current and planned

# Voice Communications

## **Current**

### **VCCS**

- Currently in the process of replacing our existing VCCS.
- New system will improve redundancy and allow us to connect our radio sites via VoIP
- This activity will be completed by 31 July 2016

### **VHF Radio's**

- A single frequency main/standby site has been installed in the East of the UAE and is currently under testing.
  - This is to improve communications over one of our busiest hold areas.
  - Will be connected via E1 over our IPVPN network.
  - Will be operational by end of Q3 2016
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# Voice Communications continued

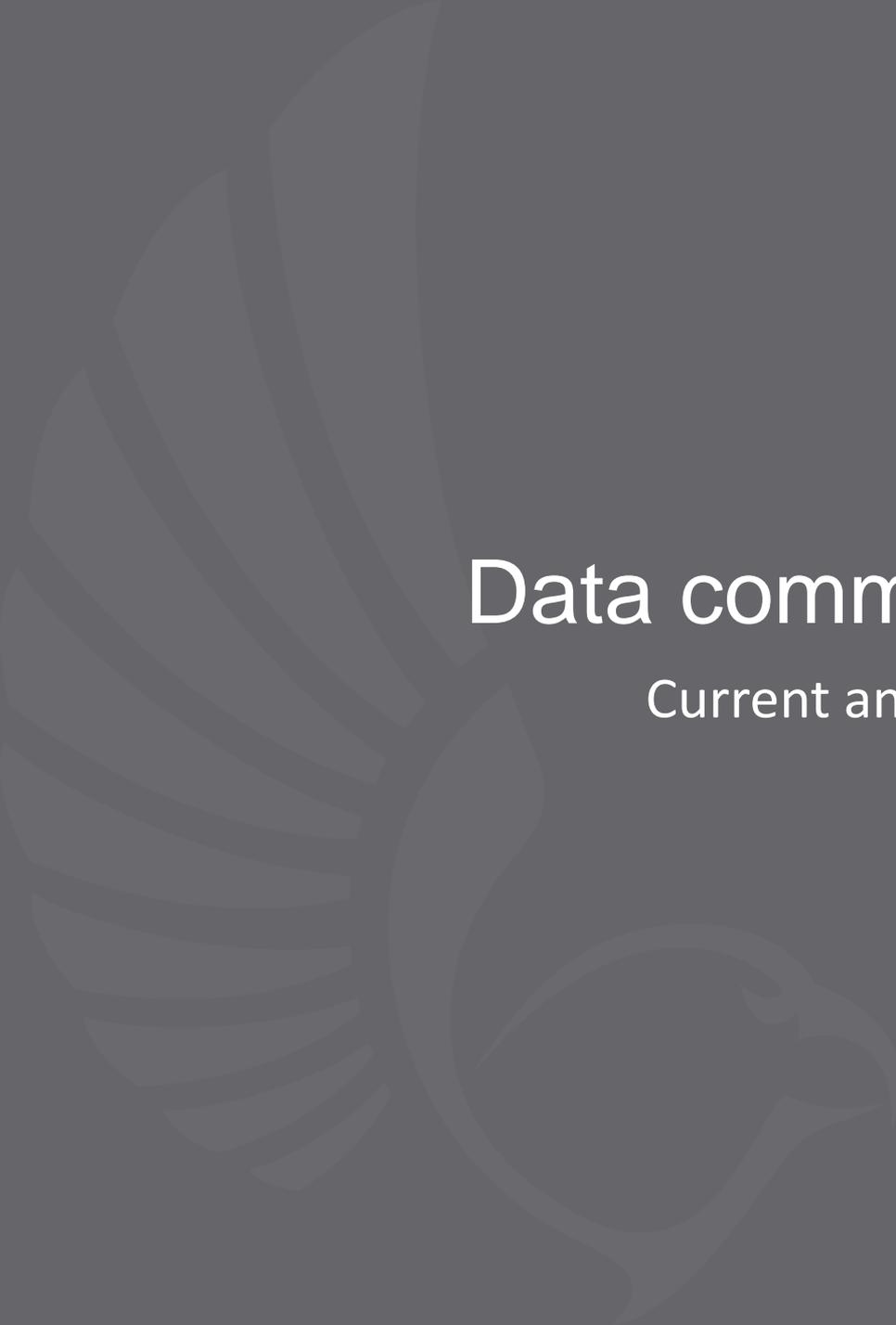
## **Planned**

### **VHF Radio's - Remote**

- An additional two new remote sites will be installed by the end of 2016.
- Each site will have 6 dedicated Main/Standby frequencies and connected back to our VCCS, via our IPVPN, using VoIP.

### **VHF Radio's – Sheikh Zayed Centre**

- An additional 10 Main/Standby VHF frequencies are planned to be installed at SZC for future growth.
  - Activity planned for 2017.
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# Data communications

Current and planned

# Data communications:

## **Current**

### **Internal IPVPN**

26 IPVPN links

- All legacy circuits are being migrated to IPVPN.
- All Mode S radar feeds are being sent back to SZC via IP due to Serial data issues over the routers.
- All links monitored via our SolarWinds software.

### **GCC IPVPN**

- New network we have established to replace the legacy circuits.
  - Currently we have connections to Bahrain and Muscat.
  - All links monitored via our SolarWinds software.
-

# Data communications:

## **Planned**

### **Internal IPVPN**

- Additional IPVPN links to new ADS-B and VHF sites.
- Complete replacement of legacy circuits within the UAE.

### **GCC IPVPN**

- All existing legacy circuits to be migrated to this network.
  - Possible integration/migration to CRV.
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A faint, stylized graphic of a bird's wing and head is visible on the left side of the slide. The wing is composed of several curved, overlapping segments, and the head is shown in profile, facing right.

# Surveillance

Current and planned

# Surveillance

## **Current**

### **Mode S**

- Currently in the process of installing a new Raytheon Mode S radar in the West of the UAE to supplement our existing radar in the Northern Emirates.
- This will be operational by end of 2016

### **WAM**

- Currently our system is being fine tuned.
- The system will be operational by end of 2016.

### **ADS-B**

- Currently have 7 sites (14 sensors) installed throughout the UAE.
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# Surveillance continued

## **Planned**

### **MODE S**

- Existing SSR radar at Tarif is planned to be upgraded to Mode S in 2018.

### **ADS-B**

- 3 additional sites will be installed by the end of 2016.
- Total ADS-B sites will be 10 by the end of 2016.

# Surveillance continued

## Surveillance feeds currently connected to our ARTAS tracker:

2 x Mode S

2 x PSR

5 x SSR

6 x ADS-B's

## Surveillance feeds in ± 12 months connected to our ARTAS tracker:

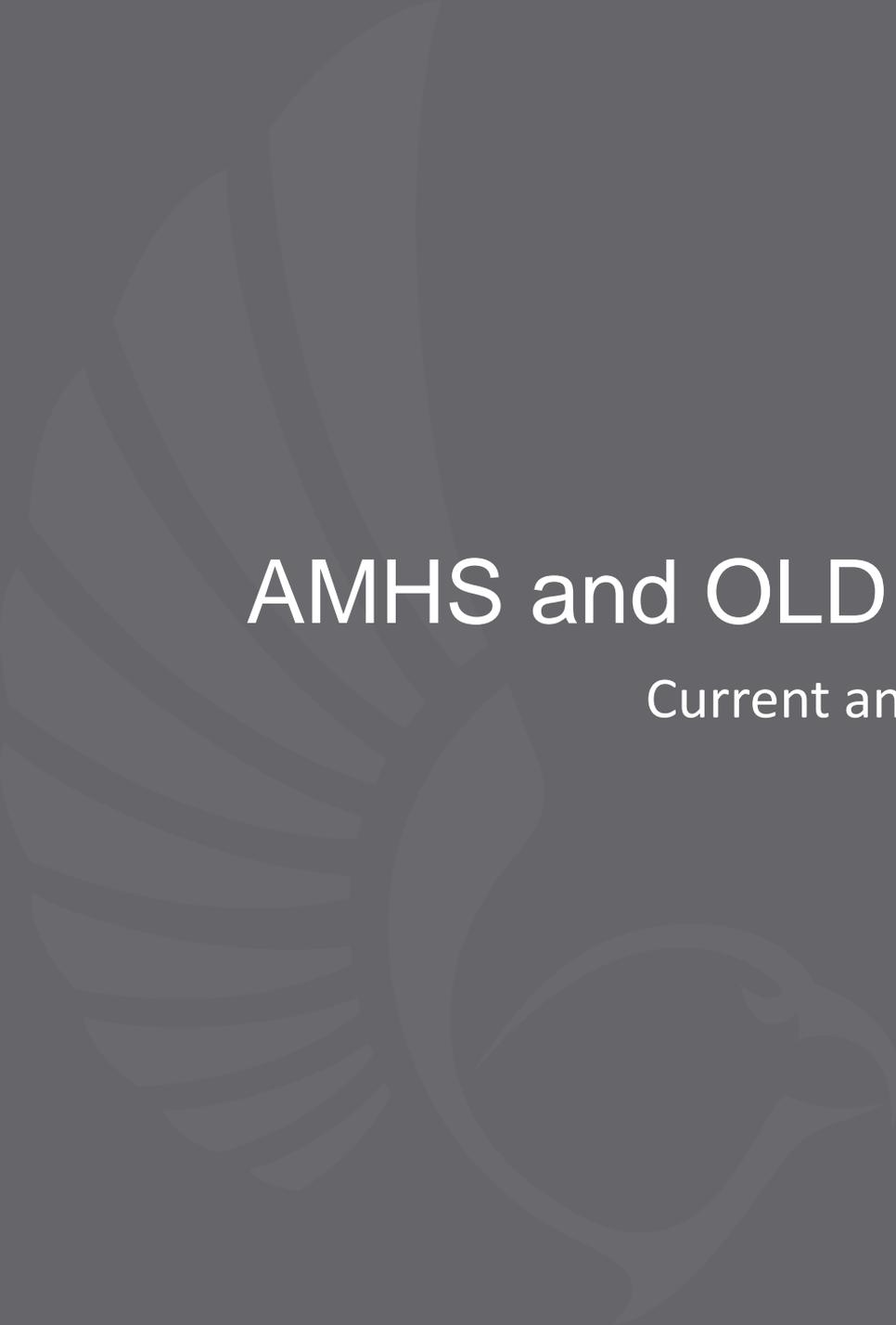
5 x Mode S

1 x PSR

4 x SSR

2 x WAM Clusters

1 x Combined ADS-B (Merged data stream of 20 sensors)



# AMHS and OLDI implementation

Current and planned



# AMHS / OLDI:

## **Current**

### **AMHS**

Oman

Saudi Arabia

Jordan

Qatar

Dubai

Dubai World Central

### **OLDI**

Doha

All UAE airports.



# AMHS / OLDI:

## **Planned**

### AMHS

Bahrain

### OLDI

Bahrain – Under test

Oman



# Future planned activities

# Future planned activities:

## Enhanced Departure Flow Management

- Dedicated webpage available to all registered stakeholders
- Dedicated secure connection for each user
- It will allow stakeholders/airlines to interact with their slot allocations and allow them to ensure better scheduling of their flights, runway usage etc.
- Will also smooth the departure flow at the exit waypoints of our FIR.

## Enhanced Aman Flow Management

- Enhancement of existing Aman System
  - It will allocate the arrival slot entry into the FIR
  - Arrival slot is the time given to Adjacent FIR (copied to Flight operator) to delay/gain the arrival flight into local FIR to ensure the optimization of approach sequence.
  - Currently in test phases
-

## Future planned activities:

### CPDLC

- Requirements have been provided to our equipment suppliers.
- Software updates required.
- SITA and ARINC to be contacted.
- Tentative plan is for 2017

### Secured Operational Network

- 2 Tier Firewall architecture.
  - Perimeter UTM Firewall including advanced IPS (Intrusion Prevention), IDS (Intrusion Detection), Anti-Dos and Anti-malware features.
  - Dedicated firewalls for database security/integrity and Web Application Security (WAF).
  - Double factor authentication to access the system from outside.
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THANK YOU

