

## Chapter 2

# Information System for Knowledge Management of the Technological Platforms in Brazil Healthcare

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### ABSTRACT

*In the information era, great challenges in healthcare are now intensifying. Regarding challenges for public health, they are intensified not only in developing and less developed countries on account of parasitic diseases, but also for developed countries because of emerging and reemerging diseases. When these diseases are associated with chronic or acute diseases, they intensify causing a serious public health problem as drugs resistance, neglected disease, and those that perpetuate poverty. Thus, it is important to find out new tools for management information. In health area, the financial turnover in the world was US\$ 1 trillion dollars only in medicines sector. In Brazil, about US\$ 40 billion. Even in times of crisis, this is a sector with constantly expanding business whether by incorporating new technologies, new players in research and development, as well as adjustments to public health policies, regulatory issues, and global outbreaks of disease. These facts lead to constant adjustments of business in companies, universities, and government actions. This statement is aligned in the knowledge-based strategy advocated by Etzkowitz. In 2017, three lists of new strategic products for the Brazilian health system had already been changed. Using new intelligence systems, the government adopted new strategic business partnerships and were conceived in 2017 (others replaced) with budgets of more than 6 billion*

DOI: 10.4018/978-1-5225-6225-2.ch002

*reais. In this scenario, the revision of the chapter will feature new author and a scope of approach will be expanded to the new policy “Technological Platform” that replaces the old policy called partnership for productive development.*

## **INTRODUCTION**

The information can be seen as a condition for survival, given that it extends the communication context and rescuing and preserving social memory. Its value is intangible and resists all the mechanisms of destruction and oblivion since the collection of information. This is due, on the grounds that allows reconstructing the cognitive and knowledge assessment of a given situation in question (Lawrence & Giles, 2000).

However, in the 21 century, the capacity to generate speed information is modern and unprecedented in the world because of the Internet. Data created are practically instantaneous. Technological per-capita capacity of the world to store information nearly doubled every 40 months since the 1980s. From 2012, every day 2.5 quintillion ( $2.5 \times 10^{18}$ ) bytes of data are created (Lynch, 2008). This phenomenon growing is called Big Data (Lawrence & Giles, 2000; McKinsey Global Institute, 2011).

Quantity of daily data posted on the Web has led to a constant training of new professionals in all science areas. New activities have appeared, such as the Data Scientist - one who constantly seeks the best way to deal with the phenomenon of Big Data. The Big Data term has been consolidated within the scientific community due to the set of technological solutions capable of dealing with the ongoing accumulation of data that are unstructured and are captured from several sources. They are presented in order of petabytes, i.e.; quadrillion bytes of stored data. It's challenging the way to deal with these issues both for conducting scientific projects and any type of business organizations (Lynch, 2008).

At the institutional level decisions made without the right information lead to inaccurate decisions and sometimes disastrous. Decisions based on facts and reliable information are more likely to generate good results, thereby enabling decision maker's subsidies to meet the everyday challenges. Proper and timely information can develop effective strategies and acts proactively. This action can be called a competitive strategy when it involves business approach, which maximizes the value of the capacity of the organization to distinguish the company from its competitors (Porter, 2008).

Any scientific research area or an organization to lead to the advancement in technology, i.e., to improve to the management of large volumes of data, must apply the concept to extract data in order to have a more consistent view for decision making of managers.

It is globally recognized that Science is an intensive data information but the scale with which it presents itself in recent times is exponential in any science area. Even considering their correlations in a globalized context. Therefore, it requires new tools for extracting, analyzing and an informational treatment. One approach that has enabled this activity is that the information science which have focused on information enables multidisciplinary interface with several areas (Magalhães, Quoniam, & Boechat, 2013; Quoniam, 2011; Trigo, Gouveia, Quoniam, & Riccio, 2007).

In this sense, this work considered a case study of management information in the “Public Health” area. The choice of this area occurred due whereas the term “health” is present in about 50% of Big data. This data total, 47% are related to the “Public Health”. Therefore, it is urgent to seek studies aimed at helping better management of this science area (Magalhães & Quoniam, 2013).

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