

# **Archibald & Prado Research**

# **2006 Results Preliminary Report**

**Condensed Version  
January 15th, 2007**

This is the **final report – condensed version** of the Archibald & Prado research results, regarding the year of 2006. The complete report will be presented in April 2007, containing all data as well as extensive analysis of the results.

The research was available, for free, at the [www.maturityresearch.com](http://www.maturityresearch.com) website from October to December 2006. The research was taken by **258** professionals of all kinds of Brazilian organizations. The website was also used by dozens of students which have been using the maturity model on their postgraduate study works. This is the second year of this survey.

The final results showed an **average maturity of 2.42**. This is a good score for Brazilian organizations, if we take into account the small amount of time on which Project Management became widely known in Brazil, but, certainly, it is a low score when we realize how much still has to be done.

All results that follows are consolidated and, as we informed in our website, all information is under the following premises:

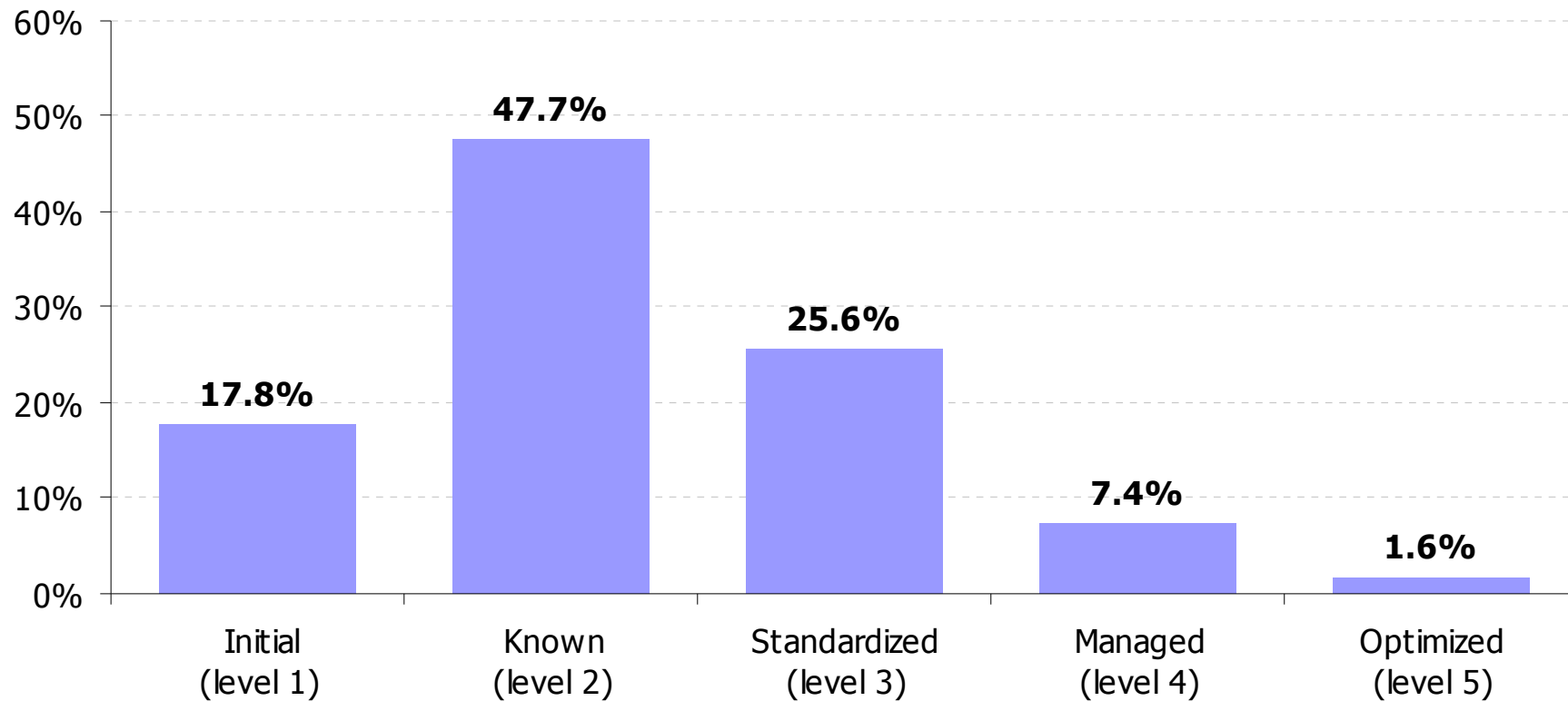
- Only groups with more than 10 participants are shown;
- Individual maturity data will *not* be made available on any media;
- Detailed info will be presented on the Complete Report.

- 2006 Results
  - Overall results
  - Drilled-down results
  - Profile of participants
  - Participants list
- Prado-PMMM model revision
- Participants list
- Research Team
- Thanks

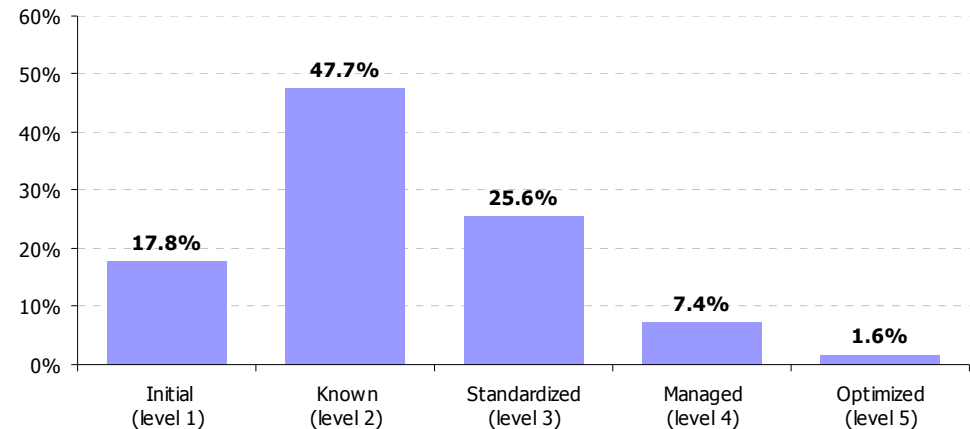
## **This part of the report contains:**

- Overall maturity
- Maturity drilled down by:
  - Organization type
  - Project Category
  - Business type

Average overall maturity: **2.42**



- Level 1** – 17.8% haven't started evolving.
- Level 2** – 47.7% invested in knowledge.
- Level 3** – 25.6% implemented standards and systems.
- Level 4** – 7.4% dominate the process.
- Level 5** – 1.6% reached the optimized level.

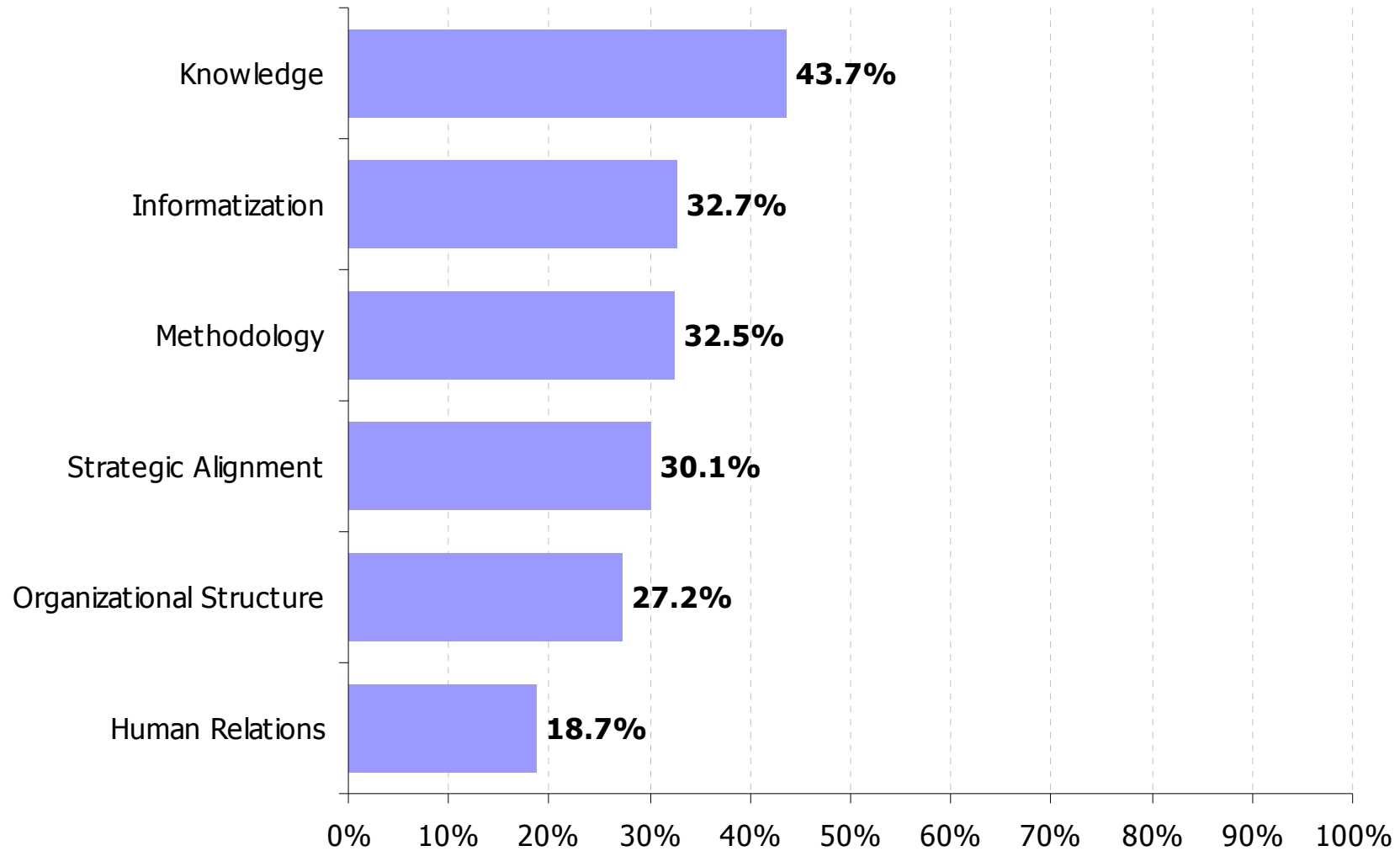


## Comments

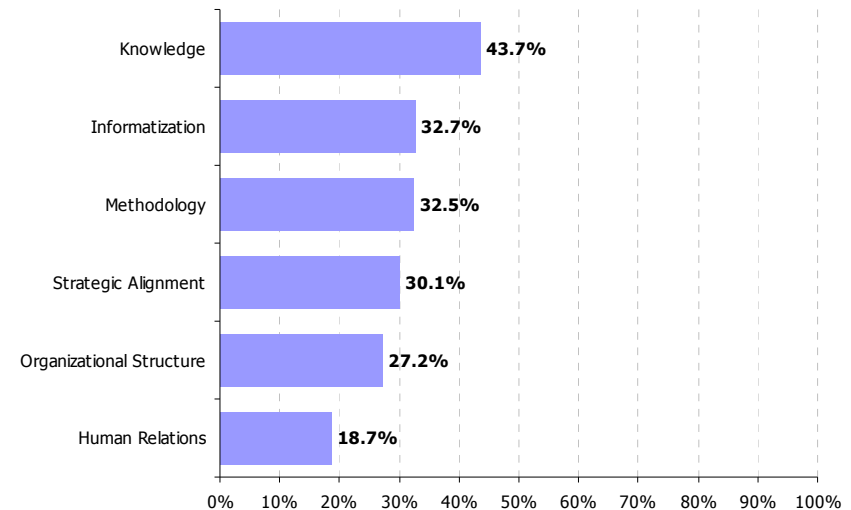
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- In almost 66% (levels 1 and 2) of the participant organizations, Project Management still does not bring results to their business in the way they wish. (3, 4 and 5);
- Only 9% of the participant organizations belong to levels which allow work dominance and optimization (levels 4 and 5).

## Attachment to dimensions



Dimension	Attachment percentage
Knowledge	43.7%
Informatization	32.7%
Methodology	32.5%
Strategic Alignment	30.1%
Organizational Structure	27.2%
Human Relations	18.7%



## Interpretation of results

The results show that:

- “Knowledge”, “Informatization” and “Methodology” dimensions are leading;
- “Human Relations” and “Organizational Structure” dimensions are the last ones.

Conclusions:

- The numbers shown above adhere to the maturity score (2.42). Thus, on the majority of organizations, the evolution is concentrated on the “Knowledge”, “Informatization” and “Methodology” dimensions;
- The scores are certainly very low.



The data shown below was obtained from consolidated groups of organizations, grouped by organization type, project category and business type.

Std. Deviation = 0.81	
Sample size	Error range
252	±0.1
63	±0.2
28	±0.3
16	±0.4
10	±0.5

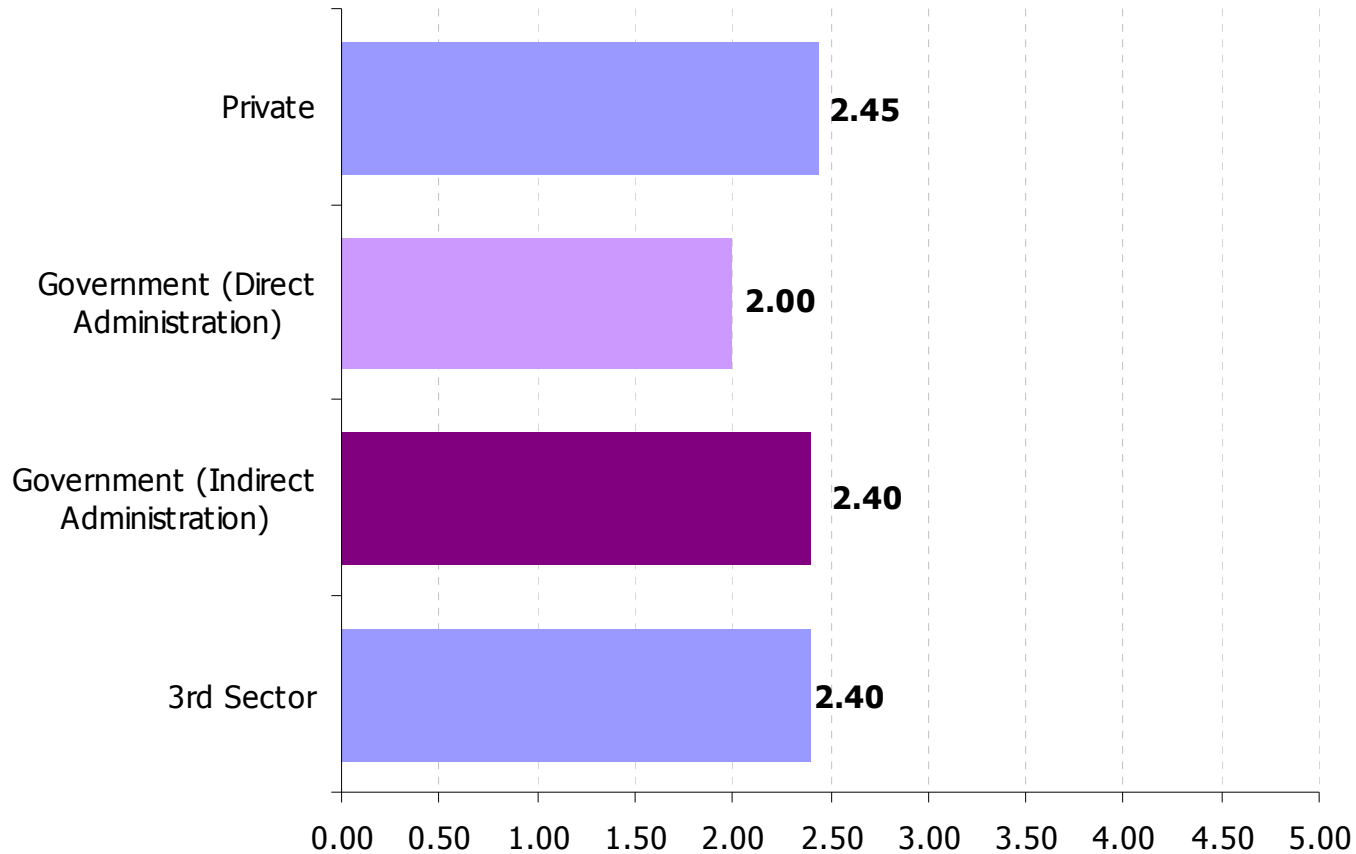
When we analyze the consolidated results, the following question arises: which is the error range for different sample sizes? This question matters even more considering that the sample sizes range from 5 to 116. According to statistics (Sample Size Analysis), for this survey's data, we have the correlations between sample size and error ranges shown on the table to the left.

Considering this research's objectives, an error rate of  $\pm 0.3$  was considered acceptable; error rates above  $\pm 0.5$  were considered unacceptable.

The portions of text ahead follow the criteria below:

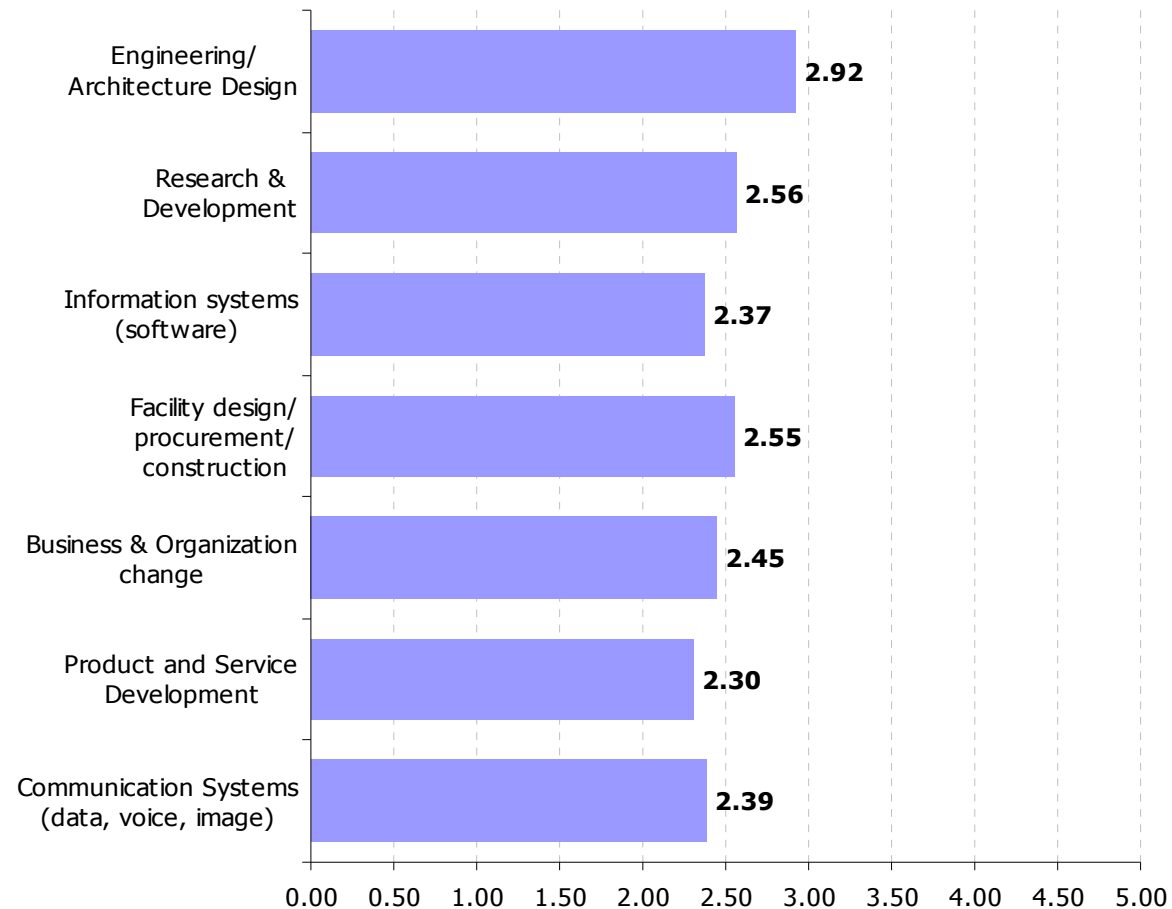
- A warning text is provided whenever a group contains less than 28 participants;
- Groups with less than 10 participants will not be shown;

## Average maturity by organization type



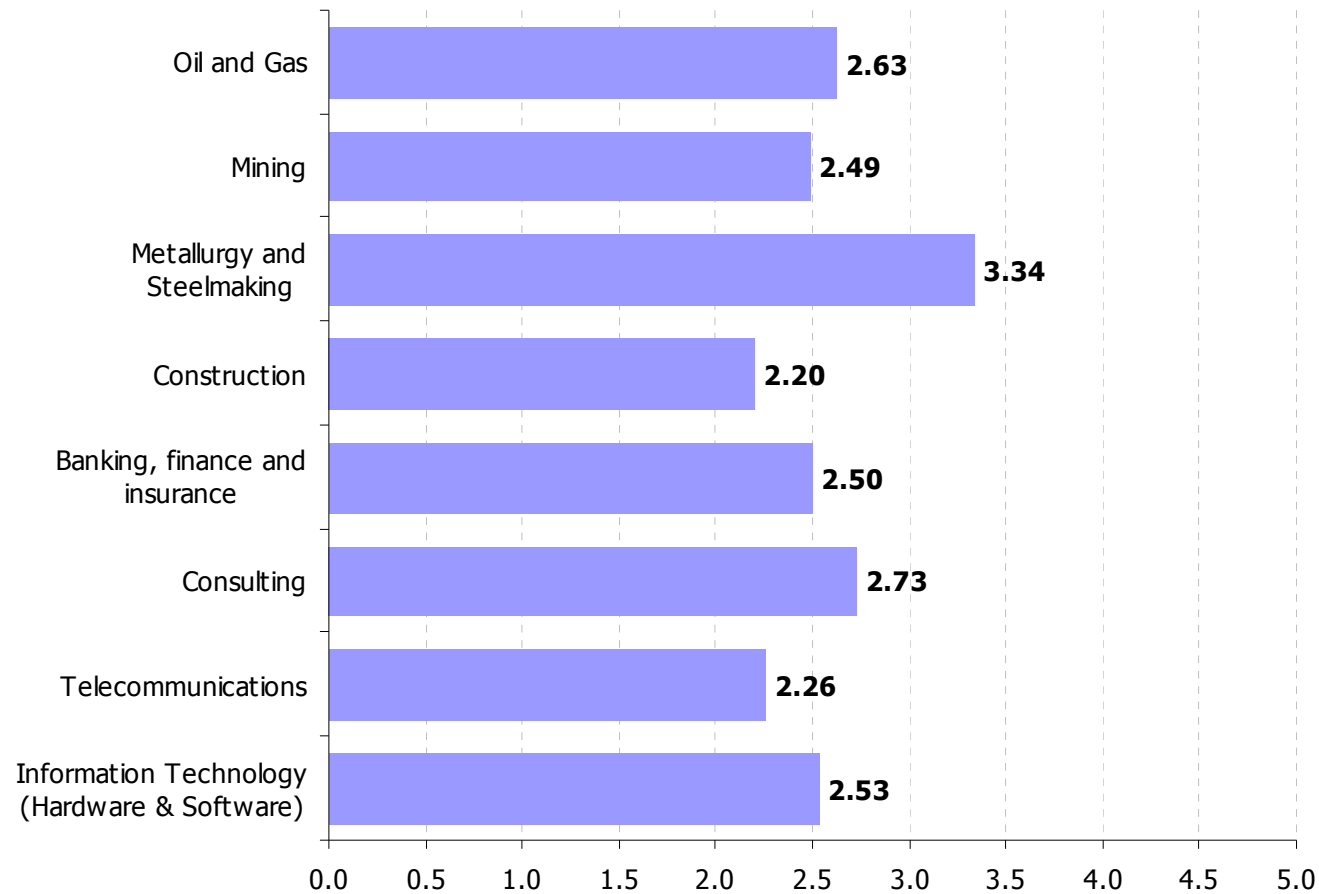
Warning: Govt. (Direct Organization) and Third sector had less than 28 participants

## 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



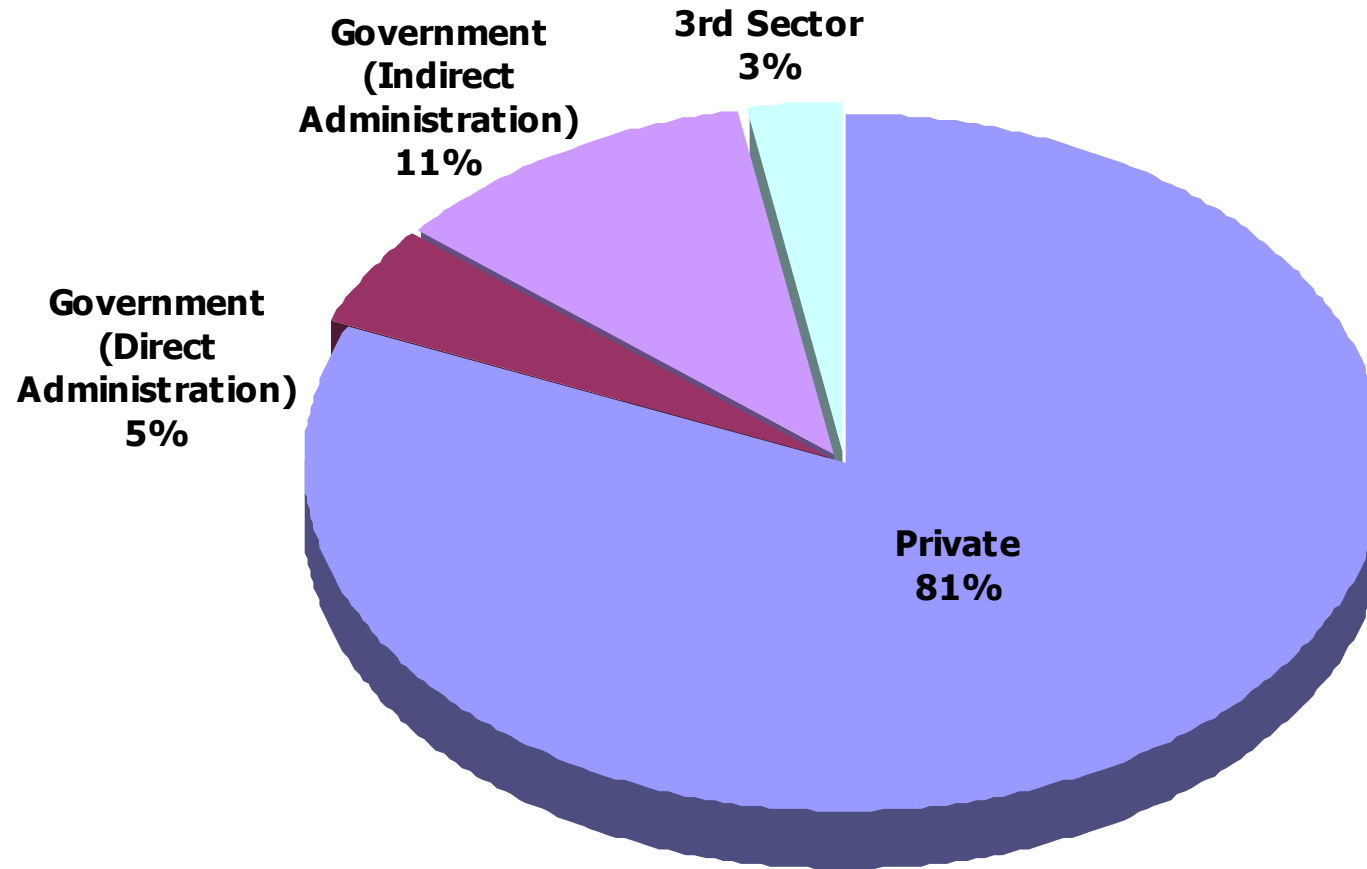
Warning: Only two categories had more than 28 participants: "Telecommunication" and "Information Technology".

## Which organizations reached a maturity score of 4 or 5?

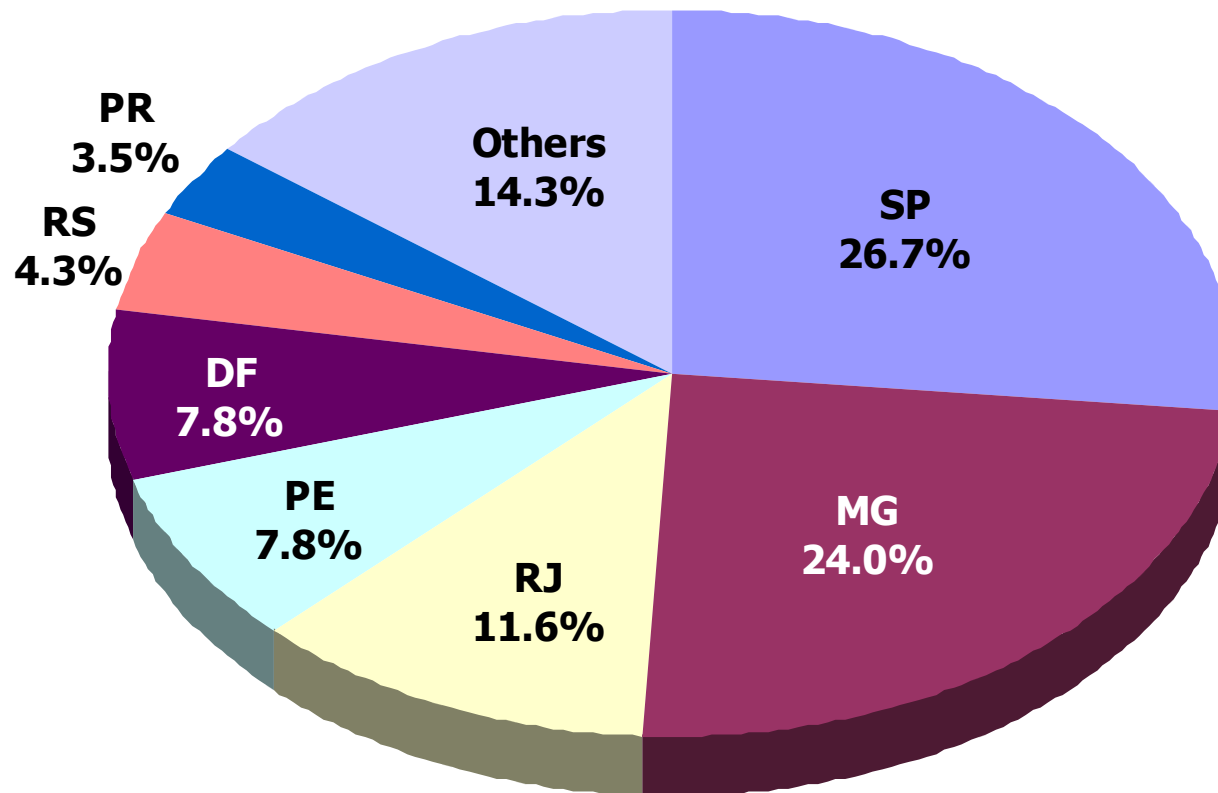
- By state: 5 organizations are in Rio de Janeiro; São Paulo (with 4) and Minas Gerais (with 4) also stand out;
- By type: 21 are private and 2 are government organizations (indirect administration)
- By category (Archibald): "Information systems (software)" category has 8 organizations; "Business and organizational changes" also stand out with 4 organizations;
- By business sector: 8 are in the Information Technology (hardware & software) business; Metallurgy and steelmaking sector (with 4) also stand out.

## Who participated in this research?

## Organization type

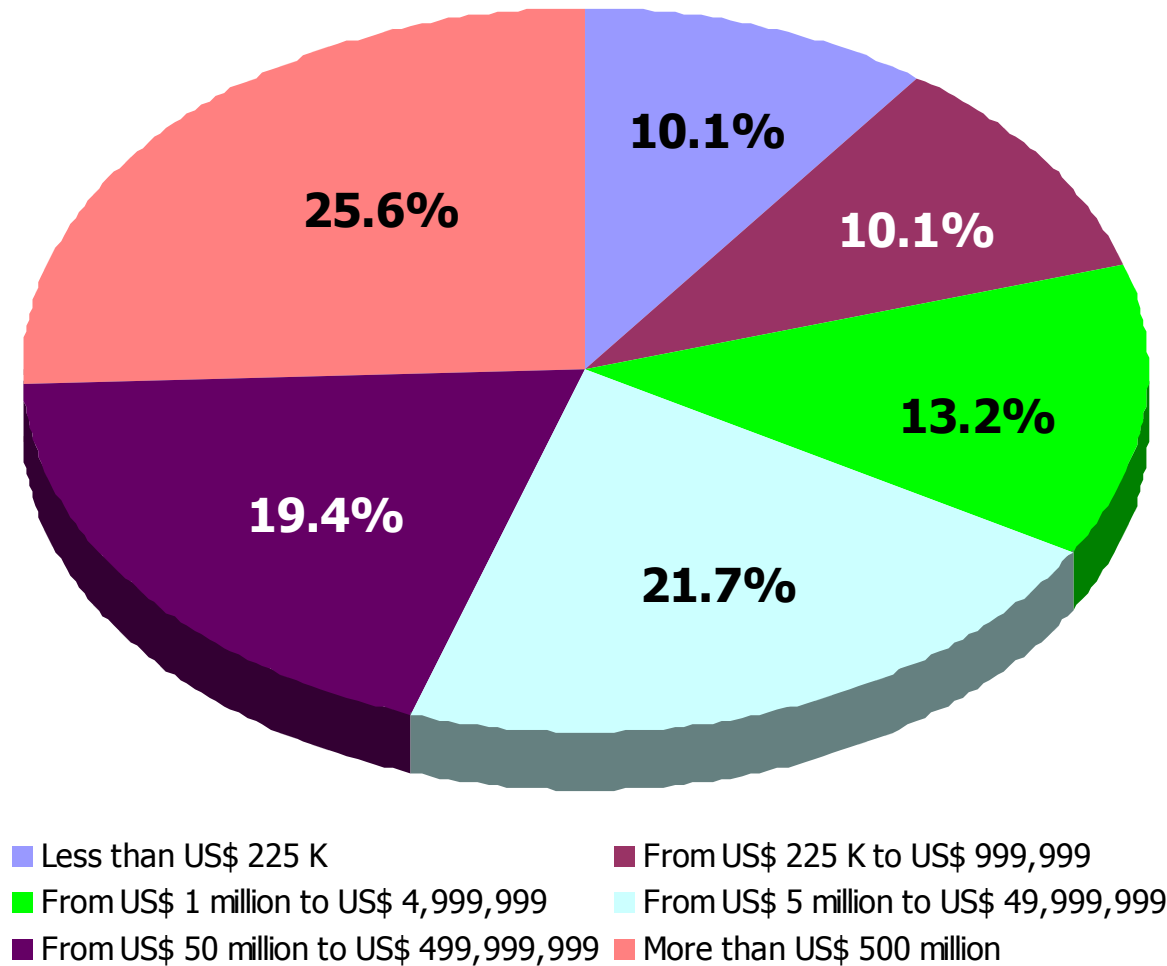


## Location (state)

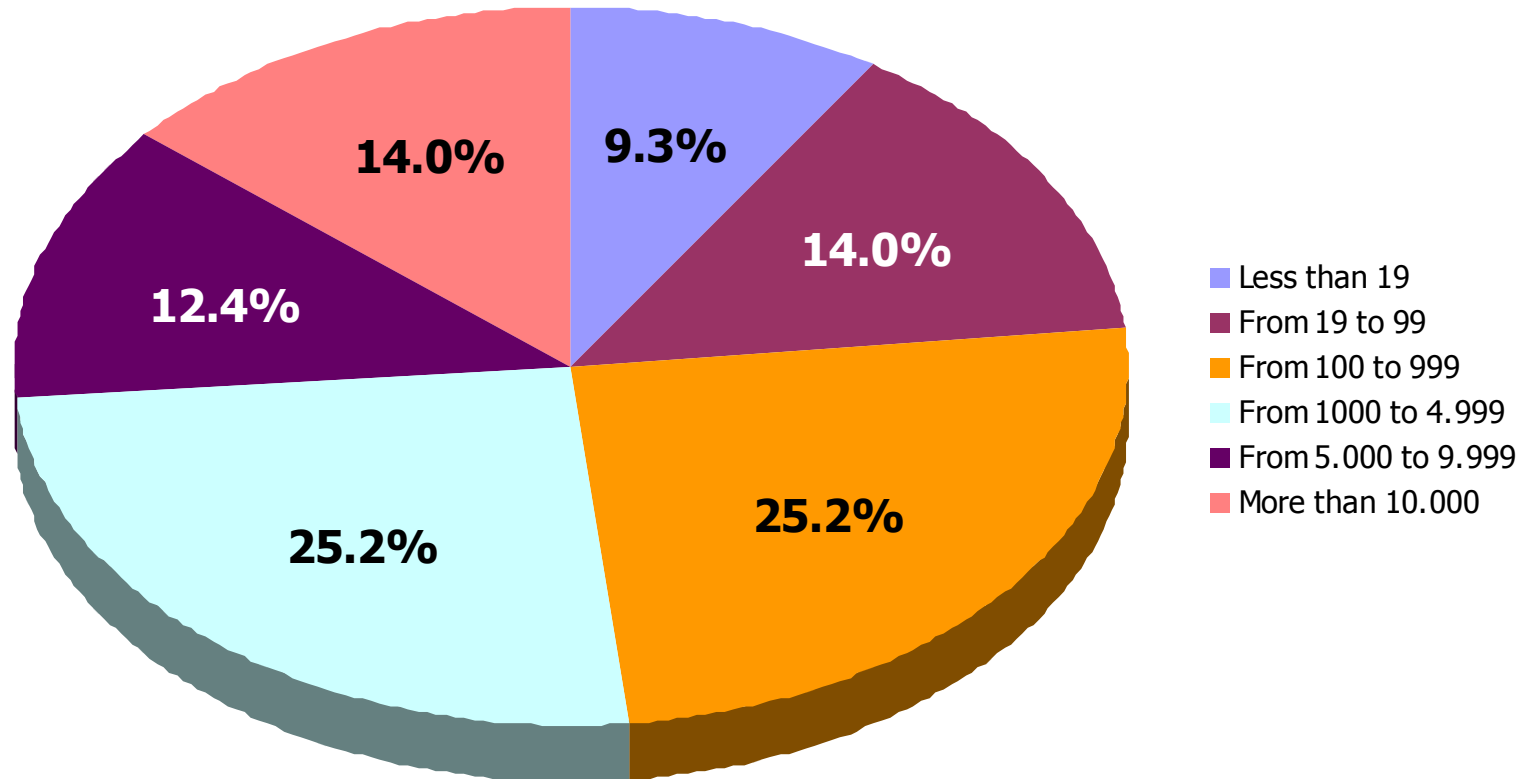




## Earnings (in US\$)



## Number of employees

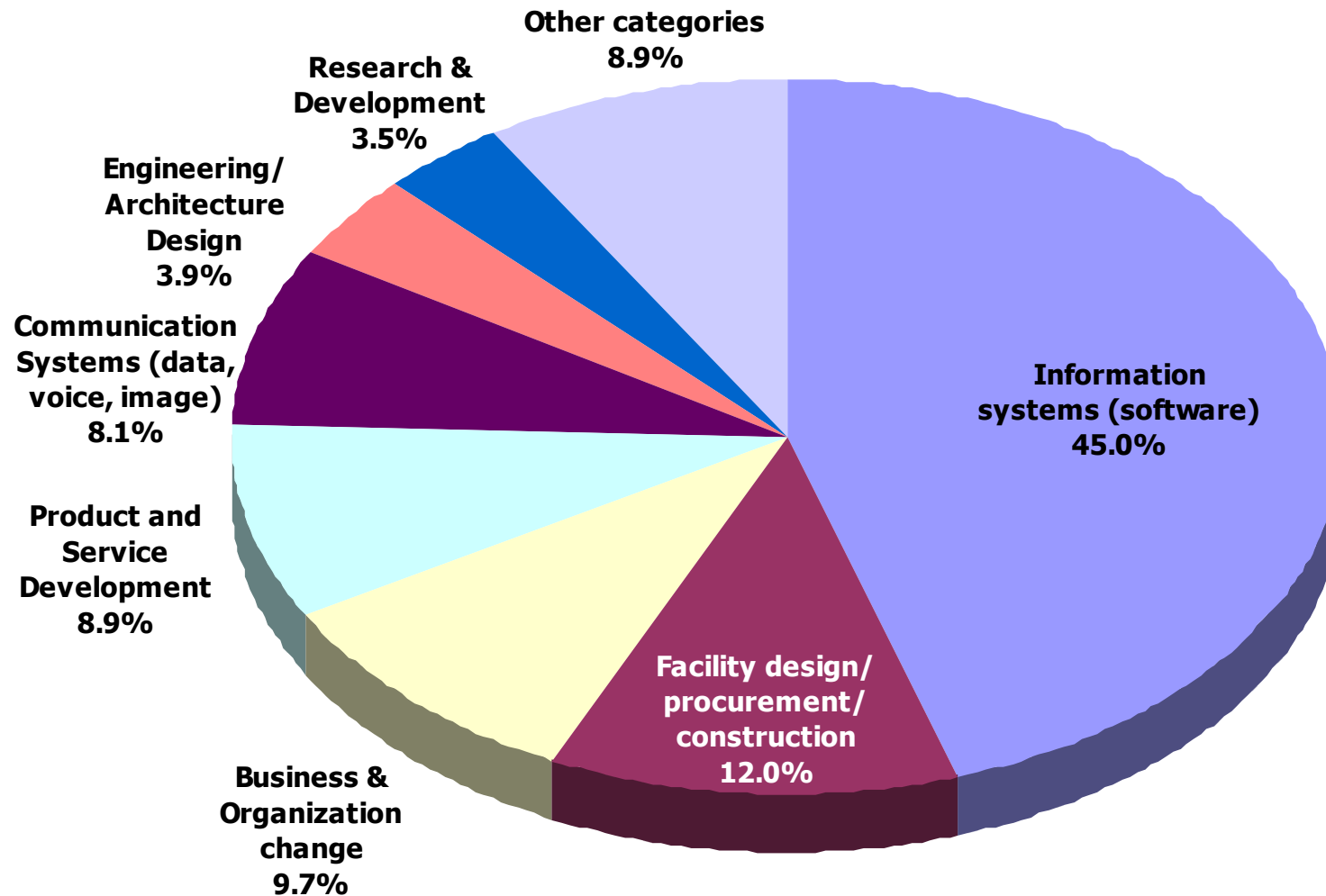


## Category

- 1** Aerospace/Defense Projects
- 2** Business & Organization Change Projects
- 3** Communication Systems Projects (data, voice, image)
- 4** Event Projects
- 5a** Engineering/Architecture Design Projects
- 5b** Facility design/procurement/construction
- 6** Information Systems (Software) Projects
- 7** International or Regional Development Projects
- 8** Media & Entertainment Projects
- 9** Product and Service Development Projects
- 10** Research and Development Projects
- 11** Other categories

Source: Russell D. Archibald

## Distribution by project category (Archibald)



## Business sectors considered

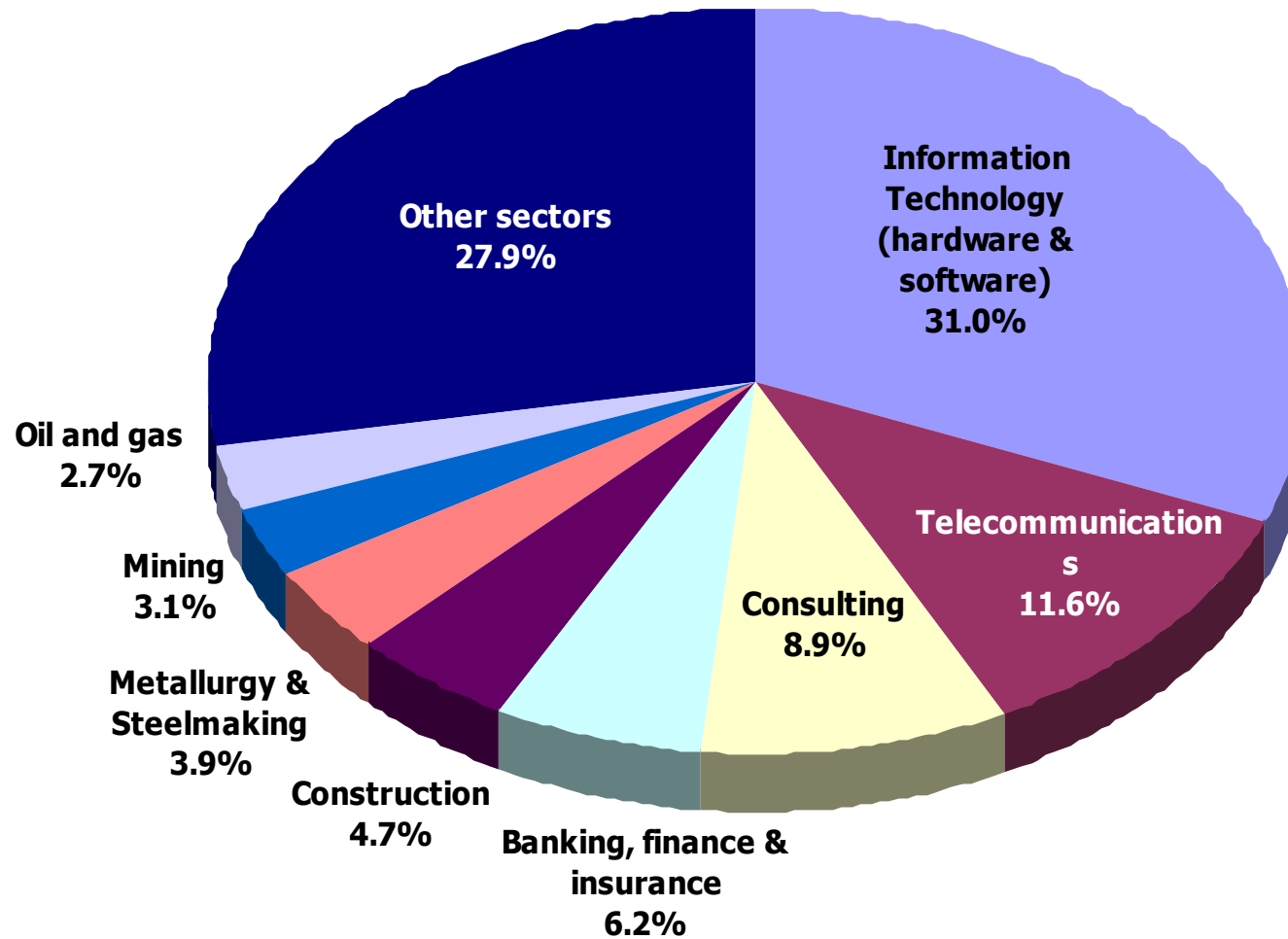
1. Agriculture, Cattle Raising, Silviculture e Forest Exploration
2. Food and beverage
3. Banking, finance and insurance
4. Trading
5. Construction
6. Consulting
7. Defense, Security and Aeronautics
8. Distribution (Water, gas)
9. Education
10. Electronics
11. Engineering
12. Electrical Energy (Production and/or Distribution)
13. Pharmaceutical
14. Mining

## Business sectors considered

(cont.)

15. Metallurgy and Steelmaking
16. Paper and Cellulose
17. Oil and Gas
18. Chemical
19. Refractories, Ceramic and Glass
20. Health
21. Information Technology (Hardware & Software)
22. Telecommunications
23. Textile
24. Transportation, Storage & Services, Logistics
25. Tourism & Sports
26. Automotive & Automotive Parts
27. Clothing, Footwear, Fashion and Sports Equipment
28. Other

## Distribution by business sector



# **Prado-PMMM model review**

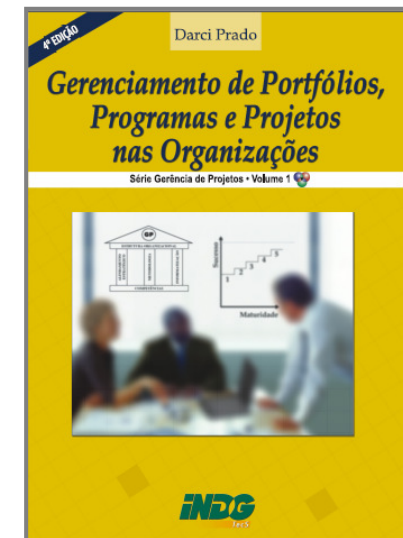


## **What is a maturity model?**

- A form of measuring the status of an organization regarding its Project Management skills;
- A way to obtain an improvement plan:
  - After assessing the actual level, it is possible to establish a path to achieve level 5:
    - High success rates;
    - High productivity;
    - High satisfaction and low stress.

## Model characteristics

- Developed between 1999 and 2002
  - Based on vast practical experience;
  - Published in December 2002.
- Parts:
  - ➔ – Sectorial (released in 2002) – used in this research;
  - Corporate (released in 2004).
- Actual status: Version 4
  - Tested in several organizations;
  - Good consolidation level;
  - Refer to the book shown at the right for more information.



## Criteria used for conception

- **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).
- Try to relate organizational **maturity** with its **ability to successfully execute projects**.

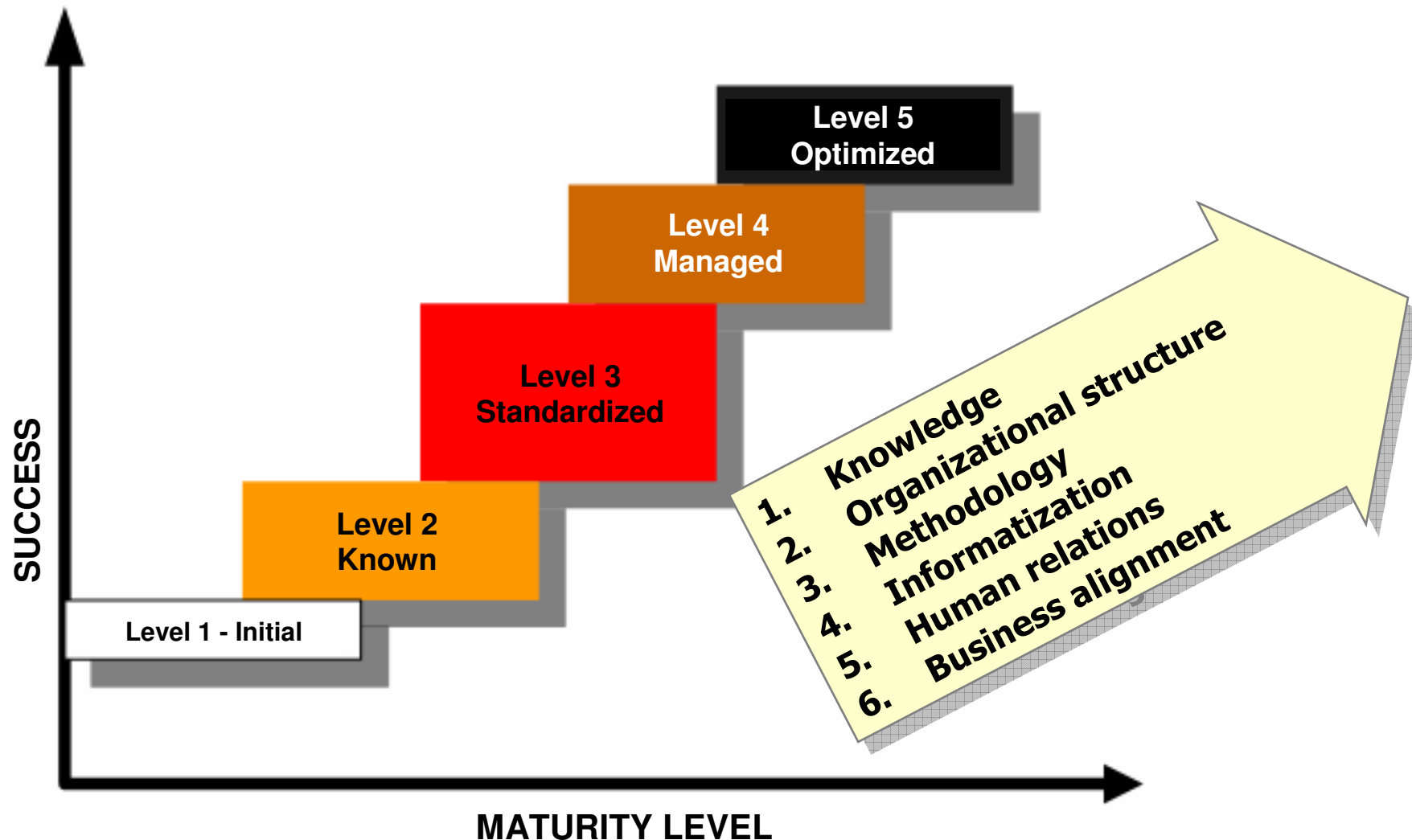
## Levels

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

## Dimensions

1. Project Management knowledge
2. Use of methodology
3. Informatization
4. Use of adequate organizational structure
5. Alignment with corporate business
6. Efficient human relations

## SECTORIAL PMMM: LEVELS vs. DIMENSIONS



## The levels

### 1) Initial

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

### 2) Known

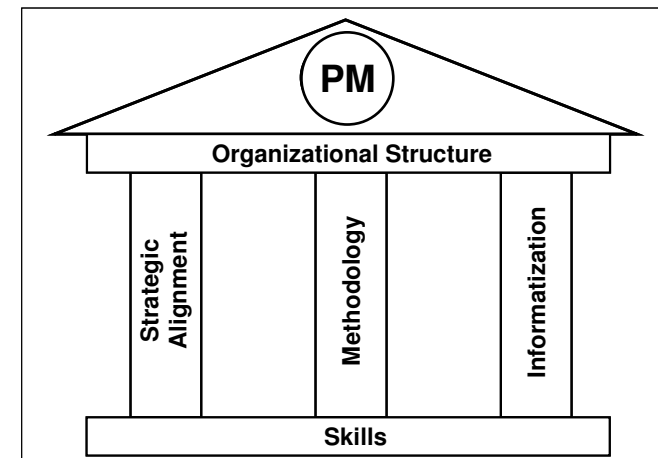
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Beginning of a new culture oriented to skill development

### 3) Standardized

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- Implementation of a Project Management platform:
  - Organizational structure
  - Methodology
  - Informatization
- Use of standards
- Strategic alignment struturation



## The levels

### 4) Managed

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

### 5) Optimized

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- High efficiency (deadlines and costs are optimized)
- Wisdom
- Low stress
- Low interference
- Somewhat natural

## Participants List

Notice: If more than one department of the same company in the same city participated, only one reference to the company is provided in the following list.



# Participants list (1)

Company name	City	State
2RP Informática	São Paulo	SP
ABC	Rio de Janeiro	RJ
AD&M Consultoria Jr. em Administração	Brasília	DF
ADN Tecnologia de Sistemas Ltda	Salvador	BA
AEDB	Resende	RJ
AGF Seguros	São PAulo	SP
Agromídia Software Ltda	Viçosa	MG
Alcatel-Lucent	Campinas	SP
AMANCO Brasil Ltda.	Joinville	SC
Amazon Corporation	Belém	PA
American Express do Brazil	Uberlândia	MG
Andrew do Brasil Ltda	Sorocaba	SP
Anglo Engenharia e Construções Ltda	Belo Horizonte	MG
Apply Solutions	Recife	PE
Arauco do Brasil	Curitiba	PR
Assefaz	Brasília	DF
Atan Ciência da Informação	Belo Horizonte	MG
ATAN Ciencia da Informação LTDA	Belo Horizonte	MG
BANCO BMG SA	Belo Horizonte	MG
Banco Bradesco S/A	Osasco	SP
Banco da Amazonia	Belém	PA
Banco do Estado de Sergipe	Aracaju	SE
Banco Mercantil do Brasil	Belo Horizonte	MG
Banco Prosper	Rio de Janeiro	RJ
BDMG - Banco de Desenvolvimento de Minas Gerais	Belo Horizonte	MG
BHS - Belo Horizonte Sistemas Ltda	Belo Horizonte	MG
BM&F - Bolsa de Mercadorias e Futuros	São Paulo	SP

## Participants list (2)

Company name	City	State
Brasil Telecom	Brasília	DF
Brasil Transportes Intermodal	São Paulo	SP
C.E.S.A.R - Centro de Estudos e Sistemas Avançados do Recife	Recife	PE
CAP - CENTRO AVANÇADO DE PROJETOS	Ipatinga	MG
Carrefour Adm. Cartões Crédito	São Paulo	SP
Carreira Müller	Indaiatuba	SP
Centro de desenvolvimento de Sistemas	Brasília	DF
Cetil Sistemas de Informática	Florianópolis	SC
Citibank S.A.	São Paulo	SP
Clênio Senra Gestão de Empreendimentos Ltda.	Itaúna	MG
CNH Latin America	Contagem	MG
CNO	Camacari	BA
Companhia Siderúrgica Paulista	Cubatão	SP
Companhia Vale do Rio Doce	Belo Horizonte	MG
Companhia Vale do Rio Doce	Rio de Janeiro	RJ
Compass - International Knowledge Center	Rio de Janeiro	RJ
ConsCiência Consultoria & Sistemas	São Paulo	SP
Consoft	São Paulo	SP
CONSTRUCAP CCPS ENG E COM SA	São Paulo	SP
Construções e Comércio Camargo Corrêa S/A	São Paulo	SP
Construtora Andrade Gutierrez S.A.	São Paulo	SP
Construtora Celi Ltda	Aracaju	SE
Consultoria em Implantação de Produtos Oracle	São Paulo	SP
Convergence Consulting	São Paulo	SP
Coopersystem	Brasília	DF
Copel	Curitiba	PR
Core Synesis Ltda	Belo Horizonte	MG

## Participants list (3)

Company name	City	State
CP Construplan Construção e Planejamento Ltda.	Ribeirão Preto	SP
D.A.S.B.	Santo André	SP
Dataprev	Rio de Janeiro	RJ
Datasul Centro Norte RS	Caxias do Sul	RS
DBA	Salvador	BA
Decisão Sistemas	Aparecida de Goiânia	GO
Dental Morelli Ltda.	Sorocaba	SP
DígithoBrasil	Campo Grande	MS
Docile Alimentos Ltda	Lajeado	RS
DotCom Solutions	Rio de Janeiro	RJ
EBM Telecomunicações	Porto Alegre	RS
EDS do Brasil	Rio de Janeiro	RJ
ELETRONUCLEAR - Eletrobrás Termonuclear S.A	Rio de Janeiro	RJ
Elfusa Geral de Eletrofusão Ltda	São João da Boa Vista	SP
EMATERCE	Fortaleza	CE
EMATER-MG	Belo Horizonte	MG
EMBRAER - Empresa Brasileira de Aeronáutica S/A	São José dos Campos	SP
Employer Organizações de Rh. Ltda	Curitiba	PR
Engeb-Botelho Engenharia Ltda.	Aracaju	SE
Estufa Investimentos Ltda	Belo Horizonte	MG
ETEG	Belo Horizonte	MG
Ética Software Brasil Ltda	São Paulo	SP
FÁCIL INFORMÁTICA - REZEK FERREIRA INFORMATICA LTDA	Belo Horizonte	PB
Faculdade JK	Águas Claras	DF
FCMartinez Consultoria SC Ltda	Santos	SP
Federação Indústrias do Estado do PR	Curitiba	PR
Federação Interfederativa das Cooperativas de Trabalho Médico/MG	Belo Horizonte	MG

## Participants list (4)

Company name	City	State
Ferramentas Gerais	Porto Alegre	RS
Fidelity	São Paulo	SP
Fischer S/A Agroindústria - Citrosuco	Matão	SP
FMC Technologies	Rio de Janeiro	RJ
Fosfertil	Cubatão	SP
Friche Valle Engenharia Ltda.	Belo Horizonte	MG
Fundação Centro Tecnológico de Minas Gerais	Belo Horizonte	MG
Fundação Lemann	São Paulo	SP
Fundação para Inovações Tecnológicas - FITec	Recife	PE
GERDAU AÇOMINAS S.A	Ouro Branco	MG
GERDAU AÇOS LONGOS BRASIL	São Paulo	SP
Global Vilage Telecom	Curitiba	PR
Grupo SBF	Belo Horizonte	MG
Ibmec	Belo Horizonte	MG
Infobase	Rio de Janeiro	RJ
InfoChoice	Belo Horizonte	MG
infor	Belo Horizonte	MG
Informenge Processamento de Dados Ltda	Sorocaba	SP
ING Bank N.V	São Paulo	SP
Instituto Capixaba de Pesquisa, Assist. Técnica e Extensão Rural - INCAPER	Vitória	ES
Instituto Centro-Oeste de Desenvolvimento de Software	Formosa	GO
INSTITUTO DE FISCALIZAÇÃO E CONTROLE	Brasília	DF
Instituto de Tecnologia em Informática e Informação do Estado de Alagoas	Maceió	AL
Instituto Nacional do Seguro Social	Brasília	DF
ITAIPU Binacional	Foz do Iguaçu	PR
ITM Brasil Ltda.	São Paulo	SP
Johnson & Johnson	São José dos Campos	SP

## Participants list (5)

Company name	City	State
Klabin SA	Telêmaco Borba	PR
LCF - Empreendimentos e Participações Ltda.	João Pessoa	PB
LTIA - Laboratório de Tecnologia da Informação Aplicada	Bauru	SP
M&G Fibras e Resinas	Cabo de Santo Agostinho	PE
Mab Assessoria	São Paulo	SP
Macrofarma Química e Farmacêutica Industrial	Aparecida de Goiânia	GO
Magnesita S/A	Contagem	MG
Manganês	Rio de Janeiro	RJ
Máquinas Agrícolas Jacto S/A	Pompéia	SP
Marista UBEE/UNBEC	Taguatinga do Sul	DF
Matera Systems	Campinas	SP
MBSC Advogados	Brasília	DF
MGP - Mosca Gestão de Projetos	São Paulo	SP
MI Montreal Informatica Ltda	Belo Horizonte	MG
Microsiga	São Paulo	SP
Microsiga Rio Software	Rio de Janeiro	RJ
Microsiga Software S.A. - Grupo TOTVS S.A.	São Paulo	SP
Ministério da Defesa - Exército Brasileiro	Manaus	AM
Modular Mining Systems	Recife	PE
Montana Soluções Corporativas Ltda	Brasília	DF
Moore Stephens SGR Consultores	Curitiba	PR
Motorola Industrial Ltda	Jaguaríuna	SP
Move CRM Consultoria LTDA	Florianópolis	SC
MSA-INFOR Sistemas e Automação Ltda	Belo Horizonte	MG
Nansen S/A Instrumentos de Precisão	Contagem	MG
NEOPENSO TECNOLOGIA LTDA	Uberlândia	MG
NetPhenix	Fortaleza	CE

## Participants list (6)

Company name	City	State
Nextech Ltda	Belo Horizonte	MG
Oi	Recife	PE
Oi	Rio de Janeiro	RJ
Otimiza Consultoria em Administração Ltda	Caxias do Sul	RS
PC Service Tecnologia Ltda.	Rio de Janeiro	RJ
PCA	São Paulo	SP
PCE	Rio de Janeiro	RJ
Petrobras	Vitória	ES
Petrobras	Araucária	PR
Petrobras	Rio de Janeiro	RJ
PM Tech Capacitação em Projetos	Porto Alegre	RS
Pmweb Comunicação	Porto Alegre	RS
PNUD	Brasília	DF
Politec S/A	Brasília	DF
Politec S/A	Recife	PE
Prefeitura Municipal de Vitória	Vitória	ES
Procergs	Porto Alegre	RS
Prodabel	Belo Horizonte	MG
Prodeb	Salvador	BA
PRODEMGE	Belo Horizonte	MG
PRODEPA	Belém	PA
Prosperi Tecnologia	Vitória	ES
Replace Projetos e Consultoria	São Paulo	SP
RJS Consultoria	Belo Horizonte	MG
RKM Engenharia Ltda.	Belo Horizonte	MG
Rodobens Administradora de Consórcios LTDA	São José do Rio Preto	SP
RONTAN Eletro Metalurgica Ltda	Tatuí	SP

## Participants list (7)

Company name	City	State
Sadia S.A.	São Paulo	SP
SANTANDER BANESPA	São Paulo	SP
São Paulo Alpargatas S.A.	São Paulo	SP
Search Informática	Brasília	DF
Secretaria de Estado de Fazenda de Minas Gerais	Belo Horizonte	MG
Secretaria de Estado de Planejamento e Gestão	Belo Horizonte	MG
Secretaria de Estado do Planejamento	Florianópolis	SC
SEDESE	Belo Horizonte	MG
SEFAZ-PE	Recife	PE
SERPRO	Brasília	DF
SERPRO	Belo Horizonte	MG
SERPRO	Recife	PE
SESC - Serviço Social do Comércio	São Paulo	SP
SGO CONSTRUÇÕES LTDA	Belo Horizonte	MG
Sivef Componentes Automotivos	Sete Lagoas	MG
SOF Informática	São Paulo	SP
Softway Contact Center	Jundiaí	SP
Solectron Brasil	Jaguariúna	SP
Solution Software Ltda	Contagem	MG
Stefanini/TIMMaxitel	Belo Horizonte	MG
Superior Tribunal de Justiça	Brasília	DF
SWB Soluções Integradas Ltda.	Uberlândia	MG
Synchro Sistemas de Informação	Campinas	SP
Synergia - Engenharia de Software e Sistemas	Belo Horizonte	MG
TakeNET	Belo Horizonte	MG
TCS Tata Consultancy Services do Brasil S.A.	Brasília	DF
Tecnologia Bancária S/A - TecBan	São Paulo	SP

## Participants list (8)

Company name	City	State
Techtex Consultoria e Assistência Técnica Têxtil	Juiz de Fora	MG
Tecnologia Bancária S/A - TecBan	Barueri	SP
Telefônica S/A	São Paulo	SP
Telemar	Maceió	AL
Telemar	Belo Horizonte	MG
Telemar	João Pessoa	PB
Telemar	Recife	PE
Telemar	Rio de Janeiro	RJ
Telemar - OI	João Pessoa	PB
Telemig Celular	Belo Horizonte	MG
Terra Networks	Porto Alegre	RS
Tetra Pak Ltda.	Monte Mor	SP
Tlantic Sistemas de Informação	Porto Alegre	RS
TOTVS S/A	São Paulo	SP
Unisys Brasil LTDA	Rio de Janeiro	RJ
Unitech	Belo Horizonte	MG
Usiminas Mecânica S/A	Ipatinga	MG
USS Tecnologia em Informática Ltda	Belo Horizonte	MG
Vallourec & Mannesmann Tubes	Belo Horizonte	MG
VEGA DO SUL - ARCELOR BRASIL	São Francisco do Sul	SC
VLB ENGENHARIA	Belo Horizonte	MG
Voith Paper	São Paulo	SP
Voith-Mont Ltda	São Paulo	SP
Volkswagen do Brasil Ltda.	Sao Bernardo do Campo	SP
Volkswagen do Brasil Ltda.	São Bernardo do Campo	SP
Webpack Ass e Desenv de Software Ltda	Florianópolis	SC
X25 Treinamento e Consultoria	Brasília	DF



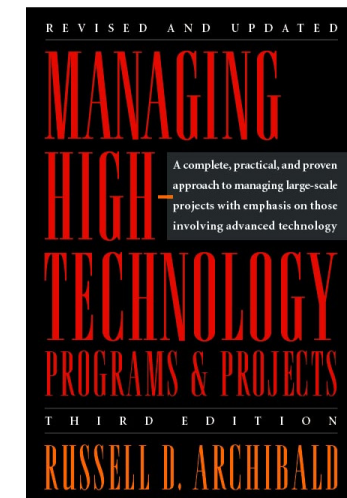
# **The team who developed this work**

## Authors



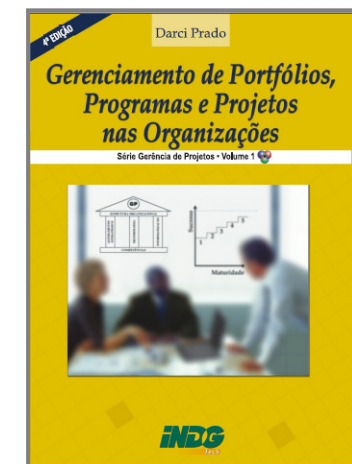
### Russel D. Archibald

- MSC, PhD
- PMP, IPMA
- One of the founders of PMI-USA
- Consults for companies all over the world
- Listed on "Who is Who"



### Darci Prado

- IPMA – Level B
- One of the founders of PMI-MG and PMI-PR
- Consultant-Associate for INDG



## **COMMITTEE**

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

## **GENERAL COORDINATOR**

Darci Prado

## **WEBSITE DEVELOPMENT**

Responsible: Warlei Oliveira

Carlos Eduardo Carvalho de Andrade, Daniela Sarmiento, George Jamil and José Carlos Tinoco

## **RESEARCH PROMOTION**

Responsible: Juscélia Brito

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

## **DATA ANALYSIS**

Responsible: Fernando Ladeira

Fernando Ladeira, José Flausino and Cristiano Alvarenga

## **FINAL REPORT**

Responsible: Not defined yet

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

- Support:



- Promotion:

- Organizations, Unions and Associations:

- PMI Chapters for the states of: BA, DF, ES, MG, PE, PR, RS, SP
- ABGP, IPMA
- MBC, ASBRAER, CBIC
- FIEMG, SINDUSCON-MG, SICEPOT-MG, SUCESU, CREA-SP, IPT-SP, ABEP, ANPEI

- Virtual Communities

- CLUBE-PMP, SIG-GOV, SIG-PMBOK

- Postgraduation courses

- FGV, IETEC

**THE END**