

## PROJECT MANAGEMENT MATURITY

**Archibald & Prado Research**

[www.maturityresearch.com](http://www.maturityresearch.com)

# Report 2014:

# **“General Report”**

## **Part A: Indicators**

**February/2015**

**Organized by:**

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We are presenting the results of 2014 Archibald & Prado Research, whose data was available at the website [www.maturityresearch.com](http://www.maturityresearch.com) from September to December 2014 and was taken by **415** professionals from all types of Brazilian organizations. As shown on the next slide, nine (9) reports were produced, and they were divided in three parts:

- A. Indicators
- B. Participants Profile
- C. Governance Aspects

The data appears at reports in groupings. It was presented groupings only with over 5 participants (*Privacy Policy*).

The data presented at reports shows that exists a strong relation between maturity and KPIs. Then, the greater the maturity:

- Greater the total success
- Lower the failure
- Lower the delay
- Lower the cost overrun
- Greater the percentage of planned scope execution.

Adherence above is almost complete, but it is necessary to inform that small anomalies occurred on data from Government and Information Technology reports.

This year, we are going to present the following reports:

1. Global Results
2. Government
3. Benchmarking
4. Minas Gerais State
5. São Paulo State
6. Projects category: Organization Change and Operational Results Improvement
7. Projects category: Construction
8. Projects category: Information Technology (software) - Private Companies
9. Projects category: New Product Development with Research and Development

The first three reports show an overview. Reports about "Categories" allows higher detailing at different projects categories. We also have two reports that contains depth analysis from Minas Gerais and São Paulo States.

This report – ***Global Report*** – contains analysis of data provided by all research participants, which means **415** professionals from private and public organizations, and non government organizations. The data provided are from a total of **7,885** projects.

This document contains the Report Part A. The other two parts are:

- Participants Profile
- Governance Aspects

Final results showed an **average maturity of 2.64** for ***Global*** grouping. This value can be considered good, considering the short time in which the Project Management subject became popular in Brazil. But it is certainly a low score considering how much still has to be done.

This report analyzes the main KPIs (success, delay, cost overrun, scope execution) either generally or divided by projects category, business area, billing (or budget) organization, cost from each project and Brazilian state.

As stated earlier, we had 415 participants in 2014. The main feature of this public is the **heterogeneity**, which means that they are from different organizations types, projects categories, business areas, organizations size and Brazilian states. The reports shows many comparisons with KPIs, but the leader should be attend to these comparisons, as noted in each case. For example, for KPIS from Brazilian states, try to avoid get conclusions using only present values, without considering the specificities of projects portfolios from each state.

Our intention is to show and analyze the data as captured, presenting to leader the greatest amount of information as possible. As established in our Principles Charter, our goal is to assist Brazilian organizations to evolve in Project Management.

Considering that, because it is a survey where stratifications are made and different samples sizes 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 representativeness interpretation 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 Respondents	Representativeness
Above 30	Good representativeness
Between 17 and 29	Average representativeness. Analyze data with discernment.
Under 17	Low representativeness. Analyze data with discernment.

Note: The warning “analyze data with discernment” is related to the fact that some populations are **finites** and, therefore, the representativeness is 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.

1. Global Results
2. Results by Organization Type
3. Results by Projects Categories
4. Results by Business Area
5. Results by Organization Size
6. Results by Cost from Each Project
7. Results by Brazilian State
8. Team who developed this work
9. Thanks

# Global Results

**This part of the report presents the global results of all participants population of the grouping:**

- Maturity and their distribution at levels
- Dimensions Adherence
- Success, Average Delay and Cost Overrun Levels
- Cost of Projects Portfolio



## **MATURITY:**

- Maturity: 2.64

**415 Organizations  
7,885 Projects**

## **RESULTS INDICATORS**

- Success Index:
  - Total Success: 56%
  - Partial Success: 34%
  - Failure: 10%
- Average Delay: 27%
- Cost Overrun: 17%
- Average Scope Execution: 77%

## **PORTFOLIO COMPOSITION OF AVERAGE PROJECTS**

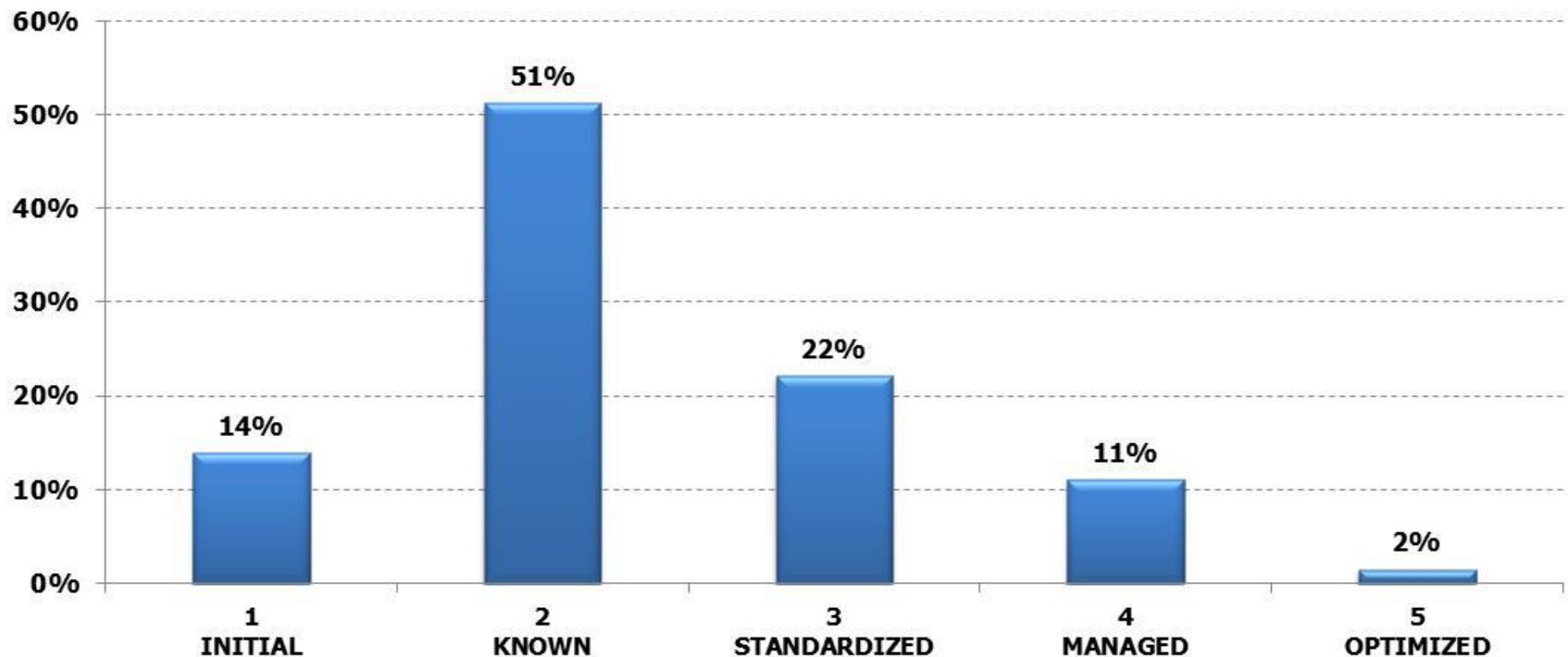
- Average projects number: 19
- Average duration of each project: 14 months
- Average cost of each project: US\$ 0,8 billion

**Average Global Maturity: 2.64**

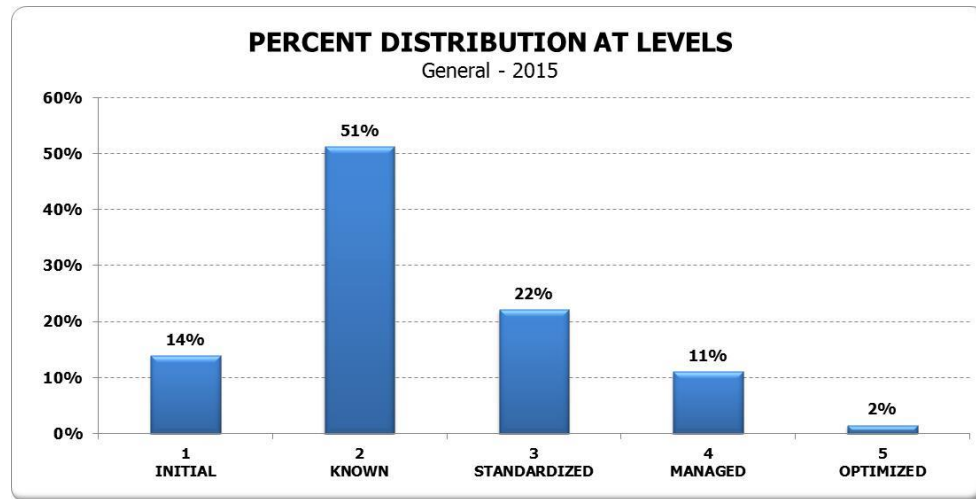
We have a strong predominance in Level 2.

## PERCENT DISTRIBUTION AT LEVELS

General - 2015



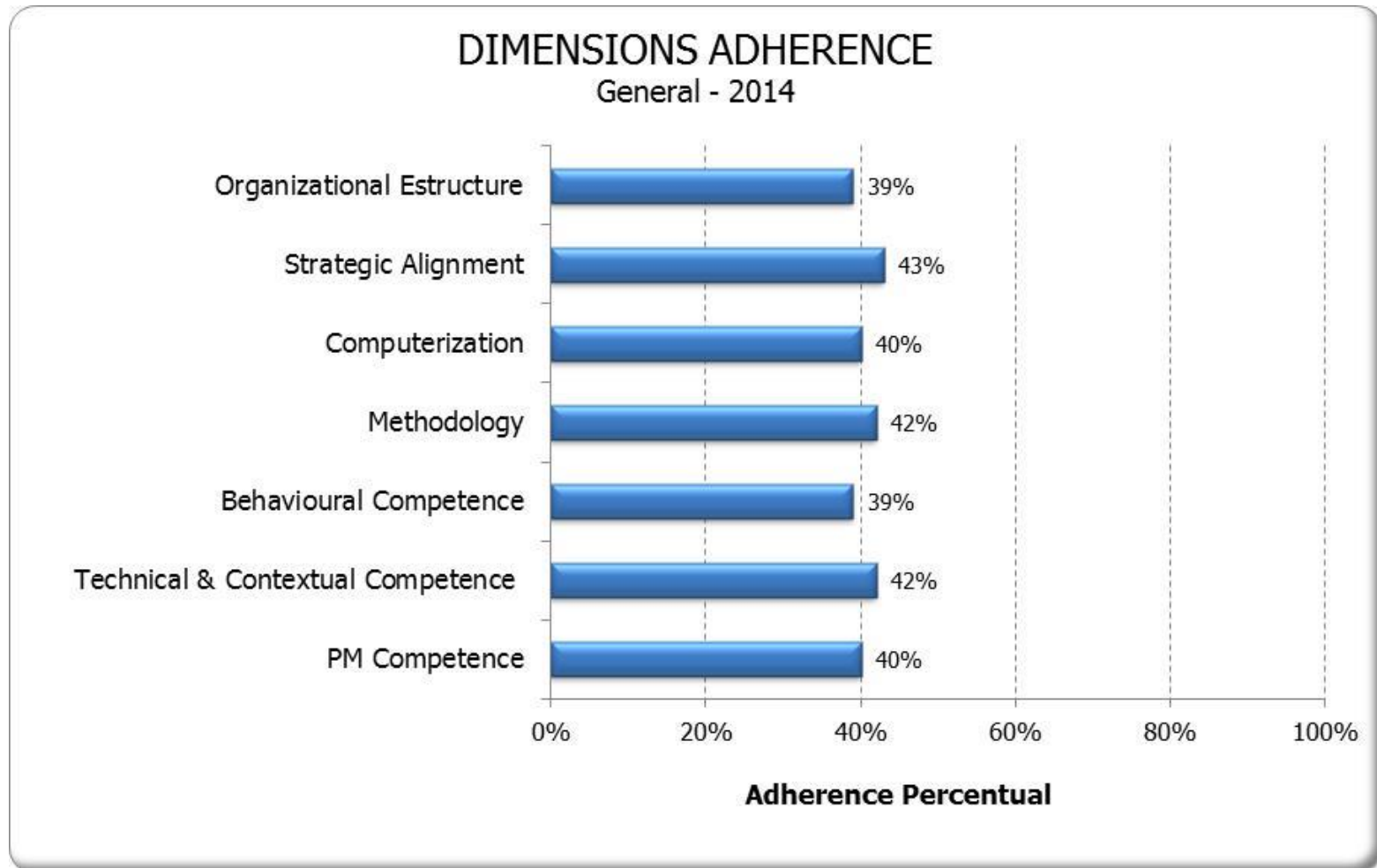
- Level 1** – haven't started evolution.
- Level 2** – invested in knowledge.
- Level 3** – implemented standards.
- Level 4** – dominate the process.
- Level 5** - reached the optimized level.



## Comments

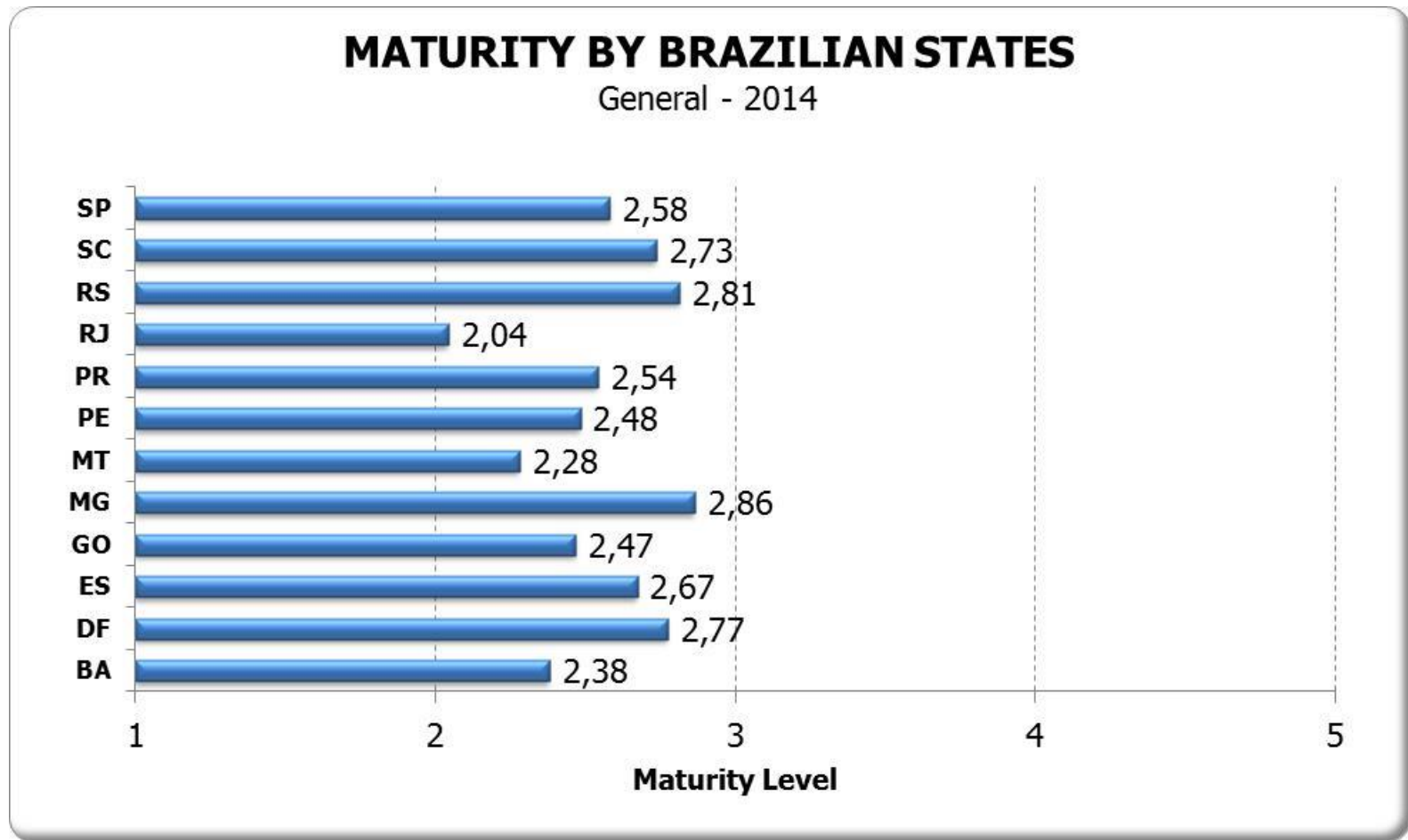
- On 64.3% (levels 1 and 2) of the participant organizations, Project Management still does not bring results to their business in the way they wish (levels 3, 4 and 5);
- Only 12.7% of the participant organizations belong to levels which allow work dominance and optimization (levels 4 and 5).

There is equilibrium among values dimensions adherence. We can consider the values presented as regular. The ideal value would be above 70%.



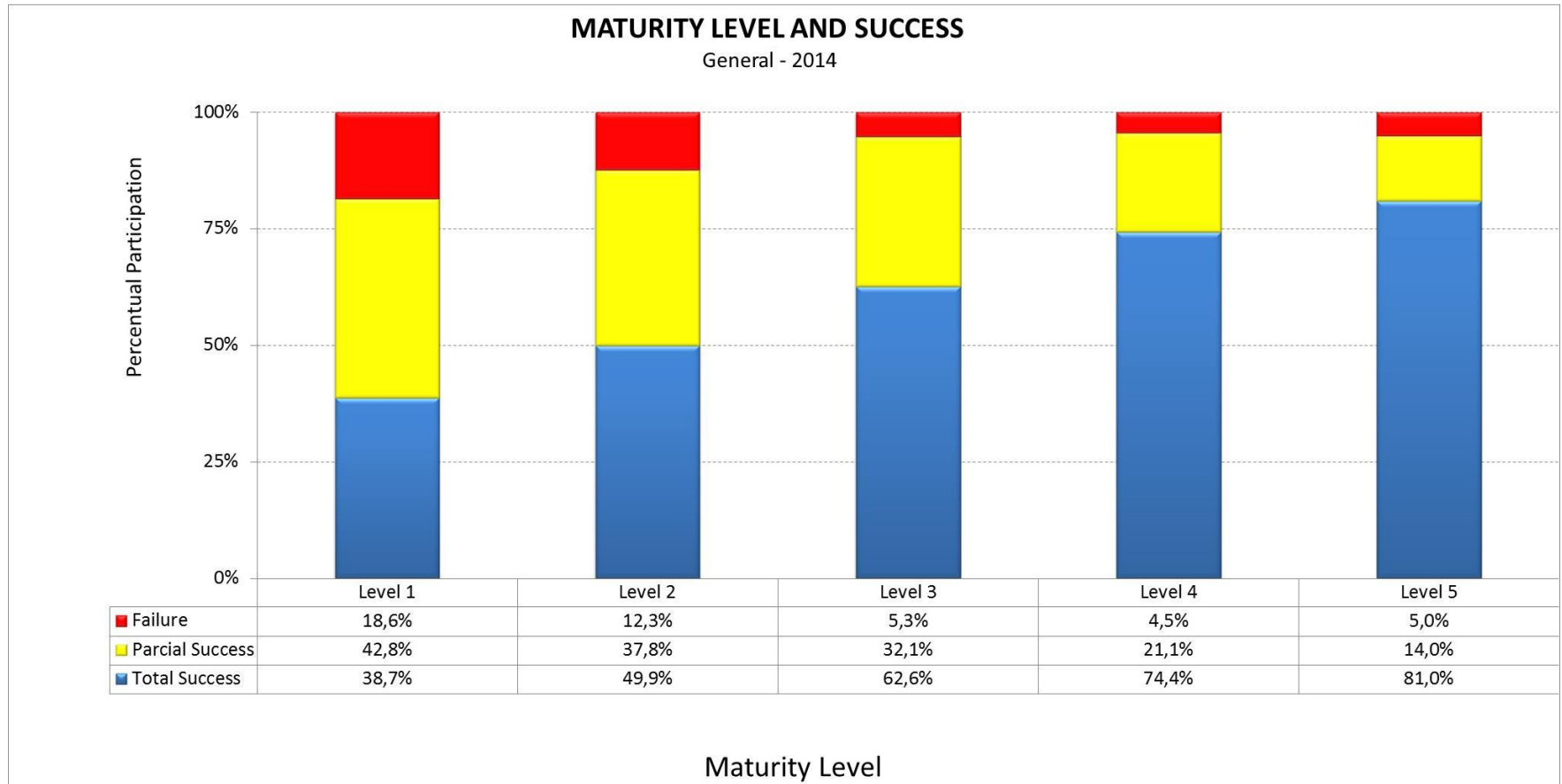
# Maturity by Brazilian States

Minas Gerais presented the best value.



Only the groupings above presented samples with over 10 participants.

There is a direct relation between maturity levels and success.



Samples size:

Level 1: 72 / Level 2: 164 / Level 3: 114 / Level 4: 57 / Level 5: 8

## Total Success:

A successful project is one that achieved the target.

This usually means it was finished and produced the expected results and benefits and the stakeholders were fully satisfied.

Furthermore, it is expected that the project has been completed within the desired outcomes for time, cost, scope and quality (small differences can be accepted depending on the project type).

**Check the full set of success concept on the site [www.maturityresearch.com](http://www.maturityresearch.com)**

## **Partial Success or Commitment Success:**

The project was completed, but did not produce all the results and expected benefits. There is a considered dissatisfaction among the stakeholders. Besides that, probably some of the desired outcomes for time, cost, scope and quality were significantly exceeded.

**Check the full set of success concept on the site [www.maturityresearch.com](http://www.maturityresearch.com)**



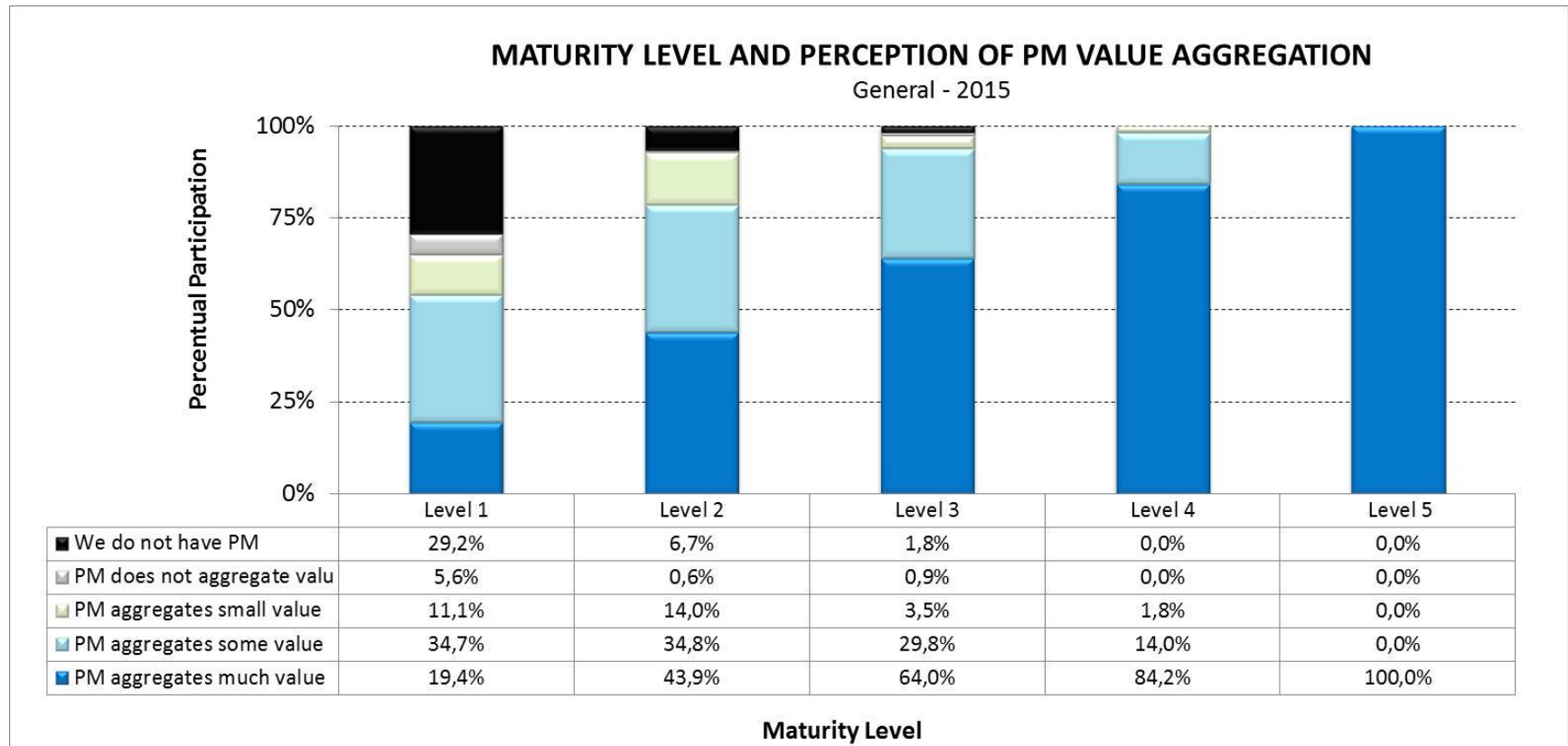
## Failure:

There is a huge dissatisfaction among the stakeholders because the project was not completed or because it did not attend the expectations or because some of the desired outcomes for time, cost, scope and quality were exceeded in an absolutely unacceptable way.

**Check the full set of success concept on the site [www.maturityresearch.com](http://www.maturityresearch.com)**

# Perception of PM Value Aggregation

There is a direct relation between maturity levels and the perception of Project Management to add value to the organization.

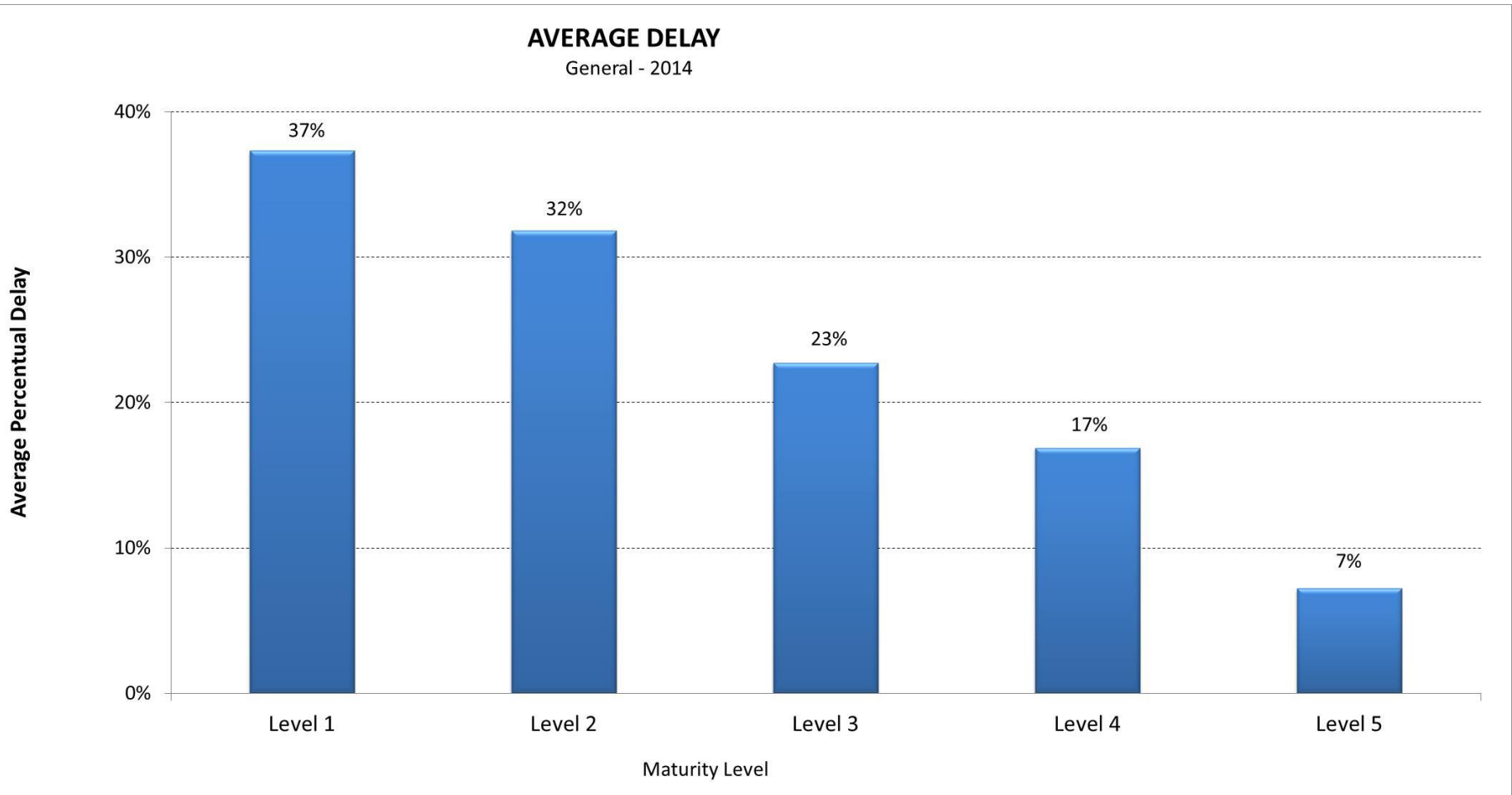


Samples size:

Level 1: 72 / Level 2: 164 / Level 3: 114 / Level 4: 57 / Level 5: 8

# Maturity vs. Average Delay

There is an opposite relation between maturity levels and average delay.

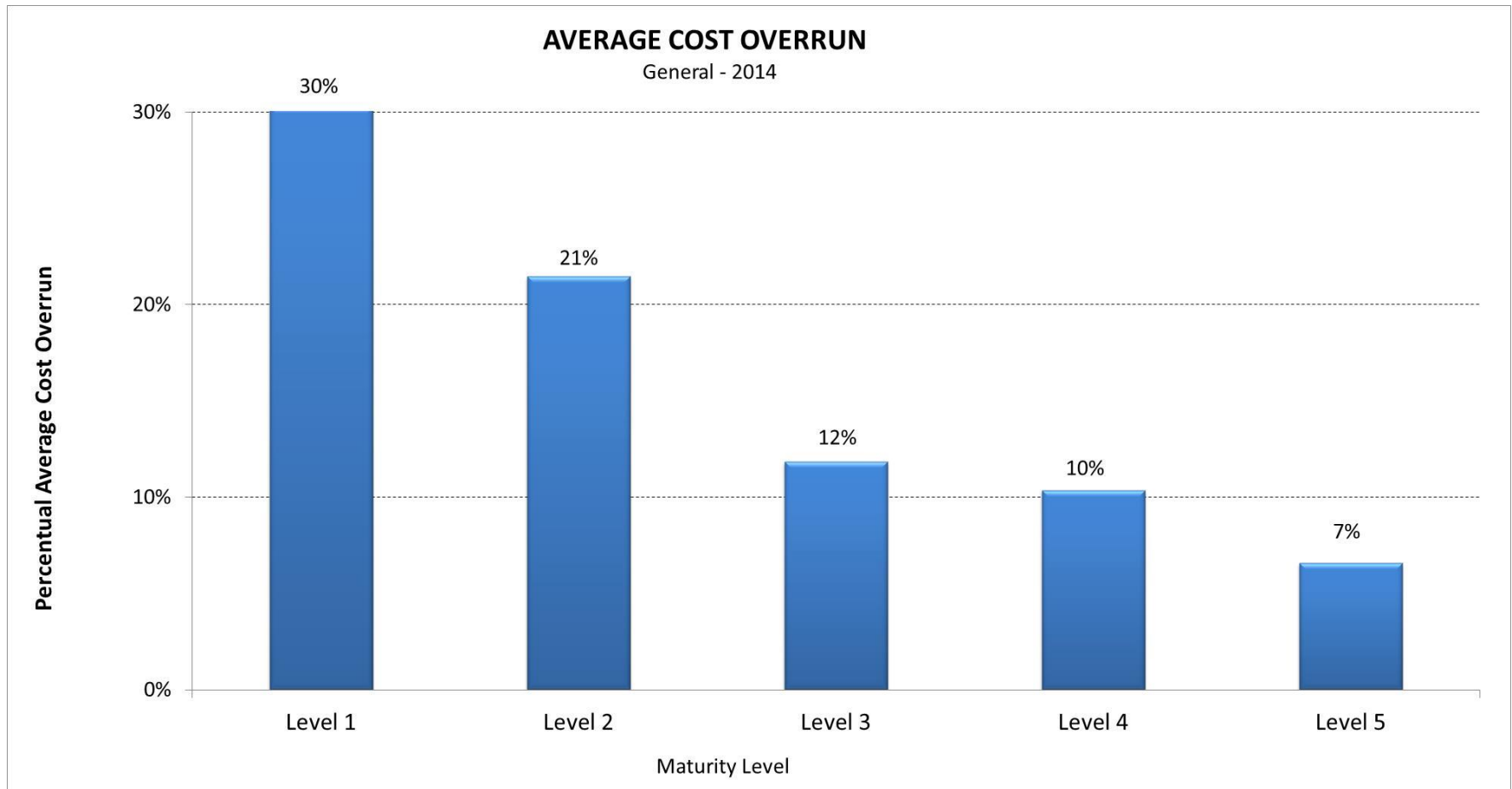


Samples size:

Level 1: 72 / Level 2: 164 / Level 3: 114 / Level 4: 57 / Level 5: 8

# Maturity vs. Average Cost Overrun

There is an opposite relation between maturity levels and average cost overrun.

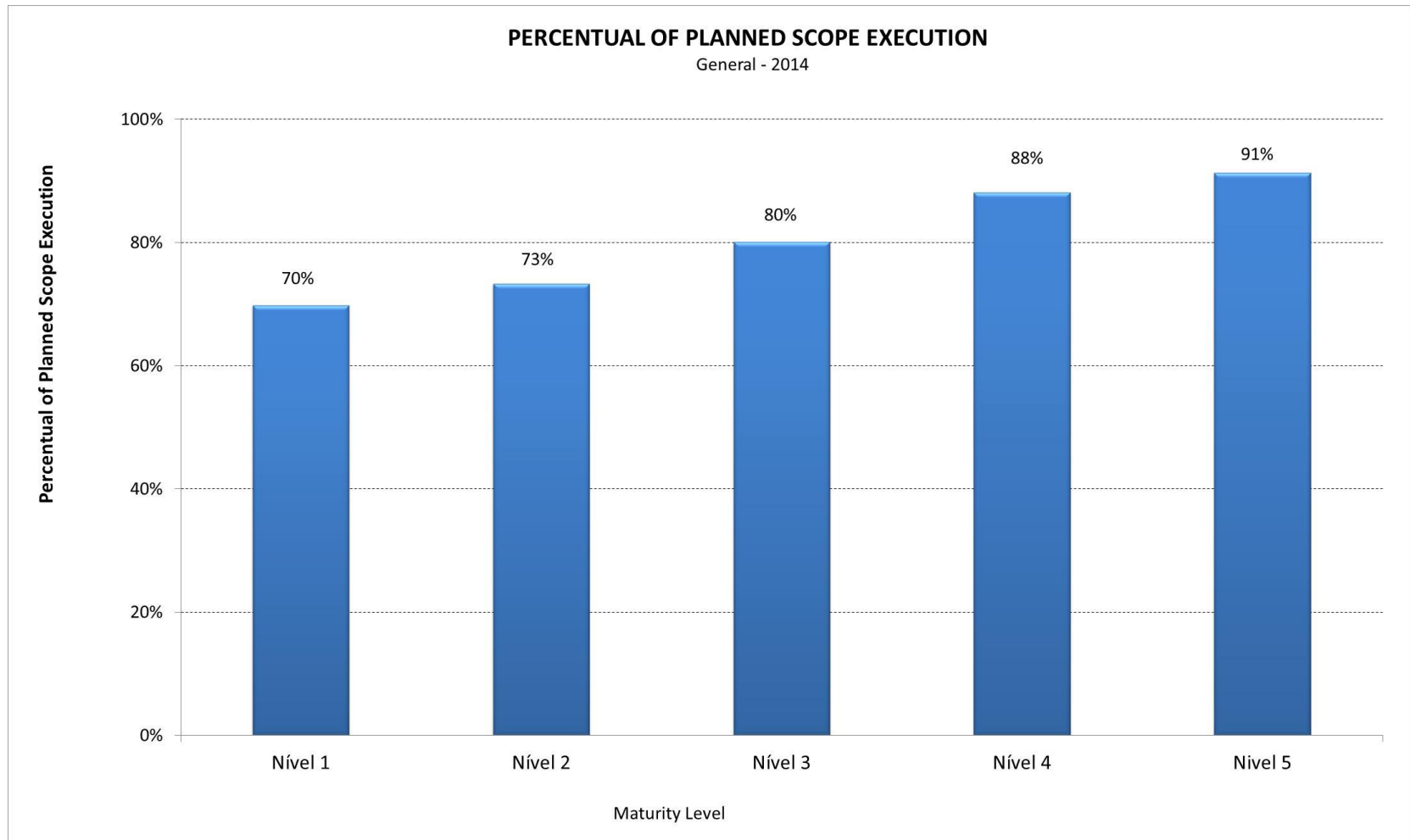


Samples size:

Level 1: 72 / Level 2: 164 / Level 3: 114 / Level 4: 57 / Level 5: 8

# Maturity vs. Planned Scope Execution

There is a direct relation between maturity levels and planned scope execution.



Samples size:

Level 1: 72 / Level 2: 164 / Level 3: 114 / Level 4: 57 / Level 5: 8

# Results by Organization Type

**In this part of the report, is made an analysis of similar data to Part 1, but considering the following Organization Types:**

- Private Organizations
- Government – Direct Administration
- Government – Indirect Administration
- Non Government Organizations

**View more information about the participants at "Part B - Participants Profile".**

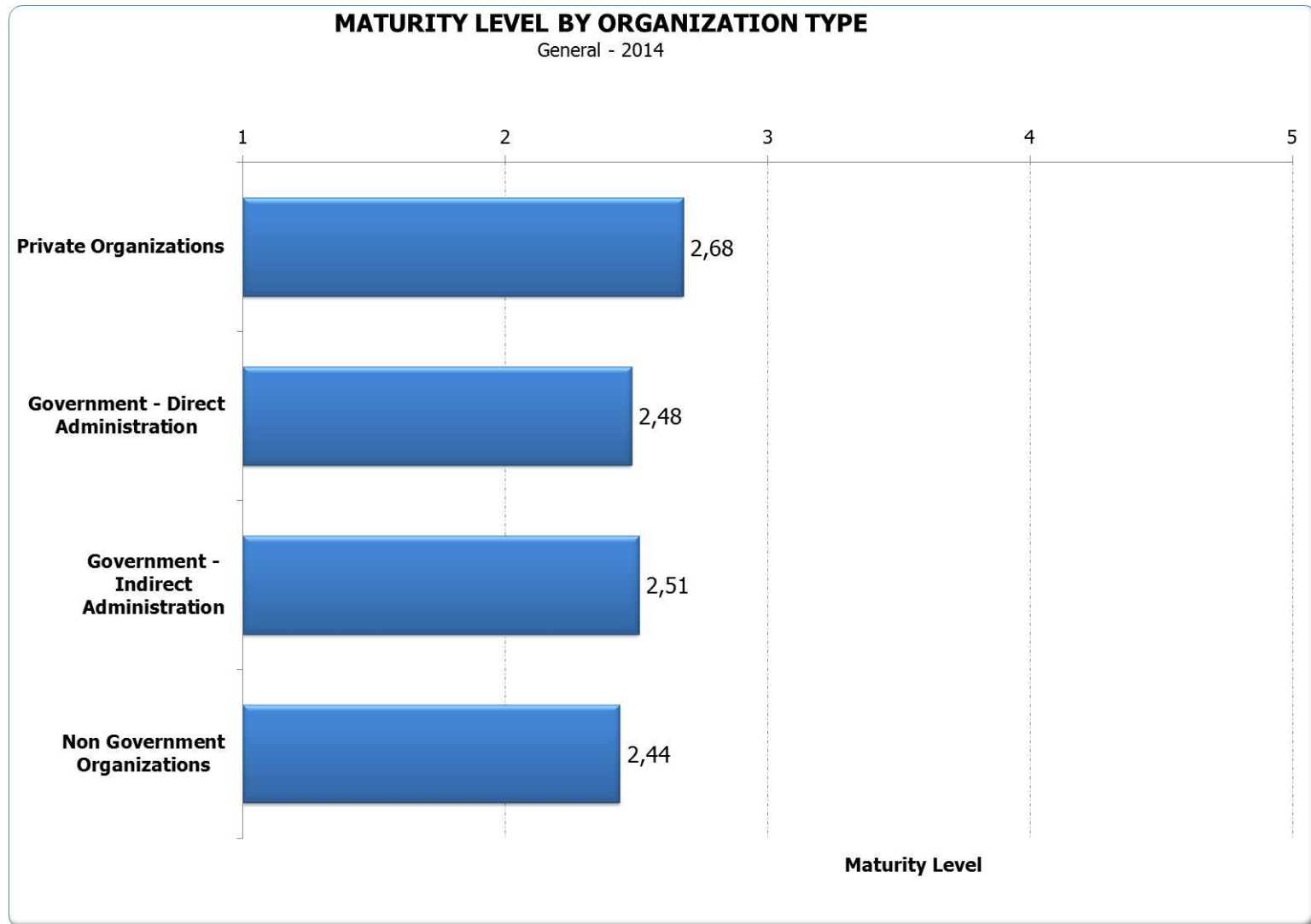
# Participants by Organization Type

The following categories were present at the research.

ORGANIZATION TYPE	# of Respondents	Percentual	Maturity
Private Organizations	323	77,8%	2,68
Government - Direct Administration	33	8,0%	2,48
Government - Indirect Administration	43	10,4%	2,51
Non Government Organizations	16	3,9%	2,44
<b>Totals</b>	<b>415</b>	<b>100,0%</b>	<b>2,64</b>

# Maturity by Organization Type

*Private Organizations* stands out.



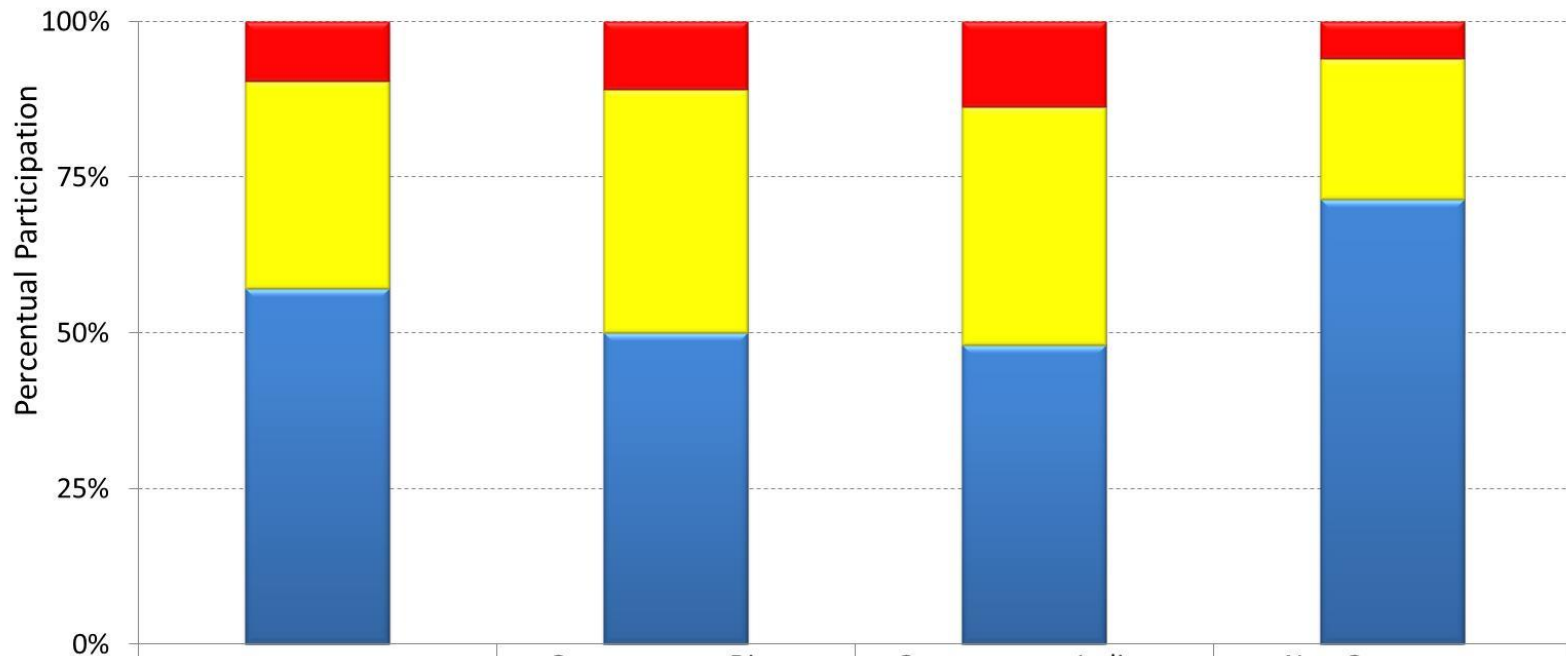


# Success by Organization Type

*Non Government Organizations* stands out.

## SUCCESS BY ORGANIZATION TYPE

General - 2014

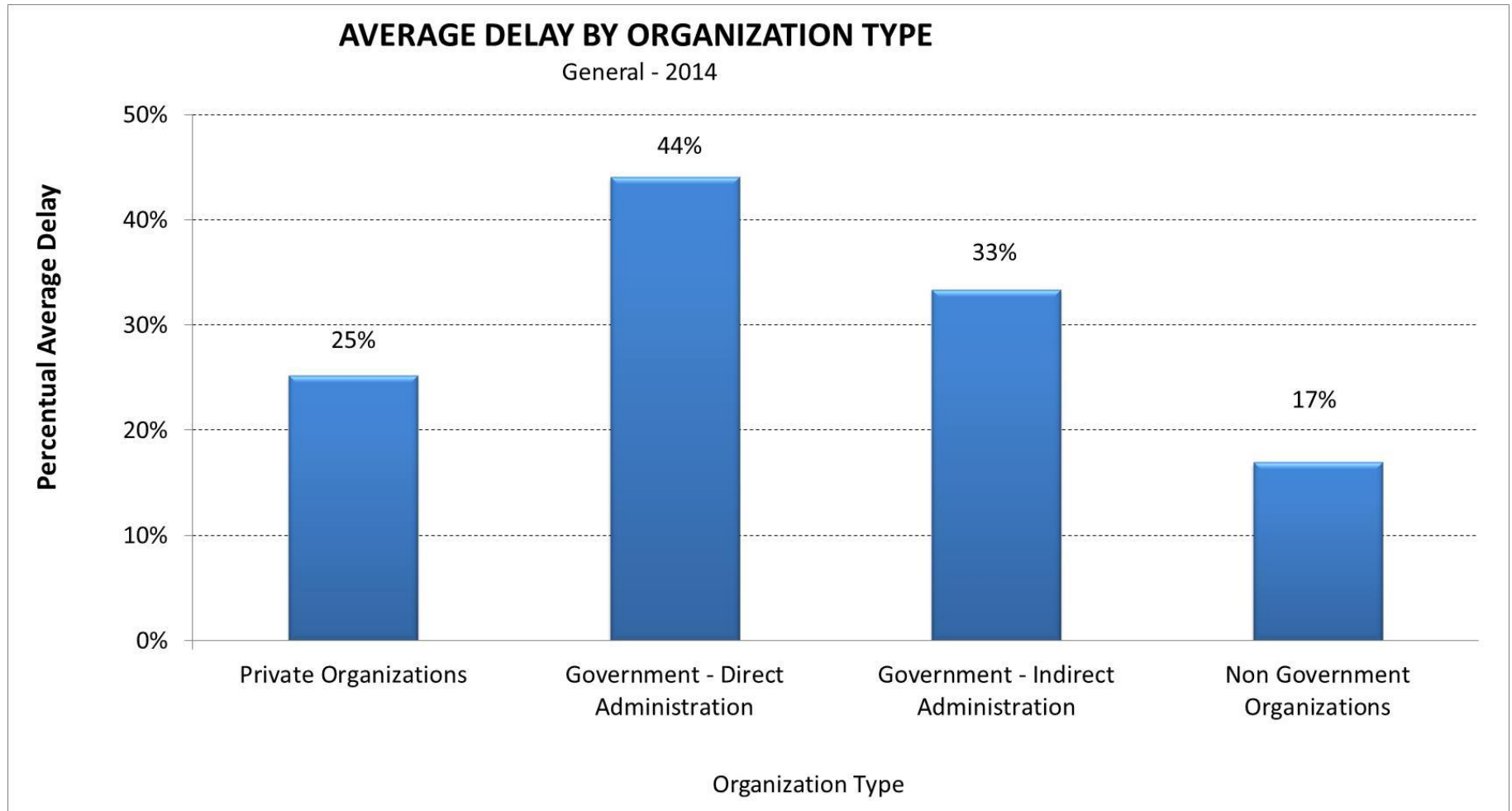


	Private Organizations	Government - Direct Administration	Government - Indirect Administration	Non Government Organizations
Failure	9,5%	11,0%	13,8%	5,9%
Partial Success	33,4%	39,0%	38,2%	22,7%
Total Success	57,1%	50,0%	48,0%	71,4%

Organization Type

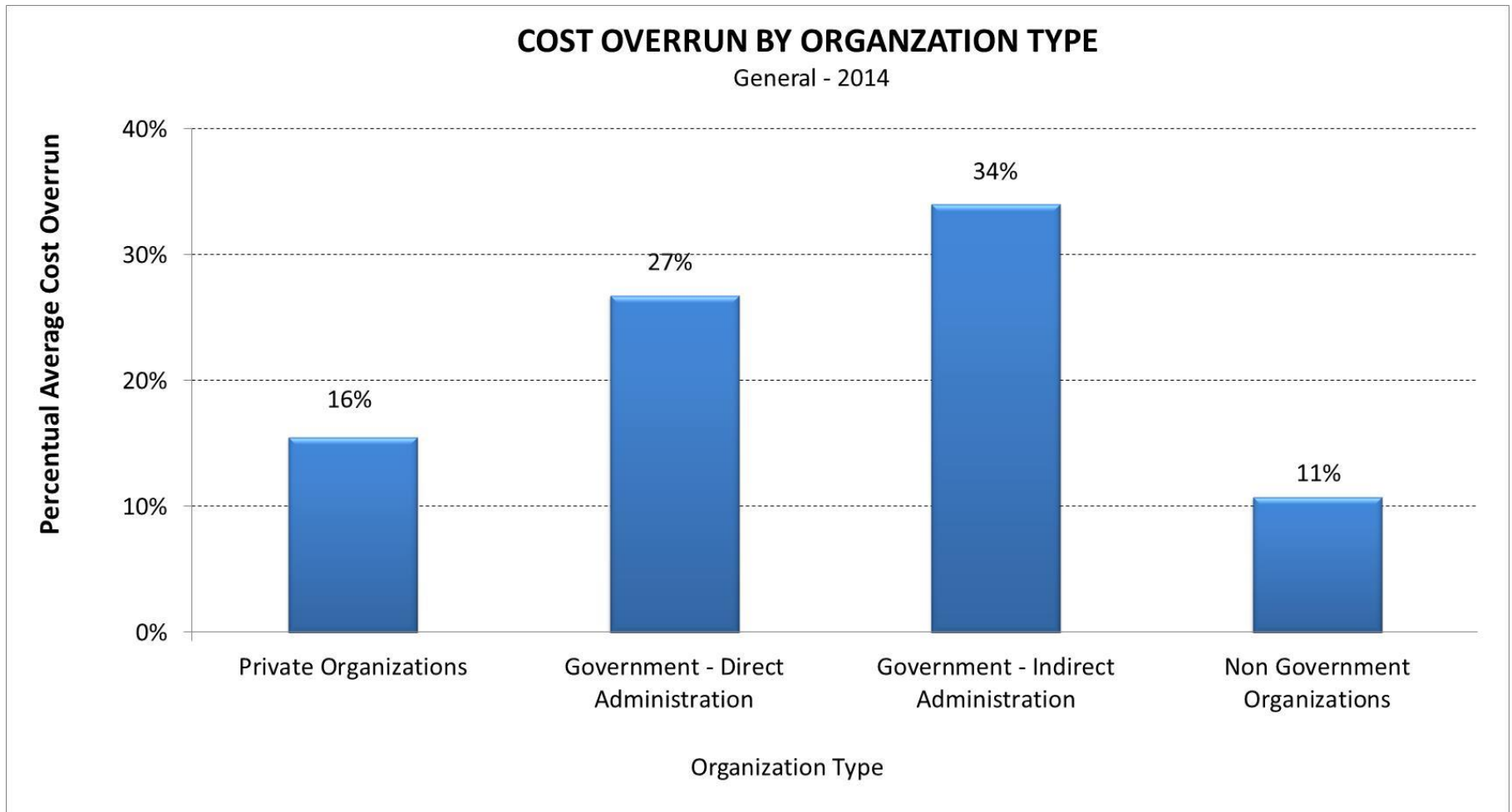
# Average Delay by Organization Type

*Non Government Organizations* stands out.



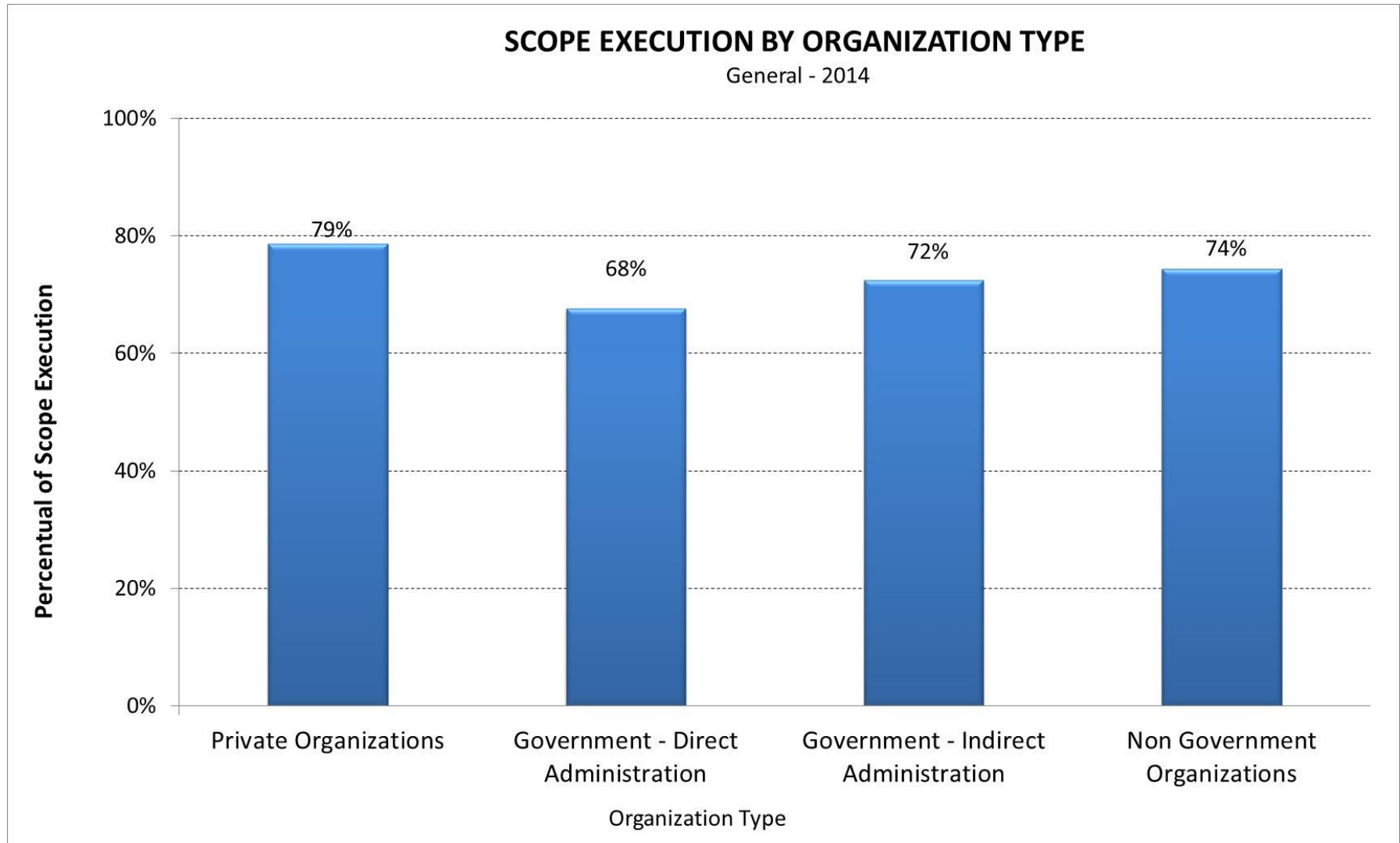
# Cost Overrun by Organization Type

*Non Government Organizations* stands out.



# Scope Execution by Organization Type

*Private Organizations* stands out.



# Results by Projects Categories

**In this part of the report, is made an analysis of similar data to Part 1, but considering the following Projects Categories:**

- Organization Change and Operational Results Improvement
- Construction and Assembly
- Information Systems (sw)

**View more information about the participants at "Part B - Participants Profile".**

1. Defense, Security and Aerospace Projects
2. Business and Organization Change Projects
3. Communication Systems (data, voice, image) Projects
4. Events Projects
- 5a. Engineering / Architecture Design Projects
- 5b. Facility Design / Procurement / Construction Projects
6. Information Systems (Softwares) Projects
7. International or Regional Development Projects
8. Media and Entertainment Projects
9. New Product and Service Development Projects
10. Research and Development Projects
11. Other Projects Categories

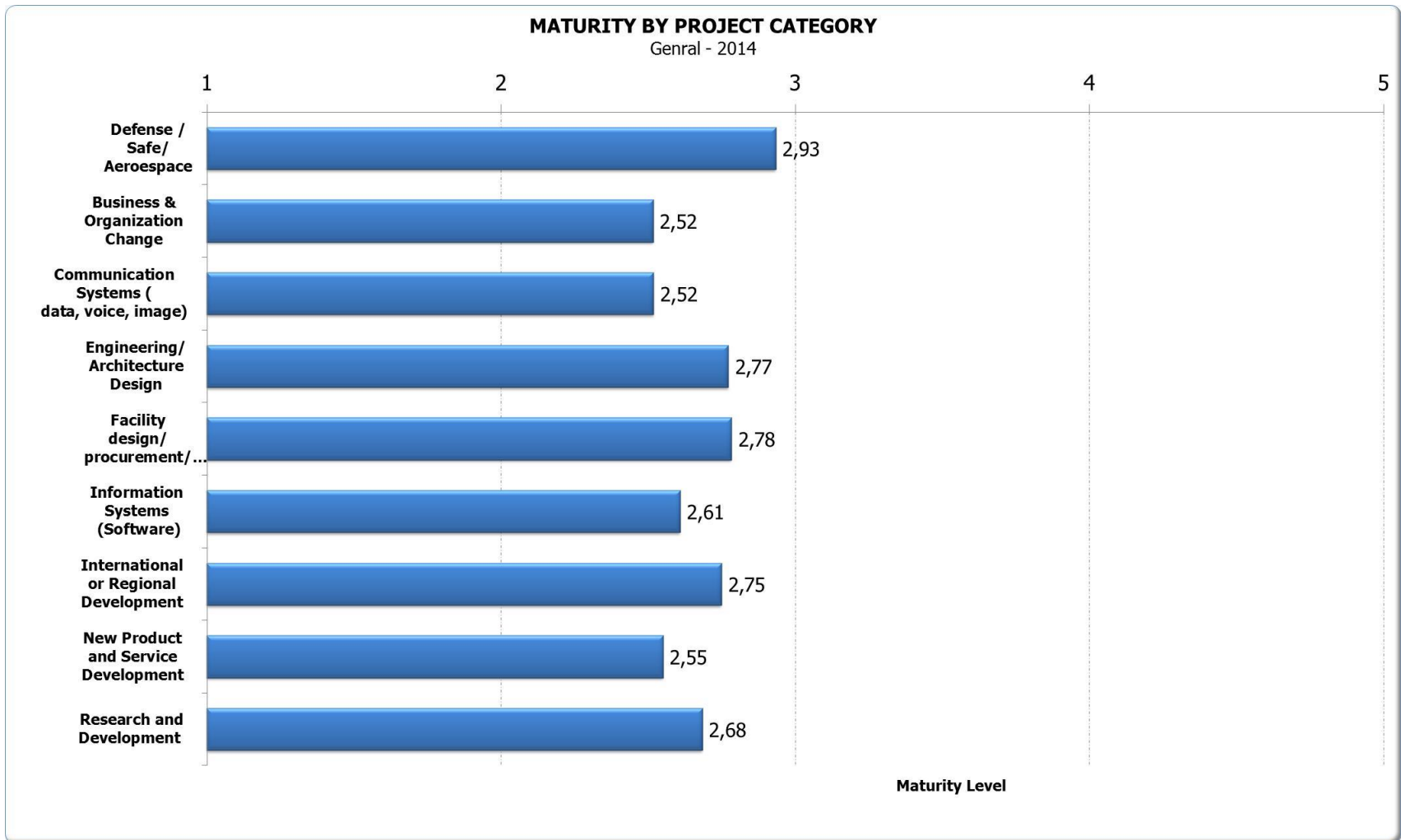
# Participants by Project Category

The following categories were present at the research.

ARCHIBALD CATEGORY	# of Respondents	Percentual	Maturity
Defense / Safe/ Aeroespace	8	1,9%	2,93
Business & Organization Change	74	17,8%	2,52
Communication Systems ( data, voice, image)	6	1,4%	2,52
Engineering/ Architecture Design	15	3,6%	2,77
design/ procurement/ construction	80	19,3%	2,78
Information Systems (Software)	130	31,3%	2,61
International or Regional Development	6	1,4%	2,75
New Product and Service Development	45	10,8%	2,55
Research and Development	11	2,7%	2,68

# Maturity by Project Category

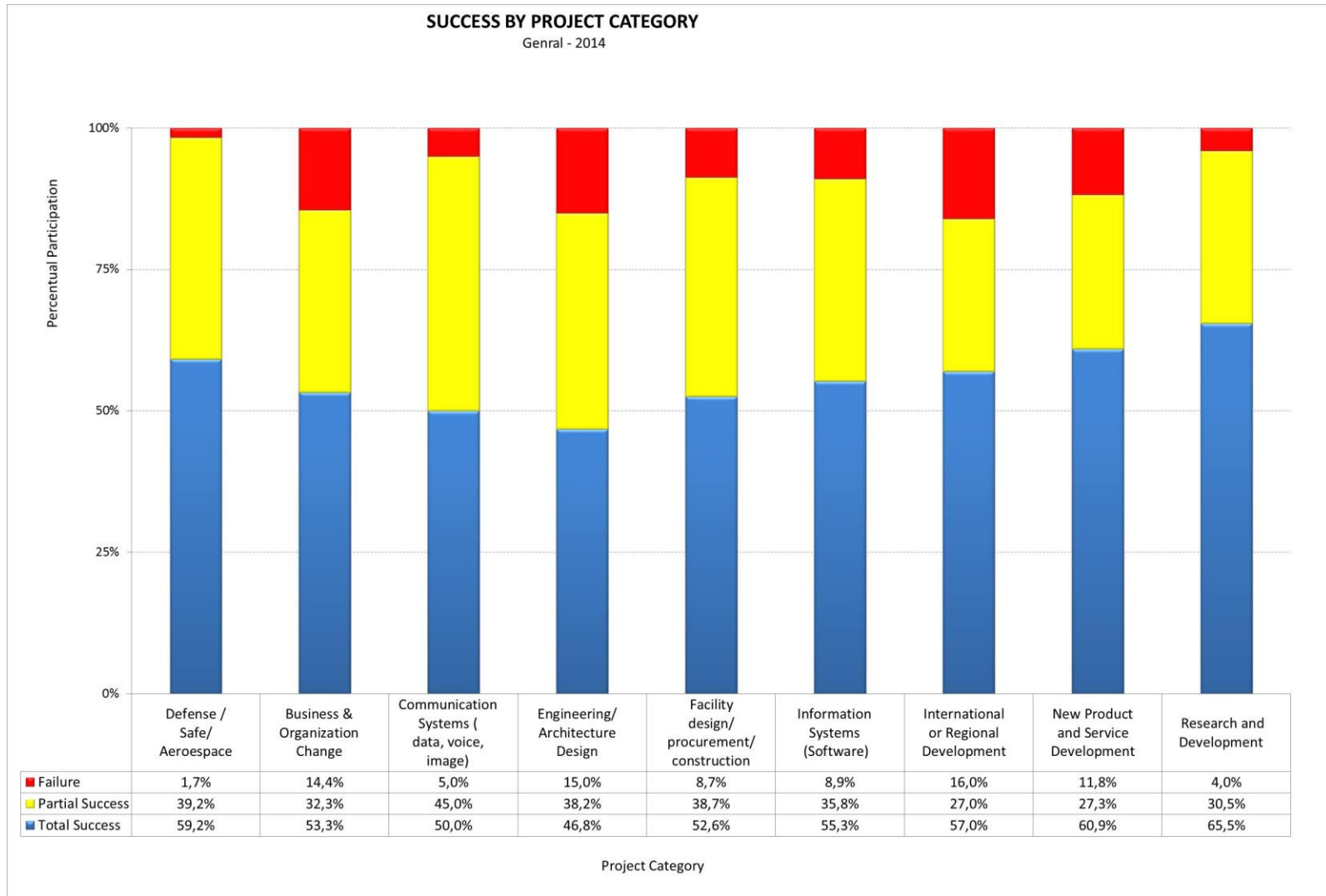
The category *Defense, Security and Aerospace* stands out.





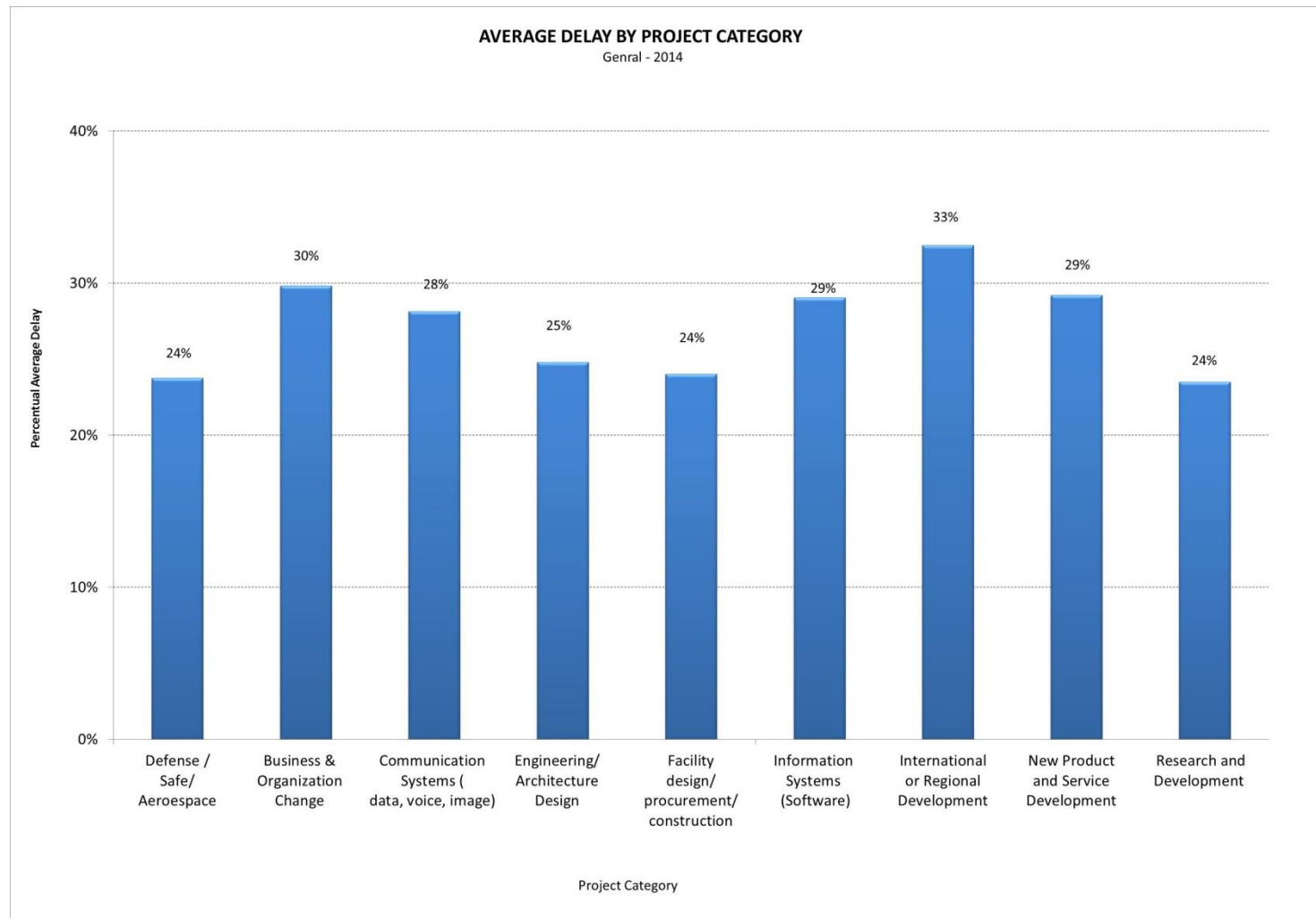
# Success by Project Category

The category *Defense, Security and Aerospace* stands out.



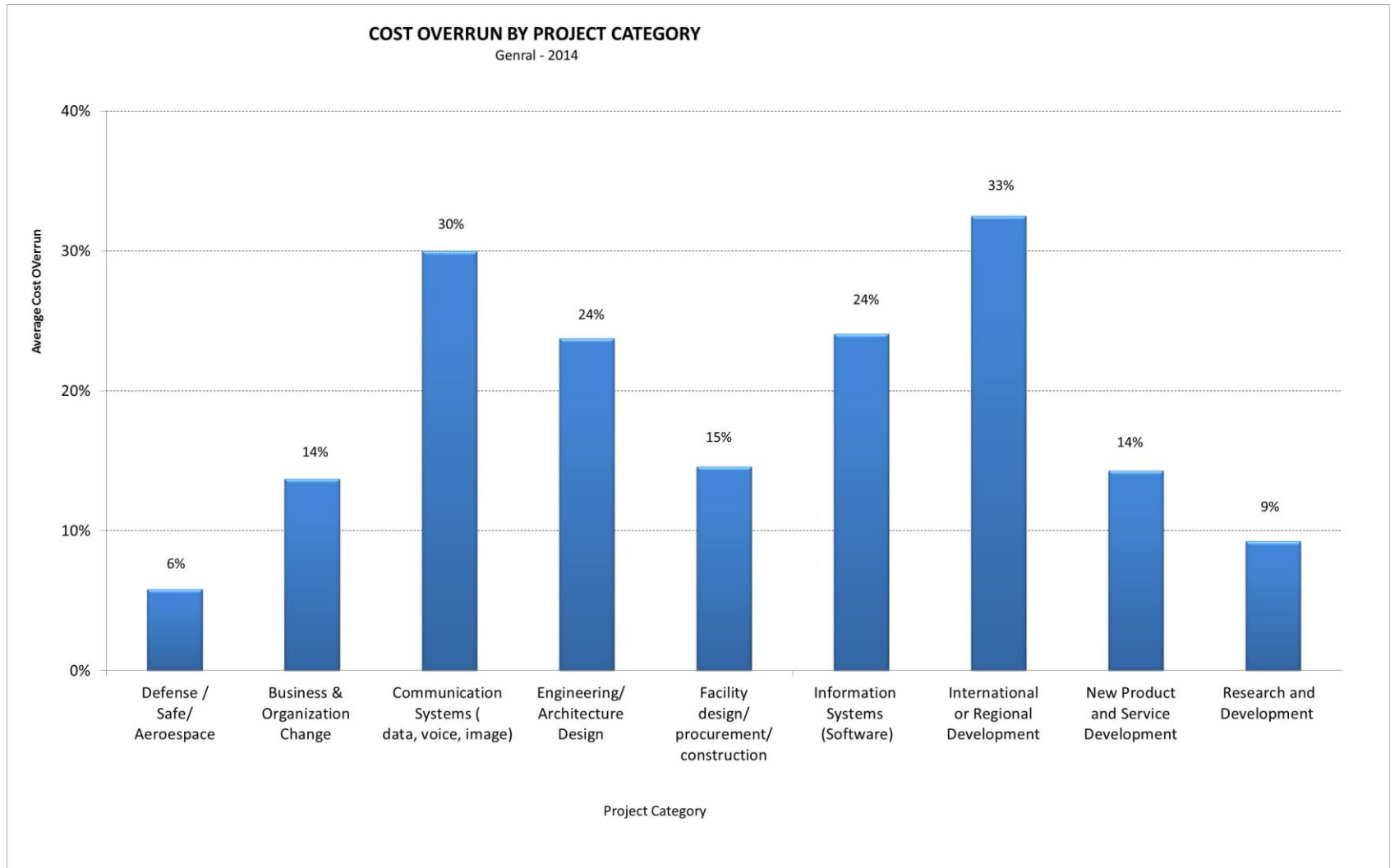
# Average Delay by Project Category

The categories *Defense, Construction & Assembly* and *Research & Development* stand out.



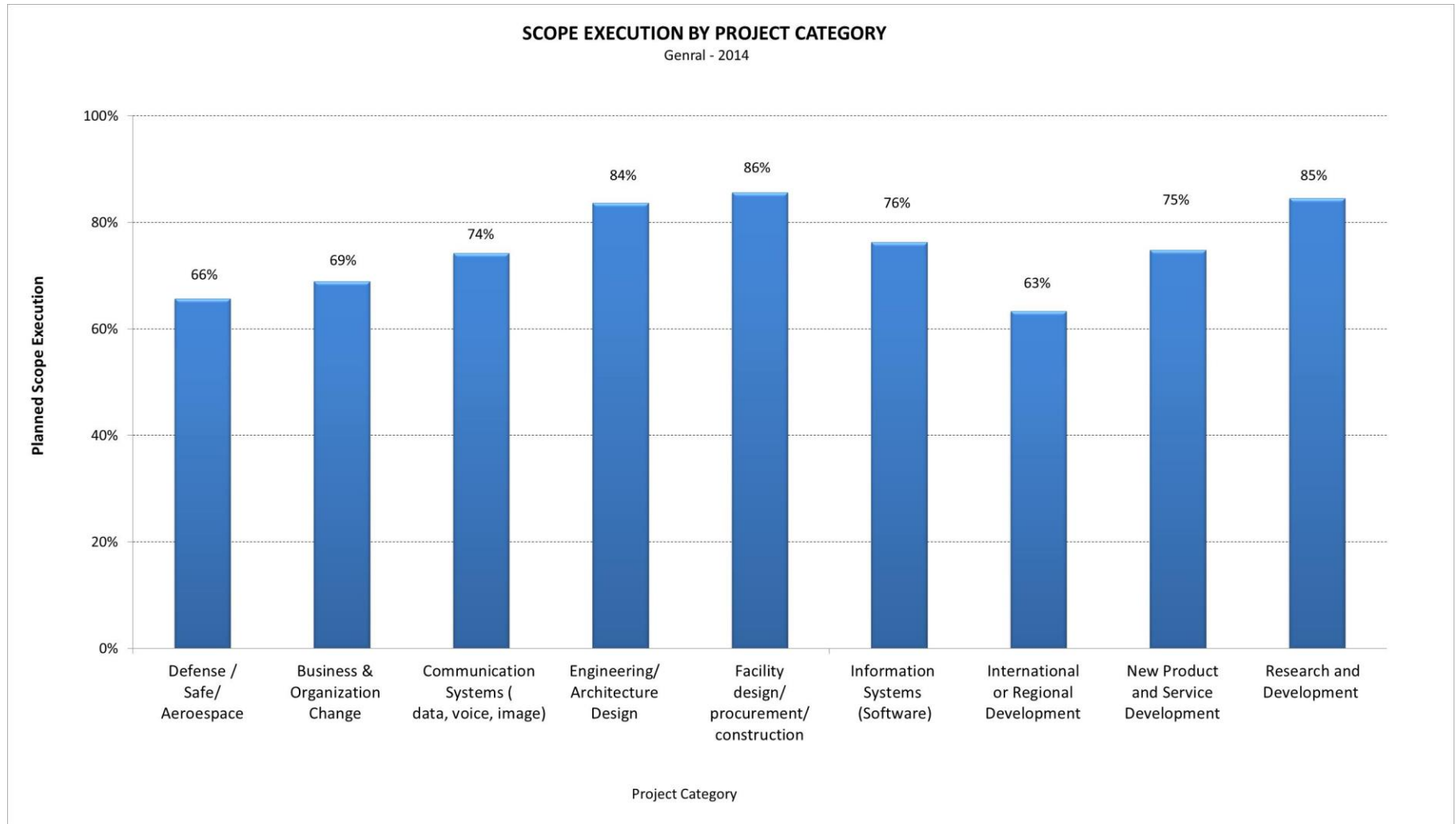
# Cost Overrun by Project Category

The category *Defense* stands out.



# Scope Execution by Project Category

The category *Construction & Assembly* stands out.



# **Results by Business Area**

**In this part of the report, is made an analysis of similar data to Part 1, but considering Business Areas shown on the next slide.**

**View more information about the participants at "Part B - Participants Profile".**

1. Agriculture, Cattle Raising, Silviculture and Forest Exploration
2. Food and Beverage
3. Banking, Finance and Insurance
4. Trading
5. Construction
6. Consulting
7. Defense, Security and Aerospace
8. Distribution (Water, Gas)
9. Education
10. Electronics
11. Engineering
12. Electrical Energy (Production and/or Distribution)
13. Equipments and Machines
14. Pharmaceutical
15. Mining
16. Metallurgy and Steelmaking
17. Paper and Cellulose
18. Oil and Gas
19. Chemistry and Petrochemical
20. Refractories, Ceramic and Glass
21. Health
22. Information Technology (Hardware & software)
23. Telecommunications
24. Textiles
25. Logistics
26. Tourism
27. Automotive and Automotive Parts
28. Clothing, Footwear, Fashion and Sports Equipment
29. Other

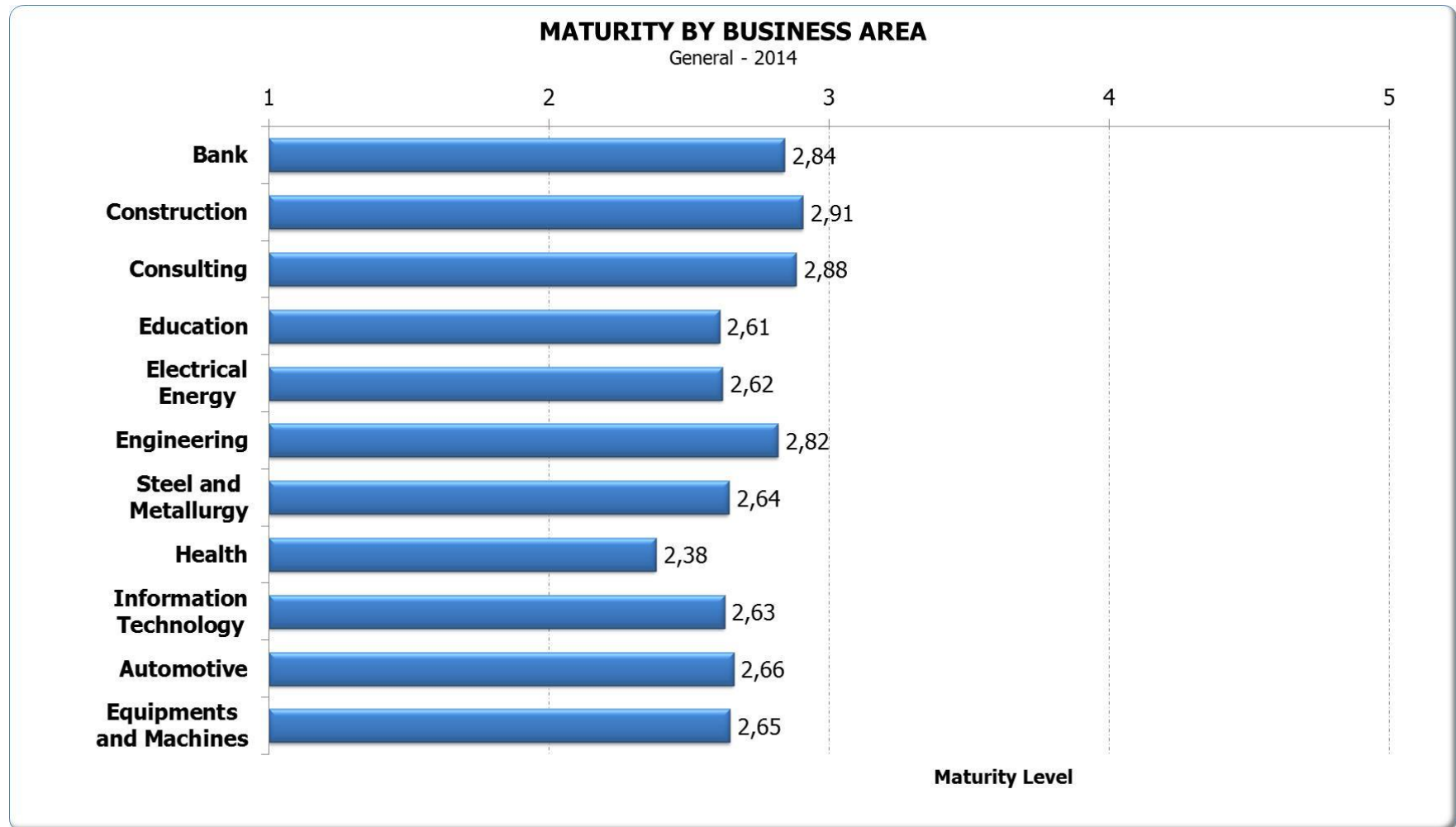
# Participants by Business Area

Only the following categories were present at the research.

BUSINESS AREA	# Respondents	Percentual	Maturity
Agriculture, Cattle Raising, Silviculture e Forest Exploration	2	0,5%	1,56
Food and beverage	5	1,2%	1,88
Banking, finance and insurance	10	2,4%	2,84
Trading	5	1,2%	3,22
Construction	32	7,7%	2,91
Consulting	40	9,6%	2,88
Defense, Security and Aeronautics	8	1,9%	2,63
Education	21	5,1%	2,61
Electrical Energy (Production and/or Distribution)	18	4,3%	2,62
Engineering	32	7,7%	2,82
Pharmaceutical	5	1,2%	2,59
Mining	3	0,7%	1,86
Metallurgy and Steelmaking	16	3,9%	2,64
Paper and Cellulose	4	1,0%	3,03
Oil and Gas	7	1,7%	1,94
Health	24	5,8%	2,38
Information Technology (Hardware & Software)	75	18,1%	2,63
Telecommunications	8	1,9%	2,80
Logistics	8	1,9%	2,53
Turism	1	0,2%	1,89
Automotive & Automotive Parts	10	2,4%	2,66
Other	55	13,3%	2,53
Distribution (Water and Gas)	6	1,4%	2,55
Clothing, Footwear, Fashion and Sports Equipment	1	0,2%	2,13
Refractories, Ceramic and Glass	1	0,2%	2,46
Equipments and Machines	13	3,1%	2,65
Chemistry and Petrochemical	4	1,0%	2,01
Textiles	1	0,2%	2,72
<b>Totals</b>	<b>415</b>	<b>100,0%</b>	<b>2,64</b>

# Maturity by Business Area

The maturity of *Engineering* area stood out over the others.

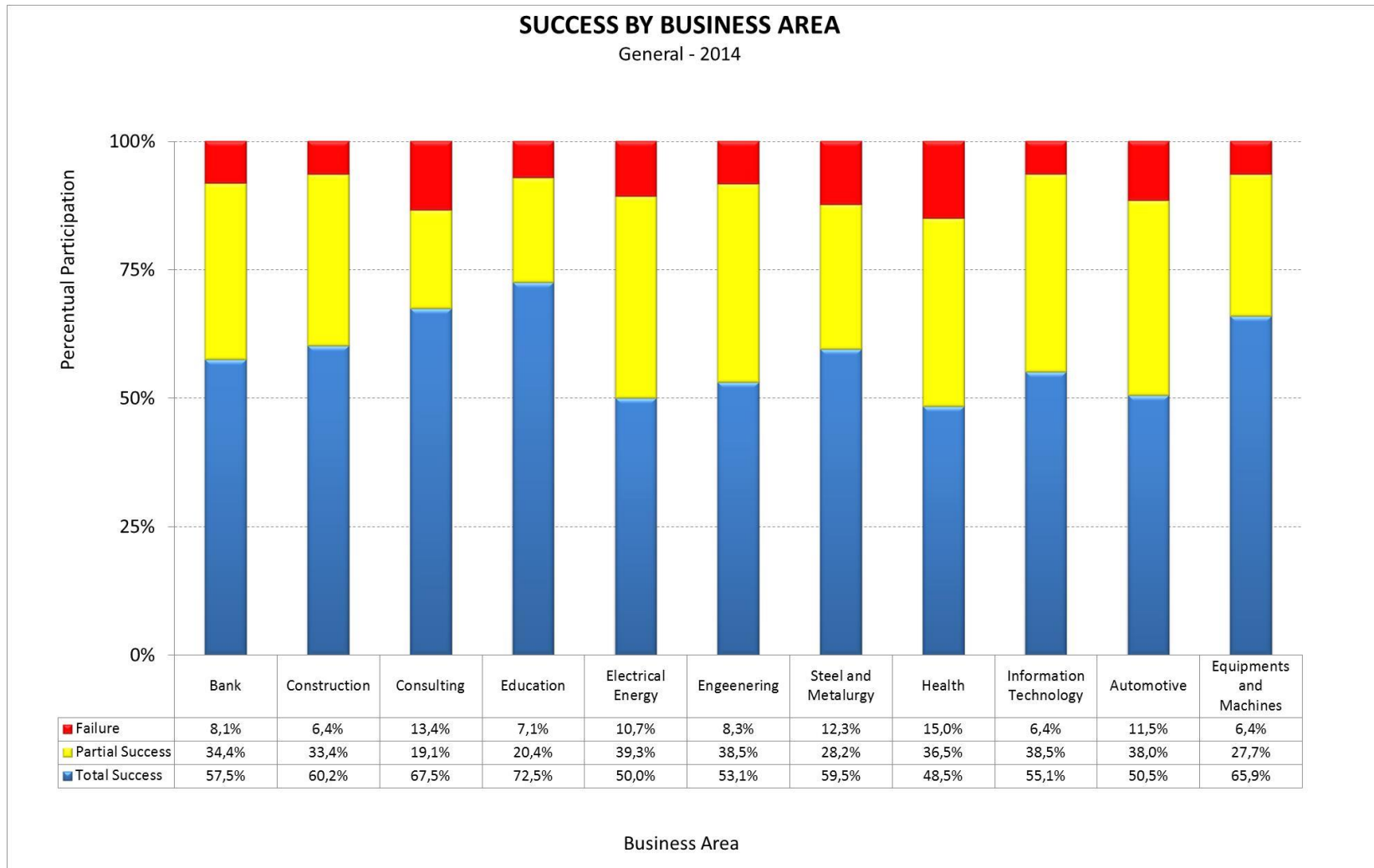


Only the groupings above presented samples with over 10 participants.



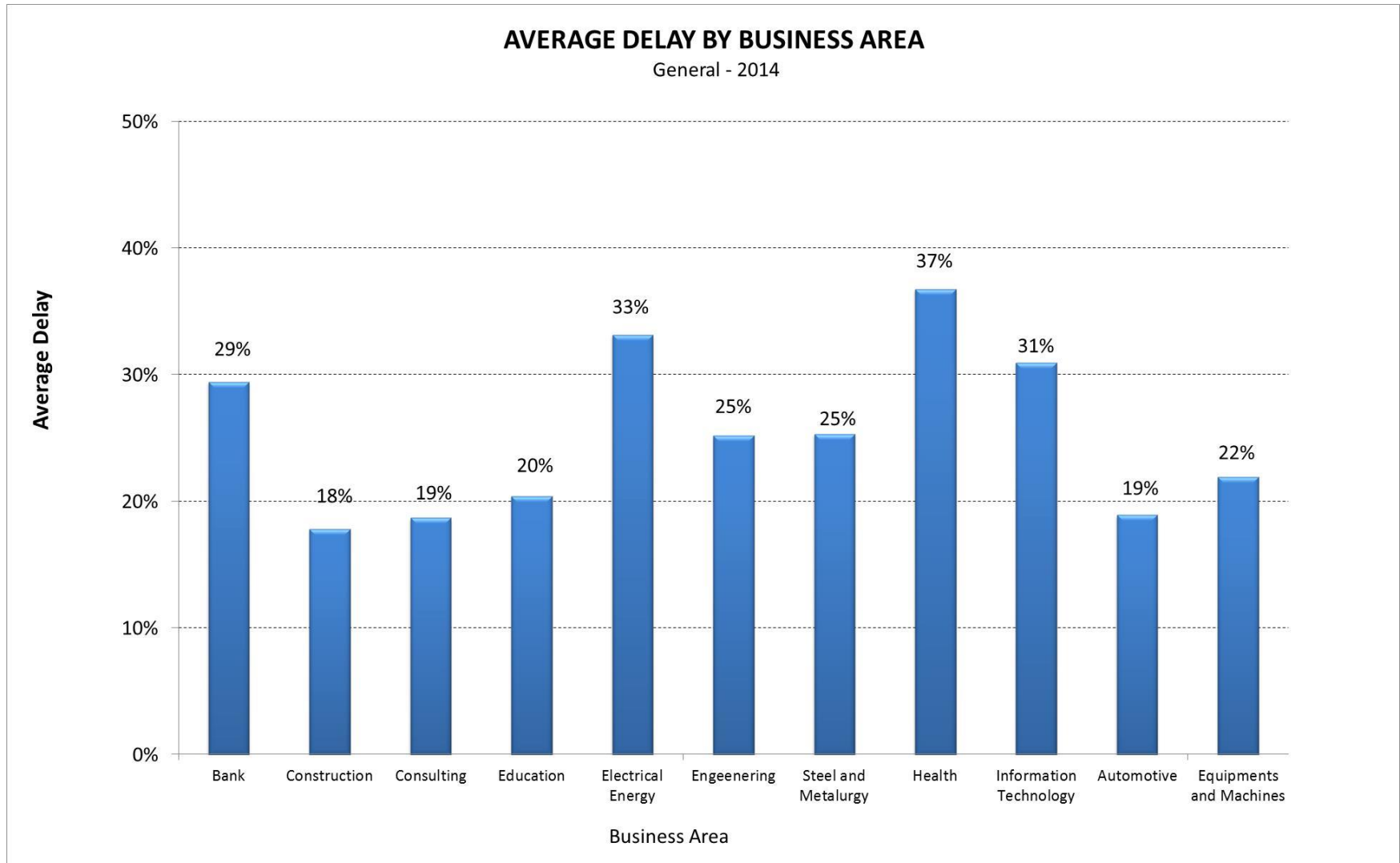
# Success by Business Area

The indicators of *Construction* and *Consulting* areas were highlights.



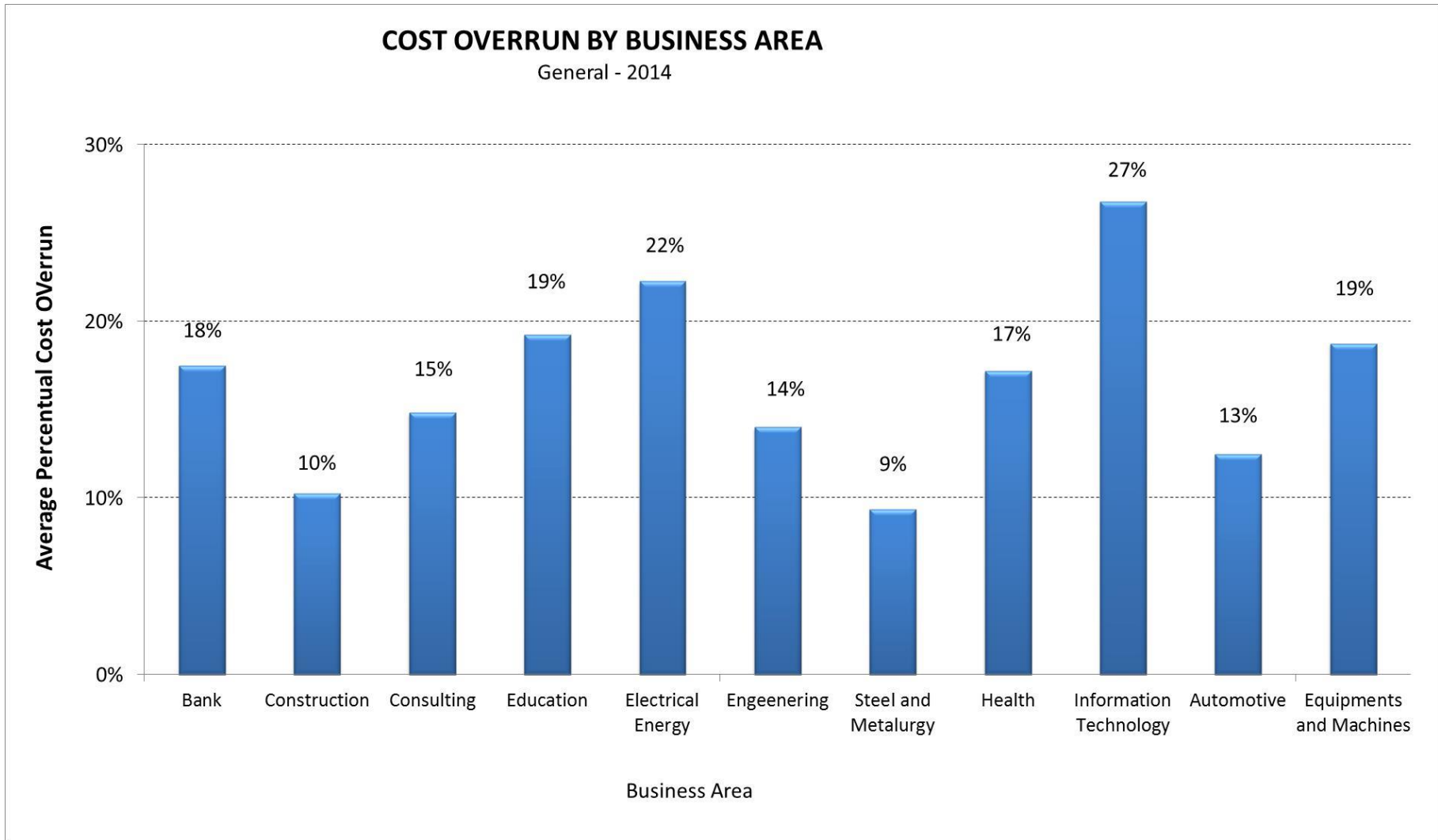
# Average Delay by Business Area

*Construction has the lowest delay.*



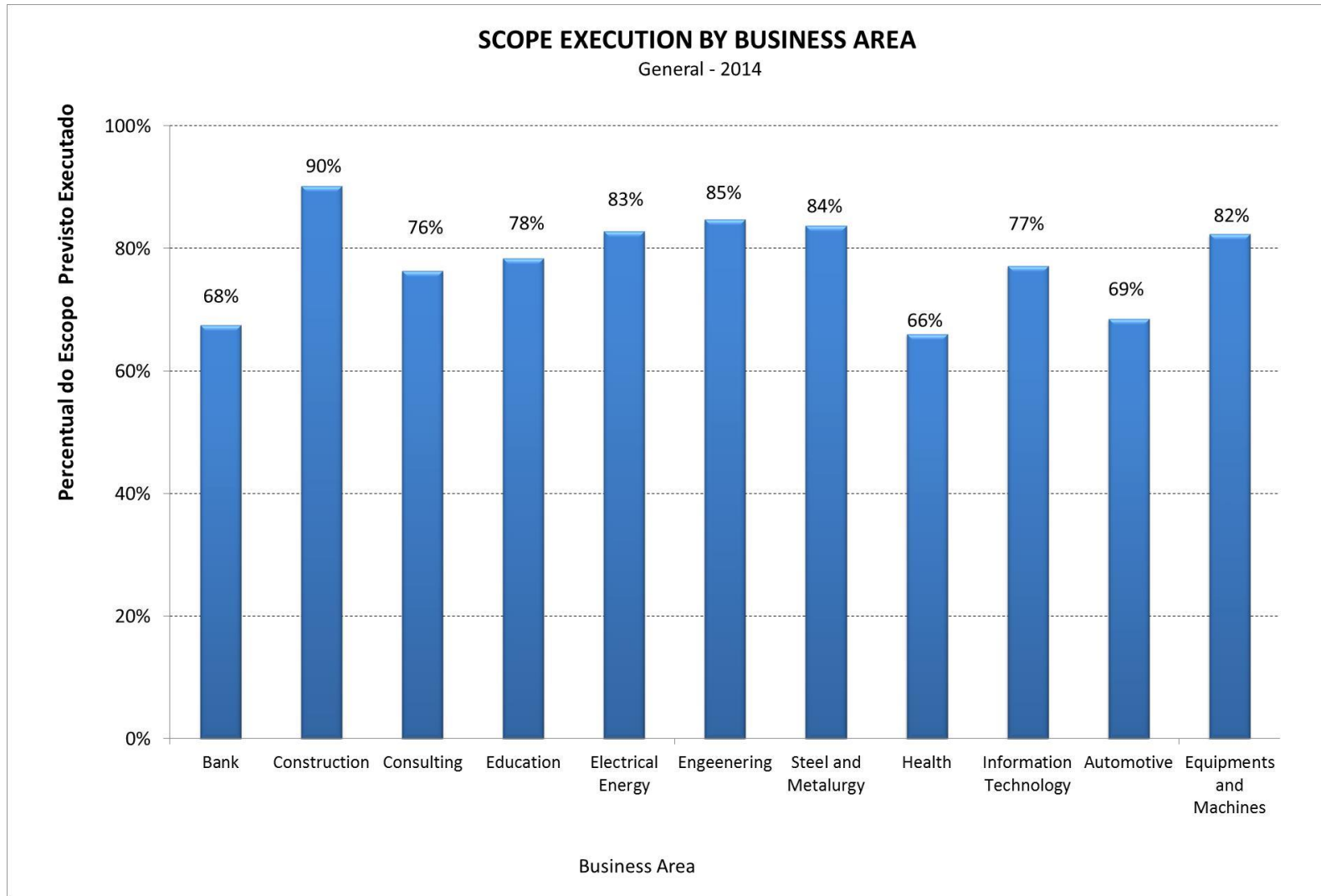
# Cost Overrun by Business Area

*Construction and Metallurgy have the best values.*



# Scope Execution by Business Area

*Construction has the best value.*



# **Results by Organization Size**

**In this part of the report, is made an analysis of similar data to Part 1, but considering Organization Size shown on the next slide.**

**To identify the organization size, it was used the value provided for billing or budget.**

**View more information about the participants at "Part B - Participants Profile".**

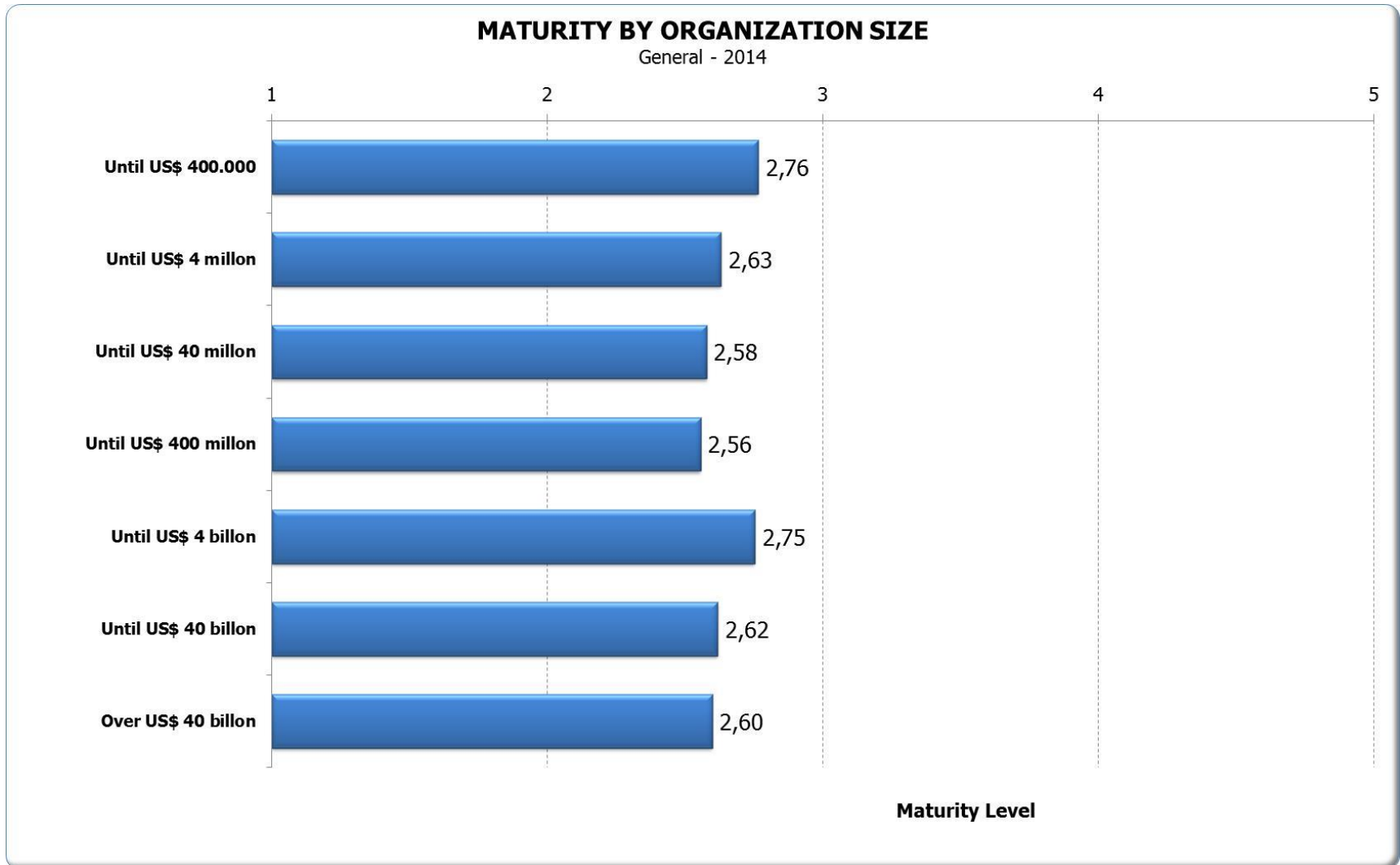
# Organization Size used at Research

To identify the organization size, it was used the value provided for BILLING.  
These are:

Annual Gross Revenue or Budget	# Respondents	Percentual	Maturity
Until US\$ 400.000	58	14,0%	2,76
Until US\$ 4 million	74	17,8%	2,63
Until US\$ 40 million	116	28,0%	2,58
Until US\$ 400 million	84	20,2%	2,56
Until US\$ 4 billion	59	14,2%	2,75
Until US\$ 40 billion	18	4,3%	2,62
Over US\$ 40 billion	6	1,4%	2,60
<b>Totals</b>	<b>52</b>	<b>100,0%</b>	<b>2,95</b>

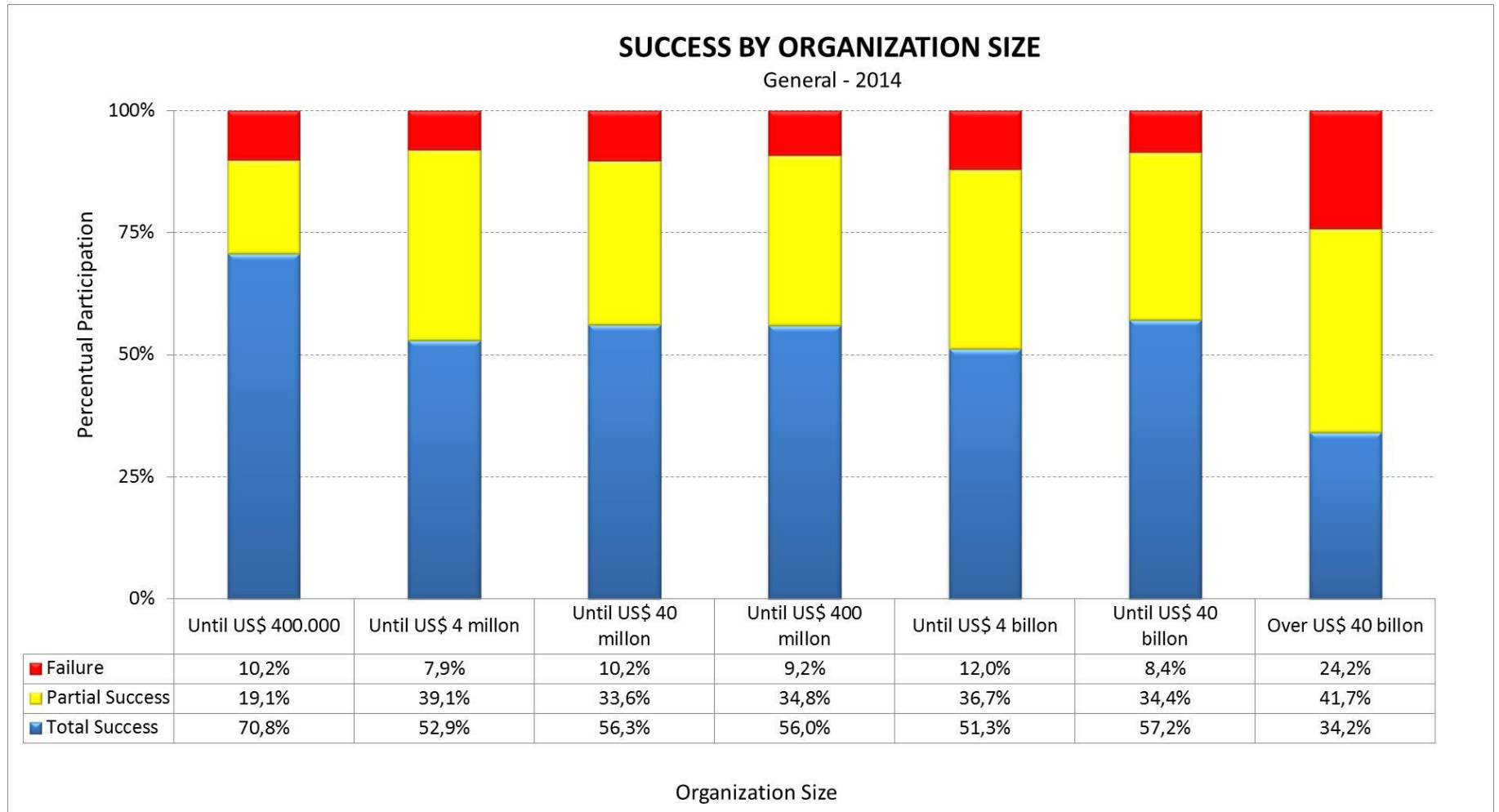
# Maturity by Organization Size

The values are very close.



# Success by Organization Size

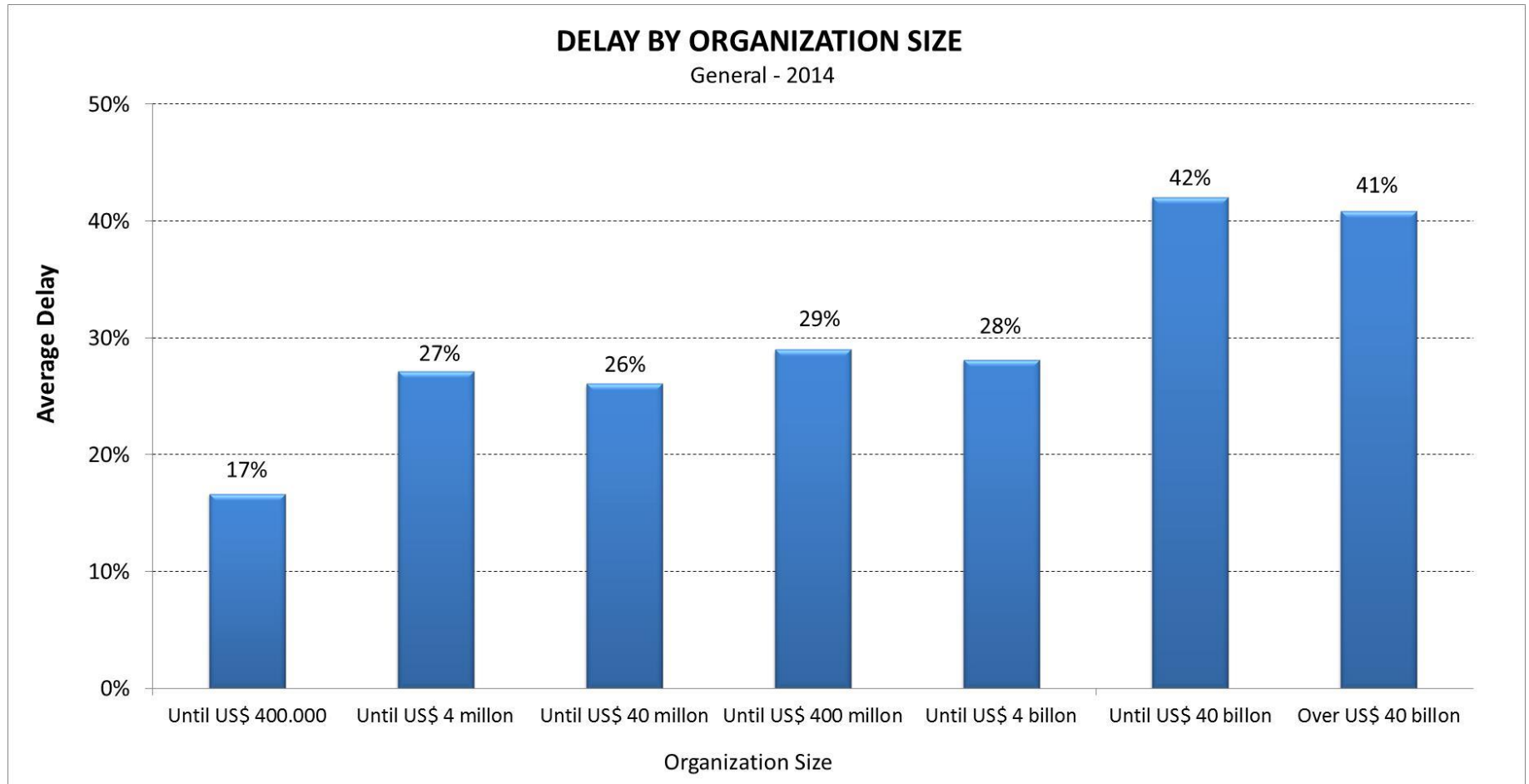
In a simplified way, the extremes stand out.





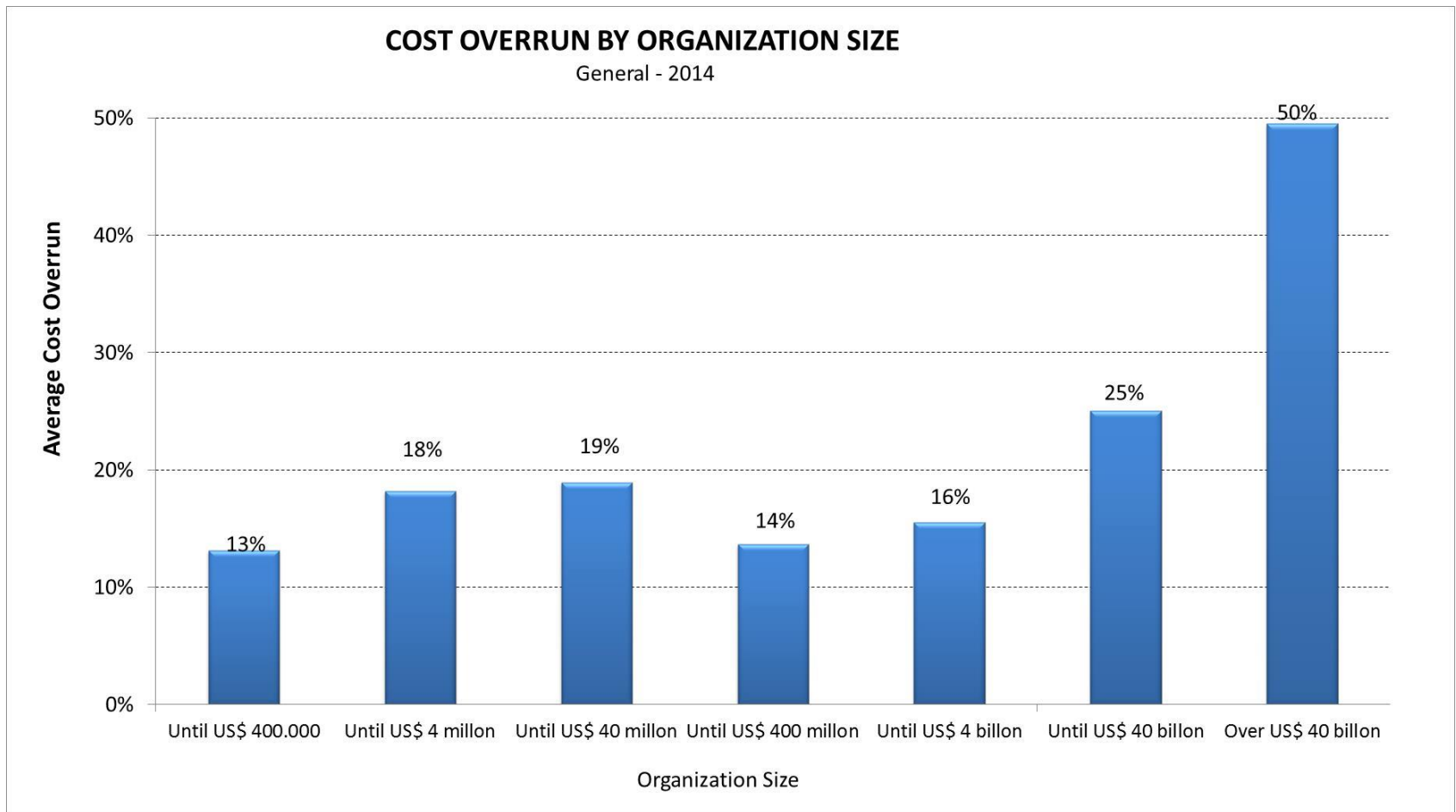
# Delay by Organization Size

The highest delays are those from larger organizations.



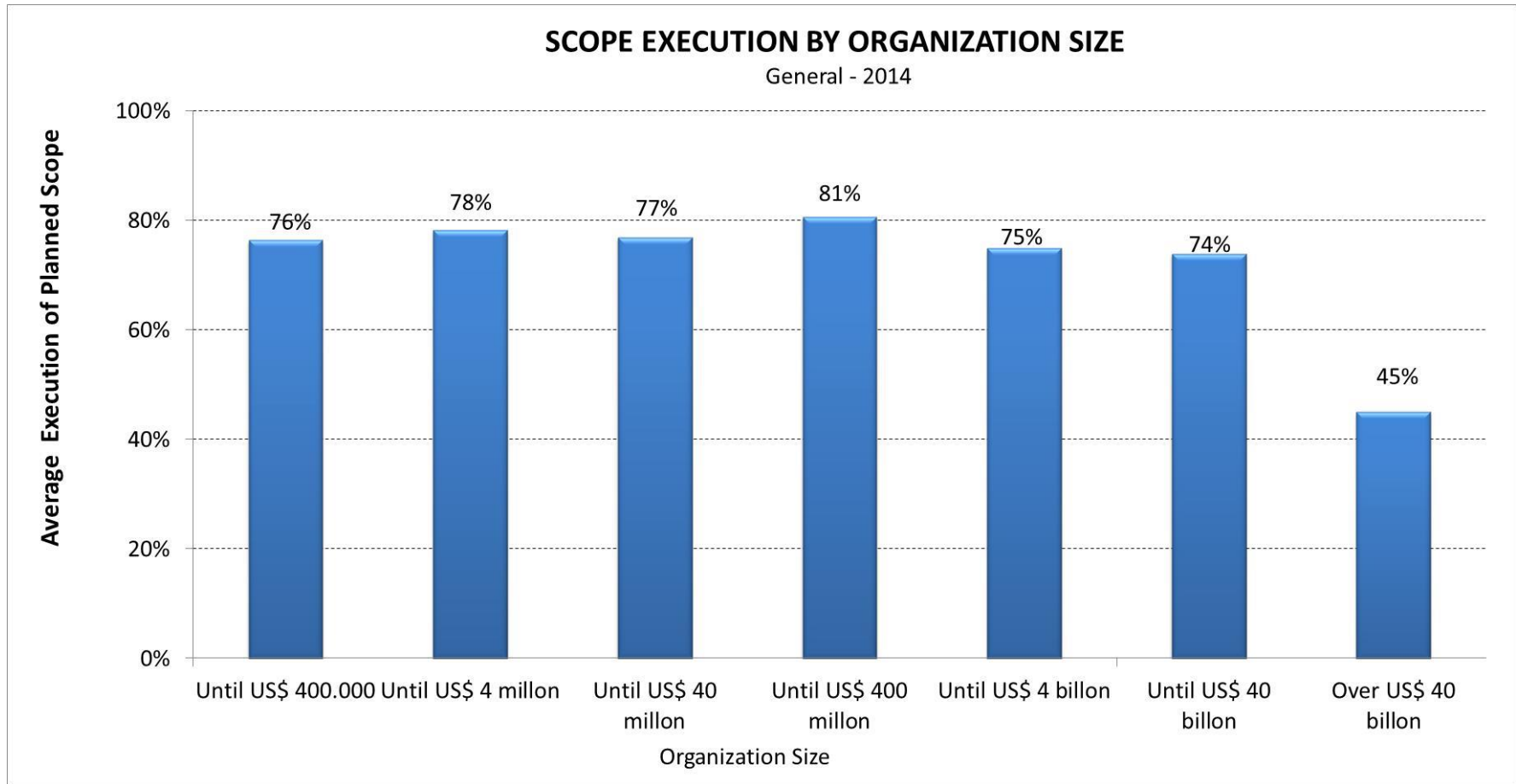
# Cost Overrun by Organization Size

In a simplified way, larger organizations have the highest cost overrun.



# Scope Execution by Organization Size

There is some uniformity of results,  
except the grouping *Over US\$ 40 billion*.



# Results by Cost from Each Project

**In this part of the report, is made an analysis of similar data to Part 1, but considering the Average Cost from Each Project.**

**View more information about the participants at "Part B - Participants Profile".**

**Comments about this part of the report:**

The following graphs shown indicate that organizations whose project portfolio consists of low-value projects for *Average Cost from Each Project* have KPIs slightly superior to the others.

# Project Costs used at Research

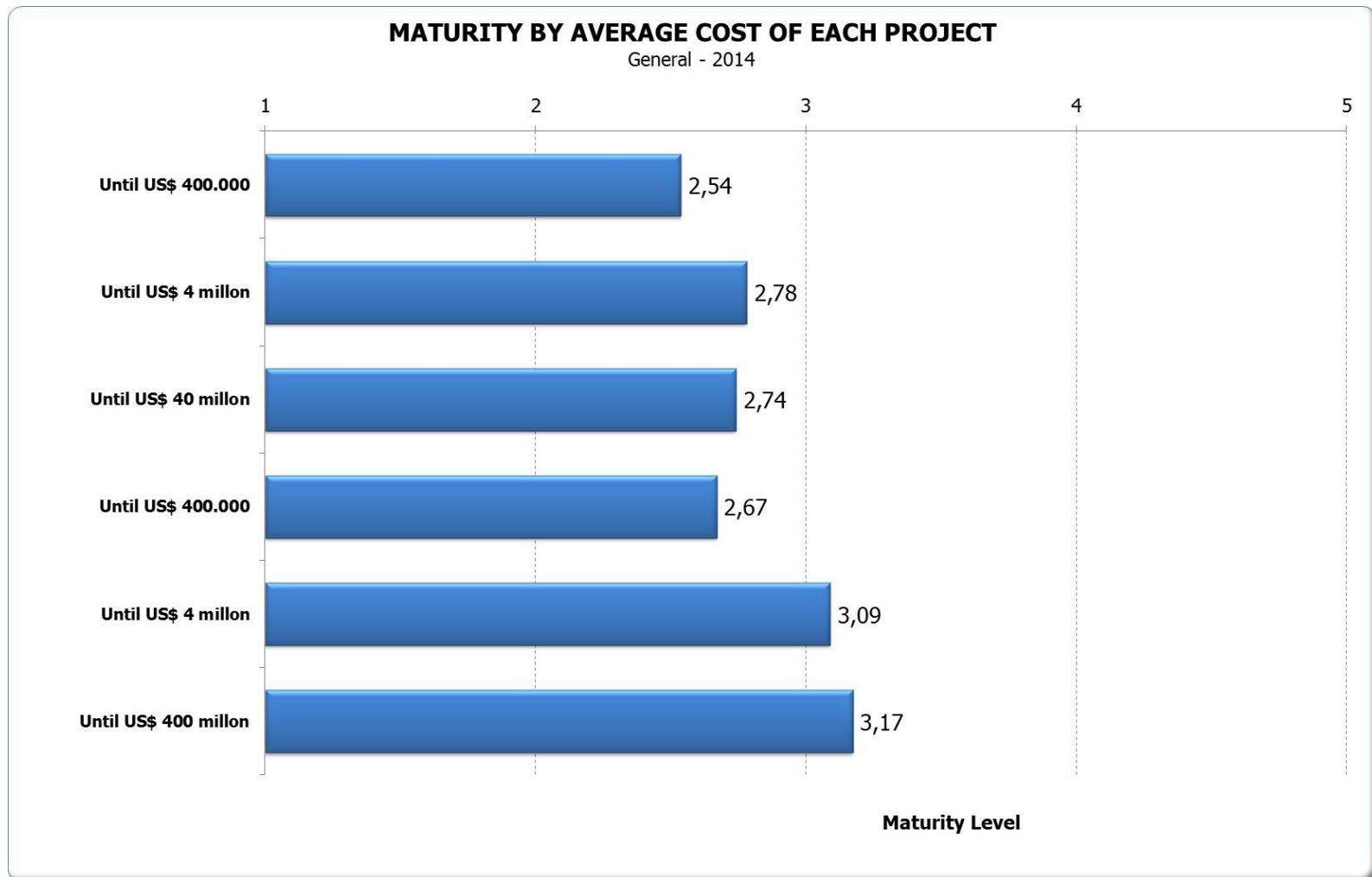
68.9% of respondents work with portfolios consisting of projects to US\$ 4 million. 1.5% work with mega projects (until US\$ 400 million).

Average Cost of Each Project	# Respondents	Percentual	Maturity
Until US\$ 400.000	100	30,2%	2,54
Until US\$ 4 million	128	38,7%	2,78
Until US\$ 40 million	42	12,7%	2,74
Until US\$ 400.000	43	13,0%	2,67
Until US\$ 4 million	13	3,9%	3,09
Until US\$ 400 million	5	1,5%	3,17
Total Geral	<b>331</b>	<b>100,0%</b>	<b>2,64</b>

Note: Only 331 respondents provided this information.

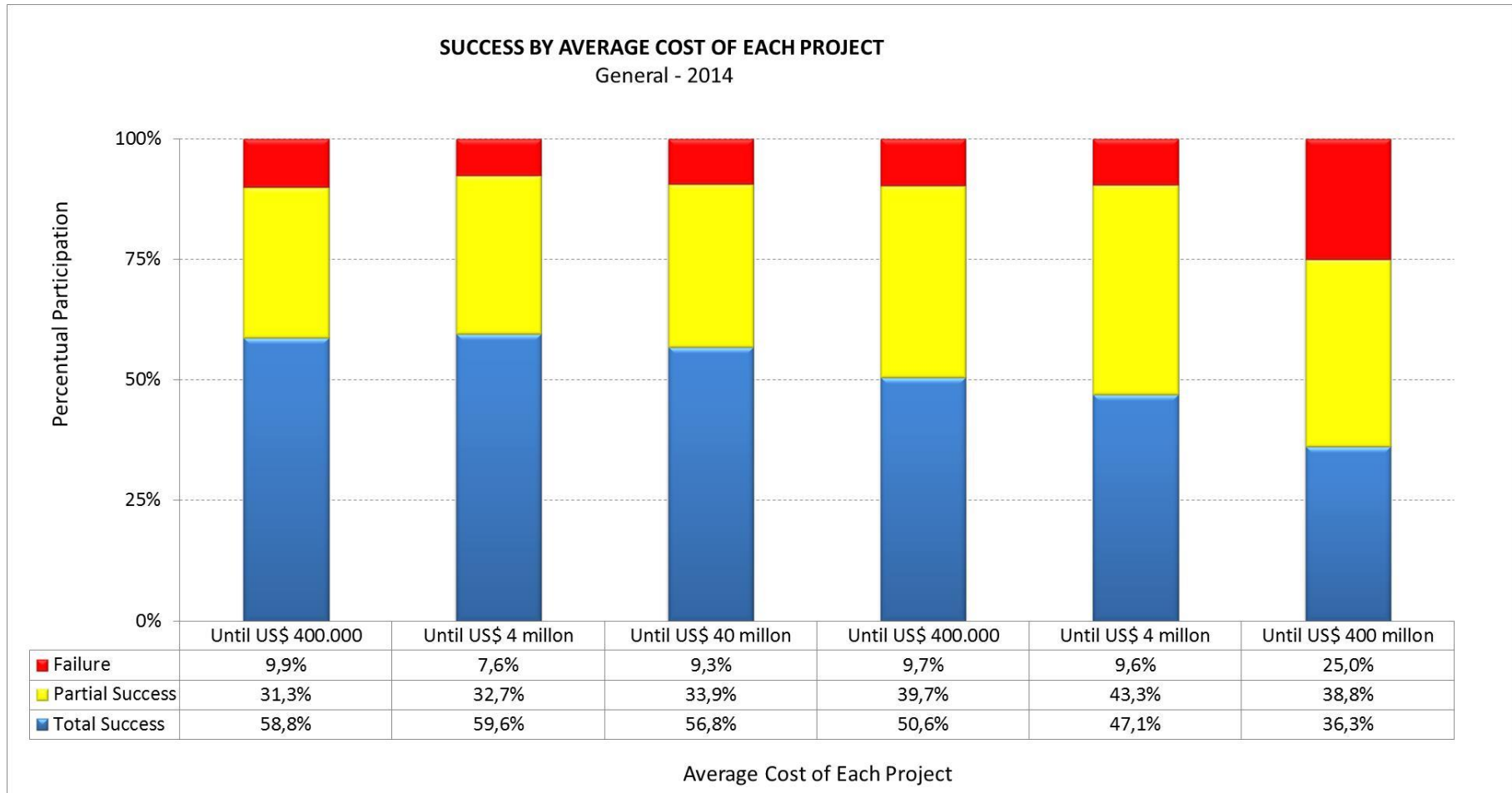
# Maturity by Average Cost of each project

Organizations with higher value for *Average Cost of Each Project* have higher maturity.



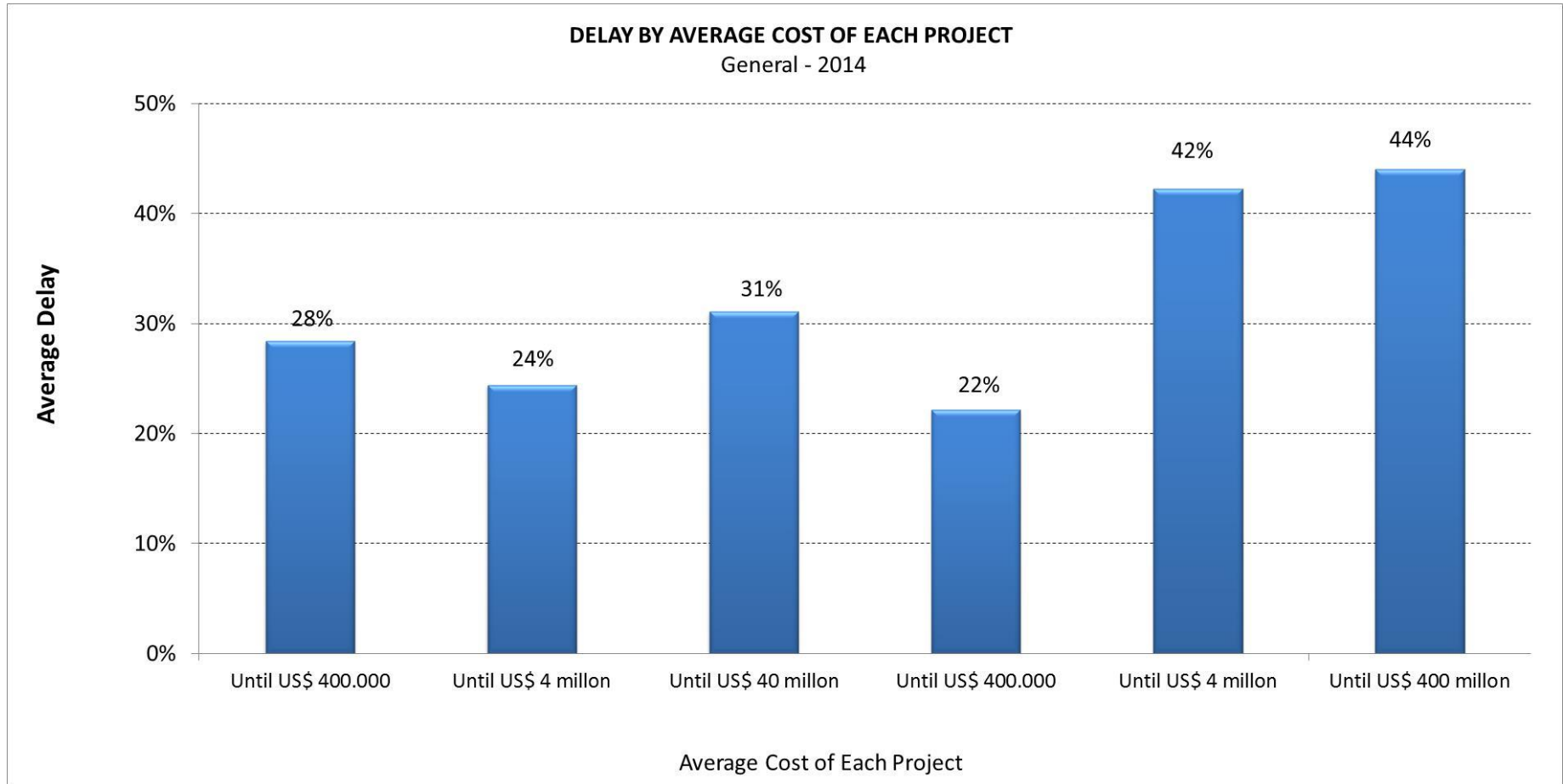
# Success by Average Cost of each project

Organizations with lowest value for *Average Cost of Each Project* have better evaluation.



# Delay by Average Cost of each project

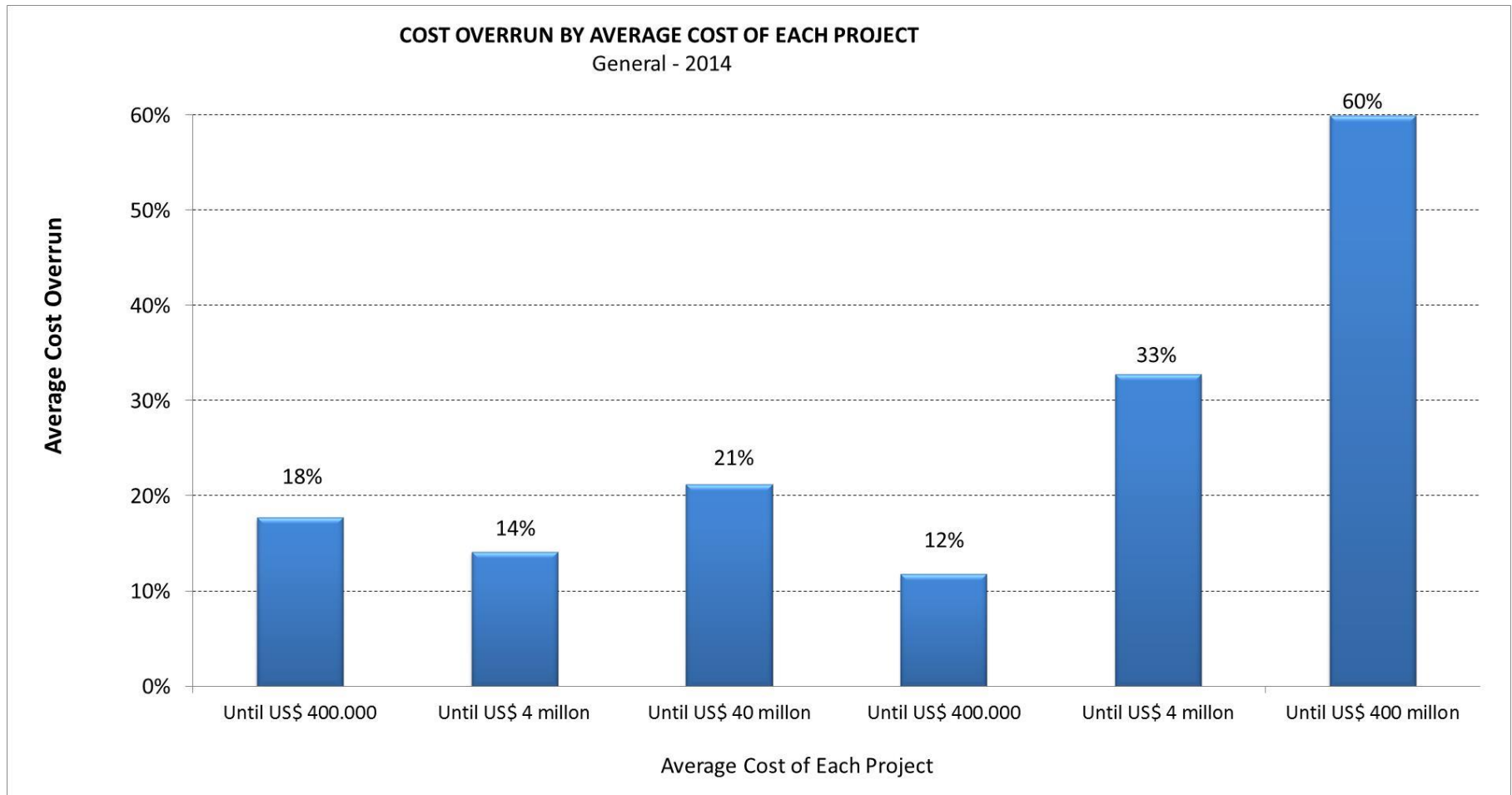
Organizations with lowest value for *Average Cost of Each Project* have lowest delay.





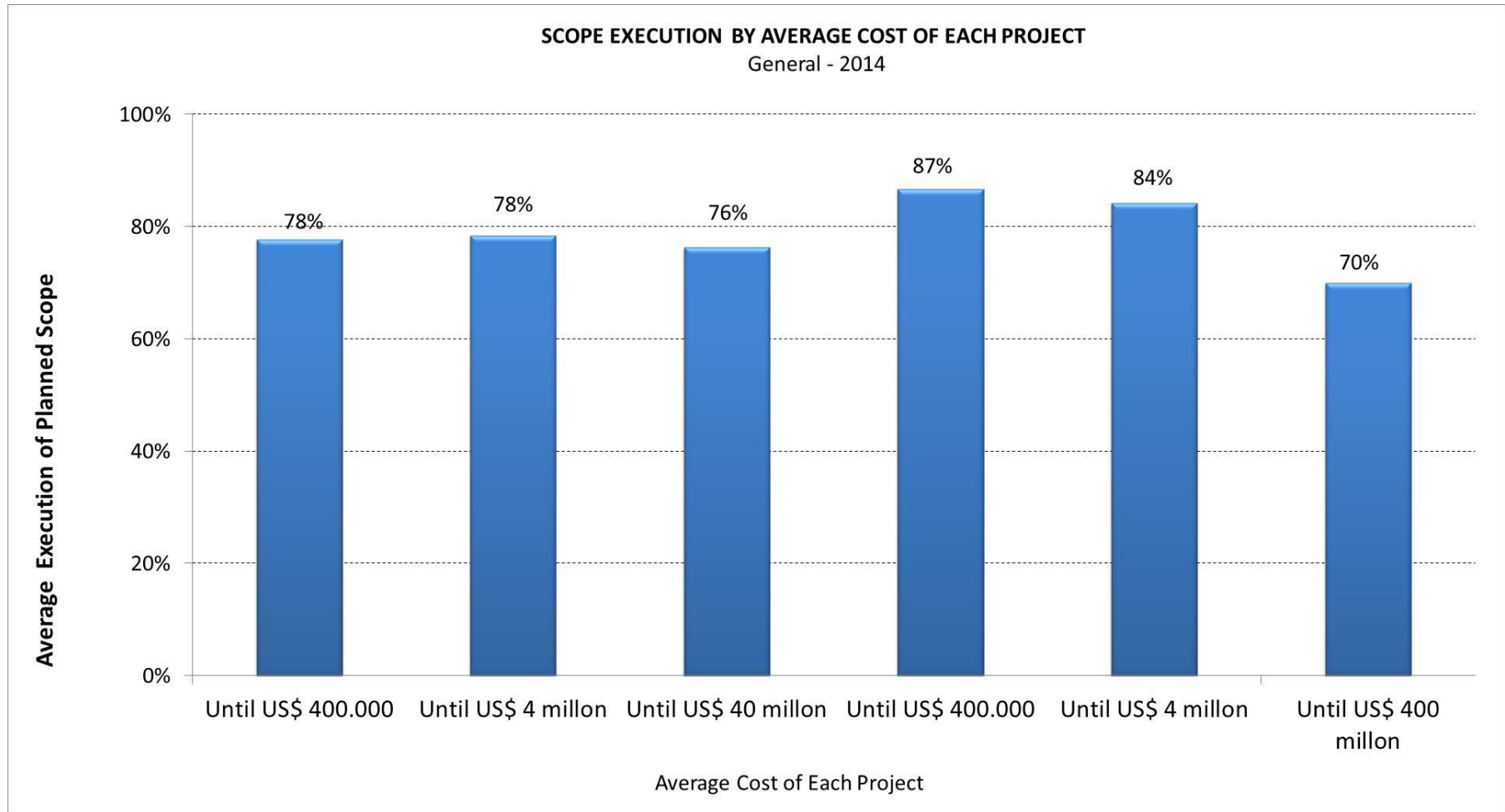
# Cost Overrun by Average Cost of each project

Organizations with lowest value for *Average Cost of Each Project* have lowest cost overrun.



# Scope Execution by Average Cost of each project

There is no possible to point a prominent grouping.  
However, it is worth mentioning the value obtained for mega projects (70%).



# Results by Brazilian State

**In this part of the report, is made an analysis of similar data to Part 1, but considering the Brazilian States.**

**View more information about the participants at "Part B - Participants Profile".**

## **Comments about this part of the report:**

The following graphs shown indicate that occur different highlights for different states. We also observed that GO stands out in some indicators, despite having a low value to maturity.

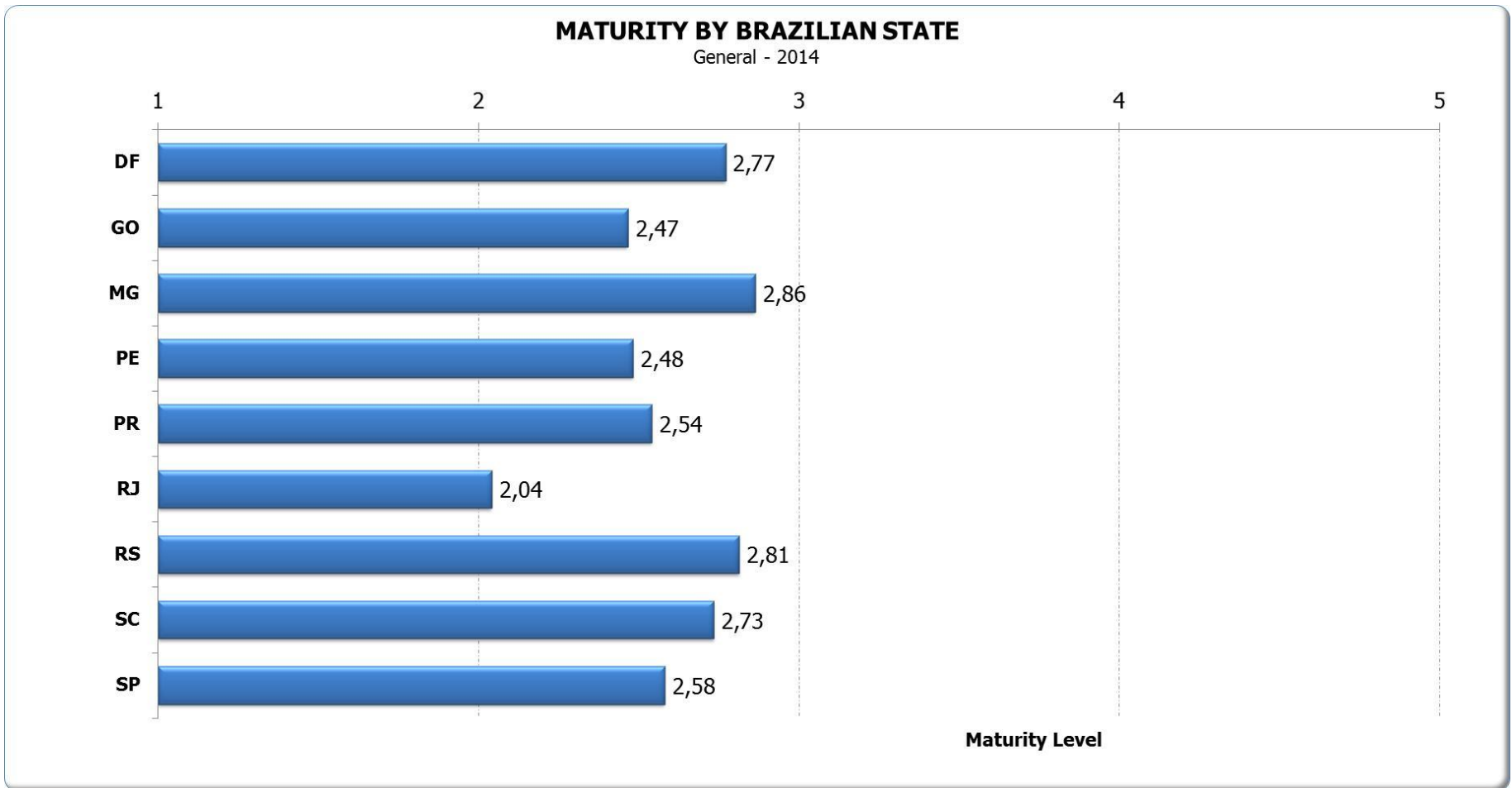
# Participants by Brazilian State

Highlight for SP.

STATE	# Respondents	Percentual	Maturity
AL	2	0,5%	2,43
AM	3	0,7%	3,17
BA	9	2,2%	2,38
CE	5	1,2%	3,34
DF	27	6,5%	2,77
ES	7	1,7%	2,67
GO	16	3,9%	2,47
MG	67	16,1%	2,86
MT	8	1,9%	2,28
PA	3	0,7%	2,10
PB	2	0,5%	2,51
PE	16	3,9%	2,48
PR	16	3,9%	2,54
RJ	24	5,8%	2,04
RN	1	0,2%	3,42
RO	1	0,2%	3,02
RS	32	7,7%	2,81
SC	20	4,8%	2,73
SE	4	1,0%	3,51
SP	152	36,6%	2,58
<b>Totals</b>	<b>415</b>	<b>100,0%</b>	<b>2,64</b>

# Maturity by Brazilian State

Highlights for MG and RS.



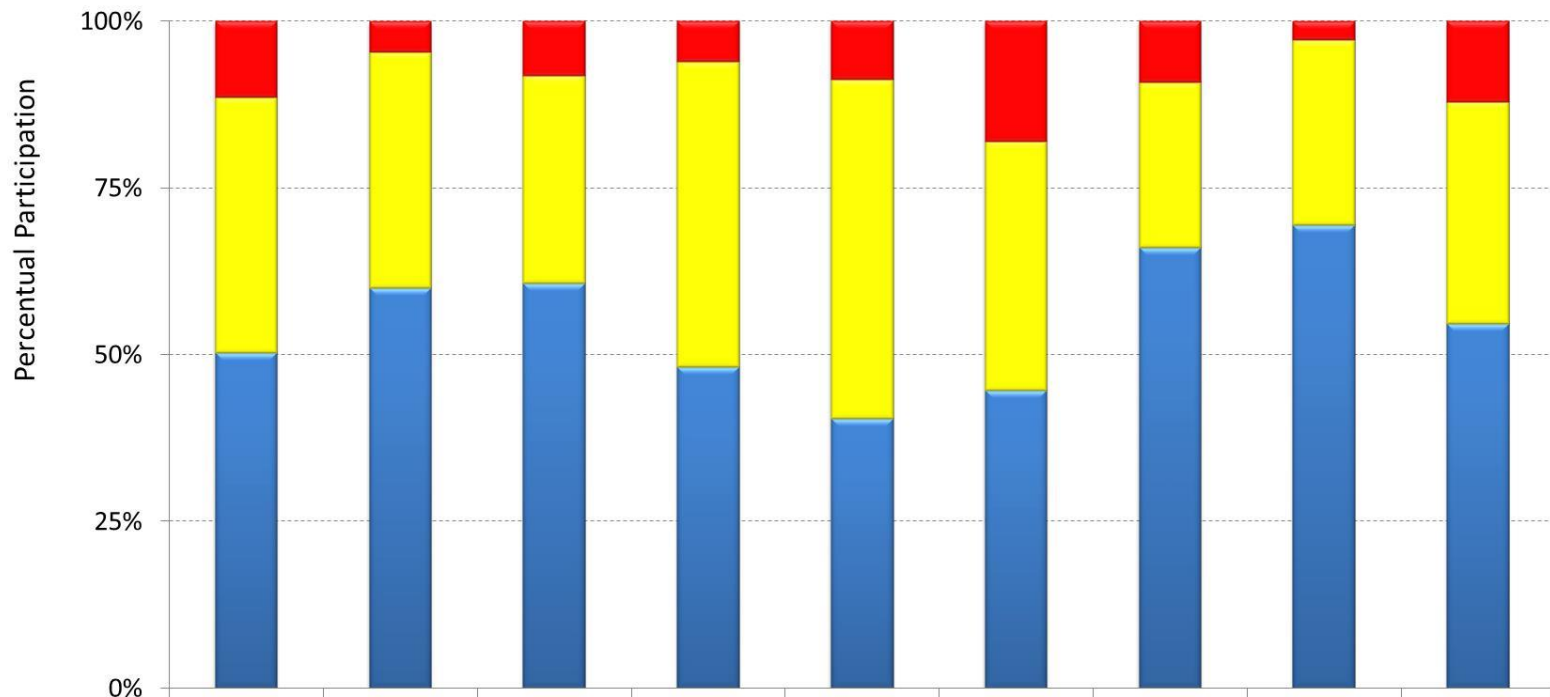
Only the groupings above presented samples with over 10 participants.

# Success by Brazilian State

Highlights for GO and SC.

## SUCCESS BY BRAZILIAN STATE

General - 2014

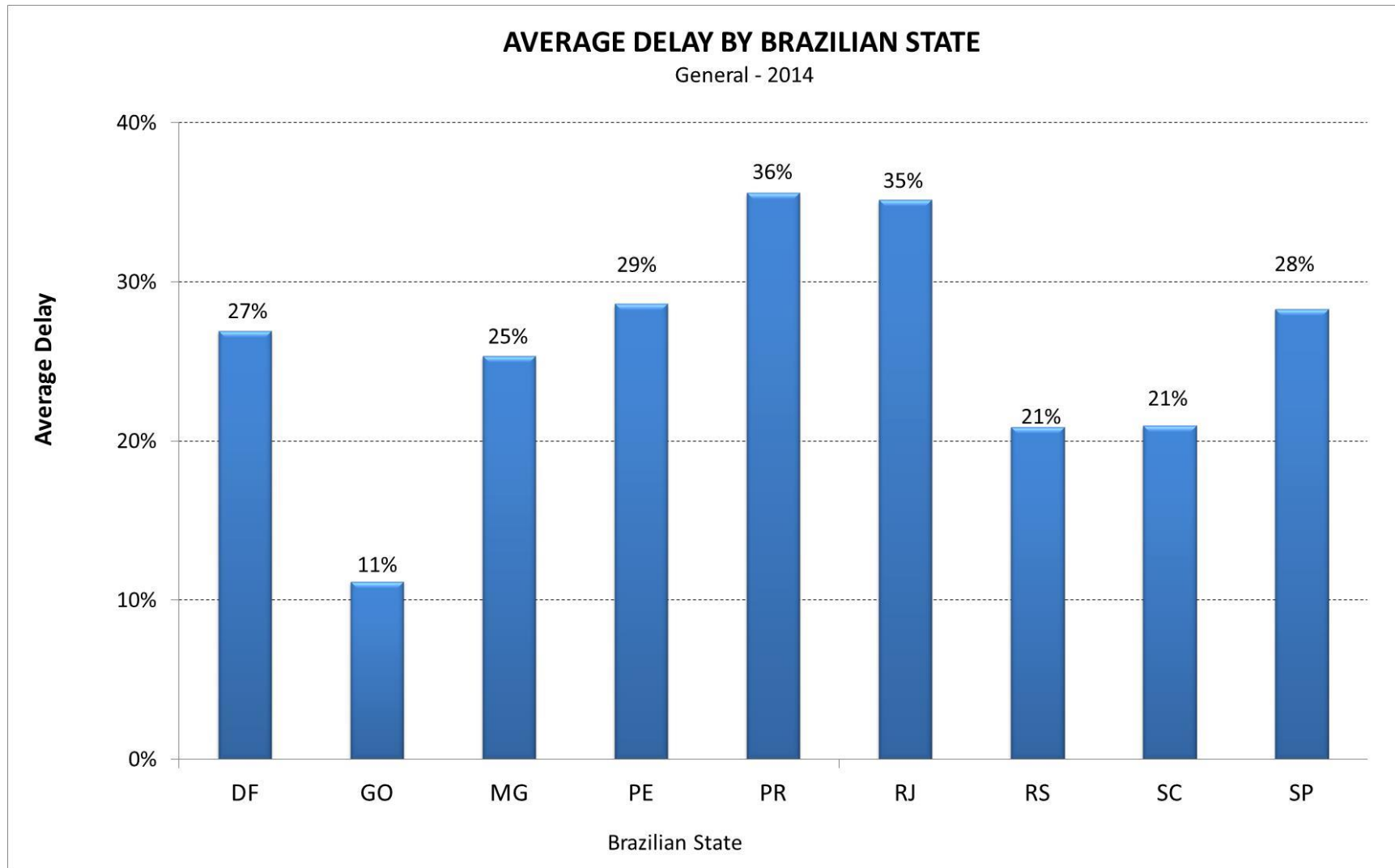


	DF	GO	MG	PE	PR	RJ	RS	SC	SP
Failure	11,4%	4,6%	8,2%	6,1%	8,8%	18,1%	9,1%	2,8%	12,1%
Partial Success	38,3%	35,4%	31,1%	45,7%	50,8%	37,2%	24,8%	27,8%	33,3%
Total Success	50,2%	60,0%	60,7%	48,2%	40,4%	44,7%	66,1%	69,4%	54,6%

Brazilian State

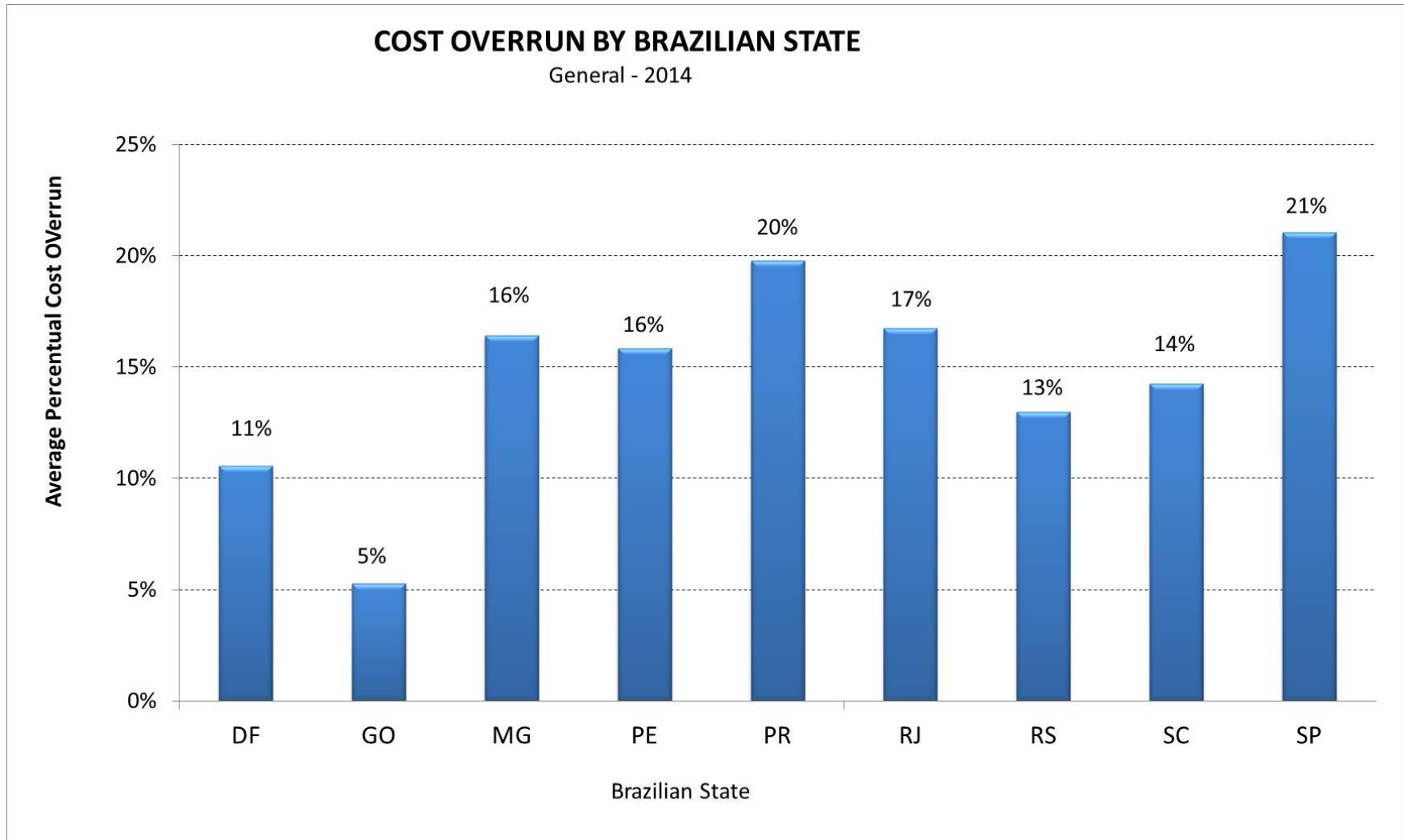
# Average Delay by Brazilian State

Highlight for GO.



# Cost Overrun by Brazilian State

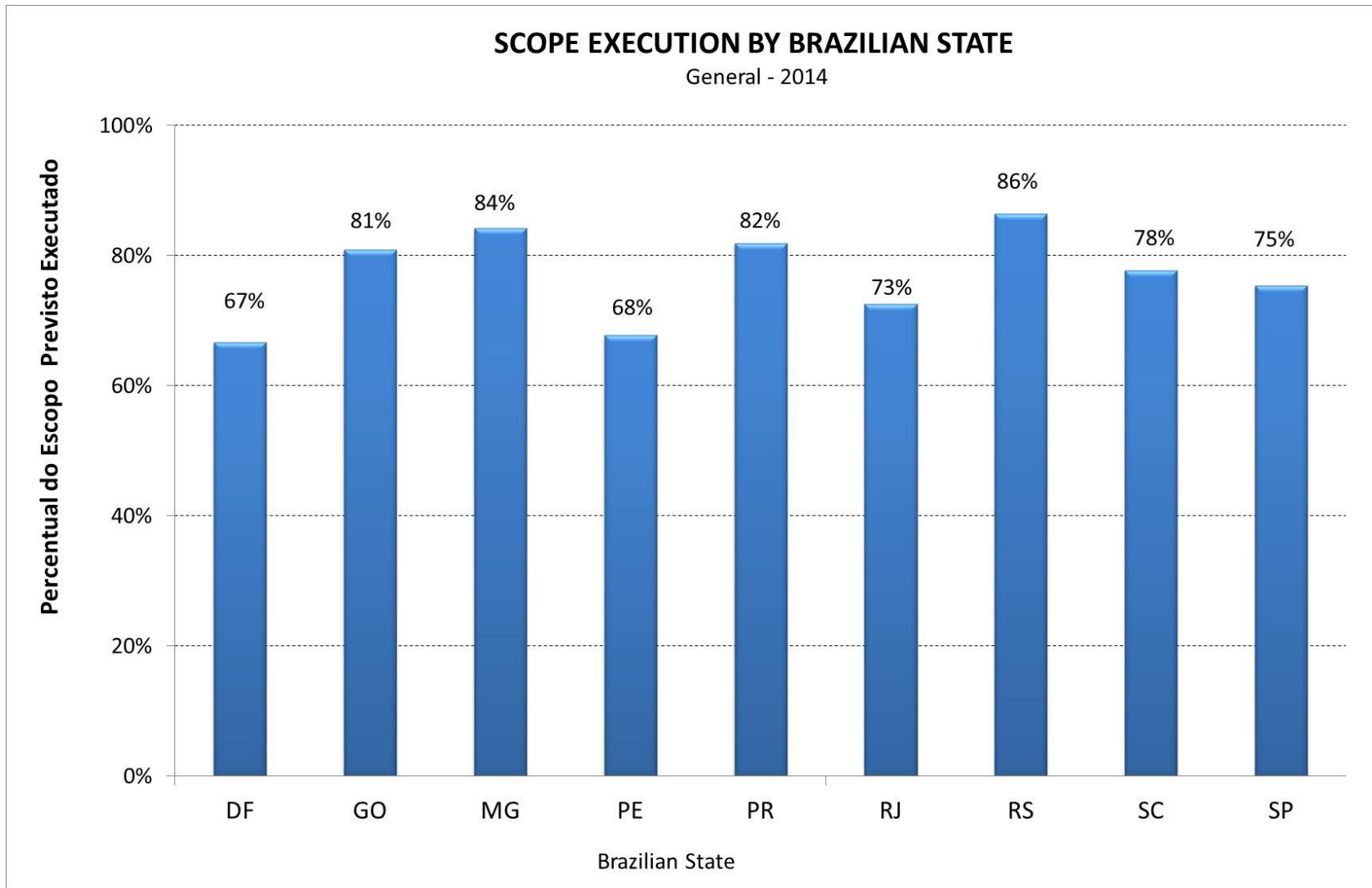
Highlight for GO.





# Scope Execution by Brazilian State

Highlight for RS and MG.



# **Team who developed this work**



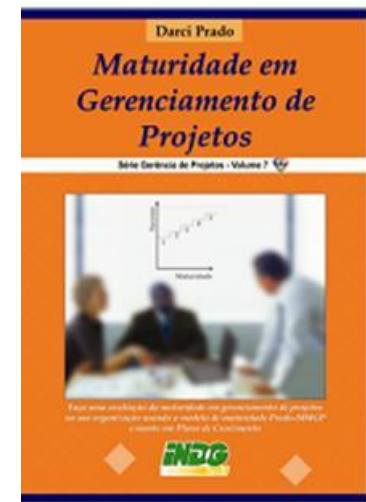
### Russel D. Archibald

- 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 and Club IPMA-BH founders
- Associate Consultant at FALCONI





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**Warlei Agnelo de Oliveira** was Secretary of Transportation and Public Works advisor, and is currently the Project Manager of “Belo Horizonte Metro” structuring project. Bachelor degree in Civil Engineering, holds a MBA degree in Project Management from *FGV* and a M.Sc. degree in Business Administration. He is Orange Belt / ILL certified and is currently professor of Civil Engineering and Enviromental Technology courses at *Centro Universitário UNA*.



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## **COMMITTEE**

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## **GENERAL COORDINATOR**

Darci Prado

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Website development: Warlei Oliveira and Carlos E. Andrade

Portuguese Language: Darci Prado

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

Italian Language: Lucas Pinheiro, José Miglioli and Italian team

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## **DATABASES**

Carlos E. Andrade

## **DATA ANALYSIS**

Bruno Machado

## **COMPLETE REPORT**

Partnership with several organizations and opinion formers

# Thanks

- Support:
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  -  [www.sucesumg.org.br](http://www.sucesumg.org.br)
  -  CONSTRUINDO SOLUÇÕES
  - 
  - 
  - 
  - 
- Promotion:
  - Organizations and Associations:
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    - PMI: All *chapters*
    - IPMA-Br
    - CREA: MG and SP
    - FIEMG
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# THE END