

This is a summary of the key points in Jarrett Walker's book "[Human Transit: How Clearer Thinking About Public Transit Can Enrich Our Communities and Our Lives](#)"

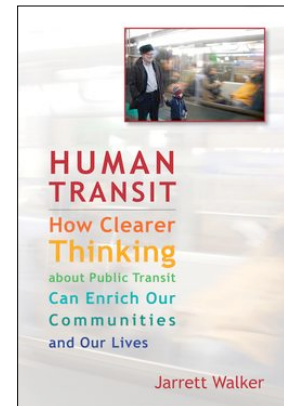
The challenge

The core challenge of transit design is how to run vehicles so that people with different origins, destinations, and purposes will choose transit as their preferred mode of transport. Successful transit systems are **simple** (I don't have to think about it.) and **dependable** (I can rely on it.) for riders.

Potential transit riders have 7 demands

"Transit has to exist when you need it (**span**), and it needs to be coming soon (**frequency**)." These are riders' seven demands: (Ch2)

- It takes me **where** I want to go
- It takes me **when** I want to go
- It is good use of my **time**
- It is good use of my **money**
- It **respects** me by providing safety, comfort, and amenities
- I can **trust** it
- It gives me **freedom** to change my plans



Focus on frequency and span

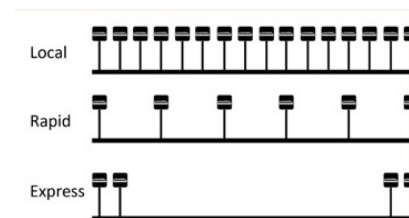
"Speed is worthless without frequency." Frequency has a direct role in meeting 4 of the 7 transit demands above. Transit-intensive cities pursue the following fundamental elements:

- **Focus on ridership** - City policy makers need to make ridership goals, rather than coverage goals the system's overarching direction - and make their decision known to Transit planners and support them as they pursue this objective.
- **Focus on all-day travel (i.e. span)** - Transit gets more crowded at peak and buses get more frequent, but the basic pattern of the network is there all day and into the evening, 7-days a week
- **Have extensive segments of exclusive right-of-way** - This means corridors restricted only to transit - not just RT lines but on-street transit lanes. The bus can be preferable to cars during rush hours (even if you have to stand on the bus) if your trip is shortened by priority lanes and signals.

Simple, direct routes

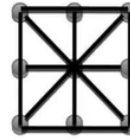
- **Encourage simple, direct routes with easy connections** - If you avoid connections you sacrifice frequency, span, and simplicity. A connective network covers the same area with far fewer routes. People are not afraid to make connections from one bus to another if
 - buses are **frequent** of (especially on main routes).
 - **connection points** are physically constructed to support connections
 - bus routes are **timed** (i.e. pulses) to support connections

Stop spacing - Create routes with consistent stop spacing. Clearly distinguish between local, rapid, and express. (Ch5)

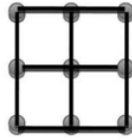


Simple Grid - Create a simple grid of high-frequency routes. In an ideal grid system, everyone is within walking distance of one north-south line and one east-west line. So you can get from anywhere to anywhere, with one connection, while following a reasonably direct L-shaped path. (Ch13)

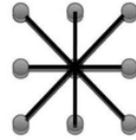
Direct Service
Everywhere



Connective
Network (Grid)



Connective
Network (Radial)



Frequent Network Maps (and branding) - (Ch7)

Answer the question: “I am someone who likes to use transit and would love to rely on it more, but I’m just too busy to be waiting a long time or worrying about whether service quits running at 7 PM. Where can I go on transit? Show me the network that is useful to me.” (e.g. Portland, Minneapolis-St Paul, [Montreal 10-minute max map](#))



Easy connections

Connections reduce network complexity. Connections buy frequency without increasing operating cost. (Ch12)

- **Clock-based timing** - Design routes to reach stops on even divisions of the hour (e.g. hourly, 1/2 hour, 1/4 hour) (Ch13)
- **Pulses** - Coordinate schedules so buses from many routes come together at a central point. (Ch13)
- **Connection hubs** - Design connection hubs for ease of connection and to address drivers’ needs but also as commercial plazas. Connection points can be logical places to invest in transit-oriented development. (Ch13)

Other points

Pedestrians are important - “Virtually every transit rider is also a pedestrian, so transit ridership depends heavily on the quality of the pedestrian environment where transit stops.” (This also applies to cyclists.) (Ch1)

Chokepoints - “For car traffic, chokepoints are a problem, but for transit they are opportunities.” 1) They create opportunities to connect between lines, 2) they allow transit-only lanes to offer an advantage. (Ch4)

Transit-unfriendly suburbs - It is possible to provide transit service to suburbs with labyrinthine streets by providing frequent service routes adjacent and pedestrian and cyclist cut-throughs to get to the stops. Locate a transit-oriented urban center at the stop. Locate urban centres in a logical direct path with several other major destinations. (Ch14)