Gate Methodology for Project Management

Chandrashekhar Kulkarni, PMP

and S Ketharaman

Every project sponsor desires that his funded project should be executed successfully within the allocated budget and on schedule. During the project execution phase, program managers are always questioned about the project status. Hence, they are always in hunt of a reliable process/methodology that can provide them with the framework to monitor the project effectively. Gate Methodology serves as an effective project monitoring technique to address this irking issue. It is fast gaining acceptance as it provides an early warning system for future budget and schedule slippages. Thus, it provides the framework to assist the project sponsors and program managers to monitor the project and take appropriate timely decisions about enhancing, continuing or stalling the project to maximize the benefits or minimize the losses.

We have all heard horror stories of IT projects gone awry, where the project sponsor grilled the project manager saying, "How did the costs cross the budget by 400%? Why did the project get delayed by three months? This defeats the purpose of the project" and then, concluding, "Had I known this earlier, I would have abandoned this project long ago and prevented good money from going down the drain along with the bad money".

Monitoring and control are of prime importance in the execution phase of a project as progress is determined by time and costs involved. The earlier a slippage is detected, the more cost-effective it becomes as corrective actions can be taken.

Having said this, have you, as a project manager, wished that you had a better system that could warn you of potential challenges well ahead?

Well, Gate Methodology is your dream come true. Also called "Phase Gate Development", Gate Methodology is seen as one of the best ways to be forewarned about slippages in projects. Offering a framework that facilitates project review at various 'gates' during the tenure of a project, it offers project managers superior control and knowledge of a project at every single instance of its deployment.

Gate Methodology

Defining project scope requires certain amount of mastery and some premonition. With a lack of adequate information being available during the initiation stage of a project, managers are compelled to make several assumptions while preparing time and cost estimates. As a result, there is a high probability that these estimates are nowhere near accurate and, therefore, may not stand true during the tenure of the project.

About the Authors

Chandrashekhar Kulkarni, PMP, has close to 10 years of experience in IT industry, most of it being in banking, cards and Application Security domain. He is currently working as a Project Manager in i-flex solutions ltd. The author can be reached at Chandra.Kulkarni@gmail.com.

S Ketharaman, has close to 20 years of experience in the IT industry in various roles in sales, marketing, delivery, and general management and across a wide range of markets like India, USA, Europe, Asia Pacific, and the Middle East. He is Senior Manager-Retail Payments and Application Security at i-flex solutions limited. The author can be reached at info@sketharaman.com

The spirit of Gate Methodology is to accept this hostile reality and address it. It is based on the principle, "Do not commit your entire budget upfront if you do not have sufficient information to support your commitment". That's why it is also referred to as a "Phased Commitment Strategy".

Concept of a "Gate"

The Gate Methodology advocates splitting the project into various logical phases and positioning a 'gate' at the exit of each phase, also serving as an entrance to the next phase.

The number of gates may not necessarily map into the different logical phases of the project. They will depend on various factors such as clarity of project scope, budget and the visibility that the project enjoys in the parent organization.

Understanding "Gate"

To apply the Phased Gate Strategy, it is important to get a clear understanding of "who does what" at each gate, thus making each gate a 'Decision Point'.

Each Gate has three elements associated with it:

Mandatory Deliverables – These are items that a project team will be asked to present at a Gate. Of course, there will be a different set of deliverables for each Gate.

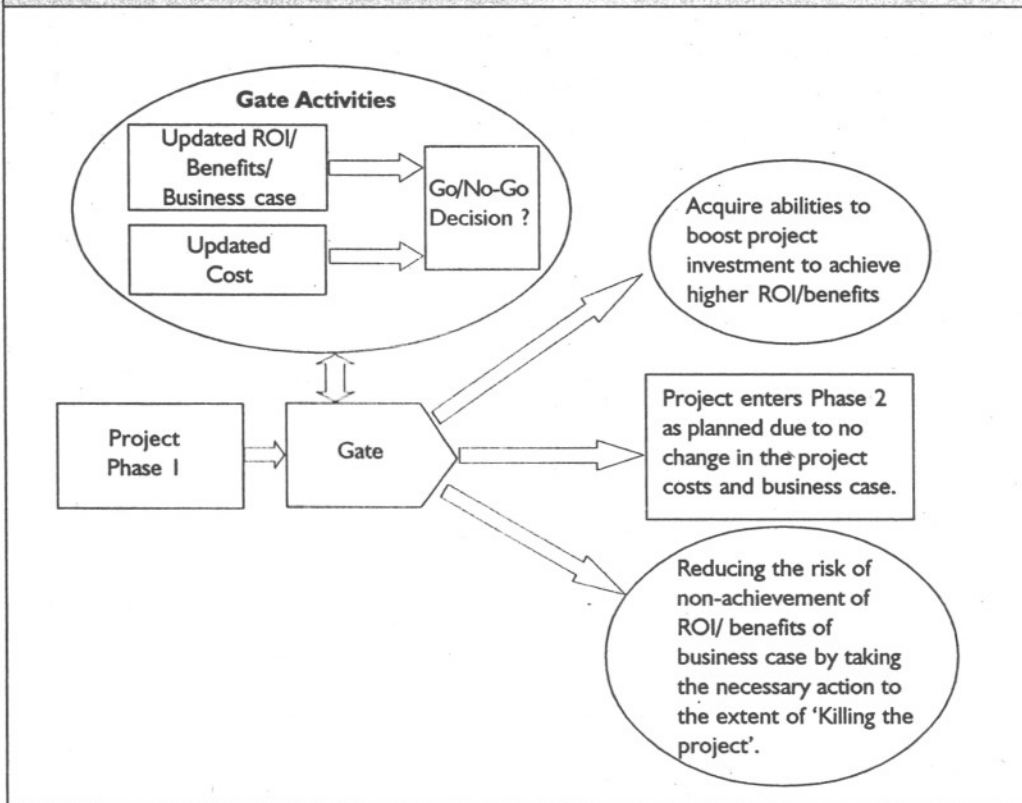**Gate Criteria** – Set of questions that help decide if the project should proceed into the next phase.

Specific Outputs – A Go/No-Go decision and the related action plan

Phase Gate Review

Does the last element mentioned above create some confusion? Let us look at it from the perspective of a 'Phase Gate Review'. As we have seen earlier, project review is conducted at every gate. The purpose is to review project deliverables specific to the gate and revisit the business case. The proposed scope and benefits are weighed against the estimated project costs, delivery schedules and risks, and a decision is made about whether the project should continue and enter the next major phase. Since the decision directly affects the budget, the sponsor or organization that is funding this project is the decision-maker. In small projects, a single person from the funding organization is authorized to take this decision. In cases where large projects/programs are involved, this call is generally taken by the steering committee. The project's sponsor is a part of the steering committee and hence, plays a major role in this decision. Here, it is important to note that with passing time, the business case, in addition to the costs, have to be changed.

Due to change in market conditions or the related economy, there is a possibility that the benefits, as indicated in the original business case, may have enhanced or diminished.

Project Implementation Using Gate Methodology

Gate Activities

Updated ROI/ Benefits/ Business case → Go/No-Go Decision ?

Updated Cost →

Project Phase I → Gate →

Acquire abilities to boost project investment to achieve higher ROI/benefits

Project enters Phase 2 as planned due to no change in the project costs and business case.

Reducing the risk of non-achievement of ROI/ benefits of business case by taking the necessary action to the extent of 'Killing the project'.

Hence, in the Gate Review we actually re-evaluate the benefits of the business case along with revised project costs. These two factors are then weighed against each other to enable the Project Steering Committee/Project Sponsor to take suitable action. There are various possible actions that can be taken depending on the situation. If the review reveals that the business case in the current situation is more profitable, the Project Sponsor may take a decision to scale the project upwards to maximize the derived benefits. He/they may want to boost the project with more funds so that maximum possible benefits can be drawn from the existing favorable situation. Alternatively, if external factors have influenced the business case so as to substantially diminish the derived benefits, the Project Sponsor may want to cut down further costs for the project and even go to the extent of 'killing' the project when the business case is no longer valid.

It is interesting to note that 'killing' a project is not a sign of project failure. There are various reasons why projects can be killed. One of them could be the changes in regulation that have given rise to this project. Other reasons could be that due to the revised project schedule/budgets, the business case is no longer valid and, the project, even if completed, may not meet its initial objectives. There are certain factors that are external to the project due to which a project can be killed. To cite an example; within the time duration between the project initiation and the Gate Review, more important business needs may have risen and the company may have had to divert resources to meet that urgent need. As we can see, this has nothing to do with the existing performance of the project.

Implementing Project without Gate Methodology
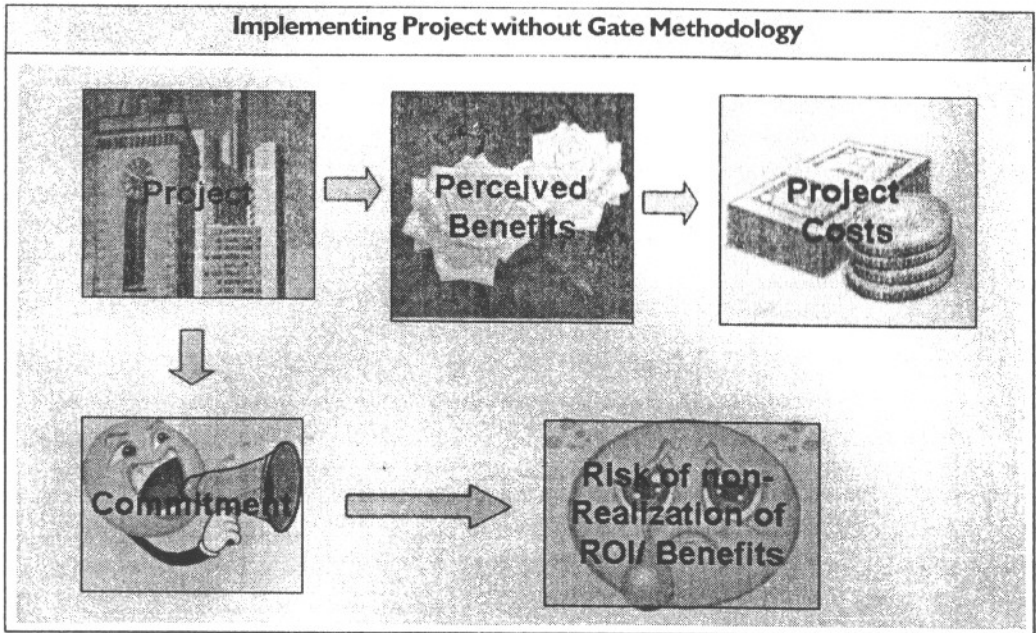
Applicability of Gate Methodology

This methodology can be used to monitor any project, or product lifecycle, or implementation projects of any size; the only constraint being that it should be possible to split the entire lifecycle into important sequential phases. This methodology is particularly useful in large projects/programs where investments are quite large, since it calls for involvement from the Project Steering Committee and important stakeholders of the project, including project sponsors.

Why Gate Methodology

Let us perform a quick recap on what exactly constitutes conventional project management practice. Depending on the business needs or user demands, a business case is prepared. Once this business case is approved by the authority concerned (who then performs the role of a project sponsor), the project is initiated. Based on the information available, costs are estimated at the beginning of the project. This estimated cost forms the baseline budget and a reference point for the entire duration of the project. All deviations are measured and compared against this figure. Thus, in the conventional method, an assessment and decision are made right in the beginning on whether the project should be undertaken at all (and subsequently completed). Once this decision is taken, no further assessment is done. It completely ignores the fact that the situation and expenses are likely to change. The assumptions that were held good during the initial assessment may however be no more valid as the project progresses. It, therefore, ignores important characteristics of the project such as progressive elaboration. Gate Methodology is based on these characteristics and accepts that projects are dynamic in nature.

Hence, the project assessment performed at the beginning of the project may not remain valid during the various stages of the project. There is the need to perform reassessments at various check points to revalidate the decision taken before the project initiation.

The first step is to establish various gates for the project. It is very important to identify the appropriate number of gates and allocate them at the right places. It is recommended that a gate be placed at the end of every major phase of the project, thereby, helping identify its major phases. For instance, a software development project that follows the waterfall methodology can be logically divided into requirements, design, code development and testing phases. Hence, a gate can be located at the end of each phase.

Once these gates are identified, the next step is to identify the deliverables that will be required for each gate and a set of questions the answers to which provide an insight into the revised project schedule and budget estimates. This data is then compared with the business case and an assessment is made to check if the business case still holds good. This enables the Steering Committee (or the Project Sponsor) to make a decision, if it is in the best interest of the organization, to advance the project or 'kill' it.

A Phase Gate Review is a legitimate forum where the project's progress is tracked and reviewed by the Project Steering Committee. It provides the latest status to important stakeholders, including the project sponsor. Depending on the status, the project sponsor may then want to revisit the business case with the updated estimates, if any. This also provides the necessary information to the project sponsor to help seek additional budget/times for the project, if necessary. Depending on the deviations in the budget and validity and profitability of the business case, the Project Sponsor may take an appropriate decision to boost the costs, move into the next phase with the existing plan, or even make a bold decision of 'killing' the project.

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Associated Case Study

Let's illustrate this with an example. A well-known product company proffered a Single Sign-On (SSO) product designed for a popular Internet browser. At the same time, another Web browser was widely gaining popularity. The company thought of leveraging this new browser to expand its customer base and looked at developing its product on the new Web browser. The project was outsourced to a vendor after the budget and approximate timelines were decided.

During the initial phase, the expected budget and timelines were conveyed to the project team. Based on the information available and a host of other assumptions, the team validated these estimates.

After the design phase, it was discovered that the timelines and assumptions no longer held good, implying that the project would not be completed in the predefined budget and timelines. However, the project moved into the coding and testing phase. As it approached the end date, the slippage in time and costs were quite evident.

When additional budgets were requested for, the project's sponsor analyzed the statistics and revised figures. He revisited the business case with the updated figures and was stunned to discover that the business case was no longer profitable. He soon realized that he was stuck in a weird situation where if the project were completed with additional

budgets, it would not be profitable, while whatever he had in his hand was not complete enough for a launch. Now, let us see how Gate Methodology would have helped manage this situation in an efficient manner.

The business owner who also acts as the project sponsor for this project drafts the business case for this product. He works out the budget and timelines so that this business case is a profitable bet. During the project initiation, a Project Steering Committee is formed that comprises a project sponsor, a representative from the project management team and other important stakeholders of the project. The next step will be to make a decision on the number and placement of gates. It is recommended to have a gate at the end of each major phase (requirements, design, coding and testing phases). Deliverables specific to each gate are then identified and documented. The team is also consulted while deciding upon the mandatory deliverables for every gate.

When the project enters the execution phase, the Project Steering Committee monitors the project for various gates. When the requirements study phase is completed, the Steering Committee meets up for the Gate Review, where the team presents mandatory deliverables specific to that gate. Projects, being progressively elaborative in nature, offer more information at this stage rather than when compared to the initiation phase when the initial estimates were drawn. These estimates are revisited now to evaluate if they still hold good. Changes in the estimates to the baseline are communicated to the Steering Committee. For the sake of convenience, let us assume that the revised estimates were 5% more than the estimate made to the baseline. The Steering Committee now knows well in advance that it will need more budgets for completion of the project. It has the necessary information to take the Go/No-Go decision. In this case, a decision is made to move the project into the next phase since the deviations are within acceptable limits.

The project enters the design phase. The design engineers work on the high and low level stages of the design, and have the necessary design documents at the end of the design phase.

The Steering Committee meets to review the progress as it encounters the next gate. When the effort estimation is reworked based on the information in the design documents, it is discovered that the budget requirements for the project have been increased by 50% as compared to the initial estimates. Upon revisiting the business case, the sponsor realizes that the business case may not be a profitable one, leading to the Steering Committee deciding to 'kill' the project in order to save costs.

Conclusion

We have seen how the effective use of the Gate Methodology helps a project's sponsors to monitor the project, and make appropriate decisions about stalling or continuing with the project. These decisions are dependent on factors such as whether further funding that went into an unsuccessful project could have been saved, or if the project could have been temporarily suspended so that existing resources are diverted to a more important project. Gate Methodology, we believe, will soon be a commonly accepted practice in project management, and be widely accepted by organizations worldwide for the enormous value addition it offers.❖