

## **PROJECT MANAGEMENT MATURITY**

**Archibald & Prado Research**  
**[www.maturityresearch.com](http://www.maturityresearch.com)**

# **Report** **“Construction Industry ” - 2012**

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Version 2

**Organized by :**

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This is the **Construction Industry Report Summary Version** of the 2012 Archibald & Prado Research. It was available at the website [www.maturityresearch.com](http://www.maturityresearch.com) from september to december 2012 and was taken by **60** professionals from the Construction Industry. This number represents a substantial improvement over the 2010 survey, when we had 27 participants. The data provided are from a total of 1,020 projects.

The final result presented an **average maturity of 2.68**. This value can be accepted as good for Brazilian organizations considering that the subject GP won repercussion in Brazil. However, surely, is modest when looking for that much still has to be done in Brazil.

Results in the following text are grouped and, as informed on our website, all data is shown under the following premises:

- Data is only shown for groupings with more than 5 participants;
- No individual maturity score will be available for the general public, in any media.

Like the 2010 research, the 2012 analyzed data obtained from the following subcategories project (or business segments) of the Construction Industry:

Business Segment	Number of participants
Building Construction	12
Heavy Construction for private customers	19
Heavy Construction for government	5
Engineering ( <i>design</i> or engineering projects)	10
Management	5
Other subcategories	9

## **MATURITY:**

- Maturity : 2.68

## **RESULTS INDICATORS**

- Success Index:
  - Total Success: : 49.5%
  - Partial Success : 41.7%
  - Failure : 8.8%
- Delay: 24.0%
- Cost Overrun: 16.0%

## **PORTFOLIO COMPOSITION OF AVERAGE PROJECTS BY PARTICIPANT**

- Average projects number : 17
- Average duration of each project : 14 months
- Average value of each project : R\$ 56,839,000.00

1. 2012 Maturity Results
2. 2012 Indicators Results
3. Governance Aspects
4. Maturity Model Value
5. Main Results Overview
6. Participants
7. Prado-PMMM Model Revision
8. Research Team
9. Acknowledgements

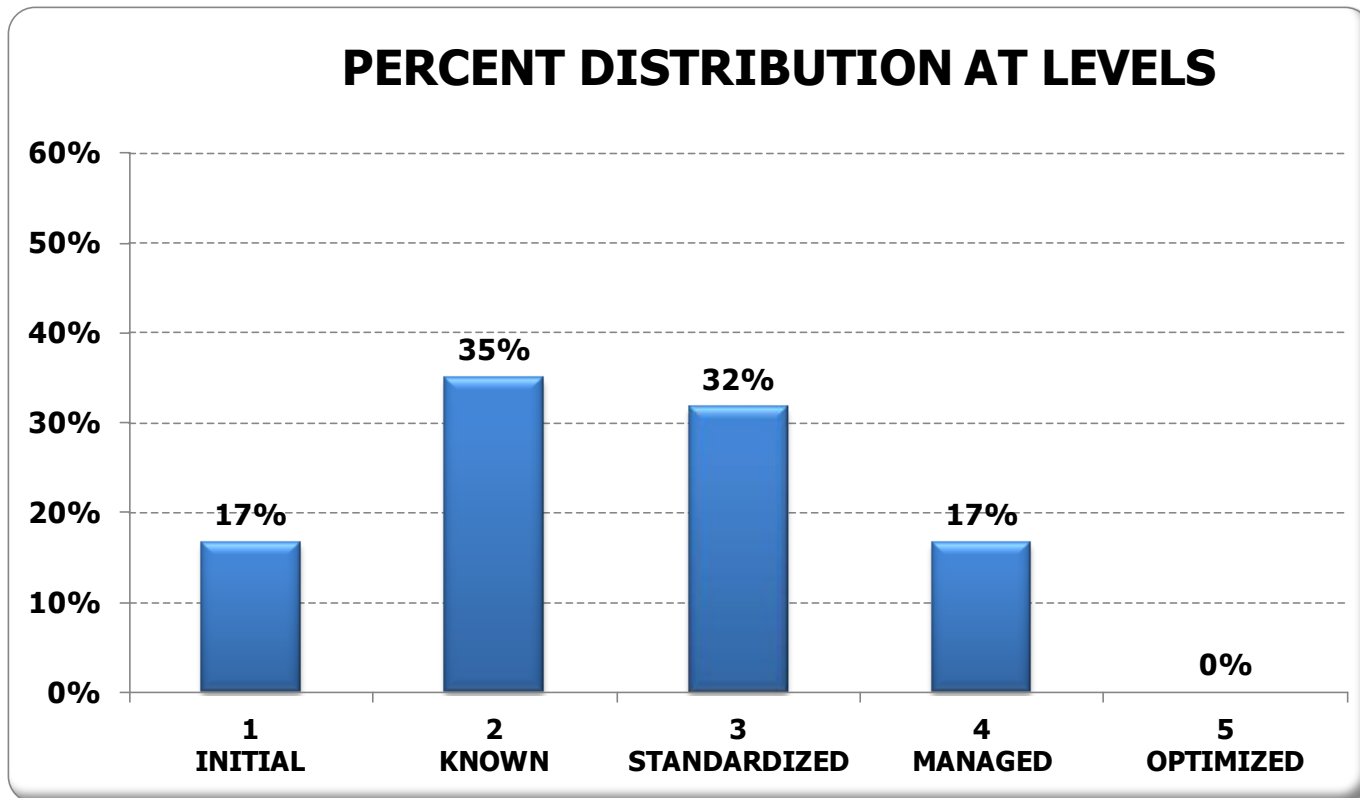
# Maturity Results

**This part of the report contains :**

- Overall results of Development of New Applications – Software
- Maturity broken down by :
  - Organization type
  - Project Categories
  - Business Areas
  - Billing Classes
  - Brazilian State

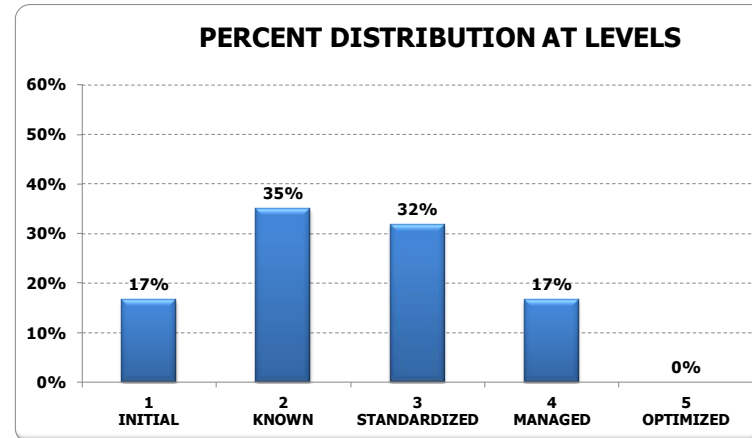
**Average Global Maturity : 2.68**

We still have a strong predominance of Business in level 2





- Level 1** – 16.7% haven't started evolving.
- Level 2** – 35.0% invested in knowledge.
- Level 3** – 31.7% implemented standards.
- Level 4** – 16.7% dominate the process.
- Level 5** - 0 % reached the optimized level.

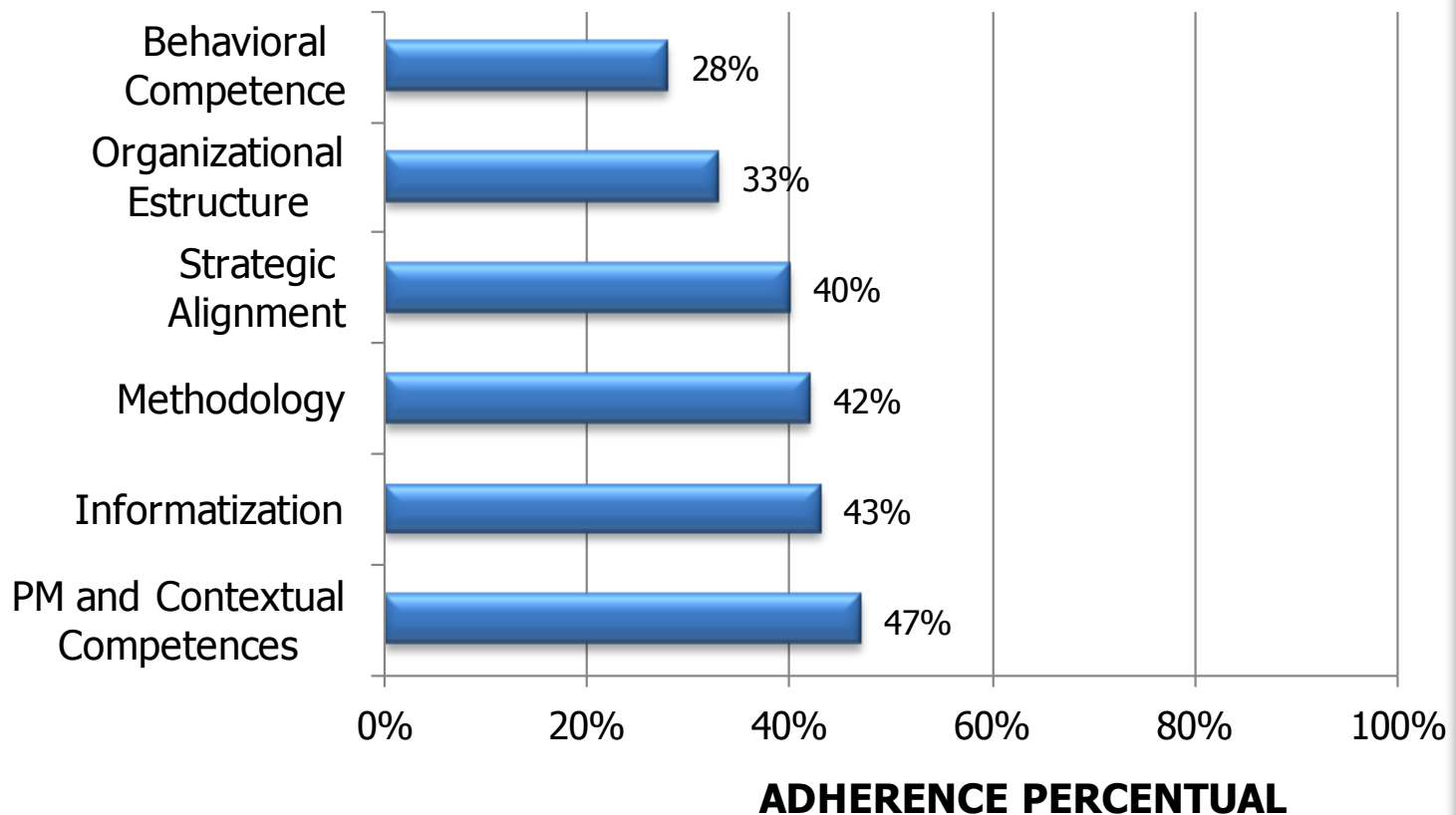


## Comments

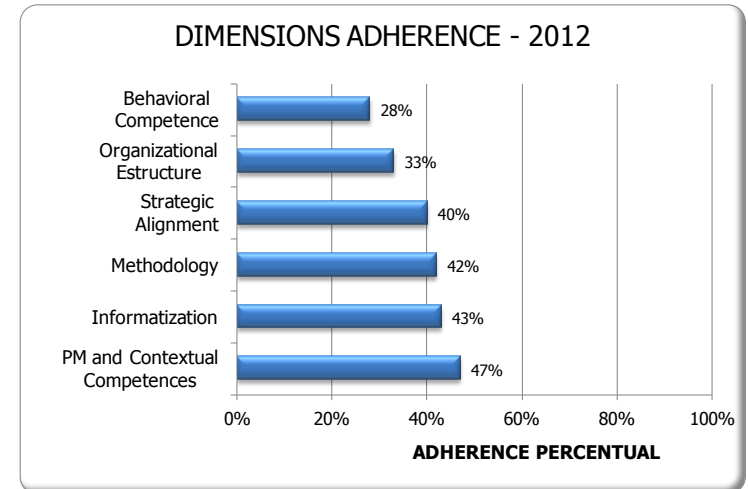
- For 51.7% (levels 1 and 2) of the organizations participating in this research, project management has enabled to bring results to their business as would be desired (levels 3, 4 and 5);
- 16,7% of the participant organizations are in levels which allow work domain and optimization (levels 4 and 5).

Behavioral Competence still is the main weakness of the organizations

## DIMENSIONS ADHERENCE - 2012



Dimension	Adherence Percentage
PM and Contextual Competences	47%
Informatization	43%
Methodology	42%
Strategic Alignment	40%
Organizational Structure	33%
Behavioral Competence	28%



## Results Interpretation

### The above results show that:

- The dimensions PM and Contextual Competences, Informatization and Methodology lead;
- Behavioral Competence and Organizational Structure come last.
- Certainly all values are still very low.

### Conclusions:

- In most organizations, the evolution continues to occur more strongly in the PM and Contextual dimensions, Information Technology and Methodology.

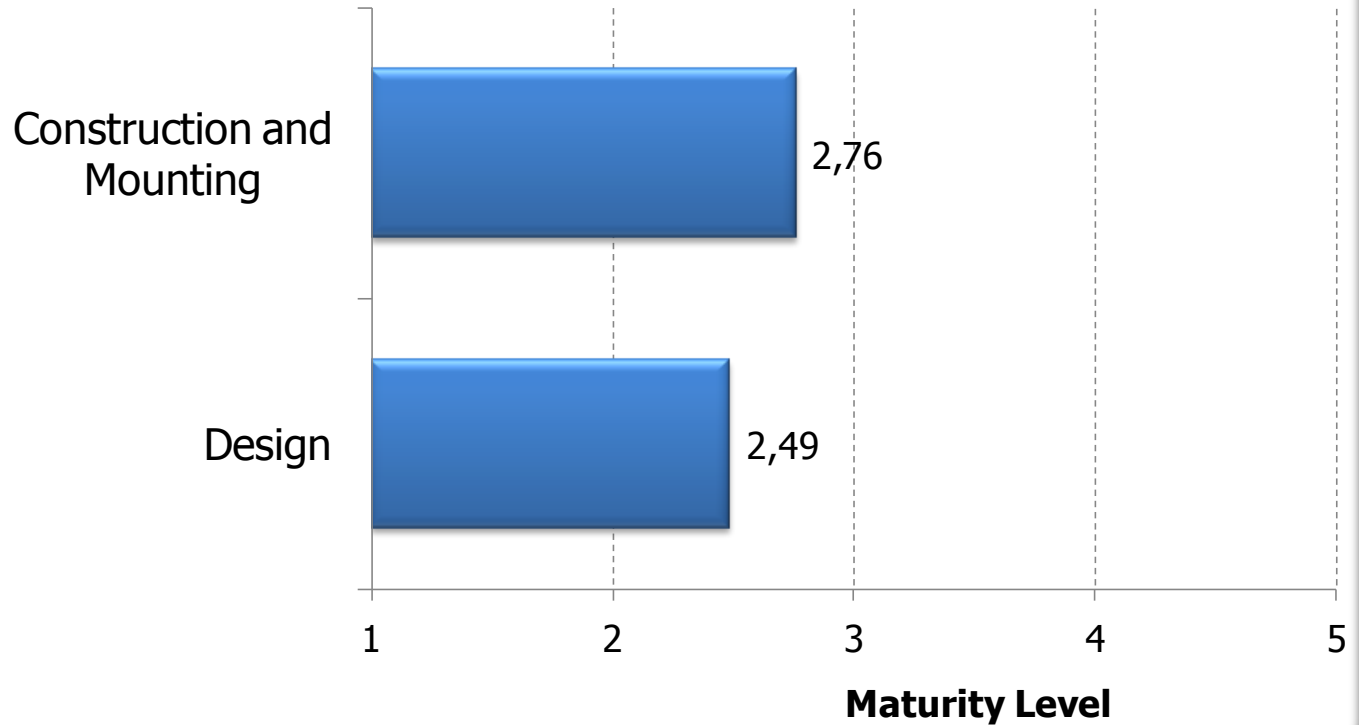
Considering that, because it is a survey where stratifications are made and different sizes samples are used, they have different representativeness. Thus, if the total number of respondents for a given sample is high, it is also high the representativeness of the data relating to that amount of respondents. The interpretation of the representativeness of the data is completely governed by STATISTICAL and, for now, we believe it is sufficient to inform the reader about representativeness indications for different values of the total number of respondents.

Total Number of Respondents	Representativeness
Above 25	Good representativeness
Between 14 and 25	Average representativeness. Analyze data with discernment.
Below 14	Low representativeness. Analyze data with discernment

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

## MATURITY BY PROJECT CATEGORY- 2012

(According to Archibald Model)



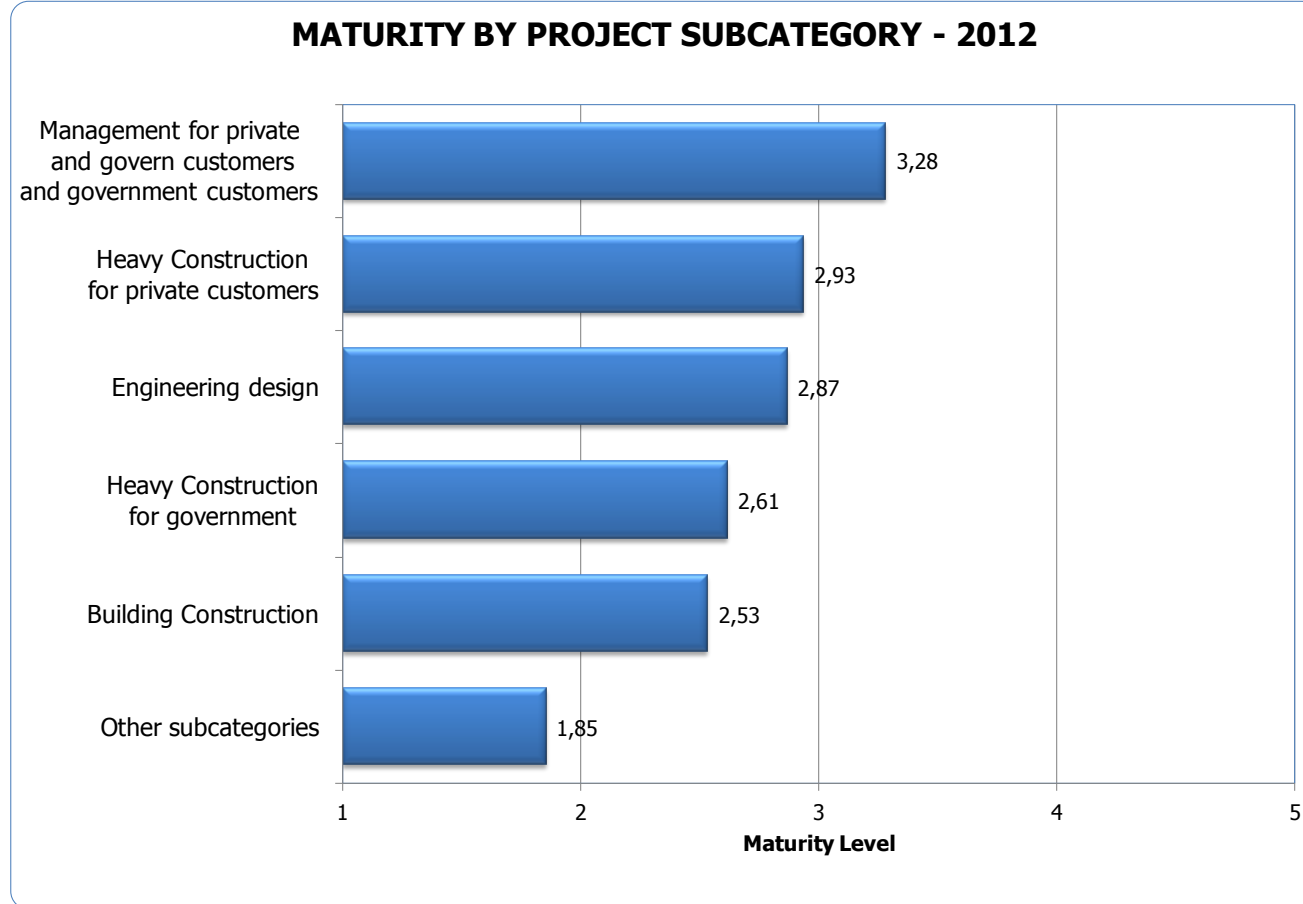
Sample size:

Construction and Mounting: 43

Design: 17

Note: the sample sizes are above average or very good representativeness

# Maturity by Project Subcategory



Sample size:

Management: 5

Construction for private customers: 19

Engineering: 10

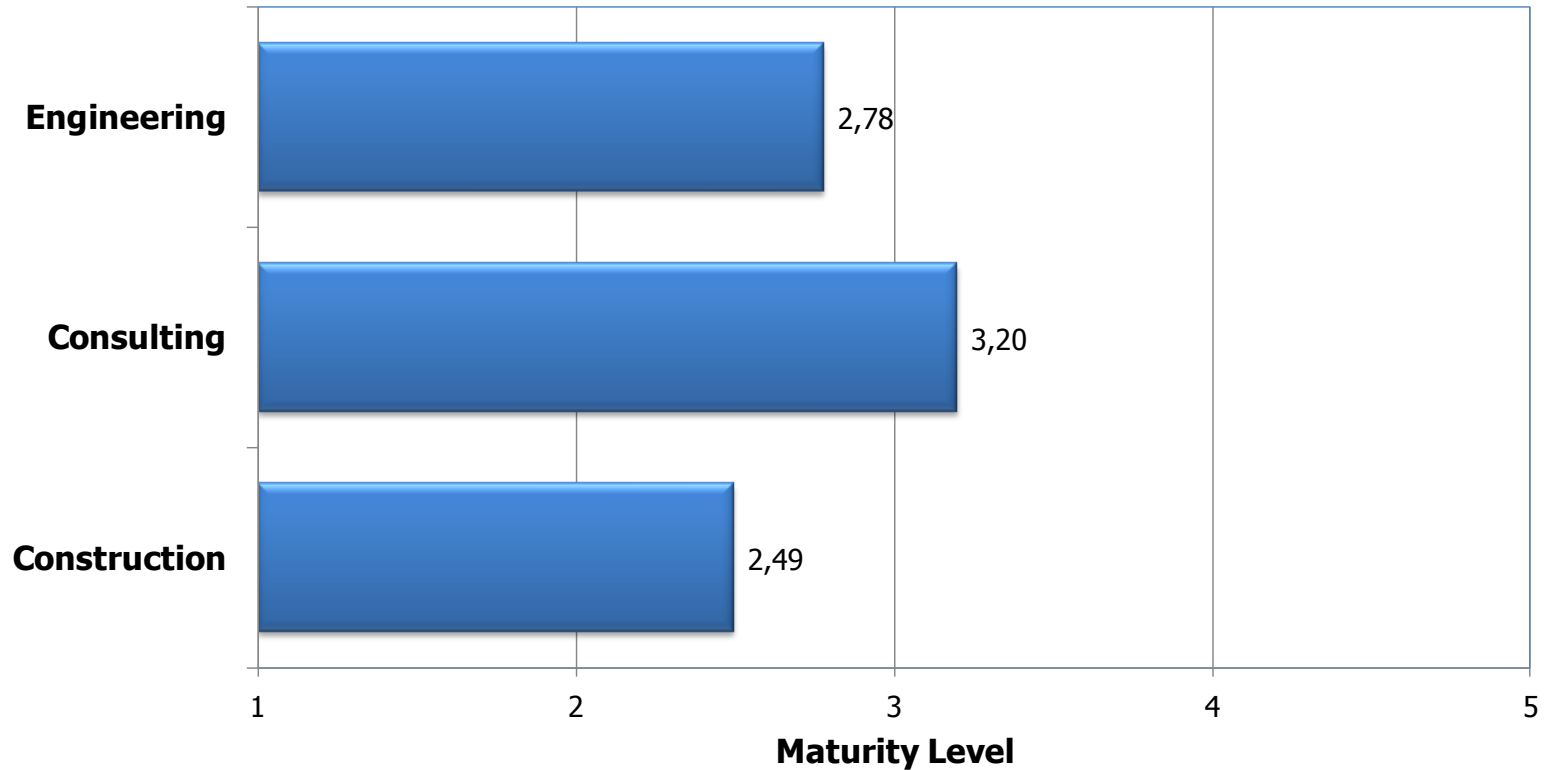
Construction for government: 5

Building: 12

Other: 9

Note: the sample sizes above have medium or low representativeness

## MATURITY BY BUSINESS AREAS - 2012



Sample sizes:

Engineering: 29

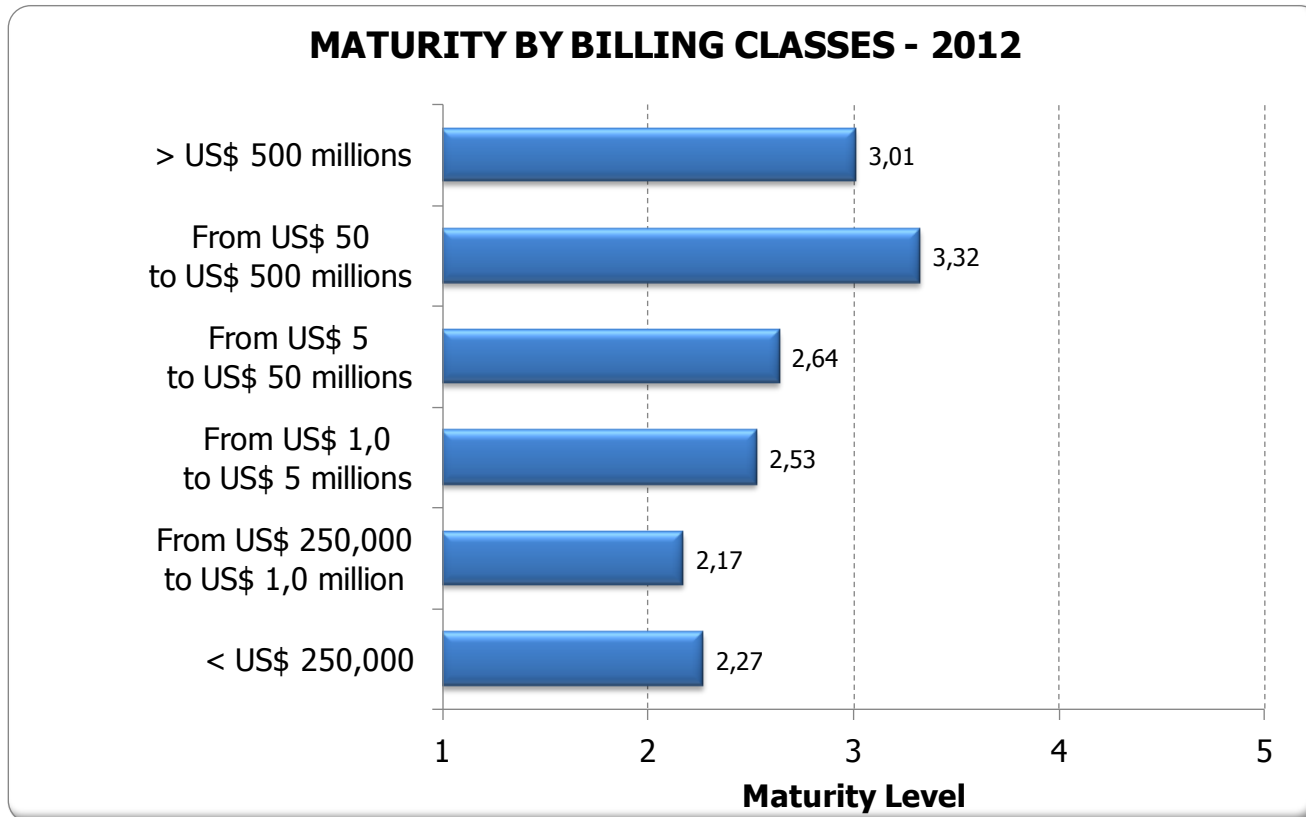
Consulting: 6

Construction: 25

Note: the sample sizes above have medium or low representativeness

# Maturity by Billing Classes

Firms with higher Billing Class have lower maturity



Samples size:

Over U\$ 500 millions: 8

From U\$ 50 to 500 millions: 7

From U\$ 5 to U\$ 50 millions: 8

From U\$ 1 to U\$ 5 millions: 21

From U\$ 2500,000 to U\$ 1 million: 12

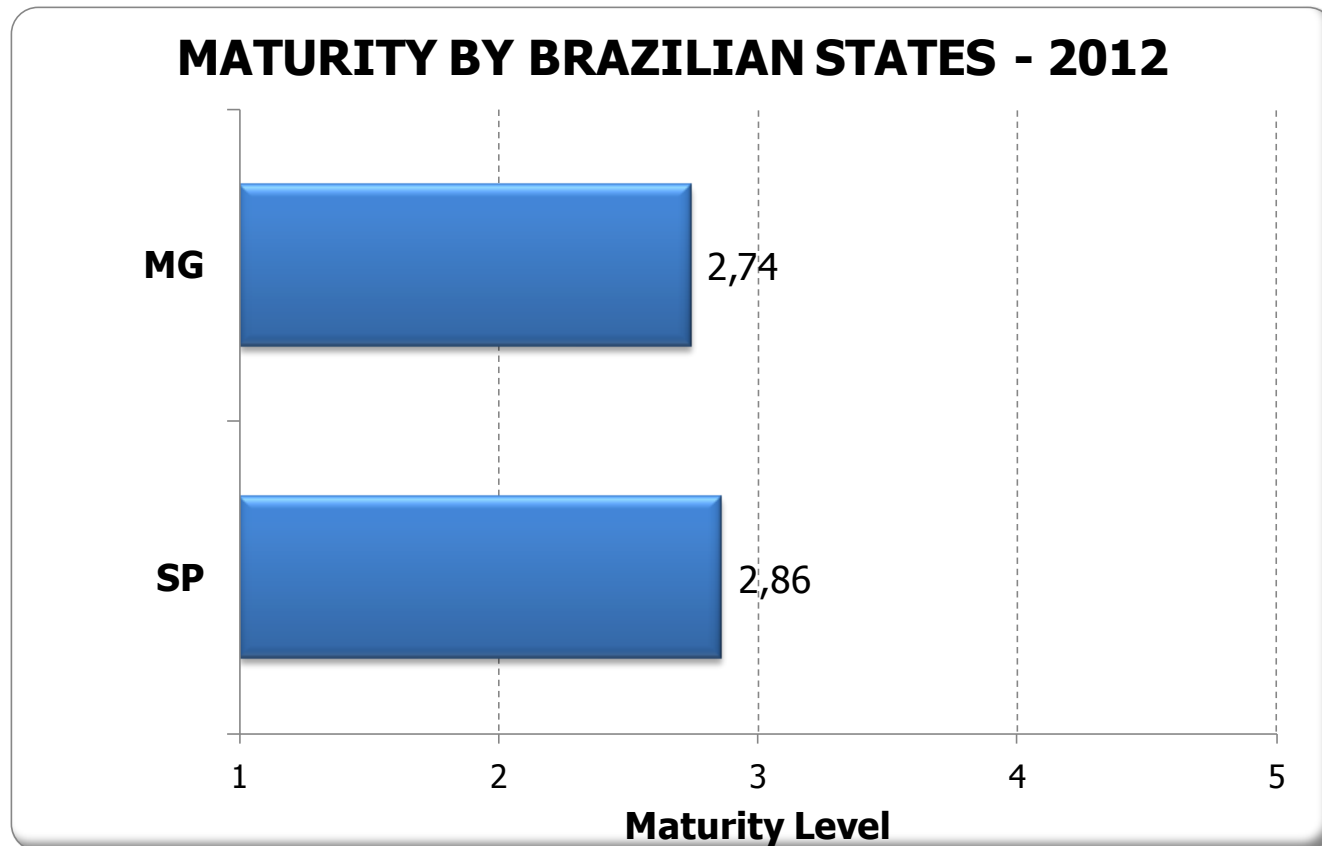
Under U\$ 250,000 : 4

Note: the sample sizes above have medium or low representativeness



# Maturity by Brazilian States

Here, only the brazilian states with more than 5 participants are shown.



Sample sizes:

MG: 24

SP: 14

Note: the sample sizes above have medium or very good representativeness

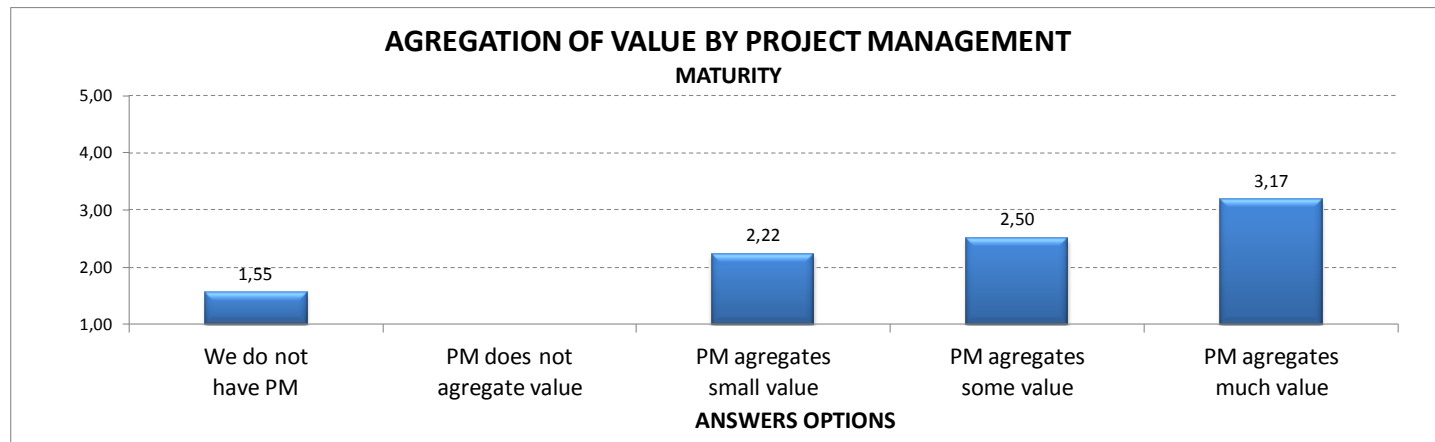
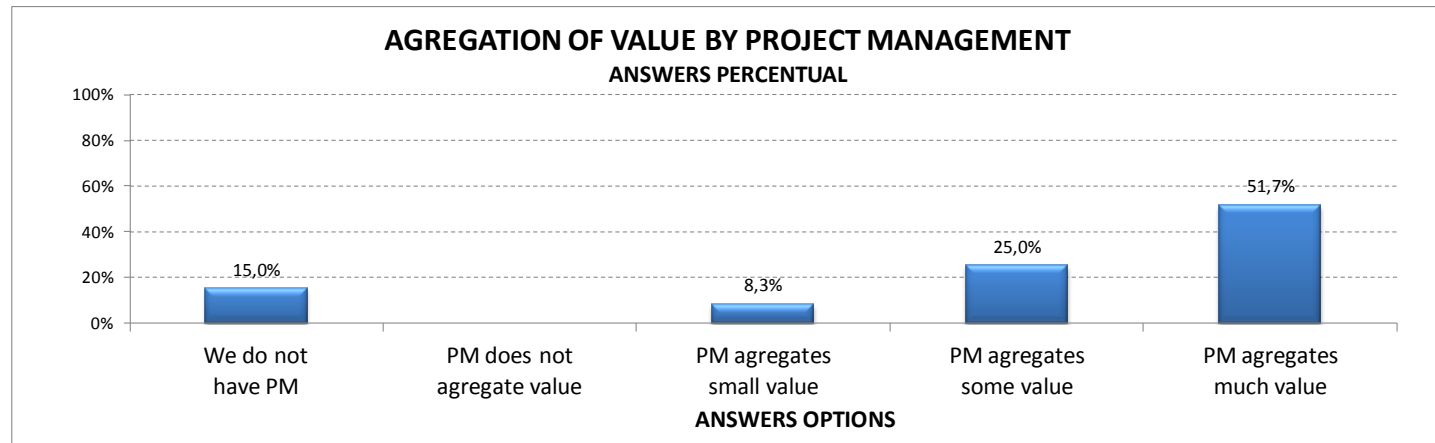
# 2012 RESULTS INDICATORS

**This part of the report contains:**

- Mean values obtained for :
  - Success (Total Success, Partial Success and Failure)
  - Delay
  - Cost Overrun

# Perception of Value Agregation

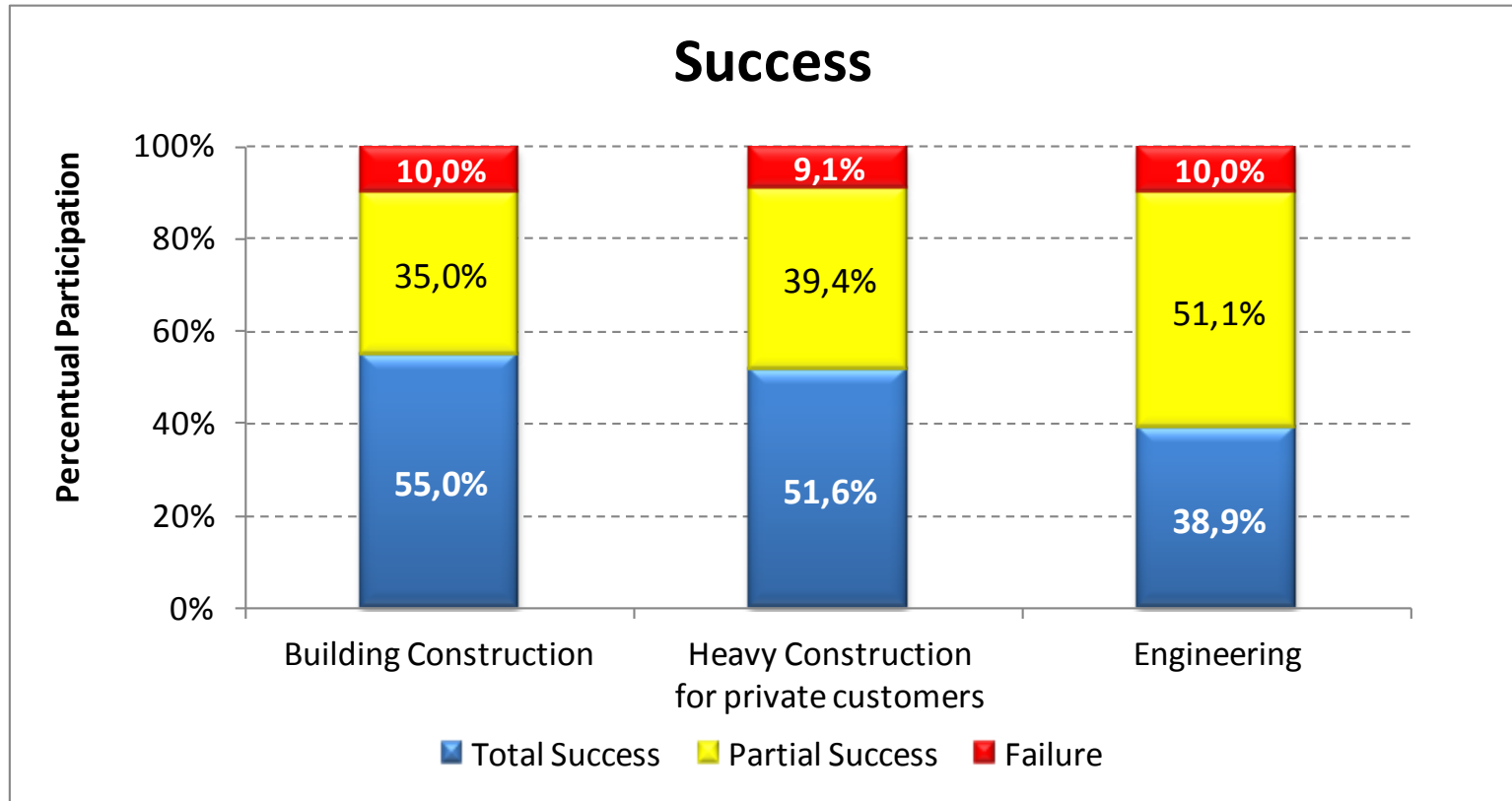
The companies where senior management and leadership have a perception that the best practices of project management add much value are exactly those with higher maturity level according to the PMMM Model.



Note: the size of the first three samples above have low representativeness

# Average Values for Success

The failure rate for the three groups is roughly equal (around 10%).



Sample sizes:

Building Construction: 10 participants

Heavy Construction: 19 participants

Engineering: 10 participants

Note: the sample sizes above have low representativeness

The participants used the following concepts of success:

**Total success:** the work finished almost on time, scope and budget (minor differences). The customer was very satisfied with the product delivered. The company achieved the expected profit and there is no significant pendency technical, judicial or labor. There were no serious accidents during construction.

**Partial success:** the work was completed and delivered. However compromising facts occurred (significant delay and / or significant budget overruns) that significantly decreased the profitability of the work, or there are minor disputes or legal or technical or labor that will certainly reduce the expected profit, and / or customer received the work, but was not satisfied, and / or accidents occurred, however the rate of their severity remained within the established parameters.

**Failure:** the work was not completed or delay and / or cost overruns were so exaggerated that the work gave prejudice, or there are technical pendency judicial, technical or labor very significant that are sure to make the work deficient, and / or customer does not agree to to accept the work, and / or accidents occurred during construction that tarnished the company's reputation.

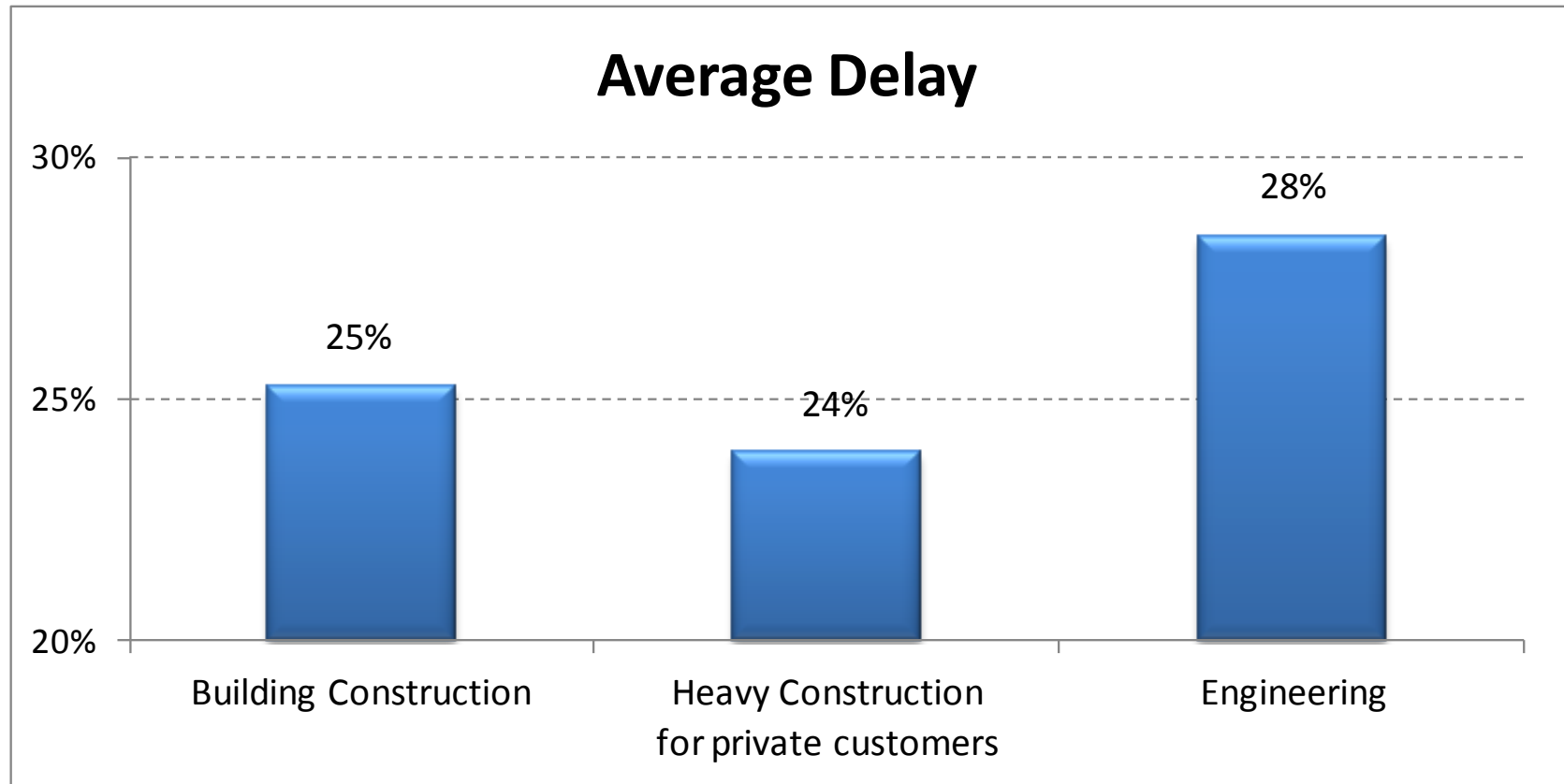
The participants used the following concepts of success:

**Total success:** work almost finished on time, scope, quality and budget (minor differences). The customer was very satisfied with the delivered product and its performance, and the company obtained the expected financial results.

**Partial success:** the work was completed and delivered. However compromising facts occurred (significant delay and / or significant costoverruns, and / or underperforming for the product delivered) that significantly reduced the financial result, and / or the customer received the job, but was not satisfied.

**Failure:** the work was not completed or delay and / or cost overrun were so exaggerated that the work caused a financial deficit, and / or performance was much lower than expected for the product delivered, and / or the client does not agree to give the accepted job.

Heavy Construction organizations shows the best values



Sample sizes:

Building Construction: 10 participants

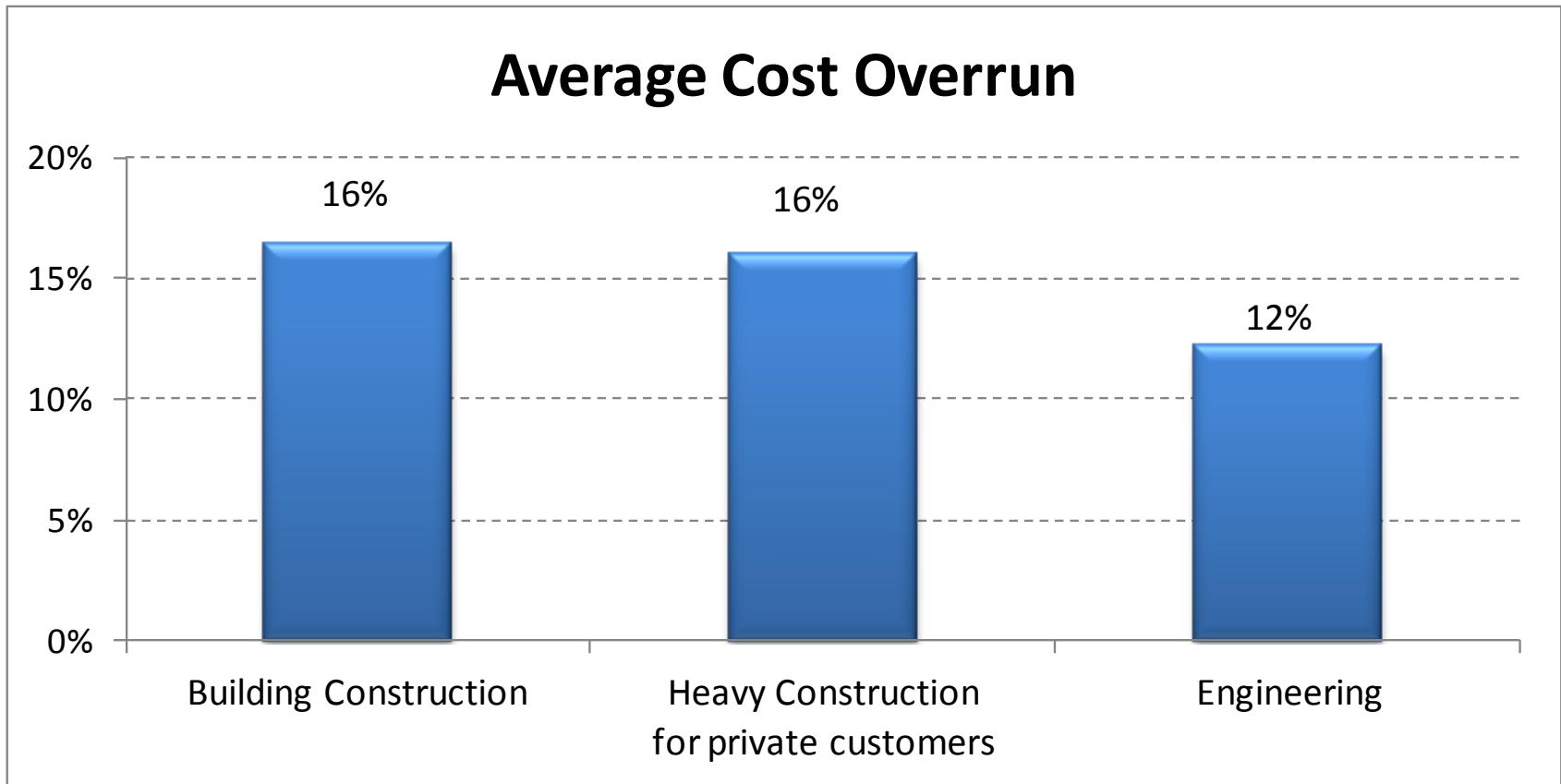
Heavy Construction: 19 participants

Engineering: 10 participants

Note: the sample sizes above have low representativeness

# Average Values for Cost Overrun

Business segment "Engineering" present the best values.



Sample sizes:

Building Construction: 10 participants

Heavy Construction: 19 participants

Engineering: 10 participants

Note: the sample sizes above have low representativeness



# Governance Aspects

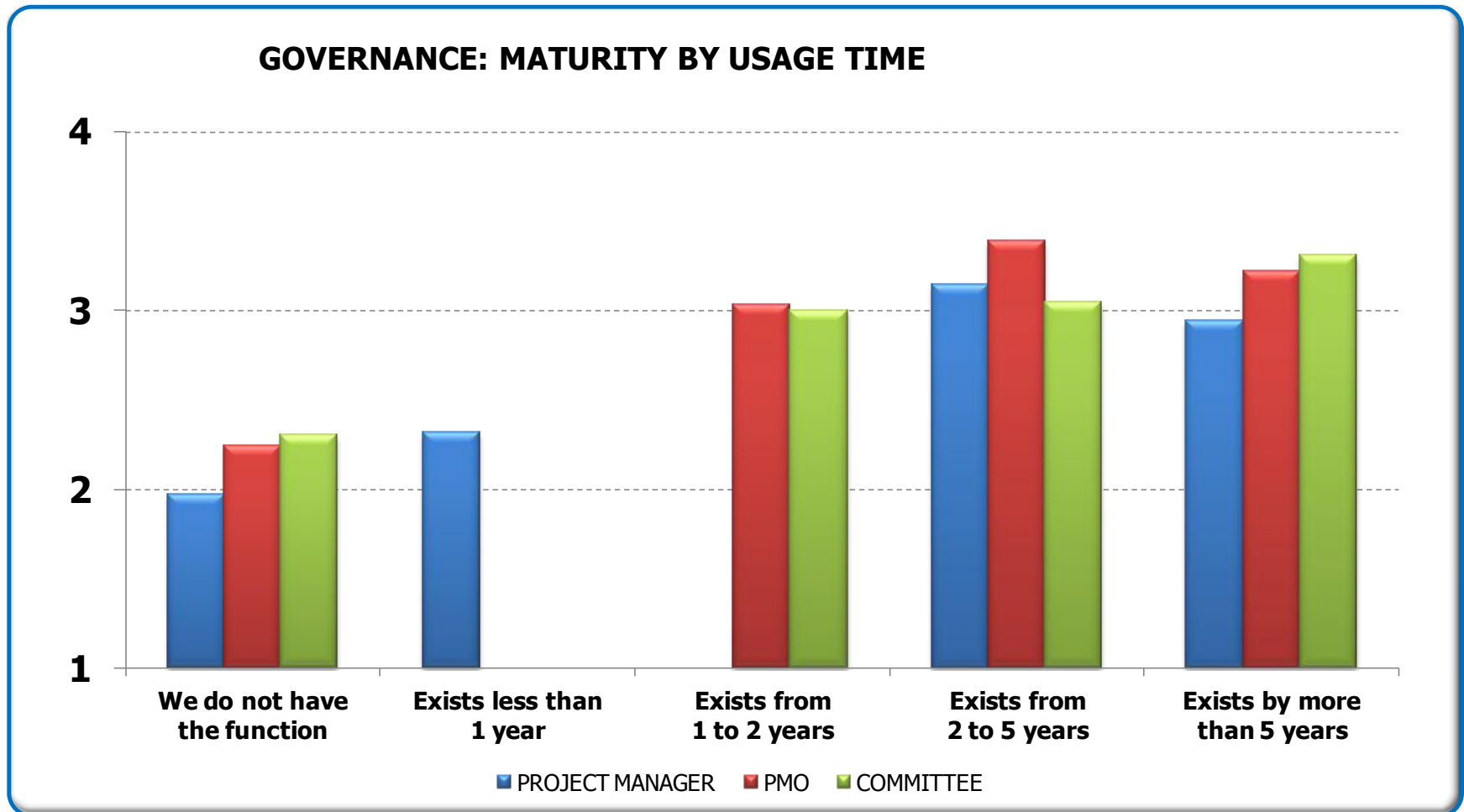
**In this part of the report are presented data about the importance and acceptance of the following governance aspects:**

- Project Manager
- PMO
- Committee

# MPCM Importance of the Governance Elements

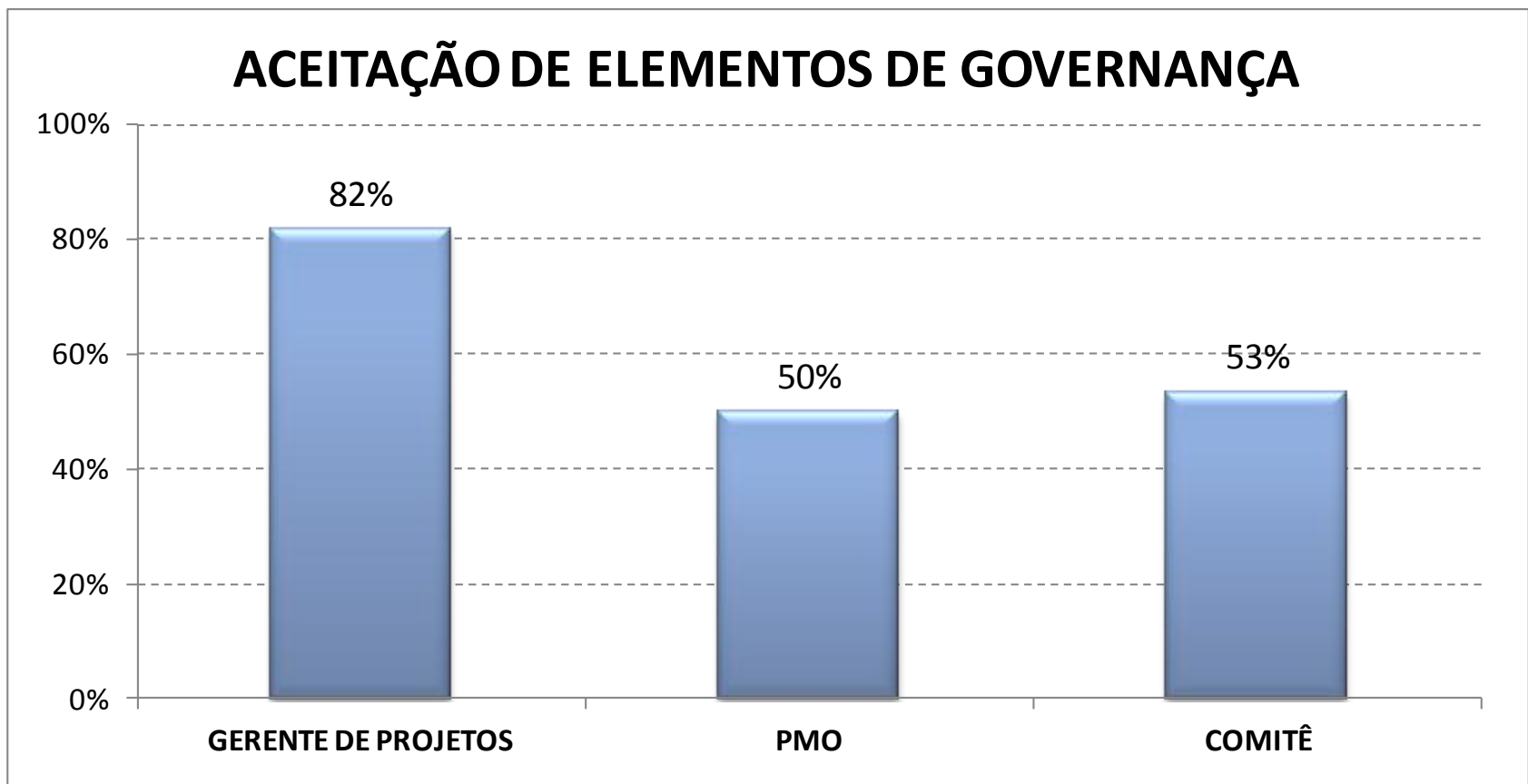
Maturity by Project Category Model

Organizations that use the governance elements for longer time have greater maturity. The graph shows the relationship between the average maturities of the participating organizations and time of use of governance elements.



The graph above presents no bars to below 5 participants.

The graph below shows the usage of the governance elements by the respondents. The project manager function is frequently used, however PMO and Committee are still not in every organization. It does not necessarily mean a non-acceptance because there are situations where those elements are not needed.



# Heavy Construction

In this part of the report is shown the data obtained for the segment HEAVY CONSTRUCTION (services to the private sector). Because the total sample size is small (19 participants) and the various stratifications obtained are of smaller size, we do not present comments about the results. We emphatically warn the aspect of samples reliability for limited value, as shown earlier in this document.

We do not present data for samples with less than 5 participants.

## **MATURITY:**

- Total participants: 19
- Maturity : 2.93

## **RESULTS INDICATORS**

- Success Index:
  - Total Success: : 51.6%
  - Partial Success : 39.4%
  - Failure : 9.1%
- Delay: 24.0%
- Cost Overrun: 16.0%

## **PORTFOLIO COMPOSITION OF AVERAGE PROJECTS BY PARTICIPANT**

- Average projects number : 11
- Average duration of each project : 14 months
- Average value of each project : R\$ 91,402,941.00

# Data Summary of the Segment Heavy Construction

TYPE OF ORGANIZATION	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
Private organizations	19	100,0%	2,93	51,6%	39,4%	9,1%	24%	16%
<b>TOTAL</b>	<b>19</b>	<b>100,0%</b>	<b>2,93</b>	<b>51,6%</b>	<b>39,4%</b>	<b>9,1%</b>	<b>24%</b>	<b>16%</b>
ARCHIBALD CATEGORY	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
Design (architecture or engineering_	1	5,3%						
Construction and Mounting	18	94,7%	2,84	48,7%	41,7%	9,7%	25%	17%
<b>TOTAL</b>	<b>19</b>	<b>100,0%</b>	<b>2,93</b>	<b>51,6%</b>	<b>39,4%</b>	<b>9,1%</b>	<b>24%</b>	<b>16%</b>
BUSINESS AREA	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
Construction	11	57,9%	2,80	47,0%	43,5%	9,5%	30%	19%
Consulting	3	15,8%						
Engineering	5	26,3%	2,89	61,7%	31,7%	6,7%	16%	4%
<b>TOTAL</b>	<b>19</b>	<b>100,0%</b>	<b>2,93</b>	<b>51,6%</b>	<b>39,4%</b>	<b>9,1%</b>	<b>24%</b>	<b>16%</b>
SUBCATEGORY	# de Respondentes	Percentual	Maturidade	Sucesso Total	Sucesso Parcial	Fracasso	Atraso Médio	Estouro de Custos
Heavy construction for private organizations	19	100,0%	2,93	51,6%	39,4%	9,1%	24%	16%
<b>TOTAL</b>	<b>19</b>	<b>100,0%</b>	<b>2,93</b>	<b>51,6%</b>	<b>39,4%</b>	<b>9,1%</b>	<b>24%</b>	<b>16%</b>

# Data Summary of the Segment Heavy Construction

BILLING	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
< US\$ 250,000	2	10,5%						
From US\$ 250,000 to US\$ 1,0 million	3	15,8%						
From US\$ 1,0 to US\$ 5 millions	4	21,1%						
From US\$ 5 to US\$ 50 millions	4	21,1%						
From US\$ 50 to US\$ 500 millions	5	26,3%	2,95	65,0%	32,5%	2,5%	32%	24%
> US\$ 500 millions	1	5,3%						
<b>TOTAL</b>	<b>19</b>	<b>100,0%</b>	<b>2,93</b>	<b>51,6%</b>	<b>39,4%</b>	<b>9,1%</b>	<b>24%</b>	<b>16%</b>
EMPLOYEES	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
< 19	3	15,8%						
From 19 to 99	5	26,3%	2,96	61,3%	28,8%	10,0%	26%	15%
From 100 to 999	5	26,3%	2,93	39,0%	55,0%	6,0%	23%	13%
From 1.000 to 4.999	6	31,6%	2,81	57,0%	33,0%	10,0%	27%	20%
<b>TOTAL</b>	<b>19</b>	<b>100,0%</b>	<b>2,93</b>	<b>51,6%</b>	<b>39,4%</b>	<b>9,1%</b>	<b>24%</b>	<b>16%</b>
STATE	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
CE	1	5,3%						
GO	1	5,3%						
MG	10	52,6%	3,16	60,6%	36,7%	2,8%	27%	20%
PR	2	10,5%						
RJ	1	5,3%						
RS	1	5,3%						
SP	3	15,8%						
<b>TOTAL</b>	<b>19</b>	<b>100,0%</b>	<b>2,93</b>	<b>51,6%</b>	<b>39,4%</b>	<b>9,1%</b>	<b>24%</b>	<b>16%</b>

# Data Summary of the Segment Heavy Construction

USAGE OF PROJECT MANAGER	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
We do not have Project Managers	4	21,1%						
Exists less than 1 year	1	5,3%						
Exists from 1 to 2 years	1	5,3%						
Exists from 2 to 5 years	3	15,8%						
Exists by more than 5 years	10	52,6%	3,23	59,5%	35,5%	5,0%	27%	18%
<b>TOTAL</b>	<b>19</b>	<b>100,0%</b>	<b>2,93</b>	<b>51,6%</b>	<b>39,4%</b>	<b>9,1%</b>	<b>24%</b>	<b>16%</b>
USAGE OF PMO	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
We do not have PMO	7	36,8%	2,58	34,2%	56,7%	9,2%	31%	19%
Exists less than 1 year	2	10,5%						
Exists from 1 to 2 years	2	10,5%						
Exists from 2 to 5 years	1	5,3%						
Exists by more than 5 years	7	36,8%	3,16	67,9%	29,3%	2,9%	29%	19%
<b>TOTAL</b>	<b>19</b>	<b>100,0%</b>	<b>2,93</b>	<b>51,6%</b>	<b>39,4%</b>	<b>9,1%</b>	<b>24%</b>	<b>16%</b>
USAGE OF COMMITTEE	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
We do not have Committee	7	36,8%	2,75	42,9%	46,4%	10,7%	22%	10%
Exists less than 1 year	2	10,5%						
Exists from 1 to 2 years	5	26,3%	3,26	66,7%	25,0%	8,3%	16%	17%
Exists from 2 to 5 years	2	10,5%						
Exists by more than 5 years	3	15,8%						
<b>TOTAL</b>	<b>19</b>	<b>100,0%</b>	<b>2,93</b>	<b>51,6%</b>	<b>39,4%</b>	<b>9,1%</b>	<b>24%</b>	<b>16%</b>



# Data Summary of the Segment Heavy Construction

AGREGATION OF VALUE BY PROJECT MANAGEMENT PRACTICES (PM)	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
We do not have PM	2	10,5%						
PM agregates some value	5	26,3%	2,47	30,0%	55,0%	15,0%	35%	32%
PM agregates much value	12	63,2%	3,33	59,1%	31,8%	9,1%	18%	10%
<b>TOTAL</b>	<b>19</b>	<b>100,0%</b>	<b>2,93</b>	<b>51,6%</b>	<b>39,4%</b>	<b>9,1%</b>	<b>24%</b>	<b>16%</b>
AGREGATION OF VALUE BY PMO	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
We do not have PMO	9	47,4%	2,65	43,8%	45,0%	11,3%	29%	16%
PMO agregates small value	2	10,5%						
PMO agregates some value	2	10,5%						
PMO agregates much value	6	31,6%	3,45	70,0%	27,0%	3,0%	19%	10%
<b>TOTAL</b>	<b>19</b>	<b>100,0%</b>	<b>2,93</b>	<b>51,6%</b>	<b>39,4%</b>	<b>9,1%</b>	<b>24%</b>	<b>16%</b>

# **GENERAL SUMMARY:**

## **Main Results of the Construction Industry**

In this part of the report the data obtained for the Construction Industry, **attended by 60 participants** whose data were analyzed in the previous slides of this document. We emphatically warn the aspect of reliability for samples of limited value, as shown earlier in this document.

We do not present data for samples with less than 5 participants.

# Summary: Main Results

TYPE OF ORGANIZATION	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
Private organizations	58	96,7%	2,68	50,3%	41,4%	8,3%	24%	16%
Government - Direct Administration	1	1,7%						
Government - Indirect Administration	1	1,7%						
<b>TOTAL</b>	<b>60</b>	<b>100,0%</b>	<b>2,68</b>	<b>49,5%</b>	<b>41,7%</b>	<b>8,8%</b>	<b>24%</b>	<b>16%</b>
CATEGORIA ARCHIBALD	# de Respondentes	Percentual	Maturidade	Sucesso Total	Sucesso Parcial	Fracasso	Atraso Médio	Estouro de Custos
Design (architecture, engineering, etc.)	17	28,3%	2,49	56,3%	38,8%	5,0%	20%	11%
Construction and Mounting	43	71,7%	2,76	47,1%	42,8%	10,1%	25%	17%
<b>TOTAL</b>	<b>60</b>	<b>100,0%</b>	<b>2,68</b>	<b>49,5%</b>	<b>41,7%</b>	<b>8,8%</b>	<b>24%</b>	<b>16%</b>
BUSINESS AREA	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
Construction	29	48,3%	2,49	49,2%	41,6%	9,2%	26%	20%
Consulting	6	10,0%	3,20	55,8%	37,5%	6,7%	16%	17%
Engineering	25	41,7%	2,78	47,3%	43,7%	9,0%	24%	10%
<b>TOTAL</b>	<b>60</b>	<b>100,0%</b>	<b>2,68</b>	<b>49,5%</b>	<b>41,7%</b>	<b>8,8%</b>	<b>24%</b>	<b>16%</b>

# Summary: Main Results

SUBCATEGORIA	# de Respondentes	Percentual	Maturidade	Sucesso Total	Sucesso Parcial	Fracasso	Atraso Médio	Estouro de Custos
Other subcategories	9	15,0%	1,85	53,0%	40,0%	7,0%	18%	3%
Building Construction	12	20,0%	2,53	55,0%	35,0%	10,0%	25%	16%
Heavy Construction for private customers	19	31,7%	2,93	51,6%	39,4%	9,1%	24%	16%
Heavy Construction for government	5	8,3%	2,61	20,0%	63,3%	16,7%	27%	13%
Engineering design	10	16,7%	2,87	38,9%	51,1%	10,0%	28%	12%
Management for private and government customers	5	8,3%	3,28	67,0%	32,0%	1,0%	18%	26%
<b>TOTAL</b>	<b>60</b>	<b>100,0%</b>	<b>2,68</b>	<b>49,5%</b>	<b>41,7%</b>	<b>8,8%</b>	<b>24%</b>	<b>16%</b>

# Summary: Main Results

BILLING	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
< US\$ 250,000	8	13,3%	2,27	73,3%	22,5%	4,2%	15%	12%
From US\$ 250,000 to US\$ 1,0 million	7	11,7%	2,17	46,7%	44,2%	9,2%	25%	18%
From US\$ 1,0 to US\$ 5 millions	8	13,3%	2,53	22,0%	71,0%	7,0%	28%	23%
From US\$ 5 to US\$ 50 millions	21	35,0%	2,64	45,0%	42,5%	12,5%	22%	14%
From US\$ 50 to US\$ 500 millions	12	20,0%	3,32	58,5%	38,5%	3,0%	30%	17%
> US\$ 500 millions	4	6,7%	3,01	46,7%	33,3%	20,0%	18%	11%
<b>TOTAL</b>	<b>60</b>	<b>100,0%</b>	<b>2,68</b>	<b>49,5%</b>	<b>41,7%</b>	<b>8,8%</b>	<b>24%</b>	<b>16%</b>
EMPLOYEES	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
< 19	11	18,3%	2,43	56,4%	38,6%	5,0%	14%	16%
From 19 to 99	16	26,7%	2,37	59,6%	30,4%	10,0%	23%	15%
From 100 to 999	20	33,3%	2,84	37,6%	55,3%	7,1%	26%	16%
From 1.000 to 4.999	9	15,0%	3,11	60,0%	31,3%	8,8%	24%	16%
From 5.000 to 9.999	1	1,7%						
> 10.000	3	5,0%						
<b>TOTAL</b>	<b>60</b>	<b>100,0%</b>	<b>2,68</b>	<b>49,5%</b>	<b>41,7%</b>	<b>8,8%</b>	<b>24%</b>	<b>16%</b>

# Summary: Main Results

STATE	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
CE	1	5,3%						
GO	1	5,3%						
MG	10	52,6%	3,16	60,6%	36,7%	2,8%	27%	20%
PR	2	10,5%						
RJ	1	5,3%						
RS	1	5,3%						
SP	3	15,8%						
<b>TOTAL</b>	<b>19</b>	<b>100,0%</b>	<b>2,93</b>	<b>51,6%</b>	<b>39,4%</b>	<b>9,1%</b>	<b>24%</b>	<b>16%</b>

# Summary: Main Results

USAGE OF PROJECT MANAGER	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
We do not have Project Managers	11	18,3%	1,97	54,2%	40,0%	5,8%	31%	20%
Exists less than 1 year	6	10,0%	2,32	34,2%	45,8%	20,0%	18%	15%
Exists from 1 to 2 years	4	6,7%						
Exists from 2 to 5 years	7	11,7%	3,14	61,0%	37,0%	2,0%	22%	24%
Exists by more than 5 years	32	53,3%	2,94	52,2%	39,6%	8,1%	25%	13%
<b>TOTAL</b>	<b>60</b>	<b>100,0%</b>	<b>2,68</b>	<b>49,5%</b>	<b>41,7%</b>	<b>8,8%</b>	<b>24%</b>	<b>16%</b>
USAGE OF PMO	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
We do not have PMO	30	50,0%	2,24	46,2%	46,4%	7,4%	23%	18%
Exists less than 1 year	4	6,7%						
Exists from 1 to 2 years	9	15,0%	3,03	46,4%	51,4%	2,1%	22%	14%
Exists from 2 to 5 years	5	8,3%	3,39	15,0%	45,0%	40,0%	41%	14%
Exists by more than 5 years	12	20,0%	3,22	67,1%	28,8%	4,2%	24%	15%
<b>TOTAL</b>	<b>60</b>	<b>100,0%</b>	<b>2,68</b>	<b>49,5%</b>	<b>41,7%</b>	<b>8,8%</b>	<b>24%</b>	<b>16%</b>
USAGE OF COMMITTEE	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
We do not have Committee	28	46,7%	2,30	50,5%	40,7%	8,8%	22%	12%
Exists less than 1 year	4	6,7%						
Exists from 1 to 2 years	9	15,0%	3,00	43,3%	47,5%	9,2%	20%	17%
Exists from 2 to 5 years	8	13,3%	3,04	54,2%	45,8%	0,0%	27%	14%
Exists by more than 5 years	11	18,3%	3,30	50,0%	41,0%	9,0%	26%	21%
<b>TOTAL</b>	<b>60</b>	<b>100,0%</b>	<b>2,68</b>	<b>49,5%</b>	<b>41,7%</b>	<b>8,8%</b>	<b>24%</b>	<b>16%</b>

# Summary: Main Results

AGREGATION OF VALUE BY PROJECT MANAGEMENT (PM)	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
We do not have PM	9	15,0%	1,55	55,0%	32,1%	12,9%	27%	15%
PM agregates small value	5	8,3%	2,22	18,3%	80,0%	1,7%	26%	21%
PM agregates some value	15	25,0%	2,50	37,3%	54,5%	8,2%	28%	21%
PM agregates much value	31	51,7%	3,17	57,0%	34,2%	8,8%	22%	13%
<b>TOTAL</b>	<b>60</b>	<b>100,0%</b>	<b>2,68</b>	<b>49,5%</b>	<b>41,7%</b>	<b>8,8%</b>	<b>24%</b>	<b>16%</b>
AGREGATION OF VALUE BY PMO	# Respondents	Percentual	Maturity	Total Success	Partial Success	Failure	Average Delay	Cost Overrun
We do not have PMO	32	53,3%	2,34	46,9%	45,2%	7,9%	24%	18%
PMO does not agregates value	1	1,7%						
PMO agregates small value	3	5,0%						
PMO agregates some value	6	10,0%	3,24	71,3%	28,8%	0,0%	19%	16%
PMO agregates much value	18	30,0%	3,15	54,7%	34,3%	11,0%	27%	12%
<b>TOTAL</b>	<b>60</b>	<b>100,0%</b>	<b>2,68</b>	<b>49,5%</b>	<b>41,7%</b>	<b>8,8%</b>	<b>24%</b>	<b>16%</b>



# 2012 PARTICIPANTS

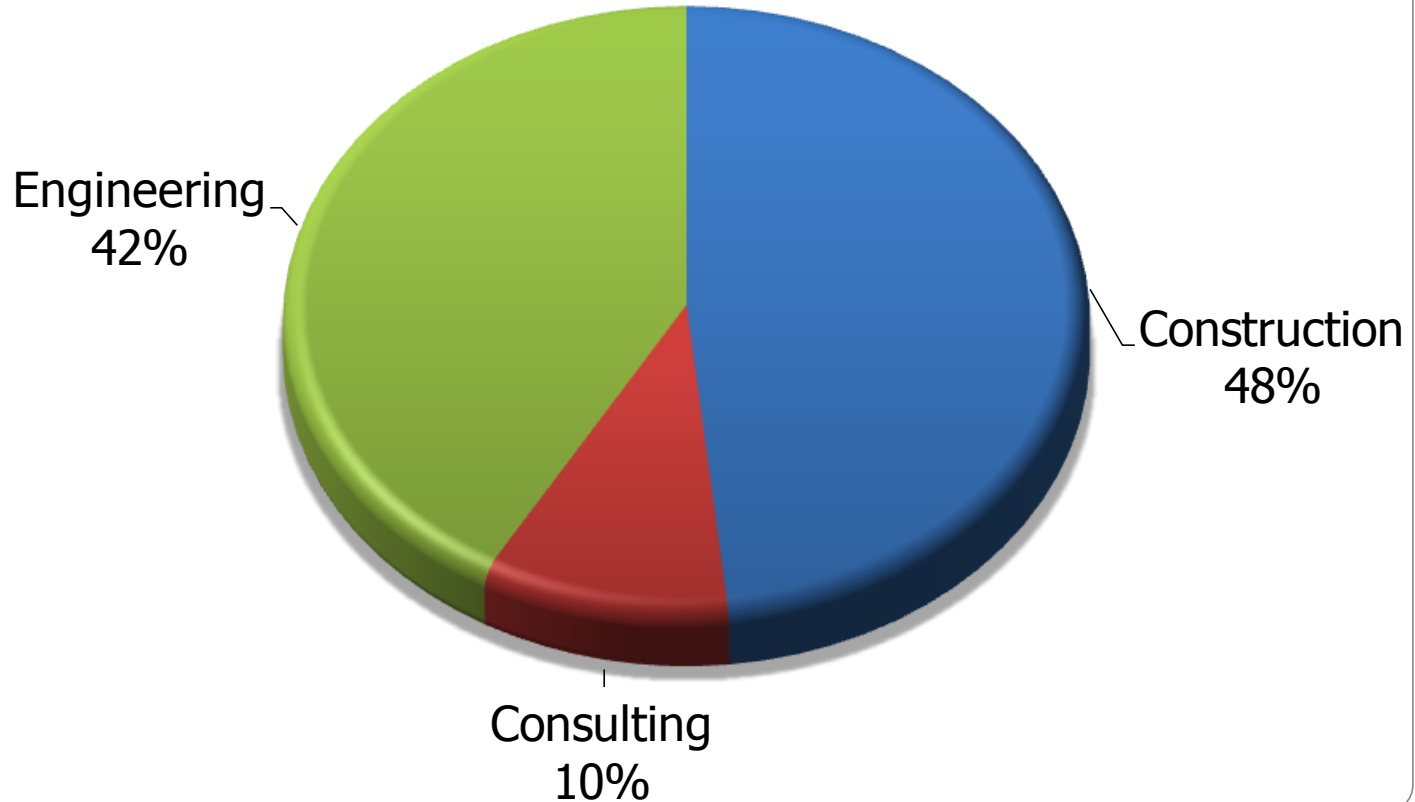
**In this part of the report we present:**

- Profile of the 60 participants
- Who are the benchmarks
- Complete list of the participant organizations

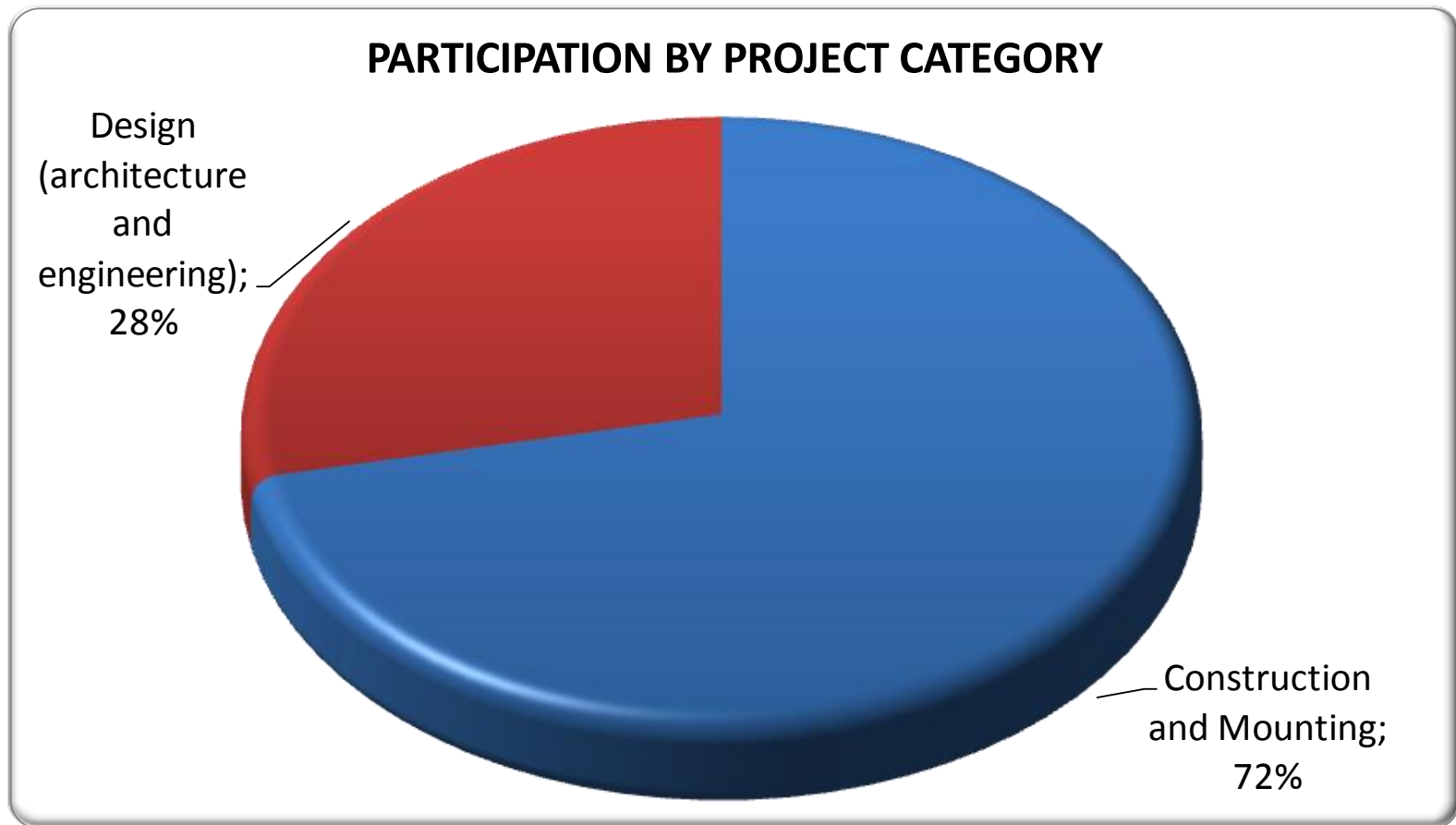
# PARTICIPANTS PROFILE

Construction and Engineering business represents 90% of total participants.

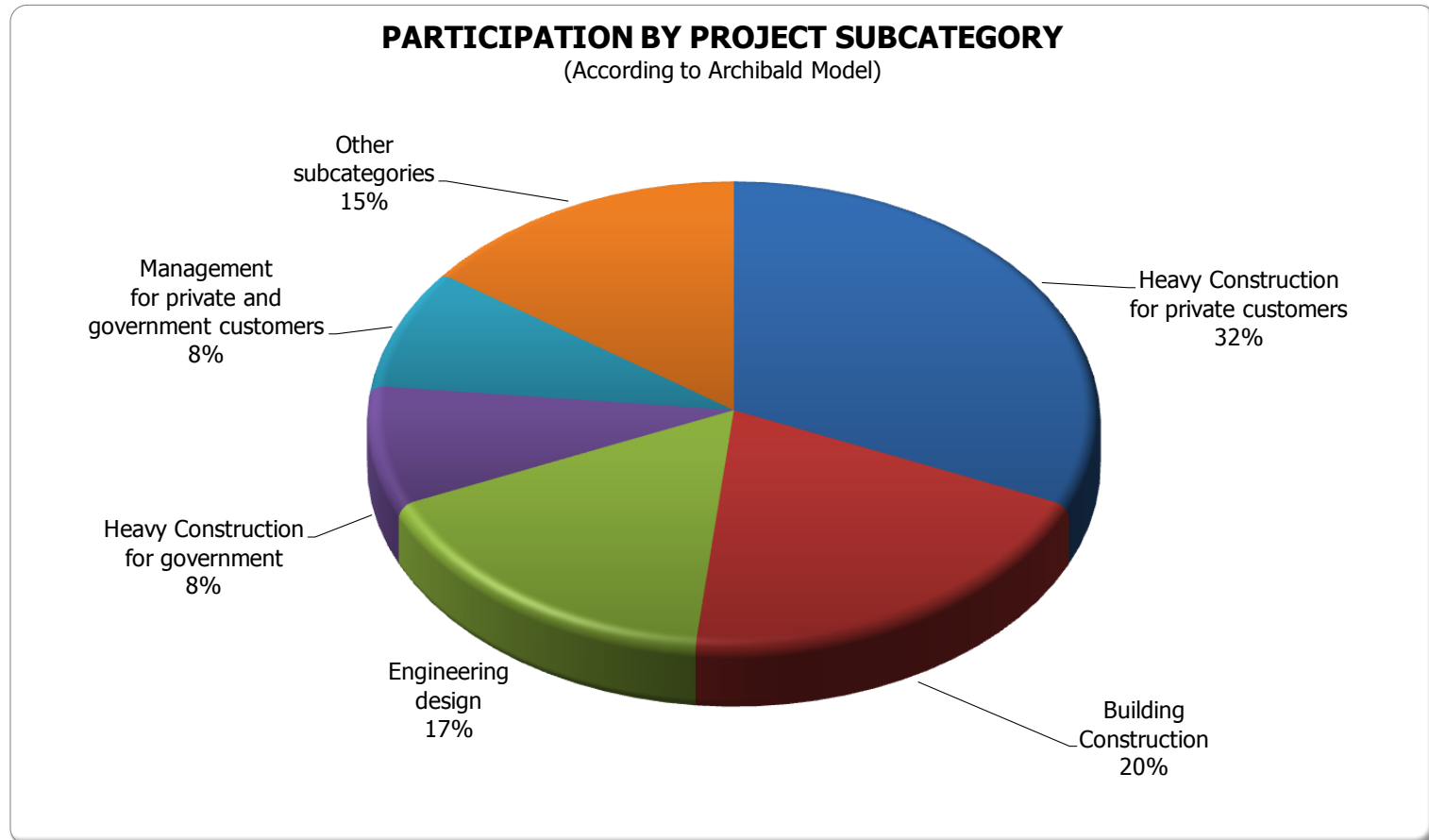
## PARTICIPANTES BY BUSINESS AREAS - 2012



Projects in category "Construction and Mounting" lead the ranking.



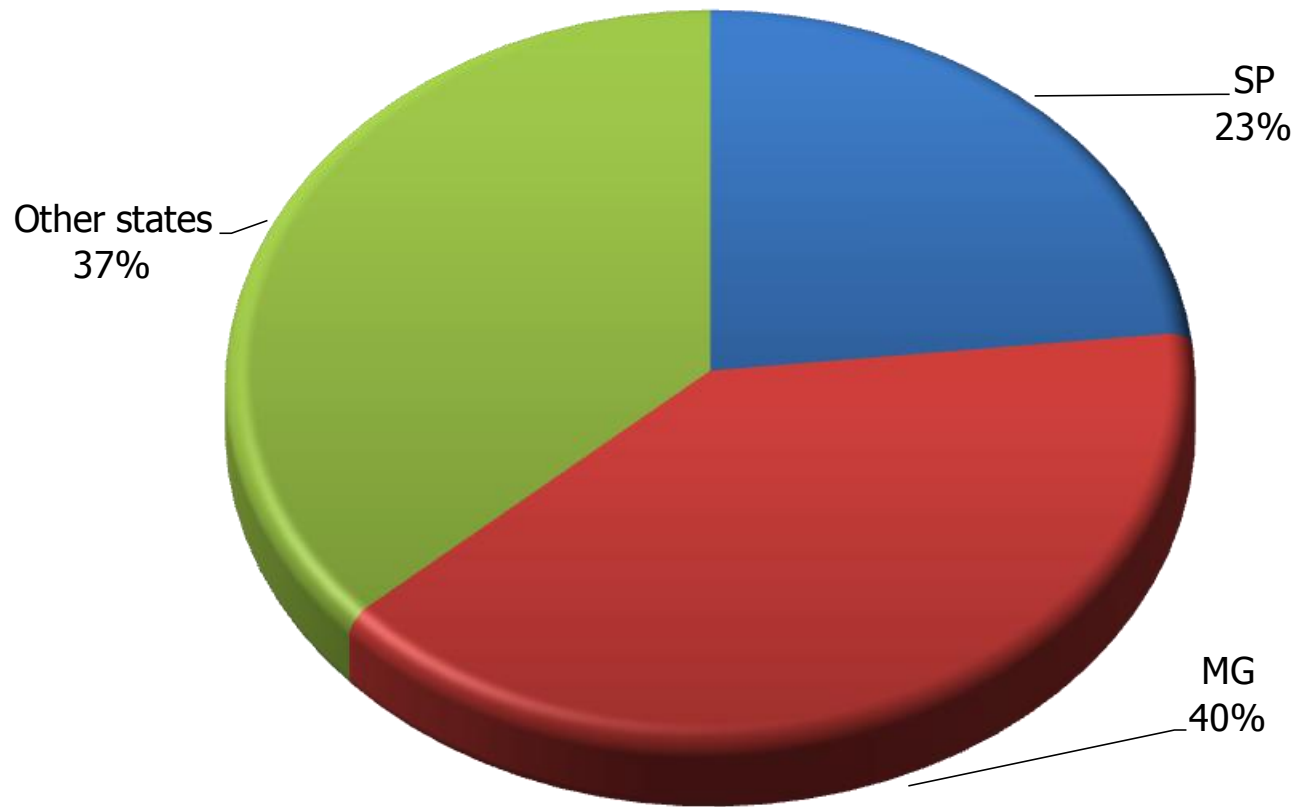
Service Projects (Heavy Construction) lead the ranking.



# Participants profile: Brazilian States

The states of Minas Gerais and São Paulo led to participation in the study with 63% of participants.

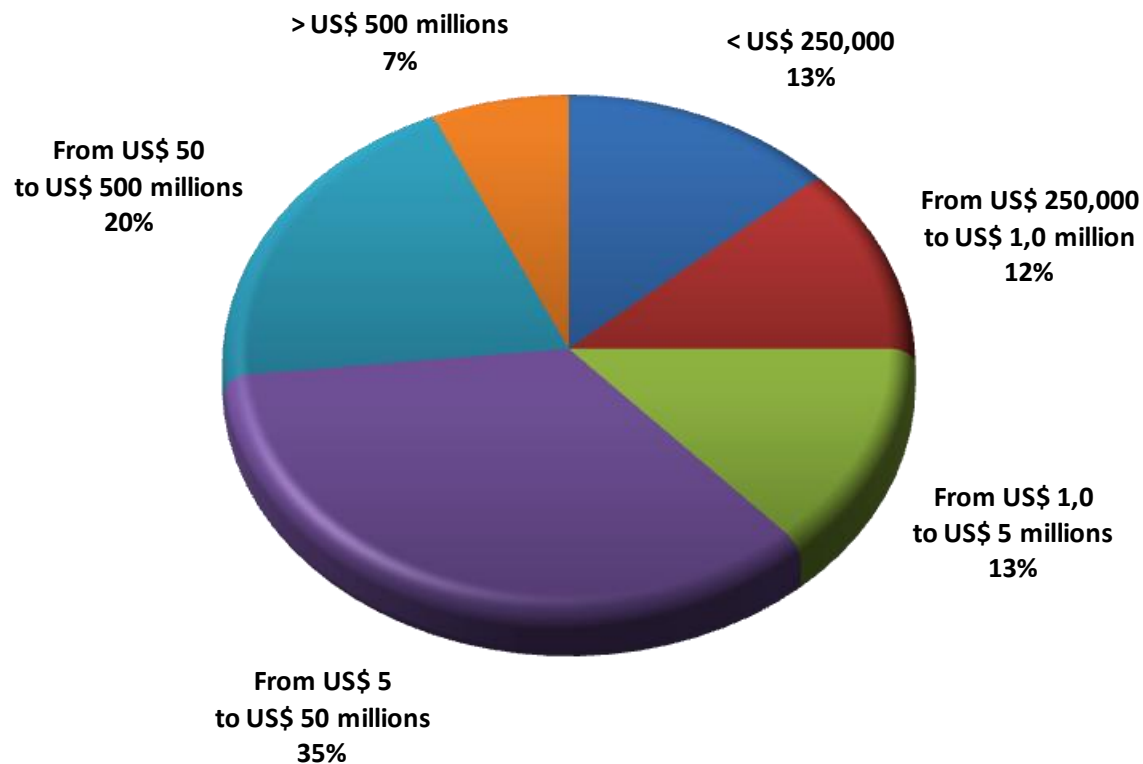
**PARTICIPATION BY BRAZILIAN STATES - 2012**



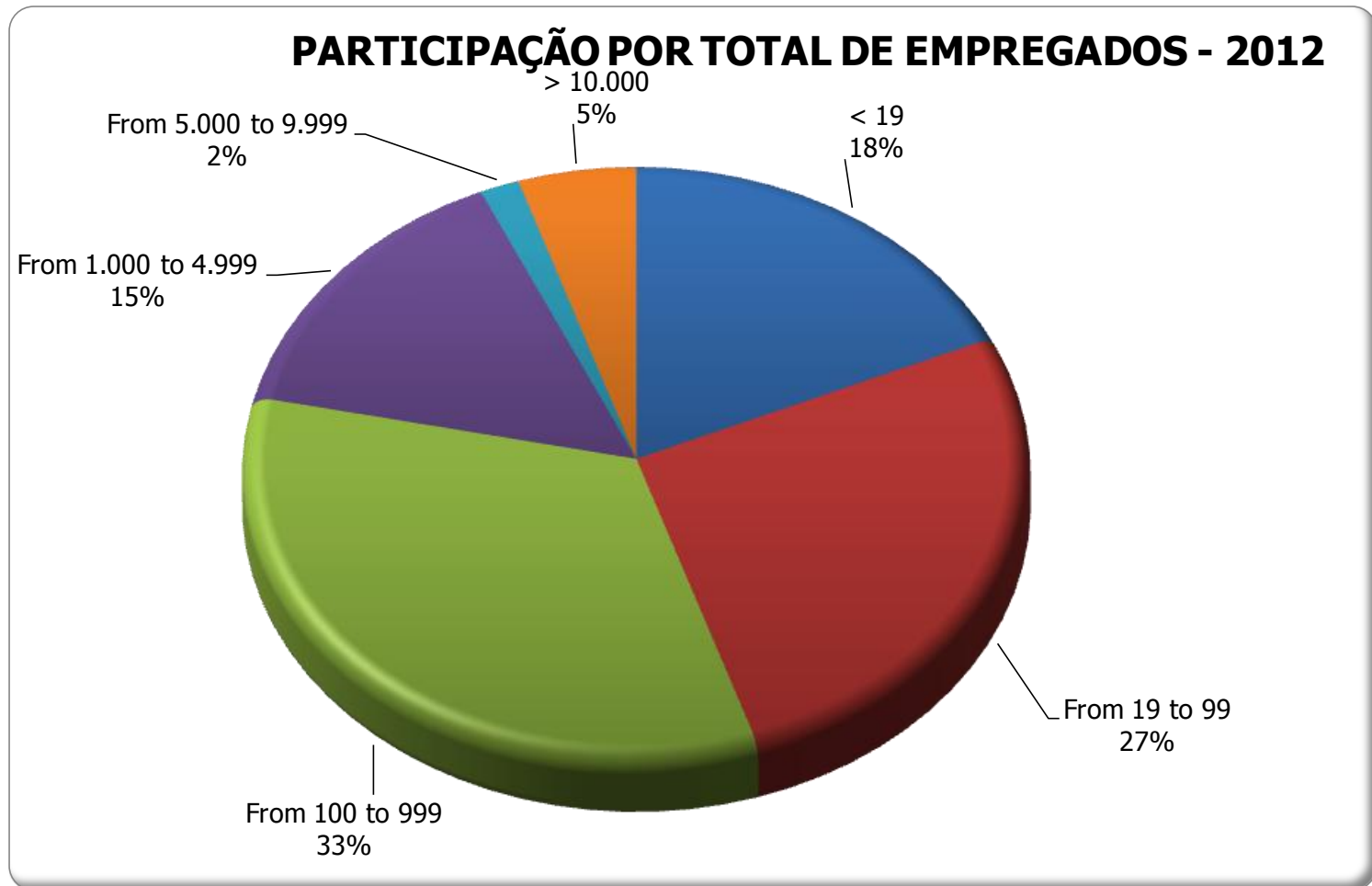
# Participants profile: Billing Classes

Companies with billing over US\$ 5 million represented 63% of the participants.

**PARTICIPATION BY BILLING CLASSES - 2012**



Organizations with up to 1,000 employees represent 78% of the participants.





# Who are the benchmarks?

## Who are the 10 organizations that reached a maturity level of 4 or 5?

- **By Brazilian State** : 5 organizations are in Minas Gerais, 4 in São Paulo and 1 in Rio de Janeiro
- **By organization type**: all come from private organizations
- **By business area** : Engineering (7), Construction (2) and Consulting (1)
- **By subcategory (Archibald)**: 4 are "Services - Heavy Construction", 3 are "Engineering - Engineering Projects", 2 are "Management for External Clients" and 1 is "Real Estate Development"

# Participants List

Note: If more than one department of the same organization in the same state participated, only one reference to the company is provided in the following list

# Participants List (1)

NAME	STATE
AECOM	RJ
Almatep Tecnologia em Construções Ltda	SP
Anglo Engenharia e Participações Ltda	MG
ASTECH	CE
Athi • Wohnrath Associados, Projetos e Gerenciamento SS Ltda	SP
B&L Arquitetura	MG
C&M Empreendimentos Imobiliários Ltda.	PR
Carteg Arquitetura e Construções Ltda	RJ
Ceri Engenharia Ltda	SP
Célio Senra Gestão de Empreendimentos Ltda.	MG
CONCRETO EMPREENDIMENTOS E PARTICIPAÇÕES LTDA	MG
Construtora Biap • Ltda	GO
Construtora Hedro Ltda	MG
Construtora Miranti	GO
CPFL	SP
DELP Engenharia Mecânica AS	MG
Devemada Engenharia Ltda.	SP
EBM Desenvolvimento Imobiliário	GO
Empresa C	SP
Engecrol Indústria e Comércio Ltda.	SP
Engefan engenharia e construoçoes ltda	PR
Engelog - Centro de Engenharia Ltda.	SP
Escritório de Arquitetura e Decoração C. Gontijo	MG
Flasa Engenharia e Construções LTDA	SP
Geomecânica SA	RJ
Granado Imóveis	PR
INGETEK EMPREENDIMENTOS Ltda.	SP
LEGNET ENGENHARIA LTDA	PR
Lorence S.A.	ES

# Participants List (2)

NAME	STATE
Mascarenhas Barbosa Roscoe SA. Construções	MG
Mercatto Arquitetura e Design	MG
Milplan Engenharia, Construções e Montagens LTDA.	MG
Ministério Público Federal / Procuradoria Geral da República / Coordenadoria de Engenharia e Arquitetura	DF
MIP Engenharia	MG
MRV Engenharia	MG
NOTHEC	SP
Novelli Souza Ltda	SC
Orteng	MG
Parex Service Ltda	MG
PCE Planejamento, Consultoria e Engenharia	MG
PDG	SP
Petra engenharia Ltda	MG
PETROLEO BRASILEIRO S.A.	SP
PKL Construções e Consultoria Ltda	CE
PREMOTEC Soluções em Estrutura Pré-fabricadas S.A.	PR
Promon Engenharia Ltda.	RJ
Reta Engenharia LTDA	MG
Reta Edificações LTDA	MG
Somattos Engenharia e Comercio Ltda	MG
TECHNIQUE Assessoria e Planejamento	RS
TECNOMETAL Engenharia e Construções Ltda	MG
Tecnomont	GO
Time-Now Engenharia	MG
TMY	RJ
Ultra Engenharia e Serviços Ltda	MG
VANGUARD HOME Empreendimentos Imobiliários	PR
Washi Empreendimentos Imobiliários LTDA.	PR

# Prado-PMMM Model

**In this part we present a review of the Prado-PMMM model:**

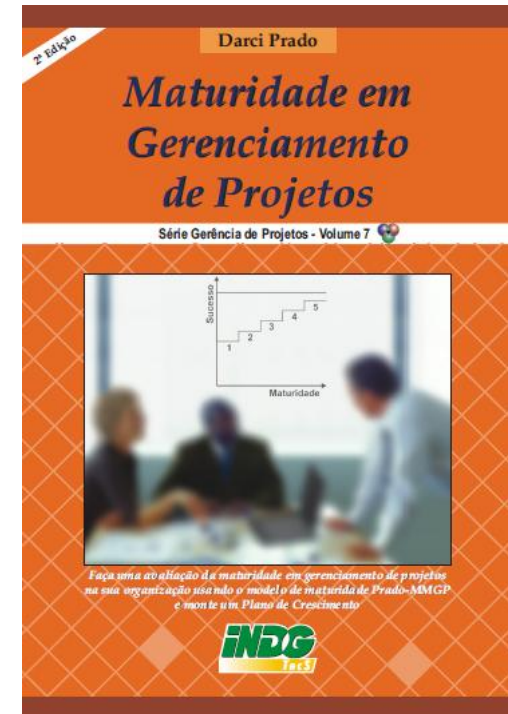
- Conception Criteria
- Levels
- Dimensions

## What is a maturity model?

- A form of measuring the status of an organization regarding its ability to manage projects successfully
- A resource to assist in obtaining a growth plan.

## Model characteristics

- Developed between 1999 and 2002
  - Based on vast practical experience;
  - Published in December 2002.
- Actual status: Version 1.7
  - Used by several organizations (see the "Testimonials" page at [www.maturityresearch.com](http://www.maturityresearch.com))
  - Good consolidation level;
  - Refer to the book shown at the right (or go to [www.indgtecs.com.br](http://www.indgtecs.com.br)) for more information.



2nd Edition  
November, 2010



## Criteria used for conception

- **Address the full well lifecycle** (product, service ou result), involving finalistic and support processes.
- Reflect the use of **Best Management Practices** (especially those practices that really add value).
- Try to relate organizational **maturity** with its **ability to successfully execute projects**.
- **Utilize the same levels of the SW-CMM model** (1 to 5) developed by Carnegie-Mellon University for software development.
- Be **simple** (questionnaire with 40 questions) and **universal** (able to be applied to every kind of organization and project category).

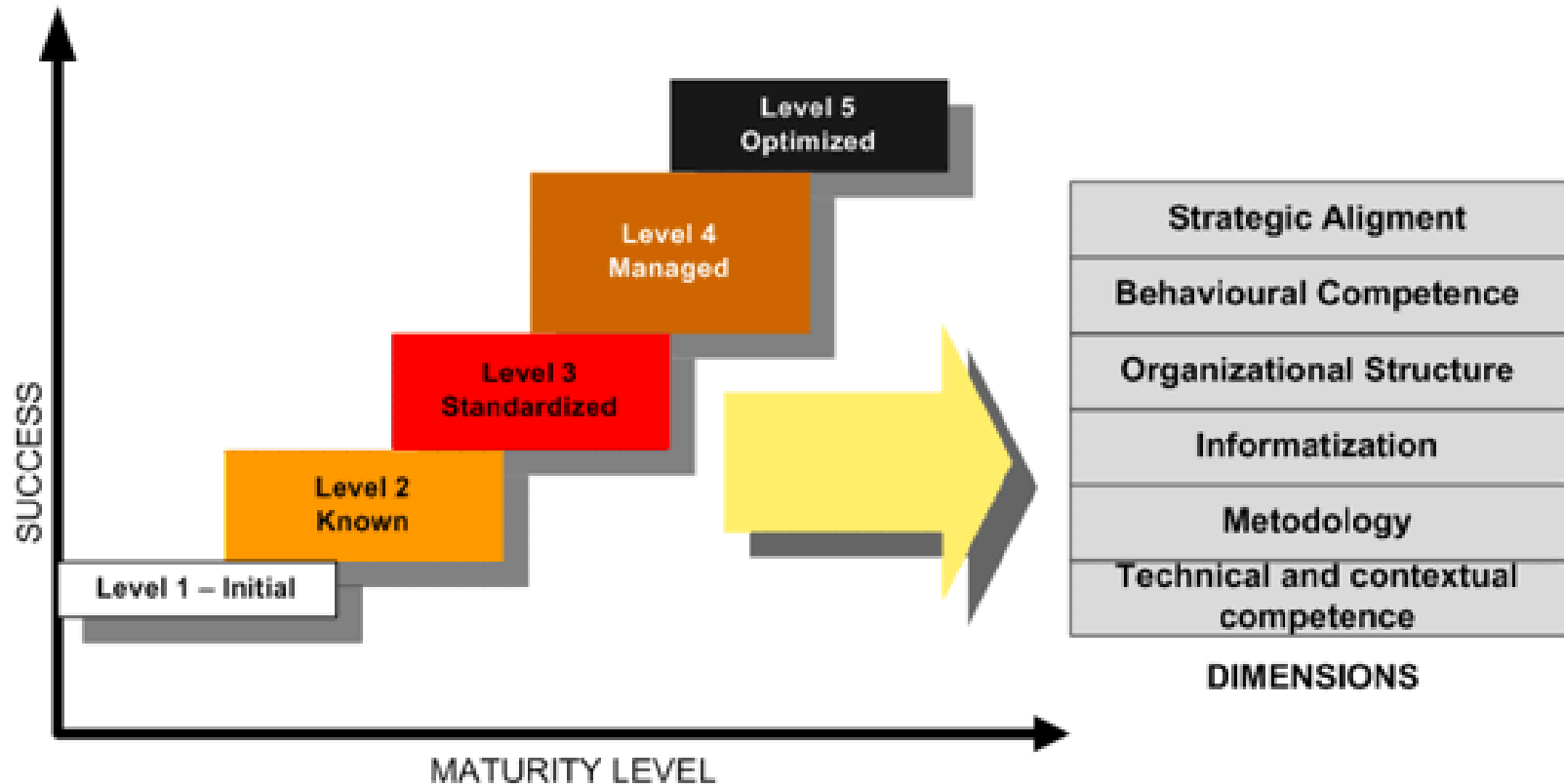
## Levels

1. Initial
2. Known
3. Standardized
4. Managed
5. Optimized

## Dimensions

1. Technical, context-based competence
2. Use of methodology
3. Informatization
4. Use of adequate organizational structure
5. Alignment with corporate business
6. Behavioural competencies

## SECTORIAL PMMM: LEVELS vs. DIMENSIONS



## The levels

### 1) Initial

---

- Low knowledge about the subject
- No methodology or management models
- Projects managed by intuition

### 2) Known

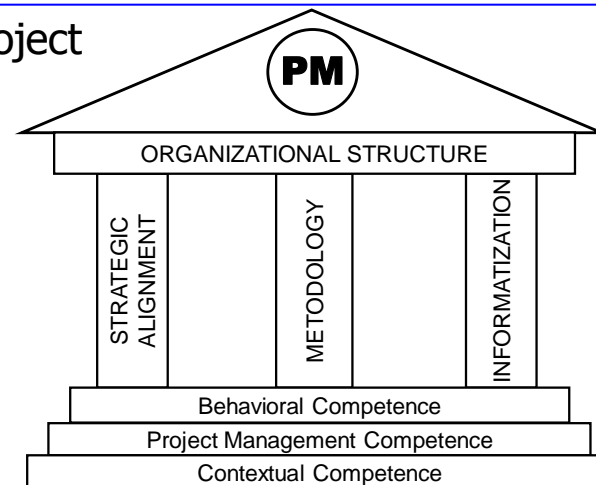
---

Beginning of a new culture oriented to skill development  
Isolated initiatives.

### 3) Standardized

---

- Implementation of a standardized Project Management platform:
  - Organizational structure
  - Methodology
  - Informatization
  - Strategic alignment
- Development of competencies



## The levels

### 4) Managed

---

- Platform enhancements: the standards are working
- Anomalies identified and eliminated
- Efficient human relations
- Consolidated alignment with corporate business

### 5) Optimized

---

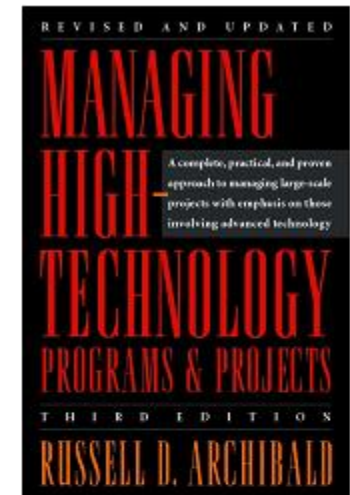
- Optimized performance indicators (deadlines, scope, quality and costs)
- Optimized management processes.
- Wisdom
- Low stress
- Low interference
- Somewhat natural

# **The team who developed this work**



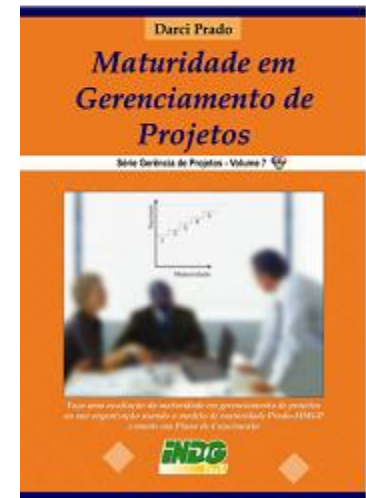
## Russel D. Archibald

- 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 e Clube IPMA-BH founders
- Associate Consultant at FALCONI



## **COMMITTEE**

Russell Archibald, Darci Prado, Carlos E. Andrade, Fernando Ladeira,  
Ilso Oliveira, Manuel Carvalho Filho, Marcus Vinicius Marques and Warlei Oliveira

## **COMMITTEE OF NEW APPLICATIONS DEVELOPMENT**

Carlos Eduardo Andrade and Darci Prado

## **GENERAL COORDINATION**

Darci Prado

## **WEBSITE DEVELOPMENT AND MAINTAINANCE**

Portuguese Language : Warlei Oliveira, Carlos E. Andrade and José Carlos Tinoco

English Language: Daniel von Sperling, José Carlos Tinoco and Rafael Negrini

Italian Language: Lucas Pinheiro, José Miglioli and italian team

## **DATABASES**

Carlos E. Andrade

## **DATA ANALYSIS**

Marcus Vinicius Marques, Bruno Machado, Cássio Goulart Gonçalves and Jorge Scheidegger

## **NEW APPLICATIONS DEVELOPMENT (SOFTWARE) REPORT**

Darci Prado and Carlos Eduardo Andrade

## **PROMOTION**

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CONSTRUINDO SOLUÇÕES
  -  **CBIC**
  -  **FGV**  
management
  -  **ipmabr»**
  -  **REVISTA**  
mundo **PM**  
Project Management
- Promotion:
  - Organizations and Associations:
    - CBIC: All affiliates (SINDUSCON, SICEPOT, SECOVI, etc.)
    - PMI: All chapters
    - IPMA-Br
    - CREA: MG and SP
    - FIEMG
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# END