# A Conceptual Model to Implement an Interactive and Collaborative Enterprise 2.0

Domenico CONSOLI Business Institute "C. Battisti", Fano, Italy consoli.domenico@gmail.com

To implement an interactive and collaborative Enterprise 2.0 it is important to have, inside the company, organizational and technological preconditions. In this model of advanced enterprise, internal workers must collaborate among themselves to communicate with all external subjects of the supply chain for achieving business goals. The implementation process is a critical and complex procedure that requires a strategic plan in the introduction and adoption of the innovation. In this paper the single actions to follow, for the implementation of the new model of business, with all determinant factors and variables, are described.

Keywords: Web 2.0, Enterprise 2.0, Implementation Procedure, Platform 2.0, Performance

# **1** Introduction

An Enterprise 2.0 is a new advanced company that interacts with all stakeholders of the supply chain and in particular with customers using web 2.0 tools (blog, forum, chat, wiki) and social networks.

Implementing a model of an Enterprise 2.0 means to realize an innovative and dynamic process inside the company. It is therefore useful to design a general conceptual framework to describe, in detail, the implementation plan and individual actions (guidelines) to execute.

The design of the conceptual framework is supported from scientific contributions [11] [12] [13] [14] [22] [27]. The first important step of the model requires the involvement of top management (owner/manager) and, subsequently, the active participation of internal human resources. Our framework is able to evaluate the current position and the predisposition of the enterprise ("readiness") to adopt new interactive and collaborative technologies and the degree of "openness" of the company with the external environment.

The paper presents the following structure: in the next section the new model of Enterprise 2.0 and relative literature are shown. In the third section we describe, in detail, the conceptual framework to implement the new business model considering all determinant factors, variables and guidelines to follow. Finally some conclusions are drawn.

#### 2 Enterprise 2.0 Model And Literature

The first author who studied the new business model was McAfee [17] who affirmed that "Enterprise 2.0 is the use of emergent social software platforms within companies, or between companies and their partners or customers".

An Enterprise 2.0 (Figure 1) is an organizational technological and model based active participation of on all stakeholders (customers, suppliers, sponsors, business partners) in the sharing of internal and external knowledge.



Fig. 1. Enterprise 2.0 model.

This new model of enterprise uses intensely web 2.0 tools [20] that before were generally used only in a private manner and not for business goals.

By web 2.0 tools customers can express opinions/suggestions on products/services to improve them. In this way, a bi-directional channel between enterprises and customers is established and the customer can actively participate in the exchange of useful information. Customer opinions constitute a gold mine for generating high value added and for making strategic decisions.

In the Enterprise 2.0, the customer is a central figure and he/she is involved in all processes: conception, design, development, test, marketing, buying and so on. A customer more involved in the production process helps the company to find and eliminate errors/defects for improving the final product/service.

The Enterprise 2.0 model can be interpreted as a new way of doing business, a participative business where the company and customers work together (co-operate, cocreate, co-produce...) [25] to improve the final product/service.

Collaboration between companies and customers, in a context of co-creation and coproduction, encourages the realization of the figure of the prosumer (producer and consumer at the same time) [26]. The consumer is becoming a co-creator of value [29] while in the past he/she was a passive responder to the supply chain.

Nowadays, the customer, really, has an active role as prosumer. In IKEA, the customer participates in logistical and productive processes by transporting and mounting, individually, the furniture at home. The Mulino Bianco is available to listen any proposal of new biscuits. Ideas can be proposed and voted; the best one will be realized. In the website "Fiat 500" (500 You - www.fiat500.com) any Wants consumer contributed creatively to the design of the new car. In the case of the Canadian manufacturer John Fluevog, customers participate actively and creatively designing new models of shoes. In the web, the production is no longer the contents' prerogative of media centers, press and traditional producers but everyone, by web 2.0 tools, can participate in the discussion and produce contents by interactive and collaborative platforms like Flickr, YouTube, Second Life, Facebook, Wikipedia.

In the era of Web 2.0 there are not boundaries between producers and consumers of contents; everything is "everything is miscellaneous" indefinite. [28]. The Web 2.0 also leads to a revolution in the content generation. The user can generate contents, movies, opinions and advices. He/she becomes User-Generated Content [23] or Consumer Generated Content [24]. The key features of this new model of business are: sharing, collaboration, interactivity and agility.

If we compare Enterprise 2.0 with a traditional enterprise, there are the following differences (Table 1):

Source : Corso and Mainetti, 2008 (adapted by author).	
Enterprise 1.0	Enterprise 2.0
Closed and rigid structure	Open and flexible structure
Rigide	Agile
Hierarchy	Network
Centralization	Distribution
Competition	Collaboration
Traditional marketing	Social Marketing
Product-oriented	Customer-oriented
Intranet-extranet	Web 2.0
IT driven	User driven
Top down	Bottom up
Location	Mobility
Owner standards	Open web based standards
Planning production	On demand production

**Table 1.** Enterprise 2.0 vs Enterprise 1.0.

As we can see in Table 1, an Enterprise 2.0 presents an architecture bottom-up, agile, collaborative and flexible and uses a peer-to-peer communication while in a traditional enterprise (Enterprise 1.0) the architecture is top-down and the communication are hierarchical [9]. The knowledge sharing, the collaboration and the development of social networks, inside and outside the Enterprise 2.0, are very important factors.

The culture of the Enterprise 2.0 must be understood from the owner/management and board committees and then spread inside the organization motivating and involving internal workers. Interactive and collaborative companies will lead their customers, employees and suppliers to participate actively in the business and to create a strategic advantage that cannot be easily replicated by competitors.

# **3.** The Framework to Implement an Advanced Enterprise 2.0

The different phases of the conceptual framework [6], that we have developed, are listed in Figure 2.

As we can see in Figure 2, the conceptual framework consists in the implementation of different steps. The first steps are a strategic design of implementation and the analysis of the enterprise to monitor the readiness to collaborate and use web 2.0 tools. Other steps are the implementation plan with a technological platform, the monitoring and the final measure of performances.

# 3.1 Strategic Design

For a good probability of the success of the implementation process an incentive, from top management to internal human resources (direction top-down), is needed. Gradually the company should receive a boost from the bottom (direction bottom-up) to feed and reinforce the project and its continuity [8]. The involvement of top management [21] is important for an active participation and to ensure visibility and financial resources. Many managers today are unable to perceive, in its complexity, the goal of the Enterprise 2.0 technology-oriented and in most

companies; it is very hard to totally involve people. With the boost from the bottom, employees must be involved, in the same emerging modality, in the implementation of the model.

In the strategic design of implementation it is important to stimulate internal employees to share and exchange information by web 2.0 tools. This process can be supported from internal facilitators ("pivots") that stimulate the realization of the new work context.

All this requires a good governance of the project and mainly that owners/managers are involved in this change and are convinced of the benefits of the new business model also in terms of visibility and online reputation.



Fig. 2. The conceptual framework to implement an Enterprise 2.0 model

# 3.2 Analysis of the Corporate Readiness

The initial analysis of the enterprise is useful to discover strengths and weaknesses. In this step the enterprise must listening employees and understands their needs to satisfy. To understand if the company is ready to use the new model it is important to analyze some features of owner/manager, human resources, enterprise culture and technologies (Figure 3). Often in companies there are not right conditions for the implementation of the new model and there are some wordless

potentialities; sometime a significant enthusiasm is not accompanied by an adequate vision.

To implement the new business model 2.0 inside the company there must be specific organizational and technological preconditions.

Regarding the organizational aspect we considered the model of Bock et al. [4], which takes into account the factors that stimulate enterprise employees to share knowledge: individual attitudes (personal traits) and the internal climate of the organization. It is also important the innovation readiness of owners/managers and partners involved in the supply chain.

For the technological aspect it is important the predisposition of the company to use interactive and collaborative technologies 2.0. We must start from a limited area (application place) and then expand to other business areas until the entire organization.

Regarding the factors which stimulate the adoption and use of web 2.0 technologies, we focused on the tested Technology Acceptance Model (TAM) [10] and on models of the successful adoption of Information Systems [13] [14] [22] which are based on the quality of information, user

satisfaction and simple use of new technologies.



Fig. 3. Features to monitor the corporate readiness

In order to evaluate the determinant features of the readiness it is important to split them, in detail, in single components (independent variables). which must be controlled/monitored to measure the predisposition and the readiness of the company to implement the new model 2.0 (Table 2). Each component represents the variable to check in a detailed questionnaire and this variable can be relative to the technological or collaborative aspect.

**Table 2.** Variables to measure the predisposition/readiness of the enterprise

# Feature 1.

Personality traits of owners/managers.

Components

Strategic vision, open-minded, fear of reputation (offline and online), predisposition to the interview, predisposition to the sharing, willingness to learn, willingness to change behavior, willingness to the information exchange with external environment, leadership on employees, capacity to understand people needs, predisposition to listen, capacity to control, willingness to implement policies, monitoring of the employees behavior.

# Feature 2.

Human resources.

<u>Components</u>

Predisposition to the collaboration and sharing, predisposition to the knowledge sharing, relational skills, organizational and technological skills, presence of internal facilitators (pivots), presence of young people (digital natives), internal collaboration between adults and young people, tasks and experiences sharing, ability to carefully follow guidelines, aptitude to accept policies.

#### Feature 3.

Enterprise culture.

<u>Components</u>

Long-term vision and prospects, corporate confidence, network culture, predisposition to the cooperation, predisposition to the knowledge exchange, adaptation and learning, drivers for organizational change, top-down/bottom-up flows.

#### Feature 4.

External exchanges.

#### <u>Components</u>

Frequency of exchanges with external environment, communication with all subjects of the supply chain, motivations to share and exchange knowledge, incentive and stimulus to exchanges, benefits and usefulness of exchanges, obstacles to overcome, satisfaction of customer requirements.

#### Feature 5.

Availability to the innovation.

Components

Openness to the collaboration with the external environment, available to the crowdsourcing, development of new products with external ideas.

#### Feature 6.

Information processing.

Components

Access to Internet anywhere and anytime, access to digital devices, reception of right information in real time, simplicity in finding, sharing, cataloging information, monitoring of current assets, monitoring of business workflows.

## Feature 7.

Readiness to web 2.0 technologies.

**Components** 

Predisposition to the use of ICT, the presence of an internal ICT office, the presence of a Marketing/Communication office, provision of a good technological infrastructure, set of legacy IT applications, set of interactive and collaborative tools, use of social networks in private life, use of social networks at work.

Feature 8.

Application Context.

**Components** 

Office, business area, department, organization.

For example to evaluate the degree of the feature Availability to the innovation of the company, it is important to consider the components (variables) such as Openness to the collaboration with the external *environment*, which indicates if the company is more or less open to share information with external subjects, the Available to the crowdsourcing to assess if the company is open to accept solutions and ideas from the external environment, the Development of new products by external ideas which expresses the willingness of the company to cooperate with others in the development of new and shared projects/products.

If all these variables have a positive sign it means that the enterprise is willing to innovate and therefore it is prepared to implement the new model of Enterprise 2.0. For a full and complete predisposition it is important that the company satisfies all characteristics of the Tab.2. Therefore, we will consider other features such as the Personality of the entrepreneurs/managers and observe all individual components enclosed this feature. in Does the entrepreneur has a strategic vision?, an open mind? and so on. In the analysis of readiness it is important the level of commitment of owners and managers, their sensitivity and involvement their in technological innovations and in the development of a spirit of collaboration inside and outside the company [10].

#### **3.3 Implementation Plan**

The phase of the Implementation plan is represented in Figure 4.



**Fig. 4.** The planning for implementing an Enterprise 2.0 model

The implementation plan focuses on the process of the change management and governance with the assignment of tasks and responsibilities. In this phase it is necessary to move from the strategy to the planning. A detailed plan with guidelines, to carefully follow, for the implementation of the Enterprise 2.0 model, must be described. In this step we must distinguish two aspects: organizational and technological.

In the organizational context the focus is on collaborative activities that are present inside the company and which stimulate the staff to work together having a long-term vision of the change. It is a good idea to start, by a soft approach, with groups motivated to experiment new the interactive and collaborative model. Initially, the company must keep out people not interested to the launch of the project.

Employees/managers/owners must understand benefits of the Enterprise 2.0 with a co-creation and co-design vision and the difference from the old way of working. The change of the new way of working should be encouraged and supported.

Bottom-up initiatives can be improved and strengthened and some isolated activities

must be converted in a cooperative and collaborative context.

Regarding the technological side, a figure of a "pivot", active facilitator, is very useful as supporter in the use of the collaborative and interactive digital platform. The platform includes web 2.0 tools (wiki, chat, blog, forum) and social networks. All employees must create an individual and professional profile and must participate in the information exchange among all internal and external subjects of the supply chain.

#### 3.3.1 Organizational aspect

Employees, in executing the various tasks, have to work together in an atmosphere of trust and the management must support and encourage these mutual interactions.

Strengthening of internal collaborative activities. It is important to listen employees, and understand their needs. Gathering collaborative aspects inside the organization. Seeing if there are some bottom-up initiatives that can be developed and strengthened. Converting to the collaboration and sharing the isolated activities. Adapting internal and external processes. Creating an action plan with guidelines to carefully follow. Newman and Tomas [19] discuss of the importance to establish clear rules. policies and communication guidelines for the internal staff.

<u>Vision of the change</u>. Focusing on concepts of co-design and co-creation and on the new way of working. Showing best practices. It is important to have a long-term vision by small steps and gradually show tangible results. All the staff and the top management must be predisposed to the change.

The owner/manager must spread this vision of the change to human resources and must govern it with the assignment of tasks and responsibility.

<u>Supporting the change with right people</u>. This is the most delicate phase of the process. The technology is the trigger but people are the "engine" of the model. The management must identify right people (pivot and others) to assign tasks and responsibilities to stimulate people to work in a collaborative project 2.0 and draw guidelines to follow. Therefore it is necessary to identify different figures: a project leader (often, where existing, he/she comes from the communication or marketing area), the pivot or facilitator of the change and early adopters (those who have immediately adapted the change).

People must be supported in using, efficiently and effectively, collaborative software tools and they must understand the functionality and the importance of web 2.0 tools, business communities and the role of the community manager in virtual channels. Managers and employees need to be convinced of the importance and usefulness of the collaboration tools of a project 2.0. McAfee [18] recommends training in several steps: explain to employees the goal of the effort in learning the use of interactive tools and encourage them to use the digital platform.

At the beginning it is important to identify the office where implement, training employees, the model 2.0 and then expand it in other business areas and departments.

<u>Implementation of the change</u>. Implementing the change, starting in a business area, with motivated groups, and experimenting, with a soft interactive and collaborative approach, individual corporate activities. Leaving out of the project people who are not motivated. The change should be encouraged with a leadership that transmits motivation, sense of direction and widespread involvement that generates social dynamics and mutual encouragement.

In this phase it is important to follow these principles:

- transparency and accessibility of information: people must have access to relevant information and the communication must flow openly without restriction (where there are not objective requirements of confidentiality);
- mutual influence and social control: individual initiatives and innovative practices inside and outside of the

company should be made visible in order to trigger positive processes of reuse;

• rewarding people who implement this process of change [19].

At this stage it is important the role of the pivot who must support actions of the change and disseminate the sense of belonging to a collaborative and dynamic company.

Every single activity executed in an office, business area, department or in the entire organization correspond to a service provided to other colleagues and together contribute to reach the business goal. It is important to work in harmony for creating value and satisfaction for the customer.

In the organizational change, beginning from the customer, it is important to re-design and refresh all internal organizational processes customizing and personalizing interfaces between different business areas. Modeling the data flow coming from the customer and mapping skills and processes.

# 3.3.2 Technological aspect 3.3.2.1. Technological pivot

Concerning the technological aspect, before implement to the interactive and collaborative platform, it is important that inside the company there is a technological pivot [15], with adequate capacity to concretely implement the ICT strategy in operational actions, who accompanies employees on the use of interactive tools 2.0 like a trainer.

It is important that the innovative driver that comes from the top management is properly managed by this figure with ICT skills [16].

Newman and Thomas [19] affirm that Enterprise 2.0 cannot be implemented without the presence of people who believe in the project, the so-called "believer." It is important to give strength to the "believer" to create experiments in social software and transform them in champions and evangelists.

The pivot [2], to involve the management in technological innovations, must have the following capabilities:

• systems skills in the daily support to users, installation and management of

complex systems. ICT development skills, both related to the design of applications and the configuration and customization of software packages;

- acquisition skills, related to the selection and evaluation of suppliers, contracts, monitoring of supplier performances;
- project management skills, related to the planning, management control and evaluation of ICT projects [1].

The role of the pivot can be covered by entrepreneurs, managers, employees who execute other tasks. In other cases, however, an external subject, typically a supplier or consultant, can compensate the lack of an internal figure. It is clear that, in these cases, the degree of decision-making autonomy and the awareness of the company are reduced.

## 3.3.2.2. Digital training

For the success of the implementation plan of the model it is important to start eliminating physical meetings between entrepreneurs and managers and replace them using skype, chat and other tools 2.0. Then do "digital gym" by an internal social intranet (case Lago SpA), in a small office until an extended business area.

Various employees/managers in the "gym", need to improve their communication and collaborative skills. These skills can be

developed using appropriate interactive digital tools which are described in the 4C model [8]. In this model Cook proposes a cartesian space composed of four subspaces (communication, cooperation, collaboration and connection)

- Communication (informal process, less interactive): platform that enables a realtime conversation via text (Twitter), voice, or video;
- Cooperation (informal process, more interactive): software used to share multimedia contents (YouTube);
- Connection (formal process, less interactive) platform that extends and implements social networks (Facebook);
- Collaboration (formal process, more interactive): wiki platform for the co-production of documents (Wikipedia).

# **3.3.2.3.** Interactive and collaborative platform of the Enterprise 2.0

A model of an interactive, collaborative platform [7] is represented in Fig. 5. In the platform we can see no. 5 main components: Access and security, Collaborative Tools and Contents Management, Virtual Interface, Information System and Integrated Datawarehouse.



Fig. 5. A collaborative platform of an Enterprise 2.0.

#### Access and Security

This module contains applications that control the access to different services of the platform. The security policies protect the confidentiality, integrity and availability of information. All applications must comply with common security requirements and service levels necessary for the appropriate operation of business processes. All users of the platform are structured as single or belonging to a group with specific privileges and hierarchical permissions.

Collaborative Tools and Contents Management A collaborative module contains web 2.0 interactive tools for sharing knowledge and experiences (wiki, blog, chat, forum, social network, tagging, FAQ...). The collaborative software also includes:

- Content Management System (CMS): for managing unstructured contents as web pages;
- Document Management System (DMS): for managing and sharing files among users of the platform;
- Contents Search: for searching all contents available in the platform;
- Text and Opinion Mining (TM/OM) [3] to extract the sentiment (negative, positive or neutral) of opinions expressed by customers.

# Virtual Interface

The platform must be able to integrate collaborative and interactive channels (unstructured) with the Information System that processes structured information. A level of integration becomes essential to ensure uniformity and harmonization of different applications.

# Information System

The Information System (IS) contains different software applications to process information for business goals:

- Enterprise Resource Planning (ERP);
- Supply Chain Management (SCM);
- Customer Relationship Management (CRM);
- Computer Aided Design (CAD), Computer Aided Manufacturing (CAM), Computer Aided Engineering (CAE);
- Product Lifecycle Management (PLM);
- Business Intelligence (BI).

The Business intelligence module is useful for corporate reports and to analyze information for business goals.

# Integrated Datawarehouse

All data of the platform is stored in an Integrated DataWarehouse. This database contains data managed by IS and collaborative systems and therefore both structured and unstructured information. All different components and services of the platform save and read data from this data warehouse. In the selection and adoption of the collaborative platform we must consider the following phases:

- *Analysis and benchmarking*. Comparison with market solutions mainly on the usability, accessibility and efficiency;
- *Development*. Selecting the infrastructure (Service as a Service, Cloud Computing...) and the collaborative platform. Assigning a specific role to human resources. Designing security policies;
- *Integration*. Integrating applications of Information System with contents of web channels;
- *Deployment*. Delivery and launch of the platform involving and motivating the internal staff;
- *Adoption.* Showing the best practices and guidelines. Activating training sessions for the support in the use of the platform.

# 3.4 Monitoring and Performances Measures

This is the last component of the conceptual framework of the implementation of the Enterprise 2.0 model. To validate the implemented model we should be monitor characteristics and performances. The monitoring of performances of an interactive and collaborative model is not easy, especially in the case in which there are intangible results like those associated to an Enterprise 2.0 which are based on theoretical concepts such as collaboration, interactivity and communication. We can adopt some measures on the sales of new innovative products, the customer satisfaction, the volume of contents and the exchanged knowledge, the number and role of participants and the development of new ideas. All these steps to execute the monitoring and the measure of performances are shown in Figure 6.

In particular, it is important to take in consideration the following factors: the rules and policies to follow in the implementation model, the adoption of web 2.0 tools, the motivation, the simplicity of the use of technological tools, the exchange of information, exchanged the quality of information, the support to the implementation results and the achieved/expected.



Fig. 6. Monitoring and performances measures

During the start-up phase it is necessary a continuous monitoring and an execution of specific corrections to lead the enterprise in a full collaborative environment.

After a period of time, since the launch of the project, a follow-up report is useful to mark all activities where it is necessary to intervene. It is also necessary to update the guidelines on results achieved to improve the executive plan of the strategic project 2.0. This step will be iterated for tuning corrections to the implementation of the Enterprise 2.0 model.

Each factor has been declined, in detail, in individual components (independent variables) (Table 3) that must be monitored. If independent variables of each factor present a positive trends it means that there are improvements and therefore a partial success of the implementation.

## **Table 3**. Variables useful in the monitoring of performances

#### Feature 1.

Policies and rules.

**Components** 

Definition of policies and rules to follow in the implementation of the project 2.0, readiness to the change of managers and employees, inappropriate behavior (use of tools for personal reasons, modalities of pseudo collaboration, ...), fear of online reputation, writing of inaccurate information, release of confidential information, acceptance of criticism and consequent actions, fear of the internal security.

#### Feature 2.

Adoption of web 2.0 tools.

**Components** 

Governance process, initial context and availability to the adoption, implementation costs, obstacles to the adoption, tools most used, utility in the exchange of information, change of other colleagues in the interface with these new technologies, increase of collaborative relationships, presence of pivot inside the company, presence of guidelines for the adoption.

#### Feature 3.

Reasons for the adoption.

Components

Needs for the internal/external communication, improvement of the operating efficiency, opportunities for business, spontaneous evolution of pre-existing technologies, imitative factors, differentiation from competitors, image enhancement, supply of innovative services.

#### Feature 4.

Support to the initiative.

**Components** 

Rewards and incentives for the adoption, stimuli by top management, clear and well expressed goals.

#### Feature 5.

Simplicity in the use.

Technology easy to use, user-friendly systems, systems simple to learn and use.

#### Feature 6.

Exchange of information.

Components

Barriers in the exchange of information inside and/or outside, increased frequency of exchanges, improvement of internal and external communication, increased activities with customers.

#### Feature 7.

Quality of information.

Components

Clarity of exchanged information, useful information for decision-making, information to improve performances, simplification of tasks and increase of the efficiency, support to the coordination.

#### Feature 8.

Quality of information.

Components

Clarity of exchanged information, useful information for decision-making, information to improve performances, simplification of tasks and increase of the efficiency, support to the coordination.

#### Feature 9.

Achieved/expected results.

Components

Improvement of internal and external communications, improvement of the business collaboration, increase of the productivity and performances, improvement of dynamic communications, support and improvement of working methods in executing activities, creation of new ways of working, creating virtual communities and sharing knowledge, more awareness of the value of corporate knowledge and its exchange, ease in access to the knowledge, improvement of the agility of the company, better visibility, increase of online reputation and reliability of the company, increase of internal attractiveness, improvement of relations with customers and with stakeholders, increase of the customer satisfaction, measures of the Return of Influence (RoI), monitoring of tools for the presence of the company in social networks.

Taking in account the factor Quality of Information it is possible to measure individual variables (components): Clarity of exchanged information to see if the information exchanged inside and outside of the company is clear and linear, Useful information for decision making to see if information is useful for entrepreneurs/managers in decision making, Information to improve performances to assess if exchanged information has increased performances, Simplification of tasks and increase of the efficiency to evaluate if the simplification of tasks increases efficiency business the of operations, Support to the coordination to understand if information is useful to internal coordination. If the answers to these questions (variables to observe) are positive it means that, in part, the factor Quality of Information helps to increase business performances. For improving a global performance it is necessary that all the other

factors of Table 3 should make a positive contribution.

After a period of time since the launch of the project 2.0, it is useful to compile a report of follow-up to highlight corrective interventions in various activities. It is important also update guidelines on results achieved, make improvements and restart the execution of the project 2.0. These steps are repeated until the development of the model of Enterprise 2.0 is completed.

#### **4** Conclusions

The implementation of an Enterprise 2.0 model is difficult and complex and so it is important to use an integrated project. A detailed list must show all steps to execute from the initial analysis of the enterprise until the completed implementation of the project 2.0. The initial analysis is useful to understand strengths and weaknesses and in particular if the company is ready to adopt and use collaborative web 2.0 tools. It is

important to stimulate, inside the enterprise, collaborative initiatives. In introducing changes an internal pivot or facilitator has an important role mainly to stimulate internal workers in following specific guidelines. Employees and managers must believe in this new business model and with their efforts and their actions they must use a digital and collaborative platform to reach business goals. After the gradual implementation of the model it is important to monitor the executed actions and in particular the measure of performances. At present it is difficult to measure the Return of Investment (ROI) of a project 2.0 and instead it is easier to measure the online Return of Influence by appropriate tools that monitor the social presence and the visibility of the company in the web and in social networks.

## References

- R. Adler, "Strategic investment decision appraisal techniques: the old and the new", Business Horizons, vol. 43, n. 6, 2000, pp. 15-22
- [2] R. Balocco, S. Mainetti, A. Rangone, "Innovare e competere con le ICT", Il Sole 24 Ore, 2006
- [3] M. Berry and M. Castellanos, "Survey of Text Mining II: Clustering, Classification, and Retrieval", Springer 2007
- [4] G. Bock et al., "Behavioral Intention Formation Knowledge in Sharing: Examing the Rols of Extrinsic Motivators, Social-Psychological Forces, Organizational Climate", and MIS Quarterly, 29(1), 2005, pp. 87-111
- [5] Y. Cho, I. R. Hiltz and J. Fjermestad, "An analysis of online customer complaints: implications for web complaint management", In Proceedings of the 35th Annual Hawaii International Conference on System Sciences, IEEE, 2002, pp. 2308–2317
- [6] D. Consoli, "A conceptual framework and guidelines to implement the new Enterprise 2.0 model" In Proceedings of the 6th International Conference GEBA 2012, Iasi, October 18-20, 2011, pp. 531-

537

- [7] D. Consoli, "A Collaborative Platform to Support the Enterprise 2.0 in Active Interactions with Customers", Informatica Economica, vol. 16, 2012, pp. 37-49
- [8] N. Cook, "Enterprise 2.0: How Social Software Will Change the Future of Work", Gower, 2008
- [9] M. Corso and S. Mainetti, "Enterprise 2.0 Report, 2008", Polytechnic of Milan
- [10] Damaskopoulos, Panagiotis and Theodoros Evgeniou, "Adoption of New Practices Economy by **SMEs** in Transition Economies: A Change at Internet Speed or a Slow Socio-economic Transformation?". European Management Journal, (Forthcoming April 2003)
- [11] F. D. Davis, "Perceived usefulness, perceived ease of use, and user acceptance of information technology", MIS Quarterly 13(3), 1989, pp. 319–340
- [12] R. Dawson, "Implementing Enterprise
  2.0: A Practical Guide to Creating Business Value Inside Organizations with Web Technologies", Sydney, CreateSpace, 2009
- [13] W.H. DeLone and E. R. McLean, "Information Systems Success: The Quest for The Dependent Variable", Information Systems Research, 3(1), 1992, pp. 60-95
- [14] X. Deng et al., "A cross-cultural analysis of the end-user computing satisfaction instrument: A multi-group invariance analysis", Information & Management, 45(4), 2008, pp. 211-220
- [15] T. R. Eikebrokk and D. H. Olsen, "An empirical investigation of competency factors affecting e-business success in European SMEs", Information & Management 44(4), 2007, pp. 364-383
- [16] S. Gramignoli, A. Ravarini, M. Tagliavini, "A profile for the IT manager within SMEs", in Proceedings of the 1999 ACM SIGCPR Conference on Computer Personnel Research, New Orleans, Louisiana, United States, April 08-10, 1999; pp. 200-208

- [17] A. P. McAfee, "Enterprise 2.0: The Dawn of Emergent Collaboration". Sloan Management Review, Spring, 47(3), 2006, pp. 21-28
- [18] A. McAfee, Enterprise 2.0: New Collaborative Tools for Your Organization's Toughest Challenges, Harvard Business Press Books, 2009
- [19] A. C. Newman and J. G. Thomas, Enterprise 2.0 Implementation, McGraw-Hill, 2009
- [20] T. O'Reilly, "What is Web 2.0. Design Patterns and Business Models for the Next Generation of Software", (2005, September, 30), O'Reilly Media Inc. Available online: http://oreilly.com/web2/archive/what-isweb-20.html
- [21] S. L. Pan and H. Scarbrough, "A Socio-Technical View of Knowledge-Sharing at Buckman Laboratories", Journal of Knowledge Management, 2(1), 1998, pp. 55-66
- [22] P. B. Seddon and M. Kiew, "A Partial Test and Development of DeLone and McLean's Model of IS Success", Australasian Journal of Information Systems, 4(1), 1995, pp. 90-109
- [23] M. Strobbe, O. Van Laere, S. Dauwe,B. Dhoedt, F. De Turck, P. Demeester, J. Vanattenhoven, "Interest based selection

of user generated content for rich communication services" J. Netw. Comput. Appl., 33 (2), 2010, pp. 84-97

- [24] K. Sumi, "Anime de Blog: animation CGM for content distribution. 2008 international Conference on Advances in Computer Entertainment Technology". ACM, Yokohama, Japan. Vol. 352, pp.187-190
- [25] D. Tapscott, A. D. Williams, "Wikinomics: How Mass Collaboration Changes Everything", Portfolio (Penguin Group) Publisher, 2006
- [26] A. Toffler, "The Third Wave". Bantam Books, 1980
- [27] A. Wattiez, "An evaluation of the Critical Success Factors to implement Enterprise 2.0 solutions within Belgian organizations", Henley, University of Reading, 2011
- [28] D. Weinberger, "Everything is Miscellaneous: The Power of the New Digital Disorder", New York, 2007, pp. 278
- [29] L. Witell, P. Kristensson, A. Gustafsson and M. Lofgren, "Idea generation: customer co-creation versus traditional market research techniques", in Journal of Service Management, Vol. 22, no. 2, 2011, pp. 140-159



**Domenico CONSOLI** graduated in Electronic Engineering at University of Padova (1981) and in Economics at University of Urbino (1994), holds the first PhD in Artificial Intelligent Systems (Information Engineering) at Polytechnic University of Marche (2009) and the second in Economics and Management at University of Urbino (2012). He is Professor of Computer Science in the Business Institute "C. Battisti" of Fano and, in the past, was Professor of Information Communication Technology at University of

Urbino. He is author of 6 books on Information Technologies and of more than 60 scientific papers (conference proceedings, journals, book chapters) on ICT and Business. His research area focuses on Information Communication Technology that supports enterprise strategies and mainly on the implementation of the new model of Enterprise 2.0, an enterprise that interact with customer by web 2.0 tools to improve product/services, in a context of customer satisfaction.