

HOSHIN KANRI AS A STRATEGIC ALIGNMENT INSTRUMENT. CASE STUDY: SOCIAL SERVICES OF THE PORTUGUESE NATIONAL REPUBLICAN GUARD¹

HOSHIN KANRI COMO INSTRUMENTO DE ALINHAMENTO ESTRATÉGICO. ESTUDO DE CASO: SERVIÇOS SOCIAIS DA GUARDA NACIONAL REPUBLICANA

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ABSTRACT

Defining a plan to improve organizational performance requires outlining a strategy that can align, connect, and translate the strategic objectives into operational objectives at different organizational levels. The investigation uses the hypothetic-deductive method, the inquisitive method, documentary analysis, interviews, and surveys to identify how the Hoshin Kanri can be combined with the Balanced Scorecard (BSC) to improve the management of the GNR's Social Services (SSGNR). Upon analysis, the quantitative and qualitative data revealed that combining the two models provides a way of leveraging organizational performance by using the Hoshin methodology to align and deploy the strategic objectives conceptualised in the BSC through tactics and processes at different organizational levels.

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Keywords: Hoshin Kanri; Balanced Scorecard; Strategic Management; Management Tools; Efficiency.

RESUMO

No momento de definir um plano que permita incrementar o desempenho organizacional, existe a necessidade de traçar uma rota estratégica capaz de alinhar, interligar e desdobrar os objetivos estratégicos em operacionais entre os vários níveis organizacionais. Através da utilização do método hipotético-dedutivo, método inquisitivo, a análise documental, e o recurso a entrevistas e inquéritos, pretende-se identificar de que forma a associação do Hoshin Kanri ao Balanced Scorecard (BSC) pode contribuir para potenciar a gestão dos Serviços Sociais da GNR (SSGNR). Da análise aos dados quantitativos e qualitativos conclui-se que a conjugação entre os dois modelos permite alavancar o desempenho organizacional, onde os objetivos estratégicos conceptualizados pelos BSC são alinhados e desdobrados através da metodologia Hoshin em táticas e processos pelos vários níveis organizacionais.

Palavras-Chave: Hoshin Kanri; Balanced Scorecard; Gestão Estratégica; Instrumentos de Gestão; Eficiência.

Introduction

The changing environment in which organizations operate, the increase of competition, and the need to provide or make quality products are some of the challenges that mark the current era of organizational management.

Against this background, managers must deal with the challenges of aligning the level that plans with the level that executes, optimising value chain flows, decreasing waste, and finding new forms of productivity to improve efficiency, organizational performance, and the scope of organizational objectives.

Traditional management systems have proven to be obsolete, and managers now employ management tools that allow them to develop organizational policies, communicate strategies, allocate resources, focus actions, and monitor and assess the performance of their organizations.

This issue has been addressed by several management gurus who claim that “the number one cause of management failure is poor linkages between top level strategic objectives and daily management” Thomaz (2015, p.2). Thus, for many organizations, Lean Management² tools provide a lever that can be used to boost the linkages between strategic and operational actions.

Kaplan and Norton’s *Balanced Scorecard* (BSC) is a strategic management tool of organizational performance that integrates both tangible and intangible objectives, measures

² Lean management is a management philosophy that supports continuous improvement by eliminating waste and activities that do not add value to a product or service.

past performances, and projects and analyses the future evolution of the organization based on strategic aspects.

Yoji Akao's *Hoshin Kanri* can deploy strategic objectives across different organizational levels in order to execute the strategy. The model is based on the FAIR³ cycle and takes into account the critical factors for an organization, which must be monitored to achieve the desired results.

The Applied Research Paper that originated this article aimed to identify whether the GNR's Social Services can improve their organizational management by combining the *Hoshin Kanri* and the BSC, and, in a second phase, to outline how this tool can be implemented.

To that end, the work focused on the following question, based on which six hypotheses were formulated: "Does the *Hoshin Kanri* improve organizational management vis-à-vis the management tools already used by the Social Services of the National Republican Guard?"

The results showed that by combining the *Hoshin Kanri* and the BSC, the SSGNR can establish linkages between the different organizational levels by focusing on the organization's vision and strategic framework.

This article is divided into four main parts: literature review, research, presentation and analysis of results, and, finally, the conclusions.

1. Alignment Models and Organizational Performance

The next section provides a brief introduction to the BSC and the *Hoshin Kanri*, as well as their strengths and weaknesses when implemented separately. A summary table is also provided to demonstrate one of several ways in which the two models can be combined, with emphasis on how they complement each other.

1.1. Balanced Scorecard

The BSC is a management model developed by Robert Kaplan and David Norton. The model is based on three principles – (i) organizational mission, (ii) organizational vision, and (iii) organizational values – and analyses the organization from four perspectives: (i) customer, (ii) financial, (iii) internal processes, and (iv) learning and growth.

The model integrates tangible and intangible indicators to translate the organizational vision and strategy into objectives, indicators, targets, and initiatives, emphasising the core aspects on which the organization should focus.

Kaplan and Norton (2001) present findings obtained during 10 years of learning and research in over 200 firms that have implemented the BSC. Most importantly, the authors included in their model a strategy map that aligns organizational levels with organizational strategy using a top-down approach, making it possible to use the BSC as a performance management and strategic management model.

³ The FAIR (Focus, Alignment, Integration, Review) cycle is a management tool that aims to continuously improve the management process.

The strategy map includes strategic objectives for each perspective, the cause-and-effect relationship between them, and even how initiatives and resources converge into results (Kaplan & Norton, 2001).

This map is an important tool because it “shows organizations how their intangible assets become value for customers and for the organization” (Ferreira et al., 2009, p.328). However, Salomão (2013) argues that the model cannot reflect a dynamic reality and that it provides a “static” and incomplete picture of the strategic paths to be followed.

Furthermore, Ferreira et al. (2009, p.322) argue that “the model does not monitor the movements of the competition, which could influence the assumptions made in the strategy and generate uncertainty”.

To address challenge of deploying the strategic objectives throughout the various organizational levels, Ferreira et al. (2009), Geada, Silva, and Cruz (2012), and Thomaz (2015) suggest combining the BSC with other models to monitor the strategic objectives and deploy them through initiatives and processes.

The organizational performance results obtained by the BSC in the private sector and the shift in public sector management culture towards “results-based management focused on efficiency, quality, and services that see citizens as customers” (Pinto, 2009, p.153) led to the model being adapted for the public sector. However, aligning the processes carried out by the employees with the organization’s initiatives and strategic objectives remains a challenge.

1.2. *Hoshin Kanri*

Hoshin Kanri is a Japanese term that contains the concepts of direction (*ho*), needle (*shin*), control (*kan*), and logic / reason (*ri*). The model developed by Yogi Akao is based on the total quality management methodology and uses the Lean Management philosophy to align the functions and activities of the different organizational levels with the strategic objectives.

The *Hoshin Kanri* model was initially used to “increase flexibility in firms and decrease their response time to changes in the environment” (Thomaz, 2015, p.31). However, Akao (1991) believes that his model goes beyond that, allowing organizations to integrate their activities into strategic objectives, planning, and communication throughout all organizational levels without losing sight of day-to-day operations.

The *Hoshin Kanri* model is based on a “process that implements process control actions” (Thomaz, 2015, p.32). Strategic management is a cyclical process that emerges from planning (Plan), execution (Do), monitoring (Check), and corrective action (Action), a process known as PDCA cycle or Deming cycle.

However, according to Witcher and Butterworth (2001), when applied to the *Hoshin Kanri*, the PDCA cycle feeds into the FAIR (Focus, Alignment, Integration, Review) cycle, providing all levels with self-management discipline.

The first phase of the FAIR cycle consists of reviewing the management actions of the previous year and formulating and Focusing the strategic priorities for the next, that is, to

define the organization's key strategic priorities. In a second phase, which corresponds to the Alignment phase of the FAIR cycle, those key strategic priorities are "aligned with the annual plans and deployed through the *catchball* process to the various organizational units" (Thomaz, 2015, p.32).

Once aligned, those key strategic priorities must be Integrated into daytoday management, resulting in the preparation of plans. This means that "plans are executed according to the PDCA cycle to ensure that corrective actions are taken (...) in a process of continuous improvement" (Thomaz, 2015, p.32).

Finally, the organization's annual performance and strategy are assessed in the Review phase. The data resulting from this phase will be used in the initial phase (Focus), starting the cycle again.

Thomaz (2015) argues that the *catchball*⁴ methodology is especially important to deploy the strategic objectives through targets and means because it is "the 'heart'" (...) or core process for aligning and integrating strategies" (Thomaz, 2015, p.33), which makes it possible to ensure that the targets are achieved.

Witcher and Butterworth (2001) describe the *catchball* process as a means of ensuring the organization's commitment to the achievement of the defined targets and action plans, involving teams from the various organizational levels.

According to Tennant and Roberts (2001), the *Hoshin Kanri* is mainly concerned with four main tasks: (i) Integrating strategic priorities into the daily management of the organization; (ii) Providing a structured assessment of how those strategic priorities are progressing; (iii) Providing focus to organizational management by defining strategic priorities; (iv) Aligning those strategic priorities with plans.

The planning process includes both medium- and long-term objectives, on which the organization's day to day activities will be based. The *Hoshin Kanri* has been praised for its "ability to align employees with the organization's strategy (...) and for facilitating the integration of short and long-term targets (...) as well as integrating the global strategic objectives with the individual objectives (...) of each employee" (Thomaz, 2015, p.33).

1.3. Complementarity between the *Hoshin Kanri* and the Balanced Scorecard

Lean Management is a management philosophy that aims to create value by reducing waste. This philosophy is based on Lean Thinking, which involves using simple tools to achieve extraordinary results.

Reducing waste and increasing efficiency is the goal of any manager because it means achieving the organization's objectives with minimum waste while sustaining a high level of quality.

Thomaz (2015) points out some of the weaknesses of Lean Management, emphasising the "disconnect between corporate strategies and their application" (Thomaz, 2015, p.29). In order to bridge this gap, DeBusk and DeBusk (2011) demonstrate the organizational value of

⁴ The *catchball* process refers to negotiation, goal sharing, and deploying objectives through operational actions.

using strategy implementation tools to deploy the strategy, such as the BSC and the *Hoshin Kanri*.

Asan and Tanyas (2007) add that this combination fosters organizational alignment and, consequently, organizational performance, arguing that the BSC provides a conceptual framework for the strategic objectives outlined in the strategy map and, on the other hand, that the *Hoshin Kanri's catchball* process can be used to deploy and communicate the objectives throughout the different levels.

The BSC and the *Hoshin Kanri* are complementary strategic management tools that enable the creation of synergies by combining a performance-oriented approach (BSC) with a process-oriented approach (*Hoshin Kanri*). Therefore, the BSC can be used to plan and build a conceptual framework and the *Hoshin Kanri* to implement and monitor it. The aim is to ensure that long-term targets are understood by all organizational levels and that each level's activities are aligned.

In their study on Canon, Toyota, and Nissan, Wicher and Chau (2007) concluded that combining the two models improves the strategic and operational management dynamics of organizations. While the BSC interconnects long-term organizational activities, the *Hoshin Kanri* system applies and executes the Scorecard's short-term objectives through participatory planning and a learning approach based on the FAIR cycle.

The two models are complementary and reciprocal in the sense that they can be combined to connect and align the various organizational management levels. For Pinto (2009), organizational alignment is a crucial source of value creation, enabling synergies by aligning resources, structures, and operational activities to achieve strategic priorities.

Figure 1 shows a table summarising the *Hoshin Kanri* / BSC Integration Model.

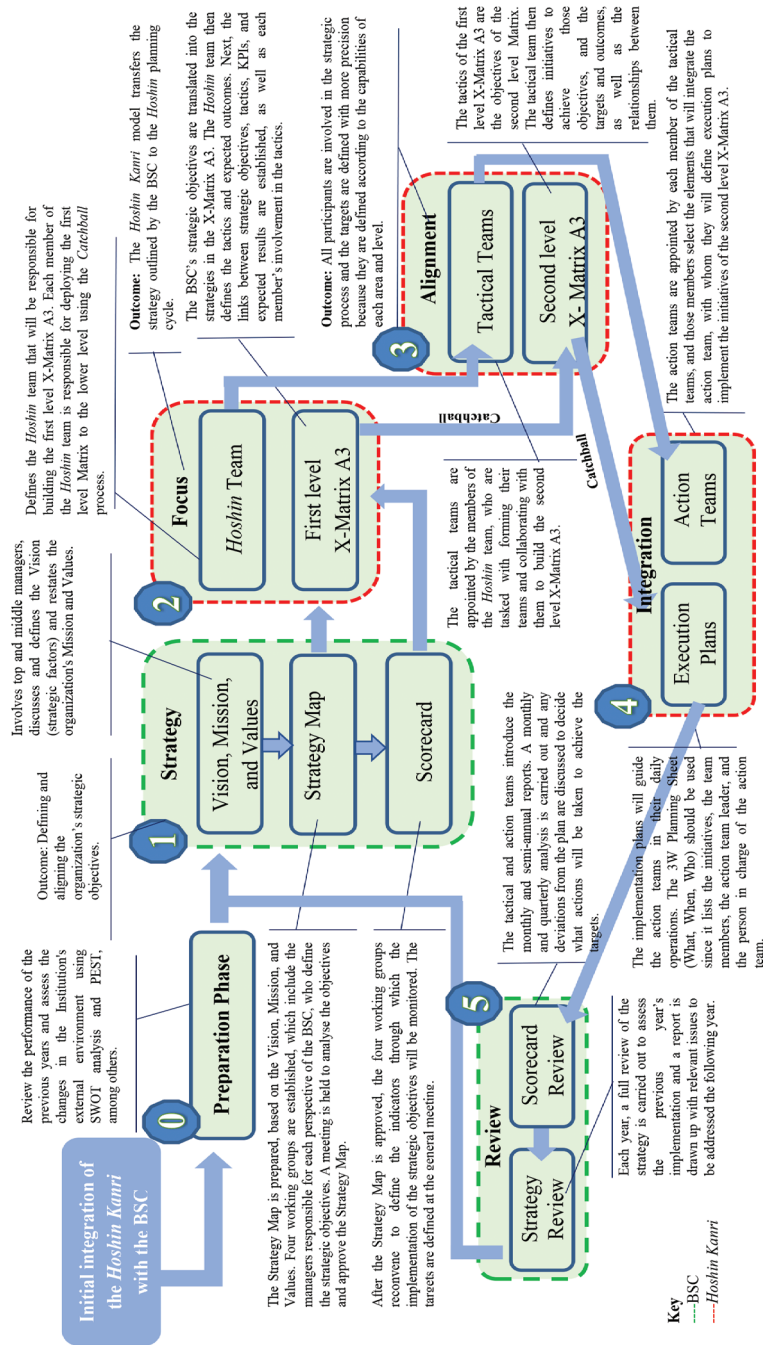


Figure 1 - Hoshin Kanri / BSC Integration Model

Source: Thomaz (2015).

2. Strategic Management

Now that the strategic management models have been presented, this section will provide a brief introduction to strategic planning and how it can be deployed throughout the various organizational levels. Thus, this section clarifies the concept of strategic planning, identifies concepts with which it can be articulated, and describes how it can be deployed.

2.1. Strategic Planning

Long-term planning is not the same as strategic planning. Ansoff and McDonnell (1990) state that long-term planning sets goals based on past data and on the assumption that the future is a trend that can be obtained by generalising the past. Strategic planning is the process by which an organization mobilizes to choose the future it envisions for itself and proposes an integrated system of actions to achieve the desired results.

Several authors have addressed this issue, such as Fayol (1916), Steiner (1979), Poter (1985), and Mintzberg (1994). Although Ansoff (1965) is acknowledged to have pioneered the field, Mintzberg is one of the great icons of strategic management for his research on business strategy.

For Mintzberg (1994), strategic planning is a way to program the consequences of the strategies that have been outlined to realise the organizational vision. Thus, strategic planning ensures that the entire organization is aligned and mobilizes all its resources in the direction that has been defined.

Planning a strategic model requires a process that is guided by the mission, which is the reason for the organization's existence, defining the boundaries of organizational activities (Witcher & Chau, 2007).

Strategic planning begins by "identifying a desirable future and translating that future into a vision statement" (Thomaz, 2015, p.57). The Vision "is the dream that the organization's members must always keep in mind" (Pinto, 2009, p.60), which embodies the belief in an idealised future and the ambition to realise it, allowing them to project an organizational image that must be achieved.

It is through the Vision that "strategic priorities, programmes, and projects are defined" (Pinto, 2009, p.159), strategies are formulated, and priorities are established (Thomaz, 2015).

Although organizational values are the embodiment of virtues, traditions, symbolism, or behaviours, they can also contain management principles or critical behaviours that the whole organization must adhere to in the execution of their daily tasks.

Therefore, "identifying values is crucial to establish attitudes, behaviours, philosophies, and policies, which should guide the work of all members of the organization" (Thomaz, 2015, p.57) towards an idealised future.

2.2. Deploying the Strategy

According to Witcher and Butterworth (2001), after the strategy has been outlined using the BSC model, the strategic objectives must be deployed into shortterm goals and targets by specifying the actions to be taken.

When the strategic planning process includes the *Hoshin Kanri* model, the BSC's strategy map is the "input to the *Hoshin* planning cycle" (Thomaz, 2015, p.59). The strategic objectives obtained by balancing and aligning the BSC are transposed to Jackson's XMatrix A3 (2006), as shown in Figure 2, and "become the *Hoshin Kanri*'s first level strategies that must be deployed" (Thomaz, 2015, p.59).

Next, using the FAIR cycle, the strategies transposed to the XMatrix A3 are focused and aligned with the tactics, the tactics are integrated into the processes, and the processes linked to desired outcomes in a cycle that is continually reviewed.

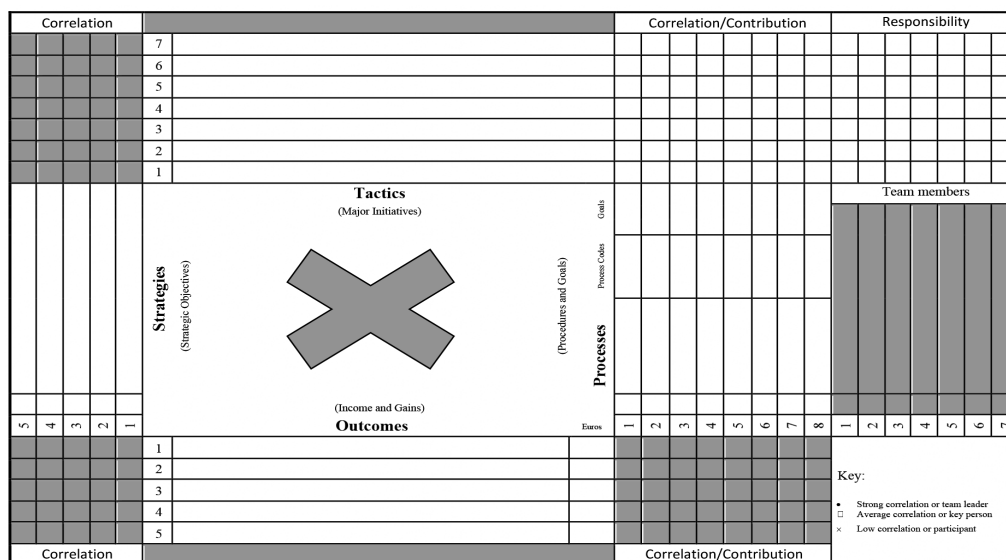


Figure 2 – XMatrix A3

Source: Thomaz (2015, p.43).

2.2.1. Focus

The ability to provide strategic direction and influence daily operations is a concern for all organizations (Witcher & Chau, 2007). The *Hoshin Kanri* model requires that management teams at different levels of the organization's hierarchy are able to work together to define operational strategies, tactics, and plans.

Therefore, top managers must delegate competences or responsibilities to managers of lower levels, encouraging them to define tactics (initiatives) to achieve strategic priorities.

The Focus phase of *Hoshin* strategic planning involves focusing short-term strategic priorities that include "the balanced strategic objectives of the BSC [as] first level strategies" (Thomaz, 2015, p.59) or vital objectives, which are later 'loaded' to the first level XMatrix A3. Once the vital objectives are introduced, the tactics (initiatives) to achieve the corresponding strategies are discussed.

When developing the first level XMatrix A3, the top managers (the *Hoshin* team) discuss and select "Key Performance Indicators (KPIs) [and] targets to assess the degree to which the tactics

and expected outcomes have been achieved” (Thomaz, 2015, p.59). The BSC’s strategy map is the core element of the first level XMatrix A3 since it is there that the *Hoshin* cycle begins.

2.2.2. Alignment

Once the strategic priorities have been focused, they must be aligned with the strategic plans. According to Mintzberg (1994) and Thomaz (2015), the lack of a link between top management (*Hoshin* team) and the operational level (operational teams) is one of the problems of strategic planning. Therefore, “it is precisely there that the *Hoshin Kanri* has strategic benefits because it can (...) align strategy and execution” (Thomaz, 2015, p.62).

The alignment process begins when the vital objectives for the year are communicated by top managers to middle managers. The vital objectives are communicated in general terms to middle managers, who are responsible, along with the managers of each team (tactical level managers), for assessing how they can help achieve those objectives.

Witcher and Chau (2007) point out that this phase involves articulating plans at all levels of the organizational hierarchy, with middle managers working together with the various teams to outline tactics to achieve the targets and strategic objectives.

Aligning strategic priorities, functional priorities, activities, and control systems “helps the organization progress and translates the [strategic priorities of the] *Hoshin Kanri* into work programmes, implementation plans, and daily actions” (Thomaz, 2015, p.62).

While the *Hoshin Kanri* model makes it possible to align decentralised decisions and strategic objectives, Witcher and Butterworth (2001) argue that the *catchball* process enables topdown and downtop knowledge and communication flows, allowing area managers and teams to prepare operational plans which are consistent with the strategic objectives and have achievable outcomes.

In the Alignment phase, the tactics defined in the first level XMatrix A3 “become the next level’s strategies” (Thomaz, 2015, p.63). Next, tacticallevel managers must build their second level XMatrix A3 and operational plans.

Therefore, the *catchball* process provides an appropriate environment to deploy the targets, functioning as a two-directional communication and negotiation technique. Once the second level XMatrix A3 is approved, the organization can begin the next phase, that is, integration (Thomaz, 2015).

2.2.3. Integration

According to Witcher and Chau (2007), managing daily activities can lead to significant changes not only with regard to operational processes but also to midterm plans and even longterm strategy. During the integration phase, the *Hoshin Kanri* incorporates strategies and tactics into the daily tasks of organizations.

For Witcher and Butterworth (2001), the essence of achieving the strategic objectives lies in the daily completion of key activities. This means that managing daily processes involves ensuring that they are properly monitored and that they contribute to the strategic objectives.

In this phase, planning reports should be used in addition to the second level XMatrix A3. Thomaz (2015) suggests using the 3W Planning Report⁵, a tool that action teams can use to execute, document, and communicate the activities for which they are responsible.

According to the same author, at the end of the planning cycle the outcomes are used as inputs for the review phase, thereby improving organizational performance and simplifying the organizational learning process.

In the Review phase, the BSC model is used to facilitate the review and documentation of indicators, measures, strategic objectives, and the degree of achievement of the targets (indicators) associated with each strategic objective.

2.2.4. Review

According to Witcher and Butterworth (2001), organizations do not typically recognise the importance of conducting management reviews and annual strategic planning reviews, considering it a waste of time. However, the authors stress that this is how the effectiveness of the strategic process is measured.

The planning reports prepared by the action teams must be submitted for review on a monthly basis to monitor the degree of achievement of the goals and objectives and identify any deviations that may have occurred and make the necessary adjustments to the plans.

This assessment leads to the definition of implementation plans, which will feed new interactions during the Alignment and Integration phases, that is, the aspects that should be corrected and improved are identified and the tactics and processes that lead to the achievement of the targets and strategies are redefined.

As stated by Witcher and Chau (2007), the FAIR cycle is assessed during the annual senior level review, which appraises how the organization has focused, aligned, and integrated its means and capabilities to achieve the strategic objectives. In this phase, the planning reports, the strategy map, and, when applicable, quality perception surveys are assessed to verify the degree to which the targets and objectives have been achieved.

Once this assessment has been completed, the BSC's strategy map is reviewed, as it is there that previous strategic objectives, indicators, measures, and targets are recorded. As Witcher and Butterworth (2001) point out, this review allows for the definition of new strategies, new indicators, and new targets for the next annual cycle, as well as for the transfer of knowledge on best practices in the sector.

According to Witcher and Chau (2007), this allows top managers to review all the information collected and maintain or rectify the strategy's conceptual framework.

⁵ The 3W Planning Report is a coordination and planning tool used by managers to identify *Who* does *What* and *When*. The daily work is carried out by action teams who use the [second level] Xmatrix A3 to prepare 3W planning sheets containing all the necessary actions to successfully execute the activities listed in the matrix.

3. Research

This article was adapted from an Applied Research Paper. Therefore, the following section briefly presents the research methods, as well as the information collection and processing techniques, procedures, and means used in the investigation.

3.1. Methodology

The initial phase was carried out using the hypothetic-deductive method, which “relies on the formulation of hypotheses or conjectures that best contextualise and explain the phenomena” (Sarmiento, 2013, p.9). Six hypotheses were elaborated:

H1 - The SSGNR uses the BSC as a strategic alignment and deployment model.

H2 - The SSGNR can use the *Hoshin Kanri* model to deploy the strategy conceptualised in the BSC model.

H3 - The *Hoshin Kanri* model can be used to involve and hold accountable the managers of the different organizational management levels.

H4 - At the internal level, the strengths outweigh the weaknesses of implementing the *Hoshin Kanri* in the SSGNR.

H5 - At the external level, the opportunities outweigh the threats of implementing the *Hoshin Kanri* in the SSGNR.

H6 - The internal critical success factors (distinctive competencies) for a successful implementation of the *Hoshin Kanri* outweigh the external factors.

In addition to the method described above, the research used the inquisitive method operationalized through “surveys and interviews, which employ different techniques of data collection, analysis, and interpretation” (Sarmiento, 2013, p.29). The data and information were collected through documentary analysis, interviews, and questionnaire surveys.

The resources used in the research consisted of computer software to collect and process the data.

3.2. Interviews

In order to deepen the research, structured exploratory interviews were carried out with an intentionally selected sample with the purpose of gathering as much information as possible to elaborate the questionnaires.

Thus, this investigation focuses on three target universes: the SSGNR managers responsible for strategic planning, such as the chair of the SSGNR and commandant general of the GNR, the vicechair of the SSGNR, the head of the Strategic Planning and International Relations Division of the GNR, and the coordinator of the strategic planning working group of the *Guardia Civil*.

Although this study focuses on the SSGNR, the interviews were conducted with a sample of top managers and persons responsible for Strategic Planning in organizations with a diversified spectrum of missions and duties, whose knowledge was believed to benefit the research. Table 1 contains the respondent data.

Table 1- Description and coded identification of respondents

Institution	Rank	Duties	Code
<i>Guardia Civil</i>	Brigadier General	- Counsellor for the Ministry of the Interior at the Embassy of the Kingdom of Spain in Portugal; Coordinator of the team in charge of drafting the Strategic Plan of the <i>Guardia Civil</i> .	E1
Social Services of the National Republican Guard	Lieutenant General	- Commandant-general of the National Republican Guard; - Chair of the Social Services of the National Republican Guard.	E2
Social Services of the National Republican Guard	Colonel	- Vice-chair of the Social Services of the National Republican Guard.	E3
National Republican Guard	Lieutenant Colonel	- Head of the Strategic Planning and International Relations Division of the National Republican Guard.	E4

Given his vast experience in the public and private sector, as well as his knowledge and mastery of strategic management models, a structured exploratory interview was conducted with engineer Manuel Thomaz to collect relevant information about how the *Hoshin Kanri* can be used to complement the BSC.

In order to gather information on the SSGNR, interviews were conducted with the service's employees. The exploratory interviews were used as a basis to elaborate the questionnaire surveys and to outline how the *Hoshin Kanri* model can be implemented in the organization under analysis.

3.3. Questionnaire Surveys

The questionnaire survey was based on a crossdimensional analysis of the internal and external environment of the SSGNR, the analysis of the exploratory interviews carried out with the persons responsible for strategic planning, and the exploratory interview conducted with engineer Manuel Thomaz.

Thus, the questionnaire survey was based on a SWOT analysis and on the critical success factors that can jeopardise the implementation of the model in the SSGNR. The questionnaires aimed to determine how managers from various levels of the institution perceive the relevance of the strengths, weaknesses, opportunities, threats, and critical factors for the implementation of the *Hoshin Kanri* model.

After preparing and validating the survey's consistency, a pre-test was carried out "to evaluate if the questionnaire is well-fitted in terms of order of questions and vocabulary" (Sarmiento, 2013, p.95).

Thus, the questionnaire survey was divided into three main parts: an introduction, the sociodemographic characterisation of respondents, and the actual questionnaire.

The final section consists of close-ended questions scored on a 7point Likert scale, allowing respondents to select neutral answers, which are relevant to the investigation.

Survey Monkey was used to elaborate and deploy the questionnaires, and the data were analysed and processed *Statistical Package for Social Sciences 22* (SPSS) and Microsoft Excel.

3.3.1. Sample Characterisation

The target population of the questionnaire surveys consisted of top and middle managers, as well as other managers of the SSGNR, that is, managers from all levels of the institution, in a universe comprising 14 military respondents: eight officers, five sergeants, and a corporal.

This sample was chosen not only because these are the main users and stakeholders of the strategic management process, but also because they deal with the need to achieve the institution's objectives on a daily basis.

Thirty-six percent of respondents are captains, 36% are sergeants, 21% are officers, and only 7% are *guardas*.

4. Presentation, Analysis and Discussion of Results

This section presents, in a logical sequence, the information and content collected in the empirical work, which consisted of applying the technical methods, procedures, and means referred to in the previous section.

Thus, once processed, the most important and relevant aspects of the answers obtained from the interviews and surveys are presented in the discussion of results and subsequent conclusions.

4.1. Analysis of the Interview Results

A content analysis table was drawn for each interview question, and the category, subcategories, recording unit, respondent, score, and corresponding results of the answers given by all interviewees were aggregated by question.

Question 1 was devised to ascertain the strategic management model that supports the strategic planning of the *Guardia Civil*, the GNR, and, especially, the SSGNR: "What model did the Institution use to build its strategic plan?" In line with other similar institutions such as the *Guardia Civil* and the GNR, the SSGNR used the BSC model to build its strategic plan, as stated by 100% of respondents.

The answers to Question 1 show, as respondent 4 explained, that the "importance of building a strategic management instrument led to several management models being studied and analysed". Respondent 3 stated that the model was chosen because a management tool that could "guide and align the Institution's strategy" was required.

The model was also chosen because it is based on a management system that defines the objectives, control indicators, and targets to be achieved, that is, it "relies on management by objectives", according to respondent 2.

Question 2, "Is your institution's strategic plan based on a consolidated strategy map that contains the institution's mission and responsibilities?" aimed to ascertain the level of consolidation of the strategies of the institutions under analysis (SSGNR, GNR, and *Guarda*

Civil) in terms of spectrum of missions and duties. It should be noted that the strategic plan of these institutions is based on a single strategy map.

As a consolidated map exists, 75% of respondents consider that using it allows them to obtain an aggregated perspective of the institution's performance, given the transparency of the causeandeffect relationship between the objectives. Respondent 2 stated that this is due to the "link between strategic objectives and operational objectives, without losing sight of the strategic [component]".

Although the strategic plan of the three institutions is based on a consolidated strategy map, the GNR and the SSGNR are moving "towards the use of several strategy maps distributed by functional areas or activities", as respondents 2 and 3 pointed out. Respondent 3 added that this makes it possible to separate the objectives and activities to be carried out into the model's four perspectives – customers, financial, internal processes, and growth and learning.

Question 3, "What was the need that led to your institution's choice of model?" aimed to discover why these institutions chose the model used in their strategic management process. After the interviews were analysed, it was verified that 100% of respondents, that is, the three institutions, consider that the BSC is compatible with the State's performance measurement instruments, as respondent 2 explained: "The BSC makes it possible to reconcile the strategy with the State's performance measurement instruments, especially the Assessment and Accountability Framework".

Furthermore, 100% of respondents consider that by using the BSC, the four organizational perspectives can be aligned with the organizational strategy. Another aspect that was mentioned (respondent 4) is that the proposed objectives can be used to leverage and "guide the institution's efforts in the direction defined by the strategy to be implemented, progressively improving the processes". This allows for a more effective response to the needs expressed by the citizens / beneficiaries while presenting them with "results as a way to mediate organizational performance", in the words of respondent 2.

The need to boost organizational performance through new management practices that improve the service provided was also given as a reason by 75% of respondents.

Question 4, "Do you consider it important to use management models to deploy the strategy in an integrative, top-down approach (alignment between strategic, tactical, and operational levels)?", aimed to ascertain the respondents' perceptions about the use of models to deploy strategy execution in their institutions (which already use a strategic plan based on the BSC model).

All respondents answered that it was important for their institutions, with respondent 2 stating that "not only is it important to adopt methods that facilitate deploying the strategy, it seems to be a fundamental requirement for the proper functioning of the BSC methodology".

It was verified that 100% of respondents consider that the use of a deployment model is due to the possibility of establishing "linkages between the strategic, tactical, and operational levels", as stated by respondent 3, because the strategic plans must be deployed at all levels.

The respondents' opinion is that the model should allow for cascade alignment between the strategic and operational objectives because, in the words of respondent 4, "it is clear

that the contributions of the lower levels are reflected in the objectives set and the strategy established”.

Regarding Question 5, “What were the main challenges encountered when aligning the different levels and how were they mitigated?” 100% respondents answered that designing the model is one of the challenges that must be overcome in the first phase. As respondent 1 stated, the design “involves determining the objectives and, above all, ensuring that the goals and indicators are the result of capturing ideas from all sectors of the institution”.

After the model is designed, the need to provide a control and support system for the management model is yet another challenge. For respondent 3, this requires “a computer tool that allows us to constantly monitor and communicate the degree of achievement of the strategic objectives” so that corrections can be made in a timely manner.

Question 6, “Has your institution adopted a model to deploy the organizational strategy across the different management levels? If so, please state which model was used and what was its perceived impact?” aimed to verify if the institutions use management models to deploy their strategy and the degree of deployment provided.

As for other deployment models, the institutions under analysis only use the BSC (100% of respondents). This model allows for partial deployment, as it “encompasses the four core areas of the institution [customers, financial, internal processes, growth and learning], and can be deployed only in those areas”, as emphasised by respondent 3.

All respondents agree that strategic planning is only partially deployed. Nevertheless, it is worth noting that the respondents consider that the BSC “provides a set of indicators, and that the persons in charge are responsible for the execution of the planned actions” (respondent 2).

Question 8, “In your experience, do you consider it important to involve the managers of the different levels in the formulation and deployment of strategic objectives?” aimed to validate the degree to which the managers of the different levels are involved in the strategic management process. All respondents considered it important that the managers of the different organizational levels are involved in determining the objectives and targets and their deployment “because the whole organization must work towards the same goals” (respondent 3).

All respondents consider that involving the managers of the different levels in the management process encourages their commitment to the established goals. Additionally, 75% of respondents consider that this involvement allows for the alignment of strategic planning, since it provides a “link between the strategic, tactical, and operational levels” (respondent 3).

4.2. Analysis of the Survey Results

Table 2 shows the relevance profile of the strengths (S), weaknesses (W), opportunities (O), and threats (T) involved in the implementation of the *Hoshin Kanri* model in the SSGNR, which are listed in the SWOT matrix. As can be verified, the mean value of the answers ($\bar{x}_m=5.76$) is higher than the mean value of the scale (4).

Table 2 – SWOT matrix factors

Positive factors					Negative factors				
Mean	Standard Deviation	Trend	Minimum	Maximum	Mean	Standard Deviation	Trend	Minimum	Maximum
Strengths – S (Question 6)					Weaknesses – W (Question 6)				
S8 - Involvement of all organizational levels in the organizational strategy" (in the definition of goals and in communicating to employees the tasks that must be performed)	6.29	0.825	7	5	7	5.93	0.829	5	4
S1 - Articulation of strategic objectives with activities, operational plans, and sectoral plans.	6.21	0.426	6	6	7	5.71	1.204	6	3
S3 - The daily activities contribute to the strategic objectives (the organization's activities are systematically integrated with the strategic objectives).	6.21	0.426	6	6	7	5.71	0.994	6	4
S2 - Vertical and horizontal organizational alignment with the strategic objectives provides focus for organizational management.	6.14	0.77	6	5	7	5.71	1.051	4	4
S5 - Adoption of a process-oriented tool that provides focus for critical area activities	6.07	0.997	7	4	7	5.64	0.842	5	7
S10 - Reinforce and align operational management dynamics with the strategic objectives throughout the various levels of the organization.	6.00	0.679	6	5	7	5.50	0.941	5	4
S4 - Deployment of strategic objectives across organizational levels (top management policies, middle management, and operational teams).	5.93	0.267	6	5	6	5.50	0.855	5	4
S6 - Monitor organizational performance throughout the economic cycle (monitor activities and processes to achieve strategic objectives).	5.86	0.77	6	5	7	5.21	1.188	5	3
S7 - Improve the communication of the organizational management process, allowing continuous improvement.	5.71	0.825	5	5	7	5.14	0.77	5	4
S11 - Holding managers accountable for the defined organizational strategy.	5.71	0.994	6	4	7	5.07	0.917	5	4
S9 - Ensuring that short-term actions are managed by the strategic planning process.	5.57	1.158	6	3	7				
Opportunities – O (Question 7)					Threats – T (Question 7)				
O6 - Parsimonious use of human, financial, and administrative resources.	6.21	0.579	6	5	7	5.71	0.901	6	4
O1 - Improving the efficiency of the management of Public Services.	6.14	0.535	6	5	7	5.93	1.072	6	4
O7 - Aligning the organization with the objectives and targets proposed by the Ministry.	6.14	0.77	6	5	7	5.93	0.829	6	4
O5 - Improving the relationship with stakeholders, fostering transparency and dissemination of results.	6.07	0.997	7	4	7	5.93	0.829	5	7
O2 - New paradigm of public management - management by objectives.	6.00	0.679	6	5	7	5.86	0.949	6	4
O8 - Evolution of information technologies and systems.	5.64	0.929	6	4	7	5.79	0.893	6	4
O3 - Sharing experiences and information about strategic management with similar military forces.	5.29	0.996	6	4	7	5.50	0.855	5	4
O4 - Exchange and strategic cooperation with civilian partners.	4.93	0.917	4	4	7	5.00	0.877	4	6

O4, "Exchange and strategic cooperation with civilian partners" obtained the lowest mean values ($x_m=4.93$), which indicates its low relevance for implementing the strategic management model in the institution. In contrast, S8 obtained a mean value of $x_m=6.29$, which shows that respondents consider the use of a management model that involves all organizational levels in the institutional strategy to be very relevant.

Table 2 also shows that eight of the eleven strengths listed for the *Hoshin Kanri* model obtained values higher than the mean. However, five of the seven threats to the model's implementation also obtained values higher than the mean, in comparison to five of the eight opportunities. It is noteworthy that the relevance of the positive factors (strengths $x_m=5.97$ and opportunities $x_m=5.80$) is higher than that of the negative factors (weaknesses $x_m=5.51$ and threats $x_m=5.71$).

As for the factors listed in each quadrant, the following were considered the most relevant: S8 - "Involvement of all organizational levels in the organizational strategy (in the definition of goals and in communicating to employees the tasks that must be performed)" ($x_m=6.29$); W8 - "Difficulty determining which strategic objectives are vital to the organization" ($x_m=5.93$); O6 - "Parsimonious use of human, financial, and administrative resources" ($x_m=6.21$); T3 - "Budget constraints on the public sector" ($x_m=5.93$).

Respondents consider that the main benefits of implementing the *Hoshin Kanri* model are the fact that it allows for parsimonious use of organizational resources and that it involves the managers of the different organizational levels in the strategic management process. On the other hand, the current budget constraints on the public sector and the difficulty determining which strategic objectives are vital for the organization are considered the main challenges for the implementation of the model under study.

The least relevant factors in each quadrant are: S9 - "Ensuring that shortterm actions are managed by the strategic planning process" ($x_m=5.57$); W1 - "Lack of specialised training in management models" ($x_m=5.07$); O4 - "Exchange and strategic cooperation with civilian partners" ($x_m=4.93$); T1 - "Lack of successful cases of implementation of strategic management models in the public sector" ($x_m=5.00$).

The above clearly shows that the benefits of implementing a management model that enables the management of short-term actions according to the strategic plans, as well as the possibility of exchange and strategic cooperation with civilian partners for the purposes of training and sharing of best practices have little relevance for the implementation of the model. On the other hand, the lack of cases in which the *Hoshin Kanri* model was successfully implemented in public sector organizations, as well as the respondents' lack of specialised training in management models, are the least relevant challenges for the implementation of the model.

Table 3 shows the relevance profile of the internal critical success factors (ICSF) and external critical success factors (ECSF) for the implementation of the *Hoshin Kanri* strategic alignment and deployment model in the SSGNR.

Table 3 - Central tendency and dispersion measures for Question 8 of Part III of the survey

	Mean	Standard Deviation	Trend	Minimum	Maximum
Internal critical success factors - ICSF (Question 8)	6.20	0.707	6	4	7
ICSF7 - Top manager involvement and willingness to implement strategic management models.	6.57	0.646	7	5	7
ICSF3 - Planning, organization, and articulation among the various organizational areas.	6.36	0.745	7	5	7
ICSF4 - Involvement of all organizational levels (in the definition of organizational targets).	6.29	0.729	6	5	7
ICSF5 - Holding meetings to discuss the organizational path and the degree of achievement of defined targets.	6.29	0.611	6	5	7
ICSF6 - Qualification of human resources (training actions and seminars to inform employees about strategic management concepts and methods).	6.29	0.726	6	5	7
ICSF9 - Restructuring processes (elimination of irrelevant processes and actions).	6.29	0.611	6	5	7
ICSF1 - Articulating strategic objectives from the four perspectives (Beneficiaries. Processes. Financial. Learning and Innovation) in a consolidated map.	6.14	0.535	6	5	7
ICSF10 - Forming cross-functional teams with elements from the various levels to operationalize the strategy.	6.00	0.784	6	5	7
ICSF8 - Ability to invest on management systems and technology.	5.93	0.917	5	5	7
ICSF2 - Employee motivation to implement strategic management models.	5.86	0.770	6	4	7
External critical success factors - ECSF (Question 9)	5.54	0.837	5	4	7
ECSF7 - Improving the organizational image transmitted to stakeholders.	6.07	0.997	7	4	7
ECSF4 - Accepting the use of innovative management models.	5.93	0.730	6	4	7
ECSF3 - Acknowledgement of stakeholders that implementing innovative strategic management instruments benefits the organization.	5.71	0.914	5	4	7
ECSF5 - Dissemination of organizational performance results regarding the level of achievement of strategic objectives.	5.50	1.092	5	4	7
ECSF6 - Influence of best practices from other organizations or public services.	5.50	0.855	5	4	7
ECSF8 - Cooperation and exchange of experiences and best strategic management practices with partners and similar forces.	5.50	0.519	5	5	6
ECSF2 - Support and incentive from the Ministry for the adoption of strategic management models.	5.29	0.726	5	4	6
ECSF1 - Partnerships and cooperation with civilian / public institutions for the purposes of training in management models.	4.86	0.864	4	4	6

As can be seen above, the mean values of the responses ($x_m=5.91$) are higher than the mean values of the scale ($x_m=4$).

Respondents consider that establishing partnerships and cooperation with civilian and public institutions for the purposes of training in management models has little relevance for the model's successful implementation, resulting in the lowest mean values ($x_m=4.86$).

Respondents attach more importance to CISF ($x_m=6.20$) than to CESF ($x_m=5.54$). The standard deviation was less than 1 for both CISF and CESF, which indicates homogeneity of responses.

FCSI12, "Employee motivation for the implementation of strategic management models" ($x_m=5.86$) is the internal factor which respondents find less relevant. The values obtained by FCSI7 show that top managers are involved and willing to implement strategic management models ($x_m=6.57$).

However, FCSI13 reveals the need for planning, organization, and articulation among the different organizational areas ($x_m=6.36$).

As for the critical external success factors, FCSE1, “Partnerships and cooperation with civilian and public entities for the purposes of training in management models” ($x_m=4.86$) is the least relevant. In contrast, FCSE7, “Improving the organizational image transmitted to stakeholders” ($x_m=6.07$) is the most relevant factor for respondents. In addition, FCSE4, “General acceptance of innovative management models” ($x_m=5.93$) shows that respondents find management innovation to be greatly relevant.

Conclusions

Having concluded this investigation, and based on the theoretical and practical sections above, it can now be verified whether the “[initial] assumptions can provide provisional answers” (Sarmiento, 2013, p.14).

H1 – “The SSGNR uses the BSC as a strategic alignment and deployment model” is partially confirmed. This hypothesis must be analysed from two perspectives: alignment and deployment. With regard to the use of the BSC as a strategic alignment model, the respondents’ answers to questions 1, 2, and 3 show that the BSC provides the SSGNR’s strategic alignment. Thus, 100% of respondents state that the consolidated strategy map developed using the BSC model enables the visualisation of several priority areas of action, providing alignment based on a causeandeffect relationship between strategic and operational objectives, without losing the institutional focus of these linkages.

However, it is not confirmed that the BSC provides deployment. The answers to question 6 reveal that the BSC allows only partial deployment, as stated by 100% of respondents. The BSC is only deployed in the four perspectives of the model rather than across all organizational levels.

H2 – “The SSGNR can use the *Hoshin Kanri* model to deploy the strategy conceptualised in the BSC model” is fully confirmed. The answers to questions 4, 5, and 8 show that respondents believe that using a management model with the characteristics of the *Hoshin Kanri* is important and that it complements the models already in use. On the other hand, 100% of respondents consider that one of the challenges is the design of the deployment model.

H3 – “The *Hoshin Kanri* model can be used to involve and hold accountable the managers of the different organizational management levels” is fully confirmed. The answers to Question 8 show that all respondents consider it important to involve the managers of the various levels, and therefore also consider that adopting a model that encourages this involvement would benefit the institution.

On the other hand, the interview conducted with engineer Manuel Thomaz revealed that the *catchball* process is crucial to the *Hoshin Kanri* model (which is based on negotiation and sharing across the different organizational levels), and that it is the ideal process to involve all management levels of the institution.

By involving the managers of the various levels in the strategic management process, in addition to fostering their commitment to the targets, as stated by 100% of respondents,

it is also possible to align the various organizational levels with the pursuit of the strategic objectives. Thus, by using the *Hoshin Kanri* model's *catchball* process, it is possible not only to involve managers but also to hold them accountable for the achieving the defined goals.

H4 – “At the internal level, the strengths outweigh the weaknesses of implementing the *Hoshin Kanri* in the SSGNR” and H5 – “At the external level, the opportunities outweigh the threats of implementing the *Hoshin Kanri* in the SSGNR” are fully confirmed. The SWOT matrix lists the internal and external factors that can jeopardise the implementation of the model. The respondents' answers to the SWOT matrix revealed that the means of the positive factors (strengths and opportunities) was higher than that of the negative factors (weaknesses and threats), indicating that positive factors outweigh negative ones at both the internal and external levels.

In the external context, there is a 0.09 difference between opportunities (5.80) and threats (5.71); internally, the difference between strengths (5.97) and weaknesses (5.51) is 0.46. The differences between the internal and external levels (0.36) show that the implementation of the *Hoshin Kanri* is more relevant internally than externally.

H6 – “The internal critical success factors (distinctive competencies) for a successful implementation of the *Hoshin Kanri* outweigh the external factors” is fully confirmed. The respondents' answers with regard to critical success factors show that the mean values obtained by internal factors (6.20) are higher than those obtained by external factors (5.54). This indicates that actions taken within the organization, which can be controlled by managers, are more relevant than actions taken outside the organization, which are naturally beyond their control. Thus, the critical success factors for the implementation of the *Hoshin Kanri* are those that can be controlled by SSGNR managers.

This research work aimed to answer the research question: Does the *Hoshin Kanri* improve organizational management vis-à-vis the management tools already used by the Social Services of the National Republican Guard?”

The results showed that by combining the *Hoshin Kanri* model and the BSC strategic management model used by the SSGNR enables the creation of synergies. The BSC is used by the institution to build a strategy map that represents the strategic “course” to be taken. However, this model cannot deploy the strategic objectives into tasks throughout the different levels of the SSGNR.

By implementing the *Hoshin Kanri* it is possible to deploy the institution's key strategic objectives across the different management levels. On the other hand, the deployment of the X-Matrices A3 and, most importantly, the *catchball* process, encourages the involvement of all managers in the strategic management process.

In a first phase, this involvement allows all levels to understand the long-term strategy, and, in a later phase, makes it possible to align more closely not only the various levels of the institution but also its daily activities.

Finally, the model provides accountability and allows for the definition of achievable targets since each manager is aware of their own capabilities and limitations, in a mechanism marked by peer control.

As for its strengths, the competitive advantages of implementing the *Hoshin Kanri* model in the SSGNR lie in the ability to overcome competitors and improve profits by adopting distinctive methods and / or procedures.

The analysis showed three competitive advantages that could be gained by implementing the model under study in the SSGNR: (i) focusing objectives and core activities, thus steering the institution's efforts towards processes and actions that contribute to the strategic objectives; (ii) improving planning and internal organization, and (iii) improving the institution's image.

The competitive advantages stem from the fact that the model integrates both the BSC and the *Hoshin Kanri*. The BSC aims to align strategic factors and mid- to longterm strategic objectives, while the *Hoshin Kanri* aims to implement and execute, that is, it can be used to translate strategic objectives into shortterm plans (annual – first level X-Matrix A3), and later into very shortterm priorities (semiannual, quarterly, daily – second level XMatrix A3). Dividing global targets into piecemeal targets makes it possible to define very shortterm action plans and correct any deviations from those plans.

Implementing the *Hoshin Kanri* model in the SSGNR would not only improve organizational performance but also the processes carried out daily to achieve the proposed goals, as daily management has direct repercussions on the organization's strategic management. In addition to its positive impact on the SSGNR, the introduction of the *Hoshin Kanri* model could imply the need to adjust or review the organizational strategy in order to leverage the institution's performance.

In sum, in these everchanging times, making the right decisions to attain excellence in their areas of operation is a challenge for all employees of an organization.

Lack of detail and lack of communication of the objectives conceptualised in the BSC and transposed into the strategy map is the main gap in the strategic management model. This investigation also found that by combining a performanceoriented approach with a processoriented approach – the *Hoshin Kanri* and the BSC – synergies can be created to bridge those gaps.

The findings show that the *Hoshin Kanri* can enhance the management of the Social Services of the National Republican Guard, improving organizational performance and the support given to the institution's managers, and complementing the models used by the organization.

In fact, and as with everything else in life, those who succeed are those who can understand their environment, see opportunities in threats, and provide an agile and insightful response to all situations.

Implementing the *Hoshin Kanri* model provides an opportunity to enhance the management tools and models already in use in the SSGNR, as well as to put the organization at the forefront of innovation, making it a reference among its peers.

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