

ACRP 09-14

## Advanced Computer Maintenance Management System (CMMS) Integration for Airports

John Fortin, CMRP, LEED AP



# Asset Management Context – Definitions

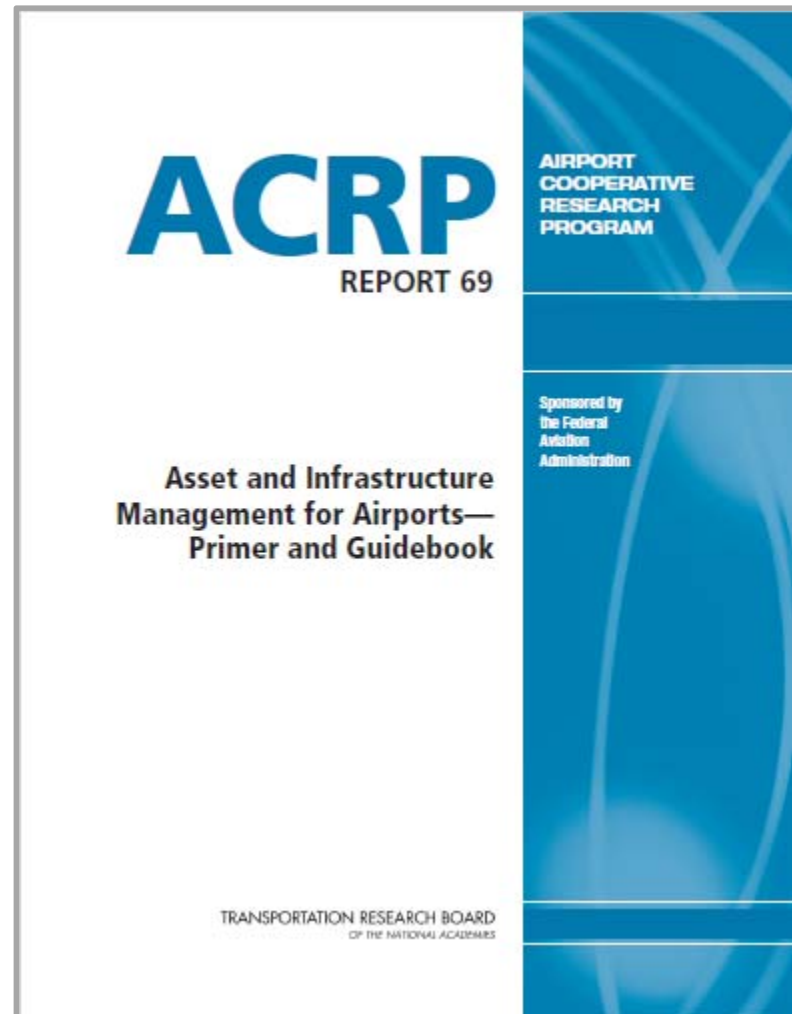
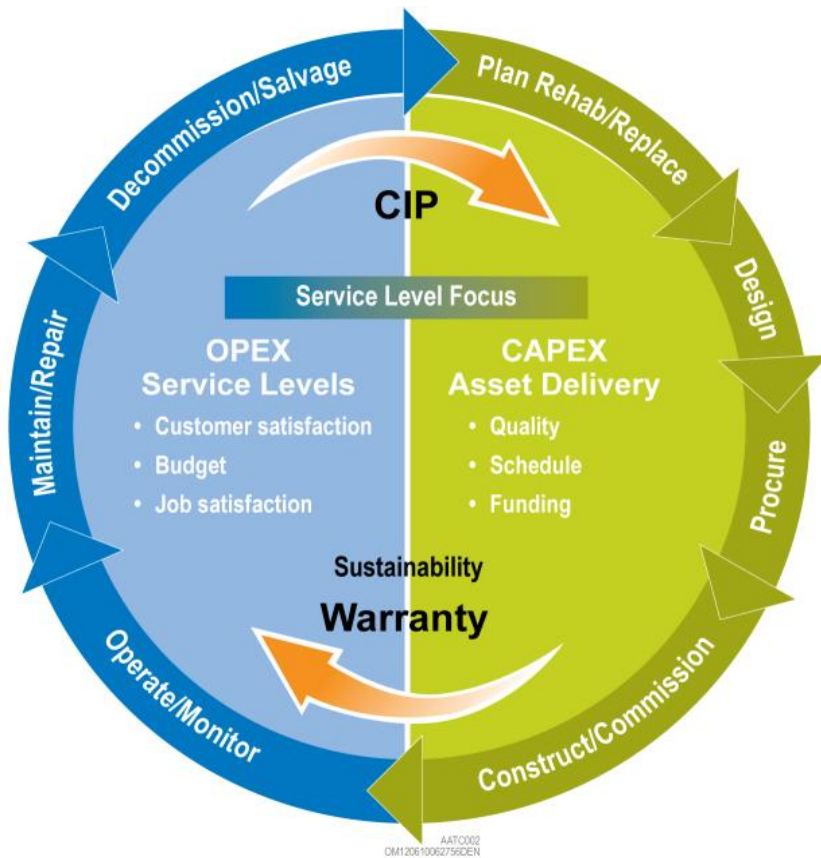
- ISO 55000 definition:

- ✓ *the coordinated activity of an organization to realize value from assets.*

- Another common definition:

- ✓ *An integrated set of processes to minimize the lifecycle costs of owning, operating and maintaining assets, at an acceptable level of risk, while continuously delivering established levels of service.*

# Asset Management Context – Lifecycle View



# Introduction to Asset Management

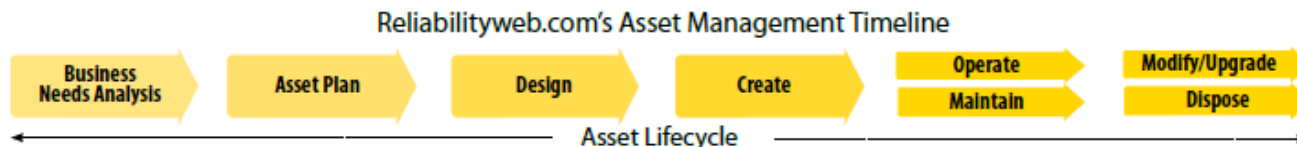
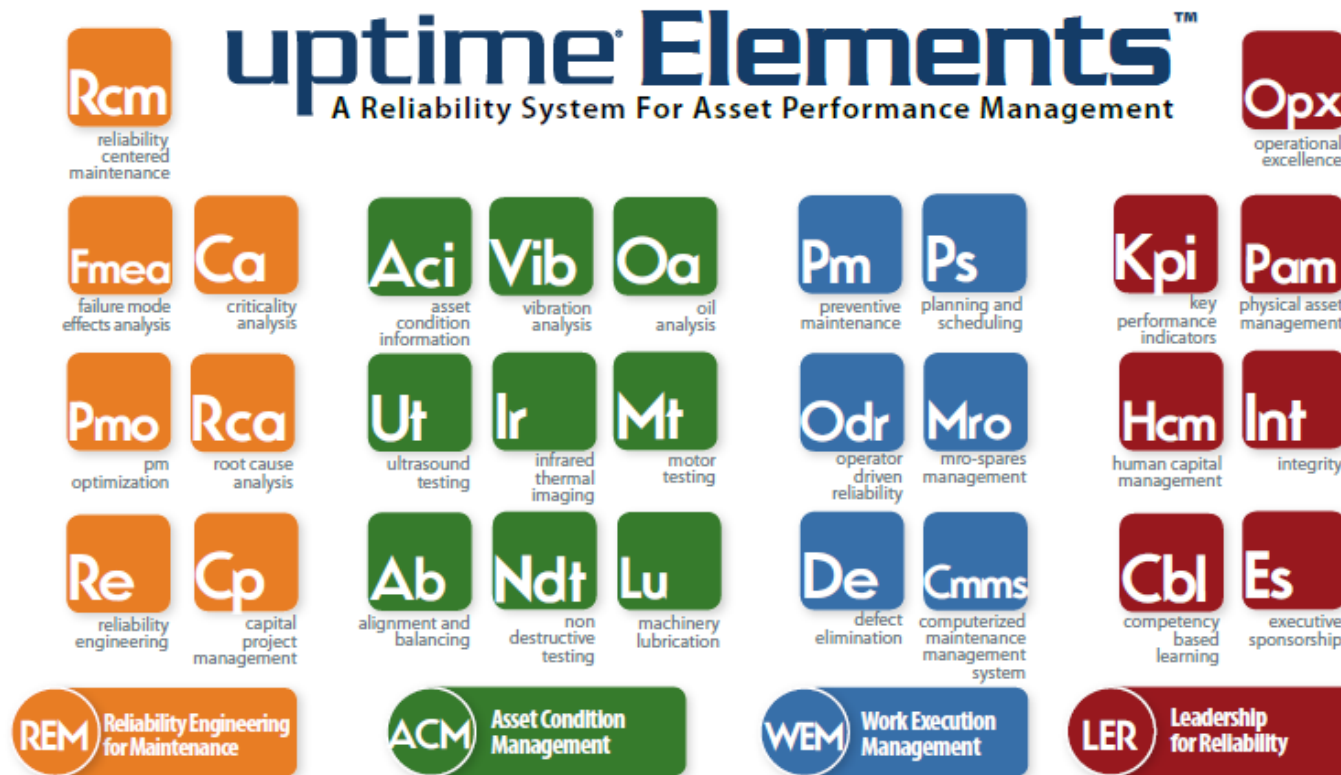
- Various frameworks for gap assessments
  - BSI PAS 55:2008 (forerunner standard)
    - (British Standards Institution - publically available standard)
  - New ISO 55000 Standard – became available 2014
  - Uptime Elements table/system for AM performance
  - Customization and industry-specific best practices (typical approach)

# ISO 55000 Asset Management Framework Documents:

- BS ISO 55000:2014 - Overview, principles and terminology
- BS ISO 55001:2014 - Management systems - Requirements
- BS ISO 55002:2014 - Management systems - Guidelines for the application of ISO 55001



# Uptime Framework (by ReliabilityWeb.com):



## Introduction:

- CMMS can be used to **manage a variety of assets** across a number of different functions and thus **can be overwhelming when implementing a new or replacement CMMS**
- **Robustness** of the features and functionalities **of CMMS'** available today also **adds to the complexity**
- **Phasing of systems** into the CMMS may result in a **more successful implementation, and development of a business case**
- **Users of past CMMS** have struggled with the details of **classifying and grouping asset tracking**
- **Recommendations** for logical groupings are needed **for various levels of tracking**




## Introduction continued:

- **Reporting** from the CMMS for airport executives **is generally inadequate for business decision making**
- The **objectives of this research** are to develop guidance:
  - identify which airport system is likely to provide the highest value when implementing a CMMS
  - describe the steps necessary to implement the identified system into a CMMS
  - provide the factors that an airport should consider when prioritizing the systems for inclusion into the CMMS in a phased approach
  - provide the steps for integrating CMMS into business decision making.



# Introduction continued:



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# ACRP

Web-Only Document 23:

## Guidance on Successful Computer Maintenance Management System (CMMS) Selection and Practices

Pamela Bell  
Rose & Baruzzini, Inc.  
St. Louis, MO

David Jividen  
Ted Melnick  
Maro Gartenfeld  
Barloh, Inc.  
Chandler, AZ

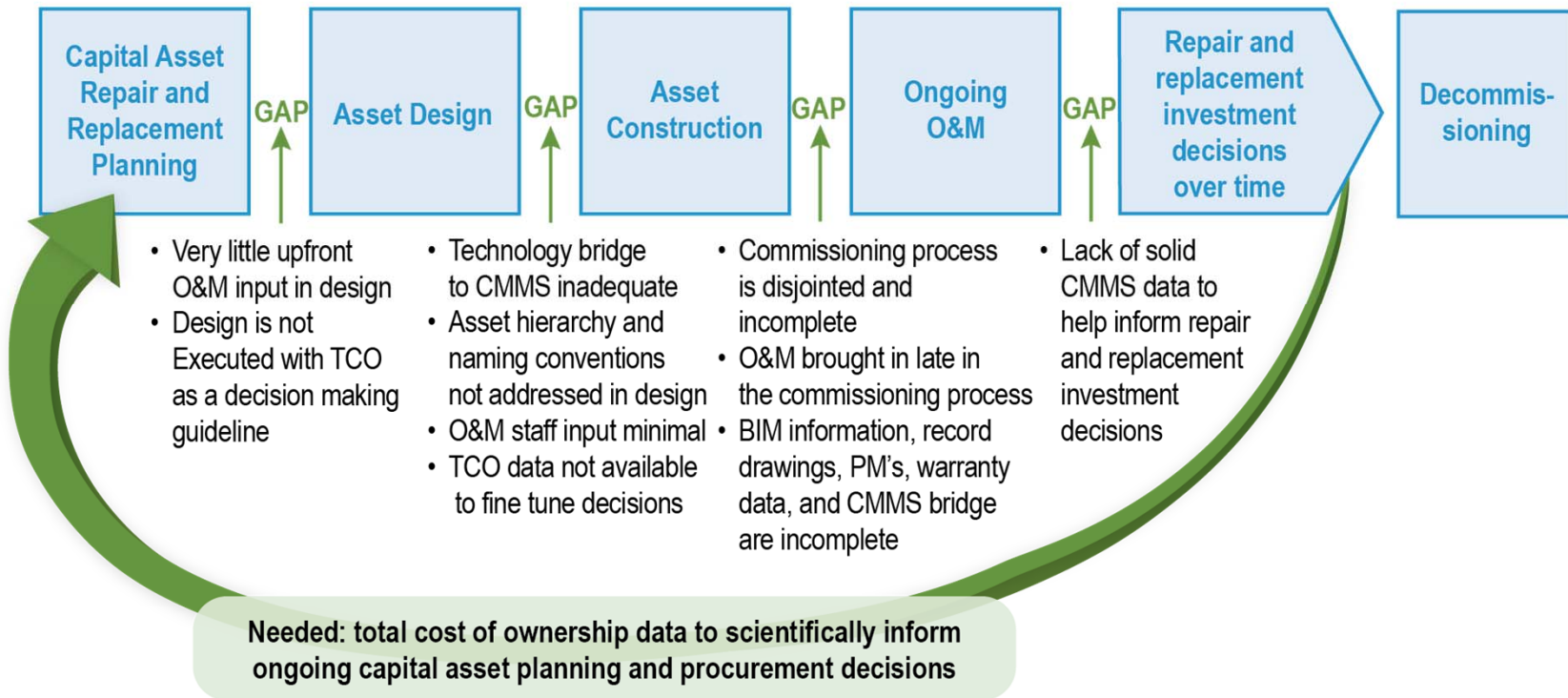
Emmy Tello  
Akadis, LLC  
Alexandria, VA

Contractor's Final Report for ACRP 09-05  
Submitted October 2014

Airport Cooperative Research Program  
TRANSPORTATION RESEARCH BOARD  
OF THE NATIONAL ACADEMIES

# ACRP 09-13: Total Cost of Ownership (TCO)

## Existing Gaps Capital Asset Procurement Siloes

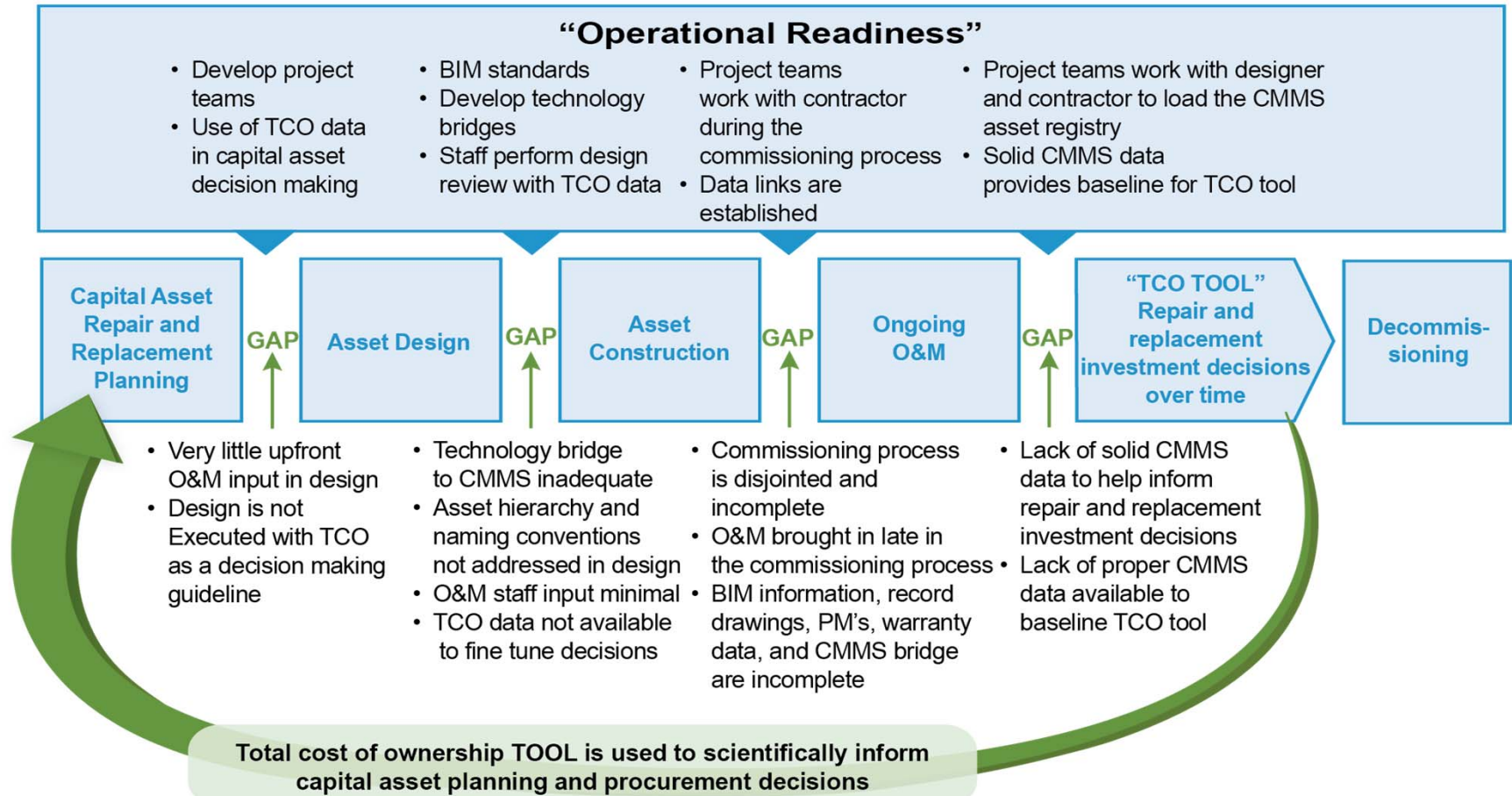


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Closing Gaps in the Asset Procurement Process

# ACRP 09-13: Total Cost of Ownership (TCO)

## CH2M HILL approach to ACRP 09-13



Operational readiness, our approach to closing the procurement gaps

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## CMMS Research Hypothesis:

***“The current state of CMMS implementation and utilization at airports can be advanced by practical and user-friendly guidance that includes templates and tools identified from leading cross-industry CMMS practices that have been adapted to fit the airport environment.”***

# CMMS Research Framework:

**Task 1**

**Project Planning & Mobilization**

- Amplified work plan
- Project charter and kick off

**Task 2**

**Data Collection Plan**

- Data collection methods and protocols

**Task 3**

**Data Collection**

- Bibliography
- Summary of findings from literature review

**Task 4**

**Data Analysis**

- Summary of findings from analysis (including airport systems that provide highest value)

**Task 5**

**Interim Report**

- Interim Report write up
- Interim Report meeting

**Task 6**

**Develop Guidance Concept**

- List of cohesive airport systems
- Best practices
- KPIs

**Task 7**

**Draft Final Deliverables**

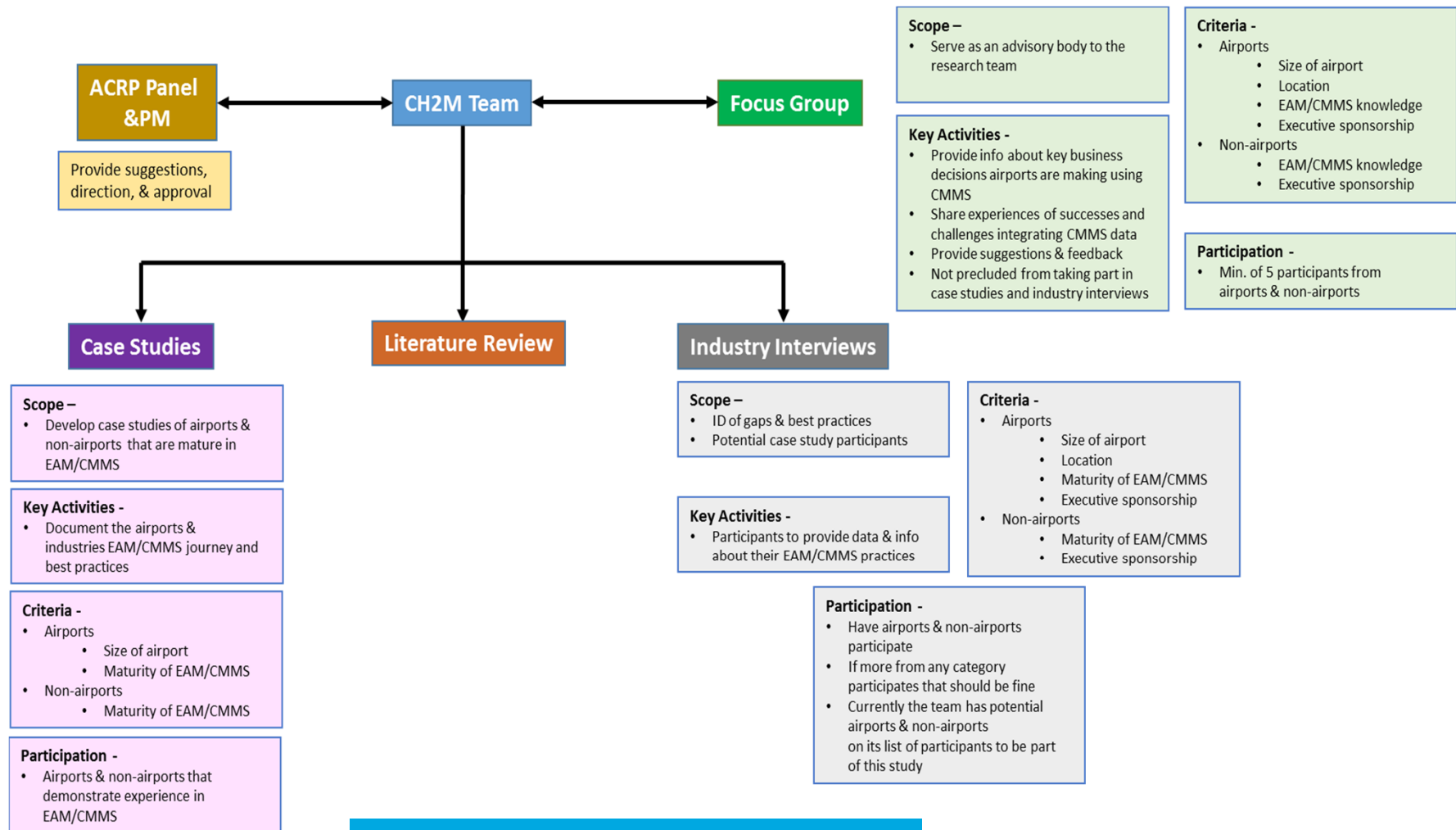
- Submit draft final deliverables

**Task 8**

**Final Deliverables**

- Submit final deliverables

# ACRP Research Process Diagram



**Major Research Outputs:**  
1. Guidebook

# Ways to Participate in this Research Project:

- Focus Group
- Industry interviews
- Case Studies

**Major Research Outputs:**  
1. Guidebook



# Thank You

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