

# Process Modeling as a Support to Decision–Making for Productive Development Partnerships: A Study in a Brazilian Public–Private Organization

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## INTRODUCTION

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).

By integrating knowledge in an interdisciplinary approach, the power of science, technology and innovation can be harnessed to leverage economic progress. However, the need to obtain full integration between the players in the national innovation system (NIS), namely academia, the private sector, and governments, may represent a hurdle for developing countries. The involvement of these three players is crucial for the success of any effort to foster knowledge integration for innovation (Lundvall, 2010; Nelson, 1993).

At the institutional level make decisions without the right information leads 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 to lead developing effective strategies and acts proactively. This action can be called 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, 2008b).

The success of public policies designed to strengthen the NIS can better be understood as enhancing integration between academia, the private sector and government, because cooperation between universities, government research centers and funding agencies is so crucial. Meanwhile, it is in the interests of businesses to speed up the introduction of innovations to their production processes. Synergies of this

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kind can boost growth by developing national capabilities (Etzkowitz, 2002; Gadelha et al., 2011; J. L. de Magalhães et al., 2012).

The quality of life of the Brazilian people is on the government's agenda. Its public health programs are designed to foster the healthy ageing of the population, with economic development being linked to improved health conditions fostering a sustainable lifestyle. Brazil is seeking to reduce its health sector deficit and to boost its technology RD&I, including a variety of initiatives and investments targeting academia, the private sector and government. These include a government effort to build technological competency in the production of drugs and medications back to the relative levels seen in the mid-1980s (Magalhaes, JL et al., 2012a).

One of the key policies in this area is the Production Development Policy launched by the government in mid May 2008, which replaces the Industry, Technology and Foreign Trade Policy (PITCE, acronym in Portuguese), introduced in March 2004. The 2008 policy has a broader scope, greater depth, and focuses on increasing coordination, controls and targets. Both it and its predecessor are structured in such a way as to align the public and private sectors, with the former being responsible for facilitating business ventures through tax/fiscal incentives, credit lines, reduced bureaucracy, and regulatory adjustments.

In this sense, Productive Development Partnerships (PDP – Brazilian term) were created. The PDPs are part of these series of strategic actions, signed in the National Policy for Technological Innovation in Health, by Decree No. high cost of health care, developing strategic products with high added value (Costa et al., 2016; Gomes et al., 2015).

Consider that, in general, the management of existing knowledge in the parts holding a given technology to be transferred through a PDP is consistent, then one can think that is an architecture of information management that will lead innovations in a sector, hence, they are essential to be evaluated since from implementation to the impact on society.

This chapter shows an example of how information architecture could be applied in any field of science, in this case, through the linkage of information management and technology transfer for health products. Therefore, the focus chosen were the PDP implemented in Brazil which will provide an average savings to government spending in the order of US\$ 1.7 billion upon the expiration of 103 PDP (BRASIL. MS., 2014). Thus, the macro process for PDP projects using information science will be analyzed and mapped. Subsequently, apply process modeling to propose improvements in the acquisition process via the PDP model in the Brazilian public organization.

## **PUBLIC PRODUCTION OF MEDICINES IN BRAZIL - OFFICIAL PHARMACEUTICAL LABORATORIES**

At the end of the 19th century and the beginning of the 20th century, innovation in the pharmaceutical sector was limited and was restricted to Research Institutes, Hospitals and Universities. At this time, Boticas also began to invest in R&D and, later, in the production of vaccines, serums and synthetic medicines (Achilladelis & Antonakis, 2001).

Magalhães et al (2012) describe the pharmaceutical industry as existing in two different scenarios. The first, in the developed world, has an ageing population and therefore a greater need for medications to treat conditions such as cancer, Alzheimer's disease, Parkinson's disease and others. There is also a demand for lifestyle drugs, which include medications for hair loss, male and female sexual enhancement, cholesterol control, with a minimum of side effects, etc. (Magalhaes, JL et al., 2012b).

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