

Lessons Learned from the PMMM Research Series¹

Maturity Evolution: Only a few get there²

By Darci Prado, PhD

ABSTRACT

This is the fifth article of the series *Lessons Learned from Maturity Research*, and it is a continuation of the previous article [11] which discussed the challenging journey towards maturity evolution. The present article will focus on understanding why very few organizations reach the platform of excellence (levels 4 and 5). We remind the reader that knowledge of the previously published articles of this series [8, 9, 10 and 11] is very important for a proper comprehension of this text:

Lessons Learned from Maturity Research

- Article 1 – Contextualization
- Article 2 – Peculiarities of the “Performance versus Maturity” relationship
- Article 3 – Heterogeneity Matters
- Article 4 – Maturity Evolution: A Challenging Journey

1 – DOES THE STATEMENT “OLDER MEANS GREATER MATURITY AND BETTER RESULTS” APPLY UNIVERSALLY TO PROJECT MANAGEMENT?

At first glance, the term “maturity” alludes to the passage of time. For example, we could say:

- The longer we know and practice something, the more mature we become.
- The more mature we become, the better results we obtain.

Our maturity research [1] has been ongoing for 20 years and during this time we have monitored the results of hundreds of organizations. If time alone was enough to ensure

¹ The Project Management Maturity series of articles by Prof Darci Prado is based on his extensive research on this topic in Brazil and other countries. Darci is the developer of the Prado Project Management Maturity Model which has been successfully implemented by many organizations in Brazil. More about this model and related research can be found at: <https://maturityresearch.com/en/home-en/>

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maturity progression, we should see significant changes in Brazilian organizations towards greater maturity and better performance. The results of the maturity research in Brazil, however, do not show that. As documented on our website [1], Figure 1 shows that the average value for maturity in Brazil, since 2005, is around 2.61, with stability of the values through time, and only small oscillations noted.

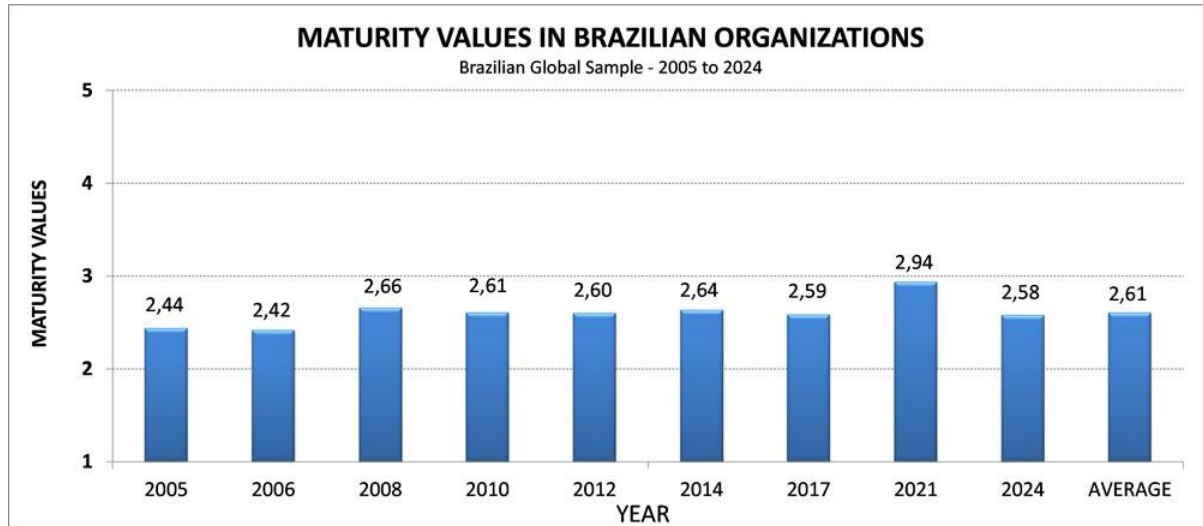


Figure 1: Average maturity level in Brazilian organizations between 2005 and 2024 [1].

Sample Sizes (total number of participating organizations) (or overall sample in each year)								
2005	2006	2008	2010	2012	2014	2017	2021	2024
261	258	310	346	434	415	301	181	117

Similar results can be observed for measurements of project success of Brazilian organizations over time [1], as shown in Figure 2, in which we again observe stability in the values over the years.

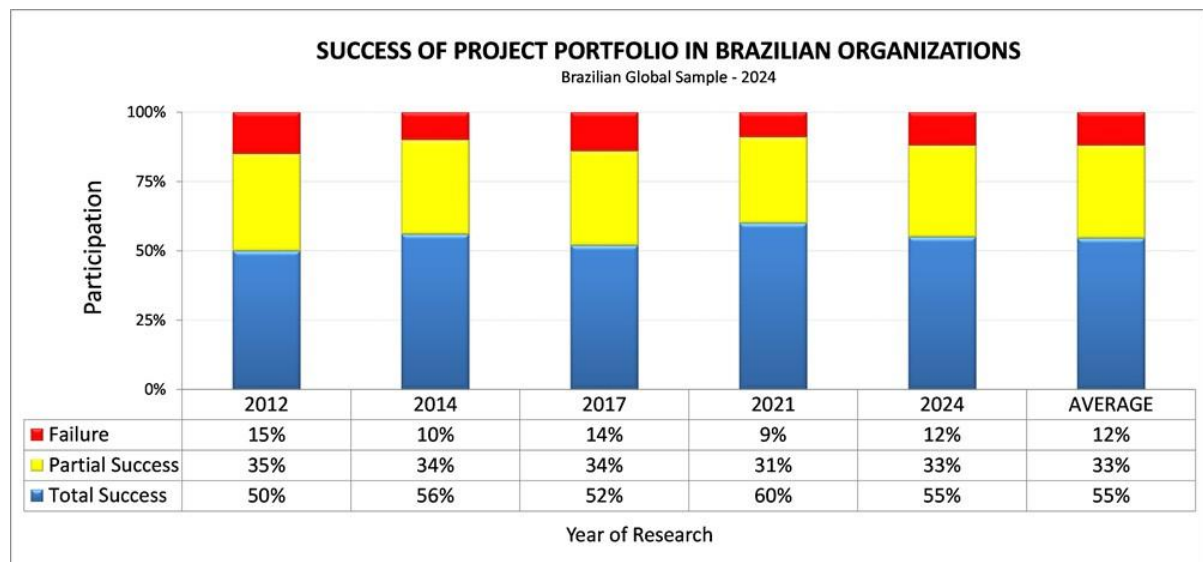


Figure 2: Average values for success in Brazilian organizations between 2012 and 2024 [1].

Sample size (total number of participating organizations)				
2012	2014	2017	2021	2024
434	415	301	181	117

For Figure 2, the average values of success from 2012 to 2024 in Brazilian organizations are:

- Total Success: 55%
- Partial Success: 33%
- Failure: 12%

Please refer to the first article of this series [8] for a comprehensive explanation of how success is measured and how we define total success, partial success and failure.

This stability of success over time, as demonstrated in Figure 2, was also observed in the Standish Group survey (*The Chaos Report*), which measures the success of software development projects in the USA since 1994 [2].

2 – THE STABILITY OF PARTICIPATION AT THE LEVEL OF EXCELLENCE

In addition to the fact that average maturity and average success have not evolved over time, our research also demonstrated that only a small portion of the participating organizations were at the excellence platform (levels 4 and 5) of maturity. Figure 3 shows that only 13% of the participating Brazilian organizations in our 2024 survey were at the excellence level.

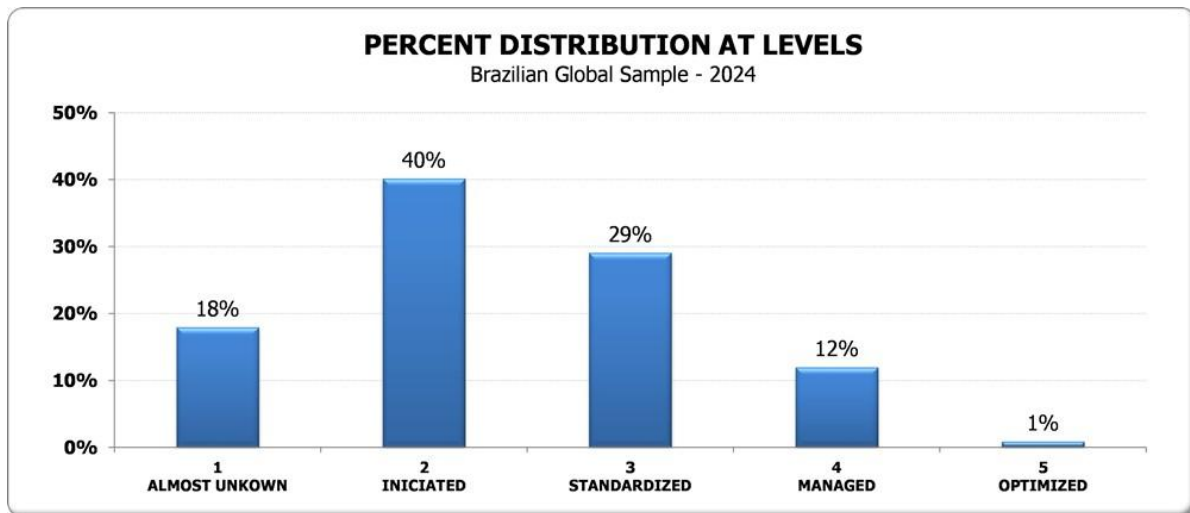


Figure 3: Distribution of maturity levels in the 2024 survey [1].

Sample size: 117 organizations

We expanded the analysis to include data from surveys conducted since 2005 to better understand how level of maturity evolved over time in Brazilian organizations. The results are presented in Figure 4. For a cleaner analysis, levels 1 and 2 (low performance organizations) were grouped together, as well as levels 4 and 5 (high performance organizations).

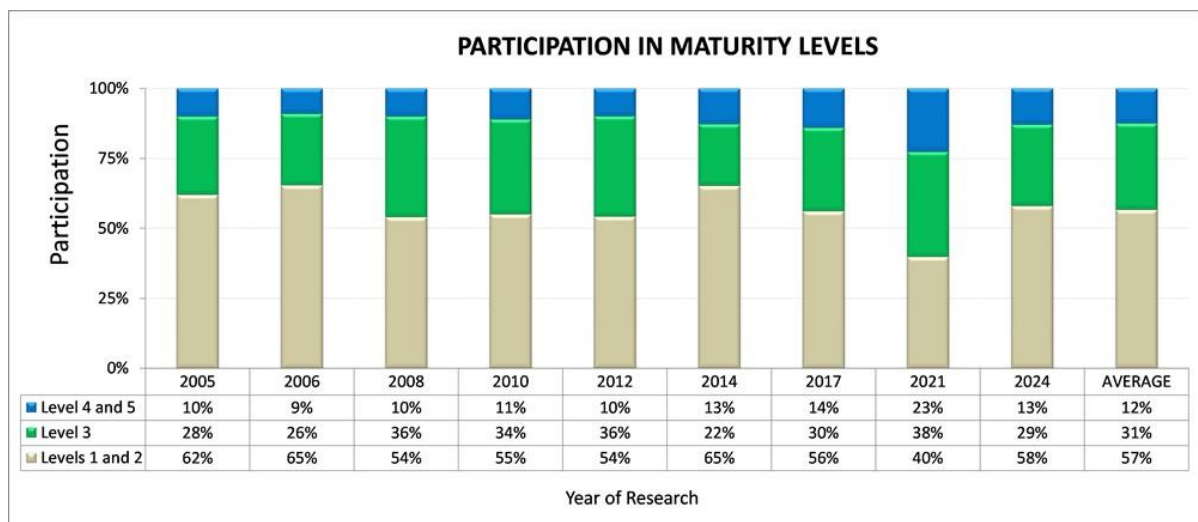


Figure 4: Participation in maturity levels [1] of Brazilian organizations from 2005-2024.

Sample Sizes (total number of participating organizations) (or overall sample in each year)								
2005	2006	2008	2010	2012	2014	2017	2021	2024
261	258	310	346	434	415	301	181	117

For Figure 4 the average values are:

- Levels 1 and 2: 57%
- Level 3: 31%
- Levels 4 and 5: 12%

3 – LONGEVITY DOES NOT MEAN GREATER MATURITY OR GREATER SUCCESS

Continuing our analysis, our questionnaire contains questions on duration of governance in a single organization. These questions are in reference to the use of PMO, Project Manager and Committees by the organizations. One of the questions inquire about the duration of the presence of Project Managers [1]:

16. Regarding the use of Project Managers in your department in question, we can state:

- a) It has existed for more than 20 years
- b) It has existed for between 10 and 20 years
- c) It has existed for between 5 and 10 years
- d) It has existed for between 2 and 5 years
- e) It has existed for less than 2 years
- f) We do not have Project Managers
- g) Project Manager does not apply in our scenario

In 2024, the 117 participants answered this question as shown below:

Number of answers of each option: number of years that Project Managers exists in the organization						
Does not apply to our scenario	We do not have this role	less than 2 years	2 to 5 years	5 to 10 years	10 to 20 years	more than 20 years
2	23	24	25	17	10	16

When we compared the number of years of the use of Project Managers with the level of success for that year, we obtained the graph shown in Figure 4.

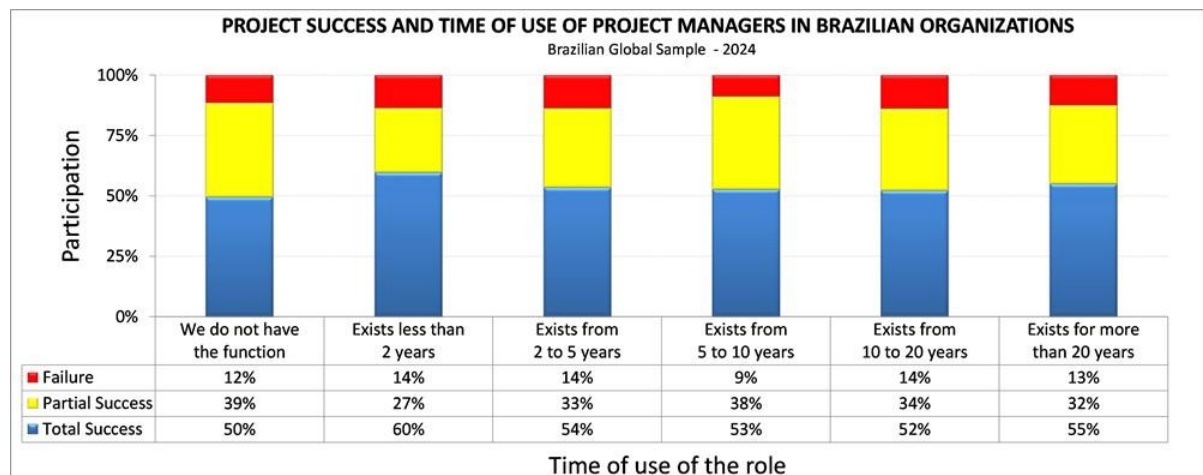


Figure 5: Success versus longevity in using the “Project Manager” role [1]

The answer “does not apply to our scenario” was not analyzed in the graph due to the number of answers being smaller than the minimal required.

Similar figures were obtained for the use of PMO and Committees [1].

Figure 5 reinforces what we showed in Figures 1, 2 and 4. Taken together, these results indicate that longevity does not necessarily imply greater maturity and greater success in a single organization, when it comes to the use of the Prado-PMMM model for project management.

4 – WHAT ABOUT PROJECT-ORIENTED ORGANIZATIONS?

The data presented previously refers to the responses of all participating organizations in each year of the survey. This data can be further divided into two large groups:

- Data from organizations oriented towards repetitive processes (e.g.: food factory)
- Data from project-oriented organizations (e.g.: construction company).

The projects in organizations oriented towards repetitive processes are generally for improving or innovating an existing situation. They are internal projects. For instance, a food factory may engage in a project to optimize the packaging of its products. In project-oriented organizations, in addition to internal projects, we also have projects aimed at serving external clients. In this second group, we have construction companies, software-houses, equipment installation/assembly companies, consulting organizations, etc. For example, a construction company may have a project aimed at building a new factory for a food company.

One would expect that project-oriented organizations would behave differently from those oriented towards repetitive processes, since the execution of projects is directly linked to their survival. Figure 6 shows results obtained after a subgroup analysis of our database, with

focus on Construction Industry data, where we evaluate the participation in maturity levels of these organizations in 2012, 2014 and 2021.

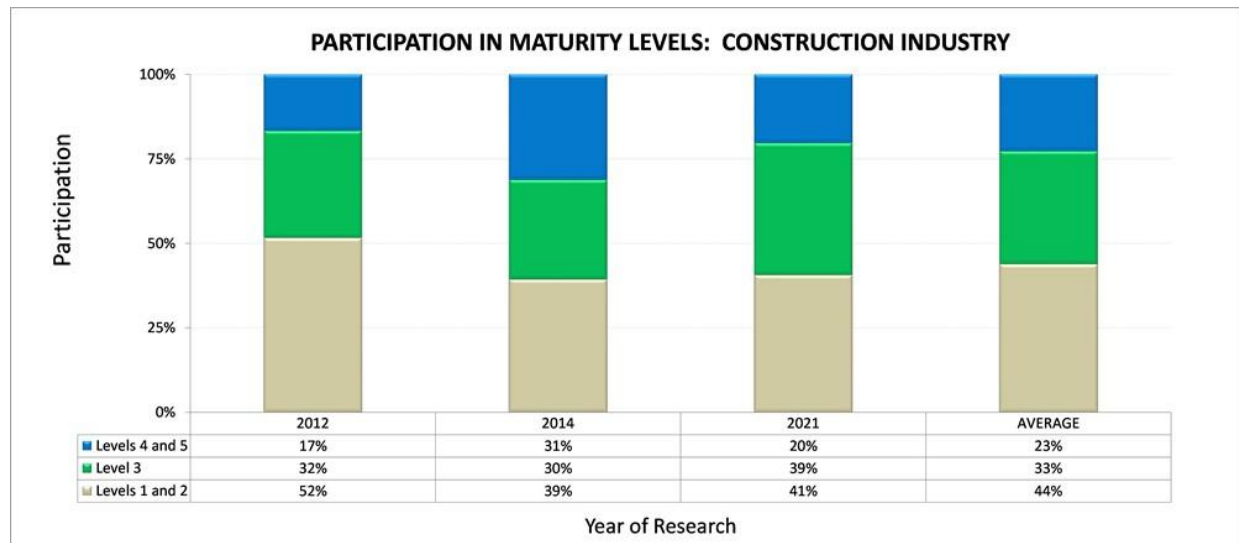


Figure 6: Participation in maturity levels for the Construction Industry [1].

Number of answers for each year		
2012	2014	2021
60	61	64

Figure 6 only shows values for 3 surveys (2012, 2014 and 2021), as only in these years were we able to obtain adequate participation to produce a report (sample greater than 60 participants).

For Figure 6, the average values are:

- Levels 1 and 2: 44%
- Level 3: 33%
- Levels 4 and 5: 23%

Because successful execution of projects is essential to the growth and survival of project-oriented organizations, one would expect a superior presence in the highest maturity levels for such organizations. In our research, when we evaluated the participation in maturity levels in the subgroup of the construction industry (which is a type of project-oriented organization), we observed that participation in the platform of excellence (levels 4 and 5) is only noted in 23% of the organizations, with most of them being at levels 1, 2 and 3. This shows how difficult it is to reach this platform, even for organization types in which maturity is vital for survival.

5 – GETTING THERE IS FOR ONLY A FEW

What we have seen so far is that the evolution of maturity (and performance indicators) of Brazilian organizations has not been significant over the 20-year period (2005 – 2025) of this research. Using the data shown above and my experience as a consultant at Falconi Consultoria (<https://en.falconi.com/>), I observe that the journey towards the evolution of maturity (and performance indicators) in various organizations may follow one of 5 different paths, as shown in Figure 7:

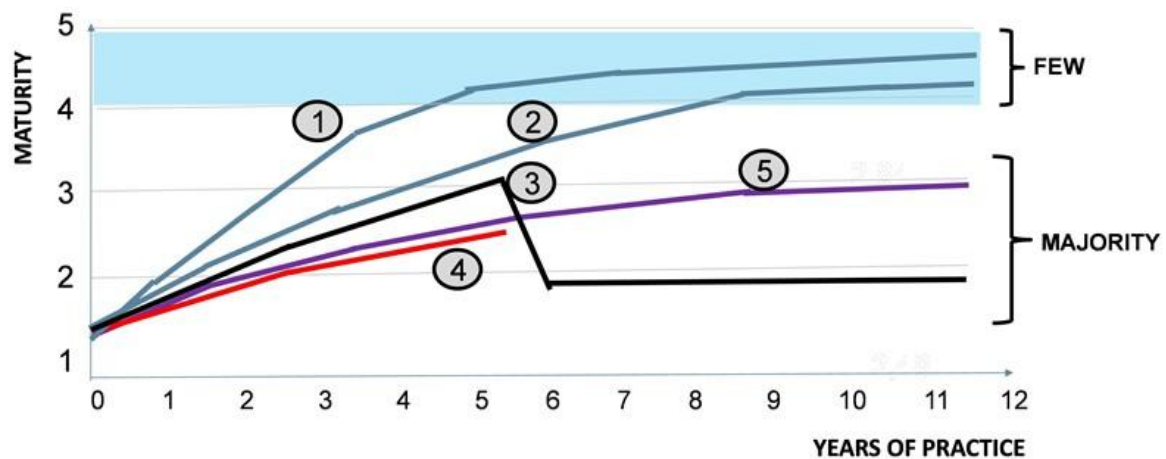


Figure 7: Different journeys of organizations to advance their maturity.

Lines 1 and 2 show situations in which organizations reached the platform of excellence (levels 4 and 5) in a period of 5 and 8 years. Harold Kerzner also points out this duration [4] as the average duration for reaching this level of excellence. This ideal situation is seen in very few organizations, as demonstrated in Figure 3. Examples of typical organizations in which we see this scenario are:

- Project-oriented organizations (construction companies, software houses, consultancies, etc.).
- Private organizations operating in a highly competitive market and dependent on their projects for survival and growth.
- Government agencies at the federal level (particularly in indirect administration) with excellent performance.

Line 3 shows the situation of organizations that began evolving, but underwent a process of discontinuity and, for that reason, their maturity value has reduced. Some examples:

- Private organizations that use project management to implement their strategies in cycles. Once a strategic cycle has ended and the next cycle has not yet begun, the group involved with projects (PMO, the project managers, etc.) undergoes a process

of emptying. When the new cycle begins, the new group that is formed is usually not so experienced as the previous one.

- Government agencies (direct administration) where the management changes every four years due to elections. A new administration with a different political orientation often has a different perception of the importance of management or wants to do things differently. For all these reasons, the project management department can suffer from emptying.

Line 4 shows a more critical situation than the previous one. The practice of project management has simply been abandoned. This is what sometimes happens in organizations with serious financial or market problems, where there are limited financial resources to invest in new strategies.

Line 5 is the most common situation. Project management is practiced, but it plateaus at a low level of maturity, where it stays. This can be the result of one or a combination of different situations: (1) There is low strategic importance of project management, scarce resources and no support for the evolution of maturity; (2) Leadership truly capable of driving the evolution process has not emerged; (3) The resistance of changing culture is extremely strong.

6 – EVOLUTION OF MATURITY: THE MAIN CHALLENGES

The analysis of the data from our research points to the 5 different paths in the journey towards maturity evolution, as demonstrated above. The fact that the concept of maturity in our Prado-PMMM model is **strongly linked to obtaining results** may explain why we observe that most of Brazilian organizations do not reach the platform of excellence (levels 4 and 5). In our model, it is not enough to have good documentation of processes (methodology, etc.), tools (software, etc.), a well-trained team, etc. If all of this means that an organization does not obtain increasingly better results over time, we will not have maturity evolution.

In the Prado-PMMM model, each level has its challenges and difficulties for evolving in maturity. This subject, which has already been addressed in previous articles, will be summarized below. Here, we will focus only on levels 3, 4 and 5, as they are the most strategic on this journey. Briefly, the challenges of these levels are as follows:

Level 3 – Use of a unified platform

- Implementation and consolidation of a project management platform (see article 3).
- Constant and convincing use of this platform by the main stakeholders.
- Identification of the main factors that hinder the success of projects.

Level 4 – Mitigation of the causes of anomalies

- Elimination/mitigation of the causes of the offending factors identified in level 3.
- Continuous improvement in the use of the platform.

- Efficient and effective governance.
- Significant progress in knowledge and practice of technical aspects of the organization (products, flows, etc.) by the main stakeholders involved in project management.
- Significant progress in knowledge and practice of managerial aspects.

Level 5 – Optimization

- Optimization of processes, tools and organizational structure.

7 – EVOLUTION OF MATURITY: THE MAIN DIFFICULTIES

The difficulties for evolution come from different sources and are as follows:

- A. Difficulties related to the activities for evolution at each level of maturity.
- B. Difficulties related to the continuity of the journey, without interruption.
- C. Difficulties related to the CSFs (Critical Success Factors) for the viability of evolution.
- D. Difficulties related to hidden challenges.

7.A - Difficulties related to activities for evolution at each maturity level

These difficulties are related to the maturity assessment questionnaire (available on our website [1]). They appear at various points in the project management flow, starting at strategic planning (or negotiation with clients, in the case of project-oriented organizations), project planning and execution, all the way to the product being put into operation (or being transferred to the client, in the case of project-oriented organizations). Our focus here is not to describe and analyze the causes of difficulties in project execution (or causes of project failures), but rather to describe and analyze the causes of difficulties in the evolution of maturity.

In short, they are as follows:

1. Difficulties in implementing and consolidating **processes (methodology)** for the entire life cycle of projects, starting with strategic planning (or negotiation with the client) and continuing through product delivery.
2. Difficulties in implementing and consolidating **computerization (tools)** for the entire life cycle of projects, starting with strategic planning (or negotiation with the client) and continuing through product delivery.
3. Difficulties in implementing an **organizational structure** and making it operational and efficient.
4. Difficulties in good project **governance**.
5. Difficulties in identifying and resolving (or mitigating) the **causes of anomalies** found in project execution (delays, cost overruns, dissatisfaction, etc.).
6. Difficulties in **developing the teams** involved in technical, behavioral and managerial aspects.

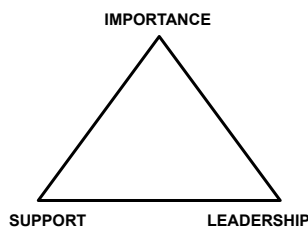
7.B - Difficulties related to the continuity of the journey of evolution

These difficulties refer to the stability of the project management practice over long periods of time. In summary, we have the following examples:

1. Discontinuity of the journey due to the end of strategic cycles.
2. Discontinuity of the journey due to a change in government.
3. Discontinuity of the journey due to constant changes in the team involved in project management in the organization.
4. Discontinuity of the journey due to a strong economic crisis or strong uncertainty in the country (example: COVID in 2021).

7.C - Difficulties with Critical Success Factors for the evolution of maturity

This subject was addressed in the previous article [11]. Here we will simply list the critical factors for the evolution of maturity in a department of an organization to be viable:



- High importance of projects and their management for the organization.
- Decisive support from senior management.
- Strong leadership in the evolution journey.

7.D - Difficulties with hidden challenges

The journey to maturity evolution may be affected by an additional category of challenges, in addition to those shown previously in this text. We can call them hidden challenges, as they are not always easy to identify and mitigate. Among them we can mention:

1. **Reactive organizational culture** – due to its importance, we detail this subject in the next item.
2. **Covert power struggles** – power struggles exist in any organization. In some more openly and in others in a covert way. When the power struggle directly affects the department in which maturity evolution is sought, we may experience a slowdown in actions aimed at increasing maturity.
3. **Lack of institutional thinking** – it is important to remember, once again, that one characteristic of projects is to be matrix-based, that is, they depend on several areas of the organization to be successful. Generally, every manager fights for his or her area to prosper, but not every manager is supportive of other areas. This does not mean that he or she acts to make the work of others more difficult. There is simply not enough effort being made to ensure that projects move forward at the required pace.

This is manifested, for example, in absences from committee meetings, in not releasing resources to temporarily work on projects, etc.

8 – THE “ORGANIZATIONAL CULTURE” FACTOR

The influence of “organizational culture” on project management is of great significance. Due to the importance of this topic, it will be summarized here, but we encourage the reader to refer to an article previously published in this journal in 2017[3] for a more comprehensive and in-depth discussion.

The following concept is widely used:

“The culture of an organization – or of any group of people – is a set of values, beliefs and behaviors, and this set is a reflection of the group's leaders” - Edgar Henry Schein [6].

The “culture” aspect is vital for project management, and its importance is underestimated by many. Peter Drucker believed that culture can strongly impact the achievement of expected strategic results, and he summed it up in an anthological phrase: “culture eats strategy for breakfast”.

Psychologist Edgar Henry Schein was one of the greatest scholars on the subject. In his book “Organizational Culture and Leadership” [6], he states that an organization's culture, like an iceberg, is not something that can be easily perceived in its entirety. He identifies three constituent layers of culture:

- A. **Artifacts** – the most visible layer – refers to *“any element of the organization that is tangible, obvious, or verbally identifiable. Architecture, furniture, clothing, office jokes. All of these are examples of organizational artifacts. Artifacts are the visible elements of the organization and can be identified by people outside the organization.”*
- B. **Shared beliefs and values** – the intermediate layer – refer to *“the organization's stated values and rules of behavior. This is usually expressed in official philosophies and public statements of identity.”*
- C. **Core assumptions** – the deep, less visible layer that truly defines an organization's culture – refers to *“deeply ingrained, assumed or often unconscious behaviors that constitute the essence of the culture. These assumptions are typically so embedded in the dynamics of the organization that they are difficult for even insiders to recognize.”*

Implementing project management is an act of cultural change within an organization and resistance usually exists. Resistance is typically not presented in an open manner, but it is rather subtle. Some examples:

- 1 - Difficulties in consolidating management processes:

- Project Plan is seen as “too bureaucratic”.
 - Project control with baseline is seen as “too rigid”.
- 2 - Difficulties in consolidating governance:
- Monitoring meetings are seen as “too bureaucratic”.
- 3 - Difficulties in interacting with other areas of the organization that also participate in the project (matrix organization):
- Such external areas consider themselves “untouchable”.

All these behaviors have a negative impact on project performance, as they cause delays, cost overruns, failure to deliver the full scope of the project, dissatisfied customers, etc. In other words, goals are not met. Situations like this can persist for a long time and are difficult to resolve. They occur more frequently in government organizations, but also in private organizations that are strongly oriented towards repetitive processes.

Culture change is a difficult challenge if faced by the internal forces of organizations, and there is currently several consulting firms dedicated exclusively to this topic (*change management*) [7]. The strength of the reactive culture cannot be underestimated. Even in scenarios where the critical success factors mentioned above are favorable, the reactive culture can complicate the situation. The persistence of unachieved results and dissatisfied customers means that maturity is not being achieved. This scenario can lead to very slow progress in maturity or even stagnation.

9 – CONCLUSIONS

Managing projects successfully is not an easy task. Progressing in project management (maturity evolution) is a major challenge and only a few organizations reach the platform of excellence, with most ending up settling for a median level. There are even situations in which some factors cause organizations to suffer discontinuity in their journey, either by falling to a lower value level or by the extinction of the project management department.

10 – CONSIDERATIONS ON THE SIZE OF THE EXCELLENCE PLATFORM

In the next article, we will analyze the companies that have achieved the platform of excellence (maturity levels 4 and 5). As Figure 4 shows, 12% of Brazilian organizations who participated in our survey are at these levels. The question then arises: what is the true size of the group of organizations in Brazil who have achieved the platform of excellence?

The analysis conducted in this series of articles was based on the answers of organizations that participated in the surveys each year, which is a fraction of the entire body of organizations in Brazil. We believe that the universe of Brazilian organizations, where departments have project portfolios, must be very large, if we include any type and size of

project. However, we also know that many of these organizations have departments who do not use project management for various reasons; either because they have not yet begun using it, or because they believe it is unnecessary. We believe it is important to understand the size of the universe of organizations that have project portfolios and require robust project management to achieve results.

Participation in our survey ranged between 117 organizations departments in 2024, to 434 in 2012. Although these are robust numbers which allowed for significant results, the total number of organizations in Brazil is much larger. The reasons for non-participation in our survey among the universe of eligible organizations could be:

- The outreach carried out each year did not reach all organizations.
- Participating in the survey was not a priority for the field at that time.
- Interest in the topic of maturity has significantly decreased in the field in Brazilian organizations.

What is the size of this universe of Brazilian organizations that could participate in the survey? Unfortunately, we don't have this information. We can make some conjectures here, using our knowledge of the Brazilian landscape as a consultant, and extrapolating the participation sizes already obtained in surveys conducted since 2005. Thus, let's assume that this total is between 2,000 and 5,000 organizations, values that we consider plausible. Based on the analyses presented in this article, we could say that **the total number of organizations that occupy the platform of excellence in Brazil (12%) would be somewhere between 240 and 600.**

In the next article, we will analyze this small but important group of organizations that have reached the platform of excellence.

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Darci Prado is a consultant and partner of Falconi Consultants in Brazil (<https://en.falconi.com/>). He holds a Chemical Engineering degree from UFMG (Federal University of Minas Gerais). He concluded graduate studies in Economical Engineering at UCMG (Catholic University of Minas Gerais) and holds a PhD in Project Management from UNICAMP (Campinas University). He has worked for IBM for 25 years and was a professor at UFMG Engineering School for 32 years. He got the IPMA Level B Certification in 2006. He was one of the founders of Minas Gerais State and Parana State PMI chapters.

In 2005, he pioneered a Project Management Maturity research in Brazil and expanded to Italy in 2010. This research is ongoing, and it is the only one of its kind in the world. He is the author of nine books on project management and is also the author of a PM methodology and a PM software application. As an international speaker, he has been invited multiple times to present in the USA, Italy, France, Portugal and Mexico. Since 2018 he has been working internally with the Falconi CEO, assisting in strategic planning and project implementation.

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