Motivation & Problem Statement

**Increase in air traffic demand** – the Federal Aviation Administration (FAA) forecasts a US passenger growth of an average 2% a year over the next 20 years.

**Challenge:** Management of construction sites in airports environments to reduce risk to airport operations. Proximity between construction equipment, materials, and crew, and airport operational areas.

What are the construction related factors that affect airport operational safety?

Objective & Research Approach

- **Objective:** To identify the construction related factors that lead to accidents/incidents and their impact on airport operations.
- **Research Approach:**
  - **Literature Review**
    - Standards and Guidelines
    - Airport construction safety
    - Data analysis efforts
  - **Ethnographic Studies**
    - FAA representatives
    - Construction companies
    - Airport authorities
  - **Data Analysis**
    - In historical datasets in Aviation Databases
    - Community clustering for major factors

Initial Findings & Expected Contributions

**Identified construction related factors**
- STOCKPILED MATERIAL
- EQUIPMENT STORAGE
- OBSTRUCTIONS TO AIR NAVIGATION
- HAZARD MARKING
- NOTICES TO AIRMEN
- WEIGHT
- CONTRACTOR’S VEHICLES
- CONTRACTOR ACCESS
- FOREIGN OBJECT DEBRIS
- WILDLIFE
- CONDITION OF RUNWAY/TAXIWAY CLOSURES
- DISPLACED THRESHOLDS

**Construction related accidents/incidents**

- Incidents
- Accidents

**Expected Contributions:** Foundational understanding on safe planning of airport improvement projects, broadening the knowledge on major factors contributing to accidents/incidents on airports and enabling further research on the subject. *Expected results* include identification of new factors, study of the factors identified, and analysis of aviation accidents/incidents data for providing a thorough assessment of construction impact on airports.