

# **T. F. Green Airport Master Plan Update and Environmental Impact Statement**

**Study Resource Committee (SRC) Meeting**

**Forecasting  
Meeting 2**

**July 26, 2001**

**5:30 p.m.**

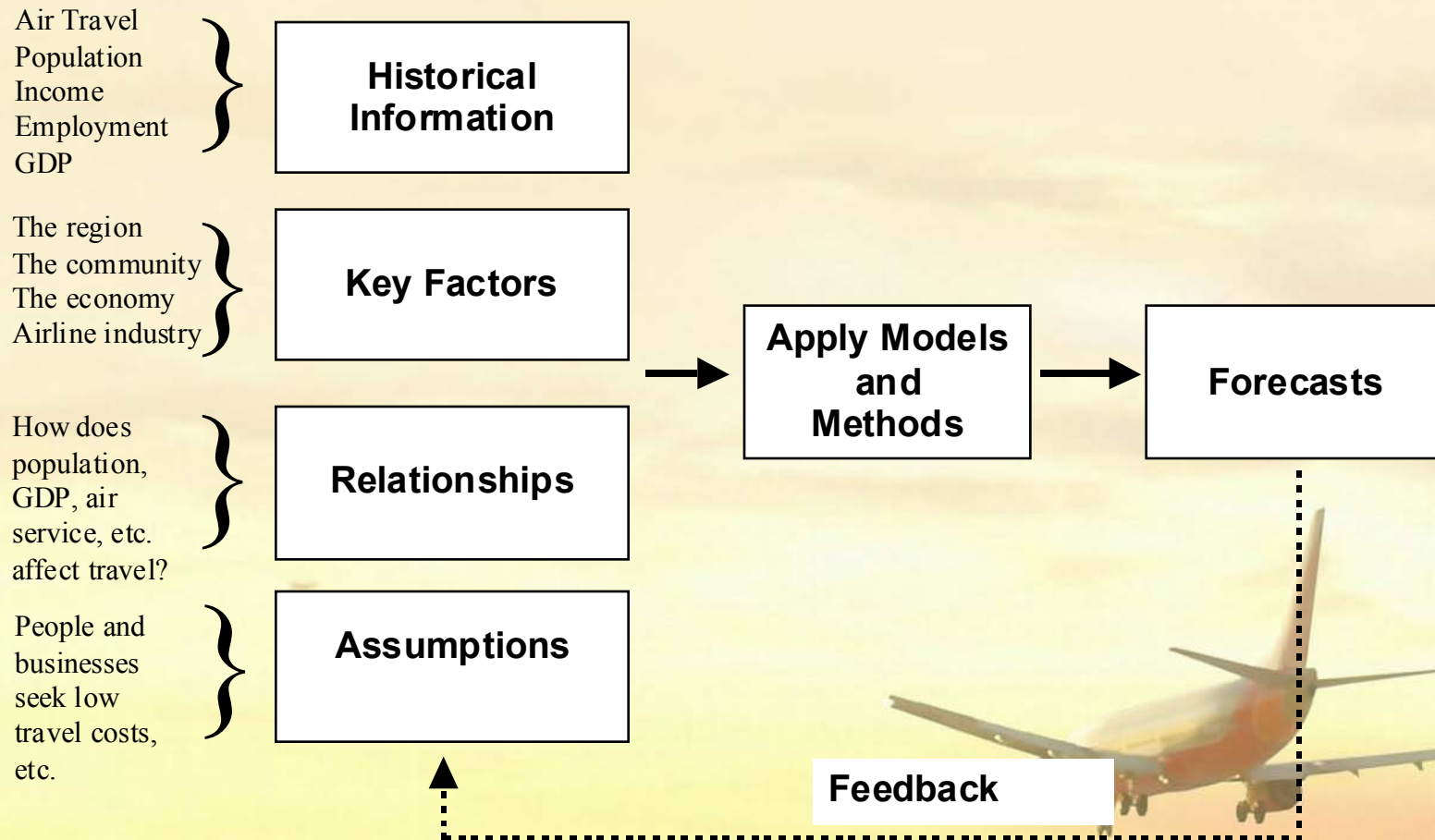


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# The Forecasting Process

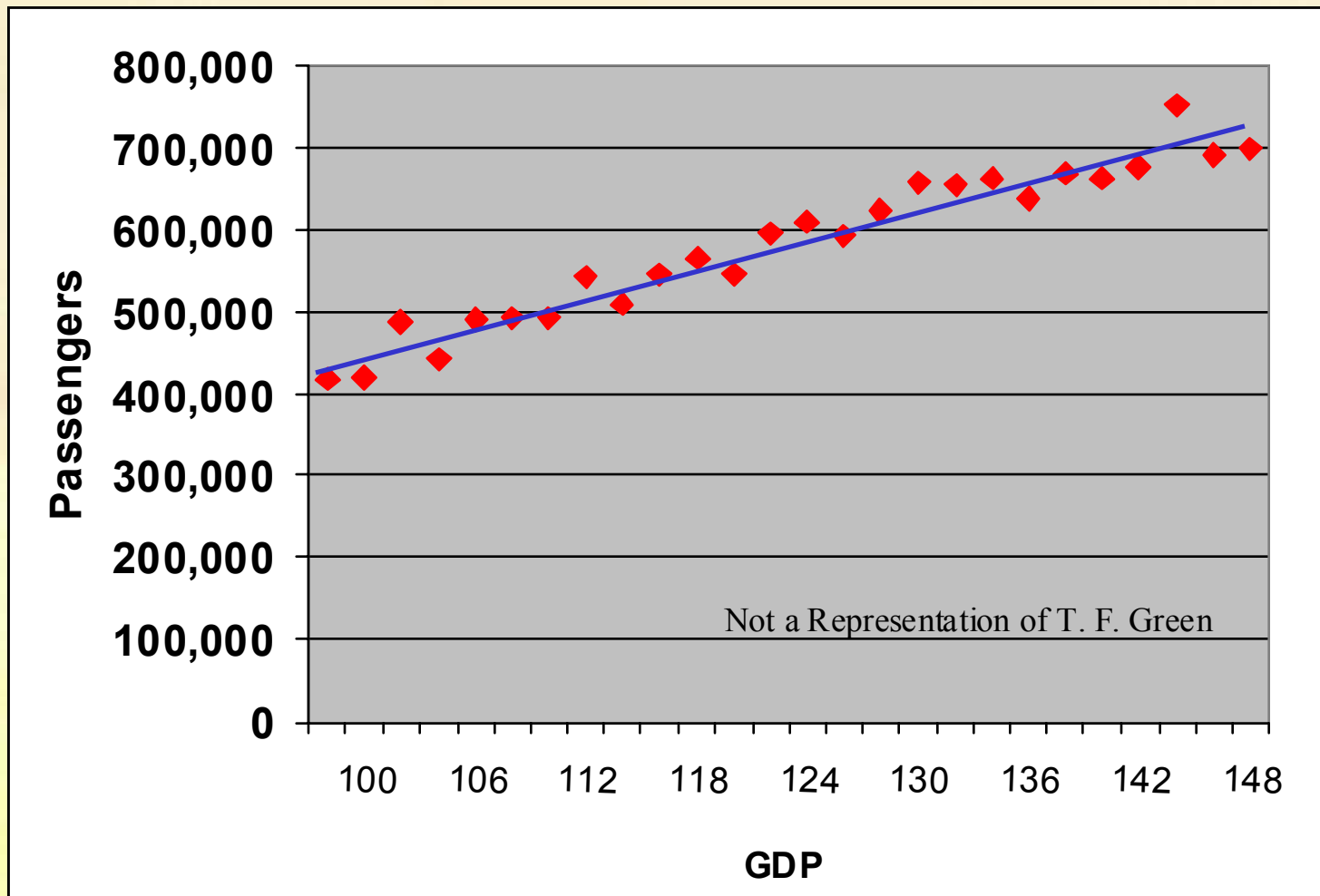


# Forecasting Techniques

- **Regression Analysis**
  - Take several variables and determine how changes in one can affect the other
  - e.g. How does an increase in GDP cause a change in fares
  - Tells which variables are important
- **Growth rates**
- **ARIMA**
- **Comparison**
  - Find an airport “like” T.F. Green and a community “like” Providence-Warwick-Cranston



# An Illustration of Regression Analysis



# Building a Model

- **You can never be better than your data**
- **Keep it simple**
- **The structure and the results MUST MAKE SENSE**
- **Know the model's limitations**
- **Common sense**



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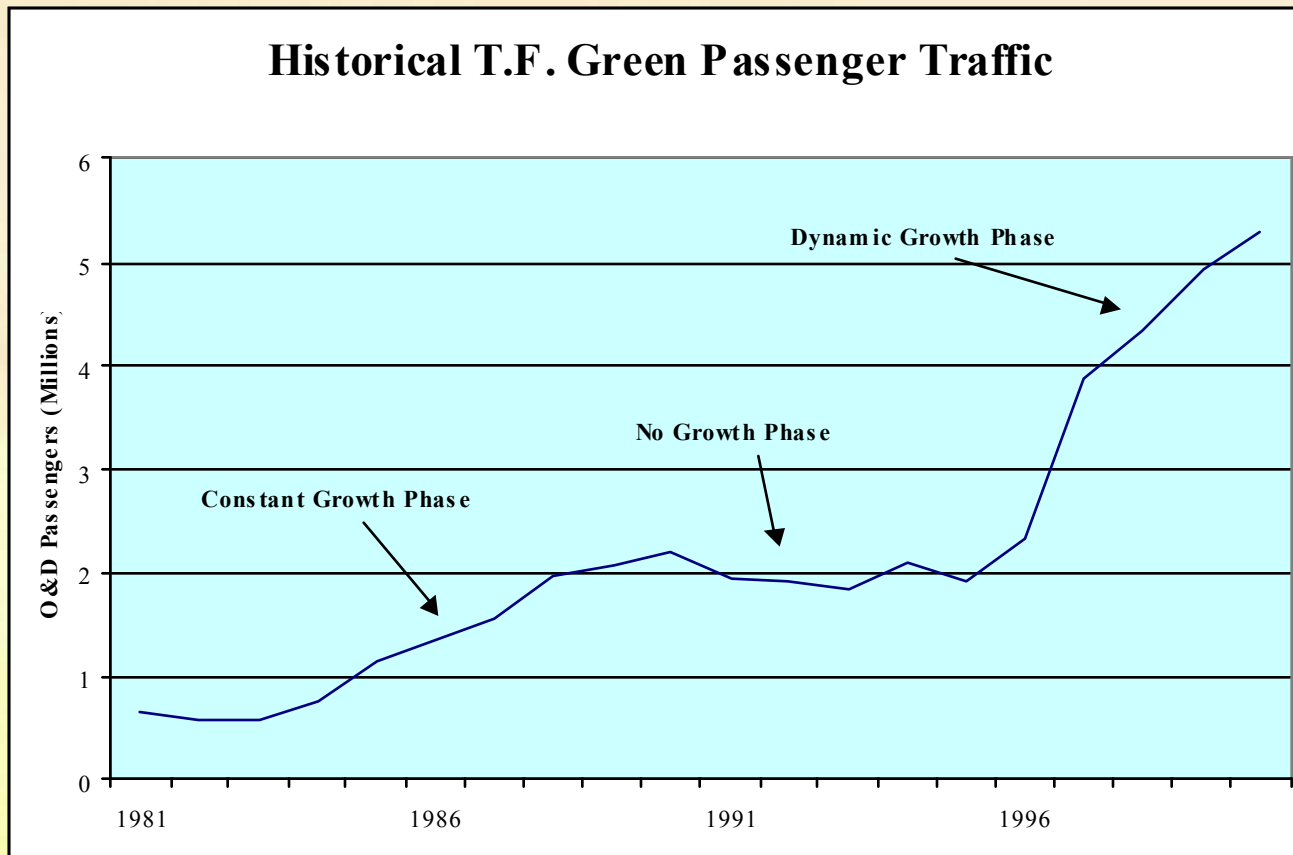
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# How Can We Include Knowledge in Our Model?

- **Build variable into mathematical structure**
- **Know when things change**
- **Develop assumptions**
- **Find analogies**
- **Review the results. Do they make sense?**
- **Develop scenarios**



# Historical Air Travel Demand at T. F. Green



Source: US DOT, Origin-Destination Survey 1981-2000



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# Putting Knowledge Into Forecasts

	Group						How We Build This Factor In						
	1	2	3	4	5	6	Structure	Know Changes	Assumptions	Analogies	Review Results	Scenarios	Don't Know
Lack of Space for Airports	✓				✓			✓	✓			✓	
Population Growth	✓	✓		✓		✓	✓				✓		
Facility Not at Full Capacity	✓			✓			✓		✓		✓		
Low Ticket Prices	✓	✓	✓	✓					✓		✓		
Accessibility	✓		✓	✓					✓				
Destinations	✓			✓		✓			✓		✓		
City Pair Growth	✓								✓				
College/University Growth	✓								✓				
Intermodal-rail	✓		✓			✓				✓		✓	✓
Desire for Growth	✓									✓		✓	
Marketing/Tourism	✓							✓		✓			
Promotion													
Other NE Airport		✓	✓	✓	✓				✓		✓	✓	✓
Competition/Congestion													
The Economy		✓	✓	✓	✓	✓	✓	✓			✓	✓	
Demand for Travel		✓					✓		✓		✓		
Ease of surface access		✓						✓		✓			
Fuel shortages			✓							✓			
Social "Right to Fly"			✓							✓			
Regional				✓						✓			
Business/Government													
Airline Fleet Mix				✓		✓	✓	✓		✓			
New Technology					✓		✓						
Attractive Destination					✓		✓						
Parking						✓							
Intl. vs. Natnl. Travel						✓							✓
Electronic Commerce						✓				✓			✓



THE FORECASTING TEAM  
GRATEFULLY  
ACKNOWLEDGES THE  
ASSISTANCE OF THE  
COMMITTEE. THE TEAM  
WILL REFINE ITS APPROACH  
TO REFLECT THE INSIGHTS  
OBTAINED AT THESE  
MEETINGS



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