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Specification of Methodologies for Assessing Innovation Maturity in Companies

Prospecção de Metodologias de Avaliação da Maturidade de Inovação nas Empresas

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Abstract

Innovation maturity assessment is a strategic tool for understanding the level of structuring of innovative practices in companies and guiding decision-making. This study aims to comparatively analyze innovation maturity assessment methodologies, with a special focus on the Innovation Radar APP application, developed by the Federal Institute of Rondônia (IFRO). The research is exploratory, descriptive, and bibliographic in nature, based on a systematic selection of scientific articles available in academic databases. Six methodologies were examined – ELECTRE TRI, Redesist, Ueno (2016), Silva, Hartman and Reis (2008), and Machado and Carvalho (2013) – considering criteria such as scope, applicability, and complexity. The results indicate that, although traditional approaches present greater analytical depth, they generally require greater technical specialization and robust infrastructure. In contrast, the Innovation Radar APP application stands out for its objectivity, intuitive interface, and ability to generate visual diagnoses, being especially suitable for micro and small enterprises. It is concluded that methodological simplification, when well-structured, does not compromise diagnostic quality, but rather enhances the integration of innovation into organizational strategies, strengthening the innovative culture and business competitiveness.

Keywords: Innovation Maturity; Assessment Methodologies; Innovation Radar APP.

Resumo

A avaliação da maturidade da inovação é uma ferramenta estratégica para compreender o nível de estruturação das práticas inovadoras nas empresas e orientar a tomada de decisão. Este estudo tem como objetivo analisar comparativamente metodologias de avaliação da maturidade de inovação, com foco especial no aplicativo Radar da Inovação APP, desenvolvido pelo Instituto Federal de Rondônia (IFRO). A pesquisa é de natureza exploratória, descritiva e bibliográfica, fundamentada em uma seleção sistemática de artigos científicos disponíveis em bases acadêmicas. Foram examinadas seis metodologias – ELECTRE TRI, Redesist, Ueno (2016), Silva, Hartman e Reis (2008) e Machado e Carvalho (2013) – considerando critérios como abrangência, aplicabilidade e complexidade. Os resultados indicam que, embora as abordagens tradicionais apresentem maior profundidade analítica, geralmente requerem maior especialização técnica e infraestrutura robusta. Em contrapartida, o aplicativo Radar da Inovação APP destaca-se pela objetividade, interface intuitiva e capacidade de gerar diagnósticos visuais, sendo especialmente adequado para micro e pequenas empresas. Conclui-se que a simplificação metodológica, quando adequadamente estruturada, não compromete a qualidade do diagnóstico. Ao contrário, favorece a integração da inovação às estratégias organizacionais, fortalecendo a cultura inovadora e ampliando a competitividade empresarial.

Palavras-chave: Maturidade da Inovação; Metodologias de Avaliação; Radar da Inovação APP.

Technological Areas: Innovation Management, Technology, and Development.

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1 Introduction

According to the Organisation for Economic Co-operation and Development (OECD), innovation consists of the implementation of a new product, good, service, or organizational method in business practices, workplace organization, or external relations (OECD, 2018). For Oliveira et al. (2011), innovation is an action capable of generating value for an organization through the adoption of something new to that organization, implying an internal paradigm shift, although not necessarily within a business context. In the contemporary global environment, innovation has become an essential element for business competitiveness and sustainability; it is no longer a differentiating factor but rather a condition for organizational survival.

In this context, companies and organizations must continuously develop their ability to generate creative solutions, adapt rapidly to change, and anticipate emerging trends. Innovation becomes integrated into corporate strategy, influencing everything from product and service development to business models and customer experience. Caires, Azevedo, and Satori (2018) emphasize that the benefits derived from innovation in services, processes, and products provide companies with a competitive advantage. This perspective highlights that innovation extends beyond the generation of valuable ideas, requiring their effective implementation to create value. It also underscores the importance of measuring innovation maturity, understood as an evolutionary process that reflects an organization's ability to manage and sustain innovative activities. This process is structured into different levels that facilitate gradual transition and continuous improvement in innovation practices.

Innovation maturity assessment models have emerged as an essential topic because they provide a diagnosis of an organization's ability to generate, implement, and sustain innovation. Innovation maturity can be understood as an evolutionary process that reflects the development and capacity of a company to manage and implement innovative activities, divided into different levels that facilitate progression and continuous improvement (Torres et al., 2022). Furthermore, innovation management maturity contributes significantly to risk reduction by revealing strengths and opportunities for improvement. As companies advance through maturity levels, their processes become increasingly structured and systematic.

Despite the growing importance of this topic, many organizations face a shortage of effective tools and methodologies for measuring their degree of innovation. This gap hinders the identification of improvement opportunities and strategic planning aimed at innovation, creating a challenge that must be overcome if companies are to stand out in an increasingly dynamic and competitive market. In response to the growing need for innovation, various tools have emerged to assist entrepreneurs in analyzing innovation practices within their organizations. Having a means of evaluating innovation capacity provides significant benefits, as assessment makes it possible to identify ways to improve processes, services, and products, thereby helping companies maintain market relevance and competitiveness.

The Innovation Radar App was developed as a tool designed to assess an organization's innovation maturity across various dimensions, including strategy, processes, culture, infrastructure, and results. It is a strategic management tool intended to analyze a company's innovation capabilities from multiple perspectives (Pereira & Silva, 2020).

The Innovation Radar App was originally developed by Sawhney, Wolcott, and Arroniz (2006) as a tool for mapping and measuring different forms of innovation within companies. The original model consisted of 12 dimensions: offerings, platform, brand, customers, solutions, relationship, value capture, processes, organization, supply chain, presence, and networking. It was subsequently expanded by Bachmann and Destefani (2008), who added a 13th dimension—innovative environment—creating a systematic approach for measuring the degree of innovation in micro and small enterprises. The Brazilian Micro and Small Business Support Service (SEBRAE) later adapted this methodology for use in its Local Innovation Agents (ALI) Program.

The Innovation Radar App methodology currently in use is extensive and includes questions that require justification, making the process lengthy and time-consuming. This may lead to participant fatigue, survey abandonment, or superficial responses intended merely to expedite completion. Seeking to improve and simplify this process, the Innovation Radar App was adapted by the Federal Institute of Rondônia (IFRO) through the Gotec Research Group. The resulting application reduced the number of questions to 56, making them more objective and significantly reducing the time required to complete the assessment, thereby making the process less burdensome for entrepreneurs.

Accordingly, the present study conducts a technological prospecting analysis of innovation maturity assessment methodologies—including the ELECTRE TRI, Redesist, Ueno (2016), Silva, Hartmann and Reis (2008), and Machado and Carvalho (2013) models—and compares them with the Innovation Radar App developed by IFRO. The analysis seeks to identify gaps and opportunities for improving diagnostic tools, demonstrating how the adaptation proposed by IFRO offers greater practicality

and applicability for micro and small enterprises, thereby contributing to the strengthening of an innovation-oriented culture.

2 Methodology

This study adopts a qualitative, exploratory, and descriptive approach based on a bibliographic survey. Data collection was carried out between May and July 2025 through systematic searches in recognized academic databases, including Google Scholar and the CAPES Periodicals Portal. The following keywords were used: "innovation assessment," "innovation measurement," and "innovation maturity," applied to the title, abstract, and keyword fields.

To ensure the relevance and comparability of the studies, specific inclusion and exclusion criteria were established. The inclusion criteria considered methodologies with broad applicability in the business context and that addressed innovation from a multidimensional perspective. Studies related to specific sectors or focused exclusively on a single dimension of innovation, such as technological innovation, were excluded.

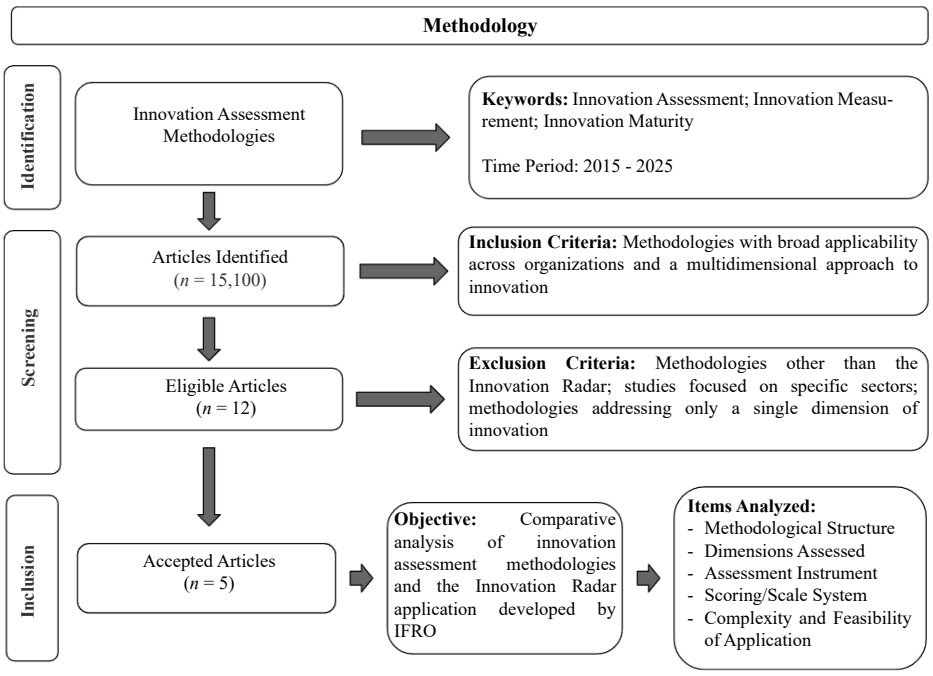
After the screening process, five articles that met the established criteria were identified. These studies were subjected to a comparative analysis using the Innovation Radar App, developed by the Federal Institute of Education, Science and Technology of Rondônia (IFRO), as the reference framework.

The comparison among the methodologies considered the following elements: the methodological structure presented; the number and nature of the dimensions analyzed; the type of instrument employed (such as questionnaires, mobile applications, or electronic spreadsheets); the measurement scales adopted; and the degree of complexity and practical feasibility of application.

This study conducted a comparative analysis of methodologies designed to assess innovation in companies, with the objective of identifying broadly applicable approaches and comparing them with the Innovation Radar App. The bibliographic prospecting was carried out using Google Scholar, accessed through the CAPES Periodicals Portal, employing the terms "innovation assessment," "innovation measurement," and "innovation maturity" in the title, abstract, and keyword fields.

Only methodologies with general applicability to businesses and a multidimensional approach to innovation were included, whereas methodologies specific to particular sectors or focused on only one type of innovation, such as technological innovation, were excluded. Following the selection process, a comparative analysis was conducted between the identified methodologies and the Innovation Radar App, considering criteria such as scope, ease of application, level of detail, and adaptability. The flowchart of the article selection process used in the comparative analysis is presented in Figure 1.

Figure 1 – Flowchart of the Article Selection Process for the Comparative Analysis



Source: Prepared by the authors (2025)

3 Results and Discussion

Innovation maturity reflects the degree of development and integration of innovative practices within an organization, indicating how systematic its approach to innovation is (Torres et al., 2022). This section presents the results of the comparative analysis conducted between five assessment methodologies and the Innovation Radar App, highlighting their characteristics, advantages, and limitations.

The Innovation Radar App offers an innovative and efficient approach to innovation assessments, providing several benefits. Among these, the significant reduction in the number of questions stands out, making the assessment process less burdensome for respondents and encouraging greater engagement and collaboration. Furthermore, the questions were strategically designed so that a single question can assess multiple dimensions, increasing process efficiency without compromising analytical depth. Another positive feature is the use of conditional questions, which can be answered with "yes" or "no" responses or through the indication of a numerical value, facilitating both interpretation and score assignment. Responses are converted into standardized values of 1, 3, and 5, representing different levels of intensity, thereby providing a clear and objective assessment. At the end of the application process, the average score of the items within each dimension is calculated, generating a balanced and straightforward representation of the analyzed situation and supporting decision-making and the monitoring of relevant indicators.

When applying the methodology, 24 articles were initially identified. Of these, 12 were selected for their relevance to the topics under investigation, and after the application of the inclusion and exclusion criteria, five articles remained for analysis. The selected studies were examined regarding aspects related to methodology, application, and innovation maturity assessment. Accordingly, the methodologies presented in the selected articles are described below.

In the study by Lima, Francisco, and Galo (2025), a structured model is proposed to evaluate the degree of process innovation maturity in small and medium-sized industrial companies. The tool consists of a prototype developed in Microsoft Excel, serving as the foundation for a future software application. This tool implements the ELECTRE TRI multicriteria decision-making method, which enables the classification of alternatives into predefined categories based on multiple criteria.

The method is structured around six dimensions (or blocks): organizational culture, process management, skills and strategies, tools and technologies, and customer and market. For each of these dimensions, 12 assessment items are evaluated using information collected from various areas of the company.

The user enters into the "Main" worksheet the geometric mean of the values obtained for each block. The "Data" worksheet performs automatic calculations of concordance, discordance, credibility, and preference relations. Parameters such as criterion weights (0.167 for each criterion), preference thresholds (1.00), indifference thresholds (0.50), veto thresholds (2.00), and a cutting level ($\lambda = 1$) are employed. ELECTRE TRI uses two assignment procedures:

a) Optimistic Procedure: Focuses on maximizing advantages, classifying alternatives into higher categories if they satisfy at least one criterion of the superior category.

b) Pessimistic Procedure: Focuses on identifying the worst possible scenario, requiring that an alternative's evaluation be equal to or greater than the thresholds of all criteria within a category before it can be assigned to that category. This is the recommended procedure for a more robust and conservative analysis.

Innovation maturity scores are assessed and classified into five distinct levels, ranging from C1 (Advanced) to C5 (Conventional), based on predefined boundary profiles. Each level includes a detailed description of the characteristics that the organization is expected to possess:

a) C1 – Advanced: Process management supported by cutting-edge technologies, comprehensive monitoring, and extensive digitalization.

b) C2 – Managed: Standardized processes, adoption of Industry 4.0 technologies, and a well-defined organizational culture.

c) C3 – Intermediate: Standardized processes, but with gaps in planning and enabling technologies.

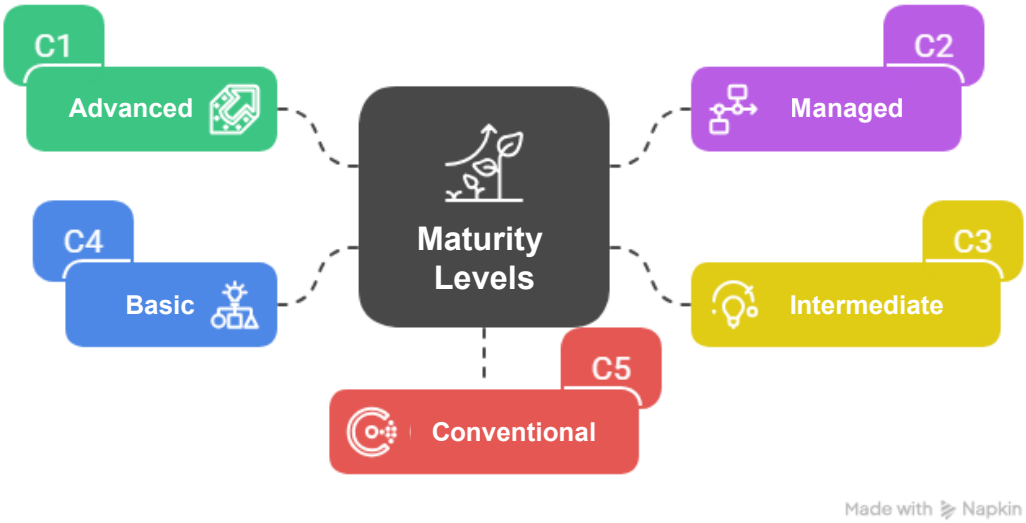
d) C4 – Basic: Initial formal implementation of processes, limited management practices, and inadequate technology adoption.

e) C5 – Conventional: Absence of process management, undefined organizational culture, and lack of incentives for innovation..

The tool presents the company's maturity level under both procedures (optimistic and pessimistic). For example, a company may be classified as C2 under the optimistic procedure but as C4 under the pessimistic procedure. The analysis recommends considering the result of the pessimistic procedure, as it provides a more rigorous and realistic assessment (Figure 2).

The study by Ueno (2016) proposes an innovation process maturity assessment model as an artifact that serves as a basis for analyzing and synthesizing the innovation process.

Figure 2 – ELECTRE TRI Method



Source: Lima, Francisco e Galo (2025)

Figure 3 – Ueno Method (2016)

Source: Ueno (2016)

To evaluate the model, a research instrument was developed in the form of a questionnaire containing 72 questions. This questionnaire was constructed based on theoretical references such as the "12 Dimensions of Innovation" model developed by MIT (Sawhney, Wolcott, & Arroniz, 2006) and the Research, Development, and Innovation Manual (Marques, 2012, as cited in Ueno, 2016).

The tool aims to support the continuous monitoring of innovation management maturity, guiding companies in developing a culture grounded in innovative entrepreneurship. The model is structured around four main dimensions of innovation maturity: discovery and evaluation, value creation, market access, and business model. These dimensions are assessed through eight innovation management variables: alignment, ideation, concept, detailing, resources, development, commercialization, and scale. Each of these variables is examined across five evolutionary levels through the questionnaire items.

Scoring is measured using a five-point Likert scale, ranging from "1 – Strongly Disagree" to "5 – Strongly Agree." These levels are associated with the stages of innovation and knowledge life cycles. (Figure 3).

a) **Level 1-2:** Fluid stage for knowledge creation.

b) **Level 2-3:** Transition toward knowledge mobilization.

c) **Level 3-4:** Transition toward knowledge diffusion.

d) **Level 4-5:** Specific stage for the commoditization of knowledge.

In the research results presented, the sample of 47 companies was predominantly concentrated at **Level 3–4: Transition toward Knowledge Diffusion**.

Another study conducted by Weschenfelder, Esteves, and Silva (2023) employs as its central assessment tool the methodology developed by Silva, Hartmann, and Reis (2008) for evaluating innovation capability. This methodology consists of a questionnaire composed of 30 questions divided into five groups of indicators. The questionnaire responses are tabulated in Microsoft Excel and weighted according to the relevance criteria prescribed by Silva, Hartmann, and Reis (2008).

The assessment process is based on the application of the 30-question survey, which covers five groups of indicators:

1) Input Indicators: Measure the amount of human, financial, and infrastructure resources allocated to R&D activities. For example, they assess the percentage of employees dedicated to R&D and the percentage of revenue invested in R&D.

2) Output Indicators: Quantitatively analyze the results achieved by the company through innovation processes. These indicators include the percentage of revenue generated from products or services launched within the previous five years, revenue derived from royalties, the number of new or modified processes, cost savings resulting from process improvements, the number of completed innovation projects, and the number of registered patents.

3) Forms of Innovation: Examine how the innovation process occurs within the company. The questions assess the proportion of radical and incremental innovations introduced. The study revealed that most innovations in the surveyed companies were incremental in nature.

4) Sources of Innovation (Stakeholders): Analyze the internal and external sources of information that contribute to the innovation process. The questions investigate the proportion of innovations originating from R&D activities, cooperation with other companies, collaboration with universities and/or research institutes (whose absence was identified as a concern in the study), relationships with suppliers, customers (a significant source of innovation for many companies), competitors through benchmarking, consulting services, other companies within the same corporate group, acquisition of licenses, patents and know-how, participation in scientific events, computerized information networks, training processes, significant software changes, and new applications for existing products.

5) Innovation Impacts: Measure the outcomes generated by the innovation process within the company. The questions address improvements in product quality, expansion of product offerings, increased market share, enhanced production capacity, and reductions in raw material consumption (which proved to be insignificant among service-oriented companies).

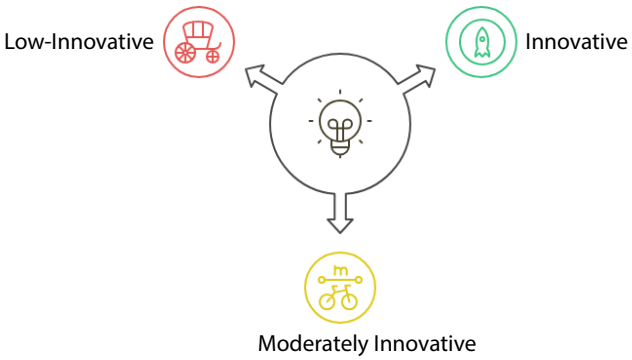
The scores obtained by companies in the questionnaire are used to determine their level of innovation capability. The methodology developed by Silva, Hartmann, and Reis (2008) establishes a classification scale composed of three evaluation levels:

a) **Innovative (IN):** Companies that achieve 374 points or more. These organizations are characterized by a high level of technological innovation, generating most of their revenue from innovative products, processes, and/or services, while making substantial investments in technological innovation.

b) **Moderately Innovative (MIN):** Companies that score between 187 and 373 points. These organizations exhibit a moderate level of technological innovation, with a limited proportion of revenue derived from innovations. They invest only a small share of their revenue in technological innovation and require adjustments to their management processes in order to increase innovation-driven revenue.

c) **Low-Innovation (PIN):** Companies that score between 0 and 186 points. These organizations display a low level of technological innovation, with little or no revenue generated from innovations and minimal investment in technological innovation, requiring significant improvements in their management processes (Figure 4).

Figure 4 – Silva, Hartmann, and Reis Methodology (2008)



Source: Weschenfelder, Esteves and Silva (2023)

In the study conducted with IT companies in Araranguá, the majority (89%) were classified as **"**Moderately Innovative", one company (11%) was classified as "Low-Innovation", and no company was classified as "Innovative."

In the methodology proposed by Machado and Carvalho (2013), the central tool is a new model for analyzing an environment conducive to innovation development. This model was developed through an adaptation of the Minnesota Innovation Survey (MIS) methodology, originally created by the Minnesota Innovation Research Program (MIRP) and subsequently adapted by Carvalho and Machado (2010).

The original MIS questionnaire contained 93 statements, which were reduced to 71 items in the earlier

adaptation by Carvalho and Machado (2010). The new model proposed by Machado and Carvalho (2013) further reduced the questionnaire to only 28 questions distributed across ten dimensions. This reduction represents the elimination of 65 questions from the data collection instrument and approximately 70% of the multivariate data requirements.

The ten dimensions of the new model are organized into three major groups:

a) **Results Group:** composto pela Dimensão 1 – Composed of Dimension 1 – Perceived Innovation Effectiveness.

b) **Six dimensions related to the internal environment of the innovation group:** include Process (originally Dimensions 2, 4, and 23, related to certainty of success, familiarity with the work, rules, and support), Resources (Dimension 3, related to competition for financial and material resources, management attention, and personnel), Leadership (originally Dimensions 6, 7, and 9, related to expectations of rewards/sanctions, leadership, and encouragement of learning), Autonomy (originally Dimensions 5 and 8, related to influence on decisions and freedom to express doubts), Internal Relationship within the innovation group (originally Dimensions 14, 15, 16, 17, 18, and 19, related to communication, problems, conflicts, and conflict resolution), and External Relationship to the innovation group (originally Dimensions 20, 21, 26, 27, 28, and 29, related to interaction with other groups within the company and mutual benefits).

c) **Three Dimensions Related to the External Environment of the Innovation Group:** include Dependence on External Resources (Dimension 8, related to reliance on support/assistance from external groups), Formalization (Dimension 9, related to the existence of discussions/conversations and documentation), and Relationship Effectiveness (Dimension 10, related to satisfaction with the partnership, fulfillment of commitments, and flexibility).

A Data analysis involved:

a) **Factor Analysis:** used to identify the most representative questions and those with the highest communality.

b) **Chi-Square Test (χ^2):** used to compare the frequency distributions of the mean scores of the internal and external environment dimensions before and after data reduction, verifying statistical equivalence between the models.

c) **Structural Equation Modeling (SEM):** used to compare the influence of the dimension groups (internal and external) on the outcomes.

The model was reapplied in a hospital organization (with a different industry context and sample size) to ensure the robustness and reliability of the analyses. No specific scoring system was defined to classify companies according to their innovation maturity level as "innovative" or "low-innovation" within the new model. Instead, the model's scoring and validation are demonstrated through statistical tests that confirm its effectiveness and explanatory power:

a) The questionnaire items use a five-point Likert scale, in which responses are categorized as "absence" (scores 1 and 2), "neutral/no opinion" (score 3), and "presence" (scores 4 and 5) for the purposes of the chi-square analysis.

b) The chi-square (χ^2) tests for the groups of internal and external dimensions (both in Company Alpha and in the validation organization) produced low values (e.g., 1.027 for the internal dimensions of Company Alpha and 0.211 for the internal dimensions of the hospital), which are below the critical value (5.991) for two degrees of freedom at a 95% confidence level. This indicates statistical equivalence between the proposed model and the original adapted MIS model, meaning that no significant deviations were identified.

c) Structural Equation Modeling (SEM) revealed that, despite some differences in the correlations among the dimension groups (e.g., a 15% decrease in the correlation between external and internal dimensions and an 11% decrease between internal dimensions and results in Company Alpha, accompanied by an 11.6% increase in the correlation between external dimensions and results), the variation in the coefficient of determination (R^2) for the results (-3.4%) did not represent a loss of explanatory power. For the validation organization (hospital), the influence of the internal and external dimensions on the results was 1.5% higher in the proposed model.

Based on these results, the null hypothesis (H_0) of significant divergence was rejected, and the alternative hypothesis (H_1) of convergence was accepted. This validates that the new model, despite the reduction in the number of questions and dimensions, does not diminish its explanatory power or effectiveness in capturing the relationships between organizational environments and innovation outcomes (Figure 5).

The studies conducted by Costa and Reis Neto (2022) aimed to identify and analyze the scales used to measure innovation within the business environment, with a particular focus on micro and small enterprises. The authors'

review identifies the **Redesist Scale** as one of the most robust instruments for measuring innovation, alongside the **Innovation Radar App**.

The Redesist Scale was developed by Lastres and Cassiolato (2003) and is intended to measure innovation in products, processes, and organizational management within companies. It is composed of three main dimensions:

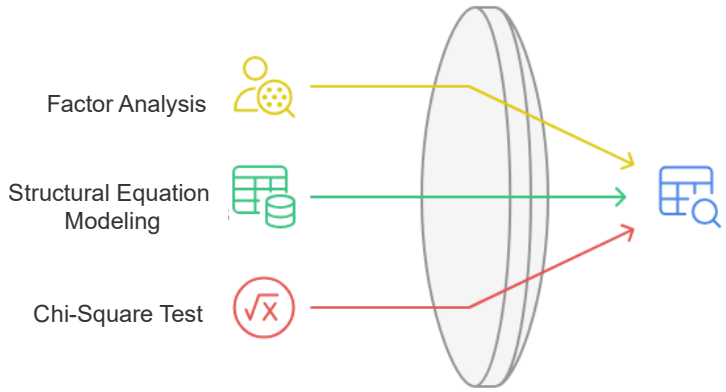
a) **Product Innovations:** This dimension refers more specifically to the introduction of products. The statements (questions or assertions) address the introduction of new products/services that are new to the company but already available in the market, as well as products/services that are new to the national or international market. It may also assess whether the product is entirely new to the market.

b) **Process Innovations:** This dimension includes statements related to the introduction of technological processes that are new to the company, even if they already exist within the industry, as well as the introduction of technological processes that are entirely new to the sector. In addition, it encompasses the acquisition of machinery and equipment that result in technological improvements to products or processes, as well as statements concerning employee training, reinforcing the importance of capacity building in operational changes.

c) **Organizational Innovations/Organizational Management:** Scales that employ the Redesist framework also address the implementation of significant changes in marketing and commercialization concepts or practices, highlighting the importance of marketing processes for innovation (Figure 6).

The authors do not provide a specific "scoring method" for the Redesist Scale. The assessment is conducted using both quantitative and qualitative approaches. However, it is important to note that measuring innovation is a challenging task, as the scales employed rely on a variety of measures that may involve discrepancies regarding the nature of the data. The study emphasizes that, although the Redesist Scale is considered one of the most comprehensive instruments available, it is presented in a very concise manner, which may create gaps in the measurement of innovation.

Figure 5 – Machado and Carvalho Methodolog (2013)



Source: Machado and Carvalho (2013)

Figure 6 – Redesist Methodology

Source: Costa and Reis Neto (2022)

Considering the methodologies presented, it is possible to observe that there are different ways to assess innovation maturity, and that measurement approaches can vary significantly according to the objectives, sectors involved, and methodologies adopted. Many of the methodologies discussed require a high level of analysis and data structuring, making it necessary for the evaluator to possess prior, and often advanced, knowledge of innovation management.

In this context, the Innovation Radar App stands out as a highly applicable and user-friendly tool, offering simplicity, objectivity, and intuitive visualization of innovation performance. These characteristics enable rapid diagnostics and support decision-making, even in environments with limited analytical infrastructure.

The characteristics of each methodology are presented in Box 1 below.

4 Final Considerations

The analysis of innovation maturity assessment methodologies demonstrates that different approaches reflect distinct characteristics in terms of depth, scope, and applicability. In this context, the Innovation Radar App stands out due to its simplified structure, which facilitates visual interpretation and enables the direct and accessible mapping of strengths and weaknesses. This characteristic makes it particularly useful for organizations seeking a rapid and effective assessment of their stage of innovation capability, while also fostering greater engagement among participants involved in the diagnostic process.

In contrast, methodologies such as ELECTRE TRI and the model proposed by Ueno (2016) exhibit a high degree of analytical complexity, requiring greater detail and technical expertise for the interpretation of results. Although these models provide substantial conceptual depth, their effective application demands considerable time, resources, and organizational structure. Meanwhile, approaches such as Redesist, Silva, Hartmann and Reis (2008), and the model adapted by Machado and Carvalho (2013) make significant contributions by incorporating structural elements as well as internal and external environmental factors, promoting a more integrated analysis, albeit with less emphasis on immediate practical applicability.

The study also revealed inconsistencies in the dimensions considered across the different methodologies, making direct comparison of results more difficult. This lack of convergence highlights the importance of carefully selecting the assessment approach according to the organization's profile and the objectives of the evaluation. Within this context, the Innovation Radar App emerges as an effective and versatile tool capable of generating critical inputs for strategic actions, reinforcing its relevance as an accessible model for assessing innovation maturity.

5 Future Perspectives

In light of the scenario presented, it is expected that the use of the Innovation Radar App will continue to gain prominence as a practical and strategic tool for assessing innovation maturity across organizations from a wide range of sectors, contributing to a more widespread and accessible culture of innovation.

From an organizational perspective, the increasing adoption of the Innovation Radar App may strengthen management strategies by enabling the rapid identification

Box 1 – Comparative overview of the methodologies analyzed

Methodology	Dimensions	Instrument	Scoring	Analysis Method
Radar APP (IFRO)	13	Application	1–5 (average score)	Radar chart
ELECTRE TRI	6 blocks	Excel spreadsheet	C1–C5	Indices and weighting factors
Ueno (2016)	4 + 8 variables	Questionnaire (72 items)	Likert scale (1–5)	Average score by dimension and evolutionary mapping
Silva (2006)	5 groups	Questionnaire (30 items)	0–500 (with 3 classification levels)	Weighted tabulation
Machado e Carvalho (2013)	10	Questionnaire (28 items)	Likert scale (1–5)	Factor Analysis, Structural Equation Modeling (SEM), and Chi-Square Test
Redesist	3	Scale developed by Lastres and Cassiolato	No standardized scoring system	Qualitative/Quantitative

Source: Prepared by the authors (2025)

of opportunities, the correction of weaknesses, and the development of solutions that are better aligned with market demands. By encouraging structured analyses and promoting employee engagement around innovation objectives, this methodology has the potential to foster more creative, resilient, and competitive organizational environments.

Furthermore, future updates are anticipated to make the tool even more effective, including the provision of more detailed assessments for each dimension and the incorporation of action recommendations aimed at improving innovation-related activities within organizations.

Finally, it is worth highlighting that the consolidation of the Innovation Radar App as one of the leading assessment instruments may encourage integration with other existing methodologies and frameworks, enabling the development of hybrid and more robust evaluation models. Such convergence can contribute not only to the maturation of innovation practices within organizations but also to the advancement of more consistent and accessible methodologies that accommodate the specific characteristics of different contexts without compromising the analytical depth of innovation diagnostics.

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