Crowdsourcing: How to Harness the Creativity of the Masses

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Crowdsourcing: How to Harness the Creativity of the Masses
by
Roland S. Rachinger

An Abstract of a Project
in
Creative Studies

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Master of Science

May 2009

Buffalo State College
State University of New York
Department of Creative Studies
ABSTRACT OF PROJECT

Developing a project management template

This project examined ways in which organizations could tap into the creativity of the crowd, specifically how it could be applied to Information Technology project management. The project was conducted by reviewing existing literature and by researching organizations that are successfully using crowdsourcing to enrich their business and contains a project management template that was designed to be a blueprint for any company interested in this phenomenon.
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Creative Studies

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Dates of Approval:

________________________________________
Name of Project Adviser
Academic Title (Associate Professor, Professor)

________________________________________
Name of Student
Student
Dedication

This project is dedicated to my late uncle Klaus and late grandfather Erich (Opa). Klaus, you were always so kind and gentle to me. Your ability to speak English with me while I was visiting everyone in Germany always made the trip that much better. I will always cherish you.

Opa, you were like a father to me, and I wish I would have told you this when I had the chance. I have such fond memories of growing up with you that I will never forget. Both of you will be in my heart for forever.
Acknowledgements

To my wife Ann, thank you so very much for the continued love and support. I could not have done all of this without you. I will never forget your dedication.

Dr. Mary Murdock, thank you for your assistance and supervision. I am pretty sure that without your direction I would have gotten in way over my head.

Warm thanks are also due to gracious colleagues of mine whose time I consumed completing the project. Their own personal creativity and desire to share made this all possible. A special thanks to Paul Reynolds, Jason Welborn, Don Erwin and Khaleel Gathers.
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Section One: Background to the Project

Project Purpose

The overall goal of my Master’s project was to find ways to incorporate open source innovation into an organization. I have been fascinated with the Linux operating system for many years. I work in Information Technology (IT), and there are three main players when it comes to operating systems--you have Microsoft’s Windows, Apple’s Mac OS X and Linux. The first two options cost a significant amount of money, and the third is completely free. How can this be possible? What’s more, there are many reports indicating that Linux encounters less trouble with viruses, spyware and overall security compared to both Windows and OS X.

Then last year I read a book called Crowdsourcing: Why the power of the crowd is driving the future of business by Jeff Howe who also writes for Wired magazine. He coined the term “crowdsourcing” which is another way of referring to open source innovation. He speaks in-depth about what crowdsourcing is and cites numerous examples including background information on the rise of Linux. I thought, “How can I bring this concept to my department?”

Description and Background

I have been employed by Buffalo State College for over 9 years now. I’ve been fortunate in that I’ve been promoted from my original position as a temporary employee at the help desk to where I am now as the manager of Enterprise Desktop Systems. Essentially, I manage the operations of the desktop (and laptop) computers on campus.
With this position comes the need to oversee projects that require my staff as a resource. There is a push within higher education for more centralized IT project management and in some instances, even the formation of a project management office (PMO).

**Rationale**

Although our department is becoming more proficient in its use of project management, some roadblocks have begun to develop. One of the more important obstacles that we have encountered revolves around the resources piece of project management. Resources include the money needed to embark on a project as well as the staffing required to work on the project. The larger issue is with limited staff resources. We seem to develop more and more projects, but the number of staff either stays the same or decreases. How can we complete more projects in this scenario?

**Creative Benefit**

This is where my project comes into play. I have designed a project management template that will help alleviate this predicament. The concept is to turn the staff resources portion of a given project over to the crowd. Essentially, the template will help users determine if a task can be completed by the crowd. This introduces a number of complications including “How to reward the crowd so they continue to come back?” and “How do you keep the crowd working within deadlines?” However, if one succeeds in dealing with the negatives of the crowd, there is no limit to the number of individuals that may become contributors to a project.
If handled properly, the crowd can be responsible for many different facets of a project from idea generation to problem solving and from end user testing to feedback. This will ideally help alleviate some of the stress on the current staff of a department because this will lighten their workload so they can concentrate on things that are not suitable for the crowd. I am looking to take advantage of intrinsic motivation. People will choose to participate because they have an innate desire to contribute to the cause. This will also foster collaboration across departments because they will end up working so closely together on projects.
Section Two: Pertinent Literature

Introduction

This section contains a review of the four main texts used for researching the phenomena called crowdsourcing. There were a number of websites that were also very valuable and those are listed here as well. Finally, there is a follow-up bibliography with all of the resources cited below.

I conducted a review of literature dealing with the concept of crowdsourcing as well as many different approaches on project management during the Spring semester of 2009. This information was invaluable in developing the template as it is today. More importantly it helped me better shape the thinking that was necessary to make the template work in the most effective way possible. After I dove into the template in its original form, I realized there were a number of factors that would need to be considered for the final project to assist a project manager as it was originally intended.

My two main research foci were on crowdsourcing and project management. There were three books related specifically to crowdsourcing that I used rather extensively. I will describe those below. Lastly, there was one major book I used to explore specifically project management methodologies in IT.

The first book that I used in my research was a book called *Crowdsourcing: Why the Power of the Crowd Is Driving the Future of Business* by Jeff Howe (2008). Howe is a contributing editor at *Wired Magazine*, where he covers the media and entertainment industry, among other subjects. In June of 2006 he published "The Rise of
Crowdsourcing in *Wired* and before that he covered the phenomenon in his blog, crowdsourcing.com.

Crowdsourcing describes the process by which the power of the many can be leveraged to accomplish feats that were once the reserved for the specialized few. Howe talked about how the crowd was more than wise--it was talented, creative and extremely productive. Crowdsourcing brings out the transformative power of today’s technology, liberating the hidden potential within us all. It’s a perfect meritocracy, where age, gender, race, education, and job history no longer matter. The quality of work is all that counts and every field is open to people of every background. If you can perform the service, design the product, or solve the problem, you’ve got the job.

This has led to a dramatic shift in the way work is organized, talent is employed, research is conducted and products are made and marketed. Howe discussed both the positive and negative consequences of this intriguing phenomenon. Some of my favorite examples include Wikipedia and the t-shirt sales website Threadless.com. Yet the best example is the Linux computer operating system. The idea originated from a handful of computer programmers who showed that a community of like-minded peers could create better products than a corporate behemoth like Microsoft. Howe showed the potential of the Internet to create human networks that can divvy up and make quick work of otherwise overwhelming tasks.

The next book I used in my research was *Groundswell: Winning in a World Transformed by Social Technologies* by Charlene Li and Josh Bernoff (2008). Both work for Forrester Research, Inc. which is an independent research company that provides
pragmatic and forward-thinking advice to global leaders in business and technology.

Charlene Li is an independent thought leader and analyst on emerging technologies. She focuses on social technologies and interactive media. Josh Bernoff is a prominent technology analyst.

The book helps the reader evaluate new social technologies as they emerge. It explained how different groups of consumers are participating in social technology arenas. There are steps to help build social technologies into any business. The book described how to talk to the crowd to get a sense for their willingness to participate.

Groundswell characterizes the Internet and the behavior of crowds which make up the Web. This book provided an interesting discussion on digital mediums such as blogging and social networking and how they are changing the face of business, the economy and the world. It is written from a corporate perspective which makes it a worthwhile read for any business owner because the topics discussed are quite relevant. This is perfect for those interested in developing their business strategy around the Internet and social technologies. The first phase of the Internet was about getting everyone connected. In this next phase, which changes the way we work, live, play, and learn, we are starting to realize the value of those connections to the human network.

The third text related directly to crowdsourcing was Here Comes Everybody: The Power of Organizing Without Organizations by Clay Shirky (2008). Shirky teaches at the Interactive Telecommunications Program at NYU. There he researches the effects of our social and technological networks. He has consulted with a variety of groups working on network design including businesses such as Microsoft and Lego to mention
a few. He is also an observer of the transformational power of the new forms of
technology enabled social interaction.

At a very fast pace our age's new technologies of social networking are evolving.
This is allowing groups to do new things in new ways. Hierarchical structures that exist
to manage the work of groups are seeing these wither away by the rising technological
tide. Business models are being transformed, and the larger social impact is profound.
The book makes assessments of the impact of new technology on the nature and use of
groups. It integrates the views of a number of other thinkers across a broad range of
disciplines. It helps to understand the opportunities and the threats to the existing order
that these new, spontaneous networks of social interaction represent.

The key text used in the project management arena was *IT Project Management: On Track from Start to Finish* by Joseph Phillips (2002). Phillips is an independent IT
consultant specializing in project management. He has successfully implemented
projects for many different industries.

This book was the main text I used for project management research in particular.
It was an obvious choice to me because it was designed specifically for project
management within Information Technology. Not only is IT my profession, I also have a
strong passion for it. This book was designed to help the reader to manage and complete
projects within IT. There was a plan for keeping these projects on track from start to
finish. The author discussed staff motivation (which I will put a spin on because I am
aiming projects or portions of them, to the crowd instead of to traditionally paid
employees) as well as dealing with challenges along the way. Included in the text are a
number of interviews conducted by the author of leading IT project managers throughout the industry.

In particular, here are some of the key points in the book which revolved around project management that I used for my project:

- Create a feasibility plan and establish a priority list
- Organize a project team by assessing internal skills as well as utilize external resources
- Resolve disagreements – How will I accomplish this among the crowd?
- Maintain leadership and keep your team focused – How to keep the crowd’s attention?

The material in these books was important to my learning and development of the project in that they helped shape the thinking I had related to crowdsourcing. They describe the importance of the community for crowdsourcing to have a positive impact on a company. One cannot simply put together a collaborative website and require the staff to participate. The project needs to be nurtured, as do the individuals that participate.

These materials could also be useful to those who looking to new social technologies as they emerge. They would also help someone determine how different groups of consumers are participating in social technology such as Facebook and Twitter. This knowledge would be essential for anyone wishing to tap into the crowd in any organization as well as talking with the crowd through marketing and public relations.
campaigns. The next section contains a select bibliography that can serve as a guide for those interested in reaching out to the crowd.

**Selected Bibliography**


Section Three: Process Plan

Introduction

This section contains a description of process I used to design and develop the project and a final timeline that documents my progress.

The process plan really began to take shape in my mind toward the end of the fall in 2008 when I became interested in the idea of crowdsourcing. This was also the time my thinking in the area expanded because I knew I would be completing my Master’s project during the spring 2009 semester. Although no formal work began during the fall semester that was the time when the idea first took form.

Because I have worked in Computing & Technology Services for almost ten years now, I have a cursory knowledge of general project management. However, I needed to really dig into some of the industry standards such as those set by the Project Management Institute (PMI). The majority of the research was concentrated on open source innovation that is being used successfully in many industries.

Once I began the research, I jumped into creation of the project management template itself. I looked at websites such as Microsoft.com and Forrester.com for industry standards while looking at UC Berkley and Cornell University websites for norms found in higher education. Over the last few weeks I have been adding and tweaking tasks in the template to polish things up.

While I was conducting research and working with the template, I began to discuss issues with a number of different individuals who expressed interest in meeting with me. Some of them worked on campus, some worked elsewhere. Some worked in
IT as I do; others were educators. These interactions were extremely helpful because I was able to gain the perspective of individuals at all of these different levels. Some of them questioned the validity of my project as a whole. I am glad this happened because it forced me to check on the overall goal and ask myself, “Is this really possible?” A number of the individuals I spoke with said they would be happy to look at the template itself and provide me with feedback. Once I have completed the first draft of the template, I will coordinate with some of these individuals so they can have a look at the template itself.

The final step was completion of the template and combination of all the required sections into the final write-up. Also, there will be preparation for the presentation at the semesters end.
## Project Final Timeline

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct concept paper</td>
<td>8</td>
<td>February 1st – February 23rd</td>
</tr>
<tr>
<td>Literature research</td>
<td>25</td>
<td>February 1st – March 31st</td>
</tr>
<tr>
<td>Crowdsourcing business examples</td>
<td>15</td>
<td>February 1st – March 31st</td>
</tr>
<tr>
<td>Create initial draft of project management template</td>
<td>20</td>
<td>February 15th – March 15th</td>
</tr>
<tr>
<td>Distribute template requesting feedback</td>
<td>2</td>
<td>March 15th</td>
</tr>
<tr>
<td>Process feedback and make any necessary modifications</td>
<td>20</td>
<td>March 16th – March 31st</td>
</tr>
<tr>
<td>Drafts section 1, 2 and 3 of final write-up</td>
<td>10</td>
<td>March 10th – March 26th</td>
</tr>
<tr>
<td>Finalize template</td>
<td>10</td>
<td>March 31st – April 10th</td>
</tr>
<tr>
<td>Finalize sections 1, 2 and 3</td>
<td>4</td>
<td>April 2nd – April 12th</td>
</tr>
<tr>
<td>Draft sections 4, 5 and 6 of final write-up</td>
<td>10</td>
<td>March 29th – April 12th</td>
</tr>
<tr>
<td>Revise and edit final versions of project write-up</td>
<td>8</td>
<td>April 12th – April 30th</td>
</tr>
<tr>
<td>Prepare project presentation</td>
<td>4</td>
<td>April 30th – May 6th</td>
</tr>
<tr>
<td>Submit hard copy of project presentation on Thursday, May 7th 2009</td>
<td>1</td>
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<tr>
<td>Present project on May 7th 2009</td>
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<td>Submit CD copy of project on Friday, May 8th 2009</td>
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<tr>
<td>Submit bound final project on by Thursday, May 14th 2009</td>
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<td>May 14th</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>140</strong></td>
<td></td>
</tr>
</tbody>
</table>
Section Four: Outcomes

Introduction

This section contains the project management template for this Master’s project. The template was created electronically with Microsoft Office Project 2007. The Gantt chart view of the entire template will be in the Appendices. However, the way I intended it to be used changed slightly as I progressed throughout the project. I had originally envisioned the template to be similar to many others with the exception of the portion related to the staff resources. I had pictured that projects would be designed and laid out entirely by paid staff. All of the necessary tasks and timelines would first be defined by individuals on the payroll. This seemed like a good idea originally, but then I realized this would eliminate a vast energy that could be found for any portion of the project, even when in the planning stage. It occurred to me that the crowd could help plan the project, not just work on parts of it.

I then expanded it to the creation of a project office which could be used when projects called for it. As such, it was left as a section of the template that would be optional and used only when necessary. This office could be used to provide collaboration and energy on new projects or existing ones in need of a kick-start.

The finalized template in its entirety consisted of well over one hundred tasks. Many of them were optional while some were mandatory. For example, there were tasks in the template related to archival of project data and this might not be appropriate for a project which contained sensitive data. Keep in mind that tasks related to project scope will always be used when working a project.
Planning – During the planning phase one must consider logistics, policies and procedures and project standards and controls. Defining the goals of the project is necessary when considering that the logistics and the goals may originally be driven by the crowd. Policies and procedures include defining priorities, reporting requirements

Project Template Phases

In all there were ten major phases to the template which will be explained. They are Conceptualization, Scope, Planning, Initiate Project Office, Design Customer Feedback Monitoring Process, Management (ongoing), Historical/Archival, Deploy Feedback Program, Post Implementation Review and Monitor Customer Feedback.

Along with each explanation of the step will be a description of how the crowd can contribute energy to that part of the process.

Conceptualization – First one must define the statement of need and scope of services required for the project. If ever a company were to take an idea from anyone for a change in business and apply a project to it, that would be using crowdsourcing for conceptualizing the idea.

Scope – One must determine the scope of the project. Discussions which involve the creation of the project office begin here. Sponsorship is garnered at this stage as well for without executive support, the project has no chance. A company may poll the crowd to get a sense for what the scope of the project should be.

Planning – During the planning phase one must consider logistics, policies and procedures and project standards and controls. Defining the goals of the project is necessary when considering that the logistics and the goals may originally be driven by the crowd. Policies and procedures include defining priorities, reporting requirements.
and testing procedures. Testing of a product or service is often done best by the crowd; simply ask anyone who shops at Amazon.com. When establishing standards, questions such as roles and responsibilities are determined in this phase. Enforcement of these roles and responsibilities in the crowd can be difficult unless the community surrounding the product is one which is tightly knit. Then it is possible for self-policing.

**Initiate Project Office** – The Project Office existence was based on the need of an organization geared towards either existing or new projects. The Project Office will determine projects which require this oversight. In addition, guidelines and performance metrics are addressed by the Project Office at this point. Although difficult for the crowd to participate on all facets of this phase, they can be extremely helpful in measuring the performance of the product developed.

**Design Customer Feedback Monitoring Process** – This section was concerned with determining how to measure customer satisfaction. Customer feedback needs to be solicited. Once it is obtained there is a path for the results to reach the affected groups. What better way to talk to the crowd than to have the crowd craft the message designed for them?

**Management (ongoing)** – After the project guidelines are agreed upon, they must be preserved for each future project. These guidelines include risk assessment and monitoring. Risk assessments are conducted to determine the priorities of multiple
projects while monitoring means to observe critical issues, budgets and allocating resources. When the crowd is included in the resource group, it makes shifting resources much easier when the pool of available candidates is significantly larger than it is traditionally.

**Historical/Archival** – This phase incorporated past experiences into a project archive for future retrieval. The perfect example of this is the wiki. The idea is for pertinent information to be placed in the wiki by the crowd for future use. This ensures past data is kept for reference as well as made available for quick change should one be warranted.

**Deploy Feedback Program** – Once all of the criteria for garnering feedback have been established, it is time to put the mechanism out there to acquire feedback. There is little change here because this feedback is already from the crowd. That is the point.

**Post Implementation Review** – This is to ensure the user feedback is being collected and acted on accordingly. This entire phase will not work if the crowd does not provide the feedback.

**Monitor Customer Feedback** – Once the post implementation review takes place there must be an ongoing process of dealing with customer feedback. This is where patterns are discovered which lead to changes in the product or process. To monitor the feedback from the customer, it must continue to come in thanks to the crowd.
Section Five: Key Learnings

Introduction

This section contains the key learnings I obtained by completing this Master’s project. The entire process was a wonderful learning experience for me. I have learned a great deal about project management, crowdsourcing and even some things about myself. This exercise forced me to look at project management methodology from the top down when I am comfortable with looking at my small piece of the puzzle that affects me directly. I had to become reasonably proficient using Microsoft Project. With this software program I was able to construct a rather comprehensive first edition of my project management template.

Some concerns I had related to the template itself arose as more was added to it. I had not thought about where the template would reside when it was completed. Should the template be online or in paper form? Will old revisions of the template be available as learning tools in the future? Arguably the most important question that I came across was about the flexibility of the template. My goal changed slightly as I poured more into the template. I wanted to construct it in a way that would allow for the crowd to work on virtually any part of a project as opposed to sections that were designed for the traditional employee.

It occurred to me that strict traditional project management methodology might not be well suited for work done by the crowd. Rigid time lines do no work well when you have individuals who chose to work on a project at their leisure. Then I came across agile project management. Agile methodologies generally promote a project
management process that encourages frequent inspection and adaptation, a leadership philosophy that encourages teamwork, self-organization and accountability, a set of engineering best practices that allow for rapid delivery of high-quality software, and a business approach that aligns development with customer needs and company goals (Highsmith, 2004). This is what really changed my thinking on the entire template philosophy.

Some of the fundamental principles behind agile software development are teamwork and collaboration. This is also what describes Web 2.0. Web 2.0 refers to a perceived second generation of web development and design that facilitates communication, secure information sharing, interoperability and collaboration on the World Wide Web (Vossen, 2007). This is what crowdsourcing is all about. It is about the people and the communities to which they belong. The concept of Web 2.0 proved to be one of the most important key learnings I encountered during the project.

**Content Learnings**

As it has been stated, I have worked in IT for many years now. I have also managed people since the second half of 2006. I have been exposed to many different IT projects because of my position. I utilized a number of domain relevant skills when I developed the content for the template itself. I have been exposed to Microsoft Project and its use by fellow colleagues within my department. In fact, a former director I used to work with was a firm believer in standardized project management methodologies. The purpose of implementing the project management standard is to improve project
results through a uniform application of project management best practices, appropriately tailored for IT industry (Phillips, 2002).

There was also exposure to the creation of a feasibility plan. The feasibility plan is a documented expression of what your research has told you about a potential project. It helps you determine the validity or scope of a proposed project or a section of a project (Phillips, 2002). They were often written with upper management in mind along with their contributions. This helped make them direct, organized and generally factual rather than opinionated. The focus of any IT related project is not technology for technology’s sake but instead to add value to the organization. This past experience greatly improved my ability to gather all of the necessary pieces of the finalized template.

According to Kirton’s KAI theory (Kirton, 2003) I rank as an adaptor. Some of the characteristics that support this are that I can be resourceful, thorough and efficient. Working on this project forced me to call on all of these traits on more than one occasion. A diversity of problem solvers, deploying a diversity of resources is needed to solve life’s diverse problems, many an outcome of mankind’s success (Kirton, 2003). This statement by Kirton is the exact reason why the crowdsourcing project template idea will work, because every problem needs a diverse group of people working together to achieve the goal.

Years ago, most companies viewed innovation as something that could only take place within their own organizations. Now, more companies are using outside sources for industrial innovation as they move beyond the "not invented here" paradigm. The "not invented here" syndrome is such that if the idea doesn’t come from within, it’s not
trusted. This reasoning is nearly universal in older, well-established institutions. This approach takes advantage of talent available in the global marketplace, whether it's a few blocks away or halfway around the world at a university, government laboratory or even the office of a competitor. Crowdsourcing is quickly becoming the norm, because it allows U.S. companies to maximize internal resources and compete globally.

Innovation is not the enterprise of a single entrepreneur. Instead, it is a network building effort that centers on the creation, adoption and sustained implementation of a set of ideas among people who, through transactions, become sufficiently committed to these ideas to transform them into "good currency" (Van de Ven, 1986). This network-building activity must occur both within the organization and in the larger community. Research by Ruttan and Hayami (1984) suggests that innovation does not exist in a vacuum and that institutional innovation is in great measure a reflection of the amount of support an organization can draw from its larger community. Collective action among institutional leaders within a community becomes critical in the long run to create the social, economic and political infrastructure a community needs in order to sustain its members (Astley and Van de Ven, 1983). In addition, a broad population or industry purview is needed to understand the societal characteristics that facilitate and inhibit innovation.

What makes open source so efficient? In the broadest sense it is the ability for a large number of people to contribute. Put another way, a large and diverse labor pool will consistently come up with the better solutions than the most talented, specialized workforce (Raymond, 2001). This is true in fields such as corporate science, product
design and content creation as it is in software, and it is one of the central principles of crowdsourcing (Howe, 2008). In the book *The Character and the Bazaar* Raymond contrasts two methods of software development. The “cathedral” characterizes the heavily managed, hierarchical approach that had been standard operating procedure since the Industrial Revolution. Raymond contrasts this with Linux, “a world-class operating system that coalesces as if by magic by several thousand developers scattered all over the planet, connected only by the tenuous strands over the Internet.” (p. 143). In a cathedral, everything is coordinated from above. In the bazaar, everything is coordinated from masses below.

As stated earlier open source innovation can take place from one organization to another as well. The notion is that innovations can spread through cross-organizational networks without the aid of direct interaction. Strang and Meyer (1993) found that organizational adoption of shared innovation can be triggered by the creation of "institutionalized" or "cultural" networks with socially similar yet non-interacting organizations. These networks are formed when organizations develop the understanding that they are members of a common social grouping and construct symbolic ties among them (Budros, 1999). The expectation is that, since similar organizations use each other as a social frame of reference, innovations that are introduced into an organizational network will flow through the network (Budros, 1999). DiMaggio and Powell (1983) specify "mimetic isomorphism" as the driving force behind the flow of innovation stating that socially similar organizations, particularly those grappling with the uncertainties of economic competition, mimic each other when it seems natural to do so. It can then be
expected that as the need for creativity and product creation continue to increase the rate at which innovation shared from other organizations is adopted will increase as well. This sharing of innovation does not have to happen between like organizations only. For example, Microsoft and Ford Motor worked together so the car company could offer a system that provided voice-activated control of music or a mobile phone. Microsoft doesn't build cars, and Ford isn't in the software business, but together, they met one another's needs.

Open source innovation does not have to come from outside the firm; it might travel from a different area of the company. For example, you might find ideas about manufacturing from the marketing department or help with packaging from the staff in finance department. Someone simply needs to be asking the right questions. The core of market knowledge for a new product constitutes the issues of why people want the product, how it fits into the flow of their lives or their work and how they will evaluate it (Dougherty, 1992). Effective idea generation relies on people’s ability to develop spontaneous experiments, tell stories of possible use, engage in face-to-face interaction and puzzle out the seeming conflicts between new and established expectations. For idea generation employees will need hands-on experience such as expeditions to existing as well as new customers, feasibility conferences over the business domain and its various product areas, fit with firm councils and scouting is necessary to build up people’s experience base (Dougherty, 1992). Successful product innovators must develop effective collaboration across departments.
One of the things that worked very well was the willingness of the individuals around me. If you think about it, my project was partially created by the efforts of crowdsourcing. It was impossible for me to possess one tenth the knowledge of all of those around me. What worked for me was note-taking and open-ending questioning. The interviews I conducted were very loose and relaxed. I found that environment the most conducive to idea sharing. In ten minutes or less I would present my idea and before I knew it, an hour or more had passed and I had nearly two pages of notes! The two biggest drawbacks were either my writing speed (my inability to keep up at times) or the meeting time limitation.

While overall, I am pleased with the final outcome there was a shift in my thinking. I realized that while the template is strong, the build up to it is essential. What needs to happen is that the organization needs to go through a mental shift. The organization then becomes so engaged with your customers that you walk in step with their needs and wants. The key to this transformation is taking an idea that typically starts with a few employees who understand crowdsourcing and making it an organization-wide movement (Li and Bernoff, 2008). In essence, you want to create your own standard for crowdsourcing within the company to embrace the energy of customers outside of it. There are three essential elements to this transformation:

- It is important to take this step-by-step.
- Each of these stepping-stones leads in a natural progression to the next step.
- You have to have executive support.
There were other key learnings that reflect on my personal preference and style. My FourSight™ (Puccio, 2001) preference is that of an implementer, and it was accurate when working on my project. I was able to immediately setup a number of appointments with individuals both on and off the Buffalo State College campus. Some colleagues of
mine were helpful and put me in touch with some of their contacts at the University at Buffalo as well.

Although my preference is to be an implementer I found myself acting a little bit like a developer. A developer likes to think about and plan the steps to implement the idea (Puccio, 2001). I was developing my developer skills as the project progressed. Instead of simply forging ahead without thought as I am known to do, I was marrying the two preferences in a constructive union. Ideas were followed through with more regularity because there was a fair amount of thought put into them before actions were taken.

For this template to work properly the community needs to be constructed and maintained. It is impossible to tap into the intrinsic motivation people have if you cannot reach out to them or provide them with the avenue to contribute. This template needs to be used in context and that context includes the proper care of the community of willing participants. The internal groundswell is all about creating new ways for people to connect and work together, and to that end, it’s about relationships, not technology (Li and Bernoff, 2008).

One of the most effective activities I participated in while working on this project was the act of listening. This may sound silly but it was quite important. I met with a number of individuals with plenty of insight, much of this was quite useful to me. Listening is one of the keys to crowdsourcing in any business, along with talking, energizing and supporting (Li and Bernoff, 2008). Talking can be when a corporation posts policy changes where everyone can read them. Energizing is giving employees the
opportunity to share their enthusiasm with the entire workforce. Supporting, or embracing, is showing a true commitment to support and promote employees from within.

I found myself where the Black hat and the Green hat from de Bono’s Six Thinking Hats. When wearing the Black hat one identifies barriers, hazards, risks and other negative connotations. This is critical thinking, looking for problems and mismatches (de Bono, 1999). Having some experience with IT project management I was aware of many of the flaws that existed in the very first version of the template. I was able to objectively look at the template and identify a number of issues that required resolution.

This is the hat of thinking new thoughts. It is based around the idea of provocation and thinking for the sake of identifying new possibilities. Things are tried for the sake of seeing what they might mean, rather than to form a judgment (de Bono, 1999). I was able just try new ideas without judging them as I tried them. There were a number of tasks moving and out of the template all throughout the process. I shifted many things around as well and needed to keep an open mind or would never have finished the final product.

The feedback I obtained from individuals who were gracious enough to provide was invaluable. However, looking back on it now, I would have requested it differently. What I did was complete as much of the template I could the very first time around and then solicited feedback. At that point I would make any changes that were necessary and move forward. The feedback itself was not as cut and dry as I had expected. I was
receiving some very good feedback telling me to take one or more sections in a slightly different direction. Unfortunately, I was not able to be as flexible as I would have liked because in a number of instances a section was so far developed I did not have the option to make drastic changes. To do things differently I would instead begin working on smaller portions of the template and ask for feedback more frequently than I had. This would allow me more flexibility to move greater portions in a different direction.

One major oversight on my part was the consideration of return on investment, or ROI. ROI is the ratio of money gained or lost on an investment relative to the amount of money invested (Phillips, 2006). What I should have factored in was how much of an ROI is there if the template is used? It is a hard piece to measure but the easiest way is with man-hours. It would have been beneficial to show (approximately) how much time is saved when any given task(s) is turned over to the crowd for completion. It is hard to argue with projects taking a fraction of the time because “someone” else is doing large amounts of the work.
Section Six: Conclusion

Introduction

This section contains what I now know about creativity and change leadership because of completing this project. In short, I would rate my project as resounding success! Not only did I create the template as I set out to do, I learned a great deal about a crowd and how to harness its creativity. People are intrinsically motivated to do good things for the right reason. The key is finding that energy and putting it to good use. Then you must find a way to sustain this energy or else the crowd will simply go elsewhere.

As a manager, I believe people look at me and think of me as the individual who signs their timesheets. However, I understand how to be more than that. Having been a manager for a few years now, I know how to motivate my staff towards the greater good. That is what it is to be called a leader. It is not someone with stature who demands respect. It is someone who can be on the same level of understanding as his staff and speak to these people as colleagues and not minions.

The rate of change in my professional world today is unprecedented. With the importance of the global economy there has been rapid technological development. IT has moved from being relatively stable and simple (mainframes) to being increasingly dynamic and complex (desktop PC’s and mobile devices). As a result, IT is now faced with a plethora of new challenges and leaders must perform to a higher level in increasingly unpredictable situations. This new world requires a new set of leadership skills to ensure high performance. Working on this project as helped me realize the
potential of not only myself, but my peers and colleagues alike. I have acquired different ways of motivating the staff around me. There is a better understand of their backgrounds and how that translates to their current professional comfort level.

This project has made me realize that I have been put into a change leadership role here at Buffalo State College. Up until approximately two and a half years ago I was considered a computer lab support coordinator. I had two colleagues with the same title. The three of us were responsible for maintaining the list of computer labs which, at the time, was well over one hundred labs and around one thousand workstations. This is all we did and we were good at it. So very much has changed since then. Now, instead of there being two separate groups for lab computers and faculty/staff computers, we are one homogenous group which supports them all. Also wrapped up in the group are all of the hardware technicians for those areas. One of my original computer lab support colleagues is in charge of supervising our student employee staff which runs as high as ten employees any given semester. My other colleague is now the assistant manager of purchasing and inventory and is responsible for all of the desktop computer orders that are placed. Finally, oversight here is done by me where these two individuals report as well as the rest of the support staff. Plus, according to my supervisor the changes will just keep on coming. So while I may not be directly responsible for some of the changes that are happening, I certainly am right in the middle of it all! We have been leading the change for quite some time now and I didn’t even realize the magnitude.
Next Steps

What I see myself doing next is to move to Phase Two of this project. That is to actually take my template and work with other faculty and staff at Buffalo State College to see how feasible the template is. There are a few faculty and staff members that I have worked closely with over the years who I am sure would be more than willing to assist. I would work with them to develop a timeline for testing of the template on a project that one particular area of Computing & Technology Services (CTS) would be responsible for.

Working the template could be done by anywhere from two to five people maximum. Once the number of individuals is above five, there might be difficulties with scheduling and other accommodations. A real project would need to be identified for the next set of rigorous testing. A real sense of energy would be required from all of the participants as well. Upon completion of this project, another round of feedback and revisions would take place.

This level of testing would continue and the scope of the projects might broaden as well. Once the template is further refined, we would begin to use it in CTS for IT projects. More testing and refinement would undoubtedly be necessary. The ultimate goal would be to refine the template to the point that it could be used on just about any project, not just IT related projects. That would make all of my efforts a triumphant success!
References


Appendix A: Concept Paper
Crowdsourcing: How to Harness the Creativity of the Masses

Name: Roland Rachinger Date Submitted: 2/22/09

Project Type: To improve the quality of life for others

What Is This Project About?

The purpose of this project is to develop procedures that can be used to incorporate open source innovation into any organization. These guidelines will demonstrate how open source innovation, also referred to as crowdsourcing, can be used on any number of different projects that have traditionally been completed exclusively by paid staff. This project will allow me to tap into some of my skills which including being an implementer as well as a diagnostic thinker. My Foresight preference is to be an implementer and I will certainly need this skill to complete a project of this scale. My skills as a diagnostic thinker will be tested because to develop these guidelines I will be forced to dig deep into all of the possible facets of organizing a project for the crowd.

Rationale for Choice:

Working in Information Technology (IT) for over nine years now (which includes managing the technicians for the past two), I see the need to incorporate our users into the daily tasks of technology support. I’ve always been fascinated by the Linux operating system which was created entirely by users on their own personal time and continues to be supported in the same fashion. This approach is called crowdsourcing.

The key to crowdsourcing is the intrinsic motivation for someone to participate. Crowdsourcing describes the process by which the power of the many can be leveraged to accomplish feats that were once the province of the specialized few (Howe, 2008).

Crowdsourcing takes advantage of the creative energy of the masses when it comes to problem solving, idea generation and innovation. This could not come at a better time with the world’s economic crisis. Workforces are dwindling all over the globe so we need to find ways of tapping into “the Billion” or the estimated number people on the planet with Internet access. There would be a direct improvement in a number of ways including staff morale, end user empowerment and quality of ideas and problem solutions. Finally, there is the potential for major cost savings because large amounts of work that are normally completed by paid staff would instead be completed by unpaid individuals working in their spare time.
What Will be the Tangible Product(s) or Outcome(s)?

The outcome of this product will be a template that could be used to properly crowdsource any given project. It would provide a documented process with guidelines and tasks for different projects that are initially related to IT.

What Criteria Will You Use To Measure The Effectiveness Of Your Achievement?

One way I will measure the effectiveness of the achievement will be the universality of the template. The guidelines must be generic enough so they may span across other disciplines. Then I will select one or more fictitious but relevant projects to use as a test. The template will be used to determine whether or not the test project is viable to be crowdsourced. Finally, if the project is deemed workable, the steps in the template would be used to see the project to fruition. All of these scenarios would be practiced in a testing environment. Even if there are many holes in the final project, I will be satisfied with a starting point that can be improved in the future.

Who Will Be Involved or Influenced; What Will Your Role Be?

For certain there would need to be some support from colleagues in my department. I would require buy-in from my supervisor, Melissa Miszkiewicz, as well as possibly Mark Kent and Judi Basinski. I expect to involve some of my staff for assistance as well. I have developed some good working relationships with a number of individuals outside of Computing & Technology Services (CTS) and I may use those in search of both feedback to the template as well as suggestions for possible projects for testing.

When Will This Project Take Place?

The time required to develop the guidelines for the incorporation of crowdsourcing would be the duration of the spring 2009 semester. I plan to work throughout the semester to research how other companies are using crowdsourcing in their environments. Once the appropriate information has been gathered the template will then be created. It is my aspiration that the templates use could last well beyond the original project.

While this is beyond the scope of the project I may extend the original template idea into Phase II. This would take place after the completion of the original project explained above and it would not be part of the Masters project. Phase II would involving testing of the template on real projects with other departments on campus.

Where Will This Project Occur?

This project will take place here at Buffalo State College in Buffalo, New York. It will originate within my department, Computing and Technology Services. Phase II may
include other department(s) such as Mathematics, Computer Information Systems, Geography, Creative Studies, Physics to name a few.

Why Is It Important to Do This?

Crowdsourcing and related processes represent the direction business today is moving. This type of collaborative work can help to bridge the communication gap between departments on a college campus. It is important to help people in all the different functional areas work together more effectively. Also, because professional staff levels continue to decline all across business and higher education, we need to find ways to take advantage of individuals with a passion (read “intrinsic motivation”) and spare time to work on something by harnessing their abilities and expertise, as well as their ability to think divergently.

Personal Learning Goals:

- How to incorporate crowdsourcing into my business?
- How to determine what is and is not a good project to be crowdsourced?
- To become a better leader (instead of just a “manager” with that mucky label)
- Ideally to increase the moral of my staff and my department

How Do You Plan to Achieve Your Goals and Outcomes?

I intend to conduct research of other organizations that are successfully using crowdsourcing in their business as well as published literature on the subject. If necessary I will speak with other faculty and/or staff members on campus who may also be interested in this concept. I would be particularly intrigued to hear from the faculty perspective to help me better understand their desired outcome. I need to know how this would benefit them and why they would choose to participate. Finally, I will be diligent about sticking to the project timeline and avoid scope creep.

Evaluation:

To evaluate my project I will require assistance from individuals both in CTS and other departments willing to provide feedback on the crowdsourcing guidelines that will be created. I will also most likely ask for guidance and/or feedback from some of the Creative Studies faculty as well.
Prepare Project Timeline:

February
- Submit Concept Paper draft by Monday, February 9th 2009
- Submit final version of Concept Paper by Monday, February 23rd 2009
- Begin literature research
- Begin review of successful crowdsourcing in business
- Begin creation of template itself

March
- Continue business and literature research
- Complete of initial draft of template, request feedback
- Process feedback and make any necessary modifications
- Begin to draft sections 1, 2 and 3 for submission by Thursday, March 26th 2009

April
- Finalize template
- Finalize sections 1, 2 and 3
- Draft sections 4, 5 and 6 for submission by Sunday, April 12th 2009
- Revise and edit final versions of project write-up
- Prepare project presentation

May
- Have final project bound
- Submit hard copy of project presentation on Thursday, May 7th 2009
- Submit CD copy of project (with 5 separate files) on Friday, May 8th 2009
- Submit bound final project due by Thursday, May 14th 2009

Identify Pertinent Literature or Resources:

Current business examples include InnoCentive, Threadless.com, iStockPhoto.com, MyFootballClub and Dell’s IdeaStorm to name only a few.


Appendix B: Project Management Template Gantt Chart
Overview of entire Gantt Chart
## Individual pages of Gantt Chart

<table>
<thead>
<tr>
<th>ID</th>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>Finish</th>
<th>Predecessors</th>
<th>Milestones</th>
<th>Notes</th>
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<tbody>
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<td>Conceptualization</td>
<td>2 days</td>
<td>Mon 2/18</td>
<td>Wed 2/20</td>
<td></td>
<td></td>
<td>Project Manager</td>
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<tr>
<td>2</td>
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<td>Tue 2/20</td>
<td>Wed 2/21</td>
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</tr>
<tr>
<td>ID</td>
<td>Task Name</td>
<td>Duration</td>
<td>Start</td>
<td>End</td>
<td>Project Office</td>
<td>Project Office Staffing</td>
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<td></td>
</tr>
<tr>
<td>61</td>
<td>Project Office Support for E-Scheduling Projects</td>
<td>3 days</td>
<td>Fin 2:30 PM</td>
<td>Mon 2:30 PM</td>
<td>Project Office</td>
<td>Project Office Staffing</td>
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<tr>
<td>62</td>
<td>Identify new projects for Project Office</td>
<td>1 day</td>
<td>Mon 9:00 AM</td>
<td>Mon 9:00 AM</td>
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<td>Project Office Staffing</td>
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<tr>
<td>63</td>
<td>Establish monitoring system</td>
<td>1 day</td>
<td>Thu 9:00 AM</td>
<td>Thu 9:00 AM</td>
<td>Project Office</td>
<td>Project Office Staffing</td>
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<tr>
<td>64</td>
<td>Create new projects for Project Office</td>
<td>1 day</td>
<td>Thu 9:00 AM</td>
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<td>Project Office Staffing</td>
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<td>Schedule meetings for Project Office</td>
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<tr>
<td>66</td>
<td>Review and approve project scope</td>
<td>1 day</td>
<td>Fri 9:00 AM</td>
<td>Fri 9:00 AM</td>
<td>Project Office</td>
<td>Project Office Staffing</td>
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<td>Establish budget guidelines</td>
<td>1 day</td>
<td>Wed 9:00 AM</td>
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Project: REVISED project

**Task Summary**

- **Start**: 4/30/20
- **End**: 5/3/20
- **Progress**: 0%

**Project Summary**

- **Phase**: 2

---

**Internal Tasks**

- [ ] Create new projects for Project Office
- [ ] Establish budget guidelines
- [ ] Establish project scope
- [ ] Review and approve project scope
- [ ] Create new projects for Project Office
- [ ] Establish monitoring system
- [ ] Identify new projects for Project Office
- [ ] Project Office Support for E-Scheduling Projects

**Project Office**

- [ ] Project Office 1
- [ ] Project Office 2
- [ ] Project Office 3

**Project Office Staffing**

- [ ] Project Office Staffing 1
- [ ] Project Office Staffing 2
- [ ] Project Office Staffing 3

---

**Project Management**

- [ ] Review and approve project scope
- [ ] Identify new projects for Project Office
- [ ] Establish budget guidelines
- [ ] Establish project scope
- [ ] Review and approve project scope

---

**Other**

- [ ] Create new projects for Project Office
- [ ] Establish budget guidelines
- [ ] Establish project scope
- [ ] Review and approve project scope

---

**Project Office**

- [ ] Project Office 1
- [ ] Project Office 2
- [ ] Project Office 3

**Project Office Staffing**

- [ ] Project Office Staffing 1
- [ ] Project Office Staffing 2
- [ ] Project Office Staffing 3
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**Historical/Archival**

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**Data Collection**

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<th>Resource Name</th>
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<td>Implement data collection to allow for all sources of feedback</td>
<td>1 day</td>
<td>Tue 7/7</td>
<td>Tue 7/7</td>
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<td>Cashewl Service Web</td>
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**Implementation Plan**

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