# OSBRCA The Open Source Business Resource

Editorial Dru Lavigne, Stoyan Tanev

Viable Business Models for Corporate Co-creation Communities Kim op den Kamp

Components of Co-creation Stephen Allen, Tony Bailetti, Stoyan Tanev

Value Co-creation and New Marketing Aron Darmody

The Micro- and Macro-levels of Cocreation: How Transformations Change People's Preferences Tore Kristensen

Co-creation: a New Way of Doing Business in an Age of Uncertainty Anna Kirah

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#### Editorial

Dru Lavigne and Stoyan Tanev discuss the editorial **3** theme of value co-creation.

# Viable Business Models for Corporate Co-creation Communities

Kim op den Kamp provides insights from her research into three main business model elements of co-creation communities: the value proposition, the value network, and the revenue model.

### Components of Co-creation

Stephen Allen, Tony Bailetti, and Stoyan Tanev present their research on the key components of value co-creation between firms and end customers based on the application of web search and Principal Component Analysis techniques.

### Value Co-creation and New Marketing

Aron Darmody, a Doctoral Candidate at the Schulich School of Business, demonstrates how granting consumers freedom through co-creation has become the most effective mode of production for contemporary marketers.

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### The Micro- and Macro-levels of Co-creation: How Transformations Change People's Preferences

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# Co-creation: a New Way of Doing Business in an Age of Uncertainty

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### EDITORIAL

*The relationship between companies that* produce and distribute goods and the consumers who purchase and use those goods is often portrayed as "us vs. them". While technology provides the tools needed for communication and collaboration, company-consumer collaboration is often met with skepticism. Is it possible for companies and the users of their products to form mutually beneficial relationships that create value? The concept of value co-creation attempts to answer that question and it is the editorial theme of the November and December issues of the OSBR.

### Co-creation: New pathways to value

(http://promisecorp.com/newpathways) reminds us that "It is...the quality of the relationship that companies form with and facilitate among their customers, which will determine how knowledge is created, shared and transferred". The authors in this issue introduce us to who is involved in these relationships, their motivations, and techniques.

*We encourage readers to share* articles of interest with their colleagues, and to provide their comments either online or directly to the authors. We hope you enjoy this issue of the OSBR.

### Dru Lavigne

### **Editor-in-Chief**

Dru Lavigne is a technical writer and IT consultant who has been active with open source communities since the mid-1990s. She writes regularly for BSD Magazine and is the author of the books BSD Hacks, The Best of FreeBSD Basics, and the upcoming Definitive Guide to PC-BSD.

Value co-creation examines the practices customers and companies use to co-create value. These practices affect the specification, design, production and manufacturing, distribution and support of the companies' products and services. Co-creation enables a company to better satisfy customers' demands for personalized products, services and experiences. The term value co-creation is broadly used and needs to be further clarified. This clarification is a challenging task and needs the cooperation of both business scholars and practitioners.

Value co-creation is an emerging concept and the body of literature associated with it is growing, but scarce. The growing interest in co-creation signals the emergence of a new semantic wave in management, marketing and innovation research. This perception makes the ongoing discussions an easy target for premature theoretical explorations leading to uncertainty and, sometimes, confusion. There is also an unconscious temptation to deal with the lack of contextual clarity by re-dressing well known conparadigms cepts and and bv mechanically refurbishing existing frameworks. Such approaches do not help in clearly identifying the need for a new terminology, new frameworks and new fields of research exploration. Due to the importance of co-creation and the large number of articles we received we have, we have dedicated two issues to this topic: November and December, 2009.

### EDITORIAL

*Kim op den Kamp from* the Eindhoven University of Technology in the Netherlands summarizes the results of the first study of business models for corporatedriven co-creation communities. Four major benefits of online communities are identified: i) new product ideas; ii) customer communications; iii) customer feedback on ideas and applications; and iv) new knowledge.

*Stephen Allen et al. provide* the first quantitative study of the components of value co-creation. Their research identifies four co-creation components: i) learning from dialog; ii) resource sharing; iii) personalization; and iv) co-production.

*Aron Darmody from the Schulich* School of Business at York University illustrates how users' creativity can be harnessed.

*Tore Kristensen examines various aspects* of the motivational and transformational processes in personal co-creation experiences. He explores the nature of the personal transformations taking place among ordinary people as consumers and users of cultural institutions.

*Anna Kirah from CPH Design* in Copenhagen argues that customer activism, experimentation, connectivity and knowledge enables people to become active participants in the value creation process.

Stoyan Tanev is Associate Professor in the Department of Industrial and Civil Engineering at the University of Southern Denmark. He is part of the Integrative Innovation Management Unit, a research group that operates across the faculties of social sciences and engineering. Stoyan had a similar position in the Technology Innovation Management Program in the Department of Systems and Computer Engineering at Carleton University and he worked for several years as an optical designer in the Ottawa high tech industry. Stoyan has a M.Sc. and Ph.D. in Physics, a M.Eng. in Technology Innovation Management, and a M.A.. His main research interests are: design and development of value co-creation platforms, value co-creation business models, value co-creation platforms for user-driven innovation, and technological infrastructures enabling value co-creation oriented business processes. He is also interested in the philosophy of technology, business ethics, and general epistemological issues at the interface of philosophy of religion and physics.

"The crowd gives the leader new strength." Evenius (Greek Mythology)

The participation of people in online communities is rapidly increasing and the shared data, information and knowledge in these communities is becoming greater and more diverse. The social community Facebook.com has over 300 million active members and over 40 billion photos uploaded to the site each month (http:// www.facebook.com/home.php#/press/in fo.php?statistics). Wikipedia.org has more than 75,000 active contributors, who are working on 10 million articles in more than 260 languages (http://en.wikiped ia.org/wiki/Wikipedia:About).

The opportunities of these large sources of information gathered in communities are being discovered by companies. Harley Davidson has established a large community where motorbikes and accessories are presented and discussed by members. Moreover, members interact about userand maintenance tips (http://www.atyp on-link.com/AMA/doi/abs/10.1509/jmkg. 69.3.19.66363). Participation in this community has been found to increase the commitment and affection for the Harley Davidson brand. The toy-manufacturer LEGO has over 2.5 million participants in their community, 40% are adults, and 3,000 new designs are uploaded to this community weekly (http://www.lego.com /eng/info/default.asp?page=factory). The best designs are produced and sold in stores.

The use of co-creation communities seems promising. However, the main business model elements that strengthen successful co-creation communities have not been defined yet. The elements of these communities that create value, that require resources, and that incur costs have not been explored in detail. The objective of this article is to provide insights into three main business model elements of co-creation communities: the value proposition, the value network, and the revenue model. These elements will be specified for distinctive new product development phases. The insights are obtained from our in-depth study of seven co-creation communities. We will conclude with some recommendations for creating successful co-creation communities.

### **Co-creation Communities**

Co-creation refers to "the practice of product or service creation that is collaboratively executed by developers and customers together" (http://deepblue.lib.um ich.edu/handle/2027.42/35225). The term community is derived from the Latin "communitas" and means "a group of interacting people in the same environment". Kozinets defines community as a group of people who share social interaction, social ties, and a common (cyber) space (http://linkinghub.elsevier.com/re trieve/pii/S0263237399000043).

The purpose of the co-creation community is to collaboratively create products. These communities are mainly based upon shared enthusiasm and knowledge concerning specific product domains and are often virtual meeting places for innovative users to discuss opportunities and ideas for new products and product improvements. Corporate co-creation communities refer to co-creation communities, initiated by companies, where company owned products or services are presented and discussed.

#### **The New Product Development Process**

A corporate co-creation community is a possible tool to gather customers' knowledge.

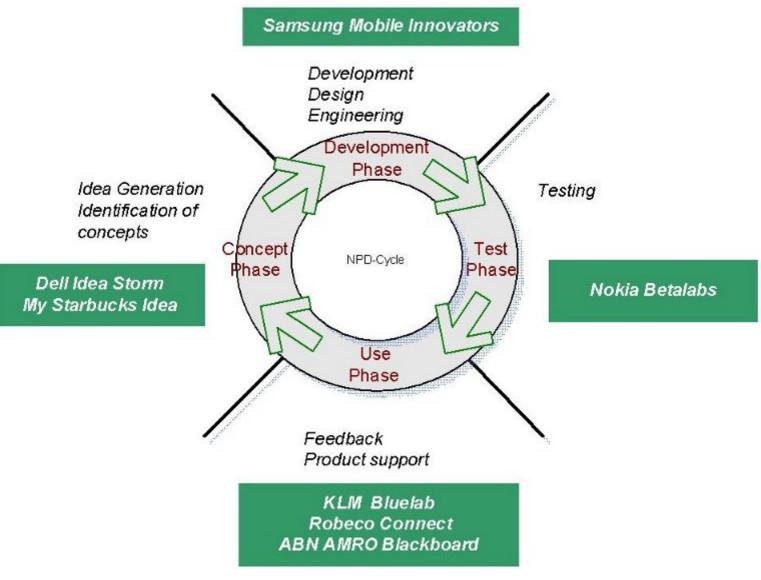
A corporate co-creation community can be defined as "an online webspace where customers are involved in the new product development (NPD) process of the company" (http://rpi.edu/~nambis/ nambisan\_amr.pdf). Consumers have valuable product know-how and when they share their knowledge in an online corporate community, companies can strengthen their innovation projects. Customer integration into the NPD process can lead to the identification of customer needs which can be translated into new products or services. Customer integration in the innovation process is a method that aims at reducing the risk of

### Figure 1: NPD Cycle

failure of the new product (http://papers. ssrn.com/sol3/papers.cfm?abstract\_id=8 61344).

Co-creation can be employed into several stages of the NPD process. NPD is the term used to describe the complete process of bringing a new product or service to market. As seen in Figure 1, the NPD process can be divided into four stages:

- **1. Concept:** in this phase, ideas for new products are generated and selected.
- **2. Development:** in this phase, the design and engineering specifications for the new product are developed and specified.



- **3. Testing:** in this phase, the product design is tested and potential product issues are solved.
- **4. Commercialization:** in the last phase the product is commercialized. The product is launched on the market and used by customers. Customers have the possibility to provide feedback or to support other customers.

Customers can participate in all these stages of the NPD process.

#### **Business Models**

A business model is useful in identifying the activities of a firm that have economic implications. The business model can be used to describe new businesses or new services.

In general, business models are constituted by three main elements:

- **1. The value proposition:** what are the benefits for the user when they use a service or buy a product?
- **2. The value network:** how is value created by a new service or product?
- **3. The revenue model:** which costs and revenues are involved?

Based on these three main elements, corporate co-creation communities in different NPD phases will be discussed following these research questions:

- 1. Which benefits are the main drivers for users to participate in co-creation communities?
- 2. How does the company create value in the community?
- 3. Which cost and revenues are involved to maintain the corporate community?

Our insights are based on in-depth investigation of seven corporate co-creation communities. The corresponding community managers have been interviewed and behaviours of users have been investigated.

## Which Benefits are the Main Drivers for Participation?

The study showed that in the four NPD phases, the main driver for customers to participate in a corporate co-creation community is that they want to improve the product or service. However, the underlying needs differ per phase. In the concept and use phase, customers contribute to product improvement or new product ideas because they have a specific product need or a product frustration. Users benefit when they are able to solve their needs or frustrations. As a Dell representative stated: "The user has an idea about the product and would like to see that idea converted in a new product".

Customers in the development and test phase participate because they benefit by gaining new product knowledge or product features. In the user study within Nokia Betalabs, two important drivers were identified: "I get to see what's out there and am able to follow the latest developments on the mobile front, and "I get to use the newest mobile applications before others do".

The second group of drivers to participation is the community related benefits, including recognition, sense of efficacy, and sense of community. These drivers are relevant in all NPD phases. Customers want to be recognized by the company and other users. As a KLM interviewee stated: "The user feels that KLM is listening and is recognizing its users and their comments".

The availability of monetary related benefits seemed to be unimportant. The majority of the studied communities had small monetary incentives available. Customers, however, appeared not to be interested in these incentives.

# How Does the Company Create Value in the Community?

The study showed that employees fulfill an important role in the success of a community. If the user is participating to solve a need or to express a frustration, employees should efficiently validate the input generated by the customer. This means that feedback on an idea should be provided to the users in the community. As a Starbucks manager explains: "Users want to see action." Ideas need to be reviewed and commented within a certain time period. Employees should provide reasonable arguments, explaining why or why not ideas are under consideration. The status of ideas, suggestions or innovative applications should be presented clearly on the site. Arguments explaining why ideas are implemented or not can be published in a blog.

If users want to benefit from new knowledge, supplying new product or technology information is important. Employees should ensure a constant flow of new beta applications, protocols, software or other information. For instance, Nokia provides new beta applications and updates of beta applications to the user community regularly. Users are informed about new applications, and when possible, known product issues are communicated. Table 1 provides some examples of how a company can provide value to users at various stages of the NPD process.

To strengthen the community benefits, engagement of the company in the community seems to be required. Engagement requires that dedicated employees take part in the community to listen to the users and enable a human dialogue. Even when users have critical comments, it is important that the company listens and responds. This enhances the community related benefits for the users, since users feel that they have been heard.

To effectively supply feedback and new information to the community, two important aspects should be taken into account. First, community employees should be closely cooperating with development teams. This is important because these teams are responsible for the development and the implementation of any suggestion, idea or design. Tight cooperation enhances the implementation of ideas, knowledge supply and validation of ideas.

Users' driver	Related phase	Creating Value By:
Solving Frustration or Need	Concept & Use	Providing relevant feedback: what does the company with the users input?
Gaining new Products & Knowledge	Development & Test	Providing new information, (beta) products and feedback how the users input is used
Community Benefits	All phases	Engagement: listen carefully and patientfully to the clients input

### Table 1: Value Creation in Corporate Co-creation Communities

Second, executive support is required to enhance overall cooperation among departments and the community and for the availability of financial resources. The company should be prepared to change existing development programs to incorporate suggestions of users. Executive support is particularly critical when the responsibility for the community and idea implementation is dealt with by different departments. Management support implicates the importance of the community and enhances the cooperation between departments.

#### Which Costs and Revenues are Involved in Running a Corporate Co-creation Community?

The major costs of online communities, irrespective of the NPD phase, are related to employee costs and platform costs. Additionally, money may be spent on promotion, like advertising or user rewards. Community managers indicate that promotion costs are negligible compared to the employee and platform costs.

A number of types of revenues, or value returns, have been identified. First, improvements or ideas for new products represent a major value return. In the concept and use phase, this is achieved by implementing suggestions and responding to needs communicated by users. In the development phase, this is achieved by sharing best practices for new designs. In the test phase, this is achieved by fixing bugs or usability aspects.

Second, community is an important instrument for communicating with customers. The company can create understanding among users by explaining why some approaches have been chosen. By engaging their employees, companies appear to be able to increase customer loyalty. Third, customer knowledge can be obtained by giving the user the opportunity to rate or review ideas or applications. With this information, the company can investigate which suggestions are well received and which products are ready for commercialization. This approach seems to be a useful tactic, in addition to traditional market research.

The fourth benefit is the enhancement of knowledge. Companies can experiment with Web 2.0 and they can improve the level of internal knowledge of and experience with innovative Internet-based solutions. This knowledge and experience can be utilized for adopting other Web 2.0 applications.

Finally, companies can benefit from online communities by improving their company reputation. This benefit is twofold. First, some cases indicate that the company's reputation can be strengthened by using Web 2.0 technologies. Web 2.0 can be associated with innovativeness of the firm, which in turn can enhance the reputation of the firm. Second, the company's reputation can be strengthed by trying to decrease negative word-of-mouth. If users are unable to express their frustrations on a company platform, they may initiate their own community or website and create harmful negative publicity. Offering a company-owned platform creates transparency about an organization's problems, but it also shows that an organization is taking unsatisfied customers seriously and is not afraid to show the current state of customer satisfaction. Providing an open and mostly transparent channel for customers is a way to both collect customer feedback and to, at least partially, keep negative word-ofmouth in control. Table 2 compares some of these community costs to community revenues.

#### Table 2: Cost & Revenue Corporate Co-creation

Community Costs	Community Revenues
Employee costs	Innovation benefits
Platform costs	Customers' loyalty benefits
	Customers' knowledge benefits
	Learning benefits
	Reputation benefits

All studied cases indicate that the gained value return is worth the expense. The value return exceeded expectations in almost all cases. Some companies even argue that co-creation communities are an inexpensive alternative to traditional approaches like extensive market research and focus groups. However, there is evidence that a community can extinguish, especially when only one service or product is discussed. Only offering information on one service or product appears to be a pitfall in practice. Such a community may be lively at the start, but after a while the flow of new suggestions dries up and discussions fade out. When users are finished giving their input, the risk appears that the expenses are not worth the value return. The expenses are only worthwhile when there is a constant flow of value return in terms of user feedback.

#### Recommendations

The findings of this study provide meaningful guidance for managers who want to establish a corporate co-creation community.

First, be aware of the needs of the audience and offer services that fit their desired benefits in order to enhance participation of customers. Customers in the use and concept phase have different information needs than customers participating in the development or test phase. The company should actively cope with these differences by providing the right benefits and information. In the use and concept phase, users are most interested in how their ideas are used. In the development and test phase, users gain benefits from new product information.

Second, engagement of the company is a key element in the success of the community. Engagement implies committed and dedicated employees who participate actively in the community and speak with a human voice. With their participation, they show their appreciation towards the contribution of the users, even when the contribution is negative in the form of complaints. This engagement appears to increase the community related benefits of the users and thus improves the activity of users.

Thirdly, the formal involvement of those who are responsible for implementing innovative solutions is required for a successful community. Efficient validation of ideas and the supply of new information can only be achieved when the responsible employees are involved and committed to the community. Efficient validation and information supply are needed to enhance the product related benefits for the users and to strengthen user participation.

To secure financial resources, a clear support by executives is needed. This support can mobilize employees to integrate user generated ideas in product development processes.

Finally, the company should be prepared to deal with negative community feedback. Users are not always satisfied with products and will mention their discomfort in the community. Community managers should realize that these users put effort in the community by registering and submitting feedback. Companies should take the opportunity to listen to these complaints carefully. If a company decides to start a community, it should also be willing to admit mistakes and to be transparent as possible. Open and honest communication can enhance the participation of users.

Kim op den Kamp has an MSc in Innovation Management from the Technical University Eindhoven. Her Master Thesis focused on viable business models for cocreation communities. She studied seven corporate co-create communities in depth to obtain results.

#### **Recommended Resources**

Study: Viable Business Models for Co-creation Communities http://www.tno.nl/content.cfm?context =markten&content=publicatie&laag1=18 2&laag2=1&item\_id=513&Taal=2

Based Innovation: A Method to Utilize the Innovative Potential of Online Communities http://doi.ieeecomputersociety.org/10. 1109/HICSS.2004.1265464

From Idea to Business Blueprint https://doc.novay.nl/dsweb/Get/Doc ument-32008/From\_idea\_to\_business\_ blueprint.pdf

Online Co-creation and Beta Trialling of Mobile Software and Services https://fds.nokia.com/fdp/interface? fid=A0B49MXOICOVQH "Co-creation is an active, creative and social process, based on collaboration between producers and users, that is initiated by the firm to generate value for customers."

#### http://www.promisecorp.com/ newpathways

Value co-creation is an emerging innovation, marketing and business paradigm describing how customers and users are seen as active participants in the design of personalized products, services and experiences. Often this participation is organised via the Internet to enable the opportunity for customers to integrate their knowledge, experience and skills into existing, modified or entirely new market offerings reflecting their personal preferences, needs and contexts. There is a growing body of literature dedicated to the discussion of value co-creation frameand works. mechanisms processes. However, these typically focus on the study, discussion and analysis of a small number of cases using deep, ethnographic description of their practices aiming at conceptualization and categorization of different types of interactions the between end users, the firm and the value network. Although useful, such an approach misses the advantages of an empirically driven quantitative approach that benefits from larger size samples and is more appropriate for theory building through the development and testing of hypotheses. It is important to seek the development of a research methodology that combines the benefits of both qualitative and quantitative research approaches for studying the nature of value co-creation.

The results provided in this article are included in S. allen's master's thesis. The article reports on the key components of value co-creation between firms and

end customers based on the application of web search and Principal Component Analysis (PCA, http://en.wikipedia.org/wi ki/Principal component analysis) techniques. The analysis of these preliminary results is then used as an opportunity to identify a number of research questions to be addressed in future research. The emerging research questions follow the inner logic of the value co-creation phenomenon as well as the nature of the results reported in this article. The specific nature of the results was found to be suitable for the application of small-N techniques such the Qualitative as Comparative Analysis (QCA, http://en.wik ipedia.org/wiki/Qualitative\_comparative\_ analysis) technique which combines the advantages of both qualitative and quantitative techniques. One of the main contributions of this article is to suggest and explore the possibility for using the QCA technique in future research on value cocreation.

### Research Objective, Strategy and Method

Our research has two main objectives. First, to use website content and exploratory factor analysis techniques to provide a categorization of the value co-creation approaches employed by a large sample of companies. Second, to identify some key research questions in association with a methodology combining the benefits of both quantitative and qualitative approaches for a deeper study of the components of value co-creation.

An extensive study of the literature on value co-creation, complemented by the examination of a number of specific websites, was used to develop a list of keyword combinations representing the largest possible spectrum of the dimensions associated with value co-creation.

The resulting list of keywords were the terms used in a web search of a large sample of publicly available websites to gather data representative of the presence of the various co-creation dimensions. The data enabled the use of PCA in identifying a set of underlying factors that characterize the specific emerging types of value co-creation present in the sample of firms. This approach builds on previous works using keyword analysis (http://gatton.uky.edu/Faculty/ferrier/Fe rrier%20AMJ%202001.pdf) and web data mining techniques. It is based on two main findings: i) the majority of small and medium-size firms use their web pages to articulate their commercialization strategies (http://www.sba.gov/advo /research/rs289tot.pdf); and ii) firms involved in value co-creation activities use the Internet as an important channel for value co-creation.

The unit of analysis is the website of an organization actively engaged in value cocreation. The sample included 287 companies. Each company in the sample carried out co-creation activities and its website contained between 50 and 1,550,000 sub-pages. Table 1 provides a breakdown of the sample organizations into three types: open source software (OSS) companies, organizations associated with the business ecosystem driven by the Eclipse Foundation (http://www. eclipse.org), and others.

The keywords list consisted of 29 combinations of words. Table 2 shows a breakdown of one specific keyword combination with an example of the context from which each word was derived.

### Table 1: Breakdown of Sample Organizations

Organization Source	Number	Percent of total
Open Source Software companies	61	21%
Eclipse Foundation organizations	140	49%
Others	86	30%

### Table 2: Example of a Keyword Set Structure, Source and Context

Keyword	Source	Context
customer OR user	Qualifier: used to eliminate sites that are internal to the firm and do not describe actions involving customers	
suggest suggestion	forum.developers.facebook.com/viewt opic.php?id=27640	You can <b>suggest</b> your idea through the <b>suggestion</b> form on the Help Centre.
input	http://www.tsmc.com/download/enlitera ture/html- newsletter/September03/CustomerSer vice/index.html	TSMC will be even more diligent in seeking customer <b>input</b> . This dialog will cover a plethora of issues including process technologies, quality and reliability, delivery, capacity, and overall service and collaboration.
request	secondlifegrid.net/technology- programs/virtual-world-api	To submit a <b>request</b> to participate in the Reg API program
demand	forum.developers.facebook.com/viewt opic.php?pid=47846	But still maintaining the sense of security users demand when they

The Keyword Search Tool provided the counts of hits for each search term at each website normalized by the total number of web pages present at the website. PCA was selected as the factor extraction method for factor analysis since it provided the cleanest component loading table.

#### **Research Results**

Tables 3 through 6 show the resulting four extracted components with their associated keywords and principal component loadings. Each of the four factors describes a component of co-creation.

#### **Factor Interpretation**

Factor 1 was labelled "Community Forum for Open Dialog and Learning." It is an indicator of the presence of a community forum designed to engage customers in an open dialog. It includes networking, information sharing and learning activities with the organization, other customers or other members of the value network.

Factor 2 was labelled "Partnerships for Resource Sharing." It describes the use of partnerships for users to access company expertise and resources, participate in the creation of adaptable designs and processes. Partnerships are based on trust, integrity and risk management. Factor 3 was labelled "Personalization via Options and Modularity." It focuses on the personalization of offers that provide choices and options.

### Table 3: Factor 1

(customer OR user) AND (learn OR learning)	0.74
(customer OR user) AND (communities OR community OR network OR networking OR forum)	0.71
(customer OR user) AND (suggest OR suggestion OR input OR request OR demand)	0.67
(customer OR user) AND (dialog OR dialogue OR communicate OR communication OR conversation OR contact OR feedback OR call OR interact OR "information sharing" OR engage)	0.56

### Table 4: Factor 2

internal AND (expertise OR resource)	0.72
cost AND (reduce OR reduction OR saving)	0.70
customer AND (partnerships OR interaction OR relationship OR participate OR participation OR activity OR action)	0.65
(design OR process) AND (flexibility OR flexible OR adaptable)	0.65
(customer OR user) AND (cooperate OR cooperation OR collaboration OR partnership)	0.55
(customer OR user) AND (risk manage OR management OR control OR assess OR reduce OR reduction OR potential OR exposure)	0.53
trust OR honesty OR integrity	0.53

### Table 5: Factor 3

internal AND (expertise OR resource)	0.72
cost AND (reduce OR reduction OR saving)	0.70
customer AND (partnerships OR interaction OR relationship OR participate OR participation OR activity OR action)	0.65
(design OR process) AND (flexibility OR flexible OR adaptable)	0.65
(customer OR user) AND (cooperate OR cooperation OR collaboration OR partnership)	0.55
(customer OR user) AND (risk manage OR management OR control OR assess OR reduce OR reduction OR potential OR exposure)	0.53
trust OR honesty OR integrity	0.53

### Table 6: Factor 4

(customer OR user) AND (disclose OR inform OR disseminate OR reveal)	0.58
(customer OR user) AND (produce OR assemble OR manufacture)	0.57
(customer OR user) AND (IP OR "intellectual property ")	0.50
(customer OR user) AND (test OR trial OR beta)	0.44

Factor 4 was labelled "Co-production" and used to describe the co-production of offers by user involvement in manufacturing, assembly and final beta trial activities requiring disclosure and sharing of intellectual property.

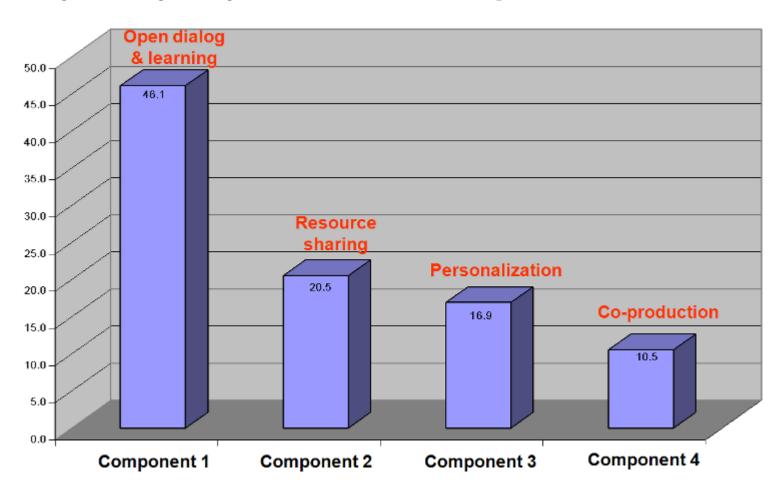
#### Value Co-creation Approaches

The four value co-creation components identified can be thought of in two ways: i) components of different co-creation approaches; and ii) as stages of a vaule co-creation maturity model with Factors 1, 2, 3, and 4 describin a level of the model.

#### Value Co-creation Component Scoring

The keyword frequency table that was generated by the web search procedure was used to calculate value co-creation component scores for each company or website. Reinard (http://books.google.ca/ books?id=E-wBHsy7GOQC) recommends that researchers either simply sum the values of the variables loaded on a specific component or scale the values based on the associated communalities before summing them. Both approaches were tried and, since there was not a significant variation in the resulting distribution, a simple sum of the variables was used. The value co-creation component scores were averaged over the complete sample of firms to allow the components to be ranked in terms of the corresponding level of activity as found in the entire research sample. Figure 1 shows the ranking of the components averaged over the entire sample of 287 organizations.

The application of the Mann-Whitney non-parametric test (http://en.wikipedia. org/wiki/Mann%E2%80%93Whitney\_U) for comparing the means of variables from independent samples indicates that, with the exception of factors 2 to 3, there is a statistically significant difference between the means of all four components.



#### Figure 1: Average Scoring of the Four Value Co-creation Components

#### Groups of Firms Manifesting High Degrees of Value Co-creation

Using the scores calculated in the way described above, the websites were ranked to identify the companies most active in the adoption of each of the four value cocreation components. We consider a company as intentionally engaged in a value co-creation approach if it actively emplovs a combination of a minimum of three value co-creation components. For a company to be active in a given component, it needed to be in the first 75% of the ranked list of companies according to their scores in that particular component. Each of these combinations was considered to be a distinct value co-creation approach. Table 7 shows that there are three types of value co-creation approaches that are actively used by more than 6% of the 141 active firms in the sample. It also shows that many of the firms use particular components individually and not as part of a particular co-creation approach.

## Using QCA to Further Study the Nature of Co-creation

The application of QCA for a deeper understanding of the nature of value co-creation is of particular interest. The QCA technique represents a synthetic strategy standing in between the purely grounded theory and quantitative techniques (http: //books.google.ca/books?id=sAcIYzgO3n kC). QCA techniques are case oriented. They typically deal with a more comprehensive analysis of 2 to 15 complex cases selected in a configurational way that differentially manifests a particular property under investigation. In QCA, the researcher could choose to focus on the more deductive research aspects by engaging in dialogue between cases and relevant theories. QCA techniques could also be used in a more inductive way by gaining insights from case knowledge in order to identify the critical kev distinguishing aspects of a given phenomenon.

Co-creation approach	% of active companies	Co-creation components
Full scale co-creation	12.1 %	1, 2, 3, 4
Personalization	12.8 %	3
Co-production	11.3 %	4
Partnership for resource sharing	9.9 %	2
Community learning forum	8.5 %	1
Ecosystem driven co-production	7.8 %	1, 2, 4
Personalization through resource sharing in learning communities	6.4 %	1, 2, 3

### Table 7: Distribution of the Different Value Co-creation Components

This aspect of QCA was found of particular importance for studying value co-creation since our initial research identified three types of value co-creation approaches: full scale co-creation, ecosystem driven co-production, and personalization through resource sharing in learning communities. Each of the three approaches differs from the other two in a key single value co-creation component and the sizes of the three groups of companies fits perfectly the requirements of the QCA method. The richness of possibilities provided by the QCA technique and the possibility for its application to the study of emergent phenomena in combination with longitudinal field research approaches (http://books. google.ca/books?id=5W6WAs46xecC) represents a key motivation for its selection

as part of our future research.

#### Conclusions

We discussed the first empirical identification of the components of value co-creation and the specific practices employed by companies engaged in a particular value co-creation component. The results are used to identify groups of companies employing different co-creation approaches as well as to identify a future research methodology combining the benefits of both quantitative and qualitative research approaches.

#### **Recommended Resources**

The Future of Competition: Co-creating Unique Value with Customers http://books.google.ca/ books?id=GO8wefdWmLIC

Collaborating to Create: the Internet as a Platform for Customer Engagement in Product Innovation http://alumni.kellogg.northwestern.edu/ reunion/mbaupdate/Sawhney%20-%20

Collaborating%20to%20Create%20JIM.pdf

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"Consumers are beginning in a very real sense to own our brands and participate in their creation. We need to learn to begin to let go."

> A. G. Lafley CEO of Proctor and Gamble

Co-creation grants consumers free rein to work with company-provided resources in the production of their own value offerings. The ongoing participation of active consumers in the production of their own use and exchange value inverts the long-standing marketing orthodoxy of the company as the arbiter of value. Rather than resist this fundamental shift in the locus of value creation, savvy firms positively embrace the change and seek to manage consumer freedoms in order to harness the consumers' productive capabilities. Using the example of the Apple iPhone and App Store, and drawing on labour theories of value and Foucault's notion of government, we show how granting consumers freedom through co-creation has become the most effective mode of production for contemporary marketers.

#### Value Co-creation

Touted as one the most significant shifts in contemporary business thinking, cocreation is a new frame of reference for achieving the fundamental business goal of value creation (http://harvardbusiness. org/product/future-of-competition-co-cr eating-unique-value-wit/an/9535-SRN-E NG). It is premised on the notion that the firm is no longer the sole arbiter of value as consumers take increasingly active roles in the creation of their own value. More than ever before, companies and customers now continually co-operate in innovative and productive efforts. Adopting this collaborative approach necessitates a fundamental shift in business thinking on the part of the co-creating firm. Rather than simply considering customers as end consumers, companies must actively seek engaged, mutually beneficial relationships by enabling and empowering users to be creative collaborators in the production process. These ideas put the spotlight squarely on the company-consumer interface, and sugpersonalized interaction gest that between the company and consumers, as well as between consumers themselves, has become the locus of value creation. The company's vision of production and of what constitutes customer value is no longer privileged. Value is now jointly created by customers, who express their requirements, share their knowledge, and even actively participate in the manufacturing. The company provides the resources that enable such customer participation.

This newfound spirit of collaboration is fostered by companies' increased willingness to relinquish some control of their resources to consumers. A combination of factors, such as the convergence of technologies and industries, rapidly emerging and changing markets, ubiquitous connectivity, and increasingly sophisticated and demanding consumers, has changed many aspects of the business world. Consumers and companies are now partners in constituting markets. Companies which recognize this new collaborative commercial reality will achieve superior organizational performance by way of increased consumer involvement and satisfaction. Collaboration is based on sustained dialogues and consumers need access to information about the extensive range of options open to them.

This privileged consumer position is partially facilitated by the company becoming more transparent about the nature of its products and processes, and the ways in which they and consumers can apply them for mutual benefit. By placing previously proprietary information and resources into consumers' hands. companies allow consumers to engage in effective dialogue, often outside of the company's purview. Newly liberated, consumers' creative zeal is employed toward creating individualized value propositions. Through their effortful inputs, company resources are re-imagined and re-worked on a grand scale.

The sum total of this creative consumer energy is greater than what the company can achieve alone. Consumers have a range of specific skills and competencies that companies are unable to match. Companies must effect ways to attract consumers and to maximize their value. From this perspective, consumers are productive workers, or prosumers, (http: //www.wikinomics.com/book) who are granted authority by companies to articulate their specific requirements, share their unique knowledge and apply their particularized skills to the consumption tasks at hand. The company benefits from outsourcing to a diverse and flexible consumer workforce some of the costly functions once conducted internally. Consumers have become resources and might as well be regarded as assets on a balance-sheet in lieu of costly plant, staff and production facility overheads. Previously, the lifetime value of a consumer would be measured in dollars spent through the course of their patronage. Now it encompasses the softer value of their knowledge and input and how they engage and work with company resources.

The company must seek to create an open communications environment in which consumers are encouraged to be playful, sociable, and ultimately creative - where they can effectively apply and enhance their knowledge for the benefit of everyone (http://research.schulich.yorku. ca/xmlui/handle/123456789/701). In so doing, a company is funding the mobilization of consumer immaterial labour, which entails a process of creating and controlling processes in which the consumer's personality and subjectivity are involved in the production of value. With immaterial labour, all facets of life become extensions of capitalist production. With co-creation, a company adroitly ingrains their offering into consumer life and harnesses and appropriates their particularized ingenuity. The market becomes a platform for participation in a culture of exchange, where companies offer consumers resources to create, and where consumers offer to companies "a contact with the fast-moving world of knowledge in general" (http://www.herm eneia.net/sala de lectura/t terranova fr ee labor.htm).

### Marketing Challenge of Co-creation

The marketing challenge posed by co-creation rests with establishing ambiences that program consumer freedom to evolve in ways that permit the harnessing of consumers' productive capabilities. As a corollary, what offerings can companies provide to attract the interest of consumers to work towards augmenting them? An ambience is a device that provides the context for productive cooperation to unfold and then be guided in one direction. It is argued that generating and capturing the productive cooperation of labour requires coercive devices, vet these are fundamentally weak and can only exert a channelling effect on consumers.

Ambience can perhaps best be understood as a frame or platform of action that does not over-determine the direction, intensity, and nature of the social production it encourages, but still assists companies in their ongoing efforts to manage seemingly unmanageable consumers. This is seen in the construction of brands, which are encoded with rich meanings in an effort to orient our understanding of what they are and how we should interact with them. To Arvidsson (http://books.google.ca/books?id=4QANg 2Ln8kEC), brand managers create particular ambiences with an eye to being able "to frame and partially anticipate the agency of consumers", or to program the freedom of consumers in certain directions. This allows managers to maintain a semblance of control over their brands in an era in which consumers wilfully imbue them with their own meanings and use them in ongoing individual and collective identity projects. Providing ambia form of "government" ences is (http://books.google.ca/books?id=TzSt\_z YZfUsC) in which behaviours and actions are subtly shaped from the bottom up, rather than being imposed through highly prescriptive rules and orders from on high. This type of power is still focused on generating particular forms of life, but does so through practices "that make up subjects as free persons" (http:// www.cambridge.org/catalogue/catalogue .asp?isbn=0521650755).

In co-creation, we see how company-generated ambiences enable consumers to produce and share technical, social, and cultural knowledge through their prosumptive acts. While companies have been able to adopt information and communication technologies that facilitate consumer actions, there is no one-sizefits-all approach to how companies may wish to engage in co-creation.

Some companies provide platforms for creativity, sociality and free expression on which almost anything the consumer can conceive can be made manifest (http: //jmk.sagepub.com/cgi/content/abstract (28/4/355). In other instances, platforms might be more circumscribed and the range of alternatives more limited, such as when consumers assist in research and development (R&D), build toys from company-produced raw materials (http:// /www.buildabear.com), or involve themselves in different brand-specific communities. While these few examples demonstrate many different types and levels of co-creation, they show the obvipotential managerial ous of this paradigm in the variety of ways in which active consumer inputs can create value for the company. They also highlight the importance for companies to make the consumption experience more attractive. This is achieved by creating robust experience environments in which consumers can indulge their creative, practical, hedonic, or any other sides they please, as they act as innovators and idea generators. The consumption experiences that consumers have been able to tailor around themselves are of more value than standardized company offerings. What they receive in exchange for their money, effort and work is better suited to their specific needs and wants, as they are instrumental in its production. This extra use value allows companies to charge consumers a price premium for the co-created commodities. Co-creation not only encourages consumers to work, it also allows the company to charge them more. Herein rests the real efficiency of the co-creation model.

Although positioned as beneficial to the consumer, we see how forging and fostering productive relationships with customers is ultimately valuable for the company.

Co-creation allows the company to maintain a level of control and becomes the company's primary method by which to control elements of the market. The fickle postmodern consumer becomes a partner in the value creation process. interactions with the com-Consumer and with other consumers. pany centered on the company's offerings, mean that they become increasingly embedded in ongoing value creating relationships. The unbounded creativity presents consumers with the opportunity to undertake many of the costly and time consuming processes once undertaken by the firm, from R&D to ongoing proactive product add-ons, upgrades, maintenance and even repair.

### Apple iPhone

Launched in June 2007, the iPhone is Apple's first foray into the Smartphone market. This is a highly competitive market, populated by established players such as Nokia, Palm, Research in Motion, Microsoft and Symbian, all with their own Smartphone operating system. Like the others, the iPhone is more than a just phone. It is a mobile operating system or technology platform, with a range of inbuilt applications and the inherent potential to create more. Although a relatively late entrant to the market, Apple has outstripped its rivals in terms of sales (http:// brainstormtech.blogs.fortune.cnn.com/2 009/09/30/admob-the-iphones-share-ofthe-smartphone-market-hits-a-record-4 0) and customer satisfaction (http://brai nstormtech.blogs.fortune.cnn.com/2009 /10/08/j-d-power-iphone-is-no-1-again). We delve into how and why iPhones have been so successful. Beyond the cutting edge design and technology, we show how Apple's success is due in part to their adherence to co-creation principles, as they invite consumers in as application

creators and merchants. Although Apple is still learning how best to work with and through consumers to channel and appropriate their creative energies, its openness makes the iPhone a site of co-creation as consumers work with company technologies to create value.

With the App Store (http://apple.com/ iphone/apps-for-iphone), Apple simplified the process of adding software to the phone. Steve Jobs contends that Apple does not plan to make much money on games and other applications; he has also said that the company does not make much money selling music on iTunes. "We are not trying to be business partners," Mr. Jobs said of the App Store. Instead, he said, the goal is to "sell more iPhones." Apple gives developers a 70% cut of sales (http://www.nytimes.com/20 08/07/10/technology/personaltech/10ap ps.html).

An Apple App is a software add-on that expands the functionality of the iPhone. In comparison to many other software development programs, the iPhone offers high flexibility and functionality in conjunction with low barriers to entry in terms of the cost, time and technological capabilities required of developers. The iPhone is designed specifically to make the creation of Apps relatively straightforward, and to allow users to easily incorelements of the phone's porate hardware, such as its GPS or Motion Sensor systems, into their Apps. The result is a flood of Apps. As of September 2009, more than 125,000 developers (each of whom pay a \$99-\$299 registration fee to join the iPhone Developer Program) have created in excess of 85,000 third-party applications (http://apple.co m/pr/library/2009/09/28appstore.html). These are available on Apple's App Store, some for free but most at relatively low prices such as 99 cents.

The resultant range of functions is impressive and the iPhone has become increasingly integrated into users' lives. Beyond performing a mobile phone's traditional functions, an iPhone can help you: navigate London's subway system, book, check in and manage flight details with Air Canada, avoid speed cameras, control your television or home lighting from the office, talk to other music fans and the band at a concert venue, tap along to your favourite songs, or find a decent local restaurant. All help to make good Apple's claim of doing "everything on iPhone" (http://apple.com/iphone/ how-to/#basics.introduction). Each week, Apple's 40 full-time App reviewers examine more than 8,000 applications bidding for inclusion in the App Store, which to date has provided more than two billion downloads. The App Store marketplace is a testament to the ingenuity and creative zeal of App developers, in addition to iPhone users' seemingly limitless appetite for Apps.

This close engagement with customers is a new tactic for Apple who has not typically demonstrated such openness with its technology. Apple had been a veritable closed shop, adhering to a code of silence about their technologies, and certainly not inviting consumers to tinker, play and augment. Instead, teams of in-house Apple experts had worked in a top-down process of design and production. Even now, Apple has not fully embraced cocreation, and seems to be taking tentative steps towards the potential it holds. As the Steve Jobs' quote demonstrates, Apple is not seeking to become partners with their customers in the App creation process. Yet, Jobs himself has since admitted his surprise at how much activity the iPhone and Apps has spurred, saying, "I've never seen anything like this in my

career in software" (http://guardian.co.uk /technology/2009/apr/12/iphone-applic ations-music-industry).

So popular is the iPhone that whole industries have grown up around it. Commercial and community-run services are available to assist would-be developers with almost any App-related issue. Companies such as iFund, positioned as "a \$100M investment initiative that will fund market-changing ideas and products that extend the revolutionary new iPhone and iPod touch platform" (http://kpcb.com/initiatives/ifund),

serve as iPhone App investment houses for new iPhone-related software businesses. A set of conditions exists that makes the iPhone attractive to both developers and regular consumers. In this ambience, developers find the iPhone to be a fertile, and in some cases profitable, platform on which to build. Consumers consider the iPhone an attractive proposition in part because of the sheer array of easily available Apps. This growing number of iPhone customers makes the iPhone an even more attractive proposition to entrepreneurial creators who see an exponentially growing marketplace. Other platforms find it hard to compete as this perpetuating community of users is already invested in the iPhone and have embedded it and its Apps into many facets of their lives.

#### Discussion

This ambience has to be carefully managed by Apple. Developers must continue to find value in the iPhone. Matt of the iFund says, "[Apple] can't kill the golden goose. The promise of the iPhone is developers. If you choke them off, there are "a lot of other platforms waiting" (http://nytimes.com/2008/07/10/technol ogy/personaltech/10apps.html).

There have already been grumblings of discontent. For some it is based on uncertainty and frustration with Apple's ambiguous and arbitrary way of assessing the suitability of an App for sale in the App Store (http://www.guardian.co.uk/ technology/2009/aug/22/google-apple-i phone). For others it is the relatively low level of returns (http://newsweek.com/id /216788). Apple must nurture relationships with powerful customers who have the means and abilities to apply their skills to other platforms. Regular customers who have embraced the iPhone and its myriad offerings must also be kept onside in this progressively competitive market.

This situation highlights the somewhat contradictory nature of co-creation. Although consumers are being as unpaid workers, they are free to leave at any time. Power does not necessarily reside with one party. Rather, the company and customers are co-dependent: an attractive company offering entices consumers in, while the work undertaken by these consumers makes the offering more attractive and valuable. Consumers are granted a say in the market and Apple allows their desires for distinction, excommunity, change, and creative experimentation to blossom. Apple acts as gatekeeper and appropriates the benefits of these effortful consumer actions in the form of profits, ideas and attention. To paraphrase Terranova (http://hermen eia.net/sala de lectura/t terranova free labor.htm), free labour is the moment where the knowledgeable consumption of culture is translated into productive activities that are pleasurably embraced and at the same time exploited.

#### **Recommended Resources**

Innovation Creation by Online Basketball Communities http://userinnovation.mit.edu/papers/ basketball.pdf

Collaborating with Customers to Innovate: Conceiving and Marketing Products in the Networking Age http://books.google.ca/books? id=fK5aDK4fFdwC

Evolving to a New Dominant Logic for Marketing http://dret.net/lectures/ssme-spring07/ VargoReading-Recommended.pdf

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"In the art of the early Renaissance...the starting point is to be found mostly not in the creative urge, the subjective self-expression and spontaneous inspiration of the artist, but in the task set by the customer." Arnold Hauser, The Social History of Art

Radical technologies can lead to extreme transformations of their users and even societies. Innovation researchers, archeologists, economic- and technological historians, and other scholars have studied past radical innovations to rationalize how these innovations emerged. This knowledge is indispensible for business governmental decision and makers. However, most research studies lack the human dimensions, such as "what did these innovative people think?" and "what were their personal motivations?". In many instances, we don't even know who the inventors were. In this article, we argue that a better understanding of personal transformations may lead to an increase of co-creation effectiveness and efficiency.

First, this article will explore the nature of the personal transformations taking place among ordinary people as consumers and users of cultural institutions. Such institutions have been created to enable people to learn and grow individually and to create a sense of community and cohesion. Second, we discuss the co-creation aspects of personal transformation processes. This will be seen in two contexts: that of the individual who is transformed, and in terms of the different value contributions to a community of users.

### Introduction

Our main purpose is to use a co-creation perspective to explore how individual personal transformations take place at a micro level and how they may affect structural change at a macro level.

Consumer research is mainly concerned about how consumers build on a set of personal and pre-existing criteria, explore existing options, evaluate them and then select the best alternative. Most economic theory assumes the existence of two types of preferences: exogenous and given. What is more interesting is how consumers find their criteria in the first place. Some people dislike a particular food or drink. Others do not want to hear an opera or visit an art gallery. Yet many change from disliking to loving certain forms of food or art. An "acquired taste" can be a painful and emotional process, such as learning to drink coffee or to smoke. Life consists of a large number of personal changes which may be called transformations since there is no change of the person, but there is a new preference that is considered to be part of that same person. The term transformation was discussed by William James in The Varieties of Religious Experience: "To be converted, to be regenerated, to receive grace, to experience religion, to gain an assurance, are so many phrases which denote the process, gradual or sudden, by which a self hitherto divided, and consciously wrong inferior and unhappy, becomes unified, and consciously right superior and happy, in consequence of its firmer hold on religious realities".

Religion does not play a vital role in our exploration, but the experiences provided by modern cultural and scientific institutions may offer experiences like the ones James described. With globalization, exposure to other cultures, and the tremendous aggregate forces seen in a global economy, the nature and processes of personal transformations become increasingly important at both the micro- and the macro-levels.

#### Historical and Modern Examples of User Transformations

It may seem strange that a major social science like economics almost totally ignores the role of transformations at an individual level, given the fact that economic history is full of examples of such transformations. Transformations have always been part of our human condition.

Hieroglyph and paper transformed information transfer from verbal deliveries and wall inscriptions into a highly mobile information system. Gutenberg's printing technique changed completely the way knowledge was diffused among a population, making schools and literacy afford-Modes able the masses. to of transportation emerged through the last two thousand years, only to be replaced by railroads, automobiles and airplanes, completely changing the nature of mobility and the concepts of place and space. Electro-magnetism became the generic condition for all modern communication technology: telegraph, telephone, radio, Internet and television.

While the transformations of the past took place over many generations, a single generation today may experience several transformations. The pace of technological and commercial development may be documented through recent business cases of transforming products. The SONY walkman emerged in the 1980s, to be followed by the Discman. Apple is another salient example with the Personal Computer in the 1970s, the Newton handheld computer device in the 1990s, followed by the iPod and iPhone.

IKEA provides an example of empowerment of the masses in deciding how their homes should be designed. IKEA supplies both the building elements and demos to inspire this personal approach to interior home design. Nautilus started in the 1990s to offer physical exercise to a population that no longer had to live from physical work, and whose altered metabolism created problems of obesity and heart disease. A body-building culture emerged and good athletic health is now an important transformation for most people, and only possible within a co-creation environment.

A number of organizations are devoted to exploring the role and value of personal user transformations and there is an increasing understanding that the successful management of such transformations will become a factor of growth in the future. In particular, when the "event and experience-culture" becomes less attractive, various forms of transformations will become more attractive. It is increasingly valuable for the decision makers and the multiple actors involved in the creation of future wealth and welfare to explore what the growing body of knowledge about transformations can offer for a highly educated society.

### What is a Transformation?

A transformation is a change in the basic set of personal criteria due to a process where the single individual interacts with a cultural system of meaning. An individual may see culture as a set of tools for orientation and criteria for what to like and dislike at a personal level.

In dealing with transformation, the question about the interaction between the subject and object of experience becomes relevant. For example, Reber, Schwarz and Winkielman (http://bora.ui b.no/bitstream/1956/594/1/BORA\_PSPR 04.pdf) argue that beauty occurs in the interaction between the active perceiver and the object. The question of beauty becomes dependent on both, and the act of perceiving beauty becomes an act of co-creation.

The perceiver adds or creates value in relation to the specific context and the specific object. When we speak of acquired taste, the assumption is that the experience is both demanding and part of a learning process, often requiring learning of new skills.

Taking a university degree has all the elements of a transformation. A person is willing to undergo a long and sometimes painful period of learning, to be tested, and finally graduate under a ceremony to signify that the candidate is now a member of a new constituency and able to take new challenges. Prospective students are willing to sacrifice other interests to follow courses and hard exercises that they have no certainty they will ever use. They are willing to accept the authority and rules set by others. After this transformation, the person is likely to have changed their preferences and interests for life.

Most transformations share some characteristics with education. To become a first class actor or dancer requires intensive training; to become a devoted admirer of such performances can also be characterized as a transformation. Most people, when exposed for the first time to an opdislike the performance. may era, However, after substantial exposure, their preferences may change so that they become devoted admirers.

To summarize, a consumer transformation changes the character of a need. To a large extent, this is due to consumer learning and adaptation due to experiences in which the active presence of people staging the experience and the community of users play a critical role. In this sense, transformations become a co-creational phenomenon.

According to Becker (http://joshpackard. files.wordpress.com/2008/09/becker-1953 -marihuana-user.pdf), the concept of transformational participation follows phases. The first is learning, which may require advice from an experienced user. Bodily sensation is the second. Sensation may be unpleasant and require an experienced person to facilitate "sense making". Conversation with other people is often essential to support this sense-making. Had Becker been a marketing scholar, he would have included a first element of market communication or branding.

Consumers may seek transformational gratifications, but the "pleasures of the body" have to turn into "pleasures of the mind" before the transformation is complete. There are three motives that dominate the discussions in research literature. The first is curiosity. Virtuosity is the second motive, which is the ability to excel in whatever one chooses. The satisfaction comes with the fluent experience and only after trials and errors. The third motivation is social gratification. While this may be expressed through association with brands, most people strive for acceptance and respect. A transformation is very often staged and it seems essential that it is an individual experience, although the role of the community is critical.

The experience leading to a transformation may be weak or strong, brief or lengthy. It is possible to remain alone, but usually experiences become deeper if other people are present. An interesting issue is how the anchoring material differs from transformation to transformation. For example, it could be found in the designated space or in the cognitive tools. In every specific case, there seems to be a particular "subject-object relation" which is case-specific.

#### **Co-creation in the Cultural Economy**

The providers of cultural products or services must deliver satisfaction at prices that at least cover costs to survive. Profit-

ability and sustainability represent serious issues in the cultural economy where many theatres, clubs, and film producers compete and where outside support, usually from governmental subsidies, enables them to survive. In Scandinavian countries, such support is considered part of government's responsibility and is integral to cultural institutions' business models. The value co-creation aspect of such business models may also imply various forms of shared economic inputs; for instance, different types of cooperation between various arts or companies.

Another aspect of value co-creation in cultural institutions concerns the acceptance of the individual person in a community. When transformations lead to acceptance and wider diffusion and imitation, value is created on a societal scale and has an additional participatory component. For example, after a broadcast performance, people find themes for talk when they meet the next day. Research has shown that people talk about what has happened by identifying themselves with or distancing themselves from various characters. This brings the drama up to a level where it adds to the "big story" that creates cohesion and coherence in a nation. This network value effect is a key component in any value co-creation phenomenon.

#### **Insights about Personal Transformations**

We summarize transformations as follows:

- a transformation is a designed experience for an individual who seeks a sensory experience, an intellectual or virtuous challenge, or an intellectual or artistic insight
- a transformation releases strong feelings and activates one's identity
- a transformation has a ritual that marks a transition

- transformations are materially anchored in objects and artifacts such as LEGO, TV Fiction, or the physical architecture in a theater
- a transformation means the acquisition of a certain insight, virtuosity, or acceptance in a community
- a transformation is relatively irreversible, but can be lost or removed by a legitimate authority
- there is a causal connection between the transformation of the individual and the cohesion and integration in a society

One might ask what this means for current business. It seems likely that transformation is a pattern for substantial innovation. This is understood by companies like Apple whose customers are surprised by what their new products can do for people. Getting the first customers and users to realize this potential is what sets the processes of networks in motion. The trick is getting new users to actually try the innovation and voice their opinions. If this is successful, the next critical step is building the social processes through marketing. By marketing we do not mean advertising, but all the forms of events, happenings and demos that fall under the name of "buzz-marketing" (http://emanuel-rosen.com). The issue is to involve future users in a tangible experience. Multiple venues and multilevel action are required, because people in one network may be isolated from others.

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".. [B]ecoming a co-creative organization is about changing the very nature of engagement and relationship between the institution of management and its employees, and between them and co-creators of value – customers, stakeholders, partners or other employees."

> Venkat Ramaswamy http://www.eccvenkat.com

Co-creation refers to the practices a company uses to collaborate with its stakeholders during the design, development, and deployment of its products and services. It replaces the hierarchical approach to management and the linear approach to innovation, affording all stakeholders the possibility to influence and bring forth meaningful and relevant solutions in a collaborative environment. Co-creation results in the develgoods, opment of services and experiences that are uniquely designed to meet people's particular needs, values, meaning and context. The purpose of this article is to share some experience driven insights on how co-creation could help businesses to live in an age of uncertainty.

### A New Age of Uncertainty and Chaos

We are now in an age where the fundamental trend is not just about surviving the crisis and determining when it is over. During the old economy of the Industrial Revolution it made sense to lay off employees in times of crisis and to cut costs to a bare minimum because we knew things would take time before they would get better. But we live in the Age of Turbulence, where everything moves much faster. Characteristic of this age is more frequent up and down swings, meaning the models of the Industrial Revolution are no longer effective in solving our challenges. We can no longer go in hibernation to await an upswing or to take action. The time for action is now. Some of the features of the crisis are here to stay and we're going to have to change and adapt in real time by learning to live with them.

Two things that are not taught in business schools are flexibility and adaptability to change. Schools continue to teach the same models that perhaps never really worked to begin with. It is clear that they certainly are not working now. Instead of engaging in massive layoffs during quiet times, companies need to reconsolidate, innovate, train, reorganize, and build new strategies and scenarios. Perhaps most important of all, they need to empower their employees to solve the challenges that impact short term and long term plans. This implies a critical need for new models within employee and employer organizations.

Our current struggle of living through crisis times should be transformed into embracing and defining the rules of the game and new models of doing business. The current situation provides a unique opportunity to identify early on some of the emerging features of the new era. These include:

- shrinking time horizons
- the democratization of business innovation
- putting people ahead of serial entrepreneurs' visions
- the importance of trust, humility and transparency between the multiple actors in any given value chain
- the co-existence of contribution, competition and cooperation

- the shift from products, services and solutions to participation platforms and experience networks
- the emergence of new values
- the changing meaning of the value creation paradigm into a new one based on value co-creation

### The Implications of Shrinking Time Horizons

One of the issues companies face is that the global economy is moving very fast and it is linked together. Formerly, upswings and downswings could last three to five years. In the new era, upswings and downswings are going to look more like a series of fluctuations, resulting in much shorter business plans in terms of six months instead of five years. The squeezing of time horizons is key to understanding the necessity of new innovation and business paradigms. There seems to be nothing new, but some of the things we already know are going to be different and more important than before. The time scale makes it impossible for firms and organizations to attempt to do everything alone. It requires new organizational designs, new types of strategic partnerships and cooperation, and not just more outsourcing.

To deal with shrinking time horizons, companies need to transform into living, sensing organisms. There is no time to learn what customers or end users want in order to retreat back into the company silo to develop it. We need to go beyond this fragmented value creation model by making sure that all the relevant people are involved by providing the proper mechanisms for them to become co-owners of assets, masters of processes, and co-creators of value rather than just a

target market and final destination of the value creation process. This process goes beyond market segmentation the paradigm, enabling individuals to personalize their products, services and experiences. It's about making stronger, richer, symmetrical and meaningful the fragile uni-dimensional links between employees, the communities of people using the products and services, vendors, and subcontractors. Within a value co-creation environment, all those links are affected and actively involved.

### Start by Involving Your own Employees

The biggest mistake companies make is to not involve their own employees in innovation. The innovation game has become so fashionable that it is tempting to keep other people out. Such an attitude is an abuse of the true social meaning of innovation. It's important to involve employees, to be transparent, and to empower them by giving them accountability and responsibility in making the company successful. It is about ownership, and ownership is not just about possession. It is about access to the proper assets and tools and to the best possible processes, within the proper context at the proper time. It is about finding meaning in what people want, in serving them through providing products and services created together in a way that meets their needs. The power of modern firms and organizations is not about providing more value to customers. It is both built and born in the process of sharing and committing to common values. When everybody is involved, and when there are clear articulated common values, you start seeing the world in a new light.

According to The Danish Secret, recently published in Monday Morning, Danish companies are good at involving their employees, resulting in increased efficiency. The advantages are loyalty, savings, learning, innovation and less vulnerability.

Instead of firing people when a crisis comes along, we can challenge employees to find solutions that turn company challenges into future assets. Through this challenge you will find who is capable of flexibility and adaptability to change and who can solve the challenges of today. At the end you may need to fire some people, but you won't fire them because there's a financial crisis. You will fire them because they are unable to take responsibility and hold themselves accountable to the people they serve: inorganization ternallv to the and externally to customers.

### The New Innovation Game

Innovation is mandatory now. If you go back in history, the best innovations came in times of crisis. In the words of Clayton Christensen, "in an environment where you've got to push innovations out the door fast and keep the cost of innovation low, the probability that you'll be is actually much successful highinnovations er...Breakthrough come when the tension is greatest and the resources are most limited. That's when people are actually a lot more open to rethinking the fundamental way they do business" (http://sloanreview.mit.edu/th e-magazine/articles/2009/spring/50314/ good-days). Innovation should become daily practice for everybody in the company. Unfortunately, in many companies some of the people with the best ideas are the ones who are never asked, like the janitor, or the receptionist, or someone with a teenager who happens to know what's really going on in the teenage world. We don't ask those people because they aren't the innovation director or the expert. Innovation is about empowering every single person to come up with ideas that are meaningful and relevant to any given need and challenge. Admittedly, not everyone is good at this, but we were all born creative.

Many have not been given the chance to voice their ideas in the current structure of a company or organization due to the politics within. These politics are often found within middle management and anecdotal evidence suggests that middle management is often the biggest barrier to innovation.

### In Need of a New Leadership

Many leaders are trained in a way that no longer fits the world we live in. Industrial Revolution models don't work in today's information and communication age. Leaders have to stop thinking of their organization as a top-down structure and must acknowledge that organizations can no longer work in isolation, particularly in the area of information communication. We are facing a new paradigm in our way of interacting with information that requires new approaches and new tools to filter through what is and what is not relevant. New business information and communication tools have to facilitate workflows that capitalize on using collaborative intelligence.

Leaders must acknowledge that uncertainty is a fact of life and that it is impossible to deal with it without enabling value co-creation mechanisms. We need to bring the significant economic advantage of co-creation to the forefront. We need to learn how to engage the right people in a co-creation process and to enable a new collaborative mindset that encourages growth and sustainability in times of change. We need to create a new model of leadership based on the co-creation paradigm. This model requires a certain level of humility and the ability of learning to fail while moving forward instead of only praising success.

### A Time for Value Co-creation

One of the significant impacts of the ongoing progress in information and communication technologies is our ability to obtain information rapidly, everywhere and, practically, at any time. There are two key implications of this impact. First, people become more knowledgeable about products and services and about all comparable products and services across the globe. Their knowledge provides them with more negotiation power. As a result, they are not just buying or not buying. They are now demanding particular types of services and are willing to become part of the process. Second, the two economic crises in the last ten years made people skeptical about the way businesses operate. They now demand to be in control, to be part of the design process, and part of developing the services and products that are being sold to them. In other words, they no longer simply accept the traditional push of offerings from companies. Instead, they are the ones pulling by increasingly demanding more meaningful and sustainable goods and services.

These two implications call for new approaches to innovation and business strategy that replace the dominant but antiquated mindset of company-centric value creation. However, as C. K. Prahalad has pointed out (http://en.wikipedi a.org/wiki/C.\_K.\_Prahalad), the solution is not just shifting from company-centric to customer-centric approaches, it is about designing and enabling value cocreation mechanisms, tools and environments. The difference between the customer-centric and the value co-creation approaches is that in value co-creation there are multiple actors in the value creation process and multiple problem solving perspectives: of the people using the co-created products and services, of the nodal company itself, and of the network of its partners.

Each actor contributes value but, in addition to the individual value contributions, there is also jointly created or partnership value. The total value outcome is larger and qualitatively different than the sum of the individual contributions. To capitalize on co-created partnership value, companies should reinvent the way their business architecture and technological infrastructure operate. The role of modern information and communication technologies in this rebuilding process is critical as an enabler of co-creation experiences and as the key ingredients of the fundamental building blocks of value co-creation platforms.

### **Closing Thoughts**

Most of the topics we have presented were discussed at the Copenhagen Co'creation Summit "Designing for Change 09" (http://www.copenhagen cocreation.com). This was an international event held on August 29th and 30th, 2009, and set up by the Danish Design Association (DDA, http://www.danishdesi gnassociation.com) to initiate a knowledge-sharing network concerning cocreation. DDA has set out to gather in Copenhagen twenty-five of the most recognized leaders, experts and practitioners in the world to address business issues of significant global interest through engaging in, exploring and developing new practices within the context of emerging the value co-creation paradigm. The participants agreed that co-creation is more than just a business tool. It is a form of open innovation that can be defined as a practice of collaborative development enabling all stakeholders to work closely together. One of the key insights of the Summit was the realization that interest in value co-creation is driven by the clear potential of its outcomes: profitable advantages for both companies and the people using their products and services.

Anna Kirah is partner and Vice President at CPH Design. The results from her extensive research have been used to implement new concepts, services, products and strategies for companies such as Microsoft, L'Oreal, Johnson & Johnson, and the aviation, media, and Tovota. newspaper industries. Prior to joining CPH Design, Anna was the Dean and Faculty Member of 180º Academy, an international school for radical innovation, where she was responsible for designing, implementing and overseeing the 180° curriculum. She joined 180° from the Microsoft Corporation, where she was Senior Design Anthropologist responsible for global field research, participatory design and co-creation. Anna has worked at Boeing as a Research Associate, doing preconcept research onboard commercial aircraft. Anna holds a graduate degree in Cultural Anthropology and a graduate degree in Psychology. She sits on several boards including the Danish Enterprise and Construction Authority's Programme for User Centered Innovation and on the jury for the Braun Design Prize 2009.

CPH Design is a Copenhagen based design and innovation agency offering services to a wide range of industries, organisations and clients. Pioneers of people centred and prototype design approaches, it focuses on holistic problem solving for the benefit of both client and end user. An international partner and inventor of many worldwide patents, CPH employs the creative power of design to generate value and advantage to improve life. CPH Design puts Why at the center of the design process. Asking Why is the essence of achieving creative solutions to generate successful design and innovation; what is known at CPH Design as Whydeology<sup>™</sup>. Whydeology<sup>TM</sup> enables new perspectives throughout the entire design process from the initial creative stages through product development to downstream troubleshooting.

### **RECENT REPORTS**

### Social Innovation in Canada: How the Non-Profit Sector Serves Canadians and how it can Serve them Better

Copyright: Mark Goldenberg

### From the Foreward:

Innovation is not just about improving the way we produce and market goods and services. It is also about finding creative ways to address social and economic problems faced by communities or nations – "social innovation." This report, by Mark Goldenberg, outlines, for the first time, the special role that non-profit organizations play in social innovation, through their deep knowledge of their communities and their ability to work with others to respond to the complex problems facing these communities today. Mark's report also identifies the challenges that non-profits are facing, in such areas as financing, regulatory constraints, and accountability mechanisms, which need to be addressed in order for the sector to realize its potential as a vehicle for promoting well-being.

http://www.cprn.org/doc.cfm?doc=1128

#### **Mixed Source**

Copyright: Ramon Casadesus-Masanell, Gastón Llanes

#### From the Executive Summary:

As most managers know, commercial firms may benefit from participating in open source software development by selling complementary goods or services. Open source has the potential to improve value creation because it benefits from the efforts of a large community of developers. Proprietary software, on the other hand, results in superior value capture because the intellectual property remains under the control of the original developer. While the straightforward rationale for "mixed source" (a combination of the two) is appealing, what does it mean for a business model? Under what circumstances should a profit-maximizing firm adopt a mixed source business model? How should firms respond to competitors' adoption of mixed source business models? And what are the right pricing structures under mixed source compared with the proprietary business model? In this paper the researchers analyze a model where firms with modular software must decide which modules to open and which to keep proprietary. Findings can be directly applied to the design of optimal business strategies.

http://www.hbs.edu/research/pdf/10-022.pdf

NEWSBYTES

### October 8

Canadians now have access to a Language Portal

### Ottawa, ON

Today the Government of Canada is launching the Language Portal of Canada, the first national Web site to showcase Canada's language expertise. The Language Portal was established to provide Canadians free access to the language tools that will enable them to use and understand both official languages more easily. One of the key features of the Portal is TERMIUM Plus®, the Translation Bureau's terminology and linguistic data bank, which contains nearly 4 million terms in English, French and Spanish.

http://noslangues-ourlanguages.gc.ca/ manchettes-headlines/acces-access-eng. html

### October 9

How Not To Spend 1 Billion Dollars

### Hamilton, ON

Researchers at Hamilton's McMaster University say they have devised an electronic medical records system that can be implemented by physicians across Ontario for two per cent of the money the provincial government has spent on eHealth Ontario. The web-based program, dubbed OSCAR, organizes medical records and can be set up on any computer system with a browser. Because it's open-source, OSCAR is free. The costs to set it up come in the form of servers, hardware and support staff.

http://oscarcanada.blogspot.com/2009/1 0/how-not-to-spend-1-billion-dollars. html

### November 19

#### EclipseRT Day

### Toronto, ON

EclipseRT Day is your opportunity to discover what is possible using Equinox and the complementary projects, such as EclipseLink, RAP, Eclipse RCP, etc. Experts from the EclipseRT community will discuss how you can build applications for embedded devices, desktops and even large scale server applications. IBM, SpringSource and TD Canada Trust will share their experiences of using Equinox and OSGi for their solutions. This event is for software architects, software development managers and senior developers that are interested in adopting a component-based architecture for their software. There is no cost to attend the event but you must pre-register.

http://wiki.eclipse.org/EclipseRT\_Day #Toronto

#### November 21

Vancouver TechFest

#### Vancouver, BC

TechFest's are about the community at large. They are meant to be a place for developers and IT professionals to come and learn from their peers. Topics are always based on community interest and never determined by anyone other than the community.

http://www.vancouvertechfest.ca/



### November 30 - December 2

Innovation Week

#### **Toronto**, **ON**

With keynotes, sessions, face to face meetings, panels, awards, and networking opportunities, Innovation Week brings together the digital media, ICT, advertising, television, production and distribution communities for an engaging look at the 21st Century economy. This year's focus: social capital, internet ecosystems and networks, the heart of innovation, games, and the new canvas for creativity – communication, content, and distribution.

http://www.nextmediaevents.com/iw09/

#### December 5-7

FUDCon

#### **Toronto, ON**

FUDCon is the Fedora Users and Developers Conference. FUDCon is a combination of sessions, talks, workshops, and hackfests in which contributors work on specific initiatives. Topics include infrastructure, feature development, community building, general management and governance, marketing, testing and QA, and packaging.

http://fedoraproject.org/wiki/ FUDCon:Toronto\_2009

### **ISSUE SPONSOR**

### **CPH DESIGN**

www.cphdesign.com

CPH Design is a Copenhagen based design consultancy that uses people-centred concept making to help companies and public institutions transform current challenges into future assets.

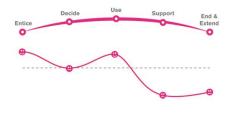
CPH Design puts "Why?" in the centre of the design process. Asking Why is the essence of achieving creative solutions to generate successful design and innovation. This involves living in the question and reflecting on possibilities. Asking Why helps us connect research and analysis with the creation of meaning and value for our clients and their end users; whatever their business. This one central question enables new perspectives throughout the entire design process from the initial creative stages through product development to down-stream troubleshooting.



CPH 1 offers competencies within service design, strategy development and organizational change. We use an interdisciplinary team within the areas of anthropology, business strategy and people-centered innovation to help you turn current challenges within your organization into your future assets. Through workshops, participatory processes and observation we gain knowledge of the aspirations and motivations of people and from this we find meaning. From meaning we help you to create value with people. From value we help you create profit and an immediate return on investment.

**CPH 2** is our team of designers and engineers. Highly skilled within the areas of 3D modelling, tooling, engineering, graphics and interaction design, we cover the area of concept making and visualization. Based on our extensive research (CPH 1) combined with your expertise, we begin our concept making phase in which ideas take form both technically and visually. **CPH 3** is our prototyping workshop and produces everything ranging from functional models to 0-series before starting the production. We work with all sorts of materials and hold great knowledge about production methods. We do short-series production from singular components to finished products.

#### Value Chain Journey



Before you can develop anything, you must have an overview of your company's products and services as well as your clients (and non-clients') needs. It sounds simple but can be complicated.

The journey into the user's world begins even before they know about your product or service. Analysis of your Value Chain will identify your Points of Excellence and your Points of Pain. Ask yourself these three questions: 1. How do users discover that your com-

- pany or service exists?
- 2. What makes them choose or reject- your business?

3. What happens when they have chosen you? What is their experience of your quality and service?

### **ISSUE SPONSOR**



The goal of the Open Source Business Resource is to provide quality and insightful content regarding the issues relevant to the development and commercialization of open source assets. We believe the best way to achieve this goal is through the contributions and feedback from experts within the business and open source communities.

OSBR readers are looking for practical ideas they can apply within their own organizations. They also appreciate a thorough exploration of the issues and emerging trends surrounding the business of open source. If you are considering contributing an article, start by asking yourself:

- 1. Does my research or experience provide any new insights or perspectives?
- 2. Do I often find myself having to explain this topic when I meet people as they are unaware of its relevance?
- 3. Do I believe that I could have saved myself time, money, and frustration if someone had explained to me the issues surrounding this topic?
- 4. Am I constantly correcting misconceptions regarding this topic?
- 5. Am I considered to be an expert in this field? For example, do I present my research or experience at conferences?

If your answer is "yes" to any of these questions, your topic is probably of interest to OSBR readers.

When writing your article, keep the following points in mind:

1. Thoroughly examine the topic; don't leave the reader wishing for more.

2. Know your central theme and stick to it.

- 3. Demonstrate your depth of understanding for the topic, and that you have considered its benefits, possible outcomes, and applicability.
- 4. Write in third-person formal style.

These guidelines should assist in the process of translating your expertise into a focused article which adds to the knowledgable resources available through the OSBR.

### Upcoming Editorial Themes

December 2009:	Value Co-creation
January 2010:	Success Factors
Febuary 2010:	Bootstrapping Startups
March 2010:	Mobile
April 2010:	Cloud Services
May 2010:	Consulting
June 2010:	Niche Markets



#### **Formatting Guidelines**:

All contributions are to be submitted in .txt or .rtf format.

Indicate if your submission has been previously published elsewhere.

Do not send articles shorter than 1500 words or longer than 3000 words.

Begin with a thought-provoking quotation that matches the spirit of the article. Research the source of your quotation in order to provide proper attribution.

Include a 2-3 paragraph abstract that provides the key messages you will be presenting in the article.

Any quotations or references within the article text need attribution. The URL to an online reference is preferred; where no online reference exists, include the name of the person and the full title of the article or book containing the referenced text. If the reference is from a personal communication, ensure that you have permission to use the quote and include a comment to that effect.

Provide a 2-3 paragraph conclusion that summarizes the article's main points and leaves the reader with the most important messages.

If this is your first article, include a 75-150 word biography.

If there are any additional texts that would be of interest to readers, include their full title and location URL.

Include 5 keywords for the article's metadata to assist search engines in find-ing your article.

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The Technology Innovation Management (TIM) program is a master's program for experienced engineers. It is offered by Carleton University's Department of Systems and Computer Engineering. The TIM program offers both a thesis based degree (M.A.Sc.) and a project based degree (M.Eng.). The M.Eng is offered real-time worldwide. To apply, please go to

http://www.carleton.ca/tim/sub/apply.html.



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