

Transit in theory and in practice

A thesis presentation by Jada Potter



The background is a solid light pink. On the left, a green vertical line with a yellow circle at the bottom and black dots along its length is partially visible. Above it, a yellow line with black dots forms a horizontal segment. On the right, a blue line with a yellow circle at the bottom and black dots along its length is partially visible. Above it, a pink line with black dots forms a horizontal segment. Further right, a red line with black dots is partially visible. The text 'In theory' is centered in the lower half, and '(Processes)' is centered below it.

In theory

(Processes)

Accessibility To:

Jobs

Travel Mode:

Transit

Departure Time:

8 am

Travel Time Threshold:

60 minutes

Filter:

All Jobs

Scale:

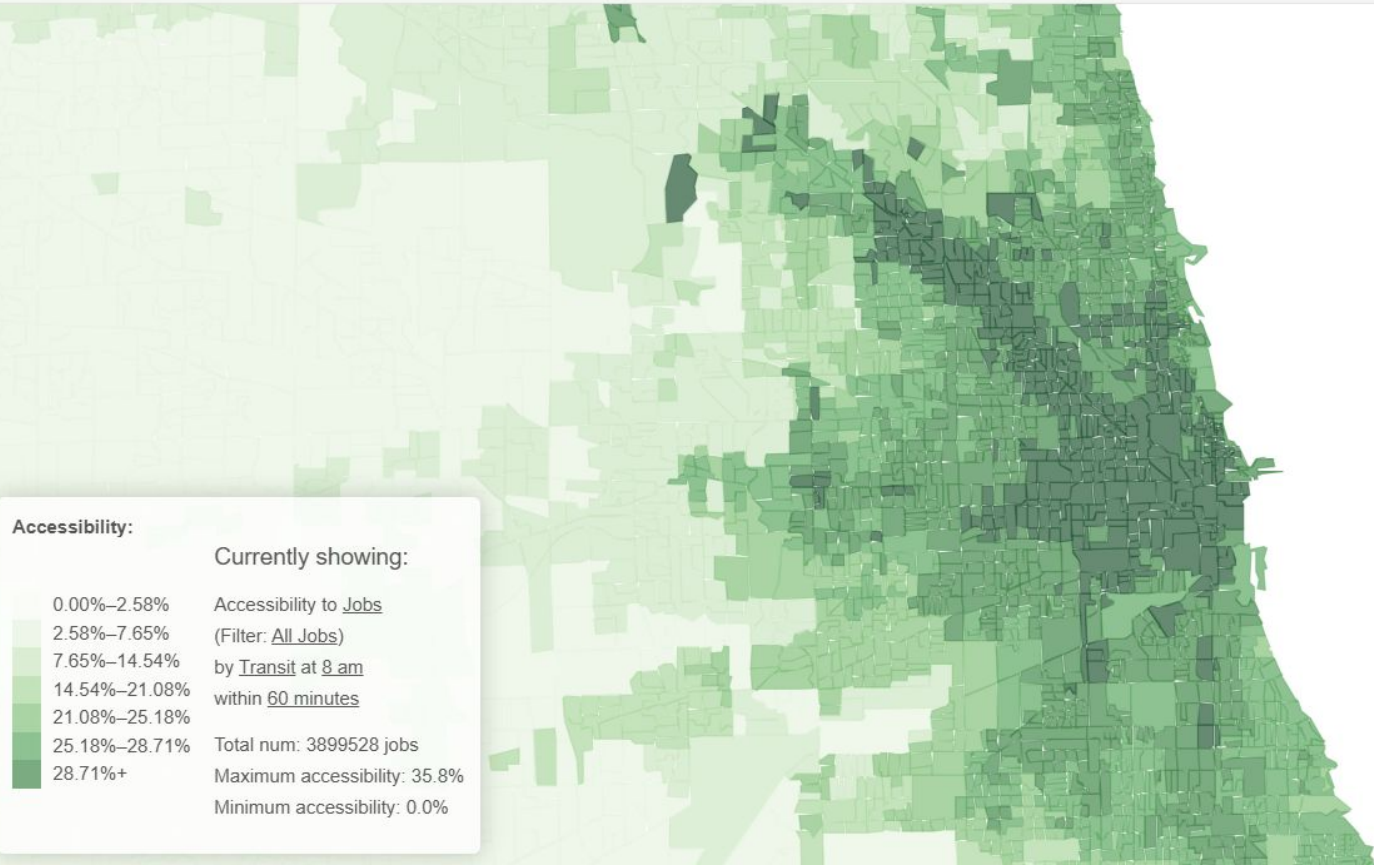
Natural Break

☐ Show rail lines

☐ Show Chicago Community Areas

☐ Show Chicago Ward Boundaries

Show Map



Accessibility:

0.00%–2.58%

2.58%–7.65%

7.65%–14.54%

14.54%–21.08%

21.08%–25.18%

25.18%–28.71%

28.71%+

Currently showing:
Accessibility to Jobs
(Filter: All Jobs)
by Transit at 8 am
within 60 minutes

Total num: 3899528 jobs
Maximum accessibility: 35.8%
Minimum accessibility: 0.0%



Overnight (owl) service

The N5 South Shore Night bus provides late night/early morning service on the most heavily traveled portions of several CTA routes. During the hours, these routes do not operate. The routes and portions served include:

#6 Jackson Park Express

between 67th/Stony Island and 79th/South Shore

#15 Jeffery Local

between 67th/Jeffery and 75th/Jeffery

#67 67th/69th/71st

between 69th/Red Line station and 67th/Jeffery

#71 71st/South Shore

between 75th/South Shore to 92nd/Commercial

#75 74th/75th

between 75th/Jeffery and 75th/South Shore

#95 95th

between 92nd/Commercial and

95th/Dan Ryan Red Line station

Additional notes:



All CTA buses are accessible. For accessibility help or to report concerns at stops, contact CTA Customer Service at transitchicago.com/feedback.



Federal law requires priority seating be designated for seniors and people with disabilities. **Please stand up** and yield these seats when needed for qualifying riders or when asked.



Schedules and other info in this timetable are subject to change. CTA does not assume responsibility for errors in timetables nor for inconvenience or damage resulting from delays.



Pay close attention to destination signs and announcements when boarding: added service may sometimes be provided over portions of this or any bus route and some trips can end before the furthest terminal on a line depending on service needs or time of day.



Bicycle racks are installed on the front of all CTA buses and are allowed on CTA trains during certain hours. See our Bike & Ride brochure or webpage for help on how to use racks and more.



Know before you go: Get alerts from us by text or e-mail about planned service changes every week or instant alerts for unplanned reroutes and disruptions. Sign up for CTA Updates today at transitchicago.com/updates.



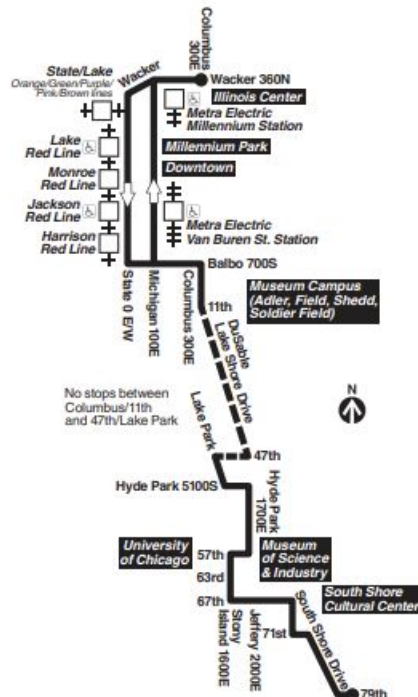
For more travel information, use the Ventra app or call the RTA Travel Information Center at 312-836-7000. Para obtener mayor información, en Español, llame al Centro de Información a

Chicago Transit Authority



6 Jackson Park Express

Effective Dec. 22, 2024



Monday thru Friday

#6 Jackson Park Express

Northbound

LV 79th/ South Shore	67th/ Stony Island	57th/ Stony Island	Lake Park/ 47th	Columbus/ 11th	AR Wacker/ Columbus
4:00a	4:13a	4:18a	4:26a	4:34a	4:47a
4:18	4:31	4:36	4:44	4:52	5:05
4:34	4:47	4:52	5:01	5:08	5:21
4:59	5:02	5:07	5:16	5:23	5:36
5:04	5:17	5:22	5:31	5:38	5:51
5:19	5:32	5:37	5:46	5:53	6:06
5:32	5:46	5:51	5:59	6:07	6:20
5:43	5:57	6:02	6:11	6:19	6:32
5:53	6:08	6:14	6:23	6:32	6:46
6:05	6:20	6:26	6:35	6:44	6:58
6:17	6:32	6:38	6:47	6:56	7:10
6:28	6:43	6:49	6:58	7:07	7:21
6:37	6:53	6:59	7:09	7:19	7:33
6:44	7:01	7:08	7:19	7:30	7:45
6:53	7:10	7:17	7:29	7:40	7:56
7:01	7:19	7:27	7:39	7:51	8:07
7:11	7:29	7:37	7:49	8:01	8:17
7:21	7:39	7:47	7:59	8:11	8:27
7:31	7:49	7:57	8:09	8:21	8:37
7:41	7:59	8:07	8:19	8:31	8:47
7:51	8:09	8:17	8:29	8:41	8:57
8:01	8:19	8:27	8:39	8:51	9:07
8:13	8:30	8:38	8:50	9:00	9:16
8:25	8:42	8:49	9:00	9:09	9:24
8:36	8:53	9:00	9:11	9:19	9:34
8:48	9:05	9:12	9:23	9:31	9:46
9:00	9:17	9:24	9:35	9:43	9:58
9:12	9:29	9:36	9:47	9:55	10:10
9:25	9:41	9:48	9:59	10:07	10:22
9:37	9:53	10:00	10:11	10:19	10:34
9:49	10:05	10:12	10:23	10:31	10:46

then every 11 to 12 minutes until

1:58p	2:16p	2:23p	2:35p	2:43p	2:59p
2:10	2:28	2:35	2:47	2:55	3:12
2:23	2:40	2:47	2:59	3:08	3:25
2:35	2:52	2:59	3:11	3:20	3:37
2:47	3:04	3:11	3:23	3:32	3:49
2:59	3:16	3:23	3:35	3:44	4:01
3:11	3:28	3:35	3:47	3:56	4:13
3:23	3:40	3:47	3:59	4:08	4:25
3:35	3:52	3:59	4:11	4:20	4:37
3:47	4:04	4:11	4:23	4:33	4:51
3:59	4:16	4:23	4:35	4:45	5:04
4:11	4:28	4:35	4:47	4:57	5:16
4:23	4:40	4:47	4:59	5:09	5:28
4:35	4:52	4:59	5:11	5:21	5:40
4:48	5:05	5:11	5:23	5:34	5:53
5:01	5:18	5:25	5:37	5:47	6:06
5:16	5:33	5:39	5:51	6:00	6:17
5:31	5:47	5:54	6:05	6:13	6:29
5:46	6:02	6:09	6:20	6:28	6:44
6:01	6:17	6:24	6:35	6:43	6:59
6:17	6:33	6:39	6:50	6:59	7:14
6:32	6:48	6:55	7:06	7:14	7:30
6:50	7:05	7:11	7:21	7:29	7:43
7:07	7:22	7:28	7:37	7:45	7:58
7:23	7:38	7:44	7:53	8:01	8:14
7:39	7:54	8:00	8:09	8:17	8:30
7:55	8:10	8:16	8:25	8:33	8:46
8:12	8:27	8:33	8:43	8:50	9:03
8:31	8:46	8:52	9:01	9:09	9:22
8:51	9:06	9:12	9:21	9:28	9:41
9:12	9:26	9:32	9:41	9:48	10:01
9:32	9:46	9:52	10:01	10:08	10:21
9:52	10:06	10:12	10:21	10:28	10:41
10:13	10:27	10:32	10:41	10:48	11:01
10:36	10:48	10:53	11:01	11:08	11:21

Southbound

LV Wacker/ Columbus	Columbus/ 11th	Lake Park/ 47th	57th/ Stony Island	67th/ Stony Island	AR 79th/ South Shore
4:59a	5:13a	5:20a	5:27a	5:32a	5:46a
5:18	5:31	5:38	5:45	5:51	6:04
5:36	5:49	5:56	6:03	6:09	6:22
5:53	6:06	6:13	6:20	6:26	6:39
6:06	6:21	6:28	6:35	6:41	6:56
6:18	6:33	6:40	6:47	6:53	7:11
6:29	6:46	6:53	7:03	7:10	7:27
6:42	6:58	7:06	7:15	7:22	7:39
6:54	7:11	7:18	7:28	7:35	7:52
7:06	7:23	7:31	7:40	7:47	8:04
7:18	7:36	7:43	7:53	8:01	8:17
7:30	7:48	7:56	8:06	8:14	8:30
7:42	8:01	8:08	8:18	8:26	8:42
7:55	8:13	8:21	8:31	8:39	8:55
8:07	8:26	8:33	8:43	8:51	9:07
8:20	8:38	8:46	8:56	9:04	9:20
8:32	8:51	8:58	9:08	9:16	9:32
8:45	9:03	9:11	9:21	9:29	9:45
8:57	9:16	9:23	9:33	9:40	9:56
9:09	9:28	9:35	9:45	9:52	10:04
9:21	9:40	9:48	9:57	10:05	10:21

then every 12 minutes until

12:45p	1:04p	1:12p	1:23p	1:31p	1:49p
12:56	1:15	1:24	1:35	1:43	2:01
1:08	1:28	1:36	1:47	1:55	2:13
1:20	1:40	1:48	1:59	2:07	2:25
1:32	1:52	2:00	2:11	2:19	2:37
1:44	2:04	2:12	2:23	2:31	2:49
1:56	2:16	2:24	2:35	2:43	3:01
2:08	2:28	2:36	2:47	2:56	3:14
2:20	2:40	2:48	3:00	3:09	3:27
2:31	2:51	3:00	3:11	3:20	3:38
2:42	3:02	3:11	3:22	3:31	3:49

then every 9 to 10 minutes until

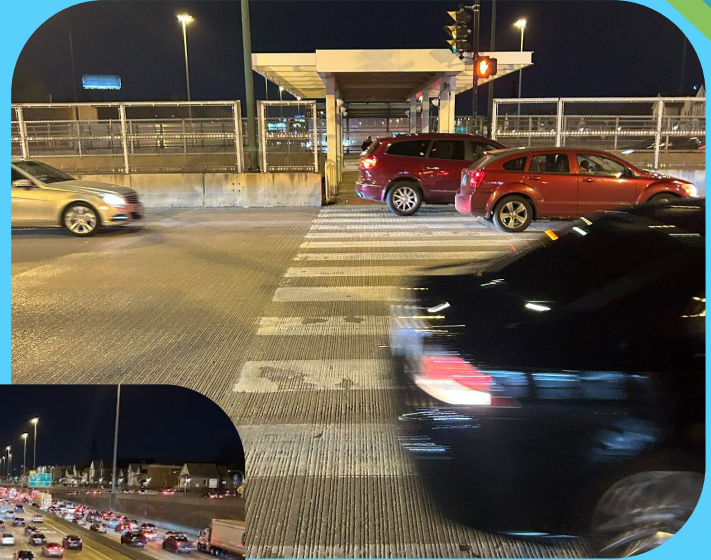
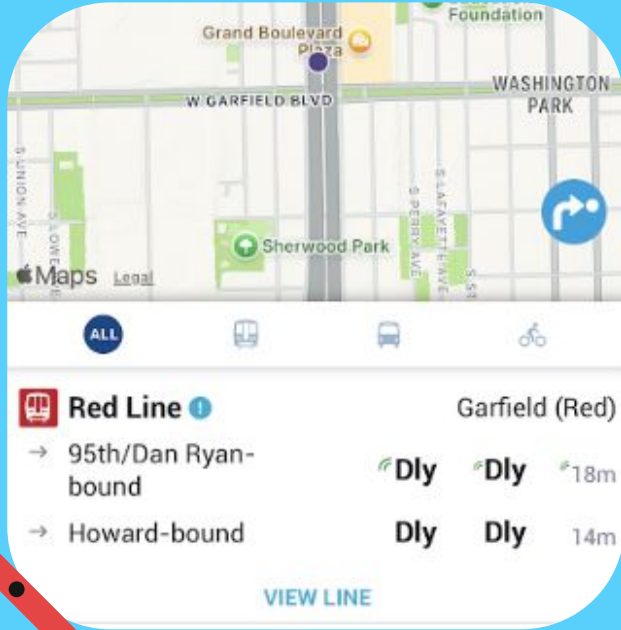
5:30	5:52	6:02	6:13	6:22	6:39
5:41	6:02	6:11	6:22	6:30	6:48
5:51	6:12	6:21	6:32	6:40	6:57
6:02	6:22	6:31	6:41	6:48	7:05
6:12	6:32	6:41	6:51	6:58	7:15
6:22	6:42	6:51	7:01	7:08	7:25
6:33	6:53	7:02	7:12	7:19	7:36
6:44	7:04	7:13	7:23	7:30	7:47
6:56	7:16	7:25	7:35	7:42	7:59
7:09	7:28	7:36	7:47	7:54	8:11
7:21	7:40	7:48	7:58	8:05	8:21
7:34	7:52	8:00	8:10	8:16	8:33
7:46	8:04	8:12	8:22	8:28	8:45
7:58	8:16	8:24	8:34	8:40	8:57
8:10	8:28	8:36	8:46	8:52	9:09
8:22	8:40	8:48	8:58	9:04	9:21
8:34	8:52	9:00	9:10	9:16	9:33
8:46	9:04	9:12	9:21	9:27	9:43
8:58	9:16	9:24	9:33	9:39	9:55
9:12	9:29	9:37	9:46	9:52	10:08
9:26	9:43	9:51	10:00	10:06	10:22
9:41	9:58	10:06	10:15	10:21	10:37
9:56	10:13	10:21	10:30	10:36	10:52
10:11	10:28	10:36	10:45	10:51	11:06
10:27	10:43	10:50	10:58	11:04	11:18
10:43	10:58	11:05	11:13	11:19	11:33
10:58	11:13	11:20	11:28	11:34	11:48
11:13	11:28	11:35	11:43	11:49	12:03a
11:28	11:43	11:50	11:58	12:04	12:18
11:43	11:58	12:05a	12:13a	12:19	12:33
11:58	12:13a	12:20	12:28	12:34	12:48

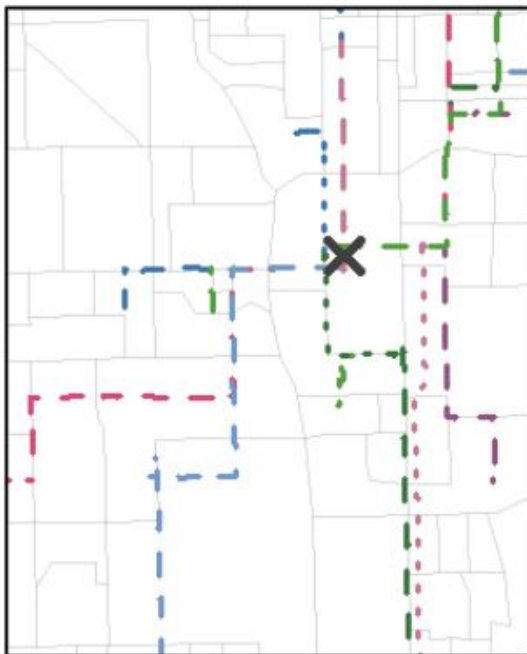
The background is a solid light blue. In the top left, a green vertical line with a yellow circle at the bottom and several black dots above it is partially visible. To its right, a yellow line with black dots forms a zigzag pattern. On the right side, there are three more lines: a purple line with a yellow circle at the bottom and black dots, a pink line with a yellow circle at the bottom and black dots, and a red line with black dots. The pink and red lines curve upwards towards the top right corner.

In practice

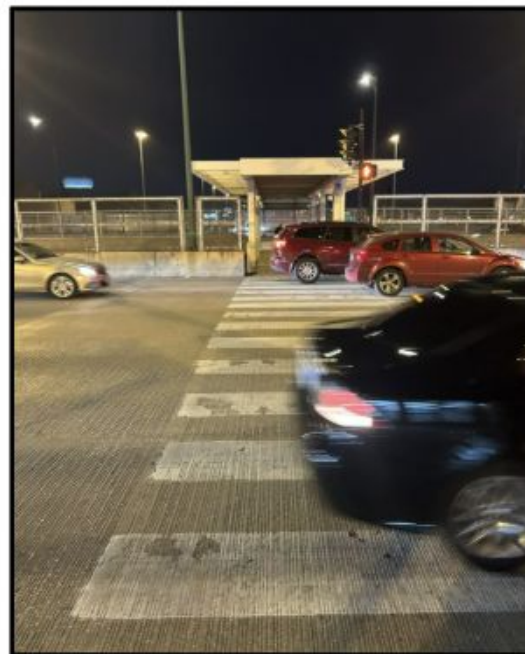
(Outcomes)





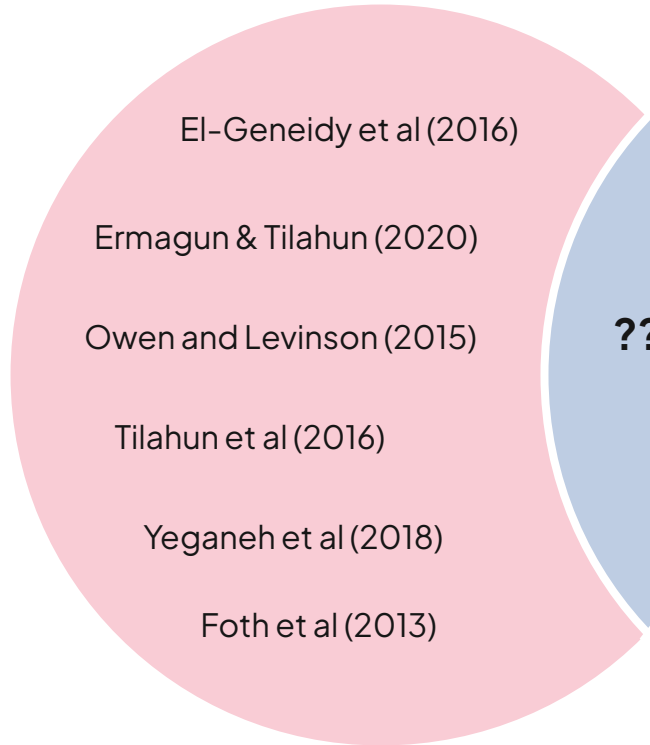


Process-based studies
measure access by theoretical
travel time alone, which may
not match user experiences

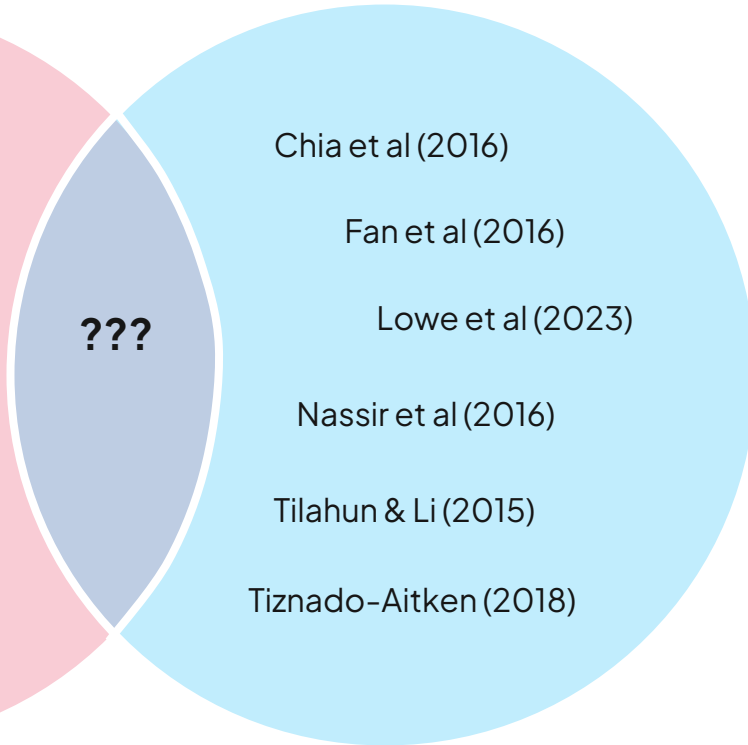


Outcome-based studies
measure impedances beyond
travel time, like needing to
cross 10 lanes of busy traffic to
reach a bus stop

Studies that account for transit processes



Studies that account for transit outcomes



The goal

processes

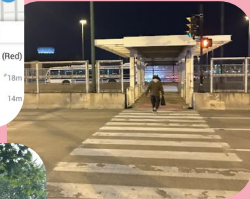
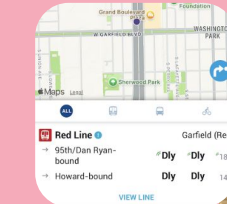
outcomes

Accessibility
from a given
location

= \sum (



+



)



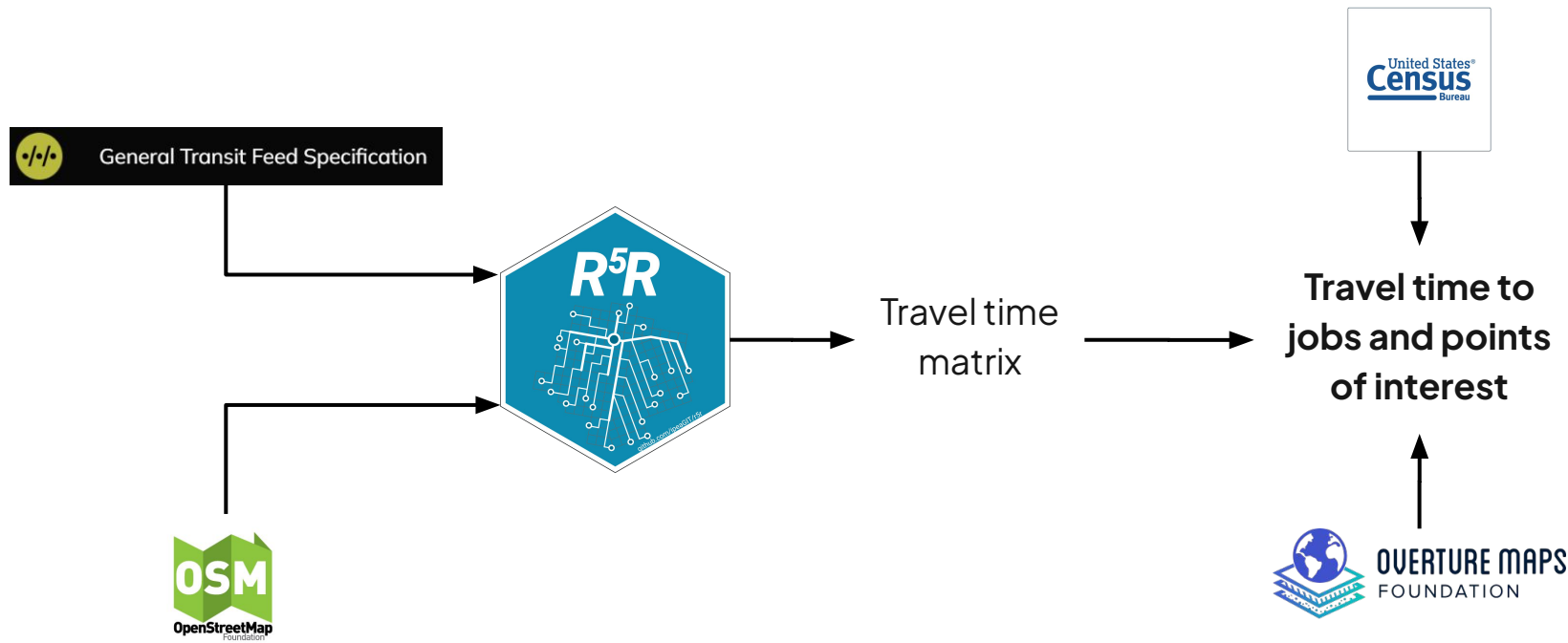
Research Questions

How can we create a metric that accounts for both processes and outcomes?

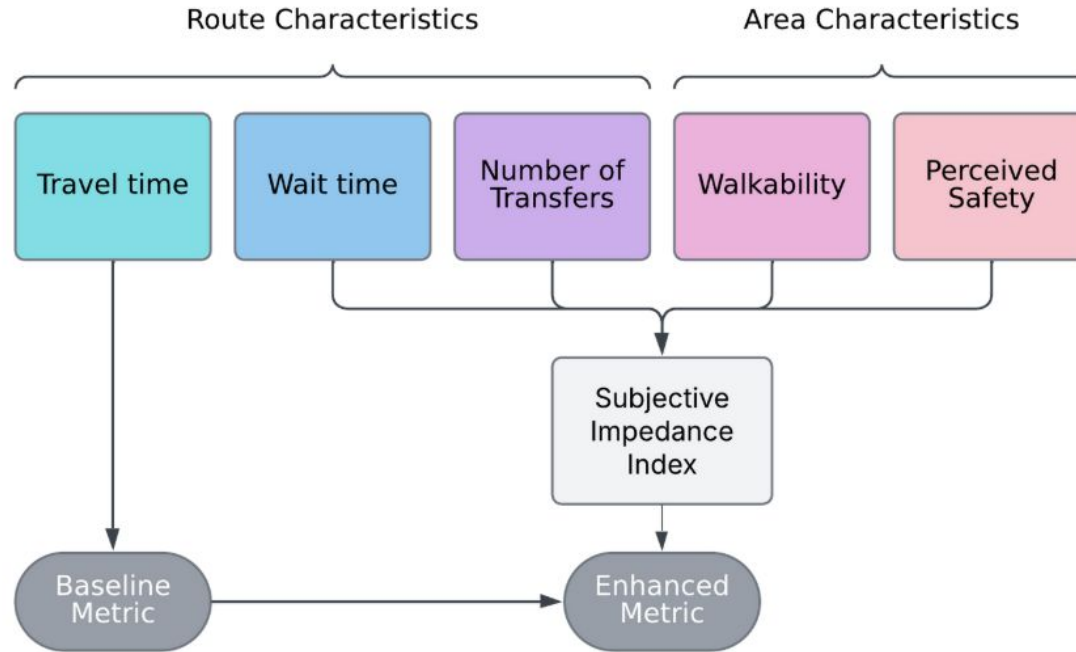
To what extent do traditional methods over/under-estimate transit access in comparison?

What are the consequences for equity and racial justice?

Calculating travel time

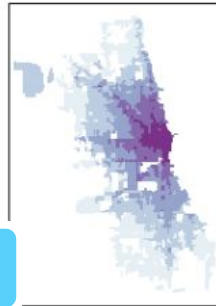


Subjective Impedances



Results – metrics

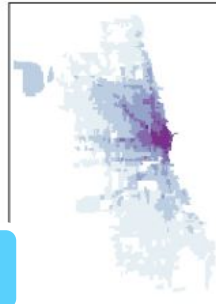
Baseline



Job access by
Census Block Group
(Baseline)

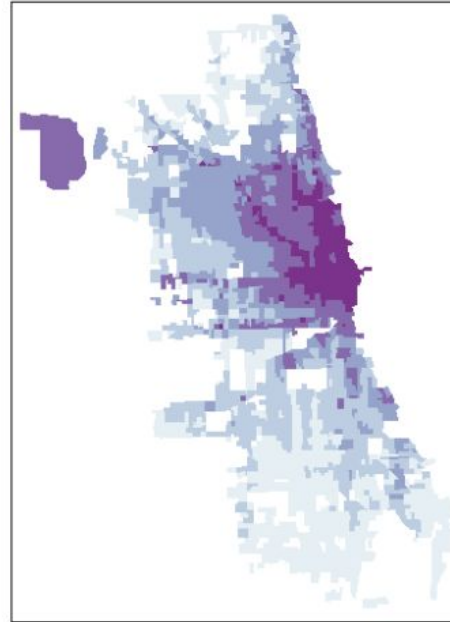
54,781 to 143,591
143,591 to 211,347
211,347 to 290,266
290,266 to 402,572
402,572 to 709,879

Enhanced



Job access by
Census Block Group
(Enhanced)

4,448 to 61,047
61,047 to 122,047
122,047 to 196,196
196,196 to 296,207
296,207 to 574,766



Ratio of job
access (enhanced
to baseline)

0.072 to 0.233
0.233 to 0.327
0.327 to 0.430
0.430 to 0.553
0.553 to 0.810

Ratio (B/E)

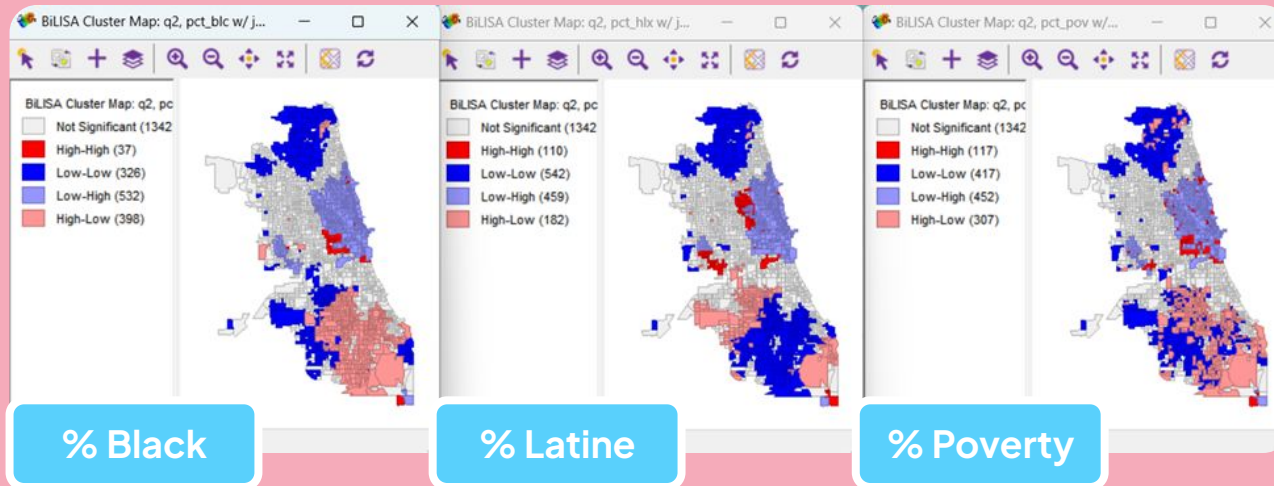
A decorative graphic on a light blue background. It features several stylized, colorful lines (pink, green, blue, yellow, purple) with black dots along them. A prominent red vertical line with a white dot at the top is positioned to the left of the title. The lines are of varying thickness and curve, creating a modern, abstract feel.

Implications of ratio

- Transit AND the ability to measure it are inequitably distributed
- Shows where process-based methods fail to detect low accessibility
- Shows where subjective impedances likely play a large role

Results – equity and justice

- Higher Black and below-poverty-line population correlated with wider gap between measures
- Especially on Far South Side



A decorative graphic on the left side of the slide consists of several overlapping, curved lines in teal, green, pink, and yellow. These lines are adorned with small black dots. A prominent vertical red line runs down the center-left of the slide, featuring a white dot at its top and another white dot further down.

Implications for equity and justice

- **Equity:** Inequitable if transit need is higher and access (and ability to accurately measure it) is lower
- **Justice:** why should people be reliant on different transportation modes in the first place? Does this reinforce history of segregation?



Conclusions

- Metrics of transit access can be modified to account for subjective impedances
- Inequities in transit access are compounded by the deficiencies of process-based methods



Conclusions

- Especially important in light of historical injustices
- Proof of concept for future methods