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APPLYING LESSONS LEARNED FROM COUNSELLING: ON NURTURING RELATIONS IN E-GOVERNMENT PROJECTS

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Abstract

This paper elaborates on the relevance of deploying focus and effort on personal relation, in interventions for organisational innovation. Supporting the establishment of sense making and trust with Social Practice Design (SPD) approaches is found to be of primary importance in an e-Government development project. Here regional employees user-design a computer-based aid for public tender editing – a tender configurator *- with the support of facilitators. The paper offers a demonstration of the mission critical relevance of the relational component in SPD, intertwined with the customary functional component, in resuming governance towards project success.*

We address the structural *problem with* infra-structural measures *including open conversations to promote shared understanding, and user design laboratories to promote concept emergence and learning, while practicing relation and trust building all along. Our* constructivist *approach renounces from the start to solve the governance problem within a narrow* managerial *perspective. This experience is far from a complete experiment. But a wealth of indications and partial results have been harvested on needs, opportunities, and practices, for promoting shared understanding and trust in the project, and letting emerge idiosyncratic solutions.*

Our SPD approach is entrenched in the deployment of facilitator interventions in the case site, in an action research (AR) like approach employing Interactive Use Cases (IUC) as a Participative Design (PD) tool. Key is the awareness and intentionality in conceiving, proposing, co-constructing with users the appropriate path, in the context, towards desired change. A holistic, long-term commitment. Quality of the path more important, that the very goal. The SPD approach is evolved through: a) the attempts from facilitators to build up personal relations of trust with managers and personnel; b) ethnographic observations; c) the analysis and awareness creation of the main traits of the extant situation in the company, through interviews, meetings, and workshops; d) the joint identification with the company's personnel of the crucial how question e) the conception and joint co-construction of visions of solution by personnel and facilitators. PD techniques employed as special measures include: user laboratories, learning sessions, design sessions.

We judge the quality of the SPD approach by three requirements (Baskerville and Myers 2004): a contribution to practice (the action), a contribution to research (the theory), the criteria by which to judge the research, and we show explicitly how the research in the case meets these criteria.

Keywords: participatory design, organizational change, social practice design, trust, sense making

1   INTRODUCTION

Governance in design projects of social informatics services is still problematic. User participation is essential for Participatory Design (PD) of sustainable IT use (Bodker, Kensing, and Simonsen 2004). However, often participation alone is not enough. Trying to define better requirements within a given conceptual and pragmatic sense-making frame appears not to be feasible. In these cases, design cannot be confined *between* requirements and solutions: even the given frame must be abandoned, and new rules of the game and goals co-produced by all stakeholders. This happens in particular when there are no shared concepts, motivations, goals, and even language, among the various actors: the establishment of relation and trust in the project is hindered by ambiguity. To overcome the stall, one has to abandon the given frame, trying to recover sufficient sense making and shared understanding (Jacucci and Martin 2008). If facilitated by management through appropriate infrastructural measures, like in co-production Social Practice Design (SPD) approaches, as soon as trust relations are re-established, a new frame emerges, co-constructed by relevant actors, along with brand new outcomes, solving the structural problem (Jacucci 2007; Jacucci, Tellioglu, and Wagner 2007, 2008; Cattani and Jacucci 2007). Also changing the meaning of the whole process, however, and heavily reshaping its governance beyond what intended, and suggesting new practices and a new deontology in facilitating participative design.

2   THEORY

2.1   Managing ambiguity, taking *a second step back*

Watzlawick (et al. 1967), in studies of the pragmatics of human communication, identifies content and relation as equally relevant. Bion (1961) in studies of the psychology of groups distinguishes between the *task* to be executed, and the equally important establishing of *relation and trust* in the group. Is there a dichotomy in our interventions for innovation in technical systems and organisational processes, between attempts to establish functional rationality through analysis of content and task, on the one hand (reducing uncertainty), and attempts to establish culture change through communication, relation and trust, facilitation and learning, on the other (managing ambiguity)? Posing this question corresponds in the words of Bourdieu (1992) to be taking *a second step back*. We have discovered in the last decade the need to re-balance focus and effort in current approaches between function and communication. (Cattani and Jacucci 2007; Jacucci and Martin 2008).

2.2   Nurturing trust with Carl Rogers' *qualities*

Carl Rogers (1951), in his person centred approach studies of therapy, advocates the respect of three criteria, three *qualities* of the counsellor (non-judgemental unconditional acceptance, empathy, congruence), for establishing working communication and trust relation with the client. Trust is a pre-requisite for establishing a web of shared understanding. In alignment with criteria introduced by Carl Rogers in personal therapy, and extended already by himself to learning and company consulting (Rogers, 1969), non-judgemental respect, empathy, congruence, are needed here, to allow the establishment of trust. This calls for, on the other hand, introspection, self-awareness, clear and clean intentions, and control on the part of facilitators, as well as are their awareness and intentionality in conceiving, proposing, co-constructing with clients the appropriate path in that context towards the desired development; a path that is more important, if possible, that the very content and task objective.

2.3   Facilitating with *SPD*

Social Practice Design has recently emerged by urgency of praxis, as a 'sand-box' type approach, seeking to construct winning paths to ensure that the potential benefits of envisioned novel technologies can be realised. We consider SPD a methodological extension of PD to the

implementation phase of information systems, often intertwined with design, however. It is not to be regarded as rigorous method, or an apodictic truth, rather as the concocting by *bricolage* of useful responses to stringent needs. SPD entails aspects of research intervention and facilitation, in which facilitators elaborate with organisation personnel visions of solution, i.e., how to attain desirable change goals by leveraging on organisational assets and strong points, and/or how to cope with problem issues, possibly emerged through ethnographic observations and recognised and accepted in previous phases of the SPD work. In SPD, facilitators thus have a crucial counselling-type job, for the sake of which they must follow a holistic approach, performing an accompanying task from start to finish of the innovation path, and for the success of which the establishment of a good communication and of a good relation of trust is all important. Actions, communication, behaviour of the facilitator establish trust with, and support, the client – at all levels: individual, group, organisation – towards change, for promoting the conscious and proactive care taking and hospitality (Ciborra 2002) to the introduction of socio-technical solutions: a person centred approach, an intentional way to proceed, designed in all its passages.

2.4   Recursive intervention and introspection

This paper puts emphasis on the relevance in SPD of Rogers' counselling-derived perspective, oriented towards trust gaining, learning, and the reduction of ambiguity. A recursive structure then characterizes SPD: it is a continuous coming and going between client and facilitator in a dialogic process in which the facilitator is capable of observing, performing ethnography, elaborating on the observations, constructing visions, but paradoxically also of forgetting them when coming back to the client ("being without memory and desire", says the group theoretician (Bion 1961)), to reconstruct afresh visions with them, putting to practice in that instant her competences, especially in the communicative, relational domain (ability of managing a flexible and open communication: Schein (1987; 1999), Rogers (1980)), as well as competences on group dynamics. We underline the process of continuous interaction with the client, and the ability of the facilitator to work substantially on self, in order to acquire the necessary ability and 'purity' of approach that really renders her capable of helping the client find themselves the solutions to their own problems (Rogers 1951).

3   THE RESEARCH INTERVENTION APPROACH

3.1   Action Research (AR)

We carry out our research-intervention with the specific AR methodology of observation, interpretation, step taking, outcome evaluation, and learning, in an AR activity devoted to the development of a new practice, rather than of new software. The process is iterative as usual, with a succession of interaction events with manager and users. (see: Baskerville and Myers 2004). In the sequel we describe the process of applying SPD step moves in the building of relations, sense making, and trust. The use of the SPD approach is shown by moving through the various stages of the iterative process, and seeing the congruence between the objectives set, and the characteristics and focuses of facilitation (e.g., the establishment of our trust relationship with the manager, and his understanding of the process). We also hint to what the consultant team does between meetings: strategizing, analysing previous step, planning next step, material preparation; but also analysing observations in videos, and dialogues: emotions, behaviours, state of mind, the things that went well, the things that went badly, SPD attentions, counselling-like activities, etc. Each step is dealt with individually, recounted, discussed, linked to the next step, albeit we worn the reader that some lesson learned in some steps seems not to be confined to that step, but produced by along the WHOLE pathway. Counselling like qualities (acceptance, empathy, congruence) are constantly emphasised along this pathway. In the reflexive reconstruction we show how things worked *because* these criteria were followed. Evaluation criteria for AR results will be the degree of satisfaction of company manager, personnel, and facilitators/researchers, respectively, for change produced and final results, for theory and practice.

3.2   Preparation of the activities

Before each meeting with manager, users, or other actors, whether regarding the laboratory, training sessions or direct and restricted meetings with the various subjects involved, there is always a consultancy workgroup session during which the team analyses the materials collected in the previous meeting, the observations made, the exchanges and the dialogues, content aspects, relational aspects, cross referencing all with first-off impressions, the notes taken by the consultants in a "log book" during and after the meeting. The primary aim of these sessions is to analyse the work performed "on stage", reprocessing it through analysis of the observation materials and discussion among the consultants (both those who went directly into the field and those who remained back stage), to assess what happened in the previous step, the situations experienced, the content and relational aspects, the initial impressions/emotions, the purpose being to design and define the next step in light of the path taken thus far, the results achieved and the lessons emerging from the analysis. Planning means: thinking flexibly about what will be done later, who will do it, with what aims, strategies, communicative/relational concerns etc. For each of these consultancy team meetings a log-book was kept, an internal workgroup document which was used to keep accurate track of these steps. It was from these notes taken in the field and during the consultancy team meetings that the points developed for each step were taken (objectives of the meeting/laboratory, description of how it went, what was learned, any citations and multimedia material used).

3.3   Reporting analysis of data

We present in the sequel our qualitative analysis data, enriched by photographs and brief transcripts of recorded discussions. Links to session videos are also provided. More specifically, we define a number of interaction steps and give them names. For each step we discuss objectives, observations, lessons learned, and decisions taken for the next step, highlighting attentions paid to counselling-like qualities. For ease of reading, coding of the data is reported in the text, as follows:
a. - The objectives of the activity and expected results: (at both content and SPD levels)
b. - SPD attention points
c. - How things went and results achieved
d. - Learning for the next steps
Stretches of dialogue, phrases, situations supporting what is said: Basic textfont
Comments on stretches of dialogue and situation: Italics

4   INTRODUCING THE CASE BY EXCERPTS

This paper elaborates on experiences of practicing SPD approaches in an e-Government development project, the 'Online call-for-bids', at the Regional Administration offices of 'Celtia', one of the regions in Northern Italy. Here regional employees are brought to user-design a computer-based aid for public tender editing – a tender *Configurator* -, with the support of facilitators employing Interactive Use Case (IUC) as a PD tool (Calzà, D'Andrea, Jacucci, and Baskin 2004). IUC is a pictorial and interactive tool positioned in between Use Cases and Mock-up. We call the IUC tool "Interactive Use Case", underlining the importance of the interaction with users, where it can provide a common place for a dialogue between system developers and system users. The research intervention lasts about half-year. 'Clients' of the intervention are the manager, and the employees of the administration, as well as technology designers of the regional administration owned software company: *Celtia* Informatica, and employees of the RTI (Regional Training Institute).

4.1   Browsing case lab-notes

a) The manager, expert about the tender *Configurator* issue and capable himself, had built by technicians on his own instructions a non participatory-design prototype, to which personnel charged with tender design responded without enthusiasm, with very few comments. In a subsequent user workshop, proposed by us, it had become evident that the *Configurator* software employees a philosophy, a procedure for the design of the public tender, which is completely out of tune with

respect to the real work practice: the fact always emerges, that software designers abstract, hence depart from reality.

b) A proper user design *laboratory* is then organised on our proposal, for best results and user appropriation. Although uncertain at the beginning about direct user participation to design, the manager is struck that we now in-act a true, participatory design laboratory, not just consulting, not just training; a true design laboratory, requiring the construction of a real work team.

c) The manager, kept out of the user design laboratory – our request to avoid hierarchical self-censorship by personnel -, is furthermore struck by our live rendering of that experience, not a power point, not a word document, but live video reproduction of the work session, with access to people discourses and action, with results recorded, and directly usable, via the Interactive Use Case tool.

d) In the end, he is so touched by the content of the presentation, and the obvious success of the user design session, that his doubts vanish, and he now asks that users be invited to redesign the tool, entirely from scratch, without influence from his own prototype; technicians too, present at this rendering session, shared the manager's inclination to take risk and opportunity and ask the group to redesign the *Configurator* from scratch.

4.2   Anticipating inferences

i) *SPD building trust with manager* – Manager: Here we see the high level of trust reached by the manager towards facilitators, his staff, and his own leadership. Trust relation with the manager has been constructed along the way with attentions like: timely and detailed reports, video recording, documents made available online, periodic update meetings, communicative attentions, and so on. So that he has perceived to be taken into good account, both professionally and personally.

ii) *SPD empowering users* – Participants: Participants enjoyed working in a group, found themselves at ease, as tasks demanded of them were simple, not stressful, albeit serious. They liked the method of hands on, of group work, also of written individual reflections. The video camera disappears, fundamental for documenting the work, no more invasive. People at last talk among themselves, share their work practices, never happened before. All this is more important that the goal: the path as all important.

iii) *SPD designing for user design* – All: the magic of when somebody with practical knowledge of her own work, builds herself the technology instruments to support her work, and as she goes on building, also performs continuous checks that all knowledge is preserved, embedded in the artefact. If the knowledge in question is tacit, it cannot be transferred to the designer. In turn, when designers build a software application for own use, things invariably go well.

iv) *SPD inheriting from counselling* - We can see the importance of the facilitator and of her direction of the performance: importance of the events she calls clients to participate in. Importance of how the facilitator IS and BEHAVES in situation (see Rogers: work of facilitator on self, re-elaborating how he/she lived through the group work, must observe how things went – video -, must build the passages each time).

v) *SPD facilitating sense making by care taking* - Importance that participants work and share viewpoints among colleagues, the facilitator here is fundamental, as must accompany this awareness process on their own work and on the work practices it consists of. It is important to make people work not on theory and abstract concepts, but on what they know, and to make them do, use their hands. It is also important working with them at the meta-level of reasoning, as this promotes awareness. And a new, co-constructed solution emerges.

5   ILLUSTRATION OF CASE ACTIVITIES AND OUCOME: CASE DATA ANALYSIS

5.1   List of SPD research-intervention steps in the 'Online call-for-bids' project:

1. Needs collection
2. Presentation to the client of the project as a *laboratory*

3. *Laboratory*: definition of the work practices for the design of contract announcements (18 March)
4. Workshop on the contract announcement *Configurator* (19 March) at which the manager presented his method, his method of creating an announcement (IT practice supported by the *Configurator*), and the listeners were able to verify the differences, the distance
5. *Laboratory*: sub-group work on analysis of the *Configurator* (a) and subsequent plenary session (b) to share the results (7 May)
6. Presentation of the results of the *laboratories* to the client (27 May)
7. *Laboratory*: building the *Configurator* interface in sub-groups
8. Presentation of the results to the client and RTI (Regional Training Institute) (4 August)

5.2 Report of research-intervention steps

1. Needs collection

a. - The objectives of the activity and expected results: Briefing with the client for the first collection of information regarding his expectations and connected problems.

b. - SPD attention points: First knowledge, first bases for building a trust relationship, initiating a dialogue which should continue in open manner.

c. - How things went and results achieved: The client stated that his expectation was to reorganise the activity of 'Online call-for-bids' contract announcement design, a common activity to be used in all departments of the *Celtia* regional administration by means of a computerised system. The client was aware of the different ways in which departments designed the announcements and the intrinsic diversity of the announcements themselves, and he was therefore also aware that the support instrument must be built taking account of this heterogeneity. The client at this initial stage did not seem to know that his objective could be achieved by allowing the future users of the system to be involved in its construction. The client was aware of the limitations of a purely technical approach to the development of a computerised system, because he had participated, with great difficulty, (playing the part of an announcement designer) in the building of the first prototype of the *Configurator,* which became specific for the Industry Department, the client's department (personalised his announcements). The result of the meeting was an agreement on presentation of a draft project.

d. - Learning for the next steps: User needs are not already there to be harvested. This phase serves to put the client front of his initial needs. These will be worked upon and re-elaborated all along.

2. Presentation to the client of the project as a *laboratory*

a. - The objectives of the activity and expected results: Make the client (manager) understand the potential of the PD of computerised systems and that his problem could be dealt with using this approach. Explain the potential of *laboratory*-type activity which directly involves the group in real tasks.

b. - SPD attention points: Consolidate the bases of trust, collaboration and the personal relationship between consultant and client.

c. - How things went and results achieved: During this meeting the consultants presented their PD approach, which is very different from what the client expected. It was presented with great emphasis on the relationship among expectations, complexity and method to deal with the problem. During the presentation the client also stated the results expected more specifically: analysis of the current *Configurator*, connections with work practices, *vademecum* on using the instrument, training for all the contract announcement designers in the *Celtia* Region. These requests the consultant assessed to be coherent and achievable with the method proposed. After the client had stated that he agreed with the method proposed (initially a *workshop*) he asked how the workgroups would be formed. Who would participate in the *laboratory*? The consultants replied that the workgroup would be formed of experts in contract announcement design (senior personnel), future users of the instrument, and the technicians who would build it. Other criteria proposed by the consultants: the group must be

numerically adequate (less than 20 members, more than 10) and composed of persons believed to be work-motivated, willing and able to work in teams, aware of the need to create change, also belonging to different departments, so that the group maintained the complexity deriving from heterogeneity.

more b. - SPD attention points: During the meeting with the client (manager): attention to open communication, the use of not too specific language, but which was still professional; willingness to listen to the increasingly specific requests of the client, unconditionally welcoming his thoughts (empathy). Non-judgmental and open assumption of the views, expectations and needs which the client was encouraged to state, in a dialogue where the consultant introduced the client to this vision and approach, which was new for him, and explained the project's objectives in more detail.

d. - Learning for the next steps: It is important that the presentation of the method should be brief, but focused on showing that change can be planned/achieved with a participatory format, and that in the contexts where change is induced by the introduction of new work instruments, these instruments and the change that they induce in work practices must be defined with the users. It was important at this first meeting to "really" listen to the client and his statement that his aim was to promote change in his organisation. The client was already aware that realisation of the technological instrument would be the means of change but that the true end was change itself. This legitimated our approach.

more b. - SPD attention points: This phase moment was fundamental for the work/collaboration relationship between the consultant and client. The relational/ communicative style used conditioned the entire path. It is therefore necessary to conceive and plan this initial phase more precisely, and know how to implement it in the field in a congruent, empathetic and conscious manner.

3. *Laboratory*: sub-groups tasked with defining and describing the work practices used to design contract announcements (18 March)

a. - The objectives of the activity and expected results: Sharing of work practices among the announcement editors, creating a fertile humus for awareness of practices. Our aim was to get them to examine their work practices so to be better able to measure the differences between what they had always done to design contract announcements and what they were asked to do with the technology.

b. - SPD attention points: Make persons communicate in a protected context (that of exercises/training), enabling them to exit from the usual work setting, which has its rules, restrictions, roles (assigned, perceived etc.), consolidated (also in their "pathologies") rituals and relational communicative procedures. Points of SPD attention: unconditional positive acceptance; sense-making, using artefacts to facilitate the sharing (posters in sub-groups, conceptual maps on stimulus questions). SPD is also attention to individual empowerment.

c. - How things went and results achieved: Division into workgroups. First activity with use of post-it notes at a sub-group level on a stimulus question: *what does working on a contract announcement involve?* Initial brain storming within each group, using a simple but powerful instrument (post-it notes can be easily moved around on a poster and can therefore be useful for later categorisation and reorganisation according to different parameters). Afterwards, facilitator held a plenary session for sharing of results (summary of post-it notes) through co-building of a map. Facilitator used a projector and the *Freemind* application software to represent a summary of the work involving all those present.
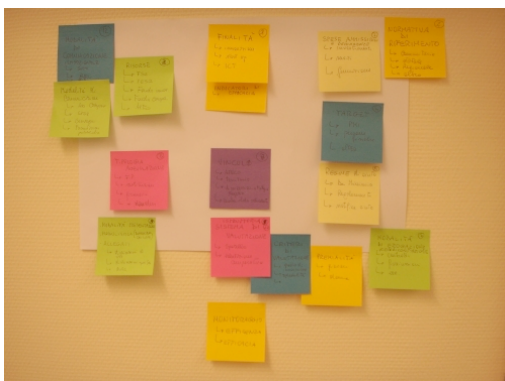
PHOTO 1: Post-it notes sub-group activity   *PHOTO 2:* Freemind *map, sum of design activities*

continues c. -   How things went and results achieved: Another sub-group activity followed which requested to explore the *Freemind* map, describing the work scenarios: who does what, how, when, why etc. Work again started from a stimulus question: what do you do when you design a contract announcement? Each sub-group worked alone, without the facilitator, who nevertheless observed the work groups and intervened when requested by the groups to clarify aspects and provide support when necessary. Complicated things: sense making on the concept of scenario (what we expected from them regarding the concept of scenario). No wide-ranging scenarios emerged, contrary to expectations. A great deal of time would be necessary to do this well. Awareness-building among *laboratory* participants on what they do routinely but of which they are not aware. The final product did not seem very satisfactory to facilitators but it was fundamental for the process whereby that product was produced (learning path on one's own daily work, great satisfaction deriving by the fact that one does a lot without clearly recognising it). Birth of a functioning workgroup

Stretches of dialogue, phrases, situations: One participant to a work colleague:
"Your way of handling the work is interesting, I'll use it as well" → *reciprocal knowledge, which creates trust, not suspicion. And:*
"I do this in the same way, but I call it something else..." → *language problems*
"We worked well!!!" → *satisfaction expressed by participants after working together, doing something they had never done before.*
Exchanges on the role of third parties: "Really? The chamber of commerce also does this? I didn't know!" → *more information, awareness.*
"We have many different ways of codifying the companies, and instead we could use a parameter that fits all of them." → *they realised that it could be simplified, using a shared language.*

more b. - SPD attention points: The facilitator demonstrated positive unconditional acceptance towards all the participants and intervened only to help them perform the work requested, responding only to questions about the method to follow; he was also an example of open behaviour, empathetic, welcoming; he supported the sense-making process enacted by the groups on their work practices. The facilitator used various artefacts to facilitate sharing (post-it notes, posters in sub-groups, conceptual maps on stimulus questions).

d. - Learning for the next steps: Ask answerable questions and model them with artefacts. It was this work that gave rise to the idea of organising a *laboratory* presenting the *Configurator* in situated form, that is, producing a contract announcement from the beginning to the end (presenting a real announcement). The manager asked for advice on how to present the *Configurator* and we said: present it with a contextual example (an announcement made with the *Configurator*).

4. ***Laboratory* on the contract announcement *Configurator*** (19 March): the manager presented his way, his practice, of creating a contract announcement supported by *Configurator* and those present listened and gave feedback (they were immediately able to see differences, the distance).

a. - The objectives of the activity and expected results: Introduce the workgroup to the instrument already built in its essential parts by technicians according to the indications of the manager, and receive feedback. Involve the manager in the process, keeping him anchored to the project, maintaining his active participation in it, helping him to gain awareness of what is happening: reactions of his collaborators, group climate etc.

b. - SPD attention points: The facilitator accompanied the manager in his preparation for the meeting (at the request of the manager), suggesting strategies and presentation methods (again at the request of the manager → see below)

c. - How things went and results achieved: The setting for the meeting was suitable for the listeners. The manager made a presentation with the support of the whiteboard and flipover sheets and the video projected *Configurator*. He first made a theoretical unidirectional presentation, which was very clear in its language, and took up about 45 minutes of the three hours of the meeting. He presented the instrument in agile manner, and contextualised it through the creation of a real contract announcement (therefore providing a practical example), using a paper-based copy of an announcement copy handed

out to each of those present to show how the announcement could be reproduced using the *Configurator*. There followed the suggestions and advice of the facilitator. Then the engineer presented the instrument, after which the manager asked for feedback from the participants. A debate began in which the participants mainly discussed the differences between the current way of working and the new logic required by use of a computerised instrument. The discussion was heated because the persons present realised that the design of the technological instrument would disrupt routine announcement design practices. The manager and the participants realised.

d. - Learning for the next steps: We are aware of the importance of this encounter among the manager, inventor of the *Configurator* (with the technicians) and the users. The manager immediately realised that the participants had numerous observations to make, many modifications to propose, and they did so with competence and commitment. This entailed that the next step – that is, the group analysis of the *Configurator* and its functionalities – be obligatory and natural even for the manager, so that it was not necessary for the facilitator to convince him. The manager was respected in his role and in what he proposed. In turn he respected and listened to what was said about the *Configurator*. The comments of the participants were however inevitably conditioned, at least in part, by the presence of the manager, because he is a superior and the author of the *Configurator*. It was found to be necessary to allow the users to talk and analyse the *Configurator* without the presence of the manager and technicians.

5. *Laboratory*: (a) sub-group analysis of the *Configurator*, and (b) Sharing the work after the sub-group activity. Managed by Diego who handed over to the various groups which performed a screen-by-screen analysis. (7 May)

a. - The objectives of the activity and expected results: The stated objectives of the work session were: analyse work practices, measure the distance between the work practices of designing a contract announcement in reality and the new practices imposed by the *Configurator*; construct an artefact.

b. - SPD attention points: Consolidate the group's work practice and the sharing process by involving the group in practical tasks through the production of artefacts. Reinforce the participants in their commitment and participation, creating further opportunities for them to demonstrate their competence, professionalism and commitment/motivation. Continue along the workgroup's learning path since the first *laboratory*; continue along the path of awareness of practices towards ever greater intentionality in the process.

Stretches of dialogue, phrases, situations: The video shows the participants working on the screens in groups of 4, modifying them according to their own work experience. One of the participants holds a pen and makes the modifications proposed by the group. The setting highlights the total and animated participation by all members of the sub-groups (each group is sitting around a table, all at the same distance from the material on which they are working). The screens of the Configurator are analysed, corrected, completed. As this is done, the participants reciprocally clarify in detailed manner the procedures described, going further and further into detail.

c. - How things went and results achieved: The detailed analysis of the *Configurator* in sub-groups takes place in these conditions: a suitable setting, the use of three artefacts: conceptual map of the first meeting (on 'what you do when you write a contract announcement?') and printouts of the most important *Configurator* screens, which are given to each group, and a poster visible to all participants which depicts the map of the entire *Configurator* (with the screens superimposed on this map so that everybody could orient themselves regarding the screens within the instrument). The task assigned: for each screen define what you consider important, what is wrong, what you would add, what you don't understand (interface accountability). For the "don't understands" the designers were deliberately kept away so that they did not respond in place of the users. The groups were chosen with care, as in the other *laboratories*, so as to make functioning groups. The groups worked very hard in the three hours available; they used two hours to conduct the analysis; the last hour to share their findings in plenary session. The facilitator was always present for the sub-group and he provided support on method if he saw that a group was in difficulties, reminding it of the delivery /task or providing minor input on method. The task was carried out by the groups at different levels of detail, owing to the varying capabilities of the group, skill, listening ability etc. One group analysed only 5 screens out of 10, others carried out all the work requested of them. Also the level of detail achieved

was different. The participants were very active, free to express themselves in their groups and in the plenary session. Without censure. Everybody participated.

PHOTO 3: Group analyses Configurator screens   PHOTO 4: The group orienting with screens map

VIDEO 1: Screen analysis activity (video with faces: http://www.etour.tn.it/mcis2008/video1.html)

d. - Learning for the next steps: Not having the Configurator on the computer (important interfaces were missing) produced some disorientation (Diego had to choose some interfaces and not others for reasons of time, not an easy choice which necessitated the contrivance of the complete paper map on the wall so that the participants could better orient themselves. The participants immersed themselves in the role of analysts of the user interface. Diego did not expect this and it came as a revelation to find that in this group there were also computer specialists, something that was not clear at first. It is therefore essential to verify, understand and make use of the competences present in the group and to enhance them through involvement in a task. This observation conditioned the next project, as it was realised that competences available were much more multi-disciplinary than expected.

more b. - SPD attention points: All of this is positive and unconditional acceptance. The route was marked out by the participants, not by the facilitator. Empathy: continuous listening, no forcing, use of the participants' point of view. The participants felt enriched in their professionalism (and this will have future consequences, also in their mode of participating, of being involved and present → greater assumption of responsibility in respect to the process). Importance of selecting the group so that it is truly a "special" group.

Stretches of dialogue, phrases, situations: A spokesperson for the first group says: We cannot write "structural funds", we must add a column; instead of indicating "structural funds", we write: "sources of finance", as label of the tree structure, the rest seems to be fine.
Diego hands over to another group, which says: We added an extra item: "FSE contract announcement funds"; and we'll add other sub-items: .... These items must be present in the monitoring stage (we don't know if we should add them here or not..)
The group already reveals the differences between the work methods envisaged by the software and the need for data comprised in real work practices.
Second group: We don't understand why the document folder is called that, because we think it is the menu…. As for the label, we would call it "denomination" not "description". The item "personal data" is no good in our opinion, because it brings to mind something different from what it is in reality.
The software was produced by computer specialists, using the framework of the regional computer system, a framework which works on the concept of document (which is why there is an inappropriate/different use of the word "document").
Min 8 Another group: We want to understand what the search engine works on when it says select or deselect..... if the thing is important it must be found, and therefore inserted, instead it is no longer there..... those two icons there should be speaking ones, otherwise you don't know what they represent. Here the participants underline the fact that the interface does not tell the user how it should be used (accountability). They listen closely, each group takes up what the previous group has said. Verbal indicators also testify to this: 'as the other group said', or 'he said'…

Min 19 Another comment, further unclear tables ... *shows examples (and has the support of others in the group) and says:* It would be useful to add or change the colours so as to separate, for example, specific objectives from general ones; inappropriateness in the chapter summary table, where are the chapters? *Accountability: they criticize but go further by suggesting changes.*

Min 22 Collegue adds: Why do they call it parent form instead of main? *Terminology clarifications: very precise (sense making). Another screen analysed by the groups. Min 24* ....let's hope that this chapter is connected to the admin office, otherwise.... situation of overbooking. *Organisational aspects, not merely technical.*

Analysis of personal data form: Several inconsistencies in the personal data form: the item 'expenditure' should be indicated ... this type of item should not be loaded by anyone, but by the group responsible for the compilation. Add finance items, because they are part of the announcement and it is appropriate for them to be indicated here. *In that conversation one foresees the work scene, say that it needs to get data, and one asks who is to input it → organisational reflections.*

Another group: We had a bit of difficulty as a group; need to add other items. Other things to delete, because they are not part of the personal data management area. These should be inserted in another part, not in the same pot. Instead here we would insert indications about the project. *They emphasise that there are things present in the current prototype which, for them, are accessories but take up large part of the scene whilst more important things are missing. The participants use very precise language, a sign of competence in this field.*

Min 38 A colleague: the "expenditure" category should be designed more from the point of view of the user, also linking with what will be the final user interface; for a citizen it is not easy to understand... perhaps it would be useful to use simple language where possible. This would help to think more from the user's point of view. *Here they think about the benefits and drawbacks; there is a need to speak the language of the beneficiary.*

6. Presentation of the *laboratory* results to the client

a. - The objectives of the activity and expected results: The purpose of the meeting with the client was to present the results of the *laboratory* with the group and agree with him on how to continue with the work (the client did not participate, on request by the facilitator, in this final *laboratory*, so that the participants could work more freely. It is therefore important to provide very rich feedback, especially on how the work session went and the results.

b. - SPD attention points: Ensure that the client was aware that the restitution was transparent and accurate, without interpretation or manipulation by the facilitator. Keeping him linked to each step of the work, consolidating the relationship with him and his faith in the project, giving proof that his hierarchal role and functions have always been considered, as well as his states of mind (anxiety, fear, resistance). Make him feel our supportive "presence" and our intention to support his objectives. Show those who worked in the groups that the operation was not demagogic, but true, that the efforts made would really be used to continue the work and therefore in full respect of those who did it with commitment and seriousness.

c. - How things went and results achieved: Present at the meeting were the facilitator, client and several members of the work group chosen by the facilitator (assertive, authoritative persons highly motivated to change, with important roles within the agency for change itself), because these persons would be guaranteed a true and not interpreted restitution. Various video clips taken during the *laboratory* were also used. The facilitator presented the results of the *laboratory* using a wide range of multimedia documentation with photographs and videos on the comments made by the sub-groups on each interface of the *Configurator*.

VIDEO 2: A clip from the multimedia presentation used to present the results of the work
(http://www.etour.tn.it/mcis2008/video2.html)

continues c. - How things went and results achieved: The facilitator does not comment on the material, but restricts himself to showing it. The comments are made by the representatives of the workgroup who intervene with important statements about the differences between actual work practices in designing a contract announcement and how this work could be supported by a computerised system.

*Stretches of dialogue, phrases, situations: Statements of the type:*
"We saw that the *Configurator* interface contains elements that are not very clear; furthermore the interface does not help those using it to understand how it is used. In some cases the *Configurator* imposes a work logic that is very different from the reality. Analysing the displays it was not easy to understand the operational context of each screen, the type of function performed by the screen.

more c. - How things went and results achieved: The client, having seen the work carried out by the group and being convinced of the potential of the group, requested the facilitator to organise another *laboratory* to redesign a new *Configurator*. For the first time we were given the task of designer.

d. - Learning for the next steps: The surprising thing that happened was that the participants showed great willingness to involve themselves, to be the protagonists of change (something generally not common among civil servants). Communicating to the manager/client what was happening in the *laboratories* proved to be crucial. From the moment when the client no longer came to the classroom, Diego always sent him the minutes of meetings within 48 hours and put the videos online so that the client could download them. The client was very impressed by this method of communicating. It was evident that he had never taken part in presentations so rich in materials gathered in the field. This legitimated the method that we had selected. The client "trusted" the group, the method and the facilitator, so much so that he proposed something that was absolutely revolutionary and delicate/risky for the organisation. The client's words "redesign it" expressed his acceptance of a new challenge, never taken up before which would shortly lead him to: agree with the computer system management to discard the work done thus far (months of work) and rebuild everything using a new logic. In order to convince the others, he would have to give reasons for the choice of this new approach to planning and also assume responsibility of designing a training course that would bring this new approach into the organisation. On the part of the facilitators, the awareness of the fundamental importance of this step and the need to accompany the client in a particularly delicate and challenging phase of his role (credibility in the organisation). Therefore it is important to give him support and make him feel the strong presence of the group of consultants accompanying the process with the times and methods agreed upon with the client, without forcing him. The client did not want, and must not feel forced, to do things he was not ready for. The willingness of the facilitators to transfer the method into the organisation was for the client a guarantee of the non-dependence of the organisation on the consultant. The consultants were aware that this step was crucial for the entire project, because it was now that began the redesign of the next steps, using the method of PD. If this passage went wrong… Doubt: to what extent did we consultants really affect this passage? Was the client "ready" to make the change and we served as a catalyst? Or was he gradually convinced? Probably this step was already part of the client's strategy, but it was necessary to give him strength, support, sustenance (create the team in a certain way so that it could not fail). This step needed a product on which to work and an external SPD expert mediator (to make the various actors talk to each other, each in their role, to stay together, to help them see different points of view!).

PHOTO 5: *Paper user interface with buttons, labels, navigation menu*
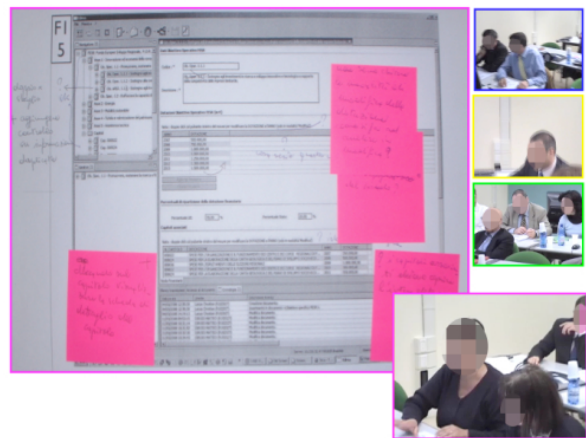
PHOTO 6: *Image shown during work presentation*

7. *Laboratory*: construction of the *Configurator* interface in sub-groups

a. - *The objectives of the activity and expected results:* Construct the *Configurator* user interface using an agile approach (paper models). The objective, connected to participatory design, is to construct with the group a new work scenario with work practices respectful of the past but able to exploit the potential of the new instrument. To use the instrument in practice during its construction (acceptance, participatory design of change).

b. - *SPD attention points:* The work method proposed uses the map of work practices constructed during the meeting of March 18. It therefore springs from the vision of the participants (positive and unconditional acceptance) and incorporates these practices in a new artefact (*Configurator* paper interface) which this group built by themselves without conditioning. Consolidate within the group the conviction that they are truly taken into consideration, beyond simple demagogy. Consolidate in the group awareness of their potential, value and competence. Show again the potential of group work conducted and managed competently in a climate of listening, sharing and collaboration.

Stretches of dialogue, phrases, situations: From the video: witty remark at the beginning of work: Don't fall asleep.... you are already yawning. We are already arguing (*said in a very nice way). Ideal setting (persons around small tables and use of the walls as boards/support for posters and post-its). Each group listens attentively. They use the coloured post-its very effectively. One in the group records in writing what is said. A lively and energetic climate. Very dense work, but in a relaxed atmosphere. Strong awareness of the method to use.*

c. - *How things went and results achieved:* Work in sub-groups: the groups worked on construction of the *Configurator* with paper models, passing through three stages. The first stage led to the construction of posters using post-it notes to imagine what the new system should give to and ask of its users in terms of data and information.

VIDEO 3: Brief sequence of the design activity with post-its
        (http://www.etour.tn.it/mcis2008/video3.html)

continues c. - How things went and results achieved: In the second stage the participants concentrated on the sequence in which interaction with the system takes place (that is, what comes first and what comes later). The post-its previously on a single poster were reorganised on several sequential sheets. In the third phase they worked to transform these still very rough representations into true user interface elements (buttons, labels, navigation menus etc.). After the sub-group work, sharing took place through the illustration by a group spokesperson of what they had produced.

VIDEO 4: Brief sequence of sharing by the sub-group work in an assembly
        (http://www.etour.tn.it/mcis2008/video4.html)

Stretches of dialogue, phrases, situations:
They demonstrate the new work process supported by the technology and she uses the support (wall). They describe the scene by centring it on the needs of the user, they contextualise it and use calls for sports bids as an example. It is entirely a symbolisation/representation (envisioning future solutions Muller 1993). But besides thinking/imagining, the group really delved into work practice and after depicting it, they were also testing/validating it. They use technical language and the jargon of the sector (e.g., flag-ing*).*

more c. - How things went and results achieved: After the sharing they agreed to create a summary of the work of the sub-groups by building a new artefact (a map with the stages of work and results achieved (each node of the map connects to a video or an artefact and also contains notes on what was learned) produced by combining the contributions of each group (the participants chose to start with the work of one group which was judged to be more advanced, and with that product they integrated the contributions of the other groups). This summary phase was one of the richest in the laboratory, comparable to the sharing of work practices of the first day because here those practices were re-discussed and redefined within the new instrument.

more b. - SPD attention points: Here there was a great deal of sharing and reciprocal listening, and much respect was shown for the interventions of others. They carefully discussed the work process and the sense making of the technical terminology of work.

more c. - How things went and results achieved: Each person made a great effort to accept the contributions of the others, especially when the contributions consisted in the strong personalisation of the instrument (the need was to build a *Configurator* able to produce very different contract announcements).At the end of the session the group produced a large poster identifying all the interface elements positioned in the order that they wanted. At the beginning of the summary work, before the group decided to choose one of the three artefacts as a starting point, a somewhat unstructured debate arose among the participants where they constantly mixed aspects of what needed to be done and how it should be done. The facilitator had to steer the group back to more structured discussion, persuading the group that it would be simpler to discuss first 'what' to put in the interface and only subsequently aspects of 'how'. The debate became much more effective when the facilitator suggested shaping the discussion through the shared construction of a poster depicting the system with its inputs and outputs, and to chose one of the artefacts of the sub-groups as the starting point.
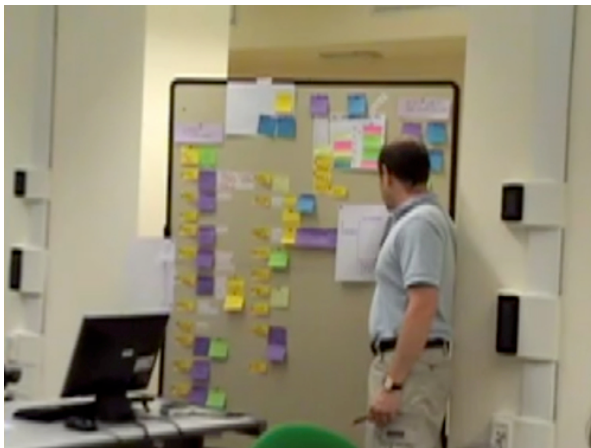

PHOTO 7: Poster with the final interface design

PHOTO 8: Nodes on map connects to videos

d. - Learning for the next steps: Again the key role of artefact construction. The crucial role of a facilitator able to accompany the group understanding its needs (for autonomy, but also being directive when the work proceeded in a disorderly and time-wasting manner) The facilitator was also important not only for the work method but also for the task. Importance of the facilitator's disciplinary competence (design of the interaction between user and system → user experience, interaction design), because in the field he is also a resource for the task. This makes the group feel protected and that it is in good hands. This increases the facilitator's authority and the participants' trust in him. A doubt which came to the facilitator in the field was whether he should intervene with his specific disciplinary competence (IT)? And if so to what extent? How? The facilitator decided that it would be better if the group remained concentrated on deciding how to build the poster, without having to sacrifice any of them for the practical work of positioning the thoughts on the poster. Therefore the facilitator was a practical support, but at the same time a methodological support (regarding construction of the map: what should be put where!). Furthermore this intervention strategy enabled the facilitator to keep all the participants at the same level, with the same roles and responsibilities (this was very useful at a relational level and produced truly cooperative work avoiding/managing power dynamics).

8. Presentation of the results (4 August) to the client and RTI (Regional Training Institute)

a. - The objectives of the activity and expected results: Presentation of all the work carried out in the *laboratory*, the methodology adopted and the results achieved. Obtain the go-ahead to continue the relationship with new projects even of a different kind. This is mainly because there is a risk in the participatory approach that after having activated participation, involvement, change, all of this, if it is not controlled, it may disintegrate and be lost, backfiring both against the client who gave his trust and against the consultant.

b. - SPD attention points: Make those present feel that you are still strongly involved and attentive to the project and its possible future developments. Attention to relational aspects (completion of the path also emotionally involves the participants and requires a closure which is very attentive to needs, so that clients do not suddenly feel themselves "orphans" without protection.

c. - How things went and results achieved: Present at the meeting: the client, a representative of the *laboratory* group and representatives from RTI. Diego presented the entire process, once again choosing a communicative style centred on documentation through the presentation of videos of the meetings and the artefacts produced by the group, in regard to which he described the key steps of the method. He chose a form of communication that was concentrated on 'what', but above all on 'how' and 'why', justifying the choice of method. The presentation lasted about 30 minutes. The debate that followed lasted an hour and everybody took part: the client (who helped contextualise the results in respect to the objectives of organisational change pursued), the representatives of RTI, who recognized the elements of success in the project, its peculiarities, like the selection of the members of the work group, the methodologies applied, the attention paid to the relationship between the classroom group and the client, etc. In the hour that followed the debate, the entire group concentrated on defining future steps to support the work carried out thus far and to develop it. Concrete ideas emerged on how to:

• give the results visibility to decision-makers in the entire organisation (for example organise an event)

• take the method into the organisation through *laboratories* and training courses for the analysts of *Celtia* Informatica

• above all move on from the design stage to realisation of the new *Configurator* according to the design drawn up by the workgroup.

Specifically, the following matters were agreed upon: on 6 August meet the technicians of *Celtia* Infomatica to introduce the project and prepare them for the next sessions; on 15 September continue the *laboratory* and complete the *Configurator* interface; in the evening of 15 September, meet the management of RTI and present the work method and the results achieved; in the second half of September meet the computer systems supervisors of the *Celtia* Region to define training projects on participatory design for the *Celtia* Informatica analysts. In the second half of September organise a public event for presentation of all the work.

d. - Learning for the next steps: Main lesson: this challenge to continue the project and start up others using the same approach can only be met by forming teams of people with different roles and motivations. Awareness of the importance of the exit from the project (as well as its start-up) for the success of the project itself. Importance of finishing the project with openings, having already thought about its possible future developments, not dissipating the motivation and energy of the individuals involved. It is important that, besides openings of a more general nature, the final meeting should also define: the strategies to put in place, who does what, the tasks, the times, the points of attention, everything, otherwise there is a risk that everything will melt like snow in the sun.

6   LESSONS LEARNED/REFLECTIONS ABOUT THE WHOLE PATH

The article shows how our method made it possible for the client group to *go beyond* the initial project conceived by the manager, and even, later, by the consultant. 'Go beyond' in the sense that not only

were the users of the system able to enrich the instrument with new functionalities derived from a more detailed analysis of the work to do in its various dimensions, levels, functions, but they were also able to find the right language to voice their need for an instrument with a different philosophy which then emerged from their work, and which therefore *went beyond what the designers had thought, and brought to light new potential and logic for the instrument, which neither the designers nor manager had thought of*: an entirely new goal and outcome, *an experience of which they became fully aware, and that they also later engaged to divulgate and preach to others.*

What we learn above all is that, to ensure that *making the client fully aware of what PD can do*, is an objective to be pursued during the whole path; it is a goal that requires experimentation of the method. The client must be enabled to create prudent conditions so that the method can be practised, and these prudent conditions create space for the pursuit of smaller, more pragmatic objectives without forcing the client's hand, or pushing him to do things prematurely (respect *Kairos*, the appropriate time).

We should remember that the objectives stated at the outset were only to analyse the *Configurator* already designed by designers, obtain feedback from its future users, construct a *vademecum*, and plan a training course for a larger number of users. These objectives of course fall short of a fully 'blossomed' Participatory Design approach. In reality the possibility to undertake *genuine* participation (Bodker *et al.* 2002) in the design of the *Configurator*, and with it to redefine the work practices, and therefore change, was understood and granted by the client and the workgroup during the ongoing work, on the basis of results achieved, and after continuous interaction/exchange of information and thoughts between the consultants, client, and group (a path of reciprocal learning, of awareness). *The group legitimated itself by doing; it was not evident at the start that this would occur.*

Let's list relevant practices towards this result:

• To GIVE SPACE, HEED, AND ROLES to all involved, not only to the manager, but also to users, technicians, other managers, etc., with their different/opposing points of view, needs and interests.
• Of LISTENING, OBSERVATION, AWARENESS, REFLECTION, ELICITATION by the consultant of the needs of the client and the different actors involved. Needs not decided upon once and for all but continually reviewed, re-discussed, in a process of learning/awareness making the client and group ever more involved, increasingly active.
• Of the client's FAITH in the consultant, because this allows the client to trust the consultant, to feel accepted and respected, as well as protected.
• Of the consultant's CONSISTENCY in his relationship with the client (be authentic, coherent between the verbal and the non verbal, be convincing, assertive).
• Of consultant's TRUST in the client, this generates positive unconditional acceptance, empathy.

Here is perhaps the key to understanding the entire process according to the logic highlighted in our AR: the stakeholders involved here have *different perspectives,* and interests. There are those interested in the participatory design approach because of their desire to use it in other cases (the manager of one of the computer systems divisions), those who are interested in technology tout court, and those interested in defining new work scenarios. These are not simply application software users: these are stakeholders expert in the design of contract announcements and also the regional computer system. Their redesign started from work practices. On the other hand, the *Configurator* was designed by technicians used to design starting from abstractions, working on the possibility of processing the data according to a computational logic, a logic different from that of routine work. In the last case (technical design): →ABCDE (from abstraction to work practices). In the second case (redesign participants in *laboratories*) ←EDCBA (from work practices, with ramifications, to abstraction).

We judge the quality of the SPD approach by three requirements (Baskerville and Myers 2004): a contribution to practice (the action), a contribution to research (the theory), the criteria by which to judge the research, and we show explicitly how the research in the case meets these criteria. Let's apply these criteria to the SPD based AR in the present case:

Contribution to practice. In the 'Online call for bids' project, users not only to enriched the instrument with new functionalities, they were also able to voice their need for, and designed, an instrument with a different philosophy which went beyond what the designers had thought.

Contribution to theory. Confirmation of the usefulness of:
- recursive dialogic process for sense making and the involvement of company personnel
- person centred counselling-like facilitation qualities for trust building and empowerment

Evaluation criteria for AR results. Hi degree of satisfaction of company manager, personnel, and facilitators/researchers, respectively, for change produced and final results.

7   CONCLUSION

In conclusion, we have experimented with user design *laboratories* based on the Interactive Use Case technique, and on open conversations and learning, as ways of practicing SPD facilitation towards co-construction in a regional administration setting. These activities clearly enabled participation, and supported participants in engaging, in sense making and awareness, and in the acquisition of perspectives of others. People generally felt comfortable and not at risk at being judged. Participants expressed how important the experience of working creatively on solving "real problems" had been for them. We can understand this also as a result of the in-depth observation and intervention character of our SPD engagement with people in the project, which provided us with good knowledge about their work practices, potentials and problems on the one hand, and allowed trust building on the other.

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