

BUSINESS INNOVATION NETWORK BASED ON BUSINESS RULES OF AN ECMM OPEN INNOVATION PROCESS AREA

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Abstract: Nowadays, innovation and collaboration are becoming new and important sources of competitive advantage for enterprises. Prestigious investigations (Chesbrough, H., 2003) outline that the most productive method to get good ideas lies in involving different persons with different experience, background and practical knowledge. New tendencies in innovation, like Open Innovation (Chesbrough, H., et al., 2006) conceive innovation as an open system where both internal and external agents take part in the system. In accordance with this new paradigm, innovation sources can be, and usually are, out of the frontiers of the organization. In this context, the aim of this position paper is to present a set of business rules compliant to SBVR standard and a strategy for using SBVR rules in order to define a business guide. In this sense a business innovation network is created to help enterprises to expand their markets using innovations based on one open innovation process area that belongs to the maturity model oriented to collaboration ECMM, which is being currently developed in the context of COIN IP project (IST-216256).

1 INTRODUCTION

Financial crisis is one of the most widely used terms in the last days in our newspapers, and lots of public and private strategies propose Innovation as *the solution* to overcome this recession situation. There is now a new reality for business, from which nobody can run away: clients want a product or a service more and more personalized, and this is impossible to get within the traditional and rigid supply chain model. Known organizations like Nike, Toyota, Apple or Google (Pralhad, C.K., Krishnan, M.S., 2008) are applying new and open innovation practices to deploy this model with successful results.

Indeed, collaboration is one of the global trends in business nowadays. Pushed by the strength of emerging competitors and increasingly demanding customers, organizations are engaging into collaborative practices in order to face those threats through cost reductions, increased flexibility and focusing on core competences (Santos, I., Schuster, S., Vergara, M., Alonso, J., 2008).

In the COIN IP project, an Enterprise Collaboration Maturity Model (ECMM) is being currently developed in order to help organizations to

evaluate and improve the capability for collaboration of an enterprise inside its collaborative network and to support collaborative and interoperability practices (Martínez de Soria, I., Alonso, J., Orue-Echevarria L., Vergara, M., 2009) even though it has not been taken into account a way of adapting the collaborative business practices to allow enterprises to create a business innovation network through common business rules. The Semantics of Business Vocabulary and Business Rules (SBVR) (Object Management Group, 2008) is a language for business modeling that has such property.

The aim of this position paper is to present a set of business rules compliant to SBVR standard and a strategy for using SBVR rules in order to define a business guide. In this sense a business innovation network is created to help enterprises to expand their markets using innovations based on one open innovation process area that belongs to the maturity model oriented to collaboration ECMM. For that purpose, the next section summarises the challenges of this position paper. Section 3 describes a brief state of the art and section 4 details the business rules for the *Open Innovation* process area of ECMM. Finally, the last section discusses conclusions.

2 CHALLENGES

In the today's global economy, the utilization of ICTs has an essential role for enterprises and administrations (cf. e-government part) to re-engineer their business models and practices and increase productivity and competitiveness. The integration of ICTs in business is considered as an acceleration factor for innovation, productivity improvement as well as an important tool for sustainable development and cohesion (Pierre Audoin Consultants, 2009). Thus, to be effective, an innovation has to be simple and it has to be focused. Even the innovation that creates new users and new markets should be directed toward a specific, clear and carefully designed innovation process. Therefore, as a process, innovation also needs to be managed and many challenges must be faced up to (Iturbe, J., Bediaga, A., Sánchez, D., López, S., 2008):

- **“Innovation must Constitute a Basic Process in the Business”**. Innovation is not a random process. Innovation constitutes an organisational capability that needs to be developed.
- **“Innovation must be Participative”**. Innovation is based on the acknowledgement of people, since the success depends strongly on the implication from the employees.

In order to address these challenges, this article depicts how a collaborative business practice related to open innovation can be defined with SBVR vocabulary giving the chance of creating a business innovation network which will have one ECMM process area based on business rules in common.

3 BACKGROUND

3.1 The Notion of Open Innovation

The notion of open innovation comes from Henry Chesbrough, a Berkeley professor at University of California that has gained international fame through his book “Open Innovation – The new imperative for Creating and Profiting from Technology” that appeared in 2003. He describes how companies in the 20th century have invested heavily in internal R&D and hired the best people, enabling them to develop the most innovative ideas and protect them with intellectual property (IP) strategies.

3.2 A Brief Description of ECMM

The Enterprise Collaboration Maturity Model (ECMM) has as main objective to analyze, measure, and propose improvement practices for increasing the capability of an organization to be able to collaborate and interoperate through seven domains.

Each domain contains several process areas which are distributed through four maturity levels. This position paper is focused on the **Open Innovation** process area that belongs to *Innovation* domain as the basis of defining business rules using SBVR.

3.3 An Introduction to SBVR

The Semantics of Business Vocabulary and Business Rules (SBVR) is a new standard for business modelling of the Object Management Group (OMG). The standard provides a number of conceptual vocabularies for modelling a business domain in the form of a vocabulary and a set of rules (Object Management Group, 2008). One of the techniques used by SBVR structured English are font styles to designate statements with formal meaning. In particular,

- the term font (normally green) is used to designate a noun concept.
- the name font (normally green) designates an individual concept.
- the *verb* font (normally blue) is used for designation for a verb concept.
- the keyword font (normally red) is used for linguistic particles that are used to construct statements.

4 BUSINESS RULES FOR OPEN INNOVATION PROCESS AREA OF ECMM

4.1 SP1.1: Define Business Objectives for Partnering

1-Operative Business Rule

It is obligatory that each enterprise of business innovation network has at least three objective criteria that is base for partners selection

Supporting Fact Type

business innovation network has enterprise enterprise has objective criteria objective criteria is base for partners selection

Related facts
objective criteria is market or competence or income
or customer

4.2 SP1.2: Select the Open Innovation Scenario

1-Operative Business Rule
It is obligatory that each enterprise of business innovation network has open innovation scenario

Supporting fact type
business innovation network has enterprise
enterprise has open innovation scenario

Related facts
open innovation scenario is advanced innovation or collaborative innovation or user innovation or crowdsourcing

4.3 SP1.3: Align the Business Model of the Entities

1-Operative Business Rule
It is obligatory that business innovation network specify what common goals are assigned to the network and must occur before network creation date/time

Supporting fact type
common goal is specified by business innovation network
common goal is assigned to network
common goal occurs before network creation date/time
network creation occurs at date/time

Related facts
The noun concept 'network creation date/time' is a role that ranges over the noun concept 'creation date/time'

4.4 SP2.1: Create an Open Innovation Teamwork

1-Operative Business Rule
It is obligatory that business innovation network has open innovation teamwork that is responsible for exactly three tiers operation and must be reviewed by stakeholder of network at review date/time

Supporting fact type
business innovation network has open innovation teamwork
open innovation teamwork is responsible for tiers operation

open innovation teamwork must be reviewed by stakeholder network has stakeholder review occurs at date/time

Related facts
tiers operation is core tier or operation tier or outer tier
The noun concept 'stakeholder' is a facet of the noun concept 'person'

4.5 SP2.2: Define the Complexity of Open Innovation

1-Operative Business Rule
It is permitted that open innovation process involves external collaboration that is responsible for manager

Supporting fact type
open innovation process involves external collaboration
external collaboration is responsible for manager

Related facts
The noun concept 'manager' is a facet of the noun concept 'person'

4.6 SP2.3: Plan for Open Innovation

1-Operative Business Rule
It is obligatory that business innovation network has open innovation plan that includes each business goal that is defined in specific practice 1.3, teamwork that is defined in specific practice 2.1 and must be documented by stakeholders and reviewed at the review date/time

Supporting fact type
business innovation network has open innovation plan
business goal and teamwork are included in open innovation plan
business goal is defined in specific practice 1.3
teamwork is defined in specific practice 2.1
open innovation plan must be documented by stakeholders
open innovation plan has review date/time
review occurs at date/time

Related facts
The noun concept 'stakeholder' is a facet of the noun concept 'person'
The noun concept 'review date/time' is a role that ranges over the noun concept 'date/time'

4.7 Specific Practices Evaluation

1-Operative Business Rule

It is necessary that specific practice X.Y has...

- SP1.1: more than one evidence
- SP1.2,1.3,2.2,2.3: exactly one evidence
- SP2.1: at least two evidence

...that is base for the mark of business innovation network

Supporting fact type

specific practice X.Y has evidence business innovation network has mark evidence is base for mark

Related facts

evidence is...

- SP1.1: business goal or objective criteria
- SP1.2: open innovation scenario
- SP1.3: strategic common goals
- SP2.1: open innovation teamwork or responsibilities or reviews
- SP2.2: relation between location and collaborators
- SP2.3: open innovation plan

The noun concept 'specific practice X.Y' is a category of the noun concept 'specific goal X'

5 CONCLUSIONS

This position paper presents a definition of business rules, based on the SBVR standard, applied to the Open Innovation process area of the ECMM maturity model in order to allow enterprises to join to a business innovation network in case of fulfilling the presented business rules. Finally, the SBVR offers many research opportunities to support the launch of collaborative practices based on business rules adapted to international frameworks or maturity models among enterprises which are willing to conduct open innovation business around common goals out of the frontiers of the organization.

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