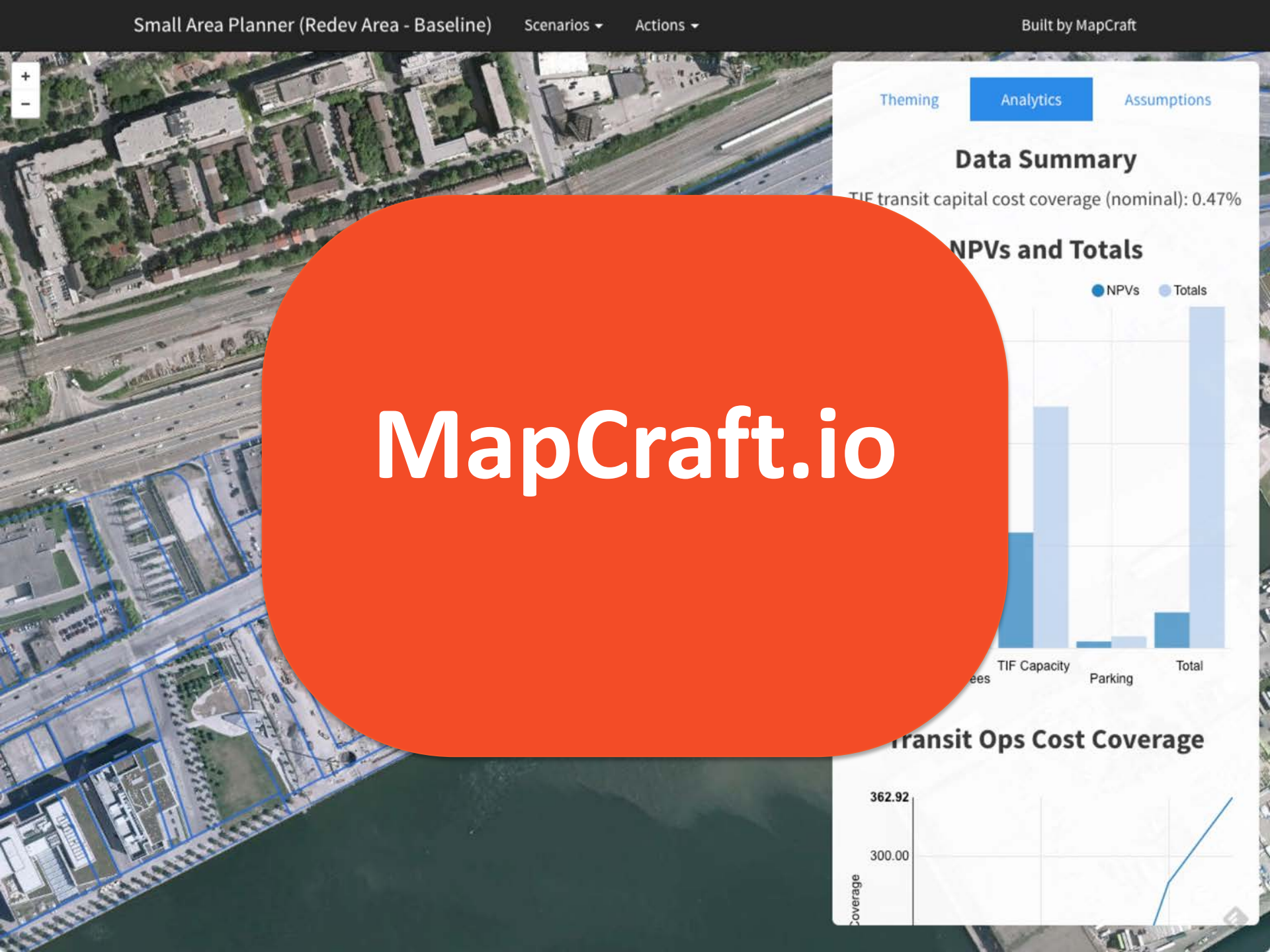
Connecting Scenario Approaches with Scenario Tools

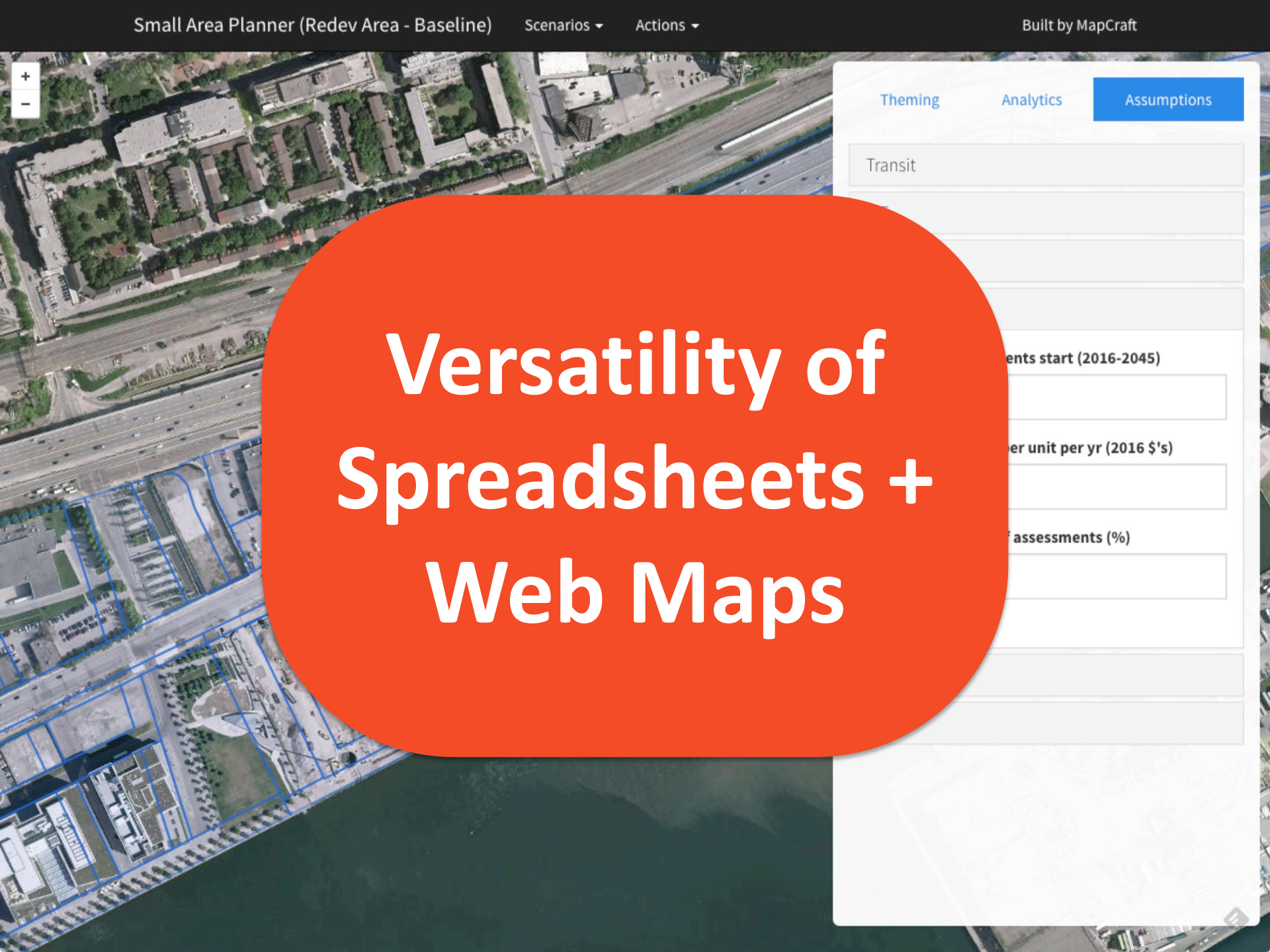
MapCraft: Spatial Analysis for Economic Development

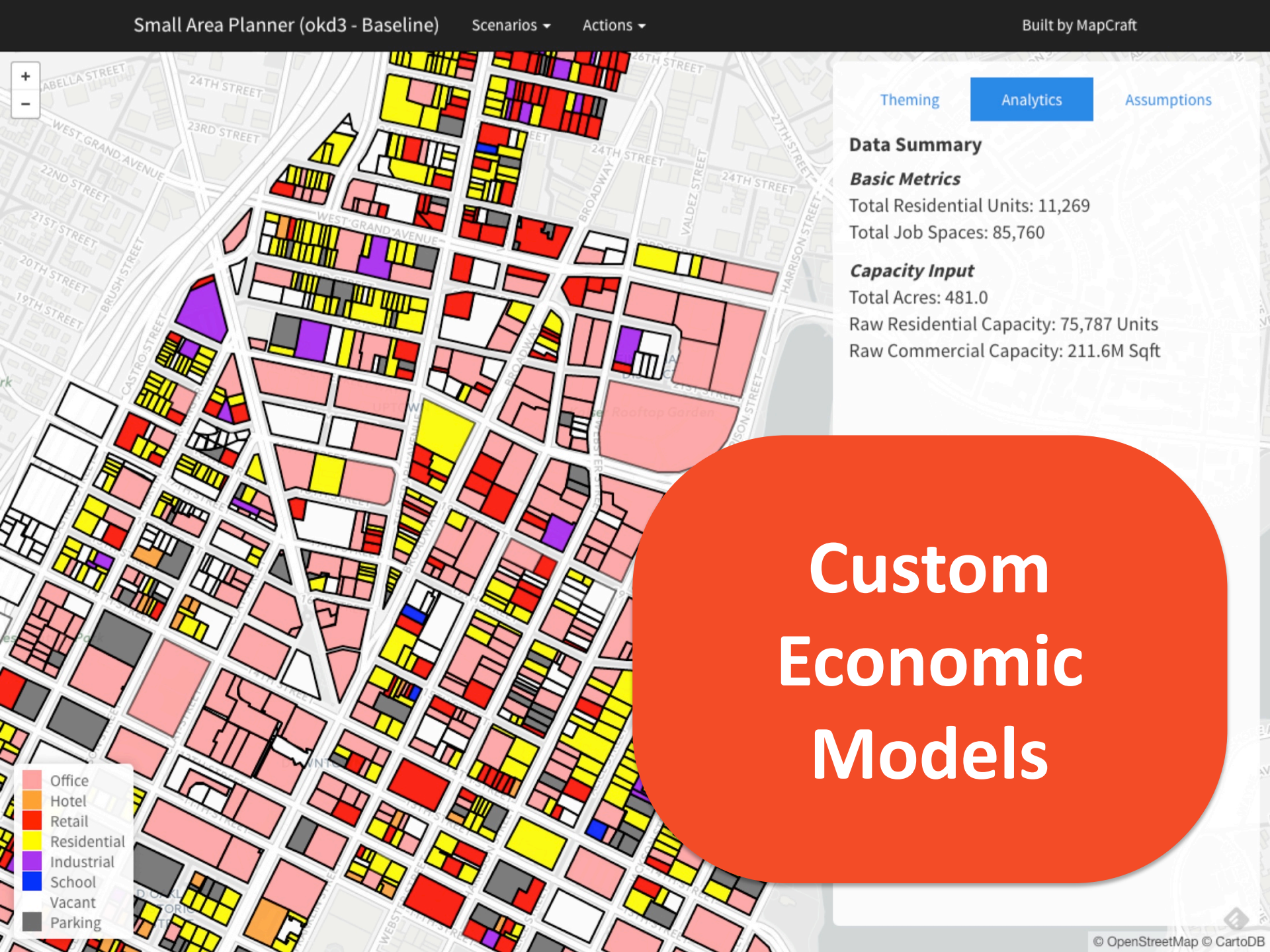
Transportation Research Board
Scenarios in Transportation Planning
August 2016

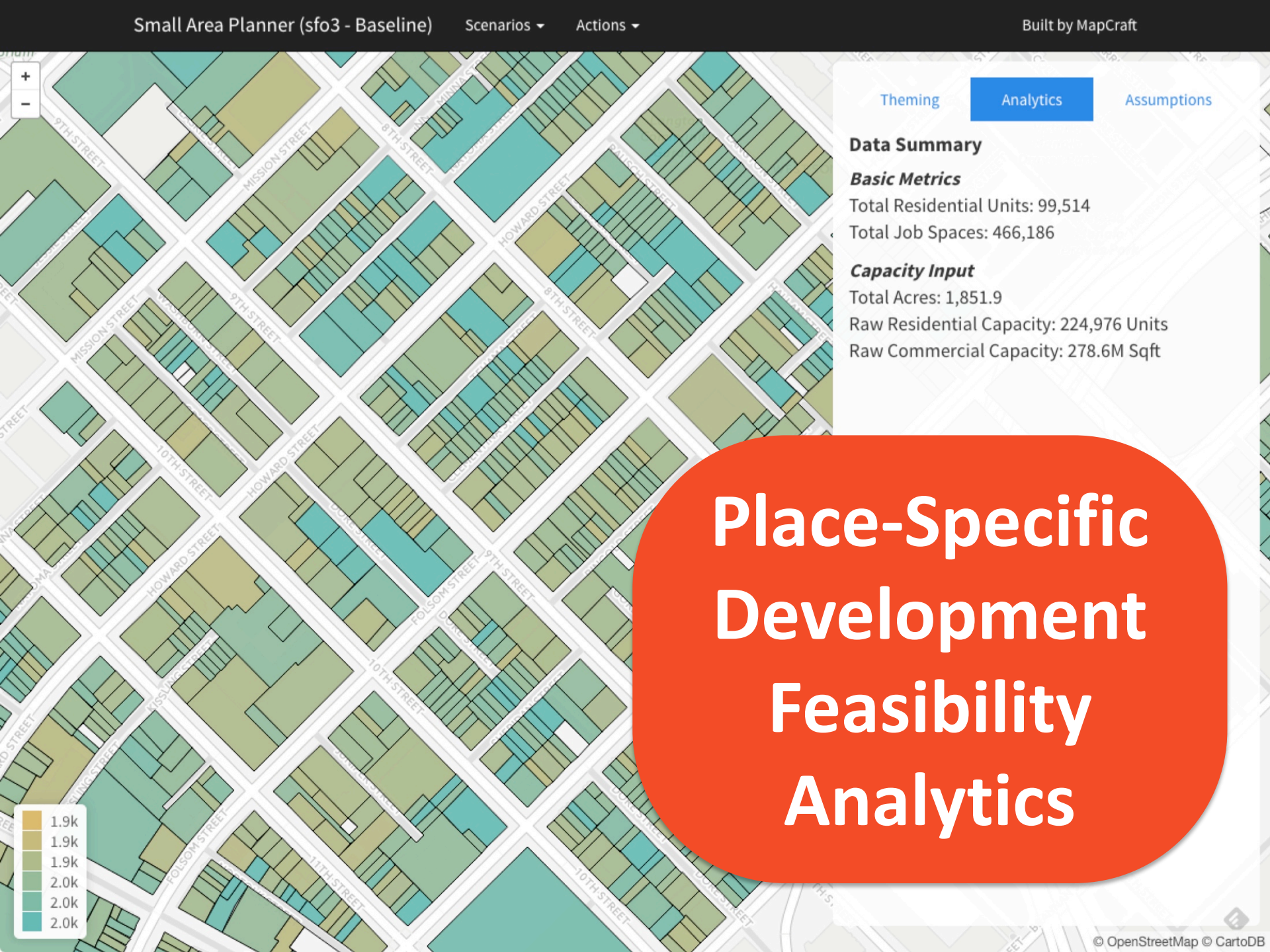
Terry Moore, ECONorthwest


Small Area Planner (Redev Area - Baseline)
Scenarios
Actions
Built by MapCraft
Theming
Analytics
Assumptions
Data Summary
TIF transit capital cost coverage (nominal): 0.47%
NPVs and Totals
NPVs
Totals
TIF Capacity
Parking
Total
Transit Ops Cost Coverage
362.92
300.00
MapCraft.io

Custom Analysis of Urban Development Policy on the Web


Small Area Planner (Redev Area - Baseline)
Scenarios
Actions
Built by MapCraft
Theming
Analytics
Assumptions
Transit
ents start (2016-2045)
er unit per yr (2016 $'s)
assessments (%)
Versatility of Spreadsheets + Web Maps


Small Area Planner (okd3 - Baseline)
Scenarios
Actions
Built by MapCraft
Theming
Analytics
Assumptions
Data Summary
Basic Metrics
Total Residential Units: 11,269
Total Job Spaces: 85,760
Capacity Input
Total Acres: 481.0
Raw Residential Capacity: 75,787 Units
Raw Commercial Capacity: 211.6M Sqft
Custom Economic Models
Office
Hotel
Retail
Residential
Industrial
School
Vacant
Parking
© OpenStreetMap © CartoDB


Small Area Planner (sfo3 - Baseline)
Scenarios
Actions
Built by MapCraft
Theming
Analytics
Assumptions
Data Summary
Basic Metrics
Total Residential Units: 99,514
Total Job Spaces: 466,186
Capacity Input
Total Acres: 1,851.9
Raw Residential Capacity: 224,976 Units
Raw Commercial Capacity: 278.6M Sqft
Place-Specific Development Feasibility Analytics
1.9k
1.9k
1.9k
2.0k
2.0k
2.0k
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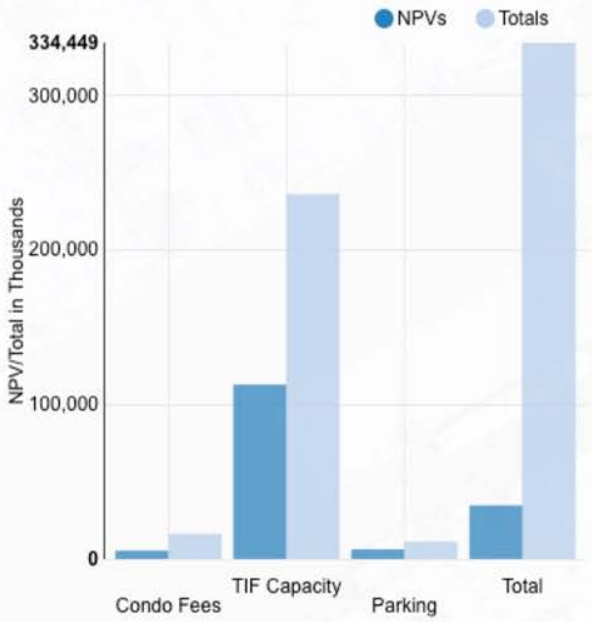
Place-Specific Economic Development Analytics

Theming | Analytics | Assumptions

Data Summary

TIF transit capital cost coverage (nominal): 0.47%

NPVs and Totals



Transit Ops Cost Coverage

Small Area Planner (Baseline)
Scenarios
Actions
Built by MapCraft
Theming
Analytics
Assumptions
Data Summary
Pro Forma Output
Feasible Residential Units: 8,677
Feasible Affordable Units: 1,745
Feasible Comm Square Feet: 10.6M
Land Proceeds: 1,107.4M
TIF Capacity: 705.6M
Capacity Input
Total Acres: 369.9
Raw Residential Capacity: 20,388 Units
Raw Commercial Capacity: 54.2M Sqft
Visualize Economic Model Inputs = Land Cost
Land Cost ($)
2.0M
2.9M
3.8M
4.7M
5.6M
6.5M
Mapbox
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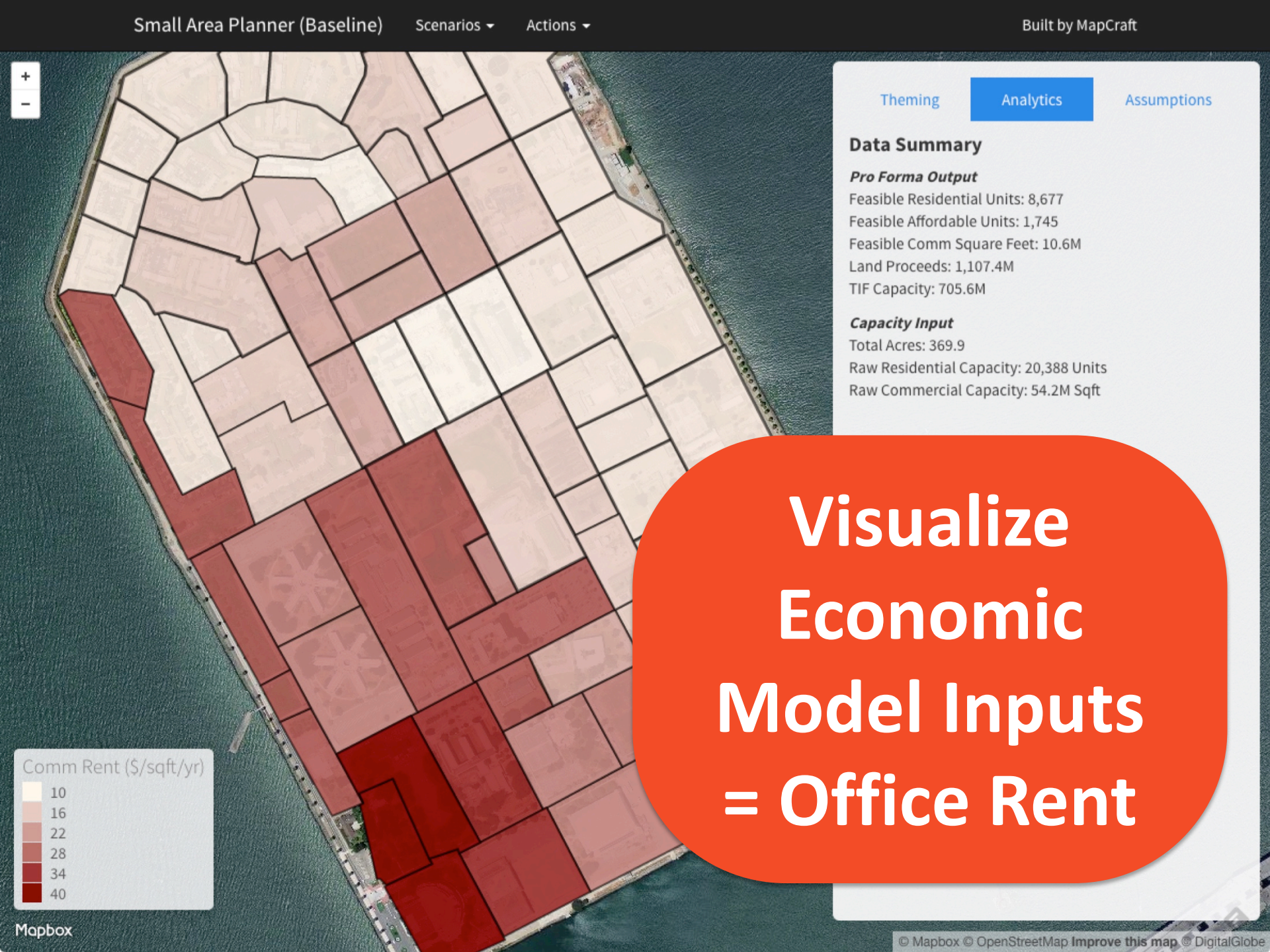
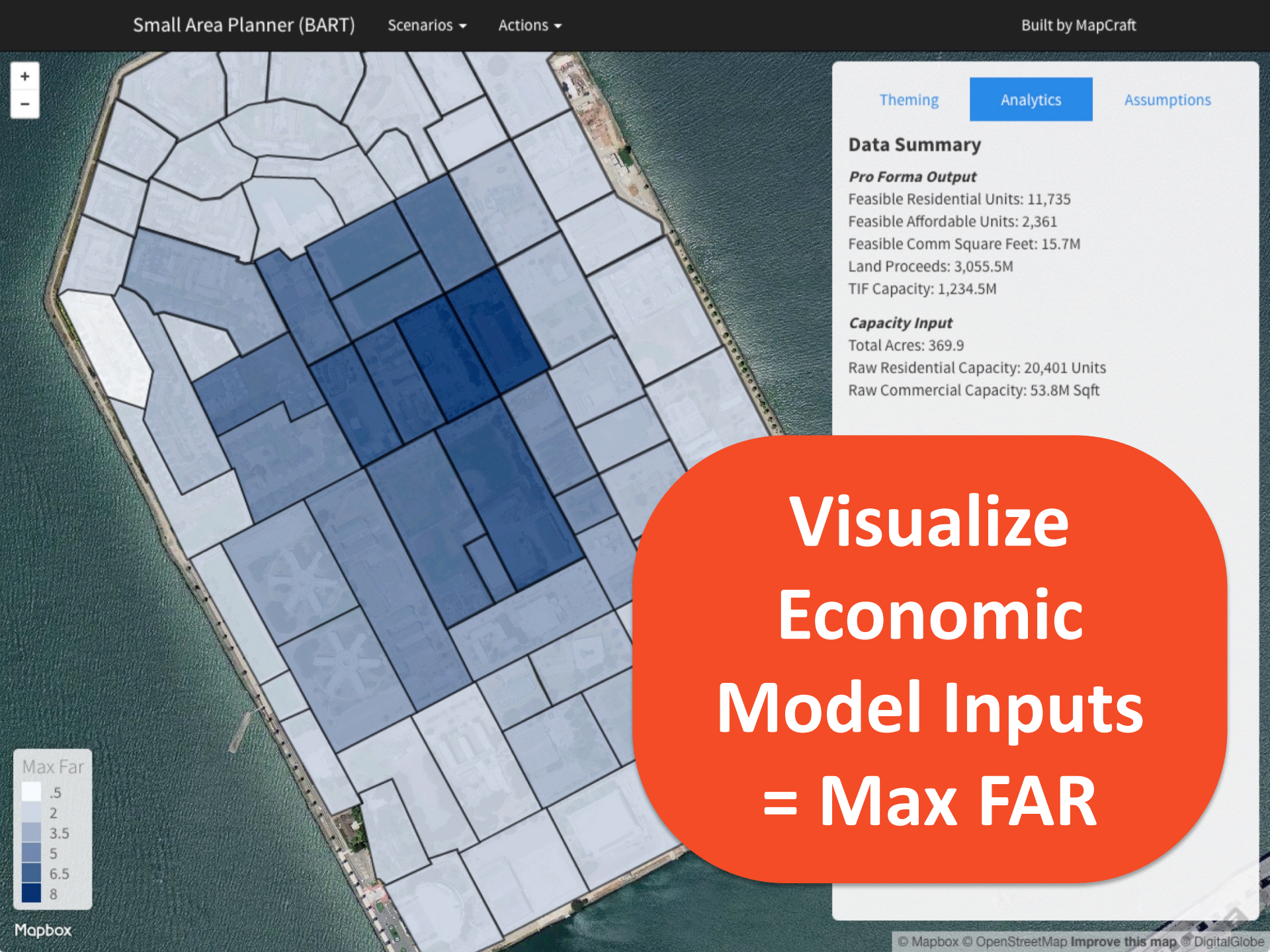
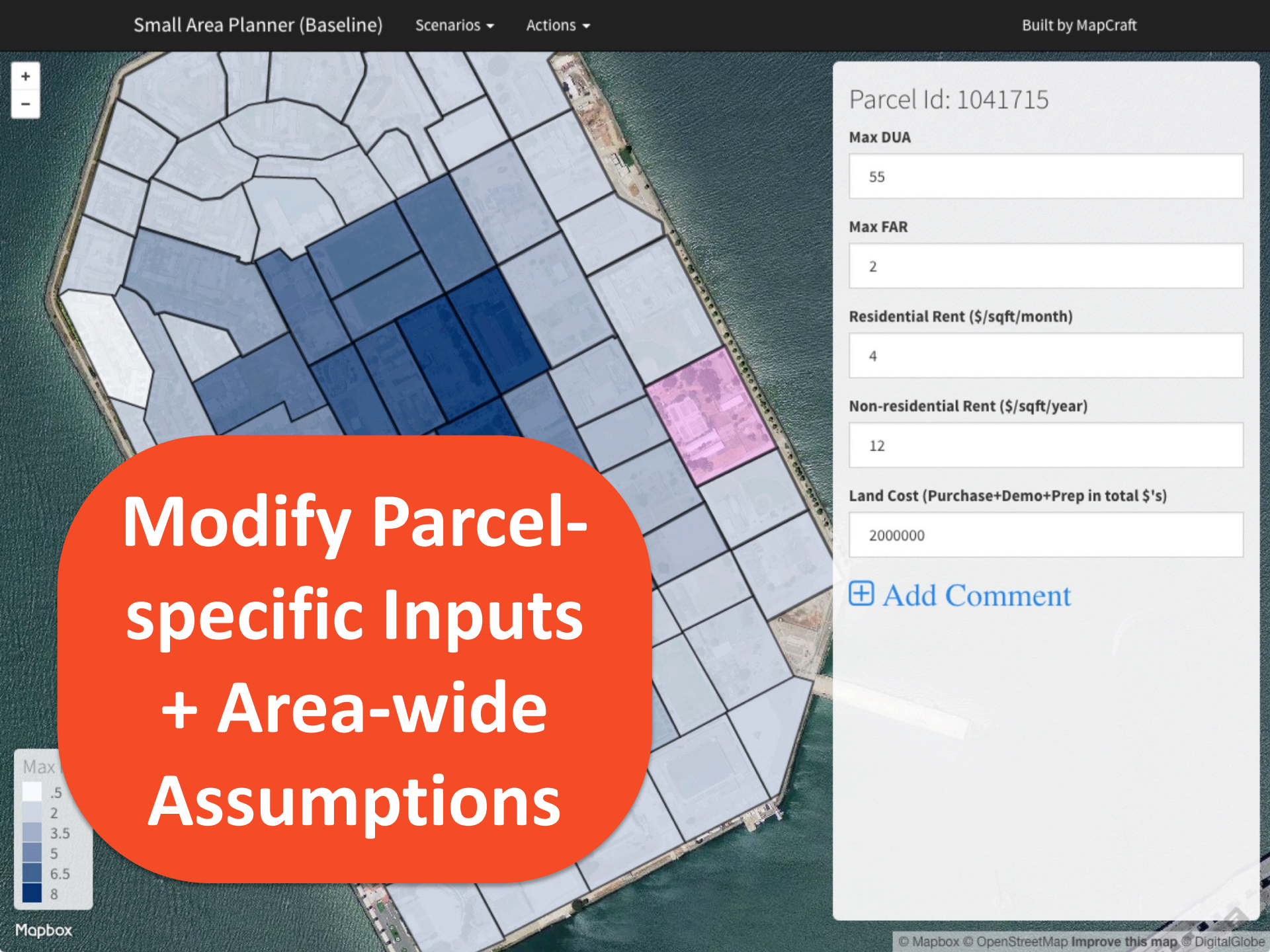

Small Area Planner (Baseline)
Scenarios
Actions
Built by MapCraft
Theming
Analytics
Assumptions
Data Summary
Pro Forma Output
Feasible Residential Units: 8,677
Feasible Affordable Units: 1,745
Feasible Comm Square Feet: 10.6M
Land Proceeds: 1,107.4M
TIF Capacity: 705.6M
Capacity Input
Total Acres: 369.9
Raw Residential Capacity: 20,388 Units
Raw Commercial Capacity: 54.2M Sqft
Visualize Economic Model Inputs = Office Rent
Comm Rent ($/sqft/yr)
10
16
22
28
34
40
Mapbox
© Mapbox © OpenStreetMap Improve this map © DigitalGlobe


Small Area Planner (BART)
Scenarios
Actions
Built by MapCraft
Theming
Analytics
Assumptions
Data Summary
Pro Forma Output
Feasible Residential Units: 11,735
Feasible Affordable Units: 2,361
Feasible Comm Square Feet: 15.7M
Land Proceeds: 3,055.5M
TIF Capacity: 1,234.5M
Capacity Input
Total Acres: 369.9
Raw Residential Capacity: 20,401 Units
Raw Commercial Capacity: 53.8M Sqft
Visualize Economic Model Inputs = Max FAR
Max Far
.5
2
3.5
5
6.5
8
Mapbox
© Mapbox © OpenStreetMap Improve this map © DigitalGlobe


Small Area Planner (Baseline)
Scenarios
Actions
Built by MapCraft
Parcel Id: 1041715
Max DUA
55
Max FAR
2
Residential Rent ($/sqft/month)
4
Non-residential Rent ($/sqft/year)
12
Land Cost (Purchase+Demo+Prep in total $'s)
2000000
Add Comment
Modify Parcel-specific Inputs + Area-wide Assumptions
Max
.5
2
3.5
5
6.5
8
Mapbox
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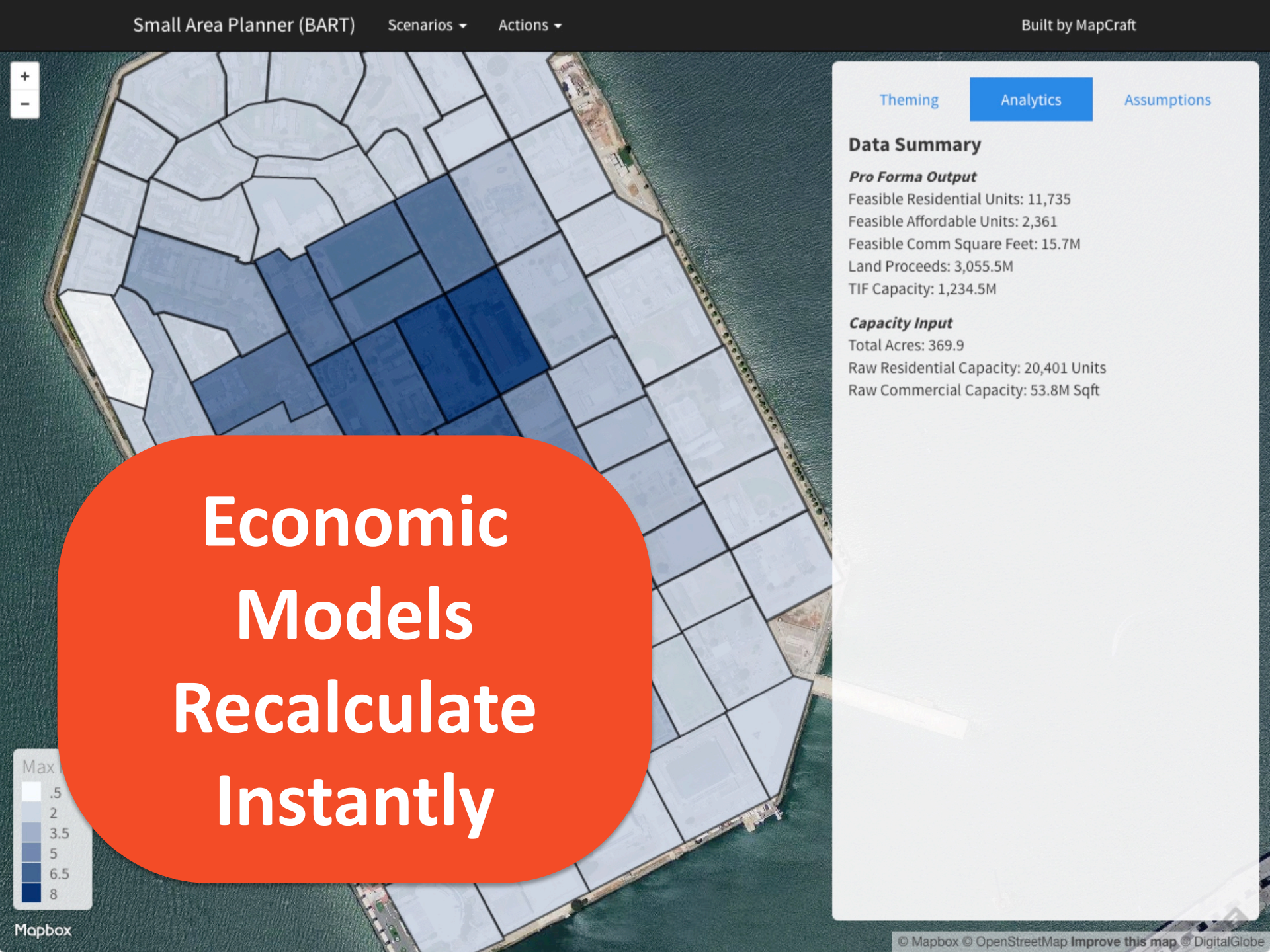
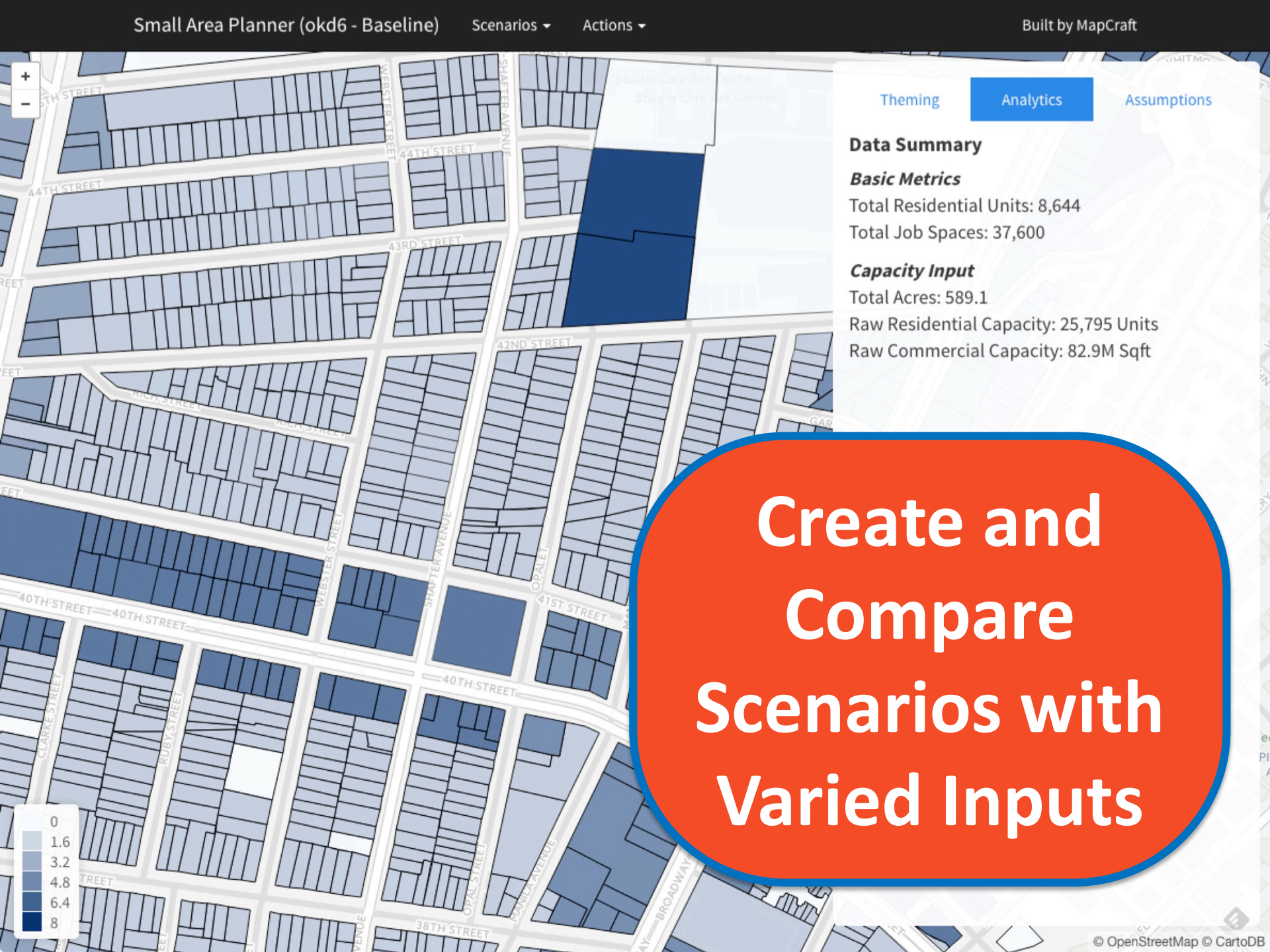

Small Area Planner (BART)
Scenarios
Actions
Built by MapCraft
+
−
Theming
Analytics
Assumptions
Data Summary
Pro Forma Output
Feasible Residential Units: 11,735
Feasible Affordable Units: 2,361
Feasible Comm Square Feet: 15.7M
Land Proceeds: 3,055.5M
TIF Capacity: 1,234.5M
Capacity Input
Total Acres: 369.9
Raw Residential Capacity: 20,401 Units
Raw Commercial Capacity: 53.8M Sqft
Economic Models Recalculate Instantly
Max
.5
2
3.5
5
6.5
8
Mapbox
© Mapbox © OpenStreetMap Improve this map © DigitalGlobe


Small Area Planner (okd6 - Baseline)
Scenarios
Actions
Built by MapCraft
Theming
Analytics
Assumptions
Data Summary
Basic Metrics
Total Residential Units: 8,644
Total Job Spaces: 37,600
Capacity Input
Total Acres: 589.1
Raw Residential Capacity: 25,795 Units
Raw Commercial Capacity: 82.9M Sqft
Create and Compare Scenarios with Varied Inputs
0
1.6
3.2
4.8
6.4
8
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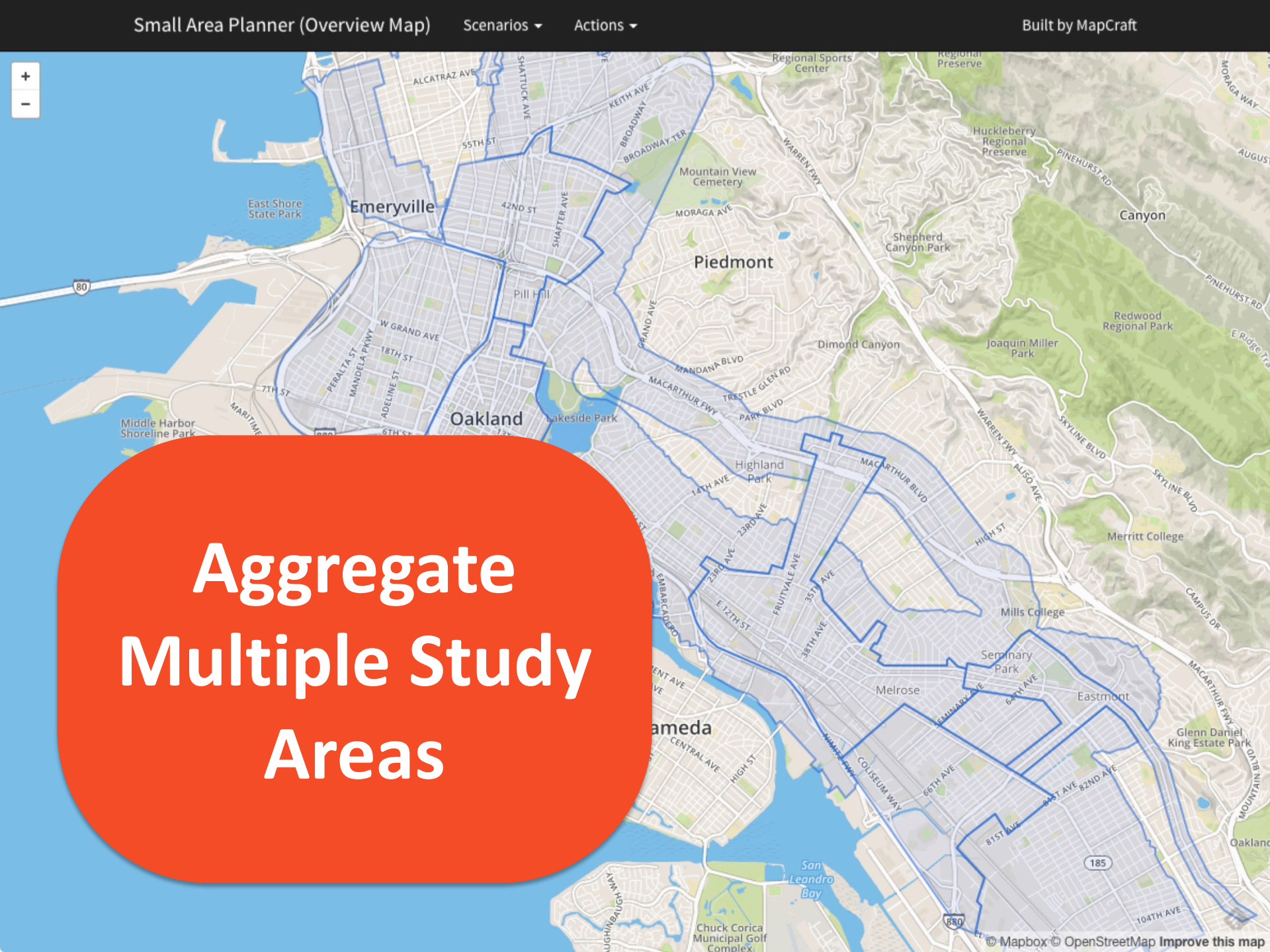
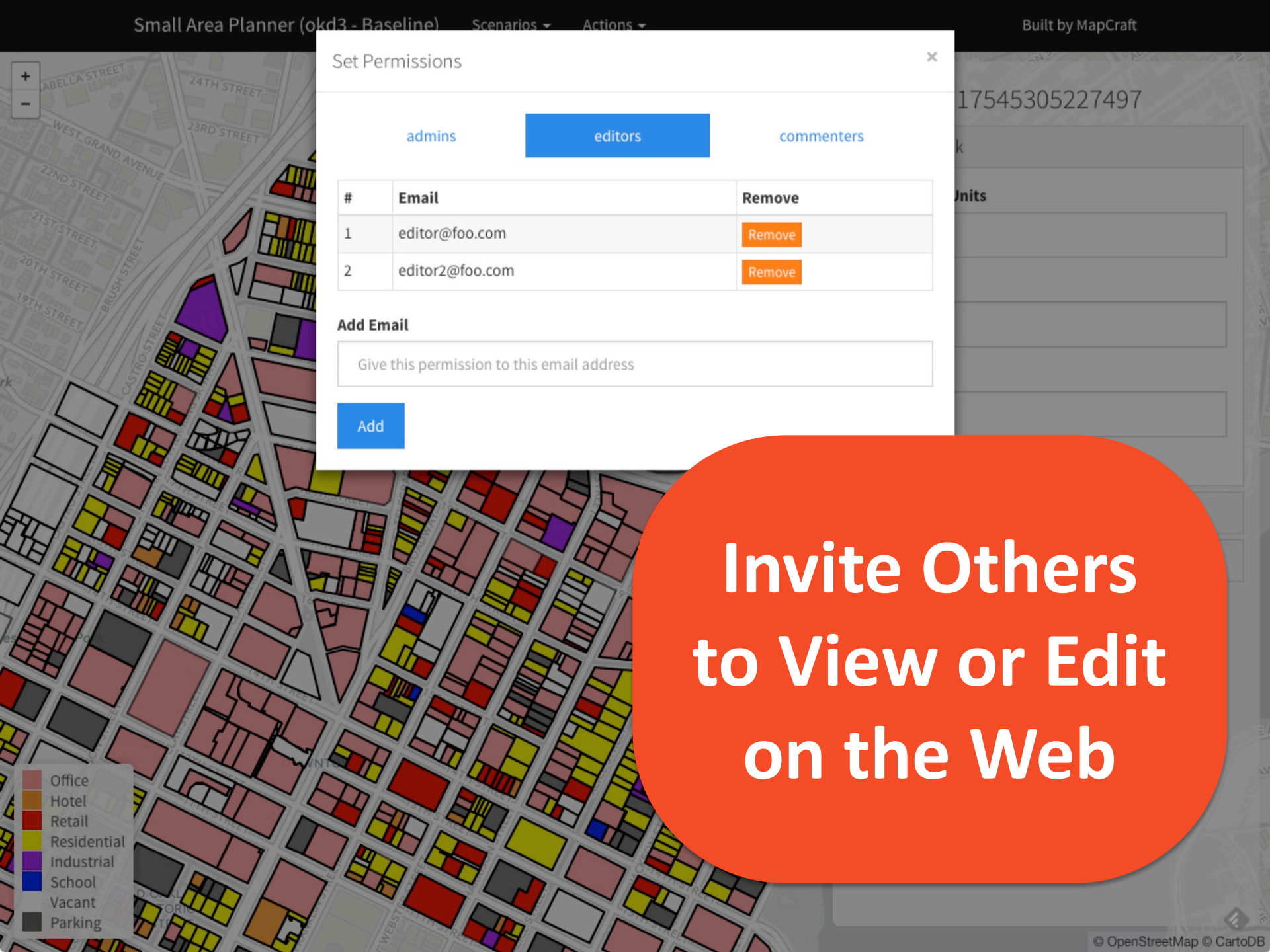

Small Area Planner (Overview Map)
Scenarios
Actions
Built by MapCraft
Aggregate Multiple Study Areas
Emeryville
Oakland
Piedmont
Canyon
Alameda
Mapbox © OpenStreetMap Improve this map


Small Area Planner (okd3 - Baseline)
Scenarios
Actions
Built by MapCraft
Set Permissions
admins
editors
commenters
Email Remove
1 editor@foo.com Remove
2 editor2@foo.com Remove
Add Email
Give this permission to this email address
Add
17545305227497
Units
Office
Hotel
Retail
Residential
Industrial
School
Vacant
Parking
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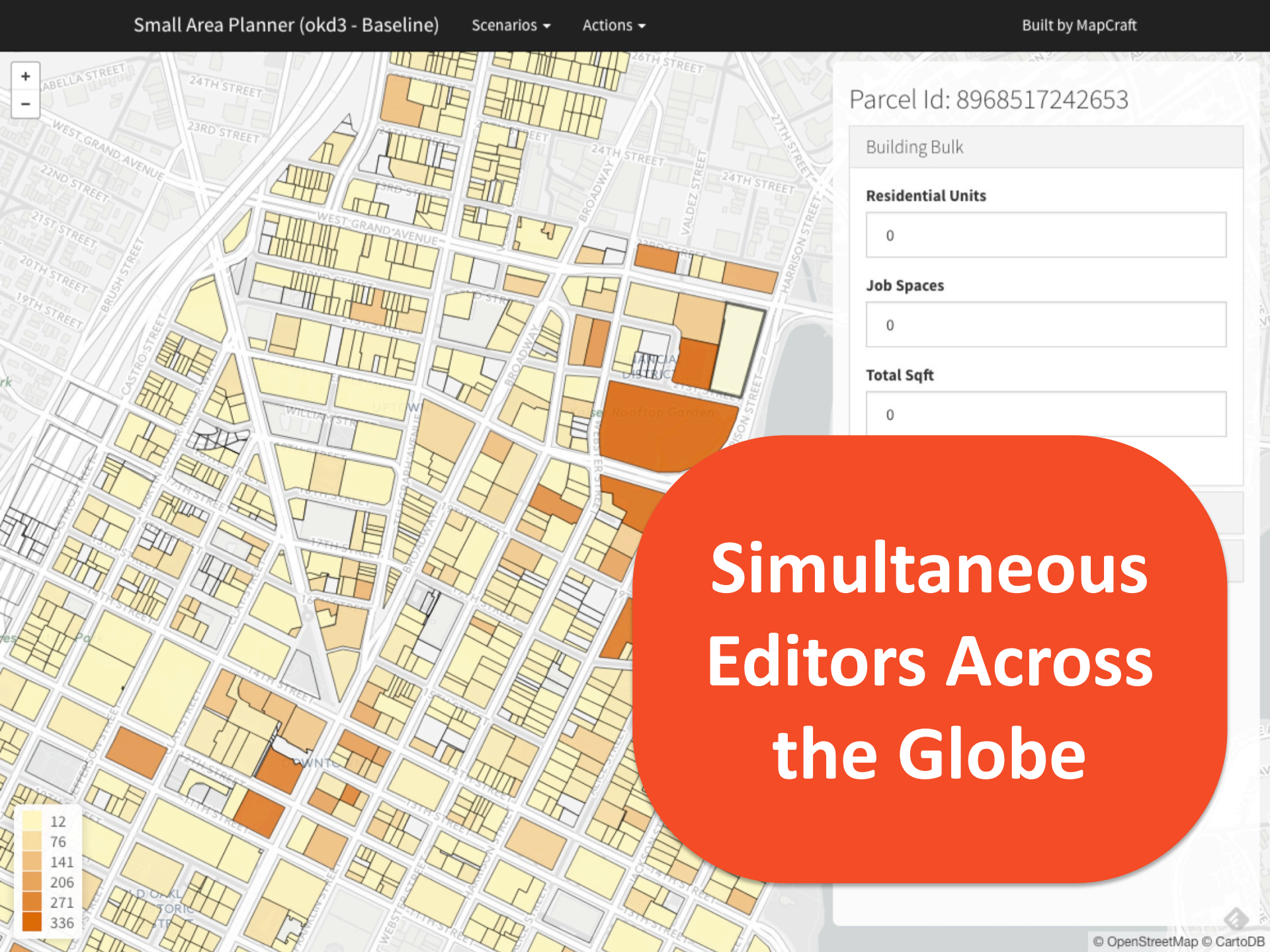
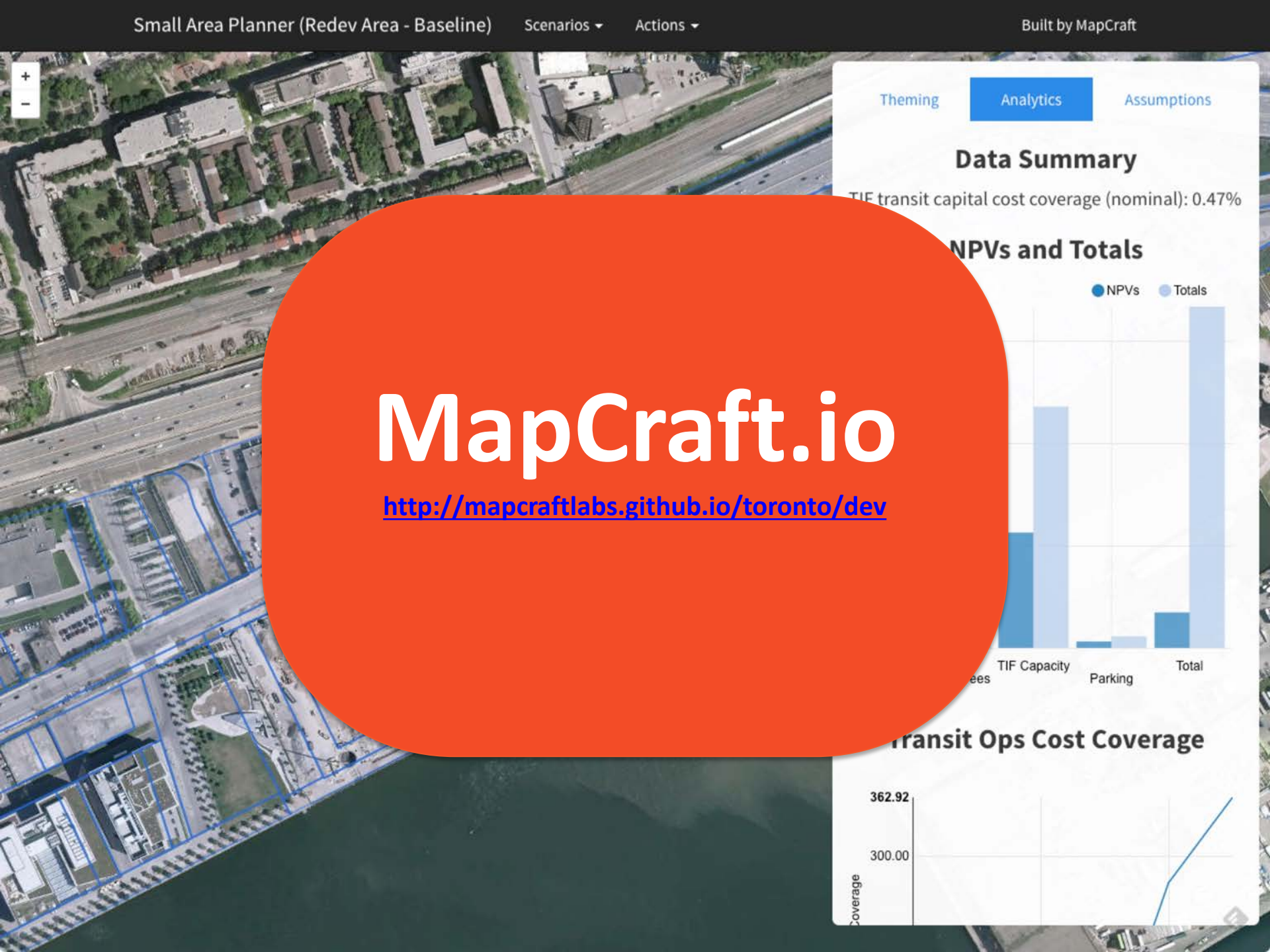
Invite Others to View or Edit on the Web


Small Area Planner (okd3 - Baseline)
Scenarios
Actions
Built by MapCraft
Parcel Id: 8968517242653
Building Bulk
Residential Units
0
Job Spaces
0
Total Sqft
0
Simultaneous Editors Across the Globe
12
76
141
206
271
336
© OpenStreetMap © CartoDB


Small Area Planner (Redev Area - Baseline)
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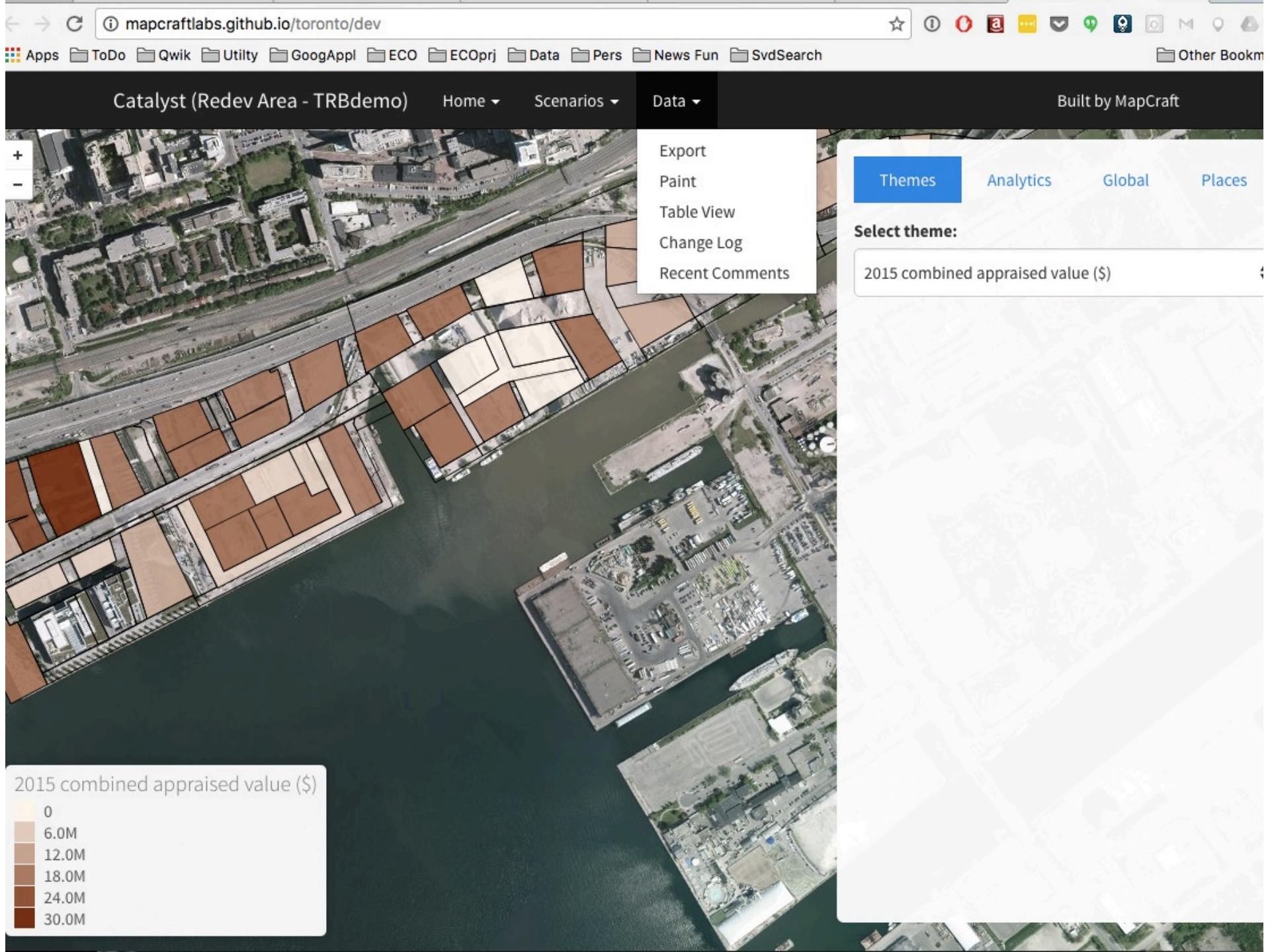
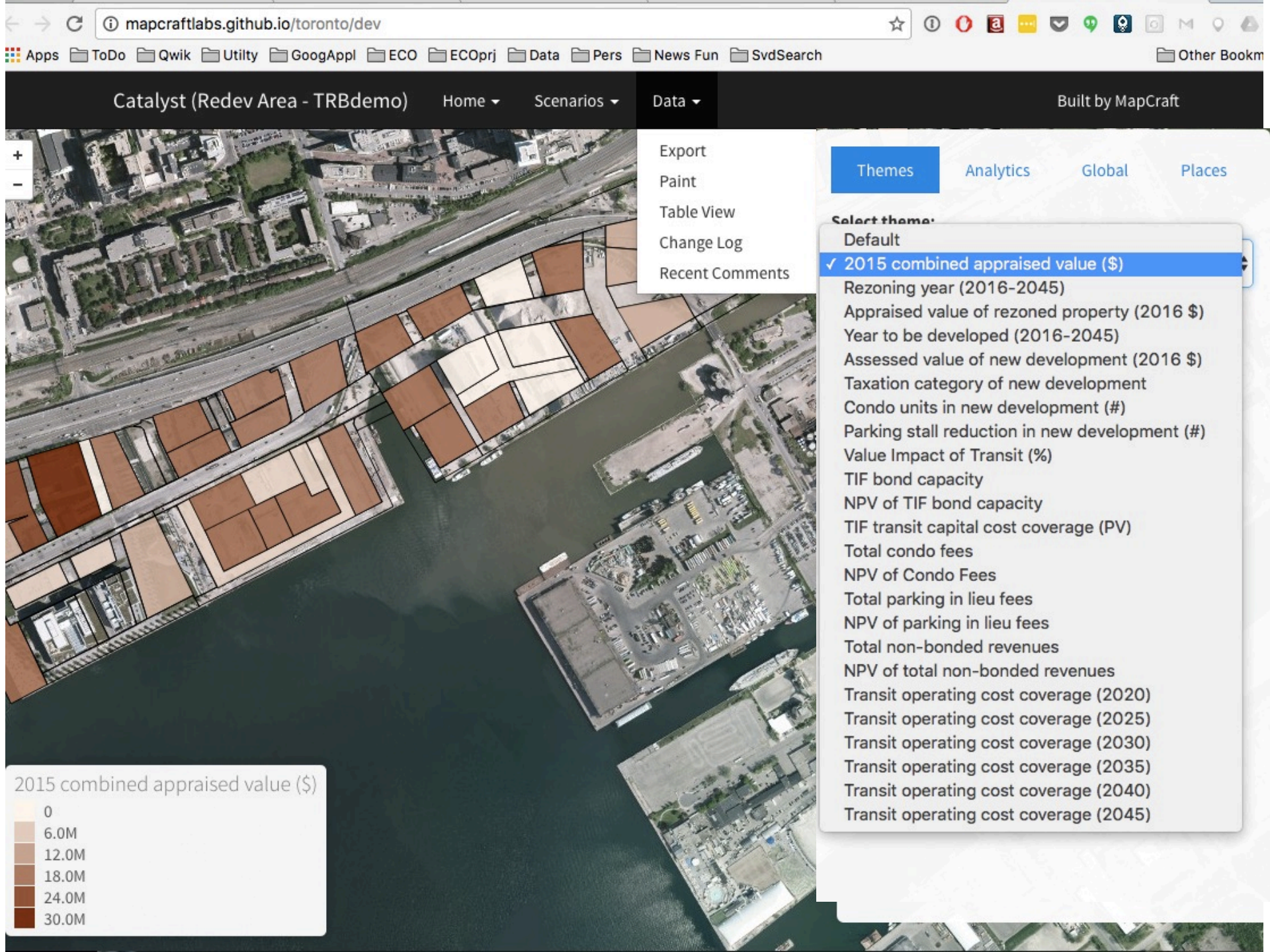
NPVs and Totals
NPVs
Totals
TIF Capacity
Parking
Total
Transit Ops Cost Coverage
362.92
300.00
MapCraft.io
http://mapcraftlabs.github.io/toronto/dev


mapcraftlabs.github.io/toronto/dev
Apps
ToDo
Qwik
Utilty
GoogAppl
ECO
ECOprj
Data
Pers
News Fun
SvdSearch
Other Bookm
Catalyst (Redev Area - TRBdemo)
Home
Scenarios
Data
Built by MapCraft
Export
Paint
Table View
Change Log
Recent Comments
Themes
Analytics
Global
Places
Select theme:
2015 combined appraised value ($)
2015 combined appraised value ($)
0
6.0M
12.0M
18.0M
24.0M
30.0M


mapcraftlabs.github.io/toronto/dev
Apps
ToDo
Qwik
Utilty
GoogAppl
ECO
ECOprj
Data
Pers
News Fun
SvdSearch
Other Bookm
Catalyst (Redev Area - TRBdemo)
Home
Scenarios
Data
Built by MapCraft
Export
Paint
Table View
Change Log
Recent Comments
Themes
Analytics
Global
Places
Select theme:
Default
✓ 2015 combined appraised value ($)
Rezoning year (2016-2045)
Appraised value of rezoned property (2016 $)
Year to be developed (2016-2045)
Assessed value of new development (2016 $)
Taxation category of new development
Condo units in new development (#)
Parking stall reduction in new development (#)
Value Impact of Transit (%)
TIF bond capacity
NPV of TIF bond capacity
TIF transit capital cost coverage (PV)
Total condo fees
NPV of Condo Fees
Total parking in lieu fees
NPV of parking in lieu fees
Total non-bonded revenues
NPV of total non-bonded revenues
Transit operating cost coverage (2020)
Transit operating cost coverage (2025)
Transit operating cost coverage (2030)
Transit operating cost coverage (2035)
Transit operating cost coverage (2040)
Transit operating cost coverage (2045)
2015 combined appraised value ($)
0
6.0M
12.0M
18.0M
24.0M
30.0M

mapcraftlabs.github.io/toronto/dev

Apps ToDo Qwik Utilty GoogAppl ECO ECOprj Data Pers News Fun SvdSearch Other Bookm

Catalyst (Redev Area - TRBdemo) Home Scenarios Data Built by MapCraft

- Export
- Paint
- Table View
- Change Log
- Recent Comments

Themes Analytics Global Places

Transit

Cost of transit investment (2016 $'s)

5000000000

Annual construction cost inflation (%)

.025

Annual transit operating cost ($)

10000000

Annual operating cost inflation (%)

.03

Year tansit construction starts (2016-2045)

2020

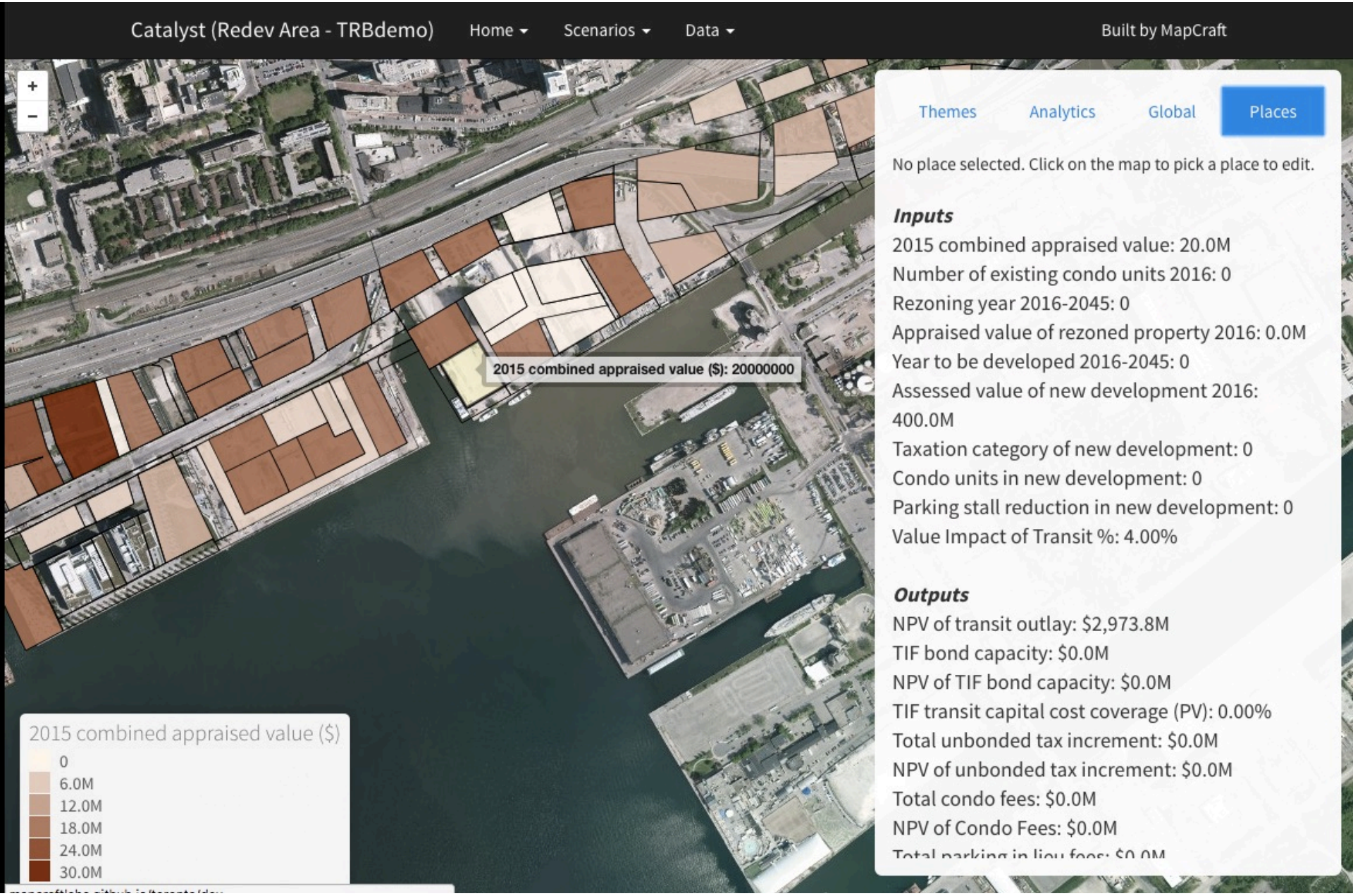
Year transit opens (2016-2045)

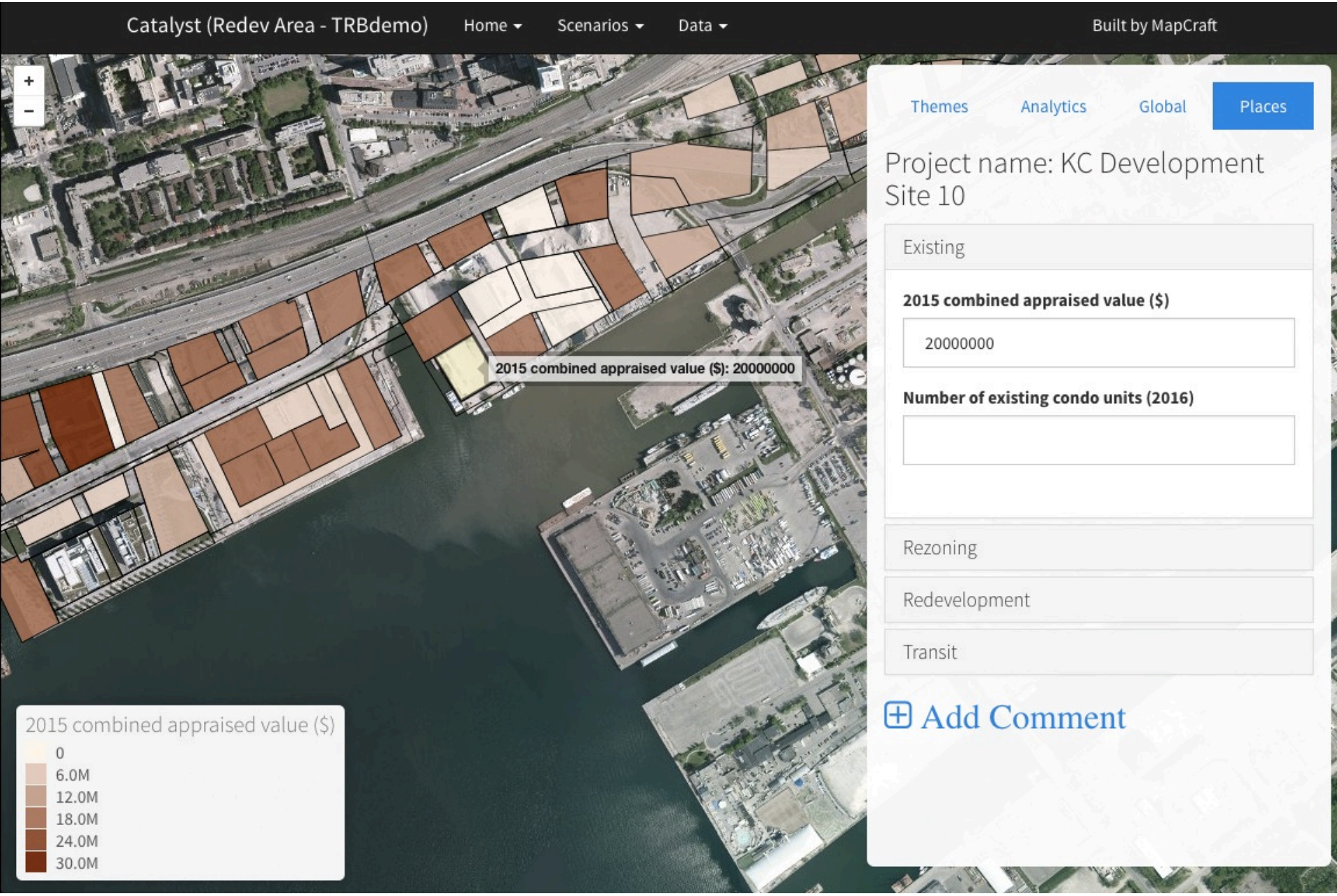
2021

Tax Increment

2015 combined appraised value ($)

- 0
- 6.0M
- 12.0M
- 18.0M
- 24.0M
- 30.0M


Catalyst (Redev Area - TRBdemo)
Home
Scenarios
Data
Built by MapCraft
Themes
Analytics
Global
Places
No place selected. Click on the map to pick a place to edit.
Inputs
2015 combined appraised value: 20.0M
Number of existing condo units 2016: 0
Rezoning year 2016-2045: 0
Appraised value of rezoned property 2016: 0.0M
Year to be developed 2016-2045: 0
Assessed value of new development 2016: 400.0M
Taxation category of new development: 0
Condo units in new development: 0
Parking stall reduction in new development: 0
Value Impact of Transit %: 4.00%
Outputs
NPV of transit outlay: $2,973.8M
TIF bond capacity: $0.0M
NPV of TIF bond capacity: $0.0M
TIF transit capital cost coverage (PV): 0.00%
Total unbonded tax increment: $0.0M
NPV of unbonded tax increment: $0.0M
Total condo fees: $0.0M
NPV of Condo Fees: $0.0M
2015 combined appraised value ($): 20000000
2015 combined appraised value ($)
0
6.0M
12.0M
18.0M
24.0M
30.0M


Catalyst (Redev Area - TRBdemo)
Home
Scenarios
Data
Built by MapCraft
+
−
Themes
Analytics
Global
Places
Project name: KC Development Site 10
Existing
2015 combined appraised value ($)
20000000
Number of existing condo units (2016)
Rezoning
Redevelopment
Transit
Add Comment
2015 combined appraised value ($): 20000000
2015 combined appraised value ($)
0
6.0M
12.0M
18.0M
24.0M
30.0M

Demo.MapCraft.io