

Michelle Poyourow

I hate walking to the bus stop!

My Feelings

People I know hate walking to the stop!

Our Feelings

Most Americans hate walking.

Culture

Humans tend to underestimate the rationality of the actions of others.

Psychology

A mammal's need to consume water increases with temperature.

Biology

Two solid objects cannot occupy the same space at the same time.

Physics

$2 + 3 = 5$

Geometry / Math



- True on other planets
- True in the year 2035



Two solid objects cannot occupy the same space at the same time.

Physics

$$2 + 3 = 5$$

Geometry / Math

What can we know *for certain* about transit in the future?

Many things *will* change, and already have:

- Hailing and paying for a ride
- Designing routes in response to pick-up and drop-off requests
- Piloting of vehicles

What *won't* change?

Scarcity of urban space

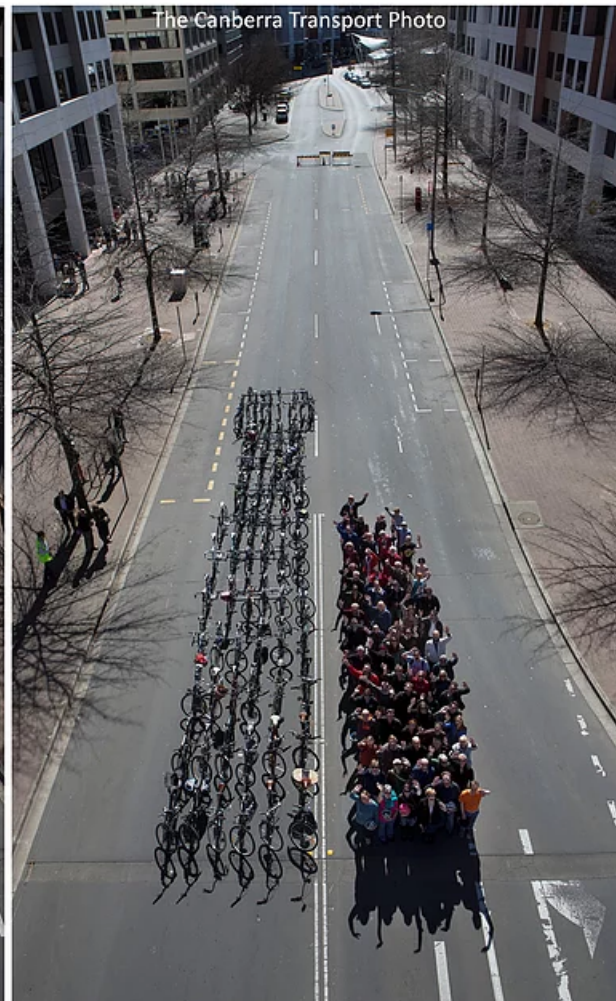


Photo by the Cycling Promotion Fund, Australia

Vocabulary: "Ridership" vs. "Productivity"

- Measured by "boardings" on transit vehicles
- Sheer total ridership is less useful than *ridership relative to cost*
- Most transit costs are tied to a bus and driver's time (rather than distance, or size of vehicle)
- "Productivity" =
ridership relative to cost =
boardings per hour of service provided

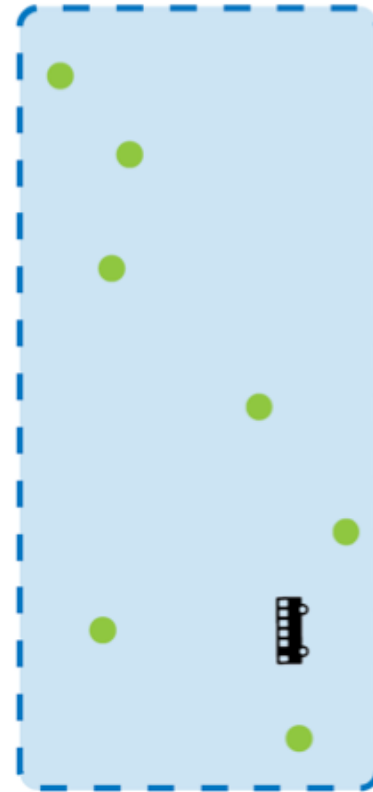
Examples

- Bridj in Kansas City.
 - Ridership: 1,480
 - Productivity: less than 0.1 boardings per hour
 - Cost per ride: \$1,014
- VTA in Silicon Valley
 - Ridership: 2,714
 - Productivity: 0.4 boardings per hour
- Uber in San Francisco at 7 pm on a Friday
 - Ridership: 17,332
 - Productivity: 2.6 hails per hour

Vocabulary: "Responsive"

- Could mean *goes to the place you want.*
- Could mean *goes when you want.*
- "Demand Response" transit =
"Flexible" transit =
"Dial-a-ride"
- Opposite of "fixed route"

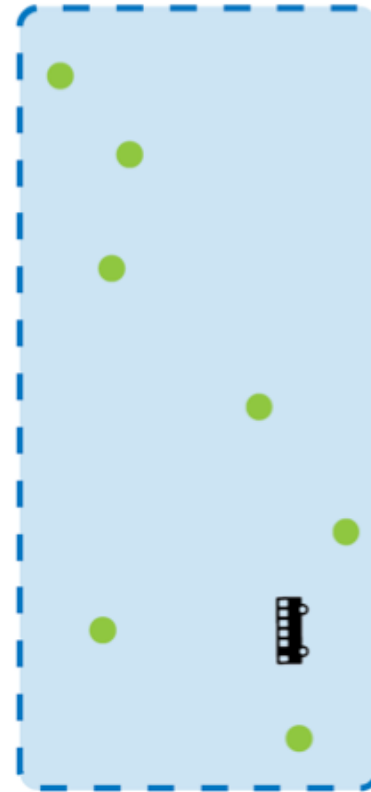
Responsiveness



How much productivity is *physically* possible?



60 per hour

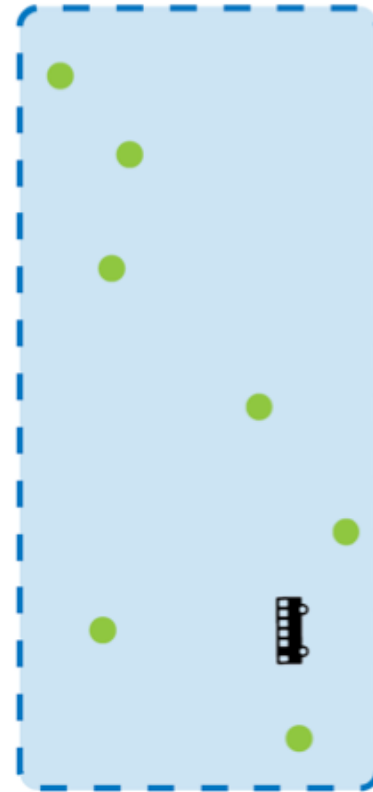


5 per hour

How *little* productivity is *politically* possible?



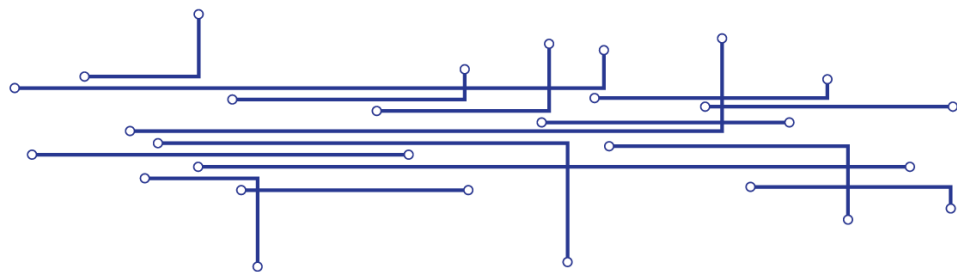
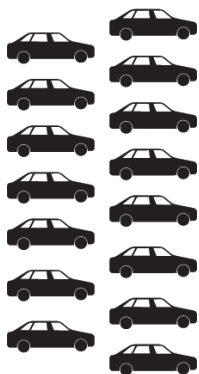
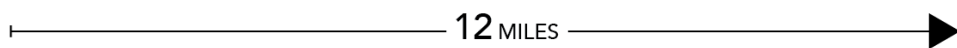
~10 per hour



??



Total VMT: 12



Total VMT: 45

AVERAGE TRIP LENGTH: 3 MILES

These are not marketing failures!

- Bridj in Kansas City.
 - Ridership: 1,480
 - Productivity: less than 0.1 boardings per hour
 - Cost per ride: \$1,014
- VTA Flex in Silicon Valley
 - Ridership: 2,714
 - Productivity: 0.4 boardings per hour
- Uber in San Francisco at 7 pm on a Friday
 - Ridership: 17,332
 - Productivity: 2.6 hails per hour

What will change?

- Operating cost per hour of vehicle
- Propulsion of vehicle
- Size, spacing and handling of vehicles
- Quality of information for riders
- Ease of paying a fare

What won't change?

