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BUSINESS INTELLIGENCE AS A DRIVING FORCE FOR QUALITATIVE DECISIONS

Computer Science

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Abstract

The optimization of information for better decision-making has now become the major challenge for any company in order to position itself and gain in terms of competitive advantage. As a result, the terms: “economic intelligence” and “Business intelligence” are more and more common these days, especially with the advent of new information and communication technologies. However, the definition of each of the two notions remains vague and their meanings often confused. Indeed, by misuse of language, these two disciplines are considered to be equivalent while there exists between them a relationship that is all the more complex as it is complementary.

INTRODUCTION

Hans Peter Luhn laid the foundations of BI by describing it as: “an automatic system for disseminating information to the various stakeholders of an industrial, scientific or governmental organization.” According to him, it is defined as “the capacity to apprehend the interrelationships between the facts in order to present them in such a way as to direct the action towards a desired goal.”

Today, Business Intelligence (BI) refers to IT solutions that help decision-makers make better decisions by presenting them with the relevant information at the right time via reports, dashboards, and statistics. It is a technology process that analyzes and processes data to arrive at actionable insights that accelerate competitive advantage gain and improve operational efficiency, respond faster to change, increase profitability, and increase business efficiency and in general, add value to the company.

This discipline experienced its boom between1990-2000, with new computer technologies allowing the development of Data Warehouses, new algorithms for extracting knowledge from data and finally Information retrieval (IR) and web Mining.

THE PROCESS

From a technical point of view, the decision-making chain or the BI process mainly goes through three phases leading to the analysis phase where the end user intervenes by analyzing the information provided to him using statistical tools or mathematical algorithms (data mining) in order to bring out forecasts or future estimates.

The decision-making chain can be summarized in three main phases:

Phase 1: Collection, integration and feeding

The first phase of the BI process is the supply phase. This phase will involve ETL (Extraction-Transformation-Loading) processes which will be responsible for recovering all the necessary data from the various storage sources, this is to collect, clean and consolidate data.

Phase 2: Modeling and Organization

The Second Phase of Modeling and organization is a storage phase, it is a question of centralizing the structured and processed data so that they are available for decision-making use. It contains the data warehouse and also involves the notions of cubes and useful datamarts to support business expectations.

Phase 3: Restitution and Analysis

It is in this phase that the various restitution tools will intervene. We will find reporting tools, access portals to dashboards, navigation tools in cubes, or statistics tools.

ECONOMIC INTELLIGENCE

Economic intelligence is defined as a series of coordinated actions involving research, analysis, and distribution of information valuable to economic actors with the goal of exploitation. These numerous acts are carried out legally, with all the required safeguards in place to ensure the preservation of the company's assets, and under the best possible quality, timeliness, and cost conditions. It is therefore a question of acquiring useful information allowing the different levels of the company to develop and implement in a coherent manner the strategy and tactics necessary to achieve their objectives and improve the position of the firm in its competitive environment through better decision-making but not only. Indeed, economic intelligence prolongs the various actions of monitoring by precisely integrating the strategies of influence and the cultural realities linked to each company, to each region.

THE PROCESS CONTINUES

Economic intelligence is a strategic process whose ultimate objective is to make the right decision at the right time. It is based on three fundamental pillars, namely:

Economic intelligence can be defined as a process in five fundamental phases:

Phase 1: Definition of the Need

The first phase of the economic intelligence process is that of the detection of the need which must be precise and concise. This phase will involve methods such as the SWOT analysis

and the "Mind mapping" for the detection of the decisional problem and its transformation into an information retrieval problem.

Phase 2: Gathering information

The Second Phase is that of the collection of information, it is a question of identifying and selecting the most relevant sources and ensuring their follow-up through automated monitoring software, RSS feeds or alerts, then collecting and extracts the information deemed appropriate.

Phase 3: Information Processing and Analysis

In this phase, it is a question of processing and analyzing the content but also of formatting the information so that it is clear and concise in order to save time, it is also a question in of interpreting the data collected through content management systems, statistical tools, text mining systems, mapping tools, etc.

Phase 4: Dissemination of information

This is the phase of dissemination of the processed information; it is a question of providing potential users with the right information, at the right time and in the best possible form.

Phase 5: Heritage protection/ Capitalization

At this stage, it is a question of storing the information collected in order to preserve and protect it so that it is accessible and usable when needed. This can be perceived as a construction of a stock through databases or even the intranet.

CONCLUSION

From a general view, and through the preceding definitions, it is legitimate to conclude that it is an aim for the two disciplines of collecting, processing and disseminating information with the aim of optimizing decision-making. What makes the complementarity between these two concepts? And what are the points of difference between them?

The two notions are not actually equivalent, BI is rather focused on product information within the company (internally) through which the company can control the optimization of its activities or its costs. For example, reports of a given product in a specific geographical area for a specific age group, while economic intelligence is based above all on information external to the company with the aim of predicting and avoiding risks and strategic threats to the business and to gain competitive advantage. From where the conclusion that the EI focuses rather on the future since it is a question of foreseeing whereas BI is especially a look on the past since it deals with processing data produced by the company following actions of sales or productions already carried out.

It is also important to note that BI is based on structured information, managed in data warehouses, whereas the practice of EI is based on unstructured information.

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