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# Thoughts on Possible CAASD Contributions to the OEIA Focus Group

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# Recent MITRE/CAASD\* Experience: Understanding Problems and Portfolios

## ✍ RTCA Free Flight Select Committee

✍ FFP1 Definition

✍ 03-05 Effort

## ✍ NAS Modernization Offsite

✍ Airspace Problem ID effort ( ... mostly for Eastern US)

✍ Understanding User Excess Costs

✍ Estimating Future NAS Performance

✍ US Oceanic System/Service Evolution

## ✍ Older Efforts

✍ Free Flight Task Force 3

✍ Early CAASD efforts in development of the NAS  
Architecture

*\* These are not MITRE/CAASD efforts, and clearly other organizations have views.*

# General Characteristics of these Approaches (1)

- ✍ **Understanding of problems\***
  - ✍ **Replacement of aging infrastructure**
  - ✍ **Improving service quality (I.e., performance) for users**
  - ✍ **Controlling service provider costs**
    - † **Operating costs**
      - **ATM operations**
      - **Facility maintenance**
    - † **Out-year capital costs**
  - ✍ ...
- ✍ **Identification of candidate improvements (different scopes)\***
- ✍ **Reflection of various stakeholder perspectives\***
  - ✍ **Priorities**
  - ✍ **Equipage rate/willingness**

\* *More or less systematically and explicitly*

# General Characteristics of these Approaches (2)

- ✍ **Some basis for selecting/prioritization improvements\***
- ✍ **Some basis for capturing interdependencies\***
  - ✍ **Applications**
  - ✍ **Infrastructure**

*\* More or less systematically and explicitly*

# What Can MITRE/CAASD Contribute?

## ... An Understanding of Previous Efforts (1)

- ✍ **Charter, scope, objectives, context, players, audience**
- ✍ **Results/conclusions from these efforts**
  - ✍ **Operational problems and shortfalls, user objectives**
    - † **Near-term, longer-term**
  - ✍ **Proposed system improvements**
- ✍ **Approach taken**
  - ✍ **Criteria**
    - † **Performance impacts**
    - † **Costs**
      - **Service providers, users**
      - **Implementation costs, operating costs**
    - † **Maturity**
    - † **Risk (implementation, cost, performance)**
  - ✍ **Methods**

# What Can MITRE/CAASD Contribute? ... An Understanding of Previous Efforts (2)

✍ Lesson's learned (*at least our view of it!*)

👉 What worked?

👉 What could be better?

# Key Observations to be Considered

- ✍ **Problems are both**
  - ✍ **General to some extent**
  - ✍ **Characteristics are highly context specific, though**
- ✍ **The “right” solutions are even more context specific**
  - ✍ **Can we identify the “best” solutions without looking at specific contexts?**

# Recent MITRE/CAASD Work: Other Work

*Other organizations have similar work*

- ✍ **Work on development and assessment of planned improvements and capabilities**
  - ✍ **Procedures**
  - ✍ **Airspace**
  - ✍ **ATM capabilities**
  - ✍ **CNS capabilities**
  - ✍ **Fleet avionics evolution**
- ✍ **Various “over the horizon” studies**
  - ✍ **Evolution of RJ service**
  - ✍ **Environmental Scanning**

# Issues

✍ **How should the OEIA relate to other efforts?**

*Granted these are US-specific, but how do they relate?*

✍ **RTCA Industry Ops Concept**

✍ **Joint FAA/Industry Ops Concept**

✍ **FFP1 implementation plans**

✍ **RTCA 03-05 plans**

✍ **Safe Flight 21**

✍ **NAS Arch 4.0**

✍ **...**