



The Perth Innovation Highway as a catalyst for systemic change

A spin-off from



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- 01 Introduction
- 02 Understanding smart transition
- 03 Discovery
- 04 Application
- 05 Next steps



We facilitate the smart transition of places [town, cities & regions] across Europe.

Sharing smart expertise, best practices, training & digital services



Peter Griffiths

UKI Urban Futures

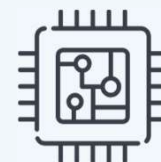


Andrew Savill

UKI Partnerships



Smart City Platform & Community



Built-in Tools & Smart-City Ready Certification



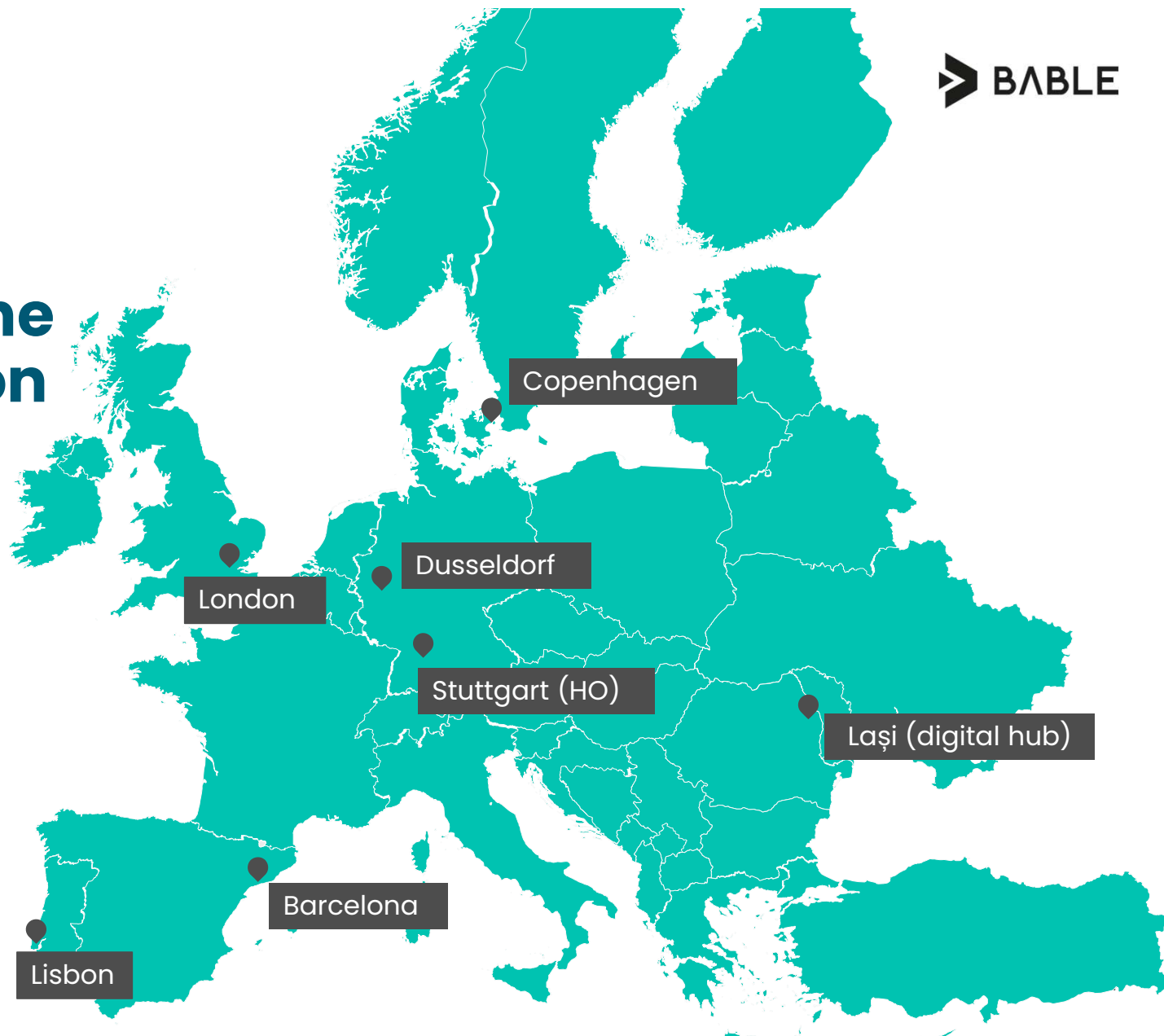
Consulting & Training Services



Smart In The City Podcast series

At the heart of the global innovation ecosystem

50 people from 20
nationalities sourcing
solutions from across
Europe



Our work in the UK and Ireland



Who are you?

Where are you from?

**What do you want to
get out of today?**

Our intention

Develop a shared understanding of the PIH, including key features

Developing a more bottom-up approach to innovation across city departments

Make the most of current strategic projects

Thinking differently about smart and mobility in connecting the region

Desired outcomes

Expanding the purpose of roads beyond moving people and goods to moving ideas

Creating a blueprint for future thinking around expansion and growth (15-min, innovation, etc)

More strategically connect innovation and growth across Perth & Kinross

Expand connectivity to digital and more sustainable modes





Understanding the global smart place transition



Six Global Transformations Impacting the Innovation Ecosystem

Digitalisation, data and AI

Smart mobility, ports and logistics

Future of work, automation and agetech

Intelligent, carbon neutral buildings

Energy transition, security and decarbonisation

Connected urban realm, shared infrastructure and social value

Six Global Transformations Impacting the Innovation Ecosystem

Digitalisation, data and AI

Smart mobility, ports and logistics

Future of work, automation and age-tech

Intelligence, carbon neutral buildings

And the need for place-based smart specialisation

Energy transition, security and decarbonisation

Connected urban realm, shared infrastructure and social value

Biedronka Saves 82% on Energy Costs with Smart Lamp Posts

 Energy
Warsaw, Poland (2019)
Scale: Individual site

The leading food retailer in Poland installed Omniflow smart and sustainable lighting units in its newest stores parking lot. The smart lamp posts integrate wind and solar generation with energy storage, to vastly reduce the carbon footprint of lighting.

Optimized city cleaning with garbage sensors in public garbage cans in Reutlingen

 Waste  ICT
Reutlingen (2018-08-30)
Scale: District level

An intelligent waste collection system, based on sensor inputs from the underground waste bins and the shafts, is implemented to optimize waste handling and to improve cleanliness and appearance of the historic city center of Reutlingen.



chargeBIG

Company: MAHLE chargeBIG GmbH

chargeBIG is part of the automotive supplier MAHLE and, as the name suggests, it's a system for charging electric vehicles on a large scale. By making available an intelligent, low-cost charging infrastructure, up to 100 vehicles can be charged at once—or even more!



CNG powered buses in the city of Tartu

 Energy  Mobility
Tartu (2019)
Scale: City Level

With the aim of having 100% of public transportation buses in Tartu run on gas by 2019, the municipality has purchased 60 new biogas busses for the public transportation network.

Waste Heat Recovery from Sewage Water

 Energy  Waste
Cologne (2016)
Scale: City Level

The project entails the installation of a heat exchanger and water-to-water heat pumps, that will recover the heat from sewage water, in order to improve the efficiency of gas fired heaters in schools.

BrightSites by Signify

Company: Signify

BrightSites by Signify is an end-to-end, wireless and scalable solution that can be integrated simply and seamlessly into the urban environment without creating visual clutter.



Flooding Innovation: Real-Time Data for the Dublin Region

 ICT  Water
Dublin, Ireland (2017)
Scale: City Level

Dublin City is getting new 'smart' rainfall sensors to give it an early-warning system to protect against flooding. This figure is increasing due to sea-level rises and more intense rainfall.

Integrated on-demand mobility for a strong public transport system



Mobility

Hamburg, Germany (2018)

Scale: Beyond City Level

Refurbishment of a Social Housing Rental in Vienna



Energy



Building

Vienna (2019)

Scale: Individual site

SIMmobile-Mobile Urban Living Lab in Vienna-Simmering



Other

Simmering, Vienna (2016)

Scale: District level

Retrofitting old Soviet Apartment buildings in Tartu



Building



Energy

Tartu (2017)

Scale: District level

Digital Calligraffiti



ICT



Other

Berlin-Durban

Scale: City Level

Digital Calligraffiti is a interactive light table for realtime projection of new artistic forms, citizens' inclusion and intercultural dialogue. It connects people at public spaces.

Assisted Transport for vulnerable people in Barcelona



Mobility



Other

Barcelona (2020)

Scale: Beyond City Level

Public Art Gallery on Retrofitted Apartments in Tartu



Other



Building

Tartu (2018)



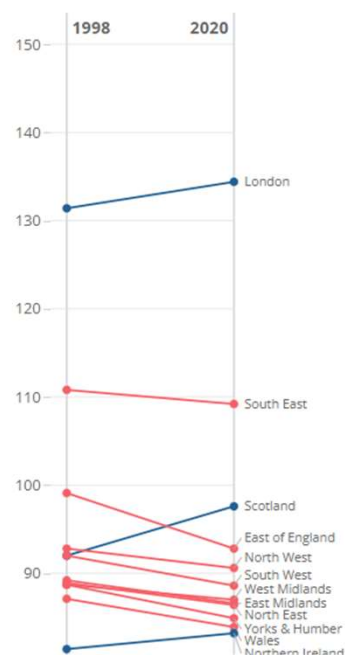
Where will future growth come from?

Figure 3: Output per hour and output per job measures of productivity

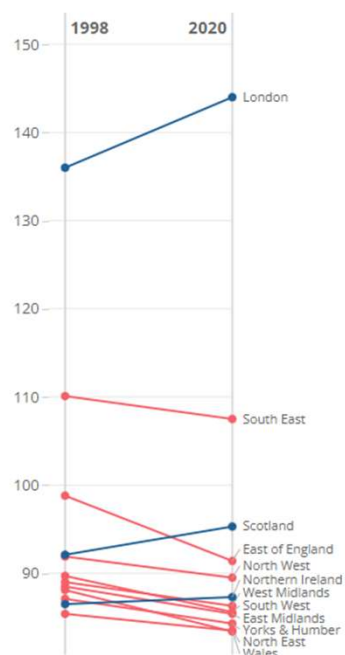
Annual productivity for International Territorial Level (ITL) 1 regions from 1998 to 2020, Nominal GVA per hour, UK=100

— Output level increased
— Output level decreased

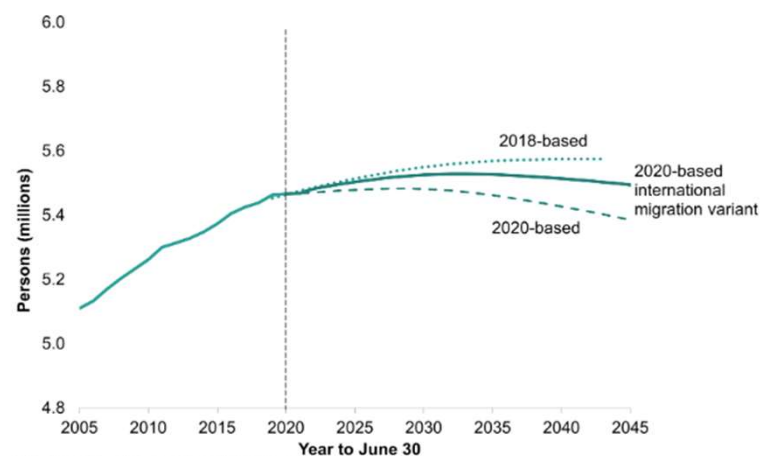
Output per hour



Output per job



Comparison between the population projections for the latest update and previous versions



Note: The scale on the y axis does not start at zero.

Further information

The original (unrevised) [2020-based population projections for Scotland](#)

Running out of time to build?



All major road building projects in Wales are scrapped

14 February

Climate change



Plans for a third Menai crossing have been scrapped in their current form

By Telert Glyn Jones
Environment & Rural Affairs Correspondent

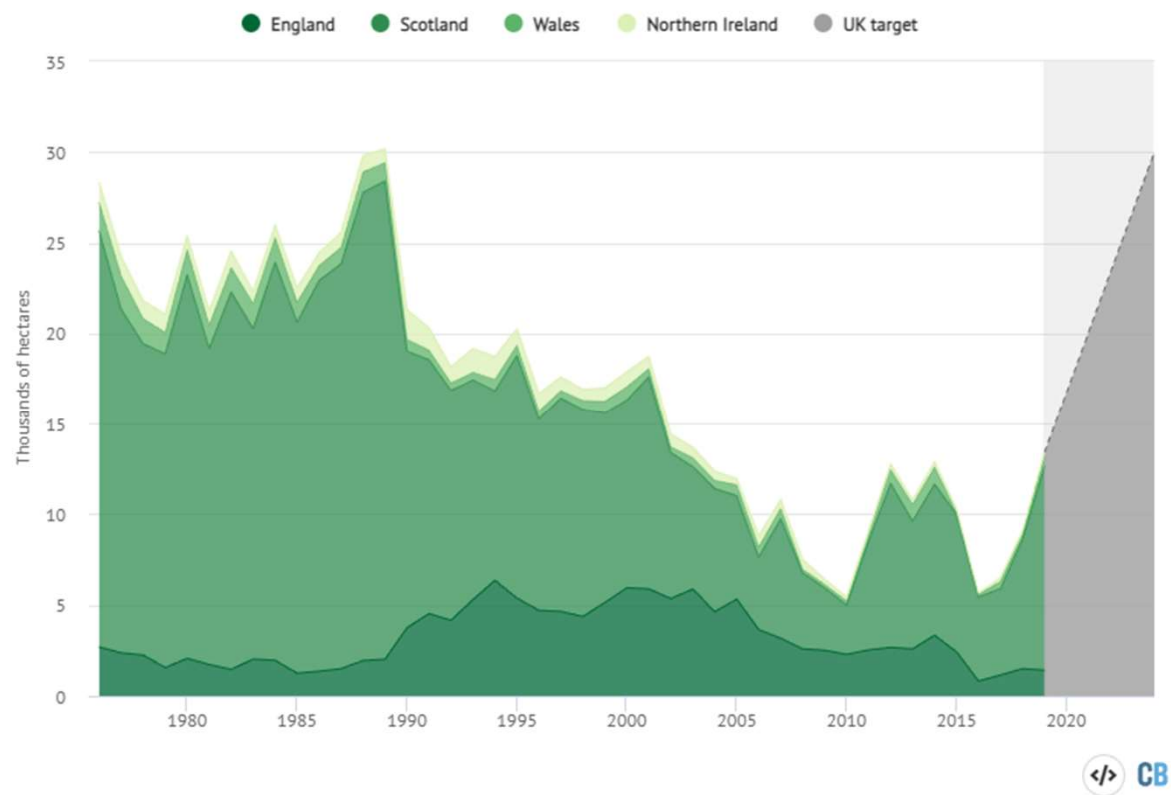
All major road building projects in Wales have been scrapped over environmental concerns.



Rewilding urban areas

UK tree-planting rates have fallen sharply in recent decades

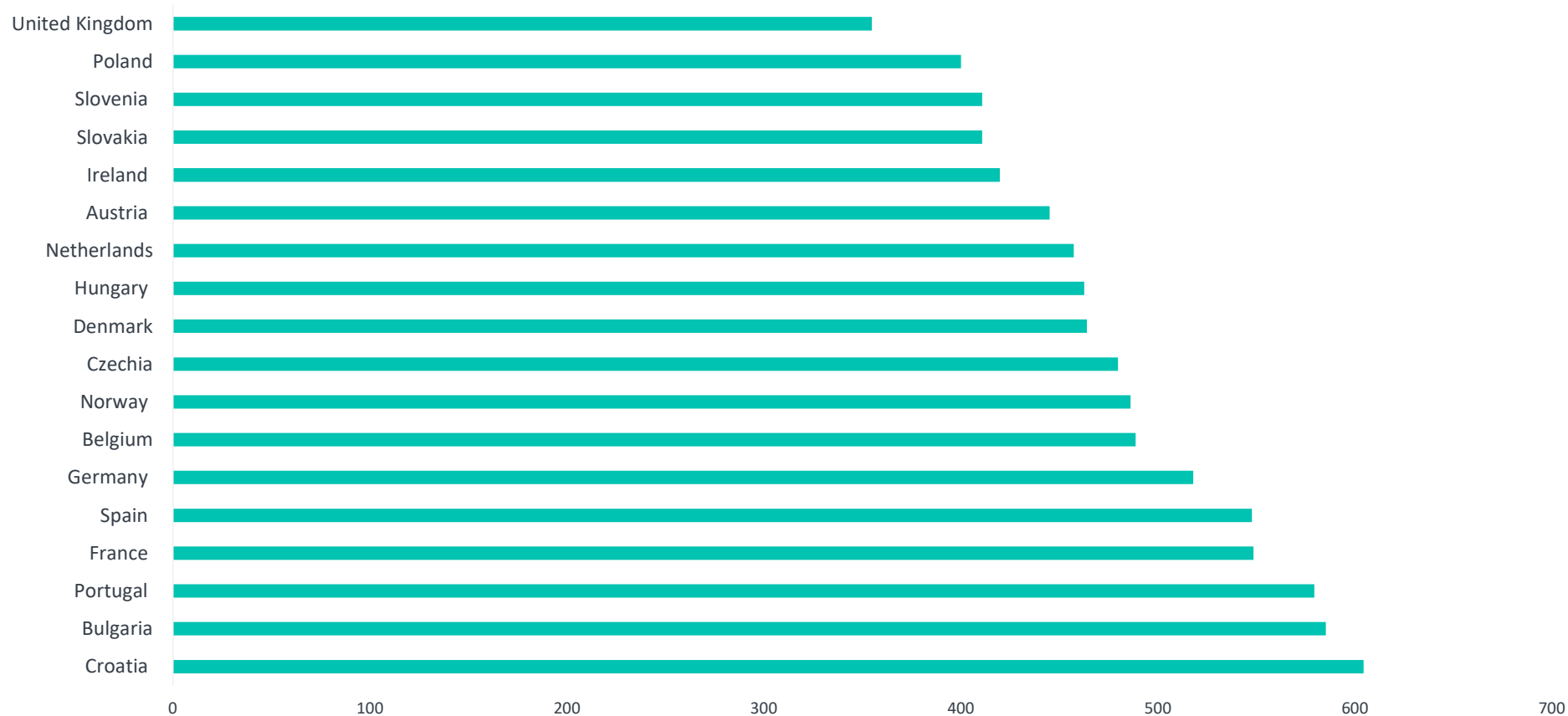
They will need to increase significantly by 2024 to meet the target recommended by the Committee on Climate Change



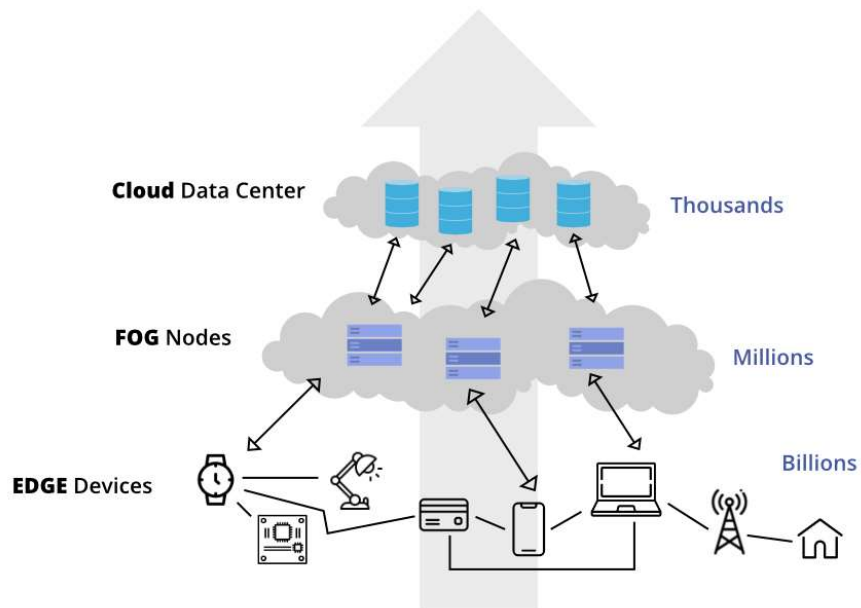
Tree planting in the UK nations from 1976-2019. Source: [Forestry Commission](#). Chart by Carbon Brief using [Highcharts](#).

Housing/land market inefficiency

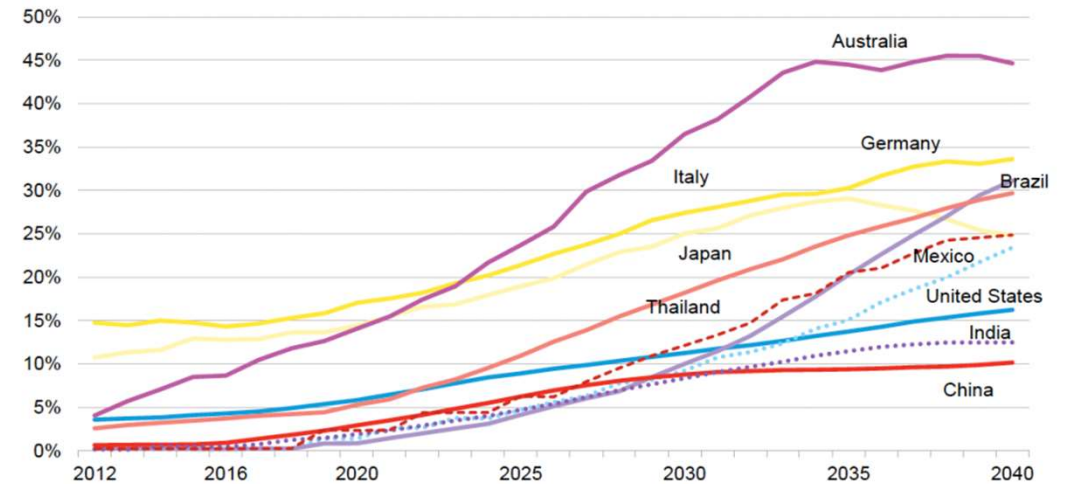
Total number of dwellings in Europe in 2021 (per 1,000 citizens)



Localisation, decentralisation and de-gridding



Decentralization ratio



Source: Bloomberg New Energy Finance. Note: decentralization ratio is the ratio of non-grid-scale capacity to total installed capacity.

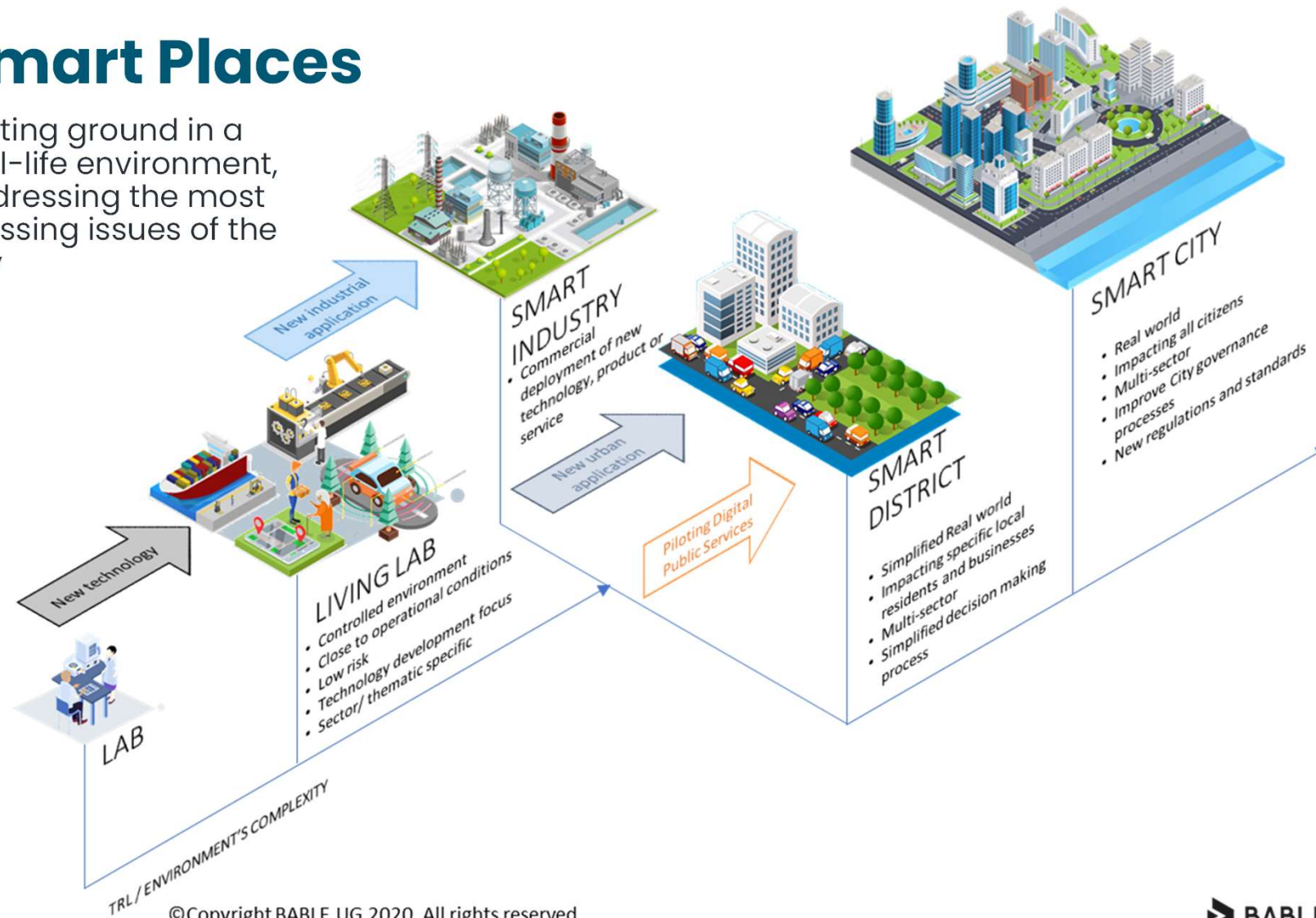


**Discovery: different
approaches to smart
places**



Smart Places

Testing ground in a real-life environment, addressing the most pressing issues of the city



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TEST IN TALLINN



Unicorn capital

**Estonian
startup
ecosystem**

1400

Startups

10

Unicorns
global top per capita

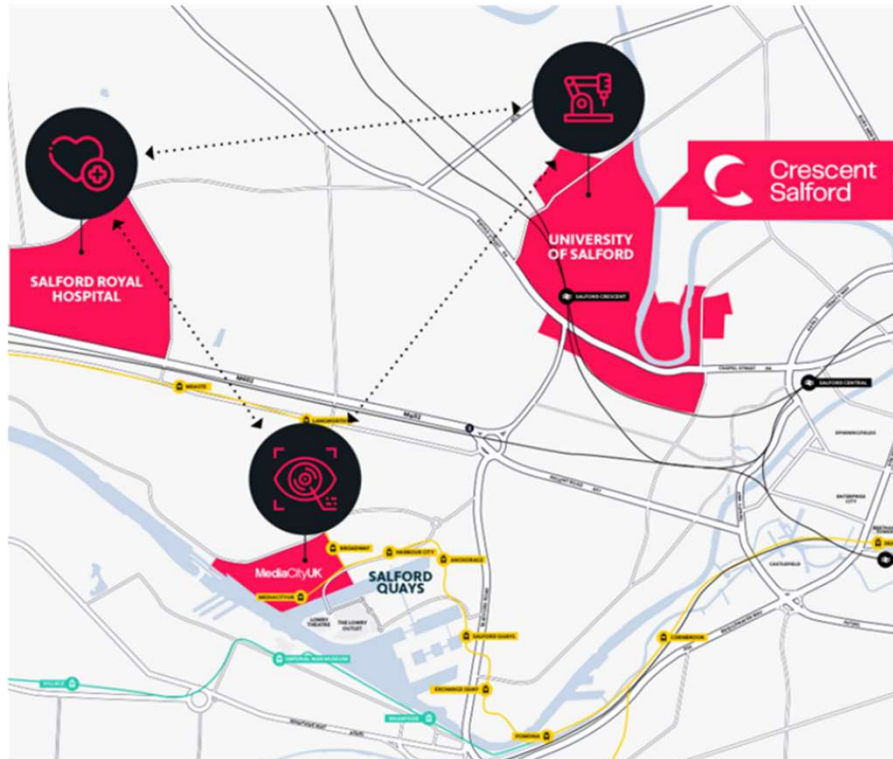
€1B

Raised funding

#3

In Europe
the number of
startups per capita

Salford Innovation Triangle



MEDIACITYUK: CANARY WHARF OF THE NORTH?

A new big money deal between Peel Holdings and Legal and General Capital...

By Matt Tate Published 12 March 2015 Updated 7 years ago

25,000 high value jobs

£1.5bn of GVA per annum

North Devon UNESCO World Biosphere

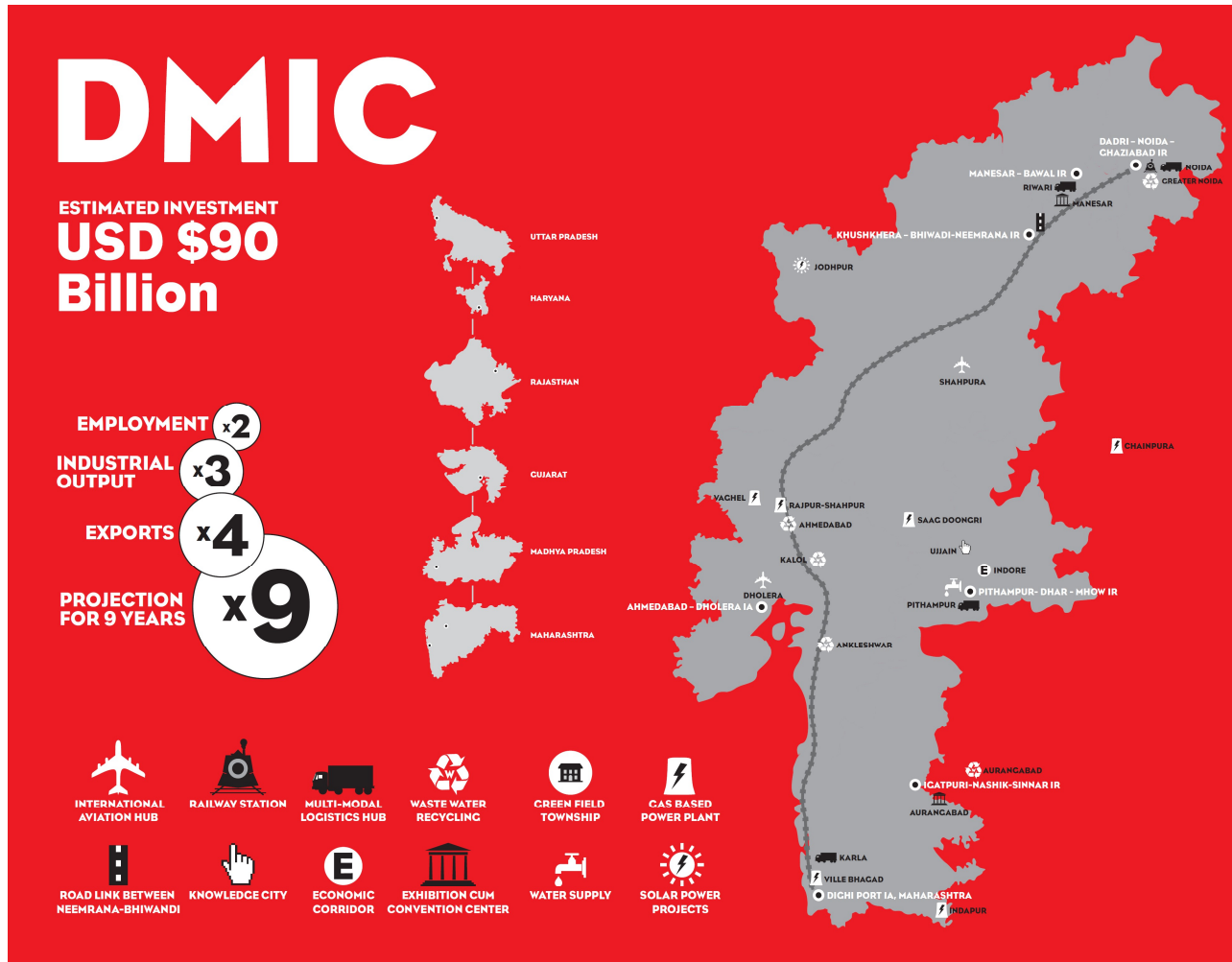
Smart Biosphere 3D



Oxford-Cambridge Arc



Delhi-Mumbai Industrial Corridor



Dholera "smart city"



↑ Slim naar
Antwerpen ↓

10 years of mobility trends in Antwerp

**Steering and adjusting: on course
for a modal split of 50/50**

April 2021

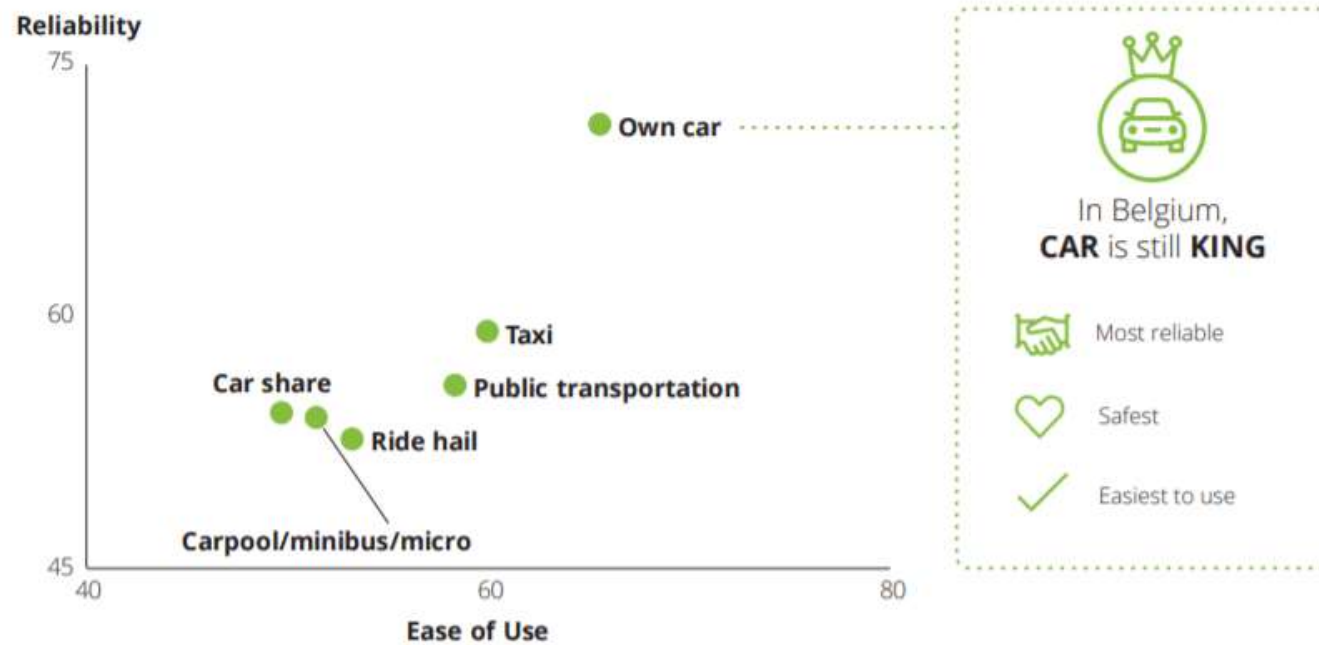


Figure 2: (Top) Belgian distribution of answers when asked: "What is the most important aspect of mobility?"; (Bottom) modes of transport mapped according to scores on reliability and ease of use; n=1,254



Parking Charges and Zones

planner

Mobility map

Transport possibilities

Low emission zone

Road works

For companies

ff zones

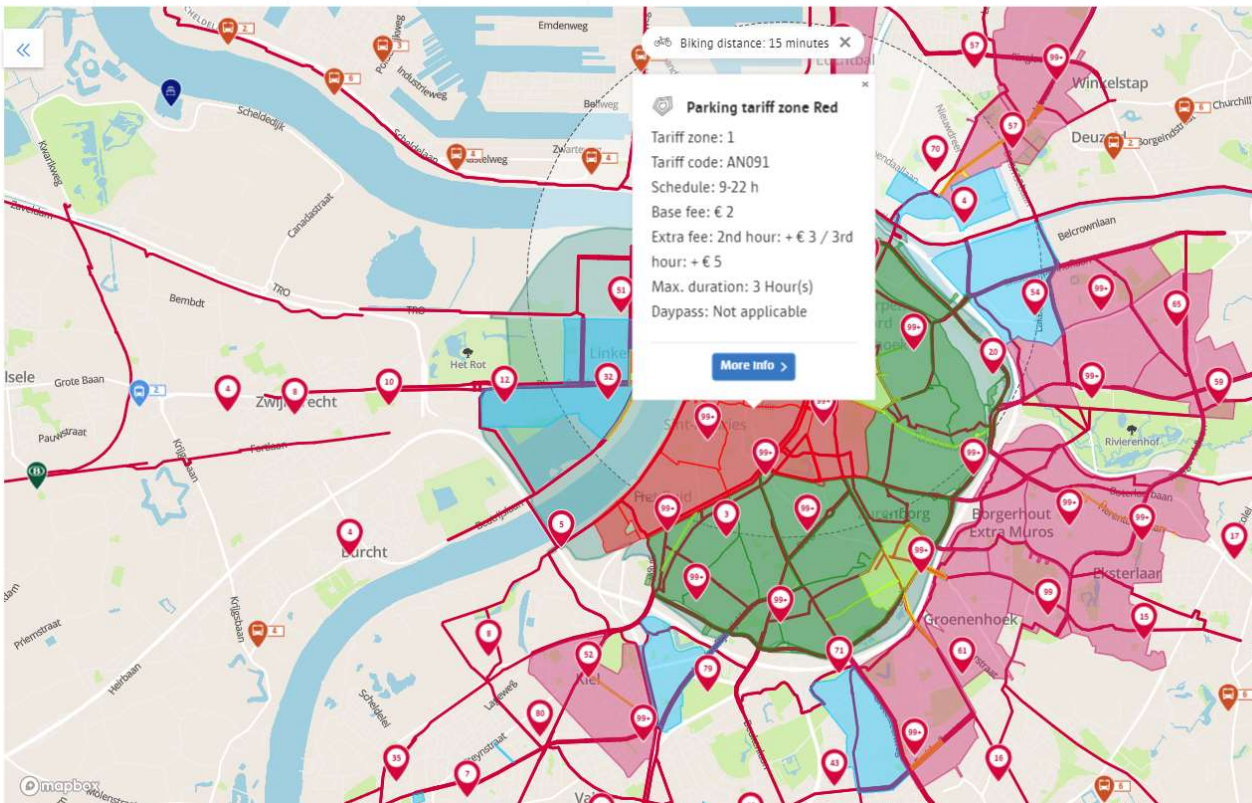
has various different tariff zones. The closer to the historic city centre, the more you pay for your parking space. The city has car parks for motorbikes, camper vans, coaches.

entitled to one free parking session for every (ANxxx). Attention: you must always start session at a payment machine, by text or in the app, even for a free parking

1st hour € 2 / 2nd hour + € 3 / 3rd hour + € 5 (max. 3 hrs)

1st hour € 1 / + € 1.40 per additional hour (max. 10 hrs)
weekly rate: light green € 68 / dark green € 25
4-week rate: light green € 272 / dark green € 100

€ 0.70 per hour (max. 10 hrs)



Antwerp: Low Emissions Zone



Best Practice: Smart Ways to Antwerp

Supports companies with more than 20 employees to develop a smart and sustainable mobility policy

Focus to achieve a modal split of 50/50 and long term behaviour change

Drivers: Road works and congestion

By 2020, 118 companies had participated in project (56k employees)

CIVITAS co-funded project

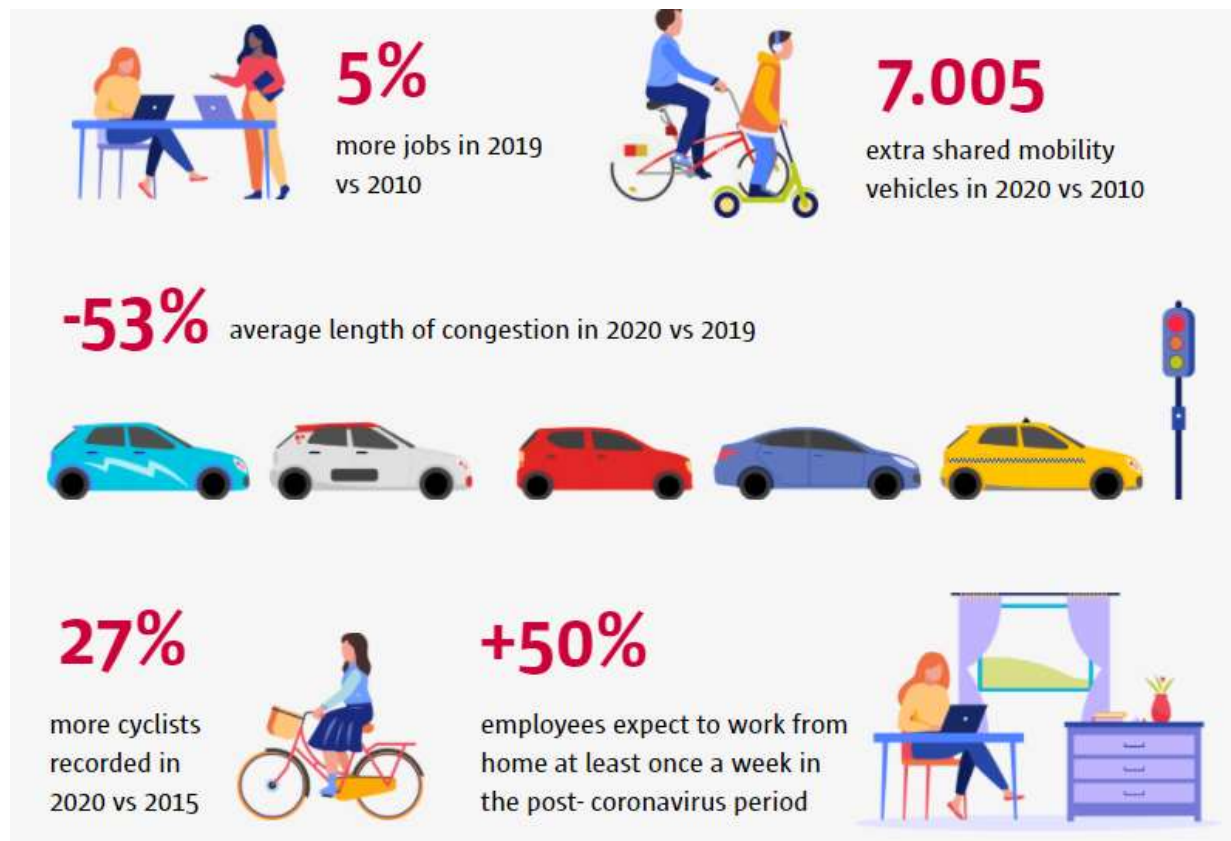


Figure 2: Strategies for behavioural change

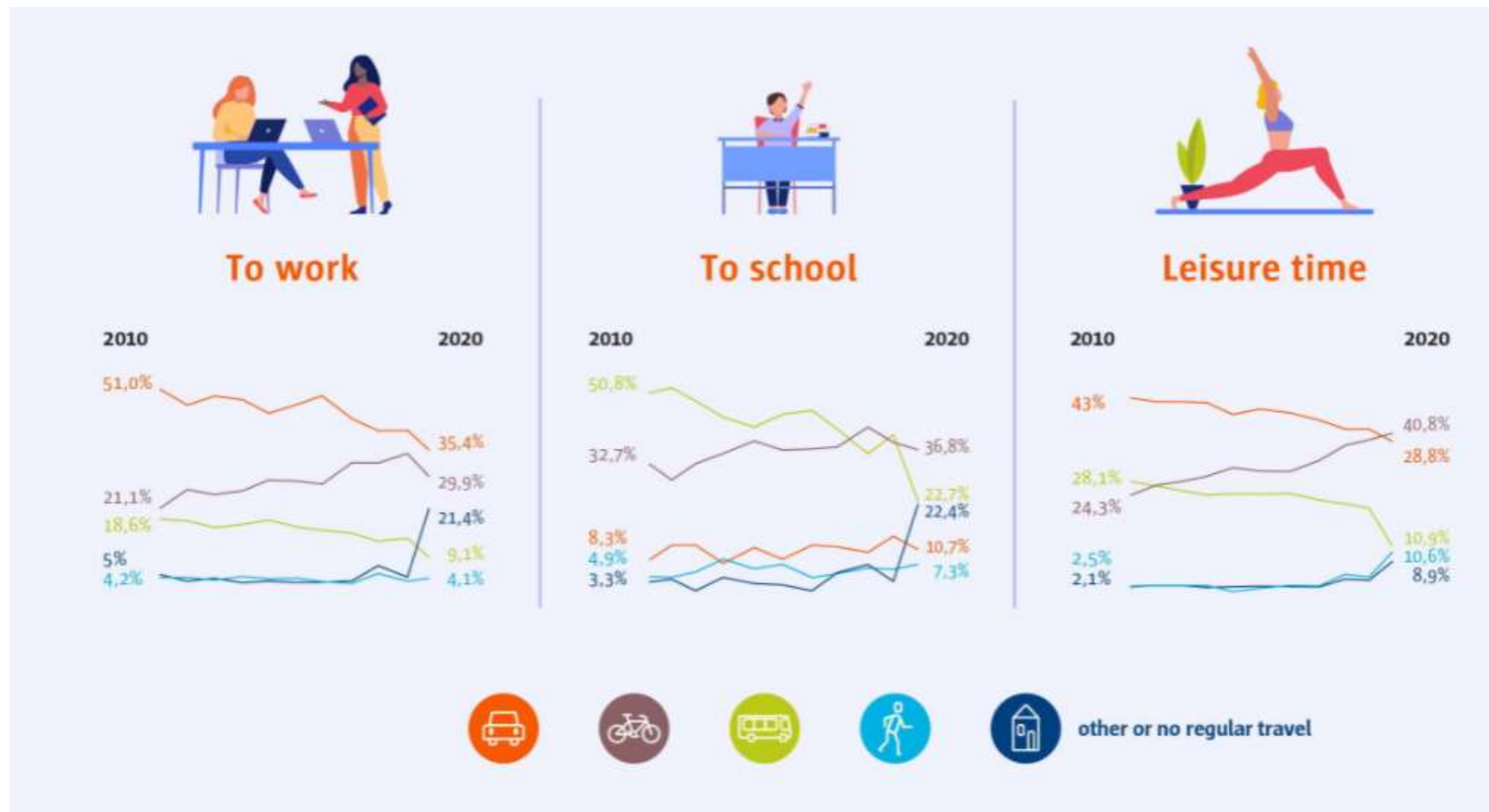


Figure 3: Mobility scan potential of 47 companies (2018)

Antwerp Effects– Key Figures

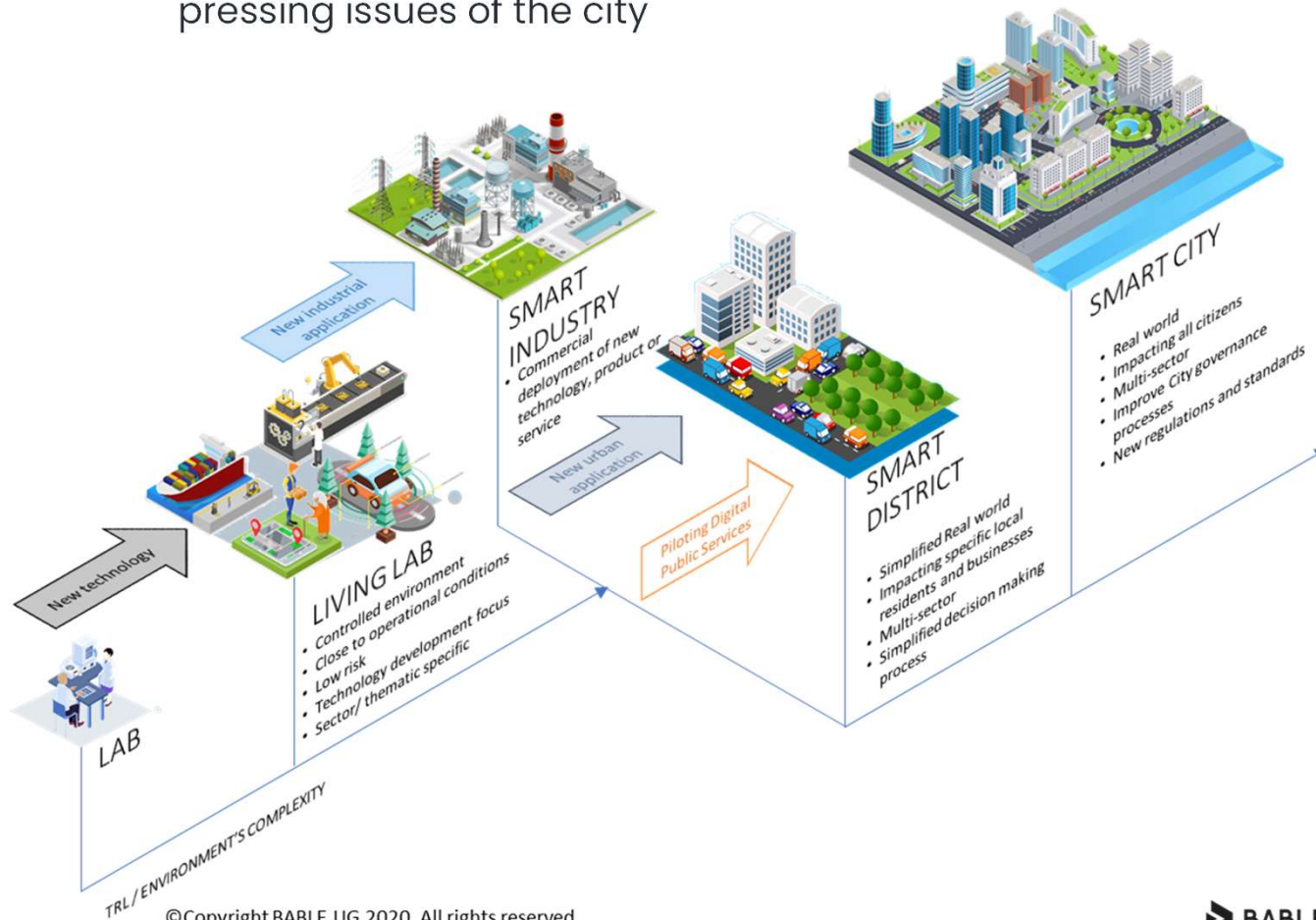


Antwerp Effects– Modal Split



Case Study: Belfast Smart District

- Testing ground in a real-life environment, addressing the most pressing issues of the city



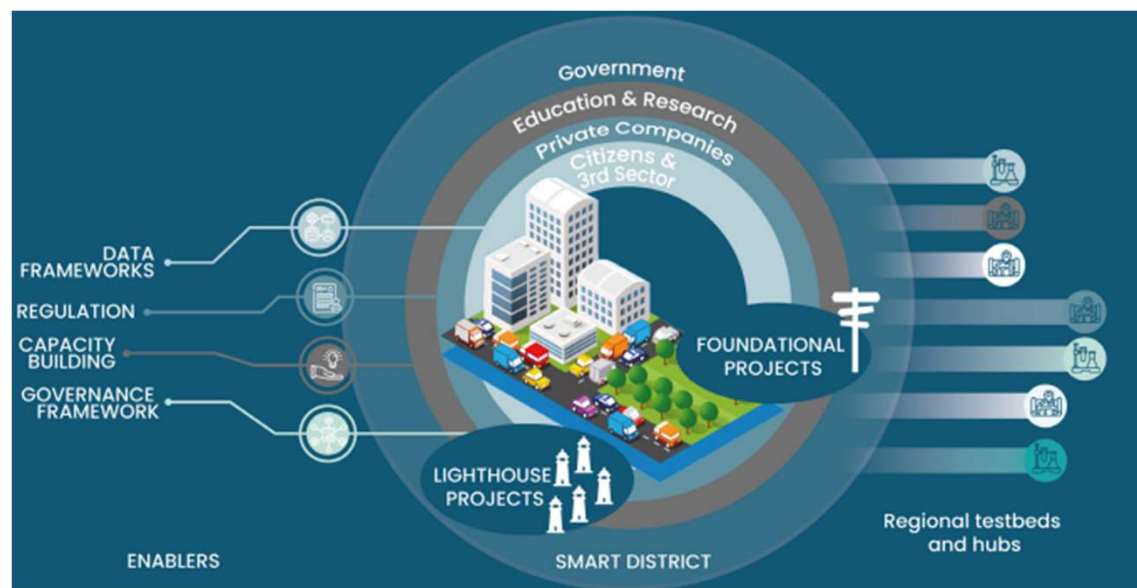
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Smart District

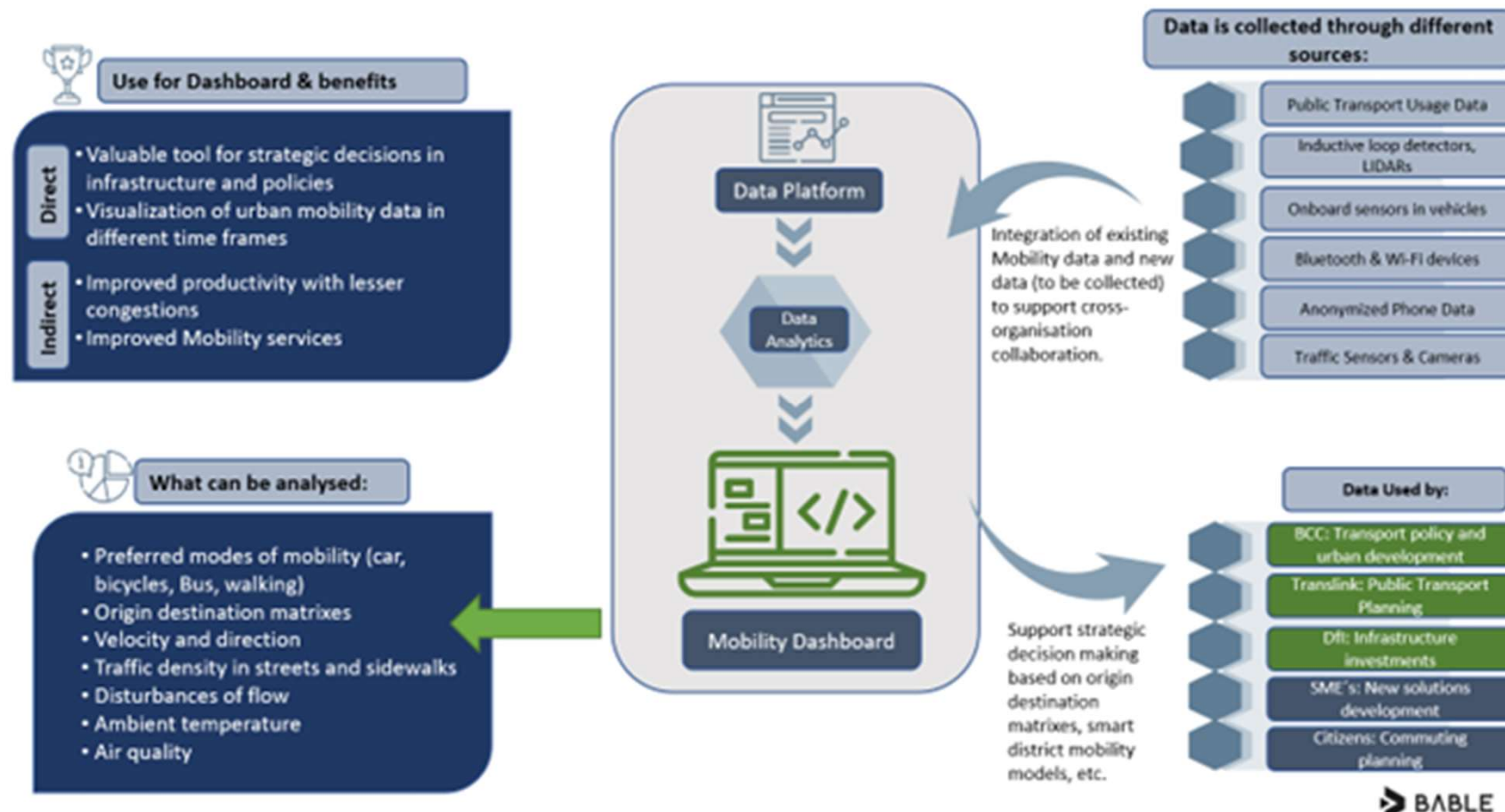


A city-centre focused Smart District will enable new technologies to be developed, tested and deployed to help the city address post-Covid recovery challenges including climate change, urban mobility, the future of the high street and healthy urban living.

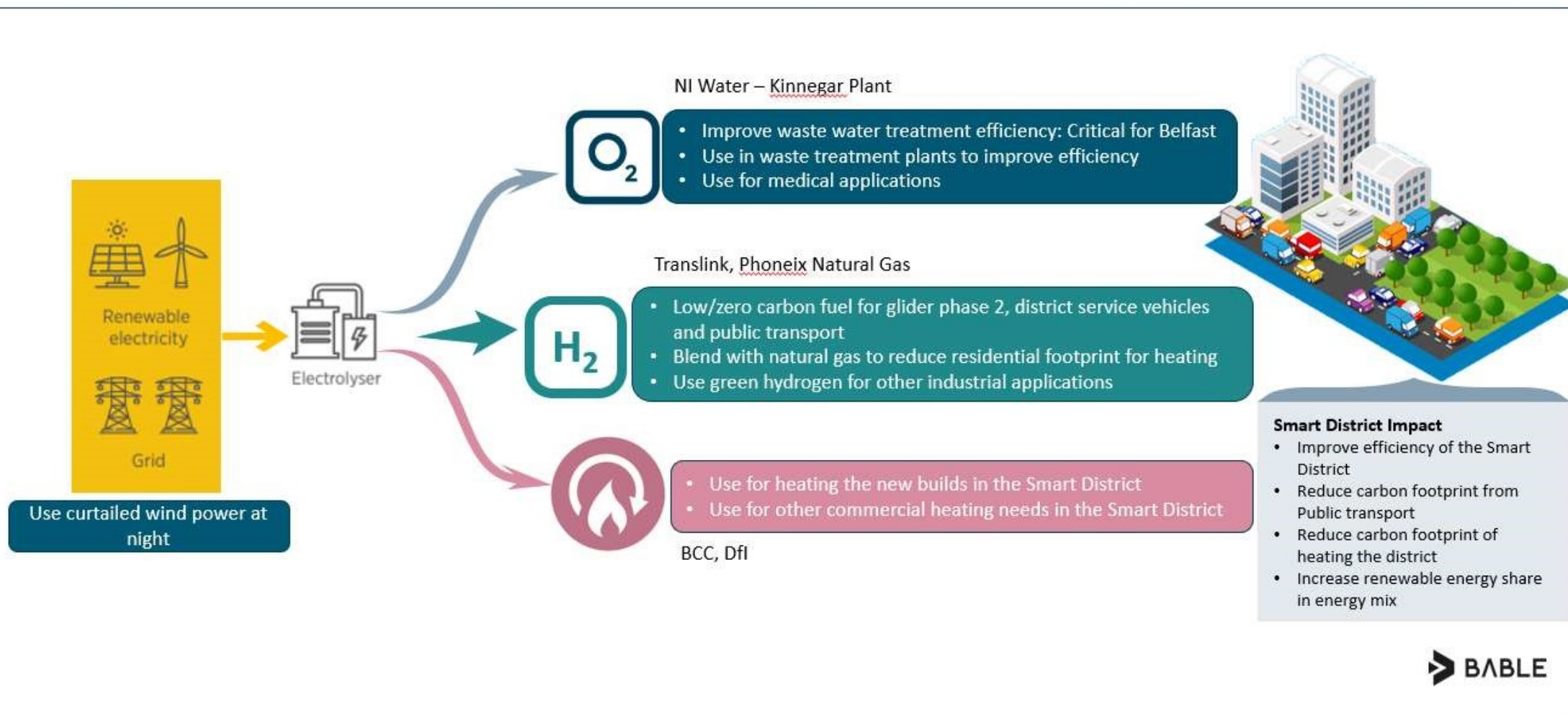
- Three **Lighthouse projects** were selected from the portfolio of more than 100 projects, based on their transformational potential for the digital innovation ecosystem of Belfast.
 - Smarter Mobility with Big Data
 - Developing a Sustainable Energy Economy
 - Smart Healthy Neighbourhoods
- Capitalise on the possibilities that the Centre and the Platform offer, focusing on each specific thematic area and tackling the key challenges the city is facing. The Lighthouse projects also serve as the basis for a multitude of projects, enabling the implementation of further digital projects in the city.



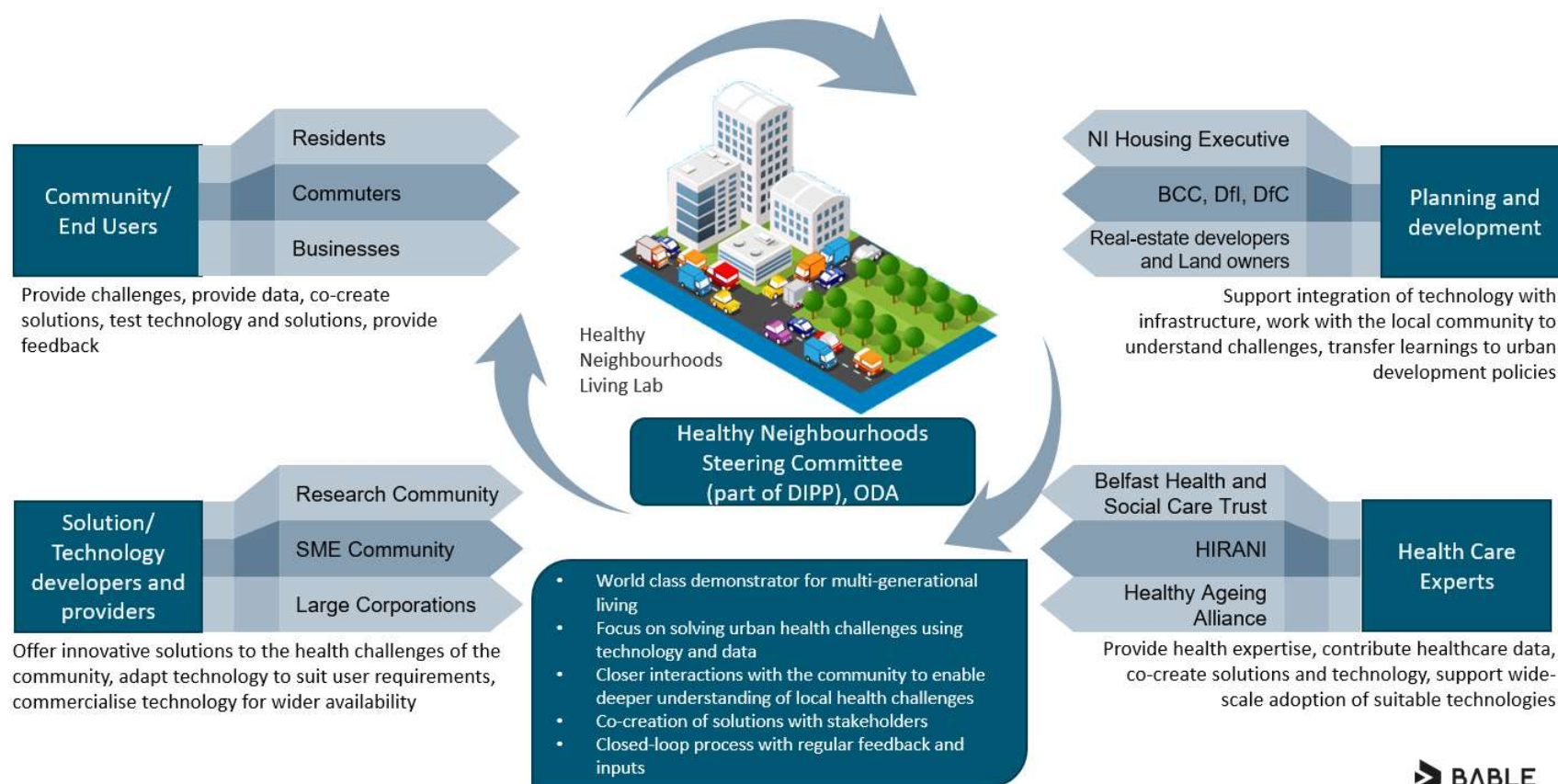
Smarter Mobility with Big Data



Developing a sustainable energy economy



Smart healthy neighbourhoods





**What should we call the
Perth Innovation Highway?**

Living Lab

Innovation District/Quarter/Park

Smart City/Place/Region

**What should we call the
Perth Innovation Highway?**



Application Workshop



Understanding your transition to get ahead of change



Expansion vs Sustainability

Coherency vs Fragmentation

Business-as-usual vs Innovation

Survey responses

a) What you want to get out of the PIH?

- How can the PIH catalyse innovation for you?
- Can the PIH help you to think about how your focus area fits into wider systems change?

b) How the PIH can help you increase your capacity to innovate in your own projects?

- What challenges to you face?
- How can the PIH help you overcome these challenges?

01

Introduction to Public Policy

What is it and why is needed?

02

Policy in Smart Places Context

Inclusive and holistic solution development

03

Principles for Smart Policymaking

Enabling Systemic changes + Activity

04

Tools for Innovative Policymaking

Agile and Collaborative development

05

Cookbook for Smart Policymaking

URBACT Guide and Key Takeaways

Smart Places and Smart Policies



Smart policies help steer behaviour and investments!

Good regulations and incentives are fundamental prerequisite to create a smart place!

Cookbook for Smart Policy making



Behaviour change lies at the core of smart policies



The art of smart policies involves making the behaviour change both easy and attractive



Users and citizens need to be engaged in designing the policy



Senior-level buy in is imperative



Examples and pilot projects can test and showcase smart policies



Each smart policy needs an individual balance of carrot (incentive) and stick (regulation)



Data sharing, gamification and standards are core factors to design successful smart policies



Create problem driven, not instrument driven policies



A good way to initiate a smart policy is to identify the hidden benefits and make them accessible



Timing is everything

Source: URBACT Smart Policies Thematic Report (2016)

Smart Places Solutions: Public vs Private



The best smart place solution generates public and private value at the same time.



The second-best smart place solution generates more public than private value. For this it needs to include (or be based on) regulations.



A product or service that creates only private value is not a smart place solution, it's just a business.

Smart Places Policy Goal

The goal of smart policies is to achieve **long-term development goals** of cities, towns and regions through leveraging on **data, innovative technology and collaboration** in planning and development.

Smart policies reflect good governance

Locally adapted regulations and incentives **target local challenges** with innovative technologies and their impact on regional development.

They help put innovation in use for **growing the economy in a sustainable way**, supporting a reduction of the environmental footprint and increasing the efficiency of public spending.

They **provoke a large impact** through a relatively small amount of change.

Tool 1 Evidence-Based Policy Making



Evidence-Based Policy Making

Concept

- Basing policy decisions on objective evidence
- Prioritizes rigorous research findings, data, analytics, and evaluation

Goals

- Use what we already know to make policy decisions
- Build more knowledge to better inform future decisions

Data as an Enabler to Policy Making

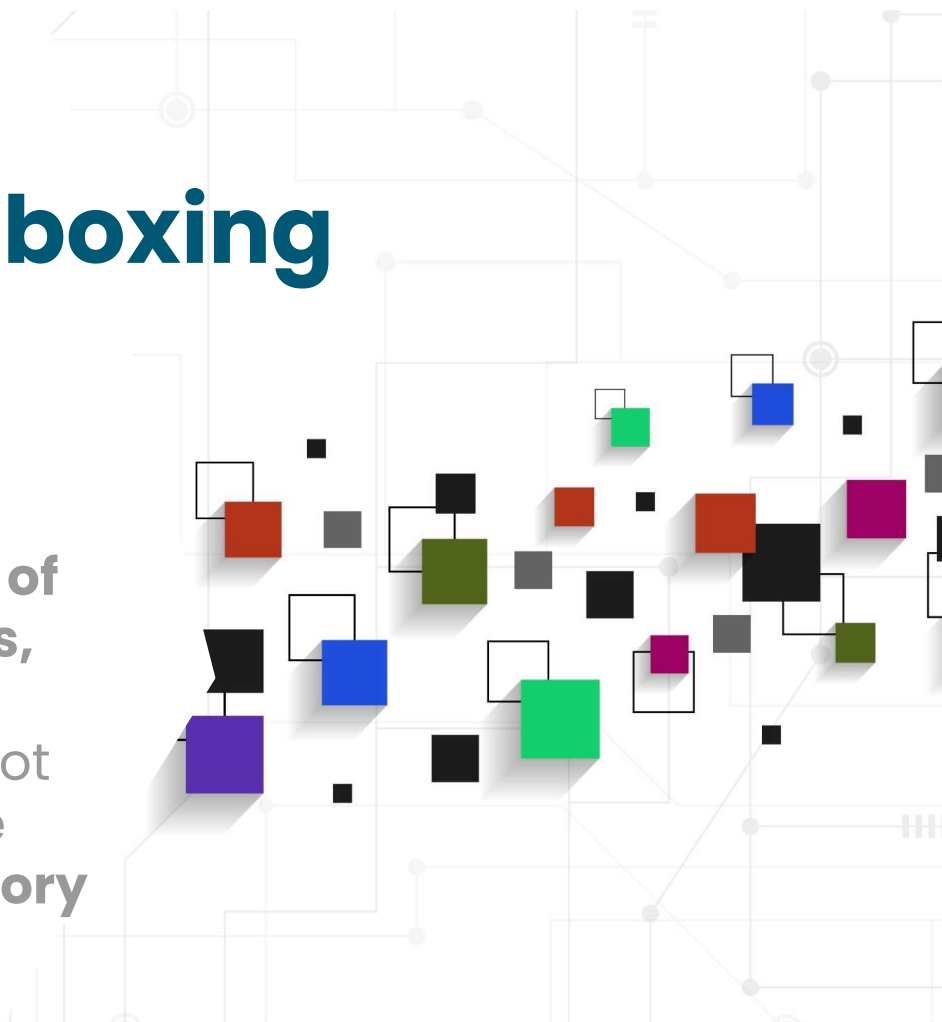
Principles for Evidence-Based Policy Making

First Principles of Evidence-Based Policymaking

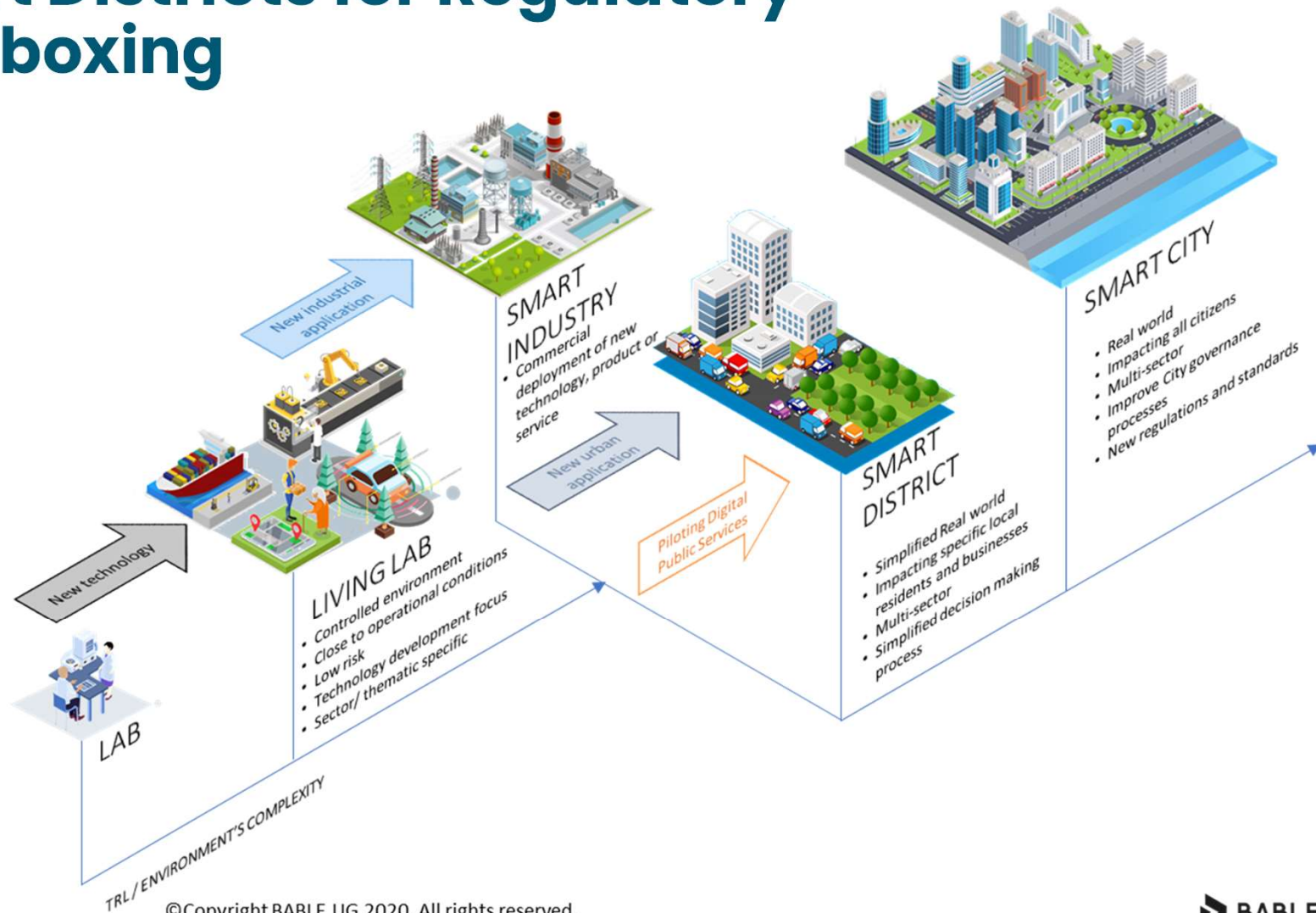
1. Build and compile rigorous evidence about what works, including costs and benefits.
2. Monitor program delivery and use impact evaluation to measure program effectiveness.
3. Use rigorous evidence to improve programs, scale what works, and redirect funds away from consistently ineffective programs.
4. Encourage innovation and test new approaches.

Tool 2 Regulatory Sandboxing

Enable in a **real-life environment** the **testing of innovative technologies**, products, services or approaches, which are not fully compliant with the **existing legal and regulatory framework**.



Smart Districts for Regulatory Sandboxing



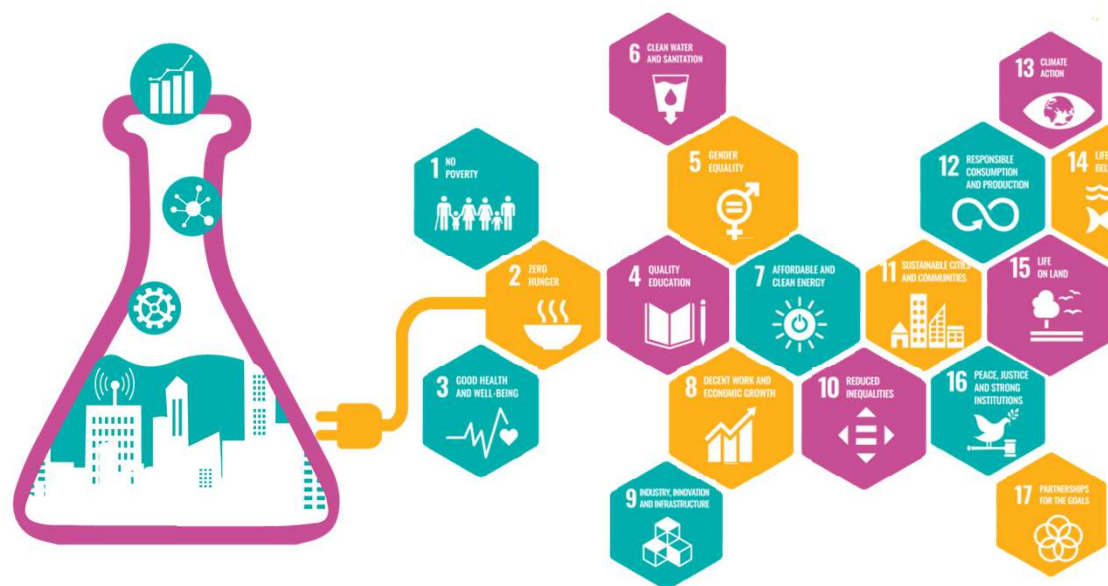
LIVING LABS AS POLICY TOOLS FOR INNOVATION

Policy Implications of Living Labs

Potential impact on the urban and broader context

With the potential to deliver radical transformations on technology and society, Living Labs are used as policy tools to:

- Guide local or regional innovation ecosystems towards 'grand societal challenges'
- Channel funding streams to address market failures
- Strengthen **innovation infrastructure** of the city or region, providing innovators with capabilities to solve greater challenges
- Develop **Regional Innovation Network** (RINs), building competitive advantage and creating economic value



Tool 3 Innovation Camps



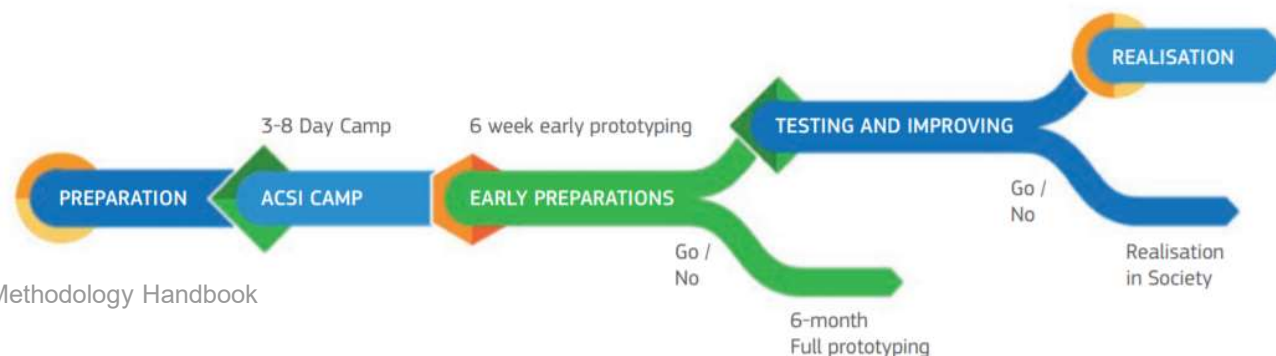
Innovation Camps

Tool to respond quickly and effectively to emerging local & global societal needs

Quadruple Helix Collaboration for rapidly innovating policy making process

Led by stakeholders – ideal for EDP

Camps bring stakeholders from diverse backgrounds to conceive new projects, solutions, and interventions in iterative process.



Source: Innovation camp Methodology Handbook

Tool 4 Consequence Scanning

Tool created by Doteveryone



Consequence Scanning

1. What are the intended and unintended consequences of this solution/policy?
2. What are the positive consequences we want to focus on?
3. What are the consequences we want to mitigate?

Source: Doteveryone

What could this mean if everyone in the world were doing it? How could the communities you operate within be affected?





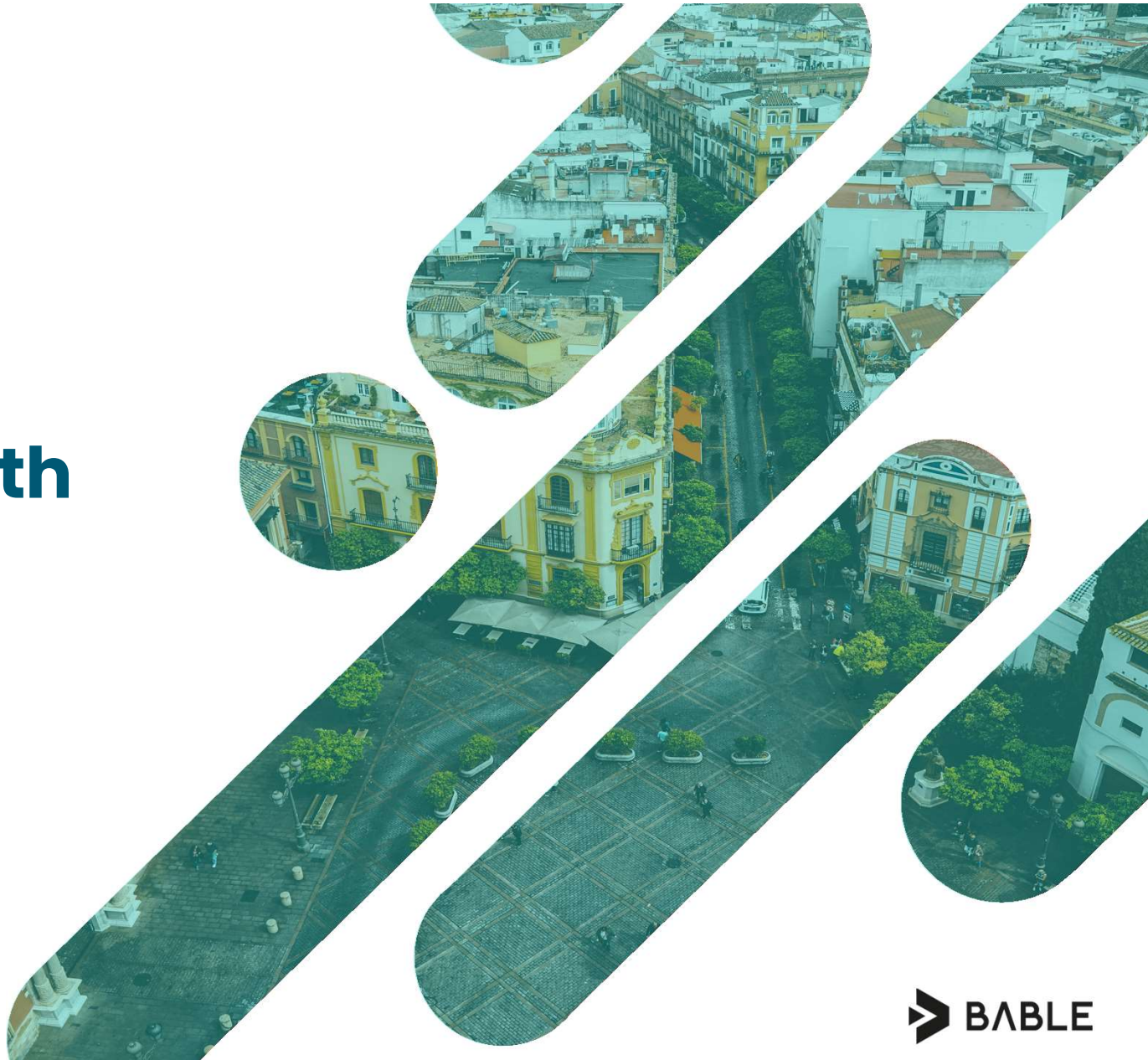
**Next steps: building
Perth's Innovation
Highway**





- 1. Focus on smart policy**
- 2. Define how PIH is a building block**
- 3. Develop a timeline**
- 4. Use co-creation to widen involvement**

Co-creating with Stakeholders



What is a Stakeholder

A stakeholder can be 'any group or individual who can affect or is affected by the achievement of the organization's objectives' (Freeman, 1984).

The role of stakeholders can range from **private sector, knowledge organisations, civil society, community groups, local government and other relevant actors.**

In order to **solve the most pressing challenges it is important to respect everyone's knowledge and create equal inclusion of stakeholders**, this can be done by involving all stakeholders from the start of the process through the strengthening of existing collaborations and **early identification/engagement** of all stakeholders.



Community members, local authorities



Consulting, planning & implementing



Early Stakeholder engagement & identification

Benefits of engaging with stakeholders

Help reduce deadlocks and promote quality implementation

Advancement of three values of democratic governance (effectiveness, legitimacy and social justice)

Public “on-going voice” which assists future planning and implementation

Enhance transparency, learning, shared ownership and greater long-term success

Save time and money by decreasing the risk of conflicts

Mobilise a broad transdisciplinary pool of information, knowledge and resources (increasing the possibilities of developing alternative and innovative solutions)

Challenges of engaging with stakeholders

Time-restraints,

Lack of resources (financial and personnel),

Political divisions

Inexperience in public consultation

Lack of a plan or strategy for participation

Difficult to find agreement

Silos

Conflicting worldviews

Departmental turf wars and

Poor communication between stakeholders

Consultation fatigue: Low interest and awareness

Imbalance of stakeholder

Lack of participation tradition in some countries

Checklist for Engagement

- ☐ Does it reach and engage with a **diverse set of voices, insights, and opinions**?
- ☐ Can it deliver a **high-quality, enjoyable participatory experience**?
- ☐ Is it **accessible** and **adaptable**?
- ☐ Is it **data-driven**?
- ☐ Does it represent the **best you can do** with your resources, or is it a watered-down version of a face-to-face experience?
- ☐ Does it **manage risk and expectation** rather than being simply risk-averse?
- ☐ Is it **serving a direct purpose** and **gathering meaningful insights**?
- ☐ Can you **use the insights** gathered to feed into the project?
- ☐ Are you the best person to handle the planning of the engagement, or **do you need a third party or additional help**?
- ☐ **How are you shifting power and decision-making** agency to those within the communities you are working in?

Shift in Public Sector's Role

The public sector is ...	A legal authority	A service provider	An arena for co-creation
Elected politicians should be concerned with...	Making decisions, rules and laws	Defining overall goals, standards and budget frames	Exercising political leadership of the political community
Public managers are good at...	Making sure that rules and laws are observed	Effective and efficient management	Leading interorganizational and cross-sector collaboration
Frontline personnel are preoccupied with...	Doing what is correct and just	Serving the wants and needs of the citizens	Mobilizing resources in the pursuit of joint solutions
Citizens perceive themselves as...	Subjects of the law and clients in public welfare systems	Customers with exit and voice options	Active citizens with rights and obligations visà-vis the social and political community
Private non- or for-profit organizations see themselves as ..	Lobbyists aiming to influence public decisions	Service providers competing for public contracts	Partners in public-private collaboration

Co-creation



Shared Value & Mutually beneficial



Innovation & Productive



Diverse



Collaborative & Hierarchy flattening



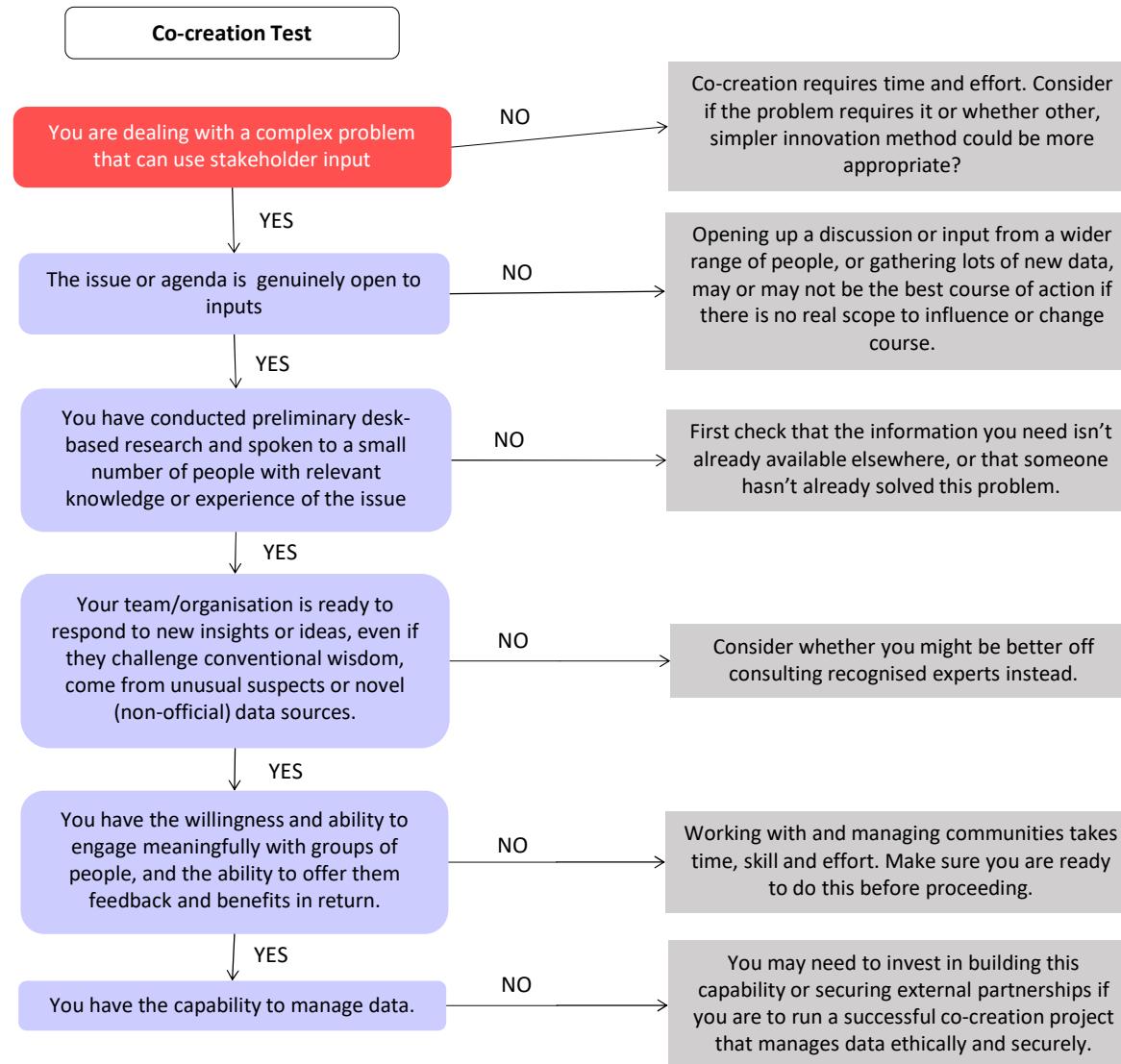
Open ended



Trusted and Transparent

Co-creation

**You answered Yes
for all -> Co-
creation might be
the solution for
you!**



Formalise Co-creation in your organisation



- ▶ Do we want to involve stakeholders in the development and delivery of products and services? Why?
- ▶ Are we ready to share power with our stakeholders?
- ▶ Who will be accountable to the results of the activity?
- ▶ What activities will we consider as co-creation?
- ▶ How do we differentiate co-creation from community participation or dialogue?
- ▶ How much power are we ready to share for different kinds of activities?
- ▶ Do we have political and executive buy-in to adopt co-creation?
- ▶ What are our long-term goals for co-creation? How many co-creation processes do we want to execute each year? Should all social initiatives have some level of co-creation with stakeholders?



Final thoughts





**Feel free to contact us.
Whenever you like.**



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