**Industrial and knowledge society**

**Turbulent and continuous environment**

Do we live in an era of change or in a changing era? How can one characterize the deep transformations that come with the accelerated insertion of artificial intelligence and new Information and Communication Technologies (ICTs) in our present society? Is it a question of a new stage in the industrial society or are we entering into a new era? “Global village”, “technotronic era”, “post-industrial society”, “information society” or “information age”, and “knowledge society” are just a few of the terms that have been coined in an attempt to identify and understand the extent of these changes.

The bottom line is: whichever term we use, it will be a shortcut that allows us to reference a phenomenon - be that present or future -, without having to repeatedly describe it. It was therefore to be expected that any term used to designate the society in which we live, or to which we aspire, be the focal point of a dispute over meanings, backed by the varied opposing projects of society. (Burch, 2006)

**Industrial society**

Industrial society It is important to distinguish the descriptive from the analytical uses of this term. At a descriptive level, an industrial society is simply one displaying the characteristic features of industrialism. However, the term is also used in the abstract to denote the thesis that a definite type of society exists whose culture, institutions, and development are determined by its industrial production process. As such, theories of industrial society constitute a species of technological determinism, or scientific evolutionism. It is claimed that the logic of applied science, or of the technical processes based on scientific expertise and values, makes necessary certain fundamental and irreversible modifications to the traditional culture and institutions of a society. (A Dictionary of Sociology, 2018)

An industrial society is one in which technologies of mass production are used to make vast amounts of goods in factories, and in which this is the dominant mode of production and organizer of social life. This means that a true industrial society not only features mass factory production but also has a particular social structure designed to support such operations. Such a society is typically organized hierarchically by class and features a rigid division of labor among workers and factory owners. Historically speaking, many societies in the West, including the United States, became industrial societies following the Industrial Revolution that sweep through Europe and then the U.S. from the late 1700s on. In fact, the transition from what were agrarian or trade-based pre-Industrial societies to industrial societies, and its many political, economic, and social implications, became the focus of early social science and motivated the research of the founding thinkers of sociology, including Karl Marx, Émiel Durkheim, and Max Weber, among others.

Sociologists believe that in industrial societies, all other aspects of society, like education, politics, media, and law, among others, work to support the production goals of that society. In a capitalist context, they also work to support profit goals of the industries of that society. (Burch, 2006)

**Knowledge society**

The knowledge society is a human structured organisation based on contemporary developed knowledge and representing new quality of life support systems. It implies the need to fully understand distribution of knowledge, access to information and capability to transfer information into knowledge. The understanding of knowledge is the central challenge when defining a knowledge society. From our present perception of the knowledge society, it is useful to emphasize the role of the knowledge society in the future development of human society. The life support systems are essential pillars of human society development. In this respect the knowledge society represents a new paradigm for future development and it is strongly correlated to sustainable development. For this reason the sustainability paradigm of the knowledge society is a potential frame for human society development leading to social cohesion, economic competitiveness and stability, use of resources and economic development, safeguarding biodiversity and the ecosystem.

The knowledge society is based on the need for knowledge distribution, access to information and capability to transfer information into knowledge. Knowledge distribution is one of the essential requirements of the knowledge society. It has to be based on equity and non-discrimination, justice and solidarity. It implies understanding of knowledge as the central pillar of the knowledge society. (Carvalho & Afgan, 2010)

In this past decade, the expression “information society” has without a doubt been confirmed as the hegemonic term, not because it necessarily expresses a theoretical clarity, but rather due to its “baptism” by the official policies of the more developed countries and the “crowning” that meant having a World Summit dedicated in its honor.

In 1973, United States sociologist Daniel Bell introduced the notion “information society” in his book The Coming of Post-Industrial Society, where he formulates that the main axis of this society will be theoretical knowledge and warns that knowledge-based services will be transformed into the central structure of the new economy and of an information-led society, where ideologies will end up being superfluous.

This expression reappears strongly in the 90s. As of 1995, it was included in the agenda of the G7 meetings (followed by G8, which joins heads of State and governments from the most powerful nations on the planet). It has been addressed in forums of the European Community and the OECD - Organization for Economic Cooperation and Development (the thirty most developed countries in the World), and has been adopted by the United States government, as well as various UN agencies and the World Bank Group. All with great repercussions in the communication media. As of 1998, the term was first selected by the International Telecommunication Union (ITU) and then by the UN, as the name for the World Summit (2003 a 2005).

Within this context, the concept “information society” as a political and ideological construct has developed under the direction of neo-liberal globalization, whose main goal has been to accelerate the establishment of an open and “self-regulated” world market. This policy has counted on the close collaboration of multilateral organizations such as the World Trade Organization (WTO), the International Monetary Fund (IMF), and the World Bank, in order for the weak countries to abandon national regulations or protectionist measures that “would discourage” the inversion; all with the known result of a scandalous widening of the gaps between the rich and the poor in the World. (Burch, 2006)

The world knowledge society reflects the human capital generated in the form which is quantified as economic knowledge, environmental knowledge and social knowledge. The notion “knowledge society” (“sociedad del conocimiento”) emerged toward the end of the 90s and is particularly used as an alternative by some in academic circles to the “information society”. In this respect human capital comprises wholeness of the life support systems. Economic knowledge is at the heart of economic growth and the gradual rise in levels of social well-being. The ability to invent and innovate, which is to create new knowledge and new ideas that are then embodied in production, processes and organisation has always served as the bases for future development. The knowledge-based economy is a recently coined term. As such, its use is meant to signify a change of economy from an earlier period to the present day. (Carvalho & Afgan, 2010)

**Continuous and Turbulent environment**

Modern organizations operate in an external environment in which conditions are often changing rapidly and unpredictably. This type of environment has been called "turbulent". Turbulence arises in part from changes in the various elements that make up the environment. It also occurs as a result of interaction between organizations that have conflicting objectives and that compete with one another for benefits in the environment. Each of these organizations is seeking to progress from its existing state to one that is judged to be preferable relative to its objectives. However, no organization can be sure that it can achieve its most preferred future position in view of the competition from others in the environment.

Those responsible for dealing with complex decision problems in a modern turbulent environment experience uncertainty with regard to future conditions and with respect to the future actions of others. Many of the formal decision-making methods that have been developed in disciplines of operational research and decision analysis do not take full account of these factors. The basis of most of these methods is the optimization of the benefits of a single participant in a static environment. The methods hemselves consist of a search for a uniquely rational solution in terms of that single participant (Radfort, 1978)

Probably the most significant author in this area is Peter Drucker so here I can take one of his thoughts.

Every institution – and not only business–must build into its day-to-day management four entrepreneurial activities that run in parallel.

One is organized abandonment of products, services, processes, markets, distribution channels, and so on that are no longer optimal allocation of resources.

Then every institution must organize for systematic, continuing improvement… Then it has to organize for systematic and continuous exploitation, especially of its successes.

And finally it has to organize for systematic innovation, that is, to create the different tomorrow that makes obsolete, and to a large extent replaces even the most successful products of today." This four entrepreneurial activities are the basis for success according to Peter Ferdinand Drucker.

We are always looking for acronyms to jog our memory. The only one we could come up with for this allpowerful Drucker formula for surviving in turbulent times is ACE – I (Abandonment, Continuous productivity improvement, Exploitation of successes, Innovation). (Drucker, 2006)

**Functional and Process management**

Functional- and process-oriented organizations differ from each other where the primary difference in terms of how they are organized refers to the fact that functionally oriented companies are organized in hierarchies where activities are the responsibility of specific units (i.e., departments). Although this commonly leads to a good performance of some functions but often results in poorer integration between them. This is a big limitation of the functional structure, as the good performance or success of an individual unit does not necessarily reflect that the customer need has been satisfies. For example, the 100% availability (i.e., up-running time) of production equipment in a manufacturing environment is assigned of an exceptional performance of the maintenance department. However, this availability of production equipment all the time does not necessarily guarantee that the customer will receive the product on time, with the expected quality and at a reasonable price. In contrast, organizations following the process-oriented structure organize in a different way, favouring structures that permit a strong and constant interaction between functions. As result, organization perform better in meeting customer expectations since the focus is on activities that are part of a particular process that aims at directly satisfying the customer needs (Garza-Reyes, 2018).

In 1776, Adam Smith describes the concept that industrial work should be broken into its simplest tasks. This idea became the basic organization model of business for almost 200 years. The modern business enterprise has gone through only two major evolutions since the Civil War in the United States. Around the turn of the century, management was indistinguishable from ownership. J.P. Morgan, Andrew Carnegie, and John D. Rockefeller began restricting of the railroads and American industry using the basic principles of Adam Smith and the new concept of management work hierarchy. Twenty years later, Pierre S. DuPont began the second evolution by restricting the family business into the modern corporation. Alfred Sloan redesigned General Motors and further defined this business model. This institutionalized command and control, centralization, central staffs, the concept of personnel management, budgets controls (McCormack, Johnson, 2001).

In recent decades, companies have orientated to an efficient execution of individual functions, which has led to a local optimization and perfection of functional areas. Technological and organizational developments, for example, have caused a significant increase in productivity and quality in the areas of accounting, logistics and production thought the use of new information and communication technologies such as standardized software, call centers, inter- and intranets, as well as thought the execution of organizational concepts such as the outsourcing of functional areas. Local optimization, however, caused the interrelationships of operational functions to retreat into background. Unfortunately, the costs for coordination between individual areas of the company increase with the autonomy of functional areas. The use modern information and communication technologies does not eliminate this structural problem. A company´s internal electronic communication just reduces the symptoms, i.e. the duration of the coordination processes. The strengthening of company in its totality and the reduction of existing interfaces, however, require a focus on the cross-functional business processes. The idea of a process-oriented corporate design is not new at all. It has been given increasing attention through the catchwords “Business Process Reengineering” and “Business Process Management” since the end of the 80´s (Becker, 2003).

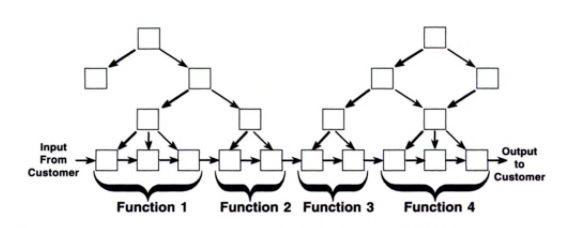
The management process perspective is also called the classical or functional view of management. Its conceptual origin comes from practicing managers (manager authors) rather than management professors. There were few management professors until management became an establishes academic discipline, mainly after 1950. The most famous forerunner was Frederick Winslow Taylor (a production manager, industrial engineer, and consultant), who wrote what can be called the first book focused on management, *The principles of Scientific Management,* in 1911. Taylor systematically studied work processes (time and motion studies) in pursuit of manufacturing efficiency. Industrial engineers of his time conceived techniques for orderly planning and control of complex tasks and projects, including time-event tracking tools (e.g., the Gantt chart, named for creator Henry Gantt, and forerunner of network models such as the Program Evaluation and Review Technique). Taylorist thinking eventually gave rise to management science. Taylor´s book was unique in conceptualizing some district managerial functions, which he perceived to be planning, training, selecting, and controlling (Ralph B. Edfelt, 2010).

Most organizations are structured into functions that are collections of specialists performing tasks. The functions are like silos which work is passed into another silo. In the next silo the work waits its turn because the people in that silo have different priorities and were not lucky enough to receive the resources they requested. Each function competes for scarce resources and completes a part of what is needed to deliver product to customer. This approach to work come out of the industrial revolution influenced firstly by Adam Smith and later by Frederick Taylor, Henry Fayol and others. When Smith and Taylor made their observations and formulated their theories, workers were not as educated as they are today. Technology was not as available and machines not as portable. Transportation of goods and information in the 18th and 19th centuries was totally different from today. As a means to transform a domestic economy to an industrial economy the theory was right for the time. Mass production would not have been possible under the domestic systems used at that time. Drucker, defined a function as a collection of activities that make a common and unique contribution to the purpose and mission of the business (Hoyle, 2007).

In the functional structure, when optimization of activities is pursued, normally each functional area optimizes their own work and processes independent of other functional areas. For example, if the production capacity, the other departments such as the sales departments may not be able to sell the extra produced outputs due to lack of coordination between different functional departments. However, if a process-oriented view is adopted by organizations instead of a functional view, both the production and sales teams would work together to ensure to match the sales figures witch that of the production department. This will result in the overall better performance of the organization rather than just the improved performance of individual units (Garza-Reyes, 2018).

The functional view of the organization is the best described by the organization chart (see Figure 1). This chart shows which people have been grouped together for operating efficiency and illustrates reporting relationships. What is not shown is the customer and the what, why, and how of the business. In the functionally centered organizations, hand-offs between functions are frequently uncoordinated. The greatest opportunity for performance improvements lies in the functional interfaces, or the point where the “baton” is being passed from one function to another. Too often, what is being managed it power and authority, not the activities that bring value to the customer (McCormack, Johnson, 2001).

Figure 1-The Typical Organization Chart



Source: McCormack, Johnson, 2001, page 18

“Functional management” consists in so directing the work of management that each man from the assistant superintendent down shall have a few functions as possible to perform… Under the ordinary or military type, the workmen are divided into groups, the men in each group receive their orders from one man only, the foreman or gang-boss of that group. This man is the single agent though which the various functions of the management are bought into contact with the men. Certainly, the most marked outward characteristic of Functional Management lies in the fact that each workman, instead of coming on direct contact with the management at one point only, namely though his gang-boss, receives his daily orders and help directly from eight different bosses, each of whom performs his own particular function (Fayol, 2013).

The effects of globalization and the technological advances of the last 20 years profoundly increased the pace of change and the severity of competition in the business environment compared to the previous five decades. In response to this rapidly changing business environment, management theorists and scholars are constantly putting forth new ideas to help corporations succeed in this turbulent world. These new ideas are like the flavour of the day. One idea after another would be put forth, generating excitement in the management press, only to fade away in a few years. The uninitiated outsider might perceive these management fads as unrelated concepts that arose independently. The truth is most of these management ideas often built on one another and shared central these that have not changed through the years. Whether it is Total Quality Management (TQM) of the 1980s or Business Process Reengineering (BPR) of the 1990s, the one central theme common to these management ideas is the concept of process management (Chang, 2006).

Process: A specific ordering of work activities across time and place, with a beginning, an end, and clearly identified inputs and outputs as a structure for action (McCormack, Johnson, 2001).

A process is completely closed, timely and logical sequence of activities which are required to work on a process-oriented business object. Such a process-oriented object can be, for example, an invoice, a purchase order or specimen (Becker, 2003).

Process management means establishing control points, performing measurements of appropriate parameters that describe the process, and taking corrective action on process deviations (McCormack, Johnson, 2001).

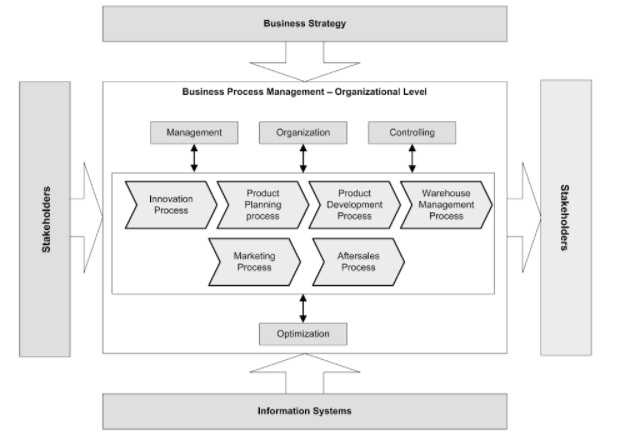
In successful businesses, leaders define their strategic directions and goals as part of a process management approach. They manage performance through business processes-in “process or value streams”-as opposed to linking together functional activities-“functional stovepipes or silos.”(Hunt, 1996)

Business process management is based on the observation that each product that a company provides to the market is the outcome of a number of activities performed. Business processes are the key instrument to organizing these activities and to improving the understanding of their interrelationships (Weske, 2012).

To manage a process, the first task is to define it. This involves defining the steps (tasks) in the process and mapping the tasks to the roles involved in the process. Once the process is mapped and implemented, performance measures can be established. Establishing measurements creates basis to improve the process. The last piece of the process management definition describes the organizational setup that enables the standardization of and adherence to the process throughout the organization. Assigning enterprise process owners and aligning employees´ performance reviews and compensation to the value creation of the processes could accomplish this (Chang, 2006).

The structure of organization-level business process management is shown in Figure 2. The business process management space is influences by the business strategy of the enterprise, that is, by the target markets, by business strategies opening new opportunities, and, in general, by the overall strategic goals of the enterprise. Information systems, shown in the lower part of Figure 2, are valuable assets that knowledge workers can take advantage of. An important aspect of business process reengineering is combining small granular functions conducted by several persons into functional units of larger granularity, and supporting knowledge workers in performing these tasks with dedicated information systems. Business process management is based on the resources of an enterprise, most prominently its knowledge workers and information systems. Information systems enable knowledge workers to perform business process activities in an effective manner. Information systems also have implications on business processes, since some business processes might not be possible without appropriate information system support. Stakeholders are among the most important influential factors of business process management. The stakeholders box in the left hand side in Figure 2 represents the fact that stakeholders have implications on the organizational business processes. But business processes also have implications on stakeholders, as shown in that figure, too (Weske, 2012).

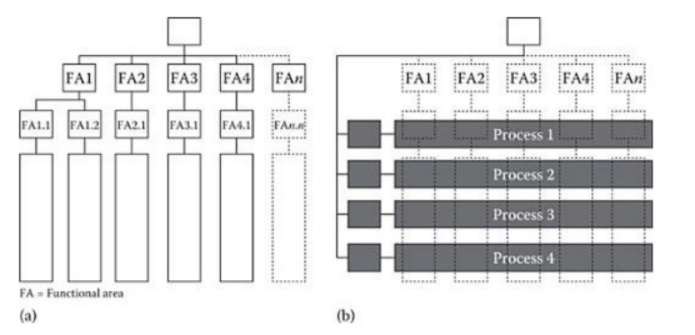
Figure 2-Organization-level business process management



Source: Weske, 2012

Process management orientation has greater potential of creating competitiveness for organizations as suggested by business excellence and quality experts; this has also been supported by empirical evidences in literature. For example. The European Foundation for Quality Management (EFQM) model emphasizes on the management of organizations based on processes to achieve business excellence. There are many success stories of the EFQM model such as BMW Regensburg Plant in Germany and Bosch Tecnologie Diesel e Sistemi Frenanti S.p. A. in Italy have achieved important improvements in their operations due to the process-orientation approach. Comparison between (a) a functional-management orientation and (b) a process-management orientation (see Figure 3) (Garza-Reyes, 2018).

Figure 3-Differences



Source: Garza-Reyes, 2018

Because of higher average income, consumers demanded more customized goods and services. They were no longer satisfied with whatever corporations sold them. All of these factors created challenges for corporations built for mass production. Instead of supplier-driven economy that existed before, corporations were faced with customer-driven economy. This set up our current environment with customer demand quality products that cater to their needs. Customers are also now demanding a satisfactory purchasing experience and customer service. Corporations that do not provide an easy buying experience risk exclusion from future sales. This increased competition and the resulting shift from the supplier-driven economy to a customer-driven economy have forced corporations to rethink their organizations and business practices. The turbulent business environment results in new management thinking and focus. One of the management initiatives to help corporations compete in this customer economy was total quality management (TQM). This is not an easy term to define and entire academic articles have been devoted to its definition. The ideas of TQM were not new. They were developed by William Edwards Deming, Joseph Juran, and Kaoru Ishikawa starting in the mid- 1940s. Even though Deming started the quality movement, he never used the term TQM. All three founders of TQM share a more socialistic view of the corporation then the traditional capitalistic theorists. They place strong emphasis on the corporation´s responsibility to the community, customers, and employees, rather than solely to stakeholders (Chang, 2006).

Do process management techniques lead to superior organizational performance? For more than a decade, business writers and academics alike have stressed the importance of process management to the achievement of “world class” manufacturing performance. Yet, despite the widespread adoption of process management methods ranging from total quality management (TQM) and continuous improvement to more radical business process reengineering, surveys cast doubt on whether companies´ efforts to improve performance through process management are yielding positive economic returns. A study by McKinsey & Company, for example, found that nearly two-thirds of the equality programs that it examined had either stalled or fallen short of delivering real improvements. Studies by A.T.Kearnes and Arther D. Little reached similar conclusions: “80 percent of more than 100 British firms reported no significant impact as a result of TQM and almost two-thirds of 500 U.S. companies saw zero competitive gain.” This disappointing findings from these studies raise questions about the ability of process management techniques to improve performance. Indeed, many companies now appear to be abandoning TQM and reengineering programs in the face of poor bottom-line results (Ittner, Larcker, 1997).

1. **The Development of Change Management**

Management of change is represented by a complex of management activities that lead to the shifting of an individual, team, department or entire organization from the current to the required state. As an independent part of management it appears at the end of the seventies of the twentieth century and to a certain extent is related to oil shocks which significantly affected the stability of the world economy at that time (Veber, 2017).

Change management does not have a rich history. Theoretical bases go back to the early times (Veber, 2009).

The management scientists and open systems theorists of the 1950s through the 1970s accepted the idea of change and argued that both organizations themselves and their environment were dynamic and constantly shifting. From the mid-1980s, change became a topic of greater urgency in management thinking (Witzel, 2016).

Before the 1970s, leaders as a whole paid relatively little attention to their external environment, including their customers, competitors, or the marketplace in general. In the late 1970s, the scope of change increased, further causing leader´s focus to turn to the organization and how to improve it. This focus on organizational improvement intensified in the mid-1980s with the quality movement, then again in the early 1990s with the reengineering craze, and continues today with the information technology movement, enterprise resource planning efforts, and the search for how to master global connectivity via the World Wide Web (Anderson & Ackerman Anderson, 2002).

In the chaotic conditions of the 1990s, crisis management is increasingly being applied. Arguments for this philosophy stem from the nature and consequences of critical changes (Řezáč, 2009).

It was also in the mid-1990s that change management began to be seen as absolutely necessary. Overnight, the major content change consulting firms began change management practices. But most of early approaches made the mistake of applying change management techniques to people and process dynamics that were inherently unmanageable (Anderson & Ackerman Anderson, 2002)

Machan (2012) states, that for understanding management of change as we know nowadays, two basic directions in the development of the perspective are important:

* engineering
* psychological

The concept of change management can be also specified in relation to the dominant nature of change, namely:

* management of internal changes
* management in conditions of constant changes
* management in conditions of critical changes (Řezáč, 2009)

Today’s change management movement has arisen in response to the difficulty companies have had in making constant, rapid improvement a routine aspect of work. Efforts to overcome this have led to the bifurcation of organizational life into ordinary times and change management times (Schaffer, 2017).

* 1. **The theory of innovation**

The roots of change management constitute the theory of innovation. Her representatives include Joseph Alois Schumpeter. In the early decades of the twentieth century, he recognized innovation as a major asset and regarded it as the essence of the economic development of market economies. Schumpeter´s theory of development is based on the existence of innovations that bring innovation to the innovator, but it has to be spent on increasing productivity, capitalizing it so that it may be maintained in business field (Veber, 2009).

This theory is usually attributed to Joseph Schumpeter, although certain elements of innovation theory are even older (Frish in Sundbo, 1998). Innovation theory had a marginal status until the end of the 1970s. Keynes was the great model for economic regulation, and it was only when the difficulties of applying his theories in the economic depression of the 1970s became evident that economists began to turn elsewhere. According to innovation economics, innovation is the determinant responsible for most growth when an economic boom begins in a period of depression. In Schumpeter´s original formulation (1934) the growth factor was said to be entrepreneurship, since the entrepreneurs produce the innovations. Innovation is therefore important to the national economy in such period of depression as occurred in the 1970s and 1980s (Sundbo, 1998).

As a representative author of the Czech innovation theory may be considered František Valenta. He published articles on the role of innovation at the end of the 1960s (Veber, 2009).

* 1. **The engineering approach**

The engineering direction of management is evolving by Frederick Taylor (Štrach in Machan, 2012) and his mechanical perspective focused on traceable and measurable elements of management that we can change or strengthen. This mechanical perspective includes nowadays:

* business strategy
* processes
* systems
* organizational structures
* working roles
* projects

Frederick Taylor introduced the concept of scientific engineering, in which he recognized that each task could be examined scientifically and rationally optimized to improve productivity (Epstein & Harding, 2004).

The engineering approach perceives management and firm as a clockwork, in which each of its parts can be simply replaced so, that the whole unit brings required and predictable result. The change is seen as a continuous improvement process or as a radical process of reengineering that was introduced in the early 1990s by an important study by Michael Hammer (Machan, 2012).

* 1. **The psychological approach**

The psychological approach focuses on how people react on their surroundings. It is also concentrated on individual thoughts and behaviour in specific situations in societies. There were studies created on a topic how people respond to corporate changes. The main author is William Bridges who published study called *Managing Transition* in 1991. It is focusing on human ability to adapt to changes in companies and work with resistance (Machan, 2012).

Bridges says that change is not the same thing as transition. Change is situational: to move to a new site, the retirement of the founder, the reorganization of the roles on the team, the revisions to the pension plan. Transition, on the other hand, is psychological (Bridges, 2011).

It is necessary to complement engineering and psychological approach together. If they are carried out in isolation, they will fail. The engineering approach prevailed in Czech countries in the 1990s. There was a need to plan well and create different projects to help in developing firms. The lack of this approach was shown when relatively high resistance was created during the implementation of projects (Machan, 2012).

* 1. **Structured process of change management**

The structured process of change management has quickly begun to complement both of these mentioned approaches. In eighties Jeanenne LaMarsch applied an organizational change management model in companies AT&T, Belle Laboratories and later in companies Ford and Caterpillar. Her approach is described in books named *Changing the Way We Change, Managed Change process* and *Change Better*. Other significant author is Daryl Conner who has captured his experience in the study called *Managing at the Speed of Change*. The important author is also John Kotter who is known all over the world for his Eight-step process for leading change (Machan, 2012).

Conner argues (2006; p. 13), that: *“our lives are the most effective and efficient when we are moving at a speed that allows us to appropriately assimilate the changes we face.”* It is the speed at which people are able to absorb change with a minimum of dysfunctional behaviour. As the world grows more complex, the pressures mount for us to manage more change at increasing speeds.

* + 1. **John Kotter**

John Kotter observed countless leaders and organizations as they were trying to transform or execute their strategies. He identified and extracted the success factors and combined them into a methodology, the award-winning 8-Step Process for Leading Change (Kotter International, 2018).

His model was first published in a 1995 article in the Harvard Business Review. The following year, it was published with greater detail in classic the book called *Leading Change*. Both were based on his personal business and research experience, and did not reference any outside sources. This was not typical of an academic undertaking. Although Kotter´s model of change management lacks rigorous fundaments, it became an instantaneous success at the time it was advocated and it remains a key reference in the field of change management (Appelbaum, Habashy, Malo & Shafiq, 2012).

Most of Kotter´s work over the past two decades has focused on aspects of managerial behaviour. His book *The General Managers* is an important work which looks at how general managers work and function. Kotter concludes that although there are similarities in the ways in which general managers work, there are also important differences, and he questions whether “general management” can be conceptualized as a discipline. Kotter´s most significant and controversial work, however, has been on the subject of leadership. In A Force for Change he argues that the leadership and management differ, and should be considered separately (Witzel, 2005).

* 1. **Management of Internal Changes**

Since the early 1980s the general concept of change management included primarily the content of management work to ensure specific conditions and tasks in making internal changes within considered organisation. The key problems were represented by innovative changes especially in organizational structures and their staffing. It was a period when the frequency and intensity of external changes in the business environment of the developed west economics began to grow (Řezáč, 2009).

Changes may be either classed as external or internal depending upon the work environment. Internal changes are those changes over which we may have some control. These are the changes we introduce ourselves rather than have others introduce them for us. Generally, internal change is initiated in order for the organisation to meet with or pre-empt changes in its environment (Saville & Higgins, 1994).

* 1. **Management in conditions of Constant Changes**

In conditions of constant changes is management oriented mainly on opportunities and threats of external business environment in comparison to strengths and weaknesses. It is a fact that the effect of external changes is reduced or it causes the need for internal changes in organization (Řezáč, 2009).

Nowadays, one of the important characteristics of modern business is related to the efficient process of business restructuring. The main objective of restructuring is greater market positioning in the context of constant changes in business environment (Spremo, 2012).

* 1. **Management in conditions of Critical Changes**

Management in conditions of critical changes has come into use in the early 1990s. This type of management has its own specifics because effects of external business environment has such an unexpected occurrence, sharp dynamics of change and the chaining, that the consequences can be with high probability for the organization critical. That is why some of the authors classify as its part also the crisis management (Řezáč, 2009).

Critical changes will receive a more thorough evaluation and scrutiny than those deemed to be non-critical. Unfortunately, it is not always obvious when a change is critical, and when it is not. Indeed, one of the principal purposes of a Management of Change review is to determine the impact of a proposed change to define its criticality. There is a danger of falling into the trap of circular logic of the kind:

* a critical change requires more thorough analysis
* a thorough analysis is needed to determine if a proposed change is critical (Sutton, 2010).

Management in conditions of critical changes is oriented towards the art to successfully survive in conditions of external threats. At the same time it seeks to take advantage of the external environment as an opportunity to strengthen and enhance its business position. Part of a proactive policy is not only the possibility projection of external changes into internal but also active participation in initiating, directing and using them (Řezáč, 2009).

* 1. **Other significant authors in history of change management**

**Igor Ansoff**

Ansoff relates change management to decision making because the ability of a firm to recognize and respond to change appears to be influenced by the same factors that influenced other strategic decisions. His work on change management was an attempt to provide a prescriptive dynamic technique form managers to expand strategic planning into the domain of strategic management. In this work he not only describes the sources of resistance to changes in organizational strategy and capabilities, but also describes four methods for overcoming resistance to change. Because he recognized that strategic planning was static and that a more dynamic management approach was needed, he introduced the concept of planned learning as an alternative to either adaptive learning or planned change. He suggested that adaptive learning is most common and normally triggered by changes in the environment that the firm can no longer ignore (Witzel, 2005).

**Kurt Levine**

His focus through the 1940s was on group decision making and the management of change. He was particularly interested in systematizing group behaviour and developing schema whereby such behaviour could be understood. In a late piece of work he developed a three-stage theory of change. The first stage he calls “unfreezing”, in which previously held beliefs, patterns of behaviour, etc. are dissolved or removed preparatory to the actual process of change. The second stage “moving”, is the transition from one state to another. The third stage, “freezing”, is the validation and embedding of the new state or mode of behaviour. Lewin also conducted a number of studies into the motivation for change, and concluded that personal success depends on the ability of people to set their own levels of aspiration at a realistic level: too high and the person will fail to meet his or her goals and become discouraged, too low and underachievement will be the result (Witzel, 2005).

Levin´s simple three-stage of model of unfreeze-change-freeze is still used by consultansts, although it has been criticised for being overly simplistic and for taking insufficient account of the continuity of change (Witzel, 2016).

**Edith Penrose**

Penrose focused more on the issues of cooperation and networking of firms, being interested in whether alliances, clusters and business networks could be accommodated within her theory, and also with the idea of a theory of the change of firms. Her work gained widespread recognition at the time, but the major interest came in the 1980s, especially in terms of the context of the resource-based theory of the firm. In contrast to traditional economic theory that offered little understanding of the processes taking place inside the firm, Penrose offered insights to understanding the firm as a “real life”, “flesh and blood” organization of the real business world, emphasizing the generation of knowledge that takes place within it. She defines the firm as a collection of (tangible and intangible) resources, bound together under and administrative coordination and authoritative communication (Witzel, 2005).

**Thomas J. Peters**

In a world of globalization and rapid technological change, Peters sees change moving at such a rate that it amounts almost to chaos. Instead of trying to defend against change, however, organizations should embrace and even create change. Organizations should never be allowed to settle, never be given time enough to build up defensive routines. Only through the constant process of change and regeneration can business survive (Witzel, 2005).

**Chris Argyris**

Argyris says that to effective change leads the circulation of knowledge and use of knowledge. Therefore the emphasis should be on the knowledge, not the change processes. He distinguishes between single-loop learning, in which feedback is used to alter actions, and double-loop learning, in which feedback is used to question the underlying assumptions on which action is based. Truly effective change, he says, must be based on double-loop learning (Witzel, 2005).

## 

**Peter F. Drucker**

Peter Ferdinand Drucker, (born November 19, 1909, Vienna, Austria—died November 11, 2005, Claremont, California), Austrian-born American management consultant, educator, and author, whose writings contributed to the philosophical and practical foundations of the modern business corporation. He was also a leader in the development of management education, and he invented the concept known as management by objectives.

Drucker, who received a doctoral degree in international and public law at the University of Frankfurt (1931), worked as a journalist in Germany but fled to England when Adolf Hitler rose to power in 1933. He remained in England until 1937, when he moved to the United States to work as an adviser to British banks and as a foreign correspondent for several British newspapers; he became a U.S. citizen in 1943. Drucker later taught at New York University (1950–71) and at Claremont Graduate University (1971–2005).

Although Drucker was known to shun the term consultant, it was through consulting that he wielded the greatest influence, starting with his 1943 invitation to analyze the organizational structure of the General Motors Corporation. The resulting book, Concept of the Corporation, offered the first complete [assessment](https://www.merriam-webster.com/dictionary/assessment) of a large corporation as a social institution. Drucker later served as a consultant to a number of corporations, organizations, and governments. [8]

In 1934, Peter Drucker married Doris Schmitz, whom he had known since he was a student at the University of Frankfurt. They had four children; three daughters and one son.

Even after he stopped taking classes, Drucker continued to work, acting as consultant to business houses as well as non-profit organizations. In many cases, he did not take any fees.

In 1969 he was awarded Presidential Citation, the highest honor awarded by New York University. On July 9, 2002, Drucker received the Presidential Medal of Freedom from US President George W. Bush.

Apart from his books on managements, Drucker had written two novels and one autobiography. He had also made eight educational films on management topics.

Drucker died November 11, 2005 in Claremont, California of natural causes. He was then ninety-five years old and was survived by his wife, four children and six grandchildren. [Editors, TheFamousPeople.com. *Peter Drucker: Biography* [online]. May 29, 2017 [cit. 2018-03-13]. Dostupné z: https://www.thefamouspeople.com/profiles/peter-drucker-132.php]

**The changes and new trends in management**

As digital transforms the business landscape, the successful organizations are forced to be those that can move faster, adapt more quickly, learn more rapidly, and fulfill dynamic career demands (Bersin, McDowell, Rahnema, & Durme, 2017). These forces lead to applying and implementing some changes and trends in company organizations which helps companies to stay in operation and to reach a competitive advantage. This literature review focuses on chosen trends and changes company go through these days.

**Changes in organizational structures**

Fast-moving global markets and digital disruption have forced companies to innovate rapidly, adapt their products and services, and stay closer than ever to local customers. This has prompted a resurgence of interest in business organization. Companies are decentralizing authority, moving toward product- and customer-centric organizations, and forming dynamic networks of highly empowered teams that communicate and coordinate activities in unique and powerful ways. Over 80 percent of respondents to global survey report that they are either currently restructuring their organization or have recently completed the process. Many companies have already moved away from functional structures: Only 38 percent of all companies and 24 percent of large companies (>50,000 employees) are functionally organized today. (McDowell, Agarwal, Miller, Okamoto, & Page, 2016).

**Network of teams**

Organizations often find it necessary to redesign the structure of the company due to influences from the external environment. Structural changes involve the hierarchy of authority, goals, structural characteristics, administrative procedures, and management systems (CliffsNotes, n.d.). Successful organizations must be designed for speed, agility, and adaptability to enable them to compete and win in today’s global business environment. An important part of designing for adaptability is a shift away from hierarchical organizational structures toward models where work is accomplished in teams. Top companies are built around systems that encourage teams and individuals to meet each other, share information transparently, and move from team to team depending on the issue to be addressed (Bersin, McDowell, Rahnema, & Durme, 2017). This new mode of organization - a “network of teams” with a high degree of empowerment, strong communication, and rapid information flow - is now sweeping businesses and governments around the world (McDowell, Agarwal, Miller, Okamoto, & Page, 2016).

In addition, the digital revolution helps teams stay aligned. Today, teams can easily use web or mobile apps to share goals, keep up to date on customer interactions, communicate product quality or brand issues, and build a common culture. Rather than having to send messages up and down the corporate pyramid, people can access information immediately (McDowell, Agarwal, Miller, Okamoto, & Page, 2016).

**Process orientation**

Nowadays, more and more companies are adopting organisation oriented on processes, which is a great shift from traditional operations-oriented management.

Process orientation is a methodology that is very successful in addressing the people side of improvement, breaking down silos in an organization, improving communications, and reducing rework that occurs as a result of multiple departments executing a process. (Sever, 2006). Aligning the organization towards process orientation can help in numerous other ways, from removing people dependency to aligning turnaround times, and developing standard procedures. With process orientation, organizations can be more focused towards core business (Arif, 2017).

Process Orientation involves educating suppliers and customers (internal or external) about what process requires and where value is being lost so that they are able to see how they can add value, anticipate needs and suggest changes that would help all parties meet their requirements. It enables suppliers, process owners and customers to “think as one mind” about maximizing the performance of jointly-owned processes (Sever, 2006).

Process Orientation is widely taught and successfully applied in Europe as an essential element to process improvement in construction, manufacturing and service industries like IT, E-Business, Supply Chain, as well as and communication processes that overarch all industries (Sever, 2006). The adoption of robotics in a manufacturing plant or of laser‐scanning checkout systems at supermarkets are examples of process‐oriented changes (CliffsNotes, n.d.).

**Changes in the attitude to company development**

**Learning Organization**

Organizations need to learn more than ever as they confront these mounting forces. Each company must become a learning organization in order to learn to survive and prosper in changing and uncertain environment. It needs its managers to make right decisions through skill and sound judgment. Successful decision-making requires the organization to improve its capability of learning new behaviours over a period of time (Satyendra, 2014).

The concept flourished in the 1990s, stimulated by Peter M. Senge’s The Fifth Discipline*and* countless other publications, workshops, and websites. The result was a compelling vision of an organization made up of employees skilled at creating, acquiring, and transferring knowledge. These people could help their firms cultivate tolerance, foster open discussion, and think holistically and systemically. Such learning organizations would be able to adapt to the unpredictable more quickly than their competitors could (Garvin, Edmondson, & Gino, Is Yours a Learning Organization?, 2008).

A learning organization is an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights (performance (Garvin, Builiding a Learning Organization, n.d.). The learning organization aims to bring new ideas, debate issues, introduce innovative methods and offer case studies to others.

Peter Senge, a leading writer in the area of learning organizations, describes five disciplines that must be mastered when introducing learning into an organization:

**1. Systems Thinking** - the ability to see the big picture, and to distinguish patterns instead of conceptualizing change as isolated events. Systems thinking needs the other four disciplines to enable a learning organization to be realized. There must be a paradigm shift - from being unconnected to interconnected to the whole, and from blaming our problems on something external to a realization that how we operate, our actions, can create problems

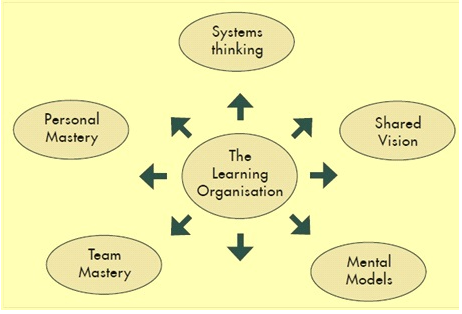
**2. Personal Mastery** - begins "by becoming committed to lifelong learning," and is the spiritual cornerstone of a learning organization. Personal Mastery involves being more realistic, focusing on becoming the best person possible, and striving for a sense of commitment and excitement in our careers to facilitate the realization of potential

**3. Mental Models** - must be managed because they do prevent new powerful insights and organizational practices from becoming implemented. The process begins with self-reflection; unearthing deeply held belief structures and generalizations, and understanding how they dramatically influence the way we operate in our own lives.

**4. Shared Vision** - visions cannot be dictated because they always begin with the personal visions of individual employees, who may not agree with the leader's vision. What is needed is a genuine vision that elicits commitment in good times and bad, and has the power to bind an organization together.

**5. Team Mastery** - is important because modern organizations operate on the basis of teamwork, which means that organizations cannot learn if team members do not come together and learn (Mason, n.d.).

Picture 1: Five characteristics of a learning organization



Source: <http://ispatguru.com/a-learning-organization-and-its-characteristics/>

The very first thing needed to create a learning organization is effective leadership, which is not based on a traditional hierarchy, but rather, is a mix of different people from all levels of the system, who lead in different ways. A learning organization's culture is based on openness and trust, where employees are supported and rewarded for learning and innovating, and one that promotes experimentation, risk taking, and values the well-being of all employees. (Mason, n.d.).

**Changes in information sharing**

**Open book management**

**These days, important information-sharing changes occur in dynamic businesses, which have led to the concept of open book management.**

**Open book management (OBM) is defined as empowering every employee of an organisation with required knowledge about the processes, adequate training and powers to make decisions which would help them in running a business. It is all about team work and moving forward collectively (HR Zone, n.d.).**

**It involves keeping complete transparency with employees, sharing data, training employees to embrace leadership roles as well as sharing financial statements. Research has shown that when companies share distinct details about the organisation with the employees, this process helps them grow faster. Most of the companies where this concept is followed generally figure among the top 10% of the companies (HR Zone, n.d.).**

**Open-book management is underlined by the theory that workers are more motivated and productive when they are treated as business partners – who traditionally have access to financial data – rather than employees (HR Zone, n.d.). When a company shares sensitive information with employees, it leads to better employee-employer relationship, helps build trust and boosts the morale of employees. Open book management approach is about showing employees' the financial statement data and making them believe that every effort of theirs is getting reflected in the overall numbers of the company. This facilitates in building the trust as well as enable companies in retaining employees (The Economic Times, n.d.).**

**Changes in the attitude to customer satisfaction**

**Mass customization**

**These days, numerous brands are adopting important business concept called mass customization. Mass customization deals with making changes to a product or service to satisfy a given consumer group (Martin, 2015). Mass customization promises individually customized products at the price of a mass-produced item. Individual customer gets something that is customized to his needs but doesn’t have the luxury price tag usually associated with custom-made products (All About Lean, 2017).**

**Mass production has been able to provide us with inexpensive and affordable products. Since every product is identical, it is possible to standardize, mechanize, and automate the process. Both machines and workers are able to work much faster and more efficiently if every part is identical. They can use the more efficient flow production. This also applies to the suppliers, who can provide many, many identical parts much cheaper than would be a variety of different products (All About Lean, 2017).**

**There are four basic approaches to mass customization, depending on customization of the product itself or its representation. When designing or redesigning a product, process, or business unit, managers should examine each of the approaches for possible insights into how best to serve their customers.**

1. **Collaborative customization**

**Collaborative customizers conduct a dialogue with individual customers to help them articulate their needs, to identify the precise offering that fulfills those needs, and to make customized products for them (Gilmore & Pine, n.d.). This approach falls under mass customization and is primarily meant for businesses with highly-customization-centric clientele. Moreover, this approach seeks to help clients who struggle to spot exactly what they want and find themselves confused between a huge variety of options (Martin, 2015).**

1. **Adaptive customization**

**Adaptive customizers offer one standard, but customizable, product that is designed so that users can alter it themselves. The adaptive approach is appropriate for businesses whose customers want the product to perform in different ways on different occasions, and available technology makes it possible for them to customize the product easily on their own (Gilmore & Pine, n.d.).**

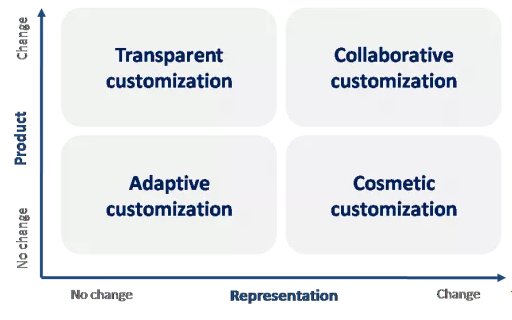
1. **Cosmetic customization**

**Cosmetic customizers advertize a standard product differently to different groups of clients. This approach works well when clients use the same product but want them to be presented differently. Such products are not customized but instead they are packaged differently to suit different kinds of customers (Martin, 2015). For example, the product is displayed differently, its attributes and benefits are advertised in different ways, the customer’s name is placed on each item, or promotional programs are designed and communicated differently (Gilmore & Pine, n.d.).**

1. **Transparent customization**

**Transparent customizers fulfill the needs of individual customers in an indiscernable way-changing the product for them but in such a way that they may not even know that the product has been customized. Instead of requiring customers to take the time to describe their needs, transparent customizers observe behaviors over time, looking for predictable preferences (Gilmore & Pine, n.d.).**

Picture 2: Approaches to mass customization



**Source:** <https://www.cleverism.com/mass-customization-what-why-how/>

There are many companies that move toward mass customization. Besides automotive (which has done it for decades), there are many other industries. For example, the German company Mymuesli sells a higher-end breakfast cereal mix, but also gives the customer the option to design their own muesli mix. This concept also adopted Czech company called Mixit, where you can choose from hundreds of potential ingredients those you like. Another example are desktop computers. Within the standard housing, you can mix and match a wide variety of components to get just the computer you want. This was for a long time the strategy of Dell (All About Lean, 2017).

**Changes in the surroundings of organizations**

**3 C**

In current business environment, 3C´s have become the driving force. 3C´s include customer, competition and changes. Even though these terms are not new to the area of business environment, their characteristics and importance have changed when compared with the past (Panwar, Kumar, & Ray, 2016).

**Customer:** The avaibility of products and services with only little variation left customer with a very limited choice in the end of 20th century. Since 1980´s came a change in existence in seller-customer relation and shift in market orientation from manufacturer/ service providers to consumer (Panwar, Kumar, & Ray, 2016).

**Competition:** Nowadays, there is an increasing move in manufacturing towards customized products, products of greater variety and small-order products. Individual customer expects that product is configured to their requirement and need schedule and also demands lower priced and superior quality services. This has forced a multi competition in the market which includes quality, variety, price and services before, during and after sale. Competition got redefined and customer looks for best price for their expected level satisfaction and features of product or service (Panwar, Kumar, & Ray, 2016).

**Change:** The change of product market, which has occured since the 1960s and peaked in the 1980s caused the change in production technologies and demand for control. With the globalization, the increasing demand forced to modify the product life cycle from years to months. Unresponsiveness, inflexible, absence of customer focus and lack of innovations has become the prohibited parameters for business practice as well as promoting technological changes is necessity of the business growth (Panwar, Kumar, & Ray, 2016).

**Changes in technology**

**Industry 4.0.**

**Among the most important changes of the 21 st century belong technology and digital development which has also big impact on managing companies. A dramatic expansion of new technologies has led to a new concept called Industry 4.0.**

**Industry 4.0 represents the fourth industrial revolution in manufacturing and industry, transportation and logistics, smart buildings, cities or healthcare. Industry 4.0 is the current industrial transformation with automation, data exchanges, cloud, cyber-physical systems, robots, Big Data, AI, IoT and (semi-)autonomous industrial techniques to realize smart industry and manufacturing goals in the intersection of people, new technologies and innovation (I-Scoop, 2017).**

**The First Industrial Revolution used water and steam power to mechanize production. The Second used electric power to create mass production. The Third used electronics and information technology to automate production. Now a Fourth Industrial Revolution is building on the Third, the digital revolution that has been occurring since the middle of the last century. It is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres (Schwab, 2016).**

**In the area of manufacturing, the concept of smart factories is a really actual topic these days. The term describes an environment where machinery and equipment are able to improve processes through automation and self-optimization. The benefits also extend beyond just the physical production of goods and into functions like planning, supply chain logistics, and even product development (Clearpath Team, 2017) . In addition, cyber-physical systems can monitor physical processes, create a virtual copy of the physical world and use available information to make decentralized decisions (Gandhi, 2015).**

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