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1   Introduction

1.1   Background

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This thesis will discuss and present the role Innovation Culture in driving Al-Em's growth. In this part we will briefly discuss the purpose of this research, the problem statement and the delimitation and dispositions.

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This research essentially deals with the topic of Innovation and the role innovation culture plays in the company's continued survival and growth. In the following discussion, we would try to understand salient features of Innovation, and its need from the literary lens.

Successful innovation gives nations, industries and organisations an advantage in today's highly competitive world (Keith Goffin and Rick Mitchell, 2007). A racially diverse workforce in conjunction with an innovation-focused business strategy may provide firms a competitive advantage (Orlando Richard, Amy McMillan, 2003). Therefore, that we suggest possible innovation strategy for company AL-Elm makes it obtain more competence in the industry so that it is able to grow successfully. Furthermore, productivity is a key component of economic growth, also for company's growth. Technological progress is perceived as a driving force of productivity growth through the mechanism of creating new demands by introduction of innovative products or improving efficiency of production process (Motohashi, Kazuyuki, 1998). As can be seen, studying the innovation strategy stimulates producing new product and new service of technology improvement in the company and hence increases the productivity of the firm, which is the element of company's growth.

In general, achieving sustained competitive advantage and company growth through innovation has basic steps: creating an innovation strategy, generating ideas, prioritizing and selecting from these, implementing the ideas selected, involving people from across the business (Keith Goffin and Rick Mitchell,2007). Therefore, the innovation strategy provided internally and externally that will be implemented in company firstly start from fostering the innovation culture. Finally, it is important that managers must bring together all five elements within their organisation if they are to achieve successful innovation (Keith Goffin and Rick Mitchel, 2007).

1.2   Problem Statement

In today's day and age, the technological companies have to be on the cutting edge of technology to thrive in today's cut-throat competitive markets. We study in this paper how building an innovation culture is important for today's technology companies, if they were to stay competitive and relevant in today's world. The real premise of our paper is to study how the Innovation Culture fuels the growth of a company. Case in point, we study Al-Elm specifically for this reason. We would have a separate section on Al-Elm to explain the background and history of the company, and why it makes a good candidate in the Middle Eastern region to study as an innovation factory.

1.3   Purpose

The purpose of this thesis is to study and analyze the role of Innovation Culture in driving growth for a company, especially for Al-Elm, as our case study.

1.4   Delimitation

This research would focus on studying the Innovation Systems at Al-Elm, and how those systems, and the conducive environment built around those system helped its employees build a company growing at an exceptional rate. We would not make this study for any other company, or study any other factors other than the cultural or systematic aspects of innovation.

1.5   Disposition

The disposition of this thesis will be as follows:

Chapter 2   This chapter will present Al-Elm Information Security Company, the company we are basing our case study on, to study the innovation culture and its impact on growth. We would not only discuss its history, but also how it progressed in terms of innovative products as well as revenue.

Chapter 3   This chapter would present the previous research on innovation systems, culture and innovation strategy from the literature. We would discuss topics such as, how to build the innovation culture, how the global companies have used innovation growth and profit, what better ways are to market the innovative products, and testing the ideas in the market as well as the consumer responses to such innovations, who ultimately decide if an innovation is successful or not.

Chapter 4   This explains the research questions we set out to find answers to, and the research instruments and the methodology we employ to arrive at the results.

Chapter 5   This section presents the empirical findings that we conducted through a series of interviews with the senior level management, middle level management, as well as employee, from cross-functional teams. The empirical findings also included annual reports, the growth strategy reports, as well as the innovation index and other innovation statistics. However the financial figures were withheld, due to privacy concerns of the company (Al-Elm)

Chapter 6   This section provides the analysis on the research findings, in terms of the impact Innovation Culture had on growth and profit of the company as well as the strategy of the company.

Chapter 7   This part brings us to the conclusion of the thesis, amalgamating our initial premise, our findings, the analysis and the conclusion it led us to.

2   Al-Elm – Profile

This chapter will present Al-Elm Information security company profile, its progressive timeline, its products and salient features about it.

2.1   Al-Elm – An Introduction

Al-Elm Information Security Company, famously known as "Al-Elm" is a national company owned by the **Public Investment Fund (PIF)**, the investment arm of the Saudi Ministry of Finance. Al-Elm strives to build the largest national system for secure e-business services. It has already produced more than ten unique services in the e-Government   field.

Al-Elm focuses on secure e-business solutions by automating information sharing, transferring information via secure technologies, and facilitating the integration between different organizations for better collaboration and integrity of data. Al-Elm is also operating and developing new e-services from government to businesses and individuals.

The entire society with all its sectors benefit from Al-Elm services, including the government, the corporate sector and the individuals. Al-Elm also strives to create a comprehensive eco-system which allows for receiving and sharing information from varied sources. The platform allows the information providers and information consumers – be it the public sector, the private sector, or the individuals – to exchange the information through secure e-channels. Often, the roles are reversed. The information provider in one instance may become the information consumer in the other instance, and vice versa. This eco-system also allows Al-Elm's technology partners to produce innovative solutions by integrating their services with Al-Elm services.

2.2 Progressive timeline
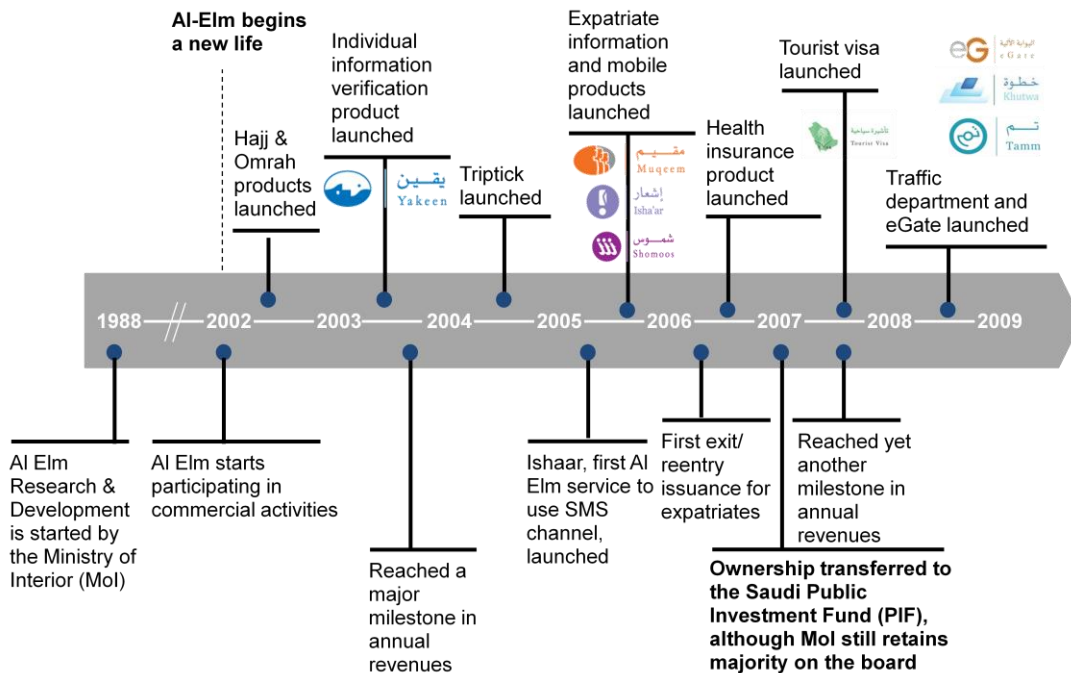
Figure 1- Progressive timeline; source: own-construction

2.3 Flagship Products

"Yakeen" – one of Al-Elm's unique services – provides electronic verification of personal identity to aid in fraud prevention, data cleansing and quality assurance. "Muqeem" which is a web portal, provides its users with the ability to view all the up-to-date information related to their sponsored expatriate workforce according to the Passport Department database. Muqeem provides also the ability to execute e-services without the need to visit a passport authority office. For instance, Muqeem users can issue or cancel exit/re-entry visas for their expatriate employees through fully electronic interactive service. This service is considered to be the first service in the Kingdom that is fully in compliance with all e-Government conditions.

"Isha'ar" is a consumer level service which uses mobile to reach its customers. It provides a pull SMS service that allows the individual to query the government databases regarding the status of their records. In addition, a push service that alerts individual when there are changes to their records or that any of their official documents is about to expire. "Omera portal" another earlier service from Al-Elm, saves twenty million waiting minutes annually for Omrah Pilgrims, in addition to many other unique services.

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In 2007, Al-Elm has executed more than sixty four million electronic transactions where every transaction offers a service to someone, somewhere in the Kingdom (www.elm.com.sa, 2010).

2.4   The Innovation System

Al-Elm started out as an Information Security Company, protecting and safe guarding the Saudi Arabia's public information at the National Information Center, also conducting trainings and seminars on Information Security technologies. From that point on, Al-Elm ventured into the realm of e-government services, and sprang the series of Innovative services which lead to highly successful and great e-government innovations in Saudi Arabia.

Innovations at Al-Elm were not mere accidents, but results of well thought-out strategy and deliberate focus on cultivating a culture of innovation, by Al-Elm's management. Al-Elm encourages everyone to have and share ideas with the company. All the ideas are submitted to the *idea bank* for storing the ideas, and further screening and development of the idea. The ideas are systematically evaluated by experts in their respective fields, and if the ideas are thought to be carrying potential both in terms of revenue and value to its clients in the current set of circumstances, it is further sent to the Business Development Department for further development, market research, and business case analysis. If for some reason, the ideas are thought not to be suitable in current situation; it is filed to be re-evaluated in 6 months again. If the idea passes the business case test, it is moved to the development department for developing it, and is launched to the market.

2.5   Al-Elm – an interesting case study in the region

Al-Elm's growth is largely characterized, and attributed to the revolutionary innovative services it produced during last 5 years, which makes it distinct not just in the kingdom of Saudi Arabia but also the middle eastern region, where companies and organizations follow more traditional ways of conducting business. It is the very reason that we have embarked on the journey of studying Al-Elm's Innovation Culture as a driver for growth. Considering the contributing Innovation has played in Al-Elm's growth, Al-Elm has commissioned this study through students of Jonkoping International Business School (JIBS) as their master's thesis, to further understand its innovation systems, and the strategies related to it.

3   Frame of Reference

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This chapter will present the previous research and studies in the areas of Innovation, and how innovation cultures are built; how innovation has been know to contribute to profit and growth.

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3.1   Innovation in organization

In an organizational environment, examples of innovation are implementation of ideas for restructuring, or saving of costs, improved communication, new technology for production processes, new organization structures and new personnel plans (West,M.A and Farr,J.L, 1990). By knowing this, the top management and employee could be goal oriented for innovation during the regular work, especially when they need to change the current condition. In this case, we can also say that Al-Elm could consider the innovation in these aspects.

An innovation strategy is a strategy that promotes the development and implementation of new products and services (Robbins, 1996). AL-ELM hence should regards the product innovation as one of most important perspectives once it decides to develop innovation strategy. Furthermore, the vision and mission of a creative and innovative organization are also customer- and market-oriented, focusing on solving customer's problems among other things (CIMA Study Text, 1996). As can be seen, implementing the innovation strategy should not lack marketing innovation because the new marketing strategy is able to bring more opportunities.

3.2   How to build the Innovation Culture for a Company

Before we plan to make the company innovate and grow in the future, we have to build the innovation culture in the organization, which is the fundamentals for innovation in every aspects of the company. After all, the innovation culture is the basic source to change and innovate. Consequently, we found a model that has three dimensions to describe to their influence in promoting and hindering creativity and innovation (E.C. Martins, F. Terblanche, 2003).

First, strategy: the employee in the company must understand which support creativity and innovation, as their work dominant the productivity and performance of the company. Normally, the top management is the producer of the strategy with employee act innovatively during the work. Hence, allowing great freedom within the context of the

goals as well as strategy encourages the innovation culture (E.C. Martins, F. Terblanche, 2003). From the leader perspective, to design the innovative strategy and to be clear inside what mission is more innovative is beneficial to build innovation culture for the company.

Second, from structure perspective, it is found that flat structure, autonomy and team work will promote innovation (CIMA Study Text, 1996). Once a company decides to re organize and make a change, adopting flat structure without much hierarchy or bureaucracy stimulates innovation and builds a much better atmosphere for company. In order to build innovation culture, we also think about how employee cooperative with each other. Empirical evidence suggests that cross-functional team that allow for diversity and individual talents who complement one another promote innovation and creativity (Arad S and Schneider, 1997). Following this rule, social and technical members should interact so that employee can open their mind and be more innovative during the procedure of work.

Third, what is the behavior which encourages innovation. It is common that employee make mistake in the regular work, but tolerance of mistakes is an essential element in the development of an organizational culture that promotes innovation (E.C. Martins, F. Terblanche, 2003). The innovation behaviour should be supported from top management to subordinate. The most creative and innovative departments in an organization regard competitiveness as an important aspects of their culture (Nystrom, H, 1990). For example, managers consider to make more access to external information that is beneficial for company's growth. After all, the more information we get, the more we can learn from others, which is another kind of source to innovate.

3.3   How Global companies use Innovation for driving growth

Before company decides to change, it is good to reference from what previous leader did about innovation for company's growth.

George Buckley, CEO of 3M, gives us some sharing of how he operated company in innovation perspective. Buckly mentions that creativity is more about controlling uncertainty, meaning that risk management and the acceptance of risk is an incredibly important element of growth and faster innovation (Castellion, George, 2010). By doing so, the rate of failure decreases considerably if the leader is professional to controling it, otherwise, loss occurs at any time. As can be seen, no matter before the innovation or in the process of doing it, we had better firstly find methods to manage risk very well as an emergency. The risk control is mainly reflected in financial aspects, hence, formulating detail financial plan and making investment decision for innovation projects before it starts really helps.

Except Buckley, all nine executives' stress that innovation culture must start at the top if a company wants to be innovative (Castellion, George, 2010). Senior management must display innovation values in everyday business practice (Castellion, George, 2010), so every level of company can perform innovation consistently. After all, we all know the leadership style dominant the atmosphere of whole company.

In order to drive innovation for growth, SAP's CEO says he has a direct influence on the culture of innovation at SAP by sending signal to customers in terms of quality, reliability, engagement (Castellion, George, 2010). This kind of stimulation almost plays a role of emphasizing, making most of them think about how to find the priorities in quality and customer satisfaction. Once these aspects are done well, the company will definitely gain more profit by selling more products and get grow.

Nokia's CEO highlights that external orientation is so important when it comes to innovation because once get internally focused, company lacks the diversity as well (Castellion, George, 2010). Learning from other company's experience and skill can help generating new ideas, and confining the range of thinking inside the company gives limitation in innovation, which decreases the possibility of growth and speed to grow. Therefore, external influence has positive effort on innovation.

3.4 Marketing Innovation

A necessary component of profitability is revenue, and revenue depends on satisfying customer needs. Research in marketing is intrinsically customer and competitor focused, and thus well situated to study how a firm might better guide innovation to meet its profitability goals successfully (Hauser, John; Tellis, Gerard J.; Griffin, Abbie,2006). Therefore, marketing department plays a significant role in company's business transaction and performance.

3.4.1 Testing Innovative Marketing Ideas

Once come up with new ideas regarding marketing, these ideas should be tested in carefully selected markets as representative and controlled conditions as possible (Levitt, Theodore, 1960). The limitation of capital that will be invested in new market and the feasibility of market confine the practical marketing innovation range, consequently we just choose the sample ones as our marketing innovation start. Then we invite the advertising agency to design as well as run the marketing innovation strategy as a separate business (Levitt, Theodore, 1960). Why we do this is because the new strategy more or less has risk, which need the agency to do it by isolating them from our current marketing to reduce the risk. Until these tests are proved to be feasible, we can deliver them to sales department for further implementation (Levitt, Theodore, 1960). At that time, salesman of company will do the marketing innovation in person by selling in new place or new channel.

One thing deserved mention about marketing innovation is that the bigger they are, the greater is their capacity to change the ingrained consumer habits to which they address themselves (Levitt, Theodore, 1960). It means the more new market we tried and the more we changed about it, the more transaction and consumer we can exploit. Meanwhile, these innovation strategy will open the previous habit that consumer have used in the past. Therefore, the innovation strategy really makes an effort.

3.4.2 Consumer responses to Innovation

The success of innovations depends ultimately on consumers accepting them. Successful innovation rests on first understanding customer needs and then developing products that meet those needs (Hauser, John; Tellis, Gerard J.; Griffin, Abbie,2006). So we had better study the consumer's habit in the new market so that our marketing innovation strategy fit, say, what kind of reaction the local consumer will have by being implementing our innovation strategy.

3.4.3 Consumer Innovativeness

Research on consumer innovativeness focuses on the characteristics that differentiate how fast or eagerly the local consumers adopt our products (Hauser, John; Tellis, Gerard J.; Griffin, Abbie,2006), in which condition we will have different sales scale. It is necessary that we analyze target market's customer as well as potential position in this market in order to provide marketing strategy for Al-Elm.

Consumer innovativeness is one of elements of marketing innovation strategy, from this point of view; we must pay attention on consumer behavior of new market. To explore a new market, we firstly should know the local consumer's habit and culture as well as what kind of group of consumers would be the first adopters, which is the premise of adaptation of the possible marketing solution. The adoption of products of new entrants by consumers is crucial to new market success (Hauser, John; Tellis, Gerard J.; Griffin, Abbie, 2006). From the research we get to know those consumers who tend not to seek out new entrants' information or assistance from others are postulated to be predisposed toward early adoption of product of new entrants (Midgley, David F.; Dowling, Grahame R, 1978). Hence, these group of people are also our first target marketing objective when we explore the new market. These early adopters are willing to take the risk of accept the new entrants without gaining information from their social system tend to purchase the product of new entrants earlier than others (Midgley, David F.; Dowling, Grahame R, 1978). All buyers who try the product in the first period are willing to pay a higher price for it in the second and all subsequent periods (Mueller, Dennis C, 1997).

Except the consumers who will be the early purchasers, we can also identify the potential consumers who most likely to adopt our products by measuring two scale: life inno-

vativeness scales and adoptive innovativeness scales (Hauser, John; Tellis, Gerard J.; Griffin, Abbie,2006). The purchasing decision of consumers are not only determined by the customers' attraction to any kind of newness and but also by the adoption of specific products new entrants introduced, meaning that consumers will be more or less have the extent of being attracted due to the curiosity sometimes as well as the possibility they like new entrants. Therefore, we can make the questionnaire to the customers in our new target market and collect the data to investigate which certain group of people are interested in our product. And we sort out the characteristic of these consumers' such as age range, the gender, the occupation, opinion and so on. By doing all these, it is easier for us to make marketing innovation strategy.

3.4.4   Network Externalities

Network externalities refer to an increase in the value of a product to a user based on either the number of users of the same product or the availability of related products (Hauser, John; Tellis, Gerard J.; Griffin, Abbie,2006). For example, if one group accept the new entrants, the related people of them will follow such as the customers' customer and customers' supplier. Consumer acceptance of products of new entrants and their subsequent growth can be affected greatly by network externalities (Hauser, John; Tellis, Gerard J.; Griffin, Abbie,2006). It is easily to be explained that the network functions as an media advertisement to consumer since most of them really believe others' taste before they try. Once a first-mover has established a large network for a product with positive network externalities, the potential demand for a second mover's product lies far below that of the first-mover (Mueller, Dennis C, 1997). In most cases, the network not only helps the sales promotion but also improve the reliability of exploring new market for the local consumers, even saving cost because if we have the trusty network, we don't have to spend the amount of money on advertisement by TV, newspaper.

3.4.5   Consumer Resistance to Innovations and the Solution

There is possibility that innovation we made could be rejected by the new market for some reasons. Because an innovation may create a high degree of change in consumers' day-to-day existence and disrupt their established routines (Ram, S.; Sheth, Jagdish N, 1989). They consequently may feel dislike or worry about the marketing change, fearing maladjustment of the innovation. It is also perhaps the innovation may conflict with consumers' prior believe structure (Ram, S.; Sheth, Jagdish N, 1989). Obviously, we need to transfer their value of the change and convince them our marketing innovation is reasonable, which could bring more benefit.

Since any kind of barrier is quite normal for the marketing innovation and introduction to new consumers, we have to deal with these difficulties to overcome the sales problem.

The first probable marketing innovation strategy is to develop a system in which the innovating system can estimate how its new offering can fit into the existing system (Ram, S.; Sheth, Jagdish N, 1989). Because the product of new entrants must interact with the ones in current market and to some degree we compare ours with the existing ones, meanwhile analyzing the competitors. From quality, price, function perspective, we could even make an metric for the product of new entrants, the current marketing and the competitors to know what position we are in. Furthermore, to overcome the resistance the innovation could be integrated to the preceding activity or product to end-users as part of package (Ram, S.; Sheth, Jagdish N, 1989). It is more easy for the new consumers to accept the part innovation than whole innovation by doing so, which is like package the innovation under a well-known brand name.

The second marketing innovation strategy to deal with customer's resistance is making the innovation mandatory through government legislation (Ram, S.; Sheth, Jagdish N, 1989). From this marketing development aspect, what we should do is to convince the government that our innovation can benefit the customers. So before we decide to enter a new market, it is necessary to think about our product's unique feature as well as the function it can perform comparing with the current ones.

The third marketing innovation strategy to overcome the customer problem is to reduce the manufacturing costs of the innovation and pass on the savings to the customers (Ram, S.; Sheth, Jagdish N, 1989). It means before we explore the new market, we have already reduced the cost when we make the production. Anyway, this strategy is based on effective pricing. Saving cost is not only for the success of marketing innovation, but also reduce the rate of failure or loss, which could happen in the new market.

3.4.6   Market Entry Strategies

The market entry concerns how to exploit innovation given company's own resources and portfolio of products, the resources and strategies of its rivals, and the dynamics of consumer demand (Hauser, John; Tellis, Gerard J.; Griffin, Abbie,2006). We can figure out the amount of production for entering new market as well as the strategy by knowing how many resources we have and the detail of competitors. For example, in most cases, we should avoid the similarity of product with the ones of local rivals.

But entering a new market company definitely faces market entry barriers and great financial risk, which decrease the likelihood, scope, or speed with which potential competitors can come into the markets (Shepherd, W. , 1979). Therefore, we should get a clear understanding of possible barriers to overcome the difficulties to enter into new market and make the innovation successfully. The cost advantages of incumbents barrier is perceived as the most critical for all market entry decisions (Karakaya, Fahri; Stahl, Michael J, 1989). So reducing whole cost as much as possible without decreasing quality of product must come first, which forms a symmetry with cost of incumbents. Meanwhile, the price will be set up reasonably according to the cost.

The product differentiation of incumbent's barrier is perceived as the third most important (Karakaya, Fahri; Stahl, Michael J, 1989). If our products and service are similar to the incumbents', this marketing innovation is meaningless since the local consumers obviously trust the original ones more. No matter the function or design, we have to make our product innovative and has its own features. Firms try to differentiate their products to deter other firms from entering markets and to increase market share (Karakaya, Fahri; Stahl, Michael J, 1989). As can be seen, by doing this our company can successfully enter the new market.

Except for the above two factors, capital requirement is another possible barrier to entry since entering a new market is also a kind of new investment, requiring a amount of funds. Of course, it can be collected in many ways such as venture capital, corporate venturing, and trade credit. But we don't have too much pressure on this, after all, the initial investment is low in order to reduce risk.

Usually firm has three major entry strategies (Porter, Michael, 1980b) :

1. Entry through internal development, which involves the creation of a new business entity in an industry.
2. Entry through acquisition.
3. Sequenced entry, which entails initial entry into one group and subsequent mobility from group to group.

In markets where barriers to entry are strong, many firms attempt to enter by way of acquisition (Karakaya, Fahri; Stahl, Michael J, 1989). But persuading the local firm to merge is not easy, as long as we have confidence, we can exploit a new market tentatively.

3.4.7 Successful Market Innovation

Market innovation is concerned with improving the mix of target markets and how chosen markets are best served (Axel Johne, 1999). As they are the new targets, opportunities exist as long as the innovators are good at grasping them and would like to be the first mover or the imitators. But how to choose the new target market is also the preference and personal tendency of the manager or group within the company, meaning that there is not standard answer for choosing them. We deal first with the identification of potential markets, which is achieved through skilful market segmentation (Axel Johne, 1999).

One criterion to choose target market is based on demographic data, which means it is based on life style interpretations of consumer and business buying behavior (Axel Johne, 1999). Hence, analyzing the local consumer as well as their buying behavior can help us to promote the sales, although the conception of consumer could change due to the advertising or propaganda.

Other criteria to choose target market is "benefit segmentation" that has become more widely used (Hooley et al., 1998). In this process, we consider what benefit our product and service will give the local market, namely how buyers seek to gain benefits in particular buying situations (Axel Johne, 1999). But as long as we can determine the certain benefit our innovation giving consumers, we can surely release our innovation in the new marketplace.

To compete effectively in new market, company should takes into account three parameters to analyze it: buyer preferences; the likely reaction of competitors; and core internal competences in product and process innovation, that is to say, the ability to ready the needed offers (Axel Johne, 1999). These are the key roles to entering a new market, no matter what way like questionnaire; we need to gather as much information as possible of them.

Furthermore, we can consider integrate some technology when we implement the marketing innovation strategy. For example, IT in product and process innovation is emerging as a powerful facilitator of market innovation in both personal and business markets (Axel Johne, 1999). So many industries have raised their working effectiveness by using IT.

3.5 Product Innovation Strategy

Having an open and highly innovative new product culture within the firm is a primary route to success, particularly when developing discontinuous or "really new" services (de Berntani, Ulrike, 2001). New product culture is also a kind of innovation culture; embed in the innovation system of company and driving it to good performance. Releasing new product and service consolidates the innovation culture of the company, which is why we positively come up with appropriate product innovation strategy.

3.5.1 Success Factors in Product Innovation

Product innovation is second only to corporate strategy in the way it involves all aspects and all functions of management (Crawford. C. M, 1980), meaning that it associates with performance of many department of companies. Basically, the product innovation experiences several steps: new product planning, idea generation, screening and evaluation, technical development, market appraisal and launch (Crawford. C. M, 1980). Most company can consider this sequence when developing new product and we add some specific strategy if necessary.

3.5.1.1 Strategy

A business that wants to grow and whose products are based on technology that is still not obsolescent can choose any one of the four strategies (Johne, F. Axel; Snelson, Patricia A, 1988):

Table - Principle Organic Product Development Strategies

Proactive Strategies	Reactive Strategies
1. Broad-span leader, undertaken for leading in a particular market segment	3. Reactor undertaken (sometimes very fast) in response to successful competitive launches
2. Broad-span leader, undertaken for leading in a particular market segment	4. Responder undertaken (usually with some reluctance) in response to competitive pressure

Source: (Johne, F. Axel; Snelson, Patricia A, 1988)

This strategy is really proper for our thesis since we mainly concern how the innovation drives the company to grow. Product modification primarily focused on the function and design perspective, and technology almost determines the quality and function of the new product. Hence, technological analysis should be the fundamental drive behind product innovation strategy formulation (Johne, F. Axel; Snelson, Patricia A, 1988). Although most company invest a large amount of money in R&D to improve technology, making the product innovation is not easy because solely technology-led does not always guarantee success.

It has been found that success business assign specific strategic roles for individual new product developments (Booz. AlIen and Hamilton, 1982). Because the innovation must correspond to the market needs so that we can have competitive advantage to profit. For example, it is possible to develop a new function to absorb the customers or give them more curiosity. Making product and service innovation can drive company grow as companies can look for a high percentage of sales generated by new products.

3.5.1.2   Corporate Structure

Corporate structure affects firm's innovative capabilities and we conclude that matrix structures that allow for the integration of the many functional inputs required for innovation and can encourage creative problem-solving are conductive to innovation (Kolodny, H. F, 1980). Therefore, to develop new product or proceed other innovation we should organize the structure by inputing cross function teams. While separating product innovation activities from mainstream organization provides tangible benefits (Johne, F. Axel; Snelson, Patricia A, 1988). It is supposed that we can both abstract the skills and talent from existing business and concentrate on the new product design in the independent department.

3.5.1.3   Shared Value

Innovation culture is intangible but directly distinguishes successful innovator firms from the less successful (Johne, F. Axel; Snelson, Patricia A, 1988). We can say that an innovating culture is fostered by openness and interaction between different units and functions operating at all levels of the organization (Johne, F. Axel; Snelson, Patricia A, 1988). Actually the innovation culture within organization is influenced by the operating norms, the regularity of company and a set of management of leaders. As long as the leader formulates the innovative strategy while the employee works creatively, this shared value will affect the new product development. In fact, the innovation culture can be supported by product innovation as a central corporate strategy (Johne, F. Axel; Snelson, Patricia A, 1988). A good way to develop product innovation is top managers need to have an open, imaginative and creative management style to encourage middle management to function effectively in product innovation (Rothwell, 1977). Anyway, what top management decides concerns how the innovation proceeds.

3.5.1.4   The Systems

Effective communication between R&D and marketing personnel is important throughout the product innovation process (Johne, F. Axel; Snelson, Patricia A, 1988). Research and development determine the quality as well as the design of product while the marketing explore the proper opportunities for new product to meet the customer needs. The cooperation between them will definitely help the product innovation. Tight coordination and control are necessary in order to time the launch into the marketplace successfully (Johne, F. Axel; Snelson, Patricia A, 1988).

3.5.2   New Product Development Process

From the literature "The New Product Process: A Decision Guide for Management", we get pretty clear process of developing new product in several stages. If company tries to release a new kind of product packed with new services together, it can follow this basic procedure.

Gate 1: Initial Screening

Initial screening is the first decision to commit resources to a project (Cooper et al. ,1988). Only if we have sufficient resources in many aspects, it is qualified to consider to make some change of product and services, during which process we take a scan is this product innovation project has value.

Gate 2: Preliminary Assessment

In the process of product innovation, technology can add new function for the product, making its feature capture customers attention and taste. Once we own adequate tech-

nological capabilities and own tech information, we can start doing it. We hereby regard technology assessment as the main change and development of product. Furthermore, it is necessary to assess the marketing value of new product because we will test whether the new product meet the customers' need and will have a good market share. Finally, financial criteria can tentatively be introduced at this gate as well (Cooper et al., 1988).

Gate 3: Pre-Development Business Analysis

Agreement must be reached on a number of items before development can begin: the target market; the product concept; benefits to be delivered; positioning strategy; product features, and attributes; and even product specifications (Cooper, Robert G., 1988). Product innovation is induced by the motivation and innovation culture as a strategy for the whole innovation, consisting of many specific strategies as well. Making a business plan for the product innovation helps to raise the rate of success.

Gate 4: Pre-Test Review

This stage serves as a quality control check on the development phase, which determines that the product functions properly and also to assess potential users' reactions to the product under actual use conditions (Cooper, Robert G., 1988). We keep testing the product during the whole innovation system and consistently modify the product.

Gate 5: Pre-Trial Review

Results obtained above provide an indication of expected sales, and permit a more valid assessment of the products' economic prospects (Cooper, Robert G., 1988). According to the data and information, we try to launch the new product and wait the feedback of them, which is beneficial for us to select the logical candidate for the final ones.

Gate 6: Pre-Commercialization Business Analysis

This final stage involves gearing up for production and market launch (Cooper, Robert G., 1988). We calculate the expect profit and loss of this product innovation happened in the future market.

3.5.3   Product Innovation Strategies

Product innovation activities not only draw on, but also serve to develop firm competences, and thus contribute to firm renewal over time (Danneels, Erwin, 2002). As a kind of innovation, it drives company to grow and renew gradually, which is why we should make specific innovation strategy for new product development.

3.5.3.1   Real-time voice of Consumer

One of the objectives of company's growth is increasing profit with pursuing cost reduction. As product innovation proceed, we focus intensely on what customers need and integrate it into the innovation process in real time (Ebert, Joachim; Shivaraman, Shiv; Carrannanto, Paul, 2010). The final user of the new product is customers, therefore we observe and investigate the requirement of customers and make the product innovation based on the customer's information, reducing innovation's defects.

3.5.3.2   Flexible Product Development (PD) Plan

To develop a low-cost product while meeting aggressive time-to-market goals, companies should develop a flexible product-development process that requires more frequent cross-functional engineering reviews (Ebert, Joachim; Shivaraman, Shiv; Carrannanto, Paul, 2010). Most product innovation add new function that needs dynamic engineering technology, in the meantime, this flexible development process minimize the amount of post-design-freeze engineering changes.

3.6   Technology Innovation Strategy

Technological innovation is the basis for competition and the prime determinant of industry evolution, which are created by company's R&D of new technology (Jagle, Axel J, 1999). The technology innovation drives company to grow rapidly as the main force because the technique changes the function of product, which will increase customer's satisfaction. Technical innovation is a distinguishing feature of the products and industries where high wage countries compete successfully on world markets (Keith PAVITT, 1984). Studying the meaning of technology innovation helps firm to compete in industry.

3.6.1   Innovation and Learning: R&D

R&D not only generates new information, but also enhances the firm's ability to assimilate and exploit existing information (Cohen, Wesley M.; Levinthal, Daniel A, 1999). This information found is used for changing the technology method during the manufacturing as well as production. While R&D obviously generates innovations, it also develops the firm's ability to identify, assimilate, and exploit knowledge from the environment—what we call a firm's 'learning' or 'absorptive' capacity (Cohen, Wesley M.; Levinthal, Daniel A, 1999). Only if the company learns new skills and adopt new capability from externality, technology will improve by applying to it. In general company make technology innovation as the company absorb new knowledge originated with its competitors' R&D spillovers even outside the industry.

Firms may conduct basic research less for particular results than to be able to identify and exploit potentially useful scientific and technological knowledge generated by universities or government laboratories, and thereby gain a first mover advantage in ex-

ploiting new technologies (Cohen, Wesley M.; Levinthal, Daniel A, 1999). Besides, a firm's technological progress depends upon an increasing number of fields of basic science. As can be seen, the results of R&D could be gained from many channels; there can be a number of possible sources of technology. Inside firms, there are R&D laboratories and production engineering departments. Outside firms, there are suppliers, users, and government financed research and advice (Keith PAVITT, 1984). The more knowledge we get from different source, the more possibility of technology innovation we will have from R&D.

3.6.2   Information Technology Innovation

The IT innovation field is concerned with understanding the factors that facilitate or inhibit the adoption and diffusion of emerging IT-based processes or products within a population of potential adopters (Fichman, 2000; Swanson, 1994). In fact, this innovation depends on whether consumers are satisfied with their new function, although in most cases the consumers are not familiar with the information system.

It is assumed that organizations with a greater quantity of the "Right Stuff" will exhibit a greater quantity of IT innovation (Robert G Fichman, 2004).
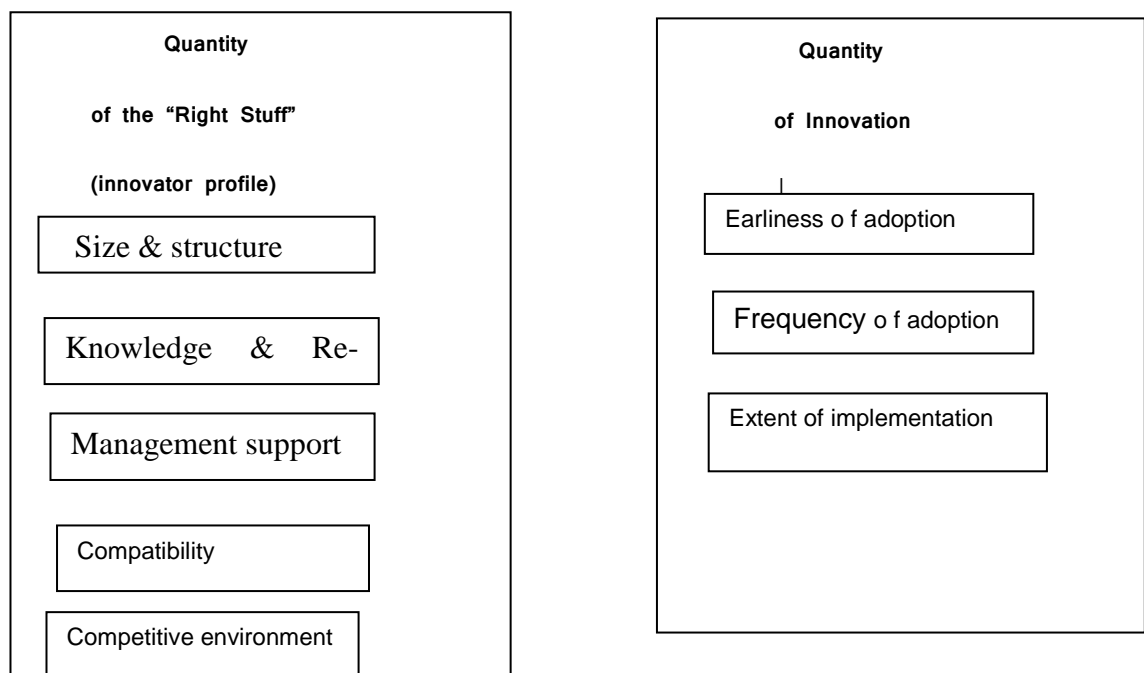

Figure 2 – Dominant paradigms of Information Technology

Source: (Robert G Fichman, 2004)

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The quantity of the "Right Stuff" has been conceptualized as the extent to which organizations possess certain characteristics that increase the need for innovation and/or the ability to innovate successfully (Robert G Fichman, 2004). Therefore, once the condition is formed, IT innovation will apply.

There is some basic theory regarding IT innovation as following:

First, usually there are often good market data available to make assessment for IT innovations, which have a commercial hardware or software component (Robert G Fichman, 2004). We can access new hardware or software adoption based on the gathering market information.

Second, IT innovations, once deployed, tend to have heavy switching costs at both the organizational and community levels (Robert G Fichman, 2004).

Third, the typical IT innovation triggers more rapid maturation of the technology, promotes additional investments in essential complementary technologies, and increases public knowledge about the innovation and how best to apply it (Robert G Fichman, 2004).

Fourth, IT innovations often produce benefits that are difficult to quantify, such as increases in managerial flexibility or contributions to the core competencies or absorptive capacities of the firm (Sambamurthy et al., 2003).

3.6.3   Information System Innovation

Information system innovation may be broadly defined as innovation in the organizational application of digital computer and communication technologies (Swanson, E.B, 1994). Actually, IS innovation is exerted for development of organization. Indeed, the success of IS innovation may rest upon an effective partnership between the IS department and its users, and moreover, users may be the sources of certain IS innovations (Swanson, E.B, 1994). In some condition, the IS innovation takes place based on the users characteristics. Parties external to host organization-consultants, vendors, and the providers of outsourced services-will also be seen to play important roles in the overall IS innovation process (Attewell, 1992).

A variety of IS innovations have been studied, ranging from IS work practices such as the data base design tools and techniques (Nilakanta, Scamel, 1990) to user-oriented industry-specific IS technologies such as electronic scanners for supermarkets. These are the common methods to make IS innovation, which will give some guidance for the company. Besides, organizational size and professionalism are found to be related to the initiation of technical innovation (Swanson, E.B, 1994), therefore, before technology innovation, we should put effort to organization structure and professional knowledge.

IS innovation may involve a new product or service, a new IS work technology, or a new IS administrative arrangement (Swanson, E.B, 1994). IS innovation is also characterized in terms of both new information technology (hardware and software and their immediate extensions) and new forms of human work and organization (means of applying hardware and software) (Swanson, E.B, 1994).

At least there are three basic types of IS innovation--IS administrative process innovation, IS technological process innovation, IS product and business administrative process innovation. Firm can make IS innovation according to these three direction (Swanson, E.B, 1994). Because the overall domain of IS innovation has two basic dimensions: business impact, technological and organizational feature composition (Swanson, E.B, 1994).

3.7   Human Resource Management Innovation Strategy

An HRM innovation is any program, policy, or practice designed to influence employee attitudes and behavior that is perceived to be new by members (Ellen Ernst Kossek, 2006). This definition tells us attitude and behaviour are the key point for innovation. An HRM Innovation can run the gamut from an enhancement in the employee benefits area (a company fitness center or child care program) to advances in participative management (self-managing work teams)(Ellen Ernst Kossek, 2006). Since HRM contains many aspects, the alteration of some policy will improve the efeciency of overall HRM.

3.7.1   External Environmental Forces Influence HRM Innovation

The extent of unionization is conductive to HRM innovation with the research suggesting unionized and nonunionized companies innovate in different HRM policy areas (Ellen Ernst Kossek, 2006). Hence, company could have innovation in different departments according to the feature of itself. For example, firms in the highly unionized industries focus on innovations influencing labor costs, productivity, and quality (Ellen Ernst Kossek, 2006). Meanwhile, in the less unionized high-technology industries, there is greater emphasis on innovation in recruitment, promotion, career development, and pay to attract highly skilled professionals (Ellen Ernst Kossek, 2006).

Furthermore, technology affects HRM innovation in a number of ways (Ellen Ernst Kossek, 2006). The impact of rapid technological change is illustrated by early use of internal labor markets, a practice firms use to set wages and allocate labor irrespective of market forces (Jacoby, 1985). Sometimes the technological change blurs the the distinctions between skilled and unskilled workers, which affect the arrangement of HRM.

The tightness of a firm's key labor markets can be a critical force in fostering adoption of HRM innovation. Hzgk-tech firms are developing HRM policies based more on the concerns of individual workers. It is difficult to supervise and set performance standards for many technical positions in high-tech firms, because individual employee ability and motivation are considered to be the critical performance factors (Kochan and Cappelli,

1984; 148). From this theory, if the technology company has HRM innovation, new HRM policy like reward and compensation will be draft according to individual performance.

3.7.2 Organizational structural characteristics may influence HRM innovation

Economic and market pressures can influence HRM innovation in very different ways (Ellen Ernst Kossek, 2006). For example, the economic crisis fostered the development of a remarkable HRM innovation such as reorganizing the structure of personnel department.

Foulkes (1980) believes his findings suggest organizational slack (Katz and Kahn, 1966) can be an antecedent to HRM innovation. The presence of slack resources allows for allocation of additional money and personnel to HRM, providing the opportunity with more capital for HR department to innovate like adding the reward for the excellent employee. Growth and profitability also improve the firm's ability to provide promotional opportunities, improvements in compensation and benefits, and job security, all key ingredients to creating a setting which is conducive to HRM experimentation (Ellen Ernst Kossek, 2006).

4   Methodology

In this section we would discuss the tools, methods, and the research instruments we would make use of in order to fulfill the purpose of this research; which is to study the impact Innovation Culture has on the Innovativeness of the company, and its growth. This research methodology would help us gather our empirical data for our research.

4.1   The Research Approach

The case study approach would be used in order to fulfill the purpose of this thesis, focusing on how–in the case of Al-Elm – the company we are conducing this research for – the innovation culture has driven the growth within the company. We, the authors of this thesis, want to take advantage of the theoretical foundations and researches which have already been done in the realm of innovation culture and how it drives the growth and innovation strategy. We want to take that knowledge further through this case study method to particularly understand the case for Al-Elm.

The authors would use structured, semi-structured and non-structured interviews as the research instrument. The case study research would not however be limited to these pre-qualified interviews, but also extend to other valuable data and reports, such as, the quarterly and annual review reports, and the Key Performance Indicators (KPIs) related to the Innovation measurement within the company, other essential data helping the authors conduct an in-depth study of the Innovation culture within the company, the institutionalized innovation processes, as well as the effects it bears on the company's strategy and growth.

The interviews would all be done face-to-face, for which one of the author of this thesis moved to Riyadh Saudi Arabia to conduct. The interviews have been categorized into three formats, structured, semi-structured and non-structured because the authors intend to conduct the interviews at three levels. The structured interview formats would be made use of while interviewing the executive management, particular for the Strategy and Planning manager as well as the Innovation Unit manager. The semi-structured interviews format would be made use of while interviewing the Innovation Unit employees, the people running the innovation management show, and the non-structured or the open-ended interviews would be used while interviewing carefully selected employees from cross-functional departments to analyze and assess their feelings towards the contributions they make in the Innovation Process at the company, and the perceived impact of these contributions. The unstructured can be made use of to informally explore an area of interview deeply (Yin, 2003). The open-ended questions help the interviewee talk freely about the given subject matter (Saunders et. al., 2007).

4.2   Case Study as a Research Method

Before we delve into applying the case study research methodology to achieve the purpose of this thesis, we would like to first define and explain what case study research method really is.

There are quite a few definitions of case study research methodology, but the one definition given by Yin (2003) in his authoritative book on the case study research – design and methods is as follows:

"A case study in an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident." (Yin,2003,p.13)

The case study research may include one or more than one cases (Yin, 2003). The case studies are used to conduct an in-depth and intensive study of a specific organization or a company, an individual, or a whole society (Gomm, Hammersly & Foster, 2000).

The choice of research method largely depends on the type of questions the research intends to answer (Hedrick, Bickman, & Rog, 1993), and the conditions under which the research is being conducted. Yin (2003) suggests that the three conditions which determine the choice of strategy are the type of research questions sought, the extent of control the investigator has over the behavioral events, and the degree of focus on contemporary as opposed to the historical events. The research questions typically posed are, "Who", "What", "Where", "How", and "why". The case study methodology as opposed with other research methods, Yin (2003) tells us that, is most suitable when the investigator in looking to answer the questions of "How" and "Why" and usually he or she would not have control over the behavioral events and the study would be more focused on the contemporary events rather than historical events.

The case study research method could employ both qualitative as well as quantitative research tools, and should not be only confused with the qualitative research methodology (Yin, 2003). However, Yin (2003) further suggests that while conducting the case study research, it is apt to collect and analyze the qualitative data. Also, Crobin and Strauss (2008) argue that making use of the qualitative research tools and methods allows the investigator perceive and analyze the situation from the point of view of the respondent, and helps him or her gain a better understanding and the insights of the problem, and develop empirical knowledge from it.

While conducting this research for Al-Elm Information Security Company, and in their attempt to study and understand the role of the Innovation culture played in its continued exponential growth, the authors decided to use the case study research method because of the above cited reasons.

4.3 The Sample Selection

The sample selection in our case study is based on non-probability sampling, specifically purposive sampling, a qualitative research tool. According to Patton (1990) purposive sampling is particular useful when the cases are extreme or deviant cases, or the objective of the research it is to able to pick a sample with a maximum variation. Since we have target specific user-groups, employees and decision-makers within the company, we can not rely on Probability Sampling which would in turn depend on random sample. Further down the category, the authors have chosen to use the expert sampling (Research Methods Knowledge Base, 2010). The specific sampling technique that the authors are going to make use of is Stratified Purposeful, whereby lies the characteristics of a particular group and sub-group (Patton, 1990). This particular sampling methodology is used because it can work with relatively smaller sample sizes (Neuman, 2006).

The samples would be taken from three stratums; one of them is executive management responsible for Innovation and growth in the company. The two managers the authors would interview in this sample would be the manager for strategy and planning and the manager for Innovation Unit. The second strata would be the employees in the Innovation Unit actually manage and run the institutionalized Innovation process in the company. The third would be a carefully chosen sample of employees from cross-functional teams in order to better gauge the feelings and contributions of the employees towards the innovation and consequently the growth of the company, or the lack of it therein.

4.4 Research Process

A research process or a research strategy has to be defined and established before any organized empirical research could be conducted (Saunders et.al. 2007). Saunders et.al. (2007) further suggest that the process or the strategy not only help answer the established research questions but also guide us toward collecting the required data to fulfill the purpose of the research. As we have already discussed in the previous section that, a case study research method is more suited to situations where the research questions are bound to be "How" and "Why", and the investigator does not have control over the behavioral events, as well as it deals with a contemporary phenomenon (Yin, 2003).

Conducting interviews, which could help build the empirical knowledge, would require some special skills and considerations. Burns (2000) suggests some key points to take into consideration while conducting such interviews to achieve the best results out of these interviews. The process and the structure of the interviews, such as, the test research project or the pilot study, learning the questioning techniques as well as listening and interview techniques are based on the Burns'guide.

4.5 The Test Research Project - Pilot Study

The authors plan on conducting the pilot study, or the trail interviews before, on a shadow sample, both in order to refine the research questions as well as gain some interviewing experience.

The pilot study would not however include the executive management, who would only be interviewed once. The pilot study would however be conducted on the other two employees of Innovation Unit, and the cross-functional team. The invaluable empirical evidence learned from the pilot study would still make it to the final empirical studies if it merits the acceptable quality. The pilot study would provide the authors the useful early insights into the company's cultural environment, and prevalent innovation systems and models.

4.5.1 Interviewing Techniques

The authors of this thesis have chosen the Burns (2000) guide to take advantage of and to learn from it the interviewing techniques. Burns (2000) emphasizes that building a rapport and a relationship based on trust with the interviewee is important. The suggested techniques are to initially using descriptive questions, which the interviewee would be comfortable answering, and as the interview progresses, more structured and to the point questions may be asked. Also equally important is the Mirroring technique which essentially means to repeat back the last words of the interviewee, so as to give the impression that you are fully involved in the conversation, and listening to and understanding the conversation properly.

The authors would have a written script, or at least a list of questions with them. After presenting themselves and the case in point, they would start with open-ended, non-threatening questions, and as the rapport and trust builds, and a friendly tone is set, the authors would further proceed with the closed-ended, to the point questions.

The interviews with the Innovation Unit employees would help the authors understand how the prevalent Innovation system works within the company, and what the department does to create or promote such a culture. For instance, the institutionalization of the idea bank, and what the innovation department does to inspire the contributions of new ideas from the employees of the company, and from clients and other stakeholders outside the company. These interviews would also help the authors understand Innovation KPIs, and the contribution new innovations in the form of new products and services make in the overall growth of the company, also the level and pace of the new ideas contributed to, by the employee, in order to gauge the effectiveness of the innovation culture within the company.

The interviews with the executive management would help the authors understand the strategic intent and the direction the management is willing to pursue, both to institutionalize and promote a culture of innovation, how successful the effort has been in their eyes, and where they would want to see it go in future.

The interviews with the employees gathered from different departments of the company would allow the authors gauge how well the employees perceive the culture to be an open and innovative, and how far the company's efforts in terms of building an innovation culture has been successful so far. This would also indicate the interest level the employees have in terms of sharing their ideas, and if they are eager to share the ideas with the company or they would rather withhold the ideas, and have some reservations and concerns of their own. The true sense of the innovation culture and its effectiveness would spring from these interviews. These interviews would follow open-ended but semi-structured interviews so as to have framework to work with, yet allow the interviewee the freedom to speak their minds, and provide the authors with valuable insights.

4.6   Interviewing Activities

Matters of fundamental nature have to be taken care of before the onset of interviews. The anonymity of the interviewee should be a pre-condition, and must be ensured if the interviewee is not comfortable revealing their names and identities, failing that might prevent them from completely being honest, and sharing their thoughts and insights truthfully. As already discussed in the above section, Burns (2000) further suggests building a rapport with the interviewee, and using the recursive model in the conversational approach, whereby the initial set of questions are not structured and intentionally left open-ended to set the right tone and stage for the real interview questions.

The interviews with the executive management would be held at their offices; however the interviews with the Innovation team and the cross-functional employees could happen in a nearby Salad Bar or a coffee house.

4.7   Data Collection

The data for this research project would be gathered from multiple sources, including the primarily sources as well as the secondary sources.

4.7.1   Primary and Secondary Data

The primary source of empirical data would largely consist of the interviews; since the authors are following a focused case study based qualitative research approach.

The secondary data would however consist of the quarterly report, annual reports; company KPIs, databases of other information sources, financial reports. However the financial figures would be withheld from publishing in this thesis, primarily because Al-Elm is a government own company, and does not allow its financial figures to be published publically.

4.7.2   Interviews

The primary empirical data would be collected through the interviews with 2 executive managers, 2 members of the Innovation team, and 4 members of the cross-functional team at Al-Elm Information Security Company.

The sampling technique to select these people for these interviews is non-probability sampling, more specifically purposes sampling. The objective is to purposefully choose reasonable representation of people from different groups of people with varying stakes and interest in the company. Based on this logic, of the executive management, the manager for Innovation and the manager for Strategy and Planning have been selected. Two members of the Innovation team have been selected, since they are most acquainted with the Innovation system and culture within the company, and four of the cross-functional team members are selected for the interviews, including a Product Manager, an account manager, an application developer, as well as a marketing person. This particular technique of sampling allows for smaller size samples to deal with effectively and provide reasonable empirical findings Saunders et.al., (2007).

The managers and the other members have agreed to conduct the interviews with the authors of this thesis. One of the authors has moved to Riyadh, Saudi Arabia where Al-Elm has its head office, to conduct these interviews in person.

The interviews with the cross-functional team would follow an unstructured format, whereas with the Innovation team the interviews 'format would be semi-structured, and with the executive management, it would be structured and formal.

We, the authors of this thesis, would try to learn about the Innovation system and the culture from the Innovation team, and try to understand the strategic intend and the initiative of cultivating the innovation culture from the executive management interviews, and from the cross-functional team we would try to learn how the innovation culture and the system is being perceived by the actual employees, and how effective this system has been in the past.

These interviews, which would take the shape of the empirical findings would reveal to us, and provide insights into the Innovation Culture and help us understand if it actually contributes to Al-Elm's continued growth over the years. The findings, to everyone's surprise, could also indicate otherwise.

4.7.3   Data Cleansing

The primary empirical data is all based on the interviews, which would have nonstructural, semi-structured and structured formats, not all the data gathered during these discussed could be deemed relevant and useful for the purpose of this thesis. It is for that reason; the data would have to be passed through a special filter, to only provide us with the relevant and useful information for the purpose of this study. The final empirical da-

ta would then be compared against the theoretical framework, and the research questions and the research questions would then be analyzed in the light of our empirical findings. The risks include of considering the irrelevant information, and interpreting the answers incorrectly. The authors would have to exercise special caution in order to avoid such mistakes, and properly consider the important factors while gathering and cleansing the data to convert it into useful and relevant set of empirical findings.

4.8   Validity and Reliability of the Research

The quality issues could surface when a research is based on nonstructural or semi-structured interviews, in terms of validity and reliability of the research (Saunders et.al., 2007).

The validity goes to show the extent to which the interviewer can manages to access the interviewee's knowledge and experience within the area of interest and if the interviewer manages to interpret the meaning of what the interviewee is telling him or her in the right context, and appropriate sense. The validity factor could be high in qualitative interviews if the interviewer exercise caution (Saunders et.al., 2007)

Reliability basically deals with, if other researchers were to conduct the same research, would they still reveal the same information and exhibit the same bias, such as those of interviewer, interviewee, and the response biases. If the interviewer imposes his or her own biases or interprets the responses through his or her biased lens, the response would be biased (Yin, 2003).

The perception of the interviewing person, as well as willingness to talk about and touch upon the sensitive issues and subject matters, although he or she was made aware of the topics before hand, and had agreed to talk about them (Saunders et.al, 2007). This particular study however does not directly touch upon sensitive issues of extreme nature, however it would be an interesting insight to gain, what the employees at the cross-functional level think of the company's innovation culture, and if they feel comfortable sharing their ideas, or if they feel acknowledged and rewarded enough for contributing the development, and innovative growth of the company.

4.9   Criticism of the case study research as a research method

No research methodology is without shortcomings, and case study research is not without exceptions. A major concern with such methodology is that, since it is based on one or few cases, it provides a little basis for scientific generalizations. The question being, we do we generalize from a single case. The finding may be relevant for one particular case that too could have mistakes in terms of reliability, validity and right interpretation of facts (Yin, 2003). Yin (2003) further suggests that another issues cited is its lack of rigor, more often than not, the researchers could get sloppy and not follow systematic procedures and allow for biased views to influence the empirical findings and the conclusions.

5 Empirical Findings

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A brief description of the interviewees of this study will be presented in this chapter to facilitate the understanding of analysis. The presentation of the interviewees will be followed by relevant themes such as Innovation Culture at Al-Elm, its strengths, its weaknesses, and what new initiatives are underway and how Al-Elm could improve on what it already has.

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5.1   The interviewees

We have lined-up and conducted twelve interviews for the purpose of this thesis, but we found the responses of the interviews were similar in certain cases. It is for that reason we have scrutinized seven interviews among the twelve interviews we conducted on site at Al-Elm Information Security Company Riyadh, Saudi Arabia. The interviewees represent the senior level management, the middle-level management as well as the employees of the company. The interviewees shared their thought about the Innovation Culture and the Innovation System at Al-Elm, and how Innovation has been a strategic asset and instrumental in the company's continued growth, and integral part of Al-Elm's strategic direction.

The profiles of the interviewees we are including in this research paper are as follows.

5.1.1   Dr. Abdulrahman AlJadhai

Dr. Abdulrahman AlJadhai is the manager for Strategy and planning for Al-Elm Information Security Company, and has been with Al-Elm for nearly 5 years now. Dr. Abdulrahman AlJadhai's major responsibilities are to specify and manage the overall strategic direction of the company, and perform at the Vice President level at Al-Elm.

5.1.2   Hamad Al-Tawajri

Hamad Tawajri is heading the Innovation Unit, and manages the idea bank at Al-Elm. Hamad has been working with Al-Elm for 4 years now, and have been in the Innovation Unit for 3 years.

5.1.3   Wael Al-Sulmy

Wael Al-Sulmy is working as Business Analyst with the Innovation Unit at Al-Elm. Wael analyses the ideas, refines them, and also research the areas where they could be applied in the most efficient and best way.

5.1.4   Mushari Al-Nashmy

Mushari Al-Nashmy is the strategy analyst and the policies officer at Al-Elm. Mushari has been working at Al-Elm for 6 years. Mushari is running the office of Strategy management at Al-Elm.

5.1.5   Shahab-ud-din

Shahab-ud-din is working as a senior software engineer, leading a team of software engineers. He and his team have been responsible for implementing many innovations at Al-Elm. Shahab has been working for Al-Elm for 5 and half years.

5.1.6   Hasan Braigash

Hasan Braigash is the product manager for Al-Elm's flagship products Muqeem, eGates, and Tamm. Hasan has been with Al-Elm for 4 and half years.

5.1.7   Khalid Akkoub

Khalid Akkoub is the product manager for Yakeen, Electronic Medical Records, Khutwa and SecureGates. Khalid has been with Al-Elm for 2 and half years now.

5.2   The Innovation Culture and the Innovation System at Al-Elm

We asked Hasan Braigash, the product manager for Al-Elm's flagship products, how he would define the Innovation culture, his response was as follows

"Having the conducive environmen to provide the employees as well as clients, and people from outside our organization with the opportunity to think out of the box, and to share ideas, and our ability to implement them, and translate them into reality in the shape of eServices for individuals, companies and government departments in Saudi Arabia." *(Hasan Braigash, Product Manager)*

When we asked the strategy department representative, Strategy Analyst Mushari how important was innovation culture and innovation for Al-Elm's continued growth, his response was as follows:

"Well, this company depends on Innovation. If you go back in 2002 and look at our history, when we started commercializing the services, and launched Yakeen. The innovation continued and we came up with Muqeem and Isha'ar, all through the process of Innovation. Also Tamm is our upcoming product. It was an idea in 2006, and in 2007 we started developing it, and now we have launched it, and selling it. Also, through the Innovation process, we have a lot of new mobile phone services. I think, this company was based on Innovation. I see a great role of innovation in the growth of this company. " (Mushari Al-Nashmy, Strategy Analyst)

We asked Khaled Akkoub, Product manager for Yakeen, one of Al-Elm's major innovative products what he thought about the Innovation Culture at Al-Elm, his answer was as follows

"Absolutely. We have a strongly embedded innovation culture within the organizational culture of the company, and it is encouraged by the executive management. But is it practiced? People would want to see their ideas implemented fast enough. This could be a source of discouragement for employees, who would have shared more ideas, and would have been more enthusiastic about it."(Khaled Akkoub, Product Manager)

We asked Khaled if he were to rate the innovativeness of Al-Elm, how would he rate it, in comparison to the other companies within the region, his reply was as follows:

"I would say, we are one of the top 3 companies in terms of Innovation. There are a lot of ideas floating around. Sometimes they are formalized and sometimes they are not formalized."(Khaled Akkoub, Product Manager)

When we asked another influential product manager, Hasan Braigash what he thought about the Innovation Culture at Al-Elm, his response was as follows:

"I think, we have an excellent Innovation Culture at Al-Elm. And I think the Innovation Unit is doing the best they can. But I am not sure if the company is taking this department seriously or not. They are collecting the ideas, they are trying to filter it, they're trying to suggest, which ones are better than others, and they are voting for each ideas monthly. I think, and they are doing well. " (Hasan Braigash, Product Manager)

We also asked Hasan how did he rate the company in terms of Innovation in the region, his answer was

"I think we are better than the most of other companies in the region." (Hasan Braigash, Product Manager)

When we asked about the present state of the Innovation at Al-Elm, Mushari's came up with the following reply

"In the past 6 years, we covered the sectors. We covered the sectors by products for individuals, for cars, then we covered mobile services, then then we covered also covered travel agencies through Shomoos. So, when you cover a lot of sectors, the need for new idea or a project becomes less, because you have more than one products in operation, the focus shifts to product enhancement more than doing and implementing new ideas.So the focus is on the enhancement of the existing products. " (Mushari Al-Nashmy, Strategy Analyst)

To get the general sense of how the employees perceived the Innovation culture, we interviewed some of the employees, Shahad-ud-din, a team lead and a senior software engineer's response was as follows:

"I am aware of the fact that there's a place called Idea bank within the company where the employees could submit and share their ideas with the company." (Shahab-ud-din, Senoir Software Engineer)

When we asked Mushari, what he thought about the Innovation culture at Al-Elm, he was proud of the fact that it existed at Al-Elm and had clear processes and policies to follow it in the following words

"It's great. We have idea bank, we have a clear system, and we can submit our ideas any time. We have policy and procedures regarding the Innovation Process announced to the whole company. There are general categories of ideas, for instance, if it is a new idea, or a major enhancement, or a minor enhancement, so it's quite clear." (Mushari Al-Nashmy, Strategy Analyst)

5.3   The Innovation Process

We asked Hamad Al-Tawajri, the Innovation Unit head to describe to us the current Innovation Process at Al-Elm. He described it the follow way

"The complete innovation process for the whole company is a broader concept, which encompasses the initiatives we take to encourage innovation, the ideas sharing, evaluation and development process, as well as the extra-ordinary measures such as the Innovation Lab, and the Holom initiative - which I would explain in a while. I would first like to explain what our Idea's bank process is, which is one of the components of the Innovation system and culture at Al-Elm.

The ideas bank process starts when an idea owner, be it an employee at Al-Elm, or a client or a user or any other stakeholder or a person holding some level interest in Al-Elm and the products and services that which Al-Elm produces, shares their idea with

the Innovation Team, for submission to the idea bank, and for further evaluation of the idea in the process.

At this point, the idea is discussed with the Innovation Team, and refined before formally submitting to the idea bank, and presentation to the executive management in Innovations Monthly meetings.

The management has a certain lens, a yardstick and a criteria to evaluate and measure the idea's potential for Al-Elm. At the high-level the criteria is based on assessing the idea's worth, if it fits within the scope of Al-Elm, if it is outside of the scope how much effort and resources would it take to create its customer base, and how it deliver values to its client-base. Also, what would be the revenue potential for this new service or product idea?

If the executive management decides the idea somehow fits their criteria, and should be further studied, it is moved to the business development for further analysis and a formal Business Case. The Business Case basically tries to answer the question in detail if the company should pursue this project or not. If the Business Case answer is yes, the project or the service idea is moved to the Development department for implementation. After the product has been developed, its handed over to the Operation Department for operating it, and rolled out in the market."(Hamad Al-Tawajri, Head Innovation Unit)
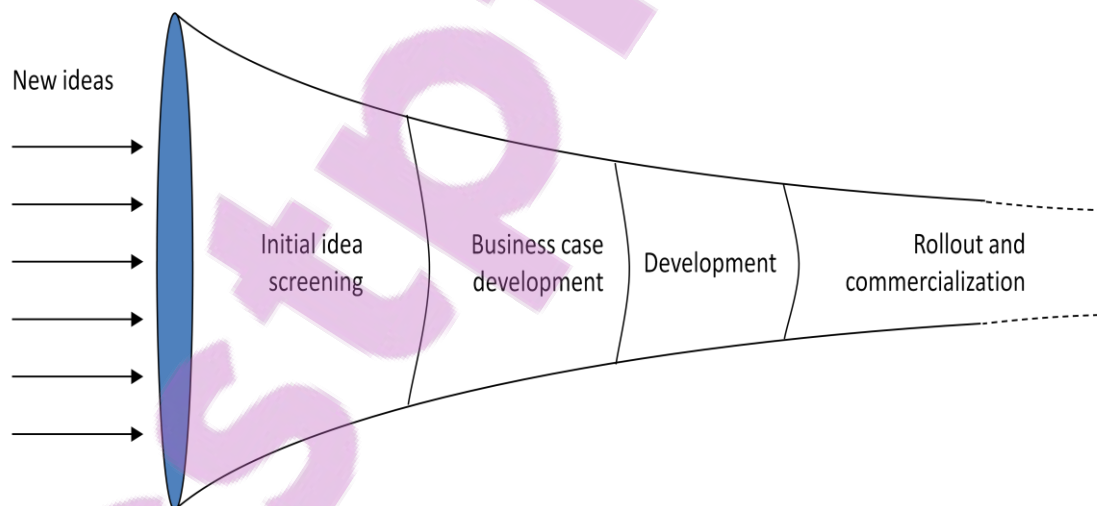

Figure 3-Innovation pipeline
source: own-construction

We also sought Wael Al-Sulmy's perspective on the process, who is the Business Analyst for the Innovation Unit. Wael described the process in the following words:

"We receive ideas not just from our employees but also from our customers. The employees are able to submit their online through the company-wide internal Idea Bank portal, and the customers can share their ideas with us through the company website, making use of the contact us form. The marketing department receives all such ideas and forwards them to the Innovation Unit for further processing. In theory, we have the avenues open for pretty much anyone to share their ideas, and thoughts with us through our company portal. And we do receive such ideas from time to time. " (Wael Al-Sulmy, Business Analyst Innovation Unit)

When we asked him if they also studied the ideas at the Innovation Unit, his answer was

"Sometimes we do not study it, we only refine and explain the ideas to the execute management. That is to say, we do not do any business plans or business cases, not the market research or the risk management before we present the ideas to the management. Then the management evaluate the ideas, and do the filtration process. This only applies to the new product ideas, and the major enhancements. " (Wael Al-Sulmy, Business Analyst Innovation Unit)

And we also inquired Mr. Wael on the type of ideas they received at Al-Elm's Innovation Unit, and his answer as following

"Yes, there are minor enhancements to the existing products and services. Minor enhancements also come through the innovation unit. In case of minor enhancements, we send them directly to the product managers, to analyze and evaluate if those would fit their products.

There is one more type of ideas, which are called non-service ideas. These ideas are non-profit generating ideas, usually aimed at improving an internal process within the company, which improves on the efficiency of the current processes at Al-Elm. The last but not the least, is the single-sale ideas. These are the ideas or the products we could only sell to one client, for instance to health ministry, or the education ministry. For Single-sale ideas, we forward the ideas either to the Government Solutions department or to the Marketing and Commercial Sales department for further studying, and implementation of the ideas. " (Wael Al-Sulmy, Business Analyst Innovation Unit)

5.4   Innovation Culture Initiatives

Having explored the innovation culture and the Innovation management processes at Al-Elm, we then wanted to explore what further initiatives were underway at Al-Elm to further enhance the quality of the innovation culture.

With this respect, we asked Hamad Al-Tawajri, what new Initiatives they had in the pipeline to make the culture even better at Al-Elm,

"We have exciting new initiatives underway, three of them are the Innovation Lab, the Holom project, and the idea generation workshops with clients and employees" (Hamad Al-Tawajri, Head Innovation Unit)

When we asked him to tell us about the Holom Project, his response was as follows:

"Holom is a very interesting project, an innovative design in itself. Holom means Dreams in Arabic. The students with the dreams and ambitions at the colleges and universities are invited to work on Al-Elm's data-sets, concepts and design and innovate on them.

The students are one group of enthusiasts who would want to work to innovate for the sake of innovation, and solving crucial problems - without worrying about the fact that if it would generate enough revenue for the company's continued survival or not.

This program is getting more and more popularity among the select student groups, and is hoped to generate flurry of innovation for Al-Elm in the coming months and years."
(Hamad Al-Tawajri, Head Innovation Unit)

Also we inquired about the Innovation Lab, and how it contributed in the Innovation and the growth of the company. Hamad's reply was as follows:

"The Innovation Lab is for the employees. Holom was only for students, and the access to Holom or the ability to work on Holom is provided to students from their campuses.

The Innovation Lab on the other hand is situated at the company premises. The idea is that if the employees have some innovative ideas, and they would want to test them or try them on sample, dummy data, they could come to the Innovation Lab, and do it. They often work in pairs, and in groups. It's a wonderful concept, and seeing them work on innovative ideas, all the while self-organizing their test projects and teams without any   supervision.

It's a great and exciting learning place for the employees. " (Hamad Al-Tawajri, Head Innovation Unit)

We then asked Wael Al-Sulmy about the third Initiative, the idea generation workshop, and his response was as follows:

"We have planned some more creative ideas that we would want to try out within the companies, and with our clients to see if we could generate more ideas, which would radically improve our existing products and services, as well as generate new products and services ideas at the same time. We plan on organizing creative thinking, and idea generation workshop at our company, by comprising cross-functional teams, and providing them with particular case problem, and how we could find the best solution for these. We plan on organizing the same sort of workshop with our clients, especially to look for solutions to their most dire of problems and issues." (Wael Al-Sulmy, Business Analyst   *Innovation*   *Unit)*

5.5   Innovation – a Strategic Imperative for Al-Elm

We asked Dr. Abdulrahman AlJadhai, the manager for Strategy at Al-Elm, where Al-Elm's executive management place Innovation within the company strategy, and what his thoughts were on innovation as a strategy imperative for Al-Elm. His detailed response is as follows

"Innovation is not only in processing ideas; innovation is suppose to drive people to come up with ideas. So there is Holom project, there is innovation lab. At least these two projects did not see the light. They were supposed to really ignite the innovation. There's another issue in the company, which is related to the demand of the market, producing new products and new features that are coming out of its exclusive relationships with Ministry of Interior (MoI). So, there are great ideas, but you don't do them. You simply do not have the bandwidth or the capacity to do them. If you are to do these features and products for MoI, then you would not have the bandwidth to do these innovative   *ideas*   *that*   *are*   *outside.*

So you have two types of ideas that come to us. There are those ideas that are outside the Mol, and there are those within Mol access. Those within MoI access, they fit into the bandwidth. For these ideas outside, we created this Emerging Business Groups. This Emerging Business Group, which by the way we did not execute well, for the past year, in getting them to work on Innovative ideas in certain areas, such as, mobile ser-

vices,   data   services,   Software   As   a   Servcie   (SaaS).

Going forward with Al-Elm, Emerging Business Groups and Innovation are going to be driving innovation for Al-Elm. Not the current eServices. However the eServices would continue having innovation, and trying to ignite some ideas. The idea of bringing something, getting the prototype quickly, will be at the Emerging Business Groups.

We have a system, but we did not execute it well."(Dr. Abdulrahman AlJadhai, Manager Strategy and Planning)

We then asked Dr. Abdulrahman AlJadhai about the management's focus with regards to Innovation? Is it management's conscious decision to focus on maturing and improving on the existing products or creating new products is still part of the strategy? His reply was as follows:

"I think we are trying in our products, especially within the eServices business of the company out of the government, and we have now good number of products and features that it will be hard to bring new products. However, we could still get innovative features, innovative ideas on how to deliver the products to the market.

There are innovations that are not even related to the features of the products, its innovation   related   to   making   the   product   visible.

It's not exactly process innovation too. Sometimes you would have to look for ideas on how to market a certain product. There are ideas. We could use lots and lots of ideas in the rest of the pipeline, in operation, in sales, and I think it's most needed and I am not sure we produce ideas in this space. We still have to look at our innovation and make sure they produce ideas in this space also. Having said that, however, the company is still interested in innovation, bringing new ideas, bring new innovations and this is why we created the Emerging Business Groups, but as I said earlier, it didn't get executed as we expected it, so we would renew this unit of the business to take care of and focus on new innovations.

The executive management of the company is still very interested in new products innovation, not just the features of on top of the existing products. We are not overly focused on just stabilizing the products we already have, but we are also interested in producing new products." (Dr. Abdulrahman AlJadhai, Manager Strategy and Planning)

We asked the Strategy Analyst Mushari Al-Nashmy how innovation was placed within the company; he came up with the following response.

"In terms of strategy, of course our strategy is now focused on new businesses in government, and I think Innovation is important for us how to develop new services. It is strategically very important for us that we continue innovating on our products."(Mushari Al-Nashmy, Strategy Analyst)

5.6   Innovation System – Problems and Issues

No system is without flaws or in its perfect shape. We tried to inquire about and analyze what problems Al-Elm's innovation culture might have. In our empirical findings, however the Al-Elm was established and thrived on innovative ideas; we found out that there has been marked decline in the ideas that were shared by the employees. We set out to research and investigate the reasons for such.

We asked the product managers, whose products continually depend on fresh ideas for new features, and further enhancements, why they thought there were relatively less ideas shared by the employees of the company.

The product manager Khaled Akkoub attributed the decline to the lack of quick implementation of the ideas, and came up with the following response,

"There's encouragement for the employees, there's a financial reward too for best ideas, but I think the financial reward is not enough. Like I said, people would want to see their ideas turning into reality, if you will. We need to build capacity, and improve our ability to execute on the ideas rapidly. People get frustrated at the pace they are implemented. Because when we discuss ideas, they are great, and everyone is excited about them, and everyone participates of the executive team. But when it comes to implementing it, as a new products, or part of a product, the frustration starts piling up. So, I think we need to get more proactive people to pursue the ideas, and get everyone excited, not just in terms of generating more creative, profitable and innovative ideas, but also to actually develop them too. And make flurry of activities. I think that is very important."(Khaled Akkoub, Product Manager)

The product manager Hasan Braigash made the comment that however we have a lot of ideas, and they do go to the Innovation Unit, but when it comes to actually implementing them, and making them part of the products, somehow they are not always translated into the features as they were imagined. He had the following opinion,

"We have an excellent system, but this is not without problems, I hope we are able to fix the problems we have here. We are really trying hard to do something different. But I think, we are not properly able to close this product cycle, which starts from a mere idea, and ends with completely getting implemented in some cases.

People have ideas at Al-Elm, and they share it too. But our development department does not have the capacity to implement all of them. However the employees share their ideas, they are however caution when they do, already thinking of and considering the bandwidth and the capacity the company has to implement the ideas."(Hasan Braigash, Product Manager)

While inquiring Mushari Al-Nashmy on the reasons why there has been a decline in the ideas from the employees, he had the following answer:

"Well, it really depends on the employees. Some employees do not have enough trust in themselves. I feel the main reason for any employee at Al-Elm for not submitting the ideas, is only coming from himself. Some people have some invisible barriers in their minds. They don't trust themselves, they don't think their ideas would be good, or he doesn't want to embarrass himself that his idea may not be taken up, or rejected.

But those who believe their ideas are good; they go ahead and submit their ideas. Maybe the idea in its original form would not be really good, but when you work with Business Analysts from the Innovation Unit, they help you refine the ideas, and then present to the management. Often times, they transform and morph into good ideas.

Innovation team is always ready to work with the people to refine the ideas. The idea bank officer invites the idea owner for a meeting to verify the ideas, and then try to refine it and then submit the ideas." (Mushari Al-Nashmy, Strategy Analyst)

Finally Dr. Abdulrehman commented on the situation as

"We have a system, but we did not execute it well" (Dr. Abdulrehman, Manager Strategy)

5.7   Innovation Culture – Ways for Improvement

We also quizzed the management and the employees on their thoughts, how they would want to resolve the issues related with the Innovation system, and motivate their employees to participate more in the ideas generation process.

"The innovation culture is there, but continuously reminding the people need to be maintained. If people are reminded more often, that how important their ideas are for the company's continued growth and survival, they would be more interested and more willing to participate in it."

(Mushari Al-Nashmy, Strategy Analyst)

"We don't have to be dejected about it, or feel low or down about it. Whatever we have up till this moment came as a result of ideas. There is a problem though, there are a lot of ideas and we sometimes implement them too, if they are minor enhancements to our products, but such ideas do not get documented." (Hasan Braigash, Product Manager)

"If we want to truly improve the innovation in our company, we should not only focus on products and features, but also focus on our processes, our strategy and the freedom with which the employees at our company could translate their innovative ideas into great products and services. Case in point, how Google allows its employees to spend 20% of their time working on projects and ideas they would want to work on, irrespective of the fact that if the product or the service would have the potential to make revenue for the company too. We are only getting started with one such initiative, the Innovation Lab as we have described earlier too. But we are in the early stages." (Wael Al-Sulmy, Business Analyst Innovation Unit)

"I think, the process we have here is a good one. We could however have more interactions with the customers which could then help us understand their problems better, and generate create idea related to their problems." (Shahab-ud-din, Senior Software Engineer)

6   Analysis

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In this section we would analyze our empirical findings, and try to find out if our initial premise turned out to be true or not. Did innovation culture actually helped the company grow

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6.1   Al-Elm's innovation culture and innovation system

As we separately interviews different people within the organization regarding how they proceed innovation--top management, regular employees, the people from cross functional department, it is more accurate to analyze company's innovation behaviour in objective perspective. From the consistent research and interviews from Al-elm, we found that it formulates its own system that results in typical innovation habit and innovation culture, which is also the source for company's growth.

Why the idea bank exists within the company is because AL-Elm to some extent allows the employee to come up with new ideas without too much constrain, meaning that the company gives freedom to employees to innovate. Of course, the idea bank is also a platform to provide ideas for the whole company even though not everyone can gives the right suggestion. However, whether the idea is helpful or useless could be discussed through brainstorm.

Even the engineer realizes that the more we interact with the customers, the more new ideas will be generated based on customers' need and problems since successful business innovation rests on first understanding customer needs and then developing products that meet those needs (Hauser, John; Tellis, Gerard J.; Griffin, Abbie,2006) as the theory part says. Al-Elm continuously explore new products from the initial one-"Yakeen" to "Muqeem", "Isha'ar", which have more function as well as higher efficiency because Al-Elm knows most customers in Saudi' high welfare society environment loves enjoying life by using efficient IT system conveniently. Therefore, this is the process of innovation by getting familiar with the customers. Furthermore, AL-elm also made marketing innovation simply by expanding the range of users from only service government to adding corporate and individuals, which is also a kind of capturing more consumers.

From the interviews, we found that Al-Elm have covered a lot of sectors in product scope, hence, the focus shifts to existing product's enhancement as well as even the production process innovation rather than consistent introduce new idea or new product. Usually it is necessay to refine certain new product's quality in order to make the innovation successful.

As Mushari says, when it comes to evaluate the innovative idea that whether it is proper to be put into practice, Al-elm still need to consider government policy and its capabili-

ty. For example, whether the security information system are safe enough for government to avoid the information disclosure. As for the capability, the company usually should know how much resource they have like finance, ability of R&D, the possible customer, the standard of employee. Every innovation demand sufficient resource as well as the government's support. As least, it can not violate the policy made by Saudi's local government.

In Al-elm, not all the employees are professional at innovation, with a minor of encouragement because some of them lack self confidence. In this perspective, we all know that human resource management innovation is one important part for the whole company. From the theory part, it says if the technology company have HRM innovation, new HRM policy like reward and compensation will be draft according to individual performance. Hence, in order to encourage the employee to innovate the company ought to give incentives or rewards to employee at regular times. Indeed, Al-Elm stiil have room for improvement in giving incentives to employee for sharing ideas and coming up new ideas as we get from interviews.

The employee in Al-Elm has described the innovation culture at Al-Elm as having a conductive environment, people from outside our organization with the opportunity to think out of the box. It can be understood as the company also relies on learning-by-doing and obtains new idea and skills from external factors like competitors, suppliers as well as customers. Exchanging the information and skills help building the innovation culture within the company.

It is good for Al-Elm to realize that company should not only encourage the employee to generate new ideas but also develop them. If all the people within the company are positive to innovate all the time without top management's support by turning them to reality, the employee will also lose passion about innovation. Consequently, paying attention to this point is also helpful for building the innovation culture in Al-elm.

From the theory part, we have already know how to build the innovation culture in a company. But since Al-elm is rated top 3 innovation company in the rigion with firmly embedded innovation culture within the organization, what it needs to do is maintain this culture and learn something new from the ourside if there is other innovation culture building way exists.

6.2 Possible business innovation strategy for Al-Elm

6.2.1 Innovation driving growth and profit

Al-Elm has grown a lot in the past five years with a considerable profit and scale due to its innovation culture. However, if it would like to keep good performance and grow faster, there are three points to be mentioned based on the theory.

First of all, from theory part, risk management and the acceptance of risk is an incredibly important element of growth and faster innovation (Castellion, George, 2010). But from the interviews and empirical findings, it seems Al-Elm doesn't emphasize how to control the risk when it proceeds with innovation. In this sense, we suggest that Al-Elm could control and disperse risk like making financial plan in detail before innovation starts. Meanwhile, increase the source of finance such as loan from bank or venture capital.

Second, many successful leaders have emphasized that innovation culture must start at the top if a company wants to be innovative (Castellion, George, 2010). Therefore, the top management of Al-Elm should always make innovative strategy and innovative plan for the whole company. Furthermore, it is important that top management of Al-Elm quite support the employee's innovation, which will induce the company have innovation culture all the time so that it grows easily.

Third, in order to make the company grows well, Learning from other company's experience and skill can help generating new ideas and innovate. Hence, sometimes, Al-Elm needs to learn some new knowledge and technology from externality rather than just picking the idea inside.

6.2.2 Marketing innovation strategy for Al-Elm

Currently, Al-Elm's market is just Saudi Arabia, taking care of the customers within the government, corporate, individuals. Since AL-Elm is a successful company with highly growth rate and its innovation rated top 3 in the region, it is believed that if Al-Elm could enter into new market.

As the theory part says, one criteria to choose target market is based on demographic data, which means it is based on life style interpretations of consumer and business buying behaviour (Axel Johne,1999). As Saudi Arabia is an advanced and wealthy country with ample resources in the middle east area, the product and service provided by company in Saudi are relatively reliable, not mention Al-Elm is owned by nation. Meanwhile, some countries in Middle East have similar characteristic in demographic perspective; therefore, the product and service from Saudi are also easily accepted and adopted by some other mid east countries. Here, we suggest Al-Elm can choose the country United Arab Emirates or other mid east country as its target market. Why we consider United Arab Emirates is because it is also a mid east country with rich resources, similar culture and tradition as Saudi, no matter in consumers' behaviour or geographic factor. In fact, Al-Elm can also test their marketing innovation idea as the theory part conducts: the more new market we tried and the more we changed about it, the more transaction and consumer we can exploit.

Moreover, we still need to avoid the similarity of product with the ones of local rivals. Consequently, when Al-Elm plan to enter a new market, it should test which country in mid east lacks electronic-business solutions like automating information sharing, trans-

ferring information via secure technologies, and facilitating the integration between different organizations. Usually, it is better to enter a new market that doesn't have IT product and service produced by Al-Elm.

Finally, Al-Elm follows closely with consumer response to Innovations. From the research we get to know those consumers who tend not to seek out new entrants' information or assistance from others are postulated to be predisposed toward early adoption of product of new entrants (Midgley, David F.; Dowling, Grahame R, 1978). Hence, this group of people is also our first target marketing objective when we explore the new market.

6.2.3   Product innovation strategy for Al-Elm

From the empirical findings, Shahab, the software engineer in Al-Elm says, Al-Elm has a narrow focus on the Ministry of Interior services and products. Being a software engineer myself I however have a broader perspectives and ideas related to the general improvement of the IT systems. As can be seen, Al-Elm should innovate its product and service rather than confine them within the narrow focus.

But Al-Elm at least realizes that product innovation is the core theme in its innovation unit. As Dr. Abdulrahmen, The Strategy Manager says they are trying in our products, especially within the eServices business of the company out of the government, and we could still get innovative features, innovative ideas on how to deliver the products to the market. Then what kind of product and service innovation strategy is appropriate for Al-Elm. Based on the theory part, we have some suggestion.

First, Al-Elm should get to know success factors in product innovation. As we have already pick up the United Arab Emirates as the target market, we can choose the strategy--Narrow-span leader undertaken for leading in a particular market   segment, which is one of the principle organic product development strategies. It means we put our new product just in the particular market like United Arab Emirates at one time in order to reduce the risk once it fails. From the company structure perspective, to develop new product Al-Elm should organize the structure by inputting cross function teams, which have been formed already. Al-Elm can both abstract the skills and talent from existing business and concentrate on the new product design in the independent department. From the value perspective, a good way to develop product innovation is top managers need to have an open, imaginative and creative management style to encourage middle management to function effectively in product innovation (Rothwell, 1977). Therefore, Al-Elm has a lot of strategy to reference.

Second, although Al-elm has ever have the product innovation successfully before, to explore other E-business or IT product, it must follow the regular product innovation rules: Initial Screening, Preliminary Assessment, Pre-Development Business Analysis, Pre-Test Review, Fre-Trial Review and gearing up for production and market launch. By doing so, it can raise the possibility to introduce popular new product.

Third, except what we talked above, we also suggest two extra product and service innovation strategies. The final user of the new product is customers, therefore we observe and investigate the requirement of local customers and make the product innovation based on the customer's information. Besides, when Al-Elm tends to develop new product and service, it requires more frequent cross-functional engineering reviews the new product to add new function and dynamic technology.

6.2.4 Technology innovation strategy for Al-Elm

Al-Elm is an IT company with e business solutions in Saudi; we hereby mainly suggest how it proceeds with the information technology innovation as well as information system innovation. Usually there are often good market data available to make assessment for IT innovations, which have a commercial information system component (Robert G Fichman, 2004). Al-Elm can access new IT system adoption based on the gathering market information.

Indeed, the success of IS innovation may rest upon an effective partnership between the IS department and its users. Hence, sorting out the users characteristics in local market will make IS innovation goes well for Al-Elm. As IS work practices contains the data base design tools and techniques (Nilakanta, Scamel, 1990) and user-oriented industry-specific IS technologies such as electronic scanners for supermarkets. Al-Elm may have the IS innovation in these area.

Another suggestion need to be mentioned is that Sweden and Japan have advanced IT level, therefore, Al-Elm could learn some new information technology from these two countries to improve its current e-product and e-service.

6.2.5 Human resources management innovation strategy for Al-Elm

In order to build the working team creative, it is suggested several methods.

First, diversify the team. Team members that have different backgrounds, training, and perspectives are naturally going to offer different categories of thought and ways of looking at a problem compared to homogenous teams (Leigh Thompson, 2003). For example, if Al-Elm plan to develop a new product, it need insight provided by different people from market department, technology department and even the design department to give comment on this.

Second, brainstorm within the teamwork. Brainwriting works like this: At various key points in time during a brainstorming session, group members will cease all talking and write down their own ideas silently (Leigh Thompson, 2003). It could be exerted in Al-Elm because it induces the employee generate better idea sometimes. Actually it is also the process before ideas stored into idea bank.

Third, high benchmark. Providing brainstormers with high performance standards greatly increases the number of ideas generated. Even when members are working independently, announcing to others how many ideas they are generating increases the number
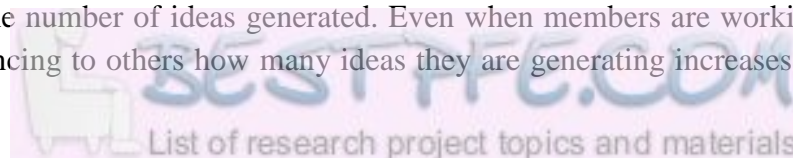
of ideas generated by the team (Leigh Thompson, 2003). Therefore, sometimes, Al-Elm could set up a relative high benchmark for employees to encourage their passion to innovate.

Fourth, membership change. Groups who experience membership change generate more ideas (higher fluency) and more different kinds of ideas (higher flexibility) than do groups who remain intact (Leigh Thompson, 2003). Al-Elm has innovation unit and other departments for sure. In order to maintain the innovation, it can consider the membership between different departments.

Fifth, recruit new employee who ever has innovation performance. Recruitment is an important part in HRM. If Al-Elm would like to maintain the innovation that will drives it grow, a good way is to recruit excellent employee such as an engineer who ever developed new product or a IT professional who ever made the IT innovation before. The more employees like these Al-Elm recruit, the innovation would be more successful in the future.

7 Conclusion

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This section will present the conclusion of this research paper

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In the paper we study the business innovation drives company to grow by analyzing a case – national IT company Al-Elm owned by Saudi Arabia. As Al-Elm grows faster these years based on its successful innovation, we did research on how its innovation culture impacts it and then provide possible innovation strategy for it. Except drawing reference from academic literature regarding business innovation, we also conducted interview the managers and employees from Al-Elm and select the sample groups to do the research.

We draw the conclusion that innovation culture is source to keep company develop and grow. Actually innovation culture is embedded in the company system and also is a habit for all the people within the organization. Innovation culture makes employee generate more useful ideas and then put them into practice for the company, which is why company can grow and change a lot than before. These innovations in fact abstract more customers as a first mover.

We also provide some possible business innovation strategy for the company Al-Elm. In general, business innovation strategy could be in many aspects such as marketing innovation, product and service innovation, technology innovation, human resources innovation, process innovation, finance innovation. But for particular company, everyone has its own situation based on the resource and capability it has. Once we want to make innovation strategy we should do it according to the specific condition of each company.

Innovation culture makes employees coming up with new ideas and generating more innovation strategies. These definitely will grow faster and perform well by taking much first mover advantage.

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Appendix 1

Interview Questions

- What do you think of the Innovation Culture at the company?
- Have you ever submitted Ideas with the Ideas bank?
- Don't you have ideas that you would want to share with the company?
- Do you have any suggestions on how to improve the ideas generation process?
- What do you think about the Innovation in this company?
- What do you think of the Innovation at the present time? We have noticed as part of our research that there have not been many innovative products during past couple of years?
- Al-Elm is not looking for new ideas?
- What do you have to say about the Innovation Culture in this company
- Do you think the employees feel encouraged generally to share their ideas?
- Do you think the Innovation department is doing enough to incentivize the employees to share more ideas?
- How would you suggest them, how could they improve it?
- In terms of strategy, how do you think Innovation is important for Al-Elm?
- What do you think of the innovation at Al-Elm? What is your general perception of the Innovation at Al-Elm?
- Do you think Al-Elm has an Innovation Culture?
- How do you describe the Innovation Culture at Al-Elm?Why have seen a marked decline in terms of number of ideas shared by the employees?Do you think we can do anything to improve this culture? Do you feel encouraged to share ideas?
- How you do rate this company in terms of Innovation within the region?
- Any more thoughts you might want to share with us for the purpose of this research study?
- If you were to rate the innovativeness of Al-Elm, in comparison to the other companies within the region, how would you rate it?
- When Al-Elm has the process for documenting the idea? Then why don't we do it?
- Is Innovation a Strategic Imperative for Al-Elm?
- What is managements focus with regards to Innovation? To focus on maturing and improving on the existing products or to create new products?
- Mr. Hammad Tawajri, you are the heading the Innovation Team. For the purpose of this research could you please explain the innovation process we have here at Al-Elm?
- Tell us about the Holom Project. What Holom Project?
- Tell us about the Innovation Lab? How is it different from Holom?
- What other initiatives you have you planned in the pipeline promote the innovation and the innovation culture at Al-Elm?
- At the Innovation Unit, do we study the ideas?

- What other ideas are there other than new product / service ideas and major enhancements?