2017 Spring AICP Exam Review

PLAN MAKING AND IMPLEMENTATION #1

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School of City & Regional Planning
Georgia Tech
A bit about me

- PhD in civil engineering from UC Davis, 2\textsuperscript{nd} year at Tech
- Research on transportation equity – fairness and justice
- Quantitative and qualitative research
- Academic and applied relevance
Plan making and implementation #1

- Conducting research and acquiring knowledge (e.g. qualitative and quantitative research, best practices, reporting)

- Spatial analysis (e.g. GIS, mapping, interpretation)

- Formulating plans and policies (e.g. creating and evaluating alternatives, full range of impacts, building constituency)

- Monitoring and assessment (e.g., measures of performance, outcome indicators)
Plan making and implementation #1

• My research critically engages with transportation (and housing) planning

• I’ve spent a lot of time steeped in regional transportation plans (RTPs) and other planning/policy documents produced by metropolitan planning organizations (MPOs) and transit agencies

• Recent published work on what makes a performance assessment “meaningful”
Why plan?
Our basic tool is the “model”

Why model?

1. To simplify
2. To understand current conditions
3. To predict future conditions
4. To make a difference (for better/worse)

“...the Cartographers Guilds struck a Map of the Empire whose size was that of the Empire, and which coincided point for point with it.”

From On Exactitude in Science by Jorge Luis Borges
Models (ideally) help us get at our ethical obligations

- Special concern for long-range consequences of present actions
- Pay special attention to the interrelatedness of decisions
- Provide timely, clear, accurate information on planning issues
- Give opportunity for the public to have a meaningful impact on plans
- Seek social justice

*From the AICP Code of Ethics*
Key points

• Models can be either quantitative or qualitative

• They can help us understand key features of a system

• We can’t rely on them entirely to achieve desired outcomes
  ▪ Performance assessment holds promise, but...
  ▪ Politics often matter as much, if not more than our best models

• Lots of great examples to draw upon; rarely need to reinvent the wheel
Overview

• Two examples from planning practice to demonstrate key points

1. **Clayton County MARTA expansion**
   • Data acquisition (quantitative/qualitative research)

2. **Plan Bay Area** (2013 regional transportation plan and sustainable communities strategy)
   • Plan and policy formulation
   • Assessment and performance analysis
Overview

• Two examples from planning practice to demonstrate key points

1. Clayton County MARTA expansion
   • Data acquisition (quantitative/qualitative research)

2. Plan Bay Area (2013 regional transportation plan and sustainable communities strategy)
   • Plan and policy formulation
   • Assessment and performance analysis
1. Data acquisition and research
Clayton county example

- **Research question:** What led Clayton County to join MARTA in 2014? Could it be replicated?

<table>
<thead>
<tr>
<th>geographic area</th>
<th>population</th>
<th>white (%)</th>
<th>black (%)</th>
<th>people of color (%)</th>
<th>poverty (%)</th>
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<tbody>
<tr>
<td>Atlanta-Sandy Springs-Roswell MSA</td>
<td>5,228,118</td>
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<tr>
<td>City of Atlanta</td>
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<td>264,221</td>
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<td>65</td>
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</tr>
</tbody>
</table>

*source: ACS 2010-2014 five-year estimates*
Data sources

• We often want to know about the characteristics of people and places
• There is a wealth of publicly available data from the US Census Bureau

• Pre-2010 decennial census (every 10 years)
  ▫ Summary Files 1-2 (short form)
  ▫ Summary Files 3-4 (long form)
• 2010 and onward decennial census
  ▫ Summary Files 1-2 only
• American Community Survey (rolling, replaces long form)
• Other products:
  ▫ Census of Governments
  ▫ Economic Census
  ▫ Census Transportation Planning Package
  ▫ Longitudinal Employer-Household Dynamics (LEHD)
  ▫ ...
Census concepts

*Geography*
Census geography

https://www.census.gov/geo/maps-data/data/summary_level.html
American Community Survey

- ACS replaces the long form and contains similar questions
- A rolling sample: taken continuously month-to-month and year-to-year
- 1% of the population sampled each year since 2005
- Three versions:
  - 1-year sample
  - 3-year sample (combines 3 one-year samples)
  - 5-year sample (combines 5 one-year samples)
ACS key concept

**Sampling error**

- The ACS is a survey rather than a census
- It is unlikely that we would obtain the same result if the sample of respondents was drawn differently
- Error was previously present but largely ignored

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Atlanta city, Georgia</th>
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<tbody>
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<td>885</td>
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*Five-year ACS (2010-2014) data for the City of Atlanta*
Clayton county example

- Research question: What led Clayton County to join MARTA in 2014? Could it be replicated?

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*source: ACS 2010-2014 five-year estimates*
Data from decennial censuses (1960-2010)
Demographics only tell part of the story

- Demographics-only view implies that everywhere that sees a similar shift will suddenly get transit service

- Needed to supplement with qualitative information to fill in the gaps left by the demographic analysis

- Examined newspaper/magazine articles and conducted about a dozen interviews with key participants
Conformity lapse

- Late 90s: region fails to hit air pollution targets, federal funding threatened

- Conformity lapse provided initial funding for “C-Tran”

- Positive initial experience laid foundation for MARTA membership
“C- Tran whetted their appetite. They got to see, free of charge, that they gained much greater mobility, much greater access to jobs in the immediate area around the airport.”
Importance of organizing

• Example of the power of advocacy coalitions to make real change

• Importance of the faith community
  ▫ “They hands down made the difference.”
  ▫ Ministers outlined policy and engaged in politics

• Well-resourced organizations essential
We flooded every county commission public comment period. We started with a couple people in 2013 and then it was 10 people and then 20 and then 50—all trying to talk about transit.
Takeaways

• Quantitative data important and necessary to understand conditions on the ground

• Qualitative research can fill in the gaps left by quantitative approaches

• The Clayton case highlighted the urgency of the moment

• Many other applications of quantitative data/research apply to future projections and conditions
2. Plan and policy formulation
   Performance assessment and analysis
California Senate Bill 375
Senate Bill (SB) 375

Background

- AB 32 (2006) and S-3-05 (2008) set ambitious greenhouse gas reduction targets for California

source: http://goo.gl/TB8xGD
Senate Bill (SB) 375

Goals

• Shift regional transportation plan making and implementation to achieve GHG performance goals (first in the nation)

• Various demand-side (non-technology) measures can help
  ▫ land use measures to facilitate compact development near transit
  ▫ investments in transit capacity, carpooling programs, and non-motorized modes
  ▫ pricing techniques that increase the cost of driving alone relative to other modes
SB 375

Requirements

• Sustainable Communities Strategy
  ▫ RTP chapter – lays out a development scenario that, if adopted, would achieve GHG targets according to simulations of future travel
SB 375

Requirements

• Sustainable Communities Strategy
  ▫ RTP chapter – lays out a development scenario that, if adopted, would achieve GHG targets according to simulations of future travel
• If SCS doesn’t hit the target, an alternative planning scenario (APS) must be prepared
  ▫ Fiscal constraint/reasonable planning assumptions relaxed
Senate Bill (SB) 375

*Scale of implementation*

- Why regional implementation?
  - The scale makes sense
    - Need to affect how people live, work, and travel to reduce driving
  - Institutions – MPOs – already exist at the interface between federal/state and local governments
  - Land use planned locally, but local governments comprise MPOs
Strategy

• Build on existing practices
  ▫ Travel modeling/air quality conformity analysis
  ▫ “Blueprint” planning
    • Consultation with local government and the public to develop support for a preferred (compact) development strategy

• Outcome-based performance mandate while preserving regional and local autonomy
  ▫ Local plans *do not* have to conform to the SCS

• Major incentive for compliance is streamlining of environmental review
  ▫ Disagreement over whether this goes far enough
Plan Bay Area Advocacy
2013 Regional Transportation Plan

- 2013 Regional Transportation Plan/Sustainable Communities Strategy
- Must meet greenhouse gas targets
- Integrates transportation, land use, and housing
- $292 billion, 30 year plan
6 BIG WINS FOR SOCIAL EQUITY

- Shape modeling inputs including policies and investments (inside game)
- Aggressive community organizing (outside game)
Equity, Environment and Jobs

*RTP Scenario*

- **Distribute Housing Growth Equitably:**
  Increase quality affordable housing options in both urban areas and suburban job centers

- **Protect Against Displacement:**
  Ensure that lower-income communities are not displaced by TOD through regional grant incentives (One Bay Area Grant Program)

- **Improve Local Transit Service:**
  Fund more of the local transit service on which low-income riders of color depend
<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2040 Plan</th>
<th>2040 No Project (Alt 1)</th>
<th>% Difference from Proposed Plan</th>
<th>2040 Transit Priority Focus (Alt 3)</th>
<th>% Difference from Proposed Plan</th>
<th>2040 Enhanced Network of Communities (Alt 4)</th>
<th>% Difference from Proposed Plan</th>
<th>2040 Environment, Equity, and Jobs (Alt 5)</th>
<th>% Difference from Proposed Plan</th>
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<tbody>
<tr>
<td>Daily Transit Boardings</td>
<td>1,581,000</td>
<td>3,054,000</td>
<td>2,426,000</td>
<td>-21%</td>
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<td>2,972,000</td>
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<td>Daily Vehicle Miles of Travel (VMT)²</td>
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<td>Daily Vehicle Miles of Travel³ per Capita³</td>
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<td>Intraregional Daily Vehicle Trips²</td>
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<td>21,648,000</td>
<td>+5%</td>
<td>20,340,000</td>
<td>-2%</td>
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</tbody>
</table>

*source*: Plan Bay Area Draft Environmental Impact Assessment, Table 3.1-8.
EEJ: The “Environmentally Superior Alternative”

- 3.5 million fewer miles of car travel per day
- 165,000 more people using transit per day
- 1,900 fewer tons of CO$_2$ emissions per day
- Energy savings amounting to 600,000 gallons of gasoline per day
- Aggregate savings in rent for low-income households of $79M per year
Outcomes improved through advocacy, not modeling

- Achieved several important outcomes related to affordable TOD housing and increased transit operating funds:
  - Anti-displacement protections within an infrastructure grant program
  - Commitment to study the best use of cap and trade revenue to benefit disadvantaged communities
Takeaways

• Creating alternative planning scenarios is helpful for understanding tradeoffs between different approaches

• The policy (SB 375) was vitally important for putting GHG emissions on the radar, but...

• Performance assessment is not enough to lead to the adoption of the “best” plan

• Advocates can be important partners for achieving desired goals
Contact

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