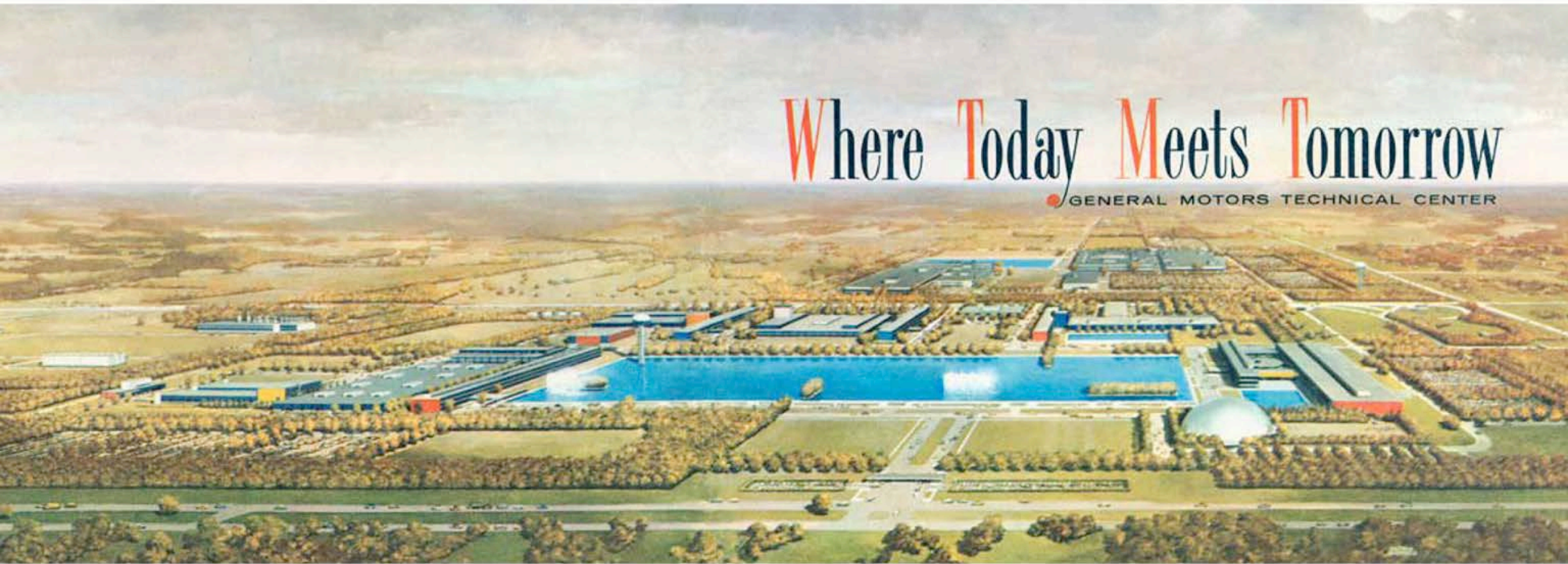


Commercialising Health: The Future of Productive Neighbourhoods

Where Today Meets Tomorrow

GENERAL MOTORS TECHNICAL CENTER



1956 brochure advertising General Motors' new Technical Center in Warren, Michigan

An Urban Morphology Phenomenon

A short history in the UK

TIMELINE

1950

New space for research
(CSP)

Move to the
suburbs

Land Availability from
MOD and
Rail Closures

Private car
affordability

**Introduction
of B1 Use Class**

1987

Enterprise
Zone Policy

2000

Urban
Renaissance

Growth in
the knowledge
economy

Second garden
town movement

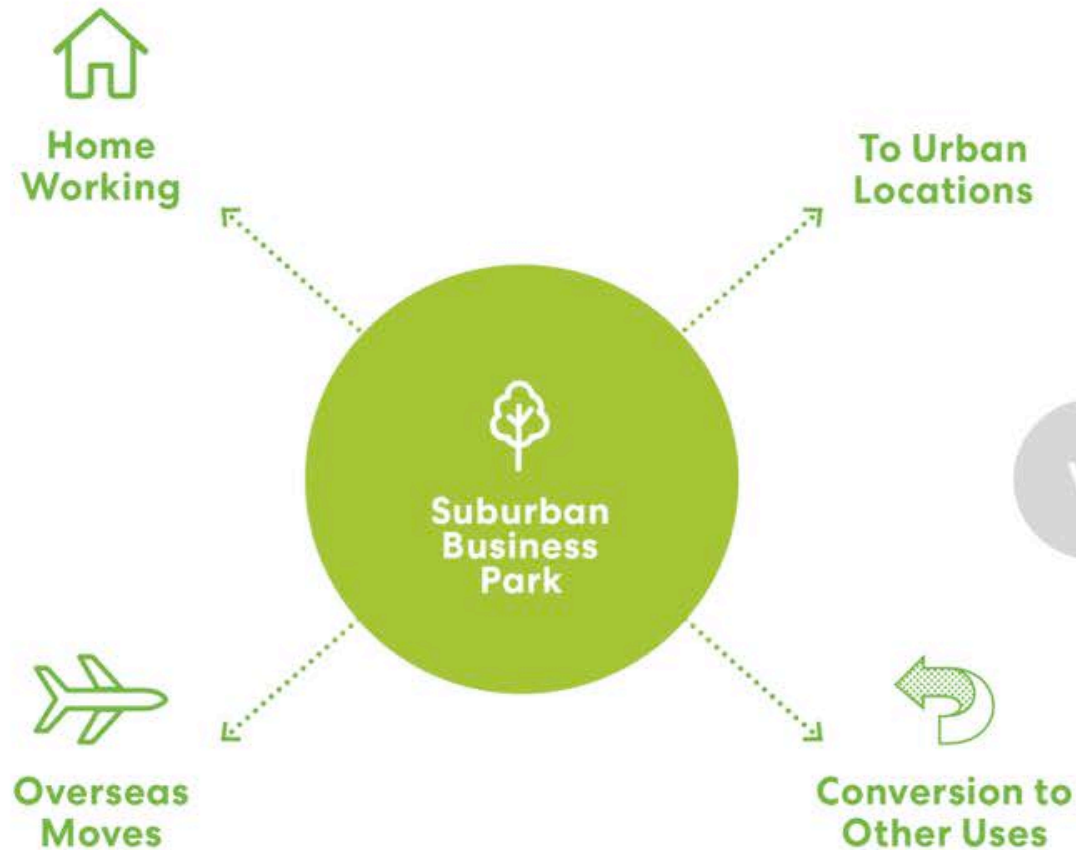


“...Employment opportunity figures a great deal
in the percentage of those who wish to escape the inconvenience
of today's crowded metropolitan areas”

US influence

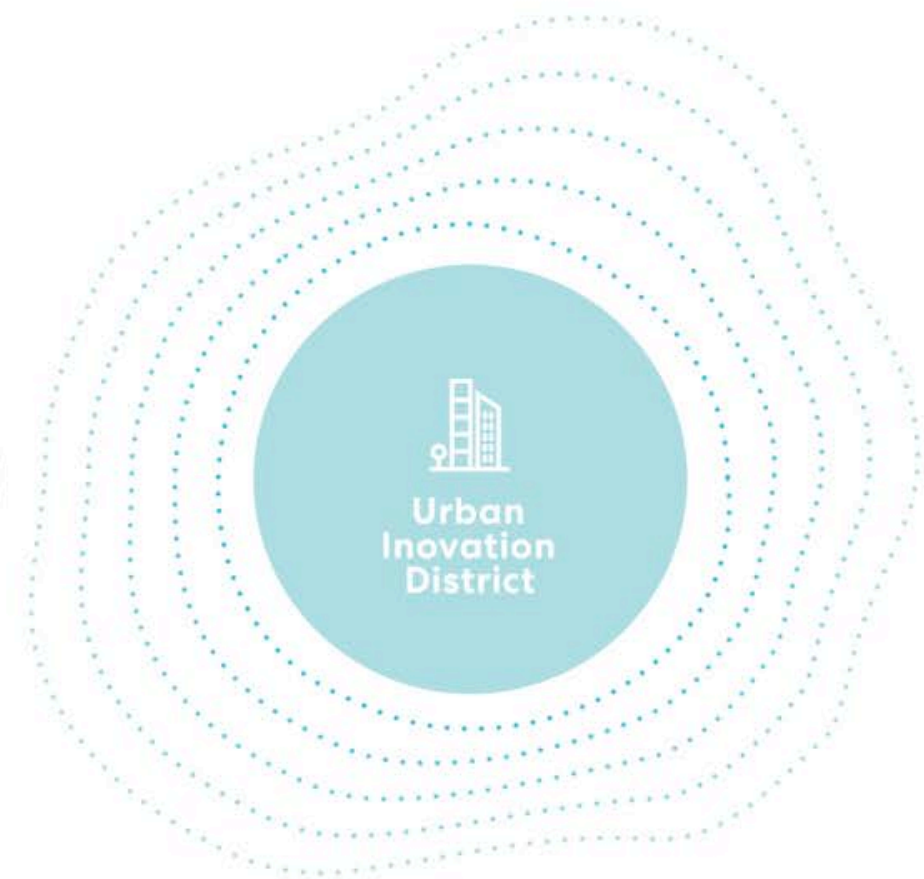
Was this the future utopia?





Abandon to challenges

Vs



Expand to opportunities



**Increase
density**



**Increased
flexibility**



Vs



**Mobility
choices**



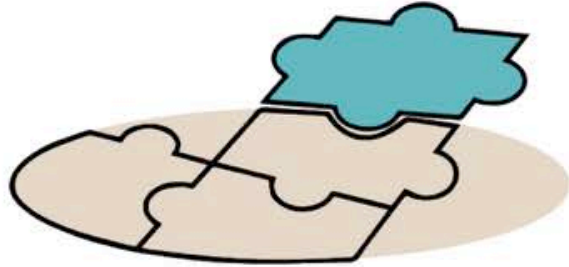
**Additional
amenities**

Evolve to
challenges

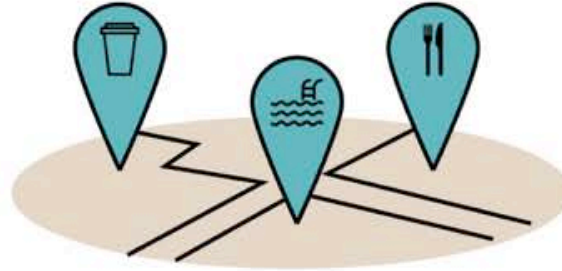
Dispersed
opportunities

Leading Change or Following Trend

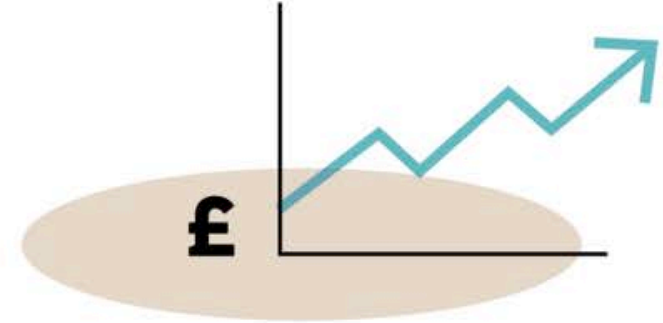
Broad trends observed in the UK



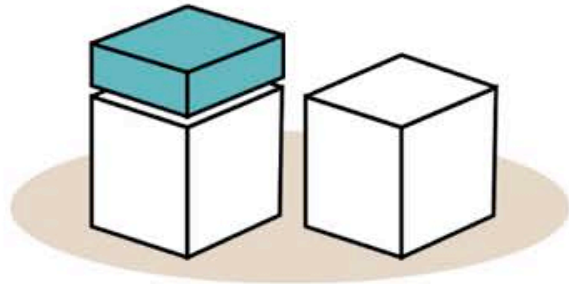
Creating tenant portfolio



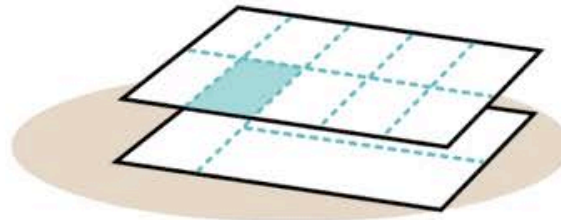
More amenities



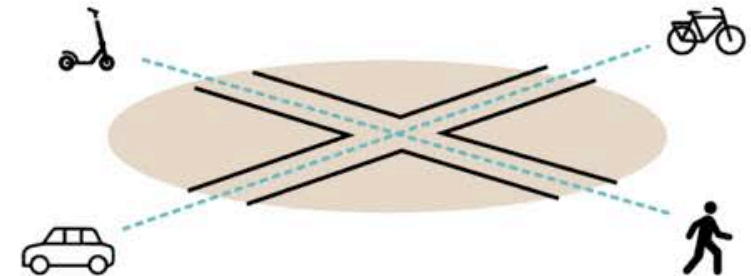
Increasing leases in return
for greater service



Increasing density



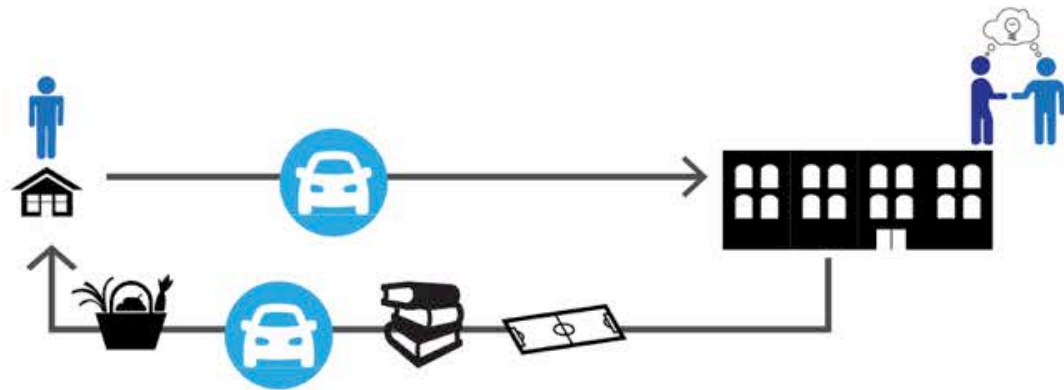
Smaller companies



More mobility choices

The Future is....Transformational

- Mobility choices are fast becoming a key aspect of both consumer preference and branding.

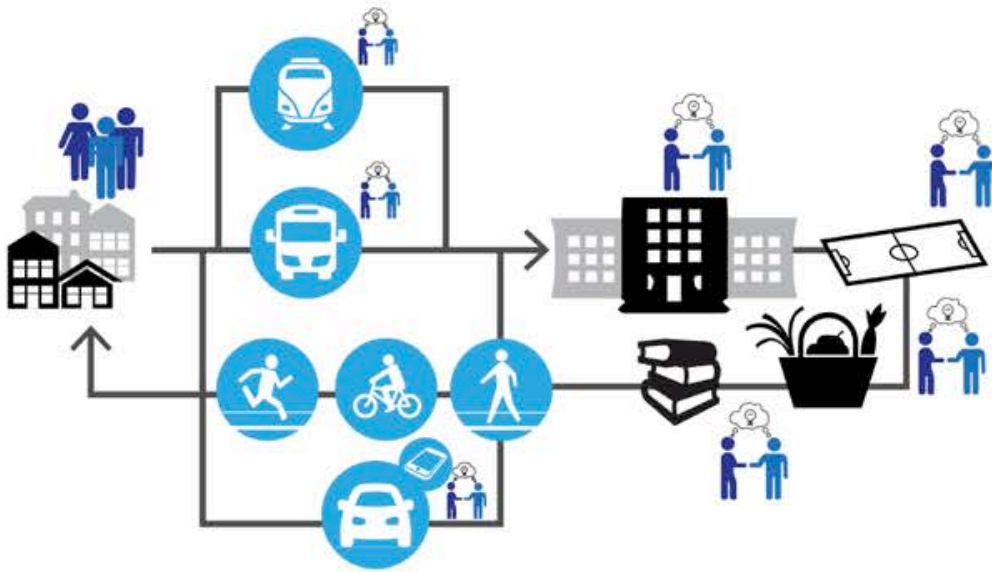


Car-dependant mobility



The Future is....Transformational

- Mobility choices and mix of uses support the desire for increased interaction and networking between companies.



Multiple-choice mobility



Milton Park, Oxfordshire

The Future is....Transformational

- Providing varied, interesting, and continually updating amenities adds value and culture that employees are businesses are looking for.

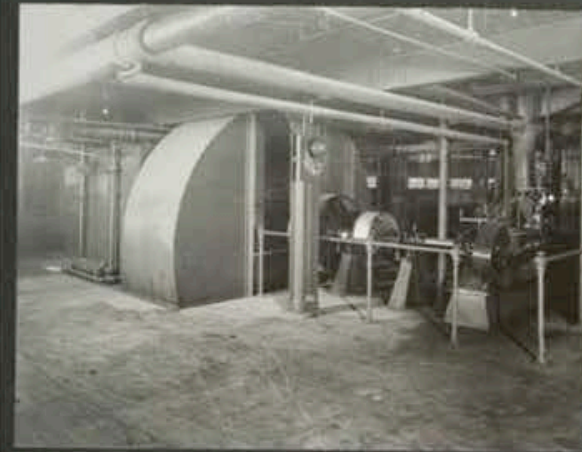


The Future is....Transformational

- Recruitment and retention has, in recent years, started to rise up the list of factors important to site selection and business location.

An explanation of employee welfare programs used at the National Cash Register Company's factory in Dayton, Ohio, 1903. Via the Harvard Art Museums.

<https://www.collectorsweekly.com/articles/stuck-in-1950s-suburbia/>



A THOROUGH VENTILATING SYSTEM



CALISTHENICS

ALL POSSIBLE ADVANTAGES ARE
PROVIDED FOR BOTH MEN AND WOMEN.
THESE MAKE IT POSSIBLE TO SECURE
THE HIGHEST GRADE OF EMPLOYEES.

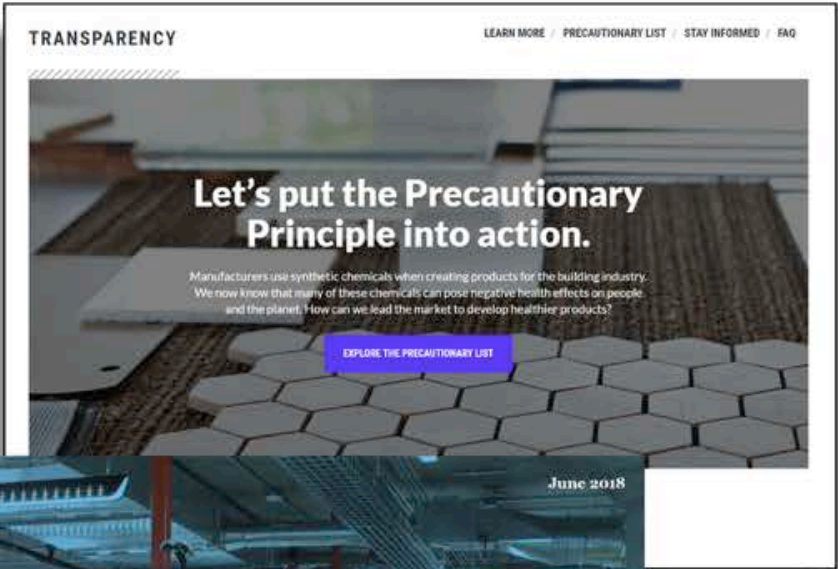
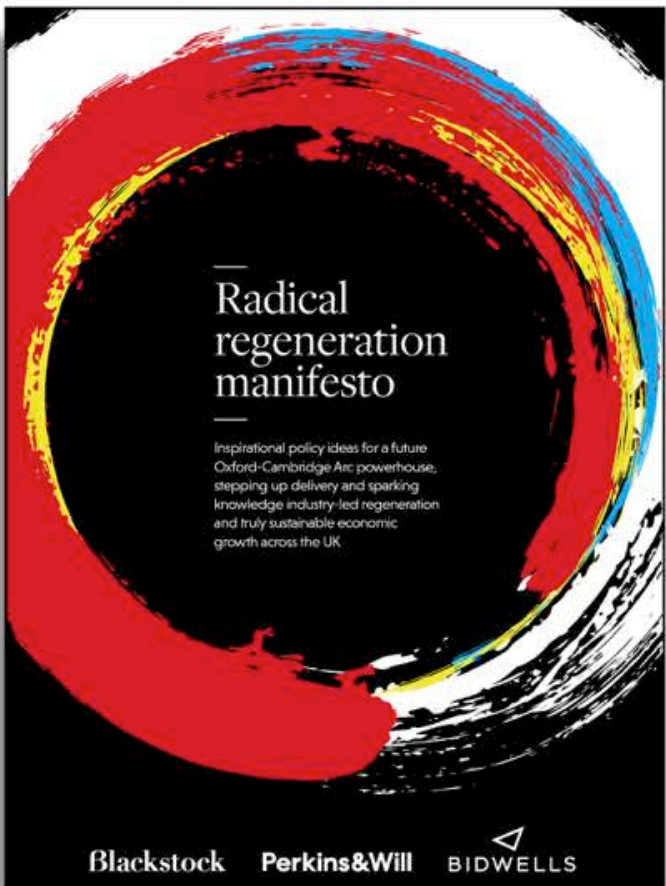


CALISTHENICS



FIRST AID TO THE INJURED

Research



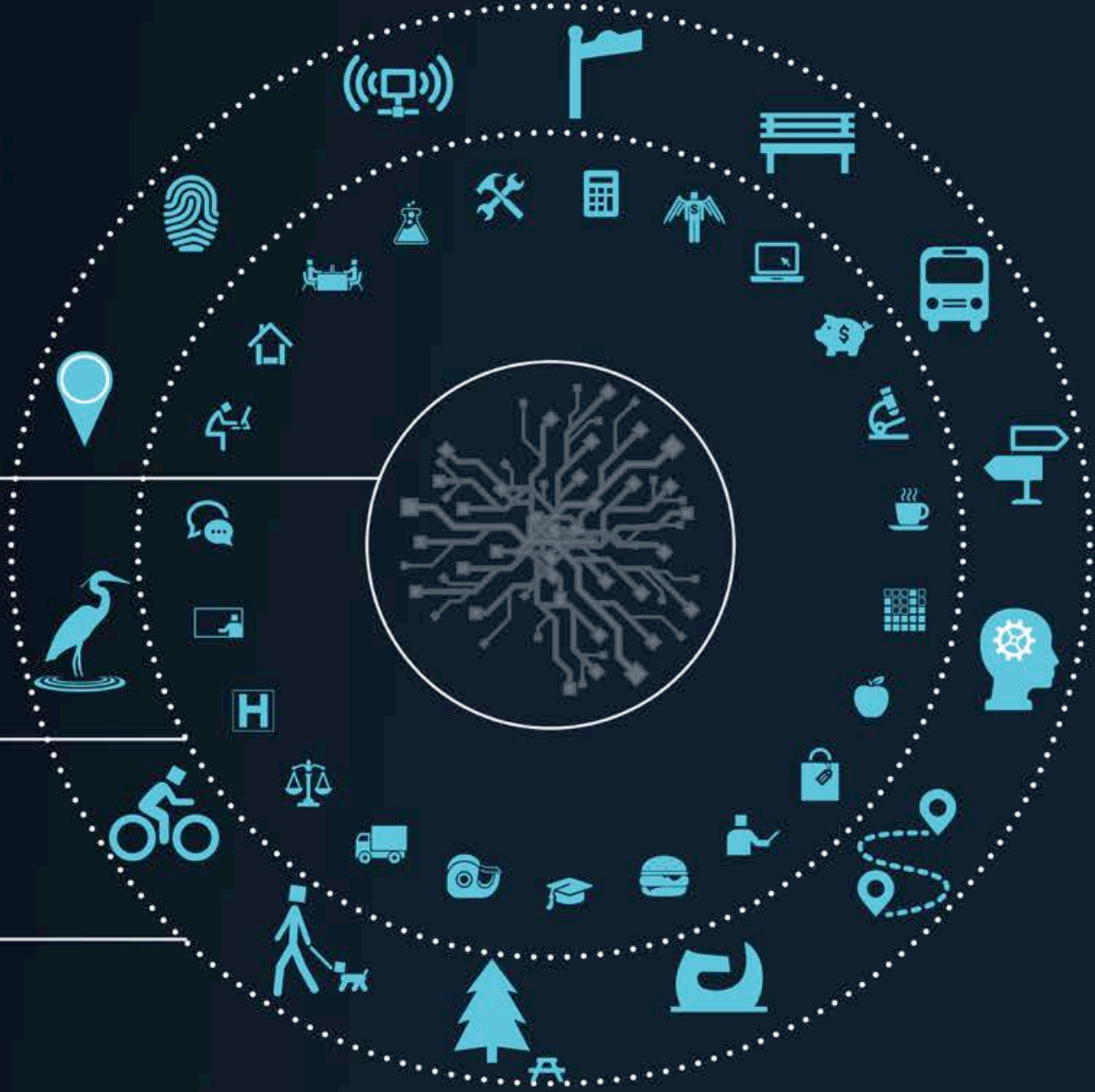
Research

From trends to data focus

COLLOCATION/
CONVERGENCE/
COLLABORATION.

NURTURING
ECOSYSTEM.

FUNCTIONAL
HABITAT.



Research

What we need to know?



1. Drivers

Which are the economy drivers in your area?

Is there affordable housing accessible from these drivers?

2. Mobility

Where do people come from?

How do people commute?

What is the public transport service?

Are there enough transport choices?

3. Market

How affordable is the commercial space?

How affordable is the residential market?

Is the housing offer meeting different people's demands?

4. Talentshed

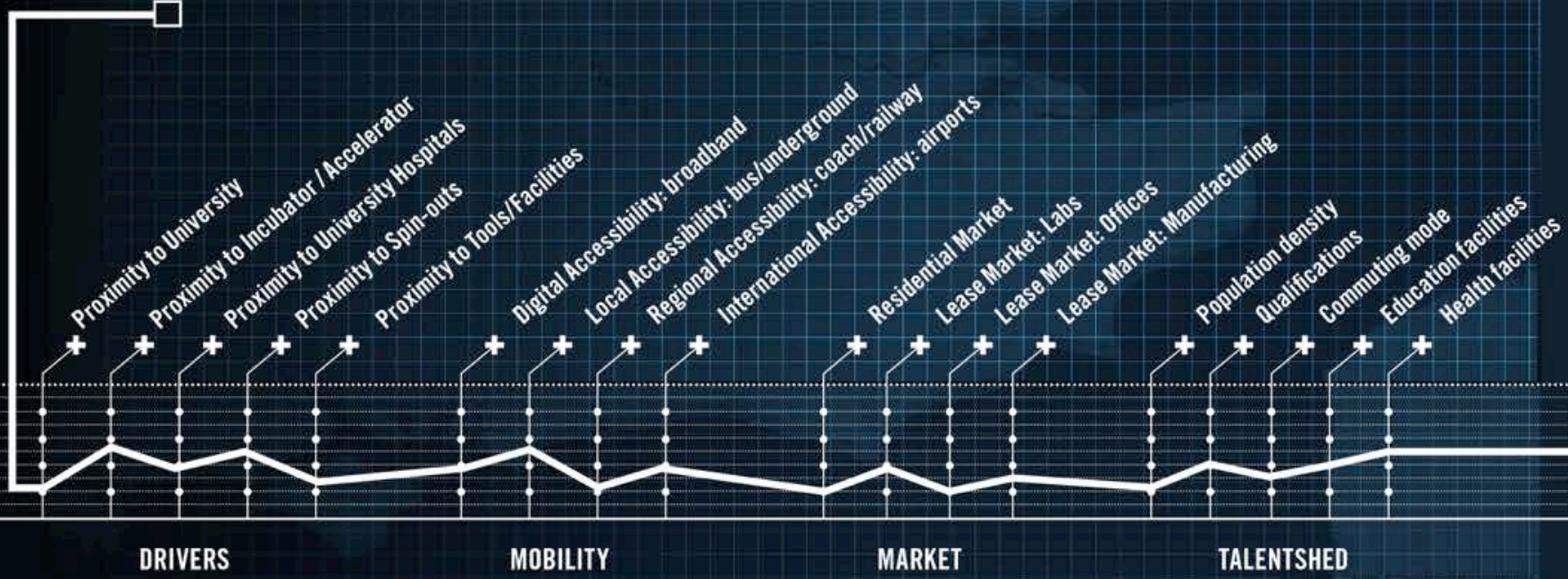
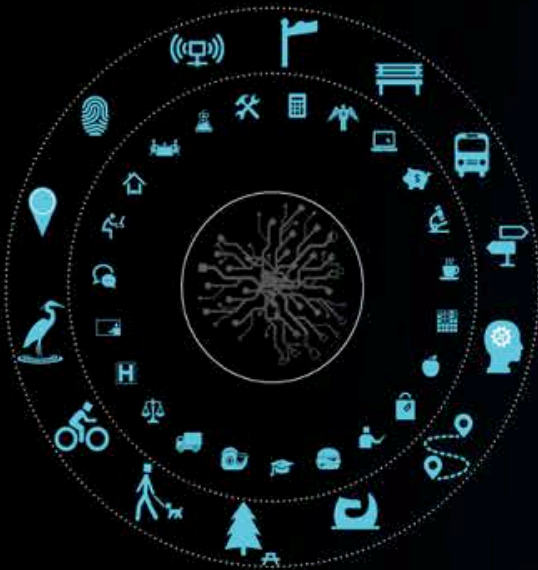
What are the qualifications of the population?

Do these match the employment opportunities?

What are the services people have access to?

Research

What metrics do we need?



St David's
Research
Area of interest



This is a sample area of the south east to demonstrate the area of investigation

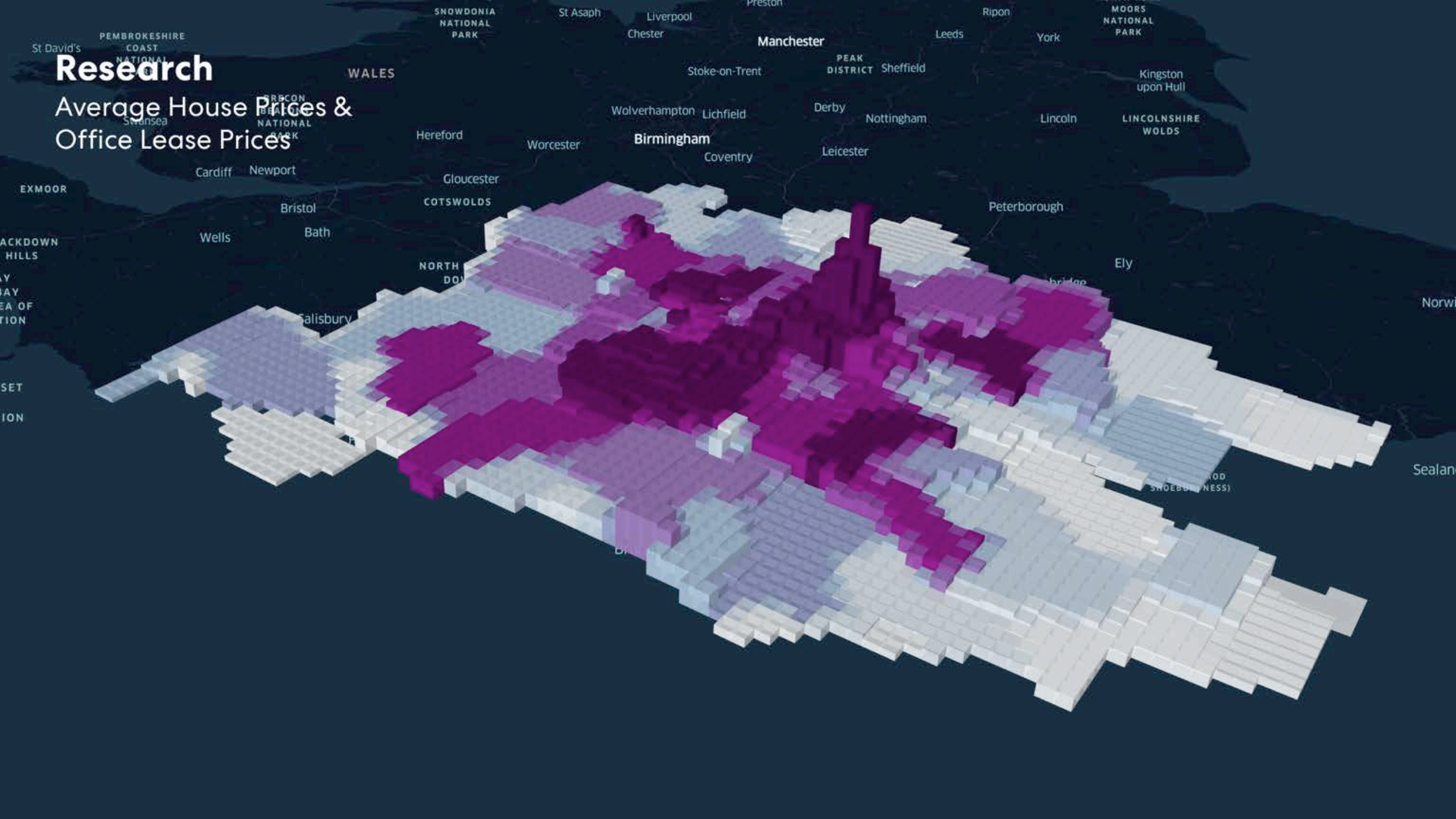
Research

Average House Prices



Research

Average House Prices & Office Lease Prices



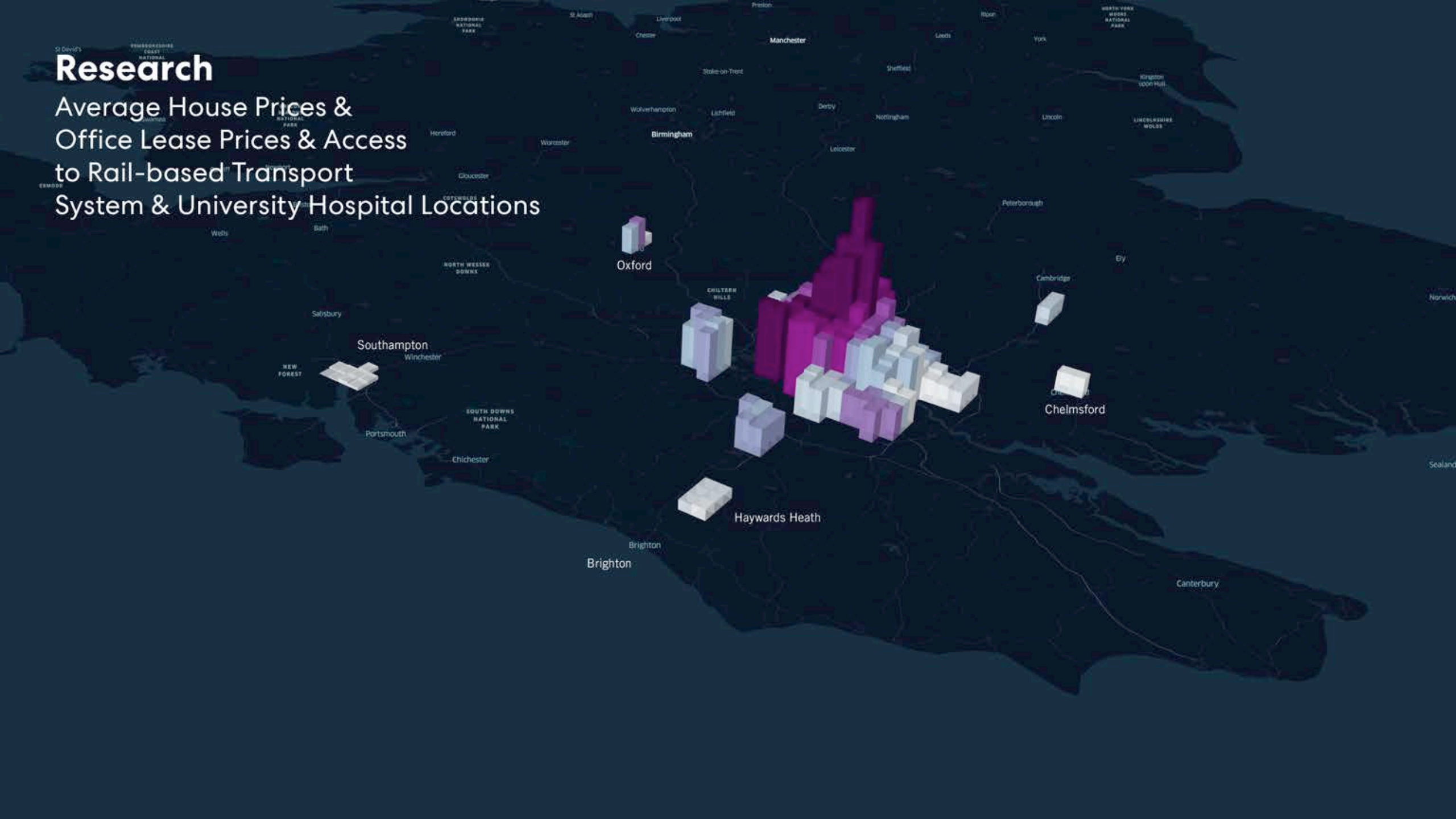
Research

Average House Prices &
Office Lease Prices & Access
to Rail-based Transport System



Research

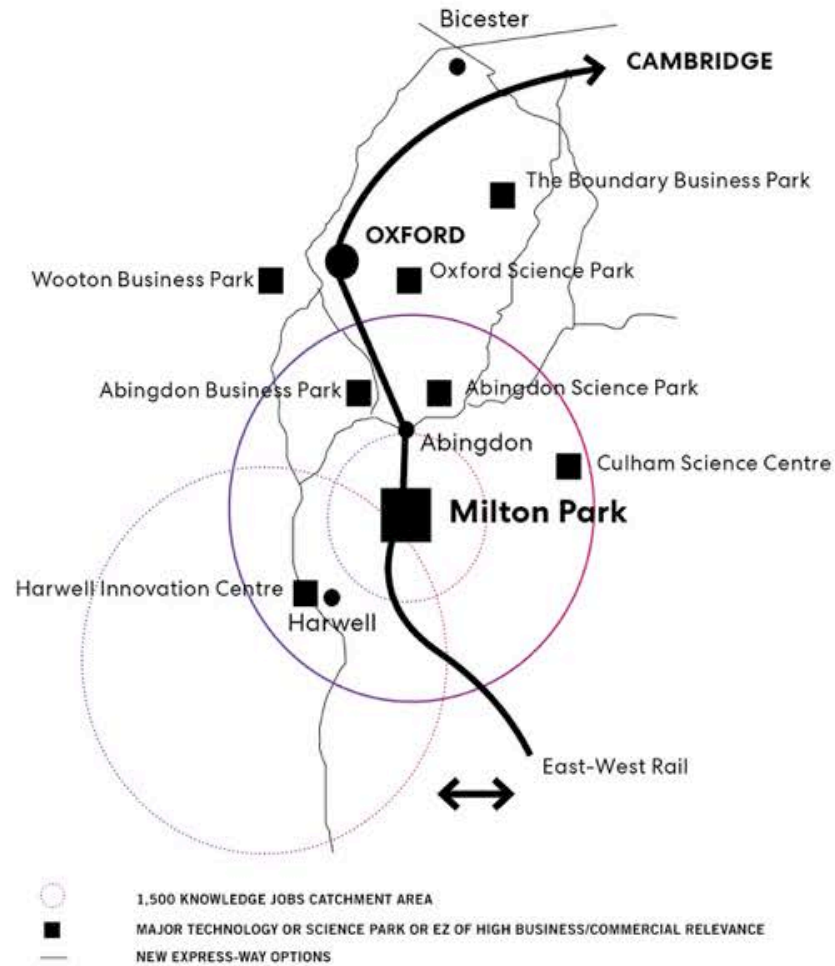
Average House Prices &
Office Lease Prices & Access
to Rail-based Transport
System & University Hospital Locations



The People Perspective: Milton park case study

The People Perspective

Milton Park case study



Source: Oxford to Cambridge Express-way Strategic Study Stage 3 Report

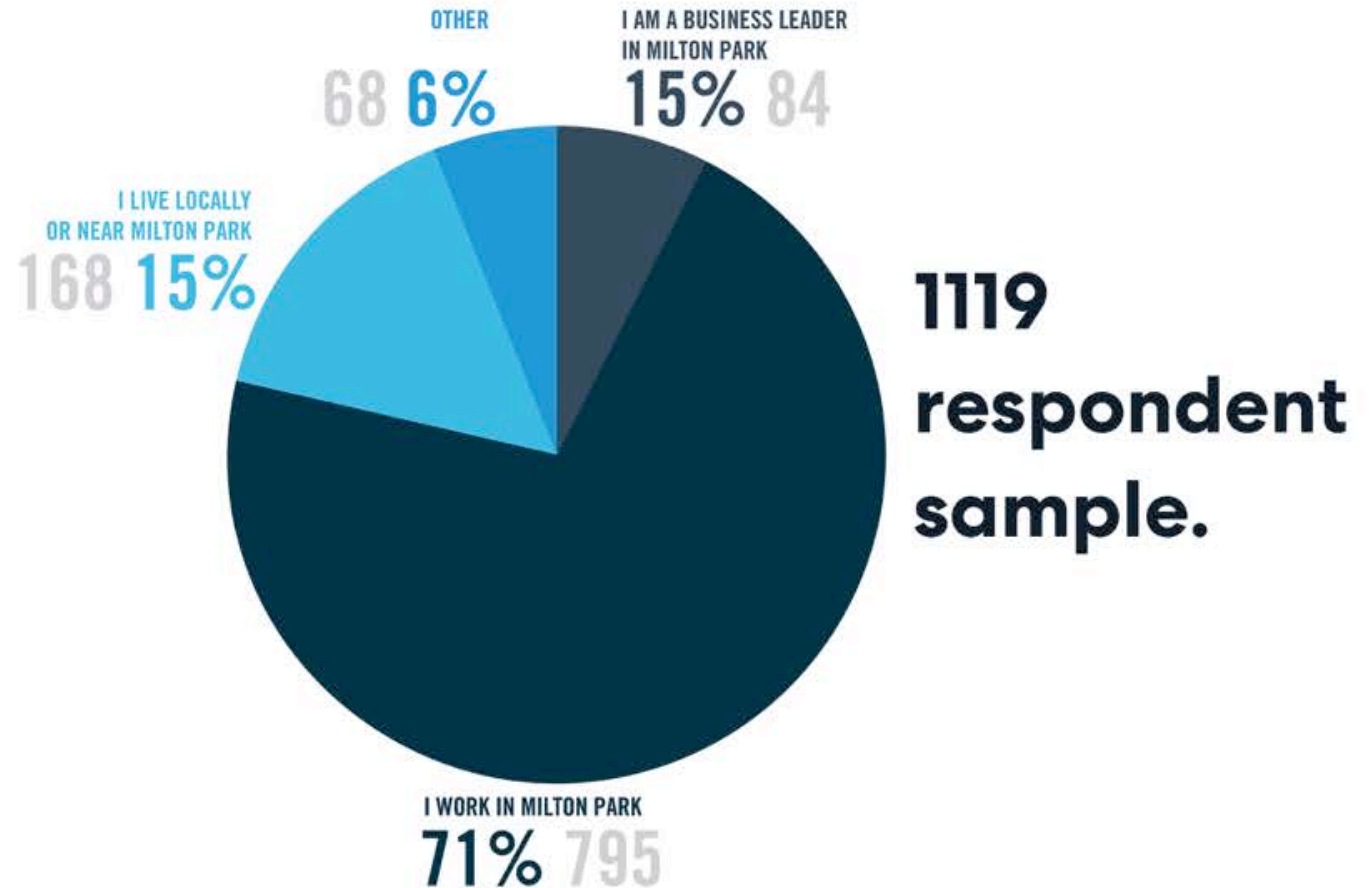


20 Spin-outs

Park Wide Survey: Opinion and Ideas

Mixing people opinions with quantitative data

- Four groups of survey responses, self classification, open to all employees within Milton Park.
- 168 respondents identified themselves as living locally as their primary relationship with Milton Park.
- Those identified as Other include Milton Park stakeholders, agents, partners, suppliers, etc.



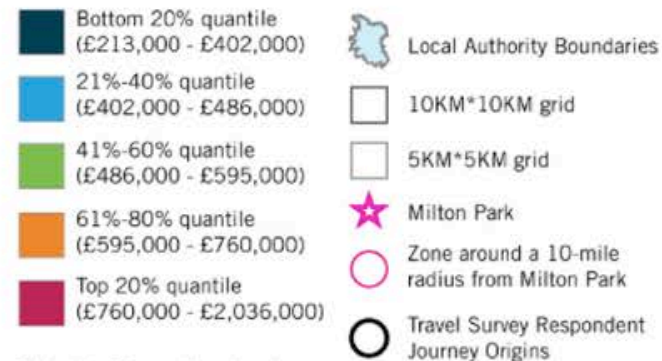
Affordability + Demographics

Livability: House Prices

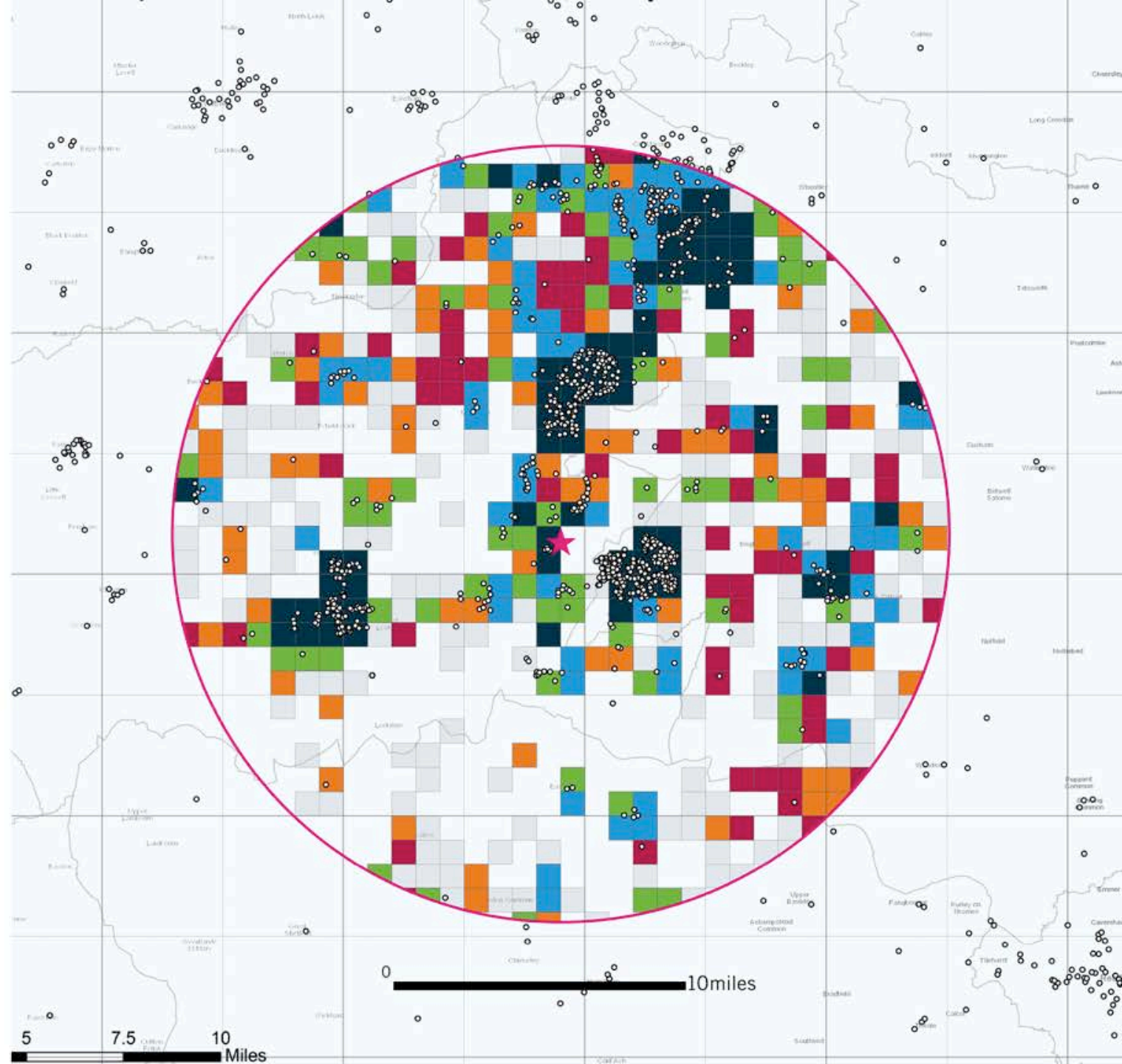
Employee origin and house price bands

The employee postcode origin data from the travel survey can be mapped against house price bands to understand livability patterns.

Average house sale prices
Housing price index adjusted
All transactions, 1995-2017



Data Source: Milton Park Travel Survey 2017

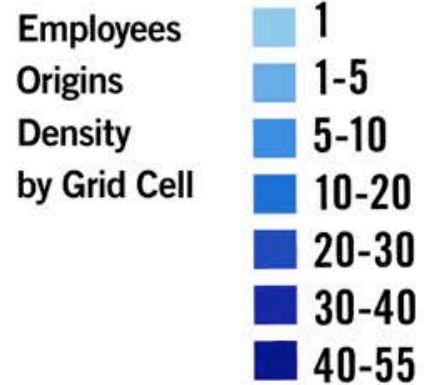


Connectivity Analysis

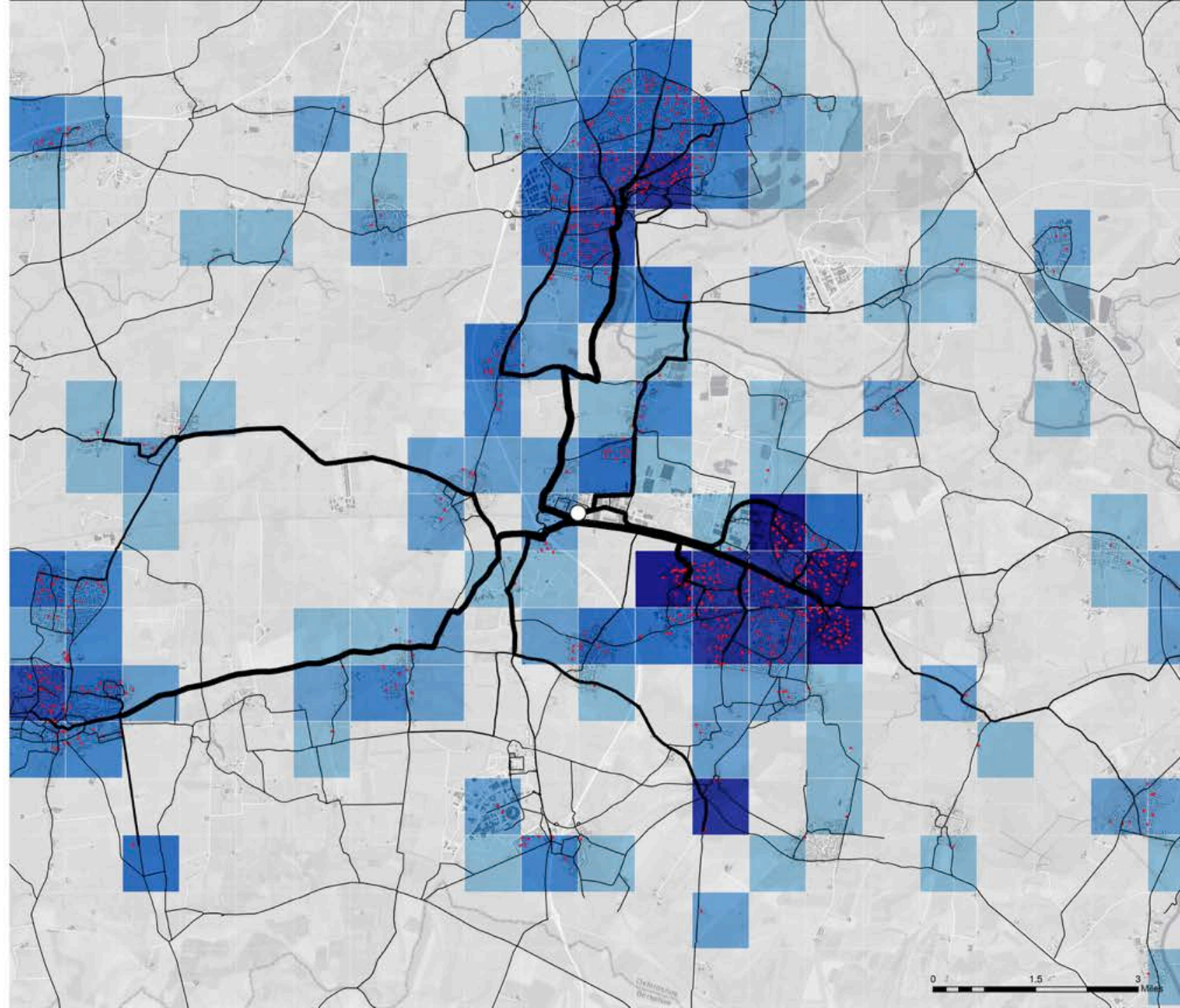
Movement

Existing cycling network

The cycling network has been built based on biker experience as shown in Strava Heatmaps as a representative of avid cyclists.



Data Source: Milton Park Travel Survey 2017 /
OS Local Map / Strava Heatmap



Connectivity Analysis

Movement

Existing cycling network

Existing cycling network

+ **LIVABILITY**

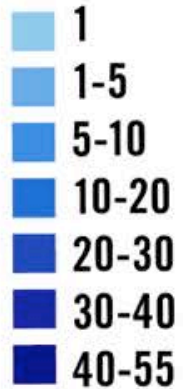
Main activities mentioned in
Stakeholder Survey

Employees

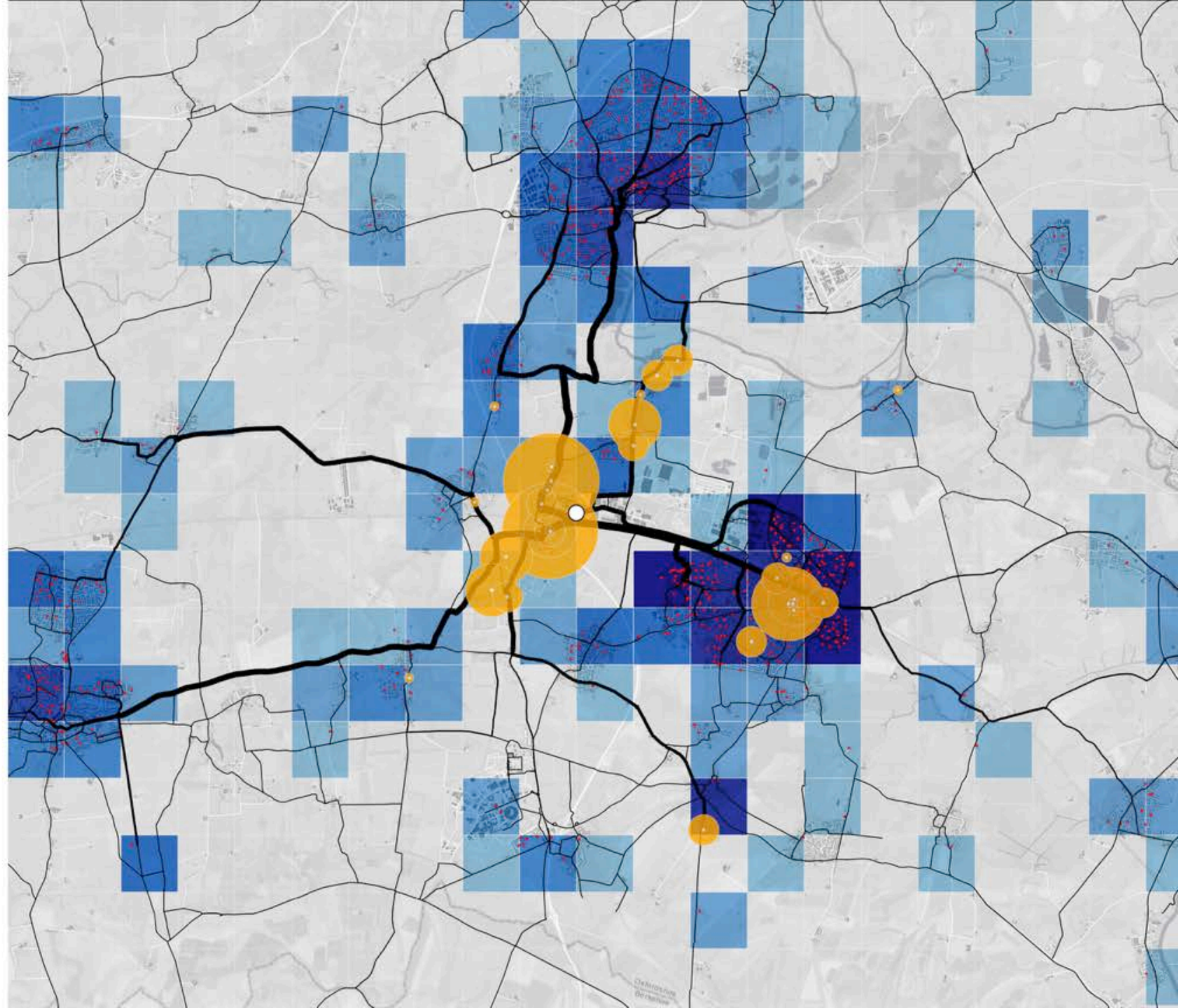
Origins

Density

by Grid Cell



Data Source: Milton Park Travel Survey 2017 /
OS Local Map / Strava Heatmap

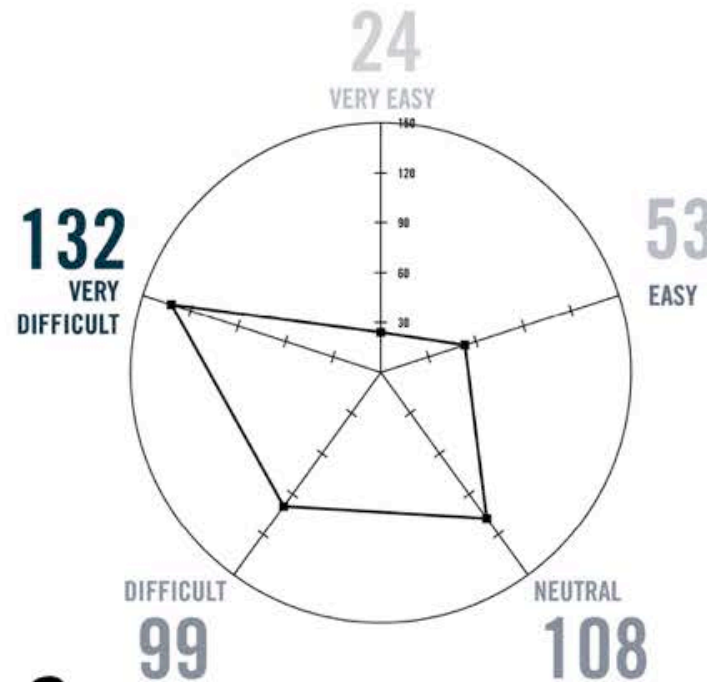


Survey Results

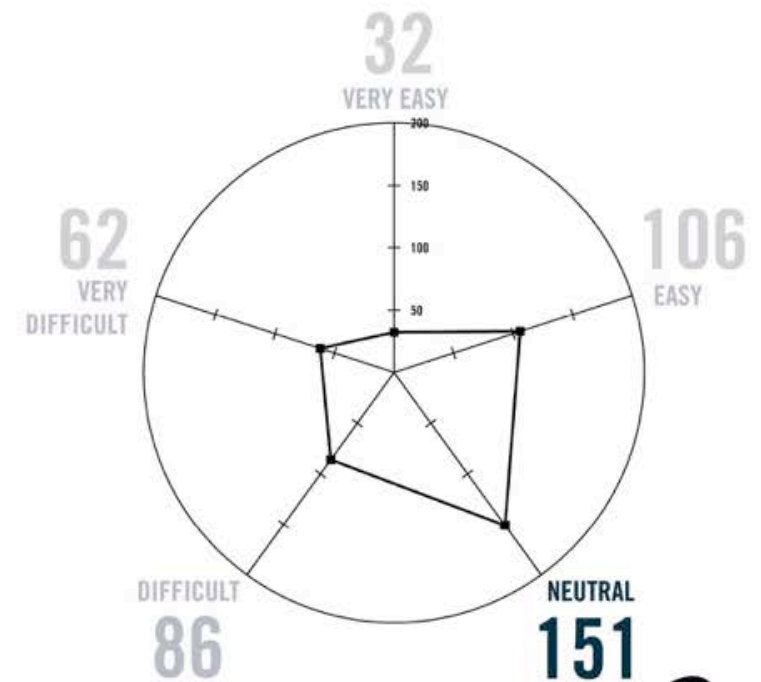
How easy is it to get to Milton Park?

- Walking to Milton Park is perceived to be very difficult whilst cycling is seen as neutral.
- Similar questions in relation to driving identified the site as easy to access by car.

ACTIVE MOBILITY



WALKING



CYCLING

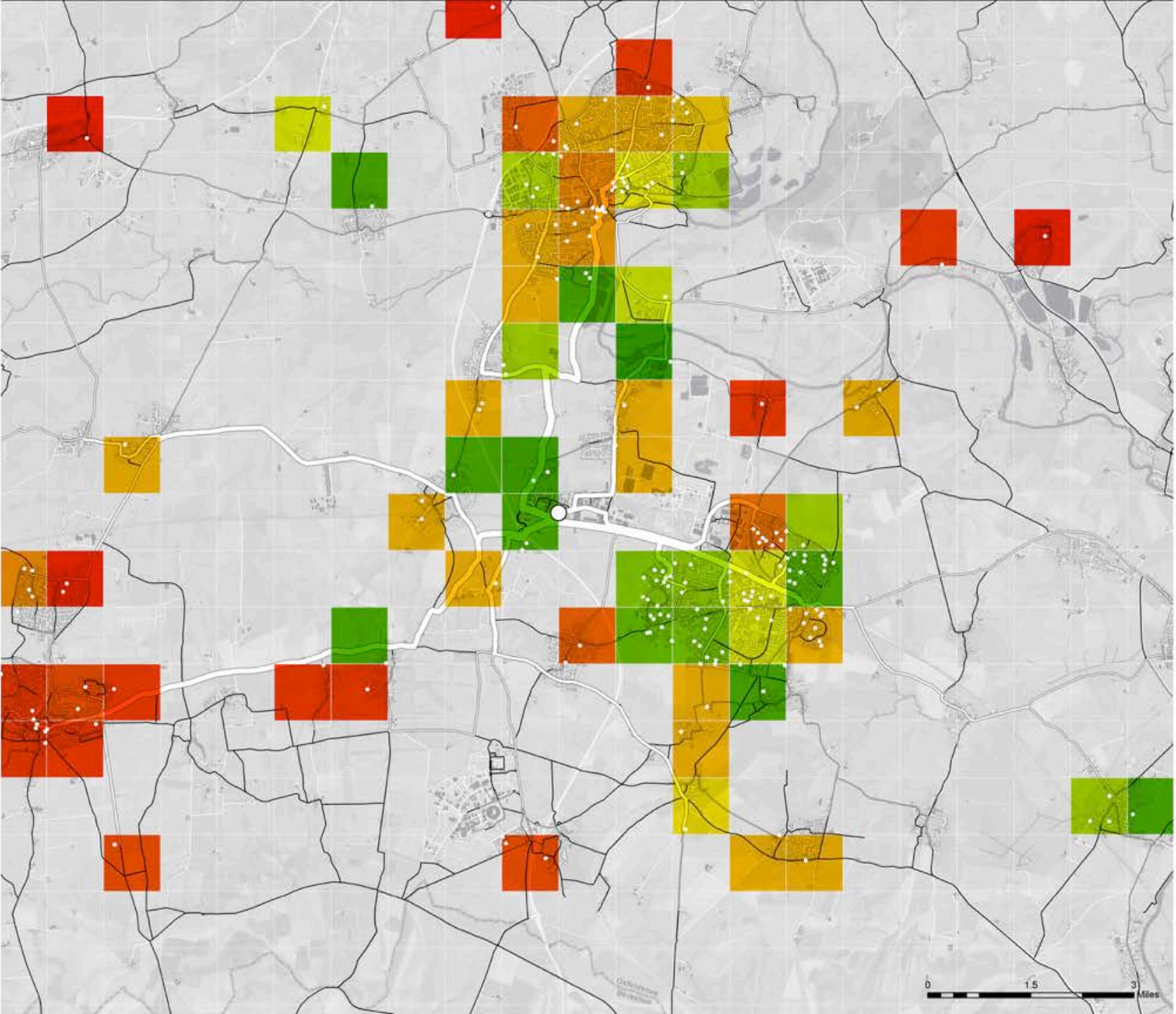
Connectivity Analysis

Movement

Active commuting
+ USER EXPERIENCE



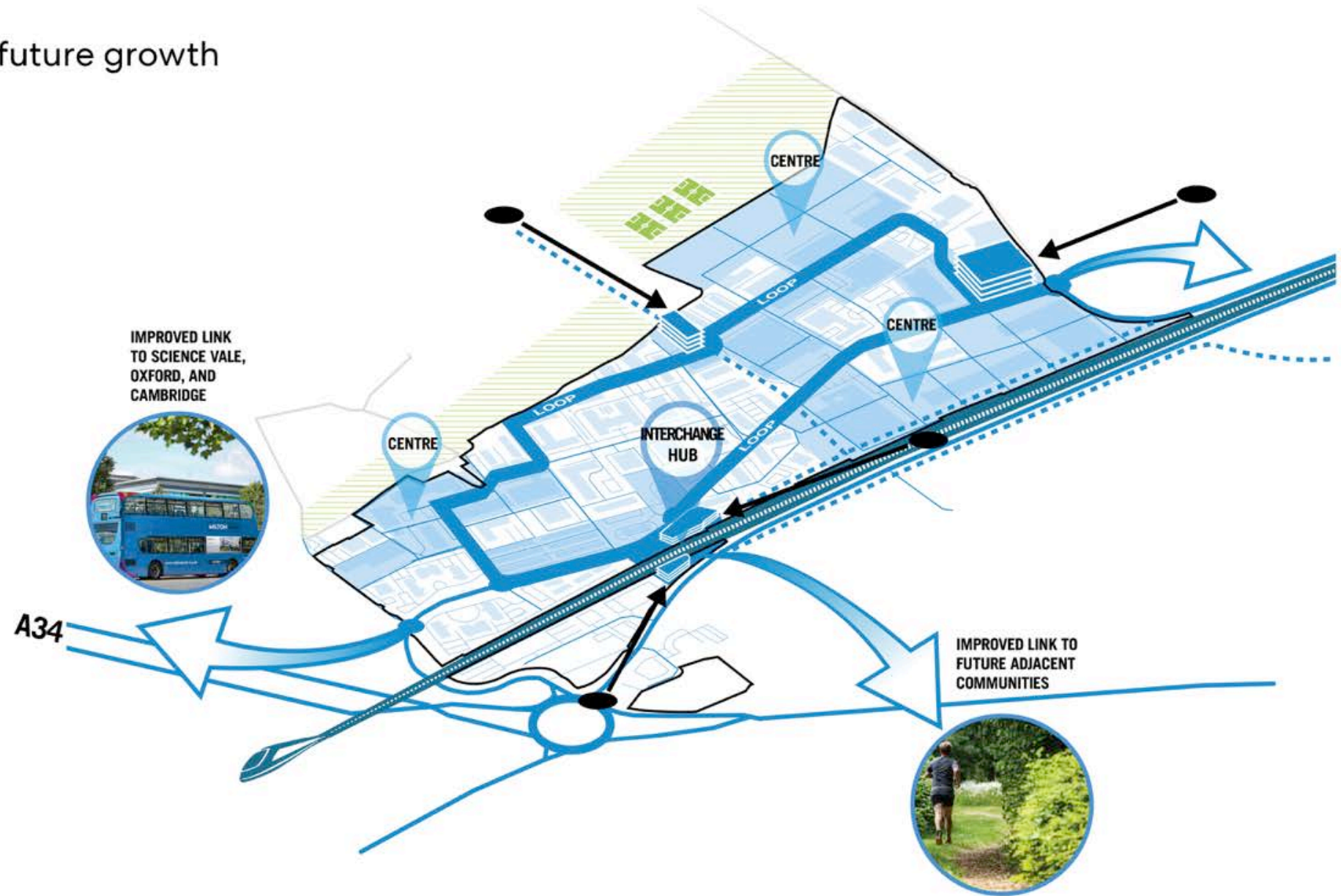
Data Source: Milton park Vision 2040 Survey/
OS Local Map / Strava Heatmap



Masterplan

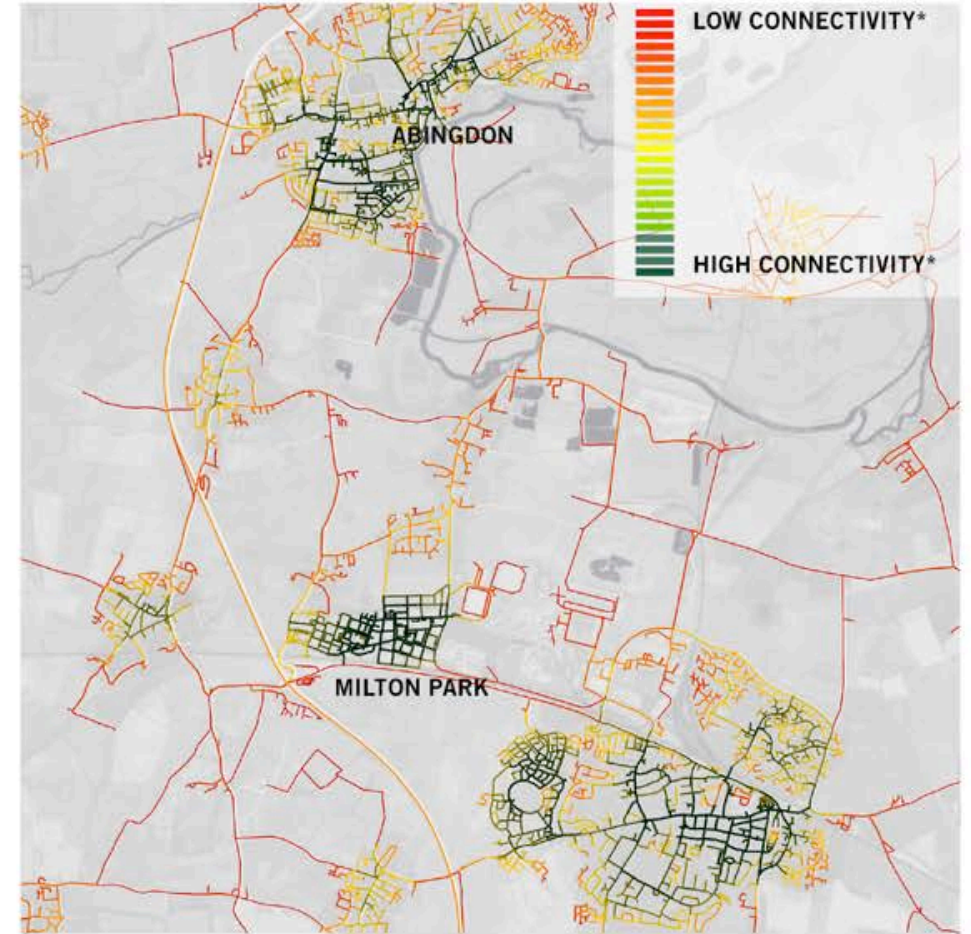
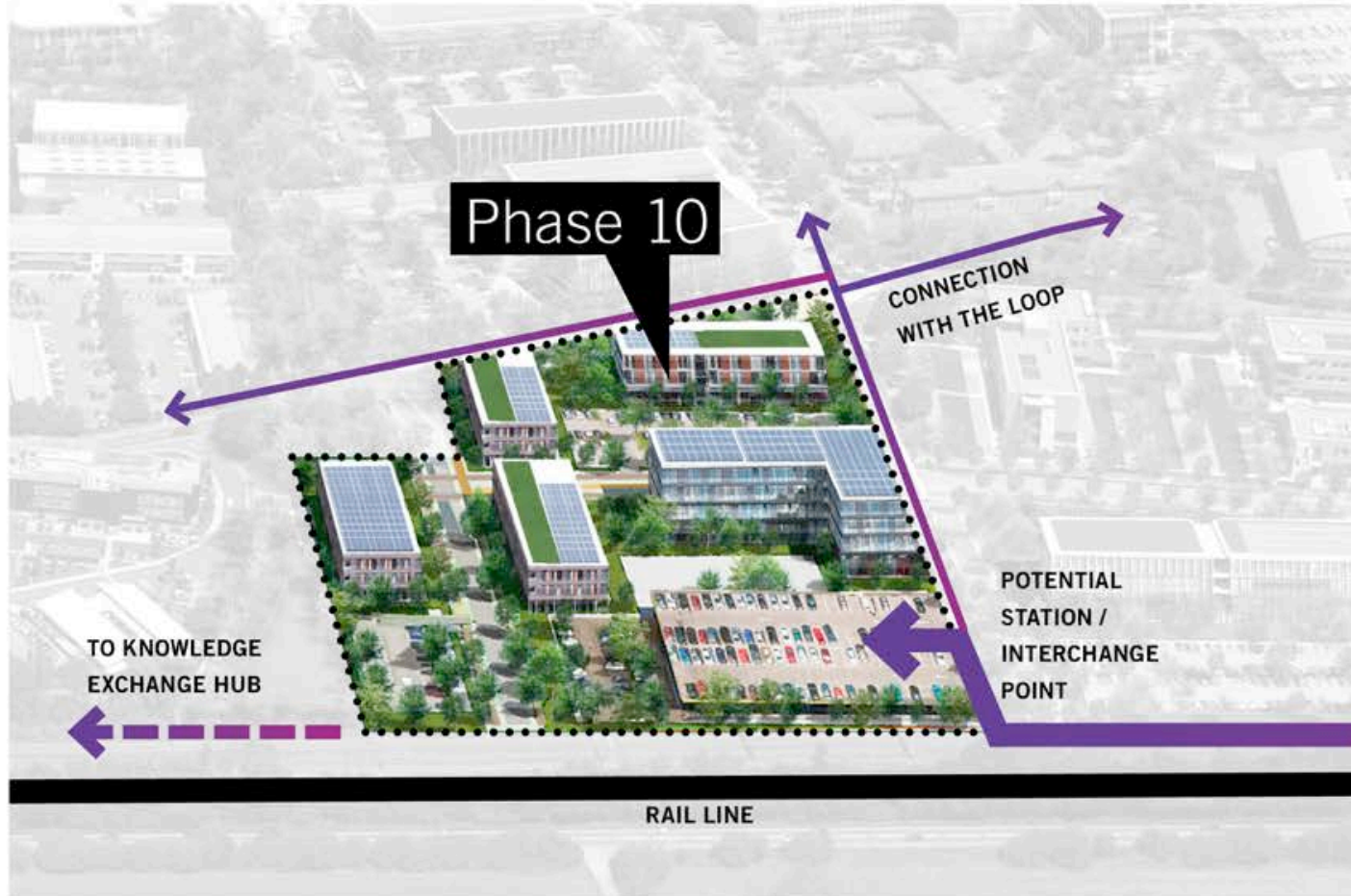
Creating a framework for future growth

-  **ACCESSIBILITY**
-  **STEWARDSHIP**
-  **IDENTITY**
-  **EXPERIENCE**
-  **ADAPTABILITY**
-  **IMPLEMENTATION**



Sustainable Growth

Applying Design Principles



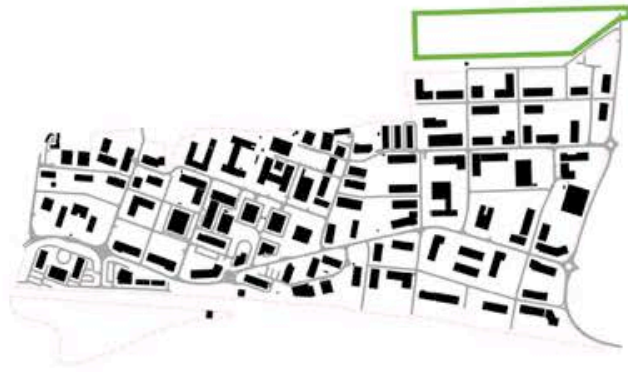
*Connectivity calculated as length on the network within a walkable radio.

Source: Cooper, C., Chiaradia, A., Webster, C. (2016) Spatial Design Network Analysis, Cardiff University, www.cardiff.ac.uk/sdna/

Resiliency

Landscape Identity

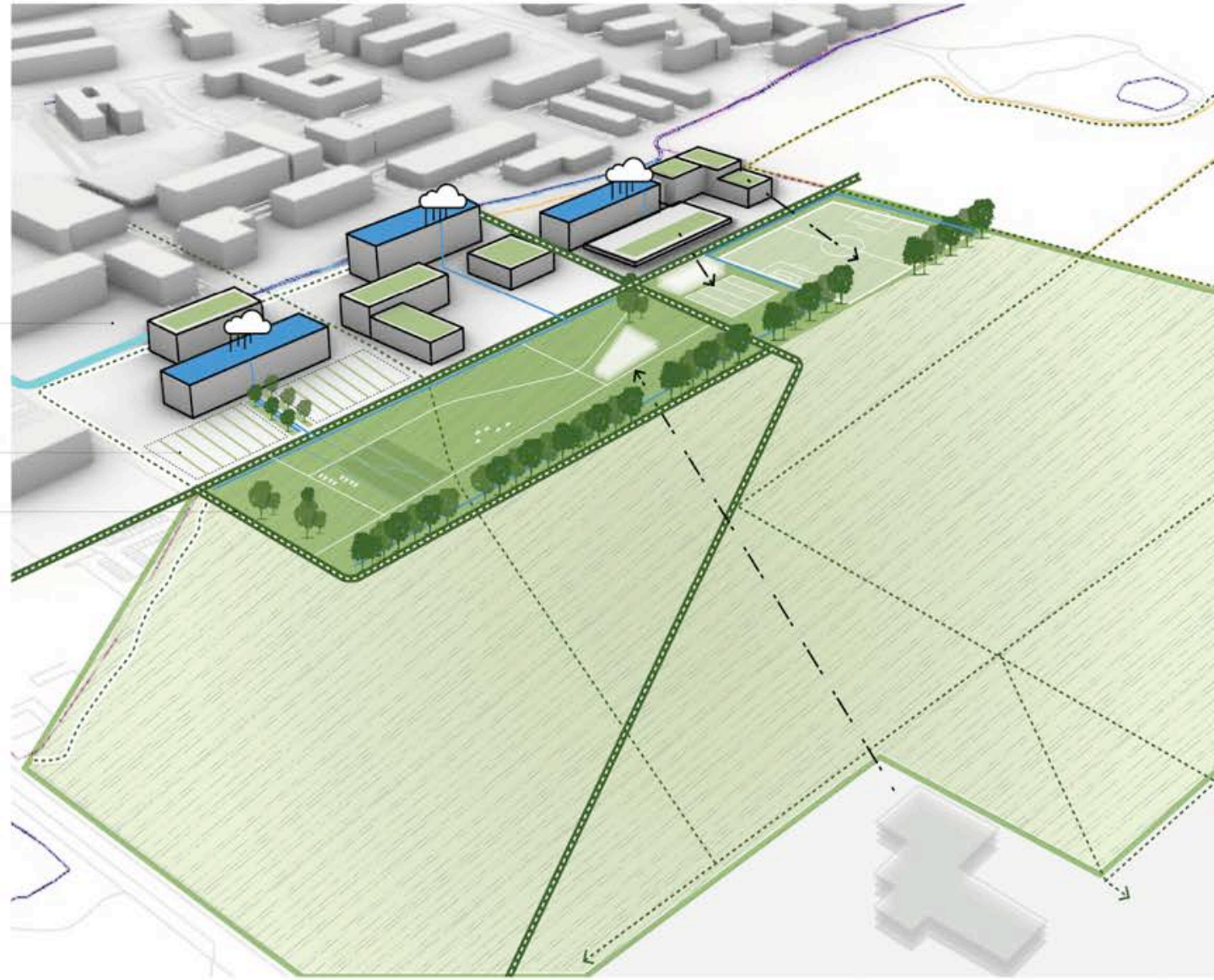
Maximize landscape value
Community engagement “changer”
Increase live-work-play balance
Minimize peak hour effect
Minimize flooding risks



Green Roof

Permeable Parking Surface

Gardens and Amenities



Resiliency

Energy/Resources

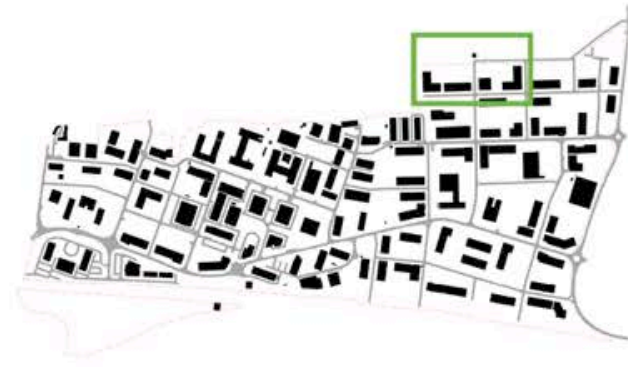
Reduce peak runoff

Reduce external energy demand

Reduce water for demand for non-potable uses

Offset clean energy back to the grid

New energy centre both generator and back-up source



PV / Green Roof

Greywater Collection Tank

District Energy Generation

Existing Watercourse / Open Space



Near Term

Mobility and community projects

New Substation to power future demand



SUPPORT SYSTEMS

CYCLE CONNECTION TO ABINGDON AND OXFORD



A new dedicated lane

SPORTS
Sports and Recreation for employees and community



Micro-mobility options



Safe Cycle Lane



Autonomous vehicle



E-scooter



E-bikes

BIKE TRAILS

THE LOOP

CONNECTING TO
MULTI-MODAL
TRANSIT
AND OTHER FUTURE
DEVELOPMENTS

Aims for the future

Data to inform design

Aim is to reduce single occupancy car mode to no more than 35% by 2040 and 65% of journeys to be sustainable modes.

- Grow cycling mode share to 25%
- Grow bus use to 25%
- Car share, new demand-responsive bus services, autonomous taxis and pods – 15%
- Parking strategy
- Incentives and rewards

ARRIVAL STATION POINT

E-BIKES DOCKING STATION

THE MOBILITY LOOP

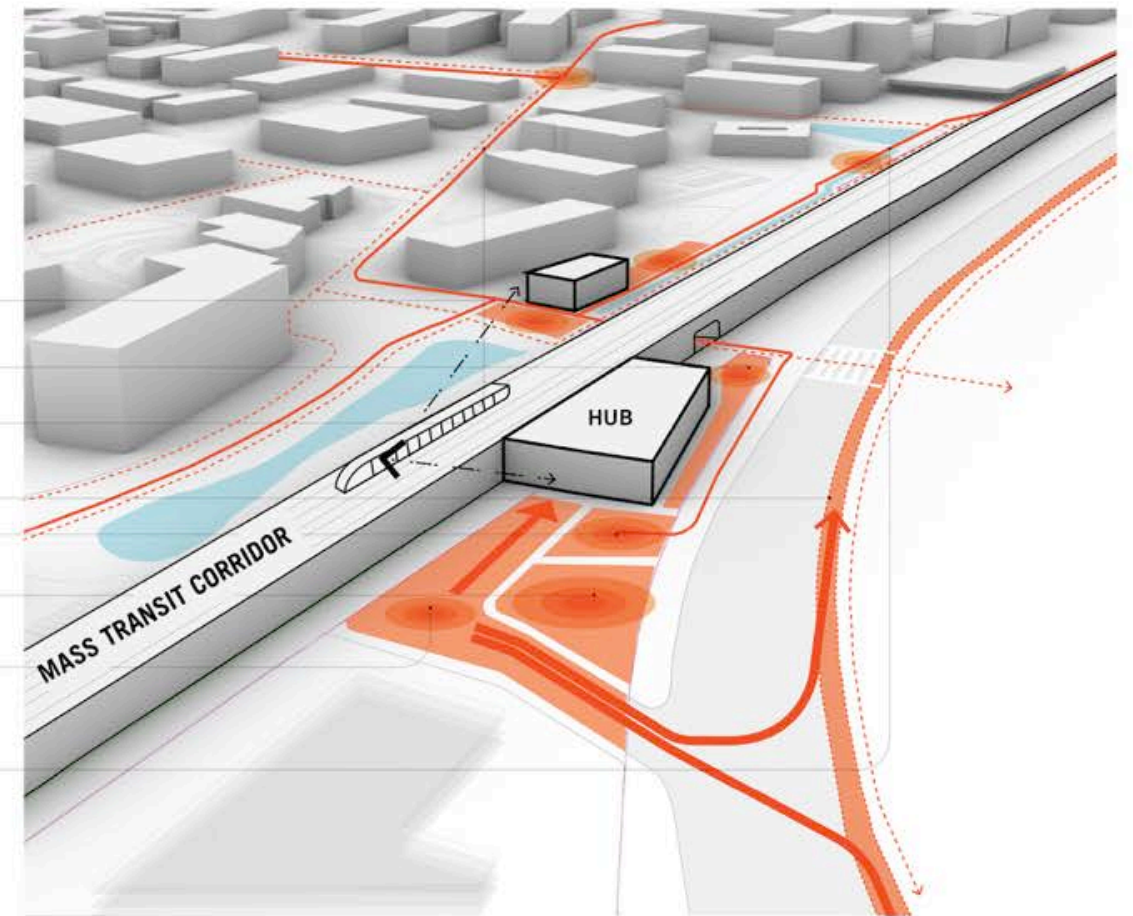
BUS INTERCHANGE

AV PICK UP POINT

SHUTTLE PICK-UP / DROP-OFF

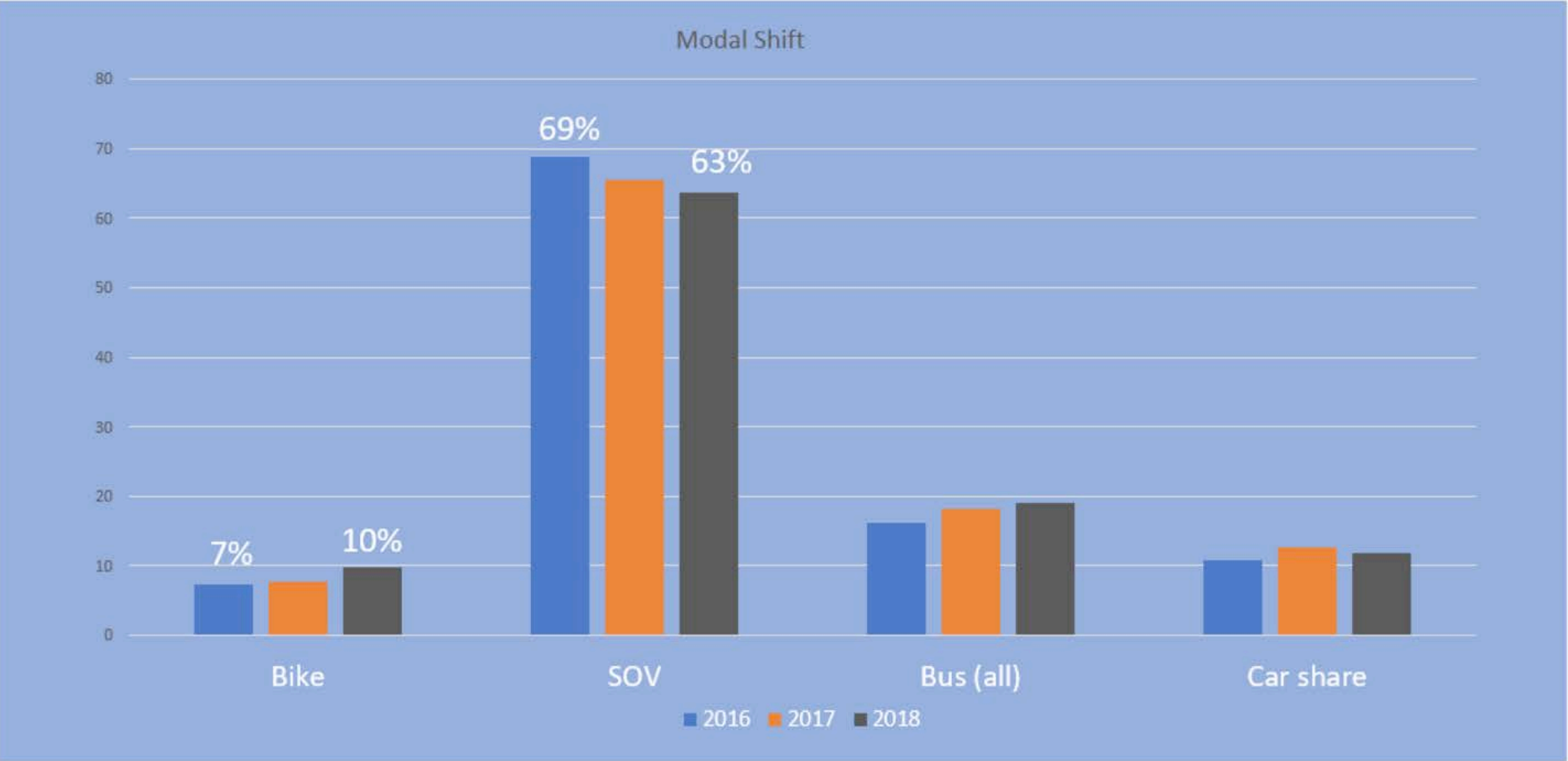
ROBOT PARKING ENTRANCE

DIDCOT TOWN LINK



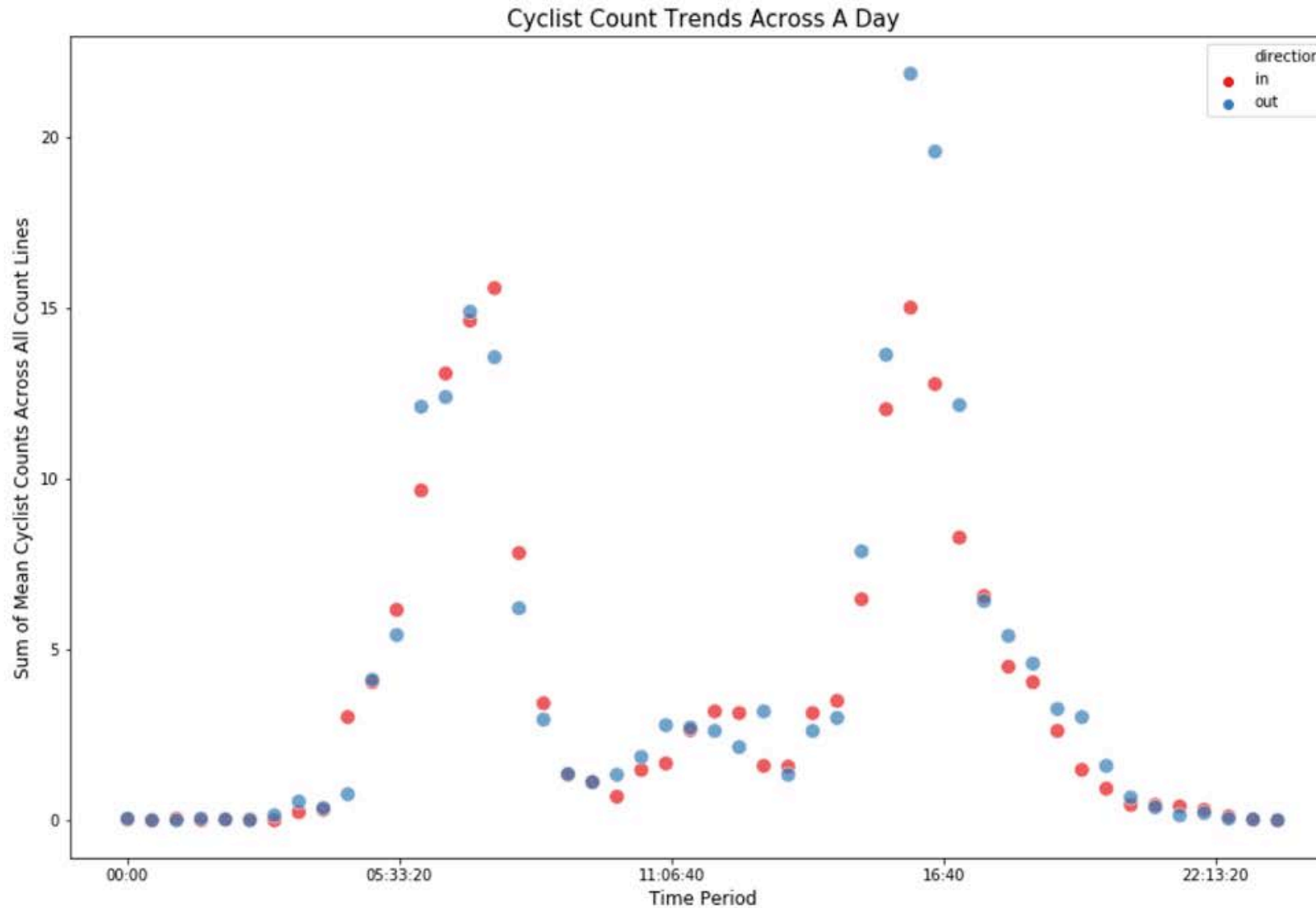
Data to inform design

3 years of travel surveys



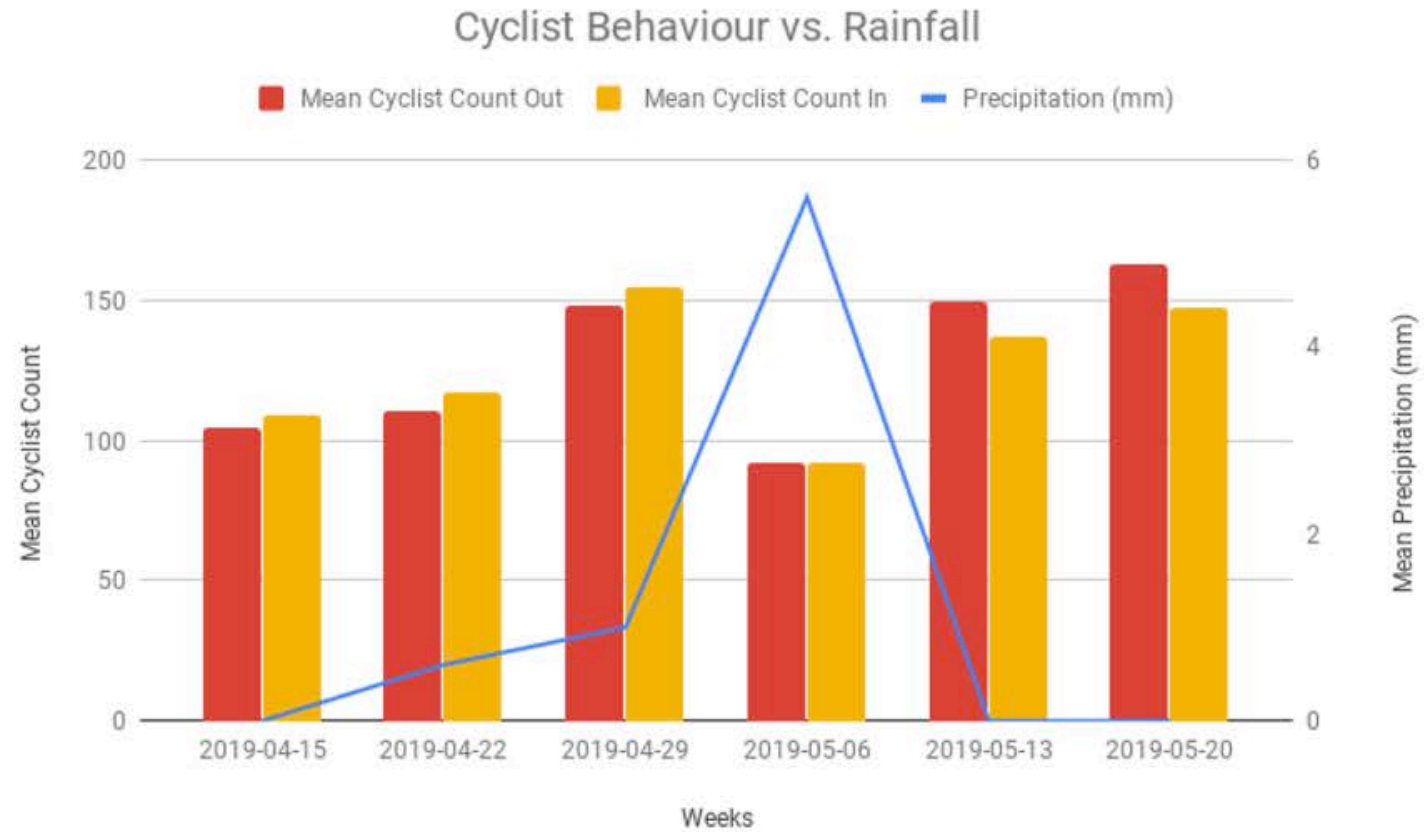
Data to inform design

New sensor data



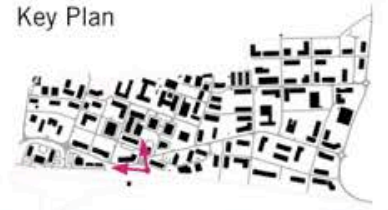
Data to inform management

New sensor data



The Future of Productive Neighbourhoods

Key Plan



The Future of Productive Neighbourhoods

Key Plan



The Future of Productive Neighbourhoods



The Future of Productive Neighbourhoods



The Future of Productive Neighbourhoods

Happier & healthier places to:

Attract and retain employees

Facilitate investment and funding

Strengthen communities & improve productivity

Be a part of the conversation