Annex 1 Cartographies

This annex is a collection of raw analysis and it's presented just a reference to the back-end work of this project. Therefore we advise using cartographies, charts and graphs from the main report, not from this annex, for decision making purposes. For best reference, you can also e-mail us at <u>spin@spinunit.eu</u> for the GIS cartographies.

Number of Lines

This metric corresponds to the number of lines that pass through a stop during the weekdays of the week of Oct 7, 2019.

This was calculated using GTFS data. The GTFS data was merged such that stop times and stop information was related (via trips and routes). From there, for each stop's subset of this merged data, the number of lines was calculated as the length of all unique route_ids.

Data Source/Provider: GTFS Date: Oct 7, 2019 Mean: 4.70 25 - 50 - 75; 2 - 3 - 6 Minimum - Maximum: 1 -120

Number of Reachable Selected Mobility Hubs

This metric corresponds to the number of selected mobility hubs reached *directly* from a stop during the weekdays of the week of Oct 7, 2019. Selected mobility hubs consist of Hobujaama, Estonia, Balti Jaam, Lennujaam, Kristiine, Haabersti, Vabaduse Väljak, Bussijaam, Harbor, Tondi.

The GTFS data was merged like it was for Number of Lines. For each stop, we extracted a subset of the merged data. If any of the contingent stops of the mobility hubs above could be reached directly via a shared route, it was considered reachable.

Data Source/Provider:

Date: Oct 7, 2019

Mean: 2.54 25 - 50 - 75: 0 - 3 - 4 Minimum - Maximum: 0 - 9

Multimodality

This metric corresponds to the number of unique modes of transport departing from a stop during the weekdays of the week of Oct 7, 2019.

Each of these modes is considered distinct: (Bus) City line operated by a public service contract, (Bus) Commercial City line, (Bus) County commercial line, (Bus) County line served by a public service contract, (Bus) Long distance and international line, Tram line, Trall line, Ferry line, Train line, Train

This was calculated by merging the GTFS data and calculating the length of unique route_colours (modes) for the stop's subset.

Data Source/Provider: GTFS Date: Oct 7, 2019

Mean: 1.38 25 - 50 - 75: 1 - 1 - 2 Minimum - Maximum: 1 - 4

3

Frequency of Trips

This metric corresponds to a stop's total number of departures, across all modes, during the weekdays of the week of Oct 7, 2019.

This was calculated as the number of times the stop's stop_id appeared in the merged dataset, the composition of which is described under Number of Lines.

> Data Source/Provider: GTFS Date: Oct 7, 2019

Mean: 883.76 25 - 50 - 75: 50 - 235 - 1020 Minimum - Maximum: 5 -9685

Average Departure Delay

This metric corresponds to a stop's average departure delay in minutes for the weekdays of the week of Oct 7, 2019.

The Thorebi and Ridanga data were merged. The date strings were then converted into datetime objects so that delay could be calculated actual departure minus planned departure). This metric was then calculated as the average of these delays from the stop in question for all departures between Qct 7 and Qct 11 (weekdays of the week of Oct 7, 2019).

Data Source/Provider:

Thorebi + Ridango Date: Oct 7, 2019 - Oct 13,

Mean: 1.029 25 - 50 - 75: 0.74 - 1.3 - 2.07 Minimum - Maximum: -392.27 - 9.57

Delayed Departure Percentage

This metric corresponds a stop's percentage of trips that were delayed (with a 1 minute tolerance) during the weekdays of the week of Oct 7, 2019.

The same list of delays used to calculate Average Departure Delay for a particular stop was used to calculate this metric. This metric is the percentage of these delays that were greater than the tolerance (1 minute in both directions).

Data Source/Provider. Thorebi + Ridango Date: Oct 7, 2019 - Oct 13, 2019

Mean: 68.92 25 - 50 - 75: 56.29 - 70 -82.93 Minimum - Maximum: 0 -100



On Time Departure Percentage

This metric corresponds to a stop's percentage of trips that were on time (1 minute tolerance) during the weekdays of the week of Oct 7, 2019.

The same list of delays used to calculate Average Departure Delay for a particular stop was used to calculate this metric. This metric is the percentage of these delays that were fell within the tolerance (1 minute in both directions).

Data Source/Provider: Thorebi + Ridango Date: Oct 7, 2019 - Oct 13, 2019

Mean: 31.08 25 - 50 - 75: 17.07 - 30 - 43.71 Minimum - Maximum: 0 - 100

Total Delay

This metric corresponds to a stop's total delay, in minutes, during the weekdays of the week of Oct 7, 2019.

The same list of delays used to calculate Average Departure Delay for a particular stop was used to calculate this metric. This metric is the sum of those delays.

> Data Source/Provider: Thorebi + Ridango Date: Oct 7, 2019 - Oct 13, 2019

Mean: 250.42 **25 - 50 - 75:** 30 - 119.36 - 336.36 **Minimum - Maximum**: -12917 - 4357

Local Line Load Percentage

This metric corresponds to a stop's percentage of Local + Main Line Load, defined above, that was specifically from local lines for all of the weekdays during the entirety of October, 2019.

This was calculated trivially as the percentage of Local Line Load from Main + Local Line Load.

Main Line Load Percentage

This metric corresponds to a stop's percentage of Local + Main Line Load, defined above, that was specifically from local lines for all of the weekdays during the entirety of October 2019.

This was calculated trivially as the percentage of Main Line Load from Main + Local Line Load.

Data Source/Provider: Ridango Date: Oct 2019, average of all work week days

Mean: 80.66 25 - 50 - 75: 89.63 - 100 - 100 Minimum - Maximum: 0 - 100

Regional bus operators (Tallinn municipal transit excluded):

(aka Main + Local Line

Load)

This metric corresponds to a stop's total weekday person load of departures on both local lines (lines contained within municipal borders) and main lines (county lines that cross municipal borders) for all weekdays during the entirety of October, 2019. A subset of the dataset was extracted for each unique stop_code. This metric is the sum of the total monthly weekday average for both the main line load and local line load for each stop_code.

Data Source/Provider: Ridango **Date:** Oct 2019, average of all work week days

Mean: 351 25 - 50 - 75: 9 - 40 - 169 Minimum - Maximum: 1 - 25403

Tallinn municipal transit (bus+tram+trolley): (Card + Driver Check Ins)

This metric corresponds to a stop's total number of checkins made via card and directly to the driver during weekdays of the week of Oct 7, 2019.

The dataset was filtered for weekdays using the day_code column. With that subset, a subset for each unique stop_code was created, and for each of those, the total number of card check ins and driver tickets sold (driver check ins) were calculated as this metric.

Data Source/Provider: Ridango Date: Oct 7, 2019 - Oct 1<u>3, 2019</u>

Mean: 1192.29 25 - 50 - 75: 95.50 - 360 - 1354 Minimum - Maximum: 0 - 24396

Data Source/Provider: Ridango Date: Oct 2019, average of all work week days

Mean: 19.34 25 - 50 - 75: 0 - 0 - 10.37 Minimum - Maximum: 0 - 100



Card Check Ins Percentage

This metric corresponds to a stop's percentage of Card + Driver Check Ins, defined above, that were specifically made via card during the weekdays of the week of Oct 7, 2019.

This was calculated trivially as the percentage of Card Check Ins from Card + Driver Check Ins.

Data Source/Provider: Ridango Date: Oct 7, 2019 - Oct 13, 2019

Mean: 99.40 25 - 50 - 75: 99.52 - 99.92 - 100 Minimum - Maximum: 78.95 - 100

Driver Check Ins Percentage

This metric corresponds to a stop's percentage of Card + Driver Check Ins, defined above, that were specifically made directly to the driver during the weekdays of the week of Oct 7. 2019.

This was calculated trivially as the percentage of Driver Check Ins from Card + Driver Check Ins.

Data Source/Provider: Ridango Date: Oct 7, 2019 - Oct 13, 2019

Mean: 0.60 25 - 50 - 75: 0 - 0.08 - 0.48 Minimum - Maximum: 0 - 21.05

Building Count

This metric corresponds to the total number of buildings within a given buffer from a stop.

This metric was calculated by creating a buffer (100, 500, and 1000m) around a stop and counting the number of building polygons within it.

Data Source/Provider: EHR (Ehitisregister) Date: 14.01.2030

For 100m buffer: Mean: 7.66 25 - 50 - 75: 1 - 4 - 10 Maximum: 126

Built SQM

This metric corresponds to the amount of built area, in sq. metres, within a given buffer from a stop. The built area in sq. metres was also calculated for the following building type subgroups: residential, non-residential, transport, industrial / warehouse, accommodation /catering, commercial /service, office, entertainment, education, health / other public.

This metric was calculated by creating a buffer (100, 500, and 1000m) around a stop and summing the total built SQM (in total as well as for each of the aforementioned subgroups) of the buildings located within it. Data Source/Provider: EHR (Ehitisregister) Date: 14.01.2030

For 100m buffer. Mean: 4764 **25 - 50 - 75:** 66.2 - 884.7 - 4320.6 Maximum: 196614.8

Population

This metric corresponds to the total population within a given buffer from a stop. The populations of the following age subgroups were also calculated: 0-14, 15-64, 65 and over.

This metric was calculated by creating a buffer (100, 500 and 1000m) around a stop and storing the number of population units (1km by 1km) from the census that intersected with the buffer, summing all of the intersecting populations values -- the total, as well as the aforementioned subaroups.

Data Source/Provider: Census Date: 2011

For 100m buffer:

Mean: 2475.90 25 - 50 - 75: 32 - 326 - 2542 Maximum: 37237

Visits Count

This metric refers to the total number of Foursquare visits within a given buffer from a stop.

This metric was calculated by creating a buffer (100, 500, and 100m) around a stop and summing the the total number of Foursquare visits located within it.

> Data Source/Provider: Qualitative observations from Foursquare Date: 200

For 100m buffer: Mean: 3761.70 25 - 50 - 75: 0 - 9 - 755 Maximum: 245843



Places Count

This metric corresponds to the total number of Foursquare locations within a given buffer from a stop.

This metric was calculated by creating a buffer (100, 500, and 100m) around a stop and summing the the total number of Foursquare places located within it.

> Data Source/Provider: Qualitative analysis from Foursquare Date: 2020

For 100m buffer: Mean: 8.91 25 - 50 - 75: 0 - 1 - 5 Maximum: 270

Optional Activities Visits Count

This metric corresponds to the total number of visits to optional Foursquare activities within a given buffer from a stop.

This metric was calculated by creating a buffer (100, 500, and 100m) around a stop and summing the the total number of visits to optional Foursquare activities located within it.

Optional Activities Count

This metric corresponds to the total number of optional Foursquare activities within a given buffer from a stop.

This metric was calculated by creating a buffer (100, 500, and 100m) around a stop and summing the the total number of optional Foursquare activities located within it.

Data Source/Provider: Qualitative analysis from Foursquare

For 100m buffer: Mean: 4.79 25 - 50 - 75: 0 - 0 - 2 Maximum: 215

Date: 2020

Necessary Activities Visits Count

This metric corresponds to the total number of visits to necessary Foursquare activities within a given buffer from a stop.

This metric was calculated by creating a buffer (100, 500, and 1000m) around a stop and summing the the total number of visits to necessary Foursquare activities located within it.

Data Source/Provider: Qualitative analysis from Foursquare Date: 2020

For 100m buffer: Mean: 1209.99 25 - 50 - 75: 0 - 0 - 247 Maximum: 88711

Necessary Activities Count

This metric corresponds to the total number of necessary Foursquare activities within a given buffer from a stop.

This metric was calculated by creating a buffer (100, 500, and 100m) around a stop and summing the the total number of necessary Foursquare activities located within it.

Data Source/Provider: Qualitative analysis from Foursquare Date: 2020

For 100m buffer: Mean: 2.92 25 - 50 - 75: 0 - 0 - 2 Maximum: 74

Optional Activities Percentage

This metric corresponds to the percentage of activities that are optional activities within a given buffer from a stop.

This metric was calculated by creating a buffer (100, 500, and 1000m) around a stop and calculating the percentage of Foursquare activities within it that are optional.

Data Source/Provider: Qualitative analysis from Foursquare Date: 2020

For 100m buffer:

Mean: 39.92 25 - 50 - 75: 0.24 - 27.26 - 79.53 Minimum - Maximum: 0 - 100

Data Source/Provider: Qualitative analysis from Foursquare Date: 2020

For 100m buffer:

Mean: 2345.53 25 - 50 - 75: 0 - 0 - 151 Maximum: 205063



Necessary Activities Percentage

This metric corresponds to the percentage of activities that are necessary activities within a given buffer from a stop.

This metric was calculated by creating a buffer (100, 500, and 1000m) around a stop and calculating the percentage of Foursquare activities within it that are optional.

Data Source/Provider: Qualitative analysis from Foursquare Date: 2020

 For 100m buffer.

 Mean: 47.40

 25 - 50 - 75:

 Minimum - Maximum: 0 - 100

Built SQM

This metric corresponds to the amount of built area, in sq. metres, within a given buffer from a stop. The built area in sq. metres was also calculated for the following building type subgroups: residential, non-residential, transport, industrial / warehouse, accommodation /catering, commercial /service, office, entertainment, education, health / other public.

Data Source/Provider: EHR (Ehitisregister) Date: 14.01.2030

<u>For 100m buffer</u> Mean: 4764 **25 - 50 - 75:** 66.2 - 884.7 - 4320.6 Maximum: 196614.8

Visits Count

This metric refers to the total number of Foursquare visits within a given buffer from a stop.

Data Source/Provider: Observations from Foursquare Date: 200

For 100m buffer: Mean: 3761.70 25 - 50 - 75: 0 - 9 - 755 Maximum: 245843



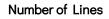
Number of Lines

This metric corresponds to the number of lines that pass through a stop during the weekdays of the week of Oct 7, 2019.

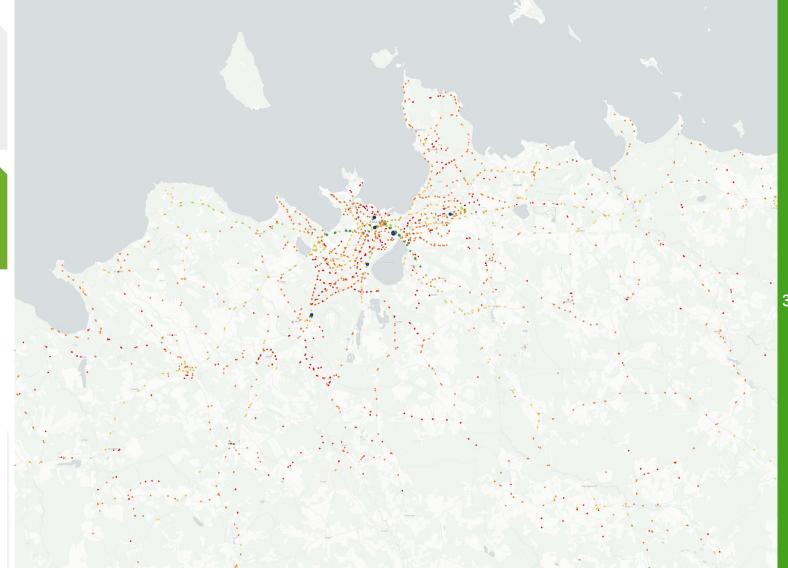
This was calculated using GTFS data. The GTFS data was merged such that stop times and stop information was related (via trips and routes). From there, for each stop's subset of this merged data, the number of lines was calculated as the length of all unique route_ids.

Data Source/Provider: GTFS Date: Oct 7, 2019

Mean: 4.70 25 - 50 - 75: 2 - 3 - 6 Minimum - Maximum: 1 - 129



1
1-5
6-10
11 - 20
21 - 50
More than 50



Number of Reachable

Selected Mobility Hubs This metric corresponds to the number of selected mobility hubs reached *directly* (from a stop during the weekdays of the week of Oct 7, 2019. Selected mobility hubs consist of Hobujaama, Estonia, Balti Jaam, Lennujaam, Kristline, Haabersti, Vabaduse Väljak, Bussijaam, Harbor, Tondi.

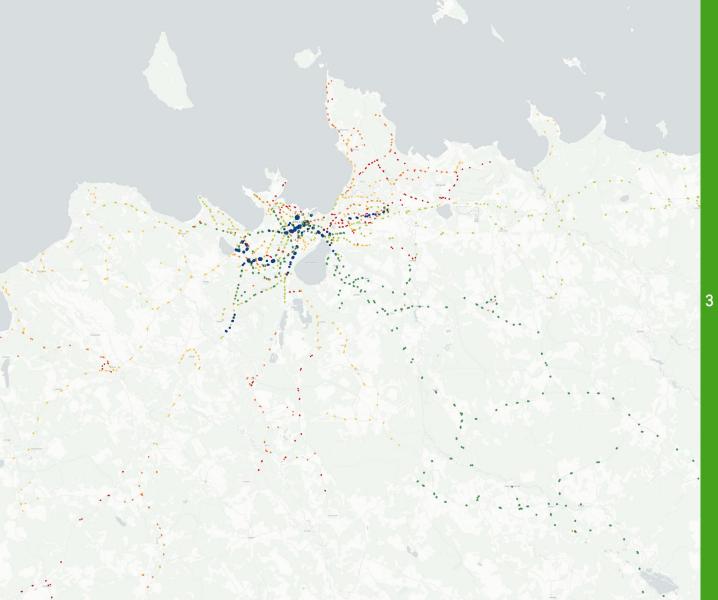
The GTFS data was merged like It was for Number of Lines. For each stop, we extracted a subset of the merged data. If any of the contingent stops of the mobility hubs above could be reached directly via a shared route, it was considered reachable.

Data Source/Provider: GTFS Date: Oct 7, 2019

Mean: 2.54 **25 - 50 - 75:** 0 - 3 - 4 Minimum - Maximum: 0 - 9

> Number of Reachable Selected Mobility Hubs

1	
2	
3	
4	
5	
>5	



Multimodality

This metric corresponds to the number of unique modes of transport departing from a stop during the weekdays of the week of Oct 7, 2019.

Each of these modes is considered distinct: (Bus) City line operated by a public service contract, (Bus) Commercial city line, (Bus) County commercial line, (Bus) County line served by a public service contract, (Bus) Long distance and international line, Tram line, Trail line, Ferry line, Train line.

This was calculated by merging the GTFS data and calculating the length of unique route_colours (modes) for the stop's subset.

3

Data Source/Provider: GTFS Date: Oct 7, 2019

Mean: 1.38 **25 - 50 - 75:** 1 - 1 - 2 **Minimum - Maximum**: 1 - 4



Frequency of Trips This metric corresponds to a stop's total number of departures, across all modes, during the weekdays of the week of Oct 7, 2019.

This was calculated as the number of times the stop's stop_id appeared in the merged dataset, the composition of which is described under Number of Lines.

Data Source/Provider: GTFS Date: Oct 7, 2019

Mean: 883.76 **25 - 50 - 75:** 50 - 235 - 1020 Minimum - Maximum: 5 - 9685



Average Departure

Delay This metric corresponds to a stop's average departure delay in minutes for the weekdays of the week of Oct 7, 2019.

The Thorebi and Ridango data were merged. The date strings were then converted into datetime objects so that delay could be calculated (actual abjects so that delay could be calculated (actual departure minus planned departure). This metric was then calculated as the average of these delays from the stop in question for all departures between Oct 7 and Oct 11 (weekdays of the week of Oct 7, 2019).

Data Source/Provider: Thorebi + Ridango Date: Oct 7, 2019 - Oct 13, 2019

Mean: 1.029 **25 - 50 - 75:** 0.74 - 1.3 - 2.07 Minimum - Maximum: -392.27 - 9.57



3

Early



Late

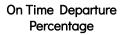
On Time Departure Percentage

This metric corresponds to a stop's percentage of trips that were on time (1 minute tolerance) during the weekdays of the week of Oct 7, 2019.

The same list of delays used to calculate Average Departure Delay for a particular stop was used to calculate this metric. This metric is the percentage of these delays that were fell within the tolerance (1 minute in both directions).

Data Source/Provider: Thorebi + Ridango Date: Oct 7, 2019 - Oct 13, 2019

Mean: 31.08 25 - 50 - 75: 17.07 - 30 - 43.71 Minimum - Maximum: 0 - 100



0% - 5%
5% - 10%
10% - 25%
25% - 50%
50% - 75%
75% - 100%

Regional bus operators (Tallinn municipal transit excluded):

(aka Main + Local Line Load) This metric corresponds to a stop's total weekday person load of departures on both local lines (lines contained within municipal borders) and main lines (county lines that cross municipal borders) for all weekdays during the entirety of October, 2019. A subset of the dataset was extracted for each unique stop_code. This metric is the sum of the total monthly weekday average for both the main line load and local line load for each stop_code.

Data Source/Provider: Ridango Date: Oct 2019, average of all work week days

3

Mean: 351 25 - 50 - 75: 9 - 40 - 169 Minimum - Maximum: 1 - 25403

Main + Local Line Load

0 - 5
5 - 10
10 - 50
50 - 100
100 - 1000
1000 - 26000

Tallinn municipal transit (bus+tram+trolley): (Card + Driver Check Ins) This metric corresponds to a stop's total

This metric corresponds to a stop's total number of checkins made via card and directly to the driver during weekdays of the week of Oct 7, 2019.

The dataset was filtered for weekdays using the day_code column. With that subset, a subset for each unique stop_code was created, and for each of those, the total number of card check ins and driver tickets sold (driver check ins) were calculated as this metric.

Data Source/Provider: Ridango Date: Oct 7, 2019 - Oct 13, 2019

Mean: 1192.29 25 - 50 - 75: 95.50 - 360 - 1354 Minimum - Maximum: 0 - 24396

3

Tot Passengers check-ins on weekdays

0- 5	
5 - 20	
50 - 500	
500 - 25000	

Population

This metric corresponds to the total population within a given buffer from a stop. The populations of the following age subgroups were also calculated: 0-14, 15-64, 65 and over.

This metric was calculated by creating a buffer (100, 500 and 1000m) around a stop and storing the number of population units (1km by 1km) from the census that intersected with the buffer, summing all of the intersecting populations values -- the total, as well as the aforementioned subgroups.

Data Source/Provider: Census Date: 2011

Eor 100m buffer: Mean: 2475.90 25 - 50 - 75: 32 - 326 - 2542 Maximum: 37237

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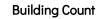
Building Count This metric corresponds to the total number of buildings within a given buffer from a stop.

This metric was calculated by creating a buffer (100, 500, and 1000m) around a stop and counting the number of building polygons within it.

Data Source/Provider: EHR (Ehitisregister) Date: 14.01.2030

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For 100m buffer. Mean: 7.66 **25 - 50 - 75:** 1 - 4 - 10 Maximum: 126





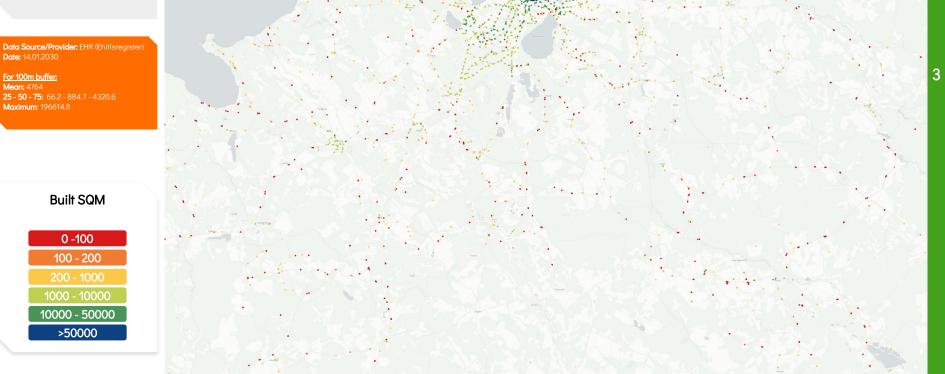
Built SQM

This metric corresponds to the amount of built area, in sq. metres, within a given buffer from a stop. The built area in sq. metres was also calculated for the following building type subgroups: residential, non-residential, transport, industrial / warehouse, accommodation /catering, commercial /service, office, entertainment, education, health / other public.

This metric was calculated by creating a buffer (100, 500, and 1000m) around a stop and summing the total built SQM (in total as well as for each of the aforementioned subgroups) of the buildings located within it.

Date: 14.01.2030

For 100m buffer: Mean: 4764 **25 - 50 - 75:** 66.2 - 884.7 - 4320.6 Maximum: 196614.8



Optional Activities Percentage This metric corresponds to the percentage

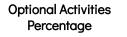
This metric corresponds to the percentage of activities that are optional activities within a given buffer from a stop.

This metric was calculated by creating a buffer (100, 500, and 1000m) around a stop and calculating the percentage of Foursquare activities within it that are optional.

Data Source/Provider. Foursquare Date: 200

For 100m buffer: Mean: 39.92

25 - 50 - 75: 0.24- 27.26- 79.53 **Minimum - Maximum**: 0 - 100



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Necessary Activities Percentage

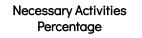
This metric corresponds to the percentage of activities that are necessary activities within a given buffer from a stop.

This metric was calculated by creating a buffer (100, 500, and 1000m) around a stop and calculating the percentage of Foursquare activities within it that are optional.

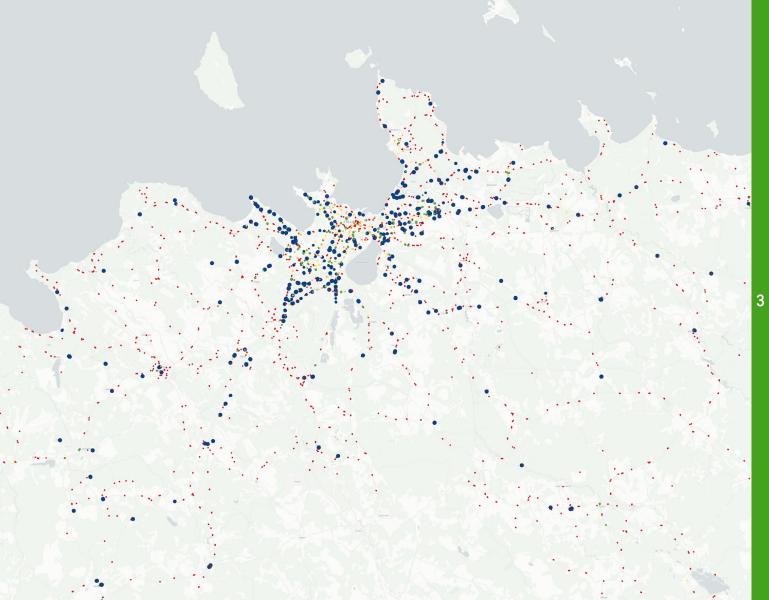
Data Source/Provider: Foursquare Date: 200

For 100m buffer: Mean: 47.40

25 - 50 - 75: 4.79 - 44.93 - 89.09 **Minimum - Maximum**: 0 - 100







Ranking

POTENTIAL DEMAND SCORE

A score between 1 and 5 for each stop signalling its relative performance (for all buffers) against the other stops with respect to their Demand, which is composed of Number of Lines, Number of Reachable Selected Mobility Hubs, and Multimodality.

For each of these constituent metrics of Demand, a quantile-based discretisation function was applied, generating 5 buckets. This score is the average of those buckets across all of the constituent metrics.

PERFORMANCE SCORE

A score between 1 and 5 for each stop signalling its relative performance (for all buffers) against the other stops with respect to their Performance, which is composed of Frequency of Trips, all of the metrics pertaining to delay, and all of the metrics pertaining to popularity.

For each of these constituent metrics of Performance, a quantile-based discretisation function was applied, generating 5 buckets. This score is the average of those buckets across all of the constituent metrics.

POTENTIAL DEMAND SCORE

A score between 1 and 5 for each stop signalling its relative performance (for all buffers) against the other stops with respect to their Demand, which is composed of Number of Lines, Number of Reachable Selected Mobility Hubs, and Multimodality.

For each of these constituent metrics of Demand, a quantile-based discretisation function was applied, generating 5 buckets. This score is the average of those buckets across all of the constituent metrics.

3

Data Source/Provider: Foursquare Date: 200

Mean: 3 25 - 50 - 75: 1.86 - 3 - 4.1 Minimum - Maximum: 1 - 5

Demand Score

1
2
4
5

PERFORMANCE SCORE

A score between 1 and 5 for each stop signalling its relative performance (for all buffers) against the other stops with respect to their Performance, which is composed of Frequency of Trips, all of the metrics pertaining to delay, and all of the metrics pertaining to popularity.

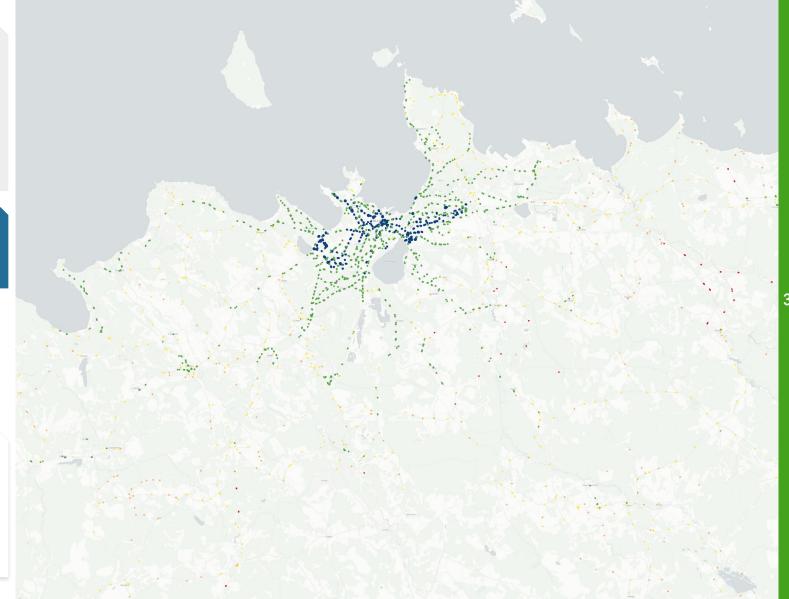
For each of these constituent metrics of Performance, a quantile-based discretisation function was applied, generating 5 buckets. This score is the average of those buckets across all of the constituent metrics.

Data Source/Provider: Foursquare Date: 200

Mean: 3.01 25 - 50 - 75: 2.33 - 3.10 - 3.71 Minimum - Maximum: 1 - 5

Performance Score

1	
2	
4	
5	



GRAPHS

SPIN DEMOS UNIT HELSINKI

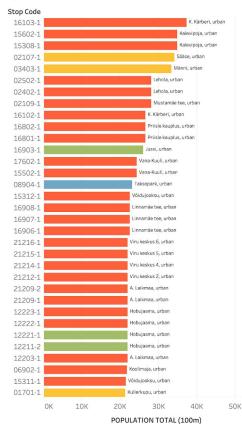
INDICATORS

Population in surroundings

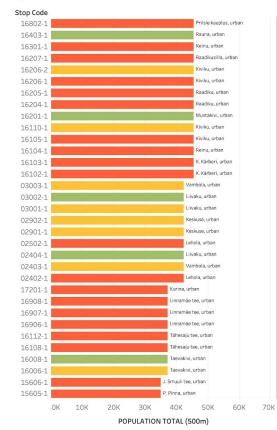
Population-100

2

HIGHEST



Population-500



Population-1000



Multimodality

1

3

DEMOS HELSINKI/

SPINUNIT

LOWEST

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Population-100



stop Code		Stop Code		Stop Code	
	Maardu kalmistu, urban		Liisküla, rural		Mustjõe, rural
	Maardu kalmistu, urban		Varese, rural		Mustjõe, rural
	Iru küla, urban		Varese, rural		Hara side, rural
19107-1	Iru küla, urban	22710-1	Hürjapea, rural	32805-1	Hara side, rural
19105-1	Iru elektrijaam, urban	22709-1	Hürjapea, rural	22363-1	Kiruvere, rural
	Vasar, urban	22352-1	Kuusiku I, rural	22362-1	Kiruvere, rural
19101-1	Vasar, urban	22351-1	Kuusiku I, rural	22328-1	Saumetsa, rural
14504-1	Betooni, urban	22330-1	Sääsküla, rural	22327-1	Saumetsa, rural
14303-1	Pikamägi, urban	22329-1	Sääsküla, rural	37306-1	Törrepõhja, rural
14302-1	Pikamägi, urban	22306-1	Jaagu, rural	37202-1	Metskonna, rural
14004-1	Paneeli, urban	22305-1	Jaagu, rural	37201-1	Metskonna, rural
14003-1	Paneeli, urban	22177-1	Viskla õpilaste, rural	37007-1	Pillapalu küla, rural
14002-1	Söstramäe, urban	22120-1	Lendermaa, rural	37002-1	Pillapalu, rural
14001-1	Söstramäe, urban	22119-1	Lendermaa, rural	37001-1	Pillapalu, rural
13902-1	Betooni põik, urban	21954-1	Jaanika, rural	28452-1	Lamme, rural
13901-1	Betooni põik, urban	21953-1	Jaanika, rural	28451-1	Lamme, rural
13808-1	Nuia, urban	21938-1	Mõnuste, rural	26406-1	Punakivi, rural
13807-1	Nuia, urban	21937-1	Mõnuste, rural	26405-1	Punakivi, rural
13806-1	Ruunaoja, urban	21934-1	Miilimaa, rural	22824-1	Suurekivi, rural
13805-1	Sõjamäe, urban	21933-1	Miilimaa, rural	22823-1	Suurekivi, rural
13804-1	Raudbetooni, urban	21932-1	Metsanurga, rural	22814-1	Maissoo, rural
L3803-1	Raudbetooni, urban	21931-1	Metsanurga, rural	22813-1	Maissoo, rural
13802-1	Ruunaoja, urban	21756-1	Tōmmiku, rural		Kuusiku I, rural
	Ruunaoja, urban	21755-1	Tōmmiku, rural	22351-1	Kuusiku I, rural
L3707-1	Suur-Sõjamäe, urban	21731-1	Luuri, rural	22306-1	Jaagu, rural
L3706-1	Suur-Sõjamäe, urban	21465-1		22305-1	
13606-1	Pühamägi, urban	21464-1		22120-1	Lendermaa, rural
	Lennujaam, urban		Paluküla, rural		Lendermaa, rural
	Paljassaare põik, urban		Paluküla, rural		Jaanika, rural
	Liiva kalmistu, urban	13807-1			Jaanika, rural
	Liiva kalmistu, urban		Sõjamäe, urban	21465-1	
	Kalmu, urban		Raudbetooni, urban	21464-1	
06601-1	Kalmu, urban	13803-1	Raudbetooni, urban	13805-1	Sõjamäe, urban

Population-500

INDICATORS Population in surroundings

1 2 3 4

Population-1000

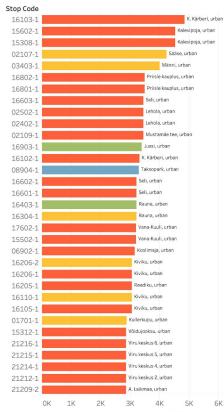
INDICATORS

Population 0-14 years old in surroundings

7K

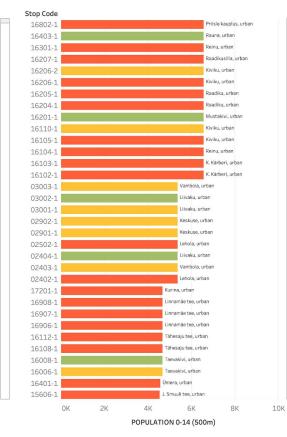


2

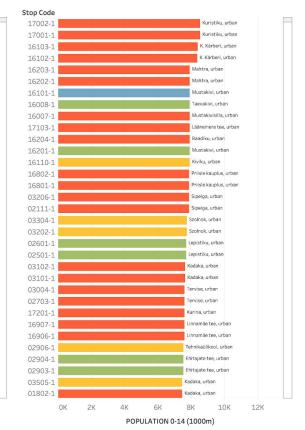


POPULATION 0-14 (100m)

Kids-500



Kids-1000



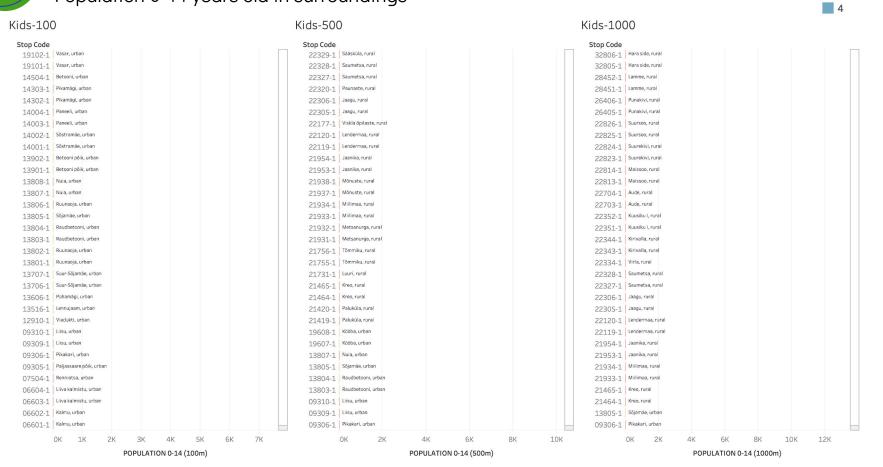


HIGHEST



LOWEST





INDICATORS Population 0-14 years old in surroundings



2

HIGHEST

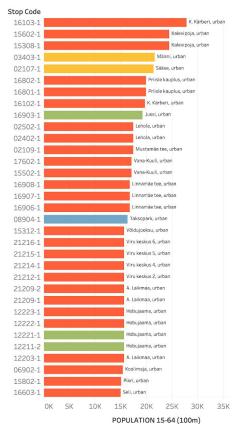
INDICATORS

Population 15-64 years old in surroundings

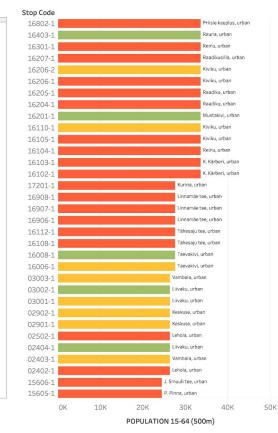
40K

Adults-100

2



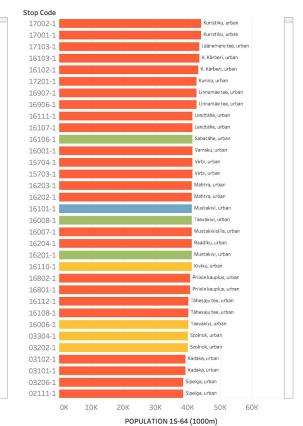
Adults-500



DEMOS HELSINKI/

SPINUNIT

Adults-1000





1

LOWEST

Adults-100



Stop Code		Stop Code	St	op Code	
19518-1	Maardu kalmistu, urban		Liisküla, rural	22362-1	Kiruvere, rural
19517-1	Maardu kalmistu, urban	22748-1	Varese, rural	22344-1	Kirivalla, rural
19108-1	Iru küla, urban	22747-1	Varese, rural	22343-1	Kirivalla, rural
19107-1	Iru küla, urban	22710-1	Hürjapea, rural	21934-1	Miilimaa, rural
19105-1	Iru elektrijaam, urban	22709-1	Hürjapea, rural	21933-1	Miilimaa, rural
19102-1	Vasar, urban	22352-1	Kuusiku I, rural	22826-1	Suursoo, rural
19101-1	Vasar, urban	22351-1	Kuusiku I, rural	22825-1	Suursoo, rural
14504-1	Betooni, urban	22330-1	Sääsküla, rural	22334-1	Virla, rural
14303-1	Pikamägi, urban	22329-1	Sääsküla, rural	37306-1	Tõrrepõhja, rural
14302-1	Pikamägi, urban	22306-1	Jaagu, rural	37202-1	Metskonna, rural
14004-1	Paneeli, urban	22305-1	Jaagu, rural	37201-1	Metskonna, rural
14003-1	Paneeli, urban	22177-1	Viskla õpilaste, rural	37007-1	Pillapalu küla, rural
14002-1	Söstramäe, urban	22120-1	Lendermaa, rural	37002-1	Pillapalu, rural
14001-1	Söstramäe, urban	22119-1	Lendermaa, rural	37001-1	Pillapalu, rural
13902-1	Betooni põik, urban	21954-1	Jaanika, rural	28452-1	Lamme, rural
13901-1	Betooni põik, urban	21953-1	Jaanika, rural	28451-1	Lamme, rural
13808-1	Nuia, urban	21938-1	Mõnuste, rural	26406-1	Punakivi, rural
13807-1	Nuia, urban	21937-1	Mõnuste, rural	26405-1	Punakivi, rural
13806-1	Ruunaoja, urban	21934-1	Miilimaa, rural	22824-1	Suurekivi, rural
13805-1	Sõjamäe, urban	21933-1	Miilimaa, rural	22823-1	Suurekivi, rural
13804-1	Raudbetooni, urban	21932-1	Metsanurga, rural	22814-1	Maissoo, rural
13803-1	Raudbetooni, urban	21931-1	Metsanurga, rural	22813-1	Maissoo, rural
13802-1	Ruunaoja, urban	21756-1	Tõmmiku, rural	22352-1	Kuusiku I, rural
13801-1	Ruunaoja, urban			22351-1	Kuusiku I, rural
	Suur-Sõjamäe, urban	21731-1		22306-1	Jaagu, rural
13706-1	Suur-Söjamäe, urban	21465-1	Kreo, rural	22305-1	Jaagu, rural
13606-1	Pühamägi, urban	21464-1		22120-1	Lendermaa, rural
13516-1	Lennujaam, urban				Lendermaa, rural
09305-1	Paljassaare põik, urban	21419-1			Jaanika, rural
	Liiva kalmistu, urban	13807-1			Jaanika, rural
06603-1	Liiva kalmistu, urban			21465-1	Kreo, rural
06602-1	Kalmu, urban				Kreo, rural
06601-1	Kalmu, urban	13803-1	Raudbetconi, urban	13805-1	Sõjamäe, urban

Adults-1000

INDICATORS

Population 15-64 years old in surroundings

Adults-500

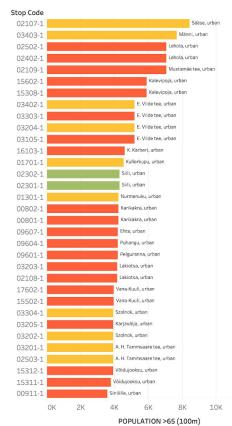
INDICATORS

Population over 65 years old in surroundings

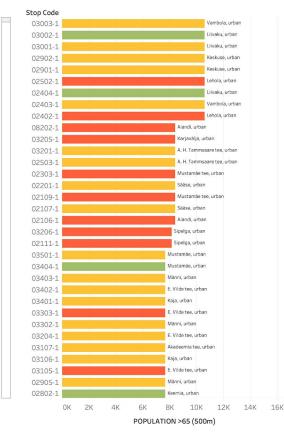
12K

Senior-100

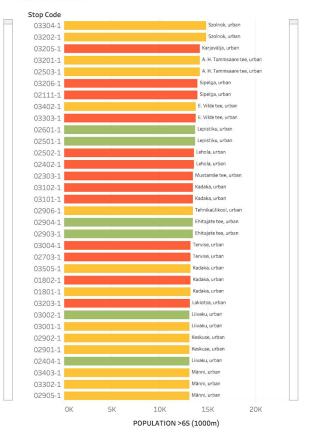
2



Senior-500



Senior-1000



Multimodality



LOWEST

13804-1 Raudbetooni, urban 13803-1 Raudbetooni, urban

13802-1 Ruunaoja, urban

13801-1 Ruunaoja, urban

13707-1 Suur-Sõjamäe, urban

13706-1 Suur-Sõjamäe, urban

13606-1 Pühamägi, urban

13516-1 Lennujaam, urban

09305-1 Paljassaare põik, urban

06604-1 Liiva kalmistu, urban 06603-1 Liiva kalmistu, urban

06602-1 Kalmu, urban

06601-1 Kalmu, urban

0К 2К

4K

6K

POPULATION >65 (100m)

8К

10K

12K



10K

POPULATION >65 (500m)

12K 14K

16K

6K 8K

22352-1 Kuusiku I, rural

22351-1 Kuusiku I, rural

22306-1 Jaagu, rural

22305-1 Jaagu, rural

22120-1 Lendermaa, rural

22119-1 Lendermaa, rural

22033-1 Sookaera, rural

21954-1 Jaanika, rural

21953-1 Jaanika, rural

21720-1 Käesalu, rural

21465-1 Kreo, rural

21464-1 Kreo, rural

13805-1 Sõjamäe, urban

0K

5K

10K

POPULATION >65 (1000m)

15K

20K

Population over 65 years old in surroundings								
Senior-1	.00	Senior-500			Senior-1000			
Stop Code		Stop Code		Stop Code				
	Koplimäe, urban		Jaagu, rural		Pillapalu küla, rural			
	Koplimäe, urban		Jaagu, rural		Pillapalu, rural			
	Iru küla, urban		Viskla õpilaste, rural		Pillapalu, rural			
	Iru küla, urban		Lendermaa, rural		Lamme, rural			
19105-1	Iru elektrijaam, urban	22119-1	Lendermaa, rural	28451-1	Lamme, rural			
19102-1	Vasar, urban	22033-1	Sookaera, rural	26908-1	Ihita, rural			
19101-1	Vasar, urban	21954-1	Jaanika, rural	26406-1	Punakivi, rural			
14504-1	Betooni, urban	21953-1	Jaanika, rural	26405-1	Punakivi, rural			
14303-1	Pikamägi, urban	21938-1	Mõnuste, rural	26402-1	Ihasalu tee, rural			
14302-1	Pikamägi, urban	21937-1	Mõnuste, rural	26401-1	Ihasalu tee, rural			
14004-1	Paneeli, urban	21934-1	Miilimaa, rural	23288-1	Traksi, rural			
14003-1	Paneeli, urban	21933-1	Miilimaa, rural	23287-1	Traksi, rural			
14002-1	Söstramäe, urban	21932-1	Metsanurga, rural	23174-1	Tuhala tee, rural			
14001-1	Söstramäe, urban	21931-1	Metsanurga, rural	23173-1	Tuhala tee, rural			
	Betooni põik, urban	21799-1	Adruvahi, rural		Vilivalla, rural			
	Betooni põik, urban		Tõmmiku, rural		Vilivalla, rural			
13808-1			Tõmmiku, rural		Suurekivi, rural			
	Nuia, urban		Luuri, rural		Suurekivi, rural			
	Ruunaoja, urban		Adruvahi, rural	200000000000000000000000000000000000000	Maissoo, rural			
	Sõjamäe, urban		Käesalu, rural		Maissoo, rural			
T2002-T		E		LLOID-1				

21720-1 Käesalu, rural

21465-1 Kreo, rural

21464-1 Kreo, rural

21452-1 Vetla, rural

21451-1 Vetla, rural

21420-1 Paluküla, rural

21419-1 Paluküla, rural

19608-1 Kööba, urban

19607-1 Kööba, urban

13807-1 Nuia, urban

13805-1 Sõjamäe, urban

13804-1 Raudbetooni, urban

13803-1 Raudbetooni, urban

0K 2K

4K

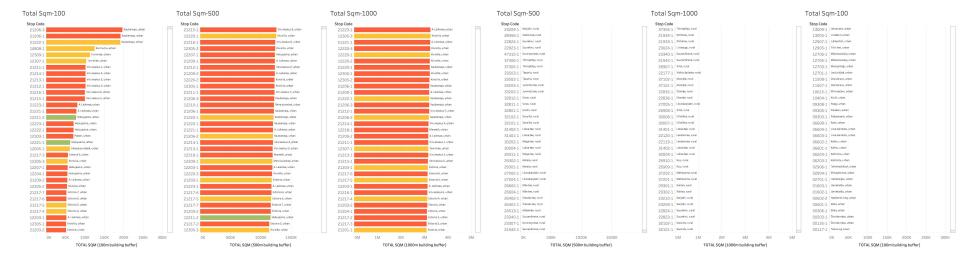
INDICATORS

Multimodality





Total Sqm: the amount of built area within a 100, 500, and 1000m buffer from a stop.



HIGHEST





Multimodality

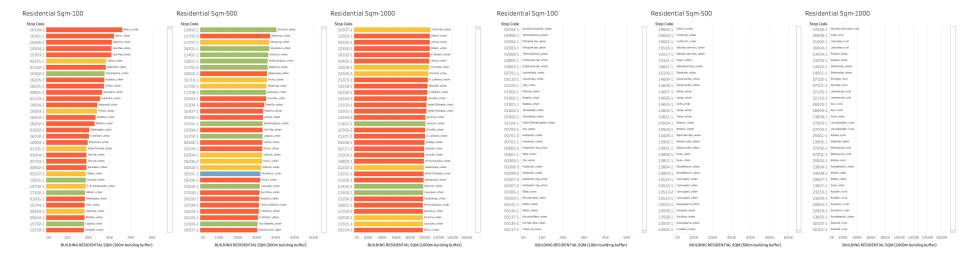
LOWEST

DEMOS HELSINKI/

SPINUNIT



Total Sqm (Residential): the amount of built residential area within a 100, 500, and 1000m buffer from a stop.



HIGHEST

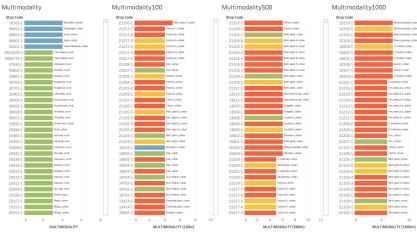


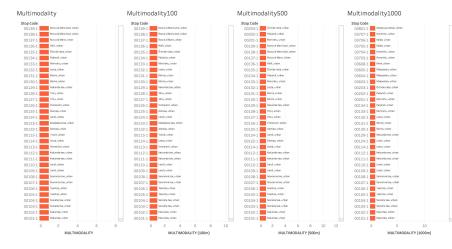
LOWEST



MULTIMODALITY

The number of unique modes of transport departing from a stop during the weekdays of the week of Oct 7, 2019. At the moment, the following are considered distinct modes: (Bus) City line operated by a public service contract, (Bus) Commercial city line, (Bus) County commercial line, (Bus) County line served by a public service contract, Long-distance and international lines (Bus), Tram line, Troll line, Ferry line, Train line





TOP 25%





2 3

4

jean, urbar

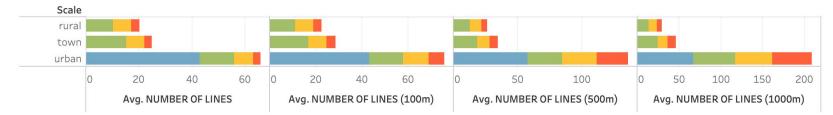


NUMBER OF LINES The number of lines that pass through a stop during the weekdays of the week of Oct 7, 2019.

Number of Lines



AVG Number of Lines



Multimodality

1 2 3



NUMBER OF LINES

The number of lines that pass through a stop during the weekdays of the week of Oct 7, 2019.

Hotell Olümpia, urba

ietell Olümpia, urba

intäe, urban

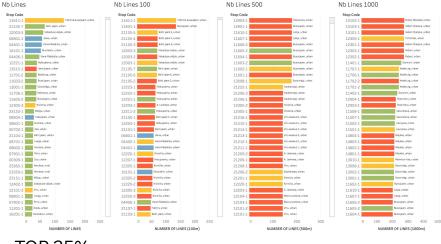
el Olimpia, urba

oberi, urban

onaiori, arben

Keskturg, urben

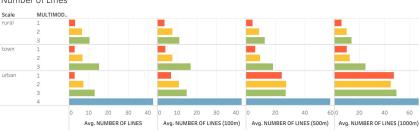
onsiori, urban



INDICATORS



TOP 25%



BOTTOM 25%



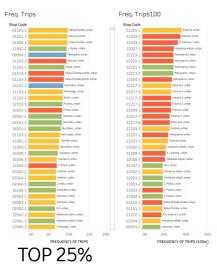
4





FREQUENCY OF TRIPS

Total number of departures, across all modes, between Monday and Friday of the week of Oct 7, 2019.



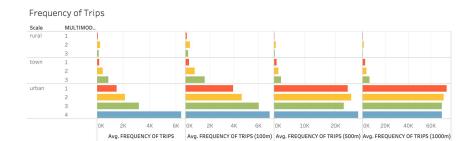
INDICATORS







BOTTOM 25%





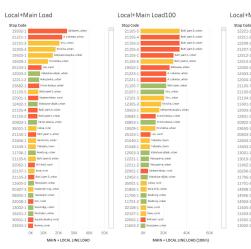


4



MAIN + LOCAL LINE LOAD

The average daily departure load (main + local lines) for a stop. (Oct 2019))



Provider: Ridanao







TOP 25%



BOTTOM 25%









MAIN + LOCAL LINE LOAD

The average daily departure load (main + local lines) for a stop. (Oct 2019)

47355-Rehe, rural 47354-1 Hindreku, rural 47351-1 Torupilli, rural 47344-1 Kurvi tee, town 47338-1 Roosi tee, rural 47334-1 Jalaka tee, town 47332-1 Seltsimaja, town 47331-1 Suurevália, town Ööbiku, rural 47328-1 47320-1 Orava, rural 47310-1 Saksa, rural Külakõrtsu, rural 47305-1 47303-1 Karu tee, rural 47301-1 Voore mõis, rural 47224-1 Uue, rural 47214-1 Hallikivi, rural 47212-1 Viti tankla, rural Mäe, rural 47211-1 47205-1 Hindreku, rural 47202-1 Kadaka, rural Muraste kool, rurai 47201-1 Rohkvahe, rural 47106-1 47103-1 Măealuse tee, rural 47102-1 Nurme, town Uus-Rebala, rural 47034-1 47031-1 Rootsikari, rural 47027-1 Maardu mõisa tee, urban 47021-1 lru küla, town 47009-1 Harkujärve, town 47007-1 Oja tee, town 47006-1 Alasniidu tee, town 47005-1 Alasniidu tee, towr 41117-1 Kurgla, rural 41010-1 Sambu, rural 41005-1 Raasiku side, rural Põhja küla, rural 28902-1 28105-1 Jõe, rural 26604-1 Mäe tee, rural 26408-1 Kadastiku, rural Kadastiku, rural 26407-1 25809-1 Jõeääre, rural

25807-1

25303-1

50

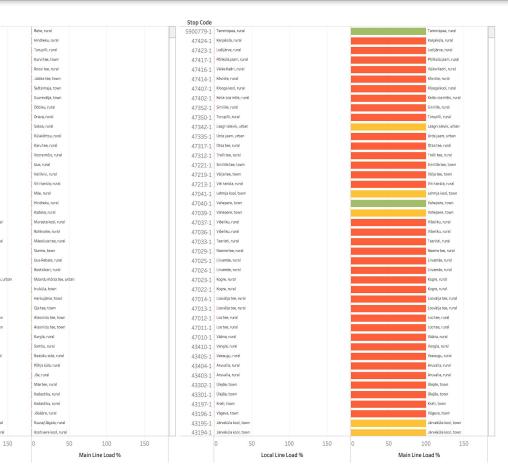
Kuuse/Jägala, rural

Kostivere kool, rural

100

Local Line Load %

Stop Code





1

23

4

Regional bus operators

Loading of people from PT Bus Stops

Time: 2019, October, all weekdays (M-F)

(Tallinn excluded):

Stop code: the stop's stop code

ocal line: local line (line cor

Main line: main line (cou municipal borders) load

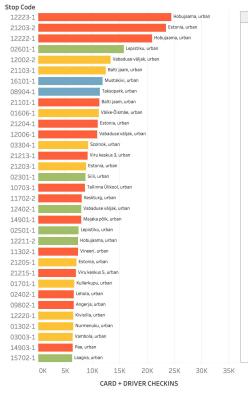
Provider: Ridango





1 2 3 4

Checkins



Checkins

SPIN DEMOS

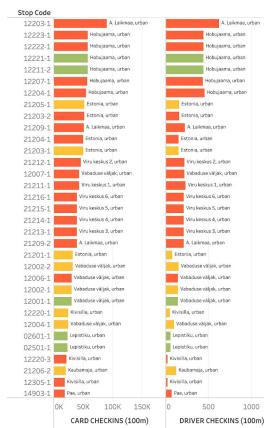




BOTTOM 25%



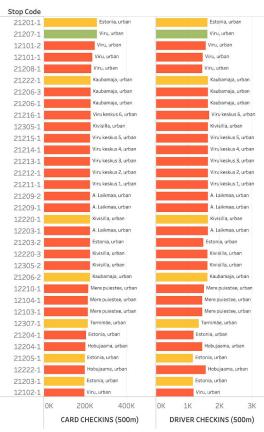
Checkins-100



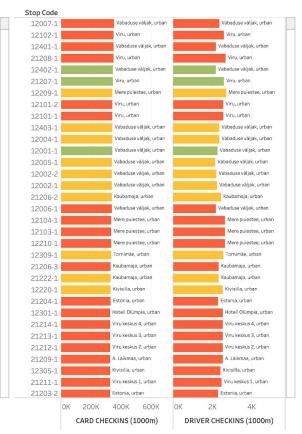
Checkins-500

A. Laikmaa, urban

1000



Checkins-1000



Multimodality





00310-1 Meistri, urban

47040-1 Vahepere, town

06105-1 Kauge, urban 09801-1 Angerja, urban

00102-1 Kakumäe, urban

00101-1 Kakumäe, urban

05105-1 Pargi, urban

20816-1 Rahnu, urban

13807-1 Nuia, urban

00125-1 Alemaa, urban

12909-1 Varre, urban

18903-1 Hämar tee, urban

12901-1 Bussijaam, urban

00202-1 Paljandi, urban

04706-1 Vääna, urban

00303-1 Hälli, urban

00117-1 Tiskre oja, town

00116-1 Tiskre oja, town

13606-1 Pühamägi, urban

23707-1 Teekalda, town

16605-1 Priisle, urban

00305-1 Tanuma, urban

19101-1 Vasar, urban

09307-1 Paagi, urban

23608-1 Tādu kuusk, town

12907-1 Juhkentali, urban

OK 50K 100K

CARD CHECKINS (100m)

150K

19401-1 Kärmu, urban

18611-1 Pärnamäe tee, urban

01104-1 Väike-Õismäe parkla, urban

13804-1 Raudbetooni, urban

02112-1 Rebasemägi, urban

09305-1 Paljassaare põik, urban

47005-1 Alasniidu tee, town



2	INDICATORS Check-ins		
Checkins-100		Checkins-500	
Stop C	Code	Stop Code	

Multimoda
1
2
3
4

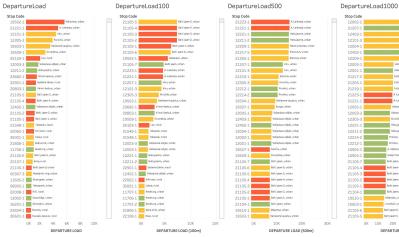
Checkins-1000

CHECKIIIS-500				CHECKINS-1000				
	Stop Code		Stop Code					
Meistri, urban	06602-1 Kalmu, urban	Kalmu, urban	20813-3 Harkujärve, tow	n Harkujärve, town				
Vahepere, town	00108-1 Sooranna tee, urban	Sooranna tee, urban	13805-1 Sõjamäe, urban	Sõjamäe, urban				
(auge, urban	20809-1 Aiaotsa, town	Alaotsa, town	00201-1 Merirahu, urban	Merirahu, urban				
ngerja, urban	00136-1 Hälli, urban	Hälli, urban	20809-1 Aiaotsa, town	Aiaotsa, town				
akumäe, urban	09310-1 Liisu, urban	Liisu, urban	20808-1 Aiaotsa, town	Aiaotsa, town				
kumäe, urban	09309-1 Liisu, urban	Liisu, urban	06605-1 Raku, urban	Raku, urban				
asniidu tee, town	09306-1 Pikakari, urban	Pikakari, urban	20807-1 Hansunömme, t	own Hansunömme, town				
irgi, urban	18602-1 Metsakalmistu, urban	Metsakalmistu, urban	20806-1 Hansunömme, t	own Hansunömme, town				
hnu, urban	18601-1 Metsakalmistu, urban	Metsakalmistu, urban	06606-1 Raku, urban	Raku, urban				
ia, urban	20811-1 Vesiniidu, town	Vesiniidu, town	47007-1 Oja tee, town	Oja tee, town				
emaa, urban	20810-1 Vesiniidu, town	Vesiniidu, town	20811-1 Vesiniidu, town	Vesiniidu, town				
imar tee, urban	06609-1 Kaarla, urban	Kaarla, urban	20810-1 Vesiniidu, town	Vesiniidu, town				
rre, urban	19102-1 Vasar, urban	Vasar, urban	19104-1 Madikse, urban	Madikse, urban				
ssijaam, urban	19101-1 Vasar, urban	Vasar, urban	19103-1 Madikse, urban	Madikse, urban				
ljassaare põik, urban	00303-1 Hälli, urban	Halli, urban	19302-1 Pähklamäe, urbi	an Pähklamäe, urban				
jandi, urban	00104-1 Soolahe tee, urban	Soolahe tee, urban	19301-1 Pähklamäe, urba	n Pähklamäe, urban				
udbetconi, urban	00103-1 Soolahe tee, urban	Soolahe tee, urban	19102-1 Vasar, urban	Vasar, urban				
ăna, urban	19403-1 Koplimäe, urban	Koplimäe, urban	19101-1 Vasar, urban	Vasar, urban				
basemāgi, urban	19402-1 Koplimäe, urban	Koplimäe, urban	00119-1 Jõeküla, town	Jõeküla, town				
lli, urban	20805-1 Metsakasti, town	Metsakasti, town	00104-1 Soolahe tee, urb	an Soolahe tee, urban				
kre oja, town	20804-1 Metsakasti, town	Metsakasti, town	00103-1 Soolahe tee, urb	an Soolahe tee, urban				
kre oja, town	00119-1 Jõeküla, town	Jõeküla, town	06611-1 Raudalu, urban	Raudalu, urban				
rnamäe tee, urban	00118-1 Jõeküla, town	Jõeküla, town	06609-1 Kaarla, urban	Kaarla, urban				
hamāgi, urban	20812-1 Muuga, town	Muuga, town	19403-1 Koplimäe, urban	Koplimäe, urban				
ike-Õismäe parkla, urban	06611-1 Raudalu, urban	Raudalu, urban	19402-1 Koplimäe, urban	Koplimäe, urban				
ekalda, town	00101-1 Kakumäe, urban	Kakumäe, urban	09310-1 Liisu, urban	Liisu, urban				
isle, urban	00133-1 Merirahu, urban	Merirahu, urban	09309-1 Liisu, urban	Liisu, urban				
numa, urban	00102-1 Kakumäe, urban	Kakumäe, urban	09306-1 Pikakari, urban	Pikakari, urban				
sar, urban	09305-1 Paljassaare põik, urban	Paljassaare põik, urban	00102-1 Kakumäe, urban	Kakumäe, urban				
agi, urban	00116-1 Tiskre oja, town	Tiskre oja, town	00101-1 Kakumäe, urban	Kakumäe, urban				
du kuusk, town	23707-1 Teekalda, town	Teekalda, town	19401-1 Kärmu, urban	Kärmu, urban				
rmu, urban	23608-1 Tädu kuusk, town	Tädu kuusk, town	23707-1 Teekalda, town	Teekalda, town				
hkentali, urban	19401-1 Kärmu, urban	Kārmu, urban	23608-1 Tädu kuusk, tow	n Tädu kuusk, town				
500 1000	ОК 200К	400K OK 1K 2K 3	к ок 200к	400K 600K 0K 2K 4K				
DRIVER CHECKINS (100m)	CARD CHECKINS (500m) DRIVER CHECKINS (500m		HECKINS (1000m) DRIVER CHECKINS (1000m)				

ality







TOP 25%



partureLoad	DepartureLoad100	DepartureLoad500	DepartureLoad1000
top Code	Stop Code	Stop Code	Stop Code
12001-1 Vabaduse väljak, urban	17502-1 Peevõķa, urban	21825-1 Uksóidu, urban	22327-1 Saumetaa, rural
11707-1 Kaskturg.urban	17501-1 Paevāļa, urban	21741-1 Nithilja, rural	22324-1 Ridamäe, rutai
11702-1 Keskburg, urban	16903-1 Jani, urban	21740-1 Nituilia, caral	22323-1 Ridamán, rural
11508-1 Vesiverwa, urban	16902-1 Amil Artist	21581-1 Adra/Vääna tallid, rural	22314-1 Klue, rural
11501-1 Laskpea.srban	16303-1 Prise uter	21580-1 Adra/Väära tallid, rural	22313-1 Klue.rusi
11201-1 Kolduurben	16110-1 Kiviku.urban	21508-1 Kervi rural	22309-1 8but rural
10905-1 A Adamsoni, urban	16105-1 Sabatahe.orban	21507-1 Kervi rural	22306-1 Jaegu raral
10904-1 Hotell Tallinn, urban	13805-1 Stjonie, urban	21450-1 Lattmetae, runal	22305-1 Jaegu, ranal
10603-1 Linnahall, urban	13803-1 Reudbetconi, urben	21449-1 Lahtzaetsa, rural	22148-1 Streen, rural
07704-1 Linutee, urban	12802-1 Onu urban	21446-1 Useanu, nural	22147-1 Stmenu, rural
07404-1 Helivatamete, urban	12801-1 0rs.srban	21445-1 Useon, wal	22138-1 Raveliu, rural
06104-1 Kaupe.urben	12601-1 Kesnes, urban	21442-1 See-otsa, sval	22137-1 Raveliu, rarai
06101-1 Marries orban	12212-1 Provid, urban	21441-1 See otsa, nval	22120-1 Lendermax runal
05902-1 Karusmarja, urban	12005-1 Vebeduse vélak, urban	21432-1 Rassitz rural	22119-1 Lendermax, runal
05901-1 Karusmarja, urban	12002-1 Vebeduse véjak, urban	21431-1 Results, rural	22102-1 Ahailla, rural
05403-1 Menne, urban	12001-1 Vebeduse väjak, urban	21424-1 Perila teo, rural	22101-1 Abaila, rural
05104-1 Hölmu, urban	11201-1 Keidu, urban	21423-1 Peria teo, rural	21974-1 Onu rarai
05103-1 Hörma urban	10905-1 A Adamsoni, urban	21420-1 Pakakila, rural	21934-1 Milimaa, rural
05005-1 Salve, urban	10904-1 Hotel Tallins, urban	21419-1 Pakelika rank	21933-1 Milima, rural
04401-1 Veto Patrikula, urban	10503-1 Unnahall, urban	21418-1 Palminde, runal	21915-1 Munaleskine tee, rural
03505-1 Kadaka, urban	0770.4-1 Lineu tex, urban	21417-1 Palminile, runal	21741-1 Nitvilja, ranal
03404-1 Mustamie, urban	06104-1 Keeps, urban	18602-1 Netsakalmista, urban	21740-1 Nitvilja, raral
03403-1 Miteri, urban	05902-1 Karasmarja, urban	18601-1 Netuskalmista, urban	21508-1 Karvi, rural
03402-1 E-Wide tee, urban	05901-1 Karasmarja, urban	17504-1 Loopealos, urban	21450-1 Lettmetsa, rural
03104-1 Autobussikoondik, urban	05403-1 Nomme_urban	17502-1 Paeväja, urban	21449-1 Lettmetsk, rusal
03002-1 Livaka.urban	05104-1 Hämuurbee	17501-1 Peevõlja, urben	21446-1 Ukeanu rarai
02903-1 Entajote tea, urban	05103-1 Hölmu, urban	12802-1 Oru.urban	21.445-1 Ukean, rarel
02301-1 Sill urban	04401-1 Vena Pääskalle, urben	12801-1 Oru.urban	21442-1 Soootaa, runal
01701-1 Kalerkapa arban	03505-1 Kadaka, urban	11201-1 Koldu, arban	21441-1 Societa, rural
01606-1 Vilke-Distrile, urban	03402-1 E-Vide tee, urban	10904-1 Hotell Tallice, urban	21.432-1 Raasta, caral
01302-1 Nameruka arban	03104-1 Autobussikaandis, urban	10603-1 Lineahall, urban	21431-1 Rasta, caral
00119-1 .deki4x.tews	D1606-1 Võike Öismäe, urban	05902-1 Kerusmarja, urban	21420-1 Palskila, rani
00116-1 Tskreeja.town	01302-1 Namenuku.urban	05901-1 Kerusmarja, urban	21419-1 Palakila ranal

BOTTOM 25%

Multimodality 1

> 2 3

4





ON-TIME DEPARTURE PERCENTAGE

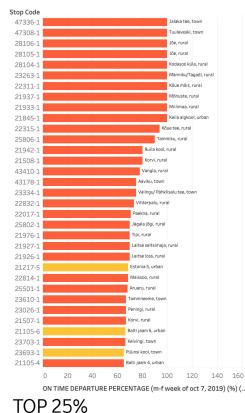
Percentage of trips that were on time between Monday and Friday of the week of Oct 7, 2019. (1 min tolerance)

SPIN DEMOS

OnTime%

INDICATORS

SPIN DEMOS UNIT HELSINKI Hardware region of 9th July 2020 Tallon - Heleinki



OnTime%



BOTTOM 25%



TOP 25%







BOTTOM 25%

Multimodality

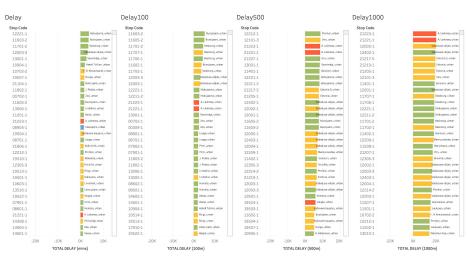
1 2 3 4

2 INDICATORS Average Departure Delay

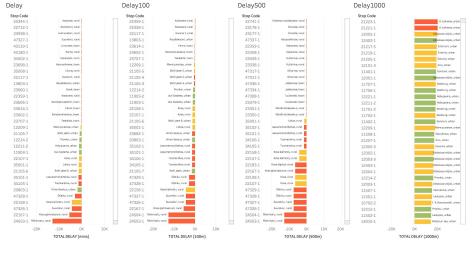


TOTAL DELAY

The total delay, in minutes, between Monday and Friday of the week of Oct 7, 2019.



TOP 25%



BOTTOM 25%

Multimodality



REACH OF MOBILITY HUBS

The number of selected mobility hubs reached *directly* from a stop during the weekdays of the week of Oct 7, 2019.

Reachable selecte

INDICATORS

- 1. Hobujaama+ Viru keskus+ A. Laikmaa
- 2. Estonia
- 3. Balti jaam
- 4. Lennujaam
- 5. Kristiine (Taksopark+ Lilleküla)
- 6. Haabersti
- 7. Vabaduse väljak
- 8. Bussijaam
- 9. Harbor (A-terminal, D-terminal)
- 10. Tondi+ Kalev

Multimodality





TOP 25%

Stop Code								
21105-7						Ba	lti jaam, u	urban
21201-1					E	istonia, u	rban	
12402-1					V	abaduse	väljak, u	rban
12203-1					A	. Laikma	a, urban	
12003-3					V	abaduse	väljak, u	rban
11201-1					к	oidu, urt	an	
11103-1					т	önismäg	i, urban	
11102-1					к	loidu, urb	an	
08904-1					т	aksoparl	<, urban	
03505-1					к	adaka, u	rban	
03304-1					S	zolnok, u	ırban	
03202-1					s	zolnok, u	ırban	
02601-1					L	epistiku,	urban	
02501-1					L	epistiku,	urban	
13002-1					Sossimä	igi, urbar	1	
13001-1					Sossimä	igi, urbar	1	
12221-1					Hobujaa	ima, urba	in	
11706-1					Kesktur	g, urban		
11701-2					Kesktur	g, urban		
11605-2					Bussijaa	am, urbar	1	
11603-2					Bussijaa	am, urbar	n	
10701-3					Reisisad	lam D-tei	rminal, ur	ban
07408-1					Tallinn-\	/äike, url	ban	
07405-1					Hallivan	iamehe, u	ırban	
07404-1					Hallivan	iamehe, u	ırban	
07403-1					Kalev, u	rban		
07401-1					Kalev, u	rban		
07301-1					Tallinn-\	Väike, url	ban	
03405-1					Akadeer	nia tee, u	ırban	
03401-1					Kaja, urt	ban		
03107-1					Akadeer	nia tee, u	ırban	
03106-1					Kaja, urt	ban		
01701-1					Kullerku	ipu, urba	n	
	0	2	4	6	8		10	12
		RI	EACHABLE	SELEC	TED N	10BILI	TY HU	BS

Reachable Hubs

top Code						
04805-1	Hiiu, urban					
04804-1	Hiiu, urban					
04803-1	Põllu, urbai					
04802-1	Raudtee, u	rban				
04801-1	Raudtee, u	rban				
04709-1	Kadaka pui	estee, urban				
04708-1	Tähetorni,	urban				
04707-1	Tähetorni,	urban				
04706-1	Vääna, urba	an				
04705-1	Vääna, urba	an				
04704-1	Pidu, urban	1				
04703-1	Pidu, urban	1				
04702-1	Hiiu jaam, u	urban				
04701-1	Hiiu jaam, u	urban				
04604-1	Rohula, urb	ban				
04603-1	Rohula, urb	ban				
04409-1	Laagri, urbi	an				
04408-1	Laagri, urbi	an				
04204-1	Pääsküla G	iümnaasium, ur	ban			
04107-1	Värsi, urba	n				
04106-1	Pääsküla, u	urban				
04105-1	Pääsküla, u	urban				
04103-1	Pääsküla ja	aam, urban				
03801-1	Kadaka pui	estee, urban				
03303-1	E. Vilde tee	e, urban				
03205-1	Karjavälja,	urban				
03203-1	Lakiotsa, u	rban				
03101-1	Kadaka, urt	ban				
02108-1	Lakiotsa, u	rban				
01904-1	Harku-Kada	aka, urban				
01903-1	Harku-Kada	aka, urban				
01902-1	Astangu, ur	rban				
01901-1	Astangu, u	rban				

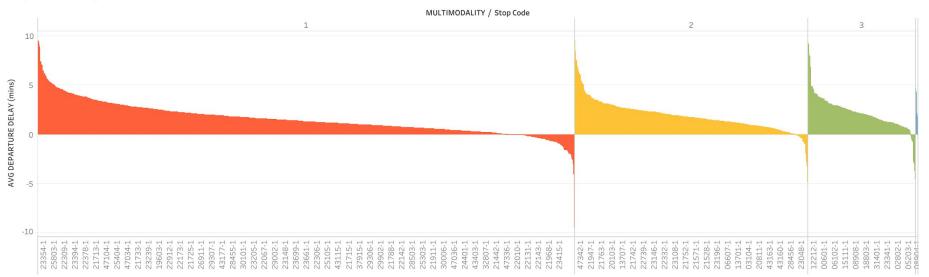
BOTTOM 25%

SPIN DEMOS UNIT HELSINKI/

14



DepartureDelay



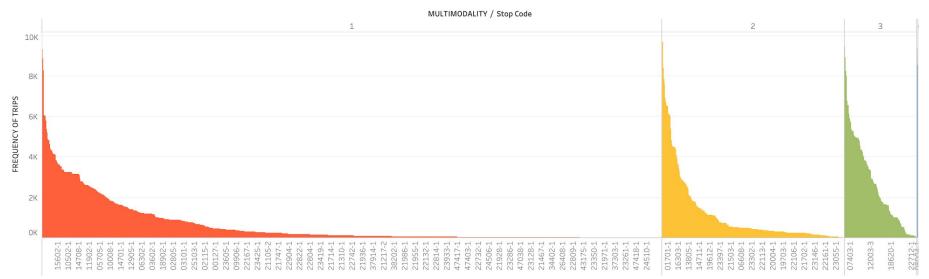
SPIN DEMOS UNIT HELSINKI/



TotalDelay MULTIMODALITY / Stop Code 2 3 1 0K TOTAL DELAY (mins) -5K -10K 23616-1 19907-1 21767-1 22189-1 34202-1 22015-1 33001-1 47105-1 24403-1 23026-1 22181-1 23609-1 47336-1 22742-1 43119-1 12101-3 21808-1 21573-1 06608-1 14502-1 24201-1 23183-1 11201-1 11304-1 19904-1 17502-1 21597-1 19108-1 23382-1 21505-1 23678-1 26911-1 23840-1 29309-1 28002-1 47348-1 47317-1 24003-1 32705-1 01701-1 22106-1 23152-1 08904-

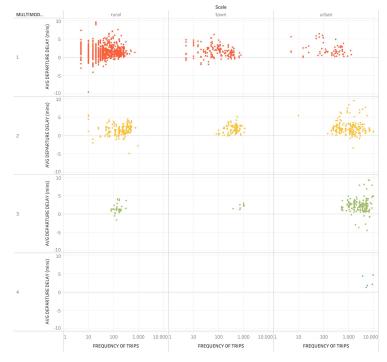


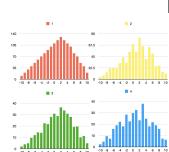
Driver Checkins





Delay VS Frequency (-10 to +10 min)





Number of public transit vehicles that have stopped at and/or departed from each stop (in week monday to friday).

Every dot is one stop.

Multimodality does not appear to be the cause of delay.

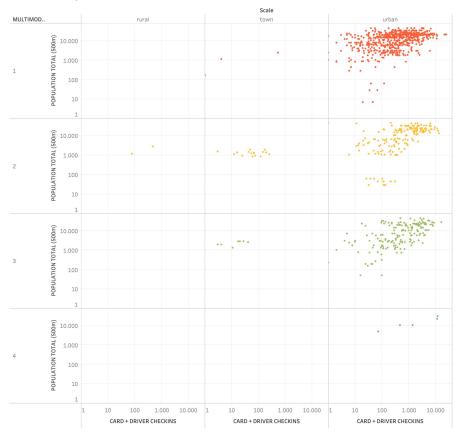
Single-mode stations are the ones carrying more dalay (influenced by long trips - highway stops)

Multimodality



INDICATORS CHECK-INS VS POPULATION (500m)

Checkins VS Population

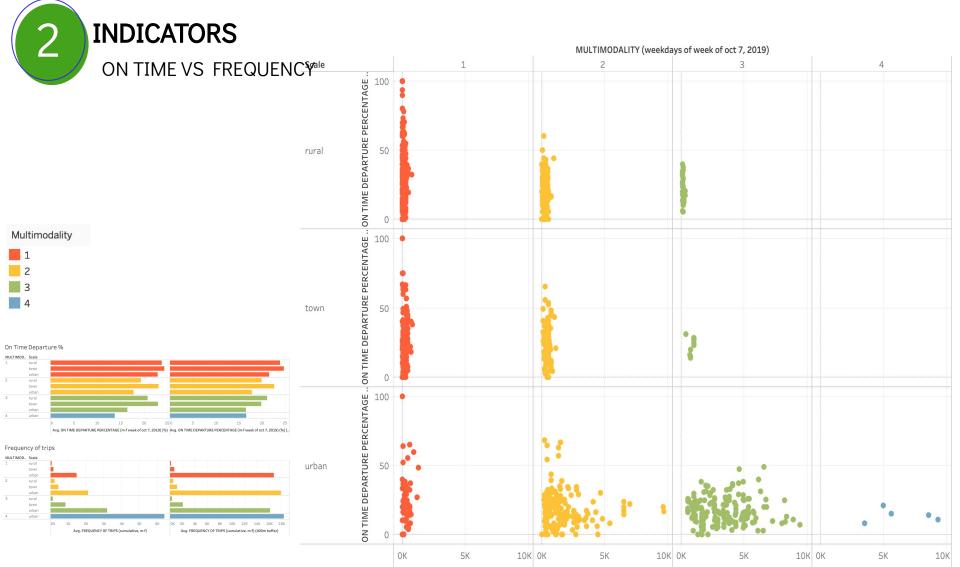


Multimodality





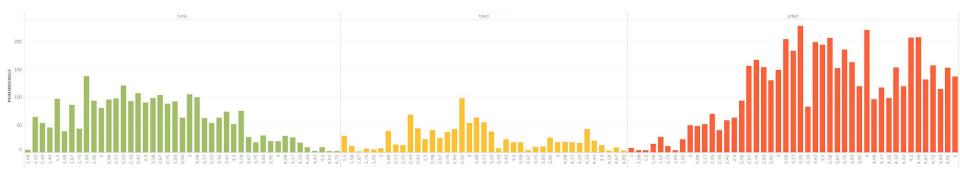




FREQUENCY OF TRIPS (cumulative, ... FREQUENCY OF TRIPS (cumulative, ... FREQUENCY OF TRIPS (cumulative, ... FREQUENCY OF TRIPS (cumulative, ...

integoence of intero (cu

INDICATORS Scale Service - Performance rural town SERVICE urban 350 300 250 200 150 100 50 0 1,08 1,33 1,67 2,33 2,83 3,17 3,33 3,5 3,67 3,83 4,17 4,33 4,83 1,5 1,83 N 2,17 2,5 2,67 $^{\circ}$ 4 4,5 4,67 S



On Time Departure percentage

On Time Departure Percentage

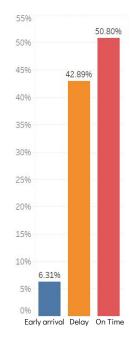
This metric corresponds to a stop's percentage of trips that were on time (1 minute tolerance) during the weekdays of the week of Oct 7, 2019.

The same list of delays used to calculate Average Departure Delay for a particular stop was used to calculate this metric. This metric is the percentage of these delays that were fell within the tolerance (1 minute in both directions).

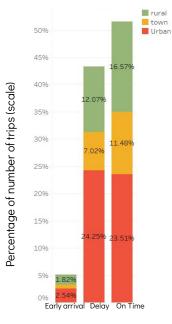
Data Source/Provider: Thorebi + Ridango Date: Oct 7, 2019 - Oct 13, 2019

Mean: 31.08 25 - 50 - 75: 17.07 - 30 - 43.71 Minimum - Maximum: 0 - 100

Comments to the graphs



Percentage of trips (On time, delayed and early arrival)



Percentage of trips (On time, delayed and early arrival)

On Time Departure percentage by municipality

On Time Departure Percentage

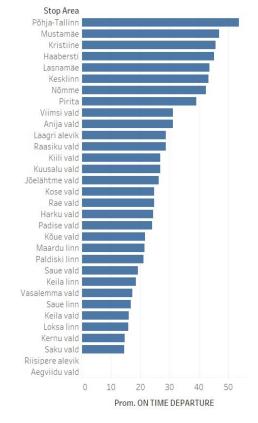
This metric corresponds to a stop's percentage of trips that were on time (1 minute tolerance) during the weekdays of the week of Oct 7, 2019.

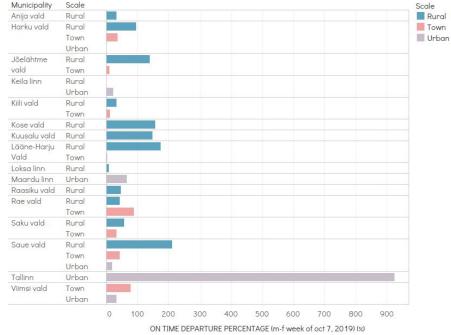
The same list of delays used to calculate Average Departure Delay for a particular stop was used to calculate this metric. This metric is the percentage of these delays that were fell within the tolerance (1 minute in both directions).

Data Source/Provider: Thorebi + Ridango Date: Oct 7, 2019 - Oct 13, 2019

Mean: 31.08 25 - 50 - 75: 17.07 - 30 - 43.71 Minimum - Maximum: 0 - 100

Comments to the graphs





Percentage of on time trips grouped by hour

On Time Departure Percentage

This metric corresponds to a stop's percentage of trips that were on time (1 minute tolerance) during the weekdays of the week of Oct 7, 2019.

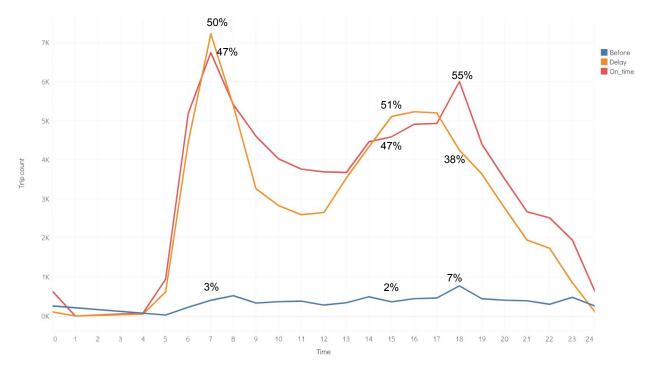
The same list of delays used to calculate Average Departure Delay for a particular stop was used to calculate this metric. This metric is the percentage of these delays that were fell within the tolerance (1 minute in both directions).



Mean: 31.08 25 - 50 - 75: 17.07 - 30 - 43.71 Minimum - Maximum: 0 - 100

Comments to the graphs

0



Considering that on time trips are the trips that has **1 minute or less** of delay



Number of trips in a week by hour depending on scale

On Time Departure Percentage

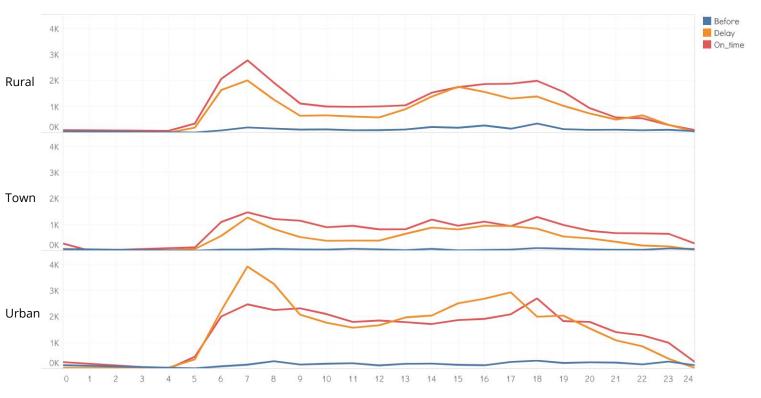
This metric corresponds to a stop's percentage of trips that were on time (1 minute tolerance) during the weekdays of the week of Oct 7, 2019.

The same list of delays used to calculate Average Departure Delay for a particular stop was used to calculate this metric. This metric is the percentage of these delays that were fell within the tolerance (1 minute in both directions).

Data Source/Provider: Thorebi + Ridango Date: Oct 7, 2019 - Oct 13, 2019

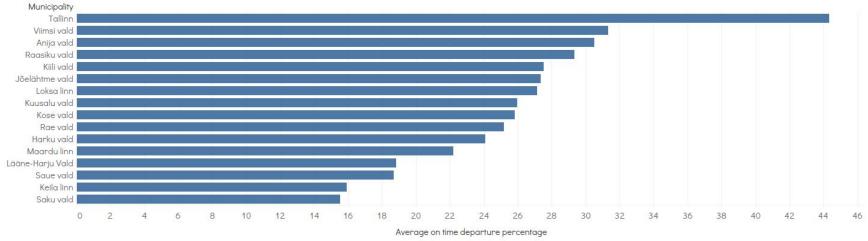
Mean: 31.08 25 - 50 - 75: 17.07 - 30 - 43.71 Minimum - Maximum: 0 - 100

Comments to the graphs



On time departure percentage by municipality

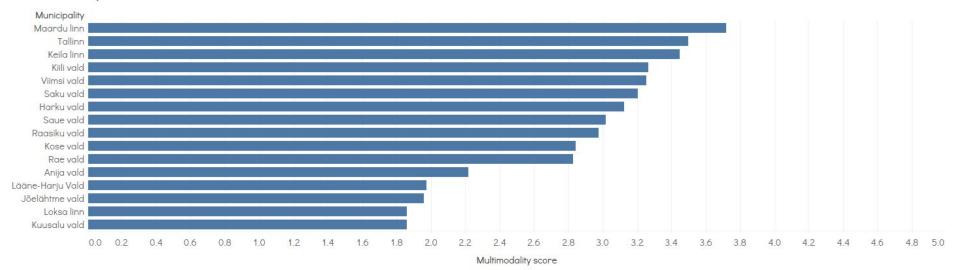
On time departure percentage



1.625 - 229 229 429 429 429 429 429

INDICATORS Multimodality / Number of line

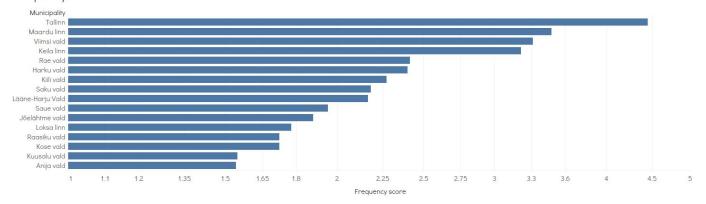
Multimodality score

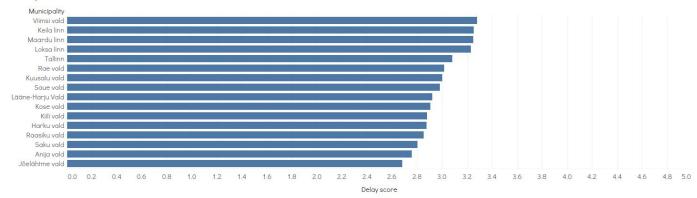


SPIN DEMOS UNIT HELSINKI



Frequency score





Delay score



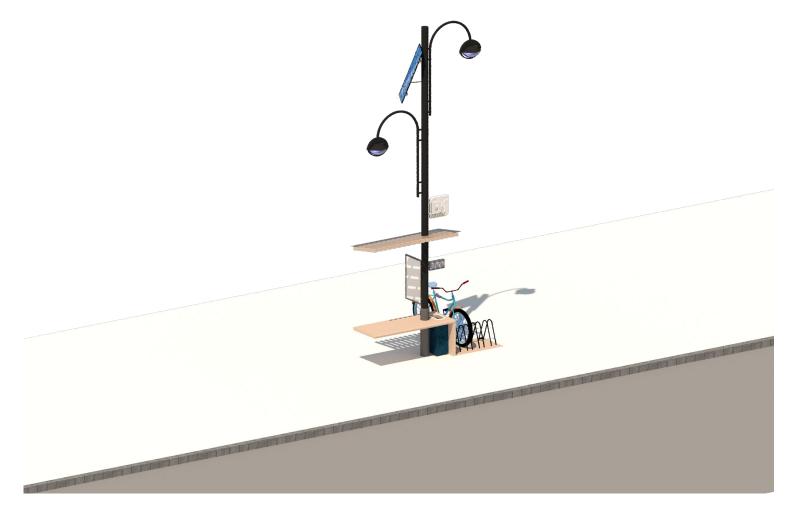




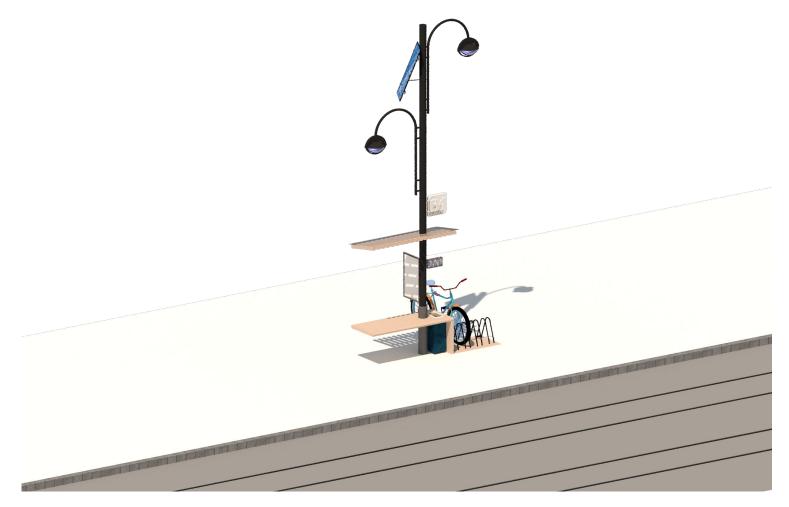
Small

SPIN DEMOS UNIT HELSINKI/

Type 1 - Small + Standard (Bus)



Type 1 - Small + Standard (Tram)





Type 2 - Small + Improved (Bus)



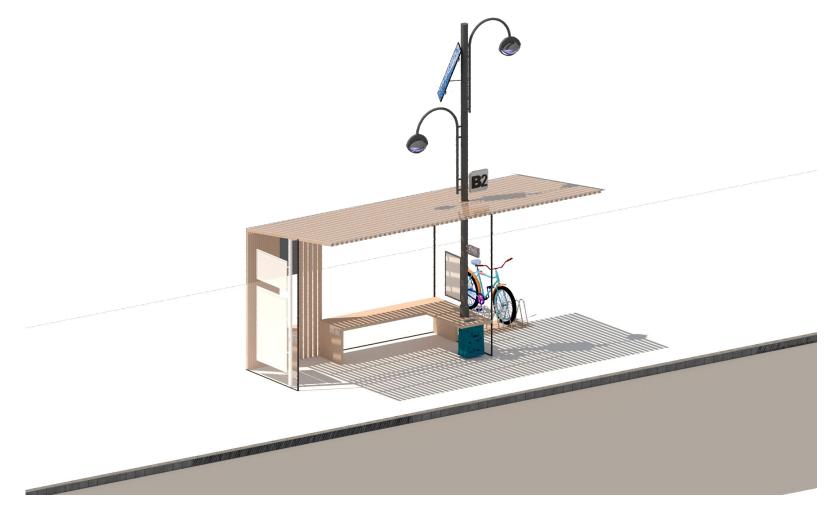
Type 2 - Small + Improved (Tram)



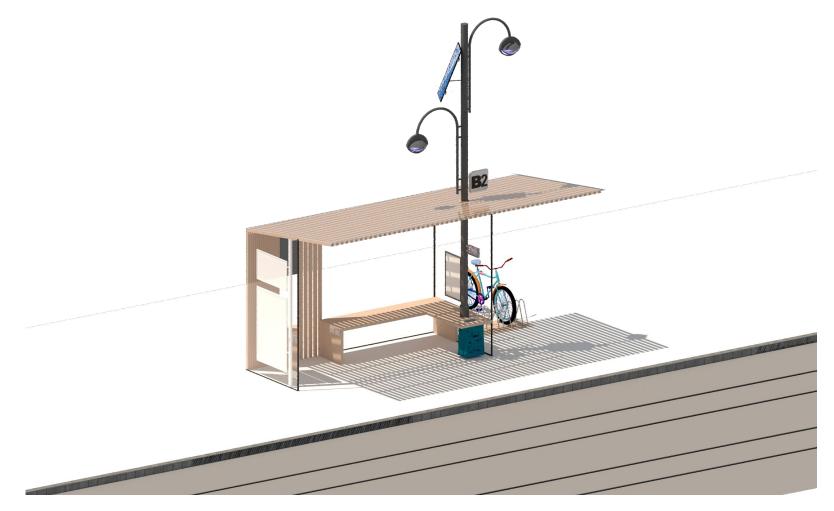
SPIN DEMOS UNIT HELSINKI/

Medium

Type 3 - Medium + Standard (Bus)



Type 3 - Medium + Standard (Tram)

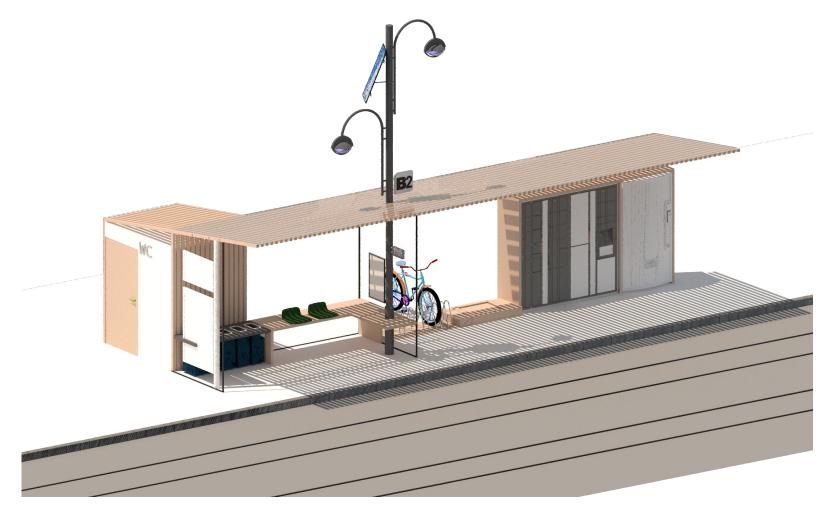




Type 4 - Medium + Improved (Bus)



Type 4 - Medium + Improved (Tram)



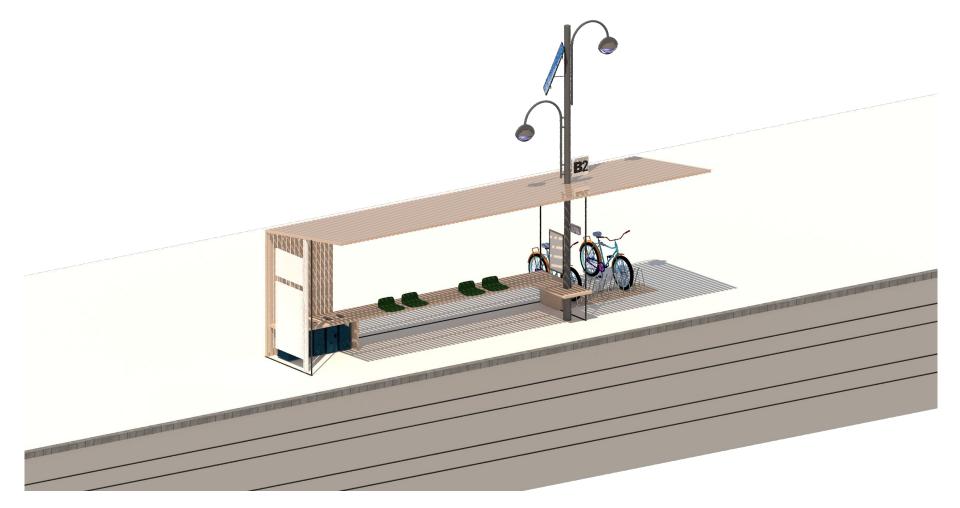


Large

Type 5 - Large + Standard (Bus)

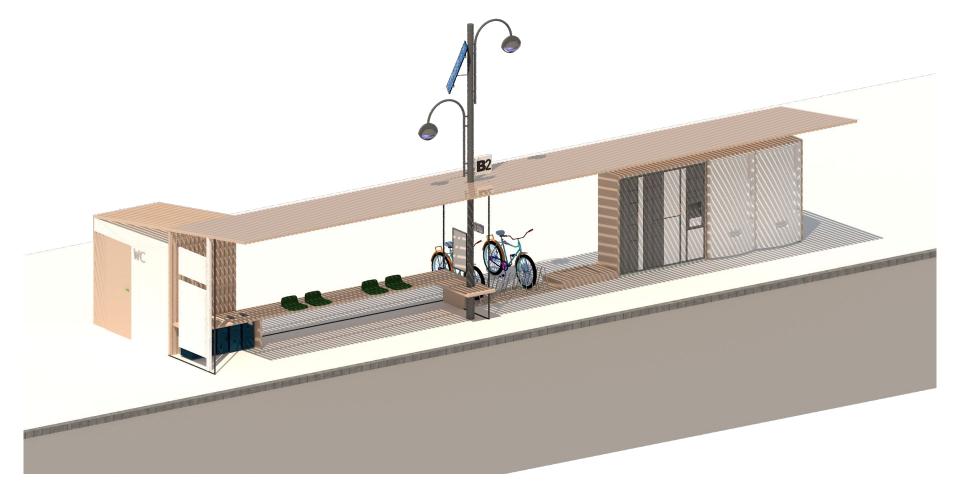


Type 5 - Large + Standard (Bus)



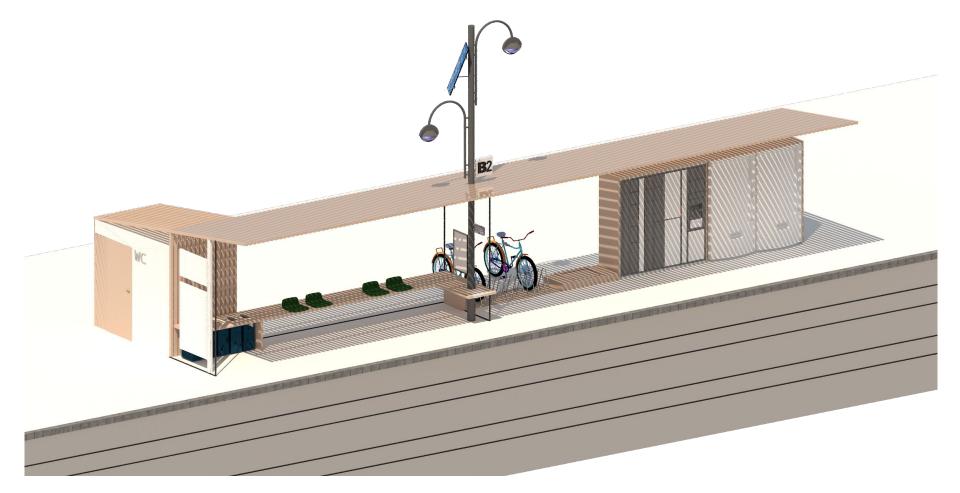


Type 6 - Large + Improved (Bus)





Type 6 - Large + Improved (Tram)





TRAIN

TRAIN - Type 1 - Small + Standard



TRAIN - Type 2 - Medium + Standard

