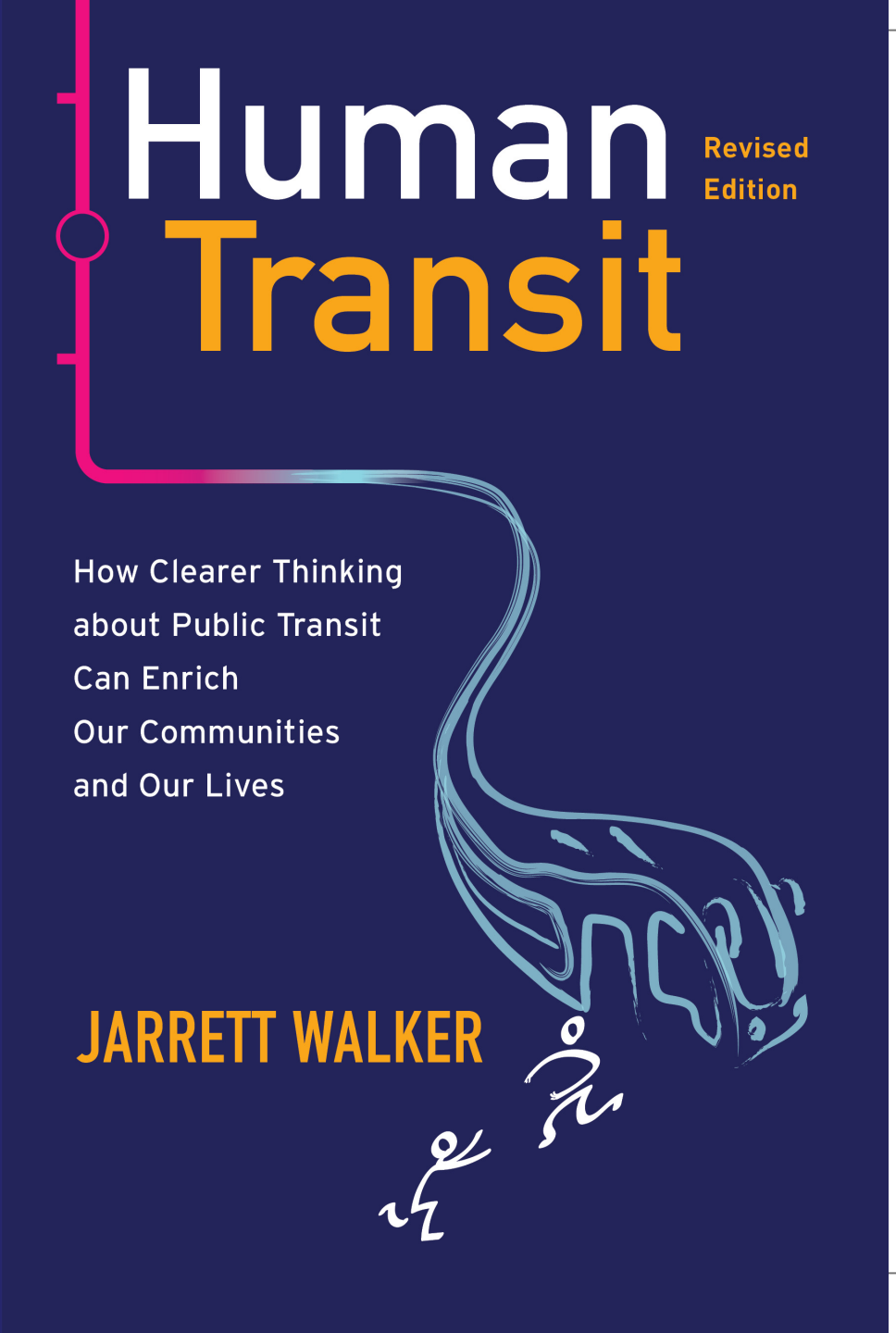


Jarrett Walker
Founder and Principal Consultant
Jarrett Walker + Associates

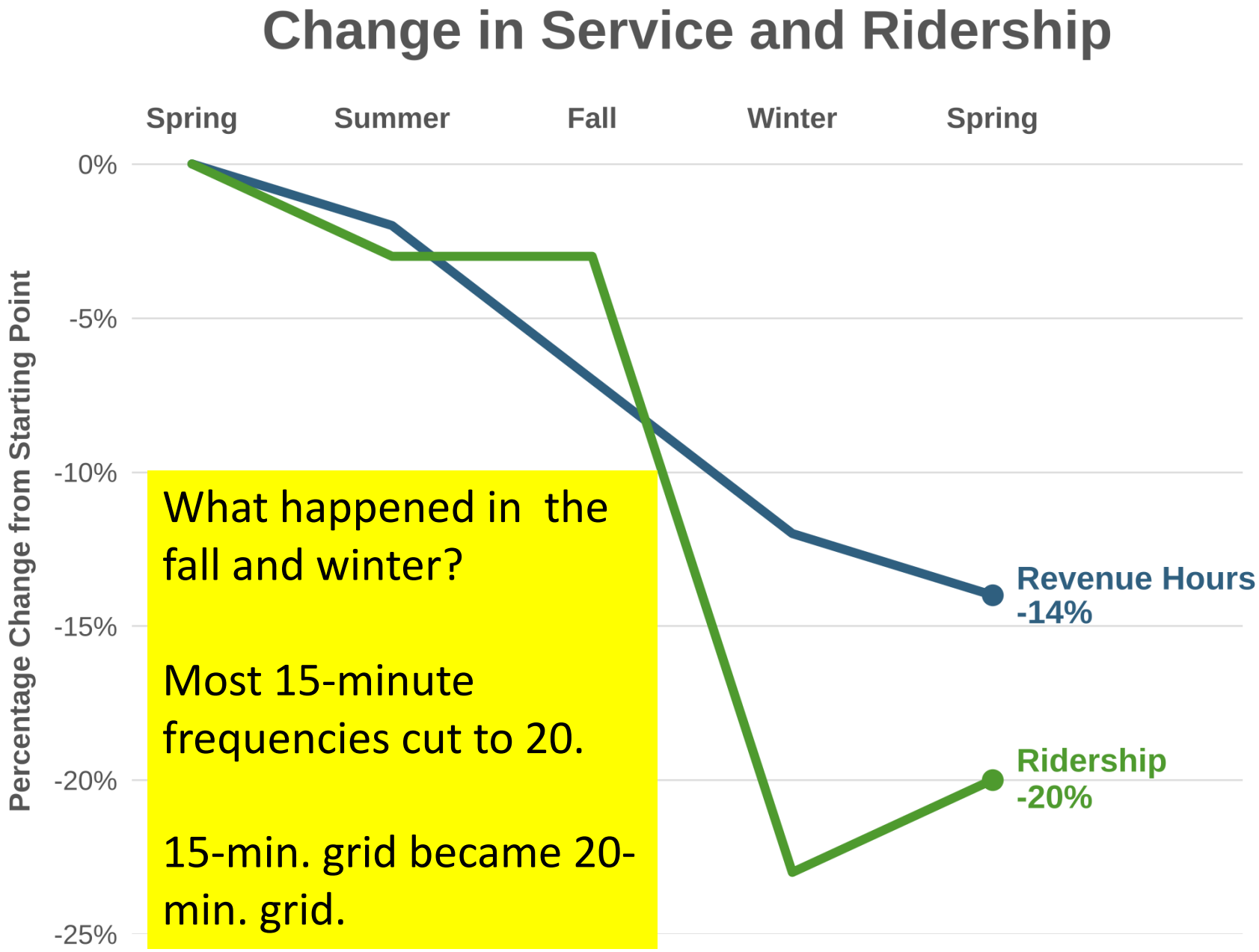
Making Service Planning Decisions in Uncertain Times

JarrettWalker.com
HumanTransit.org
Email: Jarrett@JarrettWalker.com

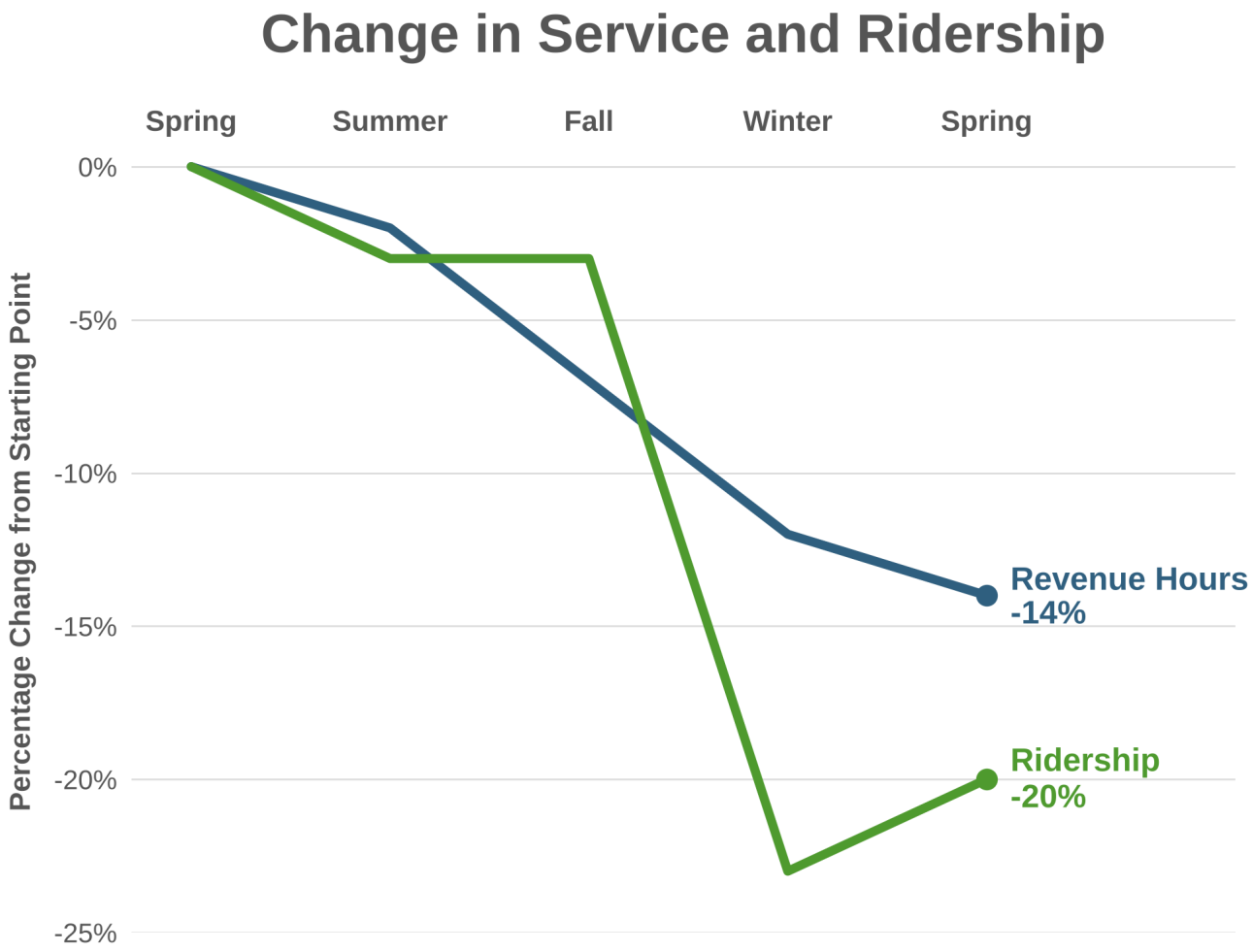
This is happening all over the US

- ”Fiscal Cliff” approaches.
- Sudden need for service cuts or cut scenarios.
- Not enough discussion of possible consequences.

How it played out in one Midwest agency.



Why did they do this to themselves?

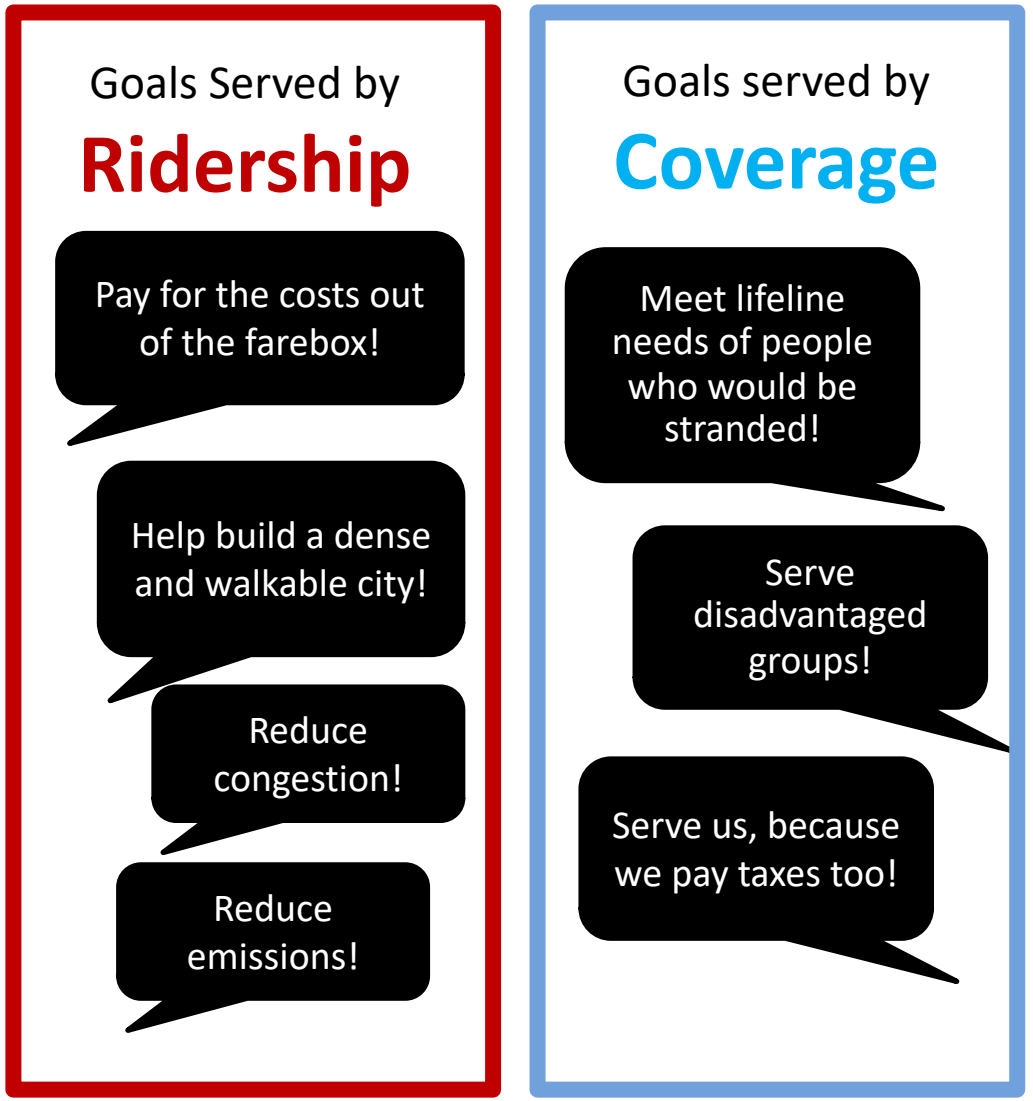


Political guidance was "*Whatever you do*, don't cut anyone's service."

Always push back on "whatever you do"!

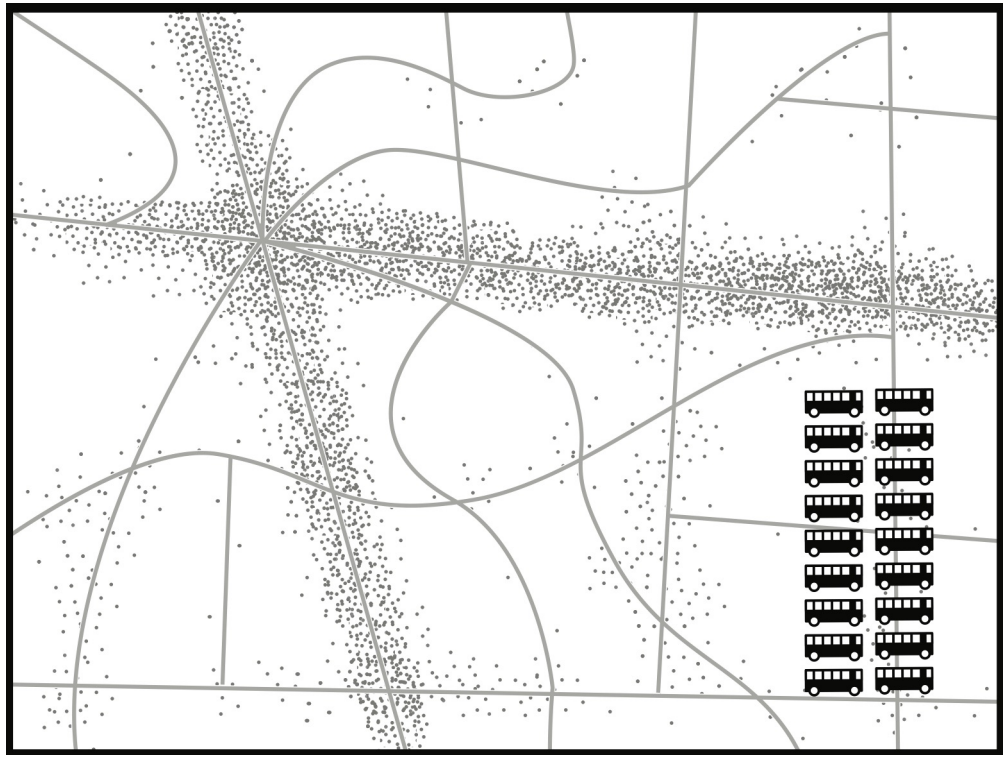
Organizing the Many Goals of Transit

- Transit debates feature people with different goals talking past each other.
- So a clear conversation must be about goals first.



Why Ridership and Coverage Goals? Why are These Goals in Conflict?

- In this simple fictional town, dots represent jobs or residents.
- Most of the demand will be along the two straight streets, with scattered demand everywhere else.
- Say we have 18 buses.
- What's the right answer?
- It depends on the goal!



Ridership Goal: "Maximize Ridership"

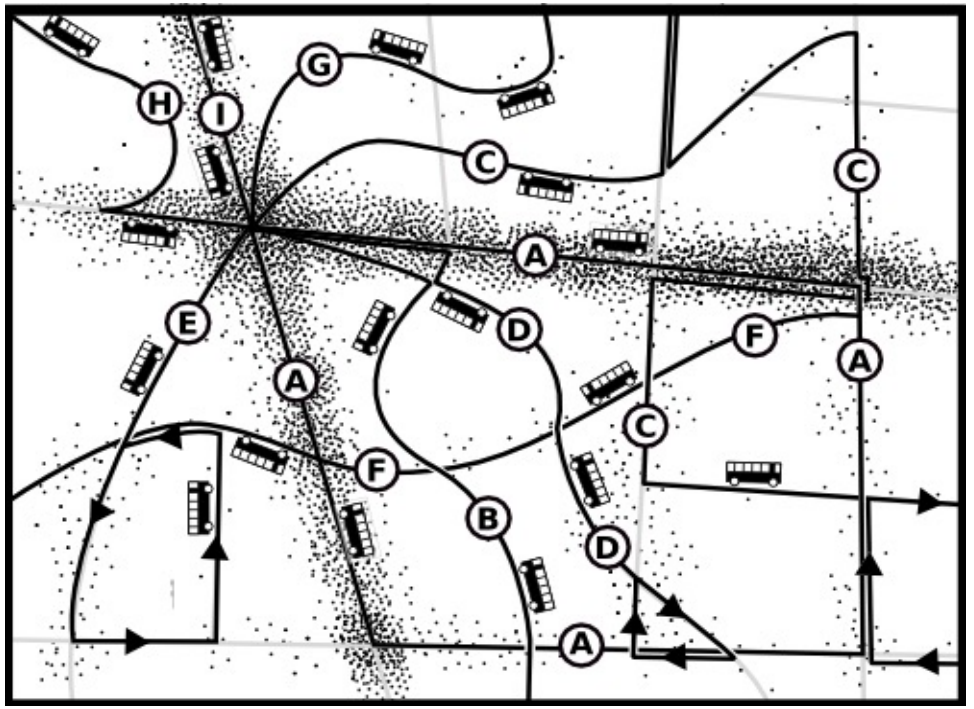
- Think like a business, choosing which markets you will enter based on where high ridership is possible.
- Fewer lines → More frequent service.
- **Performance Measure:** Productivity (ridership relative to cost)



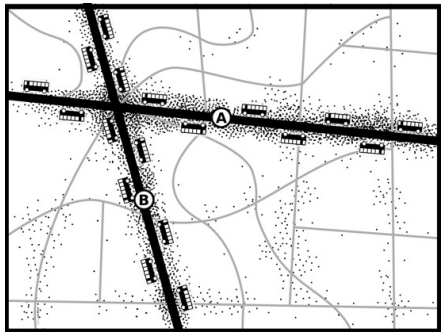
But what about me?

Coverage Goal: "Service to as many people as possible."

- Think like a government service.
- Try to serve everyone, even those in expensive-to-serve places.
- Lower frequency -> Lower ridership
- **Performance measure**: Coverage.
  - (% of jobs and population near some service)

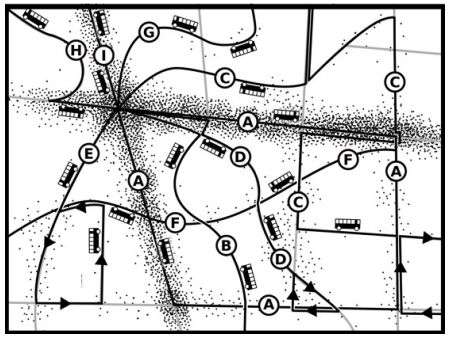


People's Objectives for Transit Tend to be Met by One of These Two Goals



Ridership Goal

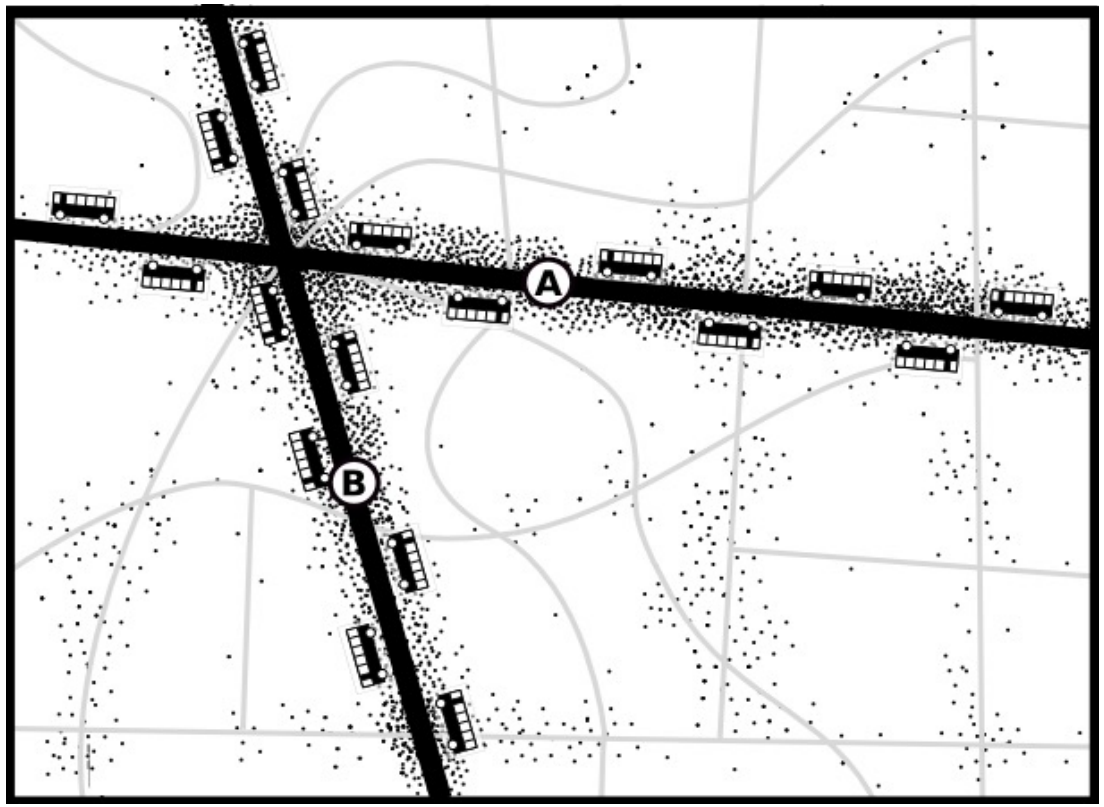
- "Think like a business."
  - More revenue from fares
- Support dense, walkable development.
- Vehicle trip reduction.
  - Environmental Goals
  - Congestion mitigation goals



Coverage Goal

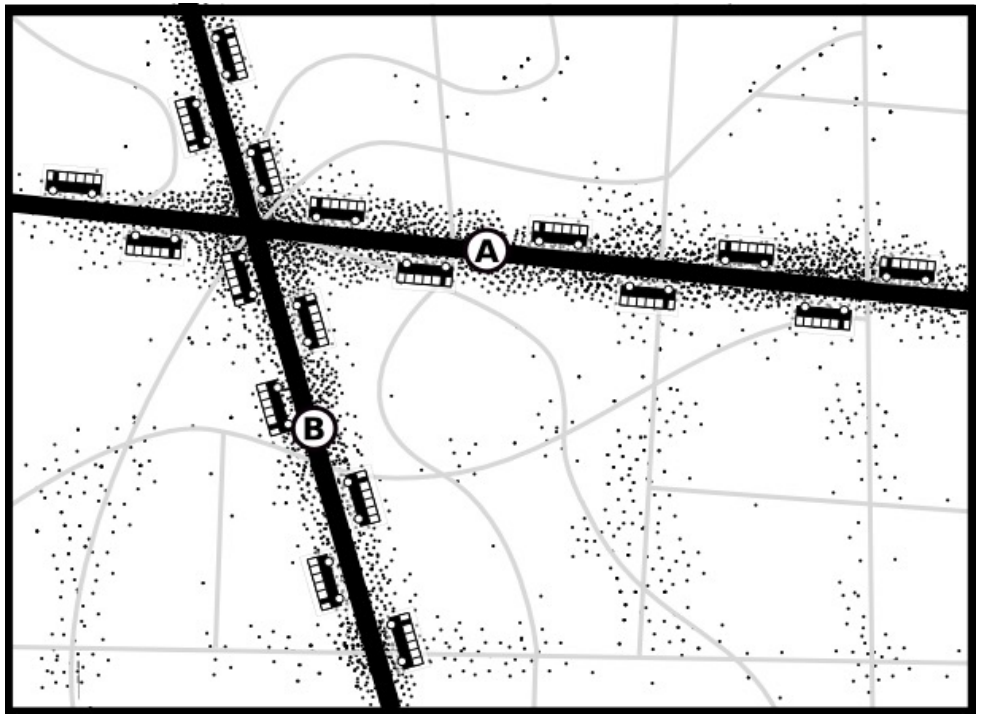
- "Access for all"
- Lifeline access for everyone, no matter where they live.
- Service to every city or electoral district. "We pay taxes too!"

But wait …



Why does a maximum ridership network look like this?

- People only use transit if transit is useful.
- Ridership goes up when transit is made more useful.
- What does that mean?
  - More people, on average, when looking up a trip, find that the travel time is reasonable.

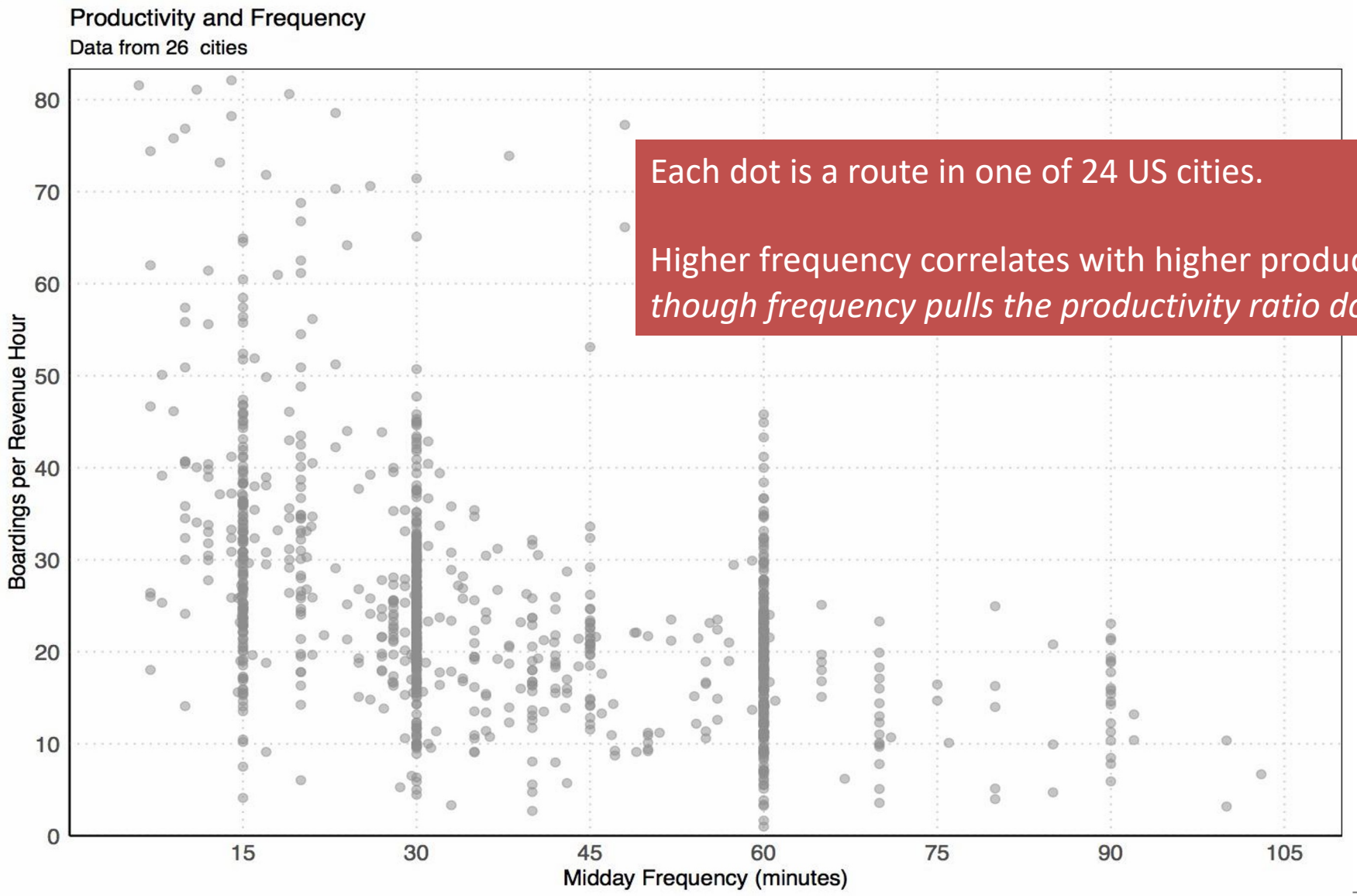


Why Frequency Matters to Ridership

Frequency is a "cubed" benefit

- Little waiting
- Makes connections easy:
  - where frequent lines cross, each line is useful for going everywhere on the other line.
- Less risk of being stranded

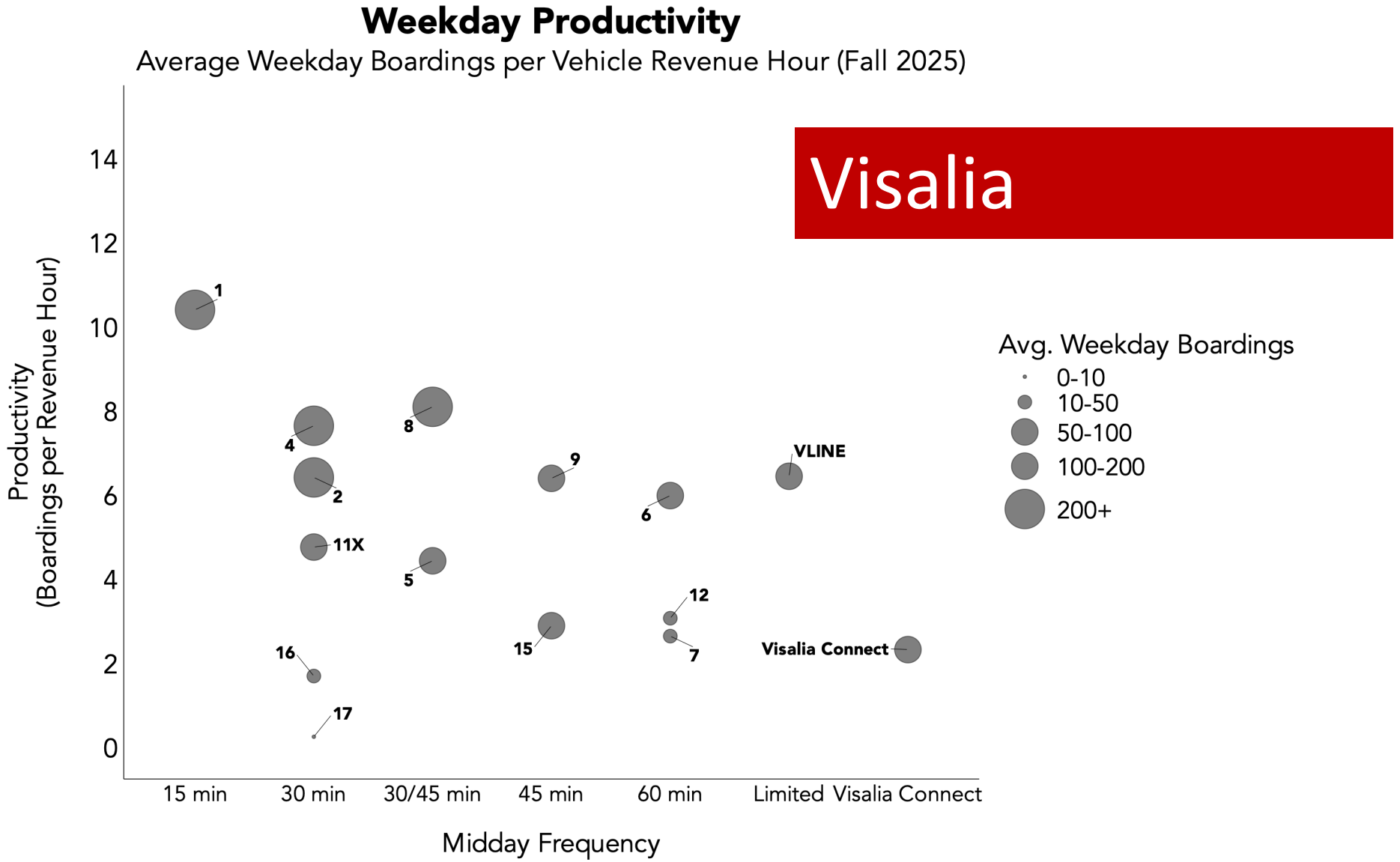
Frequency vs Productivity across the US



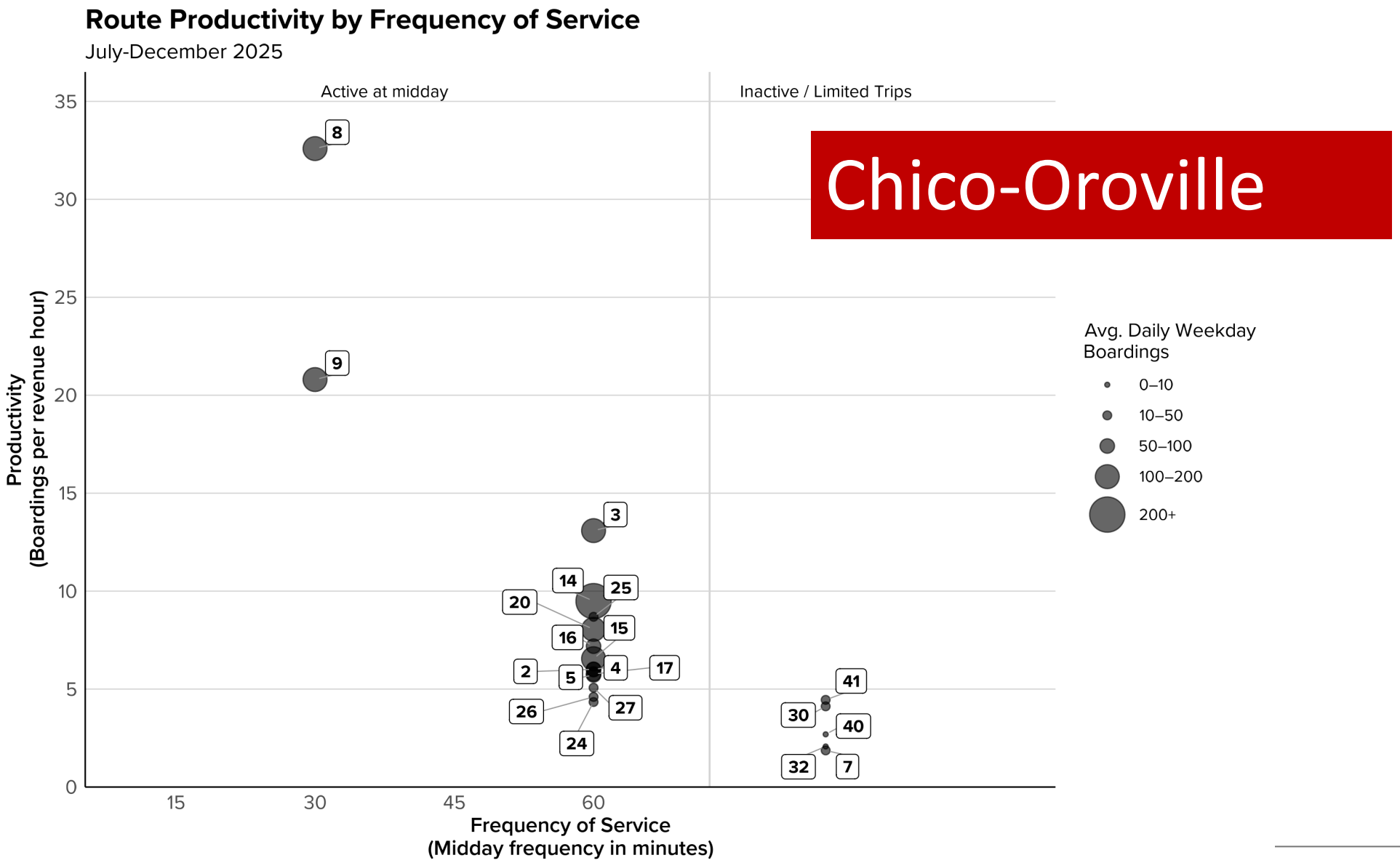
Each dot is a route in one of 24 US cities.

Higher frequency correlates with higher productivity, *even though frequency pulls the productivity ratio down.*

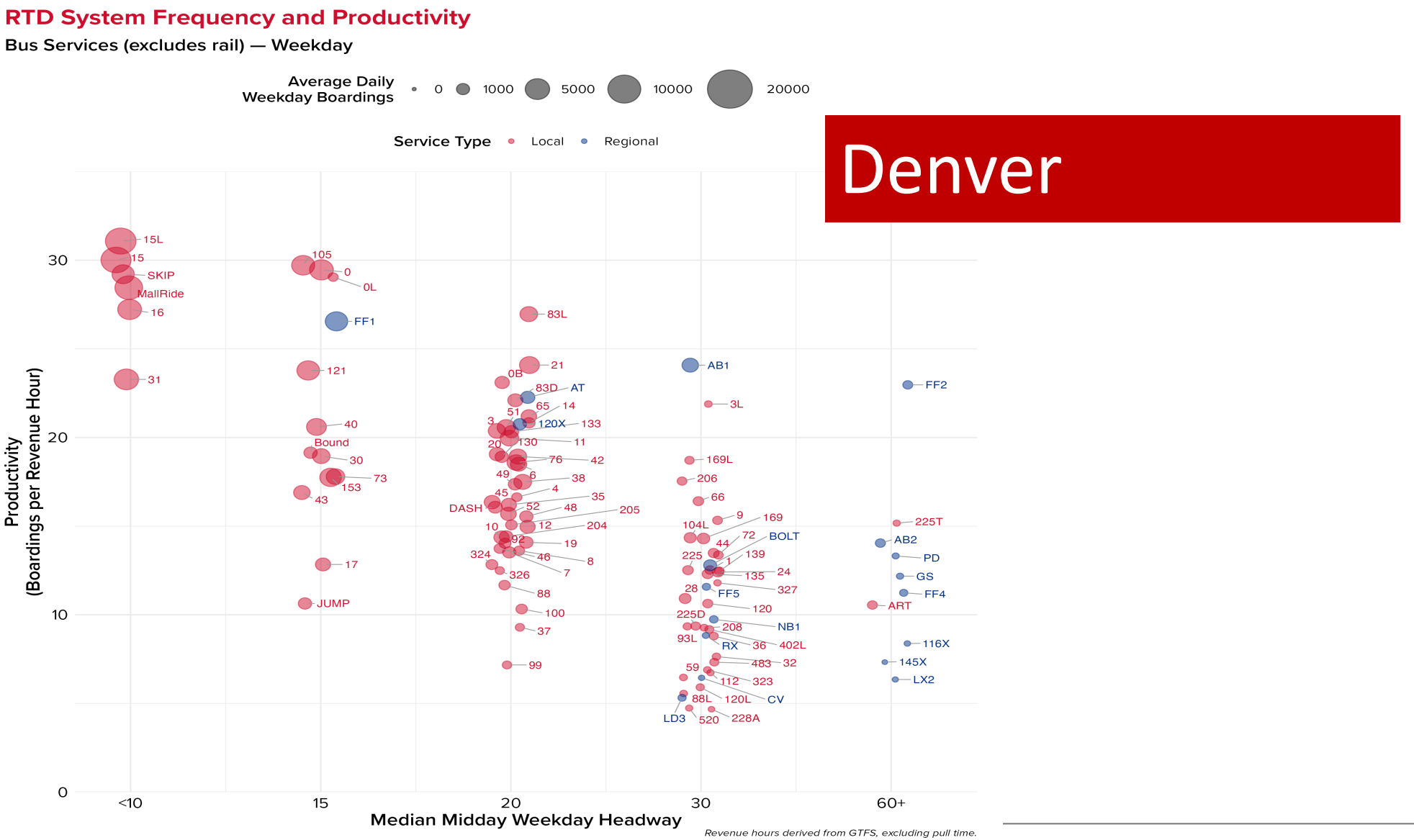
Draw this chart for your agency!



Draw this chart for your agency!



Draw this chart for your agency!



Denver

But frequency is hard to explain to a motorist …

Imagine there's a gate at the end of your driveway that only opens once an hour.



Always show frequency on maps!



From 7am to 7pm, a bus comes every...

De 7am a 7pm, un autobús pasa cada...

- **15 minutes** | *15 minutos*
- **30 minutes** | *30 minutos*
- **60 minutes** | *60 minutos*
- **more than 60 minutes** | *más de 60 minutos*

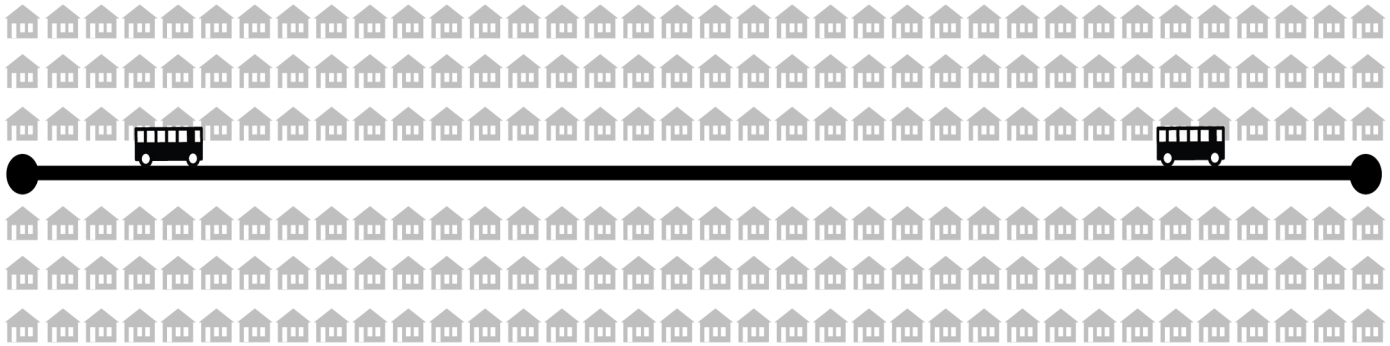
Why Do Certain Places Produce More Ridership?

- Transit is most useful where the most people and destinations are within walking distance of service that can be straight and fast.
- That's where the big investment in frequency pays off most.
- This boils down to 4 geometric features of a community:
  - Density
  - Walkability
  - Linearity
  - Compactness

Density

How many people are going to and from the area around each stop?

Higher ridership



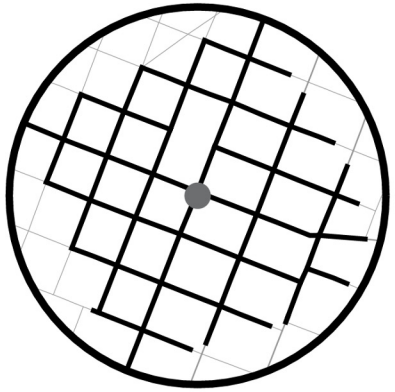
Lower ridership



Walkability

Can the people around the stop, walk to the stop?

Higher ridership



Lower ridership



Is it possible to cross the street at the stop?



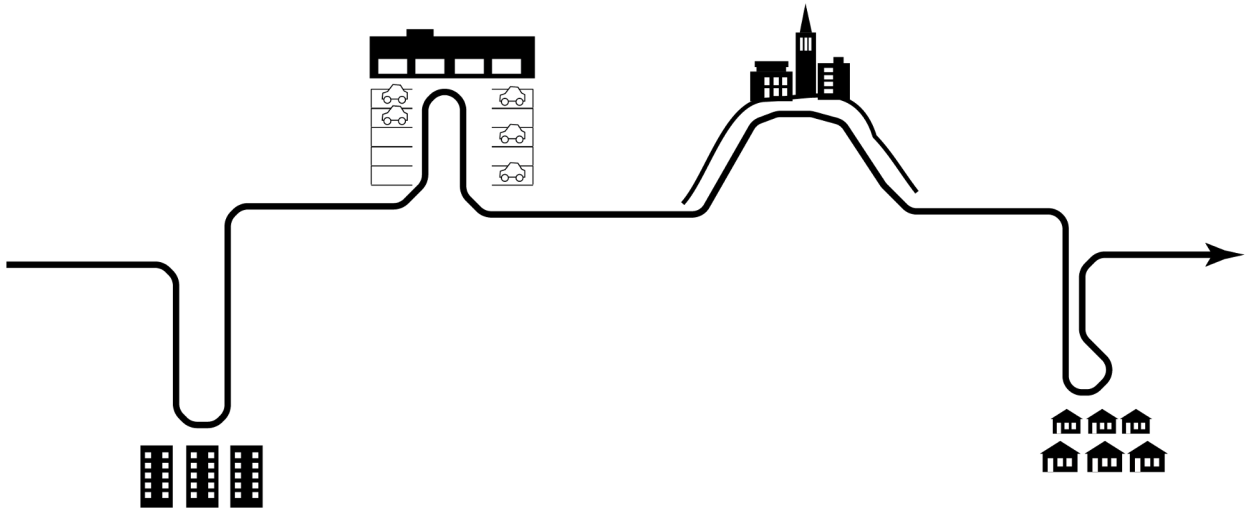
Linearity

Can transit run in straight lines that are useful to through-riders?

Higher ridership, lower cost



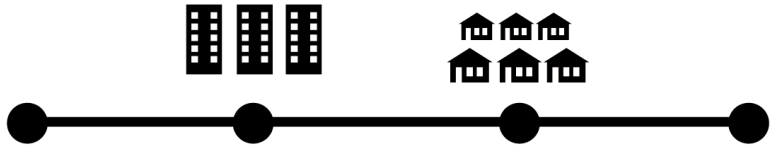
Lower ridership, higher cost



Compactness

Do buses have to traverse large areas with little demand?

Higher ridership, lower cost



Lower ridership, higher cost



Ridership Arises from how Service Meets Development

Service Features

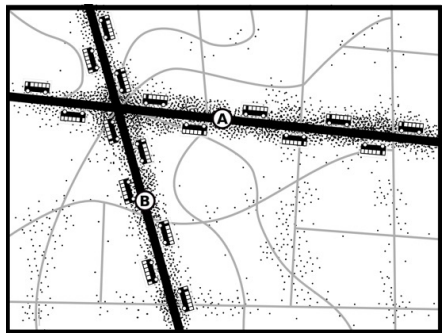
- **Frequency!**
- Reliability
- Speed
- Civility

Development Features

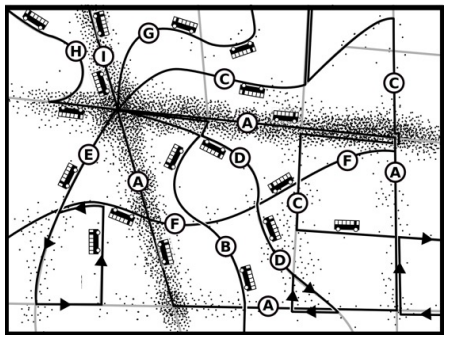
- Density
- Walkability
- Linearity
- Compactness

<u>This is geometry.</u>

That geometry is why this tradeoff is inevitable.

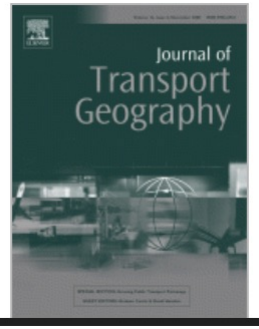


Ridership Goal



Coverage Goal

We have known this for a while …



Research article Get rights and content ↗

Purpose-driven public transport: creating a clear conversation about public transport goals

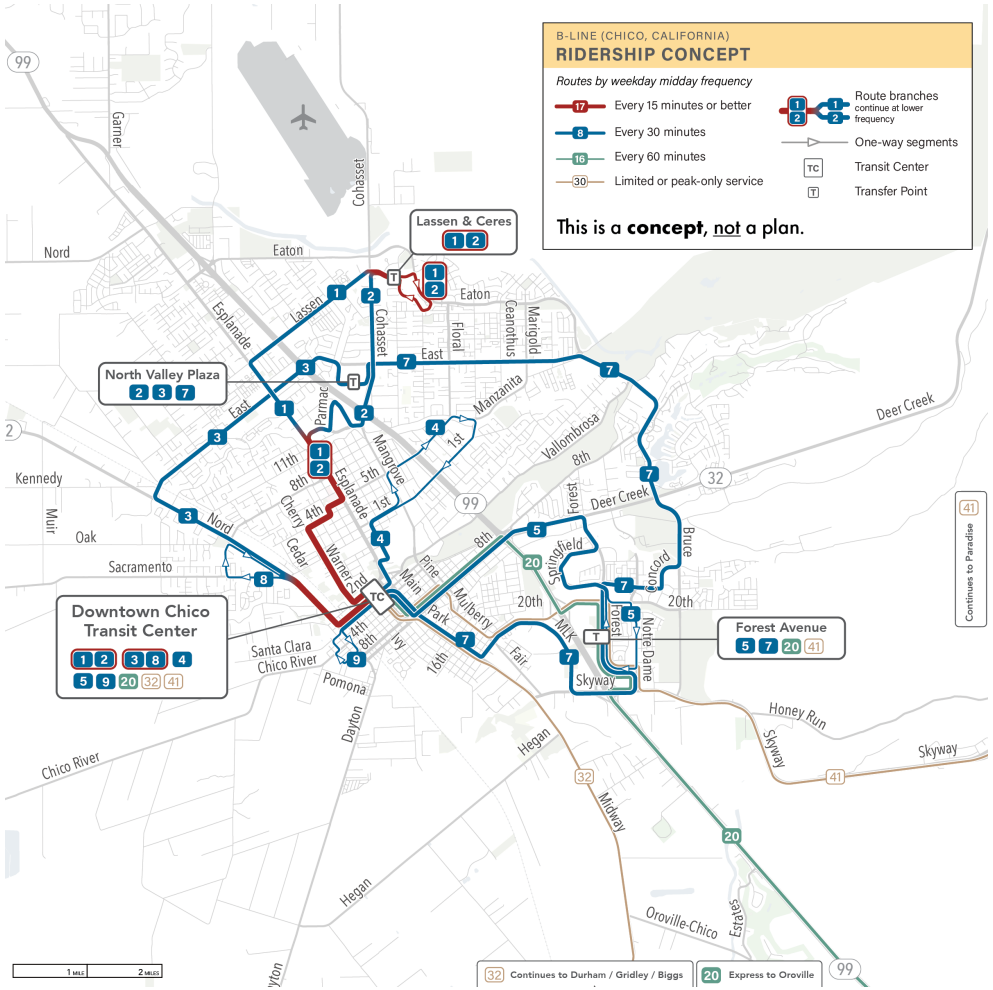
Jarrett Walker ✉ Show more

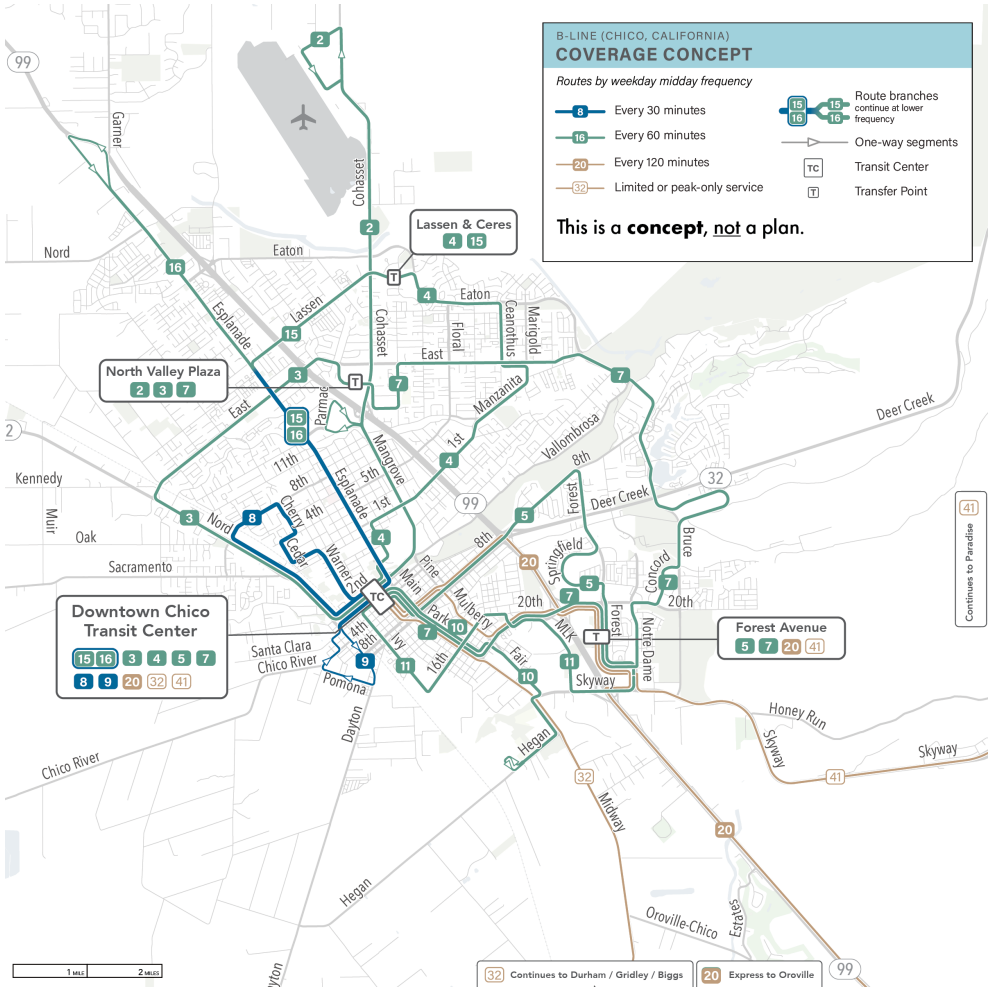
Cite Add to Mendeley Share | 10.1016/j.jtrangeo.2008.06.005 ↗

- 2008 Jarrett Walker paper in *Journal of Transport Geography*
- Written in Australian English, so
  - "public transport" instead of "public transit"
  - "patronage" instead of "ridership"

Many of our redesigns have used this method.

1. Design and share both ridership and coverage options for same budget.





Many of our redesigns have used this method.

1. Design and share both ridership and coverage options for same budget.
2. Use public feedback on options to advise Board.
3. Board directs "spend % of the budget on ridership, the rest on coverage"
4. Draft plan designed to follow that direction.
5. Draft plan is not a surprise! Easier to get to adoption.

Silicon Valley (VTA)



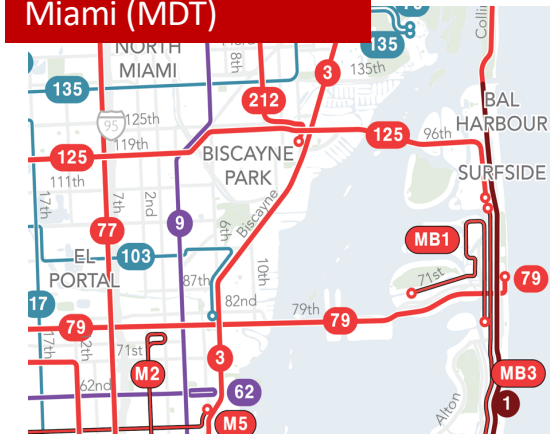
Atlanta (MARTA)



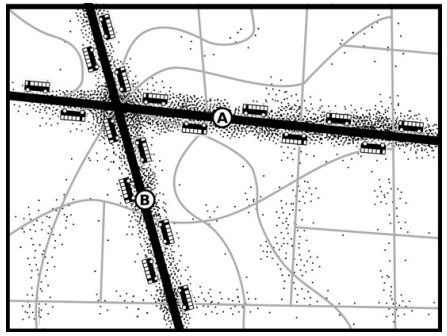
Cleveland (GCRTA)



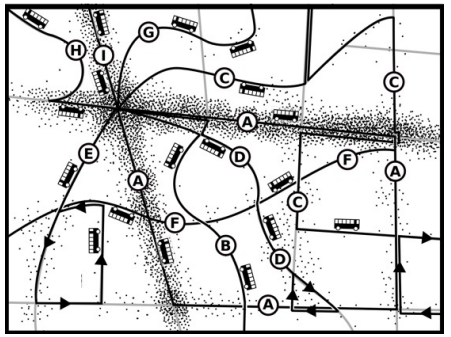
Miami (MDT)



Is this a "false choice"?



Ridership Goal

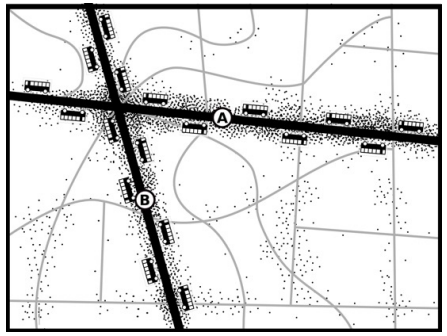


Coverage Goal

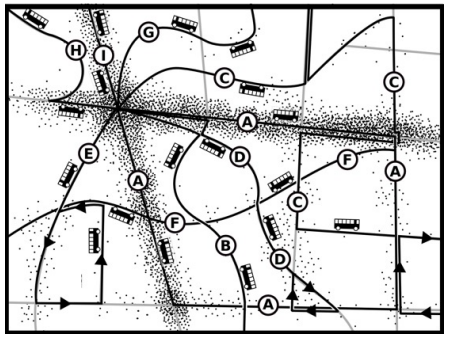
No, it's an *unpleasant* choice.

- But if a Board deals with it directly, they can be sure that their direction will affect reality.

Are we lobbying for ridership?



Ridership Goal



Coverage Goal

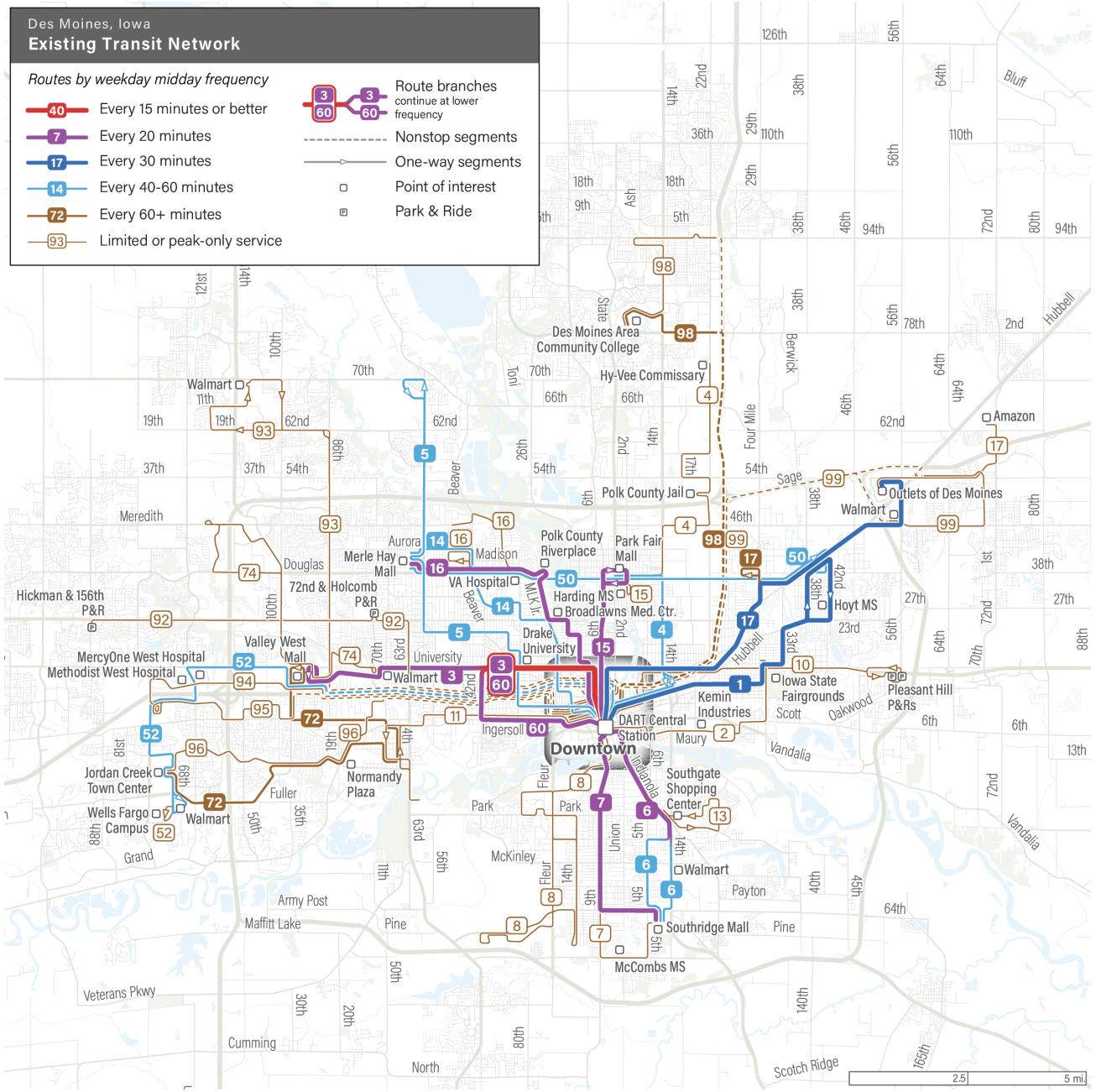
No, both have consequences.

- Our job as staff or consultants is to *hold open the decision space.*
- When people argue for one, remind them of the arguments for the other.
- This is a *value judgment, not a technical judgment .* That's what Board are for.

Des Moines: A Recent Example

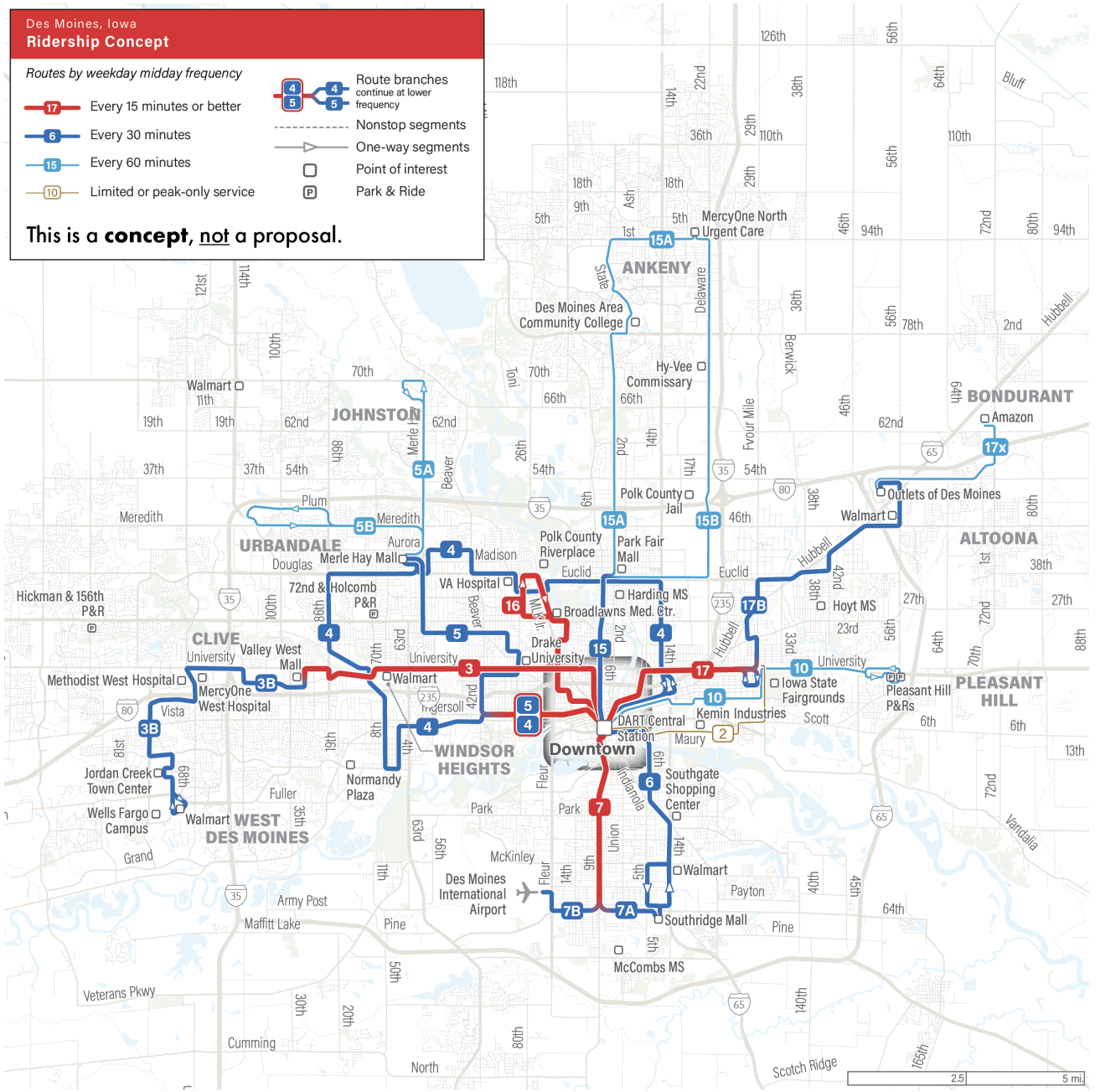
Context

- Typical fiscal cliff situation.
- Required 10% service cut.
- Existing network about 60% ridership, 40% coverage.



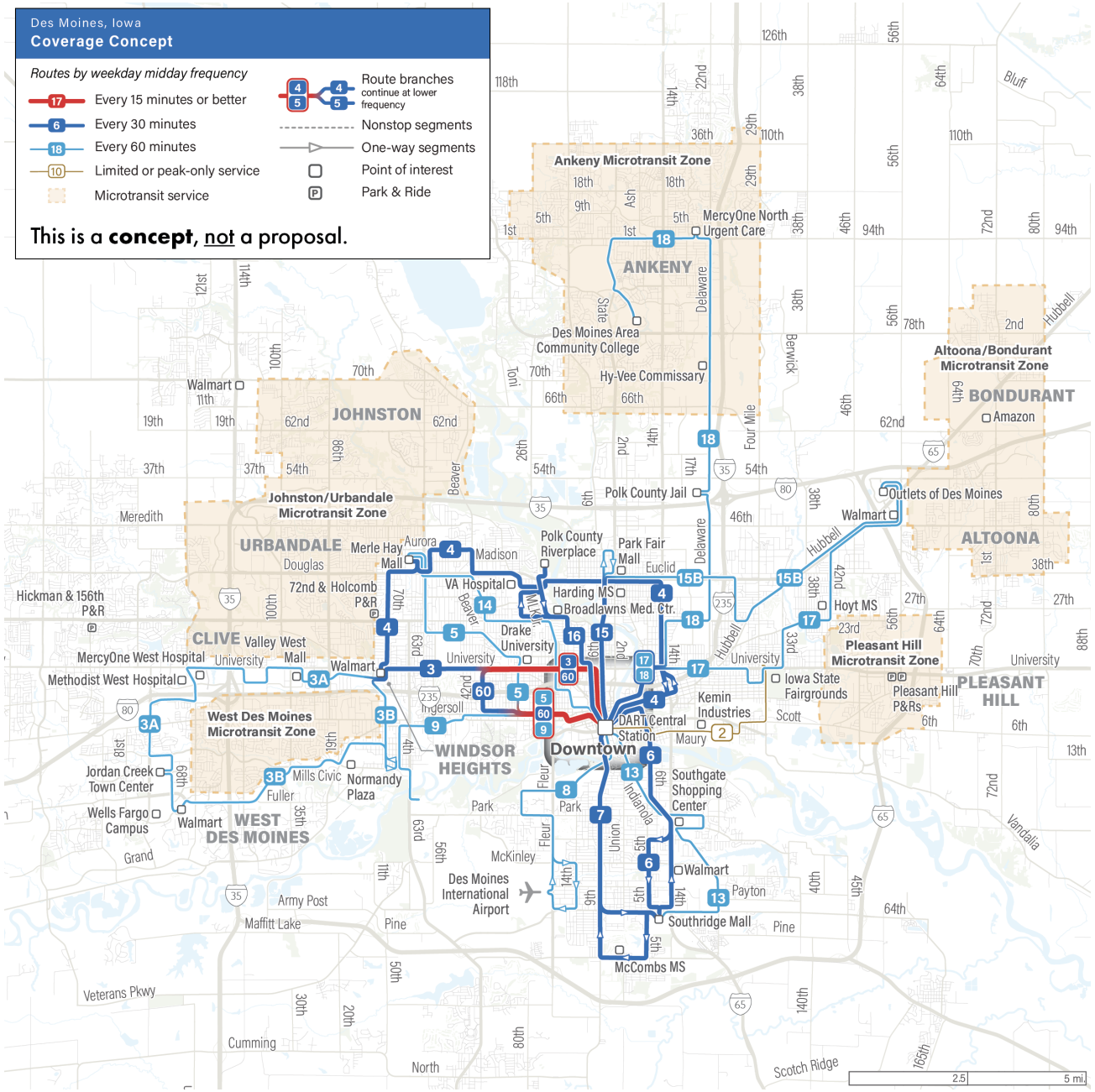
Ridership Concept

- About 80% ridership, but with some coverage services to include outermost cities.
- Vast expansion of inner frequent network to serve more dense areas and major destinations.



Coverage Concept

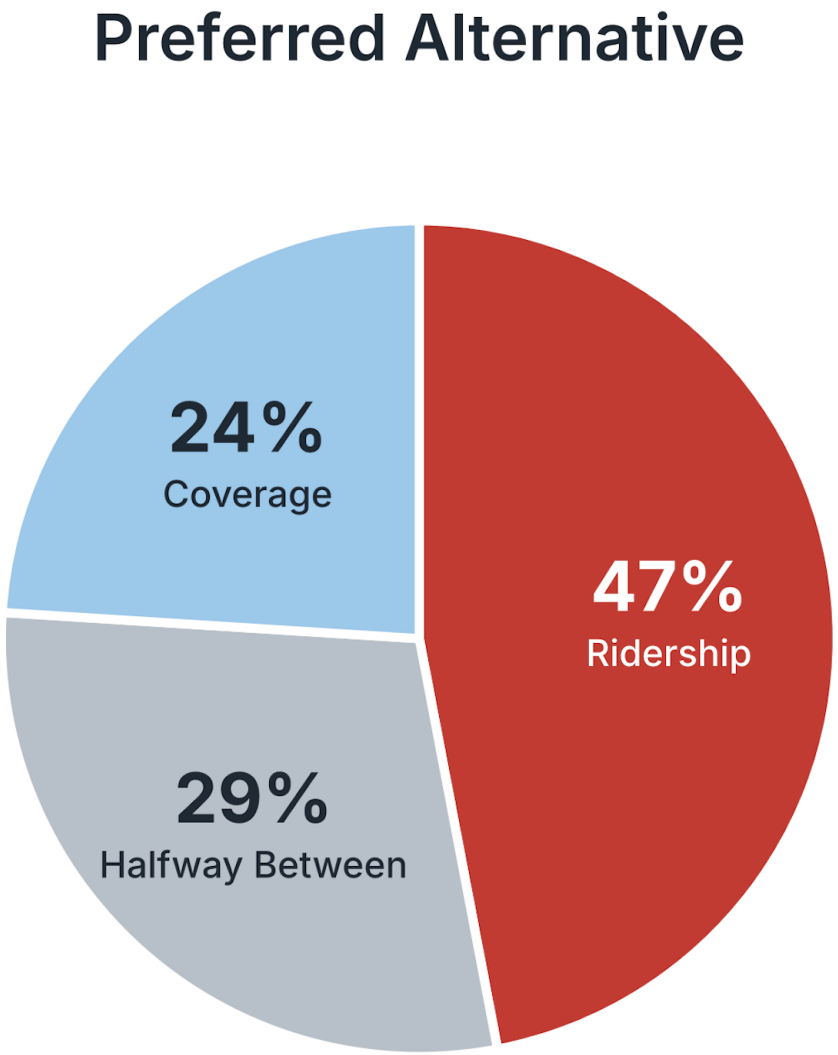
- About 60% ridership, 40% coverage
- Minimal frequency improvement.
- Big expansion of coverage in less dense areas, most of it provided using on-demand service



Summing Up the Comparison in Des Moines

Measure	Existing System	Ridership Concept	Coverage Concept
% of population near any transit	43%	38%	68%
% of population near frequent transit	4%	13%	5%
Average jobs reachable in 45 min.	--	23%	- 9%

Feedback from the public and riders

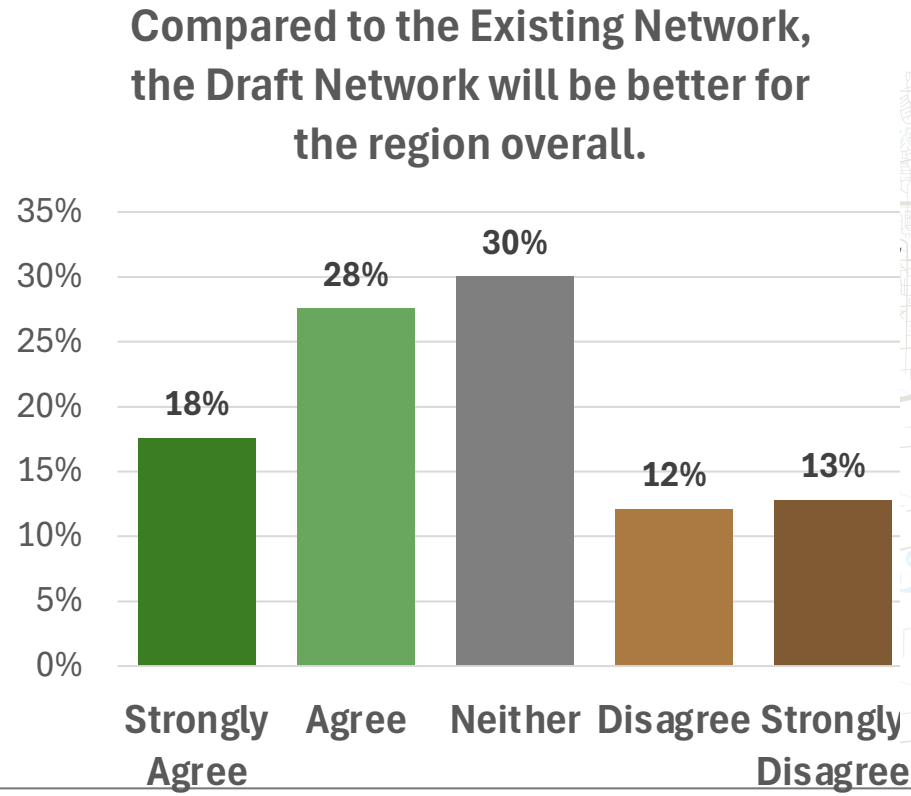


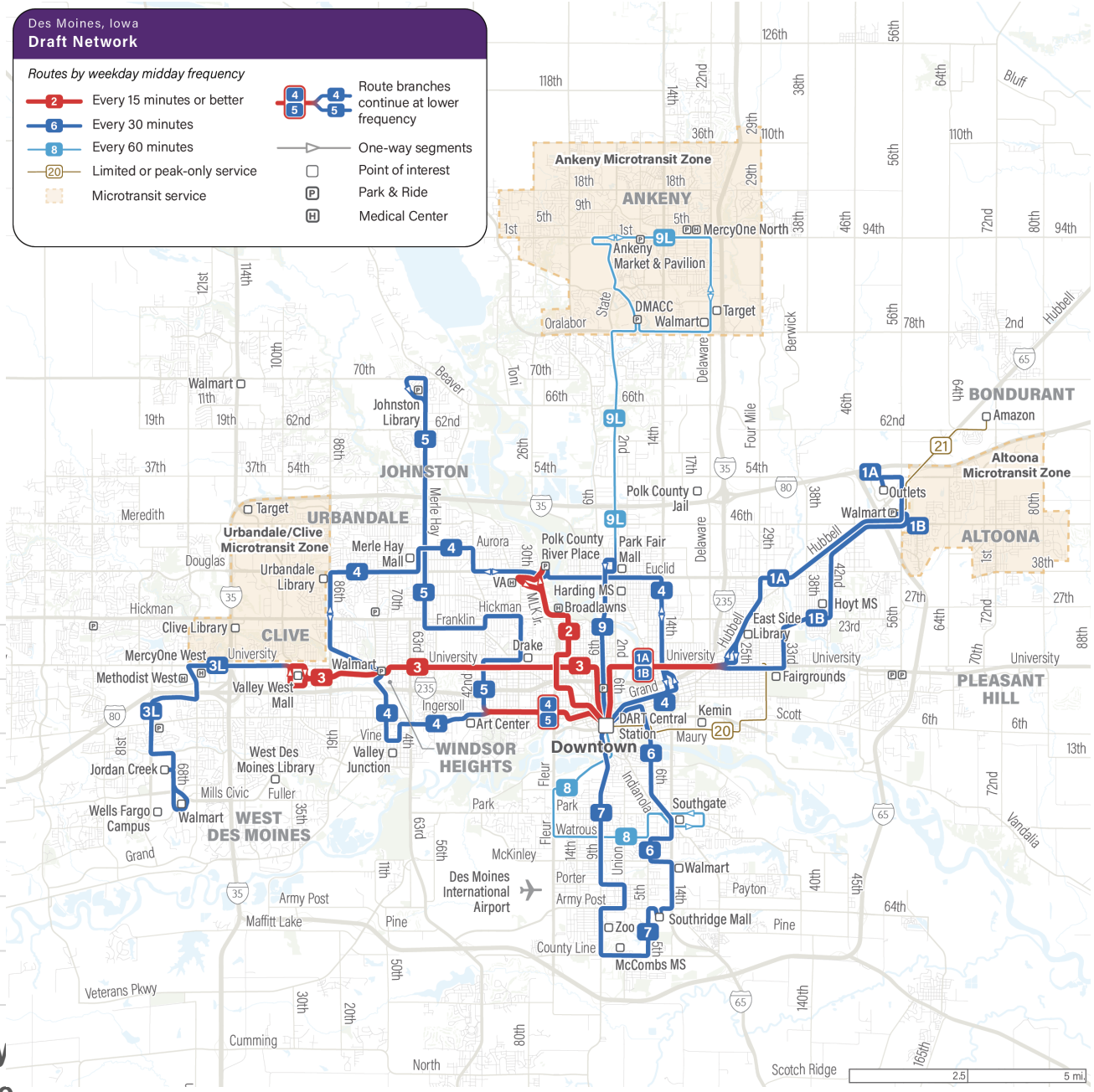
Board Decision

- **Prioritize ridership over coverage for the region**
- **Retain coverage service in three suburban cities** that consider it a priority.

Draft Plan

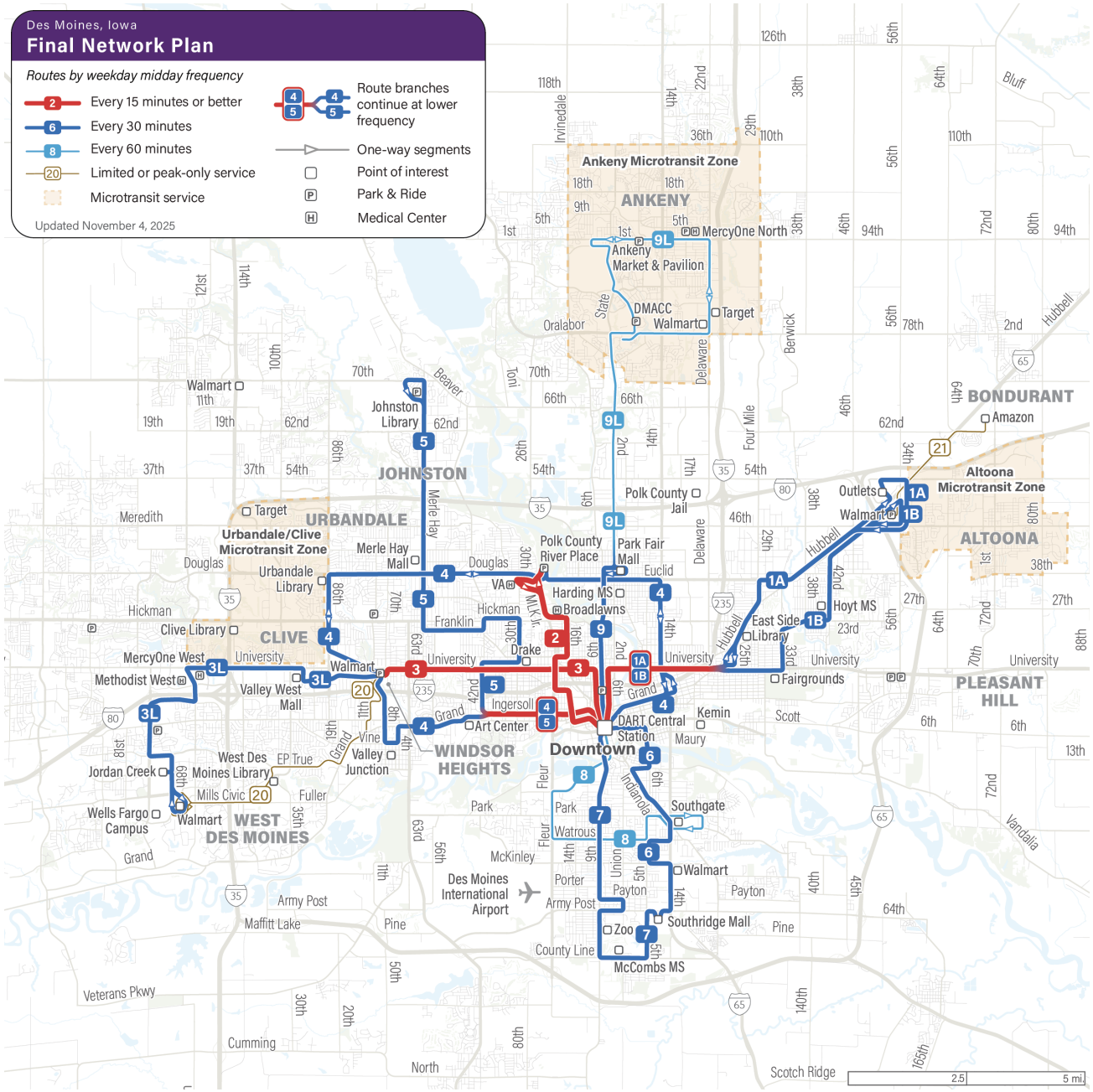
- Draft Plan reflected Board direction.
- This then went through another round of outreach.





Final Plan

- Refinements made based on public and Board input.
- Implemented June 2026.



Takeaways

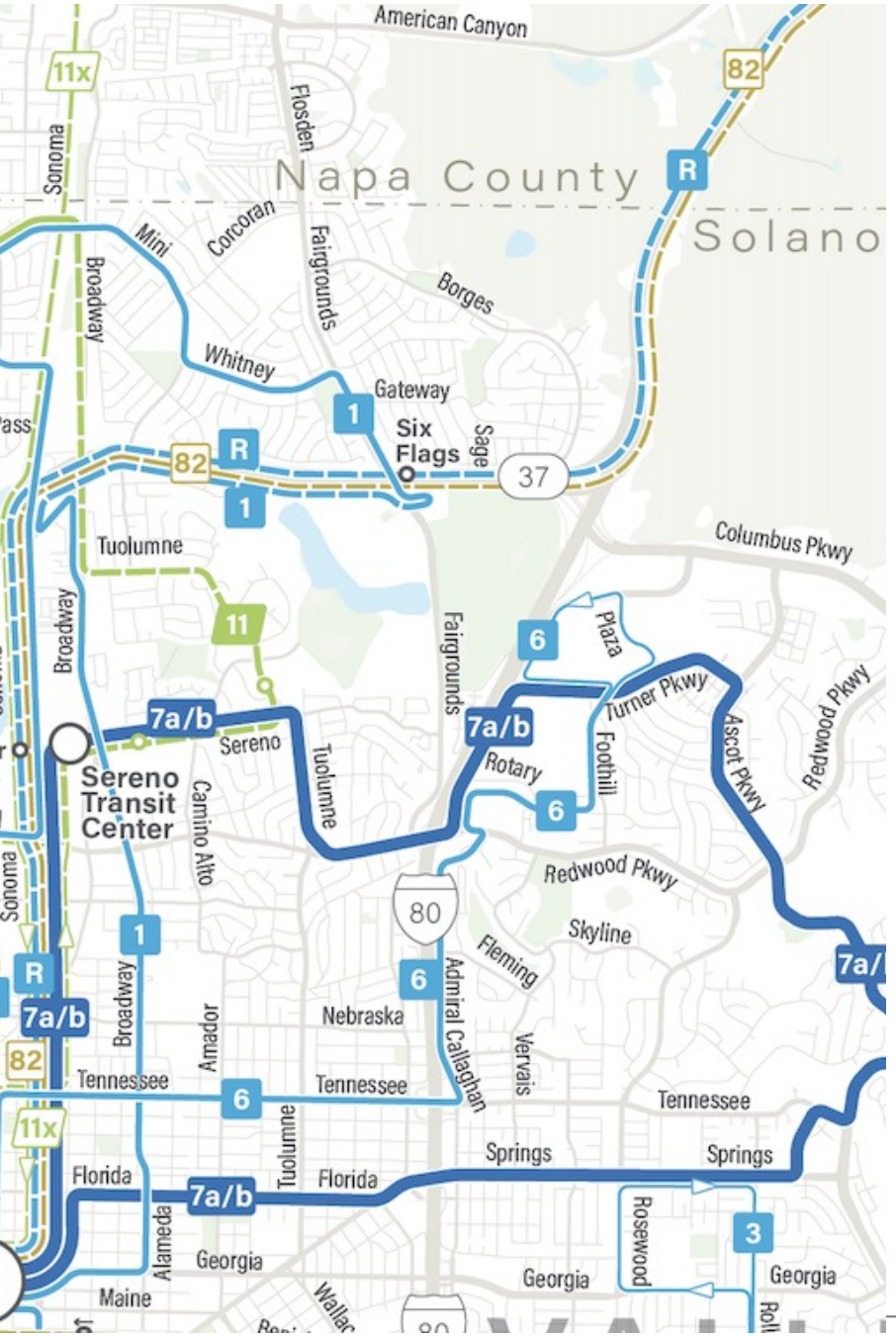
Even in a crisis, your Board owes you direction on ridership vs coverage.

- *What is their definition of success?*

- Remind Board of their decision when reporting outcomes.
- Tie service standards to this direction.
  - Ridership standard for ridership routes.
  - Coverage standard for coverage routes.

When planning for ballot measures, the same method works.

- Develop scenarios with and without new money.
- Show ridership-coverage trade-off if there is no new money.
- Show political pain of choices required without new money.
- But start soon!



Jarrett Walker
Founder and Principal Consultant
Jarrett Walker + Associates

Discussion

JarrettWalker.com
HumanTransit.org
Email: Jarrett@JarrettWalker.com