Project Management 2.0

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Abstract

Dave Hammer in his book The Future of Management points to three challenging problems/opportunities: Renew strategic focus organization-wide more quickly; get everyone involved in innovation; and shape an environment where people give their best. With these changes, organizations will become more adaptable and creative. It seems important to follow his suggestions also in terms of project management, since in many cases the success of the organizations depends on the success of the projects that they develop: be them transformation projects, new product introduction; products to be manufactured and delivered to customers. With this intent, this paper describes how Web 2.0 tools could help in further improve the project management and describe some best practices in this direction. Taking into account the new social and technological environment, it cannot be avoided to move to Project Management 2.0 in order to improve the effectiveness, the efficiency and the economics of the projects management.

Keywords

Project Management, Web 2.0, Collaboration methodology

1. Definitions

A project is a finite endeavor—having specific start and completion dates—undertaken to create a unique product or service which brings about beneficial change or added value. These characteristics of projects stand in sharp contrast to processes, or operations, which are permanent or semi-permanent functional work to repetitively produce the same product or service. The management of these two systems is often found to be quite different, and as such requires the development of distinct technical skills and the adoption of separate management philosophy, which is the subject of this work.

The Oxford English Dictionary suggests that organizations and science projects involve "a collaborative enterprise, frequently involving research or design, which is carefully planned to achieve a particular aim".

On the other side, on Wikipedia, Web 2.0 is defined as a term describing the trend in the use of World Wide Web technology and web design that aims to enhance creativity, information sharing, and, most notably, collaboration among users. The term became notable after the first O'Reilly Media Web 2.0 conference in 2004.The term does not refer

to an update to any technical specifications, but to changes in the ways software developers and end-users use the Web.

What strikes is the fact that in both definitions “collaboration” is an important term. On the other side, Web 2.0 is seen as an important set of tools which can support innovation. It becomes clear then why it is important to think how Web 2.0 can help to improve project management: this is what we call Project Management 2.0.

In a formal definition, Project Management 2.0 is the discipline of planning, organizing, and managing resources to bring about the successful completion of specific project goals and objectives, by using the support of Web 2.0.

The primary challenge of project management is to achieve all of the project goals and objectives while adhering to classic project constraints—scope, quality, time and budget. The secondary—and more ambitious—challenge is to optimize the allocation and integration of inputs necessary to meet pre-defined objectives. Web 2.0 can help the project team in managing the carefully defined set of activities in a project that use resources (money, people, materials, energy, space, provisions, communication, motivation, etc.) to achieve the project goals and objectives.

The use of Web 2.0 should help very much the effectiveness of the cooperation:

- Wider participation (Getting more and different persons connected with the project involved)
- Improved alignment (Ensuring that everyone in the project team members and stakeholders is on the same page and operating the same way);
- Increased productivity (Reducing the time spent organizing and conducting meetings and follow-ups);
- Better use of information (Ensuring that the right information is available at the right time to the right team members and the project customers);
- Enhanced social dynamics (Recognizing that team members are not solely motivated by rational reasoning).

On the other side, it should also allow the project team to:

- Co-develop (Working in the team to achieve results);
- Coordinate (Playing in concert, but each team member performing separately);
- Co-decide (Coming to a decision, as a project team);
- Commit (Building on emotional intelligence).

2. Trends

The main reason to move to Project Management 2.0 is the fact that projects are changing.

Organizations pretend more and more fast projects, since Time to Market has become an important competitive advantage. On the other side, globalization is pushing on having global projects and projects done by virtual teams. A virtual team is a geographically dispersed team, which is a group of individuals who work across time, space, and organizational boundaries with links strengthened by webs of communication technology. They have complementary skills and are committed to a common purpose, have interdependent performance goals, and share an approach to work for which they hold themselves mutually accountable.

Virtual teams and tele-working can help organizations to hire and retain the best people for the project regardless of location.

In order to reduce costs, there is a tendency on multi-sourcing, which is using for the development of the projects more and more different and several suppliers.

3. Tools

In the effort to support better coordination, Web 2.0 developments have brought web-based communities and hosted services, such as social-networking sites, wikis, blogs, folksonomies and the so-called Second Life. Web 2.0 offers a rich source of easily integrated components, thus shrinking costs and increasing the ability to innovate.

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3.1 **Social Networks Services**

A social network service focuses on building online communities of people who share interests and activities, or who are interested in exploring the interests and activities of others. Most social network services are web based and provide a variety of ways for users to interact, such as e-mail and instant messaging services.

Social networking can revolutionize the way project team communicate and share information with one another. The main types of social networking services are those which contain directories of some categories (such as former classmates), means to connect with friends (usually with self-description pages), and recommender systems linked to trust.

Social networks can be very useful along all the phases of a project to connect:

- The project team members;

- The project team members with the customers of the projects.

As an example of the first type, social networks have been used by an Italian Business, Ducati, to define the requirements of a new motorcycles. For the second type, in the traditional organization information flowed from the top down via official channels. Managers assumed that creativity resided in specific individuals or departments. That's inefficient. Let information flow in all directions, with feedback among many levels and everyone looking for possible innovation.

For using social networks in the projects, organizations should standardize these services to avoid the need to duplicate entries of team members, other stakeholders and interests.

3.2 **Blogs**

A blog (an abridgment of the term web log) is a website, usually maintained by an individual, with regular entries of commentary, descriptions of events, or other material such as graphics or video.

Many blogs provide commentary or news on a particular subject; others function as more personal online diaries. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic. The ability for readers to leave comments in an interactive format is an important part of many blogs. Blogs are not just personal platforms to vent your spleen. On a large IT project, they help people know what others are doing. Give each team member a blog and auto-subscribe them via RSS to the blogs of all the other team members and of the team leaders of the other teams. When appropriate, make these blogs accessible to partners on the Web so they can see what contribution they can make. Blogs also let other in the firm know what is going on without having to ask. And when an issue becomes the topic of comments within a blog, move to a wiki where it can be more efficiently thrashed out and resolved.

Motorola quietly introduced blogs, wikis FAQs and forums for internal use. Within ten months, 2000 wikis and 2700 blogs were being used daily by 60,000 of its 68,000 employees.

3.3 **Wiki**

A wiki is a collection of web pages designed to enable anyone who accesses it to contribute or modify content, using a simplified markup language. Wikis are often used to create collaborative websites and to power community websites. Wikis are used in organizations to provide intranets and knowledge management systems. In the project,

they can be used in the requirements and the functional specification phases. At the final stages of the projects, wiki can also be used to store and make available to everybody the results of the testing.

3.4 **RSS Really Simple Syndication**

RSS is a family of Web feed formats used to publish frequently updated content such as blog entries, news headlines, and podcasts in a standardized format. An RSS document contains either a summary of content from an associated web site or the full text. RSS makes it possible for people to keep up with web sites in an automated manner that can be piped into special programs or filtered displays.

The benefit of RSS is the aggregation of content from multiple Web sources in one place. RSS content can be read using software called an RSS reader, which can be web-based or desktop-based. A standardized file format allows the information to be published once and viewed by many different programs. The user subscribes to a feed by entering the feed's link into the reader or by clicking an RSS icon in a browser that initiates the subscription process. The RSS reader checks the user's subscribed feeds regularly for new content, downloads any updates that it finds, and provides a user interface to monitor and read the feeds.

The one-to-many online “push” delivery model also makes it much easier to provide incremental updates without disruption to or even the knowledge of the user, and dramatically cuts the time required for integration.

3.5 **Folksonomies**

Folksonomy (also known as collaborative tagging, social classification, social indexing, and social tagging) is the practice and method of collaboratively creating and managing tags to annotate and categorize content. In contrast to traditional subject indexing, metadata is generated not only by experts but also by creators and consumers of the content. In the case of projects, for tagging it is important not to use freely chosen keywords, but a controlled vocabulary.

Folksonomies became popular on the Web around 2004 with social software applications such as social bookmarking or annotating photographs. Folksonomic tagging is intended in project management to make a body of information increasingly easy to search, discover, and navigate over time. A well-developed folksonomy is ideally accessible as a shared vocabulary that is both originated by and familiar to, the project team members.

As folksonomies develop in Internet-mediated social environments, users can (generally) discover who created a given folksonomy tag, and see the other tags that this person created. In this way, folksonomy users often discover the tag sets of another user who tends to interpret and tag content in a way that makes sense to them. The result is often an immediate and rewarding gain in the user's capacity to find related content (a practice known as "pivot browsing").
These web-based communities are established to enable project team users to label and share user-generated content, such as functional or technical specifications, or to collaboratively label existing content, such as programs and blog entries.

3.6 **Webinar**

Web conferencing have been used in projects to conduct live or “synchronous” meetings or presentations over the Internet/Intranet. In a web conference, each participant sits at his or her own computer and is connected to other participants via the internet. This can be either a downloaded application on each of the attendees’ computers or a web-based application where the attendees will simply enter a URL (website address) to enter the conference.
In some moments in the life of the projects, it might be more appropriate to use webinars rather than web conferencing. A webinar is a neologism to describe a specific type of web conference. It is typically one-way, from the speaker to the audience with limited audience interaction, such as in a webcast. A webinar can be collaborative and include polling and question & answer sessions to allow full participation between the audience and the presenter. In some cases, the presenter may speak over a standard telephone line, pointing out information being presented on screen and the audience can respond over their own telephones, preferably a speaker phone. There are web conferencing technologies on the market that have incorporated the use of VoIP audio technology, to allow for a truly web-based communication. Webinars in projects should enable participants to be aware of other

4. Second Life

Second Life is an Internet-based virtual world video technology launched in 2003, developed by Linden Research, Inc, which came to attention via mainstream news media in late 2006 and early 2007. A free downloadable client program called the Second Life Viewer enables its users, called "Residents", to interact with each other through motional

avatars, providing an advanced level of a social network service combined with general aspects of a metaverse. Residents can explore, meet other Residents, socialize, participate in individual and group activities, and create and trade items (virtual property) and services with one another.

IBM plans to use Second Life to conduct project meetings with team members scattered around the world and recently announced that it will invest $100 million in developing, capabilities in virtual worlds.

5. Packages

There are plenty of general software tools and services available to use Web 2.0 in project management. Take as an example the Share Point platform provided by Microsoft. On the other side, using some of the tools of Web 2.0, such as Ajax, it is possible to take personalization and system interoperability from the world of specialist IT staff and put them in the hands of employees and customers. Value will increasing be created jointly and uniquely by the IT organization with employees, and by the firm as a whole with its customers (Prahalad and Ramaswamy)

Examples in this direction are:

Real time application rendering

- Data model customizations:
- Add tables
- Add fields

Create relationships

- User interface customizations
- Diverse page layouts to support multiple processes

Process customizations

- Workflows
- Email alerts

6. The Future

Since people are starting to talk about Web 3.0, one might wonder if there should be a Project Management 3.0. The term "Web 3.0" in Wikipedia is defined as a future wave of Internet innovation. Views on the next stage of the World Wide Web's evolution vary greatly, from the concept of emerging technologies such as the Semantic Web

transforming the way the Web is used (and leading to new possibilities in artificial intelligence) to the observation that increases in Internet connection speeds, modular web applications, and advances in computer graphics will play the key role in the evolution of the World Wide Web.

Web 3.0 can be defined as the third decade of the Web (2010–2020) during which several major complementary technology trends will reach new levels of maturity simultaneously including (N. Spivack, 2006):

- Transformation of the Web from a network of separately siloed applications and content repositories to a more seamless and interoperable whole.
- Ubiquitous connectivity, broadband adoption, mobile Internet access and mobile devices;
- Network computing, software-as-a-service models, Web services interoperability, distributed computing, grid computing and cloud computing;
- Open technologies, open APIs and protocols, open data formats, open-source software platforms and open data (e.g. Creative Commons, Open Data License);
- Open identity, OpenID, open reputation, roaming portable identity and personal data;
- The intelligent web, Semantic Web technologies such as RDF, OWL, SWRL, SPARQL, GRDDL, semantic application platforms, and statement-based data stores;
- Distributed databases, the "World Wide Database" (enabled by Semantic Web technologies); and
- Intelligent applications, natural language processing.[2], machine learning, machine reasoning, autonomous agents.[3]

At the moment it is difficult to envision special applications of these techniques in Project Management by maybe it is still early to reach conclusions.

7. Conclusions

A recent LEF-Financial Times study of US and UK subscribers to the FT found that two-thirds of respondents had equipment at home that was as good as or better than the equipment they had at work. This employee will invoke Web 2.0 technologies as needed to do what they want to do. They have resources and expertise which should not be ignored of opposed, but pro-actively leveraged, supported and enhanced. Recent developments in hardware and software virtualization make easier to do that.

All this is particularly true for the younger generation. We cannot expect to continue to use old and monolithic systems in the management of our projects with these new entrants in the organizations. Even more so one cannot expect to continue to use old management styles with this new generation. A change in paradigm is essential also in project management, as Gary Hamel writes in The Future of Management. An example of organization which has implemented such a shift in the paradigm is Google. Its management model is extremely interesting (Neal, 2007):

- Hire smart people that are nice to work with;
- Flat management structure;
- No silos, open communication;
- Ideas mailing list;
- 20% time to think to new solutions;
- Small projects;
- Iterative design, constant improvement;
- Test, do not guess.

On the other side do not forget what Gary Hamel recommends: “Commit to revolutionary goals, but take evolutionary steps.” (Gary Hamel, 2007)

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