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Evaluating Six Soft Approaches

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Abstract

The paper introduces and evaluates six soft approaches used in strategy development and planning. We take a planner's perspective on discussing the concepts of strategy development and planning. This means that we see strategy development and planning as learning processes based on Ackoff's interactive planning principles to be supported by soft approaches in carrying out the principles in action. These six soft approaches are suitable for supporting various steps of the strategy development and planning process. These are the SWOT analysis, the Future Workshop, the Scenario methodology, Strategic Option Development and Analysis, Strategic Choice Approach and Soft Systems Methodology. Evaluations of each methodology are carried out using a conceptual framework in which the organisation, the result, the process and the technology of the specific approach are taken into consideration. Using such a conceptual framework for evaluations of soft approaches increases the understanding of them, their transparency, and their usability in practice.

Resumen

En este artículo presentamos y evaluamos seis enfoques blandos utilizados en el desarrollo y la planificación estratégica, desde una perspectiva de planificadores, es decir, observamos el desarrollo y la planificación estratégica como procesos de aprendizaje basados en los principios de planificación interactiva de Ackoff que son respaldados por enfoques blandos en la medida en que se cumplen dichos principios. Estos seis principios blandos son válidos para respaldar diferentes fases del desarrollo y la planificación estratégica, a saber: el análisis DOFA (SWOT en inglés), el taller de Futuro, la metodología de escenarios, el análisis y desarrollo de opciones estratégicas, el enfoque de elección estratégica y la metodología de los sistemas blandos. Las evaluaciones de cada metodología se llevaron a cabo empleando un marco conceptual que tuviera en cuenta la organización, el resultado, el proceso y la tecnología de cada enfoque en concreto. Al utilizar dicho marco conceptual para evaluar los enfoques blandos obtenemos un mayor conocimiento de los mismos, de su transparencia y de su utilidad en la práctica.

1. Introduction

During the past decades, organisational strategy development and planning has been under influence of different schools of thought ranging from the business school, to the political school, and to the learning school (see Eden and Ackermann, 1998 for more detail). We take departure from the standpoint of the learning school as expressed by Mintzberg et al (1998). Here strategy development and planning in an organisation are perceived as a process in which strategy is developed through synthesis, creativity and a holistic approach, while planning is an analytical activity where tasks are decomposed into activities. Planning, therefore, begins with strategic thinking where strategies are identified and formulated and later interpreted, analysed and transformed into detailed plans (Mintzberg et al, 1998). Work with developing strategies comes from the organisation as a whole and builds on the organisation's experience and knowledge.

Closely associated with this perception of strategy development and planning is the 'interactive planning' principles formulated by Ackoff (1974). Here planning (and therefore also strategy development) is seen as a dynamic, interactive process built upon principles of participation of individuals in the organisation, co-ordination of various problem situations, integration of all levels in the organisation, and continuous planning. Adapting such principles to strategy development and planning, this process becomes a learning process.

Traditionally, operational research (OR) methods has been used to support strategy development and planning activities. There exists several books describing how OR and other methods can lead to strategy and planning from a business point of view (see for example Dyson and O'Brien, 1998; O'Brien and Dyson, 2007). Taking a planner's view on these methods, the traditional OR methods have a focus on the visible end products (strategies and plans) more than supporting learning processes.

In the last years, soft OR has developed more or less as an alternative or a complement to traditional OR (see Rosenhead and Mingers, 2001). Soft OR methodologies are characteristic in terms of supporting the involvement of organisational individuals in a never-ending learning process. About the development of OR as a decision support discipline see Keys (1995). There exists several soft OR methodologies (see Rosenhead, 1996, Rosenhead and Mingers, 2001) to be used in problem structuring, strategy development, planning and problem solving. However, in spite of a common purpose to support negotiation and participation processes and develop strategies, they have highly different ways of technically and methodologically addressing this task. Therefore, it may be difficult to get an overview of and choose the methodologies that give the most suitable support to a specific problematic situation. A comparison and evaluation framework is needed.

We use a conceptual evaluation framework which in many respects is based on recognising Ackoff's interactive planning principles (it has originally been developed by Friend and Hickling, 2005). The framework evaluates the support methods and methodologies gives to the learning processes of strategy development and planning. The evaluation builds on four dimensions: the process in which the methodology is applied, the visible and invisible products of the whole process, the organisation of the application of the methodology/method and its organisational view, and finally the technologies used as part of the process.

The purpose of this paper is to evaluate different ways of thinking strategically. We evaluate six soft approaches (methods and methodologies) using this

framework. The approaches selected are: the SWOT analysis, the Future Workshop, the Scenario Methodology, the Strategic Option Development and Analysis (SODA), the Strategic Choice Approach (SCA), and the Soft Systems Methodology (SSM). An overview over the methods, their acronyms and references can be found in Table 1. The references give an extended introduction to these approaches and to the original sources.

These specific approaches are in focus because of their broad application area in both private and public organisations and can therefore be said to be rather popular. The popularity is well documented in a high number of applications. Also, they are relatively transparent and easy to understand and use. Furthermore they all (under the right circumstances) have the characteristics of soft OR and therefore intentionally support the learning processes of strategy development and planning.

Table 1 Overview over the six approaches, their acronyms and references

Name of method	Acronym	References
Strengths/weaknesses, opportunities/threats analysis	SWOT	Dyson and O'Brien (1998)
Future Workshop	Future Workshop	Jungk and Müllert (1987)
Scenario methodology	Scenario	Dyson and O'Brien (1998)
Strategic Options Decisions Analysis	SODA	Dyson and O'Brien (1998)
Strategic Choice Approach	SCA	Friend and Hickling (2005)
Soft Systems Methodology	SSM	Rosenhead and Mingers (2001)

The paper has the following outline. *Section 2* presents the background for the process of thinking strategically. Strategy and planning are concepts defined through the principles of Ackoff's (1974) Interactive Planning. In *section 3*, we define the soft approaches and give a general outline to the traditional ways of planning methods and the soft approaches. Additionally, we outline the characteristics and features of six soft approaches outlined in Table 1. For each approach the background, directions for strategy development and planning, and the role of the planner are commented on. In *section 4* we present the general framework for evaluations of strategy development and planning approaches. The framework is based on explicit evaluations of the visible and invisible products of applying the approach in focus, on the technologies used, values whether there in the description of the approach exists directions for how the work of strategy development and planning shall be organised, and it looks upon the process itself.

Traditional OR planning methods are used as the standard of reference, which means that we obtain a picture of how the approaches differ from the traditional way of thinking. Furthermore, an overall evaluation is made of the presented soft approaches and some comments are made on the limitations of using the approaches in real life strategy development and planning. *Section 5* presents the conclusions.

2. The Conceptual Framework

2.1 Strategies and Planning

Strategy development shall here be understood as an explicit formulation and construction of reachable, feasible goals or visions for the future of an organisation (Borges *et al.*, 1998). The development, implementation and perhaps reformulation of strategies are a complex and slow task in a never-ending learning process in which all (or groups of) individuals of the organisation are involved in directly or indirectly. Planning consists of a set of co-ordinated activities that seeks to fulfill the goals for the future of the organisation and describes the actions that lead in their direction. Planning hereby becomes a learning process where each decision set is evaluated before action is taken. Hereby, the process of strategy development and planning becomes as important as the products of the process itself.

More formally, Ackoff (1974) has formulated this through the principles of interactive planning. In interactive planning, planning (and strategy development) is seen as a dynamic, interactive process that builds on the following four principles:

- *Participation* which means, that planning has value in terms of both the process it initiates and creates and the results of the plan. The planner is here defined as a facilitator that supports the participants (users, clients) in planning for themselves.
- *Co-ordination* which means, that planning is built upon the idea that messy problem situations needs to be addressed through holistic, broad views on the problem situation so the interaction between problem situations becomes more important than describing concrete actions.
- *Integration* which means, that planning must take place on every level in the organisation and this planning must be co-ordinated. Short-term goals and actions of tactical/operational planning must be co-ordinated with long term goals and actions of strategic planning.
- *Continuity* which means, that planning cannot be seen as a static act but is a social process. Plans must be re-evaluated, updated and changed continuously to address the ever changing world and the uncertainties of the future.

Following these principles, the planner involved in strategy development and planning becomes a facilitator to support the process. This is in contrast to the planning based on traditional OR methods where the planner must be an expert in the planning methods and their applications.

In practice, strategy development and planning is dependent upon the way organisations work while they solve problems and make decisions. Any organisation has a history, which means that the organisation will have a strong tendency to develop strategies in the way it has traditionally been done before. To change this routine, the organisation must be looked upon differently and be supported by approaches specially directed to this organisational view.

2.2 Methods and Methodologies

One can say that there exists two ways of supporting planning activities. There are directions on how a 'good' decision should be taken, and there are directions on how decisions are taken.

The first group of directions is referred to as planning methods while the second group is referred to as methodologies (Borges *et al.*, 1997). Planning methods are

based on descriptions of a series of steps, which makes up the method. The steps are usually described in detail and if they are followed consecutively they can be seen as a tool for solving a certain task or problem as for example applying Linear Programming for energy planning. Using a method requires commonly that the planner is an expert. The methodologies are less explicit in their directions. They are more based on a number of considerations or guidelines that the user of the methodology must know about and understand. A methodology seeks to structure and support an uncertain, undefined problem situation while the method deals with and solves a well-defined problem. Applying methodologies requires that the planner is more a facilitator than an expert.

We use the term approaches to comprehend both methods and methodologies. In this term lies no assumption of the basis of the methods and methodologies. Therefore, approaches may include methods or methodologies that cannot be placed under the umbrella of OR.

The traditional OR planning methods are based on the following problem solving process:

- acknowledgement of a problematic situation
- definition of the problem
- analysis of the problem
- identification and suggestions of alternatives for solving the problem
- comparison of the alternatives by testing them against different criteria after which the best alternative is chosen
- the best alternative is implemented.

Focus of the methods is placed on the solution or the plan. The methods do not address the internal negotiation process of the individuals and groups involved in the problem solving process but are based on rational, analytical elements in the planning.

As an alternative/complement to the traditional planning approaches, the soft methodologies were developed.

3. Soft Approaches

3.1 General outline

The idea of many soft methodologies is based on traditional OR in the sense of supporting decision-making using qualitative models. It has developed into a discipline of itself where it tries to merge problem-structuring aspects with organisational developmental aspects of organisational theory. In that respect, the soft methodologies face these aspects of problem solving that classical OR disregard. The fundamental characteristics of soft OR are (Rosenhead 1996; Rosenhead and Mingers, 2001) as follows:

- they are problem structuring more than problem solving
- typically, they operate non-linearly through a typical cyclic and dynamic group discussion process (in contradiction to the linear way of working of traditional OR methods)
- they are iteratively oriented which means that reflection and 'getting wiser' are allowed
- they are designed for use in groups of humans with different background

- they focus on explicit modelling of cause-effect connections instead of the development of organisations
- they use mathematics in limited terms
- they are transparent and relatively easy to use
- they focus on supporting evaluations more than representing them
- they are process rather than product oriented.

However, another feature is important for the characterisation, namely, the connection in which the methodology is used and the way it is applied. In most methodologies (and in some methods) lies flexibility in how to carry out the application. This means that some methods can be used as methodologies under special circumstances and vice versa (see Sørensen and Vidal, 1999b, for more comments on this). In that way, methods can be used as methodologies and obtain the characteristics mentioned above. In the following, we use the term soft approaches to comprehend both methods and methodologies that under application can be characterised by the features of soft OR methodologies.

3.2 The SWOT Analysis

The SWOT analysis is one of the simplest approaches that can be used in supporting strategy development and planning. It has the overall purpose to structure both qualitatively as quantitatively the situation a specific organisation is in, and to investigate which elements in the organisation and its surroundings that may influence on its future existence. It was originally developed and used in business organisations and is based on a business view of planning.

Going through a SWOT analysis

The analysis concentrates on the ground for the existence of the organisation, on its current situation, development of strategies, and selection of one or more strategies to implement.

The SWOT analysis can formally be described through the following steps:

1. Identify the organisation's internal strengths and weaknesses and its external options and threats. The different points are usually found by using the experience and knowledge of the individuals in the organisation through a discussion and brainstorming process.
2. If a large number of points have been identified, it may be necessary and worth while to make a qualitative evaluation of each point to prioritise the different points. For each of the points identified under the strengths and options, evaluations are carried out in terms of stability and consequence. Stability and consequence can be either significant or small. This means that for example strengths with significant consequence and stability have a higher priority than other points. Correspondingly, the weaknesses and threats are evaluated in terms of consequence and change (again on a significant – small scale).
3. The different points are then placed into the so-called SWOT matrix. If the points have been prioritised, they should be placed in the boxes after importance. The matrix can be found in figure 1.

	Internal strengths • •	**Internal weaknesses** • •
External options • •	Maxi-maxi strategies	Mini-maxi strategies
External threats • •	Maxi-mini strategies	Mini-mini strategies

Figure 1 The SWOT matrix

4. Now strategies can be formulated based on the SWOT points. In principle there are four types of strategies to formulate (see again figure 1): the strategies that maximises options and strengths (maxi-maxi), the strategies that minimises the weaknesses and maximises options (mini-maxi), strategies that maximises strengths and minimises threats (maxi-mini), and strategies that minimises both threats and weaknesses (mini-mini). In spite of the different types of strategies, they are not independent. Organisations often find themselves having a mixture of strengths, weaknesses, options and threats and therefore it is important to analyse all the above mentioned types of strategies. The strategies themselves are formulated using experience, sense and fantasy of the participants and/or the planner.
5. Finally, the strategy or strategies that seems most relevant are analysed further and/or implemented.

SWOT is a very simple matrix model for structuring and maching ideas and concepts to be able to identify strategy areas. SWOT does not specify how the problem solving process is to be carried out.

When applying the SWOT analysis it is up to the planner (and clients of the organisation) to define to the extent the approach shall be used as a method or methodology. Therefore, the planner's role can be anything from an expert to a facilitator. SWOT has been used by individuals and to support a group process or workshop.

3.3 The Future Workshop

The future workshop was developed among citizen groups and grassroots. The fundamentals behind the workshop was to provide these people with common background for formulating suggestions (strategies) for changing a problematic situation into a situation they agreed on would be improved. The suggestions were to be presented for others to decide on. The workshop builds on democratic principles, engagement, participation, and an interest for common problems.

The future workshop has been applied in a large number of cases within municipalities, youth centres, unions, etc. Also it is seen used in business organisations and firms. Through these applications and evaluations, the workshop has been modified and changed according to the situation in which it was used.

That means that there is not one 'right' way of presenting the workshop but a number of different interpretations.

The phases of the future workshop

By establishing a future workshop it is the intention to focus on a specific problematic situation, generate visions about the future and discuss how these visions can be realised. Participants of the workshop share the same problem, and have a wish to change the situation. As the name implies, a workshop is carried out. The future workshop is made up by the following five phases:

1. *The preparation phase* has the overall purpose of creating the necessary frames for the workshop so it will not be disturbed by practicalities when started. Examples on practicalities are deciding on the theme, finding locations for carrying out the workshop, finding participants, getting pens, paper, 3-M Notes blocks, etc., buying food and drinks for the participants.
2. *The critical phase* where the problem is described through criticism of each of the members of the workshop. Presenting individual critical views on the problem situation shall both broaden the theme with details, and create a common knowledge base for all participants on the problem situation. Each member of the workshop presents his/her critical items, complaints, anger or worries related to the problem. It is not allowed for others to respond to, criticise or comment on these points. After this first presentation, some points are selected for further work. Such selection may be based on prioritising the items for example by allocating points to each item (or simple voting). Hereby, the group formulates one or more themes for the remaining workshop.
3. *The fantasy phase* where positive solutions are formulated based on visions, wishes and hopes. In this phase the critical items and themes are changed into positive statements, visions and even utopias for the future. As the name implies, creativity and fantasy is used to formulate visions. Suggestions on solutions are given on a spontaneous basis and brainstorming. Prioritising the visions for future work also finishes this phase.
4. *The realistic phase* where the critical problem areas and the positive solutions are compared with the options and limitations of reality to form realistic strategies. More realistic suggestions must now be formed. The visions must be changed into real project proposals through looking at the limitations of reality and make adaptations accordingly. This takes place through discussions, more prioritisation, getting information from literature, media, etc., to get ideas of how they can be realised. Also economic aspects must be looked into as well as the expected critique or support that may follow the presentation of the suggestions. Suggestions are presented for decision-makers.
5. *The follow-up phase* where the process itself is evaluated as well as the new situation. Also the results of the workshop are to be presented to a larger crowd.

The Future Workshop does not use a specific model. It primarily focuses on the problem solving process.

Carrying out the workshop requires a planner who is a facilitator. He/she shall lead the workshop through the phases of the workshop and make sure that timeframes are held, all phases are carried out, and all individuals are heard. At the

same time he may assist as secretary for the workshop and have a limited leading role.

3.4 The Scenario Methodology

Originally, scenario analysis, scenario method, scenario writing are concepts used about certain techniques and steps leading to construction of quantitative scenarios – pictures of the future. Traditional OR methods have been used as techniques and tool. However, as time has passed, applications and new ways of thinking have given a more flexible structure to the act of creating scenarios. In some situations, the meaning of the concepts is more a flexible frame for the users to decide which tools, methods, methodologies to support and carry out different parts. Therefore, we refer to the scenario methodology to represent the flexibility more than the precise stepwise directions.

The concepts of scenario and scenario methodology have come to mean different things to different people. Here we operate with the broad definition of a scenario meaning *a description or presentation of a likely future as well as the corresponding actions (the ways) that lead to this future*.

For years, scenarios have been used in planning activities in public and private organisations. Scenarios are here used as a part of the first steps in the process leading to strategy and plans. Usage of scenarios in strategy development and planning, therefore, has several purposes:

- to find and identify priority problems (key variables) for the organisation by looking at relations between variables in the areas of focus
- to determine the central actors and their strategies as well as resources and means to make a successful project
- to describe (in scenarios) the development of a certain system in focus by taking into account the most likely developmental trends of the key variables and to look on the different actors' influence.

The Frames of the Methodology

The scenario methodology involves problem structuring, a methodological aspect in the process, and engagement between the different actors. There exists a long number of ways of structuring the problem as well as methodological approaches and techniques – it is up to the planner/participants of the scenario methodology to select which ones to use and through this choose the level of interplay between the actors. This determines whether it can be characterised as a soft approach or not. Here we shall comment on two aspects of the scenario methodology: the problem structuring, and the methodological aspects.

The problem structuring
In the problem structuring the following areas are considered:

- Approaches for describing the system in focus using either the *inductive or deductive principle*. Using the *inductive* principle implies looking at the system and its parts – it's fundamental factors – and their functions and relations are analysed. From this picture, alternative scenarios are constructed. The *deductive* principle also analyses the whole system but decomposition is not performed. Using this principle requires a large number of factors to describe alternative futures. The deductive principle is often carried out using qualitative data;

intuition and soft approaches while the inductive principle more commonly uses quantitative data, analytical thinking and traditional OR methods.

- Approaches that can take care of the dynamics of the system in focus by applying the *anticipatory or explanatory principle*. Focusing on the structuring of the dynamics in the system, the *anticipatory* approach can be used. Here one starts with a certain future picture of the system as it has more or less been decided would be the most desirable picture (could be specified from for example political goals and directions). The problem is then to finding the possible ways leading from the specific future picture to the known present situation. In the *explanatory* approach, the present situation is investigated under different sets of trends and assumptions giving a range of different future pictures of the system in focus.

The methodological aspects
Two schools of thought are behind the scenario methodology: the American school building on quantitatively oriented methods, and the French school based on more informal ways of handling the situation in a mixture of methods and methodologies, intuition, discussions and workshops. In either case the scenario methodology can technically be based on a combination of steps. The steps are directed to investigating the system (organisation or problem area), the surroundings of the system, historical trends, present situation, identifying key variables, constructing scenarios and alternative strategies. Each step can be carried out or supported technically and methodologically by various approaches.

It shall be mentioned that scenarios are constructed based on different themes, as various types and with different meanings, with varying time horizon, and in different numbers.

It is the methodological aspects used that define the role of the planner in the scenario methodology. The planner may therefore be both expert and facilitator in the process.

3.5 Strategic Option Decision and Analysis

Strategic Option Decision and Analysis (SODA) has its roots in the fields of soft OR and cognitive psychology. SODA is a way of working with a group of people and a technique for constructing cognitive maps of how people perceive and think about a problematic situation. It is used when groups of people both individually and commonly may have difficulties in defining and structuring their perception of a problematic situation.

SODA is made up by a number of concepts and theoretical perceptions about how we think and act. The concepts and theories are based on the following views:

- That each individual perceives the world subjectively.
- That the organisation is made up by processes and negotiations more than structures. Little weight is put into official power relations.
- That the planner's function is defined as being supportive in the above mentioned negotiation processes so decisions can be reached through consensus in contrast through demonstrations of power.
- That the primary tool or technique used is cognitive maps. The cognitive maps is a way of trying to grasp different ways of

thinking and to involve all partners to redefine the problem perceptions and form ground for commitment and consensus decisions.

The SODA Dynamics

SODA is technically based on the creation and analysis of cognitive maps. A cognitive map is a way of visually presenting an individual's perceptions about a problematic situation and the linkages between the different actions and consequences. As such a sort of network is formed. Cognitive maps are based on Kelly's theory on personal construct. Cognitive maps are constructed through an interview where the planner creates the map along the way.

Shortly, the process of SODA can be outlined as follows:

- Individual problem construction where each individual of the group is interviewed about the problem situation and cognitive maps are created.
- Individual problem acknowledgement where maps are analysed and each map are presented for the individuals again for discussion and acceptance. Some times another interview can be carried out.
- Group redefining the situation, which involve that a merged map is created based on the individual maps. The merged map includes perceptions of all individuals and in this way it represents all the members of the group. Through the merged map, they can commonly redefine the problem situation.
- Group consensus on a number of strategies where a negotiation process has been carried out based on the redefined problem situation, and solutions are found. It is assumed that consensus and engagement lies behind the sequence of strategies being the visible results of SODA.

The planner has a facilitative role in supporting the process. However, he also has an analysing role and hereby easily becomes in a position where he may lead the process.

It shall be mentioned that SODA is a dynamic, cyclic process that may jump between the outlined steps.

3.6 Strategic Choice Approach

The Strategic Choice Approach, SCA, is a methodology with a background in OR. It has been used especially in public organisations for strategy development and planning. SCA can be characterised as a planning methodology that centres on dealing with the uncertainty of problematic situations and decisions. SCA is carried out to support a group of decision-makers in deciding on which strategies to follow.

Through its focus on decision areas, uncertainty and criteria, SCA has common features with the field of Multicriteria Decision Aid (MCDA). However, SCA uses a structuring of the problem situation and discusses solutions through workshops while the MCDA field builds on quantitative representations and calculations for solutions.

The Modes of SCA

In SCA the planning process is divided into four modes: shaping, designing, comparing and choosing. The modes can be operated in a cyclic process where

the users of SCA can jump between the different modes. In the following the modes of SCA are referred to in a linear way. Each mode consists of a number of steps that are carried out using special techniques. The modes are:

- *Shaping.* In the shaping mode, the decision areas and problem focus is decided upon. This means that the group of participants outlines the decision areas of their planning problem, looks at their linkages and decides which ones are more urgent to focus on.
- *Designing.* The most urgent decision areas are now analysed in terms of different decision options and their interconnectedness. A special technique is used to limit the decision options by looking at their incompatibility. Decision schemes are constructed to outline the different feasible combinations of decision options to work with for the remains of the workshop.
- *Comparing.* Different criteria or comparison areas are now discussed to find out about the requirements for the strategies to construct. Assessments of the various combinations of decision options and comparisons are made.
- *Choosing.* For the combinations of decision options that look most promising, considerations to uncertainties of different types are made. Additionally, it is decided how these uncertainties can be dealt with for example by taking stepwise decisions. Action schemes and commitment packages are constructed to outline the different decisions that are made now and in the future.

It is the intention that the planner shall work as a facilitator of the process. However, the planner may have to be an expert in using the concepts and techniques of SCA to be able to support the process.

3.7 Soft Systems Methodology

Through the 1970's the Soft Systems Methodology, SSM, was developed. Since then, SSM has been modified and changed several times and it is in that way a methodology that tries to fit into the applications where it is used. Within the OR field, SSM has been called state of the art in terms of its mixture between thinking in the way the strategy and planning field traditionally has thought, namely, using systems engineering principles, and using the principles and features of soft OR.

SSM is used to analyse and improve problematic situations characterised as messy. It acknowledges that individuals have subjective views on the problematic situation (their world views) and through a learning system, they are learning about the problem, acknowledging others' views, comparing, and finding ways (strategies) to improve the situation. SSM is used in a group of individuals.

The Process of SSM

SSM works its way through mixing the real worlds' perceptions with a Systems Thinking way of working with the perceptions. It is, in short, based on the following steps:

- *Structuring and expressing the problem situation*. In this first step the unstructured problem situation is described for each participant in terms of his worldview (the German concept of Weltanschauungen is used). Rich pictures (cartoon like pictures) are constructed to visualise the way one person perceives the problematic situation.

- *Construction of verbal models.* From the rich pictures, a verbal model is constructed. The model intends to stimulate to debate and visually present what needs to be decided on. The verbal models are constructed by looking at operational activities needed to change the problematic situation, activities to monitor and control the change takes place, and the criteria for monitoring.
- Comparing and changing worldviews. Now the models are compared and used to discuss differences in perception and ways of 'solving' the problems. Hereby, accommodations to subjective worldviews take place. Another cycle in the process can then be taken or decisions on which strategies to develop to confront the problems may be decided on.

The planner is here again both the facilitator in terms of supporting the process but must also be the expert in the concepts and way of thinking that lies in the methodology.

4. Evaluations

Even though the six approaches are based on the same fundamental purpose of supporting learning processes and developing strategies and plans, they are quite different in terms of focus point, the role of the planner, involvement of the individuals in the organisation, organisational view, technologies used, etc. In order to evaluate and compare the approaches in terms of their support in specific problematic situations and to get a quick introduction to their features, and differences, an evaluation framework can be used. Here we present the framework we are using for evaluations of the approaches.

4.1 The Evaluation Framework

The evaluation framework is presented using a diamond as symbol for a specific approach to be evaluated. The diamond symbolises four central dimensions of the features of the specific approach. Figure 2 illustrates the framework.

The framework addresses the principles of Ackoff's interactive planning and therefore directs the learning process of strategy development and planning.
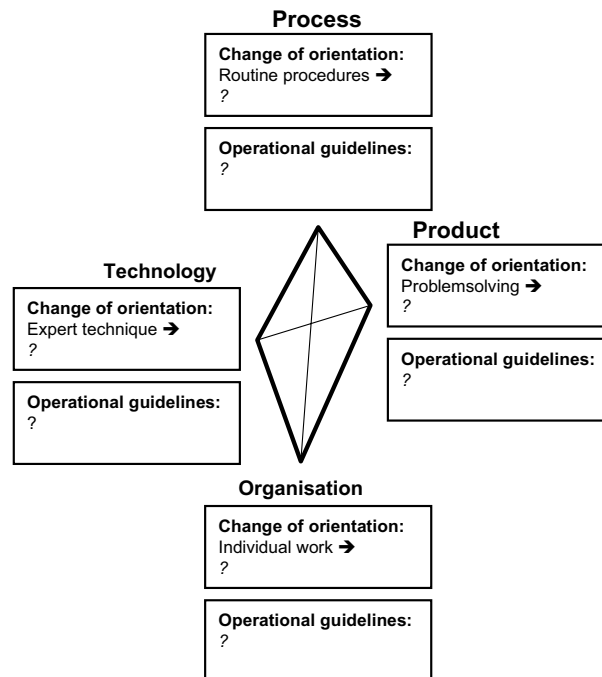
Figure 2 Overview of the dimensions of an approach (based on Friend and Hickling, 2005). The figure shows how an approach is oriented in terms of guidelines in relation to process, product, organisation and technology. For each dimension it is evaluated how the approach in focus is different from the traditional OR planning methods

The approach is evaluated in terms of the four measures: process, products, organisation and technology. The diamond symbolises that the dimensions are biased and cannot be evaluated alone. The interactive planning principles are addressed indirectly in the dimensions. Each of the dimensions shall be defined in the following.

The Process

This dimension considers whether the approach includes explicit or implicit guidelines for how the planner and/or the group of participants shall address the group's way towards obtaining visible or invisible products. 'The process' focuses on how time is used most efficiently while it at the same time is seen to that the group individuals goes through the necessary considerations in terms of reaching the wanted results of applying the approach.

The Products

Looking at strategy development and planning with the views lying in Ackoff's principles, it is clear that, products of strategy development and planning can be obtained at different levels; in terms of substance and in terms of processes. Products of substance are products, which are rather concrete and clear for the involved individuals. They can be either visible or invisible. Visible products of substance are associated with actions, policies and strategies developed as part of the process. Those are the products traditional OR methods focus on. Invisible products of substance are associated with changes in perception, the individuals themselves, have followed during and after the application. An example of invisible products of substance is an extension of individual view on the problem situation.

Products of the process are linked to the approach and the way it guides the learning process of the strategy development and planning. Visible products of the process are more or less documented commitment to be willing to change the situation, explore it and use various procedures. Invisible products of the process are the common appreciation to be willing to work with the limitations of the social, political, cultural and resourceful systems of the organisation. It is here looked upon if the approach in focus supports a process that leads to obtaining results in terms of ways of working and relating to the problem situation.

An illustrative overview of the different products can be found in figure 3.
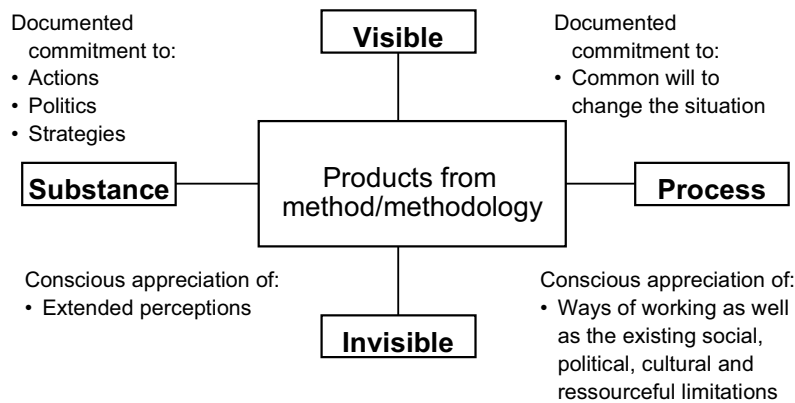
Documented commitment to: • Actions • Politics • Strategies	**Visible**	Documented commitment to: • Common will to change the situation
Substance	Products from method/methodology	**Process**
Conscious appreciation of: • Extended perceptions	**Invisible**	Conscious appreciation of: • Ways of working as well as the existing social, political, cultural and ressourceful limitations

Figure 3 Classification of products

The Organisation

The third dimension describes how the work for strategy development and planning is organised. This includes looking at the individuals and their way of being involved in the process. Hereby reflections can be made to the organisational view lying behind and inherently in the approaches. This has an important meaning in terms of the products the process will leave.

The Technology

The last dimension, the technology, refers to the 'tools' or techniques used in the process, i.e., the special structuring and perhaps programming tools such as pencils and software programmes. An evaluation of these tools and techniques is important because of their influence on the process and the individuals' possibility to understand the process and its results. The more complicated the technologies the more likely it is that the participants will have difficulties in understanding and accepting the products produced.

4.2 Evaluation of the Approaches

The framework has been used to evaluate and compare the six approaches presented in the paper. Tables 1 and 2 include a short description of each of the approaches using the concepts from the framework, information on background, and the role and importance of the planner involved.

Characteristics of	SWOT analysis	Future workshop	Scenario methodology
Background	Business	Social psychology/ sociology	OR and systems analysis
Focus	Identification of critical success factors. Match between the org. and its surroundings	Based on individual dissatisfaction, a common strategy is seeked	Formulation of strategy for the organisation
Process	No special considerations and guidelines to the process	Development process for the group participating	No special considerations and guidelines in the process
Products	Focus on visible products of substance and establishment of action oriented strategies	Products in all categories. Focus in invisible results	Focus on visible products of substance and establishment of action orientated strategies
Organisation	Carried on individually or through workshops	No special consideration to the organisation. Workshop with interactive participation	Individual or with workshops as part of the process
Technology	SWOT-matrix	Three work phases with individual and interactive participation of all involved	Construction of scenarios
Consultant function	Ranging from expert to facilitator	Facilitator	Ranging from expert to facilitator

Table 1 Overview of the evaluation of the three approaches the SWOT-analysis, future workshop and the scenario methodology

Comparing the approaches, it is clear that the SWOT analysis and the scenario methodology are close to traditional planning and OR. Both approaches are in terms of background and the linear way of working not necessarily supported by a group process. The characterisation of being soft approaches is dependent on the way they are applied both by the planner and the involved participants. Viewing objectively on the descriptions of their way of working, they have no focus on supporting a learning process, they focus on visible results of substance, can be applied individually or in groups, uses various technologies, and require a planner who must be an expert but also can be a facilitator. It is the way they are applied, and the planner and participants (and the clients/decision-makers of the organisation) who decide whether there are changes from the traditional OR methods view to the more soft approach characterisations.

Characteristics of	SODA	SCA	SSM
Background	Psychology/social psychology	OR/decision theory	Systems Engineering
Focus	Support in perception and structuring of a messy problem situation	Analytical support of depending decision areas	Structuring of a messy problem situation
Process	Learning process where dialectic thinking comes from analysing individual perceptions and these are gathered in an aggregated model	Learning process where there is a dialectic change between different ways of working	Learning process where individual world views are described and systematised
Products	Products in all categories. Special focus on invisible products	Products in all categories	Products in all categories. Special focus on invisible products
Organisation	Individual interviews and workshops	Workshops with interactive participation	Description between client-system and root definitions. Workshops with interactive participation
Technology	Cognitive maps	Different working phases with interactive participation	Systematic and organised thinking about the organisation
Consultant function	Facilitator and analyst	Facilitator and expert in methodology	Facilitator and expert in methodology

Table 2 Overview of the evaluation of the approaches SODA, SCA and SSM

The future workshop is on the other hand far from the traditional OR planning methods in especially one area: the objectivity. Throughout the whole workshop, focus is on giving room to subjectivity. Objectivity here is defined as intersubjectivity and consensus by the participants. One can say that it is the subjectivity that drives the process. Even though the workshop in some form tries to give a total description of strategy development, it is not developed or built to deal with these issues. Decision-makers must carry on work on the visible products – the strategies. The future workshop supports a learning process for the individuals participating. This support is built into the approach's way of working. Products, therefore, can be found in all four categories. However, in the idea behind the workshop lies a special focus on the invisible products. The organisation as such is not given any special consideration. It is assumed that all individuals participate without any power relations implicating the situation. It is the relatively easy understood phases that are used as technology. The future workshop requires a facilitator.

SODA support also a group process however more indirectly by focusing on the individuals and gathering their opinions on the problematic situation before a real

workshop is carried out. Through its way of working and its view on individuals in the organisation, SODA supports a learning process and gives products in all four categories. Again all participants are seen as equal members of the workshop, and there are only given consideration to the organisation by selecting the individuals for the interviews and for the workshop. The technology (the cognitive maps) in SODA is focused more on the individuals than on dealing with the group. The planner is especially important in SODA. He is the one that analyses the maps, merges maps and discusses the issues. Indirectly (or perhaps in some cases directly) he may set the outline for the workshop. The planner must be a facilitator but also an analyst and perhaps expert in using the cognitive maps.

SCA is clearly a methodology that in explicit form takes up with the traditional methods in terms of assuming full information and certainty. SCA is fundamentally developed to accept uncertainties associated with problematic situations and decisions. SCA has a very analytical way of working with the problematic situation and developing strategies. Anyhow, the SCA supports a learning process by changing between different ways of working and the cyclic view on the process. Products can be obtained in all four categories. However, the focus (in the end) is more on the visible products of substance. It is assumed that SCA is organised through a workshop with interactive participation of decision-makers. As such people are considered to be equally placed in the organisational hierarchy. SCA is dependent upon a facilitator who also must be expert in the approach and the different technologies that make up the approach.

SSM is a classical example on a soft approach. The methodology has a cyclic, iterative approach to strategy development. Focus lies on subjective values and perceptions, the problem is never solved but structured, and explicit cause-effect relations are tried modelled (however using verbal models). Even though SSM does not address uncertainties, there lies an indirect recognition of the presence of uncertainties. Through its cyclic way of working and the acknowledgement that problems are never solved but must be monitored and dealt with almost continuously, it deals with future uncertainties in the way that decisions are never definitive but can and must be changed all the time. The functionality of SSM is however dependent upon the fundamental systems based on assumptions that reflects the organisation in focus. SSM is based on principles of a learning process and focus is on the invisible products. However, products in all categories are found. The organisation as such is dealt with through the individual world-views and the descriptions of these. The way of working with the real world and then seeing systematically on things may be rather difficult for some individuals. It is, therefore, very dependent upon the planner to facilitate this process and be an expert in how the different technologies are dealt with.

4.3 Limitations

Carrying out such evaluations and using this as basis for choosing methodologies to apply for a specific situation deserves some comments on the limitations of this approach.

The dimensions of the diamond focus only on the methodology itself. This means that the evaluation and comparisons are made on the premises of the methodologies – the epistemological level only. However, the context in which the methodologies will be applied is just as important a factor for evaluation.

The context in which methodologies are applied is simply made up by a problematic situation or the case study, the methodologies, and the actors using the methodologies and their results, the planner and the clients (decision-makers,

participants in the workshops, individuals of the organisation that own the problematic situation). These four dimensions interact and it is the interactions that determines the results of the application and hereby the degree of success or failure of the strategy development and planning activities.

If methodologies are not chosen on the conditions of the problematic situation, implicit or explicit conflicts and uncertainties may raise and dominate the strategy development and planning process. There are two aspects in this. First, the methodology itself has to be suitable to the problem situation if the results of the application can be trusted. Applying a less suitable methodology to a problem can only introduce unnecessary uncertainties into the process. Second, the methodology has to fit to the problem situation, as it is perceived by the participants/decision-makers of the organisation. As it is expressed in several of the soft approaches presented here, it is clear that individuals have different background (education, experience, etc.), perceptions and world-views (to use some of the phrases from the approaches). If the methodology is chosen on the premises of the consultants/planners' perception, conflicts, uncertainties about the problem and results etc. will dominate the situation, and significantly influence the process.

In addition, the participants in the methodologies must be allowed to have influence (participation) on which methodologies to choose. Some methodologies will for some people immediately sound attractive while others find them strange, manipulating, not trustworthy, etc. If engagement and interest in the problem solving is expected of the individuals, they must have trust in the methodology and find it suitably for their situation. Otherwise, conflicts, disengagement and perhaps even denial in actively participating may be outcomes of the application. In few words methodologies should support learning processes.

The methodology itself has a role in the way the individuals interact with the consultants or planner. Existing roles between individuals and the consultant must somehow fit the roles inherently lying in the methodologies. If there for example exist a buyer – seller relationship between decision-makers and consultant, it may raise irritation, conflict, and uncertainties if a methodology is chosen with a somewhat different organisational view.

The framework constituted by the decision-makers/individuals, the planner or consultants, the methodology and problem situation can be referred to the social process framework. More detail on the social process framework and the interactions between the dimensions can be found in Sørensen *et al.* (1999).

5. Conclusions

The evaluation shows that the six soft approaches are rather different in terms of the dimensions specified above and, therefore, also in their way of supporting the learning processes of strategy development and planning. However, using the 'right' approach to the right situation, strategy development and planning becomes more effective and hopefully more successful.

Whether more suitable solutions are found using these kinds of approaches can be discussed only in terms of the context in which they are applied. No matter which approach is chosen, it will be perceived in different ways leaving parts of the problem situation unsolved or outside the scope of the methodology. Assumptions are needed at some level to deal with the problem situations and carry on strategy development and planning. However, rational, conscious actions are not enough, experience, intuition, creativity, and subjectivity are other ingredients needed in the

process. Practice has shown that it is a good idea at the beginning to start with one or several of these approaches. After some applications the learning process will develop into a situation where the group does not need a facilitator any longer and it has developed its own methodology on the basis of their experiences.

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