

Communicating and Integrating Time Management for major projects, programmes and portfolio

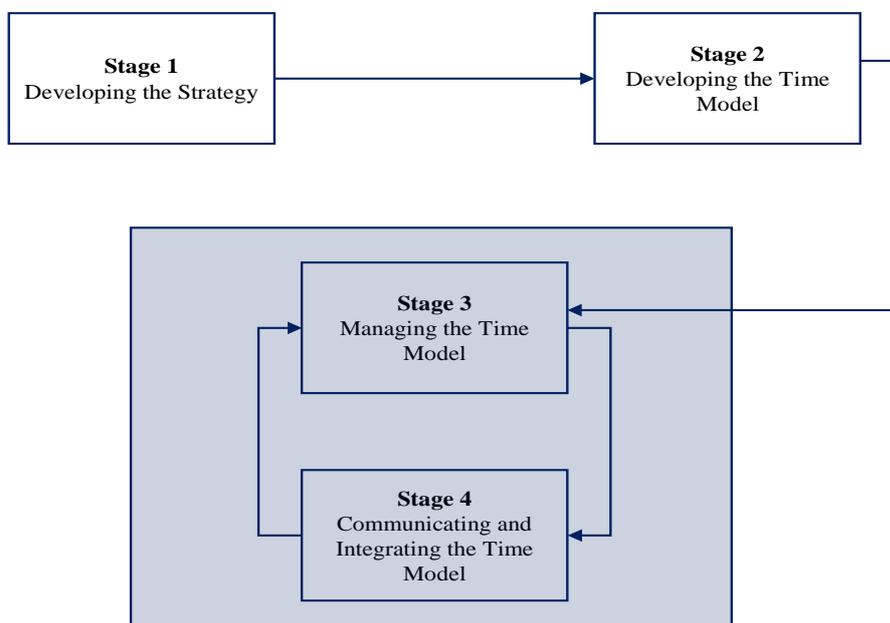
At the heart of a project is information and how it is used. Schedule and time related information has to flow within a project in a way that will help management, project managers, project teams and stakeholders to achieve business objectives and goals. This paper defines and describes how data and information is communicated and integrated within a major project environment using appropriate resources, systems and processes with some challenges and opportunities.

➤ Communication and project controls

Communication is the process of transferring information from one source to another. Effective communication of time related information is a two way process in which technical information, analysis, commentary and comments are conveyed through reports, speech and other mediums to a specific audience for the intended audience to perform an action or reach a decision based on this information.

The fundamental purpose of project planning and schedule management is to communicate effectively and with consistency, relevant and accurate information to project stakeholders at all stages of the project life cycle. Managing, communicating and integrating the Time Model are intrinsically linked as illustrated in figure 1.

Figure 1: The Time Management Cycle





The accuracy of progress and performance reporting and reliability of schedule integration fundamentally rely on the consistency and quality of the schedule. The schedule should be logically linked, progressed regularly and reflect the agreed scope and approved delivery methods.

Project controls are based on processes and systems used by project schedulers and cost managers to plan the timeline, sequence and budgets of a project in order to measure progress and performance with consistency: making complex projects or multiple projects and programmes easier to monitor, steer and manage.

Key processes essential to the operation of effective project controls include:

- (a) Planning and Scheduling / Cost estimating
- (b) Baseline Management
- (c) Progress Management
- (d) Change Management
- (e) Reporting Management
- (f) Risk / Issue / Opportunity (RIO) Management

To secure the success of a project, the project schedulers must set up, agree and use these processes to compile and issue status reports facilitating timely and informed decision making. This will allow for project cost, time, resources and quality (and other key indicators Health and Safety, Sustainability) to be managed effectively and efficiently. Effective project controls processes coupled with the appropriate software systems (adapted to the culture of the organisation and stage of the project) will provide the project scheduler with a powerful reporting capability.

In a programme or multiple inter-linked projects schedule environment, programme controls will collect and coordinate the appropriate key information from the programme's project schedules ensuring projects do not operate and deliver objectives in isolation and to the detriment of the overall programme's requirements.

In a portfolio, this information is gathered and monitored against the organisation strategic compass and key performance indicators.



➤ **Communication and Schedule Integration**

Schedule integration is the combination and co-ordination of multiple sources of time related information (e.g. stage schedules, work packages schedules or project schedules) so that they work together and form an “integrated” whole (e.g. a master project schedule or master programme schedule) with the ability to provide a snapshot of progress status at any chosen reporting milestone.

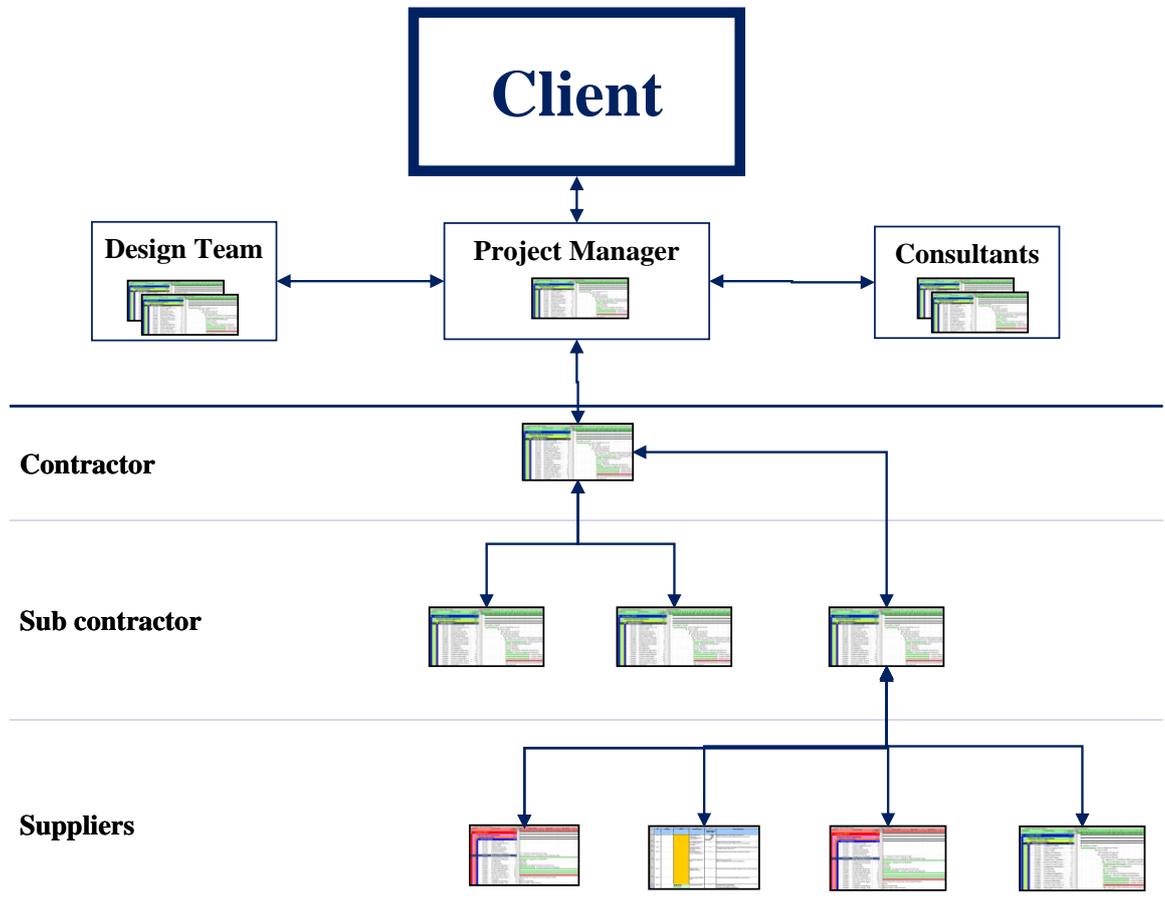
The schedule integration process will allow for interdependencies and design, procurement, construction, commissioning, departmental, organisational and supply chain interfaces issues to be identified and addressed. The impact of a delay or change to the project will be captured, assessed and escalated to the relevant authority for a decision to be reached and implemented.

The level of schedule integration will vary from loosely to tightly integrated project or programme schedules depending on the current programme or project stage, agreement of a common purpose, set of objectives and level of process and systems standardisation.

Major projects are usually carried out by a project team under the overall direction and supervision of a project manager or programme manager. The organisation structure in figure 2 represents a typical project structure. In practice, there will be many variants of this structure depending on the nature of the project, the contractual arrangements, type of project management involved (external or in-house) and Client’s requirements.

Management, design, procurement, manufacturing, construction and commissioning will often involve a number of specialist or multi disciplinary design disciplines, contractors, sub-contractors and suppliers. Each team will employ full or part time planners and schedulers often using different and incompatible communication mediums.

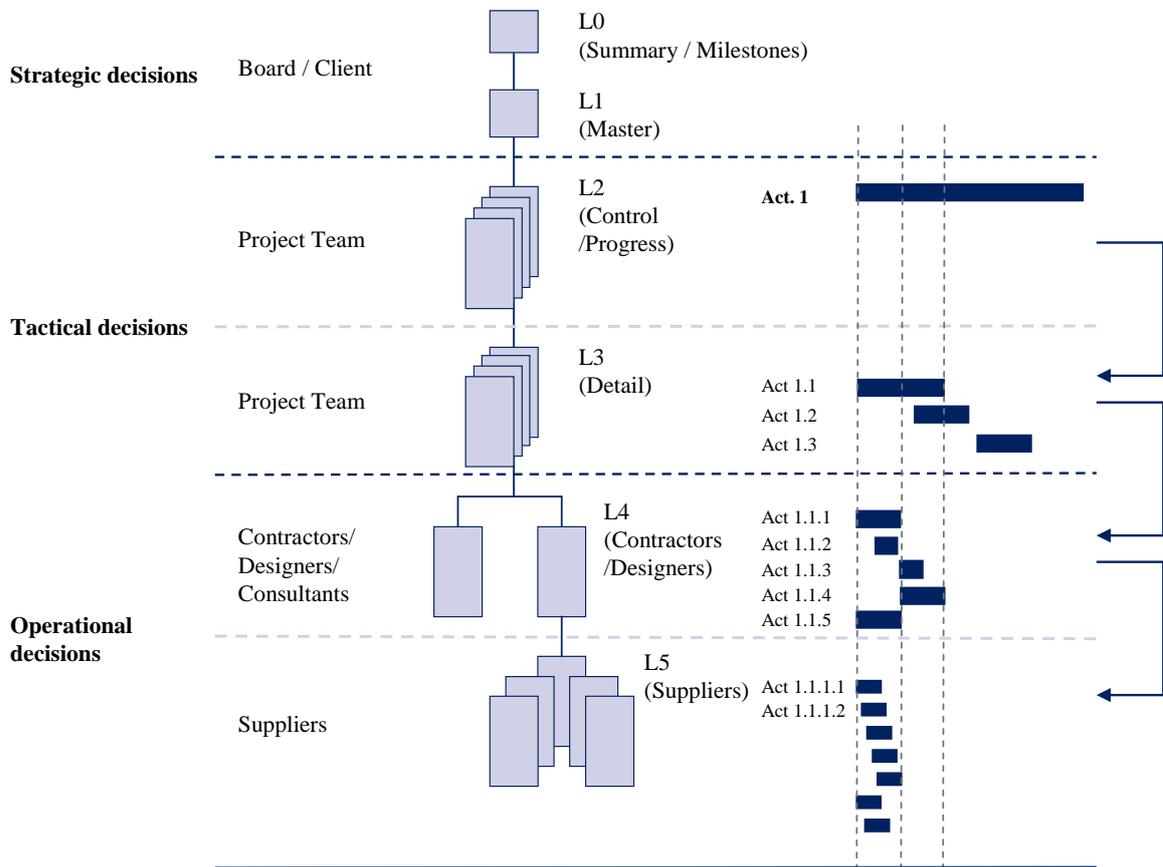
Figure 2: Typical Project Structure and Sources of Schedule Information



In terms of integration, the planning process establishes a time framework defined in the Project Execution Plan whilst the scheduling process operates within this time framework to combine separately produced schedules or time related information in order to address issues relating to their interactions and interdependencies.

As the project evolves, it is essential to strive for an integrated schedule to manage increasingly time-related detailed information. All integrated schedule activities should be coded and linked in the project schedules in order to manage the complexities of major projects as illustrated in figure 3.

Figure 3: Fully integrated schedule



With global collaboration tools and the emergence of open data, the integrated schedule should form part of a web based centralised data source at the earliest stage of a project ensuring consistency of information and outputs, 24 hour availability of selected information using the relevant security dependent access rights, control of key interfaces and improved management of information flow.

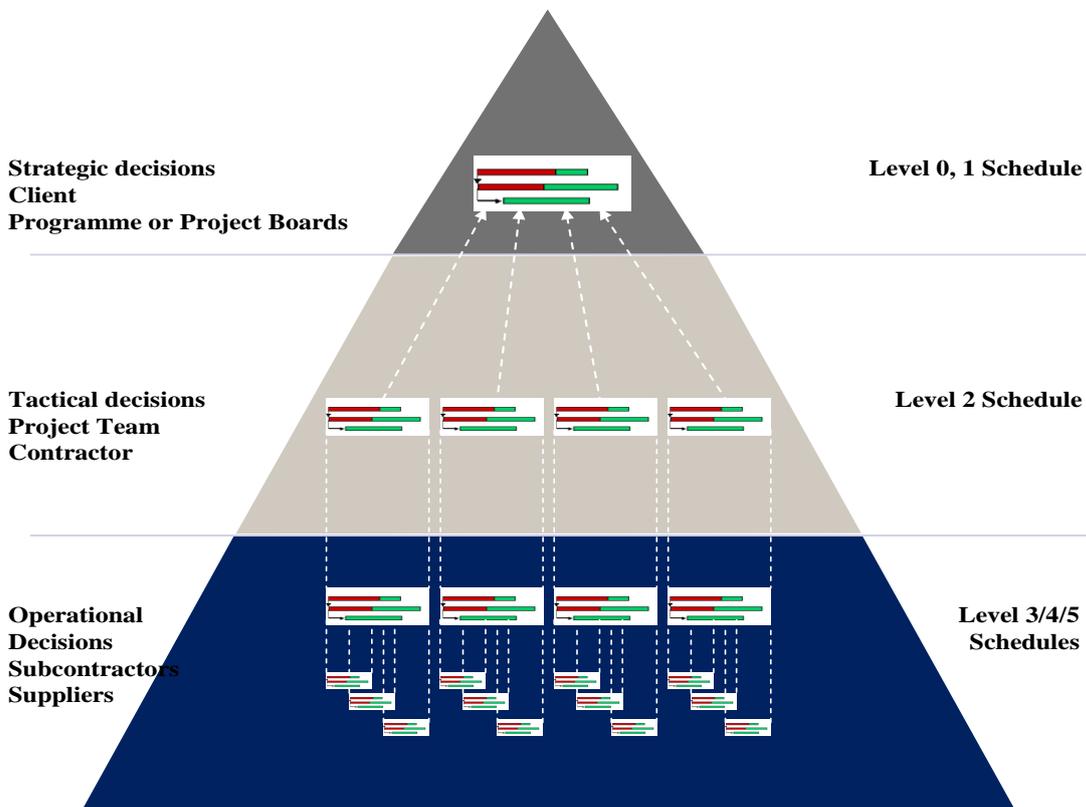
Project controls integration requirements with existing processes and systems should be a key priority for the organisation as well as information security and disclosure and associated operational risk management practices.

➤ **Communicating and Reporting**

Planning and reporting are designed to inform management on progress status: answering the following simple questions about progress and performance i) is the project ahead or behind?, ii) is performance getting better, stable or getting worse? This will allow management to assess the options available to address i) and ii) above. Things can go wrong and actions will be required to stay or get back on course.

It is therefore essential that the appropriate governance and organisation structure is established from the start of the project with open and suitable lines of communication between the project planner/scheduler, the project manager and the project stakeholders as highlighted in figure 4. Communication lines and project controls should be structured to facilitate subsequent forensic interrogation of the schedule information if so required.

Figure 4: Multiple stakeholders, multiple needs and multiple reports





The role and responsibility of the project planner/scheduler is to produce relevant, valid and complete reports in a clear and timely manner in order to measure and evaluate performance against baseline and also to understand the impact of agreed or anticipated changes and identified risks of delay to the schedule.

This should be supported by a communication matrix clearly identifying who, when, in what format, and what content should be communicated. To prevent mistakes through misunderstandings, reports and reporting formats should be reviewed and approved in line with contractual requirements and management arrangements. The progress reporting cycle should be aligned and coordinated with other project reporting functions and allow for sufficient time for data analysis before issue.

Time related information is created on the basis that what can be measured can be managed. It can be used to report in multiple formats, to numerous audiences in line with an agreed reporting cycle. Depending on the target audience, logic linked bar charts will not necessarily be the best communication mode.

The project scheduler should consider the use of alternative communication means (4D planning, web based interactive project environments) or method (use of filters, diagrams, exception reporting using Red Amber Green system) to communicate time related information effectively. In emergencies, the timing and accuracy of data should be balanced against timely communication to affect appropriate intervention strategies. All reports and schedules should be documented and recorded using approved control systems.

➤ **Benefits and challenges**

Appropriate, short and consistent communication and schedule integration established and supported from the start of a project will significantly contribute to projects success by creating a basis and framework for decision making: It will improve stakeholder understanding and increase efficiency in time planning and reporting throughout the project.

The challenge the project planner/scheduler will have to address will be to avoid complicating the communication of time related information whilst processing a large



amount of information, maintaining independence and integrity from project influences when reporting progress and managing system integration and interfaces consistently. To achieve this – he or she will need to plan to be in control and knowledgeable and remain patient, positive and supportive.

Megaprojects and major programmes require the collaboration of many stakeholders, including those who commission and finance it, those who will use the end product and those who will build it. It takes a whole organisation to make a project a success. If an organisation is serious about improving the way it manages projects and programmes, it will have an opportunity to improve the way it manages its business.

Why not start today with time management?

About the Author

Gildas André is Founder and Managing Partner at GAN.

- Gildas advises board members and departmental heads on planning and delivering major international capital investment programmes and managing issues arising from disputes in the construction, infrastructure, transport, property and energy sectors.
- He has 15+ years of formative and professional international experience across central Europe, Africa, South America and the UK with leading engineering, law and management consulting organisations including a senior management performance improvement advisory role with Ernst & Young.
- Gildas is a specialist in programme management and in establishing governance and controls effectively connecting strategy and operations; finance and delivery. He is also a planning and programming expert in strategic phasing, integration and production management and in preparing and defending claims for delay and disruption.