

# Archibald & Prado Research 2006 Results

## MATURITY AND SUCCESS IN I.T. Preliminary Report

March 31st, 2007

We present the **Final Report – Summarized Version** of the 2006 Archibald & Prado research results on **Maturity and Success in IT**. The complete report will be released in April 2007, containing all data and broad results analysis.

This survey was available for free at [www.maturityresearch.com](http://www.maturityresearch.com) from February to March of 2007; professionals surveyed represent **46** organizations that deal with IT and that participated in the first stage of the survey, which took place during the last months of 2006.

Considering the complexity of the subject, this research is, in fact, an **exploratory study** which aims to establish the foundation for other studies.

The objectives of this work are:

- Verify the project success level of Brazilian organizations and compare it with Standish Group's Chaos Report ([www.standishgroup.com/chaos](http://www.standishgroup.com/chaos)).
- Determine if there is a correlation between success and maturity, according to the Prado-PMMM model.
- Identify the main failure causes in each maturity level.
- Stimulate and prepare IT professionals for a new stage of the research, probably in 2008.

Finally, it is important to remember that this stage of the survey follows the same confidentiality and statistical analysis standards used on the previous stage.

## It is important to clarify what is being studied

The research aims to evaluate maturity and success of projects within the Information Systems category, as defined by Russell Archibald (please refer to [www.maturityresearch.com](http://www.maturityresearch.com) for additional information on Archibald's Categories).

Participants of this research are divisions (or departments) of organizations which work developing or implementing information systems (software), i.e., divisions/departments that chose Information Systems (software) on the first stage of this survey. Thus, these departments are involved with one or more of the activities shown below:

- Application development
- Installation of software packages developed by external suppliers
- Installation of software packages for clients
- Large maintenance of existing applications

Note: Projects of hardware equipment development are considered as new product development (NPD) projects and are not included in this report.

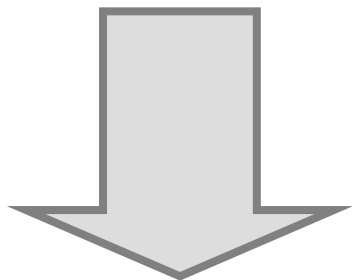
- 2006 Maturity & Success in IT survey
  - Maturity results
  - What is success?
  - Results for success
  - Comparison of results: Brazil vs. Chaos Report
  - Maturity and success
- Failure causes
- Next steps

# 2006 SURVEY RESULTS

FIRST STAGE 2006

AVERAGE MATURITY: **2.37**

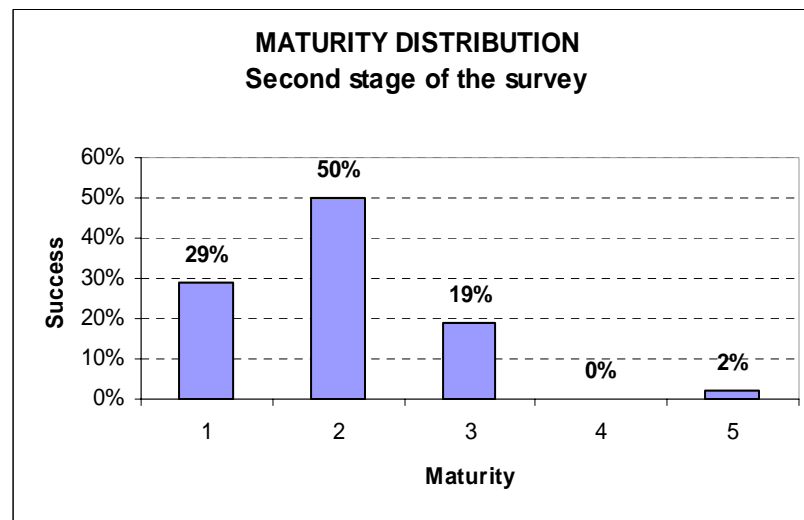
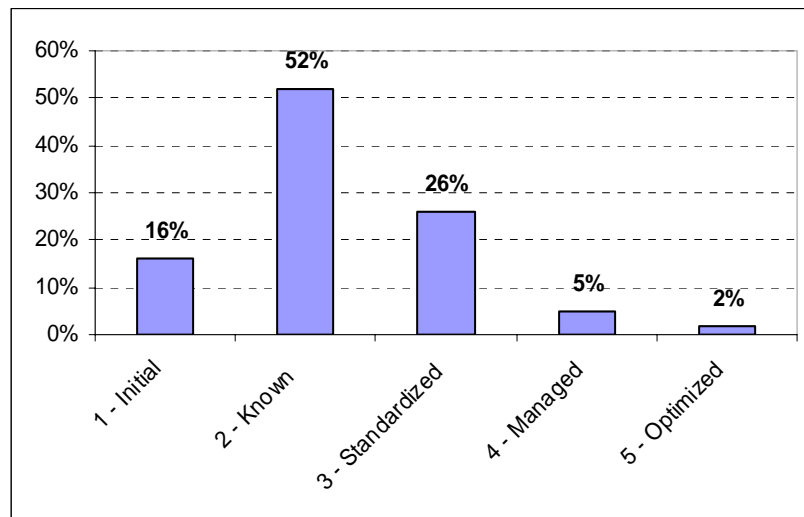
(116 participants)



SECOND STAGE 2006

AVERAGE MATURITY: **2.21**

(42 participants)



Participants of the second stage originated from the survey's first stage.

On the second stage, a greater participation of level 1 and 2 organizations is noticeable.

The second stage of the research aimed to correlate maturity and success. Because of that, a definition of **success** is needed and, reviewing PM literature, the following definition can be found as widely spread (IT environment) :

A **successful project** is a project that:

- Satisfied the customer/user;
- Positively helped to achieve the business goal;
- Executed the scope exactly as predicted and the software is being used as planned;
- Fulfills the technical specifications of quality and performance;
- Fulfills the schedule and cost restrictions.

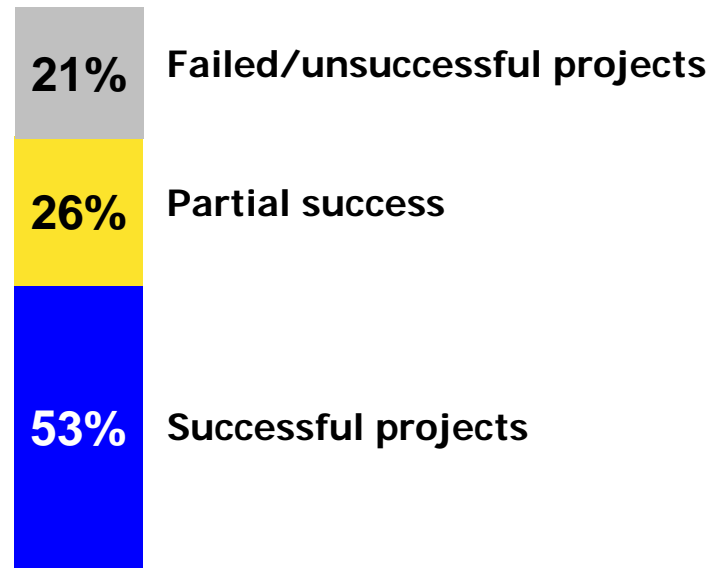
This is a rigorous, academic definition. Unfortunately, it creates a serious problem when applied to real-world situations: very few IT projects would be rated as successful and all remaining ones would be failures. Thus, we opted for another view on this issue, based on the Standish Group definitions, that uses the concepts below (they are outlined in the next page):

- \* Successful project (success)
- \* Partially successful project
- \* Failed project

- **Successful project (or complete success or, simply, success):** The project ended on the planned date, cost and scope. Deviations of these three aspects were small and not significant. The client/user was fully satisfied, because the delivered product is being used and really added value to his work (Please note again that small deviations were accepted)
- **Partially successful project (partial or compromised success):** The project ended and the delivered software is being used. Nevertheless, compromising facts (significant delays and/or budget overruns and/or scope deviations) occurred or the user is partially satisfied because the product was not delivered on time and/or does not have all the expected and required features and/or does not add the expected value to the client's work.
- **Failed project:** The project was suspended or the delivered product is not being used because it does not fulfill the user's expectations, or the delay was so significant that the business lost money. The user/client is severely dissatisfied.



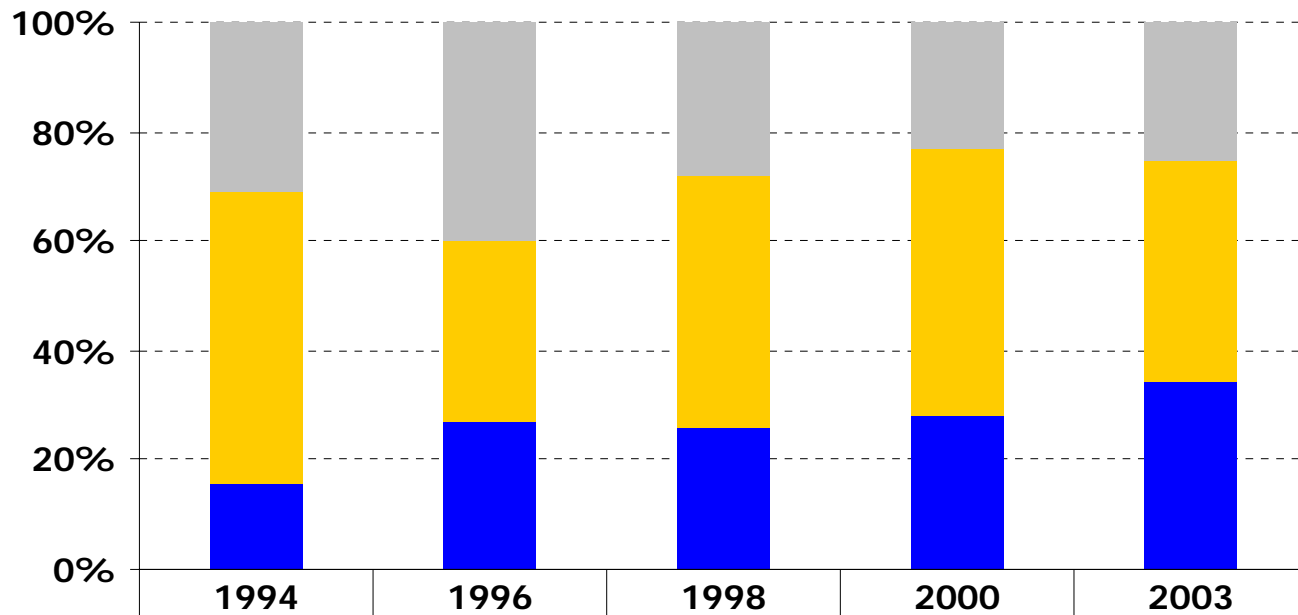
AVERAGE OF SUCCESSFUL PROJECTS: **53%**  
(42 participants)



Source:

1) Archibald & Prado 2006 Research – [www.maturityresearch.com](http://www.maturityresearch.com)

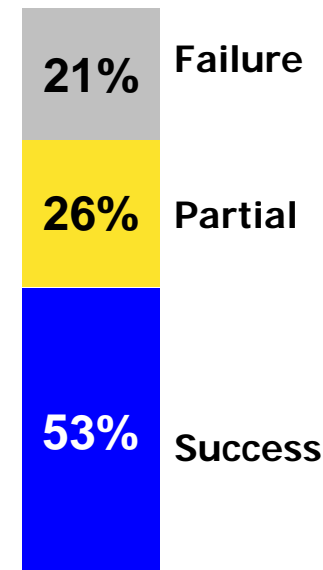
## EVALUATION OF I.T. PROJECTS' SUCCESS (Chaos Report)



■ Failure	31%	40%	28%	23%	25%
■ Partial	53%	33%	46%	49%	41%
■ Success	16%	27%	26%	28%	34%

Source: Chaos Report

## Brazil 2006 Research



### Sources:

- 1) Standish Group - [www.standishgroup.com/chaos](http://www.standishgroup.com/chaos)
- 2) Archibald & Prado 2006 Research - [www.maturityresearch.com](http://www.maturityresearch.com)

## **How to interpret previous data, that shows greater success rates in Brazil?**

The information on the previous page shows greater success rates for Brazil, in comparison with USA and Canada (data from 2003). Also, it is important to notice that failure rates are similar.

We decided not to venture in deductions based on information shown previously, considering the lack of other evidence that could lead to valid conclusions:

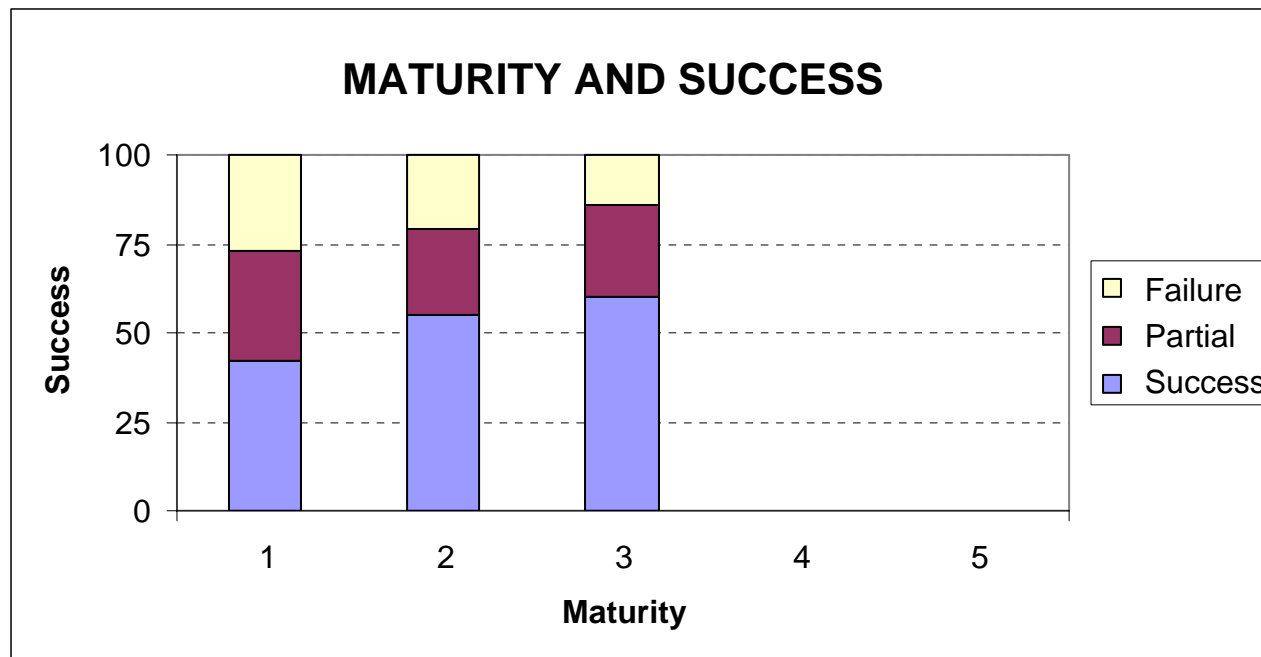
- a) The scenarios of the projects is unknown. The brazilian database could, eventually, contain more favorable scenarios;
- b) The size of the data set is not proportional. While the north american/canadian database contains around 40,000 projects, the brazilian contains around 630.

For the next surveys we hope to improve in this aspect.

The result of crossing maturity (Prado-PMMM model) and success data is shown on the graph below. It covers data for the first three maturity levels only. According to this, there is a correlation between maturity and success, especially if the sum of both types of success (complete and partial) is considered.

Important information:

1. The sample size obtained in the research is very small (42 participants)
2. The conclusions shown above need to be validated with a larger database.



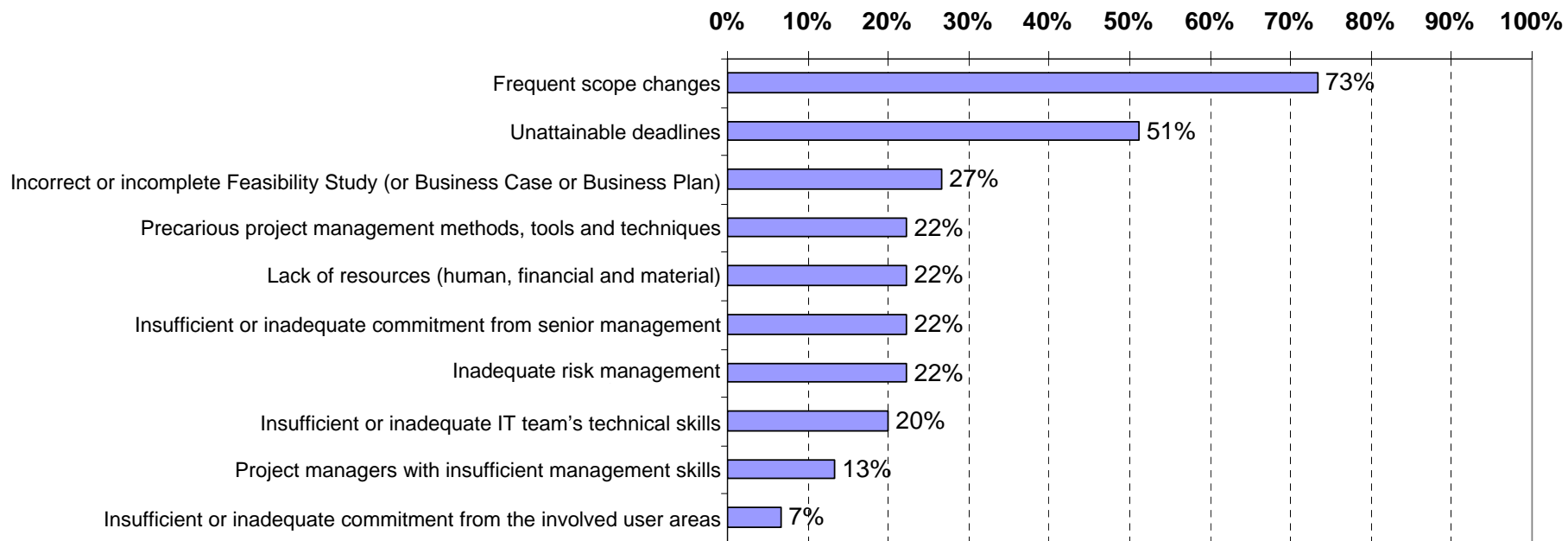
# FAILURE CAUSES

For this survey, participants were instructed to point their three main project failure causes, according to the list below:

- A) Incorrect or incomplete Feasibility Study (or *Business Case* or *Business Plan*).
- B) Frequent scope changes.
- C) Unattainable deadlines.
- D) Insufficient or inadequate commitment from the involved user areas.
- E) Insufficient or inadequate commitment from senior management.
- F) Lack of resources (human, financial and material).
- G) Precarious project management methods, tools and techniques.
- H) Project managers with insufficient management skills.
- I) Insufficient or inadequate IT team's technical skills.
- J) Inadequate risk management.

## MAIN FAILURE CAUSES:

- Frequent scope changes: 73%
- Unattainable deadlines: 51%
- Incorrect or incomplete Feasibility Study: 27%



The previous page shows the failure causes for the **entire** database (42 participants). When divided by maturity level, important details become apparent:

For Level 1 the results are:

1. Scope changes: 50%
2. Precarious PM methods, tools and techniques: 50%
3. Insufficient or inadequate commitment from the involved user areas: 42%

Note the presence of “precarious PM methods, tools and techniques”, which was expected for this maturity level.



For Level 2, the main failure causes were:

1. Scope changes: 83%
2. Unattainable deadlines: 65%
3. Insufficient or inadequate commitment from the involved user areas: 30%

The “precarious project management methods, tools and techniques” cause shows up with 17%

For Level 3, the main failure causes were:

1. Scope changes: 78%
2. Insufficient or inadequate commitment from senior management: 56%
3. Incorrect or incomplete Feasibility Study: 44%
4. Unattainable deadlines: 44%

The cause “precarious project management methods, tools and techniques” did not occur (0%)  
Unfortunately, the sample size did not allow an analysis for maturity levels 4 and 5.

The failure causes, when divided by maturity levels, shows results that are expected to happen considering the definition of corresponding maturity levels on the Prado-PMMM model. Thus, the “precarious project management methods, tools and techniques” cause affects level 1 significantly, has relative influence on level 2 and does not show up on level 3.

On the other hand, the “frequent scope changes” cause - included because it is frequently pointed out as the major IT projects’ problem – is certainly not a root cause, but the consequence of other causes, such as “incorrect or incomplete Feasibility Study”, “precarious project management methods, tools and techniques” and inherent difficulties of the IT enterprise environment itself. One could think in the same direction for the “unattainable deadlines” cause.

These aspects will be better explored in the next survey.

# NEXT STEPS:

On the next version of this survey, we intend to extend the questionnaire and introduce other variables that can affect an IT department project's success.

Our intentions is to draw inspiration from our practical experience and from INDG consultants team experience – whom we worked with – in a study group yet to be created, as well as from available publications such as PMCDF – Project Manager Competency Development Framework, published by PMI.

According to this survey, the following are determinant factors to IT projects (software) success:

1. Project complexity (inherent project portfolio difficulties)
2. Team motivation
3. The team's technical skill level for the needs of the project portfolio
4. Clients/competitors/pressure business scenario/external factors
5. Project management maturity level

Some of the factors shown above can be grouped in a new variable that will be called **PROJECT SCENARIO** in our next survey.

# Who participated in this survey

# Who participated in the second stage

Business area	# participants
Food, beverages	2
Banks, financial, insurance	4
Construction	1
Consulting	3
Education	1
Engineering	1
Health	2
<b>IT</b>	<b>23</b>
Telecommunications	2
Logistics & Transport	1
Other areas	1
<b>TOTAL</b>	<b>42</b>

Company type	# participants
<b>Privately-owned</b>	<b>36</b>
Government (Direct administration)	1
Government (indirect administration)	5
3rd sector	0

State	# part.
BA	1
DF	5
GO	1
<b>MG</b>	<b>8</b>
PE	2
PR	2
RJ	5
RS	4
<b>SP</b>	<b>14</b>

According to the tables shown, most of the participants come from:

- Private-owned business
- IT business area
- MG and SP states

- **Average 2006 values by participant organization:**
  - **Quantity of project managers: 5 (leader or coordinator)**
  - **Amount of executed projects: 15**
- **The database of 42 participants had a rough total of 630 projects.**

## **COMMITTEE**

Russell Archibald, Darci Prado, Fernando Ladeira, Warlei Oliveira.

## **GENERAL COORDINATOR**

Darci Prado

## **WEBSITE DEVELOPMENT**

Responsáveis: Warlei Oliveira e Carlos Eduardo Carvalho de Andrade  
Daniela Sarmiento, George Jamil and José Carlos Tinoco

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Ivo M. Michalick Vasconcelos, Fabiano Valente, Wagner Maxsen, Pedro Vergueiro and Manuel Carvalho Neto

## **DATA ANALYSIS**

Responsible: Fernando Ladeira  
Fernando Ladeira and José Flausino

## **FINAL REPORT**

Responsible: Not defined yet

Carlos Eduardo Carvalho de Andrade, Darci Prado, Fernando Ladeira Fernandes, Ivo M. Michalick Vasconcelos, José Ricardo Miglioli, Juscélia Souza de Brito, Luiz Gustavo Santos, Manuel Carvalho da Silva Neto, Márcio Tibo, Maria Gontijo Álvares, Ricardo Nogueira de Matos, Russell D. Archibald, Rodrigo Fernandes do Espírito Santo, Warlei Agnelo de Oliveira



**THE END**