IQC 06
Project Description

"What if the only valid model of the Universe
is the Universe itself?"

(unknown)

BASA

The *Borealian Aeronautics Security Agency* (BASA) runs **pre-board screening** (PBS) of passengers and crew for all flights departing the nation's class-A airfields:

- Auckland (AUC)
- Chebucto (CWL)
- Queenston (QUE)
- Saint-François (SAF)

PBS Process

The screening process is structurally similar at each airfield:

1. Passengers arrive at the beginning of the main queue
2. Boarding passes may or may not be scanned at S_1
3. Passengers enter the main queue
4. Boarding passes are scanned at S_2
5. Passengers are directed to a server entry position
6. Passengers and carry-on luggage are screened by a server
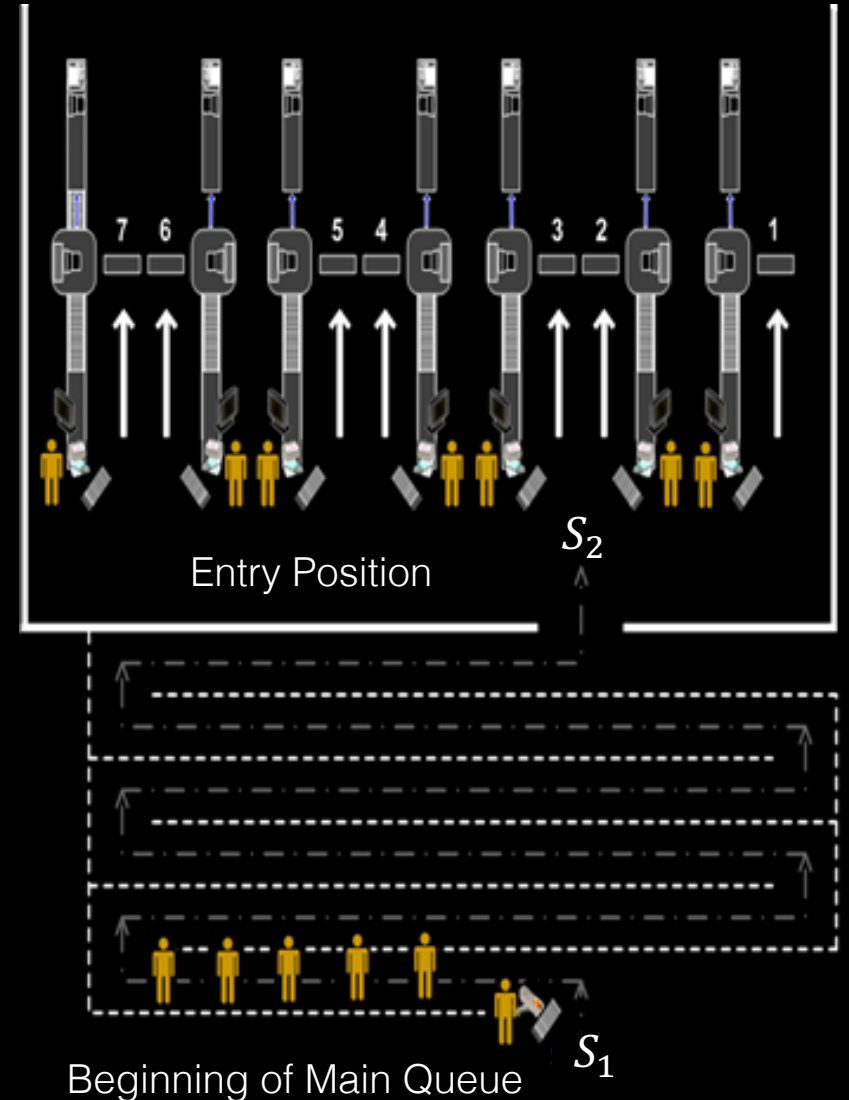
Goals and Purposes

Some factors influence the PBS wait time, including:

- **schedule intensity** of departing flights
- **passenger volume** on these flights
- number of **servers** and **processing rates** at a given airfield, etc.

There might also be

- **yearly**, **seasonal**, **time-of-day**, **day-of-week interaction effects** (among others) depending on the airfield, the flight destination, etc.
- trend **level shifts** in the number of passengers, flights, destinations, etc.

BASA Data

BASA can provide the following data elements, from 20X6 to 20X8:

- Checkpoint
- Passenger ID
- Scan at S_2
- Wait Time
- C_{start}: # servers at S_1
- C_0: # servers at S_2
- C_{avg}
- Scheduled Departure
- Actual Departure
- Destination City and Country

Project Objectives

Ultimately, BASA is seeking an **in-depth understanding** of their data to help make Borealian airfields as **efficient** and **secure** as possible.

What does the BASA system look like? What are some questions that BASA could ask about their data/system? How should we attempt to answer them? Are any of the answers likely to lead to actionable insights?

Let's get the ball rolling!