PM World **Journal**
Vol. III, Issue X – October 2014
www.pmworldjournal.net   Series Article #10

How to Increase Project Profitability
Project Management Maturity Series
Archibald, Prado, Neto

Maturity in Project Management Series[1]

HOW TO INCREASE PROJECT PROFITABILITY – AN APPROACH USING MATURITY CONCEPTS [2]

Darci Prado, Russell Archibald and Manuel Carvalho Neto

ABSTRACT

The objective of this paper is to present an approach to increase project profitability using maturity concepts. The basis for the paper are the data obtained in recent maturity researches held in Brazil using the Prado PM Maturity Model. This research quantitatively proved that:

- There is a direct positive relationship between total project success and the organization's level of project management maturity.
- There is an inverse relationship between project failure and PM maturity.
- There is an inverse relationship between project delay and PM maturity; the higher the maturity, the lesser the delay.
- There is an inverse relationship between cost overrun and PM Maturity; the higher the maturity, the lower the cost overrun.

Then, the paper shows how an organization can use such data to increase the profitability of their projects by:

- Identifying your current maturity and your project/business performance indicators (profitability, delays, cost overrun, etc.).
- Using the survey data in order to have a forecast of how much it could improve its performance by increasing the maturity;
- Identifying the success factors offenders and where they are located;
- Establishing a plan of attack for offenders to success in order to increase the maturity and increase performance indicators.

The importance of this approach is that it shows that there is a route to increase performance by means of the conclusions obtained from the maturity surveys.

This approach has been used successfully in Brazil by several Brazilian organizations.

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[1] The Project Management Maturity series of articles by Russell Archibald & Prof Darci Prado is based on their extensive research on this topic in Brazil, the United States and other countries. Russ is one of the pioneers in the project management field and the originator of the Archibald Project Categorization Model. 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 http://www.maturityresearch.com/.

[2] This paper was originally presented at the 8th annual UT Dallas Project Management Symposium in Richardson, Texas, USA in August 2014. It is republished here with permission of the authors and conference organizers at The University of Texas at Dallas.

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1. INTRODUCTION

A PM maturity survey has been conducted since 2005 in Brazil using the site www.maturityresearch.com [1], coordinated by Darci Prado and Russell Archibald. In this research the participants respond to two separate and independent questionnaires:

- Questionnaire (40 questions) for maturity evaluation:
- Questionnaire (28 questions) to identify the characteristics of the organization and inform about the department project performance indicators (project and product success, delays, cost overrun, scope adherence, etc.)[3].

With this approach in evaluating the research results, we can cross reference between the responses of the two questionnaires. One important aspect of the research is the deployment of results according to the category of each of the projects [1]. We show below a summary of key indicators obtained in the 2012 survey, which included 434 organizations and 8,680 projects [2]:

Maturity:
- Maturity (overall average): 2.60 (scale 1 to 5)

Performance Indicators (overall averages):
- Success Index:
  - Total Success: 49.7%
  - Partial Success: 35.2%
  - Failure: 15.1%
- Delay: 28%
- Cost Overrun: 15%

It is important to make the point that the research has shown that there is a strong relationship between maturity and success, i.e., the more mature the area is in the use of good PM practice, the better their performance indicators will be. We will show this aspect next.

Performance Indicator Results

To fully understand this section it would be better if the reader could read the article "*Foundations of Prado-PMMM*", that describes the Prado Model in some detail [3]. To facilitate the understanding, we show below the definitions of the five levels of Prado-PMMM:

- **Level 1 (Ad Hoc):** There is no practice of formalized project management (PM).
- **Level 2 (Known):** PM is known by leading participants in the organization. The PM initiatives are isolated and not standardized.
- **Level 3 (Standardized):** Established standardization of PM processes, tools, organizational structure and strategic alignment of projects are being used. Related skills were developed. Everyone involved follows the PM standards.

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[3] These 28 questions can be found on the site www.maturityresearch.com by registering and then clicking on the "Start Evaluation" button. You can read all questions in both questionnaires there without actually giving answers to the questions. The corporate identity of organizations is not revealed in the study results.

- **Level 4 (Managed):** Identification and removal of the causes of Business and PM anomalies.
- **Level 5 (Optimized):** the PM platform not only works and gives results but is also optimized by the practice of continuous improvement and technological and processes innovation.

According to the 2012 PM Maturity Research, the performance indicators for completed portfolios of projects are [3]:

a) Success

The relationships between success and maturity levels are shown in the following graph:

MATURITY LEVELS AND SUCCESS - 2012

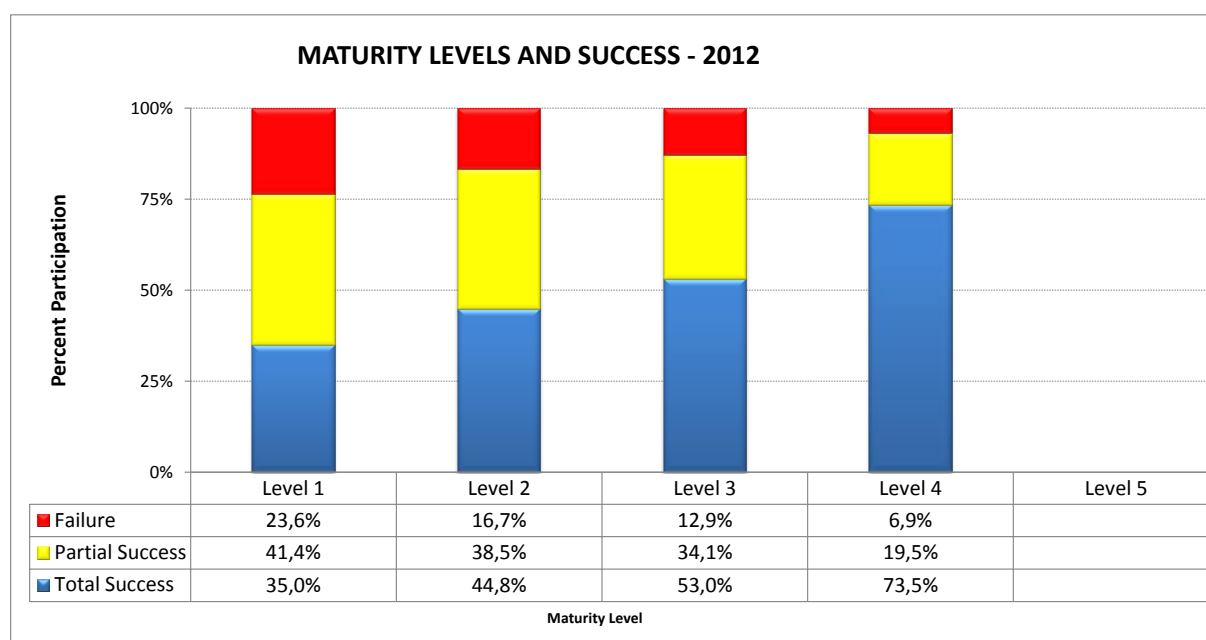|	Level 1	Level 2	Level 3	Level 4	Level 5
Failure	23,6%	16,7%	12,9%	6,9%	
Partial Success	41,4%	38,5%	34,1%	19,5%	
Total Success	35,0%	44,8%	53,0%	73,5%	

Maturity Level

Figure 1: Project Success versus Maturity Levels [4].

From Figure 1 we can conclude that:

- There is a direct positive relationship between Total Success and Maturity;
- There is an inverted relationship between Failure and Maturity.

The site www.maturityresearch.com [1] presents various definitions of success, which depend on the category of projects executed by the department; that is, the concept of success for a construction department is different from the concept for a successful IT department. So, it may be related with ROI, Ebtida, Market-share, etc. As an illustration, we present below the general definition of success shown on the site.

Total success: A successful project is one that has reached the goal. This usually means it was completed and produced the expected results and benefits and key stakeholders were fully satisfied. In addition, but not mandatory, it is expected that the project has been

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completed within the requirements for time, cost, scope and quality (small differences can be accepted).

Partial or challenged success: The project was completed but did not produce the results and benefits expected. There is significant dissatisfaction among key stakeholders. Also, probably some of the requirements for time, cost, scope and quality were significantly exceeded.

Failure: Because there is a huge dissatisfaction among main stakeholders, or the project was not completed, or did not met the expectations of key stakeholders, or some of the requirements for time, cost, scope and quality were exceeded in an absolutely unacceptable way.

The behaviour showed in Figure 1 (global results) can be seen if we look at the many survey responses that has been received within the data and that can be seen at the site www.maturityresearch.com;

b) Delay

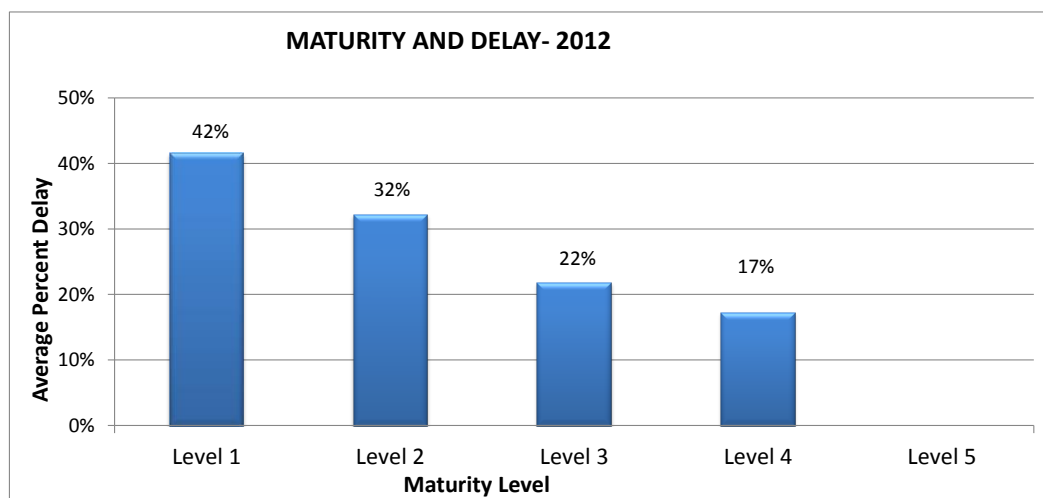The relationships between project delay and PM maturity levels are shown in Figure 2:

Figure 2: Project Delay versus Maturity Levels [4].

From Figure 2 we can conclude that there is an inverse relationship between delay and maturity. The higher the maturity, the lesser the delay.

c) Cost Overrun

The relationship between overrun costs and maturity levels are shown in Figure 3:

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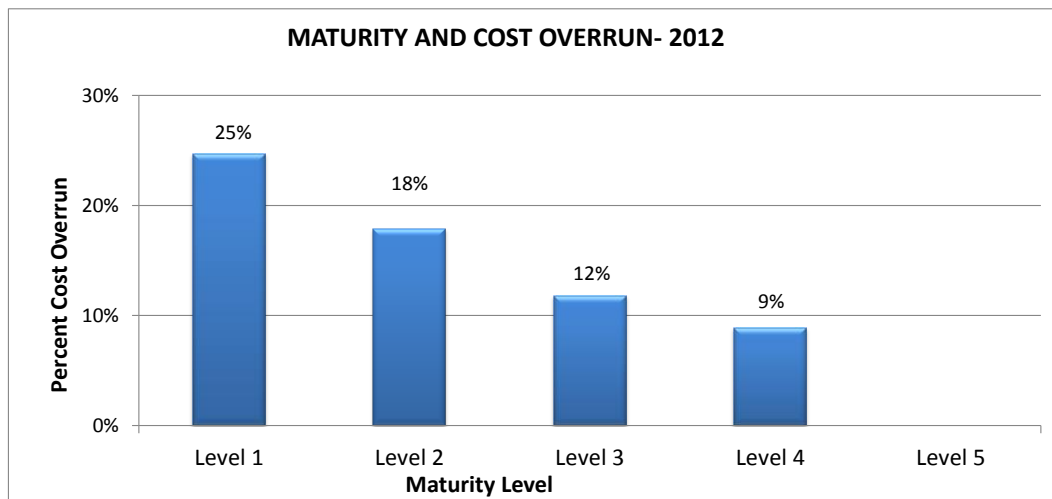Archibald, Prado, Neto

Figure 3: Project Cost Overrun versus Maturity Levels [4].

From Figure 3 we can conclude that there is an inverse relationship between Cost Overrun and Maturity. The higher the maturity, the lower overrun costs.

a) Value Aggregation Perception

The question on the perception by key stakeholders of value aggregation by project management is:

> **19.** *Regarding the practice of project management (PM) in your department, what is the perception by key stakeholders on the importance (or value creation) that project management brings to the success of projects and / or for the business of the department?*
>
> *a) PM adds a lot of value*
> *b) PM adds some value*
> *c) PM adds little value*
> *d) PM does not add value*
> *e) We have no PM*

The intersection between key stakeholders' perception of value aggregation by PM and maturity levels is shown in the following graph:

From Figure 4 we can conclude that there is a direct positive relationship between Perceived Value Aggregation and Project Management Maturity Levels. The higher the maturity, the greater the perception of added value by key stakeholders!

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MATURITY LEVELS AND VALUE AGGREGATION PERCEPTION - 2012

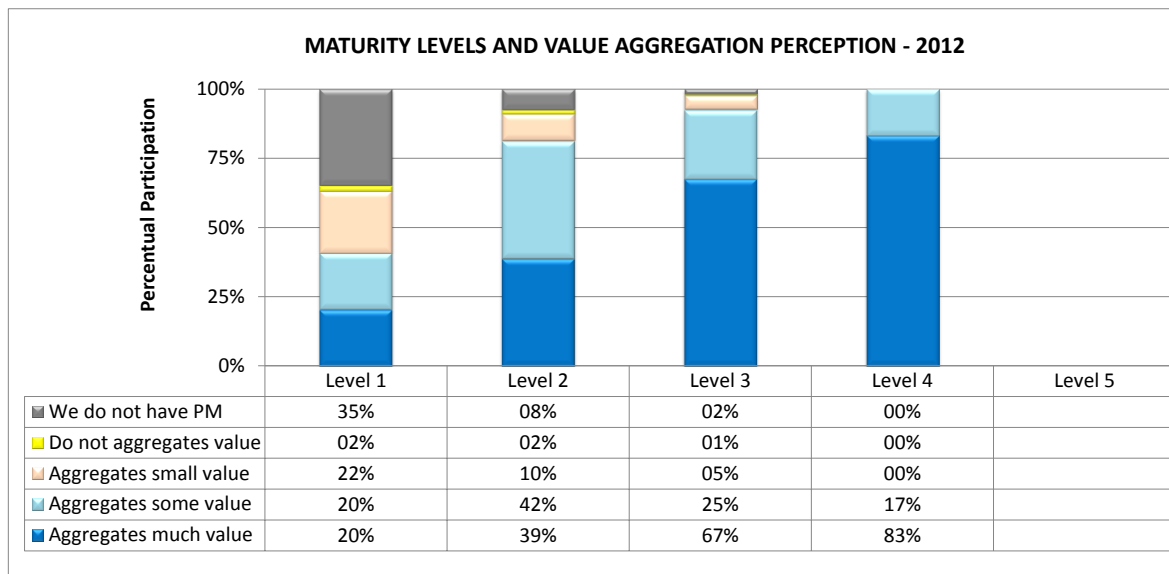|	Level 1	Level 2	Level 3	Level 4	Level 5
■ We do not have PM	35%	08%	02%	00%	
■ Do not aggregates value	02%	02%	01%	00%	
■ Aggregates small value	22%	10%	05%	00%	
■ Aggregates some value	20%	42%	25%	17%	
■ Aggregates much value	20%	39%	67%	83%	

Figure 4: Value Aggregation by PM: Perception versus Maturity Levels [4].

b) Conclusions

According to research results:

- The greater the maturity, the higher the performance (success, delay and cost overrun).
- The greater the maturity, the higher the perception of PM value.

So, the big question now is: HOW TO ACHIEVE EXCELLENCE? According to Prado-PMMM, the answer is: MOVE TO MATURITY LEVEL 4 (Figure 5).
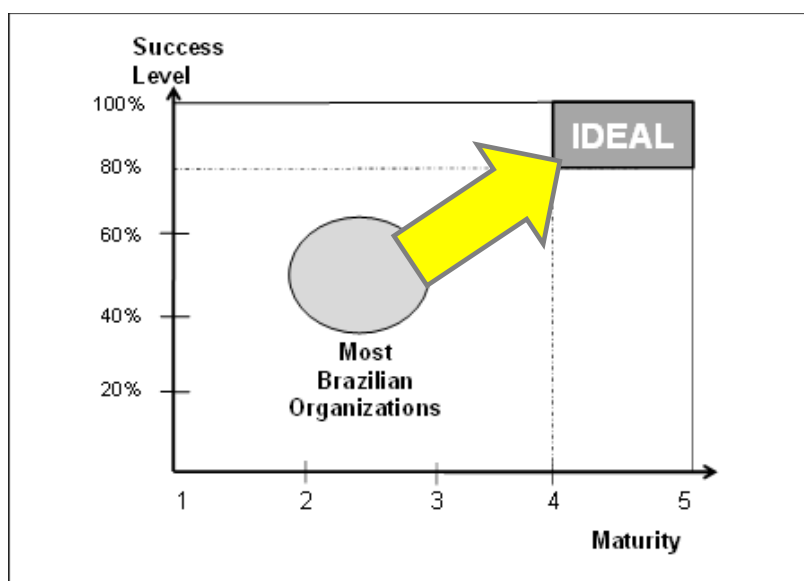

Figure 5: Moving to the ideal scenario [5].

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Now, the second big question is: HOW TO GET THERE? That's what we will see next.

2. HOW TO ACIEVE EXCELLENCE AND INCREASE PROJECT PROFITABILITY?

As we said, achieving excellence is the same as going to level 4. But to get there we first must consolidate level 3 [4].

a) Going to level 3.

Initially, level 3 represents the situation where a PM platform has been implemented. Its main features are:

- Existence of a standardized platform for PM (Figure 6).
- The platform is in use by the leading players for over one year.
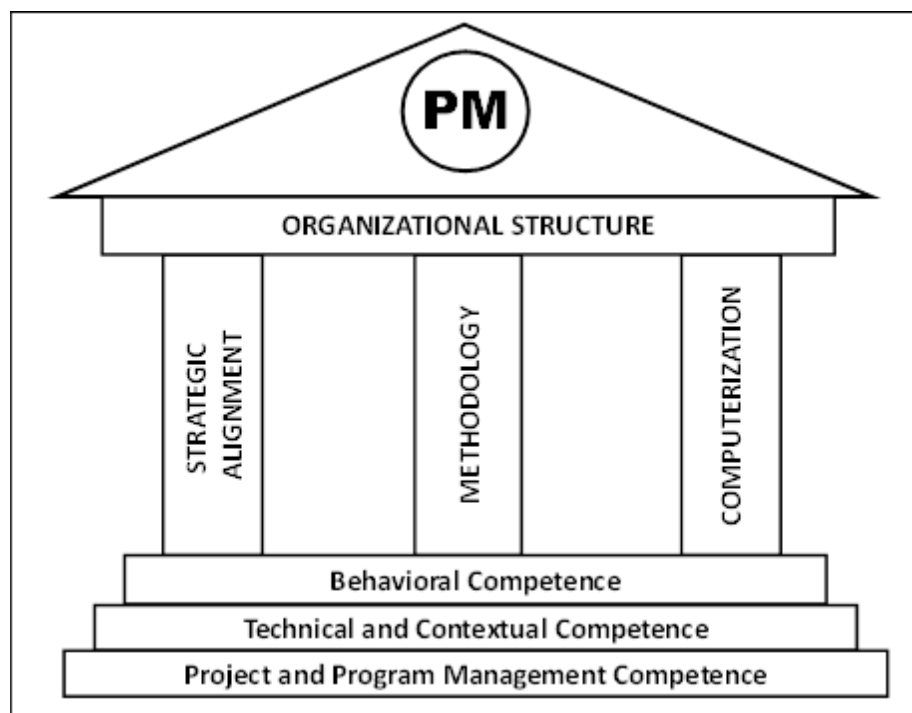- Evolution in skills.

Figure 6: A Platform for PM evolution, according to Prado-PMMM [5].

But level 3 means a little more: it also represents the situation where we proceed to capture expressive performance data, as project performance and business performance. This information will be fundamental for the next level. So, in maturity level 3 we also have:

- Use of baseline;
- Business success definition;
- Project performance measurement;
- Data capture of anomalies that impact project results (delays, cost overruns, etc.).
- Business performance measurement;

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- Data capture of anomalies that impact business results (ROI, Ebtida, Market-share, etc.);
- Lessons Learned and Best Practices gathering.

b) Going to level 4.

Level 4 represents the situation where the PM platform really works and gives results and the involved professionals consistently demonstrate a high level of competence. Its main features are:

- Elimination (or mitigation) of manageable anomalies that hinder business outcomes.
- Elimination (or mitigation) of manageable anomalies that hinder project outcomes.

It is important to add that the results of the area (success rate, delay, etc.) are consistent with what is expected for the maturity level 4. The consequences are:

- Strong alignment with organization business.
- Intense involvement of high administration.

So what we really have when level 4 is achieved is better performance, both in project management and in business indicators. This point has a huge importance. A few examples should put no doubt in what we are saying:

- For construction industry organizations (heavy construction, building, etc.) we are saying that level 4 means better profitability in business;
- For organizations that develop new produts, we are saying that level 4 means successful launching of products, regarding to time-to-market, profitability, market-share, etc.
- For government organizations that run social projects, we are saying that level 4 means successful people satisfaction, good usage of public money, etc.

3. WHO SHOULD BE THE LEADER FOR A PM MATURITY EVOLUTION?

So far we have pointed out the benefits of being level 4. Now, we will show who should drive this movement.

Our choice is the Project Management Office/PMO [4]. Certainly not all organizations (better to say, departments) should have a PMO, or are large enough to have a PMO. The Brazilian research showed that 67% of organizations responding to the survey have PMO [2]. For instance, small I.T. or Engineering organizations usually do not have a PMO.

For those organizations that have a PMO, this area is the central focus for this movement. The reasons:

- It is the only area that has the mission to be the GUARDIAN of methodology and PM knowledge;.
  - It is the PM Memory (Knowledge Management);
- It participates of the planning and controlling of all projects;
- It has a very close relationship with high administration;

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- As time passes, it acquires strong knowledge of:
  - Unit or department projects' technical characteristics,
  - Organization business and strategies,
- It is the main facilitator for maturity evolution in organizations.

For those organizations that have not a PMO, the leader for this movement should be a function manager.

4. CONCLUSIONS

This text shows that it is possible to have excellence project performance. The path is the evolution in maturity to achieve level 4. But it is important to say here that this does not occur overnight: it is a long road. If your organization is now on level 1 or 2, probably it will take from 3 to 5 years to achieve level 4. But starting the movement right now is a competitive decision.

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Click on these titles to read the previous nine articles:

Jan. 2014: Maturity in Project Management Series: Introduction to Maturity in Project Management
Feb. 2014: The Importance of Knowing Your Project, Program, and Portfolio Management Maturity: PPPMM
Mar. 2014: Foundations of the Prado-PM Maturity Model
Apr. 2014: PM Maturity for Project Categories
May 2014: Maturity, Success and Competitiveness
June 2014: The Brazilian Experience: General Results
July 2014: Impact of PPPM Maturity on the Success of Software Application Development Projects in Brazil
August 2014: Impact of PPPM Maturity on the Success of Construction Industry Projects in Brazil
Sept. 2014: Impact of PPPM Maturity on the Success of Organizational Change Projects in Brazil

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