



Project Management

Company Profile

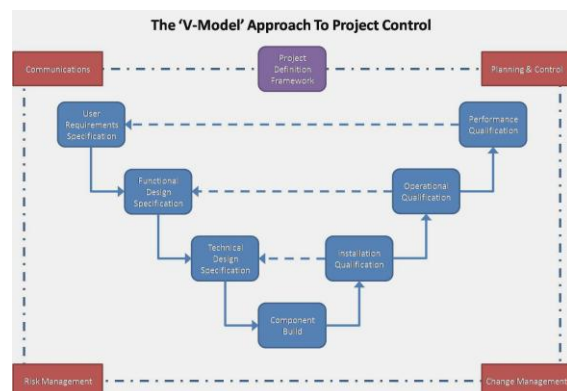
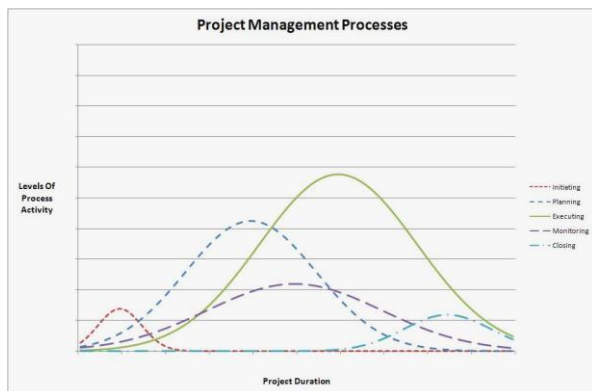
Scada Systems Management assists its clients to transform their business operations through the use of Manufacturing Enterprise Solutions (MES). This is achieved using the following services:

- Opportunity Assessment
- Hosted Services
- Custom Solutions
- Solution Support
- Project Management

Full details of all of these service offerings are given on our website at www.scada.com.au.

Project Management

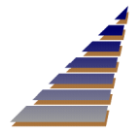
The project management approach which Scada Systems Management prefers to use draws upon the Prince 2 and PMI/PMBOK methodologies and is in line with the ISPE GAMP 5, V-Model. The V-Model approach and its variants is being adopted increasingly in regulated industries worldwide to comply with the requirements outlined in CFR 21 Part 11 for electronic signatures & record keeping.



The specific approach that we adopt to each project is tailored to the unique client circumstances. This can be formal and extensive or can simply be used as a backbone for the process. The value and intent of each of the stages is outlined below. Samples of supporting documents are also available.

Project Definition

This is the 'top-level' document that says what the project is setting out to achieve and how, in overview, it will be undertaken. For an individual work-stream this only needs to be a one page document. For a larger project or collection of many work-streams this would be more extensive. This would include the business & project objectives, organisation structure, reporting & control requirements and some mention of budgetary and timescale considerations. The main value of this document is it provides a means for all stakeholders in the client and supplier organisations to form a common basis of understanding about more significant aspects of the project shape & scope.



For a program or project with a defined scope, this document provides the ultimate sign-off for the measurement of success of the project. Where the 'Project' describes the open ended provision of services of an outsourced nature, then this document provides the basis of agreement for the provision of contractual services. An example of a Project Initiation Document (PID) is available.

User Requirements

For each project work-stream it is important that there is a statement of what functionality the users or the client organisation wants the project to deliver. This does not need to be a technical document since it expresses the client needs in terms of outcomes. The main value of this document is it focussed on one project work-stream and it enables all of the hands-on stakeholders in the client organisation to be involved in the process of defining what it is they want. This document, along with all of the other documents mentioned here are set within the context of the Project Initiation Document. It is the responsibility of the Project Manager to ensure that this coordination takes place. An example of a User Requirements Specification (URS) is available.

Functional Requirements

Having used the URS to reach an agreement between stakeholders on what needs to be delivered, the next step is for the supplier to describe how, in outline, they intend to achieve the client needs. It may be that not all of the needs are capable of being met, in which case, this should be stated explicitly. It may be that sub-contractors or non-standard component technologies will be used. In this case, the client needs to be involved in the process of determining what is acceptable. It may be that there are a number of options as to how the user needs may be met, that they might be met in part by subsequent project stages or that some functionalities are better positioned within other project work-streams. It would not be unusual that following a review of this supplier response with the client, that some prioritisation of the URS takes place based on budget, time-scale or risk. The main value of this document is it enables all parties to make an informed choice on what will be built prior to committing resources. An example of a Functional Design Specification (FDS) is available.

Technical Specification

For smaller project work-streams this stage would be done in parallel with the subsequent stage, which is Component Build. The main values of adopting a disciplined approach to documenting this stage when it is done separately from the build stage is that provides the basis for planning and resource allocation. This enables the Project Manager to move resources between projects to achieve the overall project objectives based on a quantified assessment of the build work involved. As a rule of thumb, any build that will take more than a week to achieve should have a technical specification. An example of a Design & Configuration document (D&C) is available.

Component Build

The important requirement of this stage is that what is done, and how it was done, is documented. Having adequate documentation supports compliance, testing, fault finding, maintenance, patches and upgrades. For smaller project work-streams, the Design & Configuration document and this stage will be done in parallel – stating what was done, which by definition, was what the developer intended to do! The beneficial outcome is the same. In this case, it is important that documentation takes place progressively throughout the build since if it transpires that the developer is switched to



another work-stream or becomes unavailable, the Project Manager is in a position to reassign the build task to other resources. In a similar vein, documenting the build phase, whether before the fact or during the task, enables multiple resources to be assigned to speed up critical build stages.

Acceptance Testing

All of the project stages mentioned so far (PID, URS, PDS, D&C) need to be signed off against by the client to confirm compliance with requirements. This needs to be done progressively by different stakeholders in the client organisation at different times. When these documents are written for all of the stages, the last part of each is to determine how the individual requirements will be tested to determine their acceptance or to identify the remedial actions to be taken. It is good practice to write the test plan for each phase at the time the document is written. This forces a discipline on the author to make sure the documents that are being written are practical, achievable and brief.

Status Reporting

The preceding stages were concerned with documenting the identification, definition, specification, planning and testing of requirements for individual work-streams. It is equally important that team members and stakeholders have an appropriate level of visibility, not only of the individual tasks, but of the progress of and issues relating to the overall program of works. In this way, better decisions can be made in order that the overall objectives of the program can be achieved.

Team Communications

The simplest means of achieving good team communications is 'co-location' i.e. putting the team in close proximity with each other. It is then inevitable that they will become aware of issues earlier on and will work in mutual support with of other. By documenting each stage of the process, formal team communication only needs to deal with exceptions. One means of achieving this is to use a This Week / Next Week report, an example of which is available This template may be written and issued or used as an aide memoir to prepare for a team meeting. Team members should consider what they have done in comparison with what they intended to do. If they are ahead or behind plan, the Project Manager can use this information to allocate resources. If they have issues then they should initially bring this to the attention of the team to seek assistance. The weekly team meeting is more effective if these simple reports are sent out prior to the meeting. This not only supports the operation of a multi-location team, but it enables preparatory action to be taken and permits the meeting to be focussed mainly on exceptions, issues and in seeking resolution. Priorities can then be reassigned dynamically. The weekly team meeting is a forum to cascade information from the Steering Group and controls the channels & content of communications back to it.

Steering Group

The Steering Group takes an overview of the Program and as such, is at its most effective when it has reporting at a summary level. An example of a Project Status Report is available. This report focuses on one week past, 2-3 months ahead and highlights issues for resolution – all on one page. It is the responsibility of the Project Manager to have the supporting detail to hand, but the meeting should not become a detailed review. The primary focus of the Steering Group is conformance to project objectives (quality), cost, timescale, risk and safety and the strategic options to address these. An example of a set of Steering Group Minutes is available.



Resource Planning

The Project Initiation Document should include a plan which has been worked through in some detail. The purpose of this plan is to determine the size and shape of the project and determine the 'pinch points' of the project. This is an inappropriate mechanism to use for resource planning on a weekly basis since the initial plan that goes to the Steering Group for sign-off should be one that is achievable. Given then that the Program is based on an achievable plan, then the Steering Group should take it as a given and the Project Manager need only report on exceptions and variations. An example of an initial Project Schedule is available (it is in Microsoft Project Plan format).

Budgetary Control

There is no right answer as to the format that might be used for reporting of cost performance against budget, but it is important that the scope, format, frequency and circulation of the reports are agreed with the Steering Group at the outset of the project. An example format for Project Cost Reporting is available. The most important point is that the project should have an agreed budget. Against this baseline it is then possible to report in overview against estimate, projection, spend-to-date, committed and variances rather than consuming time reviewing costs at a line-item level.

Change Management

Issues will be raised within a project. An example of form for raising Issues and a Register for controlling them is available. Some Issues will be non-events and will be closed by the Steering Group, but it is important that stakeholders have a mechanism to raise concerns. Some Issues will result in requests for a variation to the project scope. Variations requests may also be raised directly. Examples are available of a Change Request Form and a Change Register. Changes may or may not have an impact on cost, time-scale, quality, risk or safety. If so, then it is a matter for the Steering Group to sign-off against them unless the Project Manager is formally assigned latitude.

Risk Management

Upon initiation of the Program it is important that the key stakeholders participate in a Risk Assessment. This can take place at the levels of Risk Analysis and Risk Management. Examples of both of these are available. The main outcome of the Risk Assessment process is the preparation of a plan for risk monitoring, minimisation, containment and reporting. On a continuing basis, unless new risks arise, or the likelihood or severity of the identified risks changes, then it is sufficient to report to the Steering Group that there are no changes to the project risk status.

Conclusion

There is no single best way to manage complex projects. All of the components listed above need to be addressed to manage a project effectively, but the format they adopt and extent to which they are formalised is a matter for the Steering Group. As demonstrated by the supporting documents, Scada Systems Management is fully aware the requirements which underpin effective project management and has the flexibility and capability to create a control framework to suit client needs.