MPCM
Maturity by Project
Category Model

MATURITY IN PROJECT MANAGEMENT - BRAZIL

Archibald & Prado´s Research
www.maturityresearch.com

2017 Research Report:

"Benchmark Organizations"

(High Performance Organizations)

Published in February / 2018

Organized by:
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1. Introduction

2. General Results

3. Participants Profile

4. Governance

5. Team who developed this work

6. Thanks

Introduction

Research Results Presentation

We are presenting the results of the Archibald & Prado´s research for the year 2017. This research was available for free from www.maturityresearch.com during the months of September to December 2017 and it was answered by 301 professionals from Brazilian organizations. For this research, thirteen (13) reports have been produced.

Data appears in reports in the form of groupings. We only present groupings containing more than 5 participants (Confidentiality Policy).

In general, the data presented in the reports show that there is a direct relationship between maturity and performance indicators. That is, the greater the maturity:

- The greater the total success and the smaller the failure

- The less the delay

- The less the cost overrun

- The greater the percentage of execution of the intended scope.

In addition, the higher the maturity, the higher the perception of the value of project management to add value to the organization.

This Report

This report - *Organizations Benchmark* - contains the analysis of data provided by 42 professionals from Brazilian organizations. The data provided come from a total of 984 projects. In this group we have exclusively organizations whose maturity is at levels 4 and 5. 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 4.18. 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 overrrun 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 42 organizations of this excellence group are from the private sector (32 or about 76%). There are also 2 Government participants - Direct Administration, 2 of Government - Indirect Administration and 2 of the Third 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.

First of all, it is important to note that the 42 organizations that have reached level 4 or higher of maturity, have a total success rate above 73% (versus only 52% of the overall average). This impressive result confirms, once again, several other studies and the results of this same Archibald & Prado´s research, held in 2014.

Even as a consequence of this high level of success rate, these 42 organizations have lesser delays (less than half the Brazilian average), lower cost overruns (58% of the national average) and greater compliance with the scope (a rate of 15.4 points above of all the 301 research organizations). Also noteworthy was the extremely low rate of failure of its projects (only 2.1% of projects, compared with 14.3% of the overall average).

Extremely relevant is the adherence to the six dimensions assessed in the Maturity Model by this group of organizations. It can be said that this adherence is practically double (twice, therefore), of the average of the 301 organizations.

Not coincidentally, the perception of the value of Project Management in these 42 organizations is very high. All consider that GP adds value, and about 80% consider that the value added (per GP) is very high.

Among the Project Categories (Archibald model) are the New Products and Services Development (average maturity of 4.23 among the Benchmark organizations), Construction and Assembly (4.17 of average maturity), and Organizational Changes and / or Improvement of Operating Results (average maturity of 3.97 among Benchmark organizations). Perhaps a complementary research can confirm the hypothesis that organizations that fall into these categories almost always sell projects, which would force them to be better.

Among the areas of business, Construction (maturity: 4.38), Consulting (maturity: 4.24) and Engineering (maturity: 4.09) were fully aligned with the results by Project Categories.

Comment by Manuel Carvalho da Silva Neto - January 2018

Data Representation

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 the data with discernment.
Below 17	Low representativeness. Analyze the 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.

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

General Results

MATURITY:

- Maturity: 4.18 (overall search average:2.59)

RESULTS INDICATORS

- Success Rate:

    - Total Success: 73.9% (overall research average: 52%)

    - Partial Success: 23.9% (overall research average: 34%)

    - Failure: 2.3% (overall research average: 14%)

- Average delay: 11.4% (overall research average: 24%)

- Average cost overflow: 8.1% (overall research average: 14%)

- Scope Average Execution: 89.8% (overall research average: 74%)

AVERAGE COMPOSITION OF THE PROJECT PORTFOLIO

- Average number of projects: 22 (overall research average: 21)

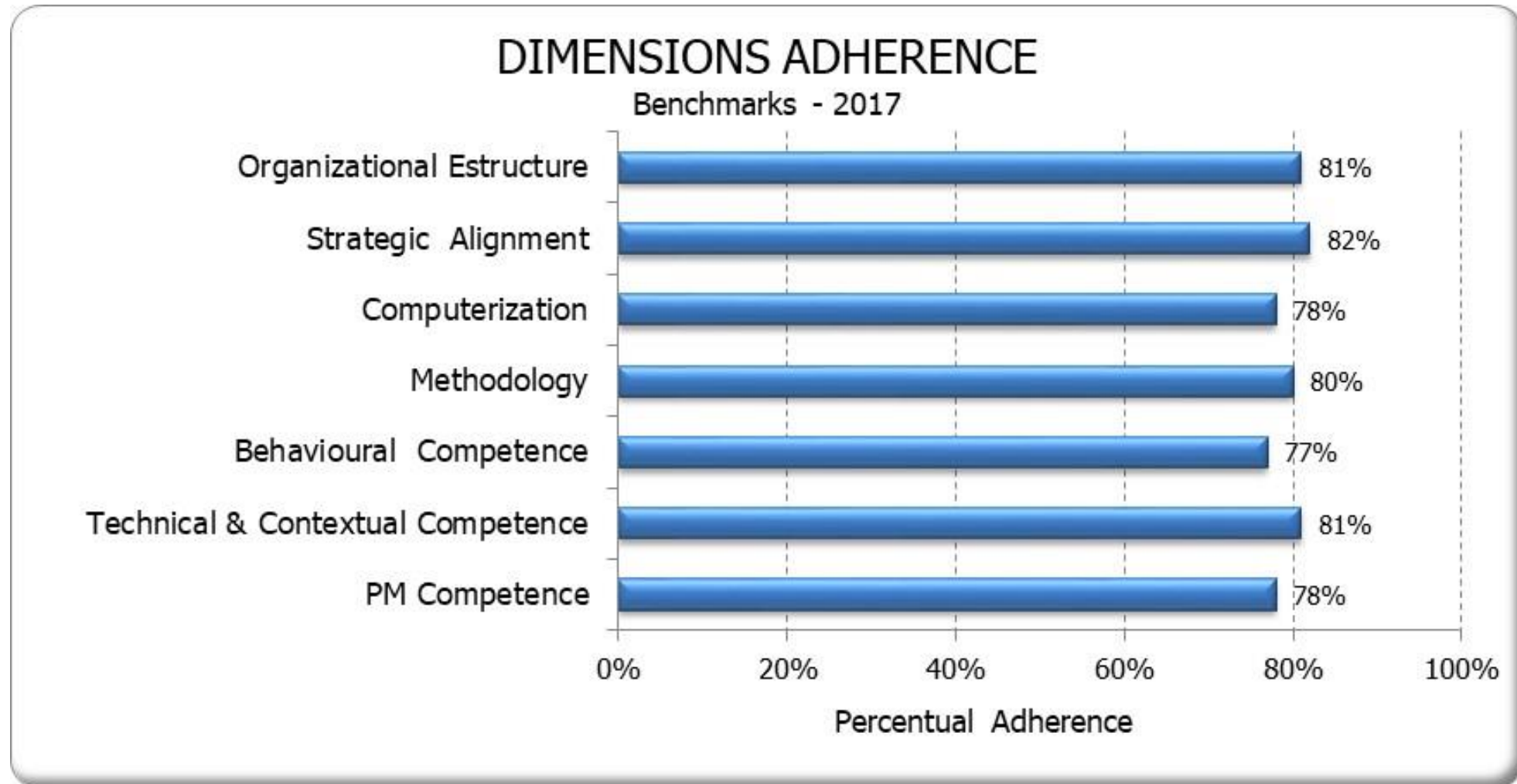- Average duration of each project: 14 months (overall research average: 12)

Maturity

Maturity: **4.18**

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.
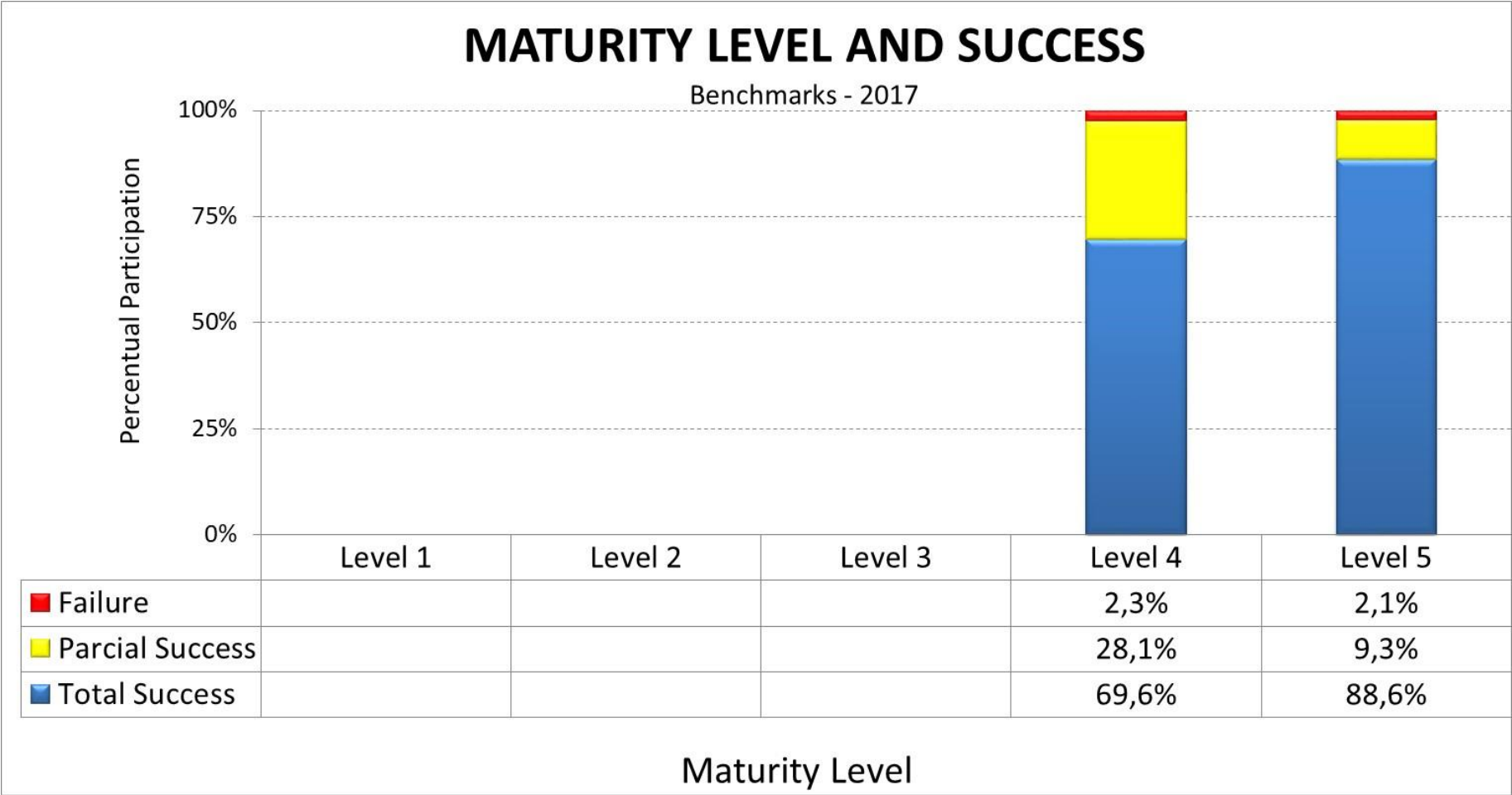

PERCENT DISTRIBUTION AT LEVELS
Benchmarks - 2017

Level	Percent
1 ALMOST UNKOWN	0%
2 STARTED	0%
3 STANDARDIZED	0%
4 MANAGED	74%
5 OPTIMIZED	26%
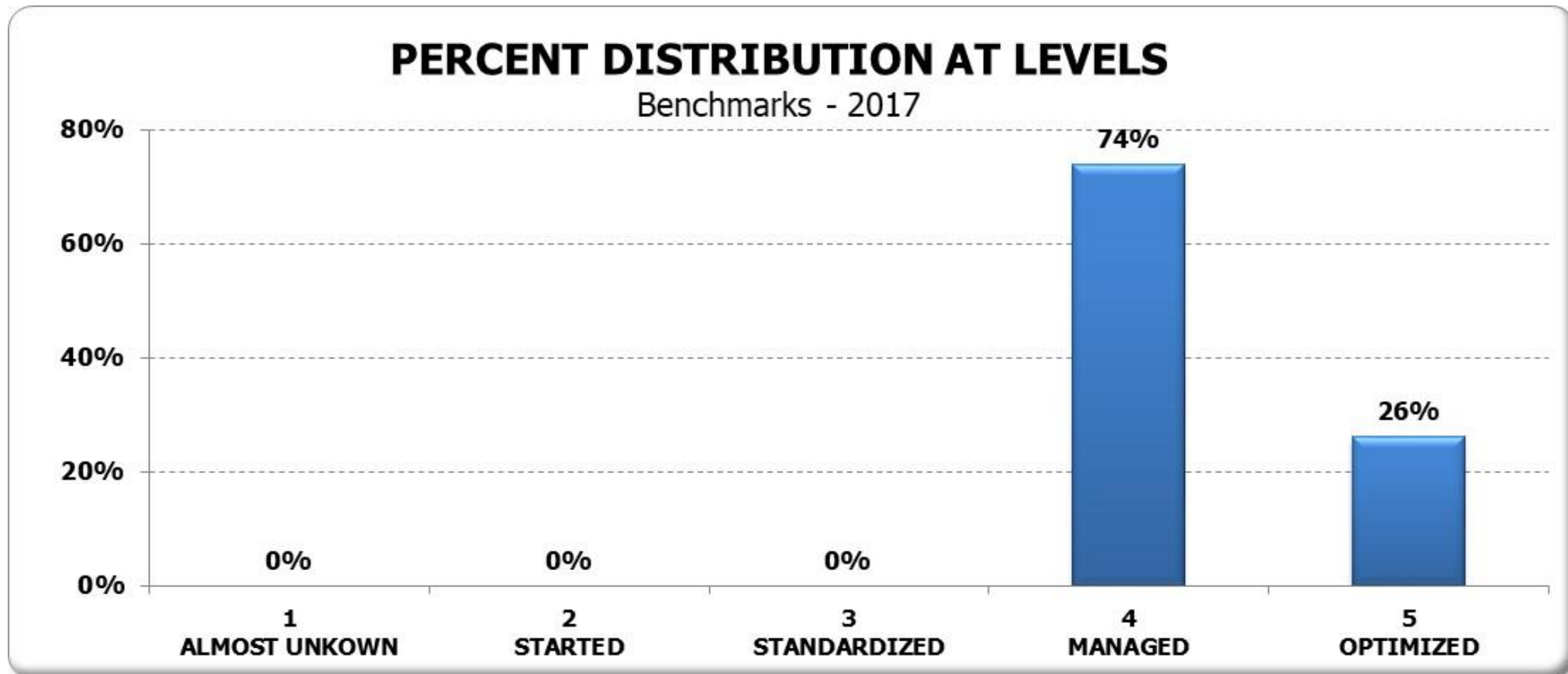
Adherence to Dimensions

All values are on the plateau labeled "optimal".

DIMENSIONS ADHERENCE
Benchmarks - 2017

Dimension	Percentual Adherence
Organizational Estructure	81%
Strategic Alignment	82%
Computerization	78%
Methodology	80%
Behavioural Competence	77%
Technical & Contextual Competence	81%
PM Competence	78%

Percentual Adherence

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

MATURITY LEVEL AND SUCCESS
Benchmarks - 2017

	Level 1	Level 2	Level 3	Level 4	Level 5
🟥 Failure				2,3%	2,1%
🟨 Parcial Success				28,1%	9,3%
🟦 Total Success				69,6%	88,6%

Maturity Level

Samples Size:

Level 4: 31 / Level 5: 11

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Maturity by Project
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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**

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

MATURITY LEVEL AND PERCEPTION OF PM VALUE AGGREGATION

Benchmarks - 2017

	Level 1	Level 2	Level 3	Level 4	Level 5
■ We do not have PM				0,0%	0,0%
⊡ PM does not aggregate valu				0,0%	0,0%
⊡ PM aggregates small value				0,0%	0,0%
⊡ PM aggregates some value				23%	18%
■ PM aggregates much value				77%	82%

Maturity Level

Samples Size:

Level 4: 31   /   Level 5: 11

MPCM
Maturity by Project
Category Model
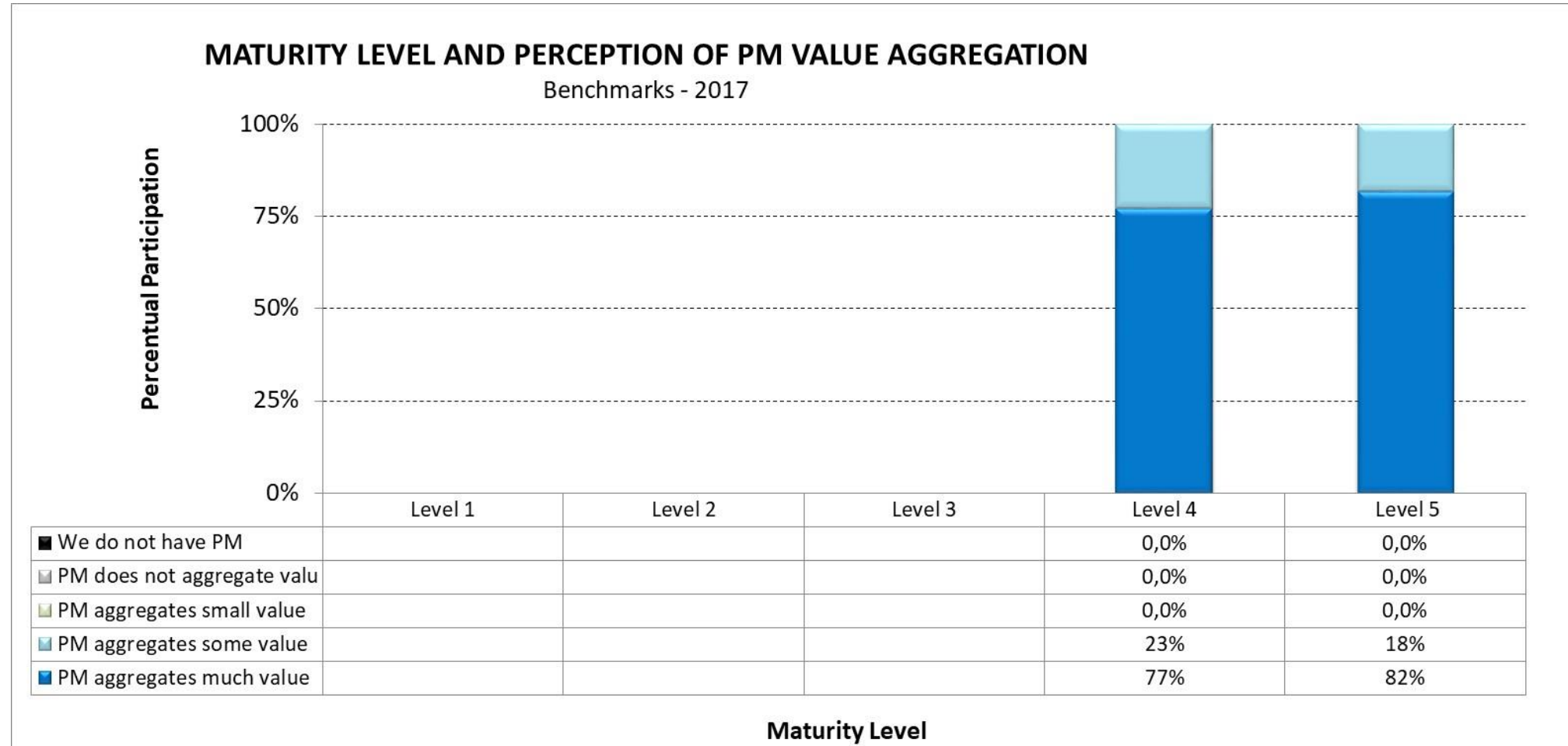
Benchmarking organizations also coexist with delays, though much smaller than the usual ones.

AVERAGE DELAY

Benchmarks - 2017
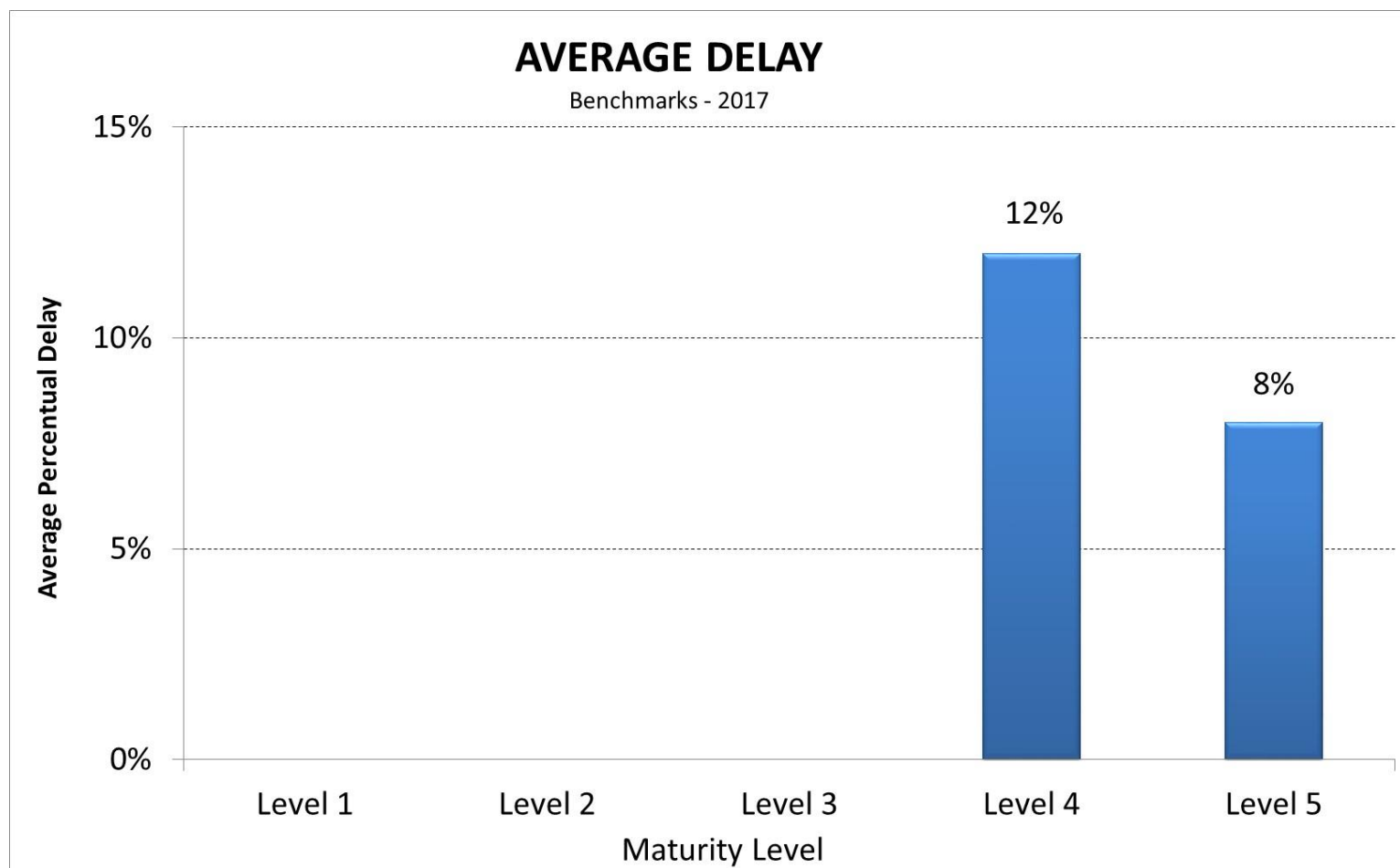
Samples Size:

Level 4: 31 / Level 5: 11

Benchmarking organizations also face some cost overrun.

AVERAGE COST OVERRUN

Benchmarks - 2017
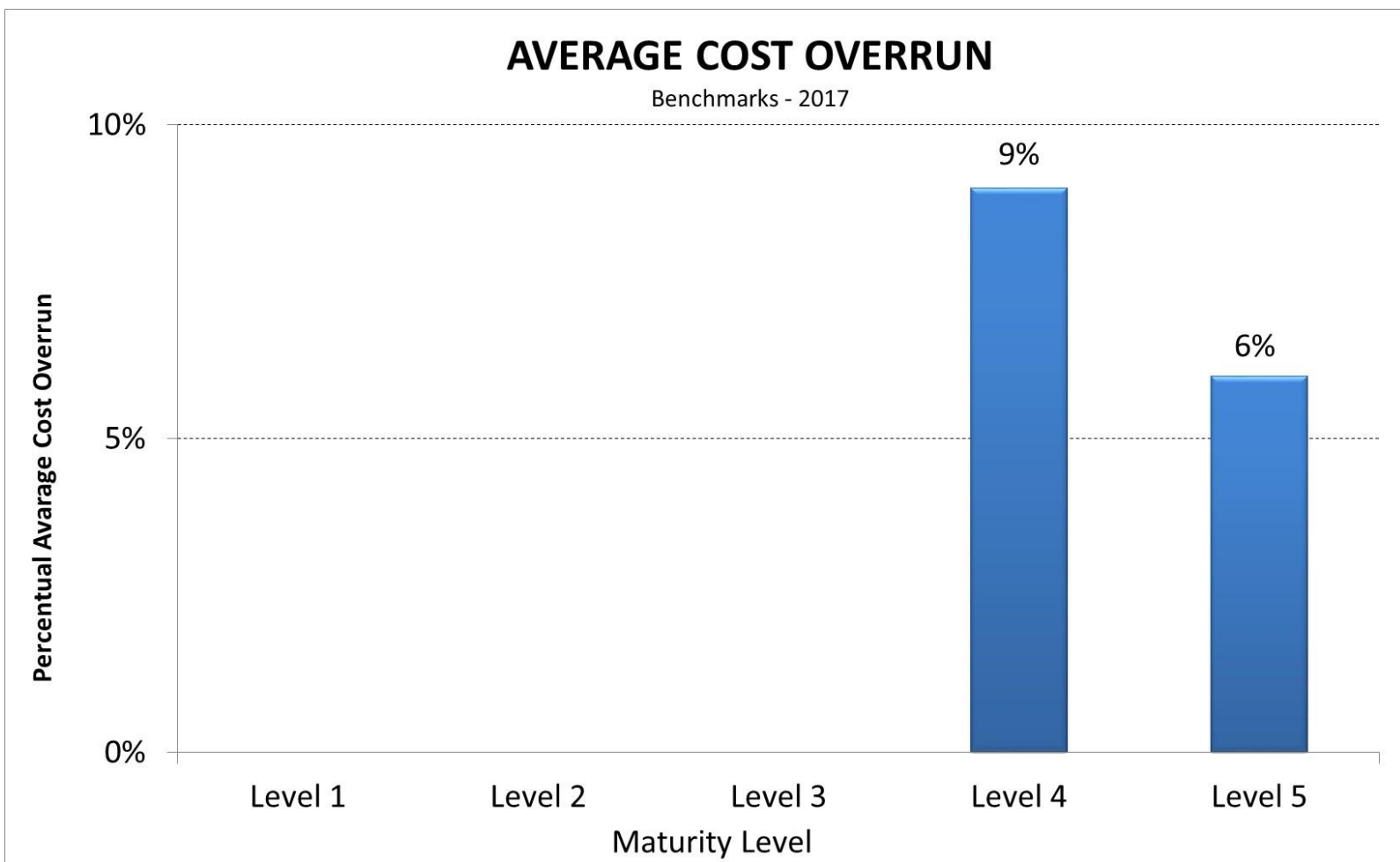
Samples Size:

Level 4: 31   /   Level 5: 11

Benchmarking organizations also have difficulties in completing the scope.

PERCENTUAL OF PLANNED SCOPE EXECUTION

Benchmarks - 2017
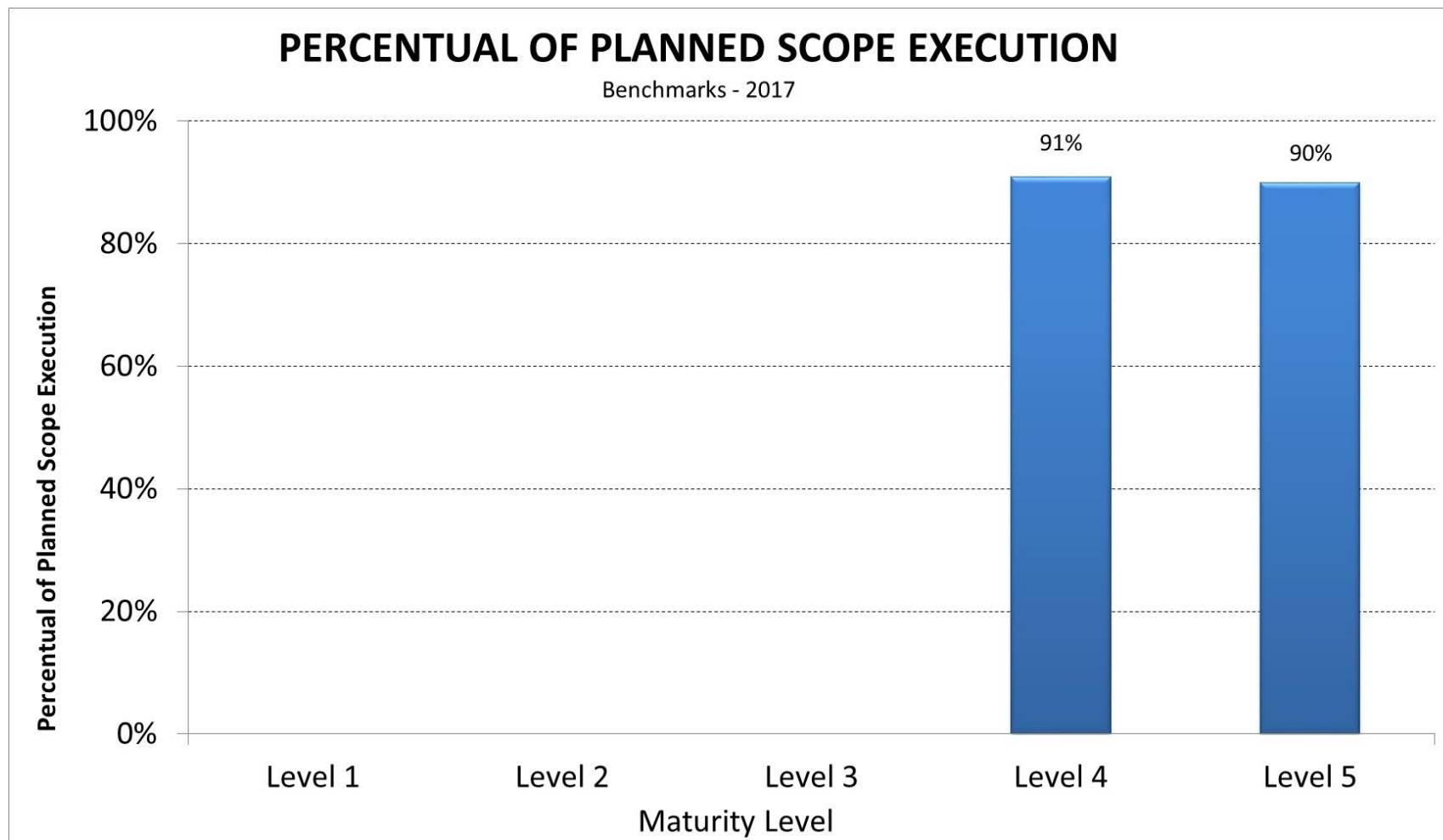
Samples Size:

Level 4: 31   /   Level 5: 11

BENCHMARK ORGANIZATIONS PROFILE OF PARTICIPANTS:

Participation

Number and duration of projects in portfolio.

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

TYPE OF ORGANIZATION

Most of the benchmarks are in the Private Companies.

Type of Organization	# Respondents	Maturity	Average number of projects	Average duration of each project
Private companies	32	4,15	21	16
Government - Direct Administration	6	4,22	28	19
Government - Indirect Administration	2			
Non Profitable Organizations	2			
Total	**42**	**4,18**	**22**	**16**

PARTICIPATION BY ORGANZATION TYPE
Benchmark Organzations - 2017

Non Profit Organizations; 5%

Government - Indirect Administration; 5%

Government - Direct Administration; 14%

Private Organizations; 76%
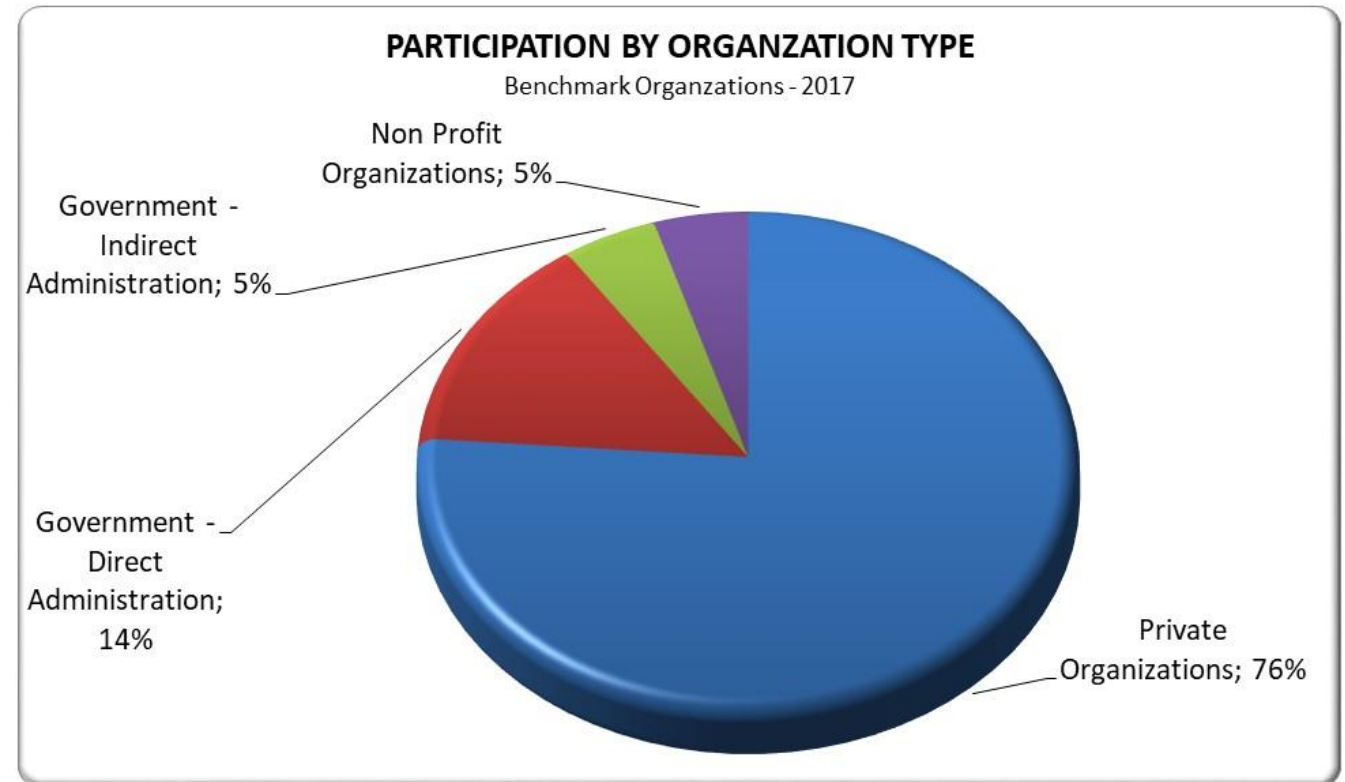
Strong presence of benchmark organizations in *Construction & Assembling* and *Organizational Changes*.

Project Category (Archibald Model)	# Respondents	Maturity	Average number of projects	Average duration of each project
Safe, Defense	4			
Organizational Changes	8	3,97	29	15
Design (Engeneering)	3			
Construction and Assembling	14	4,17	12	18
Information Systems (sw)	4			
New Product Development	6	4,23	31	12
Other Categories	3			
Total	**42**	**4,18**	**22**	**16**

PARTICIPATION BY PROJECT CATEGORY
Benchmark Organizations - 2018

Other Categories; 7%
Safe, Defense; 10%
New Product Development; 14%
Organizational Changes; 19%
Design (Engeneering); 7%
Information Systems (sw); 10%
Construction and Assembling; 33%
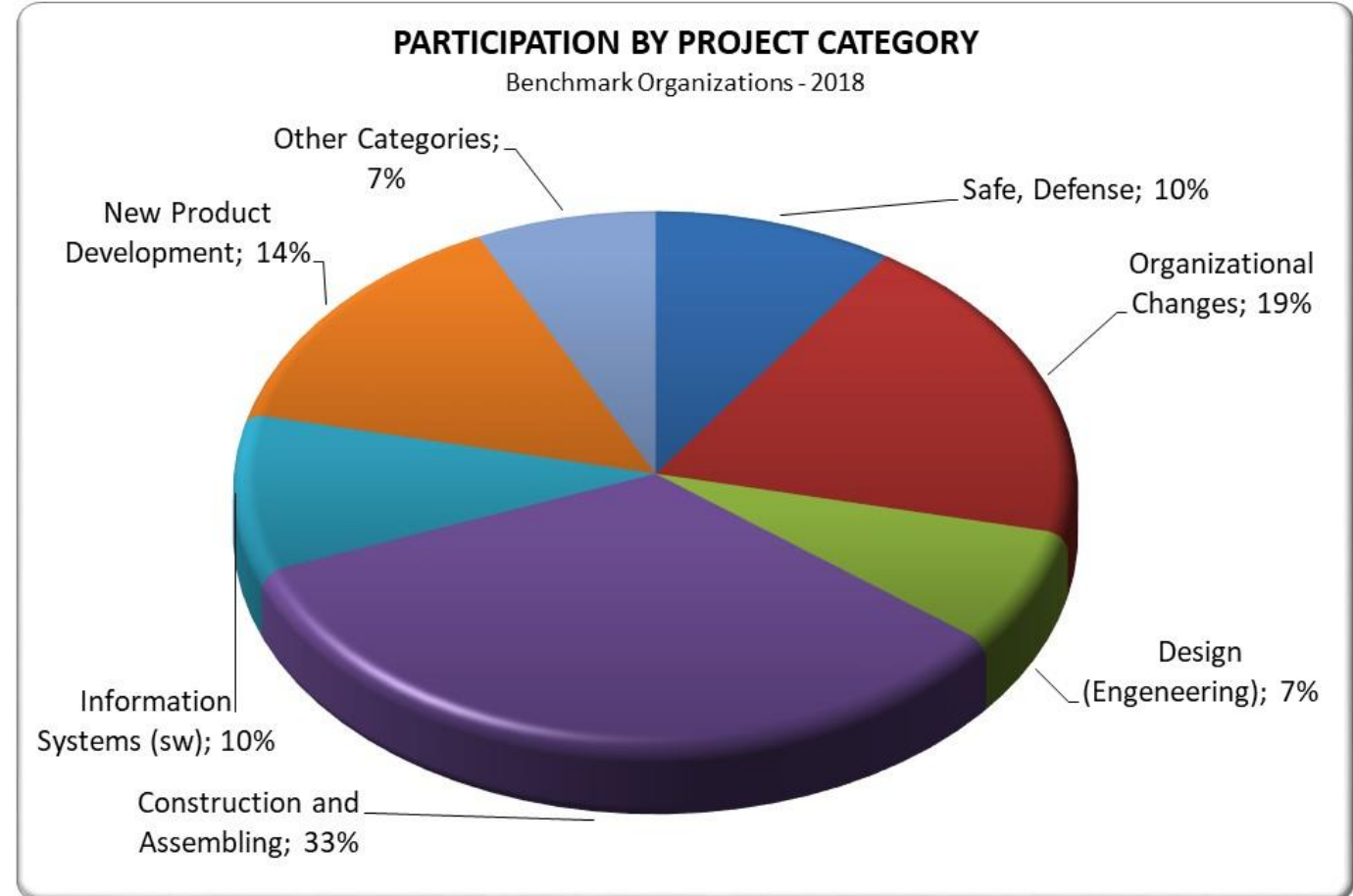
Business Areas Used in Research

1. 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 *Construction, Consulting* and *Engineering.*

Business Area	# Respondents	Maturity	Average number of projects	Average duration of each project
Food and beverage	2			
Banks, Finance	1			
Construction	6	4,38	6	15
Consulting	6	4,24	12	15
Defense, Safety	3			
Education	3			
Engineering	6	4,09	18	15
Mining	1			
Paper	1			
Oil and Gaz	1			
Health	1			
Information Technology	4			
Telecomunications	1			
Veicules and Parts	1			
Other areas	5	4,13	19	12
Total	**42**	**4,18**	**22**	**16**

PARTICIPANTS BY BUSINESS AREA
Benchmark Organizations - 2017
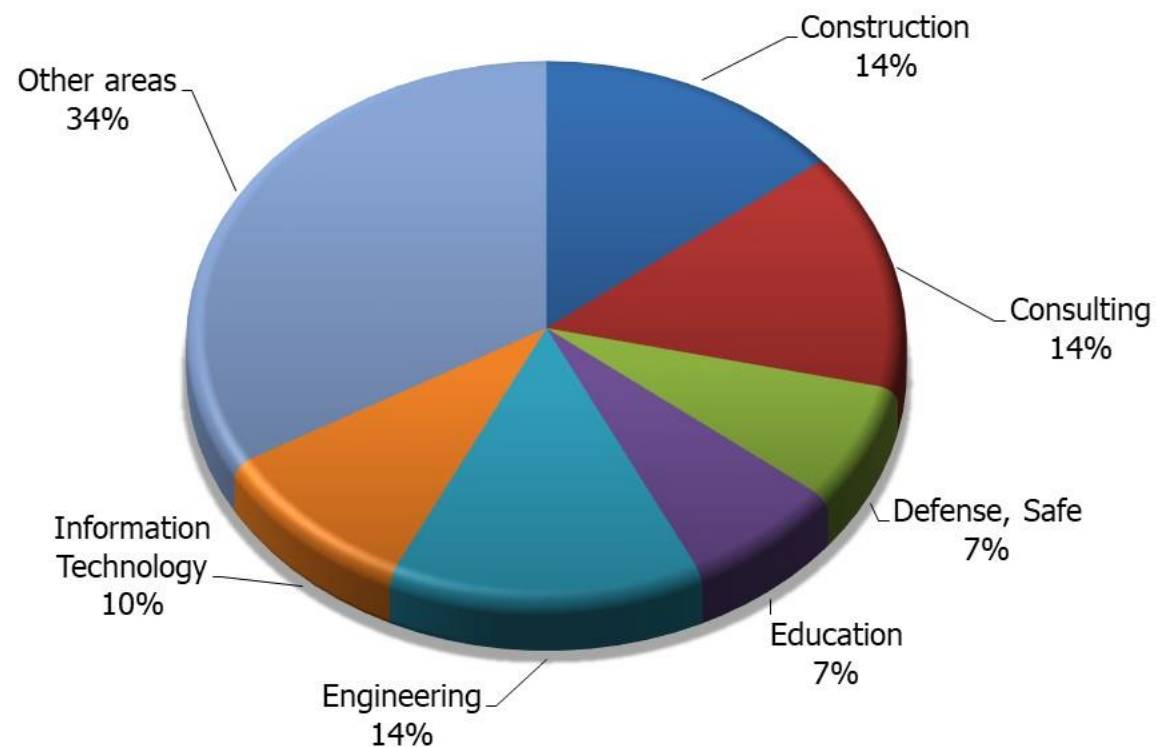
Construction 14%
Consulting 14%
Defense, Safe 7%
Education 7%
Engineering 14%
Information Technology 10%
Other areas 34%

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

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81% of organizations have budget of up to $ 300 millions.

Budget	# Respondents	Maturity	Average number of projects	Average duration of each project
Until US$ 300.000	7	4,28	5	19
Until US$ 3 millions	5	3,99	24	13
Until US$ 30 millions	12	4,23	13	14
Until US$ 300 millions	10	4,23	31	14
Until US$ 3 billions	4			
Until US$ 30 billions	3			
Over US$ 30 billions	1			
Total	**42**	**4,18**	**22**	**16**

PARTICIPATION BY BUDGET OR INCOME
Benchmark Organizations - 2017

- Until US$ 40 billon 2%
- Until US$ 40 billon 7%
- Until US$ 4 billon 9%
- Until US$ 400 millon 24%
- Until US$ 40 millon 29%
- Until US$ 4 millon 12%
- Until US$ 400.000 17%
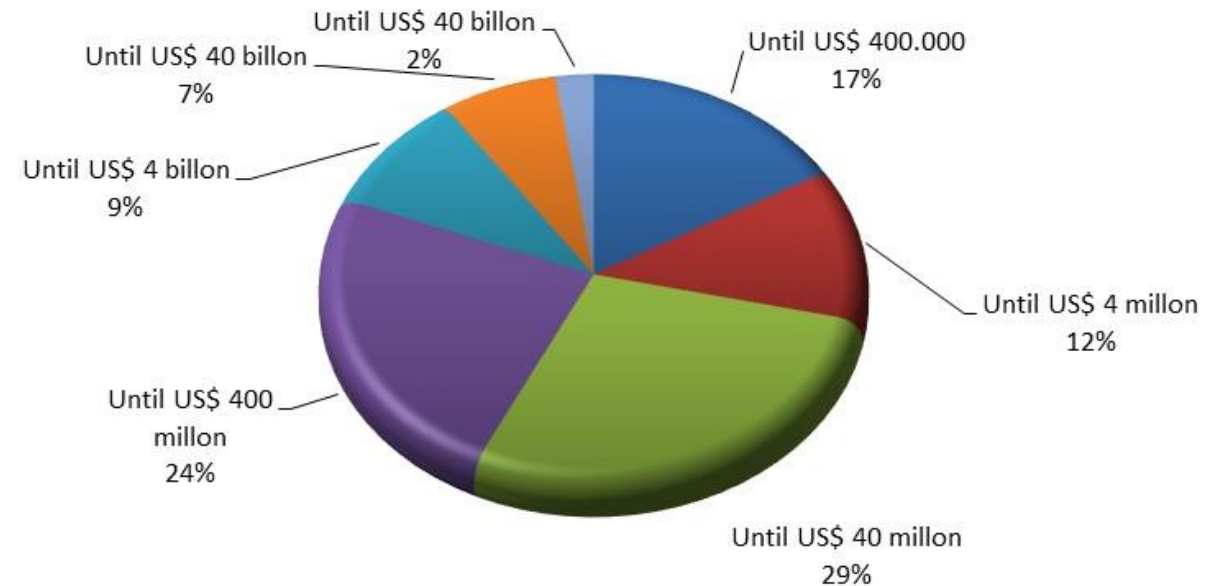
62% of organizations have up to 1,000 employees.

Employees Number	# Respondents	Maturity	Average number of projects	Average duration of each project
Less than 19	10	4,35	10	20
From 19 to 99	8	4,10	18	13
Less than 999	8	4,06	15	7
Less than 4.999	8	4,18	27	15
Less thatn 9.999	1			
Over 10.000	7	4,17	45	30
	42	**4,18**	**22**	**16**

PARTICIPATION BY EMPLOYEES NUMBER
Benchmark Organizations - 2017

Over 10.000 17%
Less thatn 9.999 2%
Less than 4.999 19%
Less than 999 19%
From 19 to 99 19%
Less than 19 24%
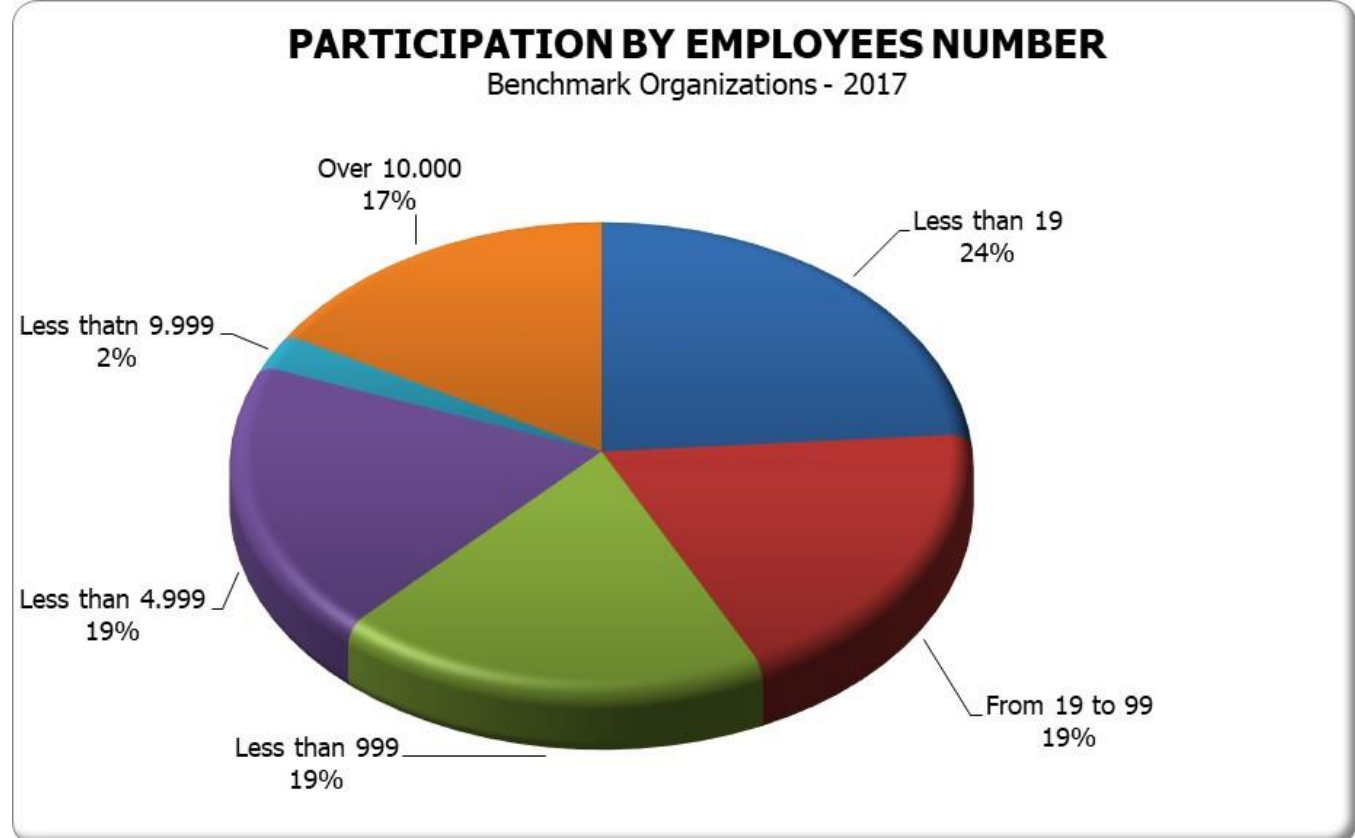
Benchmarks by Brazilian States

Highlight of participation for MG and SP.

State	# Respondents	Maturity	Average number of projects	Average duration of each project
Ceará	1			
Federal District	4			
Minas Gerais	12	4,15	15	16
Piaui	1			
Paraná	4			
Rio de Janeiro	1			
Rio Grande do Norte	1			
Rio Grande do Sul	4			
Santa Catarina	1			
São Paulo	13	4,14	26	19
Total	**42**	**4,18**	**22**	**16**

PARTICIPATION BY BRAZILIAN STATE
Benchmark Organizations - 2017

- Federal District (DF) 9%
- Minas Gerais (MG) 29%
- Parana (PR) 9%
- Rio Grande do Sul (RS) 10%
- São Paulo (SP) 31%
- Other states 12%

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

MPCM
Maturity by Project
Category Model
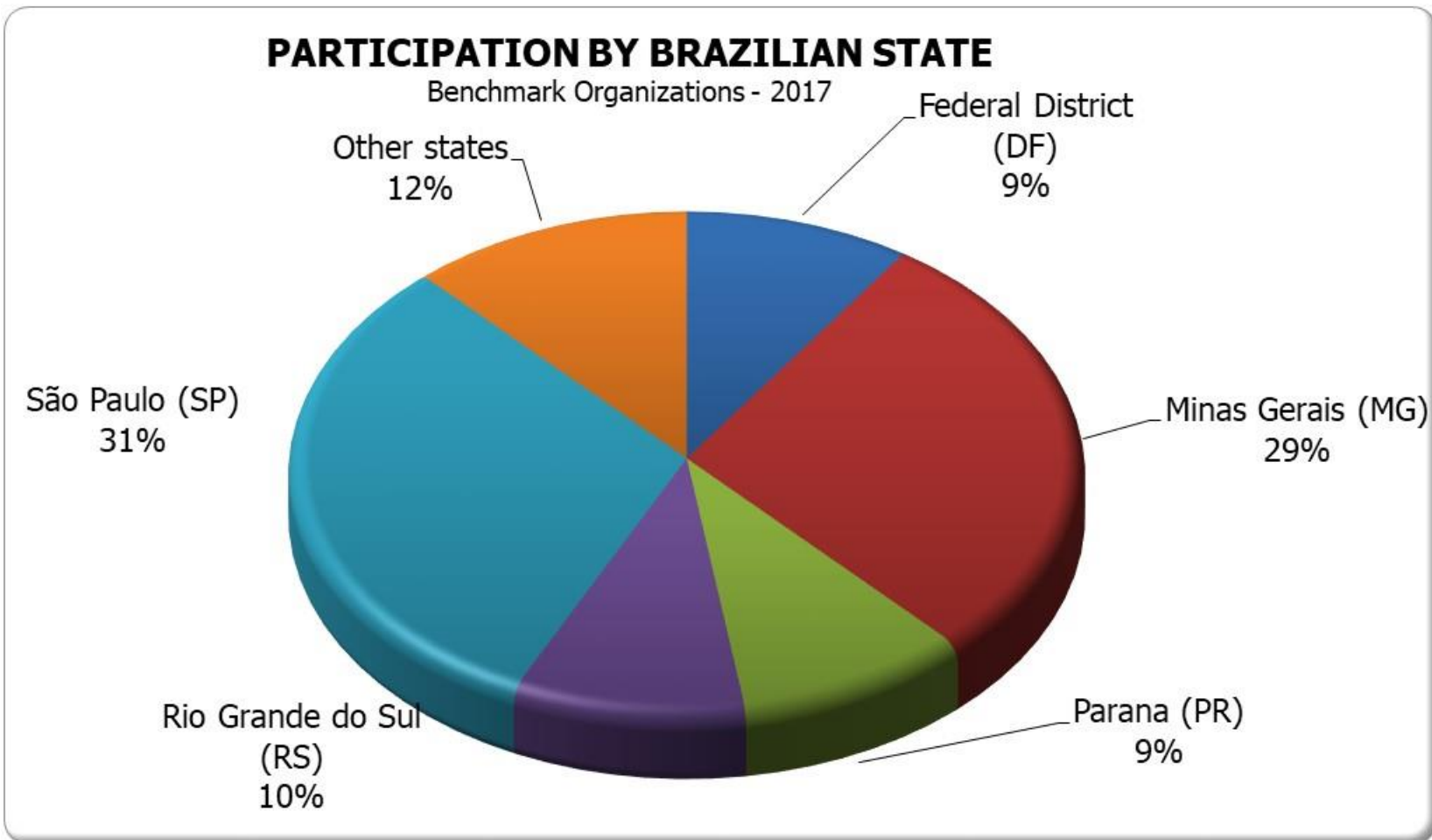
GOVERNANCE
IN BENCHMARK ORGANIZATIONS

Most benchmark organizations have had governance functions for over 2 years. In the case of Project Manager, 62% of organizations have had this function for more than 5 years.

It is significant the presence of organizations that "do not have / does not apply" PMO (23.8%).

OCCURRENCY BY USAGE TIME			
Usage Time	PM	PMO	Committee
It does not apply	0	1	3
We do not have the function	2	9	4
It exists less than 1 year	2	3	4
It exist among 1 and 2 years	2	1	2
It exist among 2 and 5 years	10	10	11
It exists over than 5 years	26	18	18
TOTAL	42	42	42

OCCURRENCY OF THE FUNCTION			
OCCURRENCY	PM	PMO	Committee
We do not have or it does not apply	4,8%	23,8%	16,7%
YES	95,2%	76,2%	83,3%

24% of benchmark organizations fall into the "do not have / do not apply" category.

56% of benchmark organizations have 1 to 5 professionals in the PMO.

On average, one organization works with 22 projects.

In organizations that have PMO, on average, we have 4 professionals in the PMO.

PROFESSIONALS AT PMO	# Resp	%
We do not have / It does not apply	10	23,8%
1	6	14,3%
2	5	11,9%
3	5	11,9%
4	5	11,9%
5	2	4,8%
Over 5	9	21,4%
Total	42	100,0%

NUMBER OF PROFESSIONALS AT PMO
Benchmark Organizations - 2017

We do not have / It does not apply; 24%
1; 14%
2; 12%
3; 12%
4; 12%
5; 5%
Over 5; 21%

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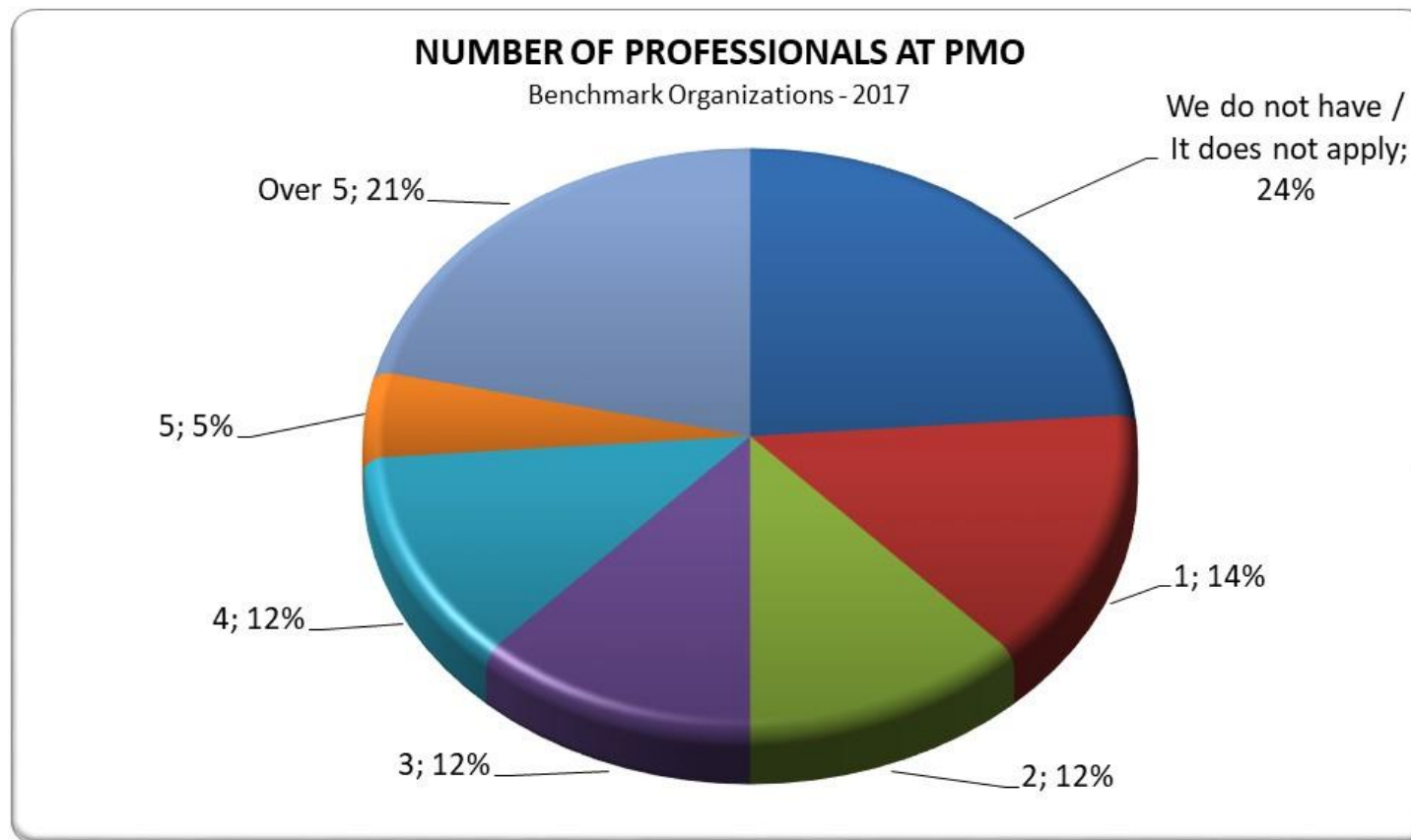
Team who
developed this work

Darci Prado is an Associate Consultant at *FALCONI Consultores de Resultado*. Bachelor degree in Chemical Engineering from *UFMG*, postgraduate degree in Economic Engineering from FDC and PhD from *UNICAMP*. He participated in the establishment of the PMI chapter in Minas Gerais and Paraná, and was a board member of PMI-MG between 1998-2002. He was the president of *Clube IPMA-BH* between 2006 and 2008. Author of 10 project management books.

Manuel Carvalho da Silva Neto is a 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 49 years of market experience, 43 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.

Lara Mendonça Romano is a Consultant at *FALCONI Consultores de Resultado.* Bachelor degree in Food Engineering from *UFLA*, postgraduate degree in Project Management, holds a MBA degree in Business Management from IETEC and specialization in Finance by INSPER. She is PMP certified and takes part of many projects at public sector and private organizations from different areas at *FALCONI Consultores de Resultado.*
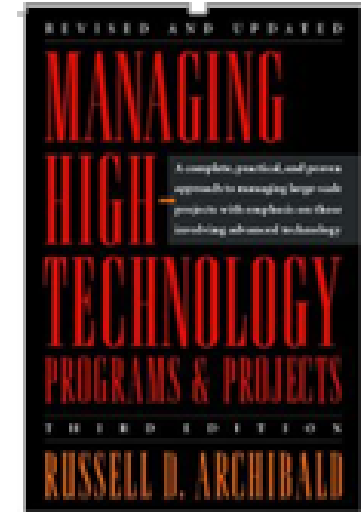
Russel D. Archibald

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

Darci Prado

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

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English Language: Lara Romano e Manuel Carvalho da Silva Neto
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COMPLETE REPORT
Partnership with several organizations and opinion formers

Thanks

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- Support:

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    - CBIC: All affiliates (SINDUSCON, SICEPOT, SECOVI, etc.)
    - PMI: All *chapters*
    - IPMA-Br
    - CREA: MG and SP
    - FIEMG
  - Educational institutions
    - FGV, FUNDAÇÃO DOM CABRAL, IETEC, IBMEC, CPLAN, VANZOLINI, DINSMORE

THE END