

Collaborative E-commerce

Knox Shopping Centre

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case study
19
of 20

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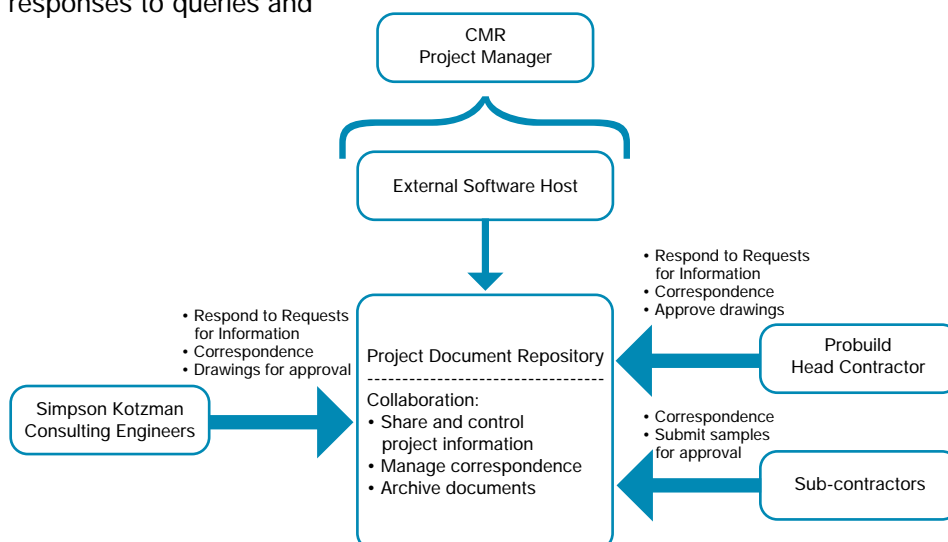
>>WHAT WAS INITIATED

Fifteen parties are currently engaged in the redevelopment of the Knox Shopping Centre. The shopping centre owner sought a way to be more involved in the project's development and to improve accountability of the contractors. The owner was aware that project members faced a variety of supply chain issues, particularly in managing the large volume of paperwork inherent in a substantial construction project. These include:

- inefficient manual documentation and archiving processes;
- disparate reporting and information dissemination processes;
- limited ability to collaborate effectively with other project members leading to delayed approval of supplies and doubling-up of work; and
- ineffective communication between project members, resulting in delayed responses to queries and misunderstandings.

Internet technology was identified as a means of addressing these issues. The shopping centre owner identified an online document repository and project management system as a potential solution. This would act as a virtual open plan room for all project members to access. As the software vendor hosts the application externally, reliance is not placed on any one party to maintain the system.

Project members were provided with a login and password to the online system. To upload files, a project member accessed the document repository via a website and electronically submitted the document. The website could then be accessed by other project members to retrieve, view or download the file.





>>E-COMMERCE COLLABORATORS

CMR

CMR is a Melbourne-based project management company. It is involved in overseeing the cost, quality and management of the project. The company has project management experience in a wide range of industries including defence, manufacturing and property. CMR has been in operation for 18 years and has offices throughout Australia and Asia. CMR has 50 employees.

Simpson Kotzman

Simpson Kotzman provides design services in mechanical, electrical and fire protection for the project. Past work includes electrical and lighting consulting for the renovated Chadstone Shopping Centre. The 30 year old business is based in Melbourne and currently employs 42 full time staff.

Probuild

The Probuild Group is a construction management company and is the head building contractor for the project. Probuild is typically involved in major projects including retail, entertainment, residential and commercial developments. The company employs 130 staff including estimators, foremen, carpenters and labourers. The company is based in South Melbourne.

>>NON-FINANCIAL RESULTS

Streamlining Documentation and Filing

- All parties have access to a register of up-to-date documents that have been submitted. This avoids the problem of lost hard-copy documents or members basing decisions on outdated information. Members working on superseded documents are automatically updated with new submissions.

- Dispatching and filing of project papers is simplified. Documents can be sorted by date, subject, or name.

- Action items (such as requests for information) can be sorted by status including pending, in progress and completed. This minimises the risk of outstanding issues being neglected.

Simplifying the Information Dissemination Process

- The process for distributing memos and notices of delay has been streamlined. Previously, documents such as requests for information (RFI's) were faxed or mailed to each of the 15 project members. They can now be submitted online for viewing by all parties. For accountability purposes, edit and viewing functions track which parties have viewed the document.

- A document register with an automatic update function eliminates the need for a manual register to be kept by CMR.

Timely Approval Process

- Drawings can be accessed and approved online. This expedites the process of printing and couriering the drawings and then waiting for feedback. Delays in development due to pending approvals are avoided. This contributes to a more timely building and construction cycle.

- Probuild can access the document repository online and print drawings (eg. from Simpson Kotzman) onsite. These can be immediately given to subcontractors onsite, avoiding the delays inherent in fax or mail distribution.

Access Control

- Access control ensures that only the relevant parties can edit or view certain documents. Previously, significant time was spent sorting through which documents actually required action.

>>FINANCIAL RESULTS

Aconex (www.aconex.com), a Melbourne based software company, provided the project management and collaboration software to CMR on a trial basis. CMR was to provide feedback in lieu of licence fees. However, the market cost of the software has been included in the following analysis. In addition, all project members undertook free training with Aconex. Staff time spent in training amounted to \$3,000 for CMR, \$3,000 for Probuild and \$1,440 for Simpson Kotzman.



CMR

Over the life of the project (18 months), it is estimated that 6,000 pieces of correspondence will be generated. Staff time previously spent typing, mailing/faxing and filing each document has been reduced. The online document repository has negated the need for a dedicated filing clerk (\$25,000).

>Simpson Kotzman

Establishment Costs of Supply Chain Collaboration	(\$)
Training and familiarisation	1,440
Project management software	1,440
	1,440

>CMR

Establishment Costs of Supply Chain Collaboration	(\$)
Training and familiarisation	3,000
Project management software	3,000
	3,000

Operating Benefit from Supply Chain Collaboration	2001
	(\$)
Cost Savings	
Staff time - responding to requests for information	14,300
Staff time - filing paperwork	1,040
Telephony	260
Total Cost Savings	15,600
Less: Ongoing Costs	
Telephony - rental of ISDN line	(2,400)
Software - rental of project management application	(2,400)
Total Ongoing Costs	(4,800)
Operating Benefit from Supply Chain Collaboration	10,800

Operating Benefit from Supply Chain Collaboration	2001
	(\$)
Cost Savings	
Staff time - filing	25,000
Fax	2,000
Stationery	350
Total Cost Savings	27,350
Less: Ongoing Costs	
Software - rental of project management application	(7,800)
Telephony - ADSL rental	(1,680)
Total Ongoing Costs	(9,480)
Operating Benefit from Supply Chain Collaboration	17,870

Probuild

Probuild purchased a new scanner to enable uploading of graphics and other paper documents (\$1,500). To allow faster and more reliable connectivity to the online repository, Probuild also upgraded its current dial-up access to an Asymmetric Digital Subscriber Line (ADSL) service (\$350) on the building site.

The online document management functionalities have eliminated the need for at least one dedicated filing clerk, reducing salary expenses by \$50,000. It is estimated \$1,950 is saved in fax charges to project members (usually twice per day).

Simpson Kotzman

For the Knox project, an estimated twenty pieces of correspondence are managed per week. Staff requirements for generating correspondence and filing have been reduced by \$14,300 and \$1,040 respectively.



>Probuild

Establishment Costs of Supply Chain Collaboration	(\$)
Training and familiarisation	3,000
Project management software	
ADSL Installation	350
Scanner	1,500
	4,850
	4,850

Operating Benefit from Supply Chain Collaboration 2001 (\$)

Cost Savings	
Staff time - documentation management (one person)	50,000
Stationery	450
Faxing	1,950
Total Cost Savings	52,400
Less: Ongoing Costs	
Telephony - ADSL rental	(960)
Telephony - dial-up charges	(1,024)
Software - rental of project management application	(7,800)
Total Ongoing Costs	(9,784)
Operating Benefit from Supply Chain Collaboration	42,616

In addition to the three parties profiled, there are approximately 12 other parties utilising e-commerce in this project.

>>CHALLENGES

The reluctance by some project parties to use the software has impeded effective collaboration such that the maximum possible value has not been realised across the project. In particular, some subcontractors prefer traditional communication methods such as faxing and posting. Some users initially experienced problems in website access, delays in document transmission and downloading.

These have since been resolved. While the system has enormous advantages, an inherent limitation is that physical samples (eg. bricks and steel) must still be distributed by courier or post for approval.

>>FUTURE

In undertaking future work, some users have stated that application features such as project claims and cost tracking will be considered. In particular, Probuild intends to use the system for issuing instructions to all sub-contractors and for purchasing supplies online.

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