

## Change Management- Final Report

### 0. Introduction

The following report comprises a collection of theories distributed within themes providing synthesis in relation to other articles within the specific topic. Furthermore, the report aims to exemplify the usage of theories across the case study of The Architectural Change Process.

### 1. Strategic Approaches and Implementation of Technological Innovations

Adopting new innovations or changes in the previous fundamentals requires a set approach on successful application of the changes, this is reflected in the theories of Klein and Sorra, Orlikowski and Hofman, Mintzberg and Waters, and Orlikowski and Gash. Firstly, Klein and Sorra represent this via a model of Determinants and Consequences of Implementation Effectiveness, see *figure 1*.

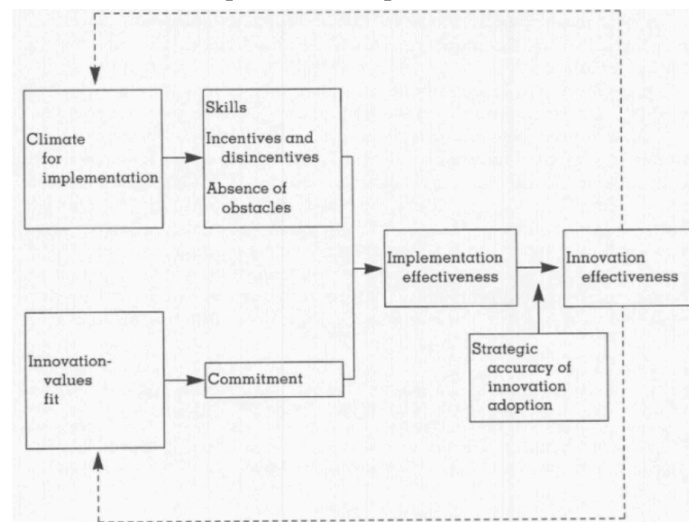


Figure 1. Determinants and Consequences of Implementation Effectiveness (Klein & Sorra, 1996)

The model involves 2 main determinants that guide innovation, climate for implementation and innovation-values fit. Climate for implementation involves understanding the whole organisation's intent to bring the change in terms of the skills, incentives required to achieve it. The higher the support towards it leads to a more successful implementation of the innovation. While, innovation-values fit is regarding how the innovation fits the organisation's values which will dictate the success through the commitment of fellow members affecting the effectiveness of incorporating the innovation (Klein & Sorra, 1996). On the other hand, Orlikowski and Gash provide "Technological Frames" which give insight of members' interaction with tech in an organisation. The frame includes three domains that dictate the members' incongruity and efficiency of an organisation. To begin with, *Nature of technology* revolves around people's understanding of tech and its abilities. *Tech strategy* involves members' understanding for the adoption of the given technology, and *Tech in use* is regarding the understanding of everyday utilisation of the tech adopted (Orlikowski & Gash, 1994).

Orlikowski & Hofman's improvisational model of change management over time, a model that rests on two assumptions: that technological innovation is an ongoing process and the changes made during the process cannot be anticipated before time. The following provides a linear outlook in respect to time with an initial anticipated change of technological matter that further down time causes

emergent changes (which are unpredictable leading to continuous cycle of changes) and opportunity based changes to incorporate the technological change (Orlikowski & Hofman, 1997). Similarities can also be drawn to Mintzberg and Waters' types of strategies model also creating a flow beginning with intended strategies to tackle the change further develops to strategies being unrealised, deliberate, and emergent. This includes, outflow of unrealised strategies being removed due to factors affecting the completion of change, deliberate strategies are the ones taken from the intended strategies which can be implemented, and emergent strategies is development of new strategies created upon events occurring during the process. Finally, the resultant of deliberate and emergent strategies is known as the realised strategies which are the planned and executed sets that are used in the process of change management (Mintzberg & Waters, 1985).

The theories stated above encompasses the theme of strategic approaches and implementation of technological innovation and can be represented in the case of company B. Klein and Sorra's model highlights this through the two key factors for innovation as "innovation value fit" and "climate for implementation" which can also be reflected through Orlikowski and Gash's frames of "nature of tech", "tech strategies", and "tech in use". This is because both require an understanding of the current state of the innovation and the drivers for change that can take place with backing of the organisation. To incorporate this changes and strategies need to be applied, represented by Orlikowski and Hofman, and Mintzberg and Waters respectively due to the need of adaptation in the organisation to drive the technological innovation which suits the structure. The theme can be exemplified by Company B due to the possible requirement of architectural change of the data router. Initially, there existed a clear strategy aimed at enhancing memory efficiency, similar to the implementation climate described by Klein and Sorra. However, as the software architecture team made individual modifications and merged to main, the process transitioned towards emergent change due to resistance and insufficient support, affecting aspects of commitment and organisation effectiveness in relevant theories. The scenario could benefit from the inclusion of emergent strategy and changes that follow an iterative pattern to avoid the negligence towards the solution for the wider spectrum of the organisation (Nedstam, Karlsson, & Höst, 2004).

## 2. Leadership and Transformation Learning in Change Management

Change in leadership can often lead to being successful rather than changes in other aspects such as training, technology, etc. This can be seen in the theories of Gill, Tjørnehøj and Mathiassen, and Weinberg. Firstly, Gill provides a model to dictate change in leadership through components of: vision, value and culture, strategy, empowerment, motivation and inspiration. Vision encompasses giving a desired outcome; Values and culture aim to provide support within a team to be able to guide to the vision pictured. Strategy is the plan of action which incorporates the vision while keeping in mind the values of the organisation, while also providing empowerment to individuals to have accountability and active participation. Finally, motivation and inspiration produces encouragement to stay on path to the final goal (Gill, 2010). Conversely, Smith's research of an iterative way of learning is through single and double loop learning. Single loop learning consists of fixing detected issues with no regards to the underlying values, ethics, and set rules of the organisation which are taken for granted. On the other hand, double loop learning counteracts that by delving deeper to discover fundamental issues of the organisation in order to fix the given issue reflecting a greater level of judgement to achieve change (Smith, 2001).

The learnings for transformation can be extracted from the text of Tjørnehøj and Mathiassen which describes the concept of control and drift. Control is regarding having a set structure

developing an order in the organisation, while drift is based on unplanned adaptation to the process. The notion revolves around leadership roles is to balance the two acts of control and drift (Tjørnehøj & Mathiassen, 2008). Additionally, Weinberg's book *Quality Software Management* consists of major fleets of change management theories; the focus is on chapter 2 and 3 which is regarding the Satir change model. It can be described in 4 stages and be represented by performance over time, in a graph shown in *figure 2*.

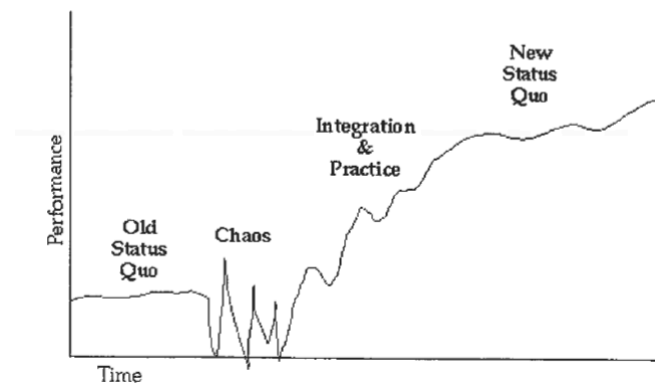


Figure 2. Satir Change Model (Weinberg, 1997)

The given model represents acceleration in performance upon a change/transition though through various ups and downs. To begin with, the old status quo is the given environment of the organisation at a given time before introducing any relevant change. The change is introduced within the chaos stage which causes disruption reflected by the fluctuation on the model affecting the performance. Though, with the right integration and practice with the help of the management and core members it can help with an uptrend in performance over time leading to a new status quo (the new stable stage) (Weinberg, 1997).

The theories of Gill, Tjørnehøj and Mathiassen, Smith, and Weinberg converge around the theme of leadership and transformation learning in change management. Gill's model provides learning due to the various leadership components which provides stepping stones for the management to alter aspects based on learning such as vision, values, and strategies. This is similar to Tjørnehøj and Mathiassen concept of control and drift, where the learnings can be encountered within the creating balance of them. Where the vision and other components can help in understanding how much there is control or drift (opportunity to get lenient) provided where in the spectrum the organisation is at in its development. Weinberg's Satir change model gives a lean way to understand how well the company rebounds from the lack of performance for example, during the chaos stage and leading towards stability. Based on the leadership changes and following through with its values can lead to stability of achieving a new status quo. Finally, Smith provides an opportunity of learning through the single and double loop. Where, specifically, the double loop provides developing deeper into the ethics and values that dictate transformation and learning from previous experiences to alter it for future.

The theme is exemplified by Company A where leadership learnings were occurring during addition of legacy protocols. The need to provide legacy protocols involved both planned (control) elements through feasibility studies and emergent (drift) aspects as multiple departments independently developed the protocols. Furthermore, the double loop can be associated to reflect on the processes that a department used compared to others and reflect on changes to aid better

performance. Shifting the focus to the Satir change model where the need to elevate the performance over time involves iterative improvement to the leadership to allow the teams to grow and provide the right needs to help the process of producing the protocols achieving a new status quo. To conclude, the growth of Company A to achieve the goal of providing legacy protocols set components can be used to learn leadership or find areas of improvements such as motivation, vision, and empowerment to name a few which can dictate the final outcome (Nedstam, Karlsson, & Höst, 2004).

### 3. Continuous Cyclical Approach to be Successful at Various Scale of Change Management

The aim of Kotter's, Burnes', Van de Ven & Poole's, and Weick & Quinn's theories is to provide an iterative structure that alters or repeats the segments to provide a suitable approach for change management. To begin with Kotter introduced the 8 steps to transforming your organisation and includes the following steps: Establishing sense of urgency, Forming a powerful guiding coalition, Creating a vision, Communicating the vision, Empowering others to act on the vision, Planning for creating short-term wins, Consolidating improvements and producing still more change, and institutionalising new approaches (Kotter, 2007). On the other hand, Burnes provides a 3 step model of change defined by unfreeze (recognising change is needed at any particular scale), move (continual research and action towards the change), and freeze (stabilising at the new desired stage) (Burnes, 2004).

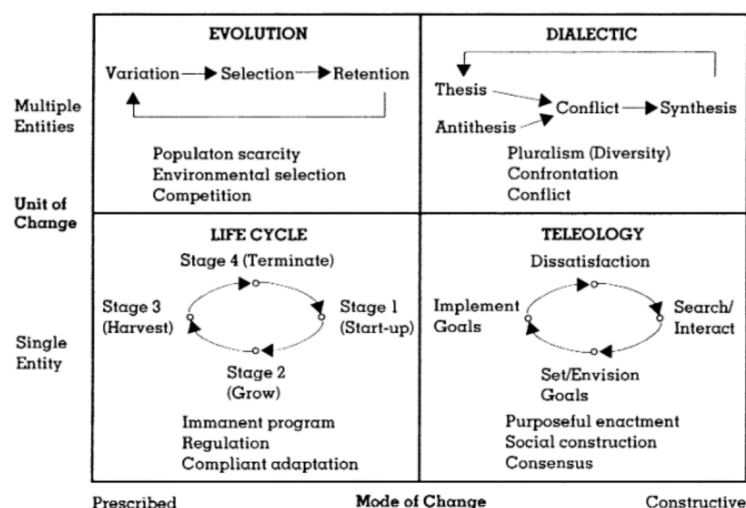


Figure 3. 4 Ideal-type development theories (Van de Ven & Poole, 1995)

To continue, Van de Ven & Poole articulated four ideal-type development theories working as motors to provide change. The four theories include Evolution, Dialectic, Life cycle, and Teleology as illustrated in *figure 3* (Van de Ven & Poole, 1995). Additionally, Weick & Quinn provide a comparison between episodic and continuous change. Episodic change can be described in Burnes' three steps as it follows the sequence unfreeze-transition-refreeze, whereas continuous change follows the sequence freeze-rebalance-unfreeze. This distinction highlights the different tempos and patterns of change, where episodic change is regarded as infrequent and intentional, while continuous change is ongoing and cumulative towards a given goal (Weick & Quinn, 1999).

The continuous improvement through the cycles described in theories shows the need for intent, action, and evaluation for further changes. This can be described in the case of Company A (given name for industrial partners of LUCAS) (Nedstam, Karlsson, & Höst, 2004). To begin with the instantiation of a reason for change can be represented in each of 3 theories, as upon acquisition of

another company a requirement of supporting new and legacy protocols to be in challenge with the competitors. In terms of the theories it is represented by the first step of Kotter's (sense of urgency), as well as acts as the unfreeze stage. In the 4 ideal-type development, it can be described as the Teleology theory due to the set goal in mind and the need for purposeful cooperation between the parties/ respective teams. Furthermore, the implementation proposals along with pre-studying by the teams provide vision and guidance leading to clear implementation steps at frequent rate (Nedstam, Karlsson, & Höst, 2004). The second stage can be incorporated within the middle steps of Kotter's 8 steps (consisting of creating the visions and aiding in short-term wins). Burnes' move step illustrates the research and application stage which leads to progression towards the aim suggested in the previous step. Teleology incorporates the implement goals stage showing advancements. Company A can represent this via incorporation of either new protocols or solving legacy protocols.

The final section involves the end of an iteration and further opportunity of improvement and addition of further protocols at later releases. The cyclical effect takes place in all the theories at various stages, Kotter's 7th step involves consolidating changes either to complete the specific task or to provide a new objective creating a loop after finishing the 8th step to iterate back to the first step of sense of urgency. This is also reflected in the move stage of Burnes' model before concluding to the freeze step. As the move step is an iterative process of learning and applying till a level of stability is achieved to freeze at and start a complete new loop with a different guidance for unfreezing. Teleology proposes the circular model through being iterative as well as upon dissatisfaction learning and changes are applied to the goals to aim at it further. To summarise through the vision of Weick and Quinn, it provides the impact of continuous changes leading to a smoother graduation of Company A to incorporate the protocols (Nedstam, Karlsson, & Höst, 2004).

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