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NYBPM 2.0

Strategic Planning Session

FINAL REPORT

*New York Metropolitan
Transportation Council
(NYMTC)*

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Executive Summary

On October 3, 2011, New York Metropolitan Transportation Council (NYMTC) hosted a strategic planning session with NYMTC member agencies for the development of the next generation of the New York Best Practice Model – NYBPM 2.0. The meeting was hosted by Mr. Ali Mohseni and Ms. Sangeeta Bhowmick of NYMTC, and moderated by Professor Kaan Ozbay of Rutgers University.

Following a presentation on the action plan and timeline for the development of NYBPM 2.0 by Mr. Ali Mohseni, the meeting followed a discussion format where each of the attendees spoke to their usage of the model and suggestions and comments for the next generation model. Attendees were primarily members of agencies who directly use the model or interact with consultants using the model.

Based on the input by each of the users, a list of key comments regarding agency needs for using NYMTC's NYBPM was compiled. This list was further commented on by the participants and additions and modifications were made. The main items in the list compiled were:

1) Ease of installation/use and updating

1. Frequency and ease of updating, especially integrating minor changes without updating the base
2. Establishing threshold for recalibration when updating
3. Flexibility for improvements and changes over time

2) Necessity for stronger data/sources

1. Control data/Integration of data from emerging sources (Taxi, GPS, etc.)

3) Better use as a first-step data source, for sub-area analysis

1. Extraction of individual NYBPM components
2. Flexibility/integration with other tools and software packages

4) Easier alternative/scenarios and sensitivity analysis

1. Computational time, number of iterations & convergence
2. Use NYBPM 1.0 experience to develop good software base, for NYBPM 2.0

5) Ability to move from macro/meso/micro level

1. Extended NYBPM
2. Integration with other models
 - a. Software proprietary issues

- b. Output of NYBPM flexible to work with any platform/model
 - 3. Better platform for operational analysis
 - a. Or better export from NYBPM to enable operational analysis
 - b. Hourly or reconceived trip tables – investigate feasibility
- 6) Modularity – ability to turn on and off/add components**
 - 1. Run modules discreetly and ease of input/output
 - 2. Isolate segments for analysis
 - 3. What happens to calibration/validation?
 - a. Define application limit
 - b. Software should identify what modules/inputs have been changed vs. those that haven't
- 7) Goods movement/freight model**
 - 1. Robust updated data collection
 - 2. Freight model should be less of a black box
 - 3. Improve data/modeling while also identifying and improving overall freight modeling for the future
- 8) New/Improved components**

The list of suggestions for new and improved components was extensive and differed based on each of the individual member agencies' needs. A complete list, including sub-components and comments consists of the following:

- 1. Improved transit and mode choice model
 - a. Copy/make similar to other models
 - b. Focus on distinct time periods (model for all time periods)
 - c. Ability to add new modes
- 2. Flexibility in time-periods or a combination of time periods
- 3. Calibration through usage of existing data
- 4. Better network and detail
 - a. Enhanced network detail within Manhattan
 - b. Better/refined zonal system and detail in the outer counties
- 5. Special generator improvement & identification of additional special generators
- 6. Better analysis of destination attractiveness
 - a. Emphasis on Non Home Based (NHB) trips, although there is a data issue associated with NHB trips

7. Reporting/post-processing
8. Airports/special access
9. New trip tables – such as special trips/visitors
10. Weekend model
11. Addition/focus on pricing analysis
12. Incorporation of economic variables, such as growth, inflation, gas price, etc.
13. Expanded/modified geography
14. Land-use module in addition to transport model
15. Auxiliary sketch-planning tool offshoot from NYBPM (for land-use for other analysis)
16. Parking: Capacity-constraint, pricing

In the afternoon, a 2nd interactive session was held where the lists of key comments and new functionalities/improvements were distributed to the attendees. The attendees were asked to rank each of the components in terms of their agency's priority. Following collection of the ranking sheets, the components were ordered in terms of priority of the attendees. A second round of discussion was conducted only focusing on the list of new and improved components.

Following discussion of the average rankings, the participants expressed a desire to share their rankings with the other users and decision-makers at their respective agencies. It was also demonstrated that the ranking process is highly contingent upon the associated cost, specifically with respect to the addition of new components/features to the model. For example, the participants expressed concern on the exclusion of several low-cost components at the expense of a highly-ranked, highly-expensive feature. Or, cases were also demonstrated where smaller models/tools that already exist or are in the process of being developed at other member agencies can be integrated into NYBPM 2.0 at low cost.

Participants wished to redo the rankings following a rough estimate of costs and feasibility, which NYMTC staff took under advisement. The meeting concluded with participants requesting a summary of the findings of the discussion, as well as a chance to redo and offer a comprehensive list of suggestions and priorities for NYBPM 2.0. NYMTC members expressed a need to have more meetings such as this one to define the scope for the RFP in the development of NYBPM 2.0.

An earlier draft of this report was distributed to all participants on November 29th, 2011, along with a survey containing the list of priorities and potential new features for NYBPM. Respondents were asked to rank the items and provide any comments. Five responses were received, and their results and comments are included within this report.

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Introduction

On October 3, 2011, New York Metropolitan Transportation Council (NYMTC) hosted a strategic planning session with NYMTC member agencies for the development of the next generation of the New York Best Practice Model – NYBPM 2.0. The meeting was attended by the following personnel (with agencies):

- Ali Mohseni, NYMTC (*host*)
- Sangeeta Bhowmick, NYMTC (*host*)
- Kaan Ozbay, Rutgers University (*moderator*)
- Shri Iyer, Rutgers University
- John Nassis, Dept. of City Planning
- Stratos Prassas, Dept. of City Planning
- David Armstrong, MTA
- Dan Evans, MTA – Metro-North
- Ann Fangmann, Nassau County DPW Planning
- Michael Griffith, NYCDOT
- Michael Marsico, NYCDOT
- Asheque Rahman, NYCDOT
- Jay Krantz, NYCTransit
- Olumuyiwa Fjolu, NYSDOT
- Heinz Joachim, NYSDOT
- Glorimar Reyes-Perez, NYSDOT
- Asfak Shaikh, NYSDOT
- Roger Weld, NYSDOT
- Todd Goldman, PANYNJ
- Charles Sutter, Westchester County DPW&T
- Imran Ahmed, NYMTC
- Fola Aiyedun, NYMTC
- Thusitha Chandra, NYMTC
- Michael Chiume, NYMTC
- Larisa Morozovskaya, NYMTC
- Mohammad H. Rashid, NYMTC
- Abdus Salam, NYMTC

The meeting began with a presentation by Ali Mohseni of NYMTC, on the action plan and timeline for the development of NYBPM 2.0. This presentation described:

- NYBPM 2.0 Exploration Program and its purpose, objectives, timeline, approaches and major tasks which included:
 - Summarize past experience with the current NYBPM
 - Learn from other agencies' practices
 - TMIP Peer Review and Certification Review requirements
 - Explore the latest applications or applicable research in advanced modeling
 - Strategic Planning Session.
- Ali described the purpose of the Strategic Planning Session as follow:
 - Limited to NYMTC members and their consultants to express their experience with the NYBPM and their future modeling needs
 - Reach consensus and develop suggestions and comments for the development of the NYBPM 2.0
 - Establish understanding of desired features for NYBPM 2.0

After the presentation, the meeting followed a discussion format where each of the attendees spoke to their usage of the model and suggestions and comments for the next generation model. Attendees were primarily members of agencies who directly use the model or interact with consultants using the model.

A summary of the comments during the users discussion can be found in Appendix A. Based on the comments by each of the users, a list of key comments was compiled. This list was further commented on by the participants and additions and modifications were made. During the 2nd session in the afternoon, this refined list was distributed to the attendees and they were asked to rank each of the items based on their agency's priorities. A second list of only new components/features was also distributed for ranking.

In addition, prior to the meeting surveys were distributed to prospective attendees with questions and space for comments about their experiences with existing NYBPM and interest in NYBPM 2.0. Following the meeting on October 3, 2011, a second survey was distributed to all attendees to review and complete following internal discussions at each of the member agencies.

Findings are compiled from the planning session itself on October 3, as well as from the results and comments of the post-meeting survey responses. The priority rankings of the prospective areas for improvement and new features are compiled and averaged to order the key areas of interest by the attendees. Additional comments and suggestions by the participants are also included.

Findings

Prior to the meeting, NYMTC distributed a list of survey questions to prospective attendees from NYMTC member agencies. The questions surveyed the number of users and main uses of NYBPM at the agencies, and asked for comments towards the development of the new NYBPM 2.0. The survey asked the following questions:

- Specific role with the model
- Estimated number of active users of NYBPM within the organization
- Past/current/anticipated projects using NYBPM (with description of usage)
- Other tools/models used by organization in transportation planning
- List of improvements/changes for a future version of NYBPM

Based on the comments of the users discussion, a list of recurring and important comments was compiled. This list was presented to the users and further discussion and refinement of each of the points was accomplished. The main points discussed were as follows:

- 1) **Ease of installation/use and updating** – Several members expressed the difficulty in installing NYBPM on their computers and having it running. It was suggested that NYMTC and the developing consultant streamline the installation process. It was also expressed that more frequent updating might be desirable. This was not specifically about base year updating, as these updates require an extensive calibration effort. Instead it was suggested that minor updates be rolled out that do not require revalidation of the model, although it would be first necessary to define the limit of a change that does not necessitate recalibration. Finally, it was suggested that the framework of the model be flexible for changes in the future, such as addition or modification of components.
- 2) **Necessity for stronger data/sources** – With emerging technologies such as GPS-based data, there is a wealth of new data available for model construction, calibration, and validation purposes. Particularly within Manhattan, there is an extensive amount of data that is under-utilized. NYBPM 2.0 should address and make use of these data sources.
- 3) **Better use as a first-step data source for sub-area analysis** – Several of the users from member agencies expressed that their primary usage of NYBPM was for sub-area analysis. While the model currently has a sub-area extraction process, the module could be further developed. However the issue of identifying the validity of the sub-area model was brought up, particularly when the NYBPM output does not match that of other similar-sized models.

- 4) **Easier alternative/scenarios and sensitivity analysis** – Comments were made regarding the computational time, number of iterations, and convergence of the model, particularly towards expedient analysis of alternatives and conducting sensitivity analysis. The user-interface of NYBPM was also discussed and it was remarked by NYMTC staff that the new user interface is much more user-friendly. Participants expressed that NYMTC must use the experience with NYBPM 1.0 to develop a strong and user-friendly software base for NYBPM 2.0.
- 5) **Ability to move from macro/meso/micro level** – Integration with other models, particularly micro- and meso-models was expressed as highly important to several of the participants. The ability to go back and forth between smaller models and the NYBPM in terms of input and output was highly desired. Thus, NYBPM 2.0 was requested to be flexible with any platform or model. However, the participants also acknowledged the proprietary issues involved with the software. Secondly, some members expressed the desire to conduct operational analysis using NYBPM or a sub-area extracted from NYBPM. Smaller level analysis could also include modified components such as hourly trip tables.
- 6) **Modularity – ability to turn on and off/add components** – Modularity was important feature requested, which could allow for reduction of computational time and focus on procedures critical to the member agencies. However, questions were raised about calibration/validation of the model when only certain components were used. Thus it was proposed that the limit of model usage/application be clearly defined, and for the model output to clearly identify what components were and were not used in the model runs.
- 7) **Goods movement/freight model** – The freight model within NYBPM was described as lacking transparency and being unable to incorporate the full range of available freight data. More robust data collection was requested, as several surveys that formed the basis of the original BPM freight model have not been conducted in many years. It was also pointed out that NYMTC has a separate modeling initiative. It was suggested that there are ways the model could be improved incrementally over time, with room for major improvement in the future, rather than requiring a major investment in a completely new modeling framework.
- 8) **New/Improved components** – Several new components and features were suggested. The list of suggestions for new and improved components was extensive and differed based on each of the individual member agencies' needs. A complete list, including sub-components and comments consists of the following:

1. Transit and mode choice
 - a. Copy/make similar to other models, similar to NJTPA's integration of the NJTransit model
 - b. Improved transit model
 - i. More time periods: (currently PM mirrors AM)
 - ii. Ability for adding new modes
2. Flexibility in time-periods
3. Calibration through usage of existing data
4. Better and more detailed networks
 - a. Enhanced Manhattan & on the periphery
 - b. Outer counties – more data and more detailed networks
 - i. Border regions that affect whole
5. Special generator improvement & isolation
6. Better analysis of destination attractiveness
 - a. Emphasis on Non Home Based trips – data issue
7. Reporting/post-processing
8. Airports/special access
9. New trip tables – such as special trips/visitors
10. Weekend model
11. Pricing Analysis
12. Economic variables
13. Expanded/modified geography
14. Land-use module in addition to transport model
15. Auxiliary sketch-planning tool offshoot from NYBPM
16. Parking: Capacity-constraint, pricing

Following refinement of the list of proposed improvements, the lists were distributed to the participants and they were asked to rank the priorities of each of the items in the list. It is important to note that it was slightly unclear whether to individually rank the individual components of the final bullet, 8) New/Improved Components. For the first round of rankings, only Items 1-8 were considered, and if participants individually ranked items within Item 8, the highest score given to any of the subcomponents within Item 8 was used as the overall score for Item 8.

The first round of rankings resulted in the descending order of priority listed in Table 1 (with 1 being highest average rank of importance) based on the present participants. It is important to note that not all NYMTC member agencies were present, and that the representation from the

participating agencies was not equal. Table 1 does not give any consideration to weighting the scores based on the makeup of the participants, and weights each score sheet received (15) equally.

Table 1 – Average order of priorities for NYBPM 2.0 based on participant rankings

Rank	Average Rank	Item
1	3.27	5) Ability to move from macro/meso/micro level
2	3.67	3) Better use as a first-step data source for sub-area analysis
3	4.07	8) New/Improved components
4	4.20	2) Necessity for stronger data/sources
5	4.33	6) Modularity – ability to turn on and off/add components
6	4.47	1) Ease of installation/use and updating
7	5.53	4) Easier alternative/scenarios and sensitivity analysis
8	6.47	7) Goods movement/freight model

From the rankings, it is clear that integration with other models, particularly the ability to extract and integrate data, is an important area of interest, both with and without the context of sub-area extraction. Specifically for the lowest scoring component, the freight model, it was noted that NYMTC is already involved with developing a separate freight tool.

Secondly, the items within Item 8 – New/Improved components were also re-ranked. In this case, some participants scored all of the sub-items of Item 8, while others only scored a limited number, for example 1-8 or 1-10. In those cases, the rank beyond the lowest rank given in the score sheet (for example, 11 if 1-10 were assigned) was given equally to all unranked components for the purposes of calculating the average priorities. Table 2 lists the order of priorities for the new features desired.

Table 2 – Average order of priorities for new components in NYBPM 2.0 based on participant rankings

Rank	Average Rank	Item
1	5.07	1. Transit and mode choice
1	5.07	2. Flexibility in time-periods
3	5.47	3. Calibration through usage of existing data
4	6.27	4. Better network and detail
5	7.20	14. Land-use module in addition to transport model
6	7.67	9. New trip tables – such as special trips/visitors
7	7.93	6. Better analysis of destination attractiveness
8	8.40	11. Pricing Analysis

9	8.60	5. Special generator improvement & isolation
10	8.73	10. Weekend model
11	8.93	12. Economic variables
12	9.00	16. Parking: Capacity-constraint, pricing
13	9.47	15. Auxiliary sketch-planning tool offshoot from NYBPM
14	9.60	13. Expanded/modified geography
15	9.87	7. Reporting/post-processing
16	10.73	8. Airports/special access

Following presentation of the average rankings, participants indicated that the ranking process is highly contingent upon the associated cost, specifically with respect to the addition of new components/features to the model. For example, the participants expressed concern on the exclusion of several low-cost components at the expense of a highly-ranked, highly-expensive feature. Or, cases were also demonstrated where smaller models/tools that already exist or are in the process of being developed by other member agencies can be integrated into NYBPM 2.0 at low cost.

Participants wished to redo the rankings following a rough estimate of costs and feasibility, which NYMTC members took under advisement. In addition, they also wished to reevaluate the items with the other users and decision-makers at their agencies, before releasing a final list. The meeting concluded with participants requesting a summary of the findings of the discussion, as well as a chance to redo and offer a comprehensive list of suggestions and priorities for NYBPM 2.0.

The recompiled survey (in Appendix B) was distributed to all meeting attendees via email on November 29th, 2011. A follow-up reminded email was sent on January 3, 2012 with a request for all surveys to be returned by January 6, 2012. The findings and key comments are provided in the next section.

Post-Meeting Survey Responses

The post-meeting survey (which can be found in Appendix B) was returned by 5 members of the NYMTC affiliate agencies (respondent) as of January 17, 2012:

- Dept. of City Planning (Stratos Prassas)
- NYCDOT (Asheque Rahman)
- NYSDOT, Region 11 (Roger Weld)
- PANYNJ (Todd Goldman)
- NYCTransit (Jay Krantz)

The survey included questions about the number of users of NYBPM at the member agencies, as well as the number and names of projects/studies NYBPM is used for. Table 3 lists the number of users and average annual number of projects/studies by the survey respondents. NYCDOT, NYSDOT Region 11, and PANYNJ are the heaviest users of the model.

Table 3 – NYBPM Usage by Survey Respondents

Organization	Estimated number of active users of NYBPM	Average annual number of studies using NYBPM by org. and/or consultants
Department of City Planning	2	1
New York City DOT	10	10
New York State DOT, Region 11	5	10
Port Authority of New York & New Jersey	3	2-3 (current), 4-8 (anticipated)
New York City Transit	1	0

Based on the compiled survey results in Table 4, responding agencies mostly prioritize usage of NYBPM for sub-area extraction and analysis, and in conjunction with other tools, consistent with the responses and comments received during the strategic planning session. In particular, it is desired for NYBPM to have better integration with other models and tools. Agencies often use NYBPM to extract trip tables for other or smaller models, so it is very important for consistency between the models. NYSDOT Regional 11 noted that sub-area extraction should run within the NYBPM environment, and that it should also include transit within the extraction.

Ease of installation and use was identified by 3 of the respondents; however there was not agreement in the importance among the sub-categories of updating frequencies. Regarding

stronger and new data sources, NYSDOT Region 11 recommended Traffic Analysis Zones (TAZs) be reduced to census tract size for origin-destination analysis.

Table 4 – NYBPM 2.0 Priorities as Identified by Post-Meeting Survey Respondents

	High priority	Medium priority	Low priority
1. Ease of installation/use and updating	3	1	1
Frequency of base-case updates	-	2	3
Frequency and easy of minor updates	1	2	2
2. Necessity for stronger data and new sources	1	4	-
3. Better tool for sub-area extraction and analysis	4	1	-
4. Easier alternative analyses and sensitivity analyses (<i>with regards to computational time and effort</i>)	3	2	-
5. Better integration with other models and tools (<i>in particular with micro- and meso-models</i>)	4	1	-
Better platform for operational analysis	2	1	2
6. Ability to turn certain model components on or off	1	4	-
Disclaimer for which components have been used and calibrated	1	2	2
7. Robust and transparent goods movement/freight model	2	1	2

** Number of responses out of 5*

Table 5 lists the priorities of potential new features/components of NYBPM as identified by the respondents. The most popular feature was the addition of pricing analysis. This was followed by improved transit and mode choice models, special generator improvement, and the addition of airport/special access trips.

Pricing analysis only ranked as a medium priority during the strategic planning session, as did special generator improvement. Airport/special access trips was the lowest rated new feature/component priority during the strategic planning session, therefore it may be more important to the agencies responding to the post-meeting survey. Transit and mode choice improvement priority was consistent with the responses during the strategic planning session.

Table 5 – NYBPM 2.0 New Feature Priorities from Post-Meeting Survey Respondents

	High priority	Medium priority	Low priority
1. Improved transit and mode choice model	3	2	-
2. Flexibility in time periods	2	3	-
3. Calibration through usage of existing data	2	1	-
4. Better network and level of detail	2	2	1
Enhanced network detail within Manhattan	2	1	2
Better/refined zonal system and detail in the outer counties	2	2	1
5. Special generator improvement and isolation	3	2	-
6. Better analysis of destination attractiveness	2	3	-
Emphasis on non-home-based trips	1	2	2
7. Reporting/post-processing	2	3	-
8. Airports/special access	3	2	-
9. New trip types, such as airport trips or visitors	2	2	1
10. Weekend model	-	3	2
11. Addition of pricing analyses	4	1	-
12. Incorporation of economic variables (e.g. gas price, inflation, etc.)	1	3	1
13. Expanded/modified geography	1	1	2
14. Land-use module	1	3	1
15. Auxiliary sketch-planning tool	-	2	2
16. Parking: capacity-constrained, pricing, etc.	2	1	2

** Number of responses out of 5*

Overall, the post-meeting survey results should be used in conjunction with the priorities identified during strategic planning session in evaluating future needs for NYBPM 2.0. Although number of responses was limited, three of the heaviest users of NYBPM in addition to NYMTC, NYCDOT, NYSDOT Region 11, and PANYNJ, were able to respond and submit comments. These results are valuable in the identification of needs for NYBPM 2.0.

APPENDIX A

Users Discussion

Users Discussion

During the first part of the meeting, participants spoke regarding their experience/usage of the model, main strengths and weaknesses of the model, and suggestions for NYBPM 2.0. The following is a detailed list of each of their comments:

Michael Marsico, New York City Department of Transportation (modeling)

- NYCDOT wants their meso-model to work with NYBPM – particularly for NYBPM to **integrate** better with other platforms
- Application of **new ideas** such as
 - o bus lane modeling & specific lane projects in general
 - trip generation and mode split manually
 - o economic variables – adjust SED data by user
 - growth rate
 - gas price
 - unemployment
 - inflation
 - housing market
 - o financial/pricing – only tool but not best tool
 - o pedestrians
 - o taxi/model shift
- Hard to install/get it to work – **not easy to run it**
- Desire for a weekend model
- NYCDOT would like NYBPM to be flexible enough to accept ATR and Classification data in single excel files rather than having to compile all raw data collected in one single database before updating and validating the model.

Todd Goldman, Port Authority of New York and New Jersey (PANYNJ)

- **Airport Ground Access**
 - o The Port Authority is developing a regional airport ground access mode choice model as part of the LaGuardia Airport Access Alternatives Analysis study.
 - o The model will work as a stand-alone spreadsheet, but can also be adapted to work in conjunction with NYBPM, providing input to the model via special generator zones.
 - o NYBPM 2.0 could rather easily incorporate this model as an optional module.

- The addition of visitor trips and airport access trips as new trip purposes in the model is a separate question, but the airport ground access model could support this as well.
- **Goods movement**
 - Script developed by George List (for freight modeling) is a sound basis for the freight model, but has been adapted into source code that is not easy to adapt or modify. It also does not differentiate different vehicle types or freight markets. This limits its utility for freight operations and policy analysis.
 - The Port Authority proposes adapting this methodology to use a richer database of classified vehicle counts and commercial optimization software instead of NYBPM's current optimization code. We believe this will provide a more useful model that can more flexibly and explicitly represent specific segments of the commodity chain such as: travel to and from the ports and other intermodal gateways; intraregional distribution; and longer-distance flows in and out of the region. The Port Authority has been doing exploratory work to explore the feasibility of these improvements.
 - This enhanced freight methodology would interact with NYBPM via fixed trip tables, just like in the current model.
- **Parking capacity & price** are important factors in mode choice in this region. We liked what we saw about the efforts to incorporate these factors more fully in Tel Aviv's travel demand forecasting model, and encourage exploration of the feasibility of incorporating these methods into NYBPM.
- **Time of day choice** (peak/off-peak)
 - Mode choice, assignment, and transit assignment are inflexible. Traveler responses to congestion and to variable pricing are important in this region, and ideally the next version of the model should include more dynamic selection of departure time in response to these factors.
- **Flexibility** that can be accomplished without additional data collection, e.g. the ability to perform highway and transit assignments for any arbitrary half-hour of the day.

Jay Krantz, New York City Transit

- NYC Transit has an in-house model, would like to use NYBPM more
 - Need to use NYBPM for mode choice
 - Developed NYC Transit model based on Metrocard data
 - Would like better **integration**
- RTFM, the MTA travel model, gave birth to NYBPM transit model
 - RTFM starts with fixed trip tables, and has its own mode choice

- Mode choice would be better if it were the same, give option to select/deselect model components, and be consistent across other means (such as assignment)
- *Comment from Todd Goldman, PANYNJ:* NJTPA integrated most of NJTransit's model – NYMTC & MTA should do the same

Dan Evans, Metro-North

- Using NYBPM for investment, Stewart Airport access, Tappan Zee Bridge
- Would like to see **parity** between transit and highway users
 - NYBPM overestimates highway users
 - Expanded detail in **periphery** trips not just to/from core

David Armstrong, Metropolitan Transit Authority

- Difficult to make **modifications to parameters**, particularly not to/from core trips
- Conformity analysis is important even if it is not the direct use
- Modify some parameters with caveats that it isn't part of the validated model
- Voice recognition – or quickly as possible view/run scenarios

Michael Griffith, NYCDOT (planning)

- **Subarea extraction** is difficult, as is **integrating** microscopic analysis with NYBPM
 - Running model after extraction is not accurate
 - *Comment from Sangeeta Bhowmick:* model calibrated only to major arterial level, so it would improve if we go lower
 - **Integration** with micro-level models & local models is also difficult
- Very **time expensive** (long preparation and running time)

Stratos Prassas, New York Dept. of City Planning (NYDCP)

- Developing new **user interface** of the NYBPM
 - *Comment from Sangeeta Bhowmick:* New user interface recently developed and is being testing.
- Should be easier to run/update
- Have an option to eliminate manual steps
- **New improvements:**
 - Pricing
 - Attractiveness of destinations particularly for non-home-based trips
 - More detail in Manhattan, make use of **wealth of data**

Roger Weld, New York State Department Of Transportation (NYSDOT)

- Using for large projects, would like to **integrate** with micro-models
- **Reverse extraction**, take micro-model data and go back to NYBPM for FHWA/Conformity
- **Integrate** with tools like VISUM

Charles Sutter, Westchester County

- Want to use it for **freight**
- Concerns about modal **splits** through the region

Olumuyiwa Fjolu, NYSDOT

- Base year update – how to validate it or fold it back under the NYBPM heading
 - o Keep model **up-to-date**
- *Comments from others:* models/number/validation is tough to get perfect
- When data collection for other models says something else, how to justify validity of NYBPM results?
 - o *Comment from David Armstrong:* **Outline what model is expected to do**, at least in the typical application
 - o *Comment from Michael Marsico:* Can backfire for those that want to use it to justify other applications

Ann Fangmann, Nassau County DPW Planning Consultants do the modeling

- Want to **integrate** ARRF Model (Aggregate Rail Ridership Forecasting)
 - o Developed for FTA by AECOM
 - o Spreadsheet-based template that can apply to any locale
 - o *Comment from David Armstrong:* LIRR has a model to Penn Station
- *Comment from Michael Marsico:* LITP 2000
 - o Used to use it but has problems
 - o Sub-area & suburban problems
- **Land use** component is difficult when unknown for future
- Using RTFM/Spreadsheet but want to use NYBPM
- Want **special events/special generators**
 - o *Comment from Todd Goldman:* airports
- On the **periphery**/suburban – **zones are large** and difficult particularly for transit

APPENDIX B

Post-meeting Survey

Organization: _____

Estimated number of active users of NYBPM: _____

Average annual number of studies using NYBPM by org. and/or consultants: _____

Agency priorities in the development of NYBPM 2.0

<i>Please mark 'X' indicating level of priority for each of the following</i>		High priority	Medium priority	Low priority	N/A
1.	Ease of installation/use and updating				
	Frequency of base-case updates				
	Frequency and easy of minor updates				
2.	Necessity for stronger data and new sources				
3.	Better tool for sub-area extraction and analysis				
4.	Easier alternative analyses and sensitivity analyses (<i>with regards to computational time and effort</i>)				
5.	Better integration with other models and tools (<i>in particular with micro- and meso-models</i>)				
	Better platform for operational analysis				
6.	Ability to turn certain model components on or off				
	Disclaimer for which components have been used and calibrated				
7.	Robust and transparent goods movement/freight model				

Additional comments or suggestions:

Potential New Features/Components in NYBPM 2.0					
	<i>Please mark 'X' indicating level of priority for each of the following</i>	High priority	Medium priority	Low priority	N/A
1.	Improved transit and mode choice model				
2.	Flexibility in time periods				
3.	Calibration through usage of existing data				
4.	Better network and level of detail				
	Enhanced network detail within Manhattan				
	Better/refined zonal system and detail in the outer counties				
5.	Special generator improvement and isolation				
6.	Better analysis of destination attractiveness				
	Emphasis on non-home-based trips				
7.	Reporting/post-processing				
8.	Airports/special access				
9.	New trip types, such as airport trips or visitors				
10.	Weekend model				
11.	Addition of pricing analyses				
12.	Incorporation of economic variables (e.g. gas price, inflation, etc.)				
13.	Expanded/modified geography				
14.	Land-use module				
15.	Auxiliary sketch-planning tool				
16.	Parking: capacity-constrained, pricing, etc.				
Additional suggested high priority components:					

Past/Current/Anticipated projects conducting using NYBPM (*and short description*):

Is your organization using other tools/models for transportation planning? (*please list*)

Your organization's future needs in terms of travel demand modeling in general:

Please take the liberty to extend comments beyond this page or these survey questions