Regional Transit Expansion Plans and "the Amazon Effect" - Recent Experiences in Atlanta, Austin, Charlotte, and Nashville

Control Centers: Co-locating Bus & Rail - Pros & Cons

Atlanta, Chicago, Los Angeles, and Portland

APTA Rail Conference, June 2018
Why Study Co-location?

• Metro system is expanding
  • Existing ROC cannot meet future need
  • New ESOC is being designed

• Asked the question:
  • Should the ROC and BOC be moved to the ESOC building?

• Which led to more questions:
  • What are the impacts and benefits?
  • What will it cost?
  • Who else has done this?
Benchmarking Effort

• Created preliminary list of 20 transit agencies for comparison
• Five agencies selected for benchmarking all of which had combined or co-located operations centers
• Interviewed each agency
• Identified commonalities and differences

• Goals
  • Identify best practices and lessons learned
  • To provide information that could help Metro make a decision to co-locate or to remain separate
## Peer Agencies

<table>
<thead>
<tr>
<th>Region</th>
<th>Service Area Population</th>
<th>Service Area</th>
<th>Annual Operating Expenses*</th>
<th>Vehicles Operated</th>
<th>Maximum Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles (Metro)</td>
<td>8.6 million</td>
<td>1,513 sq miles</td>
<td>$1.3 billion</td>
<td>70 Heavy Rail</td>
<td>144 Light Rail</td>
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<td></td>
<td></td>
<td>1,751 Bus</td>
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<tr>
<td>Atlanta (MARTA)</td>
<td>1.7 million</td>
<td>485 sq miles</td>
<td>$470 million</td>
<td>210 Heavy Rail</td>
<td>450 Bus</td>
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<tr>
<td>Chicago (CTA)</td>
<td>3.4 million</td>
<td>314 sq miles</td>
<td>$1.3 billion</td>
<td>1,108 Heavy Rail</td>
<td>1,568 Bus</td>
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<td>Portland (TriMet)</td>
<td>1.5 million</td>
<td>533 sq miles</td>
<td>$392 million</td>
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<td></td>
<td>Heavy Rail</td>
<td>104 Light Rail</td>
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<td></td>
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<td></td>
<td>516 Bus</td>
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<tr>
<td>Maryland (MTA)</td>
<td>2.2 million</td>
<td>1,795 sq miles</td>
<td>$670 million</td>
<td>54 Heavy Rail</td>
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<td>38 Light Rail</td>
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<td></td>
<td></td>
<td></td>
<td>1,568 Bus</td>
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<tr>
<td>Philadelphia (SEPTA)</td>
<td>3.4 million</td>
<td>836 sq miles</td>
<td>$1.2 billion</td>
<td>286 Heavy Rail</td>
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<td>338 Light Rail</td>
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<td>611 Bus</td>
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</tbody>
</table>

*FY2014 Operating Expenses – FTA profiles
LA Metro

Denise Longley, Deputy Executive Officer, Enterprise Transit Asset Management

• 170 bus routes; 4 LRT lines; 2 subway lines

• ROC located at Willowbrook
  • LRT & Heavy Rail
  • 38 consoles (2017); space for 44
  • 89 consoles anticipated (2070)

• BOC located at Metro HQ
  • 26 consoles (2017); space for 34
  • 33 consoles anticipated (2070)
MARTA

Dave Springstead, Assistant General Manager

• 101 bus routes; 4 heavy rail lines
• IOC opened 2017:
  • Rail Control Center
  • Bus Control Center
  • Emergency Operations Center
• Extensive analysis into benefits / costs of co-location
• Intense staff preparation for co-location
• Most stations have agents
CTA

Ronald Ester, *Deputy Chief of Safety, Security, and Control Center Operations*

- 129 bus routes; 8 rail routes
- Control Center opened 1995
  - Bus & rail controllers
  - Power controllers
  - Rail customer service controllers
  - Security controllers (intrusion alarms, bus alarms)
- All stations have on-site agents
TriMet

Patrick Preusser, Executive Director, Transportation

- 81 bus routes; 5 LRT lines; 1 commuter line
  - Operates 2 City streetcar lines
- OCC opened 2014:
  - Rail operations (commuter, LRT & streetcar)
  - Bus operations
  - EOC
- No station agents
- Backup OCC to open this year
MTA
• 80 bus routes; 1 heavy rail line; 3 LRT lines; 3 commuter rail lines
• CCC opened 2013

SEPTA
• 2 rapid transit lines; 1 interurban line; 10 trolleybus lines; 121 bus routes; 13 commuter rail lines
• Control Center fully operational in 2000
Findings
Relevant Takeaways ➔ Panel Discussion

• Co-location ➔ Increased operational efficiencies
• Labor force ➔ Non-union workers in operations centers
• Workforce Location
  ➔ Relationship between Station agents and CCTV observers
  ➔ Relationship between Bus, Rail, Security and Emergency Operations
• Big data ➔ Increased situational awareness ➔ Humans
Session Participants

• Bart Kane, LYNX Blue Line Extension
• Mark Talbot, PE, Macro Consulting
• Carl Stanton, Macro Consulting
• S. Tesse Rasmussen, PE, InfraStrategies LLC
• Julie Quinn, Quinn Williams
• Denise Longley, LA Metro
• David Springstead, MARTA
• Patrick Preusser, TriMet
• Ronald Ester, CTA