Design principles for the street

Brian Eno

Think like a gardener, not an architect: design beginnings, not endings.

Unfinished = fertile

Artists are to cities what worms are to soil.

A city's waste should be on public display.

Make places that are easy for people to change and adapt (wood and plaster, as opposed to steel and concrete.)

Places which accommodate the very young and the very old are loved by everybody else too.

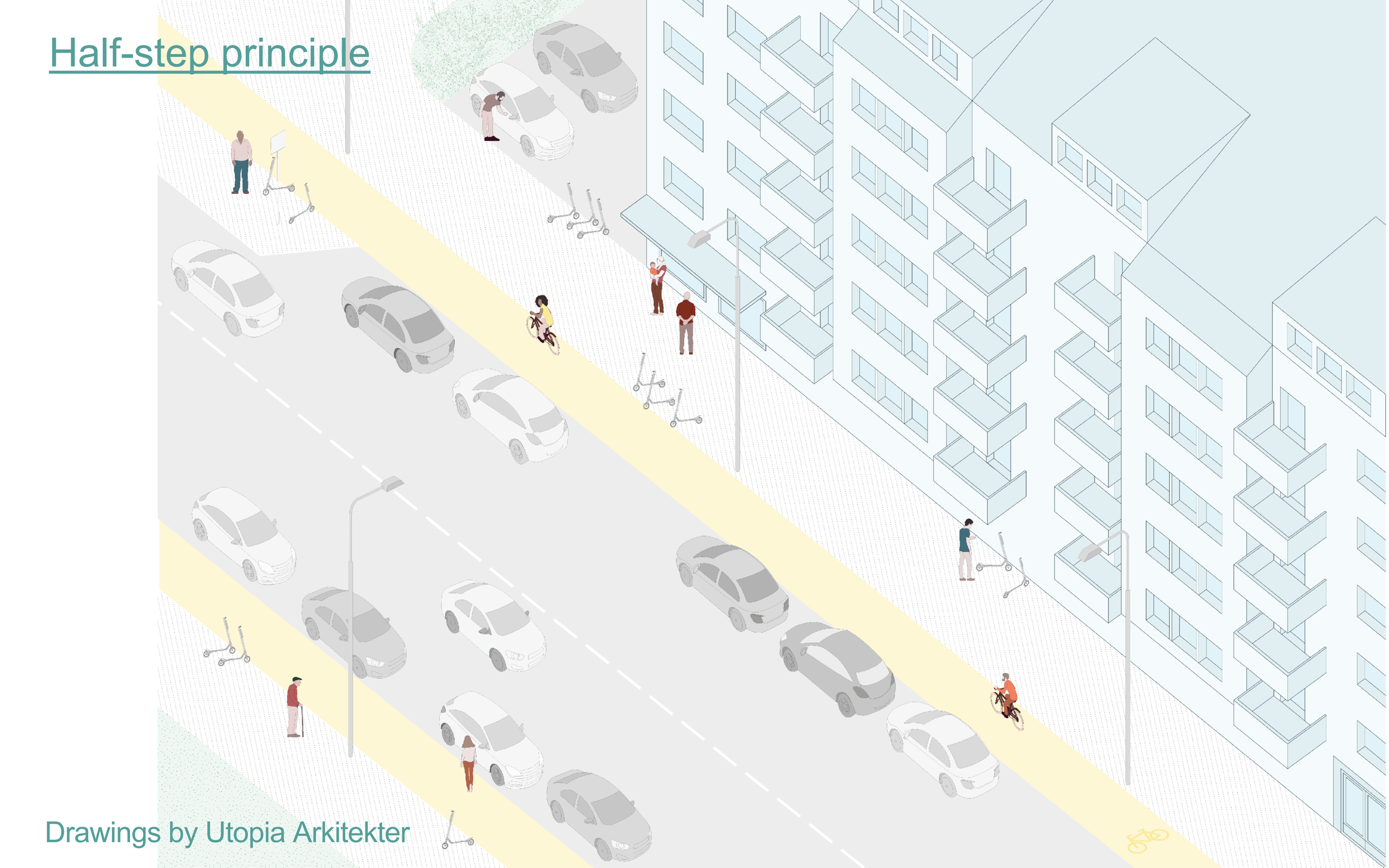
Low rent = high life

Make places for people to look at each other, to show off to each other.

Shared public space is the crucible of community.

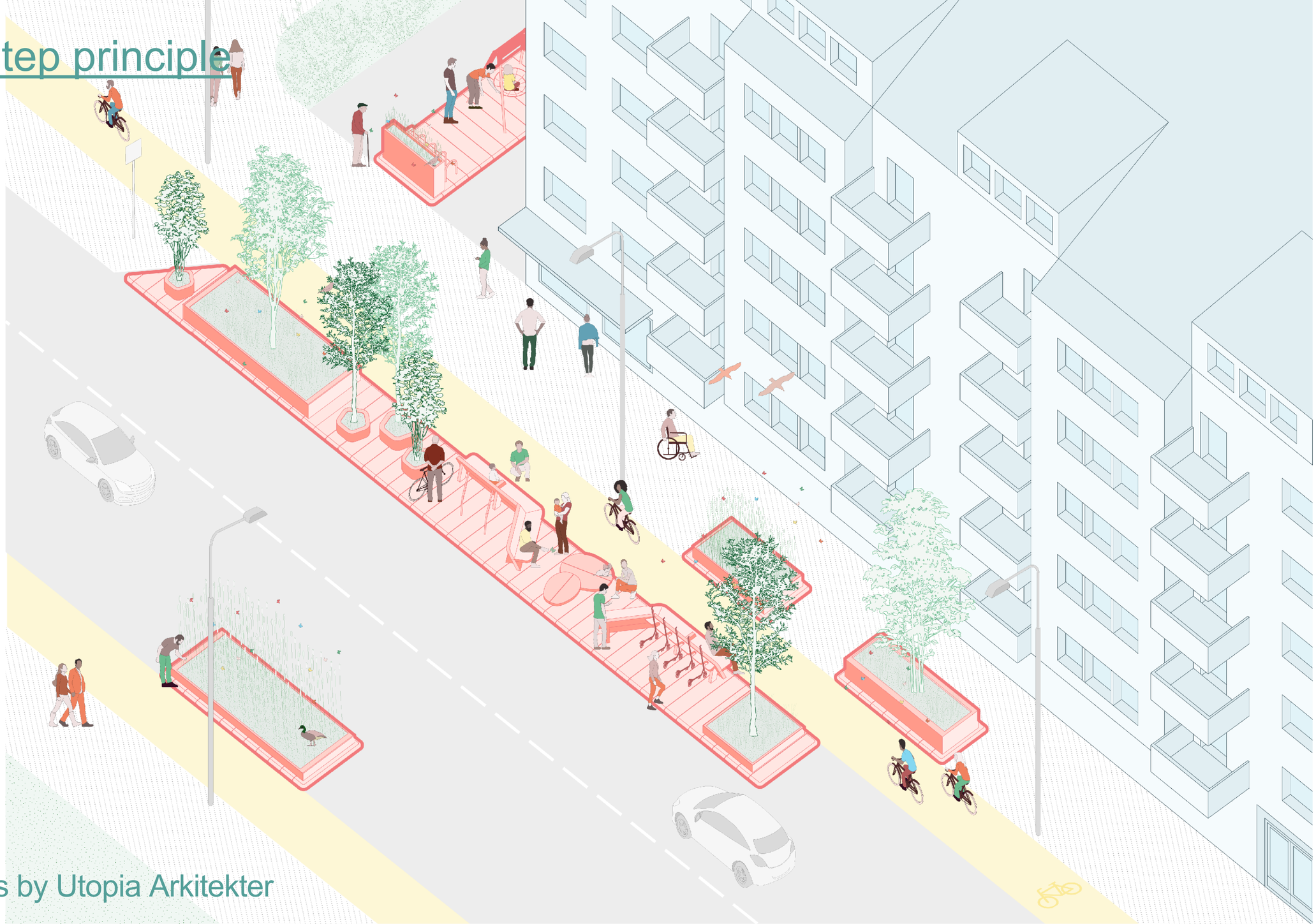
A really smart city is the one that harnesses the intelligence and creativity of its inhabitants.

Half-step principle



Drawings by Utopia Arkitekter

Half-step principle

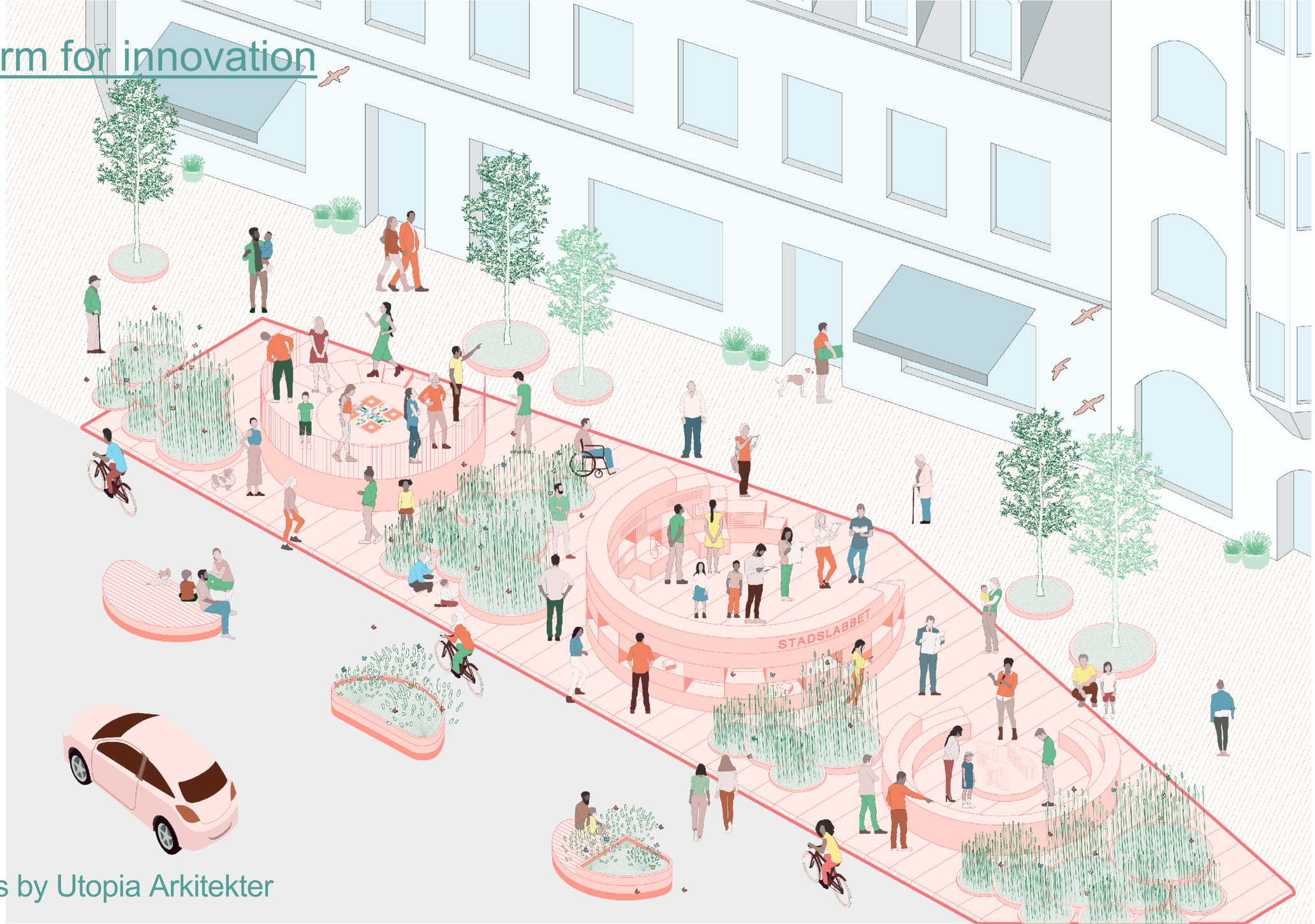


Drawings by Utopia Arkitekter

Half-step principle

Drawings by Utopia Arkitekter

Platform for innovation

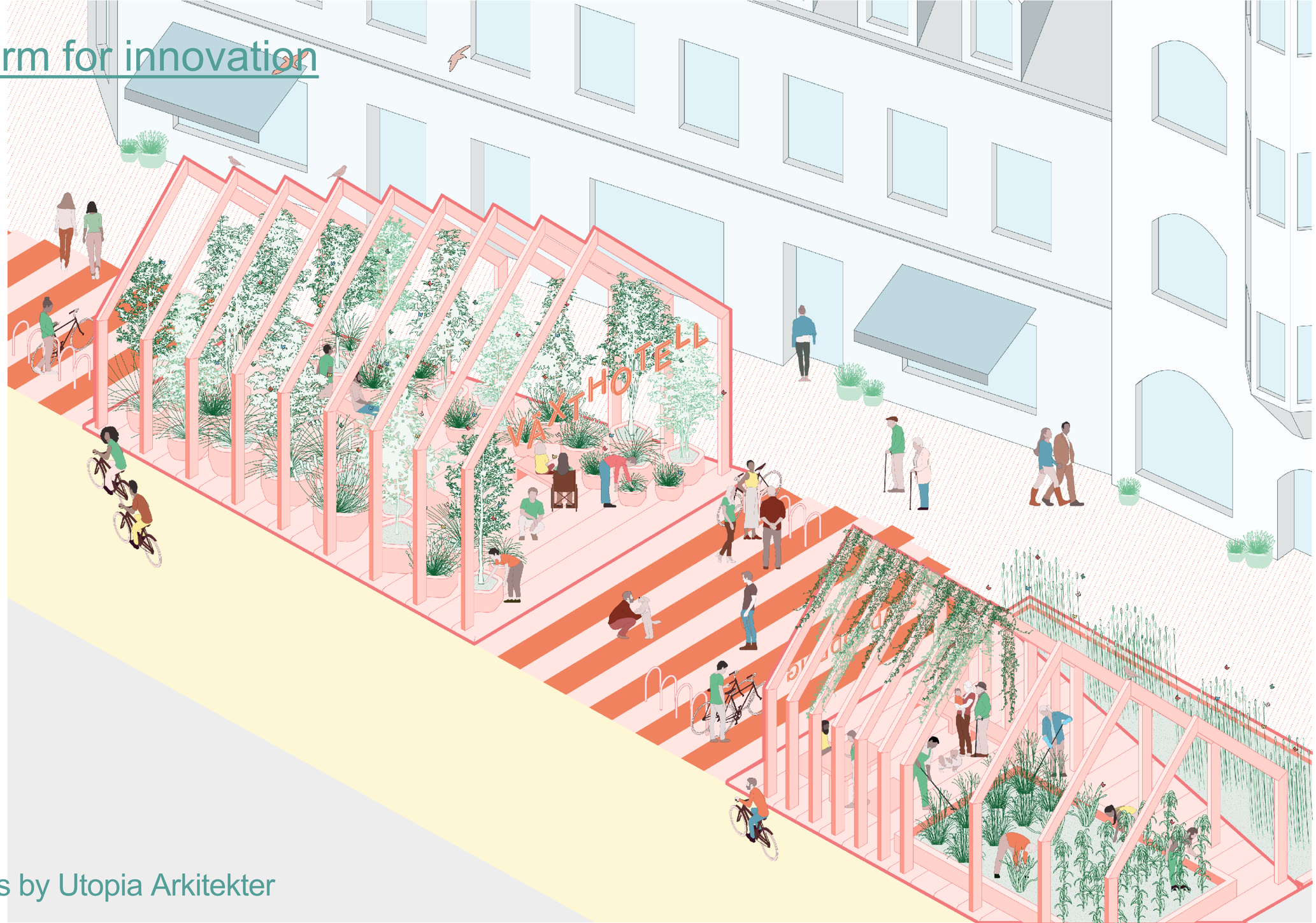


Drawings by Utopia Arkitekter

Platform for innovation

Drawings by Utopia Arkitekter

Platform for innovation

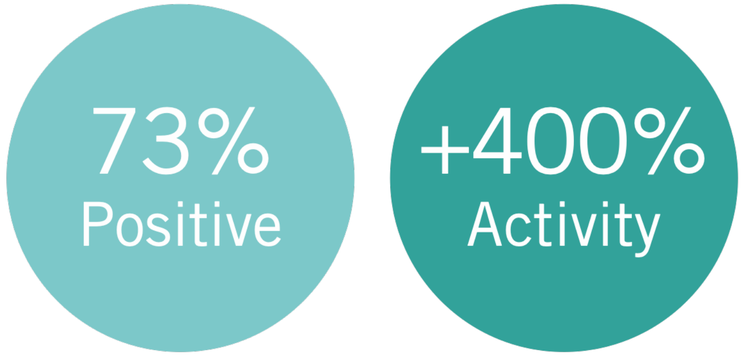


Drawings by Utopia Arkitekter

Prototyping

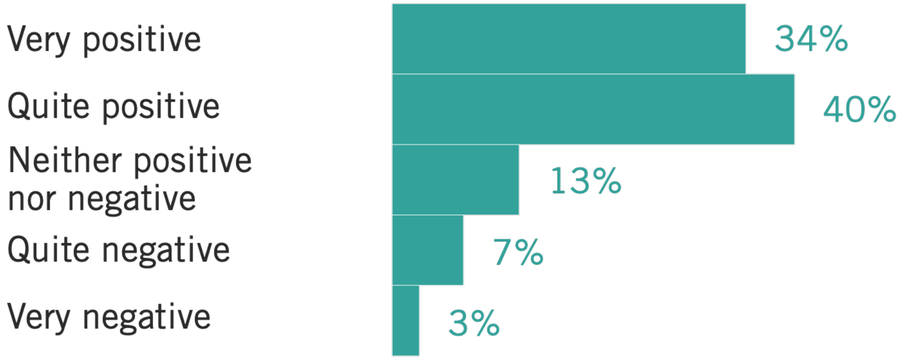
Follow-on research

As part of the evaluation of the first prototypes in Stockholm, ArkDes commissioned Novus, a research company, to conduct in-street surveys providing qualitative feedback from residents and users of the streets.



Overall feedback of the prototype core idea

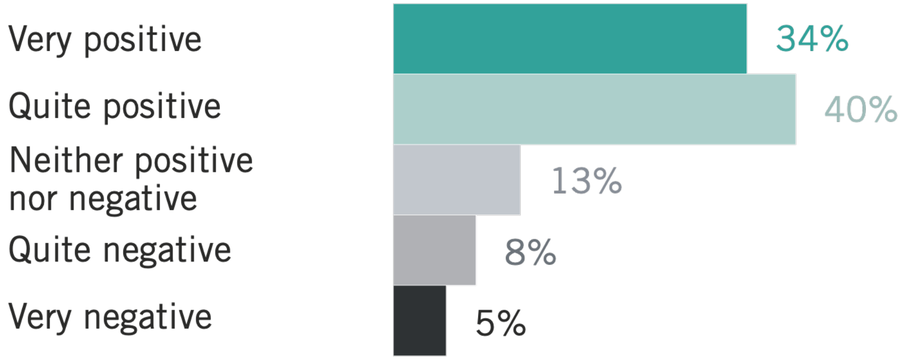
How do you see the idea of placing mobility hubs, similar to the one you can see in front of you, on different streets in the city?



If you are positive, what is it that you like?

Hälsingegatan

How do you see the idea of placing mobility hubs, similar to the one you can see in front of you, on different streets in the city?



If you are positive, what is it that you like?


3 5
Increase in residential greenery leading to increase in birthweight
3
Increase in natural sounds in urban greenery leading to increase in mental health
3
Increase in bird species diversity leading to increase in life satisfaction
14
Reduction in motor vehicle use and decrease in microplastics in seas and oceans
8 9 11
Increase in active travel and walkability, and reduction in cars, leading to increase in retail spend
Biodiversity
Property
Commerce
3
Increase in nearby green spaces leading to increase in walking maintenance
3
Decrease in road traffic noise and increase in birdsong leading to increase in mental health
11 13 15
Increase in local biodiversity leading to decrease in urban heat island effect
3
Increase in active travel leading to increase in mental and physical health and wellbeing
3 8 11 13
Increase in urban trees leading to decrease in building air conditioning and increase in worker productivity
8 9 10
Increase in property value (if desired) due to walkable environments
11 12 13
Carbon reduction and increased environmental outcomes via coordinated e-commerce delivery
3 11 13
Increase in local biodiversity, leading to increased air quality, decreased noise
3 10 16
Increase in mental and physical wellbeing leading to reduction in healthcare costs
8 9 10 11
Increase in retail and office rental value and occupancy levels via green, walkable environment, without increase in housing rent
8 9 10 11 12
Reduced road capacity for private cars leads to overall reduction in traffic and housing costs, and increased economic return through reduced congestion
3 12 13 15
Increase in community gardening leading to increase in mental and physical health and wellbeing
3
Decrease in urban heat island effect leading to decrease in early deaths
8 9 11 16
Sustainable shared and equitable infrastructure for micromobility technologies
8 9 11 12 13
Increased environmental outcomes via shared electric mobility infrastructure
3
Increase in air quality leading to increase in mental health
Environment
Physical activity
3 11 13
Increase in sustained connection to nature leading to associated benefits to happiness, health, and pro-nature behaviour
5
Decrease in domestic violence due to nearby natural landscapes
3
Greener play areas boost children's immune systems
3
Increase in active travel leading to improved immunosurveillance against pathogens
3 10 16
Increase in residential green space and access to nature beneficial for intellectual and behavioral development of children living in urban areas
3 11
Increase in neighbourhood tree cover leading to better overall health mediated by lower obesity and better social cohesion
Maintenance
Learning
10 11 16
Increase in trees and natural landscape leading to decrease in crime and reduced fear
3
Reduction in car use and decrease in brain cancer
11 13 15
Increase in biodiverse perennial meadows increasing residents' perceptions of site quality in urban green space
Health and wellbeing
11 13 16
Decrease in stormwater-related maintenance costs through increased green infrastructure
3 10 16
Increase in childrens' play and sociability in play streets
3
Increase in active travel leading to improved immunosurveillance against pathogens
10 16
Increase in dwell time leading to increase in social interaction leading to increase in mental health and wellbeing
1 4 10
Increase in childrens' social mobility in walkable neighbourhoods
3
Decrease in child deaths due to decreased car use near schools
3
Decrease in road traffic accidents with reduction in motor vehicles and decrease in traffic speed
10 16
Decrease in maintenance costs through shared management
10 11 16
Increase in publicly-accessible neighborhood nature increases sense of community
8 9 11 16
Improvement in community participation and municipal governance via public prototyping of civic tech platforms
11 13 15
Increase in sustainable timber street furniture, versus concrete, leading to increase in carbon sink and decrease in carbon dioxide
3
Lively, activated streetscapes and facades lead to increase in positive affect and lively, attentive nervous system, and decrease in poor mental health
Social fabric
3 11 13
Increase in active travel and decrease in motor vehicles leading to carbon reduction, increased air quality,
3 10 11 16
Community participation improves perceptions of pedestrian environment
3 10 11 16
Increase in social infrastructure leading to increase in social
10 16
Increase in social


eduction in motor
hicle use and decrease
microplastics in seas
d oceans
g
g
3
Increase in active travel leading to increase in mental and physical health and wellbeing
unity
g to
al and
nd
8 9 11 12 13
Increased environmental outcomes via shared electric mobility infrastructure
tic
rby
nance
Property
8 9 10
Increase in property value (if desired) due to walkable environments
3 8 11 13
Increase in urban trees leading to decrease in building air conditioning and increase in worker productivity
3 10 16
Increase in mental and physical wellbeing leading to reduction in healthcare costs
8 9 10 11
Increase in retail and office rental value and occupancy levels via green, walkable environment, without increase in housing rent
Physical activity
3
Greener play areas boost children's immune systems
3
Increase in active travel leading to improved immunosurveillance against pathogens
3
Reduction in car
Learning
8 9 11
Increase in active travel and walkability, and reduction in cars, leading to increase in retail spend
Commerce
11 12 13
Carbon reduction and increased environmental outcomes via coordinated e-commerce delivery
8 9 11 16
Sustainable shared and equitable infrastructure for micromobility technologies
8 9 10 11 12
Reduced road capacity for private cars leads to overall reduction in traffic and housing costs, and increased economic return through reduced congestion
3 10 16
Increase in residential green space and access to nature beneficial for intellectual and behavioral development of children living in urban areas
10 11 16
Increase in trees and natural landscape

Platform strategy

Place layers	In the Street mission	Place-based collaborators
Skills, capabilities, and cultures	Physical, digital, and social interventions in streets in Stockholm, Helsingborg, and Umeå, within a wider network of nine municipalities coordinated by Viable Cities.	ArkDes, Stockholms stad; Helsingborg stad; Göteborgs sta Region planning and health departments; Voi; Volvo M; Lu Spacescape

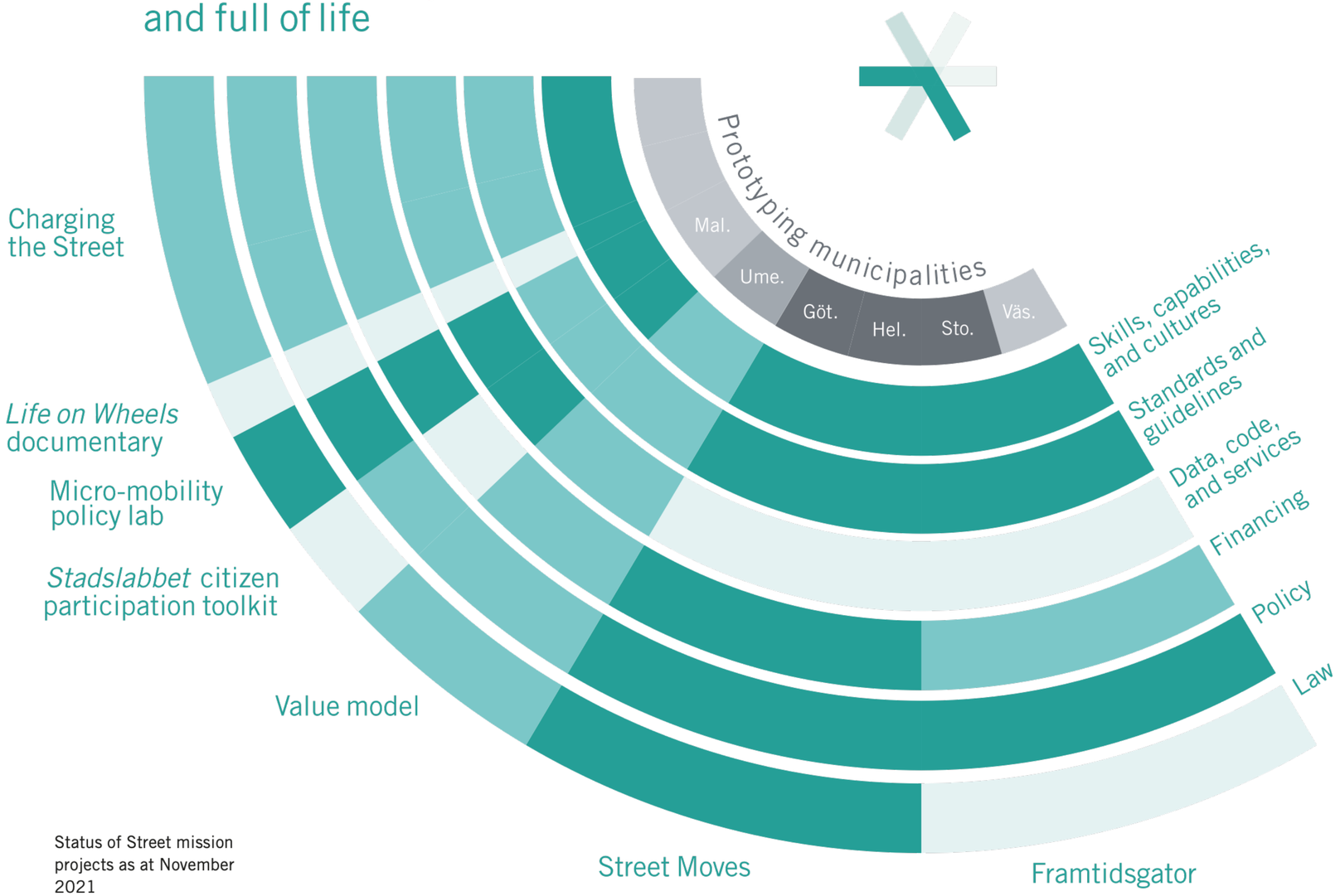
System layers	In the Street mission	System collaborators
Skills, capabilities, and cultures	Urban design/architecture; IoT, data science; user experience; micromobility, transport, and logistics; place-based governance; participative democracy; microeconomics; health and wellbeing;	ArkDes; Rådet för hållbara städer; Boverket; Voi; Volvo M; Lu Spacescape; Stockholm Region, muncipalities in Stockholm and Gothenburg
Standards and guidelines	Interoperable mobility standards, street furniture design guidelines, health and safety guidelines for micromobility, civic IoT privacy guidelines, street design guidelines and best practice, accessibility standards	Municipal traffic departments in Stockholm, Helsingborg an Stockholm Region; Voi; Volvo M; Lundberg Design; Spacesca portstyrelsen, Drive Sweden, Viable Cities
Data, code and services	Micromobility data standards; Real-time kerbside management systems; 'digital twins'; Internet of Things kits; environmental sensor data standards; footfall measurement standards: public code policies	Stockholms stad; Helsingborg stad; Göteborgs stad; Stockho Voi; Volvo M; Ericsson One; Vinnova; RISE; Drive Sweden
Financing	New value models, with 'total value budgeting' based on public health and wellbeing savings, environmental benefits, maintenance benefits; place-based system demonstrator innovation funding	Stockholms stad; Helsingborg stad; Göteborgs stad; Vinnova Region; Climate-KIC
Policy	Parking space policy; street planning policy; local real estate policy; participative design and planning policy; smart city policy; arts and culture policy; licensing policies	ArkDes; Rådet för hållbara städer; Boverket; Climate-KIC; Vi Sweden; Vinnova; RISE; Stockholm Region
Law	Parking space law, traffic speed limits, vehicle definitions, municipal and regional governance and financing law	Transportstyrelsen (national regulatory authority)

Mission portfolio

Healthy sustainable mobility mission #1

Street

Ensure that every street in Sweden is healthy, sustainable and full of life



Status of Street mission projects as at November 2021