Collaborative policy-making processes

J. (Josephine) Nabukenya, P. (Patrick) van Bommel, H.A. (Erik) Proper

Institute for Computing and Information Sciences, Radboud University Nijmegen
Toernooiveld 1, 6525 ED Nijmegen, The Netherlands
{J.Nabukenya, P.vanBommel, E.Proper}@cs.ru.nl

Abstract. This paper is concerned with the application of *collaboration engineering* to improve the quality of *policy-making processes*. Policies are needed to guide complex decision-making. The creation of such policies is a collaborative process. The quality of this collaboration has a profound impact on the quality of the resulting policies and the acceptance by its stakeholders. We therefore focus on the use of techniques and methods from the field of collaboration engineering to improve the quality.

We present the results of two case studies conducted on the use of collaboration engineering in the context of the policy making processes. This result also involves a generic design of a policy making process in terms of elementary constructs from collaboration engineering, which has been arrived at using the *action research* approach. Before presenting these case studies, however, some theoretical background on policy-making processes and collaboration engineering is provided.

1 Introduction

The current complexity in organizational decision-making has led to a multitude of approaches for it. Among them is the concept of *policy*. A policy [1] is a guide that establishes parameters for making decisions; it provides guidelines to channel a manager's thinking in a specific direction. The concept of policy is not limited to the world of business and government alone. In the field of IT, several forms of policies exist as well. For example, [2] discusses the notion of IT policies to govern and direct an organization's IT portfolio, while [3, 4] have used the term *architecture principle* to refer to the same notion. Another form of policy playing an increasingly important role in the field of IT are business rules as a mechanism to formalize business policies [5].

Policies are created in a policy-making process, which involves an iterative and collaborative process involving interaction amongst three broad streams of activities: problem definition, solution proposals and choice of the line of action through consensus. The core participants of a policy-making process must be involved in complex and key decision making processes themselves, if they are to be effective in representing organizational interests. Explicit policies are a key indicator for successful organizational decision-making.

The complexity of policy-making processes in organizations may be described as having to cope with large problems. Examples include: information technology,

procurement, security, software testing, etc. These problems may be affected by (i) unclear and contradictory targets set for the policy goals; (ii) policy actors being involved in one or more aspects of the process, with potentially different values/interests, perceptions of the situation, and policy preferences. Policy makers and others involved in the policy-making process need information to understand the dynamics of a particular problem and develop options for action. A policy is not made in a vacuum. It is affected by social and economic conditions, prevailing political values and the public mood at any given time, as well as the local cultural norms, among other variables.

A policy-making process is a collaborative design process whose attention is devoted to the structure of the policy, to the context and constraints (concerns) of the policy and its creation process, and the actual decisions and events that occur [6]. We aim to examine, and address, those concerns that have a collaborative nature. Such concerns include the involvement of a variety of actors resulting in a situation where multiple backgrounds, incompatible interests, and diverging areas of interest all have to be brought together to produce an acceptable policy result. Due to the collaborative nature of a policy-making process, its quality is greatly determined by a well-managed collaborative process. We look towards the field of *collaboration engineering* to be able to deal with such concerns. Collaboration engineering is concerned with the design of recurring collaborative processes using collaboration techniques and technology [7].

In short, the purpose of our paper is to establish how to realize a "good policy" in a collaborative process and how this process can be improved by support of collaboration engineering. This will take the form of a generic design of a policy making process in terms of constructs from collaboration engineering, which has been arrived at using the *action research* approach.

The remainder of this paper is structured as follows. Section 2 briefly explains the concepts of policy, policy making processes and collaboration engineering. Section 3 provides a discussion of two case studies we have performed, while Section 4 provides the conclusion as well as a discussion on further research.

2 Collaborative policy making processes

This section aims to briefly discuss the concepts of *policy*, *policy making process* and *collaboration engineering*. In the next section we look at ways of influencing the quality of policy making processes by means of collaboration engineering.

2.1 Policies

The concept of *policy* has been defined by several researchers. [8], defines a policy as "a long series of more-or-less related activities" and their consequences for those concerned rather than as a discrete decision. Rose's definition embodies the useful notion that policy is a course or pattern of activity and not simply a decision to do something. Friedrich [9], regards policy as "a proposed course of action of a person, group, or government within a given environment providing

obstacles and opportunities which the policy was proposed to utilize and overcome in an effort to reach a goal or realize an objective or a purpose." To the notion of policy as a course of action, Friedrich adds the requirement that policy is directed toward the accomplishment of some purpose or goal. Although the purpose or goal of government actions may not always be easy to discern, the idea that policy involves purposive behavior seems a necessary part of a policy definition. Policy, however, should designate what is actually done rather than what is proposed in the way of action on some matter. Anderson [10], defines policy as "a purposive course of action followed by an actor or set of actors in dealing with a problem or matter of concern". Anderson's concept of policy focuses attention on what is actually done as against what is proposed or intended, and it differentiates a *policy* from a *decision*, which is a "*choice among competing alternatives*". Eulau and Prewitt [11], define a policy as a "standing decision characterized by behavioral consistency and repetitiveness on the part of both those who make it and those who abide by it". Whether in the public or private sector, policies also can be thought of as the instruments through which societies regulate themselves and attempt to channel human behavior in acceptable directions [12].

Taking into account the various perspectives of policy, and to put our research into context, we offer the following definition to help integrate them: *a policy is a purposive course of action followed by a set of actor(s) to guide and determine present and future decisions, with an aim of realizing goals.*

2.2   Policy making processes

According to [6], the process of *policy-making* includes the manner in which problems get conceptualized and are brought to a governing body in order to be resolved. The governing body then formulates alternatives and select policy solutions; and those solutions get implemented, evaluated, and revised. Policy stages are thought of as a typology that completely describes policy decisions and actions that occur around a policy. The policy-making process "connotes temporarily, an unfolding of actions, events, and decisions that may culminate in an authoritative decision, which, at least temporarily, binds all within the jurisdiction of the governing body". In explaining policy-making process, Sabatier says that the emphasis is much more on the unfolding than it is on the authoritative decision. In examining the unfolding, attention is devoted to structure, to the context and constraints of the process, and to actual decisions and events that occur. Dunn [13] defines policy-making process as "the administrative, organizational and political activities and attitudes that shape the transformation of policy inputs into outputs and impacts". Even with the structured definitions of policy processes given, there is, it should be stressed, no one single process by which policy is made. Variations in the subject of policy will produce variations in the manner of policy-making. For instance, taxation, railroad regulation, aid to private schools, and professional licensing, are each characterized by distinguishable policy processes [10]. Sometimes the phrase *policy cycle* is used to make clear that the process is cyclical or continuous rather than a one-time set

of actions. Instead of a top-down listing of each stage, it could be presented as a series of stages linked in a circle because no policy decision or solution is ever final. Changing conditions, new information, formal evaluations, and shifting opinions often stimulate reconsideration and revision of established policies. In the real world these stages can and do overlap or are sometimes skipped. In other words, policies might be formulated before they are high on the political agenda; otherwise it would be impossible to differentiate policy formulation from legitimation.

2.3   Collaboration engineering

Essentially, collaboration engineering revolves around the use of *information and communication technologies* to enable the collaboration between people. Although organizations have tried to collaborate in their organizational processes to achieve maximum value from their efforts, achieving effective team collaboration still remains a challenge. Collaboration is the degree to which people in an organization can combine their mental efforts so as to achieve common goals [14]. Because of this challenge, organizations have resorted to using groupware technologies in order for collaboration to work for them. However, technology alone seldom is the answer. What is needed is the design of effective collaboration processes. This can be achieved by following the collaboration engineering approach which is defined [7] as "the design of re-usable collaboration processes and technologies meant to engender predictable success among practitioners of recurring mission-critical collaborative tasks". In other words, collaboration engineering addresses recurring collaboration processes that can be transferred to groups that can be self-sustaining in these processes, using collaboration techniques and technology [15].

In collaboration engineering research, collaboration engineers need to follow standard, repeatable procedures to achieve predictable success with group processes. These procedures should enable people to move from one activity to another during collaboration, and they accomplish the activity by moving through some combination of patterns of collaboration [7]. Collaboration engineering researchers identified five general patterns of collaboration to enable a group to complete a particular group activity [7]: i) *Diverge* – to move from a state of having fewer concepts to a state of having more concepts. The goal of divergence is for a group to create concepts that have not yet been considered; ii) *Converge* – to move from a state of having many concepts to a state of having a focus on, and understanding of, fewer concepts worthy of further attention. The goal of convergence is for a group to reduce their cognitive load by reducing the number of concepts they must address; iii) *Organize* – to move from less to more understanding of the relationships among the concepts. The goal of organization is to reduce the effort of a follow-on activity; iv) *Evaluate* – to move from less to more understanding of the benefit of concepts toward attaining a goal relative to one or more criteria. The goal of evaluation is to focus a discussion or inform a group's choice based on a judgment of the worth of a set of concepts with respect to a set of task-relevant criteria; v) *Build Consensus* – to move from

having less to having more agreement among stakeholders on courses of action. The goal of consensus building is to let a group of mission-critical stakeholders arrive at mutually acceptable commitments.

The patterns of collaboration do not explicitly detail how a group could conduct a recurring collaboration process, especially with teams who do not have professional facilitators at their disposal. This can be achieved by the key collaboration engineering concept: *the thinkLet*. A thinklet is defined by [7] as *"the smallest unit of intellectual capital required to create a single repeatable, predictable pattern of collaboration among people working toward a goal"*. ThinkLets can be used as conceptual building blocks in the design of collaboration processes. Some examples of thinkLets are provided in Table 1. More examples of thinkLets can e.g. be found in [16].

ThinkLet Name	Pattern of Collaboration	Purpose
DirectedBrainstorm	Generate	To generate, in parallel, a broad, diverse set of highly creative ideas in response to prompts from a moderator and the ideas contributed by team mates.
BucketSummary	Reduce and clarify	To remove redundancy and ambiguity from broad generated items.
BucketWalk	Evaluate	To review the contents of each bucket (category) to make sure that all items are appropriately placed and understood.
MoodRing	Build Consensus	To continuously track the level of consensus within the group with regard to the issue currently under discussion.

Table 1. Examples of thinkLets with their respective Collaboration Pattern

3 Case study and evaluation

In this section, we present how our research was conducted and evaluated. We will do so in terms of a description of the research approach and cases involved. We also present a description of the generic collaborative policy-making process, and relate this to the results of the case studies.

3.1 Research approach

To develop and evaluate our collaborative policy-making process, we followed the *action research* methodology process proposed by [17] where four activities that can be carried out over several iterations (in our case two) are involved. The 'Plan' activity is concerned with the exploration of the research site and the preparation of the intervention. The 'Act' activity involves actual interventions made by the researcher. The 'Observe' activity is where the collection of data, enabling evaluation, is done during and after the actual intervention. Finally, the 'Reflect' activity involves analysis of collected data and infers conclusions regarding the intervention that may feed into the 'Plan' activity of a new iteration.

We used action research because it permits highly interpretive assumptions to be made about observation; also the researcher intervenes in the problem setting, and it is performed collaboratively yet enhances the competencies of the respective actors [18]. In addition, we selected action research because it is an applied research method that can be tested in the field. Better still, it addresses the "how to" research questions. Our research aimed at developing and testing a collaborative process for policy-making, that is, a process of how to realize a quality policy in a collaborative effort. More so, the continuous design and evaluation of collaborative policy-making processes may not be easy to study in a constructed setting. Lastly, action research allowed us to evaluate and improve our problem-solving techniques or theories during a series of interventions.

Based on the action research process described above, we executed the four activities as follows: In the 'Planning' activity, we conducted interviews with four organizations that have policy-making functions and also performed a literature review to understand organizational policy-making. The data collected formed the initial requirements for the collaborative policy-making process design.

The 'Act' activity involved actual execution of the collaborative policy-making process in the field both in an industrial setting and an inexperienced environment. We applied the collaborative process with two policy types in two case organizations:

Case Organization 1 – it was used to observe the performance of the process in an industrial setting. A team of five experienced Information and Technology (IT) workers and involved in making policies for the Information Technology Department of the Ministry of Finance, Planning and Economic Development (MOFPED), Uganda used the process to develop an Information Technology (IT) policy for the department.

Case Organization 2 – it was used as an inexperienced environment. A team of sixteen people comprised of two experienced IT workers involved in IT policy-making and fourteen Master's Students (2nd year, Computer Science) at Radboud University Nijmegen (RUN), the Netherlands, used the process to develop a policy in the form of architectural principles for the student portal information system for RUN. The two experienced participants mainly assisted the students with the appropriate content.

To evaluate the performance and perception of the collaborative process by the participants, we collected and analyzed explorative data during the 'Observe' activity. Three kinds of instruments, that is, observations, interviews and questionnaires comprising of qualitative and quantitative questions, were used for data collection. The tools enabled us to collect and analyze data regarding perceived effectiveness, and efficiency of the collaborative policy process and its outcomes; perceived policy elements identification; the degree of applicability of the policy process; and policy stakeholders' satisfaction with the policy process and its outcomes.

Finally, in the 'Reflect' activity, our observations were analyzed with the aim of identifying limitations to the collaborative policy-making design process which currently we are using for ongoing research.

3.2 Collaborative policy-making process design

This section presents the design of the collaborative policy-making process. The process was designed following the collaboration engineering approach described in Section 2. Even though this approach comprises several design steps, the ones relevant to our research study included decomposing the process into collaborative activities, the classification of these activities into patterns of collaboration, selection of appropriate thinkLets to guide facilitation of the group during the execution of each activity as well as making the design process more predictable and repeatable. In the subsections below we give a description of the criteria we followed to evaluate the performance of the process, and a presentation of the final design of the process, respectively.

Evaluation criteria
The design of the collaborative process was derived from a few iterations which were based on the following design criteria:

Effectiveness − the collaborative policy-making process should enable policy-making stakeholders to achieve their goal.

Efficiency − the collaborative policy-making process should take stakeholders less time for attainment of the policy then without the use of a collaborative approach.

Degree of applicability − the extent to which the collaborative policy process can be applied to varying policy types.

Perceived policy elements identification − the collaborative policy-making process should enable stakeholders to have a common understanding of the policy elements (and their definitions).

The collaborative policy-making process was not designed from scratch. We based our design on process requirements derived from the explorative field study with four case organizations that have policy-making functions and also in concurrence with the policy process discussed by [19]. A typical policy-making process includes six stages [19]. However, our process design only involves the development/formation phase of the policy-making process; therefore it caters for a pre-use policy, that is, it does not cover used policy. The process (development/formation phase) has two main parts: part 1 – pre-development/meeting phase, and part 2 – development phase. Prior to the actual development of the policy, policy-making stakeholders have various policy meetings to gather information on the kind and the need for the policy. This phase involves discussions and agreement on the following pre-development eclements: the problem to be solved; the relevant information to be used to develop the policy; a legal framework to support the policy to be developed; the ownership of the policy; leadership positioning i.e. who is to spearhead the process; who are the stakeholders (internal and external); technical resources to facilitate the process. The second part, the development phase, involves policy stakeholders to identify and agree on policy mission objectives; then the identification of and agreement on common policy element definitions and terms that should suit the desired end state (policy

mission objectives); and finally, planning and agreeing on the means of awareness of the policy developed to its intended users. These activities (this process) should finally generate a policy document which clearly articulates solutions, and also demonstrates the awareness plan for communication/dissemination it to its intended users/owners.

Design process

The collaborative policy process underwent two iterations prior to deriving the final process design. The two iterations of the earlier versions of the process were applied in the two cases described above. The final process design is shown in Figure 1 in which we present the steps required to develop/form a policy document, and the patterns of collaboration with related thinkLets used to guide the group to execute each step.

The process is divided into two main phases, as mentioned earlier on. It starts with the policy-making stakeholders familiarizing themselves with each other and agreeing on the pre-development elements gathered in several earlier pre-meetings. The stakeholders base themselves on these elements for the actual development of the policy. The elements comprise the problem to be solved; the relevant information to be used to develop the policy; a legal framework to support the policy to be developed; the ownership of the policy; leadership positioning i.e. who is to spearhead the process; who are the stakeholders (internal and external); technical resources to facilitate the process.

In the activity that follows, in groups of two to three people, with prompts from the facilitator, the participants (policy stakeholders) are invited to brainstorm the mission objectives that they think would be relevant for the intended policy. The brainstorm activity is guided by the DirectedBrainstorm thinkLet, in which a facilitator gives prompts to the participants to stimulate them to think and take into account all the relevant objectives that would fit the intended policy, e.g. the facilitator would give such a prompt "think about five most important mission objectives that suit the policy". Each of the groups types their ideas in an MSWord file. The ideas from the respective groups are collected and displayed onto one MSWord brainstorm public list for cleaning up. The result from this activity is a brainstormed list of Policy Mission Objectives.

In the next activity, and using the FastFocus thinkLet, all the policy stakeholders together are asked to organize the brainstormed public list displayed by extracting only the Mission Objectives that they feel are Key to the policy. They do this by grouping ideas and eliminating any redundancies. They then reframe the extracted Key Mission Objectives in a few words to make a sentence. At the same time, they need to check whether the phrasing suits its intention appropriately. During this discussion, participants are allowed to also crosscheck to see if there is any important issue/Mission Objective that has not yet been posted on the public list. If this arises, a quick DirectedBrainstorm thinkLet followed by FastFocus thinkLet are performed until policy stakeholders all realize that nobody can find any important issues to add to the cleaned Mission Objectives public list. The result from this activity is a cleaned list of Key Policy Mission Objectives.
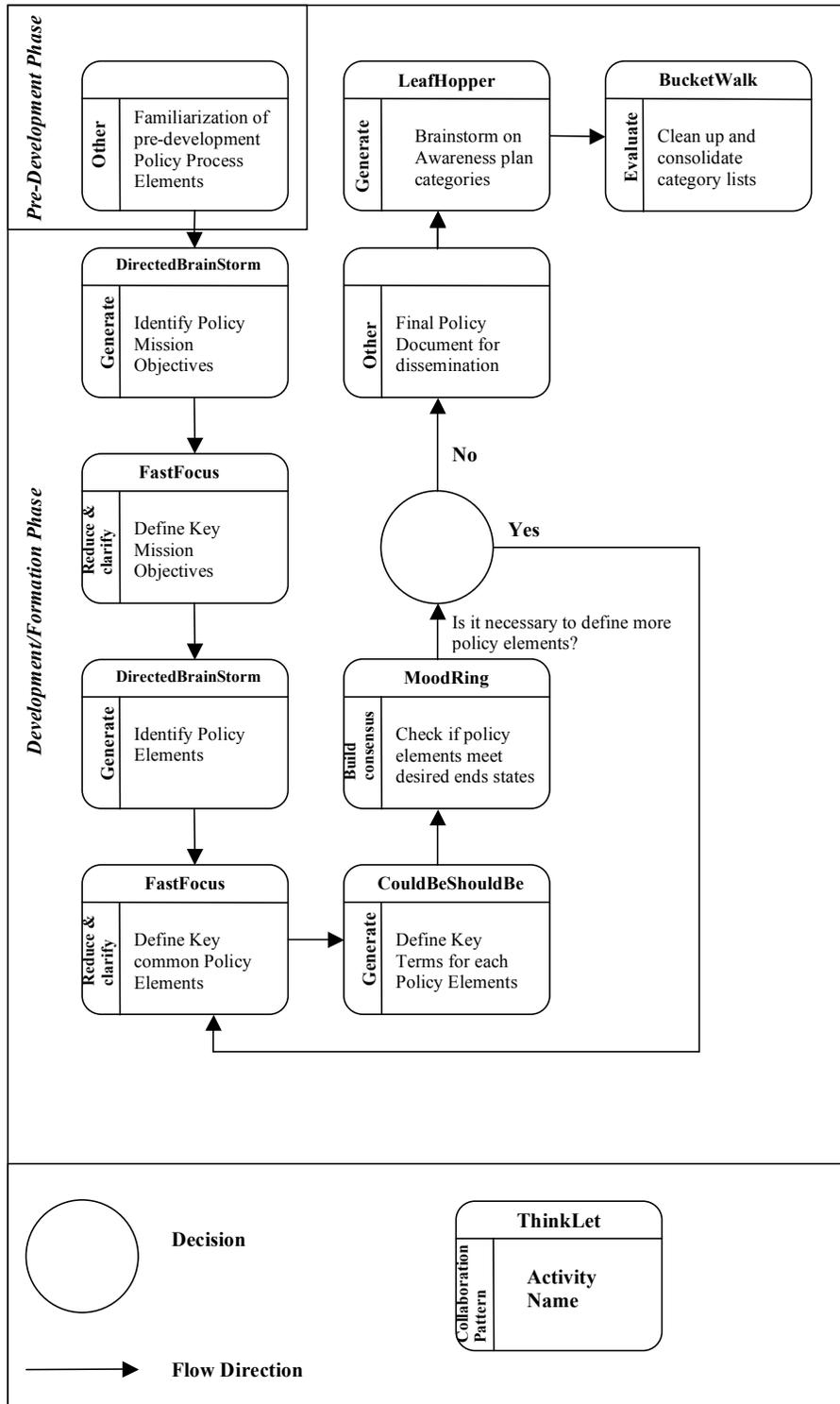
Fig. 1. Collaborative Policy-Making Process Design

Based on the resulting Key Policy Mission Objectives, the policy stakeholders are asked to identify and agree on common policy elements definitions that suit the Key Mission Objectives. This activity is guided by the DirectedBrainstorm thinkLet and followed by the FastFocus thinkLet. In their respective groups, and following the prompts from the facilitator, the policy stakeholders are stimulated to brainstorm the policy elements. They then submit these ideas to the brainstormed public list for discussion and cleaning.

Using the FastFocus thinkLet, the policy stakeholders organize the resulting brainstormed list by extracting only the common elements that they feel are Key to the policy. First, they group ideas and eliminate any redundancies. Then they reframe the extracted Key elements in a few words, while categorizing them into sections if needed, depending on the policy structure/format chosen by the stakeholders. During this time, the stakeholders keep checking whether the phrasing/definitions suit its intention appropriately. They also crosscheck to see if there is any important issue/policy element that has not yet been posted on the cleaned public list. If the need arises, again a quick DirectedBrainstorm followed by FastFocus performed until stakeholders all realize that nobody can find any important issues to add to the cleaned public list. The result of this activity is a cleaned list of Key Policy Elements.

The activity that follows involves defining the Key terms for each of the policy elements defined. Using the CouldBeShouldBe thinkLet, policy stakeholders are asked to brainstorm terms that they 'could' consider as appropriate for each of the policy elements. Based on the resulting brainstormed list of terms per each policy element, policy stakeholders are then asked to propose a term that they 'should' take as Key to each policy element. This exercise is continued until all the Key terms for each policy element are defined.

The activities above result into a Policy document. In this activity, and using the MoodRing thinkLet, policy stakeholders are required to check if the policy document meets the desired objectives for which it was intended for. They do this by voting on a YES/NO basis, where a YES is voted if the elements definitions and terms meet the desired end states and a NO if it does not meet the desired end states, and therefore certain areas need to be re-addressed. A verbal discussion to address any issues raised is conducted until all the policy stakeholders have reached some sort of consensus on the final policy document.

Finally, the policy stakeholders need to plan how they will communicate the policy document to its intended users/owners. In this activity, they are required to draw up a policy awareness plan. Two ways are pre-determined that can be used, i.e. communication and education. Following the LeafHopper thinkLet, policy stakeholders brainstorm about ways in which each of these can be addressed. In respective groups, they generate possible ideas for each awareness plan category. These are then displayed on brainstorm public lists for cleaning up.

The resulting brainstormed lists for each awareness category are evaluated to determine if there is any issue that doesn't belong to them respectively, at the same time removing any redundancies. This is achieved by using the BucketWalk

thinkLet. This activity is continuously performed until all policy stakeholders agree that all ideas are correctly placed.

The evaluation of the collaborative policy-making process design was implemented following a manual procedure. We used the Microsoft Word (MSWord) tool, an LCD projector, removable disks and voting sheets (paper-based) to implement the process. Policy stakeholders typed their ideas on an empty page in MSWord. Generated/brainstormed and cleaned-up lists as well as the final policy documents were always displayed and projected using MSWord. Results from the cases are presented in the section below.

3.3 Results

We now present the results from the two cases in which the collaborative policy-making process was applied. We collected and analyzed data regarding perceived effectiveness, and efficiency of the collaborative policy process and its outcomes; perceived policy elements identification; the degree of applicability of the policy process; and policy stakeholders' satisfaction with the policy process and its outcomes.

Efficiency
We define efficiency of the collaborative policy process as the degree to which policy-making stakeholders can reduce the amount of time required to attain a policy. To measure this, we considered the execution duration of each stage of the process; also how well the policy stakeholders understood the process tasks for successful execution; and on the whole also considered the time it took the policy stakeholders to come up with the final policy document and the awareness plan.

Based on our observations, we concluded that the policy process execution time was fairly efficient. It took about an hour and fifteen minutes to execute the process each of the workshops. That is, the policy stakeholders managed to execute the process within the duration that was assigned to each stage. This duration is comparable to the traditional way of policy formation, taking place under time pressure stemming from the fact that organizing participation in a policy procedure is hard and time consuming [6]. Even though the majority of the stakeholders felt that the process execution was efficient, not all were happy with this time length; some required that more time should have been assigned to particular activities such as policy elements identification. For example one participant said "*I believe to fully understand the process, it requires a more in-depth session*"; while another remark was "*the process is much too fast. There is little to no room for creativity*". Such remarks were taken along in the final process design.

Policy formation effectiveness
Policy formation effectiveness is defined as the extent to which the collaborative policy-making process enables policy-making stakeholders to achieve their goal. We measured policy process effectiveness by how well the policy stakeholders managed to come up with a policy at the end of the policy process execution.

From our observations, it was noted that the policy stakeholders effectively managed to form policies with respective awareness plans. This was demonstrated during the consensus stage of the process. In this stage, policy stakeholders were required to check if the policy document met the desired objectives for which it was intended for. They did this by voting on a YES/NO basis, where a YES was voted if the elements definitions and terms met the desired end states and a NO if it did not meet the desired end states. Based on the feedback from the voting sheets (see Table 2), it was observed that the policy stakeholders achieved fairly satisfactory results, that is, they managed to form a policy based on the desired end states. For those that voted a NO, a verbal discussion was held to re-address their issues. This increased consensus between the policy stakeholders.

Having arrived at a complete policy document during the consensus stage, the policy stakeholders also perceived it as having a common understanding of the policy elements identification.

	Yes	No
Case 1	4 (80%)	1 (20%)
Case 2	12 (75%)	4 (25%)

Table 2. Voting consensus results

Degree of applicability of policy process
We define this construct as the extent to which the collaborative policy process can be applied to varying policy types. To measure this, we applied the policy process to two cases with different policy types. These included formation of an Information Technology policy, and Architectural Principles for an Information System. It was observed that the policy process was flexible in terms of its applicability in formation of two different types of policies.

Policy stakeholders' satisfaction
To measure this construct, we used the 7-point Likert scale general meeting survey questionnaire where participants can strongly disagree to strongly agree. The instrument validation and theoretical underpinnings can be seen in [20]. Results in Table 3 indicate that the policy stakeholders were reasonably satisfied with the policy process outcomes, and the process by which the policies were formed.

	1	2
Satisfaction with process		
Score	4.800	3.838
Standard deviation	1.376	0.995
Satisfaction with outcome		
Score	5.160	4.363
Standard deviation	1.310	1.094

Table 3. Satisfaction with process and outcome

The policy stakeholders indicated that the results were useful to them as they gave better understanding of what issues they find important/key to the policy. They also observed this process as an all encompassing, interactive, efficient and better method of forming policies. Despite arriving at satisfactory results, some stakeholders still felt negative about the process outcomes. For example one stakeholder mentioned that *"the outcome shows that policy-making is fraught with disagreement(s) and is a political process"*.

4   Conclusions and further research

This paper focussed on the the application of *collaboration engineering* to improve the quality of *policy-making processes*. We presented the results of two case studies conducted, regarding the use of collaboration engineering in the context of a policy making processes. Based on the results, the quality of the generic policy making proces, in terms of its effectiveness, efficiency and applicability, proved to be a success. As such, the collaborative process has indeed the potential to support organizations in developing quality policies.

As a next step, we aim to more explicitly rationalize design decisions taken in policy making processes. We aim to do so by explicitly relating the goals of the policy making process (its *why*), the requirements on the process following from these goals (its *what*), the situation in which it needs to be executed (its *within*), to the construction of the policy making process (its *how*). In doing so, we will draw on past results concerning modeling processes [21, 22, 23, 24]. A policy making process can essentially be regarded as a collaborative modeling process, where the model being produced is the policy.

Furthermore, we also intend to further elaborate the issue of *perceived policy elements identification*. The applicability and longevity of a policy document is highly dependent on a shared (and committed) understanding by all stakeholders involved, including those who are to execute the policy. We are currently using techniques from conceptual modeling [25, 26, 27] to more clearly exhibit the meaning of policies by grounding the underlying concepts and semantics (see [28] for an application of this idea to *architecture principles*). Our next step will be to integrate this grounding process into policy making processes, in particular the CouldBeShouldBe and FastFocus thinkLets of the process depicted in 1.

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