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HOW TO SAVE TIME FOR CHANGE: A FIELD STUDY

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Abstract : This study describes the adaptation of a small-group creative problem-solving (CPS) protocol to work as a large-group organizational change method. The method was designed to suit a company situation, requiring a forum lasting for only four hours, instead of the two to four days of the present methods, without losing its effectiveness. The presentation of the case, with a medium-sized company of the IT sector, includes an extended diagnosis, the preparation and execution of the company forum, and the beginning of the implementation of innovation projects, aiming at increasing the proactivity of employees. The diagnosis includes the results of 32 interviews conducted with internal and external stakeholders, and an analysis of collected success stories, in order to clarify the strong points for a future organizational culture orientation. The results support the effectiveness of the adapted methodology in establishing innovation projects, involving the entire organization, in just four hours, and clarify desirable characteristics for the improvement of the present intervention method.

Keywords: Organizational Innovation; Organizational Change; Organizational Diagnosis; Large-Group Methods; Creative Problem-Solving

COMO POUPAR TEMPO NA MUDANÇA: UM ESTUDO DE CAMPO

Este estudo descreve a adaptação de um protocolo de resolução criativa de problemas (RCP), para grupos pequenos, para funcionar como um método de mudança organizacional de grupos grandes. O método foi projetado para atender a uma situação da empresa, exigindo um fórum com duração de apenas quatro horas, em vez dos dois a quatro dias dos métodos atuais, sem perder a eficácia. A apresentação do caso, com uma

empresa média do setor das TIC, inclui um diagnóstico aprofundado, a preparação e execução do fórum da empresa e o início da implementação de projetos de inovação, visando aumentar a proatividade dos empregados. O diagnóstico inclui os resultados de 32 entrevistas realizadas com *stakeholders* internos e externos, e uma análise das histórias de sucesso recolhidas, com a finalidade de clarificar os pontos fortes para uma futura orientação da cultural organizacional. Os resultados suportam a eficácia da metodologia adaptada no estabelecimento de projetos de inovação, envolvendo toda a organização, em apenas quatro horas, e esclarecem características desejáveis para a melhoria do presente método de intervenção.

Palavras-Chave: Inovação Organizacional; Mudança Organizacional; Diagnóstico Organizacional; Métodos com Grupos Grandes; Resolução Criativa de Problemas

Introduction

Scholars like Peter Drucker (Drucker, 2007) have long realized the need for management to consider time as the more perishable resource, adopting faster decision making processes and, at the same time, more inclusive of stakeholders than was the case with traditional management models.

In line with this evolution, and as researchers and practitioners in organizational development, we devoted time and effort in building an approach that could contribute to meet our needs, while working in change projects with companies, which had to do with: (1) Overcoming the difficulty in maintaining group composition after a large break (e.g. meals or overnight); (2) The little time companies could devote to group decision-making meetings; (3) The need to include a considerable number of organizational stakeholders in the same project; (4) Simplicity of execution and appropriation by the intervened companies; (5) And be action-oriented, instead of idea-oriented. These requirements, once met, should not endanger emotional and product outcomes during project planning and execution. Therefore, our concentration focused on group decision-making, mainly on small-group, problem-solving approaches, based on Osborn's brainstorming groups (Osborn, 1963), and creative problem-solving (CPS), relying on the work of researchers

like Basadur (1987), Isaksen and Treffinger (2004), or Puccio, Firestien, Coyle, and Masucci (2006). Our developments were also influenced by authors that criticize the effectiveness of brainstorming-based methods in producing valuable ideas, like Paulus and Brown (2003), or Stroebe and Diehl (1987).

Even though CPS is a flexible method, the protocol soon revealed itself difficult to adapt to time restriction conditions, as just cut the duration of meetings would compromise effectiveness, unless specific procedures were adopted (Sousa, Monteiro, & Pellissier, 2009). Therefore, we considered appropriate to create a fast track intervention method out of previous developments in small-group CPS methodology (Sousa, Monteiro, Walton, & Pissarra, 2014), thus reducing meetings from sixteen to four hours, without losing its effectiveness. This method matched the majority of our listed requirements, and allowed us to work with small groups in various settings in order to initiate innovation projects (Sousa, Monteiro, Walton, & Pissarra, 2013).

Although we had used the method with groups of twenty or more people, it became clear that CPS was not appropriate for such numbers. In interventions for organizational change, where a large percentage of the organization personnel was required, attempts were made by using the "snow-ball effect", i.e., making a central group give rise to more groups under the same objective. However, results were too slow to obtain and required many coordinating efforts. An example of such a procedure, with an NGO, is reported in Sousa, Castelao, Monteiro, and Pellissier (2015).

Therefore, we proceeded to study, acquire training and practice the use of large-group methods, though the problem of its duration (two to four days) prevented us from going beyond the training stage. We then decided to initiate the preparation of our CPS four-hour protocol to work with large groups, in an attempt to merge the its fast procedures with the maximum possible benefits of large-group methods. Successful attempts were made with project-based learning (Sousa, Monteiro, & Pellissier, 2015), and community development (Sousa, Monteiro, Gaspar, & Castelao, 2016), enabling us to be ready to work with companies. Therefore, this article is intended to report an adaptation of a four-step problem-solving protocol as a large-group intervention method, in order to suit the needs of a Portuguese company in the IT sector, aiming at an organizational change process.

Large-Group Methods

Research on large-group methods, intended to bring innovation and change to organizations and communities, through the involvement of people in the decision making process, is well documented. Bunker and Alban (1997; 2006), Purser and Griffin (2008), and Weisbord (2012), are just a few of the authors making extensive reviews about the theoretical foundations of large-group methods.

Large-group methods are tailored to suit group interventions having between 30 and 150 participants or more (ideally 70-80), and meeting in sessions ranging from two to four days. Although large-group methods may deal with similar types of objectives, each have their own sequence of procedures. In general, sessions begin by asking the groups of eight (around tables of approximately 1,5m in diameter) for an analysis of the past and present, followed by a vision of the desirable future. This is done in order to understand the history of the organization and create the necessary tension in attaining the ideal future. The definition of strategic directions, required actions and timelines, together with follow-up procedures, generally close the sessions.

Given the involvement of all stakeholders in the same location at the same time, large-group methods allow a change to occur at a much quicker than normal pace. They also allow opportunities for conflict management, by establishing a focus on common ground rather than on differences, and promote a flat hierarchy (Garcia, 2007).

The large-group methods taken as reference were Future Search, from Weisbord and Janoff (2010), and Appreciative Inquiry (AI), from Cooperrider and Whitney (2005). These methods were chosen because of previous training, availability of referenced studies, and representativeness among the organizational change theories of second and third generation, mentioned by authors like Seo, Putnam and Bartunek (2004). The methods, as several authors agree (Beer & Walton, 1994 ; Worley, Mohrman & Nevitt, 2011), have not been subjected to any marked change over time. Also, they were the only ones where it was possible to find mergers between them (Fuller, Griffin, & Ludema, 2000), and comparisons between AI and CPS (Cabra, 2004; Peelle, 2016).

Future Search is well described in the literature (Weisbord & Janoff, 1995; 2007; 2010; 2015), and its roots go back to the early works of Fred Emery and Eric Trist, in the 1960s, founders of the self-managed work teams (Weisbord, 1992). The method brings together 60 - 70 participants for a period of 16 hours over three days. On the first day, the first two-and-a- half hours are dedicated to defining the milestones of the history of the organization. At this point, the various types of participants gather around mixed tables with stakeholders coming from different fields and experiences. This is because homogeneous groups have more difficulty in building a comprehensive picture. On the morning of the second day, participants work around tables by stakeholders, i.e., belonging to similar fields, gaining the homogeneity necessary for the construction of common scenarios. Time is devoted to the analysis of the present and future trends. The afternoon is dedicated to defining the future, in terms of the "common ground", and a plan of action is defined on the morning of the third day.

The other method taken as a reference was Appreciative Inquiry (Cooperrider & Whitney, 2005), with a similar design to Future Search, but lasting up to four days, where participants develop the work in four phases: *discovery* (interviews and stories emphasizing the strong points), *dream* (building the desired future), *design* (system changes to meet the desired changes), and *delivery* (drawing up plans to implement the changes). Much of the action takes place around interviews conducted by the participants themselves, who seek to bring out images of the future based on success stories of the organization's past. Thus, for four days, participants designated by the planning committee as representing the "complete system" in the same room (can be several hundred people) define organizational culture through stories, which will represent the reality of the organization. Ludema, Whitney, Mohr, and Griffin (2003) draw attention to the fact that the "whole system" in the room leads the participants to a feeling of being part of a larger system.

Authors related with large-group methods (Bartunek, Balogun, & Boram, 2011; Bushe & Marshak, 2016) consider classic group problem-solving approaches outdated. These authors support that, instead of the drawbacks of an approach based on problem solving, the examples of success make people concentrate on the positive aspects of the organization. This principle, as with many of the remaining ones, can be put to cause

with attempts to gather scientific data to support it (Worley, Mohrman, & Nevitt, 2011). That is why so many methods proliferate with a kind of "faith" beneath, instead of scientific considerations, and experts recognize (Bartunek & Woodman, 2015) that the urge to develop new approaches makes people forget that the classic ones continue their own way. It was precisely because of the complexity of systems and the theoretical limitations for field intervention that we made an attempt to summarize the most important principles of the various forms of intervention in their own approach. This approach reduces the duration of the meeting to less than one day, while extending the diagnosis to comprise aspects normally included in the "whole-system in the room" meeting by present large-group intervention methods.

Adoption of a Small-Group Problem-Solving Method

Following previous studies on small-group creative problem-solving procedures (Sousa et al., 2014), a four-step model was designed (see Figure 1), comprising *Objective-Finding, Problem-Definition, Action-Planning*, and the *Action* itself. The sequence of divergence (<) and convergence (>) is maintained only during the Objective-Finding and Problem-Definition steps, allowing more options to be available to choose from.

Within an orientation supported by several authors, listed in Chung and Choi (2016), which concentrates participants on action planning rather than idea production, this model focuses team members on task implementation. This is achieved mainly by devoting more time to action planning rather than problem definition and ideation, setting up tasks and responsibilities, using management control measures, establishing a communication system, follow-up coordination meetings, and final debriefing deadlines. It provides an initial structure for the group during the divergent phase of Problem-Definition, followed by an emotional linkage between members, as efforts are focused on reaching a consensus during the convergent phase, so that the group may start working as a team. Another structuring step follows during Action-Planning, when the team members' creativity is expressed during the "how to?" development of each task in the plan. During the Action phase, the establishment of an effective communication structure within the team facilitates the collective awareness of what each team member is doing.

Also, advertising the project within the organization reduces resistance to task accomplishment and increases peer pressure for the team to comply with the project's requirements.

Designating an appropriate project coordinator is determinant for the success of the project. This will help maintain a constant interface between management and the team, which is fundamental for the alignment of management objectives with the team's actions and interests.

Insert figure 1 about here

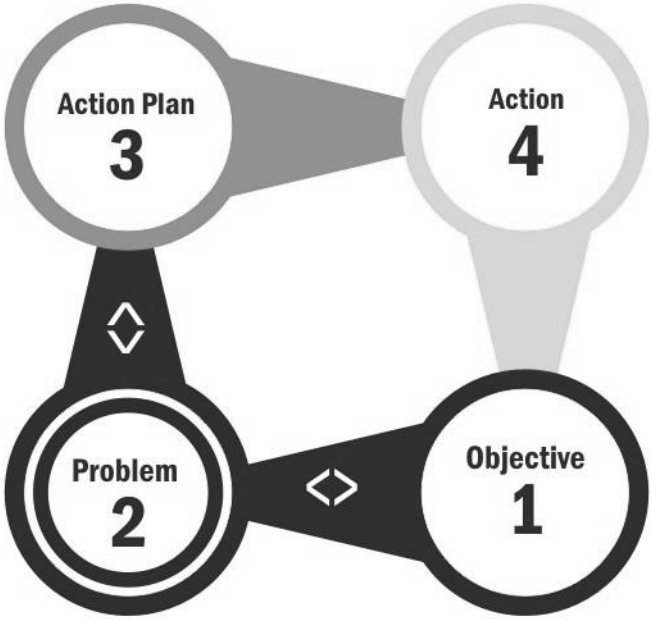

Figure 1.
The Four-Step problem-solving method (Sousa et al., 2014, p. 35)

In Objective-Finding, a *pre-consultation* (Basadur, 1994) takes place with the manager in charge (client) so that the objective, group composition, and administrative requirements may be set. During the interview, the manager is lead to produce images of causality, as advised by Bushe and Storch (2015), in such a way that the implications among objectives may become clear enough to facilitate a final choice for the team to work. Also, as suggested by Strauss (2002), group composition is set and should involve the stakeholders relevant for the project, in terms of knowledge, power or implication in

the possible outcomes. Group composition is mandatory to gather the different types of knowledge needed and reduce organizational resistance by including those who have the power to delay the project or may be affected by its outcomes.

During Problem-Definition, a balance between positive and negative emotions is created in order to favor creativity, when the team enumerates all possible barriers to reach the objective and selects a few, which are transformed in challenges rather than obstacles, by adding the expression "What are the steps needed in order to…?". This, according to Johnson (2011), can contribute to producing new ideas depending on context and how people make meaning of the situation they are in. It also transforms a potential "negative" problem into a positive statement. From the list of challenges, the group makes a selection, using the convergence tool *telescope* (Basadur, 1994), where each participant makes and justifies a few choices. The manager selects a final problem definition to work with.

In Action-Planning, the team starts by listing all tasks needed to achieve the goal and then puts them in order of execution. In coordination with the manager, each task is assigned to a sub-team that defines how the task should be executed, who will be responsible and sets the deadlines for the outputs. The last step (Action) starts after the planning session.

Adapting the Small-Group Problem-Solving Method to Work with Large Groups

This small-group problem-solving method was adapted to work with large groups, first in a study with higher education students, described in Sousa et al. (2015), aiming at bringing 62 participants, randomly arranged in ten groups, to solve the objective consisting in the preparation of a single common essay, which would involve all students. The groups discussed the issue for an hour, resulting in a consensual problem, written in a challenge format: *What are the steps needed to structure the project so that the physical constraints (e.g. difficulty in meeting) can be overcome?*. After some discussion, the groups identified five key tasks to solve the problem: (1) Define the topics and subtopics; (2) Establish the process of assigning the sub-themes to groups; (3) Create a platform for virtual communication and schedule face-to-face meetings; (4) Improve personal

knowledge (establish scheduled meeting points) ; (5) List individual skills in each of the defined sub-themes. Then the students were asked to regroup into five groups, according to personal preferences, around each of the five identified tasks, and asked to establish action plans to be implemented within the next three months. The whole forum lasted for three hours.

Approximately three months later, in a session held at the appointed day, almost all students attended the presentation, during which each component of the collective work was demonstrated. A 200-page essay, organized, written and presented with a standard of quality above average, was delivered through the virtual platform two days after the presentation. The study included the use of small-world network analysis, before and after completion of the project, in order to appreciate the evolution of the whole group. The findings of the research indicated that the actions taken after the large-group session led to an increase in the density of communications and the emergence of leaders who acted as brokers between network clusters.

The next attempt (Sousa et al., 2016), in using this small-group problem-solving method with large groups, was made in a community development context. The study aimed at assessing the effectiveness of the four-step, large-group method in project development, using a project commitment questionnaire. Nine civic forums were planned and executed in order to develop the participation of civil society in democracy. A total of 318 civil society representatives produced action plans for the celebration of the anniversary of the Portuguese Revolution (April 25th, 1974), as well as for local development. The participants, invited by local committees, had very diverse experiences: eleven per cent were former military, who participated in the revolution; fifteen per cent belonged to associative boards of sports, social support, and recreational local associations; and thirteen per cent belonged to organizations linked to artistic activities, including theater, music, museums and art galleries. About eight per cent belonged to regional state entities (six per cent to the municipalities). The local media also participated actively, representing eight per cent of the total. Teachers and students from secondary and higher education schools accounted for twenty per cent of participants, and ten per cent were professionals from various fields, such as trade unionists, banking or administration. Entrepreneurs and business managers from

different sectors of activity (seven per cent) participated, as well as retired professionals, representing eight per cent of the total.

Furthermore, in collaboration with one of the twelve administrative regions of Lisbon, a forum for the promotion of local development was organized, gathering local associations and people representing the different types of knowledge and authority in this parish of 40,000 people (e.g., police, firefighters, theatre, art galleries, libraries, music, primary, secondary and higher education schools).

The forums initially lasted for eight hours. However, given the logistical complications, dropout rate, and costs associated with the food service, we decided to reduce the sessions to half of the time, thereby avoiding lunch.

In every forum, the chosen challenges were mostly connected with the need to reach out to the younger generation and develop intergenerational projects of civic collaboration. With regard to the projects, the concentration was on events and surveys, as well as the construction of messages to be disseminated and the use of appropriate media.

The outcomes obtained demonstrated the effectiveness of the method in producing action plans in a short time and an increase in commitment to projects as a result of the sessions. However, session commitment did not reveal itself a successful predictor of the projects' execution. The forums allowed us to improve the large-group method as a tool to help civil participation in decision making and regional development. Furthermore, results did not vary depending on the session length, with the eight-hour sessions obtaining similar results to the four-hour ones.

One of the most important aspects learned by the research team was connected with the definition of which entities represent the powers and the existing knowledge in a region. However, the fact that many of the people invited were members of governance boards, and were not accompanied by their assistants, was relevant in reducing the probability of execution due to the time available and priorities these leaders had to cope with.

From these two experiments we built a large-group method, trying to bring together the advantages of both the problem-solving protocol and the large-group methods taken as references. The main similarities and differences, between the large-

group methods presented and the adapted four-step one, are indicated in Table 1. Details are described in the Method section.

Insert Table 1 about here

Table 1. *Main Similarities and Differences Between the Large-Group Methods Chosen as References (Future Search and Appreciative Inquiry), and the Four-Step, Small-Group Problem-Solving Protocol, Adapted to Large Groups*.

Procedures	Large-group methods	Adapted four-step method
Participants	30-150 or more	30-80
Duration	16-24 hours	4-6 hours
Groups	Sub-groups of 8 members each	Same
Small-group facilitators	Designated by small groups	Same
Emphasis	Reaching common ground	Setting an action plan
Past history; present and future trends	Within the session	Previous diagnosis and collection of success stories
Time for sharing small-group conclusions	Yes	Yes
Organization	Steering Committee	Same
Mixed and homogenous groups alternate	Yes	Yes

Method and Results – The "Quidgest" Case Study

This presentation describes the intervention in an IT company, aiming at an organizational change process towards a greater proactivity of employees. Management was approached after we had won first prize in a contest related with decision-making studies, set by the company, which provided the conditions for the intervention. It includes the diagnosis, the company forum, and the beginning of the implementation of the innovation projects, based on an adapted CPS protocol. To make the company diagnosis, internal and external stakeholders were interviewed, and a content analysis of the collected success stories was made in order to define the company's perceived strong points. The company forum involved the whole personnel during four hours.

Company Description

Created in 1988, Quidgest is a Portuguese IT company acting as a consultant and developer of management software. In the last few years, the size has increased up to nearly 100 coworkers. The company is organized in a matrix structure by projects, in conjunction with functional software departments. The vision is to see itself as a "software factory of the future" in terms of the production unit. The notion of "software factory" presupposes an automated and constantly improved information systems development process by immediately incorporating R & D results into the production process.

The company was a pioneer in the computerization of the Portuguese public administration and, since 1992, conceived an applications' generator called "GENIO", a platform for rapid development of comprehensive information systems, combining model-based development with automatic code generation in different programming languages. Any employee can re-generate all the codes for a project and get access to functional specifications (metadata). This ensures superior standards of agility and maintenance, increases the systems' stability, and allows the continuous monitoring of

technological developments. Each new version, automatically generated, incorporates all the improvements in the technology layer, allowing building programs in less time and with smaller and less specialized teams.

The organization has no particular system of idea management, as the company encourages concrete changes (there are money awards for initiatives), instead of just ideas for others to do. The company promotes several initiatives of participation, such as *Open Door Day*, dedicated to students in technological areas; the *Quidspark*, which brings together employees to exchange ideas and projects; The *Customer's Day*, which includes thematic seminars; The *Partner's Day*, with the same purpose but with the company's partners. Every year the company awards thematic prizes (*Q-Day*), at the national level, as the one we won.

It is in this betting on a model of collaborative operation, always looking for consistency between objectives, internal structure, culture and products, that the company aims to participate in the technological revolution of the future.

Pre-Consultation and Diagnosis

During the pre-consultation (Basadur, 1994) with the CEO, the objective for the intervention was set - *To define the challenges and actions needed to commit everyone in fighting the "common enemy"*- and the diagnosis requirements were presented. This step aimed at collecting the necessary data to let management know about the alignment between the objective defined and the views of collaborators. It also intended to replace the time devoted to defining a vision of the desirable future, followed by a diagnosis of the present, during the session, in large-group methods.

First, a review of all the documents provided by the company was made, including newsletters, quality manuals, board reports and publications in journals. Next, always in close coordination with the CEO, and after the intervention objective was set, the researchers made 32 semi-structured interviews to internal and external stakeholders, trying to detect gaps in management alignment, i.e., mismatches between management intentions, and interests and actions of employees, related with the intervention objective. For example, although management enforced a decentralized decision making process,

some interviewees considered that there was an excessive centralization, although acknowledging a close relationship with management.

Each interview lasted for 30-40 minutes, stopping when there was repetition of information already collected. After requesting the interviewee to speak about the professional experience, before and during the stay in the company, we proceeded to analyze in detail the challenges defined by management, in a conversation starting with a general *consigne*, related with the intervention objective, followed by a protocol that changed as new data was provided by the interviewees. Each interviewee suggested further interviews that were subject to management approval. Consequently the diagnosis concentrated progressively in the collection of contrasting visions regarding the objective of the intervention, related with the difficulties that some coworkers had in transforming difficulties into challenges. Even though the interviews could only be made by the researchers, as they required the knowledge about the company, necessary to maintain a conversation, the analysis of the notes taken from the interviews (there was no recording) was made by someone else other than the interviewer, in order to reduce the bias.

After reviewing the documents and the interviews, the diagnosis, concerning objectives and gaps in management alignment, was done and presented to the CEO, who maintained the intervention objective.

Success Stories.

In order to define the strong points of a future organizational culture, success stories were requested from every interviewee. The aim was to explore the most recurrent themes from success stories. The theoretical premise we used was that narrative analysis support the idea that organizations live and change by discourses (Manuti & Mininni, 2013).

We prepared our text for analysis doing what is known by *lemmatization*, which gives a reorganization only for the words (lemmas or categories) considered similar for the subsequent analyses, like ‘‘client,’’ the most frequent word into our database. Using the software T-Lab, version 8.2, the cognitive map associated to the word “client” was built, as Figure 2 illustrates. The distances refer to the frequency and proximity that the

different words are positioned in the original text, without any categorization or change. These distances (shorter distances mean higher frequencies) measure the frequency each word had in the original text when associated with the word "client". Thus, the words "new solutions", "different ways" and "doing business" indicate the coworkers' main concerns in answering the clients' challenges. A selection of these stories, representing a desirable future orientation, was included in the handout provided to everyone before the large-group forum, and shown in the conference room, so that everyone could read them. This was done to replace the in-group discussion of large-group methods, aiming at defining the desirable future.

Insert figure 2 about here

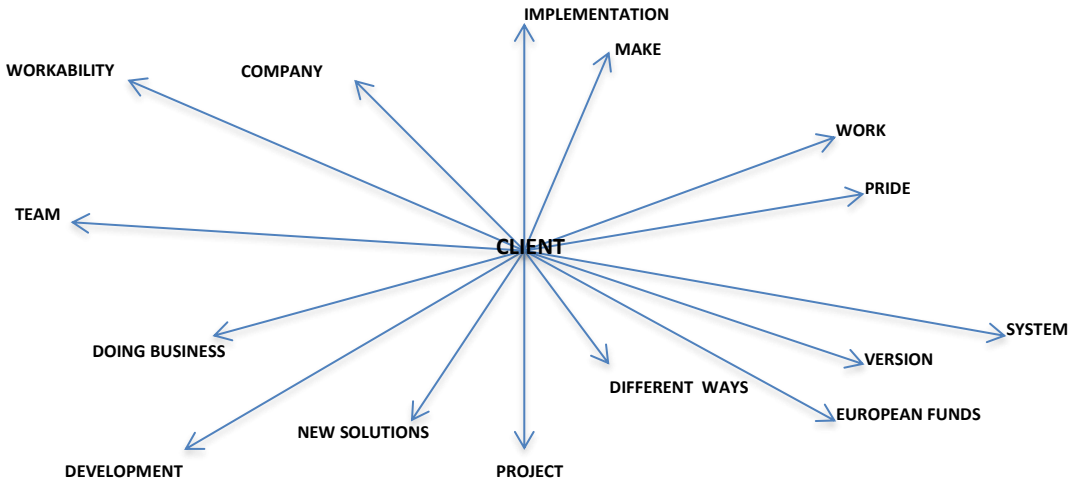

Figure 2.

Associative network of the word "client"

Preparation, Company Forum, and Follow-Up

Concerning the preparation of the company forum an organizing committee was designated, and the forum was scheduled with the participation of almost all the company members. A week before, a handout explaining the objective and the agenda of the meeting, together with the selection of success stories, was issued to everyone. After that, management made sure all coworkers knew its content.

On the appointed day, about 80 participants, randomly organized in 10 groups, took part in a four-hour session, aimed at developing projects contributing to the designated objective. In the first hour-and-a-half, the groups engaged in defining the most important challenges within the objective, followed by the selection of the CEO - *What are the steps needed to increase people's accountability?* Next, teams were asked to list projects to match this challenge, producing a large number of possible projects, which, during the break, were organized in eleven categories. After the re-start, participants were asked to choose the category each one would like to develop, thus reorganizing in eight groups (three categories were left blank). The next 60 minutes were used to define the action plan. In each round (random and stakeholder groups) a facilitator was designated by each team.

The eight projects planned were: (1) Organizational structure – area coordination; (2) Review of HR politics; (3) Organizational structure (outside area coordination); (4) Professional consideration (rewards); (5) Objectives, deadlines and priority management; (6) Work methods; (7) Competencies improvement to achieve objectives; and (8) Accountability for project delivery. For each project the group defined the tasks needed, the "how to" and "whom" for each task, and the deadlines. Even though we knew that this could cause evaluation apprehension (Bushe & Paranjpey, 2015), groups were encouraged to match tasks with the balanced scorecard used in the company, so that a quantitative evaluation of projects could be set. Follow-up meetings were scheduled and a general coordinator was designated along with a communications team.

The first follow-up session showed every team had run at least one face-to-face meeting to complete the action plan. In addition, the communications team created a virtual platform where the team members could show their work. All teams had worked on the projects but, due to the complexity of some of them, as well as the lack of expertise of team members, in matters pertaining to human resources management, it was necessary to negotiate the reduction of its scope, so they could become feasible and, therefore, the CEO met with each team facilitator to redefine each project output. However, since the distance between the imagined and the negotiated projects was sometimes very large, the facilitators encountered difficulties in making the teams accept the changes. This difficulty, together with new challenges the company had to face, led the groups to postpone some of the projects' outputs.

After the company forum, interviews were made to group coordinators, in order to collect relevant information for improving the method. Management reported that it is normal for results of this kind to be postponed for several reasons, but that each project has continued its own way.

Discussion

In line with previous attempts (Sousa et. al, 2013; 2015; 2016), it became clear that the adaptation of the small-group procedures to a large-group intervention was effective in creating organizational innovation projects in the company, in a meeting of just four hours. Indeed, although many details must be changed, the intervention was a key stage in the work that we have developed and, more importantly, enabled the design of more effective interventions. The same happened with the diagnosis, which was explicit enough to detect gaps between the management objective for the intervention, and its perception by the informal organization, so that corrective actions could be taken. Success stories' analysis also confirmed the desirable future direction, coinciding with the intentions of management. Finally, and although some of the projects were not completed within the designated period, many aspects influenced changes in the company, either resulting from the diagnosis or from the forum.

This result was very important for us, given the effort we put in its preparation and the little support we had from other cases we had studied. In fact, in our research, we have not found a single example of a merge between CPS and large-group methods. Only examples where AI and CPS were compared (Cabra, 2004; Peelle, 2016). In a way we drove a path that must have been similar to Eric Trist, Fred Emery, and Ronald Lippit, who worked with Kurt Lewin in small-group problem-solving, and moved later (1960s) to conferences with huge networks (Weisbord, 1992).

In the interviews made after the intervention to group coordinators, some assumptions proved to be right, such as:

- Project tasks did not take time out of normal work, with people saying they *think about it during travel from and to work; it is therapeutic; it is a crusade.*
- All groups thought about the association between project outputs and the indicators of the balanced scorecard, although the fear that the quantitative could detract the groups from more qualitative goals led them to abandon the reference. As a result, our doubt about "evaluation apprehension" (Bushe & Paranjpey, 2015) was clarified and we never tried to associate quantitative indicators to projects afterwards.
- In each group, several departments were represented, which gave them a good interdepartmental connection.
- There appeared to be no conflict between the temporary matrix structure set by the projects and the formal hierarchy, although the department coordinators were, in some cases, subordinate to project group coordinators. This factor represented an added value for the project and for the company.

Limitations and Implications

However, there are aspects that should be modified, including some related with the large-group method and the preparation of the company forum, such as:

• The operation of the organizing committee was not fully tested. Since the entire company participated, it was not necessary to make a preliminary selection of participants and the organizational work was done directly by management, which also appointed someone responsible for the logistics. This committee could also participate in the

selection of projects, during the large-group session, which should not be left to management, only. Indeed, management must decide on the fundamental aspects, but should also be far enough from the definition of projects to allow the teams to have freedom of decision. On the other hand, asking management to select only one problem/challenge, from the list provided by the teams, is clearly insufficient and should be extended to every problem considered important and achievable by management.

- Some teams decided to give ideas for others to do, when they were the "others".

Also some of the projects, in the area of human resource management (HRM), were difficult to execute, as team members did not have any particular HRM expertise. As there was no outside expertise, some form of decision about the viability of the projects should have been available. The greatest difficulty seems to lie in deciding whether or not initiatives about the projects should be carried out, since management cannot be burdened with decisions about projects, nor should people wait too long for decisions, or go too far, and then face management disagreement. One solution may be for the project coordinator to have a more active role in the preparation of decisions and a more direct implication of the company hierarchy in deciding on projects. Another solution might be to extend the mission of the organizing committee to work as a sort of "innovation committee", which could also be responsible for formal meetings of coordinators in the follow-up process. As there was some overlapping of work, especially in the area of processing, quality and accountability, more coordination work is needed. This has to do with the construction of an innovation process within the company, which is outside the scope of this article.

• The duration of the session (four hours) is in clear contrast with other large-group methods, but the steps taken to shorten it are well explained in previous articles (Sousa et al., 2014; 2015; 2016). Nevertheless, the time was too short, requiring additional meetings to define action plans for the projects. In this case, the physical meeting of the teams was not very difficult, due to the location and type of activity of the company; in other cases, this probably would have been more difficult. Hence, six hours instead of four seem more appropriate for the duration of the forum, in order to allow for the complete construction of action plans. This, of course, if a large break for a meal is possible to be included without loss of group stability.

• Some team facilitators failed to plan with a minimum efficiency, revealing little capacity for the job. Taking into consideration all the pros and cons, we believe that facilitators should be pre-appointed and trained to work during the session, thus forcing small changes in the development of the session. The biggest advantage will be the increase in the feasibility of the projects, which, in this case, was very weak and led to a difficult negotiation with the teams. However, the little organizational experience of participants (average age less than 30 years old) may have favored the conception of perfect organizational models, out of reality's reach.

- Some teams were too large to be coordinated by inexperienced facilitators in group work. We did not put any restriction to group size because we trusted that they would be capable of organizing themselves, following our own procedure. We now recognize this was a mistake, and that teams should not exceed five people, unless there are trained facilitators available.
- The main limitation was related to the will of management to "pull" the working groups to complete the projects. We must recall that management never asked for the intervention, but only agreed with our request, even though with permanent support. This separation between accepting and requesting makes all the difference.

Concluding Observations

The way to stay in tune with the concerns expressed by management, and the building of a solid interface between management and company teams was an important aspect of the whole process, as recommended by several authors (Howard & Associates, 1994; Beer & Walton, 1994). If it were possible to repeat the entire process, carried out in the company, we would have considered all the listed recommendations, and would have deepened the diagnosis, either in the selection of interviewees or by extending the time spent with each individual. This embodiment of the diagnosis, through which came out varied and contrasting views on the objectives set by management, was an important synthesis of information for management and for the preparation and monitoring of the intervention. Additionally, if you are able to make a ground theory out of the analysis

of the best examples of past company history, that is when the diagnosis can be itself a form of intervention, as stated by Woodman (2014).

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