

Bus Network Redesign

Phase One: Key Choices

Tuesday 6 July 2021



Presented by:
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What is BusConnects?

BusConnects is the NTA's programme to greatly improve bus services and cycling facilities and address climate change in Irish metropolitan areas.

BusConnects is implementing:

- The National Development Plan 2018 - 2027;
- The Cork Metropolitan Area Transport Strategy 2040 (CMATS)
- The Climate Action Plan 2019.



BusConnects Cork

- A step change in the use of sustainable modes is required for Cork to reach its potential as **the fastest growing city in Ireland**.
- BusConnects Cork will **transform bus service** for the Cork Metropolitan Area.
- Walking and cycling infrastructure will be improved, providing safer streets for pedestrians & cyclists and **more alternatives to private cars**.

Cork Metropolitan Area (CMA)



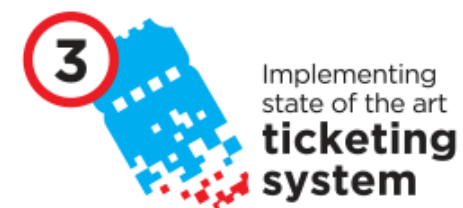
Public Bus Services

The Cork area bus system includes:

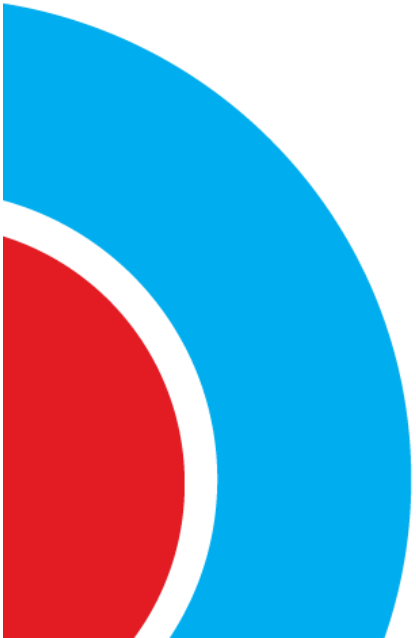
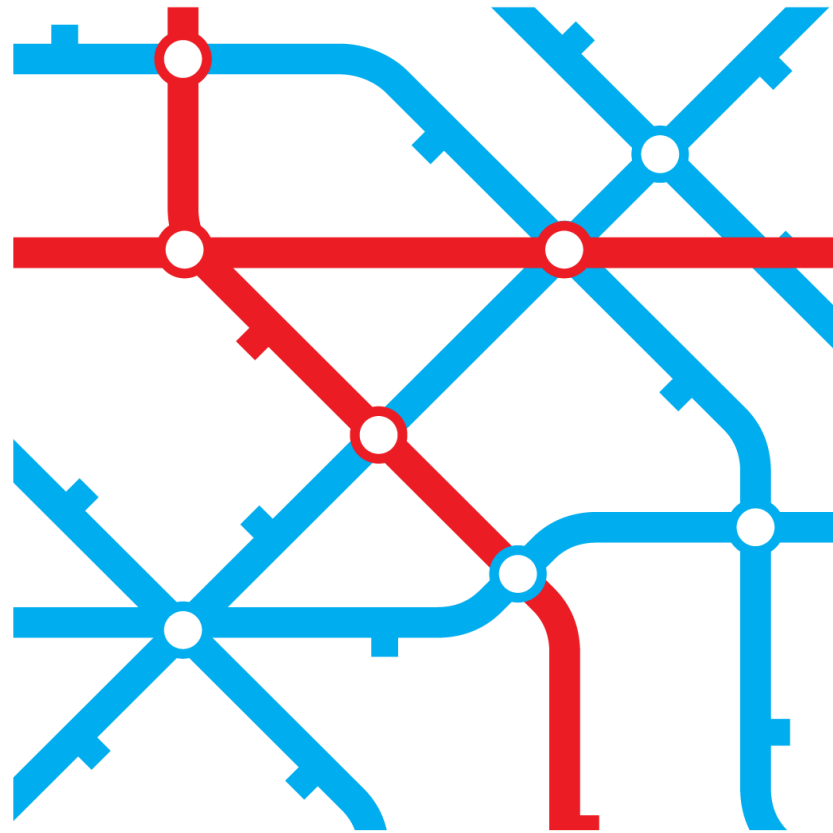
- **Public Service Obligations (PSO)**, which NTA purchases from Bus Éireann. These serve the general public in a comprehensive regional network.
- **Commercial services**, by licensed private operators, such as Cobh Connects.

This study focuses on **PSO services**, which are **most of the Cork area network**.

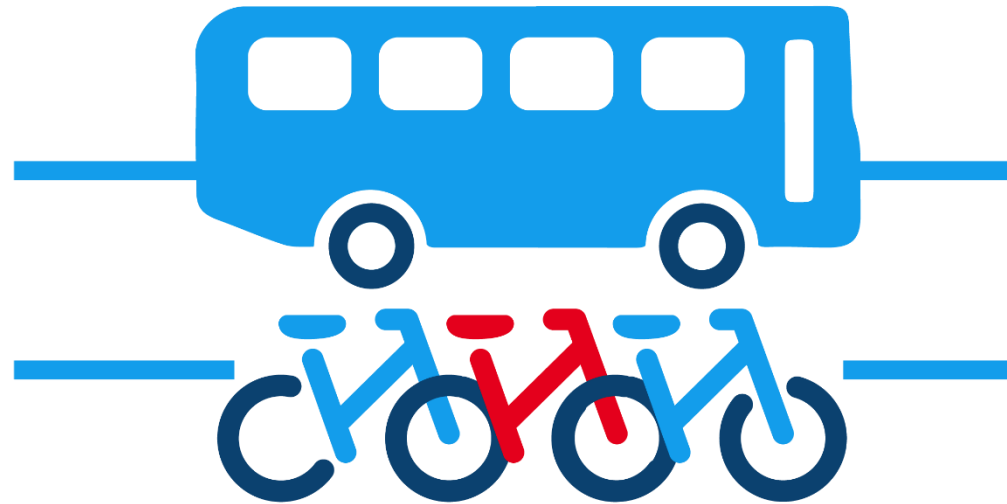
BusConnects Cork is a programme of 9 elements



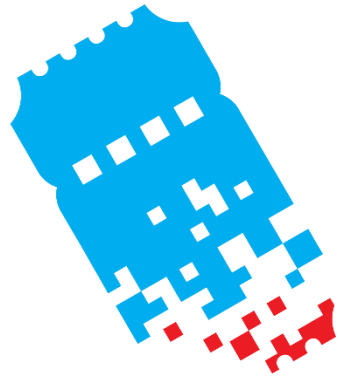
Redesigning the Bus Network



Building a new network of bus corridors and cycle lanes



New fares and ticketing



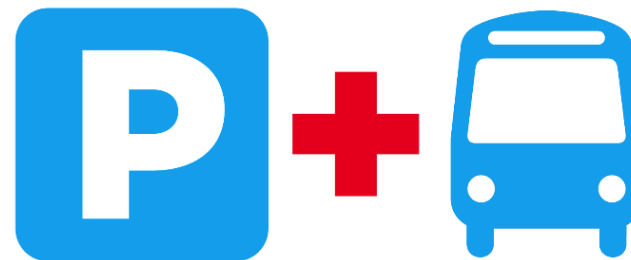
Implementing
state of the art
**ticketing
system**

Implementing
**Cashless
payment
system**



**Simpler
fare
structure**

New Bus Shelters and Park & Rides



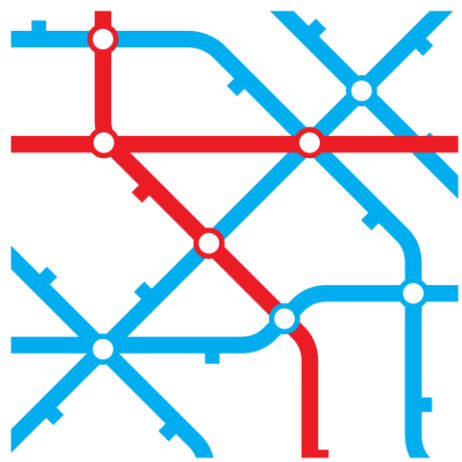
Improved Bus Livery



**New bus
livery**



Transitioning to a new
**zero emissions
bus fleet**



Redesigning the bus network

Phase One:

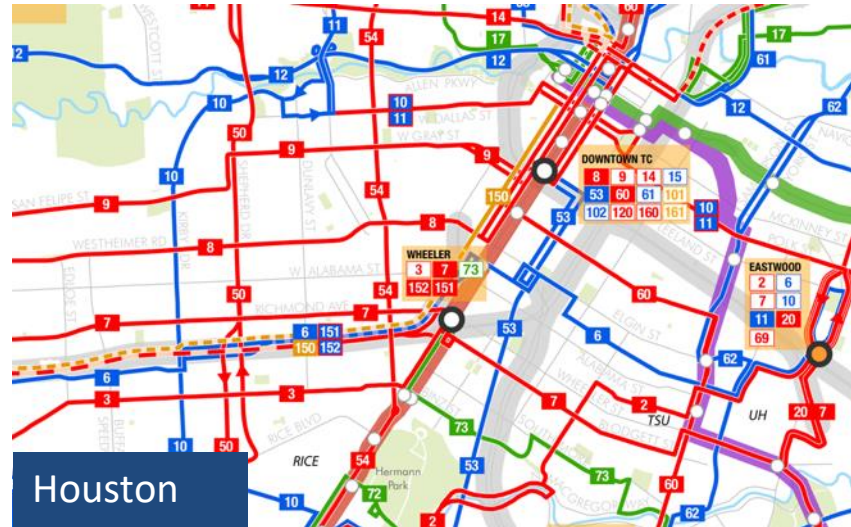
- The NTA launched a consultation on key choices for the Cork Bus Network from **1 July – 21 July**
- This phase is about initial decisions that need to be made in redesigning the bus network.
- There is *not yet* a proposed revision to the bus network.

Phase Two will set out a Draft New Network with proposed revisions, in autumn.

About Jarrett Walker & Associates



- 25 Years specialising in Transport Network Design.
- More than 50 metro areas in 9 countries





We are knowledgeable about public transport network redesign.

You are knowledgeable about your community and its priorities.

In this process we will fuse those two kinds of knowledge.

SYSTRA

Poll: How do you feel about the possibility of major change to the bus network?

1. Alarmed
2. Concerned
3. Neutral or Balanced
4. Intrigued or Hopeful
5. Enthusiastic



Online Consultation

Start at www.busconnects.ie/cork-network

The Cork bus network is being redesigned. But first, there are some key choices about how to best serve residents while meeting the area's climate, development, and livability goals.

Your input about these choices will affect the design of the Draft New Network. Once finalised, the New Network will be implemented starting in 2023 and will continue to evolve to support Cork's growth in the more distant future.



Visit the pages on this site using the buttons below, click "Get Started" to move through the information in order, or jump to the survey questions.

1

BusConnects

Learn about BusConnects Cork and the bus network redesign process.

2

Public Transport Trade-Offs

Understand the trade-offs and choices that arise when designing a public transport network.

3

Key Choices

Give input to help the project team understand your priorities.

4

Next Steps

Find out what happens next and how to stay involved.

What is motivating the bus network redesign?

- 50% more residents are expected by 2040.
- Three Government strategies rely on higher public transport use for success, including the Cork Metropolitan Area's Transport Strategy (CMATS).
- Some elements of the Cork network have been in place for generations.



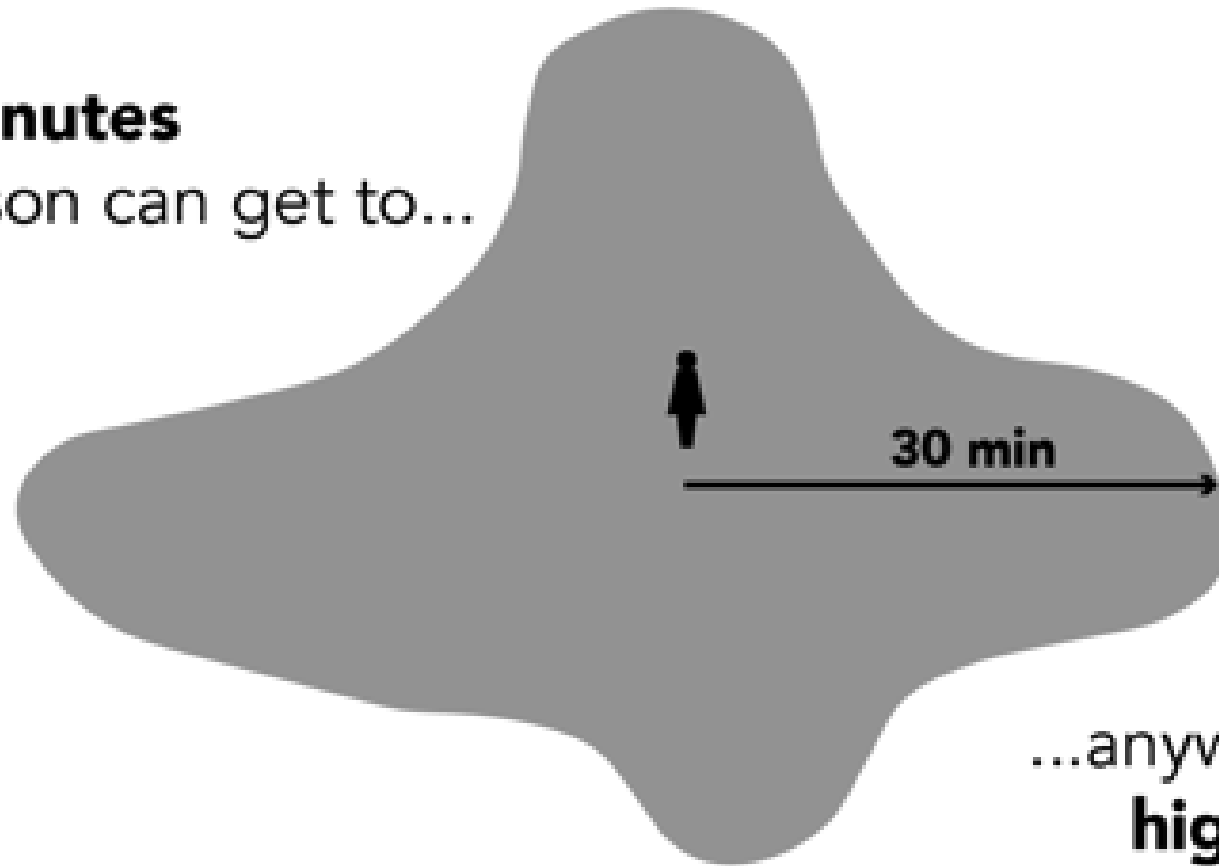
Public Transport Access

Here is a person.





In **30 minutes**
this person can get to...

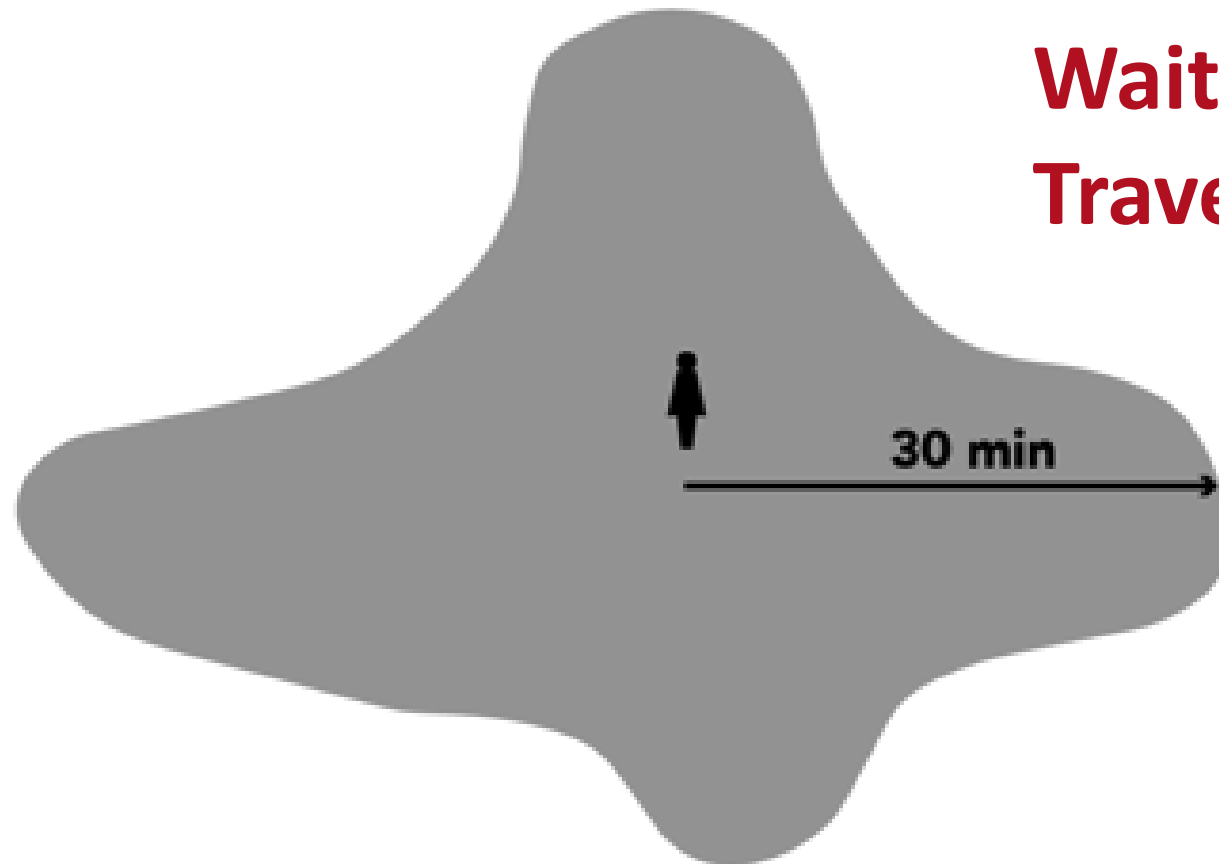


...anywhere in the
highlighted area.

Her access to destinations
is the **number of
destinations
in that
area.**



**Walk +
Wait +
Travel**



Why does *access* matter?

- Describes how many opportunities and services are within reasonable travel time
- High access in a particular place means service is more useful to people there
- High *average* access means the network is more useful to *more people overall*
- This describes how network design affects potential for high patronage
- Patronage potential is your potential to reduce emissions, congestion, parking



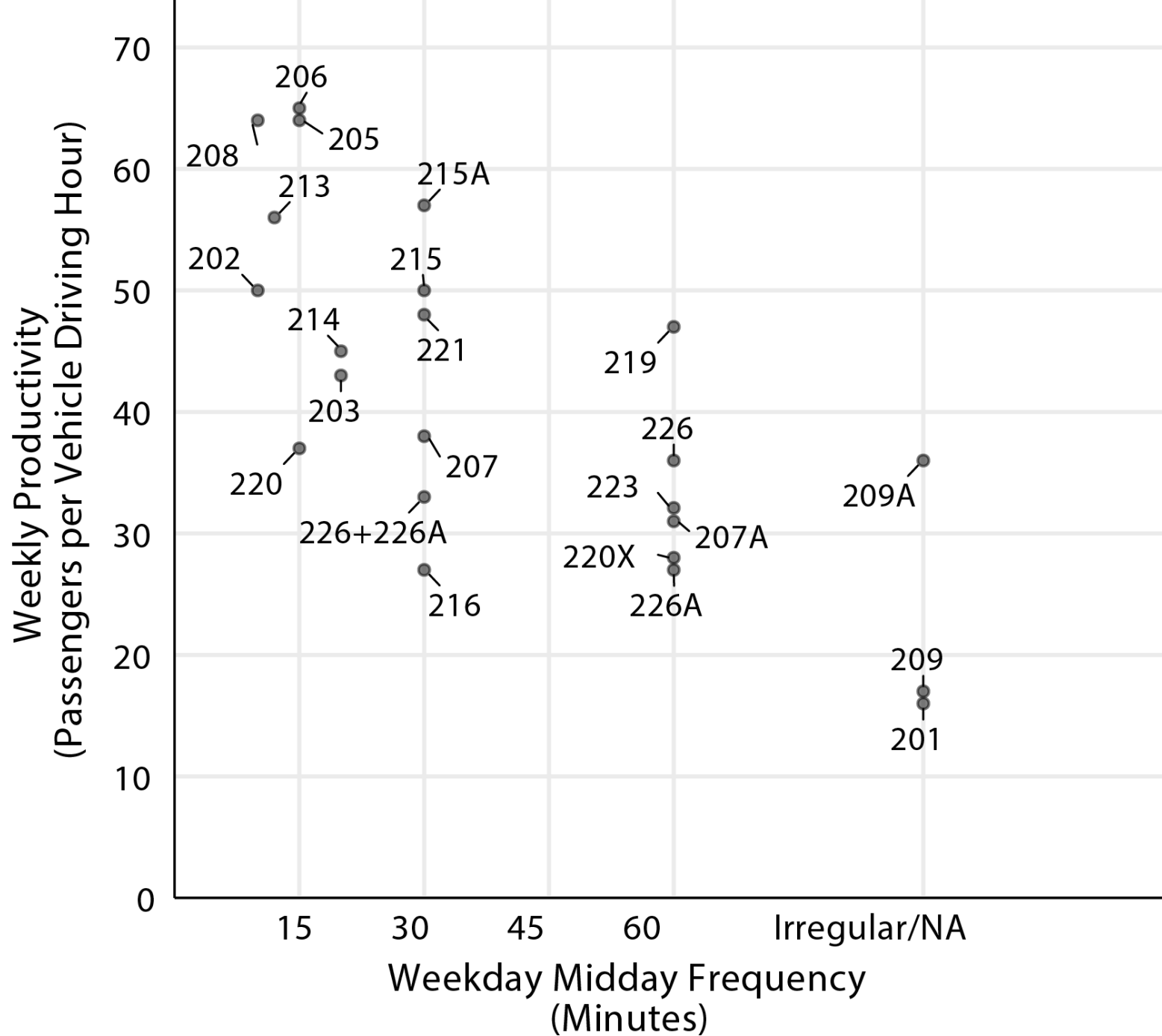
How would you grow access, and thereby patronage?

- High frequency routes
- Forming a connected network
- Reasonably fast and reliable
- Focused on geographic places where development, land use and streets are friendly to public transport



Frequency

- Frequent service means your bus is always coming ***soon***.
- Frequent service has three independent benefits:
 - Reduced waiting
 - Easier interchange
 - Reduced impact of disruptions
- Frequent service is particularly important for short trips.



Frequencies and patronage as they were in Nov. 2019

High access, and high patronage, depend on the built environment

Some geographic places are more conducive to useful and efficient public transport than others.

What matters most?

- Density
- Walkability
- Linearity
- Proximity
- Mix of Uses



Density

Higher
potential

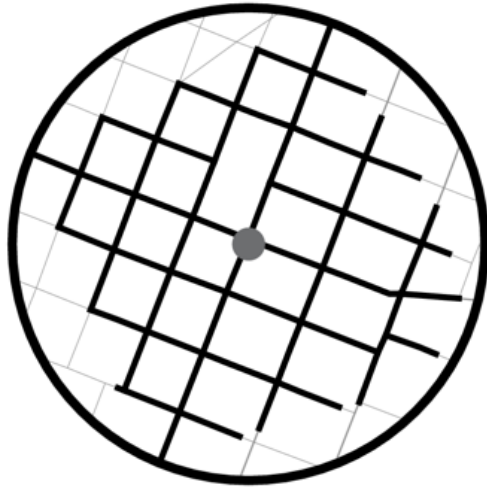


Lower
potential



Walkability

Higher
potential



Lower
potential

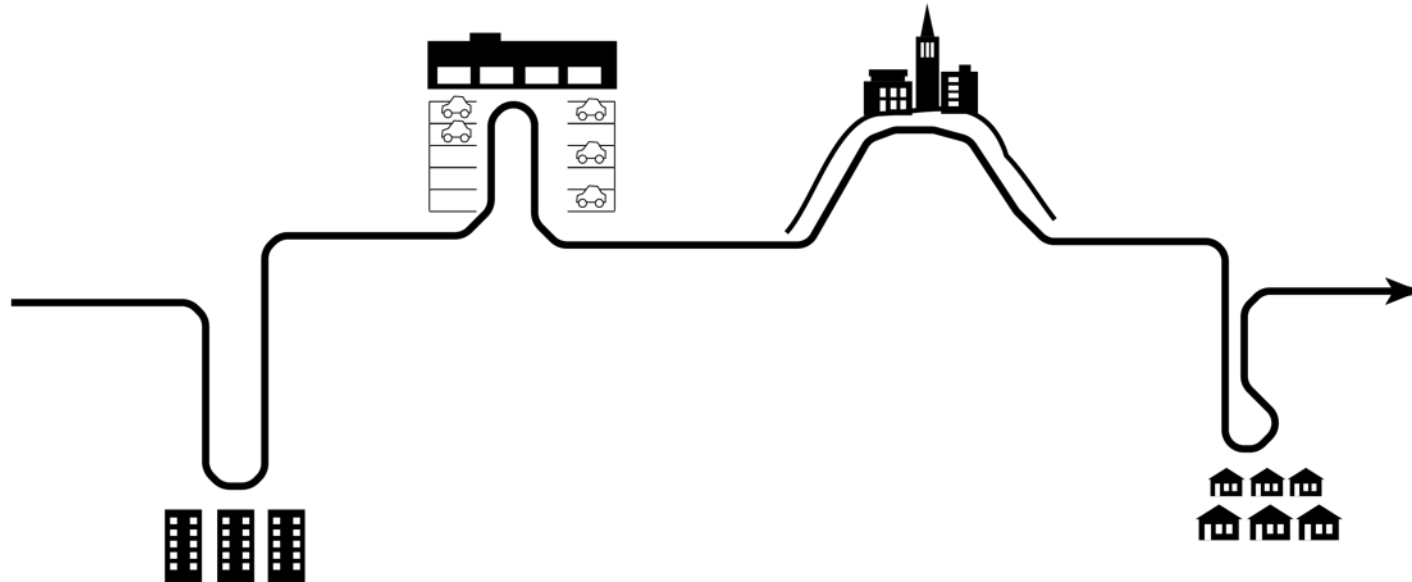


Linearity

Higher
potential

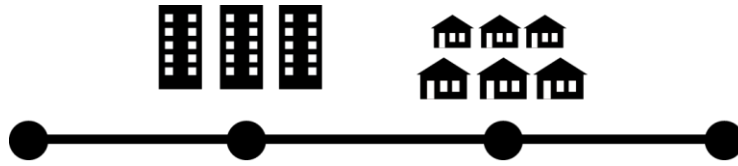


Lower
potential



Proximity

Higher
potential

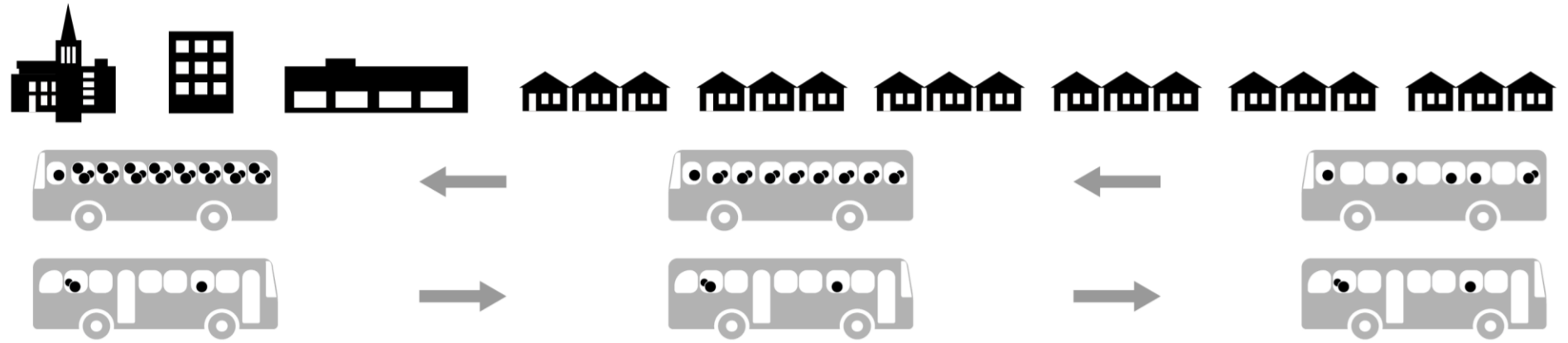


Lower
potential

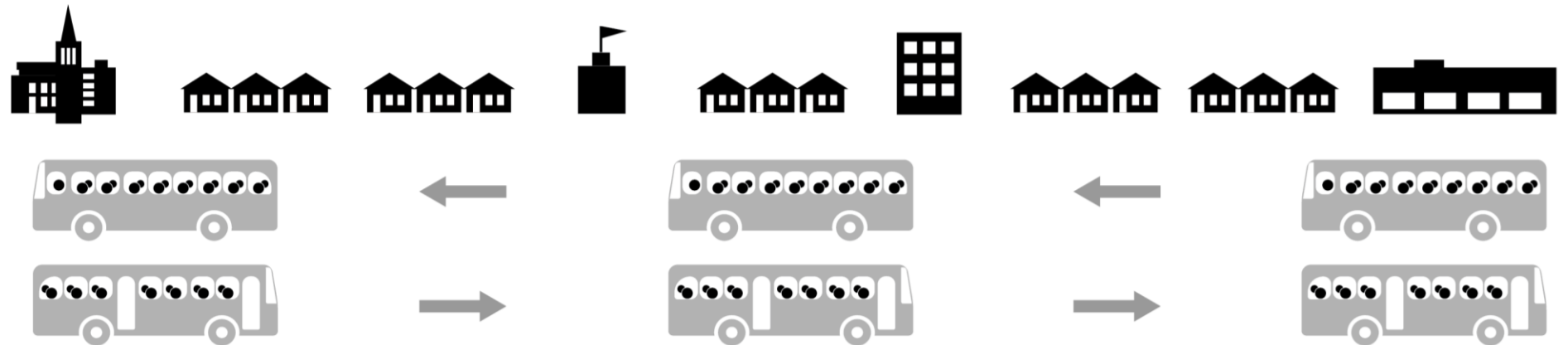


Mix of Uses

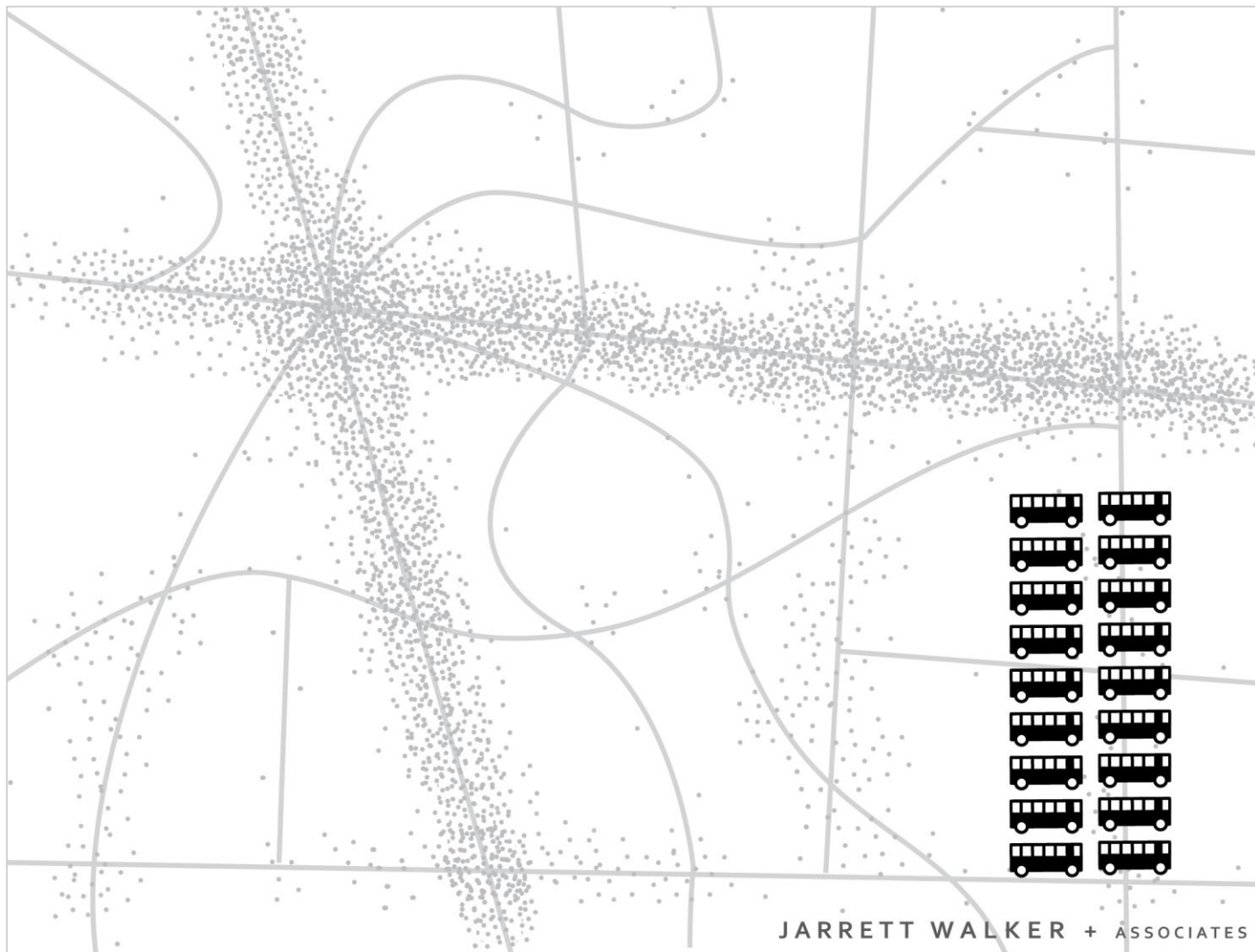
Higher
potential



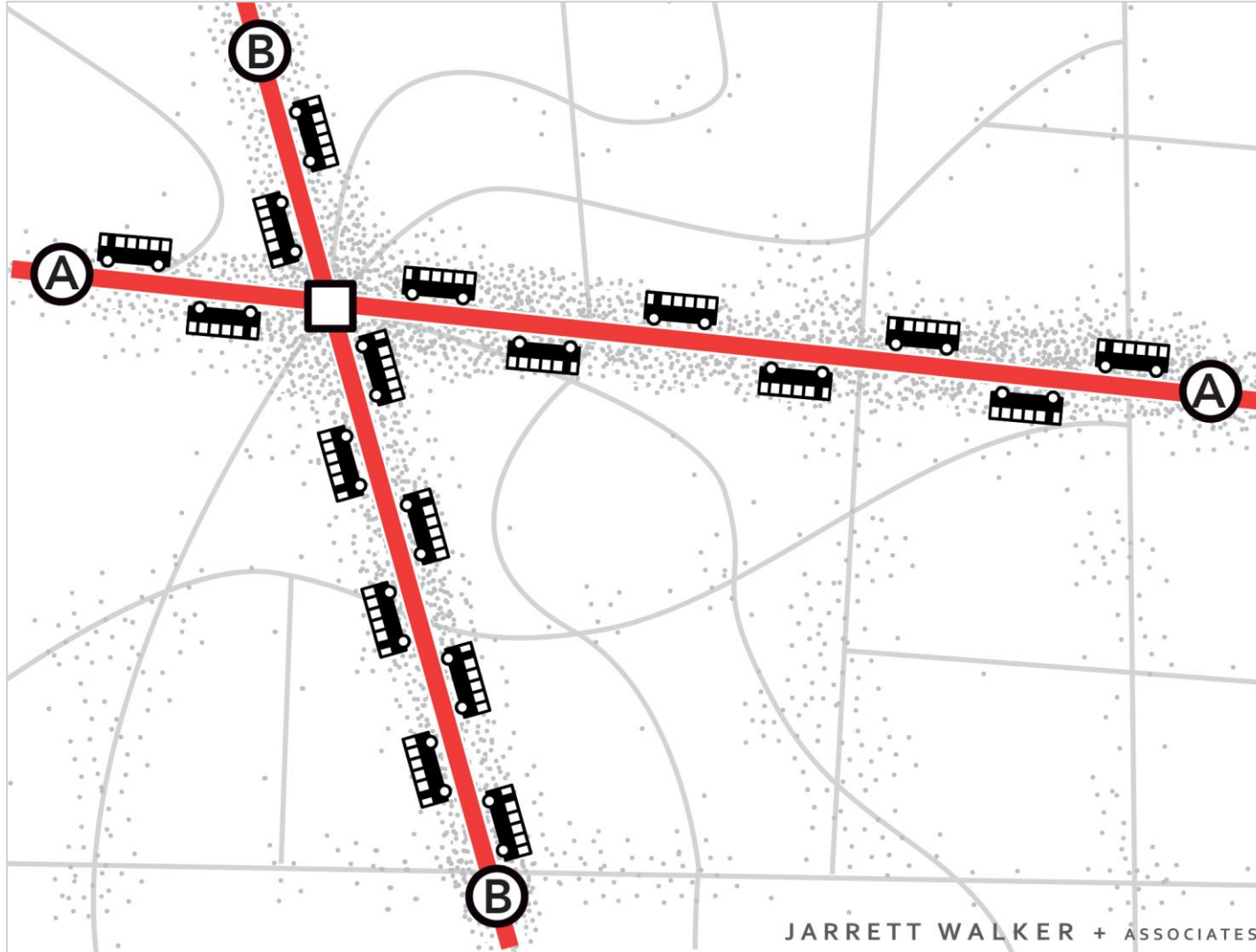
Lower
potential



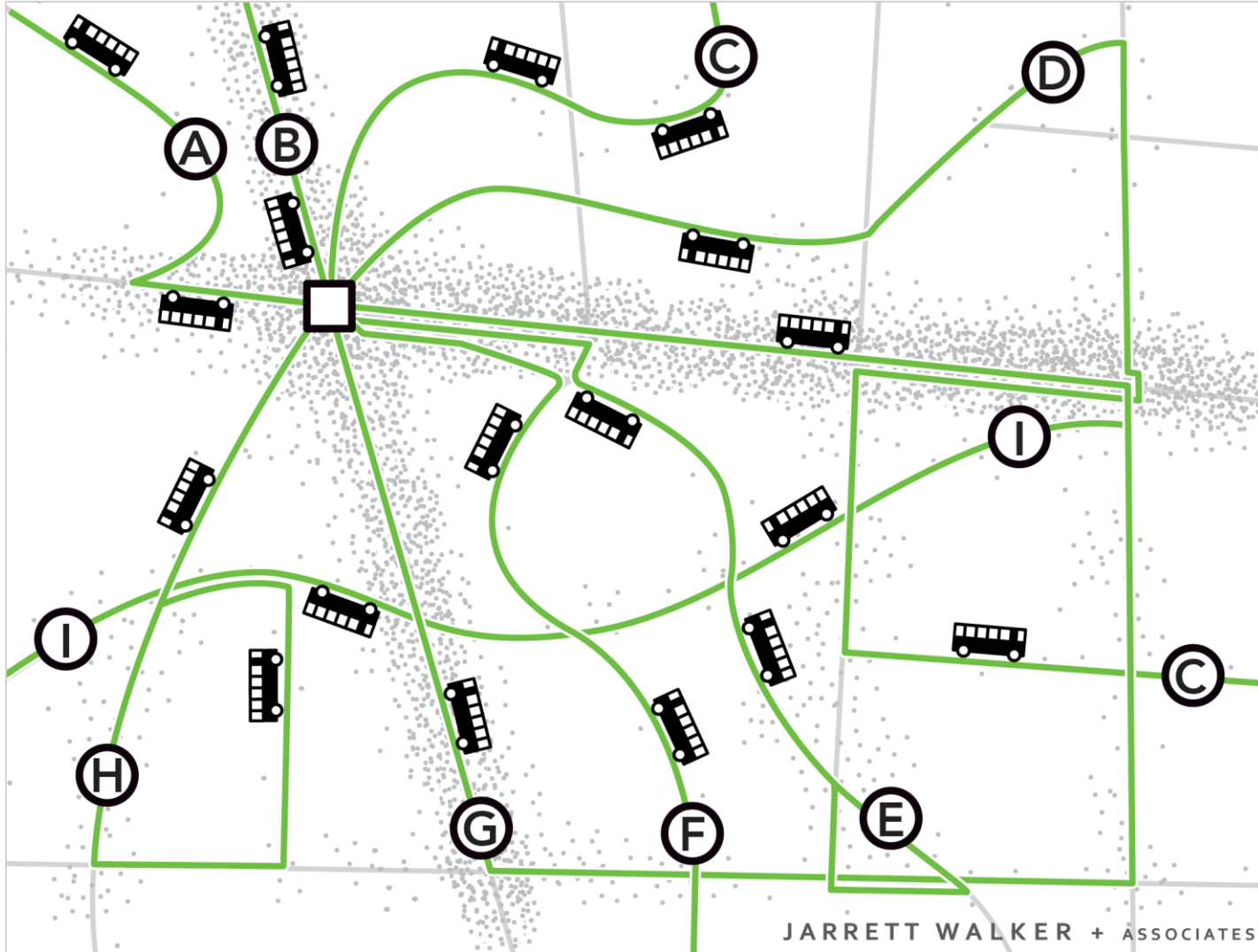
But how important is high patronage?



If maximum patronage were the only goal...

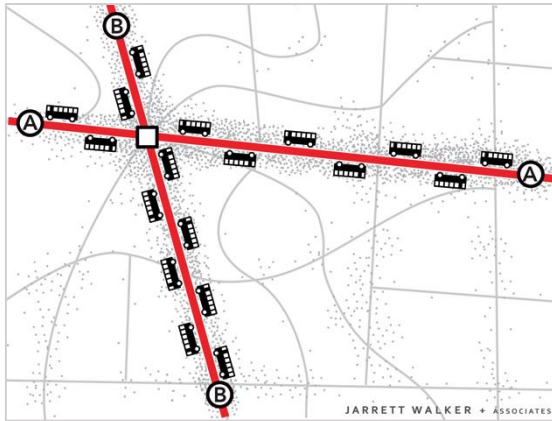


If maximum coverage were the only goal...

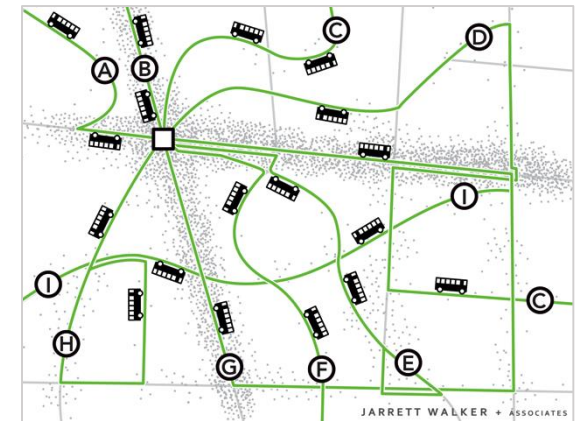


Both goals are important...
...but they lead us in opposite directions!

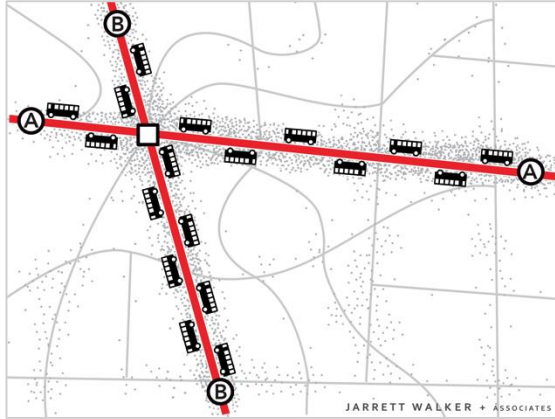
Maximum Patronage



Maximum Coverage

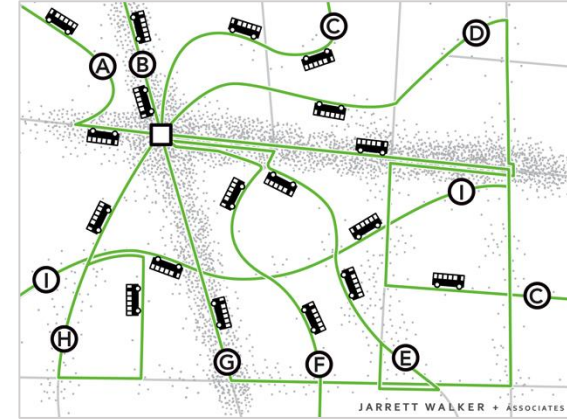


High Patronage



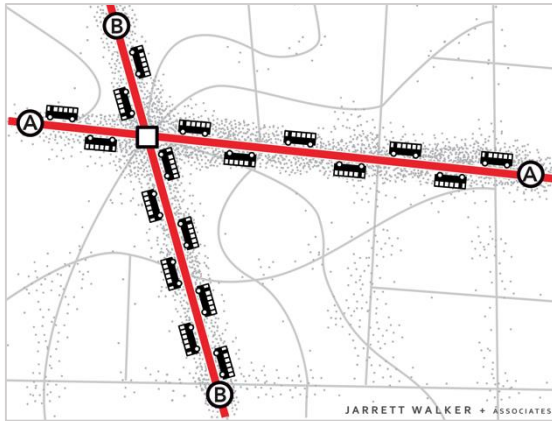
- More people using public transport
- Max. reduction of vehicle emissions
- Max. reduction of congestion
- Supports dense and walkable development

High Coverage

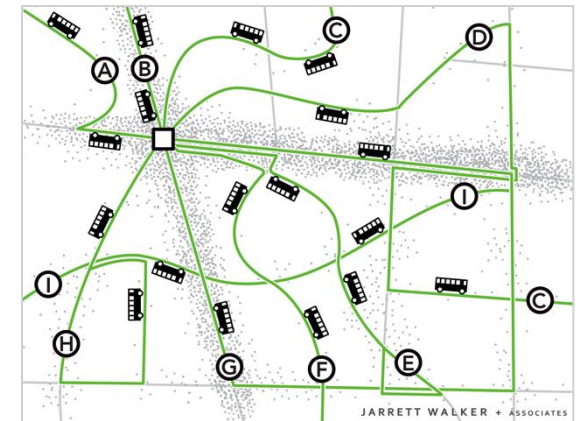


- Social and economic inclusion for people with a severe need for transport
- Service near more people regardless of where they live
- Service in all parts of a geographic area

Maximum Patronage



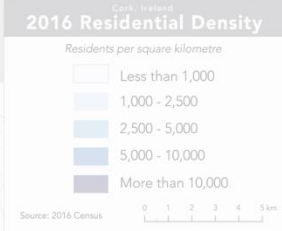
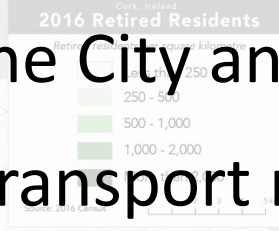
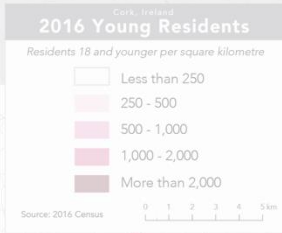
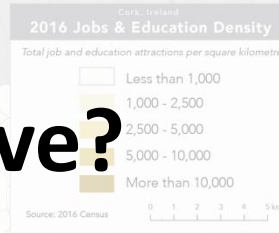
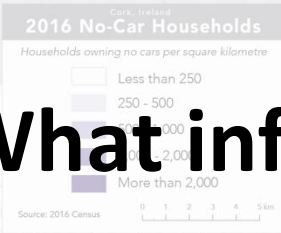
Maximum Coverage



What information do we have?

- Patronage data from autumn 2019
- Census data for residential and job locations
- Demographics such as age, employment status and public transport use
- Planned and forecast growth in the City and County
- Levels of travel demand (by any transport mode) among all places in the Cork Metropolitan area

➤ See maps and other data in the **Choices Report**, at busconnects.ie/busconnects-cork



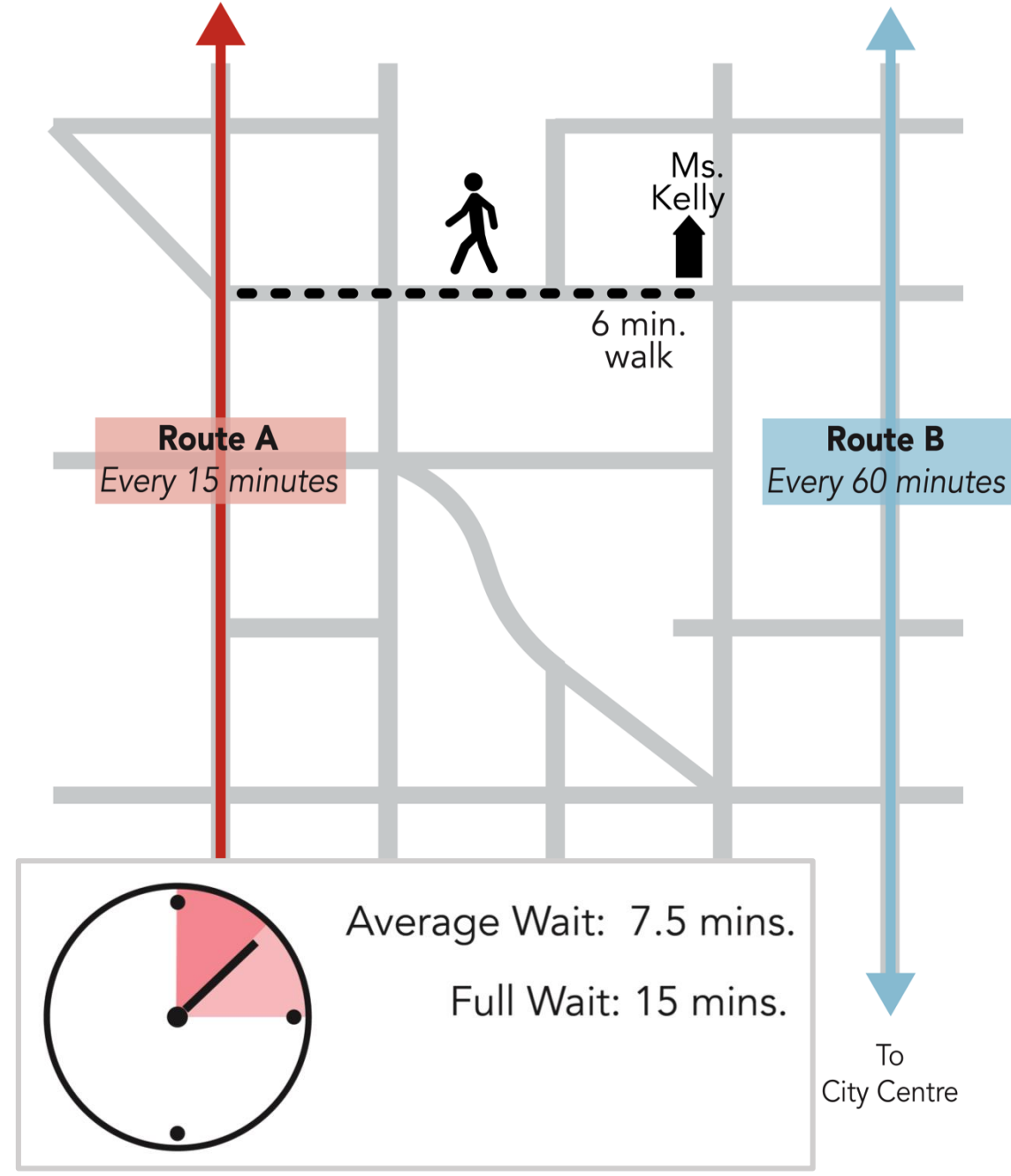
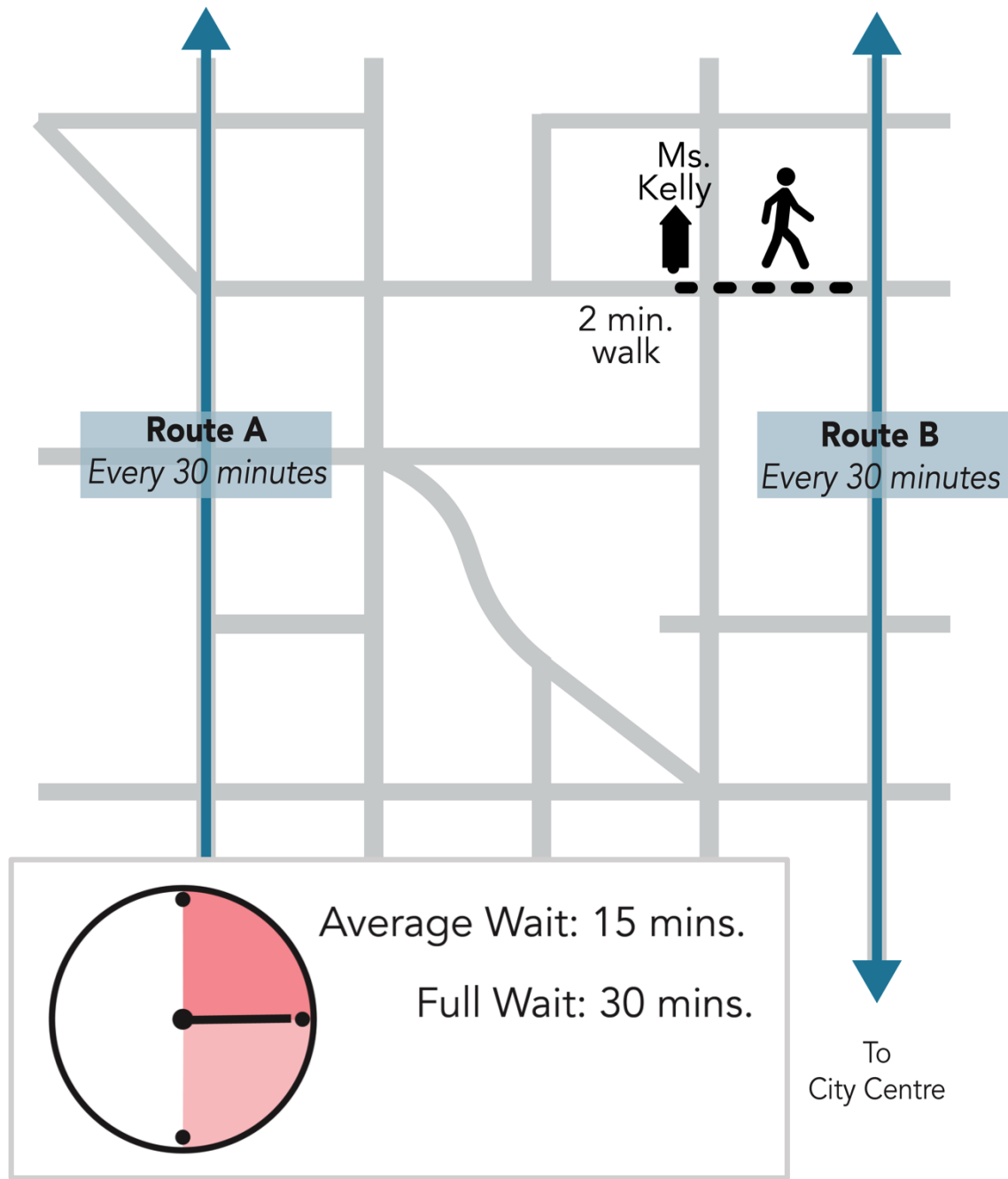
Q&A

Key choices for the Cork bus network design

- Design for short walks, or short waits?
- Design for more interchange, in exchange for greater frequency and simplicity?
- What are the most important measures of success?



Short walks or short waits?

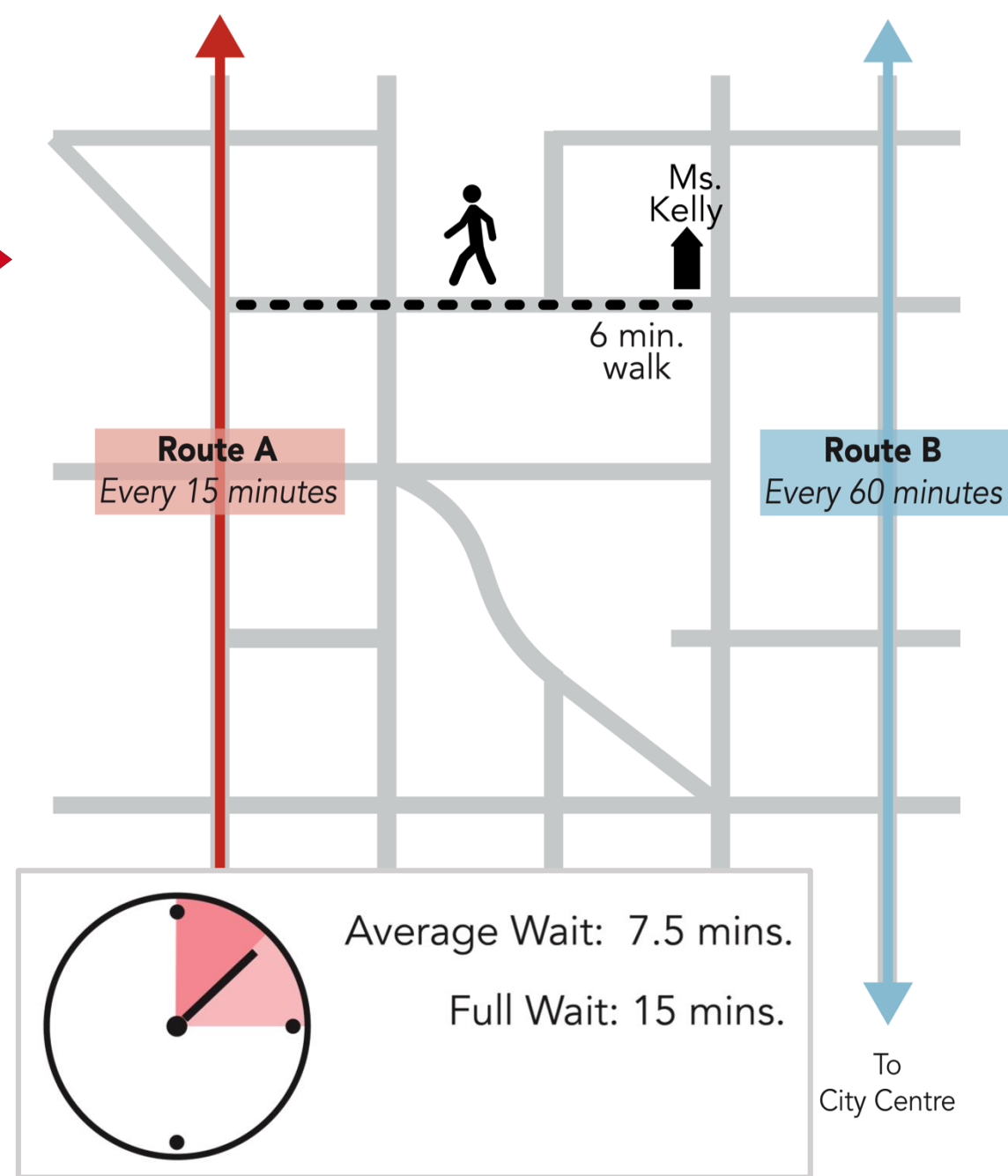


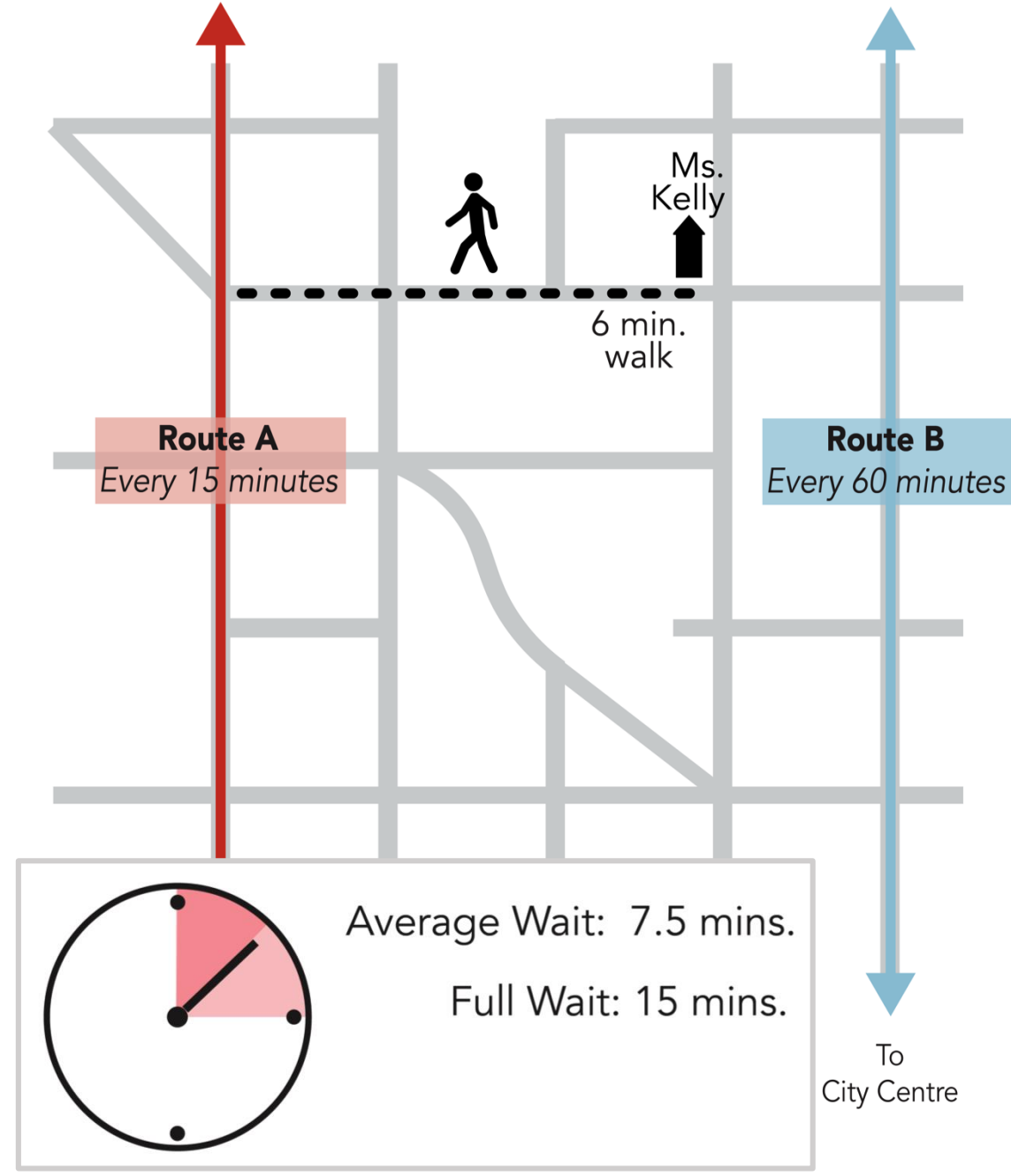
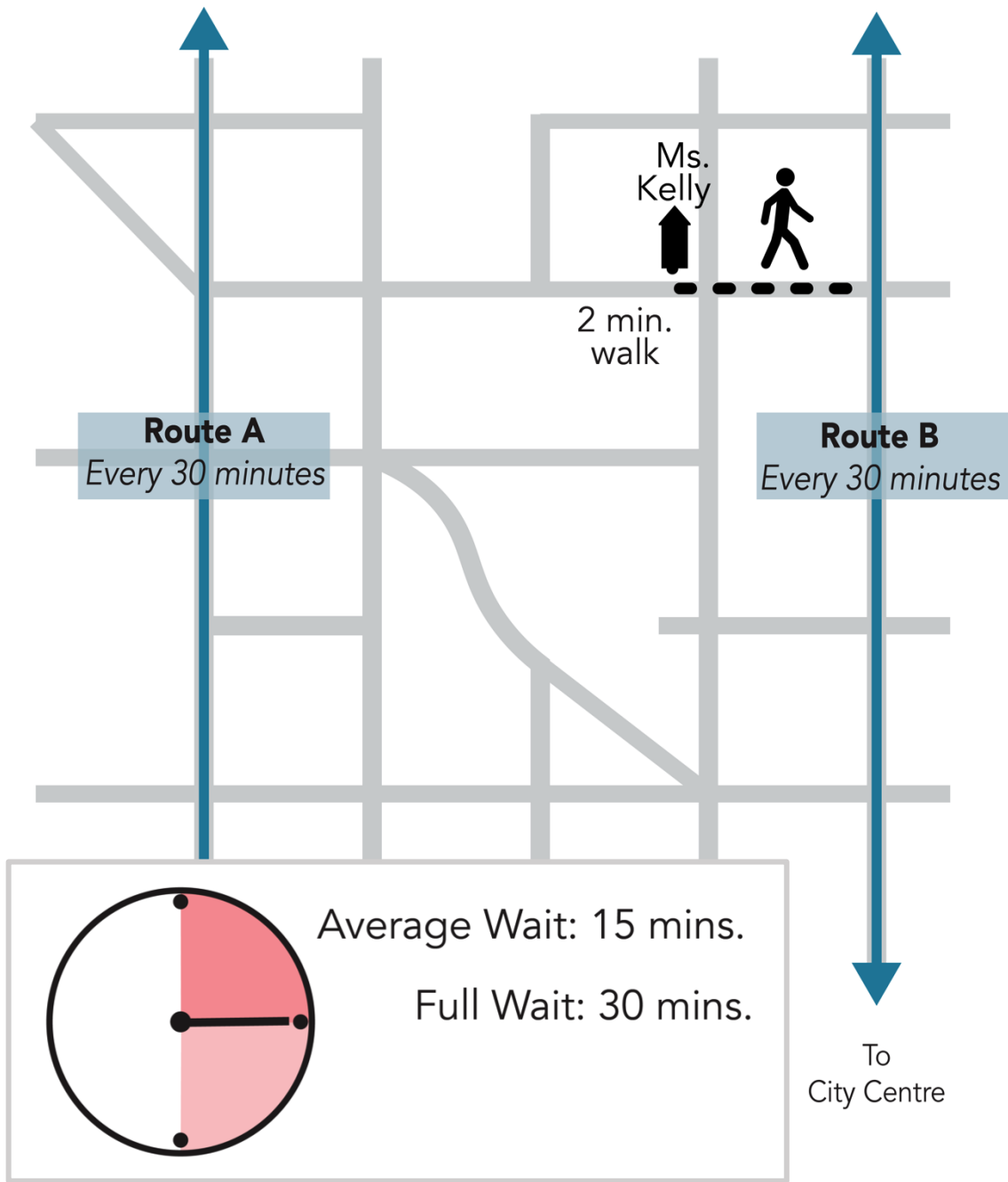
On average:

+ 4 mins more walking
– 7.5 mins less waiting
= **3.5 minutes faster**

Worst-case, if you just
missed your bus:

+ 4 mins more walking
– 15 mins less waiting
= **11 minutes faster**





Poll: Which is more important to you?

Short walks to bus stops,
or short waits to use the bus?

1. Short walks are more important
2. No preference
3. Short waits are more important
4. I'll do whatever gets me to my destination soonest
5. I'm unsure





Interchange, frequency and complexity

BusConnects Fare Changes

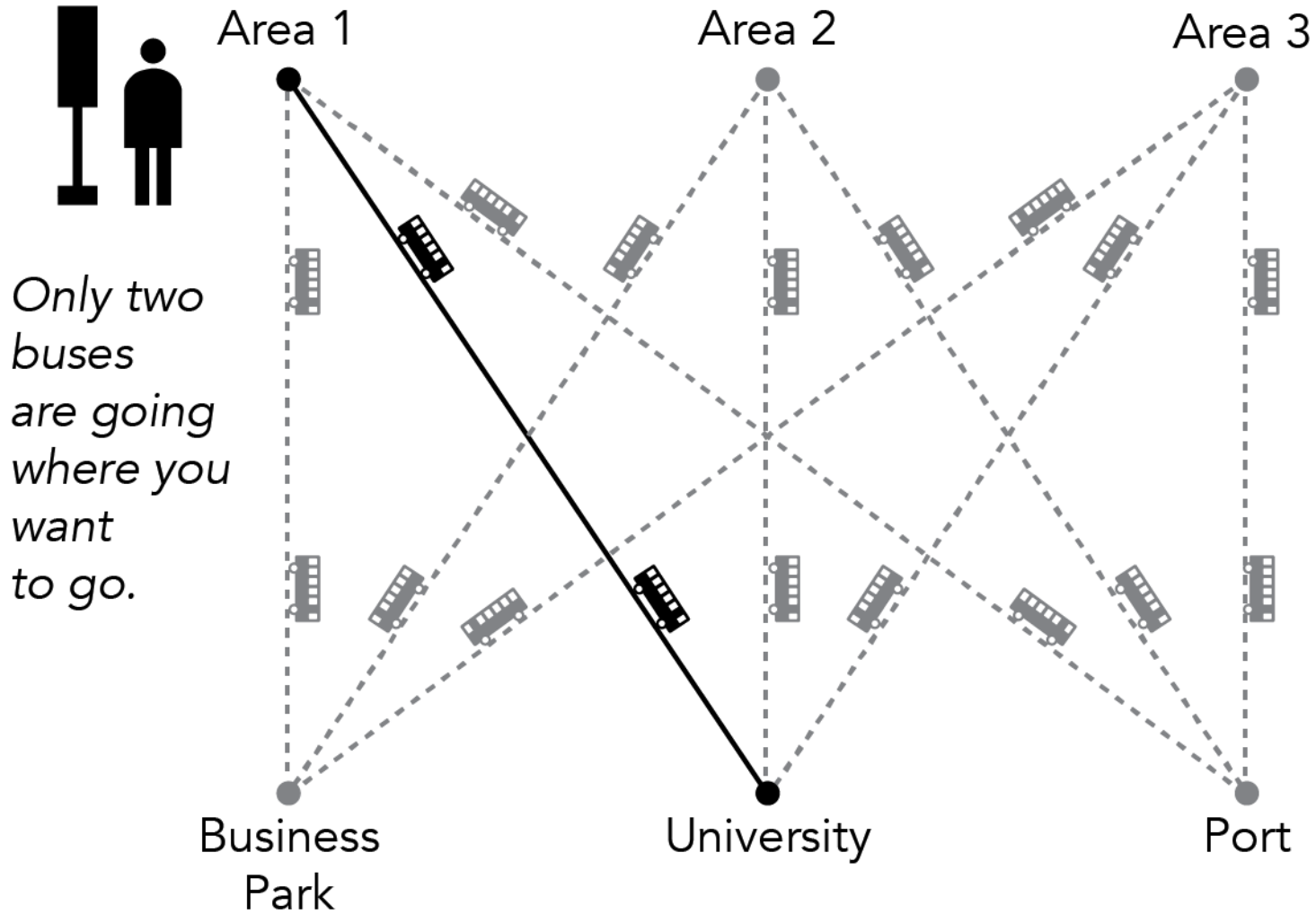
As part of BusConnects Cork there will soon be ***no extra fare to interchange*** – neither between buses, nor between bus and rail.

Also coming in the next few years:

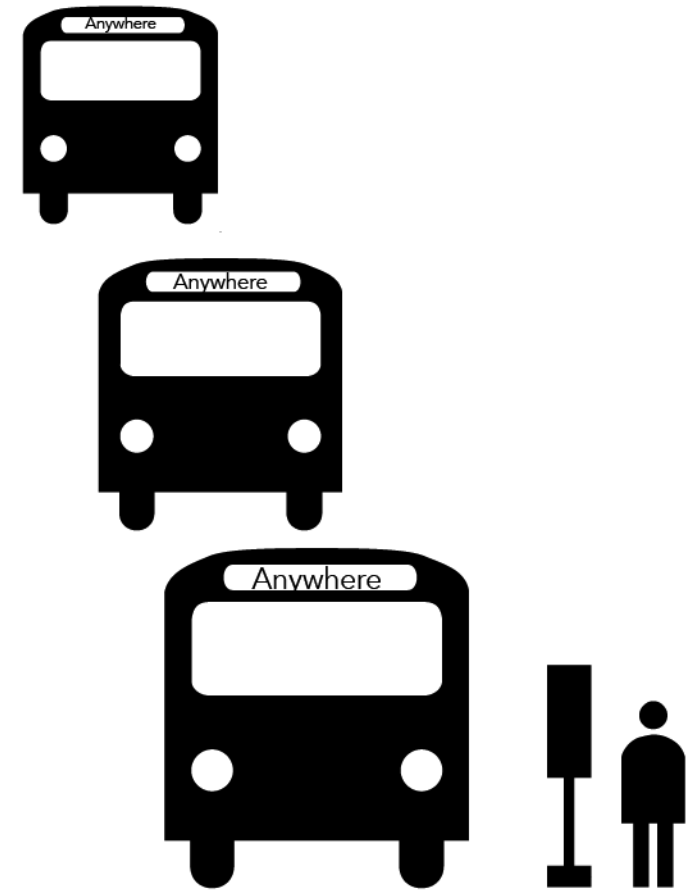
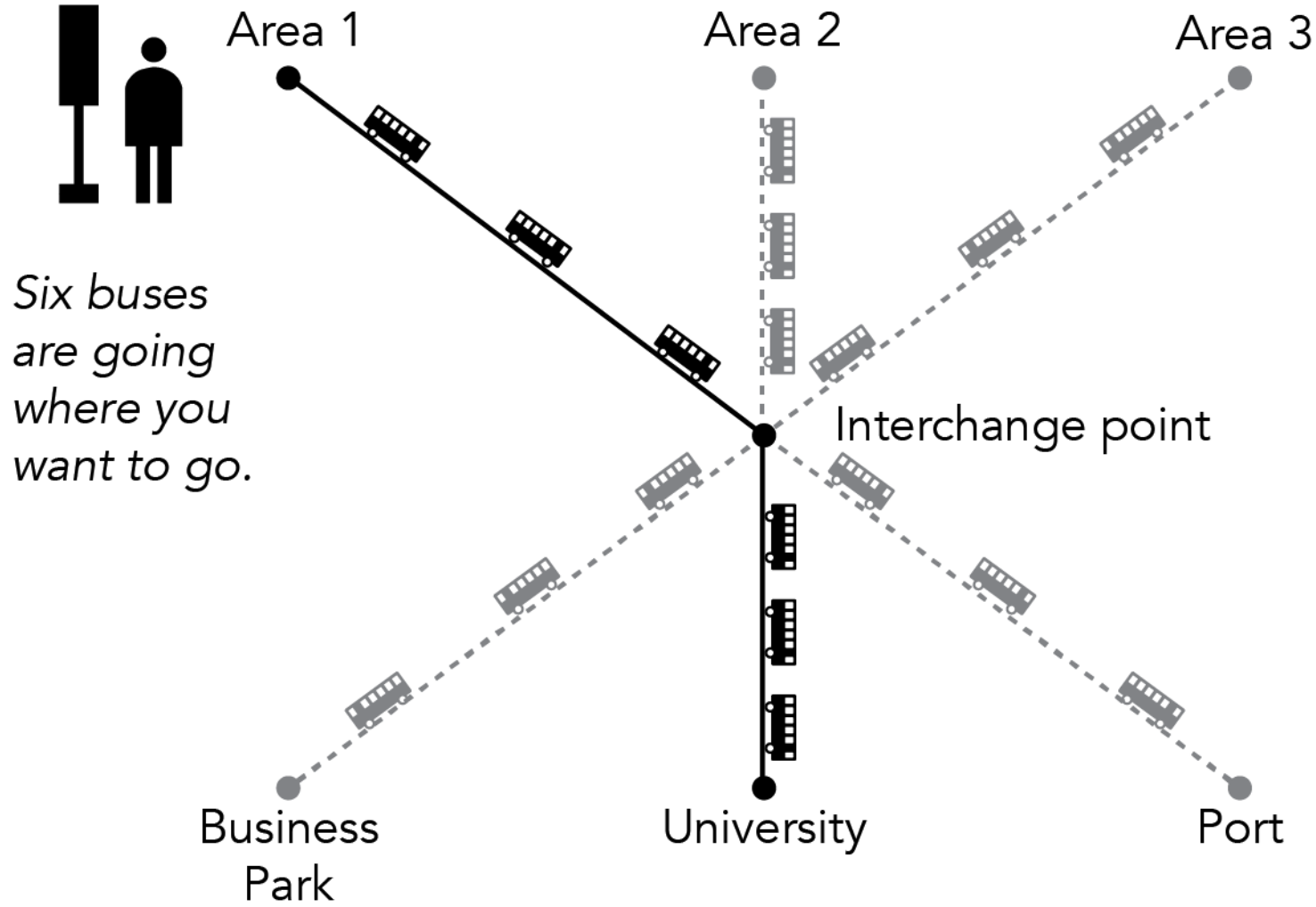
- Better seating and shelter at busy bus stops
- Better wayfinding signage
- Real-time information about bus arrivals
- Better reliability



Direct Routes, Long Waits, Complexity

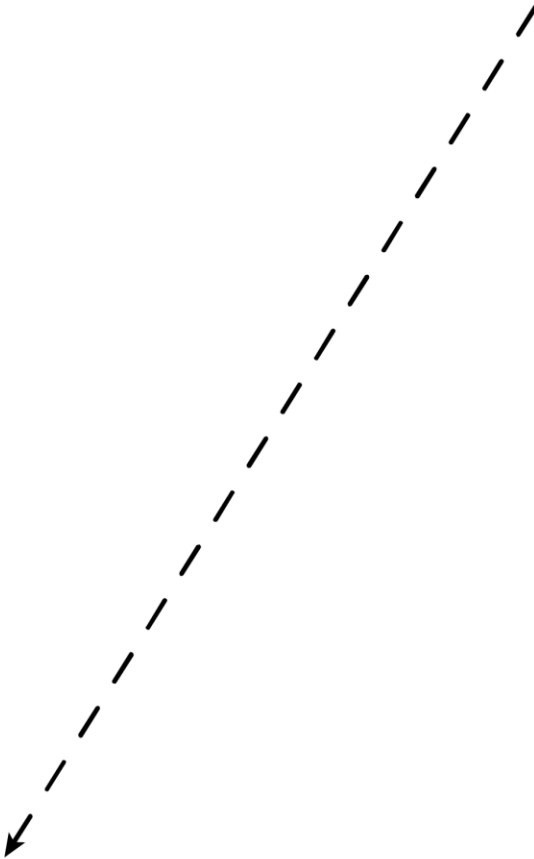


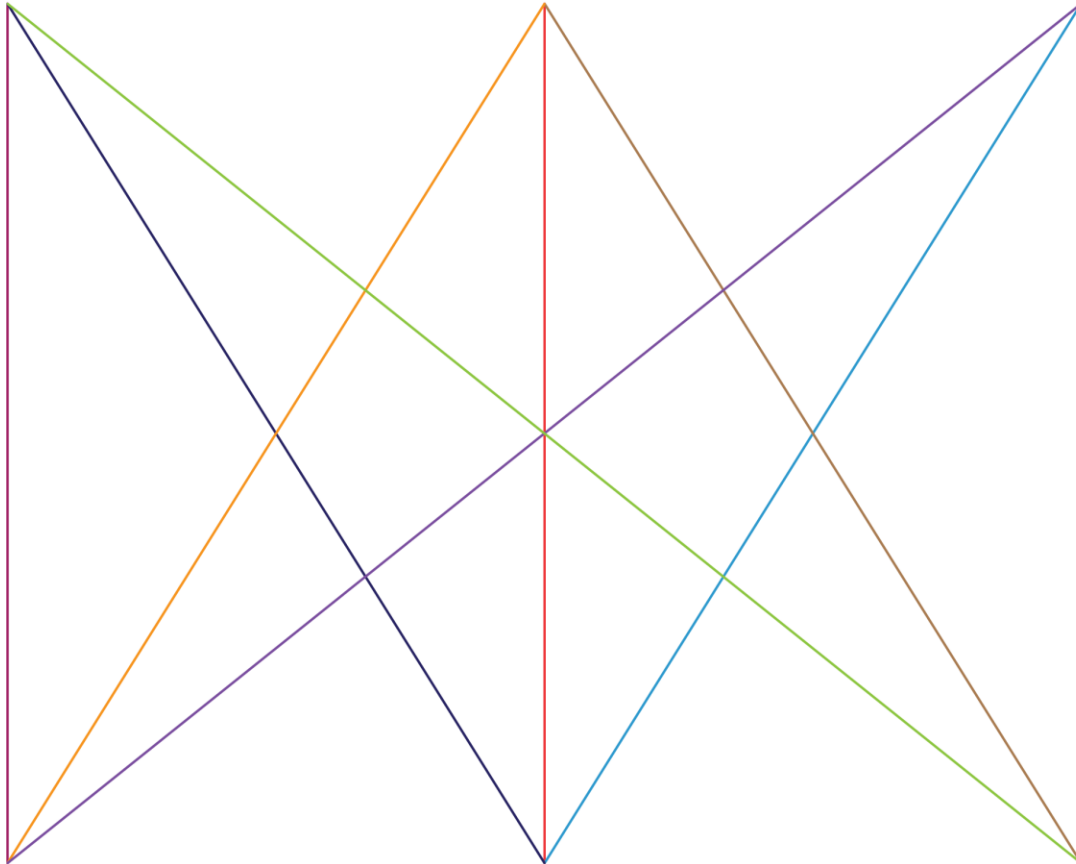
Interchange, Short Waits, Simplicity



Many buses are serving both legs of your trip, so you have **more choice** of when to travel, and **shorter waits**.

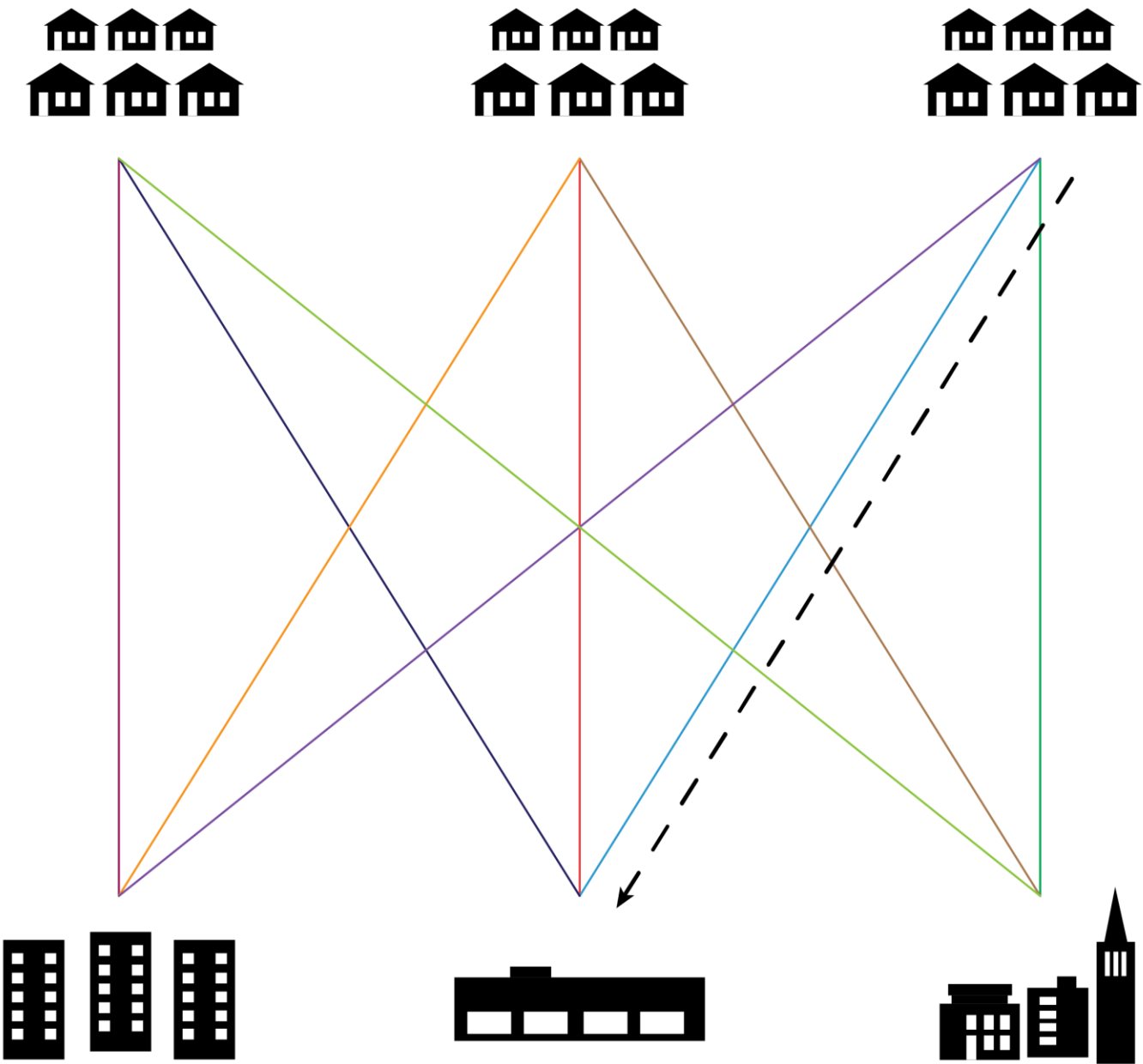


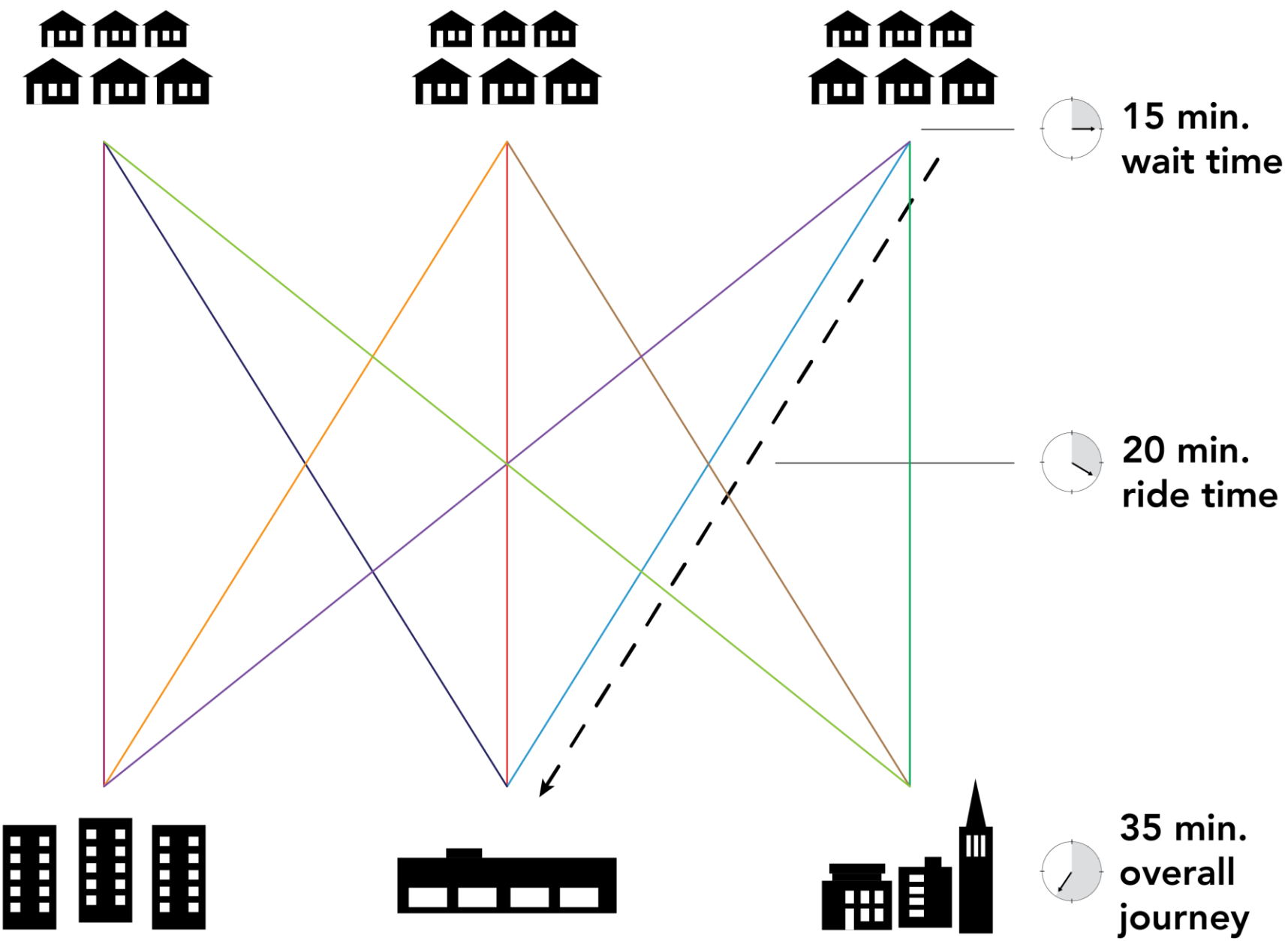


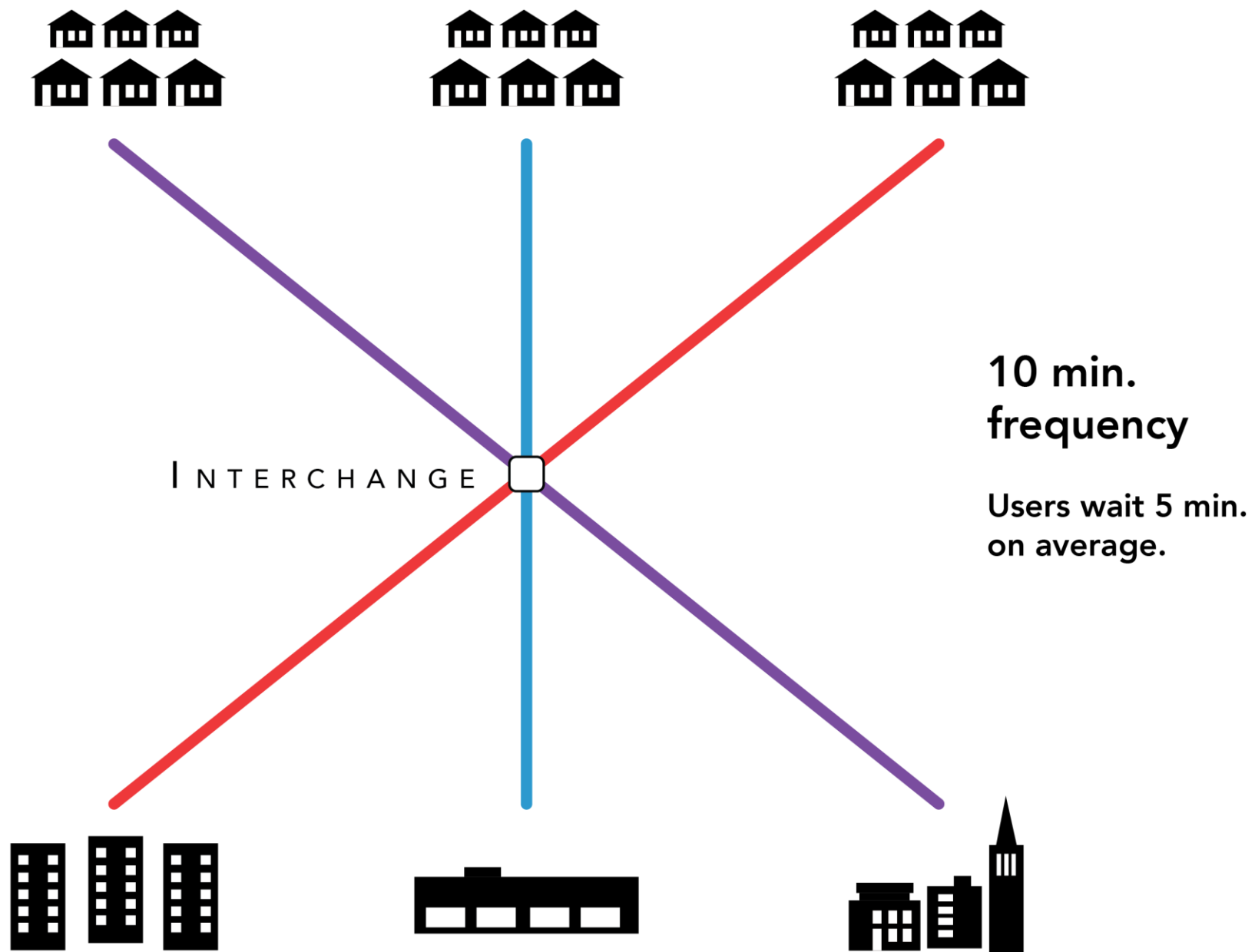


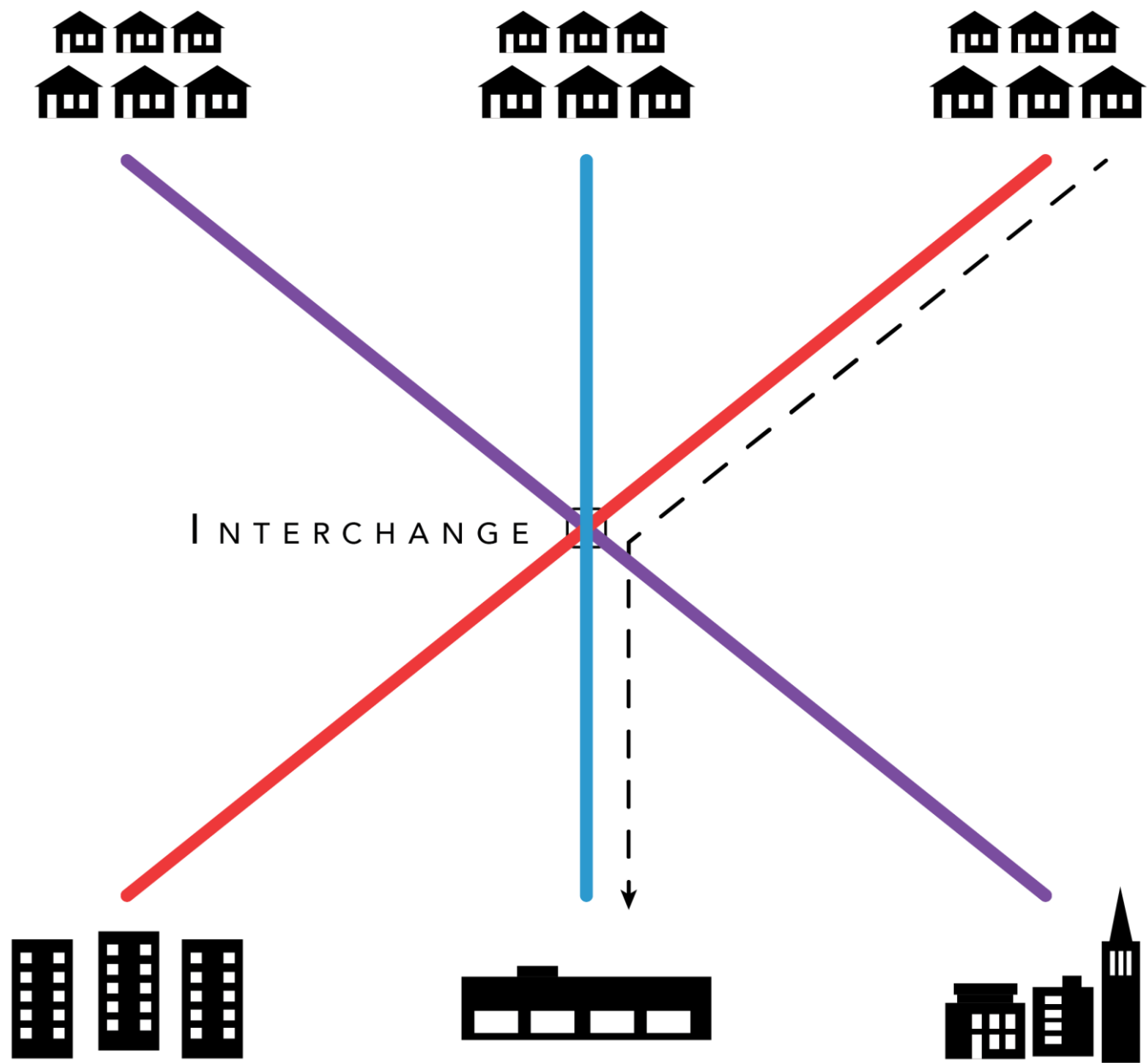
**Direct routes offer
30 min. frequency.**

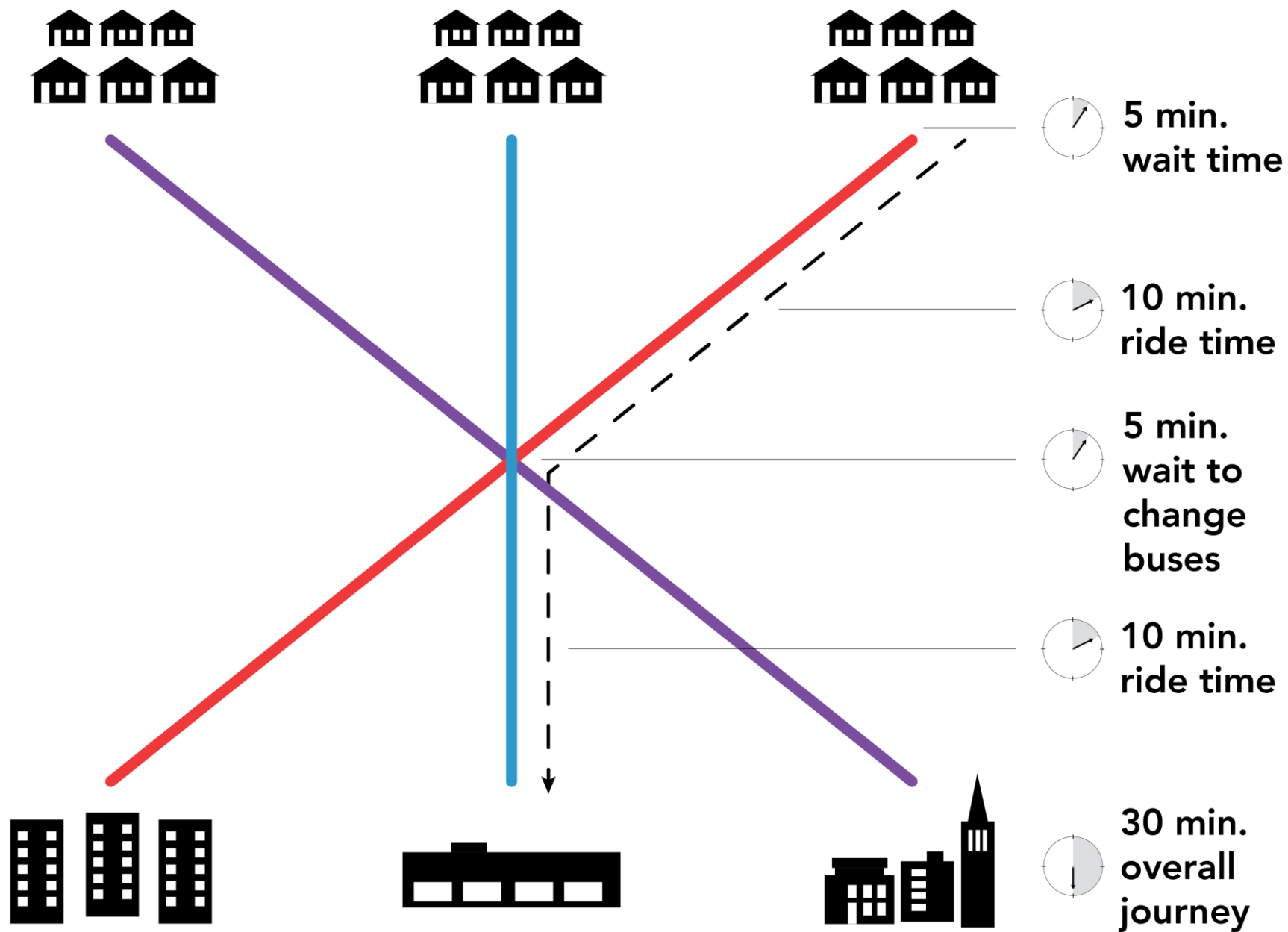
**Users wait 15 min.
on average,
either at the start
of their journey,
or at their
destination.**











Poll: If some additional interchange would result in greater access and faster journeys for most people, would that be worthwhile?

1. **Avoiding interchange** is important enough to me that I would accept poorer frequencies, longer journeys and a more complex network.
2. No preference.
3. Higher frequencies, shorter journey times or a simpler network are important enough to me that I would accept **more interchange**.
4. I'm unsure.





Appetite (or tolerance) for change

How much change is desirable and tolerable, given changes benefitting the larger population will be disruptive to some people?

We can make most peoples' journeys faster and better by changing the network...but it is not possible to make it better for *every person* nor for *every current user*.

Possible inconveniences or difficulties include:

- Having to learn new routes.
- Having to walk farther.
- Having to make an interchange for a trip on which it's not required today.



Poll: Show your tolerance or appetite for change on this scale.

1. No existing bus users should be inconvenienced in any way.
2. ...
3. ...
4. ...
5. We should have a network that provides maximum benefits to large numbers of people, regardless of the inconvenience or difficulty for some existing users.
6. Not sure.



Network Redesign Timeline:

July 1 – July 21	Public consultation on key choices and trade-offs
July 6	Online public meeting, 6 pm
August-September	NTA, Bus Éireann, Cork City and County staffs will develop Draft New Network
October-November	Public consultation on Draft New Network
January	Expected publication of the Final New Network

Please participate in the online consultation

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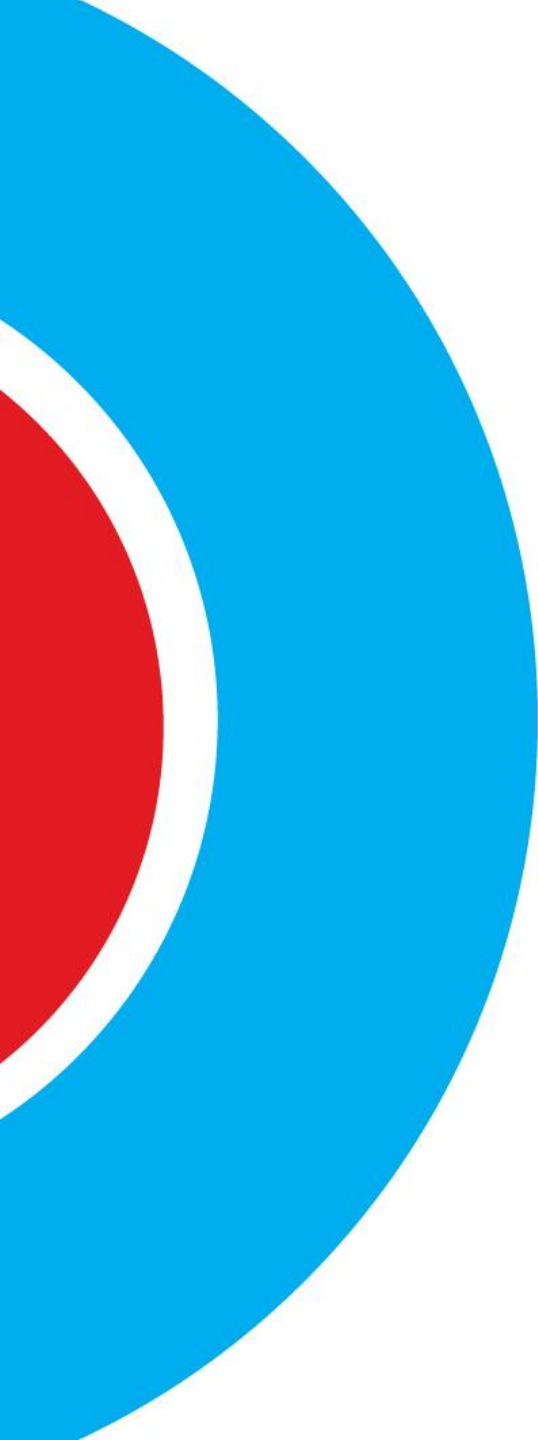
Find out what happens next and how to stay involved.

Start at

<https://busconnects.ie/busconnects-cork/>

**BUS
CONNECTS
CORK**
SUSTAINABLE TRANSPORT FOR A BETTER CITY.

Q&A



**Thank you for your
participation, and for your
interest in making Cork's
public transport better.**