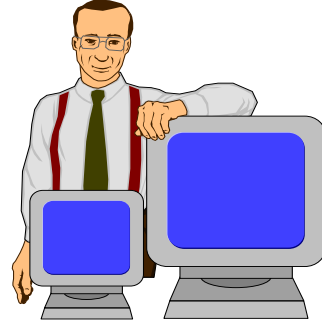


Article category: PM CONTEXT

THE VIRTUAL PROJECT OFFICE:

Project management in a wired world

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At the forefront of the Information Revolution, which is currently changing the way we live, work and play (in the words of Mr Gates himself), is the Internet. This is the information superhighway that connects computers all over the globe and has allowed a consolidation and sharing of information unsurpassed in the history of mankind.

The *global economy* and the *virtual enterprise* are buzzwords that are being thrown around in the information age in which we now find ourselves. Advancements in technology, not only in the computer industry, but also in telecommunications, engineering and transport, has made the world a much smaller place than it used to be. As a result, companies have found that physical storefronts are no longer necessary to do business.

Project management, as one of the most challenging, exciting and fastest growing careers in the global economy, can also benefit from the tremendous communication potential of the Internet.

What is a virtual project office?

The concept of a project office is not a new one to project management. For as long as projects have been managed, particularly large-scale projects, a project office has been set up. The project office of the past, as well as the present, is a physical office (or building) erected at the start of a project that will be the core of the project team for the remainder of the project.

Here, some of the project members work and gather regularly with stakeholders to meet, project documentation is kept, and ideas are exchanged. Enter any respectable project office and you will find GANTT-charts, technical drawings and processes and procedures stuck on bulletin boards all over the place.

The virtual project office (VPO) leverages the unparalleled communications infrastructure of the Internet to create a meeting place in cyberspace to fill all the functions mentioned above. As many companies around the world are now busy replacing many of their physical (or brick and mortar) storefronts with web-based (.com) storefronts in the electronic commerce revolution, many project teams are moving from physical project offices to virtual project offices.

To put it simply, a VPO is a website that contains all the information and functions associated with a physical project office. A variety of back-end systems stores mountains of information, such as project documentation, RFQs, technical designs

(CAD or other type of files) and discussions on various project issues. These are accessible to all team members through a consistent interface, a web browser.

Meetings and discussions can be held online, and all major project management software can interface with the web to enable online time and progress capturing. Team members require only a personal computer and access to the Internet to enter the VPO. This form of project communication and collaboration is particularly effective when team members are geographically dispersed, as is now so often the case.

A VPO usually has two components: an **intranet** and an **extranet**.

- An **intranet** is a website that does not run on the World Wide Web, but on the internal networking infrastructure of a company. If a company has five branches throughout South Africa, they would typically be connected through a Wide Area Network. An intranet is a website that allows everyone on this network to connect to it, but excludes the rest of the world.
- An **extranet** is a typical website, ie it resides on the World Wide Web and everyone authorised by the website administrator, has access to it.

The VPO intranet is used to contain sensitive intercompany information, and the extranet is the VPO's window to the world. External project stakeholders (ie clients), project team members not on the company's intranet (either on-site elsewhere in the country, or abroad), suppliers, customers and the general public interact with the project team using the VPO extranet or web site.

The greatest assets of the Internet are its simplicity of use, and its communication infrastructure. A VPO leverages this to allow project team members to communicate and share information using a variety of systems that usually requires training to use. However, due to the web interface that lies on top of these systems, the user often does not even know what system he is using: he is only interacting with his web-browser.

A typical VPO will contain all the project management templates, procedures and processes of a company, virtual project rooms for every project containing all project related information (RFQ's, project charter, issues log, progress reports and meeting minutes, design documents, discussion rooms), log-ins to the company's project management software, interfaces to existing ERP systems for time logging and invoicing, etc.

Figure 1 is an example of a VPO of a software development company called the ACME Company, which has offices in South Africa, New York and London. The main page contains all the project management documentation templates and procedures of the company. It allows project managers and executives to register new projects and thereby kick-off project initiation. Team members can also log into the company's project scheduling and time-logging software.

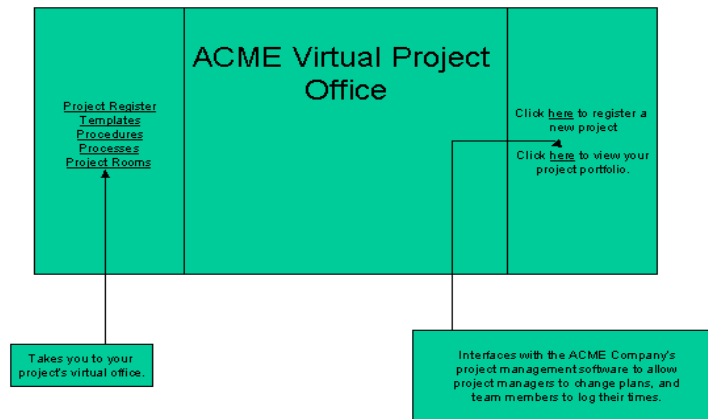


Figure 1: ACME Company's main VPO page.

Figure 2 shows a project room for one of the ACME Company's project, an e-commerce implementation. The page contains all the documentation related to the project, and links the project team electronically to the purchasing systems off the suppliers, allowing them to order new software and hardware online.

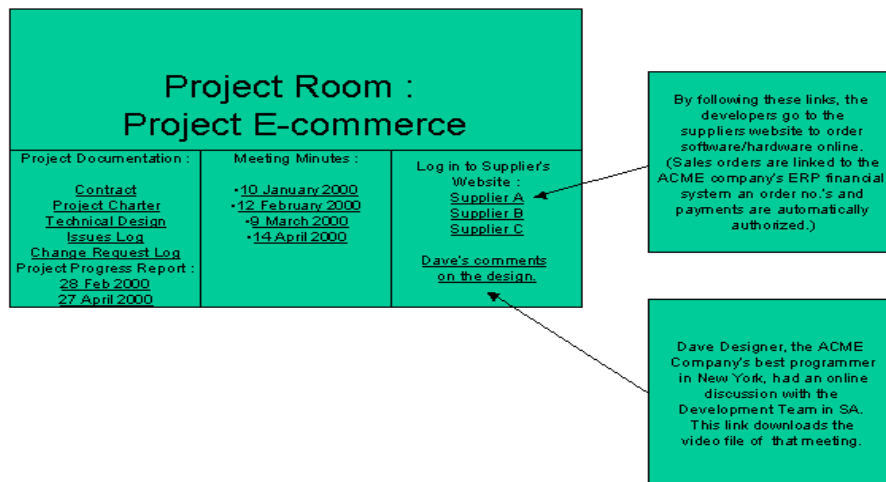


Figure 2: Individual Project Rooms within the ACME Company VPO.

Examples of VPOs around the world

Lend Lease, a major Australian based property development, civil engineering and real estate management corporation, has offices throughout Australia and different geographic locations around the world. To minimize the costs of establishing project office infrastructures for all their projects, promote more effective communication between project team members and stakeholders, and to cut down on internal documentation costs, they have established a VPO.

All their project data (documentation, CAD drawings, image files) is stored on a Project Data Server, which is accessed either through their company intranet (by Lend Lease staff) or the Internet (by external consultants/stakeholders/suppliers). The Project Data Server contains:

- a projects directory (a list of all projects, who's working on them and when)
- a resource library (containing industry related web sites and links to those sites)
- a project calendar
- project rooms for every individual project
- a document library, drawings register
- a file transfer area
- image library and
- discussion lists.

Over the next 5 years the company plans to completely phase out the use of faxes and physical documentation.

Also in Australia, the **New South Wales Department of Works and Services** has implemented what they call ProjectWeb.Gov, an interactive and collaborative communication model for the procurement and management of projects.

Their objective with this website is:

- to enhance and improve existing work practices to improve efficiencies and cost benefits,
- to shorten review and approval period and,
- to provide ecologically sustainable solutions to business practice by reducing the need for face to face meetings, travel and paper records.

By accessing the NSW Project Web, team members can:

- submit and exhibit electronic DAs,
- view and review CAD files and fly through 3D models,
- see virtual reality environment, measure CAD drawings and customize CAD drawings using level structure.

Team members can also:

- participate online in community consultation
- interactive conferencing
- threaded discussions for online reviewing and approval of documents
- collaborative real time design environments and,
- version control management.

Similar to this concept, the **UK Highways Agency**, faced with the problem that the average proposed highway in the UK spends between 9 and 12 years in planning, design and construction before it is built, implemented a VPO. For future roads and upgrading old roads with new technology (e.g. toll gates), the Highway Agency wants to ensure that proposals are fully understood and no unwarranted protests are on the horizon to delay construction.

The problem with this goal is that maps and engineering drawings only evoke a vivid landscape in the minds of engineers familiar with them. However, the support of the public is critical to successfully adopt plans for a new road. To overcome this problem, virtual maps of new roads can be found on the UK Highways VPO that provides the public and governmental authorities with a virtual reality that they can relate to.

Telcordia Technologies, a US based international networking/information solutions and communications company created a VPO in 1996 for project team members from various companies within the telecommunications industry that are geographically dispersed over the US and Canada. The aim of the project was to attempt to overcome some of the difficulties of project management by using the Internet.

Their VPO contains:

- bulletin boards
- news groups
- interfaces to their preferred project management software
- online databases
- legal software
- FAQ's and more.

Telecom New Zealand believes that a web-based project office can overcome many of the problems associated with establishing a project office in a large organization. They therefore implemented a VPO called POOL (Project Office OnLine), which contains documentation, information on all projects, discussion rooms and web interfaces to their project scheduling software.

Advantages

- Although the initial capital investment in setting up a Virtual Project Office infrastructure could be expensive in terms of procuring the necessary hardware, software and implementation skills, the return on investment in the future has made it a profitable exercise for many companies.
- Whereas setting up a physical project office infrastructure cost time and money for each project, once a VPO has been established, all new projects can run off the existing backbone.
- As the Internet and related communications technologies continue to improve, and the world becomes more and more wired, the benefits of a VPO will increase. Every new electronic commerce component that a company adds can be plugged into the VPO to leverage the new enhancements.
- A VPO supports all the Project Management Body of Knowledge (PMBOK) areas. Project management is 90% communication, and communication and collaboration is the Internet's greatest strength. The web is a very flexible medium, and project information can be displayed in virtually any format, from word processing documents and spreadsheets, to image files and video clips. Planning and time management can be done by virtue of the fact that all major project scheduling software these days have web-interfaces. Project team members can update plans and timesheets on-site through the web without ever knowing whether they are using Microsoft Project or Primavera, so non-project management folk do not need PM software training.

- Online collaboration supports effective risk management. It is virtually impossible for a small number of people on a project to successfully identify and mitigate all the risks, but a VPO makes all this information more readily available to them to participate in collaborative risk identification exercises.
- The advances in e-commerce enables online procurement management. Procurement needs can be made available online, and one can get competitive bids from previously unknown vendors. Inventory costs can be reduced with just-in-time delivery. Online collaboration also facilitates communication between the planners who actually define the materials and the buyers responsible for procuring them.
- Online collaboration and instant access to all project information is obviously also a major boost to quality and integration management, as the accessibility and accuracy of electronic data to all team members and stakeholders enhance the prospects of project integration and higher quality end deliverables.

As the world becomes more and more wired, and e-commerce continues to replace and challenge traditional business processes and models, companies around the globe find better and more cost effective ways of doing business. Just as the global economy is constantly growing and re-inventing itself, so is project management as a discipline. Look out for The Virtual Project Office in the next edition of PMBOK!!

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