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Coffee Break by Our Bronze Sponsor

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Directors General Panel

A Strategy for a Civil Aviation Authority 2.0: Digital Ideas to Serve the Aviation Ecosystem to the Benefit of the Community

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Christian Schleifer

Council Representative of Austria and
the Abis group at ICAO

Panel Speakers

Fernando Naranjo Elizondo

Director General

DGAC Costa Rica

Lic. Homero Francisco Morales Herrera

Executive Director

Civil Aviation Authority of El Salvador

Ing. Daniel Acquah

Deputy Director-General (Technical)

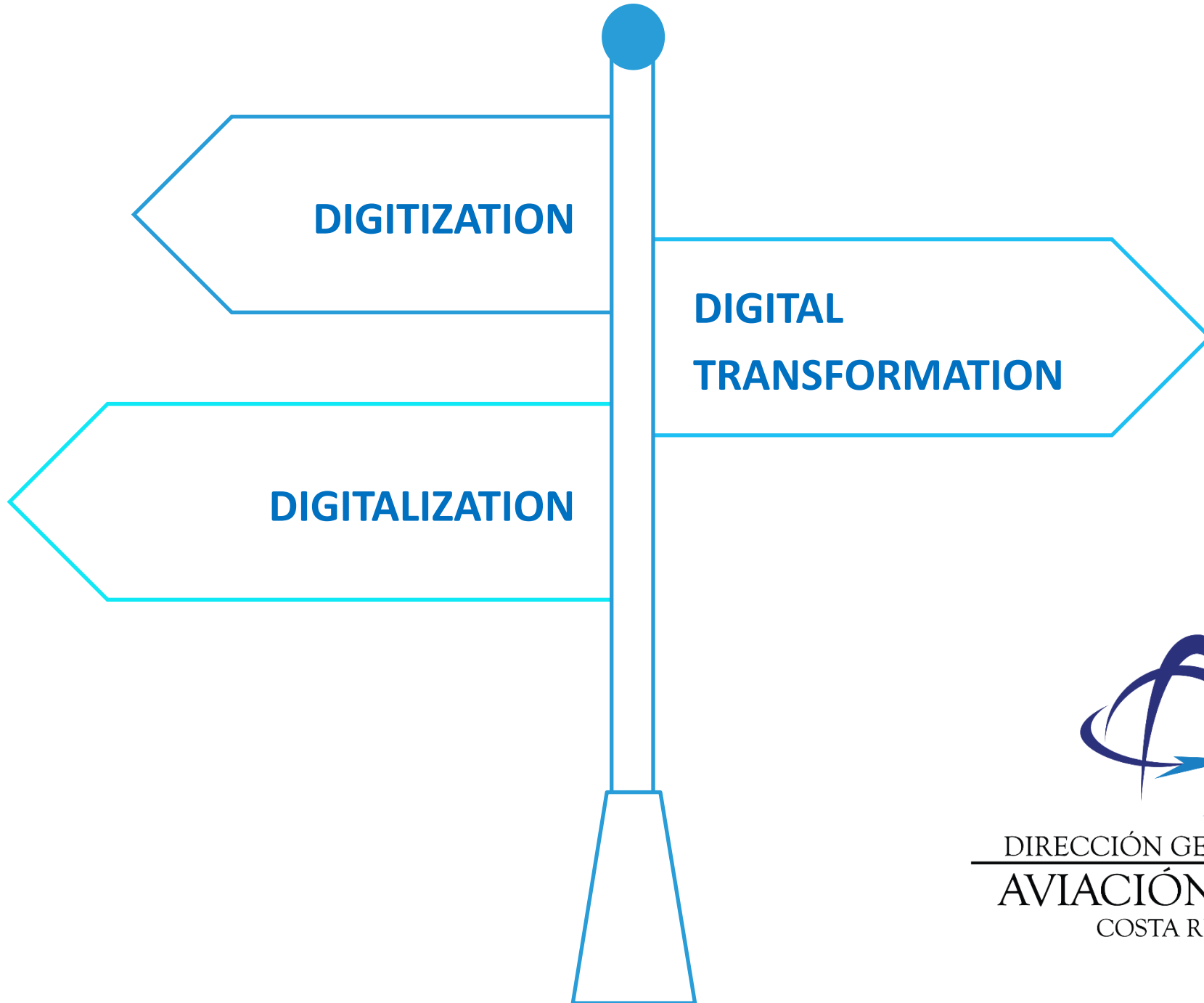Ghana Civil Aviation Authority (GCAA)

Mr. Koen Milis

Director General

Belgian Civil Aviation Authority

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Fernando Naranjo Elizondo

Director General

DGAC Costa Rica

DIGITIZATION

DIGITAL TRANSFORMATION

DIGITALIZATION

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DIRECCIÓN GENERAL DE
AVIACIÓN CIVIL
COSTA RICA

Digitization

Updates/New regulations

Technical library

Electronic Flight Bag

Digital signing

AOC, helicopters, aerial works, training schools, GHS, RPAS, AMO

ISO 9001:2015

Software cloud-based

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Digitalization

e-FPL, e-AIP, e-TOD, SAR, NOTAM, ATM Systems, Staff Management, ATFM, SMS, etc.
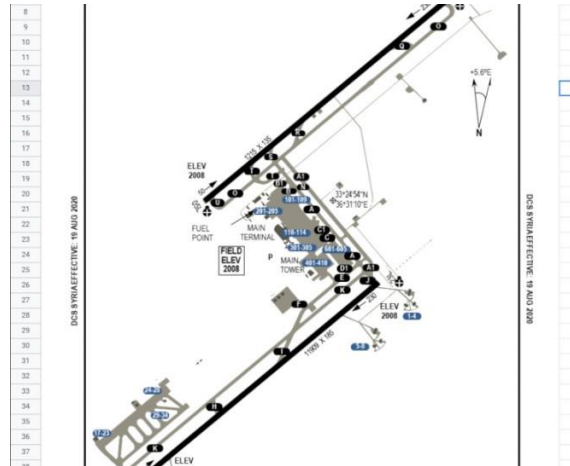
Obstacles, constructions

Airport processes

Application, tests, medical certificate, records, payments,

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Digital Transformation

01

02

03

04

05

Awareness

Why?

Strategic
innovation
(vision)

Planning

What?

Where?

When?

Who?

Training

Build
capabilities

Digital skills

Critical
thinking

**Implementa-
tion**

People

Processes

Technology

Optimization

Continuous
monitoring
and
improvement
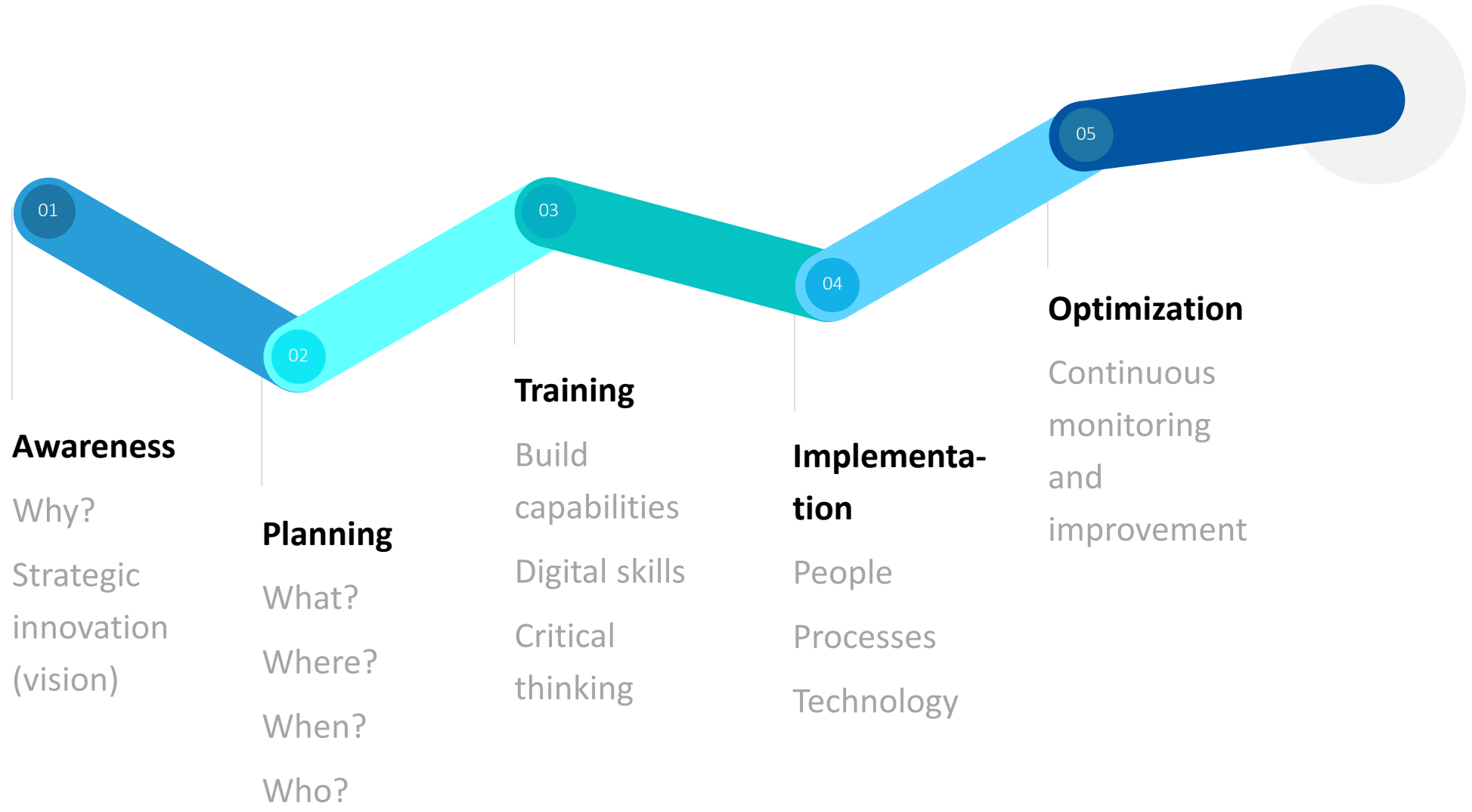
Mindset - Strategic Innovation

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Thank You

ICAO Headquarters
Montréal

European and North Atlantic (EUR/NAT) Office
Paris

Asia and Pacific (APAC) Sub-office
Beijing

Middle East (MID) Office
Cairo

Western and Central African (WACAF) Office
Dakar

North American Central American and Caribbean (NACC) Office
Mexico City

South American (SAM) Office
Lima

Eastern and Southern African (ESAF) Office
Nairobi

Asia and Pacific (APAC) Office
Bangkok

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Ing. Daniel Acquah

Deputy Director General (Technical)

Ghana Civil Aviation Authority (GCAA)

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DIGITAL TRANSFORMATION IN AVIATION SAFETY OVERSIGHT: ENSURING A SECURE SKY FOR GHANA

Progress achieved in digital solutions in the Ghanaian aviation ecosystem.

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PRESENTATION OVERVIEW

01 Introduction

02 Internal Digital Ideas for Aviation Safety Oversight in Ghana

03 External Digital Ideas for Aviation Safety Oversight in Ghana

04 Benefits of Digital Solutions in Aviation Safety Oversight and Success Story of Ghana.

05 Challenges

06 The Way Froward

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01 Introduction

GCAA is the designated state entity responsible for regulating civil aviation in Ghana. GCAA is committed to maintaining the highest aviation safety and security standards.

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- **First ICAO USOAP Audit in Ghana - *2006.***

   Reliance on manual paperwork for safety oversight functions and activities. Associated problems include**:**
  - cumbersome paperwork for certification surveillance activities.
  - time-consuming processes.
  - increased risk of errors and delays,
  - loss of records/evidence,
  - access to guidance materials difficulties by inspectors and industry, etc.
  - amendment of regulations and guidance materials very cumbersome

- **Digital innovations occasioned by the commitment of the Government to make Ghana the aviation hub of West Africa to catalyze:**
  - economic growth,
  - regional and global connectivity,
  - promotion of tourism and trade.

- **In 2010, GCAA's journey to digitalization began with deployment of systems and applications to support the work of the Authority and its external stakeholders.**
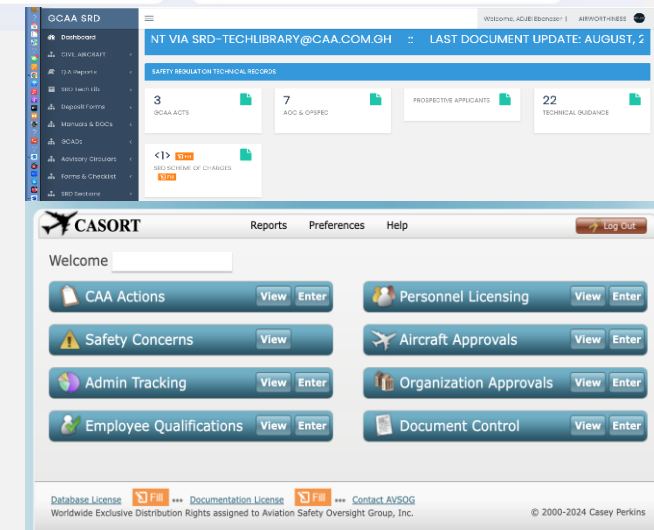
02
Internal Digital ideas for aviation safety oversight in Ghana

GCAA INTEGRATED SOFTWARE CENTER (INTERNAL)

| GCAA Intranet Site | Phonebook Directory | ITRAQS | Records Manager |
| CASORT | Laserfiche | Microsoft Office 365 Suite | GCAA SRD Technical Library Portal |

➢ CASORT (Certification and Surveillance activities)
➢ Laserfiche (Document Management System)
➢ ITRAQS (Inspector Training Records and Qualification Systems)
➢ SRD Technical Library Portal (Portal for Inspector Guidance Materials)
➢ Records Manager (Records Retention)
➢ Microsoft Office 365 Suite (Suite of apps for work processes and collaboration)
➢ PMS (Performance Management System)
➢ RCMS (Remote Control Monitoring System by Eng.)

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03
External Digital ideas for aviation safety oversight in Ghana

GCAA INTEGRATED SOFTWARE CENTER (EXTERNAL)

| GCAA Website	Billing and Permit Administration Portal	GCAA Notam	GATA Website
State Safety Program	PEL Exam Portal	Drone MS	AMCAS Portal

- ➢ AMCAS (Medical Certificate Application System)
- ➢ PEL Exam Portal
- ➢ Billing and Permit Administration Portal
- ➢ State Safety Reporting System (For mandatory and voluntary reporting by both GCAA and AIB-Ghana).
- ➢ GCAA Website
- ➢ Consumer Protection Complaint Site
- ➢ Drone Registration Data Base
- ➢ Zipline Operations Corridor & Fleet-Deck Monitoring System
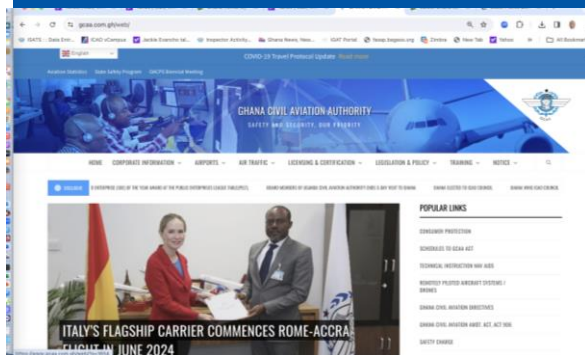
04
Benefits of Digital Solutions in Aviation Safety Oversight and Success Story of Ghana.

- Enhanced and Robust Safety Oversight System.

- Data-Driven Decision-Making.

- Real-Time Monitoring and Reporting.

- Enhanced Communication and Collaboration.

- Predictive Analytics for Risk Management.

- Enhanced Data Security.

- Global Compliance and Recognition.
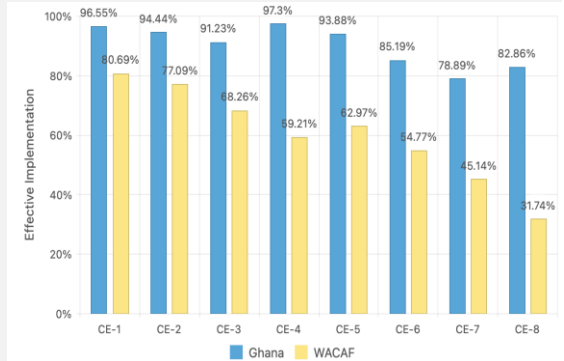
05
Challenges

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- **Resource Constraints**
  - Limited resources for implementing digital solutions.

- **Training and Capacity Building**
  - Lack of expertise in digital technologies among inspectors.

- **Resistant to change**
  - Unwillingness to accept change.

- **Data Privacy Concerns**
  - Concerns about the privacy of sensitive safety data.

**06
The Way Forward**

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Ghana's aviation sector has evolved from paper-based to digital, enhancing efficiency, safety, security, and facilitation. However, more need to be done through:

- seeking partnerships with technology providers and international organizations
- investing in training programs to build digital literacy and skills
- implementing robust data protection measures and compliance with international standards.

Lic. Homero Francisco Morales Herrera

Executive Director

Civil Aviation Authority of El Salvador

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EL SALVADOR

Mission and Vision Statements
CIVIL AVIATION AUTHORITY OF EL SALVADOR

✈ MISSION

"To regulate, certify and monitor civil aviation in El Salvador, guaranteeing compliance with national and international standards, to promote development and aviation safety and security."

🛫 VISION

"To be a dynamic and effective institution, committed to safety, security and continuous improvement."

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Strategic Goals
CIVIL AVIATION AUTHORITY OF EL SALVADOR

Strategic Goal N°1

Guarantee the Operational Safety and Security of Civil Aviation in El Salvador

Strategic Goal N°2

Modernize the Civil Aviation Authority

Line of Action N°1

Digitize and systematize the main processes of the CAA

Line of Action N°2

The renewal of the organizational and operational model of the CAA

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Strategic Projects
CIVIL AVIATION AUTHORITY OF EL SALVADOR

Line of Action N°1

Digitize and systematize the main processes of the CAA

Safety and Security Oversight System (SSOS)

1. It is a process that has been developed in order to have an easy access to the web platform.

2. In terms of having the electronic signature incorporated, we advance in the management of zero paper and thus contribute to the preservation of the environment.

3. Online feedback with operators/service providers.

4. Upload photographic and documentary evidence in real time.

5. 24/7 connectivity.

6. The possibility to analyze risks by operator and carry out **risk-based surveillance planning.**
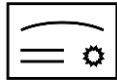
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Line of Action N°2

Modernize the Civil Aviation Authority

Training Management System

1. Training control by inspector.

2. Automatic training planning based on training expiration and compliance with the training manual.

3. Automatic alerts.

4. Digital backup of evidence of training received from inspectors.
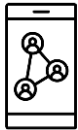
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Line of Action N°2

Modernize the Civil Aviation Authority

El Salvador Digital Agenda 2020 - 2030

- https://simple.sv/

The Civil Aviation Authority of El Salvador has uploaded 14 procedures

The challenges associated with these implementations are:

- The standardization of procedures, which has already been overcome.

- The interaction with the user must be really simple. Which is in progress.

- Generate trust in the population to use the platform. Which in progress.

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The main tool for innovation is not only a informatic system, nor the fastest or most expensive computer, but the ability to encourage our work teams for adapting to changes through constant training.

"No man ever steps in the same river twice, for it´s not the same river and he´s not the same man."

Heraclitus

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Mr. Koen Milis

Director General

Belgian Civil Aviation Authority

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Futureproof organisational structure

Belgian Civil Aviation authority

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PRESENTATION OVERVIEW

01 Introduction

02 T(h)rust set a new breeze

03 New mission

04 New structure

05 Implementation of Enterprise architecture

06 Belgian aviation vision

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1. Introduction

Organisation scheme not changed since 2000

Meanwhile many new developments & challenges in the aviation sector:

new tasks, new kind of clients, innovation in all fields….

Now opportunity for an introspective on the functioning of the BCAA

Program **T(h)RUST SET**

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2. T(h)rust Set – a new breeze

Transformation program of the BCAA

- introducing a new mission & vision

- implementing a new organisation chart

- introducing a new culture

- developing a strategic IT architecture

- developing a Belgian aviation strategy

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3. New mission

The BCAA, as part of the FPS Mobility and Transport,

- contributes to **safe, sustainable and economically** relevant aviation within a multimodal approach to transport
- by focusing on **international decision-making**, **partnerships** with stakeholders, **digitalization** and the development and **expertise** of its staff.
  - ➢ More impact on (international) decision making
  - ➢ More focus on environment and the economic impact of aviation in Belgium

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4. New structure

Steps used to design our new structure
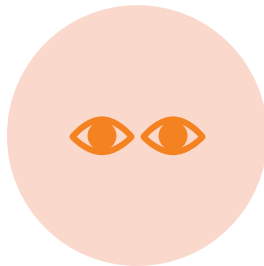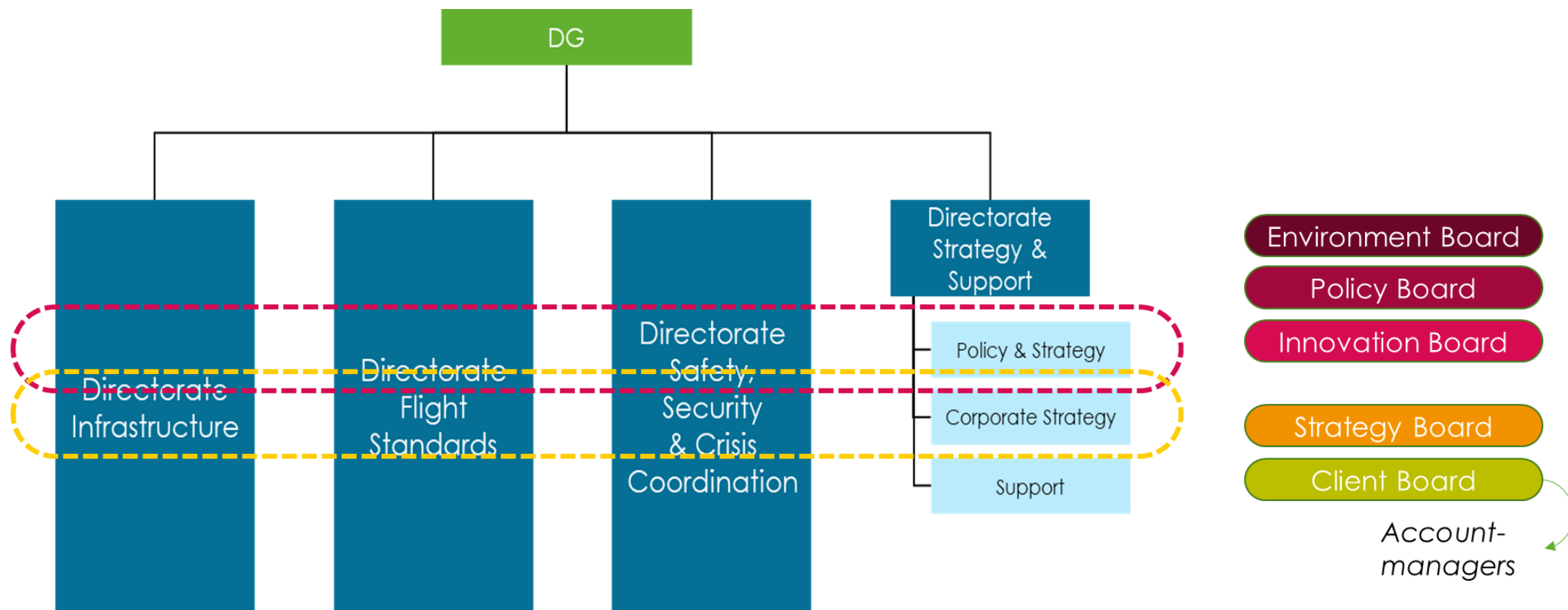
NEW MISSION-VISION

UPDATE EXTERNAL AUDIT

BENCHMARKING WITH OTHER CAA

OUR OWN IDEAS (INVOLVEMENT OF ALL THE PERSONNEL)

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4. New Structure

5. BCAA Enterprise Architecture

Support tool for a future-ready organisation

'An enterprise architecture (EA) is a conceptual blueprint that defines the structure and operation of organisations. The intent of enterprise architecture is to determine how an organisation can effectively achieve its current and future objectives. Enterprise architecture involves the practice of analysing, planning, designing and eventual implementing of analysis on an enterprise.'

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5. BCAA Enterprise architecture

Expectations

- Facilitate business-IT alignment

- Increase digitalisation of the business

- Facilitating innovation

- Be more responsive to needs of user groups/stakeholders

- Support DevOps & processes by providing insights, principles, standards & guardrails

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6. Belgian aviation strategy

- Developing a long term vision on aviation in Belgium

- Buttom-up approach

- All stakeholders represented

- Guidelines
  - BCAA
  - political level
  - stakeholders

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7. Conclusions

Structure of organisation must be appropriate for future challenges and major innovations

Aviation authorities face similar challenges - possible role for ICAO

Digitalisation has a key role to play

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