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Culture of Innovation: The Impact on the Day-to-Day of an Organization

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***Keywords*— Competitiveness, Culture of Innovation, Innovation Hubs, Organizational Management, Innovation Strategy.**

***Abstract*—** *This study analyzes stakeholders' perceptions of the culture of innovation in an organization in the Greater ABC region linked to an Innovation Hub. The research adopts an exploratory approach, using qualitative and quantitative methods, with data collection carried out through employee questionnaires and interviews with managers. The results show that, although innovation is recognized as essential, there are challenges in integrating this culture, in training employees, and in strategic alignment with the Hub. The study concludes that it is necessary to strengthen support mechanisms and promote greater internal cohesion to ensure that innovation becomes a consistent practice within the organization.*

I. INTRODUCTION

The culture of innovation is a crucial element for the success and sustainability of organizations in a competitive and dynamic environment. The capacity for innovation is not limited to the development of new products or services, but includes the implementation of new processes, business models and management methods that promote a sustainable competitive advantage [1].

The authors [2] state that a solid organizational culture, which values creativity and flexibility, is essential to foster an innovative environment. However, many organizations face challenges in establishing a culture of innovation due to barriers such as resistance to change and lack of adequate incentives [3]. In addition, research by [4] suggests that the organizational structure must be flexible to allow rapid adaptation to market changes and the implementation of new ideas.

The general objective of this study is to analyze the perception of those involved and impacted on the Culture of Innovation of an organization in the Greater ABC region of São Paulo, Brazil, which has a link with an Innovation Hub.

The concept of culture proposes that there is structural stability, depth, extension and patterns or integrations, indicating that culture is a learned phenomenon, in the same way that character and personality are for each of us [5].

Some studies indicate that the role of culture is critical and fundamental for organizations and that it is considered one of the determining factors of success or even failure [6].

Organizational culture, according to [7], is a form of sociocultural system, in which the social and structural components are closely connected to the symbolic and ideological issue of the organization.

Within the scope of organizational culture, the authors [8] indicate that organizational behavior is a field of study that attempts to explain, predict and even modify human behavior within the context of organizational culture, but

there are three considerations that are necessary for organizational behavior, which are:

• It aims at observable behaviors, such as the use of equipment, way of speaking in meetings, how to write a report. It also deals with people's internal states, for example, how to think, decide and perceive which issues that accompany an observable action are.

• It also evaluates the relationship and behavior of groups among themselves, since people, groups and organizations do not behave in the same way. In this way, events can occur within the organization that we cannot explain solely as a result of an individual's behavior, for example. It is necessary to evaluate from a group or organizational perspective.

• Therefore, it is always necessary to analyze the behavior of people as individuals, as members of groups and of the organization.

For the concept of innovation, one of the main points is that people understand the concept in different ways, usually confusing it with invention, since the term innovation derives from the Latin - innovare, which means "to do something new", but the concept for innovation is a process of transforming opportunities into new ideas to be taken advantage of and used by society [9].

Innovation is a process in which a product or service is created, renewed or updated with the introduction of new techniques or ideas to generate value for the consumer and organization. In this way, innovation ceases to have an optional role and is seen as a protagonist [10].

In closed innovation, organizations carry out the process internally without external contact, only with restricted knowledge [11].

For [12], success in the closed innovation process requires control, in which organizations must generate their own ideas, then develop, distribute, serve, finance and support them.

According to [13], in open innovation there are activities carried out internally and others carried out with external partners, showing that in this model organizations do not innovate in isolation, as the organization is inserted in the environment and society and therefore depends on external knowledge to create something innovative for the market. In the open innovation model, a concept attributed to Henry Chesbrough, the organization carries out the process collaboratively with other companies, universities and even consumers [11]. One of these models are innovation hubs, which according to [14], are essential for the implementation of smart specialization strategies, especially in European regions. A key element of the initiative is the innovation hubs that act as ‘one-stop-shops’ where small and medium-sized enterprises (SMEs) can test the latest digital technologies and obtain training, financial advice, market intelligence and networking opportunities to improve their businesses through digital innovations. This is exemplified by figure 1 where one can see, schematically, the Catalan innovation hub [15].

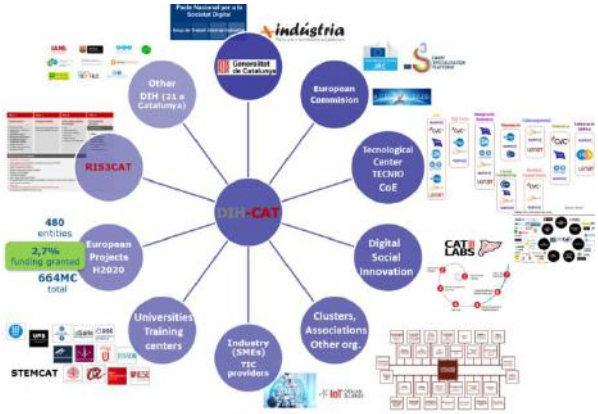

Fig. 1: Catalan Ecosystem and DIH

Source: [15]

Innovation hubs offer numerous benefits to their users. Among the advantages are the dissemination of knowledge, entrepreneurship and technologies, which occur through courses, workshops and lectures, often taught by the startups that are part of the hub [16].

According to the report by [17], innovation hubs stand out for their agglomeration capacity, where geographic proximity and the density of talents and resources create synergies that accelerate the innovation process.

Innovation hubs create an ecosystem where startups, large corporations, universities and investors can interact and collaborate. This collaboration facilitates the exchange of knowledge and resources, promoting synergies that can result in significant innovations [18].

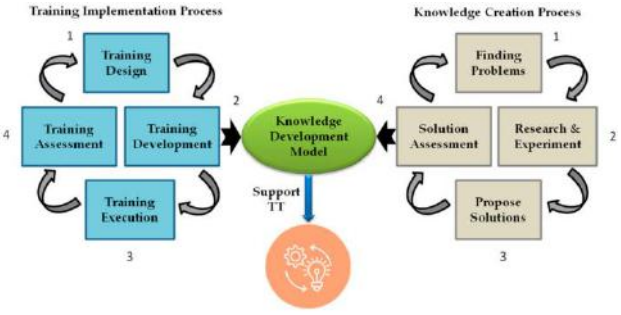

Fig.2 – Knowledge Development Model

Source: [15]

For [19], innovation hubs function as regional laboratories for technology businesses and entrepreneurs, exploring the concept of a "regulatory sandbox" as an

extension of the public policy environment to foster technology entrepreneurship.

Furthermore, research by [15] proposes a generic and flexible learning framework to assist digital innovation hubs in offering education, training and learning services that support the transfer of digital technology to companies, this proposal is shown in figure 2.

According to [20], as Innovation Hubs expand and reinforce the innovation ecosystem, they are considered as ecosystems of agents involved in digitalization, transforming themselves into platforms for testing advanced digital technologies.

Hubs, for [21], are in practice relational spaces, created amid interactions between global power structures, regional configurations, local cultural contexts, daily lived experiences of communities and individuals, among other things. Hubs should be studied as positioned in their local contexts.

II. METHODOLOGY

With the aim of analyzing the perception of those involved and impacted on the Culture of Innovation of an organization in the Greater ABC region of São Paulo-Brazil, which has a link with an Innovation Hub, this research will adopt an exploratory approach by case study in a qualitative and quantitative manner, with a non-probabilistic sample.

According to [22], exploratory research is conducted with the purpose of offering a preliminary overview of a given phenomenon.

Exploratory research is especially valuable for obtaining initial ideas and developing a preliminary understanding of the research problem, assisting in the formulation of hypotheses and in the development of a more structured research design for subsequent studies[23].

According to [24], the case study can include quantitative elements, as well as details. And it is not just a form of qualitative research, the use of quantitative and qualitative data together with the need to define a “case” are just some of the ways to demonstrate that the case study goes far beyond qualitative research.

For [25], non-probabilistic samples are constituted accidentally or intentionally, without the random selection of elements..

For this study, the population will be from an organization in the retail sector: The retail group was founded in 1952 by a Polish immigrant who arrived in Brazil after World War II. Initially, he worked as a peddler, selling products door-to-door, mainly to people who were leaving a certain region of Brazil, which inspired the company's name. In 1957, he opened the first physical store in São Caetano do Sul, São Paulo [26]. Another part of the population will be considered from the Innovation Hub, with which the organization has a partnership: The innovation company was founded in 2018, with the objective of fostering the innovation ecosystem in Latin America. Initially, it operated through three physical hubs with acceleration programs for startups, quickly becoming a reference in the technology and innovation market [27].

For quantitative data collection, a 10-question scaled questionnaire was conducted with the organization's employees. According to [28], a questionnaire is a data collection technique characterized by the application of a structured set of questions to a specific group of individuals. In this case, the Likert scale was used, as according to [29], Likert scales are commonly used to measure attitudes and perceptions, providing a range of responses to a given question or statement.

For qualitative data collection, structured interviews were conducted using a 9-question form with the manager of the Innovation Hub and the innovation area of the organization. According to [25], interviews can be exploratory or used to obtain data. While exploratory interviews are relatively structured, interviews for collecting information are highly structured.

III. RESULTS AND DISCUSSION

Statistics is a widely used tool that allows researchers to not only describe data, but also to evaluate new possibilities for relationships and perform future analyses based on this information, providing valuable findings, and supporting research conclusions [30]. Frequency distribution involves organizing a set of data into classes or categories and counting the number of occurrences, the frequencies, within each class. This method allows researchers to identify patterns and trends in the data, which is essential for more in-depth analyses [31].

The responses showed a general tendency to concentrate on intermediate values (Neutral and Agree). This may suggest that most respondents partially agree with the statements about the culture of innovation, although it may suggest that some employees may not be fully aware of or involved with the company's innovation issues, with a variability in perception.

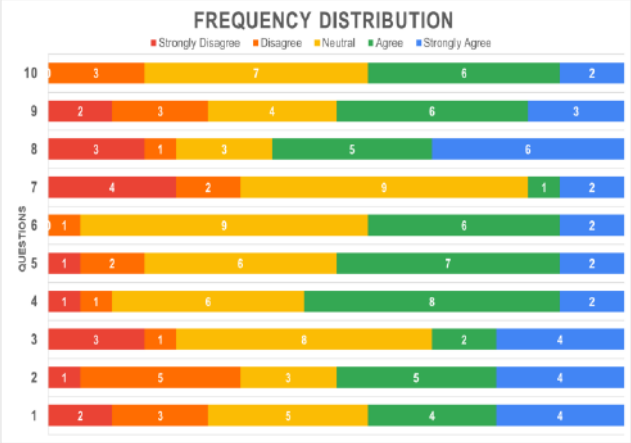

Fig.3 – Distribution of quantitative questionnaire responses

Table.1: – Table of mean and standard deviation of Responses

#	Theme	Questions	Mean	Standard Deviation
1	Innovation Processes	The organization I work for has an Innovation Department/Center structured with innovation models and processes.	3.28	1.32
2	Innovation Ecosystem	The organization I work for has partnerships with Innovation Hubs/Research and Development institutions.	3.33	1.28
3	Innovation Ecosystem	The organization I work for has startup acceleration or incubation programs.	3.17	1.34
4	Innovation Processes	The organization I work for has a long-term vision to remain or become a leader in the sector through innovation.	3.50	0.99
5	Innovation Culture	The organization I work for understands that innovative projects involve risks and knows how to deal with these risks and likely failures.	3.39	1.04
6	Innovation Culture	The latest innovations launched by the organization I work for have achieved great results in the market.	3.50	0.79
7	Innovation Processes	The organization I work for has a history of patents and intellectual property in the market.	2.72	1.23
8	Innovation Culture	The organization I work for encourages a culture of innovation among its employees.	3.56	1.46
9	Innovation Culture	The organization I work for constantly invests in emerging technologies and market trends.	3.28	1.27
10	Innovation Processes	The organization I work for can quickly adapt to market changes and new demands from our consumers.	3.39	0.92

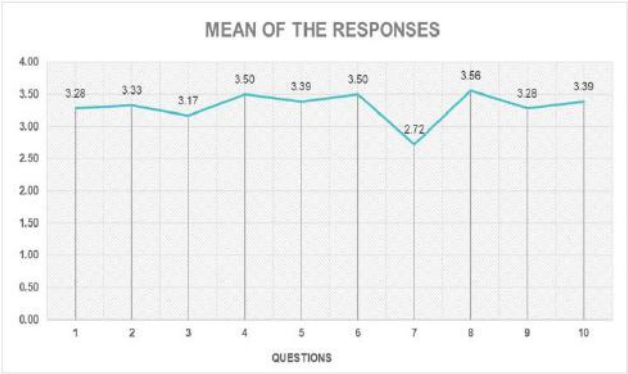

Fig.4 – Mean of the responses.

The mean and standard deviation of these responses were also analyzed. The mean, according to [31], represents the sum of all values in a data set divided by the total number of observations. For [32], the standard deviation indicates how dispersed the values of a data set are in relation to the mean, providing information about the variability of the data.

The averages for the questions range from 2.72 to 3.56, indicating that the perception of the participants is more mixed. While some areas are seen more positively (average of 3.56), other areas have a more neutral or even slightly negative perception.

The average of 3.56, observed in one of the questions, suggests that this specific area is seen more positively, which may indicate a certain degree of acceptance or alignment with innovative practices.

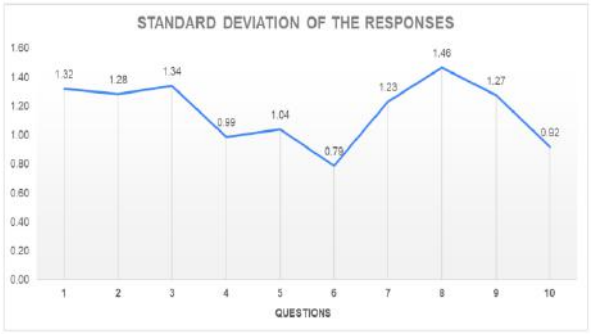

Fig.5 – Standard deviation of the responses.

Standard deviations range from 0.79 to 1.46, indicating that although the overall perception is slightly positive, there is significant variation in employee perceptions.

A higher standard deviation (1.46) suggests that there is considerable diversity of perceptions in certain areas, which may point to differences in the experience, understanding, or perception of innovation culture among employees.

The combination of slightly positive means with significant standard deviations suggests that although the majority of employees have a positive view of innovation culture, there is still considerable variability in perceptions.

According to [33], while the mean provides a central measure of the data, the standard deviation complements this information by indicating the consistency of the data in relation to the mean. This combination is essential for the interpretation of research results, as it allows researchers to understand both the typical value and the variability of the data.

For the qualitative data, a thematic content analysis was carried out, according to [23] qualitative interpretation is a reflective process that demands the researcher to construct

complex meanings from the data, needing to take into account the theoretical and practical context of the research.

Table.2- Interview Question Guide

Theme	Questions
Innovation Culture	8. What training or development programs are offered to support the dissemination of innovation within the organization?
	9. How are employees who significantly contribute to the dissemination of innovation recognized and rewarded?
	5. What is the role of executive leadership in supporting innovation and the innovation hub?
Innovation Ecosystem	1. What are the main objectives of an innovation hub in its relationship with the company?
	2. What are the main benefits that an innovation hub can bring to the company?
	7. How does the innovation hub collaborate with other areas of the company?
Innovation Processes	3. What are the criteria for selecting projects or ideas to be developed within the innovation hub?
	4. What metrics are used to measure the success and impact of innovation initiatives in the hub?
	6. How does the hub engage and motivate employees to actively participate in the innovation process?

Regarding the topic of innovation culture, in the interviewees' view, innovation training in the organization is treated as a complementary and informative activity, but it is not yet fully integrated as a structured part of the innovation strategy. There is a disconnection between recognition and reward for participants in the innovation culture. Although recognition exists, it is not fully structured or financially incentivized in a comprehensive manner, which can limit employees' motivation to engage in innovation initiatives. The role of executive leadership is fundamental to the success of innovation, but there is a need to maintain engagement in the long term. Innovation requires committed leadership that promotes a culture of calculated risk and continuous learning.

As with the innovation process, the interviewees analyzed the evolution of selection criteria as reflecting the company's adaptation to market demands and its own maturity. The initial lack of criteria may have generated inefficiencies, but the introduction of governance shows an effort to structure the innovation process. Likewise, the decentralization of knowledge and the promotion of a critical culture are important steps to engage employees. However, there was no clear strategy to ensure that all employees were aligned and motivated to actively participate in the innovation process.

In the ecosystem theme, interviewees indicated that collaboration is seen as a key to the success of innovation initiatives. Integrating the Hub with other areas of the company allows for an exchange of knowledge and perspectives, which is essential for effective innovation. However, the effectiveness of this collaboration depends on engagement and communication between areas. The Innovation Hub offers both tangible and intangible benefits. It not only improves processes and strategies, but also promotes a cultural change that values continuous learning and innovation. However, to maximize these benefits, a coordinated effort between the Hub and the organization is necessary.

IV. CONCLUSION

This study investigated the perception of those involved and impacted on the Culture of Innovation in an organization in the Greater ABC region, linked to an Innovation Hub. The combined analysis of quantitative and qualitative data revealed valuable insights into how participants perceive the different aspects of the culture of innovation in the organization.

Participants demonstrated an understanding of the importance of the culture of innovation, recognizing it as fundamental to the success and competitiveness of the organization. However, there is a perception that support mechanisms, such as training, recognition and incentives, are not sufficiently structured or integrated to promote a culture of innovation effectively, and there was notable variability in perceptions. Participants indicated that leadership needs to play a more active role in promoting a culture of innovation, creating an environment where creativity and experimentation are encouraged and rewarded. At times, there was even a slightly negative perception of innovation processes, which may indicate that they are not uniformly understood or applied within the organization. In summary, the participants' perception suggests that, although the organization is on the right track in adopting innovative practices and connecting with an Innovation Hub, there is still work to be done to ensure that the culture of innovation is fully integrated, communicated and supported at all levels. Future initiatives should focus on aligning the objectives between the Hub and the organization, as well as strengthening the internal mechanisms that support and encourage a culture of innovation, such as training, recognition and success metrics. Leadership plays a crucial role in transforming this perception into action, ensuring that the culture of innovation becomes an intrinsic part of the organization's day-to-day activities.

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REFERENCES

[1] Aithal, R. K. (2015). Book essay on Unrelenting Innovation: How to create a culture for market dominance. Journal of Business Research, 68(2), 322-325. https://doi.org/10.1016/j.jbusres.2014.07.001

[2] Barale, R. F., & Santos, B. R. D. (2017). Cultura organizacional: una revisión sistemática de la literatura. Revista Psicologia Organizações e Trabalho, 17(2), 129-136.. https://doi. org/10.17652/rpot/2017.2. 12854.

[3] Bessi, V. G. (2015). Estudo da inovação e da cultura organizacional em indústrias de pequeno e médio porte da região do Vale do Rio dos Sinos, no Rio Grande do Sul. Gestão & Planejamento-G&P, 16(2).

[4] Bock, A. J., Opsahl, T., George, G., & Gann, D. M. (2012). The effects of culture and structure on strategic flexibility during business model innovation. Journal of Management studies, 49(2), 279-305. https://doi.org/10.1111/j.1467-6486.2011.01030.x

[5] Schein, E. H. (2009). Cultura organizacional e liderança. São Paulo: Atlas.

[6] Cameron, K. S. (2011). Diagnosing and changing organizational culture: Based on the competing values framework.

[7] Allaire, Y., & Firsirotu, M. E. (1984). Theories of organizational culture. Organization studies, 5(3), 193-226. https://doi.org/10.1177/017084068400500301

[8] Wagner III, J. A., & Hollenbeck, J. R. (2020). Comportamento organizacional. Saraiva Educação SA.

[9] Tidd, J., & Bessant, J. (2015). Gestão da inovação-5. Bookman Editora.

[10] Freitas, A., Riascos, L., Andrade, A., Faco, J., & Gallotta, B. (2021). Innovation in small & medium enterprises in São Paulo. http://dx.doi.org/10.46254/SA02.20210160.

[11] Da Silva, E. L., & Pinheiro, L. V. (2014). O Brasil e as pesquisas em inovação aberta: Um estudo a partir dos Grupos de Pesquisa do CNPq | Open innovation research in Brazil: a study on CNPq Research Groups. Liinc em revista, 10(2). https://doi.org/10.18617/liinc.v10i2.727

[12] Chesbrough, H. W. (2003). Open innovation: The new imperative for creating and profiting from technology. Harvard Business Press.

[13] Christensen, J. F., Olesen, M. H., & Kjær, J. S. (2005). The industrial dynamics of Open Innovation—Evidence from the transformation of consumer electronics. Research policy, 34(10), 1533-1549. https://doi.org/10.1016/j.respol.2005.07.002

[14] Rissola, G., & Sörvik, J. (2018). Digital innovation hubs in smart specialisation strategies. Publications Office of the European Union, Luxembourg. https://dx.doi.org/10.2760/475335

[15] Sarraipa, J., Zamiri, M., Marcelino-Jesus, E., Artifice, A., Jardim-Goncalves, R., & Moalla, N. (2023). A learning framework for supporting Digital Innovation Hubs. Computers, 12(6), 122. https://doi.org/10.3390/computers12060122

[16] Rosolem, A. M. (2024). Identificação dos pré-requisitos para a abertura de um hub de inovação: avaliação da aptidão do município de Jaboticabal–SP. https://hdl.handle.net/11449/258531

[17] Nature. Nature Research Intelligence. Nature Portfolio. Available in: https://www.nature.com/articles/d42473-023-00420-1. Accessed: May. 2025.

[18] Bittencourt, B. A., Helale, J., Visentini, A. L. F., & Martins, B. W. (2025). The role of individual orchestrators of innovation hubs: A multiple case study in the south of Brazil. International Journal of Innovation, 13(1). https://doi.org/10.5585/2025.27160

[19] Hemphill, T. A. (2023). Technology entrepreneurship and innovation hubs: Perspectives on the universal regulatory sandbox. Science and Public Policy, 50(2), 350-353. https://doi.org/10.1093/scipol/scac072

[20] Georgescu, A., Avasilcai, S., & Peter, M. K. (2021). Digital Innovation Hubs—The present future of collaborative research, business and marketing development opportunities. In Marketing and Smart Technologies: Proceedings of ICMarkTech 2020 (pp. 363-374). Singapore: Springer Singapore. https://doi.org/10.1007/978-981-33-4183-8_29

[21] Jiménez, A., & Zheng, Y. (2021). Unpacking the multiple spaces of innovation hubs. The Information Society, 37(3), 163-176. https://doi.org/10.1080/01972243.2021.1897913

[22] Gil, A. C. (2002). Como elaborar projetos de pesquisa (Vol. 4, p. 175). São Paulo: Atlas.

[23] Creswell, J. W. (2014). Investigação Qualitativa e Projeto de Pesquisa-: Escolhendo entre Cinco Abordagens. Penso Editora.

[24] Yin, R. K. (2015). Estudo de Caso-: Planejamento e métodos. Bookman editora.

[25] Prodanov, C. C., & De Freitas, E. C. (2013). Metodologia do trabalho científico: métodos e técnicas da pesquisa e do trabalho acadêmico-2ª Edição. Editora Feevale.

[26] HPG. Available at: https://hpg.com.br/historia-das-casas-bahia-quem-e-o-dono-ministro-e-curiosidades.html. Accessed: May 2025.

[27] DISTRITO.ME. Who We Are. Available at: https://distrito.me/quem-somos/. Accessed: May 2025.

[28] De Brito, L. (2012). Pequeno guia de inquérito por questionário. IESE. https://tinyurl.com/yc24h84j

[29] Jamieson, S. (2004). Likert scales: How to (ab) use them?. Medical education, 38(12), 1217-1218.

[30] Field, A. (2020). Descobrindo a estatística usando o SPSS-5. Penso Editora.

[31] Triola, M. F. (2008). Introdução à estatística. In Introdução à estatística (pp. xxvi-310).

[32] Malhotra, N. K. (2019). Pesquisa de Marketing-: uma orientação aplicada. Bookman Editora.

[33] Morettin, P. A., & Bussab, W. D. O. (2023). Estatística básica. ISBN: 9786587958491