

MATURITY IN PROJECT MANAGEMENT - BRAZIL

Archibald & Prado's Research

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2021 Research Report:
"Benchmark Organizations"
(High Performance Organizations)

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Organized by:
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Introduction

This report - ***Organizations Benchmark*** - contains the analysis of data provided by 19 professionals from Brazilian organizations. The data provided come from a total of 806 projects. In this group we have exclusively organizations whose maturity is higher than 4.0. Therefore, it is the group most qualified in research, that set of organizations that reached the level of excellence. This report is a natural continuation of the ***Performance Comparative Analysis*** Report.

The final result presented in this report showed, for this group, an average maturity of 4.29. Considering that the range of values for maturity is from 1 to 5, it is possible to understand why we use the term "excellence" to qualify this grouping.

This report presents the main performance indicators (success, delay, cost overrun and scope execution) both in general and unfolded by type of organization, project category, business area, organization billing, type of customer and Brazilian states. Most of the 19 organizations of this excellence group are from the private sector (16 or about 84%). There are also 1 Government - Indirect Administration and 2 of the Non government sector.

The numbers and information presented here confirm that, growing up in Maturity means results significantly better, in other words, a better application of the money invested in projects.

In this way, it is expected that this report will be useful to the organizations that are setting up their growth plan, both in the sense of having arguments with their Top Management, in order to be able to assemble such a plan, as well as to know benchmark data in their performance area.

Comments about the group Organizations Benchmark

Maybe the most remarkable result of this 2021 Research is the Benchmark Organizations Total Success percentage, which is 80%, 33,3% above the All-Organizations Success Total, which is 60%. We can agree that an 80% Success Total rate is an excellent number.

This Benchmark Organizations Total Success percentage can be confirmed by other remarkable results, such as the average delay, overrun and scope execution rates (see slides 7,13, 14 and 15 ahead).

These organizations which have little or no delay, overrun and that deliver the total (or almost total) project scope, clearly understand and perceive the Project Management value (see slide 12 ahead).

It's not by chance that the 19 Total Success Organizations have very high adherence to the 7 Maturity dimensions considered in the Prado-MPCM Model, used in this research (see slide 9).

Also, the numbers presented here regarding the 19 benchmark organizations Organizational Structure (see slides 24 and 25), certify the importance of this Model Dimension.

So, we can conclude reading this Report and its numbers, percentages and results is that greater the Maturity level, greater the Success rate. Those numbers confirm, in a categorical way, a lot of studies and papers about Project Management Maturity, and the 2014 and 2017 edition of this Research, as well.

But you can conclude in other way, that the amazing and impressive results from the 2021 Research Benchmark Organizations, just demonstrate the validity and solidity from Prado-MPCM Model.

Comment by Manuel Carvalho da Silva Neto – March 2022

General Results

In this part of the report, the General Results of the entire of participants population of this group are presented:

- Maturity and its distribution in levels
- Adherence to the dimensions of maturity
- Success level, delay, and overflow

MATURITY:

- Maturity: 4,29 (research general average: 2,94)

19 Organizations
806 projects

PERFORMANCE INDICATORS

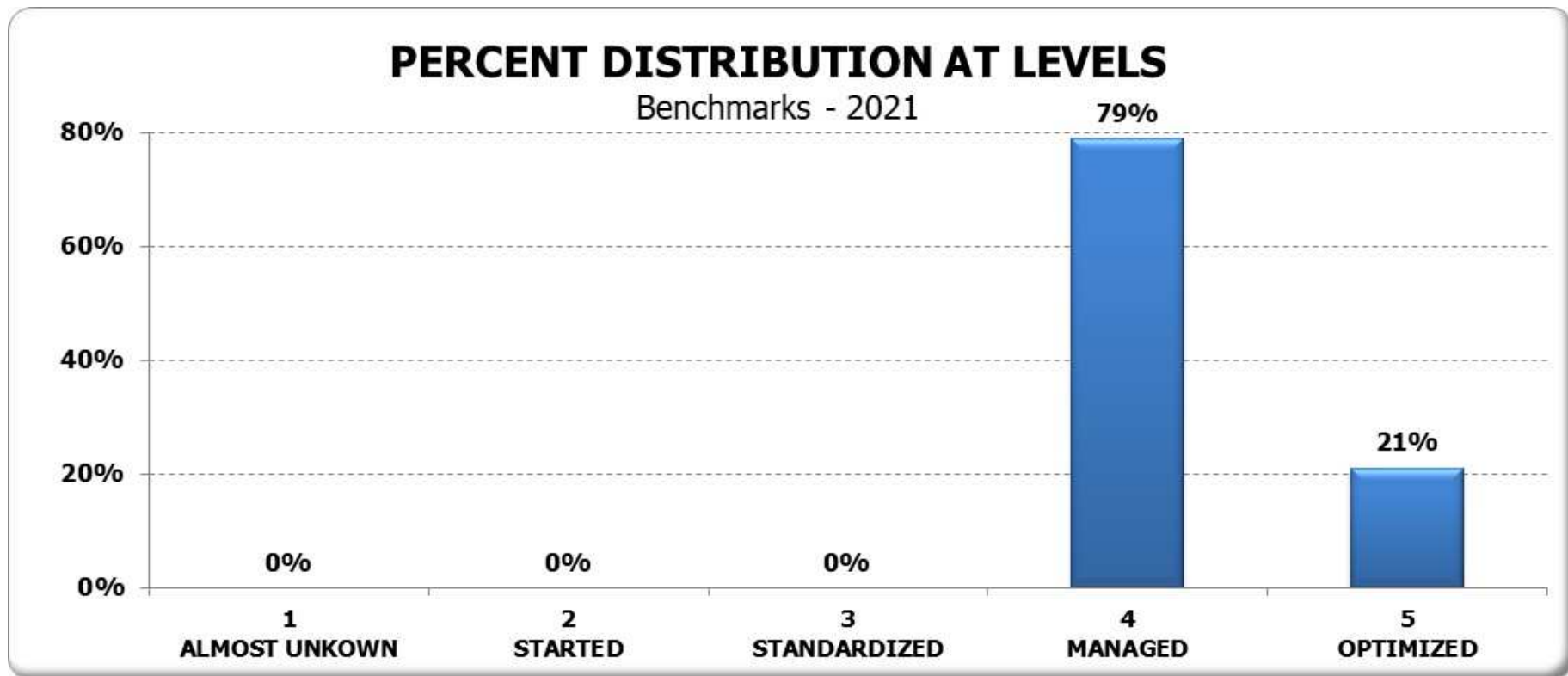
- Success Index:
 - Total Success: 80.0% (research general average : 60%)
 - Partial Success: 15.0% (research general average : 31%)
 - Failure: 4.0% (research general average : 9%)
- Average Delay: 8.3% (research general average : 21%)
- Average cost overrun: 9.4% (research general average : 12%)
- Execução média do Escopo: 92.6% (research general average : 79%)

AVERAGE COMPOSITION OF THE PROJECT PORTFOLIO

- Average number of projects: 32 (overall research average: 25)
- Average duration of each project: 11 months (overall research average: 13)

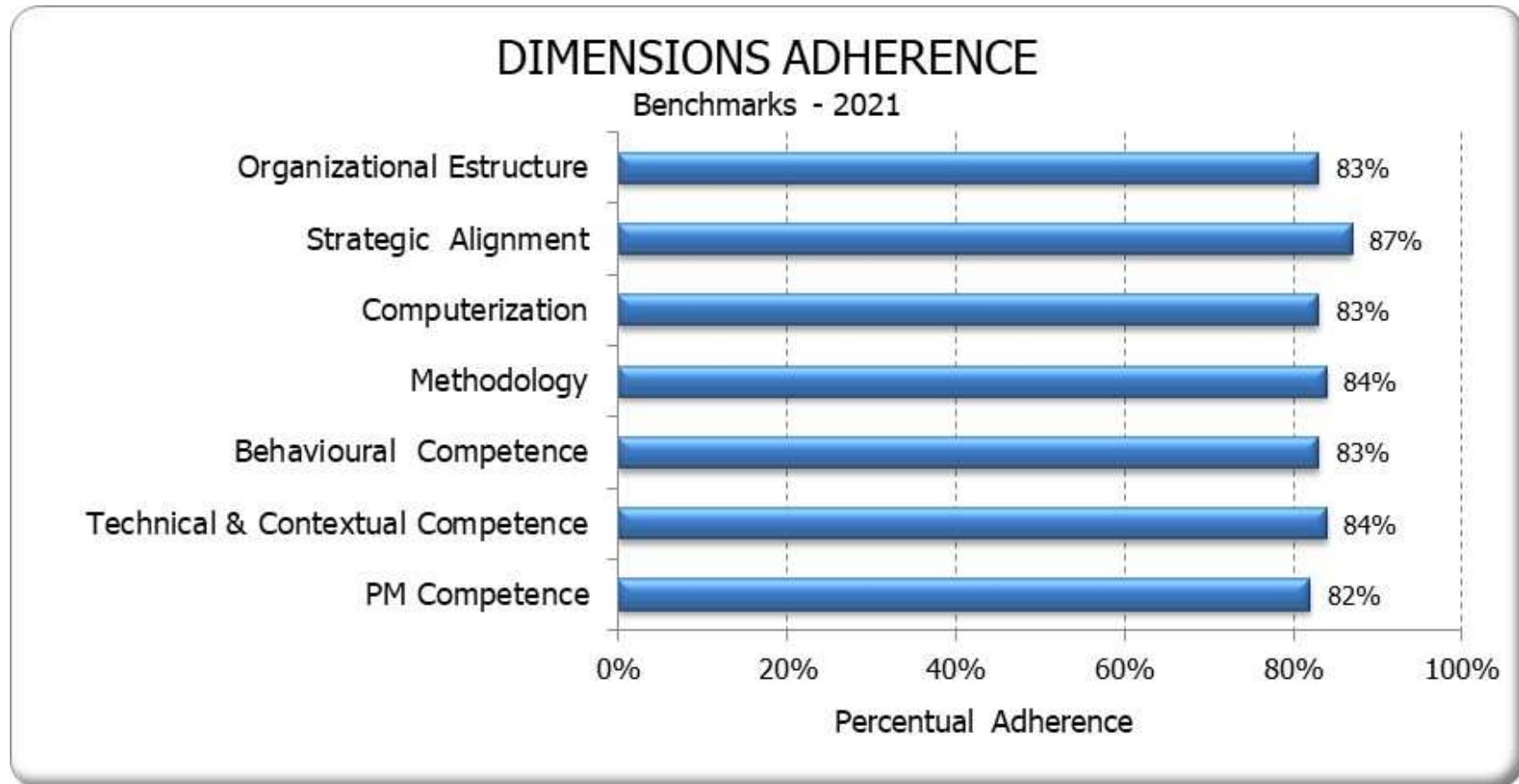
Maturity: **4.29**

This group consists exclusively of organizations that are at maturity levels 4 and 5.
In the sample, we have a predominance of organizations in level 4.

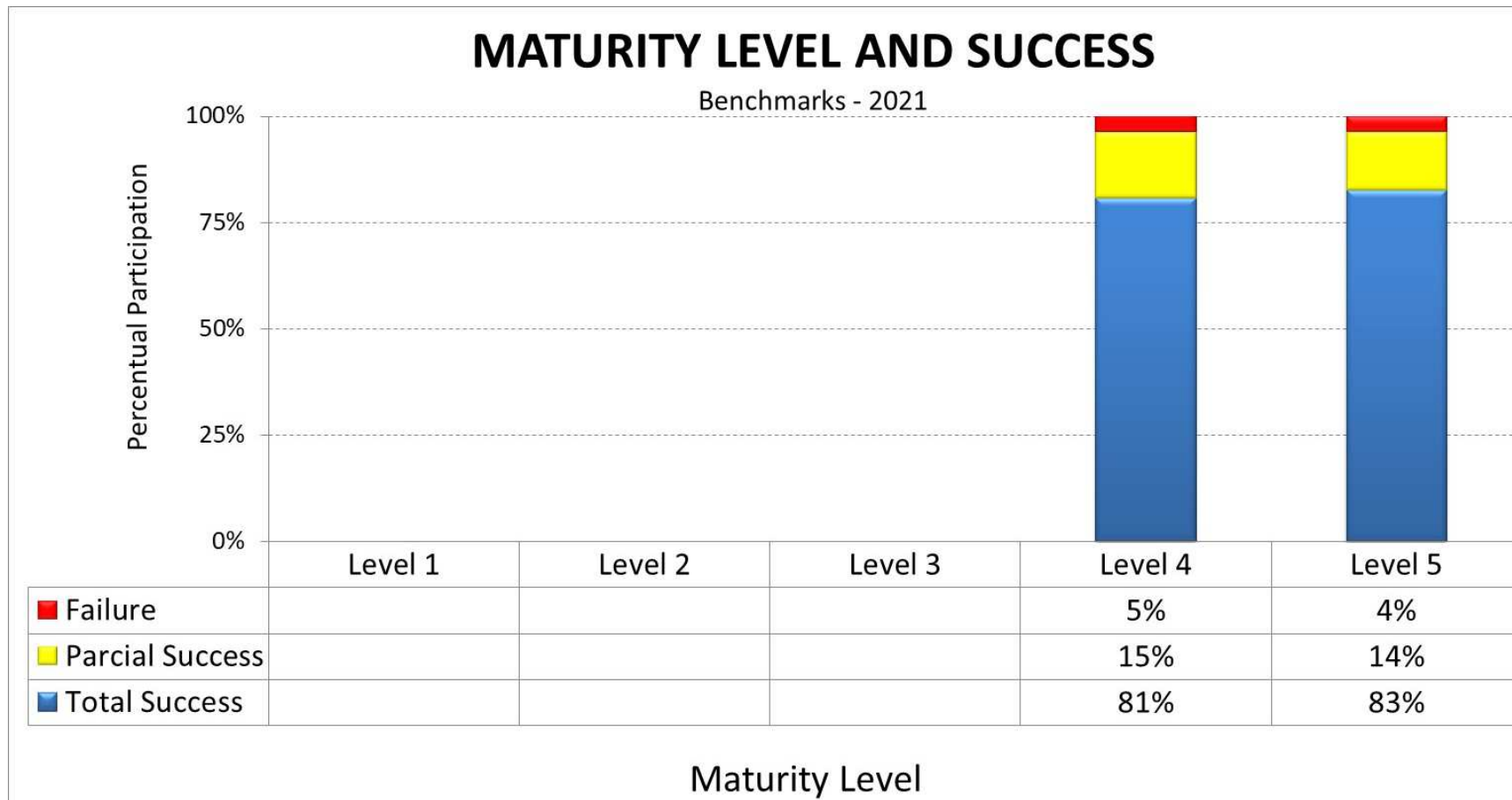


Adherence to Dimensions

All values are on the plateau labeled "optimal".



The main characteristic of levels 4 and 5 is the very low failure rate.



Samples Sizes: Level 4: 15 / Level 5: 4

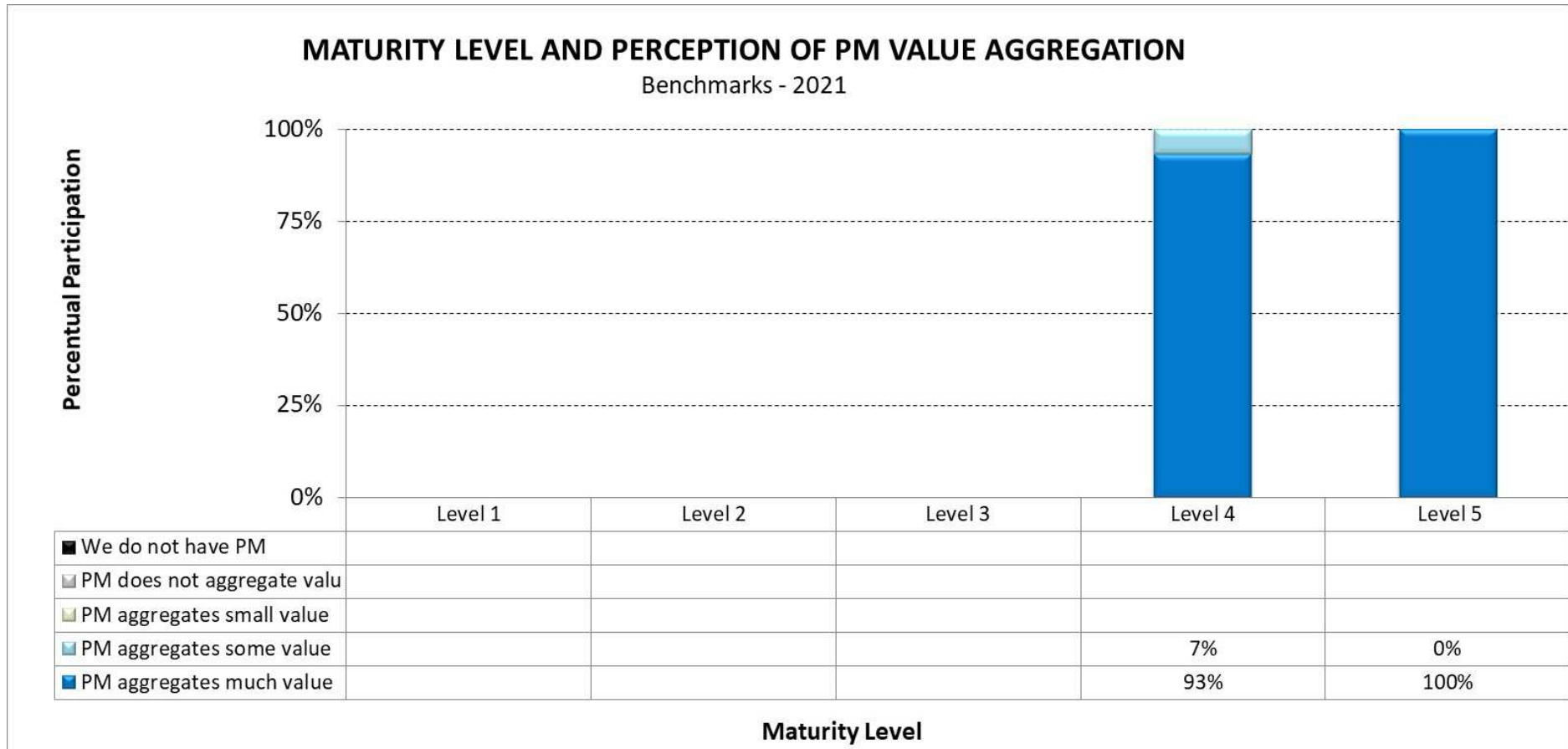
Indicators Explanations of Performance Types

TYPE	CHARACTERISTICS
TOTAL SUCCESS	A successful project is one that has reached the goal. This usually means that it was completed and produced deliverables, expected results and benefits and the key stakeholders were fully satisfied. In addition, it is expected that the project has been closed within the expected requirements for term, cost, scope and quality (small differences can be accepted depending on the type of project).
PARTIAL SUCCESS	The project was completed but did not produce all the expected results and benefits. There is significant dissatisfaction among key stakeholders. In addition, some of the expected requirements for term, cost, scope and quality were probably significantly worse than desired.
FAILURE	There is a huge dissatisfaction among the key stakeholders either because the project was not completed or because it did not meet the expectations of the key stakeholders or because some of the expected requirements for time, cost, scope and quality were absolutely unacceptable.

See the complete set of success conceptualization on the site www.maturityresearch.com

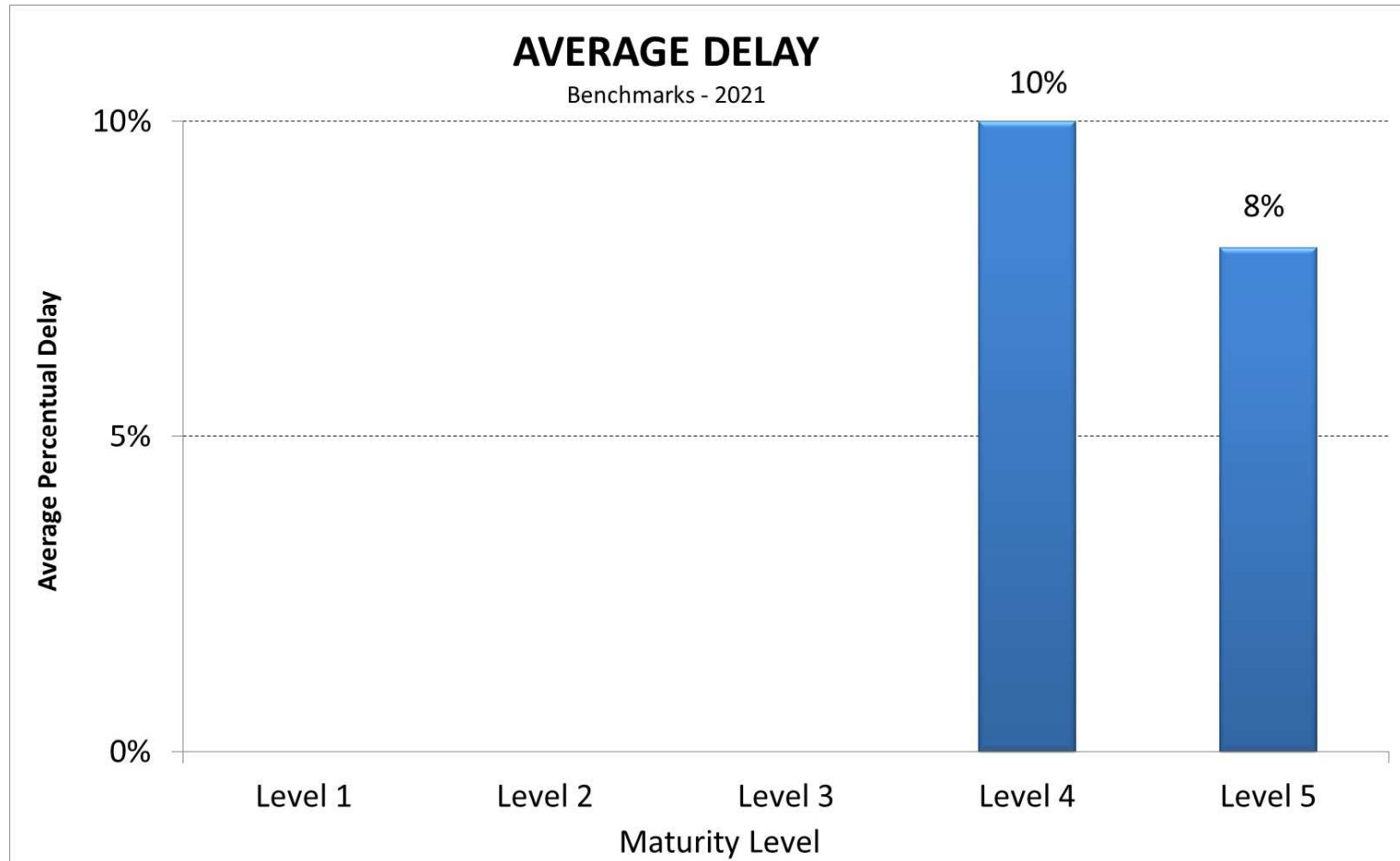
Perception of GP Value

There is a strong incidence of organizations whose top management believes that project management contributes significantly to value adding to business.



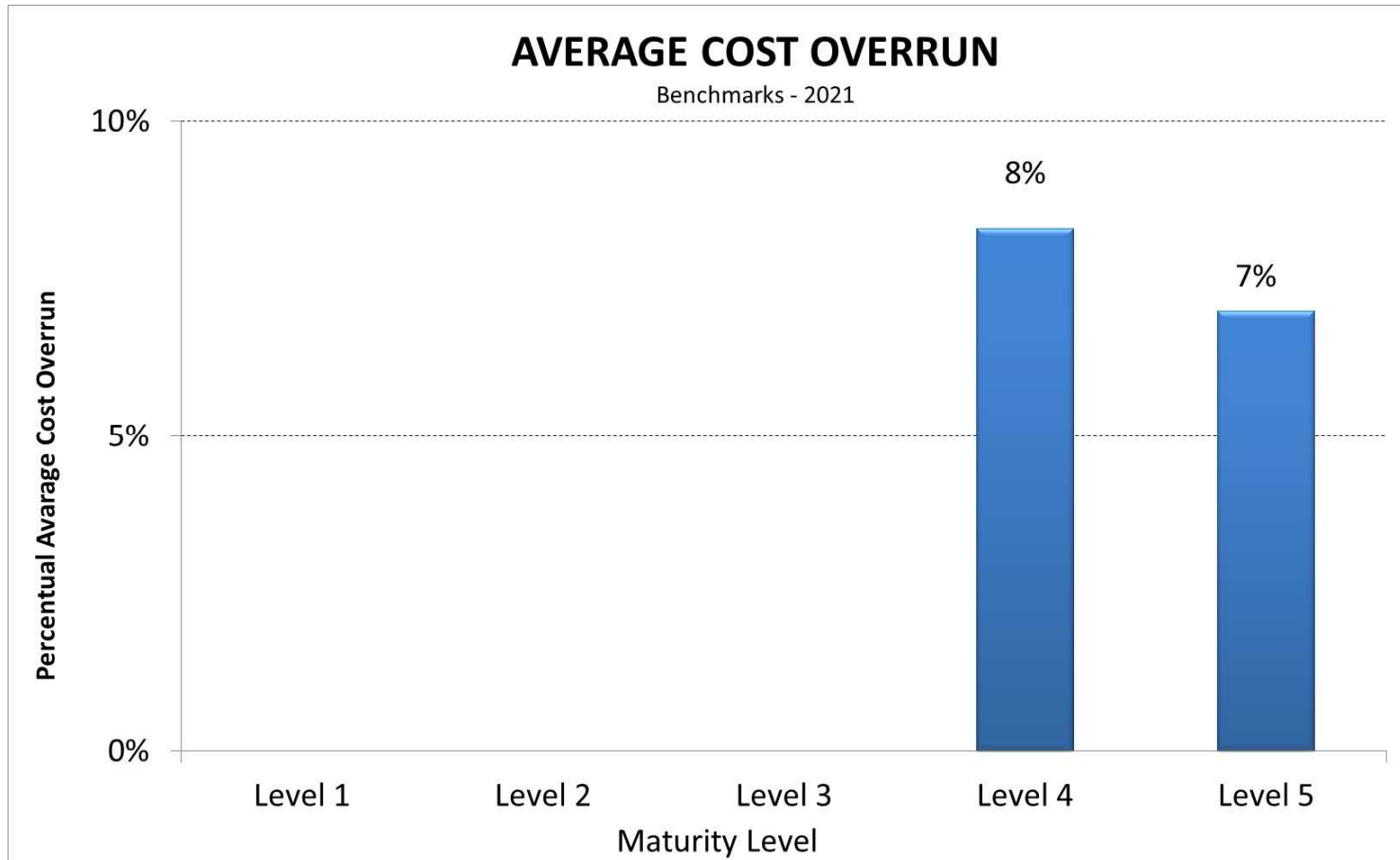
Samples Sizes: Level 4: 15 / Level 5: 4

Benchmarking organizations also coexist with delays, though much smaller than the usual ones.



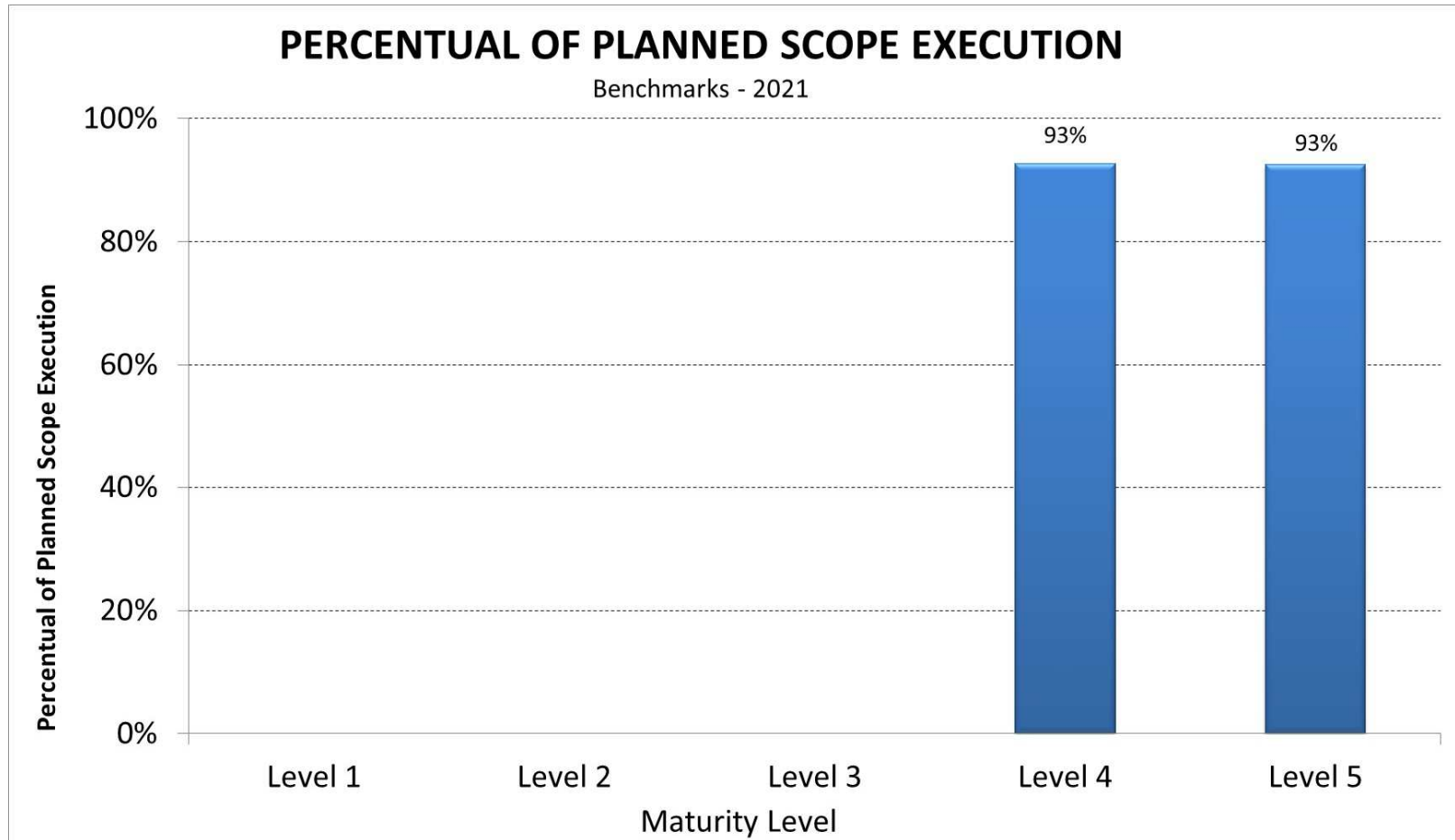
Samples Sizes: Level 4: 15 / Level 5: 4

Benchmarking organizations also face some cost overrun.



Samples Sizes: Level 4: 15 / Level 5: 4

Benchmarking organizations also have difficulties in completing the scope.



Samples Sizes: Level 4: 15 / Level 5: 4

BENCHMARK ORGANIZATIONS PROFILE OF PARTICIPANTS:

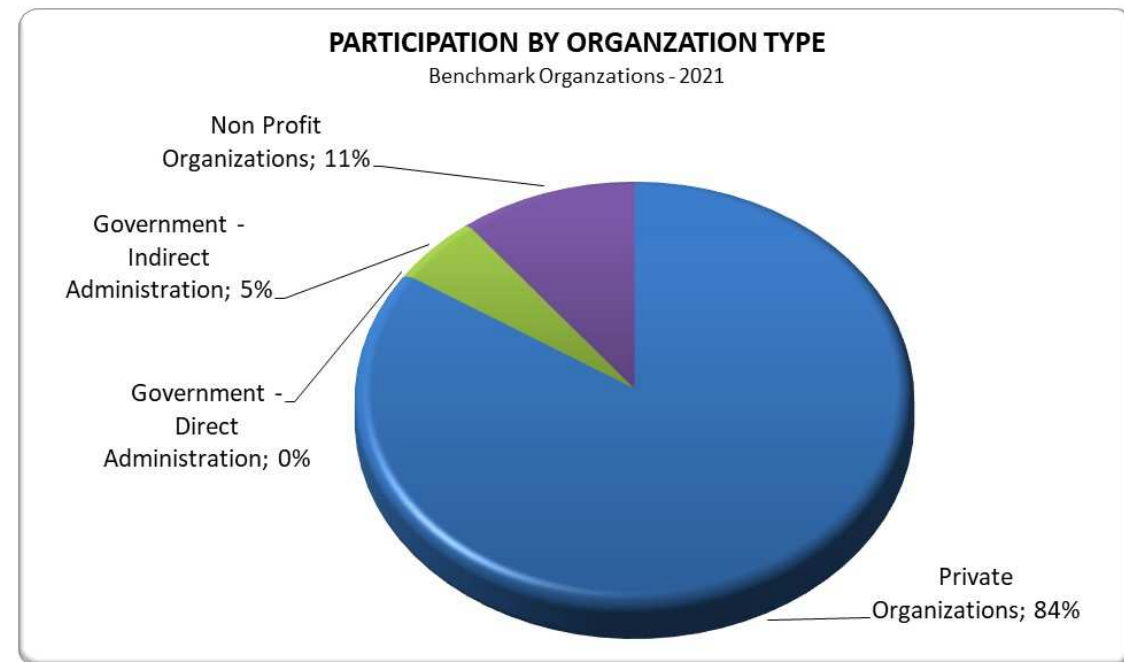
Number of projects and duration of projects in portfolio.

Important: In the tables shown on the following slides there are no performance indicator values displayed for groups with less than 5 participants.

TYPE OF ORGANIZATION

Most of the benchmarks are in the Private Companies.

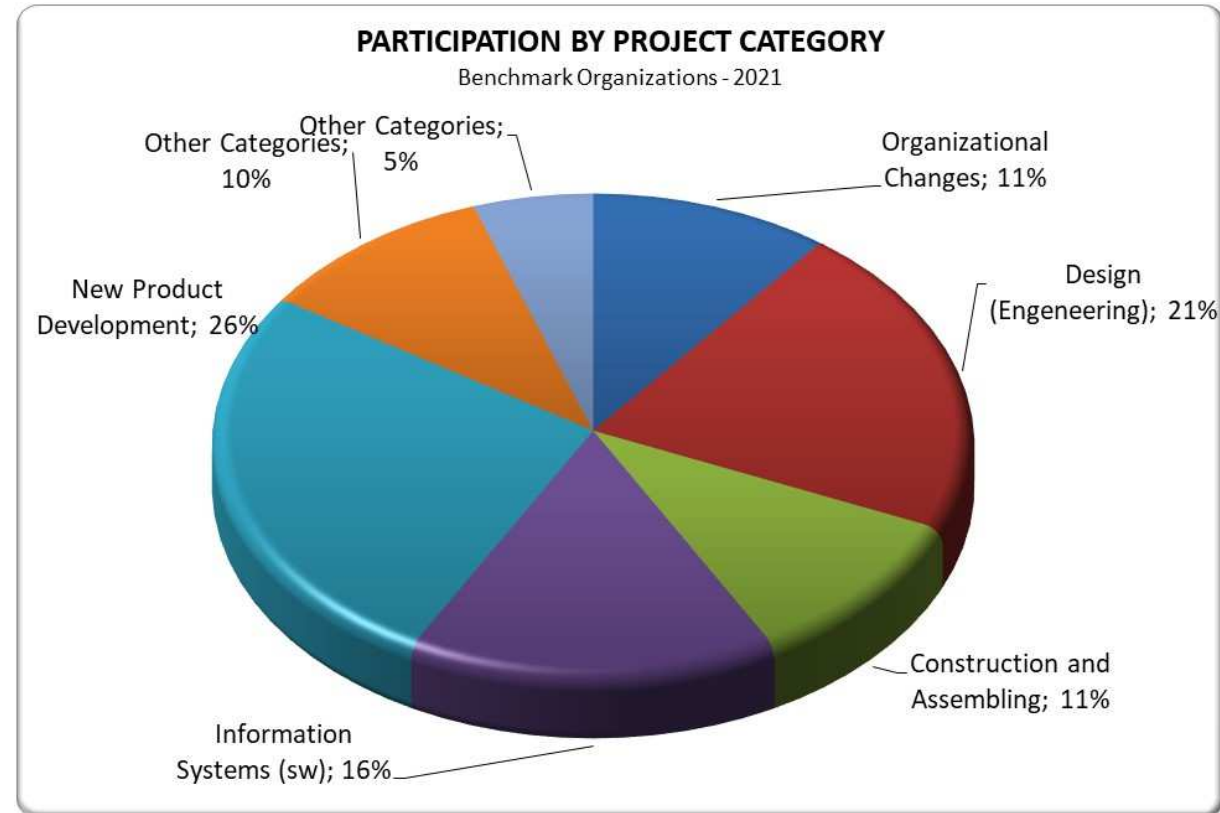
TYPE OF ORGANIZATION	# of respondents	Maturity	Average number of projects in the portfolio	Average duration of each project
Private Organizations	16	4,26	31	11
Government - Direct Administration	0			
Government - Indirect Administration	1			
Non government organizations	2			
TOTALS	19	4,29	32	11



CATEGORY OF PROJECTS

Strong presence of benchmark organizations in *New Product Development*.

ARCHIBALD CATEGORY	# of respondents	Maturity	Average number of projects in the portfolio	Average duration of each project
Organizational Changes	2			
Design (engineering, architecture)	4			
Construction and assembling	2			
Sistemas de Informação (software)	3			
New Product Development	5	4,35	31	14
Research and Development	2			
Other categories	1			
TOTALS	19	4,29	32	11



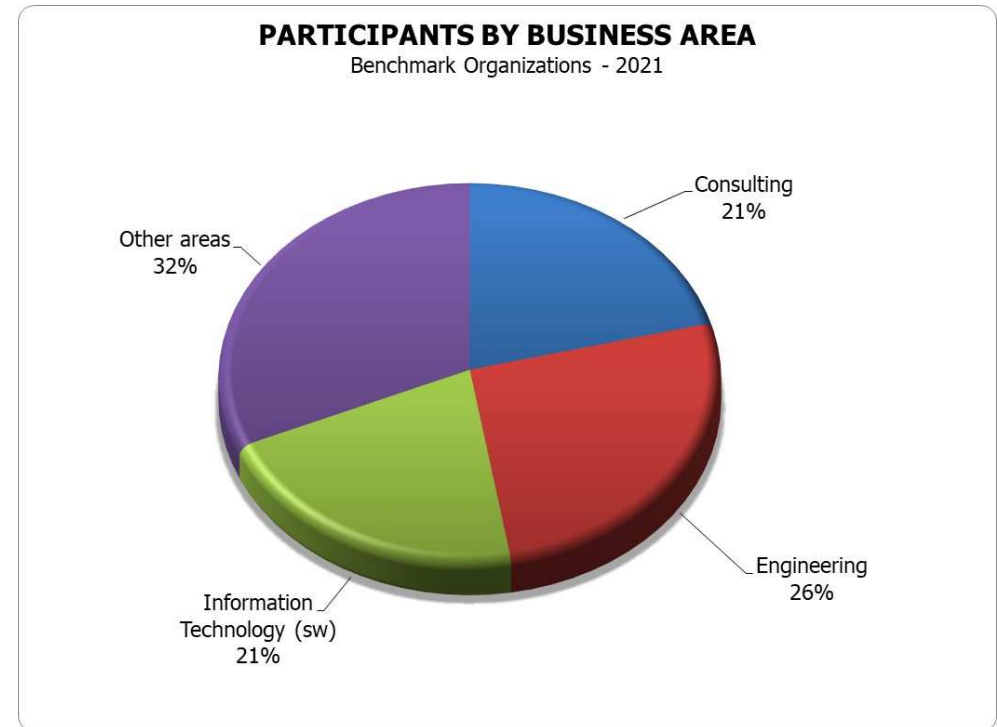
Business Areas Used in Research

1. Agriculture, Livestock, Forestry and Forest Exploration
2. Food and Beverage
3. Banks, Finance and Insurance
4. Trade
5. Construction
6. Consulting
7. Defense, Security and Aerospace
8. Distribution (Water, Gas)
9. Education
10. Electro-electronics
11. Engineering
12. Electric Power (Production and / or Distribution)
13. Equipment
14. Pharmaceutical
15. Mining and quarrying (Mining, etc.)
16. Metallurgy and Steel
17. Pulp and Paper
18. Oil, Oil and Gas
19. Chemistry
20. Refractory, Ceramics and Glass
21. Health
22. Information Technology (Hardware & Software)
23. Telecommunications
24. Textile
25. Transport, Warehousing and Services & Logistics
26. Tourism & Sports
27. Vehicles and Parts
28. Clothing, Footwear, Fashion and Sporting Goods
29. Other Areas

Benchmarks by Business Areas

Highlights for *Consulting, Engineering and Information Technology*.

BUSINESS AREA	# of respondents	Maturity	Average number of projects in the portfolio	Average duration of each project
Agriculture, Livestock and Forestry	1			
Food and beverage	1			
Construction	1			
Consulting	4			
Engineering	5	4.22	28	12
Metallurgy and Steel	1			
Health	1			
Information Technology (Hw and Sw)	4			
Equipment & Machinery: Construction and/or Assembly	1			
Totals	19	4.29	32	11

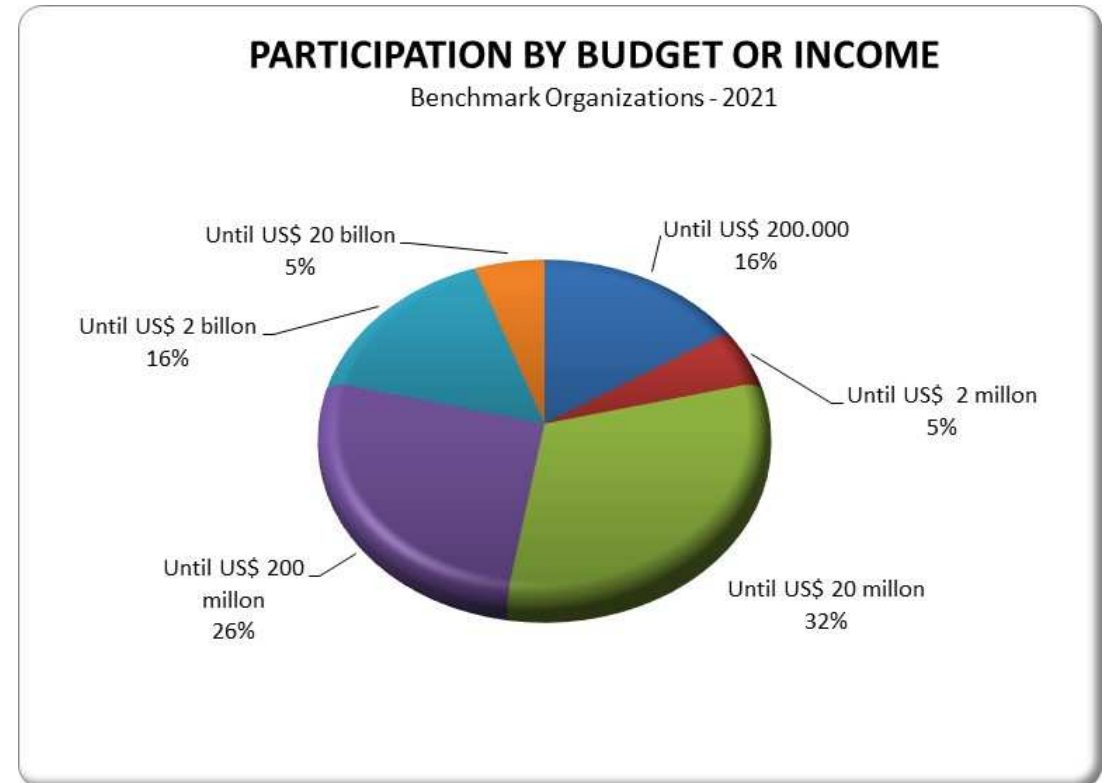


Only groups with more than 4 participants are present in the chart

Budget/Income Benchmarks

79% of organizations have budget of up to \$ 200 millions.

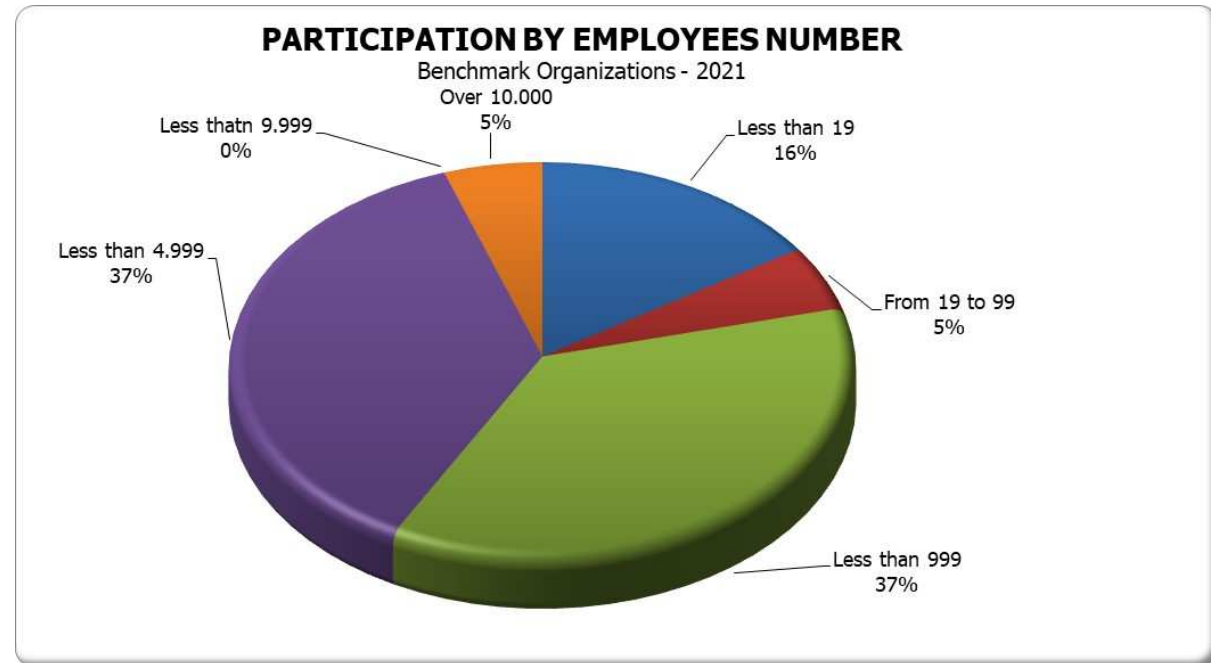
BUDGET OR INCOME	# de Respondents	Maturity	Average number of projects	Average Duration
Until US\$ 200.000	3			
Until US\$ 2 millon	1			
Until US\$ 20 millon	6	4.22	38	14
Until US\$ 200 millon	5	4.36	42	13
Until US\$ 2 billon	3			
Until US\$ 20 billon	1			
Total Geral	19	4.29	32	11



Benchmarks by Number of Employees

74% of organizations have from 100 to 5,000 employees.

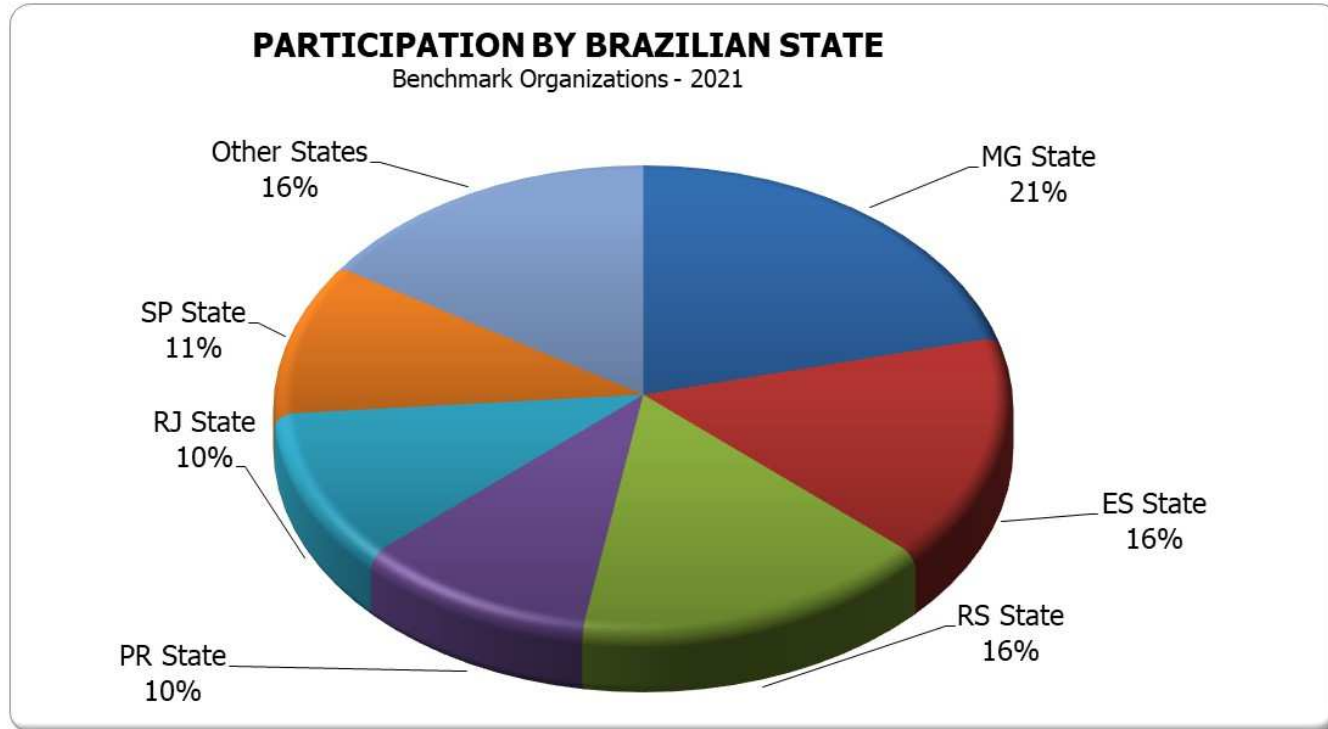
NUMBER OF EMPLOYEES	# of respondents	Maturity	Average number of projects in the portfolio	Average duration of each project
Less than 19	3			
From 19 to 99	1			
Less than 999	7	4.2	40	13
Less than 4.999	7	4.38	38	14
Over 10.000	1			
TOTALS	19	4.29	32	11



Benchmarks by Brazilian States

Highlight of participation for MG, ES and RS.

STATE	# of respondents	Maturity	Average number of projects in the portfolio	Average duration of each project
AL	1			
AM	1			
ES	3			
MG	4			
PE	1			
PR	2			
RJ	2			
RS	3			
SP	2			
TOTALS	19	4.29	32	11



GOVERNANCE IN BENCHMARK ORGANIZATIONS

Occurrence of the Governance Function by Time of Existence

Most benchmark organizations have had governance functions for over 2 years. In the case of Project Manager, 68% of organizations have had this function for more than 5 years.

OCCURRENCY BY USAGE TIME			
USAGE TIME	PM	PMO	COMMITTEE
It does not apply	1		
We do not have the function		2	2
It exists less than 1 year	1	2	
It exists among 1 and 2 years		2	2
It exists among 2 and 5 years	4	4	5
It exists over than 5 years	13	9	10
TOTALS	19	19	19

OCCURRENCY OF THE GOVERNANCE FUNCTION			
OCCURRENCY	PM	PMO	COMMITTEE
We do not have or it does not apply	5.3%	10.5%	10.5%
YES	94.7%	89.5%	89.5%
TOTAL	100%	100%	100%

Number of Professionals allocated to the PMO

All benchmark organizations have PMO.

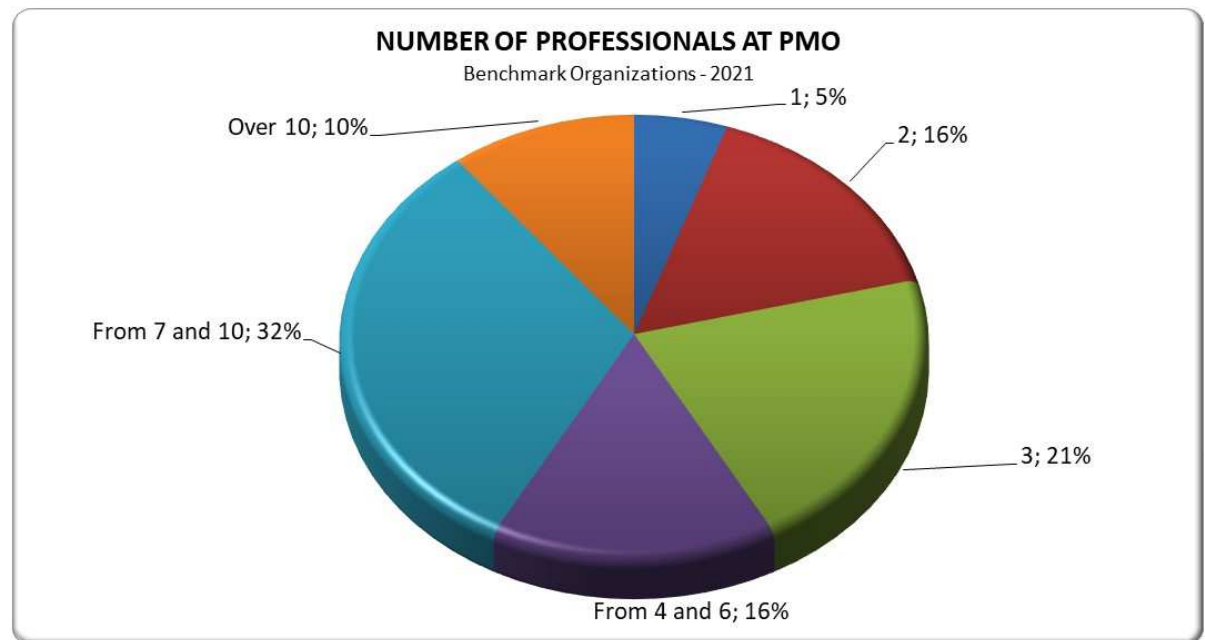
58% of benchmark organizations have 1 to 6 professionals in the PMO.

42% of benchmark organizations have more than 7 professionals in the PMO.

On average, one benchmark organization works with 32 projects.

On average, we have 5.5 professionals in the PMO and each professional works with 5.8 projects

PROFESSIONALS AT PMO	# Resp	%
1	1	5,3%
2	3	15,8%
3	4	21,1%
From 4 and 6	3	15,8%
From 7 and 10	6	31,6%
Over 10	2	10,5%
Total	19	100,0%



Attachments

About data and results presented in this report

As mentioned previously, we had a public of 181 participants in 2021. The main characteristic of this public is the **heterogeneity**, in other words, they come from different organizations types, projects categories, business areas, organizations sizes and Brazilian states. The reports we provide, present and allow many comparisons between performance indicators, but, in spite this, the reader must pay attention to these comparisons, as duly pointed in each report. For example, performance indicators from several Brazilian states are presented and, in this case, one must avoid drawing conclusions using only the presented values, without considering the specificities of projects portfolios of each state.

Therefore, we advise the reader to also analyze the reports that work with more detailed samples.

Our intention is to show and analyze the data as captured, presenting to the reader, with as much information as possible. As stated in our Principles Charter, our goal is to assist Brazilian organizations to evolve in Project Management.

Data Representativeness

Considering a research where stratifications are made and where there are samples of different sizes, these have different representativeness. Thus, if the total number of respondents for a given sample is high, the representativeness of the data referring to that number of respondents is also high. The interpretation of the representativeness of the data is totally governed by STATISTICS and, for the moment, we believe that it is sufficient to inform the reader of representative indications for different values of the total of respondents.

Total of Respondents	Representativeness
Above 30	Good representativeness
Among 17 and 29	Average representativeness. Analyze data with discernment.
Below 17	Low representativeness. Analyze data with discernment.

Note: The alert "analyze the data with discernment" is related to the fact that some populations are finite and, therefore, the representativeness criteria are differentiated. For example, if for the "Refractories" business we only have 5 companies in Brazil and if all of them participated in the survey, the results presented would be totally representative.

Team who developed this work



Darci Prado is *FALCONI* consulting partner. Graduated in Chemical Engineering from UFMG, post-graduate in Economic Engineering from Fundação Dom Cabral and doctor from UNICAMP. He participated in the founding of PMI chapters in Minas Gerais and Paraná and was member of the PMI-MG Board of Directors between 1998-2002. He was president of the IPMA-BH Club between 2006 and 2008. He is the author of 11 books about project management. He developed the MEPCP methodology, the MMGP maturity model and the SISGEP software. He conducts a maturity survey on PM since 2005. Lately, he has worked internally with the FALCONI presidency, helping with strategic planning and project implementation.



Manuel Carvalho da Silva Neto is a Visiting Professor at Fundação Dom Cabral and Consultant in the areas of Project Management and Process Management. He holds a Master's degree in Administration from CEPEAD - UFMG and holds PMP Certification. He also obtained the titles of specialist in Economic Engineering (INEA / EEUFMG) and Financial Administration (FJP) and graduated in Mechanical Engineering from UFMG. He has 53 years of market experience, 47 of which in Projects. He has participated or directed more than 300 large and medium-sized projects in private and state-owned companies and public agencies. He was undersecretary of Planning and Budget of the State of Minas Gerais from 2007 to 2008.



Russel D. Archibald (in memoria)

- MSC, PhD
- PMP, IPMA
- One of the PMI-USA founders
- Global consultant
- Listed in "Who is Who"



Darci Prado

- PhD
- *Qualis* member of IPMA-Br
- One of the PMI-MG, PMI-PR and Club IPMA-BH founders
- Senior Advisor at FALCONI



GENERAL COORDINATION

Darci Prado

SITE DEVELOPMENT AND MAINTENANCE

2x3 Organization

SITE DATA MAINTENANCE

Eduardo Motta

DATA BASE

2x3 Organization

DATA PREPARATION

Darci Prado, Eduardo Motta and Pedro Rocha

ANALYTICS

Paula Júlio

SITE

Falconi – Consultores de Resultados

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See author's name in each report

GENERAL SUPPORT

Carlos Eduardo Andrade, Fernando Ladeira, José Ricardo Miglioli, Giselle de Laurentys, Manuel Carvalho da Silva Neto, Marcus Vinicius Marques and Warlei Oliveira

Prado-MMGP Maturity Model

MMGP - Maturity Model in Project Management

Prado-MMGP maturity model, created in 2002, is based on the experience of consultant Darci Prado in a world-class organization (IBM), teaching (UFMG) and consulting (FALCONI Results Consultants). He has more than 40 years of project management experience and has already had the opportunity to get involved with projects of the most different values and types, ranging from construction, information technology, new product development, equipment installation, etc.

The model proposes to evaluate the maturity of an organization sector and has the following characteristics:

- It includes 5 levels and 7 dimensions;
- It includes Processes, Tools, People, Skills, Structures and Strategies;
- It adheres to PMBOK (PMI), ICB (IPMA) and Prince2.

Maturity Research in Project Management - Brazil

Maturity research has been conducted in Brazil since 2005. It is led by Darci Prado and Russell Archibald and counts on the participation of several volunteers.

Level	Title	Characteristics
1	Almost Unknown	The company does not have a correct perception of projects and project management (GP). Projects are executed on the basis of individual intuition, "goodwill" or "best effort." Usually no planning is done and control is non-existent. There are no standardized procedures. Success is the fruit of individual effort or luck.
2	Started (isolated initiatives)	This level represents the awakening to the subject of project management. Its main characteristics are: <ul style="list-style-type: none"> • Introductory knowledge of Project Management. • Introductory use of tools (sw) for sequencing activities. • Isolated initiatives for the planning and control of some projects. • Each professional works in his own way, since there is no standardized Platform for Project Management, consisting of processes, tools, organizational structure, etc. • There is awareness of the importance of implementing each of the components of a project management (GP) platform.
3	Standardized	This level represents the situation in which a GP platform was implemented. Its main characteristics are: <ul style="list-style-type: none"> • Evolution in skills. • Existence of a standardized platform for Project Management • Use of baseline. • Performance measurement of closed projects. • Data capture of anomalies that impact project results (delays, overflow, etc.). • The platform has been in use by the key players for more than a year. • A significant number of projects used all methodology processes (start, middle and end).

Level	Title	Characteristics
4	Managed	<p>This level represents the situation where the GP platform really works and gives results. Its main characteristics are:</p> <ul style="list-style-type: none"> • Professionals consistently demonstrate a high level of competence, aligning knowledge and practical experience. • Elimination (or mitigation) of manageable anomalies that hinder project results. • Area results (success rate, delays, etc.) are compatible with the expected level of maturity 4. • This situation occurs more than 2 years ago. • A significant amount of projects have already completed their life cycles in this scenario.
5	Optimized	<p>This level represents the situation where the GP platform not only works and gives results but has also been optimized through technological and process innovation. Its main characteristics are:</p> <ul style="list-style-type: none"> • Optimization of processes and tools. • Optimization of results (deadlines, costs, scope, quality, performance, etc.) • Highest success level. • Environment and working climate of efficiency, productivity and low stress. • High recognition of area competence, which is seen as a benchmark. • This has been happening for over 2 years. • A significant number of projects have already completed their life cycles in this scenario.

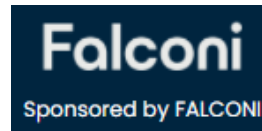
Dimension	Characteristics
Project, Program and Portfolio Management Competence	The main stakeholders involved with project management should be proficient (knowledge + experience) in aspects of project management, such as, for example, presented in PMI's PMBOK manual or IPMA's ICB manual. The competence level required depends on the role of each.
Behavioral Competence	The main stakeholders involved with project management should be competent (knowledge + experience) in behavioral aspects (leadership, organization, motivation, negotiation, etc.). The competence level required depends on the role of each.
Technical and Contextual Competence	The main stakeholders involved with project management should be proficient (knowledge + experience) in technical aspects related to the product (good, service or result) being created, as well as aspects of the organization (finance, its production / distributive model, etc.). The competence level required depends on the role of each.
Methodology	Existence of a methodology adequate to project management and that involves the whole cycle that needs to be monitored. Eventually this means not only the Implementation phase, but also the Business Case stage.

Dimension	Characteristics
Informatization	Relevant aspects of the methodology should be computerized and the system should be user-friendly and allow the right decisions to be made at the right time. Eventually the whole cycle initiated by the idea / need should be computerized.
Organizational Structure	An appropriate organizational structure should be in use, both for the Business Case and for Implementation. In the case of implementation, this structure generally involves project managers, PMO, sponsor and committees. The Organizational Structure should regulate the relationship of authority and power between the project managers and the various organization areas involved with the projects.
Strategic Alignment	The projects executed in the sector are in total alignment with the strategies of the organization. The processes in question (portfolio management) are executed with the necessary quality and agility. There are computerized tools and the organizational structure in question is appropriate.

Thanks

Special thanks to the volunteers of this research.

- Support:
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THE END