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Strategic Status of Technology Management and Enterprises for the Technology Adoption Lifecycle

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Abstract

The aim of the study is to present a conceptualizing study in order to express the strategic nature of this situation in the technology adoption life cycle and that it may be possible to manage technology in the context of industry 4.0. Social science has also been included in the study created by the department of management and organization and strategic management. The rapid change of technology leads to a change in the understanding of fashion and a change in the perception of the benefits of the user or consumer on the product. From the point of view of enterprises, it is important to consider this situation at a more thoughtful stage in terms of strategicity. The introduction of technology management in order to use the effects and benefits of industry 4.0 in the technology adoption life cycle in the best and strategic context reveals the originality of the study; management science and its importance due to its potential to be a guiding guide to the business world. As a result, it is thought that the business world can be successful with the decisions they will make using the technology adoption life cycle before the supply of new products.

Key Words: *Technology Adoption Lifecycle, Technology Management, Strategic Management, Society and Technology.*
Jel Code: *M10, M21, O3*

Öz

Yapılan çalışmanın amacı endüstri 4.0 bağlamında teknolojinin yönetilmesinin mümkün olabileceği ve bu durumun teknoloji benimseme yaşam döngüsündeki stratejikliğini ifade etmek adına kavramsallaştırıcı bir çalışma ortaya koyabilmektir. Kapsamını yönetim ve organizasyon bilim dalının ile stratejik yönetimin oluşturduğu çalışmada toplum bilimine de yer verilmiştir. Teknolojinin hızlı değişimi moda anlayışının değişmesine ve kullanıcı veya tüketicinin ürün üzerindeki fayda algısının değişmesine neden olmaktadır. İşletmeler açısından bu durumun, daha düşün aşamasında ele alınması stratejiklik anlamında önem arz etmektedir. Teknoloji benimseme yaşam döngüsünde endüstri 4.0'ın etkilerini ve faydalarını en iyi ve stratejiklik bağlamında kullanabilmek için teknoloji yönetiminin ileri sürülmesi çalışmanın özgünlüğünü; yönetim bilimi ve iş dünyasına bir yol gösterici klavuz olabilme potansiyelinden ötürü ise önemini açığa çıkartmaktadır. Sonuç olarak, işletme dünyasının yeni ürün arzından önce, teknoloji benimseme yaşam döngüsünü kullanarak alacakları kararlar ile başarılı olunabileceği düşünülmektedir

Anahtar Kelimeler: *Teknoloji Benimseme Yaşam Döngüsü, Teknoloji Yönetimi, Stratejik Yönetim, Toplum ve Teknoloji.*
Jel Kodları: *M10, M21, O3*

Introduction

Although it takes its source from necessity or preference, people have created a social life by accepting coexistence, limiting some their behaviors and habits and creating communities. Having accepted the rules necessary for the harmony of social life, mankind has become a member and involved in the first management activities under the shadow of a certain authority and included in its system. In order to continue their lives within this order and to meet their needs, they have developed and used various tools. It can be stated that this situation has come by contributing to the systems in which they are involved, from the most primitive communities to today's information societies. Contribution has sometimes been revealed as a technical tool coming out of the hands of craftsperson and sometimes as an idea embodying a social phenomenon. It can be stated that the pool of knowledge accumulated by the systems developed by social and technical contributions together is called science and is revealed as a science in its management when it Decouples into catagories and becomes a discipline in its own right.

Management science to proactively meet the needs of the people of latent or business based on the needs, Research & Development (R&D) laboratories to develop and that can be demanded by the buyers of the products they bring to market on many experimental performs the determining factors can be specified. The factors that influence people's purchasing preferences in public life are also the basis of the operations performed by the organizations on which management science works in order to achieve above-average returns, to position themselves at an advantageous point compared to their competitors and to maintain their assets. The main factors in the supply of organizations, whether for the purpose of producing products or services, are designed in accordance with the wishes and preferences of consumers or buyers. It is a situation where the design or design of a product or service that cannot be a subject of marketing or will not be preferred by the buyer / consumer has no place in the world of business administration. With this perspective, business owners or the board of directors in line with the goals of the organization by the members of the executive directors within the activities of all departments and marketing departments, including production in accordance with the strategic decisions taken in terms of ensuring the integrity of all departments to be released for the world of mind and synergy to create a common for products or services are required. On the other hand, it can be clearly stated that the main factors that influence buyers/consumers to purchase a product or service are first their purchasing power and status, then the value judgments of society and finally, the perception of fashion in society. In this sense, considering it from a broader point of view, it becomes clear that the current period is the main one that is effective from the economies of buyers/consumers to value judgments and fashion ideas. In accordance with the explanations the first time based on the needs of communities around a proactive understanding of invented and shaped in the aftermath of the products developed within the industry, thanks to society, they start to shape societies and ekomomi, value judgments and the fashion sense is becoming essential because of the factor buyers/consumers they are members of societies that will be in consideration of the phases can be specified.

As a result of the impact of technology on fashion understanding, the shortening in the life span of products causes the perception of the benefits of the user or consumer on the product to change. It is strategically important for enterprises to address this situation at the planning stage yet. It is important to recommend using technology management to strategically use industry 4.0 in the technology adoption process. Another importance is revealed due to its potential to be a guiding guide to management science and the business world. As a result, it is thought that the business world can be successful with the decisions they will make using the technology adoption lifecycle at the planning stage before the new product supply.

Technology Adoption Strategic of Technology Management in The Lifecycle

Wren (1979), who conducted one of the useful studies in this sense, stated that the idea of management went back to 5000 BC. In ancient times, people whose motivations were very different from what they are today and who lived in an organized way have some kind of management understanding. It is known that the ancient Greek, Roman, Egyptian and Mesopotamian civilizations had their own political and administrative practices, as well as organizations that could implement roads, dams, majestic structures, monuments and accounting records (Aktan, 2003).

Table 1. XIX. Developments in Management Thoughts and Practices Until the End of the Century

İSKENDER BC. 325	Leveraging Experts
ROMANS 200 BC - 400 AD	They built factories for the manufacture of weapons, textiles and pottery. They built roads for transportation. They used skilled and specialized workers. They adopted an authoritarian organizational structure.
J. CRIST MS 20	Unity of Command Human Relations
GHAZALI MS 1100	Manager's Features
VENICES 1300 AD	They established a legal framework for business activities.
LUCA PACIOLI MS 1340	first developments in the field of accounting were with the contributions of Pacioli.
SECRET. THOMAS MORE MS 1500	Disadvantages of specialization, mismanagement and leadership
NICOLLO MACHIAVELLI MS 1525	Leadership is based on the masses, solidarity in groups, leadership qualities
SIR JAMES STEUART MS1767	The theory of the source of powers, the effects of mechanization
ADAM SMITH 1776 AD	He emphasized the importance of division of labor and specialization for the Wealth of Nations. He laid out the first principles of the market economy in the modern sense.
CHARLES BABBAGE AD 1832	Scientific approach, specialization, division of labor, time and motion studies, cost accounting, effects of colors on productivity

Source: *Claude SG (1972). The History of Management, 2th Edition, Prentice Hall, NJ*

Industry 4.0 in the Context of Sociology and its Development in Business Science

In accordance with the classification of Fukuyama (2018), at this stage, people lived their lives in the form of "Society 1.0 Hunter-Gatherer" and "Society 2.0 Agricultural Society". After learning to use water, soil, plants, sunlight and even tame some wild animals by observing nature from a period when nature adapts, organized hunting, coexists to protect against dangers and knowledge accumulates to survive to maintain life, agriculture has to a period where agriculture has taken place. The increase in production agriculturally, the partial progress of humanity in organizing and the recovery around national consciousness are characteristic features of this period. During this period, the world's population increased, villages, towns and cities appeared with the continuation of habitation, socio-cultural life, as well as economic vitality and rules in inter-communal relations were formed. After the necessary threshold was exceeded in the use of information, the groundwork was prepared for the transition to the industrial society, which is the next period, especially as a result of the social movement in Europe and the advances in industry. During this period, Society 1.0 and Society 2.0 can be adapted with the management before the scientific period.

Participation in these mentioned practices was previously done by the king, the state or the military, etc. although it is in hegemony, it can be stated that participation has become more homogeneous over time and has evolved directly to individuals or groups (Baransel, 1979).

It has been observed that they have gained improvements in economic purchasing power, as a result of increasing job opportunities, the population living in difficult conditions in the countryside has formed the working class in cities and has been developing by trying to meet the need for education and self-development as it has started to get rich economically.

It can be noted that the developments in the chemical industry, especially with the use of oil in industry, have led to breakthroughs in the business world that have passed to the accumulation of capital and triggered the second industrial revolution.

It has been seen that the purchasing power of the society and the working class, whose social opportunities have improved much more, has improved more and that the product they want has become a state of choice and demand whether it is technological or more different products. It can be clearly stated that the importance of a period when

Fort brand car manufacturer Henry Fort's rhetoric "The customer can choose the color he wants provided that the color is black" was shelved and those who requested were addressed came from the beginning of diversification and fashion perception in products.

Important innovations in the industrial world, developments, inventions, discoveries, innovations and R & D activities as a result of the third industrial revolution informatics, bio-technology, computer technology and nano-technology in the field of clear expression is appropriate. It is observed that the diversity in the portfolio of those who demand from this moment on is the main determining element of the technology-based advancing revolutions. It differs in products in accordance with the demands of consumers. It can be stated that the information that is characteristic of this period is effective in referring to the period as the Society 4.0 information society. It can be noted that information systems on the server greatly facilitate management in the business world, in other words, help, especially in all departments of management, computers and hardware, as well as software, enterprises and business-specific package programs are used.

From an administrative point of view, it is seen that Modern Management Theories have spread over a wide period of time and are somewhat intertwined with Post-Modern contemporary approaches. However, it can be stated that social responsibilities and environmental awareness are at the forefront in the society model, which is the result of the enormous knowledge accumulated by Industry 3.0, which paves the way for the next period and which is sharper and shorter than other transition periods and partly as a result of the uncertainties of what this information might cause when it gets out of control.

Table 2. Management Theories by Periods

Period	Management Items	Procedure	Contributors and Key concepts
Classical Management Theory	Leadership Organization Production Period Authority management Prize Structure	Hierarchy Machine Individual Projected Results Rules are compelling Same Leader Economic Formal Relationships	Time and Motion Study, Functional Consultation, Piece Wage System (Taylor); Five Basic Functions, Fourteen Principles of Management (Fayol); Posdcrob (Gullick); Ideal Bureaucracy (Weber)
Neo-Classical Management Theory	Leadership Organization Production Period Authority Prize Structure	All Instructions Organism Group Unforeseen Consequences Group Norms Participation Social and Psychological Aspects Informal Relationships	Hawthorne Studies (Mayo, Roethlisberger and Dickson); Intellectual Confidential Education, Group Dynamics, Leadership Studies (Lewin, Lippitt and White); Counselor-Focused Therapy (Rogers); Sociometric Technique (Moreno); Human Relations in the Restaurant Industry (Whyte); Small Groups (Homans)
Modern Management Theory	Condition Dependent (Continence) Leadership, Culture Overemphasis on all key elements of a transformational leadership and systems approach	Common Systems (Bernard); Fusion Process (Bakke); Best Realization-Organization and Individual (Argyris); Social System Theory-Nomothetic and Idiographic (Getzels and Guba); Hierarchy of Needs (Maslow); X and Y Theory (McGregor); Hygiene-Motivation (Hertzberg); System 1-4 (Likert); Open Indoor Climates (Halpin and Croft); Administrative Network (Balke and Mouton); Conditional Dependency Theory (Fiedler); Situational Leadership (Everyone and Blanchard); Prospect Theory (Vroom); Three Dimensional Leadership (Rejection); Adaptation Theory (Etzioni); Structure of Organizations (Mintzberg); Leadership-Unconscious Conspiracy (Bennis)	
Post-Modern Management Theory	With school improvement related concepts, Social justice and overemphasis on democratic community and leadership Emerging unconventional perspectives	School Improvement, Democratic Community and Social Justice (Murphy); Transformational Leadership (Bass); Learning Organization (Senge); Transforming Organizations (Bolman and Deal); Total Quality Management (Deming); Synergetic Leader Model (Irby, Brown, Dufy and Trautman); Values and Ethics (Hodgkinson, Stefkovich, Shapiro, Beck and Starratt); Gender, Race/Ethnicity and Class (Gilligan, Nieto, Delpit, Shakeshaft, Grogan, Brunner, Tallerico, Irby, Brown, Skarla, Ortiz, Marshall, Lomotey, Jackson, Pounder, Mertz, Dillard, Rossman); Critical Theory and Postmodernism (Greenfield, Derrida, Faucault, Lyotard, Giroux, Bates, McLaren, Foster, English, Capper, Maxcy, Scheurich, Dantley, West, Young, Larson, Furman anderson, Shields, Lather, Freire)	

Source: *Lunenburg, FC and Ornstein, AC (2013). Educational Administration (Trans. Gökhan Arastaman). Ankara: Nobel Publications*

It can be noted that the industry, which adopts a management philosophy that is more systematic and compatible with environmental conditions, in

addition to being successful and reaching information, also raises environmental concerns that will become fully evident in the next period by developing environmental awareness in the society. It is stated that Society 5.0 has a structure that contains all the development and knowledge accumulated by society to this day and combines and integrates the history of civilization (Er et al., 2021; Mashur et al., 2019). Also, Calis D. (2022) in his study, he referred to a society 5.0 in which problems can be solved with a vision based on a happy person (Pillai et al. 2021; Potocan and Nedelko, 2020). Parallel to all these developments and advances, it is seen that the world of management and the currents and theories of this world have developed by considering technique and society.

Strategic Status of the Technology Adoption Lifecycle of Technology Management

Ultimately, occurring in the business world and the digitization of today's work life, the Metaverse (virtual world), Internet of Things, artificial intelligence, machine learning and technological developments such as cloud computing, period, speed, depth of the system, such as the effect started the industrial revolution with certain features that separates him from other periods, it can be argued that the fourth ((Fırat and Fırat, 2017). However, it can be stated clearly that the Society 5.0 "Super Intelligent Society" project has been launched in order to manage the concerns caused by the dizzying speed of technology and its inability to be controlled. According to the explanations made, it shows that the level of prosperity that society has reached has reached the level where it can demand and supply many products in the characteristics it wants. It can be noted that products have been diversified and sorted from a simple batch needle to space travel within the framework of freedom of travel and economy. At the same time, the effects of this situation, which is enabled by technology, on the world of business and management are inevitable.

Table 3. Elements of Technology Management

Terminology Used	Describing	choose	Acquisition	Commercialization	Protection	Learning	Adaptation
Gregory (1995)	Describing	choose	Acquisition	Commercialization	Protection		
Rush at all (2007)	Research, Awareness	Research, Evaluation	Acquisition, Competence Development	Application, Commercialization		Learning	
Babylon, NCR (1995)	Research, Evaluation		R&D	Integration, Implementation, Obsolescence			
Sumanth (1988)	Awareness		Acquisition, Progress	Harmony, Abandonment			
Dogson (2008)		Strategy	Cooperation, R&D, New Product Development	Commercialization, Application			
Cotec (1998)	Scanning	Focusing	Source	Application		Learning	
Robert (2004)	Awareness of Opportunities		Idea Generation, Problem Solving	Business Development, Benefit, Dissemination			
Levin and Bernard (2008)			Knowledge Generation and Transformation into Working Outcomes	Matching Outputs to User Requirement		Organizational Support	
Cetindamar (2013)	Describing	choose	Acquisition	Commercialization	Protection	Learning	
Akkoyun (2015)	Describing	choose	Acquisition	Commercialization	Protection	Learning	Adaptation

Source: *Adapted by the author.*

It can be specified that enterprises are most affected by technology within the framework of management science, whether it is in the sense of responding to the needs of enterprises in accordance with demand or accompanied by presentations that create fashion or managing needs. However, it can be noted that one more situation has arisen due to the speed of technological progress. It seems that a top version of a technology or technological product that has just been released has been released within a few months, affecting the product life curve and causing it to become outdated. It can be argued that this situation, referred to as the "Technology Adoption Life Cycle", is of vital and strategic importance in technology management, which has a great impact on the competitiveness and survival of enterprises. It is thought that it may be useful to address the elements of technology management at this stage.

In this sense, it can be stated that it would be appropriate to review the most valid process of strategic management today.

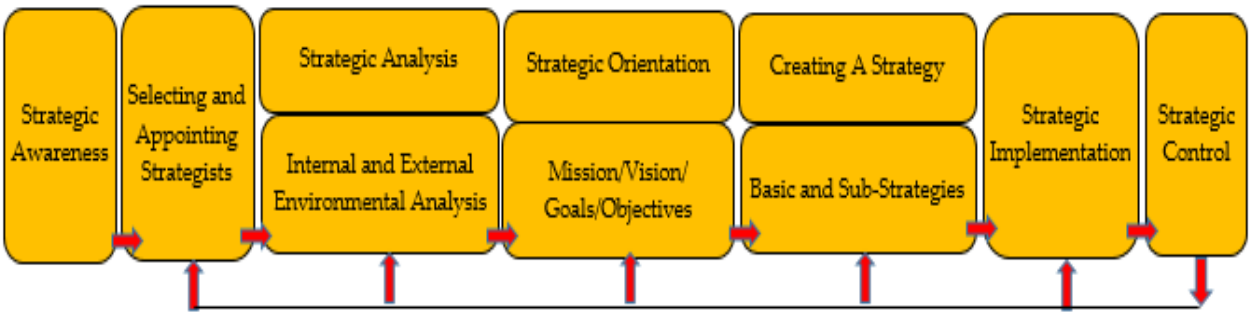

Figure 1. Strategic Management Process

Source: *Ülgen, H. and Mirze, SK (2020). Strategic Management in Businesses, Beta publications, 10th Edition, Istanbul.*

It is predictable that it is important for businesses to implement the right management philosophy and the right organizational structure by anticipating change, realizing the necessary structural adaptations. In other words, it can be stated that it is a necessity to integrate each of the stages of technology management, taking into account the creation of strategic awareness and the appointment of strategists to the analysis of the enterprise, from the work on satrategic adaptation and harmonization to the stage of strategic implementation and strategic control. In addition, it can be stated that it is important for business management to take into account the product life curve and the technology adoption life cycle that affect it at the design stage of a product or service. From studies that address the strategic aspects of Technology Management Linn and Zhang (2000) and the systematic promotion of the process Badaway (1998) have referred to the action with the adaptation of business and technology strategies.

The speed of development of technology, which is vital in today's business management, in recent years also affects the duration of using the technology used by enterprises. In other words, since the new technology can be developed quickly, it can be stated that the fashion sense that affects the perception of "new" and "modern" that affects consumer preferences and the perception of "more useful" due to the nature of the new technological product cause the current technology to go out of fashion in a short time and may affect costs.

When the issue is considered from this point of view, the importance of its acceptance and integration within the enterprise in order to create the optimum level of time and benefit from the technology in the compound is revealed as soon as possible.

Rogers' (2003) "The Theory of the Spread of Innovation" can be a guide at the stage of

acceptance of new technology in an enterprise. In a study conducted at Iowa State University, he suggested that the adoption of new technology depends on four different criteria consisting of product, communication, time and system. It states that the spread of innovation will be evaluated depending on the systematics achieved by catagorizing the individuals who adapt within the process and within certain time frames in a distribution.

However, it has been expressed in how new ideas and technologies have spread to different cultures.

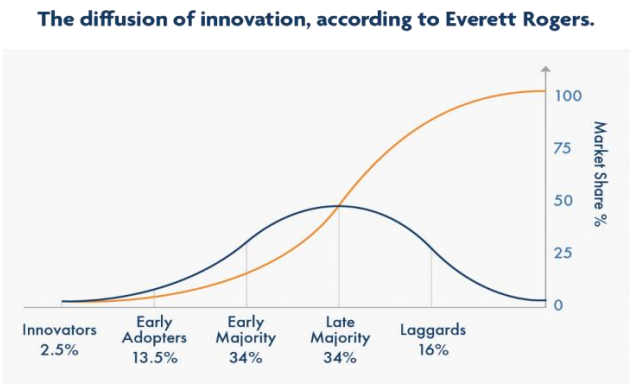

Figure 2. Diffusion of Innovations

Source: *Rogers, E. (2003). Diffusion of Innovations. 5th Edition. New York, The Free Press.*

Bruin (2020) developed the "Technology Adoption Life Cycle" based on this theory and adapted the study. After all, even though their motivation and ways of acquisition are different in organizations, they want to have a technological innovation just like individuals. When we consider this study at the organizational level formed by individuals, it is seen that five different groups have emerged in the acceptance of technological innovation and change in the cycle.

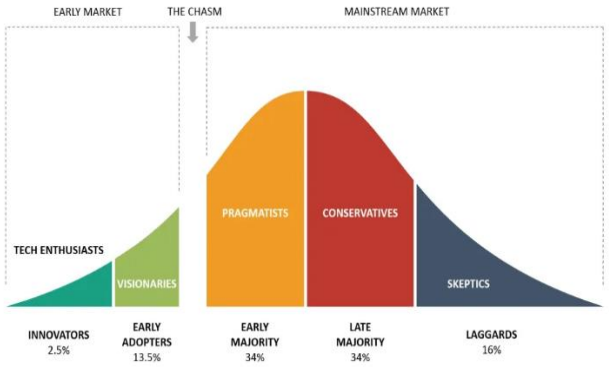

Figure 3. Technology Adoption Lifecycle

Source: *Bruin, LD (2020). Technology Adoption Lifecycle, (Adaptation). Rogers, Everett (2003). Diffusion of Innovations, 5th Edition. Simon and Schuster.*

Innovators (Technology Enthusiasts), technologists who aggressively pursue new technology products this group is the first group of people who are most likely to invest in the product.

Early Adopters (Visionaries), this group of non-technologists, purchase a new product concept very early in the life cycle. They are visionaries who are looking for not only a breakthrough, but also a revolutionary breakthrough. As a result, they are willing to take high risks in order to try something new.

The Early Majority (Pragmatists) are guided by a strong sense of practicality. They know that many inventions are temporary whims, so they are the ones who are content to wait and see how other people achieve it.

The Late Majority (Conservatives) believe more in tradition than in progress. It is they who prefer to wait until a situation becomes an established standard and invest only at the end of a technology life cycle.

The laggards (Skeptics) are those who do not want to do anything with the new technology. Skeptics have a strong belief that innovations rarely work and almost always have undesirable consequences.

Similarly, different researchers (Moore, 1991; Wenger, 2009; Schirtzinger, 2019; Mills, 2021) were carried out in studies on technology adoption life cycle in reaching similar conclusions reported results on graphs. According to Mills (2021), regardless of the financial volume of technology, it

means that all technologies exist in one of four stages.

The R & D phase, first identify a problem, research your options and the cost of developing a solution; the solution, when applied technology will gain a certain amount of time (ascent stage); subsequently, these gains are increasing and that after a certain point, this level of stability that korudog (maturity stage) and lastly, these gains are introduced as new and more efficient technologies or processes that will rise over time (downward phase) expressed.

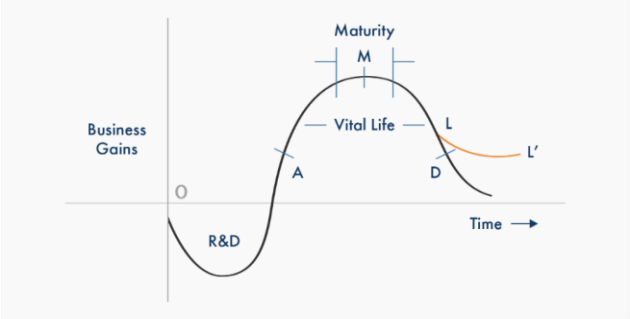

Figure 3. Technology Adoption Lifecycle

Source:[*https://www.dprism.com/insights/technology-lifecycle-management-ceo-roadmap/*](https://www.dprism.com/insights/technology-lifecycle-management-ceo-roadmap/)

In this case, the adaptation of the "Technology Adoption Life Cycle", "Technology Management" and "Strategic Thinking" with a trilogy seems to be almost a necessity. It is a necessity to adapt the decisions taken in the departments of other level managers to the strategies determined by the top management of organizations in order to achieve higher-than-average returns, to position themselves at an advantageous point compared to their competitors and to maintain their assets.

Practically, after detailed extraction of the enterprise's technology inventory, it is necessary to determine at what stage the technologies included in this inventory are from these stages. It is necessary to create a plan and schedule of programs, deciding how to make a change in the cost and benefit plane (to Decommission and buy a new one, to develop it in R & D).

It can be stated that they must be managed within a system, whether it is the products produced or the technologies used in production. It is vital to predict the technology, determine which ways it will be delivered, choose Dec alternatives, determine how and users, learn and protect information about the use of technology and finally manage this process by integrating each stage into the organization in other words.

When developing a new product or changing the technology they use, businesses should take a step by calculating the technological innovation and change in the technology adoption lifecycle and the presence of five different groups in accepting the change. Thus, they can calculate both the resistance to change and the perception in society. It can be stated that the parties whose values and perceptions are ready, whether they are a member of the organization or a buyer / consumer, will have high demands on performing the transaction.

Conclusion

The business world constitutes the building blocks of economic systems. They serve as dynamos in the development and progress of countries and societies. They affect societies in the same way as they are affected by society. Considering the cornerstones separating the periods of industry and societies, it is seen that 4-four industrial periods and five different social periods that give their characteristics to society have been passed to the present day when we consider the cornerstones that separate the periods of industry and societies from each other. From these periods, it can be stated that in Industry 1.0 and Industry 2.0, the production and services of enterprises are usually supply-oriented, whatever enterprises have produced is sold in the face of ready-made demand and buyer / consumer demands do not have much importance. It can be noted that this situation is the same in (1.0) hunter-gatherer, (2.0) agricultural and (3.0) industrial societies. However, it is necessary to state that this situation has undergone changes during the period of Industry 3.0 and Society 4.0, the welfare level of societies and therefore their purchasing power have increased and the buyer /consumer demands have come to the fore more than the business supply of services and products. From this point of

view, it can be stated that the analysis of the value judgments and fashion perceptions of the requesters that guide their demands by the enterprises and accordingly, the supply of appropriate products come to the fore. However, considering that the individuals that comprise the organization they are members of the same society, in considering the organizational structure and informal structures in preferences to lead, to manage businesses of the future must be expressed in clear terms the importance of strategic importance. At this stage, considering the speed of progress in the industry and the resistance that change may face in organizations, it can be stated that the importance of "Technology Management" has been revealed. It can be stated that identification, selection, acquisition, commercialization, learning, protection and adaptation, which are the cornerstones of technology management and the severity of the resistance that is likely to be encountered can be minimized by actively involving members within the organization in the change. However, it should be noted that it is essential for conservatives and skeptics involved in the "Technology Adoption Life Cycle" to be included in this process. It can be stated that it will be equally important and strategic to direct the perceptions of these two groups both within buyers / consumers and within the organization accompanied by technology management. Because, at the present point, Industry 4.0, where businesses are a subsystem, along with the increasing number of conservatives and skeptics involved in the technology adoption life cycle, as well as a shift in the ratio of pragmatists to conservatives, as a result of the 5.0 super intelligent society has been exposed.

It can be stated that today's enterprises can have significant benefits in thinking strategically and acting in the context of strategicity, accompanied by elements of technology management and taking into account the groups involved in the technology adoption lifecycle as criteria. It can be clearly stated that a process that should be carried out by including the members of the organization in the work without falling under the spell of technology for the sake of making more profit in organizations where the pace of technological progress brings changes on top of each other is vital from the point of view of socio-technical balance. After all, considering that robots and systems installed with software can replace millions of employees; In societies where there are people who are unemployed or who will change jobs and fall far below the income level where they are located, irreparable declines in demand lines may occur and create big problems in the supply Sundays of enterprises. From this point on, it should be clearly stated that the demand-oriented market cannot be returned to the supply-oriented market structure as in the early periods and that large uncertainties and chaos can be directed towards commercial markets where there is a right. This situation has made businesses feel obliged to create a balance between technology and society by leading them to think strategically.

High profitability and efficient use of resources under the umbrella of the virtual universe, artificial intelligence, machine learning, Internet of things and robotic systems in industry, unemployment will increase and ultimately the continuation of this situation may be a sign of a layer impoverished and unhappy. Resistance to change has always cost businesses a lot of money. Considering the negative aspects of social aspects, the importance of optimally realizing the balance of technological products within the socio-technical system in which it can be increased is once again revealed. In addition to environmental disasters that progress in industry has the potential to create, intelligent machinery/factory, artificial intelligence, etc. it is seen that the potential of damaging the social balance in the new working life that will be created on the basis of the systems is being revealed day by day. Located in each Industry 4.0 philosophy, "interoperability" as a qualification that connects all stakeholders, also in an elite segment of society out in the open for more fadya individually created by a view of the uncertainty of the results it brings.

After addressing the importance of technology management and technology adoption lifecycle on the basis of socio-technical system, researchers may be advised to work on the use of technology for the benefit of humanity and the use of technology management elements in the business world in order to keep progress under control in future studies. Because it is observed that Society

5.0 cannot address the concerns caused by the speed of technological progress and the inability to be controlled in the process through which it is passed.

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