

Policy deployment: an examination of the theory

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Introduction

An increasing number of organisations, as part of a strategic planning approach to continuous improvement, are starting to use policy deployment. In Western organisations the interest in policy deployment has primarily been generated by the use of self-assessment against a recognised model for business excellence such as the European Foundation for Quality Management (EFQM) Model and Malcolm Baldrige National Quality Award (MBNQA). It has been found that policy deployment based on the Japanese *hoshin kanri* concept is a good method of engaging all employees in the business planning process, focusing an organisation on the vital few objectives to achieve business results and providing an effective means to track progress against the set objectives.

In the late 1980s the concept of policy deployment was little known outside of Japan. Dale recalls leading Japanese TQM study missions of European executives and management consultants to leading exponents of TQM in Japanese manufacturing industry in 1988 and 1989 and, it was clear, that when the concept of policy deployment was introduced by the Japanese host organisation, this was something new to the study mission participants. This prompted Dale (1990) to write an introductory piece on the concept, which proved to be one of the first published papers in the West on the subject of policy deployment.

As part of a research study into the application of policy deployment in a "world class" organisation a literature survey of the English language papers on the topic has been carried out. The main purpose was to uncover published literature on policy deployment definition and concept, why it is used, what it is and what it is not, and the main models and processes. Fortunately policy deployment is treated as a discrete topic by those who have written on the subject. Hence it was possible to gain access to most of what has been published without having to search literature relating to specific products and industry.

Unlike aspects such as quality management systems and statistical process control, little academic effort appears to have been expended on the use of policy deployment to achieve quality improvement and business results. A search of the ABI/INFORM database (1986-1991 and 1992-1997) reveals only nine and ten articles respectively on policy deployment. However, it should be said that it features as a topic in text such as Imai (1986) and Juran (1964); there is a view from the writings of Juran that he was one of the contributors to the development of policy deployment. While this cannot be considered a comprehensive search of the literature, it is indicative of the scarcity of material

on the topic. One reason for this is that people use different words for the same concept in the translation from Japanese into English and a search of “management by policy” may have revealed more papers. Another possible reason for the neglect may be the result of the late 1980s/early 1990s focus by academics with engineering backgrounds on the “hard” systems, tools and techniques of TQM and the ISO 9000 series of quality management systems. Policy deployment may appear as a “softer” management/HRM issue but it involves a definite process. This view is supported by Calingo (1996) who suggests:

The bodies of knowledge of strategy formulation and TQM have been dominated by contributions from different disciplines – business policy and industrial engineering/production management, respectively. As a result, the management literature has treated strategy formulation and TQM as distinct, separate organisational processes.

This paper presents the main findings from the literature search and provides guidance on the most authoritative reading on the subject. In doing this it gives pointers to those researchers who may be interested in taking the subject of policy deployment further.

Background

In the pursuit of strategic quality management, managers require a system to: develop policy, communicate, allocate resources, focus and align actions, and control corporate drift. Although there are many ways in which to plan (e.g. formal strategic planning, issue-based planning, and strategic assumption analysis and dialectic inquiry), they are all fraught with difficulties and often charged with *naïveté*, bureaucracy, short-termism and failure to adapt to changes. Much has been published about strategic planning, most notably by Ansoff (1969), Juran (1964), Mintzberg (1994) and Porter (1996). However, *hoshin kanri* or policy deployment, which is used by many major corporations such as Hewlett-Packard (Whiting, 1990), NEC Japan (Smith, 1994), Procter and Gamble (Zairi, 1994) and Xerox (Leo, 1996), has been little discussed. Moreover, this method which, until recent times, has been neglected by organisations outside of Japan, offers an alternative which may, in the right circumstances, overcome the common problems associated with strategic and business planning.

According to Newcomb (1989) policy deployment “helps create cohesiveness within a business that is understood throughout the company; it provides a structure with which to identify clear organisational goals”. Van der Wiele *et al.* (1996) say “In recent times policy deployment has been a topic in which organisations have shown an increasing interest, but it is still not a well known technique in many companies”.

According to GOAL/QPC policy deployment is fundamental to TQM. Witcher and Butterworth (1997) agree with this when they say “What makes *hoshin kanri* different from other strategy formulation and implementation methodologies is the application of total quality management”. Although they

more naïvely refer to it as “a particular type of TQM” they do emphasise its plan-do-check-act (PDCA) nature and that it begins with the check cycle (so it becomes CAPD). Calingo (1996) places an organisation that has started to use policy deployment at Stage IV (management by policy) in a five-stage model for the integration of strategy formulation and TQM – Stage 1 annual budgeting, Stage 2 long-range planning, Stage 3 strategic quality planning, Stage 4 management by policy and Stage 5 strategic quality management. At Stage V, strategic quality management, Calingo includes national quality award winners, where “strategic planning and quality planning have merged into one seamless process”.

In the authors’ opinion policy deployment is the way to align all efforts in the company towards its major goals. It connects TQM to the strategic planning process and is fundamental to the success of TQM.

Definition

Hoshin kanri was developed in Japan in the early 1960s to communicate a company’s policy, goals and objectives throughout its hierarchy; its main benefit is to focus attention on key activities for success. A literal translation of *hoshin kanri* provides an insight into its concept (*Total Quality Engineering*, 1997):

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

Kanri = management control, care for;

Together = “management control of the company’s focus”.

Another definition from the Center for Quality Management (1997):

Shiny metal – the glint from the spear of a forward guide that leads the way.

The popular term “policy deployment” is often used interchangeably with *hoshin kanri* and while the English translation of *hoshin kanri* into policy deployment does not do the concept justice, it is sufficiently succinct to deliver the message and, as such, is used liberally throughout this paper as a synonym. While the foregoing literal translation is useful as an insight, there are a number of widely varying definitions of *hoshin*, *hoshin kanri* and policy deployment which expand the concept. Watson (1991) simply says:

Perhaps the most accurate term for *hoshin kanri* would be target-means deployment.

Total Quality Engineering (1997) say *hoshin kanri* is:

a system of forms and rules that encourage employees to analyse situations, create plans for improvement, conduct performance checks, and take appropriate action.

While *Integrated Quality Dynamics* (1997) define *hoshin* as:

a one-year plan for achieving objectives developed in conjunction with management’s choice of specific targets and means in quality, cost, delivery, and morale.

or in “catch-phrase” form

Hoshin = target + means

While these definitions offer variations on the themes of plans, targets and means, the most comprehensive and more “encompassing” definition, and one that emphasises the importance of the PDCA cycle and feedback, is that of Mizunode given in Eureka and Ryan (1990):

Deploy and share the direction, goals, and approaches of corporate management from top management to employees, and for each unit of the organisation to conduct work according to the plan. Then, evaluate, investigate and feed back the results, or go through the cycle of PDCA continuously and attempt to continuously improve the performance of the organisation.

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.

History

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 quality policy and assure that everyone understood and supported it. Management saw the company’s planning process as the vehicle for them to fulfil their responsibility for quality management” (*Total Quality Engineering*, 1997). At about the same time, the concepts of management by objectives (MBO) were translated into Japanese and these, combined with Deming and Juran’s ideas were blended into the Japanese’s first attempts at strategic quality planning. In 1957, Ishikawa published a paper stressing the importance of management and operational policies; and in 1960, Juran returned to Japan, to emphasise management responsibility for setting goals and planning for improvement.

Throughout the 1960s Japanese planning activities continued to improve as MBO rapidly gained favour. In 1962, the Bridgestone Tire Company conceived its idea of systemizing *hoshin kanri* (Akao, 1991; Kondo, 1997); the company visited the Deming application prize winners and, in 1965, published a report which described the best practices and put forward ideas to resolve the perceived problems of policy deployment. By 1975 *hoshin kanri* was widely accepted in Japan; it proved effective in motivating employees and uniting them in improvement processes as Japanese companies moved to increase “their overall strength and character” (Kondo, 1997). By the mid-1980s *hoshin kanri* began its journey across the Pacific Ocean using the medium of Deming application prize winning Japanese subsidiaries such as Hewlett-Packard’s YHP Division and Fuji-Xerox. MBNQA and European Quality Award winning companies started to use policy deployment successfully in the early 1990s to

link medium- to long-term policy to annual plans to achieve significant improvements in business results; however, the concept still appears to remain under-valued, under-utilised, and under-researched.

Why policy deployment?

Babich (1995) says strategic planning is considered by many organisations as a necessary business tool but after considerable effort and much budgetary commitment, the strategic plan is filed and never used. He suggests five main reasons why strategic plans fail:

- (1) daily management not distinct from breakthrough objectives,
- (2) vague mission/value and weak organisation linkage,
- (3) vague vision/strategic intent and weak organisational linkage,
- (4) lack of data analysis during plan creation,
- (5) lack of periodic review and process improvement.

Gilmore and Camillus (1996) say the usefulness of conventional planning systems are doubtful because:

- they focus too much on content and not enough on process – finding solutions to perceived problems, rather than defining how organisation should recognise them and then approach the complex and significant issues,
- they seek to apply existing solutions learned from different contexts to the situation at hand, ignoring the differences that make such solutions of questionable relevance, and
- they disregard the intrinsically unique, intransigent, wicked character of strategic issues.

Policy deployment offers a planning process which can respond to and resolve these issues, and ensure that the policy and the plan remain alive and vibrant. For instance, Newcomb (1989) says management by policy deployment is characterised by:

- the purpose of the organisation,
- the principles that guide actions,
- a vision of where the firm is going,
- the objectives that move the firm toward its vision,
- the priorities assigned to the objectives,
- an action plan in which everyone participates.

This characterisation highlights the higher level items of corporate missions and visions but it fails to capture the spirit of the cascade and catchball process which is inherent in *hoshin kanri*. A more balanced menu of what policy deployment can bring to strategic planning is provided by the Goal/QPC

Research Committee (1994) who propose the following key elements in the policy deployment process:

- a planning and implementation process that is continuously improved throughout the year using a PDCA cycle,
- focus on key systems that need to be improved to achieve strategic objectives,
- participation and co-ordination by all levels and departments as appropriate in the planning, development, and deployment of yearly objectives and means,
- planning and execution based on facts, and
- goals and action plans that cascade through the organisation based on the true capability of the organisation.

The goal/QPC research committee elements emphasise the importance of PDCA, focus, and participation which are essential to successful employee buy-in and implementation. As further confirmation that *hoshin kanri* can deliver results where other planning methods do not, Mulligan *et al.* (1996) put forward a comparison of several popular planning methods (reproduced in Table I) and suggest that each planning method is useful in the proper circumstances and may even be used in harmony in the same organisation. They believe the choice of method depends on what question managers are asking. If they are asking: "Now that I have it (policy/plan/objectives), what should I do with it? How do I do it? How well am I doing it?" they should use *hoshin* planning. What this suggestion fails to promote is that policy deployment is not just a one-year process but that it can be used successfully to develop the higher level, medium/long-term objectives through its catchball process. Feedback from employees and facts from a self-assessment against a recognised model for business excellence are key elements of policy deployment and should not be ignored in the establishment and review of the longer range planning goals. Policy deployment can be used to answer questions such as "Where do we want to go?"

Additionally, at first glance, policy deployment looks very similar to MBO; and, as Akao (1991) and Fortuna and Vaziri (1992) highlight, *hoshin kanri* was initiated by the emergence of MBO in Japan. But, although there are some similarities, there are more significant differences, Eureka and Ryan (1990) refer to *hoshin kanri* as MBO done correctly. From the work of Akao (1991) and Fortuna and Vaziri (1992) a compilation of their views reveals the similarities and differences between policy deployment and MBO (Table II).

The effective deployment of business objectives is not solely the province of policy deployment. Bititci *et al.* (1997) state that Carrie and Macintosh's (1992) research identified "the need for effective deployment of business objectives down through the organisation and the subsequent measurements of performance in critical areas as key elements of sustainable competitive growth". The performance management process is described by Bititci *et al.* (1997) "as

	<i>Hashin</i>	Planning methods		
		Issue-based	Formal strategic	SAA-dialectic inquiry
Why?	To see break-through achievement and continuous improvement	Change initiation	Portfolio management, perpetuate status quo	Challenges status quo or potential change
When?	Rottenest and ongoing, periodic review	Sporadic, as needed	Annual or bi-annual	Planned, as needed
Who initiates?	Hierarchically stratified participation of whole organisation	Initiated by an individual, grows to a coalition through selling	Planning group "presents" to senior management for ultimate organisational deployment	Initiated by senior management with possible planning group participation
Who's involved?	Senior management, middle management, and implementation teams	Active (dominant or emerging) coalitions	Functional organisation	Conducted by facilitator and two or more groups
How?	Stepwise process; PDCA driven	Interactive process of seeing, screening, signing-up and signaling	Formal procedures	Structured process; unstructured data
Where?	Pervasive through organisation at the "shopfloor" level	Covert initially, only visible to coalition; growing visibility	Detached function	Detached, retreat like atmosphere
What?	Initiative focused, communication based	Issue focused learning and building case/energy for change	Budgeting focused analysis	Devil's advocacy, mental/quasi game theoretic

Table I.
Summary of planning methods

Source: Mulligan *et al.*, 1996

how a company manages its performance in relation to its corporate and functional objectives and strategies." They go on to say that:

At the heart of the performance management process, there is an information system which enable the closed loop deployment and feedback system.

It is claimed that this closed loop system (Figure 1) performs the same function as catchball in policy deployment. However, this depends on how and when feedback is created and for what purposes. Furthermore Figure 1 does not give a good impression of the catchball process.

Similarities	Differences
Self-determination of goals	Policy deployment focuses on a general improvement plan for the organisation not on an individual's performance
Attainment of goals	
Setting continuously higher goals	Policy deployment ensures an individual's goals are congruent with the company objectives
Improvement in performance	
Self-evaluation of results	Policy deployment encourages employee participation in objective setting rather than acquiesce to a superior's bidding and direction
Implementation of co-ordination, discussion, and exchange of ideas	Policy deployment focuses on timely and relevant feedback, not an annual or bi-annual review of progress
Inducement of creativity and morale improvement	Policy deployment focuses on the process of getting there, how the objectives will be met and what actions an individual must take
	Policy deployment emphasises process and quality tools and techniques to solve problems
	Policy deployment encourages the formulation of management items
	Policy deployment encourages the establishment and implementation of TQM
	Policy deployment emphasises customer focus and quality of products and services

Table II.
Main similarities and differences between policy deployment and MBO



Source: Bititci *et al.*, 1997

Figure 1.
The closed loop deployment and feedback system for the performance management process

Yet, despite Bititci *et al.* (1997) stating that the objectives of deployment are to ensure that:

- performance measures used at various levels of the organisation reflect the business objectives and policies;
- deployment is consistent through the hierarchy of the organisation; and
- deployment is relevant and correct with respect to the impact and influence of individual business areas (i.e. processes, functions and activities);

they do not say how this should be achieved. Nevertheless, they do provide a reference model for an integrated performance measurement system (based on Beer's (1979) viable systems model) and "an audit method designed to assess the integrity and relevance of the performance measurement system used in an organisation." Unfortunately, they do not identify the importance of the PDCA cycle, the requirement for top management leadership and self-assessment which are key to the success of policy deployment.

What is policy deployment?

Kendrick (1988) provides one of the earliest articles on policy deployment discussing how it was used by the Florida Power & Light Company to reshape the corporate objective-setting process to conform to customers' needs. However, perhaps the first article to thoroughly summarise the Japanese approach to policy deployment was produced by Dale (1990) following a number of missions to study Japanese total quality control (TQC). He said "policy deployment within a process of long-term planning is one of the features of 'the approach' to TQC by Japanese companies". He described the deployment of the presidents annual management policy plan through the organisational hierarchy. It was a process of developing plans, targets, controls and areas for improvement based on the previous level's policy and an assessment of the previous year's performance. The plans and targets are discussed and debated at each level until a consensus on plans and targets is reached, along with the methods for meeting the goal – he called this "play catch" but it is now more commonly known as "catchball". He went on to say that once agreement has been reached at all levels, in a strictly controlled six-to-eight week policy deployment period, individual, plans, targets, control points, improvement areas and corrective actions are recorded and, perhaps more importantly, predominantly displayed around the workplace. Control of the deployment process and subsequent implementation of the policies is conducted through quarterly, monthly, weekly and daily reviews depending on the level of the individual involved.

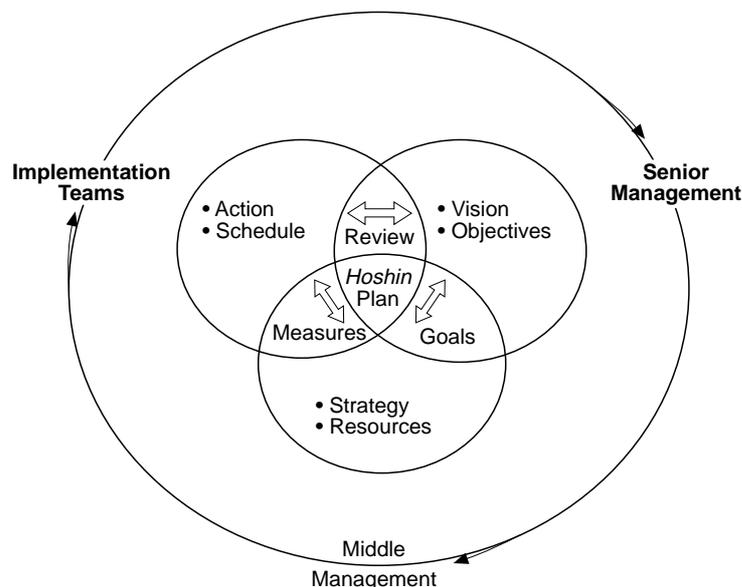
Dale (1990) says that the PDCA cycle "is extensively used in these diagnoses" and that "the discipline of policy deployment and agreement at each level" ensures everyone is working in the same direction. He concludes that "there is little doubt that the policy deployment method can assist an organisation to

attain its corporate goals". He suggests it ensures improvement activities are integrated in corporate objectives and that it can resolve conflicts in time, resource and initiative conflicts.

The concept of policy deployment as providing a bridge between the corporate "plan" and the "do" steps in continuous improvement is re-emphasised by Robinson (1994) who says that at Harris Semiconductor (USA), the process:

embraces the concept of empowerment as a balance between alignment of activities to the goals and the freedom people have to take action. The ultimate purpose of this process is to empower people to make meaningful improvements.

Akao (1991) provides a *hoshin* model, Figure 2, which shows the general policy deployment movement from senior management to middle management to implementation teams, where the two-way arrows represent catchball used to agree goals, measures and review. Akao (1991) says senior management establishes the "what" in terms of vision and objectives; middle management negotiate with senior management in terms of goals and resources – negotiating the "how" – and then they negotiate with the implementation teams in terms of performance measures. The implementation teams are empowered to manage the action and schedule their activities. Finally, the senior management use the review process to understand the progress and success of the implementation teams.



Source: Akao, 1991

Figure 2.
Hoshin model

More recently, Kondo (1997) described *hoshin kanri* as “a system of management in which the annual policy set by a company is passed down through the organisation and implemented across all departments and functions”. There are a number of elements in this paper which are key to the Japanese approach and support Dale’s (1990) description of the process, and which are overlooked or underplayed by some writers on the subject. Several of Kondo’s key points are:

- policy deployment is effective in motivating employees,
- the aim of the process is “give and take”,
- for a top-down approach to work senior managers have to be highly respected,
- results are checked by means of individual managers’ control items,
- the process is an important strategy for allowing top managers to exercise leadership,
- policy is not determined only by short-term considerations,
- top management must “lead the way in whipping up everyone’s energy and enthusiasm”,
- the purpose of the internal top management audit is to find and solve problems, discover and build on strengths, and standardise and institutionalise improvements,
- if management audits are carried out in the wrong way, there is a danger they will become superficial and ritualistic, and
- it is important for top managers to talk directly to ordinary workers.

The most important policy deployment concepts to be drawn from the writings of Dale (1990) and Kondo (1997) are:

- leadership,
- communication,
- control, and
- review.

However, despite the defined process and benefits to be gained from effective policy deployment, even in Japanese companies there appear to be some fundamental problems with applying the system. Kogure (1995) defines them as: ambiguity of relations between goal and policy and the lack of fit of content of management policy between superiors and subordinates on matters pertaining to ratio of abstractness and concreteness.

Essentially, in the first case, Kogure (1995) describes the problems with Japanese companies distinguishing between policies and goals, the order they are issued in and how they relate to each other. In the second case, he discusses how there is an imbalance between content of policy and level of its issuer – the

higher the policy issuer the more abstract the policy should be and the less concrete, and that it is the role of the subordinate to develop plans and not policy. Kogure (1995) describes four patterns where:

- (1) Management policies of superior and subordinates are both abstract and deployment of policy is carried out only perfunctorily.
- (2) Content of superior manager's policy is too concrete.
- (3) A gap between the superior manager's policy and the subordinates manager's policy is conspicuous because the former is too abstract and the latter is too concrete.
- (4) The matching subordinate manager's policy to the superior manager's policy is very appropriate and policies are deployed properly from top to bottom."

Pattern 4 is where true policy deployment occurs; however, as Kogure (1995) states patterns 1, 2, and 3, and especially pattern 1:

Frequently appear at the beginning stage of introducing TQC; however, sometimes these patterns still remain even in advanced TQC applying companies, because employee in these companies have no full knowledge of how to balance abstractness and concreteness when deploying policy.

What policy deployment is not

Hoshin kanri is not a solution to all planning problems but a process which enables managers to plan effectively and translate those plans into actions. Furthermore, although *Integrated Quality Dynamics* (1997) considers the description of *hoshin kanri* as policy deployment as "not the best translation", (they describe *hoshin* as a one-year plan with targets and means and that *hoshin* management is not only "deployment"), their "myths" are worth repeating:

Hoshin myths:

- *Hoshin* is part of quality function deployment (QFD),
- *Hoshin* is only for the top management of an organisation,
- *Hoshin* is the corporate policy,
- *Hoshin* is following the direction of the shining needle.

Hoshin management myths:

- *Hoshin* management is part of QFD,
- *Hoshin* management works successfully only in Japanese organisations,
- *Hoshin* management is strategic planning,
- *Hoshin* management can be implemented without any other TQM methods and systems,
- The key to successful *hoshin* management is deployment of targets,
- When implementing *hoshin* management the start point is to determine the corporate vision.

Despite *Integrated Quality Dynamics'* disagreement with the broad definition of *hoshin kanri* used here, their "myths" do offer valid insights to misconceptions perpetuated by some writers on the subject. Policy deployment is not just about corporate philosophy and management jargon but it provides a positive process which engages all employees in the cycle of planning, implementing, and reviewing policy. Perhaps, however, there is one important myth that is missing from *Integrated Quality Dynamics'* list:

- *Hoshin* management absolves managers of their leadership responsibilities.

In terms of this, the authors believe that policy deployment is not:

- an excuse to pay lip service to employee feedback during the catchball process,
- an opportunity for "empowered" employees to take decisions without adequate direction, support, checks and balances, or
- a permit for managers to abdicate their responsibility for the plan and the results.

The policy deployment process

Policy deployment works on two levels to manage continuous improvement and achieve business results: strategic objectives and daily control of the business.

Duarte (1993) presents a four-step policy deployment process:

- (1) prepare the organisation to create policies that will change the way it does business,
- (2) create the plan, using input from key customers and managers from the organisation's key activities,
- (3) deploy the policies through a schedule of regular updates and follow up and by committing resources to ensure accomplishment of the goals and objectives, and
- (4) revisit the first three steps during the annual review to ensure continuous improvement of the process.

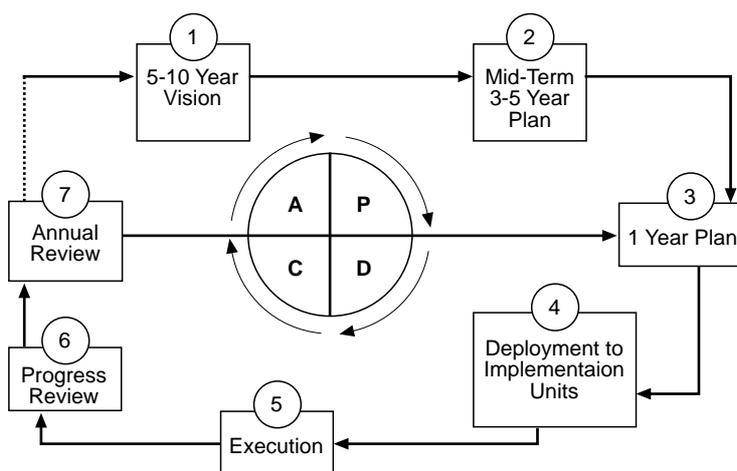
These simple steps belie the complexity of the real process and fails to emphasise that the daily control of activities is the foundation of policy deployment, pinpointing performance strengths and weaknesses. Akao (1991) provides an involved flowcharted "basic concept" of *hoshin kanri* which is similar to the one provided by Dale (1990). As a more simple illustration, Calingo (1996) presented a pictorial *hoshin* planning cycle (Figure 3); however, for a more complete and perhaps simple illustration Goal/QPC Research (1996) have produced a seven-step model. As can be seen in Figure 4, they focus on the PDCA cycle and show how the monthly and annual reviews are linked to the following year's annual plan, furthermore, a dotted line is also linked to the process of reviewing and revising the longer-term objectives.

While the Goal/QPC Research (1996) model is a good representation of the policy deployment cycle it fails, perhaps due to over-simplification, to highlight the important catchball/feedback process; the single direction arrows between each step and most importantly between steps 3-5, do not adequately reflect the processes involved. Nevertheless, it does provide a framework with which to describe the policy deployment process in more detail.



Source: Calingo, 1996

Figure 3.
The hoshin planning cycle



Source: Goal/QPC Research, 1996

Figure 4.
Hoshin planning

Five-ten year vision

A challenging, customer-focused vision, pertinent to people at all levels and appropriate for the next five to ten years is required. According to the Goal/QPC Research Committee (1994) a draft of the vision should be given to the organisation for a reality check and then communicated to everyone at all levels. Unfortunately, this is easier said than done, as visions are generally created at top management level and any reality check is likely to receive middle management filtering of employee comments to prevent unfavourable views reaching top management (i.e. the "sponge" effect). The most effective way of overcoming this problem is to gather accurate information on the company, its customers, competitors and market and then hold workshops between top management strategists and employees without the middle management interference (i.e. play catchball without middle management). However, this method needs to be treated with caution because it is not usually a good approach to ignore middle managers.

Mid-term three- to five-year objectives

Translating the vision into mid-term objectives, together with the broad means to achieve them is the next step. Wood and Munshi (1991) suggest that the objectives should be prioritised and from this the critical ones are selected with a focus on a small number (maximum three) of breakthrough objectives. Then, determine the means by which the objectives will be achieved and cascade the objective and means through a catchball discussion. The process of catchball provides the opportunity to ensure commitment to objectives at each hierarchical level and produces an organisation which is focused and committed to the same goals. However, these medium goals, as extensions of past performances, are of little value without analysis of critical problems, current practices and changes inside and outside the company. Mulligan *et al.* (1996) say a holistic perspective is required, including:

- business objectives;
- environmental conditions;
- resources constraints; and
- definitions of core business processes.

Annual plan and objectives

Annual, short-term objectives are determined from the mid-term goals and the annual plans should be actionable and specific. This one-year plan includes targets, means and measures that each manager will work on during that year. Goal/QPC Research (1996) say it is necessary to choose a small number of target areas on which to focus (six to eight maximum) and half of these should be related to the manager's participation in the strategic plan and the other half to the critical process of the person's regular job. However, Mulligan *et al.* (1996) suggests that departments should have only three or four goals, so line

management can have the appropriate level of focus and resources assigned. Nevertheless, regardless of the number of objectives, all must be measurable with monthly numerical targets and the reasons for selection must be compelling and obvious (Watson, 1991). Furthermore, they should be owned by the organisation through the process of catchball. Moreover, the plan, objectives, and targets should not be constrained at management level, but cascaded down to each individual team or employee.

Deployment/roll down to departments

Clear, disciplined action plans with direction for improvement, what is to be measured, and the processes to be improved are generated through a continuous catchball between all levels and around chosen targets. Corporate and division/department planning cycles should be synchronised and annual plans should present a prioritised set of actionable tasks, designed to achieve breakthrough in critical areas (Wood and Munshi, 1991). A significant aspect of policy deployment is the extent to which the targets and means initiated at the top level are extensively modified through negotiation by the creativity of the lower levels through bottom-up feedback. This involvement of everyone results in full ownership and understanding of the plan at all levels of the organisation. The goal of catchball is to prevent sub-optimisation and local optimisation may have to be forsaken for the optimisation of the interests of the company as a whole, even if this appears to rebuff the concept of “empowerment” which pervades modern companies. Ideally, policy deployment should be a shopfloor process, with no off-site management retreats and/or staff-level planning. Once the goals, objectives and plans have been agreed they should be openly displayed in the work area adjacent to the progress charts that are tracking achievement and targets. However, more recently, it has been recognised by the work carried out by Dale in Japanese companies located in the UK that too much information can be displayed in workplaces and one solution is that only specific, essential information is presented on the shopfloor visual displays and storyboards, with full back-up policy deployment details in files and folders located in close proximity.

Unfortunately, some authors (Calingo, 1996; Witcher and Butterworth, 1997) fail to emphasise the vital importance of the catchball phase, while other writers (e.g. Duarte, 1993; Mulligan *et al.*, 1996) still concentrate the critical catchball process on the management structure, appearing to stop at the lowest line manager, and they continue to perpetuate the dominant direction as top-down – which is not true *hoshin kanri*. However, Mulligan *et al.* (1996) do make a valid and astute observation:

The image of catch-ball involves a group of children passing a ball (idea) amongst themselves while standing in a circle.

They say that an alternative mnemonic “CRIP” embodies the concept more clearly. CRIP stands for catch, reflect, improve and then pass the idea. Preferably, no one should pass the idea on immediately on receipt without

improving it first. In this way they believe a consensus is achieved with maximum participation and minimal conflict. However, more importantly, it prevents “passing-the-buck” and combined with PDCA, it can be used throughout the process to monitor progress and continued relevance of objectives. Indeed, this whole cycle can become CAPD, when policy deployment begins with annual self-assessment and the monitoring cycle begins with the “check” step to ensure goals remain viable and appropriate (Akao, 1991).

Execution

The actionable tasks, following the deployment phase, should be taken up by teams and individuals, departmentally and cross-functionally, depending on the task. When using the cross-functional approach it is essential to determine the lead department to determine responsibility and supervision for the task. The team/individual should have a clear statement of target and means and follow a PDCA cycle, with periodic checks from senior management (Wood and Munshi, 1991).

Progress review (monthly and quarterly)

The progress reviews stress the importance of self-diagnosis of targets and process. Problems should be identified and corrective action implemented. Again the PDCA is built into the policy deployment process and regular checking will assure continuous improvement and reduce costs.

Annual review

Wood and Munshi (1991) suggest the review process focus on the following:

- achievements of the past year;
- lessons learned in the past year;
- the gap between goals and achievements in the past year;
- root cause analysis of the problems;
- environmental factors;
- future plans for the organisation.

This is similar to a process of self-assessment and forms the basis of policy deployment for the succeeding year, the check being undertaken at the start of the cycle. However, one important review should not be forgotten, the review of the policy deployment process itself, to learn from the mistakes made and improve it for the following year.

Mulligan *et al.* (1996) say that the most tangible aspects of policy deployment are the four sets of reports that support the organisation’s planning process:

Hoshin plan summary:

- articulated objectives,
- objective owners,

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- long- and short-term goals,
 - implementation strategy,
 - specific improvement focus.

Hoshin action plan:

- detailed links between core objectives and implementation initiatives.

Hoshin implementation plan:

- records progress as the plan is implemented,
- one plan for each objective,
- incorporates:
 - task ownership,
 - milestones and due dates.

Hoshin implementation review:

- charts post-implementation results relative to company goals,
- competitive benchmarks,
- accepted world-class benchmarks.

An example of how this relates to a specific business case is provided by Cross and Leonard (1994) who describe Rank Xerox's policy deployment process as:

- operating units present an annual performance assessment with root cause analysis of inhibitors and action lists to the company's senior team;
- the senior team determines the company's overall objectives for the coming year against the four business priorities;
- each director then agrees his vital few actions, which will contribute directly to achieving the company goals;
- these vital few are then cascaded down the organisation, with each level agreeing their own list of actions;
- at the end of the cascade all 28,000 employees have personal objectives which directly contribute to the achievement of Rank Xerox business priorities.

Cross and Leonard (1994) say "policy deployment is a diagnostic tool as well as a process for setting objectives. It is bottom-up as well as top-down. It has helped focus on the vital few rather the trivial many."

Summary

Hoshin kanri or policy deployment is simply PDCA applied to the planning and execution of a few critical strategic organisation objectives. It is an essential element of TQM and is slowly being acknowledged by authors such as Lascelles and Peacock (1996) and van der Wiele *et al.* (1996) as an essential

requirement integrated with self-assessment against a business excellence model. Policy deployment is best used by organisations that are some way down the TQM road; however, fundamental elements such as catchball can be used by less advanced companies to develop leadership and employee involvement, and lay the foundation for future use of the full policy deployment approach.

The principles of policy deployment can be summarised as:

- focus on processes, not results;
- founded on daily control;
- goals based on customer needs;
- thorough analysis of previous stage;
- top-down, bottom-up planning;
- catchball between layers of organisation;
- objectives aligned throughout the organisation to achieve common goals;
- all members of the organisation are responsible for the process leading to the results;
- focus on a small number of breakthrough items;
- widespread understanding of TQM and the PDCA cycle;
- means deployed with targets;
- regular review mechanism, focus on corrective action;
- dynamic, flexible, never ending improvement.

In terms of benefits, Hill (1994) says policy deployment:

- helps create cohesiveness within an organisation and provides a consensus of the company objectives at all levels;
- brings into focus a vision of the future of the organisation;
- integrates and orchestrates the efforts of all within an organisation into actions that move the entire organisation towards its objectives;
- creates and establishes process to execute breakthrough year after year;
- creates commitment to both the direction and implementation paths chosen;
- increases interdepartmental co-operation;
- draws on and reinforces the PDCA cycle in monthly progress reviews;
- creates a planning and implementation system that is responsive, flexible, yet disciplined;
- gives leadership a mechanism to understand the key problem areas in a company, and facilitate prioritisation;

- creates quicker and more accurate feedback loops and by means of the catchball process it provides optimum communication both between levels and departments concerned.

Mulligan *et al.* (1996) believes “a major strength of *hoshin* is its added dimension of adaptability that arises from the constant application of Deming’s PDCA methodology”. However, while knowledge and skill in the use of quality management tools and techniques is a prerequisite for policy deployment, perhaps the most important and most difficult aspect of policy deployment, due to the corporate culture required, for western managers is the “deployment” phase – catchball. It is essential that employees understand what targets should be achieved and how to do so. During the catchball process, it is necessary to reach a consensus for targets and means across functions and between varying levels of the organisation. Top managers are required to show leadership (Kondo, 1997) and communicate effectively throughout the process if they are to foster alignment and continuous improvement while maintaining sufficient levels of control. Finally, Gilmore and Camillus (1996) say:

The nature of strategic issues, especially in dynamic, complex environments, requires a fundamental change in how strategic planning is conducted. The focus of the exercise must shift from defining the solution for problems which are assumed to exist, to defining a process which is responsive to the wicked characteristics of the perceived issues, a process which is alive and changing as additional learning takes place, a process which is inclusive, cross-functional, cross-hierarchical, iterative and self-correcting.

References

- Akao, Y. (1991), *Hoshin Kanri: Policy Deployment for Successful TQM*, Productivity Press Inc., Cambridge, MA.
- Ansoff, I. (1969), *Corporate Strategy*, Penguin Books, Baltimore.
- Babich, P. (1995), “Why strategic planning efforts fail”, <http://www.tqe.com:80/planfail.html>
- Bear, S. (1979), *The Heart of Enterprise*, John Wiley & Sons, London.
- Bititci, U. S., Carrie, A.S. and McDevitt, L. (1997), “Integrated performance measurement systems: a development guide”, *International Journal of Operations & Production Management*, Vol. 17 No. 5, pp. 522-34.
- Calingo, L.M.R. (1996), “The evolution of strategic quality management”, *International Journal of Quality & Reliability Management*, Vol. 13 No. 9, pp. 19-37.
- Carrie, A.S. and Macintosh, R. (1992), “UK research in manufacturing systems integration”, *Integration in Production Management*, Pels and Worthman, Elsevier.
- Centre for Quality Management (1997), *Hoshin Planning Course Notes*, Cambridge, MA.
- Cross, R. and Leonard, P. (1994), “Benchmarking: a strategic and tactical perspectives” (Chapter 24), in Dale, B.G. (Ed.), *Managing Quality*, 2nd ed., Prentice-Hall, Hemel Hempstead.
- Dale, B.G. (1990), “Policy deployment”, *The TQM Magazine*, December, pp. 321-4.
- Duarte, J.E. (1993), “Policy deployment”, *CMA Magazine*, Vol. 67 No. 4, pp. 13-17.
- Eureka, W.E. and Ryan, N.E. (1990), *The Process-Driven Business: Managerial Perspectives on Policy Management*, ASI Press, Dearborn, USA.
- Fortuna, R.M. and Vaziri, K.H. (1992), “Orchestrating change: policy deployment”, *Total Quality: A Managers Guide for the 1990s*, The Ernst & Young Quality Improvement Consulting Company, Kogan Page, London.

- Gilmore, W.S. and Camillus, J.C. (1996), "Do your planning processes meet the reality test?", *Long Range Planning*, Vol. 29 No. 6, pp. 869-79.
- Goal/QPC Research (1996), "Hoshin planning", <http://www.goalqpc.com:80/RESEARCH/plan.html>
- Goal/QPC Research Committee (1994), "Hoshin planning: a planning system for implementing total quality management", in Costin, H.I. (Ed.), *Readings in Total Quality Management*, The Dryden Press.
- Hill, D. (1994), "Policy deployment (*Hoshin Kanri*) in Durham", *Philips Quality Matters*, ISS 56, Philip's Electronics, Eindhoven, The Netherlands, pp. 11-13.
- Imai, M. (1986), *Kaizen: The Key to Japan's Competitive Success*, Random House Business Division, New York, NY.
- Integrated Quality Dynamics* (1997), "TQM: Hoshin", <http://www.iqd.com:80/hoshin.htm>
- Juran, J.M. (1964), *Managerial Breakthrough*, McGraw-Hill, New York, NY.
- Kendrick, J.J. (1988), "Managing quality: lighting UP quality", *Quality*, Vol. 27 No. 6, pp. 16-20.
- Kogure, M. (1995), "Some fundamental problems on *Hoshin Kanri* in Japanese TQC", in Hromi, J.D. (Ed.), *The Best on Quality: Targets, Improvements, Systems*, Vol. 6, Chapter 23, ASQC Press, Milwaukee, pp. 323-34.
- Kondo, Y. (1997), "The *Hoshin Kanri* – Japanese way of strategic quality management", *Proceedings of 41st Congress of the European Organization for Quality*, Trondheim, Norway, June, Vol. 1, pp. 241-50.
- Lascelles, D. and Peacock, R. (1996), *Self-assessment for Business Excellence*, McGraw-Hill Book Company, Maidenhead.
- Leo, R.J. (1996), "Xerox 2000: from survival to opportunity", *Quality Progress*, Vol. 29 No. 3, pp. 65-71.
- Mintzberg, H. (1994), "Rethinking strategic planning part 1: pitfalls and fallacies", *Long Range Planning*, Vol. 27 No. 3, pp. 26-35.
- Mulligan, P., Hatten, K. and Miller, J. (1996), "From issue-based planning to Hoshin: different styles for different situations", *Long Range Planning*, Vol. 29 No. 4, pp. 473-84.
- Newcomb, J.E. (1989), "Management by policy deployment", *Quality*, Vol. 28 No. 1, pp. 29-30.
- Porter, M. (1996), "What is strategy?", *Harvard Business Review*, November-December, pp. 61-78.
- Robinson, R. (1994), "Goal deployment: getting everyone aiming at the same target", *Tapping the Network Journal*, Vol. 5 No. 3, pp. 8-11.
- Smith, S. (1994), *The Quality Revolution*, Management Books 2000 Ltd, Didcot.
- Total Quality Engineering* (1997), "Hoshin planning", <http://www.tqe.com:80/tqehelp/hoshin.html>
- van der Wiele, A., Williams, A.R.T., Dale, B.G., Carter, G., Kolb, F., Luzon, D.M., Schmidt, A. and Wallace, M. (1996), "Quality management self-assessment: an examination in European business", *Journal of General Management*, Vol. 22 No. 1, pp. 48-67.
- Watson, G. (1991), "Understanding *Hoshin Kanri*", in Akao, Y. (Ed.), *Hoshin Kanri: Policy Deployment for Successful TQM*, Productivity Press, Cambridge, MA.
- Whiting, R. (1990), "Commitment to quality: Hewlett-Packard educates from within", *Electronic Business*, Vol. 16 No. 19, pp. 113-14.
- Witcher, B.J. and Butterworth, R. (1997), "*Hoshin Kanri*: a preliminary overview", *Total Quality Management*, Vol. 8 Nos. 2 & 3, pp. 319-23.
- Wood, G.R. and Munshi, K.F. (1991), "*Hoshin Kanri*: a systematic approach to breakthrough improvement", *Total Quality Management*, Vol. 2 No. 3, pp. 213-26.
- Zairi, M. (1994), *Measuring Performance for Business Results*, Chapman & Hall, London.