

Beyond the Standard

Today’s offices are rethinking accepted standards and evolving to improve inclusion, productivity and well-being, to make the workplace work better for everyone.

Modern office design is developing but building design standards continue to incorporate some long-standing assumptions based on data derived from studies which look at the ‘average’ man. This is a limited perspective that can result in environments that do not adequately serve the diverse needs of the broader population. This “one-size-fits-all” approach often overlooks unique requirements of

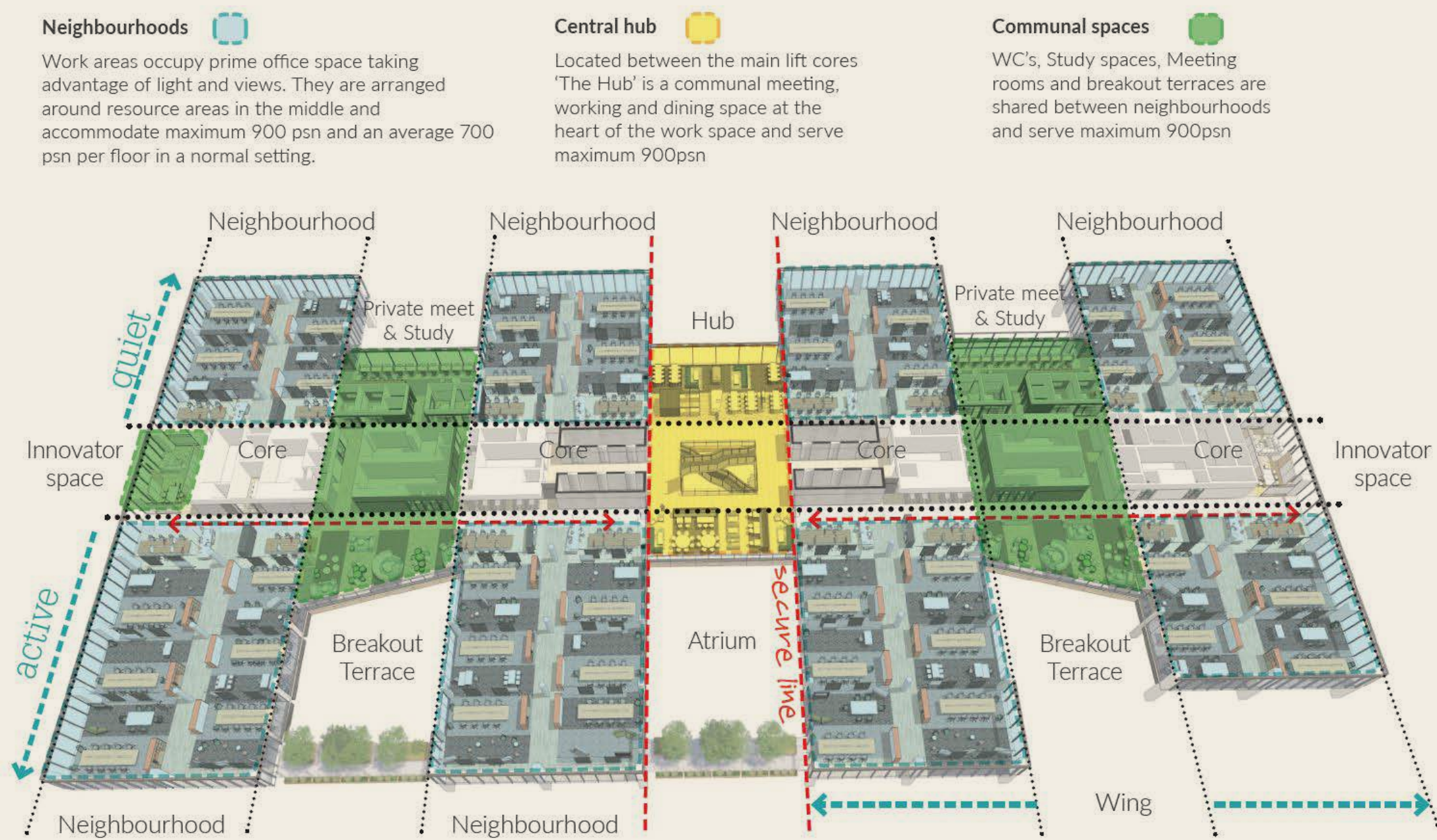
individuals and different groups, necessitating more inclusive and adaptable approach to defining design standards. Small design changes like incorporating adaptable furniture, providing a range of work settings, considering access to natural light and views, including biophilic principles and inclusive spatial planning, all allow for the design of spaces that can reflect the diverse needs of the modern workforce.



Fig. Santander plan as a neighbourhood example – the modern open plan office

Unity Place

This example of an architectural open-plan office design for Santander at Unity Place by LOM. The desks are purposefully placed against the windows to allow the workers to take in maximum natural light. Breakout spaces and a kitchen is located towards one end of a plan to allow for the least noise pollution over the office floor. Smaller meeting rooms and single-person phone pods are also located around the floor. The desks are all back-to-back with a circulation route all around. This means all staff can see each other over the floor creating a collaborative work environment. By including these workplaces can foster a more inclusive and productive environment for all employees, accommodating the diverse needs of the workforce better, ensuring that spaces are built for everyone.



About this exhibition

This exhibition is drawn from our experience of modern office design for a range of clients, and from research produced by Tegan Blakey for her University Dissertation. Tegan is an Architectural Assistant and Level 7 Apprentice at LOM. Her dissertation examines the evolution of office design over the past 125 years, analysing architectural layouts, furniture design, and long-standing design standards that fail to accommodate diversity, as research has traditionally prioritized Caucasian, middle-aged men, leading to spaces that do not account for diverse genders, ages, and races. Thermal comfort, furniture ergonomics, toilet accessibility, open plan layouts and spacial hierarchy are all unintentionally reinforced by out-of-date research.

A Historic Perspective

The transformations in office design during the 20th century laid the foundation for modern office layouts. Open-plan spaces and ergonomic furniture have become standard features, but many design standards still reflect some historical biases.

Larkin building central Atrium (Anon, ND)



Early offices with standardised desks and chairs



Changing expectations and the open plan office

Open-plan offices which were popularized in the 1950s and were used to foster productivity through surveillance as well as allowing for more collaboration than cellular spaces. Early open plan offices overlooked the diversity of experiences and preferred working environment for different employee groups. For example, studies indicate that women feel more comfortable in enclosed space whereas male prefer an open layout. (Yildirim et al. 2007).

The integration of women into the workforce coincided with broad cultural and societal shifts in the late 19th and early 20th century where women sought more independence and looked for greater opportunities in society. The increased presence of women in the office, initially in positions such as typists, impacted office design and layout, coinciding and influencing a shift toward open-plan office designs.

This transformation saw office layouts evolve from small, individual workspaces to large, open-plan environments. The Johnson Wax Headquarters (1936–1939), designed by Frank Lloyd Wright, exemplifies this shift, incorporating an open-plan layout that streamlined workflow and allowed supervisors to oversee multiple workers efficiently.



Wing in Larkin Building (Anon, ND)



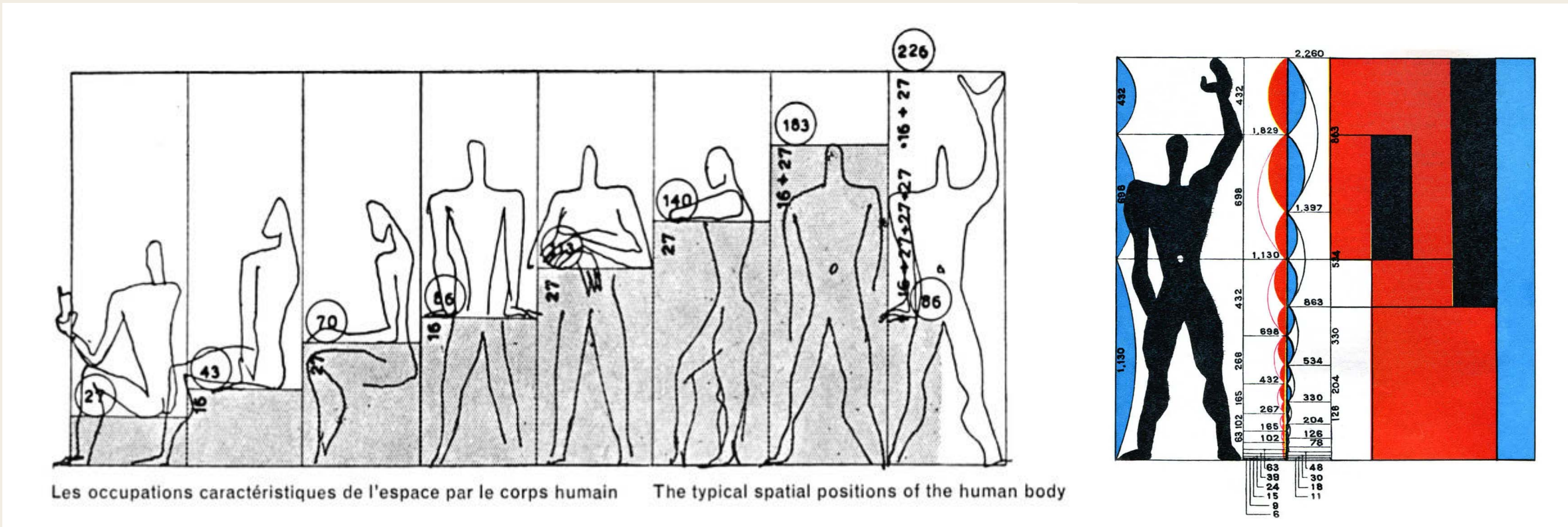
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Ergonomic Design

Many modern office spaces were originally designed with standard office desks, chairs, and equipment. As typists spent long hours at their desks, office furniture evolved to improve ergonomics. Adjustable chairs and desks were introduced to reduce strain and enhance efficiency. However, these designs were largely based on male anthropometric measurements, which meant that they did not fully accommodate the female workforce (Sundstrom, 1986) and ergonomic improvements did not entirely address the physical differences between male and female workers. (Kaufmann-Buhler, 2019).



Boots D10 main factory working floor (Boots, 1930)



Modular Man, Le Corbusier

Designing workplaces for everyone

The design of modern offices includes some biases, embedded in design standards, that stem from the definition of a ‘default’ worker as an ‘average 40-year-old 70kg man’, meaning design standards are not based on all of the population. But this is changing.

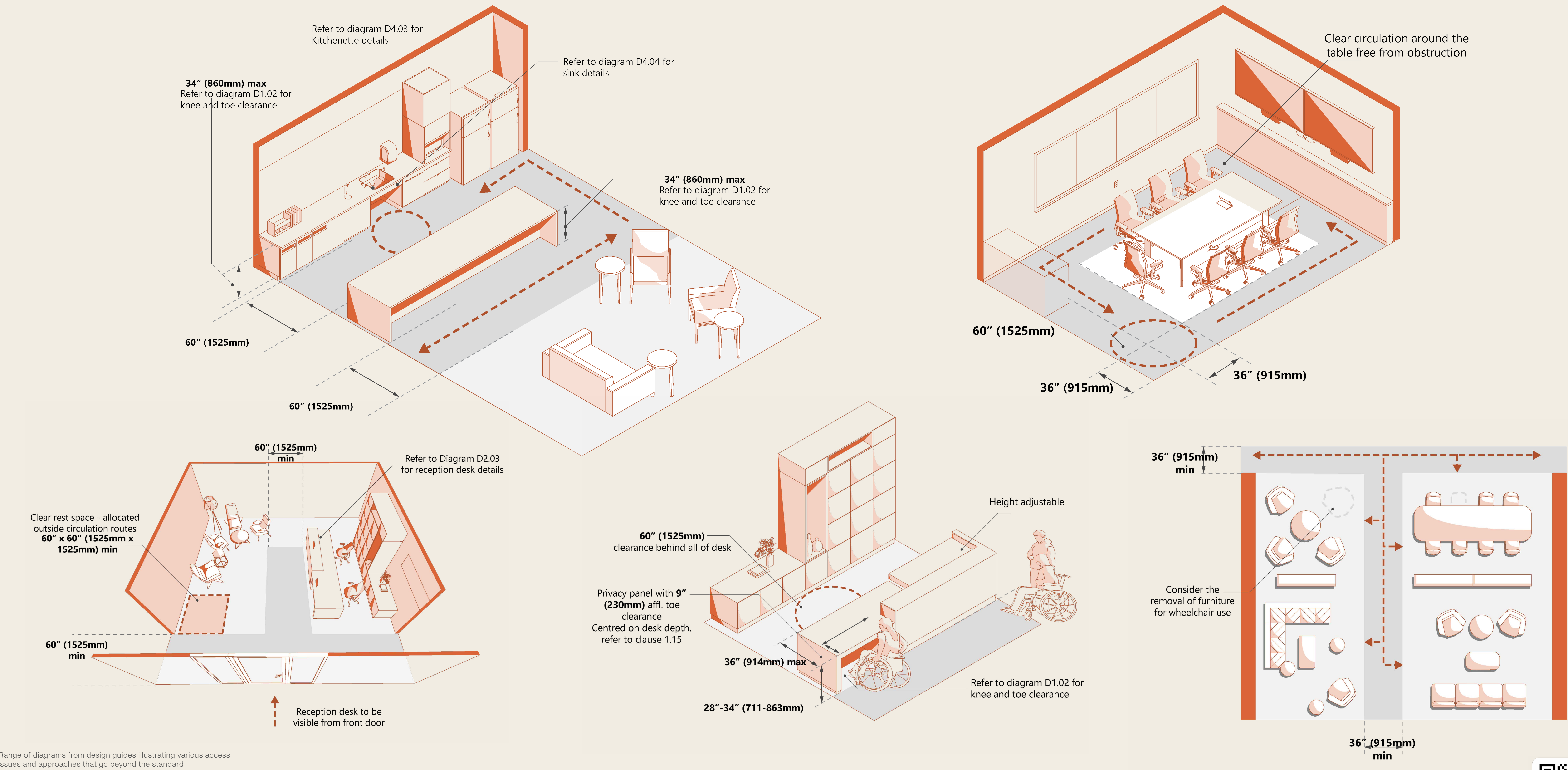
Accessibility & Inclusion

Issues of accessibility and inclusion are becoming more and more important to our clients, and we work with them to develop design guides that define their own standards of how they want to treat their staff. This often goes beyond the standard, and combines statutory guidance from multiple sources in order to define how to best deliver accessible and inclusive workplaces so that workplaces can be designed for everyone. This includes thinking more widely to address peoples stage of life or religious needs, and provide facilities that suit these including parents rooms and prayer rooms, for example. These guides are leading the way to develop an approach that goes beyond the standards.

Until recently, disability was defined as the result of an individual's condition. The limitation was associated with the person, not the environment. Today we consider that disability occurs at the point of interaction between a person and an inaccessible environment, with exclusion being the result of a mismatch between what a person wants to achieve and an environment that does not support them. Everyone will experience a disability at some point in their lives. A disability can be acquired gradually or rapidly and can be a permanent, temporary or situational condition. A temporary disability might be a broken leg or arm.

A situational disability might be a person using a buggy up or down stairs or someone struggling to hear a conversation in a noisy environment. Disabilities may not always be visible. There are physical disabilities related to mobility, vision, hearing or speech, and there are cognitive, neural and mental disabilities including neurodiversity, which also require us, as designers, to consider working environments in a more complex and varied way. Often designs developed to address these issues benefit everybody by providing variety and choice.

All of these affect most aspects of design of the modern office including spatial layout, scale and variety of **spaces, furniture design, signage, lighting, temperature, acoustics and facilities**, all of which are combining to inform the new environment of the modern office. Designing for diverse needs can benefit everyone and extends the choice and variety on the office. There is no doubt that the careful design of our workplaces has the ability to bring value to both individuals and companies.



Range of diagrams from design guides illustrating various access issues and approaches that go beyond the standard

Diversity in design teams

The architecture profession has historically lacked diversity. Design decisions were predominantly made by individuals who made up a majority group of society and had a larger influence on society due to the social status of being educated at the time. This can unintentionally lead to biases within designs. Although unintentional, it can lead to spaces that do not fully consider the needs of diverse users including different genders, ages and abilities. The built environment is becoming more diverse as a profession and we see a large mix of races, genders and ages in the modern age on projects.

Diversity within design teams can lead to a more inclusive design environment and collaboration between colleges about design decisions that may not have been previously considered. As you can see from the models of our staff, not many of us are average physically and this applies to us in terms of mental, social and cultural differences. We all have different needs and contemporary design needs to address this variety. At LOM we are working to address this and trying to make sure that all voices are heard.



Your views

We would like to hear your opinion on your own workplace. Please use the QR code to access a short survey to tell us what works and what doesn't work in your place of work.

The new workplace environment

To address disparities, the future of office design should adopt a data-driven approach and incorporate research that accounts for variations in body size, temperature preferences and other factors that impact workplace efficiency and comfort.



The Living Rooms, 250 Bishopsgate, illustrating the transformation of the open plan office into a more fluid and varied plan, before and after (LOM)

Fluid plan offices

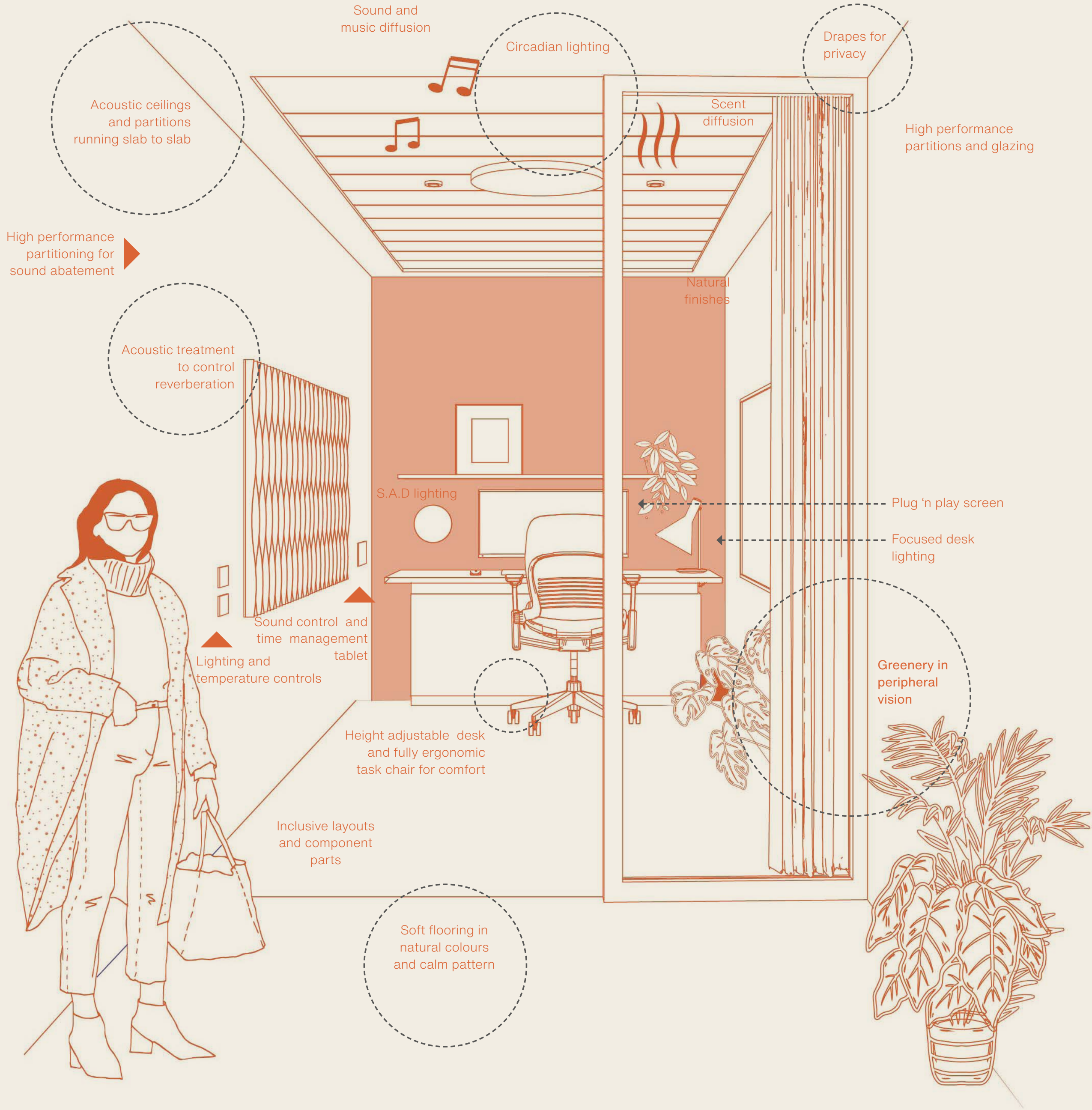
To create a more inclusive work environment employees and designers can create a variety of work environments in one building. Also promoting hot desking work options to allow movement throughout the day at different work settings. This allows employees to make individual choices in the work environment, selecting work styles and comfort levels that suit them best. Providing a variety of hot desking, touch-down tables, private working rooms and quiet zones give the employee a choice. Even though the design is open plan, the space is articulated and divided into neighbourhoods, including the use of acoustic baffles that help moderate the noise in the space whilst also assisting in breaking up the rows of desks so the space doesn't feel as open whilst still allowing it to be flexible.

Space for focus

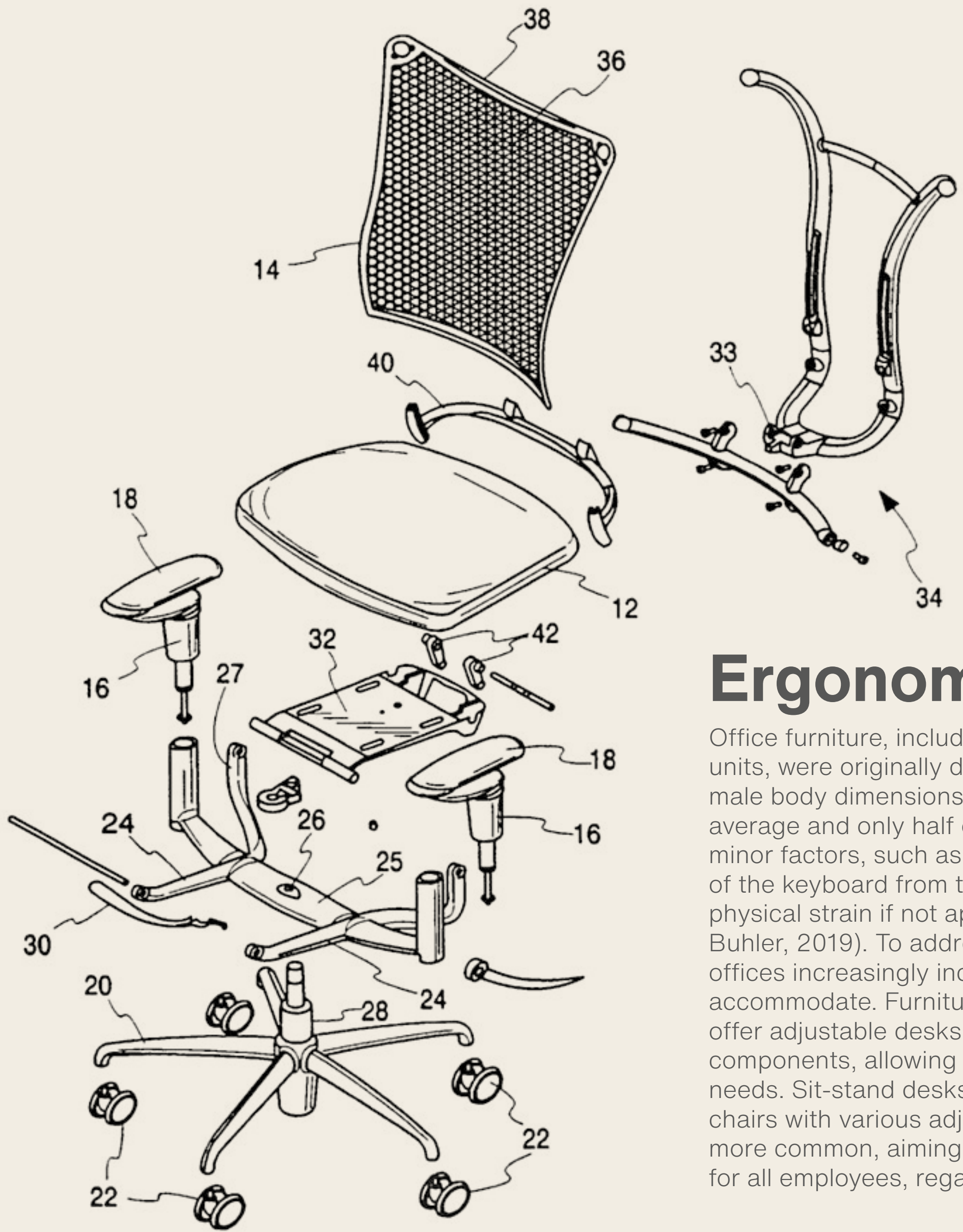
A lack of focus can affect our productivity and mood, can lead to mistakes and impact the ability to think creatively and sharply. It can cause irritability, depression and anxiety – undermining our efficiency and productivity, degrading the quality of our mental wellbeing. While people may carry out focused work in open plan areas we are seeing more dedicated quiet zones and rooms being provided in offices.

The interior design of focus spaces should be conducive to calm. This can, however, mean different things to different people. Lighting design is integral to the design of spaces for concentration. As humans we are tuned to natural light and the passing of time during days and seasons. Some people prefer to focus in relative darkness, some in bright light and uncluttered spaces, and some prefer to focus in spaces with a view.

As preferences differ widely, the best approach is to design for choice and build in a degree of variation between focus spaces. The ultimate aim is creating the conditions that enable us to do our best work. While the variables are as countless as human preferences, accounting for some differentiation will allow us to capture the needs of a wider user group.



A holistic model - Science of Focus (LOM)



Office rolling chair (UsumStudy, 2024)

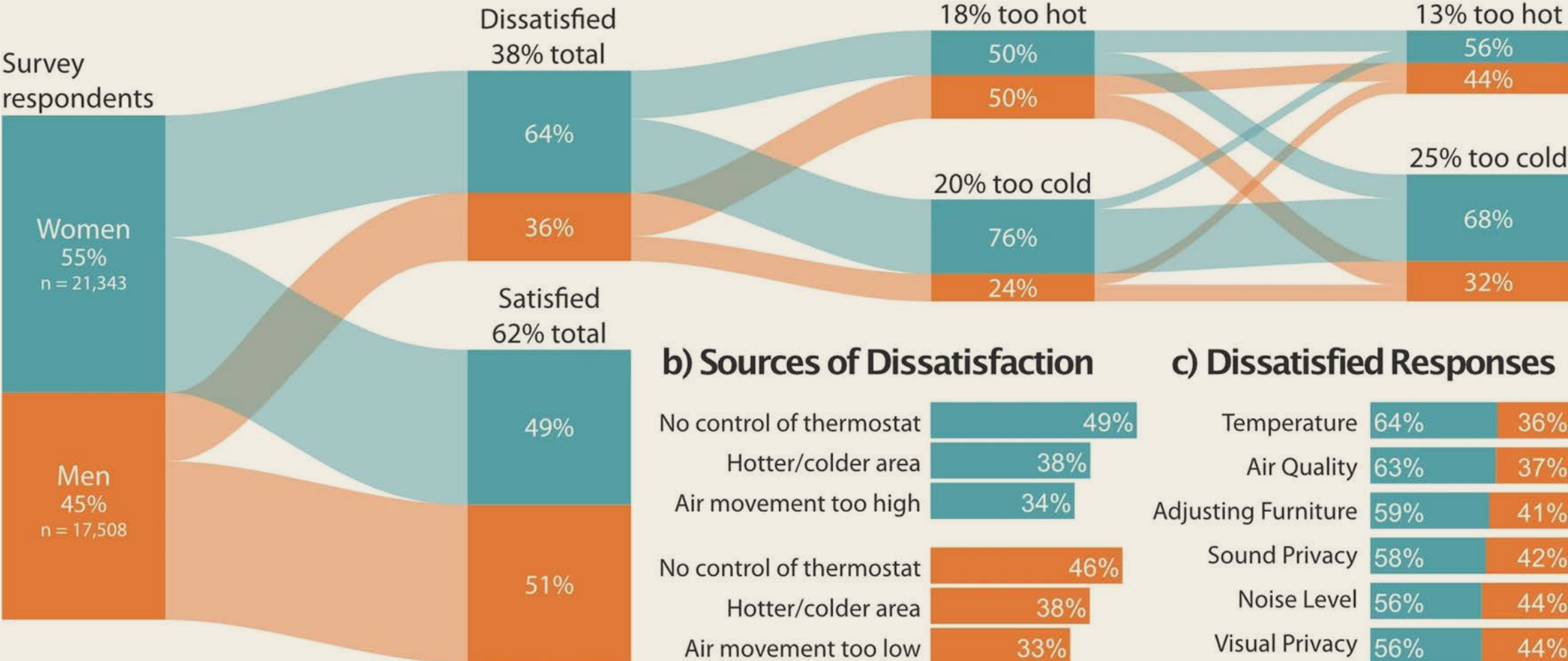
Ergonomics

Office furniture, including desks, chairs, and storage units, were originally designed based on the average male body dimensions. Not many of us are actually average and only half of us are male and even seemingly minor factors, such as screen height or the distance of the keyboard from the edge of the desk, can lead to physical strain if not appropriately adjusted. (Kaufmann-Buhler, 2019). To address these disparities, modern offices increasingly incorporate adjustable furniture to accommodate. Furniture designers and suppliers now offer adjustable desks and chairs with multiple interactive components, allowing for customization to fit individual needs. Sit-stand desks with adjustable heights and chairs with various adjustable features are becoming more common, aiming to provide comfort and support for all employees, regardless of gender or body type.

Temperature

To create a more inclusive work environment employees and designers can create a variety of work environments in one building. Also promoting hot desking work options to allow movement throughout the day at different work settings. This allows employees to make individual choices in the work environment, selecting work styles and comfort levels that suit them best. Providing a variety of hot desking, touch-down tables, private working rooms and quiet zones give the employee a choice. Even though the design is open plan, the space is articulated and divided into neighbourhoods, including the use of acoustic baffles that help moderate the noise in the space whilst also assisting in breaking up the rows of desks so the space doesn't feel as open whilst still allowing it to be flexible.

a) Satisfaction with Temperature



How disproportionately women find office temperatures uncomfortable compared to their male colleagues. - Satisfaction of Gender per season in offices (Parkinson, 2021)

Toilets

Buildings allocate equal lavatory numbers and areas to men's and women's restrooms, even though women generally require more facilities due to physiological differences and clothing considerations and use a toilet for, on average, a longer time than their male colleagues (Ghent University, 2017). This often results in longer wait times for women in workplaces. A study by Bichard and Hanson (2009) found that women spend an average of 1.5 to 2 times longer in restrooms than their male equivalents. Despite this, the same area is allocated to both men's and women's restrooms, creating a bottleneck effect for women. This miscalculation leads to disproportionately long lines for women's restrooms at concerts, theatres, airports, and stadiums (Molotch, 2014). The movement towards more inclusive and equitable bathrooms facilities for all, in public and office places, is gaining traction. There is probably a need for more variety of facilities and an increase in space provision but we first need to understand what everyone's issues are, and this will need more R&D.

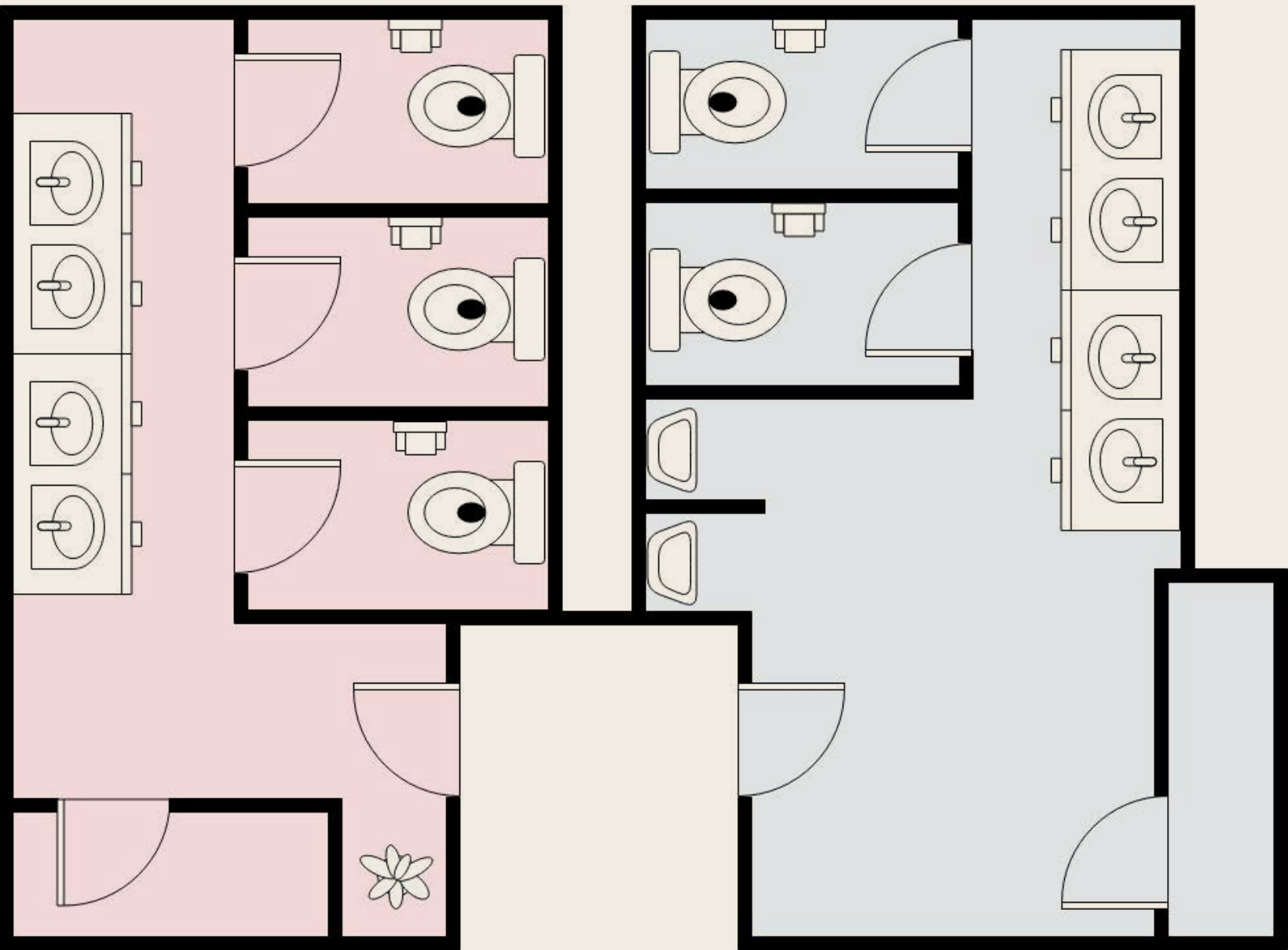


Diagram representation of toilet design (Visual Paradigm, ND)