ORCHESTRATION OF INTERNAL DEVELOPMENT INITIATIVES

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ABSTRACT

Empirical studies of 30 companies have revealed that the greatest difficulties in managing internal development initiatives were experienced in an area in-between major strategic initiatives and local initiatives carried out solely in organizational units (sections and departments). This middle group represents a grey area. First they may not appear sufficiently important to attract the top management attention for a longer period of time. Second, they require a joint effort of several sections, departments and functional areas. Third, it is difficult to specify goals and means.

The paper will focus on this middle group of internal development initiatives. First we shall introduce the notion of orchestration to capture some of the challenges for this area. Then, a classification of practices with respect to the major driving force will be introduced. The empirical studies also showed that shifts take place from one paradigm and functional area to another during internal development. This calls for a capability to quickly change mode of operations. Finally, implications will be spelled out, and a new approach will be proposed and discussed.

1. A MIDDLE GROUP OF INTERNAL DEVELOPMENT INITIATIVES

In a company, activities directly related to customers, such as customer orders and product development, usually attract managerial attention. To the contrary, internal development initiatives often suffer from mutual coordination and management attention. This is unfortunate in view of external demands on improvements of company performance. At the same time we have observed that the issue of internal company development is experienced as complex and difficult to manage. The initiation of many development projects is often a symptom rather than a cure of the frustration in a company of the felt need for carrying out more developing activities in view of the limited capacity in the organization.

A research and development project has been initiated to study the practice of managing internal development initiatives and to propose new approaches and methods. 30 companies covering different industries and size have been interviewed according to a questionnaire, and in about half of the companies further studies have been carried out with internal seminars held for discussion of the findings and new approaches.

A general pattern emerged rather quickly, namely that companies experienced the greatest difficulties in managing internal development initiatives in an area in-between major strategic initiatives and local initiatives carried out solely in organizational units (sections and departments).

This middle group represents a grey area. First they may not appear sufficiently important to attract the attention of top management for a longer period of time. Second, they require a joint effort of several sections, departments and functional areas which makes initiation and implementation of such initiatives difficult. Third, it is difficult to specify

goals and means; and fourth, a great and sustained effort is necessary, because of organizational development elements.

To give a few examples of internal development activities in the grey area: the introduction of a new planning method, for example Total Productive Maintenance (TPM); an effort to make logistics and production more customer oriented; and an effort to cut delivery times for customer orders in an engineering company

1.1 DIFFERENT SCHOOLS OF THOUGHT

To be able to interpret and understand the observations of internal development initiatives in the middle area, different perspectives or schools of thought will be employed.

1.1.1 PROJECT PORTFOLIO MANAGEMENT

Project portfolio management thinking has been widely used in specific areas, primarily in product development, but also in systems development and production development, cf. Cooper (1998) and Cooper et al. (1998). A broader concept, Program Management, has been employed in the area of internal development initiatives, because different functions are involved. The strength of this approach is to tie a large group of different initiatives that somehow are related into a more coherent effort. Also, it provides methods for prioritizing competing projects.

1.1.2 STRATEGIC MANAGEMENT

As pointed out by Mintzberg et al. (1998), for many years development of a corporate strategy and functional strategies has been considered as a planned process often initiated and driven by top management. However, practice shows that some companies have been able to act strategically successful without an explicit strategy. Instead, over the years the organization had developed a commonly shared strategic understanding, an organizational preparedness. Such emergent strategies have enabled the company to act swiftly and coherently. The key concepts of deliberate, intended strategy (as plan and position) and emergent, unplanned strategy (as a pattern in a stream of decisions) lie at each end of the continuum of strategy formation (Graetz, 2002).

In addition to the design, planning and positioning schools, the learning school offers valuable contributions to understand internal company development initiatives, for example Quinn's notion of logical incrementalism (Quinn, 1980).

The development of a vision has been supported by several researchers, e.g. Senge (1990), Kotter (1996) and Womack & Jones (1996). According to our experience a vision is a useful means for combining the two strategy approaches. However, it requires development of a creative and dreaming-like exploration of future options in a constructive dialogue between different functions and disciplines (Riis & Johansen, 2003).

An essential issue in the middle area of internal development initiatives is concerned with realization of developed strategies.

1.1.3 ORGANIZATIONAL CHANGE AND LEARNING

Internal development eventually should empower management and employees in such a way that they accept and take ownership and develop competencies necessary to implement the business processes implied by a new strategy. Resistance to change, ownership and empowerment are key issues in this discussion (Beer & Nohria 2000).

A useful approach to include organizational issues in internal development is that of organizational learning. A multi-stakeholder view is warranted pointing to collaborative learning with the aim to support a constructive dialogue between actors to develop a commonly shared image of the present and future situation and feasible solutions, as studied by Senge (1990) and Isaacs (1999).

Internal company development necessitates a balance between exploration and exploitation (March 1991). Exploring and discovering new strategic opportunities implies knowledge creation and double-loop learning (Argyris & Schöen, 1978, and Nonaka & Takeushi, 1995).

1.1.4 STAKEHOLDER MANAGEMENT

The many actors involved in the middle area of internal development initiatives with opposing criteria and interests at play suggest that a stakeholder approach be adopted. It purports to identify the motives, power, attitude, and expected involvement and behaviour of stakeholders in a development effort. Such a mapping method has been proposed by Riis & Mikkelsen (1997), and a model for describing different roles that a stakeholder may play is presented by D'Herbemont & César (1998).

In summary, the four theoretical areas represent complementary views and perspectives and together hold important contributions for obtaining a comprehensive understanding of internal development initiatives, and, as we shall discuss later, for suggesting appropriate means for managing such initiatives.

1.2 ORCHESTRATION

The empirical studies suggest the proposition that at any point in time in a company there are many internal development initiatives in progress competing for attention. For good reasons each functional area, e.g. sales and marketing, product development, production engineering, logistics, purchase, human relation, or IT-systems, is expected to propose activities that can improve the overall company performance. For example, production and logistics may want to improve quality, but have to rely on cooperation with product development and purchase; or the HR-section may want to launch a large-scale competence development program, but will depend on the active involvement of the whole organization. In addition, top management often has its own agenda with respect to attending to the public image and shareholders' opinion which also may give rise to internal development initiatives in the grey area.

These initiatives represent a broad spectrum of different activities with respect to time horizon (short term and long term), functional areas involved, and actors with different roles and interests (motives). In many respects, the grey area of mid-sized internal development initiatives represents a force field of interests.

To acknowledge this complex management situation we shall introduce the notion of orchestration to indicate that management of internal development initiatives is about harmonizing the activities of many interested parties into a concerted effort being able to continuously shifting the balance between actors and focal areas. The metaphor of managing the development of a company like conducting an orchestra or a band may capture important characteristics. For example to create a uniform mode of expression from different instruments; to let the theme shift from one group of instruments to another; to allow for individual interpretation and sometimes improvisation, yet maintaining the overall theme and mood of the piece; to change the tempo and expressions during the piece; and to create an impression of a whole through a sequence of

movements. As is generally the case, any metaphor holds potential of illustrating some key points, but does also have limitations.

In the following we shall focus on this middle group of internal development initiatives, because it represents an important, but difficult management challenge. First we shall present and discuss a classification of practices that we have observed with respect to the major driving force. Empirical studies also suggest that internal development should be viewed over a period of time. Shifts from one paradigm and functional area to another were observed calling for a capability to quickly change mode of operations. Finally, implications will be spelled out and a new approach will be proposed and discussed.

2. THREE PARADIGMS FOR MANAGING INTERNAL DEVELOPMENT INITIATIVES

The grey area of mid-sized internal development activities bridges top management effort and local activities, as well as coordinates local activities. The empirical studies of 30 companies have shown a broad spectrum of practices representing different management focus and methods. We have identified three paradigms representing respectively a top-down, an outside-in, and a bottom-up approach.

2.1 A STRATEGY IMPLEMENTATION PARADIGM

The middle area of internal development will be involved when a new corporate strategy is to be implemented. This will imply changes in management systems, performance indicators, and development of new norms and behaviour in all functions and sections. Implementing a new strategy is in nature very much different from the development of strategies, because it calls for a concretization of ideas and principles into specific actions, and for a change in the mindset of managers and employees. Both of these activities require a great effort and time.

Company A: For a long period of time, company A had enjoyed a steady growth following the same strategic pattern and supported by a strong corporate culture of optimism and corporate identity. Then three years ago, sales dropped considerably resulting in a substantial loss. This came as a shock for everybody in the company. Some changes were made in top management, and a new strategy was developed based on the realization that the external conditions, indeed, had changed radically. A concerted effort was made to define a set of development projects covering new ways of operation, development of supportive IT systems, and addressing organizational and value issues.

Company B: Initiation of internal development activities in company B is well-organized. Every year the corporate strategy is revised, and this leads to defining new initiatives and to accept proposals submitted by managers of local sections. It is required that each proposal be formulated as a project with clearly specified goals that relate to the corporate strategy and with a project plan and a responsible project group. In recent years only minor adjustments have been made in the corporate strategy which has resulted in a rather stable structure of development projects.

This paradigm relies on a clear corporate strategy from which development initiatives rather easily can be defined and prioritized. In the case of company B, this paradigm seems appropriate as long as a clear and stable strategy can be defined. If the basic assumptions on which the current strategy rests are not continuously monitored, a company may find itself in the situation of company A.

2.2   A REACTIVE PARADIGM

In this paradigm, middle area internal development activities are initiated primarily on the basis of obvious external needs, for example market growth, customer requirements with respect to quality assurance, and shareholder demands for short term revenue.

Company C has enjoyed almost ten years of considerable growth, mainly because of a good product and timing on the market. Expansion has been the main agenda for all departments and functional areas, and decisions often had to be made in a hurry leaving little time for mutual coordination. The need was obvious to everybody for implementing management systems, increasing capacity in all areas, training of new employees, and for stabilizing the organization by introducing and implementing operating procedures. Yet it was difficult to prioritize the many things that had to be done. Little time was left for thinking ahead, because the main effort was spent on catching up on obvious shortcomings and deficiencies.

In this paradigm, explicitly or implicitly, management accepts external requirements as a major force for driving internal development. This holds potential for getting many people in the organization on board, for example by visualizing customer requirements. On the other hand, it is important that management understands to balance external forces, often pointing in different directions.

Company D: An operations manager in company D one day asked about the precision in delivery. When the reply was given that it was 97%, the management team felt quite satisfied. But the operations manager asked for a list of those customers who did not receive their order last week as promised. He wanted to spread in the organization names of the persons who had been disappointed, as a means of creating a stronger customer orientation in operations.

As also the name of the paradigm indicates, it represents an acceptance of external forces to dominate. It implies that always seeking to reach Best Practice will leave the company permanently behind the best.

2.3   A SELF-ORGANIZED PARADIGM

In this paradigm, management trusts employees and managers in sections and functions to be proactive and to take improvement initiatives within an outlined strategic direction.

Company E: Management of a business unit in company E decided to challenge its employees and section managers to propose changes. A strategy for the unit had been developed with a high degree of involvement, but instead of developing a set of action plans, management indicated that it would wait for initiatives to be taken for realizing the strategy.

Company F: In an industrial company F in the telecommunication industry a strong corporate culture has emerged. Being used to work internationally in product development networks and projects, also improvements in business processes and knowledge sharing are initiated and implemented by employees without the direct interference of management. This holds for incremental changes in current practice as well as for initiating more radical changes.

The role of management is to support such bottom-up efforts and to ensure an appropriate coordination. Several means have been observed in the companies, such as the development of a vision for the company's strategic direction and images of future modes of operations. Lack of a strategic direction may for good reasons make this para-

digm dysfunctional and lead to a chaotic situation with many un-coordinated development initiatives and application of politics to promote certain initiatives.

2.4 COMBINING MANAGEMENT PARADIGMS

The three paradigms describe three different ways of seeking a reference for defining and prioritizing internal development initiatives. In a way, each of them represents a generic force that any company needs to address in order to ensure, respectively

- strategic positioning of the company,

- attention to external requirements, e.g. customer needs, and

- sufficient energy in the organization, i.e. acceptance and motivation among employees.

In the group of companies studied we were able to identify some companies who primarily followed one of these forces as its governing paradigm. This does, however, not mean that they can neglect the other two forces. For example, even if strategy implementation is the dominating criteria, management needs to address the issue of getting members of the organization onboard; and external incidents may call for action. Also as pointed out, in the self-organized paradigm some image of a desired strategic direction is a prerequisite.

Management of some of the companies wanted to deliberately seek means for attending to the three forces, i.e. combine two or three of the paradigms.

Company G: For some time operations management of company G had tried to introduce a Japanese originated management method called Total Productive Maintenance (TPM) following a prescribed top-down approach (a strategy implementation paradigm); however rather unsuccessful. Then they established a support center with trained facilitators and consultants and left to each operational unit to decide for themselves whether they wanted to use the method. At the same time management defined clear targets for annual improvements in operations. This resulted in a broad range of different ways of implementing TPM and a greater commitment.

3. SHIFT OF PARADIGM AND FOCUS OVER TIME

As has been pointed out, each management paradigm is associated with certain prerequisite conditions for been appropriate. In a dynamic world external and internal conditions change, and a shift in management paradigm may be warranted.

Company C: After a period of rapid growth company C experienced a slower growth rate. At the same time competition became more keen. Management realized that it was time to change away from a reactive paradigm. When building a new plant for a new product-market area they put much effort into ensuring that the plant would also be competitive for the coming three to five years. Traditionally, they would just have expanded capacity by following the same production and management principles already in use. Also, management initiated a company wide program of Lean Thinking that was to be rolled out over a period of two years following a master plan. In effect, company C shifted to a strategy implementation paradigm.

Another empirical study has revealed that also the focus of internal company development may change over time. Seven SMEs from different industries were selected, because they had all been through a development process in the past three to ten years

with significant improvement in performance. The managing director in each company was interviewed, cf. Riis (2003).

A general impression from the interviews is that over this multi-year time span several functional areas had been involved, but in different sequences. This has lead to the formulation of a parallel stream model that was able to capture development initiatives of different kind being carried out in parallel and in series. To limit the number, five areas were defined: Product; Market; Production; Organization; and Management Systems. Different trajectories emerged as illustrated by two case companies in figure 1.
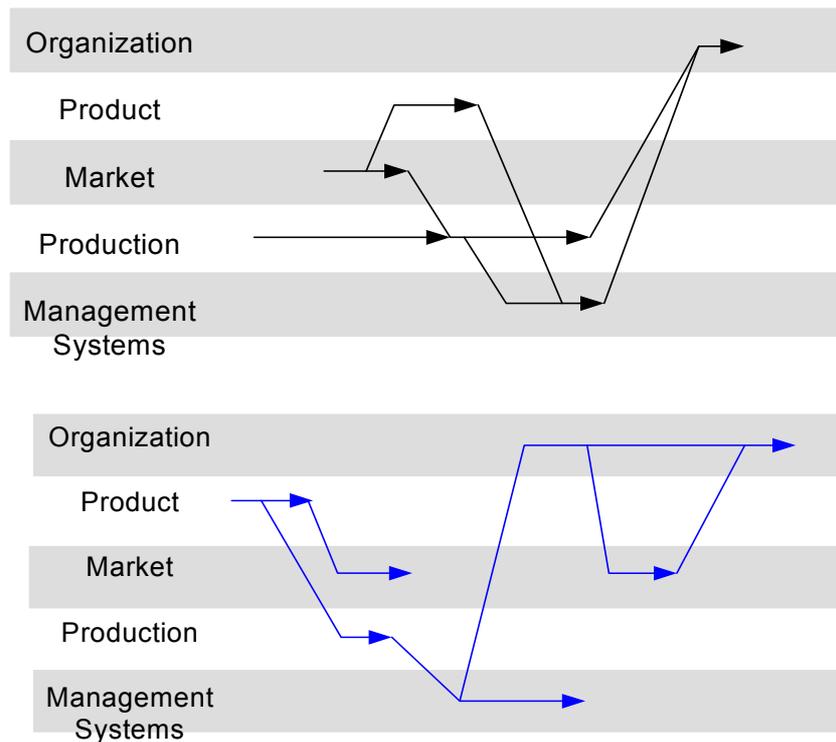

Figure 1. Different trajectories of company development

Depicting trajectories of the companies' development, despite the rough measures, has demonstrated that the development of a company over a span of three to ten years shifts from one area to another, and often several areas are dealt with simultaneously. There seems to be no general pattern of sequence in which the various areas are addressed. It appears from the case companies that a development process may start at either of the five areas, organization, product development, market, production, and management systems. In most companies, organizational issues were addressed early in their change program indicating that they were aware of the need to address acceptance and motivation aspects.

4. INCREMENTAL AND RADICAL CHANGES

As mentioned in the literature overview, an essential issue in company development is the combination of incremental and radical changes, e.g. March (1991). We have chosen to introduce two dimensions. The first one indicates the degree of novelty of the direction of change. For example, the decision to build an extension of the existing plant as a "Factory of the Future" will indicate a new direction that is radically different from the current mode of operation. Or a development initiative may signal an increased and con-

certed effort that is in line with the current thinking in the company. Such a move may be seen as incremental, because it extends the present solution and thinking.

The second dimension indicates whether the move is carried out as one big, fast effort during a relatively short period of time, or if it is realized over a period of time. This provides a table with four cells, cf. Table 1.

The parallel stream model introduced in Figure 1 provides a more differentiated picture of the location in the table in Table 1. For example, in company H most of the changes were of type (1), except the organizational changes. Realized over several years, altogether they may be characterized as type (3). In company I radical changes in outsourcing policy and customer orientation also implied more radical organizational initiatives realized over a period of time. Company J went through a radical change in its organizational structure and management thinking in a relatively short period of time, leading to a location between (3) and (4).
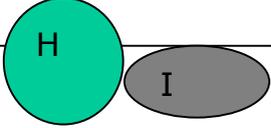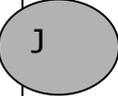
Degree of realization

Degree of innovation	Realized over a period of time in smaller steps	Realized as one big, coordinated effort
Incremental direction	1. Continuous improvement programs	2. Turn-around
Radical direction	3. An extension of the plant as a pilot plant "Factory of the Future"	4. New green field plant

Table 1. The location of three case-companies

5. IMPLICATIONS FOR ORCHESTRATION

In the preceding sections we have analyzed how companies have followed different management paradigms in their internal development and seen that companies shift between paradigms over time and also make changes in focus. In this section we shall discuss implications for managing internal development with its many actors and different interests and forces. We have introduced the notion of orchestration in section 1.2 and shall make an attempt to give it a normative meaning.

5.1 TO MANAGE SHIFTS IN PARADIGM AND FOCUS

As the empirical studies show, a development process shifts from one area to another. Thus, it is important to be able to carry results and experiences on to the next area, and to define a new focus. Also for various reasons the management paradigm may shift over time.

In view of these changes a managerial implication is to be able to anticipate changes and to include shifts in the planning (thinking-through) of the overall development for

the coming years. This may prevent surprises and confusion in the organization when a shift is eventually made. Also it will guide the attention towards managing the transition from one paradigm to another or from one focal area to another. In the practice of project management interface management is a key issue which points to the need to focus special attention on transitions.

Some of the companies have introduced the idea of announcing a "Theme of the Year" to indicate regular shifts in focus. Or the selection of a three-year campaign on Lean Thinking clearly anticipates a shift in the future.

5.2 TAKE NOTE OF DIFFERENT CLOCKSPEEDS

The introduction of a new production technology or the acceptance of a new group of customers may often be implemented within a relative short period of time. To the contrary, implementing organizational changes in most cases call for patience, endurance and a longer time horizon. Hence, managing company development requires coping with different clockspeeds.

Fine (1998) has noted that technological development represents a spectrum of different clockspeeds. In some areas, e.g. IT, the rate of change is very high, and in other areas, e.g. combustion engines, changes take place at a much slower rate. The notion of different clockspeeds can be used in company development by planning more realistically the rhythm of corporate development in the various areas, e.g. organization, product development, market, production, and management systems.

This suggests that different perspectives be included in the discussion of planning internal development initiatives. For example, four perspectives have been proposed by Riis & Mikkelsen (1997), respectively a business (strategic), a technical, an organizational and a political (stakeholder) perspective. The business perspective may indicate when certain results must be reached, and the technical perspective may provide information about the necessary development and delivery times for engineered facilities and components. The organizational perspective will adopt a different viewpoint and look at organizational learning processes in which acceptance of new ideas, motivation and ownership, and competence development play significant roles. The process of dealing with stakeholders is the focal area in the fourth perspective that often calls for a different course of events. Each perspective has its own clockspeed, and the model suggests that a master plan be prepared that seeks to combine the various clockspeeds. This also implies an effort to make a combined use of the four schools of thought introduced in section 1.

5.3 TO PLAN A COURSE OF ACTIONS AND YET TO ALLOW FOR IMPROVISATION

To be successful any complex initiative should be planned. Planning, however, may be interpreted in different ways. At the one end of the scale is a minute, detailed outline of which activities should be carried out in the future, based on constraints and mutual interdependencies. At the other end, a more conceptual planning is based on a 'thinking-through' process of possible and desired tasks and solutions based on scenarios of future, possible events. The result of planning is a commitment, e.g. to a contract with a client, a certain technical solution on which the product design will be based, a customer order for delivery of certain equipment and technological capabilities, or the appointment of people to the project organization. In a dynamic environment there is a need for continuous re-planning, because things do not always materialize as planned. This calls for a capability to improvise. This paradox indicates that during the development process,

management needs to find an appropriate balance between planning and improvising, acknowledging that either extreme will not be successful.

5.4 TO USE INCIDENTS AS OPPORTUNITIES FOR INITIATING MAJOR CHANGES

Especially, small and medium sized companies seldom have the possibility to engage in a large development project at own risk. If a major change is undertaken, a long-term contract with customers usually provides a safety net. On the other hand, we have observed that a manager has used an incident that called for a change as an opportunity to initiate a change process that reached far beyond the specific incident.

Companies have to attend to daily operations issues, and the daily or weekly agenda is hard to predict. New requests from customers, unforeseen difficulties in production, or deficiencies in deliveries from suppliers call for immediate action. It requires reserves of strength to identify such incidents as opportunities for major improvements. As a manager said: "We some times appreciate demanding customers, because they help us develop our competencies".

The parallel stream model (figure 1) augments the traditional preparation of a master plan for corporate development based on a Work-Break-Down structure of activities by suggesting to initiate a change process in an area in which a change is widely accepted. However, it is important to be aware of the interrelationships with other areas and to let the change process later on include other areas. This way of initiating development activities also rests on an organizational learning approach focusing on developing and maintaining an organizational momentum.

5.5 CONNECTING DIFFERENT TIME HORIZONS

As discussed in the introduction of this paper, it is important to focus on connecting activities of different type. But it is equally essential to connect activities with different time horizons, suggesting two approaches:

- Relating short-term to long-term activities by looking for long-term aspects of a short-term activity to see, if it could be "a step in the right direction".

- Relating long-term to short-term activities by identifying from long-term solutions implications for the organizational and cultural dimensions, and seeking to identify specific short-term activities that may support these future dimensions and which may be seen as a part of organizational learning processes.

The development of a manufacturing vision may provide a solid basis for identifying both types of relationships.

5.6 TO MASTER SEVERAL WORKING MODES

As discussed above, application of the parallel stream model includes shifts in focal areas, combining different time horizons and including some degree of improvisation into a planning approach. It implies that the company should master several working modes.

This is often made difficult by management systems, because they are geared to a "normal" situation that never exists in practice. To the contrary, management and employees are capable of attending to a broad spectrum of different situations, but this is most often done on an ad hoc basis and with a bad feeling of breaking rules. It should be possible for the company to define a number of different working modes. For example, we have experienced with the introduction of a Time Out, known from sports, that it is

possible to engage a large group of middle managers, staff people and operators in addressing long term issues and to employ experimental and innovative modes as means for developing a shared picture of the future manufacturing system and its operations, cf. Riis & Jørgensen (2002).

6. DISCUSSION AND CONCLUSION

The empirical studies of management practices in dealing with a middle group of internal development initiatives display a varied picture. It was argued that the three different management paradigms represent three generic forces for company development. This provided a better background for explaining how companies shift focus over time, as a result of changes in the environment and internally in the organization. In addition to the three generic forces, the many actors also add their own formal and personal interests and goals, constituting a force field. This provides a basis for understanding the notion of orchestration which we have introduced.

The existence of this force field at play in internal company development calls for a combined use of a number of different theories, among others the four schools of thought mentioned in the first section. For example, models from project portfolio management may establish a coordinated picture of on-going improvement initiatives that should be augmented by an organizational learning model and a stakeholder analysis to give a picture of the forces at play in their implementation.

We suggest that the notion of orchestration be used in two ways; first as a metaphor from music. Some of the implications in section five directly relate to the need to make shifts in tempo and to let the theme shift between instrumental groups. In classical music, the score is given for an orchestra, but the interpretation must be agreed upon in cooperation between the conductor and the orchestra. We want to see the idea of a corporate or manufacturing vision as a score that is understood and accepted by the whole orchestra; it may even have been involved in its development. However, the meaning of the score in the metaphor opens for several interpretations and perhaps brings us to the limit of the metaphor.

The second use of orchestration is to signify that the management task is about establishing a concerted and coordinated effort in an organization with many rather independent actors with different interests and goals striving to prosper in a turbulent environment.

The managerial implications in section five may be summarized as follows:

- Anticipate shifts in paradigm and focus
- Focus attention on transitions from one paradigm to another
- Take note of different clockspeeds
- Look for incidents as opportunities for developing organizational momentum
- Adopt an organizational learning approach to look for steps in the right direction
- Use visions to bridge long term ideas and concrete modes of operations
- Develop and stimulate different working modes.

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