A Framework for Selecting Change Strategies in IT Organizations

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Abstract. In this paper we describe a framework which combines several models for organizational change. The framework enables an organization to decide which strategies will be most successful when implementing a specific change in its particular setting. The conditions for change is assessed in relation to each of the strategies for organizational change and a list-of-fit is produced, which reveals the degree to which each of the strategies fits the specific setting. The framework was developed and evaluated within a field study involving four companies in the financial sector. The IT organizations in two of these collaborated with the researchers in providing promising evaluations of the framework.

1 Introduction

The Danish Talent@IT project [26] (www.talent-it.dk) studies parameters in organizations which promote or impede changes in organizations. This has led to a model of 20 parameters in 4 categories, the *ImprovAbility*™ model [20] (see Fig. 1). The *ImprovAbility*™ model and accompanying assessment method provides an organization with a view of their strengths and weaknesses on each of these parameters.

In addition, the project studies different change approaches [25] and their relevance for improving each of the parameters of the model. An *ImprovAbility*™ assessment therefore also produces recommendations for change approaches that can be used in the specific organizational setting to improve the success of its change efforts.

Our study of change approaches employed in practice by IT practitioners and their management lead us to distinguish three types: Means (methods, techniques, and tools), Approaches (principles, practices, or conducts), Strategies (overall rationale for how changes are perceived by the organization).

Means and Approaches belong to the operational level. The selection of a change strategy, however, belongs to the top level of the organization. It is heavily influenced by the vision or goals for the change as well as by issues in the organizational culture. These issues determine the conditions that make certain change strategies successful and others a failure. In this paper, we are concerned with the design and evaluation of a framework for change strategies and a tool, which enables organizations to select among those which will be most successful, and avoid those most probable to fail.
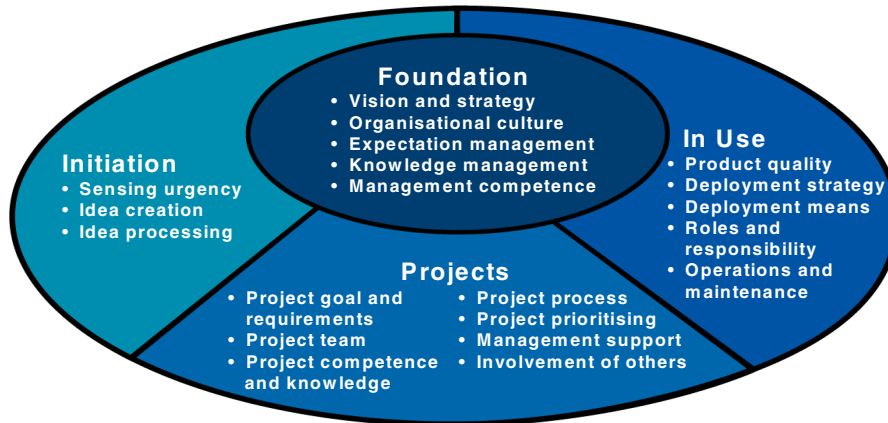
Foundation
- Vision and strategy
- Organisational culture
- Expectation management
- Knowledge management
- Management competence

In Use
- Product quality
- Deployment strategy
- Deployment means
- Roles and responsibility
- Operations and maintenance

Initiation
- Sensing urgency
- Idea creation
- Idea processing

Projects
- Project goal and requirements
- Project team
- Project competence and knowledge
- Project process
- Project prioritising
- Management support
- Involvement of others

Fig. 1. The *ImprovAbility*™ model

2   Theories and Models for Organizational Change

Since management became a discipline, the study of change has been important. Authors have written about organizational change from different perspectives including psychology, sociology and business. Academic and practitioner contributions to organizational change have been built on empirical work in many organizations. Examples of this include descriptive accounts of change, normative models to guide change processes, theoretical models for understanding and analyzing change, typologies of approaches to organizational change, and empirical studies of success and failure.

In terms of the descriptive accounts of change, three different schools of organizational thinking have provided metaphors for organizations. The first school (and oldest) descends back to the end of the 19th century where Taylor, Fayol, and Weber were key figures. Taylor invented "Scientific Management" including the key belief that "it is possible and desirable to establish, through methodological study and the application of scientific principles, the one best way of carrying out any job." ([6], p. 28). The metaphor for this is an organization as a production system where it is possible to optimize its efficiency and effectiveness. Organizational change is about optimizing planning through observation, experimentation, calculation and analysis.

In the 1930s and 1940s the second school challenged the classical view of organizations to provide a new perspective. In relation to change this perspective is characterized by [6][4] the belief that organizations are co-operative, social systems rather than mechanical ones, where people seek to meet their emotional needs. So the metaphor for an organization is a (large) group of people with an organizational culture and visible communication and interaction processes between them.

The 3rd school of thought has been called the political-emergent perspective [6][4]. It is characterized by the belief that organizations and change are shaped by the interests and commitments of individuals. It is also characterized by the belief that decisions often arise from power-struggles between special-interest groups or coalitions. "Organizations are not machines, even though some of those running them would dearly like them to be so. They are communities of people, and therefore behave just

like other communities. They compete amongst themselves for power and resources; there are differences of opinion and of values, conflicts of priorities and goals" [11].

An interesting approach to combining change strategies is found in Huy [12], who identifies four ideal types of interventions. He distinguishes between episodic and continuous change. Changing formal structures is an episodic change involving something tangible. Thus the ideal type of change will be "commanding". He suggests that every ideal type is relatively more effective than the other ideal types. For example, the "engineering" intervention is relatively best at changing work processes.

Organizational change management thought has now developed so many approaches to change that no one approach can claim that it is suitable for all organizational goals and settings. There is a need for analysis of available approaches in developing a particular organizational change strategy. However, few (if any) comprehensive analytical tools are available to support this analysis. The contingency approach exemplified by Huy [12] provides the right direction, but its two-by-two analytical structure is simplistic compared to the complexity of most practical settings.

3   A Framework for Selecting Organizational Change Strategies

How can an organization select the best change strategy from the abundance of different foundational theories for organizational change? Each theory has its advocates and adherents, and there is little comparative research to aid the selection. The theories are so varied that comparisons are usually drawn between only a few alternatives [24]. Our research focuses on this selection issue, the lack of formulated tools to help organizational change managers to select from these change theories. Our intention is to improve the ability for organizational change managers to rationally select the most appropriate change strategies.

In connection with our survey of the organizational change literature, we conducted a number of search conferences involving participants from the companies in the Talent@IT consortium in order to assemble a catalogue of change approaches, which have been used successfully in practice. From the search conferences we identified a number of high-level overall approaches. We analyzed them to determine their distinguishing characteristics and related them to theories in literature. We focused on the essential goals of each change strategy (the ends) and the essential processes (the means), and refined them into ten prominent change strategies (Table 1).

4   Development of a Change Strategy Selection Tool

Following this analysis, we set out to create a tool to guide change managers in evaluating and choosing which of the ten change strategies that would be most appropriate in an actual organizational setting. For each of the ten organizational change strategies in Table 1 we formulated a number of assertions that would reveal in a given organizational setting to which degree the conditions were present. E.g. for the change strategy called "Commanding," we formulated the following assertions:

– Right now we need change to happen fast
– It is primarily organizational structures that need to be changed
– In the past we have had successes in requiring or dictating change

Table 1. An overview of the ten organizational change strategies

Strategy	Definition	Conditions	Literature
Commanding	Change is driven and dictated by (top) management. Management takes on the roles as owner, sponsor and change agents.	*Where* formal structures needs change. *Where* change is needed fast	[12] the approach called Commanding
Employee driven	Change is driven from the bottom of the organizational hierarchy when needs for change arise among employees.	*Where* the need for change arises among the employees. *Where* the result is more important than the process; there is no need for a standardized approach. *Where* an open management style allows change to arise from the bottom.	[1] on a grassroots approach. [13], [14] on participatory design
Exploration	Change is driven by the need for flexibility, agility, or a need to explore new markets, technology or customer groups.	*Where* dynamic and complex surroundings make it important to explore opportunities.	[3], [17]
Learning driven	Change is driven by a focus on organizational learning, individual learning and what creates new attitudes and behavior.	*Where* employees learn from the experience of others. *Where* there is a need for change in attitudes and/or behavior. *Where* relationships between means and goals are unclear.	[12] the approach called Teaching
Metrics driven	Change is driven by metrics and measurements	*Where* there are relatively stable surroundings so measurements from the past can be used to decide the future. *Where* the result of change is measurable	Total Quality Management thinking [18]. Six Sigma thinking [19]
Optionality	Change is driven by the motivation and need of the individual or group. It is to a large degree optional whether the individual takes the innovation into use	*Where* target group is very diverse and has large individual or contextual differences. *Where* individuals that should (could) change are highly educated, very knowledgeable and self-aware.	[21] studies groups that took innovations into use voluntarily.
Production organized	Change is driven by the need for optimization and/or cost reduction	*Where* you have many homogeneous resources and workflows. *Where* you have relatively stable surroundings.	[3] Scientific Management. [12] the approach called Engineering
Reengineering	Change is driven by fundamentally rethinking and redesigning the organization to achieve dramatic improvements	*Where* a need exists for major change, e.g. when the organization has ground to a halt. *Where* nothing new happens. *Where* decisions are made but not carried out. *Where* a crisis is eminent.	[2],[5],[8], [9],[10], [15],[16],[27]
Socializing	Change in organizational capabilities is driven by working through social relationships. Diffusion of innovations happens through personal contacts rather than through plans and dictates.	*Where* organizational skills and capabilities needs to be developed. *Where* no unhealthy power struggles occur (so people *can* talk). *Where* employees that can be exemplars are available.	[12] the approach called Socializing
Specialist driven	Change is driven by specialists, either with professional, technical, or domain knowledge.	*Where* work has vast complexity and variety so there really is a need for special knowledge. *Where* there is access to necessary specialists, eventually by in-sourcing them.	[7],[17] especially adhocracy, [22],[23]

And for the change approach called "Optionality," we formulated the assertions:

– Our employees are self-aware and always have an opinion
– We have very knowledgeable employees that know their areas well
– There are vast differences between the tasks of different employee

All of the assertions were formulated in a number of statements which represent expressions of the conditions for implementing change in relation to the organizational setting, the employees, the change ahead, and the current use of metrics. The statements were assembled into a query form where managers on a five level scale can express their degree of agreement or disagreement with the statements. When the query form is filled in by the management of an organization, the conditions for change in that organization can be compared to the conditions for each of the ten change strategies (Table 1). The fit of each is measured by the degree (0-100%) to which these conditions are present in the particular organization. A fit (score) calculated around 50% represents an indeterminate value. A fit calculated above 70% means that the corresponding change strategy fits the organization well (will be successful). On the other hand a score below 30% means that the corresponding change strategy doesn't fit the organization at all (should not be used).

5   Evaluation of the Framework and Tool

The framework for selecting change strategies was developed and evaluated within a field research study by a consortium (Talent@IT) involving two research institutions and four financial companies. When the parameters in the *ImprovAbility™* model (Fig. 1) that promote or impede change had been extracted from interviews with the partners and literature, we were ready to evaluate the model and the *ImprovAbility™* assessment method at the partner companies. The framework for selecting change strategies presented in this paper was included in two of these evaluations.

We asked the management group in the IT Division of the companies to fill out the query form. First they worked individually and afterwards we facilitated a discussion of any major differences in the individual assessments. For example, if one manager said "agree" to the assertion "In the past we have had successes in requiring or dictating change" while another manager said "partly disagree", then we brought out the difference in the discussion and facilitated the attainment of an agreement.

From the evaluations we obtained the following two list-of-fits (Table 2) detailing the degree of fit for each of the ten change strategies to the two organizations' vision or goals for change and the organizational setting. The application of the framework led in both companies to recommendations that combined the two best-fitting change strategies and strong advice against the least-fitting change strategy.

In both companies the management of the IT Division found the results quite positive and considered them very useful. In Company A the CIO called the results a major "Aha!" experience, and compared it to his wearisome exchanges with previous consultants who asked him to "run around with a box of matches" to establish a burning platform ("Reengineering"). The recommendations at Company B led to a discussion about whether the "Optionality" and "Commanding" approaches can coexist. The IT managers agreed that they would use the "Optionality" strategy on those

many change initiatives which are driven by the individual's or group's need and motivation. They would use the "Commanding" strategy on only few (2-3) initiatives where they really needed to drive the change (e.g. because change was needed fast).

Table 2. The degree of fit for each of the ten change strategies in the evaluations

Company A		Company B	
60%	Socializing	71 %	Optionality
60%	Learning driven	65 %	Commanding
56%	Production organized	59 %	Socializing
55%	Employee driven	58 %	Production organized
54%	Optionality	56 %	Specialist driven
42%	Metrics driven	40 %	Metrics driven
37.5%	Specialist driven	34 %	Learning driven
35%	Exploration	29 %	Exploration
34,5%	Commanding	28 %	Reengineering
31%	Reengineering	18 %	Employee driven

6   Conclusion

In this paper we presented a framework and a tool to support the selection of an organizational change strategy. We developed a framework that binds together ten well-known organizational change strategies into a prescriptive recommendation for a cohesive and suitable change strategy for a particular organization's unique situation. The change strategies to be prescribed develop from a list-of-fit that indicates the relative suitability of each of the ten strategies to the organization's vision and setting.

The framework and tool was evaluated in two IT organizations in the Talent@IT consortium [26] (www.talent-it.dk). They considered the results quite positive and very useful. The framework evidently leads to operational management decisions about the selection of a suitable change strategy in a particular organizational setting.

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