The " sustainable developpers " experience in a telecom company: reflections from a grounded experience in social innovation

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The "sustainable developers" experience in a telecom company

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Abstract:
This case study is made from an action-research intervention in a very huge multinational company of telecommunications. The objectives of the projects were to change the miond (attitudes, behavior and competences) of all these people who work in software development in the company (several thousands of persons). This intervention has been done during the 2009 year. The results of our work that we have capitalized and shared with the top managers of the company are to our mind interesting enough to be published in a scientific symposium like ERIMA.

The genesis of the project is first presented as far as it is central to understand the very nature of the complex process that has been developed. Then, the way we have organized and implemented our intervention will be explained. The idea of an insufficient preparation of the intervention (idea well shared by participants, managers, animators, researchers) will be discussed in the light of the results we have obtained.

After a reflection of capitalization (done with the managers of the company), we think and they have written that the results we have obtained are interesting and that they constitute a good basis for a generalization of the change process.

Key-words: change, community, social networks, mental representations

Introduction

This contribution is about a case study related to an intervention (2009) in a big multinational company of telecommunications ("E"). This intervention has been lengthily prepared with the company's staff and then realized by our team as a research action process.

The genesis of the project is important in order to understand the very nature of the process which is beginning with the preparation of this intervention (history is central in complex epistemologies). Then, we will describe the project specifications and then, we will focus on both the modes of proceeding we have developed and the results we have obtained.

The genesis of the project

In recent years, the E group had a tendency to consider that software development represents a cost more than a strategic added value. Therefore, a logic of externalization (towards India particularly) was at work. More recently, a strategic reflection stated that the unique common point of all the activities of the group (from TV production to domotics, passing by mobile phone and Internet) is the fact that all these activities are based on digital technologies.

As a consequence, strategy is revisited, as it is understood that software design, production and maintenance as well as its quality and relevance are central in such a strategy. Therefore, the competences related to these activities present a core strategic character for the group. The group's top management staff develops the idea of transforming the professions related to software development (all these professions which take a part in software development life-cycle, from analysis and design to code production and validation, passing by project management, quality management, customer service, etc.). Several thousands of persons are concerned in the whole group. The idea is to make this professional community evolve towards more responsibility, more self-management, more client orientation, to develop commitment and "agile" attitudes, behaviors and methods, to share knowledge, skills and tricks and to improve ability to communicate.

The "sustainable developers" project
The project named "sustainable developers" was formalized as a consequence of this reflection. Top management decides to hurry up the process so that the real preparation and implementation of our intervention is realized in a very short time (3 weeks). It will be organized per sessions of 15 persons groups, each session being organized on the basis of 15 days on a 3 months period (with the rhythm of four sessions a year).

We had defined a "program", like in habitual training sessions: technical aspects (object orientation, frameworks, agile methods, etc.) and skills related to management, ("agile" project management, human resources management, skills, competences and learning, social networks, communities of practice, etc.). We defined six days of theoretical-practical presentation of these notions and five days dedicated to a work on the definition of a community of practice. Then two days were previewed for the evaluation of the session and two days more for the preparation of the next session. No more specification! The idea is that we have to invent things walking. This is to our convenience as far as we are conscious of the tight complexity we are facing and that we do not really know how to begin! We are in tune with the "agile philosophy" in which the specification is an ongoing co-construction!

Results
During the process, we decided to organize the « project sequence » about the building and starting of the community of practice[1]. Our underpinned reflection is that by doing that, we are favoring the development of skills and competences linked to complex project management but that we are also contributing to make the reflection focus on (and to give a form to) this concept of a 'community of practice' of which participants are not really aware. The time dedicated to the functional reflection related to such a community will be very long as three days of very rich discussion between participants will be used. It is important that such a definition is the product of a collective work in order to favor the appropriation of unusual organizational modes and that this work becomes the embryo for a community. It is also important that this reflection is tracked by a documental production in order to produce symbolic objects (text / power-point documents, etc.) as a basis for the future "chart of developers" that the management would like to implement and to the next sessions.

Participants are not familiar with functional specifications for such 'virtual' subjects as communities of practice. Therefore, work is difficult to organize and manage. Projection towards an abstract future is definitely far from the kind of systems they conceptualize in their profession. They are a lot more comfortable with concrete modes of 'doing' things (particularly in relation with web-based social networks) than with an abstract definition of things. We understand perfectly that such a community-building should be more in the web 2.0-philosophy-spirit if it was done on the basis of concrete services, self-organization and individual-community highly interactive actions, but the way sessions are organized and the limited commitment and initiative ability of participants make it difficult.

Nevertheless, participants take progressively an interest to the game, even if the omnipresent "substantive doubt" ('why are we doing all this work, if we know that top management will do nothing with it…') reenters the scene from time to time! They will finally take part intensively (the group finishes the sessions very tired!) and will try to answer the question: a community of developers: what for? Animators lead the beginning of the reflection focusing on the types of services a community should propose to the developers (trying to be relatively concrete), but after a half day work, the suggestion will come from the group itself: we have to start from "a higher point" and answer the question of developers' fundamental needs. The group decides to stop working on the services that the community should propose and to begin a more abstract reflection about the needs of developers.

The group finally defined 5 classes of needs. The community must be seen as:
- A place for flourishing
- A place for acknowledgement
- A place for developing competences
- A place for contributions
- A place for information exchange
- An attractive place.

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[1] Etienne Wenger, communities of practice…, http://www.ewenger.com/theory/

It is also important to underline the importance of a specific work on triggering conditions, critical mass and sustainability conditions for the community.

During the sequences of evaluation and preparation of the following sessions a presentation will be done to the enlarged "pedagogic committee" (top management). The jury will be amazed by the quality and the density of the work made by the group. It is decided that the next session will be done using the same framework than the first one (with some minor adaptations).

Discussion and conclusion

One of the conclusions we can take from this rich experience is that organizers, animators and participants have developed an apprehension of organizational change and of its dynamics different from the ideas they had before[2]. It is a question of 'learning by doing', of 'capitalization'[3].

Organic and eco-systemic approaches, emergence and self-organization, mental representations are central in the understanding of organizational dynamics. Understanding things by the means of social networks and communities has been omnipresent during this experience[4], among participants, but also among organizers and even researchers. The interest was so strong that the top management asked us to organize a seminar (2 days) on these approaches. After this experience, top managers are changing their mind about organizational innovation. Action-research is validated as an interesting method for accompanying socio-cognitive change[5], Edgar Morin's transdisciplinarity concept[6] (with the participation of practitioners), tightly linking reflection and action, is also validated by this experience. The theories of Francisco Varela[7] about group constitution and cultural change in a group considering the building of interpersonal interfaces (individual – group) is also very interesting in order to understand how practice may change collective attitudes.

Innovation must be understood as a struggle between ambitions of change and resistances related to current practices, cognitive representations, existing management systems and power systems[8]. The management of complex projects related to socio-cognitive and behavioral transformations must be invented, considering particularly the "agile" philosophy[9] as a source of inspiration. In this experience, we have begun with an embryo of change. Top management must understand that from this first step, management systems and persons and teams evaluation systems also must be changed. The core question is about generating trust and commitment. The first priority to go ahead and to be able to develop a community of destiny (to our mind more than a community of practice), of which we have defined the first brick, is to develop trust in order to enlarge this basis and to trigger the first nucleus of the community, basis of new attitudes and behavior.

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