

WORKPLACE DESIGN CHANGES AND THEIR IMPACT ON ORGANISATIONAL CULTURE

KUSAL NANAYAKKARA, SARA WILKINSON and DULANI HALVITIGALA

University of Technology Sydney and RMIT University

ABSTRACT

The growth of flexible work practices has altered the perceptions of how office space is procured and utilised. This research explores the effect of workplace design changes on the existing organisational culture of organisations from the perspective of the management of such organisations. A questionnaire survey with 32 Senior Workplace and Change Strategy Consultants of large corporate organisations who moved to Activity Based Work (ABW) settings was undertaken. The findings identified that all organisations in the study either experienced culture changes with the changes in office layouts or believed that changes in office layouts could be used as a starting point for culture changes. However, some noticeable discrepancy between the perceptions of public and private sector organisations was identified where public sector organisations felt that standardised procedures still governed their actions even in flexible office layouts. The research emphasises the importance of in-depth examination of the behavioural and attitudinal characteristics of market participants to obtain a better understanding of how they create different workplaces and how they interact and behave in these different work layouts.

Keywords: Office layouts, Activity Based Working, Organisational culture, dimensions of organisational culture

INTRODUCTION

The COVID pandemic has disrupted the labour markets globally, causing sudden and severe impacts on the physical use of office spaces. Even though the current global pandemic raises the need for rapid changes in workplaces, changes in office designs have been gradual in the past (Appel-Meulenbroek et al., 2018). The large open plan offices have been reviewed by many organisations and found to no longer serve modern organisations' needs (Harris 2021). With the introduction of the internet and the rapid development in IT technologies, the ability to work remotely has increased substantially in the last two decades. As a result, work practices such as agile working have become more common (Peters et al., 2014).

The physical real estate of an organisation is a silent communicator of its existing culture (Knight Frank, 2017). The culture of the organisation can be determined by viewing its physical office layouts and configurations (Hamilton et al., 2008). Due to the changing perceptions of the office, the modern workplace is an instrument that drives the preferred culture and productivity of organisations, affecting their financial, cultural and layout ethos (Knight Frank, 2017).

Changes in office layouts may lead to changes in work practices, leadership style and the organisation's main orientation. In whatever way the changes occur, impact on the culture of the organisation is inevitable (Rodriguez and Gomez 2009; Hofstede et al. 2010). However, there is limited empirical research on how the corporate culture of an organisation changes with the changes in office layout designs (Igo and Skitmore, 2006). Therefore, a significant gap exists in understanding how the existing corporate culture changes with response to the introduction of flexible, non-territorial office layouts. This paper examines the influence of introducing Activity Based Work (ABW) settings on the existing organisational culture of organisations. As part of a wider project, this paper examined the research question from the perspective of the organisations who introduced ABW settings from 2012 to 2019. The research was conducted in Melbourne and Sydney in late 2019, just before the COVID pandemic began to affect property markets.

LITERATURE REVIEW

The increasing popularity of knowledge-intensive work and continuously improving information and communication technologies have increased the demand for flexible work practices (Bal and De Lange, 2015; Knight Frank, 2017). To meet such demand, a wide range of flexible office layout arrangements has been introduced since the early 2000s (Appel-Meulenbroek et al., 2015; De Paoli et al., 2013; Hassanain, 2006, Harris 2021; Bosch-Sijtsema et al., 2009; Gorgievski et al., 2010). Many of these office layouts no longer look like offices, but are transparent and open spaces with their own identity (Harris, 2021; van Meel and Vos, 2001). The objectives of flexible office layouts are to increase productivity, flexibility, creativity and interaction among employees and to reduce corporate real estate costs (van Meel et al., 2010).

Modern knowledge-based work practices require workers to switch more frequently between different activities, co-workers, tools and locations (Davenport, 2005; Mark et al., 2005; Van Yperen et al., 2014). This development was the main motive for the introduction of a flexible office layout arrangement called activity-based working (ABW), which was introduced in the early 2000s (Cushman and Wakefield, 2013). The concept of ABW involves designing spaces to accommodate various activities that employees undertake rather than having a rigid allocation of space based on their status in the organisation (Engelen, 2019; Brunia et al., 2016). Employees in activity-based offices can move from place to place during the day, choosing the most appropriate space for their current activity (Schriefer, 2005).

Changes in office layouts can lead to the changes of leadership, organisation's orientation and its corporate culture (Rodriguez and Gomez 2009; Hofstede et al. 2010). One of the most accepted frameworks to distinguish the dimensions of organisational culture is known as the competing value framework (Fairs, 2016). Cameron and Quinn (2006) identified four cultural dimensions in this framework as follows:

- i. Hierarchy culture
 - ii. Market culture
 - iii. Clan culture
 - iv. Adhocracy culture
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- i. Hierarchy / consistency / bureaucracy culture – This culture type emphasises uniformity and strong control of the organisation with empowering coordination, evaluation and internal efficiency (Cameron and Quinn, 2006). Seven main characteristics are observed: hierarchy, rules, meritocracy, accountability, specialisation, separate ownership and impersonality (Übuis and Alas, 2009).
 - ii. Market / rational culture – This culture emerged in the late 1960s since the hierarchy culture could not provide flexibility for organisations when meeting strong market competition (Cameron and Quinn, 2006). This culture focuses on competing and reaching set goals with unsupportive external factors, such as government regulations, license restrictions, customers' expectations, suppliers' limitations, external contractors and trade unions (Übuis and Alas, 2009).
 - iii. Clan / group / involvement / consensual culture – The main focus of this culture is maintaining better relationships and providing greater flexibility to employees to perform their job. Trust, involvement, teamwork and corporate commitment to staff are the key characteristics of this dimension (Übuis and Alas, 2009).
 - iv. Adhocracy /development / role culture – This culture emerged when the developed world moved to the information age from the industrial age (Cameron and Quinn, 2006). The focus of this dimension is on external layout and creativity, innovation, and resource acquisition (Fairs, 2016).

The literature suggests that the full effects of flexible office layouts on human reactions to such workspaces are not well understood (van der Voordt, 2004; Miller, 2014). Particularly, there is limited theoretical explanation of and little empirical research on how the corporate culture of an organisation changes with changes in the workplace arrangements (Igo and Skitmore, 2006). The aim of the research is to examine the influence of the introduction of ABW settings on the existing organisational culture. The competing value framework was used to measure the changes in culture dimensions with the introduction of such layouts.

RESEARCH METHODOLOGY

This is a quantitative research and a survey was designed to measure the influence of changes in office layouts on the existing organisational culture from the management perspective (Yin, 2015). Quantitatively measurable data relating to various dimensions of the culture, enabled the researchers to statistically measure the dimensions before and after the changes and then to identify if any change occurred. Surveys were employed as the best data collection method since they enable large amounts of data to be collected in a short period (Kumar, 2014). Furthermore, they provide greater geographic flexibility than other data collection methods. Large scale corporate organisations who had moved to Activity Based Working from 2012-19 were selected as the survey sample. 50 organisations in Melbourne and Sydney were identified, using purposive sampling, which involves identifying and selecting individuals or groups that are especially knowledgeable about or experienced with a phenomenon of interest (Creswell and Plano Clark, 2011).

Only large-scale corporate organisations were selected as such organisations have greater incentives and financial resources to adopt more efficient space utilisation models. Selected organisations occupied large office premises and were categorised as major tenants in their buildings. An online survey was sent to senior managers of those organisations who were directly responsible for properties and workplaces or held people and culture related positions in their organisations. Their positions included, Head of Property, Head of Commercial Property, Group General Manager Property, Head of People and Change, Head of Agility, Change Lead, Executive Director – Infrastructure, Director – Projects (Interiors), National Accommodation Manager, Head of Change Management – Workplace of the Future program, Head of Workplace Experience, Director – Workplace strategy and change, Program Lead – Wellbeing and Community People and Culture and Managing Director. Out of 50 surveys sent, 32 were returned. Table 1 summarises the main characteristics of survey participants.

Table 1: Characteristics of survey participants

Business sector	Sector	
	Public	Private
Local government, Defence and Security	5	
Education	1	
Finance and Insurance		7
Professional Consultancy		7
Property		6
IT, Telecommunication and Energy		6
Total	6	26

(Source: Authors)

The survey was developed to measure the presence of four dimensions of organisational culture: adhocracy, clan, hierarchy, and market, before and after implementing office layout changes. Questions were grouped into four main sections to measure these four dimensions in the competing value framework. Each of these items had questions which represented the four culture types (See Table 2).

Table 2: Summary of main survey questions

Organisation culture measurement criterion	Culture dimension
Cultural orientation Level of collaboration Level of creativity Level of organisation's regulations and procedures Level of competitiveness	Clan Adhocracy Hierarchy Market

<u>Leadership style</u> Encourage more teamwork and collaboration Encourage more innovative/creative employee outputs Focus on monitoring staff and their work Push employees to work hard to complete their assigned task	Clan Adhocracy Hierarchy Market
<u>Organisation value drivers</u> Ongoing employee skill development Employee innovation Consistency and uniformity in day-to-day tasks Employee goal achievement	Clan Adhocracy Hierarchy Market
<u>Efficiency measures of the organisation</u> Participation of employees produces effectiveness New or latest resources produce effectiveness Control, uniformity and efficiency produce effectiveness Customer focus produces effectiveness	Clan Adhocracy Hierarchy Market

(Source: Adapted from Cameron and Quinn, 2006)

To measure the variation of organisational culture, respondents were asked to provide their perceptions on the presence of each organisational culture dimension before and after implementing the changes. Their responses were measured using a nine-point scale where 1 represents ‘no presence at all’, and 9 represents ‘extremely high presence’. A nine-point scale was used to measure any variation in their perceptions more precisely. Survey responses were analysed using descriptive statistics such as mean scores and contingency tables. The mean score given for each culture dimension before and after implementing layout changes was calculated by adding the responses for questions for each alternative and dividing the result by the number of questions related to each culture type. Before and after mean scores for each culture type were compared to measure how the dimensions changed with the introduction of new office layouts.

RESULTS AND DISCUSSION

The first set of questions asked the participants to identify their previous and current workplace arrangements. Table 3 shows, most organisations changed their office layouts from open-plans to activity-based working (ABW), while some converted their traditional, cellular offices to ABW.

Table 3: Previous and new work practices and office layouts

Criterion	Previous status	Current status
Office layouts	Cellular Open plan offices	ABW (7 organisations) ABW (25 organisations)
Desk ratio	100%	70% – 80% (all)

(Source: Authors)

In their previous office layouts, staff occupied static desks or offices and assigned individual spaces were often sized and equipped based on the employee’s status within the company. However, their current ABW layouts, which involve the design of spaces to accommodate various activities that office workers undertake, are based on the premise that no employee has an assigned workstation. The ratio of the total number of desks and total employees was 70% – 80%.

In the next section of the survey, respondents provided their perceptions and experiences of the presence of each organisational culture dimension before and after implementing changes. It is extremely rare for an organisation to have a pure hierarchy, market, clan, or adhocracy culture, or to share equal traits of all four culture dimensions with no dominant culture type (Acar and Acar, 2014). Organisations generally have a strong dominant culture, followed by a strong secondary culture component (Calori and Sarnin, 1991; Cameron and Quinn, 1999). The survey data were analysed in different stages as follows:

- i. Overall analysis
- ii. Analysis by sector type
- iii. Analysis by industry type

i. Overall analysis

In the first stage of analysis, the entire survey sample responses were analysed as a whole, and Table 4 illustrates the mean scores given to the questions to measure the level of presence of four culture types before and after the implementation of layout changes.

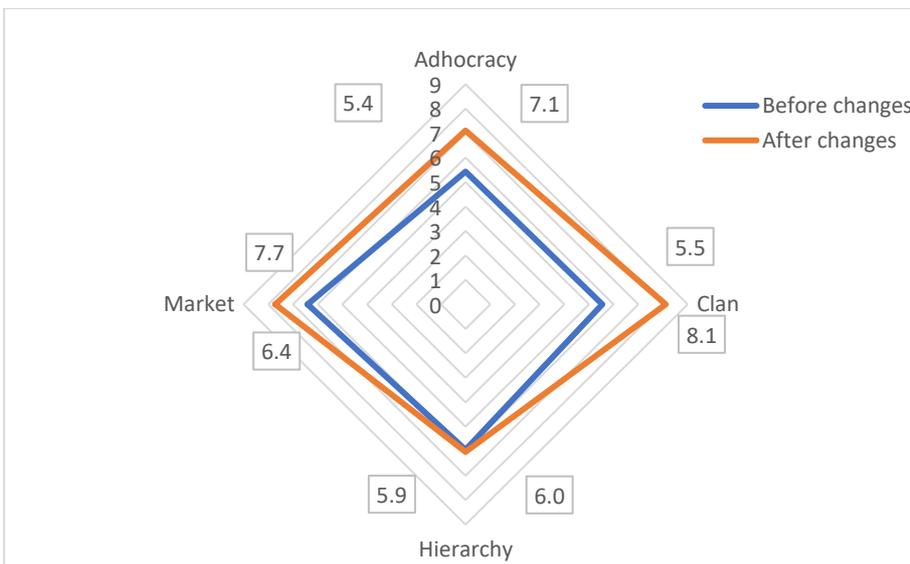
Table 4: Dimensions of organisational culture before and after layout changes (Entire sample)

Culture type	Before changes		After changes		Difference
	Mean score	Rank	Mean score	Rank	
Adhocracy	5.4	4	7.1	3	1.7
Clan	5.5	3	8.1	1	2.6
Hierarchy	5.9	2	6.0	4	0.1
Market	6.4	1	7.7	2	1.3

(Source: Authors)

The most dominant culture presented before workplace changes was the market culture, which emphasised competitiveness not only between the organisation and its market competitors, but also amongst employees. This was followed by the hierarchy culture, which focused on controlling procedures, and the efficiency and stability of the organisation and its employees (Tharp, 2009). However, with workplace changes, the clan culture, which emphasises teamwork, collaboration, inter-personal relationships and doing things together (Fairs, 2016), became the dominant culture. This suggests that non-territorial ABW layouts increased the collaborative orientation and knowledge sharing according to the management of the surveyed organisations. It was followed by the market culture, which illustrates organisations’ preference to be still competitive while achieving their goals collaboratively and flexibly. The importance of the hierarchy culture decreased with the introduction of flexible workplaces, suggesting that the management procedures have become less hierarchical. The changes in organisational culture after workplace changes are further illustrated in Figure 1.

Figure 1: Influence of workplace changes on organisational culture (Entire survey sample)



Participants believed that the strength of all four culture types increased with the introduction of ABW settings. This suggests that collaboration and teamwork (clan culture), competitiveness and customer orientation (market culture), structure and decision-making (hierarchy culture), employee innovation and creativity (adhocracy culture) were further improved with the introduction of flexible office layouts.

ii Analysis by business sector (public vs. private)

The culture in public and private sectors differs in many obvious ways (Rainey, 2009). Public sector organisations continue to emphasise the values of a bureaucratic culture with strong emphasis on regulations, standards, uniformity, and consistency, while private sector organisations operate in profit-driven, competitive environments (Rusa and Rusub, 2015). Therefore, it is interesting to see how the culture changed in public and private organisations when ABW layouts were introduced.

Public sector organisations

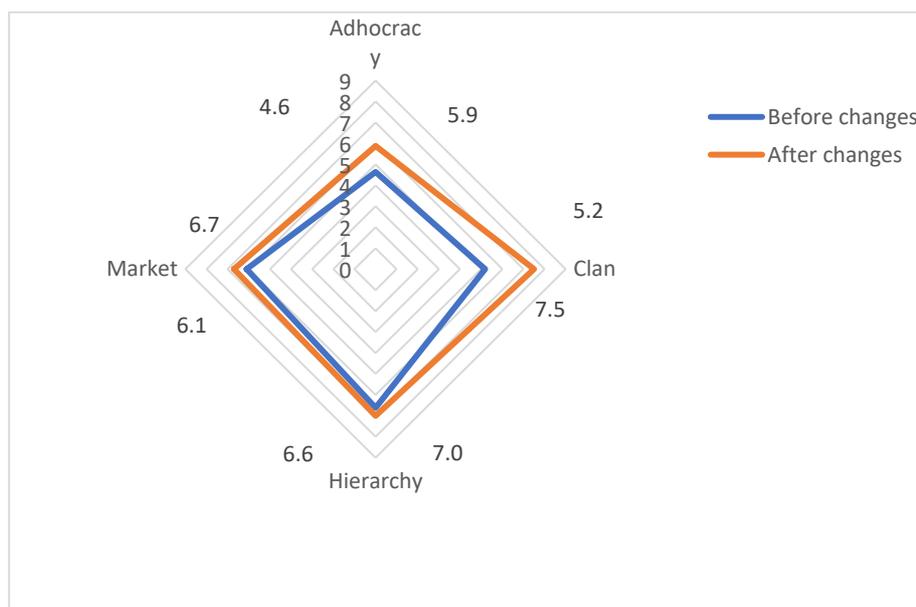
Unlike, the private sector, few government organisations had undertaken workplace redesign processes; therefore, the survey sample consisted of six government organisations only. Table 5 and Figure 2 summarise their perceptions of the culture that existed before and after implementing office layout changes.

Table 5: Changes in organisational culture – Public sector

Culture type	Before changes		After changes		Difference
	Mean score	Rank	Mean score	Rank	
Adhocracy	4.6	4	5.9	4	1.3
Clan	5.2	3	7.5	1	2.3
Hierarchy	6.6	1	7.0	2	0.4
Market	6.1	2	6.7	3	0.6

(Source: Authors)

Figure 2: Changes in organisational culture – public sector



The analysis shows that the hierarchy culture was the dominant culture prevailing in public sector organisations before they moved to ABW layouts. This suggests that public sector organisations tended to have strong formal

rules and policies with formalised and structured workplaces and an emphasis on stability and predictability (Tharp, 2009). Their secondary dominant culture was the market culture, which emphasises finishing work and completing jobs (Cameron and Quinn, 2011). Adhocracy, which focuses on innovation, creativity, articulating future vision and entrepreneurship (Tharp, 2009) was the weakest culture type. This finding is consistent with the findings of earlier studies, which found that the culture that existed in the public sector had little or no space or encouragement for their employees to be creative and innovative, and required high intensity of face-to-face communication to complete tasks (Rusa and Rusub, 2015).

The analysis indicates that with the introduction of new workplaces, collaboration and teamwork improved noticeably, and as a result the clan culture emerged as the dominant culture type. The hierarchy culture remained as the dominant secondary culture, suggesting that formalised and structured work remains important.

Private sector organisations

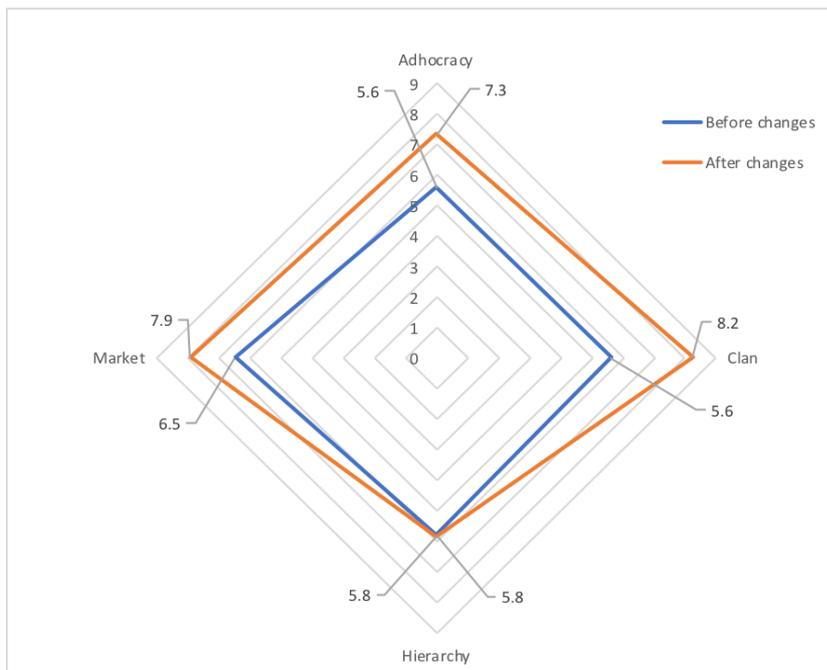
The survey sample consisted of 26 private sector organisations. Table 6 and Figure 3 show their perceptions of the changes in the corporate culture with the introduction of new workplaces.

Table 6: Changes in organisational culture – Private sector organisations

Culture type	Before changes		After changes		Difference
	Mean score	Rank	Mean score	Rank	
Adhocracy	5.6	3	7.3	3	1.8
Clan	5.6	3	8.2	1	2.6
Hierarchy	5.8	2	5.8	4	0.0
Market	6.5	1	7.9	2	1.4

(Source: Authors)

Figure 3: Changes in organisational culture – Private sector organisations



Consistent with the findings in the literature (Übüs and Alas, 2009; Denison et al., 2004), market culture, which focuses on competitiveness and goal achievement, was the dominant organisational culture before

layout changes. This was followed by hierarchy culture while adhocracy and clan cultures shared the least dominant culture type. However, with the introduction of new workplaces, the presence of clan culture increased noticeably to become the dominant culture type. The findings are consistent with the literature that confirms that flexible work layouts enhance collaboration and knowledge sharing (Cameron and Quinn, 2011). The market culture is still very important in the new layouts and is the secondary culture. Private sector organisations are mainly profit-oriented and customer- focused and therefore, always look for more efficient and productive ways of doing business (Rusa and Rusub, 2015). However, the findings indicate that modern private sector organisations tend to achieve these strong result-orientation and competitive behaviours by employing more collaborative and flexible approaches.

Table 7 summarises the dominant culture before and after moving to ABW layouts in public and private organisations.

Table 7: Summary of dominant organisational culture – Private vs. public sector

Sector	Dominant organisational culture type	
	Before layout and work practice changed	After layout and work practice changed
Private sector	Market	Clan
Public sector	Hierarchy	Clan

(Source: Authors)

The results show that both public and private sector organisations which participated in the survey experienced noticeable changes in their existing corporate culture. Private sector organisations that were previously dominated by external positioning, with a high degree of individualism, are now dominated by clan culture, which is characterised by collectivity and flexibility. Public sector organisations, which were dominated by internal maintenance with the need for stability and control, are now dominated by clan culture, which is characterised by internal maintenance with flexibility.

5.3.2.3 Analysis by industry type

Organisations have different dominant corporate culture orientations based on the nature of their business activities (Nahm et al., 2004). Therefore, the next step in the analysis examined if the organisations' perceptions of the impact of layout changes varied with their industry sector. Table 8 shows the diversity of survey participants by their main industry sector.

Table 8: Diversity of private sector organisations by industry type

Business sector	No. of organisations
Finance and Insurance	7
Professional Consultancy	7
Property	6
IT, Telecommunication, and Energy	6
Total	26

(Source: Authors)

Finance and insurance sector

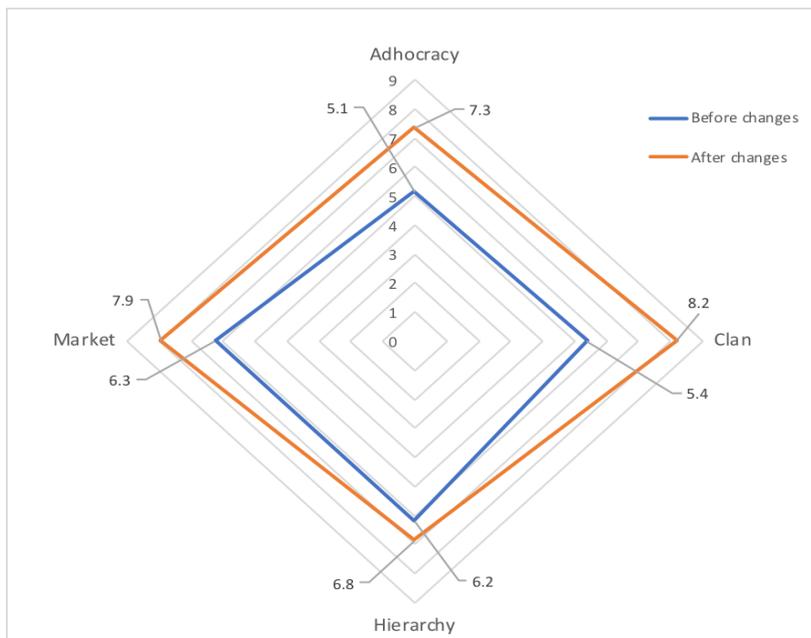
Participants were leading Australian banks or capital fund management companies and had moved to ABW layouts from open-plan work settings. Table 9 and Figure 4 show the culture types that existed before and after layout and work practice changes.

Table 9: Changes in organisational culture – Finance and insurance sector

Culture type	Before changes		After changes		Difference
	Mean score	Rank	Mean score	Rank	
Adhocracy	5.1	4	7.3	3	2.2
Clan	5.4	3	8.2	1	2.8
Hierarchy	6.2	2	6.8	4	0.6
Market	6.3	1	7.9	2	1.6

(Source: Authors)

Figure 4: Changes in organisational culture – Finance and insurance sector



The results revealed that the market culture was the dominant culture before layout changes. This was followed by the hierarchy culture, while clan and adhocracy cultures were the third and fourth ranked culture types. This finding supports the existing literature, which suggests that the main drivers of finance sector organisations are enhancing profitability and market share with strict institutional procedures in place for guidance for goal achievement (Tsui et al., 2006). Traditionally, collaboration and innovation are less important in this industry (O'Connor, 1995), making clan and adhocracy cultures less important. With the introduction of ABW layouts, the clan culture in these organisations increased and it has become the dominant culture type. The hierarchy culture, which was the second dominant culture, has become the least dominant culture.

Professional consultancy sector

The survey sample included seven professional consultancy organisations which represented various professional services such as legal, architecture, auditing, taxation and other consulting organisations. These industries do not have strict rules and regulations to control employees, as they are professionally qualified,

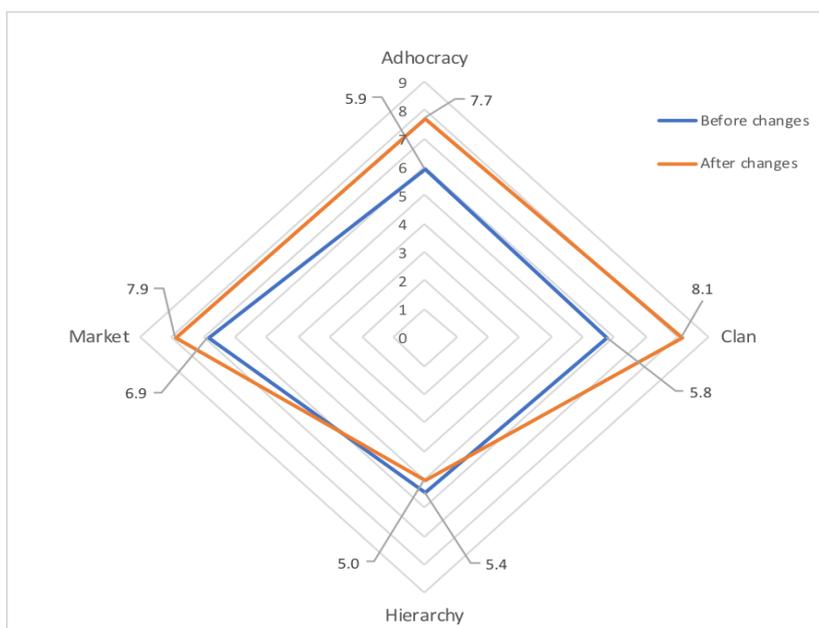
highly skilled workers doing more intellectual tasks (Park and Kim, 2009). Professional organisations' perceptions of the impact of office layout changes are illustrated in Table 10 and Figure 5.

Table 10: Changes in organisational culture – Professional consultancy sector organisations

Culture type	Before changes		After changes		Difference
	Mean score	Rank	Mean score	Rank	
Adhocracy	5.9	2	7.7	3	1.8
Clan	5.8	3	8.1	1	2.3
Hierarchy	5.4	4	5.0	4	-0.4
Market	6.9	1	7.9	2	1.0

(Source: Authors)

Figure 5: Changes in organisational culture – Professional consultancy organisations



The goal-oriented market culture was the dominant culture type before layout changes. This was followed by adhocracy culture, which requires innovation and creativity, while the hierarchy culture, which is founded on structure and control, was the least dominant culture. These results are consistent with the research which suggests that knowledge-based industries require access to an layout which allows them to be able to conduct experiments, meet challenges, take risks and be innovative and creative (Park and Kim, 2009). Interestingly, with the introduction of ABW layouts, clan culture has become the dominant culture type. The results suggest that these companies now tend to value flexibility, employee autonomy while stilling valuing competition. The presence of the hierarchy culture further decreased and remained the least dominant culture, suggesting that this industry continues to be less hierarchical.

Property sector

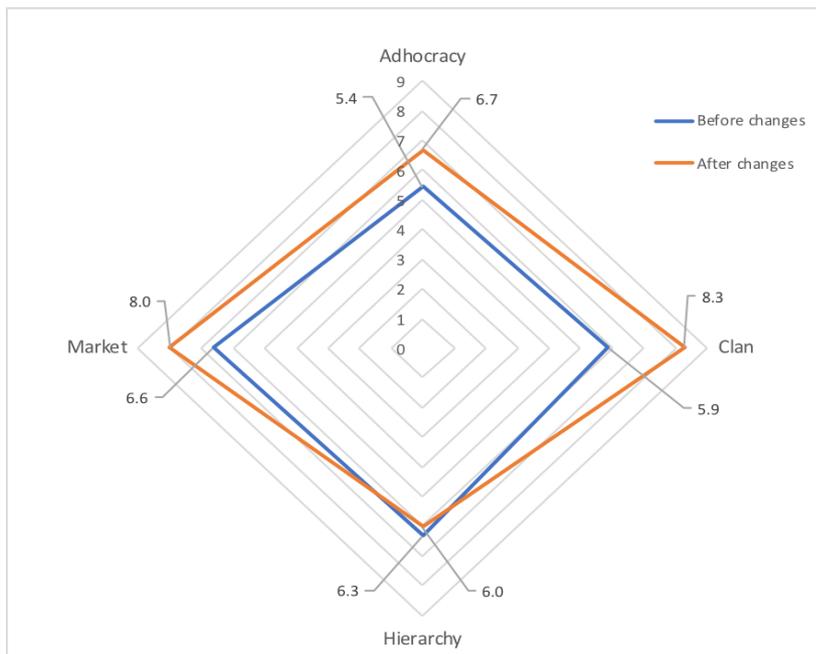
As experts in space utilisation, some major property companies actively use non-territorial office layouts such as hot-desking, hoteling and ABW (CBRE, 2018). In addition, they provide professional advice to other organisations on office utilisation models and change management programs related to layout redesigns. Table 11 and Figure 6 illustrate the organisational culture types before and after office layout changes.

Table 11: Changes in organisational culture - Property sector

Culture type	Before changes		After changes		Difference
	Mean score	Rank	Mean score	Rank	
Adhocracy	5.4	4	6.7	3	1.3
Clan	5.9	3	8.3	1	2.4
Hierarchy	6.3	2	6.0	4	-0.3
Market	6.6	1	8.0	2	1.4

(Source: Authors)

Figure 6: Changes in organisational culture – Property sector



The market culture was the dominant culture before office layout changes, followed by hierarchy and clan cultures. This confirms existing studies which suggest that firms in the property and real estate sector are highly competitive, and are dominated by market culture (Park and Kim, 2009). Similar to other industries, the clan culture has become the dominant culture after office layout changes. Market culture is the secondary culture in their new work layouts, which emphasises the importance of having common goals and ensuring profitability and a satisfactory market share (Gaál et al., 2010). The presence of hierarchy culture decreased, indicating that the hierarchical structures and authority have become less centralised.

IT, Telecommunication and Energy sector

Although more organisations are moving towards non-territorial, equal status office layouts, it should be noted that the IT and Telecommunication industries have taken the lead with new ways of working and new workplaces (Bosua et al., 2013). These organisations' perceptions of the impact of office layout changes on the organisational culture are illustrated in Table 12 and Figure 7.

Table 12: Changes in organisational culture - IT, Telecommunication and Energy sector

Culture type	Before changes		After changes		Difference
	Mean score	Rank	Mean score	Rank	
Adhocracy	5.7	3.5	7.3	3	1.6
Clan	5.7	3.5	8.4	1	2.7
Hierarchy	5.8	2	6.0	4	0.2
Market	6.3	1	8.1	2	1.8

(Source: Authors)

Figure 7: Changes in organisational culture - IT, telecommunication and energy sector



The analysis reveals that, traditionally, this industry was dominated by the market culture followed by the hierarchy culture. This is consistent with the existing literature which suggests that IT and telecommunication industries operate in highly competitive environment and are united by a common goal to succeed and beat their rivals (Cameron and Quinn, 2006). However, after changing layouts, the presence of the clan culture increased noticeably, to be the most dominant culture. The hierarchy culture fell from second position to the least dominant culture position.

Overall, the analysis revealed that all profit-driven private sector industries that participated in the survey had been dominated by the market culture, which emphasises competition, fast responses and goal achievement, before the introduction of flexible office layouts. However, with the introduction of ABW layouts, the clan culture became the dominant culture type in all organisations which participated in this study. Clan cultures are the most collaborative and the least competitive of the four main corporate culture models. The findings confirm that organisations believe that productivity and business success can be achieved by better employer commitment and employee engagement. Overall, the results illustrate that management believe that the nature of work settings can have a clear impact on the corporate culture of an organisation.

CONCLUSION

The purpose of this paper was to examine corporate organisations' perceptions and experiences of the impact of changes in office layouts on the existing corporate cultures in their organisations. The study focuses on large scale organisations who moved to Activity Based Working (ABW) in Melbourne and Sydney in Australia. Most organisations participated in this study viewed the physical office space as a means of reinforcing the corporate culture.

Contributing to the existing knowledge, the findings clearly identify that, with the introduction of flexible office layouts, the clan culture became the dominant culture of all industry types that participated in this study. Whatever their business orientation or industry type, all organisations in this study found that, with the introduction of new workplaces and work practices, collaboration and teamwork improved considerably. However, the findings indicate that their secondary cultures varied with industry type and business orientation. Workplace designs are becoming a powerful tool impacting on the culture of an organisation and the extent to which knowledge workers can collaborate and interact within and across different sections of the organisation. Therefore, space planners need to consider this relationship and account for the important role the office settings play in the performance and cultural orientation of organisations.

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Email contact: kusalnn@gmail.com