



# Methodology of business ecosystems network analysis: A case study in Telecom Italia Future Centre

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## ARTICLE INFO

### Article history:

Received 16 February 2012

Received in revised form 8 November 2012

Accepted 9 November 2012

Available online 4 December 2012

### Keywords:

Methodology of business ecosystem network analysis

Business ecosystem

Foresight

Case study

Telecom Italia Future Centre

## ABSTRACT

The paper proposes a method for analysing, modelling and foresighting the business ecosystems as network structures interacting one with each other. The methodology's name is "methodology of business ecosystem network analysis" (MOBENA). The paper shows how it is possible to systematically study the structure and fluxes of a business ecosystem. The main problems of other modelling languages for firm interactions that MOBENA tries to overcome are that (1) the methodologies tailored for BEs are very few, the others neglect interdependences or focus only on tangible or intangible aspects, and (2) they limit potential for strategic analysis and they do not take in a future-perspective. The paper includes an analysis of literature on Strategic Management (in particular, strategic models on relationships), Network Analysis and Foresight, from whence the theoretical proposal of the MOBENA is born. Then, the authors illustrate its application via a case study conducted inside the Telecom Italia Future Centre, and in particular taking as example the digital imaging ecosystem. The original aspects are the mapping of tangible and intangible relationships, the dynamic and foresight analysis, the possibility to set strategic guidance thanks to specific indicators.

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## 1. Introduction

Technological innovations produced significant impacts on global production structures. In fact, they did not have an impact only on new products and services and their ideation, design, manufacturing and delivering, but also radically changed the concept of value for companies and organizations. In this sense, whilst traditional and consolidated strategic models (such as the value chain [1]) and more innovative models (such as the value network – [2]) focus on the process of value creation, the business ecosystem (BE) model [3,4] analyses and underlines the value of the relationships amongst actors and the key elements (physical structure, revenues attraction, attractiveness, assets and technologies) which foster the ecosystem survival and development [5]. The BE comprehends all the agents that directly and indirectly contribute to the development of a

business, product or process influencing its success in a short or longer time [4].

The concepts and the terminology derive from ecology (Tansley [6] proposed the term biological ecosystem): a biological ecosystem is a complex system of organisms (physical agents of the environment where they live and develop) and relationships amongst them. Moore [3] coined the term "business ecosystem" that gained popularity with the research of Iansiti and Levien [4]. In their work they affirm: "Like biological ecosystems, business ecosystems are formed by large, loosely connected networks of entities. Like species in biological ecosystems, firm interact with each other in complex ways, and the health and performance of each firm is dependent on the health and performance of the whole. Firms and species are therefore simultaneously influenced by their internal capabilities and by their complex interactions with the rest of the ecosystem." (p. 35).

If an organization would like to know the complex dynamics intercepting its ecosystem [7] or if it would like to

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