MASTER THESIS

EMPLOYEE ADAPTATION IN INTEGRATED COMPANIES

BY

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Abstract:

This report looks at adaptation time of new employees. More specifically, adaptation time in integrated architectural design companies where many design disciplines are working under the same roof. For a newcomer to act according to company's identity and direction takes anywhere from three to 24 months. Thus, this shows a great potential to shorten this period or use fewer resources to deal with it. The report covers basic theory of organizational socialization. Moreover, it contains a case study of Bryden Wood - an integrated design company, based in London, UK. The results are used to identify several adaptation factors and time consuming aspects to see what the employees struggle the most with while adapting and what takes the longest to understand. Based on that, a comprehensive onboarding solution is offered allowing employees to adapt at their own pace while taking off the stress of HR and other company resources. It is then followed by perspectives and discussion on validity and reliability of the research.

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By signing this document, each member of the group confirms participation on equal terms in the process of writing the project. Thus, each member of the group is equally responsible for all the contents in the project report.

Contents

List of abbreviations used

Abbreviation	Meaning
AAU	Aalborg University
AEC	Architecture, Engineering and Construction
AF	Adaptation Factors
BIM	Building Information Modelling
CV	Curriculum Vitae
DfMA	Design for Manufacturing & Assembly
HR	Human Resources
HRM	Human Resource Management
IPD	Integrated Project Delivery
IT	Information Technology
PDCA	Plan-Do-Check-Act
QA	Quality Assurance
RIBA	Royal Institute of British Architects
TCA	Time Consuming Aspect(s)
UK	United Kingdom

Preface

This Master Thesis is written by students in their 4th semester Master Programme "Management in the Building Industry" at Aalborg University, in Denmark. The report topic and research are designed in accordance with the semester curriculum. The student team writing it consists of two members. The period of writing is from 1st of September 2017 to 8th of January 2018.

The research topic of the Master Thesis is concerning the speeding up of employee adaptation in integrated companies. The authors aim to assist companies in the building industry, therefore the report is also written from company's interest perspective. The main body starts with pointing out the research area and current state of the topic. The main contribution of the Master Thesis is developed through a case study based on the company called Bryden Wood. The case is developed and thereafter analyzed to discover the specific processes of adaptation with the time consuming aspects (TCA) employees experience, which hold back the company from developing faster. After these aspects are identified, the most slowing-down ones are targeted and aimed to be sped-up within the adaptation process frames. A whole coherent solution is formed which the team considers as a new better practice. The thesis concludes by considering if the coherent solution would speed up the adaptation process in Bryden Wood and if it is possible to have a broader generalization of the solution so it can speed up the current practices for adaptation in similar integrated companies.

Enclosed besides the main body of the Master Thesis are the appendixes (documents produced by the team members) and annexes (already existing materials). The annexes and appendixes are numbered sequentially. Some of the data from the case study has been uploaded as Digital Annexes and Digital Appendixes The information about pictures used is located in the Table of Figures. All the abbreviations used are presented in the List of Abbreviations. Resources, such as books, articles, reports, websites and other sources of information, are mentioned throughout the text and later listed in the Bibliography chapter.

Acknowledgements

The authors of this report would like to express their gratitude to Henrik Sørensen for the supervision and encouragement given throughout the Master Thesis writing period. The researchers appreciate the opportunity to have worked with Bryden Wood Ltd. Special thank you to Paul O'Neil, Steven Tilkin and Nadine Mohammed for being open to sharing information and key-insights about the case study company. Without these people, the report would have been very different.

1. Introduction

There is an extensive amount of companies operating around the globe. Researchers as Kaplan and Norton, 2000 or Donaldson, 1985 defend the concept that the reason they exist is to bring money. It is characteristic for the industrial age that companies were looking for ways to optimize the production outcome and its processes (Toldbod, 2017) so it is more cost leading or differentiated which are part of the generic company strategies (Porter M. E., 1980). However, in the information age, due to technology and fast news, it is a lot easier to copy the already developed solutions. So, even if one company discovered a revolutionary product design, that design may not be a sustainable capability (Johnson, Whittington, Scholes, Angwin, & Regner, 2014, ch. 3) for them for a long period of time to keep them ahead of other companies. Michael Porter is one of the people that started looking for more sustainable strategies through the whole 'fit' of a company (Porter M. E., 1996), or how everything the company does works as a system and is coherent. Another very popular work is the one from Kaplan and Norton, 2000. They use previous research linking the financial aspect to another three company perspectives. The product of their work is the Balanced Scorecard which claims that if you want to perform economically well, you should also look into the customer, internal company, and employee learning and growth perspective.

It has been argued if companies should look just into these four perspectives. However, it is undeniable that the employee learning and growth perspective is something that can improve the company performance and thereafter its financial performance. Furthermore, the employees and intellectual capital are intangible resources which are hard to copy, if even possible (Johnson, Whittington, Scholes, Angwin, & Regner, 2014, p. 82, Darroch, 2005, p. 111). Thus, a large part of the competitive advantage of the company is made up of certain combination of people. This should drive companies to look for particular skills that people have. While finding the right people and hiring them is a topic on its own, another important aspect is to get this new force up to speed in the new environment and get it accustomed to the peculiarities of the company. Having this in mind, the authors of this report considered that looking at the adaptation period of new employees is relevant to companies since it is the first learning and growth experience newly recruited people have. Finding a way to utilize new intellectual capital to the current company identity and direction faster, would lead to the company reaching its goals sooner.

Additionally, the authors of this report have been observing throughout previous companies they have been working with that new employee adaptation is a challenge for prospering companies (Koleva, Fazekas-Ghinea, Shrestha, Ólafsson, Stavrovská, & Milovidova, 2017), (Millers, Bagdonas, Mikutas, Vepstaite, & Zafeirakis, 2017).

Because of the general theory about the value of learning and growth employee perspective and the practical observation of companies struggling with adaptation, great value proposition has been identified to have adaptation as the topic of this Master Thesis. The next chapter will further argument the research question and the reasoning for it.

2. Research question

The research topic for this Master Thesis is employee adaptation. The specific questions to be investigated can be found in the 2.1 Problem formulation chapter, whereas the assumptions and limitations are specified in chapter 2.2 Problem delimitation.

2.1 Problem formulation

The Balanced Scorecard together with its employee learning and growth (Kaplan & Norton, 2000) are pointing to the value of employees skills, knowledge and their contribution to an organization. Moreover, the intellectual capital a company has is considered the '*micro foundation*' of companys' capabilities (Coff & Kryscynski, 2011). Considering the external company environment, how the employees work for the organization is a sustainable competitive advantage, due to it being valuable, rare, and imperfectly imitable (Johnson, Whittington, Scholes, Angwin, & Regner, 2014). The external company gains are greater due to the internal value contribution each employee has. Adaptation is what unlocks that asset to a company. It is what makes the new employee act according to the specific company identity and direction. Good adaptation practices as onboarding and orientation lead to increased employee commitment, job satisfaction, job engagement, performance, motivation, productivity, quality of work, identification with the organization and more (Lisbon & Welsh, 2017).

As noticeable, there are many positive sides and need of adapting employees to an organization. Nevertheless, the process takes resources (Klein, Polin, & Sutton, 2015) and perhaps the most significant one is time. Most, if not all, companies need to invest organizational and individual time and effort to transform a newcomer into an adapted employee. For example, Chapman, 2009 points out three important issues for successful orientation - checklists, support from supervisor, and a peer/buddy/mentor. Even here it is visible that the HR, supervisor and the mentor have to take their focus away from their general job responsibility in order to unlock a new asset for the company. Also, it takes time for an employee to become fully productive. Therefore, the adaptation process can be considered time consuming.

Looking at optimization considerations, when a resource is used in one place only, it is assessed if there are opportunity losses compared to the alternative places the resources could have been used (Haimes, 2004). For example, if the supervisor could use less time on employee adaptation, they would be able to invest it elsewhere yielding other benefits to the company. If the employee could adapt faster, the company would be able to gain new potential opportunities in the time saved, and etc. In other words, '*.. the sooner and the extent to which newcomers can learn firm specific knowledge, understand the culture, and recognize other unique aspects of the organization, the sooner and the extent to which they can contribute to the success and competitive advantage of the organization*' (Klein, Polin, & Sutton, Specific Onboarding Practices for the Socialization of New Employees, 2015).

Additionally, global statistics show that '*adoption of BIM in different countries is increasing day by day*' (Shaikh, Raju, Malim, & Jayaraj, 2016). In the building industry there is a shift towards BIM (Perez-Sanchez, Mora-Garcia, Perez-Sanchez, & Piedecausa-Garcia, 2017) with its implied

integration of disciplines. Since the authors of the report aim to introduce a better concurrent and perhaps future practice for employee adaptation it would need to correspond with the BIM or in other words - the integration methods of work.

The discussion of saved adaptation time, opportunity gain and BIM enhanced integration lead to the following question:

How to speed up the adaptation process in integrated companies?

Sub-questions:

- What are the company identity and direction, procedures and processes new employees adapt to?
- What are the adaptation factors (AFs) and time consuming aspects (TCAs)?
- What is a potential new TCAs speeding up best practice concerning employee adaptation for Bryden Wood and other integrated companies?

From here on the report is going to focus on finding answers to these questions. Chapter 3. Methodology includes the information about how the problem formulation is approached and tackled. But before that, the next chapter specifies the limits in the scope of this research work.

2.2 Problem delimitation

The research main question and relevant sub-questions have been formulated and much can be written about each one of them. However, in order for the report to be more focused, it is necessary to delimitate the scope of work.

First, the students look into the Bryden Wood mission, vision, culture, organization values, and strategy as they are, assuming that they are optimal and aligned throughout the organization. The authors of this report have been developing these analyzing skills during their previous semesters and further analysis would be a drift from this research topic. Therefore, it is considered that by reducing the scope for the company identity and direction analysis would yield more in-depth adaptation learning outcome in addition to having a more focused research.

The understanding of Bryden Wood's identity and direction comes from an interview with an architectural director, together with provided documents about the company. Concerning the company adaptation processes and procedures, they would be based on a another interview with the HR manager and a questionnaire for the new employees. The two interviews with the documents and other found resources are considered enough to have triangulation and thereafter verification of data, making it trustworthy.

The case study investigates many different specialties. Each discipline has its own unique value contribution or more characteristic fit in the organization. However, the students focus more on the company overarching common identity and direction. Thereafter, the solutions in this report would be more generalizable for all the employees and possibly other integrated practices.

Last but not least, the students do not dwell deeply on the human background and how that might or might not influence the way an employee adapts. The psychological aspect is not be greatly

investigated since it requires a lot of resources and is not among the main interest of the researchers specialty. Therefore, just the more obvious and visible behavioural connections (like adaptation factors and time consuming aspects) are looked into.

These are the main assumptions and delimitations for the research. The problem formulation and delimitation set the direction and scope of the Master Thesis report which leads to the next Methodology chapter.

3. Methodology

So far the adaptation topic has been discussed and an opportunity for speeding up approaches had been identified which is also the new research question to be developed in this Master Thesis. The Methodology chapter elaborates on how this research is set-up.

A precondition for this research to bring value to existing theories and the Brydon Wood's potential practices, it needs to be valid and reliable. Therefore, literature has been used to increase the trustworthiness of the students work throughout the different chapters. Majority of theoretical background comes from research papers, books, e-books, and webpages. The most used platforms for research articles and books were Scopus and Primo database from Aalborg University as well as Google Scholar. In order to follow the most recent developments in theories, the authors were striving to look for papers no older than year 2000 with an exception of fundamental theories underlying some particular subjects. Concerning the Methodology chapter, the main resource used is the work from O'Gorman & MacIntosh, 2015. Complementary to it, the chapter also is using concepts from Vaus, 2001, Creswell, 2009, Mackenzie & Knipe, 2006, Kristensen, Nielsen, Jensen, Vaarst, & Enevoldsen, 2008 and the report authors' own developed knowledge. More on validity and reliability of this research can be found on Chapter 8 Validity and reliability of the research.

3.1 Worldview and data enquiry

O'Gorman and MacIntosh, 2015 suggest a Methods Map (see Annex 1) for the process of choosing the research methods. It starts with the Research Paradigm. The Theory of Science is a topic which has been debated as long as there have been debates. There are several different worldviews which have been established. The two radical sides are the Positivist (relying on hard, objective wide data as numbers) and Constructivist (using more soft, subjective deep data as people's experiences). In between there lie the Pragmatic worldview which is chosen to be used for this research for several reasons:

- The report authors are two. Each one has own experience and slightly different understanding of how the surrounding world works. Rather than considering the differences as a disadvantage, they could be used as different perspectives on the same matter. This would lead to a more holistic view of the research topic by covering more aspects of it, which is aligned with the Pragmatic concepts. Therefore the authors agreed to follow this worldview.
- The Aalborg University students are enrolled in a specialty which considers hard data about time, resources and other Positivist validating facts, but also soft data about motivation, learning and similar Constructivist fortifying information. Therefore, the Pragmatic worldview would be more appropriate as it does not limit the research to either of the radical sides.
- "*Human behaviour is both willed and caused: there is a double-sided character to human social behaviour.*" (Vaus, 2001). People can follow the natural cause-effect or deterministic pattern but because of their complex nature they can act in a more probabilistic manner where the same cause may not lead to the same effect. Human behaviour, similar to the previous bullet point, is also double sided and it is hard to make a reliable conclusion if the

research excludes either one of the radical worldviews. Having in mind that the research is about employee (a human) adaptation, the Pragmatic worldview is considered most suitable.

Naturally, the Pragmatic worldview leads to mixed methods of data enquiring. Therefore, both qualitative and quantitative data collection have been used for the single case study with multiple units (Yin, 2009, pp. 19-20, also see Annex 1). To support the Master Thesis, information has been gained from literature, Brydon Wood documents, and case study interviews and questionnaire. The interviews are semi-structured due to the researchers analyzing it matches the applicability for this research, with awareness of the strengths and the weaknesses compared to the alternatives (see Annex 2). The questionnaire was designed with both open and closed questions. The open-ended ones were discussed to be necessary due to the need of identification showing time consuming aspects from many employees based on their individual understanding. The data collected was used for induction of enhanced theory for speeding up the adaptation period of new employees.

3.2 Research design

Whilst the previous section explained the methods and data enquiry, this section will explain the research methodology itself. Kristensen et al., 2008 has worked on a conceptual model for mixed

methods of data gathering, see Annex 3. The work is also the base for the development of the research design used in this report, see Figure 1: Research design conceptual model. In brackets are

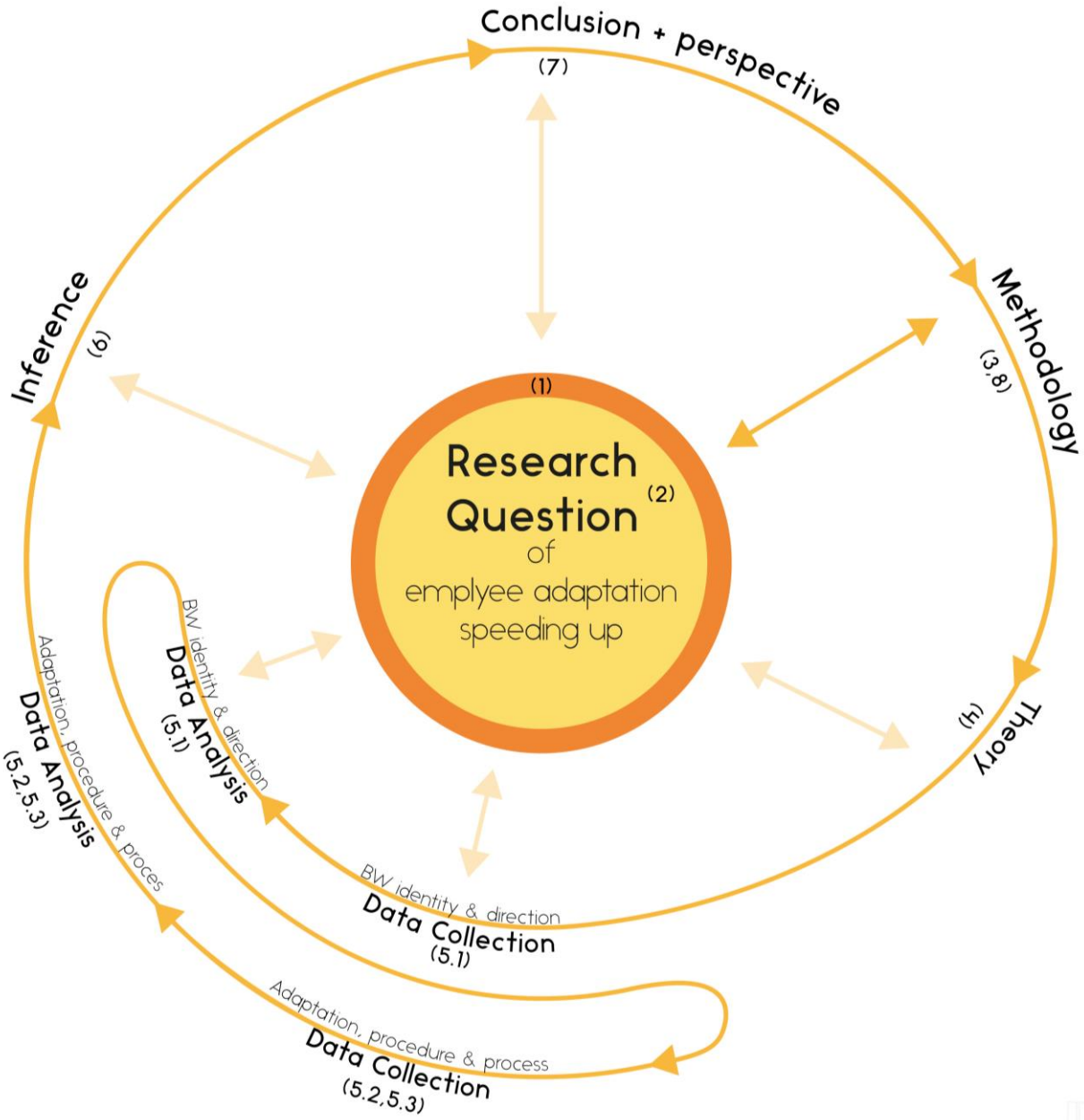


Figure 1: Research design conceptual model. In brackets are placed the specific chapter numbers in this Master Thesis. Made by Koleva and Millers based on Kristensen, Nielsen, Jensen, Vaarst, & Enevoldsen, 2008, also see Annex 3

placed the specific chapter numbers in this Master Thesis. Made by Koleva and Millers based on Kristensen, Nielsen, Jensen, Vaarst, & Enevoldsen, 2008, also see Annex 3

As visible from the previous chapters, the Master Thesis report begins with 1. Introduction. The chapter itself starts with global general principles and then narrows down to the basic topic of employee adaptation and gives a brief reasoning of why the reader and companies should be interested in it. Then the 2. Research question elaborates on the problem and potential benefits of solving it. This could help the reader to consider if they would be interested in reading the answer to the research question. The chapter also includes problem delimitation which aims to scrutinize the scope of the research in order to deliver relevant and reliable outcomes.

Once the research question is placed, the 3. Methodology chapter looks into the practical research setup and design. If the main goal is to speed up adaptation in integrated companies, the methodology beforehand considers corresponding worldviews and how to tackle the research so its outcome is considered valid and reliable.

Afterwards the 4. Adaptation theories review follows. The fourth chapter establishes what is the current state of the topic. This is done with the purpose that the Master Thesis does not just repeat but rather gives new value contribution to existing theories. The chapter would be used as a foundation throughout the next chapters to support the findings or new considerations.

Next is the Bryden Wood case study used for the base to induce the new adaptation practice. The 5 Bryden Wood case study it is necessary to establish when a personnel of the company is considered adapted to the company identity and direction, practices, and processes. The researcher team has acknowledged that an employee is considered adapted when they *are* according to the company identity (mission, culture, and values) and are going in the same direction as Bryden Wood (vision and strategy). Therefore, there is a data collection about the company's identity and direction (interview with architect director, literature, company documents and online relevant data) and subsequently it is analyzed in chapter 5.1 Company identity and direction - the adaptation goal.

After identifying the adaptation goal, the researchers collect and analyze more data through an interview with the Head of Human Resources of Bryden Wood. It is mainly concerning the 5.2 Company adaptation procedure. This helps the research to establish what the adaptation path the new employees are set on is and what the company's existing new employee adaptation practices are. These also are necessary in order to establish if the potential new practice the Master Thesis will offer speeds up the current Bryden Wood practices but also assist for a better analysis of the 5.3 Employee adaptation process. The company identity and direction, and adaptation procedure analyses lead to the formulation of the new employee semi-quantitative questionnaire which was used to collect and perform analysis on. The main objective of chapter 5.3 Employee adaptation process is to understand if the procedure can be optimized for the actual process and then identify different adaptation factors (AFs) and most time consuming aspects (TCAs) within that process.

Once the TCAs are identified, each is targeted within the new practice flow with solution for speeding it up - it is done in chapter 6 Reducing the time consumption of the adaptation process. The Pragmatic worldview does not delimit on the literature or methods used while looking for solutions, therefore all data considered reliable, valid and with potential for speeding up the adaptation process has been used to provide what the researchers consider as the 'best' or new practice which would reduce adaptation time consumption. This is how the inference is made. The case study practices and processes are used to offer a potential value contribution to the existing Theory by presenting a speed improved adaptation practice.

Chapter 7 Conclusion, overviews the research development to reach the answer to the 2 Research question. The discoveries throughout the research have led to new potential theory perspectives on the employee adaptation topic which shortly discussed. The research methodology has been designed with a lot of considerations but the 8 Validity and reliability of the research is the place where trustworthiness and quality of the research are questioned. The chapter arguments if the research has been developed valid and reliable so they can be added to the existing Theory, which also completes this Master Thesis report.

4. Adaptation theories review

To further describe the challenges behind new employee adaptation, this chapter clarifies theory underlying employee adaptation in an organization in general. Organizational socialization is explained with four main directions in organizational socialization research. Adaptation dynamics and productivity is reviewed.

4.1 Organizational socialization

During organizational socialization or adaptation the new employee adapts from outsider to integrated and effective insider (Cooper-Thomas & Anderson, 2006). Organizational socialization in its essence is the process by which an individual acquires the social knowledge and skills necessary to assume an organizational role. Socialization is a continual process that extends throughout an individual's tenure with an organization and across organizations throughout one's career (Klein, 2015). It includes the learning of a cultural perspective which can be used to deal with both regular as well as unusual situations in the workplace. In order to do so, it is necessary for a person to have developed some commonsensical beliefs, principles, and understandings, a perspective for interpreting experiences in a given sphere of the work world (Van Maanen & Schein, 1977, pp. 3-4). For reasons of simplicity in this report, adaptation is used as a synonym to organizational socialization.

Generally, the research in organizational socialization has developed into 4 directions or perspectives - (1) stages of socialization, (2) socialization actors, (3) organizational practices and tactics to facilitate newcomer socialization and (4) content that needs to be learned during the initial time in a organization (Klein, Polin, & Sutton, 2015).

Stages

Much of the early research had been concerned with **stages** that the newcomer should undergo during their initial adjustment to an organization. However, it is difficult to set clear stages within this process. Because the process of organizational socialization is not linear, stages often overlap, the newcomer is often recycled through the stages, and the fact, that the new employee often has to adapt to several collectives at the same time (team, department), there are no generally agreed stage models for the process. However, Ashforth, Sluss, & Saks, (2007, pp. 9-10) roughly grouped the most notable models into four stages (as summarized in Figure 2):

- **Anticipation** occurs before the individual enters the organization. On the employee side it may include the job search itself, asking questions about the organization, looking for information about the firm, etc. On the other side, the organization itself is providing somewhat mixed idealistic and realistic portrait of itself through press releases, recruitment and selection activities, job ads, their web page etc.
- **Encounter** involves the actual entering into the organization. Here, the discrepancy between expectations and reality becomes visible. It often triggers sense of shock and/or surprise, which prompts learning.
- **Adjustment** involves resolving the new demands. It may include becoming integrated into interpersonal networks and adjusting one's self-image. It also includes organizational

activities designed to foster newcomer adaptation. This stage produces mutual sense of commitment.

- At **stabilization** stage the newcomers have become organizational insiders. It may include promotion, lower stress, termination of mentoring and integration into a group.

Socialization actors

The perspective concerns actors or agents that facilitate adaptation. These agents could be co-workers, supervisors, mentors, people from other departments as well as the newcomers themselves. The agents are believed to fundamentally affect the adjustment of the newcomer. Proactive behavior has been identified as one of the most important variables to consider in organizational socialization research (see Cooper-Thomas & Burke, 2012, Ashforth, Sluss, & Saks, 2007, Saks, Gruman, & Cooper-Thomas, 2011 for example).

Organizational practices and tactics

As discussed previously, organizational socialization is the process by which an individual acquires the social knowledge and skills necessary to assume an organizational role. Thus, by definition it is a process within an individual. On the other hand, onboarding refers to efforts by the organization and sets of practices to expedite socialization (Klein, Polin, & Sutton, 2015).

Onboarding is a process which takes frequent checkups, training and follow up on new employee progress. It includes all formal and informal practices, programs, and policies to facilitate newcomer adjustment (Klein & Polin, 2012, p. 268) during which the new employee is accommodated, assimilated and accelerated to the organization (Graybill, Carpenter, Offord, Piorun, & Shaffer, 2013). During onboarding the newcomer acquires the knowledge, skills, attitudes, and behaviours that will ensure their success in an organization (Lawson , 2006). In this report, employee onboarding is considered a key process to adapt the new employee to a company. Onboarding covers all four stages of organizational socialization.

Large part of employee onboarding is *orientation*. Normally orientation covers encounter stage (first day and onward as discussed in Stages). As new employee expectations and understanding might differ from organization's requirements, orientation is meant to equalize this disparity (Allee, 2012). The purpose of new employee orientation is (a) to introduce the individual to the organization and its history, traditions and culture, (b) to create a favorable impression of the organization, (c) to help to adjust to the organization, (d) to give information about the job and performance expectations, and (e) to give information about policies, rules and benefits of the company (Caruth, Caruth , & Haden, 2010). As discussed previously, individuals are most receptive to organizational information early in their employment, thus orientation is very important tool to navigate the new employee in the desired organizational direction.

Content

There are several typologies describing contents of organizational socialization (see Klein & Heuser, (2008) for example). However, the most favourably received so far is the seminal research by Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, (1994). Although never intended as a comprehensive typology, it is still being used as a basis for new typologies for various researches. It consists of six key content areas. These areas can be directly influenced by the socialization process. According to Chao (1994) the six critical content areas that a newcomer must master in order to successfully adapt to an organization are:

1. **Performance proficiency** – the identification of what needs to be learned and how well an individual masters the required knowledge, skills, and abilities
2. **People** – finding the right people from whom to learn about the organization, team. Here some scholars divide between supervisors (superiors) and others (coworkers, support staff etc.) (Gailliard, Myers, & Seibold, 2010)
3. **Politics** – concerns the individual's success in gaining information regarding formal and informal work relationships and power structures within the organization
4. **Language** – profession's technical language as well as knowledge of the acronyms, slang, and jargon that are unique to the organization.
5. **Organizational goals and values** – includes an understanding of the rules or principles that maintain the integrity of the organization. The learning of organizational goals and values also extends to unwritten, informal, tacit goals and values espoused by members who are in powerful or controlling positions
6. **History** – Knowledge of history, as well as knowledge about the personal backgrounds of particular organizational members, can help the individual learn what types of behaviors are appropriate or inappropriate in specific interactions and circumstances

4.2 Dynamics of adaptation

New employee performance is likely to be more positively dynamic in the early stages of adaptation and it improves over time with negative acceleration. Therefore performance improvement is more pronounced early rather than late in socialization (Chen, 2005). New employees are most receptive to organizational information at the beginning of their employment. Waiting too long to offer initial information may result in reduced learning motivation and increase the likelihood that new employees will receive biased, misleading, outdated, or incorrect information from other employees (Verlander & Evans, 2007). To put it in context, adaptation procedure should be started as early as possible without hesitation in order to maximize efficiency. The procedures will be most effective at the beginning while slowly decelerating and losing momentum (see dark line in Figure 2).

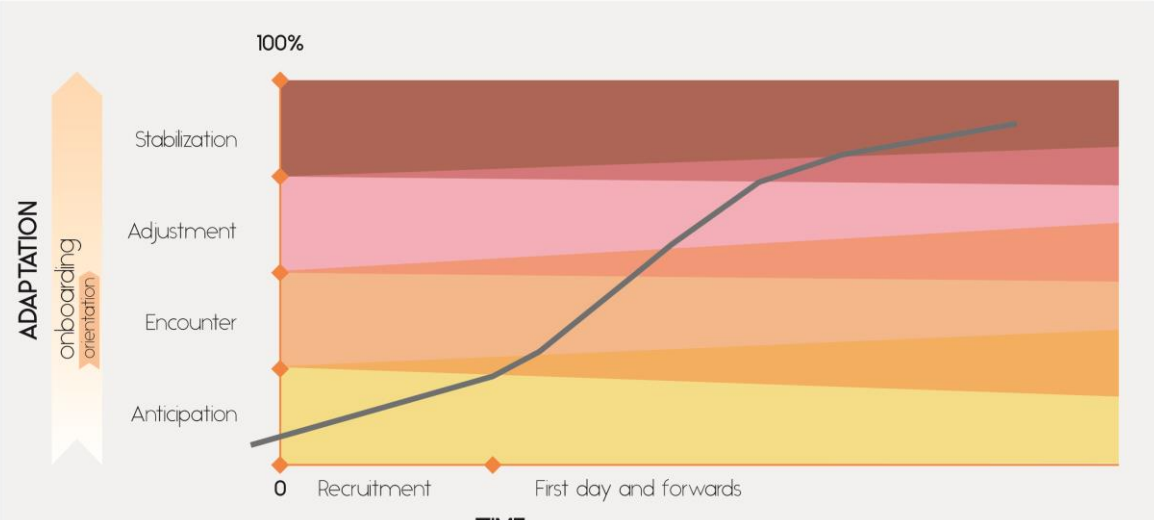


Figure 2: the process of adaptation or organizational socialization (made by Koleva and Millers based on Chen (2005), Myers and Oetzel (2003), Gailliard et al. (2010), Ashfort et al. (2007, p. 9-10))

4.3 Productivity

The success of a onboarding program can be measured in employees productivity. But how long does it take for a new employee to become fully productive in a new workplace? According to Allied Van Lines Ltd., (2012) it takes eight months on average to reach full productivity. Moreover, twenty-seven percent of companies report that it takes a year or more for new hires to reach this target. Twenty-five percent of companies responded that it takes three months or less. According survey conducted by Oakes, (2012), 75 percent of participants indicated ranges between twelve months and two years. The adaptation time depends on many factors, mainly industry of operation and thus job specifics. Therefore, the adaptation benchmark differs from organization to organization and should be looked upon context-specifically.

To sum up, organizational socialization or adaptation is the process by which an individual acquires the social knowledge and skills necessary to assume an organizational role. Generally, the research in social organization has taken four main directions - stages of socialization (Anticipation, Encounter, Adjustment, Stabilization), Actors (co-workers, supervisors etc., proactivity of newcomer is crucial), Practices and tactics (onboarding, orientation) and Content (performance proficiency, people, politics, language, organizational goals and values, history). The adaptation process is the most active during the early steps of organizational socialization and loses momentum as time goes. Thus, the beginning of organizational tenure is the the most effective timing to intervene in this process.

5. Bryden Wood case study

This chapter introduces the company in the center of the case study. In order to clarify the background, the first part of the chapter, regarding identity and direction, gives an introduction to the company, explains the history, mission and vision and strategy. The information in this part comes mainly from the interview with Steven TIlkin, architecture director, as well as company's webpage. The second part describes the current adaptation practices in the company. Results from survey conducted at the company are presented in third part.

5.1 Company identity and direction

As explained previously in chapter 3 Methodology, an employee can be considered adapted when they act in compliance with the company identity and direction. Thus, it is worth clarifying the background and values of the company to understand the goal of the adaptation. This following chapter does exactly that.

5.1.1 Introduction to Bryden Wood

Bryden Wood is a multidisciplinary design company based in London, England. The company was founded by two architects Mark Bryden and Martin Wood. It has grown steadily in the past years and have opened new offices in Singapore and Barcelona recently additionally to the two offices in the UK - London and St. Albans. The idea behind Bryden Wood is design for manufacturing.

Started as a regular design office in 1995, the company has now turned away from traditional project delivery methods deeming them awkward and slow. Instead, in the period of 2009-2012 Bryden Wood has switched exclusively to integrated design citing it quicker and more cost-effective. Therefore, the company is capable of designing a whole project in-house, without subcontracting external consultants or engineers.

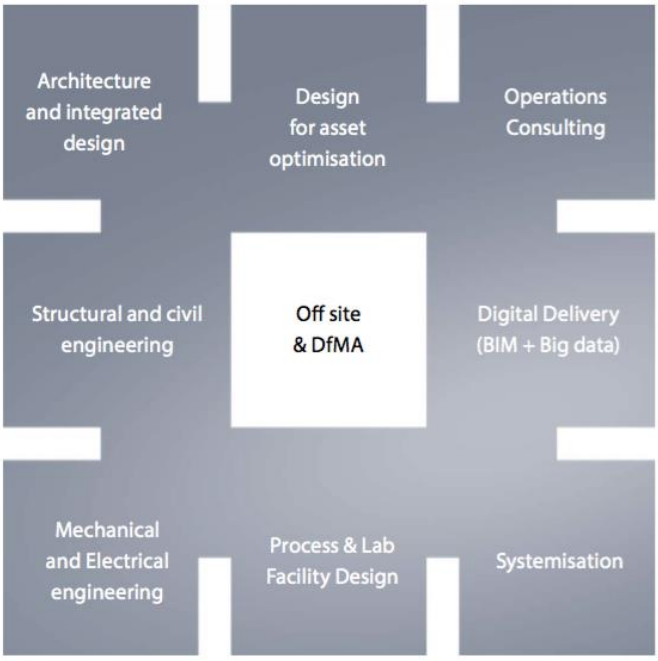


Figure 3 Chip logo explaining the nine key areas of the company (www.brydenwood.co.uk retrieved on 12.11.2017)

The logo of Bryden Wood (Figure 3) is nine key capabilities of the company enclosed in a computer chip. The nine integrated areas are:

Architecture and integrated design. Core speciality of the company and the area that ties all the other disciplines together. The company has received several architectural awards. Moreover, the

company reached AJ100[1] in 2017, ranking them between the 100 largest architecture practices in the UK. The company is a RIBA Chartered practice.

Structural and civil engineering. Involved early in the design process thus avoiding potential problems that are costly to solve later. The engineers are constantly looking for new methods and materials. Standard solutions are used as benchmarks for improvement. The company has its own facilities to conduct load and blast tests.

Design for asset optimization. Bryden Wood acknowledges the importance of building economically, and maximising functional space. Achieving this without down-speccing is the challenge. Bryden Wood strives to achieve performance requirements efficiently with the fewest resources and the least possible time. They believe that it is achievable because Bryden Wood thinks in more than one discipline.

Operation consulting. The company goes as far as to connect client's strategy with building's delivery and optimisation. Internal analytics team work closely with the client to use the assets more efficiently and make Bryden Wood flexible and responsive to possible future changes.

Design for manufacture and off-site. This is a way of thinking at Bryden Wood. The company constantly looks to rationalise, standardise and optimise any project or scheme. They might do it by automation of repetitive components, for example.

BIM and big data. The company has extensive BIM experience, and because of its pioneering work, in 2011 Bryden Wood had been invited to BIM Task Group as a core group member. This task team is the driver behind BIM adaptation in the British government. Additionally, Bryden Wood works with universities, funding research and designing software.

Mechanical and electrical engineering. Removing unnecessary complexity, minimising space requirements and optimising energy performance. The engineering is designed with construction and procurement in mind.

Process facility design. The expertise reaches in pharmaceutical facilities, airports, data centres, and hospitals.

Systemisation. Bryden Wood is using design for manufacture philosophy at scale. Thus it can apply this philosophy to mega projects which are notorious for cost overruns and delays. The company does that by reusing schemes over many projects, robot automation, and by repetitive assets or frameworks.

Thus it can be said that the company strives to deliver a complete in-house produced neatly engineered architectural solution to wide range of client requirements and business cases. The level of integration of the project can be described by a fact that the company has designated desk spaces for clients they are working with - that is how close the company works with their clients. Instead of designing only by requirements, Bryden Wood is looking for the reason behind these requirements helping to solve a particular business problem The company calls themselves “consultants in

[1] The AJ100 is a ranking of the largest architectural practices in the UK, measured by the number of qualified architects employed. Published annually since 1995 this survey offers a timely snapshot of the profession over the previous calendar year and measures the level of optimism among practices for the year to come (https:/www.emap.com/events/aj-100 retrieved on 31.10.2017).

overalls" underlining the practicality of their solutions. The largest clients are Circle Hospitals, pharmaceuticals giants Glaxosmithkline, British Airways, Heathrow Airport, Metropolitan Police among others.

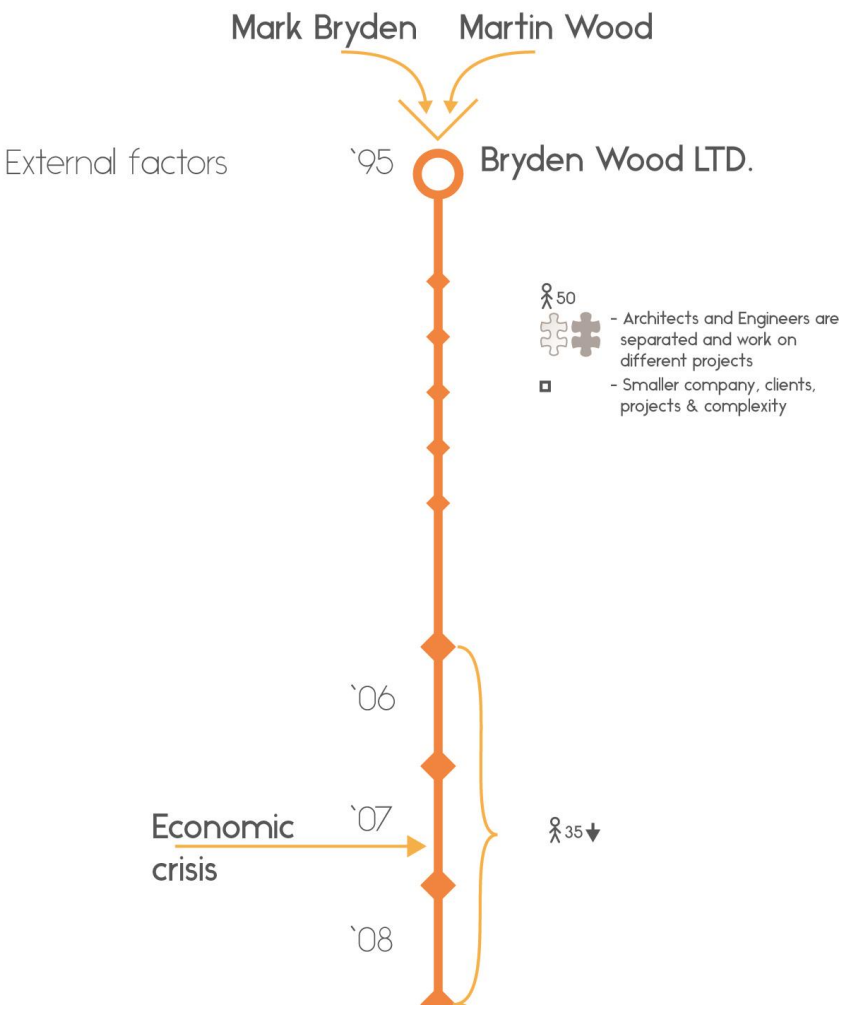
5.1.2 History, mission and vision

The previous chapter presented the research case study and introduced the Bryden Wood company. This chapter looks into the path dependency (Johnson, Whittington, Scholes, Angwin, & Regner, 2014, p. 143) the company has been developing through its history to its present mission while projecting the future vision. The information described is mainly based on the data collected from interview with Bryden Wood Director Steven Tilkin (Digital Appendix 2), Bryden Wood homepage (http://www.brydenwood.co.uk) and also one of the documents the company has shared with the researchers (Bryden Wood, Architecture and Integrated Design Vision and Context, 2017, available in the Digital Annex 1).

It is relevant to look into Bryden Woods history as the current company identity and direction are the result of the past development. Bryden Wood was founded by Mark Bryden and Martin Wood in February 1995. Both of the founders prior to creating a business together have been involved in work '*on a collection of the UK's most influential buildings, a number having become iconic examples of the 'Hi-tech' movement.*' (Bryden Wood, Martin Wood, 2017).

Furthermore, Martin Wood was part of a group leading new developments and ideas connected with the building design and engineering, CAD as an example. Still a rather new idea in the 90s has been the CAD which nowadays is commonly used. Based on this data, it is visible that the founders of Bryden Wood have been able to '*learn the lessons of the future*', which is also one of the first statements visible on their homepage or some of their other internally produced documents nowadays too.

During an interview, Nadine Mohammed, head of HR, shared that the case study company started with Mark Bryden and Martin Wood and it was just the two of them in the beginning (Digital Appendix 1). Steven Tilkin continued the topic of Bryden Woods history development based on his observation through the eleven years of experience within the company (a summary of the main timeline has been visualized in Figure 4).



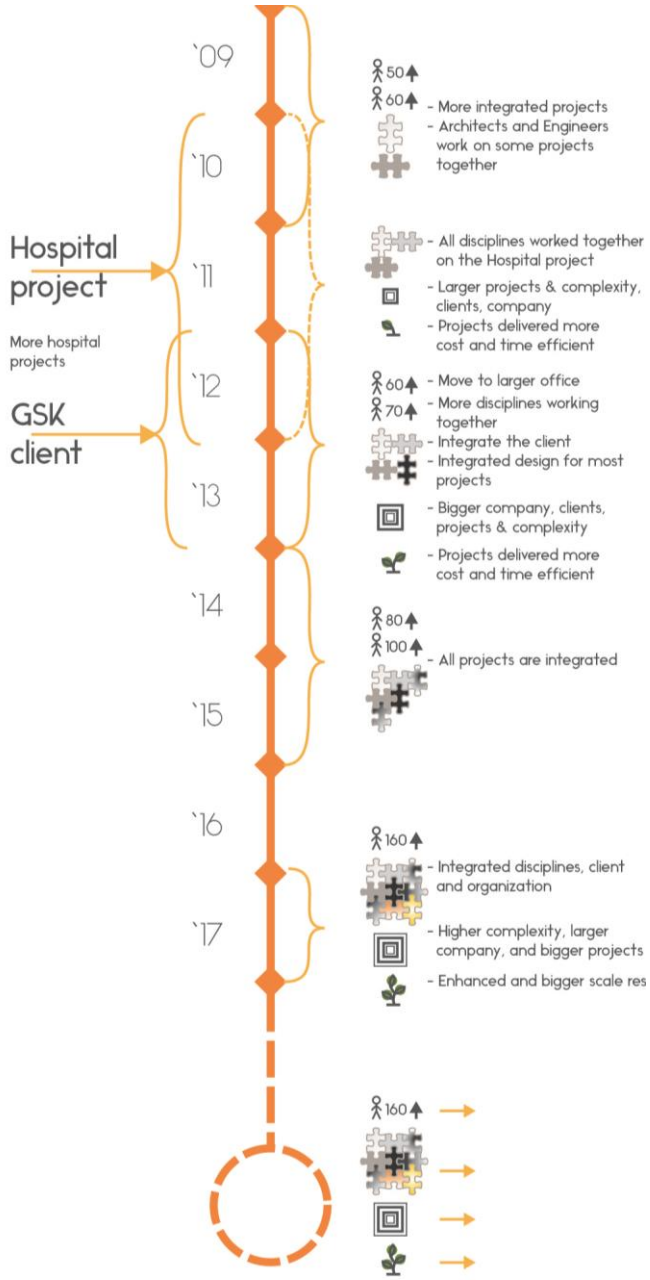


Figure 4: Bryden Wood timeline. Made by Koleva and Millers based on interviews data analysis

In 2006, when Steven has been hired, Bryden Wood consisted of around 50 people, the two specialties working within being architects and engineers. At the time, the two disciplines have been physically divided in the office as well as they have been mostly working on different projects. To present a clearer picture of how divided the two specialties have been, Steven compares the situation as '*we were in the same office, under the same name but it was almost like two companies*' (Digital Appendix 2 – Interview with Steven Tilkin). The economic crisis development over 2007/2008 has lead the company to the need to reduce its employees to 35 in order to sustain being in business. Naturally, as economy improved, the numbers of employees started *slowly* increasing in 2009-2010 to 50/60 people. At this point, the architects and engineers were developing more

integrated projects together. An important milestone for Bryden Wood is the Circle Reading Hospital project the company starts working on in 2010/1011 (Circle Reading Hospital, 2017). Steven reasoned about the hospital being a key project as '*not only to just keep us going but also in showing who we are and then defining us because that is where all the disciplines worked together*.' (Digital Appendix 2 – Interview with Steven Tilkin). This is also the first project where perhaps also due to the scale, the benefits of understanding the client and integrated design have been more visible throughout the project cost and time reduction the team had achieved. After completing the hospital, Bryden Wood continues working with the same client on more hospitals. In 2012/2013 the company starts growing *quicker and quicker* to 60 and 70 people. It is due to more projects and thereafter resource demand that leads the company's human resource expansion which is followed by the company moving to a more spacious office. It has *not* been just Bryden Wood that noticed the benefit of integrated project work but also GlaxoSmithKline plc. who request new different complexity building projects to be developed in the same manner. The two companies collaborate closely together and become 'integrated' between themselves when it concerns projects to such extent that they work together from the moment GlaxoSmithKline plc. *'think they need a building or infrastructure project*' (Digital Appendix 2 – Interview with Steven Tilkin). This shows that at this point the Bryden Wood integrated project development mindset reaches further beyond the design disciplines to include the clients themselves to deliver '*more quickly and more cost effectively'* (Digital Appendix 2 – Interview with Steven Tilkin). The good performance on projects attracted bigger and different complexity projects as hospitals, schools, prisons and etc (supported by the yearly projects available on https://www.brydenwood.co.uk/projects/59/). As the projects grew larger, the human resource need also grew bigger and Bryden Wood began expanding *quite quickly* through 80, then 90 to 100 people around the year of 2015. Currently in October 2017, the company has more than 160 employees. Bryden Wood has the integrated project development greatly rooted in their practices, stretching beyond the traditional understanding of 'integrated project delivery' (The American Institute of Architects, 2007). The company purposefully has the client integrated in the projects to understand their needs and acquire the disciplines, skills, knowledge and resources needed to develop each following larger or more complex project. It has lead to the current specialties mixture Bryden Wood has (Chip logo, **Error! Reference source not found.**). Furthermore, t he specialties are not separated neither physically nor projectwise anymore to the extent that it is difficult to recognise the departments of the employees. Additionally, the company no longer does just architecture nor just engineering anymore, but all is integrated collaborative work.

This is the summary of the observations Steven shared with the AAU students concerning the development of the Bryden Wood over the history he was familiar with until the moment of the interview (October 2017). This is the summary to the question '*Can you tell us how it was when you started working and how Bryden Wood developed to what it is now*?' (Digital Appendix 2 – Interview with Steven Tilkin). Besides the knowledge that this Master Thesis is about '*employee adaptation speed reduction*', the question formulation does not imply any specific areas the interviewee should talk about. This leaves the respondent to choose the topics to be evolved which are most relevant to Bryden Woods development. Throughout Stevens answer, these several topics have been progressing over time and each is further elaborated on:

- employee numbers
- integration mindset
- improved quality of the built environment
- bigger and more complex problems

Employee numbers have been gradually increasing (except for the years of the economical crisis). It took from 2009/2010 to 2015 for the company to increase by 50 employees. Then it took from 2015 to 2017 to grow by more than 50 people. The company *is currently* '*aggressively*' (Digital Appendix 2 – Interview with Steven Tilkin) hiring new people and *plans to continue* doing so at least for some time (Digital Appendix 1 – Interview with Nadine Mohammed). The elaboration of this area is linked to the 'employee adaptation' topic which has been discussed prior to the question. This data is further used to argument the importance of the research topic (chapter 2.1 Problem formulation).

The **integration mindset** is one of the most noticeable and elaborated topics through the history question answer. It starts with the clear division between architects and engineers. The authors of this report have no source which explains what causality started making a change towards more integrated direction. But what is known is that after the economical crisis there have been more integrated projects. This includes the hospital project which *'defines*' Bryden Wood because of the achievements the company identifies have been developed through integrated project development. Upbuilding on the integration with the design disciplines there is the close integration with the pharmaceutical client (GlaxoSmithKline plc.). Understanding the client's needs and trying to fulfill them lead to a need for more disciplines to be involved so there are fewer and fewer gaps in the process. The integration mindset can be even further seen through the company's value chain (Porter M. , Competitive Advantage, 2004, ch. 2) integration. Here it is necessary to specify that even though there is close collaboration and overlaps between the different disciplines, they do not perform the same work. The concept is that each employee finds the value they deliver and tries to increase it or new workforce is hired if there is a demand (Ahlersten, 2008). Then the diversified capabilities are joined on a common purpose (Johnson, Whittington, Scholes, Angwin, & Regner, 2014, ch. 7). This greatly contributes to the 'no gap' (Annex 4) results Brydon Wood delivers. The integration mindset has been evolving, it is currently deeply rooted, then most likely it will continue developing in the strategy and the values and culture of the company, which is where the topics would be further elaborated on.

Improved quality of the built environment aspects which Steven mentions are these two - time and cost reduction. As noticeable from the history, Steven talks about how Bryden Wood through time has been increasing the quality of the built environment and these have also evolved to be part of the current desirable deliverables of the company. They are also the first two *results* the company wishes to see as an outcome of the project work. Besides shorter construction periods and lower costs, there are also higher quality, reduced carbon emissions and truly integrated design and architecture (Annex 4). The natural causality link observed through the story is that the more integrated project work, the more benefits there will be. What also helps is that the company has been gaining bigger and more complex projects where these improvements are magnified making them even more visible and beneficial for the client, Bryden Wood and the built environment. This is also what motivates the employees to seek better solutions as they see the '*bigger purpose'* (Digital Appendix 2 – Interview with Steven Tilkin). Therefore the sum of the desired results becomes the mission statement of Bryden Wood:

We aim to improve the quality of the built environment and its value to society by advancing the efficiency of design and construction.

(Digital Annex 1 - Architecture and Integrated Design Vision and Context)

Even though the mentioned results are standard ways to improve the projects other companies claim too, what makes Bryden Woods unique is that they are they are learning the lessons of the future and the solutions offered are more advanced. The company is even faster in advancing with lesser risk as they use the data they have collected to *look ahead instead of to leap ahead* (How we work, 2017). This gives the company its unique mission or positioning (term as in Ingenhoff & Fuhrer, 2010).

From all the previous points there is a clear connection and progression between past and present time. This proves the path dependency (Johnson, Whittington, Scholes, Angwin, & Regner, 2014, p. 143) of the company and projects the **bigger and more complex project** vision of the company as well:

> *Our aim is to be the major multi disciplinary, architecture and integrated design company of choice for Healthcare, Pharma, R&D/ academia, infrastructure, residential, education and high complex buildings. We need to be adding value to clients through recognised expertise, whilst establishing and growing a team of integrated designers based in London, St Albans and Singapore. And ultimately to be a commercially competitive and profitable business.*
>
> (Digital Annex 1 - Architecture and Integrated Design Vision and Context)

The vision is the direction the company is moving towards. Previously the company has been smaller and the projects were smaller. Now the company is larger and the projects are also larger (Digital Appendix 2 – Interview with Steven Tilkin). Following the path dependency, the vision is that Bryden Wood is '*the major [...] company'* with high complexity projects. It makes sense as if the company identifies its purpose in seeing the improved quality of the built environment expressed by the desired results, then the bigger the scale is, the larger the benefits would be.

While talking about the mission and vision statements, it is important to mention that they are extracted from a document created for the architecture specialty (Digital Annex 1 - Architecture and Integrated Design Vision and Context). This prompts that the other specialties might have different formulations. However, considering the fact that integration principle is triangulated by all the data the authors have, then these differences as with the Pragmatic worldview will be acknowledged as different completing perspectives on the same matter, which concept is also supported by the interview with Steven.

When Steven Tilkin was asked to talk about the past to present development of the company, he chose to speak about the employee numbers (linked to the interview), integration mindset (the main part of the strategy), improved quality of the built environment (mission), bigger and more complex problems (continuous vision). These are also the identity and direction of Bryden Wood. It would have been illogical to otherwise talk about the history, present and future without tracing the most defining aspects of a company and how they intercorrelate (Figure 5). This is also one of the reasons

the researchers claim that the adaptation goal is to have the employees act according to the company identity and direction.

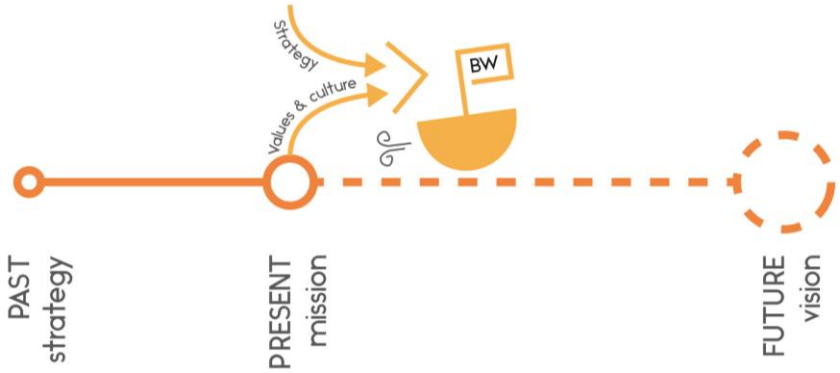


Figure 5: Company identity and direction: history determining the mission and projecting the vision of Bryden Wood + the movement forward is propelled by the strategy, values and culture. Made by Koleva and Millers based on interviews data and path dependency concept by Johnson, Whittington, Scholes, Angwin, & Regner, 2014

This subchapter analyzed the coherency between the history, mission and vision of Bryden Wood. To complete the company identity and direction picture, the next chapters look into the more practical sides - the values and culture, followed by the strategy.

5.1.3 Values and culture

Bryden Wood are maintaining an open friendly informal culture based on mutual respect and fairness. The integrated delivery approach is deeply intertwingled in the culture of Bryden Wood. Although values of the many disciplines separately might be slightly misaligned, there is an overarching intention delivering seamlessly integrated designs. Looking from side, it is difficult to think of any other attitude to facilitate the collaboration needed between disciplines in the company.

The company dominantly values innovation over experience. That helps to deliver new and exceptional solutions to diverse construction challenges. The upper management thinks that overly relying on experience can be somewhat restrictive and dampen innovation. However, this may also lead to reinventing the wheel again and therefore time may be lost while working on once already solved challenges.

During the interviews it was noted several times that the office is quite young and at least partially that is what drives the innovative and curious environment in the office. The Bryden Wood office is also dynamic and it was mentioned that it might seem a little chaotic. According to Steven, changes are constant and that is a big part of the culture in the office. This prevents the company delivering traditional solutions as a norm.

During job interviews the main judging is not by qualifications or wage required, rather the mental and cultural fit in the company. Thus, people who largely might find the culture at the company not to their taste usually get filtered out already during recruiting procedure (chapter 5.2.1 Recruitment

of employees). Company values open and down-to-earth people. The management does not prefer the traditional laddered hierarchy. They think this might affect agility. As Steven Tilkin stated:

> "Martin Wood probably would say that he'd liked the company, even it is a big company to maintain the spirit and agility of a small company, because I think the reason why the things work that we do is because we have that mentality. If you become a big corporate company with sort of much more hierarchical structures and divisions, you probably wouldn't have the sort of dynamic that you need to this kind of integrated work very well."

(Digital Appendix 2 – Interview with Steven Tilkin)

Stricter hierarchies often may be related to large companies. Therefore, the loose structure or keeping the agility of the company may become increasingly difficult in a quickly growing company like Bryden Wood.

There are quite a few social events in the company. From regular ones Friday tea could be mentioned made for the employees by the employees just to come together, have a little chat and eat some cake. There is larger gathering called Pay Day Beers taking place every last Friday of the month. Although not as regular, there is Wednesday afternoon tea, which is oriented around a presentation where a team from the office is presenting a project it is working on. Teams are going out on occasional lunches to celebrate milestones and support morale and team spirit. Often people are going out together on Thursdays or Fridays or organize a barbecue. There are yoga classes offered as well as guided meditation.

From out-of-office activities Friday walks to unusual places, basketball initiative, running club, table tennis, canal-canoeing events among others can be listed. It is important to mention that the these activities are organized by small group of employees to reduce stress and increase bonding and are initiative of the people. There are three or four official company social events each year including Christmas Party.

The dress code in the office is smart casual. The working hours are quite strict, from 09AM until 06PM but often people work longer hours and are expected to report to their managers if they are likely to arrive late. The company considers people their most valuable asset. Bryden Wood offers in-house training for their employees.

5.1.4 Strategy

The history, mission, and vision show the course on which the company is set. The values, culture and strategy together drive the company towards the envisioned direction (Figure 5). The strategy is the part which has not yet been analyzed but will be in this chapter.

Keeping in mind that the (1) mission of the company is to *'improve quality'* (see 5.1.2 History, mission and vision), (2) the *path dependency* proven (see 5.1.2 History, mission and vision) and (3) their approach to *look ahead* instead of *leap ahead* (How we work, 2017), (4) the parts in the quality manual (Bryden Wood Limited QMS, 2016, available on: How we work, 2017) point towards an evolvement process similar to Deming's PDCA cycles (Evans & Lindsay, 2010, ch. 7), also visualized in Figure 6.

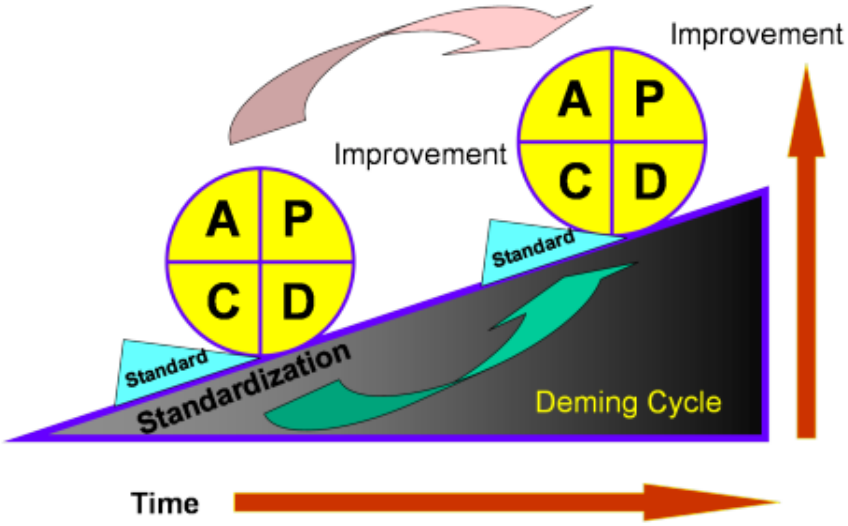


Figure 6 Deming cycle, visualization from https://plus.google.com/+Mbaknol based on Evans & Lindsay, 2010

The basic concept, which is also traceable throughout the history of Bryden Wood, is that the company starts with a specific standard and previous observations. Then similar to the path dependency, the past data allows Bryden Wood to *look ahead*. The understanding of different correlations and own capabilities enables them to innovate the traditional processes with higher success probability. Then those improved processes are tried out and observed. The things that prove to be an advancement are the company's gained intellectual capital and later on become the new standard. This is the conceptual repeating strategic pattern of how Bryden Wood advances and is behind each specific timeshot of development. Considering the timeshot of the report writing period, Bryden Wood's answer to the question 'how?' to deliver the mission is:

'By working towards increased integration, innovation, rationalisation. By enabling the increased use of Building Information Modelling, Standardisation, Systemisation, DFMA and Off-site Manufacture.'

(Digital Annex 1 - Architecture and Integrated Design Vision and Context)

The first sentence points out the characteristic values and culture, even though it is a part of the strategy statement. This is another proof of the company's integrated mindset but also shows that the strategy and values are both propelling for the organization to reach its vision (Figure 5). The second part of the strategy statement is linked to practical ways to reaching the aimed increasement of integration, innovation and rationalization.

Defining the strategy through its topic theory, Bryden Woods strategy is following **Focused Differentiation** generic strategy (Porter M. , Competitive Strategy, 1998, ch. 2) - they deliver unique integrity to specific categories of projects (hospitals, schools, prisons, other high complex projects,

etc.). Though it is also relevant to mention that their integration competitive advantage and continuous PDCA cycles has also led to considerable cost and time optimizations as well. Rather than focusing on cost leadership, the company is more interested in the *greater purpose* and delivering the unique demands of their clients. Next, when considering the expansion of the company, it has been, it is and it wishes to expand its capabilities and fill the gaps of delivering projects through integrated work. Therefore, the dominant general direction is considered to be towards **service diversification** (Ansoff, 1998). The company aims to preserve the '*spirit and agility*' (Digital Appendix 2 – Interview with Steven Tilkin) of a small company even if it grows larger. It can be considered that the company manages to be flexible because of its continuously evolving PDCA strategic cycles which allow the company to have relation to its internal and external environment. Also the lack of strict hierarchy, the founders working among the workers, the empowerment of the workers, the lean thinking, acceptability to changes, and questioning value support the **agile** philosophy (Gunasekaran, 1998; Agarwal, Shankar, & Tiwari, 2006). These are the main characteristics of the Bryden Wood strategy.

Looking again at the strategy statement, It is necessary to point out that it is extracted from the architectural mission document (Digital Annex 1 - Architecture and Integrated Design Vision and Context). Keeping in mind the integration mindset pattern, this means that the united vision and results would be the same but each discipline has its own unique fitting part of the value chain (Porter M. , Competitive Advantage, 2004, ch. 2) . This means that the general concept from this strategy statement refers to all specialties but each disciplines has a different practical way of adding value which they need to identify. Having this concept in mind, the way a new employee can be considered adapted to the strategy is if they know their unique contribution and try to evolve their own capabilities and thereafter the company's capabilities. Examples for developing the strategy is for eg. the job diversification of Nadine and Steven (interviews with Nadine and Steven, respectively Digital Appendixes 1 and 2). Additionally as analyzed previously in the same chapter, it is not only the strategy but also culture and values that determine the company direction (Figure 5). Therefore, when the employee adapts to the Bryden Woods identity, they partially also adapt to the strategy.

With the presentation of the Bryden Wood strategy, the whole picture of Bryden Woods identity and direction is completed. Bryden Wood is a pattern which the employees need to discover and lead towards to adapt to the company identity and direction.

5.2 Company adaptation procedure

The previous chapter presented the identity and direction of Bryden Wood. That is also what the researchers consider to be the adaptation goal for the new employees or in other words when the adaptation process is considered completed. The AAU students are aiming to scrutinize the time aspect of the process that Bryden Wood already has. In order to analyze the actual process the employees undergo, it is relevant to investigate the procedures Bryden Wood already applies to reach the adaptation goal (chapter 5.3 Employee adaptation process). It is also the purpose of this section. Chapter 5.2 Company adaptation procedure divides the Bryden Wood procedures in two parts - what occurs before (Chapter 5.2.1) and after (Chapter 5.2.2) the first workday of the new employee. The main resources used are the interview with Nadine Mohammed (Digital Appendix 1 – Interview with Nadine Mohammed), director of Human Resources at Bryden Wood, the staff

handbook of Bryden Wood (Annex 6), and theories from Chen, 2005 and Ashforth, Sluss, & Saks, 2007.

5.2.1 Recruitment of employees

Before the first workday of an employee, there is the recruiting process. In the procedure Bryden Wood has, after knowing they need a new employee, several steps have been identified: find, filter, negotiate, prepare. They are also visualized in Figure 7, then sequentially described and analyzed. Unless there is a notice period the employee needs to stay in his previous company, the whole recruiting process takes from one to two weeks.

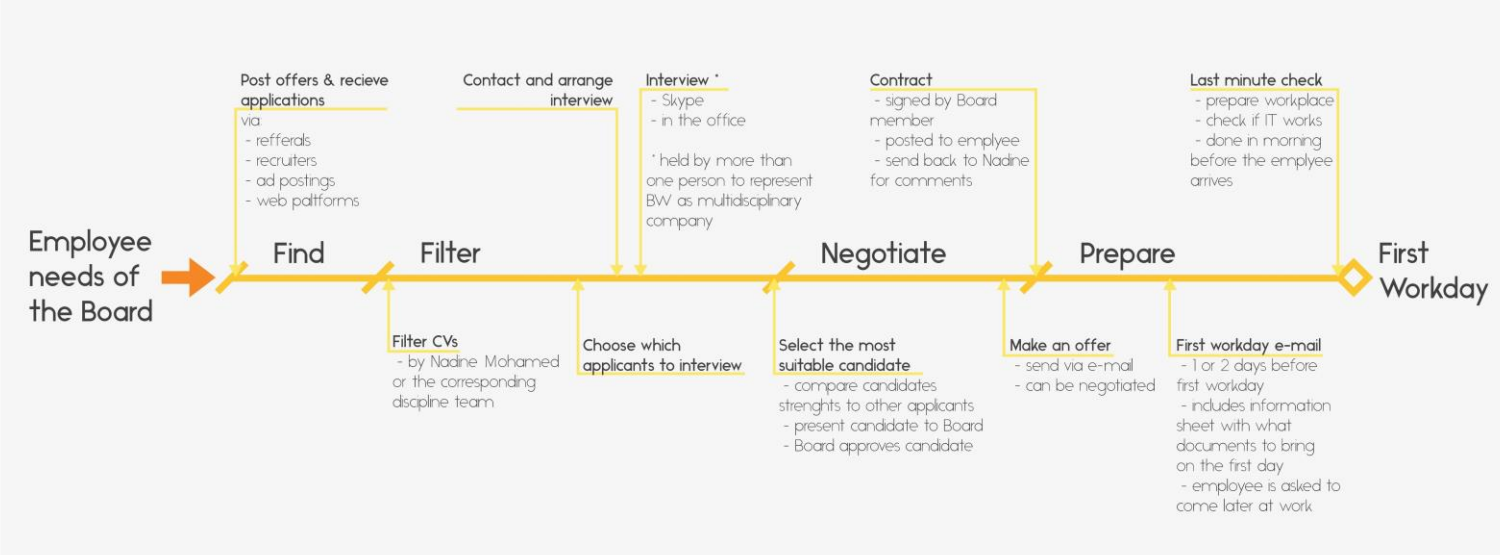


Figure 7: Employee recruitment procedure (represents just the order of events). Made by Koleva and Millers based on interviews data

The whole recruiting procedure is initiated by the needs of the board for a specific workforce. According to the integration concept, the disciplines are interlinked but yet contribute with their uniqueness, the company looks for someone who fits in the organization (Digital Appendix 2 – Interview with Steven Tilkin) but also has the characteristic skillset (Digital Appendix 1 – Interview with Nadine Mohammed) for the specific position. These also determine the job offered and thereafter the position advertisement and are given to Nadine Mohammed with the task to find candidates.

The way a company finds and filters new employees influences the sample of applicants thereafter the sample of new employees too. Depending on what is characteristic for the group of new recruits, the scrutinized adaptation strategy for a specific personalities would vary. Since the research case study is based on Bryden Wood and their questionnaire respondent sample, it is relevant to understand what that sample is and how it is being assembled.

Find. During the interview Nadine Mohammed was asked about the ways Bryden Wood finds its new employees. Nadine answered by mentioning these specific practices:

- referrals from employees - this is also the *encouraged* method

- recruiters - these people are given the job position specifics and are paid to find applicants which are fitting the description
- ad postings in publications - in different architectural or engineering journals
- web platform - the web platforms listed are LinkedIn (linkedin.com), Reed (reed.co.uk) and the Bryden Wood website (brydenwood.co.uk).

Concerning the referrals, the recommended person can be *whoever* but also the company is open minded if the person is a *friend* or *family* to someone who is already part of Bryden Wood. This could lead to quicker adaptation because of already existing connections but also promotes the closeness between the employees and integrates the values and culture within the company (see chapter 5.1.3). The recruiters are people who have awareness of where to look for people and save time on the Human Resource but it also costs the company resources. The different ad postings in publications and journals, together with the previously mentioned methods even further expand the probability of having a greater range of applications to start with. Furthermore, on the Bryden Wood Career page (Careers, 2017) there is an invitation for people to send their unsolicited applications. Having in mind also the rapidly increasing amount of projects and employees in Bryden Wood (Chapter 5.1.2), the company is in continuous need for new recruits. This also explains the various broad ways the company is using to gain larger amounts of applications. Additionally to support this, the students looked into the LinkedIn and Reed advertisements of Bryden Wood (the same job found both places is also in Annex 5). The requirements for the applicant listed are just four, most of which are linked with the company identity fit and then the software and social skills linked to the specific discipline. And even though the job advertising is for an *Associate* Project Architect position, there is no specific amount of previous experience requirement. As the company increases the methods of finding new employees but also does *not* set plentiful requirement, this leads to increased number of CVs received and very broad range of applications. On the good side, in that broad sample, there might be new and interesting skills which might upbuild on the position expectations from the board and thereafter diversify further the company.

Additionally when considering the different platforms, the AAU students noticed that at least on the Bryden Wood webpage and LinkedIn, the company presents itself and updates frequently with news. When people apply through these places, they can read recently updated developments and progress of the company. This is also the time the potential new employee learns and starts building the 'idealistic and realistic' portrait of the company as in the Anticipation phase (Ashforth, Sluss, & Saks, 2007) describes.

Filter. The initial screening is done either by Nadine or by the respective team the new employee would join. It results in a list of people the company wishes to interview. The picked applicants are contacted and a meeting is arranged. The interview itself is done in the office or if that is not possible, Skype is used as a platform. At the time the employee meets the company, there are usually more Bryden Wood members in order to show the importance of the integration principle (Digital Appendix 1 – Interview with Nadine Mohammed). After the interviews with the candidates, the most suitable one is presented with their strengths over the other potentials applicants, then is approved and selected by the board.

The initial screening with the filtering of the CVs is necessary to remove the applications that do not fit the job position and it is even more relevant having in mind the broad application sample. What is interesting is that even though the HR has the profile of the preferred candidate, it is still the corresponding discipline team that can do the CV filtering. This way each team can get to choose

who they work with (Ebbesen & Ussing, 2007) which promotes the later integration of the new employee within that team. By having more than one discipline on the meeting when the selected potential candidates are interviewed, presents the integration of the company and further enhances the 'idealistic and realistic' Bryden Wood profile (as in the Anticipation stage in Ashforth, Sluss, & Saks, 2007).

On the company side of the interview, concerning the assessment of the potential of the candidates, Steven states*: 'when we have conversations about interviews whether we say someone is suitable or not is generally not about the fact that she or he doesn't have enough qualifications or they want a certain amount of money. It is usually about attitude.'* (Digital Appendix 2 – Interview with Steven Tilkin). This answer was given to a question linked with the importance of Bryden Woods values when employing new people. Furthermore, by keeping in mind that the company trains and develops their workers, it can be concluded that the main aim of filtering is to have candidates from the beginning at least partially aligned with the company's values rather than all the position required skills. This is further supported by Nadine when talking about flexibility with the skills when it comes to graduates, as they might also be more creative, innovative and lack the practice in a traditional design company.

The filtering stage finishes with a candidate's strengths compared over other candidates being presented to the board for approval. This further supports the organization integration concept of Bryden Wood, as for the selection of a new employee, the HR, the discipline teams and the board have to be included and all have to agree and know why that person is needed. It makes the teams more involved with and accepting of the new person from the start.

Negotiate. The negotiation is when Bryden Wood prepares an offer for the candidate. Then Nadine Mohammed e-mails that offer. The candidate has an option to negotiate. Then a contract is prepared, which also can be negotiated. When both the applicant and the board have signed the contract, then the candidate becomes a new employee for the company. The negotiation part is more of a paperwork procedure involving mainly emails, posting, little interaction between both contract side and dominantly accepting of offers rather than negotiating them.

Prepare. After the contract and the new employee is hired, what is left from the company side is to prepare for the first work day of their new member. One or two days before the employee arrives in the company, they are sent an email with an information sheet of what to bring to the office and is also being asked to come one hour after the official work time. At the day of the appearance and a few hours before it, IT and facility manager sets up the sitting for the new employee, cross-checks if everything works. All these procedures ensure that the employee arrives and is being welcomed, there is a place for them, there is unobstructed first impression of Bryden Wood and smoother lead into the first workday and on of the new employee.

5.2.2 First work day and forward

In the company, there is a semi-formalized employee orientation procedure in place. It is developed by Nadine Mohammed, the head of HR in Bryden Wood.

Arrival. Each newcomer is met personally by Nadine. She is introducing the new employee with her role in the office and is reviewing the admin team, as it is the first in line support system for the most in the office. At this point various HR forms and documentation are filled as well. The list of required documentation is sent to the employee few days before the first day and is also mentioned in the staff handbook.

Staff handbook. A very important part of the first day is the staff handbook (Annnex 6). It contains lots of important information about the company and also works as a great first-impression strengthening tool for the company. It is written in a friendly fashion, neatly organized and generally leaves a good impression. The handbook contains a brief introduction to the company values and capabilities. This is a good way communicating the strategy and direction of the company already on the first day of employee. Additionally, information like staff benefits, office etiquette holiday/study leave, seating plan, staff list, organigram among a myriad of other valuable new employee information is explained.

Introduction to the team. Subsequently, the new employee is settled to their desk and introduced to a member of the team who then gets them started on the project. This person is supposed to personally introduce the newcomer to the members of the team, take them out to lunch and show the area.

Meeting with specific teams. At some point in the orientation process meetings with several specific teams are planned. For example, there is document control team which introduces the new employees with standards of issuing documentation, then there is digital delivery team as well as facilities manager. The latter is introducing with health and safety rules of the office.

The HR team is trying *not* to overload the new employees with information on their first days. Currently, there is *no* list of all the meetings nor procedures the new employee should go through. In HR's opinion, the adaptation takes anywhere from three to six months.

The orientation is organized at the right time - very early in the process. According to theory research Chen, 2005, Verlander & Evans, 2007, is the best time to maximize its efficiency. Although the orientation process is quite thought-of, a lack of consistency can be noticed. There is *no* checklist of planned meetings or things to familiarize the new employee with. Thus, as seen in the survey, some newcomers are missing parts of needed information, which causes confusion. Another important concern is that there is *no* plan nor procedure regarding onboarding after the new employee is handed over to their respective team. As Nadine pointed, it is kind of "*gray area*" for her. This indicates a possible area of improvement in the process.

To sum up, there is planned orientation procedure in place for the company. However, the lack of oversight makes it only partially efficient as it is often missing to deliver important bits to some newcomers. This is somehow compensated with the ad-hoc support function from the office admin desk. But, if the orientation procedure is somehow organized and structured, further onboarding processes are not. Newcomers are handed over to their teams and then it is down to the person-in-charge or the team which then is in complete solicitude of the newcomer. As there is *no* developed procedure from this point on, there is a risk that employee adaptation might be hampered at this stage.

5.3 Employee adaptation process

For the purpose of identifying the situation in the company from the employee perspective, a questionnaire with 41 questions was prepared. The survey was assembled and distributed through SurveyXact. The analysis was done through SurveyXact analysis tools and MS Excel. The questions consisted of single-choice, multiple choice, 5-level Likert scale questions as well as some open questions. The questionnaire was distributed on 19th of October, 2017 through email with a

reminder sent on Monday, October 30, 2017. The survey target group were people working in the company for 2 years or less. According to Klein, Polin, & Sutton, (2015), such time is a reasonable estimate for the length of onboarding programs (six months to over a year) as well as allows for a sufficient amount of time to have passed for new hires to have learned from the onboarding practices they experienced. Although there is no precise information available on how many people are working in the company for 2 years or less, according to the management (Digital Appendix 1 and 2) the count is around 70 people. The full questionnaire with questions, answers, frequency and ratio can be seen in Appendix 2.

Out of 53 received responses, 16 were incomplete, hence they were removed. Mostly, these respondents ended the survey when open questions started or the answers were the same in each statement suggesting that the respondent was not really paying attention to the answers. Further 2 were rejected because did not meet the requirement of working in the company for 24 months or less (36 and 200 months respectively). Therefore, the survey received 35 valid responses. Considering that the survey target group were around 70 people from the company, the response rate is approximately 50%. From the 35 respondents 60% were males while 40% were females. From the respondents 34.3% had Bachelors degree, 54.3% had Masters degree and another 2.9% had PhD and the rest had different training. The age of respondents was ranging from 20 years up to 55, with the average age being 29.66 years. The respondents had various lengths of job experience in their position prior their current job and can be considered evenly distributed (see Figure 8). The positions covered mainly architecture and engineering, although several people from administration and analysts also completed the survey, contributing to more distributed opinion. All the respondents have been working for Bryden Wood between 1 and 18 months, with 7 months being the average.

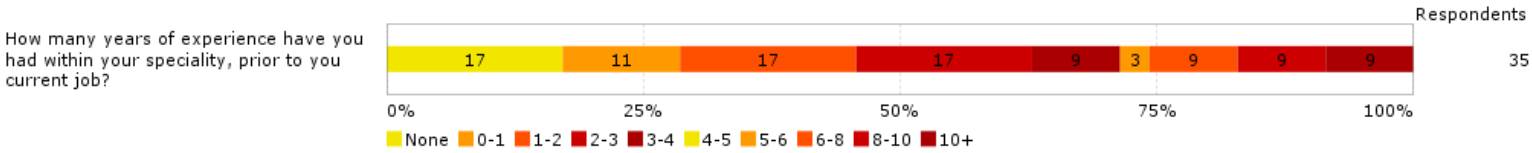


Figure 8: Previous experience of respondents in their respective position

5.3.1 Adaptation factors

Throughout the analysis, several interesting factors were discovered. However, only the most pronounced are described and possible causes are discussed. This chapter will be one of the cornerstones to develop solutions later in the chapter 6 Reducing the time consumption of the adaptation process. A summarizing table with all the adaptation factors (AFs) can be found at the end of the chapter (Figure 13).

The respondents of the survey can be loosely divided into two groups - the ones feeling adapted and the non-adapted ones - out of 35 respondents, 71% considered themselves adapted to the company, 29% stated that they disagreed or neither agreed or disagreed with the statement "I feel adapted to Bryden Wood". In the adapted group people working from 1-17 months were found. From the non-adapted group, 6 were fairly new to the company (1-7 months). However, there were also non-adapted people working 11, 12 and 18 months which is found to be quite surprising. This suggests that **there is no connection between time in the office and the level of adaptation (AF1)**.

When asked about their first work day, only 45% of the respondents thought that they have received adequate preparation for their first work day (agreed or strongly agreed). 20% disagreed, 3% strongly

disagreed and 31% neither agreed or disagreed. This shows that some people might not receive enough help on their first days. **Although there is an orientation program present in the company, this indicates that the efficiency of it could be improved (AF2)**.

From the adaptation help received (Figure 9), the most common was meeting with HR manager (97%), health and safety information (74%), employee handbook (71%), guidance on timesheets and company documents (60%), and someone explaining the handbook (46%). Less than half (40%) were explained how to perform their daily work, 34% had BIM guidance, 17% had a meeting with document control team and 23% had a mentor. The least received help was meeting with communication team and quality management team (11%). It seems that not all newcomers are receiving all possible orientation activities. There are clearly gaps in received orientation help. Several researches in the past and recently Klein, Polin, & Sutton, (2015) had noted that **employees report onboarding practices less often than companies report them being offered (AF3).** Klein, Polin, & Sutton, (2015) propose three reasons why this could be happening: (a) policies not being clearly communicated, (b) guidelines, materials, or resources needed to implement those policies not being provided, or (c) managers simply choosing not to implement a practice.

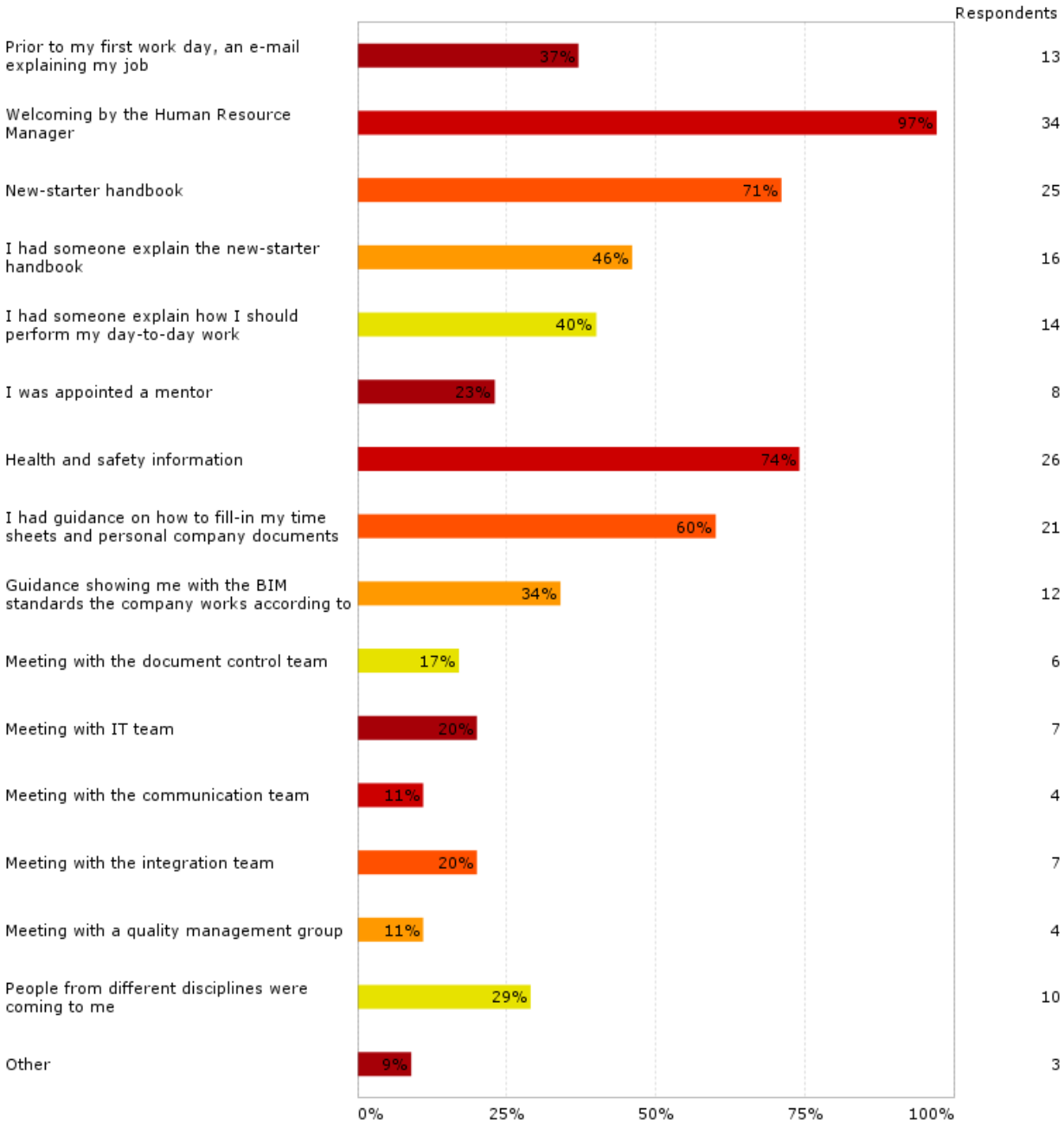


Figure 9: Adaptation help received and ratio of respondents receiving it

When looking at the adaptation help received by the non-adapted group, 90% had a meeting with HR manager, 50% received employee handbook and had a health and safety guidance, 30% received guidance on the employee handbook and fill in timesheets and personal company documents. BIM standards and day-to-day guidance were explained to only 20% of the non-adapted group. None of them had a meeting with document control team or had a mentor. Even though large part of the non-adapted group received some orientation help, it is considerably less structured than the one received by the adapted group. Therefore, orientation program by itself does not guarantee

successful adaptation. However, **a structured orientation program contributes to a better adaptation progress (AF4).**

When crossing the rating of “I feel adapted to Bryden wood” and adaptation help received, (Figure 10) few interesting correlations were discovered. Generally, people, who received particular adaptation help also agreed or strongly agreed to being adapted.

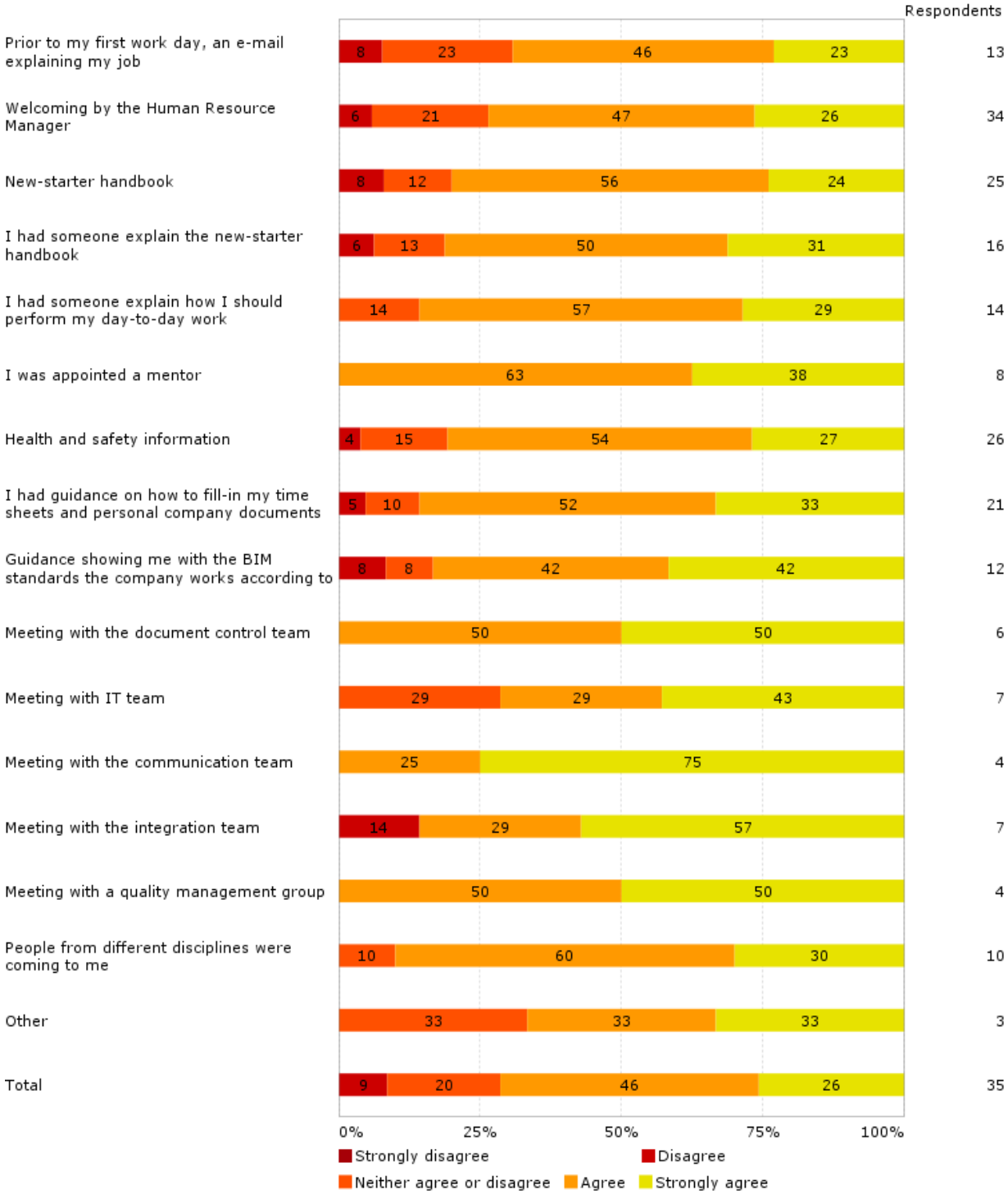


Figure 10: Adaptation help received, crossed with "I feel adapted to Bryden Wood"

Meanwhile, there were several adaptation activities that were chosen by people not feeling adapted or feeling partially adapted. Receiving a mentor, meeting with the document control team, meeting with the communication team, meeting with quality management group were chosen only by

respondents who agreed or strongly agreed that they feel adapted to the company. Contrary, choices with the largest proportion of non-adapted group were pre-workday email, meeting with IT, meeting with HR, BIM guidance and employee handbook. This result might suggest that **receiving a mentor, meeting with document control team, communication and quality management team are among the most effective practices in the company (AF5)**

When asking if employees visit all the social events in the company, 45% agreed or highly agreed and 29% neither agreed or disagreed, suggesting that they visit some of the events. However, from the non-adapted group, 50% strongly disagreed or disagreed that they visit all the social events in the company while 30% neither agreed or disagreed and another 20% agreed to the statement. When crossing the "I visit all the social events" question with "I feel adapted to Bryden Wood" question (Figure 11), a correlation was found - **the more often people visit the social events, the more adapted they feel (AF6)**. It is unclear, however, whether non-adaption is the cause for not visiting the events or not visiting the events might contribute to the poor adaptation.

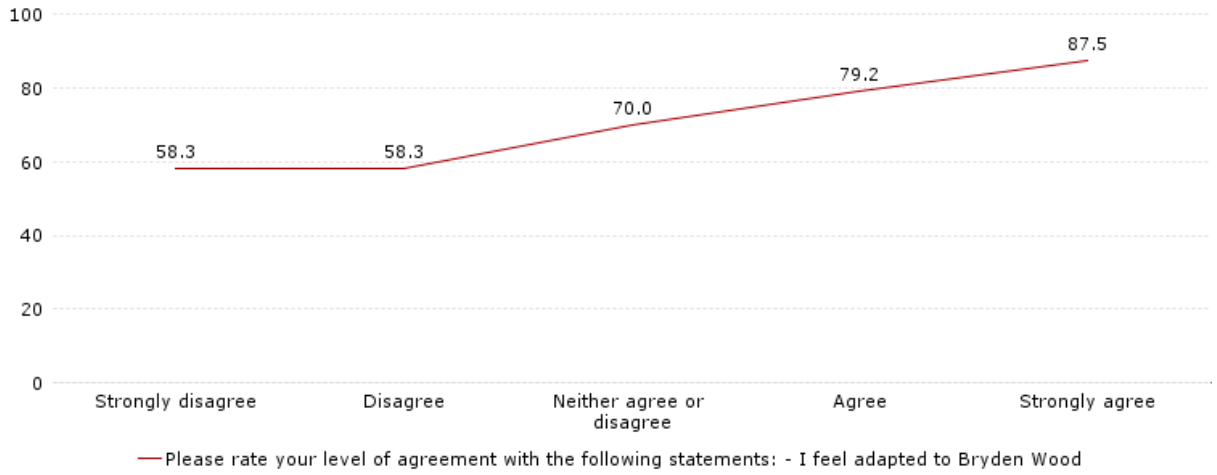


Figure 11: "I visit all the social events" crossed with "I feel adapted to Bryden Wood"

Despite not feeling adapted to the company, 70% of the non-adapted group shared mostly positive experiences about Bryden Wood around them. This is difficult result to explain, but possibly people still like the company as they have found bigger purpose for their work (from the non-adapted group 60% agree, 10% strongly agree, 30% neither agree or disagree) or they have found something, that keep them in the company, be it projects or other people.

The non-adapted group had no positive correlation between prior job experience and feeling adapted to the company. Rather, there was a slight negative correlation. (Chan & Schmitt, 2000) (Niessen, Swarowsky, & Leiz, 2010) showed that newcomers with little previous transition experience tend to look for information and ask questions more actively. Therefore, **people with lesser previous transition experience tend to adapt faster (AF7).**

Also, for the non-adapted group, the average age, when compared to the adapted group, was slightly higher (29.66 vs. 33.60 years) suggesting that age might affect adaptation. Although the age difference is not that wide in this case, this is in line with previous research that **age is negatively associated with ability and willingness to learn (AF8)** (Niessen, Swarowsky, & Leiz, 2010).

When crossing ratings for "BW prepared me well for my first work day" and "I have a clear understanding of what I have to do for my job" (Figure 12), it showed slight correlation, suggesting that **better preparation for the first work day might contribute to role clarity (AF9)**.

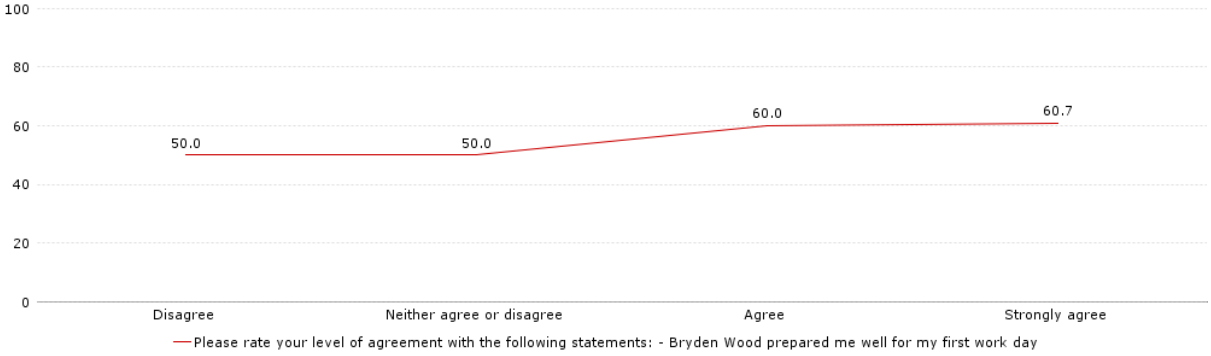


Figure 12: "Bryden Wood prepared me well for my first work day" vs "I have a clear understanding of what I have to do for my job"

When splitting rating of question "I feel adapted to Bryden Wood" and "I have/had someone guiding me through my duties", a positive correlation was found. This suggests that **guidance or mentorship contribute to employees feeling adapted (AF10)** Mentorship or "buddy program" previously had been found to facilitate organizational socialization on many cases (Lisbon & Welsh, 2017).

NUMBER	OBSERVATION
AF1	there is no connection between time in the office and the level of adaptation
AF2	there is space for improvement for the orientation program present in the company
AF3	employees report onboarding practices less often than companies report them being offered
AF4	a structured orientation program contributes to a better adaptation progress
AF5	receiving a mentor, meeting with document control team, communication and quality management team are among the most effective practices in the company
AF6	the more often people visit the social events, the more adapted they feel
AF7	people with lesser previous transition experience tend to adapt faster
AF8	age is negatively associated with ability and willingness to learn
AF9	better preparation for the first work day might contribute to role clarity
AF10	guidance or mentorship contribute to employees feeling adapted

Figure 13 Summary of adaptation factors

These were the most notable relevant observations from the analysis of closed questions. Few were little surprising (adaptation and time, feeling not adapted but sharing positive opinion about the company). However, majority of observations are supported by previous research. Thus, this chapter in combination with open question analysis and other theories is used to develop a possible solution on chapter 6 Reducing the time consumption of the adaptation process.

5.3.2 Time Consuming Aspects

This is the last chapter of the Bryden Wood case study. It is also among the main aimed outcomes considered while architecturing all the previous data collections which lead to the structuring of the questionnaire so eventually the researchers could discover the adaptation factors (AFs) but also the main Time Consuming Aspects (TCAs) occurring during the employee adaptation process. The time reduction or if possible complete removal of each TCA would lead to the sped-up adaptation of the new employees, which is also the research topic of this Master Thesis Report (see chapter 2. Research question).

For the purpose of this research, Time Consuming Aspects are considered the areas that an employee need to develop and/or the barriers that need to overcome in order to adapt to the company's identity and direction. As each of these actions requires time, these aspects are considered time consuming. Considering AF1 that there is no connection between time spent in the company and feeling of adaptation, it is noticeable that each new employee has their own tailored onboarding steepness of the line (Figure 2: the process of adaptation or organizational socialization (made by Koleva and Millers based on Chen (2005), Myers and Oetzel (2003), Gailliard et al. (2010), Ashfort et al. (2007, p. 9-10))

Similarly, the actual amount of time each of the TCAs takes is different from one employee to another. Regardless of the actual amount, even a single sped-up aspect would yield a time reduction in the overall adaptation process.

On one side, the Bryden Wood employee questionnaire included closed questions which are used to understand different adaptation factors (Chapter 5.3.1). On the other side, there were specific open questions aiming to allow the employees to identify aspects from their adaptation period until the point of filling-in the questionnaire. The open-end questions asked were four:

1. What is something new you have discovered in the past week about how Bryden Wood works?
2. What did you struggle the most with while adapting to Bryden Wood and how long did it take?
3. If you could go back and tell yourself something at your first work day, what would it be?
4. What took you the longest to understand about Bryden Wood and how long did it take?

The 35 respondents had to answer each question shortly and based on their experience. There were employees who specified that they cannot remember or nothing comes to their mind. Such responses were naturally not included in the data analysis conclusions. Also there are replies which are closely linked to the specific position of the employee and for the reason of company generalized adaptation new practice, only the parts that were common for the organization were taken into consideration. The remaining answers were then decoded as according to the suggested method of O'Gorman & MacIntosh, (2015). The authors of the book question the subjectivity of the decoding, so in order to increase reliability of the data, each of the authors decoded answers individually and then the united decoding result for each question was formed (see Appendix 2). The researchers observed that there are certain codes which spread among several of the questions and then summarized the main TCA codes identified (visible in Figure 14).

Number	Employee TCA name	Code	number of apperances	Found in questions
TCA 1	Understanding BW processes	BW processes	21	1, 2, 3, 4
TCA 1.1	Internal processes			
TCA 1.2	External processes			
TCA 2	Understanding integration principles	integration	14	1, 2, 4
TCA 3	Clarifying	uncertainty	10	1, 2, 3, 4
TCA 4	Understanding standards (BIM, LOD, document control, delivery)	standards	9	2, 4
TCA 5	Reducing stress levels	stress	9	1, 3
TCA 6	Meeting people and discovering events	socialization	6	1, 2, 3
TCA 7	Learning to question and seek	ask	6	3
TCA 8	Switching from a job/university to BW	job experience	5	2, 4
TCA 9	Understanding hierarchy and organization structures	organization	4	1, 4
TCA 10	Finding how to manage time and tasks	resource management	3	1, 4
TCA 11	Becoming flexible	agile	3	1, 3
TCA 12	Learning how to work in Revit	software	3	2
TCA 13	Learning how to find company and project information	information	3	2, 3
TCA 14	Developing English and/or technical language	language	3	2
TCA 15	Becoming more dynamic	active	2	3

Figure 14: Main categories of TCAs identified by the employees, by Koleva and Millers based on questionnaire data

The visible TCAs in Figure 14 are the hierarchies of codes (O'Gorman & MacIntosh, 2015), meaning that there are several different perspectives on the same code. The most often found TCAs in the decoding are explained to gain a better understanding of the problem.

Bryden Wood processes (TCA1). The main problem the employees struggle with understanding is to place what are all the pieces that form Bryden Wood and how all the company elements fit together to form the bigger picture. Understanding how the organization works is also the largest '*stumbling blocks*' reported from a new employee survey (as presented by Byford, Watkins, & Triantogiannis, 2017). Looking at the Bryden Wood employee answers, they fit in two main categories. The first one **(TCA1.1)** is gaining an understanding of the internal organization processes. Many of the respondents have/had questioned how the company operates and what is the general concept behind all the capabilities it has. It even includes considerations about timesheets, QA procedures, what make Bryden Wood better than other companies, the nine blocks the company has and how they work together. All of these are very much linked to the employees asking about the company identity and the way it is moving forward. The second category is linked to Bryden Wood processes in regards to project work **(TCA1.2)**. Here the struggles derive from understanding how the projects are

coordinated, the BIM practical implementation considerations, contacting clients, issuing projects and similar steps along the project delivery. What is common for both subcategories is that they both question what is the bigger picture of the dynamic Bryden Wood mechanism and where is the employee's placement within it.

Work Integration (TCA2) is an aspect characteristic for the researched integrated company and their specific methods of work, values, culture, and strategy (Chapter 5.1). The integration aspect adaptation need derived due to the traditional methods of work in the building industry where work is being passed from a specialty to specialty. As employees arrive in Bryden Wood they need to change to an unorthodox approach containing collaboration with other disciplines (Smith & Tardif, 2009). Therefore the questions the integration raises are linked to collaboration, coordination, teamwork, disciplines communication and fit. As most respondents shared it as what took them the longest to learn, some expressed that there is lack of teamwork and disciplines support/guidance. When considering traditional approaches, previous **job experience (TCA8)** can also slow down adaptation. It takes new employees time and effort either to shift from their previous job or get used to having a job.

Uncertainty (TCA3) is linked to the employee having a to spend time finding and clarifying information concerning all the questions raised by the TCAs. The main problem here is that all the general confusion, lack of information leads to the employee being uncertain also about what their own role within the organization is.

Standards (TCA4) is mostly linked with answers to BIM, then there are also some in regards to drawing details and document control standards. Bryden Wood is a leading company in the BIM field (they are asked to help drive adoption of BIM across British government due to them 'pioneering' in the field, (BIM Level 2 - Industry leading BIM, 2017)). As they are also aiming to *learn the lessons of the future,* the company undergoes a lot of research and tries out new practices. While in the continuous process of developing such new and innovative practices which are not yet established, people can feel confused about what standards exactly they should be delivering according to.

Stress (TCA5) or advice to be more relaxed is mostly occurring answer to what would employees advice themselves on their first workday (open question number 3). Stress is in one way or another expected from the anticipation adaptation stage (Ashforth, Sluss, & Saks, 2007). Another advice employees would have told themselves is to **ask (TCA7)**. Bryden Wood's culture is linked to being curious and questioning. The knowledge management system is based on people, which is something that employees get used to and become part of with time.

Some of the respondents discoveries shared are about **socialization (TCA6)**. They discover social initiatives by the company like yoga, sport or meeting different disciplines. The socialization aspect is more common for people that have been in the company for rather short period of time (1-6 months).

In the **organization aspect (TCA9)** new employees discover (or struggle with understanding) the flat, well-structured, and integrated organization - that the managers are also *'normal people*' which can be asked but do not necessary know all the answers. Whereas in the **resource management aspect (TCA10)** people share difficulties with being able to manage their own time or their concerns that Bryden Wood has room for improvement in the way they handle their resources.

These are the first ten TCAs, which are also more expressed by the new employees. To gain better understanding on the remaining TCAs and their considerations, they have been plotted on Figure 15 in their corresponding company identity and direction categories.

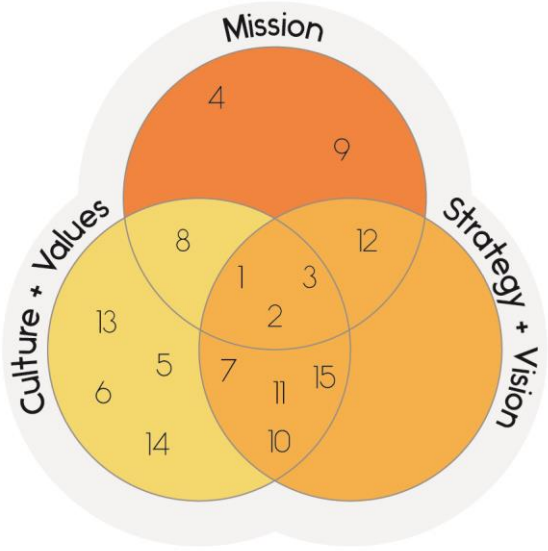


Figure 15: TCAs plotted in their corresponding identity and direction aspects, by Koleva and Millers, upbuild based on previous report chapters

In chapter 5, four main areas have been discussed to develop an understanding about adaptation in integrated companies. First, there has been an introduction of the case study company. Second the researchers have presented and analyzed the company identity and direction with the different path dependency, integrated values, and PDCA strategy with their supporting links in between. Then in the third part the specific practices from before and after the first workday have been looked into. Afterwards the second and the third parts become the base for formulating an employee survey. The data collected was used to identify different Adaptation Factors and Time Consuming Aspects. The next chapter looks specifically in solutions which would reduce adaptation time consumption.

6. Reducing the time consumption of the adaptation process

This chapter once more, as previously structured in chapter 5.2 Company adaptation procedure, leads through recruitment and post-recruitment phases of Bryden Wood, just with suggestions for further improvements while considering data from previous research and results from surveys. The chapter starts with suggestions for Bryden Wood on how to improve employee adaptation through recruitment practices, followed by suggested improvements in orientation and onboarding practices from employee's first day and onwards. Where possible, linkage with TACs and AFs is made. As the TCAs and AFs are often overlapping, they are be examined individually. Rather, the authors look at the situation as a coherent whole often suggesting improvements which can solve several of these aspects simultaneously throughout the single adaptation process flow.

6.1 Recruitment of employees

Although the recruitment process of Bryden Wood seems quite worked out, there is always space for improvement. Therefore the following paragraphs suggests possible improvements in this initial adaptation process. Recruitment is concerning anticipation stage only, the rest of the phases are covered in subsequent chapters.

The most effective way to shorten the adaptation way of new employees could be recruiting easy adaptable or already partially adapted employees (proactive, enthusiastic, BIM-prepared, somewhat aligned to the values of the company for example). This leads to several options.

One of the possibilities would be cooperating with universities. There are several advantages for this. Firstly, although with no or little field experience, graduates have the advantage of adapting faster **(as in AF7)**. Moreover, their motivation is usually quite high, which is a key to fast adaptation. Secondly, graduates usually come from backgrounds which often are at the forefront of the development in the particular area. This may bring in the latest ideas and developments in the industry. Thirdly, newcomers often offer new or unnoticed perspectives on existing processes and may help in improving them. Moreover, if Bryden Wood can work together with universities to turn the student skills towards desired direction (by participating in curriculum design, for example), it would shorten the adaptation time for them in the company. Additionally, this would tackle **AF8,** as younger people are usually more keen to learn and therefore are faster at adapting.

Another important aspect is the representation of the company. It is important to portray accurate picture of what the company is, who it seeks and how it works - more accurate information before organizational entry provides higher role clarity (Klein, Fan, & Preacher, 2006). This has to do not only with the company portrait but also job roles and working environment. Usually, there will be some discrepancies between employee expectations and actual job or work environment. Normally, at encounter stage this triggers shock, which prompts learning and therefore adaptation. If this discrepancy is too large, job commitment, role clarity and proactivity may suffer. This causes too

much stress and as a result, adaptation is either prolonged or does not happen at all. As previously suggested in **AF9**, this is a part of preparation of the first workday. It helps to smoothen discrepancies between expectations and reality thus contributing to better role clarity and subsequently shortening adaptation time.

Important part of recruitment is the actual interview with the prospective employee. Currently, HR and the head of particular departments take part in the interviewing process. However, often the top management has an incomplete picture of what is actually happening in a particular team. The team is the most understanding regarding what they actually require. Therefore, not only the respective department of the new employee should participate in the job interview, but also people from the team - they are the ones who will be working together, day-to-day with the newcomer, therefore early search for fit is desirable. It would also give the new employee more realistic view of what the actual duties will be thus effectively linking with **AF9** (better preparation contributes to role clarity).

Stars attract more stars. The best people in the industry may require above-average wages and the practice of hiring the best had been questioned (Coff & Kryscynski, 2011). However, (Coff & Kryscynski, 2011) are suggesting that best-in-business employees may attract up-and-coming stars. These new employees may be willing to make wage or other sacrifices effectively strengthening competitive advantage of the company. Needless to say that this contingent of employees are motivated and proactive, which is a key ingredient for fast adaptation.

Value congruence or person-organisation fit delivers as a motivational mechanism that requires less organizational intervention with employees' effort - it enhances employees attachment and involvement in the company. Therefore organizations are able to benefit from the spontaneous effort delivered by better motivated employees (Ren & Hamann , 2015). Even though Bryden Wood are filtering prospective employee values and fit during interviews already, this practice could be further enhanced to benefit from it. Also, Bryden Wood have to continue develop the "*I believe there is a greater purpose to my work*" feeling in their people.

Another way of shortening adaptation times could be mapping company knowledge. In essence it helps to forecast in what areas there might be shortcomings. This helps to plan and prepare for particular-knowledge-specific projects. Additionally, mapped knowledge may point what are the main competitive advantages of the company at particular times. With such information it is easier to target and recruit people with a specific needed knowledge profile.

6.2 First work day and forward

This subchapter focuses on different solutions towards reducing the time consumption of the Bryden Wood adaptation practices previously described in Chapter 5.2.2. It will then present these solutions in a way that bears relevance for other similarly integrated companies. The previous chapter 6.1 described possible solutions for the recruitment of employees, while this chapter focuses on the improvements that could be made in regards to the orientation and onboarding during and after the first work day.

Recruitment is associated with the anticipation stage of adaptation. Following it, is the next onboarding stage - **encounter stage including the orientation process** (Figure 2). In the Bryden Wood case study, the encounter involved arrival and welcoming by the head of HR, going through

the staff handbook, meeting with different organizational teams as well as the project team itself. It has been discussed that the orientation procedure is structured but its execution could be managed better, as employees do not get all the adaptation help available (supported by the questionnaire data, chapter 5.3.1). This also led to the need to improve the adaptation orientation **(AF2)** which, if better structured would make the employees adapt faster **(AF4)**.

Firstly, when the employee arrives for the first time they should be greeted personally by the HR manager as it helps the employee feel welcomed and more positive towards the company. The first day of work should include the greeting, fixing employment paperwork, having everything set up at the workplace, and being introduced to *the new starter handbook* (Annex 6) with its overview of the company. The explanation of this kind of manual can be part of the initial introduction to a company, its traditions, culture, policies, rules, and benefits (as some of the goals of orientation - Caruth, Caruth , & Haden, 2010, see chapter 3). However, this manual can also contain the different social events the company has or a link to a place where these can be found. This would reduce **TCA6**, discovering initiatives, and increase the chances people participate in them (also supported by **AF6**). With this small change, the procedure at the arrival (Chapter 5.2.2) is mostly be kept.

Secondly, looking at the timing of the first work day, if done a few days before a bigger social event, then there is a higher probability that the new employee would meet more people sooner is increased. In other words: Timing the start of employment can initiate the socialization process faster and reduce the **TCA6** and **TCA2** linked to meeting new people/finding events as well as integration/teamwork respectively. Furthermore, such events can help new employees get familiarized with their supervisors and teams **(TCA2)**.

Thirdly, by comparing the interview with the HR manager and the questionnaire answers regarding adaptation help, it was discovered that the organization reports more adaptation help than the employees actually receive **(AF3)**. Looking at the number of adaptation help/checklist activities mentioned by HR showed 15 activities (they can be seen in Figure 9). During the interview the HR manager, Nadine Mohammed shared that in a single month they had hired 11 people. Having these two numbers in mind, the HR manager had a month in which she had to keep track of 165 tasks overall (Figure 17- a) without any checklists or systems in place. This greatly increases the likelihood of missing adaptation help with employees and not even having data pointing it out. The researchers became interested in creating standardization as it would increase quality (Evans & Lindsay, 2010) and having such checklists was also identified by Nadine as her '*dream world of inductions*' (Digital Appendix 1 – Interview with Nadine Mohammed). Therefore, having all these adaptation helps identified and scrutinized then placed in a list would make the process more structured, which would in turn help adaptation **(AF4)**. Going further, making a *digital profile* (see Figure 16- a, Inspired from CVs, LinkedIn or game profiles - see Annex 7) for each employee, where: (1) the employees would self update when they have had the adaptation help checklist and (2) the digital data would give signals/reminders/indications if adaptation help has not been present by the time expected, would reduce the load of activities from 165 different tasks to keeping track of just the 11 employees (see Figure 17- b). Then the HR manager can take the appropriate corrective or guidance actions, as it is characteristic for quality systems (Evans & Lindsay, 2010, ch. 3). Furthermore, such checklist can include tasks concerning the preparation for the arrival of an employee so everything is set and the company presents a favorable impression of its organization, as that is one of the goals of the orientation (Caruth, Caruth , & Haden, 2010). Digital data systematization would both reduce the

adaptation time consumption of the HR manager, and lead to a higher quality onboarding for the same time with less risks of gaps.

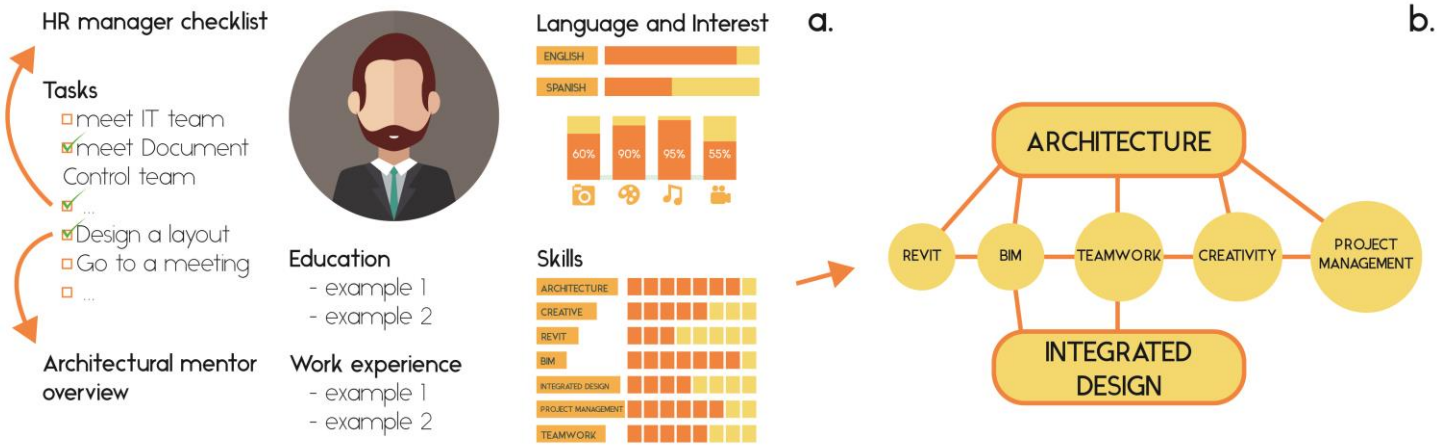


Figure 16: An employee company profile (a) with the mapping of his/her capabilities (b). By Koleva and Millers inspired by Annex 20 and Porter , 1996. Employee picture is from https://www.freepik.com/

Checklists and adaptation help are usually associated with HRM and are often controlled by the corresponding company department, the same way it is in the Bryden Wood case study. As such it is the responsibility of HR managers, like Nadine, to lead the entire adaptation process. The consequence becomes that all the adaptation help is being *pushed* onto the employees (Figure 17- a), rather than it being *pulled* (Figure 17- b) as according to *lean* concepts (Mehrsai, Thoben, & Scholz-Reiter, 2014; Gong & Blijleven, 2017). In other words, the new employees are rather *reactive* to the adaptation procedures, there are *two* main problems identified within this approach. The first one is that naturally to gain opportunities HR management would be interested in offering the adaptation help earlier as it would be better. However Klein, Polin, & Sutton, 2015 empirically studied the matter and discovered that adaptation help timing is more complicated than the "the sooner the better" approach. The research also points out that the optimal timing of onboarding activities depends on *'needs of the new employee, the specific practice, and how many practices are being offered'* (Klein & Polin, 2012). The second problem is that employee proactiveness is a more important variable to the success of onboarding practices (4.1 Organizational socialization, Klein, Polin, & Sutton, 2015). Those two problems identified in the current practices lead to a need for a different approach to the adaptation of the employee where they would be more *pulling* (Mehrsai, Thoben, & Scholz-Reiter, 2014) the information they need at the time they consider it relevant, which would also be a more *proactive behaviour* (Gong & Blijleven, 2017), which helps to speed adaptation. Translated in a practical way for companies, as in the case study, the HR manager would create the previously mentioned digital profiles of employees (Figure 16), they will lead the welcoming plus introduction and appoint a mentor to help with clarifying the work specifics **(AF10)**. From that point on it would however be the employee's task to fulfill the remaining parts of the checklist (or quest) and actualize their profile with the gained skills. It would *not* be the HR manager's or the mentor's task to introduce the new employee to the different teams but the employee would seek out such tasks themselves (Figure 17 - b) with the priority arrangement they consider to be most relevant in relation to their own case/pace/struggles. Then the employee will self-update their progress on the adaptation help checklist and skills developed. If presented to the employee as a type of

game (Vlachopoulos & Makri, 2017), it would increase cognitive learning and motivate being more active - **TCA15** (Vlachopoulos & Makri, 2017). This is further supported by the self determination theory, that giving people control and choices increases their motivation (Klein, Polin, & Sutton, 2015). As much as employees self-directed learning would be encouraged, Klein, Polin, & Sutton, 2015, Vlachopoulos & Makri, 2017 and the case study questionnaire **(AF5 and AF10)** suggest that guidance or mentorship throughout the process is what gives better outcome. According to Lisbon & Welsh, 2017, mentorship helps reduce anxiety and allows the new employees to ask questions, which helps respectively with **TCA5** and **TCA7**. So while dominantly the employee would be in charge of own adaptation, the mentor and HR manager (perhaps informally colleagues too) will provide guidance, support and feedback in order to gain better outcome on concerns as for example personal time management **(TCA10)**.

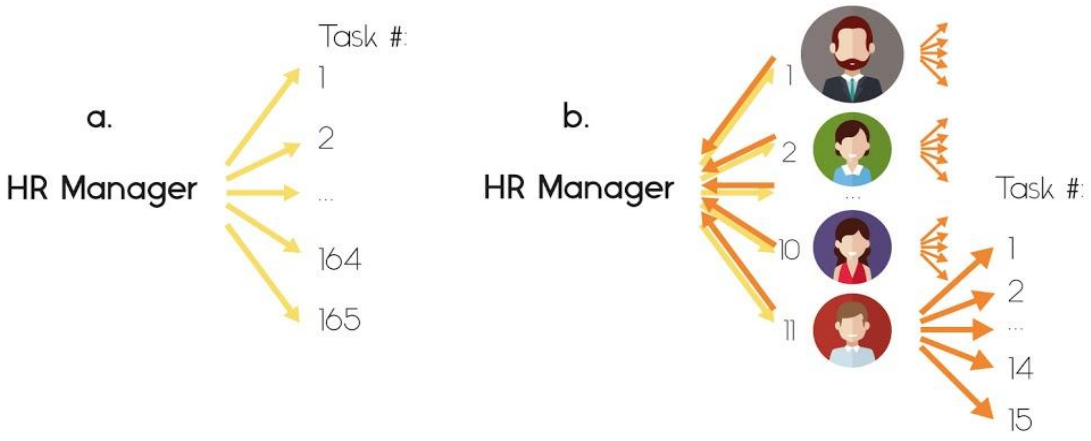


Figure 17: HR manager task management currently (a) and potentially (b). Made by Koleva and Millers inspired from case study analysis, Klein et al., 2015, Mehrsai et al. 2014 and Gond & Blijleven, 2017

Here are some of the additional to the TCAs time benefits of implementing such adaptation system:

- having just mentorship and guidance would require less time from more experienced employees in an organization
- the motivation of employees speeds up the adaptation practice
- the employee would be able to choose which adaptation practice is most needed at the corresponding time, making the effect of such help more optimal (Klein, Polin, & Sutton, 2015)
- even after the employee is adapted, they can continue developing their profile and capabilities further, which will help with other adaptation stages and TCAs, as explained in the following parts of this chapter.

If each of the employees in the company has his own profile or company avatar, which they are continuously updating personal development on skills, then the data can be used to map the contemporary capabilities (inspired by Porter, 1996 and Annex 7.1 CV2) in a visual way for each of the employees (see Figure 16 – b) which would built to the company's capabilities (Figure 18) - digitalization enables such models to be even more self-explanatory or perhaps even interactive. This solution is designed for integrated companies as the specialties merge and overlap into each other

(the research survey showed that even 77% of the new employees have developed skills outside of their own expertise field, with an average of developing into 3 other of the Bryden Wood capabilities, Appendix 3).

Because the employee profiles are continuously updated, then the company can take these capability maps (Figure 18) at time frequencies with little effort. Having the capabilities to take different snapshots over time would allow integrated companies to track their development throughout history to the present moment. Visualizing the evolvement could lead to conceptually something like the Figure 5 previously developed for visualizing the path dependency of Bryden Wood (see chapter 5.1.2 History, mission and vision). If applied to be coherent with the chapter 6.2 visualizations, it could conceptually be as in Figure 19.

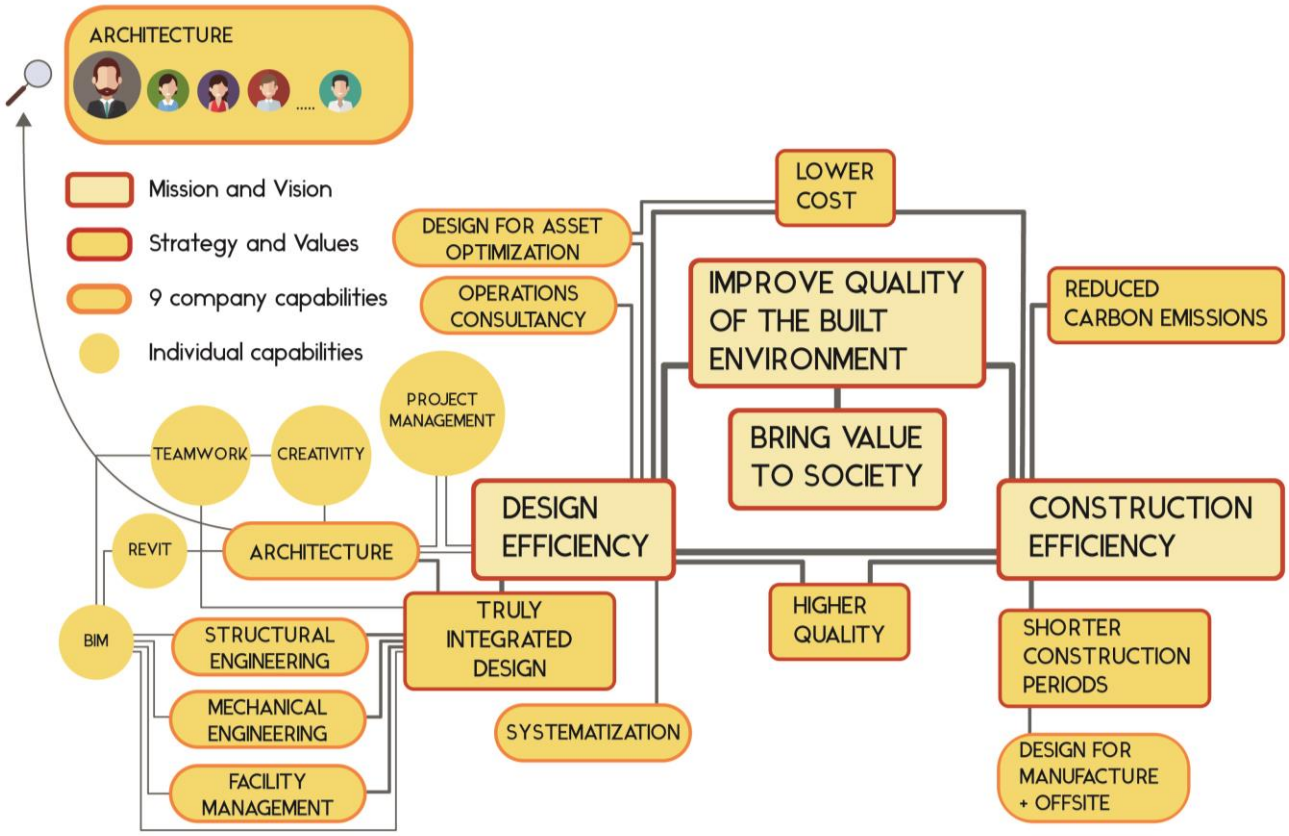


Figure 18: Idea for mapping the capabilities of a company, based on Porter, 1996 and Annex 231 (CV2). By Koleva and Millers based on case study data and concepts from Porter, 1996

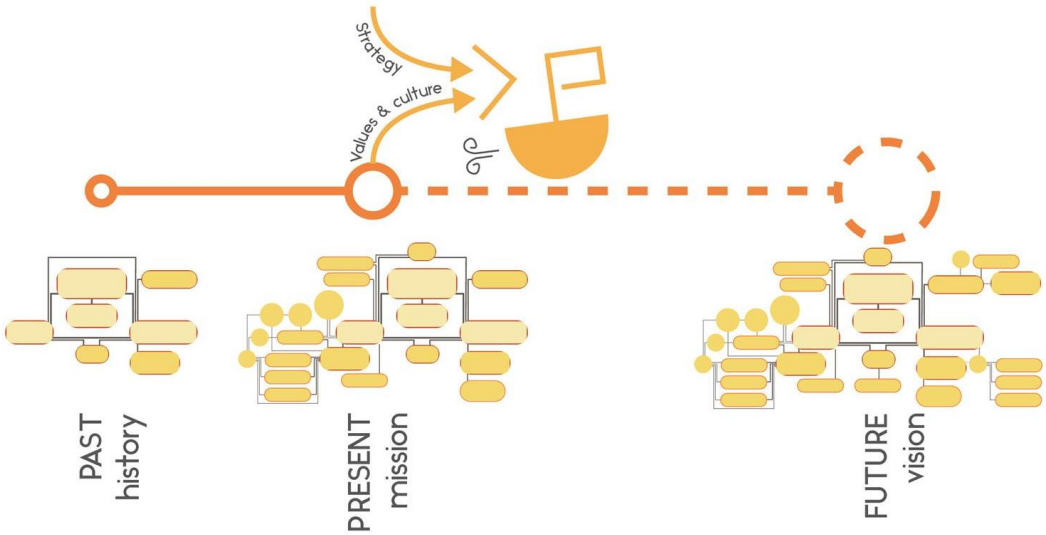


Figure 19: Idea for visualizing the History, Mission and Vision of companies. By Koleva and Millers based on previous report chapters

Mapping the capabilities, then having the history mapped with the suggested system would have many benefits for the strategic management of companies. However this research focuses only on the adaptation related advantages when such system is presented to and available for the new employees:

- A picture is worth a thousand words, the Hibbing & Rankin-Erickson, 2003 research in its core looks into of using '*...visual images to improve comprehension...*'. Therefore, by using visualization the company picture becomes more clear and leaves less space for uncertainty, which would speed up the **TCA3** with lesser time need for long and descriptive information to be presented by the guiding people.
- If such 2D (concept wise like in Figure 18 and Figure 19) or 3D or some kind of time representing visualization is placed in for example in a common area (as in one of the example cases of Kotter, 2002), people can continuously see the picture, contemplate on it and understand it better with its different aspects at the time the employee is questioning something specific (optimal timing, Klein, Polin, & Sutton, 2015). This will help the employees understand how all the different people, including oneself, and capabilities fit together and work together. It basically would picture the entire company integration as described in chapter 5.2, Figure 4 and Figure 5. This will be progress on understanding the company's internal and project processes **(TCA1.1 and TCA1.2)** and how they fit together **(TCA2)**. This would also be a progress **TCAs (1), (5) and (6)**.
- a picture is worth a thousand words, it doesn't just explain what is seen but also gives new ideas (Hibbing & Rankin-Erickson, 2003). The concept stimulates creativity and innovation - company values which the organization with this visualization stimulates.
- having this human capital capabilities mapping, additionally helps new employees identify who to turn to to ask questions or look for information **(TCA7, TCA13, consequently TCA3)**. If additionally in this company profile system peers could also enhance other peers (perhaps similar to how Alterman & Harsch, 2016 observed or as in the LinkedIn example, Annex 7.2). This would make even better ranking between the same skill level in different employees, which could help the employee to choose who to turn to depending on the matter they are interested in.
- human capital capabilities visualization also represents part of the organization and who fits where, how (**TCA9**; 4 Adaptation theories review "Content").
- If the company desires certain behaviour or skills development as part of its strategy, they can easily identify the employees who have it and reward people who are developing it. Recognition is an another organizational assimilation driver (Gailliard, Myers, & Seibold, 2010). Rewards and acknowledgement enhance motivation and behaviour in the desired way (Ker, 1995). This further helps aligns the employee with the company direction.

The previous job performance clarification point also completes the last purpose of the orientation of new employees (Caruth, Caruth , & Haden, 2010) and leads to the **adjustment stage** (see chapter 4.1). However, there is not a strict border line between the different adaptation stages, so at the end of the orientation part of the adjustment is already in process. For example, concerning the accommodation of the self-image aspect, the personal profile already does that through the motivation to develop that company avatar/profile. Also the previously described orientation changes stimulate different values development (proactiveness, dynamic, questioning, creative, and etc.).

TCA11 is concerning flexibility, agility and rapid changes. Adaptation process itself is to a great extent a change - new employee adapts from outsider to integrated and effective insider (Cooper-Thomas & Anderson, 2006). According to Kotter, 2002 one of the reasons people are resisting to change is because of their previous negative experience with it. By managing the adaptation in a more motivated and game-like enjoyable experience, then that would create positive feelings about the initial changes a newcomer would undergo. John Kotter in his change management literature involves a *momentum* concept that basically is about gaining speed on changes - making small steps with fast results to gain momentum for the bigger changes. So by making the relatively short adaptation process positive experience for the new employees and gaining the first small adaptation change help steps in a free way, it will help gaining a momentum (linked with increase in speed) on their flexibility and agility (reducing **TCA11**).

Perhaps here is also where the time consuming barriers linked to adaptation would be overcome. While the orientation solved or initiated the process of solving many TCAs, there are still some TCAs left: **4)** understanding standards, **8)** switching from university/previous job to the current job, **12)** software, and **14)** language. Different employees will have different skills and levels they are on on each of the mentioned aspects. So an universal solution to them would either lead to giving more or giving less support than needed, making the process *not* optimal. Which is why rather than a specific solution for each, the researchers would suggest an approach for when an employee meets difficulties. This also would help smoother the differences between the difficulties Bryden Wood and other integrated companies might have. Having explained that, the approach the researchers are overall suggesting and focusing on is creating the *proactive and questioning* values in new employees. Then instead of the organization investing more or less resources than necessary, they would be as much as needed because it is based on identification from the new employee themselves.

With continuous work in the so far described environment and with guidance from the mentor, these adjustments become more and more present, making the employee more adapted. As the environment starting from the orientation is modified to promote better adaptation process, then it simply becomes a question of time to complete this stage as well.

The more an employee is considered adjusted to the environment and to the company, the more they start to shift into the **stabilization stage**. According to Ashforth, Sluss, & Saks, 2007, one of the criterias in this stage is the integration into a group. As according to social identity theory, '*human beings tend to identify themselves with some groups*' (Teng, 2017). When having the human capital capabilities mapped and visible, just by having a company profile linked in the system and that visualization would help the new employees identify their own placement in the system. It could be also the initial identification to navigate the employee to his group, a better starting point which would reduce the stage time.

The stabilization also may include promotions, which can easily be acknowledged based on the progress the employee has made throughout the time in the organization. Additionally, that organizational assimilation would yield less and less adaptation related questions and leave just the integration or discipline questions, making the mentorship redundant and thereafter terminated. All together, this will complete the stabilization stage and the onboarding process, making the employee adapted to the company identity and direction.

On the way to completion of the suggested time solution for adaptation, most of the TCAs (10 out of 15) were directly addressed and the remaining were given more optimizing principles as solutions. Additionally, other time complimentary overall ideas were implemented. Keeping in mind the way a TCA was defined as not having a specific numerical values, the overall adaptation reduced time would also not have a specific numerical time or adaptation change value as it is individual to each single employee. Nevertheless, by optimizing the different aspects or segments, then the whole process is better optimized. Conceptually what has been reached would be time saved from the difference of the time (Δt) between the performance improvement curves before (solid line) and potentially after (dashed line) the suggested new practice (see Figure 20). The employee Δt (in addition to the organization experienced employees time saved) is also the resource which the company gains opportunity to invest elsewhere and benefit from. Furthermore, the company does not just benefit from the time opportunity gained but also from the increased performance of the employee throughout the process (A').

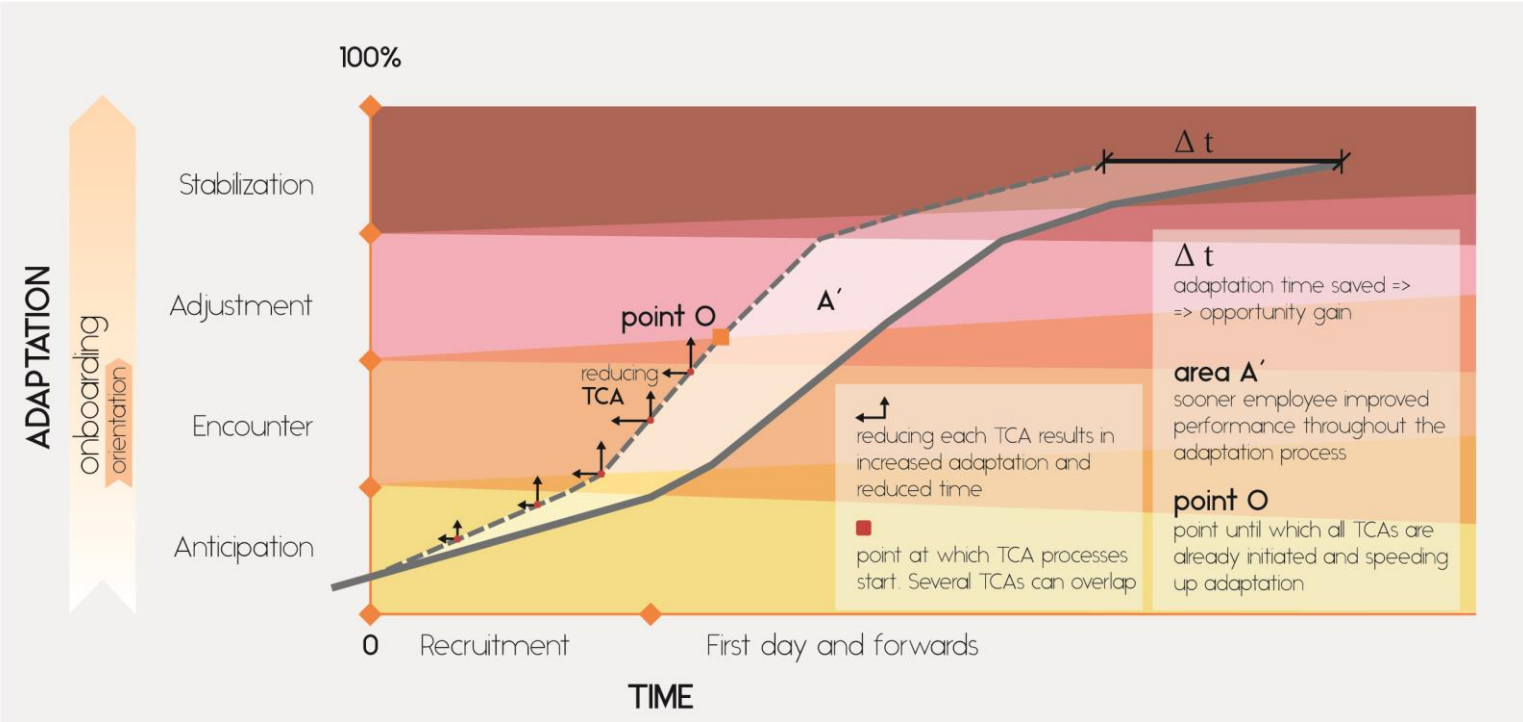


Figure 20: Conceptually visualizing the time saved. The curves and their specific shifts would be specific for each employee. By Koleva and Millers based on previous report chapters.

When theoretically reaching the less time consuming adaptation of new employees, that is also when the research goal is reached. The report conclusion provides the more summarized answer to the initial employee adaptation research question.

7. Conclusion

The research topic for this Master Thesis is employee adaptation. It has been discussed (see Chapter 2 Research question) that the onboarding is resource occupying where emphasis was placed on the time consumption it has from the newcomers and the more experienced employees or the organization itself. As BIM and integrated companies are considered the concurrent and future method of work in the building industry, the problem revolves around the *opportunity loss* from this time consumption specifically for integrated companies. This led to the following time *opportunity gain* orientated research question (followed by its sub-questions):

How to speed up the adaptation process in integrated companies?

What are the company identity and direction, procedures and processes new employees adapt to?

In order to find a solution to the main problem, the research had to increase an understanding on the *company identity and direction, then the procedures and processes* new employees undergo in concurrent and advancing BIM companies. Bryden Wood Ltd. is a multidisciplinary company which is proactive in the building industry, and therefore has been investigated as a case study. Data was collected through various methods (see chapter 3. Methodology). It has been discovered that there is *path dependency* which the company has been developing through its history to its present mission while projecting the future vision. As integrated the past, present and future of the company is, all of the other company aspects are as equally integrated. The mindset of integration (Chapter 5.2) is not just while applying IPD but also throughout the organization levels, its value chain, the different specialties. Even considering the strategy PDCA cycles, they upbuild on each other also making them overlap and merge. The values and culture are also aligned with the organization coherency. Looking at the questionnaire, the employees dominantly develop knowledge in additional disciplines. This makes the companies very interlinked, complete, and coherent. The integration idea is that there are general rules, mission, vision that unite everyone but each element has to contribute with its own uniqueness to support the organization identity and direction. Concerning the specific adaptation practices and procedures employees undergo (Chapters 5.3 and 5.3), it was discovered that Bryden Wood has a good adaptation strategic intention and practices. However, the questionnaire showed that the process is not as structured as intended and has gaps.

What are the adaptation factors (AFs) and time consuming aspects (TCAs)?

Different adaptation factors were discovered which would speed up adaptation, such as: structured onboarding, mentorship and meetings with other teams, attending social events, lesser previous experience, younger age, etc. A more interesting finding was that there is no correlation between time spent in company and extent of adaptation. Newcomers would also discover things in different order, regardless of the fixed procedure, as the knowledge assimilation is linked to the time the adaptation help is considered relevant by the individual (Klein, Polin, & Sutton, 2015). The previous two sentences support that each employee adaptation curve (blue solid line in Figure 21) would be different depending on the person's own unique identity. Even through the process timings are unique for each employee, through the employee questionnaire, fifteen common Time Consuming

Aspects were decoded. All of them were associated with a specific characteristic of the company's identity and direction.

What is a potential new TCAs speeding up best practice concerning employee adaptation for Bryden Wood and other integrated companies?

The understanding of the (1) integration company specifics/characteristics, processes and procedures, (2) Adaptation Factors, (3) Time Consuming Factors was used as a base to develop a complementary coherent adaptation speeding up practice (Chapter 6). First the *anticipation onboarding process*, concerning the recruitment, several suggestions were made. Closer collaboration with universities could benefit the company several ways - mainly fresh knowledge, younger employees and proactivity, which is crucial to fast adaptation. Another suggestion was concerned with team members taking part in the interviewing and decision making process since they are the ones who will be working with the new employees the closest. Stars attract more stars and employing the best in industry could attract highly proactive and motivated people. Although already practiced in the company, goal congruence is highly beneficial to adaptation. Finally, knowledge mapping could help in understanding what knowledge the company has and needs and could help to plan in advance.

The second *encounter stage including the orientation process*, linked to the first period of employment, was structured and scrutinized. Suggestion was made to make the initial first workday date closer to social events. Also a more proactive employee adaptation method was suggested where after the company welcome, the newcomers would be in charge of going through their adaptation checklist. Nevertheless, HR manager and a mentor would be assisting and overviewing the process to increase the outcome for the time used. By having the employee empowered and enhanced to be proactive, they would be able to taylor the adaptation processes and procedures in most relevant for them order to optimize their own adaptation curve.

By having company profiles for each organization employee, the newcomers can digitally update their process with the gained skills and accomplished tasks. This way the HR management can have an less time consuming procedure while also significantly reducing chances of adaptation gaps. The employee profiles could help map the individual capabilities. Then the joined profiles would also present the whole organizational capabilities mapping - which makes it easier to understand the bigger integration picture and how everything works in coherency, including with understanding of where the individual uniqueness fits in the general whole. When records of such capabilities mapping is present, the company can easily visualize also its path dependency, which would help the employee catch the pattern and understand better the strategy and vision of the organization, besides the concurrent mission, culture and values. At the end of the onboarding, the *adjustment and stabilization* stages goals development would be already initiated, needing some time to settle and complete as well.

The above explained solution speeds up directly ten of the fifteen TCAs identified. The remaining TCAs solutions would have to be tailored more specifically to each individuals already established progress which would be cumbersome. Therefore by having the questioning and proactivity values, the employees can give identification of the special need they would have which would assist the company giving optimal help. This solves the remaining five TCAs indirectly. By reducing all the time consumption, the the adaptation process would be sped-up. Looking at the even bigger picture, by having the employee empowered with his own adaptation, it would (1) reduce the effort the

company invests, (2) give better adaptation for the time with less excessive used time deviations, if excessiveness would be even present after the suggested optimization. This paragraph leads to the answer of the adaptation research question:

By having a solution for reducing each TCA and genreral optimization suitable for each employee, the entire adaptation process for integrated companies would be developed sooner.

Going to the original reasoning of why the topic is relevant to companies, looking at Figure 21 and the Δt time saved from adaptation (in addition to the organization experienced employees time saved), it could be used to reinvest elsewhere harvesting greater benefits for the company. Furthermore, even while in the adaptation process itself, the newcomers would be able to increase their performance (A') faster. By adapting the employee to the company identity and direction sooner, an integrated company can utilize its employee learning and growth perspective better and thereafter also the remaining internal, client and financial perspectives from the Balanced Scorecard.

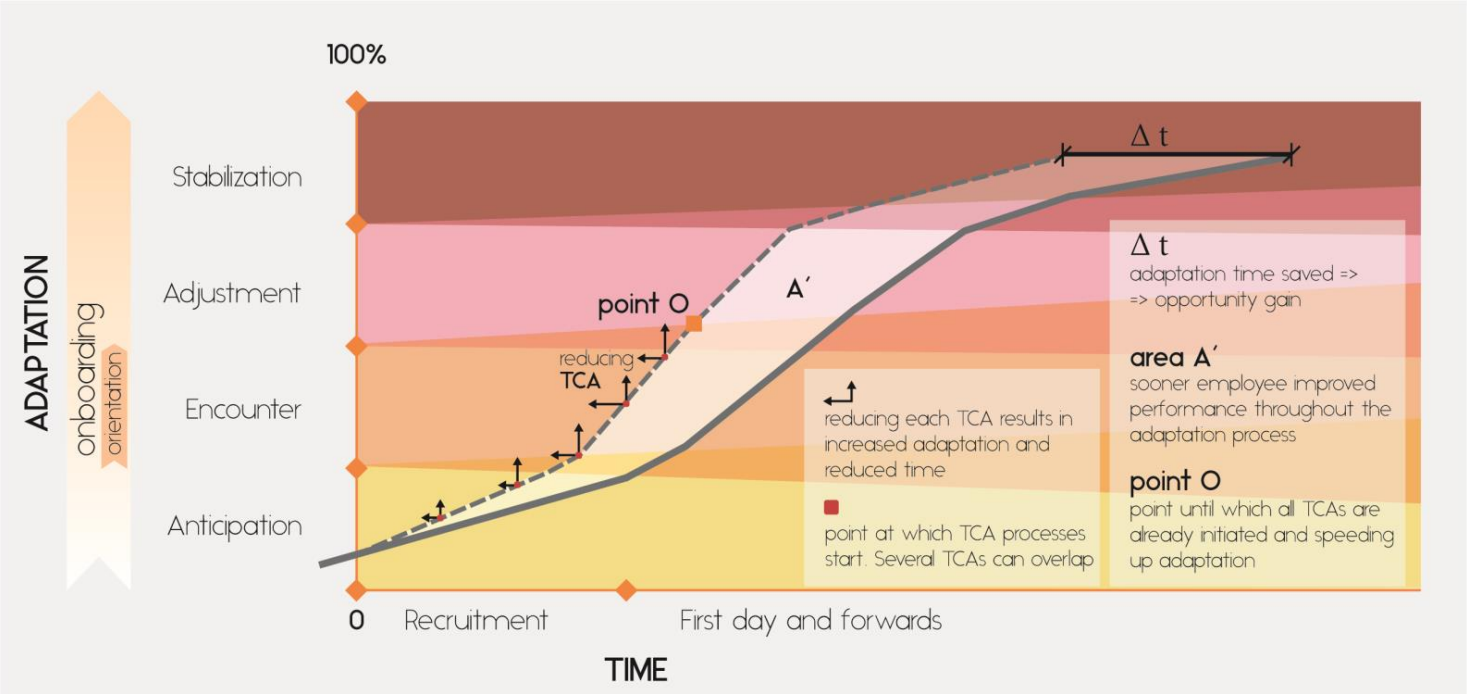


Figure 21: Conceptually visualizing the time saved. The curves and their specific shifts would be specific for each employee. By Koleva and Millers based on previous report chapters.

Perspectives

While developing the Master Thesis topic, the research considered potential perspectives:

- It would be interesting to see if such adaptation new practice can be used in integration organizations which are not under the same company name. In other words: Could architects, engineers, etc. have their own companies and still apply such system to work and fit better together to deliver more integrated projects as well (Franz, Leicht, Molenaar, & Messner, 2017)?
- '*Generation Y expects to have five to seven major career changes'* (Lamoureux, 2008), which would cause more, compared to previous generations, time consumption in the whole building industry. Would the suggested new practice be the direction which could be reducing time on industry level, if each company has such profiles and the job switching costs are lower?
- Similar to the PDCA cycles, when a better standard is reached and for example this practice is empirically tested and established, what would the next development be? Which areas within this solution be needed for optimization after the knowledge gained?
- virtual reality, BIM, open innovation and gaming are some of the trends which are increasing (respectively Dulebohna & Hoch, 2017; Papadonikolaki, Verbraeck, & Wamelink, 2017; de Paulo, Carvalho, Costa, Lopes, & Galina, 2017; and Huang, Cheng, Huang, & Teng, 2018). Also there are case studies showing that people do not need to have offline face-to-face communication to achieve tasks and have social relationships (Olaisen & Oivind, 2017). How would those increasing trends enhance the suggested practice in future?

The Conclusion together with the perspectives close the research topic, leaving only the discussion on validity and reliability.

8. Validity and reliability of the research

All research studies must be open for evaluation and critique. Evaluation of studies is an essential prerequisite of the application of findings. Ambiguous or meaningless findings may result in wasted time and effort, while findings which are simply wrong could result in the adoptation of dangerous or harmful practices. Traditionally, such evaluation is based on assessment of reliability and validity (Long & Johnson, 2000).

Validity refers to ensuring the use of adequate operational measures for the concepts under the investigation - how well a test measures what it is supposed to measure. **Reliability** is concerned about the degree to which stable and consistent results are produced - consistency of results over a variety of conditions. Although validity and reliability are terms mainly used in quantitative or positivist research, where statistical analysis and clear numbers are employed, these terms partially apply to a qualitative research as well. Prion & Adamson, 2014 are suggesting the following interpretations for validity and reliability for qualitative research.

Generally, **rigor** in qualitative research can be very loosely compared with reliability and validity for quantitative research. In 1985, Lincoln and Guba , pioneers of qualitative research, outlined four criteria for rigor and they are: credibility, transferability, dependability, and conformability (Lincoln & Guba, 1985).

Credibility is the truthfulness of the data and its interpretation. Methods for ensuring credibility include validating the data, validating the results, and confirming the interpretations by asking the participants and other experts to review the data coding and conclusions about meaning based on those codes. Concerning this research, QA was done by few independent people involved with AEC industry, providing more unbiased view on the matter. The applicability of the study results to other populations in different contexts is known as transferability. The reader can determine the **transferability** of the results if the researcher has provided a thorough description of the research methodology. **Dependability** is also known as auditability. It refers to the ease with which readers and other researchers can follow the original researcher's decision-making process during the study and reach similar conclusions. A key determinant of dependability is the availability of a thorough description of the research methodology. **Conformability** or neutrality is the absence of researcher bias and assumption or the clear delineation of the researcher's perspective.

With all this in mind, the authors of this research took into account some considerations concerning this topic. A summary of them follows.

Some industries are more researched than others. Often, while focusing only on one industry or situation, one can miss wider perspectives. Moreover, looking to divergent industries and environments often can add variety to the research and even draw some inspiring ideas. However, this comes at a cost. While the authors of this research often used literature and research from other environments (libraries, schools, hospitals among others), there was considerably low proportion of articles from architecture, construction and engineering (AEC) industry. This may add to possible errors because of peculiarities of AEC field. On the other hand, it borrows ideas from other fields.

While authors of this research have obtained both theoretical knowledge and hands-on experience in AEC processes, they have had limited exposure to the field of HR. The understanding of this territory was obtained through research and reading of various papers, books and articles. While this gave some insight in general processes of HR, it may have led to some errors. This research could definitely benefit from deeper understanding of common HR processes.

Although there is plenty of information and software available for designing surveys, experience comes from doing. For the authors of this report this was the first major encounter of designing a survey. Even though useable and valid data was obtained, there is still area for improvement in designing a survey.

Concerning dependability, the limitations of this research include survey sample size that may be too small. Even though the response rate was 50%, a survey of 35 respondents may not be completely reliable.

Even though there are plenty of architectural practices, Bryden Wood is slightly different from others. Integrated design companies are not that common in AEC field. As this is not a traditional practice, there is no commonly agreed working workflow as it is with traditional architectural practices (D-B or D-B-B to name a few). Therefore each integrated design company can be considered unique. Consequently, the results may slightly differ when applied to other integrated design practices affecting transferability.

On the other hand, authors of this research relied heavily on triangulation. This means that at least two sources were used to validate conclusions and results. This adds to the credibility of this research.

The questionnaire is a critical part of this survey. To increase the quality of this survey, a pilot study was distributed among small sample of people connected with building industry. Subsequent changes were made where necessary. This ensured that the survey is understandable and the response rate is higher as well as results are more reliable due to improved understanding of questions.

On top of that, the authors had supervisor meetings scheduled regularly. Minutes of meetings were kept and suggestions carefully used to improve the quality of the survey, interviews and report chapters.

Although there always is a space for improvement, considering all the above mentioned, the authors of this paper consider the research to be valid and reliable enough to be used as insight in the particular subject.

9. Bibliography

Agarwal, A., Shankar, R., & Tiwari, M. K. (2006). Modeling the metrics of lean, agile and leagile supply chain: An ANP-based approach. *European Journal of Operational Research* , 211-225.

Ahlersten, K. (2008). *Essentials of Microeconomics.* Bookboon.

Allee, E. C. (2012). *New Employee Orientation: A Survey of Participant Experiences and Self-Report Outcomes.* The Chicago School of Professional Psychology, ProQuest Dissertations Publishing.

Allied Van Lines Ltd. (2012). *Onboarding and Retention*. Retrieved from Allied Workforce Mobility Survey: http://hriq.allied.com/

Alterman, R., & Harsch, K. (2016). A more reflective form of joint problem solving. *International Journal of Computer-Supported Collaborative Learning* , 9-33.

Ansoff, H. (1998). *Corporate Strategy.* Penguin.

Ashforth, B. E., Sluss, D. M., & Saks, A. M. (2007). Socialization tactics, proactive behavior, and newcomer learning: Integrating socialization models. . *Journal of Vocational Behavior, vol. 70, iss. 3* , 447-462.

Bryden Wood. (2017). Architecture and Integrated Design Vision and Context.

Bryden Wood. (2017, November). *BIM Level 2 - Industry leading BIM*. Retrieved from brydenwood: https://www.brydenwood.co.uk/capabilities/bim-level-2/s2414/

Bryden Wood. (2017, October). *Bryden Wood*. Retrieved from brydenwood: http://www.brydenwood.co.uk

Bryden Wood. (2016). Bryden Wood Limited QMS.

Bryden Wood. (2017, October). *Careers*. Retrieved from brydenwood: http://www.brydenwood.co.uk/careers/115/

Bryden Wood. (2017, October). *How we work*. Retrieved from brydenwood: https://www.brydenwood.co.uk/about-us/how-we-work/s2125/

Bryden Wood. (2017, October). *Martin Wood*. Retrieved from brydenwood: http://www.brydenwood.co.uk/team-members/martin-wood/s4973/

Bryden Wood. (2017, October). *Projects*. Retrieved from brydenwood: https://www.brydenwood.co.uk/projects/59/

Brydon Wood. (2017, October). *Circle Reading Hospital*. Retrieved from brydenwood: https://www.brydenwood.co.uk/projects/circle-reading-hospital/s1121/

Byford, M., Watkins, M. D., & Triantogiannis, L. (2017). *Onboarding isn't enough.* Harward Business Review.

Caruth, D., Caruth , G., & Haden, S. (2010). Getting off to a good start. *Industrial Management , 52* (2), 12-15,5.

Chan, D., & Schmitt, N. (2000). Interindividual differences in intraindividual changes in proactivity during organizational entry: A latent growth modeling approach to understanding newcomer adaptation. . *Journal of Applied Psychology , 85* (2), 190-210.

Chao, G. T., O'Leary-Kelly, A. M., Wolf, S., Klein, H. J., & Gardner, P. D. (1994). Organizational Socialization: Its Content and Consequences. *Journal of Applied Psychology, vol. 79* , 730-743.

Chapman, C. (2009). Retention begins before day one: orientation and socialization in libraries. *New Library World* , pp.122-135.

Chen, G. (2005). Newcomer Adaptation in Teams: Multilevel Antecedents and Outcomes . *The Academy of Management Journal, vol. 48* , 101-116.

Coff, R., & Kryscynski, D. (2011). Drilling for Micro-Foundations of Human Capital–Based Competitive Advantages. *Journal of Management* , 1429-1443.

Cooper-Thomas, H. D., & Anderson, N. (2006). Organizational socialization: A new theoretical model and recommendations for future research and HRM practices in organizations. *Journal of Managerial Psychology, vol.21* , 492-516.

Cooper-Thomas, E., & Burke, S. (2012). Newcomer proactive behavior: Can there be too much of a good thing? In C. Wanberg (Ed.), *The Oxford Handbook of Organizational Socialization* (pp. 56 - 77). Oxford Library of Psychology.

Creswell, J. W. (2009). *Research Design - Qualitative, Quantitative, and Mixed Methods Approaches.* Sage Publications Inc.

Darroch, J. (2005). Knowledge management, innovation and firm performance. *Journal of Knowledge Management* , Vol. 9 Iss 3 pp. 101 - 115.

de Paulo, A. F., Carvalho, L. C., Costa, M. T., Lopes, J. E., & Galina, S. V. (2017). Mapping Open Innovation: A Bibliometric Review to Compare Developed and Emerging Countries. *Global Business Review* , 291-307.

Donaldson, G. (1985). Financial goals and strategic consequences. *Harvard Business Review* .

Dulebohna, J. H., & Hoch, J. E. (2017). Virtual teams in organizations. *Human Resource Management Review* , 569-574.

Ebbesen, R. M., & Ussing, L. F. (2007). Tendering for personal competencies -. *Department of Production, Aalborg University* .

Evans, J. R., & Lindsay, W. M. (2010). *The Management and Control of Quality, 8th ed.* South-Western, Cengage Learning.

Franz, B., Leicht, R., Molenaar, K., & Messner, J. (2017). Impact of Team Integration and Group Cohesion on Project Delivery Performance. *Journal of Construction Engineering and Management* .

Gailliard, B. M., Myers, K. K., & Seibold, D. R. (2010). Organizational Assimilation: A Multidimensional Reconceptualization and Measure. *Management Communication Quarterly, vol. 24(4)* , 552-578.

Gong, Y., & Blijleven, V. (2017). The role of Lean principles in supporting knowledge management in IT outsourcing relationships. *Knowl Manage Research and Practice* , 533–541.

Graybill, J. O., Carpenter, M. T., Offord, J., Piorun, M., & Shaffer, G. (2013). Employee onboarding: identification of best practices in ACRL libraries. *Library Management, vol.34* , 200-218.

Gunasekaran, A. (1998). Agile manufacturing: Enablers and an implementation framework. *International Journal of Production Research* , 1223-1247.

Haimes, Y. Y. (2004). *Risk Modeling, Assessment and Management.* John Wiley & Sons, Inc.

Hibbing, A. N., & Rankin-Erickson, J. L. (2003). A Picture Is Worth a Thousand Words: Using Visual Images to Improve Comprehension for Middle School Struggling Readers. *The Reading Teacher* , 758-770.

Huang, H.-C., Cheng, T., Huang, W.-F., & Teng, C.-I. (2018). Impact of online gamers' personality traits on interdependence, network convergence, and continuance intention: Perspective of social exchange theory. *International Journal of Information Management* , 232-242.

Ingenhoff, D., & Fuhrer, T. (2010). Positioning and differentiation by using brand personality attributes: Do mission and vision statements contribute to building a unique corporate identity? *Corporate Communications, vol. 15* , 83-101.

Johnson, G., Whittington, R., Scholes, K., Angwin, D., & Regner, P. (2014). *Exploring Strategy, 10th ed.* Pearson Education.

Kaplan, R. S., & Norton, D. P. (2000). Having Trouble with Your Strategy? Then Map It. *Harvard Business Review* .

Ker, S. (1995). On the folly of rewarding A, while hoping for B. *The Academy of Management Executive, vol. 9* , 7-14.

Klein, H. J., & Heuser, A. E. (2008). The learning of socialization content: A framework for researching orientating practices. *Research in Personnel and Human Resources Management* .

Klein, H. J., & Polin, B. (2012). *Are organizations on board with best practices onboarding? Chapter in C. R. Wanberg (Ed.), Oxford library of psychology. The Oxford handbook of organizational socialization.* Oxford University Press.

Klein, H. J., Polin, B., & Sutton, K. L. (2015). Specific Onboarding Practices for the Socialization of New Employees. *International Journal of Selection and Assessment* , Volume 23.

Klein, J., Fan, J., & Preacher, K. (2006). The effects of early socialization experiences on content mastery and outcomes: A mediational approach. *Journal of Vocational Behavior , 68* (1), 96-115.

Koleva, Y., Fazekas-Ghinea, A.-L., Shrestha, D., Ólafsson, H. J., Stavrovská, I., & Milovidova, V. (2017). TL Byg strategy - now and in the future. *AAU student report* .

Kotter, J. (1996). *Leading change.* Harvard Business School Press.

Kotter, J. (2002). *The Hearth of Change.* Boston: Harvard Business School Press.

Kristensen, E., Nielsen, D. B., Jensen, L. N., Vaarst, M., & Enevoldsen, C. (2008). A mixed methods inquiry into the validity of data. *Acta Veterinaria Scandinavica* .

Lamoureux, K. (2008). Strategic Onboarding: Transforming New Hires into Dedicated Employees. *Research Bulletin* .

Lawson , K. (2006). New Employee Orientation Training. Trainer's Workshop Series. Burlington Elsevier.

Lincoln, Y., & Guba, E. (1985). *Naturalistic Inquiry.* SAGE Publications.

Lisbon, A. H., & Welsh, M. E. (2017). Building A Cloud-Based Onboarding Guide for New Academic Librarians. *Library of Leadership & Management* , volume 31.

Long, T., & Johnson, M. (2000). Rigour, reliability and validity in qualitative research. . *Clinical Effectiveness in Nursing* (4), 30–37.

Mackenzie, N., & Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. *Educational Research* , vol. 16.

Mehrsai, A., Thoben, K.-D., & Scholz-Reiter, B. (2014). Bridging lean to agile production logistics using autonomous carriers in pull flow. *International Journal of Production Research* , 4711-4730.

Millers, M., Bagdonas, P., Mikutas, G., Vepstaite, V., & Zafeirakis, G. (2017). Facilitating growth through knowledge management. *AAU student report* .

Niessen, C., Swarowsky, C., & Leiz, M. (2010). Age and adaptation to changes in the workplace. *Journal of Managerial Psychology , 25* (4), 356-383.

Oakes, K. (2012). How long does it take to get fully productive? *Training Industry Quarterly* .

O'Gorman, K., & MacIntosh, R. (2015). *Research Methods for Business & Management: A Guide to Writing Your Dissertation, 2nd ed.* Goodfellow Publishers Ltd.

Olaisen, J., & Oivind, R. (2017). Working smarter and greener: Collaborative knowledge sharing invirtual global project teams. *International Journal of Information Management* , 1441-14448.

Papadonikolaki, E., Verbraeck, A., & Wamelink, H. (2017). Formal and informal relations within BIM-enabled supply chain partnerships, Construction Management and Economics. *Construction Management and Economics* , 531-552.

Perez-Sanchez, J. C., Mora-Garcia, R. T., Perez-Sanchez, V. R., & Piedecausa-Garcia, B. (2017). FROM CAD TO BIM: A NEW WAY TO UNDERSTAND ARCHITECTURE. *WIT Transactions on The Built Environment* , 1746-4498.

Porter, M. (2004). *Competitive Advantage.* Free Press.

Porter, M. (1998). *Competitive Strategy.* Free Press.

Porter, M. E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors.* Free Press.

Porter, M. E. (1996). What Is Strategy? *Harvard Business Review* .

Prion, S., & Adamson, K. (2014). Making Sense of Methods and Measurement: Rigor in Qualitative Research. *Clinical Simulation in Nursing. , 10* (2), e107–e108 .

Ren, T., & Hamann , D. (2015). Employee value congruence and job attitudes: the role of occupational status. *Personnel Review , 44* (4), 550-566.

Saks, A. M., Gruman, J. A., & Cooper-Thomas, H. (2011). The neglected role of proactive behavior and outcomes in newcomer socialization. *Journal of Vocational Behavior, vol. 79* , 36-46.

Shaikh, A. A., Raju, R., Malim, N. L., & Jayaraj, G. K. (2016). Global status of Building Information Modeling (BIM) - A Review. *International Journal on Recent and Innovation Trends in Computing and Communication* , 300 - 303.

Smith, D., & Tardif, M. (2009). *Building Information Modelling - A strategic Implementation Guide.* John Wiley & Sons, Inc.

Teng, C.-I. (2017). Impact of avatar identification on online gamer loyalty: Perspectives of social identity and social capital theories. *International Journal of Information Management* , 601-610.

The American Institute of Architects. (2007). *Integrated Project Delivery: A Guide.* s.l.:AIA | AIA CC.

Toldbod, T. (2017). Balanced Scorecard and Strategy Maps. Aalborg University .

Van Maanen, J. E., & Schein, E. H. (1977). Toward a theory of organizational socialization. *Annual review of research in organizational behavior, vol.1* .

Vaus, D. (2001). *Research Design in Social Research.* SAGE Publications.

Verlander, E. G., & Evans, M. R. (2007). Strategies for Improving Employee Retention. *Clinical Leadership & Management Review, vol.21* .

Vlachopoulos, D., & Makri, A. (2017). The effect of games and simulations on higher education: a systematic literature review. *International Journal of Educational Technology in Higher Education* .

Yin, R. K. (2009). *Case Study Research. Design and Methods, 4th ed.* SAGE Inc.

10. Table of Figures

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Appendix 1 - Questionnaire, Answer Frequency and Ratio

What is your gender?

	Respondents	Percent
Female	14	40.0%
Male	21	60.0%
Total	35	100.0%

What is your education?

	Respondents	Percent
Bachelors degree	12	34.3%
Masters degree	19	54.3%
PhD	1	2.9%
Other training	3	8.6%
Total	35	100.0%

How many years of experience have you had within your speciality, prior to you current job?

	Respondents	Percent
None	6	17.1%
0-1	4	11.4%
1-2	6	17.1%
2-3	6	17.1%
3-4	3	8.6%
4-5	0	0.0%
5-6	1	2.9%
6-8	3	8.6%
8-10	3	8.6%
10+	3	8.6%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I feel adapted to Bryden Wood

	Respondents	Percent
Strongly disagree	0	0.0%
Disagree	3	8.6%
Neither agree or disagree	7	20.0%
Agree	16	45.7%
Strongly agree	9	25.7%
Total	35	100.0%

Please rate your level of agreement with the following statements: - Bryden Wood prepared me well for my first work day

	Respondents	Percent
Strongly disagree	1	2.9%
Disagree	7	20.0%
Neither agree or disagree	11	31.4%
Agree	12	34.3%
Strongly agree	4	11.4%
Total	35	100.0%

Please rate your level of agreement with the following statements: - The expectations I had while applying for my job is what I do at my job

	Respondents	Percent
Strongly disagree	0	0.0%
Disagree	4	11.4%
Neither agree or disagree	10	28.6%
Agree	18	51.4%
Strongly agree	3	8.6%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I have/had someone guiding me through my duties

	Respondents	Percent
Strongly disagree	0	0.0%
Disagree	7	20.0%
Neither agree or disagree	9	25.7%
Agree	13	37.1%
Strongly agree	6	17.1%
Total	35	100.0%

Please rate your level of agreement with the following statements: - Depending on the issue I know who I can turn to for guidance

	Respondents	Percent
Strongly disagree	0	0.0%
Disagree	1	2.9%
Neither agree or disagree	9	25.7%
Agree	14	40.0%
Strongly agree	11	31.4%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I have a clear understanding of what I have to do for my job

	Respondents	Percent
Strongly disagree	0	0.0%
Disagree	3	8.6%
Neither agree or disagree	5	14.3%
Agree	20	57.1%
Strongly agree	7	20.0%
Total	35	100.0%

List the adaptation help you have had so far.

	Respondents	Percent
Prior to my first work day, an e-mail explaining my job	13	37.1%
Welcoming by the Human Resource Manager	34	97.1%
New-starter handbook	25	71.4%
I had someone explain the new-starter handbook	16	45.7%
I had someone explain how I should perform my day-to-day work	14	40.0%

I was appointed a mentor	8	22.9%
Health and safety information	26	74.3%
I had guidance on how to fill-in my time sheets and personal company documents	21	60.0%
Guidance showing me with the BIM standards the company works according to	12	34.3%
Meeting with the document control team	6	17.1%
Meeting with IT team	7	20.0%
Meeting with the communication team	4	11.4%
Meeting with the integration team	7	20.0%
Meeting with a quality management group	4	11.4%
People from different disciplines were coming to me	10	28.6%
Other	3	8.6%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I visit all the social events at Bryden Wood

	Respondents	Percent
Strongly disagree	3	8.6%
Disagree	6	17.1%
Neither agree or disagree	10	28.6%
Agree	12	34.3%
Strongly agree	4	11.4%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I have worked on projects with people from other Bryden Wood offices

	Respondents	Percent
Strongly disagree	4	11.4%
Disagree	6	17.1%
Neither agree or disagree	5	14.3%
Agree	16	45.7%
Strongly agree	4	11.4%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I have spoken with most people at Bryden Wood

	Respondents	Percent
Strongly disagree	5	14.3%
Disagree	7	20.0%
Neither agree or disagree	10	28.6%
Agree	12	34.3%
Strongly agree	1	2.9%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I like working extra hours

	Respondents	Percent
Strongly disagree	8	22.9%
Disagree	16	45.7%

Neither agree or disagree	7	20.0%
Agree	4	11.4%
Strongly agree	0	0.0%
Total	35	100.0%

Since having started working for Bryden Wood, I have also developed understanding in these areas:

	Respondents	Percent
Structural + Civil Engineering	13	37.1%
Architecture + Integrated Design	19	54.3%
Mechanical + Electrical engineering	17	48.6%
Process Facility Design	8	22.9%
Design for Asset Optimization	3	8.6%
Operations Consulting	2	5.7%
BIM + Big Data	17	48.6%
Systematization	6	17.1%
Design for Manufacture + Offsite	9	25.7%
None	3	8.6%
Another	2	5.7%
Total	35	100.0%

On average, how many hours weekly do you stay additionally to your official work hours?

	Respondents	Percent
None	1	2.9%
0-2	15	42.9%
2-4	9	25.7%
4-6	5	14.3%
6-8	1	2.9%
8-10	2	5.7%
10-15	2	5.7%
15+	0	0.0%
Total	35	100.0%

Please rate your level of agreement with the following statements: - Bryden Wood exists to make big and complex projects

	Respondents	Percent
Strongly disagree	2	5.7%
Disagree	2	5.7%
Neither agree or disagree	12	34.3%
Agree	16	45.7%
Strongly agree	3	8.6%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I share mostly positive experiences about Bryden Wood with the people around me

	Respondents	Percent
Strongly disagree	1	2.9%

Disagree	1	2.9%
Neither agree or disagree	6	17.1%
Agree	23	65.7%
Strongly agree	4	11.4%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I am actively looking for ways to expand my capabilities in the building industry

	Respondents	Percent
Strongly disagree	1	2.9%
Disagree	2	5.7%
Neither agree or disagree	4	11.4%
Agree	16	45.7%
Strongly agree	12	34.3%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I often have monotonous work for long periods of time

	Respondents	Percent
Strongly disagree	3	8.6%
Disagree	7	20.0%
Neither agree or disagree	13	37.1%
Agree	8	22.9%
Strongly agree	4	11.4%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I consider myself creative and innovative

	Respondents	Percent
Strongly disagree	0	0.0%
Disagree	1	2.9%
Neither agree or disagree	5	14.3%
Agree	27	77.1%
Strongly agree	2	5.7%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I bring only well established solutions to the projects I work on

	Respondents	Percent
Strongly disagree	1	2.9%
Disagree	6	17.1%
Neither agree or disagree	10	28.6%
Agree	17	48.6%
Strongly agree	1	2.9%
Total	35	100.0%

Please rate your level of agreement with the following statements: - In Bryden Wood I voice my opinion, concerns and questions

	Respondents	Percent
Strongly disagree	0	0.0%
Disagree	0	0.0%
Neither agree or disagree	10	28.6%
Agree	21	60.0%
Strongly agree	4	11.4%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I believe there is a greater purpose to my work

	Respondents	Percent
Strongly disagree	0	0.0%
Disagree	2	5.7%
Neither agree or disagree	13	37.1%
Agree	19	54.3%
Strongly agree	1	2.9%
Total	35	100.0%

Please rate your level of agreement with the following statements: - Bryden Wood helps me to develop in the areas I am interested in

	Respondents	Percent
Strongly disagree	0	0.0%
Disagree	4	11.4%
Neither agree or disagree	10	28.6%
Agree	19	54.3%
Strongly agree	2	5.7%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I prefer working in a team rather than individually

	Respondents	Percent
Strongly disagree	0	0.0%
Disagree	4	11.4%
Neither agree or disagree	11	31.4%
Agree	12	34.3%
Strongly agree	8	22.9%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I have an easy time collaborating with other disciplines in the company

	Respondents	Percent
Strongly disagree	0	0.0%
Disagree	2	5.7%
Neither agree or disagree	10	28.6%
Agree	19	54.3%
Strongly agree	4	11.4%
Total	35	100.0%

Please rate your level of agreement with the following statements: - Complex problems usually have complex design solutions

	Respondents	Percent
Strongly disagree	3	8.6%
Disagree	14	40.0%
Neither agree or disagree	15	42.9%
Agree	3	8.6%
Strongly agree	0	0.0%
Total	35	100.0%

Please rate your level of agreement with the following statements: - The solutions my teams deliver are rational and practical

	Respondents	Percent
Strongly disagree	1	2.9%
Disagree	3	8.6%
Neither agree or disagree	7	20.0%
Agree	20	57.1%
Strongly agree	4	11.4%
Total	35	100.0%

Please rate your level of agreement with the following statements: - Project work from end to end, and everywhere in-between helps Bryden Wood deliver seamless results

	Respondents	Percent
Strongly disagree	0	0.0%
Disagree	3	8.6%
Neither agree or disagree	15	42.9%
Agree	15	42.9%
Strongly agree	2	5.7%
Total	35	100.0%

Please rate your level of agreement with the following statements: - I understand what Bryden Wood values

	Respondents	Percent
Strongly disagree	0	0.0%
Disagree	2	5.7%
Neither agree or disagree	12	34.3%
Agree	19	54.3%
Strongly agree	2	5.7%
Total	35	100.0%

Appendix 2 – Decoding of Open Questions

This Appendix presents the codes discovered through the decoding of the open questions asked in the employee survey. The strikethrough ones are not considered relevant and therefore were not taken into consideration. The 'no code' counts the lack of answers to each question. Some of the answers have more than one code. The figure is the base for developing the TCAs, explained in 5.3.2 Time Consuming Aspects

DECODING SUMMARY							
1. What is something new you have discovered in the past week about how Bryden Wood works?	37	2. What did you struggle the most with while adapting to Bryden Wood and how long did it take?	43	3. If you could go back and tell yourself something at your first work day, what would it be?	32	4. What took you the longest to understand about Bryden Wood and how long did it take?	40
integration	4	standards	9	stress	7	standards	6
socialization	2	integration	4	ask	6	integration	6
~~BW projects~~	~~3~~	job experience	4	active	2	resource management	2
BW processes	7	software	3	information	2	BW processes	7
		language	3			uncertainty	4
		socialization	3			organization	3
		BW processes	6				
		uncertainty	4				
poor resource management, overtime	1	lack of teamwork, lack of integration, need for cultural	1	be ready for a change, do good but don't be surprised	1	job experience	1
less discussion than expected, less creativity	1	high demands	1	~~long introduction meeting, rest before first work day~~	~~1~~	British office culture	1
unnecessary demands, stress, working faster	1	information	1	ambiguity, uncertainty	1	agile	1
BW strong organization	1			cannot learn all at once, overwhelming	1		
innovation	1			socializations	1		
BW supportive, agile	1			BW processes	1		
uncertainty	1						
no code	14	no code	4	no code	9	no code	9

Appendix 3 – Integration of Disciplines

	How many months have you been working for Bryden Wood?	What is your position at Bryden Wood?	Since having started working for Bryden Wood, I have also developed understanding in these areas:	Since having started working for Bryden Wood, I have also developed understanding in these areas: - Another	Number of chosen options
1	1.00	Architect	Architecture + Integrated Design / BIM + Big Data		2
2	1.00	Senior mechanical engineer	Mechanical + Electrical engineering		1
3	1.00	Revit/Solidworks Technician	Structural + Civil Engineering / Architecture + Integrated Design / Mechanical + Electrical engineering / Design for Asset Optimization / BIM + Big Data / Systematization / Design for Manufacture + Offsite		7
4	1.00	Structural Engineer	Structural + Civil Engineering / Architecture + Integrated Design / Systematization		3

5	1.00	Senior Structural Engineer	None		0
6	1.00	senior engineer	Design for Manufacture + Offsite		1
7	1.50	Computational Designer	Structural + Civil Engineering / Architecture + Integrated Design / Mechanical + Electrical engineering / BIM + Big Data		4
8	1.50	Engineer	Structural + Civil Engineering / Architecture + Integrated Design / Mechanical + Electrical engineering / BIM + Big Data		4
9	2.00	Architectural Technician	BIM + Big Data		1
10	2.00	Architectural Assistant	Architecture + Integrated Design / BIM + Big Data		2
11	3.00	Assistant Architect	Structural + Civil Engineering / Architecture + Integrated Design / BIM + Big Data		3
12	3.00	Undergraduate Civil & Structural Engineer	Structural + Civil Engineering		1

13	3.50	Project Assistant - on a placement year from University	Structural + Civil Engineering / Architecture + Integrated Design / Mechanical + Electrical engineering / Another	project management	4
14	5.00	Senior Sustainability Engineer	Architecture + Integrated Design / Mechanical + Electrical engineering / BIM + Big Data / Systematization / Design for Manufacture + Offsite		5
15	6.00	Graduate Electrical Enginner	Architecture + Integrated Design / Mechanical + Electrical engineering / BIM + Big Data		3
16	6.00	Architectural assistant	Mechanical + Electrical engineering / BIM + Big Data		2
17	6.00	Graduate Civil Engineer	Structural + Civil Engineering		1
18	6.00	Associate	Process Facility Design / Design for Asset Optimization / Operations Consulting / Systematization / Design for Manufacture + Offsite		5
19	7.00	Analyst	Architecture + Integrated Design / Mechanical + Electrical engineering / Process Facility Design / BIM + Big Data		4
20	7.00	project architect	Architecture + Integrated Design / Process Facility Design / BIM + Big Data		3
21	7.00	Associate	Structural + Civil Engineering /		2

			Mechanical + Electrical engineering		
22	7.00	Project Architect	BIM + Big Data		1
23	8.00	Administration and Document Controller	Another	Document Control and ISO	1
24	9.00	Document Control	None		0
25	10.00	Electrical engineer	Mechanical + Electrical engineering / BIM + Big Data / Design for Manufacture + Offsite		3
26	10.00	Intermediate Engineer	Architecture + Integrated Design / Mechanical + Electrical engineering		2
27	11.00	Associate	None		0
28	12.00	Solidworks Modeller	Structural + Civil Engineering		1
29	13.00	Architectural Assistant	Architecture + Integrated Design		1

30	14.00	Engineer	Structural + Civil Engineering / Architecture + Integrated Design / Mechanical + Electrical engineering / Process Facility Design / Systematization / Design for Manufacture + Offsite		6
31	14.00	Civil Engineer	Structural + Civil Engineering / Architecture + Integrated Design / Mechanical + Electrical engineering / Process Facility Design		4
32	15.00	Analyst	Architecture + Integrated Design / Mechanical + Electrical engineering / Process Facility Design / Design for Asset Optimization / Operations Consulting / Design for Manufacture + Offsite		6
33	15.00	Architect	Architecture + Integrated Design / Mechanical + Electrical engineering / Process Facility Design / BIM + Big Data		4
34	17.00	Intermediate Electrical Engineer	Mechanical + Electrical engineering / BIM + Big Data / Systematization / Design for Manufacture + Offsite		4
35	18.00	Architectural Technologist	Structural + Civil Engineering / Architecture + Integrated Design / Process Facility Design / BIM + Big Data / Design for Manufacture + Offsite		5

			Average		3
					of 9+ possible

Annex 1 – Methods Map

Annex 1 is based on the Methods Map (see Figure 22) which Kevin O'Gorman and Robert MacIntosh have developed in their book 'Research Methods for Business & Management: A Guide to Writing Your Dissertation', 2nd ed., 2015. It presents the different considerations the Master thesis authors have been following while writing the Chapter 3 Methodology.

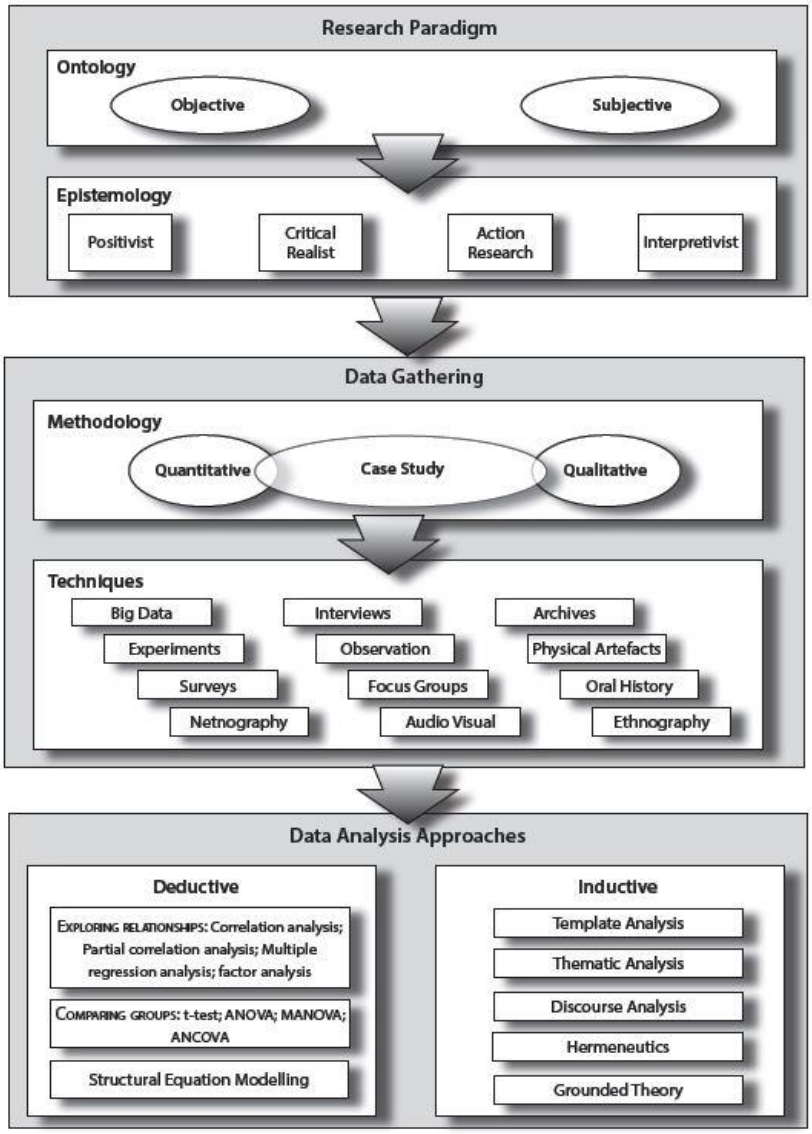


Figure 22 Methods map (O'Gorman & MacIntosh, 2015)

Annex 2 – Different Types of Interview

This annex is supporting the analysis in chapter 3 Methodology, where it is discussed that the interviews for the research are semi-structured (see Figure 23).

Strengths	Weaknesses	Applicability
Unstructured		
Provides rich information. Explores previously unknown themes that arise from the interview. Creates relationships which may lead to more information. Uses natural language.	Very time consuming. Resource intensive Lacking in generalizability Can generate lots of often irrelevant data. Susceptible to interviewer bias.	Exploratory research investigating past events when subjective views and experiences are sought in conjunction with other research methods.
Semi-Structured		
Questions prepared in advance to cover critical points, useful when the researcher is inexperienced. Interviewees still retain freedom and flexibility to express their own views. Increased reliability and scope for comparability. Interviewee is able to respond in language natural to them	Time consuming. Resource intensive. Needs good interview skills to keep on topic. Interview questions are open to researcher bias May lack in generalizability.	Multiple interviewers. Only one chance to conduct the interview. Researcher has some knowledge of the topic, In conjunction with other research methods.
Structured		
Can produce consistent generalizable data. Minimal risk of bias. Large sample size. Can be conducted quickly. Sophisticated interviewing skills not required.	Little opportunity for feedback. Question responses are limited and restrictive. Little scope to cater for the unforeseen. Real-time changes to the interviews cannot be made.	Clear focus and a question to be answered. High level of knowledge on a topic to allow for appropriate question formulation. A well-developed literature.

Figure 23 Strengths, weakneses and applications of interviews (O'Gorman & MacIntosh, 2015)

Annex 3 – Conceptual Model for Research Design

Annex 4 is in connection to the chapter 3 Methodology and is based on the work of Erling Kristensen et al., 2008 who contributed to the development of the Conceptual model for research design (figure below). The Master Thesis authors have developed the research conceptual model (see Figure 1 in Chapter 3 Methodology) which is based on the induction half of the visualization.

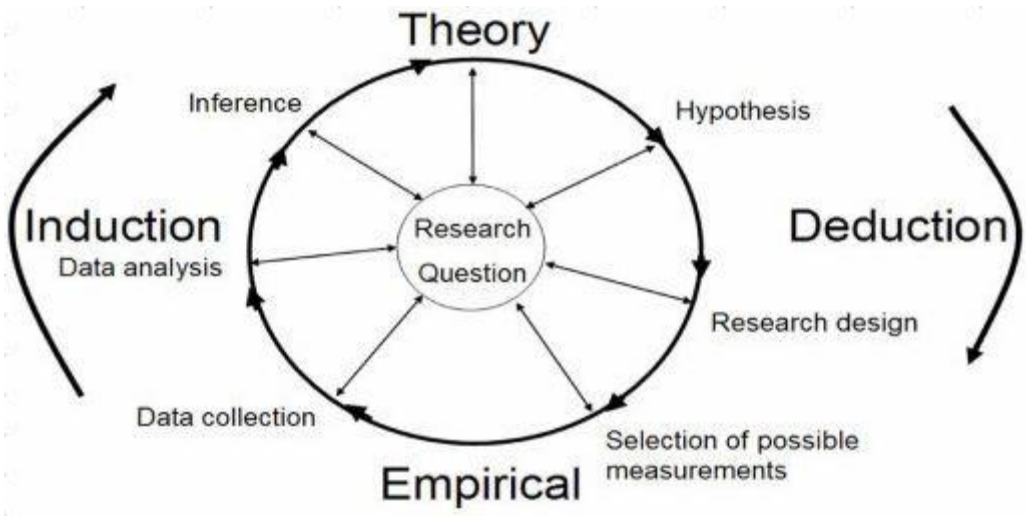


Figure 24 Conceptual model of research design (Kristensen, Nielsen, Jensen, Vaarst, & Enevoldsen, 2008)

Annex 4 – Architecture and Integrated Design and Vision & Context

This document has been received from Bryden Wood. It is mostly linked to chapter 5. Bryden Wood case study. The two next pages below are just the 2nd and the 6th page of the document (for the remaining ones, see Digital Annex 1).

2017

Architecture and Integrated Design
Vision & Context

01 Introduction

This document is intended to review the Architecture and Integrated Design capability, opportunities, challenges, size and structure. It will also make recommendations for other capabilities, along with business wide activities.

Some areas will be defined by over the following periods with a view to predicting the potential for growth in the team and workstreams whilst considering the depth of our overall offering:

- May 2017
- Q3/Q4 2017
- Q3/Q4 2018

02 Mission Statement

We aim to improve the quality of the built environment and its value to society by advancing the efficiency of design and construction.

How? By working towards increased:
- integration
- innovation
- rationalisation

By enabling the increased use of Building Information Modelling, Standardisation, Systemisation, DFMA and Off-site Manufacture.

Resulting in:
- shorter construction periods
- lower cost
- higher quality
- reduced carbon consumption
- truly integrated design and ARCHITECTURE

Our aim is to be the major multi disciplinary, architecture and integrated design company of choice for Healthcare, Pharma, R&D / academia, infrastructure, residential, education and high complex buildings. We need to be adding value to clients through recognised expertise, whilst establishing and growing a team of integrated designers based in London, St Albans and Singapore. And ultimately to be a commercially competitive and profitable business.

2017

Architecture and Integrated Design Vision & Context

02 Mission Statement

Summary

Our aim is to be considered the sector experts and 'architects of choice' in a number of sectors, including....
healthcare, pharma, aviation, residential, laboratories, education and high complex and infrastructure sectors
....where we are the 'go to company' and default company on tender lists.

We need to strengthen our USP, improve the quality and approach to design across the office, and produce design of a consistently high standard.

We need to produce our work more efficiently so that sustainable profits can be achieved by improvements to systems and processes.

We should continue to work in sectors where there is a strong emphasis on social content to make Bryden Wood a fantastic place to work.

We need to refine the Bryden Wood and Architectural team structure to support this vision.

Finally, its good to list why we are integrated

Focussed design team management and control - **clarity**

Cohesive and consistent approach to design - **seamless**

Common principles and goals - **purpose**

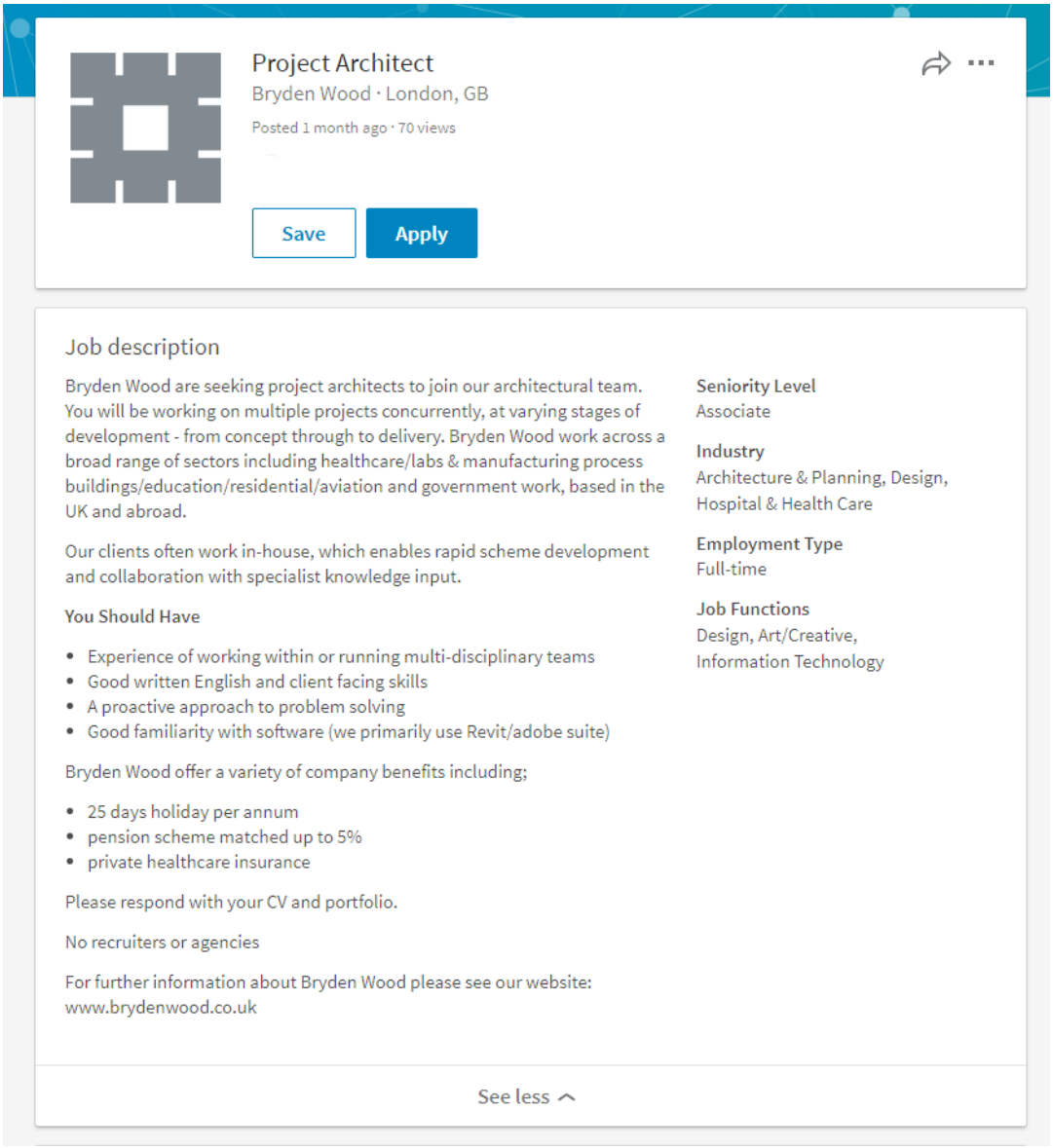
Single point of responsibility for clients - **no gaps**

Single BIM model - **coordinated outcomes**

Project wide skills developed and retained - **expertise**

Annex 5 – Recruitment Advertisment on LinkedIn

This Annex is linked to Chapter 5.2.1 Recruitment of employees. It is concerning a job offer (figure below) found on LinkedIn. (https://www.linkedin.com/jobs/view/460914091/)



Annex 6 – Staff Handbook

+44 (0)20-7253-4772
info@brydenwood.co.uk
brydenwood.co.uk

Bryden Wood Ltd
100 Gray's Inn Road, London WC1X 8AL
United Kingdom

2016

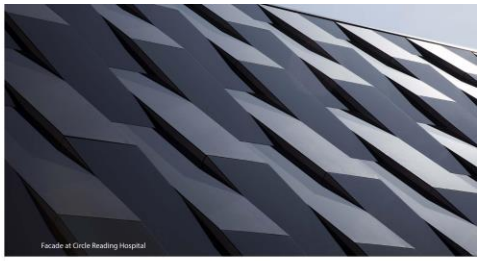
Welcome to Bryden Wood

The Office Handbook

Bryden Wood

Contents

About Us -
About Bryden Wood


Facade at Circle Reading Hospital

Find out all about Bryden Wood

Purpose
We aim to improve the sustainability, efficiency and aesthetic quality of all aspects of the built environment, lowering the financial and carbon cost of assets to business and society.

Who we are
We are a company comprised of architects, analysts, engineers and industrial designers collaborating with a shared passion for positive change in an integrated and technologically enabled working environment.

What we do
For more than 20 years Bryden Wood have led the building industry's adoption of more advanced construction techniques and the application of design for manufacture and assembly (DfMA) endorsed by the 1998 Egan report. Our unique understanding of digital delivery (BIM) and commitment to off-site fabrication allows us to move value away from site. As a result we increase positive outcomes (health and safety, quality, certainty) while reducing the resources required to achieve them (whether measured in carbon, cost, time, waste or labour).

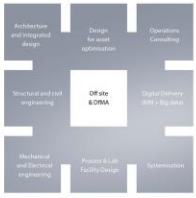
We investigate complexity, developing unique data analysis and visualisation techniques in order to increase the certainty and simplicity of business and governmental decision making, and specialise in simulating aspects of asset performance and outcomes. This is achieved through the use of 'Chip-Thinking', a data enabled creative thinking technique developed by Bryden Wood in conjunction with our key clients. We are a research centre collaborating with academic institutes in developing innovations that are practically applicable to design and delivery of assets.

For who
We have helped leading global companies to improve both asset programme and project outcomes, assisting them from inception, through design and delivery, to the operation of complex facilities in a variety of UK and international locations.

4

9 Capabilities

BW Logo
Utilising a range of skills from our 9 key capabilities, our talented team are able to offer a holistic approach to design challenges, looking at projects from many different aspects.



Our Approach
From the beginning our ambition to advance the built environment, through design innovation and construction methodology, has been at the heart of our ethos. Our multidisciplinary, integrated team apply innovative thinking and techniques to our designs to achieve buildings with strong aesthetic merit, architectural integrity and functional performance.

Through our architects, designers, structural and civil engineers, building services engineers and specialist fabricators having an integrated approach to design, the practice has grown to understand how best to incorporate each discipline's requirements at the earliest stage of a project design. The intention has been to create seamlessly integrated designs where the aesthetics, structure and services are informed and supported by an efficient and cost effective construction technique.

Our services include:
— Architecture
— Structural and Civil Engineering
— Building Services and Environmental Design
— Production Design
— Parametric Modelling
— Design for Manufacture and Assembly
— Integrated Design and Engineering
— Research, Development and Technology
— Building Information Modelling
— Construction and Prototyping
— Strategic Briefing and Analysis

The factor common to all aspects of our work is that we aim to drive efficiency and value through bringing construction logic into the design process. Our ethos aims to bring a new integrity to architectural design and construction.

Our experience allows us to take projects from inception to completion, and we have orchestrated the approval of many healthcare schemes on challenging urban sites. Working on extremely complex projects demonstrates our ability to deliver high quality design solutions, often within the severest of site constraints. Through an efficient and rigorous delivery process we achieve the highest quality architecture that exceeds our clients' aspirations.

Bryden Wood is also an award winning design company, with offices in London, St. Albans, Singapore and St Petersburg. On projects where we perform a partial service / single discipline, our unique offering makes us better informed in all areas. As a multidisciplinary service, by working together and viewing our interdependent disciplines as equally important parts of a whole design, BrydenWood offers a number of advantages to clients:

— Integration of architecture, structure and services
— Complete design delivery by one team
— Efficiency in production of information

Bryden Wood work in numerous sectors, including aviation, residential, commercial office, industrial, healthcare, education, infrastructure, pharmaceutical, retail, data facilities and hospitality.

In every case, we have brought a unique perspective to the design and management of the project. Our understanding of detail and integration extends far beyond that normally expected of the architectural profession, allowing us to effectively manage interfaces between trades and contractors. Where appropriate, our lead in the UK market in Design for Manufacture and Assembly allows us to augment traditional construction techniques with off-site manufacture to deliver greater quality and a shorter programme.

5

Staff Benefits


Circle Birmingham Hospital


Walsall Leith Police Station

It is important to us to put your mind at ease.

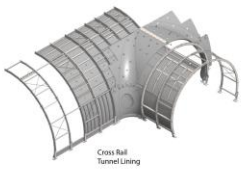
Cycle To Work Scheme
We encourage our staff to cycle to work. Our cycle scheme is open to permanent staff, which allows you to purchase a bike up to the value of £1,000 which is paid back through monthly instalments from your gross salary over 12 months. This is interest free with tax savings.

Course Fees & study leave
We are committed to ensuring staff reach their full potential and offer support in providing appropriate experience, tutorials and, where suitable, contributions to certain course fees and study leave. Speak to our HR Manager or your disciple Director for further information.

Private Medical Health Insurance
Good health is important to us. We have teamed up with Vitality Health, a 5-star Health Insurance that rewards you for being healthy while providing access to the best possible medical care treatments and therapies.

The scheme offers additions benefits basis on rewards for being healthy, including a number of health partner discounts, things like health screenings, stop smoking sessions, reduced gym memberships and fitness equipment such as heart rate monitors and sports shoes.

The scheme is free to join but you should be aware that this is considered to be a taxable benefit.


Cross Rail
Tunnel Lining

6

Practice Pension Scheme
We believe it is important to plan for your future. We offer a group private pension plan which is managed by Aegon/ Scottish Equitable. Following the end your probationary period you will be automatically enrolled in the scheme, any monthly contributions you make will be matched by Bryden Wood, up to a maximum of 5% of your salary, although you may pay more into the scheme if you wish.

Eyetest
Bryden Wood wants you to stay healthy and you are entitled to one eye test per calendar year.

Income Protection
We offer financial protection against long term sickness by offering insurance to help maintain your monthly salary in the unfortunate event of long term absence from the office dues to sickness or accident. This scheme is at the discretion of the insurers and is accessed on an individual basis.

Life Insurance
Our company insurance provides nominated dependants with financial assistance in the unfortunate event of death to any of our employees.

Childcare Vouchers
To support staff with families we offer a childcare voucher scheme which is managed by Fair Care.


Great Western Studios in West London

7

Practices & Procedures

Your First Days

Do I need to bring anything?

- Passport
- National Insurance Number
- Bank details
- P45 from previous employer

On your first day, please arrive at the office for 10.00am. You will then have an induction with the Office Manager who will show introduce you to the office, including topics like:

- Health and Safety
- Who is who in the office
- Outlook and emailing filing
- Project servers
- Brand guidelines
- Time Management System
- Opening up / staying late procedure
- How to use the intranet

and more to be discussed.

You will then get to meet a colleague, who will introduce you personally to the members of your team, and at lunch time will take you out for lunch and show you the area.

Over the course of your first month, you will also meet with other inductors who will run you through the Bryden Wood way of using softwares such as Revit.

What can I wear?

Dress code is smart casual, smarter if you are going for a meeting.

What day do we get paid?

Pay will be in your bank account on the last Friday of each month. Your payslips can be accessed online via www.epayslips.com - The access details will be posted to you.

Display Screen Equipment/Workstation Assessment

You will receive a DSE workstation checklist shortly after joining. Please complete this as soon as is practical, and return to the Facilities Manager. Any recommendations will be implemented as soon as possible.

Please inform the Facilities Manager of any pre-existing medical conditions that may require the adjustment of your workstation.
Users of DSE are entitled to free eye tests; please contact HR for further information.

Office Etiquette

What are the working hours?

These are typically Monday to Friday 9:00-18:00 although reception is open from 8.30

Late arrivals

Please inform your line manager if you are likely to arrive in the office later than 9.15am.

Absences & Sickness

When calling in sick, staff are required to inform their direct line manager by 9:00am on the day of their absence. Failure to do so may be considered an unjustified absence.

If line managers are on leave, staff members are to contact the next suited individual in the relevant discipline. Text messages and e-mails are generally not considered an appropriate method of contact in the event of absences.

Line managers for each discipline:
Engineering (M&E)
Ian Pegrum - 07827 233 846
Engineering (Structures)
Markus Huber - 07889 402 531
Kevin Masters - 07507 725 183
Architecture
Paul O'Neill - 07712 588 973
Modellers
Steven Tilkin - 07855 647 992
Admin (or in the absence of all the above)
Nadine Mohammed - 07596 409 622

Doctor and Dentist Appointments

Notify your line manager and Reception in advance of your appointment. Please aim to book appointments outside of core office hours wherever possible.

Tell Reception

External Meetings / Site Visits

All external meetings and site visits must be noted in the reception staff diary in advance of you leaving the office.
We have PPE (Personal Protective Equipment) available to take with you on site visits.
Please note that you have to have a valid CSCS card (Construction Skills Certification Scheme) . This is required to confirm you have the correct training and qualifications to gain access to the site.
Please speak to the manager who will confirm the process of obtaining a CSCS card.

Visitors

Visitors are required to sign in and out at reception and obtain a visitor badge on arrival. For security reasons, all visitors must wear a visitor badge. We expect all visitors to follow company procedures in the event of a fire alarm being activated.

Meeting Room Bookings

Please book all meetings rooms/areas via Reception, checking room availability before committing to a meeting.
Meeting room schedules for the day and following day can be found outside main meeting rooms.
Please inform Reception if your meeting requires tea, coffee & water to be set up.
If your meeting requires lunch, please inform reception no later than the day before the meeting.
Please leave meeting rooms tidy and in the state that you would like to find them.

Incoming/Outgoing Mail

Incoming mail is received and sorted by Reception. An email notifying you of any mail items ready for collection will be sent; please collect from Reception and sign the register.
Please pass any outgoing mail to Reception staff, ensuring that any specific requirements (such as tracking needed) are communicated to them. Note that some services will require a trip to the Post Office; please ensure that sufficient notice is given to enable these to be sent the same day.

Couriers may also be booked by Reception staff. Please provide full details of what is to be delivered, and the time frame required for delivery.

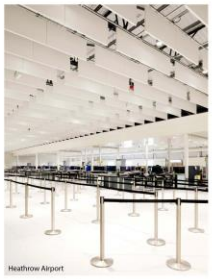
Stationery

Please help yourself to any stationery from the stationery cupboard. The cupboard is located through the sliding doors just past reception, opposite the open meeting area. If you require specific items or cannot find something please contact the Facilities Manager.

Resources

In addition to PPE, the following resources are available to book via the Front Desk:
Cameras
Projectors
Laptops and tablets
Tape Measurer
Laser Measurer

Circle Reading Hospital



Heathrow Airport

Practices & Procedures

Kitchen and Recycling

Can I help myself to fruit in the morning?

Yes! Help yourself to fruit, tea and coffee, all located in the kitchen.

What time is lunch?

Lunch is 1 hour, usually starting from 12:30. You can use the fridge, microwave and crockery if you bring your own lunch. You can use the tables around the office but check with reception that they are not booked.
Although we don't have an official 'lunch' area, please feel free to utilise the glass meeting rooms in front of the kitchen. Other breakout spaces can be used (avoiding meeting rooms please), when in doubt check with reception.

Recycling and Waste

Please place all food waste into the silver kitchen bins.

Recyclable materials (cans, plastic bottles and wrappers, tins, paper, card etc.) should go into the blue wheelie bin – please remove any food residue beforehand.

We provide recycling bins for paper (next to printer) and cans, plastics and mixed recycling (in the kitchen) which should be used at all times.

General Housekeeping

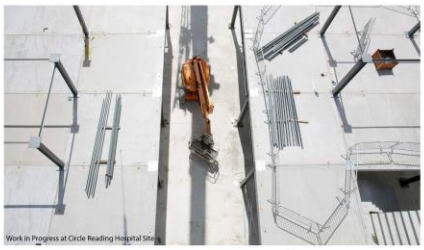
In order to create a clean, clutter free office that we can be proud of, please ensure you keep your work space free of clutter, project archiving is available if necessary, please see the facilities manager is archiving is required.

Kitchen Rules

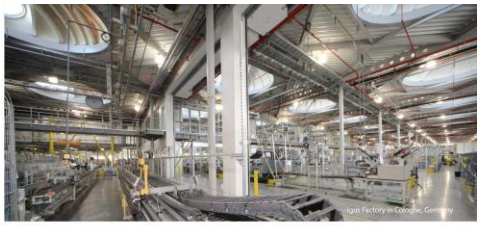
We aim to keep the kitchen presentable at all times.
Please ensure that plates and bowls are scraped clean and put into the dishwashers after use; do not fill the sinks with dirty crockery! Similarly, please mop up any spillages that occur and clean the microwave after.

Please notify the Facilities Manager if you notice problems with any kitchen equipment.

- Coffee machine: Filter coffee is provided for staff. If you finish off a pot, please put another on to brew. Spare filters and coffee are kept in the cupboard above the machines; replace the filter paper after each use, fill with a sachet of coffee and select 'large brew'.
- Food Storage: Staff are welcome to store food in the fridge on the understanding that they are responsible for removing it before it goes off. Please label all items with your name and best before date. Please aim to remove food on a Friday evening. Staff may also store other clearly-labelled items in the space provided. Please take any Tupperware containers home once you have finished with them. You are welcome to bring in personal mugs and plates but please be aware that these may be damaged or go missing. Mugs, crockery and cutlery for general use are provided. Avoid microwaving "smelly" food such as fish etc.



Work in Progress at Circle Reading Hospital Site



Igus Factory in Cologne, Germany

At Work

What software do you use?

We are a PC based office and use software such as:
Revit
Autocad
Indesign & Photoshop

Office Phones

All incoming calls are handled by Reception.
To place an outgoing call press 9, then dial the number.

Can I use my headphones?

The use of headphones may not be appropriate depending on your role and tasks to be undertaken. Please also ensure the volume does not disturb others.

Can I use my mobile phone?

Out of courtesy it is asked that your phone be on silent. Calls and messaging are to be kept to a minimum.

Intranet

General office information, CPD presentations, the office seating plan, the staff holiday chart, and this handbook, can be found on the Bryden Wood Intranet, which can be accessed here:

http://intranet.brydenwood.co.uk:8080/BWL/cpd

All official documents should be created using the standard templates for letters, reports etc.

Clear Desk Policy

Aim to clear your desk as far as practicable each evening to enable your desk to be cleaned. Secure confidential materials and personal possessions in your desk drawers.

Time Management System

Our staff management programme Quantim stores a wealth of information. All staff are trained in its use during their induction and learn how to book holidays, weekly timesheets and claim expenses.

Weekly Timesheets

Please use Quantim to record all hours worked, by project and activity, accounting for 8 standard hours per day (totalling 40 hours per week). Any further hours worked, please record as 'additional'. Timesheets are to be completed each week by Friday at 18:00.

Claiming Expenses

Expenses incurred on behalf of a project can be claimed back. In order to do so, record the receipt details and generate an expense form in Quantim. Attach all receipts to the expense form and then pass on to the Office Manager to be checked and signed. Once authorised, it will be forwarded on to Accounts, and you will then receive a bank transfer. Expense claims typically happen once per month and the HR manager will email each month to confirm when the claim is to be submitted.

Holiday Leave

In order to take annual leave, you will need to submit all requests through Quantim.
Please give as much notice as possible and a minimum of four weeks notice for requesting one-two weeks leave and one-week notice for requesting up to one week leave.
Be sure to check the dates with your project team as well to prevent missing deadlines or clashes with team members.
Pending and approved holiday requests are shown on the staff holiday chart, which can be found in the kitchen, and on the Bryden Wood Intranet.

Study Leave & Training

Please obtain authorisation from your line manager before booking any training courses or study leave.
Please let Reception know, and make a note in the reception staff diary in advance of the study/training day.

Building & Security

Parking
Bicycle parking is available in the main basement parking area. Use your access fob to open the shutter to the right of the main front door on the ground floor. The bicycle racks are located down the ramp at the rear of the building.

Bryden Wood have some allocated bays for cars and motorbikes in the basement carpark.

Office Access
The office door is open from 8.30am to 5.00pm. Outside of these hours, and when the front Reception desk is unattended, you will need an access fob. All staff are issued with an access fob. This fob will also open the main front door to the building and garage door when the security downstairs is left unattended.

If you intend to work outside core hours you will need to sign out an alarm fob and office key; please obtain these from the Facilities Manager, and sign out in the book at Reception. Please return them immediately after use.

Should you lose a key or fob, report this to the Facilities Manager and Office Manager.

Smoking
Smoking in front of the entrance is not allowed by the landlord. Please make sure you are keeping your distance.

First Aid
A first aid kit can be found at Reception.

A list of first aiders is displayed on the kitchen notice board. Please report any incidents and accidents and any use of the first aid kit to the Facilities Manager, and record in the relevant record book at Reception.

In the event that you discover a casualty or suffer an accident:
- Remain calm
- Get help from a qualified first aider
- Reassure the casualty and wait for assistance

In the event that you discover an unconscious casualty:
- Contact a first aider and immediately after call an ambulance. Inform them of the location and status of the casualty i.e. unconscious and not breathing, unconscious and breathing etc.

Please inform the Facilities Manager of any allergies or other medical conditions you feel they may need to know.

Fire Safety – Evacuation Procedure
A call point test is conducted by the landlord every Tuesday at 09.30am. The alarm will sound briefly during this time. If the alarm sounds at any other time please follow the evacuation procedure:
- Never assume the alarm is a drill – treat all instances as potentially life-threatening.
- Vacate the premises using one of the two fire escapes. They are located at the far end of the office next to the East Meeting room and via Reception. Do not use the lifts. If you are with clients you are responsible for their safe evacuation.
- Assemble in Portpool Lane (left out of the main door, then first left).
- A roll call will be taken by the fire marshals.
- Await further instructions. Do not return to the building until given the all clear.

If you discover a fire:
- Do NOT attempt to fight it unless you have been trained.
- Sound the alarm by breaking a call point (located next to fire exits)
- Evacuate using the procedure above.

Details of the current fire marshals are displayed on the kitchen notice board.

On other terms...

Newsletter
A quarterly newsletter is e-mailed out to all staff, informing about current projects and general office happenings.

Afternoon Tea - Wednesdays
Every Wednesday at 4pm one project team within the office will present what they are working on while you munch on biscuits. Bring your mug!

Afternoon Tea - Fridays
Every Friday afternoon at 4:00pm staff can help themselves to afternoon tea treats. Staff take it in turns to buy and set-out the tea, and the tea rota can be found on the kitchen noticeboard. Reception will distribute the weekly allowance for the tea to the week's tea-host.

Team Lunches
Project teams will go on occasional lunches to celebrate milestones and support morale and team spirit.

Company Socials
Bryden Wood has three or four official company socials each year, including the Christmas Party where all staff are invited to a Christmas dinner at a venue near the office. Socials throughout the year have in the past included a pub quiz, a treasure hunt, canal-canoeing and table-tennis and dodgeball tournaments.

Pay Day Beers
The last Friday in the month just got better. We have some cold beers for you to start into a well deserved weekend!

What happens on Friday nights?
There are a selection of pubs and bars in the local area where you can usually find BW staff.

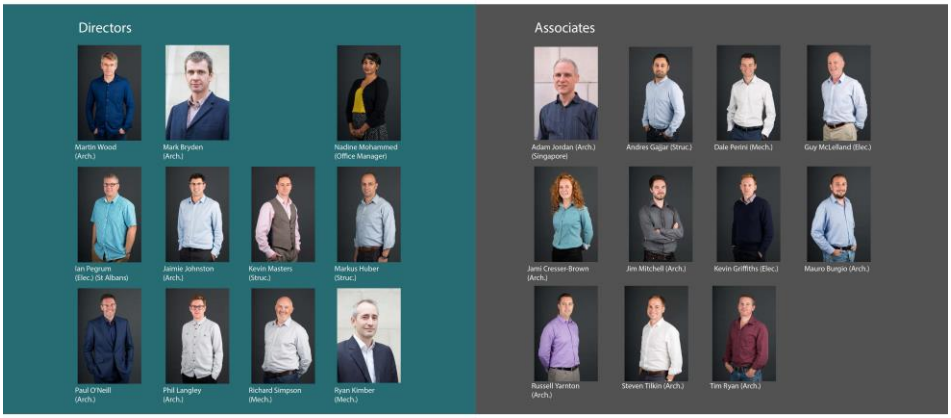
Workplace Culture

Bryden Wood Offices
We currently have offices in London, St Albans, St Petersburg and Singapore. We work in an open and professional studio environment and maintain an open friendly informal culture based on mutual respect and fairness. We are of course an equal opportunities employer.

Aims and Values
Our culture of openness and shared working enables our teams to design high quality projects. Bryden Wood's aims and values are at the core of our practice philosophy. These ensure that we continue to provide innovative design solutions and a high quality service that meets the aspirations of our clients and the community through a talented, highly motivated and creative team working together in a spirit of collaboration and enjoyment. Bryden Wood has a reputation for consistently delivering innovative and imaginative designs.

Training
Along with a range of staff benefits, we operate an active CPD programme and are committed to helping all our staff reach their full potential. Lunch is even provided on internal CPDs if you have signed up.

People are our most important asset and we are committed to the development of our staff personally and professionally through focussed in-house training programmes, incorporating external lectures and seminars and other skills as well as sponsorship of further education.



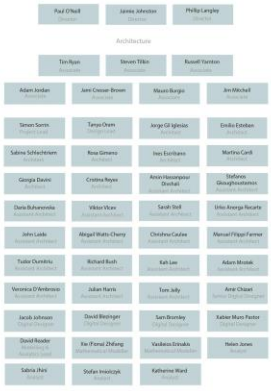
Who is Who

Team

This section gives you an idea about the composition of our multi facetted team. A vibrant mix of professional skills and backgrounds.

Team BrydenWood, London Office

(For a complete list of all staff, their positions and pictures, please head to the Bryden Wood Intranet http://intranet.brydenwood.co.uk:8080/BWL/general-office-information)



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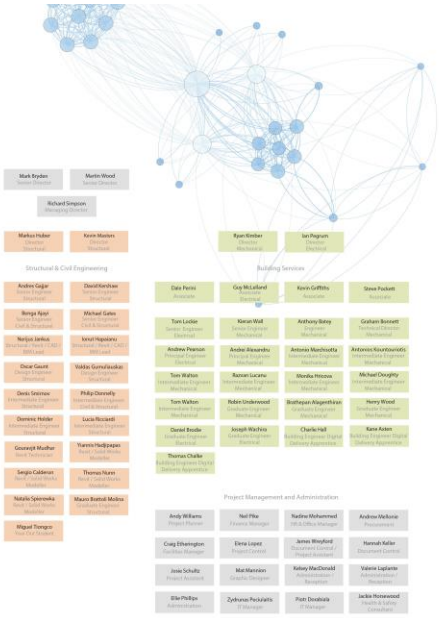

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Seating Plan

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Our People

Staff List by Discipline

Directors:
Ian Pegrum (Elec.)
Jamie Johnston (Arch.)
Kevin Masters (Struc.)
Mark Bryden
Markus Huber (Struc.)
Martin Wood
Paul O'Neill (Arch.)
Philip Langley (Arch.)
Richard Simpson (Mech.)
Ryan Kimber (Mech.)

Associates:
Adam Jordan (Arch.) (Singapore)
Andres Gajjar (Str.)
Dale Perini (Mech.)
Guy Mcclelland (Elec.)
Jami Cresser-Brown (Arch.)
Jim Mitchell (Arch.)
Kevin Griffiths (Elec.)
Mauro Burgio (Arch.)
Russell Yernton (Arch.)
Steven Tilkin (Arch.)
Tim Ryan (Arch.)

Architectural:
Abigail Watts-Cherry
Adam Mrotek
Amin Hassanpour Divshali
Chrishna Caulee
Cristina Reyes
Daria Buhanovska
David Blezinger
Emilio Esteban
Giorgia Davini
Ines Escribano
Jacob Johnson
John Laido
Jorge Gil Iglesias
Julian Harris
Kah Lee
Manuel Filippi-Farmar
Martina Cardi
Richard Bush
Rosa Gimeno
Sabine Schlechtriem
Sarah Stell
Simon Sorrin
Stefanos Gkougkoustamos
Tanya Oram
Tom Jelly
Tudor Dumitriu
Urko Anorga Recarte
Veronica D'Ambrosio
Viktor Vicev
Xabier Muro

Electrical:
Ammad Qazi
Andy Pearson (St Albans)
Daniel Brodie
Joseph Wachira (St Albans)
Tom Lockie

Mechanical:
Andrei Alexandru
Anthony Batey
Antonio Marchisotta
Antonios Kountouriotis
Brathepan Alagenthiran
Graham Bonnett (St Albans)
Henry Wood
Kieran Wall
Michael Doughty
Monika Hricova
Razvan Lucanu
Robin Underwood
Tom Walton (St Albans)

Structural:
Andre Heller
Benga Ajayi
David Kershaw
Dominic Holder
Gouranjit Mudhar
Ionut Hapaianu
Lucia Ricciardi
Mauro Brattoli
Michael Gates
Miguel Tiongco
Natalia Spierewka
Nerijus Jankus
Oscar Gaunt
Philip Donnelly
Samuel Bramley
Sergio Calderon
Thomas Nunn
Valdas Gumuliauskas
Yiannis Hadjiapos

Mathematical Modellers:
David Reader
Helen Jones
Katherine Ward
Sabria Jhini
Stefan Imiolczyk
Vasileios Erinakis
Xie (Fiona) Zhifang

Digital Delivery Apprentices:
Charlie Hall (St Albans)
Kane Asten (St Albans)
Thomas Chalke (St Albans)

Consultants:
Amir Chizari
Andrew Mellonie
Andrew Williams (Part-time)
Andres Mujica (Barcelona)
Denis Smirnov (Russia)
Elisabeth Ramos (Barcelona)
Guillermo Grillo Torres (Barcelona)
Julian Harrism

IT Help Desk:
Piotr Dorabiala
Zydrunas Peciulaitis

Admin:
Craig Etherington (Facilities Manager)
Elena Lopez (Project/Doc Control/ ISO) (Tenerife)
Ellie Phillips (Admin.)
Hannah Keller (Doc. Control)
James Wreyford (Doc. Control / Project Assistant)
Kelsey MacDonald (Reception / Admin.)
Josie Schultz (Project Assistant)
Mat Mannion (Graphic Designer)
Nadine Mohammed (Office Manager)
Neil Pike (Accounts)
Valerie Laplante (Reception / Admin.)

Data Visualisation of user interaction

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Neighbourhood

Clerkenwell

We are very lucky to be situated in a very exciting area with some nice markets and parks right at your feet.

Fun fact: Clerkenwell is home to more architects and creative businesses per square metre than anywhere in the world.

Bryden Wood

1 Exmouth Market: Street Food Market, Cafés, Bars, Boutiques
2 Leather Lane: Street Food Market, Market Stalls and Cafés
3 Lamb Conduit Street: Cafés, Bars and Boutiques

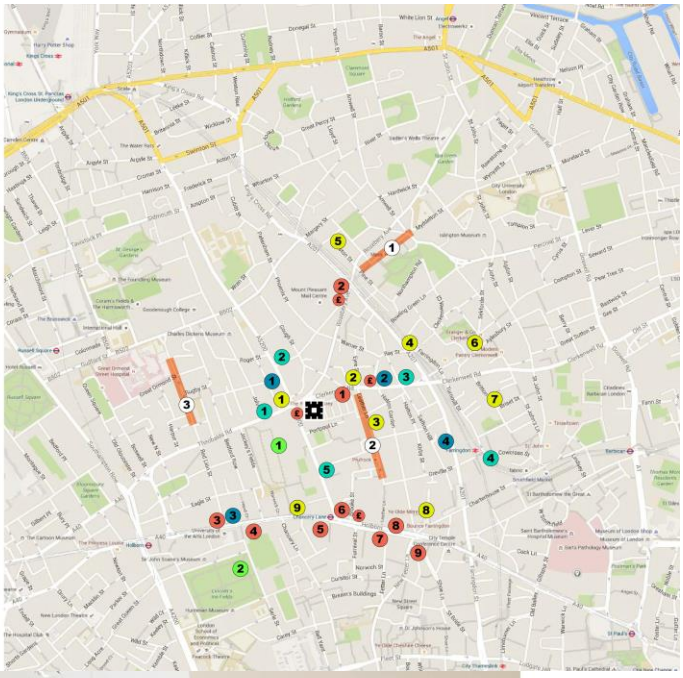
1 Banh Mi (Vietnamese) and Grill Market (Salads)
2 Kitchen 8 (Salads)
3 Terroni of Clerkenwell (Italian Salads & Sandwiches)
4 Mugen (Sushi)
5 Conditor & Cook (Cakes)

1 Mail Boxes Etc. (Post Office)
2 Royal Mail (Post Office)
3 Halifax Bank
4 Nationwide & TSB Bank
5 Natwest Bank
6 Barclays Bank
7 HSBC Bank
8 Santander Bank
9 Lloyds Bank
£ Cash Point

1 The Yorkshire Grey
2 The Gunmaker's Arms
3 The Craft Beer Co.
4 Betsey Trotwood
5 The Easton
6 The Crown Tavern & The Three Kings
7 The Jerusalem Tavern
8 Ye Olde Mitre
9 Cittie of Yorke

1 Park: Gray's Inn Gardens
2 Park: Lincoln's Inn Fields

1 Coop Supermarket
2 Sainsbury's Supermarket
3 Sainsbury's Supermarket
3 Tesco Supermarket



British Airways Flight Simulator at Heathrow

More

If you have other questions that are not covered in this document...

... feel free to contact the Manager and we will be more than willing to answer them.

Thank you!

We hope you will enjoy working with us and will benefit from the diverse range of project skills and specialisms that Bryden Wood offer.

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Notes

Annex 7 – Company Profile Inspiration

Annex 7.1 - CVs

The CVs presented in this section demonstrate an idea which is already existing and could easily be applied to the employee company profiles suggested through the solutions mentioned in Chapter 6 Reducing the time consumption of the adaptation process.

Figure 25 CV example 1, showing the level development of different interests and skils - https://www.freepik.com/free-vector/resume-graphic-designer-template_833339.htm

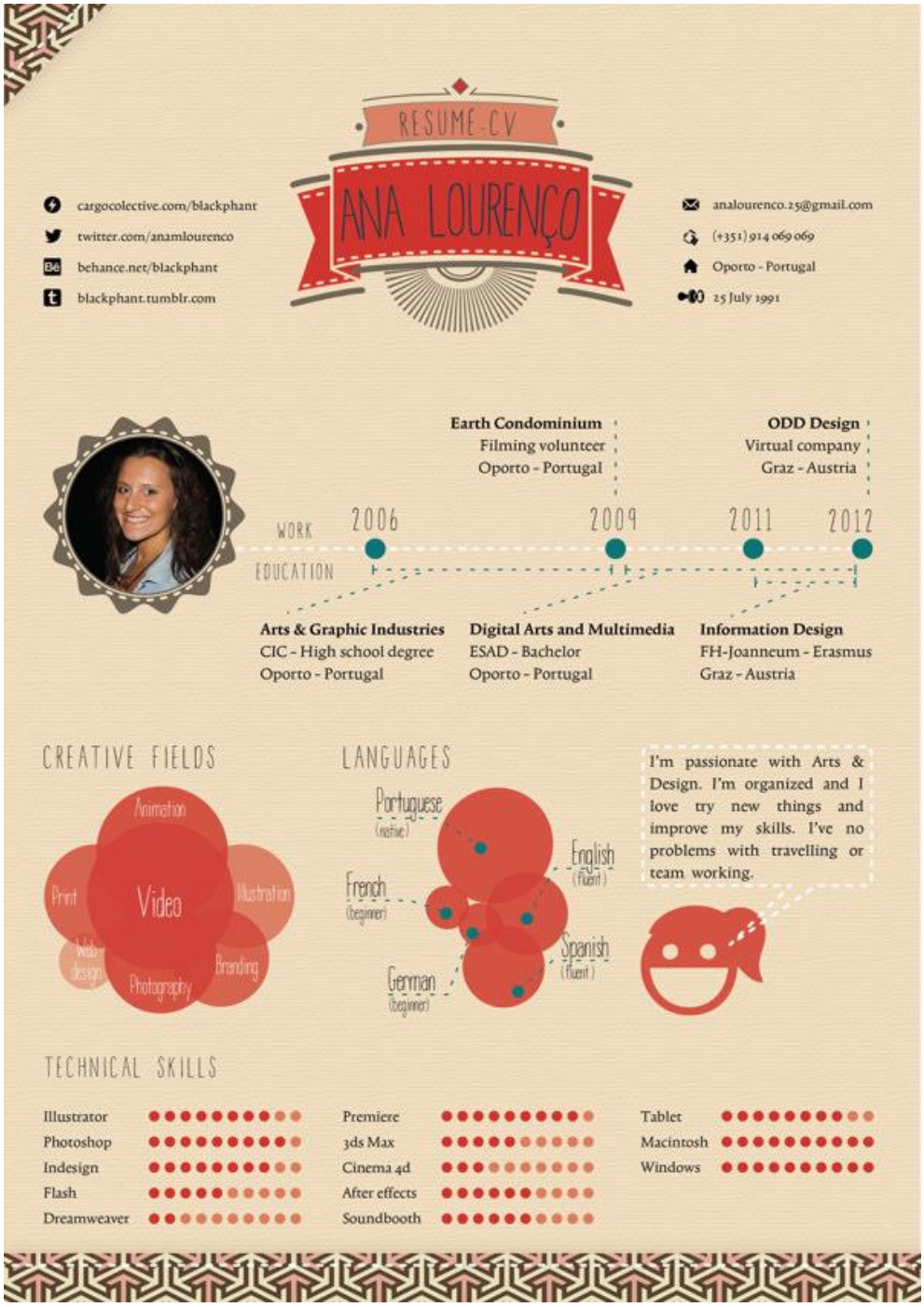


Figure 26 CV exaple 2, showing the concept of integration between different skills
https://www.hongkiat.com/blog/beautiful-resume-design/

Annex 7.2 – LinkedIn Profiles

LinkedIn profiles are also very similar to the company profile suggested in the suggested solution in chapter 6 Reducing the time consumption of the adaptation process. In addition to the previous CV examples, the LinkedIn ones are part of a social network which allows people to enhance other people's experiences making it more reliable that the person actually has those skills or competencies. It also could show common areas between people (Figure 28) making the integration between people even more visible.

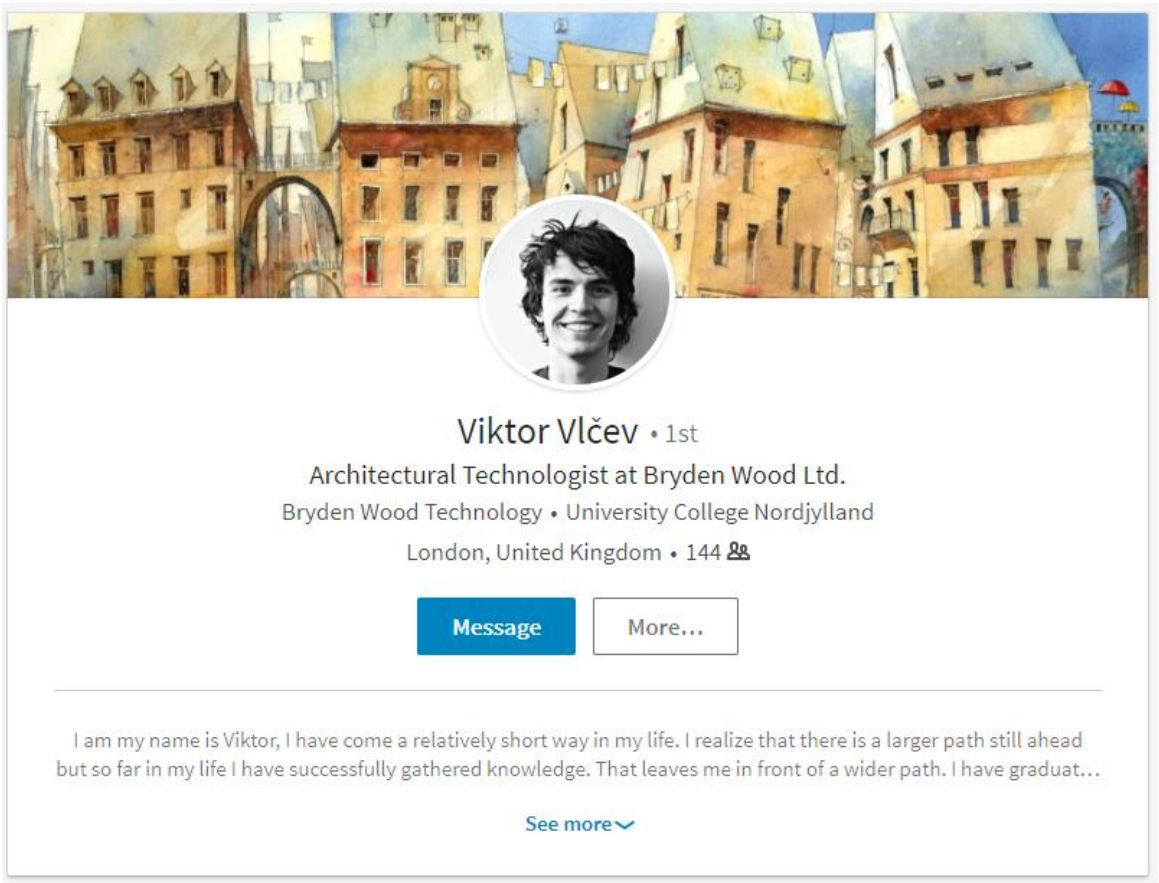
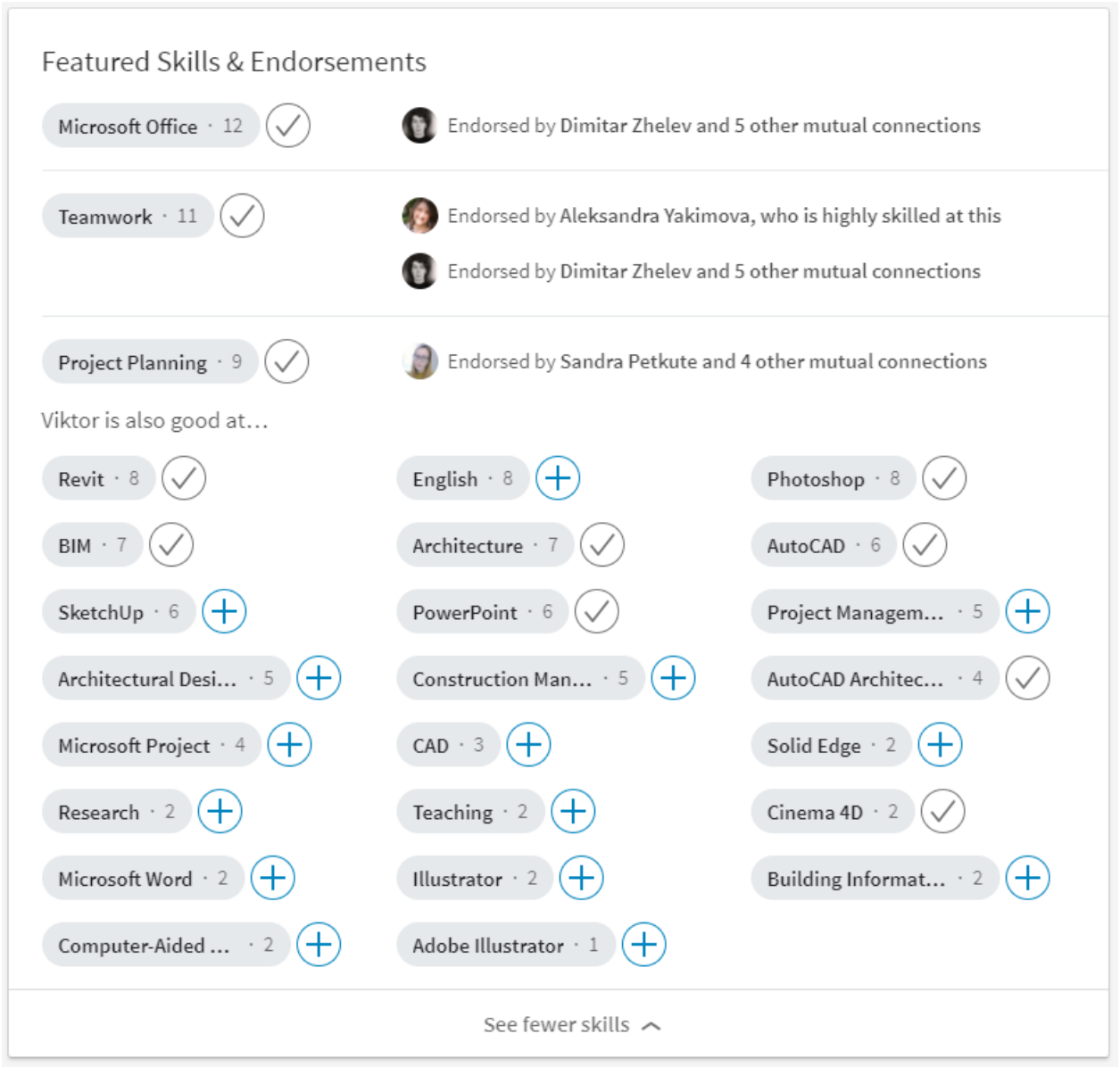
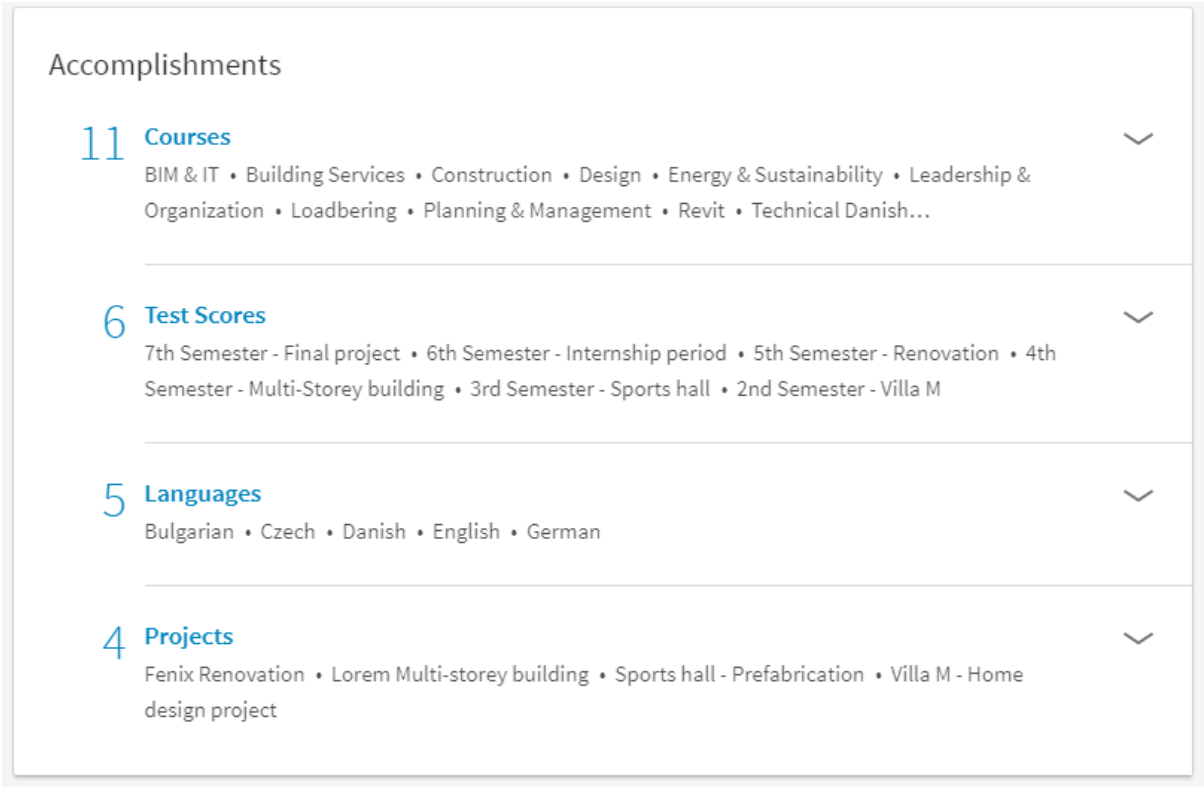


Figure 27 Bryden Wood employee LinkedIn profile https://www.linkedin.com/in/viktorvlcev/


Featured Skills & Endorsements
Microsoft Office · 12
Endorsed by Dimitar Zhelev and 5 other mutual connections
Teamwork · 11
Endorsed by Aleksandra Yakimova, who is highly skilled at this
Endorsed by Dimitar Zhelev and 5 other mutual connections
Project Planning · 9
Endorsed by Sandra Petkute and 4 other mutual connections
Viktor is also good at...
Revit · 8
English · 8
Photoshop · 8
BIM · 7
Architecture · 7
AutoCAD · 6
SketchUp · 6
PowerPoint · 6
Project Managem... · 5
Architectural Desi... · 5
Construction Man... · 5
AutoCAD Architec... · 4
Microsoft Project · 4
CAD · 3
Solid Edge · 2
Research · 2
Teaching · 2
Cinema 4D · 2
Microsoft Word · 2
Illustrator · 2
Building Informat... · 2
Computer-Aided ... · 2
Adobe Illustrator · 1
See fewer skills



Previously LinkedIn also showed common skills between profiles (Figure 28). This could also be a way to join the internal company capabilities (except the suggested Master Thesis solution would show the actual Skills & Experience, Groups, and etc.)

Figure 28 LinkedIn common areas between profiles, http://empoweringpumps.com/six-ways-to-use-linkedins-new-features-to-boost-business/

Annex 7.3 – Game Character Profiles

Game character profiles also similarly have a lot of skills they can develop (Figure 29). The profile levelling up is in many cases due to experience gained. In the adaptation topic relation this experience can be gained through completing the different adaptation tasks set by the HR manager. The person playing can decide which areas he would like to further develop which would help him during the next stages of the game. Or in the adaptation topic context, the employee would be able to be aware of which skills to further develop on his character in order to help the further development of the company. This is linked to the employee adaptation to the company vision and strategy. Furthermore, by involving the gaming concept, the adaptation process become more enjoyable and motivates people (Vlachopoulos & Makri, 2017).

Figure 29 Game Character leveling up, http://www.indiedb.com/games/empires-in-ruins