



Implementing the new product development process

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Abstract

Much discussion in the new product development (NPD) literature is concerned with describing blueprints for more effective systems for managing the process. Features of the emergent pattern of good practice in NPD include cross-functional team working, early involvement, effective project management arrangements and learning systems. However, there is relatively little in the literature on the implementation question; how a particular organisation can articulate and embed the necessary behaviour patterns and accompanying structures and processes needed to make good-practice NPD work for them.

This paper reports on a case study of an electronics firm designing and implementing a new NPD system. In particular, it emphasises the organisational development processes required to implement and develop ownership of the system. The paper concludes with some comments on transferring this approach to other organisations, and on research issues arising from the experience. © 1997 Elsevier Science Ltd

1. INTRODUCTION

New product development (NPD) is widely recognised as an important source of competitive advantage, and emphasis is being placed on systems which simultaneously provide quality, variety, frequency, speed of response and customisation (Cooper, 1994; Crawford, 1991; John and Snelson, 1988; Smith and Reinertsen, 1991; Souder and Sherman, 1994). In order to meet these challenges, attention has been placed on reconfiguring internal mechanisms for integrating and optimising the NPD process such as concurrent engineering, cross-functional working, advanced tools, early involvement etc. (Thomas, 1993; Wheelwright and Clark, 1992). With shorter life cycles and demand for greater product variety, pressure is also placed upon NPD systems to work with a wider portfolio of new product opportunities

and to manage the risks associated with progressing these through development to launch. To deal with this, attention has focused on systematic screening, monitoring and progression frameworks such as Cooper's 'stage-gate' approach (Cooper, 1988, 1994).

Most of these ideas are not in themselves new; for example, Lawrence and Lorsch (1967) drew attention to cross-functional team working and co-ordination mechanisms back in the 1960s, and Cooper (1994) has reported on NASA's 'phased review process' as a stage gate model dating back to the same period. But it can be argued that there is now growing consensus about their integration into a new model of 'good practice' in NPD. Table 1 lists key features of this emergent model.

TABLE 1. Key features of emerging 'good practice' model in NPD*

Theme	Key characteristics
Systematic process for progressing new products	Stage-gate model Close monitoring and evaluation at each stage
Early involvement of all relevant functions	Bringing key perspectives into the process early enough to influence design and prepare for downstream problems Early detection of problems leads to less rework
Overlapping/parallel working	Concurrent or simultaneous engineering to aid faster development whilst retaining cross-functional involvement
Appropriate project management structures	Choice of structure — e.g. matrix/line/project/heavyweight project management — to suit conditions and task
Cross-functional team working	Involvement of different perspectives, use of team-building approaches to ensure effective team working and develop capabilities in flexible problem-solving
Advanced support tools	Use of tools — such as CAD, rapid prototyping, computer-supported co-operative work aids (e.g. Lotus Notes) — to assist with quality and speed of development
Learning and continuous improvement	Carrying forward lessons learned, via post-project audits etc. Development of continuous improvement culture

*Table based on Cooper, 1994; Crawford, 1991; John and Snelson, 1988; Lilien and Yoon, 1989; Mahajan and Wind, 1992; Maidique and Zirger, 1985; Rothwell, 1992; Smith and Reinertsen, 1991; Stalk and Hout, 1990; Thomas, 1993; Wheelwright and Clark, 1992.

2. THE IMPLEMENTATION QUESTION

The prescription for better NPD performance (outlined in Table 1) is well articulated, and the case evidence convincing. However, we have less systematic understanding concerning the effective implementation of new or improved NPD practices. That is, how does an organisation articulate and embed new structures, systems and behaviour patterns that enhance its ability to introduce (faster than its competitors) a stream of new products which customers value?

The development of a stream of new products requires more than awareness of the issues; specialised skills, knowledge, processes, mind-sets, problem-solving mechanisms and management philosophies are needed. These are developed, in part, using the concept of 'routines' from the innovation literature. Routines are behaviour patterns associated with aspects of organisational performance which are rehearsed to the point where they become automatic — 'the way we do things around here' — and there is growing interest in this approach to understanding organisational behaviour in terms of learning (Bessant and Caffyn, 1996; Pentland and Rueter, 1994). Nelson and Winter (1982) suggest that firm-specific routines for dealing with certain aspects of innovation provide a powerful explanation for firm-level differences in innovative performance, and this appears to be borne out in empirical observation. Similarly Nonaka (1991), Senge (1990), Leonard-Barton (1992) and Garvin (1993) all interpret company specific success in terms of particular routine behaviour.

Winter (1986) defines routines as "... a relatively complex pattern of behaviour ... triggered by a relatively small number of initiating signals or choices and functioning as a recognisable unit in a relatively automatic fashion ...". This is not to say that routines are mindless patterns; as Giddens (1984) points out, "... the routinised character of most social activity is something that has to be 'worked at' continually by those who sustain it in their day-to-day conduct ...". It is rather the case that they have become internalised to the point of being unconscious or autonomous.

By the same token, routines do not equate to rigid and mechanistic behaviours; they can contain considerable flexibility. For example, in NPD there may be a bundle of routines associated with developing a deep understanding of customer requirements, but selection of a particular set will depend on the particular customer — as will the mode of execution.

It is also important to emphasise that positive routines encourage alertness and attention rather than replace the need for consciousness. For example, the routines that a policeman learns develop his selective attention so that clues, that would be missed by most of us, are quickly seen.

The capability to manage new product development requires a cluster of abilities: to integrate different functional perspectives, to interpret the needs of customers, to forecast technological developments, to select and prioritise between projects, etc. Below each of these abilities are basic routines which describe 'how we do things round here' and which are, by and large, unconscious patterns of behaviour that promote

enhanced awareness where this aids the fulfilment of an NPD process. These patterns might include routines for collecting and communicating information, for working in teams, for project management activities, and so on. These may appear autonomous and largely fixed, but they are the result of a learning and reinforcing process.

One important feature of such a behavioural model is that, over time, routines create and are reinforced by various artefacts, tangible expressions and products of the underlying belief system. So particular structures, procedures and policies come to define 'the way we do things round here' and help to reinforce and fix the pattern. Thus capability becomes a highly specific combination of behaviours and artefacts; this helps explain why imitation of capability or its constituent abilities and routines is extremely difficult (Pavitt, 1991). Simply copying what others do is a superficial rather than a fundamental change; it is only when the underlying behaviours are learned, reinforced and institutionalised that lasting change can emerge.

The need for deep behavioural change limits the utility of the current fashion for 'best practice' benchmarking, which implies that all firms need to do to become 'world class' is to copy processes and structures. For example, 3M is often cited as an example of an effective and consistently successful product innovator — to the extent of building its business on the premise that a significant proportion of sales will come from new products. Achieving this is not a matter of being blessed by occasional luck but the consequence of a learning process which has embedded key routines for dealing with the NPD question (Coyne, 1996; Nayak and Ketteringham, 1986).

Routines are not easy to acquire, however. They are the result of a learning process over time, and involve experiment and failure. It is possible to describe success routines, but they are not easily transferable. The analogy can be drawn with learning to drive a car — itself a complex integrated suite of behaviours which have to be learned, integrated and practised before facility is developed. Watching another person drive or reading a manual can quickly identify the key behaviours involved, but transferring this knowledge is not the same as transferring the skill to actually drive the car. This must be learned over a period of time and with extensive rehearsal.

3. LEARNING TO MANAGE NPD

It has long been an empirical observation that some firms manage innovation better than others — that is,

that they have learned and developed better capabilities. Importantly, these differences may be independent of their specific technological competences. For example, Carter and Williams' (1957) pioneering work identified the concept of 'technical progressiveness', drawing attention to differences in the way in which some firms managed the process. Studies of success and failure, explored through a variety of methodological routes, draw similar conclusions, in each case identifying a set of capabilities associated with innovation management (Cooper, 1988; Freeman, 1982; Georghiou *et al.*, 1986; Lilien and Yoon, 1989). There is considerable consistency in the findings of many of these studies; Rothwell (1992) sums these up well in his recent review.

Innovation cannot be an isolated activity. Decisions about the commitment of funds and other organisational resources are essentially strategic. Since many firms spend 5% or more of turnover on research and development it is imperative to realise the strategic significance of decisions to support or kill a development initiative (Janis, 1989).

Three distinct clusters of problems emerge for organisations seeking to improve innovation management.

First, innovation studies highlight broad capabilities but not necessarily the constituent abilities and routines. For example, many studies highlight the importance of developing close links with the marketplace and communicating this perspective through to the various functions involved in creating new products to satisfy that marketplace. But there is relatively little information, except in case studies, about *how* that understanding might be built up, or of how some firms are able to do so more consistently and effectively than others.

Second, capabilities in innovation management are firm-specific; what works for one firm cannot simply be copied by another with the same results. The underlying problems towards which the capabilities address themselves may be generic — indeed, this is what studies of success and failure highlight well — but there is no substitute for individual learning and development of appropriate responses. So, for example, many car companies visited Toyota during the 1980s to try and understand how it was able to produce cars so productively. The company was quite happy to pass on the 'secrets' of its approach to process innovation, and indeed several books on the 'Toyota production system' were available; however, assimilating the underlying capabilities took considerably longer and it is only now that those firms are

demonstrating their own versions of the underlying capability (Monden, 1983; Womack *et al.*, 1991).

Lastly, innovation has been frequently seen as a largely technical endeavour, distinct from line management and only loosely connected with the firm's strategy. This has prevented the formation of very close links between the 'innovative' and 'routine' parts of the organisation. It is now realised that innovation must be widespread across a firm and that innovative parochialism severely restricts the quantity of resource that can be applied to either product or process innovation (Morgan, 1986).

Implementing new or improved NPD approaches requires that we strengthen our understanding of the processes which support the articulation, development, introduction and consolidation of suitable routines. In our own work we have drawn extensively on the literature and practices in the field of 'organisational development' (OD) to provide a framework for exploring implementation of changes in structures, process and behaviour (French and Bell, 1990, p.283). OD offers insights into change processes, particularly those associated with changing an organisational culture and embedding alternative behavioural routines.

Combining the two approaches of innovation research and OD in 'action research' projects allows both exploration of the implementation issues involved in NPD and the development of supportive routines within client organisations. The following case example illustrates this process.

4. NPD WITHIN ABC ELECTRONICS

ABC Electronics is involved in the design and manufacture of products for the information technology (IT) industry; it has core technical expertise in acoustics, electronics design and assembly and plastics moulding. Typical products include battery chargers, speaker kits, telephone handsets and remote control devices for television and hi-fi systems. The company currently employs around 700 people on several sites across the UK; turnover in 1995 was around £30 million.

Founded in 1957, the company was originally involved in design and manufacture of hearing aids for the National Health Service; the link to telephone equipment was easy to make and the then national monopoly telecommunications company became a major client. Although ownership of ABC changed on several occasions, it enjoyed a virtual monopoly on sales of acoustic components to these markets.

However, during the 1980s major changes — particularly the liberalisation and subsequent privatisation of British Telecommunications (BT) — meant that markets were becoming more demanding in terms of price, quality and product innovation. Profitability declined sharply and the company faced a mounting crisis; it lost its major contracts in microphone and receiver markets because of sluggishness in implementing new technology in products, and it lost an increasing number of tenders on price and product design grounds.

In 1990 the company was taken over by a Japanese group which introduced a new strategy but left the old organisation largely intact. Key features of this new approach were the focus on diversifying the customer base, on targeting OEM markets and moving towards product families. By the mid-1990s ABC was active in four main market segments, telecommunications, mobile communications, home entertainment (TV/video/hi-fi) and fire and security, and the company began a period of accelerating growth and rising profitability. Much of this success arose from a much higher level of NPD activity; for example, the two main product categories, currently accounting for 76% of total sales to an entirely new set of customers, were not even in the company's product mix in 1991.

5. THE EMERGING NPD CRISIS

Rapid growth through proliferating new products, accelerated by the speed with which many of their key sector markets (such as mobile telephones) were expanding, meant that ABC began to face a new crisis in NPD. Whereas the company's earlier problems were due to too little NPD activity, this new crisis resulted from too much — or rather, too much unstructured and uncontrolled — NPD activity.

At the same time, the company faced a series of strategic questions. What categories of products should be manufactured? What markets should be targeted? What portfolio of competences should be built? Resolution of these questions was essential to provide the strategic umbrella under which NPD requirements could be specified. The top team undertook a strategic clarification process following the guidelines of one of the authors of this paper (Francis, 1994). This enabled the senior management group of ABC to see that NPD was a core competence and needed substantial investment of time and resource.

Late in 1994 a seminar was held for senior management to discuss the emerging 'good practice' model of NPD and the decision was taken to implement

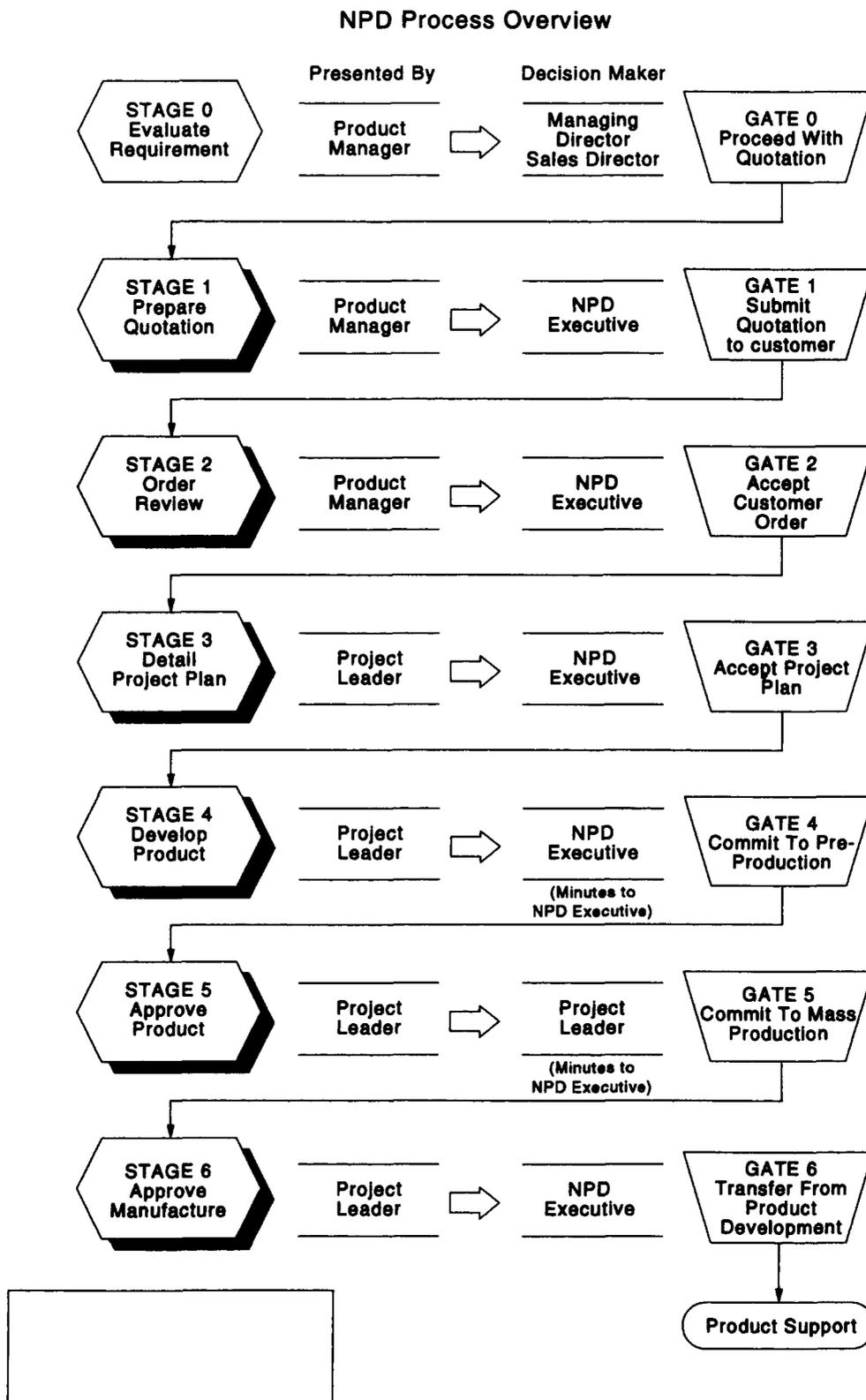


Fig. 1. NPD process overview.

some form of change; the requirement to appoint a new NPD manager provided an opportunity for making these changes.

A diagnostic study was carried out in February–March 1995 which identified a number of problem areas within the current NPD system; these are summarised in Table 2.

Further discussion with senior management led to a commitment to design and implement a new NPD system by early 1996.

The development of a new NPD system was seen (correctly in our view) as an organisation development task rather than a requirement for a more elaborate and comprehensive set of procedures. The principles shaping the OD intervention were:

- people working the present system know most or all of the problems; a way has to be found to collect these insights;
- many problems are due to ‘silo’ thinking: each actor needs a commitment to helping others to win and must know what this means in practice;
- procedural change (especially elaboration) will be ineffectual unless it is understood and ‘owned’ by the people involved;
- a careful balance needs to be maintained between system (which tends to bring rigidity) and *ad hoc* processes (which can deal with opportunities of the moment). Too much, or inappropriate, systemisation is as much an enemy as too little.

From these five OD principles an NPD improvement programme emerged which is summarised in Table 3; this programme combined inputs of external knowledge (about good practice NPD, about models used elsewhere, about other case examples, etc.) with internal development on the design and detailed elaboration of the new process, including the attitudinal and behavioural changes required. It is important to emphasise that all the steps outlined in the table were

not, and could not have been, defined in advance. NPD processes are (at least in part) organic, and so the programme had to be responsive to the developing needs of the intervention process.

Table 3 provides an overview of the activities undertaken. What is more difficult to convey is the passion, emotion and enthusiasm that was released by the process. From the start the Managing Director adopted the view that a participative approach was needed; the question was how to structure participation so that ideas and concerns could be released, codified and turned into a coherent set of positive routines that were comprehensive, context sensitive and accepted.

The participative development programme involved around 35 people from across the organisation and representing different levels and functions in the NPD activity. The aim was to get everyone who made a contribution to the development of new products involved as a contributor.

The OD process was neither ‘top-down’ nor ‘bottom-up’ — it was both. From the top came strategy, permission, leadership, recognition and terms-of-reference. From the bottom (really the middle) came critique, ideas, detail, commitment, diligence and enthusiasm.

Activities ranged from workshops for the whole group to intensive small group work on designing the new NPD system; as the programme evolved, so the ownership and input from the ABC side increased. The NPD manager played a crucial role as the champion of process change; his skills as an empowered facilitator and system designer were crucial.

Managing the complexity of later stages of the project required a change of direction. It proved possible for all 35 participants to contribute to a diagnosis of the problems of the present system and generate ideas for improvement. The need to elaborate and reality-

TABLE 2. Overview of problem issues in NPD

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- NPD process unclear
 - ‘ad hoc’ approach to project selection and priority setting
 - unclear responsibilities and lack of accountability
 - limited teamwork
 - lack of early involvement and subsequent downstream delays and problems
 - lack of cross-functional involvement
 - inter-function competition rather than cooperation
 - no clear link to company strategy in NPD decisions
 - overloading of product managers, required to oversee a wide range of new products through the NPD cycle
 - all projects treated the same, no ‘fast tracks’ or special projects
 - no mechanisms for capturing learning from NPD experience
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TABLE 3. Key steps in the NPD organisational development programme at ABC

Date	Activity	Purpose	Involvement
Feb. '95	Initial data collection and diagnostic	Provide overview feedback to company on state of NPD	University researchers
April '95	Feedback to and discussion with Board Agreement to basic OD process for new NPD Identify key participants	Obtain top management support Agree parameters for NPD programme	Board (MD, Marketing Director, Manufacturing Director) plus NPD and personnel managers
June '95	Senior management strategy workshop	Develop coherent business strategy to provide framework for NPD — which products should we be working on?	Senior management
Aug. '95	Sensing interviews	Data collection and diagnosis	Key participants in current NPD process and likely to play a role in the development team ('the NPD task force') for a new process
Sep. '95	Workshop I Awareness raising, using case studies, simulation and other exercises, etc.	Top management expression of support and commitment Raise awareness of good practice and limitations in current ABC NPD process	NPD task force
Sep. '95	Company-based project work reviewing problems in current NPD system	Building an awareness (with specific examples) of the limitations of NPD and surfacing frustrations and frictions associated with particular parts of the process	12 small sub-groups of the NPD task force
Oct. '95	Report back Cluster key problem issues Review case examples of good NPD practice elsewhere — 'informal benchmarking'	Focus on key aspects of NPD process Align ABC experience with theory regarding critical dimensions of 'good practice' — e.g. need for a stage gate system to control a high volume of product opportunities	NPD task force
Oct. '95	Project team activity around key themes — project management, team working, learning, use of advanced tools, etc.	Taking major themes (cf. Table 1) and exploring their applicability in ABC	12 sub-groups, two of each working on a particular aspect of 'good practice' in NPD
Nov. '95	Presentation of project team ideas about a new NPD system — the rough building blocks and design principles which could be used to configure a new process	Building from their experience of what was wrong with the current system, and their awareness of generic 'good practice', to create a shared 'vision' of what could be developed as an NPD process. This early prototype could be discussed and extensively modified, but ownership was already within the group who would ultimately be responsible for implementation and operation	NPD task force plus senior management
Nov. '95	Senior management workshop	Configuring the building blocks into a basic architecture which took account of strategic and other business concerns	Senior management
Nov. '95	Workshop presentation and discussion/exploration of outline NPD system	Communicating the new NPD model framework and giving team members the chance to explore, surface concerns and begin the next phase of development	Whole team plus senior management
Dec. '95	Mandate team work on detailed design	Elaboration of basic framework and development of maps, procedures and other aspects of the new system. The mandate team also began the integration of work done by small groups before December on individual aspects of the new process	'Mandate team', a small group made up of representatives from the whole team and with the responsibility for representing their views and feeding back developments to them on a regular basis
Dec. '95	Workshop and presentation of new NPD system by mandate group to rest of team plus senior management	Presentation of near-complete NPD system design, including sample documentation. Discussion and identification of fine-tuning issues	Whole team plus senior management
Dec. '95	Pilot projects	Testing out aspects of new system with new product ideas coming into the company	Product managers Senior management Production engineers
Jan. '96	Workshop and discussion, including simulation with dummy projects	Tidying up on key issues such as the process for ensuring strategic fit ('stage 0') Development of guidelines for New Product Executive decisions Planning implementation, selecting implementation team, setting outline roll-out timetable, etc.	Senior management Product managers Representatives from mandate team Representatives from proposed implementation team
Feb. '96	Presentation workshop	Formal presentation of the new programme for NPD to all those with an involvement in new products. Mobilise commitment to help roll-out the new programme and 'sell' it on to other staff	Whole development team Senior management All NPD-related staff
Mar. '96	Formal launch date		

test ideas and produce an integrated synthesis of improvement proposals could not be done in the full group — the information processing task was just too big. Accordingly, for much of the later design work a representative small group was formed, with the mandate to represent the interests of all participants and report back to them.

The emerging model corresponds closely to the 'blueprint' suggested in Table 1, but elaborated in a highly customised way for the needs of a particular firm. Figure 1 illustrates the overall framework.

6. CONCLUSIONS

The participative process of development of the NPD system for ABC surfaced six key design elements which add to our understanding of the behavioural preconditions needed for the successful implementation of a new or upgraded process.

- (1) The need for a stage-gate system, a shared understanding of the route through this and the criteria for 'go/no go' decisions at each stage. This provides a structure for the decision making elements in NPD and ensures that active decisions are taken when resource commitment decisions must be made.
- (2) The establishment of a New Product Executive (made up of relevant directors, meeting frequently and if necessary on an *ad hoc* basis), to make the formal approval decisions for progressing through the system. This elevates NPD to a senior level and ensures that commitment decisions are taken to support the strategic intent of the firm.
- (3) The identification of clear roles and responsibilities within the process, especially hand-over from product managers to project managers. This provides for the superior management of linkages — an incipient weak area in hierarchically based organisations.
- (4) The need for balance between early involvement of downstream functions such as production and fast-track decision making. This diminishes the burden of trying to communicate everything to everyone who could possibly be involved at all times.
- (5) The need for a multi-track system to cope with different kinds of new products, from simple variants on existing themes to completely radical new concepts. This provides inherent flexibility, thereby reducing the risk that a demanding (and therefore costly) procedure is used for simple product enhancements which do not require an elaborate decision making process.

- (6) A shared understanding of the company's competitive strengths and its strategic focus. This enables NPD to be an implementation process rather than a divergent activity driven by internal generated goals.

Discussion of routines in the innovation literature often focuses on the artefacts of such behaviour patterns — for example, the procedures, structures and rules which emerge. (The 3M '15%' policy, in which employees are allowed to work on 'bootleg' projects for up to 15% of their time, is an example.) But these artefacts are only the surface indicators of an underlying culture which has to be established and grounded in the organisation. Developing such a culture — 'the way we do NPD around here' — involves articulating the key issues, surfacing concerns and conflicts, building a shared vision of what the new system might look like and detailed and participative design work on key aspects (including resolving tensions such as that between formalisation and flexibility, or personal and collective responsibility).

This intervention taught the researchers a great deal, demonstrating that in management sciences the use of action research processes has great heuristic value. In the ABC company project we were creating the conditions for a learning organisation to develop and seeing the interdependency of strategy, system, culture, learning and behaviour. But the most powerful learning point is that shared ownership is the key to success: if those involved understand, affirm and support the NPD process, they will make it work. Even the world's most elegant NPD system will fail if understanding is lacking, there is no 'buy-in' or support is absent. We will always fail if we underestimate the organic nature of organisations.

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kehrungen für effektive Projektleitung und Lernsysteme. Die Fachliteratur enthält jedoch recht wenig zur Frage der Einführung: wie kann eine bestimmte Organisation die notwendigen Verhaltensmuster und die begleitenden Strukturen und Verfahren, die notwendig sind, um NPD mit guter Praktik einsetzbar und effektiv für sie zu machen, artikulieren und verankern?

In dieser Arbeit präsentieren wir die Fallstudie einer Elektronikfirma, die eine neues NPD System entwickelt und einführt. Wir konzentrieren uns insbesondere auf die organisatorischen Entwicklungsverfahren, die zur Einführung und Entwicklung des Eigentumsrechts des Systems notwendig sind. Die Arbeit schließt mit einigen Kommentaren zur Übertragung dieses Ansatzes auf andere Organisationen und zu Forschungsaspekten, die durch diese Erfahrung entstehen, ab. © 1997 Elsevier Science Ltd

La implementación del proceso de desarrollo de un producto nuevo

Resumen

Las publicaciones acerca del desarrollo de los productos nuevos (NPD) hablan mucho de los anteproyectos para sistemas más eficaces de administración del proceso. Entre los aspectos del patrón resultante de buena práctica en NPD se encuentran el trabajo en equipos interfuncionales, el involucramiento desde el primer momento posible, la efectividad de la administración del proyecto y los sistemas de formación. Sin embargo, existe muy poco escrito referente a la cuestión de la implementación, cómo una empresa en particular puede articular y arraigar los patrones necesarios de comportamiento y demás estructuras acompañantes y los procesos necesarios para hacer que la buena práctica NPD le funcione.

En este artículo se comenta un estudio de caso de una empresa de electrónica en el diseño y la implementación de una sistema nuevo de NPD. Se hace hincapié especial en los procesos de desarrollo organizacional necesarios para implementar y desarrollar la propiedad intelectual del sistema. El artículo termina con algunos comentarios referentes a la transferencia de este enfoque a otras organizaciones y acerca de los áreas de investigación que surgen de esta experiencia. © 1997 Elsevier Science Ltd

Integrating continuous improvement and innovation into a corporate culture: a case study

Zahir Irani and John M. Sharp

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Intégration de l'amélioration et de l'innovation continues dans la culture de l'entreprise: Une étude de cas

Résumé

L'amélioration continue, comme son nom l'indique, adopte une approche dont le but est d'améliorer les performances organisationnelles, grâce à de petits incréments sur une longue période. Dans cette approche, ce n'est pas la taille de l'incrément qui est importante, mais la vraisemblance que ces améliorations continueront. Un grand nombre d'entreprises complètent l'amélioration continue avec de l'innovation, qui est considérée comme l'exploitation réussie des idées nouvelles, et qui apparaît clairement comme la synergie entre ces deux philosophies, lorsqu'elle est intégrée dans la culture d'entreprise adéquate. Dans ce papier, l'auteur décrit une étude de cas sur un petit artisan du nord ouest de l'Angleterre, et décrit comment son entreprise a réussi, malgré des revers de fortune et des périodes difficiles à garder intactes ses idées et sa foi en l'amélioration continue et la meilleure pratique tout au long de la récession qui a frappé le Royaume-Uni au début des années 90. Le papier continue en décrivant la culture d'entreprise au sein de laquelle une approche de l'amélioration continue et de l'innovation a permis à l'ensemble du personnel d'aller plus loin dans leur quête pour la qualité totale. © 1997 Elsevier Science Ltd

Integration von stetiger Verbesserung und Innovation in eine Unternehmenskultur: eine Fallstudie

Abriss

Stetige Verbesserung vertritt, wie der Name schon andeutet, einen Ansatz zur Verbesserung der Leistung eines Unternehmens in kleinen Schritten über einen längeren Zeitraum. Bei diesem Ansatz ist es nicht die Größe jeden Schritts, die entscheidend ist, sondern die Wahrscheinlichkeit, daß die Verbesserungen andauern und fortgesetzt werden. Viele Unternehmen ergänzen inzwischen ihre stetige Verbesserung mit Innovation, da dies als erfolgreiche Ausschöpfung neuer Ideen betrachtet wird und es eine deutliche Synergie zwischen diesen beiden Philosophien zu geben scheint, sofern sie in eine angemessene Unternehmenskultur integriert werden. In dieser Arbeit beschreiben die Autoren die Fallstudie einer kleinen/mittelgroßen Werkstatt für Einzelaufträge im industriellen Herzen Nordwestenglands. Wir erklären in der Arbeit, wie die Firma es schaffte, trotz beträchtlicher Rückschläge und Härte ihre Ideen zur stetigen Verbesserung und ihren Glauben an beste Praktiken während der UK Rezession Anfang der 90er Jahre aufrechtzuerhalten. Die Arbeit beschreibt weiterhin