FAA FF-ICE R1 Implementation

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Presented on: 18 June 2024

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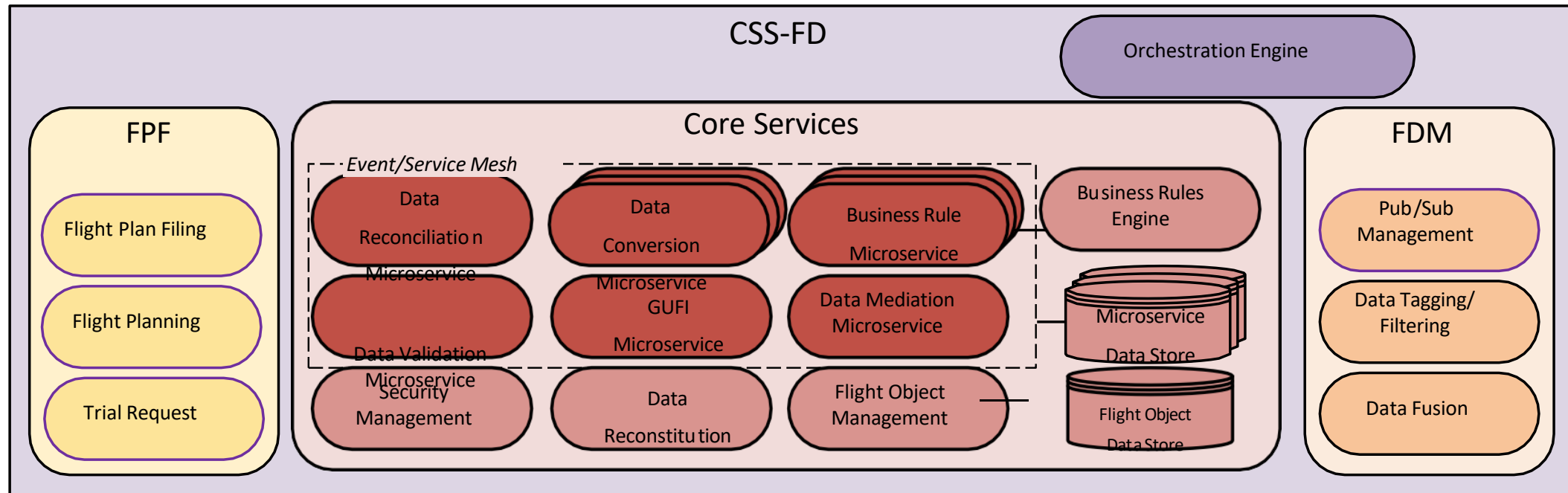
FF-ICE R1 Implementation Phases

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FAA Implementation Phases

- Comprise of Infrastructure and FF ICE R1 mandatory service
  - Infrastructure
    - Cyber Security
    - SWIM enhancements
    - Data Conversion
    - Data Store

  - FF ICE R1 Services
    - Flight Planning Service
    - Flight Filing Service
    - Flight Data Request Services

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CSS-FD Capability Decomposition

- CSS-FD = Common Support Services – Flight Data
- CSS-FD will provide the FAA with necessary services to implement FF-ICE/R1

CSS-FD

Orchestration Engine

FPF
- Flight Plan Filing
- Flight Planning
- Trial Request

Core Services

Event/Service Mesh

- Data Reconciliation Microservice
- Data Conversion Microservice
- Business Rule Microservice
- Business Rules Engine
- Data Validation Microservice
- GUFI Microservice
- Data Mediation Microservice
- Microservice Data Store
- Security Management
- Data Reconstitution
- Flight Object Management
- Flight Object Data Store

FDM
- Pub/Sub Management
- Data Tagging/Filtering
- Data Fusion

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CSS-FD Phase 1 and Phase 2 Capabilities

Phase 1

1. **Data Management & Security Framework**
2. **Flight Planning and Flight Plan Filing**
3. **Feedback by Reference**
4. **Return ATC Preferences**

Future Phase 2

- **Enhancement of Phase 1**
- **Focus on Preliminary Flight Planning, management, and additional, expanded integration with other systems (e.g., TFMS/FMDS)**

Phase 1 Capabilities Descriptions:

Capability 1: Data Management & Security Framework
- Data publication, conversion, matching, reconciliation, and reconstitution
- Data security and access control

Capability 2: Flight Planning and Flight Plan Filing
- File and update the associated Flight Plans with ATC automation
- Receive and respond to trial requests and flight information requests

Capability 3: Feedback by Reference
- Provide feedback by referencing constraints with updates when condition changes

Capability 4: Return ATC Preferences
- Provide ATC assigned routes and pref routes

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Mix Mode Operation Support

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CSS-FD Mix Mode Support

- The "legacy" flight plan filing system remains active and support legacy users filing FPL2012

- FF-ICE capable user (eAU), will file eFPL to CSS-FD

- CSS-FD internally generated unique flight identifier or UFI for legacy flight plan before stores it in its Flight Object.

- For CSS-FD, ONLY the eAU's derived GUFI will be called "Globally Unique Flight Identifier – GUFI"

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Thank You