From the traditional to the modern and complex agricultural companies that are using business intelligence tools

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FROM THE TRADITIONAL TO THE MODERN AND COMPLEX AGRICULTURAL COMPANIES THAT ARE USING BUSINESS INTELLIGENCE TOOLS

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Abstract: *In the current conditions of a volatile economic environment, the ability to use an intelligent way the information that allows agricultural companies to cope with the challenges that they are facing regarding the current economic environment, represents the solution to strengthen their position on the global market. I explain in this paper how in the prospects of adapting intelligent business solutions they can influence not only agricultural companies but also the whole economic system. To remain competitive in the new global environment, characterized by an increasingly sharp competition, companies must adapt to new technologies and solutions.*

Key words: *intelligent systems, agricultural companies, economic development, business intelligence, support system*

INTRODUCTION

Business Intelligence (BI) is a term that designates a set of concepts and methods used to improve the quality of decision-making in business. More simply, although, we can say that, Business Intelligence is providing relevant information in a timely manner for the people who need them [11].

We can define BI as a presentation of the information platform in a correct manner, useful and specific to each person in adequate time to be able to serve in an effective mode.
In a 1958 article, IBM researcher Hans Peter Luhn used the term of BI. He defined intelligence as "the ability to understand the relationship between the facts presented in a way that lead us towards the desired goal."

BI as it is understood today represents the evolved from of a decision-making support system that began in the 1960s, and was developed through the 1980s [2]. DSS (Decision-making support system) has its origins in computer models designed to assist with decision making and planning process. Since then, data storage, and the BI Executive Information System began to evolve rapidly [3].

In 1989 Howard Dresner has proposed that the term BI to describe: "concepts and methods to improve business decisions, using a support system based on facts." Only in the late 1990s the term BI began to be spread throughout companies worldwide.

Thomas Davenport argued that BI should be divided in queries, OLAP reports (On-line Analytical Processing) and BA (Business Analysis). In this definition, business analysis is a sub-branch of BI based on statistics, predictions and optimization.
There are two basic interactive techniques to gather the necessary data:
1. interviews and
2. open session features.

Before starting implementing a BI solution, it is appropriate that certain factors to be taken into consideration. There are three critical areas that must be valued in an organization before making a BI project:
● the level of commitment and sponsorship from the top management;
● you need a certain business level to create a new BI implementable;
● the quantity and quality of the existing business should facilitate implementation of a new BI.

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Business Intelligence is not a set of printed reports or an presentation on a screen [6]. The rows of a sales report, for example, may contain detailed information and accurate, but is not a Business Intelligence solution until they are put into a format that can be easily understood and interpreted by a person in order to establish an effective solution for a particular situation encountered in the day-to-day process by agricultural companies or any other type of companies.

The analysis of Business Intelligence
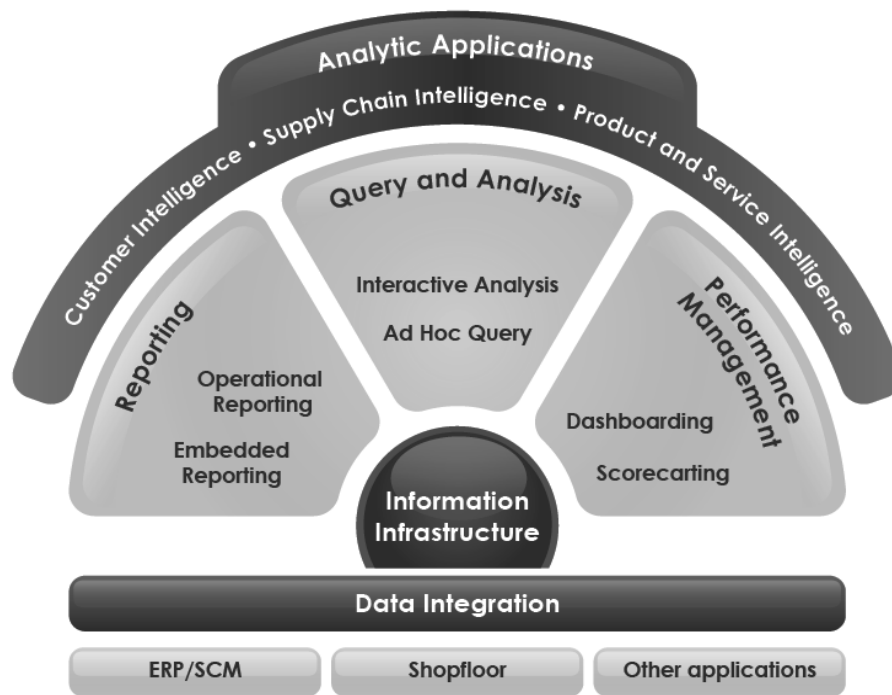Source: http://www.computernetworksit.com.au/blog/corporate-success-through-business-intelligence

Business Intelligence solutions have witnessed an unprecedented development in the last decade and companies that offer such solutions continued developing them despite the economic downturn that we are facing in the present - worldwide. The functionalities offered users, have become increasingly varied, covering a broad range of needs, from simple tabular or graphical reports to the ability to track key indicators of the performance of the organization in a synthetic manner and concise.

MATERIAL AND METHODS

Business Analytics (BA) used to develop and improve Business Intelligence reduces considerably the risk of decision-making process and marketing activities that generate real value, usable with minimal resources.

Business Analytics applications include decision support systems, reporting and query tools, on-line analytical processing (OLAP) and also forecasting systems and data mining. Ultimately, the results of business analytics deployments are in-depth analysis, refinement and concentration of a large number of business information, in specific performance indicators and finally, organizational knowledge. Business Analytic deployments are efforts involving multiple aspects of organizational management strategies and processes from application management to infrastructure changes. Business Analytic projects does not aim to teach managers how to take the right decisions, they help them instead to take decisions based on facts and figures and not on assumptions.

Companies collect vast amounts of data throughout transactional systems (e.g. ERP - Enterprise Resource Planning, CRM - Customer Relationship Management and SCM - Software Configuration Management) which have been implemented over the years and are used daily to perform a variety of corporate functions.

Analytic application in Business Intelligence
Source: http://dnninxites20.alfabyte.be/SAPServices/SAPBusinessanalyticsSAPBWBusinessObjects.aspx

Development of concepts and technologies for BI using BA creates an ambiance where the current data management can be used to improve the quality of decisions. In addition, the existence of large volumes of transactional data, and in particular transactional data with a high degree of specificity and particularity, creates opportunities for managers within agricultural companies to improve the accuracy of forecasts [4].

RESULTS AND DISCUSSIONS

The global demand for new and innovative business solutions, especially in agricultural companies, has increase in the last decade and continues to grow. But despite the technology that we have access to, the evolution of intelligent systems is deficient [9].

The concept of Business Intelligence is relatively new and appeared approximately 40 years ago [5] and it has not been used in agricultural companies since a few years ago and only in the USA.

The application of multidimensional dynamic systems that supports the decision-making processes with intelligent and predictive skills, has led to the development of the concept of business intelligence [12] which can be a new and revolutionary tool for the development and increase of agricultural companies. These systems (BI) are becoming increasingly more complex, being capable of multidimensional data analysis with statistical analysis capabilities and software that serves much better the decision-support systems [10].

The need for business intelligence systems can be easily explained if we study the current economic context: to survive in today's competitive agricultural and economic conditions a company has to develop a successful strategy to increase its resources, to anticipate future development of the economic environment and to know how to analyze the strategies that are used by other companies to be able to predict the its own future. Business Intelligence does all of these things.
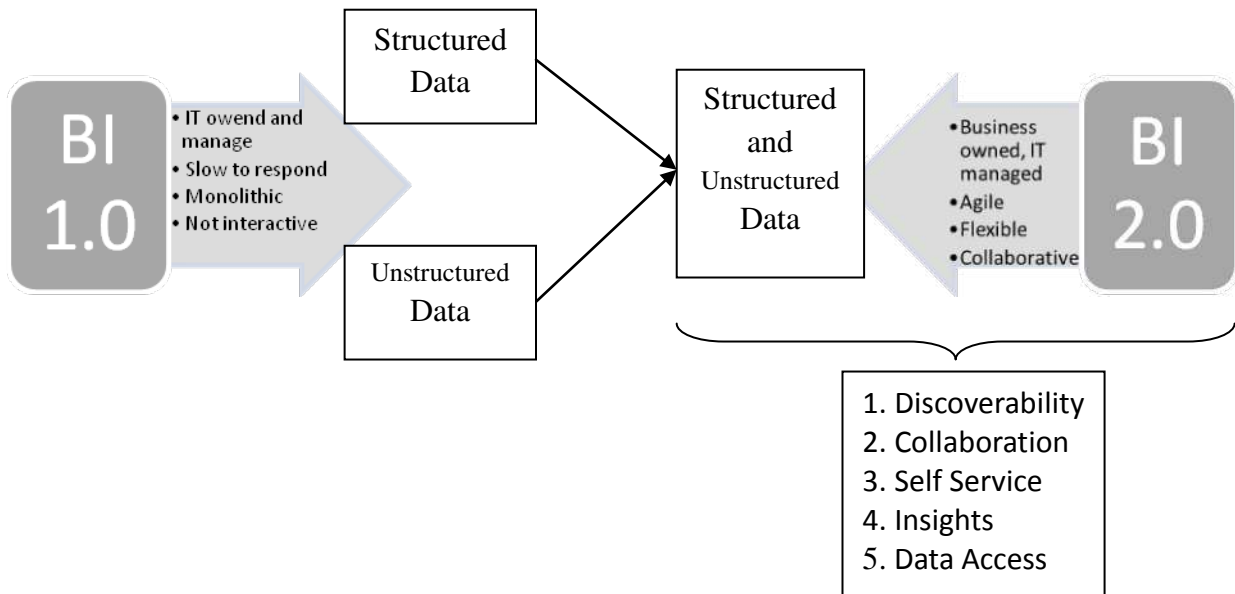
Figure 1: The evolution form BI 1.0 to BI 2.0
Source: Proposed Model by BALINT A. O.

The success of a company is based on the newest information that the business environment is offering and BI represents a systematic process of collecting, analyzing and disseminating the information, which is mainly aimed at getting or keeping competitive advantage, preventing the ignorance in the company activity and capitalizing on opportunities that arise in the agricultural market [7].

Business Intelligence has evolved over the years, progressing from its incipient state, becoming a very powerful tool that it's used by companies worldwide. The current concept of BI (also named BI 1.0) has reached its second stage on the evolution scale and its named BI 2.0.

The implementation of BI 1.0 and BI 2.0 in agricultural companies started in the USA in the mid 2000s and represents a set of tools and software for the traditional agricultural companies [1].

The main differences between BI 1.0 and BI 2.0 are represented by the fact that in the past BI was focused on strategic and operational views, its responses came in a slow rhythm, very inflexible and not very interactive [8]. BI 2.0 resolved all these inconvenient factors and added new features such as a more collaborative and easy way to use the system which is integrated with the business ideals and goals.

CONCLUSIONS

The permanent changes that are taking place within the global markets require agricultural companies and managers to constantly adjust their operations and business strategies, to redefine their objectives and to analyze the competitors performance.

A long time BI systems have treated only the daily activities of the organizations. As a result of their evolution they have surpassed the level of importance regarding the tactical and strategic level of management and are now used with success in agricultural companies. They represent an important step in the integration of business processes with the information technology. Providing solutions to transform data into information and knowledge, Business Intelligence 2.0 systems can help agricultural companies cope with the actual financial market and adapt the competitive factors in order to respond better and faster to their clients.

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