

Streetcars are Growing Up – Expanding from a Starter Line to a Transit Network

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2018 Rail Conference

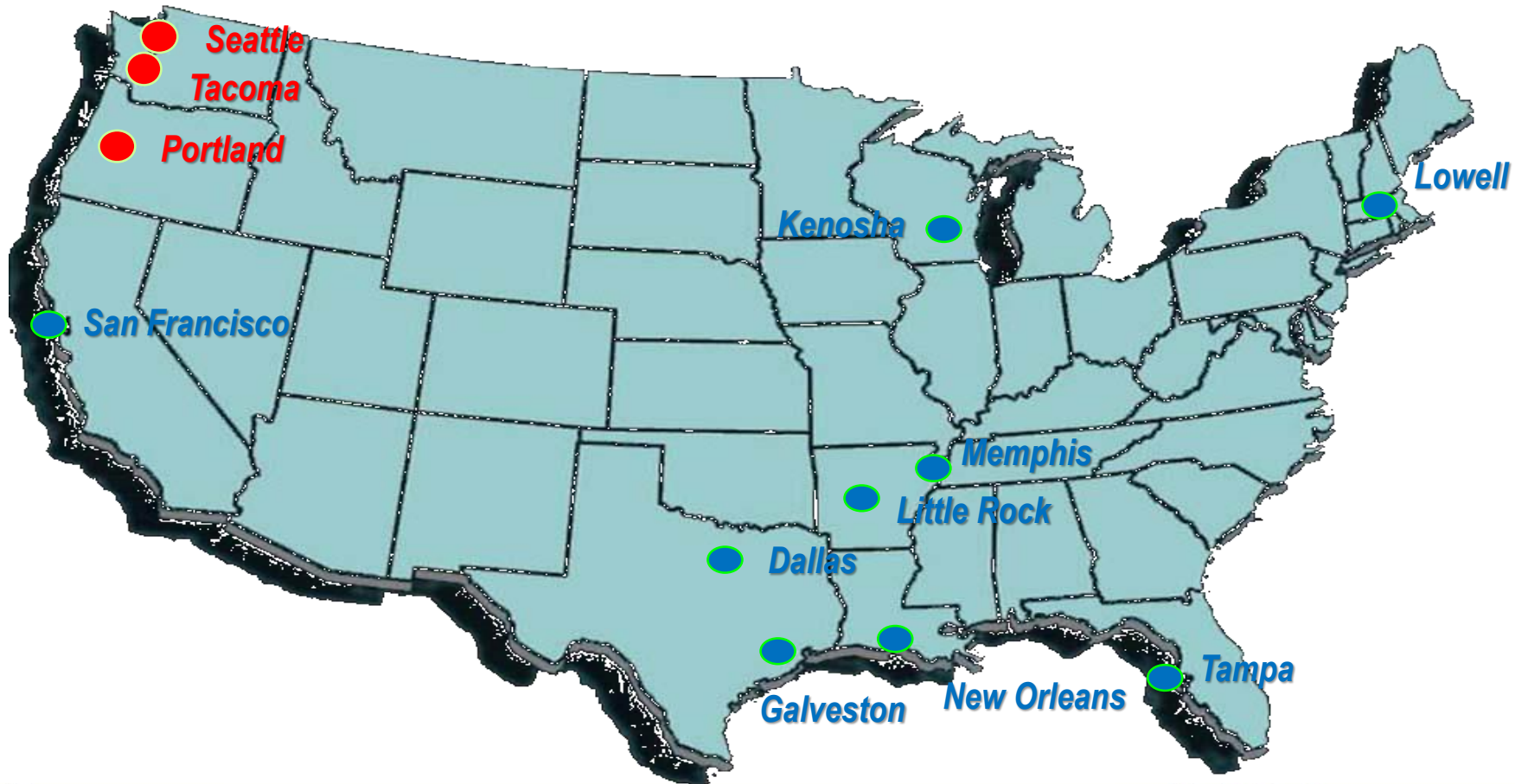
Key Presentation Take-Aways

- Modern Streetcar can yield mobility benefits
- Lessons from review of U.S. streetcar evolution
- Projects evolving into transit networks
- Innovative technologies and service delivery



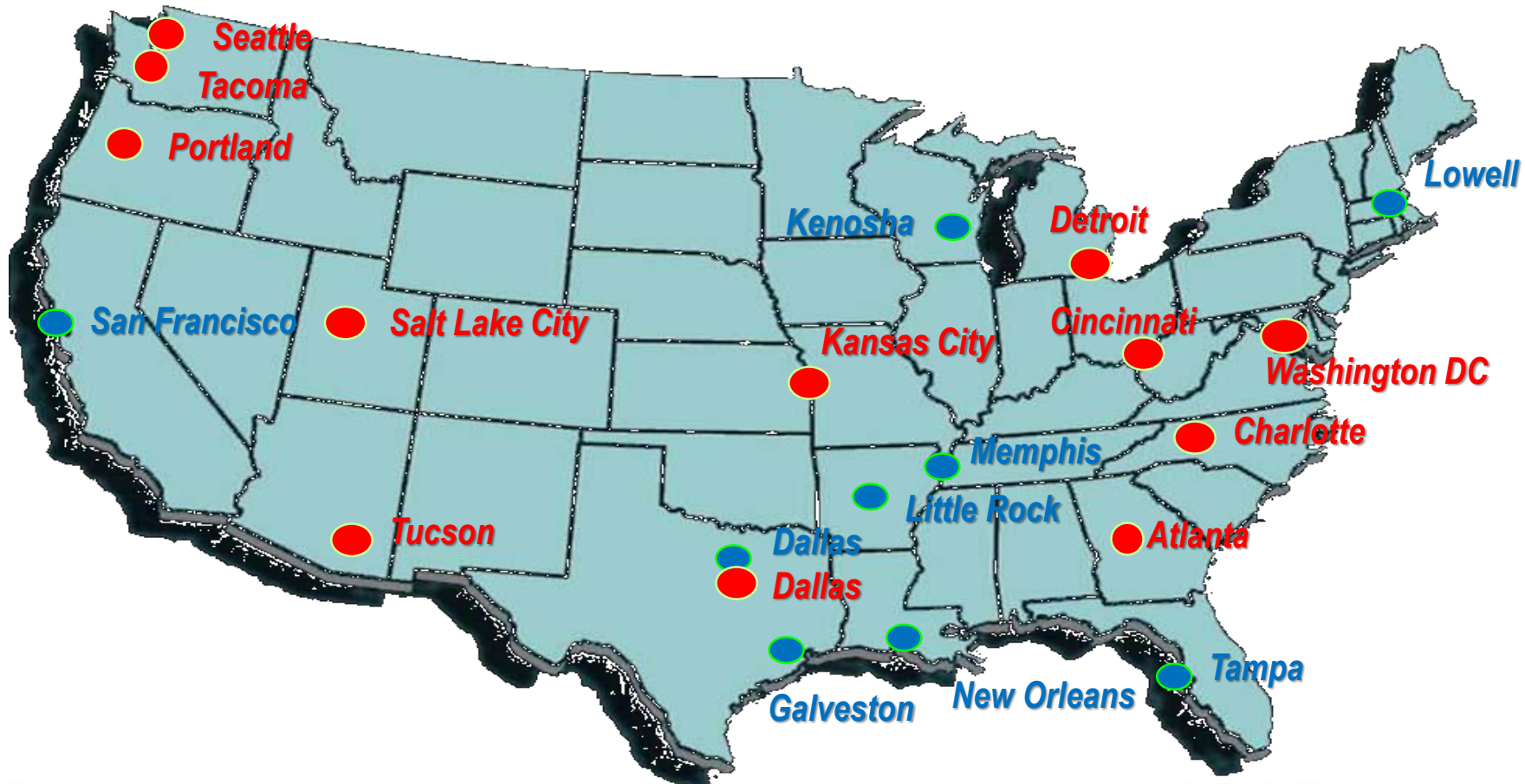
2013 Operating U.S. Streetcars

(**Modern** and **Vintage**)



Today Operating U.S. Streetcars

(**Modern** and **Vintage**)



RECENT STREETCAR OPENINGS

- Salt Lake City Sugarhouse December 2013
- Tucson Sun Link July 2014
- Atlanta Streetcar December 2014
- Dallas Oak Cliff Streetcar April 2015
- Charlotte CityLYNX Gold Line July 2015
- Seattle First Hill Streetcar January 2016
- Washington DC February 2016
- Kansas City Streetcar May 2016
- Dallas Bishop Arts Extension, August 2016
- Cincinnati Streetcar September 2016
- Detroit Q-Line Streetcar May 2017



Kansas City Downtown Streetcar



Washington DC

UPCOMING STREETCAR OPENINGS

- Milwaukee, 2018
- Oklahoma City 2018
- Charlotte Gold Line Phase 2 - 2020
- Tacoma Extension, 2020
- Santa Ana/Orange County, 2020
- Tempe, 2021
- Sacramento, 2022
- Seattle Central City, TBD

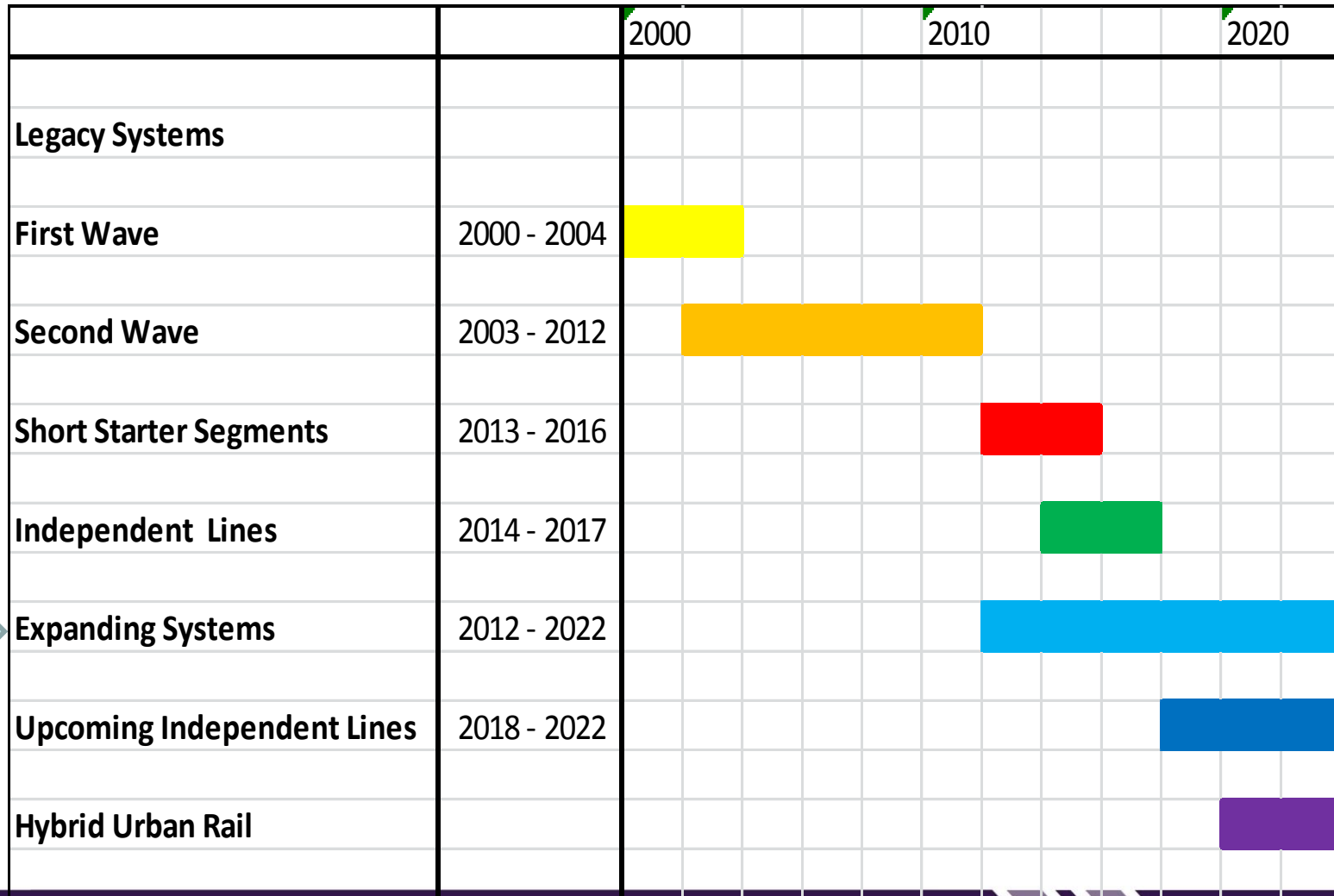


Modern Streetcar isn't only about **Economic Development**

It's also about Urban Mobility!!!!



Evolution of Modern Streetcar



Portland
New Orleans
Charlotte
Kansas City
Seattle
Tacoma
Dallas
Tampa



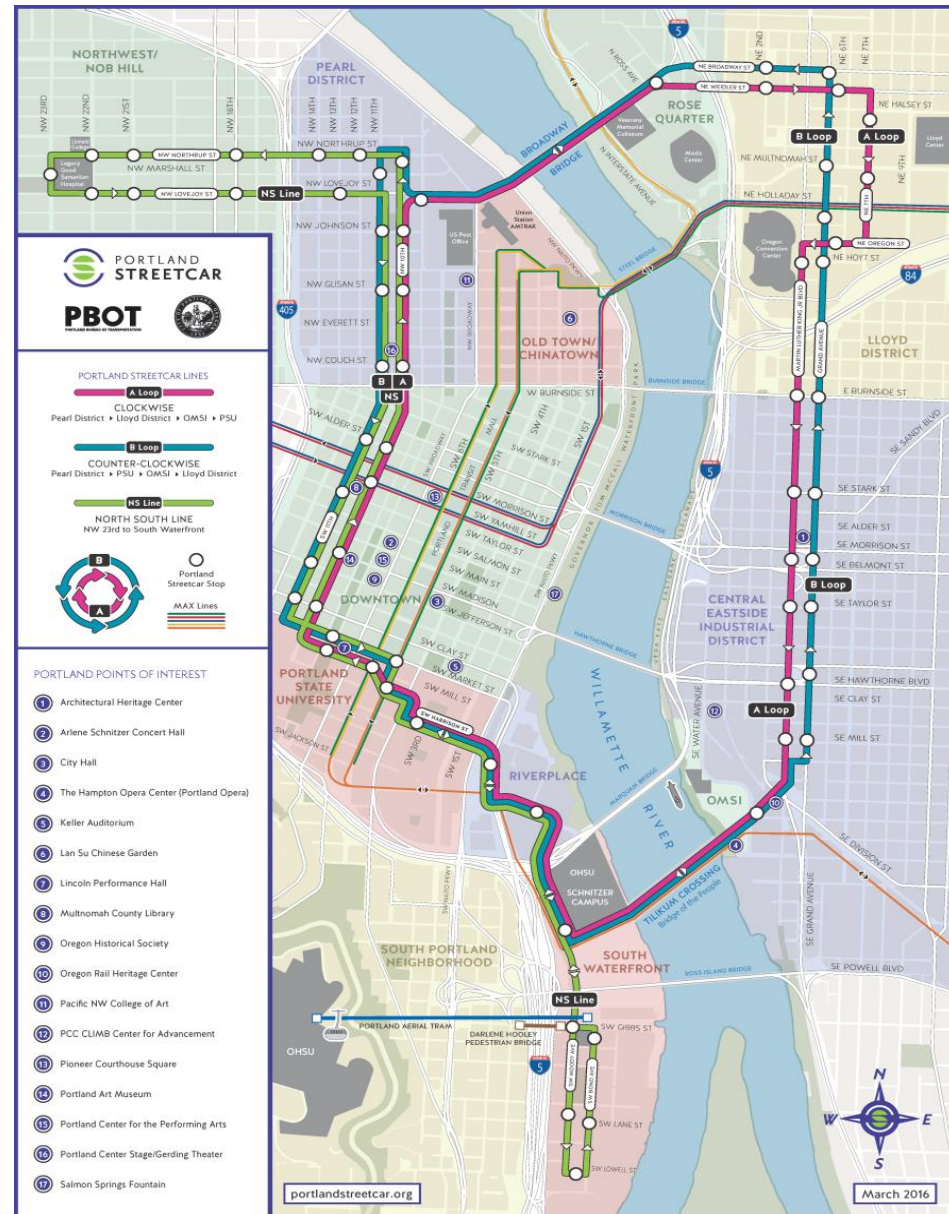
Streetcars are Growing Up – Expanding from a Starter Line to a Transit Network

- Expand network to serve diverse travel markets
- Serve first mile/last mile
- Connect to emerging neighborhoods
- Improve productivity and effectiveness
- Expand sustainable mobility options



Portland

- Opened four extensions in 2001-2015
- 16 miles, 35 stops, 17 streetcars
- \$256 million capital cost for system
- 15,000 daily boardings
- Over \$4.5 billion new development
- Considering additional streetcar extensions



New Orleans

- Oldest line opened in 1835
- Newest lines opened in 2013 and 2016
- 4 Streetcar lines and 32 track miles
- 22,000 daily riders



New Orleans

- Rampart line opened in 2016
- Reviewing Elysian Fields extension to French Market station on Riverfront Line
- Reviewing St. Claude Ave. extension to Press St.



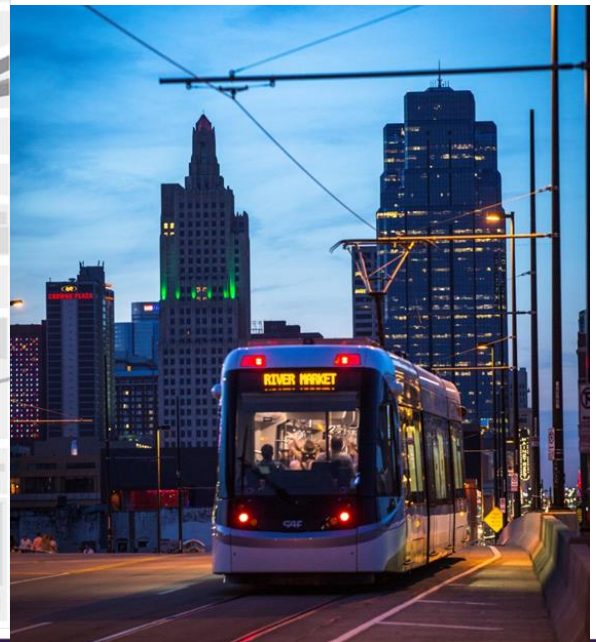
Charlotte

- Starter Line opened July 2015
- 1.5 miles, 3 replica streetcars
- 1,500 weekday riders
- Phase 2 adds 2.5 miles
- Modern hybrid streetcars
- FTA Small Starts funded
- Planned opening in Aug 2020



Kansas City

- Opened May 2016
- 2 miles, 4 streetcars
- 10-12 minute headways
- 5,500 weekday boardings
10,000+ on weekend days
- Free Fare



Kansas City

KCSA planning extensions to
North and South.

Northern Extension

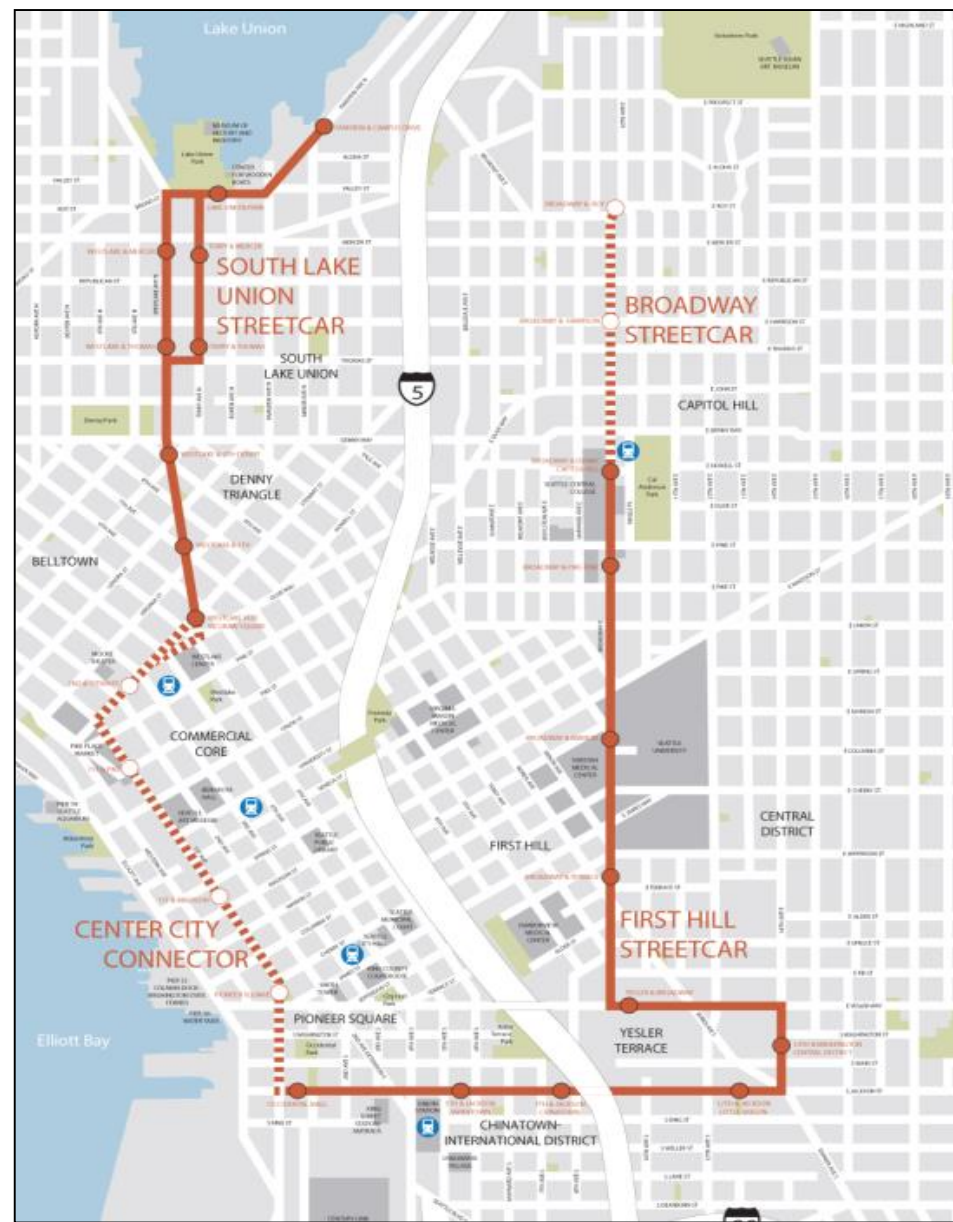


Southern
Extension



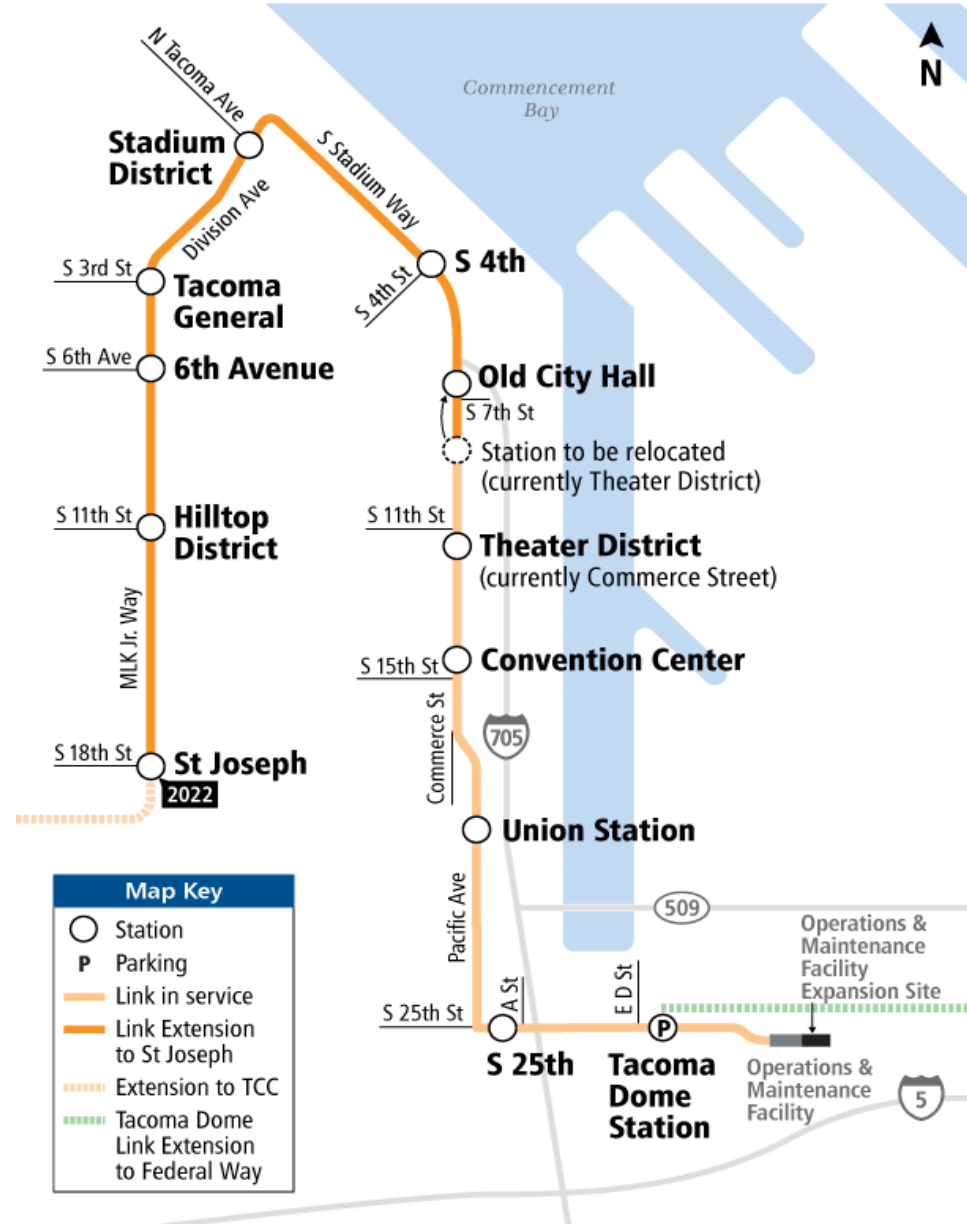
Seattle

- South Lake Union (1.3 miles) opened in 2007
- First Hill (2.5 miles) opened in 2016
- 21 stops and 9 streetcars
- 4,500 daily boardings on both lines
- Center City Connector project on-hold.
- Planned for 5-10 minute headways
- Estimated 24,000 daily system boardings



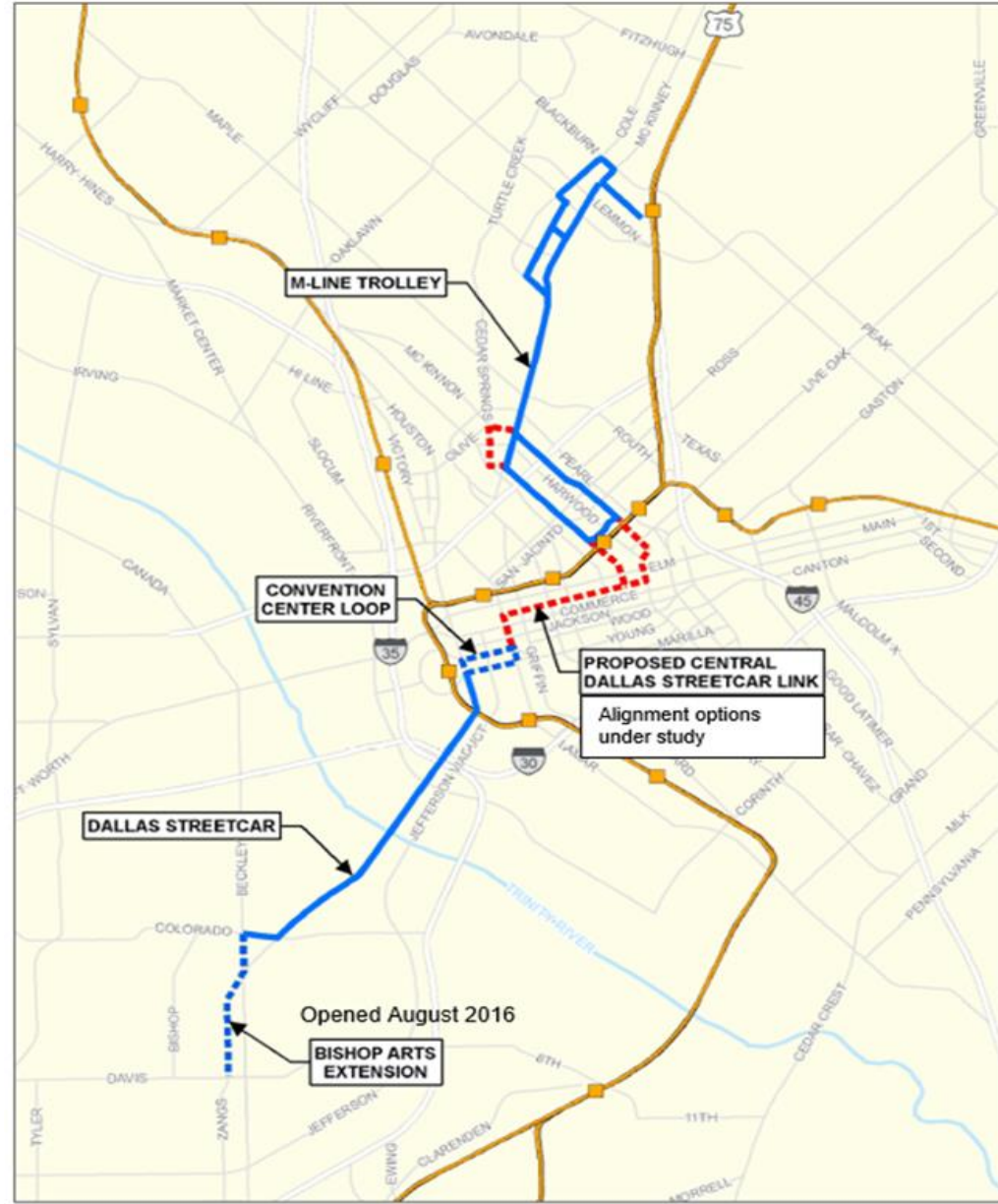
Tacoma

- Tacoma Link (1.6 miles) opened in 2003
- 6 stops serving over 3,000 daily riders
- Tacoma Link Extension, adding 1.6 miles, in final design
- FTA Small Starts funding



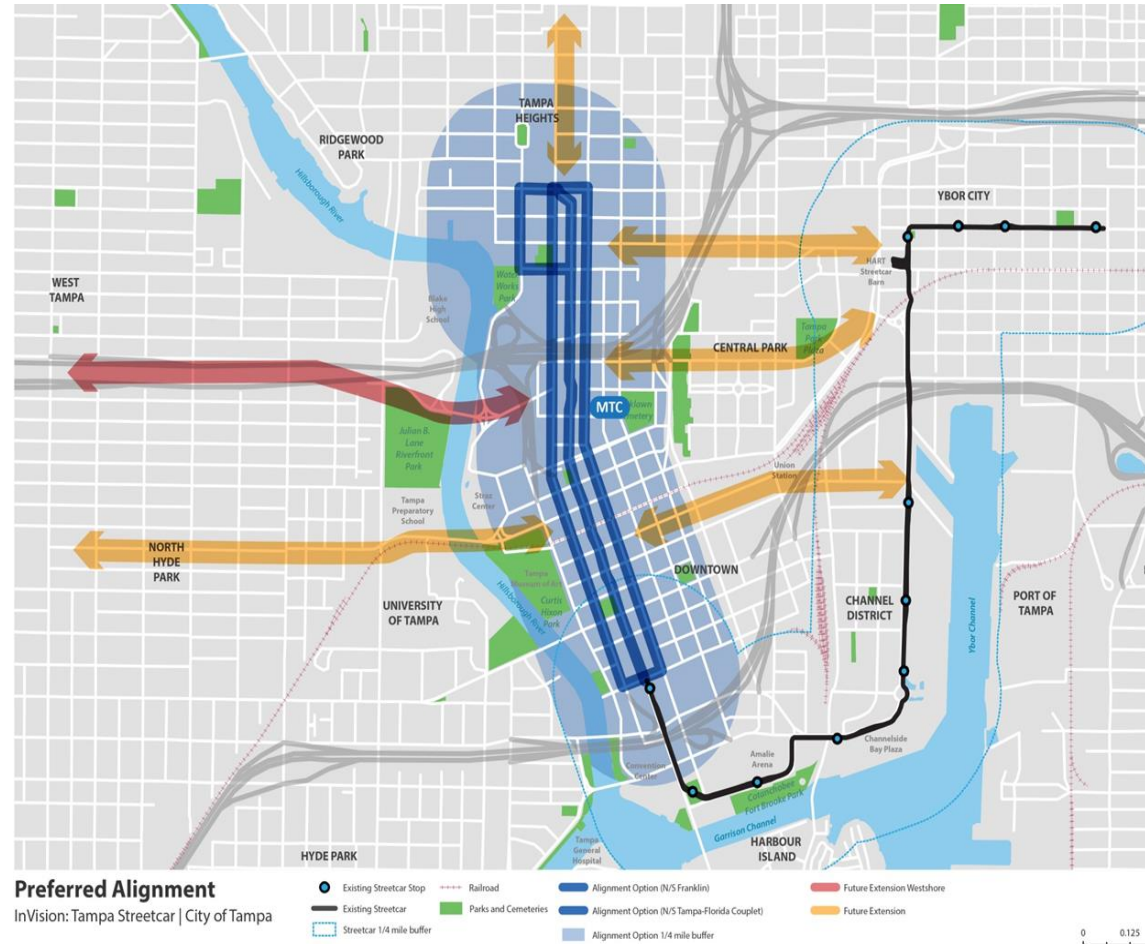
Dallas

- Oak Cliff starter line (1.6 miles) opened in April 2015
- Bishop Arts Extension (0.75 miles) opened in August 2016
- M-Line Trolley on other side of Downtown
- Existing ridership
- Planning Central Link extension to link Dallas modern streetcar with M-Line loop, connecting thru downtown



Tampa

- TECO Line Historic Trolley is 2.7 mile system connecting Ybor City to downtown.
- Starter line opened in 2002, and 0.3 mile extension opened in 2010.
- City of Tampa Modernization and Extension Study in 2017-2018.
- Extending alignment to downtown core and adjacent developing neighborhood
- Pursuing FTA Small Starts funding.



Tucson

- Sun Link (3.9 miles) opened in 2014
- 18 stops and 8 modern streetcars
- 4,000 daily boardings, higher for special events
- High Capacity Transit Implementation Study recently completed
- Framework for Streetcar extensions and Bus Rapid Transit corridors.

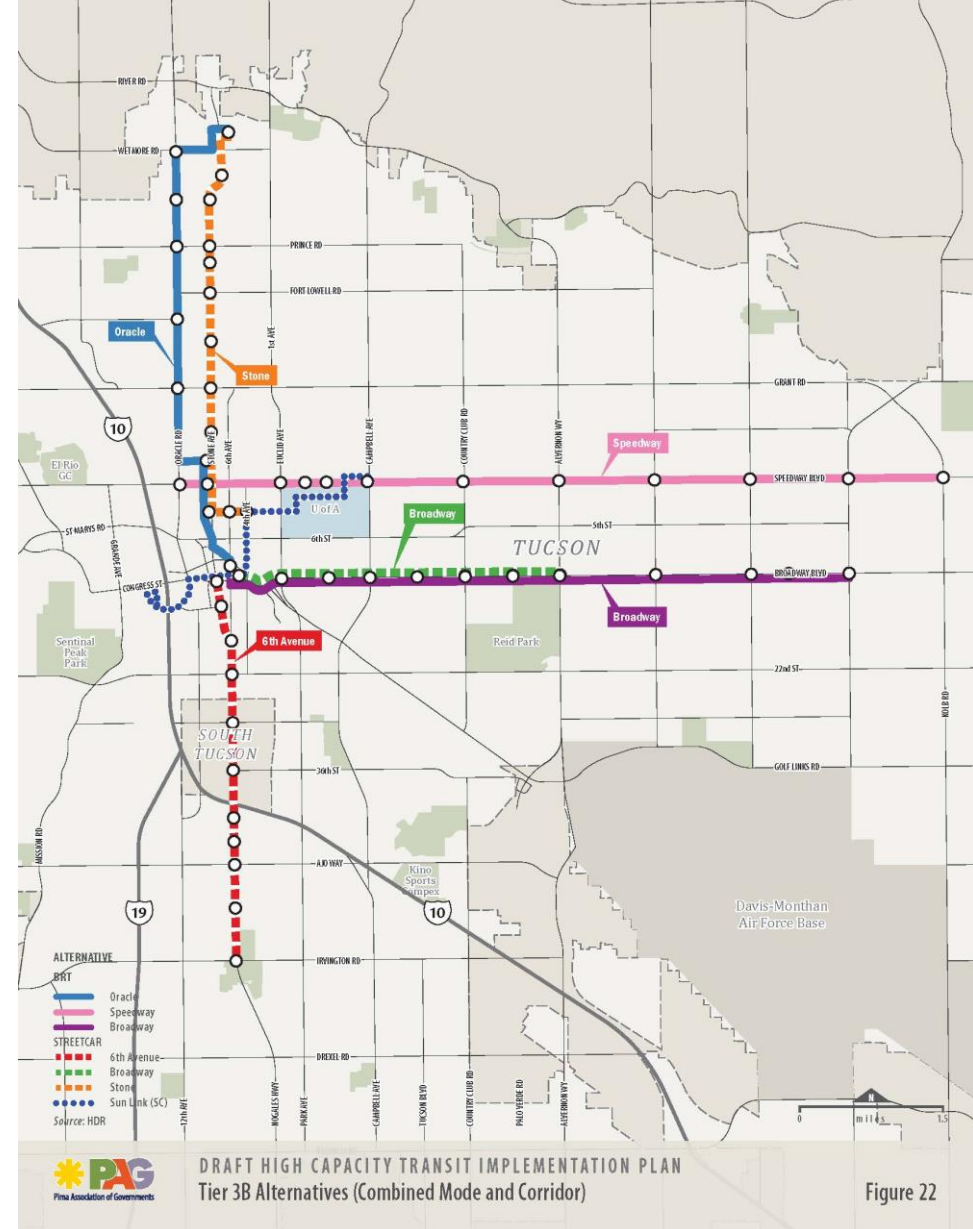


Figure 22

Why are these Streetcar Systems expanding?

- Portland and New Orleans continuing expansion of established network
- Kansas City and Charlotte fulfilling system goal
- Seattle and Dallas connecting separate streetcar lines
- Tacoma and Tucson building on success
- Tampa reinventing itself



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