

# From a FabLab towards a Social Entrepreneurship and Business Lab

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## ABSTRACT

Social and institutional demands, in addition to the increased socioeconomic development of territories, advocate the creation of a more current, more integrated and larger university which, while continuing to teach technical knowledge, also teaches values. This would enable the university to respond to the countless challenges that are currently created by citizens in the form of social needs. The aim of this study is to explore the possibilities of creating value in a university FabLab in order to subsequently use this value as a vehicle for practical education in values and technical abilities in relation to the management of 21<sup>st</sup> century organisations. This materialises in a teaching initiative based on FabLab and that is suggested for computer engineering (University of Extremadura, Spain). After positioning university FabLabs in the digital age, detailing their potential for creating value, and describing this educational initiative, some closing conclusions will be made.

## KEYWORDS

Computer Engineering, Creation of Value, FabLab, Management of Organisations, Teaching Initiative, Teaching Values, University

## INTRODUCTION

If the purpose for which the university was created was to fulfill and transform human beings through science and knowledge preparing professional humans, scientists and technicians (Martín & García, 2014), this finalist vision currently takes on a new life because of the fact that the university, like any organization, does not subtract itself from social and institutional demands in favor of ethical behavior (Manzano, 2012), and educated in global attitudes and capabilities that allow their adaptation to the environment (Boni & Lozano, 2006).

Therefore, what needs to be found is a good university: more up to date; broader, students/researchers aware of their entire environment and how to adapt their knowledge to said environment; and more integrating, going beyond this restricted view of a university, restricted to its economic function as facilitator of sector, regional, or national competitiveness (Boni & Gasper, 2011), as well as finding the way to achieve it. This means a more active university in the solution of local, national, and global social challenges: a new technical-ethical vision that conceives a good university as one whose central goal is favoring the constant development of its students/researchers as responsible global citizens, unavoidably passing through the learning of not only technical matters, but also values.

We are referring to the university culture, as an organization, as an element that brings together its condition for being and for acting (Guerras & Navas, 2007), together with the fact that current society

is centered less on the market and more on social justice: the result is an ethics based organizational culture (Yukl, 2008), to which the university must subscribe to.

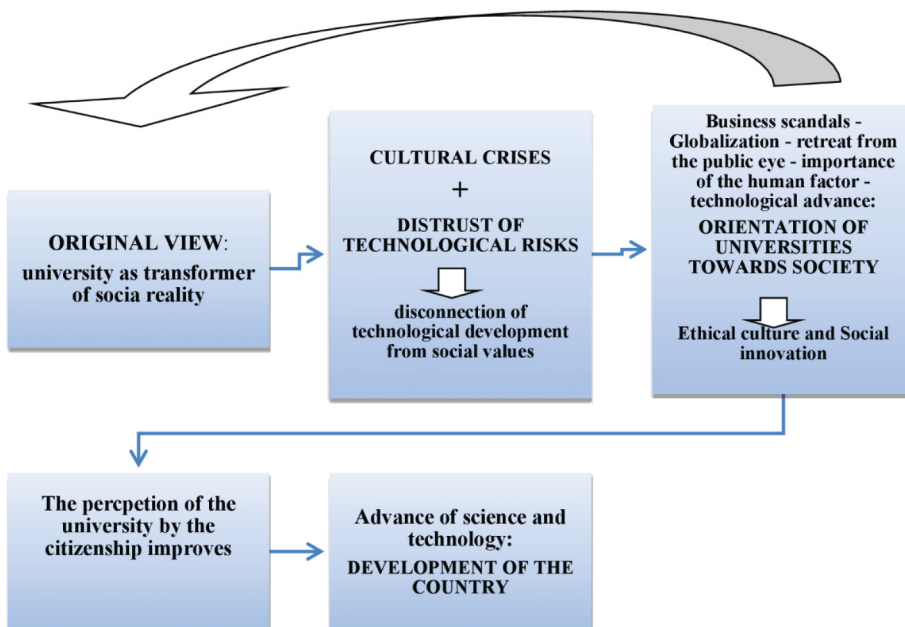
This conclusion is the result of a process that has extended itself through time, starting from the original goal of the university to be a transforming agent of society (Figure 1). The idea that cultural crises that have unlinked technological development in current society, and the innovation of the values accepted by society (Muñoz, 2011), as well as the progressive distrust towards its possible risks (Cuevas, 2008a), help to similarly explain this prolonged disconnection between the university and society.

In this context, factors such as business scandals during the eighties and nineties, the globalization of organizations, the retreat from the public eye in favor of privacy, the relevance of the human factor in organizations, and the same technological advance of society, especially in ICTs (Cuesta & Rodríguez, 2005), behave as the reactants of a progressive orientation of organization, including the university, towards the needs and expectations of society: the implementation of an ethical culture as a solution of these crises.

Due to the strong interrelation between culture and innovation throughout history (Muñoz et al., 2011), innovation similarly begins to be led by ethics: this is Social innovation, a concept that leads innovative processes to cover social needs (Guerra & Sánchez, 2016), and that shows the evolutionary character of innovation from a business point of view towards multiple forms of human and social development (Cornejo, 2011).

The university as an organization also reflects this innovation applied towards satisfying the expectations of society, although not in the measure that it would like. This is shown by Cuevas & López (2009) when they document, on the one hand, the great recognition citizens give to the potential usefulness of technology for life and the development of society (Carrillo et al., 2012), while on the other hand, simultaneously recognizing the social perception regarding the insufficient presence of these subjects in formal education. The last point is especially relevant if we know that, in large measure, the degree of scientific-technological development of a country depends on the

**Figure 1. Process followed by the university mission (Source: Prepared by the author)**



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