How Information Architecture Contributes to Define a Framework for a Market Intelligence System Development: Applications in Healthcare Sector

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ABSTRACT

It was observed, in these last years, the consolidation of Market intelligence (MI) concept. Results from MI are now being applied in several strategic ways, serving mainly for the important relationship between strategic and marketing planning. This article intends to reinforce the conceptualization of MI process, observing specially its application in one critical sector: Healthcare. Healthcare is a dynamic sector, where strategic marketing planning fundamentals are still being disseminated and absorbed by managers and institutions. Marketing data and information must be provided from a variety of sources to produce knowledge, in a process that can be characterized as “organizational intelligence”. Collected contents from healthcare associated industrial sectors, such as chemical and pharmaceutical, have the potential to produce integrated value chain knowledge, improving analysis and decision processes. Approaching the healthcare market, a framework for an intelligence system for marketing decisions was discussed in Jamil et al. (2011) and it is now evaluated with the contribution of information architecture concepts. Literature review from that original approach is expanded, encompassing information architecture discussions, towards a more consistent framework for market intelligence system implementation and cases of MI application in Healthcare sectors are then re-evaluated, with this new theoretical contribution. Bringing this additional light, market intelligence is presented with a newer, updated and improved conceptualization for practical decisions.

KEYWORDS

Health Intelligence System, Information System, Information Technology, Intelligence, Intelligence System, Market Intelligence, Marketing

INTRODUCTION

The actual complexity of businesses management can be observed in different situations. Observing from information management point of view, the environment is overloaded with disorganized data and information contexts, spread throughout the organization and even in the competitive chain. However, the lack of consistency for tactical decisions, such as the critical marketing plans alternatives where a mistake can lead to a risky situation, as an error in product offer, misinterpretation of customer needs or definition of incoherent prices which can result in financial losses or opportunistic chances for competitors. This chapter develops a study about how information architecture contributes to propose a framework for a market intelligence system, which is oriented for marketing decisions.
This system aims, fundamentally, to understand how to provide systemic intelligence, for strategic marketing planning and subsequent execution in one organization. The first market sector chosen for its application was healthcare industry, analyzing cases from Brazilian competitive scenario. This is an opportune case for researches, as it is a fast-evolving market, now going facing a recession, which recently has attracted substantial investments, changed its legislation, produced new competitive conditions and growth of new potential customer segments. This specific market provides a remarkable case for study, where main organizations and business firms are now practicing strategies and tactics to gain positions and attend to customer needs. Information architecture, as presented in Jamil et al. (2014), is a conceptual background that can perfectly provide substance for a marketing intelligence process definition, as this knowledge generating business cycle can help companies to solve emerging problems for their strategic marketing planning.

As a methodological approach, the chapter initially presents a literature review of fundamental and recent concepts to develop the understanding of information architecture and marketing intelligence. This analysis is made from contributions of different scientific areas aiming to relate intelligence basis to information and knowledge management systems. The system framework investigation is then developed, considered in this study as a composition of three main aspects: a) adherence to theoretical fundamentals; b) technological infrastructure specifications and c) software development process details. After this, a multiple case analysis, based on Brazilian healthcare market is conducted, observing typical marketing decisions that can be supported by the intelligence system.

BACKGROUND

In this section concepts will be discussed to form the fundamental base for market intelligence system theoretical background. This section is structured approaching first the basic concepts, then information architecture, both covered for the intended discussion around a framework and, finally, intelligence and its comprehension for market analysis is defined. This conceptual network is elementary for the remaining development of this article study.

Basic Concepts

A basic set of concepts is composed by data, information and knowledge definitions. What is discussed here, in this article, is a determined, restricted and oriented version, a “focus”, as these concepts are widely discussed in several areas and studies, aiming to build a coherent, robust and applicable conceptualization that serves for definitions for the knowledge management process and, as a repercussion, for market intelligence process itself.

According to authors like Davenport and Prusak (2000), Tuomi (2000) and Jamil (2005), data can be considered as a signal or value, got directly from a measurement or collected from an automated source, or in a human intervention. Simple examples are quantitative measurements, such as the price of an item – US$ 10.00 – or the temperature measured in one phenomenon – 34,4o.C. These are simple, easy to get, store and transfer, although it lacks meaning, not providing valuable decision capabilities. As an evolution of data concept, information is then conceptualized as a collection of correlated data added with context, identifying where or how it was generated. It provides a better condition for deciding, but offers more complexity as gathered data must be treated or processed, forming a standardized, based collection to result in useful information. Information increases decision capabilities, but demands additional work to be observed and applied as a coherent set. Keeping those examples above, one can announce that monetary value is related to a food price, for example, a snack. Immediately, we already can state if this price is high or low, as, possibly, we have a mental collection of prices for that specific snack. Finally, knowledge is composed by collection of information, including descriptions of the processes that produced that information. Knowledge allows maximum perception of a scenery evolution, for example, enabling more complex decisions and even prediction capabilities (Davenport, 2000; Akbar, 2003; Jamil, 2005). But on the other
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