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## ORGANIZATIONAL CHANGE MANAGEMENT MODEL PROPOSAL: ACTION-RESEARCH IN A PUBLIC EXAM COMPANY.

## PROPOSTA DE UM MODELO DE GERENCIAMENTO DE MUDANÇAS ORGANIZACIONAIS: PESQUISA-AÇÃO EM UMA EMPRESA DE CONCURSOS PÚBLICOS.

### ABSTRACT

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**Purpose** – The presented research aimed to propose a model for organizational change management for a public examination company, which has experienced a significant increase in its activities and business environment in recent decades.

**Design/methodology/approach** – The adopted methodological approach was action research. The collected data allowed for the identification of the dominant culture within the organization and the assessment of its internal and external environment. This information informed the selection of an appropriate change management model.

**Findings** – Two results emerged from the research, one of general use and the other specific to the context: i. a method for choosing change management models, and ii. a detailed management model outlined for the analyzed organization.

**Originality/value** – The academic contribution consisted of developing a method for searching and selecting a management model. It is noteworthy that this method itself represents an initial outcome of the research with a high level of applicability, not limited to companies in the public examination sector. Regarding the final product, the selected and detailed model's primary contribution lies in guiding the organization in making adjustments to remain competitive and continue its operations. The outlined steps include the necessary care and attention to details in implementing changes, aiming to effectively contribute to the success of the adaptations required by the market scenario.

**Keywords:** Organizational change. Change management. Organizational culture.

## RESUMO

**Finalidade** – A pesquisa apresentada teve por objetivo a proposição de um modelo de gerenciamento de mudança organizacional para uma empresa de concursos públicos, a qual, nas últimas décadas, sofreu um expressivo aumento em suas atividades e em seu ambiente negocial.

**Desenho/metodologia/abordagem** – O enfoque metodológico adotado foi a pesquisa-ação. Os dados coletados permitiram identificar a cultura dominante da organização, bem como traçar um panorama de seu ambiente interno e externo, de sorte a subsidiar a escolha de um modelo de gerenciamento de mudança apropriado.

**Constatações** - Dois foram os resultados derivados da pesquisa, sendo um de uso mais geral e outro de uso específico, a saber: um método para a escolha de modelos de gerenciamento de mudança; e ii. um detalhado modelo de gerenciamento delineado para a organização analisada.

**Originalidade/valor** – A contribuição acadêmica consistiu na elaboração de método para a busca e seleção de um modelo de gerenciamento. Convém notar que esse método em si constitui um primeiro resultado da pesquisa, tendo um nível elevado de aplicabilidade, ou seja, não se limitando a empresas do setor de concurso público. Quanto ao produto final, destaca-se que o modelo selecionado e detalhado tem como principal contribuição a orientação dos caminhos a serem seguidos pela organização na realização de adequações para se manter competitiva e prosseguir com sua operação. Os passos previstos incluem cuidados e atenção necessários aos detalhes na condução das mudanças, que devem contribuir efetivamente com o êxito das adequações requeridas pelo cenário do mercado.

**Palavras-chave** - Mudança organizacional. Gestão de mudança. Cultura organizacional.

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## 1. INTRODUCTION

Adaptability remains a critical requirement in today's ever-evolving business context. The quest for equilibrium between organizations and their dynamic environments has spurred the development of numerous models and tools. Despite the extensive discourse on this topic, it is widely acknowledged that organizations that undertake significant changes often face an impressive failure rate, estimated at eighty percent (Whelan-Berry & Somerville, 2010; Worley & Mohrman, 2014).

However, the literature suggests that a well-designed organizational change program can propel companies towards enhanced performance levels. Noteworthy scholars such as Franco, Neiva, Nery and Demo (2016), Al-Haddad and Kotnour (2015), Abrell-Vogel and Rowold (2014), Americano and Fleck (2013), among others, have underscored the necessity for studies to take into account the intricate relationship between change and various facets of organizational dynamics. These facets include: organizational culture, organizational strategies, leadership training, employee involvement in the change implementation process, and the subsequent impact of these variables on driving organizational transformation.

Franco *et al.* (2016) have explored the influence of various variables within the context of change, focusing on individual attitudes and well-being. They have urged further investigations into other organizational variables that may impact on change processes, such as the active participation of employees and leadership influence on them.

Al-Haddad and Kotnour's (2015) argument underscores that realizing desired outcomes necessitates tailoring management models to suit the unique characteristics of each type of change. They advocate for future studies centered around understanding the human element within the sphere of organizational change.

The studies conducted by Abrell-Vogel and Rowold (2014) demonstrate the effectiveness of employees' commitment to change as a result of transformational leadership behavior. Thus, they suggest conducting future research focusing on the commitment of leaders and employees to change.

From the perspective of change in organizations, Americano and Fleck (2014) propose new research to advance theoretical and practical aspects related to the execution of change strategy processes.

Rashid, Sambasivan, and Azmawani (2004) discuss the influence of organizational culture on different levels of resistance to change. According to these authors, longitudinal studies of "the relationships between various dimensions of attitudes toward organizational change, organizational culture, and organizational strategy can better capture the dynamic nature of attitudes toward organizational change" (Rashid, Sambasivan & Azmawani, 2004).

Therefore, in terms of theoretical contribution, the research at hand offers insights into the relationship between change and organizational culture, as well as the interplay between environmental variables and potential change models. The practical contribution of this work lies in proposing a change management model that takes into consideration the peculiarities of a company in the public competitive examination sector, especially concerning aspects related to the organization's culture.

The researched company is a public-private institution affiliated with a prominent Brazilian university, ranking among the top five companies in the sector. Since the 1970s, it has been dedicated to developing and administering entrance exams for various educational institutions in the country. After two decades of this work, it ventured into public competitive exams and currently conducts entrance exams, public competitive exams, and assessments.

With five decades of experience in this market, the company comprises 200 employees and many collaborators who work on exam administrations. A decade ago, they conducted about 40 projects per year, whereas today, they handle approximately 200 projects. They receive over 800 requests for organizing exams, entrance tests, or assessments each year, and

they execute one out of every 8 requested projects in a market where 650 companies compete nationwide. More than half of these companies are based in the state of São Paulo, the primary market for this segment.

From 2010 to 2018, the company experienced significant growth in exam administration. The number of entrance exams they conducted increased by 37.5%, while the percentage increase in the number of public competitive exams they administered was 123.6%. Given this scenario, the company's top management deemed it necessary to promote a change management model capable of fostering a culture of continuous improvement in their activities and processes.

Therefore, the aim of this research was to find an answer to the question at hand: how to develop a change management model that suits the characteristics of an institution in the public competitive examination sector?

For a better presentation of the research and its results, the article is structured into five parts, including this introduction. In section 2, a theoretical discussion on the topic of this article, i.e., organizational change, is presented, explaining how the choice of the selected change management model for the specific case came about. In the third section, the research method used is introduced, and the fourth section describes the implementation process of the adopted model. Finally, the article concludes with some final considerations.

## 2. LITERATURE REVIEW

Organizational change is a prominent phenomenon in studies within the field of behavior, as emphasized by Worley and Mohrman (2014). It is a concept that's challenging to define, similar to other constructs in the field of organizations, such as culture, organizational climate, and strategy. In general, one can say that the essence of this concept involves the acquisition of new values and beliefs, the development of a new organizational reality, and the modification of social relationships within the organization (Lima & Bressan, 2003).

Table 1 presents the main concepts of organizational change and their respective authors.

**Table 1**

Theoretical definitions of organizational change

| Definitions found   | References                   |
|---|------------------------------|
| Significant change, articulated, planned and operationalized by personnel internal or external to the organization, which has the support and supervision of higher management, and which fully affects the behavioral, structural, technological and strategic components. | Araújo (1982)                |
| Organizational change is the process of group structuring by which members of a certain community learn together, that is, create and establish new ways of playing the social game of cooperation.   | Crozier and Friedberg (1990) |
| Set of scientifically based theories, values, strategies, and techniques aimed at planned change in the work environment with the aim of increasing individual development and organizational performance.  | Porras and Robertson (1992)  |
| The organization's response to transformations taking place in the environment, with the aim of maintaining congruence between organizational components (work, people, arrangements/structure and culture)   | Nadler and Tushman (1990)    |
| Sequence of events that unfold during the existence of the organizational entity and that report a specific type of change.   | Van de Ven and Poole (1995)  |
| Intentional proactive and targeted activities to achieve organizational goals.  | Robbins (1999)               |
| Any transformation of a structural, strategic, cultural, technological, human, or other component nature that generates an impact on parts or the entire organization.  | Wood. (2000)                 |

| Definitions found   | References                                |
|---|---|
| Any modification, planned or unplanned, in the most relevant formal and informal organizational components (people, structures, products, processes and culture); modification that is significant, that affects most members of the organization and aims to improve organizational performance in response to internal and external demands | Bressan (2001)                            |
| Any change, planned or unplanned, that occurs in the organization, resulting from factors internal and/or external to it, that has some impact on the results and/or relationships between people at work.  | Bruno-Faria (2003)                        |
| Organizational change occurs when external forces influence the adoption of actions and behaviors. In this sense, institutionalization arises when action becomes habitual on the part of various organizational actors, replicating, encouraging, sharing and legitimizing these practices.  | Camargo, Román, Barberio and Lopes (2018) |
| Broadly speaking, organizational change can be defined as any attempt to change, in a planned manner, the operations or processes of an organization.   | Choflet, Packard and Stashower (2021)     |

Source: Adapted from Lima and Bressan (2003); Charry, Vargas and González-Campo, Murillo-Vargas (2019); Choflet, Packard and Stashower (2021)

Organizational changes can also be classified into the most diverse typologies, the main ones of which are summarized in Table 2:

**Table 2**

Types of organizational change

| Type of change  |  | References                          |
|---|--|-------------------------------------|
| <p><b>First order</b></p> <p>It is a linear and continuous change, which involves changes in the characteristics of the systems, without causing breaks in key aspects for the organization.</p>                                      | <p><b>Segunda ordem</b></p> <p>É uma mudança multidimensional, multinível, radical e descontínua, que envolve quebra de paradigmas organizacionais.</p>  | <p>Porras and Robertson (1992)</p>  |
| <p><b>Incremental / Continuous</b></p> <p>Continuity of the existing standard. It may have different dimensions, but it is carried out within the company's current context.</p>  | <p><b>Discontinuous</b></p> <p>Change in the existing pattern, which occurs in periods of imbalance and involves one or several restructuring of the company's characteristics.</p>  | <p>Nadler and Tushman (1990)</p>    |
| <p><b>Continuous</b></p> <p>Constant, cumulative, and evolutionary change. They can be small advances that occur daily throughout the organization, the accumulation of which can lead to significant change in the organization.</p> | <p><b>Episodic</b></p> <p>Infrequent, discontinuous, and intentional change that occurs during periods of divergence, when companies leave their equilibrium condition.</p>  | <p>Weick and Quinn (1999)</p>       |
| <p><b>Convergent</b></p> <p>Fine-tune existing organizational guidance.</p>   | <p><b>Radical</b></p> <p>Break with the existing orientation and transformation of the organization. Could it be:</p> <p><b>Revolutionary</b> – happens abruptly and affects virtually all parts of the organization.</p> <p><b>Evolutionary</b> – occurs slowly and gradually, and its scope may be</p> | <p>Greenwood and Hinings (1996)</p> |

| Type of change  |  | References                             |
|---|--|--|
|   | more modest.   |  |
| <b>Micro change</b><br>Focused within the organization. Example: redefining jobs in a factory or developing a new product.  | <b>Macro change</b><br>It targets the entire organization, including its relationships with the environment. Example: repositioning in the market or changing all its physical facilities. | Mintzberg, Ahlstrand and Lampel (1998) |
| <b>Incremental/Organizational</b><br>Increased efficiency and use of resources, change in company architecture.   | <b>Transformational/Institutional</b><br>Questioning and changing the mission, nature and objective of the organization.   | Silva (1999)                           |
| <b>Planned</b><br>Organizational change because of processes of introspection and gradual adaptation of organizations, based on the dynamism of the micro and macro environment, in addition to the internal capacity to respond to variables on which there is no direct impact. | <b>Emerging</b><br>Organizations' reaction processes to abrupt and unexpected forces in the environment.   | Charry <i>et al.</i> (2019)            |

Source: Adapted from Lima and Bressan (2003); Pinto and Couto-de-Souza (2009), Charry *et al.* (2019).

Lima and Bressan (2003) point out that there are different types of changes and various managerial techniques and strategies for addressing each type of change. Furthermore, according to the authors, several types of changes can be categorized into two main forms, even if they are labeled differently:

The first form involves changes that only affect some aspects of the organization, making small adjustments continuously. This type of change is typically seen in situations where the environment is more stable. The second form encompasses changes that break from previous patterns, impacting the entire organization. It necessitates a redirection of the organization due to significant alterations in its environment. These distinctions are crucial in order to understand the nature of organizational change and the management approaches required for different change scenarios (Lima & Bressan, 2003, p. 25).

## 2.1. Organizational change management models

Worley and Mohrman (2014) observe that change should be implemented through networks that support learning throughout the organization. This model treats change as a source of effectiveness, incorporated into projects that occur all the time, at different speeds, and in different parts of the organization. This perspective does not eliminate the value of traditional models found in the literature.

In the 1940s, Kurt Lewin proposed the unfreezing, change, and refreezing model. According to Al-Haddad and Kotnour (2015), Lewin requires active participation of agents in understanding the problem, seeking a solution, and its implementation, with the involvement of leadership and employees, as observed by Hussain *et al.* (2018).

Appelbaum, Habashy, Malo and Shafiq (2012) consider that, although it requires rigorous foundations, Kotter's model remains a fundamental reference in the field of change management: an excellent starting point whose application can increase the chances of success. However, they report that the model should not be expected to apply to all types of changes.

Al-Haddad and Kotnour (2015) emphasize that Judson anticipates resistance at each stage of change, with the most significant resistance coming from managerial levels closest to operations, which play an important role in implementing changes.

A comprehensive model consisting of ten phases was proposed by Kanter, Jick, and Stein. The authors, according to Al-Haddad and Kotnour (2015), consider many internal and external forces that can affect change.

Luecke believed that the success of change implementation lies in seeing it as an opportunity rather than a threat, as reported by Al-Haddad and Kotnour (2015). Luecke considered employee motivation and support for change to result from the actions of effective leadership.

The model proposed by Hamel differs from others in that it considers change to stem from radical and non-linear innovations, differentiating from those being undertaken by competitors, aiming for a competitive advantage and organizational success (Al-Haddad & Kotnour, 2015).

Developed by Jeffrey M. Hiatt, the ADAKAR process describes five points to be achieved in successful change by an individual or a team: (i) awareness of the need for change; (ii) desire to support the change; (iii) knowledge of how to change; (iv) the ability to demonstrate new skills; and (v) the behaviors necessary for change and reinforcement to sustain it (Hiatt, 2006).

Evidence-Based Practice is a process proposed by Cherry B. Stetler, originally focused on research utilization, which was updated and improved to fit the Evidence-Based Practice (EBP) model paradigm (Stetler, 2001). The model consists of five phases and provides guidance for implementing and evaluating practice changes (Schaffer, Sandau & Diedrick, 2012).

Tom Peters, Richard Pascale, and Robert Waterman. developed a model that analyzes seven aspects of the organization with a view to the changes to be implemented (Galli, 2018).

Schaffer, Sandau and Diedrick. (2012) describe the three key elements of the Promoting Action on Research Implementation in Health Services (PARIHS) framework. Developed by Jo Rycroft-Malone, it is a model in which practice and evidence mutually influence each other during implementation.

## 2.2. Organizational change management

There is a wide variety of change management models in organizational literature. Therefore, a selection was made based on the relevance of the models found in the literature supported by the h-index. Developed by Hirsch (2005) and widely accepted by the scientific community, this index is calculated from the ratio of the number of articles published to the number of citations received by the researcher, journal, or research group. The index is available in Scopus, Web of Science, and Google Scholar databases. The number of published articles and the h-index were used to identify the change management models cited in the literature. Table 3 presents the models along with the number of published articles and the h-index.

**Table 3**

Number of articles published and h index

| Year | Author            | Model   | SCOPUS database |      |              |                   |        |           |           |
|------|-------------------|---|-----------------|------|--------------|-------------------|--------|-----------|-----------|
|      |                   |   | Article         | Book | Book chapter | Proceedings Paper | Review | TOTAL     | h index   |
| 1946 | Kurt Lewin        | <i>Unfreezing-Change-Refreezing</i><br>(Hussain <i>et al.</i> 2018)       | 30              |      | 3            | 3                 | 8      | <b>44</b> | <b>84</b> |
| 1982 | Tom Peters        | <i>McKinsey 7S</i><br>(Galli, 2018)                                       | 8               |      |              | 2                 | 1      | <b>11</b> | <b>3</b>  |
|      | Robert Waterman   |   | 8               |      |              | 2                 | 1      | <b>11</b> | <b>0</b>  |
| 1991 | A.S. Judson       | <i>Five-step Change Model</i><br>(Al-Haddad & Kotnour, 2015)              | 2               |      |              | 3                 |        |           | <b>0</b>  |
| 1996 | John Paul Kotter  | Eight Stage Processes<br>(Kotter, 1947).                                  |                 | 2    | 7            | 15                | 10     | <b>34</b> | <b>41</b> |
| 2000 | Gary Hamel        | <i>Insurrection Method</i><br>(Hamel, 2001)                               | 1               |      |              |                   | 2      | <b>3</b>  | <b>23</b> |
| 2001 | Cherry B. Stetler | <i>Evidence Based Practice</i><br>(Stetler, 2001)                         | 13              |      |              |                   | 14     | <b>27</b> | <b>0</b>  |
| 2001 | Marita G. Titler  | <i>Iowa Model</i><br>(Titler <i>et al.</i> , 2001)                        | 8               |      |              |                   |        |           | <b>0</b>  |
| 2003 | Jeffrey M. Hiatt  | <i>ADKAR</i><br>(Hiatt, 2006)   | 15              |      |              | 8                 | 1      | <b>24</b> | <b>1</b>  |
| 2003 | Richard W. Luecke | <i>Seven Steps</i><br>(Al-Haddad & Kotnour, 2015)                         | 1               |      |              |                   |        | <b>1</b>  | <b>1</b>  |
| 2003 | Rosabeth Kanter   | <i>Ten steps for Organizational Change</i><br>(Al-Haddad & Kotnour, 2015) | 3               |      |              |                   |        | <b>3</b>  | <b>0</b>  |
|      | Todd D. Jick      |   | 1               |      |              |                   |        | <b>1</b>  | <b>0</b>  |
|      | Stein             |   |                 |      |              |                   |        |           |           |
| 2004 | Jo Rycroft-Malone | <i>PARIHS</i><br>(Schaffer <i>et al.</i> , 2012)                          | 4               |      |              |                   |        | <b>4</b>  | <b>5</b>  |
| 2008 | Amarji Sing       | <i>Organizational Change Model</i><br>(Sing and Shoura, 1999)             | 1               | 1    |              |                   |        | <b>2</b>  | <b>1</b>  |
|      | Max Maher Shoura  |   | 1               | 1    |              |                   |        | <b>2</b>  | <b>1</b>  |



Among the models with the highest number of published articles and the best h-index, the following stand out:

- Unfreeze, Change, and Refreeze by Kurt Lewin
- The Eight Steps by John Paul Kotter
- McKinsey 7S by Tom Peters and Robert Waterman
- Evidence-Based Practice by Cherry B. Stetler
- ADKAR by Jeffrey M. Hiatt
- Insurrection Method by Gary Hamel

The evaluation of these models has led to the development of a comparative analysis of their stages, as presented in Table 4.

**Table 4**

Comparison between the stages of the models with the highest number of articles published and the best h index

| Unfreeze, Change and Re-freeze<br><b>Lewin</b><br>(1946)   | Eight Steps<br><b>Kotter</b><br>(1996) | McKinsey 7S<br><b>Peters and Waterman</b><br>(1980)           | Evidence-Based Practice<br><b>Stetler</b><br>(2001)                                 | <b>ADKAR</b><br><b>Hiatt</b><br>(2003)              | <i>Insurrection Method</i><br><b>Hamel</b><br>(2001) |
|--|--|---|---|---|--|
|  | Establish a sense of urgency           | Identify a leader to drive change                             | Define the purpose of the change  | Realize the need to change to achieve what you want | Build a point of view                                |
| Defrosting<br>- Understand and communicate the reason for the change<br>- Understand doubts and concerns<br>- Obtain support from senior management and key people | Form a powerful guiding coalition      | Create a need to change and share it                          | Assess contextually and search for sources of evidence                              | Develop the inner will to drive change forward      | Write a manifesto                                    |
|  | Create a vision                        | Shape a vision and convey it to key stakeholders              |   |   | Create coalition                                     |
|  | Create a vision                        | Analyze possible resistance and obtain support and commitment | Criticize and synthesize evidence found and decide which change will be implemented | Know the actions to take to make change happen      | Choose targets                                       |
|  |  |   |   |   | Co-opt and neutralize                                |
|  | Empower people to act on the vision    |   |   |   | Find translator                                      |
| Change<br>- To communicate<br>- Empower action<br>- Involve people<br>- Dispel rumors  | Plan and create small wins             | Make the change   | Implement and evaluate change in practice   | Putting attitudes into practice                     | Earn little  |

| Unfreeze, Change and Re-freeze<br><b>Lewin</b><br>(1946)  | Eight Steps<br><b>Kotter</b><br>(1996)            | McKinsey 7S<br><b>Peters and Waterman</b><br>(1980) | Evidence-Based Practice<br><b>Stetler</b><br>(2001) | <b>ADKAR</b><br><b>Hiatt</b><br>(2003)                      | <i>Insurrection Method</i><br><b>Hamel</b><br>(2001) |
|---|---|---|---|---|--|
| Freezing  | Consolidate improvements and produce more changes | Monitor progress                                    |   |   |  |
| <ul style="list-style-type: none"> <li>- Anchor changes in culture.</li> <li>- Develop support for change.</li> <li>- Provide support and training.</li> <li>- Celebrate success</li> </ul> | Institucionalize more changes                     | Integrate change into the organization's culture    |   | Keep the change in action and avoid giving up along the way | Isolate infiltrate integrate                         |

Source: Adapted from Al-Haddad and Kotnour (2017), Hiatt (2006), Galli (2018) and Hamel (2001).

As one can see, there are various models in the literature that provide steps for change management. However, Kotter's model (1947) is the subject of many published articles, and the author's h-index is higher than that of similar models. Despite being created in the mid-20th century, this model is widely recognized in organizational literature (Pollack & Pollack, 2014) and remains quite relevant. With appropriate adjustments, it can even be used for small-scale changes that do not represent significant interventions. This model addresses concerns such as clarifying what needs to change, effectively communicating the change to key stakeholders, and includes elements that contribute to integrating the new situation into the organization's culture.

These reasons explain the use of Kotter's model (1947) as a reference for developing the change management model for the company under study, which can also employ it for more extensive and intensive interventions.

### 3. METHODOLOGY

This study adopted Action Research, which is a research method that aligns academic and organizational interests to propose solutions to complex organizational problems. The method represents a theoretical contribution and knowledge/learning through iterative and interactive questioning throughout sequential cycles of activities, involving planning, action, observation, and reflection on the studied phenomenon, with the collaboration of academic researchers and representatives of the organization directly engaged in the research context (Bernardes, Muniz & Nakano, 2019). The study had a phase of theoretical discussion and fieldwork. It's worth noting that, as part of the research method used, participants were invited to evaluate the results of the data collection phase in a specific meeting. The researcher presented a synthesis of the results to the participants, and they subsequently expressed their opinions, validating the collected data.

In the first stage, research was conducted in university repositories and in Scopus and Web of Science databases. The search terms used were: "change model," "organizational change," "organizational change management," and "organizational culture." From this set, the five models with the highest number of citations (as mentioned above) were selected.<sup>1</sup>

The fieldwork stage allowed for the identification of the prevailing culture within the company (see Appendix 1) and the internal and external variables of the organization obtained through SWOT analysis (see Appendix 2) and Porter's Five Forces (see Appendix 3). The necessary changes to the organization were also consolidated, and the proposed Change Management Process (see Section 4 - Figure 2) was developed through discussions with those involved in the company and by using a questionnaire to prioritize the identified changes (see Appendix 4).

The proposed Change Management Process (see Section 4 - Figure 2) is detailed for a better understanding of the data collection process in the following three stages.

1. Meeting with the respondent to present the reasons and objectives of the research.
2. Questionnaire administration, completed online using Google Forms, with the aim of evaluating the company's prevailing culture and the environmental forces, including the business environment, threats, opportunities, strengths, and weaknesses of the company. The forms used can be found in Appendices 1, 2, and 3.
3. Validation meeting with the respondents, during which the questionnaire results were presented for joint assessment. After the meeting, participants were invited to express their opinions on the necessary changes to the organization through a closed-question form via Google Forms (see Appendix 4).]

The respondents were area managers and were selected based on their experience and knowledge of the company's operations. The participant selection process involved the company's director. The aim was to identify managers from central areas of the company who could provide information about the business environment and the organization's processes. The profile of the respondents is provided in Table 4.

**Table 5**

Profile of survey respondents

| Respondent | Training Academic       | Management area    | Time working at the Company (years) | Sex | Age Range  |
|------------|-------------------------|--------------------|-------------------------------------|-----|------------|
| 1          | Computer Science        | Quality Management | 10                                  | F   | 31 - 40    |
| 2          | Bachelor's in law       | Project Management | 20                                  | F   | 41 - 50    |
| 3          | Business Administration | Project Management | 28                                  | F   | 51 - 60    |
| 4          | Physical education      | Project Management | 28                                  | F   | 61 or more |
| 5          | Bachelor's in law       | Project Management | 20                                  | F   | 41 - 50    |
| 6          | Computer Science        | IT Management      | 29                                  | M   | 51 - 60    |
| 7          | Bachelor's in law       | Project Management | 20                                  | M   | 41 - 50    |
| 9          | Bachelor's in law       | Project Management | 21                                  | F   | 61 or more |

<sup>1</sup> It's worth noting that in the search results, no articles related to the public competition sector were found, which in itself indicates a potential scientific gap.

|    |                  |                       |    |   |            |
|----|------------------|-----------------------|----|---|------------|
| 9  | Systems Analysis | Production Management | 20 | M | 41 - 50    |
| 10 | Physical         | Planning Management   | 20 | F | 61 or more |

Regarding the data analysis process, it was conducted as follows:

Quantitative data (e.g., closed-ended questionnaire questions) were tabulated and presented descriptively.

For qualitative data (validation meetings and open-ended questionnaire questions), content analysis was used (Bardin, 2018) with open coding (Bryman, 2012), as exemplified below. The transcriptions and responses were analyzed in three stages: material pre-analysis, material exploration (initiation of coding), and results treatment (Bardin, 2018), as shown in Table 6.

**Table 6**

Example of Content Analysis

| Meaning Unit Condensed meaning unit   | Condensed meaning unit   | Code                                      |
|---|--|---|
| <p>Answer in open questionnaire (respondent number 6)</p> <p>We can execute many projects simultaneously and meet customer needs. <b>However, there are clients who choose the competition depending on the deadline for executing the project.</b> I believe it is possible to improve execution times by reviewing processes, with an increase in digital solutions aimed at reducing execution time.</p> | <p><i>clients who choose competition depending on the deadline for project execution</i></p> | <p><i>project completion deadline</i></p> |

### 3.1. The study company

This research was conducted in the context of a professional master's program. Therefore, the choice of the company was driven by both practical and scientific reasons. The practical reason is related to the fact that the researcher also worked for the company that funded the master's program. The scientific reason is that it's a service company in the public competition sector, which is an area that has received limited attention in current scientific research, as evidenced by the database searches mentioned earlier.

The research generated two sets of results, one with a broader scope and another with a more specific scope. The first set pertains to the method used to choose the management model, a method that can be employed by researchers, consultants, and academics dealing with organizations in various sectors of activity. As for the second set, namely the suggested and detailed model, it can support companies in the same sector with similar cultural and environmental characteristics that wish to implement change management processes.

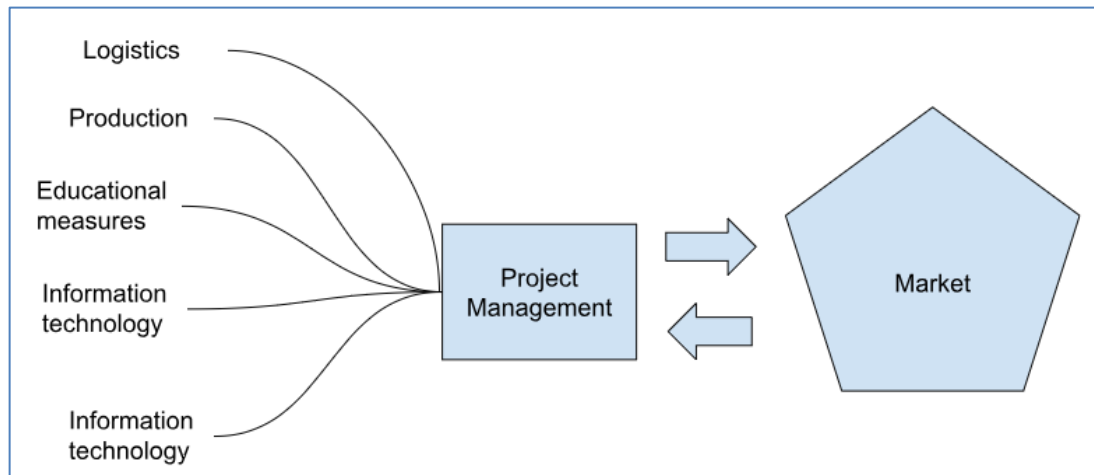
Regarding the company, it's worth noting that it has over 40 years of experience and consists of 180 employees, as well as many collaborators involved in exam administration. A decade ago, it handled around 40 projects per year, but now it manages approximately 200. The company receives over 800 requests for organizing competitions, entrance exams, or assessments annually and executes one out of every 8 requested projects in a market where it competes with 650 national-level competition companies. More than half of these companies are based in the state of São Paulo, the primary market in this sector.

The company's organizational structure consists of top management, middle management, and the operational area. The Project Management Department is responsible for the primary processes of interaction with the market and coordinates the services of internal departments in serving customers, as illustrated in Figure 1.

The department's teams consist of a Project Manager supported by Assistants and Aides. Each team is tasked with managing projects from negotiation through to result delivery, a structural and operational model rooted in the company's inception. With an average of 24 years of experience within the company, our Project Managers possess profound expertise in the department's operational processes.

### Figure 1

Project Management as an interface between the company's departments and the market.



There are differences in procedures among the teams that hinder the computerization of certain stages of the process. Additionally, there is an accumulation of tasks performed by Project Managers. Many of these tasks could be handled by assistants and aides, allowing the manager to have more availability to serve the customer and engage in strategic activities. In some situations, teams are overloaded with tasks, while others remain underutilized, with a low level of activity.

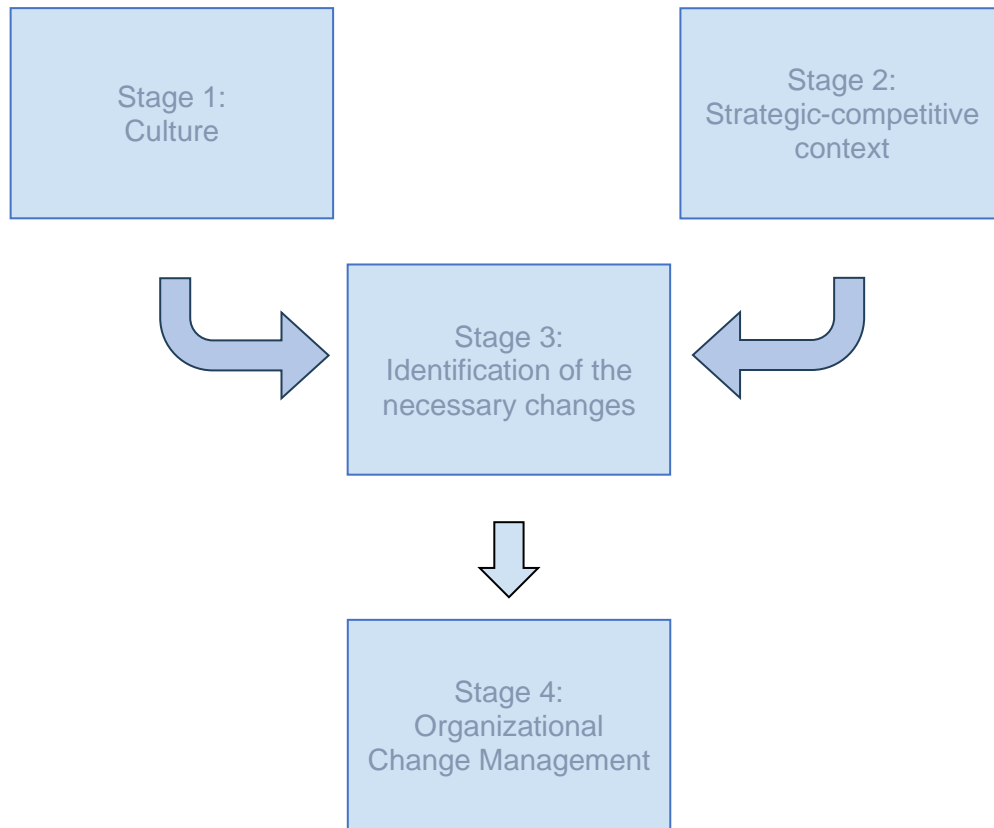
## 4. RESULTS AND DISCUSSION - PROPOSED CHANGE MANAGEMENT MODEL

The proposed change management model (Figure 2) consists of four stages, starting with data collection to determine the priority of changes. The two diagnostic stages include: i) the company's cultural profile (stage 1), based on Handy's (2003)<sup>2</sup> classification; and ii) the company's strategic-competitive context (stage 2), utilizing Porter's Five Forces Model (Porter, 1989) and the SWOT Model (Gürel & Tat, 2017). It's worth noting that the diagnostic phase contributes to building an organizational perspective on what is intended with the change (Hamel, 2001).

<sup>2</sup> The chosen model for identifying organizational culture is a mature and well-established model in the field of Organizational Studies, known for its practicality in application. The model was developed by Handy (2003), and it assesses the following variables: leadership profile, subordinate profile, and the way the organization interacts with its subordinates.

**Figure 2**

Flowchart of the Change Management Model Selection Method



**Stage 1 - Internal Diagnosis: Organizational Culture**

The Handy model (2003) was chosen for diagnosing Organizational Culture due to its ease of association between the proposed images and real situations experienced by the organization's managers. Based on Greek Gods, the author describes four types of companies with diverse cultural profiles, as mentioned above. The diagnosis of the company's culture (Stage 1 - Appendix 1) was obtained through the application of a questionnaire adapted from Handy (2003), and the results are presented in Table 7. Following Handy's method, the lowest obtained value indicates the predominant culture, which in this case, is the Task Culture (Athena).

**Table 7**

Types of Culture Perceived by Managers

| Respondents | Culture of Power (Zeus) | Role Culture (Apollo) | Task Culture (Athena) | Existential Culture (Dionysus) |
|-------------|-------------------------|-----------------------|-----------------------|--------------------------------|
| 1           | 20                      | 16                    | 17                    | 19                             |
| 2           | 21                      | 16                    | 17                    | 20                             |
| 3           | 23                      | 17                    | 17                    | 21                             |
| 4           | 23                      | 18                    | 18                    | 22                             |
| 5           | 24                      | 21                    | 18                    | 25                             |
| 6           | 25                      | 24                    | 18                    | 26                             |
| 7           | 26                      | 24                    | 18                    | 28                             |

| Respondents    | Culture of Power (Zeus) | Role Culture (Apollo) | Task Culture (Athena) | Existential Culture (Dionysus) |
|----------------|-------------------------|-----------------------|-----------------------|--------------------------------|
| 8              | 28                      | 24                    | 20                    | 29                             |
| 9              | 30                      | 25                    | 22                    | 30                             |
| 10             | 31                      | 26                    | 23                    | 30                             |
| Soma de Pontos | 251                     | 211                   | 188                   | 250                            |

Respect for the executive in the studied area tends to be earned rather than imposed. Authority is exercised through persuasion. Project Managers are recognized for their ability to manage multiple projects simultaneously, stemming from years of accumulated knowledge and experience. Some employees in the area have expressed concerns that changes may restrict the manager's freedom in project management. In certain circumstances, trust and empathy support intuitive decisions regarding changes.

#### Stage 2: Diagnosis of the strategic-competitive environment

The Strategic Competitive Diagnosis was conducted through questionnaires with the following objectives:

- Identify strengths, weaknesses, opportunities, and threats concerning the environment in which the company operates.
- Address relevant aspects of the current competition in the sector.

#### Stage 2.1 SWOT Analysis

By utilizing the SWOT analysis (Stage 2.1 - Appendix 2), our goal was to discern the strengths, weaknesses, opportunities, and threats as perceived by our organization's key managers. The outcome of this analysis was intended to stimulate deep reflections among respondents. We aimed to encourage them to consider how to harness opportunities effectively, leveraging the organization's strengths, and also to contemplate the necessary changes to address our weaknesses.

In a questionnaire with open-ended questions, managers identified 30 strengths, 15 weaknesses, 13 opportunities, and 6 threats. The most relevant items, as presented in Table 8, were derived from the propositions of Gürel and Tat (2017), using the Content Analysis process mentioned earlier and through the interaction of participants in the presentation and evaluation of the results.

**Table 8**

Summary of SWOT Analysis

| <b>STRENGTHS</b>   | <b>WEAKNESSES</b>   |
|--|---|
| <ol style="list-style-type: none"> <li>1. Good cost-to-benefit ratio</li> <li>2. Personalized customer service</li> <li>3. Quality of services provided and commitment to the customer</li> <li>4. Test application</li> <li>5. In-house graphic facility</li> <li>6. Ability to execute multiple projects simultaneously</li> <li>7. Qualified and dedicated professionals</li> <li>8. Confidentiality</li> </ol> | <ol style="list-style-type: none"> <li>1. Project execution deadlines</li> <li>2. Limited involvement in federal competitions</li> <li>3. Costs</li> <li>4. Need for workflow realignment</li> <li>5. Lack of standardization in some procedures</li> </ol> |

| <b>OPPORTUNITIES</b>   | <b>THREATS</b>  |
|--|---|
| <ol style="list-style-type: none"> <li>1. Unemployment rate</li> <li>2. Economic growth</li> <li>3. Workforce availability</li> <li>4. Population growth</li> <li>5. Communication capabilities with the public</li> <li>6. Utilization of new technologies</li> <li>7. Government incentive policies</li> </ol> | <ol style="list-style-type: none"> <li>1. Political changes</li> <li>2. Competitive company actions</li> <li>3. Changes in industry regulations</li> <li>4. Election periods</li> <li>5. Legislative changes</li> </ol> |

### Stage 2.2 - Analysis of the Five Forces

Following the broader perspective obtained through the SWOT analysis, it fell to the managers to assess the company's position in relation to competition. According to Porter (1989), ensuring the organization's survival requires a position that is less susceptible to competitive actions, whether from existing competitors or new entrants. This strategic position can be established through the consolidation of customer relationships, service differentiation, and technological leadership. The elements comprising the analyzed forces were adapted from Ambarwati, Fathurochman and Rizal (2019) and were included in the questionnaire provided to the managers, as outlined in Appendix 3.

According to Joshi, Kale, Chandel and Pal, (2015), the Likert scale was developed to measure opinions, perceptions, and preferences in a scientifically accepted and validated manner. To gauge the managers' perceptions of the competitive forces, a 5-point Likert scale was adopted to prioritize simplicity, participants' understanding, and response consistency. To enhance the robustness of the results, the median was chosen as a measure less sensitive to extreme values.

The results of the competitive analysis are presented in Table 9.

**Table 9**

Porter's Five Forces

| <b>Regarding current competitors:</b>                             | <b>Median</b> | <b>Result</b>     |
|---|---------------|-------------------|
| There are few competitors in the market                           | 1,0           | Strongly Disagree |
| Our costs are better than the others.                             | 2,0           | Disagree          |
| Our project completion time is shorter than the others.           | 2,0           | Disagree          |
| We have better access to customers than the others.               | 3,0           | Neutral           |
| Our market share is higher than that of others.                   | 4,0           | Agree             |
| <b>As for the bargaining power of suppliers:</b>                  | <b>Median</b> | <b>Result</b>     |
| There are few significant suppliers.                              | 2,0           | Disagree          |
| Suppliers have a strong impact on the business.                   | 4,0           | Agree             |
| The price-to-quality relationship with suppliers is excellent.    | 3,0           | Neutral           |
| <b>Threat of substitute products:</b>                             | <b>Median</b> | <b>Result</b>     |
| There are many products with similar benefits.                    | 3,0           | Neutral           |
| The uniqueness of our product influences the customer's decision. | 4,0           | Agree             |
| <b>Barriers inhibiting the entry of new competitors:</b>          | <b>Median</b> | <b>Result</b>     |
| Government Policies.  | 4,0           | Agree             |
| Capital requirements.   | 4,0           | Agree             |
| Brand importance.   | 4,0           | Agree             |
| Access to customers.  | 4,0           | Agree             |
| Intense competition   | 4,0           | Agree             |
| <b>Regarding the bargaining power of customers:</b>               | <b>Median</b> | <b>Result</b>     |
| Our customers have strong bargaining power.                       | 4,0           | Agree             |



|  |     |       |
|--|-----|-------|
| Our customers exert strong pressure for price reduction.   | 4,0 | Agree |
| Our customers exert strong pressure for shorter deadlines. | 4,0 | Agree |

### Stage 3 - Identification of Necessary Changes

Stage 3, which involves the presentation of results, was conducted in a meeting with the organization's managers. After the presentation and discussion of the results, participants were invited to record their judgments about the collected data and the ongoing process. They were also encouraged to suggest changes they deemed necessary for the organization. Through content analysis, the results were summarized and categorized.

Subsequently, the respondents assigned priority to the suggested changes. This process was carried out using a Google Forms questionnaire (Appendix 4). Table 10 presents a summary of the main proposed changes, along with their prioritization (with 1 being the most relevant priority).

**Table 10**

Changes Proposed by Managers

| Changes proposed  | Priority |
|---|----------|
| Reduce costs and project execution time.  | 1        |
| Restructure the subprocesses in the Project Management Area into three main processes: <ul style="list-style-type: none"> <li>• Customer negotiation (budget, proposal, contract, and schedule)</li> <li>• Project development (call for proposals, registrations, analysis of requests during registration, publications)</li> <li>• Implementation (locations, allocation, manual preparation, training, logistics, incident analysis, feedback)</li> </ul> | 2        |
| Develop new products: <ul style="list-style-type: none"> <li>• Digital exams</li> <li>• Online practice tests for competitive exams and college entrance exams</li> <li>• Assessments for state governments</li> <li>• Item bank</li> </ul>   | 3        |
| Enhance professional development for skill improvement.   | 4        |
| Redefine the role of managers to focus exclusively on process and personnel management.   | 5        |
| Adopt a more aggressive approach to acquiring new customers.  | 5        |

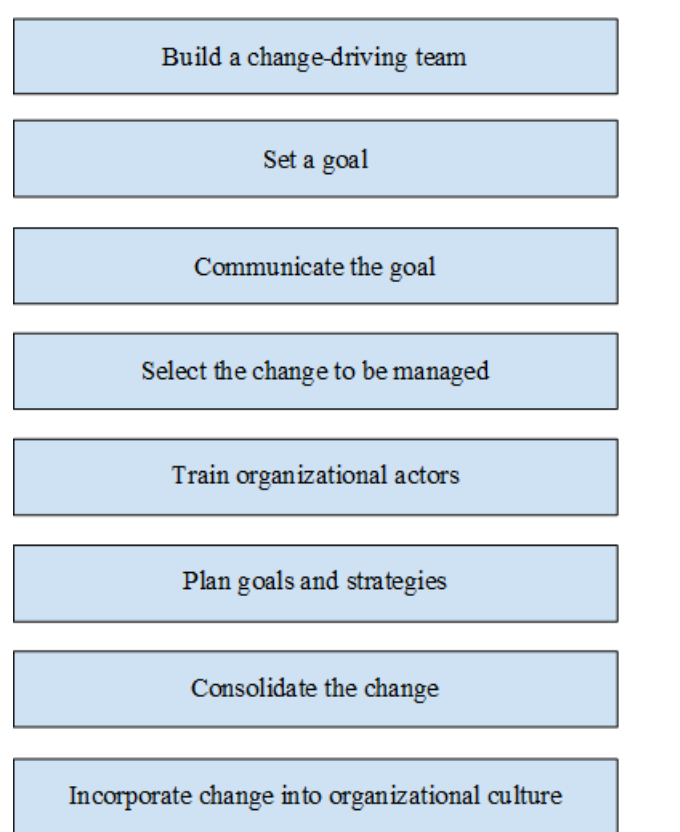
### Stage 4 - Implementation of Organizational Change

Appelbaum *et al.* (2012) outline eight steps in the change management model proposed by Kotter, discussing each of them. The first step emphasizes that people will not change unless they see the urgency and necessity to do so. In the second step, the model proposes creating a group with power and influence to lead the change. The third step seeks to outline the vision of what the change is and how it will be achieved. The fourth step deals with communication, telling people in various ways, in all circumstances, the vision of change, the scenario of the change accomplished. The next step, the fifth one, aims to expand the action base by involving people and encouraging them to think about the changes and how to achieve them. Making people feel the changes happening is the goal of the sixth step. The seventh step aims to consolidate the gains with the change, encouraging people to continue the process. The last step relates to the institutionalization of change in the organizational culture to prevent the tendency to return to the old and comfortable way of doing things.

The implementation of the change process in the company (Stage 4) is adapted from Kotter's (1947) model and consists of eight phases or steps, as shown in Figure 3.

**Figure 3**

Eight-Step Model for Change Management



The initial steps (1-4) help "unfreeze" the current situation, similar to the model presented by Kurt Lewin (Hussain *et al.*, 2018); the subsequent steps, 5 and 6, represent the actual change; and the final steps, 7 and 8, are aimed at consolidating organizational change.

**Change Implementation Management: Choosing the Change to Be Managed (Step 1)**  
The work developed by Kotter (1947) shows that in organizational environments with high levels of complacency, few people are interested in changes. When there is a low sense of urgency to change, no matter how much top management exerts itself, adopts a reward system, pressurizes, or threatens, if people do not feel a sense of urgency, they will find numerous ways to thwart a process they see as unnecessary. This step is intended to engage people and provide them with the stimulus needed to awaken motivation for change. It is necessary for everyone to understand the reasons justifying the change and the need and importance of taking immediate action.

**Change Implementation Management: Forming a Change-Driving Team (Step 2)**

It's important to establish a team responsible for driving the change process in the company, with the legitimacy to engage colleagues in implementing changes. In forming effective guiding coalitions, Kotter (1947) highlights several considerations:

- **Include Managers Who Can Easily Block Actions Related to Intended Changes:** It's crucial not to exclude managers who may easily obstruct actions related to the desired changes.
- **Comprise Credible and Representative Team Members:** The team should consist of individuals with credibility and representativeness in terms of knowledge and professional experience.

- **Include Leaders with Change Management Skills:** The group should contain leaders with skills in managing the change process.

Trust among team members is a relevant aspect for the success of the work and should be combined with common goals, mutual understanding, and respect. A well-constituted team will have the capacity to create the necessary vision, widely communicate the vision, and empower a broad base of individuals to achieve the change. Hamel (2001) adds that the team needs to have collective authority with the ability to seduce, persuade, and convince people to act. In the quest for the right individuals to form an appropriate coalition, the company should:

- Invite department heads with experience and significant credibility.
- Include Project Managers and Assistants with management and leadership skills.
- Organize carefully planned events to build trust among participants and between them and the community.
- Develop objectives with both rational and emotional appeals.
- Allocate tasks and competencies.

By following these guidelines, the company can form a strong coalition capable of leading and driving the desired changes effectively.

#### Change Implementation Management: Defining the Objective (Step 3)

Hamel (2001) emphasizes the need for an understanding of what is changing, the opportunities it presents, and proposes the creation of a credible, coherent, and attractive perspective. He advises starting the process with a sense of purpose and highlights the importance of clarifying the risks of not changing.

For Kotter (1947), a "vision" refers to a picture of the future with some implicit or explicit comments on how people should strive to create that future. The author proposes several steps in creating an effective vision, starting with a statement that reflects real market needs. This statement is shaped by the guiding coalition team or a larger group of people and requires effective teamwork. Both analytical thinking and dreams are essential throughout the modeling activity, characterized by back-and-forth discussions and requiring some time. This statement is rarely defined in a single meeting and should result in a desirable, feasible, focused, flexible, and communicable direction for the future in five minutes or less.

In crafting the vision, the team designated by the company can use:

- Strategic guidelines provided by the board of directors.
- Analysis of strengths, weaknesses, opportunities, and threats.
- Analysis of the five competitive forces, following Porter's proposed model.
- Suggestions for improvements proposed by company employees.
- Empowerment of lower-level hierarchical structures to structure the change at each hierarchical level.

The guiding coalition team should produce a document that translates the desired situation for the company within a time frame established by top management.

#### Change Implementation Management: Communicating the Objective (Step 4)

The strength of the vision is revealed when most people in a company have a common understanding of its goals and direction. This shared sense of a desirable future can help motivate and coordinate the types of transformational actions (Kotter, 1947). People tend to listen to information about a new vision when the sense of urgency is high enough, and the message, created by a well-formed guiding coalition, is appropriate and easily communicable due to its clarity and simplicity.

Hiatt (2006) suggests personalized messages for specific groups of people with particular views related to the vision. Hamel (2001) proposes influencing people with ideas, choosing the right targets and moments, always having a brief speech about the vision on hand. He also suggests identifying people who have sympathy for the vision and possess influential communication, as this will give everyone a better understanding of the project.

In the company, there are various top-priority issues competing for employees' attention. However, to gain support and acceptance of the vision, the company should:

- Hold meetings involving department heads to communicate the objectives.
- Organize events with various employees to clarify any doubts about the content of the objectives.
- Direct efforts to ensure that the vision is disseminated to different levels of the company.
- To disseminate the document widely, clearly, and directly, using all available means.

It is of fundamental importance that people perceive the vision as being shared by the company's top management.

#### Change Implementation Management: Training Organizational Actors (Step 5)

This step aims to empower people to act. Kotter (1947) highlights important barriers to making changes: formal structures that hinder the implementation of a new vision, lack of skills that make action unfeasible, misused information technology that hampers change, and managers who discourage actions aimed at implementing the new vision. When these barriers are not addressed in a timely manner, there is a risk of losing transformational effort.

Kotter (1947) emphasizes that habits acquired over time may no longer be relevant and may even become dysfunctional. It seems inappropriate to push people to change these habits with just a few days of training to deal with new situations. Additionally, training may not be delivered at the right time, or it may not be sufficient, or it may not be of the right type. It is also necessary to carefully reflect on the new behaviors, skills, and attitudes required for the transformations to achieve the established vision. The author states that with intelligent design of educational experiences, you can generate greater impact at half the cost of conventional approaches.

Employee training and retraining in the company must include effective communication of the vision built in the previous step. Additionally, it is necessary to evaluate the compatibility of the current organizational structure with the vision and make the necessary changes.

In the company, people's empowerment can be achieved through:

- Emphasizing the communication of the vision by top-level hierarchy.
- Adjusting organizational structures to the vision, reallocating processes and activities.
- Training conducted by Project Managers, Assistants, and Aides, enabling other people to use systems and activities.
- Aligning information systems to increase their contribution to new activities.
- Special attention to supervisors who undermine necessary changes.

#### Management of Change Implementation: Planning Goals and Deliverables (Step 6)

People expect evidence of good results stemming from the company's efforts and seek clear data indicating changes in full operation. For this reason, small results in the short term should be visible, unambiguous, and directly related to the changes. According to Kotter (1947), small wins justify the sacrifices, reward change agents, allow for minor adjustments, reduce resistance, provide an indication that the transformation is on the right path, and help gain support from more people.

Hamel (2001) observes the importance of obtaining quick and frequent small victories. The author suggests the need to continuously pursue them to demonstrate that the ideas really work.

Short-term victories do not happen by chance and can be achieved in the company by:

- Continuously providing achievable goals with minor procedural changes.
- Using the results obtained as positive feedback to the team responsible for the changes.
- Eliminating or reducing any potential resistance.

#### Change Implementation Management: Consolidation (Step 7)

Kotter (1947) states that a failure at this stage will result in serious consequences and that reducing efforts before the work is completed may lead to a regression in achievements, risking the entire investment. Until the new practices are consolidated into the organizational culture, they will be fragile. Once the return to previous practices begins, it becomes difficult to contain the regression. The team responsible for change – the guiding coalition – should use the credibility gained from small wins to leverage new improvement projects.

Changes are not a quick process and take time to be fully absorbed. The pace of changes should be maintained, and premature declarations of victory should be avoided.

In the company, the consolidation of improvements can come from:

- The contribution of senior management while maintaining goal clarity.
- Effective involvement of middle management in leading specific projects.
- Development of operational procedures in partnership with the Quality Management department.

Change Implementation Management: Incorporation (Step 8)

This step or stage deals with the consolidation of change by incorporating new practices into the company's culture. According to Kotter (1947), in situations where new practices are consistent with shared norms of behavior and values, it is already quite challenging to make them part of the culture. When they are not consistent, the challenge can be even greater. Consequently, changes can be undone, even after a lot of time and effort, if new approaches are not firmly rooted in the culture.

Kotter (1947) emphasizes that knowledge and understanding of the organization's culture impact the establishment of urgency to change, the creation of a guiding coalition, the shaping of a vision, and other steps in the change process. However, the author points out that changes in culture may occur at this stage, but only after new behaviors produce benefits, and the connection between new actions and improved performance becomes evident.

To incorporate changes into the company's culture, it is necessary to:

- Emphasize senior management support for consolidating the changes.
- Prove that the new procedures are superior to those practiced previously.
- Change key individuals who might compromise the incorporation of new procedures.
- Ensure that shared norms and values within the company community reflect the new practices.

It's important to note that changes of any size should follow the eight steps, and while some phases may occur simultaneously, deviating from the sequence or skipping a step can jeopardize the entire effort.

## 5. CONCLUSION

The objective of this research was to propose a change management model tailored to the needs of a conventional public-private company operating in the realm of public examinations. This company was undergoing a phase of significant organizational adjustment. Although this study originally stemmed from a specific issue encountered in a company with distinct characteristics, the findings from our research can offer valuable insights to managers confronted with similar organizational challenges.

This research makes a significant academic contribution by introducing a method for researching and selecting a change management model. It's important to highlight that the method itself stands as one of the primary outcomes of this study, and it possesses a high degree of practicality, extending its utility beyond just the public examination sector. As a result, both the research findings and the methodology applied are equally noteworthy in terms of their contributions to the field.

Regarding the final product, the selected and meticulously detailed model offers clear

guidance for the organization to navigate the essential adaptations required to maintain competitiveness and sustain its operations. The model's outlined steps emphasize a meticulous approach to change management, with a clear focus on contributing effectively to the success of the necessary adjustments in response to evolving market dynamics.

One limitation of this study is the absence of an investigation into the potential correlation between the outcomes of a change process and the application of the proposed model. However, it's important to underscore that this limitation does not diminish the overall significance of the research; instead, it paves the way for future investigations into the efficacy of change management models.

Furthermore, another limitation of this work pertains to the impracticality of an additional validation phase, in which the proposed model could have been subjected to further scrutiny and analysis, potentially yielding deeper insights into the mechanics of change.

Lastly, in terms of originality, it's worth noting that while the authors of this research developed the method for selecting a change management model, the model itself was drawn from existing propositions by other authors. Consequently, it exhibits a somewhat lower degree of originality in its conception.

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## Appendix 1 ORGANIZATIONAL CULTURE

This questionnaire aims to identify your perception regarding the main cultural traits of the organization, as well as to identify the set of values, beliefs, and typical behaviors of the company.

Please review the four statements for each of the nine topics and classify them based on how you perceive the organization, assigning a number in the 'Rank' column, with '1' representing the statement that best represents the organization, '2' for the second-best, and so on.

|  |                      |
|--|----------------------|
| <b>1. A good leader:</b>   | <b>Order</b>         |
| A Is strong, decisive, and firm but fair. Is protective, generous, and lenient with loyal subordinates.  | <input type="text"/> |
| B Is impersonal and correct, avoiding the exercise of authority for personal gain. Demands from subordinates only what is required by the formal system.   | <input type="text"/> |
| C Is egalitarian and open to influence on task-related matters. Uses authority to obtain necessary resources for task completion.  | <input type="text"/> |
| D Cares about and responds to personal needs and values of others and provides satisfying and growth-stimulating job opportunities to subordinates.  | <input type="text"/> |
| <b>2. A good subordinate:</b>  | <b>Order</b>         |
| A Works hard, is loyal to the superior's interests, is resourceful, and trustworthy.   | <input type="text"/> |
| B Is responsible and reliable, fulfilling duties and responsibilities of the task, avoiding actions that would surprise or embarrass the superior.   | <input type="text"/> |
| C Is motivated to contribute their best to the task and is open to ideas and suggestions. However, they are ready to yield leadership to others when they demonstrate greater knowledge or skills.                     | <input type="text"/> |
| D Is vitally interested in developing their potential and is open to learning and receiving help. Also respects the needs and values of others and is ready to provide assistance and contribute to their development. | <input type="text"/> |
| <b>3. A good organization member prioritizes "one" for:</b>  | <b>Order</b>         |
| A The personal demands of the boss.  | <input type="text"/> |
| B The duties, responsibilities, and requirements of their role and the usual standards of personal conduct.  | <input type="text"/> |
| C The task requirements in terms of skill, capability, energy, and material resources.   | <input type="text"/> |
| D The personal needs of individuals involved.  | <input type="text"/> |
| <b>4. People who do well in the organization:</b>  | <b>Order</b>         |
| A Are politically aware, enjoy taking risks, and operate independently.  | <input type="text"/> |
| B Are conscientious and responsible, with a strong sense of loyalty to the institution.  | <input type="text"/> |
| C Are technically competent, efficient, and highly committed to getting the task done.   | <input type="text"/> |
| D Are effective and competent in personal relationships, strongly committed to individual talent growth and development.   | <input type="text"/> |

|   |  |                          |
|---|--|--------------------------|
| <b>5. The organization treats the individual:</b>                               |  | <b>Order</b>             |
| A   | As a trusted agent whose time and energy are at the disposal of those who run the organization.  | <input type="checkbox"/> |
| B   | As if their time and energy are available through a contract, with risks and responsibilities on both sides.                             | <input type="checkbox"/> |
| C   | As a co-worker who has dedicated their skills and abilities to the common cause.   | <input type="checkbox"/> |
| D   | As an interesting and talented person in their own right.  | <input type="checkbox"/> |
| <b>6. People are controlled and influenced by:</b>                              |  | <b>Order</b>             |
| A   | Personal exercise of rewards, punishments, or charisma.  | <input type="checkbox"/> |
| B   | Impersonal exercise of economic and political power to enforce procedures and performance standards.                                     | <input type="checkbox"/> |
| C   | Communication and discussion of task requirements leading to appropriate action, motivated by personal commitment to achieving the goal. | <input type="checkbox"/> |
| D   | Intrinsic interest and enjoyment in the activities to be done or concern and care for the needs of other people.                         | <input type="checkbox"/> |
| <b>7. It is legitimate for one person to control the activities of another:</b> |  | <b>Order</b>             |
| A   | If they have more power and influence in the organization.   | <input type="checkbox"/> |
| B   | If their role dictates that they are responsible for directing the other.  | <input type="checkbox"/> |
| C   | If they possess more relevant knowledge of the task to be done.  | <input type="checkbox"/> |
| D   | If they are accepted by those they control.  | <input type="checkbox"/> |
| <b>8. The bases for task assignment are:</b>                                    |  | <b>Order</b>             |
| A   | The personal needs and criteria of those who lead the company.   | <input type="checkbox"/> |
| B   | The formal divisions of functions and responsibilities in the system.  | <input type="checkbox"/> |
| C   | The requirements of the task to be performed.  | <input type="checkbox"/> |
| D   | The desires and personal needs for learning and growth of organization members.  | <input type="checkbox"/> |
| <b>9. Competition among colleagues in the company:</b>                          |  | <b>Order</b>             |
| A   | Is for power and personal advantages.  | <input type="checkbox"/> |
| B   | Is for a high-status position in the formal system.  | <input type="checkbox"/> |
| C   | Is for excellence in contributing to the task.   | <input type="checkbox"/> |
| D   | Is in consideration of one's own personal needs.   | <input type="checkbox"/> |

Source: Adapted from Handy (2003).

## Appendix 2

### SWOT ANALYSIS

This form aims to support the identification of necessary changes for the company. First, a reflection on the company's strengths and weaknesses, as well as the opportunities and threats in its operating environment, will be proposed. Second, a competitive analysis will be conducted, and finally, based on the reflections from the previous two stages, suggestions for possible organizational changes will be made.

This stage will consider the organization's strengths and weaknesses, along with the opportunities and threats in the environment where the company operates, as outlined in Table 1 - Analysis of Strengths, Weaknesses, Opportunities, and Threats.

**Table 1**

Analysis of Strengths, Weaknesses, Opportunities, and Threats.

|  |  |  |
|--|--|--|
|  | Facilitate the achievement of<br>the organization's objectives | Hinder the achievement of the<br>organization's objectives |
| INTERNAL ENVIRONMENT<br>(organization's characteristics) | STRENGTHS  | WEAKNESSES   |
| EXTERNAL ENVIRONMENT<br>(market characteristics)         | OPPORTUNITIES  | THREATS  |

Source: Adapted from Razkenari *et al.* (2020).

#### INTERNAL ENVIRONMENT STRENGTHS

(Characteristics that provide advantages over the competition.)

What activities are performed exceptionally well?

What are our most valuable resources?

What are our competitive advantages?

What is the strength of our brand?

What is the level of expertise within our team?

Any other strengths that you deem relevant.

#### WEAKNESSES:

(Characteristics that put the company at a disadvantage compared to competitors.)

What are the training gaps?

Why do customers choose the competition?

What are the opportunities for improvement?

Any other weaknesses that you consider relevant.

## EXTERNAL ENVIRONMENT

### OPPORTUNITIES

These are external factors (within the operating environment of the company) that positively influence the organization.

### THREATS

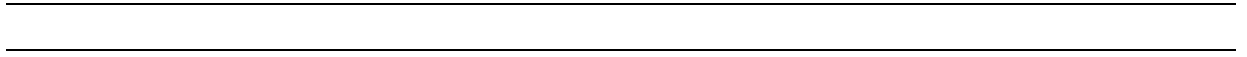
Factors that can pose problems for the organization, with a negative impact on the business, similar to opportunities, they depend on external environmental variables.

Here's a filled-out table with justifications for the opportunities and threats to the business:

### FACTORS

|   | O | A |
|---|---|---|
| <b>Political</b>  |   |   |
| Election Period   |   |   |
| Changes in presidential/governor/mayoral politics           |   |   |
| Incentive policies  |   |   |
| Administrative reform (under study by the government)       |   |   |
| <b>Economic</b>   |   |   |
| Interference of the unemployment rate                       |   |   |
| Economic growth   |   |   |
| Availability of the workforce                               |   |   |
| <b>Social</b>   |   |   |
| Population growth   |   |   |
| Average population education level                          |   |   |
| Communication with the public                               |   |   |
| <b>Technological</b>  |   |   |
| Emerging new technologies in the market                     |   |   |
| Competing company activities                                |   |   |
| Cost of implementing more modern technologies               |   |   |
| <b>Environmental</b>  |   |   |
| Current environmental laws that impact business operations  |   |   |
| Sustainability  |   |   |
| Investments in environmental issues to increase brand value |   |   |
| <b>Legal</b>  |   |   |
| Regulatory authority in the market niche                    |   |   |
| Existing legislation or tax changes                         |   |   |
| Changes in sector regulations                               |   |   |
| <b>Other important opportunities and threats</b>            |   |   |
|   |   |   |
|   |   |   |

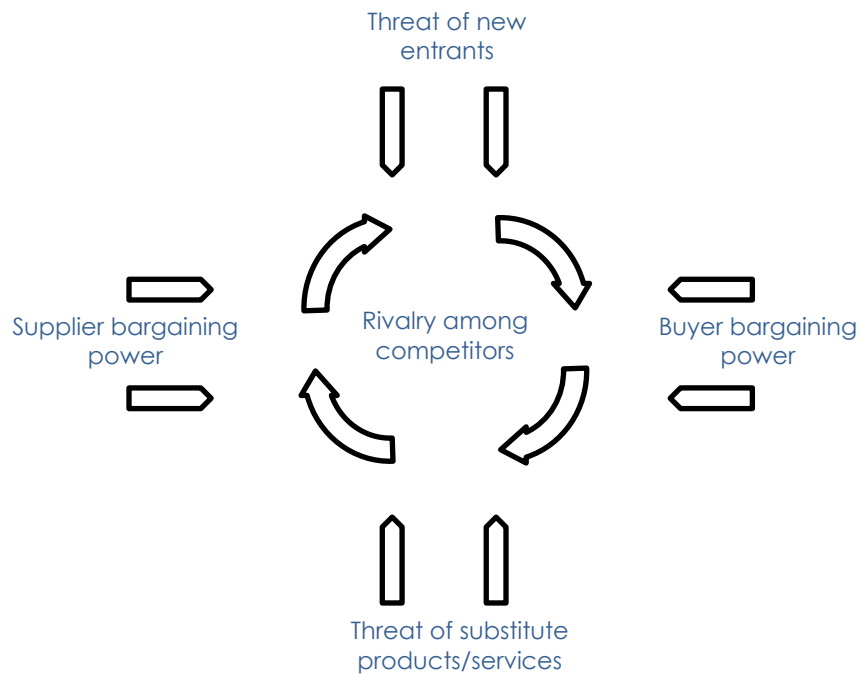
Justify choices if deemed necessary.



### Appendix 3 COMPETITIVE ANALYSIS

In this stage, the competition faced by the company will be evaluated based on Porter's five competitive forces, as illustrated in Figure 1.

**Figure 1.**  
Porter's Five Competitive Forces



Source: Adapted from Porter (1989).

| <b>Regarding current competitors:</b>                             | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
|---|--------------------------|-----------------|----------------|--------------|-----------------------|
| There are few competitors in the market.                          |                          |                 |                |              |                       |
| Our cost is better than the others.                               |                          |                 |                |              |                       |
| Our project completion time is shorter than the others.           |                          |                 |                |              |                       |
| We have easier access to customers than the others.               |                          |                 |                |              |                       |
| We have easier access to customers than the others.               |                          |                 |                |              |                       |
| Our market share is greater than that of the others.              |                          |                 |                |              |                       |
| <b>Regarding the bargaining power of suppliers:</b>               | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
| There are few significant suppliers.                              |                          |                 |                |              |                       |
| Suppliers have a strong impact on the business.                   |                          |                 |                |              |                       |
| The relationship between price and supplier quality is excellent. |                          |                 |                |              |                       |
| The company depends on few suppliers.                             |                          |                 |                |              |                       |

| <b>Threat of substitute products:</b>                             | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
|---|--------------------------|-----------------|----------------|--------------|-----------------------|
| There are many products with similar benefits.                    |                          |                 |                |              |                       |
| The uniqueness of our product influences the customer's decision. |                          |                 |                |              |                       |
| <b>Barriers inhibiting the entry of new competitors:</b>          | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
| Government Policies   |                          |                 |                |              |                       |
| Capital requirements  |                          |                 |                |              |                       |
| Brand importance  |                          |                 |                |              |                       |
| Access to customers   |                          |                 |                |              |                       |
| Intense competition   |                          |                 |                |              |                       |
| <b>Regarding the bargaining power of customers:</b>               | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
| Our customer has strong bargaining power.                         |                          |                 |                |              |                       |
| Our customer exerts strong pressure for price reduction.          |                          |                 |                |              |                       |
| Our customer exerts strong pressure for shorter deadlines.        |                          |                 |                |              |                       |

Source: Adapted from Ambarwati *et al.* (2019).

## Appendix 4

### PRIORITIZATION OF CHANGES BY MANAGERS

#### PROPOSED CHANGES

<https://forms.gle/rkMc8G9mgKcWbCPK6>

Based on data obtained from questionnaires, six changes or improvements have been proposed and are presented below.

#### PROPOSED CHANGES

A - Reorganize the subprocesses in the Project Management Area into three main processes:

- . Customer negotiation (proposal, schedule, budget, and tender);
- . Project development (analysis of requests during registration periods, tenders, publications, deadlines);
- . Implementation (locations, allocation, manual preparation, training, logistics, incident analysis, feedback).

B - Redefine the role of the manager to focus exclusively on process and people management.

C - Adopt a more aggressive approach to acquiring new clients.

D - Develop new products:

- . Digital exams;
- . Online practice exams for competitive exams and college entrance exams;
- . Assessments for state governments; and . Question bank.

E - Reduce project costs and execution time.

F - Promote professional development for the qualification of individuals.

These changes are associated with a priority scale from 1 to 6. Mark the priority for each of them, with 1 being the highest priority for implementation and 6 being the least priority.

**Do not assign the same priority to more than one change.**



|  | 1                     | 2                     | 3                     | 4                     | 5                     | 6                     |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| A - Reorganize the subprocesses in the Project Management Area | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| B - Redesign the role of the manager                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| C - Adopt a more aggressive stance to acquire new clients      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| D - Develop new products                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| E - Reduce costs and execution time                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| F - Promote professional improvement                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Source: prepared by the authors (2019).