

“The challenges facing Business Process Outsourcing in delivering scalable and secure work-at-home solutions: a focus on senior technical and information staff”



National
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Ireland

**“THE CHALLENGES FACING BUSINESS PROCESS OUTSOURCING IN
DELIVERING SCALABLE AND SECURE WORK-AT-HOME SOLUTIONS:**

A FOCUS ON SENIOR TECHNICAL AND INFORMATION STAFF”

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Abstract

“THE CHALLENGES FACING BUSINESS PROCESS OUTSOURCING IN DELIVERING SCALABLE AND SECURE WORK-AT-HOME SOLUTIONS: A FOCUS ON SENIOR TECHNICAL AND INFORMATION STAFF”

The benefits of working at home (WAH) are well documented: a 55 percent increase in productivity, improved employee satisfaction, a significant increase in recruitment and retention metrics, and companies gain from savings on office space and other overheads. It is little wonder, therefore, that WAH is growing at an incredible pace with a 115 percent increase in at-home workers since 2005, and more now with the unfortunate coronavirus pandemic (Analytics, 2020). To prevent the spread of COVID-19 which has produced momentous disruptions in the functioning of public sector organizations, there has been a sudden and dramatic shift in the location where employees work. Many workers have converted their bedrooms into meeting rooms, their living room tables into working desks and their kitchens into workplaces. This trend is happening across the world and is likely to stay even after the pandemic.

Academic research on this organizational phenomenon has managed to shed a lot of light on specific issues, namely the importance of remote work-life balance, work-life integration (Beauregard & Basile, 2016) and the side effects of this new technology acceptance model (TAM).

However, the studies have not focused on the technological challenges that senior staff have daily in delivering such solutions. This paper, therefore, addresses these gaps while investigating how upper managers in Business Process Outsourcings (BPOs) are delivering scalable and secure ‘work at home’ solutions. It will primarily focus on answering questions and challenges from a technical and operational perspective, while also focusing on employees’ perception of the flexibility and control organizations may indirectly have over them.

The approach the author has taken in this research was in line with what Creswell (2013) called a mixed design. A mix of qualitative and quantitative approaches, using an online survey, was taken in order to first identify the size of the companies managers were working for, and then define any challenges faced by the same managers in delivering secure and scalable ‘work at home’ solutions.

Submission of Thesis and Dissertation

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Research Students Declaration Form
(Thesis/Author Declaration Form)

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Degree for which thesis is submitted: Master of Business Administration

Title of Thesis: “THE CHALLENGES FACING BUSINESS PROCESS
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HOME SOLUTIONS: A FOCUS ON SENIOR TECHNICAL AND
INFORMATION STAFF”

Supervisor: Stephen Sands

Material submitted for award

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Date: 05/05/21

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Chapter 1 – Introduction

1.1 Introduction

Working remotely is not something new in today’s workplaces. The terms “telecommuting” or “teleworking” were first introduced in the late 1970s, and other similar words such as “remote work”, “virtual offices”, “work anywhere” soon followed (Martino, 1979; Olson, 1983; Licker, 1983).

Greater technological connectivity facilitates this process by enabling work to be carried out wherever workers happen to be and whatever the time (Messenger and Gschwind, 2016). As a result, employees are now capable, more than ever, of working without a physical boundary, using a phone, tablet, or laptop, and on the go. This the new era of “mobile / remote workers“ has attracted significant research attention in the last few decades.

Studies have analysed the associations with organizational performance and cost saving, but also with employee’s attitudes, retention rates, health, performance and well-being. From an organization point of view, having virtual employees, in fact, lessens the need for office space and allows organizations to take advantage of lower labour costs available across the world (Kumar, Kwong, & Misra, 2009). While employees are also happier, according to Donovan (2019), flexibility means a happier and more productive workforce.

The amount of remote workers has increase exponentially over the past 10 years and studies shows this phenomenon is likely to stay. Research carried out by the Trades Union Congress (TUC) suggests that over the last decade the number of employees who say they usually work from home has increased by a fifth (TUC, 2016).

An obvious reason recently has been the COVID-19 pandemic that has driven a dramatic spike in virtual collaboration and homeworking. Data from CIPD’s survey found that 70 percent of organisations were willing to facilitate more employees to work remotely after COVID-19 than before the crisis (CIPD, 2020).

While many firms across the globe see it as an obstacle, others see it as the key to resolving the primary challenges facing the Business Process Outsourcing (BPO) industry today, such as record low unemployment and high attrition rates, that can be very costly (Chennai, 2018).

Attrition rates vary widely in the BPO industry. Publicly declared rates range from 21 percent to 48 percent annually. Leading contact center analyst firm, ContactBabel,

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found an average of 30 percent attrition rates (Allen, 2016). Whilst in private accounts, the numbers are as high as 70 percent, with the average sitting in the 30 percent to 40 percent range. The cost impact of this on a business is very significant. It is estimated that the total cost of replacing a single employee ranges between 90 percent and 200 percent of an employee’s annual salary (The UK Contact Center Decision-Maker’s Guide 2020’, 2020). Vicki Brakcett, a 25-year C-Level contact center consultant, states the average cost of replacing a contact center employee is about \$20,000. WAH can have a significant impact on these costs. A Stanford University study of 500 travel agency employees found that those working from home had a 50 percent lower attrition rate. Similarly, Global Workplace Analytics found a 25 percent reduction in attrition among home and remote workers (GWA, 2010). The benefits of WAH don’t end there.

WAH also expands the employable population to those who could not previously work in contact center jobs, including military spouses, people in rural areas, those with disabilities, etc. The current age of the global workforce is regarded to be, by Meier and Crocker (2010), the generation with the highest ambitions, motivations, and education. This generation Y – those born between 1978-1990 (Tulgan, 2011), has a higher technical skillset and also prefer working remotely. The Labour Force Survey (LFS) analysis confirms the statement that remote working is growing among people between 20–59-years who are in work.

Booth et.al. (2002) stated that increased labor market flexibility creates job opportunities for young workers, less skilled workers, women, and immigrants. Unsurprisingly, in a low margin industry in that of BPOs, WAH has the potential to deliver huge cost savings and consequent bottom line benefits. These include significant real estate savings of \$11,000 per employee and a *de facto* raise for employees through savings of \$2,000 to \$7,000 per year (Analytics, 2019). Generally, this type of research is based on telecommuting, which is broadly defined as working 50 percent of the time from home. In the BPO industry, employees are far more likely to work 100 percent of the time at home, suggesting the benefits could be even larger than the studies above suggest.

In addition, if we consider the environmental side, it is estimated that if people in the US worked from home just half the time they currently spend working in the office, greenhouse gas emissions would be reduced by 54 million tons (Howington, 2020).

1.2 Importance of the Paper and Research Gap

In 1923 Henry Ford said: “If there is a thing that we cannot do more efficiently, cheaper, or better than the competition, there is no point in doing it further – we should hire the one who does it better than we do (Outsourcing | EEC-Marketing, 2020).” That was when the concept of “outsourcing” was first introduced. The term “outsourcing” is a combination of “*outside-resource-using*” and means contracting an external party to do a particular job, service or operation. Nowadays, there are more and more BPO companies that provide multiple services across the globe. There are multiple benefits when companies decide to outsource their activities. The bigger factor is cost. 44 percent of companies decided to outsource to better manage and control cost. 34 percent of companies decided to outsource due to the lack of skilful employees, while 29 percent claimed that BPOs can solve capacity issues (Caroll, 2019). After almost 100 years, BPO is still very much relevant today and this industry is like to be worth over \$279 billion worldwide with an annual growth of 25 percent .

Academic researchers have studied this sector for about 15 years with positive findings on the functioning of the BPO model and the relationship between BPO clients and suppliers. However, there is still much research to be done in regard to managerial approaches, decision making and the rationale of using home working solutions over traditional workplaces. This paper will fill in the gap.

This research was conducted using a mix of quantitative and qualitative methods as previously stated. The reason why a mixed methodology was chose, was that while the quantitative data was used to identify if the company was an actual BPO based on the size of the company and the number of outsource activities performed and offered. The qualitative open questions lent themselves more easily to explaining the challenges faced by managers in delivering such remote solutions.

This study will examine trends, motivations and drawbacks influencing mangers or decision-makers in investing in technologies that shift to home-working and bring-your-own-device (BYOD) solutions versus the classic brick and mortar environment. The focus will be on upper-level management rather than employee wellbeing and work-life balance, which are well covered by existing academic research.

The findings from the survey were consequently exported and analysed in order to extract common themes and differences between the various BPOs manager responses.

1.3 Research Objectives

Saunders et al. (2009), describe research objectives as statements that should be precise and distinct in order to describe what the study is trying to achieve. Wilson (2014) also claims that research objectives are the foundation to reinforce and underpin the research questions.

Enabling working from home, especially the technical elements, has historically been a challenge for most organizations. There has always been a technological gap between wanting to give the option to work from home and actually doing it. It is obvious to say that during the COVID-19 pandemic a lot of process and practices were suddenly removed to facilitate that.

The paper intends to contribute to fill in this gap in the literature, proposing an empirical examination into the selection of technology used to deploy home-based working.

1.3.1 Overall Research Objectives

To investigate the challenges facing senior technical and information staff in delivering suitable work-at-home solutions for their employees.

1.3.2 Sub Objectives

1.3.3: To assess the perceptions of key decision makers on the risks and benefits of delivering home working solutions.

1.3.4: To identify issues, drawbacks, or barriers in investing in this type of systems.

1.3.5: Analyze through qualitative research the factors that are influencing companies in the BPOs industry in investing in such systems.

1.4 Overview of Paper Structure

Chapter 1 – Introduction

This chapter contains a brief introduction of home working, the BPO industry and the rationale for this the study.

Chapter 2 – Literature Review

This chapter contains a review of the academic literature relevant to the research question.

Chapter 3 – Methodology

This chapter discusses the chosen methodology. Additionally, there are discussions about the philosophies, approaches, population sample, and a systematic review of how the data collection was conducted.

Chapter 4 – Findings and Discussion

This chapter discusses the empirical findings of the research.

Chapter 5 and 6 – Conclusions and Future Research

The conclusions and future research chapters are the final piece of this paper. It summarises the main findings of the research and it also offers some insight into how this literature could be expanded and broadened over time.

Chapter 2 – Literature review

2.1 Introduction

Work-at-home is now widely accepted as being a key feature of the BPO world. In a low margin industry, ‘work at home’ has the potential to deliver huge cost savings and consequent bottom line benefits. The number of people who are able to operate remotely has grown dramatically over the last ten years and is showing no signs of slowing down. The COVID-19 pandemic was just an accelerator and not a driver in this shift. In fact, organisations have been challenged to rapidly develop solutions that would help maintain both productivity and employee wellbeing for an entirely remote workforce (CIPD (2020)). Flexible working has been implemented in organizations, according to the CIPD (2016), as a way for workers and managers to have flexibility within their job positions, enabling them to suit their personal needs. This form of working also known as “mobile working”, allows workers and employers to work outside of the office for all or part of the week, using a corporate machine or their own. Managers must adjust to this transition in order to handle their workers: they must recognise opportunities and obstacles by encouraging employees to perform tasks that were previously performed in an office while still using the company's assets, or at home with their own personal devices. This new era of BYOD (Scarfo, 2012; Leavitt, 2013), will be crucial for the future of an organization in terms of cost saving, scalability, employee retention but mostly employee acquisition. The first goal of this chapter is to define what flexible working is and how it came to be.

Following that, the author will look at past literature and studies in order to discuss the benefits of working from home, as well as the drawbacks and implications for managers deciding to adopt this solution. The literature review will discuss the themes and objectives as per the research aims of this thesis. This chapter is divided into the following sections: the history of remote working, flexible working and teleworking, the benefits and disadvantages of working from home, company strategies and concerns, and, finally, the BYOD model. Each section delves into and evaluates previous research on the topic at hand.

The concepts described here were then used to establish the research's main and sub-objectives.

2.2 Remote Working’s history

Working from home has always existed, not only in the last few decades since the introduction of telecommuting, but for hundreds of years. Combining work and living spaces is a natural way for families and neighbourhoods to pool resources more effectively, make the most of available space, and collaborate for the greater good. Everyone worked from home until the Industrial Revolution.

Skilled blacksmiths, carpenters, leather workers, and potters all set up shop and sold their wares from the comfort of their own homes. Then came the Industrial Revolution with all the benefits of the first model of automation and the establishment of factories.

To complete their jobs, workers needed to be present in-house with massive machines and large-scale productions. So, people began commuting to designated "business spaces" around this time. The growth of corporate offices, wider office rooms, and aisles of drab cubicles coincided with the strengthening of the US economy. During this time, the 8-hour workday was also born. With the growth of the economy came advances in computers and technology, which paved the way for today's remote workers. More people began to own personal computers, and still more began to link their homes to the internet, two developments that would later pave the way for the growth of remote work.

As a result, the internet helped to turn the office tide once more. Whether working from a home office, a laptop, or even a smartphone, workers had access to cloud-based software that enabled them to do whatever they could outside of the office. Because of the internet, virtual employees could now work at any time of day and communicate with coworkers from all over the world. That's just one of the reasons why remote work is still so common and is likely to stay. Changes in the workplace have contributed to a “growing movement toward encouraging workers to work from home one or more days a week,” according to Richardson (2010, p. 137). Although teleworking or more permanent home-based work only applies to a small percentage of the workforce, the number of workers who work from home on an ad hoc basis has increased exponentially over the past years (Wheatley, 2012). While Smith and Karavattuvelil (2004) point out that these forms of working arrangements have several advantages, they also point out that there are trade-offs for all parties involved. The advantages and drawbacks of working from home for both the

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employees and the businesses have been hotly debated in the literature.

Remote working, flexible working or home working are often interchanged terms to refer to new and changing work models that take place outside of an employer's office. It is a working arrangement in which an employee performs the basic functions of his or her job while working from home, using information and communication technology (ICT).

Flexible Working, according to the Financial Time (FT) lexicon, allows workers to choose how long, where, and when they work. Human resources regulations, which typically require supervisory approval, give employees access to these “working where you want” type of solutions. Workers are not required to work from 9 a.m. to 5 p.m. anymore; instead, they choose when and how they work, considering set appointments or meetings, around on personal events that could have been missed if in the normal office.

2.3 Flexible working

BPOs have been a steady source of interest for researchers for years, with the topic developing constantly over the decades thanks to advancements in technology and the adoption of the internet almost globally. Teleworking or telecommuting is becoming increasingly popular in Western developed countries where, according to the Telework America Survey, 89 percent of the teleworkers were home-based (Felstead et al., 2005; Moos and Skaburskis, 2008; Nilles, 2007).

As various studies show, remote working offers an enormous series of benefits both from organizational and employee viewpoint. The first researchers to demonstrate the impact of flexible working and job satisfaction on employees were Schein (1977) and Orpen (1981). While these studies showed an increase in job satisfaction, job productivity was not impacted. However, a later analysis by Bolle (1996) showed that when employees are able to select this type of employment when given the option, their productivity increased. Papalexandris and Kramar (1997) also suggested that smart working (SW) has an impact on productivity, fostering organizational change, and improving recruitment quality and employee retention. Briscoe et al. (2011) argued that employers who wish to reduce employee attrition rates should attempt to accommodate work-life balance by implementing flexible working (FW). Allan (2011) indicated that organizations with the right strategies in place can increase retention rates and promote work-life balance for their employees.

WAH has grown in popularity so much nowadays that organizations are looking into ways of implementing WAH solutions into their onboarding, Human Resource (HR) and day-to-day processes. This is also highlighted by Basile and Beauregard (2016), who stated that HR's job is to ensure that working from home is a positive experience for employees and that they are able to work efficiently from home.

Basile and Beauregard (2016) conducted a study that focused on what HR should do to ensure the effective adoption and growth of working from home, as well as how, if this way of working is managed correctly by HR, there can be greater progress in creating a more flexible and diverse workplace.

Even before the COVID-19 pandemic and the expansion of the BPO industries, Reilly (1998) stated that providing flexible work can help companies perform in an increasingly competitive and volatile market. Similarly, Vandenberg (2006) described flexibility at work as the main factor that gives companies the ability to

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adapt to demand changes, technological developments, and global competition more quickly.

Cable and Elsbach (2012, p: 56) discussed the phenomenon of teleworking, suggesting that it is likely to stick around, and therefore companies must rethink the way they do business if they want to achieve a competitive advantage and global success.

Rogers (2011) outlined savings in terms of office space, energy, and insurance. He also suggested that flexible working hours for employees lead to more productivity for employers. By staying home, flexible employees save time commuting, which is reallocated into company tasks, thus resulting in more productivity. Gov UK (2015) stated that while home working is beneficial for an organization, there are doubts and concerns around employees' manageability. On the contrary, Emerald Group Publishing (2013) suggested that when employees are free from scheduling and other constraints, they are likely to be more productive. They will work at their own pace, free of distractions, and likely take fewer breaks.

2.4 The Benefits of working from home for BPO

As the literature shows, remote working solutions offers a vast number of benefits from an employee’s point of view. However, the purpose of this study is not finding the benefits for employees, which the literature has plenty, but to focus on the benefits an employer has in delivering such arrangements.

Rogers (2011) suggested that saving in terms of office space, energy used, and insurance are some of the most important factors for the employer. Figure 3 in the List of Tables, shows the average yearly cost spent in an office in different American cities. Companies offering remote working will save in renting these spaces which can be then re allocated in money invested in hiring more skillful employees around the globe. Dell, for example, claims to have saved \$12 million in real estate costs each year by consolidating and providing more flexible workspace options across the globe (Sahadi, 2016).

This is further confirmed by a study from Analytics (2019) where it suggests that reduction in expenditure include significant office overhead savings of up to \$11,000 per employee and an effective pay rise for employees through savings in commuting and other work-related costs of between \$2,000 and \$7,000 per annum. Global Workplace Analytics estimates that contact centers save \$10,000 on real estate costs for each agent who works from home (Analytics, 2019). ‘work at home’ allows BPOs to utilize an employee’s own infrastructure rather than paying rent, electricity, insurance, and other costs on physical contact center space. AT&T saved over \$6 million annually as a result of 600 employees telecommuting in New Jersey – exactly \$10,000 in savings per agent. A report compiled by Telework Research Network showed real estate savings can be as high as 18 percent. Although some companies offer benefits to employees in terms of incentives to help pay for home expenses like electricity and internet, the amount given is not comparable with the amount saved by utilizing a normal brick and mortar office. Dell is an example of a company that has implemented a formal working remotely strategy and is providing staff with an allowance to help defray the costs of operating a home office (Foster, 2012).

‘work at home’ brings many other benefits including a quite astonishing 55 percent increase in productivity. According to the study performed by SurePayroll, 86 percent of respondents said they achieve high efficiency only while working alone. In addition, 61 percent of these employees believe that their noisy coworkers are the

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most distracting factor at work, and 40 percent find improvised meetings from coworkers dropping by in their workplace to be bothersome. Improving productivity is a key challenge for all commercial organizations (Board, 2019).

Labor is the largest single cost for contact centers by far with many reports showing it comes in at above 70 percent of total costs (The Metrics of Contact Center Productivity, 2019). Increased employee productivity therefore has a far greater impact on contact centers than other industries.

There is a considerable body of research to indicate that ‘work at home’ leads to an increase in productivity. On the low end, a Harvard Business School-led research project, found a 4.4 percent increase in productivity from ‘work at home’, while for contact center workers, ‘work at home’ increases productivity by up to 55 percent (Analytics, 2019).

As mentioned in the introduction, attrition rates are an important factor in the BPO industry. An analysis of the top 30 BPOs by Everest has shown that 77 percent of those who issued annual reports mentioned hiring as a key risk factor to company performance. That risk factor is exacerbated by high attrition rates.

With an average attrition rate of between 30 and 40 percent, a BPO must effectively rehire every single employee every three years, and that’s before recruiting additional employees to account for growth. For many BPOs, this can mean finding tens of thousands of new employees each year.

At a time of historically low unemployment rates, this poses a major strategic and operational problem. Even if they succeed in finding candidates for the vacancies, the potential cost implications are enormous. For example, a 1,000 employee BPO can expect to incur costs ranging from \$9.8 million to \$21.7 million annually as a result of attrition. And this ignores the cost associated with an inability to meet growing customer demand.

‘work at home’ helps resolve this problem by enabling employers to target recruitment campaigns at the areas of maximum opportunity. These can include regions with higher unemployment and specific groups of people who cannot access conventional jobs for one reason or another.

For example, the location independent aspect of ‘work at home’ allows campaigns to target rural areas which have traditionally been subject to high unemployment. Rural areas are also highly appealing due to their lower living costs not to mention the political and corporate brand benefits of providing much needed employment in such

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areas. This could be particularly effective for contact center jobs with relatively low pay which are far less attractive for city workers who have to contend with a much higher cost of living. \$31,000 a year goes a lot further in Salem, Huddersfield, England than it would in San Francisco or London.

It also facilitates the hiring of people who find it hard to access the workforce. For example, one English BPO that operates a pure ‘work at home’ model has reported that 12 percent of its employees are registered disabled. Similarly, an American BPO targets military mothers who move from place to place and base to base and who ordinarily experience difficulties finding work due to that mobility. With ‘work at home’ that mobility ceases to be an issue. According to Wharton professor Dipak Kumar the main reason people leave rural communities is a *“lack of academic and economic opportunity”*. ‘work at home’ brings much needed economic opportunity to those communities. And it allows companies that are struggling to hire in cities to specifically target areas where labor is available.

From an environmental perspective, it leads to improved sustainability through a reduction in commutes with consequent CO₂ and other greenhouse gas emissions decreases. Moreover, the time that is spent commuting can be time put back into work which indirectly, as previously mentioned, will increase productivity, and will lessen the levels of employee stress (Agius and Angelides, 1997).

2.5 The Danger of working from home for BPOs

While much of the literature focuses on the benefits that ‘work at home’ undoubtedly offers for both workers and for the bottom line, it also presents a range of challenges that managers have to tackle. While Wheatley (2012) identifies isolation, blurred work-home boundaries, and a lack of career advancement as possible drawbacks to working from home for employees, these challenges are not in the scope of this research. The focus of this study is on the technical pitfalls faced by BPOs when implementing ‘work at home’ programs. When it comes to remote working options, there are several considerations that employers must consider. This may include market advantages, such as attracting and maintaining talent, increasing efficiency, and lowering costs by participating in more sustainable working practices. Businesses also face obstacles such as a lack of clarification on how to enforce a remote work HR programs, difficulties in implementing a formal HR policy on remote working, access to guidelines, and cost-related factors such as Information Security (IS) requirements (Remote Work in Ireland Future Jobs, 2019).

Indeed, while the range of solutions for the delivery of ‘work at home’ is potentially very wide each has technical issues which must be resolved before the benefits can be realized. These issues range from security and compliance to difficulties providing support to many hundreds of remote agents who are potentially using a diverse range of devices and operating systems.

Security is absolutely critical in the BPO world with compliance requirements ranging from Payment Card Industry Data Security Standard (PCI), Health Insurance Portability and Accountability (HIPAA), General Data Protection Regulation (GDPR) and numerous financial regulations. The relatively easy part is securing the backend infrastructure. The main players, including VMWare, Citrix, and Microsoft, all provide blueprints on how to implement compliant environments and checks.

However, the home environment presents an altogether stiffer challenge. Policies have to be put in place for a whole range of eventualities not normally considered in the workplace, particularly in relation to credit card data. Every point in a credit card transaction must be secure and comply with PCI and other regulations. Additional risks in the home environment include data leaking from employee devices, malware running on a computer, employees taking pictures of screens, and so on.

Organizations must use a mix of people, processes and technology in order to

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achieve their desired security and compliance outcomes, regardless of the employee’s location. The people aspect tends to be most difficult and is usually dealt with by HR. The HR solution normally requires an employee to sign an agreement regarding their behavior but there is no guarantee of adherence and such agreements are very difficult to police. Indeed, the author has encountered instances of employees being required to video their home working environment on a webcam to ensure it meets workplace regulations. However, employers cannot be assured that the images in the video are actually of the employee’s home. Moreover, it is hard for a company to identify, who is working remotely, when and how.

Greater certainty can be achieved with process and technology, but this usually comes at a cost, with the employer having to retain ownership and control of all devices and software used by the home worker. This has contributed to a mistaken belief that ‘work at home’ solutions cannot be delivered successfully using employees’ own devices.

Remote communication and collaboration have always represented a barrier to remote work and ‘work at home’. Communication is extremely important in virtual teams.

Since face-to-face contact is often not an option, virtual teams can face limitations in the quantity and quality of information shared (2020). Research shows that remote workers face issues not shared by office workers (Igloo, 2018). A study carried out by Igloo Software shows that seven in ten remote workers face challenges they would not face in an office. These include missing important information communicated in person, being excluded from meetings, not having the technology to do their job, reducing job satisfaction, organisational commitment and perceived autonomy, and increasing job stress, absenteeism, turnover intent and work–family conflict (2020). Without mentioning career progression, also outlined by Richardson (2010).

This is according to Harvard Business Review, different management methods are required for remote teams, and it is also important to consider the technical solutions that are needed to ensure effective communication and collaboration. This virtual workplace technology includes both internal and external communications and chat software that are usually managed in house when working in the office.

From a technical perspective, ‘work at home’ introduces new dynamics into the recruitment and onboarding process, primarily concerning the employees’ machines

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and the quality of the connection, which is a critical factor for contact center agents while working at home. Contact centres rely extensively on one-to-one calls while dealing with customers, hence having a bad connection will jeopardize the quality of the support an agent can offer, which will directly impact the BPO ‘s reputation. Tackling internet speed remotely and especially in rural areas is still one of the biggest challenges when delivering remote working solutions.

Simplicity is essential due to the distance between the agent and the support team. Hardware can present a variety of issues such as keyboards not working and hardware not connecting to the network. BYOD, or more accurately agent owned device (AOD), introduces device compliance issues. Agents also need to be provided with the tools and knowledge to fix issues they may run into.

It is critically important that automated device validation take place prior to hiring, while hardware and software are managed by the internal IT department. Ongoing maintenance of infrastructures, software, endpoints and so on can be a challenge when agents are while distributed.

All business applications remain centralized whether with a cloud provider, Virtual desktop infrastructure (VDI) or on premise. The same backend infrastructure is required regardless of where people are sitting. The challenges remain the same as with a physical contact center.

Centralized software is as easy to maintain for at home agents as those in physical contact centres. It is important to consider how to keep home workers’ software updated, however. This will require the devices to be kept on the company domain or the utilization of management software solutions that can deploy the updates.

Endpoints are where the challenges really start to mount up. Where the employer provides the device, ‘work at home’ at any real scale can pose massive difficulties, with the tipping point being at between 100 and 200 devices in most cases. This is the point where the company effectively becomes a hardware distributor as well as a BPO.

Getting devices back from agents when they leave is another vitally important consideration. Even when companies pay postage and packaging in advance, they frequently do not receive them back from a departing employee.

Device damage is also common when with the agent or en route to the agent. Finally, when using corporate devices, agent downtime may occur when computers need to be returned to IT for problem resolution and maintenance. In most jurisdictions,

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companies are required to continue paying staff during these periods.

For IT, it is important to consider how hundreds, if not thousands, of agents are supported when they are distributed remotely. Interestingly, front line engineers and helpdesk employees suggest treating everyone largely the same – once the employee has the desktop, apps and resources available alongside a centralized management and deployment solution, the physical location of the agent is irrelevant. This is corroborated by industry leaders like Amy Freshman and Amy Anger who say this approach fosters employee equality, inclusion and diversity.

Some IT support issues will be due to a lack of environment standardization – people working on different networks, devices, etc. Technological diversity does introduce its own issues. A common problem is poor quality audio due to either bad headsets, softphone quality or high bandwidth demand within the agent’s home. It is essential that support teams be equipped with the tools to address these new challenges as they arise. When implementing ‘work at home’, a BPO has two main options in terms of an overall technology solution.

The first is to provide the ‘work at home’ agent with some kind of company-owned hardware while the other is for the agent to use their own device (BYOD/AOD), which will be analysed in later section.

Up until now, the latter option has been rejected by many BPOs as unworkable for a variety of reasons. However, under closer analysis it becomes clear that BYOD/AOD is actually the only sustainable solution from support and cost perspectives, especially at scale.

2.6 BPO’s Strategies towards Remote Working’s Concerns

Remote working and BYOD is a practice that is common in many organizations, especially now with the result of the COVID-19 pandemic. Although there are risks associated with it, from a business operation, scalability and security viewpoint, its adoption will continue to rise due to its overall effectiveness, whether the enterprise wants it to or not. However, business strategies play a crucial role in deciding for the adoption or not of such models. Employees accessing company data and software on personal computers pose a significant threat to data protection but attempting to protect data by controlling privately owned devices can be seen as an infringement on individual privacy rights. Organizations of all types are faced with the challenge of protecting their data while still adhering to data privacy laws. Although data privacy laws vary by region, two universal principles apply to businesses adopting a BYOD policy: entities must take appropriate security measures to protect any personal data they process, and individuals must provide express consent for their personal data to be accessed and processed.

The most important strategy a company will have to identify for a remote working scenario is Information Security. The establishment of "*a security positioning that fits with the company's resources and business path*" in order to protect the "*organization's information infrastructure(s) against internal and external threats*" is known as IS strategy (Park and Ruighaver, 2008; Wang, 2005). While the scope of Information Security is vast, the purpose of this study is to identify the role of IS in a remote working and BYOD solution and nothing more.

While emerging technologies are driving innovation, flexibility and productivity to new highs, the risks associated with it are also increasing. The same can be said for remote working solutions. Although external threats usually target corporate infrastructure for reasons like espionage, Intellectual Properties theft, or simply for financial gain via ransomware, the biggest security challenges companies have with home workers are associated with data leakage, device loss and loss of visibility. Miller et al. (2012) compared BYOD to the introduction of laptop computers into the workplace. The security threats and issues associated with BYOD, they believe, are "largely a repeat" of those encountered with laptops. They do, however, say that BYOD is a much more difficult security problem due to the larger volumes and ease of system failure (Miller et al., 2012).

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Data leakage, the intentional or unintentional leakage of confidential data, such as private customer information and proprietary company information, presents a significant threat to companies when important information assets are stored on employee-owned computers (Miller et al., 2012). A lost BYOD system can be a major source of concern for businesses, not just because of the expense of the hardware, but mostly because of the sensitive personal and organizational data it can contain (Tu, Yuan, & Archer, 2014). Second, mixing personal data and business information on a computer presents a significant risk to businesses due to the intentional or unintentional disclosure of sensitive information (Miller et al., 2012).

Home-based work represents a significant shift in the evolution of work and the relationship between workers, managers, and businesses in general. One of the most significant obstacles to its introduction is the absence of workers from the workplace, which implies changes in control over them. BYOD poses major security threats for businesses because they no longer have control over the computer on which company data is stored, compared to corporate devices, making it difficult to implement security policies for issues including data leakage, theft, and regulatory compliance (Miller et al., 2012).

Organizations have embraced BYOD as a result of the consumerization of IT, and although this phenomenon has been shown to have substantial business advantages in terms of capital expenditure reduction, employee efficiency, and job versatility, if not handled properly, the IS challenges of data leakage, system control and management, can outweigh these benefits.

Technical solutions such as mobile device management (MDM), network access control (NAC), Software Based solutions (ThinScale), Full System Virtualization via VDI, and Virtual Private Network (VPN) configurations are just some of the options to help organizations in deploying scalable and secured home worker solutions.

Additionally, while MDM systems prevent unauthorized access to a specific set of business applications when using a specific device, that doesn't cover if the same applications are used with a different machine. To overcome this limitation, company can install “tracking/ validation” agents on devices that will extract data, unknown to the user, that will bind authentication information together from both machine and user. The same agents are additionally used in case of device loss as a mechanism to safeguard corporate data with an automated “kill switch” that can, in case of extreme circumstances, wipe the entire remote system. To conclude, organizations need to

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differentiate what is considered corporate data and what is considered user personal data. During the “wipe”, firms need to make sure that only corporate data is wiped and not personal data. That presents a data ownership challenge. To overcome this, some solution like ThinScale can separate employees and corporate data into multiple accounts known as “*Dual Persona*”, allowing computers to be decommissioned without compromising personal information.

To conclude, a major strategy for security policy makers is to align the same policies implemented for corporate machines and office workers with the remote employees values. The more employees, especially the one’s external to the company environment, understand the reason why something has been “forced” or implemented for them, the more effective those policies will be. It is crucial that during remote onboarding, the addition of Staff Education & Training Awareness (SETA) programs is also added to, firstly, increase the resilience and effectiveness of the IS strategy, and to secondly lessen the risks associated with employees clicking a potentially dangerous file or link.

2.7 BYOD

The term "bring your own device" (BYOD) refers to the growing business trend of using employee-owned smartphones, tablets, laptops and other platforms to access corporate applications like email and databases; and to create, store and manage corporate data using these devices. It has become a generational phenomenon, and thanks to the rapid advancement of mobile technology this trend is still rising.

BYOD applies to workers carrying their own electronic devices to work, that have not been configured or locked down by any IT department, such as mobile devices, and using them to access private company information and applications. Industry surveys reveal that 72 percent of corporations allow personal devices to connect to corporate networks (Tenable Network Security, 2016) and 87 percent of companies rely on their employees using personal devices to access business apps (Lazar, 2017). While at the beginning, organizations were not comfortable in providing such a model, the shift in expectations from their employees who demand job flexibility and desire to perform their work on the latest technological gadgets, made firms re-evaluate their business strategies.

Vast literature shows that BYOD benefits include increased employee satisfaction and productivity, increased engagement with customers and innovation, and for employers lower IT costs due to the removal of hardware and software acquisition and development costs from the company budget. However, there is an argument that this trend is simply a response to growing pressure from the connected workforce of tomorrow and is a tactic for attracting and retaining top talent for the organization.

2.8 The Benefits of BYOD

Many businesses have switched to a BYOD environment because of the significant cost savings associated with the reduction in hardware investment. Employees may bring their own devices to work, allowing the company to pass on the expense of desktop hardware to them. Employees also have a strong desire to update their hardware as quickly as possible, accelerating the introduction of cutting-edge technology. The organization no longer pays for the hardware's and lifecycle maintenance costs, and it's typical for employees to foot the bill for the majority of the running costs of their newly acquired unit (Wood, 2012; Calder, 2013).

The same can be said for support costs. Organizations are not required to support personal devices, and a study from Research Corner (Rains, 2012) showed that only 35 percent of the companies studied adopting a BYOD model had an internal support team specific for home agents. Organizations can make better use of their IT resources by requiring less IT support for devices. However, according to an Aberdeen Group report, if a 1,000-person company uses BYOD, it will spend \$170 more per user per year. Supporting a wide variety of mobile devices, operating systems, and hardware models is usually more costly than supporting only one or two IT-approved and company-funded platforms.

On the contrary though, while Research Corner showed saving in terms of hardware, support and maintenance when BYOD was implemented, SC Magazine (2012) outlined an increase in the cost of security. Companies spend more in terms of application security, back-end infrastructure and other security implementations negating any real savings.

Another benefit is the overall productivity and satisfaction that a happy employee brings to the company. Data is accessible all the time, on demand and from everywhere without any geolocation or physical restriction. Users can get more work done by having access to all files and emails from any hardware, platform or web browser.

For better or worse, a significant percentage of workers check their email and do other work after hours on weekdays, weekends, and vacations, according to various studies. BYOD is a major enabler of this trend.

Additionally, users have a level of comfort using their own device higher than the one from the office. As a result, employees are more productive because they are

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more at ease interacting with devices, they are familiar with.

When a BYOD policy is enforced in a company, workers are more likely to look after their devices because there is a greater sense of personal ownership involved, resulting in lower hardware costs and maintenance.

According to a recent study commissioned by VMWare called the "New Way of Work Study", 64 percent of employees in multinational corporations across the Asian and Australian region said their productivity had improved due to efficiency and ease of use by using personal devices for work purposes, which contributed to increased employee happiness and satisfaction (Mont, 2012). Another study from the Aberdeen Group confirmed the same where it found that 61 percent of companies that permit employees to use their own mobile device experience higher employee satisfaction.

2.9 The Danger of BYOD

The trend of BYOD stems from the perception that it can improve the agility and productivity of work practices amongst employees, and cost savings for an enterprise. These benefits have resulted in the continuous growth of BYOD practice within firms but have also led to the introduction of security risks.

One of the most important risks associated with employees' personal machines is the loss of data due the device being stolen, lost or damaged. A McAfee study (2012) showed that when employees sell their personal devices in order to an upgrade to newer model, some data is passed to unauthorized people. For example, in a study conducted in the United Kingdom, researchers obtained 49 mobile devices that had been resold via secondary markets; forensic analysis of the devices revealed information was left on each device, resulting in a total of more than 11,000 pieces of information collected from all of the devices (Anthony, 2012).

Another important danger of BYOD is that personally owned devices that access and store corporate data will typically bypass any security filtering systems that have been deployed by IT. Corporate machines have biometrics and/or encryption, enabled by default to authenticate a user, whereas “home-users” tend to disable pin and password protection for ease of use or convenience, therefore compromising the security of the company data.

Gatewood (2012) also mentioned the difficulties for company in auditing and monitoring whether the authorized user is accessing corporate data as opposed to someone else entirely. Additionally, visibility and control of that data is also reduced. With the advent of cloud storage, the likes of Dropbox, Google Docs, Apple iCloud and so on, employees can sync and share data across multiple devices, and it is hard for a company to monitor where that data is saved and accessed from.

One more factor with higher associated risks for BYOD is with the monitoring of external applications installed or downloaded for personal use. Although Google Play and Apple Store are getting better in detecting and stopping malicious applications from entering their stores, once an app has been downloaded and installed on personal devices, that can create a back door on that device which can then be exploited for attacks. Cisco (2012) accordingly identified that the risk of BYOD entering corporate networks with malware and viruses will increase the possibility of breaches and data leakage.

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To conclude, though BYOD has many risks associated with its implementation, there are numerous ways for businesses to manage the BYOD model via security policies, security culture, and especially SETA to achieve the overall benefits. Furthermore, research still indicates that the “human factor” is still the weakest link for organizations, making it critical for workers to be knowledgeable about information security, including best practices and how to handle accidents. Employees may perform their jobs and use BYOD in a way that emphasizes mitigating risks and preserving information assets by promoting an organizational culture that emphasizes the importance of security.

2.10 Conclusion

BYOD, Remote Worker, Flexible worker, WFA or however one might call it – it is happening, and it is here to stay. Thanks to the uncertainty caused by the COVID-19 pandemic, more and more businesses have seen a rise in the number of remote employees, and this trend will only continue to grow.

Under these conditions, the author set out on a quest to explore and collect all of the useful information already available in the literature, in the hopes of contributing to a deeper understanding of a widespread phenomenon and its improvement in the months and years ahead, not only for smaller business but also especially for the BPO industry overall. Working outside of the conventional office environment provides organisations’ managers and individuals with unique opportunities and challenges. In a highly complex structure of business strategy, trajectory, growth goals, motives, and impacts, and every component is related to the others. The concerns raised in this article indicate that organizations should approach, plan, execute, and fine-tune their remote work programs with caution and care.

When it comes to building societal support and recognition for remote working projects, as well as alleviating the majority of well-being threats for teleworkers, managers tend to play a critical role. Leading by example, setting clear goals, speaking regularly, tracking and modelling acceptable work habits, and purposefully providing opportunities for remote workers are just a few examples of how the managerial group can really make a difference and help BPO practices succeed. The academic literature still has a lot to say about topics on how to effectively handle remote workers' preparation, progress, and promotion opportunities, or how to effectively consider practical, psychological, and managerial aspects when leading remote teams. The current environment not only makes almost every BPO company a possible case study, but it also allows for a global examination of remote working patterns, eventually providing all the data required to adapt remote work programs to various countries and cultures. As businesses explore new ways to maximize the benefits of remote work while minimizing the risks, policymakers are becoming increasingly aware of the need to consider remote work and its consequences more effectively and concretely. New legislation should be enacted to prevent these activities from negatively impacting teleworkers' comfort, health, and protection, as well as to incentivize businesses to move in this direction.

Chapter 3 – Research Design and Methodology

3.1 Introduction

This chapter outlines the methodology chosen to carry out the research in line with the aims and objectives, while also aligning the research question to a specific philosophy. Wilson (2014) stated that research is a set of actions performed to gather, record, and translate useful data. The reason individuals embark on a research journey is to increase their knowledge and their understanding on a given subject (Saunders, Lewis, Thornhill, 2015). However, a critique from Saunders, Lewis, and Thornhill (2019, p132), suggested that during the design and the development of the research process, it is paramount to recognise the philosophical differences and inconsistencies.

3.2 Proposed Methodology

Methodology is a broad research approach that specifies how research should be conducted. It requires a set of beliefs and philosophical assumptions that shape how the research problems are understood and how research methods are chosen. The research methodology section of a dissertation helps to ensure that the methods, strategies, and underlying theory are all consistent. This section will describe the various philosophical approaches considered for this study and the preference of one over the other.

The use of the Saunders Research Onions (Fig. 1) was followed as a guidance to the qualitative methodology performed for this study. The tool was developed by Saunders in 2007 and illustrates, for each layer, a detailed description of the stages involved in the development of a research project. Its usefulness lies in its adaptability to almost any type of research methodology (Bryman, 2012). Saunders *et al.*, (2007) noted that while using a “research onion”, one has to go from the outer to the inner layer, when viewed from the outside, each layer of the onion describes a more detailed stage of the research process. They see the research process as an unwrapping of an onion layer by layer, in that for the inner layer to be seen the outer layer must be unwrapped first. For a goal to be achieved the right steps must be taken accordingly, this applies in research too, where one step must be discovered before proceeding to another.

3.3 Saunders’ Research Onion

As previously stated, one critique from Saunders, Lewis, and Thornhill (2019, p132), was the need to align a research question to a philosophy. This section will analyze exactly that.

The outer layer of the “onion” is the **Research Philosophy**, which describes the set of beliefs the research is built upon. Research philosophy can be described from either an ontological or epistemological point of view, analysed in later discussions.

The second layer is the **Research Approach or Approach to theory development**, which is the broader method used in the study, which include deductive, inductive and abductive approaches.

The third layer is the **Methodological Choice**. This layer details how, based on the aims of the study, research can be conducted. It determines the use of quantitative or qualitative methods or various mixtures of both.

The fourth layer is the **Research Strategy** which describes how the researcher aims to carry out the work (Saunders *et al.* 2007). Examples are experiments, surveys, archival research, case studies, ethnography, action research, grounded theory, and narrative inquiry.

The fifth layer is **Time Horizon**. This layer describes the time for the completion of the project. There are two types of time horizons specified within the research onion: the *cross sectional* or short-term study, involving collection of data at a specific point in time; and the *longitudinal*, in which collection of data is repeatedly over a long period of time in order to compare data. (Bryman, 2012).

Last, but not least, the sixth layer **Techniques and procedures or Data collection and Analysis**. This includes data collection and analysis through the use of primary and secondary data, sample groups, questionnaires, interviews, and more.

3.4 Research Philosophies: Ontology, Axiology and Epistemology

A classical research methodology is based on a certain philosophical theory which then implies strategies and techniques of the research (Nweke & Orji 2009; Saunders et al., 2016). The choice of the research philosophy is defined by the type of knowledge being investigated in the research project (May, 2011). Research philosophy is the researcher's approach to how they see the world; it is based on assumptions, and these assumptions should support the overall strategy of the research and the research method chosen. These factors must be important and useful to the research question. Trying to describe or characterize ontology and epistemology, according to Modell (2009), is difficult.

Saunders et al. (2012), on the other hand, looked at the research onion and how it could be used to peel away each layer based on the cause/issue of the chosen data collection method in order to create and assess a research strategy.

The most significant philosophies in the research process are:

- **Ontology**
- **Epistemology**
- **Axiology**

Saunders *et al.* (2019), states that **Ontology** can be explained as the ‘meaning’ or ‘purpose’ of reality. This branch of metaphysics answers the question ‘what is’. Events, properties, values and abstract object such as numerical values are all representations of the ontology of the world. Three philosophical positions come under the ontological umbrella: *objectivism*, *constructivism* and *pragmatism*.

Objectivism is derived from the idea that human knowledge and values are objective and are determined by the nature of reality. Constructivism focuses on how bodies of knowledge come to be and how ideas are constructed by human interactions and decisions. Pragmatism centres on the linking of theory and practice. It asserts that both objectivism and constructivism are practical and valid ways to approach any research, and they both could be comfortably used to find solutions to problems.

Moon and Blackman (2014) described **Epistemology** as the “study of knowledge”. This branch of philosophy answers the questions beginning with “how” and “what”. *Positivism, realism* and *interpretivism* are the philosophical positions under the epistemology worldview (Bryman, 2012). Positivism takes the view that knowledge exists outside of what’s being studied, and it can only be observed. Additionally, knowledge can only be true, false or meaningless. Realism questions reliability of the scientific knowledge and maintains that all theories can be revised, and more reliable results can be obtained through continual research and application of new methods of research. Interpretivism emphasizes the use of qualitative analysis over quantitative or statistical analysis to obtain the results. The interpretivist researcher is often seen playing an important role in making sense of and interpreting the collected data.

Axiology deals with the nature of value and answers the question of “what is intrinsically worthwhile”. Although ontology could have been considered for this study, due to the open-ended characteristics of this research, the method of epistemology over the others was chosen. The main reason for rejecting both ontology and axiology philosophies was that epistemology is concerned with all aspects of the validity, scope and methods of acquiring knowledge. Therefore, the author has accepted the respondent’s data as reliable and accurate and doesn’t require explanation of the collected knowledge.

Additionally, the author also rejected the positivism, realism, and pragmatism approaches in favour of the interpretivism. Positivism is a strategy that involves detachment from participants that must be approached numerically, hence it is more associated with quantitative research. Realism, Saunders *et al.*, (2015) suggests, underpins the positivist philosophy and the experience of factuality. Pragmatism is considered the approach one might take when the researcher's views may not be aligned with either positivism or interpretivism (Wilson, 2014).

3.5 Research Approaches: Deductive vs Inductive vs Abductive

The approach to theory development layer includes *deduction*, *induction* and *abduction* approaches. Bryman and Bell suggest choosing between these rationalities are critical to the research process (Bryman, and Bell, 2007, p.11).

In the *deduction* approach, the research starts with an existing theory, then a question or hypothesis and data collected will either confirm or reject the hypothesis (Silverman, 2013). The deductive approach can be used together with the positivist approach and a quantitative methodology that permits the formulation of hypotheses and the statistical testing of expected results to an accepted level of probability (Snieder & Lerner, 2009). However, this approach can also be used with qualitative research, though in such cases the expectations formed by pre-existing research would be formulated differently than through hypothesis testing (Saunders et al., 2007; Dudovskiy, 2018). Critically, Saunders *et al.*, (2019) suggested that researchers who favour the induction method often criticize the deduction approach for its rigidity and lack of alternate explanations for results.

The deductive approach employs a questionnaire to create an understanding of observation, allowing one to compare different people's perceptions using empirical data. The information gathered can be used to confirm or disprove the hypothesis, and the process can be repeated. This approach is less concerned with observation or experience, unlike the inductive one (Saunders *et al.*, 2019, p.156)

In the *induction* approach, sometimes referred as a “bottom-up” approach, the research starts with observation, followed by identification of patterns, then hypothesis and conclusions. The inductive approach is characterized as a move from the specific to the general (Bryman & Bell, 2007). This is a common method for qualitative research. Interviews are conducted about particular phenomena, and the data is then analysed for patterns among respondents (Flick, 2011). However, this approach may be useful also within positivist methodologies, where data is evaluated first, and significant trends are used to inform the generation of results.

The *abduction* approach is set to address weaknesses associated with both deductive and inductive approaches. This “hybrid” approach follows a pragmatist perspective, from an incomplete observation of reality that may then lead to a best prediction of the truth, and perhaps even to a new theory. With the abductive approach, the research process begins with "surprising truths" and then devotes itself to explaining them

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(Kovács & Spens, 2005). For the purpose of this study the authors rejected the deduction approach in favour of the induction approach. Via the study of social actors, in this case managers or directors, this approach would underpin the research to gain a better understanding of the challenges, benefits and risks managers have in delivering secure and scalable working solutions to home users. A small sample is considered to be more effective than a large group of individuals and more suitable when applying the deductive method (Saunders et al., 2019, p.155). With a small sample of managers, the inductive approach was initiated through an online survey and applied to this study.

3.6 Research Methodological Choice: Qualitative vs Quantitative

Saunders et al. (2016) categorises research choices in regard to the use of quantitative or qualitative research methods, as well as the simple or complex mix of both or the use of mono methods.

Quantitative research is concerned more with data like mathematical analysis, opinions, behaviours and attitudes, which can be easily represented statistically in order to test or confirm theories and assumptions (Saunders *et al.*, 2015). Additionally, the population sample is much larger in the quantitative approach and it adopts surveys, questionnaires, or polls, which tend to contain more closed-ended questions (Perrier, Blondall, McDonald, 2020).

Qualitative research is conveyed using words in order to express the opinions and perceptions of participants, and understand concepts, thoughts or experiences of real-life situations (Silverman, 2014). Qualitative research, according to Perrier, Blondall, McDonald, (2020) is used to understand attitudes, behaviours, words, sounds, feelings, and emotions and tends to undertake more open-ended questions. This is also confirmed by Yin (2016) where he outlined that the use of qualitative research benefits the study with the openness, behaviour and the language expression from participants.

According to Saunders et al (2007), there are three outlined choices in the research union that include the Mono, Mixed and Multi method research choice or approach.

Mono method: this method uses either a quantitative or a qualitative methodology to gather information, but not both.

Mixed method: this method combines quantitative and qualitative methodologies in a research to create a more precise set of data.

Multi-method: this method is similar to the mixed method because it combines using quantitative and qualitative methodologies in a study. However, analysis of the collected data is done using just one perspective.

Given that the topic analysed requires different data sets, a mixed method of quantitative and qualitative data was chosen for this study.

According to Anderson (2009), the use of mixed methods research allows:

- a variety of sources to be used in order to present results
- a progression of research questions

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- a focus on both qualitative and quantitative data

Creswell (2013) stated that the use of mixed methodologies provides a better understanding than research based on a single methodology. The author used quantitative analysis to identify the scale of the BPO, in terms of number of employees and number of offices around the world. While the qualitative analysis served to understand the specific challenges around delivering secure and scalable ‘work at home’ solutions.

Additionally, the exploratory approach lends itself to ask open-ended questions and thus allows the author to achieve further insights into managers’ perspectives. A modification of the Small Business Survey (2010), with both quantitative and qualitative questions was utilized.

The qualitative approach taken is in the form of an online Survey outlined below:

- (1) The data collection involved 16 BPOs’ managers or directors*
- (2) Each participant took part in a 10-minute survey with an average time of 9m and 53s*
- (3) Participants chosen for the study were managers working in large BPO companies with the authority to make technological decisions.*
- (4) The purpose was to gain these managers’ perspectives on 20 questions derived and directly related to the research question, with a potential follow up one to one interview afterwards.*

The qualitative approach in this research, together with the acceptance of Interpretivist and Inductive methods outlined in previous sections, gives a broadness and depth to the data by allowing managers to elaborate on their risks and benefits and thorough reasoning, while also supporting the qualitative design (Dudovskiy, 2018). The motivation for this research is to understand how managers feel about making decisions around the flexible solutions for remote users.

3.7 Research Methodological Choice: Descriptive vs Explanatory vs Exploratory

Saunders et al. (2019) discusses various forms of research: descriptive, explanatory and exploratory, which all serve a different end purpose.

For example, **descriptive research** is used to show how things are related and to represent a circumstance, individual, or event as it occurs naturally (Saunders et al., 2019). Descriptive analysis, however, is unable to explain why such an occurrence occurred and is much more suitable for a relatively new or unexplored research area (Wilson, 2014), so it has been dismissed as a method for this review. Alternative study designs, such as explanatory or exploratory approaches, are recommended in situations where descriptive data is plentiful.

Exploratory research, on the other hand, can be especially important within the frameworks of qualitative research design, according to Saunders et al. (2019). Furthermore, the exploratory approach lends itself to asking open-ended questions. This enabled the author firstly, to accept this methodology, and secondly, to gain additional insights into the experiences of participants and determine an acceptable approach for this analysis. This approach allowed the author flexibility within the survey questions and during the interview process. Furthermore, the object of exploratory research is to investigate specific aspects of the study; however, the design does not aim to reach final conclusions about the research questions (Wilson, 2014) but merely explores the research topic with varying levels of depth. Within the confines of exploratory research, it encourages the researcher to take the analysis in a different direction if necessary, but not entirely (Blumberg, Cooper, and Schindler, 2011).

Lastly, there is the **explanatory research**. The aim of an explanatory analysis is to clarify and account for the descriptive data. Explanatory studies aim to answer "why" and "how" questions, whereas descriptive studies can ask "what" questions. It builds on exploratory and descriptive analysis to determine the true causes of a phenomenon. Explanatory analysis seeks out causes and explanations, as well as facts to back up or refute a theory or prediction. It is carried out in order to discover and disclose any relationships between various aspects of the phenomena under investigation.

3.8 Research Strategy

The third layer contains the research strategy, and it describes how the researcher aims to carry out the work (Saunders et al. 2007) and plans to collect the data. Such data collection method includes Experimental design, Survey design, Archival research, Case study, Ethnography, Action research, Grounded theory and Narrative inquiry (Saunders et al. 2012).

In the **Experimental design** the researcher manipulates the independent variable to observe if a change happens to the dependent one, in order to assess the relationship between the two. It can be applied to any field of study and typically requires the consideration of a small number of variables (Saunders et al., 2007). It aims to test existing theories rather than create new ones, and as such, is deductive in nature. The data collected is often statistically analysed.

Survey design is used to seek answer to question such “what, how, where, who “, or the hypothesis in a cost-effective manner. This approach is able to collect a larger pool of data that can be used to answer the research question. Surveys tend to be used in quantitative research projects and involve sampling a representative proportion of the population (Bryman & Bell, 2011). The data is collected and analysed from a sample of individuals.

The **case study** strategy tries to seek answers for ‘how’ and ‘why’ questions and is aimed at either a single individual or group of people. It can provide insight into the unique characteristics of any example, as well as determine the importance of culture and context in determining case differences (Silverman, 2013). In this type of research, the subject is analysed to gain an in-depth understanding of issues in a real-life situation. The objective here is to gain a deeper understanding within the context of the study and not to generalise the findings.

Action research is designed to deal with a specific problem in a specific situation where the practitioner can assess ways in which they can improve their professional approach and understanding (Wiles et al., 2011). The researcher aims is to find realistic solutions to problems via participation and cooperation with members of a social unit. Setting a specific goal is the first step in the action research process. Following that, the problem is thoroughly identified, and a list of solutions is compiled and provided as suggestions for addressing the problem.

Grounded theory is a technique for conducting qualitative research in order to establish a hypothesis that is systematic and inductive. The theory developed is **grounded** in the data. Rather than testing or improving a hypothesis, this technique gathers data in order to construct one. When using the grounded theory technique, the researcher usually starts with a research query or qualitative data collection. Following that, the researcher analyses the data gathered through observation, and the recurring ideas are coded/grouped into categories, which serve as the base for a new analysis.

Ethnography is a research strategy adopted to explore cultures and societies where data is collected through direct interaction and involvement. The objective with ethnography is to collect data through direct interaction and involvement of participants, to see the world through their eyes. Creswell (2013) said “*Ethnographers study the meaning of the behaviour, the language, and the interaction among members of the culture-sharing group*”. Although the researcher becomes part of the study, which generally reflects with an interpretivist philosophy and involves an inductive, qualitative research approach, this process is usually very time- consuming.

Last, but not least, there is the **Archival research** strategy. This involves a systematic investigation into primary sources kept in archives for the purpose of gathering information or gaining a deeper understanding, like historical research. A researcher does not use secondary sources that are important to the research subject in this situation but will only analyse material that already exists.

The author rejected all the strategies but the Survey, with rational and design further explained in section 3.11.

3.9 Time Horizon

According to Saunders et al. (2007), time horizons are needed for the research design independent of the research methodology used. Longitudinal and cross-sectional approaches are the two forms of time horizon.

Longitudinal studies are those that are replicated over a long period of time and are used where an important factor for the research is examined for change over time (Goddard & Melville, 2004). A longitudinal study is mostly used in medical research and other areas like psychology or sociology, where researchers’ notes and data from the same subjects are collected over what can be many years.

Cross-sectional studies are constrained by a time frame. This is ‘snap-shot’ research, meaning that a phenomenon or a cross-section of the population is studied at one point in time (Setia 2016). Since the emphasis is on the time of collection, not the data type, the type of data collected can be qualitative, quantitative, or a combination of both.

For the purpose of this research a longitudinal approach was taken.

Caruana *et al.* (2015) stated that the longitudinal study refers to the study of a phenomenon or a population over a period of time. Since that the move to “work from home solution” is a phenomenon that is likely to stay also in the long run, the author rejects the cross-sectional approach, in favour of the longitudinal one.

Future research may be required to expand the data, but to complete this study a specific time horizon has been set.

3.10 Data Collection and Analysis

This is the innermost layer of Saunders' research onion. The method used at this point of the analysis makes a major contribution to the study's overall reliability and validity (Saunders et al., 2007). The analytical methodology used determines how data is collected and analysed (Bryman, 2012). It also goes over the data source, research design, sample, sample size, sample ethics, sample limitations, research reliability, and validity.

Reliability is the extent to which an experiment, research project, or measuring procedure yields the same results on repeated trials. It refers to how consistently a method measure something. If the same result can be consistently achieved by using the same methods under the same circumstances, the measurement is considered reliable.

Validity, on the other hand, refers to how accurately a method measures what it is intended to measure. If research has high validity, that means it produces results that correspond to real properties, characteristics, and variations in the physical or social world.

The information gathered may be primary or secondary. Primary Data is defined as data collected from the source or 'first-hand'. This can be done via the use of several instruments like questionnaires, oral or written interviews, surveys, letters, etc. Secondary Data is derived from the work or opinions of other researchers. This data is gathered from studies, surveys, or experiments that have been run by other people or from other studies.

3.11 Primary Data

It was critical to ensure that a variety of considerations were considered in order for this research to be effective, including who the target group would be, how many people would be interested in the study's research, the methodology that would be chosen, and the actual questions that would be asked to assist in answering the research questions (Bryman and Bell, 2007). The type of research chosen for the study was an online survey which would be carried out in a semi-structured format.

As explained in previous sections, the research used a mixed method design. An online, anonymous survey with open ended semi-structured questions for qualitative data and closed questions for quantitative data, was utilized. Components from the Small Business Survey (2010) were included in the questions.

The first section was used to qualify participants by ensuring they were a senior manager and met the BPOs criteria.

The quantitative data was analysed using *descriptive statistics*. Descriptive statistics are ‘ideal when collecting information dealing with beliefs, attitudes, behaviours, and the makeup of a group’ (Gay, et al., 2009); however, it does not explain the rationale or reasoning behind those numbers.

On the other hand, the data from the open-ended questions were analysed using a *thematic analysis*. Thematic analysis is a useful method that can be used to closely examine data to identify common themes, topics, ideas and patterns of meaning that come up repeatedly. It emphasises identifying, analysing and interpreting patterns of meaning (or "themes") within qualitative data. This allows the researcher to look at and identify the key themes from the data collection in order to successfully analyse the responses collected.

Thematic analysis allows participants to give answers in their own words. These questions are useful if one is interested in getting unanticipated answers or in learning about the world as the participants really see it (Fink, 2003). The information being sought is of the opinions of these senior managers, making this a suitable approach. Although a semi-structured survey was chosen for this research, other techniques such as structured and unstructured interviews were considered as well.

Structured interviews would have been irrelevant for this analysis since they are most commonly used in quantitative research to ensure validity and evaluation in the study (Bryman and Bell, 2007). Although unstructured interviews were also taken into

consideration, these interviews have no clear questions that must be answered; instead, the interviewer asks questions based on the interviewee's response and probes as needed (Bryman and Bell, 2007). As a result, this was not an appropriate method for this study since clear questions needed to be answered with the option of questioning when necessary, which an online semi-structured survey provides.

3.12 Secondary Data

The author undertook a critical review of the existing literature on the subject of business process outsourcing and the opportunities and challenges brought by flexible working for managers and employees. In order to gain a thorough understanding of the research subject, the method included various reviews and critical analyses of books, trustworthy peer-reviewed journal articles, web sites and paid subscriptions of business and financial publishers like the Financial Times and Harvard Business Review. According to Bryman and Bell (2007), any study should be conducted subjectively and with caution.

The information was gathered over an extended period of time from mainly the online NCI library, Emerald Insight, EBSCO, O'Reilly and other external online databases using selected peer-reviewed articles.

3.13 Pilot Study

Prior to releasing the survey to the target audience, it was decided to conduct a pilot study.

The use of a pilot study helped the researcher to ensure that the survey questions were applicable to the study, that there were no duplicates, the structure was easy to follow and that the process and time required to answer them was acceptable. The pilot study carried out was based on the survey questions presented in Appendix A, and it was carried out on two individuals who are currently working from home and who were not being surveyed as part of this research. The author's supervisor was also part of the pilot study, and where possible, modifications were made based on his valuable feedback. As a result of this pilot study some minor changes were made that led to a change in the number of questions that were asked. Two question were removed from the initial pilot and one was added at the end with a total of 20 questions published.

3.14 Samples

To acquire the data collection sample, the following technique was used, and a target group was chosen.

According to Bryman and Bell (2007), deciding on a sample size for any analysis is difficult due to time and cost constraints, which include how much time is available to analyze the data obtained and if any costs were incurred. As a result, it was important to be practical and take these considerations into account when determining the sample size.

Non-probability sampling was used as the sampling model, due to limited resources, as probability sampling was beyond the scope of this research.

The results of this research would not be generalizable outside of this study participants because the sampling was not random.

The participants were selected by both convenience and judgemental sampling.

Saunders et al. (2007) describes judgement sampling as a technique that “*entails the interviewer using their judgment to choose cases that would most usefully lend themselves to answering the research question and fulfilling the research objectives*”.

They were either “virtually known” to the interviewer or were deliberately selected to conform to some criteria.

Managers for the study were selected by following criteria:

- 1- Direct contact from the company the author works for
- 2- LinkedIn Sales Navigator plus Lead Forensic research via keyword like “BPOs”, “Managers” “Director”, “CTO”, “CEO” and so on.

Following identification of these managers and the company they worked for, an email was issued to see whether they would be interested in participating in the study. A copy of the email issued can be seen in Appendix B, with the survey link attached. The email was issued to twenty-five contacts with the hope of receiving at least ten responses. A surprisingly total of sixteen replies were received (See List of Tables). All sixteen contacts that responded were happy to participate in the study, and additional seven also agreed to have a follow up virtual one-to-one interview.

As discussed in the limitations, the sample size presented a challenge. Of the participants who took part, 87.50 percent were male, 6.25 percent were female, and the remaining 6.25 percent preferred not to say. They ranged in age between 25 and 64.

3.15 Ethical Consideration

The Code of Ethical Conduct demands the researcher assess the full impact to all participants and it is critical to the integrity of the research (Bryman and Bell, 2007; Yin, 2016). In accordance with the NCI guidelines, an ethics form was completed and submitted as part of the dissertation proposal in December 2020.

The research study has been designed in order to ensure participants understand exactly what they were participating in. Participants were given a summary of the researcher’s job role, information about the research topic and a brief introduction about the aims and the objectives of the study itself.

Additionally, a consent form was provided before the survey was completed. There were no ethical complications or risks of harm, and participation was on a voluntary basis. Each of the participants was made fully aware at the start of the study that they were able to withdraw at any given stage. Anonymity was ensured where participants were not willing to provide either their name or their company name, thus a unique identification name (UIN- Participant x) was allocated instead.

All data collected in the form of surveys, email, data extraction, transcripts etc., was only accessible by the author, and was stored on an encrypted universal serial bus (USB) storage device. The device was password protected and after completion of this study, all the data was safely deleted, and the disk properly formatted in accordance with the Data Protection Acts 1988 and 2003, that states that data should not be held for longer than required (Data Protection Commissioner).

3.16 Limitations to the research

Since the analysis used a limited sample size – sixteen surveys out of the twenty-five that were sent out, it's fair to conclude that the findings aren't fully definitive, due to the likelihood of bias and subjectivity. Additionally, according to Bryman and Bell (2007, p.525), correlating themes can also be difficult due to various individual points of view and inconsistencies within the data set. The same data can be dependent on the various experiences and exposure managers have had with home-working solution programmes, infrastructure, budgets and the freedom to make decisions in general.

Another possible drawback of this study is the outsized impact that external factors (such as Brexit and COVID-19) could have had on the outcome, making it difficult to compare to other studies. The survey questions had been chosen to ensure more than one challenge was identified by managers in order to overcome this potential limitation.

According to Bourque and Fielder (2003) response rates average around 10-20 percent when using an online survey, but the author's survey had a completion rate of 88 percent and a total of sixteen responses (Figure 2). While the qualitative data was used to drive the results and discussion, the quantitative data was used to support it, as suggested by the widely cited work of Ritchie & Lewis (2003).

The author was successful in conducting seven conference calls out of the sixteen participants via Microsoft Teams. Ideally, additional interviews would have been conducted to widen the sample size to a broader audience and further investigations would have been carried out, if there had been no time constraints on the data collection. These limitations are perhaps in the scope for future research in the same area.

Chapter 4 – Findings

4.1 Introduction

This chapter aims to organize the data extrapolated from the survey during the course of this study. Once the survey was closed and all the responses collected, the author exported all 16 responses to a single PDF file to better analyze the data. The analysis cross referenced all the 20 questions asked in the survey for common themes. This was then compared with the available literature.

It is paramount to say, though, that literature is lacking in data regarding managers in BPO companies deploying secure and scalable remote solutions: this difficulted the comparison. The author’s hypothesis was that companies were choosing remote working solutions over the normal bricks and mortar type of configuration, driven by capital expenditure reductions in terms of office space, hardware distribution and time to scale. However, results were surprising.

4.2 Themes

Outlines below are the themes that emerged from this research:

1. Talent Acquisition around the globe
2. What got you here won’t get you there
3. Technology as an Enabler in driving change

4.3 Thematic Analysis

4.3.1 Theme 1 - Talent Acquisition Around the Globe

Globalization has opened up so many doors for companies, but one of the main issues concerning them still remains: talent acquisition. When asked what the benefits were in having remote workers, Participants 1, 2 and 4 outlined that *“Thanks to new technology available they can work any time, from anywhere. They do not have to go into the office to do any additional work.”* *“Ability to hire from different locations and cheaper location-based salaries esp. for seasonal workers, demographic expansions”*.

Participant 6 also gave the rationale *“My employees have the freedom to work from other locations, closer to home and family. This, in my opinion has provided a more comfortable workplace”*.

Similarly, participants 10 and 16 gave even more precise responses outlining *“Access to very highly-skilled talent with specialist skills who have chosen to not live in a location where there is no company office for them to access or travel to”*, and *“Flexibility, Hiring the best people regardless of location. Distributed is more resilient”*.

Although talent acquisition was the common theme, the second highest point mentioned was also around *“employee flexibility”*. Participants 7,8,11,13,15 and 16 all responded with reasoning around employees flexibility and the connection with employees retention rate and productivity. These responses were in line with literatures covered in previous sections. A high level of positivity associated with working from home produces a higher level of productivity and performance boost from workers working from home.

The responses from the remaining participants 3,5,12 and 14 didn't fit in into a specific category, however scalability, less time commuting, work life balance and cost saving where also mentioned.

4.3.2 Theme 2 - What got you here won't get you there (Goldsmith, 2007)

It was interesting to see the various responses in relation to challenges that were overcome in the past, compared with the challenges that managers were trying to resolve today. Question 14 and 18 included a list of challenges faced by managers at different points in time. Companies usually learn from past experience, but sometimes there are factors that cannot be estimated or resolved even with time.

When asked what the primary challenges to the success of the business were in the past the most picked choice was, “**Entering New Markets**”, followed by “**Competition**”, “**Cash Flow**” and “**Recruiting Staff**”. Surprising to the author, “**Cash Flow**”, “**Obtaining Finance**” and “**The Economy**” were not as high as expected. A general understanding was that the companies surveyed had enough cash during the initial phases of this flexible remote expansion. However, when asked the same question but in relation to challenges managers were experiencing currently, the data was interestingly different.

The leading choice was now “**Recruiting Staff**”, followed by “**External factors**” like Brexit and “**Entering new market**” followed by “**Keeping up with new technology**” hand in hand.

4.3.3 Theme 3 - Technology as Enabler in driving change

When managers were asked about possible solutions to overcome the current challenges facing the BPO industry, the majority of the responses were unsurprisingly around technology. New emergent technologies, such the Cloud, existing ones such VDI and the new trend of BYOD models were the most written. It is worth mentioning that the majority of the services these BPO companies are providing are around Cloud, Customer Experience, Security and Application Service. When the responses were analysed, participant 2 stated *“We moved from an office based to home working solution and from hybrid worker to fully remote workers using BYOD. Although we were aware of the initial risks, which we mitigate overtime that helped us save money over hardware distribution and also give us the option to scale quicker than before”*.

Comparable with this, participant 3 outlined *“Scaling up the business and having the right technology for it. With COVID-19 we struggled with security and productivity management of our employees and getting them setup at home, but thanks to collaborative tools like Slack, Teams and a VPN, employees were running at home faster than we expected.”*

Similarly, participants 4 stated *“Leveraging more BYOD models, enabled us to scale quick and expand in rural areas as long as internet was available”*.

Participant 5 outlined *“With the introduction of a work from home hybrid model, either with our Cloud VDI based systems or via personal employee laptops connected via a company vpn, talent acquisition can be broadened to other geographics”*.

The most precise answer was from participant 8 who highlighted *“Keeping the employee experience as good, or as close as possible, to the experience level or being in the office when moved home - from the perks to the socialization and team building opportunities, to training or done virtually, either via zoom or teams. Making sure new people get engaged with their team and are able to learn an upskill so they feel they are making progress and succeeding”*.

Interesting was participant 11’s response, where external advisors were used to deploy accordingly different solutions *“We rely heavily on advisory consultants to provide a SWOT analysis and general report on the new technological and economy trends. This information allows business leaders to make strategic and educated*

decision and to deliver the right technology to the right customer”.

Participant 13 stated *“More use of tools like LinkedIn and data driven tools. Engaged the whole management team in the recruiting, filtering and selection of candidates. There was too much work for the Talent Acquisition team to handle by themselves. Highly visible referral bonuses if the person recommended was hired. Data on the whole recruiting process to see what approaches were the most effective in hiring the right candidates.”*

The second highest solution outside technology was the cutting cost strategy.

Participant 1 simply outlined *“Aggressive cost saving strategy”* while 9 highlighted *“Tight control on budgets and managed headcount growth. Phased re-opening of offices as soon as it is safe, and people feel comfortable to be in work and to travel on Public Transport”.*

4.4 Conclusion

This chapter has examined how the participants responded of the qualitative semi-structured survey that was carried out to answer the research question and achieve the objectives of this research. The discussion chapter that follows, analysis the meaning behind them, as well as how the findings of this study relate to previous research, differ from it, or provide new information.

The results that have been presented, clearly shows a mixed picture and don't define a unique challenge for these BPO companies as characteristics of their business differ from one to the other. However, there are basic trends that have emerged from this research that are common for the majority of them.

Chapter 5 – Discussion

Overall, there has been a lot of research regarding working from home in relation to employees wellbeing, motivation, productivity, performance, drawbacks and benefits of smart working, which has helped to further the study's goals and objectives. However, not a lot was found in relation to the challenges facing BPO managers in delivering such flexible solutions. The following discussion was created by looking at the literature and performing a mix of quantitative and qualitative research in order to address the research questions asked at the start of this study. Following the data collection by semi-structured open-ended survey, this segment will look at the conclusions that were presented using a thematic analysis.

The main objective of this study was to investigate the challenges facing senior technical and information staff in delivering suitable work-at-home solutions for their employees. The following three themes that emerged from this study are particularly relevant to the objectives outlined in the ‘research question’ section. All three of these themes connect with the topic of talent acquisition and retention, past challenges that may or may not effect current challenges and the role of technology in driving changes.

Theme 1 is concerned with talent retention and acquisition around the globe

Theme 2 is concerned with past and current challenges

Theme 3 involves the role of technology as an enabler in delivering home solutions

5.1 Discussion - Theme 1 - Talent Acquisition Around the Globe

This theme emerged from this study because it was evident from the responses that there appear to be multiple benefits of remote working to both employers and employees. As outlined by participant 6 “*My employees have the freedom to work from other locations, closer to home and family. This, in my opinion has provided a more comfortable workplace*”. This is supported by literature surrounding this topic whereas Offstein et al (2010) outlined that, “*this type of job gives businesses a competitive advantage because it helps them to hire people in different time zones and gives HR managers the ability to hire top talent from all over the world*”. Elshaiekh et

al (2018), for example, stated that remote work can draw talent from abroad, which can help a business grow and improve its financial position. CIPD (2020) also outlined that these types of configurations have led to a shift in priorities for the profession, with a key focus now on retention, health and wellbeing, and employee engagement (Developing effective virtual teams | CIPD, 2020). Carroll (2019) also outlined that thirty four percent of companies decide to outsource due to the lack of skilful employees, while twenty nine percent claimed that BPOs can solve capacity issues. Similarly, participant 10 and 16 outlined “***Access to very highly-skilled talent with specialist skills who have chosen to not live in a location where there is no company office for them to access or travel to***”, and “***Flexibility Hiring the best people regardless of location. Distributed is more resilient***”, showing that flexibility is a major benefit of working remotely from both parties. This is consistent with what Crawford et al (2011) and Beauregard et al (2013), stated that advantages of remote working include greater control and flexibility over work schedules and task management for employees and less overheads for employers.

However, Gatewood (2012) mentioned the difficulties for company in auditing and monitoring whether the user is accessing corporate data or not while home. A study conducted in Ireland also suggested that while the employers must also adhere with the Organisation of Working Time Act and track employee hours for home workers too, this is rather difficult for businesses to accomplish (2019).

The idea of organizing work around personal commitments instead of the other way around is a great deal for remote workers. This statement is supported by James (2016), who stated that this way of working provides workers with flexibility, which can be a tremendous advantage because it helps employees to complete their everyday tasks as well as any personal tasks that they might need to complete during the day.

5.2 Discussion - Theme 2 - What got you here won't get you there

This theme emerged from this study when the author analysed the challenges a BPO companies faced in the past compared with the challenges the same companies are currently facing. It became clear that while some challenges are still there, the likes of entering new markets or cash flow, it emerged that “*what got companies were they are now, will not be enough anymore to get them further*”.

Organizations all over the world have turned to BPOs to help them reduce costs and expand their businesses. But while at the beginning they lacked the market penetration required to support a multitude of different customers, with the advent of the internet, they turned setbacks into opportunities. Although technologies like Artificial Intelligence (AI), Automation and the Internet of Things (IoT), have helped them address problems faced in the past, in this fast-paced environment, customer service has never been so critical.

This sector has a high employee turnover rate of up to 48 percent . People simply leave after a certain time for a variety of reasons. Lack of advancement opportunities, motivation, work-life balance problems, expectations to achieve a higher salary, or vertical growth stagnation – the reasons are numerous. The literature also confirms this statement, where Wheatley (2012) identified isolation, blurred work-home boundaries, and a lack of career advancement as possible drawbacks to working from home for employees. CIPD (2020) also found out that a significant minority of employees (29 percent) report that use of portable devices blurs boundaries between work and home life. Time away from work is also a challenge, with 30 percent reporting that their use of portable devices makes it difficult to switch off. There is also the usual “job hopper”, a person who transfers from one BPO to another in search of the ‘best offer’, but this represents just a small percentage of the resignations.

Globalization has definitely improved the way companies hire and manage people, but because this trend is happening across different industries, talent acquisition and retention rates are even harder to master nowadays.

It is also worth mentioning that the on-boarding process has also changed for remote workers. Learning, discovery and cultivating talents, which used to be done in person through coaching and group training, are now held online (Narayandas, Hebbbar, & Liangliang, 2020). However, research suggests that communication techniques that work well in face-to-face environments cannot inherently work as well in virtual

“The challenges facing Business Process Outsourcing in delivering scalable and secure work-at-home solutions: a focus on senior technical and information staff”

teams (Daim et al., 2012). As a result, HR practitioners bear responsibility for retaining workers by improving their talents and abilities in order to achieve the company's corporate strategy (Parry & Battista, 2019). Although there is plenty literature around HR and employee management, these are not in the scope of this study. A small sample is considered to be more effective than a large group of individuals and more suitable when applying the deductive method (Saunders et al., 2019, p.155). However, the gap in the literature still exists in understanding the challenges for BPOs in delivering remote solutions, as the size of the survey was too small to draw a definitive conclusion.

Based on the responses received it became clear that one of those challenges is finding and retaining the right candidates. Allan (2011) indicated that organizations with the right strategies in place can increase retention rates and promote work-life balance for their employees, but ‘work at home’ is not for everybody. Someone will feel isolated, some will have to cope with the stress associated with the removal of boundaries between work and family and some, by contrast, will like it and find it more useful and flexible. Personality characteristics play a critical role to this type of work. Rogers (2011) supported this argument by saying that while some people may enjoy and thrive while working from home, it is not suitable for every person, particularly those who like personal interaction. These people may dislike this type of work arrangement and even feel imprisoned in their own house.

5.3 Discussion - Theme 3 - Technology as Enabler in driving change

It is clear to see from both the literature and the findings of this research the importance of the role of technology in driving change. Technology in the participants' view has been one of the major contributors, culturally and technological, of this “remote only / hybrid model” shift. Participant 1 outlined “*Thanks to new technology available they can work any time, from anywhere.*” Working from home is made possible, according to Timsal and Awais (2016), because of the new innovations and technology available in the marketplace. Greater technological connectivity facilitates this process by enabling work to be carried out wherever workers happen to be and whatever the time (Messenger and Gschwind, 2016). This statement is also supported by James (2016), who states that this style of working gives workers more flexibility, which can be a big advantage as it helps employees to do their everyday work while still fitting in personal tasks.

The current literature explains how the use of emerging technologies has allowed for flexibility surrounding the workplace and the life-work balance for employees, but also the possibility for managers to leverage the same in delivering such solutions. BPOs can use innovative technologies to enhance their current services offering and providing a wider range of solutions. But when new technology is implemented in the workplace without careful consideration of the consequences for people, it can have a detrimental effect on long-term organizational success. The likelihood of technology supporting strategic goals is influenced by factors such as job difficulty, capability utilization, and worker autonomy. As a result, the effect of technology on human experience and organizational efficiency must be considered in tandem (CIPD, 2020). However, while benefits of BYOD are evident in terms of capital expenditure reduction, logistics, and support, the risks, already analysed in section 2.9, associated with it are also a factor to consider. Even if just some of the respondents mentioned risks as a factor when deciding for such remote solutions, participant 2 stated “*We moved from an office based to home working solution and from hybrid worker to fully remote workers using BYOD. Although we were aware on the initial risks, which we mitigate over time that helped us save money over hardware distribution*”. Knowing that the majority of the participants were managers, all of them were well aware of the security implications associated with such tools, they still went ahead and used them.

5.4 Discussion – Study objectives

All of the goals set out at the start of this study has been successfully addressed and have emerged in each of the themes, as shown by the above results and discussion.

This section will go through each of these goals and explain how the results of this study have helped to achieve them.

To begin, the overall research question for this study was:

““THE CHALLENGES FACING BUSINESS PROCESS OUTSOURCING IN DELIVERING SCALABLE AND SECURE WORK-AT-HOME SOLUTIONS: A FOCUS ON SENIOR TECHNICAL AND INFORMATION STAFF””.

The overall answer to this research question is that delivering scalable and secure solution is not a challenge, finding the right candidate who can use them is. However, if the right approaches and processes are delivered and utilized, employees will get on board and will remain loyal to the company. This is clarified through the research objectives below.

5.4.1 Discussion – Objective 1

“To assess the perceptions of key decision makers on the risks and benefits of delivering home working solutions”

The findings from this study clearly identify a pattern from these managers. With or without the risks associated with BYOD, flexible working or teleworking in general, if there is a small possibility that the company can scale up, recruit and retain employees in the short term and save some money in the long term, they will deploy remote solutions with all the risks and benefits associated with them. *“Although we were aware on the initial risks, which we mitigate overtime that helped us save money over hardware distribution and also give us the option to scale quicker than before”.*

5.4.2 Discussion – Objective 2

“To identify issues, drawbacks, or barriers in investing in this type of systems”

As presented in section 2.9 of this study there were a lot of negative factors that managers have to be aware of while deploying and investing in home working systems. Competition has become fierce and sophisticated in today's business world. In order to remain ahead of the competition, BPOs around the world are working hard to run as efficiently as possible and pass on the savings to their customers utilizing the BYOD model. However, while scalability and cost savings are important factors to evaluate in the short term, the security and the risks associated with utilizing those devices is far greater in the long run than the previously mentioned factors.

There is a bright side of the story, however. Managers don't need to stop promoting and deploying BYOD, as the benefits for both sides are well documented. What they have to do is to overcome these limitations by providing security training for employees, investing in either MDM or software-based solution where security & compliance can be achieved remotely, while also focusing on compliance and employee wellbeing.

5.4.3 Discussion – Objective 3

“Analyze through qualitative research the factors that are influencing companies in the BPOs industry in investing in such systems”

The findings from this study suggested that BPOs are lacking talent. Although the responses don't show the location of these firms, the survey was sent to twenty-five managers where companies' Headquarters were based in the USA, India, Philippines and one in Portugal. If the majority of the responses were around demographic expansion, talent acquisition and talent retention, there are only couple factors that could cause it.

The first is poor HR management where they are unable to maintain the right candidates; the second one a lack in the development of local skills. Perhaps the “in-house” employees are not skilful enough that companies need to look elsewhere to match their core competencies. Either way a recruiting and HR strategy should be implemented, allowing first, existing employee to feel comfortable and looked after so they won't leave, and second, an online training course portfolio where possible candidates may improve their skills and then be integrated within the company.

5.5 Limitation of the Study

While this study was designed to produce insights into challenges affecting managers in delivering solutions that will allow users to perform work remotely or from home, there were a number of limitations.

The first limitation of this study was the sample size. Although a small sample is considered to be more effective than a large group of individuals and more suitable when applying the deductive method (Saunders et al., 2019, p.155), the data may not be entirely definitive, because of the qualitative nature of the research methodology. This argument is also supported by Bryman and Bell (2007, p.525), where subjective opinions may create inconsistencies while correlating themes in the research. In fact, the response data could vary depending on managers' perceptions and exposure to home working solution programs, facilities, budgets, and overall decision-making independence. However, the data from the survey demonstrated similarities between the responses and the existing literature, nevertheless. Another potential disadvantage of this analysis is the outsized effect that external variables (such as Brexit and COVID-19) could have had on the results, making it difficult to correlate with other studies. The survey questions were chosen to ensure that several challenges were found in order to address this possible constraint. If the author had more time, he may have conducted a more detailed statistical study of a wider group of people, in order to gather more responses and as a result a bigger sample size.

Having said this, the author felt that the sample size was adequate for this analysis, and while looking at the results, the author's primary goal was to contribute to the discussion on the challenges facing BPOs, encourage more research, influence the gaps in research, and develop it further. While the author was successful in conducting seven conference calls out of the sixteen participants through Microsoft Teams, if the author had more time, he would have conducted additional interviews to expand the sample size to a larger audience and conducted additional investigations.

Chapter 6 – Conclusion

6.1 Conclusion

Research into BPOs has been an area of intense interest in recent years throughout Europe, the United Kingdom and the United States. This is due to the outsized impact they have on economies, with research showing they ‘create all or have already a large share of new net jobs’ in the economy (Henrekson & Johansson, 2010). In this paper, the main aim was to explore the challenges for managers and directors in the BPO industry in delivering software or hardware to home users working remotely. In particular, the investigation was into managers’ obstacles in terms of deploying, scaling, and securing home working solutions to users across the globe. In order to achieve this, the author created, piloted and then distributed a semi- structured survey during the period from February 2021 to April 2021.

The results of the research confirm some related findings of earlier studies, especially one related to employees’ flexibility, productivity and performance. It is demonstrated that when companies offer flexible working arrangements, they are better able to respond to fluctuating workloads and, as a result, function more effectively in terms of efficiency and cost (Papalexandris & Kramar , 1997). Also, when such arrangements are offered to the workforce, employees are happier, which results in higher productivity. Additionally, when employees can arrange personal commitments around work, performance also increases (Boole,1996; Donovan, 2019). Thematic analysis shows that flexible working has contributed to a better talent acquisition via digitalization program and new technology that helps companies find and retain employees. According to the survey done by Deloitte (Deloitte’s 2016 Global Outsourcing Survey, 2016), the key challenge for companies is to hire and keep the most valuable employees and reduce the cost at the same time. Leading companies such as Google, Best Buy, P&G, and Sysco, according to Davenport et al. (2010), utilised advanced data collection technologies and analysis to get the most benefit from their talent and enhance their methods of recruiting and retaining employees. As a result, flexible working can reduce labour costs, capital expenditure, and hardware distribution costs, and lower employee attrition rates.

The majority of the companies answered that flexible working helped them face the scarcity of talent in their region by going global for talent acquisition. This statement

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is also reenforced by Allan (2011), who indicated that with the right strategies in place, firms can increase retention rates and promote work-life balance for their employees.

As the need for talent increases and the labour market tightens, businesses are focusing their efforts on recruiting and retaining highly qualified employees through option like remote work. Employers are providing remote working options to do this, not only because it is a solution growing in popularity, but also because it can eliminate some of the obstacles to employment for people with care obligations, the elderly, and people with disabilities by eliminating the need to drive to an employer's location every day (Remote Work in Ireland Future Jobs, 2019).

At the same time, recruiting is never easy. Armstrong (Armstrong and Taylor, 2014) in fact, highlighted that it is very costly and a study from CIPD (2013) found that the average recruitment cost of filling a vacancy for an employee is around £3,000. The same study outlined different ways organizations can source candidates either through online recruitment, advertising, recruitment agencies, jobcentres and more. All of them have advantages and disadvantages, in terms of talent selection and number of applicants, but they all need to reach the same goal: to select the right candidate that will align with the company trajectory, culture and goals. And while remote working can attract a lot of interest from employees all over the world, finding the one that will embed in the corporate culture is difficult. HR will have an important role in finding, nurturing and training talented people in order for the company to achieve success and growth.

To conclude, the question about the challenges in delivering flexible working solutions, shows that some companies have the capacity and the resources to deliver and deploy such solutions, but have no employable population in their home region or abroad to whom deliver them.

Seeing the exponential growth of the BPO industry, the author's perspective is that each and every company that responded truly believes that in the near future, flexible working will be expanded even further, and they are attempting to stay ahead of the curve by giving employees the option to be as flexible as possible.

For example, a global agreement has just been signed between a BPO and the company the author works for in which, even after the pandemic ends, they will retain 68 percent of their workforce at home. While a study shows that the global BPO market size is expected to reach almost a half-trillion (Business Process Outsourcing

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Market Worth \$435.89 Billion By 2028, 2021), personal working circumstances seem to align with this trend.

Notwithstanding the benefits of flexible remote working, there are, however, also greater risks in terms of data leakage, security breaches, unauthorized access to corporate data, and ransomware attacks, as outlined in section 2.9. BYOD is compared by Miller et al. (2012), to the introduction of laptop computers into the workplace. They claim in fact, that the security risks and issues associated with BYOD are similar to those experienced with company laptops. While many businesses have opened their networks to employee-owned mobile devices, many are also grappling with how to maintain data protection without burdening users (Remote Work in Ireland Future Jobs, 2019). BYOD strategies in doing so should be established with a clear understanding of how they fit with the organization's overall strategic goals to develop a successful plan. Only by linking BYOD goals to business objectives can a BYOD strategy be effective.

For organizations, BYOD objectives should represent a balance of enablement, empowerment, security, and governance.

MDM systems are among the most successful short-term solutions for gaining control over your BYOD climate. These systems automate the identification, inventory, and policy enforcement of hundreds or thousands of mobile devices in just a few hours. These include both corporate devices and personally owned ones. Although software options for home users are not scarce, no matter how many solutions companies may buy and deploy, if they don't educate the people using them it won't matter. Employees must understand the logic behind security policies and procedures for them to be successful. BYOD training should begin as soon as users start the onboarding process for a company and should be repeated on a regular basis. BYOD and SETA courses are available both online and in person. Although, research indicates that communication strategies that work well in face-to-face contexts can not necessarily work well in virtual teams (Daim et al., 2012), a limited exposure to security is better than no exposure at all. One way to help consumers appreciate the value of a BYOD policy is to highlight other organizations' well-publicized data theft and intrusion incidents caused by mobile device use. It is paramount for BPOs to concentrate the training on protecting not only the business, but also the personal information and livelihood of the employees.

Lastly, there is the issue of BPO compliances. In order to ease monitoring and

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auditing of the contact center’s employees, some BPOs will keep them in-house, while others will simply send the majority home, (especially during the COVID-19 pandemic), or promote a full work-at-home program. For most of the BPO firms, compliance is mandatory, and they have to adhere to data and compliance standards developed by organizations such as ISO, PCI, HIPAA and if dealing with European customers, GDPR. They also have to ensure that these protocols and procedures are followed even when operating remotely. In order to do so, they will have to imply stricter policies and measures to ensure that their processes are streamlined while still achieving compliance and security. This entails creating new rules, protocols, and procedures for a remote agent's environment, as well as ensuring adequate monitoring to detect and mitigate gaps.

Finally, employees benefit from greater flexibility in terms of work-life balance, but they must forego additional costs associated with a work-hour surplus, isolation and potential setbacks in career progression.

“The most successful businesses as we all know are not the ones that haven’t faced challenges but are the ones that have slowly and steadily strategized solutions to overcome them.”

6.2 Potential areas for future research

There is still much research to be done in this field. As discussed previously, an interesting area of future study would be in gaining further data on how BPOs overcome the challenges they face. As this research seems to suggest that the approaches are varied and somewhat individualistic, it would be useful to gain further data on this topic, including data from employees’ viewpoints when receiving analysed remote solutions.

Another area would be to study the same group of BPOs over the next 5 to 10 years. Future studies should aim to understand, firstly if they are still in the BPO industry, and if so, if they are still facing the same challenges they faced in the past or if new issues have surfaced. They would be asked whether they overcame the challenges in the way they expected, or if new challenges arose with the advent of new disrupting and modern technology.

The final recommendation would be to perform the same research using a different methodology, a wider sample group and by using a longer longitudinal time horizon, in order to evaluate if the results are similar, or a new perspective is discovered.

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Abbreviation Lists

AOD	Agent Owned Device
BPO	Business Process Outsourcing
CIOs	Chief Information Officers
CSOs	Chief Security Officers
CTOs	Chief Technology Officers
FW	Flexible Working
FT	Financial Time
GDPR	General Data Protection Regulation
HIPPA	Health Insurance Portability and Accountability
HR	Human Resources
ICT	Information and Communication Technology
IoT	Internet of Things
IT	Information Technology
LFS	Labour Force Survey
MDM	Mobile Device Management
NAC	Network Access Control
NCI	National College of Ireland
PCI	Payment Card Industry Data Security Standard
ROI	Return of Investment
RQ	Research Question
SEM	Structural Equation Model
SW	Smart Working
TAM	Technology Acceptance Model
TUC	Trades Union Congress
UIN	Unique Identification Number
USB	Universal Serial Bus
VDI	Virtual Desktop Infrastructure
VPN	Virtual Private Network
WAH	Work at Home
WFA	Work from Anywhere
WFH	Work From home

Appendix

Appendix A: Survey Questions

Q1 What is your role in day-to-day control of the business?

Answered: 16 Skipped: 0

Q2 How many employees have you had in the last 3 years?

Answered: 16 Skipped: 0

Q3 What type of employees do you have in your organization? Please tick all the options that are applicable to you.

Answered: 16 Skipped: 0

Q4 Do you have remote/flexible workers in your organization?

Answered: 16 Skipped: 0

Q5 Do they work from home, office, or shared hub location?

Answered: 16 Skipped: 0

Q6 What are the benefits that you think are most important in having remote workers?

Answered: 16 Skipped: 0

Q7 Please select your age bracket

Answered: 16 Skipped: 0

Q8 Would you mind sharing your name ? (Please be reassured that your responses will not be related to organization or location. Confidentiality is assured)

Answered: 15 Skipped: 1

Q9 Please could you tell me your gender?

Answered: 16 Skipped: 0

Q10 Would you mind sharing the Name of the Organisation (Please be reassured that your responses will not be related to organization or location. Confidentiality is assured)

Answered: 10 Skipped: 6

Q11 What service do you provide? Please tick all options which are applicable to you.

Answered: 16 Skipped: 0

Q12 What would you say are the primary challenges to the success of your business in general, currently?

Answered: 14 Skipped: 2

“The challenges facing Business Process Outsourcing in delivering scalable and secure work-at-home solutions: a focus on senior technical and information staff”

Q13 I am going to provide you a list of other issues and I would like you to tell me which, if any, represent challenges to the success of your business currently. Please tick all options which are viewed as challenges to success.

Answered: 14 Skipped: 2

Q14 Overall, which is the primary challenge to the success of your business, currently?

Answered: 14 Skipped: 2

Q15 How do you expect to overcome these challenges?

Answered: 14 Skipped: 2

Q16 Question 12 asked what are the primary challenges you face currently. What would you say have been the primary challenges your business has faced in the past?

Answered: 14 Skipped: 2

Q17 I would like you to tell me which, if any, have represented challenges to your business in the past. Please tick all options which were viewed as a challenge to success.

Answered: 14 Skipped: 2

Q18 Overall, which was the primary challenge to the success of your business, in the past?

Answered: 14 Skipped: 2

Q19 How did you overcome these challenges?

Answered: 14 Skipped: 2

Q20 Would you be interested in a one-to-one interview to gather more information?

Answered: 13 Skipped: 3

Appendix B: Email Template

Giuseppe Stirpe

National College of Ireland, IFSC

Co. Dublin, Ireland,

087 xxxxxxxx

x19145870@student.ncirl.ie

XXXXX,

COMPANY NAME

Dear X

My name is Giuseppe Stirpe, and I am a masters student at the National College of Ireland, where I am researching about the challenges facing Business Process Outsourcing in delivering scalable and secure work-at-home solutions.

I was hoping for your assistance in completing an anonymous, online, 10-minute questionnaire for my master thesis. A Senior System Engineer/Manager/CEO/CTO/Director would be the most appropriate person to complete the questionnaire. In return for doing so, I will send a report on the study's full findings to an email address of your choosing. I believe you will find the results to be of value to your business.

The questionnaire can be found here – <https://www.surveymonkey.com/r/97KJPM2>

Please be assured that all collected information will be treated with the utmost confidentiality and stored securely, in line with the stringent requirements for best practice research at the institute. I would be most happy to answer any questions you might have and can be reached at 087 9470669 x19145870@student.iadt.ie.

Sincerely,

Giuseppe Stirpe

List of Tables

Research Approaches		
Research Approach	Deduction	Induction
Approach to investigation	Highly structured	Flexible
Paradigm	Positivist	Interpretivist
Sequence of Investigation	1. Theory 2. Hypothesis 3. Observation 4. Confirmation	1. Observation 2. Patterns 3. Hypothesis 4. Theory
Purpose	Explanatory; Explanation of causal relationships between variables	Exploratory; Gaining an understanding of the phenomena
Data Collected	Quantitative	Qualitative
Generalisation	Need to generalise conclusions	Less concern with generalisation

Table 1: Research Approaches

Qualitative and Quantitative Methods: Strengths and Weaknesses		
	Quantitative Methods	Qualitative Methods
Strengths	<ul style="list-style-type: none"> • Testing and validating previously constructed theories about how phenomena occur. • Research findings could be generalised when data is sufficient and based on a random sample. • Can eliminate the confounding influence of many variables, allowing one to assess cause-and-effect relationships. • Data collection and analysis is relatively less time consuming and provides precise numerical data. • Research results are relatively independent of the researcher. • Useful for large sample sizes. 	<ul style="list-style-type: none"> • Data is based on the participants' own categories of meaning. • Useful for studying a limited number of cases in-depth and describing complex phenomena. • Provides understanding and description of people's personal experiences of phenomena (i.e. insider's viewpoint). • Can describe, in rich detail, phenomena as they are situated and embedded in local contexts. • Can determine how participants interpret constructs • Determine idiographic causation (i.e. causes of events).
Weaknesses	<ul style="list-style-type: none"> • Researcher's theories developed from the data may not reflect local constituencies' understandings. • May miss out on phenomena occurring because of the focus on theory testing rather than on theory generation. • Knowledge produced may be too abstract and general for direct application to specific contexts. 	<ul style="list-style-type: none"> • Findings produced may not be generalised to other settings. • More difficult to test hypotheses and theories. • Data collection and analysis is often time consuming. • Results are influenced by the researcher's personal biases.

Adapted from Johnson and Onwuegbuzie (2004)

Table 2: Research Methodology

“The challenges facing Business Process Outsourcing in delivering scalable and secure work-at-home solutions: a focus on senior technical and information staff”

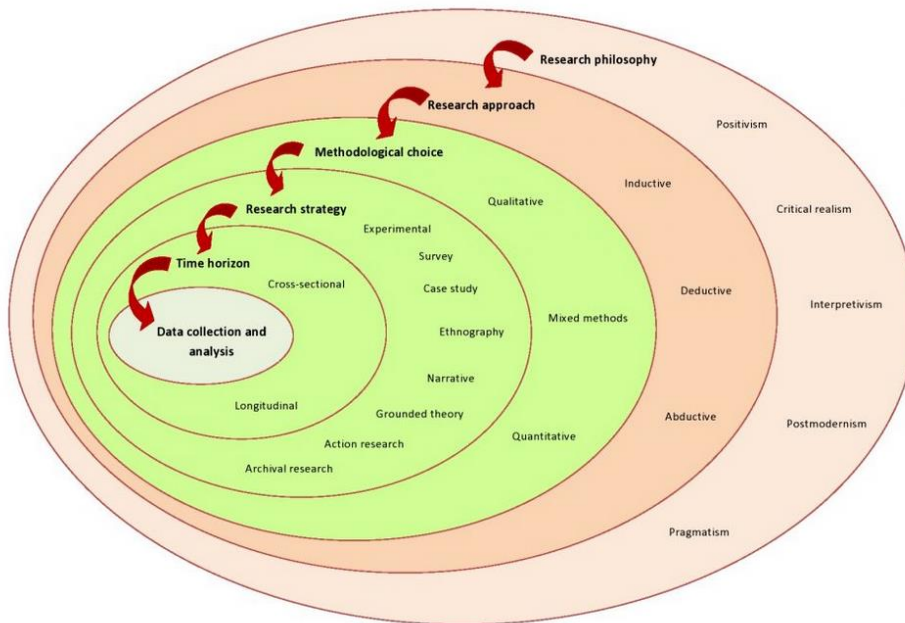


Figure 1: Saunders Research Onion: (Saunders, et al. 2007)

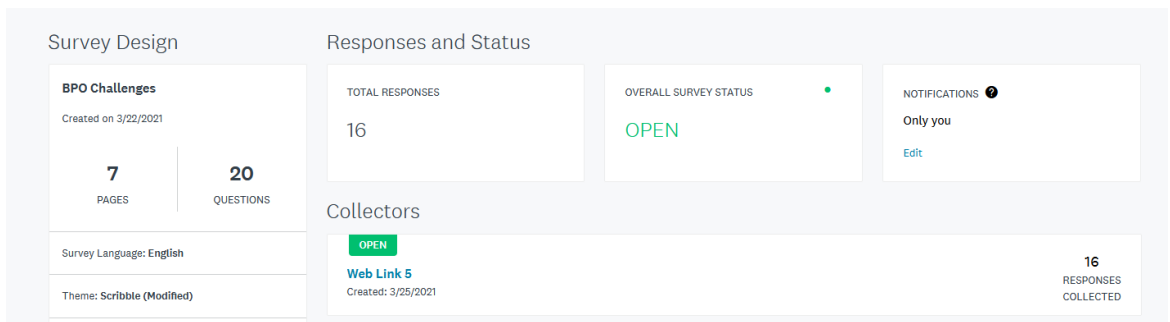


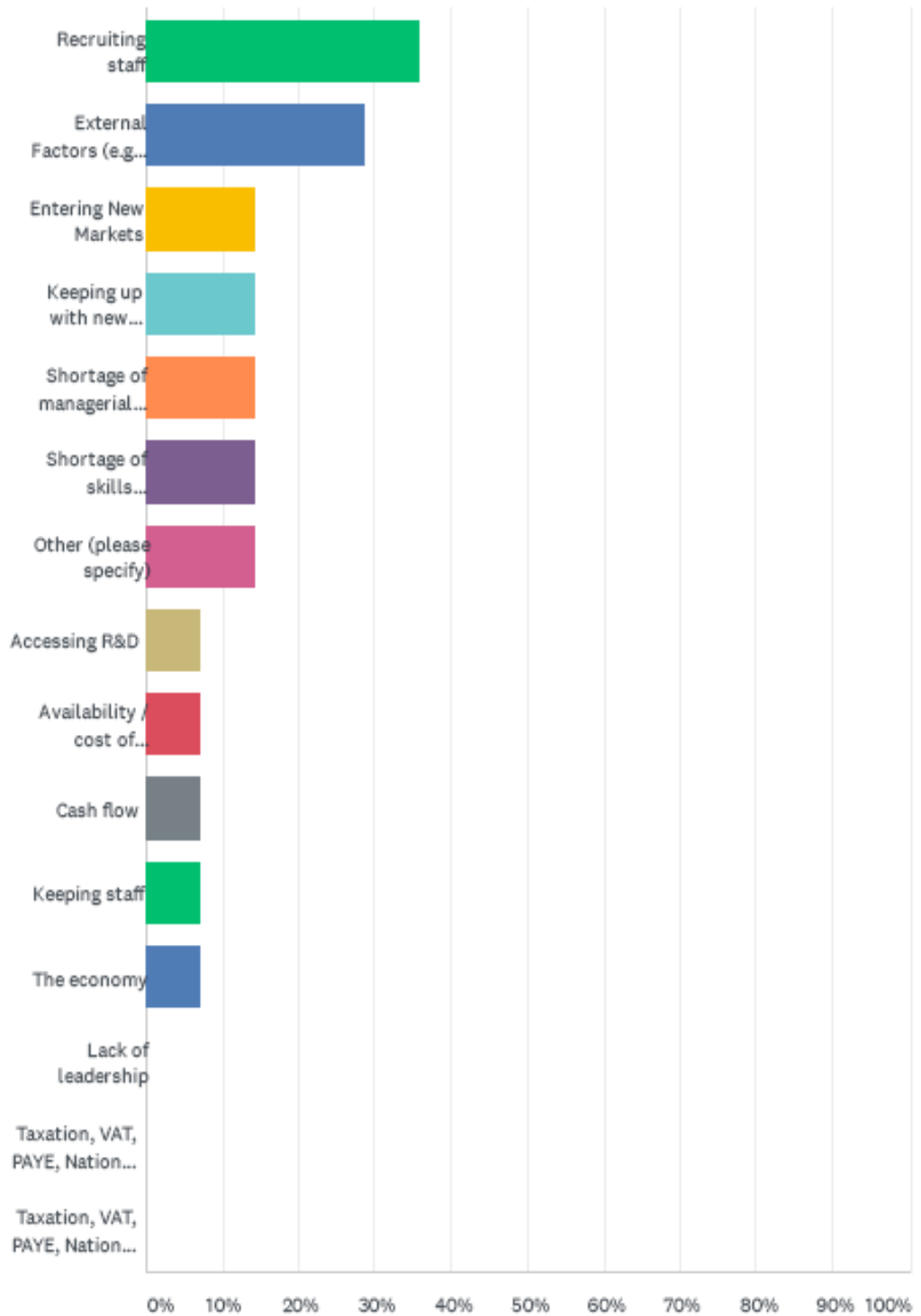
Figure 2: Responses

Location	Average yearly cost spent in an office of 100m2
New York	\$74,000
San Francisco	\$65,160
Los Angeles	\$33,510
Chicago	\$35,000
Miami	\$33,150

Figure 3: Average yearly cost spent in an office of 100m2 per location

Q14 Overall, which is the primary challenge to the success of your business, currently?

Answered: 14 Skipped: 2



“The challenges facing Business Process Outsourcing in delivering scalable and secure work-at-home solutions: a focus on senior technical and information staff”

Q18 Overall, which was the primary challenge to the success of your business, in the past?

Answered: 14 Skipped: 2

BPO Challenges

