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Toward a project-led economy

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Abstract
In recent years, the phenomenon referred to as projectification has escalated. Projects have increasingly started to displace certain types of operations in businesses across the globe. In essence, it means that project work has intensified due to an increase in the freelance and independent work economy. This represents a reflection of changing times and changing organizations. This article aims to present a general overview of the evolution of projects and the future trends in using this particular way of working. The methodology is a literature review that helps identify critical events and key agents in the process.

Keywords: projectification; project management; software; alternate credentials; virtual organizations.

Hacia una economía basada en proyectos

Resumen
En años recientes el fenómeno referido a la proyectificación se ha incrementado. Los proyectos han comenzado a desplazar ciertos tipos de operaciones en empresas alrededor del mundo. Esencialmente esto significa que el trabajo por proyecto se ha intensificado debido a un incremento en las economías del trabajo independiente y de *freelance*, esto representa un reflejo de tiempos cambiantes y de organizaciones que cambian también. Este artículo tiene por objetivo presentar una perspectiva general de la evolución de los proyectos y las tendencias futuras al utilizar esta metodología en el mundo del trabajo. La metodología es la revisión de la literatura que permitirá identificar eventos críticos y agentes clave en el proceso.

Palabras clave: proyectificación; gestión de proyectos; software; credenciales alternas; organizaciones virtuales.

1 Introduction

Since the end of the last millennia, the world of work has transformed from established hierarchical structures and work schemes into more flexible arrangements, including diverse innovative practices encompassed in the New Ways of Working.

Digitalization has played an essential part in this process. It has helped free the workforce from what can be considered traditional rigid jobs, but it has also changed organizations to their core through the search and promotion of efficient and effective work.

In this context, work has been, and is still, in the transition towards employment based on specific goals, activities, and projects, instead of what is defined as traditional positions and functions or generalized job descriptions. Non-hierarchical organizations are becoming the new rule because their flexibility enables faster changes and adaptation, which is crucial in facing the complexity of present-day business environments.

As a consequence of this, the world of work has become substantially projectified; and organizations have been restructured around teams and multi-team systems. Teams are getting smaller [1], while the goals they look to achieve are getting bigger. “Heavy structures have been substantially reduced, while the precepts of clarity and direction have gained ground” [2].

These new practices have allowed cost reductions, productivity increases, time optimizations, and better organizational outcomes. Work by projects, and consequently Project Management (PM), has become increasingly popular, and the methods and best practices to carry out work in this way

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have evolved into standards and good practices.

The rapid increase in the use of projects in almost all sectors "has resulted in a powerful and well-established practical knowledge field that provides project managers with tools and methodologies for achieving project success" [3].

Projectification helps organize human behavior in more flexible ways [4]. The use of projects is making organizations more flexible and innovative while increasing their capability to solve complex problems more efficiently [5]. In this context, project management skills have become some of the most sought-after qualifications for future industry hires.

A set of different courses and certifications are available beyond those of the Project Management Institute. Different educational institutions and training organizations are developing ever more agile and shorter courses to obtain specific PM qualifications that are credit free in the form of alternate credentials and digital badges.

Additionally, the number of software available for project management in free and paid versions is on the rise, and so is the number of practitioners who are testing and using, trying to find the right fit for specific needs or the tasks ahead. Projects have helped develop modern-day organizations where people can work collaboratively in smaller groups than in traditional structures, creating closer relationships among members.

2 Materials and methods

This article presents a general overview of the evolution of projects and the future trends regarding this particular way of working. A literature review was conducted to identify critical events and key agents in the process of projectification. The methodology for the literature review included an online search for articles, books, and research materials on the subject of the project-led economy. Over 45 documents were reviewed, and, considering the scope of this article, around 30 were selected as sources of information.

3 Results: a quick overview of the evolution of projects

Projects have existed for a long time. Throughout human history, projects have been carried out informally, although established methodologies for these practices were not developed until recently. Project Management can be traced back to World War II, specifically in the 1940s, when it was used primarily for large military projects [6]. Later on, it spread across countries and sectors [6], permeating diverse industries and expanding its range of use.

PM started to take shape as a profession in the middle of the 20th century when several groups of people from different fields, such as the aerospace, engineering, pharmaceutical, and telecommunications areas, determined that the changes that the world was experiencing made it necessary to develop new tools to deal with them [7].

It was in the 1950s that PM grew into a recognized discipline, and specific tools and techniques were developed for it, which included Program Evaluation and Review Techniques (PERT) and Critical Path Method (CPM) [8]. In the history of project management, the public sector played an important role in the development of a series of tools that later were added to the project management toolbox in other sectors; “the principles of systematic project management, project maturity models, and project techniques were all firstly developed in the public sector” [9].

During this time, PM became recognized as an efficient way of organizing work in diverse areas [10]. Research about Project Based Organizations first appeared in the mid-1960s [11]. As projects started to become increasingly complex, the pioneers of the discipline met in an effort to address the scheduling and resource issues that were starting to arise by standardizing the tools for this new profession; later, in 1969, the Project Management Institute (PMI) was created [7]. The PMI, along with the International Project Management Association and Project, operates across the globe and in most areas related to the industrial and commercial sectors [12].

In the decade of 1990, projects became one of the most sought-after organizational structures because of their economic efficiency, and the scholarly interest in Project Based Organizations has seen a significant increase since 2000 [11]. Nowadays, Project Management operates across a broad range of areas, from marketing campaign projects to complex engineering projects across the globe; it is considered the world's first genuinely international area of professional practice [12].

PM emerged as a solution to the urgent needs and demands in a world that was facing a crisis, and it acquired recognition as a discipline and as a sought-after practice [13] because it proved to be an enabler for the progress of organizations and because of its applicability from small to large-scale projects.

4 Discussion: projectification, the project-led economy

Projects are contingent organizations that emerge when required. They are considered temporary organizations that are fluid in their internal mode of operation; they appear when required and disappear when the goal has been reached.

Temporary organizations tend to have a short life cycle, and they can take various forms, including entirely project-based organizations or organizations in which projects can be carried out at different levels and times. "The use of projects has often been lauded as an organizational response to the challenges of managing in a world of growing complexity" [14].

The increase in the use of Project Management as a method for handling complex tasks and as a creative way of renewing contemporary organizations has been referred to as projectification [3]. The buzzword “projectification” was coined in 1995; its creator, Midler, foresaw a phenomenon that would be widespread in today's economies: the proliferation of projects as a form of planning, organizing, and working [15].

The notion of "projectification" was developed by integrating the terms "project" and "organizational transformation," and it has been used to describe the growth of projects as a form of organization [16]. However, the term projectification has evolved from its primary definition related to the increased primacy of projects in contemporary organizational structures into the ideas involving processes in society in which notions related to projects are present [9].

Projectification comprises project work as a production practice carried out in organizations, industries, economies, and societies, which is a growing trend because of its flexibility and cost-effectiveness in the pursuit of agility and innovation [11].

In recent decades, projects have become a common form of work in all sectors of the economy [3]. “Projects have become the unit (or at least a key driver) of economic action” [4], and the process of projectification has become increasingly relevant to studying and understanding different elements of the contemporary economy [3].

A survey carried out in 1999 that studied 3,500 European companies revealed a significant increase in the use of project-based structures in a four-year period, namely from 13% to 42%, and the trend intensified in the years that followed [4]. This increase is partly due to the fact that projects are seen as a form of control that allows for creativity and innovation, so it is an optimal way of working when complex and business tasks need to be managed [3].

In 2004, PricewaterhouseCoopers conducted a cross-sector survey of 200 firms which helped confirm the growing trend of PM, as nearly 25% of the organizations had a portfolio of 100 projects or more [4]. This supports the idea that as time goes on and organizations evolve, it becomes harder to picture an organization that is not somehow engaged in projects.

This phenomenon is most visible when looking at the transformation of traditional organizations into project-based companies whose whole operations are organized as projects and whose permanent structures function more as administrative support for programs and portfolios than a hierarchy [3].

Projectification has shed light on the importance of project-based modes of ordering" [14] as a form of work and of Project Based Organizations as critical players in the economy and the labor market [11].

The rise in projectification can positively impact the competitiveness of individual organizations, but it can also be linked to the economic development of societies as a whole [15]. By 2009, the World Bank had already reported that 22% of the world's gross domestic product was almost entirely project-based [4].

One of the most important characteristics of projectification is scope since it is present in everything from specific project-oriented industries to the public sector, program development and policy implementation, healthcare, media, art, and research [15]; a clear example of the latter is the development of vaccines and treatments for several kinds of illnesses.

In this sense, the world is heading towards a project society because of ever-changing, complex, and uncertain contexts where the pre-codification of time, space, and activities is no longer the best option for planning [4]. This leads to what experts have called the "projectification of everything," expanding the idea of projects to private and social life [15].

The projectification of everything is the “proliferation of a temporary, future-oriented, purposeful, time-limited organizational form that is more agile, sensitive, and flexible than the disciplinary codification and planning, which operates in one-off activities” [4]. Therefore, projectification can be considered a specific meta-phenomenon that permeates all activities in modern societies [9].

Projectification has emphasized the use of projects and the proliferation of the ideas surrounding project work; it is a transformation and adaptation of ordinary organizational structures and activities and organizational capacity building through practices that encourage project logic [9].

Projects are rapidly becoming the driving force behind the world of work and how it is performed to promote change and deliver value. “In the project economy, the worldwide growth of project management proves its value as a: recognized and strategic organizational competence, a subject for training and education, and a career path” [7].

4.1 Project management skills are in demand.

The global trend that favors projects over jobs has increased substantially in the last decade. This has produced a growing demand for qualified talent that can work in diverse, more general areas [17] and yet specific projects simultaneously. Project managers have to be generalists with extraordinary communication skills, as well as an ease for organization, critical thinking, and resourcefulness.

The professionalization of PM is the process in which the occupation “transforms itself into a true profession of the highest competence” [18]. This includes defining standards for the different knowledge and competencies required in managing projects, as well as the industry practices involved in this process.

Professionalization of PM also includes the increased and comprehensive application of PM tools and techniques [18].

The growing demand vastly pushes this professionalization trend for project managers in organizations because they have realized that projects are an efficient tool to promote, implement, and maintain their corporate strategy [18]. Getting the right people with the required skills and capability is crucial for businesses.

Some of the most sought-after competencies in project managers include heightened business acumen, initiative, strong communication skills, and leadership abilities, which are essential in the world of work, and particularly in work by projects [19].

Planning, monitoring, and strategic thinking abilities are also necessary for PM [18]. A study carried out by the Project Management Institute in 2017 shows that technical and leadership skills are a high priority for 32% of participants, representing a 3% increase from 2016 [19].

4.2 Growth in PM courses

The growing demand for PM skills in the labor market has resulted in the development of technical, leadership, and business management skills of project professionals [19]. All sectors, including public administration, increasingly require better and more standardized PM competencies [18].

One way to satisfy this demand is through staff development programs, which can significantly impact project performance when used consistently [20]. The amount of organizations providing training and development has been relatively stable with some growth.

According to the Project Management Institute, three in five organizations provide PM tools and techniques training to their employees, and nearly half have formal processes to develop PM competencies and a defined career path for project managers [19].

In addition to company-provided training, experts suggest that learning programs or courses offered by universities and

other actors, as well as certifications, will increase, and they will include materials for all stages of a project manager's career [16]. The methods for learning and teaching PM-related topics will also be consistently improved.

According to data from PricewaterhouseCoopers, "higher-performing projects are significantly more likely to be staffed with certified project managers" [20]. Projects are at the core of many strategic organizational initiatives; they are part of how change happens. "Having the talent to implement those initiatives successfully is the critical capability that gives organizations a competitive advantage to navigate through necessary change" [19].

This is partly why higher education institutions and private companies are providing more and more education and training for people interested in a career in PM [18]. They are trying to satisfy that demand.

The number of certified project managers continues to rise. A study carried out by PricewaterhouseCoopers in 2006 identified that the percentage of respondents' project managers that held certifications was 77%, a 4% increase from the study conducted two years prior. Also, the study points out certain differences concerning the types of certifications that are on the rise, indicating a clear shift away from internal certifications from 22% to only 10% [20].

The Project Management Institute (PMI) and Prince 2 certifications are leading these changes; the percentage of project managers with PMI certifications went from 24% in 2004 to 46% in 2006 [20], and it is expected that that number will continue to rise.

4.3 Availability and use of PM software

The use of project management software is increasingly commonplace as it has been closely connected to high-performing projects [20]. As the business environment keeps evolving and adapting to technological development and other changes to the business environment, project managers rely more and more on software that allows and facilitates planning, organizing, budgeting, tracking, and communicating [19].

According to PricewaterhouseCoopers, the use of commercially available PM software can lead to better performance and more satisfaction with regard to organizations' practices [21].

In 2006, software tools were most commonly used to manage single projects and not multiple projects or programs at the same time [20]. Around this time, Microsoft Project was the most used among other brands of software [20].

As time has gone by and projects have become more prevalent, commercial software has grown in numbers and sophistication, and they have evolved into friendlier, self-service tools.

Regarding the type of software, organizations work with, 21% of PM software users utilize off-the-shelf packages, 19% use commercial packages that allow for customization, and 17% use internally developed or proprietary software [21]. The options of software available are very diverse, from straightforward planning and scheduling to optimization and resource management software.

Various PM tools have been developed for virtual teams and integrated into these kinds of software to allow and promote collaboration through personal and public interface boards, communication, real-time monitoring, time tracking, task management, and budget management [22].

In addition to the novel software alternatives, the attention of organizations and project managers is on what has been called the connectivity revolution. This emphasizes the various portable devices that can be used to connect to the internet, log information, consult data, and make changes in real time. In PM, the connectivity revolution is improving the process of managing increasingly larger projects that can be dispersed all over the world. "This revolution, fueled by handheld electronic devices such as smartphones and tablet computers, is penetrating even remote and poor countries and is almost certainly contributing to the proliferation of distributed projects in many industries and nations" [19].

These technologies have gained popularity because of the increased flexibility they provide, but also the standardization they allow. As virtual teamwork continues as a growing trend, new technologies will be developed to fill gaps in the pursuit of efficiency.

4.4 Virtual projects

Technological development has created new and better ways of storing and sharing information, which has played an essential role in bringing the possibility of remote mobility and connectivity into reality [22]. This has led to the emergence of New Ways of Working and the creation or redesign of more agile and innovative organizations where a conventional office is no longer required.

In this context, the digital workforce has become more prevalent, as well as productive and adaptive. The New Ways of Working offer employees greater self-control and more flexible work arrangements [23]; they eliminate the restrictions and requirements imposed by traditional employment. Employees go from being company resources to being part of what is called the human cloud, contingent workers who fit in perfectly with the contingent nature of projects.

Projects can be performed both in a face-to-face manner or through the use of technologies in a virtual setting, opening the door to different ways of organizing [24], and teamwork between people from different countries and contexts has emerged not only as an alternative to the traditional forms of work but as a trend in the new era of employment.

The most important aspect to consider is that members need to be able to collaborate and work together [25], even at a distance. Communication, especially in virtual environments, is critical for collaboration, and digital dexterity has become a requirement for successful project development.

Virtual project management can be defined as a collaborative effort that is undertaken by a virtual team using information technologies to carry out project activities remotely [22]. This practice includes project managers interacting with different geographical locations, time zones, or organizations [26]. Virtual project management requires a leader that can manage a virtual or remote team through the use of various tools and techniques to guarantee a smooth flow of information and the optimal organization of tasks [27].

During the pandemic, virtual projects became even more mainstream as numerous organizations transitioned into virtual

companies. Nevertheless, they have been around for more than a decade as a product of the development of information and communication technologies, globalization, and general changes in how work is performed worldwide.

Virtual projects have been used at regional, national, and international levels in a variety of sectors and industries in which global virtual projects can become mega projects that are large and complex, have particular goals, take time to develop, involve multiple different stakeholders, and affect many people [28]

Virtual project management has been substituting traditional project management practices for a few years now, mainly because of persistent corporate pressures to reduce costs (primarily through decreasing headcount), environmental concerns related to the use of fossil fuels and long commutes to work, the need to quickly address problems, and the growing demand for a more diverse and qualified pool of employees across the organization. In this sense, if carried out properly, virtual project management can be just as effective as its traditional counterpart or even more. It is vital to corporate growth and helps teams to operate in the most efficient way possible [29].

The perpetual cycle of technological innovation and the impact it has on organizations and the world of work ensures that the future of business, employment, and the global economy will be digital [22]. In this regard, virtual project management will become a regular practice in developing products and services.

5 Conclusion

Constant technological developments are changing and will continue to change the way people work and the general employment conditions. Amongst these transformations are the types of contracts that organizations use to bring in the talent they need to get the job done. Instead of standard long-term contracts, companies are using short-term, contingent, goal-oriented workers who can also work virtually. Work by projects and freelance workers are becoming more and more common.

These new forms of employment and ways of working are transforming organizational structures and have moved closer to personalizing the employee experience, incentivizing a culture of freedom of choice, even when it comes to a job. As these changes become more ingrained in society, people will have ample choice of where, how, and when to work.

Under contingent models like work by projects, employers will find many benefits as well. Companies will be able to find the ideal candidate for the time frame that they need, for a reasonable cost, and for the specific goals or tasks that need to be completed [30]. This has the potential to improve productivity, efficiency, and employee satisfaction.

The workforce has become more productive and adaptive, and has played an important role in creating or redesigning more agile and innovative organizations. Organizational designs will continue to evolve, following the trend of moving towards more holistic models. The organizations of the future are leaning towards smaller and less structured formats. Changes will primarily affect the physical space of the workplace, the technology used to achieve connectivity, the overall organization and management without as much supervision, and the openness of the work cultures [23, 31].

Every year, more contingent workers are hired, which can be interpreted as the decline of the traditional paradigm of organizations with full-time employees [32]. Organizations require a more fluid source of talent that can bring specific skills that their regular staff sometimes cannot cover. Flexible employees seem to be the answer to many of the issues that the labor market is facing, including the Great Resignation. It is a time of employee empowerment, and flexible work arrangements seem like the answer for both people and organizations.

The future of work is small, as the Project Management Institute's project methodology establishes 14 different areas or roles that a reduced number of employees can achieve, and it is increasingly digital, creating new spaces for remote and hybrid workforces. These forms of employment involve collaboration and teamwork among geographically dispersed individuals, and project work is emerging not just as an alternative but as a trend.

The "projectification" of the economy is a phenomenon in itself. However, it also produces a series of effects that go beyond the idea of the project. The exponential growth of the use of projects as a way of working has led to more emphasis being placed on PM as a profession, increasing the number and quality of PM skills required in the labor market, which in turn has resulted in a more extensive offer of PM courses and certifications. In a similar way, the organizational focus on projects has boosted the development of software to carry out these tasks in the most effective and efficient way possible.

Data suggests that the project-led economy is the system of the future, among other new ways of working that can go hand in hand with project management, such as digitalization and automation.

Work by projects has become a widespread model, and it has the potential to become the primary work scheme in many industries. Nevertheless, people and organizations must prepare and adapt to make it in this new system. Individuals will have to develop the skills that the labor market demands, and organizations will need to listen to the needs of the workers. Projectification is also an opportunity for startups and independent workers who come up with more and better software alternatives for project management because organizations will rely on these technologies to be able to compete.

The future points towards a competitive environment that will continue to evolve, and actors in the economic system must transform with it if they intend to survive. In this sense, project management presents a series of opportunities that should be harnessed and challenges that must be overcome in order to promote effective models that work for employers, employees, and other stakeholders.

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