



**Future office layouts for large organisations: workplace specialist and design firms' perspective.**

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## Future office layouts for large organisations: workplace specialist and design firms' perspective.

### ABSTRACT

**Purpose:** Challenged by the effects of flexible workplace strategies, organisations are increasingly seeking flexibility and functional efficiency in their office space and its layouts. Once an organisation decides to change their office layouts, an office design firm or, a workplace strategist, can be employed to implement new workplace strategies. Understanding the client's requirements, as well as constraints, are key to creating an efficient office environment for occupiers. Since office layout arrangements have a significant influence on many important aspects of the organisation, design firms need to liaise with the client to determine the most appropriate design concept for their clients. In dealing with tenants over the years, design firms and workplace strategy firms have a broader understanding of what the common requirements are for tenants and landlords regarding requirements in workplace design. They have a good understanding of what clients' requirements were previously and how they have changed over time. Thus, design and workplace strategy firms have a better understanding of the requirements of future offices. This research, therefore, explores the factors which design firms consider when designing new office layouts and the nature of future offices from the design and workplace strategy firms' perspectives in the Australian context.

**Design/methodology/approach:** A qualitative study comprising semi-structured, in-depth individual interviews with eight internationally renowned design firms and workplace strategy consultant firms, involved in award winning office designs in Australia, was undertaken. All interview participants were professionals with extensive experience within the field. Qualitative data was analysed using a thematic approach, which adopted within case, and across case, analyses.

**Findings:** The results identified several major factors considered when identifying appropriate workplace strategies for large corporates. These included the existing and preferred culture of the organisation, the level of flexibility required, functionality and technology requirements, acoustic strategies, sense of community, the generation gap between employees, levels of brightness and colours of interiors and furniture choices. Participants believed future offices would be technology driven, community oriented, sustainability, health and wellbeing focused, smaller in size with satellite offices, such as co-working and office spaces.

**Originality/value:** The paper provides in-depth insights into how design firms and workplace strategy firms meet organisations' demands for physical spaces, and their main considerations in developing new workplace strategies in an Australian context.

**Keywords:** office layouts, organisations, design firms, requirements, future office layouts

**Disciplines presented in the paper:** Corporate real estate, Property, Built environment

### INTRODUCTION

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Workplaces are usually viewed as a cost centre rather than a driver of performance, with emphasis more often placed on factors such as increasing worker density and reducing total space requirements. Studies reveal that some organisations spend years preparing to change their office layouts. Office design specialists are involved to identify the most appropriate layouts for the organisation to align with their client's requirements. Understanding the nature of the business, work practices, corporate culture and other requirements of an organisation can help employers and office designers to offer the most suitable mix of the different types of spaces and the atmosphere of those spaces. Evidence suggests that architecture, interior design and furnishings provide a way to support – or even change – the employee perceptions of their workplaces and the way they work within the workplace (Cagliano et al, 2011). There are researches in corporate real estate literature addressing the requirements, benefits and challenges of new office designs and layout arrangements. Most of the published literature is based on user perspectives, and in based on research undertaken in many different countries. Limited empirical research has been conducted to understand these issues from the design and workplace specialist consultant's perspective and very limited literature covers the Australian context. m

This research addresses this research gap by identifying the factors considered when designing new office layouts from the design and workplace strategy specialist firms' perspectives in Australia. This research is extended further to understand the nature of future offices required by tenants and landlords in the CRE sector in the Australian property market from the design and workplace strategy specialist firms' perspectives. The main research question is; what are the current considerations and the future expectations of office layouts in large organisations from the workplace strategy specialists' and design firms' perspectives?

Eight large, internationally renowned design firms and workplace strategy specialists were interviewed for this research and this paper presents their perceptions, the processes followed when changing office layouts and work practices, and the issues confronted when incorporating new layouts. Two research objectives were established prior to the interviews with the design and workplace strategy firms. These research objectives are:

1. To gain a deeper understanding of the main considerations in designing new office layouts and work practices from the design and workplace strategy specialist perspectives in the Australian CRE sector, and:
2. To identify the nature and characteristics of future corporate offices from the design and workplace strategy specialist perspectives in Australian CRE context.

## LITERATURE REVIEW

Many organisations redesign, or change, their workplaces with the intention of creating a dynamic alignment between organisational goals and the spatial environment (Hassanain, 2006; Arge, 2005). However, such changes in their workplaces should be carefully planned to avoid any negative impacts on employees and the image of the organisation (Joroff et al. 2003). It is emphasised that flexible workplace practices may lead to success, only when organisational members, understand the purpose of such changes, use those facilities as intended; and are committed to continuous behavioural improvement (Erllich and Bichard, 2008; Joy, & Haynes, 2011). Therefore, it is important to understand the factors that need to be considered when designing workplaces for client organisations to support achieving their expected outcome from those changes.

Typically, buildings were designed for a 9am to 5pm work pattern which mainly adopted 'Traditional' work practices in Scientific Management theory Szarejko and Trocka-

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3 Leszczynska, 2007). Hive, Cell, Combi, Den and Club (Szarejko and Trocka-Leszczynska,  
4 2007) are the most common office layout plans used in Traditional work practices. Office  
5 environments and facilities have undergone gradual change, as working patterns have evolved  
6 to new ways of working, such as flexible and agile work practices (Laing et al., 1998). Most of  
7 these layout changes in the workplace come with new work practices; and, organisations expect  
8 several benefits from these changes in various ways. Integrated workplace strategy, which  
9 addresses client requirements such as aims of the proposed changes and how the changes  
10 contribute to the aims, is important for successful completion of a project (Barber et al., 2005;  
11 Bradley and Woodling, 2000; Duffy, 2000).

12  
13  
14 Gensler (2005) estimated that poorly designed workplaces could cost over 135 billion pounds  
15 every year in the British economy. Those cost could have been minimised if workplace have  
16 designed properly. Haynes et al (2005) identify the positive relationship between office layout  
17 and productivity. Gensler (2005) also identified the working environment could improve  
18 productivity by 19 per cent and employee satisfaction by 79 per cent in legal, media and  
19 financial sectors. He also recognised the relationship between working environment,  
20 recruitment, retention, productivity and ability to achieve it business strategy. Research based  
21 on 102 work settings in Sydney offices, Ilozor et al. (2002) revealed that more diverse office  
22 designs would increase employee's productivity. He further concluded that increased number  
23 of work settings would increase innovation in terms of fostering staff interaction.

24  
25  
26 Sustainability is another important factor that interests both tenants and landlords. Chinnakani  
27 et al., (2011) emphasised the importance of using intelligent on-off system for HVAC systems.  
28 Others recognised employees' preferences for thermal comfortability in their personal  
29 workspaces, with special air conditioning control facilities (Cho, S.H., et al, 2001). Excessive  
30 noise levels have been a concern of users in workplaces and designers are expected to use  
31 technologies to reduce noise levels in open plan layouts. Sound masking treatments have been  
32 a popular solution among users and designers, although it is an expensive solution. Horrall and  
33 Rosenberg (2006) found that stand-alone acoustic solutions could reduce the cost of multiple  
34 solutions, such as material selections for ceiling tiles, private office wall construction and  
35 workstation design. It would be interesting to see if design firms consider this issue beforehand,  
36 rather than after the issue arises.

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39 Better communication, collaboration, and information sharing and knowledge integration are  
40 other key expectations tenants have from their workplaces. Innovative technologies, advanced  
41 information and communication technologies, globalisation of businesses, increase in team and  
42 project-based working practices, the emergence of flatter organisational structures,  
43 reorganisation of work activities and the emerging trend of knowledge-based activities are  
44 major expectations of workplace from the user perspectives (Saurin and Ratcliff, 2010; French  
45 and Jones, 2010; French and Wiseman, 2003; Irons and Armitage, 2003; Lizieri, 2003; Joroff  
46 et al., 2003; Fawcett and Rigby, 2009; French, 2001). However, there is little evidence in  
47 published literature, if design and workplace strategy consultants put the same emphasis on  
48 this when design new workplaces for large corporates in Australia.

49  
50  
51 Workplace design and physical office layout convey messages to employees and other  
52 stakeholders about an organisations values, ways of working and culture. It is not well known  
53 that design and workplace strategy consultants firm consider this in their design process. As  
54 organisational culture has a significant influence on the success of an organisation, it is not  
55 clear in existing literature how workplace strategy specialists' and design firms understand  
56 these changes and incorporate the changes into their designs (Mars, G.,2008; Miller,  
57 2014;Morgan, & Anthony, 2008; Rothe et al, 2011). However, there is limited academic  
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3 literature about extent of office designers understand the importance of addressing these  
4 elements in their clients' design.  
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6 New workplace strategies would change the socio-spatial contract between employer and  
7 employee (Bell and Anderson, 1999). What this is to workplace strategy specialists, and how  
8 they address this relationship (Cameron & Quinn, 2006) is not clear in property literature.  
9 Literature also highlighted the importance of making a great effort in getting employees  
10 involved during a move to more flexible workplace strategies (Binyaseen, 2010; Brunia, and  
11 Hartjes-Gosselink, 2009). Therefore, it was recommended to implement programmes with  
12 employees to help ease the transition. (Appel-Meulenbroek et al., 2011; Joroff et al., 2003).  
13 However, it is not clear in academic literature if design and workplace strategy specialist firms  
14 consider this as a part of the design strategy in Australian context.  
15  
16

17 Before implementing changes to a workplace, conducting experimentation with pilot activities  
18 with client, would be extremely useful (Lizieri, 2003; Duffy, 1999). Such pilot projects may  
19 provide valuable insights for implementation, thus limiting risks and helping to avoid "pitfalls"  
20 associated with layout changes (Schriefer, 2005; Earle, 2003). If there is a mismatch between  
21 the office environment and works happening in that environment, productivity losses are  
22 inevitable (Mawson, 2002.; Göçer et al., 2017;). However, majority of literature focusses on  
23 user perspectives and there is limited published evidence available in of design and workplace  
24 specialist consultant firm perspectives in Australian context.  
25

26 Brill et al. (2001, p.19) identified the most important workplace features from designers'  
27 perspectives as;  
28

- 29 1) Ability to do distraction-free solo work.
- 30 2) Support for impromptu interactions.
- 31 3) Support for meetings and undistracted group work.
- 32 4) Workspace comfort, ergonomics and enough space for work tools.
- 33 5) Workspace side-by-side work and "dropping into chat".
- 34 6) Located near or can easily find co-workers.
- 35 7) Workplace has good places for breaks.
- 36 8) Access to needed technology.
- 37 9) Quality lighting and access to daylight.
- 38 10) Temperature control and air quality.  
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41 However, this finding were 2001 which is about two decades old and US based. This research  
42 attempt to identify the considerations of workplace strategy specialists' and design firms focus  
43 on in the late 2010s and in Australia context for which no published evidence exists.  
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#### 47 **Future offices:**

48 Office environment has been changed significantly over the last few decades. Due to the  
49 changing nature of business environments, the nature of office environment had to be changed  
50 too. Change of business environment are caused mainly by changes happening in the market,  
51 competition, new technology, workforce, workstyle, workplace, and; in organisational  
52 structures (Harris, 2015). There are opinions on how future workplace would look like in CRE  
53 sector in user perspectives. Harris, (2015) emphasised that changes in future offices would be  
54 mainly focussed on "software" of the organisation, which are; cultural, social and value  
55 systems and not the "hardware" side, such as desk, partition, layout or technology.  
56 Organisations will be looking at office space which gives opportunity to be more agile and  
57 connected with giving high flexibility and variety of choices (Halvitigala, and Reed, 2015).  
58 Harris, (2015) contradictory to his own argument above he believes that usage of high  
59  
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3 technology will be another key element in future offices. Regardless, the theoretical approaches  
4 of layout planning (Brooks, 1998; Stewart, 1985) separation of sections of buildings such as  
5 building structure, façade and fit outs would increase the adaptability of the building (Remøy,  
6 et al, 2011) and it would minimise possible challenges of future layout changes (Steen et al,  
7 2005; Steiner, 2006). Remøy, et al, (2011) emphasised that adaptability cannot be predicted,  
8 thus allowing provision for change is a good solution.  
9

10 Halvitigala and Reed (2015) believe that purpose-built campus style offices, serviced offices  
11 and multi-functional office spaces would be in high demand for future space requirements for  
12 some tenants. More space for socialisation, bigger floor plates for open plan and cellular space,  
13 higher vertical rises, communication booths and adaptable partitions would be requirements of  
14 future offices also (Markland, 1995). Diverse usage patterns will be encouraged more in future  
15 offices (Halvitigala and Reed, 2015). Fit-out solutions is another focus for future offices, while  
16 greater permeability of buildings to support new work patterns, such as co-working and shared  
17 facilities.  
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20 However, this literature was from the CRE and facilities management user perspectives, but  
21 very limited literature was available addressing this issue from the design and workplace  
22 strategy firm perspectives in Australia. Thus, another objective of this research was to  
23 understand the nature of the future workplace in the corporate sector from the design and  
24 workplace strategy specialist firms perspective.  
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## 30 RESEARCH METHODOLOGY

31 To obtain in-depth understanding of research problems, a qualitative research design was  
32 adopted. Qualitative methodology allows researchers to describe feelings and ideas, such as  
33 problems, experiences and challenges. Semi structured, face to face interviews were decided  
34 to be the most appropriate data collection method in this research.  
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37 Semi-structured interviews allowed participants to answer the questions freely and ensured a  
38 consistent coverage of the topics between the interviews. All interviews were conducted at  
39 participants' workplace or, their nominated place. The first part of the interview questions was  
40 about their work experiences, projects they have been involved in and their contributions. The  
41 second part of the interview was focused on interviewees attitudes, beliefs, experiences and  
42 predictions on research objectives. Interviews were focused on two major areas.  
43

- 44 i. Main considerations in designing new office layouts and work practices.
  - 45 ii. Nature of future office layout arrangements of large organisations.
- 46

47 Eight internationally renowned and award winning workplace strategy consultants and design  
48 firms in Australia were selected for the interview sample. All interview participants were high  
49 profile professionals with extensive experience in the relevant field. Individual, face to face  
50 semi structured in-depth interviews were conducted as the data collection method to explicitly  
51 discuss ideas, perceptions and experiences since the researcher is able to get physically and  
52 psychologically closer to the phenomenon (Perry, 1998). **Selected** firms have been involved in  
53 office layout redesign of large commercial buildings in Melbourne and Sydney in recent years.  
54 With these recent and past experiences of large office building redesign, these organisations  
55 would have a deep understanding of future office layout requirements for large organisations.  
56 **All interviews were recorded and that transcriptions were made.** Data were analysed using a  
57 thematic approach. with the use of within case, and across case, analyses (Creswell, 2009).  
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Table 1 shows the profile of interviewees who contributed their extensive experience to this research.

**Table 1: Profiles of interviewees.**

Interviewee	Scale of work	Position in organisation	Experience (years)	Interview duration
Respondent 1	International	National Director - Australia & New Zealand	15	45min
Respondent 2	International	Director- Workplace strategy & change	7	55min
Respondent 3	International	Senior Consultant - Workplace & change strategy	9	105min
Respondent 4	National	Workplace researcher, design consultant and strategist	16	50min
Respondent 5	National	Director – Projects (Interiors)	18	50min
Respondent 6	International	Head of Design – Interiors design	21	45min
Respondent 7	International	Design consultant and strategist	18	40min
Respondent 8	National	Pioneer of business culture transformation & contemporary Australian workplace design	19	50min

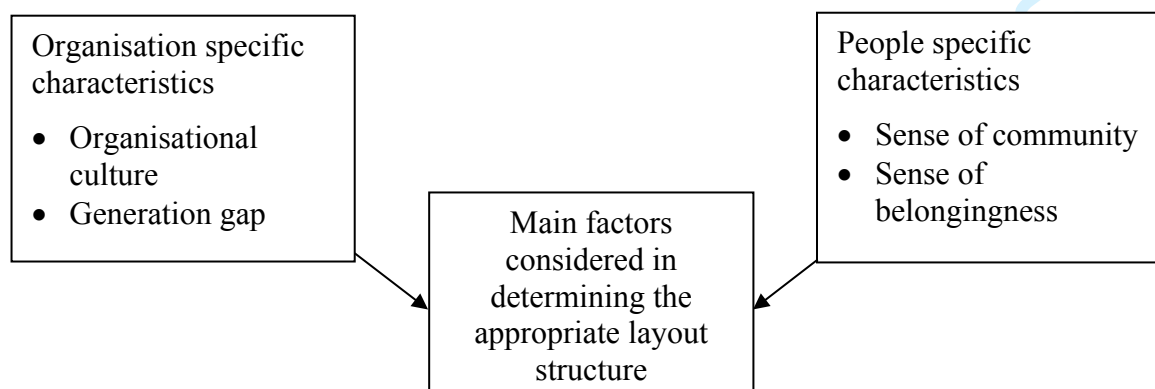
(Source: Authors)

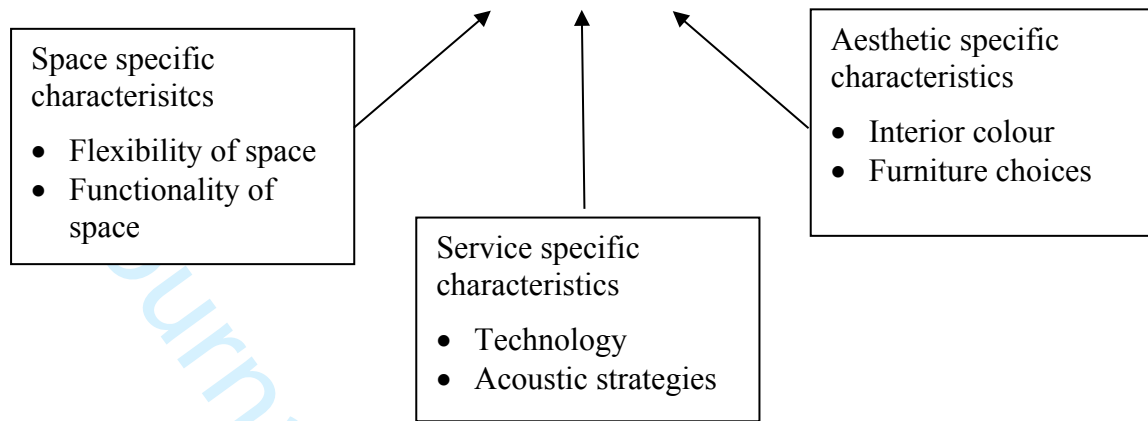
## RESULTS AND DISCUSSION

### 1. Main considerations in designing new office layouts and work practices.

Design and workplace strategy firms explained the main factors they consider when designing office spaces. These factors identified by design and workplace strategy specialists firms are categorised in figure 1 and discussed below.

Figure 1: Main factors considered in determining appropriate layout structure.





(Source: Authors).

### **i. Organisation specific characteristics:**

#### **a) Culture of the organisation**

One of the main factors which need to be considered when designing a workplace is the culture of the specific organisation. Although some literature discussed behavioural changes following layout changes (Binyaseen Binyaseen, 2010; Brunia, and Hartjes-Gosselink, 2009), property literature did not emphasise the importance of integrating organisational culture into workplace designs. One interviewee revealed the relationship between organisational culture and office layouts: *“Different layouts support different cultural dimensions”* (Respondent 1).

This is important, since different layouts support different cultural dimensions. They further revealed that one of the main reasons for changing the existing layouts is to change their culture or, further establish their existing culture. Office spaces are designed to utilise the physical environment in a way that adds the most value to employer’s objectives, enabling for choice on how much interaction they want. **One interviewee emphasised;**

*“organisational culture is not “one size fits all,” and the physical layout should only be an extension of the culture, showcasing the values of the organisation.”* (Respondent 3)

Interviewees identified two dimensions of corporate culture that may help organisations to understand appropriate office layout for them: interaction and autonomy. Interaction refers to the amount and intensity of face-to-face communication that is necessary to carry out their work while autonomy refers to the degree of individual choice regarding when, where and how work is undertaken as respondent 5 summarises:

*“It’s pretty clear often from the business goals and vision what their culture is at the moment, and we talk to them to find out what they want it to be. Sometimes they’re close, and sometimes they’re really far apart. We help them with change management to get their culture where they want it to be”* (Respondent 5).

Changes in an organisation have implications for the existing organisational culture and work practices (Brunetto, 2001). New working strategies, such as flexible working arrangements, working from home, outsourcing and the use of technology, weaken the existing organisational culture (Hofstede et al., 2010a). The nature and type of work practices have significant implications for building design (Fairs, 2016; Tharp, 2009).



## b) *Generation gap*

Interviewees stated that many organisations have employees from four generations and workplaces are shared by these employees with different work experiences, work styles and expectations. Workplaces need to accommodate these variations and the near 50-year age gap amongst the employees. **As per literature**, Baby Boomers comprise 25% of the workforce, generation X 50%, generation Y 20% and generation Z the remaining 5% of the workforce, all have different technology skills, work practice preferences and psychological needs which should be incorporated into office layout designs. Interviewees indicated that they obtain all information about employee demographics before designing workplaces and, to date, the literature has not highlighted this generation gap design factor. *“Different age groups in the workforce have different technology skills, work practice preferences and psychological needs, and such needs should be incorporated into office layout designs”* (Respondent 2).

Interviewees emphasised that modern office layouts provide the opportunity to have a better mix of spaces for different generations by removing physical and hierarchical barriers to encourage collaboration and knowledge transfer. They employed strategies to address the generational gap in workplace design by providing several arrangements, including:

1. Providing flexible work settings that employees can choose from based on their needs.
2. Providing collaboration spaces for generations X, Y and Z and; personal spaces for Baby Boomers.
3. Improving technology tools to support the way in which Gen X, Y and Z are accustomed to working.
4. Creating spaces that provide good access to support staff and resources for Baby Boomers.
5. Creating spaces that provide access to mentoring and learning experiences for Gen X, Y and Z.
6. Future proofing the space to facilitate more flexibility and remote working when Gen Y and Z become the highest portion of the workforce.

Overall, all participants suggested that efficient space layouts would have spaces that are suitable for different employees' different expectations. For example, there are 'retro-tech' areas for traditional workers and 'high-tech' areas in interactive areas to support young employees.

## ii. **Space specific characteristics:**

### a) *Flexibility*

For these interviewees, flexibility is the biggest and most commonly requested requirement of most clients. Erlich and Bichard (2008) and Joy & Haynes (2011) found this requirement is mostly predicated on the reality that organisations do not know where their business would be in the future, due to the changes in their business strategies, working strategies and technology and future growth. Therefore, clients want their office layout to be flexible enough to adjust for, currently unknown future circumstances. One interviewee explained:

*“You actually need to design it in many ways, with many settings, because how you might work now might be different to how you might work in two years' time, and that staff numbers are going up and down. So if a space is indicative for the shrinking and the grand growth of staffing numbers and how people work”* (Respondent 7).

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3 Organisations require flexibility in many areas such as, the partitioning used, flexible meeting  
4 rooms, adjustable table and chairs and flexible working schedule. It is suggested that flexibility  
5 is the theme for many office layout designs and flexibility in building services were required  
6 to increase the density of offices. All participants suggested, a modular approach to office  
7 designs to provide flexibility for changes in function, movement or organisational growth is  
8 commonly adopted.  
9

### 10 11 12 **b) Functionality**

13  
14 Interviewees highlighted that some organisations provided lockers which were not big enough  
15 for employees to put their belongings into. If lockers are not big enough to store their  
16 belongings, the lockers are not functional enough. Interviewees indicated that electronic  
17 locking systems are more functional to operate than manual padlocks. They explained that  
18 allocating zones for each department is more functional than asking employees to work  
19 anywhere in the building. Staff in the same department, or team, would be available in that  
20 zone for easy collaboration. In addition, this arrangement helps each department to maintain  
21 their sub culture. As one workplace strategy organisation explained what they did with a client:

22  
23 *“Parts of the business get assigned work stations, and they can sit in the same place*  
24 *every day, but this part of the business has to operate under a flexi-desk type*  
25 *arrangement, then you’ve got sort of dichotomy across the business. So, there’s 20*  
26 *desks allocated for the accounts department and it might be because those staff never*  
27 *leave the office that there’s not a ratio applied to that, so if there’s 20 staff there will*  
28 *be 20 desks. But the design principles remain the same in that you need to pack up your*  
29 *stuff at the end of the day and put it in your locker”* (Respondent 1).  
30  
31

32 All participants considered functionality as a key consideration of workplace designing.  
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### 35 **iii. Service specific characteristics:**

#### 36 **a) Technology**

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38 All interviewees shared a common view that changes in building specifications and  
39 configurations occur at a much slower pace than changes in work practices and information  
40 and communication technology which is confirmed in the literature (Bradley and Hood, 2003).  
41 Two main technology changes that have emerged in the past decade, high speed external fibre  
42 networks and mobile and wireless technology, affect the way people work as well as the design  
43 of office layouts. Therefore, office layout designs are often designed, or redesigned, to ensure  
44 the building is capable of introducing supporting technologies such as wireless networks and  
45 adequate communications connectivity to support the enhanced technology. Design firms  
46 believe that the latest ICT facilities help organisations to attract, and retain, high skilled new  
47 generation workers. Many organisations increasingly rely on highly motivated, young  
48 individuals who are enabled by technology. *“Modern workplaces are designed to support*  
49 *knowledge transfer and connectivity among new generation of employees”* (Respondent 7).  
50 Three of the interviewees (3, 4 and 7), also stated that they consider the wellness of employees  
51 as well by connecting *“IoT (Internet of Things) systems to sit/stand desks”* (Respondent 4).  
52  
53

54 All participants mentioned that technology is one of their key considerations when designing a  
55 workplace for their clients.  
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#### 58 **b) Acoustic strategies**

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3 Interviewees suggested that acoustic issues frequently arise in open plan layouts, which can be  
4 overlooked in the initial design phases, as some organisations focus on the aesthetics aspects  
5 of the space. Installing sound absorption technologies such as acoustic screens which would  
6 adversely increase acoustic issues in open plan offices (Respondent 1). If there are no partitions  
7 or screens, staff are aware and avoid making loud noises, however if there are partitions, they  
8 talk louder not realising that partitions do not reach the ceilings. The end result is more noise  
9 is created than when there are no partitions provided. Some design and workplace strategy  
10 firms believed that noise is a good thing as one interviewee explained:

11  
12  
13 *“But the flip side to that is what noise means? That people are connecting,*  
14 *collaborating. No one thinks like that, everyone is going, oh it’s just too noisy, it is*  
15 *noisy because people are actually talking to each other. Then you correlate that to*  
16 *email volumes going down. I suggest that’s exactly what you want for your business”*  
17 (Respondent 2).  
18

19 Design firms take a range of acoustic goals into consideration in modern office plan  
20 environments, including controlling noise in common areas, establishing some privacy and  
21 sound absorption for employees at their desks and providing private spaces for confidential  
22 discussions (Respondent 2). In addition, soundproof walls, panel absorbers on the side walls  
23 and associated floor materials such as needle-punched carpets are used in modern office  
24 designs to decrease sound levels. Furthermore, ‘sound masking systems’ which consist of a  
25 series of speakers that generated electronically generated unobtrusive music to cover  
26 background noise are commonly used in modern office designs. In addition, office furniture  
27 and equipment can be strategically placed to minimise its sound impact on neighbouring  
28 workstations.  
29

30  
31 All participants confirmed that acoustic strategies is one of their key considerations when  
32 designing a workplace for their clients.  
33

#### 34 35 **iv. Aesthetic specific characteristics:**

##### 36 37 **a) *Bright and interior colour***

38 All interviewees shared the common view that choosing the right colour is an important  
39 decision in interior designs. It was suggested that colour choices not only a just personal  
40 preference, but they can influence occupiers’ moods, emotions, perceptions by attracting  
41 attention, both consciously, and subconsciously. Furthermore, colour can brand a space,  
42 signifying what interactions are to occur in those areas. Therefore, choosing the right colour  
43 and brightness would give a good impression of organisation and its culture on their employees,  
44 as well as customers. Design and workplace strategy firms emphasised that they used different  
45 colours for the areas allocated for different activities as shown below:  
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48 Blue – often associated with stability, it communicates a reliable outlook whilst  
49 boosting relaxation and intellectual thoughts. It is used in collaborative areas in modern  
50 offices.  
51

52 Red – aiding with employee heavy concentration. It is used in areas where  
53 concentration is needed.  
54

55 Yellow – used for areas where occupiers are required to be more creative and innovative  
56

57 Green –used for areas that need a strong sense of balance, calm, warmth and reassuring  
58 feelings.  
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3 White – is avoided in modern office environments as it promotes feelings of tension and  
4 discomfort. (Respondent 7)  
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9  
10 **b) Furniture choices**

11 Appropriate selection of furniture is an important contribution employees' comfort, health and  
12 wellbeing, and it has an impact on organisational ergonomics. Material, colour, comfort,  
13 adjustability are the main criteria when selecting furniture for modern office spaces.  
14

15 Soft seating on wheels, mobile tables and movable privacy screens are commonly used to allow  
16 participants to create a collaborative meeting space easily. Adaptable, convertible furniture  
17 such as standing desks, movable desks, convertible standing desks, communal desks and  
18 leaning desks are used to allow occupiers to transform workstations into an opportunity to  
19 inspire brainstorming sessions and promote effective discussion among employees. Poor  
20 choice can hinder engagement, as respondent 7 noted: "*Furniture choice is very important. I*  
21 *had meetings around enormous boardroom tables that actually stopped conversations*  
22 *happening and stopped connection forming*" (Respondent 7).  
23

24 Only three out of eight interview participants mentioned that they considered furniture choice  
25 for their client as a part of office design.  
26  
27  
28

29 **v. People specific characteristics:**

30 **a) Sense of community**  
31

32 Interaction between employees is important, and all interviews revealed that social places for  
33 employees including larger atria, lobbies and cafés, where employees and socialise and work,  
34 are considered as amenities that increase the sense of community. It was suggested that; "*about*  
35 *a four and a half minute waiting time at the coffee machines is the ideal time for employees to*  
36 *start conversation and get to know each other*" (Respondent 1).  
37

38 In addition, high quality buildings often have amenities such as gyms, childcare facilities,  
39 banks, ATMs, convenience stores, small supermarkets, community gardens, games rooms,  
40 indoor bicycle and scooter tracks, on-site shower facilities, as well as, break away rooms for  
41 relaxation and contemplation. Interviewees stated that these facilities create a more home like  
42 environment for occupiers, and enhance their physical and physiological connectivity with the  
43 building while providing the competitive edge to such properties.  
44  
45  
46

47 **b) Sense of belonging**  
48

49 Though the literature did not highlight sense of belonging, it was revealed that modern designs  
50 aim to provide employees with this attribute in new work environments, as stated by  
51 Respondent 1. "*Fostering better sense of belonging (Nesting) has been found in many cases*  
52 *to enhance wellbeing and allow a person to create a sense of security*" (Respondent 1).  
53

54 Participant emphasised that they incorporated several specific elements into office spaces to  
55 create an optimistic sense of belonging in workplace. These features include:  
56

- 57 1. Creating welcoming entrances with visible hosting.
- 58 2. Offering video-conferencing configurations that allow remote participants to connect.
- 59 3. Designing informal areas for socialisation, both in person and virtually.  
60

4. Creating spaces that provide occupiers choices and empower them to work alone or together.
5. Including spaces beyond the lobby that reinforce the culture of the organisation.
6. Using modern technology to help employees feel connected and informed.
7. Designing areas that allow workers to control their sensory stimulation.
8. Offering places that are calming, through the materials, textures, colours, lighting, and views.

Six out of eight participants mentioned that sense of belonging is one of their main considerations when designing a workplace for clients.

Table 2 shows the number of interview participants who mentioned the factors discussed above.

**Table 2: No. of participant discussed-Factor considered in designing.**

Factor	No of participant discussed
Culture of the organisation	8
Flexibility	8
Functionality	8
Technology	8
Acoustic strategies	8
Sense of community	8
Sense of belonging	6 (except 3 & 5)
Bright and interior colour	8
Furniture choices	3 (only 7, 1&3)
Generation gap	8

(Source: Authors).

## 2. Future office layout arrangements of large organisations

The interviewees discussed how future physical office environments would look considering the changes that occur due to internal organisational pressures, as well as external changes, which are beyond the control of organisations. None had a clear idea about how future office spaces would look, as a result of the fast changing nature of technology, work practices and the changes in the corporate culture of organisations. However, they discussed possible improvements they would like in future office environments which are analysed below.

### *Technology driven spaces*

1  
2  
3 All interviewees believed future office environments would be strongly influenced by advances  
4 in technology. People would be more mobile than ever before and workplaces would only be  
5 used for collaborative purposes. Desks and large computer screens would gradually disappear.  
6

7 Therefore, future workplaces will rely on big data, with an expectation to see the rise of the  
8 intelligent workplace that monitors its workers' environment, mood, wants, needs and  
9 performance. Future office environments will use more sensory data to better understand  
10 employee performance dynamics. Interviewees suggested people's involvement would mainly  
11 focus on critical thinking and problem exercises, as artificial intelligence computing will  
12 dominate future work environments. The importance of incorporating such changes into office  
13 utilisation strategies was emphasised.  
14  
15

### 16 17 ***Virtual offices*** 18

19 Remote working, with the use of cloud work environment, would be become commonplace  
20 allowing employees to cultivate their own work environments and schedules to best suit their  
21 needs. Easy WiFi access, smartphones, conferencing and advanced communication software  
22 would foster an office setting without employees being in the office physically. However, they  
23 perceived that virtual offices could get to a certain point of success only. As existing  
24 workplaces have evolved considerably to date, change would not go too much further. Though  
25 many studies discussed technological advancement (Rothe et al., 2011; Knight Frank, 2017),  
26 the virtual office concept was not highlighted.  
27  
28

29 Overall, interviewees emphasised that these plans would vary a lot, by organisation and  
30 department, as the design of the office space should be tailored to the nature of employees'  
31 work and their work patterns. All participants mentioned that large corporates would be  
32 heading towards to virtual offices to some extent.  
33  
34

### 35 36 ***More community environments*** 37

38 Future offices will focus on providing more community environments rather than more formal  
39 work environments. Given that people are busy with their day-to-day activities and, most  
40 services and facilities available through virtual resources, people are disconnected to each  
41 other. Future workplaces, therefore, might fill those gaps by providing more connected and  
42 community environments for employees. Some literature discussed social spaces in workplaces  
43 (Halvitigala, and Reed, 2015) but not as an entire community environment.  
44

45 Interviewee (Respondent 8) believed that workplaces with collaborative spaces will be more  
46 important in future, though advanced technology will enable virtual offices. He believed that  
47 smart decisions and dynamic solutions mostly emerge when employees work together to  
48 resolve problems. Seven out of eight interview participants mentioned community as a feature  
49 of future offices.  
50  
51

### 52 53 ***Sustainability focus*** 54

55 All the interviewees believed that future workplaces would focus more on environmentally  
56 sustainable features. "*Organisations would provide more environmental friendly work*  
57 *facilities and employees would be encouraged to use environmentally friendly ways of*  
58 *working*" (Respondent 2).  
59

60 Large organisations have started using natural light, natural air, recycled water, recycled papers  
and products which create minimum carbon foot print and future office layouts may be

1  
2  
3 designed for zero paper usage and future workplaces would further enforce these practices  
4 (Respondent 2).  
5  
6

### 7 ***More diversity and amenity***

9 Seven out of eight interviewees believe future workplaces would have more diverse work  
10 settings to support day-to-day activities highlighted by Respondent 3: *“The workplace would*  
11 *be surrounded by many amenities which people need, such as; libraries, childcare centres,*  
12 *gyms, medical centres, cafés, restaurants, grocery shops and banks”* (Respondent 3).  
13

14 The interviewees suggested that the ‘three minute worker’ concept, which focuses on providing  
15 occupants to have their main requirements within a three-minute work, would be a common  
16 concept for most office buildings in the future.  
17  
18

### 19 ***Hoffice***

21 Interviewees suggested that the ‘hoffice’ will be a popular concept among knowledge-based  
22 industries. *“Hoffice is a concept where people offer out their own home as a co-working space*  
23 *for certain days or certain hours of the week”* (Respondent 1). In such environments,  
24 selectively invited people would work together in a small group. The ability to avoid travelling  
25 long distances to the office and to collaborate in convenient, familiar locations are the main  
26 benefits of such environments. It was suggested that Hoffice work environments would be  
27 more common in the future, however this concept was not discussed in any literature reviewed.  
28 Only two out of eight interview participants mentioned this as a possibility for future offices.  
29  
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32

### 33 ***Creativity***

34 All interviewees commented positively about creativity; *“future office environments would*  
35 *create environments for more collaboration, problem solving skills and creativity* (Respondent  
36 4). Literature discussed collaboration, teamwork and quick problem-solving ability relation  
37 with agile working but this has not been highlighted as creativity. Different features, such as  
38 creative walls and mapping walls will be common in most offices. In addition to collaboration  
39 within the organisation, the trend of co-working which involves different organisations sharing  
40 office space to boost creativity and energy is developing currently, and interviewees suggested  
41 that co-working will be more common in future. Six out of eight interview participants  
42 mentioned future office design would be mainly focussed on creativity.  
43  
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### 47 ***Health and well-being***

48 All eight interviewees focus on employee health and well-being in future office designs, as  
49 employees are the most important asset for organisations. Physical movement is highly  
50 encouraged, and office furniture would accommodate these requirements, such as adjustable  
51 desks. *“Office layouts and interior designs will be increasingly focusing on employees*  
52 *physical and psychological wellbeing. Simple step like encouraging high adjustable table to*  
53 *work standing; locating printer, kitchen within a reasonable distance.”* (Respondent 1)  
54  
55

56 Meel and Vos (2001) believe employees’ emotional and mental states will have high  
57 importance when designing future office layouts. More specifically, Biophilic office design,  
58 which is an innovative way of designing office environments, would be popular in the future.  
59 Greenery and natural light are the two main themes of in biophilic offices which would help to  
60

put employees closer in touch with nature, to reduce their stress and open creative thought patterns.

### ***Smaller buildings and Satellite office***

Interviewees believed the size of office spaces would shrink further in future due to advances in technology, and changing work practices and organisational culture. Single large office spaces would be replaced by a number of small satellite offices which are based on the nature of job and the location of employees. However, the importance of having procedures to keep all employees connected with the organisation, was emphasised in the interviews. Interviewees noted that traditional workspace would disappear in the workplace strategy as Respondent 7 stated: “*Satellite offices would also be popular with organisations who have mobile staff*” (Respondent 7).

However, five out of eight interview participants mentioned smaller and satellite offices become more popular between both employers and employees. Table 3 shows the number of interview participants who mentioned above discussed factors.

**Table 3: Factors in Future office designs and participants**

<b>Factor</b>	<b>No of participant discussed</b>
Technology driven spaces	8
Virtual offices	8
More community environments	7 (except 6)
Sustainability focus	8
More diversity and amenity	7 (except5)
Hoffice	2 (only 1&7)
Creativity	6 (except 3 &7)
Health and well-being	8
Smaller buildings and Satellite office	5 (except 2, 6 &8)

## **SUMMARY AND CONCLUSION**

The main research question of this paper was to identify the factors consider when designing new office layouts and the nature of future offices from the design and workplace strategist firms’ perspectives. To achieve the main aim, two research objectives were developed. They were;

- 1) to understand main considerations in designing new office layouts and work practices, and,
- 2) to identify possible characteristics of corporate offices in the future.

In respect of objective 1, this research identified organisations’ main considerations in designing new office layouts and work practices. Flexibility, functionality, advanced technology, reduced noise level, improved organisational culture, improved sense of



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2  
3 community and sense of belongingness, addressing the generation gap, interior colour and  
4 furniture choices were identified and established as key client requirements.  
5

6 In respect of objective 2, we found that design and workplace strategy specialist firms believe  
7 that characteristics of future workplace would be more technology driven and with greater  
8 emphasis on sustainability features. They also emphasised that Virtual offices, greater focus on  
9 employee physical and psychological wellbeing, more creative, community oriented and  
10 diverse workstations would be some other features of large office buildings in the future.  
11

12 The results reveal that office space designers do not consider office spaces as just a means of  
13 keeping the employees dry and warm. Instead, they view the physical office space as a means  
14 of reinforcing the corporate culture, improving organisational performance and employee  
15 productivity and attracting new talent to the organisation.  
16  
17

## 18 19 PRACTICAL IMPLICATIONS

20 This research has implications for industry and academics, as it provides an in-depth  
21 understanding of workplace specialists' and design firms' perceptions of future requirements  
22 from office spaces. It also illustrates what they look at when designing office spaces for large  
23 corporates. It demonstrates the need to consider how the office environment should align with  
24 the physical and psychological needs of the organisation and its employees. There is very  
25 limited published literature available addressing these issues from the design and workplace  
26 strategic specialists' perspectives; and, in the Australian context. Therefore these findings have  
27 practical application to professionals involved in human resource management and the design,  
28 management, development and valuation of office buildings.  
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## 33 LIMITATIONS OF THE RESEARCH

34 The main limitation of this research is the data collection was undertaken in Melbourne and  
35 Sydney only. Even though, most firms operate nationally and internationally, the findings  
36 would have been more generalisable if could collect data from other states and territories too.  
37 The number of interviewees was another limitation. **All interview participants are from large  
38 firms and therefore this research did not represent the perceptions of small and medium scale  
39 firms.**  
40  
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## 44 SUGGESTIONS FOR FUTURE STUDIES

45 There could be significant impact on workplace design due to the COVID-19 pandemic. This  
46 is an interesting area for future research to understand that how the workplace was influenced  
47 by this unexpected health crisis. This study mainly focused on workplace design workspace for  
48 large corporate organisations. There is opportunity for future research to understand what the  
49 main considerations are when designing workspaces for small and medium sized organisations.  
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