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Emerging Technologies:
Companies and Innovation Report*

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Contents

Article I.   Introduction

This report will focus primarily on innovation at companies, specifying how companies innovate, what the benefits of innovation are and what issues may arise throughout innovation.

The first section of the report will critically appraise peer-reviewed journal papers, in order to evaluation the methodology and reasoning behind innovation taking place throughout organizations today. In order to gain a better insight the report will also analyze the companies operations and strategies.

The second section of the report will concentrate on EE's approach to innovation, assessing the role of technology in EE's operations, and evaluating the advantages and disadvantages the company face by incorporating innovation.

Article II.   Literature Review

Innovation is a technique the majority of organizations now adopt in order to become successful; it not only helps with the functionality of the business, it also helps the business save money and gain a competitive advantage. An important thing to consider is the effect innovation has on employees within the company; a case study reveals that 75-80% of innovations fail which would result in a major impact on the employees. (Glor, 2014) The usual reason for innovations failing is due to a lack of research and planning, a lot of businesses take the serendipitous approach, which is unsustainable and often leads to poor implementation meaning the business will have little or no breakthroughs.

Implementing innovation within a company has many advantages such as changing the balance of power in industries, creating a competitive advantage and gaining the ability to reach new custom, however it has its disadvantages including many social and economical issues, for example new innovations can replace existing job roles; from a business point of view it will cut costs and reduce contingency time however to employees this will result in a number of people left without work.

Organizations use innovation for numerous reasons, Damanpour and Wischnevsky (2006) stated that "Innovation adoption contributes to organizational success but it is not necessarily the primary success factor." This is because for many companies the reason for innovation is not success; it is simply put in place in order to survive. An organizational decline often boots motivation for innovation and this is often known as a turnaround through innovation. (Silva, 2014)

There are a number of approaches one can take to implement innovation; one approach is to follow the open innovation model which consists of two different methods, the outside-in method which is where organizations use

external technology and ideas, and the inside-out method which is where organizations use internal technology and ideas. (Gianiodis et al, 2014)

Both methods have proven to be successful for example Santander followed the inside-out method and within 12 years managed to go from the 73rd largest bank in the world, to the 10th largest bank in the world. By acquiring Banesto, Santander had access to Parthenon OS and set up the Parthenon service innovation which left Santander with a customer database that methodically prearranged all the banks services in one place allowing for a cut back to be completed on administrating staff. (Gianiodis et al, 2014)

An example of achievement using the inside-out method is the company BBVA which focused on three main elements to implement their innovation strategy. These elements were new business models, which were derived from benchmarking other leading firms in order to produce an alternative model, technology including a digital signature to improve validation and management innovation where software was adopted to manage the implementation of each innovation initiative project.(Gianiodis et al, 2014)

Implementation of innovation is known to be problematic due to the call for specialist support and advice, as well as the disruption to daily routines as users struggle to embrace new practices into their everyday life. (Compagni et al, 2015) Organizational change is one of the most vital non-technological innovations, but it can be the hardest to implement. (Evangelista, 2010) Unfortunately this often results in failing to achieve the expected technical and economical benefits. (Compagni et al, 2015)

It is believed that there is a close connection between competition and innovation and many economists believe competition decreases innovation due to larger organizations having economies of scale in research and development and organizations with greater market power having high returns to innovation. However there are also a number of economists that believe competition increases innovation due to the fact that a larger product market rivalry would therefore increase revenue for independent inventors. (Spulber, 2013)

A way companies motivate innovation is often through an incentive scheme, such as rewarding long term success. There are three vital steps to take, in order to motivate innovation; one is having a long-term compensation plan in place, two is ensuring job security and three is providing regular feedback on performance. (Manso, 2011)

Implementing a long-term compensation plan would motivate innovation because employees will have the drive to become successful without the worry of failure and job dismissal. The compensation plan would usually be based on total performance of an employee, but it could also incorporate employees who are on the right track for success, making the scheme more appealing to all. However there are many who believe that these types of incentive schemes should punish employees for failures, and there are also many who believe a scheme like this should not be implemented at all, due to

the outcome of innovations being unpredictable. (Manso, 2011)

A case study on Empresas Polar revealed that project related factors are the main success factors in innovation projects, as a pose to factors relating to the company, the product and the market. On the other hand many organizations would disagree with this statement, but this statement does not mean that the other factors mentioned are irrelevant; it just establishes the main focus Empresas Polar has in order to produce product innovations. (Silva, 2014)

Research reveals that 80% of business leaders feel innovation is of great importance; however 65% of them feel they lack the ability to innovate. Although many small to medium sized companies are familiar with the significance of innovation, a mass of them do not have the formal processes in place, in order to generate ideas. Whilst in contrast to this, larger companies allocate more time and money to ensure that formal processes for innovation actions are in place. (Trotter, 2012)

This outcome would indicate that cost is one of the main barriers of innovation, but it seems many organizations fail to use a broad variety of research tools, and with the correct tools, research suggests that innovation doesn't always have to be a costly process, and the outcome could potentially save the organization money in the long-term. There are many other barriers that often prevent businesses from innovating for example bad communication, poor decision making processes and a general lack of technical understanding, but with the right innovation methodology put in place, businesses have the opportunity to strive. (Trotter, 2012)

Innovation is vital for businesses that come up with a unique selling point, and developing and implementing new business models is often the key for capturing value. There are often six main steps businesses follow for innovation, they start by demonstrating value creation, followed by generating business model options and identify the risks for each option, they then prioritize the risks and try to reduce them through business experiments, and lastly they would then organize for incubation. An example of a successful business that has followed these six steps and generated a process innovation would be Netflix who has managed to eliminate the vast majority of mail order DVD retail outlets. (Euchner, 2014)

Article III.   EE's Approach to Innovation:

Section 3.01 Technology and its role in EE's operation

EE owns and operates national 2G, 3G and 4G mobiles throughout the UK, offering its services under the T-Mobile, Orange and EE brands to deliver mobile and fixed communication services to customers and businesses. (Wikipedia, 2015) EE were the first company in Britain to supply 4G mobile services along with fibre broadband and has therefore become the

largest,most advanced and most reliable, digital communications company in Britain. (EE, 2015a)

EE believes strongly that technology can make you happier, healthier and cleverer, and it can make your life easier, faster and much more pleasurable because after all technology should be exhilarating and entertaining. (EE, 2015b) The use of technology EE provides can change people's lives, some businesses can be run solely from a smartphone, whilst others can reap the benefits from the amount of time and money that can be saved.

EE established their strategy by conducting a thorough assessment of their business and performance, outlining the potential risks and issues in order to determine what the business wants to stand for, and then generate effective solutions. With EE's advanced technology it's operation strategy for 2015 is to increase one million people's digital skills, employ 500 apprentices and reduce the company's carbon emissions, and waste to landfill by 50%. (EE, 2015c)

EE uses technology to enable everyone to stay connected, as reports show there are over 10 million people in the UK who do not use the Internet. EE wants to build trust with its customers in order to deliver the finest network and services, they do this by focusing on the issues that matter the most. (EE, 2015c)

Section 3.02 Innovations at EE

Innovation is important at EE in order to gain a competitive advantage and keep their Consumer Superbrand status, which they were awarded in early March 2015. EE are constantly releasing the latest mobile models on their network and in 2013 received an award for network innovation.

EE's most recent innovative idea was the launch of their latest TV campaign in order to showcase EE TV, which is the UK's most innovative TV service. People are now becoming more reliant on next generation technology and services, which is why it is important for EE to continuously come up with innovative ideas.

By the end of 2013 EE's goal was to boost performance, speed and capacity within their networks, at no extra cost to their customers. This was not only to provide developers with the necessary requirements to build 4G applications, but also to provide more 4G bandwidth than any other operator in the UK at present and in the future. (EE, 2013)

In 2014 EE took on an innovative project called 'Future Thinking' which involved collaborating with LinkedIn in order to create an interactive microsite that enabled LinkedIn members to login and receive personalised guidance, encouragement and technical support. Member's activity then appeared on their LinkedIn feeds for their connections to see. (EE, 2014a)

In summer 2014 EE's innovative focus was on what they could bring to the Glastonbury festival and they came up with a 'High-speed Herd' idea, which would provide free 4G WIFI to partygoers via fibreglass statues. Other innovations EE brought to the festival included contactless payment facilities and cash on tap facilities allowing customers to make purchases via their mobile phones. (EE, 2014b)

EE also have a dedicated innovation hub in two of their stores to allow customers to try out their latest projects. They are currently trying out three technology inventions, InteraXon's Muse which is a headband that detects brain activity, SubPac a backpack that provides intense bass without damaging hearing, and Philps Hue a lighting system which can be controlled from your smartphone. (EE, 2015d)

Section 3.03 Advantages of innovation at EE

EE focuses on innovation primarily because of the opportunities it can provide. It can allow businesses to change people's perception, their concept of time, distance and geography, and provide a way to show people that they can achieve more, share more and learn more. (EE, 2015e)

Innovation has permitted the unconnected to access a world that was previously closed off from them due to geographic location, and the opportunity of providing such power to people motivates EE to take on new challenges and win the competitive advantage because EE believe that connectivity, mobility and accessibility are vital. (EE, 2015f)

Another advantage of innovation at EE is the fact that they have become more advanced than any other network in terms of technology and services; this therefore generates more income for the business, gains new custom and builds trust and relationships with existing customers. It also provides a sense of job satisfaction to employees within the company because innovation can provide a way for people to become more invested in a company.

Section 3.04 Innovation concerns and issues at EE

The main concern about innovation for EE is unnovation, which is the refusal to innovate because this could lead to disastrous consequences for the business, the staff and EE's future. (EE, 2015f)

Obviously there is always the worry of a failing innovation so EE have to ensure the strategies they move forward with are fit for purpose. EE have to ensure they outdo their competitors and keep up with the latest technologies and services in order to ensure they stay in the present, thrive in the future and never vanish into history. (EE, 2015f)

Another concern EE has about innovation is the fact that consumer expectation has now become very high due to the adoption of new

technology, this means EE will have to try harder to match these expectations, which is why they ensure they provide the latest technology and services to their customers. (EE, 2015f)

EE, like any other business will have to make certain the innovation process runs smoothly and ensure the employees transition well, because as technology adapts, old technology is left behind which can amount to a number of issues arising within the company.

Article IV.   Conclusions

Overall the report addresses the main advantages and disadvantages of innovation today within companies and organizations. Although a number of issues and concerns have been outlined, and they must be taken into consideration before proceeding with innovations, the benefits of innovation overrules all the negative aspects, as it has become clear from EE's case study that unnovation is not really an option for any business wanting to survive, purely because of all the businesses that are advancing with innovation. The most important thing to remember is to ensure a solid method and strategy are planned and produced; otherwise it's almost a guaranteed innovation fail.

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