

## 2006 MPCM Research Results in Brazil

# MATURITY AND SUCCESS IN I.T. PROJECT MANAGEMENT

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&  
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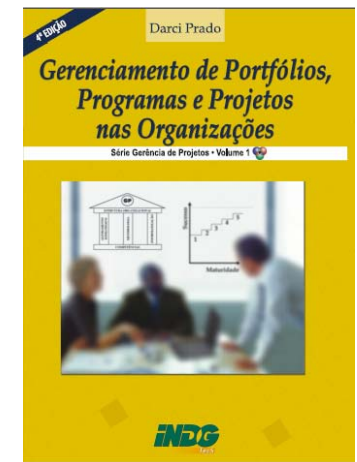
## RUSSEL D. ARCHIBALD


- MSC, PhD
- PMP, IPMA
- A Co-Founder of PMI-USA
- World known consultant
- Listed on "Who is Who"
- **Project Category Model**



## DARCI PRADO

- IBM
- IPMA – Level B
- Founder of PMI-MG e PMI-PR
- INDG Partner & Consultant
- PM Methodology
- **Maturity Model**



- Brazil in perspective
- Brazilian PM Maturity Research in 2006:
  - Presentation
  - Global Results
-  • Brazilian PM Maturity Research in 2006: Maturity and Success in I.T. Projects
- Next Steps

|    | GNP            | POPULATION                  | AREA          |
|----|----------------|-----------------------------|---------------|
| 1  | USA            | CHINA                       | RUSSIA        |
| 2  | EUROPEAN UNION | INDIA                       | CANADA        |
| 3  | CHINA          | USA                         | USA           |
| 4  | JAPAN          | INDONÉSIA                   | CHINA         |
| 5  | INDIA          | <b>BRAZIL</b>               | <b>BRAZIL</b> |
| 6  | GERMANY        | PAKISTAN                    | AUSTRALIA     |
| 7  | UNITED KINGDOM | <b>GNP PER CAPITA: 72nd</b> |               |
| 8  | FRANCE         |                             | ARGENTINA     |
| 9  | ITALY          | NIGÉRIA                     | KAZAKHSTAN    |
| 10 | RUSSIA         | JAPAN                       | SUDAN         |
| 11 | <b>BRAZIL</b>  | MEXICO                      | ALGERIA       |
| 12 | CANADA         |                             | NETHERLANDS   |
| 13 | MEXICO         | <b>CHINA: 84th</b>          | IRELAND       |
| 14 | SPAIN          | <b>INDIA: 122nd</b>         | PORTUGAL      |

**MPCM**  
Maturity by Project Category Model

Português  
English

**HOME**

**INFORMATION**

- PRADO-MMGP MODEL
- ARCHIBALD CATEG.
- BUSINESSES
- BIOGRAPHIES

**2005 RESULTS**

- RESULTS
- DOWNLOADS
- TEAM

**2006 RESULTS**

- RESULTS
- DOWNLOADS
- TEAM

**WHO ANSWER**

**RECOMMENDATIONS**

**SUPPORT**

**VIRTUAL LIBRARY**

**CONTACT US**

Welcome to Archibald & Prado site  
**MATURITY IN PROJECT MANAGEMENT**

**START EVALUATION**

At this site you will find important information to evaluate the PM Maturity of your organization and/or analyse Brazilian last researches results.

Using these informations you could compare your department results with the results of other organizations, in the same business segment or project category, thus creating a convenient growing plan.

Among the information available at our site, you can see that the average maturity for Brazilian organizations was **2,42** (in a scale from 1 to 5), with the stratification shown in the graph.

You can also verify that the success index for the project category Information Systems (software related) was 53% and that the maturity level for this category was 2,35 at 2006 research.

At the [Download Section](#) the complete data for all researches that have been conducted at Brazil is freely obtainable.

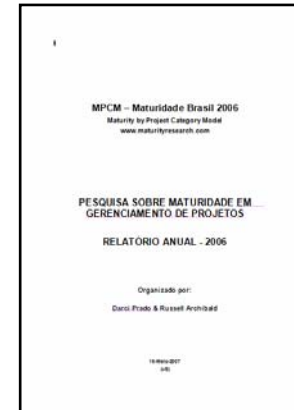
The [Portuguese version of Final 2006 Report](#) contains 161 pages, as a reference about the huge work done to reach final results. At the Virtual Library Section a selective collection of articles that shows the state-of-art of these subjects in the world can be seen.

There we have the complete list of the 258 organizations that participated at the 2006 research and the names and curriculum of the people that worked to produce all research material. We are a team about 40 volunteers; all considered experienced on the research subjects. Our mission is to contribute to the evolution of PM in Brazil.

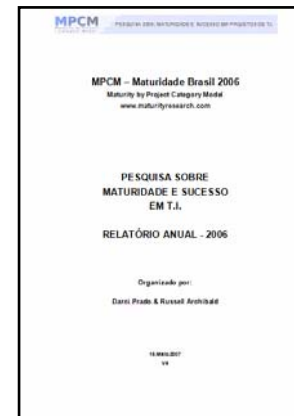
**HOW TO AVALUATE THE MATURITY OF YOUR ORGANIZATION**

Using this site is possible to evaluate PM Maturity of any kind of organization (private, government, third sector and others). To start, click at [START EVALUATION](#), at the superior right corner.

| Sector              | Maturity Score |
|---------------------|----------------|
| Private Sector      | 2,45           |
| 3rd Sector          | 2,40           |
| Indirect Adm. Govt. | 2,40           |
| Direct Adm. Govt.   | 2,00           |



Global Maturity  
Report  
(161 pages)



I.T. Success  
Report  
(40 pages)

Website:

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

PORTUGUESE (BRAZIL)

ENGLISH

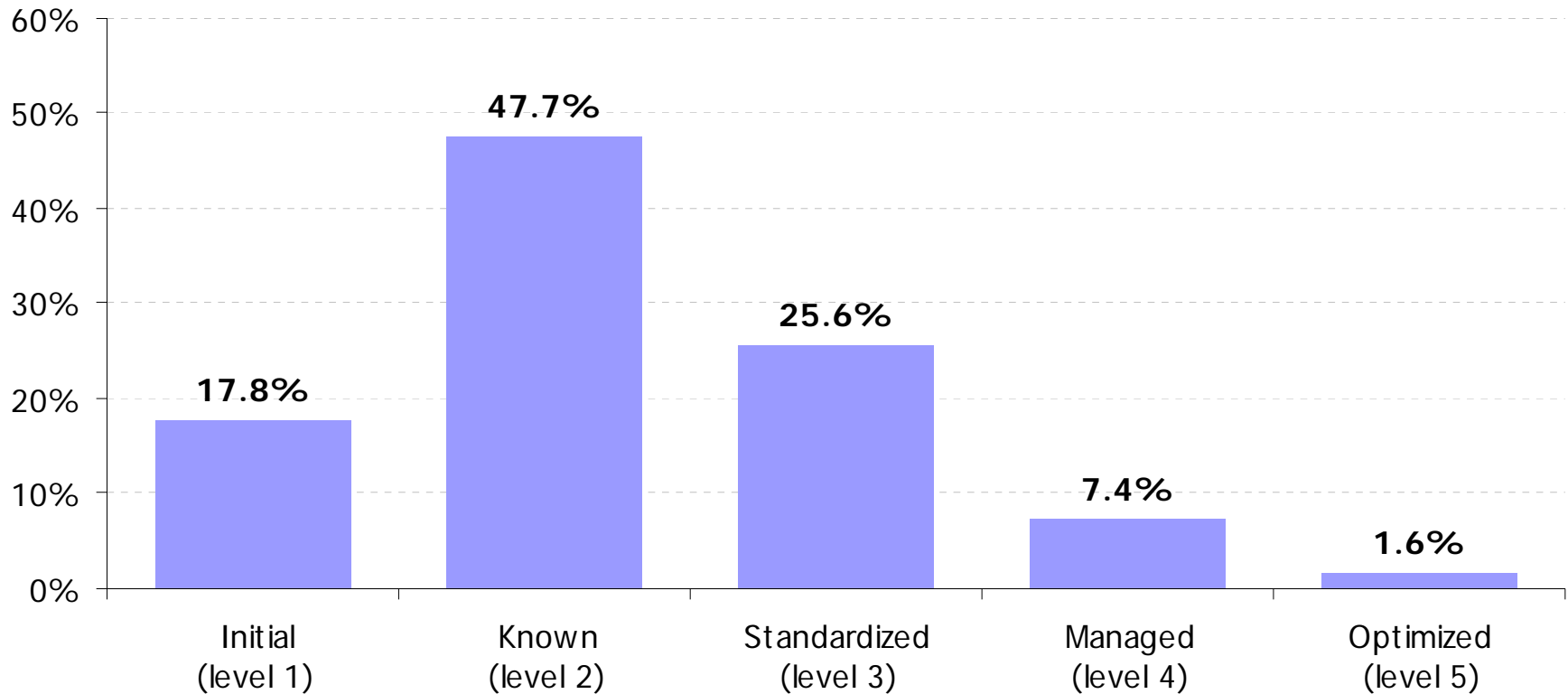
Free use

Free distribution

# **MATURITY**

# **GLOBAL RESULTS**

Average overall maturity: 2.42

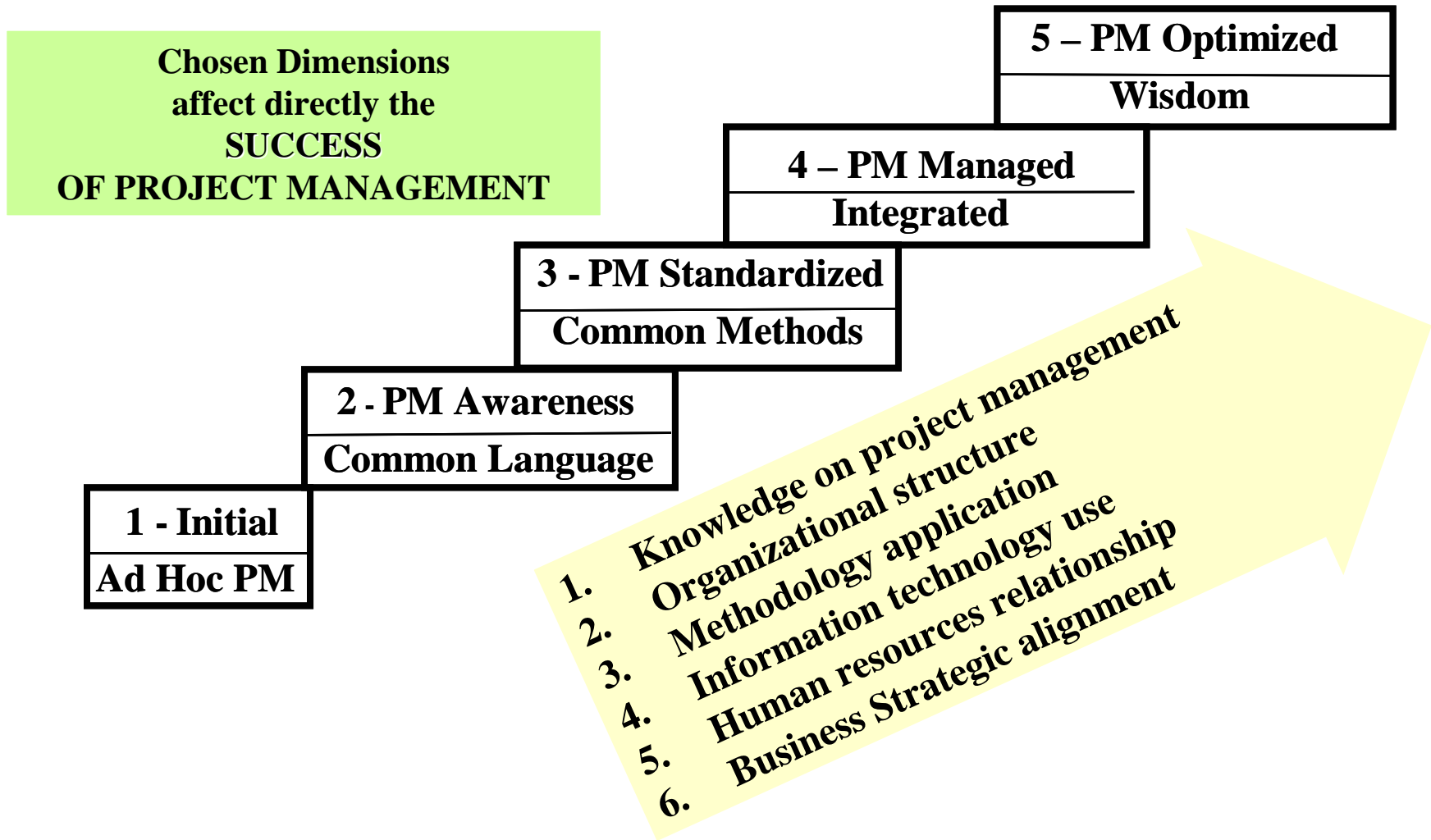


## LEVELS

1. INITIAL
2. KNOWN
3. STANDARDIZED
4. MANAGED
5. OPTIMIZED

## DIMENSIONS

1. KNOWLEDGE ABOUT PROJECT MANAGEMENT
2. USE OF A METHODOLOGY
3. USE OF INFORMATION TECHNOLOGY
4. ORGANIZATIONAL STRUCTURE
5. HUMAN RESOURCES RELATIONSHIP
6. BUSINESS STRATEGIC ALIGNMENT



## 1- INITIAL (Ad hoc):

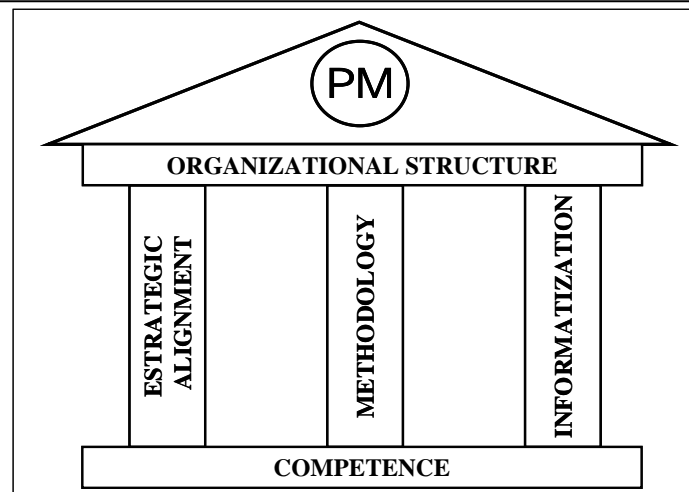
- Poor knowledge of project management
- There is no management model or methodology
- Project management based on intuition

## 2- KNOWN (awareness):

- Investment on knowledge (training)
- Starts the creation of a new culture (project management)
- Initiatives are disperse and non standardized

## 3- STANDARDIZED (processes exist):

- Processes are mapped and standardized
- Organizational business objectives alignment
- Project management platform based on:
  - Organizational structure
  - Methodology
  - Information technology
- Based also on competence
- Habitual use of standards by managers



## 4- MANAGED (processes really work):

- Initial standards were improved and are in full use
- Error factors identified and eliminated
- Efficient human resources relationship
- Efficient business objectives alignment

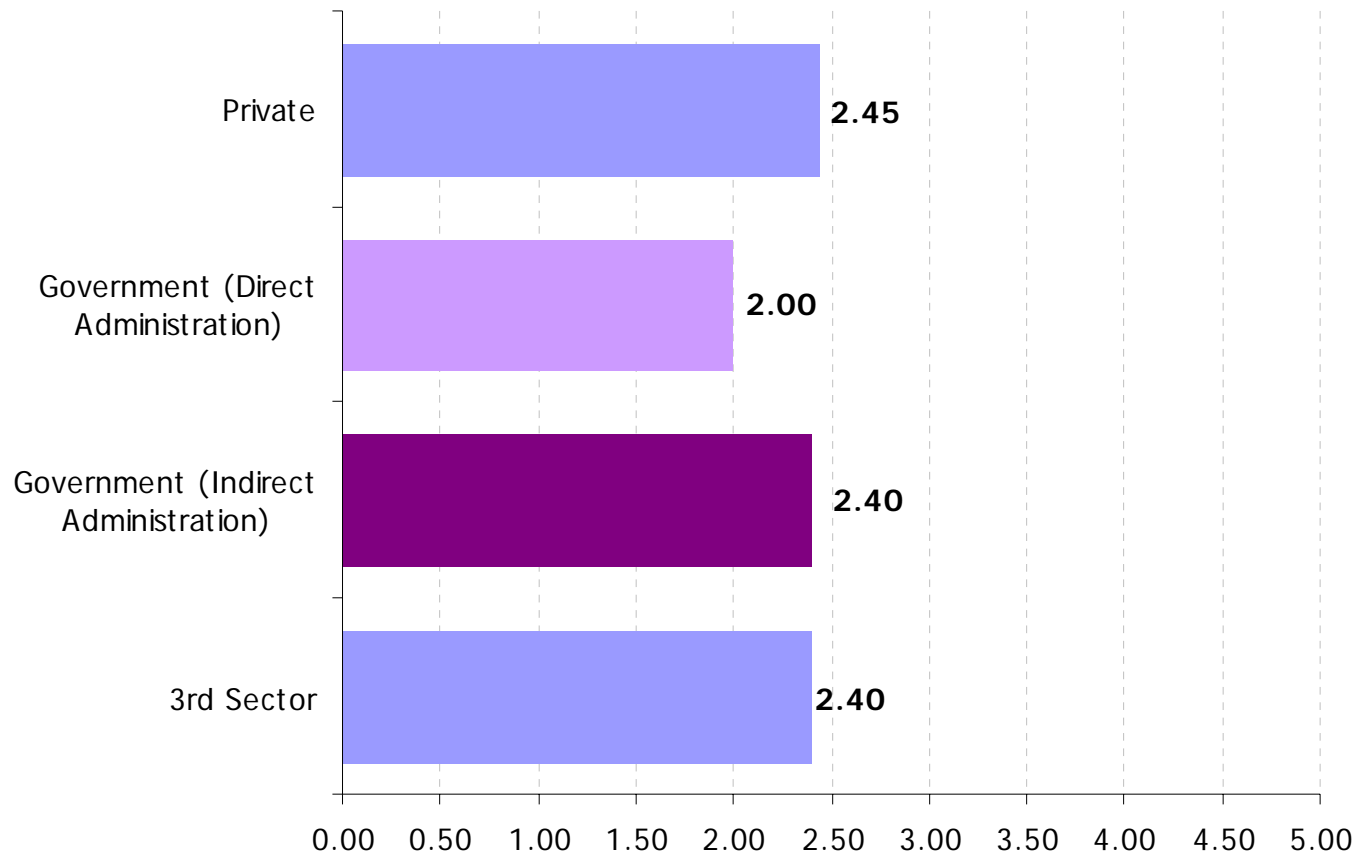
## 5- OPTIMIZED:

- Optimization:
  - Schedule
  - Cost
  - Quality
  - Management processes

## 5- OPTIMIZED:

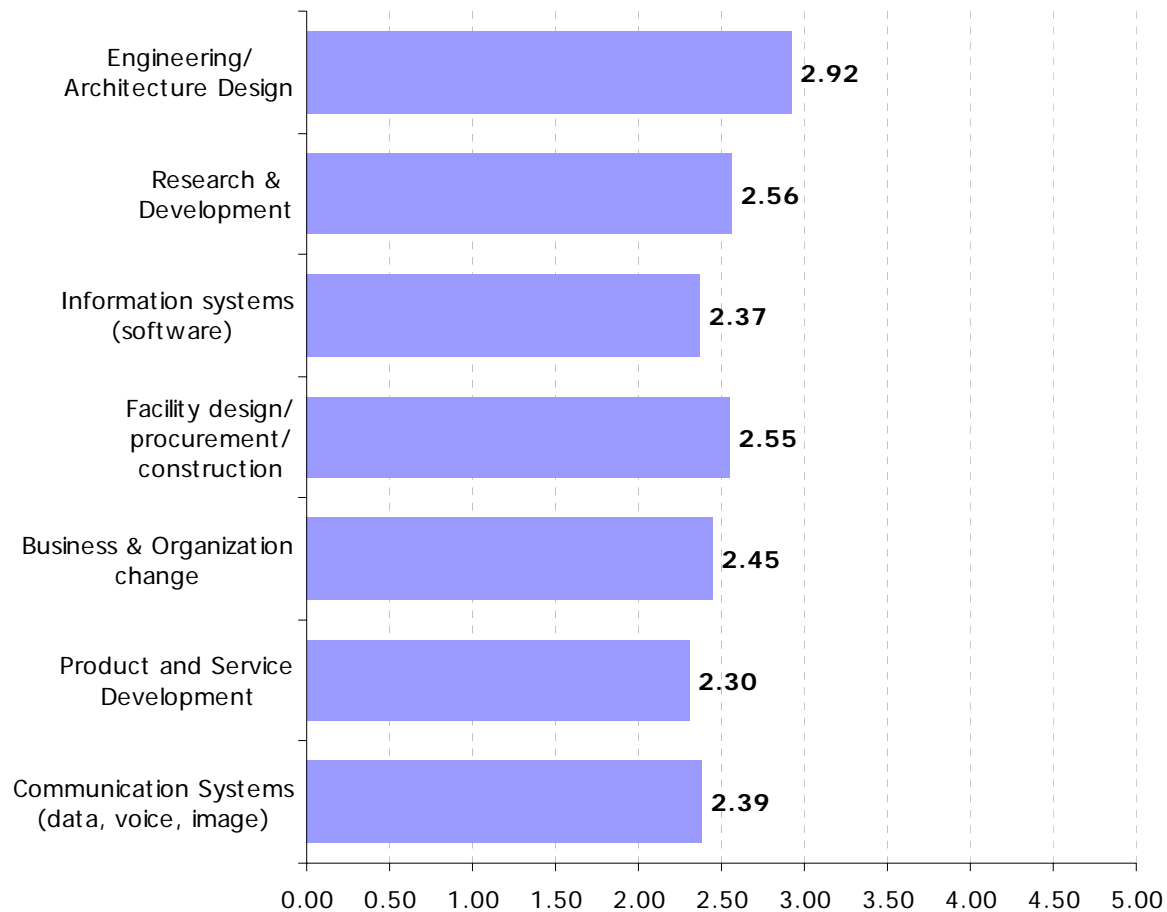
- Consequences
  - Low level of stress
  - Low level of misinformation
  - Natural behavior
  - Wisdom

## Average maturity by organization type



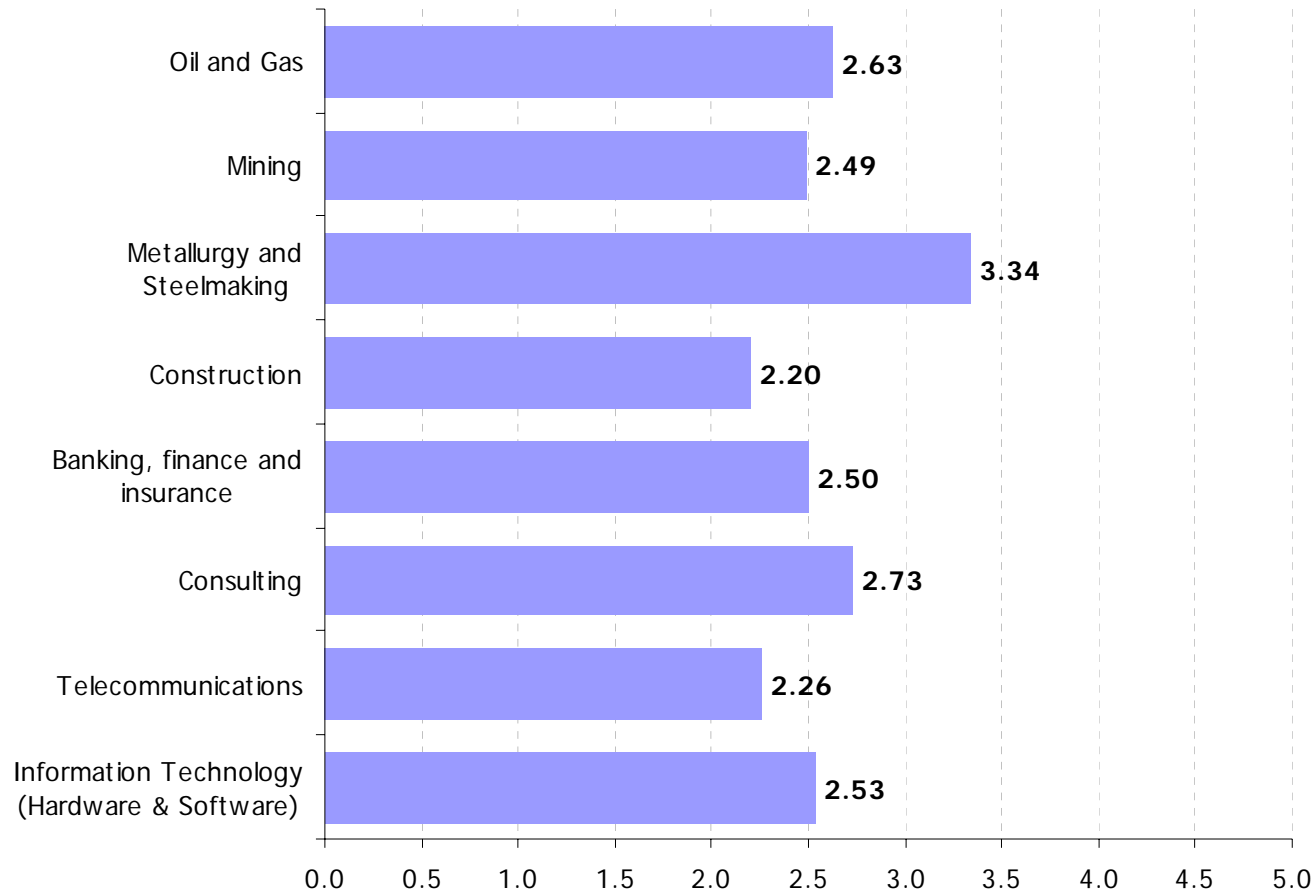
Warning: Govt. (Direct Organization) and Third sector had less than 28 participants

## Average maturity by project category (Archibald)



Warning: Only two categories had more than 28 participants: "Facility design/ procurement/ construction" and "Information Systems (software)".

## Average maturity by business sector



Warning: Only two categories had more than 28 participants: "Telecommunication" and "Information Technology".

# **Maturity And success in I.T.**

## **INTRODUCTION**

- IBBS and REGINATO – 2002
  - Maturity Berkerley Model
  - Success measured by CPI and SPI
- JIANG and Other - 2004
  - CMMI

## TWO COMMENTS ABOUT MATURITY AND SUCCESS

- **Standish Group 2004 Report:** the main reason for project failure is not the absence of general resources or financial resources, but the lack of PM knowledge.
- **PMI – Project Manager Development Capabilities Framework:** there is a positive relationship between the success of a project (any category) and the following factors: project manager competence, organizational maturity and contingency factors such as project characteristics, life cycle characteristics, project structure, etc.

1. Determine the I.T. PM maturity level in each organization
  - Using the Prado Model
2. Determine the success level achieved within their I. T. projects

## AN EXPLORATORY STUDY

- Determine the level of success in Brazilian organizations for I.T. projects and:
  - Use practical definitions of success and failure
  - Compare with the Chaos Report
  - Determine failure causes
- Verify the existence of a positive correlation between PM maturity and project success
- Present the simplified concepts to the research participants and prepare them for a new and more sophisticated research phase to be conducted in 2008

## **TYPES OF I.T. PROJECTS**

- Application development
- Installation of externally furnished packages
- Installation of packages in client organizations
- Maintenance of applications

- What is success? (common book definition):
  - Client/user satisfaction;
  - Positive contribution in achieving business objectives;
  - Achievement of the stated scope and the software is being used as originally specified;
  - Accomplishment of the desired technical and quality specifications;
  - Project completion within the desired time and cost limits.

- Usual evaluation of a completed project in Real World:
  - Success
  - Partial success
  - Failure or disaster

Note: Inspired by the definition by the Standish Group

- **Success:** Project was completed on time, within budget and approved scope (with no significant delay). The user is totally satisfied, and the product delivers real value to the business.

Note: Inspired by the definition by the Standish Group

- **Partial (or challenged) Success:** The project was finished and the software is used. However, the project experienced serious problems (significant delay and/or budget overrun) and user satisfaction is partial, or the product does not perform as expected, and/or does not have all the functionality desired and necessary, and/or does not add the expected value to the work or business.

Note: Inspired by the definition by the Standish Group

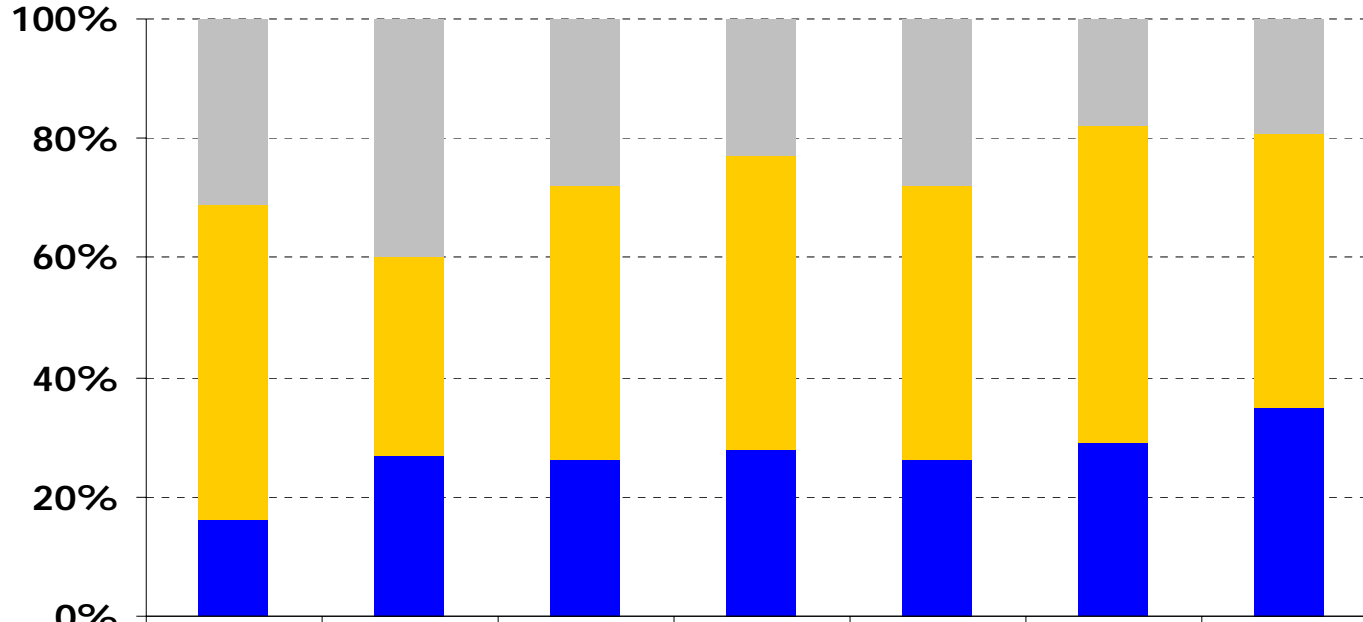
- **Failure:** The project was cancelled or paralyzed, the product delivered does not serve the intended purpose or does not meet the user expectations, or the delay caused serious business losses. The user/client is profoundly dissatisfied.

Note: Inspired by the definition by the Standish Group

# **Maturity And success in I.T.**

## **RESULTS**

### I.T. SUCCESS EVALUATION (Chaos Report)



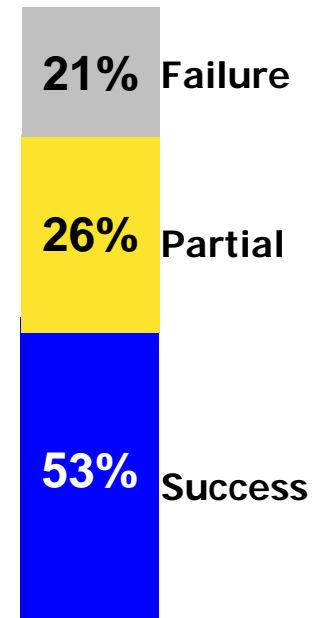
|         | 1994 | 1996 | 1998 | 2000 | 2002 | 2004 | 2006 |
|---------|------|------|------|------|------|------|------|
| Failure | 31%  | 40%  | 28%  | 23%  | 28%  | 18%  | 19%  |
| Partial | 53%  | 33%  | 46%  | 49%  | 46%  | 53%  | 46%  |
| Success | 16%  | 27%  | 26%  | 28%  | 26%  | 29%  | 35%  |

Source: Chaos Report

Sources:

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

### Brazilian 2006 Research



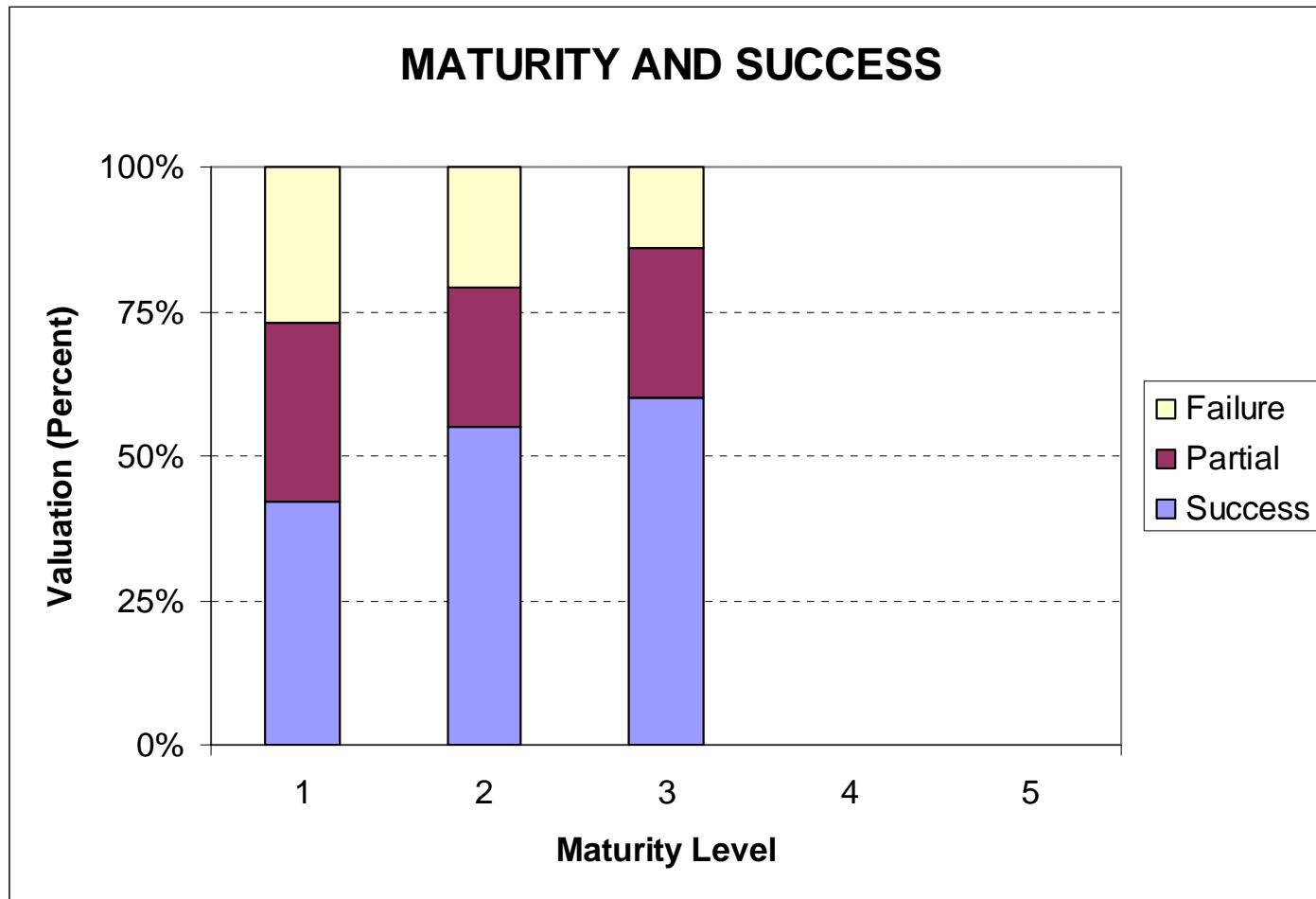
## **How to interpret previous data, that shows greater success rates in Brazil?**

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 are 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.



## CONCLUSION:

**There is a positive relationship between Maturity (Prado-MMGP) and Success.**

# 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>I.T.</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<br>(Direct administration)   | 1              |
| Government<br>(indirect administration) | 5              |
| 3rd sector                              | 0              |

- **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.**

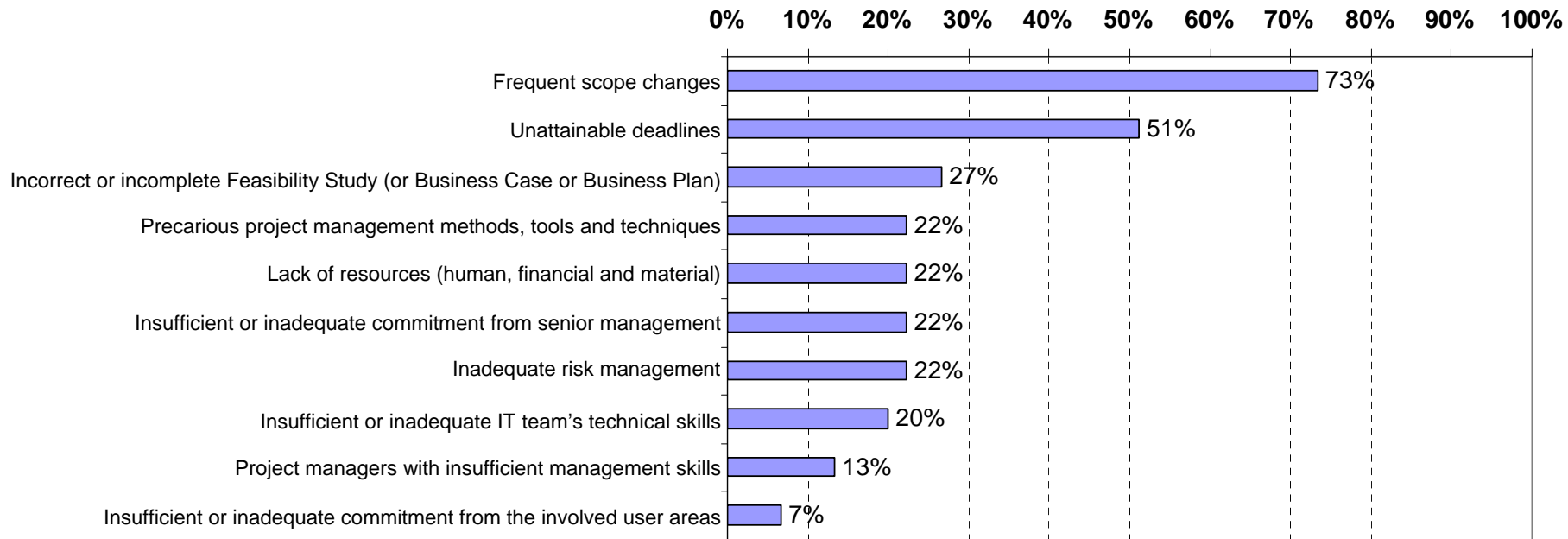
# FAILURE CAUSES

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%



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.

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%

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.

# NEXT STEPS:

On the next version of this survey, we intend to extend the questionnaire and introduce other variables that can affect an I.T. 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 our studies, the following are determinant factors to I.T. 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.

**THE END**