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WHEN BUSINESS AND BUSINESS SCHOOLS UNITE TO CREATE UNIQUENESS: STAKEHOLDER RELATIONSHIPS IN BUSINESS HUBS EMBEDDED IN HIGHER EDUCATION BUSINESS INSTITUTIONS

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ABSTRACT

This research is conducted on a smart hub embedded in a business school, in a regional location, of a higher education institution. The two themes that emerged from this research are that the smart hub increased work satisfaction (theme 1) and also personal satisfaction (theme 2). The results show there are three distinctly unique factors that smart hub employees experienced by being in a business school, these included (1) external interactions with the institute's personnel (staff and students), (2) mutual benefits of engagement with smart hub employees and finally (3) the natural environment and facilities provided by the institution. Using the two themes of work and personal satisfaction, as well as the 3 unique factors, the research identified the "Unique Mutual Alliance Factors" (UMAF) to summarise the outcomes of embedding a smart hub within a higher education Business school.

KEYWORDS: Unique Mutual Alliance Factors (UMAF), Smart Hub, Stakeholder Engagement.

Statement of Originality.

This submitted work is original and the authors own work. This paper is not currently under review by any other journal.

1.1 INTRODUCTION

Avondale Business School is part of Avondale College of Higher Education, a regional Higher Education institution since 1897. The Avondale Business School is piloting a remote Smart Hub in one of the classrooms located inside the business school. The business will be a marketing firm with 4 employees using the classroom to work remotely to save a 3-hour daily commute to the central Business district (CBD). The Avondale Business School Smart Hub will allow employees to work remotely, with use of internet, and a workplace health and safety (WHS) compliant facility where workers can work for part of their role, away from the CBD located head office. The Smart hub is a facility where people can be more productive than just working from home. There is value in working at places closer to home with the feel of a productive corporate work space. As the Smart Hub is embedded in a business school, it is designed to create a productive work space but also to allow for stakeholder engagement and collaboration with Avondale Business School staff and students.

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1.2 LITERATURE REVIEW

The growth of advanced communications technologies, have paved the way for the development of Smart Hubs, which allow users to work closer to home (Fitzgerald, Malik & Rosenberger III, 2017). A Smart Hub or Smart Work Hub is defined as "an alternate workspace location (or "third space") that affords its users geographical and temporal flexibility" (Malik, Rosenberger III, Fitzgerald & Houlcroft, 2016 p.3). It is described as "a facility or space which offers workers an alternative to either working in their normal place of work or working from home" (NSW Government Trade & Investment 2013 p.5). This space caters for telecommuters also referred to as teleworkers and/or remote workers (Smith & Baruch, 2001), which are defined as remote work involving the use of information computer technologies (Sullivan, 2003).

Telework has been available to organisations for many years. Whilst there is no universal agreement as to its definition, it can be broadly described as working away from the office or normal place of work and might involve working from home or working at a satellite office managed by the employer, or in more recent times, working from a "telework smart work hub" where other "teleworkers" meet to do their business" (Malik, Rosenberger III, Fitzgerald & Houlcroft, 2016 p.7).

Research has explored the many benefits of working remotely. Employers benefit from "increased productivity, security in retention, strengthened organisational commitment and improved performance"; Employees benefit from "reduced stress, better health and better work-life balance"; and the wider community benefit from "reduced congestion on roads and the corresponding environmental benefits" (Fitzgerald, Malik & Rosenberger III, 2017 p.4).

The term work-life balance refers to the concept of finding a balance between work commitments and non-work commitments, namely family life (Bailyn, Drago, & Koshan, 2001). For most this balance has become more challenging, especially with increasing workloads and advances in technology, which have resulted in the boundaries between work and home life becoming more blurred (Major & Germano, 2006). Advances in communication technologies, such as mobile phones, laptops, email and wireless internet connections, have created a virtual workforce (remote working), where employees can be contacted anywhere and anytime (O'Driscoll, Brough, & Kalliath, 2006; Beauregard & Henry, 2009). Being able to work from any location, especially from home, has an impact on a person's work-life balance. On the one hand, remote working enables the reduction in commute time, allowing for more time to interact with family and other non-work commitments, such as exercise and hobbies (Hall et al., 2013). On the other hand, research has shown, employees that are working from home (especially software developers), are experiencing greater intrusion into their family life, due to the difficulty experienced in 'leaving work at work' (Hyman et al., 2003). Hence, while remote working allows for greater flexibility (Hill et al., 2010), reduces commute time and cost (Major & Germano, 2006), it also has an adverse impact on an employee's work-life balance.

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Technology advancements have created the opportunity for employers to be able contact their staff outside of normal office hours (Chesley, 2005). It is therefore evident that the concept of work-life balance is becoming more complex (Allis & O'Driscoll, 2008).

The aims of this project are to identify the current challenges and opportunities to the four (4) stakeholders of the Avondale Business School embedded Smart Hub. In particular:

1. Employees who work remotely and use the Smart Hub

- 2. The Businesses CEO who endorsed the use of the Smart Hub
- 3. The Avondale Business School Staff and
- 4. Avondale Student engagement with the Smart Hub employees.

Based on the literature review and research aims, the research questions (RQs) for this study are:

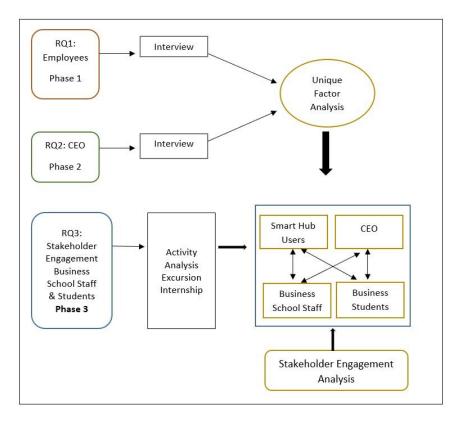
RQ1: What is the unique experience of employees in Smart Hubs embedded in Higher Education Business Schools?

RQ2: What is the unique experience for the employer (CEO) who endorses the use of Smart Hubs for their employees?

RQ3: Does a smart hub embedded in a business school increase the level of stakeholder engagement for business school staff and students?

The conceptual framework for the research is as follows:

Figure 1.0: Conceptual Framework



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1.3 METHODOLOGY

A mixed methods multiphase design will be the guiding methodological approach to the investigation (Creswell & Cresswell 2018, Cresswell & Clark, 2011). Within this design, individual phases consisting of both quantitative and qualitative data collection, analysis and interpretation will be conducted in each phase.

- Phase 1: Conduct interviews with Smart Hub staff members after the first 12 months of using the facility
- Phase 2: Conduct interview with CEO of Smart Hub staff who endorsed the use of the Smart Hub after the first 12 months of using the facility
- Phase 3: Collection and analysis of data from stakeholder engagement activities from within the business school (students, staff and Smart Hub users).

According to Yin (2003), qualitative methodology is ideal for generating descriptive answers, involving richness and intensity, to access and understand personal experiences and opinions. Qualitative research is undertaken when the researcher "aims to explore a problem, honour the voices of participants, map the complexity of the situation, and convey multiple perspectives of participants" (Creswell & Clark, 2011, p.7). Whereas, Quantitative methods can then be utilised to determine associations between key concepts in the research problem. This understanding arises through the depth of exploration of the participant's perspectives.

1.4 Data Analysis

The data collected from the smart hub employee interview transcripts were analysed in terms of: participant demographics; mode of transportation; commute experience; life/work balance; advantages and disadvantages of working remotely at the Avondale Smart Hub; interaction with Avondale staff and students; and employer and colleagues attitudes towards the use of the Avondale Smart Hub.

Table 1.0 displays the demographic characteristics of the four smart hub participants. Of the four participants 75% (3) were male and 25% (1) was female. The participant's length of employment ranged from 14 months to 18 years.

Participant	Gender	Length of time Employed by PA	Job Role
1	Male	12-13 years	Software Developer
2	Male	13-14 months	Marketing Manager

Table 1.0:	Participant	Demographics
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3	Female	23-25 years	CRM Consultant
4	Male	18 years	Account Manager

Table 2.0 outlines the breakdown of the participant's work location. The four participants are utilising the Avondale Smart Hub between 1 and 3 days per week. Of the four participants, three are still commuting to CBD Office 1-2 days per week and two are working from home 2 days per week.

Number of Days per Week Working from:			WOIK
Participant	Avondale Smart Hub	Work from Home	CBD Office
1	1	2	2
2	3		2
3	3		1
4	2	2	

Table 2.0: Weekly Breakdown of Location of Work

Table 3.0 outlines the mode of transport and average commute time to CBD Office compared to Avondale Smart Hub (SH). Of the 4 participants, 3 travel by train to the CBA Office and 1 by car. The commute time ranges from 1 hour and 30 minutes to 2 hours and 45 minutes. On the other hand, the participants indicated their travel time to Avondale Smart Hub was significantly reduced down to 10-30 minutes depending on mode of transport.

Participant	Mode of Transport travelling to:		Average Comm	Average Commute to:		
	CBD Office	Smart Hub	CBD Office	Smart Hub		
1	Train	Car/bike	1.5hrs-2hrs	10-15mins or		
				30mins by bike		
2	Train	Walk	2hrs	20mins		
3	Car	Car	2hrs	45mins		
4	Train	Car	2hrs45mins	15mins		

 Table 3.0: Mode of Transport and Average Commute to Work

Table 4.0 displays the typical issues that the participants encountered when commuting to the CBD Office. Note participant 4 usually worked from home prior to working at the Avondale Smart Hub. The two most common issues mentioned were locating parking (particularly in relation to finding a parking spot at train stations) and trains running to schedule (this extended the participants commute time).

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Typical Issues Encountered with Commute	Participant			
	1	2	3	4
Locating Parking	✓		✓	~
Congested Roads		✓	✓	
Road Accidents		✓		
Overcrowding on Trains	 ✓ 	✓		
Quiet carriage not respected				
Trains running on Schedule	✓	✓	✓	
Loss of Internet on Train		✓		
Childcare Operating Hours			✓	

Table 4.0: Typical Issues Encountered by Participants with their Commute to CBD

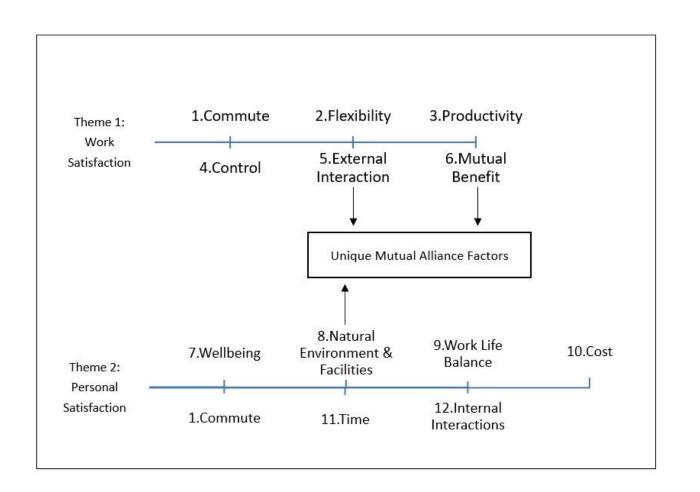
1.5 Themes from Employee Interviews (Phase 1)

The interviews from the users of smart hub facilities indicated that there were two main themes, work satisfaction (theme 1) and personal satisfaction (theme 2) from the use of the smart hub. There were 12 distinct factors identified from using a smart hub (which have been grouped into the two themes identified), and in particular 3 unique factors from operating a smart hub embedded in a business school. These unique factors were identified as 1) External Interaction 2) Mutual Benefits and 3) the Natural Environment and facilities, and these have been dubbed the Unique Mutual Alliance Factors (UMAF). Note the "Commute" factor is listed in both themes.

Figure 2.0 : Themes & Unique Mutual Alliance Factors

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1.5.1 Theme 1: Work Satisfaction

1.5.1.1 Factor 1: Commute

Workers who reside outside the state capital cities have longer average commute time (ABS, 2018). According to a survey conducted by ABS (2016), the biggest flow of commute comes from the NSW Central Coast south into Sydney (Salt, 2018). However, with the growth of technology, new opportunities for travel reductions emerged. One of which, is the nascence of Smart Hubs (Kramers, Hojer, Nyberg & Soderholm, 2015). Before the Avondale Smart Hub was established, three from the four participants had to commute to the company's headquarters in North Sydney. This factor has the most references; consisting statements mentioning the word 'commute' or 'traveling', the number of hours spent on commuting, and days of commuting in a week.

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"Oh I cannot believe the average commute is two hours"

"I can take the train all the way to North Sydney from Morisset but that's two hours, one-way minimum"

"Now, from here to North Sydney is roughly about two hours and change on the train, and obviously time from here to there"

"I was commuting by train and I guess door to door, of two and a half to three hours given that there's no parking available at Gosford at the time I leave, but now I'm driving, so I allow myself two hours"

1.5.1.2 Factor 2: Flexibility

Smart Hub (Smart Work Center) is a form of innovation of how work can be done flexibly. It is a great approach to help employees overcome any drawbacks of home working (Errichiello & Pianese, 2018). Employees are provided with additional workspace option that is closer to their residences (Cisco, 2009). Workplace flexibility is an essential strategy that visionary companies can apply to empower their employees in dealing with their workload stress. According to research, adopting greater workplace flexibility is beneficial for both the individuals and the business (Hill et al., 2010). The Avondale Smart Hub serves as an alternate office location. With three options on hand (home, CBD, Smart Hub) the participants have more flexible working arrangements. This factor is about the participants' ability to decide their workplace and mode of transport.

"So my biggest thing was about shuffling it but one day a week with being flexible, that's worked in well and I've kept my days at home and being able to work here and utilise the space"

"Sometimes on a Friday, I'll be in the area, I'm like rather than going home, I'll just come here. So I found myself here a lot more often than I thought I would, actually. It's been real positive."

"work four days a week at the moment. I do still go to Sydney on a Monday, just to sort of spend time with the team 'cause I'm within a management team. So it's good to have that one day on the ground with the guys and – but the other remaining three days, I'm here"

1.5.1.3 Factor 3: Productivity

Remote workers face more difficulties when working at home because the borders between home and work are blurred. As a result, work pressures are spilled over into their non-working life (Felstead & Henseke, 2017). A Smart Hub plays a role as the bridge between the home office and the central office. It provides the employees with interaction opportunities, office environment, and services that they

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need to work more productively (Cisco, 2015). The chance to have conversation also gives a positive effect on the employees' productivity (Haynes, 2008). The Avondale Smart Hub has allowed the participants to have a clear border between their work and personal life, which inevitably help them to stay focus. This factor consists of quotes mentioning about the improvements in the participants' performance outcomes.

"And being in the office is actually more productive than when I'm at home or even here at Avondale, because it's in the office environment, so conversations happen naturally, like you sitting over to petition from somebody so you see them and you overhear things are saying or you can contribute"

"Yeah, it's just – especially at this point, with the types of projects that we've got going on, it's so much easier to just be in one space and focus. I know that there's a separation between home and work and that's good, so, this is my place now where I come to work rather than sitting on the lounge."

"if I was looking at productivity – one of the reasons I'm less productive at home is because we have a small house and I've got four kids and so I don't have the ideal scenario where I can go and lock myself away"

1.5.1.4 Factor 4: Control

The elements of control and predictability are present in the nascence of commuting stress. In the context of commute, there are preferred outcomes that commuters want to obtain (Novaco & Gonzalez, 2009). However, in the situation of commuting on either train or car, the opportunity to exercise behavioral control is constrained (Evans, Wener, & Phillips, 2002). The lack of ability to exercise control goes hand in hand with longer commuting hours (Milner et al., 2017). This factor contains the participants' response regarding the overwhelming lack of control they have when commuting to work

"what happens in the event that something goes on the train – yeah, come summer and you get bushfire season and trains aren't working and all of that. You might end up an hour and a half late into work"

"You just need to have one little thing to go wrong, it's – your whole trip could be delayed. I guess if you're commuting by car, your arrival can vary depending on traffic. With the train from the central coast line, it was pretty much bang on. It was every blue moon that there was an incident.

1.5.1.5 Factor 5: External Interactions (Unique Factor 1)

Engagement can be defined as the perception of open relationships that influence one's well-being in the workplace (Biggio & Cortese, 2013). The Avondale Smart Hub was established for specific

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employees who reside closer to the area. Therefore, the employees are working under different departments. Even so, creativity may be the outcome of interactions between the individual, regardless of their functional area or organizational position (Zhou & Hoever, 2014). This factor contains participants' experiences interacting with their work colleagues and Avondale personnel. These interactions included social interactions, professional development, and discussion of relevant business issues with staff, and assistance to students. This is the first of the "unique" factors identified.

"So I've had quite a few conversations and even just the one point – seven o'clock at night, I've wandered down to see that there's a light on there in the student lounge and somebody's sitting in there, pondering away over their first year accounting homework. And being able to offer some assistance and build up a bit of rapport and point somebody in the right direction. So there's those type of – on a small scale – Interactions as well. That's personal satisfaction for me too."

1.5.1.6 Factor 6: Mutual Benefits (Unique Factor 2)

A good partnership brings in diversity and drives innovation. The main principle is to ensure that everyone gets mutual benefit out of it (Belfield, 2012). The Avondale Smart Hub is a project that provides mutual benefits for Employees using the smart hub and Avondale College of Higher Education. One of the many ways universities respond to global competition and change is through university-industry collaborations and partnerships. It is a collaboration where both parties share their resources in an efficient and effective way to attain mutually compatible goals (Tumuti, Wanderi, & Lang'at, 2013). In the long-term run, Avondale and Employees using the smart hub have planned to support one another by providing what they can to create outcomes that are beneficial for both parties. This unique factor listed statements about mutual benefits and any future plans for this alliance.

"mutual benefits was that we would get office space, but then obviously offer an internship program which I believed they've done"

"I think I saw it from the point of view of it was a win-win that – yes, we would get benefits and that hopefully the business school would get benefits as well. So that was probably the key thing for me"

"That was what made it one of those sweeter arrangements, where there's a clear benefit for both parties, as opposed to it just being a transaction. So, I saw it more as an alliance than a transaction"

1.6 Theme 2: Personal Satisfaction

1.6.1 Factor 7: Well Being

The costs of commuting include the delayed effects on health that employees absorb and manifested in their body (Novaco & Gonzalez, 2009). Commuting contributes negatively to commuters'

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emotional, physiological, and psychological wellbeing. It increases the level of physical exhaustion, tension, and lower level of performance (Flood & Barbato, 2005). According to research, people who spend over five hours commuting every day were melancholic about the time they lost to commuting (Bissell, 2015). Another finding stated that one in three employees with a commute time of more than 90 minutes experience neck or back pain (Crabtree, 2010). The Avondale Smart Hub has provided the participants with the opportunity to exercise on their way to and from work (riding bike, walk) as well as during their break time. The hours previously spent in commuting to Sydney can now be used for improving their well-being. This factor consists of statements related to the participants' well-being.

"that's something that I really enjoyed too, is when you go outside in your lunch break and you go out and it's relaxing and refreshing with that work, you go outside of your office at work and you're in the city and it's exciting and you in fresh, but it's not relaxing like it is here. You can't go for a walk or ride around the swing bridge or whatever, just stand by the water and have some peace and quiet."

"I love the idea that – get a little bit more active, but still be able to put the same amount of hours into your day"

"And that's appealing in a sense that it's so relaxing in that regard and even the commute or riding my bike and over the swing bridge or boys or girls walk over lunch. It's just nice"

"We have been playing tennis. You probably heard that. Deb and I had our Thursday match which we went, "Oh, let's go play tennis," and it's been great. I absolutely love it."

1.6.2 Factor 8: Natural Environment & Facilities (Unique Factor 3)

Organisations tend to pay little attention to natural elements in their office. Natural elements and sunlight are two free resources that can provide psychological benefits for the employees. Benefits from natural resources can result from direct and indirect exposure to green spaces (Felsten, 2009). It can improve mood, reduce stress and increase well-being. (An, Colarelli, O'Brien & Bovajian, 2016; Ulrich, 1993). After concentrating on work tasks for hours, the mind requires rest. Exposure to nature will give a restorative effect on the mind and effectively counter any fatigue (Kaplan, 1995). Compare to the North Sydney office that is located in a crowded business district, the Avondale Smart Hub offers a more relaxing environment. This third unique factor demonstrates the participants' opinions about the environment and facilities at their Avondale Smart Hub.

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"You go to Sydney, in a train, it's just rush, rush, rush, rush, rush, lunchtimes, people everywhere, and here, you just feel more relaxed, you look at the cows or the sheep, not so many cows but – so that's been a really big positive, less stress. Although when we're working, it's busy but it's just the whole environment, it's just relaxed, no driving, little driving."

"So I guess it's a great environment to work which I said these things already but just to recap them, it's very convenient"

1.6.3 Factor 9: Work-Life Balance

Work-Life Balance (WLB) is the time an individual use to work, in comparison with their time spent with individual engagement and relations (Abioro, Oladejo & Ashogbon, 2018). In this century, WLB is an important concept, in which the equilibrium must be maintained and managed constantly. A finding shows that employees with well-balanced life are valuable for the company. The quality of their personal life impacts their work quality (Garg & Yajurvedi, 2016).

There is an inverse relationship between the time parents spend commuting and the time they spend interacting with their children (Flood & Barbato, 2005). With the office now being closer to home, the participants can spend more time at home before and after work. The presence of the Avondale Smart Hub has positive impacts on the employees. They can have a more balanced life; between work and family commitments.

"I can be home for my kids. It's obviously – my kids are still eight and ten, so still reasonably young, can't sort of leave them on their own. They were really the two."

"Because it's so close, I actually start at 9 because I spend more time at home in the morning with the kids and I eat breakfast at home, and so what's ended up happening is that with the family rather than being spent predominantly at the end of the day has now moved to spending in the beginning of the day."

"I value that as much as being able to work here, just because I have four kids and so not having to commute is – that's the ultimate, because you can get up and have breakfast and be part of the family"

1.6.4 Factor 10: Cost

A large proportion of labor force is heavily centered in Sydney, with nearly 1,747,388 people employed in the CBD, of this figure, more than 500,000 commute from areas outside Sydney (ARA, 2015). Commuting and cost are two inseparable components. Commuters living in the outer suburbs of state capital cities incur higher costs compare to those living in the main city (Wang, 2013). Monetary commuting costs for motorized transport are not quite straightforward to determine. For

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public transport, monetary commuting costs are derived from the price of tickets. Meanwhile, for cars, the costs are derived from its variable cost of use and ownership cost (Ommeren & Fosgerau, 2009). This factor consists of the statements mentioning the three main commuter cost components: vehicle running cost, parking, and public transport costs.

"So when I was doing four days a week, I was spending our budget was at \$60 a week in fuel and then the train ticket was 25 a week I think is changed over time because of fare changes"

"So, generally, each way is about eight or nine dollars, yeah, thereabouts."

"Saving money. And the saving money wasn't the reason I wanted to come here, but it was an unexpected – well not totally unexpected, but it was surprising how much money we saved in terms of fuel and maintenance and whatnot."

1.6.5 Commute (Also Factor 1: Personal Satisfaction Theme 2)

Up to a certain point, every additional minute of commuting time would make someone feel slightly worse (Arnett & Sedghi, 2014). Being able to have a shorter commuting time has resulted in both work and personal satisfaction for the participants. As the Smart Hub has shortened the time length of commuting, the participants gained more time to do several activities that contributes to their personal satisfaction.

"Advantages, the less commute obviously"

"Close to home, you can walk here if you need to and then going home is easy."

"it's just so much better when you don't have to commute. It's the commute really. Not having to commute just gives you so much more time."

"Going against the traffic. Just where it is, it's just so pleasant, and it's relaxing."

1.6.6 Factor 11: Time

Time is a finite resource divided between various fundamental domains of life; family, socializing, and employment (Milner, et al., 2017). Amongst employed people, the concept of time is tied to work; time spent at the office and commuting. As learning agents, humans allocate time and location information to make up their activity-travel pattern combinations. According to a research, humans focus on either the time planning of their activity patterns, or search for the shortest path (Davy, Yu, & Guoqing, 2007; Charypar, Graf & Nagel 2004; Dijkstra, 1959)

Residing outside of Sydney requires the participants to leave home early in the morning to arrive on

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time in the office. For train commuters, deciding the time from home to a station involved individual judgment for the biggest possibility to get into the train as soon as their arrival (Feng, Mao, Chen, Bai, & Li, 2013). Once the office hour is over, participants need to leave work at the right time to arrive home at the earliest time possible. This factor contains statements mentioning time.

"Yeah, be at work around six. And I did that for about eight or nine months and I mean to leave at 4:30, I got to be up at four. And I was doing that, but it wore me out, and I was like, "Yeah, four o'clock in the morning every four days a week is too much." And so I changed it to leave at 5:00 am. So just an extra half hour made a big difference and that's sustainable. And I've been doing that since I've made that change. I haven't changed it from 5:00 am."

"We've had time when you get home because when you leave, if you leave at 5:30, 8-8:30, because it's always like, "Oh, I've missed that train. Now it's another half an hour." So quickly, it gets to 8:30"

"For me to allow enough time to get home, I would have to be leaving work at four o'clock in the afternoon, which of course, you can head into work earlier, but you're not gonna get the trains running to schedule. You'd have to be doing transfers all the way down"

1.6.7 Factor 12: Internal Interactions

Through the interactions in physical and virtual environments, Smart Hubs promote the culture of collaboration (Errichiello & Pianese, 2018). Working with different staff of the same organization can create open collaboration and efficiencies.

"So as I said, it's been solo at home, so now I'm working with colleagues again and feeling part of a team. So I, for years, worked as a solo person in reality, my business, and now I'm part of a team again, so that's been a really big positive."

"he and I wouldn't work together and he would be working on other projects or whatever. We wouldn't have that face to face opportunity, so, now we do. So those are the type of interactions that we have on a day to day basis that I wasn't expecting we were going to have"

1.7 Employer (CEO) Attitudes to Avondale Smart Hub Usage (Phase 2)

Overall, the participants indicated that their employer encouraged the use of Avondale Smart Hub and see the arrangement as mutually beneficial with minimal risk. The CEO in particular wanted the arrangement to have mutual benefits to all parties. The employer was able to establish a greater relationship with Avondale and in turn offer an internship, which enables them to vet their candidates prior to offering employment. The CEO also invited Business School staff and students to visit the

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CBD office, as part of the mutual exchange of benefits the smart hub encouraged by being embedded in the business school. Table 7.0 outlines the participants' views on the CEO's support of the use of the smart hub.

	Table 5.0: Employee Attitudes to CEO use of Avondale Smart Hub		
#	Employer		
1	Managing director suggested working from Avondale		
	Have other hubs offices spread across US so not new concept		
	From employers perspective pretty low risk they stand to gain more than they lose		
2	CEO has embraced the idea, especially here at Avondale, because they are alumni.		
	CEO doesn't see too much disadvantage there		
3	CEO was a big promoter of it. CEO likes the idea of people interacting and connecting.		
	Lot of people commute to CBD and CEO is a family man, understands time that you would be at		
	work actually travelling.		
4	Our business has always been cutting-edge and, if you can do things remotely, you can be doing		
	this while you're doing this. CEO had five or six people in this region now working at home but		
	realised a good opportunity, a local opportunity to get them back socialising, get that flow of ideas		
	between the employees to get some different aspect of your job satisfaction which is socialising		
	with your colleagues.		
	Link to the college to have some mutual benefit there.		

In particular the CEO made the following comments:

"The advantages would be to get – I guess to build a stronger connection between staff because there's a lot of positives to having a mobile capability and being able to work remotely, but a negative is that connection can get a little bit frayed or dim."

"Obviously, from the point of view of making their commute easier to a place of work, that would be the other one. I guess, was being in an educational institution maybe that sort of provided some –opportunities in terms of picking graduates up or things like that."

1.8 Activity Analysis within the Business School (Phase 3)

Activity analysis was conducted on the interactions of the staff using the smart hub and Business School Staff and Students. Activities included the following:

- Interactions of students with smart hub staff (informal)
- Interactions of Business School staff with smart hub staff (informal and formal)
- Excursion by Business School staff and students to CBD office of smart hub users

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- Internship offered by Smart hub business
- CEO presentation to students on excursion

Table 8.0 presents the participants responses in relation to their interaction with Avondale staff and students. Overall, the interaction that has occurred has been a positive experience. Participants noted that the interactions with Avondale staff have been "warm and welcoming". One participant noted that it was a rewarding experience assisting a student with their studies. The participants also indicated that they would be happy to engage further with students through technical demonstrations or short presentations.

	Comments on interaction with:		
#	Avondale Staff	Avondale Students	
1	" It wasn't one of the reasons were a catalyst	"So from my employee's perspective, obviously being pro	
	to come and work here, it was just	Avondale graduates coming to work for us, there's benefits	
	coincidental."	to - if we can as a company can offer undergraduates and	
		internship programs"	
2	"So the ABS staff has been great".	"so, the company's aims were that we wanted to be able	
		to do a little bit of nurturing with students as well and	
		enable them to see what a functioning business is like and	
		perhaps some of those conversations."	
		"being able to offer some assistance and build up a bit of	
		rapport (with students) and point somebody in the right	
		direction. That's personal satisfaction for me too."	
3	"Well, I must say it is a lot quieter than I was	"over at the café, we've been there a couple of times and	
	anticipating, a bit more of a buzz around."	strike up a conversation and your young cleaner here."	
4	"(Head of School) has been really nice, &	"I thought we'd actually have a little bit more interaction	
	warm, and everyone we've had dealings	with the students, especially after they came to visit us.	
	with."	Student think "I don't want to interrupt those guys in there.	
	"it's just really friendly and really warm	They're working." And they're younger, I understand that,	
	and welcoming, it would be good to have	but we have been welcoming, especially when I came down	
	a bit more of an induction type thing,	to CBD office.	
	meeting with staff officially."		

Table 6.0: Interaction with Avondale Staff and Students

One example of the stakeholder engagement of smart hub employees was the invitation to Business Students to the employees CBD office for an excursion. The students did the 1 1/2 hour commute to the CBD office, where they met the CEO and senior executive staff for a discussion on what it means to work in an office with various roles from marketing manager, to chief information officer to

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financial controller. Students were given the opportunity to ask questions of staff, and a tour of the four levels occupied by the company. Students were given the opportunity to review their resumes and covering letters for job applications. Table 9.0 gives the student feedback from the excursion, both positive and negative.

Student	Positive Student Feedback from	Negative Student Feedback from Excursion to
#	Excursion to CBD Office	CBD Office
1	The opportunity to visit a real business, in a different environment (CBD) Chance to create connections	Make a day of it to fit more in
2	I likedwhen we talked and networked	Not so rushed felt we missed out in the end
3	Was real wake up call for me to change my habits and priorities	Need a longer trip with not only group focus but also on talks on improvements
4	Being able to have real discussion Seeing all the departments and how they work	Time went too quickly
5	Up close view of real work place	3 hour commute
6	Getting information from actual professionals	More time one on one with professionals

 Table 7.0 Student Feedback on Excursion

With the Smart Hub being located at a business school, employees have had various interactions with the students. From non-formal type of conversations in the hallway to more formal approaches such as the excursion and internship offerings. In addition, the interaction between the participants and the Avondale staff is also a form of support for one another that strengthens the connection between them. During the period of starting to put the hub together, the Avondale staff helped with the process and made sure that everything is organised. Moreover, daily small-scale interactions of saying 'hi' and 'goodbye' have always been maintained.

1.9 Discussion on Findings

The following is a discussion based on the three research question as follows:

RQ1: What is the <u>unique</u> experience of employees in Smart Hubs embedded in Higher Education Business Schools?

Overall the employees were very satisfied with their use of the smart hub facility. In particular they identified two main themes of 1/Work satisfaction and 2/ Personal Satisfaction, and 12 factors embedded in these two themes. The unique factors to being embedded in a business school were identified as being 1/ Interactions with stakeholders in particular Avondale Staff and Students 2/ Mutual or Alliance Benefits particularly with each other 3/The use of the natural environment and facilities.

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RQ2: What is the <u>unique</u> experience for the employer (CEO) who endorses the use of Smart Hubs for their employees?

Overall the CEO cited two main reasons for his support of the use of the smart hub 1/ Staff satisfaction and 2/ mutual benefits with the Business School. However, they further realised they had an opportunity to invite students to their CBD office for educational purposes and had the ability to offer an internship to a student. The third (3rd) unique reason then in support of the smart hub was the stakeholder engagement of the CEO with the students and staff.

RQ3: Does a smart hub embedded in a business school increase the level of stakeholder engagement for business school staff and students?

The level of engagement was cited as one of the Unique Mutual Alliance Factors (UMAF) of embedding a smart hub in a business school. The three way relationship of smart hub employees, business school staff and business students led to better engagement and interaction with all three parties, giving students access to a real life office in their business school as well as the opportunity to visit head office in the CBD. This lead to the fourth stakeholder engagement which involved the CEO. The stakeholder engagement then involved 4 stakeholders:

- Users of smart hub
- Business School Staff
- Business School Students
- CEO

The three factors of external interaction, mutual benefit and natural facilities & environment, creates the uniqueness of embedding the smart hub in a business school. For the Smart Hub staff, this has meant engagement with students and engagement with staff to add value to the learning environment. This has been done for students by the arrangement of the excursion and the classroom and informal support smart hub staff have been providing to the students. For the business school staff it resulted in a research project that allowed them to mentor an early career casual staff member and mentor a student researcher, which will lead to publication of a conference paper and journal article – meeting the business schools KPIs. For the CEO this has meant happier and more productive staff, and interaction with students.

In terms of engagement, there was increased engagement of smart hub staff and Avondale Staff, which lead to an excursion of students to the CBD office, however more engagement was encouraged by both Avondale Staff and Smart Hub Staff with students. These outcomes can be summarised in the "Unique Factors Alliance Model". This shows expectations and potential outcomes from embedding a smart hub in a business school of a higher education provider, and the effect on Smart Hub users, CEO, Business school staff and students in relation to stakeholder engagement.

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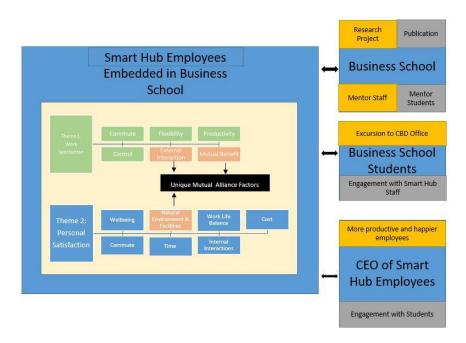


Figure 3.0: Unique Factor Alliance Model (UFAM)

1.10 Conclusion

The Unique Factor Alliance Model shows the 4 stakeholders being the Smart Hub users, the CEO who authorised the use of the smart hub, the Smart Hub provider (Higher Education Business School) and Students attending the Business School. The model shows that for Smart Hub users the two most important themes are Personal Satisfaction and Work Satisfaction. This aligns with the expectations of the CEO who is also concerned about personal satisfaction and mutual alliance with the Business School. Mutual alliance then, also aligns with the expectations of the school. There is also a link between the Business School Staff and Smart Hub staff in terms of sharing facilities and collaboration. Students have been involved in an excursion to the CBD office of the smart hub users, there is still more engagement that can be done in terms of guest lectures for the students and support with learning. Overall, the embedding of a Smart Hub in a Business School has provided all parties with benefits, in particular it has brought the 'real world' into the school, the real value of that is unable to be calculated. In the final words of the CEO,

"from a company point of view, you obviously want to have a stable direction, but people also want you to be doing things that are different and innovative... I think this has been one of those things that we would say, "Well, that's something we've done that's different," and I think – and that has worked."

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REFERENCES

Abioro, M.A., Oladejo, D.A., & Ashogbon, F.O. (2018). "Work Life Balance Practices and Employees Productivity in the Nigerian University System". Crawford Journal of Business & Social Sciences, 8(2), 49-59

ABS (2018)"Census of Population and Housing: Commuting to Work - More Stories from the Census,2016",ABSRelease25May2018.Retrievedfrom:http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2071.0.55.001~2016~Main%20Features~Commuting%20Distance%20by%20Personal%20Characteristics

ABS. (2016). "How far do Australians go to get to work?". Abs.gov.au. Retrieved from http://www.abs.gov.au/ausstats/abs@.nsf/mediareleasesbyCatalogue/EC802A92025821DFCA25829 50001F5DD?OpenDocument

Allis, P. & O'Driscoll, M. (2008). "Positive effects of non-work-to-work facilitation on well-being in work, family and personal domains". Journal of Managerial Psychology, 23, 273-291. DOI: 10.1108/02683940810861383.

An, M., Colarelli, S.M., O'Brien, K., & Boyajian, M.E. (2016). "Why We Need More Nature at Work: Effects of Natural Elements and Sunlight on Employee Mental Health and Work Attitudes". PloS ONE, 11(5). Doi: 10.5061/dryad.9rj26

ARA. (2015). "The Costs of Commuting: An Analysis of Potential Commuter Savings". Ara.net.au. Retrieved from https://ara.net.au/sites/default/files/15-01% 20REPORT-Commuter-costspotential-savings-report FINAL% 20% 281% 29% 20% 281% 29.pdf

Arnett, G., & Sedghi, A. (2014). "How does commuting affect wellbeing?". Theguardian.com.Retrieved from https://www.theguardian.com/news/datablog/2014/feb/12/how-does- commuting-affect-wellbeing

Bailyn, L., Drago, R., & Koshan, T. (2001). "Integrating Work and Family Life: A Holistic Approach. Report of the Sloan Work-Family Policy Network". Cambridge MA: Sloan School of Management, Massachusetts Institute of Technology.

Beauregard, A., & Henry, L. (2009). "Making the link between work-life balance practices and organizational performance". Human Resource Management Review, 19, 9-22. DOI: 10.1016/j.hrmr.208.09.001

Belfield, H. (2012). "Making Industry-University Partnerships Work: Lessons From SuccessfulCollaborations".ScienceBusinessInnovationBoard.Retrievedhttps://www.sciencebusiness.net/sites/default/files/archive/Assets/94fe6d15-5432-4cf9-a656-

633248e63541.pdf

Biggio, G., & Cortese, C. G. (2013). "Well-being in the workplace through interaction between individual characteristics and organizational context". International journal of qualitative studies on health and wellbeing, 8. doi:10.3402/qhw.v8i0.19823

Bissell, D. (2015). "Understanding the impacts of commuting: Research report for stakeholders". Australian National University

ISSN 2582-2292

Vol. 2, No. 02; 2020

Bryman, A., & Bell, E. (2011). "Business research methods" (3rd Edition ed.). New York: Oxford University Press.

Charypar, D., Graf, P., and Nagel, K. (2004). "Q-learning for flexible learning of daily activity plans". Swiss Transport Research Conference (STRC). Monte Verita, Czechoslovakia

Chesley, N. (2005). "Blurring boundaries? Linking technology use, spillover, individual distress, and family satisfaction". Journal of Marriage and Family, 67, 1237-1248. DOI: 10.1111/j.1741-3737.2005.00213.x

Cisco. (2009). "Smart Work Center". Cisco.com. Retrieved fromhttps://www.cisco.com/c/dam/en_us/about/ac79/docs/cud/SWC_Fact_Sheet_051209_FINAL.p df

Cisco. (2015). "Smart Work Centers: Green Collaboration and Productivity". Cisco.com. Retrieved from https://www.cisco.com/c/dam/en_us/solutions/industries/docs/gov/SWC_Bro.pdf

Crabtree, S. (2010). "Well-Being Lower Among Workers With Long Commutes". Gallup.com. Retrieved from https://news.gallup.com/poll/142142/wellbeing-lower-among-workers-longcommutes.aspx

Creswell, J. W., & Clark, V. L. P. (2011). "Designing and Conducting Mixed Methods Research" (2nd ed.). Los Angeles: Sage Publications.

Creswell, J., & Cresswell, D. (2018). "Research Design: Qualitative, Quantitative and Mixed Methods Approaches" (5th ed.). Thousand Oaks, CA: Sage.

Davy, J., Yu, L., Guoqing, C. (2007). "Allocating Time and Location Information to Activity-Travel Patterns Through Reinforcement Learning". Knowledge-Based Systems, 20(5), 466-477

Dijkstra, E. (1959). "A note on two problems in connection with graphs". Numerical Mathematics 1, 269-271.

Errichiello, L., & Pianese, T. (2018). "Smart Work Centers as "creative workspaces" for remote employees" CERN IdeaSquare Journal of Experimental Innovation, 2(1).

Evans, G. W., Wener, R. E., & Phillips, D. (2002). "The Morning Rush Hour: Predictability and Commuter Stress". Environment and Behavior, 34(4), 521–530. Doi: 10.1177/00116502034004007

Felstead, A., & Henseke, G. (2017). "Assessing the growth of remote working and its consequences for effort, wellbeing and work-life balance". Doi: 10.1111/ntwe/12097

Felsten, G. (2009). "Where to take a study break on the college campus: an attention restoration theory perspective". J Environmental Psychology, 29, 160–167

Feng, J., Mao, B., Chen, Z., Bai, Y., & Li, M. (2013). "A Departure Time Choice for Morning Commute Considering Train Capacity of a Rail Transit". Hindawi Publishing Corporation Advances in Mechanical Engineering, 1-7

Fitzgerald, M., Malik, A., & Rosenberger III, P. J. (2017). "NSW Smart Work Hub Pilot Program: Final Report prepared by the UON Central Coast Smart Work Research Team", The University of Newcastle, New South Wales, for the NSW Department of Industry.

Flood, M., & Barbato, C. (2005). "Off To Work Commuting in Australia". Tai.org.au. Retrieved from

ISSN 2582-2292

Vol. 2, No. 02; 2020

Finding an Extra Day or Two. Journal of Family Psychology, 24(2), 349-358 http://www.tai.org.au/sites/default/files/DP78_8.pdf

Gable, G.G. (1994). "Integrating case study and survey research methods: An example in information Systems". European Journal of Information Systems, 3(2), 112-126.

Garg, P., & Yajurvedi, N. (2016). "Impact of Work-Life Balance Practices on Employees Retention and Organizational Performance–A Study on IT Industry". Indian Journal of Applied Research, 6(8), 105-108

Hall, D., Kossek, E., Briscoe, J., Pichler, S. & Lee, M. (2013). "Nonwork orientations relative to career: A multidimensional measure". Journal of Vocational Behaviours, 83, 539-550. DOI: 10.1016/j.jvb2013.07.005

Haynes, Barry (2008). "An evaluation of the impact of the office environment on productivity". Facilities, 26 (5/6), 178-195.

Hill, E.J., Erickson, J.J., Holmes, E.K., & Ferris, M. (2010). "Workplace Flexibility, Work Hours, and Work-Life Conflict" Journal of Family Psychology, 24, (3) p.349-58

Hill, J., Ferris, M. & Martinson, V. (2003). "Does it matter where you work? A comparison of how three work venues (traditional office, virtual office, and home office) influence aspects of work and personal/family life". Journal of Vocational Behaviours, 63, 220-241. DOI: 10.1016/S0001-8791(03)00042-3

Hyman, J., Baldry, C., Scholarios, D. and Bunzel, D. 2003 "Work-life imbalance in call centres and software development", British Journal of Industrial Relations, 41, 215-239.

Kaplan, S. (1995). "The urban forest as a source of psychological well-being". University of Washing Press

Kramers, A., Hojer, M., Nyberg, M., & Soderholm, M. (2015). "Work hubs- location considerations and opportunities for reduced travels". 29th International Conference on Informatics for Environmental Protection, Sweden. Doi:10.2991/ict4s-env-15.2015.15

Major, D. & Germano, L. (2006). "The changing nature of work and its impact on the work-home interface". In Jones, F., Burke, R. & Westman, M. Work-life balance: A psychological perspective (pp. 13-38). New York: NY Psychology Press.

Malik, A., Rosenberger III, P. J., Fitzgerald, M. & Houlcroft, L. (2016) "Factors affecting smart working: evidence from Australia", International Journal of Manpower, 37(6), 1042-1066, https://doi.org/10.1108/IJM-12-2015-0225

Milner, A., Badland, H., Kavanagh, A., & LaMontagne, A.D. (2017). "Time Spent Commuting to Work and Mental Health: Evidence From 13 Waves of an Australian Cohort Study. American Journal of Epidemiology, 186(6), 659–667

Novaco, R.W.; & Gonzalez, O.I. (2009). "Commuting and well-being". Technology and Psychological Well-being. Cambridge University Press, 174–205. DOI: 10.1017/CBO9780511635373.008

NSW Government, Trade & Investment. (2013) "NSW Smart Work Hub Pilot Program", EOI General

ISSN 2582-2292

Vol. 2, No. 02; 2020

Information & Guidelines

O'Driscoll, M., Brough, P. & Kalliath, T. (2006). "Work-family conflict and facilitation". In Jones, F., Burke, R. & Westman, M. Work-life balance: Mapping the work-home interface (pp. 117-142). Sussex: UK Psychology Press.

Ommeren, J.V., & Fosgerau, M. (2009). "Workers' marginal costs of commuting". Journal of Urban Economics, 65, 338-47, https://doi.org/10.1016/j.jue.2008.08.001

Robson, C. (2002). "Real World Research: A resource for social scientists and practitioner-researchers" (2nd ed.). Oxford: Blackwell Publishers.

Rugg, G., & Petre, M. (2007). "A Gentle Guide To Research Methods". (1st ed.). Maidenhead: McGraw-Hill International.

Salt, B. (2018). "Sydney and Melbourne the focal points for nation of commuters". Theaustralian.com.au. Retrieved from https://www.theaustralian.com.au/news/inquirer/sydney-and-melbourne-the-focal-points-for-nation-of-commuters/news-

story/2ca1e9abf696c4052899a934cca6d554

Sieber, J. E. (1973). "The integration of field work and survey methods". American Journal of Sociology, 78, 1335-1359.

Smith, I. T. & Baruch, Y. (2001). "Telecommuting and the Legal Aspects. Telecommuting and Virtual Offices: Issues and Opportunities". Johnson NJ (ed.). The Idea Group Publishing: Hershey, PA.

Sullivan, C. (2003). "What's in a Name? Definitions and Conceptualisations of Teleworking and Homeworking", New Technology, Work and Employment, 18(3), 158—165.

Tumuti, D.W., Wanderi, P.M., & Lang'at, W.C. (2013). "Benefits of University-Industry Partnerships: The Case of Kenyatta University and Equity Bank". Thoruwa International Journal of Business and Social Science, 4 (7), 26-33

Ulrich,R.S. (1993). "Biophilia, biophobia, and natural landscape". The biophilia hypothesis, 74–137 Wang, J. (2013). "Public transport versus car commuting in Australia". Ara.net.au. Retrieved from https://ara.net.au/sites/default/files/Commuter-costs-potential-savings-report FINAL%20%281%29.pdf

Yin, R. K. (2003). "Case study research: Design and methods". (3rd ed.). London: Sage Publications. Zhou, J., & Hoever, I.J. (2014). "Research on workplace creativity: A review and Redirection". Annual Review of Organizational Psychology and Organizational Behaviour, 1(1). 333-359.