

WETZI(CO)₃N

connected – cohesive - complementary

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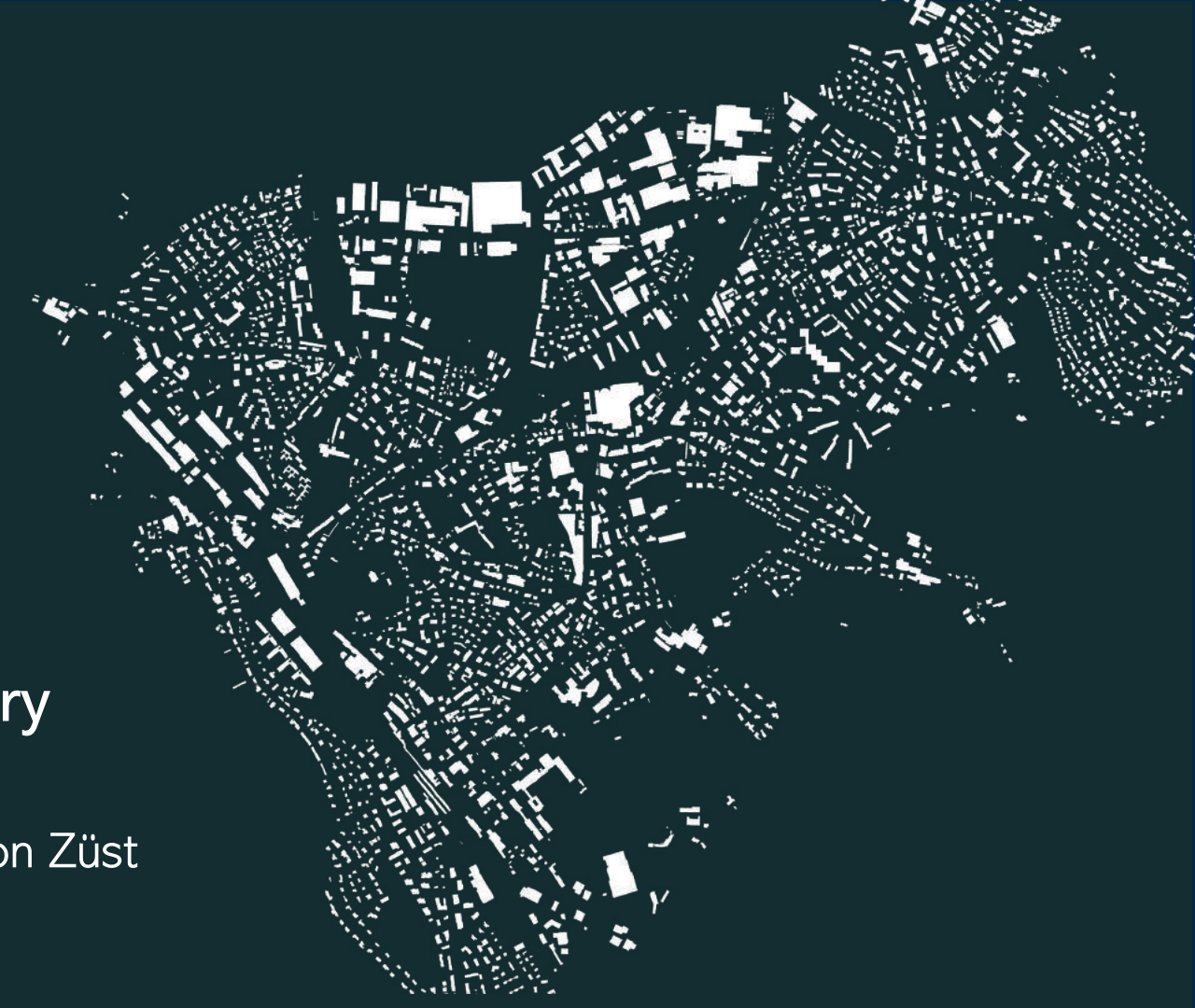
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Muyang Jiang, Martin Kalberer, Ruth Krembel, Simon Züst
20.12.2023, Wetzikon

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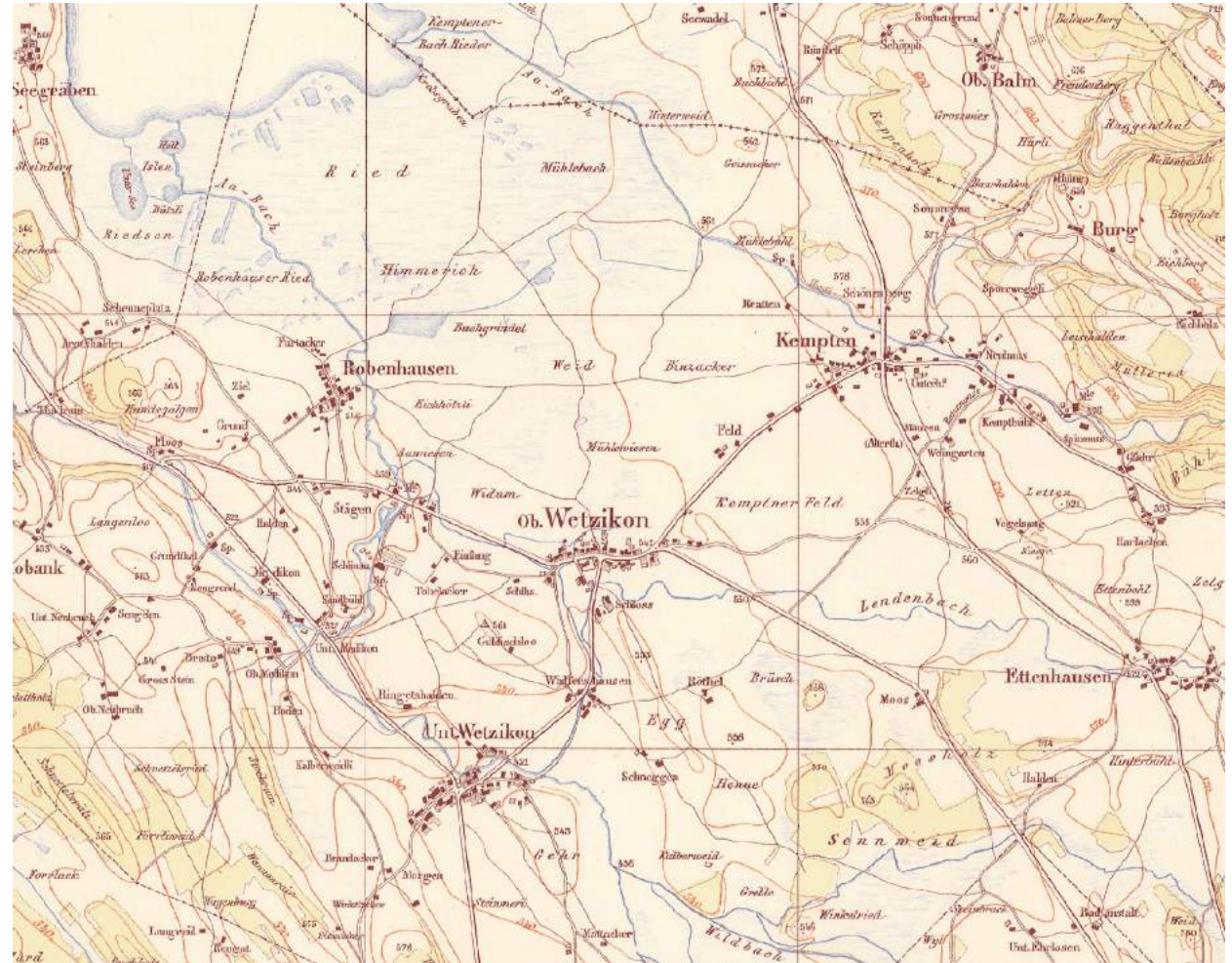
1. Context
2. Situation Analysis
3. Vision
4. Development Strategy
5. Focus Phase

Context

An aerial photograph of a city grid, likely Zurich, with a red circle highlighting a specific area in the center-right of the image. The grid consists of numerous small, rectangular blocks and streets, with some larger, more prominent buildings or structures. The overall color palette is muted, with greys, browns, and greens, and the red circle provides a strong visual contrast.

Context

- First settlements in late stone age
- Six formerly independent municipalities
- 16 neighborhoods with unique identities
- 25'989 inhabitants
- Regional center and part of Zurich's agglomeration

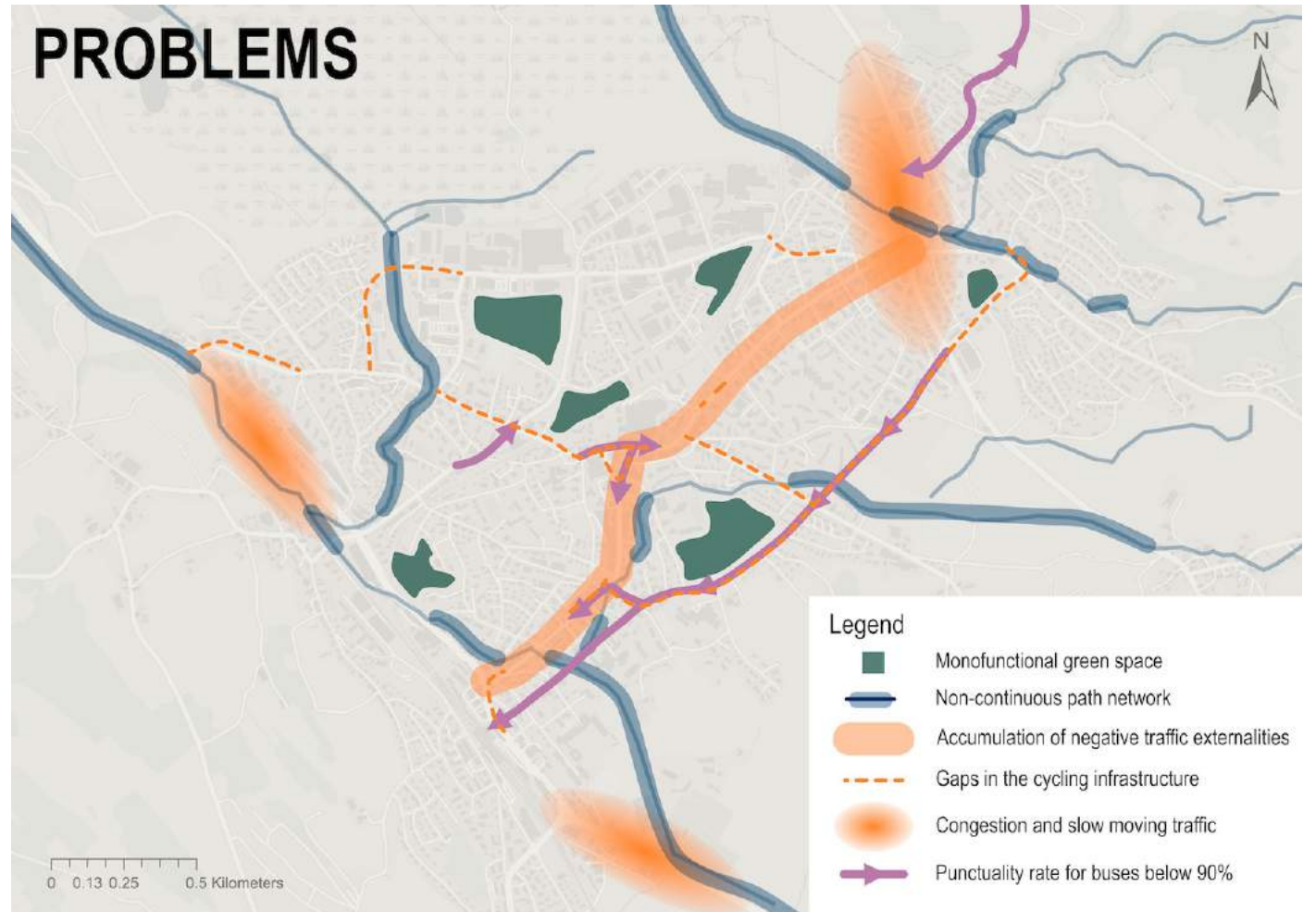


Source: GIS-ZH (2023)



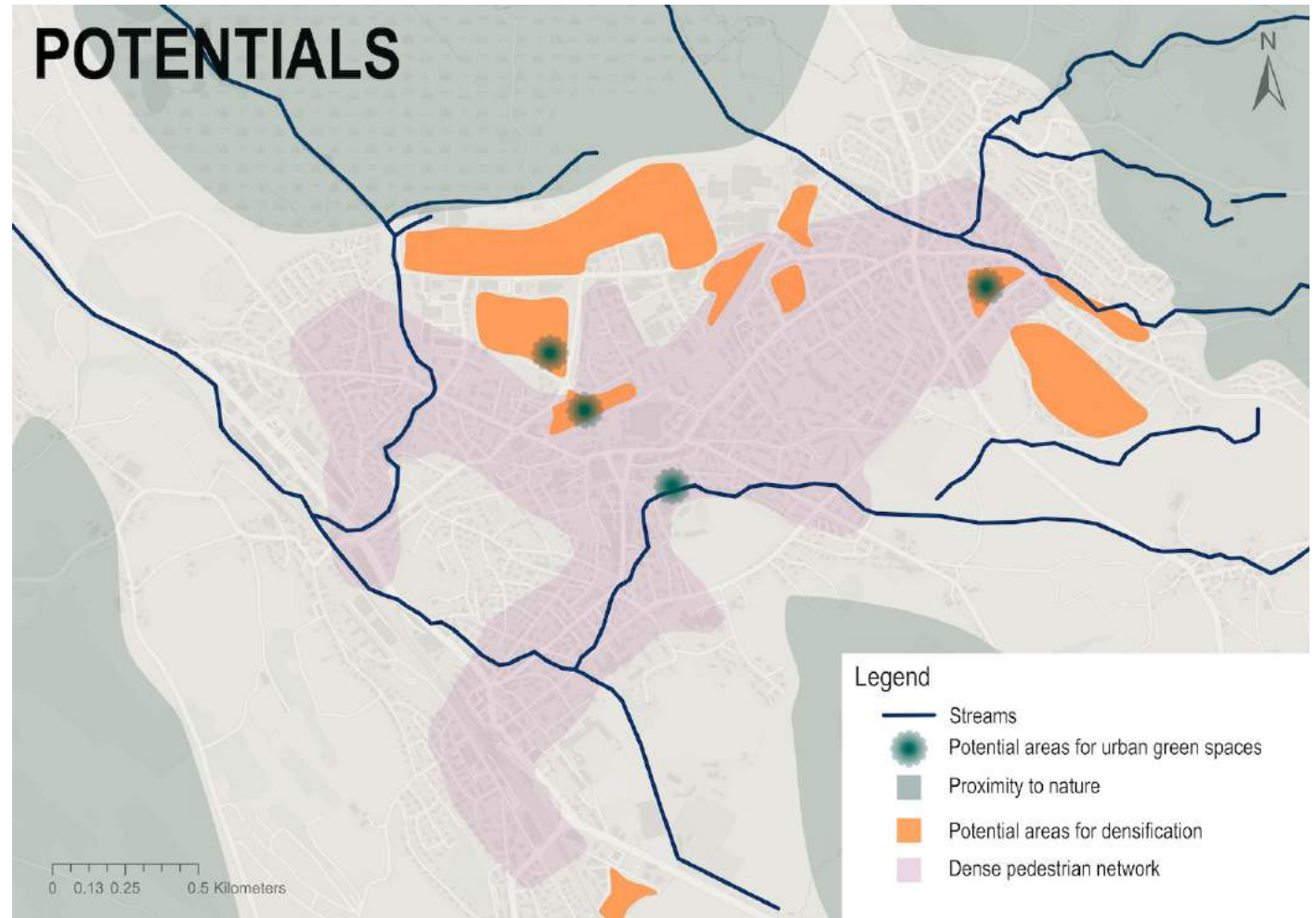
Situation Analysis

Problems



Source: Own figure, using data from GIS-ZH (2023) & ArcGIS (2023)

Potentials

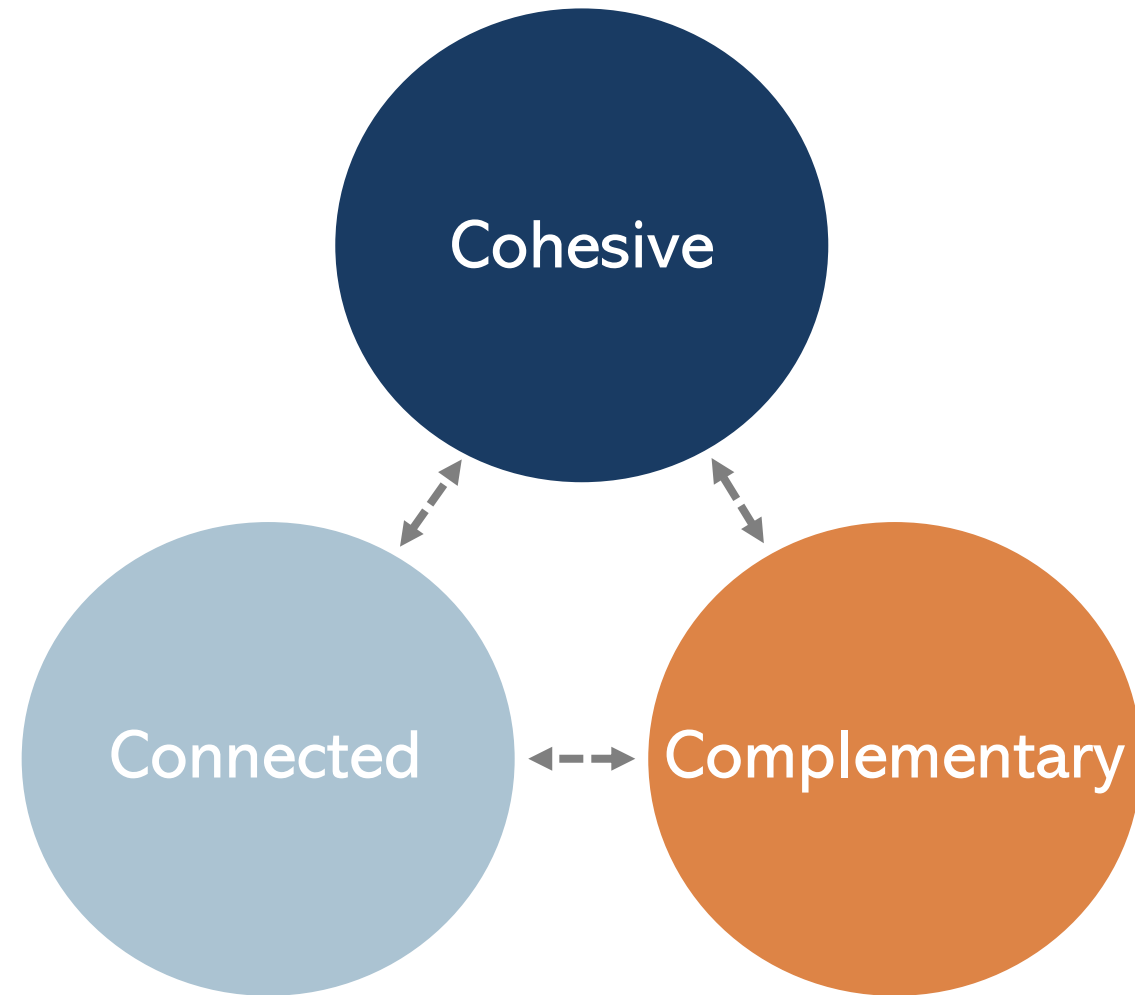


Source: Own figure, using data from GIS-ZH (2023) & ArcGIS (2023)

Vision

An aerial photograph of a city grid, likely Zurich, with a prominent red dot marking a specific location in the center-right area. The grid consists of numerous small, rectangular blocks and streets, creating a complex pattern of urban development.

WETZI(CO)³N



Goals

Seamless
Mobility



Context Specific
Densification



Immersive
Landscape



Lively
Neighborhoods



Low Impact
Traffic

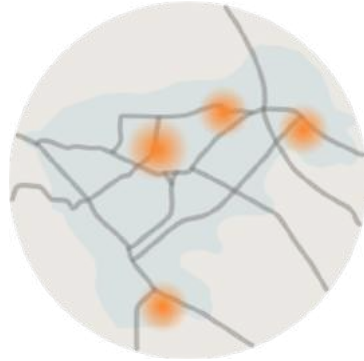


Goals

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Goals

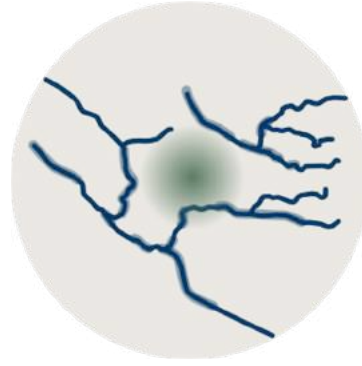
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Development Strategy

Toolboxes for Wetzikon

- A Home for Everyone
- Restructuring the Urban Fabric
- Transforming the Traffic Network
- Promoting the Active Modes
- Transforming Train Stations into Multi-modal Hubs
- Public Green Space



A Home for Everyone

- Direct loans
- Special land use zones
- Urban development contracts
- Targeted purchase of land (active land policy)



Restructuring the Urban Fabric

- Soft densification
- Hard densification



Restructuring the Urban Fabric

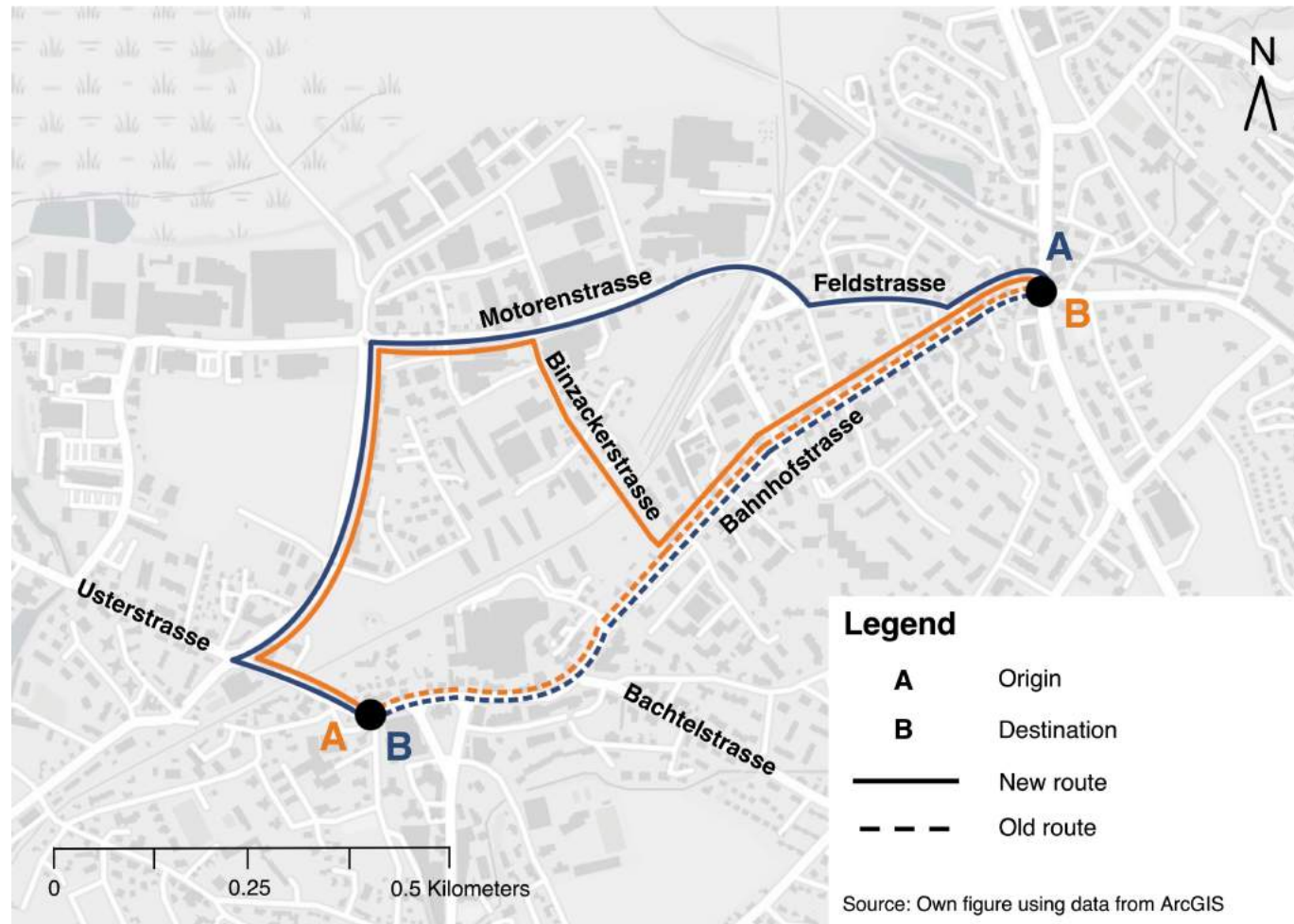
Soft densification		Hard densification	
Goal	Priority	Goal	Priority
Increase utilization rate	1	Replacement	3
Adding stories	2	Brownfield development	3
Filling in the gaps	2	Greenfield development	4

Transforming the Traffic Network

- Rerouting traffic away from the city center
- Enhancing perimeter control



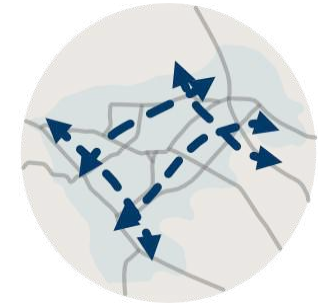
Rerouting Traffic away from the City Center



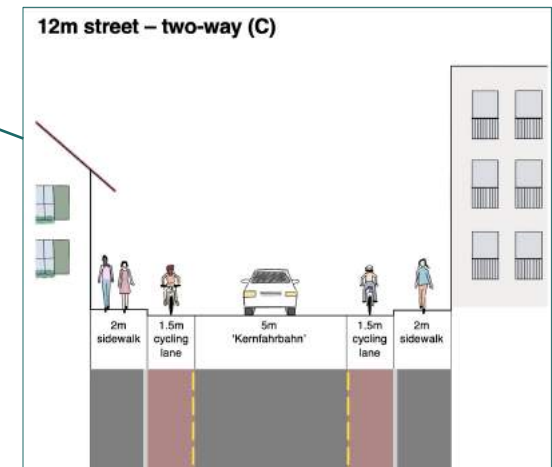
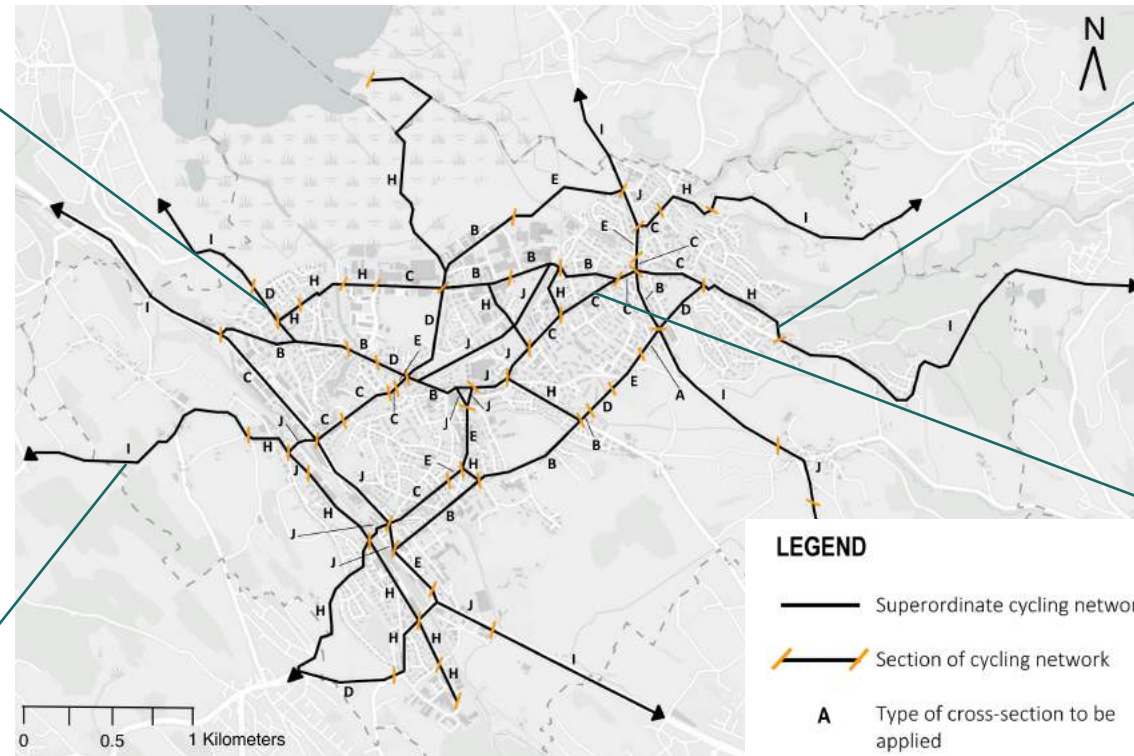
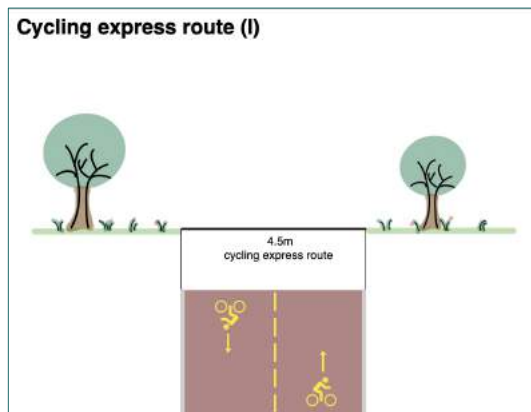
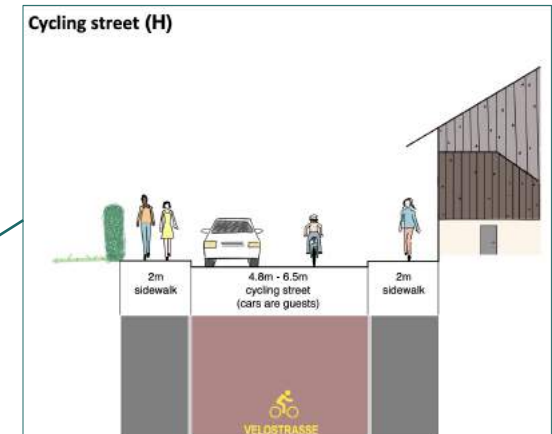
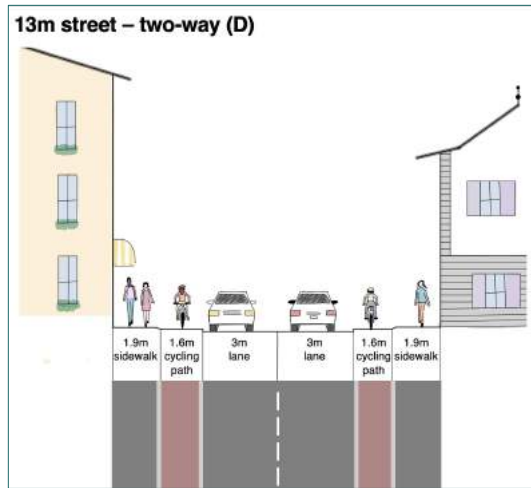
Source: Own figure, using data from GIS-ZH (2023) & ArcGIS (2023)

Promoting the Active Modes

- A dense bike sharing system
- Generously designed cycling axes
- Colored cycling infrastructure
- Bicycle friendly roundabouts



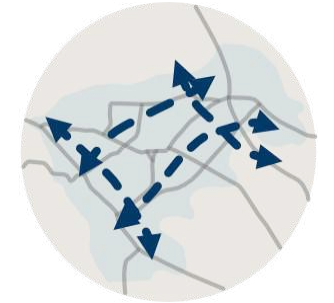
Generously Designed Cycling Axes



Source: Own figure using data from GIS-ZH (2023) & ArcGIS (2023)

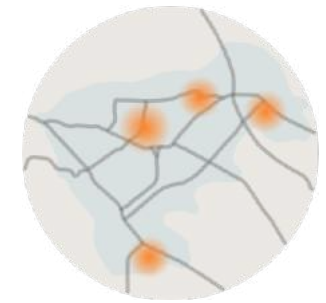
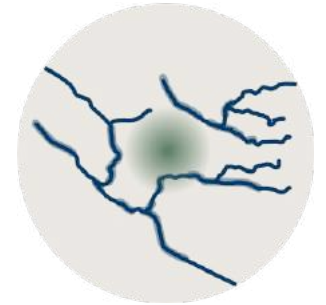
Transforming Train Stations into Multi-modal Hubs

- Increase in bike parking facilities
- Bus locks at selected bus stations
- Signalized intersections at highly used roundabouts



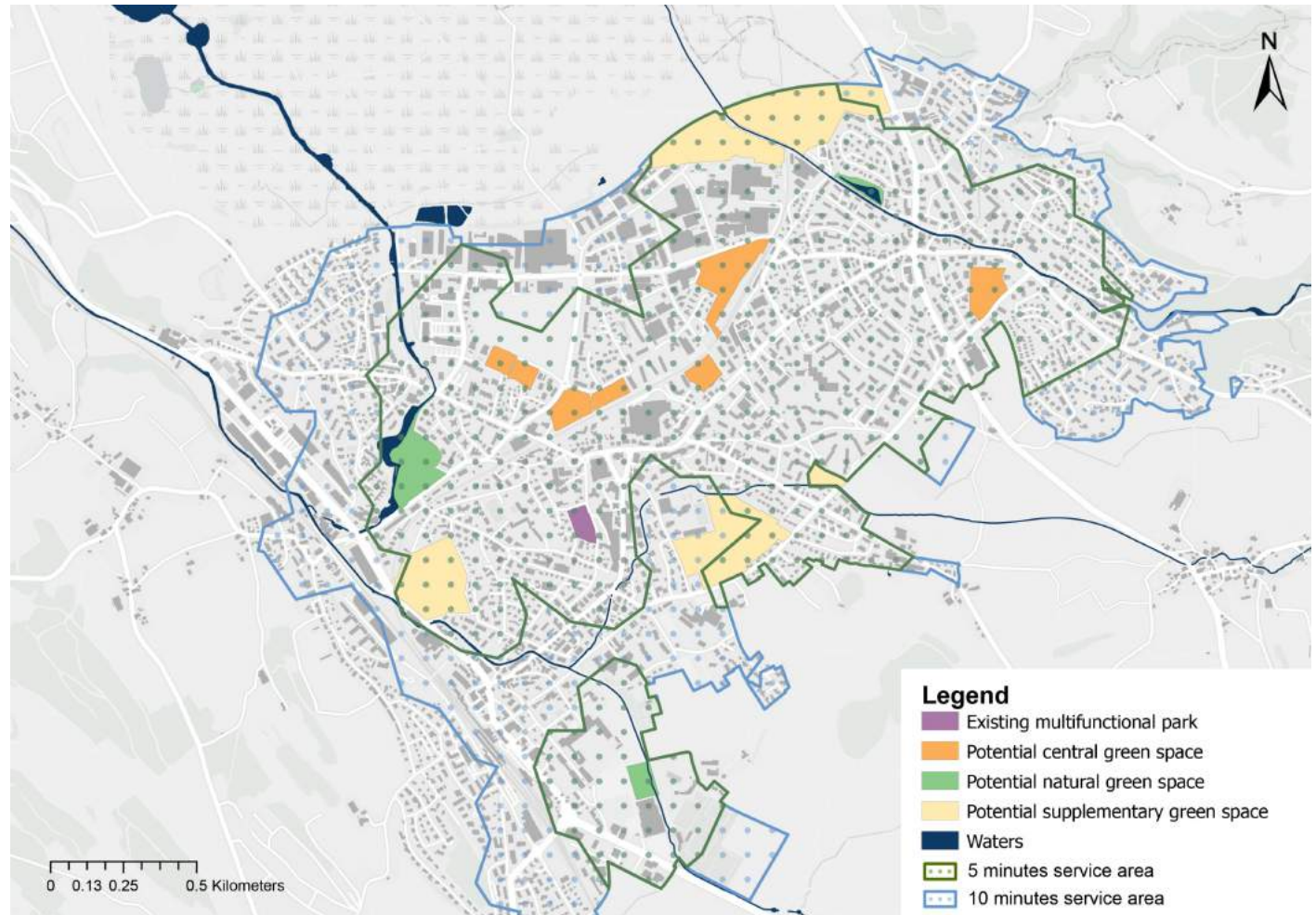
Public Green Space

- Develop and enhance green space
- Provide green infrastructure



Develop Green Space

- Easily accessible
- Wide coverage
- Complement each other



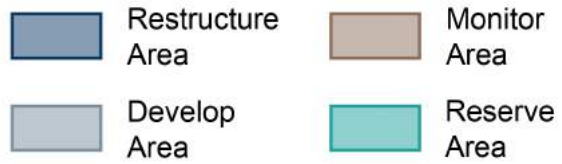
Source: Own figure using data from GIS-ZH (2023) & ArcGIS (2023)

Focus Phase

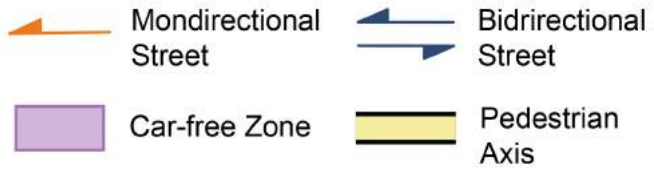


Strategic Overview

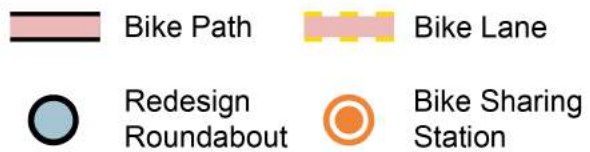
Restructuring the Urban Fabric



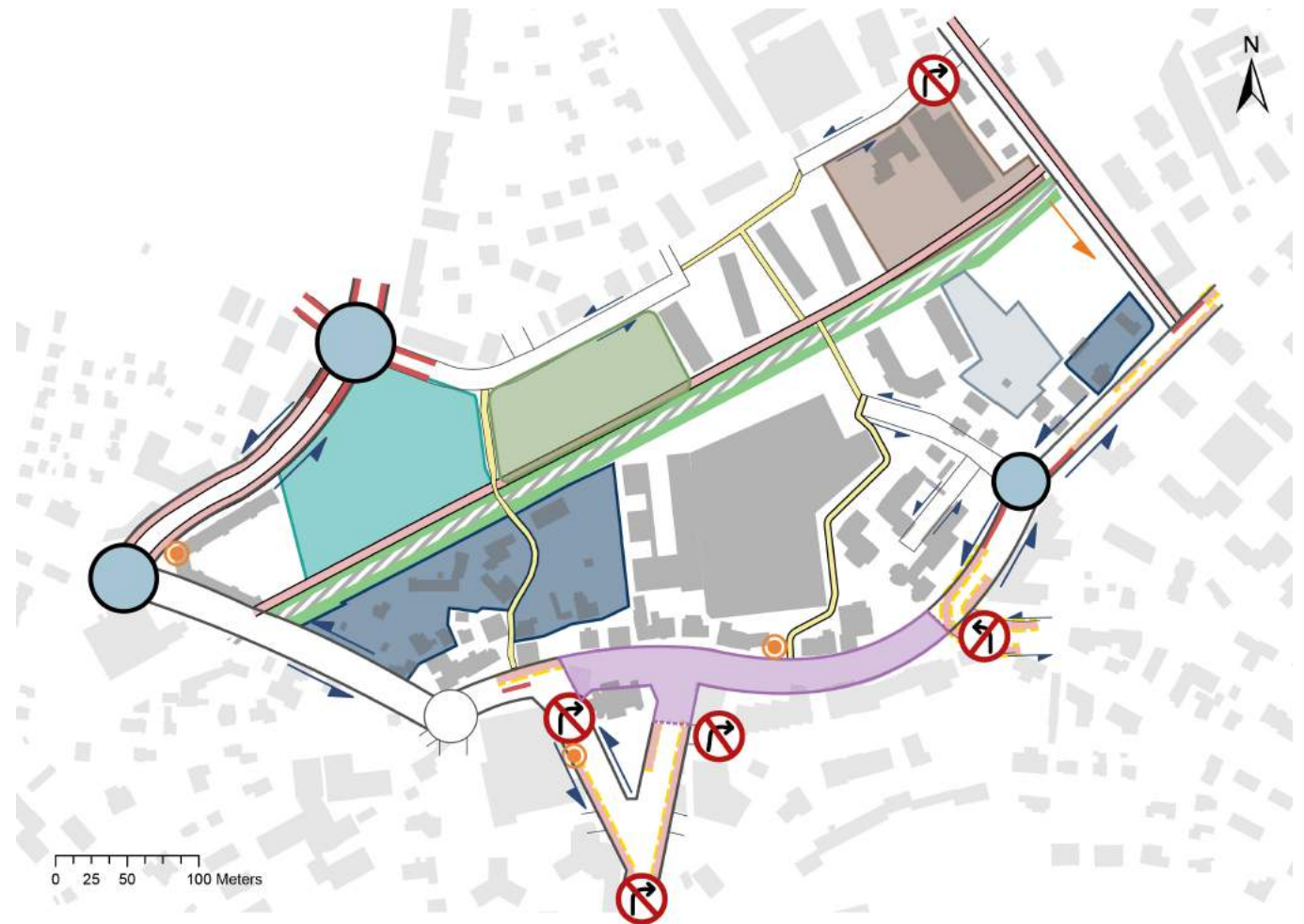
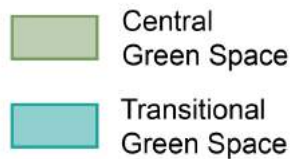
Transforming the Traffic Network



Promoting the Active Modes

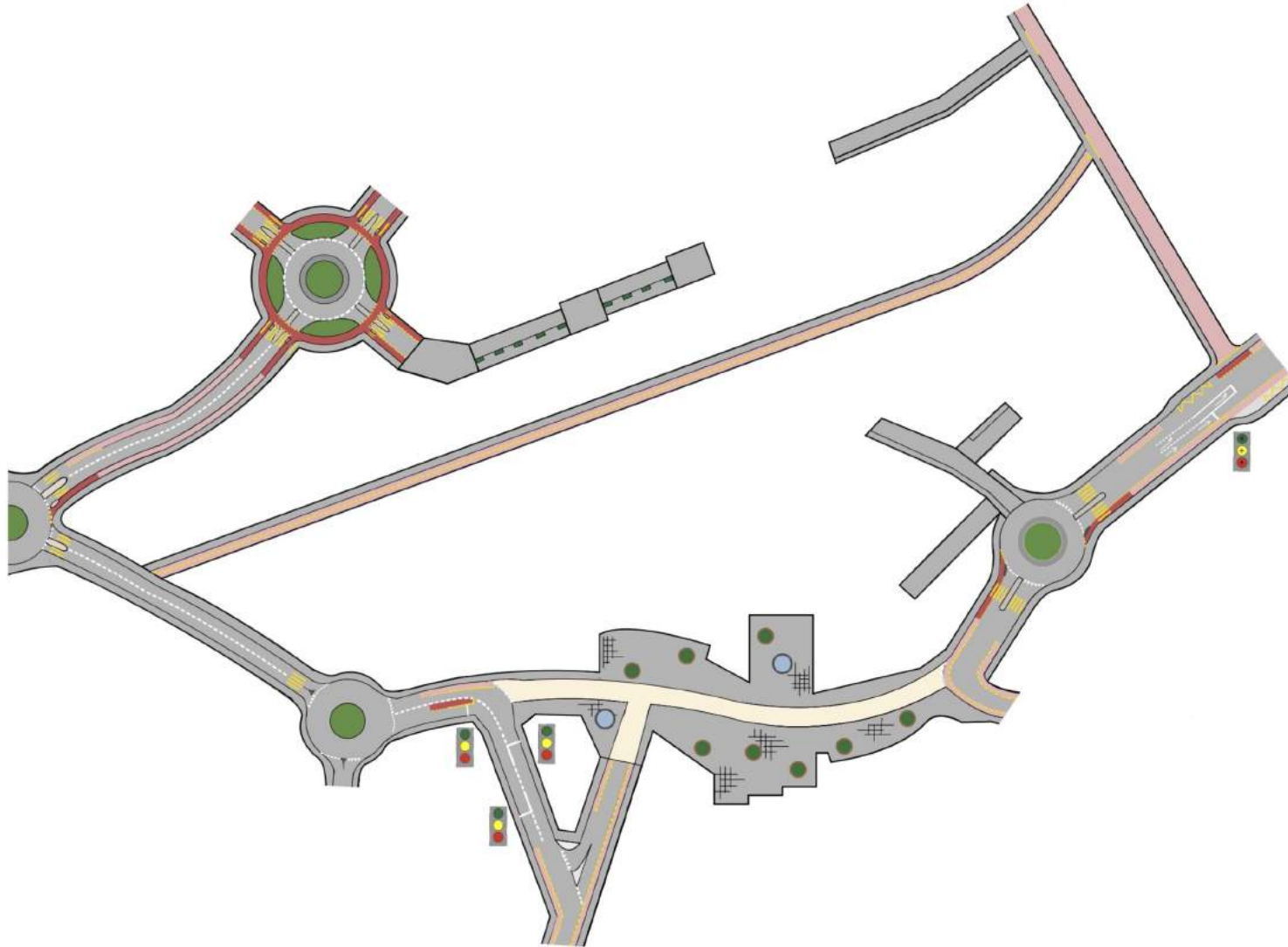


Public Space

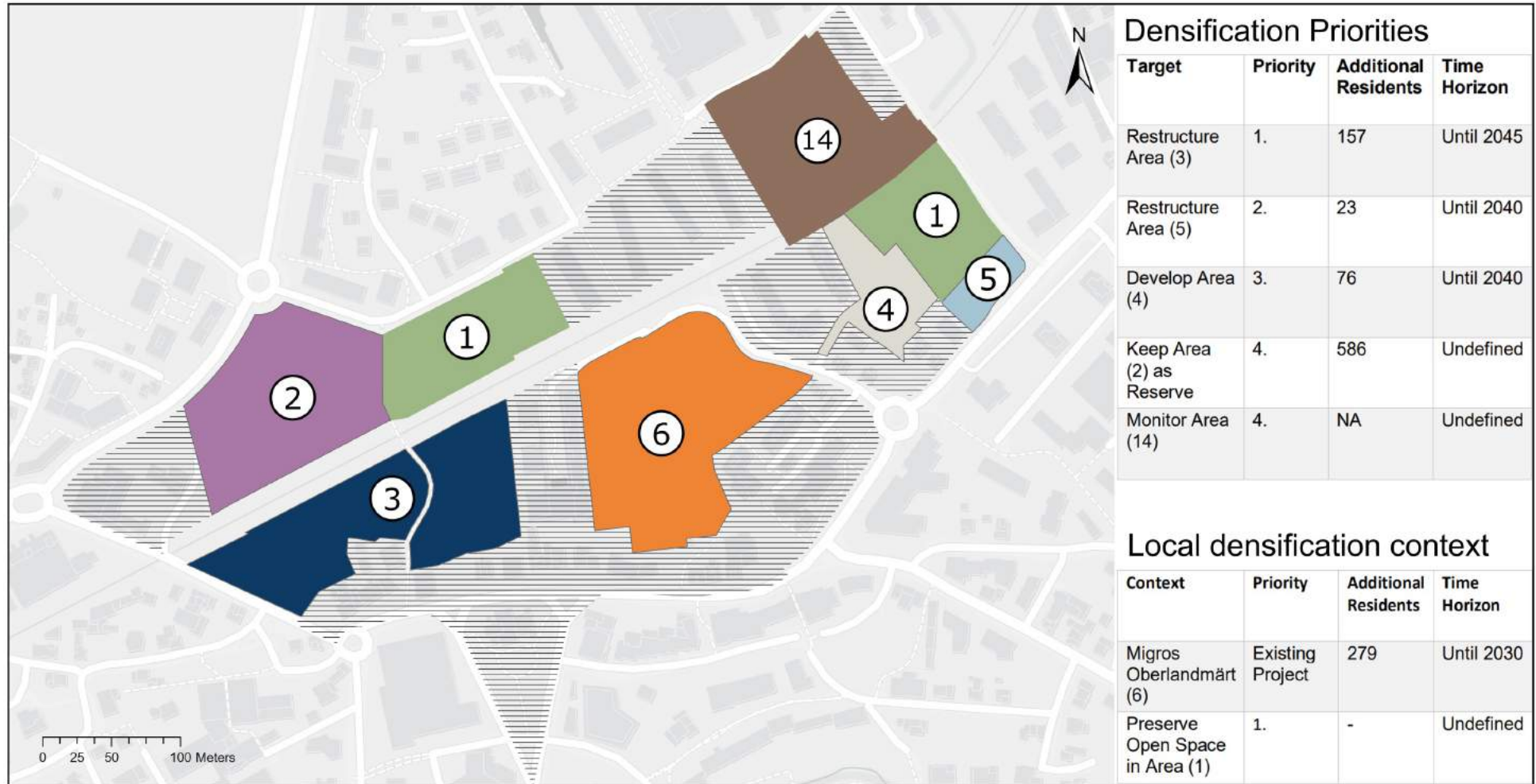


Source: Own figure, using data from GIS-ZH (2023)

Promoting the AM and Transforming the Traffic Network



Restructuring the Urban Fabric



Source: Own figure, using data from ArcGIS (2023)

Public Green Space

- Nature's preservation and enrichment
- Diverse activities
- Accessibility and connectivity

	Natrual green area	①	Tree island	④	Tennis courts
	Functional green area	②	Paved path	⑤	Biking parking
	Playground area	③	Auxiliary buildings	⑥	Eco-corridor



Source: Own figure, using data from swisstopo (2023)

Costs

	Costs [CHF]	Lower bound costs (-15%) [CHF]	Upper bound costs (+15%) [CHF]
Construction costs	12'218'612	8'553'028	15'884'198
Maintenance costs	5'325'843	3'728'090	6'923'594
Total	17'544'455	12'281'118	22'807'792

Vision in Focus Area



Connected

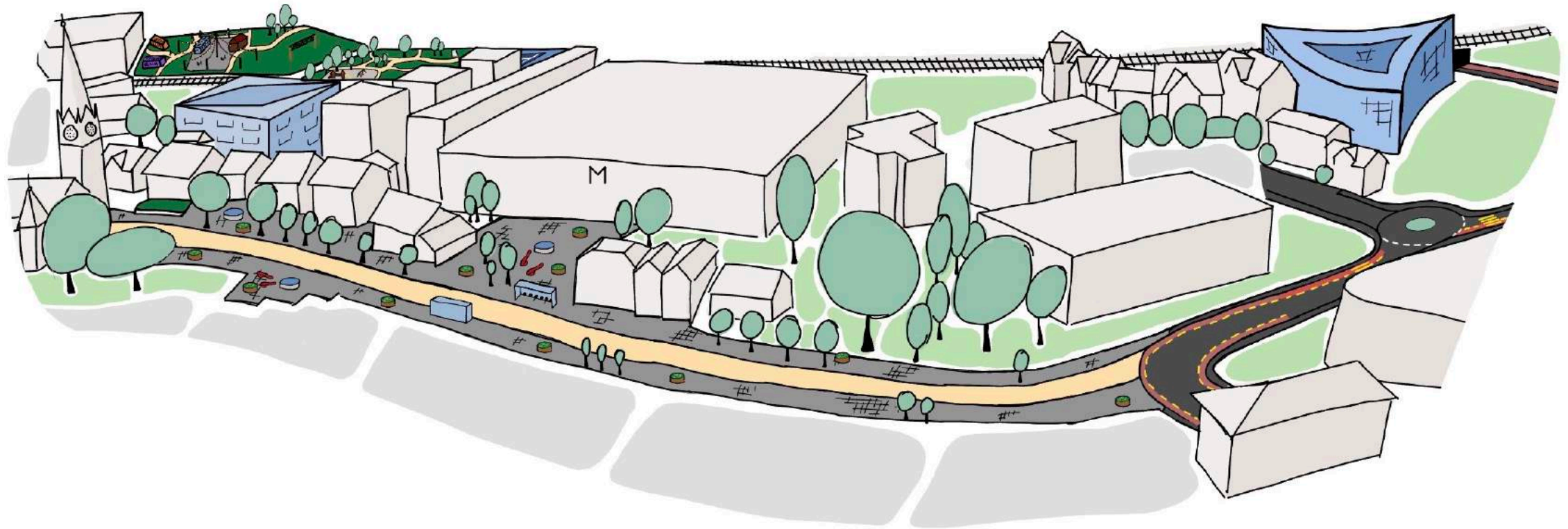


Complementary



Cohesive

Conclusion



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Supplementary material

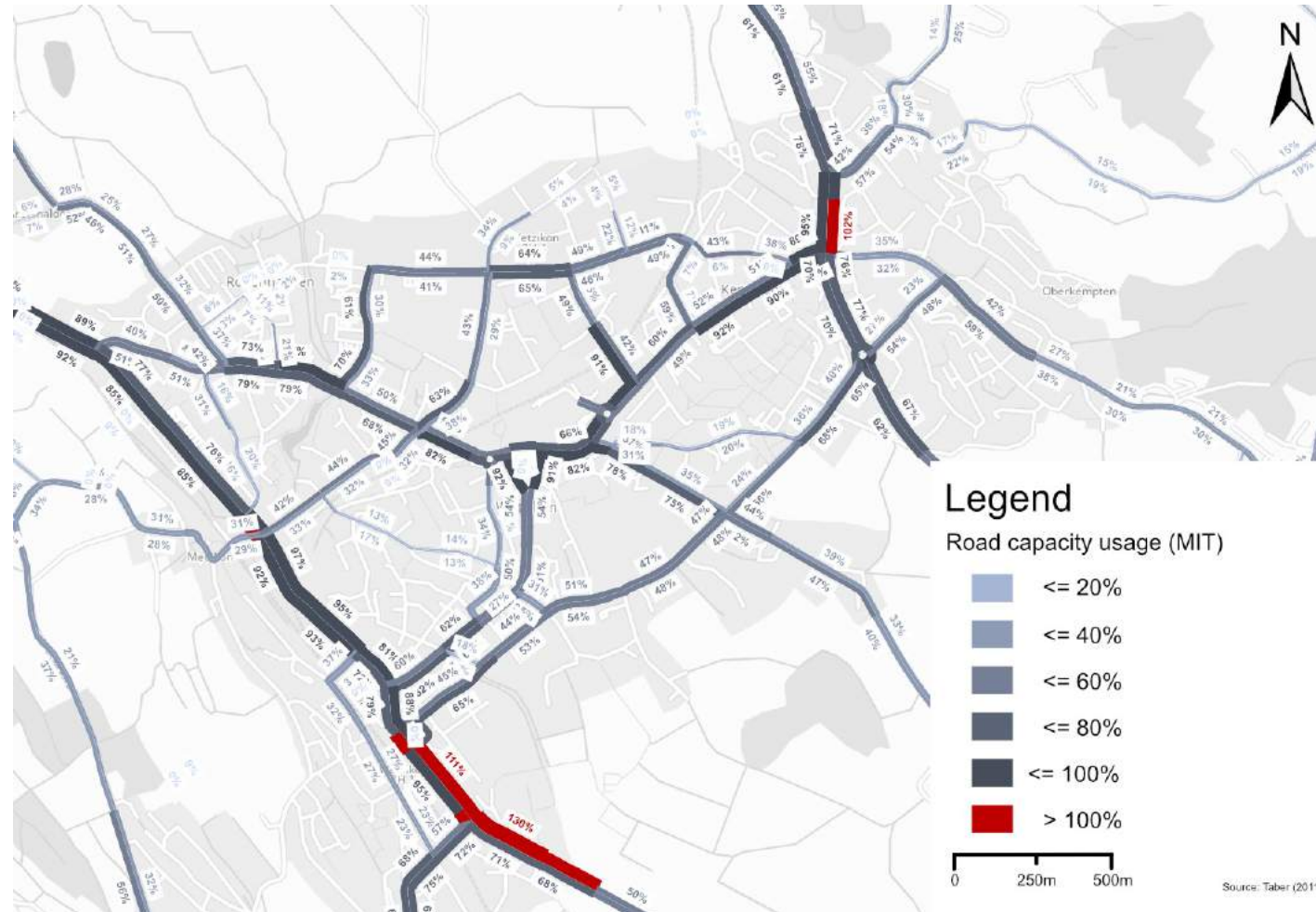
Direct Loans

- Provision of loans with low interest rates or direct payments
- Providing direct loans in exchange for the commitment to provide affordable housing
- Reduces the financial barrier for private developers

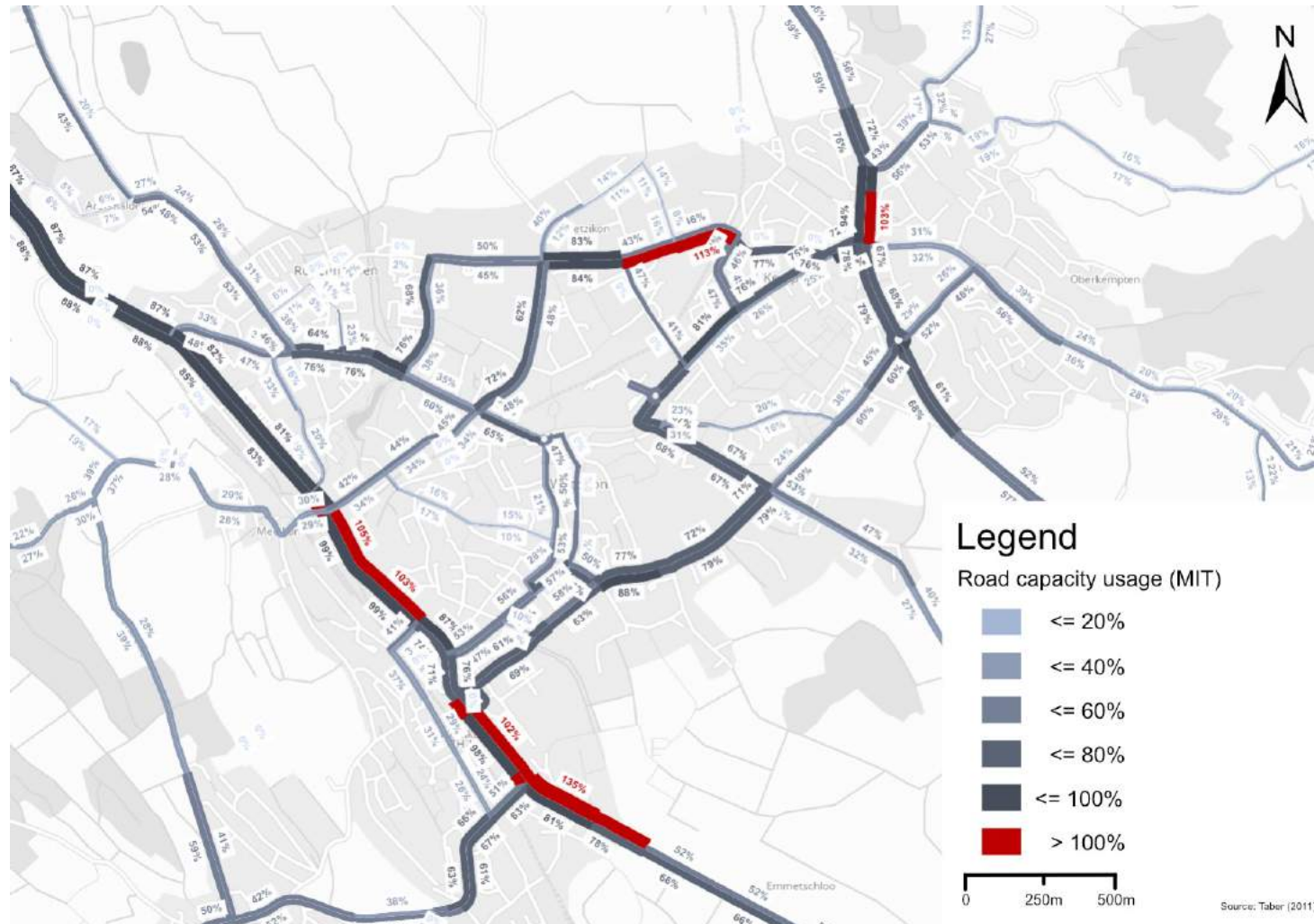
Enhancing Perimeter Control



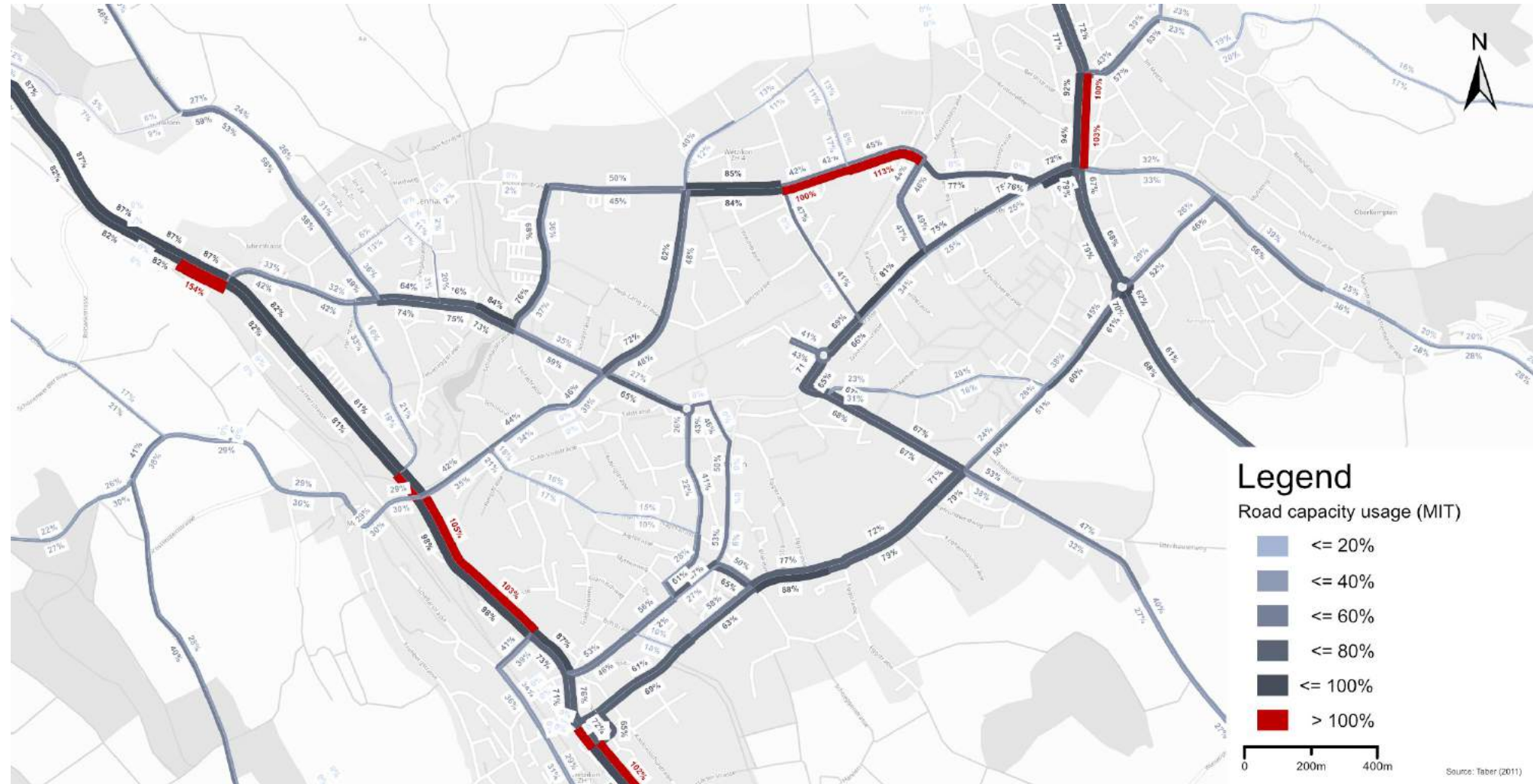
Modelling Proposed Interventions – Status quo



Modelling Proposed Interventions – New traffic regime

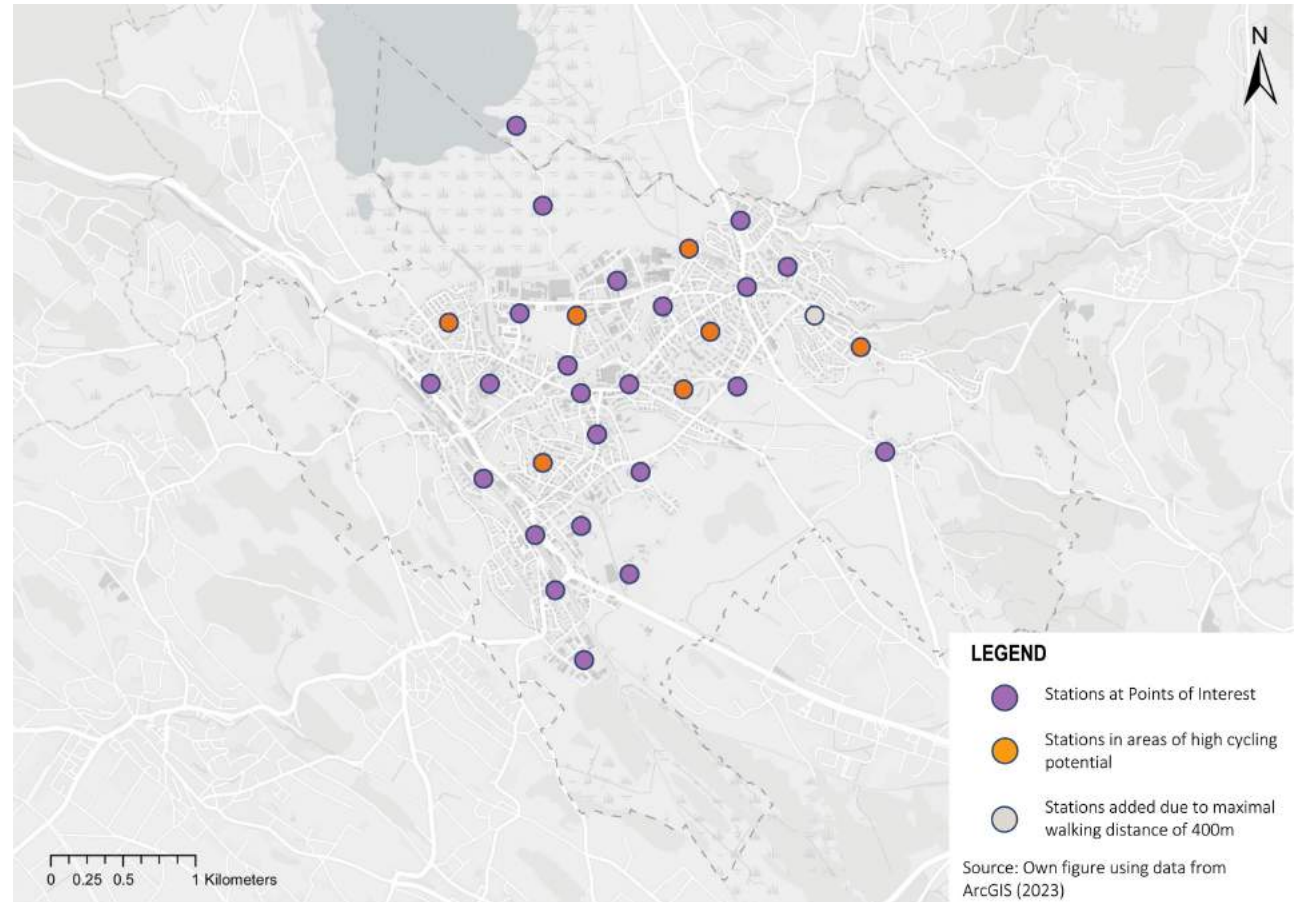


Modelling Proposed Interventions – New traffic regime and perimeter control



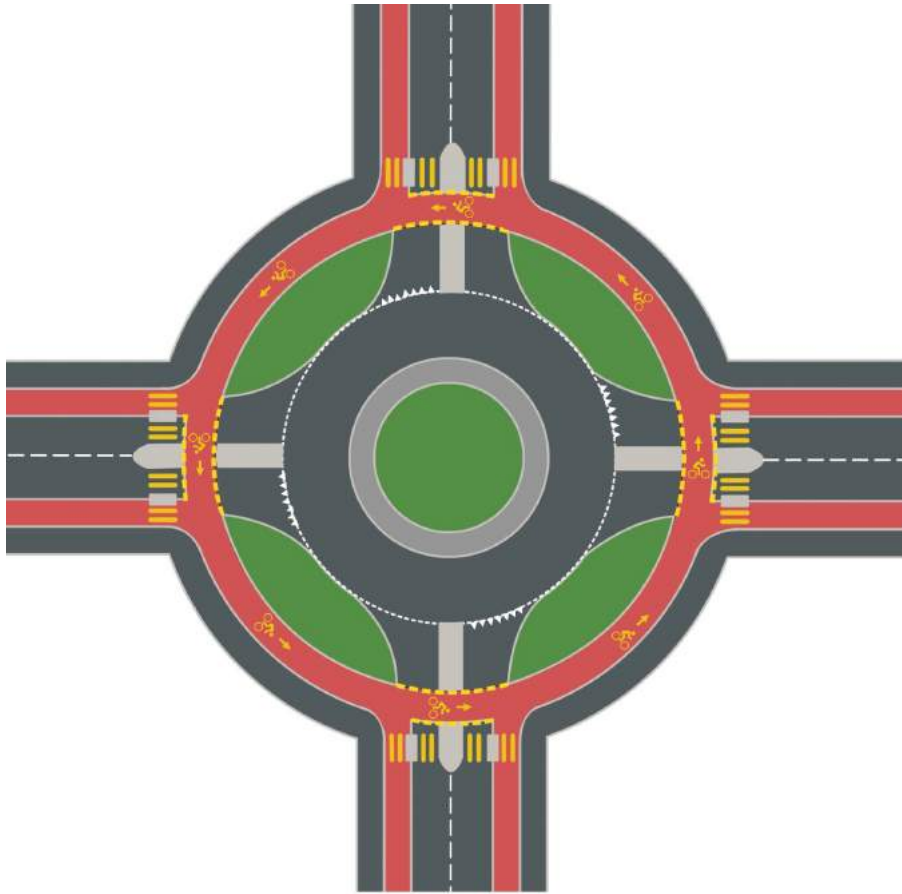
Bike-Sharing System (BSS)

- Physically fixed stations
- Max. walking distance of 400m
- Allows people to cycle more spontaneously
- Increases the visibility of AM

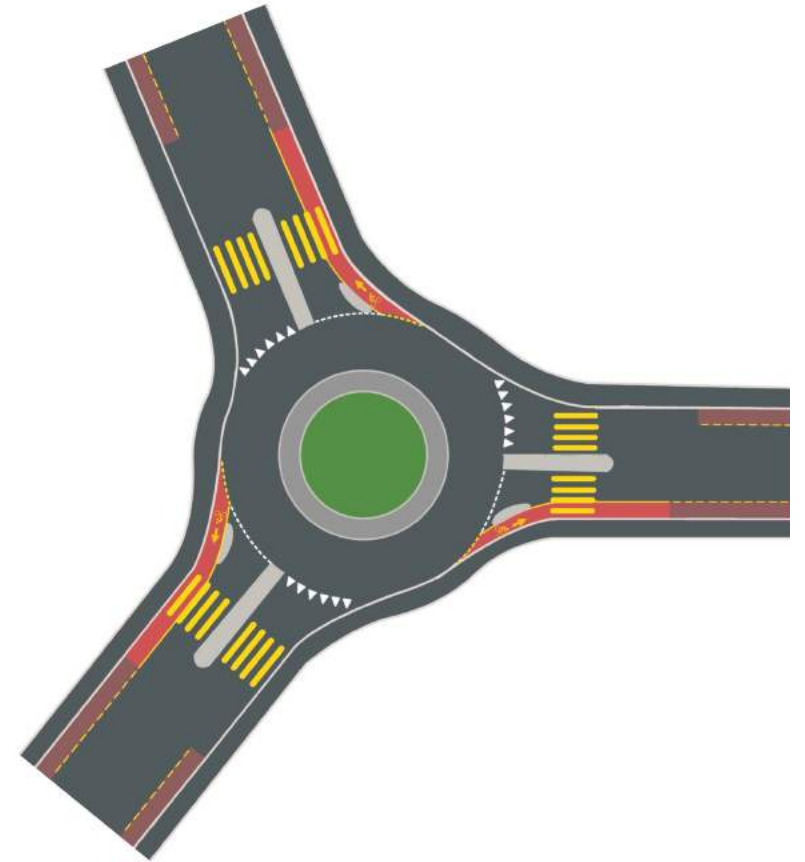


Bike Friendly Roundabouts

Fully protected roundabout (A)



Partially protected roundabout (B)

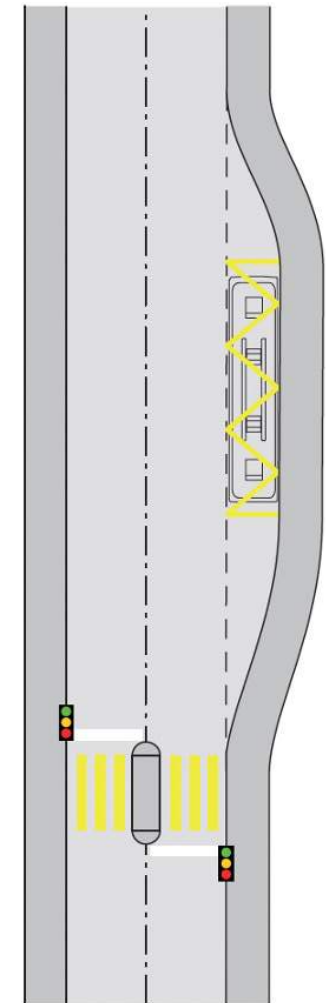
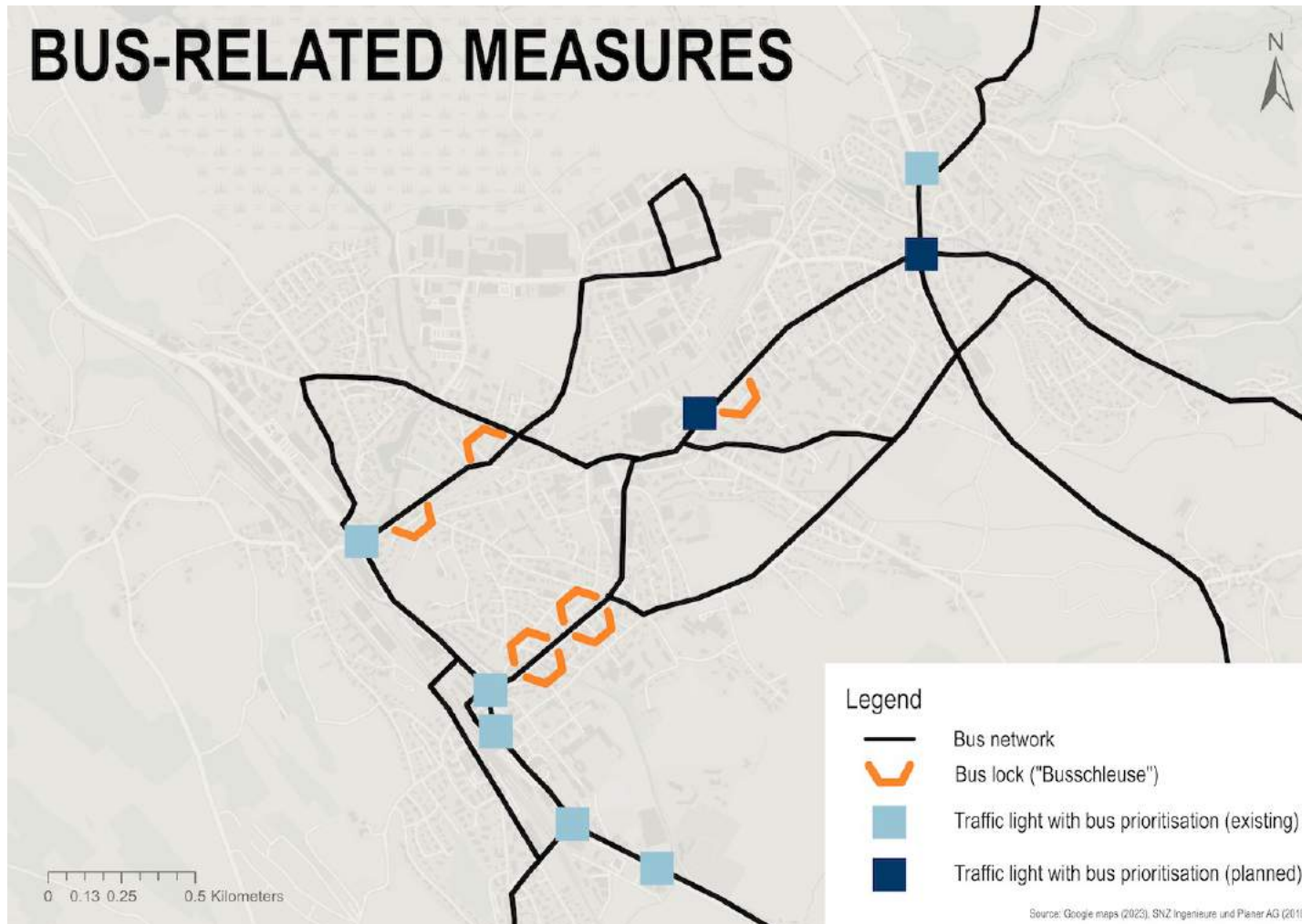


Colored Cycling Infrastructure

- Increase the visibility of the AM
- Increases the sense of safety
- Lowers the amount of accidents
- Easier navigation

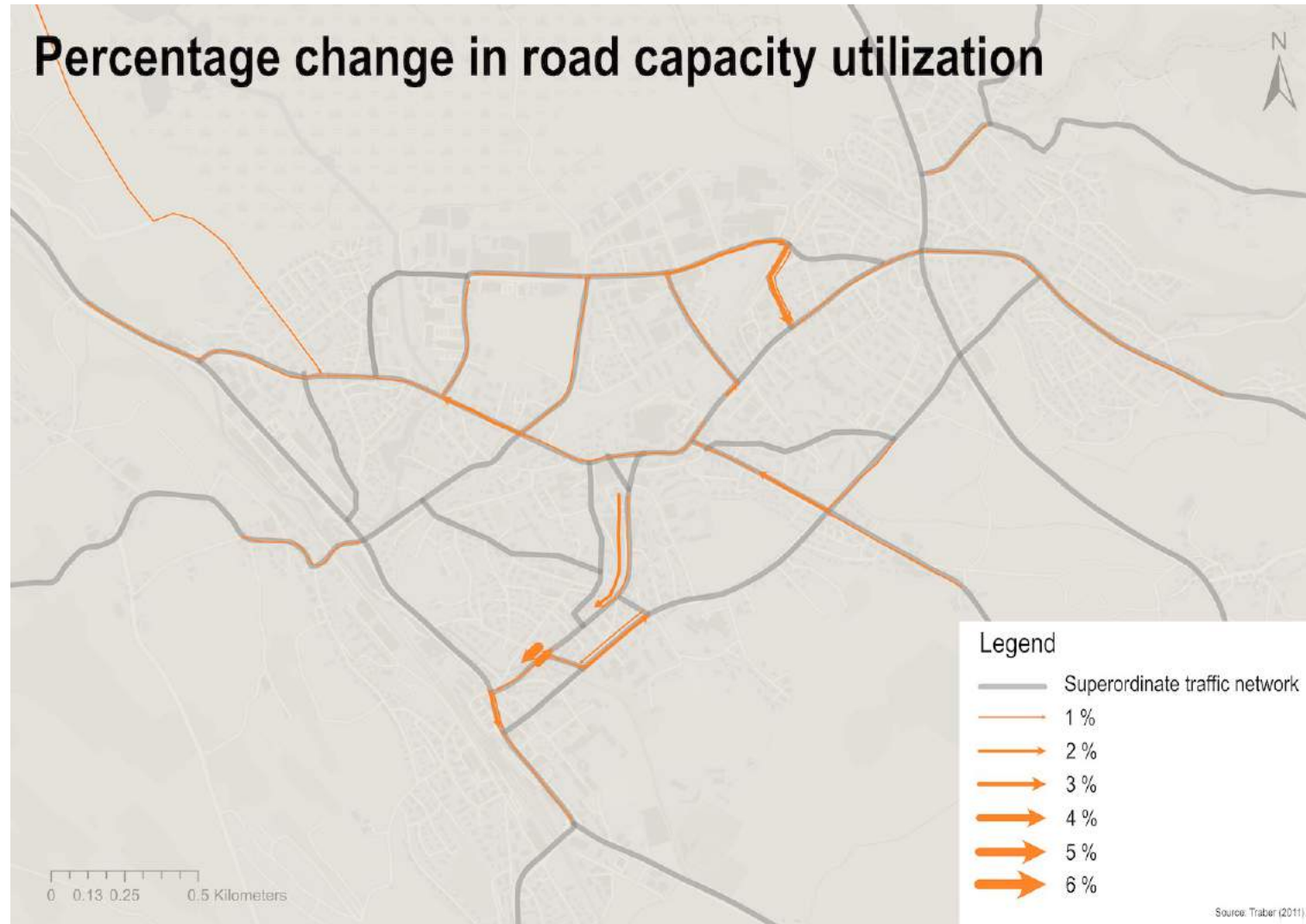


Bus Locks at Selected Bus Stations

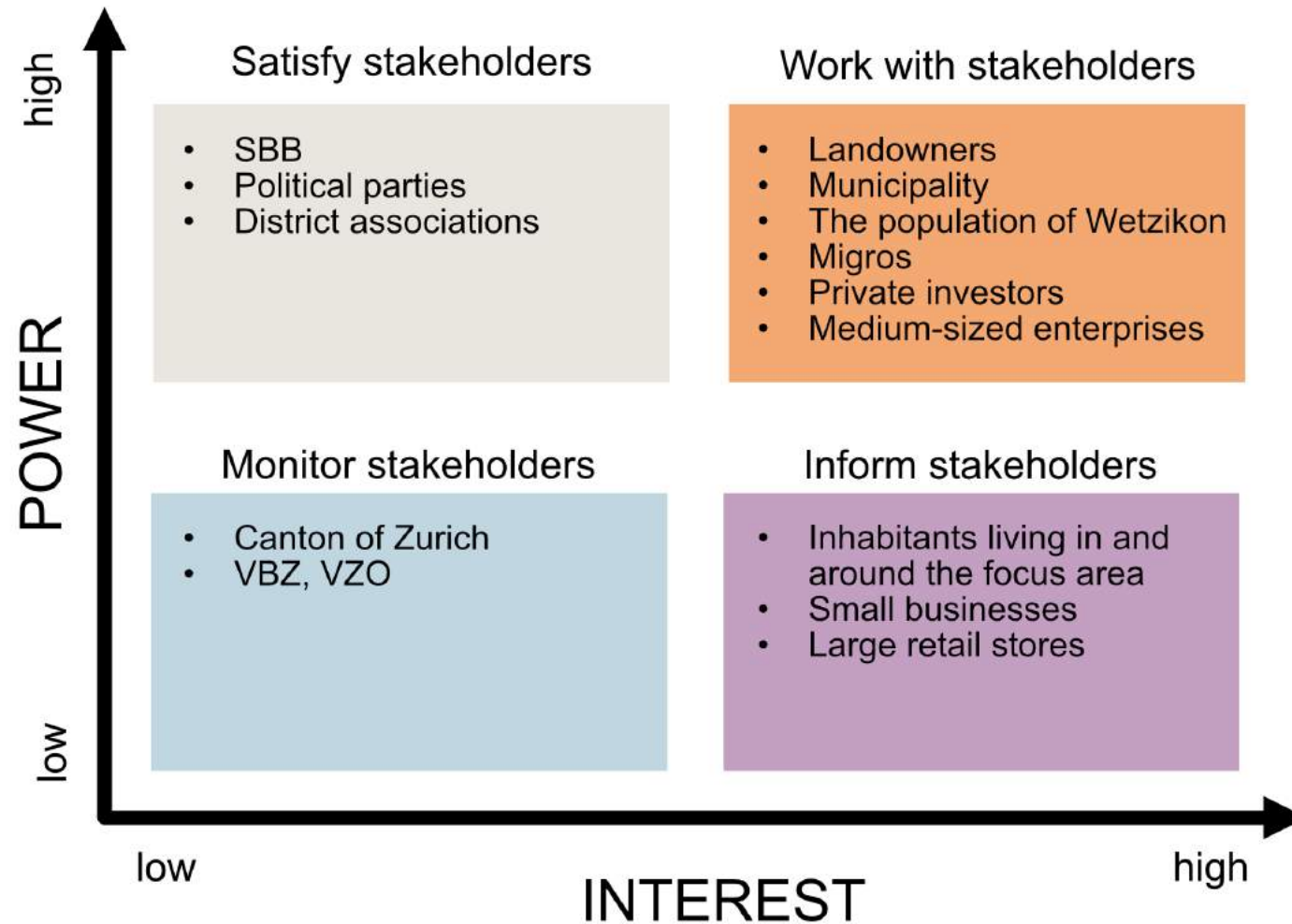


(Bernhardsgrütter et al., 2016)

Bus Locks at Selected Bus Stations



Stakeholder analysis



Overview



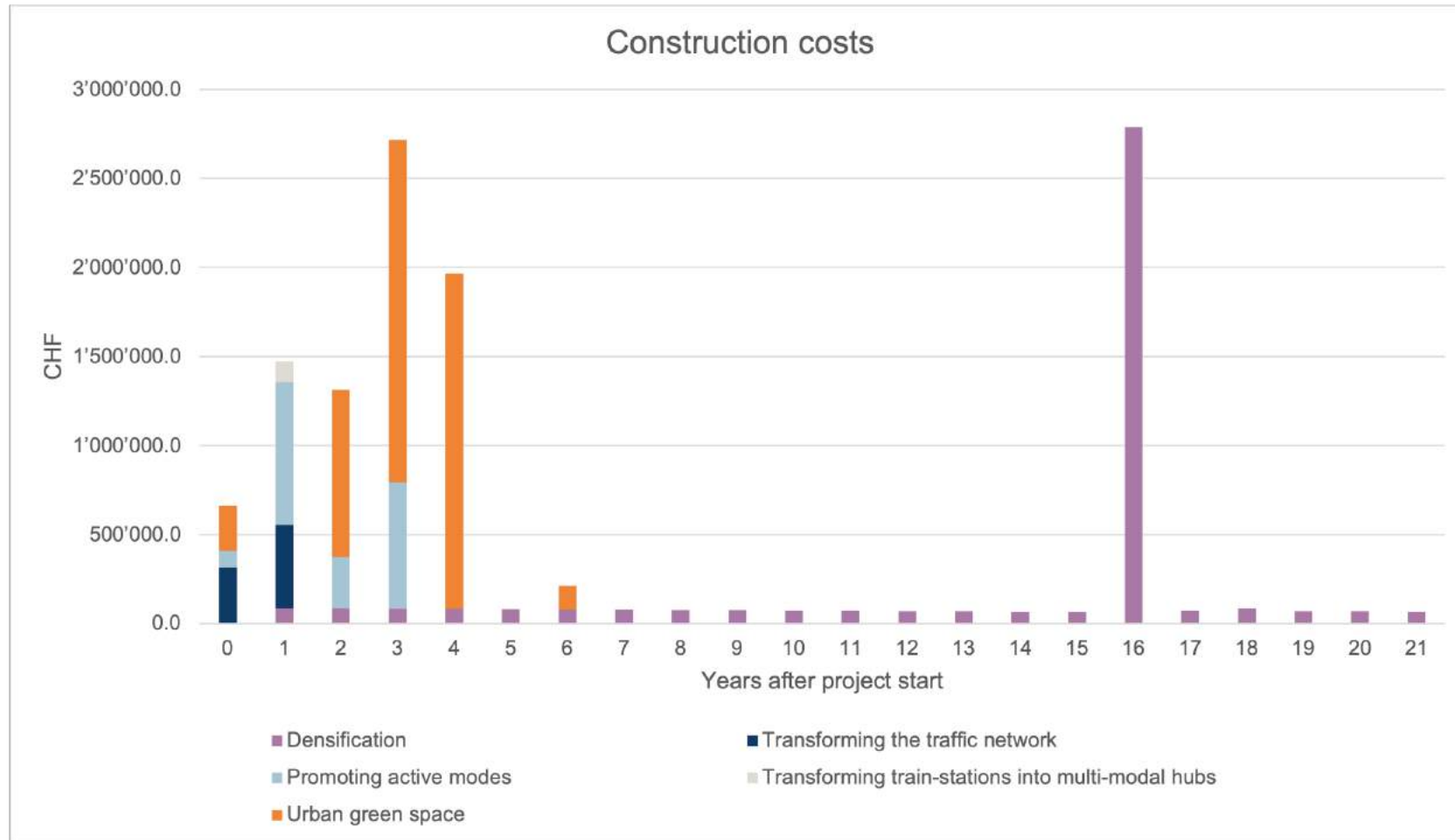
Variants Binzackerstrasse

	Variant 1	Variant 2	Status quo
Residents	++	+	-
Land management	++	+	0
Public space	+	-	-
Control	-	+	0
Total	5+	2+	3-

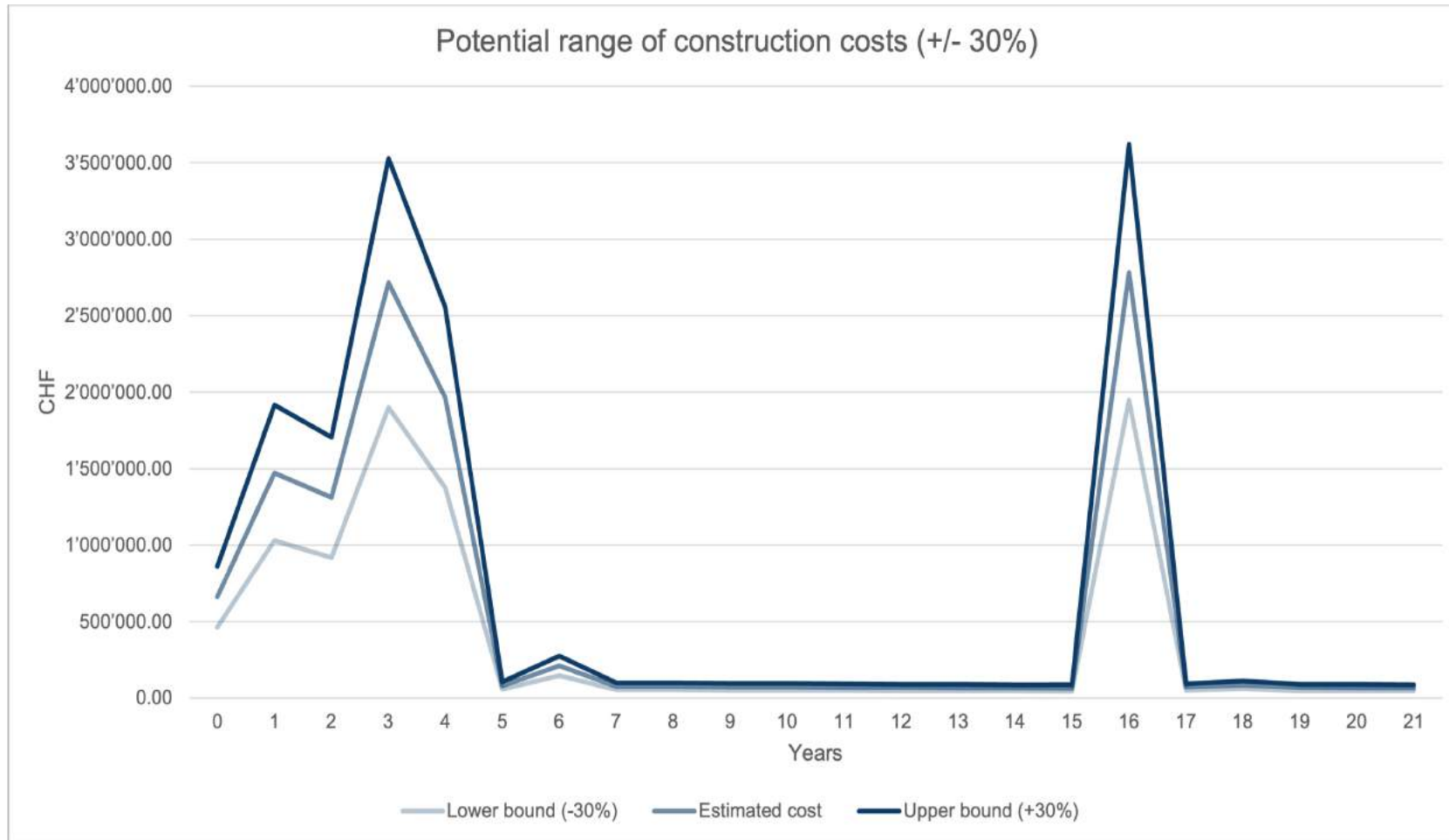
Variants Binzackerstrasse

	Car-centered	Bike-centered	Compromise
Car throughput	++	--	+
Bike comfort	-	+	0
Pedestrian comfort	-	+	+
Safety	-	+	0
Cost	0	+	-
Total	-	2+	1+

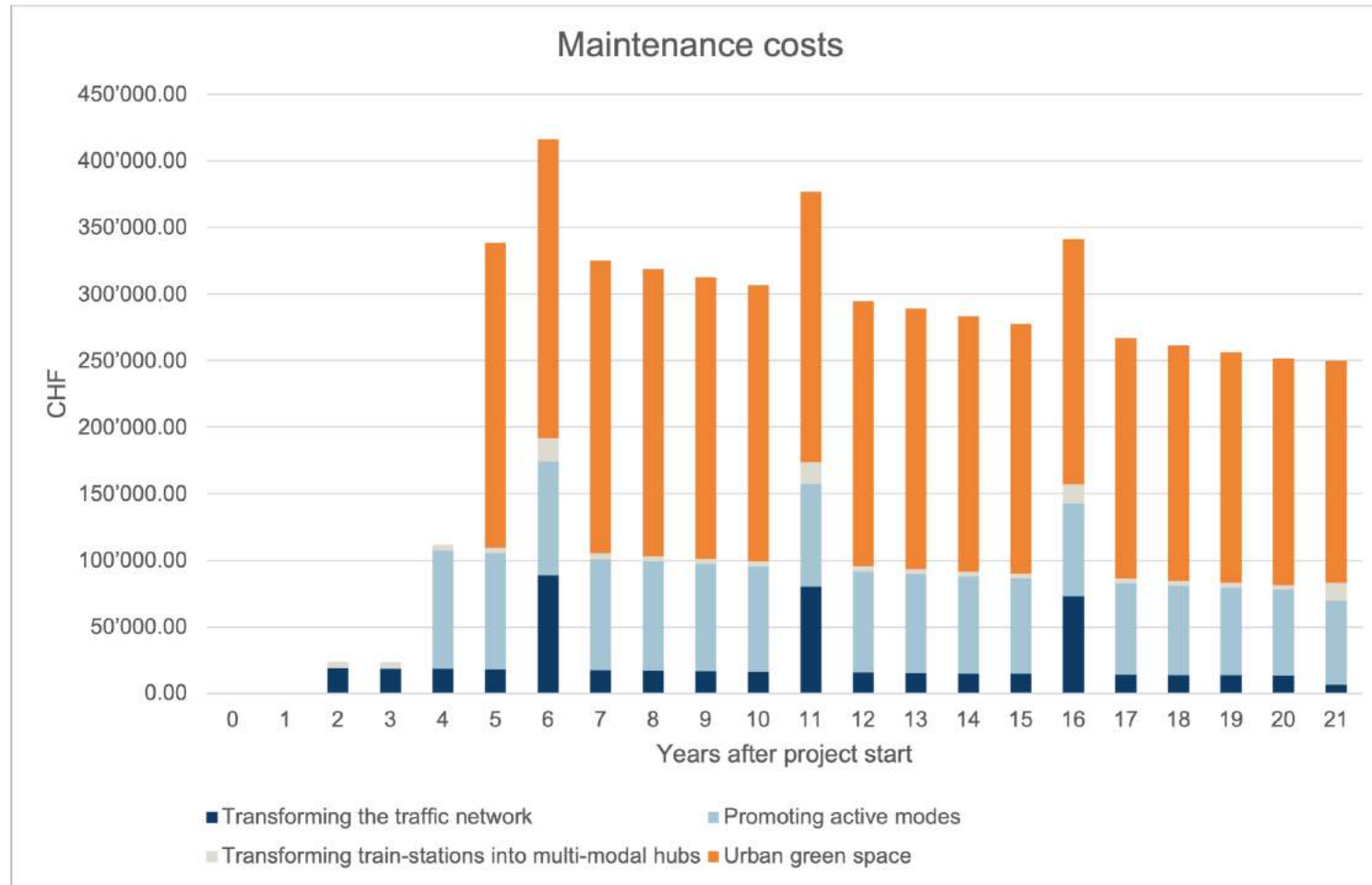
Construction Costs



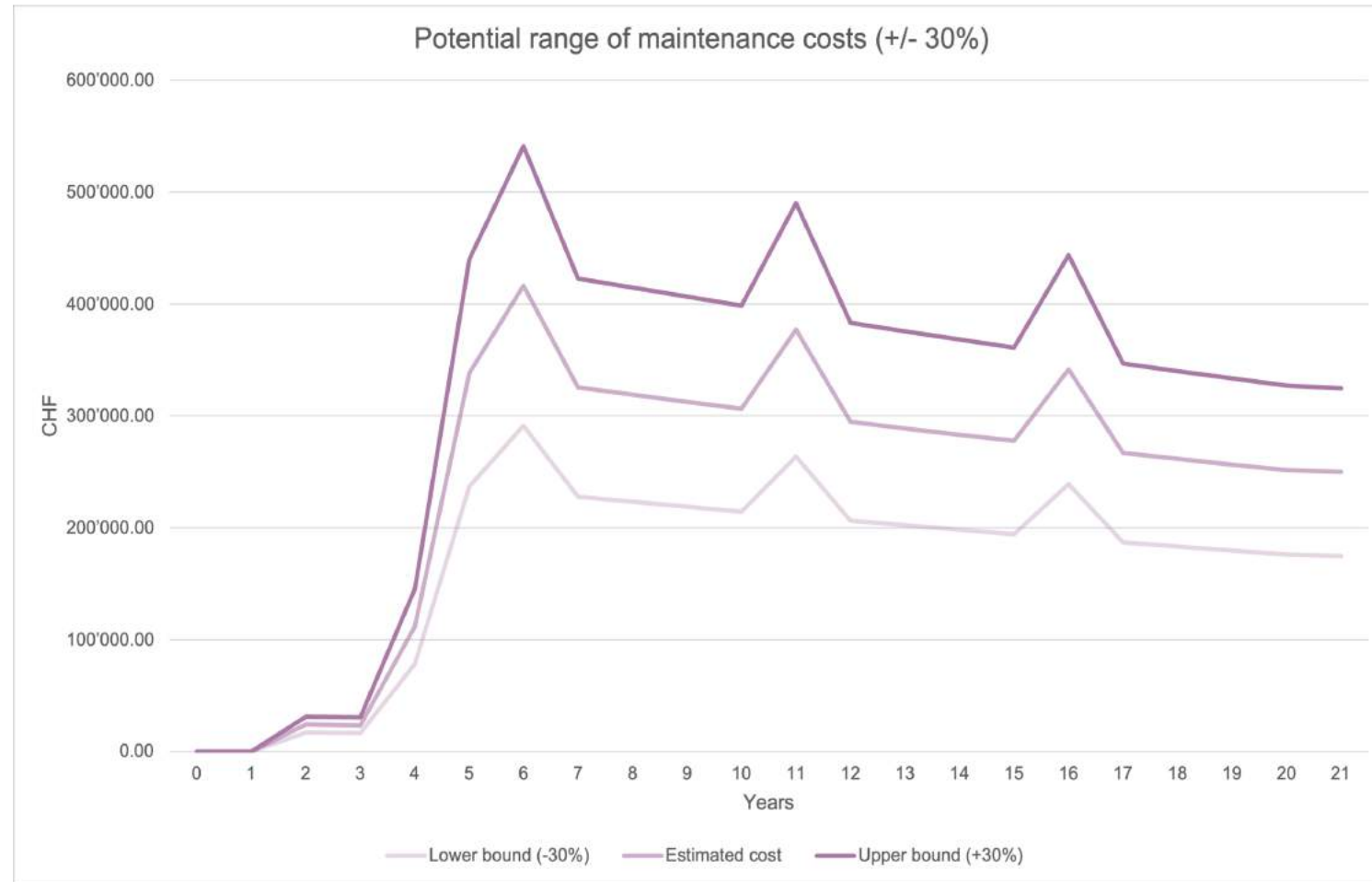
Construction Costs



Maintenance Costs



Maintenance Costs



Bus Punctuality

