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EVOLUTION OF PROJECT MANAGEMENT IN THE DIGITAL ECONOMY

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ABSTRACT

The great changes caused by the Fourth Industrial Revolution, also known as Digital Transformation, are happening very fast. We are living a new reality of Digital Economy, where technological innovation has a great impact on how projects are managed. This article has the objective to identify what Project Managers appropriate profile should be in order to face this new reality, taking advantage of using new digital technologies to increase the probability of projects' success and contribute with added value to the economy, the environment, and society. It is also presented the model proposed by Green Project Management, oriented to sustainability, and is also emphasized the importance of identifying the best approach to follow in the development of a new project in this Digital Economy era, knowing that besides the traditional predictive and agile approaches, there are rising new hybrid approaches, gathering the positive characteristics of the both of them.

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GLOBAL KNOWLEDGE ACADEMICS

1. Introduction

The evolution of technology is much more intense in recent history. About 1 million years ago, the ability to control fire was an important change in the habits of pre-humans, as it generated heat, light and allowed them to cook food. The evidence of wheeled vehicles dates from the fourth millennium BC. But it was much later, in the 15th century AD, that the printing press appeared, in the 16th century, the microscope and the thermometer were invented, in the 17th century the telescope and in the 18th century, at the origin of the first industrial revolution, the steam engine, the hot air balloon, the bicycle and the typewriter. In the 19th century, with the second industrial revolution, the steam train, the photograph, the lamp, the automobile, and the telephone appeared. The third industrial revolution arises in the second half of the 20th century, with the computer and the mobile telephone. From 1990 onwards, we may already speak of the fourth industrial revolution, linked to Digital Technologies.

Klaus Schwab (2016), President of the World Economic Forum, considers that in the Fourth Industrial Revolution "The changes are so profound that, from the perspective of human history, there has never been a time of greater promise or potential peril."(p. 8). This Revolution is different from previous revolutions because of its velocity, amplitude and depth, and systemic impact. We are living an exponential and non-linear pace where everything is interconnected in a world with new technologies that generate newer and more qualified ones. It is based on the digital revolution, combining several technologies and it involves the transformation of systems between and within countries, into companies, industries and across the society. The new digital technologies are leading to deep changes in society, impacting on organizations, and on the employment market (Cabeças & Silva, 2019).

It took about 75 years for the phone to reach 1,000 users, but it only took 2 years for the mobile phone to have more than that number of users. We have a new reality with systematic and profound changes, where Airbnb, Uber, Alibaba, Google with the autonomous car or WhatsApp are good examples.

> Uber, the largest taxi company in the world, does not even have a vehicle. Facebook, the world's popular media owner, does not create any content. Alibaba, the most valuable sales site, has no stocks. Airbnb, the largest hosting provider in the world, doesn't even own a property. (Goodwin, 2015, p. 1).

Project Management exists since humans began building in an organized manner and we have evidence that in older civilizations there were already followed rules in the construction of buildings and roads, which clearly show us a specific concern with Project Management (Cabeças, 2018).

Frederick Taylor (1856-1915) was the first to apply management techniques to industry and Henry Gantt (1861-1919), who worked with Frederick Taylor, is considered one of the most important developers of planning techniques and project control, having created the famous "Gantt Charts" as a support tool for Project Management. Later, in the beginning of the 1950s, we may consider that the modern era of Project Management began, with the development of the PERT and CPM models, originating PERT/CPM[1] (Cabeças, 2018).

The International Project Management Association (IPMA) was founded in Europe at 1965, the Project Management Institute (PMI) was created in the United States of America in 1969, both with the objective of find ways to support and help Project Management to get better results. PMI developed the Project Management Book of Knowledge (PMBoK) that was published in 1981, defining the standards and practical guidelines to be used by Project Managers, which is considered one of the main guides in this area (Cabeças, 2018).

The European Commission developed the PM[2] Methodology in 2007, to be used in European Union projects, and in 2012 was issued the ISO 21500 with generic guidance and description of key principles for good Project Management practice, and in 2020 a new, more detailed ISO 21502 was published, replacing the previous ISO 21500. Green Project Management (GPM), as a sustainability-oriented Project Management organization, appeared in 2009.

[1] PERT/CPM is the conjunction of the Program Evaluation and Review Technique (PERT) with the Critical Path Method (CPM)

According to PMBoK (2013), “A project is a temporary endeavour undertaken to create a unique product, service, or result” (p. 3) and “Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements" (p. 5). To grant a good Project Management it is important that Project Managers have the adequate skills, with professional qualifications and profile to enable them to manage projects (PMI, 2013).

This article, concerning the Evolution of Project Management in the Digital Economy, has a main objective to identify what should be the appropriate profile of the Project Managers to face this new Digital Economy reality, taking advantage of the use of new digital technologies to increase the probability of success of projects and contribute with added value to the economy, to the environment and to society. It is also presented the model proposed by Green Project Management, oriented to sustainability, and is also emphasized the importance of identifying the best approach to follow in the development of a new project in this Digital Economy era, knowing that besides the traditional predictive and agile approaches, there are rising new hybrid approaches, gathering the positive characteristics of both.

This document has the following sections: Introduction; section 2, where is described the used methodology; section 3, where the theme of Digital Economy is detailed, defining its concept and scope in the context of the Fourth Industrial Revolution; section 4 containing a historical introduction to Project Management evolution, including the most significant changes related to Digital Technologies and the existing different approaches to improve the success of projects with sustainability concerns; section 5 has the list of the conclusions of this article.

2. Methodology

The elaboration of this article consisted in the research of available scientific literature on this recent theme, through published books, recent articles and also from publications available on the Internet, published by accredited entities such as Project Management Institute (PMI), International Project Management Association (IPMA), Green Project Management (GPM), and others.

It was made a global analysis about the Evolution of Project Management in the Digital Economy from all these sources, detailing all information in the following chapters and resuming the obtained results in the conclusions chapter.

3. Digital Economy

Digital Economy incorporates the Internet, technologies and digital devices in the production, commercialization and distribution processes of goods and services.

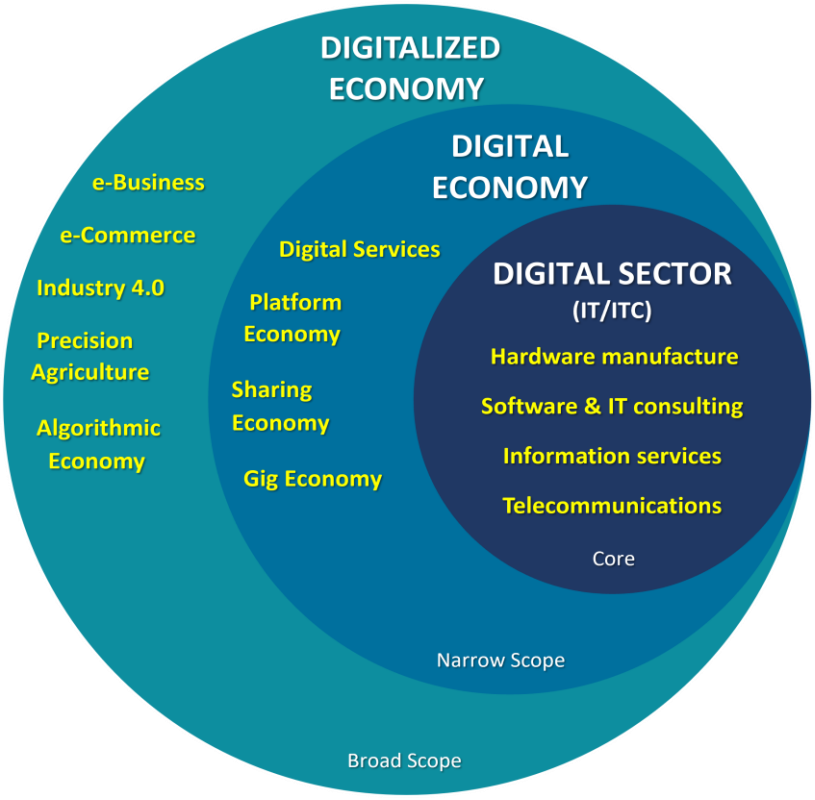
In the United Nations Conference on Trade and Development (UNCTAD) held in 2019, a very good representation was shown of the Digital Economy, as seen in figure 1.

The new technologies can help to achieve the Sustainable Development Goals. It is stressed the importance of improving international cooperation to get the full social and economic potential of digital technology. Digital Technology evolution has generated enormous wealth in a short time, but it has been concentrated in a small number of entities, individual people and countries. Considering the current policies and regulations around the world, this trajectory is likely to continue and will contribute to rising inequality (UNCTAD, 2019).

In this context of Digital Economy, we must have to come up with new ideas, which should be innovative, without any fear of facing risks and only then will we have entrepreneurship. We need to identify opportunities and implement them with added value. Innovation and entrepreneurship are fundamental to economic and social development, transforming society and the environment. Without entrepreneurship there will be no new projects and we must not forget that they are the ones which drive businesses and the economy, because they enable innovation and are agents of change.

The pace of innovation associated with new technologies is confirmed by the number of patents registered at the European Patent Office (EPO), which has been growing very fast. The quick evolution, between 2002 and 2015, in the miniaturization of transistors has led to an increase in the capacity of processors, global Internet use grows significantly every minute, 5G, with higher data transmission rates and Big Data, will allow the Internet of Things to become a reality. Big data is also powering the block chain technology, where transactions may be safely stored in data bases allowing control of the new reality of cryptocurrency.

Figure 1. Digital Economy



Source: UNCTAD, 2019.

We are experiencing the Fourth Industrial Revolution characterized by major changes associated with digital transformation, defined as the process where organizations use digital technologies to improve their processes and outcomes. It is an enormous challenge to Management in a highly competitive environment and in the era of the Digital Economy. Human capital is the core of this movement linked to technology, business models and products.

There is a wide range of technological advances, especially in the digital technology area, able to change the world. However, we must ensure that these advances continue and are geared to the best possible results.

Schwab (2016) and known entrepreneurs such as Bill Gates and Elon Musk have been warning against significant job losses in the world's major economies as a direct consequence of the industry's digitalization. Solutions and new responses will need to be found to mitigate the risk of unemployment. In fact, there may be new job opportunities associated with the technology itself. In a recent study, the International Labour Organization (ILO), estimates that "between 120 and 150 new professional activities will emerge in the next 50 years, many of them generated by the technology itself" (Cabeças & Silva, 2019, p. 84).

A hyper-connected world in conjunction with growing inequalities may lead to increase fragmentation, segregation and social unrest, which may origin to attitudes of violent extremism. There is a need for great care and common sense with the information provided, which must be timely, correct and adequate, as well as thoughtfully and critically considered. There will also be a risk of cyber-war where an opponent can create serious problems to the enemies, destroying their communications or accessing defense and attacking systems, without the traditional physical boundaries of the countries being relevant. Cybercrime may increase as well, since criminal activity associated with attacks on computer systems and communication networks has been significant, giving rise to greater concern about cyber-security (Schwab, 2016).

Today it is clear that cybercrime has no borders, and there is now an awareness of the importance of strengthening the fight against it. As an example, Brad Smith (Microsoft CEO) argued in 2017, at the Web Summit, that "cybersecurity must be one of the great causes of our time." (Cabeças & Silva, 2019, p. 7).

Strategic and operational decisions are also being anticipated with the covid-19 pandemic, with the help of artificial intelligence, advanced robotics, big data, business intelligence and 5G in communications, making companies, businesses and people's quality of life to evolve faster. There is also evidence that digital technologies are impacting on how companies are led, organized, and managed (Cabeças & Silva, 2019).

It has been predicted that "in 2022, 25% of the top 500 European companies will change their focus from the board to digital business excellence and sustainability." (Meyer, 2020, p. 11).

About 40% of the world GDP is generated by successful projects but we know that many companies have disappeared over time because they did not innovate and did not evolve, such as the case of Kodak that did not bet on digital photography and eventually went bankrupt. It should be mentioned that, from the original list of the 500 largest companies of Fortune magazine in 1955, only about 70 companies remain active today.

We live in a world constantly being changed by technology. The appropriate use of new digital technologies will be critical to ensure the success of organizations. Recent studies prove that innovative organizations are more successful with their projects, when giving priority to digital skills and knowledge (Cabeças & Silva, 2019).

The new digital technologies are already allowing employees of services areas to work in teleworking. In training activities, the use of digital sharing and communication tools is another good example of the use of new technologies. According to a study by CAP Gemini, conducted in 2020, 63% of companies with teleworking teams in the covid-19 pandemic period, through reduced travel times, more flexible schedules, and the adoption of digital collaborative tools, achieved productivity gains during the third quarter of 2020. In the future, companies must find a balance between remote and face-to-face work, eliminating some of the negative risks, which may be inherent to this way of working.

Today, in Project Management, Project Managers can manage projects remotely, without their physical present, with the use of Project Management IT tools and videoconference systems. In industry it is already possible to perform many tasks without the need of workers' physical presence and using intelligent robotics. In the Healthcare Sector, imaging exams can be diagnosed online by doctors in teleworking and surgical interventions may be supported by robotic systems. There are also projects to create computerized prostheses, commanded by the human brain, and to produce organs with intelligent artificial. Smart cities, intelligent buildings, smart offices, private homes, vehicles and agriculture are also good examples of the technology evolution. Digital Banking and Digital Commerce are also already a reality (Cabeças & Silva, 2019).

The use of online computer tools in conjunction with Data Science is enabling the emergence of Digital Marketing, which has grown at a high rate in recent years, allowing companies to promote their products or brands through online communication with the public in a personalized way and at the right time.

Digital Technologies are redefining the basic principles of strategy and changing the rules on how companies should operate in the market to have success. Digital transformation is more than technology, being important to consider strategy. We may be required to upgrade IT architecture, but the more important issue is to upgrade the strategic thinking. The Digital Leadership must have the ability to reimagine and reinvent the business itself (Rogers, 2016). In fact, we are now living in a Digital Economy era.

4. Evolution of Project Management in the Digital Economy

4.1. Project Management History

Project Management exists since ancient times and since the second half of 20th Century it has been evolving very fast. The emergence of institutions such as IPMA and PMI with a strong concern in defining rules and guidelines to improve the quality of project management has contributed to better methodologies and to improving results.

The Project Management classic model, known as the Triple Constraint or the Project Management Triangle, is used by Project Managers since the beginning of the second half of 20th century. This model considers that a project that is completed in the planned time, with the expected cost and the agreed scope, is a quality project. This model may be represented in figure 2.

Figure 2. Triple Constraint

Source: Adapted from Author, 2018.

Obviously, the quality of a project's final product will always depend on the sponsor's perspective. We must not forget that the quality of a final product from the Project Manager's perspective may not be the same as that of the Sponsor, so it is critical that the Project Manager clearly and unambiguously understands the Sponsor's requirements and ensures good communication and proper expectation management throughout the project.

In 2006, Kerzner stated that, when the techniques and concepts of Project Management were first applied, cost and time risks where the main issues, but from the 1980s onwards organizations began to work risks linked to their impact on scope, cost, time, and quality objectives.

Unfortunately, many projects still fail these days, and, despite improvements, especially the appearance of different approaches supporting Project Management methodologies, mistakes are still being made. Most of the recent worldwide statistics are confirming that more than 50% of projects are failing because of problems of communication, poor or non-existent planning and defining unrealistic deadlines.

Good communication is considered a key factor for the success of projects. All communication channels must be well planned and organized so that an adequate communication plan must be created and maintained throughout the life of the project, involving all internal and external project stakeholders. On the other hand, poor planning can be just as bad as non-existing planning, emphasizing that a goal without a plan is just a wish. Setting unrealistic deadlines is obviously a project killer and Project Managers will be in a delicate situation, as their management and the project Sponsor will certainly not give them the opportunity to manage a new project again (Cabeças, 2018).

But how can we improve? A PMI (2018) study referred that "there are three top drivers to help a project to achieve success:

1. Invest in the active participation of the project sponsor, ensuring that he is present when needed;
2. Avoid scope changes after the project starts, as any changes will impact the project's final cost and/or deadline;
3. Ensure the existence of mature capabilities to deliver value with the project." (p. 19)

Ensuring the involvement of all stakeholders in a project is very important, but the project Sponsor has always a huge relevance, being a key to allow the project success (Cabeças, 2018).

Allowing changes during the project development is also a huge risk factor as it imposes more workload, which has an impact on project costs. There are two ways to solve this problem, one is to increase the workload to be carried out by the project elements, and the other is to add more workers to the project. Either of these alternatives will imply more costs. Agile approaches help to minimize this risk by segmenting the project in watertight phases, where the requirements are specific to each phase and changing them will not impact the other phases.

Regarding mature capabilities for value delivery, Kerzner (cited in Dowling, 2014) mentioned that "Value is when a project adds significantly to the business. What's happening in the industry today is that companies end up having all sorts of projects in their queue, but how many add value?" (p. 1).

A project must add something to the business and to society, otherwise it will be considered as a useless project. Currently, the goals of a business are also being seen from other perspectives, more

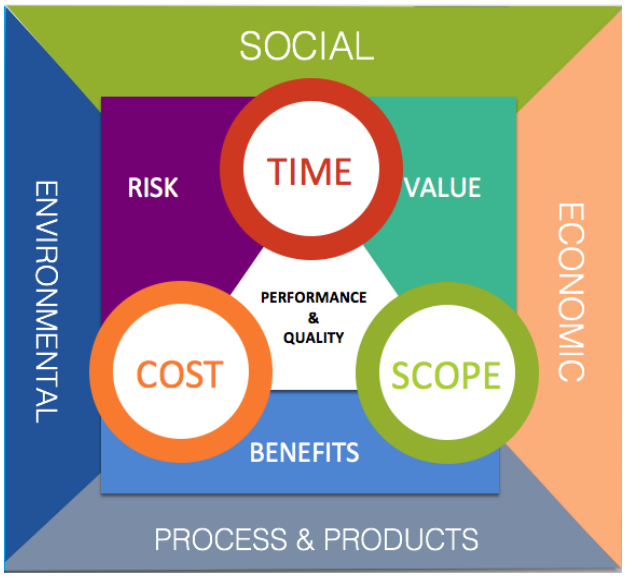
than the traditional profit, appearing also sustainability and ethical perspectives as very important (Cabeças & Silva, 2021).

Sustainable projects are being considered increasingly important for organizations and norm ISO 26000 is defining sustainability as "integrating the goals of a high quality of life, health and prosperity with social justice and maintaining the earth's capacity to support life in all diversity"(ISO, 2010, chapter 2.23). According to IPMA in 2016, organizations must consider a sustainable perspective on developing new projects, respecting stakeholders' expectations on social responsibility and in 2015 stated that Project Management must be aligned with the organizations' strategy.

4.2. Green Project Management

Green Project Management (GPM) developed a recent model as an evolution of the triple constraint classic model, where we may look our project with an environmental concern, making decisions that consider their impact on the environment. It is a way of thinking green in each of the five PMBoK Project Management Process, initiating, Planning, Executing, Monitoring and Controlling, and Closing. Highlighting a sustainability perspective, it is important to use natural resources, considering the environment and welfare. GPM is an entity based in the USA, that considers the evolution of the traditional model to a wider and more complex one, where new components are added, represented in figure 3.

Figure 3. GPM Model



Source: GPM, 2019.

In this model, Project Managers should be focused not only on time, cost, scope and quality, but also should be focused on benefits, and risks and should also consider the five "P's", which are referred to in the document *The GPM P5™ Standard for Sustainability in Project Management*, People, Planet, Prosperity, Processes and Products, with the goal to achieve a good Project Management and the creation of sustainable projects. Project managers should ensure that projects are truly sustainable, contributing to meet the needs of their stakeholders and adding value to the environment and to society.

4.3. Project Management evolution and Project Managers profile to face Digital Economy

Methods and tools used in Project Management are evolving with new technologies. Tools are evolving and they will be even smarter and more sophisticated. The evolution of Project Management models is a fact, were the predictive traditional Waterfall or Agile project approaches are also following the technological evolution. There are also appearing the new Hybrid Models, which will be more detailed in this article.

Projects delivery in time is very important to the organizations and agile approaches are being an important way to help on reducing the gap between business requirements and project delivery. It is

also a fact that automation, data analytics and artificial intelligence are increasingly helping to improve ways of monitoring performance, identifying deviations from projects plans and reducing risks and issues (KPMG, 2019). There is today a huge expectation about the use of hybrid models to improve project management even further.

Grey (2016), in the World Economic Forum, considered "the three most relevant skills for a professional to succeed in the Fourth Industrial Revolution as, complex problem solving, critical thinking and creativity" (p. 1). But he also identified as important people management, coordination with others, emotional intelligence, judging, and decision making, service orientation, negotiation, and cognitive flexibility. Highlighting two specific concepts on Greys' list, as far as emotional intelligence is concerned, it can be said that those with high emotional intelligence manage their emotions better and achieve a better professional performance (Goleman, 1995), and those who show cognitive flexibility are able to think of different strategies to achieve the same goal.

As mentioned by Wagner (2017),

> projects have the objective of enabling the creation of innovative products and services and they require a flexible and context-adaptive facilitation. The people working in projects must acquire new skills and the leadership style will change as there are no dependent employees anymore but 'co-workers' on more flexible organizations (p. 1).

Project Management and Project Managers are adapting to the new reality of the Fourth Industrial Revolution and the Digital Economy. Bolick (2019) identifies that "Project Managers can face the digital transformation using four different approaches:

1. Promote the agility of change

Digital transformation is much more than increasing computing power. Technological capabilities, internal resources and customer experiences are changing

The Project Manager will have a greater role in identifying value, serving as an agent of change and influencing multidisciplinary teams in organizations;

2. Evolving intellectual capacity

Digital transformation requires an evolution in leadership skills. Recent research shows that two of the ten most valued leadership skills will be cognitive flexibility and emotional intelligence. Leaders able to apply emotional intelligence and cultural awareness, demonstrating technical skills, critical thinking and analysis, will be at the forefront of digital transformation;

3. Consider the resource dynamics

Project Managers will need to create cross-functional teams with a balance of native knowledge and new experiences, using advanced robotics and computing systems. There will need to be an open mindset, cognitive skills and emotional intelligence, qualities that will be in high demand by employers for the efficient transition of resources to a digitized workforce;

4. Refining emotional intelligence

Leaders must ensure the balance between innovation and chaos with the stability of organizational processes. With the adoption of artificial intelligence and advanced robotics, leadership will tend to be more oriented towards collaborative processes, where knowledge sharing is important. Relationships and emotional intelligence are critical, for Project Managers to facilitate the relationship and motivation of employees, contributing to the growth of their enthusiasm.". (p. 1)

Melanima (2018) stated that "in the past, purely technical skills were essential, but today social skills are also essential for good professional performance" (p. 1). The ability to interpret data using Business Intelligence (BI) with Big-Data is very important for the organizations and for the success of future projects.

Recycling and talent management should be encouraged, with the recruitment of data scientists and engineers, mathematicians, statisticians, and software engineers, who are increasingly essential to reinvent and build the digital generation project management workshop. It is also necessary to define

a change management strategy that stimulates business, procurement, and IT leaders to catalyze the concept of project management services, in a Project Management as Service logic, as an accelerator for modernization initiatives and for the increase of competitiveness in the global market (Santos, 2021).

Project Managers need to embrace new ideas and reinvent their own organizational options, practices, and decision support tools to address more dynamic project management models, and capitalize on the evolution of technologies, information systems and the new data economy as enablers of greater transparency. A recent study by Gartner refers that

> 80% of project management tasks will be eliminated by 2030 as the adoption of new digital technologies, including artificial intelligence solutions, virtual reality, machine learning, analytical intelligence tools and their integration with digital communication platforms, such as Teams and others, and agile project management modern tools as Jira, Trello, and others. (Santos, 2021, p. 1)

Microsoft Project continues to be the number one Project Management tool with the highest number of worldwide users, but new tools are appearing with a more collaborative perspective.

In the face of advancing technology, we may ask how we determine whether the innovations resulting from the new digital transformation will be truly useful and whether they will introduce added value. We need to identify and quantify risks, positive and negative, resulting from the introduction of innovations associated with new technologies, to allow for a better informed and balanced decision on the advancement of new projects. Several international movements warn about our planet's scarce natural resources, showing signs of climate change and pollution, demonstrating an increasingly strong concern for sustainability.

The introduction of new Digital Technologies contributes to improving the quality of project management and helps in the development of new projects. In our context, in a Digital Economy environment, choosing the right approach in Project Management also becomes relevant.

4.4. Project Management Predictive, Agile and Hybrid Approaches

The traditional predictive approaches, as waterfall and the agile approaches[2] are very well described on books and on the Internet. But new approaches are appearing. These are described as hybrid models, which try to combine the positive characteristics of the previous ones, to help projects to be more successful.

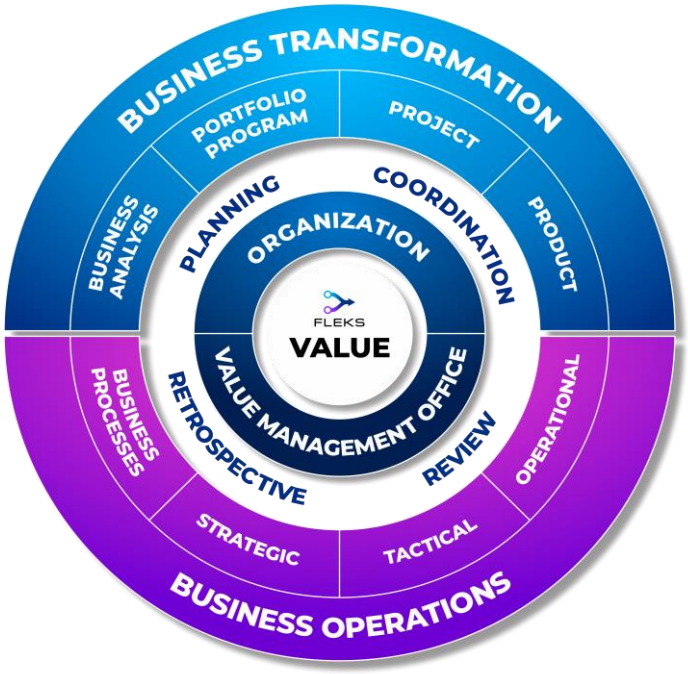
Good examples of recent developed hybrid approaches are the FLEKS Hybrid Model created by Hélio Costa (cited in Trentim, 2020) and PRiSM, as a sustainable approach, created by GPM in 2013.

According to Costa (cited in Trentim, 2020), FLEKS is a lean, hybrid model for managing organizational transformations and operations that enables rapid adaptation to change in the environment and a sustainable flow of value creation. This model is an organizational management approach that aims to provide support to the implementation of a structure, processes, techniques, and tools that allow a fast adaptation to market and environment changes, creating a continuous and sustainable flow of value for its stakeholders, through hybrid managed actions. This Model is a set of guides that allow you to integrate predictive and agile approaches into a single model, helping to achieve project objectives and deliver value. Concepts such as Strategy, Sustainability, Change Management, Value Management Office, Business Analysis, Portfolio, Program, Project, and Product Management are covered in this hybrid model.

The following figure 4 represents the FELKS Hybrid Model:

[2] Agile Scrum, Kanban, Lean, Extreme Programming (XP) and others

Figure 4. FLEKS Hybrid Model

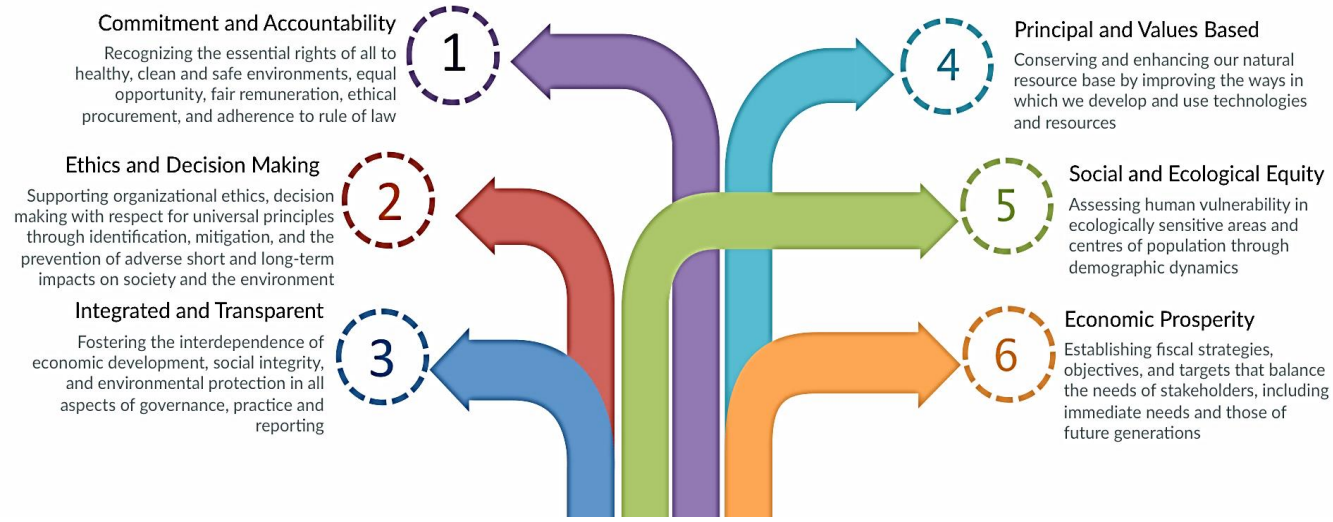


Source: Costa, cited in Trentim, 2020.

The other hybrid model described in this article is PRiSM, which are the initials of Projects Integrating Sustainable Methods. This model is oriented on GPM sustainable project management methodology, and it is different of others because is focused on whole asset life cycle and not only on the project runtime. "The aim of this approach is to optimize the project's sustainability, reducing environmental, social, and economic risks" (GPM, 2013, p.1).

In figure 5 there is a representation of the PRiSM Principles.

Figure 5. PRiSM Principles



Source: GPM, 2013.

As mentioned before, to attain greater success probability, we must avoid communication problems, poor planning and setting unrealistic deadlines. We must consider active involvement of executive Sponsors, avoid changing the scope during project execution and mature capabilities for value delivery.

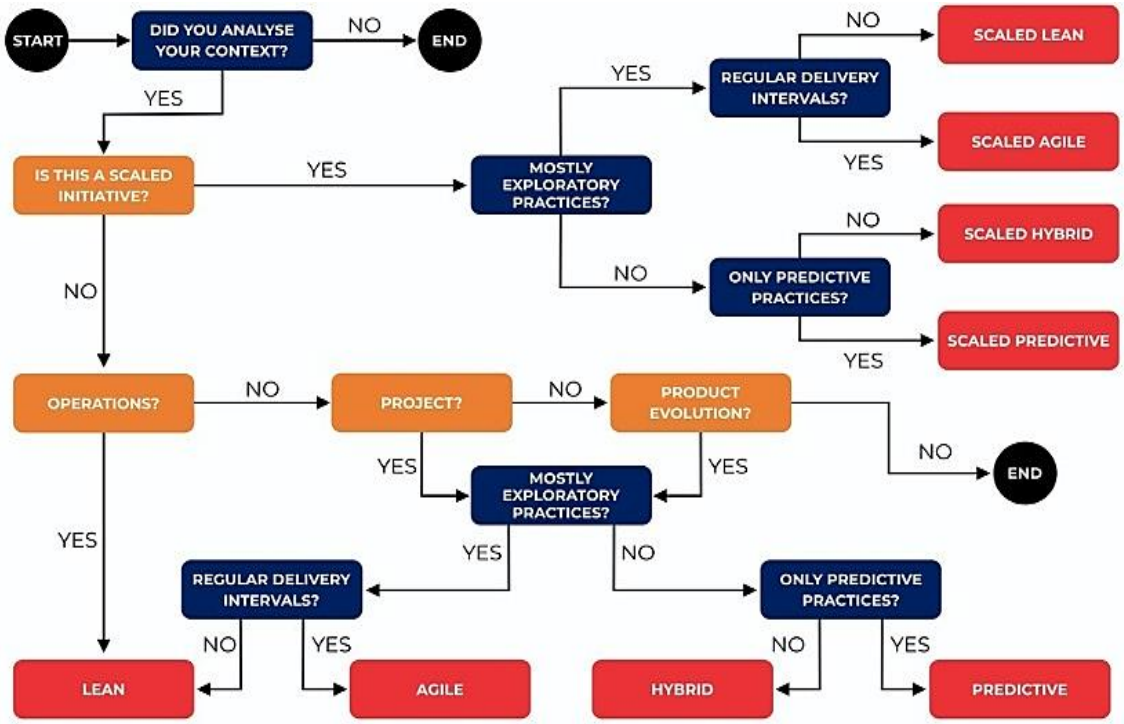
With PRiSM Methodology projects are being in a more strategic focus by leveraging existing organizational systems to ensure that project benefits are applied on all organization levels

(horizontally and vertically), truly oriented to process and product sustainability. It allows the reduction of project risk level, on the environmental, social and economic perspectives and expands the benefits to gain, considering a new lifecycle with five phases: (i) pre-project planning, (ii) product/service, (iii) adoption, (iv) integration and (v) benefits realization (GPM, 2013). Corporate sustainability is based on a value system and on a principled approach to doing business. In this perspective is important to meet fundamental responsibilities in the areas of human rights, labor, environment and anti-corruption (GPM, 2013).

There are many models, frameworks, standards, methodologies, methods, and practices that sometimes it is very difficult to find the direction to go on finding the best approach. The Management Approach (MAp) is a proposal to help on this important decision but should be tailored since there is no "one size fits all" (Costa & Caramelo, 2021, p. 1).

To help choosing the best approach to a new project, MAp is a very interesting proposal which is detailed in next page figure 6:

Figure 6. How to Choose Management Approach



Source: Costa & Caramelo, 2020.

5. Conclusions

We are living in an era of great change linked to the Fourth Industrial Revolution, where the Digital Economy is having greater importance. The way you manage, how you do work and how you do business are changing rapidly in a Digital Economy context with Human Capital as the basis of Digital Transformation in organizations.

Complex problem-solving skills, critical thinking and creativity are fundamental for managers to meet the new challenges. As mentioned before, emotional intelligence and cultural awareness must be strongly linked to the technical skills of professionals. Digital Technology is implying profound changes in society, environment, economy, and management in general.

The Digital Economy is bringing greater challenges to Project Management, forcing Project Managers to adapt to new paradigms. Today, the way the Economy presents itself is completely different compared to the recent past. The new projects that appear have a completely different framework and require different approaches and, consequently, Project Managers should have a suitable profile for to be able to respond effectively and manage their projects with greater probability of success.

We must not forget that the IT strategy must be strongly linked with company strategy and managers must adapt quickly to a new reality, using new technologies appropriately. But to adapt to the new technological challenges, we must consider the 5 "Ps" proposed by GPM: People, Planet, Prosperity, Processes and Products. Besides these 5 “Ps”, we must also follow Ethical Principles.

To get higher probability in project success, we must have good communication at all levels and a well-structured Communication Plan oriented to each project, avoiding poor planning, and not set unrealistic deadlines impossible to meet. We must ensure the active involvement of the project’s Executive Sponsors, avoid uncontrolled changes to the requirements during project development and consider mature capabilities to value delivery.

Digital Technologies will help Project Managers to do a better and more efficient Project Management. The use of Artificial Intelligence, Big Data with Data Science will improve the planning and control activities, increasing projects success rates. According to recent PMI statistics, Microsoft Project is the most used tool by Project Managers, but there are appearing new tools at a very fast pace, as Jira/Confluence and Trello, among many others, most of them with a collaborative perspective to share data and information with all project stakeholders.

Project Management is being improved with the use of Digital Technologies but choosing the right approach in implementing a project is fundamental. We must choose whether the approach should be traditional predictive, agile or hybrid. The new hybrid approaches are allowing Project Managers to build good methodologies that will help your projects and our planet to succeed.

Is already foreseen the Fifth Industrial Revolution appearance, based on the concept of Human-Robot co-working. Legal, regulatory, psychological, social, and ethical questions related to the collaborative work between humans and intelligent machines are arising and must be answered in a near future, because changes are happening fast.

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