

ATKINS

# A DIGITAL APPROACH TO HUMAN-CENTRED DESIGN

SPACES STUDY DAY  
DR CAROLINE PARADISE

23 JUNE 2017



Winner  
Best use of Technology  
2017





**DIGITAL...DATA?**





**ANALOGUE . . . HUMAN EXPERIENCE?**



**ATKINS**

# 'PERSONALISED' EXPERIENCE

## SHOPPING

- ... LOCATION
- ... BUYING TRENDS
- ... FRIENDS//BIRTHDAYS
- ... FACIAL RECOGNITION

## SEARCH ENGINES

- ... LOCATION
- ... POLITICAL INTERESTS
- ... TREND ANALYSIS

## BANKING

- ... IDENTITY INFO
- ... SPENDING PROFILE
- ... SHOPPING TRENDS

## MAPS

- ... CAR ROUTES
- ... SPEED – WALKING/DRIVING
- ... CONTACTS NEARBY

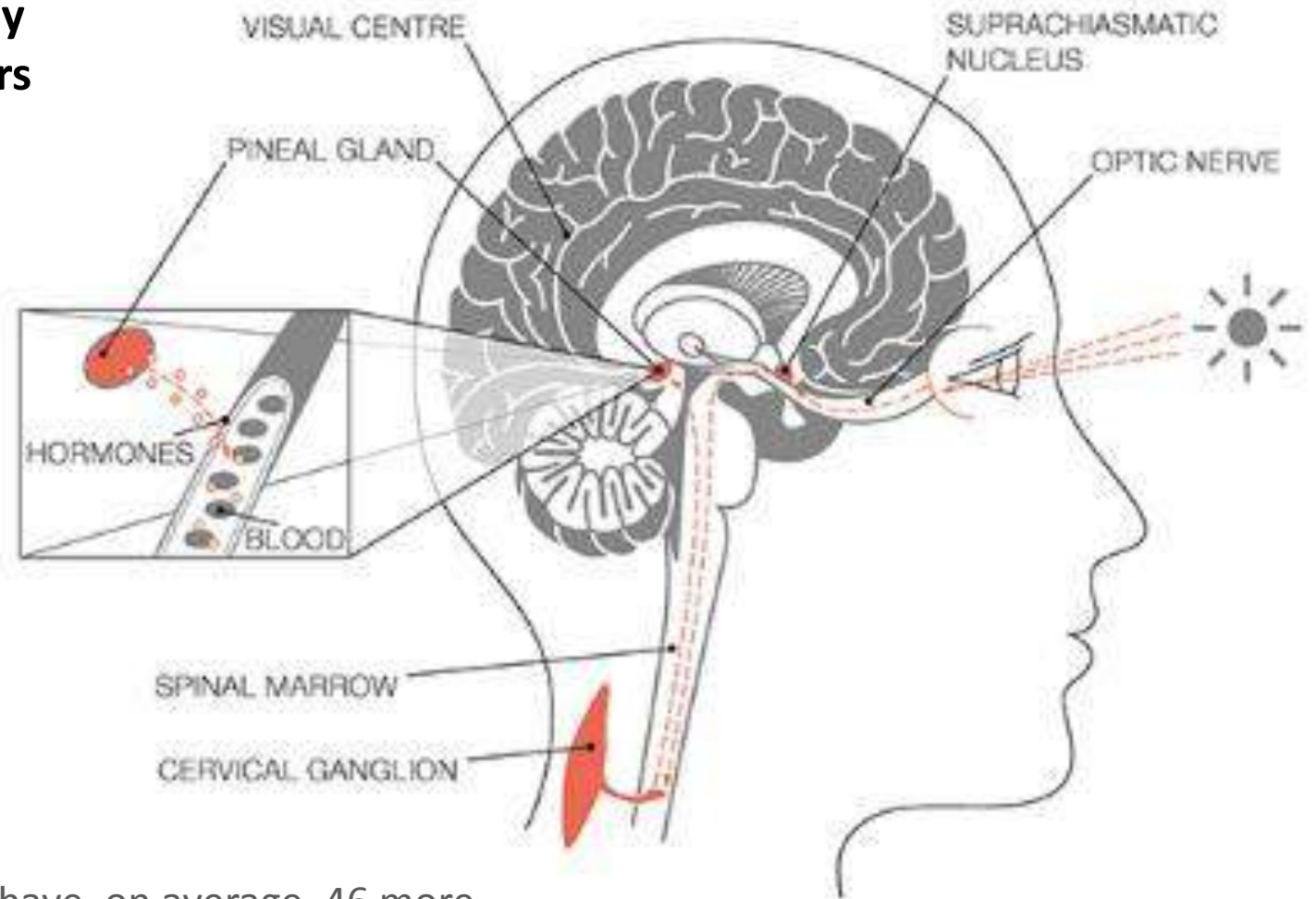




# HUMAN DATA COLLECTOR: LIGHT

Light is an external trigger for a wide variety of biological responses. Our brain registers light as data about the external environment.

- Vitamin D
- Circadian rhythm
- Heart rate
- Sleep quality
- Concentration

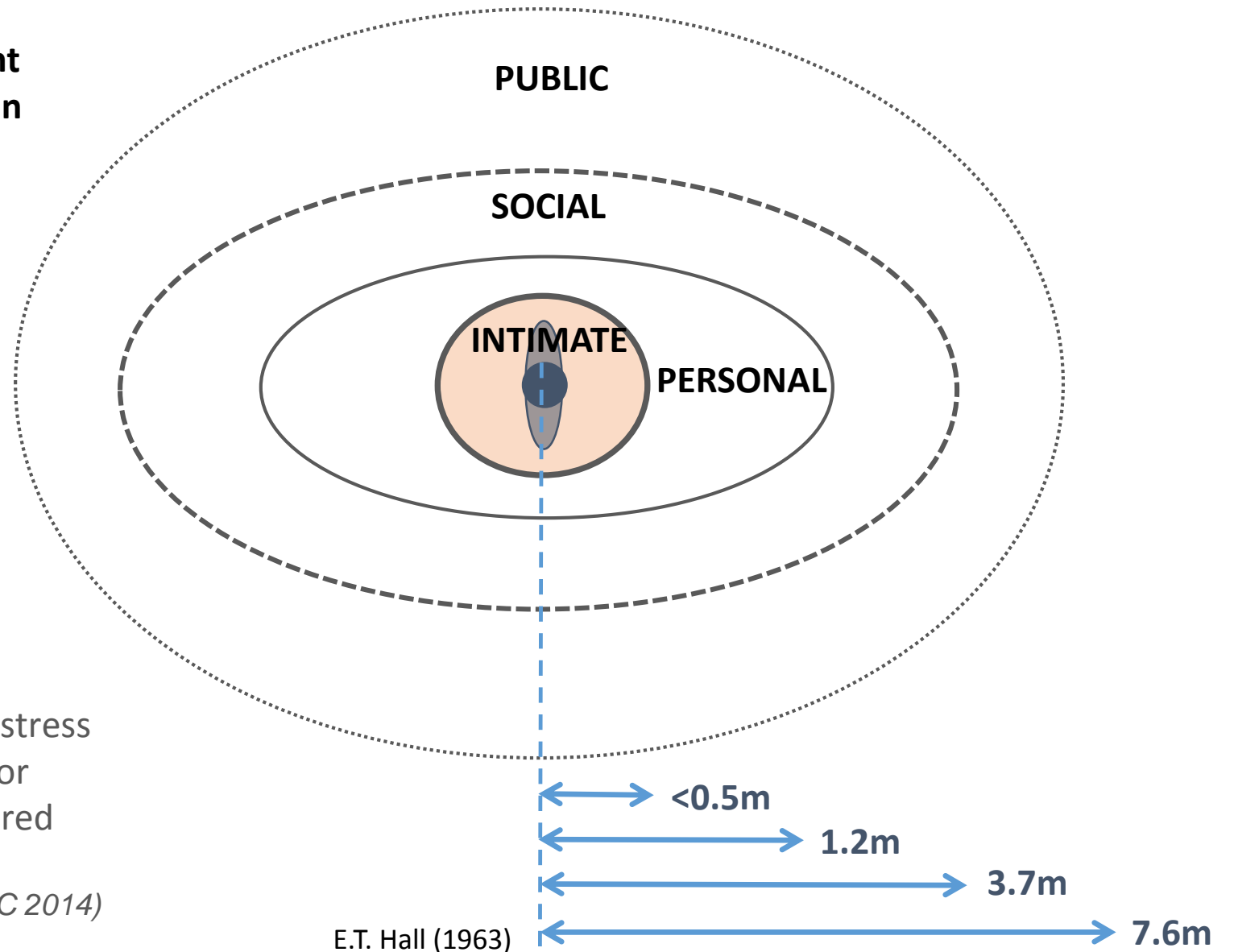


Office workers who sit near windows in offices have, on average, 46 more minutes sleep per night than colleagues without a window.

*(I.Cheung, 2013)*

# HUMAN DATA COLLECTOR: SOCIAL INTERACTION

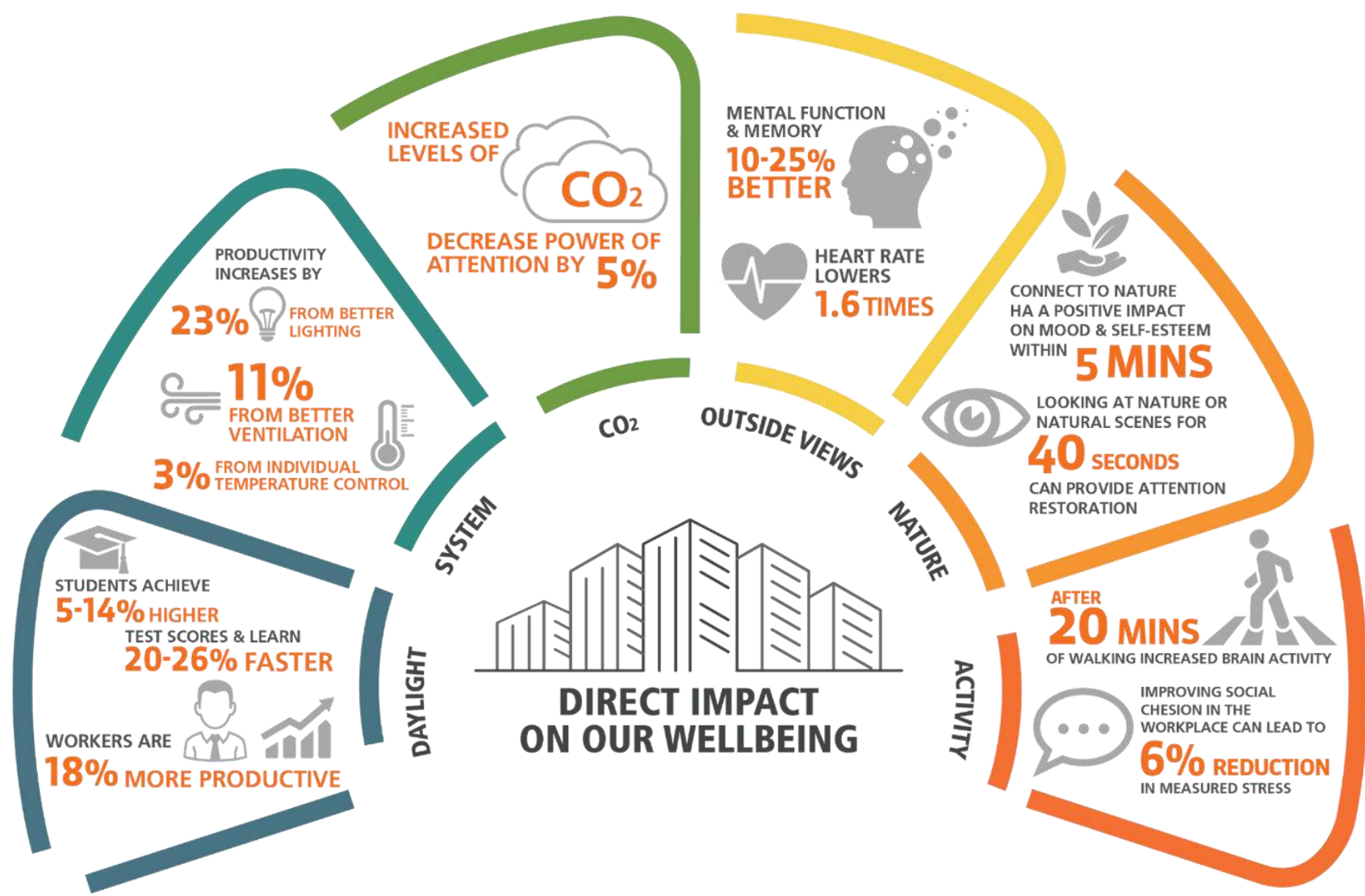
Interaction is valuable for the development of social relationships responds to a human need for belonging.



Strong informal social networks can reduce stress in the workplace. Increasing opportunities for interaction lead to a **6% reduction** in measured stress.

*(Health, Wellbeing and Productivity in offices, WGBC 2014)*

# WELLBEING: ENVIRONMENT MATTERS



# ATKINS' HUMAN CENTRED DESIGN

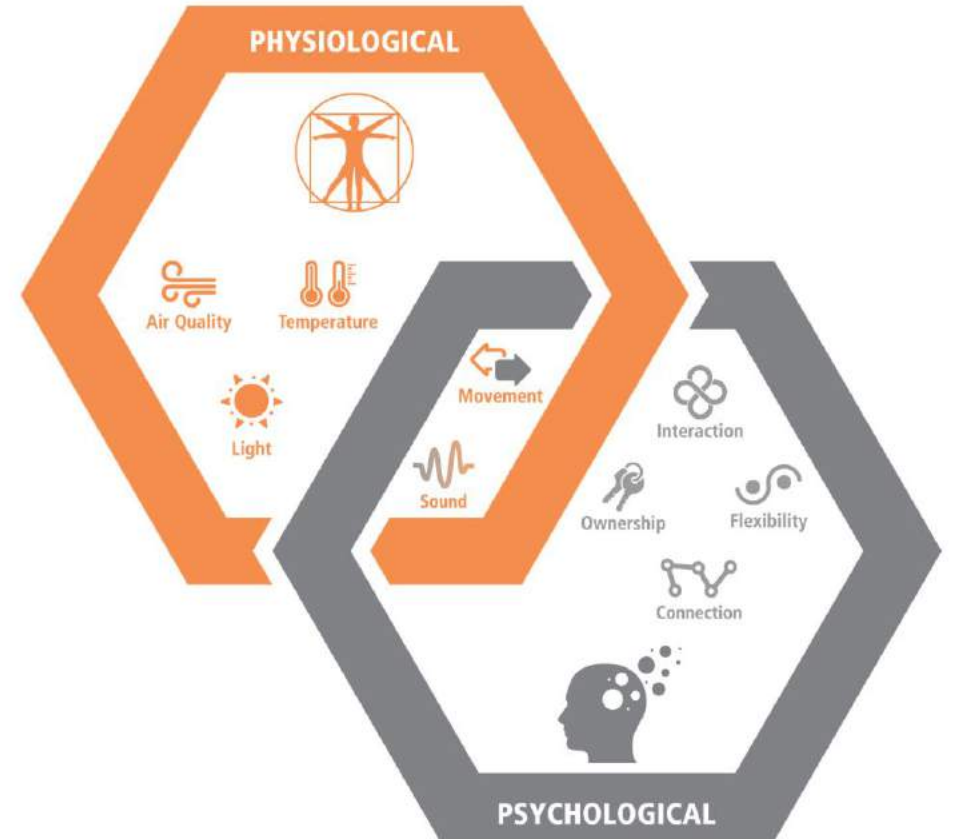
## WHAT DOES IT DO?

Uses technology to put wellbeing at the heart of design decision-making.

## HOW DOES IT DO IT?

By objectively quantifying design impact on user experience through:

1. Defining a bespoke wellbeing brief
2. Measuring design proposals in relation to capital cost, energy in use, and wellbeing





# DEFINING WELLBEING



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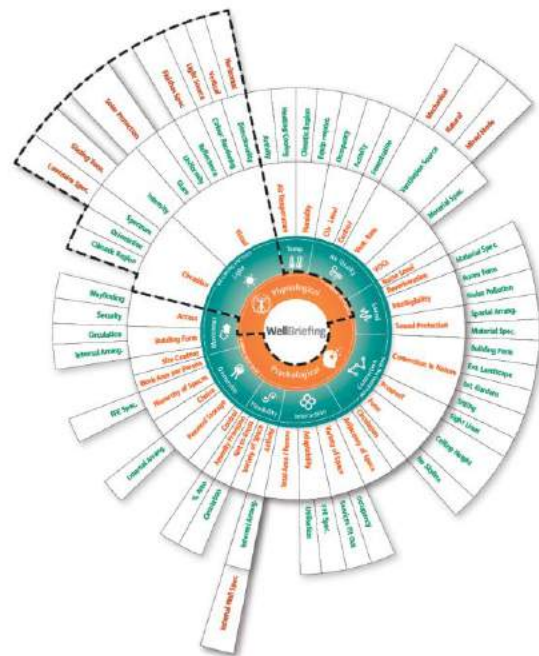




# DEFINING WELLBEING



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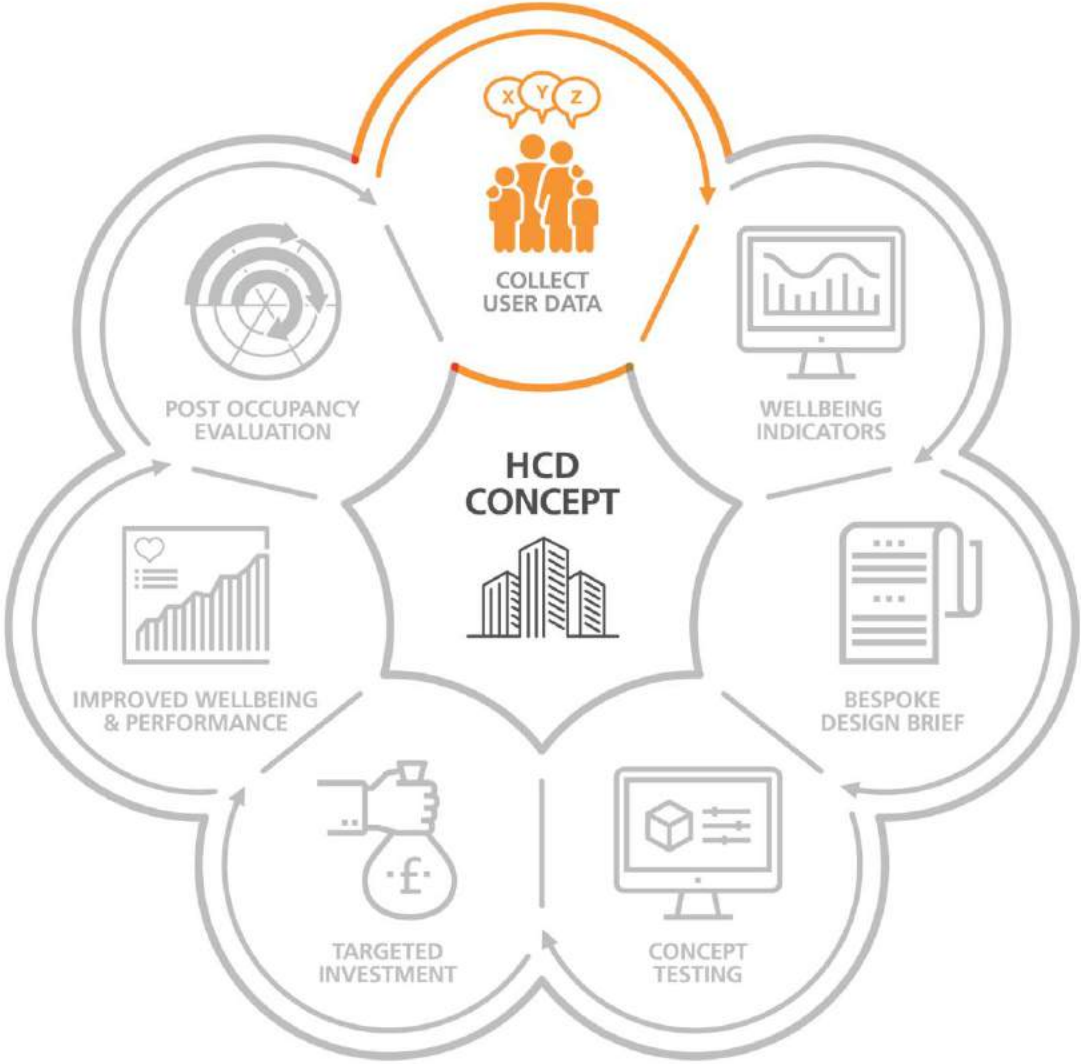
- Human Response
- Wellbeing Factors
- Design Parameters
- Detailed Design Parameters
- Design Specification



# THE CONCEPT



# COLLECTING USER DATA





## USER ENGAGEMENT – TRADITIONAL

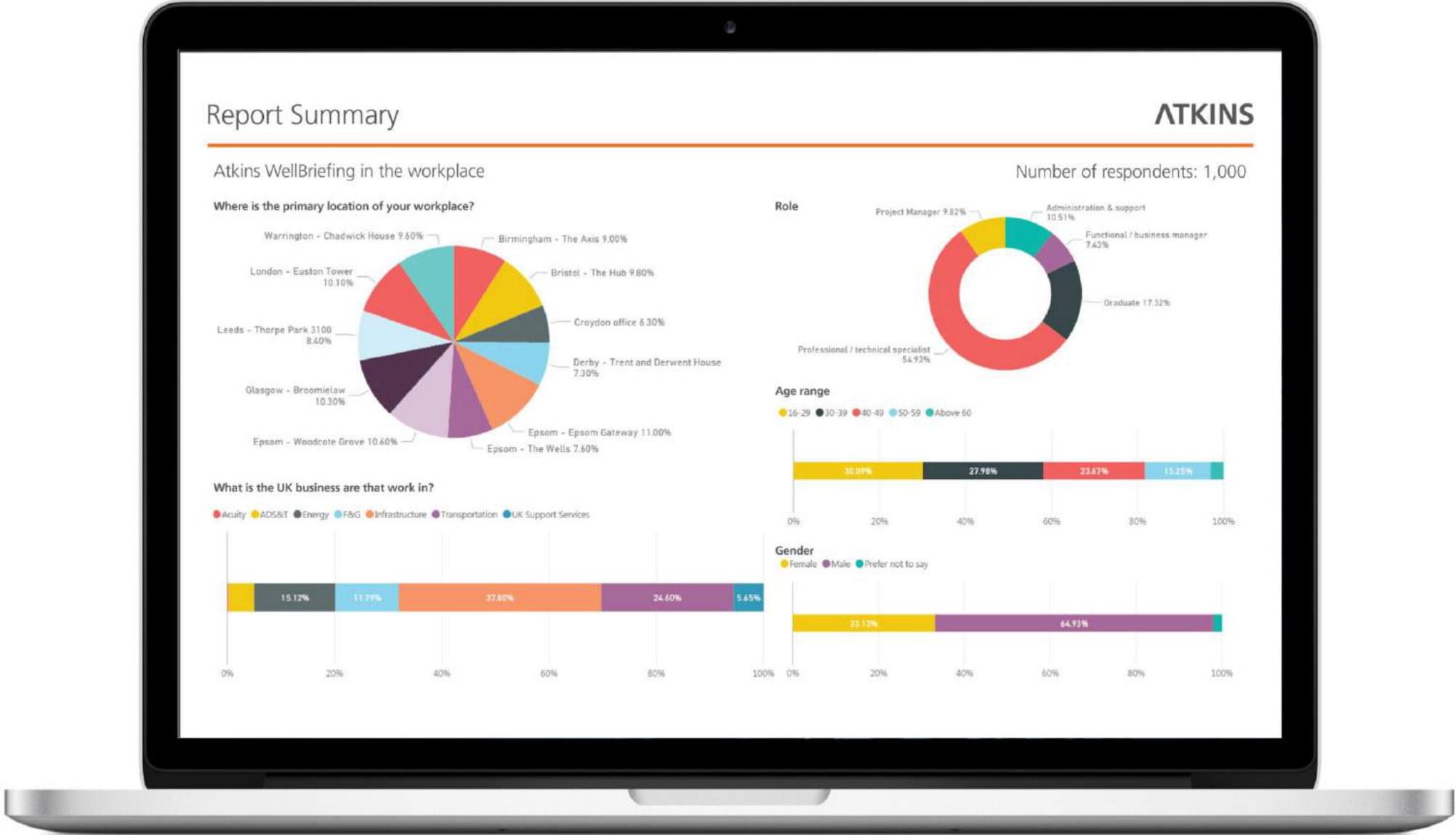


## USER ENGAGEMENT – PERSONALISED

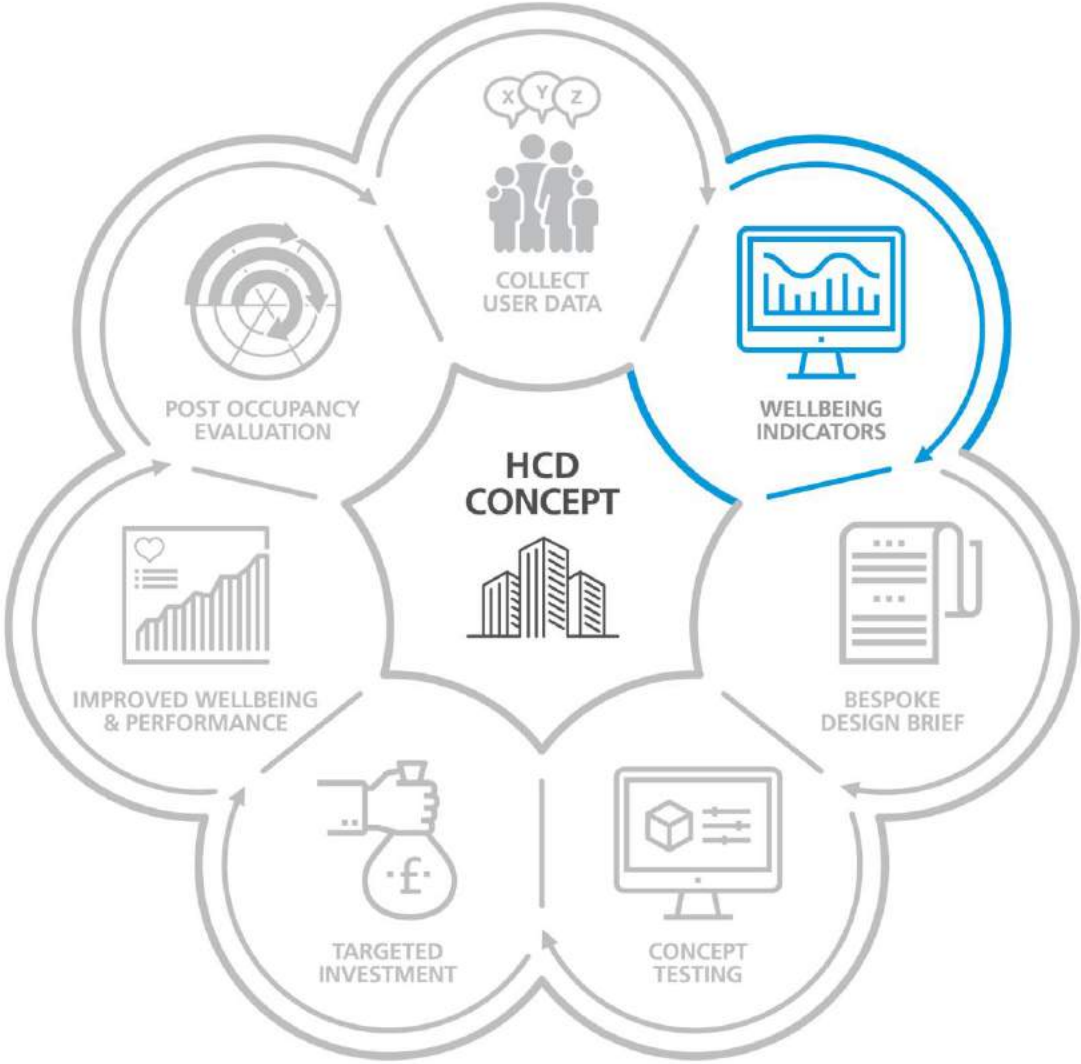




# USER DATA – DEEP AND BROAD ANALYTICS

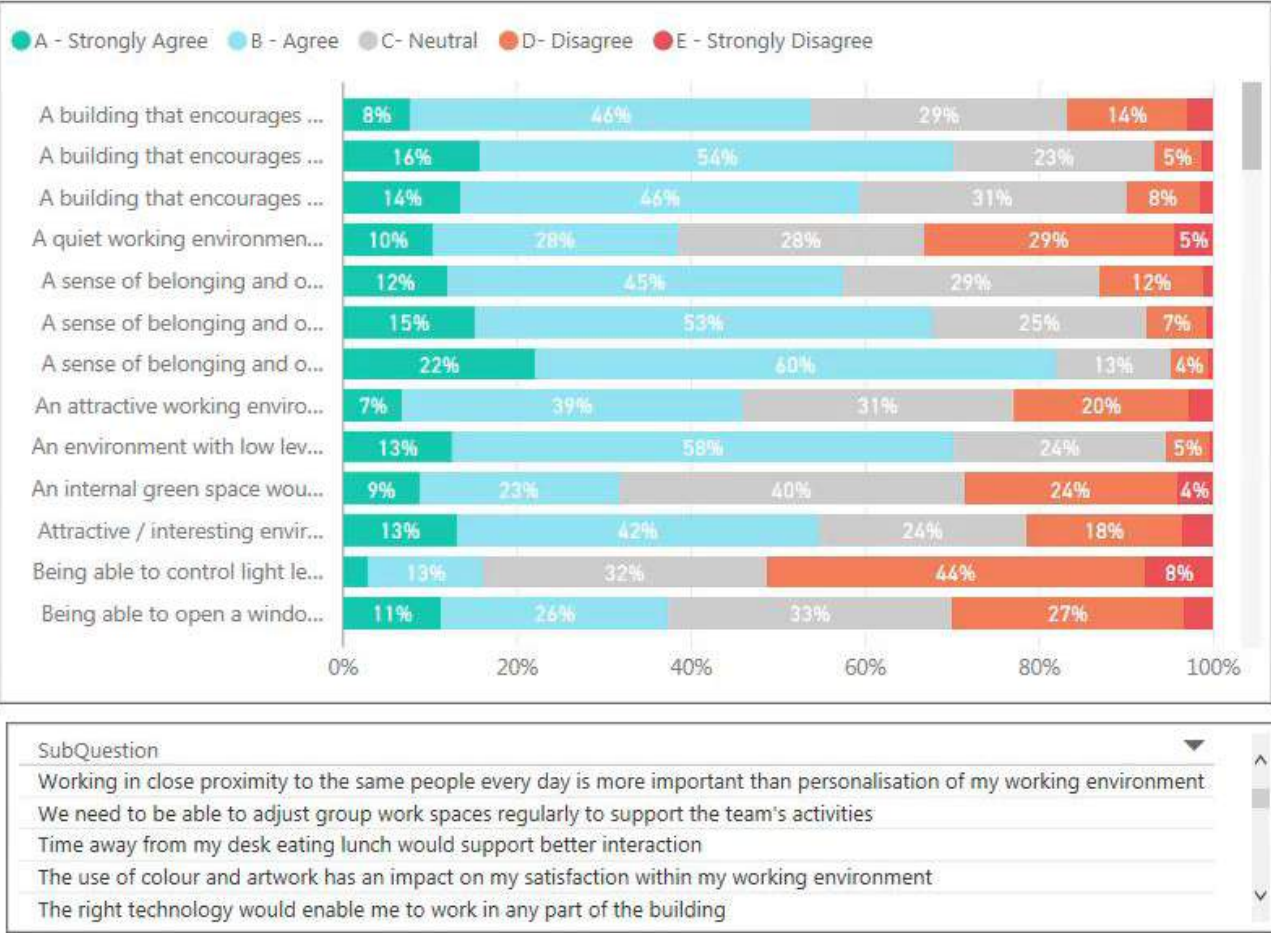
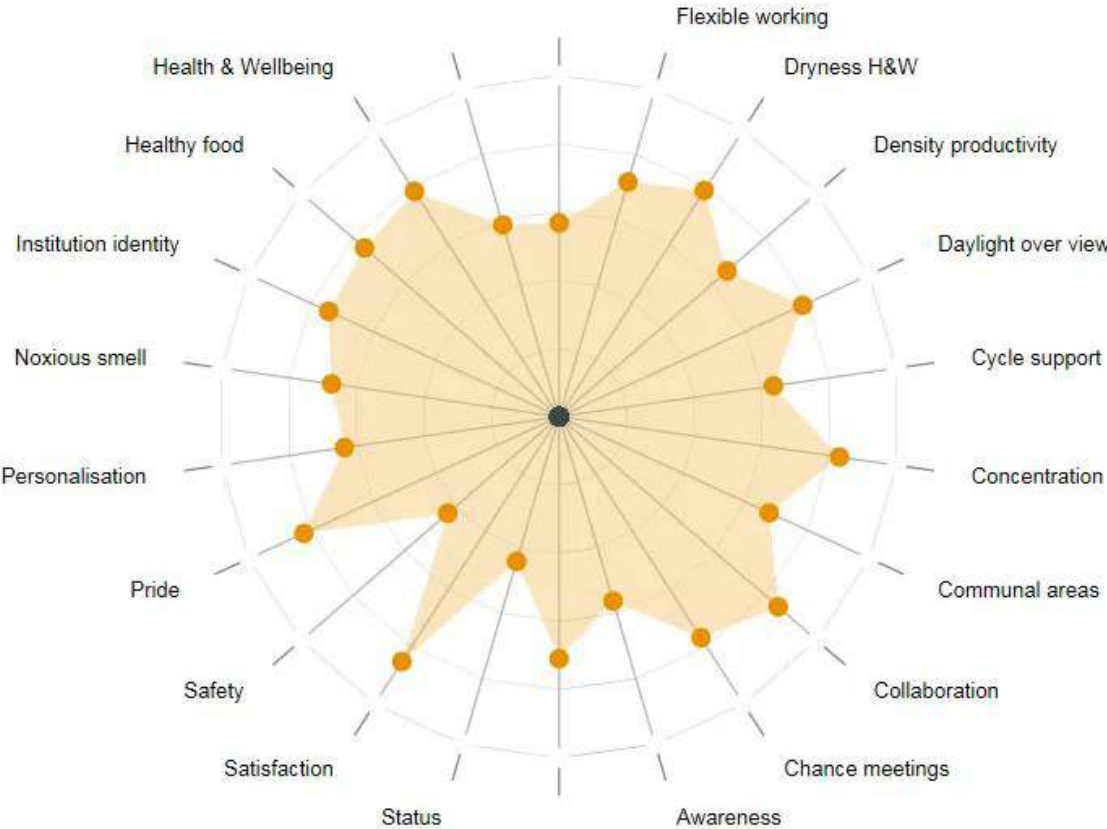


# WELLBEING INDICATORS

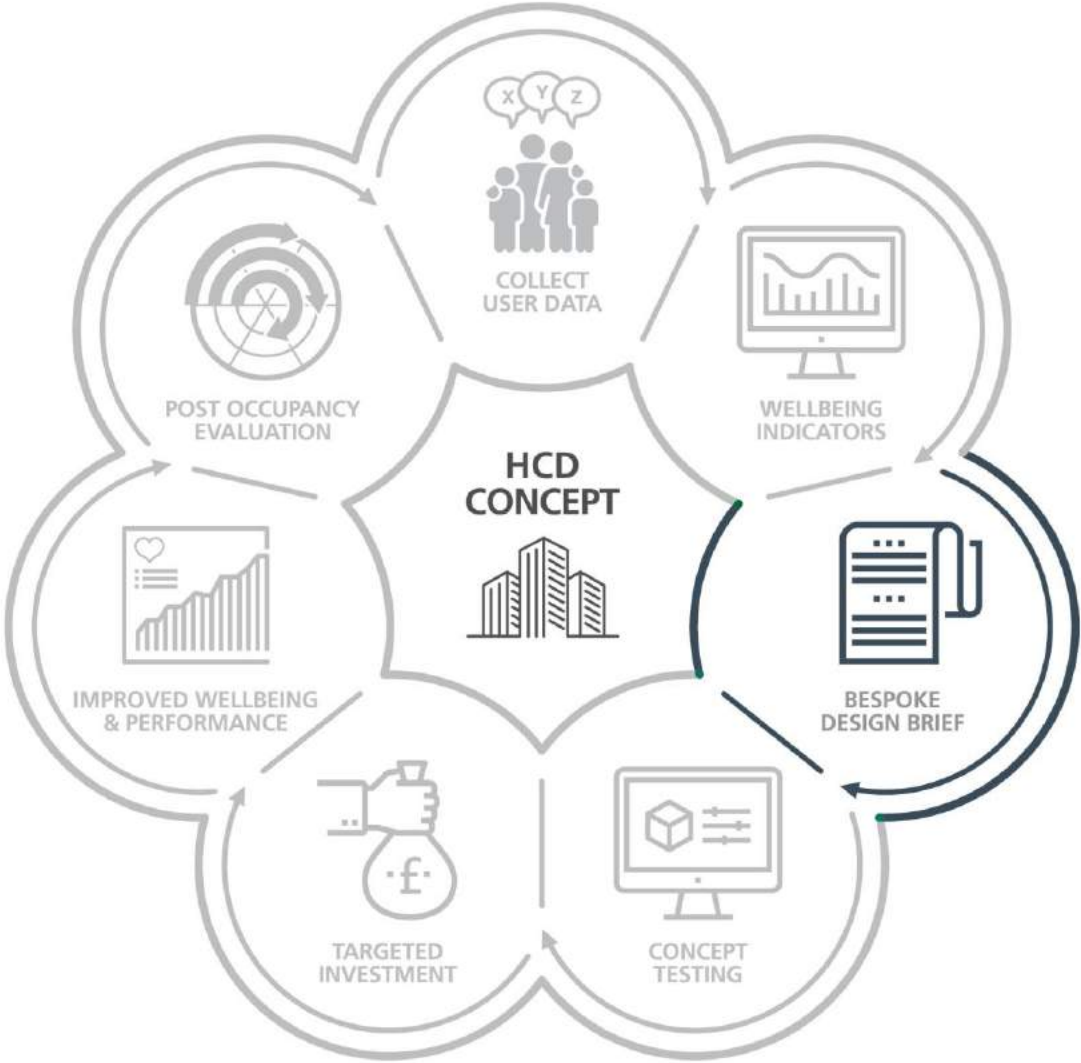




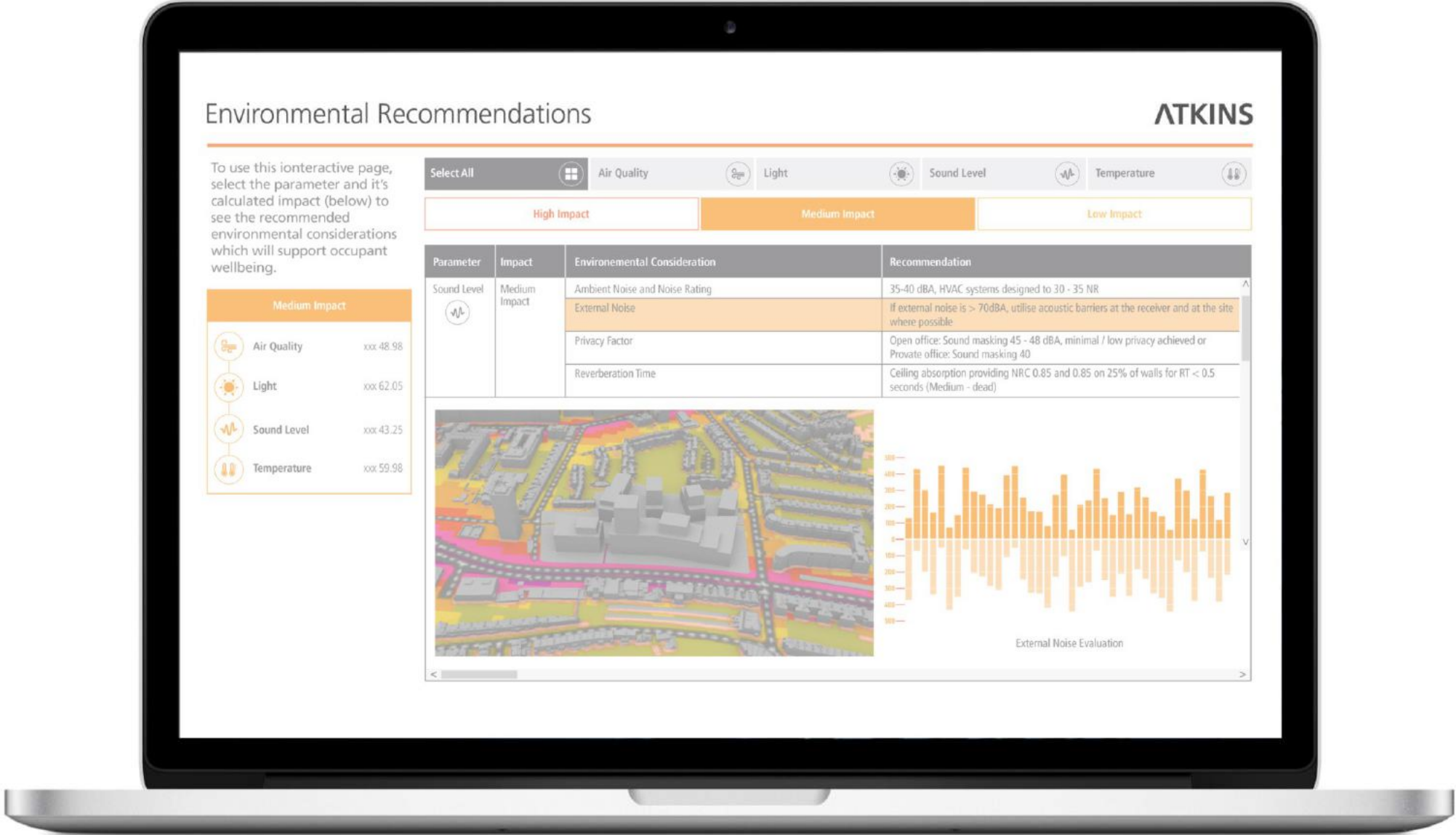
Parameter Overview



# BESPOKE DESIGN BRIEF

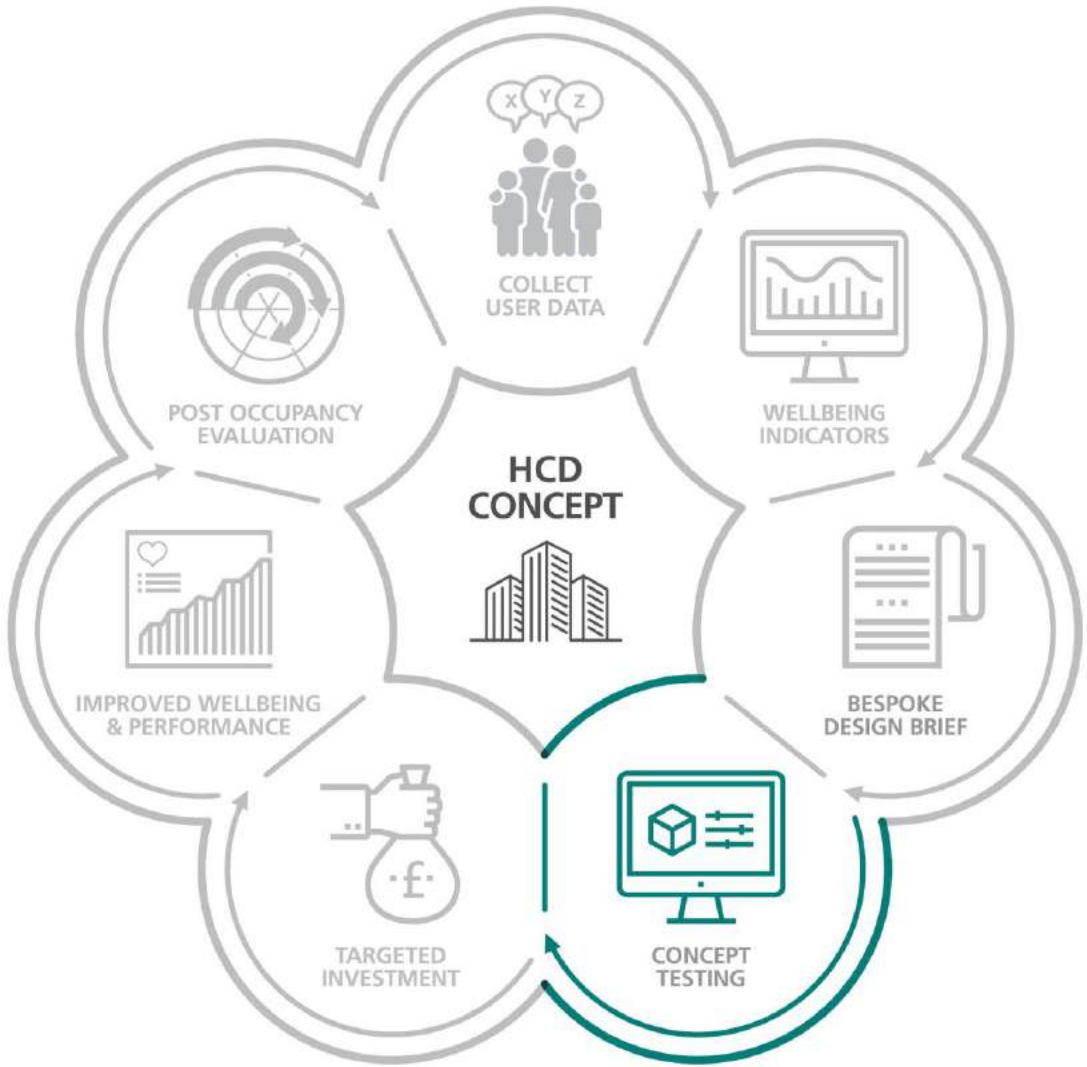


# BESPOKE DESIGN BRIEF

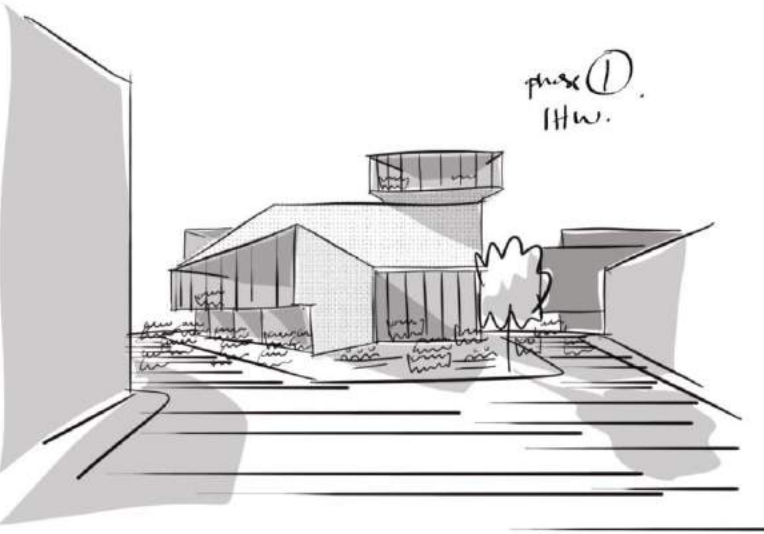




# DESIGN CONCEPT TESTING



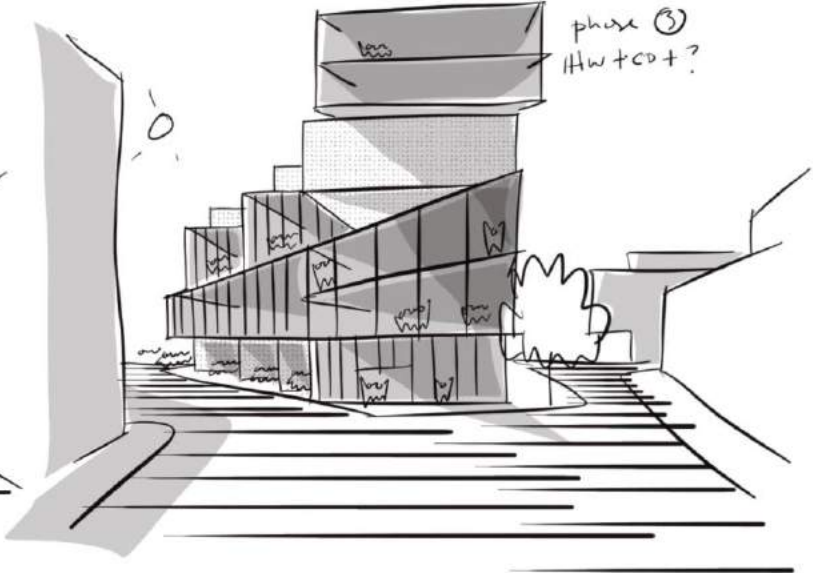
# DESIGN CONCEPT TESTING



Option 1

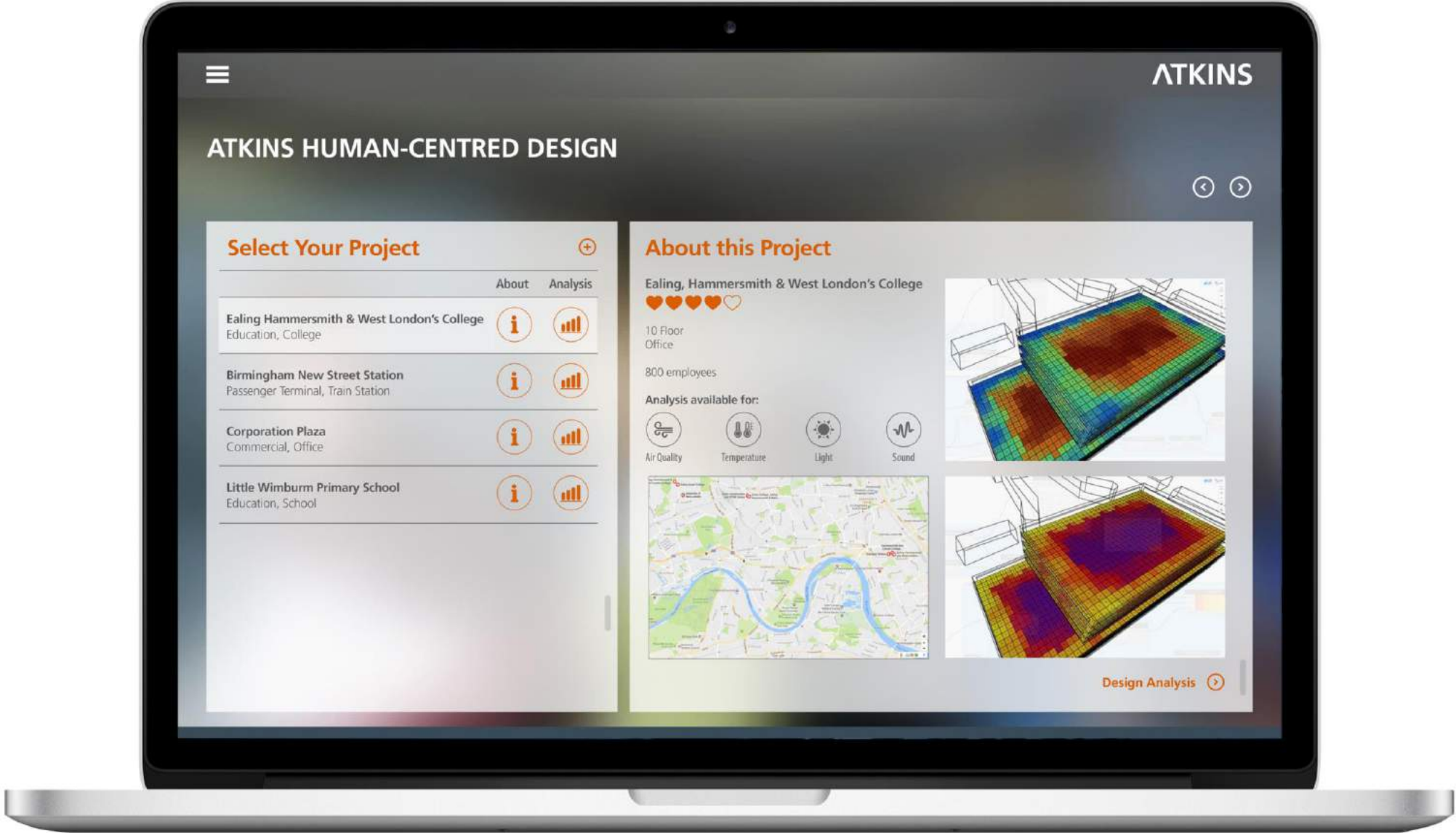


Option 2



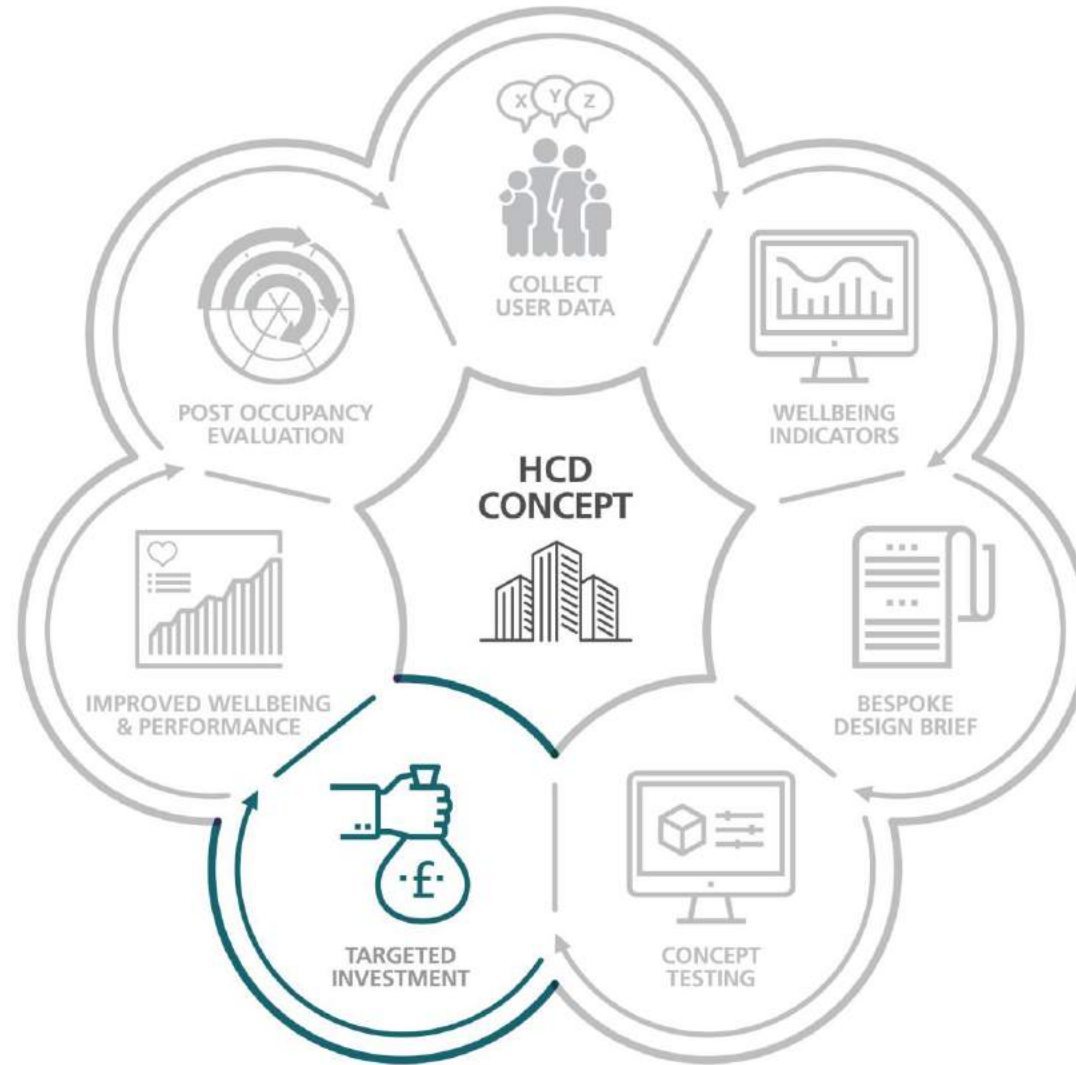
Option 3

# DESIGN CONCEPT TESTING





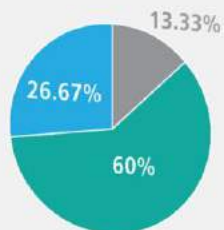
# TARGETED INVESTMENT



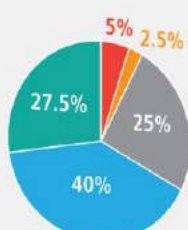


## DIRECT ACCESS TO NATURE

Direct access from where I am working to the outdoors world improve my health & wellbeing



Academic Staff



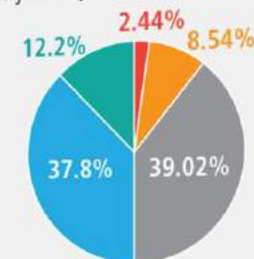
Non-academic Staff

Strongly Disagree  
Disagree  
Neutral  
Agree  
Strongly Agree

## INFLUENCE OF NATURE AND NATURAL MATERIALS



Nature & natural materials in the working environment have an impact on my ability to connect



Strongly Disagree  
Disagree  
Neutral  
Agree  
Strongly Agree

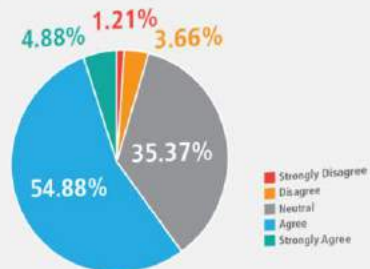
TARGETED INVESTMENT



# TARGETED INVESTMENT

## VISUAL CONNECTION SUPPORTS COMMUNITY

Being able to see the activities of others in the building supports a sense of community



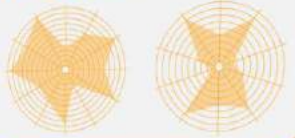
## SPACE TYPE FLEXIBILITY

I would be willing to move to a different location in the building with a sound level that suited my working needs





RECONFIGURE  
SPACE TO  
MEET NEEDS



NATURAL  
LIGHT



CONNECTED  
TO NATURE



SENSE OF  
BELONGING



IMPROVED WELLBEING & PERFORMANCE

## IMPROVED WELLBEING & PERFORMANCE

**“Using WellBriefing has taken us away from the basic dialogue we often have with staff. Instead we’re having a more mature dialogue around mixed use and flexible spaces.”**



**Tim McIntyre-Bhatty**  
Deputy Vice Chancellor at Bournemouth University



# POST OCCUPANCY EVALUATION

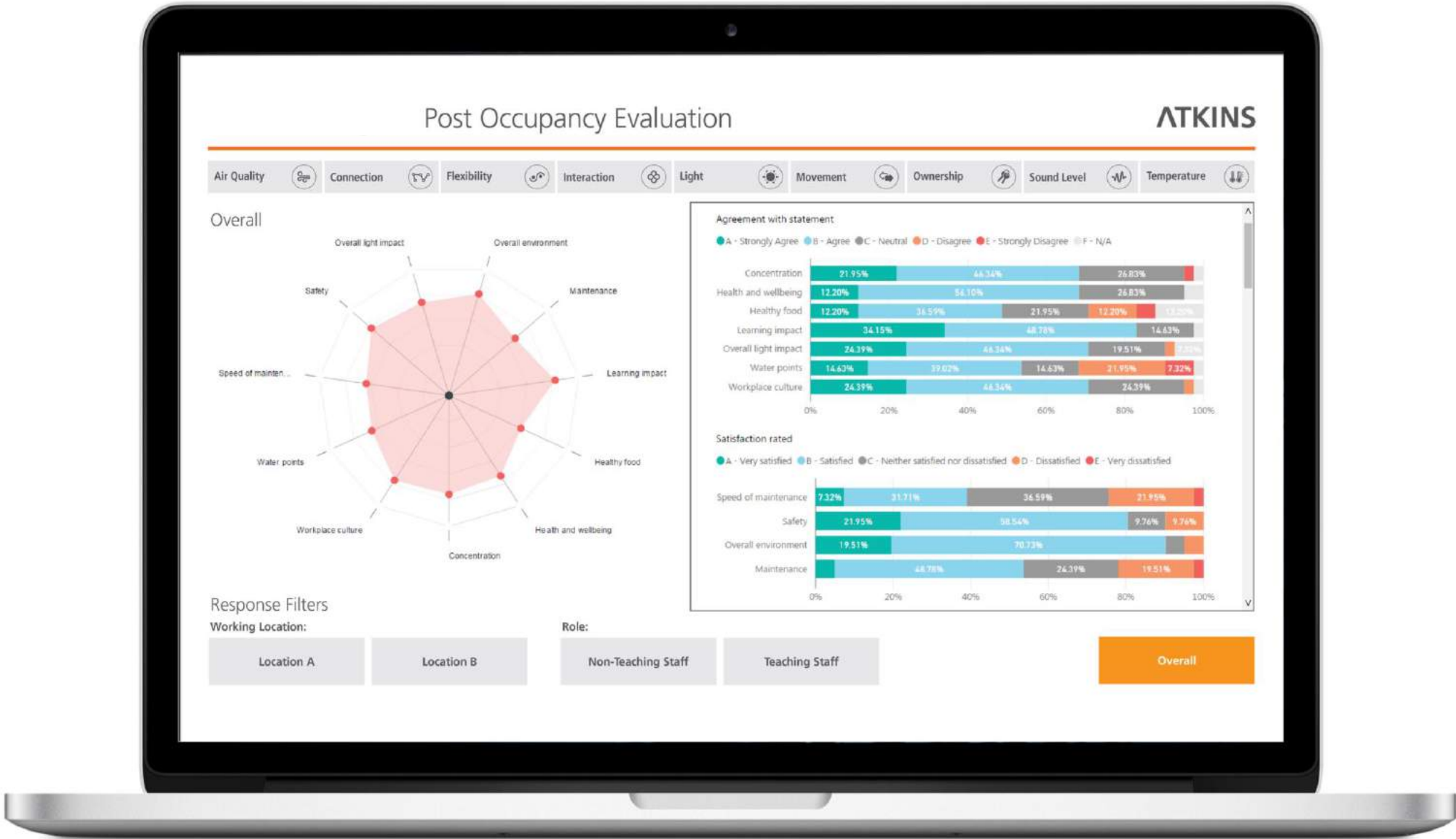




# POST OCCUPANCY EVALUATION



# POST OCCUPANCY EVALUATION





# VIRTUOUS CYCLE





# QUESTIONS



Light



Temperature



Air Quality



Sound



Movement



Ownership



Flexibility



Interaction



Connection



**ATKINS**  
HUMAN CENTRED DESIGN