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Planning using Hoshin Kanri

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Abstract

This paper describes a technique for planning, known as Hoshin Kanri. It is a system of management policy considering the direction, target and means. It emphasizes on the mutual operation of resources with the concept of total quality management to achieve the highest goal by supporting and linking the potential of organization.

The problem of applying the concept of planning using Hoshin Kanri, is that it can tend to challenge the traditional authoritarian strategic planning models, which have become the paradigms of modern business. Yet Hoshin Kanri provides an appropriate tool for the declaration of the strategic vision of business while integrating goals and targets in a single holistic model. There have been various adaptations of Hoshin Kanri to align the technique of western thinking and management approaches, yet outside japan its significance has gone largely unreported.

It is proposed that Hoshin Kanri is an effective methodology for planning, which has a number of benefits over the more conventional planning techniques. The benefits of Hoshin Kanri as a tool for planning compared to conventional planning systems include: integration of strategic objectives with tactical daily management, the application of the plan-do-check-act cycle to business process management and parallel planning.This paper suggests a methodology that focuses on the vision of Hoshin Kanri.

Key Words: Hoshin Kanri, Planning, Strategy, Total Quality Management, Policy Deployment

I. Introduction

This paper presents an exploratory research study which seeks to give an insight on Hoshin Kanri, a process which has been largely unidentified in terms of academic research in the West. Interest in the research study developed as a result of identification of practitioner and consultancy based early literature which presented uncritical and prescriptive accounts of the process.

The Hoshin Kanri is a popular methodology for strategic policy planning and deployment. The approach is widely used by firms as a tool for aligning organizational objectives at the strategic level with key performance measures at the tactical and operational levels. Moreover, the methodology presents a structured means for translating performance measures into specific performance indicators. Based on the performance indicators, decision makers are able to measure the performance of processes and systems and consequently, implement corrective actions.

Hoshin Kanri is the process of choosing strategic change. In most firms, this process is called strategic planning. Proposed changes are usually identified to either increase the competitive performance of a process or to create the competitive 'attractiveness' of a product to its targeted market. Strategic choice in both dimensions is essential in order to have a globally competitive organization. As pointed out by Dr. Hiroshi Osada, many Japanese companies have not paid enough attention to the critical aspects of strategy formulation as they have to the deployment of their strategy using Hoshin Kanri. This leads to an error of effectively deploying a poorly chosen strategy. When management confuses the mechanistic aspects of policy deployment with its own crucial obligation to establish strategic direction, then they create a grievous error that is truly an abrogation of leadership. However, an organization may effectively deploy management's strategic choice if the selection of the strategy is not carefully directed it will not lead to improvement.[1]

From this standpoint, we can tackle the following problematic:

The importance of planning using Hoshin Kanri ?

The foregoing of this topic will be discussed in this study through:
- theoretical background of Hoshin Kanri.
- Hoshin Kanri definition.
- objectives of Hoshin Kanri.
- the principles of Hoshin Kanri.
- the Hoshin Kanri method of strategic planning.
- what is the different thing in Hoshin Kanri?
- implementing Hoshin Kanri.

II. Theoretical Background of Hoshin Kanri.

Hoshin Kanri is considered to be a system of planning and deployment which evolved in Japan and is currently used by many leading companies. The quality of management principles

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[1] Hiroshi Osada argues this point effectively in his article "Strategic Management by Policy in Total Quality Management" that appeared in *Strategic Change* (Volume 7 (1998), p. 277-287.

and practices within the Japanese industry were initially introduced by the Japanese Union of Scientists and Engineers in the 1950's and this has led to the widespread use of the plan-do-check-act cycle. [2]

In 1954, Juran was invited by the Japanese Union of Scientists and Engineers (JUSE) to build on Deming's earlier work on statistical quality control. He lectured on management's role in promoting quality control activities and pointed out that it was management's responsibility to lead quality improvement efforts. "A key element of that responsibility was to define the policy quality[3]

Along with these developments, the idea concerning a companywide management system began to generate. By the late 1960's companies, including Bridgestone, Toyota and Matsushita, began to develop their own innovative approaches and these efforts created the basis of Hoshin Kanri Planning. As a result, by the late 1970's, the experience which accumulated in industry had appeared as books on the subject. The first authoritive text in English was translated and edited by Yoji Akao from Japanese, in which the term "Hoshin Kanri" was described as a planning, implementation, and review system for managed change. By the late 1980's, western companies began to implement their own versions of Hoshin Kanri including Procter and Gamble, Hewlett Packard, and Xerox. Today, Hoshin Kanri Planning can be defined as a proven technique to help organizations focus on efforts and achieve objectives.[4]

A commonly found translation of Hoshin Kanri is: Hoshin as 'policy' or 'target and means', and Kanri as 'planning' or 'management or control'. The word Hoshin is composed of two Chinese characters: ho and shin; ho meaning method or form, and shin meaning shiny needle or compass; Kanri meaning management or control. Taken together the two words mean a 'methodology for strategic direction setting'. Translation in this form is to be found in literature in this area (see for example Akao 1991, King 1989, Shiba 1993, Soin 1992).
The Japanese term, "Hoshin Kanri", originally means the "shining metal" + "compass

方針

Hoshin = a course, a policy, a plan, an aim

管理

Kanri = administration, management, control, charge of, care for

The main purpose is to communicate company policy to everyone in the organization. Hoshin Kanri Planning (or alternatively Deployment Policy according to some authors). It can also be defined as a step-by-step planning, implementation and review process through the

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2 Watson, G. H. (2005), Design and Execution of a Collaborative Business Strategy, Journal For Quality & Participation, Vol. 28, No. 4, pp. 4-9.

3 Lee, R.G. and Dale B.G. (1998). Policy Deployment: An Examination of the Theory, International, Journal of Quality & Reliability Management, Vol. 15 No. 5, p523.

4 Pekdemir, I. and Others, A Study on Hoshin Kanri Planning System Applications in Companies that have received Iso 9001-9002 Certifications from the Turkish Standards Institution, Istanbul University, School of Business Administration tr-34850Avcılar, Istanbul, p39.

systems approach to the management of change in critical business processes. Hoshin Kanri Planning, based on the Plan- Do- Check- Act (PDCA) .

In Japan, Hoshin Kanri evolved as a system of planning and deployment. Hoshin Kanri Planning is widely used around the world by many leading companies. Its purpose is to be aware of the status quo and make a major performance improvement by analyzing current problems and deploying in response to environmental conditions. With Hoshin Kanri Planning, top management vision can be translated into a set of coherent, consistent, understandable and attainable policies and actions. It can also be easily applied at all levels and in all functions of the organization. Among the initial considerations in the Hoshin Kanri Planning approach to business system change are: (1) measuring the business system as a whole; (2) setting core objectives of the business; (3) understanding the environmental situation in which business operates. In companies using Hoshin Kanri Planning, everybody is aware of management's vision and individuals become able to run their projects to successful conclusions through coordinated business processes.[5]

Hoshin is applied in many domains among them :

-    Improvement in current work: efficiency, quality, , …
-    Problem solving: old or recurring problems, new difficulties, …
-    Technical innovations, technological, management, …
-    Training, personal or team development

III.   Hoshin Kanri definition

Before dealing with this style, we have to answer this question:

Why Hoshin Kanri?

The essential problem, particularly in an ever changing dynamic and complex environment, necessitates an essential change on how strategic planning process is conducted. The focus of strategic planning process must be changed from determining the solution of the problems which are believed to exist, to define a responsive process to the wicked characteristics of the assumed problems. This process is dynamic and changes continuously as long as additional learning happens.

There are many definitions for this style among them:

1)   It is known as a variety of differing terms which have been adopted within a Western context and the rationale for this reflects commentators' attempts to promote an understanding of Hoshin Kanri acceptable to a Western audience. Such terms include: policy deployment, management by policy, policy control, Hoshin planning and managing for results. Given the confusion which may arise as a result of this proliferation of terms, in subsequent discussion of specific works for the purpose of this thesis, the term Hoshin Kanri will be adopted[6].

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[5] Ibid.

[6] Butterworth, R. (2001), *Hoshiin Kanri: An Exploratory Study at Nissan Yamato Engineering* ltd, Durham theses, Durham University. Available at Durham E-Theses Online: http://etheses.dur.ac.uk/4234/ p11.

2) It is also known as a step-by-step planning implementation, and review process for managed changed. It is a system approach to management of change in critical business processes.[7]

3) There is another definition which considers it as policy deployment which is also known as Hoshin Kanri. Hoshin Kanri is basically an application of Deming's plan PDCA cycle to the management process. The PDCA cycle represents a generic approach to continual improvement of activities and processes. [8]

4) Hoshin Kanri is widely adopted in Japanese companies, but it is less spread in western companies. Even though the few companies that have applied Hoshin Kanri in the west have won many reputable awards, Hoshin Kanri has not gained widespread popularity[9]

5) Hoshin Kanri strives to get every employee pulling in the same direction at the same time. it achieves this by aligning the goals of the company (strategy) with the plans of middle management (tactics) and the work performed by all employees (operations).[10]

6) Hoshin Kanri is an organising framework for strategic management, which is concerned with the following four primary tasks.[11]

A brief definition for Hoshin Kanri Planning can be given as "a planning and management system that focuses and aligns the organization to achieve break throughs for customers".

The most significant point to draw from these definitions is that they"interpret" *Hoshin Kanri* and often fail to mention feedback. Interpretation of *Hoshin Kanri* into policy deployment by Western writers leads to a watering down of the concept and, although "catch-phrase" versions may make western management's job easier, it can lead to inadequate application of the method and unsatisfactory results.

Transforming the policy to the implementation. The transformation of policy is conducted by using main elements; vision, mission, policy, strategy, method, and activity following the cycle of quality management PDCA from framework of policy deployment as shown in fig 1.

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[7] Yoji Akao. (1991), Hoshin *Kanri: Policy Deployment for Successful TQM,* Productivity Press, New York, NY.

[8] Lee, R.G. and Dale B.G. (1998), Op-Cit, pp.520- 540.

[9] Tennant, C., & Roberts, P. (2001). Hoshin Kanri: Implementing: the Catchball Process, Available at: www.lrpjournal.com Retrieved on 23-12-2016.

10 Hoshin Kanri, Available at http://www.leanproduction.com/hoshin-kanri.html Retrieved on 23-12-2016.

[11] Witcher, B., & Butterworth, R. (1999). Hoshin Kanri: How Xerox manages, Long Range Planning 32(3), P323.
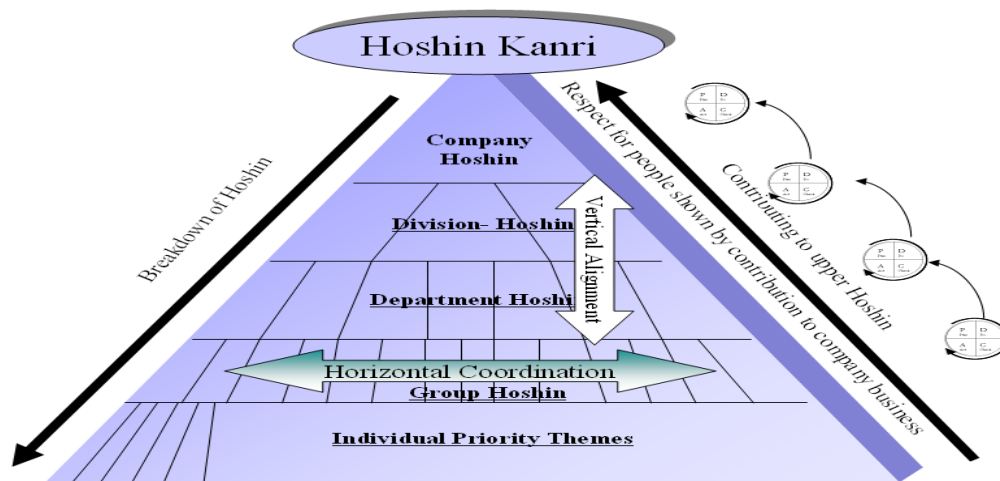
fig. 1 The Framework of Policy Deployment

Source: Piyathip Theppinta. P. & Ngaoprasertwong. J. (2012). Application of Hoshin Kanri for Continuous Improvement in Procurement of Automotive Industry, International Conference on Mechanical and Robotics Engineering (icmre'2012), may 26-27, phuket p.82.

Each group is assigned with the responsibility of following the goal of their department in order to achieve the main goal of the organization.

Here we present three illustrative alternatives identified in the literature review; [12]

The six elements model (tennant & roberts, 2001).

– five-year vision (review of internal and external obstacles, input from all managers;
– the one-year plan (deriving from the 5-years vision a situational analysis and last year performance);
– deployment to departments (**key implementation items**);
– detailed implementation (contingency planning – self-diagnosis, self-correction and visual presentation of action);
– monthly diagnosis (attention on the process rather than the target);
– president annual diagnosis (numerical targets, but also the process that underlies the results);

The eight essential points of Hoshin Kanri model (kondo, 1998)

– annual policy;
– medium- to long-term policy;
– the establishment of quality policy;
– converting methodological policy into objective;
– policy composition - aims, targets and priority strategies;
– top-down and bottom-up deployment;
– the meaning and practice of "catch-ball"[13] in the deployment process;

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[12] Löfving, M. and others (August 2016). Introducing the Hoshin Kanri approach in small and medium sized companies. Accepted for publication in Management Decision, P3§.

– top management internal QC audits.

The extended ten step Hoshin Kanri model (jolayemi, 2008)
– pre-planning analysis (analysis of the organizations environment, both external and internal)
– development of mission statement
– development of value statement
– development of vision statement
– long- and medium-term plans and goals
– annual plan (vital few objectives) & annual strategies (targets, means, performance measures, the annual planning table)
– policy deployment and catch ball process
– integration, implementation, daily management/daily control, and business fundamentals
– reviews (daily/weekly/monthly reviews + annual review/ president's diagnosis) standardization

   it is not surprising that the common bases of the alternatives above is the division in four broader phases, similar but not equaling the p(lan), d(o), c(heck), a(ct) phase in the PDCA methodology. In what we name the *outlining phase,* the organizational position is determined. he outlining phase resembles the traditional design school planning model where the method include traditional strategy analysis such as environmental analysis with the use of tools such as porters five forces, pestle as well as internal analysis of resources and capabilities.

IV.   Objectives of Hoshin Kanri
   This style targets to achieve the followings:
• integrate all the personnel of an organization towards the key objectives using indirect means instead of direct pressure, creating a feeling of necessity and conviction.
• integrate all tasks, whether routine or improvement, according to the key objectives of the company coordinating all efforts and resources.
• effectively realign objectives and activities according to changes environment.
From the analysis of the objectives it points out that all work responds to a dual nature, in which routine and innovation are alternated. A common element to both routine and innovation is the need for teamwork. It is desirable that at the highest levels of the organization, more time be devoted to innovation and creation and less time to routine tasks, while as one descends from level, this relationship is reversed.

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[13] Catch-ball is the process that is used to build a consensus through dialog about the targets and means to achieve the change. This process is data-driven and uses tools that permit management by fact. Catch-ball links annual change projects to mid-range and long-term plans, deployment prior to annual fiscal year commencement, incorporated into target setting and annual employee objectives cascade; coordinated both vertically within functions and horizontally across processes and negotiated across the processes to allocate resources (competence, funding and equipment) to achieve the shared and agreed objectives.

Hoshin strongly involves senior management and it would be unthinkable implementation without a strong commitment from it.

The initial considerations in the Hoshin Kanri approach to business system change are as follows: [14]

- defining processes that make up the system, and their activities, goals, and metrics.
- understanding the environmental situation in which the business operates
- providing resources to perform activities to achieve business objectives.
- measuring the business system as a whole.
- setting core objectives of the business.

V. The Principles of Hoshin Kanri

The principles of Hoshin Kanri can be summarized as follows :[15]

- objectives aligned all over the institution to accomplish common goals;
- each and every one in the institution is responsible for the process of recurring review mechanism, emphasis on corrective action;
- prevalent understanding of TQM and the PDCA cycle;
- catchball between different levels of institution;
- emphasis on a few number of advanced items;
- active, flexible, and endlessly improvement.
- goals are contingent on customer needs;
- concentration on processes, not results;
- profound analysis of previous stage;
- top-down and bottom-up planning;
- means deployed with targets;
- based on day-to-day control;
- bringing about the results;

VI. - Hoshin Kanri Method of Strategic Planning.

"Hoshin [Kanri] helps to control the direction of the institution by orchestrating change within an institution. this system includes tools for continuous improvement, breakthroughs, and implementation. The key to Hoshin [Kanri] is that it brings the total institution into the strategic planning process, both top-down and bottom-up. It ensures the direction, goals, and objectives of the institution which are rationally developed, well defined, clearly communicated, monitored, and adapted based on feedback system."[16]

In current use, Hoshin Kanri, used interchangeably with hoshin planning, refers to the process through which:[17]

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[14] Watson, G. H. (2005) op. cit., p.2.

[15] Lee, R.G. and Dale B.G. (1998), Op-Cit, P520-540.

[16] Ahmed, H. O. K. (2016). A Proposed Systematic Framework for Applying Hoshin Kanri Strategic Planning Methodology in Educational Institutions. European Scientific Journal, 12(16), p167.

[17] Available at: https://www.isixsigma.com/methodology/hoshin-kanri/hoshin-planning-making-strategic-plan-work/, Retrieved on 23-12-2016.

1) top management identifies a compelling business situation (need or opportunity), that is linked to the company's three-to-five-year strategic plan and vision.
2) a strategically important annual "stretch" objective to meet the need is identified.
3) plans are developed to achieve the objective.
4) monitoring processes are established and used to ensure that planned actions are accomplished and, if necessary, available to modify the plan.
5) metrics are used to assess progress and to determine if the objective has been achieved.
6) year-over-year lessons learned are used to continually improve the hoshin planning
7) process and to further develop employee skills.

The initial steps of Hoshin planning look a lot like any strategic planning process. Executive teams gather data on current performance and identify current and future customers and their needs. Strengths, weaknesses, opportunities, and threats are analyzed. The mission and vision are reviewed and refined, and attention is given to make sure the organization's measures of success are still relevant.

Hoshin-style strategic planning then departs from standard planning in four important ways: the degree of focus, the involvement of all levels of the organization, the use of planning and process improvement tools, and the rigor of the reviews.[18]

VII.   What is different about Hoshin Kanri?

Hoshin Kanri management has its unique features which greatly differentiates it from the typical management systems. Hoshin Kanri management aims at making the whole institution to work in the same direction through vertical and horizontal alignment of the objectives, targets, and means. In addition, Hoshin Kanri transfers the focus on the management from the results to the processes.[19]

Six things are unique about the hoshin planning process and need to be thoroughly understood and used for success. They are: [20]

1) the plan flows from two sources, an annual "state of the business" review and the hoshin objective. The annual "state of the business" review is conducted by the most senior leaders of the organization. In this review, data about the external and internal environments are examined in light of their impact on the three-to-five-year strategic plan.
2) the Hoshin plan is composed of a series of hierarchical objectives that are derived from a series of multiple ends/means analyses.
3) use "catch ball" to help develop the cascade of subordinate objectives.
4) Catch ball describes a communication process in which parties engage in a series of information exchanges about the means for achieving a particular objective. The purpose for the exchange is to build consensus around the best approach for achieving an objective. Catch ball is based on the belief that the best approach will evolve from the back and forth exchange of information between the person who is responsible for achieving the objective and the persons who will be most influential in achieving it. The secondary benefit from

[18] Boisvert, L. (2012). Strategic Planning Using Hoshin Kanri. Executive White Paper Series, P3.
[19] Ahmed, H. O. K. (2016). Op. Cit., p.163.
[20] Available at: https://www.isixsigma.com/members/bob-page/, Retrieved on 23-12-2016.

using catch ball is a higher degree of commitment to achieve the objective.. The catch-ball process includes four activities:

- *Building alignment through linked cascade of means.*
- Setting business performance targets and objectives.
- Cascading business objectives to the workplace ('gemba').
- Achieving alignment of improvement and effective resource allocation.

5) communicate the plan to everyone who will be involved. A special effort should be made to communicate with persons on whom the success of the plan depends and people who will be implementing the plan and working on its various objectives and tactics. Plan to communicate as a continuing activity to keep everyone involved and up to date on any changes to the plan.

6) monitor the plan as part of regular management meetings and be prepared to act when the plan shows signs of going off track. Some activities may require weekly or even daily monitoring.

7) hold monthly, quarterly and annual review meetings to keep the senior leadership informed on progress, to resolve issues that may require intervention, to ensure the planned activities are occurring as planned, to do root cause analysis and take corrective actions when necessary.

These elements are consistently shown to be major factors that differentiate success from failure with hoshin planning. They seem simple, obvious and have common sense. In reality, they are often taken for granted and therefore overlooked with predictable and unfortunate results.

VIII.   8- Implementing Hoshin Kanri

One way to understand Hoshin Kanri is to follow a typical set of implementation steps.[21]

step one : create a strategic plan: Hoshin Kanri starts with a strategic plan (e.g. an annual plan) that is developed by top management to further the long range goals of the company. This plan should be carefully crafted to address a small number of critical issues. Key items to consider when developing the strategic plan are:

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[21] Hoshin Kanri, Available at: - http://www.leanproduction.com/hoshin-kanri.html /, Retrieved on 23-12-2016.

-focus on five: focus on five goals (or less). The mere act of writing down goals can create a (false) feeling of progress and more goals feel like more progress. In reality, a goal only expresses intent and taking action is the hard part. Every company has finite resources and energy and a limited attention span. focusing on a small number of goals makes success far more likely than dissipating energy across dozens of goals, or looking at it in another way. If everything is important; nothing is important**.**

- effectiveness first: there is a well-known distinction between efficiency and effectiveness: efficiency is doing things right while effectiveness is doing the right things. Strategic goals need to be effective doing the right things to take the company to the next level. If a goal doesn't have that kind of broad impact it's probably not strategic.

- **evolution vs. revolution**: goals can be evolutionary (incremental goals usually achieved through continuous improvement) or revolutionary (breakthrough changes with dramatic scope). Both are legitimate and important forms of improvement**.**

- top down consensus: top management is responsible for developing the strategic plan and it is one of their most important responsibilities. Taking time to consult with middle management serves two useful purposes:

- it provides additional perspective and feedback that helps craft stronger and more informed strategies.
- it creates a sense of shared responsibility for the plan and significantly more buy-in from middle management.

- careful kpis: key performance indicators (kpis) provide the means for tracking progress towards goals. They also have a considerable ability to drive behavior. So, choose kpis with care. It is essential to think through whether the selected kpis will drive the desired behavior without unintended side effects. For example, more than one company has found that a single-minded pursuit of efficiency can lead to unintended consequences such as excess inventory (larger batches means less changeovers) and reduced quality (a subtle "fix it later" pressure creeps in to keep lines running).

-own the goal: every goal should have an owner, a facilitator and coach who has the skills and authority to successfully see the goal through to conclusion.

- as a facilitator, the goal owner will remove roadblocks and smooth the path to progress
- as a coach, the goal owner will track progress and intercede if things get off track

1) step two: develop tactics: at a departmental level, mid-level managers develop tactics that will best achieve the goals as laid out by top management. one of the most important aspects of this process is "catch ball". A back and forth exchange with top management to ensure that the strategy and goals are well understood. Also there is strong alignment between strategy and tactics, and that the kpis are meaningful and appropriate**.**

2) step three – take action: at the plant floor level, supervisors and team leaders work out the operational details to implement the tactics as laid out by mid-level managers. Once again, the principle of catch ball applies to ensure that activities at the plant floor (and other areas of the company) are strongly aligned with tactics and strategy**.**

3) step four – review and adjust: so far the steps have focused on cascading strategic goals down through levels of the company; from top management all the way down to the plant floor. Equally important is the flow of information in the other direction – information about progress and results. It is this second flow that creates a closed loop system – enabling control and adjustment of the entire process.

IX.   Conclusion

It is noteworthy that policy management is a good approach for building strategy into daily management on an organization-wide basis.

Hoshin Kanri approach aims to ensure that insight and vision are not forgotten and ignored as soon as planning activities are over. It aims to guarantee that planning documents, once finalized, are kept alive and daily acted, and not shelved as soon as they have been completed. It also aims at preventing the daily quota of fire-fighting, unplanned 'strategic' meetings and quarterly bottom-line pressures taking precedence over the really strategic plans. In the Hoshin Kanri environment, short-term activities are determined and managed by the plans themselves. There is a continual process of checking to make sure that what is done each day reflects the intentions, the targets, and the vision the company has agreed to pursue. Both planning and deployment are critical features of Hoshin Kanri and the term policy deployment.

Indeed, Hoshin Kanri provides an opportunity to improve performance continuously by disseminating and deploying the vision, direction, targets, and plans of corporate management to top management and to all employees so that people at all job levels can continually act on the plans, and evaluate, study, and feedback results as a part of a continuous improvement process.

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