



SFMTA Equity Toolkit Transit Assessment

MWCOG TPB Regional Public Transportation Subcommittee

March 23, 2021

Steph A. Nelson, SFMTA GIS Developer

Agenda

1. SFMTA Toolkit Brief Introduction
2. SFMTA Context for Transit Equity Planning
3. SFMTA Equity Toolkit
 - Findings- Highlights
 - Methodology
 - Process & Next Steps
4. Q&A

SFMTA Equity Toolkit

The SFMTA Equity Toolkit enables data driven decision making that centers the needs of residents in equity neighborhoods– areas that have historically been systematically undermined by both public and private institutions.

The Equity Toolkit furthers the SFMTA's commitment to serve all residents of San Francisco.

SFMTA Equity Toolkit

SFMTA Equity Toolkit - Transit /

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An interactive extension of the Muni Service Equity Strategy [f](#) [t](#) [l](#)

The SFMTA Equity Toolkit enables data driven decision making that centers the needs of residents in equity neighborhoods— areas that have historically



Overview

Bayview-Hunters Point

Chinatown

Excelsior/Outer Mission

The Mission

Oceanview/Ingleside

The Tenderloin



When the Shelter-in-Place order took effect in mid-March, SFMTA pared Muni service back to a 17-route Core Service Plan in order to support essential service workers. As the economy has gradually re-opened, SFMTA has gradually restored Muni service. The service plan currently in effect (as of January 23, 2021) is the most robust since the Shelter-in-Place order took effect.

The *SFMTA Equity Toolkit -- Transit Assessment* evaluates access to jobs via transit during the Pre-Covid period and present day for each of the nine equity areas identified in the [Muni Service Equity Strategy](#).

Changes in job access from August 2020 to January 2021 vary from neighborhood to neighborhood, and include increases in access for many, but decreases in some.

The most noteworthy increase in job access occurred for residents of Hunters Point. Due to the introduction of the 15 Express, residents can now access close to 330,000 jobs in essential industries within 45 minutes, a jaw dropping 864% increase from just months prior.



LEGEND

Muni Service

- 10 Minutes or Less
- 10-20 Minutes
- Approximately 30 Minutes

SFMTA Equity Neighborhoods



Policy & Operational Context



Emergency Response Planning

Coronavirus Response

Department Operations Center (DOC) activated March 13, using an incident command system responsible for planning and implementing our responses to the COVID-19 public health emergency.

Priority is reducing health risks for staff and passengers while continuing to provide critical access.

Muni Equity Strategy Report

Muni Service Equity Strategy

Making Muni accessible to all



Equity Neighborhoods

- Concentration of low-income households (below 200% FPL): census tracts with poverty rates exceeding the citywide average (31%)
- Concentration of people of color: higher than citywide average percent of residents who identify with a race other than white (58.3%)
- Transit dependent population: census tracts with higher than the citywide average of 20.4% reporting no vehicle ownership
- Concentration of affordable and public housing developments

SFMTA Equity Toolkit

SFMTA Equity Toolkit - Transit

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- ☰

Hunters Point

- Pre-COVID Transit Service Area
- Aug 2020 Transit Service Area
- Jan 2021 Transit Service Area

Bayview

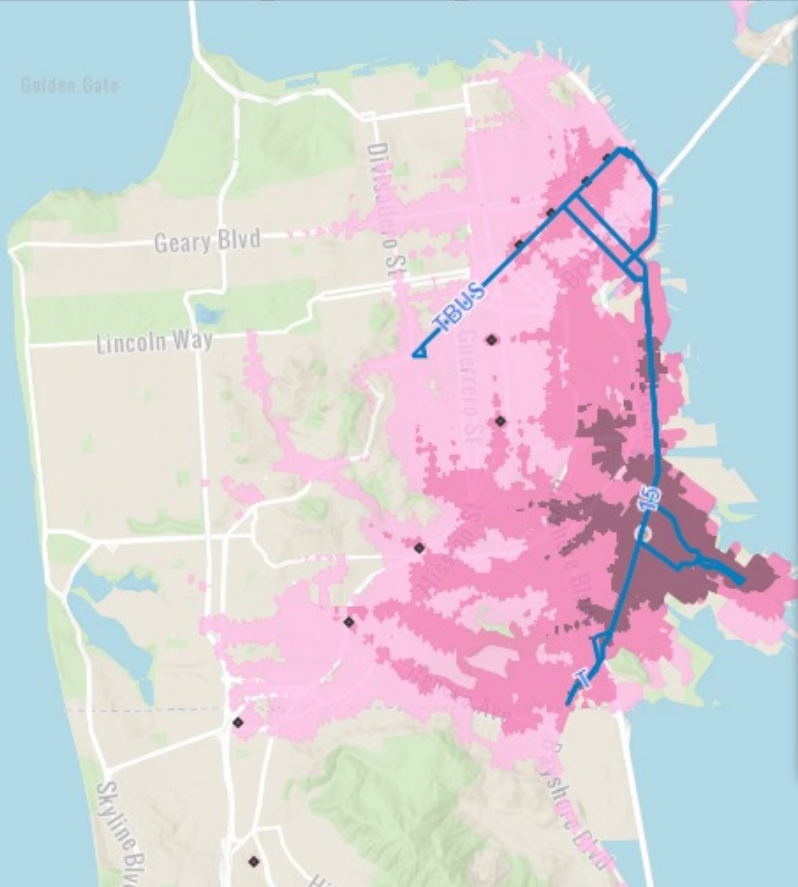
- Pre-COVID Transit Service Area
- Aug 2020 Transit Service Area
- Jan 2021 Transit Service Area

August 2020 to January 2021

Hunters Point
 The Hunters Point neighborhood saw the largest increase in job access via transit from the addition of the community-driven 15 Bayview-Hunters Point Express. In August 2020, Hunters Point residents were able to reach 3,500 jobs within a 30-minute commute, 34,000 jobs within 45 minutes, and 310,000 jobs within an hour.

	Aug 2020	Jan 2021	% Chg
30 mins	3,526	14,497	311.2%
45 mins	33,890	326,716	864.1%
60 mins	309,624	633,228	104.5%

Map navigation controls: + (Zoom In), Home, - (Zoom Out), Search (Magnifying Glass)



LEGEND

Muni Routes

- Muni Metro (Dark Red)
- Rapid Bus (Red)
- Connector (Blue)
- Frequent (Dark Blue)
- Grid (Light Blue)
- Historic (Yellow)
- Specialized (Dashed)

BART Stops

- ◆

Nhood Landmark (Rawview)

- ◆

SFMTA Equity Toolkit

SFMTA Equity Toolkit - Transit Assessment

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- Tenderloin
- Treasure Island

Bayview

Pre-COVID Transit Service Area

Current Transit Service Area

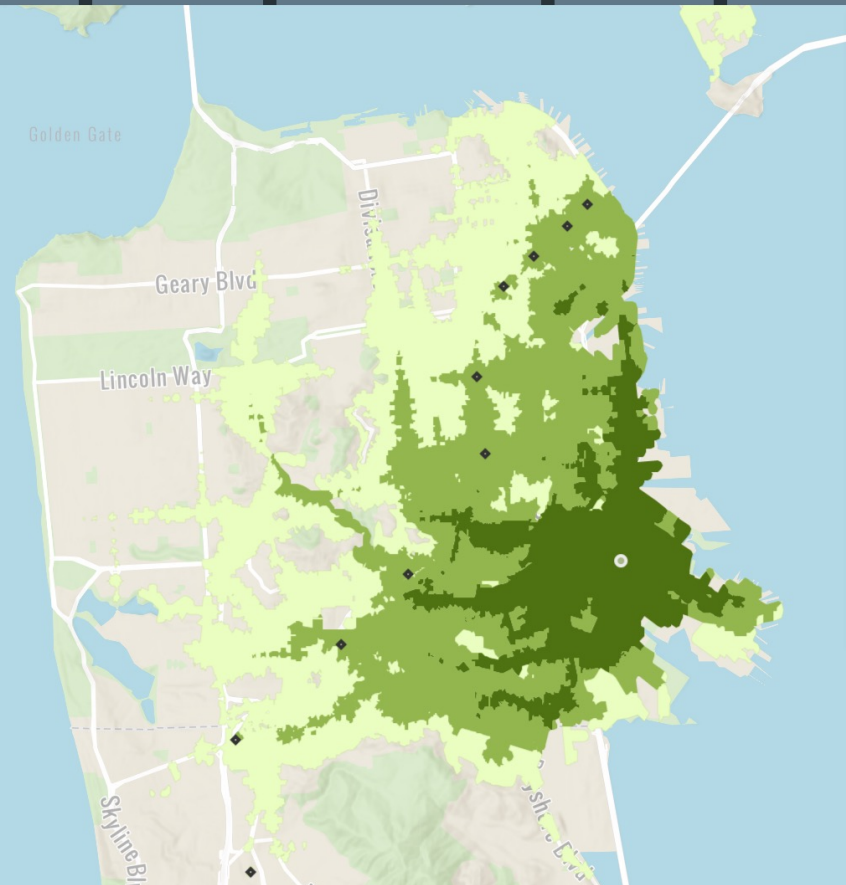
While Muni service has decreased since the Shelter in Place order took effect, access to jobs in essential industries within a 45 minute transit commute from the Bayview neighborhood has actually increased by 55% from 225,500 to 350,100.

	Pre-Covid	Current	% Chg
30 mins	30,512	34,084	12%
45 mins	225,460	350,114	55%
60 mins	613,164	614,724	0%

Note: Travel times are calculated from the Bayview Opera House at 4705 3rd Street. This location was chosen for its central location within the neighborhood and/or for its important role within the community.

Data Sources:

SFMTA, BART, SamTrans, AC Transit, GGT, Caltrain, US Census Bureau LEHD, PolicyLink, USGS.



LEGEND

- BART Stops
- NHood Landmark
- Transit Commute Shed (Current)
 - 60 mins
 - 45 mins
 - 30 mins

SFMTA Equity Toolkit

SFMTA Equity Toolkit - Transit Assessment

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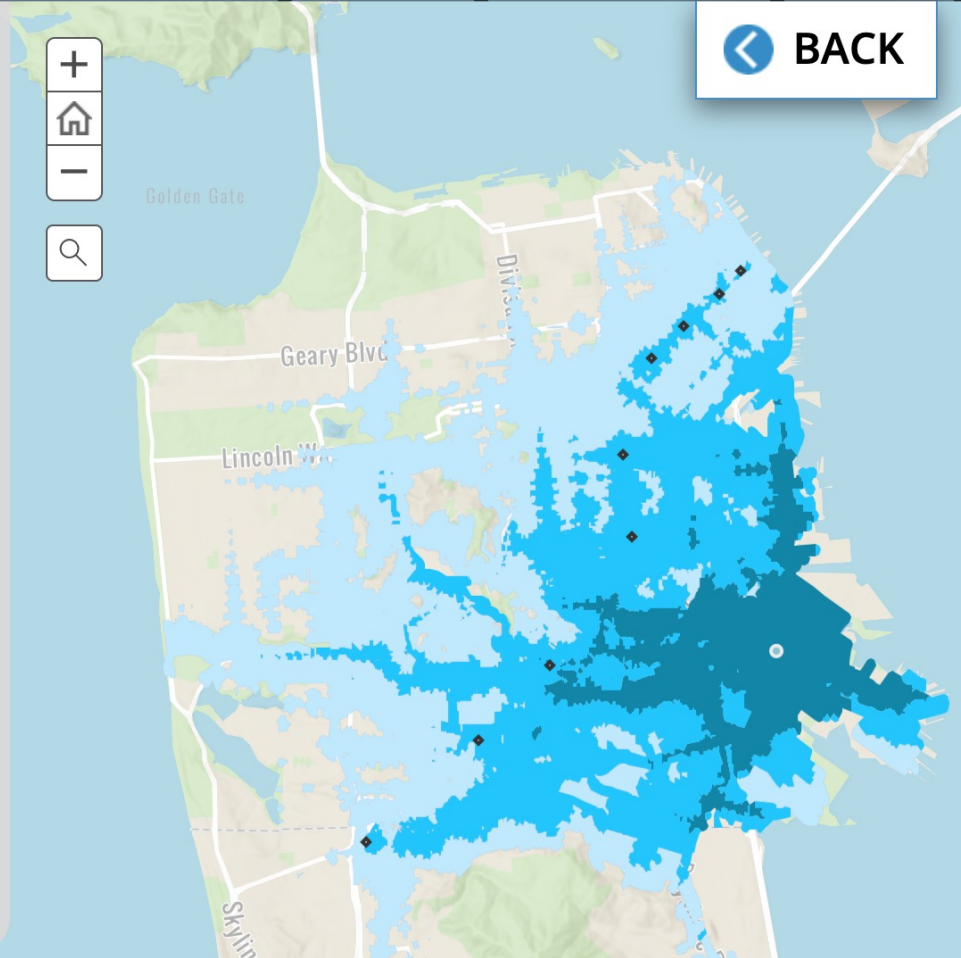
Bayview
 Pre-COVID Transit Service Area
 Current Transit Service Area

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[← BACK](#)

LEGEND

- BART Stops
- NHood Landmark
- Transit Commute Shed (PreCovid)
 - 60 mins
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SFMTA Equity Toolkit

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Hunters Point Job Access

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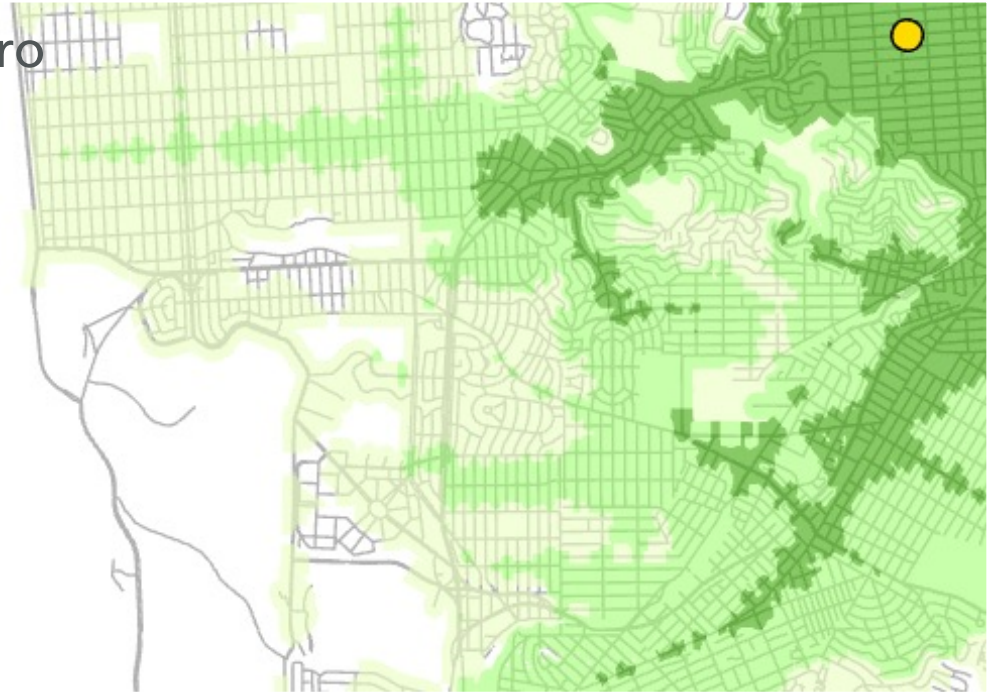
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SFMTA Equity Toolkit: Methodology

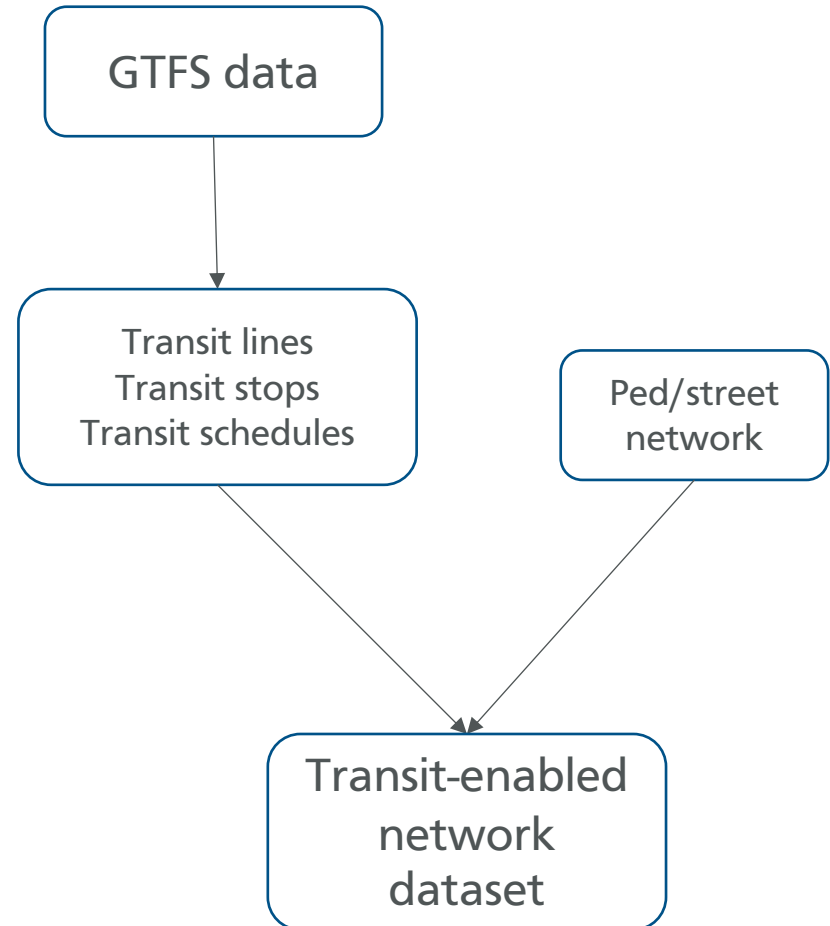
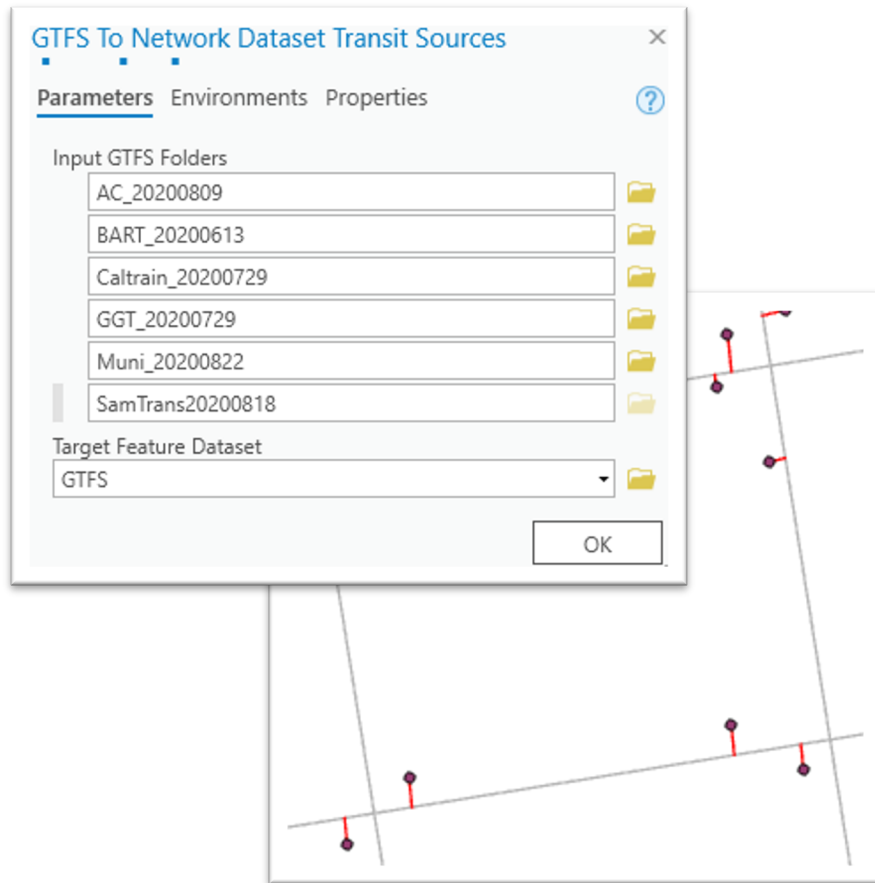
- Generate Transit Service Areas
- Analyze job access
- Take average from sample set of 20 model runs
- Publish map services & customize AGOL Storymap
- Python automation

Transit Service Area Analysis

- Environment: ESRI ArcGIS Pro
- Tool: Service Area
(Network Analyst)

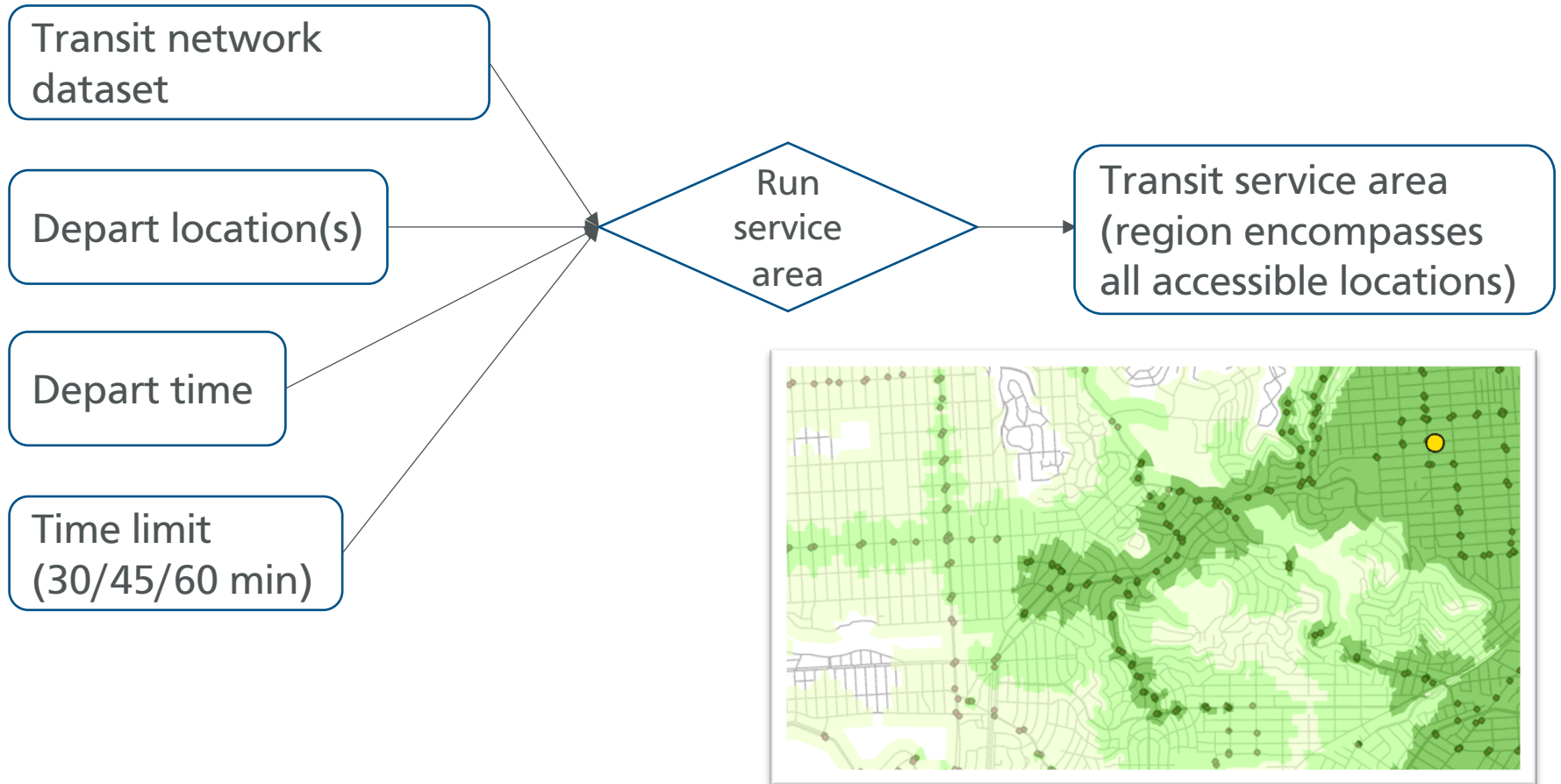


Transit Service Area Analysis - Build Transit Network



Transit Service Area Analysis

- Generate service area



SFMTA Equity Toolkit: Process

- Started out with more ambitious metrics, data limitations
- Iterations with review of service planning team
 - Data QAQC
 - Refine methodology
- Next steps: Update methodology to utilize ESRI's augmented Transit Network Analyst Tools
 - Calculate Accessibility Matrix & *Create Percent Access Polygons*
 - <http://esri.github.io/public-transit-tools/TransitNetworkAnalysisTools.html>

Putting the Toolkit to Use



Questions?

Thank You!

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