

UN High Level Dialogue on Sustainable Cities and
Transport | Berlin | 20 June 2013

Happold Consulting

Transforming our Cities to foster responsive, affordable Mobility

Lessons from Detroit and Berlin

**Lawrie Robertson | Head of Strategic Planning
Happold Consulting | London**

Introduction

Mobility systems often struggle to keep pace with rapidly changing cities – delivering too limited benefits at too high cost.

This presentation looks at:

- An Integrated Framework to mobility
- Practical Examples from contrasting projects in Detroit and Berlin



Buro Happold and Happold Consulting

Buro Happold
World leading multi-disciplinary
engineering and environmental
consultancy

Happold Consulting Strategic Consulting for City Development

Consortium for the Eradication of Poverty (CEP)
Brookfield Global Sustainability
Hotel America ITE Support
Connolly Quarter Masterplan
World Bank Energy Efficient Cities

Atrisco, Albuquerque
Chicago Spire
Mississippi Delta Review
Sustainable Cities
Jamaica Bay



Strategy



ECONOMIC DEVELOPMENT



ECONOMIC INFRASTRUCTURE



INTEGRATED DEVELOPMENT PLANNING



REGIONAL PLANNING



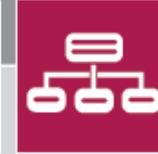
SUSTAINABILITY & ENVIRONMENT



ORGANISATIONAL DEVELOPMENT



PROCUREMENT



PROJECT MANAGEMENT

Delivery

Mobility Challenges

Mobility Challenges...

- Societies, economies and governments can change faster than physical cities
- Transportation systems and networks must constantly rediscover their relevance and optimise their value to the changing city.



...in Different Environments

Urban Growth...

Berlin, Germany

2013

Changing economic base

City Financial Challenges

Urban Decline...

Detroit, USA



Current Factors Driving Demand and Supply Side

Economic Transformation

Global and national economic shocks, industrial restructuring and deindustrialisation

Social Change

Demographic change, new role of civil society, social and political movements

New Role of Governments/Governance

Increased demands for transparency, strained public finances, decreasing steering capacities

Transportation systems and networks configuration and organisation

Transport Systems and Vehicles

Cleaner transport systems, smart grids, EV charging infrastructure, mobile internet.

Personal Car

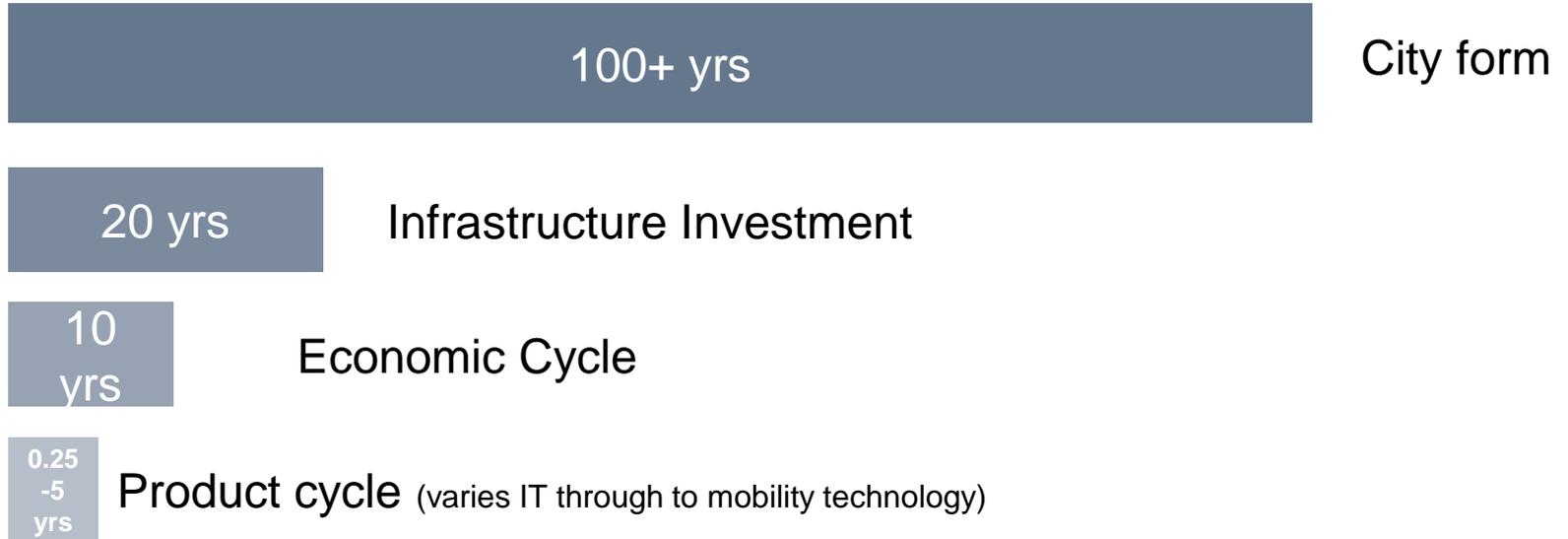
Increasing cost for purchase, operation and maintenance, congestion in city centres.

Public Transport

Restricted availability, limited flexibility, increasing costs

Widening timeframes

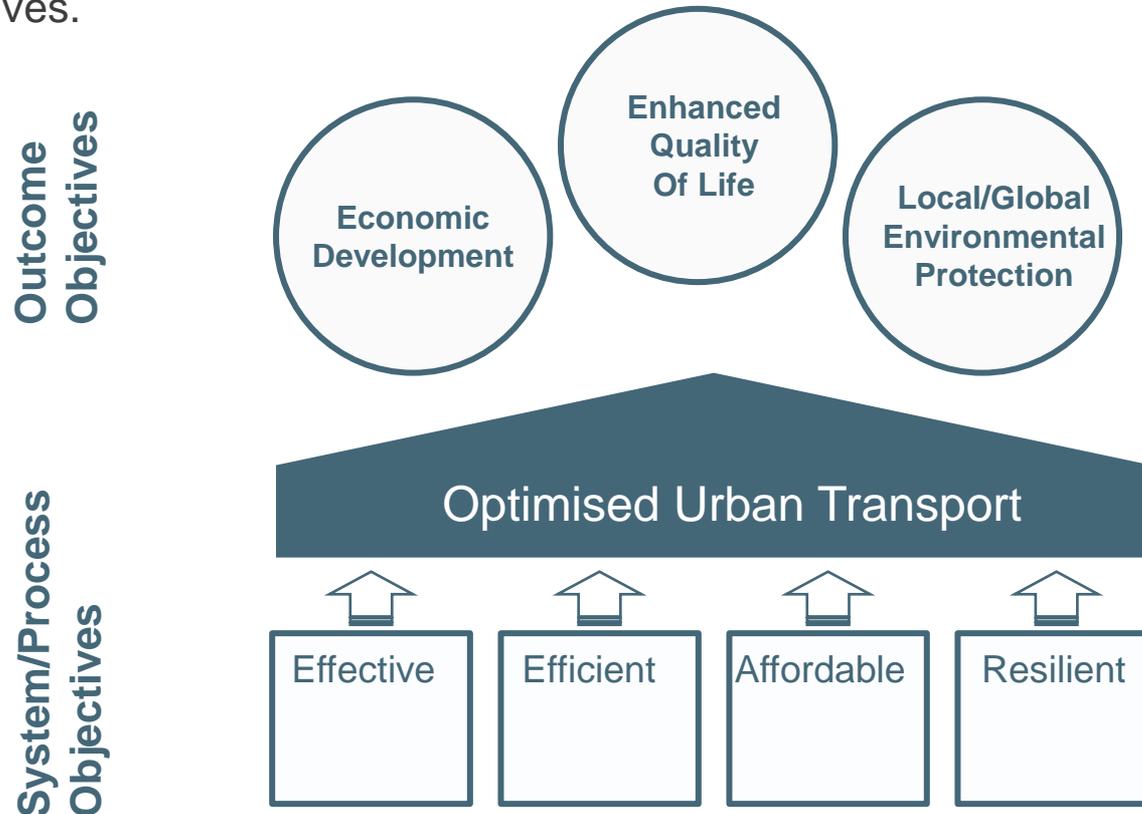
It is easy to imagine change in particular areas - but visions rarely cross time cycle silos

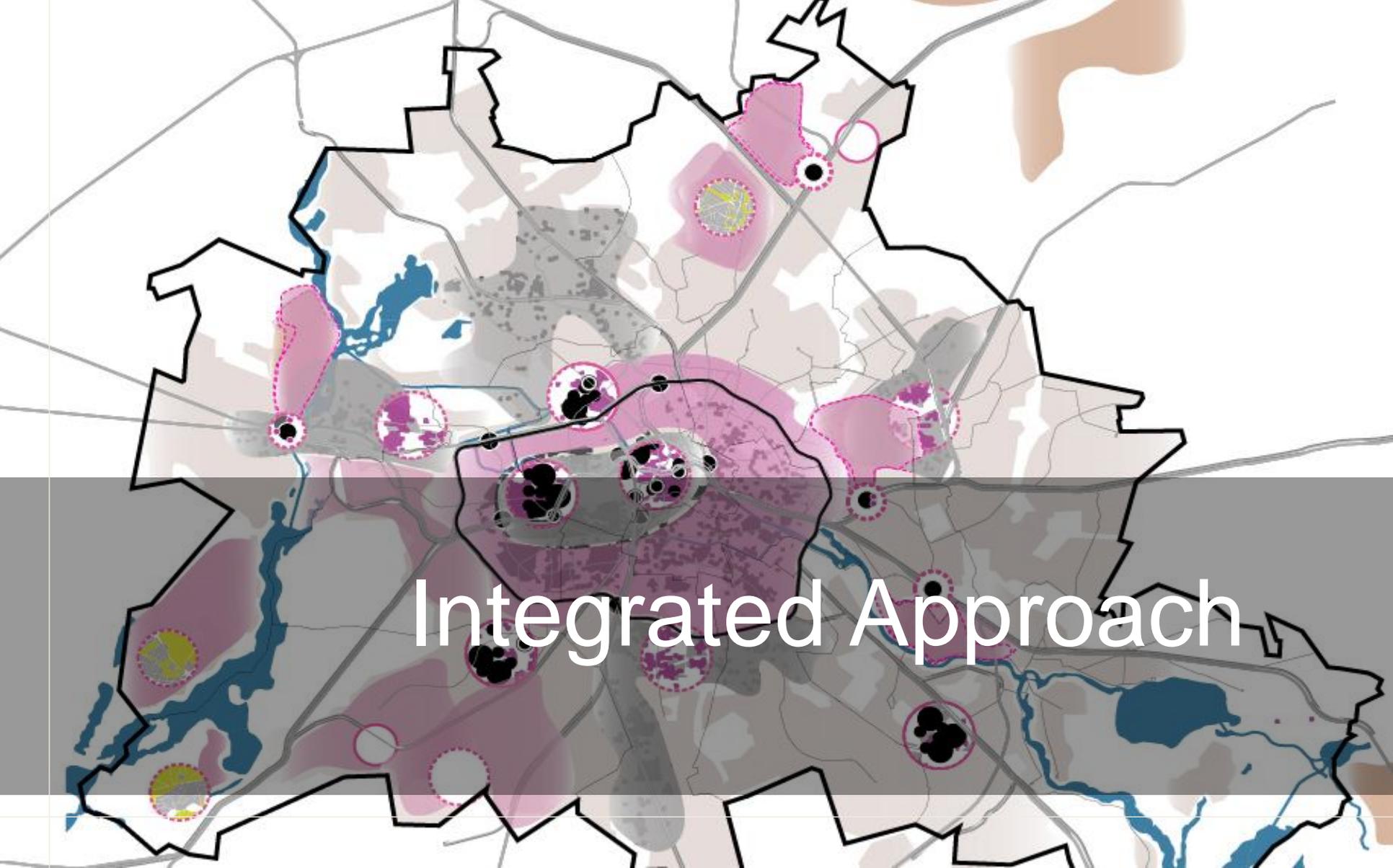


City decision-makers struggle with the mismatch between cycles and the resulting unintended consequences

The Challenge for City Governments

City Leaders are expected to balance multiple factors simultaneously to meet stakeholder objectives.

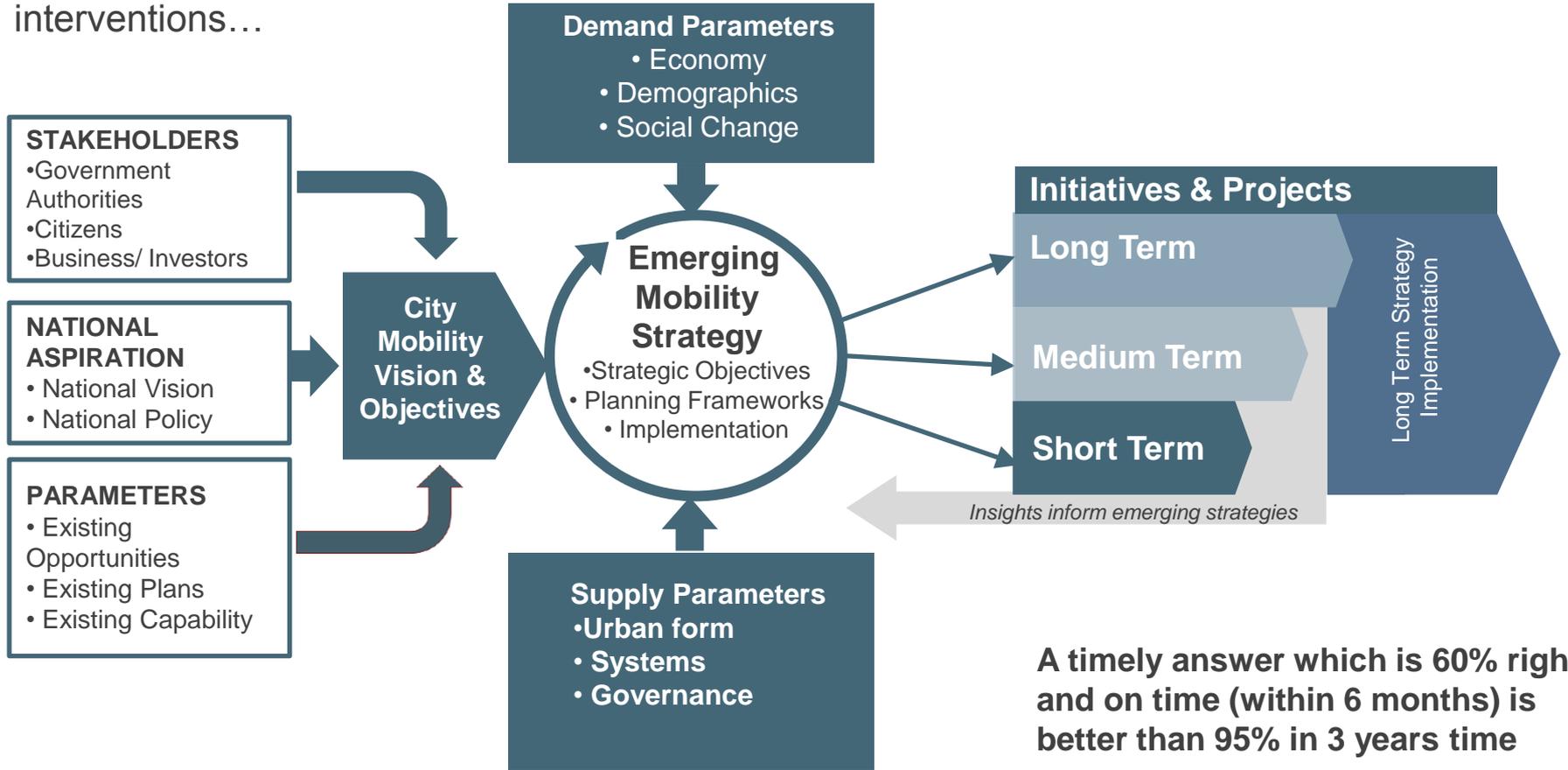


A stylized map of a city with various colored zones and icons. The map features a central urban area with a grey background, surrounded by pink and purple shaded regions. Several circular icons with different patterns (dots, solid black, or concentric circles) are scattered across the map, some within the pink zones and others in the grey area. A blue river or waterway flows through the city. The map is overlaid with a semi-transparent grey horizontal band.

Integrated Approach

Emerging Mobility Strategy

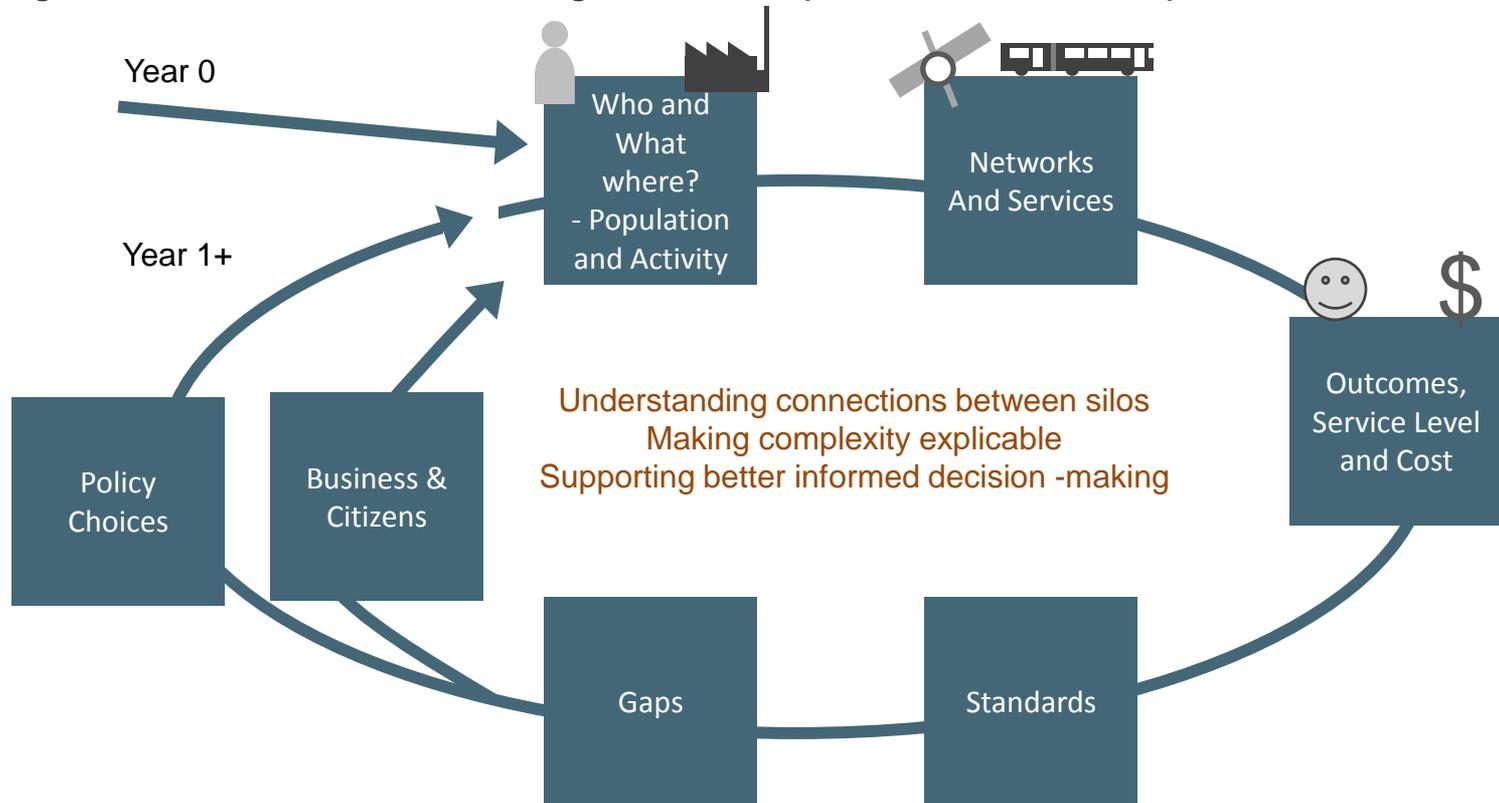
Set within a feedback driven framework - maintains speed and relevance of strategic interventions...



A timely answer which is 60% right and on time (within 6 months) is better than 95% in 3 years time

Modelling

Modelling allows better understanding of the complex links between parameters and strategies



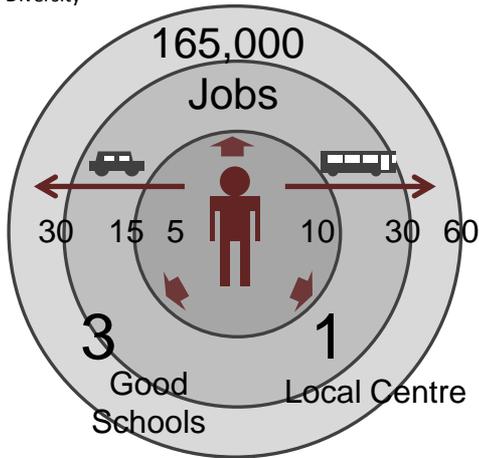
...Big data provides ever broader ways to map mobility

Outcomes

Gives a practical, whole system, understanding of which factors are key to optimum change

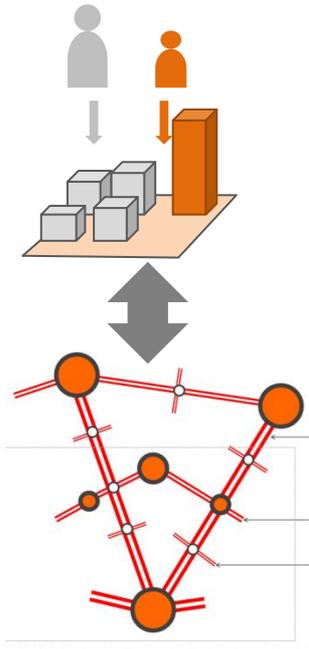
MOBILITY TARGETS

Access
Diversity

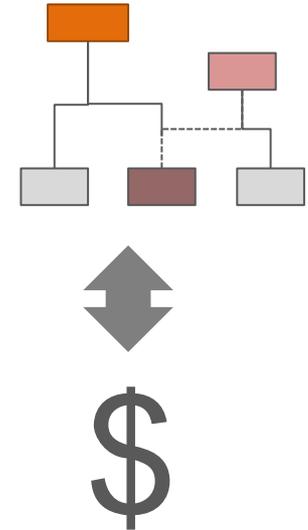


What real outcomes should mobility deliver?

LOCATIONS & NETWORKS



OPERATION & FUNDING



Case Study 1

Re-integrating Detroit

The Detroit Future City Project

Shrinking City, Transforming Economy

One of the largest metros in the US
Wealthy and growing rapidly
Industrial power house of the US



NEGATIVES

Loss of key industries
Collapsing population 1.9m – 700k
High unemployment – 50% in some groups
High poverty rate
High levels of vacancy

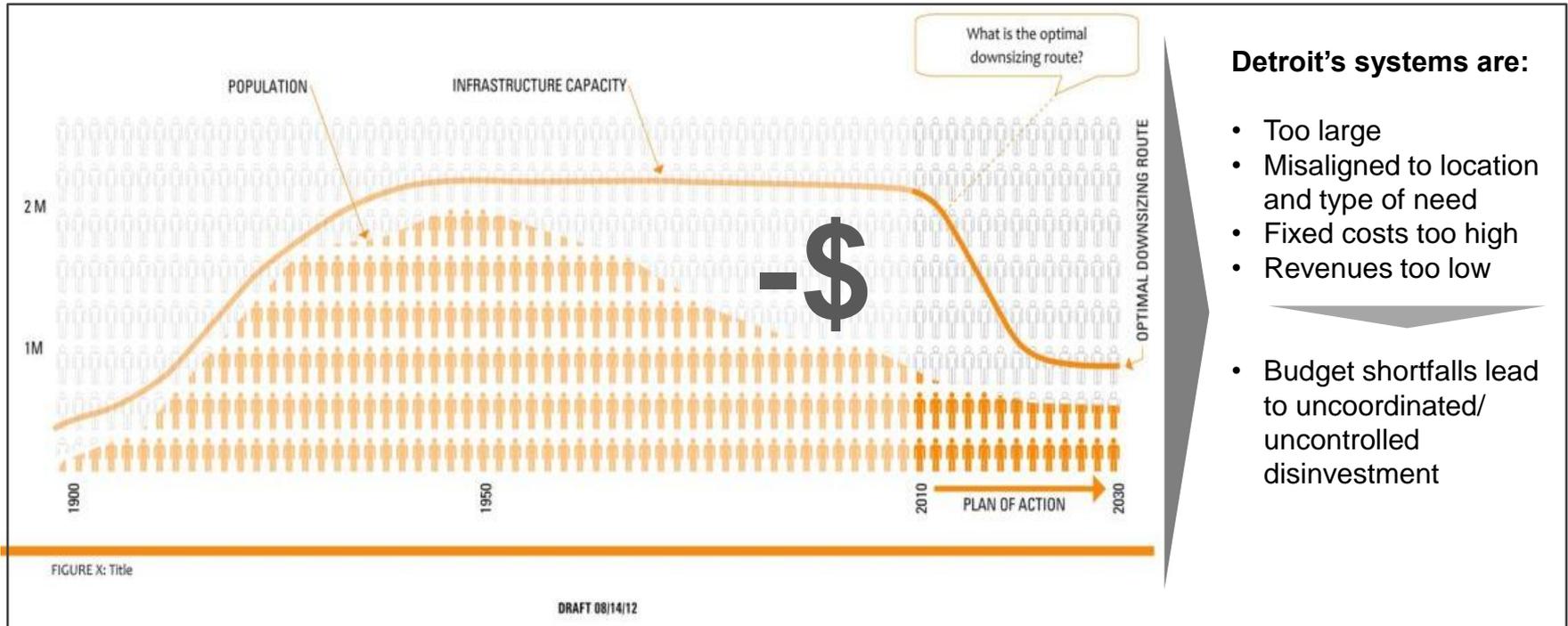


Fast growing new sectors
Dynamic new migrant groups
Rising visitor numbers

POSITIVES

Misaligned Infrastructure, Misaligned Mobility

The Key Challenge is to realign the city behind its opportunities - affordably



Detroit's systems are:

- Too large
 - Misaligned to location and type of need
 - Fixed costs too high
 - Revenues too low
- ➔
- Budget shortfalls lead to uncoordinated/uncontrolled disinvestment

➔ The Key Challenge is to realign the city behind its opportunities - affordably

Detroit Future City Project

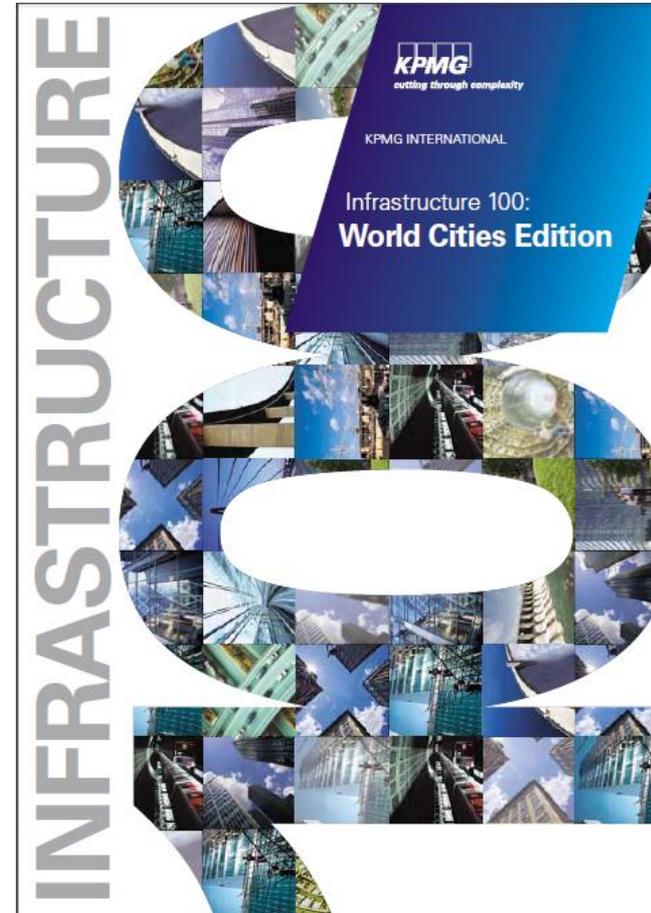


Sets unified objectives:

- Economic Growth

Backed by:

- Land use change
- Systems change
- Governance change



Realigning networks: Reducing costs and increasing performance

Agreement provided basis for pragmatic multi year planning for all transport systems

EXISTING: CURRENT PUBLIC TRANSIT ROUTES



PROPOSED: 2030 PUBLIC TRANSIT ROUTES



System change:

- Fundamental realignment of city network
- Years 1-5: cost saving transformation – reorienting existing fleets to serve new city
- Year 5 onwards – targeted investment to meet new city needs



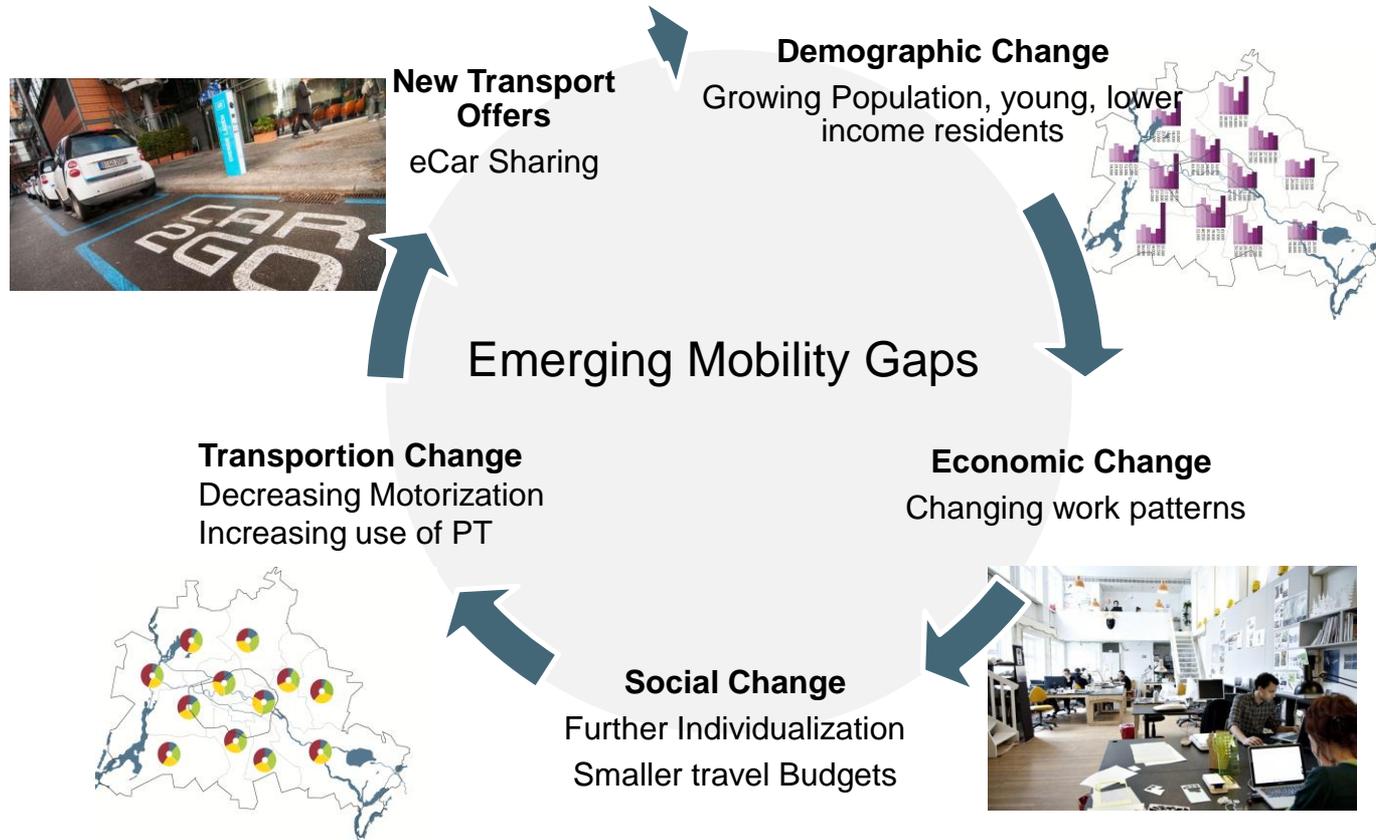
Case Study 2

The BeMobility 2.0 Project

Berlin

Challenges

Demand and supply shifts lead to mobility gaps in Berlin's City Centre



Emerging Mobility Gaps

Demand Side Shift

Affordable, flexible, spontaneous short trips at different times (day/night) and locations.

Public transport unable to deliver such service cost effectively.

eCar Sharing

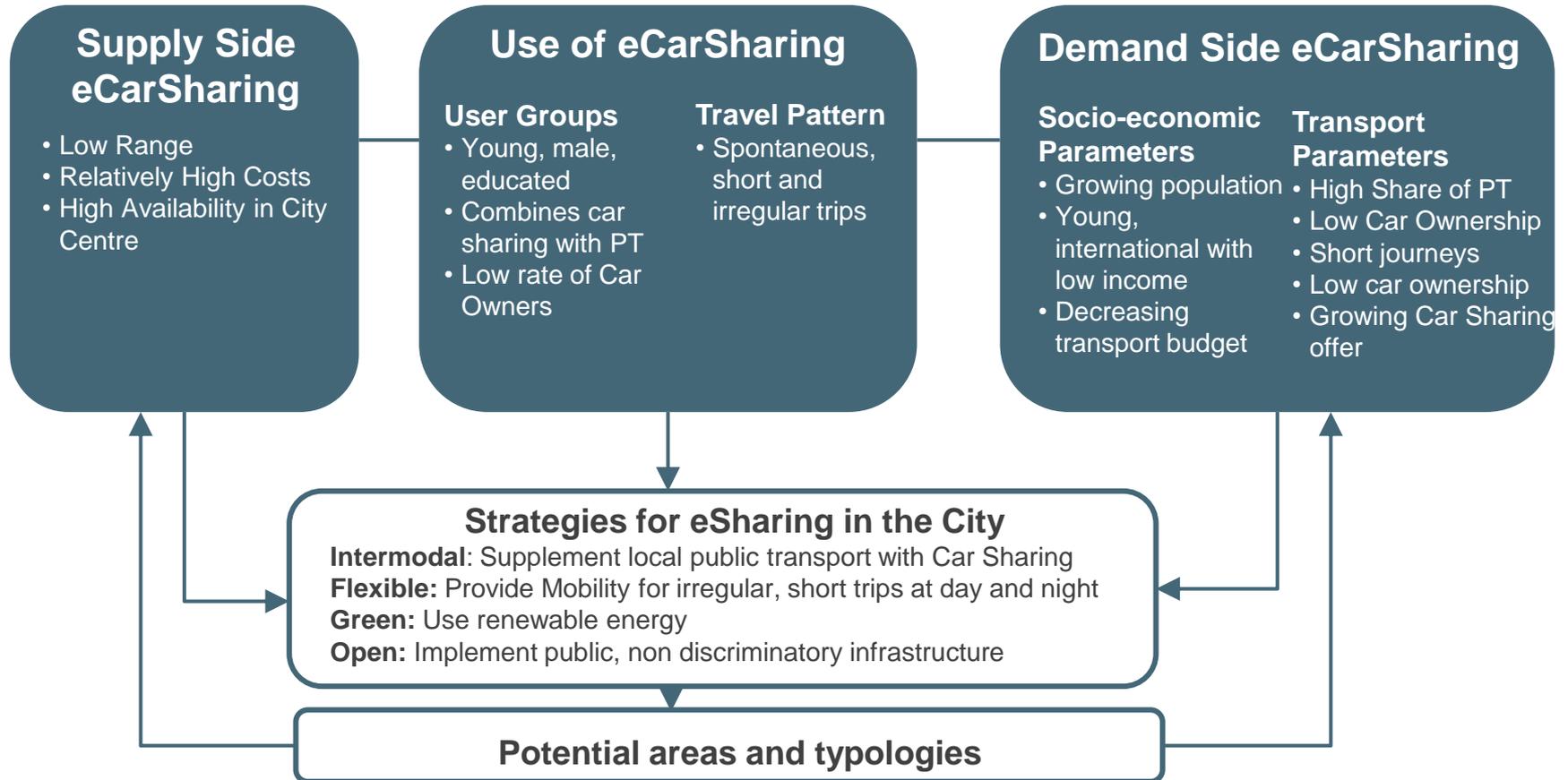


Supply Side Shift

New development in transport, energy and ICT as well as emerging car sharing offers allow for new transport approaches.

eCar Sharing can address a niche but needs to part of integrated systems.

Matching Supply and Demand to Identify Implementation Areas



Potential Implementation Areas and Typologies

Intermodal Train Stations

eCar Sharing for short, spontaneous trips from and to station

Potential users: Business travelers, visitors, infrequent PT users

Universities and Science

eCar Sharing for internal transportation and infrequent commuters

Potential users: students, staff, visitors

Inner City Residential Areas

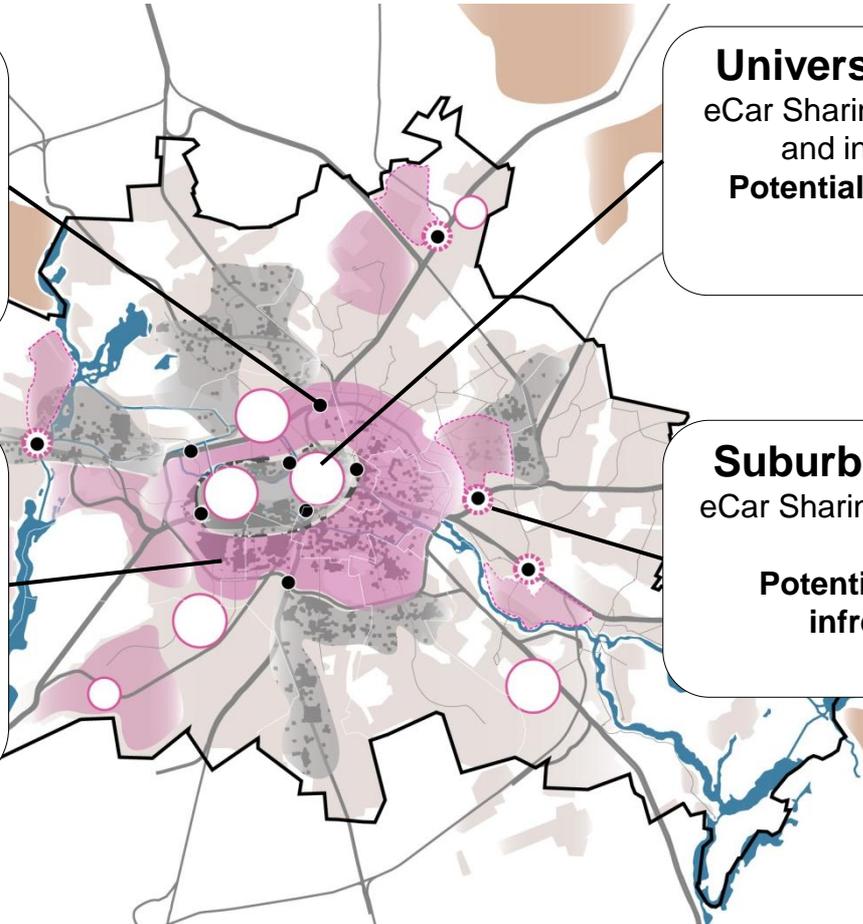
eCar Sharing for short, spontaneous trips and infrequent shopping/leisure trips

Potential users: Residents, Visitors

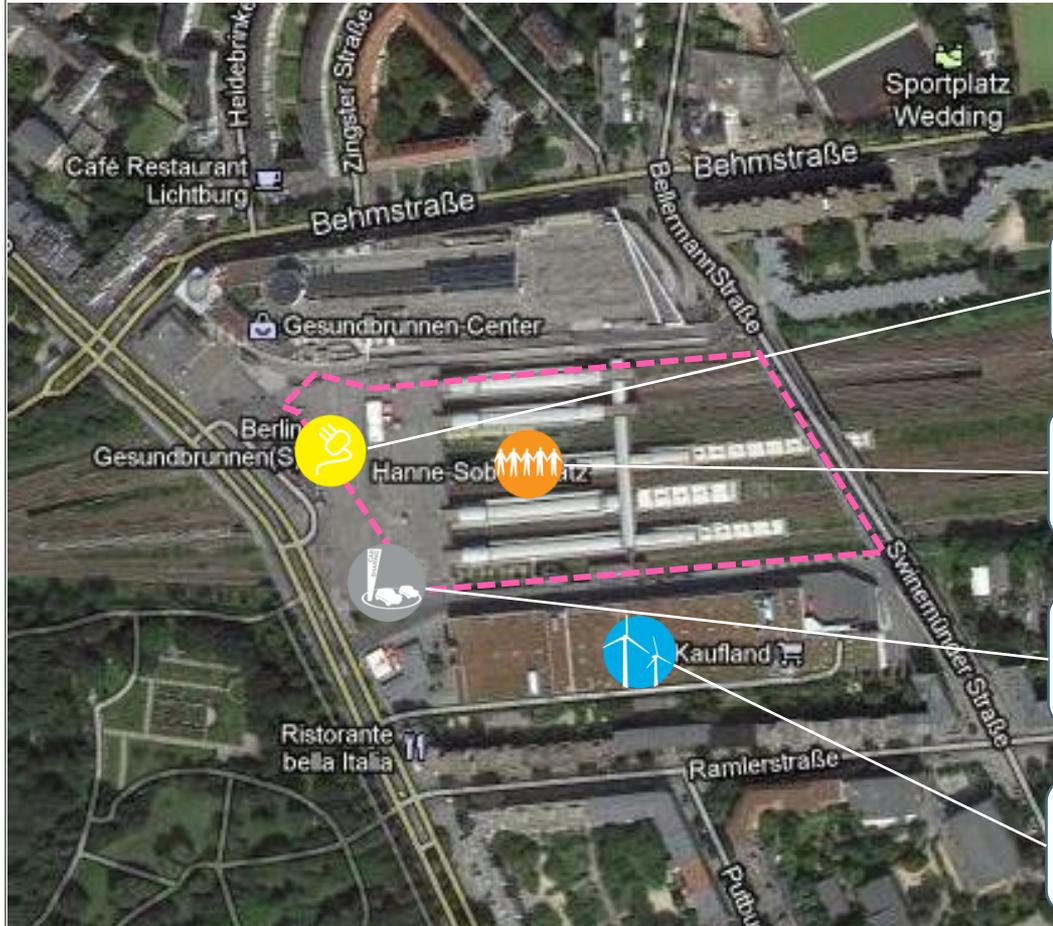
Suburban Train Stations

eCar Sharing for first and last mile to station

Potential users: residents, infrequent PT users



Recommendations an for Intermodal Train Station: Case Study Gesundbrunnen



Install charging stations for eCar Sharing next to station

Access new sources of funding to set up infrastructure

Use installation of charging points to upgrade urban realm

Provide of power from PV on station roof to power EV in SMG

Taking an integrated approach to understanding mobility can make a real difference to developing solutions which are:

- Better adapted to city changing city needs
- More affordable – able to better define demand parameters and to identify full range of measures that can meet these needs – rather than just requiring more system investment

Conclusions

www.happoldconsulting.com

Buro Happold and Happold Consulting

- Buro Happold is one of the worlds leading multi-disciplinary offering buildings, environment and infrastructure and consulting services.
- Happold Consulting is part of Buro Happold and a strategic management consultancy operating internationally.

