

LGS Project Management Methodology

The LGS project management methodology is integral to our overall delivery methodology. Based on *inPRO*, one of the LGS *inSPIRATION* series documents, our methodology is compliant with standard project management methodologies, including PMI PMBOK. Principles and techniques are discussed below.

Project Planning

LGS believes that successful management of projects begins with effective planning. This includes planning not just of tasks and schedules, but of all aspects of the project. Key planning elements are:

- **Development of a global project plan** - This is a high level plan covering the entire project duration. It includes timelines for each major activity and deliverable, total required effort, and key milestones. This ensures that LGS and the client have the same understanding of priorities, and that the project's constraints, critical success factors, and risks are reflected in the project's planning strategies. The global plan is jointly reviewed to ensure concurrence, and both parties must agree to the plan.
- **Development of detailed work plans** - This ensures that the deliverables are achievable, that the workload is properly distributed, and that the role of each person is clearly understood.
- **Documentation of the project organisation** - This includes not only the LGS team organisation, but also those aspects of the client organisation which have a role in the project. This ensures not only that the project is well organised but also that the lines of communication between the client, LGS, and any committees and task forces have been properly established.
- **Project scope and objectives** - These are documented and reviewed with the client to ensure that LGS and the client are working to the same set of expectations. It also allows validation of the project plans against the scope and objectives, ensuring that all in-scope items are included in the plans.
- **Quality assurance and control** - Strategies to ensure high quality deliverables are developed early in the project, reviewed with the client, and implemented as part of the total management process.

Project Control

Effective planning of a project is a key success factor. However, proper control procedures are equally important to ensure that progress is made as planned, and are therefore essential to both the client and to LGS. Managing a project's scope requires:

- a baseline, which is established with the initial project plan and documented in the Project Definition Statement (also known as the Project Charter); and
- procedures for documenting, assessing, tracking, and resolving changes and issues.

At LGS, we are proud of our procedures, which are:

- **Complete** –all required aspects of project control, as determined by the extensive experience LGS brings to these tasks, have been taken into account in determining procedures.
- **Detailed** – the LGS Project Manager has access to a complete set of forms and activities for project control.
- **Flexible** – we take pride in our ability to adapt our methodology to client-preferred administrative procedure or form for reporting or applying an aspect of project control.
- **Thorough** – because our procedures are complete and detailed, LGS can adapt to client-preferred procedures and still ensure that all required steps in a process are followed by augmenting and adapting as required to maintain control of scope.

Project Plan Maintenance

LGS updates its project plans each week to reflect the actual progress made on each task. This is done by the Project Manager in conjunction with the technical team. In order to achieve this, task durations normally do not exceed 5 days. Tracking tasks at this granularity allows a binary approach to the weekly evaluation of task status: tasks of less than 5 days in duration are considered either zero or 100% complete. In this model, only summary tasks can be viewed as partially complete, the degree of completion being a function of the number of sub-tasks completed. This approach allows for significantly greater accuracy than asking delivery personnel to estimate degrees of task completion. In turn, this accuracy allows the Project Manager to act early to control situations that could affect the project schedule.

Change Management

An effective change control process is required if the project is to succeed. An effective change control process is one which ensures:

- identification of all changes;
- identification of their effect;
- timely review of changes; and
- identification of required actions.

Given such a process, no changes will be made to the project's scope or schedule without the knowledge and approval of the client, and control of budget and schedule will be maintained.

LGS does not make use of the change control process to maximise our income from a project. Our estimates for both time and cost are as accurate as we can make them at any given time, and we are committed to the estimates we provide. The change request process is a part of overall project management, and every minor deviation is not used as an excuse for budget changes. LGS has established a reputation of delivering value for the money, and will continue to do so.

Occasionally, unforeseen factors (for example, changes in the client's business requirements) require substantive changes to the budget or schedule. When this occurs, the project team will estimate the new requirements, and specified time and material rates will be used for calculating any budget estimates required (rates are normally specified in the initial proposal). As part of our

commitment to change management, will provide two hours of requirements investigation and preparation, at no expense to the client, for any change request.

Steps in the Change Request process are:

Action	Description	Responsibility
Initiate Change Request	A change request is normally initiated when a change to the scope or timetable of the project has become necessary owing to new factors, or is being considered for business or technical reasons.	LGS PM or Client PM, or other team members where appropriate.
Complete CR form	Document the projected change and the reasons for it; assign a CR number; ensure that the CR is logged in the Issue Log; forward CR to Steering Committee.	LGS PM or Client PM (may be delegated to PCO)
Review CR	Review the request, and the potential effect on the business. Note that if the analysis requires extensive out-of-scope work from the project team, this would have to be authorised by the Steering Committee.	Steering Committee, LGS PM, Client PM
Approve or reject CR	Decide on and mandate a course of action; document decision in CR form; sign and return CR form to LGS PM.	Steering Committee
Incorporate decision into project plan.	Ensure that all necessary activities to carry out the mandated decision form part of the revised project plan.	LGS PM (may be delegated to PCO)
Update issue log	Ensure that all closure activities are entered into the issue log.	LGS PM (may be delegated to PCO)
Report on status	As part of the normal status reporting procedure, publish the change and its effect on the project.	LGS PM

Table 1 – Change Request Process

Issue Management

Management of project issues - LGS understands that a number of issues or situations requiring a decision will occur during most projects. We believe that successful issue management requires:

- identifying the issue;
- analysing its impact;
- identifying solutions;
- documenting the advantages and disadvantages of each solution; and
- working with the client to choose the best solution.

Issues may be identified by any member of the project. When an issue arises, it is recorded in the Issue Log, ensuring that no issue is lost. All issues must be resolved, and the project team and the client normally work together to accomplish this. The resolution of each issue is recorded in the Issue Log.

Issues are reviewed on a regular basis to ensure that agreement is maintained. Issues that may have a significant effect on the project are forwarded following the Decision Request Procedure. At that time the Project Managers, and the Project Sponsor, are incorporated into the resolution team.

Steps in the issue resolution process are:

Action	Description	Responsibility
Create issue log	Using PCONotes or other repository as required, create a file and an administrative process for notification of, tracking, and updating a log of project issues.	LGS PM (may be delegated to PCO)
Raise an issue	When a problem arises which is not an anticipated part of the project activities, an issue should be raised. This will normally be done in discussion with the LGS PM.	Any project member becoming aware of an issue
Record issue in log	The issue should be entered, and the administrative process for notification, etc., initiated.	LGS PM (may be delegated to PCO)
Recommend resolution	Normally, the solution or set of potential solutions to an issue will be evident. The recommended resolution, and the reasons for choosing it, should be documented in the issue log.	LGS PM, or other team member(s) as appropriate
Resolve or escalate issue	If the issue can be resolved at the project level, the LGS Project Manager and client Project Manager to agree on, and subsequently implement, the solution. If the issue cannot be resolved – for example, because it has a business impact beyond the scope of the project – the LGS Project Manager will issue a Decision Request or Change Request (q.v.).	LGS PM
Confirm resolution	Issues resolved at the project level should have the resolution entered in the log. Necessary steps to implement the solution will become part of the project plan. Issues escalated via a Decision or Change Request will be resolved at a higher level. The LGS PM must ensure that these are followed up on and resolved in a timely manner.	LGS PM
Update issue log	Ensure that all closure activities are actually entered into the issue log.	LGS PM (may be delegated to PCO)

Table 2 – Issue Resolution Process

Decision Request Procedure

When an issue which may affect the project is identified, a Decision Request is prepared. This is intended to initiate discussion of the issue and to ensure that the most appropriate resolution is identified. Decision Requests are also useful for communicating critical decisions that may affect other project areas, and ensuring that all parties concerned are aware of such decisions.

Steps in the Decision Request process are:

Action	Description	Responsibility
Initiate	A decision request is normally initiated when an issue cannot be	LGS PM or Client PM

Action	Description	Responsibility
Decision Request	resolved at the project level. Initiation includes identifying solutions and recommending a course of action.	
Complete DR form	Document solutions and recommendations; assign a DR number; ensure that the DR is logged in the Issue Log; forward DR to Steering Committee.	LGS PM or Client PM (may be delegated to PCO)
Review DR	Review the issue, and the potential and recommended solutions, with regard to the effect on the business.	Steering Committee, LGS PM, Client PM
Mandate decision	Decide on and mandate a course of action; document decision in DR form; sign and return DR form to LGS PM.	Steering Committee
Incorporate decision into project plan.	Ensure that all necessary activities to carry out the mandated decision form part of the revised project plan. If this changes the scope or time frames, a Change Request must be issued.	LGS PM (may be delegated to PCO)
Update issue log	Ensure that all closure activities are entered into the issue log.	LGS PM (may be delegated to PCO)
Report on status	As part of the normal status reporting procedure, publish the decision and its effect on the project.	LGS PM

Table 3 – Decision Request Process

Project Reporting

- **LGS project reviews** – The LGS Project Team reviews each project on a regular basis, normally weekly. During the review, progress, issues, problems, and plans are discussed in detail. This allows for early identification of situations or problems, enabling us to act upon them before they become critical. During the reviews, particular attention is paid to project risks, to ensure that the risk containment strategies remain effective.

In addition to the internal project reviews, projects are reviewed on a regular basis by the Project Management Office (PMO). The frequency of PMO reviews depends on a number of factors, but is normally at least once per month.

- **Client reviews and meetings** - LGS understands that remaining focused on the client's objectives is the single most important success factor for the project. We also understand that these objectives may be subject to change during the course of the project. LGS therefore makes every effort to ensure that the client is well informed about all aspects of the project. We strongly encourage feedback, decisions, concerns, and a generally high level of communication so that we are sure that the project is addressing the client's continuing needs. Unless there are exceptional circumstances, LGS recommends that client reviews be held at least every other week.
- **Status reports** - LGS provides regular status reports to the client, outlining progress toward milestones, work planned during the next period, and any problems or outstanding decisions affecting progress. These reports are normally presented at client reviews, attended by the LGS project manager, the client project manager, and other team members and stakeholders as appropriate.

Weekly status reports are the LGS Victoria standard. Where the client requires fewer status updates, LGS will comply, but strongly recommends that the interval between status reports should not exceed two weeks.

Reports show the status of:

tasks,
milestones, and
deliverables.

As well, status reports include any updates to:

the project plan,
the project issue log,
the decision request log, and
the change request log.

Any additional fields required by a client, or modifications to the status report format to meet the requirements of the client, will be incorporated as required.

Quality Management

LGS believes in Total Quality Management. Our focus is on your requirements and being responsive to them. Quality is something that is planned for and built into our custom applications. Quality can not simply be tested into an application. Our approach to quality is encompassed in four main areas:

- **Quality Management** - The determination of policy, objectives, and responsibilities, and then implementing them.
- **Quality Planning** - Identify the appropriate quality standards and then determine how to meet them.
- **Quality Assurance** - Quality Assurance is a management or audit function. This is the process of evaluating the overall performance to ensure that the quality standards established during the quality planning stage are met.
- **Quality Control** - This is the actual monitoring of the units of work or sub programs to determine if the product meets our standards. When errors are encountered, and corrected, staff is encouraged to identify methods to correct the situation so that it does not reoccur.

Quality Assurance

LGS has earned an excellent reputation for delivering quality solutions to their clients. To achieve high quality deliverables, LGS employs a comprehensive review approach:

- **Management Review** - All project deliverables are the direct responsibility of the LGS Project Manager and therefore must be reviewed and approved by management prior to delivery to the client.

- **Specialist Review** - In addition, to management reviews, in-house specialists review all project deliverables to ensure high quality. For example, all database designs, no matter how large or small, are reviewed by our database administrator.
- **Client Review** - In addition to following standards and guidelines for application development, LGS will perform walkthroughs with the client technical support staff to ensure the consistency, integrity and quality of the product. These review checkpoints may be seen in our proposed project plan.
- **Audit Review** - On occasion, LGS has in conjunction with a client, submitted all deliverables for a full audit review by an independent consultant. LGS stands by its reputation.

Quality Testing

LGS has earned an excellent reputation for delivering high quality application software to its clients. To consistently achieve high quality software LGS employs a proven four tiered software testing strategy:

- **Level 1 testing** - the unit testing done by the developer. The objective of this testing is to ensure individual programs meet the technical and functional requirements.
- **Level 2 testing** - the project quality assurance testing. This level of testing ensures that all applications are developed according to clients' development/design standards and ensures programming consistency among all developers. In addition it is intended to identify any misunderstandings, errors or omissions in the technical design.
- **Level 3 testing** - the system integration testing. This level of testing ensures the quality of the system functions and confirms the proper flow of data.
- **Level 4 testing** - the user acceptance testing (pilot phase). User acceptance testing ensures the system functions meet the defined system requirements and that they properly support the required business functions.

This approach provides the lowest risk to the client because it is consistent with the methodology used on similar successful projects managed by LGS.

The team's role within the project is to perform quality assurance with respect to Project Management, Appropriate Design and Development Reviews, and Documentation.