



**Australian Institute of Project Management
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Tools and Techniques

Communication tool – managing project information through the web
On-line communication for virtual communities

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Executive Summary

Despite a world-wide trend towards usage of the Internet to facilitate improved communication, there is nevertheless a major imperative for organisations which spearhead adoption to overcome resistance to changes. The Commonwealth and NSW Governments are progressively mandating the introduction and ongoing application of e-procurement. As is the case with many change initiatives, there is a time lag before benefits are realised.

asset.gov, an internet based collaborative communication and project management tool, was launched in 2001. *asset.gov* is a 'toolbox' that assists clients and project teams to coordinate project activities. This Paper focuses on one of the three components of asset.gov, project management support delivered through a proprietary Communications Module. It provides on-line management and tracking of communication including RFI's, site instructions, to-do lists, action items, defects lists.

Organisations moving from manual or other information management systems are required to make an intellectual investment, financial in the case of the developer or promoter and changing processes, including learning a new tool, in the case of other stakeholders.

1. Introduction

The Department of Commerce is transforming stakeholder and project communication management through the integration of a commercially available communication software package with its own asset.gov project web site technology. Through the Communication Module clients, project managers, contractors, consultants and other stakeholders can efficiently and effectively manage project communication (RFIs, Instructions, Requests, Action Items etc) through the use of a centralised repository of information. The module supports the generation, collection, dissemination, storage and retrieval of project information (drawings, specifications, reports, studies, photographs etc). Integral to the implementation of the module was the management of change ie involving and supporting industry/stakeholders.

Due to the level of investment that can be required, electronic procurement implementation carries significant business risks. However, the risks of moving too slowly are just as significant, as agencies can fall behind the leading benchmarks or lose their competitiveness with other providers.

Many of the benefits of electronic procurement rely on the establishment of more open, trusting and cooperative business relationships that allow greater sharing of information. Increased cooperation and information sharing is not just required between Government and industry but also within industry sectors and throughout the supply chain. Businesses that are competing against each other are increasingly finding that their competitive advantage is improved through cooperation with each other in the new electronic environment. This involves a cultural change on the part of Government and industry.

Successful electronic procurement implementation and business process improvements can require significant business, organisational and cultural changes. E-Procurement is mandated in a NSW Government White Paper 'Electronic Procurement Implementation Strategy.

2. Background

Prior to the adoption of the communication module, the media used for project communication were meetings, letters, telephone, facsimiles and e-mail. Technology developments have provided an opportunity to overcome many of the limitations associated with traditional communication methods. Internet based electronic commerce forms an important part of the NSW Government's electronic procurement strategy. The primary benefit that government agencies and industry seek to achieve from the implementation of electronic procurement is reducing the cost of doing business. By bringing operating costs down, such as through automating processes, agencies in turn will be able to deliver more efficient services to the community.

Contrary to fairly widespread perceptions, electronic procurement is not an IT issue, it is a procurement and business issue. The move to electronic procurement can place a significant burden on an agency in terms of expenditure, time and resources.

Agencies need to consider the interoperability of technologies and processes they choose to invest in, so that industry is not required to meet different standards for different agencies. To this end, the NSW Government has contributed to the development of the Australian Procurement and Construction Council's Framework for Cooperation on Electronic Commerce for Procurement (May 1999). That document recognises the potential benefits for government and industry from implementing electronic commerce within a co-ordinated framework.

3. **asset.gov**

asset.gov, an internet based collaborative communication and project management tool, was launched in 2001. *asset.gov* assists clients and project teams to coordinate project activities. Its internet based project management functions help team members to effectively track and audit task management. The successful delivery of a project relies on the ability to ensure each specific project goal is met. This includes the effective planning, management and communication of many complex tasks.

asset.gov also supports project communications by allowing clients and stakeholders to monitor project progress in real time. Team members have access to the latest, up-to-date information about all aspects of the project as correct and relevant information is readily accessible to all involved.

Asset.gov is being used, with increasing frequency, by a number of Government Agencies including:

- Premier's
- Attorney General
- Department of Education and Training
- Lithgow City Council
- North Coast Water
- NSW Health
- Roads & Traffic Authority
- Department of Commerce

Types of projects using Asset.gov include courthouses, TAFE's, schools, Government Offices, water supply, hospitals and roads. About 50 projects are being delivered through *asset.gov*.

5. Application within the Department of Commerce

The Communications Module is mandatory for new DoC construction projects that satisfy the following criteria:

- Exceed \$2m in total project cost
- Non-construction managed (ie not used when the Department is Construction Manager)
- No security risk (eg may not be used on a high security jail project)

The Module is intended for use on all C21 contracts. The key objective of the C21 Construction Contract is to remove as far as possible the adversarial climate within which building and construction projects have traditionally been delivered. C21 provides the contracting parties with a contractual framework requiring the parties to work cooperatively in the delivery of the required product time, cost and quality goals whilst meeting the social and environmental goals of the project.

For risk management reasons it has been decided that the users of the communications module should only extend to those resources the Department has a direct contractual relationship with. Key target stakeholders are the client, consultants (internal and external), contractors, the Department's project managers and other team members (located centrally and in regional areas). . In practical terms this means that no external Sub Consultants or Sub-Contractors should be placed on the system (see Figure 2).

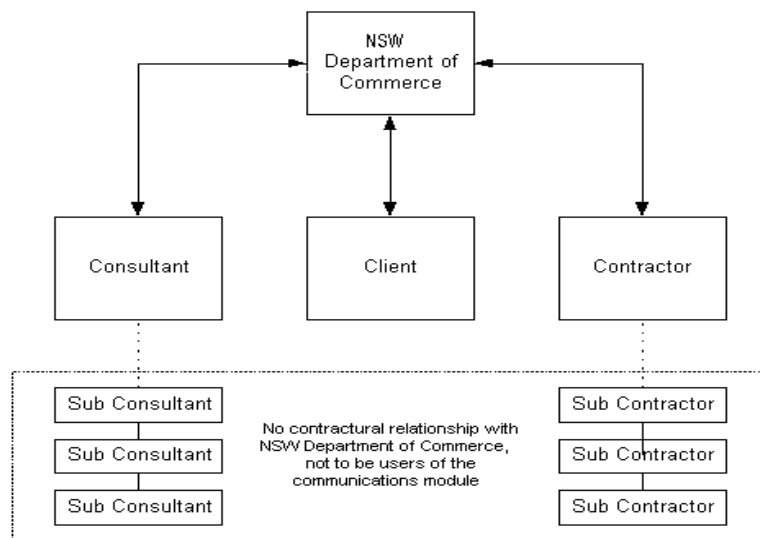


Figure 2:
Module Users
and
Relationships

For applicable projects, usage of the Communication Module is included in tender documentation, as a condition of the contract. The module is also used for internal projects including those associated with the Department's Project Management Office.

6. Business process improvement

The module is changing the way Government does business with clients, consultants, contractors and other key stakeholders. Business process improvement, also known as business re-engineering, is the most challenging aspect of electronic procurement implementation.

The automation of inefficient processes through the use of new technologies will not yield anticipated benefits. However, business process improvement is about more than just eliminating inefficiencies. It is about the challenging task of integrating different systems across an organisation and interfacing agency systems with those of suppliers. It is about doing it differently, not just doing business electronically. In other words, looking at existing business processes from the new paradigm provided by the electronic environment, and finding new ways of achieving desired outcomes.

Features

The primary usage of the module is for issuing, routing and receiving requests for information, to do lists, meeting minutes, action items and discussions among other features.

- Centralised database of project information
- Facilitates more effective communication amongst key project stakeholders
- collaboration and communication via the Internet across different locations and time zones;
- editing and commenting through the 'red-lining' function that creates an overlay on the actual document and is then archived while retaining ownership information;
- minimal additional software is required by users as the Module is accessed via a web browser

The module reduces the need to transmit large volumes of data, especially where people are geographically dispersed. This, in turn, facilitates speeded up response times.

See attachment 3 for a generic project and user initiation flow diagram. The diagram is identifies the steps required to place a project on the communications module.. See Attachment 4 - for a System Integration Diagram showing the interaction between people, hardware and other systems.

Benefits

Reducing the cost of doing business and so enabling more efficient delivery of services to the community is the primary benefit of electronic procurement. Key benefits of the Module are:

- Improved potential to manage stakeholders
- Improved decision making through access to current information
- Provided a consistent framework (across projects) for managing information
- Speeded up response times including shortened review and approval times
- Improves information tracking capability
- Enhances capacity to monitor and review documents

Although a central database offers benefits, there are also pitfalls such as the perception by contractors or consultants that the Department seeks to assert greater control over the ownership of information by requiring contractual parties to use the system rather than have their own (local) system. Concerns have also been expressed that a central database limits access to data by organisations other than the Department. These issues are best addressed through a range of communication mechanisms to address concerns.

Early results suggest improvements in information management and savings of up to 2.5% in Departmental fees. Much of the saving can be attributed to reductions in the decision-making 'cycle' time. Savings in the order of 0.5% of project costs are being targeted. Aforementioned

savings apply to the use of all three components of asset.gov. Benefits are realised across projects / in programs, where a consistent framework is used to store and retrieve information. Principles of more efficient document management are being applied in the development of the Department's knowledge management system.

These cost savings are maximised where electronic procurement implementation is used as an impetus for business process improvement. Business process improvement is about eliminating inefficiencies in purchasing and payment processes and finding smarter ways of doing business in the electronic environment. Effective business process improvement generally requires significant organisational commitment, change and investment. Potential problems arise when the Module is used only by some and not all of the key stakeholders expected use it.

8. Managing the change

Through promotion and education, industry resistance to change was minimised. Contractors are the stakeholders most affected by the change, as they are most likely to have their own systems for managing information in general and tracking RFI's in particular. . One of the key challenges has been to convince contractors that they will, in fact, benefit from using the Module. From the Department's perspective, there was an initial concern that cost savings might be eroded by industry raising prices as a result of an 'extra burden' being placed upon organisations as a result of using the Module. Clients, typically are not heavy users of the Module; they tend to use the telephone rather than access the web.

In order to ensure sustainable benefits are achieved, key industry sectors need to be involved in the design and implementation of major electronic procurement projects. Projects are more likely to succeed where there are clearly identifiable benefits for industry as well as for Government.

Senior managers in the Department have promoted the Module widely in client departments. 'Best Practice contractors' are encouraged to take-up the Module through briefings, to inform them of its features and promote the benefits. At a recent workshop for a number of questions were posed and included:

- Who owns the data. Will it be available to contractors at project end
- Can Double Entry of data be eliminated
- If contractors purchased Prolog could they share data with their other systems

One of the key mechanisms for managing the change within the Department was to establish a network of 'key user trainers' in Regional offices. Key user trainers is an established change management method that has been used in the Department for other roll-outs (eg MIMS, enterprise resource planning system). This was necessary given the Department's spread across the State. The trainers delivered training, helped users with operational issues and acted as mentors. This aided ownership by local business units and at an individual level.

System users are offered free training for two staff and Helpdesk support.

9. Lessons Learned

The Module has been able to remedy a recurrent problem experienced on many projects in the Department. Regional construction managers, were typically only involved in projects at the start of construction, being their first exposure to the project. Now regional involvement occurs

early in the life of a project, where staff can access project data through the Module, thus reducing risk exposure and surprises.

Other lessons learned include:

- Smaller organisations only have a single computer with Internet access
- There is anecdotal evidence that some contractors are reluctant to give their staff access to the Internet
- During the pilot, many organisations continued using other systems, perhaps because the ‘change-over’ was not mandatory
- Whilst the technology facility shorter decision-making cycles, there is a greater need to ensure that ‘correct’ decisions are being taken, as the potential for adverse impact is increased

10. Future Directions

Asset.gov in general and the Communication Module in particular is being progressively rolled out in the Department. Increased application is envisaged over time, particularly as the benefits are more widely recognised. A greater degree of integration within asset.gov and with other systems, both within the Department and externally, is expected to result in further improvements. Such integration is envisaged at a personal level (eg phones and palm pilots) with organisational systems (eg enterprise resource planning and knowledge management).

Attachment 1 - Definitions

Asset.gov	An Internet based set of collaborative and communication management tools for electronic project procurement
Client	Typically the person who requires a project to be undertaken and pays for the work. There is usually only one client for a project.
Consultant	An individual or organisation engaged on a temporary basis to give advice or provide services to Department of Commerce and Services of a professional, technical or general management nature.
Contractor	A Company performing work for Department of Commerce and Services. Can be the Department when we perform work for some other party. The legal entity with whom the principal enters a contract - the second party to the contract.
Project web site	A project web site is a web location, whether public or accessed by password, which enables users to access and share project information.
RFI	A Request for information. RFI's can be generated by any users of the system seeking information, requiring answers to questions, querying a decision, responding to a request and the like.

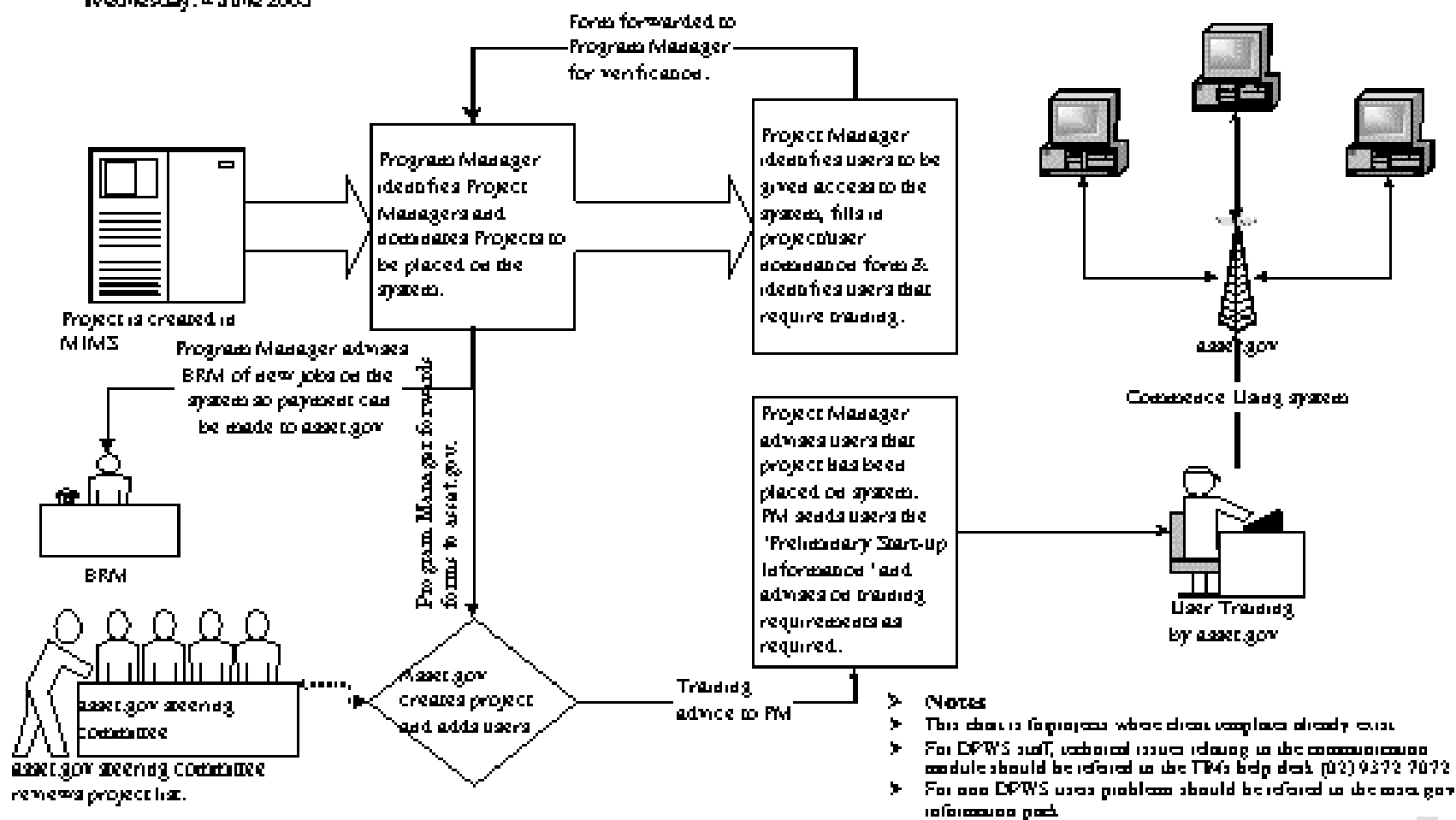
Attachment 2 - References

NSW Government e-Procurement Implementation Strategy
asset.gov.com.au
www.c21.dpws.nsw.gov.au/

Attachment 3 – Project and User Initiation Diagram

asset.gov Communications Module - Project & User Initiation.

wednesday, 4 June 2003



Attachment 4 - System Integration Diagram

