Reviewer’s report

Title: ITEMAS Ontology for Healthcare Technology Innovation

Version: 1 Date: 30 Jan 2019

Reviewer: Maddalena Illario

Reviewer's report:

The paper provides the results of a research effort focusing on the definition of a formal representation of the most relevant concepts associated with the creation and adoption of innovative medical technology in the Spanish healthcare system. Specifically, the defined ontology describes how relationships between employees, organizations, projects, and ideas can be applied to generate results that are transferable to the market, general public, and scientific forums.

The proposed approach builds on the added value (and data) provided by the regional network of 66 healthcare centers (ITEMAS), focusing on fostering innovation in medical and health technologies.

The methodology is convincingly based on the methontology process, with peer review identification and selection of concepts from the innovation indicators used by the ITEMAS and innovation management system standards, followed by an iterative validation process. The proposed approach allows the system to carry out the involved sequence of tasks and its associated functionality and managed clinical data. The proposed semantic model constitutes also the main pillar for enabling dynamic service selection.

The research presented in the paper is innovative as it defines an ontology for innovation focused on healthcare centers in Spain, describing how relationships between employees, organizations, projects, and ideas can be applied in a large scale to generate results that are transferrable to the market, general public, and scientific forums.

It might be scaled up to other healthcare systems, providing standards that guide organizations in the introduction, development, and maintenance of frameworks for systematic innovation management practices, and positively impacting the scale up of innovations to benefit of citizens.

The paper is acceptable in its present format.

Level of interest
Please indicate how interesting you found the manuscript:

An exceptional article

Quality of written English
Please indicate the quality of language in the manuscript:
Acceptable

**Declaration of competing interests**
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organisation that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?
   If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal