Effective Gatekeeping in New Product Development
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Every organization concerned with innovation is striving to bring new products to market faster, at lower cost, and with higher probability of commercial success. The literature is full of prescriptions for achieving these three, often conflicting, objectives. One finds repeated references to such concepts as fast cycle time analysis, concurrent engineering, cross-functional teams, voice of the customer, use of systematic processes, etc.

"Gatekeeping" is a relatively new term in the lexicon of product innovation. It will be defined much more clearly below. It has become very apparent, however, that a key factor distinguishing "best-of-breed" organizations from the rest, in terms of the results achieved from their product innovation processes, lies in their utilization of effective gatekeeping practices.

This paper summarizes the principles of effective gatekeeping. While this compilation of "best practices" draws upon insights gained from a number of organizations, I am most indebted to ExxonMobil Chemical Company, an exemplary practitioner whose Innovation Process embodies most of the principles outlined here. I also want to express my appreciation to Bob Cooper of McMaster University for the many insights he has provided over the years.

Introduction
It's useful at the start to define the words "product" and "innovation" as used in this paper. By "products" we mean new opportunities in the broadest sense, embracing physical products, processes, software, systems, services, and applications. "Innovation" is the process through which ideas are generated and developed into successful new products.

Product innovation processes typically provide for discrete decision points at intermediate stages along the path from opportunity conception to commercial implementation. These interim decision points are commonly referred to as gates. Indeed, the Stage-Gate process for product innovation, originated and championed vigorously by Bob Cooper, emphasizes the importance of these intermediate decision points in its name.

The generic Stage-Gate process has been described extensively by Cooper in several books and publications, so it is unnecessary to go into detail here. A brief extract from his 1997 article in this publication (Volume 1, Number 1) is sufficient to set the stage for our discussion:

> "A Stage-Gate process .... breaks the product innovation process into stages -- typically five or six -- with each stage comprising a set of parallel, cross-functional and prescribed activities. Between stages are gates: these gates are quality control checkpoints in the process; they open or close the door for projects to move to the next stage. Here senior management meets with the project team to decide on the merits of the project, and whether or not it should receive funding or resources for the next stage. Each gate has a pre-defined set of *deliverables*: the information that is required to make the Go/Kill decision to the next stage. Each gate also features a list of *criteria*, against which the project is scored in order to make the Go/Kill and prioritization decisions."

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Whether they employ formal Stage-Gate processes or not, many organizations utilize innovation processes that embrace similar concepts, especially that of intermediate decision "gates". And, whatever the process they employ, every organization has "gatekeepers" -- people whose approval is required before resources, initial or continuing, can be expended on innovation projects.

The term "gate", while descriptive, has, however, contributed to a somewhat narrow and limiting definition of gatekeeping. Since a gate is an interim decision point on the innovation path, this has resulted in a tendency in some organizations to think of gatekeepers as simply decision-makers, or judges, at discrete points during the project evolution, and of gatekeeping as simply decision-making at these points in time (usually associated with meetings).

Decision-making is obviously an important component of gatekeeping. In an effective innovation process, however, gatekeeping is invested with a much richer meaning than just decision-making at gate meetings. As discussed in this paper, effective gatekeeping involves, in addition, many facilitating activities, most of which take place external to gatekeeping meetings. These activities take place continually *during* the execution of stage activities, as well as *after* the gate decisions have been made.

It is thus more useful to think of gatekeeping as the facilitating mechanism -- the set of practices and behaviors -- that enable project teams to move good projects forward to rapid and effective commercialization. This paper attempts to provide a fuller appreciation of the elements of effective gatekeeping in terms of such practices and behaviors: gatekeeper responsibilities, norms of gatekeeper behavior, selection of gatekeepers, and conduct of gatekeeping meetings.

Responsibilities of Gatekeepers

Innovation is arguably one of the most difficult endeavors any organization undertakes. It helps immeasurably if gatekeepers view themselves as facilitators of innovation, whose ultimate function is to facilitate the rapid progress of the best projects along the path to commercialization. A corollary of this function is to ensure that the less attractive projects -- those failing to meet agreed criteria -- are terminated before they consume extensive resources, so that the requisite resources can be dedicated to the most attractive projects.

Carrying out their function effectively entails the following gatekeeper responsibilities:

Establish, with the full involvement of the project team, specific stage deliverables and unambiguous gate passage criteria, at the start of activities for each stage.

This brief statement embodies several of the most important aspects of the gatekeeper's job. Since the gatekeepers will eventually decide whether to advance a project, they need to come to grips early on with what it will take to convince them. This should be deliberated with the project team, to ensure that all of the team's wisdom is taken into account, and to achieve their full commitment. The criteria for success should also be decided, as explicitly as possible, before the actual work commences, so that the team's effort is focused on the issues that will impact the gatekeepers' decision. This advance planning requires a lot of effort, but a lot less than could be wasted on costly development work on potentially wrong things. It ensures that all are working toward the same goals, and that all will recognize when success is achieved.

Maintain contact with each project for which they have responsibility, and mentor the project team during project execution.

Despite the best possible planning, surprises -- good and bad -- will always happen as new information comes in. Development results may suggest shortcuts not envisioned when the activities were being planned. New customer inputs may call for "tweaking" product attributes. Competitive activities may suggest modifications in approach. Gatekeepers must thus be accessible to project teams during the execution of stage activities to review potential changes in deliverables or criteria. Even in the absence of possible mid-course corrections, gatekeepers should be in contact to share their wisdom and experience and to ensure more informed decision-making.

Make timely, firm, and consistent gate decisions

Gatekeepers must make timely decisions -- good projects should not be allowed to languish for want of resources, and poorer projects must be terminated as soon as it becomes apparent that they will not achieve the criteria that were established. The decisions should be clear and firm; killed projects must really be stopped so that resources are freed up for allocation to the more promising ones. Finally, gatekeeper decisions should be consistent

with the pre-agreed project success criteria.

Set priorities among competing projects.

Once a project has met the absolute criteria for gate passage, the next decision is a prioritization decision that must take into account resource availability. This requires that the project be ranked relatively against the other projects competing for resources, based upon an assessment of the "value" of the project relative to others. This in turn requires good knowledge of the competing projects and some common bases for comparison.

Since resources are never unlimited, the best projects can be accelerated only if the less promising projects are culled expeditiously. An effective prioritization or portfolio management process is thus a critical aspect of any product innovation process, to keep the organization from working on too many projects and "over-fractionalizing" resources.

Gatekeepers must agree among themselves on the areas of strategic focus of the business unit, and on the criteria that will be applied to prioritize projects competing for resources. Once agreed upon, the criteria must be applied consistently.

Commit resources and ensure implementation of the resourcing decisions.

With the emphasis on resourcing the most promising projects, resource commitment is clearly a vital gatekeeper responsibility. This responsibility has implications for the composition and organizational level of gatekeeping teams, as discussed in the section on gatekeeper selection.

Enlist appropriate gatekeepers for the next gate meeting and secure their participation during the next stage of the project.

Some organizations change compositions of gatekeeping teams as the project advances and resource commitments escalate (see section on gatekeeper selection). Where this applies, gatekeepers are responsible for enlisting their successors when the project passes a gate.

Communicate gatekeeping decisions promptly to the project team members, senior management as appropriate, and other relevant constituencies such as support functions and customers.

Execute and sign any prescribed documentation.

A formal system of documentation is required in any quality process, and many processes prescribe forms to document gatekeeping decisions, for example.

Act as advocates of projects to higher levels of management, when their endorsement will ultimately be required (see section on gatekeeper selection).

Ensure that projects do not exceed approved budgets or schedules without explicit consideration and authorization.

Promote high standards of project management effectiveness by monitoring the quality of execution of the project deliverables and providing feedback.

Consistent with the concept of continual mentoring of the project team, this function should be carried out on a continuous basis.

Promote high standards of execution of the innovation process.

This responsibility entails monitoring process performance, recognizing exemplary application, communicating ideas for improvement to the process owner, and adhering to the norms of gatekeeper conduct (see below).

And finally, as an overall responsibility, facilitate project progress by being alert for and helping the project team overcome any potential obstacles to timely project completion.

This is a formidable list of responsibilities. It invests gatekeeping with a much richer function than simply decision-making. It is what the best gatekeepers do to facilitate the progress of the projects under their purview.

Norms of Gatekeeper Conduct
As organizations progress toward more systematic innovation processes, the role of the manager must evolve in parallel, from the traditional judge/decision-maker role to the coach/facilitator role embodied in the discussion of gatekeeper responsibilities. This often implies the need for a change in behaviors. Here is a list of "norms of conduct" that gatekeepers must work to cultivate if they are to discharge their responsibilities effectively:

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- Gatekeepers must put high priority on their gate-keeping function and ensure that they never become bottlenecks to project progress.

  Project progress should never be impeded because of the failure of gatekeepers to fulfill their responsibilities. Gatekeepers must make themselves available for mentoring, decision-making, and facilitation as the project team requires. If circumstances make it impossible for a gatekeeper to fulfill his or her roles, the gatekeeper must make a clear delegation of responsibility, including the responsibility for gate decision-making.

  Gatekeepers should carry out their coaching/ facilitating roles without crossing over the line of micro-managing the details of project execution.

- Gatekeepers should prepare themselves for gate meetings by studying the relevant project material in advance.

  This is a courtesy that should prevail whether or not an organization employs a systematic process, but the institutionalization of this norm of conduct becomes especially important when a formal process is employed.

  Gatekeepers must restrict their inquiries to questions appropriate to the specific deliverables of the gate at hand.

  A common trap that gatekeepers fall into is to seek more information than is warranted by the stage of the project. An aversion to risk is common to the culture of many organizations, leading gatekeepers to seek out details "before their time". Remember that risk is being managed through the use of the process, which breaks the innovation path into discrete phases and intermediate decision points before further resources are authorized.

  Gatekeeper decisions should be disciplined and based on the pre-agreed-upon criteria for the gate, with no hidden criteria or last-minute raising of the hurdles.

- Gatekeepers must work by the "rules of the game", following the company process and treating all projects consistently, with no special favoring of "pet" projects.

  Gatekeepers should understand and act consistently with the principle that bringing a project to a rapid, efficient "no-go" decision where appropriate represents a success.

  Many projects do not deserve to be progressed, and the innovation process must be viewed as a winnowing-out process that focuses resources on the most deserving projects. This can happen only if the less attractive projects are terminated in a timely manner. Project teams need to look at their projects objectively, and this behavior needs to be reinforced by gatekeeper conduct.

- If gatekeepers become aware of a major weakness in the project, they should inform the project team immediately, and not wait for the next gate meeting.

  This is entirely consistent with the responsibility of gatekeepers to act as ongoing coaches and mentors concerned with speeding up projects, as opposed to judges at fixed milestones.

  Gatekeepers must support decisions of the gatekeeping team. Once the gatekeeping team decides to continue or increase project resources, individual gatekeepers must provide the resources under their control.

Selection of Gatekeepers

Gatekeepers are stakeholders in the project, typically managers representing the organizational units involved with the execution and commercial implementation of the project. Since the tasks performed during each project stage typically comprise a cross-functional set of activities requiring the participation of several functions/organizations, gatekeeping similarly requires cross-functional participation.

This introduces the concept of a gatekeeping team, with team members representing such functions as Technology, Marketing, Product Management, and Manufacturing, and perhaps others such as regional management, depending upon the project issues and their importance. The organizational level of the gatekeepers is usually a function of the magnitude and importance of the project.

The fundamental principle behind gatekeeper selection is that gatekeepers must be able to approve and commit the human and capital resources needed to successfully complete the next stage (at least) of project activity. This principle often implies a change in the composition of the gatekeeping team sometime

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during the project lifetime, with the organizational level of the gatekeepers escalating as the project advances through the successive, increasingly resource-intensive stages.

On the other hand, some organizations find it more effective to use an unchanging team of relatively senior gatekeepers throughout the life of the project. This is often the case in relatively flat organizations, and in organizations working on fewer, larger projects. Similarly, for major projects that will eventually entail large resource commitments in the late stages, an organization may elect to employ higher gatekeeper levels at the earlier gates than would be called for by the lower resource levels involved. This approach enhances continuity between the project team and the gatekeeping team and minimizes the disruption that may be caused by a changeover. It does, however, place a greater burden on senior management.

Each organization needs to decide between these two approaches, based upon its own characteristics. Whatever method is chosen, the fundamental principle still applies: gatekeepers must have the authority to commit the resources needed to successfully complete at least the next stage of the project. If an organization elects to employ changing gatekeeping teams as a project advances, gatekeepers should nominate the appropriate gatekeepers for the next gate at the conclusion of each gate meeting, taking into account the resource commitments that will likely be entailed at the next gate and the associated authority levels.

Many innovation projects require the investment of capital funds, sometimes during the development stages and often prior to commercial implementation. Consistent with the above principle, gatekeepers must be able to commit these funds, along with the human resources required.

Organizations generally have well-developed policies and processes for managing their capital investments, including the specification of "gatekeepers" who must approve/endorse the commitment of capital investment dollars. Where processes to manage innovation intersect with processes to manage capital investment, it is of course essential that the processes meld smoothly. An issue that arises in many companies is that capital approval gatekeepers (for any significant capital commitments) are often at the very highest level of the organization, sometimes at the president/executive vice president level.

It is usually unrealistic to expect people at this level to act as innovation project gatekeepers, yet their endorsement is necessary for the capital expenditure commitment. When an individual having the appropriate capital approval authority cannot be on the gatekeeping team, he or she may delegate authority to the gatekeeping team. The ultimate resolution lies in the recognition of the distinction between approval/endorsement and gatekeeping in the sense described above. It is up to the gatekeepers to advocate the project to the ultimate capital approval authorities and secure their endorsement of the necessary capital commitment.

Effective Gatekeeping Meetings
From the foregoing discussion, it should be evident that effective gatekeeping meetings are somewhat anti-climactic events. With clear, up-front definition of the required stage deliverables and the criteria for gate passage, along with on-going mentoring of the project team by the gatekeepers, there should not be any surprises at gate meetings. All involved with the project should have a clear idea, in advance, whether the absolute criteria for gate passage have been met (although a project that meets the pass criteria may have to be assigned a "hold" decision temporarily because of non-availability of resources, if relative priorities place other projects ahead of it.)

Despite the expected absence of surprises, formal gatekeeping meetings should be held at the conclusion of the activities for each stage. A formal meeting before the decision is ratified ensures that any minority views have been considered and any last minute issues resolved. Also, a formal gatekeeping meeting has the important value of marking progress toward commercialization, or of bringing formal closure to a low priority project.

In addition, the gatekeeping meeting provides the opportunity for the gatekeepers to revisit the portfolio of projects under their purview and consider whether the project under consideration merits continued/additional resources in terms of its relative priority.

For projects that do not pass the gate -- which represent the majority of projects in the early stages -- the gatekeeping meeting offers the opportunity to recognize an efficient and timely project termination. Such decisions are vital if resources are to be made available for assignment to the more promising opportunities. It is critical to the success of the innovation process for project teams to recognize that a kill decision has been made, to understand why the kill decision

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was taken, and to appreciate that a quality process, which has considered all of their inputs, has operated to arrive at the decision. The meeting thus contributes to achieving organizational alignment behind termination decisions, and helps people in the often difficult task of "letting go" cleanly and moving on to the next assignment.

Similarly, for projects that get the go-ahead to move forward, the gate meeting affords the opportunity for a formal celebration. It provides a clear demarcation between stages, and ensures clear alignment between the project team and the gatekeeping team on the plans for the next stage and the critical success factors for the project.

Some guidelines that will contribute to effective gatekeeping meetings are offered below:

Appoint a "lead gatekeeper," or chairperson of the gatekeeping team, to chair the gatekeeping meeting and serve as the contact person for administrative purposes while stage activities are in progress.

- Go ahead with a gatekeeping meeting only if all the agreed deliverables are complete. (A deliverable, of course, includes the assessment that a critical project target is unattainable, hence leading to a "kill" decision.)

Ensure that all written materials documenting the achievement of the deliverables -- technical reports, marketing studies, freedom of operation assessments, etc. -- are in the hands of the gatekeepers sufficiently in advance of the meeting date to permit adequate time for review.

Adopt a standard meeting format and stick to it. This might include, for example, the project team being given an uninterrupted period of time at the beginning of the meeting to present a summary of the deliverables, followed by a question and answer session moderated by the lead gatekeeper to elicit further details and address critical issues. The gatekeepers should then go through the list of pass criteria and decide, or perhaps more descriptively, ratify, whether they have been met or not.

Decide in advance the process by which gatekeepers will reach a decision -- will a formal scoring system be employed with a quantitative standard for passage, will the decision be unanimous or by majority vote, etc.

- Invite the project team to be present at the meeting, if possible. They may be asked to leave the room if the prioritization decision involves sensitive discussion of other projects competing for resources. If they are not present when the decision is taken, they should be informed of the decision in person immediately after the meeting.

- Consider videoconferences and teleconferences.

- Do not adjourn a gatekeeping meeting without a decision being taken to proceed, terminate, or hold until resources become available.

- Choose a tentative date for the next gatekeeping meeting at the conclusion of each gatekeeping meeting. It should be an aggressive target, but consistent with the assigned resources and a realistic work plan. If needed, an extension can be requested later by the project team or initiated by the gatekeepers.

- Have an external facilitator present at occasional gatekeeping meetings, to assist from a process standpoint and to help ensure that the spirit of the process is being followed.

- The meeting should conclude with an assessment of the effectiveness of the application of the process to the project. Recommendations for improvement of the process should be documented by the lead gatekeeper and transmitted to the process manager.

Conclusion

The roles of the gatekeepers and the principles of effective gatekeeping summarized above represent significant change from past practices for many organizations. Considerable effort will often be required, at least during their early application, to implement these principles fully. This vision of effective gatekeeping represents an ideal to which an organization must aspire, however, if it is to achieve the full benefits of its innovation process.

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