

ABSTRACT

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Organizations need to change constantly for their survival and success, and project management has been extensively used to implement organizational change. However, studies show only less than 20 percent of organizational change projects actually succeed. This may indicate the lack of a valid model for project managers to successfully implement and manage organizational change projects since what is currently available is a wide range of organizational change models that neither are in a project management context nor pay adequate emphasis on the people-side of change. Under these circumstances, this paper has attempted to build an integrated change model in a project management context. To construct such a change model, we integrates widely cited change models in the organizational change field and the Transtheoretical Model (TTM) (Prochaska, DiClemente, 1984, 1994) in the individual behavior change field with the project management process groups (PMI, 2008).

AN INTEGRATED CHANGE MODEL IN PROJECT MANAGEMENT

By

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Chapter 1: Introduction

Section 1 Executive Summary

Facing rapid changes in the external environment, organizations need to change constantly for their survival and success. As a result, change becomes an ever-present feature of organizational life, both at operational and strategic levels (Burnes, 2004). Under these circumstances, studying how to implement organizational changes becomes an important subject across business, engineering, and project management.

Project management has been recognized as a powerful and flexible management approach to implementing organizational change since the last decade (Laszlo, 1999; Pinto, Rouhiainen, 2001; Hebert, 2002). Thus, organizational change could be an important topic in project management research, although it still has not been the focus of researchers in the field. This paper is an attempt to analyze organizational change from the viewpoint of project management. It will give useful insights for project managers leading organizational change projects.

Even with the use of project management, not all organizational change projects end in success. Or rather, most of them fail. Studies show only less than 20 percent of organizational change projects actually succeed (The Standish Group, 1999; Cicmil, 1999; Collyer, 2000; Haines, Aller-Stead & Mckinlay, 2005). With the failures to successfully implement change, scholars and consultants have jumped to provide prescriptions by creating various organizational change models. However, few of those models have been developed in a project management context.

This paper fills such a research gap by developing an integrated change model in a project context so that project managers can have a road map to improve their effectiveness in leading organizational change projects. To do so, we first review change models in the organizational change field as they indicate how and why organizational change unfolds and what processes are likely to lead to successful change. We then try to identify the most significant organizational change model and put it in a project management context. After studying 25 organizational change models (Table 1) that were published in any of the 13 selected journals (Table 2) between 1989 and 2009, we find that there is no broad and widely accepted organizational change model, and all the models ignore an individual's readiness for change which is the core of organizational change (Porrás, Robertson, 1992). Understanding an individual's readiness for change is important as successful organizational change always requires individuals to get ready for the change and alter their current behavior patterns. Under the circumstances, it seems better to build an integrated change model in project management by integrating widely cited change models in the organizational change field and the Transtheoretic Model (TTM) (Prochaska et al., 1983, 1994, 2000) in the individual behavior change field with the project management process groups (PMI, 2008). The TTM has been recognized as the most influential model in the individual behavior change field to study an individual's readiness for change (Pendleburg, 1996).

To build an integrated change model in project management, we divide the paper into nine sections. Section 1 gives a brief introduction of the paper. Section 2 defines the concepts of organizational change. Section 3 identifies widely cited change models in the organizational change field, explains their conceptual principles, and identifies the

common change steps of them. Section 4 illustrates the conceptual principles of the Transtheoretical Model (TTM) in the individual behavior change field. Section 5 develops the Integrated Change Model (ICM) by integrating the common steps of widely cited change models identified in Section 3 with the TTM. Section 6 constructs the Integrated Change Model in Project Management (ICMPM) by integrating the ICM developed in Section 5 with the project management process groups (PMI, 2008). Section 7 summarizes the results. Section 8 concludes the paper, and Section 9 provides directions for future research.

Table 1. 25 Change models

25 Change Models		
Year	Creator	Model Name
1990	Beers et al.	Seven Elements to Change
1991	Jick	10-step for Organizational Change
1991	Judson	Five-step Change Model
1992	Kanter	Ten Commandments for Executing Change
1994	Dawson	Processual Framework of Change
1995	Kotter	Eight Stage Processes for Successful Organizational Transformation
1995	Roger	Six-stage Model of Adaption
1996	Galpin	Nine Wedges Change Model
1998	Appelbaum	Strategic Organizational Change Model
1998	Nader	12 Action Steps to Change
1998	Pendlebury et al.	Ten Keys
1999	Armenakis et al.	Change Readiness Model
1999	Taffinder	Transformation Trajectory
2000	Brass et al.	Change Model for Organizational Decision Making Schema
2000	Garvin	Seven-step Change Acceleration Process
2001	Anderson and Anderson	Nine-phase Change Process Model
2001	Evans & Schaefer	Ten Tasks of Change
2001	Kirkpatrick	Step-by-step Change Model
2002	C. Marlene	Model of Identity Transformation in Organization
2002	Mento, Jones & Dirndorter	12-step Framework
2003	Luecke	Seven Steps
2005	Light	RAND's Six Steps
2006	Leppitt	Integrated Model
2007	Alas & Ruth	The Triangular Model of Organizational Change
2007	Gerkhardt	Twelve Successful Factors in Change Processes

Table 2. 13-selected journals with relevance to organizational change management

Journals from FT45 list with relevance to organizational change management	
1	Academy of Management Journal (AOM)
2	Academy of Management Review (AOM)
3	Harvard Business Review (Harvard Business School Publishing)
4	Human Resource Management (John Wiley and Sons)
5	Organization Science (INFORMS)
6	Sloan Management Review (MIT)
7	Strategic Management Journal (John Wiley and Sons)
Other journals with relevance to organizational change management	
8	Journal of Management (SAGE)
9	Journal of Change Management (Taylor and Francis Group)
10	Journal of Organizational Change Management (Emerald)
11	Journal of Organizational Behavior (John Wiley and Sons)
12	Journal of Applied Behavioral Science (SAGE)
13	Leadership & Organization Development Journal (Emerald)

Section 2 Objectives of the study

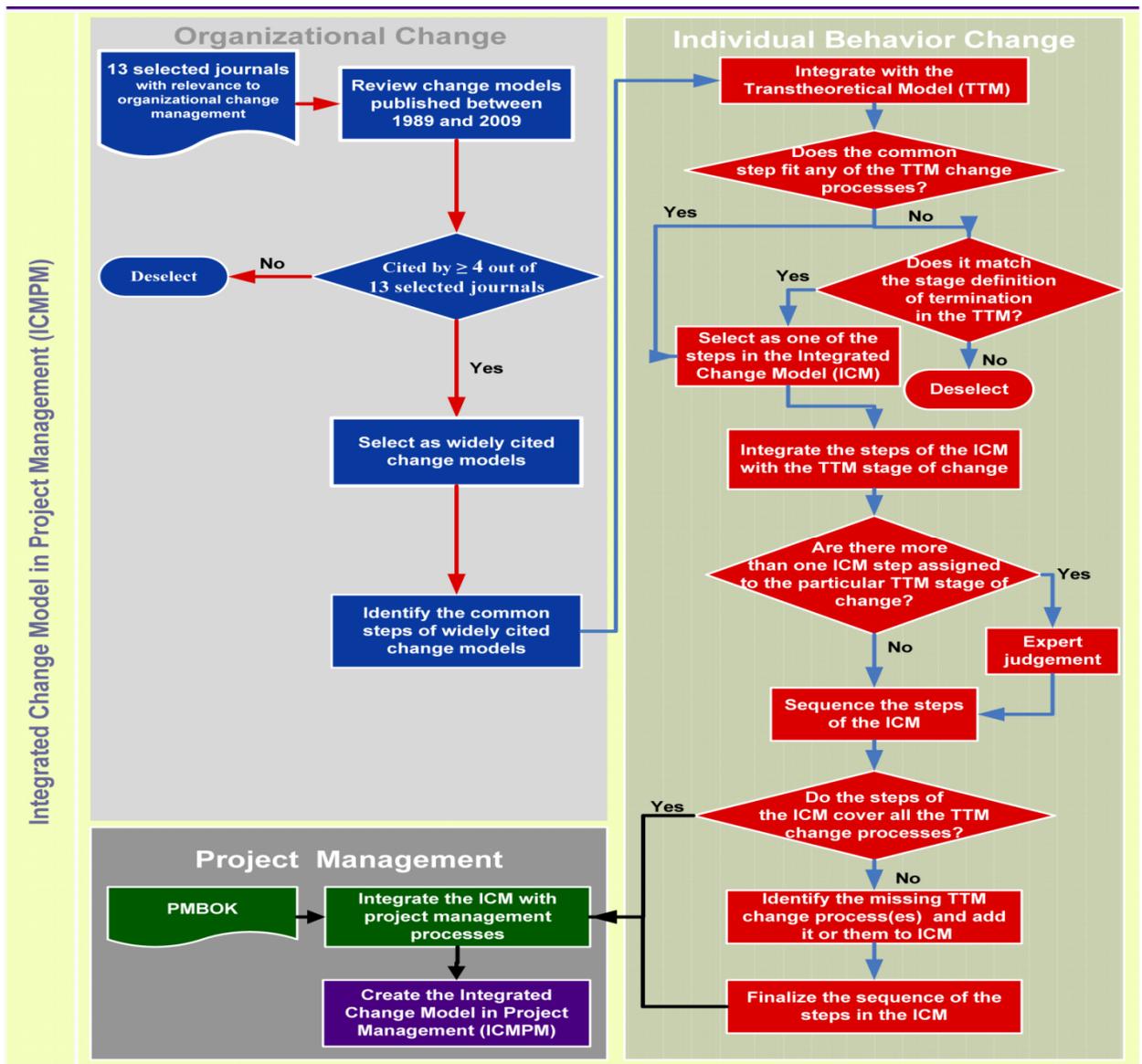
By creating the Integrated Change Model in Project Management (ICMPM), this paper aims to provide a road map for project managers to improve their effectiveness in leading organizational change projects. So far, most organizational change models have not been developed in a project management context. As a result, project managers would find it difficult to utilize them and thus relying on a trial and error approach to implement organizational change. Some succeed; some make costly mistakes. That could be one of the reasons that less than 20 percent organizational change projects actually succeed (The Standish Group, 1999; Cicmil, 1999; Collyer, 2000; Haines, Aller-Stead & Mckinlay, 2005).

Moreover, through integrating the common steps of widely cited change models with the Transtheoretical Model (TTM), the ICMPM considers both organization change processes as well as an individual's readiness for change. It helps project managers better manage change by not only following change processes, but also dealing with the people-side of change that is often overlooked in traditional organizational change models.

Section 3 Methodology

This research attempts to integrate widely cited change models in the organizational change field and the Transtheoretical Model (TTM) (Prochaska, DiClemente, 1984, 1994) in the individual behavior change field with the project management process groups (PMI, 2008) in order to build the Integrated Change Model in Project Management (ICMPM). Figure 1 summarizes the research methodology.

Figure 1. Research methodology



The research began by reviewing organizational change models which were published in any of the 13 selected journals between 1989 and 2009. We selected the journals in two ways. First, we reviewed the journals on the 2009 Financial Times 45 (FT45) list of journals which defines the top 45 journals in business and management. Appendix 1 shows the 2009 FT45 list of journals. We eliminated 38 journals with very limited relevance to organizational change management, ending up with seven journals as shown in table 3.

Table 3. Seven journals from FT45 list of journals

Journals from FT45 list with relevance to organizational change management	
1	Academy of Management Journal (AOM)
2	Academy of Management Review (AOM)
3	Harvard Business Review (Harvard Business School Publishing)
4	Human Resource Management (John Wiley and Sons)
5	Organization Science (INFORMS)
6	Sloan Management Review (MIT)
7	Strategic Management Journal (John Wiley and Sons)

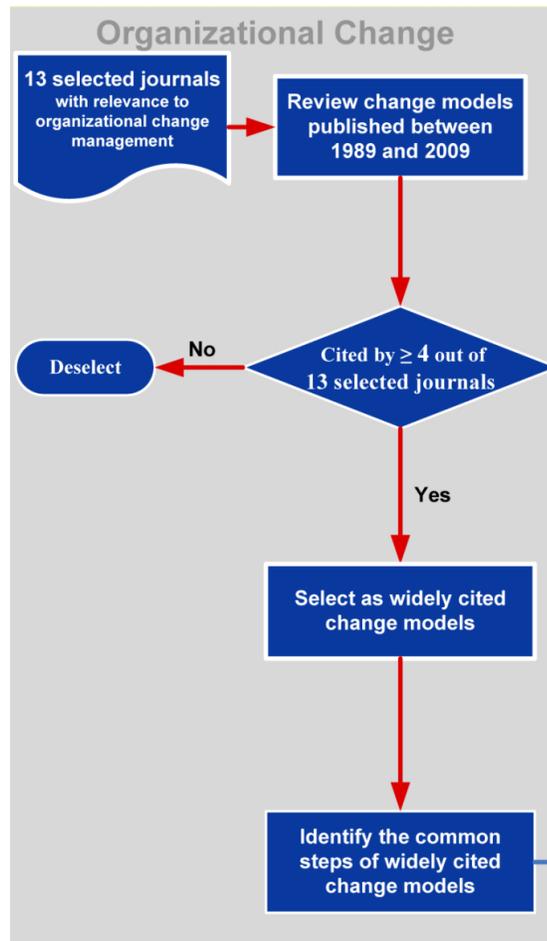
Second, we reviewed journals which are prestigious in the organizational change field and are published by leading academic publishers. We selected six additional journals: two additional journals from SAGE, two additional journals from Emerald, one additional journal from John Wiley and Sons, and one additional journal from Taylor and Francis Group. Table 4 shows the additional six journals. Thus, we ended up with a list of 13 selected journals.

Table 4. Six additional journals with relevance to organizational change management

Other journals with relevance to organizational change management	
1	Journal of Management (SAGE)
2	Journal of Change Management (Taylor and Francis Group)
3	Journal of Organizational Change Management (Emerald)
4	Journal of Organizational Behavior (John Wiley and Sons)
5	Journal of Applied Behavioral Science (SAGE)
6	Leadership & Organization Development Journal (Emerald)

Afterward, we identified an organizational change models as widely cited if it was cited at least in four out of the 13 selected journals. Moreover, we identified their common steps. Figure 2 summarizes the processes of identifying widely cited change models and their common steps.

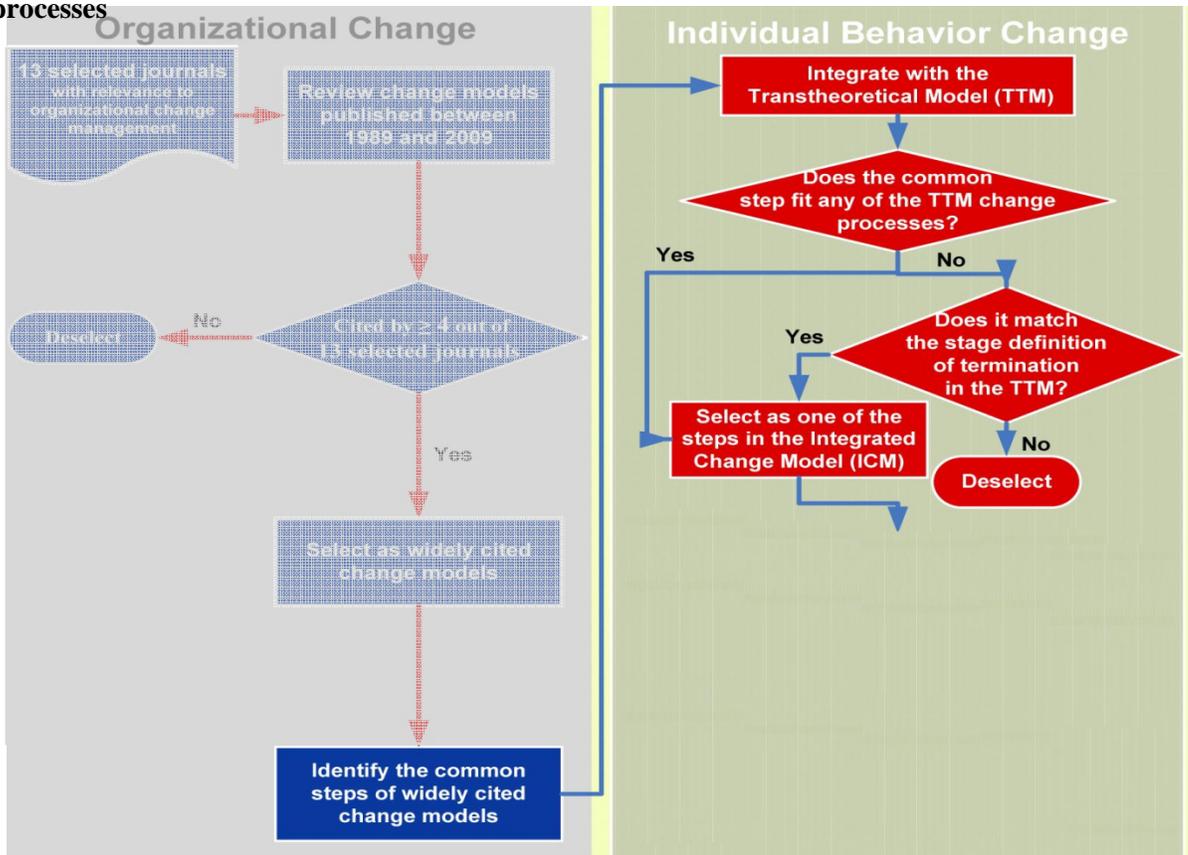
Figure 2. Processes of identifying widely cited change models and their common steps



We then integrated the common steps of widely cited change models with the Transtheoretical Model (TTM) in the following two steps so as to create the Integrated Change Model (ICM).

The first step was to merge with the TTM change processes. We decided to start the integration at this point because the common steps of widely cited change models and the TTM change processes are both action steps to produce change. We believed that this similarity would streamline the integration process. Although they share common elements, they have different focuses. The common steps of widely cited change models focus on action steps to make organizational change while the TTM change processes focus on action steps to make individual behavior change. Because making successful individual behavior change has been recognized as the core of organizational change (Porras, Robertson, 1992; Pendleburg, 1996), we decided to select the common steps that match the definition of the TTM change processes as the ICM steps. The only exception in which an unmatched common step is selected is when it fits the stage definition of termination in the TTM. Although no specific change process is required at the termination stage of the TTM, we wanted to have a step in the stage to celebrate successful change and finally close a change project. Therefore, we decided to build in this exception rule. Figure 3 represents the integration between the common steps in widely cited change models and the TTM change processes.

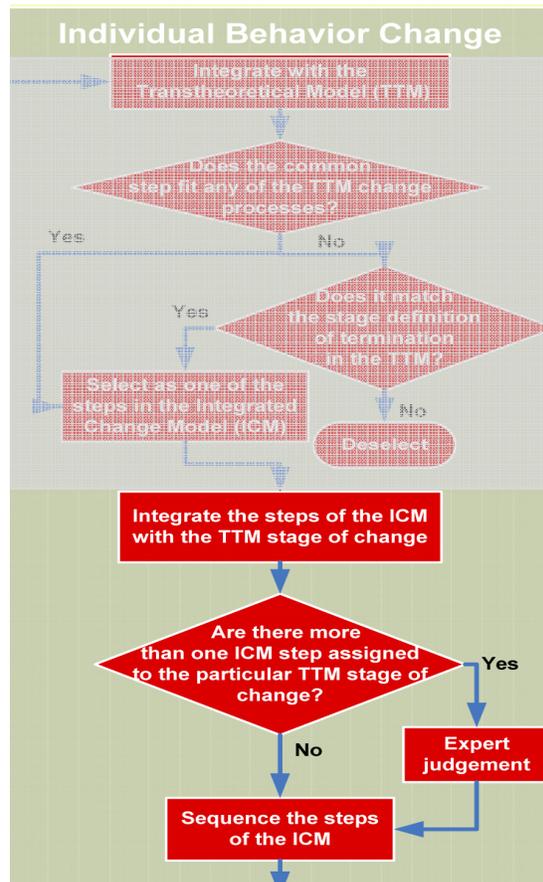
Figure 3. Integration between the common steps in widely cited change models and the TTM change processes



After the common steps of widely change models became the ICM steps, we started the second integration step with the TTM. We integrated the ICM steps with the TTM stage of change in order to sequence the ICM steps. In the TTM, each stage of change requires particular change processes to help people progress from one stage to the next. So, there are systematic relationships between the change processes and stage of change in TTM. As we had already aligned the ICM steps with the TTM change processes in the previous step, it helped link the ICM steps to the particular TTM stage of change. After linking the ICM steps to the different stages of change, we could get a ballpark on the sequence of the steps. For instance, the ICM step assigned to the first stage of change (Precontemplation) should be ranked higher than the ICM step assigned to the second stage of change (Contemplation), etc. Yet, it was likely that several ICM

steps were assigned to the same stage of change. Under the circumstances, we used our field experience to rationalize the final sequence of the steps. Figure 4 shows the integration between the ICM steps and the TTM stage of change.

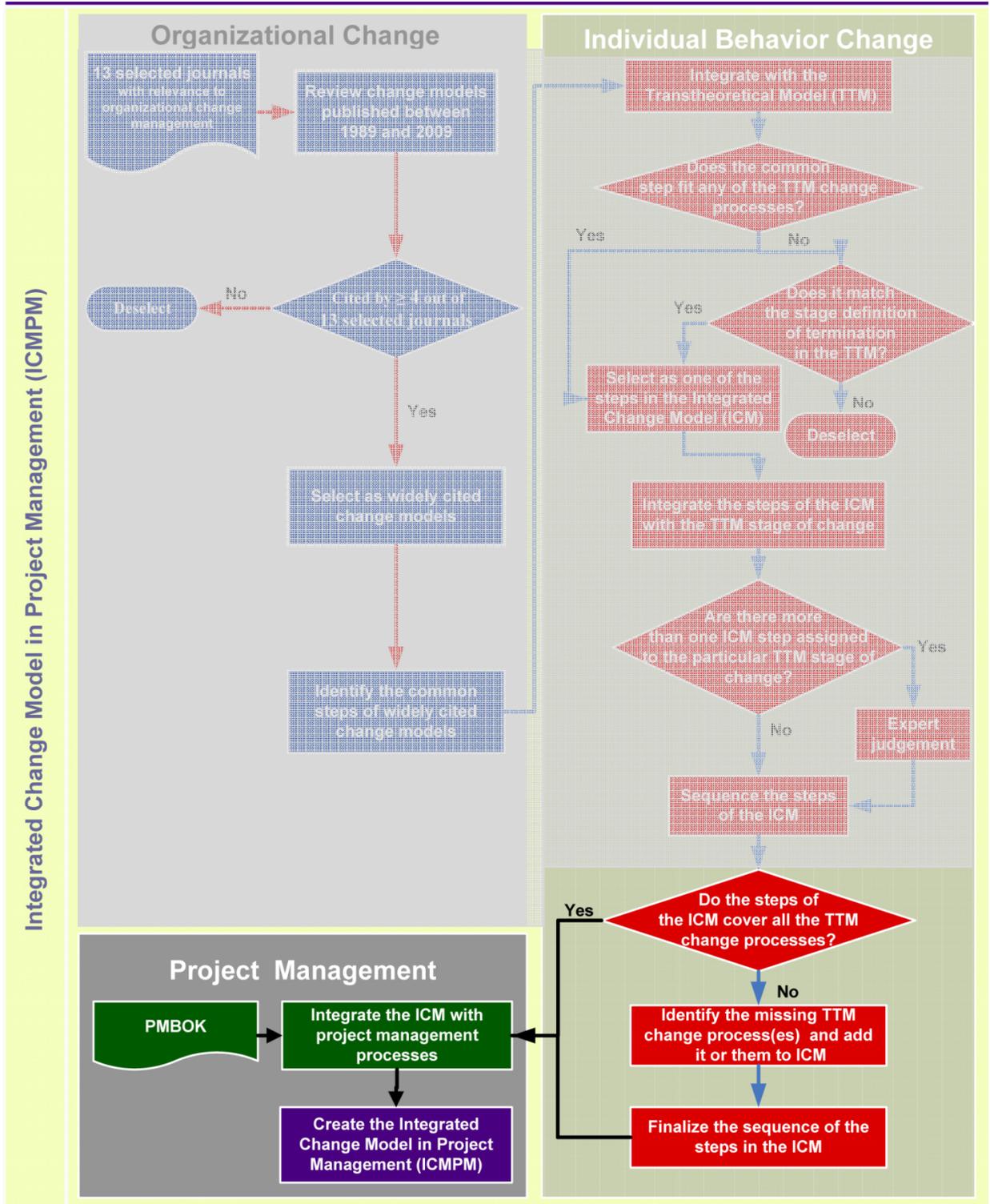
Figure 4. Integration of the ICM steps and the TTM stage of change



To further enhance the comprehensiveness of the ICM, we examined whether the ICM steps covered all the TTM change processes or not before we integrated them with the project management process groups (PMI, 2008). If the answer was no, we would identify the missing TTM change process(es), add it or them to the ICM, and fine tune the sequence of the steps. If the answer was yes, we would integrate the ICM with the project management process group, thus creating the Integrated Change Model in Project

Management (ICMPM). Figure 5 illustrates the integration between the ICM and the project management process groups.

Figure 5. Integration of the ICM and the project management process groups



Chapter 2: The Concept of Organizational Change

This section examines the nature of organization change. Section 2.1 gives an overview on the definitions of organizational change. Section 2.2 explains the driving factors of organizational change. Section 2.3 illustrates different types of organizational change.

Section 1 Overview

There are many different definitions on organizational change, but they all carry the connotation of “changing how an organization functions or performs”. For instance, “Organizational change is the revision of established work routines, the revision of existing patterns of communication, the reshuffling of work groups, or the hiring of new employees” (House et al, 1986). “Organizational change alters how an organization functions, changes who its members and leaders are, what form it takes, or how it allocates its resources” (Huber et al 1993). “The intention of any organizational change is to move the organization from its current state to a more desirable state” (Ragsdell, 2000). “Organizational change can be defined as new ways of organizing and working in an organization” (Dawson 2003).

Section 2 Triggers of organizational change

A range of triggers to organizational change have been identified in the literatures. Huber, Glick, Miller and Sutcliffe (1993) group those triggers into five categories as the five-construct model that is widely cited in the organizational studies. The model is the following: (1) characteristics of the organizational environment, (2) characteristics of organizational performance, (3) characteristics of the organization’s top managers, (4) characteristics of the

organizational strategy, and (5) characteristics of the organization's structure. The five triggers are shown in Figure 6.

Figure 6. Five triggers associated with organizational change



Environmental characteristics

Common managerial wisdom and organizational theories indicate that organizations must attain and maintain a satisfactory fit with their environments. Often, this means that they must adapt to environmental changes. Turbulence, competitiveness and complexity are environmental characteristics that have often been suggested as determinants of organizational changes (Aldrich, 1979; Hrebiniak and Joyce, 1985; Huber, 1984; Mohrman and Mohrman, 1989).

Organizational strategies

Organizations having a prospector strategy would have a higher frequency of organizational change. For example, an organization with a strategy of frequently introducing new products or entering new markets would have a higher frequency of organizational change since such changes generally require changes in organizational process, personnel, resource allocations, and forms in order to be implemented.

Organizations having a defender strategy would have a lower frequency of organizational change. For example, an organization with a strategy of operating as a low cost producer would have a lower frequency of organizational change since the implementation of change inevitably consumes costly resources.

Organizational structure

A number of structural characteristics might serve to facilitate or constrain organization change. For example:

- Centralization is positively associated with administrative changes and is negatively associated with technology changes (Kimerly and Evanisko, 1981).
- Standardization is negatively related to organizational changes.

Organizational performance

Recent decreases or increases in organizational performance is usually a threat or an opportunity indicator for managers to search for improvement, and often results in organizational changes. Even antecedent levels of organizational performance can affect the frequency of organizational change. Huber, Glick, Miller and Sutcliffe (1993) find the frequencies of changes increase when organizations use prior performance-related information to continuously improve their performance.

Organization's top managers

Managers deliberately create some changes in organization while retard others. These propensities vary across managers depending on:

- Work history factors
- Age and education
- Personality variables

Section 3 Types of organizational change

Although we can identify triggers to change, the question of how we differentiate types of change remains open to debate. According to Senior (2002), there are three categories of change as a structure which links to the main theories in organizational change management. These three categories have been identified as change characterized by the rate of occurrence, by how it comes about and by scale.

Change characterized by the rate of occurrence

Table 5 identifies the main types of change categorized by the rate of occurrence to be discontinuous and incremental change. However different authors employ different terminologies when describe the same approach. For instance, both discontinuous change and revolutionary change share the same definition as the change which is radical and discontinuous with the purpose of breaking the grip of strong organizational inertia. However, Grundy (1993), Luecke (2003), and Senior (2002) call the type of change as as discontinuous change while Tushman & Romanelli (1985) call it as revolutionary change.

Moreover, although Burnes (2004) differentiates between incremental and continuous change, other authors do not. Incremental and continuous change refers to the ability to change continuously in a fundamental manner to keep up with the fast moving pace of change. According to Burnes (2004), the difference between continuous and incremental change is that the former describes departmental, operational, and ongoing changes, while the latter is concerned with organization-wide strategies and the ability to constantly adapt to the demands of both the external and internal environment.

Table 5. Change characterized by the rate of occurrence

Type of change	Balogun & Hope Hailey (2004)	Burnes (2004)	Grudy (1993)	Luecke (2003)	Senior (2002)	Tushman & Romanelli (1985)
Discontinuous			✓	✓	✓	
Revolutionary			□	□	□	✓
Incremental		✓				✓
Continuous	✓	✓				

Change characterized by how it comes about

When change is characterized by how it comes about, there are several different approaches as identified in Table 6. Yet, the literature is dominated by planned and emergent change (Bamford and Forrester, 2003).

Conceptions of planned change have tended to focus on the importance of understanding different states in which an organization will have to go through in order to move from an unsatisfactory state to an identified desired state (Eldrod II and Tippett, 2002). Planned change is often driven by top-down approach in which senior executives plan for the required changes (Senior 2002).

Emergent change emphasizes that change should not be perceived as a series of linear events within a given period of time, but as a continuous, open-ended process of adaptation to changing circumstance and conditions (Burnes, 1996, 2004; Dawson, 1994). Emergent change tends to be driven from the bottom up (Bamford and Forrester, 2003; Burnes, 1996, 2004).

Apart from planned change, the advocates of emergent change argues that successful change is less dependent on detailed plans and projections than on reaching an understanding of the complexity of the issues concerned and identifying the range of available options. (Burnes,

1996). In other words, emergent change is more concerned with change readiness and facilitating for change than providing specific pre-planned steps for each change project and initiative.

Table 6. Change characterized by how it comes about

Type of change	Burnes (1996)	Dunphy and Stace (1993)	Senior (2002)
Planned	✓	☐	✓
Emergent	✓	✓	✓

Change characterized by scale

Table 7 summarizes the main types of change categorized by scale. It includes fine-tuning, incremental adjustment, modular transformation, and corporate transformation (Dunphy & Stace, 1993).

Fine tuning is an ongoing change process to match the organization’s strategies, processes, people and structure (Senior, 2002). It is usually manifested at a departmental or divisional level in an organization.

According to Senior (2002) incremental adjustment involves distinct modifications to management processes and organizational strategies, but does not include radical change.

Modular transformation is change identified by major shift of one or several departments or divisions. In contrast to incremental adjustment, it can be radical. Yet, it focuses on part of an organization rather than as a whole (Senior 2002).

Corporate transformation is the change that is corporate-wide and characterized by radical alterations in the business strategies (Dunphy and Stace, 1993). According to Dunphy and

Stace (1993), examples of this type of change can be reorganization, revision of interaction patterns, reformed organizational missions and core values, and altered power and status.

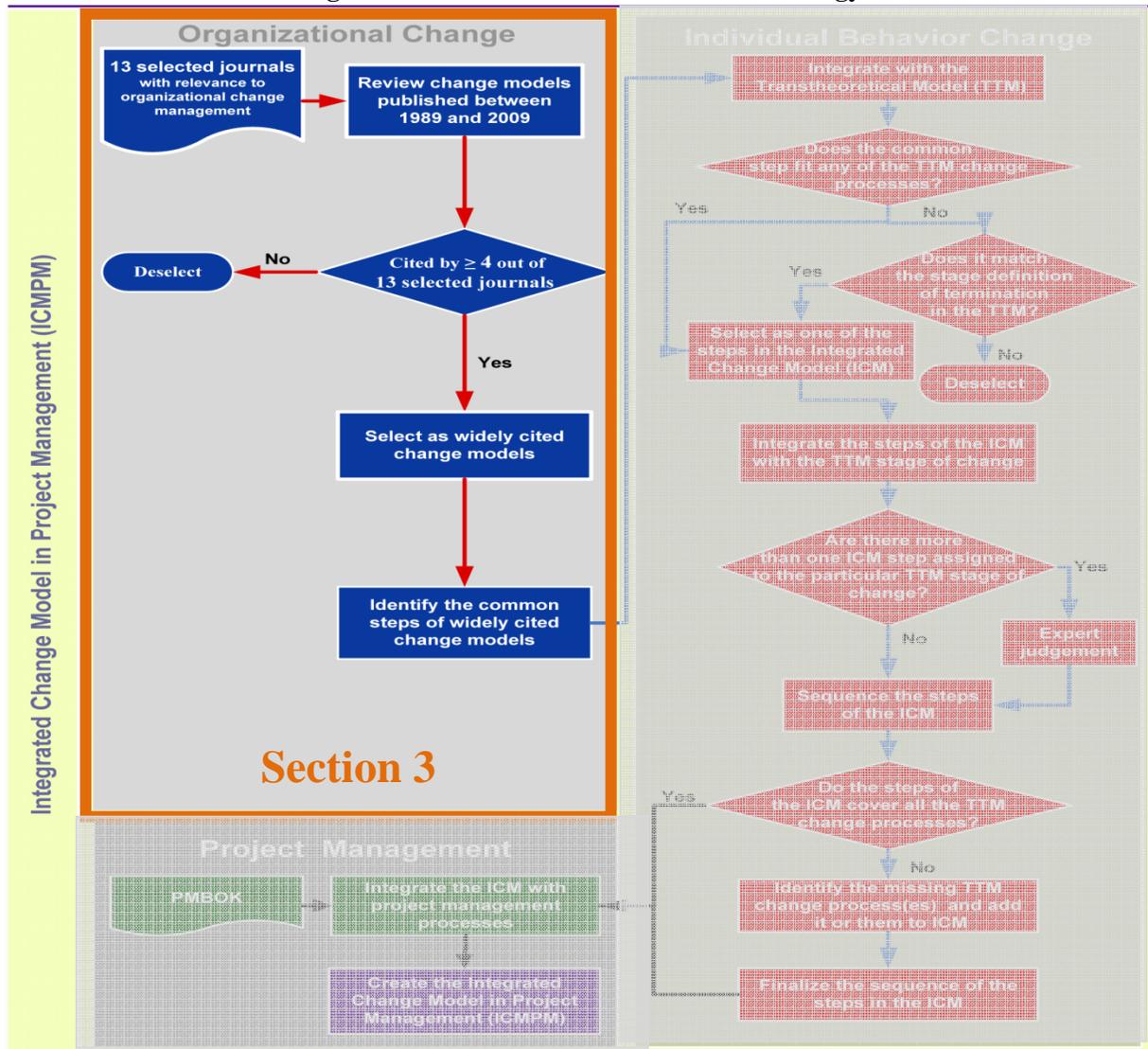
Table 7. Change characterized by scale

Type of change	Dunphy & Stace (1993)	Senior (2002)
Fine tuning	✓	✓
Incremental adjustment	✓	✓
Modular transformation	✓	✓
Corporate transformation	✓	✓

Chapter 3 Organizational Change Models

This section identifies change models in the organizational change field that are widely recognized, and their common steps which are used to build the Integrated Change Model (ICM) in section 5. Section 3.1 gives an overview of organizational change models. Section 3.2 explains how to identify widely cited change models from the 13 selected journals. Section 3.3 illustrates the conceptual principles of widely cited change models. Section 3.4 identifies the common steps of them. Figure 7 summarizes the content of this section in the research methodology.

Figure 7. Section 3 in the research methodology



Section 1 Overview

In the organizational change field, there is no broad and widely accepted organizational change model (Porras, Robertson, 1992). Researchers and practitioners have failed to reach consensus on which model is the most effective one to make successful organizational change. Therefore, instead of using a single change model in our research, we had better identify several change models that are relatively well-cited in the field, study their common steps and integrate them to create an integrated change model.

Section 2 Methods of identifying widely cited change models

This sub-section explains how to identify widely cited change models from the 13 selected journals shown in table 2. The 13 journals are selected from the 2009 Financial Times 45 (FT45) list of journals and the prestigious organizational change journals. The detailed selection processes of the 13 journals are illustrated in section 1.3.

To identify widely cited change models, we start from reviewing change models that were published in any of the 13 selected journals between 1989 and 2009. We find 25 change models as shown in Table 1 and all are developed based on the needs for making planned organizational change which is often driven by top-down approach in which executives plan for the required changes (Senior 2002).

Afterward, we identify a change models as widely cited if they is cited at least by four out of the 13 selected journals. With this selection criterion, there are six out of the 25 change models selected. The selected change models include Judson's Five-step Change Model (1991), Kanter et al.'s Ten Commandments for Executing Change (1992), Kotter's Eight Stage Processes

for Successful Organizational Transformation (1995), Galpin’s Nine Wedges Change Model (1996), Armenakis et al.’s Change Readiness Model (1999), and Luecke’s Seven Steps (2003).

Table 8 shows how six widely cited change models fulfill the selection criterion.

Table 8. Six widely cited change models and the 13 selected journals

Six Widely Cited Change Models						
	Judson (1991)	Kanter et al. (1992)	Kotter (1995)	Galpin (1996)	Armenakis et al. (1999)	Luecke (2003)
Journals from FT45 list with relevance to Organizational Change Management						
1	Academy of Management Journal (AOM)	X	X	X	X	X
2	Academy of Management Review (AOM)	X			X	
3	Harvard Business Review (Harvard Business School Publishing)		X			X
4	Human Resource Management (John Wiley and Sons)	X	X			X
5	Organization Science (Informs)		X	X		
6	Sloan Management Review (MIT)		X			
7	Strategic Management Journal (John Wiley and Sons)					
Other Journals with relevance to Organizational Change Management						
8	Journal of Management (SAGE)	X		X	X	
9	Journal of Change Management (Taylor & Francis Group)		X	X		X
10	Journal of Organizational Change Management (Emerald)	X	X	X	X	
11	Journal of Organizational Behavior (John Wiley and Sons)		X			
12	Journal of Applied Behavioral Science (SAGE)	X	X	X	X	
13	Leadership & Organization Development Journal (Emerald)	X	X	X		X

Section 3 Six widely cited change models

This sub-section illustrates the conceptual principles of six widely cited change models by Judson (1991), Kanter et al. (1992), Kotter (1995), Galpin (1996), Armenakis et al. (1999), and Luecke (2003).

1. Judson's Five-step Change Model

The Judson (1991) model of implementing a change consists of five phases: (1) analyzing and planning the change; (2) communicating the change; (3) gaining acceptance of new behaviors; (4) changing from the status quo to a desired state; and (5) consolidating and institutionalizing the new state. Within each phase, Judson (1991) discusses predictable reactions to change and methods for minimizing resistance to change agent efforts. Among the different methods, Judson (1991) suggests overcoming resistance by using alternative media, reward programs, and bargaining and persuasion.

2. Kanter et al.'s Ten Commandments for Executing Change

Kanter et al. (1992) suggest that Lewin's model of change, which consists three successive phases called unfreezing, moving, and freezing, is too simple as it is based on the view that organizations are essentially stable and static. They disagree with the idea that change results only from concentrated effort, and that it occurs in one direct at one time. Kantel et al. argue that change is "multi-directional and ubiquitous". So, change happens in all directions at once and is a continuous process. Under the circumstances, they offer the following "ten commandments for executing change": (1) analyze the organization and its need for change; (2) create a shared vision and a common direction; (3) Separate from the past; (4) Create a sense of

urgency; (5) support a strong leader role; (6) line up political sponsorship; (7) craft an implementation plan; (8) develop enabling structures; (9) communicate, involve people and be honest; (10) Reinforce and institutional change.

3. Kotter's Eight Stage Processes for Successful Organizational Transformation

In contrast to Judson's (1991) five phases and Kantel's (1992) ten commandments to implement change, Kotter (1995) recommends eight steps for change agents to follow in implementing fundamental organizational change: (1) establishing a sense of urgency by relating external environmental realities to real and potential crises and opportunities facing an organization, (2) forming a powerful coalition of individuals who embrace the need for change and who can rally others to support the effort; (3) creating a vision to accomplish the desired end-result; (4) communicating the vision through numerous communication channels; (5) empowering others to act on the vision by changing structures, systems, policies, and procedures in ways that will facilitate implementation; (6) planning for and creating short-term wins by publicizing success, thereby building momentum for continued change; and, (7) consolidating improvements and changing other structures, systems, procedures, and policies that aren't consistent with the vision; and (8) institutionalizing the new approaches by publicizing the connection between the change effort and organizational success. Moreover, Kotter (1996) suggests that skipping steps only create an illusion of speed and never produce a satisfying result. Moreover, he proposes that critical mistakes in any of the phases can have a devastating impact, slowing momentum and negating previous gains.

4. Galpin's Nine Wedges Change Model

Galpin (1996) proposes a model with nine wedges that form a wheel. The wheel comprises of the following wedges: (1) establishing the need to change; (2) developing and disseminating a vision of a planned change; (3) diagnosing and analyzing the current situation; (4) generating recommendations; (5) detailing the recommendations; (6) pilot testing the recommendations; (7) preparing the recommendations for rollout; (8) rolling out the recommendations; and (9) measuring, reinforcing, and refining the change. As a foundation for each wedge of the model, Galpin (1996) stresses the importance of understanding an organization's culture that is reflected in its rules and policies, customs and norms, ceremonies and events, and rewards and recognition. Moreover, in his view, a successful organizational change effort must target on two levels – the strategic level and the grassroots level. Strategic level refers to the initial efforts involving executives, senior managers or a small cadre of employees; Grassroots level refers to the efforts that drive change deep into an organization by stressing implementation at the local level.

5. Armenakis et al.'s Change Readiness Model

Armenakis et al. (1999) establish a model that incorporates elements of both Lewin's (1947) work and Bandura's (1986) social learning theory. The model contains seven steps with purposes of facilitating the adoption and institutionalization of desired change. The steps include (1) persuasive communication (e.g., speeches by change agents and articles in employee newsletters); (2) active participation by those affected (e.g., vicarious learning, enactive mastery, and participative decision making); (3) human resource management practices (e.g., selection, performance appraisal, compensation, and training and development programs); (4) symbolic

activities (e.g., rites and ceremonies); (5) diffusion practices (e.g., best practice programs and transition teams); (6) management of internal and external information; and (7) formal activities that demonstrate support for change initiatives (e.g., new organizational structures and revised job descriptions).

6. Luecke's Seven Steps

Luecke (2003) develops a seven-step change model based on the research of Beer (1990), and Schaffer and Thomas (1992). The steps contain (1) mobilize energy and commitment through joint identification of business problems and solutions; (2) develop a shared vision of how to organize and manage for competitiveness; (3) identify the leadership; (4) Focus on short-term results, not on activities; (5) start change at the periphery, then let it spread to other units without pushing it from the top; (6) Institutionalize success through formal policies, systems and structures; (7) monitor and adjust strategies in response to problems in the change process. Luecke believes that organizations can implement change better if they approach it with the right attitude, from the right angle and with a solid set of action steps.

Section 4 Common steps of six widely cited change models

This sub-section identifies the common steps of six widely change models and their definitions.

To identify the common steps of six widely cited change models, we combine and compare the six models of Judson (1991), Kanter et al. (1992), Kotter (1996), Galpin (1996), Armenakis et al. (1999), and Luecke (2003) as shown in table 9. We regard a step as a common one if it is used by at least three widely cited models. Table 10 shows the consolidated 10 common steps of six widely cited change models.

Table 9. A comparison of six widely change models

	Judson (1991)	Kanter et al. (1992)	Kotter (1995)	Galpin (1996)	Armenakis et al. (1999)	Luecke (2003)
Common Steps	1. Analyse the change	1. Analyse the organization and its need for change		3. Diagnose and analyze the current situation		1. Mobilize energy and commitment through joint identification of business problems and their solutions
	1. Plan the change	7. Craft an implementation plan		4. Generate recommendations 5. Detail the recommendations		
	2. Communicate the change	9. Communicate, involve people and be honest	4. Communicate the change vision		1. Persuasive communication	
	3. Gain acceptance of new behaviors 4. Change from the status quo to a desired state	8. Develop enabling structures	5. Empower broad-based actions	8. Roll out the recommendations	3. Human resource management practices 7. Formal activities that demonstrate support for change initiatives	
			6. Generate short-term wins		4. Symbolic activities	4. Focus on short-term results, not activities
	5. Consolidate and institutionalize the new state	10. Reinforce and institutionalise change	8. Institutionalize new approaches	9. Measure, reinforce, and refine the change		6. Institutionalize success through formal policies, systems, and structures
		2. Create a vision and a common direction	3. Develop a vision and strategy	2. Develop and disseminate a vision of a planned change		2. Develop a shared vision of how to organise and manage for competitiveness
		4. Create a sense of urgency	1. Establish a sense of urgency	1. Establish the need to change		
		5. Support a strong leader role 6. Line up political sponsorship	2. Create a guiding coalition		2. Active participation by those affected	3. Identify the leadership
			7. Consolidate gains and produce more change		5. Diffusion practices	5. Start change at the periphery, then let it spread to other units without pushing it from the top
Uncommon Steps		3. Separate from the past				
				6. Pilot testing the recommendations		
				7. Preparing the recommendations for rollout		
					6. management of internal and external information	

Table 10. The 10 common steps of six widely cited change models

10 Common Steps of Six Widely Cited Change Models
1. Understand the needs for change
2. Establish a sense of urgency
3. Encourage people to join a guiding coalition to lead the change
4. Develop a vision and common goals
5. Plan the change
6. Communicate the change
7. Empower others to act on the change
8. Create short-term wins
9. Reinforce and refine the change
10. Consolidate gains and produce more changes

The following part explains the 10 common steps of six widely cited models in details.

Step 1: Understand the needs for change

According to Judson (1991), Kanter et al. (1992) and Galpin (1996), the starting point of any effective organizational change is to get a clear understanding on the needs for change. This answers the most important question that affected parties want to know: Why must we change? By knowing the reasons for change, people are more aware of the problems. As a result, they would be more receptive to change.

Step 2: Establish a sense of urgency

Kanter et al. (1992), Kotter (1995) and Galpin (1996) agree on the importance of establishing a sense of urgency for making successful organizational change. This is an essential step as it further enhances people's awareness toward change. People are willing to walk out of their comfort zones and are motivated to change when they know the problem is an urgent one. Although this step could sound easy, Kotter (1995) states that more than 50% of the companies that he studied failed in the step.

Step 3: Encourage people to join a guiding coalition to lead the change

According to Kanter et al. (1992), Kotter (1995), Armenakis et al. (1999), and Luecke (2003), assembling a group with enough power to lead the change efforts is critical for the success of organizational change. A successful guiding coalition can consist of senior managers, board members, representatives from different affected business units, key customers, and even powerful union leaders. In a guiding coalition, people share their concerns and support each other to make change. Instead of participating in an opposition group against the change, joining a guiding coalition provides an alternative for people who want to produce change.

Step 4: Create a vision and common goals

Kanter et al. (1992), Kotter (1995), Galpin (1996), and Luecke (2003) think the step is important in every successful change effort because it develops a picture of future that is relatively easy to communicate and appeals to customers, stockholders, and employees. In other words, the step helps people visualize the change bringing positive outcomes to them. As a

result, they are more energized and committed to the change. Moreover, a guiding coalition should be in charge of creating such a vision and common goals.

Step 5: Plan the change

According to Judson (1991), Kanter (1992) and Galpin (1996), the step takes people from the decision they go for the change to the specific steps they take to produce change. The working tasks of the step can include the following:

- Devise appropriate strategies to introduce change
- Identify the significant steps in the change process
- Discuss the full details of what is involved for implementing of change
- Devise a sensible time scale and cost analysis for implementing of change
- Produce action plans for monitoring the change
- Anticipate the problems of implementation
- Understand why change is resisted

Step 6: Communicate the change

Judson (1991), Kantel et al. (1992), Kotter (1995) and Armenakis et al. (1999) indicate that a guiding coalition should use every possible vehicle such as a routine discussion about business problem, a regular performance appraisal, and a division's quarterly performance meeting to communicate the change. The step is important for two reasons. First, people inside the guiding coalition would be more committed to the change after communicating it with others because their decisions to produce change go public. Once peoples' decisions go public, they are more likely to try their best to accomplish them since they may embarrass if they fail (Prochaska,

Norcross, DiClemente, 1994). Second, people, who are outside of the guiding coalition, can get a chance to understand more the need for the change through communications. It helps them believe that useful change is possible and thus enabling them to support it. With more people willing to drive and support the change, the chance of making successful organizational change increases.

Step 7: Empower others to act on the change

Judson (1991), Kantel et al. (1992), Kotter (1995), Armenakis et al. (1999) and Luecke (2003) agree that empowering others to act on the change is essential to successful change implementation. This is because no change can take place without people acting on it. Because people are so occupied and focused on making the change after empowerment, it prevents them from behaving their old problem behaviors. When there are more new behaviors than old ones, the chance of making successful change increases. According to Kotter (1995), to thoroughly empower others to act on the change, the guiding coalition needs to confront and remove major obstacles to change.

Step 8: Create short-term wins

Kotter (1995), Armenakis et al. (1999), and Luecke (2003) think that creating short-term wins is important because it helps renew the momentum of making change. Creating short-term wins helps set up an environment that the change is workable. Most people won't go on the long march unless they see compelling evidence that the journey is producing expected results. Celebrating short-term wins is compelling evidence that the change drives expected outcomes. As a result, people are more willing to stay with the change and keep putting efforts in driving its success.

Step 9: Reinforce and refine the change

Judson (1991), Kantel et al. (1992), Kotter (1995), Galpin (1996), and Luecke (2003) state that the step helps achieve desired change by creating an environment that eliminates the negative factors toward change while enhance the positive ones toward it. The process involves figuring out what work and what do not. For those change elements that work, people need to do more as reinforcement. As for the change elements that do not work, people need to refine and implement them again.

Step 10: Consolidate gains and produce more changes

To lay a solid foundation to produce more changes in the future, Kotter (1995), Armenakis et al. (1999) and Luecke (2003) believe that people should consolidate the gains in this step. The consolidation process involves showing people how the new approaches, behaviors and attitudes have helped improve performance. As a result, people would feel more meaningful and rewarding for supporting the change. Moreover, the successful experience this time would help build their confidence and willingness to lead or participate in any change projects in the future.

Chapter 4 The Transtheoretical model

This section illustrates the conceptual principles of the Transtheoretical Model (TTM) in the individual behavior change field. Section 4.1 gives an overview of the TTM. Section 4.2 explains the stage of change in the TTM. Section 4.3 demonstrates the processes of change in the TTM. Section 4.4 shows how to assess an individual's stage of change in the TTM.

Section 1 Overview

In the last 30 years the Transtheoretical Model (TTM) has been remarkably robust in its ability to explain individual behavior change across a broad range of behaviors from addictions to professional practices (Levesque, Gelles & Velicer, 2000; Prochaska, Redding, Harlow, Rossi, & Velicer, 1994; Prochaska & DiClemente, 1983). Moreover, the major breakthrough of the TTM approach is the ability to have an impact on an entire population (e.g. all employees) by individualized and interactive interventions that have produced unprecedented impacts on the population (Prochaska, Prochaska, Levesque, 2001).

The TTM has been recognized as the most influential approach to integrate behavior change theories with practices (Pendlebury, 1996). In contrast to most other change management paradigms, nearly \$60 million has been spent to assess the efficacy of interventions based on the model (Prochaska, Prochaska & Levesque, 2001). Moreover, many organizations around the world (e.g., the Centers for Disease Control, the National Cancer Institute in the United States, the National Health Service of Great Britain, and Johnson & Johnson) continuously use the TTM to help people make successful changes.

The model integrates a number of theoretical constructs central to change: stages of change and processes of change (Prochaska, Prochaska & Levesque, 2001). Specifically, the

model includes six stages of change: precontemplation, contemplation, preparation, action, maintenance and termination. Nearly all changes start from precontemplation. Only the most successful one ends in termination. No stage can be skipped. The progression through the stages is spiral, not linear as shown in Figure 8. For instance, people who initiate change proceed from contemplation to preparation to action to maintenance. Tempted by old behaviors, they may slip off at some points, and return to contemplation or sometimes even to precontemplation. They need to renew their efforts before trying to go through the stages again. As a result, it is common that people go through the stages several times before finally exiting the termination stage. In addition, there are nine processes of change in the TTM. People need to use particular change processes in order to progress change from one stage to the next.

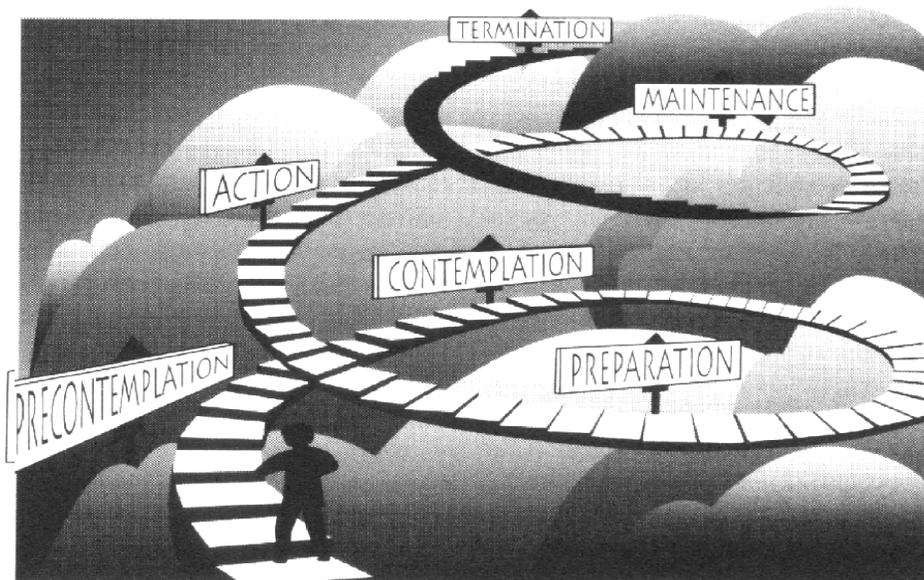


Figure 8. The spiral of change (Prochaska, Norcross & Diclemente, 1994)

Section 2 Stages of Change

Stage of change is the central organizing construct of the TTM. Prochaska and DiClemente (1983) have found that people progress through a series of six stages when modifying behavior on their own or with the help of formal interventions. The following are the six stages of change in the TTM.

Stage 1: Precontemplation

This is the first stage of the model in which people have no intention to change, deny having a problem or think others who point out the problem are exaggerating. According to G.K. Chesterton 's description of precontemplators, “ It isn't that they can't see the solution. It is that they can't see the problem.”

There are many reasons to be at this stage, and DiClemente refers them as the “four Rs”- reluctance, rebellion, resignation and rationalization.

- Reluctant precontemplators are those who do not want to consider change due to lack of knowledge or inertia. The impact of the problem has not fully been recognized.
- Rebellious precontemplators insist on their own decisions. They are resistant to being told what to do.
- Resigned precontemplators have given up hope about the possibility of change and seem to be overwhelmed by the problem.
- Rationalizing precontemplators have all the answers; they have plenty of reasons why the current situation is not a problem or it is a problem for others but not for them.

Stage 2: Contemplation

This is the second stage of the model in which people become more aware of their problems and begin to think seriously about solving them. They struggle to understand their problem, to see its causes and to wonder about possible solutions. However, contemplators may be far from actually making a commitment to action because the cost of change is still bigger than the benefit (Prochaska, Norcross & Diclemente, 1994).

Stage 3: Preparation

This is the third stage of the model in which people are planning to take action, and are making the final adjustments before they begin to change their behavior (Prochaska, Norcross & Diclemente, 1994). Although those in preparation stage are committed to action, and may appear to be ready for action, they have not necessarily solved their ambivalence on change. They may still need to convince themselves that taking action is what is best for them. In addition, Even though it is an important stage, people tend to shortcut preparation and leap into action after the contemplation stage. The practice often leads to premature actions, and in turn ineffectual change. (Prochaska, Norcross & Diclemente, 1994).

Stage 4: Action

This is the fourth stage of the model in which people most overtly modify their behaviors and surroundings. In short, they make the move for which they have been preparing. Action is the most obviously busy period and the one that requires the greatest commitment of time and energy. Changes made during the action stage are more visible than those made during other stages, and therefore receive the greatest recognition (Prochaska, Norcross & Diclemente, 1994).

Therefore, people always equate change to action and overlook the critical work that prepares people for successful action and maintains change after action.

Stage 5: Maintenance

This is the fifth stage of the model in which people maintain the momentum of change. It is a critically important continuation that can last from as little as six months to as long as life time (Prochaska, Norcross & Diclemente, 1994). People must work to consolidate the gains they attained during the action and other stages, and struggle to prevent lapses and relapses (Prochaska, Norcross & Diclemente, 1994). Without a strong commitment to maintenance, people often relapse into their problem behaviors.

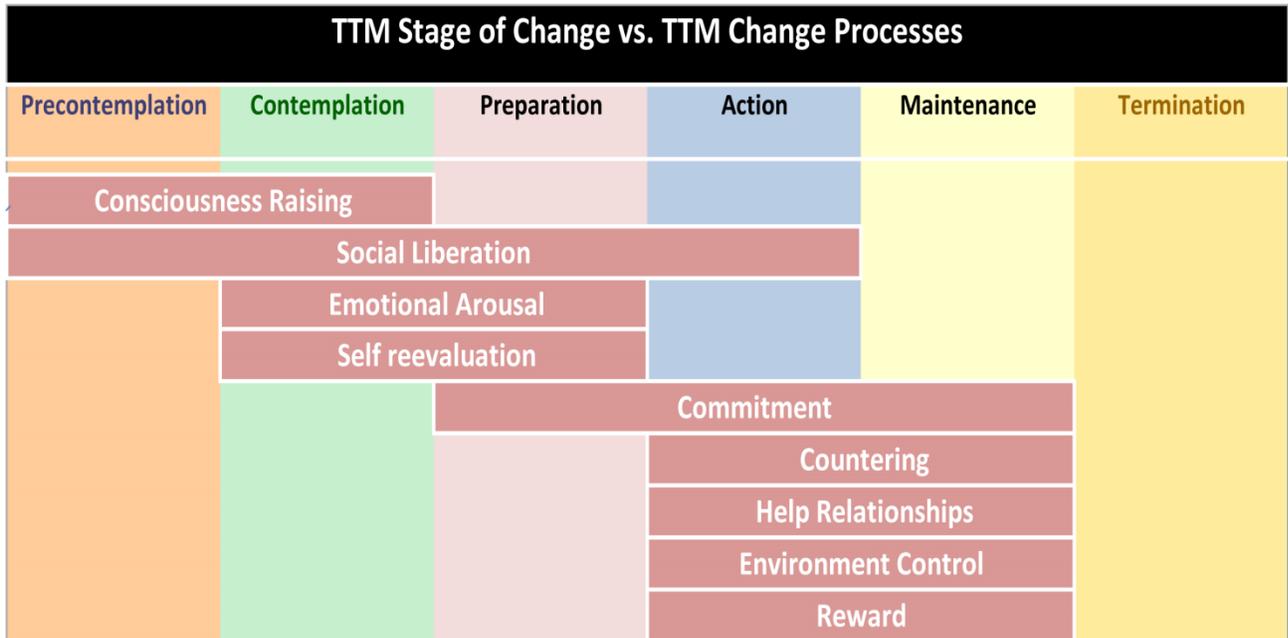
Stage 6: Termination

This is the final stage of the model in which people change successfully. In the stage, people are no longer tempted by their old behaviors or problems. They are confident that they can cope without fear of relapse (Prochaska, Norcross & Diclemente, 1994). People will have exited the cycle of change and won their struggles.

Section 3 Processes of Change

Processes of change are another key construct of the TTM. There are nine fundamental change processes in the model which help people progress through the stage of change. Different change processes need to be used at different stages of change (Prochaska, Norcross & Diclemente, 1994). Therefore, using stage-matched change processes is the key to produce successful change. Figure 9 shows stage of change in which particular change processes are useful.

Figure 9. Stage of change in which particular change processes are useful



The nine processes of change are defined as follows:

1. **Consciousness Raising:** Become more aware of a problem and potential solutions;
2. **Social Liberation:** Empower individuals by providing more choices and resources;

3. **Emotional Arousal:** Use emotions to provide a burst of energy that allows individuals to supersede procrastination, and determine what is really in their best interests. For example, fear about failures to change and inspiration for successful change;
4. **Self reevaluation:** Appreciate that the change is important to one's identity, happiness, and success;
5. **Commitment:** Be willing to act and believe in their own abilities to act;
6. **Countering:** Substitute new behaviors and cognitions for the old ways of working;
7. **Help Relationships:** Seek and use social support to facilitate change;
8. **Environmental Control:** Restructure the situation to elicit new behaviors and inhibit old habits;
9. **Reward:** reward self, or being rewarded by others, for making change.

Section 4 Assessing the Stage of Change

A key to produce successful change is to know which stage of change individuals are in for the problem. Prochaska, Norcross & Diclemente (1994) introduce four simple statements to assess the stage of a self changer. We modify those statements in a project management context in the following The modification allows project managers to identify the stage of their project stakeholders more effectively. Table 11 illustrates how evaluate the answers of the statements.

1. A project stakeholder delivered the key performance indicators of the organizational change project.
2. A project stakeholder has taken action on driving the success of the organizational change project.
3. A project stakeholder intends to take action before the next team meeting.
4. A project stakeholder intends to take action after a few more team meetings.

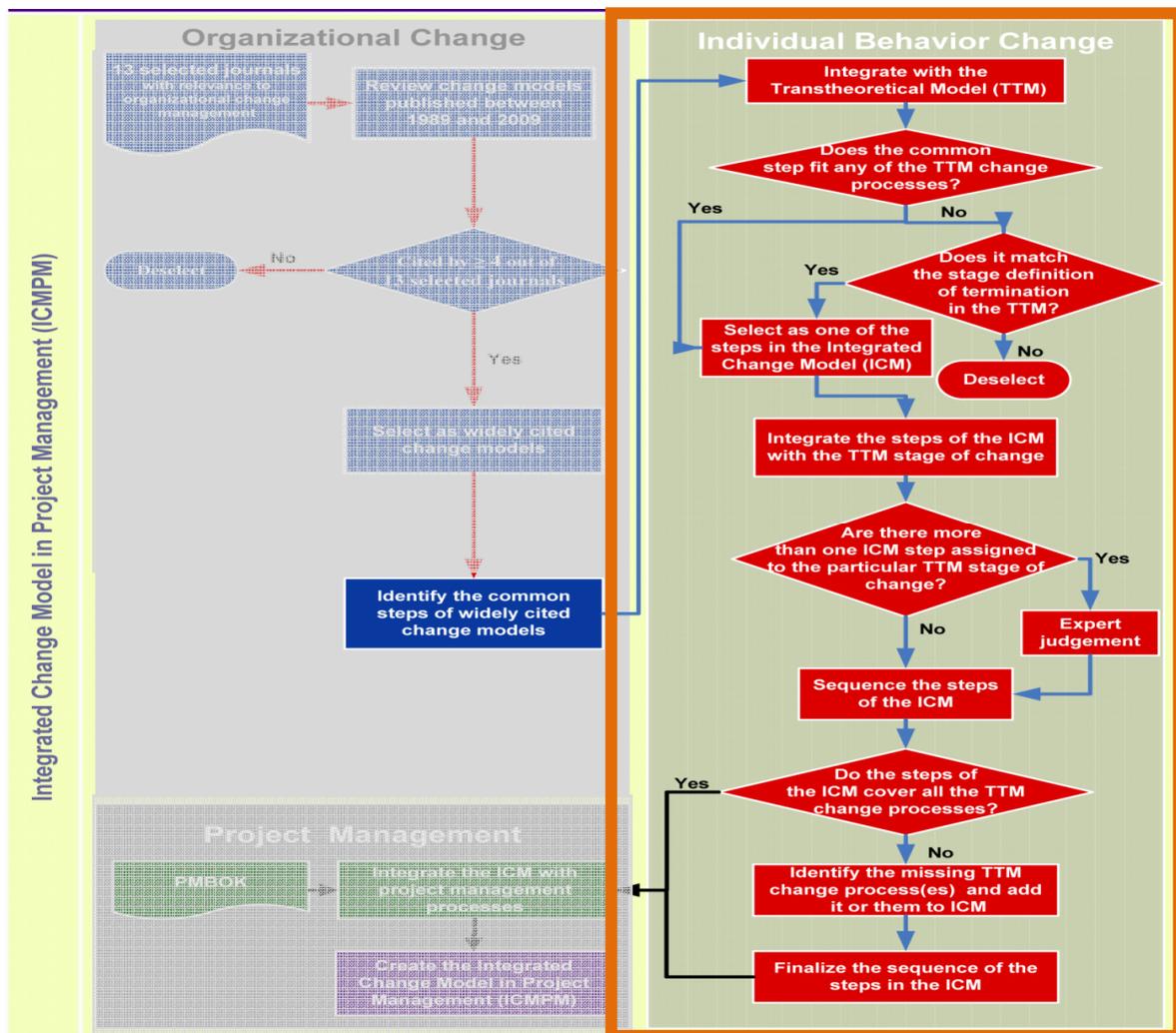
Table 11. Assessment of stage of change

Stage of Change	Assessment results
Precontemplation	Answer “no” to all statements
Contemplation	Answer “yes” to statement 4 and “no” to the others.
Preparation	Answer “yes” to statement 3 & 4 and “no” to the others.
Action	Answer “yes” to statement 2,3 & 4 and “no” to statement 1
Maintenance	Answer “yes” to all statements
Termination	Answer “yes” to all statements and have finished the project closing process

Chapter 5 Integrated Change Model (ICM)

This section explains how to build the Integrated Change Model (ICM) by integrating the common steps of widely cited change models with the Transtheoretical Model (TTM). Section 5.1 gives an overview of the ICM. Section 5.2 shows how to create the ICM steps by integrating the common steps of widely cited change models with the TTM change processes. Section 5.3 illustrates how to sequence the ICM steps by linking them with the TTM stage of change. Section 5.4 improves the comprehensiveness of the ICM by examining whether the ICM steps cover all the TTM change processes or not. If not, the missed processes will be added to the ICM. Figure 10 summarizes the content of this section in the research methodology.

Figure 10. Section 5 in the research methodology



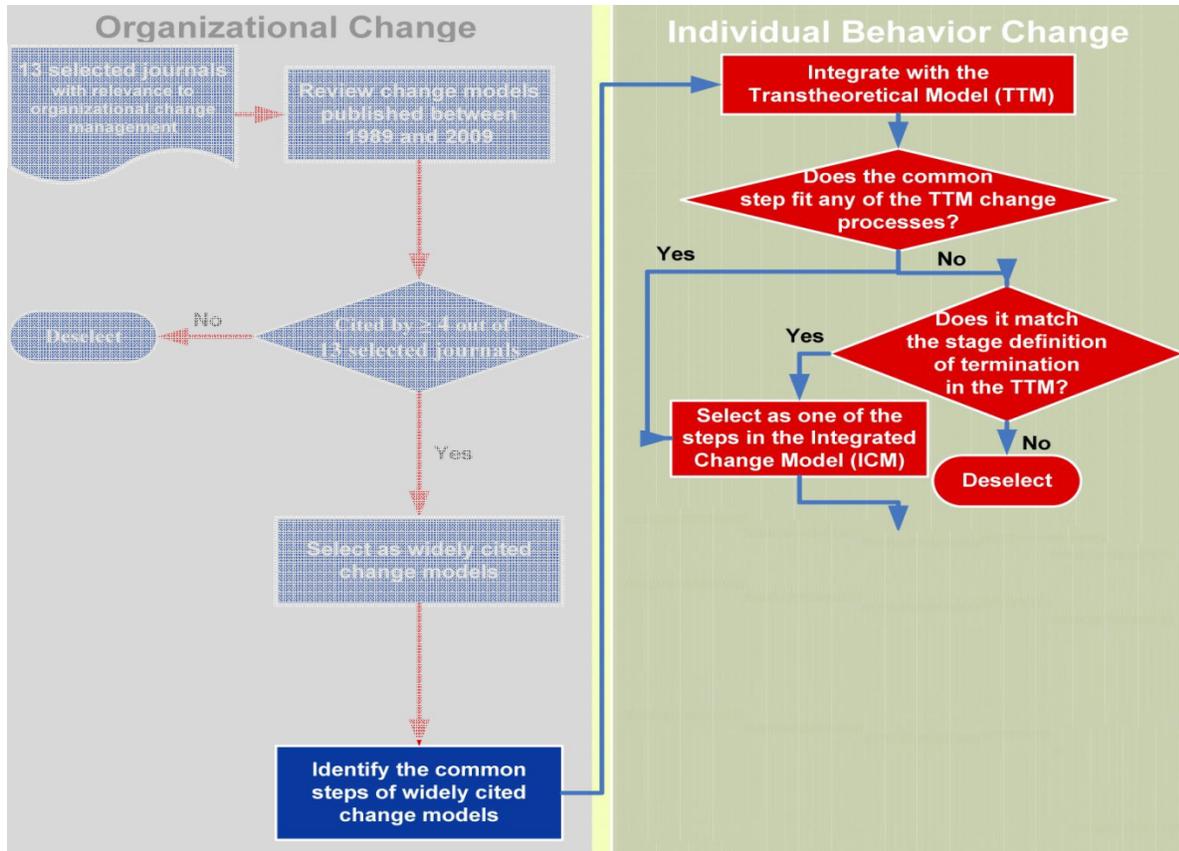
Section 1 Overview

The ICM is the integration between the common steps of widely cited change models in the organizational change field and the TTM in the individual behavior change field. The common steps of widely cited change models and the TTM are similar in the sense that they both help produce change. However, they are qualitatively different. In short, the common steps of widely cited change models relate to organizational change processes while the TTM to an individual's readiness for change. Researchers and practitioners consistently point out that understanding individual's readiness for change is important for making successful organizational change (Porras, Robertson, 1992; Pendleburg, 1996). This is because successful organizational change always requires individuals to get ready for the change and alter their current behavior patterns. Under the circumstances, to successfully lead organizational change projects, project managers cannot only follow change processes in organizational change models, but they also need to consider an individual's readiness for change which is deeply studied in the TTM. This leads us to integrate the common steps of widely cited change models with the TTM and thus building the ICM.

Section 2 Creation of the ICM Steps

This sub-section illustrates how to create the ICM steps by integrating the common steps of widely cited change models with the TTM change processes. Figure 11 shows the integration processes.

Figure 11. Creation processes of the ICM steps



The integration starts from selecting the common steps of widely cited change models that match the purpose of the TTM change processes as the ICM step. The only exception in which an unmatched common step is selected is when it fits the stage definition of termination in the TTM. The rationale of using these integration criteria is explained in Section 1.3. By applying these integration criteria, we find that nine out of the ten common steps of widely cited change models match the purpose of the TTM change processes, and the remained common step

fits the stage definition of termination in the TTM. As a result, we select all the 10 common steps of widely cited change models as the ICM steps. Table 12 summarizes the results of the integration.

Table 12. Integration between the TTM change processes and the 10 common steps of six widely cited change models

Matched TTM Change Processes	10 Common Steps of Six Widely Cited Change Models
Consciousness Raising	1. Understand the needs for change
	2. Establish a sense of urgency
Social Liberation	3. Encourage people to join a guiding coalition to lead the change
Emotional Arousal	4. Develop a vision and common goals
Commitment	5. Plan the change
	6. Communicate the change
Countering	7. Empower others to act on the change
Environment Control	8. Create short-term wins
	9. Reinforce and refine the change
Matched TTM stage definition of termination	10. Consolidate gains and produce more changes

The following explains how each of the common step fits the particular TTM change process or the TTM stage definition of termination, and thus becoming the ICM step.

Consciousness Raising: Step 1 & 2

Matched TTM Change Processes	10 Common Steps of Six Widely Cited Change Models
Consciousness Raising	1. Understand the needs for change
	2. Establish a sense of urgency

The purpose of consciousness raising in the TTM is to increase one’s awareness on a problem and possible solutions. “Understand the need for change” and “establish a sense of

urgency” serve the same purpose with this change process because the former step helps people confront a problem while the latter step makes people interpret a problem as an urgent one so that they would think about possible solutions to deal with it. As a result, both steps increase one’s awareness on a problem and possible solutions.

Social Liberation: Step 3

Matched TTM Change Processes	10 Common Steps of Six Widely Cited Change Models
Social Liberation	3. Encourage people to join a guiding coalition to lead the change

The purpose of social liberation in the TTM is to create more social alternatives for supporting new behaviors. For example, social help groups are the most familiar social liberation activity in the United States (Prochaska, Norcross, DiClemente, 1994). “Encourage people to join a guiding coalition to lead the change” serves the same purpose as social liberation. This is because joining a guiding coalition provides a social alternative for people who want to make change. A guiding coalition creates a social environment in which people can share their concerns and support each other to make change. This social environment helps them stay with the new behaviors and free from the old ones.

Emotional Arousal: Step 4

Matched TTM Change Processes	10 Common Steps of Six Widely Cited Change Models
Emotional Arousal	4. Develop a vision and common goals

The purpose of emotional arousal in the TTM is to use emotions to provide a burst of energy that enables individuals to make changes. “Develop a vision and common goals” serves the same purpose in the sense that it arouses individuals’ positive emotions by helping them

visualize the change as bringing positive outcomes in the future. When people experience positive emotions, they are more open and energized to make change (Fredrickson, 1998, 2001 2003).

Commitment: Step 5 & 6

Matched TTM Change Processes	10 Common Steps of Six Widely Cited Change Models
Commitment	5. Plan the change
	6. Communicate the change

The purposes of commitment in the TTM are to enable one’s willingness to act and strengthen a belief in her ability to change. “Plan the change” and “communicate the change” share the same purposes as commitment. To a large extent, successful change depends on using a plan that people believe works; if people create plan by themselves, that belief becomes much stronger (Prochaska, Norcross, DiClemente, 1994). Therefore, “plan the change” helps people strengthen a belief in their ability to change. For the step “communicate the change”, it enables one’s willingness to act on change in two ways. First, people, who are inside the guiding coalition, would be more willing to act after communicating the change with others because their decisions to change go public. Once people’s decisions go public, they are more likely to try their best to accomplish them since they may embarrass if they fail (Prochaska, Norcross, DiClemente, 1994). Second, people, who are outside of the guiding coalition, can get a chance to understand the needs of change more in depth after communication. It helps them believe that useful change is possible and necessary and thus enabling them to act on it.

Countering: Step 7

Matched TTM Change Processes	10 Common Steps of Six Widely Cited Change Models
Countering	7. Empower others to act on the change

The purpose of countering in the TTM is to substitute new behaviors for the old ones. “Empower others to act on the change” serves the same purpose because it helps people focus on acting on the change. When people are so occupied and focused on making the change, it prevents them from behaving their problem behaviors. According to Prochaska, Norcross and DiClemente (1994), keeping people busy at working on new behaviors is a common technique for countering. By doing so, there would be more new behaviors to counter the old ones.

Environment Control: Step 8 & 9

Matched TTM Change Processes	10 Common Steps of Six Widely Cited Change Models
Environment Control	8. Create short-term wins
	9. Reinforce and refine the change

The purpose of environment control in the TTM is to restructure the situation so as to elicit new behaviors and inhibit old habits. “Create short-term wins” and “reinforce and refine the change” align with the purpose. Creating short-term wins help restructure the situation where the change is workable. As short-term wins enable people to see compelling evidence that the change is workable, they are more willing to stay with it and keep putting efforts into driving its success. As for the step “reinforce and refine the change”, it helps restructure the situation by eliminating negative factors and enhancing the positive ones toward the change. This is because the step involves figuring out what work and what do not. For those change elements that work,

people need to do more as reinforcement. As for the change elements that do not work, people need to refine and implement them again.

TTM stage definition f termination: Step 10

Matched TTM stage definition of termination

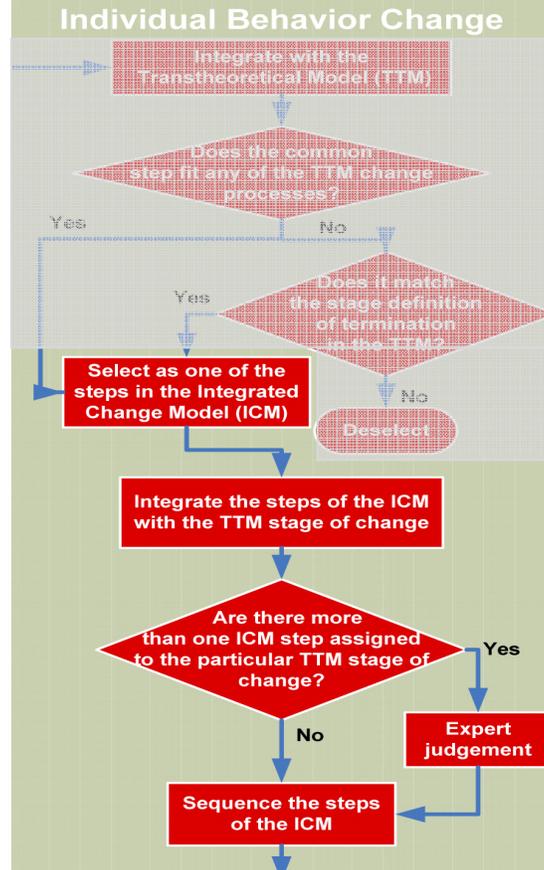
10. Consolidate gains and produce more changes

In the termination stage, people are no longer tempted by their old behaviors or problems. They will have won their struggles and exited the cycle of change. “Consolidate gains and produce more changes” fits this stage definition. According to Kotter (1995), Armenakis et al. (1999) and Luecke (2003), the consolidation process takes place when people successfully produce change with solid performance improvement. Before they exit the change cycle, they consolidate gains from the produced change in order to build their confidence in leading or participating in other change projects in the future. Therefore, the step does fit the stage definition of termination.

Section 3 Sequence of the ICM steps

This sub-section illustrates how to sequence the ICM steps by linking them with the TTM stage of change. Figure 12 represents the sequencing processes of the ICM steps.

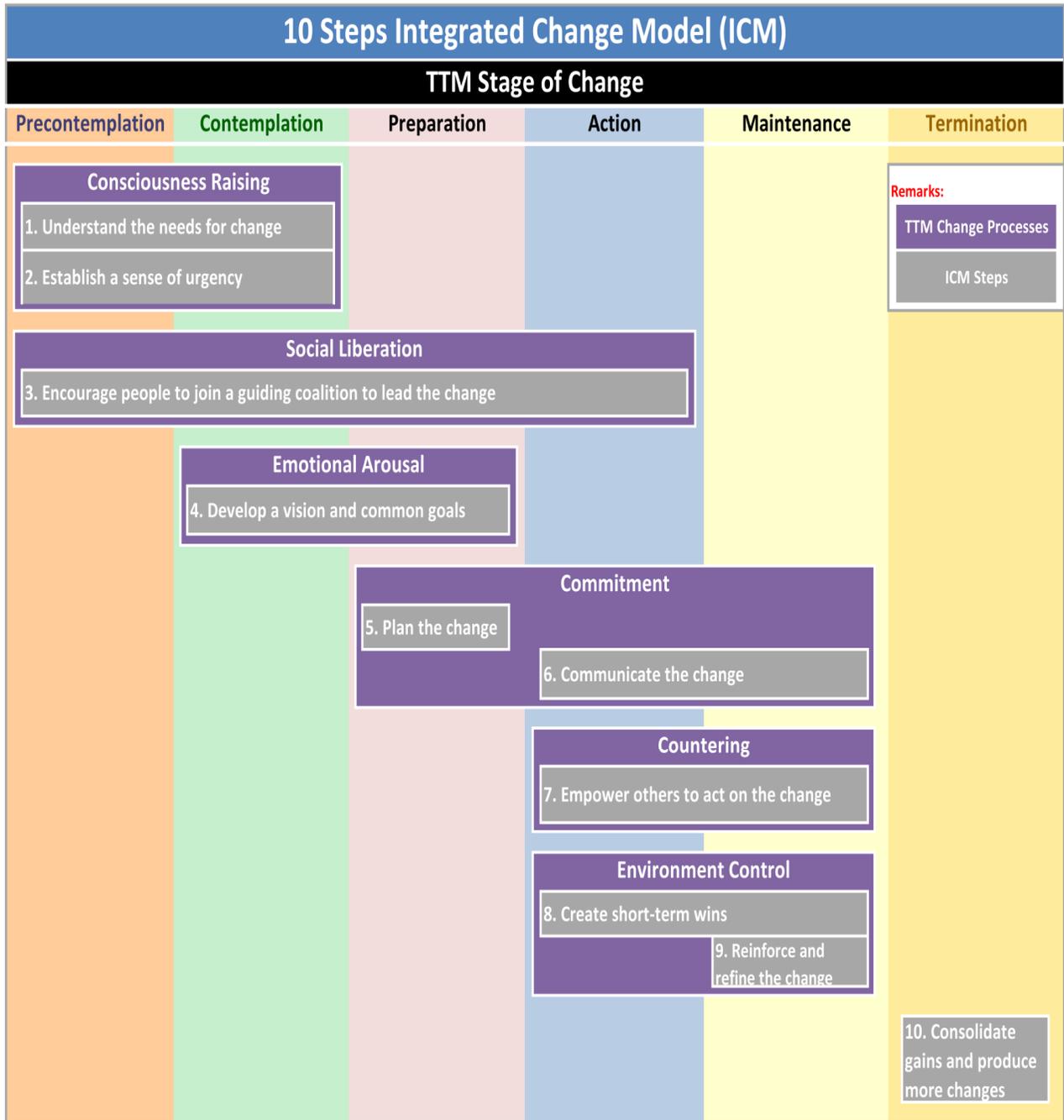
Figure 12. Sequencing processes of the ICM steps



After the common steps of widely change models became the ICM steps, we sequence them by integrating with the TTM stage of change. The integration works because there are systematic relationships between the change processes and stage of change in the TTM shown in figure 9 while we have already aligned the ICM steps with the TTM change processes in the previous steps shown in table 12. As a result, we can link the ICM steps with the TTM stage of change and get a ballpark on the sequence of the ICM steps. For instance, the ICM steps assigned to the first stage of change (Precontemplation) should be ranked higher than the ICM

steps assigned to the later stage of change. If there are more than one ICM steps assigned to the particular TTM stage of change, we will use our field experience to rationalize the final sequence. Figure 13 illustrates the sequence of the ICM steps. The following part explains the details of the sequence:

Figure 13. 10 Steps ICM



There are three ICM steps — “understand the needs for change”, “establish a sense of urgency” and “encourage people to join a guiding coalition to lead the change” — integrated with the precontemplation stage which is the first stage of change in the TTM. Therefore, we rank these ICM steps higher than others assigned to the latter stages of change. Because three steps are assigned to the same stage of change, we need to rationalize their final sequence based on our experience. We rank “understand the needs for change” the first, “establish a sense of urgency” the second, and “encourage people to join a guiding coalition to lead the change” the third. This is because by knowing the reasons for change, people are more aware of the problems. When they are more aware of the problems, it helps increase the urgency rate to fix it by making change. As a result, people are more motivated to join a guiding coalition as a way to produce change.

Although there are four ICM steps — “understand the needs for change”, “establish a sense of urgency”, “encourage people to join a guiding coalition to lead the change” and “create a vision and common goals” — integrated with the contemplation stage which is the second stage of change in the TTM, the sequence of “understand the needs for change”, “establish a sense of urgency”, “encourage people to join a guiding coalition to lead the change” have been identified as the first, second and third ICM step respectively. Therefore, “create a vision and common goals” becomes the fourth ICM step.

There are three ICM steps — “encourage people to join a guiding coalition to lead the change”, “create a vision and common goals” and “plan the change” — integrated with the preparation stage which is the third stage of change in the TTM. Since the sequence of “encourage people to join a guiding coalition to lead the change”, “create a vision and common

goals” have been identified as the third and fourth ICM step respectively, “plan the change” becomes the fifth ICM step.

There are four ICM steps — “encourage people to join a guiding coalition to lead the change”, “communicate the change”, “empower others to act on the change” and “create short-term wins” — integrated with the action stage which is the fourth stage of change in the TTM. As the sequence of “encourage people to join a guiding coalition to lead the change” has been determined, we only need to rationalize the sequence of the remained three steps. We decide to make “communicate the change” as the sixth step, “empower others to act on the change” as the seventh step, and “create short-term wins” as the eighth step. This is because communicating the change helps empower others to act on the change, and create short-term wins. By understanding the change more in depth through communication, people are more willing to support it and thus acting on it. When they act on the change, it helps accomplish short-term goals that are set by the guiding coalition. As a result, the chance of creating short-term wins increases.

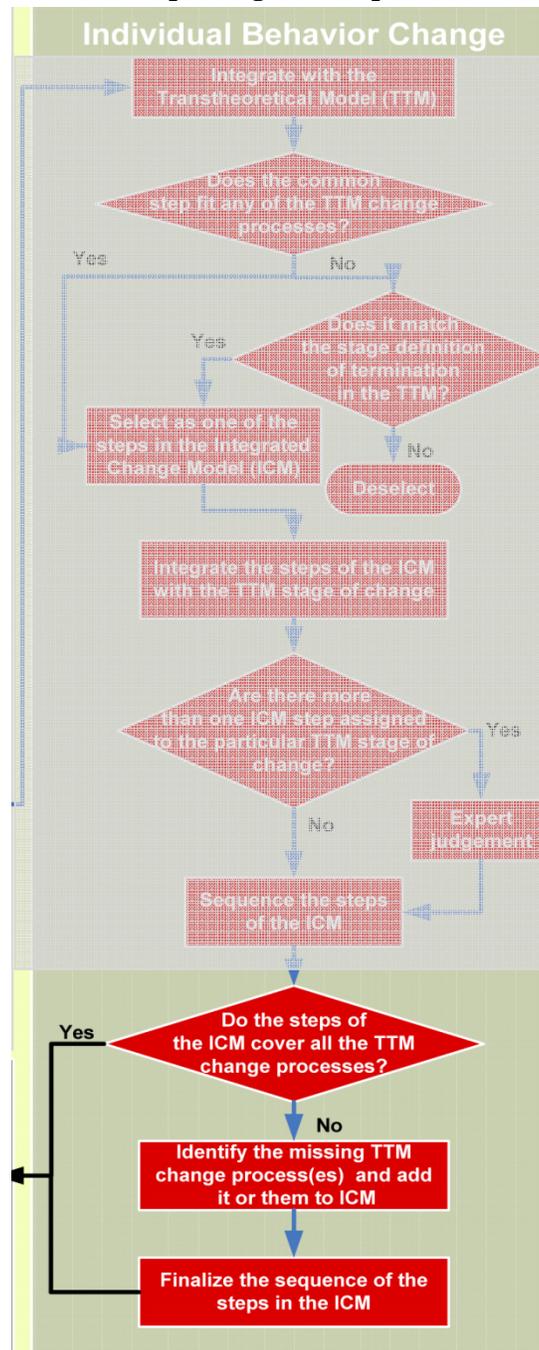
Although there are four ICM steps — “communicate the change”, “empower others to act on the change”, “create short-term wins” and “reinforce and refine the change” — integrated with the maintenance stage which is the fifth stage of change in the TTM, the sequence of “communicate the change”, “empower others to act on the change”, “create short-term wins” have been identified as the sixth, seventh and eighth ICM step respectively. Therefore, “reinforce and refine the change” becomes the ninth ICM step.

Finally, “consolidate gains and produce more changes” is the only step integrated with the termination stage which is the last stage of change in the TTM. As result, it becomes the last ICM step which is the tenth one.

Section 4 Comprehensiveness of the ICM

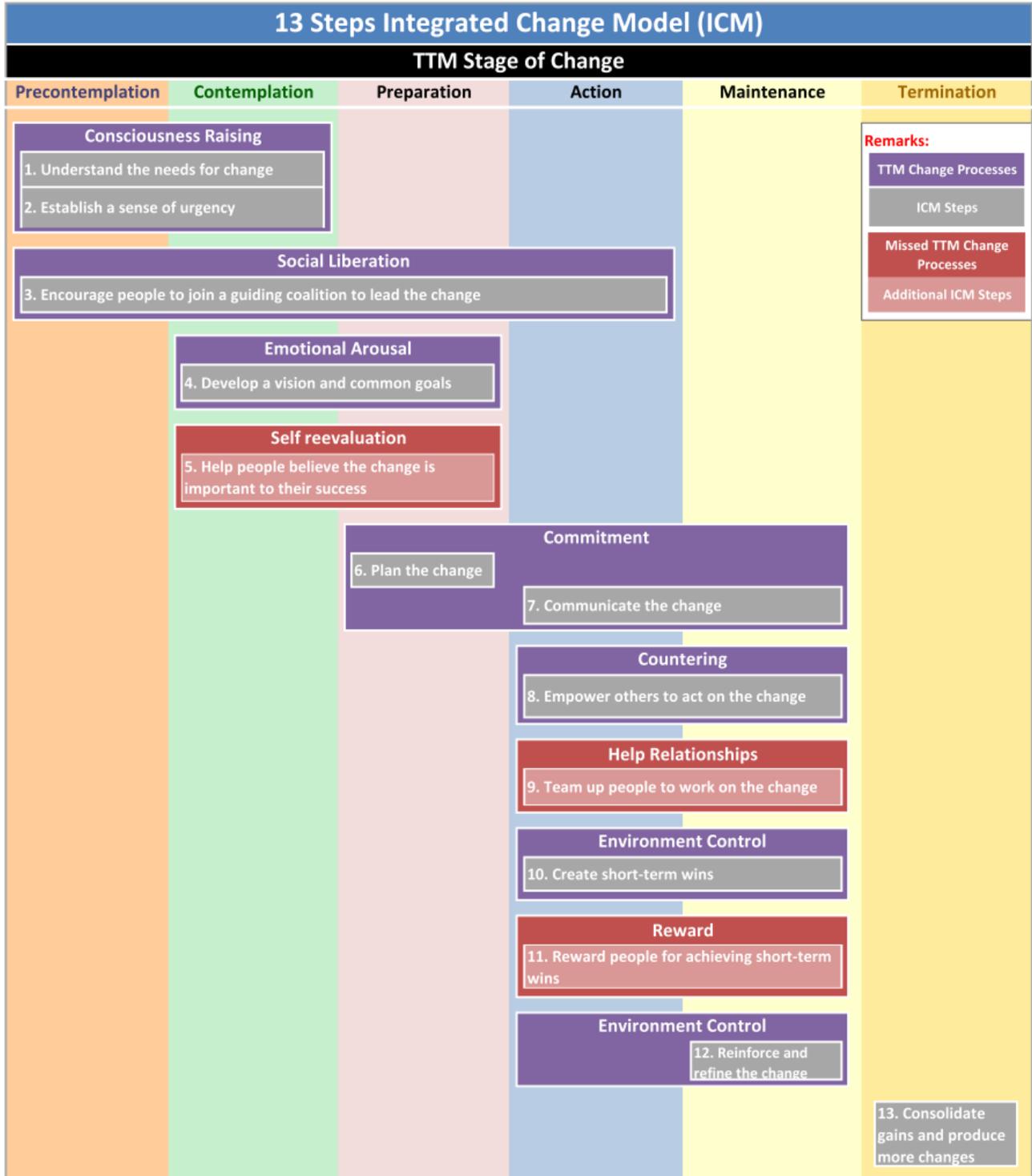
This sub-section demonstrates how to improve the comprehensiveness of the ICM by examining whether the ICM steps cover all the TTM change processes or not. If not, the missed processes will be added to the ICM. Figure 14 shows the improvement process.

Figure 14. Process of improving the comprehensiveness of the ICM



After we compare the ICM steps with the TTM change processes, we find three TTM change processes — self reevaluation, help relationships, and reward — are not covered by the ICM steps. Therefore, we add them to the ICM and form the 13 steps ICM as shown in figure 15.

Figure 15. 13 steps ICM



The following explains the content of the three missed TTM change processes and how to sequence them in the ICM.

Self reevaluation: Step 5

Missed TTM Change Processes	Additional ICM steps
Self reevaluation	5. Help people believe the change is important to their success

The purpose of self reevaluation in the TTM is to help people believe the change is important to their success. According to Prochaska, Norcross and DiClement (1994), we need to use self reevaluation in the contemplation and preparation stage so as to help people progress the stages. Moreover, self evaluation follows naturally from emotional arousal which is another change process of the TTM. Therefore, we should place the ICM step which matches self reevaluation after the ICM step which matches emotional arousal. The fourth ICM step — develop a vision and common goals — is the one that matches emotional arousal. As a result, we should rank “help people believe the change is important to their success” as the fifth ICM step.

Help Relationships: Step 9

Missed TTM Change Processes	Additional ICM steps
Help Relationships	9. Team up people to work on the change

The purpose of help relationships in the TTM is to seek and use social support to facilitate change. According to Prochaska, Norcross and DiClement (1994), we need to use help relationships in the action and maintenance stage so as to help people progress the stages. “Team up people to work on the change” is a typical technique of help relationships suggested by Prochaska, Norcross and DiClement (1994). We decide to insert it after the eighth ICM step —

empower others to act on the change — because people generally act on the change more effective as a team than alone (Prochaska, Norcross, DiClement, 1994). Therefore, “team up people to work on the change” become the ninth ICM step.

Reward: Step 11

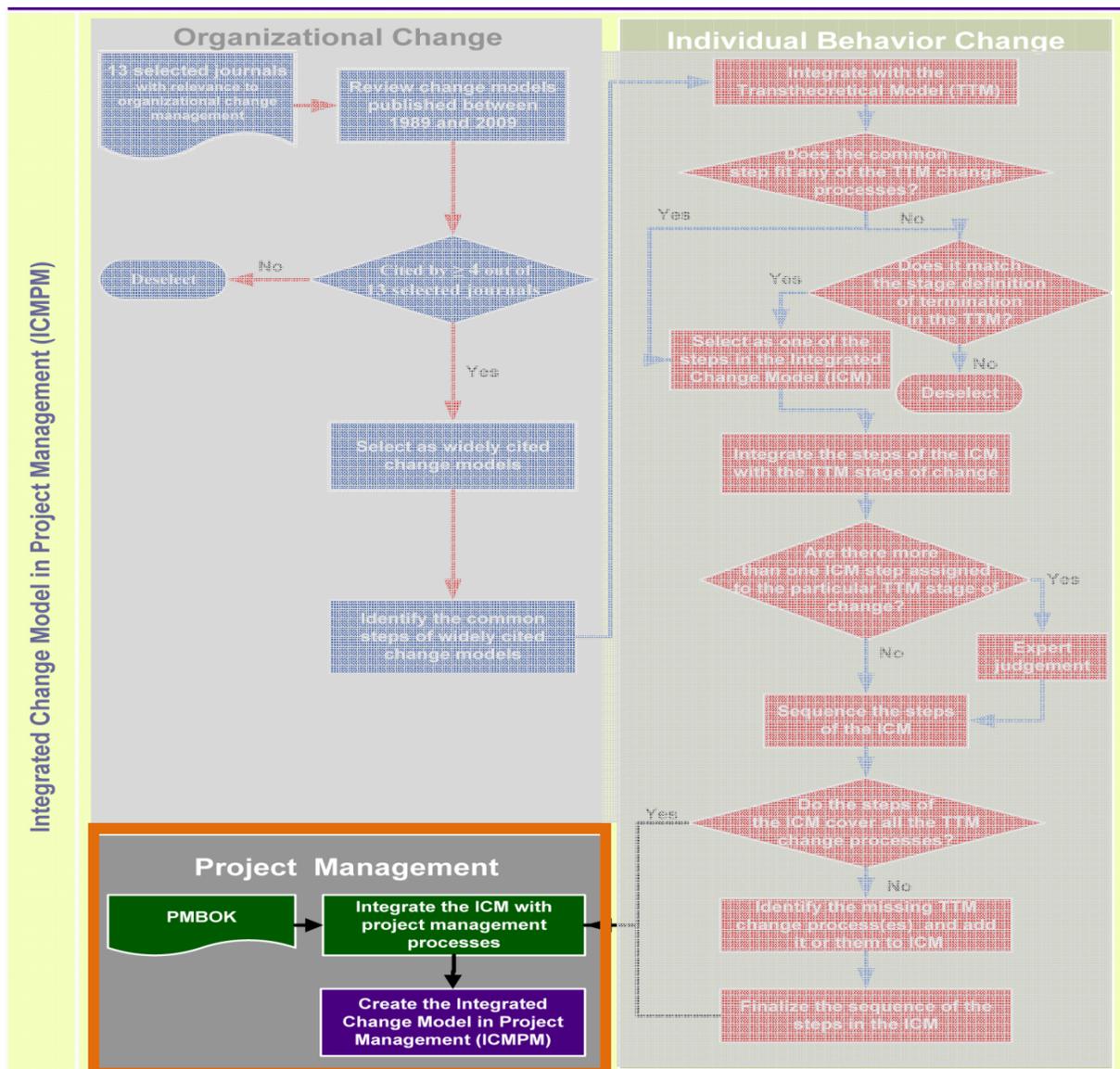
Missed TTM Change Processes	Additional ICM steps
Reward	11. Reward people for achieving short-term wins

The purpose of reward in the TTM is to reward self, or being rewarded by others, for making change. According to Prochaska, Norcross and DiClement (1994), we need to use reward in the action and maintenance stage so as to help people progress the stages. To effectively reward people, we need to link rewards with clear performance improvement. Successfully creating short-term wins is a good performance indicator. Therefore, we insert “reward people for achieving short-term wins’ after the tenth ICM step — create short-term wins, and it becomes the eleventh ICM step.

Chapter 6 Integrated Change Model in Project Management (ICMPM)

This section explains how to build the Integrated Change Model in Project Management (ICMPM) by integrating the ICM with the project management process groups (PMI, 2008). Section 6.1 shows the conceptual principles of the project management process groups (PMI, 2008). Section 6.2 illustrates how to build the ICMPM by integrating the ICM with the project management process groups. Figure 16 summarizes the content of this section in the research methodology.

Figure 16. Section 6 in the research methodology

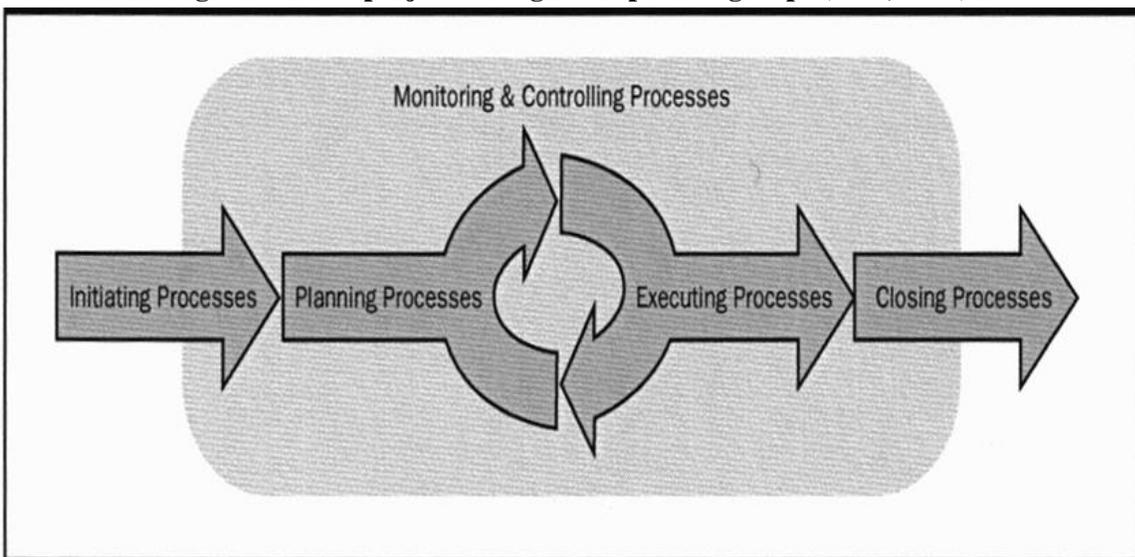


Section 6

Section 1 Project Management Process Groups

This sub-section illustrates the conceptual principles of the five project management process groups proposed by Project Management Institute (PMI, 2008). Figure 17 shows the five project management process groups — initiating, planning, executing, monitoring and controlling, and closing.

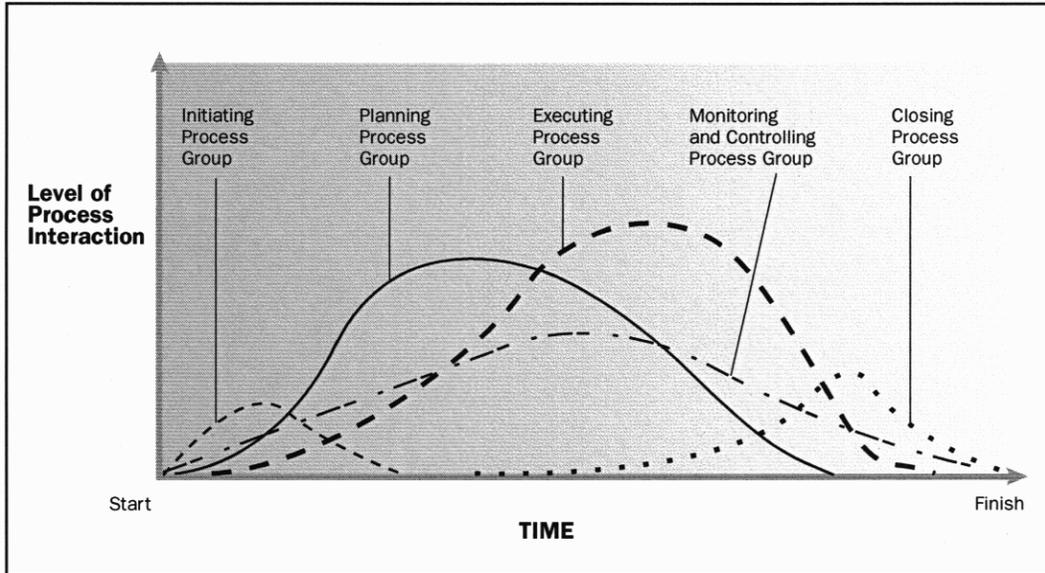
Figure 17. Five project management process groups (PMI, 2008)



These process groups ensure the effective flow of the project throughout its existence. Moreover, the integrative nature of project management requires the monitoring and controlling process group to be interacted with the other process group as shown in figure 17. Since project management is a finite effort, the initiating process group begins the project, and the closing process group ends it.

In practice, the process groups contain overlapping processes that interact at varying levels of intensity across the project or project phase as shown in figure 18.

Figure 18. Process groups interact in a phase or project (PMI, 2008)



The following part defines the project management process groups:

Initiating

The initiating process group consists of processes to define a new project or new phase of an existing project by obtaining authorization to start the project or phase (PMI, 2008). Within the initiating processes, business needs of a project are identified; initial scope is defined; initial financial resources are committed. If not already assigned, the project manager will be selected. Moreover, both external and internal stakeholders of the project are identified. This information is captured in the project charter and stakeholder register. When the project charter is approved, the project becomes officially authorized.

Planning

The planning process group consists of processes to establish the total scope of the effort, define and refine objectives, and develop the course of action required to attain those objectives

(PMI, 2008). The planning processes develop the project management plan and project documents that will be used to implement the project. The project management plan and project documents include all aspects of the scope, time, cost, quality, communication, risk and procurements. As more project information are gathered and understood throughout the project life cycle, additional planning may be needed. Moreover, project teams are suggested involving all appropriate stakeholders when planning and developing the project management plan and project documents (PMI, 2008).

Executing

The executing process group consists of processes to complete the work defined in the project management plan which satisfies the project specifications. The executing processes involve coordinating people and resources, and integrating and performing the activities of the project according to the project plan (PMI, 2008). During project execution, results may require to do planning updates and re-baselining. The updates can include change in activity duration, resource productivity and availability, and scope. These variances may affect the project management plan or project documents and may require detailed analysis of appropriate project management responses.

Monitoring and Control

The monitoring and controlling process group consists of processes to track, review and regulate the progress and performance of the project; it identifies areas in which changes are required to the project plan, and initiates the corresponding changes (PMI, 2008). The continuous monitoring provides the project team insights into the health of the project and identifies areas requiring additional attention. In addition, the monitoring and controlling process group not only

monitors and controls the working being done within a process group, but also monitors and controls the entire project efforts.

Closing

The closing process group consists of processes to finalize all activities across all project management processes groups in order to formally complete the project, phases or contractual obligations (PMI, 2008). The closing processes verify that the defined processes are completed within all the process groups so that the project manager can officially close the project or project phase.

Section 2 Integrated Change Model in Project Management (ICMPM)

This sub-section demonstrates how to build the Integrated Change Model in Project Management (ICMPM) by integrating the 13 steps Integrated Change Model (ICM) created in Section 5 with the project management process groups (PMI, 2008). The integration is conducted through matching the purpose of the ICM step with the project management process groups (PMI). We find that the first five ICM steps match with the initiating processes; the sixth ICM step matches with the planning processes; the seventh to eleventh ICM steps match with the executing processes; the twelfth ICM step matches with the executing and controlling processes; the thirteenth ICM step matches with the closing processes. Figure 19 summarizes the results of the integration.

Figure 19. Integrated Change Model in Project Management (ICMPM)

Intergrated Change Model In Project Management (ICMPM)						
Project Management Process Groups	TTM Stage of Change vs. 13 Steps Integrated Change Model (ICM)					
	Precontemplation	Contemplation	Preparation	Action	Maintenance	Termination
1. Initiating	1. Understand the needs for change 2. Establish a sense of urgency		3. Encourage people to join a guiding coalition to lead the change		4. Develop a vision and common goals 5. Help people believe the change is important to their success	
2. Planning			6. Plan the change			
3. Executing					7. Communicate the change 8. Empower others to act on the change 9. Team up people to work on the change 10. Create short-term wins 11. Reward people for achieving short-term wins	
4. Monitoring and Controlling					12. Reinforce and refine the change	
6. Closing					13. Consolidate gains and produce more changes	

The following explains how the ICM step matches with the particular project management process group in order to create the ICMPM.

Initiating: ICM Step 1 to 5

Project Management Process Groups	13 steps Integrated Change Model (ICM)
Initiating	1. Understand the needs for change
	2. Establish a sense of urgency
	3. Encourage people to join a guiding coalition to lead the change
	4. Develop a vision and common goals
	5. Help people believe the change is important to their success

The initiating process group consists of processes to clarify business needs of a project, define its initial scope, commit initial financial resources, and identify both external and internal stakeholders of a project (PMI, 2008). We integrate the first five ICM steps with the process group because the purposes of these steps match the above definitions. By understanding the needs for change and establishing a sense of urgency, people get to know the reasons for making change which always relate to business benefits. In other words, the steps help clarify business needs of an organizational change project. By developing a vision and common goals, people determine what they expect regarding change outcomes. By doing so, people can define the initial scope of a change project as well as committing initial financial resources to it. Finally, in the ICM step of "encourage people to join a guiding coalition to lead a change project" and "help people believe the change is important to their success", "people" mean project stakeholders who have influence and interest in a change project. Therefore, to effectively implement these steps, we first need to identify both external and internal project stakeholder. This is consistent with the definitions of the initiating processes.

Planning: ICM Step 6

Project Management Process Groups	13 steps Integrated Change Model (ICM)
Planning	6. Plan the change

The planning process group consists of processes to develop course of action required to attain the project's objectives (PMI, 2008). The project management plan is the output of the process group that is used to implement the project. We integrate the sixth ICM step — plan the change — with the process group as they basically serve the same purpose. When we plan the change, we actually develop a plan of actions to attain expected results of an organizational change project.

Executing: ICM Step 7 to 11

Project Management Process Groups	13 steps Integrated Change Model (ICM)
Executing	7. Communicate the change
	8. Empower others to act on the change
	9. Team up people to work on the change
	10. Create short-term wins
	11. Reward people for achieving short-term wins

The executing process group consists of processes to implement a project by coordinating people and resources, and integrating and performing the activities of the project according to the project plan (PMI, 2008). We integrate the seventh to eleventh ICM steps with the process group because these steps help implement an organizational change project. When we communicate the change, we make relevant information available to project stakeholders as planned in the planning process group. After communication, project stakeholders are more likely to support and act on the change. We then team up people to work on the change as they generally act on

change more effective as a team than alone (Prochaska, Norcross, DiClement, 1994). As a result, project stakeholders are fully empowered to execute an organizational change project. To keep the momentum of implementing an organizational change project, we need to create short term wins and reward people for achieving them.

Monitoring and Controlling: ICM Step 12

Project Management Process Groups	13 steps Integrated Change Model (ICM)
Monitoring and Controlling	12. Reinforce and refine the change

The monitoring and controlling process group consists of processes to track, review and regulate the progress and performance of the project; it identifies areas in which changes are required to the project plan and initiates the corresponding changes (PMI, 2008). We integrate the twelfth ICM step with the process group as they serve the same purpose. “Reinforce and refine the change” involves figuring out what work and what do not, which is the same as the tracking and reviewing processes of the monitoring and controlling process group. Moreover, in the step, people need to work more on the change elements that work, and refine the elements that do not work. These are the same as regulating the progress and performance of the project, and initiating the corresponding changes in the monitoring and controlling process group.

Closing: ICM Step 13

Project Management Process Groups	13 steps Integrated Change Model (ICM)
Closing	13. Consolidate gains and produce more changes

The closing process group consists of processes to finalize all activities across all project management processes groups in order to formally complete the project, phases or contractual

obligations (PMI, 2008). We integrate the thirteenth ICM step with the process group as they serve the same purpose to close a project. “Consolidate gains” takes place after people successfully produce change with solid performance improvement and before they exit the change cycle. They consolidate gains from the produced change in order to build their confidence in leading or participating in other change projects in the future. Therefore, we can regard the step as the closing process of an organizational change project.

Chapter 7 Results

Section 2 analyzes the concepts of organizational change. In the section, it defines organizational change as new ways of organizing and working in an organization (Dawson 2003). It presents five triggers to organizational change (organizational environment, performance, top management, strategy and structure) based on the research of Huber, Glick, Miller and Sutcliff (1993), and categorizes types of organization change by the rate of occurrence, how change comes about and their scale (Senior 2002).

Section 3 reviews change models in the organizational change field. It first reviews 25 change models that were published in any of the 13 selected journals between 1989 and 2009, and selects six out of the 25 models as widely cited change models. These six widely cited change models are cited at least in four out of the 13 selected journals, and they include Judson's Five-step Change Model (1991), Kanter et al.'s Ten Commandments for Executing Change (1992), Kotter's Eight Stage Processes for Successful Organizational Transformation (1995), Galpin's Nine Wedges Change Model (1996), Armenakis et al.'s Change Readiness Model (1999), and Luecke's Seven Steps (2003). The section then explains their conceptual principles, and identifies 10 common change steps of them. The 10 common steps are: (1) understand the needs for change; (2) establish a sense of urgency; (3) encourage people to join a guiding coalition to lead the change; (4) create a vision and common goals; (5) plan the change; (6) communicate the change; (7) empower others to act on the change; (8) create short term wins; (9) reinforce and refine the change; (10) consolidate gains and produce more changes.

Section 4 illustrates the conceptual principles of the Transtheoretical Model (TTM) in the individual behavior change field. It explains the definition of the six stage of change (precontemplation, contemplation, preparation, action, maintenance and termination) in the

model and which particular change processes of the model are useful for people to progress change from one stage to the next. There are nine change processes in the TTM which include consciousness raising, social liberation, emotional arousal, self reevaluation, commitment, countering, helping relationships, environmental control, and reward. In addition, the section also includes a modified assessment for project managers to evaluate the stage of change of their project stakeholders.

Section 5 demonstrates the formation of the Integrated Change Model (ICM) by integrating the common steps of six widely cited change models with the TTM. It begins from selecting the common steps of widely cited change models as the ICM steps if they match the purpose of the TTM change processes or the stage definition of termination in the TTM. Based on the selection criteria, all the ten common steps are selected as the ICM steps. The section then sequences the ICM steps by integrating them with the TTM stage of change, and by expert judgment. As a result, the 10 Steps ICM is created. To improve the comprehensiveness of the 10 Steps ICM, the section examines whether the ICM steps cover all of the TTM change processes or not. It finds three TTM change processes — self reevaluation, help relationships and reward — are missing in the ICM. Therefore, we add them to the model and create the 13 Steps ICM.

Section 6 illustrates the creation of the Integrated Change Model in Project Management (ICMPM) by integrating the 13 Steps ICM with the five project management process groups— initiating, planning, executing, monitoring and controlling, and closing (PMI, 2008). The integration is done through matching the purposes of the ICM steps with the definition of the project management process groups (PMI). Based on the integration criterion, the first five ICM steps integrates with the initiating process group; the sixth ICM step merges with the planning process group; the next five (from the seventh to the eleventh) ICM steps integrates with the

executing process group; the twelfth ICM step merges with monitoring and controlling process group; the thirteenth ICM step integrates with the closing process group.

Chapter 8 Conclusions

It is evident from this paper that change is an ever-present element that affects all organizations. There is a consensus that project management is a powerful and flexible management approach to implementing organizational change (Laszlo, 1999; Pinto, Rouhiainen, 2001; Hebert, 2002). However, with less than 20 percent of organizational change projects ending in success (The Standish Group, 1999; Cicmil, 1999; Collyer, 2000; Haines, Aller-Stead & Mckinlay, 2005), this may indicate the lack of a valid model for project managers to successfully implement and manage organizational change since what is currently available is a wide range of organizational change models that neither are in a project management context nor pay adequate emphasis on the people-side of change.

Under the circumstances, this paper has attempted to highlight the need for building an integrated change model in a project management context. To construct such a change model, this paper integrates widely cited change models in the organizational change field and the Transtheoretical Model (TTM) (Prochaska, DiClemente, 1984, 1994) in the individual behavior change field with the project management process groups (PMI, 2008). The TTM has been recognized as the most influential model to study the people-side of change (Pendleburg, 1996).

Specifically, the results of the paper propose to integrate the 13 Steps Integrated Change Model (ICM) with the project management process groups (PMI, 2008) so as to create the Integrated Change Model in Project Management (ICMPM). We develop the 13 Steps ICM through merging the 10 common steps of six widely cited change models with the TTM.

Moreover, the paper finds that unlike a one-size-fits-all change model, the ICMPM enables project managers to adjust their approaches to implement organizational change in accordance with their project stakeholders' readiness for change. For instance, project managers

can evaluate project stakeholders' readiness for change through assessing their stage of change in the TTM as shown in Section 4.4. If most people are found to be in the precontemplation stage, then we know from the ICMPM that we need to stay longer in the project initiating processes and intensively use the first three ICMPM steps — understand the needs for the change, establish a sense of urgency, and encourage people to join a guiding coalition to lead the change — to help people progress through the change. Similar systematic strategies can be used at each stage as project managers prepare for effective actions. We believe that this interactive approach offered by the ICMPM would reduce resistance to change, increase participation in change, reduce dropouts from change, increase progress and greatly enhance implementation of organizational change projects.

Chapter 9 Recommendation for Future Works

This research raises questions for future research in several areas. First, future research should focus on empirical studies that test all or part of the change model presented in this paper. It is important to explore how much predictive power the proposed conceptual relationships among the 10 common steps of six widely cited change model, the TTM and the project management process groups have on successful organizational change projects.

Second, the integration between the ICMPM and positive psychological states such as flow, positive emotions and psychological capital could also be studied. Although ICMPM and positive psychological states are similar in the sense that they both help people make successful organizational changes, these two models are qualitatively different. In short, the ICMPM relates to behaviors and positive psychological states to cognitive and emotional state. Here, a behavior is an observable action that reflects one's psychological state. In the ICMPM, people behave differently in each step of the model so as to make successful organizational change. Positive psychological states, on the other hand, are more fundamental in that they focus on one's positive emotions and cognitive reactions toward change, which in turn result in positive behaviors, the subject of the ICMPM. Therefore, the two theories are related, but focus on different aspects of human activity. Due to the difference in focus, integrating the two models will allow us to look at the issue from different angles, thus providing new and deep insights into how to handle organizational change projects.

Finally, future research should consider the role of differing types of organizational change such as incremental and revolutionary change, and cultural factors that influence the selection of change models, and how they manifest and impact performance of organizational change projects.

Appendix 1

Financial Times 45 Journals (FT45) List 2009	
1.	Academy of Management Journal (Academy of Management, Ada, Ohio)
2.	Academy of Management Perspectives (AMP)
3.	Academy of Management Review (Academy of Management)
4.	Accounting, Organisations and Society (Elsevier)
5.	Accounting Review (American Accounting Association)
6.	Administrative Science Quarterly (Cornell University)
7.	American Economic Review (American Economic Association, Nashville)
8.	California Management Review (UC Berkely)
9.	Contemporary Accounting Research (Wiley)
10.	Econometrica (Econometric Society, University of Chicago)
11.	Entrepreneurship Theory and Practice (Baylor University, Waco, Texas)
12.	Harvard Business Review (Harvard Business School Publishing)
13.	Human Resource Management (John Wiley and Sons)
14.	Information Systems Research (Informs)
15.	Journal of Accounting and Economics (Elsevier)
16.	Journal of Accounting Research (University of Chicago)
17.	Journal of Applied Psychology (American Psychological Association)
18.	Journal of Business Ethics (Kluwer Academic)
19.	Journal of Business Venturing (Elsevier)
20.	Journal of Consumer Psychology (Elsevier)
21.	Journal of Consumer Research (University of Chicago)
22.	Journal of Finance (Blackwell)
23.	Journal of Financial and Quantitative Analysis
24.	Journal of Financial Economics (Elsevier)
25.	Journal of International Business Studies (Academy of International Business)
26.	Journal of Management Studies (Wiley)
27.	Journal of Marketing (American Marketing Association)
28.	Journal of Marketing Research (American Marketing Association)
29.	Journal of Operations Management (Elsevier)
30.	Journal of Political Economy (University of Chicago)
31.	Journal of the American Statistical Association (American Statistical Association)
32.	Management Science (Informs)
33.	Marketing Science (Informs)
34.	MIS Quarterly (Management Information Systems Research Centre, Unviersity of Minnesota)
35.	Operations Research (Informs)
36.	Organization Science (Informs)
37.	Organization Studies (SAGE)
38.	Organizational Behaviour and Human Decision Processes (Academic Press)
39.	Production and Operations Management (POMS)
40.	Quarterly Journal of Economics (MIT)
41.	Rand Journal of Economics (The Rand Corporation)
42.	Review of Accounting Studies (Springer)
43.	Review of Financial Studies (Oxford University Press)
44.	Sloan Management Review (MIT)
45.	Strategic Management Journal (John Wiley and Sons)

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