

SHARINGCITIES

Mobility Islands

a vital piece in the jigsaw that will manage the transition to clean green healthy shared urban mobility

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H2020 SHARING CITIES

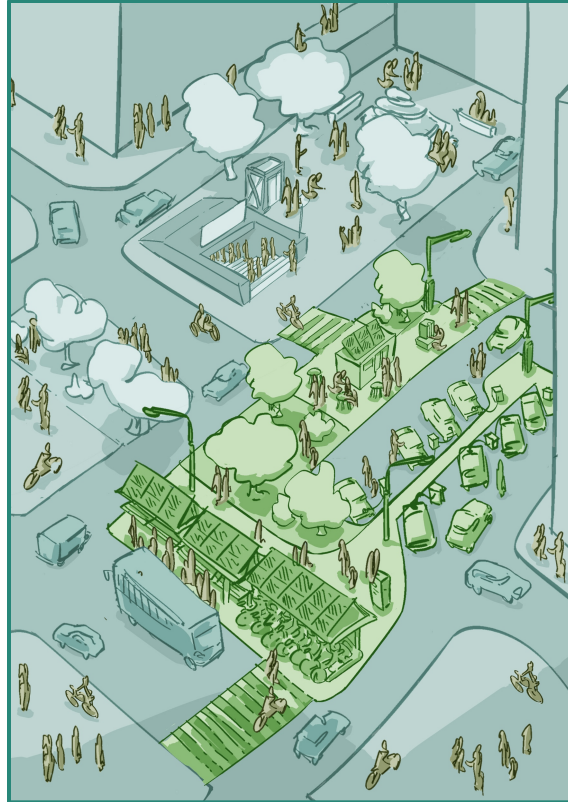


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a vital piece in the jigsaw that will manage the transition to clean green healthy shared urban mobility

Infrastructure

- Design & form
- Integrated into city-wide digitally-enabled infrastructures to manage overall efficacy
- Energy production (PV) and storage
- Energy management system
- Connected to urban data platform
- Smart lighting for safety
- Green infrastructure for place-making purposes



People

- Access to shared affordable convenient mobility services within a 5 minute walk
- Gamification and incentives to shift behaviour
- Offers & informs rider choice
- Safe, secure, convenient locations
- Storage and services

Mobility Assets & Services

- Bringing owned/shared eCars & eLogistics (Vans / Bikes) to a network of islands across the city to improve flow
- An exchange point between modes (walking / eBike / Micro-mobility / car; & with major transit hubs)
- Business models to attract investment and incentivise mode shift



Growing turmoil
frustration confusion
and ill-health



Clean green healthy urban mobility

Mobility Islands – Components and services

PUBLIC GREEN SPACE – attractive landscaped areas where people will want to be, whether they are travelling or not. Seating; tables; litter bins and e.g. water fountains to improve



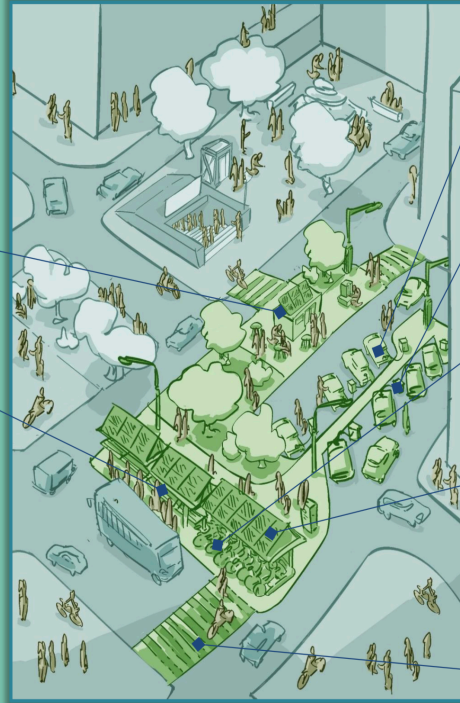
ANCILLARY SERVICES – Concessions for Café; Storage lockers; Light logistics (pick up) services. Revenue



PUBLIC TRANSPORT – convenient access to / from public transport to provide seamless connectivity



DEMAND SHAPING – travel information (mode options and availability, weather-informed, pricing, booking, potential shared travel); booking and payment; incentives ('nudge' theory); ...



SHARED eCARS – bookable small clean vehicles, with incentives for group use



CHARGING INFRASTRUCTURE – differential pricing for private charging bays and power



eBIKES / eSCOOTERS / eBUGGIES – managed micro-mobility for user from

RENEWABLE ENERGY – PV Panels on shelters with power storage

OPERATING PLATFORM – discrete Mobility Island platform, inter-operable with energy and city operating

ACCESSIBILITY – easily and safely accessible from all parts of the community

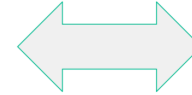
SOLUTION	Mobility Island RELEVANCE	Commentary
e-Bike sharing	Hi	An essential first micro-mobility solution for Mobility Islands
e-Car Sharing	Hi	An integration point for a city-wide or community eCar share scheme
e-Vehicle Chargers	Hi	An array of different capacity chargers to cater for all mobility modes; priced to incentivise specific behaviours
e-Logistics	Med	Potential to incorporate small light logistic service integration
Smart Parking	Med	Integration into city parking system is feasible to optimise revenue from spare bays for eCars
Digital Social Market	Med	A complementary platform to digitally support (collective) behaviour change and incentive (local) commerce / SMEs
Building Retrofit	Med	Potential for housing estates and developers to integrate mobility islands into the re-designs
Sustainable Energy Mgmt Systems	Med	PV panels within the Mobility Island can interoperate with community renewable systems, and/or wider energy grid
Smart Lampposts	Med	Lighting levels can be adjusted to ensure safety. Smart sensors (e.g. 'push-to-talk'; noise; CCTV) can enhance safety
Data Platforms	Med	Integration with specific sector or city-wide platform(s) can enhance the mobility island network yet further

CONVENTIONAL

Transport engineering
Heavy ('hard') infrastructure
Charging for eVehicle owners
Individual cars
Elite
Transport services
Costly
Dated model
'Hub'

MOBILITY ISLAND

Demand Shaping
'Soft' Light infrastructure
Sustainable mobility for all
Shared multi-modal
Inclusive
Overall experience
Affordable
Sustainable
'Island'



Macro and micromobility sharing services integration

- E-cars
- E-vans
- E-bikes
- E-scooters
- Kick-scooters

INTERMODALITY IN MILAN



Smart Parking Solutions

HITACHI
Inspire the Next



- Detecting occupancy
- Smart Parking Pilot Test on all 10 Mobility Areas in Milan

- Detecting occupancy
- Smart enforcement
- Measuring duration
- Designing parking policy based on demand
- Smart Parking Pilot Test on Bocconi Area, Milan in partnership with Hitachi Europe



Mobility Island Components

- **10 Parking spaces**
 - 8 Parking spaces reserved to Car Sharing
 - 2 Public Parking spaces equipped with EVCP
- **6 EV Charging Points:**
 - 4 Normal Charge – 22KW
 - 2 Fast Charge – 150 KW
- **10 Smart Parking Sensors**

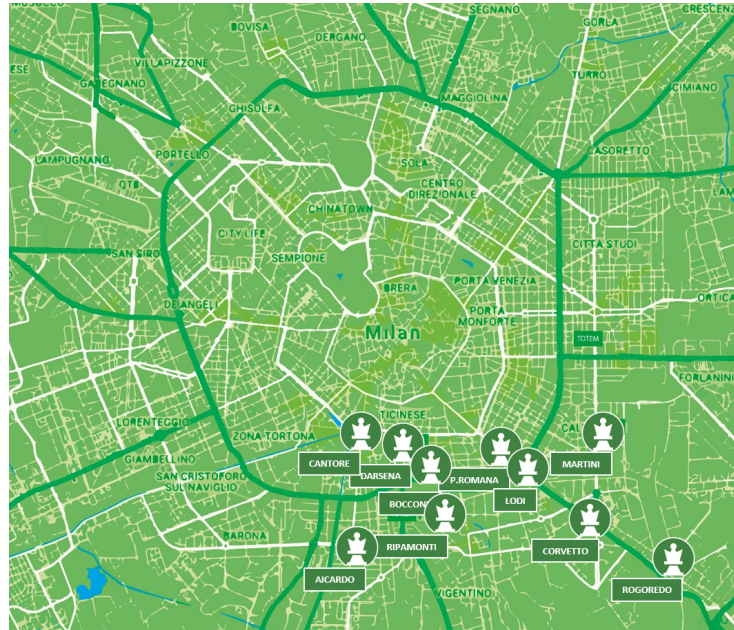


FAST CHARGE 150 KW

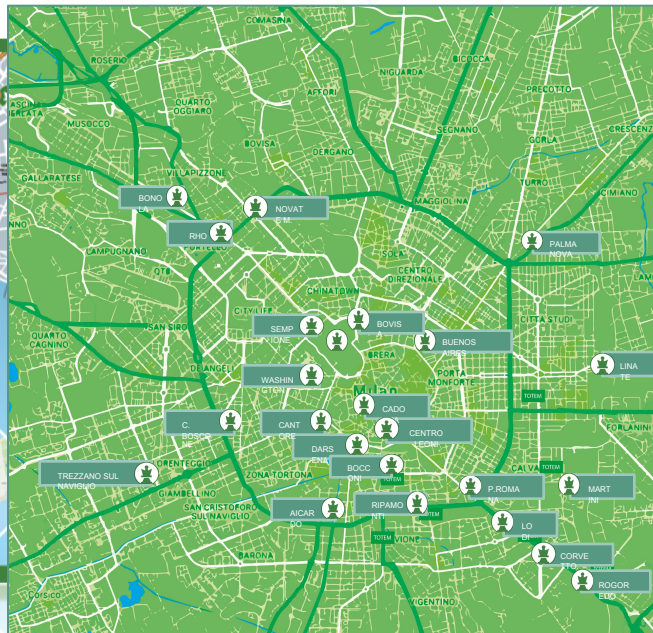
NORMAL CHARGE 22 KW

10 Mobility Islands

- **60 EV Charging Points:**
 - 40 “Normal Charge”;
 - 20 “Fast Charge”;
- **100 Smart Parking sensors**







Replication Target Areas

- New Residential Districts
- Mall
- University Campus
- Urban Districts
- Transportation Hubs – Rail Stations, Airports
- Tourism and Cultural Areas

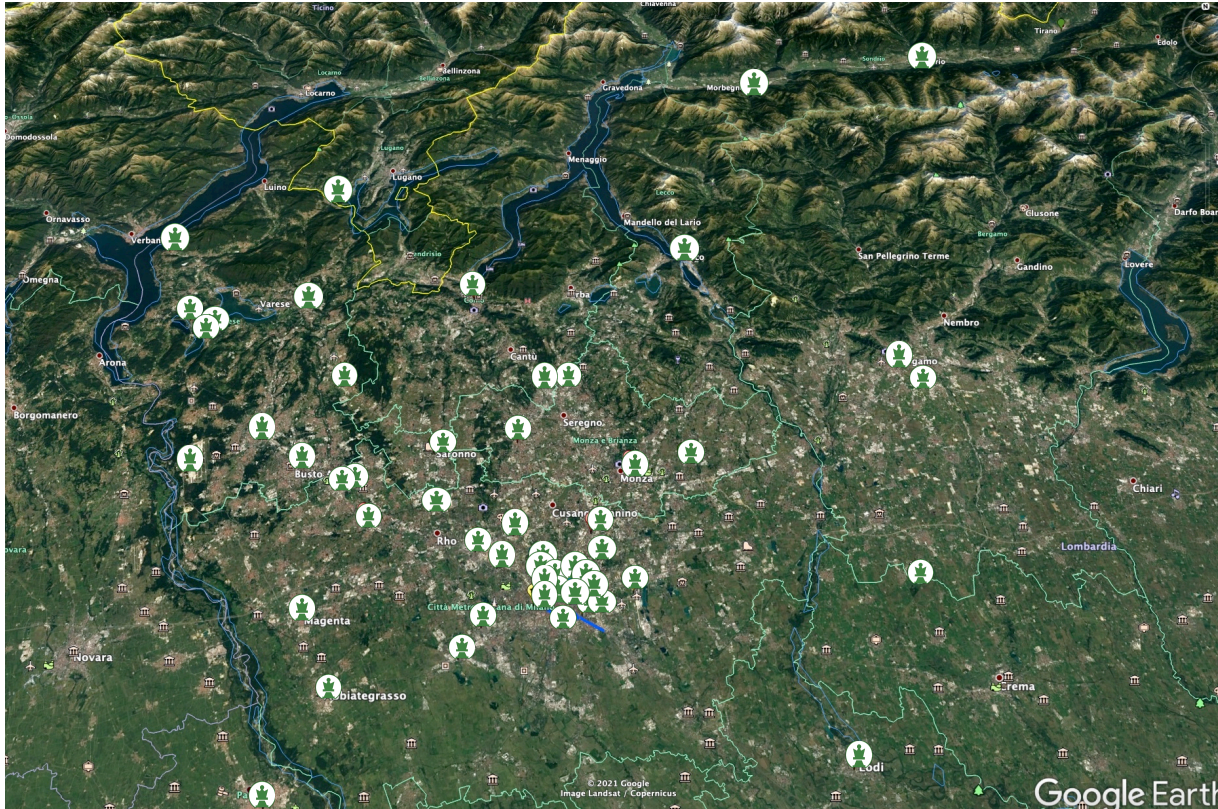
Ongoing Opportunities

- Milan Mobility Islands scale Up
 - Private Parking Lots
 - Public spaces
- SEI Milano – 30 ha urban development
- Linate Airport
- Italian Airports
- Main Italian Cities' Private Parking Lots
- Corporation Mobility Hubs

New Metropolitan Areas Scale Up

- Naples Network
- Sharing Cities' cities
- The Cities in the audience
- UK Small Cities network

Mobility Islands & Sharing Cities: The "5 Minutes Region" - Connecting Lombardy



Regional Scale-up coverage

- 70% of major and minor rail Hubs in Lombardy Region
- 3 out of 3 airports: Linate, Malpensa, Orio al Serio
- 12 out of 12 regional districts
- Principal cities, smaller towns, touristic locations
- Car sharing operators present on 90% network
- 5-minutes-city model
- Urban and extra-urban network

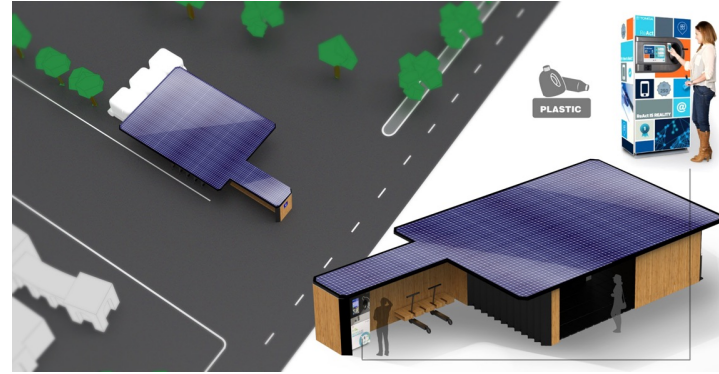
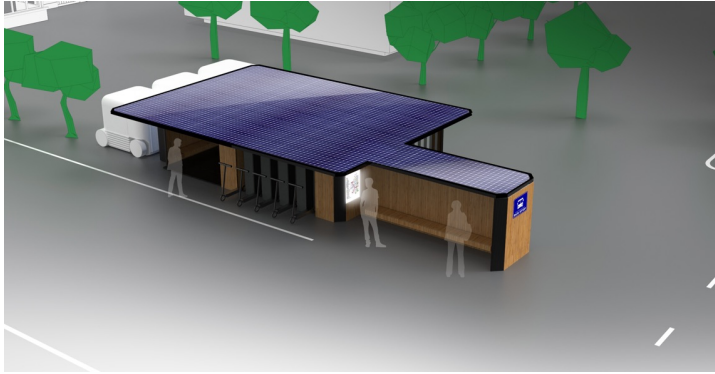
Replication Target Areas at Regional Level

- Small Cities/Villages and towns
- Transportation Hubs – Rail Stations, Airports
- Tourism and Cultural Areas
- Italian small cities and cultural areas

'Starter' Designs with built-in extendibility

A Component Based approach

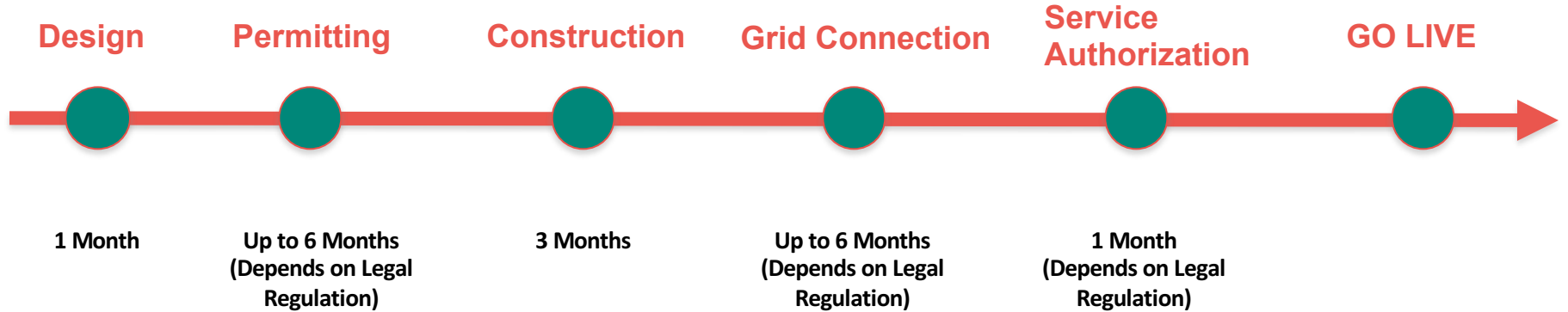
Model	Locations	eCars	Light Mobility	Scooters	PV & Storage	ICT Platforms	Related Smart Services	Budget Costs
'Light' / Pilot / Test / Low Investment, quick ROI	Trial sites: Towns/Villages; Holiday Locations; City districts	3-5	5-15	2-3	20 KW – 150 sqm	SEMS; EVCP; Community Sharing	Water fountains; Smart bins; Smart lockers Plugs for medical services	75 k€
The Norm	City-wide application. Large Apt complexes.	6-10	10-25	3-5	As much as needed	+ Smart Parking	+ Environmental sensors; eBike battery swap	100 k€
High End Specials	CBD; Rail Hubs; Shopping Malls; High Street; Campus	>10	20-75	5-7	Landmark	Any other sinergic urban digital service	+ Infocommercial Totem; Videosurveillance	150 k€



Sustainable Design

- Wood from sustainable forests
- Production made with renewable energy
- Integrated PV Shelter
- ONE Digital Access to smart city services
- 3 standard sizes
 - 12 sqm – 3KW, 30.000 Km Zero emission trips,
 - 18 sqm – 4KW, 40.000 Km Zero emission trips,
 - 25 sqm – 12 KW, 120.000 Km Zero emission trips





SOURCES OF FINANCE

Public

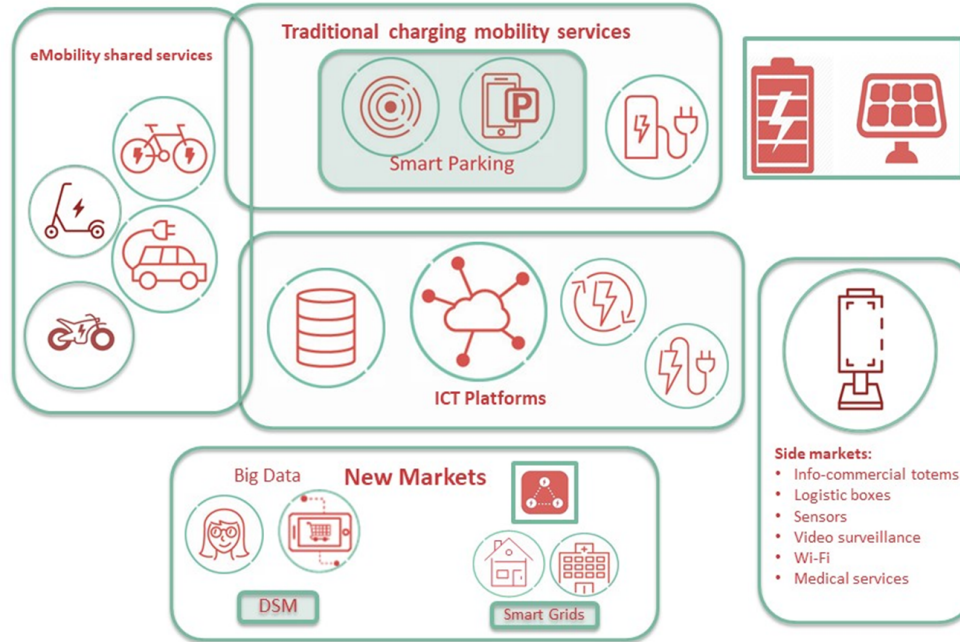
- Borough capex / opex (revenue) / other budgets
- Government grants
- Sovereign funds / loans
- EC H2020 project grants
- EU project development grants/ assistance (eg EIB)
- EU Structural and Investment Funds
- Institutional grants and loans

Private

- Commercial Market
- Pension funds / Insurance
- Philanthropic
- Industry

Blended

- Mixed funding sources



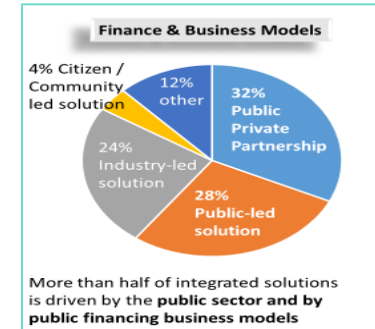
BUSINESS MODELS

Traditional Business Models

- Traditional Public / 'City Hall'
- Concession
- PPP – public private partnerships

Innovative Business Models

- EScO – Energy Services
- VASCO – Value Added Services



Innovating Business Modelling - Users' based Business Model, a Bottom Up approach

SHARINGCITIES Mobility Islands: Scale-up tools



LEADERSHIP GUIDE



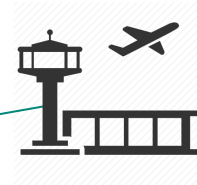
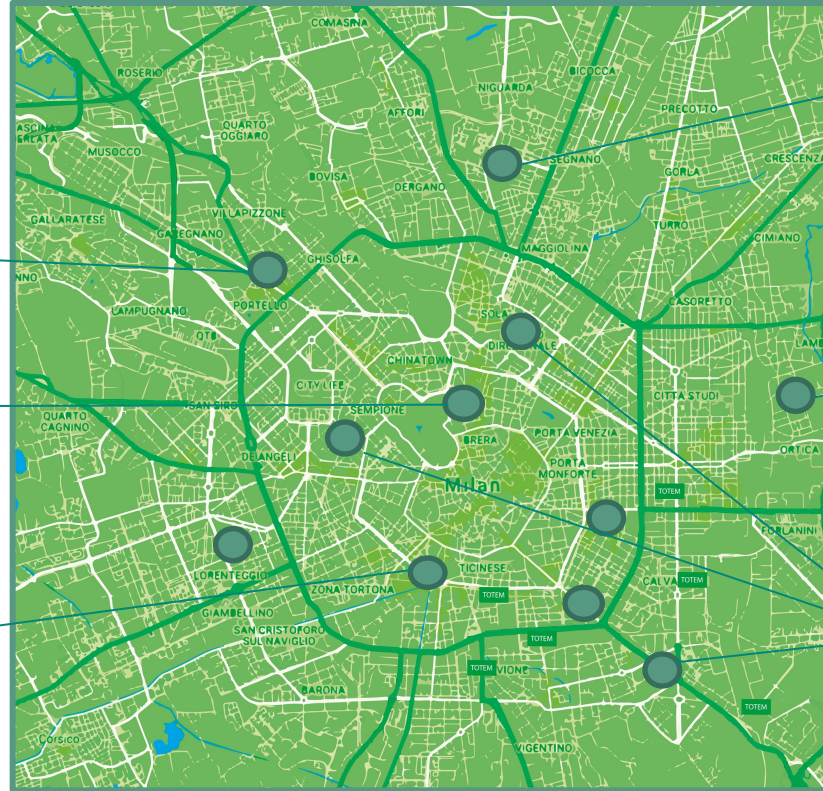
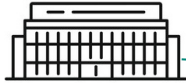
SHARING CITIES PLAYBOOK

Mobility Islands: Scale-up THE 5-minutes-City

What Mobility service do you need for your people?



5-minutes-city



Thank you!



NHP ESCo

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