T.C.
ISTANBUL GEDİK UNIVERSITY
INSTITUTE OF GRADUATE STUDIES

INNOVATION MANAGEMENT IN SME AND PROCESS, PRODUCT ORGANIZATION DEVELOPMENT BASED ON SATISFACTION OF CUSTOMER

MASTER THESIS

Omar EL AZZOUZI

Engineering Management Department

Engineering Management Master in English Program

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İSTANBUL GEDİK ÜNİVERSİTESİ

LİSANSÜSTÜ EĞİTİM ENSTİTÜSÜ MÜDÜRLÜĞÜ

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DECLARATION

I, Omar EL AZZOUZI, do hereby declare that this thesis titled as “I Innovation Management in SME and Process, Product Organization Development Based On Satisfaction of Customer” is original work done by me for the award of the masters degree in the faculty of Engineering Management. I also declare that this thesis or any part of it has not been submitted and presented for any other degree or research paper in any other university or institution. (15/03/2022)

Omar EL AZZOUZI

PREFACE

Firstly, All Thanks and gratitude to my supervisor, Prof. Dr. Gözde ULUTAGAY for all the information, guidance and supports during my researches. I appreciate her observations and respect.

Many Thanks to my parents, my colleagues who help me in my thesis without forgotten all my professors and teachers thought my scholastic journey who have actively contribute to lighten my path.

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INNOVATION MANAGMENT IN SME AND ORGANIZATION STRUCTURE, PRODUCT, AND PROCESS DEVELOPMENT RELATED TO SATISFACTION OF CUSTOMER

ABSTRACT

Innovations Management in SME becomes the most popular topic in the present specifically Innovation Management in SME's. In addition firms should focus in development of three important significant which are: Product development, Process development and Organization development. On second thought, innovation management may be created in a range of business patch, Including Marketing, Manufacturing, HR, And so on. Nearly all researchers do not revolve around the customers' desire and expectation from a service or product before releasing it into the market for sale; however, this way provides a quick and easy style to improve any innovations ideas in the firm because it is directly related to the target, which is the customers' needs. Furthermore, this research aims to integrate organizational innovation management with customer satisfaction by creating new ideas in the company that assist customers in meeting their requirement and achieving their goals.

Keywords: *Innovation Management, Customers Satisfactions, Organization Innovation, Innovation Management in SME, Product Development, Process Management*

KOBİ VE ORGANİZASYON YAPISINDA YENİLİK YÖNETİMİ MÜŞTERİ MEMNUNİYETİ İLE İLGİLİ ÜRÜN, SÜREÇ VE SÜREÇ GELİŞTİRME

ÖZET

KOBİ'lerde Yenilik Yönetimi, günümüzde özellikle KOBİ'lerde Yenilik Yönetimi'nin en tanınmış konusu haline geliyor. Buna ek olarak firmalar üç önemli konunun geliştirilmesine odaklanmalıdır: Ürün geliştirme, Süreç geliştirme ve Organizasyon geliştirme. Öte yandan inovasyon Yönetimi, pazarlama departmanı üretim departmanı İK departmanı gibi şirketin çeşitli sektörlerinde de geliştirilebilir. Çoğu araştırmacı, müşteri ihtiyaçlarına ve hizmet veya üründen satış için piyasaya sürmeden önce beklentilerine odaklanmamıştır, bu yöntem firmadaki herhangi bir yeniliği hızlı ve kolay bir şekilde geliştirmenin kısa bir yolunu sağlar. müşterilerin ihtiyaçları olan hedef.

Ayrıca bu çalışma, müşterilerin ihtiyaç ve hedeflerine kolayca ulaşmalarına yardımcı olan organizasyonda yeni fikirler geliştirerek organizasyondaki inovasyon yönetimi ile müşteri memnuniyetini birleştirmeye çalışmaktadır.

Anahtar Kelimeler: *İnovasyon Yönetimi, Müşteri Memnuniyeti, Organizasyon İnovasyonu, KOBİ'lerde İnovasyon Yönetimi, Ürün Geliştirme, Süreç Yönetimi*

1. INTRODUCTION

Innovation in nowadays becomes the most famous subject for now. In additions, innovation management in most of time applied in firms to increase profit by minimize variable cost and reach maximum of clients in world market by developing ideas for innovations centers by innovators and inventors.

To get new inventions and new technology knowledge. Organization management introduces to improve their performance by offering new products or services. Moreover, many research papers publishing about innovation management in organization but few of them relate this innovation strategy with customer's satisfaction even the changes in organization structure should be based on client needs.

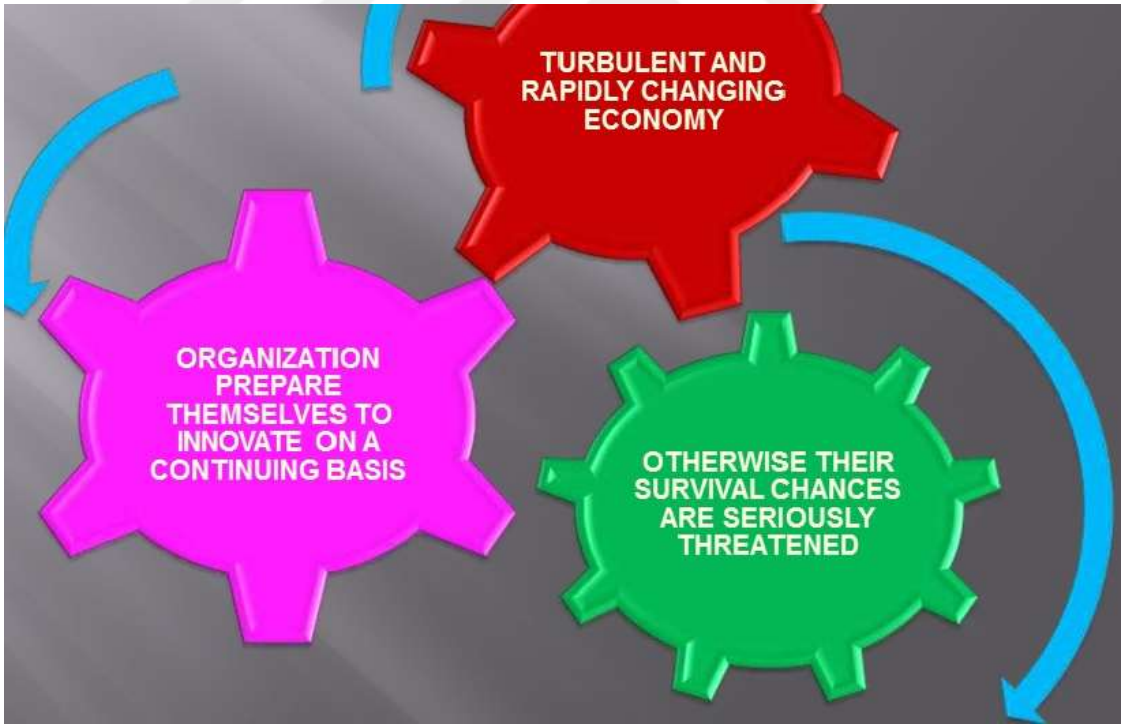

Figure 1.1: Innovation structure

Innovation management encompasses constant and extensive collaboration and coordination among operationally and technically specialization groups. Furthermore, it entails a sequence of acts for whom the outcomes are inherently unpredictable. Moreover, it's really a compounding endeavor whereby the majority

of information and technology as unique, despite the fact that this understanding and these talents may be purchased from other sources. For this to happen there must be an assimilation capacity in place. Finally, it is extremely distinguishing since specialized technological talents may be transferred from one sector to another. All of these features indicate that innovation in a business will be a broad including the acquisition of knowledge from inside the organization, the expansion of the organization through the creation of new structures, and so on.

2. ORGANIZATION DEVELOPMENT AND CUSTOMER SATISFACTION

2.1 Innovation Management in Small and Medium Fırms and Organization Improvement

Innovation Organizational concern creative organizational methods to business administration in not only the worksite, but in the market situation, such as that of the firm's contact with different brokers. It comprises changes to operational processes and/or coordination mechanisms related to a company's core management and operation. Transformation of business structures and procedures might make developing new goods and processes more straightforward. Furthermore; creative techniques to managing a firm's external relations with other firms or governmental institution, such as close engagement with research groups or customers, are becoming increasingly popular.

2.2 Developing Appropriate Management Practices

Organizational culture is determined by management practices. The development of an innovative organizational culture begins at the top and bottom the company. Executive orders are ineffective. The concept is established at the top, but the many organizational units implement them. Develop extremely distinct group cultures based on those general concepts.

2.2.1 Key management types

As a result, we will look at a few key management principles that must be followed throughout the company:

- Explain the goals, Objectives, and tactics.
- Communicate
- Focus on result seek breakthrough possibilities
- Take appropriate risks
- Introduce change

- Make timely decisions
- Consider system of thought
- Anticipate the future
- Create cultural vitality

2.2.2 Innovation management purpose

By describing the following aims, goals, and strategies: Purposes, objectives, and strategic orientations must all be determined before a company can begin the process of building a culture that encourages innovation. The message is not communicated through communication procedures. Where a company is going and how it intends to get there are both important factors to consider. It must be conveyed the whole organization, and that communication must be implanted in the thoughts of those charged with putting the company's goals drop it into action marketers, technical experts, technicians, and others participating in the process, as well as those responsible for marketing the process, as well as those responsible for marketing the product or services must transform what seems to be straightforward, obvious, and deserving of response into operational language. Plain discussion: a basis for establishing a culture that supports creativity is openness and straight talk delivered with respect and empathy. Unfortunately, candor and transparency are difficult to come by, and they frequently take us down the wrong path. Most individuals avoid confrontation at all costs, which frequently has unexpected effects that can have a large influence at a later period-especially when one group's activity influences the work of another. We are not arguing that disagreements should be promoted, but they must resolved when they come. While peace and calm cannot always prevail, disagreement may and must be resolved. The solution is simple: debate the problem, not the people. Someone must speak out when short solution is presented that are incompatible with the organization's goals, objectives, and strategy. When wishful thinking takes precedence over facts and takes control the conversation, the red flag must be raised.

2.2.3 IBM an example of innovation management in organization

As IBM invested in the creation of the IBM 360, T.A wise explores the reason and ramifications. The organization underwent substantial modifications as a result of the development. The IBM 360 project was dubbed the "you bet your company" project

in jest. IBM was the poster child for logical decision-making at the time, but project meetings, according to wise, were more like to inquisitions. Executives who failed to complete their assignment were reprimanded. This IBM example isn't meant to condone encouraging team members to argue, but when disagreements start to harm performance, they must be addressed. There's nothing wrong with heated debate or conversations, as long as it's courteous, focused, and impersonal. Reevaluate aggressiveness: over the last two decades, companies and their managers are being tolerated wıth non-efficiency workers , frequently as result of individuals being disengaged from the organization's genuine job on all levels. In this book Real work, Abraham Zaleznik argues that more positively directed violence is required. Managing entails both work and social leadership, and it necessitates a degree of maturity that allows you to not only accept but even guide other people's aggressive conduct. Managing via indirection, according to Zalznik, produces subordinates who are less autonomous, more psychologically reliant, and more preoccupied with avoiding identity-threatening situations with, than doing actual job. Real job necessitates critical thought.

2.2.4 Developing communication in the organization

Leaders fail to fulfill their obligations as managers when they substitute ritual or habit for thought. Communicate: following an organization's strategic directives need a communication strategy; yet, few initiatives fully articulate that strategy. Despite the fact that additional communication methods are accessible, the process has deteriorated since the widespread usage of e-mail. Back-to-back e-mail that appear to nowhere in favor of face-to-face conversation aggravate the issue. Furthermore, owing to differing interpretations of what appears to be conventional vocabulary, we have lost part of our ability to communicate properly. Although it is self-evident that companies must communicate, it takes effort to develop statements that are clear and concise.

Provide leadership : the hallmark of an innovative business is leadership. But being a leader entails more than just keeping an eye on the cash register. The debates about the distinctions between managing and leading are somewhat pointless because they are two side of the same coin. It is impossible to lead without managing, because it's impossible to succeed without the ability to lead. Leadership may be found in various

areas of company, yet most of it goes unnoticed. Leadership entails action, getting things done, and making those many difficult decisions.

2.3 Management and Leadership in Organization

2.3.1 Leadership

Leading entails putting your reputation on the line, not just being an executive or manager or winning a popularity contest… leading entails taking risks and having the confidence to go above and beyond what is estimated. Organizational leadership that has developed the infrastructure to promote innovation is required, Discipline does not imply requiring blind obedience or " tightening the screws", but it does need defining operational norms, suitable norms of behavior, insistence on meeting obligations, and a " no excuses" approach. Moreover we have to keep in mind that excuses are not the same as reasons. However, because most significant activities come with a slew of unanswerable questions at the moment of permission, imposing discipline as IBM require a lot of judgment. It's inevitable that mistakes will be made while designing something that hasn't been done before. Failure will come in all shapes and sizes, focus on outcomes: in recent years, shape of production got a lot of attention in all elements of organizational endeavor. While success isn't assured, sticking to the procedure will give you a better chance of succeeding. Many consulting firms use consultants who are relatively inexperienced in order to gather knowledge from the business the represent. While process is critical, it must also allow for flexibility. Once the real work begins, the original premises under which an activity was allowed might swiftly alter.

2.3.2 Knowledge management effectiveness in SME

Focusing on outcomes-not the end result of a given endeavor, but the intermediate results throws' the activity's status into sharp perspective. Even if 75% of working groups complete their tasks on time, little information about the end result is available. If others are falling behind, the fact that one group is ahead of schedule is of little use. A defined process is only useful if it is outcome-oriented. Those process charts that can fill volumes are only useful if they aid in the achievement of the intended results. Look for breakthrough opportunities: most innovation, whether it's for new goods or services, in incremental, while incremental improvements are necessary, they only allow for limited development unless they include some really

major features. It's tough to pinpoint major advancements in the last ten years. Enhancements to our electronic toys aren't really ground-breaking. Breakthroughs open up huge development prospects, modify the games and not only provide you a competitive edge, but they also put the competition to sleep. Nobody assembles a team of multidisciplinary experts, sets a deadline, proclaims a breakthrough, and then proclaims another breakthrough after a period of time breakthroughs are the result of a long and arduous quest for something that has never been done before. However, it might take a years for that new idea to germinate in someone's thoughts, but it will ultimately emerge. They are acceptable risks for it : Innovation necessitates a willingness to take risks. There are no assurances that putting resources into project will provide the intended results. However, investing in innovation is no different from investing in any other risky endeavor. Understand the parameters, keep them up to date as the project proceeds, keep the facts in mind, and don't lose sight of the goal. We all know that assessing risk isn't a science, and that algorithms don't provide the whole story. Your danger is determined by your knowledge. People with a sense of the industry's history, intimate knowledge of market requirements, a rudimentary understanding of the technologies involved, familiarity with industry leaders, and the ability to assess the entire system needs, those who grasp the fundamentals of the technology involved, are familiar with industry leaders, and assess the whole system needs have minimal issue making a risky selection. If such knowledge is not accessible and choices must be based on a report from someone who is unfamiliar with the business, establishing the risk level becomes more difficult. This should only happen if a company is venturing into new markets or technology. Every action has some level risk, which must assess in the context of the organizations' business activities.

2.3.3 Decision making in organization

Introduce change: we search for change in procedures and systems of operation far too often. It's a lot simpler to talk about change than it is to really make it happen. Change causes a range of feelings of unease. Making a few seemingly little adjustments might result in not just hours of debate, but also dissatisfaction and drop in performance. The switch from alphabetical to numerical phone dialing, even if it is a little alteration, can cause enormous dissatisfaction. Creating a culture that encourages creativity necessitates a fundamental shift. In cognitive processes and the

amount of time spent thinking about the next generation of innovation. Thinking ten years ahead, but basing that future on today's demands and technologies, will not be beneficial. It's vital to make predictions regarding the economy and society over the next ten years. We should ask those questions :what will required by the market? What new technologies are expected to be available? Three years in the future brings a unique set of challenges. The market is unlikely to undergo a transformation, and the technologies that will be deployed are likely to be completely established. Make timely decision: decision-making procedures continue to be a struggle for individuals in position of authority, but it's important to remember that CEO and manager aren't the only ones who make choices. Many crucial choices, on the other had are made deep within the corporation. The individual who proposes a certain structures or the sort of circuit to suit a certain need might be the difference between success and failure. You have probably heard phrases like "the timing isn't ideal" "we need to widen the study", " ought to reorganize the strategy to include such and such", and "we do have to reframe the concerns" just mention only some. You have undoubtedly heard them from your employer as well as the professionals with whom you collaborate. Once on section becomes relying upon that competence to other, absence of clear decisions by competent employees causes confusion which perpetuates into itself. It still adds toward the workload and it also demands modification.

2.4 Innovation Management as a culture in Organizations

2.4.1 Business and culture of innovation

In an innovation culture, timely choices are critical. Consider the following: few businesses or organizational units have adopted the system approach to management as a management paradigm. What exactly meant "system" consider the factors that must be addressed while planning a dinner party for eight guests. More than just buying and preparing food is required for a successful dinner party. Guest list, deciding on suitable day and time, selecting a acceptable food and beverage menu, scheduling the kitchen operation, preparing the table arrangements and seating, and contemplating conversation themes are all part of the systems approach. It also includes all post-dinner tasks, having cleared up meal, wiping all plates plus tidying up the house are also just very few instances. Inside this scenario, the guest doesn't get to worry about it too much. It's almost instinctive. When it comes to commercial

activities, the same strategy must be used. Even at the dawn of the twenty-first century, it's fairly unusual to come across companies who either directly or indirectly ignore the expense of maintaining the stuff they offer. Anticipate the future: ignoring the future of an organization may end in the lights being turned out. Few businesses can afford to ignore the economic, social, and political forces that will define their destinies. The personal computer was not anticipated by IBM. The automotive industries in the USA did not foresee japan as a global rival, and Kodak did not foresee Fuji photo's development. Everyone who said in those long centuries prior that many who ready for tomorrow own it and this were not incorrect. Innovators plan for the future. Big changes, but from other hand, must be foreseen either by entire enterprise, not even just very few bosses. Each expert has quite a responsibility to understand future behavior that could have an influence mostly on organization's performance. Create cultural vitality: what happened to companies that formerly had a culture of innovation but now lack the motivation and excitement to undertake ideas that involve higher degrees of risk. The solution is simple: people- individuals at all levels of the organization, from the top to the lowest. The performance of project can be a useful predicator of a company's culture. Aaron Shenhar and DovDvir provide the findings of a 15-year study that included data on over 600 project in the construction industry, in numerous nations, the government and the not-for-profit sector have collaborated. They discovered that around 85 percent of projects failed to fulfill their schedule and budget objectives, with a 70 percent time and 60 percent budget overrun. Organizations must track project success with the same zeal that they track manufacturing line output or daily sales in the accounting department. Continued failure to achieve project criteria, missed delivery deadlines, and expense overrun are all signs of a deteriorating company culture. Is it possible that these outcomes are purely product of cultural stagnation, probably it's not likely. Project slippage leads to deteriorating culture, and project slippage leads to deteriorating culture.

2.4.2 Results of experiment's finding focused on structural organization's innovation

Dependent on the results of the quantitative survey and their analysis, it is feasible to conclude that organizations now place a high value on innovation. Only 5.5 percent of businesses stated that it was tough for them. Representatives from these

organizations also stated that it was tough for them to innovate since it was a tough endeavor for which they did not have the financial resources to engage professionals to assist them. See Table for further information.

Table 2.1: The importance of innovation for organization

Is it Innovation has value for your Organization?	Absolute frequencies	Relative Frequencies
Agree	18	90
Not agree	2	10

Given that the great majority of organizations consider innovation to be requirement in the present environment, the poll also looked at the question of innovative culture and whether it was vital for

Table 2.2: The importance of innovation culture in organizations

Is it important to have a suitable innovation culture in Org?	Absolute frequencies	Relative Frequencies
Yes	16	80
No	4	20

Businesses to build a proper innovative culture that would promote innovation. Table 1 shows the results.

Only 20 percent of respondent organizations disagreed that having a sufficiently creative culture was crucial; over 80 percent of respondents agreed. Moreover, most often reported benefits of an innovative culture in organizations are increased inventive potential (29.8 percent), competitive advantage (29,8 percent), and organizational growth (29.8percent). (19.3 percent), a 3.5 percent increase in process efficiency and 3.5 percent increase in profit (3.5percent). A total of 6 organizations stated that building an appropriate creative culture was not necessary; most commonly, they noted that their staff were busy and that the size of the organization had a significant effect. Only 14 of the organizations that consider creative culture to be crucial have such a culture in place (29 percent). The majority of organizations believe it is vital, but it has yet to be implemented (70.5 percent). The most common causes are that these organizations innovate without first developing an inventive culture, or that they do not believe it is required for the innovation process to begin with (14.1 percent). 12.8 percent of organizations said it was too expensive for them, and two respondents said. They didn't know in 2016 companies that had previously

built an innovative culture began to implement it. After the financial crisis. Large customers; suppliers and workers are the most popular sources of innovation inspiration.

Table 2.3: The most frequent impulse to innovation organized relative frequencies

Impulse from :	**Yes**	**No**
Important clients	80,4	4,50
Suppliers	40,4	9,50
Employees	30,34	18,4
Clients	54,5	20,2
Competitors in, the marke	20,2	30,1
Experts	21,4	30,5
Personal Survey	6,3	45,8
Corporation with institutions and academics	6,3	45,7
Other	2,8	98,8

2.4.3 Evaluation of results

Contingency tables were implemented based upon that absolute and relative frequencies obtained from the questionnaire survey to identify links between identified qualitative traits. In the appropriate boxes of the contingency table, the number of cases when the first characteristics is present is reported (impotant iinovation or importance of an innovation culture). The value of inventions and the size of organization are depicted in the table (in absolute frequencies) .According to the findings, small businesses with less than 50 workers perceive innovation to be the most essential (‘ç percent), Followed by medium-sized and big business. Only around 6 percent of businesses, usually mid-sized ones, are affected. Especially mid-sized ones, consider innovation to be significant.

Table 2.4: Contingency table between qualitative characteristics

Question		**Size of organization**			
		Under 20 Employees	**20 to 50 employees**	**50>**	**Total**
IS it critical for your company to innovate?	Agree	9	7	0	16
	Not Agree	2	2	0	4

Based on the findings, it is possible to infer that organizations value innovation and invention activity. In the realm of creative activities, it could be critical for your company to have similar ambitions. All businesses, regardless of size, aspire to achieve success via innovative inventions a considerable and, if feasible, long-term

and sustainable competitive advantage, which may then be translated into improved financial performance any company that wants to be competitive in today's market must innovate. Small and large organization innovate in very different ways (as evidenced by the polls done, are two examples. Small businesses benefit from the flexibility of decision-making and the capacity to adapt; nevertheless, they lack resources required for innovation implementation when compared to bigger businesses. The absolute frequencies in table 4 demonstrate that the majority of respondents are from the private sector (96percent). In the current competitive climate, people in the public sector, like those in the private sector (90 percent), recognize the importance of innovation. Only three organizations in the private (4percent) and public (10 percent) sectors do not believe innovation to be significant.

Table 2.5: Contingency table between qualitative characteristic

Question		**Econimoc Regions**		**Total**
		Private	**Public**	
Is it innovation important for your organization?	Yes	5	9	14
	No	0	6	6

This is crucial to emphasize that the private and public sectors approach innovation engage development and support for a culture of innovations in different ways. The EU now supports public-private partnership; nevertheless, this poses a variety of obstacles, including a lack of knowledge and technology transfer, and so on. The disparities become much more obvious when we divide the sectors into primary, secondary, and tertiary. Founds that innovative firms in tertiary sector mostly focus on implementing organizational reforms, whereas the secondary sector is dominated by product and process innovation. Table no 6 shows that building a proper creative culture is vital for the majority of respondent organizations (86 percent), particularly for big organizations (96 percent), followed by mid-sized (88 percent) and small organizations (8percent). (81 percent). When contrasted to large corporations, small businesses larger ones, on the other hand, are more reliant on tradition and prior experience, and do not require the areas od innovative culture explicity defined. Large organizations, on the other hand, prioritize the identification and implementation of an appropriate creative and demand that it be adopted by all employees.

Table 2.6: Innovation culture qualitative between employees

Question		Size of organization			Total
		Under 20 employees	20 to 50 employess	50 and more	
is it critical for a company to have an a dequate innovation culture ?	Yes	9	6	0	15
	No	4	1	0	5

In addition, the majority of private-sector and public-sector respondents (85 percent and 90 percent, respectively) indicated that an innovation culture must be formed in order for innovations to be effective. Only 9 organizations stated that innovation was critical to their success. However, they did not see the need of establishing an innovative culture within their company. The success of innovations, according to public sector respondents, is linked to a well-established innovative culture inside an organization. Table 1 shows the detailed results. Table 6 demonstrates that the majority of responding organizations 86 percent believe that creating a proper creative culture is critical, particularity for large businesses 96 percent and mid-sized 88 percent ans small firms 8 percent. A whopping 81 percent. Small enterprises, in contrast to huge organizations, are more relied on tradition and past experience, and

Table 2.7: Innovation culture and private public sector effectiveness in economy

Question		Economic Region		Total
		Private	Public	
Is it important to have suitable innovation in O.	Yes	10	2	12
	No	6	2	8

The findings and companies with previous studies, such as Hoffman et al. (1998), it has been found that staff qualities and effective leadership are the two most important internal characteristics that substantially affect creative actions in organizations. According to polls, the majority of small businesses execute innovative management only instinctively, without taking intentional measures and without having a sufficient number of skilled staff, resulting in the failure of the provided innovation, large organizations, on the other hand, make use of their resources, whether they are financial or technical, or in terms of the employment of specialists and professional management, and so on.

2.4.4 Verification of results

Two null hypotheses concerning the absence of reliance were developed based on the interdependence between the researched qualitative features. The Pearson's chi square test was used to assess the interdependence between the extracted data and the Pearson's Chi-Square test. The null hypothesis was rejected if the p-value determined using the 2 test (Pearson Chi-Square) was less than the set level of significant =0,005, the null hypothesis was shown to be false. The poll looked into the following two hypotheses:

H01: The application of innovation culture is independent of the economy's sector.

H00: The size of the organizations has no bearing on the application of innovation culture.

At the 5 percent level, there is no statistically significant association between the implementation of innovation culture and the sector of the economy. The P –value is 0,596, which is greater than. At the 5 percent significant level, the relationship between the use of innovation culture and the size of the organization is not statistically significant. The P-value is 0,446, which is greater than. As a result, neither null hypothesis can be rejected. However, the result of comparable polls focusing on whether innovative culture in organizations has a direct impact on economic performance and if creative strategy is a component that determines competitiveness must be considered. These findings suggest that there may still be connections between innovation culture and the industry and size of the organization. The following are primary benefits of a creative culture, according to the survey: better customer-facing products, gaining a competitive advantage, increasing the efficiency of cash invested in innovations, and in particular, giving a competitive advantage, increasing the efficiency of cash invested in innovations, and in particular, giving space for people with great potential and retaining personal who might otherwise leave to work for a rival or start their own business.

2.5 Knowledge's impact throughout the process of innovation

By summarizing the theoretical underpinning of the work, it is vital to recognize that great inventions are never a one-time occurrence, but rather the outcome of a long-term process in which the human component plays critical role. Innovations can only

be effective if senior management back s them up and imaginative creative team made up of people who may be termed knowledge employees is formed. Because the concentration of know-how in a team and its development should be significant influence on the organization, an innovative team also have to be a natural gathering place for the organization's important workers. These team members from the heart of innovation, which surely contributes to the organization's innovative culture simply by sharing their expertise process and tools, as well as the utilization of their expertise, is an advantage of their personnel going for a successful innovation. It is important to remember that the efficiency of the innovation process is determined by prior experience with and understanding of the innovation process as well as the capacity to avoid the challenges that innovations brings. It is vital to note that it aids in the proper processing of obtaining data; yet, it does not provide a solid foundation for creativity. Contingency table no 8 was created to investigate the relationship between the importance of innovations and employee knowledge sharing. According to the findings, 80 percent of companies value innovation also encourage current employees to share their expertise. Only 20 percent of responding organizations agreed that innovations was vital to them, but they did not support information exchange that would help them innovate.

Table 2.8: Sharing knowledge qualitative between organizations

Question		**Knowledge sharing**		**Total**
		Yes	**No**	
Is it innovation critical for your Org.	Agree	8	8	16
	Not Agree	1	3	4

A total of 25 percent of responding organizations claimed that information had been a long-term shared among colleagues, and they established so-called knowledge bases (where information and past experience were documented) to assist staff implementing innovations. Only 34 percent took use of this although the amount of time on such a random selection and for a small duration of organizations 41 percent did not take use of this opportunity.

Table 2.9: Qualitative of using knowledge base duration

Question		The Acquisition Of Information			Total
		Yes Long Term	Yes Short Term	No	
Is it innovation critical for your Org.	Yes	4	6	8	18
	No	0	1	1	2

The findings show that knowledge is critical for innovation and help to the success of implemented innovations. The majority of company executives stated information and collaboration with them result enhanced innovation efforts. Creating new market possibilities is the most common example (17 percent). For the purpose of evaluating the result, A parametric test was used to determine the relationship between two independent sets, namely the comparative category of benefit in terms of innovation (improving research and development application of new technologies, new products and services, new products and services, new business segments) and the size of the organization. The Krukal-Wallis test was performed to determine that there is no statistically significant difference between the advantages experienced by small, medium, and big organizations in any of " innovation". Other factors that impact innovations, according to romero and Marthinez-Roman (2012); include education, experience, internal motivation, stimulation, the size of the organization, and the economic sectors.

2.6 Discussion

It is feasible to summarize and suggest that the so-called intelligent growth plan be supported based on research results. It is one of the pillars of the Europe 2020 plan, which emphasizes a never-ending learning process that is centered on knowledge and innovation, which stresses a continuous and unbroken learning process and focused on knowledge and innovation. As Svtlk (2008) points out, the inventive process may be divided into four stages: invent – develop – create- market, or , to put another way, " science convert into knowledge, and innovation transform knowledge into money". As a result, knowledge is critical in the innovation process, serving as both a useful input and a beneficial product from the transformation process. Small and medium-sized businesses are among the most important economic players in the Czech Republic. They account for 99,85 percent of all entities functioning in the

Czech Republic, according to statistics from the Czech statistical office. They employ more than 60 percent of the workforce and account for almost a third of the country's gross domestic output. Around hald of all commodities and services are exported. In light of the foregoing, it is reasonable to conclude that these businesses must be prospective innovators in order to preserve their market position. Small-business value creation procedures are just a sophisticated as those used by middle- and large- sized businesses, especially when it comes to production. However, the difference is resources, particularly financial resources. Other restrictions apply to staff arrangements. Employees in top and upper management are frequently non-substitutable, and number of jobs lacks the necessary substitutability.

2.7 Sharing innovation in Private or Public sectors make multi-alternatives solutions for problems

Partnerships between the public and private sectors can help the European Union's economy recover and thrive sustainably (EU). In a time of economic crisis, the integration of public and private abilities and finances is critical. The commission puts up roadblocks in the process of forming partnership and securing money to support them. The union of innovations' goal is to work on the aforementioned difficulties- not only within the European union, but globally as well, but also in collaboration with third-party nations. Public-sector inspired initiatives xill inspire the private sector and remove roadblocks that hinder innovative ideas from being adopted and promoted, such as a lack of financial resources or fragmented research. Institutions and markets, a lack of use of public auctions for innovation, and protracted implementation procedure for new standards based on the findings of the study focused on organizational innovations in the Czech Republic, it is feasible to conclude that achieving the desired degree of innovation is difficult without the proper individuals with knowledge and expertise. The outcomes of Remero and Martinez Roman (2012)'s survey, which determines these elements as its, may confirm the conclusion of this article. It is impossible to succeed in today's world without constant development of knowledge, skills and abilities, according to the findings of survey conducted by the technology transfer Institute of Tomas Bata University In New Zealand and the technological center of the academy of science of the Czech Republic titled " developing knowledge for new innovations". It's also

conceivable to argue that the social paradigm has been shifting since the 199s, with the industrial society evolving into a knowledge society. Employees with the ability to differentiate themselves from competition become a valuable resource for businesses. These personnel are a company's most important to create an inventive atmosphere within an organization; instead, each employee should be given time to pursue creative self-realization. Managers' primary responsibility should thus be to promote individual workers' initiative and inventiveness. In the current competitive climate, it is also conceivable to argue that innovativeness based on knowledge and the capacity to adapt to a turbulent environment is seen as source of probability and success for businesses/ the following preconditions must be met in order for an organization's innovativeness to be maximized: the following preconditions must be met in order for an organizations' innovativeness to be maximized:

To foster a suitable inventive culture in the organization and to encourage a continual of new idea creativity.

To increase the inventive potential of current knowledge resource by connecting them and creating new markets.

To foster a suitable inventive culture in the organization and to encourage a continual flow of new ideas creativity.

To stoke individual creativity and encourage employees to put their faith in their learders to come up with innovative ideas

To bring together managers and specialists with varies specializations from organization's external and internal environment in order to produce new idea.

To consistently support and inspire small and medium businesses, which make up the majority innovators.

Innovation in organization and marketing innovation

Several writers claim that marketing innovation is positively viewed and assessed by consumers, implying that there is a correlation between a firm's marketing innovation activities, marketing innovation and customer pleasure. Additionally, marketing innovation is more likely to prioritize and meet consumer expectations than product innovation. Moreover creation of a new business model that demands significant design or packing changes in product.

2.8 Knowledge Management and Organizational Learning

2.8.1 The companies innovation degree

Assessment of innovation at the firms degree have identified typical component of creative companies in the last decade. Strategic methods, linkages and strong employee interest are included in these elements. In table1, the distinctive characteristics of each variable are concluded.

Table 2.10: Types of innovative organization

Components	**Key features**
Governance. Insight and capability to innovate	'Top management support' to a well established and unambiguous higher purpose transcending strategic aim
Structure that is appropriate	Organizing in a way that encourages a higher creativeness.
Key individuals	Different positions that excite or support creativity inside promoters, champion, gatekeepers, etc...
Productive Team	Excellent problem-solving teamwork. Investment in team selection and development is required.
Professional growth that is both continual and expanding	Long-term education and technical dedication to assure increased rates of competency and learning skills.
Widespread connectivity	Inside the institution including between the corporation and outside world. Essentially; three orientations are possible: skywards, downwards, and crosswise.
Significant participation in the development of new ideas	Engagement in a program of continual development at the company level.
Customer focus	Customer loyalty, both within and outside. Culture of total quality.
Creative climate	Good attitude toward innovative ideas, backed up with an appropriate incentive scheme.
Learning organization	Learner autonomy is institutionalized through processes, organizations, and cultures. .

Source: Tidd et al., 1997/314.

This finding supports our belief that an organization's capacity to recognize an intention's promise is not a simple process and is dependent on how information is received and preserved, based on the type of innovation; structure of the organization, method, individuals means that successful technologies are distinguished by the right prediction of consumer needs. Entrepreneurs from various areas of economic activity make up the numbers of enterprises chosen for this study. This method is used to create a questionnaire that is based on a systematic search of

the literature. The interview questions indicating organizational effectiveness are based on study of Yam and Jimenez.

2.8.2 Application of Innovation management in organizations for some sectors

The Assessment was evaluated by specialists in the sector through a survey, and then it was pilot tested on SMEs in Turkey, Morocco, Tunisia; demonstrating its suitability and achieving the content validity constructs. The items in the questionnaire were graded on a seven-point modified Likert scale (1=extremely low; 7=extremely high). Because of the latter's experience with the concern addressed in the questionnaire, the general manager or another management authorized by him/her should complete it. Similarly; in order to investigate the methods and outcomes of corporate innovation. The committee for manual economic assistance used the identification of innovative practices by corporate managers/owners as the basis for creating rules when collecting data on innovation in the Oslo handbook. Two rounds of replies were received, each with its own set of questions. Finally, 226 valid questionnaires were gathered, matching the SEM analysis threshold, with a response rate 28, 25 percent food and drinks (22, 5 percent) agriculture products (18 percent), machinery and equipment (16, 5 percent); metal product (11, 5 percent), and plastic and allied products (11,5 percent) were among the industries represented by the responding companies (31, 5 percent).

2.8.3 Measurement analysis

Hypothesis testing (CFA) is used to improve the EFA scales and evaluate if the implicit factors retrieved and loadings on the measured variables match what is predicted based on pre-established theory. Factor analytic approaches are suitable for analyzing the underlying distribution or interrelationship of a large set of samples, as well as determining whether the data can be condensed or summarized into smaller number of factors or components. As a result of EFA and CFA, the measuring item's construct validity is reliable and non-dimensional. Stepwise regression, a multidimensional analytical tool that provides insights on casual ordering of variables in a framework relationship, is used to assessment the study hypothesis. Data is processed using the statistical software SPSS AMOS and MINITAB.

2.8.4 Data analysis and results

Using EFA, we can see that almost all of the observed components' factor loadings are significantly over 0,50. Item with factor cross-loadings of 0,40 or higher are not included in the report. Four latent components are identified, accounting for 68,50 percent total variation. Organizational learning, organizational innovation, marketing innovation, and customer satisfaction are the four variables that are designated depending on their respective components.

Table 2.11: Results for the scale components

Factors				
Item	**Marketing Inno.**	**Organ. Learn.**	**Organ. Inno**	**Customer Satisf.**
Society 1	1.554	1,555	1,589	0,498
Society 2	1,549	1,543	1,538	0,556
Society 3	1,511	1,508	1;654	0,607
Society 4	1,493	1,503		
Society 5	1,675	1,460	1,440	0,730
Eigenvalue	5,820	3,698	3,572	1,044
Deviation in the aggregate	43,472	52,881	61,620	67,414
Cronbach alpha	1,884	1,851	1,855	1,752
Kaiser-Meyer-Olkin=0,823				

Table 2.11 shows the scale components Barlet

Barlett's test of sphericity= 2231.459, p= 0.00 Eigen value> 1, MSA>0.80.

In terms of the random sample used, all of these characteristics are great implications. The factor loadings of Cronbach's Alpha coefficient are more than the specified threshold value of 0,7 for satisfactory dependability based on the foregoing, it is clear that the assessment scales' normality is adequately established. It really important to note that multi-co linearity issues aren't addressed in this research (all correlation coefficients are lower than 0,80). Additionally, all of the latent components variance inflation factors (VIF).This indicates there is no deleterious co-integration; hence, any correlations among the four components wouldn't skew the data conclusion. At the end, normalcy, randomness, and self-determination of the latent components are evaluated.

Table 2.12: Factors correlation matrix

Factors	Mean value	Standard deviation	Correlation matrix			
			first	second	third	fourth
Org. Learn	3.81	2.21	1			
Org. Inno	3.98	2.18	0.72	1		
Mark. Inno	4.05	2.08	0.59	0.72	1	
Satis. Customer	4.33	1.09	0.52	0.64	0.51	1

Note: all correlation are significant at 0.001

Table 2.13: The validity of factors

Factors Depart	**Average Variance Extracted***	**Construct Reliability****	**(Corr)²*****
Organizational learn.	0.523	0.830	0.517
Organizational Inn.	0.595	0.861	0.517
Marketing Innovation	0.593	0.884	0.503
Customer Satisfaction	0.504	0.758	0.269

Notes: AVE=$\sum\lambda i^2/n$; (number of items i= 1,…,n, λi= standardized factor loading);
CR= $\sum\lambda i^2/n$; (number of items i= 1,…,n, λi= standardized factor loading);
Inn= Innovation ; Learn. =Learning

This element of interest has the highest squared correlation with the remaining component. The components presented and their linked item have a suitable level of face validity, according to the expert and pilot test. In all situation, convergent validity is proven by analyzing the components loadings>0,621, the average variance extracted (AVE>0.504), and construct reliability (CR>0.758). that observation that its Corr2 (the strongest squared correlation between the factor of interest and the other component) is smaller than to AVE for each factor (table4) indicates discriminates validity. The retrieved variables homological (clear association from among technique differs) and validity are also supported. This analysis which focuses mostly on the topic of technical innovation, reveals that previous research indicates a favorable association between a company's organizational learning, organizational innovation, and competitive advantages.

3. PRODUCT DEVELOPMENT BASED ON CUSTOMER SATISFACTION

3.1 Product Development

3.1.1 Customer satisfaction developments' effects on product and manufacturing

The companies achieve their targets, such as development, growth, improved goods and services; it relies on their imagination to apply a more successful marketing approach. Furthermore, it keep up with conditions of competition, firm have to present unique and innovative practices. To achieve these target, it is important to design and manufacture new products. Still as a result of the comprehensive implementation of sciebtific breakthroughs and technical developments. When technologies are put on national and foreign markets,quicker and more mature goods are put on similar to the preceding ages. The company's main and fundamental aim is to evaluate the demands and requirements and the production of consumer goods and services to fulfill these requirements and requirements specification. It follow from this that not only does marketing entail coping with the phases of a products from manufacturing to distribution and the acts carried out. Marketing Continues with an analysis into the requirement of buyers who are expected to be past consumers of the products. The general pupose of marketing is accepted from past to present as " creating living standards and standards". "Transmitting them to the masses; making use of those individuals and societies".The distribution process acts as marketing process.

Following:

Comprehensive determination of customers' demands and specifications,

Planning and production of goods and services to fulfill the needs and demands,

Determination and presentation of most appropriate Pricing promotional and delivery method applications.

The most successful tool for rising competition is new product Growth. If the companies continue to succed in the extremely challenging environment of competition, and they need to establish a business climate. From a new product, new technologies are one of the main means of competition for firms to capture markets. The most productive way to improve this strategic strength is now perceived to be analysis and activities for growth. First of all, understading the explanations behind the new products would be beneficial in order to appreciate the value of the new products. For new technologies to be produced. Those explanations are set out as follows:

Rapidly Advancing and earthshattering technological progress.

The marketing world is widening its field and growing competitiveness more and more.

Few life-span items on the market.

The new product development process and operational and manufacturing implication

The (NPD) new product development Process, includes organizational and leadership views. Successful goals are often resource efficient (simple to manufacture) and have excellent product distribution. Such as procedures that are simple to implement and advantageous to consumers (easy to use). Idea creation, concept development and selection, program description, design and development, validation, pre-commercialization, and launch are all part of the “standardized” NPD process. Rapid product development need strong coordination, collaboration, and connectivity &mong all parties, virtual and real. It is difficult to compel innovation, but it may be encouraged. It come from determined people who use their imagination to come up with fresh ways of thinking and solving challenges. The organizational structure that facilitates collaboration behavior in a creative setting is cross functional team intergration. IT is necessary to ensure that the contribution of engineering, marketing; manufacturing, and finance are all included. Team work, the concerned with information exchange, communications, and involvement in decision process in this regards is highlighted. It is critical to foster a high-performance culture.n Management stimulates, inspires, and pushes the business to find new solution it resulted in proactive positions and outcomes with major benefit in the marketplace.

Production and operation management issues are critical criteria that must be evaluated at the theoretical level before being translated into concrete strategies at the operational level. The option are determined by state of new product development (NPD). Whilst industry standards and " international manufacture" are on the rise, when the new-product opportunity moves from idea to commercialization, the events that occur downstream creating the product or providing the service must be defined with input from the whole NPD team. Once a new product's basic design is complete, to bring a product to market, it usually requires manufacturing capabilities. Whether the company uses its own production capabilities, buys the product fully from supplier, or uses a mixture of the two, the new product must be produced in higher quantities. Frequently, a product that was previously only produced in small numbers in a controlled laboratory setting must now ne produced in big amounts on the factory floor, which is more "uncontrolled". The" essential production strategies, methods, and applications, as well as the utilization of supply networks and outsourcing, as well as design techniques for making items easier to manufacture, customers will find it more enticing. New product and operations methods Mix flexibility manufacturing with a simple and-assemble design to produce item that consistently meet or exceed client requirements. By devising and implementing the most efficient and appropriate manufacturing system for a certain product. Manufacturing may be used as a strategic weapon and a competitive advantage, reducing rivals weaknesses. Manufacturing outputs, production , process planning, capacity planning, supply-network design, and other subjects are discussed. That provide qualitative and quantitative strategies and tools for planning and managing operations to practitioners. Some important topics to learn the objectives:

- Understanding the manufacturing or operations demand and requirements.
- Investigating industry-standard procedures for manufacturing and delivering the goods.
- Creating high-quality item via developing production procedures.

3.1.2 Production system characteristics

Production systems turn "inputs" into "output" by processing and adding to raw materials, completed components, or clients (i.e. service activities), changing them

into final outputs, using machines or other resources. The value of the outputs must be greater than the entire cost of the inputs in order to run a profitable, continuous business. To accomplish this translation from inputs to outputs, several process-flow architectures have been devised and perfected through time. The manufacturing outputs requested by consumer should be addressed by the enterprise's production system. There are four well-known outcomes like **cost**, **quality, delivery speed,** and **flexibility**. Recently, it was suggested that quality be divided into two parts: quality and performance, and flexibility be devided into two parts: flexibility and innovativeness. Quality has been defined in a variety of ways through the years. The key work of David Garvin, published in the Harvard business review in 1987, sparked renewed attention and thinking on the issue. The eight aspects of quality, according to Garvin are :

Performance: a product's fundamental functioning qualities, such as computer's processing speed.

Features: the number of alternatives available; the "bells and whistles".

Reliability: the likelihood of a product breaking or malfunctioning within a specified time frame.

Quality of conformance: specification are followed. This is how quality is traditionally defined

Durability: the amount of time a client uses a product before it breaks (decreases in quality).

Adaptability: a metric for the reparability, convenience, and simplicity of use of a product.

Serviceability: a criterion for competence, convenience, and ease with which product may be repaired.

Aesthetics: a person's subjective assessment of a product's look, feel or taste.

4. METHODS USED TO CATEGORIZING AND MEASURING THE NEEDS OF CUSTOMERS

4.1 Product Development

Effective product creation result in goods that can be manufactured and Marketed Profitably from the viewpoint of consumers in a for-profit company. It's always difficult to make a simple and straightforward assessment. There are three other distinct dimensions to consider. Most of them widely used to evaluate a product's success when they ultimately contribute to benefit.

Product quality : how successful in the end product of the development process? Is it meeting demands of the customer? is it durable and dependable ? Market share and the amount that consumers are able to pay are also indicator of product quality.

Product cost : what is the product's production cost ? the cost of capital equipment and tooling , as well as the incremental cost of manufacturing each unit of the commodity, are included in this figure. For a given sales volume and given price, product decides how much profit the company makes.

Time spent on product development: how rapidly did the team finish project? The amount of ime it takes for a company to grow defines how resilient it can be external forces and technical advances, as well as how easily absorbs the financial benefits of the team's efforts.

It is important to consider consumer requirements and desires to assess their variations. Managing these needs. Customers should rely not only on satisfying consumer needs, but also on meeting customer requirements. Comprehend these in order to identify criteria, the kano model used as well as classical method such as focus groups and surveys. The kano model is a model that is used to categorize customers. Requirements, the following basic logic is used in classical approach to consider whether consumer expectation are fulfilled. Clients will be satisfied; they will be disappointed if not. Customer criteria, however, are ranked and the measurements of their happiness are calculated using the Kano model. The approach

of Kano is a good means of researching the features of consumer requirements. By using Kano's methodology can illustrate the hard to figure out the client specifications by categorizing all in a groups and by finding on a graph each criteria. To grape the role kano it propose a model of quality attributes that evaluates quality trends, based on the clients satisfaction with particular characteristics of consistency and their degree of sufficiency. In the horizontal line in the background the physical adequacy of a given quality attribute is seen in the kano diagram it will be shown and the vertical axis suggests happiness with a certain attribute of quality. The ideology discuss how it is possible to relate the degree of adequacy to consumer loyalty with a consistency attribute. Listed into five perceived quality categories: " attractive quality", " one-dimensional quality", " quality must be", "indifferent quality" and " reserve quality". The first three types were referred to over above. In the following table, all three types of service/product specifications can be seen.

Getting a satisfaction rate of the customer

After determining the value of customer happiness, CS(X_{ij}) and weights Wij for each criterion, we may obtain the whole CS score $CS\left(X_j\right) = \sum_{i=1}^{m} w_{ij} CS(X_{ij})$ for the jth custom product created with formulation 1.the outcomes of the four personalized portrait-based product schemes are as follows: (0.77,0.677,0.642and 0.478). as a result, we can conclude that scheme1 receives the best CS ranking. As a result, scheme 1 is the better choice. Tables 6 and 7 show the findings of the qualitative study of the CS parameters and weights, repectively. If we can see that:

The relative significance weight of similarity criterion is the highest of all the criteria. As a result, we can draw the conclusion that the company should focus on improving/enhancing this criterion in future product design.

The Price criterion has the lowest value of the eight criteria. This is due to the fact that a portrait-based product is one-of-a-kind item with a small batch general product price. As a result, from the customer4s perspective, the price if this type of product is higher than the price of general products.

Companies may use the suggested approach to assess which goods are competitive. Take, for example, the customized Barbie doll (pictured above). After a cycle of promotion, where there are N consumers who have personalized those products, the

company's decision-makers and designers discuss the effects of the customers' CS ratings.

Since there are 30 CS results in terms of eight parameters in table 8(N=30), we can determine the average CS outcome for this kind of personalized product. Decision-Makers and planners can learn about consumer reviews for this product by looking at the overall satisfaction value. As a result, the business will determine the demand potential for this sort of commodity Similarly The organization will use the review to plan and test other forms of personalized products. As a result, goods with higher average CS scores can be considered competitive, and the organization can devote more human, financial, and material capital to developing them. The suggested approach can also be used to test a personalized software product that engineers have developed before it is produced. In order to prevent more financial damage, if the test outcome does not satisfy the customer's expectation, future procedures would not be enforced. In this case, until revising the digital model, the company's designers can review the necessary parameters before they eventually fulfill the customer's requirements. The final assessment value analysis outcome will reflect consumer input on the product and provide instant, meaningful, and objective guidance on customer desires and expectations. Companies should assess their marketing and product production strengths and limitation, and eventually strengthen the poor requirements of a product. The suggested approach is useful for assessing product success in the market and setting future expectation for change. Which would help the business retain consumer satisfaction and stay competitive.

4.2 Product Timing

There are a few rules to remember and obey when it comes to pacing. The following eight are the ones we agree are the most critical for a smooth implementation.

Customer (product creation, consumer, supplier engineer)

And supplier performance is cross-functional, joint obligation(core team members). This idea is important, but it is not often appreciated in the consumer community. Of course, this accurately means that supplier success is based on a range of team members.

No single feature can guarantee supplier consistency on its own. It is still a collaborative effort. Individuals of ownership, jurisdiction, and responsibility for the

software make up the core team. There are others, to be sure, but these are the team members with the most clout during a project. On a platform, customer cross-functional teams can collaborate with the highest leverage(priority) vendors proactively. The second theory recognizes that, while it would be desirable to have cross-functional consumer teams collaborating with each and every provider of new tolled end products on a program, this is neither feasible nor practicable.

As a result, the team will concentrate its cross-functional activities on the most relevant subset of vendors during the process. It should also be noted that this procedure is intended for large system that might face the greatest amount of engineering transition or historical issues. In general, a program's vendors are divided into two categories: "priority" and " nonpriority", or "sensitive" and "noncritical"

Priority vendors have newly tooled end products that pose launch risks [Sitesegment, or program risk-no]. Financial peace, historical context. As a result, the cross-functional consumer services are normally focused on the priority or essential vendors during the supplier interaction phase.

The supplier engineer's on site visits are based on the priority and most important suppliers.)

Early in a scheme, after sourcing, supplier involvement will begin. The third theory is also crucial since it represents a break from previous experience for both the consumer and the retailer.

This theory emphasizes the importance of starting to collaborate with these important vendors as soon as they are identified. We do this because we want to catch problems early and repair them until they become too expensive to fix. Fixing problems or issues now can help us escape problems later on.(of course, the frequency of the visit is determined by the consumer, the experience of the retailer, and the product.) We are only using four as a starting point here.) To assist the supplier with the launch of parts, the whole team must have a mutual knowledge of the parts and procedure. This visits are timed around main schedule milestones to ensure that supplier deliverables are on schedule to maintain customer deliverables. On key launch issues, the team would provide the provider with a single customer face. As previously mentioned, having a single voice to suppliers is a core objective in timing supplier interaction.

Customers cannot continue to lose time in any area of the company. If they do, they will pay a high price in terms of both expense and competition. Therefore , as much efficiency as possible can be put into maintaining acceptable and applicable interface with suppliers. The fundamental structures and functions and obligations for advanced product quality preparation (APQP) and development component approval process (PPAP) will remain unchanged. It's crucial to note that, while the timing supplier interaction method establishes a new way of interacting with the supply base, it also establishes a new way of working with the supply base.It does not modify any of the previous underlying procedures used by manufacturers and consumers. The elements of APQP and PPAP have not changed and continue to reflect industry practices. We would stress that we are not recommending any changes to what we do ; but , we do believe that the change must be about how we do it. The supplier's interaction with the team will proceed until all PPAP specifications have been fulfilled and all program ram up volumes have been met. This indicates that the customer/supplier engineer has accepted the component submission warrant (PSW) and that all practical checks have been performed and approved by the customer's factory. Although it may seem self-evident, the customer team (particularly the customer engineer) must continue to collaborate with the supplier until all of the parts have been PPAP. In compliance with the global makeup (if applicable), the customer can execute the provider interaction process effectively on a global (if applicable) basis. The total timing of product or service, it must be extended fairly to all of them.

4.3 Product Development Case Study

This frame work is intended to serve as a visual reminder to readers of how to see the innovation process that has to be handled by businesses. The particular standards required will be determined by the industry, goods, and services. The framework aims to emphasize that it is a dynamic process. It's complicated process, and this help to simplify it so further research can be done. Product innovation process, and this is frequently seen only from marketing standpoint, with little, if any, attention given to the R&D function and the challenges of managing science and _drawn a slew competitors. Apple's Iphones and Ipad contibue to make a lot of money.

However, savvy competitors like as Samsung are eroding margins. Cook reduced the amount of components in Apple's supply chain when he first took control.

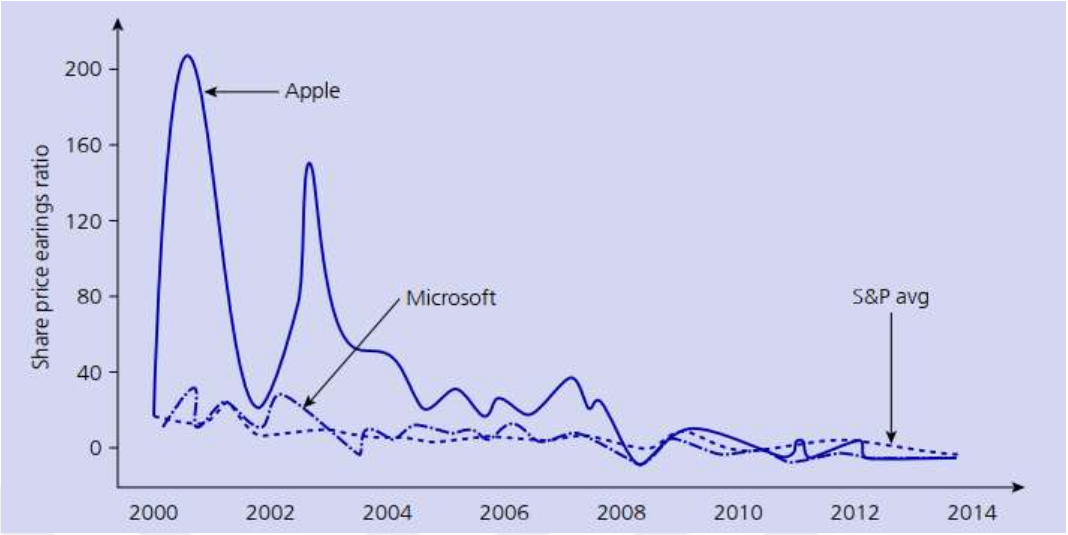

Figure 4.1: the development statistical curve for Apple Microsoft and S&P Average

Apple's success has been built on this skill. Its capacity to have market vision, or the capacity to see into future and see profitable goods and services, is a crucial necessity for companies looking to innovate. After appealing to broads audiences, he would almost likely gain income. Apple, on the other hand has seldom attempted to reach out to general public. An examination ot it the past provide insight into the future. Steven Wozniak and Steve Jobs created and delivered the Apple to the personal computer market in 1977, and Apple computers were born. IT look years to create and was only available in printed circuit board from. It made its premiere in Palo Alto's Homebrew Computer Club in April 1976, but few people took it seriously. The Apple Macintosh was introduced in 1984 as result of continuous product advancements and larger technology breakthroughs, particularly microprocessor advances. Microsoft leased its operating system to all PC makers in the early 1980s, while Apple rejected this method, preferring to maintain control over its system. The 1980s were an era of rapid expansion for personal computers, with nearly every workplace and house adopting the technology. Microsoft gradually became the de facto standard, not because its technology was superior, but because it was easier to use, but primarily due to the fact that its system became the de facto norm. as consumers purchased PCs, they also purchased the operating system: Microsoft Windows, which became the de faccto standard. The Apple operating system was only accessible if you purchased an Apple computer. As a result, Apple's market

share has fallen. Apple has grown to 12 billion Dollars firm by the mid-1990, more than double the size of Microsoft. But, thanks to the success of Windows, Microsoft was on its way became the world's most powerful technology company. Apple released the Newton in 1993, making the company's first fully new product in many years. Indeed, it marked Apple's foray into (and maybe inventionof) a brand-new market: Personal Digital Assistants (PDAs). When the Newton was introduced, The PDA industry was nascent, other businesses, though, were developing comparable gadgets. The newton Message Pad had a number of personal-organization features, including a contact book, a calendar, and notes, as well as communications features like faxing and e-mail. It had a pen based interface and a trainable word-based handwriting recognition engine. Unfortunately, this engine was created by a third party. It was infamous for being difficult to operate, contributing to the product's downfall. This was to be lowest point in Apple's history.

Table 4.1: Apple's new product failures

Apple product	**Why it failed**
Macintosh Portable (1989-91)	The 16-pound behemoth included numerous cutting-edge innovations at the time, such as as active matrix LCD Screen, but its size and the fact that it frequently failed to power on, even when plugged in, due to its battery construction, kept it off customers' desk. The Macintosh portable was a whale in a market of dolphins in 1989, when Toshiba and others began relaseing the 6-pound notebook from we still use today.
Apple Newton MessagePad (1993-8)	The newton MessagePad is a tablet-PDA combination that recognizes hadwriting. It was unique, but its unwieldy bulk, poor battery life, and difficult-to-read screen doomed it to technology cult status.
Macintosh Performa series (1992-7)	Apple was experiencing greater competition from Dos and Windows-Based PC Manufacturers in the 1990s. Michael Spindler, Apple's Then CEO, Planned to launch a range of low-cost Macs Known as the Performa. They Were Low-cost: Weak, Prone to malfunction, and underpowered-but still more expensicve than a low-cost computer. Worse, rather of increasing the market, they cannibalized sales of more expensive than a low computer. Worse, rather of increasing the market, they cannibalized sales of more expensive Macs for period.
Pippin (1995-6)	The Pippin was multimedia computer that focused on games and CD playback rather than regular computing, Similar to what a PlayStation or Xbox is now. Game developers and players neglected the Pippin since the PlayStation, Nintendo, and Sega systems were already out and more popular.

Table 4.1: (Cont.) Apple's new product failures

Apple product	**Why it failed**
Macintosh clones (1995-7)	Apple was having financial difficulties in the mid-1990s. Apple made the decision to open its doors to other business. Macs are manufactured and sold. Power Computing was the major clone Producer. Power Computing's clones were less expensive and quickly outperformed Apple's original Macs in terms of popularity
Apple USB Mouse (1998-2000)	Apple USB mouse after regaining leadership of Apple in 1997, Steve Jobs set about reimagining the Mac's appearance and feel, and his design team came up with the candy-colored iMac series, which stood out against the usual beige box. It also opted to redesign the mouse's appearance and feel. The new disc attracted a lot of attention. It was difficult to grip since it did not suit most people's hands, but for the wrong reasons. The soapbark-shaped Apple pro mouse was launched in 2000; the extended, yet basic, curves could be grasped pleasantly and firmly.
Apple TV (2007-present)	Apple's networked media player box was meant to be next tiVo, but it doesn't even compare to Windows-based media-center Pcs in terms of popularity. Apple Tv's capabilities are restricted: it isn't connected to Netflix or blochbuster, so you're restricted to what the iTunes Stores has to offer. Many television and movie companies have shied away from endorsing it for fear of closing control.

With all featured on the front cover of business week in February 1996, implying the company's collapse. With all of apple's recent success, it's often tough to remember all of the company's mistakes. As a result, I have included them in table 1. Some of them were very terrible. However, learning from your failures is crucial life lesson that Apple appears to have absorbed well. With a varied product range and a 3percent market share in the PC market in the mid-1990s, Apple's future in the computer technology sector appeared dismal. As a result, many people were shocked when Steve Jobs returned to the business as CEO in 1997. He rapidly began Eliminating several product lines and most of the company's activities, deciding to concentrate on only a hadfull. Include the iMac, which has fresh design. This occurred during the late 1990 economic boom, allowing Apple to produce cash swiftly. This supplied funding for the creation of the iPod. Which would change Apple's fortunes forever?

Table 4.2: The connection between Apple and Steve Jobs depicted

Year	Event	Year	Events
1976	Go-founds Apple with Steve Wozniak	2001	Launches iPod
1976	Apple launches first computer	2003	iTunes launched
1984	Launch of Apple Mac	2007	iPhone launched
1985	Jobs ousted in Boardroom battle	2010	iPad launched
1986	Co-founds Pixar	2010	Apple overtakes Microsoft
1997	Returns To Apple	2011	iCould Launched
1998	Launch of iMac	2011	Steve Jobs dies
2001	First Apple store opens		

Apple's Famous iPods, iPad, and iPhones designed by Jonathan Ive, a British designer. Jonathan effect has is difficult to exaggerate. He is expected to collect 20 million dollars in stock. For &à million dollars, he was able to purchase. The money will help him build on his 100 million wealth appears to have pledged his allegiance to Apple when he purchased a 17 million dollar home in San Francisco in September 2012. Ive was promoted to higher role at Apple in 2012, and today he is in charge of all product design, hardware, and software. This comes on the heels of Apple's decision to cut ways with mobile software executive. Scott Forstall. I will help to replace some of the void created by forsrall's departure. In addition to his job as the head of industrial Design, Jonathan Ive will offer leadership and direction for human interface (HI) across the firm, according to Apple. For more than decade, his remarkable design style has been driving force behind the appearance and feel of Apple's products. The Apple watch, his team's most recent innovation, is setting the bar for whole new category of gadget. He studied design ar Newcastle Polytechnic, which is now North Umbria university, and he still gives guest lectures there. Ive emphasizes the need of collaboration when it comes to crating products like iMac, the candy-colored computer that started Apple on the route to success. Ive and his colleagues aren't simply responsible for the aesthetic of Apple's products. They frequently have to develop the complete manufacturing method that the manufacturers will utilize to manufacture them since the concepts are so varied. " we don't really talk about design, we speak about generating ideas and producing goods". Ive stated in interviews. There have also beed some goods that have failed (see table). However, Ive Claims that the majority of the company's failures are kept hidden. And there have been instances when we have been working on a program

and we have gotten to a point where we have answers and you get that sinking sensation because you are trying to express the ideals to yourself and others just little bit better. This is most likely an indication that isn't quite excellent enough. We have all been honest with ourselves on a number of occasions and said, " you know, this isn't good enough, , we need to quit". And that is quite difficult. Knowing when to bring a project to halt is a crucial element of his job. Within Apple, there is a strong conviction that workers should concentrate on their areas of competence, but as Ive points out, the process of developing a product may be rather flexible. "you would hard to recognize us as we get together to design a product" he addswho is the electrical engineer, mechanical engineer, and industrial designer. The important teamwork in the process cannot be overstated. We have got really hooked to studying as a group and working together to solve really challenging challenges. And it gives us a great deal of pleasure to do so. In 20212, Apple flew in its whole design team from San Francisco in acknowledgment of the importance of the Design & Art direction Awards- somethings that had never happened before Sir Jonathan Ive was escorted on stage by all 16 of them to accept the award. The prize for the best design studio was given out. Are there going to be peoblems? Apple Inc. has been subjected to a lot of criticism in this area. Also gotten a lot of media attention is the extreme secrecy and obsession with control Apple's influence on its suppliers. Foxconn is one of the vendors and the largest contract manufacturer of IT items in the world, including the iPhone. Is is a much smaller company than the brands it assembles, yet it is one ot taiwan's biggest. According to Reuters news agency in 2010, Apple goes to "extraordinary measures" to preserve even the tiniest secrets of its new product in development (Pomfret and Soh, 2010). longHua, china, is home to foxconn's assembley factory. Many of distributed onlu those who need come straight out of a James Bond film: information is carefully guarded and distributed only to those who need to know; employees suspected of leaks may be investigated by the contractor; and the company makes it clear that if secret are leaked, it will not hesitate to sue. Apple will provide contract manufacturer multiple product options in order to ry to manage information, just to put them out. As a result, the source of any leakage is readily apparent. In Silicon Valley, Apple's preoccupation with privacy is legendary. It has dismissed executives over leaks and sued bloggers to prevent trade secrets from being revealed over years. Apple also contributes to keeping its components out of the mainstream by requiring unique designs rather than off-the-shelf components.

A confidentiality provision will always be included in any contract with apple. In the case that z breach is uncovered, they normally come with harsh sanctions. Such agreements are sometimes accompanied by unannounced inspections by Apple personnel in order to maintain standards. The challenge, though, is determining the source of a leak.

4.3.1 Once the contract expires, Apple's only option is to swap vendors

All of this concealment appears to have gotten out of hand at times. In case that gained international news, a Foxconn employee in china is alleged to have committed himself after being interviewed by his company. According to sources in the local news, he was suspected of stealing an iPhone prototype to which he had access. The most effective technique for the organization to demonstrate to the best case scenario would be for it to cause havoc in another makor market. Apple has shifted its focus since Jobs's death in 2011, enhancing the quality of its current offerings.

Table 4.3: Key components that go into the iPhone

Component part	**Supplier**
Touch screen	Japan display Inc. or LG
Flash memory disk	SanDisk or Sk Hunix, Samsung, Toshiba
Processor	Qualcomm
Camera module	Qualcomm
Phone casing	Qualcomm
Battery	Sony
Touchscreen controller	Texas instruments
Duplexer	Avago

Moreover most of the consumers become hooked into Apple's 'ecosystem' of linked gadgets and software, it should boost sales of iPad and other Apple goods.

Figure 4.2: Apple work place

The regent street shop in London employs 120 geniuses, each of whom sees over 30clients a d day. However, due to high demand, booking an appointment is not feasible. One option is to minimize the number of consumers. Make the product more posh and more costly so that it can serve a smaller number of clients. Alternatively, funds might be used toward more efficient operations (see chapter 5) or better service delivery. The iPod wasn't digital music player, the first smartphone or tablet. Apple has copied other goods, yet they engage to us on an Emotional level because they are pleasing to the eye and easy to use. Finally making up for lost ground in the extremely competitive PC industry. It's important to remind business student that at the end.

5. STRATEGIC INNOVATION AND THE SCIENCE UNDERSTANDING

5.1 The Need for Strategic Innovation

Entrepreneurship is a skill that only the most elite corporation possesses. It's a pity, because its absence is noticeable. Many venerable companies have died as a result of this. In a world of rapid alter, the capability to figure out new chances by launching a business is crucial, and learning from strategic experimentation is more important ever for survival. Within an established firm, a strategic experiment is a risky new endeavor, it's a multi-year investment in a hazily defined sector with no apparent profit formula. Potential clients are just that possibilities. Vlaue assertions are really educated estimates. Also its unclear which actions lead to lucrative consequences. The majority of CEO who have participated in strategic experiments feel that learning rapidly is the key to success. When iit comes to defining a new industry, the competitor who learns first usualy wins. Unfortunately, learning id hampered by habits ingrained in the traditional planning approach. Theory-focused planning, a better method, differs from traditional in six ways. Corning Inc. began exploring potential much beyond its present capabilities in the late 1990s. Business divisions Corning Microarray Technologies experiment (CMT). The goal was to bring in a new age genomics research. (For further information, see "about the research."), arrays, microarrays, it an essential piece of experimental gear for assessing DNA interactions in cells was glass slides with hundreds of small DNA samples etched on their surfaces. A huge number of samples attempting change a status quo that provided researchers with a devil's bargain, the option of time-consuming self-printing or purchasing a costly printer system with a closed standard, as a part of newopen-standard system, CMT aimed to provide dependable, low-cost microarrays. CMT predicted a strong market as a result of the predicted surge in genomics research following the completion of the human genome mapping. Even still, the unknowns were frightening. Is it likely that a standard that is compatible with CMT's product will be widely adopted? As part of new open-standard system, CMT wanted to develop dependable, low-cost microarrays. CMT predicted a strong market as a

result of the projected surge in genomics research following the completion of the human genome mapping. The unknowns were still a concern. Is there a market for a standard that is compatible with CMT's product? During the recent economic downturn, several businesses have adopted out of such strategic initiatives. Only a handful have taken substantial risks, understanding that boom and bust cycles hide a basic truth: the world is always changing. The rate of change is slower than the frantic financial Markets, and it is more stable and secure. New markets emerge as a result of globalization. Such as the Middle East's armed conflict and china's admission to the world trade organization. More subtle shifts, such as population aging in industrialized nations and the creation of a new middle class in developing nations, are also significant. This dynamic environment has an impact on industrial and service industries, both new and old, high-tech and low-tech. "Everything has a life, and you have one", says the chairman of analog devices Inc. (ADI). Always keep an eye on what's beyond that life. The CEO's principal responsibility is to detect danger, as well as answer with the help of the organization's constructions as well as to be as sponsorship for those who envision the future is enticing, "Everything has a life, and you have one" Says Analog Devices Inc. chairman. You must always seek beyond your current existence. The CEO's main tasks is to detect danger, as well as react, with the use of the organization's suggestions, as well as for those who perceive the future, an encouraging sponsor is needed. A strategic innovation is a unique approach to solving a problem. In at least one of the three areas, there is a considerable deviation from previous practice.2 Design of the end-to-end value-chain architecture (for example, Dell Inc.'s) is one of these domains, IBM Corp's change to direct-sales approach); conception of provided customer value (IBM Corp's transition a direct-sales strategy). Strategic innovation entails delving into the unknown in order to generate new information and opportunities. It then conducts strategic trials to determine the feasibility of the idea.

5.1.1 The learning imperative

In hindsight, CEO's engaging in strategic experiments would almost agree that one things to assume is that your initial predictions would be incorrect. For example, when AT&T sought advice on the cellular-telefone industry from McKinsey&Co.in the mid-1980s, the firm estimated that the global potential was 900,000 units. Currently, every three days, 900,000 new mobile phone customers join the ranks. 4

when knowledge is scant and the future is unknown, even the most brilliant individuals can make mistakes. Market-potential error magnitudes are frequently expressed in multiples rather than percentages. On the first go-around, determining a spend level that is even in the ballpark is practically impossibleμ. Management teams must learn to enhance initial expectations and overcome the many unknowns connected with each new firm. 5 this is something that can only be learned by trial and error. For strategic experiments, the alternative-adequate investigation, study, and analysis to develop the optimal plan-is not feasible. By trial and error, how does one learn? The scientific method consists of designing an experiment, predicting results based on a hypothesis, measuring results, comparing outcomes to expectations, and drawing conclusions about hypothesis based on the comparison. The final phase is the most important in the learning process. Scientific experiments should fulfill five requirements in the deal world: (1) findings should be provided fast, (2) findings should be unambiguous, (3) experiments should be separated from extraneous influences, (4) experiments should be economical, and (5) experiments should be repeatable. Strategic experiments, on the other hand, are far from perfect. They don't satisfy any of the requirements. It's possible that feedback won't be available for years, the results are confusing, important factors cannot be separated, and repeating the studies is prohibitively costly. This isn't to say that there isn't a better way to ensure timely learning; it just means that learning while strategic experiments progress is challenging. As a result, many leaders encourage their employees to try new things and learn from their mistakes. Even for people with open minds, teachings do not appear miraculously. Learning takes deliberate effort. It's an active effort, with planning cycle serving as a natural backdrop. Regrettably, traditional planning methods erect impediments to learning.

5.1.2 The conventional designing mind-set

Executives understandably see a thorough financial planning process as a valuable asset and are hesitant to change it. A performance-oriented culture, defined as one in which employees are held accountable for the statistics in their plans, is widely cited like feature of success businesses. although firms that offer strategic experiment leaders the flexibility to establish completely separate companies with fully distinct cultures, budgeting and performance assessments are frequently excluded from the established planning processes do not present hurdles to learning for all forms

innovations, strategic experiments may and should change planning techniques. The fundamental assumption that underpin traditional planning methods not needed. Historically, managıng and control systems were created to implement a tried-and – true strategy while maintaining accountability and high level of predictability. Given the unpleasant fact to dependable unpredictability, strategic experiment planning systems should be built explore future strategies through promoting learning. When first stage in evaluating a result is to compare it to the plan's projection. Any discrepancy can be signified in both sides: the strategy was applied incorrectly or the forecast was incorrect. Someone must be held accountable if the former is true. However, if the forecast was incorrect, Given the new knowledge, future expectations must be altered. In many companies, an accountability mindset is so engrained that discrepancies between projections and result are nearly always blamed on managerial performance. The Forecast (performance expectation) is holy. That is reasonable in a mature business. However, planning inside strategic experiments should not be based on the assumption of dependable prediction. When the future is unknown, the most important goal should be learning rather than responsibility. Managers must, of course, be held by amount in different method basis. How quickly do they pick things up? What is their response time to fresh information?

Despite the unpredictability of the future, forecast must be made. Learning occurs through a thorough examination of discrepancies between forecasts and result, with required special attention paid to the stories, models, or ideas that underpin the forecast. The structure required for such analysis is provided by theory focused planning. It lead to better ideas and predictions, demonstrating that learning is taking place. As a result of better projections, better decision concerning strategy and financing levels may be made. A traditional planning mindset, on the other hand, might sabotage a strategic experiment. Coring Microarray Technologies, for example, ran across a number of unforeseen roadblocks on its way to market. Microarrays manufacturing procedures failed to achieve quality reliability requirements commonly recognized for Corning products in early testing. This should have prompted a rethinking of early manufacturing process decisions and reevaluation of expectation. However, because they were operating under the assumption of dependable predictability and in a culture that valued numbers, they were able to do so. The general manager was under pressure to turn around a

struggling company. There is no time for reevaluation; instead, there is a pressing need to push harder. As the squad struggled to catch up, tension rose. Finally, top management intervened, replacing numerous managers, resetting expectation (for financial performance, speed to market, and quality), and revisiting fundamental concerns about the production process.

5.2 Theory-Focused Planning Works with Six Changes

Details like as revenue breakdowns by product line or by location are useful when planning for an established firm. Fine-grained comparisons of forecasts and outcomes can aid in the identification and resolution of issues. For strategic experiment, however, such specificity is impractical. There are far too many unknowns. Furthermore, the lessons are found in a handful of crucial unknowns rather than in the specifics. Market, technical, and cost unknowns are the three main types of critical unknowns. When ADI sought the commercialization of a new semiconductor technology, micro electromechanical machines (MEMS)- chips with small moving components- in the early 1990s, there were many unknowns. Three unknowns, however, were definitely the most crucial:

The most promising early use for MEMS was novel methods for launching vehile air bags, which was the most crucial market unknowns. Would automakers, on the other hand, take a chance on a fresh strategy?

The most essential technology is unknown: can MEMS be produced with enough dependability for an automobile safety application?

The most important cost is unknowns/could production yields be increased to match of pother semiconductor manufacturing processes?

Only trying leaning could resolve such unknowns, not any amount of priori analysis.

A limited number of crucial unknowns were not prioritized in ADI's Traditional Planning.

It concentrated on comprehensive estimates of sales, margins, and profitability, as sis most firms' planning, and planning conversation concentrated on appraisals of those measures. Regardless of this, the important unknowns were addressed positively in the end, and MEMS is now profitable. Even still, with a planning framework that

facilitated learning, the big uncertainties might have been handled faster and with fewer crises.

5.2.1 Change no 2: communication of expectations

Instead than focusing on the predictions themselves, concentrate on the theory that was used to make them and the assumption that underpin them. Prediction have always been written down as numbers, generally accurate ones. (More advanced plans for new businesses may contain a range or even a best-case scenario). The best-case scenario and the worst-case scenario. However, while organizing a strategic experiment, the emphasis should be on the assumptions that underpin the forecasts rather than the forecasts themselves. A complete discussion of the theory used to create the predictions should be the most clearly expressed and comprehensive component in any strategy for a strategic experiment. A management team cannot learn without a common story about how a strategic experiment is supposed to operate. As fresh information becomes available, managers will not reach the same conclusions. Between the time forecasts are produced and the time those forecasts are compared to events, which is frequently months later, the theory and its underlying assumptions are forgotten. The impact or bubble-and-arrow diagram, which demonstrates how numerous variables impact outcomes, is one way to communicate a story about how a business is intended to perform. The influence map should show how each key spending area-such as research, product development, and manufacturing-affects each other.

5.2.2 Drawing influence diagrams

Building and then testing a hypothesis is required to learn from strategic experiments. The idea must be recorded, communicated, and reviewed for management team to learn together. The influence diagram is useful communication approach for expressing the core of a theory-cause and effect interactions.

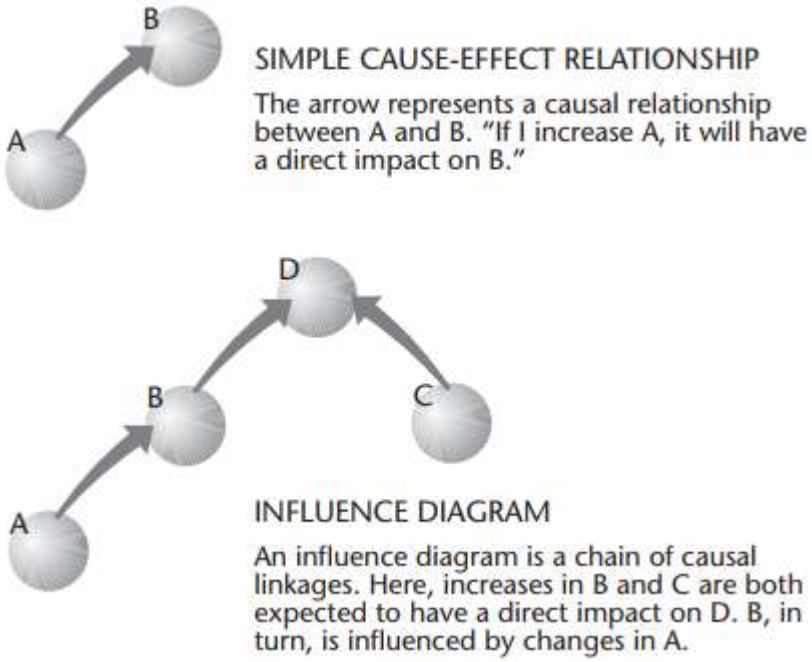

Figure 5.1: Drawing influence diagrams

Thomson Learning, a division of Thomson Corp., began its own strategic experiment, Universitas 21 Global, in 2001. (U21). U21G, which was pursued in collaboration with a global consortium of institutions, ushered in a new era in higher education. U21G was designed to be a university without a campus or classrooms. All operations were to take place entirely online. When it first began in may 2003, U21G only provided a MBA and only hired people from a few major Asian cities. However, within a few years, its founders aim to introduce more programs and spread throughout the continent. Faculty wages will be a considerable cost for U21G, and the impact of the student-to-faculty ratio on online student happiness is a major unknown. In theory, online learning allows a single faculty person to reach out to a larger audience. Students, on the other hand, may be more demanding of instructors than they were in high school. A typical university, looking for personal answer to e-mails on things like employment opportunities advising or clarifying course ideas What conclusions may be drawn from this? Adding more professors? The link between the two components is impossible to predict ahead of time. It can't be drawn from traditional intuitions' experience; it has to be discovered. "We have a lot of experimentation to do .. to deliver online training in ways that allow us to have a greater student-to-faculty ratio without losing quality" the provost of U21G said ' I am unable to predict the student-to-faculty ratio. All I can do is speculating'. More than just the right student-to-faculty ratio for good student satisfaction unknown. The

relationship's exact nature is unknown. An impact Diagram can depict a fundamental hypothesis about the relationship as well as notion about how student happiness influences income in the long run. The following is a summary of the theory: Adding professors lowers the student-to-faculty ratio, increasing student happiness and increasing U21 Perceived G's appeal in the market, resulting in more enrollments and revenues. Increases in other important budget categories connected to significant unknowns, for example, might have an influence on revenues, as shown in the diagram, how an increase in sales and marketing budget might improve product appeal and thereby enrollments. (See <<Predicting an Uncertain Future>>.

5.2.3 Change no. 3: nature of estimation

Predict the trends rather than providing explicit numerical forecasts for certain dates. Managers are required to agree on a top-line and bottom-line number for the next year in a normal planning cycle. There is better way to conduct a strategic experiment. Because every single-point prediction is bound to be incorrect, and because of new endeavors are inherently dynamic, focusing on trends makes more sense. A performance measure's pace and direction of change are frequently more essential pieces of information than its present value. Supplementing influence diagrams with trend graphs is a simple approach to add trend prediction into plans. Because such graphs indicate a large number within a short period of time, they may appear to have a lot of question for planners. Predictions, on the other hand, do not need the same level of precision as business plans. What matters is the geometry of the curve. Simple deciding whether the x-axis (time) should be labeled in weeks, months, or quarters, and determining the size of predicted change (is a 10 percent change, a doubling, or a factor of ten predicted? It's good enough for the y-axis (the performance metric).

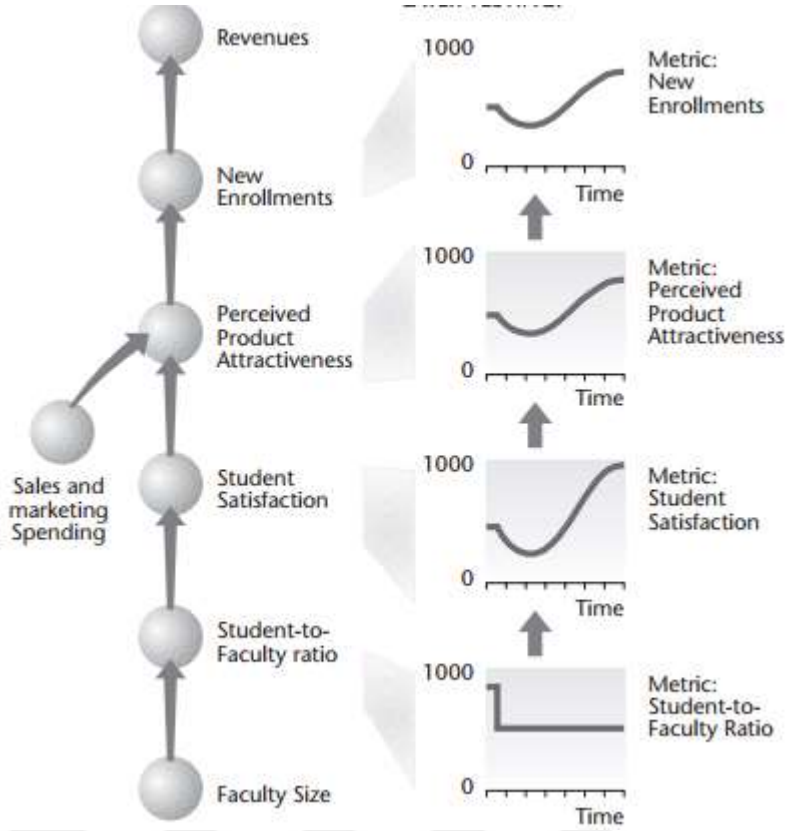

Figure 5.2: Charts of influence

Charts of influence develop fundamental hypotheses about cause and effect, as well as data showing trends. They improve tales by making hypothesis about anticipated outcomes clear so that they may be tested later.

The goal of visualizing predicted trends is to give you head-up if the actual trend diverges dramatically. A change in strategy may be required if it is, for example, in a different direction or considerably quicker or slower than envisaged.

5.2.4 Change no.4: frequently of strategic reviews

Instead of assessing result once a year to reconsider core business assumption, do it once a month-or more frequently as new information becomes available. Results may be evaluated as frequently as weekly in mature enterprises. Such reviews, on the other hand, are usually brief status checks to defect any deviations that require prompt correction in order to get back on track. For the majority of businesses, the company strategy in only revisited once a year during the major yearly planning cycle. Management teams concentrate on execution in between planning periods. If a main aim of managing a new enterprise is to learn as much as possible as rapidly, the strategy itself-particularly significant unknowns noted on the impact diagram-must

be reevaluated at least monthly. At each review, leaders must prepared to make bir course corrections. A monthly strategy review may apper burdensome to some. However, because each review only covers the significant unknowns, it takes significantly less time than conventional yearly planning process. A global business we'll call Capstone-White, which formed a venture to market services for managing printing, image, and copying assets across huge companies, would have benefited from more regular strategic assessments. After around two years, the management team came to the conclusion that in order to be trustworthy, the organization required a wide range of services, from routine maintenance to complicated consultancy. The legitimacy of the one-stop-shop concept was affirmed by outside consultants, and extra resources were allocated. Massive recruiting ensued, as well as development of a complex IT infrastructure to handle the anticipated expansion. Nonetheless, the most important assumption-whether the market was truly ready for additional service- was not put the test right away. IT executives –potential clients-pretended to be interested in better managing their printing and image assests, but they had more important problems. " IF you asked CEOs in the late 1990s, they would say, they were worried about major issues : the Y2K bug and the euro. They were also concerned about establishing a hot new internet infrastructure. " as a result, the new service offers did not attract the desired number of clients. Despite this, the venture's general manager continued to invest extensively, motivated by culture of responsibility to the plan and a presumption of solid predictability. Not with standing all indications to the contrary, expecting impending growth the poor revenues escaped strong from tp management for over two years due to the yearly planning rhythm and tiny size of endeavor relative to the firm. When management ultimately drastic budget cuts and leadership changes, the price was substantially greater than it would have been if the reviews were done more often.

5.2.5 Change no. 5: perspective in time

Instead of focusing just on current-period results, analyze the complete history of the strategic experiment and track patterns across time. If a trend graph is used for prediction, the same format must be utilized for reporting results. However, in many organization, prior history is not taken into account during planning reviews. Only the most recent results, as well as year-to-date numbers, are frequently presented. If the previous data is used at all, a regression analysis is utilized to anticipate revenue.

History, on the other hand, is full with lessons. On the influence diagram, each performance metric should be plotted across time. Updated plots should be compared against projected trends on a regular basis. The form of each shown curve promotes understanding when projections are revised, and rates of change are easily obvious. Companies may avoid the risky mindset expressed by one finance executive: "with new businesses, you have to have a short memory, since you know you will fail a lot".

5.2.6 Change no. 6: nature of measures

Focus on leading indicators rather than combination of financial and non-financial indicators to gauge results. Traditional plans place a strong emphasis on financial results. However, the financial results of new companies are often uncertain-probability, for example, is many years away, and predicting the extent of early losses is challenging. To earn as much as soon as possible, leading indicators should be emphasized in strategic experiment plans since they give the earliest signals as to whether the plan's assumption are practical. The extent to which online viewership will cannibalize subscriptions to the paper's print version was a crucial uncertainty for New York Times Digital (NYTD), the online arm of the New York Times Co. Naturally, tensions between NYTD and newspaper arose as a result of the potential. NYTD undertook extensive investigation to fix the problem and discovered something surprising. One NYTD executive stated. Nobody goes online and reads the entire article in one sitting. It's a completely unique experience. As a result, we were able to leverage the website to create newspaper subscription profits and losses, due to NYTD were rigorously tracked as a leading indicator od its contribution to the corporation's overall success. It wasn't long before it became evident that gains exceeded drawbacks. After reading a sample of the newspaper online.

5.2.7 Form of verbal theory to diagram

Trying to build an influence diagram right away is difficult for many people. Instead, a textual narrative of how a firm should operate may be developed, then examined for cause-and-effect assertions that can be easily turned into diagram. Coring, for example, may have stated the following about how the Microarray Technologies Collaboration was planned to work: we will need to combine our own expertise in precise glass manufacturer and fluid control with biotechnology knowledge from

outside sources. If we can accomplish this well, we should be able to build an excellent microarray production method. Due to the reliability of the product will be high and prices will be low, we will be able to provide tremendous value to potential consumers. They would otherwise have to make their own Microarrays or buy pricey closed systems to conduct experiments. The market must make a solution incredibly appealing, and we should see significant revenue growth if we can support the adoption of open standards that are compatible with our item design. The firm is not completely described in the appropriate impact diagram (bottom). Instead, it concentrates on the above-mentioned key unknowns.

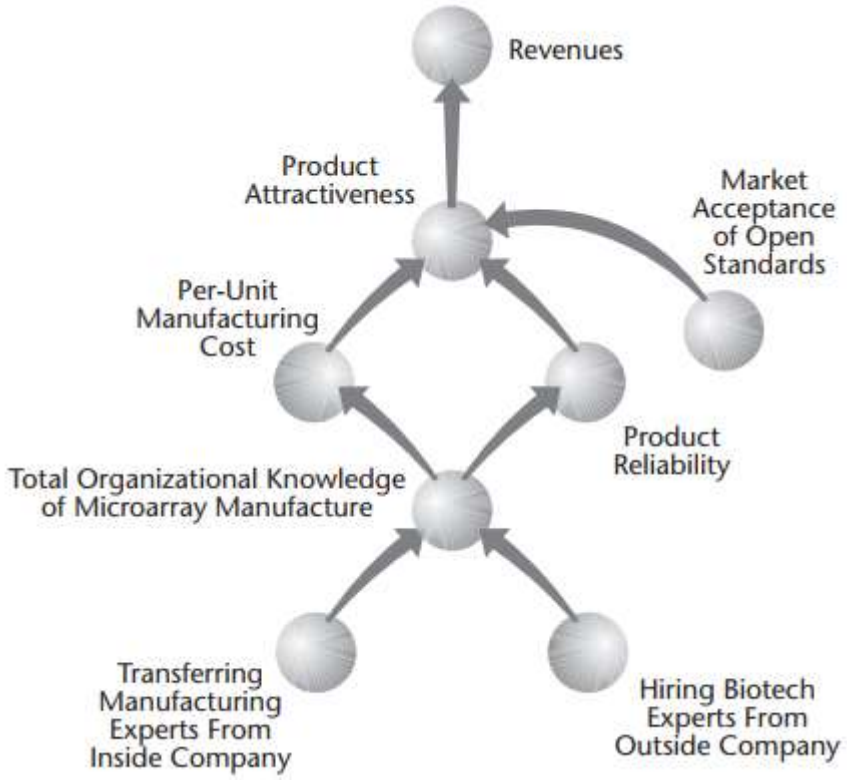

Figure 5.3: Form of verbal theory to diagram

6. THE INNOVATIVE ECONOMIC GROWTH NEW STRATEGIC MANAGEMENT APPROACH

6.1 Poised Strategy Management Approach and Its Key Elements

This chapter gives a new approach to strategic management in the early 21st century innovation economy, following that, each component of the new strategic management method is outlined. The rest of the chapter compares the new method to existing strategic management techniques in terms of context, substance, and procedures, using many company cases to demonstrate the differences. The chapter finishes with specific requirements and caveats for adopting this method. The following are the important aspects of this definition.

Poised strategy: Is an umbrella word that distinguishes itself from traditional methods to strategy like as planning, balance, and positioning (fit). The term "organizational poise" refers to a dynamic skill founded in certain attitude and wide variety of various dexterities (also known as " ambidextrous" talents). As well as the capacity to efficiency revitalize (energize into diversified or growing business environments), and paralyzing rigidity may characterize a "not poised" firm.

Managing many business models: At the same time referred to as multi-model management. In the innovation economy, managing just a successful company model that rapidly becomes 'traditional' with sustained success not guaranteed, is insufficient. Business requires a diverse set of business models, new business are set to gradually replace established ones.

Sustaining and disruptive value innovation: As discussed in Chapter, business must be able to maintain as well as disruptive (i.e., inflective, breakthrough) innovation skills order to survive. **Knowledge and innovation**: for new value creation emerge via cooperation in business networks, which include ecosystem, conventional clusters, supply and demand chains, and internal firm value chains, in an increasingly economy. For value innovation, judicious use of networks is essential, becoming a crucial success element for businesses, with crucial internal

corporate operations going outside the corporation (e.g., “open” innovation). The next of the chapter expand on these dimensions.

The significant contrasts between the poised strategy approach of the early tewenty-first century and traditional methodologies previously mentioned are shown in table

Table 6.1: Content, context and process aspects compared to previeos methodologies, the poised strategy approach

*Provider and Product/service emphasis *Assessment of industries, competitors, consumers, and value propositions	Networking, global, commercial,and departmental planning processes (mechanistic).	Linear, reductionistic,'closed' innovation;timely and control directive.
*Connected quality management focus. *Input and anticipation of global networks and sales model reivention.	*Marketing strategies, industrial ecology, and innovation alternatives are all strategy structures. (Systemic and dynamic).	Non-linear, holistic,'open' innovation;continuous business model reinvention; and noherence-enabling mechanisms

Table may now be expanded to incorporate the poised strategy approach of the early twenty-first century as a foundation for the necessary further expansion of the strategy elements and ideas mentioned in table.

6.2 Poised Strategy for Corporate Rejuvenation

Poised strategy to an organization’s capacity to perpetually revitalize itself via value innovation derived a variety of business models. The well-known Einstein formula $E=MC^2$ was put into a 21st-century commercial as follows: $E_b = MI^2$ or $Energy_{Business} = Management\ (innovation \times Speed)$.

Table 6.2: Poised strategy to an organization’s capacity to perpetually revitalize itself via value innovation derived a variety of business models

1950's-1960's	1970's	1980's	1990's	Early 21st Century
Planning: Budgeting and economic modeling	Balancing: Large corporation and functions are being optimized	Positioning: "adapting" sectors, businesses, and media to achieve a unique "fitting"	Resources & capabilities: a competitiveness, take a source of energy approach	Value cooperation in computer systems as a source of innovation

Table 6.2: (Cont.) Poised strategy to an organization's capacity to perpetually revitalize itself via value innovation derived a variety of business models

1950's-1960's	1970's	1980's	1990's	Early 21st Century
* Development Planning *Accounting for investment and operation expenditures *Financial Control	*Managing a spectrum of SBUs, businesses, and products *Resource and functional coordination	*Selecting sectors and marketplaces, as well as establishing a position within them *Adjusting and blending in with the surroundings	*Creating a competitive edge within the company *Going to respond toward high energy	*Equity of old and innovative marketing strategies *Organizational regeneration *Different value invention through cooperative networking
*Iproblem formulation *Investor management *Economic forecasts *Capital planning	* Basic strategic Matrixes(e.g. BCG,GE,Shell's directed strategy) * Swot	*Industry anlaysis (e.g."5forces" -model) *Competitor analyses *PIMS (Profit Impact of Market strategies) analyses	*A spectrum of old innovative economic models *Entreprise revitalizatio n * Diffrent value invention from competitive networks	*Company context sensing *Marketing strategy reinvention *Information linking both within and outside the organization *Utilising many forms of innovation, both sustainable and disruptive *Innovation management processes *SSC(Methodical Scorecard) * Feeling instruments

As a result the following major principles will be covered from on:

The nature and important features a business model: different and frequently contradictory perspectives on notion of business model are examined and clarified.

Maintaining a portfolio of different business models for value innovation: a business example is used to the necessity for managerial need, and managing portfolio of varied (sustaining and disruptive) company models

7. INNOVATION AND PROCESS DEVELOPMENT

7.1 Process Development Keys

The word ‘‘Process Control” is often used, and it may refer to a variety of things. In this part, we will discuss how we define the term “process management”. We will do that by comparing and contrasting the procedure with four others.

The four types of key process:

- Processes of design
- Processes of fabrication
- Processes of services
- Processes carried out by suppliers

Process management and system integration

The Polar opposites in a substantive method are process architecture and process control. A method of making decisions by their very essence, many issues are amorphous. Unstructured issues are what we call them because they aren’t well-defined. There are issues for which there is no clear and/or definitive response. This may be due to one of three factors:

- There is no scientifically observable evidence available.
- Challenges and solutions are complex, and there is no agreement about the parameters to be used in solving the problem.

We will use an example of an unstructured problem that was overcome with the aid of a process design to demonstrate this. Business are responding to political pressure to reduce the environmental effects of various forms of consumer goods packaging. To do so, they must first determine the environmental impact of different packaging options, such as the carton case, glass container, polycarbonate bottle, and polyethylene bag for milk packaging. The environmental effect can be calculated by

comparing multiple packages in term of pollution, energy use, photochemical smog, carbon and waste.

While it might seem that determining the environmental effect is easy, the truth is very different. The first issue is the scarcity of reliable evidence on environmental effects. To determine how much energy it takes to produce a product, transport it to the customer, and return it if necessary, one must first determine how much energy it takes to produce the package, transport it to the consumer, and so on.

It's difficult, if not impossible, to measure these parameters objectively. Assume that the wood used to make carton boxes were imported from North Africa . This necessitates the expenditure of electricity but how much energy? Data is in short supply, and some of it is outdated or over or under-aggregated. Method for calculating a package's environmental effects are controversial, and no method can truly be fully objective. After gathering information on the environmental effect of each of the aspects, a kit category must be selected. Which kit has the least negative effect on the environment? One that is high in energy, low in carbon, and waste neutral? Or a kit that performs poorly in terms of oil, in neutral in terms of waste, and performs well in terms of emissions. The second issue is that there are no clear guidelines for comparing different environmental factors. It's difficult to weigh those points critically and neutrally, particularly when environmental factors are pitted against each other as well as values like economy and protection. It's possible that the kit with the least environmental damage is just too costly there is also a conflict between environmental protection and public safety. Baby food, for example, may be sold in recycled glass bowls. However, the protection of such reusable jars is a concern: even after cleaning, they can still contain glass shards or detergent residues. It's no wonder, then that separate sides have opposing viewpoints. Concerning the environment effects of a single kit they have achieved their goal. Their decisions about records, processes, device limits, and the relative importance of each

Environmental compartments are crucial. Each choice is debatable, so each is worth considering. The result is also debatable. It can therefore come as no surprise that each faction has its own set of issues.

Arguments to refuse the view of the opposing party a third feature of the substance of problems that necessitate process design is since they are complex, the challenge

evolves over time. As a result, the answer to the question of whether or not anything is a solution to dilemma will also evolve over time.

7.2 Scope of Process Management

Processes management it includes the planning and administration of activities such as design and improvement that are required to attain a high standard of work. There are four different types of critical processes:

- Design processes
- Production/delivery processes
- Support processes
- Supplier Processes

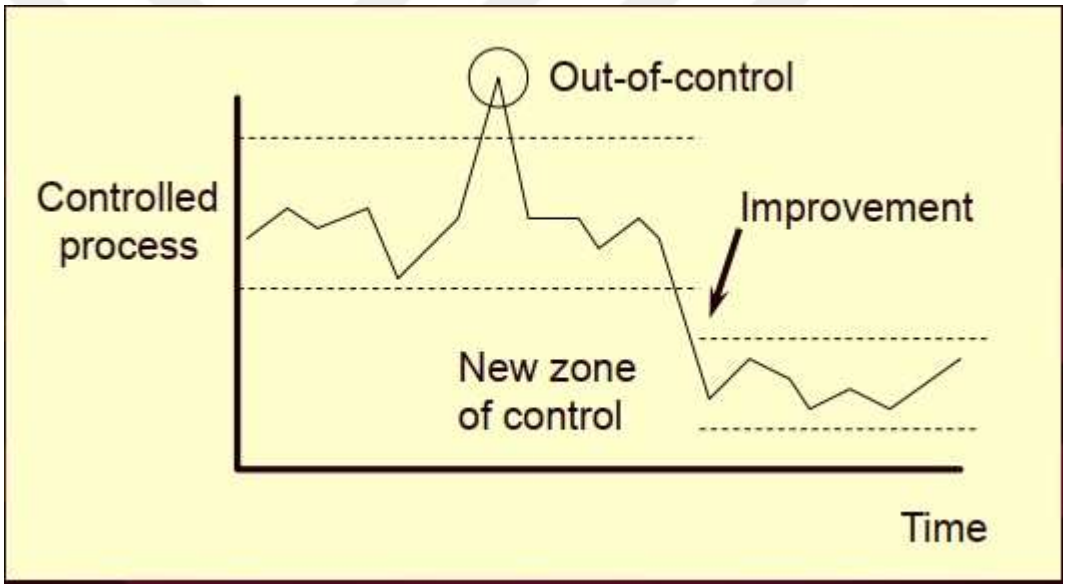

Figure 7.1: Process control scheme

When a network decision-making process is necessary, it often means that many players are involved in the decision-making process. Where a networked decision-making mechanism is necessary, this is always the case. Implies that a number of people are interested in the decision-making process. They are interdependent and have diverse desires, no one from actors will completely understand his or her own ability or objectives (interdependence). However, there are several distinctions between performers. (pluriformity).which makes collaboration and coordinated decision-making difficult.

In some cases, some actors may have no interest in cooperating decision-making. Finally, the number of actors participating in the decision-making process (dynamics) can change over time: actor may enter and leave. Hierarchical administration has no chance of succeeding in a network. A boss who wishes to enforce a project by command and control will seem proactive but he or she typically lacks the expertise and strength to bring his or her own ideas into motion, and may face substantial opposition from the network. Other people have the ability to block, pause, or alter his project. As a result, hierarchical management can be counterproductive: Although the boss seems to be authoritative, he actually causes opposition. Goals aren't being met, and proposals aren't being carried out.

Table 7.1: Hierarchical and horizontal management

Hierarchy	Network
Dependence on superior	Interdependence
Uniformity	Pluriformity
Openness	Closeness
Stability, Predictability	Dynamic, Unpredictability

A method solution is the polar opposite of command and control. When a boss needs to operate in a network, he can't just focus on hierarchical management structures. After all, he is reliant on other parties, which are not obligated to help him. A boss who understands this will not make decisions on his or her own, but will discuss and negotiate with all parties before making a decision. After all, such a procedure represents the network's shared dependencies. This is referred to as "interest-based" decision making in the literature. It's worth noting that a curiosity is considered a rational point of view. This isn't suggest that command and control doesn't have a spot in networks. While this management style can play a role in the process approach, the dominant concept is that networks force members to use a process approach to decision making.

7.3 Process Management Related To a Project Management

Thirdly, a method approach can be contrasted with a project approach. Problems and proposals are considered to be relatively stable under such constraints in a project strategy. This encourages project management methods to be used, such as providing a clear target, a time line, a clear structure, and a fixed final result. As a result, decision-making would be more linear and organized. Of course, such a technique

would only work in a static environment. Where a scenario is complex rather than static, a project solution is inefficient, and a method approach is necessary. This dynamic may be the product of both external and internal factors. External dynamics denotes that a project begins as a project but evolves into phase as a result of external factors. Moreover we can claim that is a common sequence of events in infrastructure projects. Anything begins as a proposal (for example, the building of railway line) and is faced with opposition. A controversy ensues, with different groups seeking to hinder or modify the railway construction. After a bit, the subject is likely to turn to subjects that have nothing to do with the railway itself, as a consequence, the railway construction project could result in a slew of other problems. Put on the schedule as a result, anything that begins as a project becomes a method. Internal dynamics suggest that a project that begins as a project evolves. Since the project owner discovers something during the process of the project that the situation is not what he had expected. A good example is a homeowner who wishes to switch a particular painting one morning. He then notices that the color of the wall behind the painting has disappeared, and he decides to paint over it. Decides to redecorate the entire wall, which has an effect on the rest of the house's interior, which finally necessitates the complete renovation of the property. The next step is for him to understand that his need to renovate is linked to the stage of life he is in, and he ends up in a psychologist's clinic, what began as a straightforward project becomes a complicated mechanism involving a variety of their people, including other members of his household, a construction manager, neighbors, a counselor, and so on.

When decision-making needs to take place in network, dynamic would be visible. After all, various parties have different viewpoints on how a problem and a solution can be described. The variations in decision-making in a hierarchy and in a network are seen in table 2. A hierarchy accommodates a sequential and organized decision-making process that moves through a series of steps to a solution.

The actor who is higher in the hierarchy

The actor who is higher in the hierarchy initiates the decision-making process. The other actors involved in this decision-making mechanism work together, partially due to their subordination to the problem-solving actor.

Project management is responsible for a significant part of the decision-making process. There is no such thing as project-like and phased growth in a network.

However, there are several distinctions between production control and project management. Make decisions in an engaging manner. It is used in the interactive decision-making process. Typically, a government agency collaborates with individuals, businesses, and societal groups formulate a strategy

Process management innovation, on the other hand, is aimed at participants in institutional or managerial while interactive decision-making is concerned with social issues. The process of interactive decision-making usually begins with a government who has to make decision or strategy. This is why the responsibility of this government to build the rules for the procedure and specifies the parameters. The substance of process determines when the interactive process will begin and how long it will last. when will the interactive decision-making process take place and still being worked on administration, typically, they are about strategies, view points, or strategies. If they have little to do with decision making, the connection between the processes and the potential decisions is very shaky. There's possibility that interactive decision-making could become a free-for-all operation.

7.4 Types of waste in innovation Process

How do you spot waste in a forest repetitive meetings with no constructive conclusion; reliance on letter, excuses rather than solution behaviors, good ideas that go untapped, information that is dispersed but not organized, and good ideas that disappear.

We should firstly categorize the cause of waste into big divisions, as Taiichi ohno did when he divided

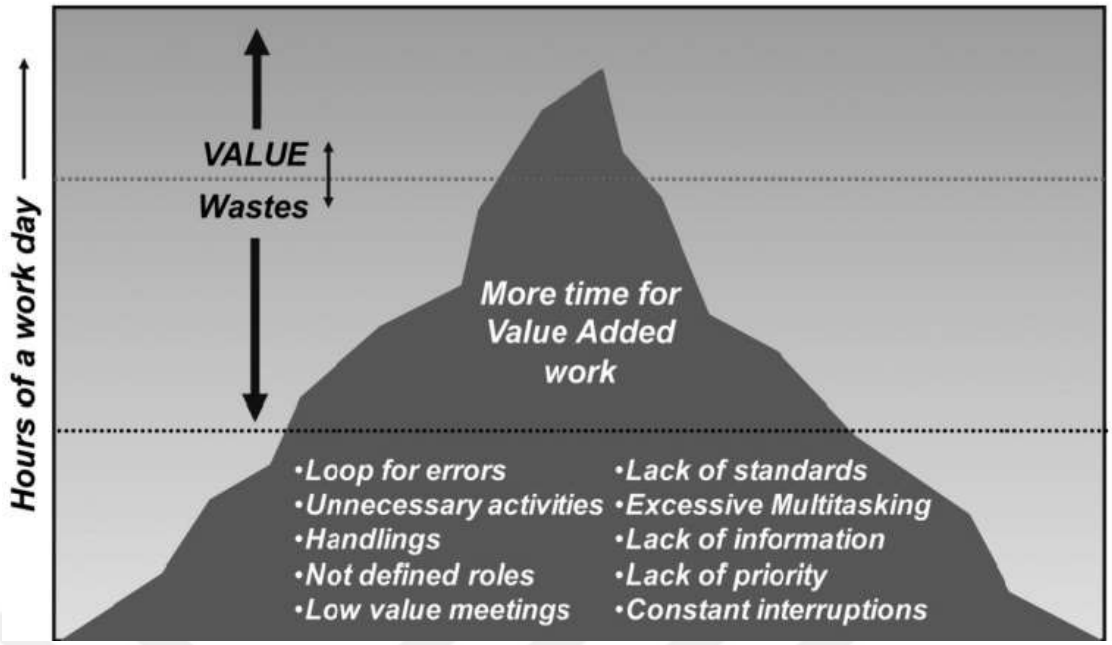

Figure 7.2: Wasting time and work examples

According to Lean Thinking standards, we spend the most of our time in wastes. Our primary responsibility should be to differentiate between value added and waste.

the causes of lost output in a manufacturing world into seven macro wastes. Different methods have evolved over time, integrating the major waste types with product creation and procedures.

Morgen and Liker divided waste into twelve categories in their study, each of which is unique to the design and construction context. There are some of them:

Handoffs

When we move task and duties from one part to another, or when we shift a "semi-intellectual" job from one individual to another, we are handling. When we transfer the ball of blame from one person to another, when one person starts a job and another completes it, when the right hand doesn't realize what the left hand is doing, when a collective task is mixed with a lower level of responsibility and individual ownership, when a task is divided into many subtasks, this happens many times and sometimes without our noticing it. Then snatches the thread bad coordination, poor understanding of those giving and receiving material, and poor estimation of the maximum human capacity for overseeing the entire flow of a set of interconnected activities are some of the causes of this sort of waste. This type of waste is equivalent to excessive transportation and movements that occur during the planning process.

External Excess

Both the work and time spent gathering data that no one can need, data that no one can read, and analyses that no one will use fall under this macro-category ten to twenty percent the irony is that this waste is often added to its inverse: the required data is not available when it is required, or it takes three times as long to locate it in all the other useless data.

Waiting time

Due to a shortage of capability and funding, we are waiting for results, responses, decisions, and revisions (human and machine). We often mix up different types of waiting with value-added procedure, such as when we interrupt or slow down due to a lack of control, too much inforion, difficult analysis, redundant information, information incompatibility, or program incompatibilities. Additionally, correspondence errors, security concern, a lack of direct access, reformatting, and the need for additional information or expertise are all factors to consider.

Duplicate Projects

Many reviews and checks, for example, pacing, creating needless details and knewledge, disseminating information, too much customization, and too many revisions are all examples of this

Stop and start

When engineer, mechanic, or employee must reorient to a job, this happens. It's as if you had several set-ups when you recommence a project numerous times. This pollution is the source of the most inurement, and it occurs in tandem with interruptions. It's always mistaken for virtue, and some people joke of being able to work on hundreds of tasks at the same time. Whenever anyone is in need, when we are forced to pause and restart, it usually takes fifteen to twenty minutes. To re-establish academic Figures and attention, and when they where stopped, they had this feeling.

Buying and selling

This is time to spent on unimportant but necessary tasks. For example, contracts, talks, and workshop to nedotiate on different offers are all part of the process, such as supplier selection, and scheduling are all things that need to be considered activists in

labor unions, for example these are all activities that cause us to spend so when we should be doing something else. There aren't sufficiently consistent procedures, well established roles, or delegation structures.

Inventiveness

Recreation or rediscovery of objects that are already known. How much do we are invent stuff that others have already done. How much do we misinterpret for example do we imagine any sport, athlete or team sports, taking place without rules and, most importantly, without the discipline to adhere to those rules. Many of the schemes are geared toward maximizing success in the current market. Moving on to business dynamics, a lack of discipline creates inconsistency in the duration of line-ups waiting at each intellectual work center. It's common to believe that the existence of routines, or methods; as a result of years of repeating the same patterns, automatically translates to actual optimized systms and relative discipline in adhering to them. So we are not talking about laws enforced from outside, but rules and regulations that emerge from inside with the aim of improving individual and group success. Discipline and imagination are well understood to be two sides of the same cion: the more teams and individuals learn to be orderly and obey the rules of the game, the more natural space for value-adding creativity is created. Bringing discipline and imagination together releases critical energy so the lawsq of the game teach you how to do those tasks almost instinctively and "routinize" them. Around the same time, it frees up resources for high-value programs in spaces that are specifically designed for this purpose.

Variability of processes and input

Knowledge was delivered late. A delivery that is made too soon. Long queues and long crossing periods are caused by the instability to procedures, operations, and the arrival of input. Changes of gogoqls or interruptions to project in progress, This is the same kind of waste that leads to manufacturing inter-operational stockpiling.

The system has been overused

When a system reaches 80% utilization, even minor changes have significant impact on crossing times and therefore system efficiency.

Assume you always have a complete calendar of obligations with no gaps in them. How possible bis it that you will be able to meet all of your obligations on time.

Rather than if you had a calendar of planned obligations and delays between one engagement and the next, nobody seems to notice that a human powered machine has a productivity rating that is proportional to the load is carrying. The yield of team that is working at 60 percent or 90 percent of their saturation point is vastly different. When overseeing ventures, it's important to have this in mind. When producing new goods, it is critical to calculate the teams' saturation potential.

Batches in large quantities

Data is Pushed out rather than "pulled" by those who need it. The scale of what we do, or the lot or batch, raises the cycle time, and the same is true of intellectual output. The time it takes to deliver vast amounts of data is getting longer. When we work " in big batches", we have a real surplus.

In the designer's opinion, it involves processing a batch of one hundred sketches before sending it on to the next branch, rather than just one thing at a time. How many times have you wished you could do more by achieving many tasks at once. In true, the less tasks one does in a given amount of time, the more one progresses over time. The big batch principle is the same for both.

As in the manufacturing system, the more things you bring in, the more things you get out.

And if you have the right equipment, the more you spend in the " processing tunnel", the slower you go. The appearance of moving quicker.

Unsynchronized simultaneous or concurrent activities

This is one of the most pervasive types of waste, and it often seems to be the best thing to do, despite the fact that it is often the source of a slew of other types of waste. Has it ever occurred to

You that you were not called upon to contribute, you are unable to do.

8. CUSTOMER LOYALTY AND CLIENT RELATIONSHIP

8.1 Introduction

Many of today's leading companies use the Net promoter score (NPS) to monitor and manage client relationship. According to Fred Reicheld and his co-developers of the NPs, a single survey query, "how likely are you to suggest company name to a friend or colleague" is the loyalty metric a company requires to expand its market. Despite its widespread acceptance by companies like GE, Intuit, T-Mobile, Charles Schwab, and Enterprise, the NPs is now the subject of controversy over its merits. Moreover The NPs approach, including its proponents' arguments and detractors' objections. In addition, the sense of consumer satisfaction assessed by survey questions. Finally, it used how the predictability of business performance metrics can be increased when the loyalty issue and business performance measure have the same precision.

8.2 Methodology of NPS

The Net Promoter score is based on a single loyalty question: " how likely are you to recommend us to your friends/colleagues, Customers are divided into three groups depended on its responses to this question a 0 to 10 probability scale, where 0 means "Not at all likely" and 10 means " Very Likely". (1) Detractors (rating of 0 to 6), (2) passives (rating of 7 to 8) and (3) Promoters (rating of 9 tand 10) are the three types of people. By the percentage subtracted of detractors from the proportion of promoters, a company's Net Promoter Score can be calculated.

8.3 Claim of the NPS

Fred Reichheld (along with NPS co-developers satmetrix and Bain&company) has made a number of assertion regarding the NPS's superiority over other loyalty metrics. They also stated specifically:

The Net Prompter Score NPS is " the best predictor of success" (Reichheld 2003)

There is no reliable demonstrable connection between satisfaction and .. growth" (Reichheld etal., 2003)

Reichheld back up his arguments with data that shows the connection between NPS and revenue growth. Reichheld (2006) illustrates with convincing graphs that businesses with higher Net Promoter Scores have higher sales growth than companies with lower Net Promoter Scores (See Figure the top graph).

Reichheld cites only one Bain & associates analysis that found a 0.001 relationship between satisfaction and development.

8.4 Scientific Rebuttals of NPS Claim in the Recent Past

Researchers also done extensive scientific studies on the NPS with surprising findings, finding out that NPS theories are only backed by Reichheld and his co-developers. Keiningham et al. (2007), for example, used the same technique as Reichheld to demonstrate the relationship between NPS and development.Generated Scatterplots to illustrate the association between satisfaction and growth using survey data from the American Customer Satisfaction Index (ACSI). They discovered that happiness is just as effective as the NPS at forecasting success in the personal computer industry (see figure). In other sectors, Keiningham et al. (2007) discovered the same sequence results.

8.5 Constraints in NPS Research

Recent peer-reviewed research reviews cast doubt on Reichheld's and his colleagues 'assertions. In reality, this author is unaware of any published scientific research that affirm the supremacy of the NPS over other traditional loyalty measures as of this writing. The authors of the NPS, Keiningham et al (2007), correctly point out that the NPS Creators might be biased in their study. With respect to their study, The net Promoter creators should present their findings to back up their arguments and reject existing experimental research that contradicts their methodological rigor question. They have not done so to date. Instead, the Net promoter camp emphasizes the straightforwardness of this particular metric. Enables businesses to become more Customer-focused. That isn't a scientific cpounter-argument. That's how marketing work.

8.6 Customer Loyalty Measurement and Implications

Why do often ask loyalty issues have a similar trend of sales growth? Awareness the essence of consumer loyalty requires an understanding of the calculation mechanism that underpins the loyalty issues. Let's start with objective loyalty metrics. There is very little measuring error involved with these metrics. These quantitative loyalty metrics have unmistakable significance from the number of recurring orders. Let's have a look at how surveys can be used to determine consumer satisfaction.

Customers' responses to each loyalty question (likelihood to recommend, happiness, and likelihood to repurchase) customer satisfaction has become a metric. About the fact that we measures different loyalty scores for each loyalty question (for example, NPS, Overall satisfaction, and likelihood to repurchase), the difference between loyalty question might not be as straightforward as we assume, because of how people respond to survey question and the intrinsic error in calculating psychological constructs, rating must objectively assessed in order to ensure recognize the context behind them (American educational research association, American psychological association, and national council on measurement in education, 1985.rating must be critical evaluated in order to ensur that we understand the meaning behind them (American educational research association, American psychological association, and national council on measurement in education,1985. To help identify the context behind the consumers' scores, psychological measurement criteria and analyses (for example, correlational analysis, factor analysis, and reliability analysis) are used .we set out to compare four widely loyalty question to see if there were any variation between them. The following is the loyalty question:

How happy are you with company as a whole?

Would you suggest company to your peers or co-workers?

How likely are you to buy the same good or service from company in the future?

How possible is it that you would pick company if you were choosing a company (within the industry) for the first time?

Every issue was graded on an 11-point scale. Question1 was rated on a scale of 0 (extremely dissatisfied) to 10 (company satisfied) (extremely satisfied). The rest of the question were on a scale of 0 (not likely) to 10 (extremely likely). GMI (global

Market INC,. wwwgmi-mr.com), which provided online data collection and customer panels, assisted the researchers, I polled around 1000 people (general customers in Morocco aged 23 and up) who were asked to name and rank their wireless service provider on four different criteria. When available, I collected quantitative market metrics for each wireless service provider, including sales (2005 and 2006) and defection rates (Q2 2007). I used traditional statistical analyses to survey question that are widely used. First, the overall correlation (r=0.87) between the four loyalty questions was very high. Customers consistently answer to the four questions, according to the finding. Customers who are particularly likely to approve a business are therefore highly likely to be happy with business.

9. CONCLUSION

In this book, I have attempted to emphasize the main components that are required for organization to become a hub of innovation and market leader. It should be obvious by now innovation cannot be forced and inventiveness in any manner, so we should instead cultivate these abilities within the company. Person that work for the firm will only be disappointed if we continue down this path. Innovation must be a part of any company's culture without forgotten the satisfaction of customer. The plan and objectives as we have covered, management may improve its performance by communicating clearly and openly. Can demonstrate that these efforts are well-supported by allowing individuals to participate, to propose their ideas and receive feedback from all levels of the business credit and genuine gratitude for the effort. We can assist individuals in growing and allowing them to talk honestly about what they feel might be beneficial to them should be improved. In addition, the organization's ideals must encourage creativity. These should not be lest as dead letters in the company's print, but should be replaced. Every employee should set an example for others to follow. Again, it is up to the leaders to lead by example and demonstrate that these principles are company-wide guidelines. We can only expect to establish a culture that allow individuals to express their ideas in an open atmosphere without being assessed for how they might enhance the present method of functioning if these basic principles are in place to push for this change. We have said numerous times in this book that every concept has a risk, and that a risk implies that we will fail. On the one hand, we are left with the task of rebuilding the organization's skills, while on the other hand; co-workers with excellent ideas no longer and recognize that we will fail, but we will succeed. It is precisely our failures that propel us onward. With all these components in place, we may now concentrate on the next set of building blocks that will aid in the development of the project. Frequently, individuals try to reproduce frameworks and systems that haven't worked for them. Desire to encourage and facilitate innovation, their efforts are not in useless, since hard work always pays off, but with so many tried and true frameworks currently available, we should concentrate on which methods will work

best for our firm. How do we think people will react to change and if they will be able to come up with fresh ideas or solutions? Sometimes brainstorming is the best solution. However, for more competitive situations, there is a variety of solution available, such as corporate war games. We cannot just expect individuals to come up with ideas or embrace change because it is required of them. Nothing is more challenging than having to come up with a set of answers "on the fly", if we don't understand why, regardless of how or what, this is a pointless effort. Clear frameworks and working method may benefit not just the entire process, but also offer individuals confidence that their ideas will be acknowledged and failure will be allowed. If all of these elements are in place, and we have a clear grasp of current trends and technology that we may employ, we can use a structured innovation process. Only by putting a strong emphasis on these components of creativity will we be able to guarantee long-term buy-in from all stakeholders who will be affected by the changes. I would only suppose that as the number of change managers grows, this has become more apparent to many. This does not, however, imply that change is well managed and that all stakeholders are treated with respect. We can only establish a loop continual change that is supported by all stakeholders if we have an open communication, clear information, and healthy debate that our project efforts has an impact on. We should also be aware of the latest digital solution and trends in the industry. What are our rivals up to, and what does the future holds for us what do our customers expect from us? Only by addressing these question will we be able to arrive at a conclusion. Taking a deeper look at where we could discover. Even when significant changes are taking place in entirely unrelated industries, we may study new and inventive methods of doing things and consider how we might use these ideas in our own. Should we, too , place a major emphasis on lifelong learning? Even while it is obvious to everyone that we have entered a world where people must continue to learn throughout their careers, many organizations still do not give it the attention it deserves. We haven't introduced continuous learning by opening up certain online libraries or requiring individuals to attend a one-time seminar on a given topic. Those of you who are interested many business mandated compliance learning do not related to continual learning. This notion refers to the company's assistance for the professional growth of its workers. They should provide tools and time for all co-workers to focus on various aspects that fit under their own job function as well as other employees' job description. People are able to come up with

new thoughts and views on old problems in this way. We should make these learning efforts a part of employee performance so that everyone recognize the value of new information, which is especially important in this day and age. With all of these ideas in place, we're left with the innovation team, who are brainstorming new ways to arrange this all information which is determined by our organization's DNA as well as the industry in which we operate. What is the extent to which we are willing to go? Do we prefer to collaborate with external specialists or rely on ad hoc processes? Or do we go all-in and recruit specialists who are only focused on innovation? Each of these techniques has its own set of benefit, drawbacks, and dangers. Finally, there's the aspect of invention of process. Despite the fact that there are many alternatives ways, i have included my own thoughts about how we can structure the process below, and what method we may employ to assist us along the path. Several there are a variety of approaches available that are currently underutilized and they deserve a position in the current business world. Due to the fact that we live in a society where Data has become more important than ever before, we should utilize this information and the analysis we can conduct to identify where we should focus our efforts in order to tackle the problem we're seeking to solve. These insights are critical, and in certain situation, they may provide us with the answer we need right away. However, if we need to go deeper into the idea creation process, AI and other techniques/ Approaches can assists us in generating amazing ideas that are completely out the box. These approaches may not provide you with 100 percent of the answers you need, but that isn't the goal. There are supposed to assist you in coming up with amazing ideas. What could be more inventive than employing something's entirely new and untested to assist you in the innovation process? After we have chosen a few of these idea, the process moves on to additional research so that we can figure out which ones are the most practical for our firm. When we examine the present operating environment, which of the offered choices provides the greatest solution? Even after we have completed the examination, we need thoroughly evaluate our ideas to ensure that the solution we've come up with works as well as we could have hoped. When we've made it through all of these phases, we will arrive at the stage we've all been waiting for: implementation. Is this a guarantee that the solution will work? No, but the time and effort you put into each of these stages has significantly increased your odds. Whether you want to become a leader in your business when it comes to new ideas and ways of doing things or not,

innovation is always a risk. Rather, he is laggard who waits to observe what works and what doesn't. Each method has its own set dangers. Only genuinely understanding the nature of these dangers and how we might deal with them in a responsible manner. Only is this way will be able to progress. I hope that the time we've finished reading this book, I've been able to inspire and assist you in the research for a better approach to innovate and develop all sectors of company to reach customers satisfaction.

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APPENDIX

Appendices-1: Questionnaire

1- Is it critical for your company to innovate

A- YES
B- NO

2- Is it important to have a suitable innovation culture in your Organization

A- YES
B- NO

3- Is important to your Organization to Know the customer expectation before selling product

A- YES
B- NO

4- Is it important to your organization to get customers satisfaction after selling

A- YES
B- NO

5- The level of sharing innovation culture in your Organization

A- NON B-FEW C- Medium D- Good E- Better

RESUME

EDUCATION:

Bachelor: 2011-2016, Istanbul University, Engineering Faculty, Industry Engineering Program,

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EXPERIENCE

- Ertürk Platik /Export and Import Department 2020-2021 1 year
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