

Appendices

Appendix A: Soft System Analysis

A. Logical Analysis

1. Questions answered through the different sources
2. “Root definition” of transport planning system obtained
3. Develop conceptual framework for a transformation to occur
4. Distinguish between logical and actual:
Does the logical activity exist in the real situation?
How is the real activity done?
How is the real activity judged?
5. Iterations of the logical analysis until acceptance of a possible transformation is achieved

	<u>Data Collection</u>	<u>Interviews</u>	<u>Community Meetings</u>	<u>Policy Documents</u>
Who are the customers of the transport planning process?				
Who are the actors involved?				
What transformation takes place?				
What is the worldview/paradigm set of those involved in the process?				
Who are the owners of the situation? Who has the power to stop it?				
What is the political, economic, social environment?				

B. Cultural Analysis

1. Analysis of Intervention:
What are the conflicting values?
2. Analysis of the Social System:
What are the behavior norms?

What values are not discussed?

3. Analysis of the Political System:

What types of power exist?

How are they used?

How are they preserved?

How are they passed on?

How are they relinquished?

C. Combine Hard & Soft Systems

1. Hard System of Engineering reported
2. Soft System of Social Background reported
3. Combine possibilities of hard and soft systems
4. Method of consensus

Appendix B: Stated Preference Method

1. Utilize traditional four-step model for quantitative data
2. Expand four-step model to include social preferences
3. Design 'Stated Preference Surveys'
4. Surveys divided into themes within the 4 model categories
5. Contributions from different actors for what to incorporate in survey
6. Survey results combined with quantitative data

		Users	Operators	Planners	Policymakers
Trip Generation:					
	Trip Chaining				
	Telecommuting Possibilities				
Trip Distribution:					
	Origin-Destinations				
	Residential Location Choice				
	Business/Industry Location Choice				
	Behavior Responses to New Infrastructure				
Modal-Split:					
	Mode Selection Criteria				
	Policy Packages to switch modes				
Route Choice Stage:					
	Costs, speed, transit time reliability				
Additional Factors:					
	Trip Length				
	Safety				
	Influence of Statistics on Behavior				

Appendix C: Planning Support System

A. Scenarios: What may be?

	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>	<u>Scenario 4</u>
Plan A				
Plan B				
Plan C				

1. Planners develop alternative land-use plans
2. Qualitative scenarios are developed based on public and professional input
3. If available, then a land-use model that accepts context developed 'boundary conditions' and qualitative data can be used to generate a layered map depicting the scenario

B. Visioning: What should be?

1. Planners facilitate discussion among stakeholders
2. Planners ensure distinction between future and utopias

	<u>Planners</u>	<u>Citizens</u>	<u>Politicians</u>	<u>Organizations</u>
1. Review of scenario phase				
2. Where are we now?				
3. Where do we want to be?				
4. How do we get there?				

C. Storytelling: What could be?

“As Guhathakurta (2002) notes, people do not connect through common information, but through common interpretations” (Couclelis 2005, p. 1367)

1. Planners develop stories with public participation to combine 'science and rhetoric'
2. Type of story (narrative, comedy, tragedy, parable) based on message that want to explore
3. Planners synthesize stories to ensure each has the story components
4. Share stories with populace
5. Responsibility to citizens to respond about which story or which threads of the story they prefer

Story Components

	Logically Consistent	Empirically Testable	Morally Acceptable	Actionable	Aesthetic
Comedy					
Tragedy					
Parable					
Narrative					
Other					

Appendix D: Supplementary Transportation Information

1. Transport for London Bus System:

www.tfl.gov.uk/sitemap/

The sitemap displays the depth of the modal habitats in London. Of particular note is the “Buses,” “Cycling,” and “Oyster Online” sections.

2. European Union Mobility Management:

www.managenergy.net/indexes/1224.htm

A wealth of mobility case studies throughout Europe.

3. European Platform on Mobility Management:

www.epommweb.org/index.phtml?Main_ID=820

A conglomeration of governments in European Countries working to improve mobility by developing and sharing ideas.

4. Active Living by Design:

www.activelivingbydesign.org/

A program run by the University of North Carolina Chapel Hill that is generating ideas to increase physical activity by community design.

5. International Bicycle Fund:

<http://www.ibike.org/index.htm>

An international non-profit working to develop sustainable transport.

6. Bikes Belong:

<http://www.bikesbelong.org/>

An organization sponsored by the United States bicycle industry whose mission is to get more people on bicycles.

7. Sustrans:

<http://www.sustrans.org.uk/default.asp?sID=1091003006653>

A United Kingdom sustainable transport charity with the purpose of providing transportation that is good for people and the environment.

8. League of American Bicyclists:

<http://www.bikeleague.org/>

A league formed in 1880 with the mission of improving cycling conditions.

9. Pedestrian and Bicycle Information Center:

<http://www.bicyclinginfo.org/>

A site funded by the United States Department of Transportation Federal Highway Administration to provide safety, health, advocacy, education, and other information to citizens.

10. United States Bureau of Transportation Statistics:

<http://www.bts.gov/>

A sector of the United States Department of Transportation that provides research and statistics.

11. Interface for Cycling Expertise:

<http://www.i-ce.info/sitemap.html>

An international non-profit located in the Netherlands pursuing cycle policies in cities across the globe.

Of particular note: 'Cycling Friendly Cities' Video

12. Velo Mondial:

<http://www.velomondial.net/>

Appendix E: Interview Questions

I. Planners:

1. Background information:

Age:

What city did you grow up in?

What is your education level?

What is your current professional title?

How long have you been in this position?

What was your previous work?

2. What are your favorite cities? Why?

3. What are the current trends in transportation and land-use in your opinion? Which should continue? Which should be altered?

4. What are some small changes that have had significant effects on transportation or urban design? Do you know examples from other cities?

5. What is the role of short and long-term plans?

6. What models do you use?

If so, how do you select the inputs? How do you determine the values?

How are the outputs used?

How often do you change or update the models?

7. What is the role of GIS in your work?

8. How do you measure mobility?

9. How does the public participate in the plans?

Do you regularly communicate with the public? If so, how?

Has this changed during your career?

10. Have you adopted methods or techniques from other cities?

Have other cities come to learn about your methods?

11. How do you incorporate new theories into your work?

12. How much of your budget is spent on posters, maps, and publication design?

13. What is the budget breakdown by mode?

14. What is the division of roles between the national, province, and municipality?

Do you think more or less autonomy would be beneficial?

15. What are the most pertinent lessons, successes, or failures from the past?

16. How can buses and bicycles most effectively be used together?
17. What is the cultural mentality of the city?
18. What are your ideas to foster cultural shifts?
19. Dreams make reality, so what is your vision for the future development of the city?

II. Citizens

1. Background information:
 - Age:
 - What city did you grow up in?
 - What is your education level?
 - What is your current professional title?
 - How long have you been in this position?
 - What was your previous work?
2. What are your favorite cities? Why?
3. How would you describe the culture of Asheville?
4. If you want to voice an opinion on a community topic, then what method do/would you use?
 - Do you think citizen opinions are listened to?
5. Are you actively involved in volunteer groups? What is your motivation for being involved?
6. What are your main sources of information about events, politics, etc. in Asheville?
7. How do you view the distribution of power between local, regional, state, and national?
 - Do you think Asheville would benefit from more or less autonomy?
8. What would you like to see your tax dollars spent on?
9. What transportation maps, campaigns, posters have caught your attention?
10. What are the current trends in Asheville's land-use? Transportation?
11. What do you think are the opportunities and constraints of bus and bicycle networks in Asheville?
12. Dreams make reality, what is your future vision for the city?
13. What are your ideas to foster cultural shifts?

Appendix F: Interviewed Asheville Citizens

- a. Jay Bonner, Associate Head Master, Asheville School
- b. Michael Sule, Teacher, Evergreen Charter School; founder, Asheville on Bikes
- c. Carol Barley, Manager Psychology Department, Memorial Mission Hospital
- d. Jim Ellis, retired; former Business Manager of Black Mountain Center for Mentally Disabled
- e. Barbara Reynolds, Environmental Studies Professor, University of North Carolina – Asheville
- f. Cara McCauley, Financial Analysis, Biltmore Farms; professional bicycle racer
- g. Mark Boyd, Computer Science Professor, University of North Carolina - Asheville
- h. Jim Webb, retired, North Carolina Arboretum Board Member
- i. Arnold Wengrow, retired, freelance journalists
- j. Irene Rossell, Environmental Science Professor, University of North Carolina – Asheville
- k. Egbert Hofstra, Environmental and Infrastructure Planning Master's Program, University of Groningen, Netherlands

Appendix G: Interviewed Planners

- I. Groningen, Netherlands
 - a. Erwin Stoker, Transportation Planner, OV-Bureau Groningen-Drenthe Provinces
 - b. Eric van Huissteden, Senior Transportation Planner, City of Groningen
 - c. Cor van der Klaauw, Senior Transportation Planner, City of Assen (Province of Groningen); former Transport Planner, City of Groningen (1994-2007)
 - d. Wybe Naube, City Architect, City of Assen

- II. Asheville, North Carolina, USA
 - a. Yuri Koslen, Transportation Planner, University of North Carolina – Asheville
 - b. Joe Minicozzi, Project Manager, Public Interest Projects

Appendix H: Sample of United States Multi-Modal Programs

1. New Belgium Beer, Fort Collins, Colorado:

The brewery gives a bicycle to everyone who has worked there for at least one year. Additionally, the company hosts the Tour de Fat to celebrate the bicycle as an effective mode of transportation (Mintzer 2008).

2. Pangea Organics, Boulder, Colorado:

The company turned 500 sq. ft. into lockers and showers after employees said that would encourage them to bicycle to work.

3. RideSpring, Santa Cruz, California:

The company sets up secure website note boards for companies so that employees can find ride information for carpooling.

4. Workplace Transportation Audits:

Companies can analyze their transportation demands and ways to reduce it.

5. Zipcar

www.zipcar.com

A car share company that provides citizens with ability to be a member and have access to car parked in a central business location.

6. Bike to Work Days/Weeks:

Businesses can be grouped into size categories and compete for the highest bicycle percentage of workers.

Appendix I: City of Asheville Information

1. <http://www.ashevilenc.gov/#>

On the left-hand side under the 'Projects and Initiatives' is information on the current city plans.

Of particular note: the 'Comprehensive Bicycle Plan' & the 'Downtown Master Plan.'

2. Transportation Engineering Department:

http://www.ashevilenc.gov/departments/trans_engineering/default.aspx?id=542

Of particular note: 'Transit System' and 'Transportation Planning'