

## How employees value the support of activity based and traditional work environments

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## Understanding impacts and functioning of different solutions

Edited by

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# How employees value the support of activity based and traditional work environments

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## Abstract

New Ways of Working (NewWoW) are popular, both for increasing employee and organisational effectiveness and attracting new talent. As Corporate Real Estate management (CREM) is responsible for delivering a supportive office environment for employees and the organisation as a whole, they must align by providing a work environment that aims for employee satisfaction, increased support of productivity and other added values. This is often done through introducing the shared workspaces and facilities of activity based working (ABW). However, lack of proof of advantages of such work environments is feeding a more reserved attitude towards NewWoW. This paper aims to provide evidence for differences between traditional and ABW environments in workplace support of organisational goals as perceived by employees.

Online questionnaires (2010-2014) from the Leesman Database amongst 47,913 office employees (mainly Western European organizations) were analysed for employee opinions on workplace support. Respondents were split in two groups based on their workspace: ABW or a traditional, dedicated seat. Statistical tests of differences between both groups provided insight in five types of added value.

The ABW employees were more positive on all added values included in the questionnaire and the support of their workspace for important activities. Also, they were more satisfied in general and with most of the individual features and facilities of their work environment. Only satisfaction with their desk, chair, personal storage, phone equipment, desk/room booking systems, in-office network connectivity and the ability to personalise was lower than the employees working at dedicated seats. The design of the ABW workspace had a more positive (perceived) impact on culture, corporate image and environmental sustainability. Further, they agreed more with statements that the design of their organisation's workspace contributes to a sense of community, creates an enjoyable environment to work in and enables them to work productively.

The results from this analysis provide CRE managers with proof for implementing ABW environments in their office portfolio. Not only did employees that work flexibly feel more supported in their work by their workplace, they also felt that it better supports general strategic organisational goals like productivity, corporate image and sustainability.

**Keywords:** added value, work environment, employee preferences, chi square tests, independent samples t-tests

# 1. Introduction

The workplace is said to be a strategic tool for organisations, but there is still little evidence to show how and in what contexts (Kampschroer and Heerwagen, 2005; Blakstad et al., 2009; Steen and Markhede, 2010). Therefore, for many organisations it is still mostly a costly resource for which cost reduction is the main aim (Gibler et al., 2010). However, corporate real estate (CRE) managers at contemporary organisations increasingly try to work with a workplace strategy aiming at a more optimal cost/benefit ratio (Jensen, 2009; Pullen et al., 2009). For benefit they look at the added value of the physical work environment for employees and the organisation as a whole. Jensen et al. (2012) detected six different types of added value of CREM in their review of the literature:

- Use value: quality in relation to the needs and preferences of the end users;
- Customer value: trade-off between benefits and costs for the customers or consumers;
- Exchange value: economic trade-off between costs and benefits;
- Social value: connecting people;
- Environmental value: environmental impact;
- Relationship value: experiencing high-quality services.

While exchange value lies fully within reach of the CRE manager, the effect of the other added values is (partly) indirect and thus cannot be isolated from other variables, which makes it harder to prove the relevance (De Vries et al., 2008). These added values do not only have an effect through the real estate itself but also through the employees (use, social and relationship value) or clients and society (customer and environmental value). As employees and clients are important for knowledge organisations, a positive influence on this should be highly valued by their corporate management. Unfortunately, measuring these indirect added values is often troubled by a lack of outcome indicators, making it hard for CREM to show proof. As Feijts (2006) suggested that the indirect effects explain the majority of performance changes, this deserves more research.

With the rise of strategic CREM, many companies have redesigned their buildings and workspaces to influence employees' attitudes and behaviours (Robbins, 2003). Large companies are increasingly moving towards new ways of working practices (from here on called NewWoW) (Inalhan, 2009) and the so-called activity-based office concept. But evaluating whether these designs have succeeded in their goals of adding value is difficult and not done much yet (Pullen, 2011; Maarleveld et al., 2009; Laihonon, et al., 2012). Particularly little is known about the consequences for employee attitudes and well-being (Ten Brummelhuis et al, 2012; Peters et al, 2014). Therefore, this paper focuses on the question how contemporary office design relates to organizational performance, from the viewpoint of the office employees working in it.

The next section provides a short overview of the literature on the contemporary work environment and different added values it might have. Then the research approach is explained,

which is based on statistical analyses of questionnaires among 47,913 employees from 115 different organizations. In the results section the findings are described, followed by a discussion and recommendations for further research.

## **2. Contemporary work environments**

Despite of the hype and well-known terminology, a survey taken by Van der Meulen (2012) showed that 67% of the organizations that are orientating themselves on NewWoW implications do not know exactly what NewWoW encloses nor what benefits it could provide. Half of the respondents even had negative associations with it. The coverage on NewWoW in magazines and journals is often either very positive or very negative (Pullen, 2011). This has led to a more reserved attitude of some organizations towards introducing NewWoW (Baalen et al., 2011) and the effort to convince management to do so, has increased over the years (Van der Meulen, 2012).

The term Activity Based Working (ABW) has become a widely used expression for different office concepts that support NewWoW and is regarded as one of the most advanced concepts (Ross, n.d.). These concepts have in common that all users, from employee till general management, can choose to work at all available workspaces and collective facilities and where nobody is allowed to claim their own workspace. ABW offices offer a variety of different types of workspaces aimed at supporting different activities. So there are no dedicated seats and people are supposed to choose different workspaces throughout the day, based on their activities at that moment. Besides exchange value through cost reduction (a decrease of m<sup>2</sup>'s), added use value through increased employee satisfaction and productivity are important goals of organizations implementing ABW (Van der Voordt, 2004; Baalen et al., 2011). A positive image and as a consequence attraction and retention of scarce personnel and clients, more flexibility and environmental impacts (CO<sub>2</sub>) have also been mentioned as additional aims of the ABW environment (Ruostela et al, 2014; Blok et al, 2011; Van der Voordt, 2004).

But expectations and realizations of NewWoW do not always coincide (see Figure 1). In a study of Baalen et al (2011) among more than 250 organisations, all aims of implementing ABW, except more flexibility, showed a lower achieved effect than the original expectation. While the effects on the organisational process (flexibility, costs) largely matched expectations, effects on employee output (productivity) and organisational image towards their employees (employee wellbeing, satisfaction, image) lagged behind. In a before/after study questioning employees that moved towards an ABW environment, Blok et al (2012) also showed no higher appreciation of use value (satisfaction and the suitability for work tasks) nor social value (collaboration with other employees). Top-down implementing new working conditions is said to be insufficient to achieve positive work outcomes, as it might not change the actual behaviour at the office and could even be a source of stress (Peters et al, 2014). So it seems important to know in more detail what employees with dedicated seating think of their work environment versus the ones working in an ABW environment to discover which added values are perceived by them.

### Realised and expected NewWoW effects

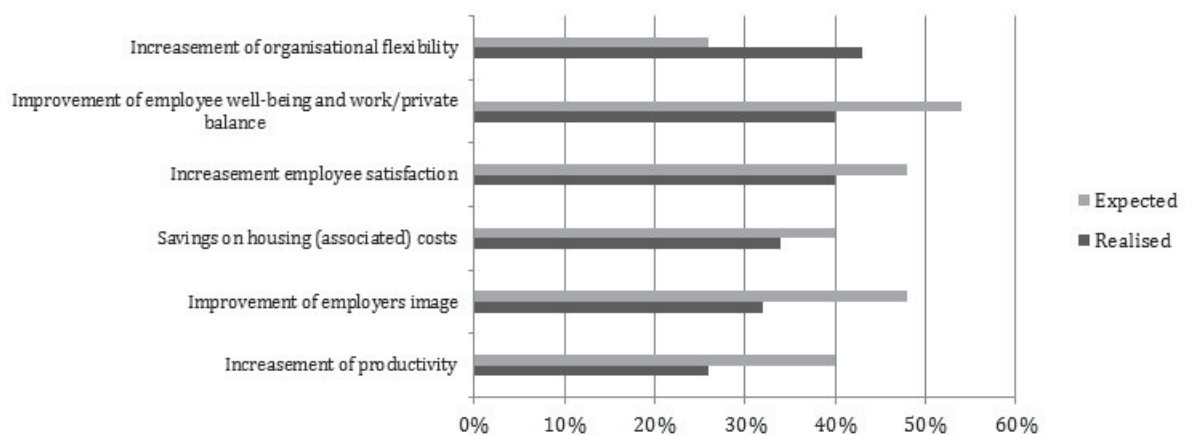


Figure 1: Realised and expected NewWoW effects (Baalen et al., 2011)

## 3. Research approach

As this paper focuses on employee opinions about the work environment, an existing large, multinational dataset of employee questionnaires was used. The questionnaires have been developed and collected by Leesman Ltd (from 2010 up to February 24, 2014). Their online surveys of employees question various workspace aspects and some general data on the respondent (e.g. age, gender, position etc.). Average response rate to the Leesman survey is 64%. The so-called convenient sample taken for this paper included 47,913 employees from 115 different organizations divided over more than 370 locations (average 369 employees/location).

Respondents mostly worked at organizations in Western Europe that approached Leesman to survey their employees. Although the database contained respondents from 22 countries spread over all continents except Asia, 59% of the respondents work in the UK and 22% in Sweden. The other 19% had a very diverse origin. The organisations belonged to many different sectors,

both profit and non-profit. Because of the non random sampling method the results were interpreted with care. However, the large number of organizations and employees included supported generalizability to Western European Offices.

From the complete set of 47,193 respondents, those who pointed out to spend <50% of their time at the primary office were not taken up in the sample (= 4,122 respondents or 8.6%). This guaranteed that respondents who only visit the office for short periods of time did not influence results. The rest was split in two groups (ABW flexible environments versus traditional environments with dedicated seating (TradWoW)) based on the work setting they indicated to work in most of the time. TradWoW employees worked at a private office, cubicle, technical area (e.g. drafting table), shared office with own desk, own workstation in open plan area or other. ABW employees mostly worked at a pre-booked hoteling or hot-desk, shared team table, informal work-setting, flexi/shared workstation or touchdown area. The NewWoW group obtained 6,243 (14.2%) respondents and the TradWoW 37,557 (85.8%) respondents.

To look at the employees' opinion on use value, the following survey questions were used:

- Opinion on importance of workspace design (on a 7 point scale of -3 to 3);
- Perceived support of activities that were important to them (For 21 different office activities the respondent was asked to state whether it is an important activity for them (yes/no). If yes, the respondent was asked to rate support of this activity by the workspace design on a 6 point scale of -3 to 3, without 0. Support of all activities was added up and averaged);
- Satisfaction with 31 features and fifteen facilities of the physical work environment (For each feature and facility the respondent was asked to state whether it is important (yes/no). If yes, the respondent was asked to rate satisfaction for his or her current workspace (on a 5 point scale of -2 to 2). A respondent indicating to find a certain feature/facility not important was not asked about satisfaction with this aspect. This is considered to be neutral satisfaction (=0) in the further analyses. Satisfaction with all features and with all facilities was also added up and averaged to get total scores);
- Opinion on workspace design enabling them to work productively (on a 7 point scale of -3 to 3)

For customer value, the questionnaire contained one question on the impact of workspace design on corporate image. Exchange value was disregarded as employees do not have insight in workplace costs and how efficiently these are managed. Social value was studied with questions on workspace contribution to workplace culture and a sense of community at work. Environmental value was measured by the perceived impact on environmental sustainability. Relationship value was measured with questions about whether the environment is enjoyable to work in and whether they are proud to bring visitors. All these questions were asked to be rated on a 7 point scale (of -3 to 3).

To test differences between both groups, either  $\chi^2$ - or t-tests could be used. As the 7-point scales are quite large, one could argue that t-tests on the group means are allowed, although it is not a fully continuous scale. But as several of the variables did not show a fully normal spread (most lean towards the positive side of the scale),  $\chi^2$ -tests were used to test significance of differences



observed for most of the added values. For the use value, new variables were calculated in SPSS, namely the mean satisfaction with all features and with all facilities of the work environment and the mean support of important activities. These were tested with t-tests to look for differences between both groups, as these were continuous variables with a normal spread. All statistics are visible in Table 1.

The flexible and the dedicated seating group did not show significant differences with regard to gender (58% male, 42% female), age (normal distribution), part time employees (6%) or time working at this organisation. Only on the country of residence, the groups showed significant differences ( $\chi^2(23, N=43791) = 2817.6, p = .000$ ). The NewWoW group consisted of 75% UK employees (vs. 47% in TradWoW) and employees from the Netherlands, Germany, France and Sweden, so only European countries. In the TradWoW group the Swedish account for 24% of the group (vs. 8% in NewWoW) and several other non-European nationalities were also present.

Table 1: Statistics on all the added values

	<i>statistics</i>			
	<i>n</i>	$\chi^2$ -value	<i>t</i> -value (equal variances assumed)	<i>p</i> -value (* = sign.)
<b><i>use value</i></b>				
<i>importance workspace design</i>	43516	28.3		.000*
<i>support of important activities</i>	43550		-12.0 (no)	.000*
<i>satisfaction with all features</i>	43561		-9.1 (yes)	.000*
<i>satisfaction with all facilities</i>	43561		-23.4 (no)	.000*
<i>enabling to work productively</i>	43524	89.5		.000*
<b><i>social value</i></b>				
<i>contribution to workplace culture</i>	43519	360.8		.000*
<i>contribution to sense of community</i>	43521	144.8		.000*
<b><i>relationship value</i></b>				
<i>enjoyable to work in</i>	43520	407.3		.000*
<i>proud to bring visitors</i>	43522	1845.5		.000*
<b><i>customer value</i></b>				
<i>impact on corporate image</i>	43521	1505.9		.000*
<b><i>environmental value</i></b>				
<i>impact environmental sustainability</i>	43524	1139.4		.000*

## 4. Results

The design of the workspace mattered to most employees (85.2% agreed with this statement), both in ABW and in dedicated seating environments (see Figure 2). But in ABW environments significantly more employees agreed on this (see Table 1). Looking at the use value that was experienced by both groups of employees, on all matters the ABW employees were more

positive than the ones with dedicated seating. The perceived support of important activities by ABW employees was higher ( $M=.79$ ,  $SD=1.2$ ) than among the dedicated seating employees ( $M=.59$ ,  $SD=1.2$ ). Workplace satisfaction in general with the features and with the facilities also showed significant higher scores for the ABW group than the TradWoW employees. ABW employees scored (on a scale from -2 to +2) the features on average with .19 ( $SD=.45$ ) and facilities with .39 ( $SD=.49$ ) and dedicated seating employees with .13 ( $SD=.46$ ) and .24 ( $SD=.47$ ). Looking at the individual features and facilities, satisfaction of ABW employees was higher for all facilities (except desk/room booking systems) and for most of the features (e.g. indoor climate, parking, meeting rooms, accessibility, noise and décor), except for their desk, chair, personal storage, phone equipment, in-office network connectivity and the ability to personalise. The last question on use value regarded the support of productivity and again ABW employees felt better supported by their workspace (see Figure 3 and Table 1).

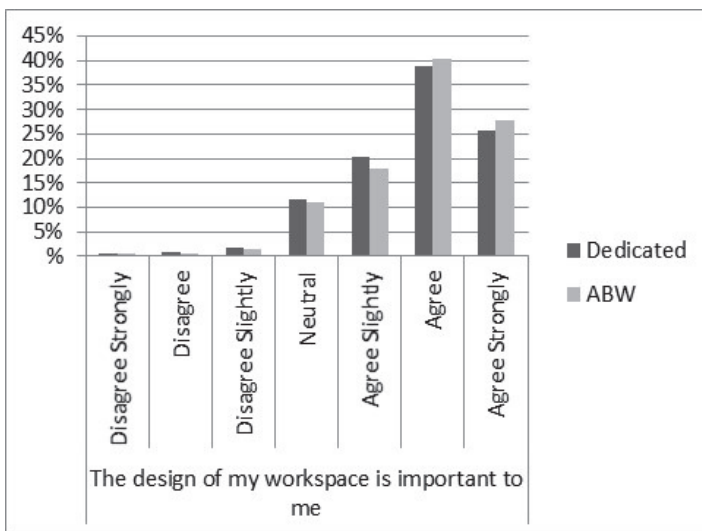


Figure 2: Importance of workspace design

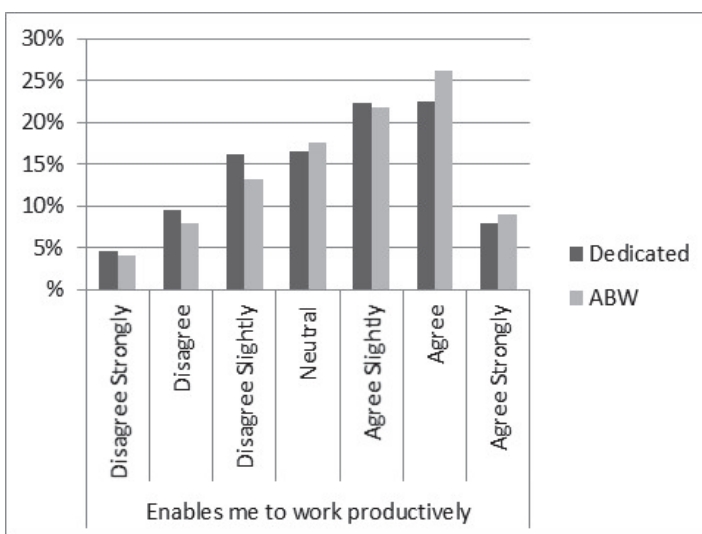


Figure 3: Added use value through support of productivity

Besides use value, the ABW employees also valued the added social value of their workspace. The impact on workplace culture was more positive and also the contribution of the workspace to a sense of community at work (see Figure 4 and Table 1). Both these items are known to help connect people. The last indirect added value through the employees is relationship value, which also scored very highly in the ABW environment. The employees felt more strongly about the fact that it creates an enjoyable environment to work in and they felt more proud to bring visitors to their workplace. Figure 5 shows that especially pride was much higher among the ABW employees.

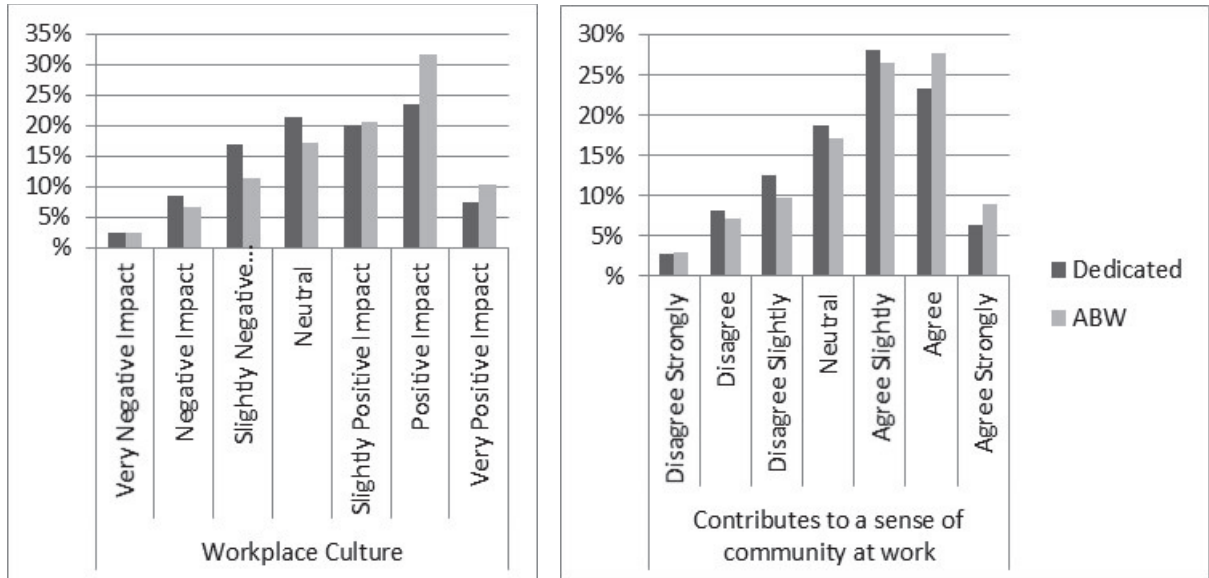


Figure 4: Added social value

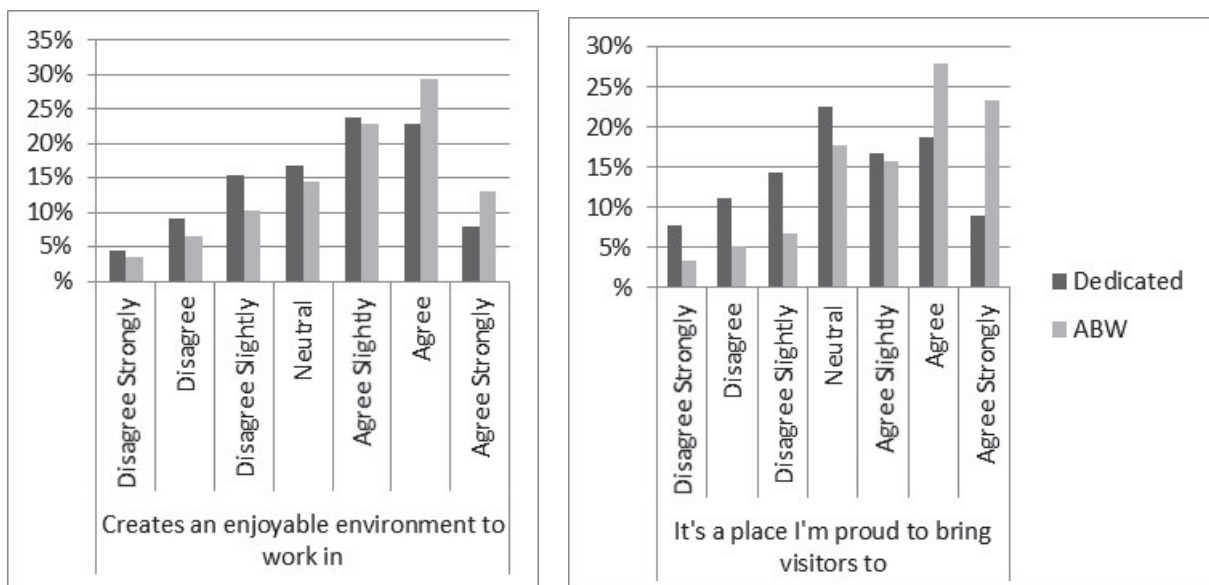


Figure 5: Added relationship value

Although customer value and environmental value are indirect added values which are best measured by opinions outside the organisation, it is also interesting to know what employees have to say about it. With regard to customer value, employees felt more strongly that their ABW environment had a more positive impact on corporate image and environmental sustainability (see Figure 6). Opposed to use, social and relationship value, these ‘outside’ values might be the hardest for CREM to quantify the actual effect for, as it is not common to question customers and society about this. For the question on environmental sustainability 42.2% of the respondents remained neutral, which might also imply that they did not know how to value this aspect.

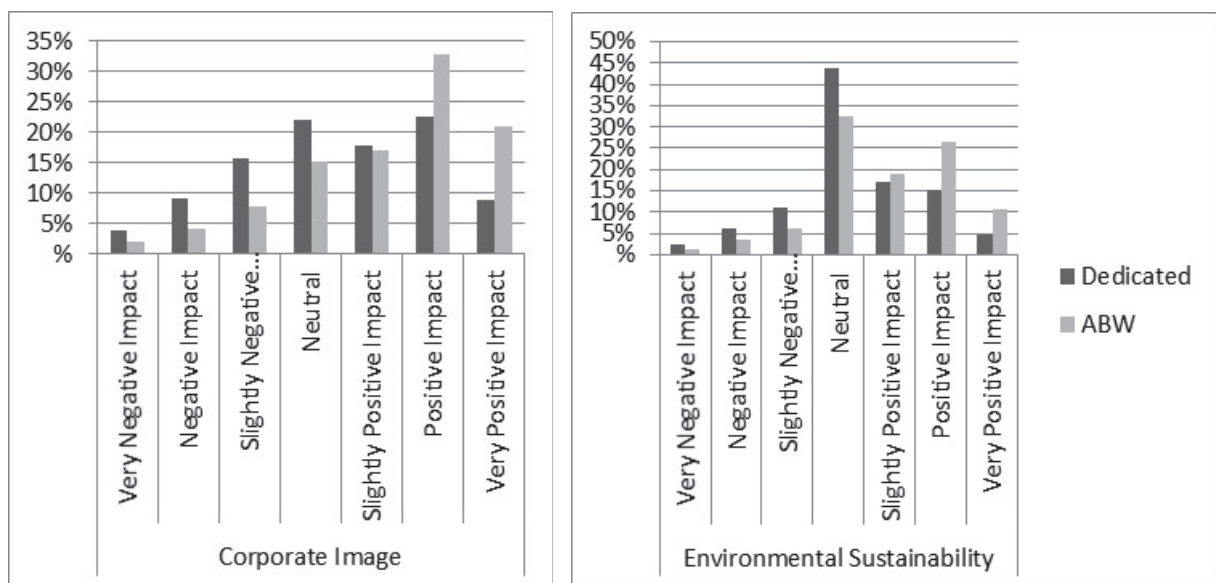


Figure 6: Added customer value and environmental value

## 5. Discussion

In today’s knowledge economies, the employees are the most important asset. To measure their perception with regard to use value, social value and relationship value probably has provided valid results, as these are perceived values. However, for customer and environmental value it would be better for future research to also include research among clients, passers-by and local residents. In future comparisons of NewWoW and TradWow environments, it is also important to take the building itself into account. It is likely that the ABW environments in general were newer (or more recently renovated), which has probably led to more modern climate installations and decor.

The results of these analysis showed that ABW environments scored better on almost all aspects and added values. That would imply that all organisations can improve their performance by moving from dedicated seating towards these types of work environments and NewWoW. However, ABW might not be suitable for all job types and also not for all types of people. Also, research has shown, that these environments are not always used as intended, because people still claim the same seat everyday anyway and do not change during the day (Appel-

Meulenbroek et al, 2011). If employees are not guided well during the implementation, they might even oppose the intended changes on purpose (Inalhan, 2009).

It is unknown which added value is the most important for organisations and their performance. For knowledge organisations it would seem that social value is particularly valuable as knowledge sharing increases the innovativeness of the organisation. Asking about the contribution of the work environment to workplace culture and a sense of community probably did not cover this entire concept of social value yet. Innovation requires stimulation of both interaction and creativity (Oseland et al, 2011) and CREM can take specific steps to do so with the physical work environment design (Kastelein, 2014; Dul and Ceylan, 2014). These studies have not yet identified whether ABW are better at it than traditional work environments, so this is subject to further research.

Looking at satisfaction with some of the individual features and facilities that scored negative for both groups, it becomes clear that people walking past your desk and noise levels are not solved satisfactory in any of the work environments (as there was no significant difference). And although satisfaction with temperature control and art/photography were significantly less negative among ABW employees, they were still dissatisfied a lot. After desk, chair and different types of office equipment, temperature control was important for the highest percentage of respondents. So research how CREM can add value with these important aspects is necessary, as it does not seem that the modern ABW environments have succeeded (much) in doing so.

## 6. Conclusions

The physical work environment is very important to office employees, both in contemporary as in more traditional work environments. Therefore CRE management can add value to the organisation by offering important features of the physical work environment and facilities to the satisfaction of their client's employees. The results of this study suggest that on average (European) employees were happier and supported better with ABW environments than with dedicated seating, so introducing these office concepts seems promising for CRE managers to add more value. Besides the exchange value that it will bring (through reduction of m<sup>2</sup>'s), the respondents felt that also all the other added organisational values benefit from it. The challenge for CREM remains to express all the added values in terms of money, as interventions in the physical environment do require an investment and thus approval of corporate management.

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