Cybersecurity Oversight

Our journey @ the JCAA

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Director of Information Technology (Chief Information Officer)

Douglas Williamson

- 30 years in the Information Technology field
  - Public/Private Sectors
  - Former Specialist at IBM
  - Senior Manager at Xerox
  - MSc. In Advanced Computer Science, University of Manchester UK
- 8 years @ the JCAA
  - Restructured IT Department (Applications & Data)
  - Complete IT Infrastructure replacement
  - Retire legacy applications (MS Access)
  - Acquire/Build, Test & Deployed 10 Enterprise Application Services
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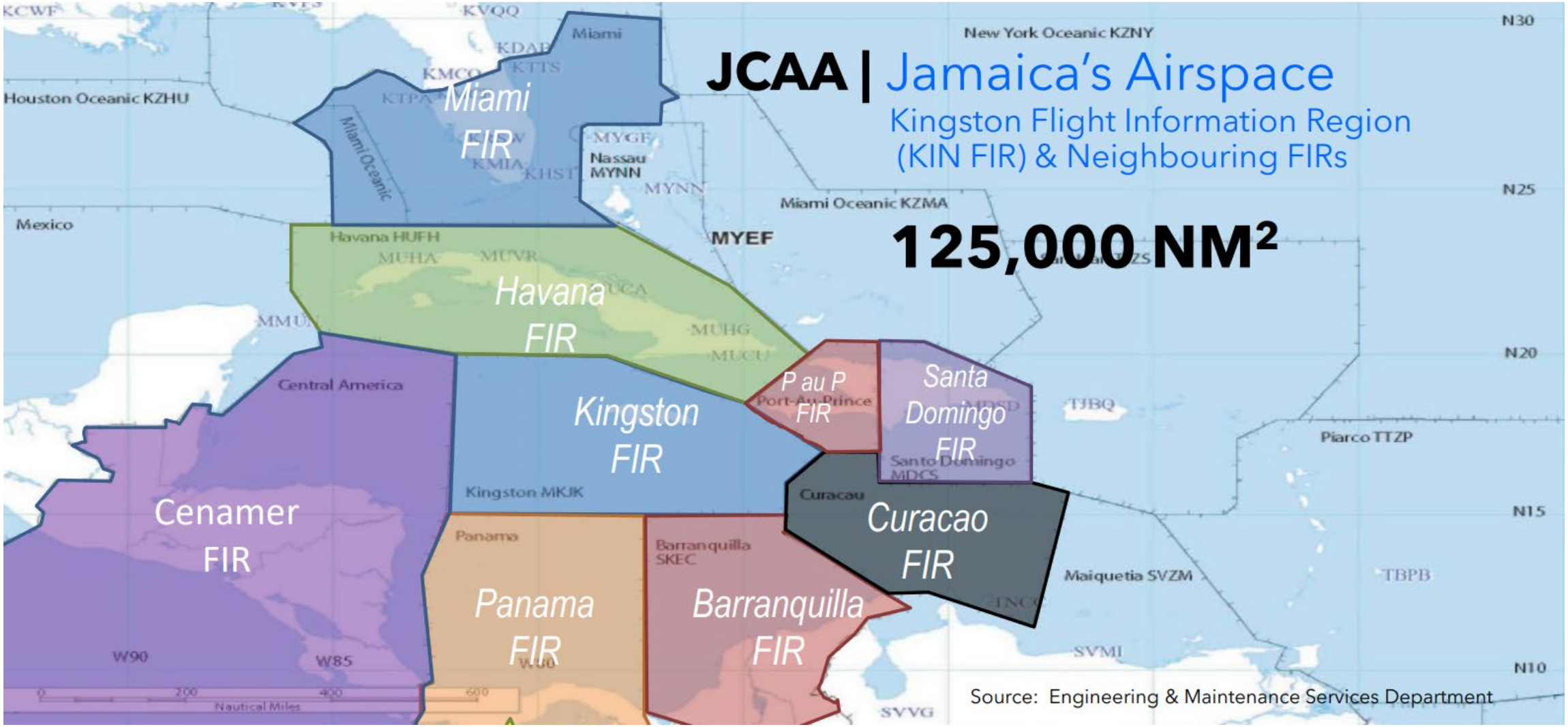
Aviation Cybersecurity Oversight

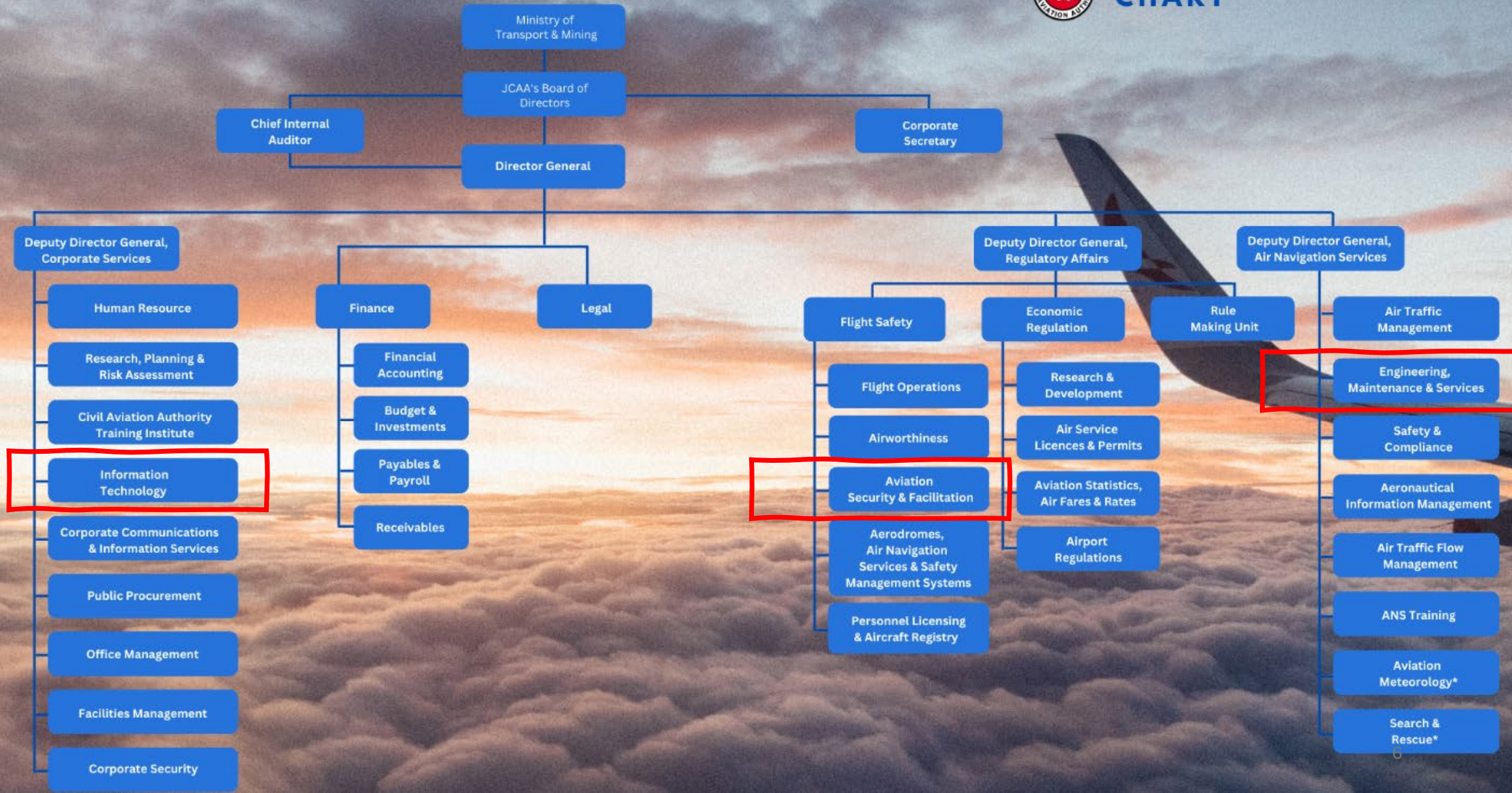
- Background of the JCAA
- Digital Transformation @ (at) JCAA
- Current practices (Protocol Questions)
- Annual Assurance Schedule

Background

- JCAA Established in 1996
- Civil Aviation Department becomes JCAA
- 2016 decision taken to take a strategic approach to IT
- 2017 – Strategic Plan for Digital Transformation
- 2018 – 2022 Rapid Digital Transformation
  - Regulator – PALMS, Mobile Forms, PEL Testing (LMS)
  - ANSP – AIP Subs, ATC License tracking, Tower Log
  - Shared Services – e-Commerce, Recruitment, eSignatures, Asset Mgmt…
  - Cybersecurity & Disaster Recovery Assurance questions
  - Jamacia Data Protection Act 2023

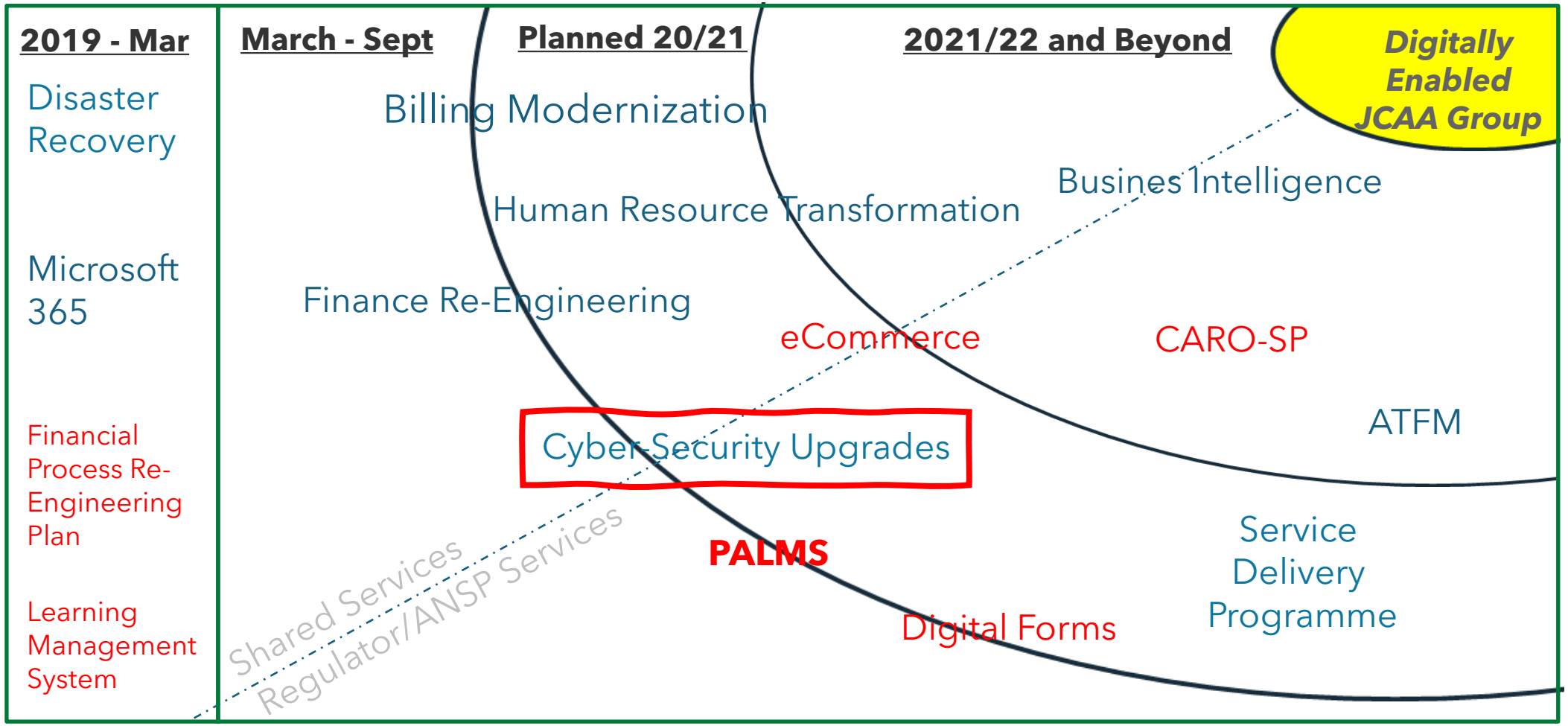

JCAA | Jamaica's Airspace
Kingston Flight Information Region
(KIN FIR) & Neighbouring FIRs
125,000 NM²
Miami FIR
Havana FIR
Kingston FIR
P au P FIR
Santa Domingo FIR
Curacao FIR
Barranquilla FIR
Panama FIR
Cenamer FIR
Miami Oceanic
Houston Oceanic KZHU
New York Oceanic KZNY
Miami Oceanic KZMA
Nassau MYNN
MYEF
Havana HUFH
Mexico
Central America
Kingston MKJK
Santo Domingo MDCS
Curacau
Barranquilla SKEC
Panama
Piarco TTZP
Maiquetia SVZM
N30
N25
N20
N15
N10
W90
W85
Nautical Miles
Source: Engineering & Maintenance Services Department

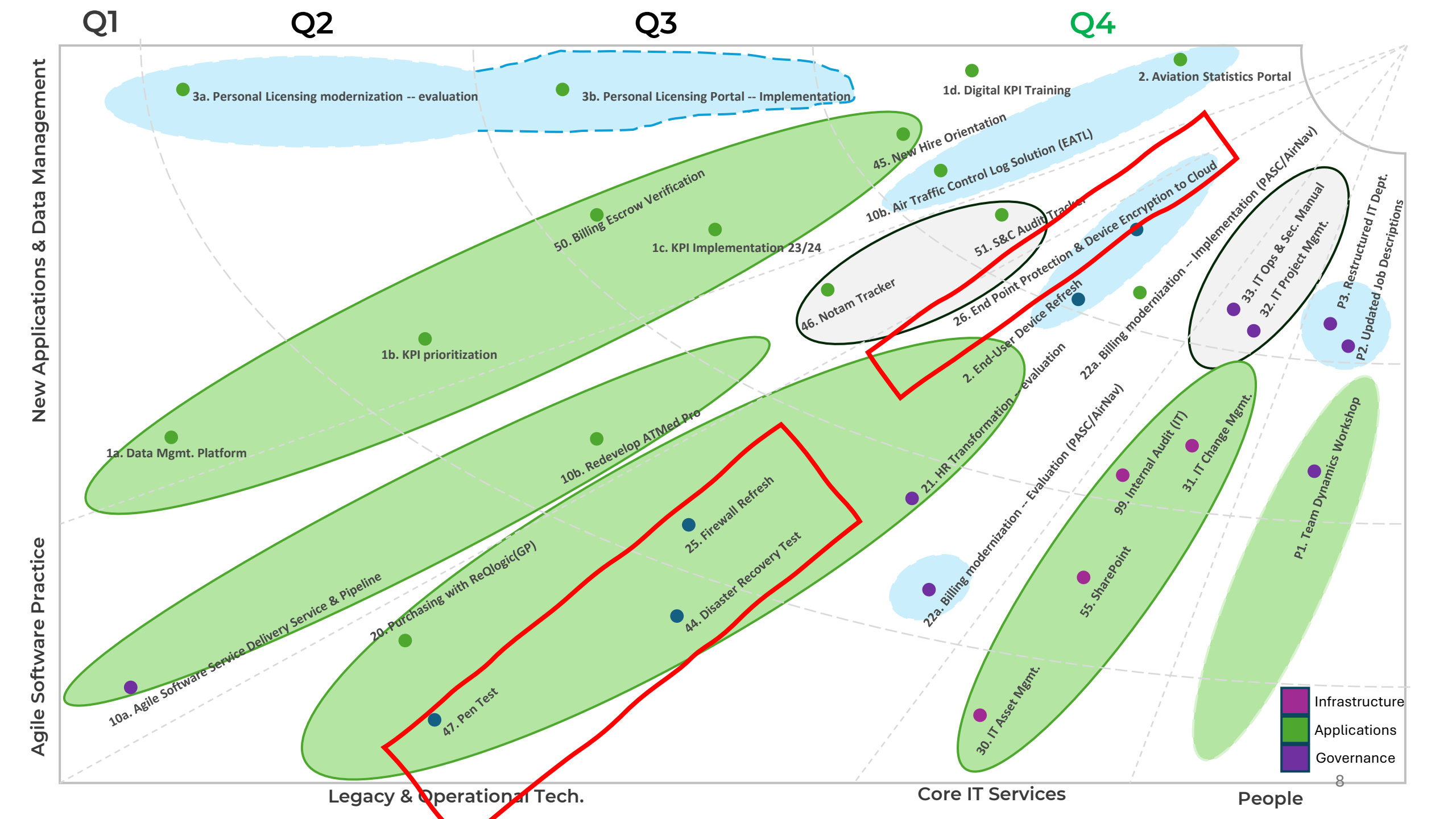
ORGANIZATIONAL CHART



Digital Transformation

The Roadmap




Q1
Q2
Q3
Q4
New Applications & Data Management
Agile Software Practice
Legacy & Operational Tech.
Core IT Services
People
3a. Personal Licensing modernization -- evaluation
3b. Personal Licensing Portal -- Implementation
1d. Digital KPI Training
2. Aviation Statistics Portal
45. New Hire Orientation
10b. Air Traffic Control Log Solution (EATL)
50. Billing Escrow Verification
1c. KPI Implementation 23/24
10b. Air Traffic Control Log Solution (EATL)
51. S&C Audit Tracker
46. Notam Tracker
26. End Point Protection & Device Encryption to Cloud
22a. Billing modernization -- Implementation (PASC/AirNav)
33. IT Ops & Sec. Manual
32. IT Project Mgmt.
P3. Restructured IT Dept.
P2. Updated Job Descriptions
1b. KPI prioritization
1a. Data Mgmt. Platform
10b. Redevelop ATMed Pro
2. End-User Device Refresh
21. HR Transformation -- evaluation
22a. Billing modernization -- Evaluation (PASC/AirNav)
99. Internal Audit (IT)
31. IT Change Mgmt.
P1. Team Dynamics Workshop
25. Firewall Refresh
20. Purchasing with ReQlogic(GP)
44. Disaster Recovery Test
10a. Agile Software Service Delivery Service & Pipeline
22a. Billing modernization -- Evaluation (PASC/AirNav)
55. SharePoint
47. Pen Test
30. IT Asset Mgmt.
Infrastructure
Applications
Governance

Digital Applications Suite

- Air Service Licenses & Permits - PALMS
- Ramp Inspection – Mobile Forms
- Aviation Statistics (Airport) – AVStats
- Air Traffic Tower Log – EATL
- ATC Safety Reporting – SC Forms
- AIP subscriptions – ePubs
- Business Intelligence – DataHub
- Learning Management – LMS
- Ecommerce – ePay
- Asset Management - OMIS

Current Practices

Practice	Purpose (Protocol Questions)
Monthly Cybersecurity Report	Review all telemetry, logs & remediation projects Attacks on our public facing services(www), Phishing Email, Ransomware delivery, Results from PC & Server scans (EDR & WDE), Backups & Replicas, Pen Test & remediation
Annual Disaster Recovery Test	On Premises Systems tested for availability & currency (RPO & RTO)
Annual Network Penetration Test	External test all public facing IP Addresses & public applications
Report to ERMC	Update to JCAA Exec. & HoD's

Annual Assurance Schedule

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Monthly Checks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ext. Pen Test												✓
DR Test		✓										
ERMC	✓		✓		✓		✓		✓		✓	
CIRT												
DPU												

Monthly Checks – Executive, Board
External Pen Test – Executive, Board, ERMC, Technical
Disaster Recovery Test – Executive, Board, Process Owners
ERMC – Management,
CIRT – National Cyber Incident Response Team

*ERMC – Enterprise Risk Management Committee

Final Thoughts…

- Digital Transformation Journey of JCAA
- Strategic approach to Information Technology
- Build in Cybersecurity compliance
- Collaborate, Evolve & ACT
- Extend to Industry

Questions...

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