

High Capacity Transit Task Force: Peer Regions

General Criteria (ideally should meet some, but don't have to meet all):

- Similar climate to Houston
- Similar geography/topography to Houston (some constraints but not overwhelming)
- Similar population and development pattern to Houston (lower density/auto-oriented):
 - 2016 Estimated MSA Population: 6,772,470
 - 2010 Census MSA Density: 674 persons/square mile of land area
- Similar forecasted populations (2045-2050 timeframe); data to be acquired
- Relatively recent implementation of HCT (within ~40 years)

National Peer Regions

Atlanta

✓ *TECHNOLOGY*

✓ *ECONOMIC IMPACT*

- 2016 Estimated MSA Population: 5,789,700
- 2010 Census MSA Density: 632 persons/square mile of land area
- Some topographic differences (hills), but no geographic limitations and similar climate
- MARTA (heavy rail; metro service) – first section opened 1979
- Modern streetcar (district circulator)

Austin

✓ *TECHNOLOGY*

- 2016 Estimated MSA Population: 2,056,405
- 2010 Census MSA Density: 407 persons/square mile of land area
- Some topographic differences (hills), but no geographic limitations and similar climate
- Capital Metrorail (light rail; commuter service) – opened 2010
- MetroRapid – “better bus” routes with elements of BRT
- Project Connect – long-range plan considering local and high-capacity transit

Cleveland

✓ *TECHNOLOGY*

- 2016 Estimated MSA Population: 2,055,612
- 2010 Census MSA Density: 1,040 persons/square mile of land area
- Geographic limitation to north (Lake Erie), but not south
- Red Line (heavy rail; metro service) – first section opened 1955
- Green and Blue Lines (light rail; metro service) – upgraded from streetcars in early 80s
- HealthLine (bus rapid transit; metro service) – opened 2008; ITDP “silver” rating
- Cleveland State Line - “better bus” route with elements of BRT
- Innovative Financing Experience: Naming rights for the “HealthLine”

Dallas/Fort Worth✓ *TECHNOLOGY*✓ *ECONOMIC IMPACT*

- 2016 Estimated MSA Population: 7,233,323
- 2010 Census MSA Density: 714 persons/square mile of land area
- Some topographic differences (hills), but no geographic limitations and similar climate
- DART (light rail; regional/metro service) – first section opened 1996
- Trinity Railway Express (railroad; commuter service)
- DCTA A-Train (railroad; commuter service)
- TexRail/Cotton Belt – under construction (railroad; commuter service)
- Streetcars (district circulators): heritage (McKinney Ave Trolley) and modern (Dallas Streetcar)
- Las Colinas Peoplemover (automated transit; district circulator)

Denver, Colorado✓ *INNOVATIVE FINANCE*✓ *ECONOMIC IMPACT*

- 2016 Estimated MSA Population: 2,812,732
- 2010 Census MSA Density: 305 persons/square mile of land area
- Geographic limitations to west (Front Range) but not east
- RTA Lines C D E F H R W (light rail; regional/metro service)– first section opened 1994
- RTA Lines A B (light rail; regional/commuter service) – first section opened 2016
- Innovative Financing Experience:
 - Includes \$150mm in TIFIA loans for station Public-Private Partnership (P3);
 - FasTracks Eagle Project Innovative Financing (P3) with private investor Denver Transit Partners (Fluor, John Laing Investments, Uberior Infrastructure Investments):
 - \$1 billion New Starts Grant
 - \$280mm TIFIA Loan
 - \$396mm in Private Activity Bonds (PABs)

Los Angeles✓ *TECHNOLOGY*✓ *INNOVATIVE FINANCE*

- 2016 Estimated MSA Population: 13,310,447
- 2010 Census MSA Density: 2,646 persons/square mile of land area
- Geographic limitations include mountains, Pacific Ocean; mild climate
- Red and Purple Lines (heavy rail; metro service) – opened 1993
- Blue, Green, Gold and Expo Lines (light rail; metro/regional service) – first section opened 1985
- Orange and Silver Lines (bus rapid transit; metro/regional service); ITDP “bronze” rating
- Metrolink – (railroad; commuter service)
- METRO Rapid – “better bus” routes with elements of BRT

- Innovative Funding Experience/Activity: Measure M Legislation; LAX people Mover (In procurement)

Miami

✓ *TECHNOLOGY*

✓ *INNOVATIVE FINANCE*

- 2016 Estimated MSA Population: 6,066,387
- 2010 Census MSA Density: 1,096 persons/square mile of land area
- Atlantic Ocean and Everglades create some geographic limitations; similar climate
- Metrorail (heavy rail; metro service) – first section opened 1984
- Metromover (automated transit; district service) – downtown, first opened 1986
- Tri-Rail (railroad; commuter service)
- Brightline – privately-owned; under construction (railroad; commuter/intercity service)
- MiamiCentral – mixed-use multi-modal transportation hub; under construction
- South Miami-Dade Busway (Express Bus/Bus Rapid Transit; regional/commuter service)

Seattle, Washington

✓ *INNOVATIVE FINANCE*

✓ *ECONOMIC IMPACT*

- 2016 Estimated MSA Population: 3,798,902
- 2010 Census MSA Density: 586 persons/square mile of land area
- Significant geographic limitations (Puget Sound; Lake Washington) and hilly terrain
- Sound Transit Central Link (light rail; metro/regional service) – first section opened 2009
- Sounder (railroad; commuter service)
- Modern Streetcars (district circulators): Tacoma Link, South Lake Union, First Hill
- Seattle Monorail (monorail; district/tourist service) – opened during 1962 World’s Fair
- Innovative financing (\$1.3 billion TIFIA Loan for East Link Rail completed in 2016)

Washington DC

✓ *INNOVATIVE FINANCE*

✓ *ECONOMIC IMPACT*

- 2016 Estimated MSA Population: 6,131,977
- 2010 Census MSA Density: 997 persons/square mile
- METRO (heavy rail; metro service) – first section opened 1976; continuously expanded
- MARC & VRE (railroad; commuter service)
- Amtrak Acela/Northeast Corridor (FRA-compliant rail; intercity/commuter service)
- Innovative Funding: Purple Line LRT planned for Maryland (Public-Private Partnership); \$875mm TIFIA loan included
- Modern Streetcar (district circulator)

International Peer Regions

Dubai, United Arab Emirates

✓ *TECHNOLOGY*

- 2017 Population: 2,788,929

- 207 Population Density: 1,756 persons/square mile (entire Emirate)
- Geographically limited by Persian Gulf to west; no limitations to east; similar climate
- Dubai Metro (automated heavy rail; metro service) – first section opened 2009
- Palm Jumeirah Monorail (automated monorail; tourist-oriented service)
- Modern Streetcar (district circulator): Dubai Tram
- Bluewaters District (automated transit; district circulator – contract just awarded)
- Roads and Transport Authority is enthusiastic about automated vehicles

Ottawa, Canada

✓ *INNOVATIVE FINANCE*

- 2016 Regional Population: 1,323,783
- 2016 Regional Density: 507 persons/square mile
- Few geographic limitations
- Transitway (bus rapid transit; metro/regional service) – began service 1983
- O-Train: Trillium Line (light rail; regional service) – began service 2001
Confederation Line (light rail) – will replace portion of Transitway
- Innovative Funding Experience: Infrastructure Ontario (Various Projects)

Vancouver, Canada

✓ *TECHNOLOGY*

✓ *INNOVATIVE FINANCE*

- 2016 Regional Population: 2,463,431
- 2016 Regional Density: 2,078 persons/square mile
- No freeways in central Vancouver
- Skytrain (automated heavy rail) – first section opened 1986
- West Coast Express – (railroad; commuter service)
- Innovative Funding Experience: Partnerships BC (Various Projects)