COLLABORATIVE PROCESSES. DECISION MAKING. GROWTH IN BUSINESS PERFORMANCE

BOGDAN GABRIEL VASILCIUC, FLORIN VĂDUVA, NICOLAE MERCIOIU
"TITU MAIORESCU" UNIVERSITY OF BUCHAREST, ROMANIA
22 DÂMBOVNICULUI STREET, BUCHAREST, ROMANIA. 040051
PROSECUTOR'S OFFICE ATTACHED TO THE HIGH COURT OF CASATION AND JUSTICE, ROMANIA
25 BATISTEI STREET, BUCHAREST, ROMANIA
bogdanvbg@yahoo.com, nicu_mercioiu@yahoo.com, florin_vaduva@yahoo.com

Abstract:
In today's search for information, the business intelligence user experience is disorienting and frustrating. Companies need to have modern solutions from which they can deliver compelling BI and information applications that defined a new type a consumer. The solutions should also improve efficiency, reduce costs and create competitive advantage.
In this paper the authors try to present some ways to improve decision-making performance through collaborative approaches to business process.

Key words: *collaborative processes, business intelligence, decision maker, business performance, collaborative environment*

JEL classification: *M14, M15, M21*

I. Introduction

It is already known that organizations face increasing volumes of information more and more consistent, which has to manage properly and capitalize the opportunities, while they can avoid the possible threats, perhaps even more, in an uncertain economic environment.

Management experts [5] agree with the idea that information is one of the most important resources of a company, but should be collected, processed, transmitted and archived in an efficient, timely, effective and safe. Therefore, companies must give greater development of information systems capable of handling data and information especially in a level of greater stringency, by which:

- manage information at low cost;
- available to employees in real time and operational information necessary to support their decisions;
- contribute to the objectives of the organization system;
- eliminate or minimize a number of specific weaknesses of information systems (screening, distortion, information shorting circuits, redundancy, overloaded circuits, information);
- provide enhanced data protection and information;
- provide a collaborative working environment to enable the creation of relationships between entities that carry out common processes (employees, suppliers, customers, entrepreneurs).

On the other hand, when an organization invests in technology, the problem is most acute in regard to return on investment. In most cases, managers expectations are related to process efficiency, increase employee productivity and tasks more effective. From a similar perspective, managers are considering that choosing a technology which fit in to a total cost of ownership (TCO) low and equally to generate a return on investment (ROI).

These considerations offers to the managers the possibility to position the company on a trend of success.

II. Perspectives on collaborative work environments

The prospect of generating virtual working environments in the enterprise while leading to new conceptual delimitation of the term *collaboration*. According to [2], a Collaborative Working Environment is *that environment that provides capabilities to share information and exchange of views, in order to reach a common understanding among the various surveys*.

For many, the collaboration involves sharing resources within the organization, but for specialists collaboration mean much more. Both, the collaborative processes and technologies that allows the automation, are registered in conceptual boundaries of the term collaboration. However, the most important aspect of collaboration within an organization is the informational content.

In the year of 2002 [1], the specialist Stephen R.G. Fraser first raised the issue of *content*. What is and what does this term mean, in relation to a content management system? All Fraser [1], proposes two ways of approaching the term *content*, namely:

- *information* or *content information* (text or image), which can be viewed in a public or private interface;
- *applications* or *programs* running behind an interface on a web server, and are designed to present information in a dynamic way in a public or private interface.

Below we present some examples of good practice highlighting the collaborative aspects of document content management.

Why we need a collaborative environment when we create a document?

The answer is apparently simple, but must be supported and demonstrated by the fact that document maturity is reached when the content provides a maximum of knowledge of persons to whom it is addressed and that they use. If we consider that the development of a large scale project is geared a whole team of specialists, we can admit that it is appropriate to consider that also in the document creation may participate more people. More ideas and views is leading to a clear information, concise, which may contribute which more consistency in decisions.

For example, to design a software products procurement agreement, company Lawyer must consult with the Manager and IT Head. Consultation, as well as informal component, is achieved through technological means already known: e-mail, chat, conference, content creation, however, is done electronically on the same document, the repeated notes, change the form or content. The final form of procurement agreement must be validated by the Manager of the company after repeated consultations with the Lawyer and the IT Head. In this sense, one can define a life cycle of content creation life cycle specific document, must not necessarily a temporary component (there is no need to create in a short time; usually requires only that the document is complete, the content is clear, rigorous and well argued).

In Figure 1, is presented a concept of creating their own content document in a collaborative approach. Any user in the company receiving the necessary right scan interfere with the contents of a document. The life cycle was defined strictly to illustrate just the content creation, until the document will be given a form and content that will express the real purpose for participating in a trial. Any intervention on the content from this time involving the use of content, the document is already created and ready to be directed to another process or workflow.

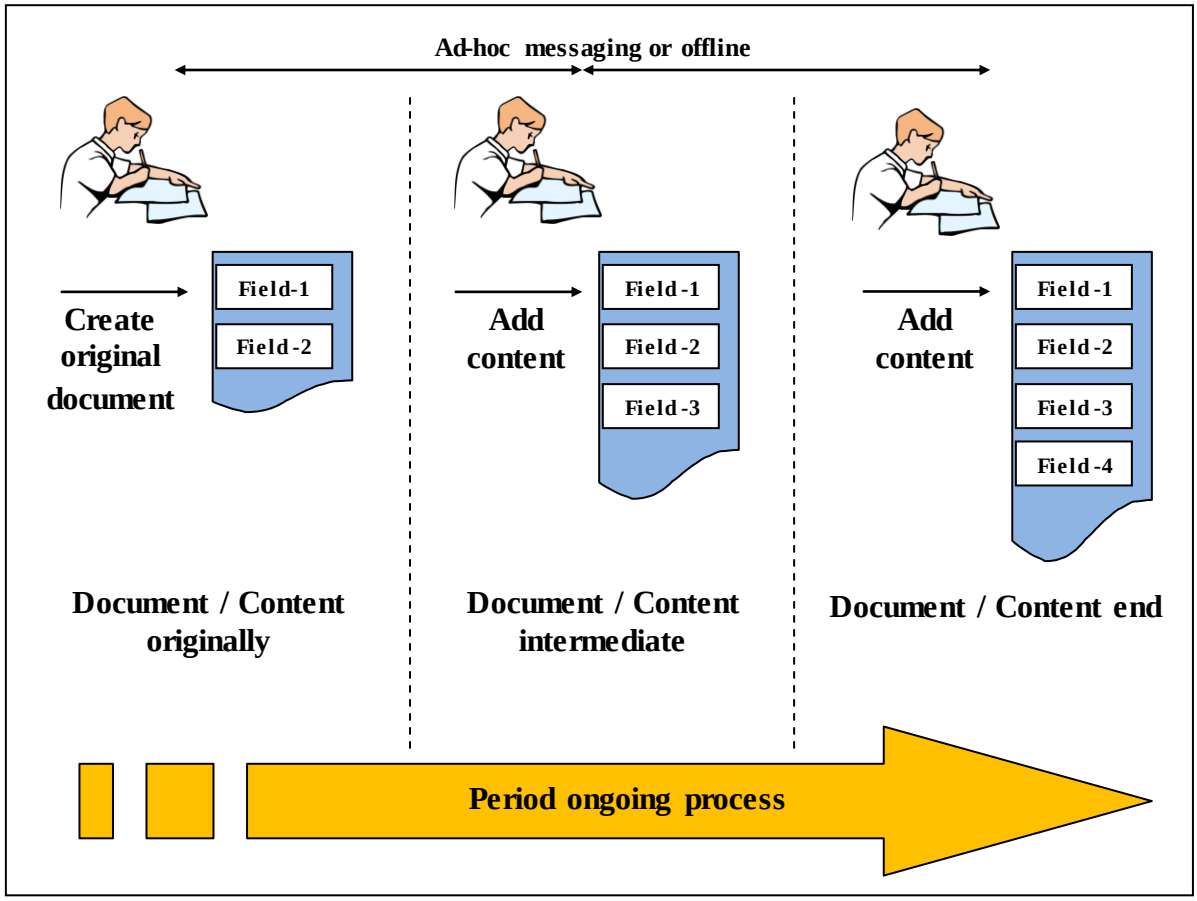

Figure 1. Collaborative approach for creating document content

Why do we need a collaborative environment when using a document?

And in this case, the response can be predicted. In an ideal business, in line with modern management application, developed processes are followed. The orientation is towards the goals, which are all companies and not of a single department or employee. Instead, the fulfillment of a goal (running a process) can and should participate more employees, inter-departmental level. The need for a collaborative working environment is much more pronounced when we refer to processes, employees and ultimately not in document sort heir contents.

For example, a classification of materials is completed by an employee. Two other employees, which consult the same nomenclature and retrieve data about the materials they need in order to carry out specific activities within a common project. As a result, it identifies two distinct processes, so the first employee wants to run the foundation materials of construction, the second employee wishes to raise construction materials. Both consult the same list (document), can even use the same material (is the same information), but for different processes. Similarly, the process can participate more employees and a number of documents whose content can be shared to lead to achieving that goal.

In Figure 2 we presented the use of a document (content) joint, which it shares several employees of the company interested in contributing to business success and the successful conduct of the process that generates objective. It is important that in a long process, users with rights to the content of a document can occur at anytime, with the ability to access the document and its contents at all stages through which it passed.

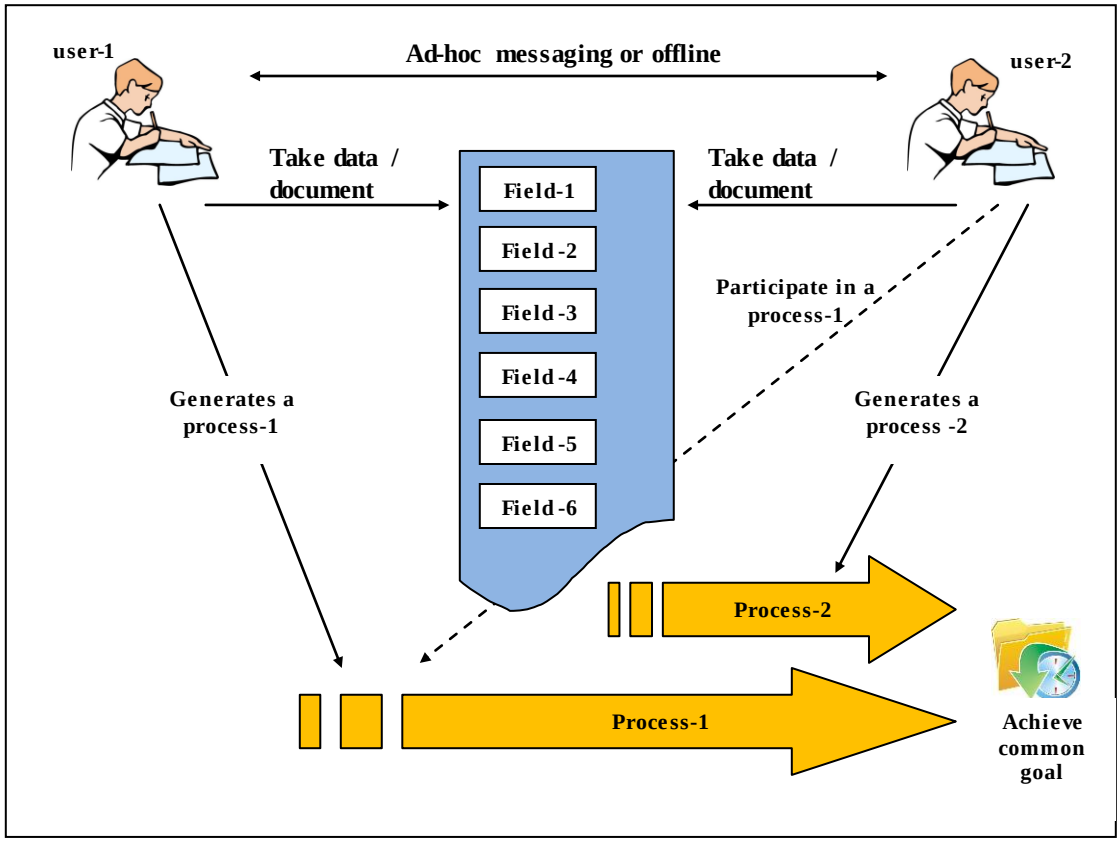

Figure 2. Activity level collaborative process, users, documents

III. Optimal decisions based collaborative environments

An important discovery, particularly as regards the financial returns achievable from imaging, was the concept of *Workflow*. Although the transition from traditional document on paper to electronic document was made long ago redundant nature of the information problem has not disappeared completely. Any document involving multiple photocopies, can be replaced with a single scanned image of the form or correspondence, moving through the process steps in a pre-defined way with serial, parallel, or conditional paths. This level of Business Process Management (BPM) provides for considerable optimization of the process, reducing unnecessary steps, and removing physical barriers to the location of processing staff [8].

According to the Wikipedia Dictionary, *Business Process Management* (BPM) is a holistic management approach [6] focused on aligning all aspects of an organization with the wants and needs of clients. It promotes business effectiveness and efficiency while striving for innovation, flexibility, and integration with technology. BPM attempts to improve processes continuously. It can therefore be described as a *process optimization process*.

Enhanced BPM capabilities have included the capture of information from forms using much improved OCR or ICR techniques, allowing automatic matching of identifiers such as invoice numbers with records held on transactional systems such as Business Intelligence and Enterprise Content Management System. Improved tools for process modeling, optimization and simulation have enhanced the management of document-centric BPM, and merged it with transaction-centric BPM and Enterprise Application Integration (EIA), linking up other enterprise software applications [8].

Workflow-based solutions are implemented as:

- WF solutions - customers identify the type of information / document and workflow generates as a result; the document can be routed (reference sequence in an order established by several users) or distributed (refer simultaneously to multiple users) - *ad-hoc workflow*;

- WF engines or BPM (Business Process Management) - the information / documents are automatically identified and sent streams of well-defined at the outset, without any need for user intervention (if document is printed) - *predefined workflow*.

  Tools for generating workflow must provide perspectives on:
  - image processes and organization structure;
  - inclusion of tools for processing data and documents, and charting the process;
  - parallel or sequential processing procedures including simultaneous saving;
  - alert the user on the need for a task (activity);
  - task tracking through a rigorous monitoring of information and documents in it.

  In a parallel approach, a BPM presents a number of its features:
  - WF ensure complete and functional;
  - monitor the whole process at the server;
  - use the EAI to integrate with other applications;
  - integration with Business Intelligence applications, for assisting users in the WF, sometimes requiring assistance in support of their decision process that generates the continuation or cessation of WF, or routing it to another WF.

IV. Growth in business performance

Today's business environment demands innovation. An advanced technological product is not always enough, are therefore more often considered the investment figures, the profit generated by the investment and potential risks.

The concept of ROI (Return Of Investment) [7] derived from information technology (IT) is defined *as the percentage measurement of an IT project's expected return, which is calculated by dividing net benefits by costs*. The result provides the length of time required for a customer to fully recoup the costs associated with a technology investment after implementation. The definition has expanded to encompass the ability of a particular IT investment to impact the overall efficiency and effectiveness of an organization. This includes the recognition and measurement of *soft benefits* such as reduced time waste, improved customer service and increased employee and customer satisfaction.

Developing a solid ROI is based on:

- *Small investments in technology and the involvement of as many factors knowledge or knowledge of the company*. Choose the initial project so that you can deliver measurable business returns with minimal infrastructure investments to create a maximized ROI;
- *Developing a very detailed investment plan*. Define data quality metrics and relate these to business initiatives;
- *Use a knowledge base that will gradually populate with data, information and knowledge as the business will be successful*. Calculate return based on metrics and the business impact previously defined;
- *Use the demonstrated ROI as a tangible benefit to drive further investment in infrastructure and resource allocation*;
- *Market your success internally*. Create visibility of your well documented success to help elevate awareness among senior management and decision makers who may ultimately be responsible for assigning priorities and resources for future initiatives.

Considering the effects of ROI measurement perspective, we propose a general formula for sizing long-term effects:

ROI = annual revenue + growth over * years + effect on equity – cost to develop –

cost to maintain – expected loss – opportunity cost of capital investments

V. Conclusions

Collaboration and cooperation has always been a key aspect of overall system success [3]. People need to change the way they work in order to get the full benefit and companies to work together to provide accurate, transparent and timely idea to clear competitor to the detriment of their partner [4].

An integrated approach to Collaborative Work Environment holds the most potential for ROI which involves delivering document information and the subsequent tools needed to use the data within the context of a business routine and process.

Collaboration across the enterprise is not an easy process but can become productive and make efficient. As a result, IT & C industry should propose solutions software and services, targeting those who want to overcome their competitors by putting information in the center of the organization. Managers can be helped to create an information agenda to achieve quality information on which to base business decisions. The ultimate goal is to get the value added of all this information, organize and structure information effectively. We express our opinion on the need for continuing investment in modern information technology, tailored collaborative environment with opportunities to develop and use the online environment, where investments are not very expensive.

REFERENCES

1. Bianco F., Michelino F. – "*The role of content management system in publishing firms*", International Journal of Information Management, Volume 30, Issue 2, April 2010, p. 117-124;
2. Dobrea C., Ciocoiu N., Ştefănescu A.N. – *„Aspects of the collaborating environment integration in the SME-s activity in the context of the economic globalization"*, The Ninth International Conference "Investments and Economic Recovery", May 22-23, 2009, Vol. 12, Nr. 2 special/2009, Economia seria Management, p.144-151;
3. Eunjee S., Shuxin Y., Indrakshi R. - "*Using UML to model relational database operations"*, Computer Standards & Interfaces, Volume 29, Issue 3, March 2007, p. 343-354;
4. Vasilciuc B., Văduva F., Mercioiu N., Dumitra S. – "*Aboradarea informatică a crizei economice"*, Conferinţa internaţională „Calitate, excelentă academică, multiculturalitate" – Universitatea Vasile Goldis din Arad, 2010, în curs de publicare în Studia Universitatis „Vasile Goldis" Arad Seria Stiinţe Economice, revistă cotată CNCSIS B+ (cod 792) si indexată BDI CEEOL Germania;
5. Văduva F., Vasilciuc B., Postole A.M. – "*The management of documents – an optimizing component for a companies IT system*", Conferinţa internaţională „Integrarea europeană – noi provocări pentru economia României" – Universitatea din Oradea, Facultatea de Ştiinţe Economice, publicată în Analele Universităţii din Oradea, Seria Ştiinţe Economice, Ed. Universităţii din Oradea, 2008, ISSN 1582-5450, TOM XVII 2008, vol. IV – Management and Marketing, p.1560-1564;
6. vom Brocke, J.HKVJH & Rosemann, M. (2010) – *"Handbook on Business Process Management: Strategic Alignment, Governance, People and Culture"* (International Handbooks on Information Systems) (Vol. 1). Berlin: Springer;
7. "ROI and Image Now – Generating Measurable Cost Saving and Efficiencies Across the Enterprise:", Perceptive Software White Paper, http://www.perceptivesoftware.com/ (visited link March 2011);
8. "SharePoint and ECM Working Together", AIIM White Paper, http://www.aiim.com/ (visited link March 2011).