

# Capítulo 17

## Competências em Gestão de Projetos



# Agenda



## ➔ 1. Competência

- Modelos de competência do indivíduo
- Modelos de competência da equipe

2. Resiliência

3. Capacidades dinâmicas

4. Aspectos culturais



# Competências

Nossos profissionais estão fazendo o melhor trabalho possível? Eles estão qualificados?

Competência Individual

Competência de Equipe

Competência em GP

Estamos trabalhando com uma equipe de alta performance com toda eficiência? A equipe nos incentiva a produzir soluções mais rápidas, mais baratas e melhores que levem à satisfação do cliente?

A organização oferece um ambiente que incentiva a condução de projetos de forma eficaz?

Competência Organizacional

Maturidade em Gestão de Projetos



# Competências Individuais



# PMCD - PMI (2017)



# Project Manager Competency Development (PMCD)

## Desenvolvimento de competências do Gerente de Projetos

### O que é Competência no contexto do PMCD?

“Competência é um termo largamente utilizado e que significa muitas coisas para diferentes pessoas. Engloba conhecimento, habilidades, atitudes e comportamentos que estão relacionados com Performance Superior de Trabalhos”

(Boyatzis 1982).



# Três dimensões do PMCD



- 1) Dimensão Conhecimento em GP (*Project Management Knowledge*) – analisa os conhecimentos dos gerentes em Gerenciamento de Projetos. Foca no conhecimento nas áreas de conhecimento e grupos de processo do PMBoK.
- 2) Dimensão Desempenho em GP (*Project Management Performance*) – analisa o que os gerentes de projetos são capazes de fazer se utilizando dos conhecimentos em GP. Foca no desempenho nas áreas de conhecimento e grupos de processo do PMBoK.
- 3) Dimensão Competência Pessoal (*Personal Competency*) – analisa as características básicas de personalidade e a capacidade pessoal de realizar o projeto. Foca em habilidades pessoais.

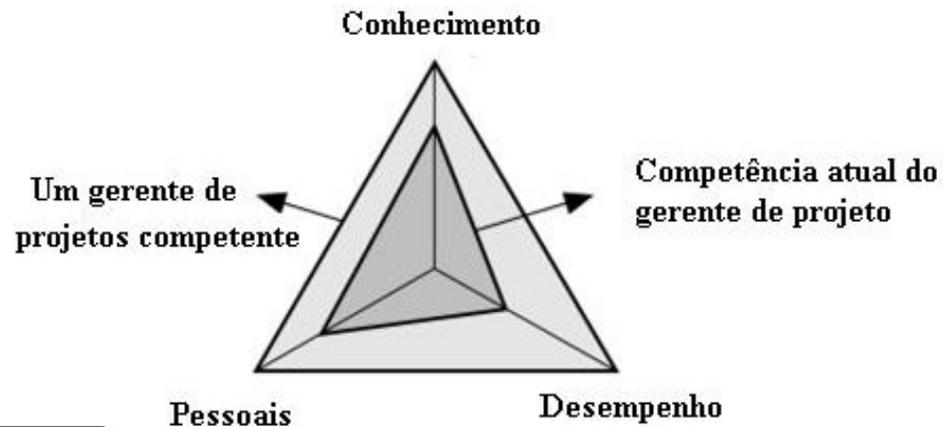


Ainda não está alinhado ao novo PMBoK 6. ed.

# PMCD *Assessment*

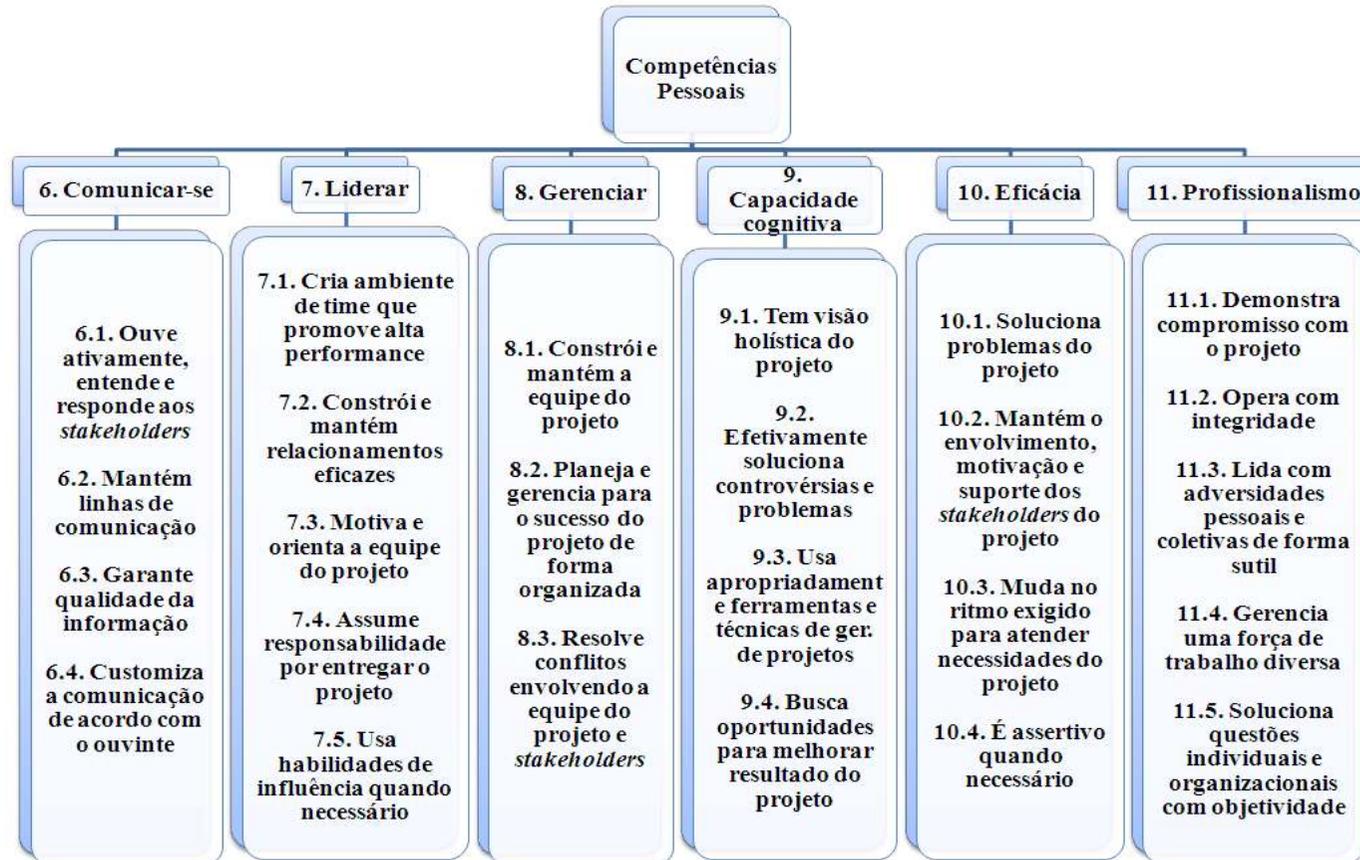


- # Questionário distribuído nas três dimensões, utilizando respostas em escala de likert 5 pontos.



Competence Level	Description of Level
1	Limited experience or knowledge is required in this competence
2	Some knowledge and experience of this competence is required
3	This competence needs to be demonstrated though may only be partially demonstrated and could be performed under supervision
4	Full competency is required, supported by knowledge and experience
5	Full competency, supported by deep knowledge and broad experience; the individual is likely to be regarded as a thought leader

# Competências pessoais



# Avaliação



## Unidade de Competência: Liderança

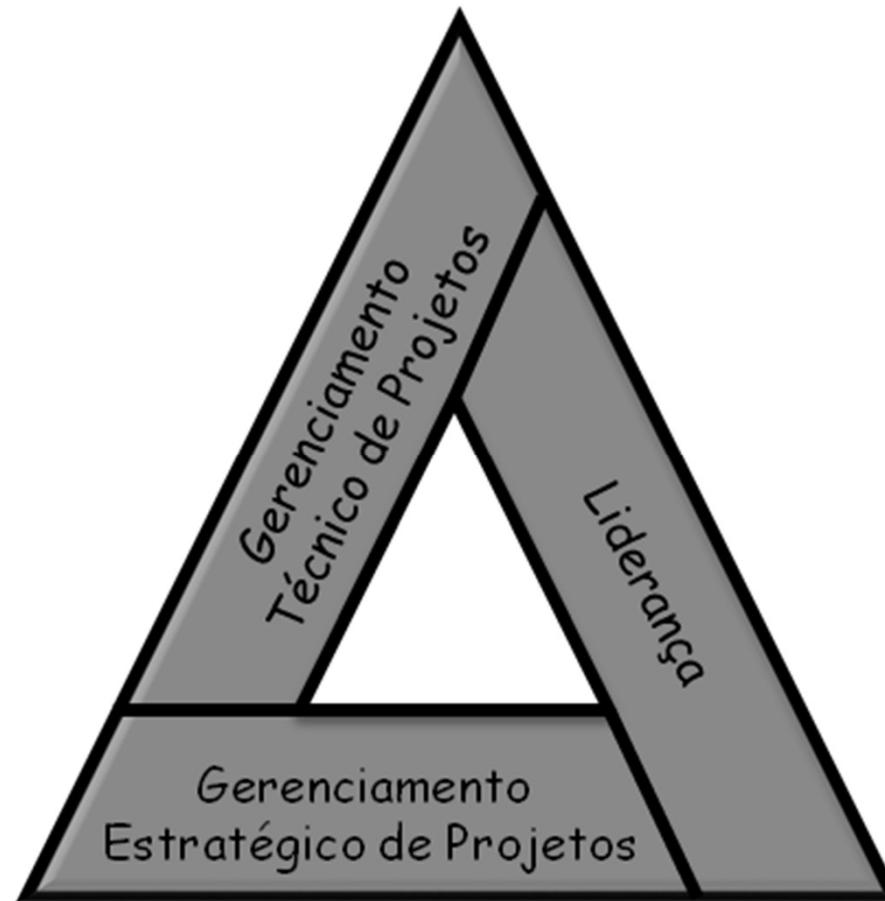
Guia, inspira e motiva os membros da equipe e outros *stakeholders* para atingir efetivamente os objetivos do projeto

**Elemento: Cria um ambiente de equipe que promove alta performance**

Critério de desempenho	Tipos de evidências	Auto avaliação	Avaliação do assessor
Expressa expectativa positiva da equipe	Feedback documentado da equipe sobre: <ul style="list-style-type: none"><li>•Reconhecimento das habilidades dos membros da equipe</li><li>•Suporte a tomada de decisão</li></ul>	Atende expectativas (3)	Atende expectativas (3)

PMCD Framework Element	Performance Criteria	Required Proficiency	Importance	Self-Assessed Rating
Communication	Actively listens	3-Average	5-High	3
Communication	Engages stakeholders	4-Above average	4-Above average	5
Influencing skills	Uses experts to persuade others	3-Average	2-Not essential	2

# Triângulo de Talentos (PMI, 2017)



ICB (IPMA, 2016)



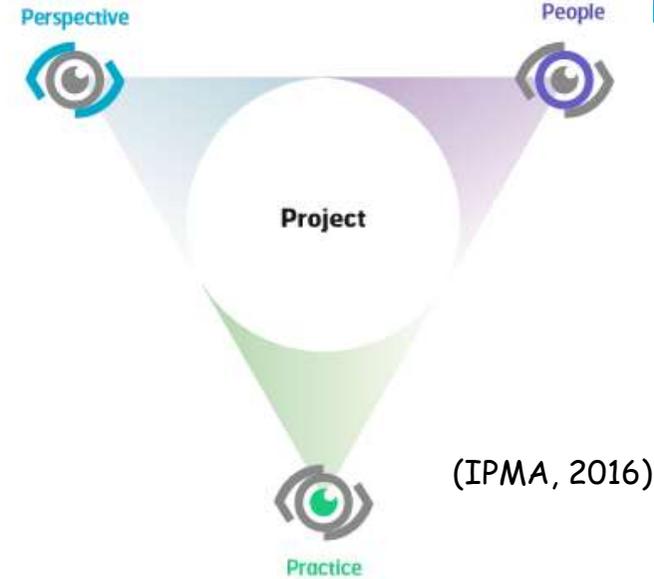
# Olho da Competência



(IPMA, 2006)

## # 3 áreas de competências

- Contextuais;
- Comportamentais;
- Técnicas.



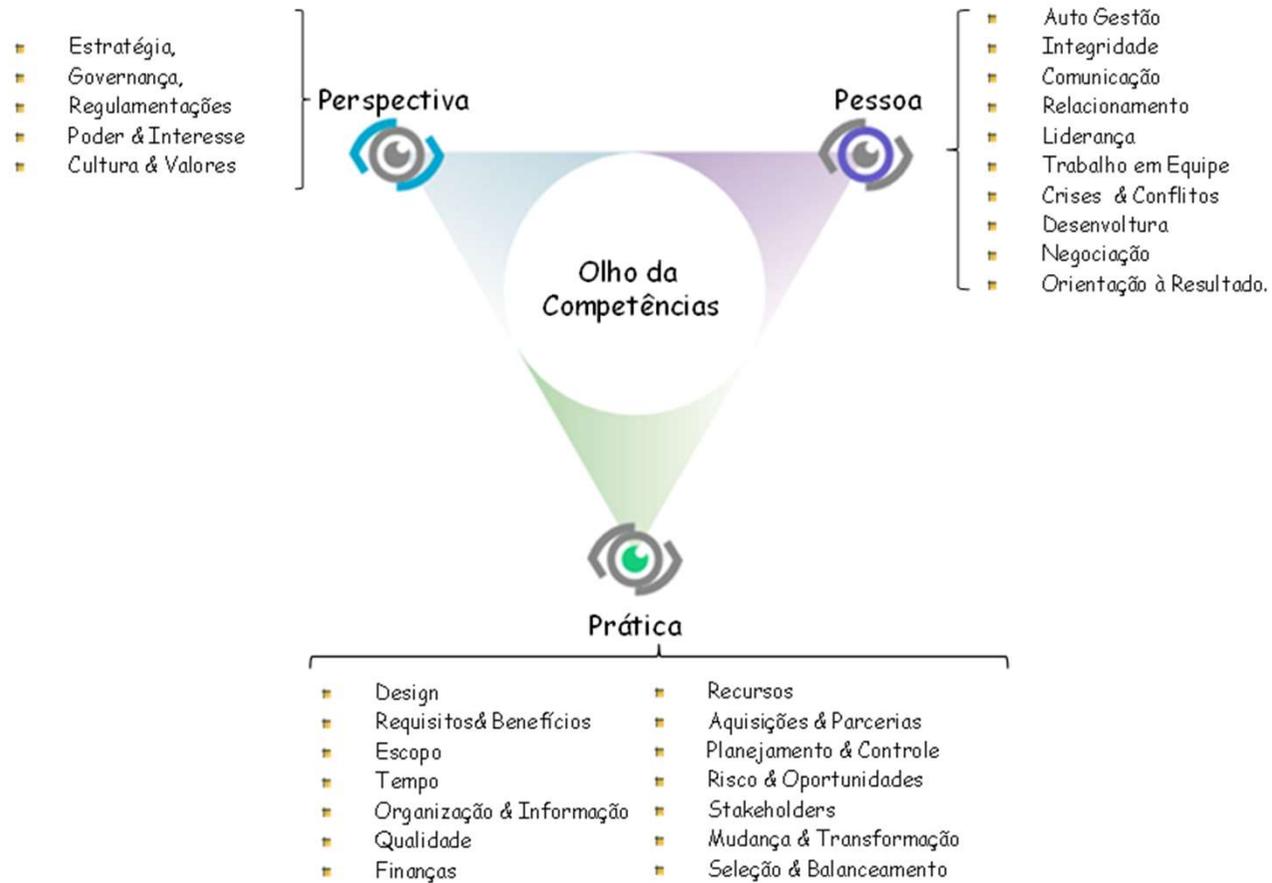
(IPMA, 2016)

## # 3 áreas de competências

- Perspectiva;
- Pessoais;
- Práticas.



# Olho das competências



# Critério & Avaliação



1 Habilidade de comunicar-se					
Núm.	Característica	+	0	-	Oposto
1-1	Ouve cuidadosamente os outros, deixa os outros falarem.				Negligencia colocações dos outros, interrompe os outros, fala muito.

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- Modelos de competência da equipe

## ➔ 2. Resiliência

### 3. Capacidades dinâmicas

### 4. Aspectos culturais

# Resiliência em Psicologia

- Capacidade de o indivíduo lidar com problemas, superar obstáculos ou resistir à pressão de situações adversas
- Balanço entre tensão e vontade de lutar e vencer
- Capacidade de transcender - renascer após uma situação de sofrimento e adversidade, de forma a aprender com esta experiência e utilizá-la para viver melhor

Job (2003), Poletto e Koller (2006)

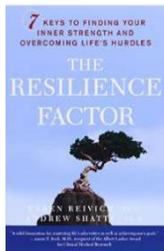


# Resiliência - Fatores



- 1. Administração das Emoções**
  - habilidade de se manter calmo diante de uma situação de pressão
- 2. Controle dos Impulsos**
  - habilidade de regular a intensidade do impulso, dando assim a apropriada intensidade à vivência de uma emoção e não agindo compulsivamente
- 3. Empatia**
  - habilidade de compreender os estados emocionais e psicológicos dos outros
- 4. Otimismo**
  - habilidade de manter firme convicção de que a situação vai melhorar, quando envolvidas em adversidades
- 5. Análise do ambiente (causal)**
  - habilidade para identificar precisamente as causas dos problemas e das adversidades
- 6. Auto eficácia**
  - senso de ser eficaz nas ações
- 7. Alcançar Pessoas.**
  - habilidade de se conectar a outras pessoas para viabilizar soluções para as adversidades

Reivich e Shatté (2002)



Reivich K, Shatté A. The Resilience Factor. 7 Essential Skills for Overcoming Life's Inevitable Obstacles. New York – USA: Broadway Books – Random House; 2002.

# Resiliência

## *Resilience Quotient Test*

1. Instrumento composto de 56 questões.
2. Escala Likert 4 pontos (1-nunca, 2-algumas vezes, 3-quase sempre, e 4-sempre)
3. Cada fator contém 8 questões (4 abordam aspectos positivos e 4 aspectos negativos)

Reivich e Shatté (2002)

<b>Fator</b>	<b>Questões Aspectos Positivos</b>	<b>Questões Aspectos Negativos</b>
<b>Administração das Emoções(AdEm)</b>	13; 25; 26 e 56	02; 07; 23 e 31
<b>Controle dos Impulsos (CntImp)</b>	04;15; 42 e 47	11; 36; 38 e 55
<b>Empatia (Emp)</b>	10; 34; 37 e 46	24; 30; 50 e 54
<b>Otimismo com a Vida (OtmVd)</b>	18; 27; 32 e 53	03; 33; 39 e 43
<b>Análise do Ambiente (AnlAmb)</b>	12; 19; 21 e 48	01; 41; 44 e 52
<b>Autoeficácia (AutEfic)</b>	05; 28; 29 e 49	09;17; 20 e 22
<b>Alcançar Pessoas (ALcPes)</b>	06; 08; 14 e 40	16; 35; 45 e 51



- (1) – Nunca
- (2) – Algumas vezes
- (3) – Quase sempre
- (4) – Sempre

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## ➔ 3. Capacidades dinâmicas

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# Dynamic capability (DC)



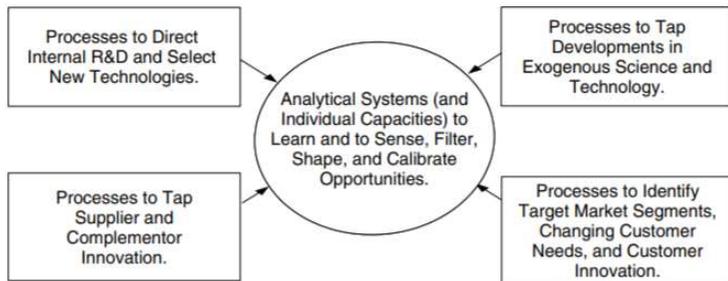
- # Dynamic capabilities We define dynamic capabilities as the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments. Dynamic capabilities thus reflect an organization’s ability to achieve new and innovative forms of competitive advantage given path dependencies and market positions (Teece et al., 1997: p.516)
- # The firm’s processes that use resources—specifically the processes to integrate, reconfigure, gain and release resources—to match and even create market change. Dynamic capabilities thus are the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die.... they are the drivers behind the creation, evolution, and recombination of other resources into new sources of competitive advantage (Eisenhardt and Martin, 2000, p.1107)

Teece DJ, Pisano G, Shuen A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal* **18**(7): 509– 533.

Eisenhardt KM, Martin J. 2000. Dynamic capabilities: what are they? *Strategic Management Journal* **21**(10–11): 1105–1121.

Peteraf, M. Stefano G. Verona, G. 2013. The elephant in the room of dynamic capabilities: Bringing two diverging conversations together. *Strategic Management Journal*, 34(12):1389-1410

# Micro Fundamentos (DC)



capacidade de sentir oportunidades do ambiente (*Sensing*);

re 1. Elements of an ecosystem framework for 'sensing' market and technological opportunities

capacidade de apreender as oportunidades (*Seizing*)

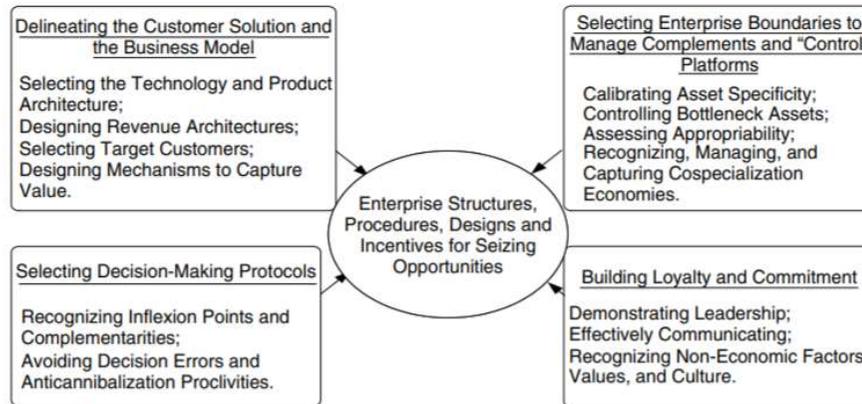
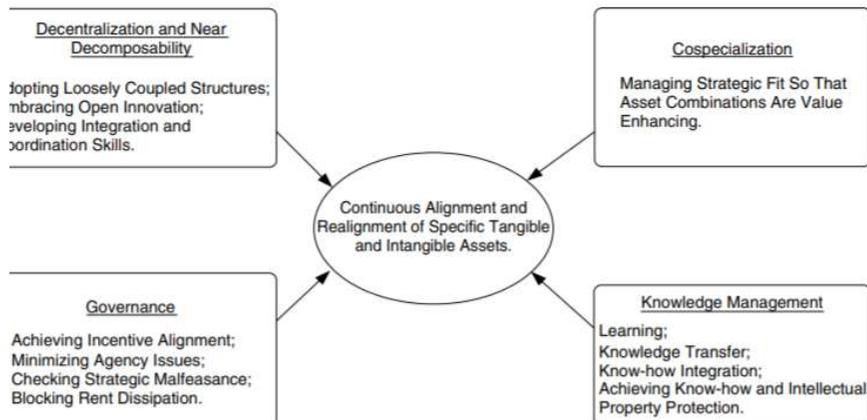


Figure 2. Strategic decision skills/execution



capacidade de gerir ameaças e transformações (*Transforming*).

(Teece, 2007)

# Micro Fundamentos (DC)

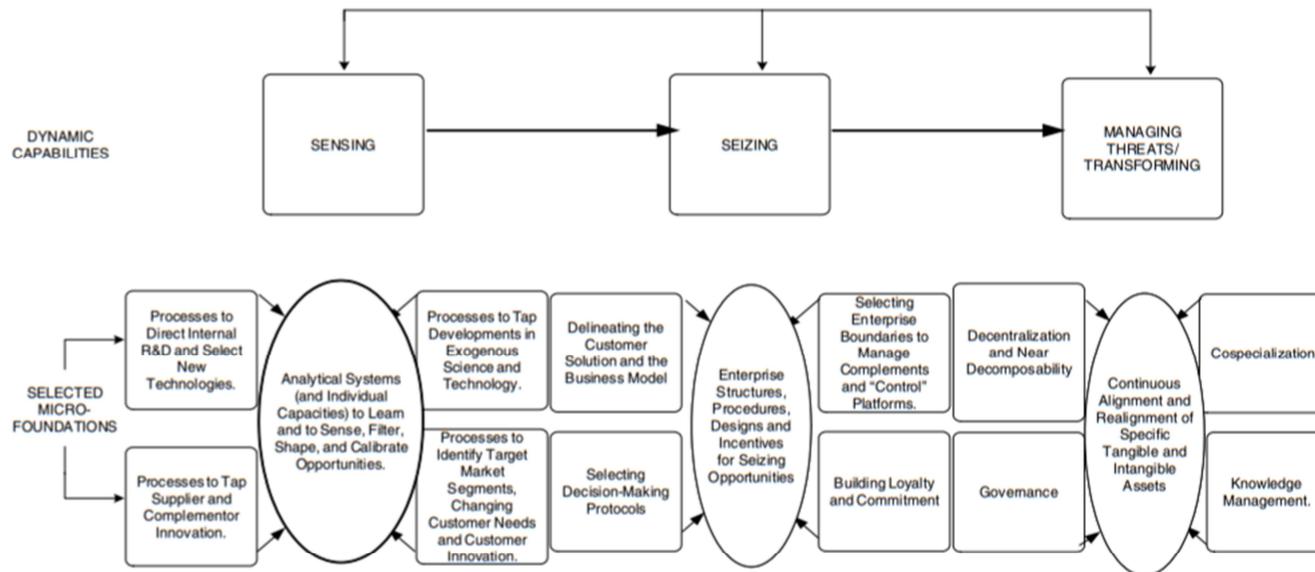
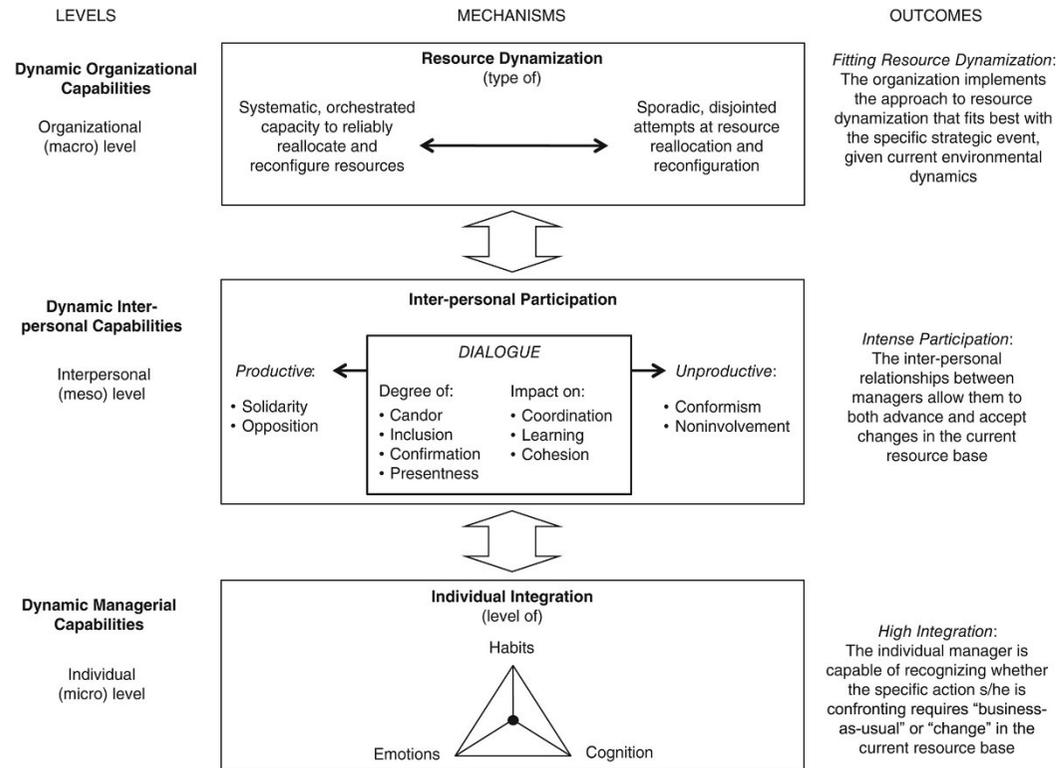


Figure 4. Foundations of dynamic capabilities and business performance

(Teece, 2007)

# Níveis de análise



Eisenhardt KM, Martin J. 2000. Dynamic capabilities: what are they? *Strategic Management Journal* 21(10–11): 1105– 1121.

Peteraf, M. Stefano G. Verona, G. 2013. The elephant in the room of dynamic capabilities: Bringing two diverging conversations together. *Strategic Management Journal*, 34(12):1389-1410

Salvato, C., Vassolo, R. 2017. The sources of dynamism in dynamic capabilities. *Strategic Management Journal*, 39(6): 1728-1752.

Teece DJ, Pisano G, Shuen A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal* 18(7): 509–533.

Teece DJ. 2007. Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal* 28(13) : 1319-1350

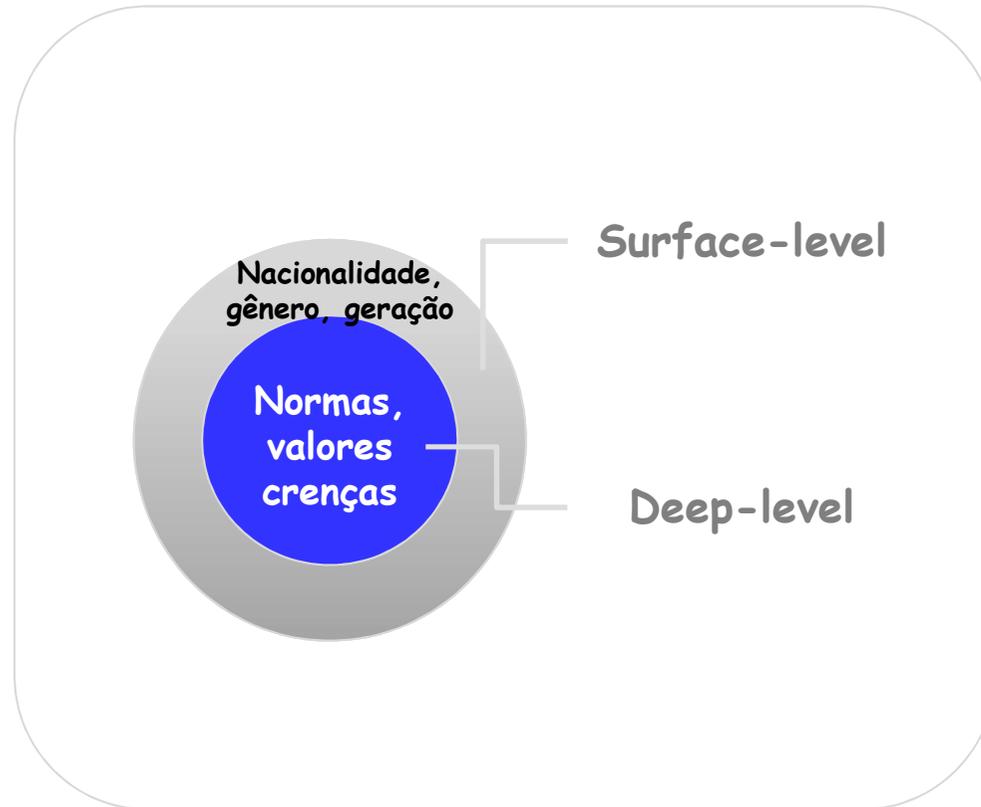
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# Diversidade Cultural



## Cultural diversity

*Cultural diversity* is classified through surface-level and deep-level of diversity (Stahl et al. 2010). As surface-level, culture is related to national diversity, age and gender differences among team members (Burton et al., 2019; Robert, 2016; Taras et al. 2019; Wei et al. 2018). As deep-level of diversity, culture is related to attitudes, beliefs, and values (Harrison et al. 1998).



# Pesquisas LGP





Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

**ScienceDirect**

International Journal of Project Management 33 (2015) 784–796

International Journal of  
**Project  
Management**

[www.elsevier.com/locate/ijproman](http://www.elsevier.com/locate/ijproman)



## Competency mapping in project management: An action research study in an engineering company

Silvia Mayumi Takey, Marly Monteiro de Carvalho \*

*Production Engineering Department, Polytechnic School University of São Paulo, São Paulo, Brazil*

# Empresa de Engenharia

## Serviços Profissionais

- Consultoria
- Estudos de Viabilidade
- Projetos de Engenharia



## Soluções Integradas

**EPCs Engineering, Procurement and Construction**



## Gestão de Projetos

## Integração de Sistemas

# Áreas Estratégicas de Negócio



Energia



Ólio e Gás



Química e Petroquímica



Mineração



Manufatura



Logística e transportes

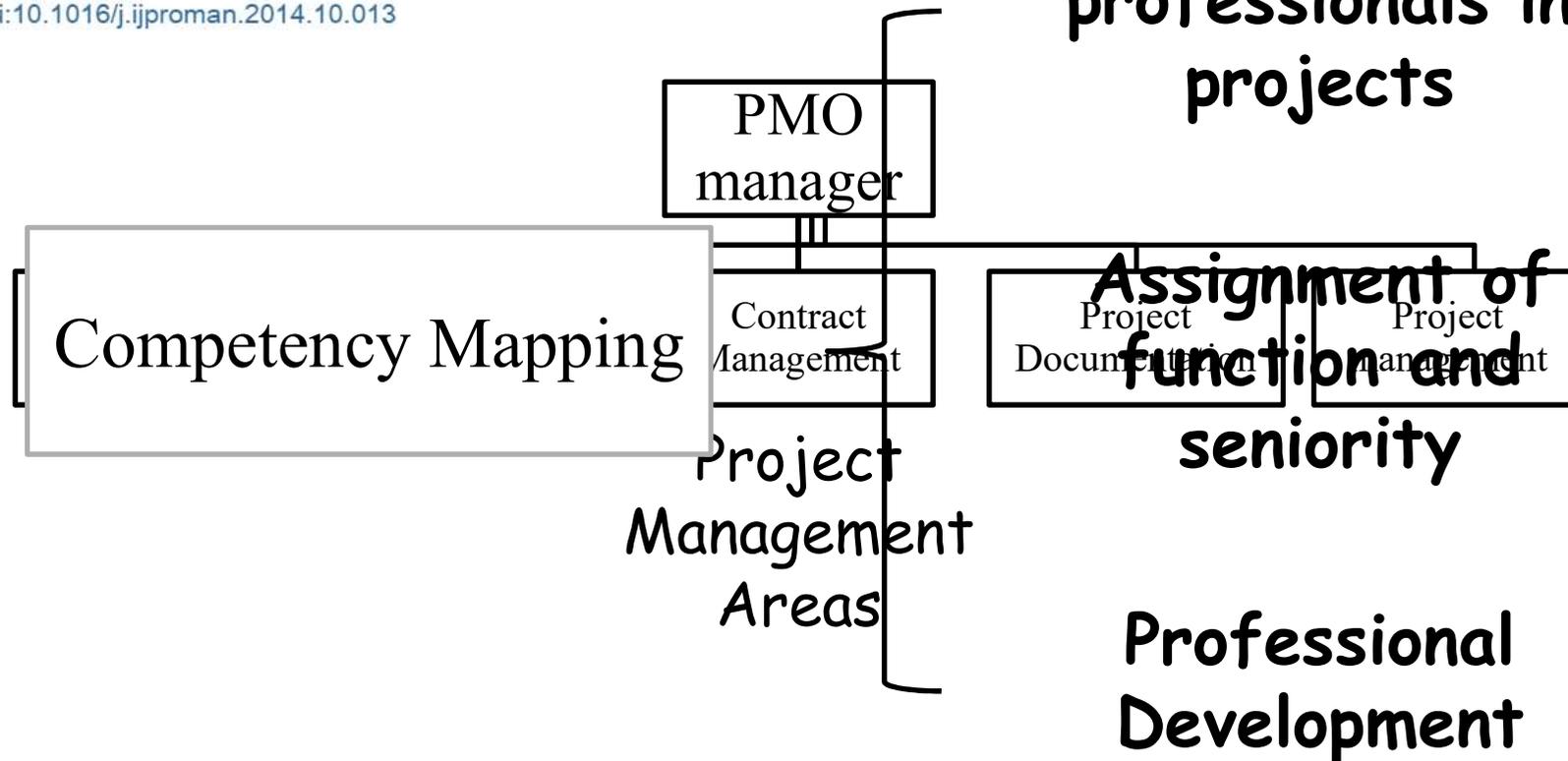


# Competency mapping in project management: An action research study in an engineering company

Sílvia Mayumi Takey, Marly Monteiro de Carvalho

doi:10.1016/j.ijproman.2014.10.013

## Allocation of PM professionals in projects



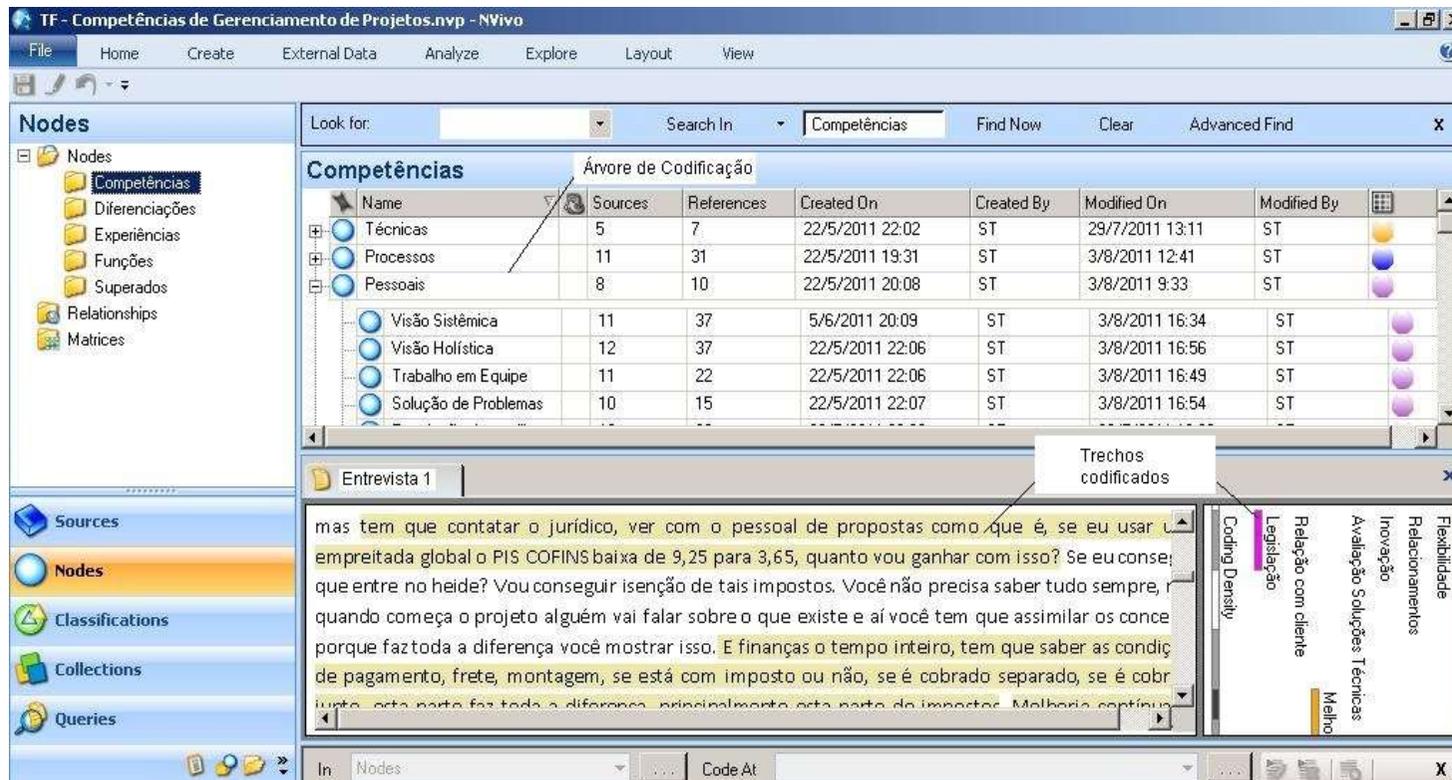


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# 1 Dicionário de Competências



The screenshot displays the NVivo 9 software interface. The main window shows a table of competencies with columns for Name, Sources, References, Created On, Created By, Modified On, and Modified By. Below the table, a text analysis window titled 'Entrevista 1' shows a snippet of text with highlighted segments and a list of coded segments on the right.

Name	Sources	References	Created On	Created By	Modified On	Modified By
Técnicas	5	7	22/5/2011 22:02	ST	29/7/2011 13:11	ST
Processos	11	31	22/5/2011 19:31	ST	3/8/2011 12:41	ST
Pessoais	8	10	22/5/2011 20:08	ST	3/8/2011 9:33	ST
Visão Sistêmica	11	37	5/6/2011 20:09	ST	3/8/2011 16:34	ST
Visão Holística	12	37	22/5/2011 22:06	ST	3/8/2011 16:56	ST
Trabalho em Equipe	11	22	22/5/2011 22:06	ST	3/8/2011 16:49	ST
Solução de Problemas	10	15	22/5/2011 22:07	ST	3/8/2011 16:54	ST

Text analysis window 'Entrevista 1' content:

mas tem que contatar o jurídico, ver com o pessoal de propostas como que é, se eu usar empreitada global o PIS COFINS baixa de 9,25 para 3,65, quanto vou ganhar com isso? Se eu conse... que entre no heide? Vou conseguir isenção de tais impostos. Você não precisa saber tudo sempre, r... quando começa o projeto alguém vai falar sobre o que existe e aí você tem que assimilar os conce... porque faz toda a diferença você mostrar isso. E finanças o tempo inteiro, tem que saber as condiç... de pagamento, frete, montagem, se está com imposto ou não, se é cobrado separado, se é cobr... junto, esta parte faz toda a diferença principalmente esta parte de imposto. Melhorar continuan...

Coded segments list:

- Coding Density
- Legislação
- Relação com cliente
- Avaliação Soluções Técnicas
- Inovação
- Relacionamentos
- Flexibilidade
- Melhoria

Análises no Software Nvivo9 (Takey & Carvalho (2015))



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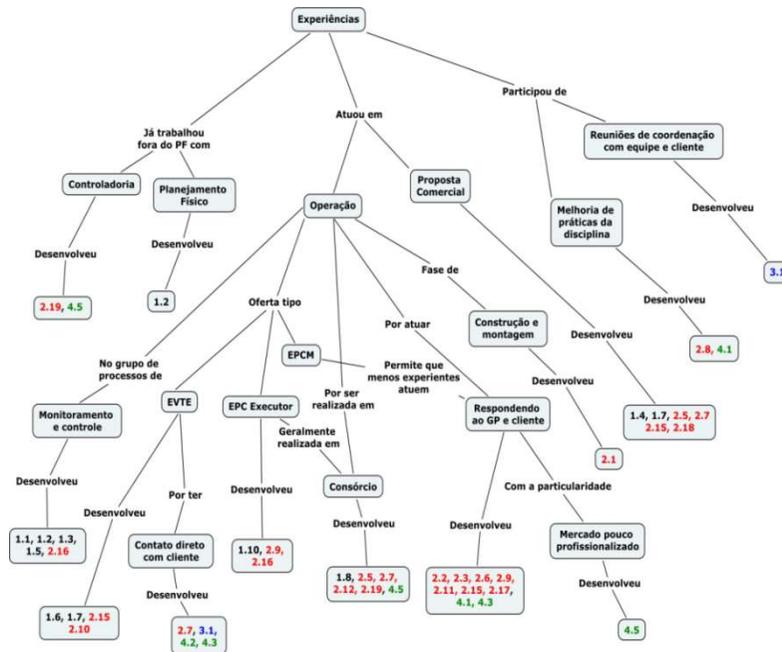
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# Planejamento

## Mapas Causais baseados em entrevistas



Já trabalhou alocado em obra?

Sim

Não

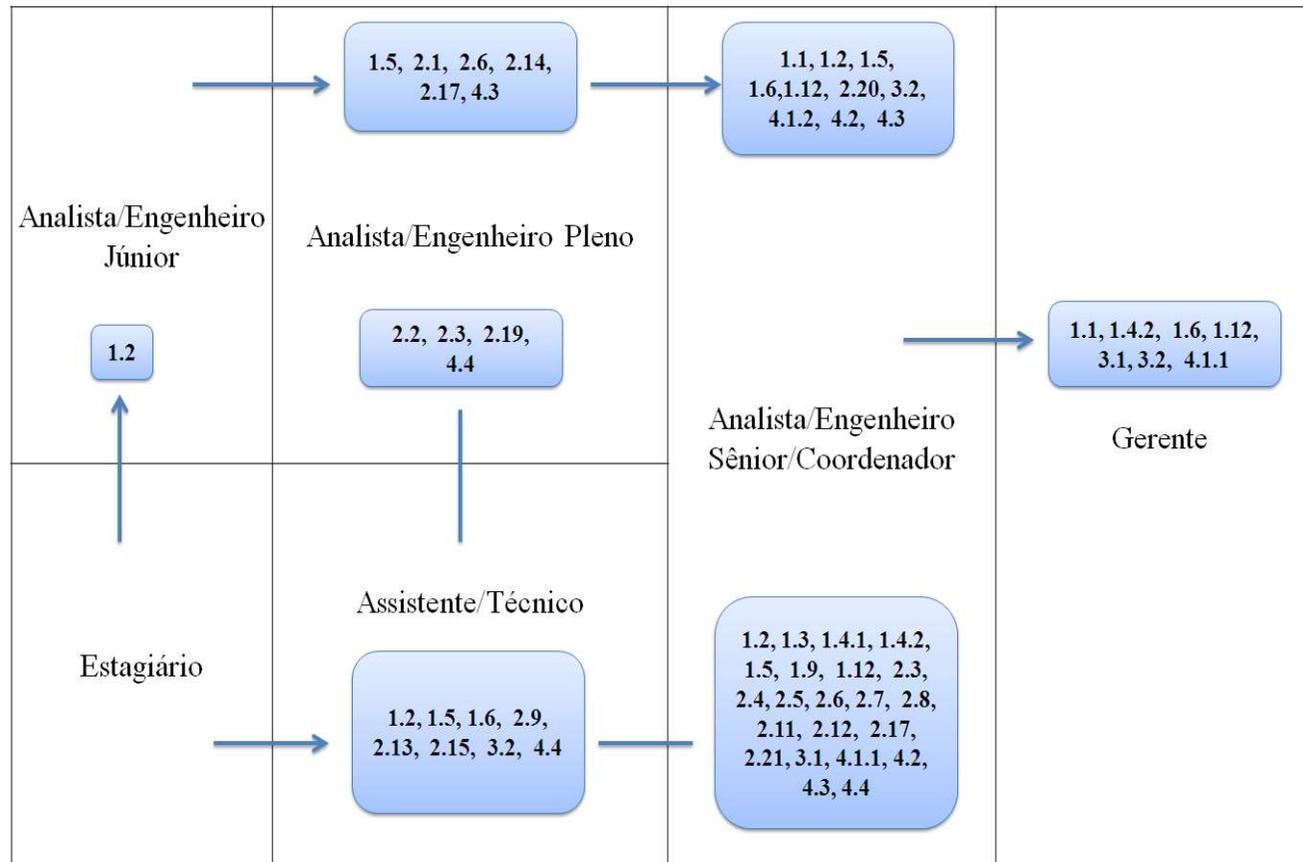
Teste da mediana de Mood's

1. Preto (Processos de GP), 2.vermelho (pessoais), 3.azul (tecnicas) and 4.verde (contextuais).

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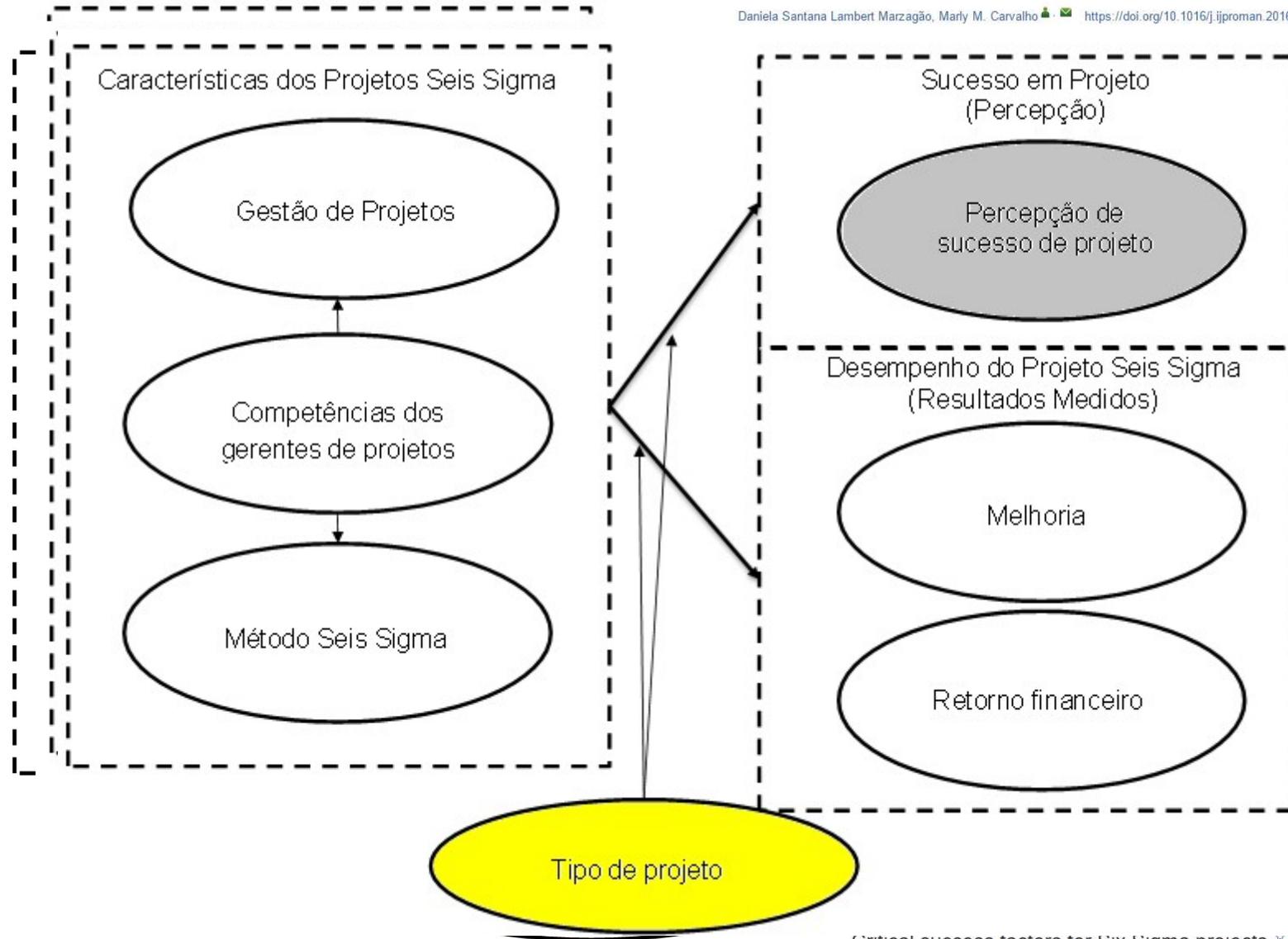


1. (Processos de GP), 2. (pessoais), 3. (técnicas) e 4. (contextuais).



### Critical success factors for Six Sigma projects ☆

Daniela Santana Lambert Marzagão, Marly M. Carvalho <https://doi.org/10.1016/j.ijproman.2016.08.005>



### Critical success factors for Six Sigma projects ☆

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# Project Managers' Competences: What Do Job Advertisements and the Academic Literature Say?

João Walter Saunders Pacheco do Vale<sup>1</sup>, Breno Nunes<sup>2</sup>, and Marly Monteiro de Carvalho<sup>1</sup>

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DOI: 10.1177/8756972818770884  
journals.sagepub.com/home/pmjx



**Table 6.** Methodological Triangulation Analysis: Literature Versus Job Ads.

Competences	Terms	Occurrences Literature	Occurrences Job Ads	Literature Versus Job Ads
Behavioral	Leadership	1,323	46	With regard to behavioral competences, the literature, in general, highlights the importance of soft skills, for example leadership, communication, and even emotional intelligence. In the job ads, some even mention the need for leadership and the ability to communicate in the position offered; however, terms such as emotional intelligence are not seen. One of the possible reasons for not being so evident is that these competences should probably be analyzed in the later stages of a selection process such as group activity and interviews. The fact that some competencies presented in the literature as fundamental for project management are not evident in the advertisements can be an important topic for future research.
	Communication	734	77	
	Emotional intelligence	426	0	
	Motivation	189	5	
	Influence	164	1	
	Dynamic	121	3	
	Creative	114	3	
	Flexibility	114	10	
	Ethical	94	1	
	Sensitivity	57	0	
	Total	3,336	146	
	%	27%	17%	
	Technical or specific	Product	908	
Technical		875	25	
Software		868	43	
Industry		694	5	
Engineering		685	138	
Test		269	15	
Total		4,299	233	
%		35%	28%	
Management	Planning	474	87	Management competences are approached in identical ways for both ads and literature. In general, they demand that the manager have the skills needed to plan, execute, monitor, and control the project, which means competences to build a schedule or a project budget. Some ads even point out the need for the project manager to have the ability to allocate resources efficiently and effectively. One difference is that advertisements specify some software for the planning/monitoring phases of a project, such as Microsoft Project or Primavera.
	PMP certification	132	84	
	Resource Management	124	1	
	Other Certification	120	89	
	Change Management	118	8	
	Monitoring	99	24	
	Negotiation	84	24	
	Risk Management	84	6	
	Total	1,235	323	
	%	10%	38%	
Contextual	Organization	973	25	The literature on contextual competences indicates the importance of the project manager to know the environment in which the project is located, the sectors and departments of the organization and the people involved, as well as related processes. Job vacancies indicate which specific sectors of the organization the project manager will need to interact or work with, for example, the finance department, marketing, and research and development. In this perspective, another point that also deserves to be highlighted is the fact that in international projects, knowledge of a foreign language is a competence required but probably not needed in countries where the language spoken is English.
	Business	858	28	
	Relationship	484	44	
	Environment	477	0	
	Process	472	34	
	Marketing	177	10	
	Total	3,441	141	
	%	28%	17%	
	Total	12,311	843	
	%	100%	100%	

**Table 7.** Expected Profile of the Project Manager and the Location With the Largest Number of Vacancies.

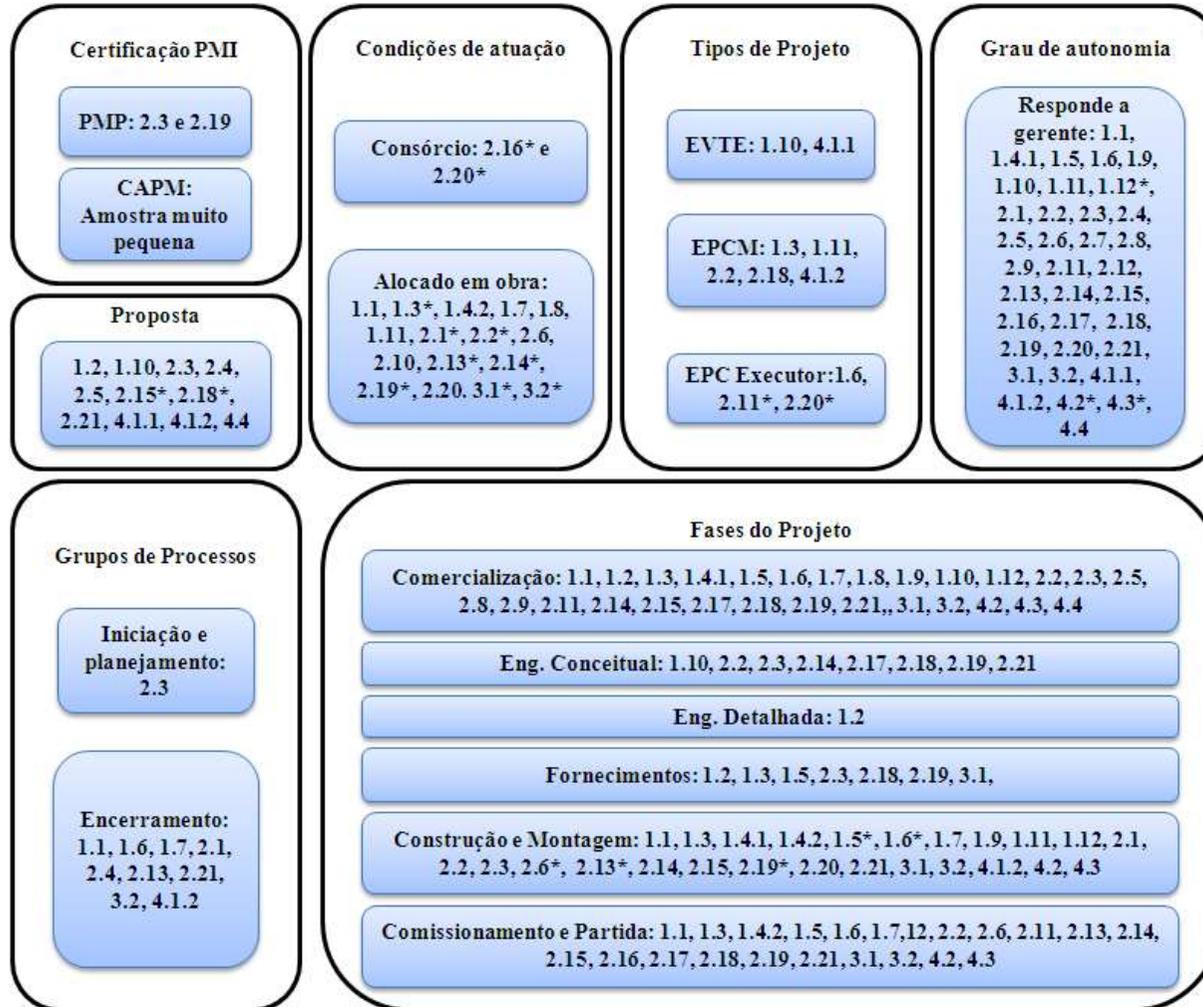
Local	South and Southeast, with special emphasis on São Paulo - SP
Sector	Engineering or IT
General requirements	Higher education Graduate and/or certification Knowledge of foreign languages, especially English
Previous experience	Preferably yes
Project management processes	Knowledge in planning processes, implementation, and monitoring and project control
Knowledge Area	Emphasis on preparation and control schedules Budgeting and project cost control (Time and Cost)
Behavioral competences	Ability to lead teams Ability to communicate and explain point of view (Leadership and Communication)
Technical competences or specific competences	Knowledge in specific software project and/or area Technical knowledge on the specifics of the project (Software and Technical)
Management competences	Certification aiming to demonstrate experience and expertise in project management issues Ability to carry out plans for the project (Certification and Planning)
Contextual competences	Ability to relate with stakeholders and influence them Bargaining power with stakeholders (Relationship and Business)



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1. (Processos de GP), 2. (pessoais), 3. (técnicas) e 4. (contextuais).

# The influence of project leaders' behavioral competencies on the performance of Six Sigma projects

Daniela Santana Lambert Marzagão  
Marly M. Carvalho



**Table 6**

List of desired characteristics for a project leader (Strang, 2007) and the factors measured by the PI\* (Perry & Lavori, 1983)

Leadership Features	PI* related factors	Characteristics
Innovative (creative solution to problems, adaptation)	Factor A aboveaverage	Creator, probing mind, initiator of things
	Factor A bigger than factor B	prioritizes your interest in understanding things and processes
	Factor C belowaverage	a fastlearner
	Factor D belowaverage	questioning methods and rules, flexible
Broker (power, influence, resource acquisition)	Factor A aboveaverage	assertive, confident, Director
	Factor B aboveaverage	empathic, persuasive, motivator
Facilitator (conflict management, participatory decision making)	Factor D belowaverage	flexible, independent
	Factor A aboveaverage	Director, solves problems
Mentor (development)	Factor B aboveaverage	friendly, empathetic, otimesta, motivator
	Factor A aboveaverage	critical, demanding
Coordinator (coordination of tasks, budget control)	Factor B aboveaverage	delegates authority, stimulant
	Factor A aboveaverage	critical, demanding
Monitor (information management, critical thinking)	Factor D aboveaverage	economical, conservative, careful
	Factor A bigger than factor B	prioritizes his interest in understanding things and processes
	B factor belowaverage	seriously, imaginative thinker
Producer (productivity, efficiency)	Factor A aboveaverage	critical, demanding
	Factor A bigger than factor B	prioritizes his interest in understanding things and processes
	Factor D aboveaverage	economical, conservative, careful
Director (Planner, goals)	Factor A aboveaverage	entrepreneur, Director
	Factor C belowaverage	sense of urgency, adjusts priorities quickly

Note. Source Strang, K. D. (2007). Examining effective technology project leadership traits and behaviors. *Computers In Human Behavior*, 23(1), 424-462; Perry, j. c., & Lavori, p. w. (1983). The predictive index \*: the report on reliability and construct validity. Massachusetts: Praendex.

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**Table 10**  
**Independence test results for the entire sample examined**

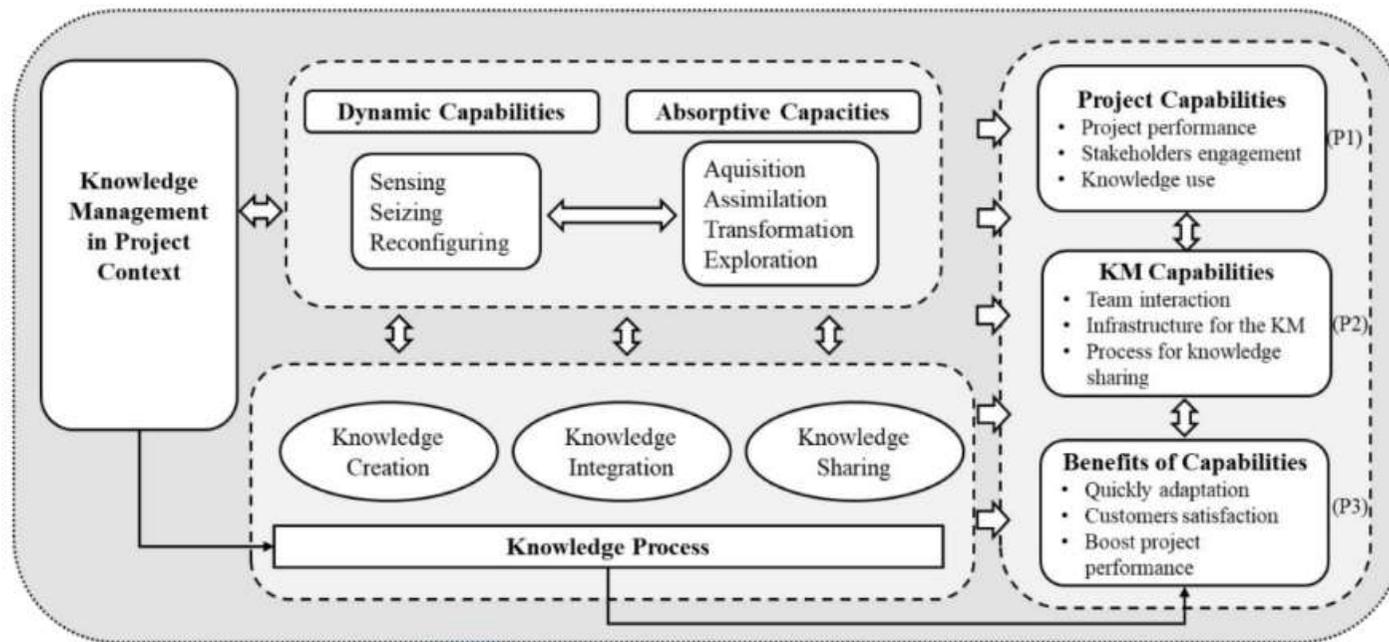
Population	Hypothesis tested	Calculated chi square	P-value	Hypothesis Confirmation
Entire Population	The performance in the project depends on innovative behaviour?	5.422	0.02	Supported
	The performance in the project depends on broker behavior?	2.452	0.117	Unsupported
	The performance behaviour depends on the project facilitator/mentor?	1.785	0.182	Unsupported
	The performance in the project depends on a coordinator behavior?	0.126	0.722	Unsupported
	The project depends on the performance of a behavior monitor?	0.032	0.857	Unsupported
	The performance in the project depends on producer behaviour?	0.032	0.858	Unsupported
	The performance in the project depends on Director behavior?	8.965	0.003	Supported
	The performance in the project depends on a persuasive leadership?	3.415	0.065	Supported
	The performance in the project depends on a participative leadership?	1.249	0.264	Unsupported
	The performance in the project depends on a delegate leadership?	0.014	0.907	Unsupported
	The performance in the project depends on a Directive leadership?	0.207	0.649	Unsupported

**Bridging Knowledge Management and Capabilities in Innovative Projects: An Integrative Framework**

Journal:	Project Management Journal
Manuscript ID:	PMJ-23-0103.R2
Manuscript type:	Special Issue - Project Knowledge Management and the Challenges of Rising Complexity and Uncertainty
Research Methods:	Literature review
Topic Area:	Knowledge management/ learning, Performance, value, benefits management



(Leite & Carvalho, 2023)



Note: Research Propositions from 1 to 3.

Figure 5. Integrative Framework for Knowledge Management and Capabilities in Innovative

# Towards a comprehensive conceptual framework for multicultural virtual teams: a multilevel perspective exploring the relationship between multiculturalism and performance

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Marly Monteiro Carvalho

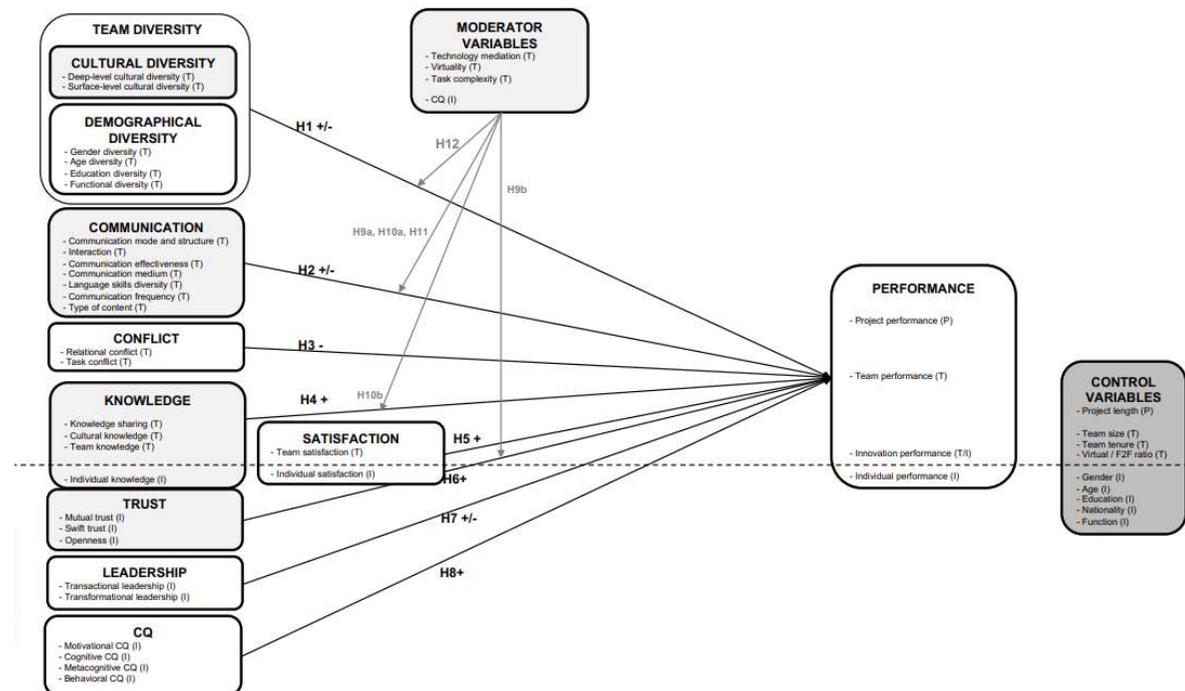
Roberto Sbragia



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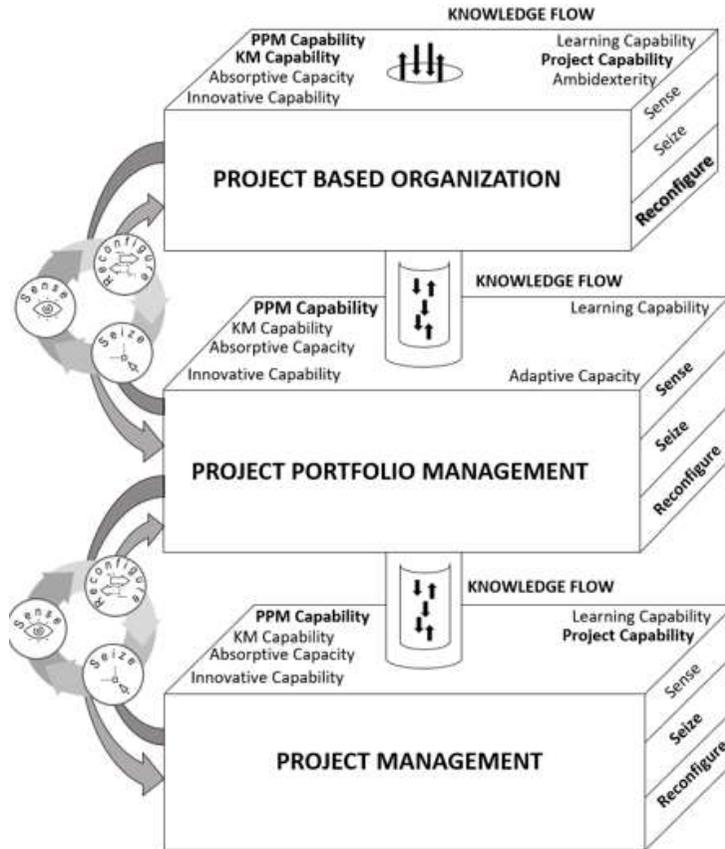
Figure 7 – Conceptual framework for direct/indirect effects for p



te: Related to the diversity of virtual teams (I=individual level; T=team level; P=project level. Source: the hors.

# Towards a Multi-level Framework of Dynamic Capabilities in Lenses of Project Management, Project Portfolio Management, and Project-Based Organizations

Barbosa & Carvalho, 2023



# Resenhas

