

2016-2040 RTP/SCS Aviation Demand Forecast, Airport Ground Access Analysis, and Aviation Economic Impact Analysis

Presentation to ATAC

August 28, 2014



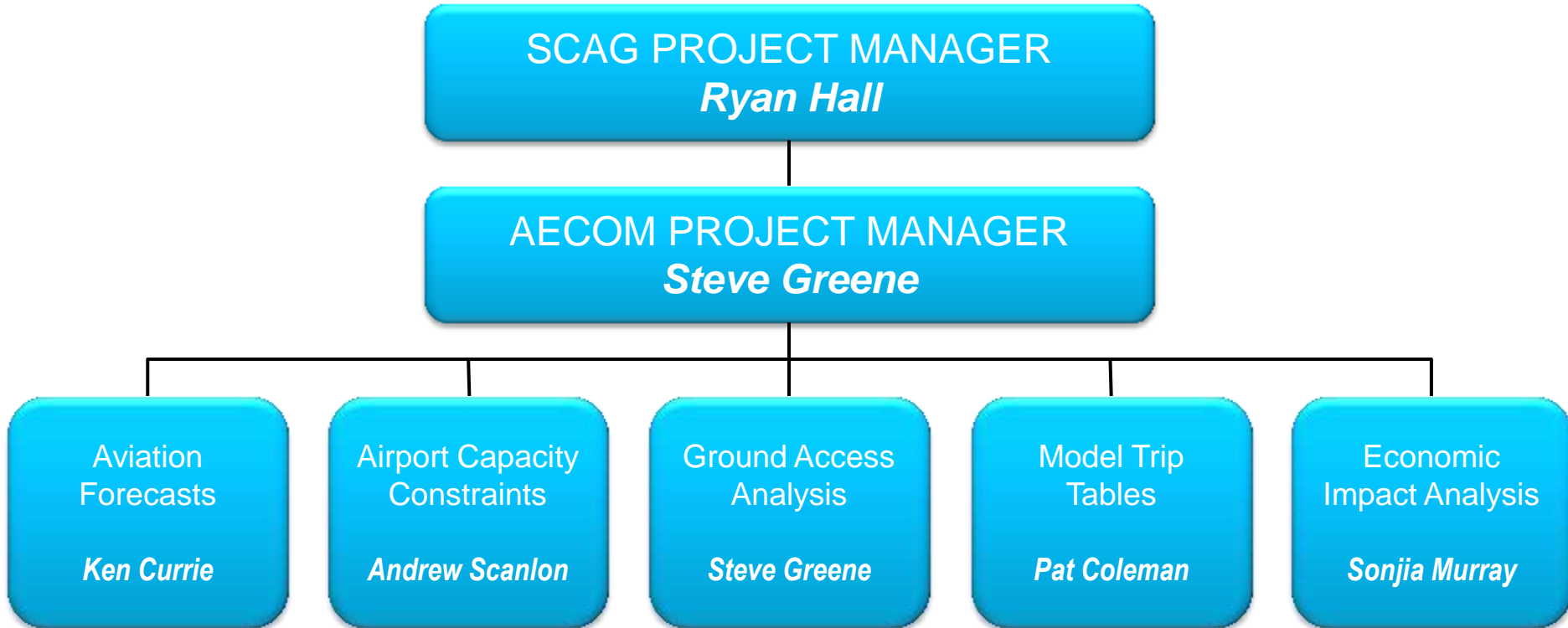
SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

AECOM

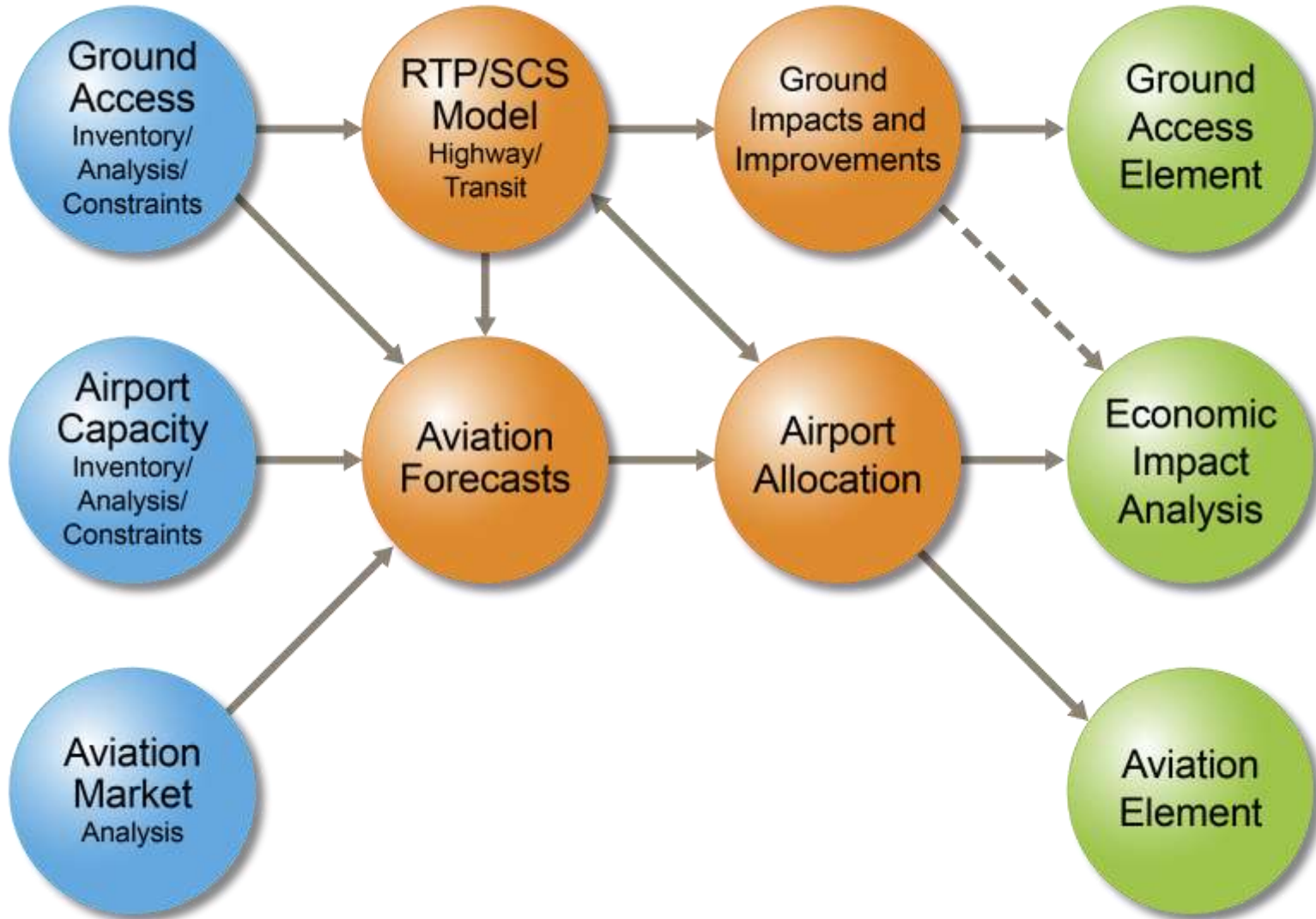
InterVISTAS

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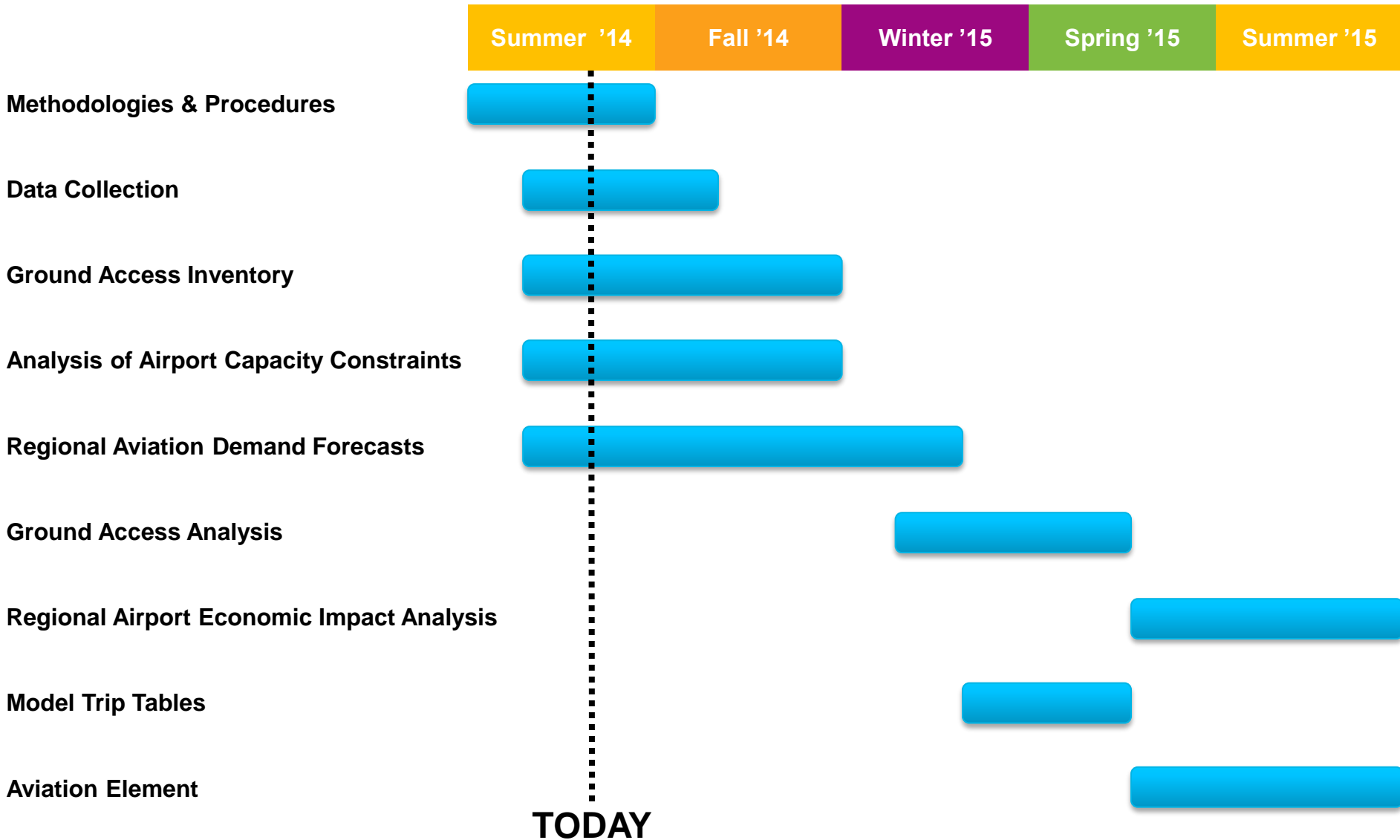
The Team



Work Flow



Schedule



Aviation Forecasts



Top-Down

- Using regional economic and demographic trends to forecast overall regional demand
 - Population
 - Economic Growth
- Macro-economic techniques to understand demand in the region
 - **Overall regional** economic and demographic trends
 - **Specific sub-regional** economic and demographic activity
 - Income
 - Wealth
 - Economic output

Aviation Forecasts



Bottom-Up

- Micro-economic techniques to allocate demand within the region
 - Using historical activity and airport-specific factors to build up overall demand
 - Airline, airport, and other transportation services
 - Ground access and convenience
- Look at trends and activity in individual markets
 - California
 - Western Continental US (Short- & Medium-haul)
 - Domestic Long-haul (including Alaska, Hawaii, and U.S. Territories)
 - International (Canada, Caribbean & Latin America, Trans-Atlantic, and Trans-Pacific)

Aviation Forecasts



After top-down and bottom-up forecasts are complete, we compare and reconcile the two.

Currently, we're just beginning the top-down regional analysis, while gathering data from you for the subsequent analyses.

Airport Capacity Constraints

Airfield constraints

- Based on the future airfield layout (2040) provided by the airports
- Estimate the annual service volume (ASV) according to the FAA Advisory Circular 150/5060-5 *Airport Capacity and Delay*
- Airfield capacity is estimated based on ASV and the pattern of each airport



Airport Capacity Constraints

Terminal constraints (# of gates)

- Based on the future terminal gate layout (2040) provided by the airports
- Estimate the maximum gate capacity by maximizing the usage of each gate (e.g., # of turns, seating capacity, and load factors)



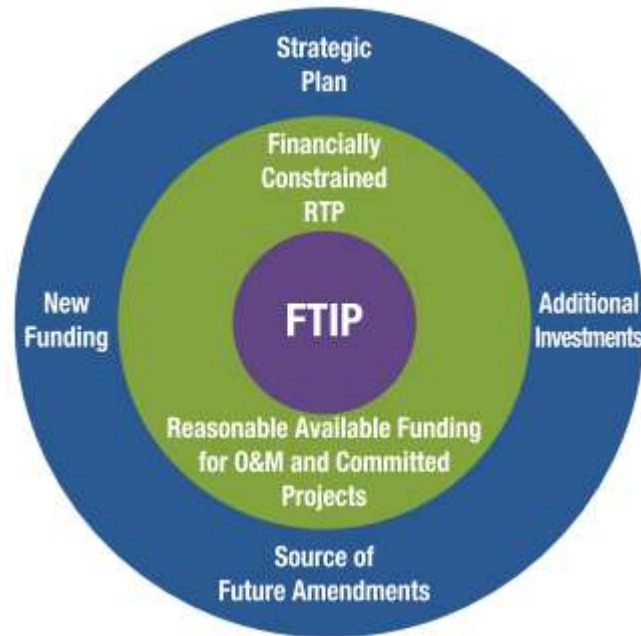
Ground Access Analysis

Review 2012 RTP/SCS Project List

- Identify status of projects on list
- Review planned improvements with airports and other agencies (e.g., Metro, Caltrans)
- Coordinate with SCAG re 2016 RTP/SCS Project List

Identify deficiencies

- With input of airports
- Consider high-level solutions



Model Trip Tables

After overall demand has been allocated to airports, by subregion, use demographic data to allocate to TAZ level

- Deliver in two formats
 - Excel file
 - GISDK script/TransCAD trip tables
- Integration into RTP/SCS model
 - Possibly after mode choice to highway and transit assignment
 - Diurnal (time of day) factors from existing air passenger/TSA data




Bob Hope Airport Trip Distribution

Economic Impact Analysis

Demonstrate the impact of airports on economic activity in the region

- Review studies that have been done of individual airports and regionally
- Consolidate and demonstrate overall economic impact to region

Data Request



**SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS**

Aviation Data Needs Request for the 2016- 2040 RTP/SCS

Please submit all documents to Mr. Ryan N. Hall, SCAG Aviation Specialist, by **September 30, 2014** in electronic format. Contact hall@scag.ca.gov or 213-236-1935 if you have any questions.

Capacity Analysis and Demand Forecasting Data Needs

- Existing airport layout plan, terminal layout plan, apron/gate layout showing the allocation of gates
- Busy day flight schedule (preferably 2012)
- Latest Airport Master Plan reports or similar technical study on capacity analysis
- Ultimate airport layout plan showing the runway configurations
- Ultimate aircraft parking plan with the terminal layout (showing the gate allocations for different airplane design group)
- Number of based aircraft
- Percentage of time in VFR, IFR and in different runway operation modes
- Traffic enplane/deplane statistics
 - Annually, for 2012 and previous years as available to 1990
- Aircraft operations
 - Annually, for 2012 and previous years as available to 1990
 - Broken down by passenger, cargo, and general aviation operations
- Cargo volume
 - Annually, for 2012 and previous years as available to 1990
- Any air passenger surveys that have been conducted for the airport
- Any aviation demand forecasts that your airport has prepared that you are able to share

Ground Access Data Needs

- Review and update of attached project list
- Any ground access studies or traffic impact assessments for the airport overall or planned projects

Economic Impact Analysis Data Needs

- Any economic impact analysis that have been conducted for the airport

Discussion

August 28, 2014



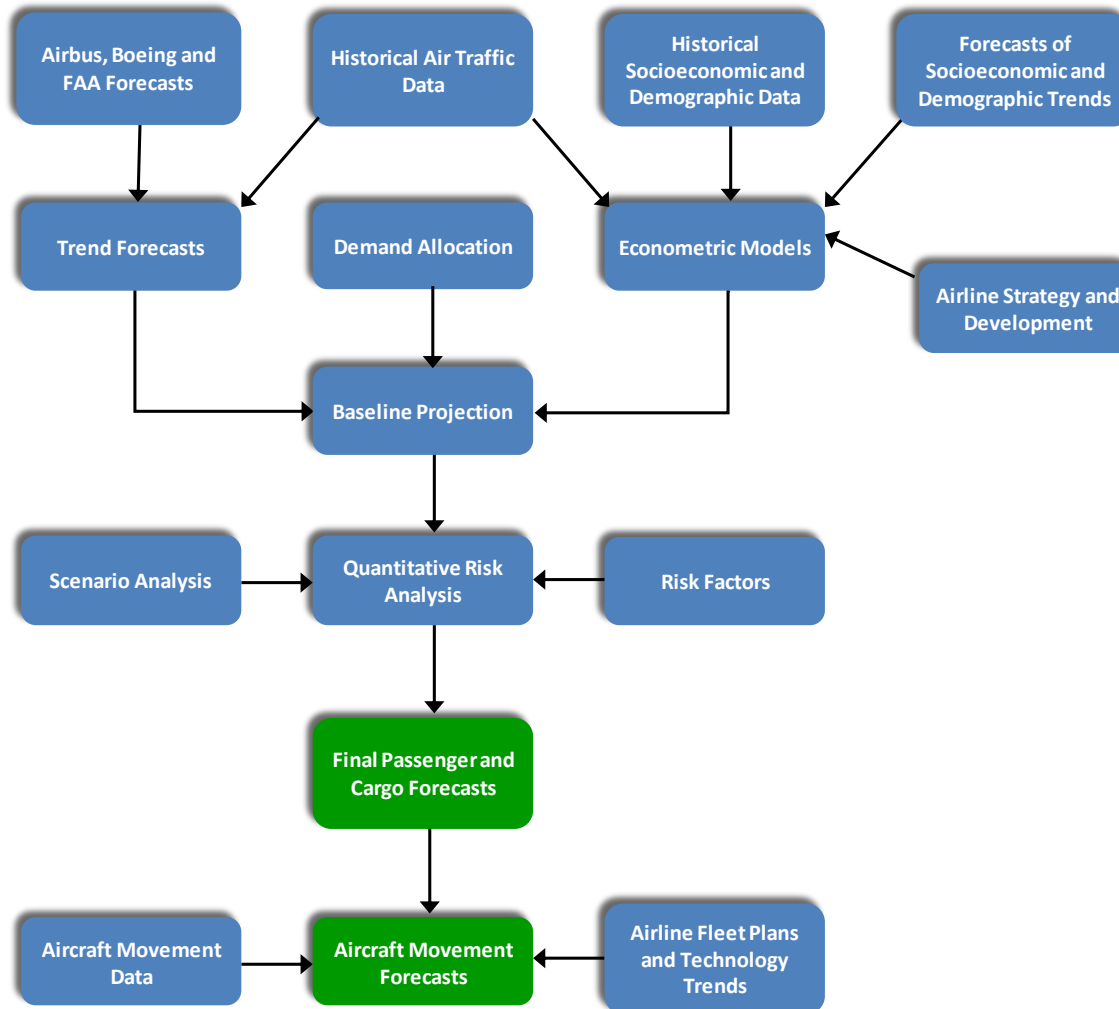
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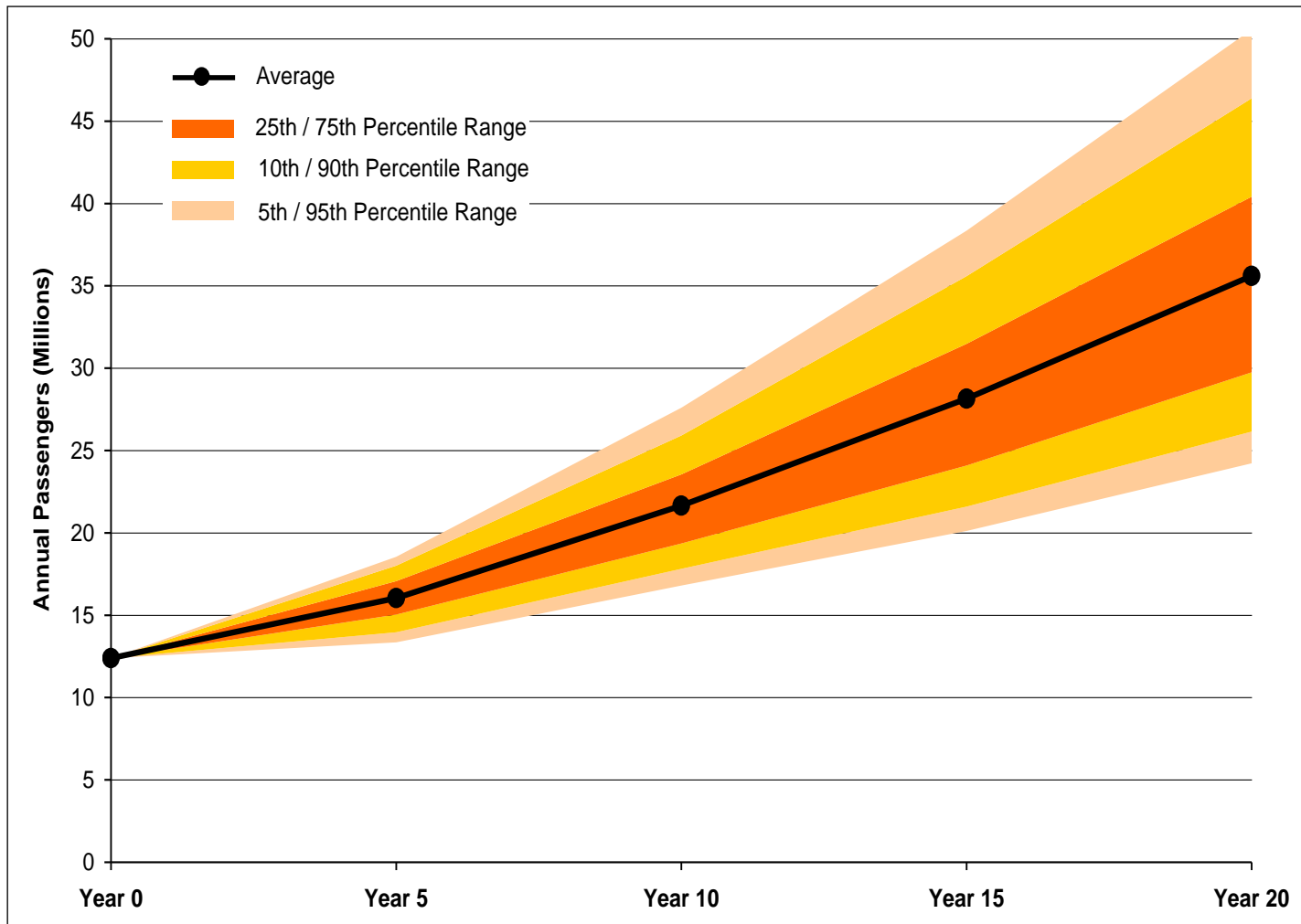
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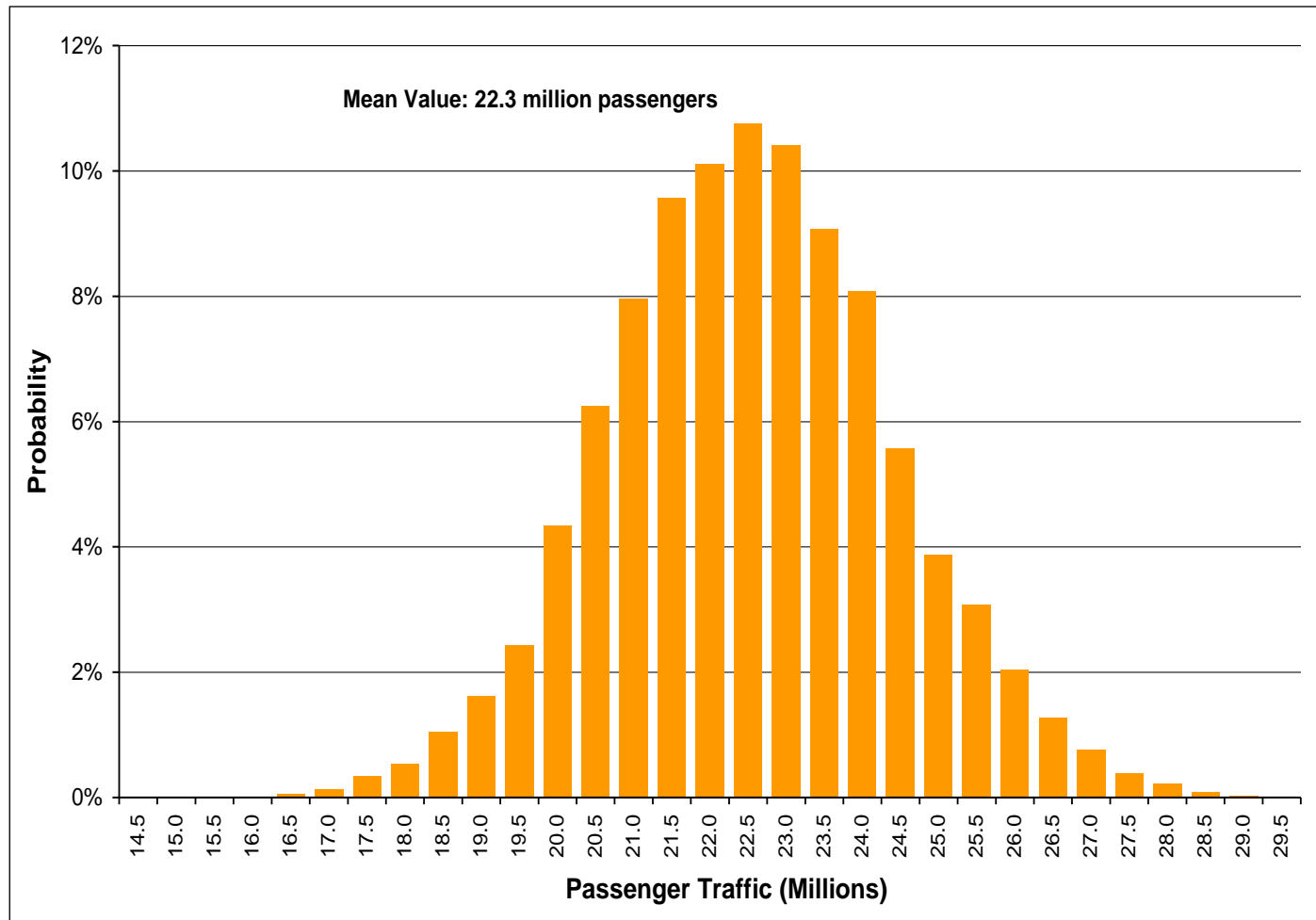
Key Tasks—Aviation Forecasts



Forecast Probability Range



Year 10 Probability Distribution



Mode of Arrival—Survey vs Model

