

# Workplace & Wellbeing

What aspects of workplace design are most important to people's wellbeing?

A research study



Royal College of Art

**THE HELEN HAMLYN  
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# Foreword



One hundred and fifty years after the birth of the modern office as a by-product of the industrial age, we are still searching for the right balance between management efficiency and employee wellbeing.

For a long time, the considerations of organisational management were prioritised over individual needs as a basis for business success. Today, however, such assumptions are being seriously challenged. Indeed there is growing consensus in the knowledge-based economy that organisational purpose cannot be served effectively if the workforce is disengaged and dispirited in mind and body.

Workplace wellbeing has risen up the agenda inside organisations large and small, in the UK and internationally; and workplace design has been widely identified as a factor in making people feel better at and about work.

But what aspects of workplace design are most important to boosting people's wellbeing? And does employee participation in the collaborative design processes that shape new workplaces give that sense of personal control that can help raise morale and productivity?

These are the questions that this report seeks to explore. At a time when loss of productivity through mental health issues such as stress and depression is causing consternation in the British workplace, we make no apology for focusing on what really matters to people in the work environment.

Our study suggests that giving a voice to employees in the design of their workspace is one way to ensure that they feel a 'sense of control', essential to personal wellbeing. But we need to know more about ways to engage in co-design and about how deep or widespread participatory practices need to become.

The Workplace & Wellbeing research consortium, led by a combination of academic expertise at the Royal College of Art and deep practice knowhow at Gensler, is well placed to address these issues.

The one-year study described in this report presents new ideas and information in the field, but it is just the start and we intend to work with our industrial consortium of partners to push the frontiers of knowledge further. Please join the dialogue.

Professor Jeremy Myerson  
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This report is based on the findings of a research programme led by Gensler and the Helen Hamlyn Centre for Design at the Royal College of Art. Industry partners: Bupa, Kinnarps, Milliken, RBS and Shell



# Executive Summary

This design research project is set in the context of a 'wellbeing deficit' in the UK workplace that has caused a loss of productivity through sickness and stress. This wellbeing deficit is part of a worldwide trend, leading to unprecedented interest by organisations in ways to improve wellbeing, satisfaction and engagement of employees.

The study was led jointly by the Helen Hamlyn Centre for Design at the Royal College of Art (RCA) with Gensler, the global architectural practice, thus combining the academic knowledge and practice-based skills of the RCA's largest centre for design research with Gensler's expertise in workplace consulting and design.

A review of literature in the field at the outset of the study explored definitions of wellbeing as a balance between personal resources and external circumstances and challenges. A 'sense of control' was identified as an important concept in relation to managing external factors and therefore critical to personal wellbeing.

The study set out to explore which aspects of workplace design are perceived by employees to be important to wellbeing and whether giving greater participation in the design of the workplace environment increases the sense of control and wellbeing of people at work.

The study was conducted in two stages over a period of one year. In the first phase of research, the research team conducted a Scoping Study in four different organisations in London and the south east of England that have undergone different levels of workplace change over the past three years. Thirty interviews were conducted and analysed.

In the second phase of research, a Participatory Design Project was devised with three teams in one organisation in order to test the impact of different levels of design participation (high, low and no participation) on employee wellbeing. Teams worked to create, design and test interventions in the workspace. A validated measurement of mental wellbeing, the Short Warwick-Edinburgh Mental Wellbeing Scale, was used to measure the effects on employees.

Findings from the Scoping Study presented 'a snapshot of change' characterised by an ever-shifting workplace landscape and a relentless squeeze on space. This constant change was seen by employees to worsen their physical and psychological wellbeing. Huge variations in levels of mobility, choice and

flexibility for individuals emerged, with many people feeling excluded from decision-making processes in relation to the work environment.

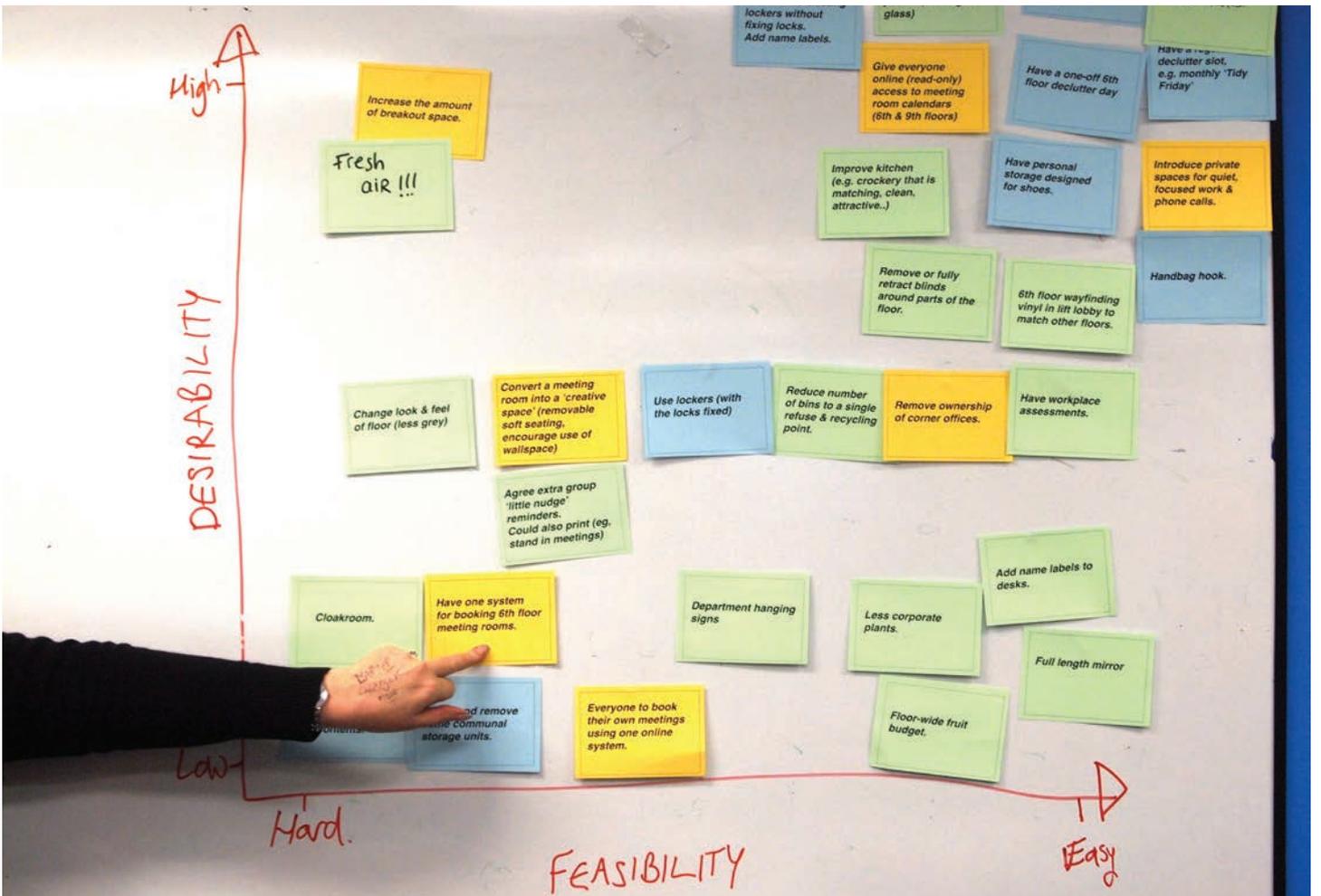
The Scoping Study revealed that employee wellbeing and satisfaction was supported by such workplace factors as a sense of connection, a positive and purposeful environment, a variety of spaces and control over space. People felt better about work when invited to participate in the planning and design of the work environment, and unfairly excluded from decision-making processes when not given a voice.

The Participatory Design Project found that people expressed satisfaction with the staff-designed workspace intervention irrespective of whether or not they had participated in the process. While teams that were given a role in the design of the environment recorded a rise in mental wellbeing compared to the no-participation team, there was hardly any difference in the rise in wellbeing between low and high participation. This suggests that the invitation to participate is more important to wellbeing than the level or 'dose' of participatory activity offered.

Based on the findings of the two phases of the study, the research team built a workplace wellbeing conceptual model that illustrates a necessary balance between the functional and psychological needs of the individual that organisations need to provide in the workplace. The model presents two axes of need, from functional need to psychological need, and from the organisation to the individual.

Four variations of the model are presented in this report: a full alignment model (functional and psychological needs of the individual both properly aligned with organisational purpose); two partial alignment models (either functional or psychological needs unmet); and a non-alignment model (functional and psychological needs both unmet).

The conceptual model has the potential to be developed into a wellbeing evaluation toolkit in the next phase of the Workplace & Wellbeing research project.



# Context

The context for this project lies with a current 'wellbeing deficit' in the workplace. Loss of workplace productivity through sickness or stress has been well documented and widely publicised internationally.

Absence from work costs the UK economy more than £14 billion a year according to the Confederation of British Industry (CBI 2013). In 2014, around 27.3 million working days were lost in the UK, according to the Health and Safety Executive; 23.3 million of them were due to work-related ill health, predominantly depression, stress, anxiety and musculoskeletal disorders, and just over 4 million due to workplace injuries (HSE 2015).

While physical injuries in the workplace have reduced from a generation ago, mental health problems are now sharply on the rise, costing the UK economy the equivalent of £1,600 per employee according to the UK National Work-Stress Network (2012).

This picture of a 'wellbeing deficit' is

part of a worldwide trend; workplace stress, for example, is rising in countries as diverse as Spain, Mexico, South Africa and India, with the fastest growth recorded in China and the greatest severity experienced by business people in the USA (Regus 2009).

As a result, there is now unprecedented organisational interest in the real costs of actively disengaged employees and in ways to improve workplace wellbeing, satisfaction and engagement (Pangallo and Donaldson-Feilder 2011).

Some of the wellbeing problems that workforces around the world are experiencing can be put down to inappropriate employment policies, inadequate training, insensitive management or unreliable IT systems. But the work environment is also a major interrelated factor in making us 'sick' of work.

## Literature Review

The research team carried out a literature review of research in the field. Since the 1980s, with some important

precedents before, studies in workplace environmental psychology have consistently pinpointed the relationship between physical environment and the experience and performance of workers (Sundstrom 2001).

This body of research has not only focused on such factors as the effects of ambient conditions (temperature, noise, air quality, illumination and so on) and workstations (seating, equipment, personalisation) on the individual, but also the impact of different layouts and types of workspace on groups and interpersonal relations.

As a consequence, we know a lot more today about the broad interplay between workplace design and the psychological processes that can lead to more positive outcomes for the individual (in terms of personal wellbeing, performance and satisfaction) and for the group (in terms of team cohesion and effectiveness).

But what is missing are the frameworks and tools that will help organisations to better understand those aspects

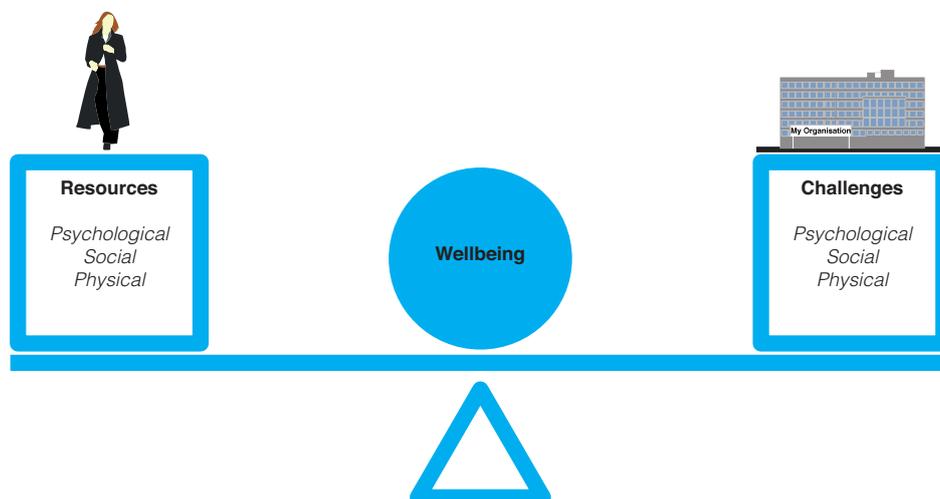


Figure 1: Dynamic model of wellbeing, adapted from Dodge et al., 2012

# Context

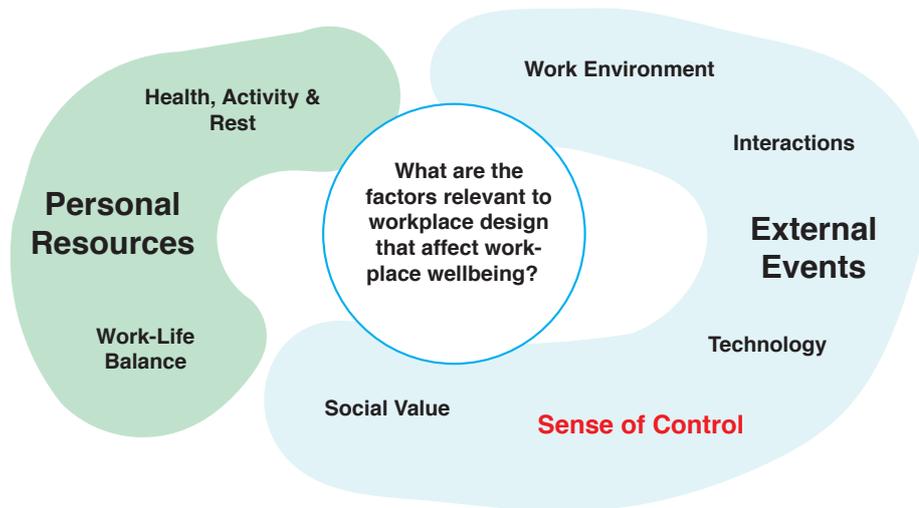


Figure 2: Factors affecting wellbeing at work

of workplace design that are most important to people's wellbeing, evaluate and measure their own position, and make the design decisions that will create healthier workplaces promoting greater comfort and productivity.

Fundamental definitions of wellbeing are central to developing a new approach. One way to describe wellbeing that we found useful was as the equilibrium between a person's own psychological, physical and social resources and external circumstances and challenges. (Dodge et al., 2012).

Personal wellbeing is subjective and dynamic within this model. This encompasses happiness, job satisfaction, freedom from anxiety and feeling worthwhile (ONS: Oguz et al., 2013).

Factors affecting wellbeing at work include: personal resources ('who you are') – your health, activity, level of relaxation and work-life balance; and organisational systems ('where you work') – environmental factors, social value of work, technology and infrastructure, social interactions and relationships, and sense of control. This is based primarily on research by New Economics Foundation (Jeffrey et al., 2014).

Indeed a 'sense of control' was identified within the literature as having the richest opportunities for further design research.

As office design moves away from individually assigned desks to new, more flexible ways of working in activity-based spaces, questions are raised about how workers establish privacy, identity and belonging.

In this context, a sense of control – which is so critical to personal wellbeing – extends to the level of participation that people have in the design and planning of their workplace. The levels of control and empowerment associated with group participation in office design have been connected to both higher levels of productivity (Knight & Haslam, 2010) and a higher degree of psychological comfort (Vischer, 2008).

## Participatory Design

Participatory design or 'co-design' is a growing field. It sees designers working collaboratively with end-users as equal partners to create, design and/or produce ideas, spaces, products, technologies or services.

Participatory design is commonly seen in such areas as community development, public services and urban environments, where asset mapping and co-design approaches help local people to work together to improve their neighbourhood. This creates social capital and community cohesion. It is intended to lead to more citizen-centred results as well as having an intrinsic value for participants who benefit from being part of the process.

These solutions are more sustainable due to a sense of ownership (Ramirez, 2008; Boyle et al 2010).

Co-design processes have application in workplace design. Past research suggests that being consulted, studied or otherwise involved in changes to the workplace has a positive effect on employee wellbeing.

Participatory design also relies on gathering the views of many stakeholders and on broad cooperation to achieve a positive result. This again suits the workplace, which is a community of individuals who may have different, often conflicting, needs, preferences and relationships. Co-design methods promote participation, open discussion and shared decision-making.

Exploring levels of participatory design within the workplace was therefore identified as an appropriate approach to study a 'sense of control'.

# A Sense of Control

In the workplace, a 'sense of control' has wide meaning. It applies to choices regarding work-life balance, surrounding environment, commuting and travel; it also refers to control in terms of access to tools, resources, spaces, control over territory and privacy, and control over relationships and interactions with others in the office community.

A sense of control features heavily in many reports as an established driver of wellbeing and happiness at work (Marks, 2014a; Gensler Workplace Survey 2014). In recent years substantial changes to our ways of working have had a great effect on our sense of control in the workplace. Knowledge working has allowed people to work more autonomously using technologies that suit them. This increased freedom has allowed people better insights into how they work best. Control of the workplace environment can manifest itself in different ways:

- Control over physical environmental conditions
- Choice of workspaces
- Freedom to reconfigure a workspace
- Personalisation
- Participation in the design process

Moving away from individual assigned

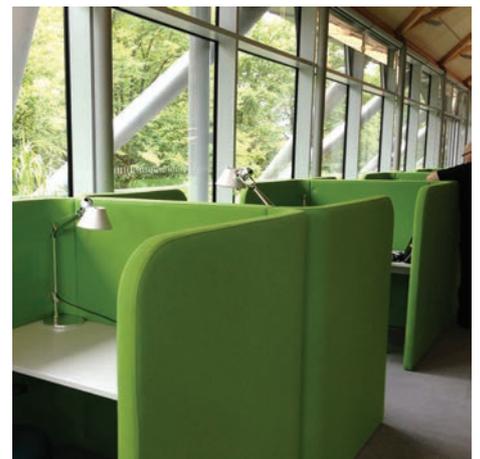
desks, to either hot-desking or working in task-based spaces, requires a cultural shift. The development of activity-based workspaces and remote working technologies aim to support employees, by offering them more choice. But these factors can also impact negatively on an employee's sense of belonging at work, an important element in measuring wellbeing.

There is evidence in the literature of design strategies that can give workers a greater sense of control over their physical environment. Stamford d. school, for example, uses furniture and objects that can be reconfigured by its occupants, 'to support idea generation, collaboration and experimentation' (Chan, 2014). Lightweight, flexible pieces using screens, coloured light, printed graphics and projections can allow employees to change the atmosphere of a space to meet functional and emotional needs (Myerson & Privett, 2014).

Empowerment of employees is linked to positive feelings about territory, belonging, ownership, place and attachment, and participation in design of the workplace can give greater satisfaction in the results (Vischer, 2008). Simply allowing people to

arrange decorative elements (plants, artwork) themselves at work improved productivity and reduced errors over an environment enriched by a designer with no user input, and lean environments with no enrichment (Knight & Haslam, 2010).

A sense of control is closely linked to territoriality, representing the space needed for an employee's work and their position in the organisation. However it is not limited to the appropriation of physical space, but related to an employee's 'sense of privacy, social status and perception of control' (Vischer 2008). Studies summarised by Vischer showed that concerns about privacy and confidentiality, raised by people moving from private offices to open plan, related more to social status and control.



# Research Questions



Influenced by the potential impact on wellbeing of two complementary concepts – a sense of control and levels of participation in workplace design – the research team devised the following research questions for the study:

**Does greater participation in the design of the workplace environment increase the sense of control and wellbeing of knowledge workers?**

- How much participation is needed, and desired, to create a sense of control?
- Which aspects of workplace design are perceived to be most important to wellbeing at work?



- How can teams of knowledge workers work together to better meet individual needs?

To address these questions, a research plan was created with two distinct phases: first, a scoping study of workplace occupancy involving stakeholders in four different organisations with four different levels of workplace change; and second, an in-depth study within a single organisation exploring different levels of participation in the design process and its effect on wellbeing, through a programme of workshops and interventions.



The intention of the research plan was to generate knowledge in four main areas:

- Methods that allow teams to engage with and participate in the design of their workspaces
- Insights into how employees would change their environment, and why, given the opportunity
- Aspects of workplace design that have the greatest effect on wellbeing, from the group's perspective
- The effects that both a participatory process and the resulting design interventions have on employee wellbeing.

# Research Methodology

To achieve its aims and objectives, the Workplace & Wellbeing study undertook two phases of research: first, a Scoping Study in four workplaces to observe different levels of change at work; and second, a Participatory Design Project to create office interventions to test improvements in employee wellbeing.

## Phase 1: Scoping Study

This research phase was conducted within four organisations in London and the south-east that have undergone different levels of workplace change in the past three years.

The research was conducted through cross-organisation interviews, stakeholder mapping (with managers, building services, department representatives and so on) and observations of teams within the workplace. The aim of the study was to:

- Understand how people adopt and adapt their workplaces to meet needs
- Gather reflections on the success of workplace design processes from the perspective of different stakeholders, and how it could be improved to give a greater sense of control
- Establish common themes between organisations in terms of approaches, constraints, levels of participation and levels of satisfaction
- Assess which aspects of the workspace emerge as contributors to employee wellbeing.

Thirty interviews were conducted in total across the four organisations (22 with employees, eight with other stakeholders). Each interview lasted 45 minutes in person and asked questions around 'your role, 'your patterns of work and use of space', 'how and where you work', 'changes to the workplace', 'the process of change' and 'the consequences

of change'. The 30 interviews were transcribed and a thematic analysis conducted.

## Phase 2: Participatory Design Project

In the second phase of the research, we worked with employees in one London-based organisation to create, design and test interventions within their office environment.

The intention of this approach was to give employees more sense of control over the workplace in two ways: first, by inviting them to participate in the design process using co-design methods; and second, by providing interventions designed for and by them, creating a sense of co-ownership of space. The interventions might themselves be adjustable or offer users more choice to meet the needs of the group and improve levels of comfort.

We worked with three teams of employees all situated on the same floor. Each team contained between six and nine people who work together and share similar work patterns. We tested different levels of participation with each.

**Team 1** was offered the highest level of participation by being invited to co-design ideas and interventions and becoming involved in their implementation.

**Team 2** was offered a lower level of

participation through engagement activities to identify those aspects of the workplace that were important to them and where opportunities for improvement lie. However they were not involved in how ideas and interventions were developed or chosen for implementation.

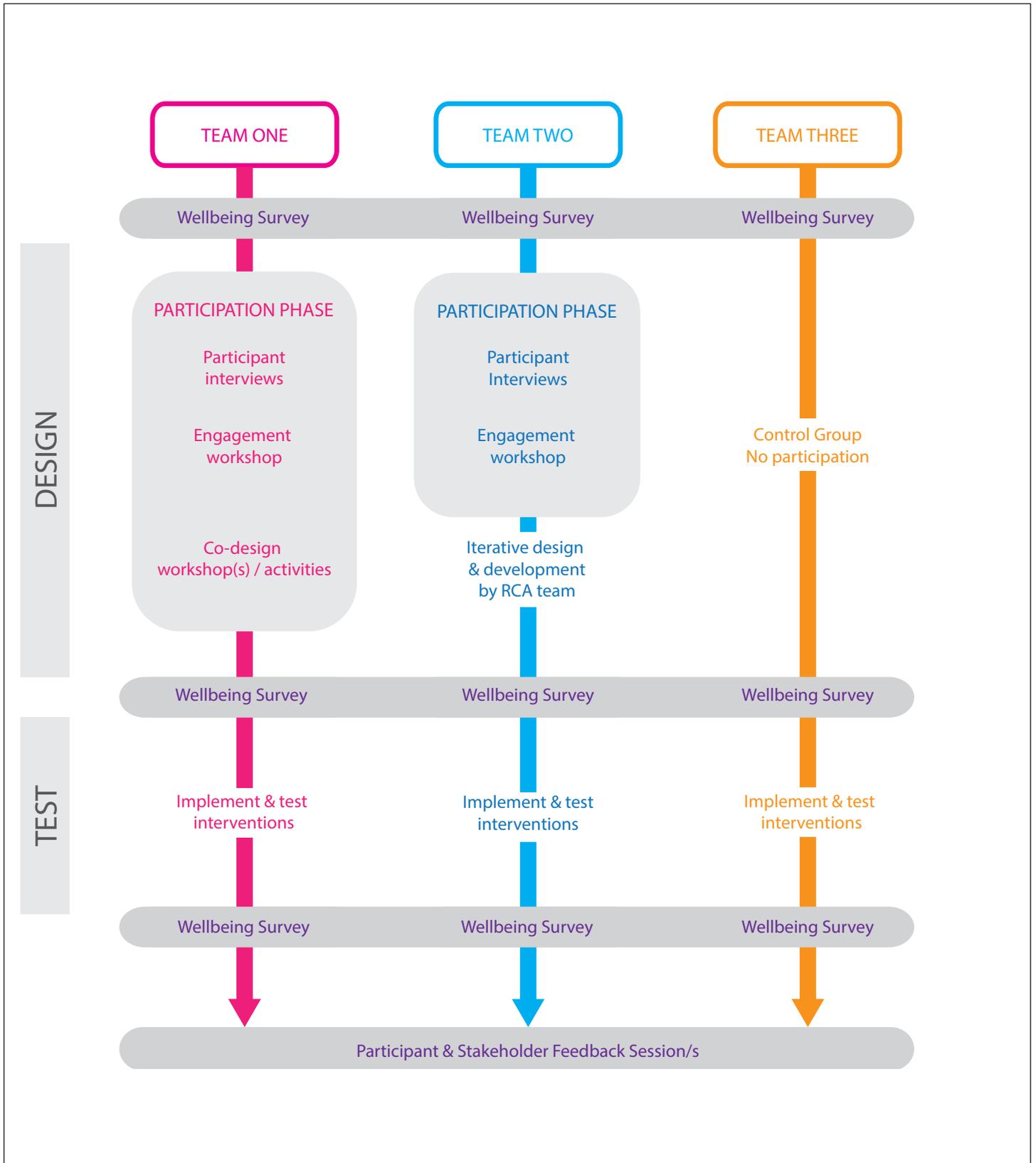
**Team 3** was excluded from design participation, but received interventions designed for the other teams on the floor.

The effects on employee wellbeing of both the process and the design interventions were evaluated using quantitative and qualitative methods at the beginning and end of the project using qualitative methods (interviews, questionnaire and feedback session) and quantitative methods, through the Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS), which is a validated measurement of mental wellbeing.

<b>Organisation 1:</b>	A charity that has relocated to new purpose-built premises	 Scale of Change
<b>Organisation 2:</b>	A bank that has relocated to new premises without refurbishment	
<b>Organisation 3:</b>	An architectural practice that has added new furniture to existing premises	
<b>Organisation 4:</b>	A healthcare company that has made no workplace change	

Research Phase 1: four sites for research

# Research Methodology



Research Phase 2: plan for participatory design project

# Research Methodology

## Levels of Participation

<p><b>Team 1 – High Participation</b> Team 1 participated in an engagement workshop to decide as a group their needs from the workplace, establish what they considered to be most important in terms of their wellbeing, identify specific areas that were open to improvement and capture early ideas for interventions.</p>	<p><b>Team 2 – Low Participation</b> Team 2 followed the same process as Team 1, except that the participatory design processes stopped after the first engagement workshop. The researchers took Team 2’s ideas and developed them into designs with input from the team members.</p>	<p><b>Team 3 – No Participation</b> Team 3 had no participation in the design process and was not engaged in any workshops. In the later stage of the project they were offered the interventions to test and to see whether interventions designed for or by employees can have wider appeal within the organisation.</p>
<p>Following the engagement workshop, Team 1 took part in a design workshop to prioritise ideas and progress the most significant ones into concepts for interventions or future plans.</p>		
<p><b>Three-minute online survey</b> (SWEMWBS), completed by all team members, repeated three times during the project.</p>	<p><b>Three-minute online survey</b> (SWEMWBS), completed by all team members, repeated three times during the project.</p>	<p><b>Three-minute online survey</b> (SWEMWBS), completed by all team members, repeated three times during the project.</p>
<p><b>Individual interviews</b> with six team members about their workplace.</p>	<p><b>Individual interviews</b> with six team members about their workplace.</p>	
<p><b>Engagement workshop:</b> group activities to let people share openly their thoughts on the workplace environment, to identify issues to be focus of project.</p>	<p><b>Engagement workshop:</b> group activities to let people share openly their thoughts on the workplace environment, to identify issues to be focus of project.</p>	
<p><b>Co-design workshop &amp; activities:</b> employees collectively and creatively develop their ideas for what they would like to change, prototype and test, facilitated by the research team.</p>		
<p><b>Four-week testing period of ideas</b></p>	<p><b>Four-week testing period of ideas</b></p>	<p><b>Four-week testing period of ideas</b></p>
<p><b>Invitation to feed back via questionnaire</b></p>	<p><b>Invitation to feed back via questionnaire</b></p>	<p><b>Invitation to feed back via questionnaire</b></p>

# Research Methodology

## Participatory Activities

### Participatory Activities

#### Interviews (Teams 1 & 2)

Interaction with Teams 1 and 2 began with a selection of individual interviews to get a greater understanding of roles, work patterns, needs and preferences. Interviews were also conducted with facilities managers to understand current protocols and pressures on the workplace.

#### Engagement Workshop (Teams 1 & 2)

A two-hour engagement workshop attended by Teams 1 and 2 explored which aspects of the workplace could be improved. Each participant raised three issues with their working environment, opening up ideas and opinions to the rest of the group. The workplace was then discussed at five different scales (desk area, team area, floor area, inter-floor and the whole building), noting down observations and ideas where it was felt improvements could be made.

#### Co-Design Workshop (Team 1 only)

Team 1 took part in a two-hour co-design workshop where they developed initial ideas raised in the engagement workshop – both quick fixes and longer-term imaginative solutions. Participants plotted all the ideas from the engagement workshop on a graph of feasibility versus desirability to develop a shortlist of ideas that could be realised through the design interventions. This shortlist was based on what was thought to be possible and most likely to be well received within the project constraints.

The workshop participants then looked more closely at their floor, collectively making an alternative space plan. This was presented alongside images they had selected to visualise their ideas and communicate look and feel.

To extend participation by Team 1,



interactive follow-up activities included an online poll to select one idea to be trialed from six prioritised and an online survey to capture broader ideas on the future of the workplace.

#### Design Outputs

With Teams 1 and 2, we worked towards three design outputs:

**1 Intervention:** a chosen design idea, requiring little investment, trialed on the office floor for a period of four weeks

**2 Action Plan:** A feasible idea that employees were able to put in place themselves, by committing time to identify the necessary steps and implementing within the timescale through internal channels within the organisation

**3 Future Proposal:** an idea for a more significant improvement to the workplace that requires larger investment.

Team 1 (high participation) worked toward producing all of these outputs themselves. Team 2 (low participation) handed over ideas to the RCA research team following the engagement workshop to develop on their behalf.

Design interventions were installed

by the research team and tested with employees in their office environment over four weeks. The installations were simple prototypes to help us achieve the intervention within the project constraints of time and resources.

#### Analysis of Wellbeing

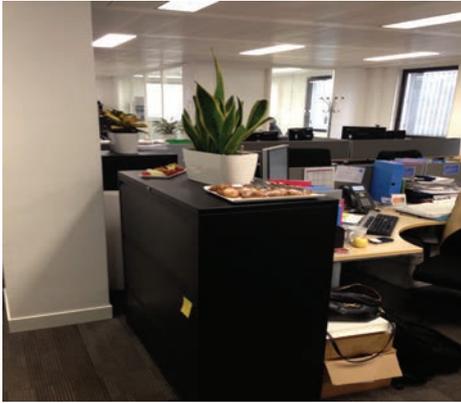
Wellbeing was evaluated using quantitative and qualitative methods. As employee wellbeing is personal and subjective, we looked for overall changes as a group rather than at an individual level, as we could not account for personality type or individual circumstances.

An established questionnaire (SWEMWBS) was used to create a wellbeing survey. This was web-based and therefore accessible to participants via desktop, tablet or smartphone. The survey was conducted at the start and end after the design intervention period with all three teams. This aimed to compare levels of wellbeing amongst groups who experienced different levels of participation.

Ethnographic research through a context-specific questionnaire was also conducted as part of a final feedback session. All data was analysed using thematic analysis, to identify recurring themes, vocabulary and feelings.

# Findings

## Scoping Study



Thematic analysis of 30 employee interviews in four different organisations experiencing different levels of change to their workplace created a 'snapshot of change', with many common themes evident despite the variety of workspaces and industry sectors investigated.

### A Picture of Relentless Change

A constant process of change in the work environment now appears to be the norm. Formal office moves are just the tip of the iceberg - changes of role and project, growth and shrinkage of teams, changes of strategy and policy and the introduction of technology innovations all contribute to an ever-shifting workplace landscape in which wellbeing needs are shifting too.

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*"We have official shuffles, for example to make more space for a large project. But smaller shifts happen all the time. You move with the project."*

*"In the past year we've been moved four times."*

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*"Small move but such an impact."*

There is a relentless and continuous squeeze on workspace. Desk to worker ratio, desk size, team floor space, storage space and alternative breakout space are all subject to continuous shrinkage. The majority of changes are

perceived by users to be for the benefit of the organisation at their expense and worsen their wellbeing, both physically and psychologically:

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*"We're squished and desks are full."*

*"Numbers grew and space shrunk, this is a source of frustration in the team. Not a lot of support spaces..."*

*"I don't mind not having an assigned desk but the ratio needs to be reasonable."*

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The general direction of change in the workplace is towards more mobility, choice and flexibility. But the study revealed huge variations in these aspects for individuals both between and within companies, depending on prevailing managerial cultures and available technologies.

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*"I use breakout spaces sometimes, but not more than that. I need to use a large monitor."*

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*"A lot of new people don't get a desk."*

*"I'm in the office about half the time. I have an allocated desk, a laptop. I frequently use meeting rooms and breakout areas. There's a general feeling of permission."*

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### Process of Workplace Change

Workplace changes feel top-down, according to the findings of the study. Organisational agendas are behind workspace investment, or lack of it. Too often, workers feel their functional and psychological needs are not being taken into account. People feel disempowered due to a proliferation of rules from above – from the 'design/building police'. They also sense many degrees of separation to those that effect change and a lack of interest in asking for employee feedback or participation in design decisions.

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*"No one said, hey what is it that you need?"*

*"There's a bit of cynicism about the flexible environment. In reality you have your e-mails."*

*"We feel like Gypsies. We're constantly being moved to make space for other people. Your needs are totally disregarded. You never get an answer. It's just desks to them."*

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However, despite employees being aware of their workspace, how they use it and what it provides, active participation in the change process is often low. In some cases it was difficult to make decisions amongst groups in the same environment with different needs and tastes. Active participation in workplace redesign was not generally high on people's agenda.

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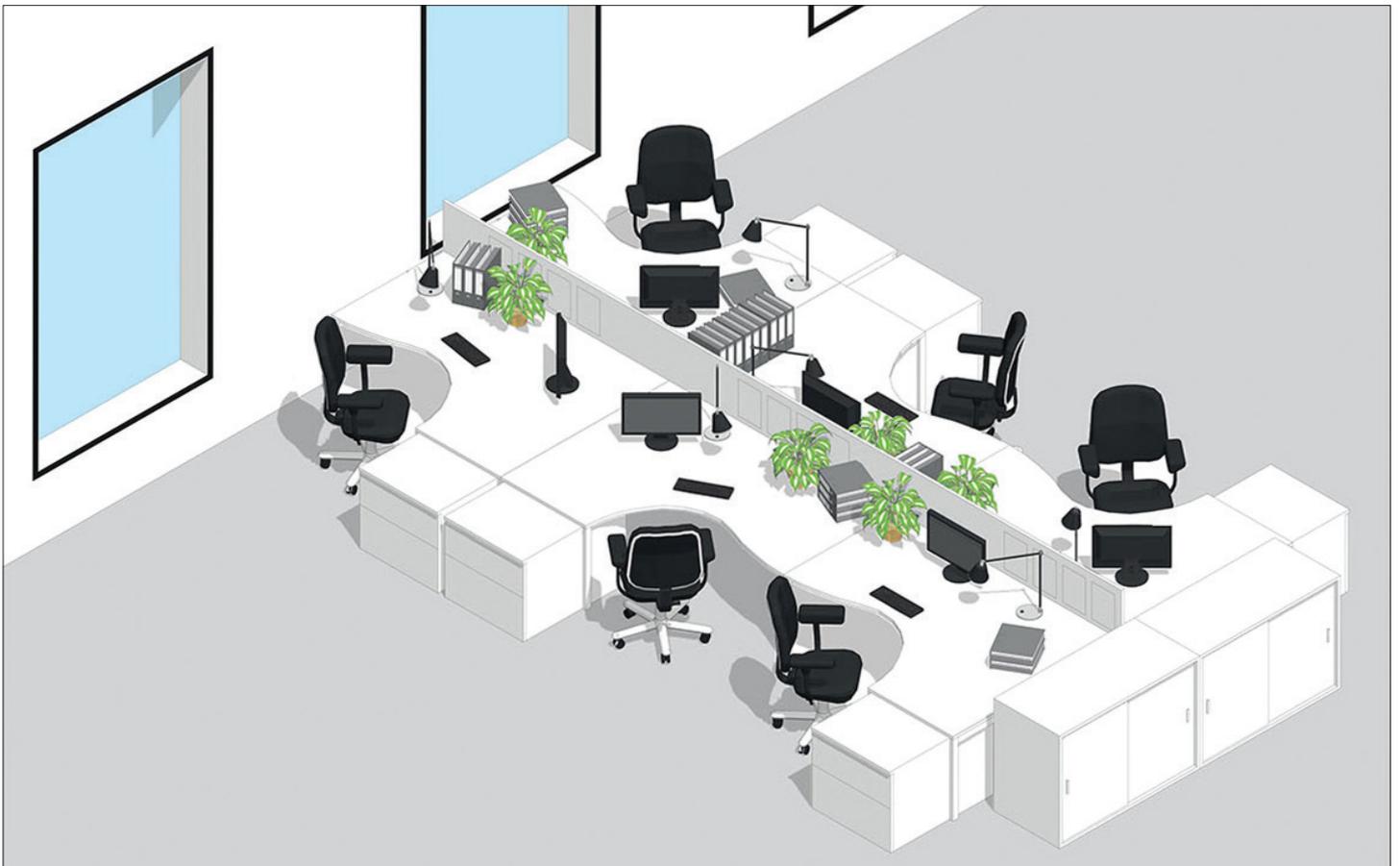
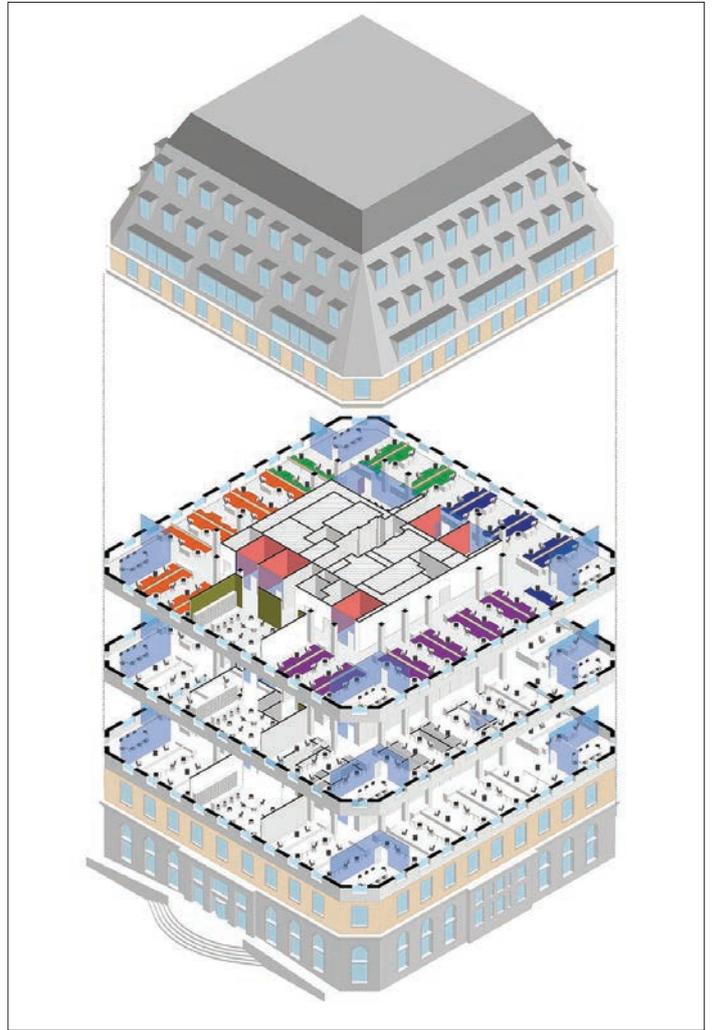
*"I haven't been able to get them to take control over their space."*

*"No one will be interested until at least six months before a move."*

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*"Some people weren't interested, until we showed them a floor plan of where they'd sit. Then everyone has an opinion."*

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Scales of Workplace Interaction

# Findings

## What Supports Wellbeing

Traits of workplace design that impact on wellbeing were identified from the Scoping Study.

### Sense of Connection

Members of staff emphasised a positive connection between the workplace and the outside world through natural light, birdsong, plants (including those tended to by employees) and pleasant views. A building situated near to amenities to support employees' lives outside of work was also a big plus – cafés, shops, bars, gym, and a choice of transport options making the commute easier and more pleasurable.

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*"Walking here, especially in winter with all the lights... it's a weird motivational thing to be working in the city. It's exciting."*

*"Views connect to the city... you get so involved in the little things, so actually it's good to say 'there's all that, and it's OK'."*

*"There's a rule against plants. I've no idea why..."*

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### Positive Environment

Office buildings that are welcoming and legible, with good wayfinding and communal spaces that encourage people to build cross-departmental links, were seen by employees to support wellbeing. Environments that showcase the organisation's environmental or charitable activities, and project a professional, purposeful ambiance without too much intrusive corporate branding, were regarded as a plus alongside team identity and space to showcase work to colleagues.

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*"Even within the office people don't necessarily know what we do - it would be great if we had a space to say 'these are our tools, this is what we do, come and ask us questions.'"*



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*"This building just seems friendlier as you come in... [At previous place] you had the same security barriers, but you had two security guards and they were fairly officious.."*

*"You are sort of put off from going to the other floors of offices, even if there's no reason why you should be."*

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### Supportive Culture

Employees responded really well when the organisation recognised their responsibilities outside of work and made flexi-time, compressed hours, home working and other flexible options available to all. People felt unfairly treated if not offered the same as others, if asked to make concessions (hot-desk, relocate) to accommodate others, or when rules were imposed without thought to their impact on the individual. Assumed time in lieu or a culture that actively discourages overtime were seen to have a positive impact on wellbeing.

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*"I think even if the directors were working late they wouldn't cc the world – they're very conscious of not setting an overtime-culture."*

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*"I was invited to staff training even though I'm on a short-term contract, along with a lady literally here for three weeks - they want everyone to feel welcome"*

*"We were told not to use the break-out space to eat but there's no alternative. You can't always eat at your desk – you'd just mould into it."*

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### Variety of Spaces

The provision of a versatile, flexible range of spaces that can adapt to the needs of employees was seen as important to wellbeing: meeting rooms; breakout and refreshment spaces; creative and alternative spaces. These spaces should offer bookable and drop-in, casual or formal use, near colleagues to breakout or huddle, or removed from the team for privacy. There should be variety in range of sizes and types of spaces; range of bookable/drop-in; private/open; casual/formal spaces. Whether employees have a fixed-desk or hot-desk, they like to be near those they work with most, whether that's by team, project or a fluid community, to communicate, support and build a group dynamic.

# Findings

## What Supports Wellbeing



*"I try to have project meetings near my team, even if they're just listening in – it gives people extra information."*

*"Our meeting rooms are too corporate. You're sat in this clinical, lifeless room. A bit of stimulation can start the conversation"*

*"In the afternoons I've learnt I need to relocate. I don't need to tell anyone... I'm still on emails so I'm working"*

### **Control over Space**

Alongside the provision of a variety of spaces, the ability to change your working environment to suit your needs was rated as important. Employees wanted control over what they use their storage for (such as personal belongings or work files) and how their workstation is set up. Personal autonomy in this context extended to accessing new ergonomic products such as sit-stand desks.

*"I'm supposed to set up my own desktop but my display monitor doesn't even go up and down."*

*"Taking away our storage doesn't mean I'm hoarding less stuff, it just means I'm hoarding it less neatly"*

*"A changing environment creates some interest and fun".*

### **Participation in Process**

Employees felt better about work when invited to give some input to their workplace design. Collaborative action was seen to help build a supportive culture and a sense of control. But while giving people a voice in the design of their environment brings benefits, there was little evidence that individual were encouraged to share their ideas with a view to making changes. The result was often paralysis rather than participation.

*"I guess, typically, we've discussed it amongst ourselves but no one's raised it. We should."*

*"Actually getting any change made probably involves a string of decision-makers, just to get a plant in the door. Not that I have tried. Actually, I haven't for that reason."*

*"I think we're old enough and mature enough to know what's appropriate and what's not."*

### **Barriers to Wellbeing**

Generally, employee wellbeing was seen to suffer when there were poor connections with the outside world, badly managed communication between teams, difficulties in wayfinding and inadequate provision of a variety of flexible spaces, thus exposing staff to constant noise and distraction. Decision-making that failed to account for the impact on the individual and a general lack of consultation over workplace design were also factors seen as unhelpful.

# Findings

## Participatory Design Project

The Participatory Design Project focused on three teams in one organisation, all based on the same floor.

### Design Intervention

Team 1 (high participation) and Team 2 (low participation) both focused on the corporate feel and identity of the space, its dullness and low levels of natural light with poor connections to the outside, in their engagement workshops.

Team 1 then went on to co-design a 'Life and Light' intervention with the research team. This comprised the introduction of plants in the space installed in hanging skyplanters, a range of salad crops, herbs, chillies to eat that the team would cultivate. Blinds were fully retracted to increase light. This intervention was delivered to Team 2 (low participation) and Team 3 (no participation).

### Action Plan

In their engagement workshops, Team 1 resolved to address the lack of personal storage and distracting clutter. Team 2 identified redundant furniture and storage units. Both teams worked together to organise a De-Clutter Day as part of a social activity on a Friday. Team 3 did not initiate this activity but participated in it.

### Future Proposal

Team 1 (high participation) used their co-design workshop to create a mood board and space plan for an ideal future workplace. Team 2 (low participation) were given sketch design ideas by the research team on how they might repurpose a meeting room into a flexible creative space – an idea that Team 2 had proposed.

All the ideas generated by Teams 1 and 2 gave the team members an active role in reshaping their workspace, thus contributing to a 'sense of control'. They chose plants that they could care for themselves and rearranged the office to suit needs that they had identified through a participation process.

A qualitative survey at the end of the project after the design intervention had been running for four weeks revealed that, irrespective of the level of participation, there was a wide welcome for the hanging plants and the retracted blinds bringing more daylight into the building. In particular the idea of caring for and even naming plants was popular.

The 'Tidy Friday' action plan was also successful because it enabled people to take ownership of the entire office floor. Generally, focus on the workspace

over several months during the research project led to further ideas and initiatives. Workers broadly appreciated the opportunity to participate in the design and look of the environment even if they sometimes struggled to commit time to the activities.

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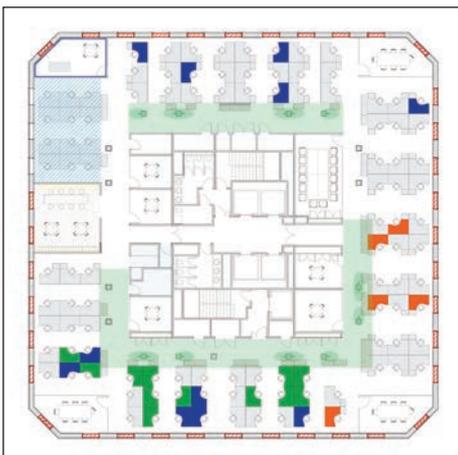
*"We did not take part because of workload when the project was happening, but I loved the new plants and would have even more if we could!"*

*"I had the amount of involvement I would have liked. I would have had bigger plants – everywhere"*

*"I'd like to be more involved. It would have been good to have shared / learnt more about best practice workplace design... I would have been happy to research this and share it with the group."*

*"Happy with this level of involvement – i.e. participate in discussion and have the option to contribute to ideas. For me the only thing that could have been better was investment to make more significant change – although I understand this has followed."*

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# Findings

## Measuring Wellbeing

The Participatory Design Project made use of the Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS), a validated tool developed to evaluate the impact of a project on the mental wellbeing of a group of people. This was presented to participants as an online survey that they could complete themselves.

The survey was distributed before the design participation project began and at the end (after implementation of the design intervention) to chart changes in team wellbeing that might be attributed to the project. Our original intention was to use the scale to also measure wellbeing at a midway point after the participation stage and before implementing the intervention, but this was dropped due to inconsistencies in terms of which team members responded. Our results therefore analyse changes in wellbeing due to the project as a whole, from before the project began to after the project ended. They are based on a sample of 18 people in total, drawn from the three teams.

Participants responded to seven positively worded statements with 1 of 5 worded categories, from 'none of the time' to 'all of the time'. Each team's average mental wellbeing score was calculated from members that responded. Questions scored 1-5 depending on the response; the maximum overall score for all questions was 35.

The overall average mental wellbeing score for Team 1 (high participation) and Team 2 (low participation) increased by a small but significant amount (Team 1 by 3 points from 26.7 to 29.7; Team 2 by 3.5 points from 27.6 to 31.2). However the mental wellbeing score for Team 3 (no participation) did not increase by a significant amount (just 0.5 points from 28.7 to 29.3).

**The Short Warwick-Edinburgh Mental Well-being Scale (SWEMWBS)**  
Below are some statements about feelings and thoughts.  
Tick the box that best describes your experience of each over the last 2 weeks

I've been feeling optimistic about the future					
I've been feeling useful					
I've been feeling relaxed					
I've been dealing with problems well					
I've been thinking clearly					
I've been feeling close to other people					
I've been able to make up my own mind					

The Short Warwick-Edinburgh Mental Well-being Scale (SWEMWBS)  
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In answer to the statement 'I've been feeling useful', Team 1 and Team 2 recorded higher increases than Team 3. As the project encouraged greater empowerment and 'a sense of control' in the workplace environment through participation in workshops, caring for plants and each person de-cluttering their own workspace, these engagement activities had some impact on wellbeing.

Similarly, in answer to the statement 'I've been feeling close to other people', Team 1 (high participation) and Team 2 (low participation) again recorded higher increases than Team 3 (no participation). As the project encouraged people to share problems and work together to find an outcome that suits everyone, these collaborative activities had some impact on wellbeing.

Overall, the survey implies that there is a detectable link between workplace participation/engagement and mental wellbeing. The teams that were engaged, including those that were invited but did not participate, recorded bigger increases on the wellbeing scale than the team that was not given the opportunity to participate.

However there was no real difference between the wellbeing scores for Team 1 (high participation) and Team 2

(low participation), indicating that the level or 'dose' of design participation is less important than the overall invitation to engage in some way. Providing a more intense or prolonged participatory design experience does not automatically boost wellbeing further.

The increases recorded in the 'after' survey perhaps reflect the greater sense of ownership or satisfaction with the interventions by those teams that helped to create them.

More in-depth feedback from all teams (through a qualitative survey) provides greater context, showing that many people appreciate being invited to participate in an open design process even though in practice they may not be able to prioritise this over other activities.

The study suggests that any participatory exercise, whether light-touch or intensive, should be open to all with content shared throughout the process. This keeps people informed of the on-going activity so they can more easily join in at any stage, even though, in practice, not everyone will want or be able to do so.

# Workplace Wellbeing Model

A conceptual model to chart and assess wellbeing needs in the workplace was developed over the duration of the study.

Using the thematic analysis from phase 1 (Scoping Study in four organisations) and the live findings recorded in phase 2 (Participatory Design Project) to test and refine, the model illustrates a necessary balance between the functional and psychological needs of the individual that organisations need to provide in the workplace. This approach mirrors to some extent the purpose of the organisation itself, which can also be seen as combination of functional and psychological needs.

The model therefore presents two axes of need, from functional need to psychological need, and from the organisation to the individual. Individual needs are those that appear to benefit the individual more than the organisation; organisational needs are those that benefit the organisation more.

At the heart of the model is what has been termed 'the psychological contract' - in return for hard work, commitment and loyalty, the individual worker expects the organisation to be responsible for their workplace wellbeing.

## Functional Needs of the Organisation

Organisations have a number of functional requirements in order to be productive, efficient and viable. They must capitalise on assets and property, utilising space in an efficient way (for example, by introducing new working practices). They must raise performance and increase commercial competitiveness (for example, through collaboration). Keeping the workforce safe and healthy to work, through provision of ergonomic work settings, is also part of this picture.

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*"Uniformity and interchangeability are cheaper...."*

*"People think there's an optimal arrangement. The end goal is whether I'll produce better work..."*

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## Psychological needs of the organisation

Organisations also have 'softer' psychological needs based around creating and maintaining a positive culture, reputation and brand. These needs are related to motivating the workforce and attracting and retaining talent (for example through training, social amenities and other incentives), as well as exerting influence in the wider world of customers, partners and suppliers.

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*"It (workplace design) makes a small difference to me. Training and the culture and information and the speed of my tools are important..."*

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## Functional Needs of the Individual

Individuals have a number of functional requirements to carry out their work. These broadly relate to environment (light, heat, air quality, spatial layout, ambience, décor and so on), tools (technology, furniture, protocols and systems) and settings (spaces for different work and social activities).

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*"We don't have wall space to show our work. Even within the office people don't know what we do."*

*"It's important for the team to be together, communication-wise and information-wise..."*

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## Psychological needs of the individual

Individuals have a range of psychological needs in the workplace that are related to belonging, trust and empowerment. They want to feel valued, cared for and acknowledged.

They want to feel that their contribution is worthwhile. Factors relating to levels of flexibility, autonomy and choice in the workplace come into play here, also issues of identity and territory and the process of participating in workplace design.

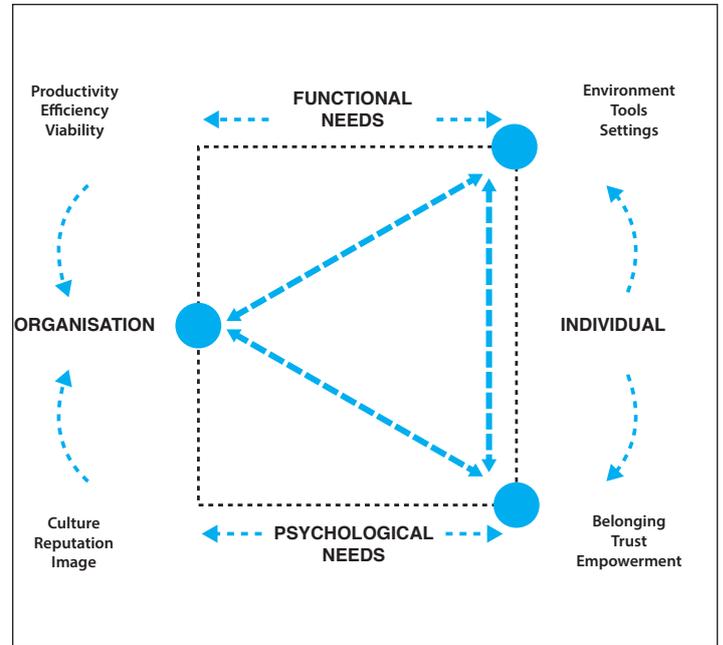
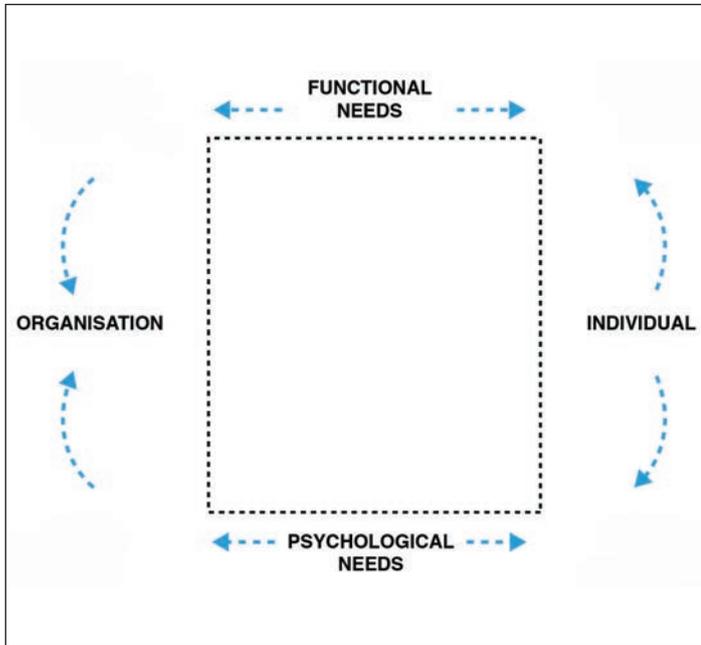
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*"They're saying yes, we pay you a salary, but we also want you to be happy here."*

*"In a big office like this the hardest part is to figure out what I'm allowed, and how to be noticed and effort acknowledged. Huge deal..."*

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# Workplace Wellbeing Model



## Aligning Needs

The model proposes that for wellbeing in the workplace to be optimised, organisational purpose has to be geared towards meeting both the functional and psychological needs of the individual on an equal basis.

Our research showed that individuals naturally put more emphasis on their own needs rather than those of the organisation. But there is an interrelationship between the two: just as an organisation benefits through higher productivity if its staff feel happy, enabled and valued, so employees also understand that the needs of the organisation have to be met for the business to succeed.

Needs in each organisation are constructed, not a given. They mirror the organisation's resources and purpose, and vary accordingly. Employees have different expectations for aspects of the workplace depending on sector, in terms of workspace, pay, wellbeing and social value of work.

## Four Variants

The research presents four versions of the model: a Full Alignment model in which the organisational purpose is fully aligned with both the individual's functional and psychological needs; two Partial Alignment versions in which the organisational purpose is aligned with either the functional or psychological needs of the individual, but not both; and a Non-Alignment Model in which organisational purpose is aligned to neither the functional nor psychological needs of the individual.

It is proposed that the ideal state of wellbeing in the workplace is when the organisation's needs and individual needs are aligned, both functionally and psychologically. The organisation's purpose is reflected in the way employees work (functional) and the way they are treated (psychological).

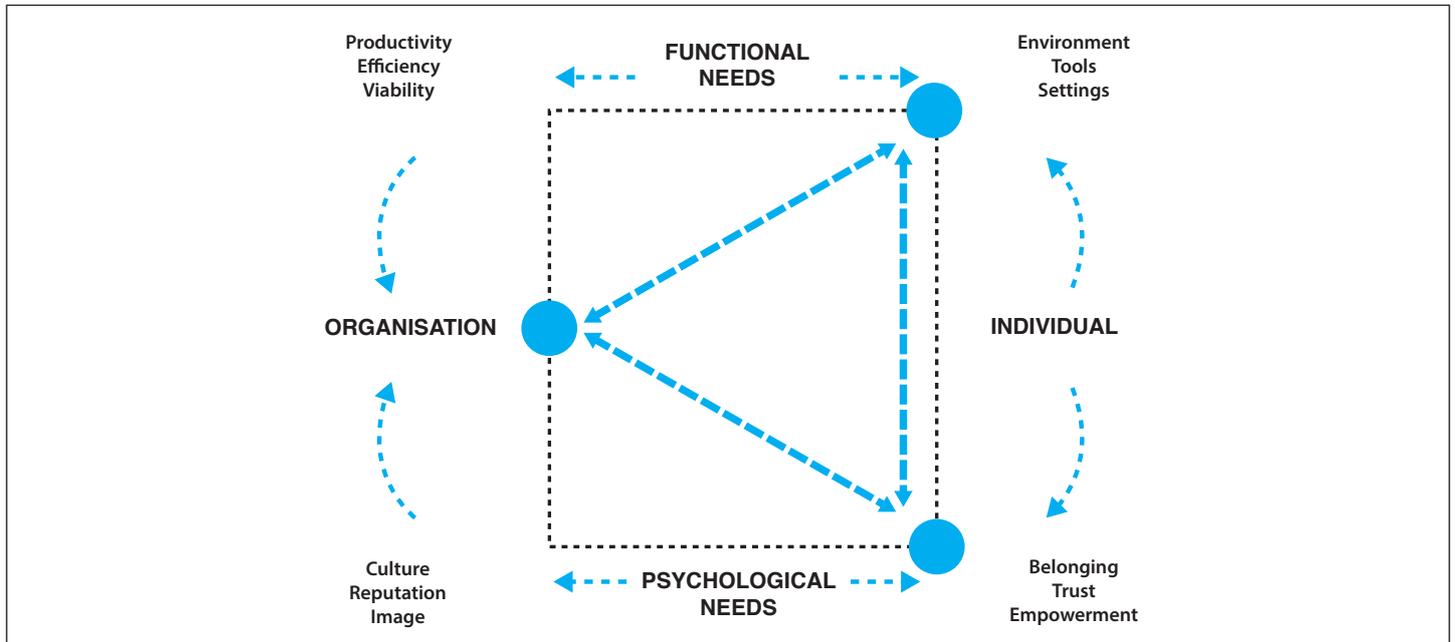
This state of equilibrium is rare and hard to achieve, although the research team identified examples in the field. In this scenario, the organisation benefits directly from its investment in the

workplace and in people's wellbeing because the psychological contract ensures that people will work harder, have more commitment, be more innovative, and so on.

More often, the alignment is incomplete or partial in one way or another. In the worst cases, there is a complete non-alignment, resulting in a demotivated workforce adrift in a disorganised workplace.

# Model

## Full Alignment



In this scenario, there is total alignment between organisational purpose and both the functional and psychological needs of the individual. All elements of the model are in harmony.

Functional needs of the individual are met by providing an environment with the right conditions for work that reflect the mission and values of the company – for example, if the organisation has strong sustainability credentials then the building's eco-friendly energy and lighting systems live up to those values.

Tools are appropriate for the work undertaken – for example, if the organisation is a tech leader then the IT systems are state of the art. A variety of settings offer choice and autonomy for different work and social activities, as well as popular social amenities, for example bike stands, showers, urban gardens or green external views.

Psychological needs of the individual are met by policies that promote belonging, trust and empowerment – for example, training opportunities are open

to include permanent, temporary and contracted staff; comprehensive change management processes accompany any relocation; there are forums for feedback and consultation on design; employees are protected from unpaid overtime; the conflicting priorities of work and life are carefully balanced; and there are compensations when things don't work or go wrong – for example, ice creams handed out to staff when the building gets very hot.

*"I saw the building going up and I thought I'd love to work there."*

*"It's got a calm feeling yet it feels exciting at the same time."*

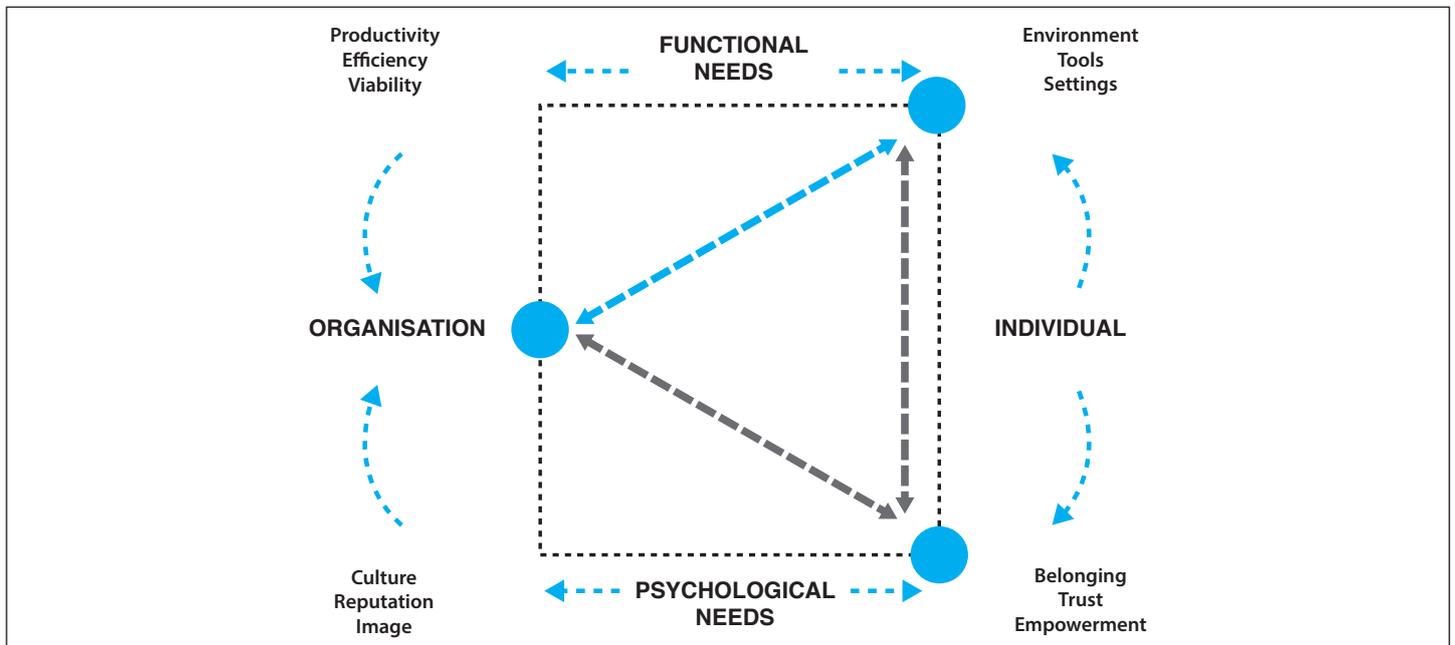
*"I know if I work late I can take the time in-lieu - it's not an issue."*

*"The managers try not to work late ... they would never send an e-mail after hours."*

*"Not only do you feel better, but you perform better."*

# Model

## Partial Alignment – Type A



### Partial Alignment – Type A

In this scenario, there is partial alignment between the organisation's purpose and the needs of the individual, resulting in a fracture in workplace wellbeing.

Functional needs are met in terms of providing the right physical work environment, tools and settings to match the organisation's purpose.

However the psychological contract with employees is weak – staff members do not feel trusted, empowered or understood and they have no real sense of belonging, indicating that their underlying psychological needs have not been considered. Staff complaining about a failure to offer flexi-time or homeworking to all on an equal basis, even though the office itself is well designed, is a sign of a wellbeing deficit as a result of this partial alignment.

This scenario often occurs after an organisation has invested in the design of a new workplace without having taken their workforce through a change

management process, allowed staff some level of participation in the decision-making for the new space, or given employees freedom to use new environments. Organisational imperatives have trumped private individual ones.

*"We have a company-wide policy for flexible hours, so I said to my pregnant friend 'why don't you work from home?' 'My boss doesn't allow it.'"*

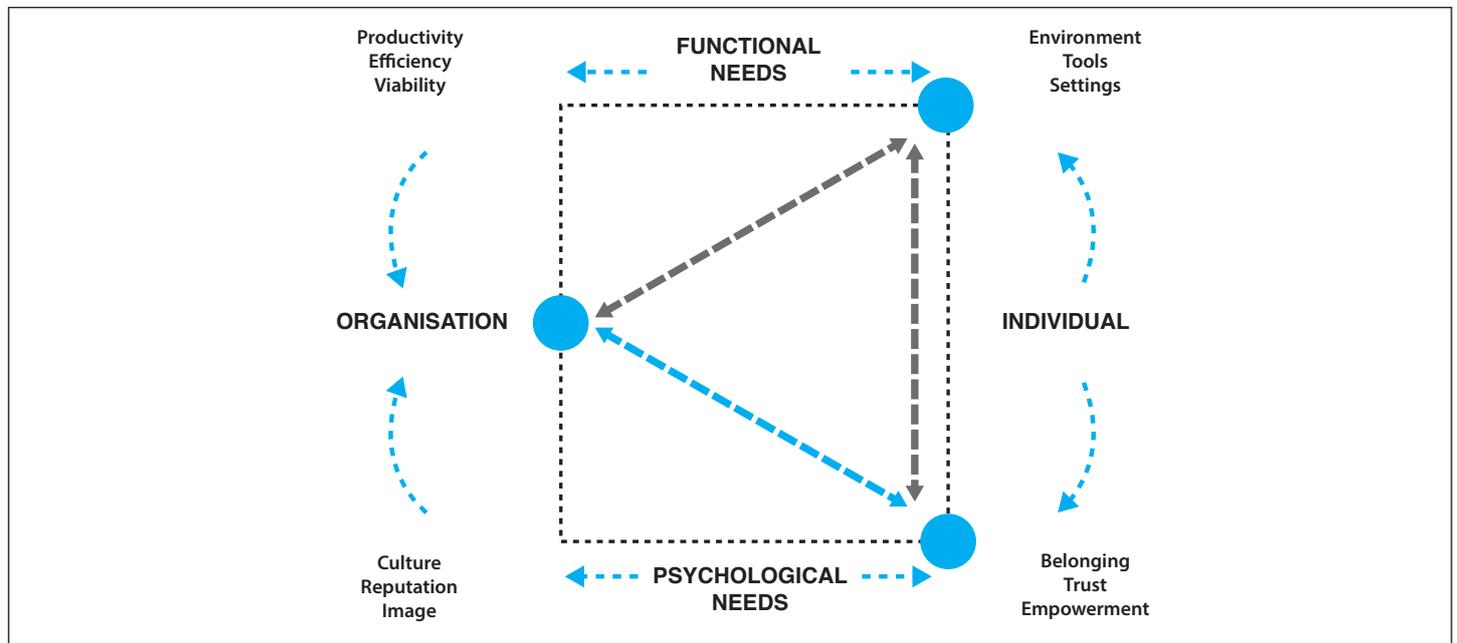
*"The whole building does Dress-Down Friday, except this floor, which is Dress-Down-Last-Friday-Of-The-Month. That's probably the biggest gripe on the floor."*

*"The email goes round, 'we remind you no tinsel, no cards, no this, no that'. They don't like fun in these big buildings. They can't control it."*

*"We're just numbers to them. Desks and numbers. Not people."*

# Model

## Partial Alignment – Type B



In this scenario, there is also a partial alignment between the organisation's purpose and the needs of the individual. But the type of fracture in workplace wellbeing is different from Type A.

The psychological contract with employees is strong – staff members feel trusted, empowered and understood. They have a strong sense of belonging based on a commitment and attraction to the organisation's mission and values. Their psychological needs are met.

However their functional needs are unmet. The environmental conditions might not be appropriate given what the organisation is trying to do – for example, a healthcare company offering a sterile space with no natural light; or the tools and systems are inadequate – a tech company with malfunctioning IT systems; or there is insufficient choice or variety of settings.

A vibrant sense of identity with the organisation's mission is therefore undermined by a workplace that is not fit for purpose.

This scenario can occur when an organisation has adopted a new workspace culture but not adapted its workplace functionally to reflect new ways of working, or when the protocols associated with space and tools are too heavy-handed and inflexible, or when plans for workspace redesign are constantly delayed.

*"Despite hyper-awareness, we're still at our desks."*

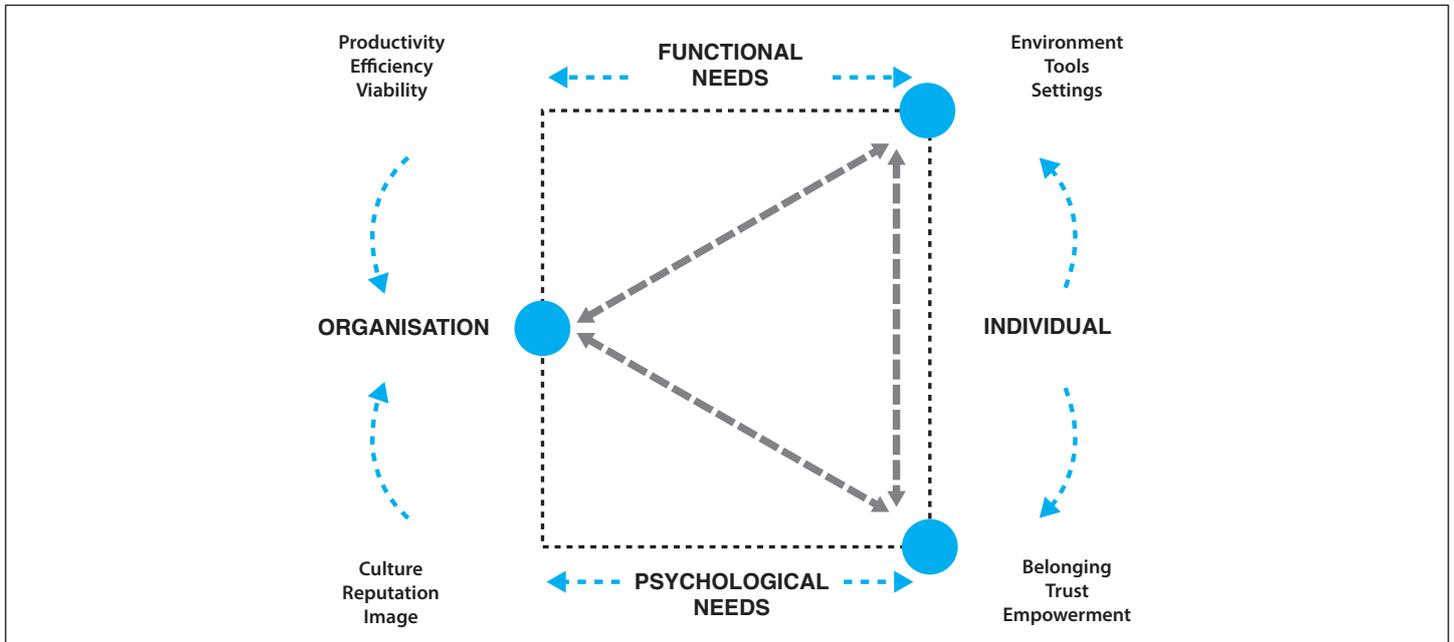
*"It's hard for creative people... 'Sit at your desk and Be Creative'. We can't stick things on the walls as the Building Police take them down."*

*"We're told we should hot-desk but we run out of desks all the time and we're not allowed to work from home."*

*"We use Macs in our department, everyone else has a PC. It's really limiting. We can't fill out our time sheets; we can't access bits of the Internet, send links. It's a total pain."*

# Model

## Non-Alignment



In this scenario, there is a complete non-alignment between organisational purpose and both the functional and psychological needs of the individual. All elements of the model are out of synch with each other.

Functional needs of the individual are not met. The organisation is not providing the right environment, tools or settings to get the work done effectively.

Psychological needs of the individual are not met either. Employees do not feel they belong. They feel disempowered, mistrusted and misunderstood.

This scenario can occur when an organisation is physically stretched – the office is full beyond capacity but there is no budget for improvements and no planned investment. At the same time, there is a failure to compensate for physical workplace shortcomings by meeting psychological needs.

Functional discomfort is therefore matched by psychological discomfort, for example people feeling marginalised,

under-valued and unprotected from a culture of unpaid overtime.

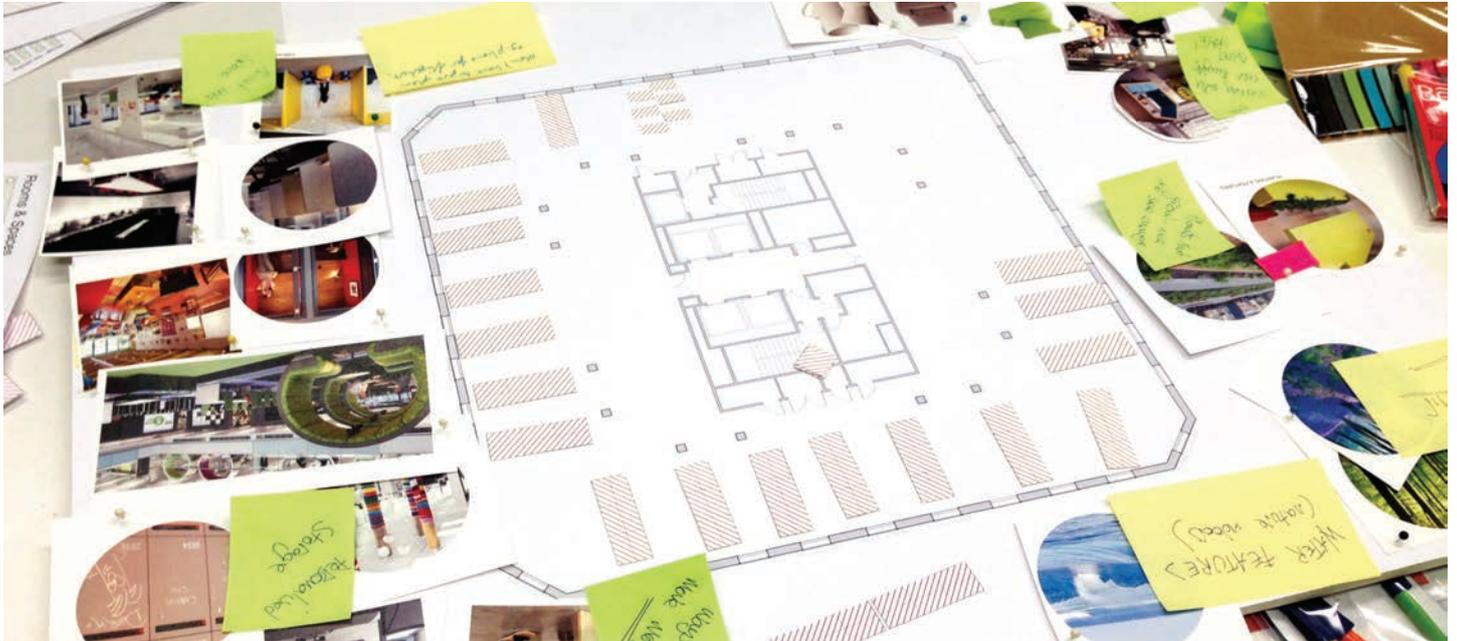
In this scenario, employees can feel the organisation is not practising what it preaches. The organisation's purpose is broken by a combination of a malfunctioning workplace and a weakened psychological contract with staff members.

*"...The squeeze has made us lose belonging..."*

*"...If you don't feel in control, you complain more..."*

*"Got to fit with business needs but also with individual circumstances."*

# Conclusions



The Workplace & Wellbeing study revealed that:

Organisations should ensure that both the functional and psychological needs of the individual are met in order to meet their purpose. Failure to create a full alignment between individual and organisational needs will have some negative effects on employee wellbeing.

Where full alignment cannot be achieved, a system of 'concessions, compensations and interventions' should be in place to moderate the effects on wellbeing. Concessions mean giving employees what they are asking for, whenever possible. Compensations mean acknowledging when employees are asked to make a sacrifice or accept poor working conditions. Interventions mean giving employees the opportunity to take ownership and make improvements to their local work environment.

Employees appreciate being given the opportunity to exercise some control over the change process that is now a constant part of working life through participation in workplace design. But the invitation to participate is more important than the level of participation on offer.

Those teams that were engaged in the Participatory Design Project at any level (whether high or low participation) registered a higher increase in their mental wellbeing than the team not invited to participate. Staff-designed interventions were welcomed by all, including those who did not participate.

Participants in the Participatory Design Project chose to create and test solutions that gave them greater control and ownership of their workspace. They weren't asking for things to be done *for* them – for example they already had office plants but wished to grow and care for their own, and they already had blinds but wished to be able to retract them. Also, the ideas that were implemented (new plants, more light and de-cluttered space) benefited everyone equally as they were not related to specific job functions or work patterns.

Although there was enthusiasm for the idea of participation and appreciation of being included, people found it difficult to find the time. Therefore workshops that are offered as shorter activities, and repeated to increase opportunities to participate, allow more people to engage with the process.

Outcomes of workshops should be shared openly to enable all to see where the project is going, if it affects them and if they'd like to respond. A parallel online platform for collaboration was successful in allowing those who had not participated in workshops to have a chance to feed in and steer the direction of the project.

The conceptual model described in this report will be developed into a wellbeing evaluation toolkit in the next phase of the Workplace & Wellbeing research project, which will also feature a more in-depth ethnographic engagement with participatory design processes in the workplace and specific focus on different spatial, material and technical interventions.

# Acknowledgements

## Research Team

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## Gensler:

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Namrata Krishna

## The Helen Hamlyn Centre for Design

The Royal College of Art is one of the world's most influential universities of design. It is wholly postgraduate and has a proud history of national and international collaboration with industry. The Helen Hamlyn Centre for Design provides an interdisciplinary focus for inclusive and sustainable design research within the RCA. Since their inception in 1991, the centre's research programmes have built an impressive track record of partnership with a wide range of organisations worldwide. The centre has three research labs: Work & City, Healthcare, and Age & Ability.



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