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PROJECT MANAGEMENT FRAMEWORK TO ORGANIZATIONAL TRANSITIONS

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ABSTRACT

The contribution of this paper is a description of a project management framework and associated models for organizational transitions. The framework contains an integrated set of steps an organization can take to lead an organizational transition such as downsizing and change in mission or role. The framework is designed to help an organization do the right work the right way with the right people at the right time. The underlying rationale for the steps in the framework is based a set of findings which include: defining a transition as containing both near-term and long-term actions, designing actions which respond to drivers and achieve desired results, aligning the organization with the external environment, and aligning the internal components of the organization. The framework was developed based on best practices found in the literature, lessons learned from heads of organizations who have completed large-scale organizational changes, and concerns from employees at the Kennedy Space Center (KSC). The framework is described using KSC.

Managers can use this framework to help design their transitional activities. Change leaders can use the methodology and framework to develop a framework specific to their organization. Researchers can use this framework to further research the effect of different change activities on transition and organizational performance.

PROJECT MANAGEMENT FRAMEWORK TO ORGANIZATIONAL TRANSITIONS

Tim Kotnour, Ph.D.

1. INTRODUCTION—THE NATURE OF KSC'S TRANSITION

The Kennedy Space Center (KSC) as part of the National Aeronautics and Space Association's (NASA) efforts to perform "better, faster, cheaper" have begun a large-scale organizational change effort. Their effort is similar to the other private, public, and government organizations who have attempted efforts such as downsizing to meet performance requirements. The drivers for KSC's transition include: the reduction in NASA's budget, the development a single flight operations contractor (SFOC) for shuttle processing, and a definition of KSC's roles based on NASA's plans (e.g., strategic, HEDS, and enterprise). These drivers have led to the change in role of and possible reduction of the civil servants at KSC. The change in the civil servants' roles has been described as moving from oversight to insight. These circumstances lead KSC to undergo a large-scale organizational change.

Best practices can help guide an organization to complete successful large-scale change. Other studies have been completed which summarize the set of "best practices" for organizational change and downsizing [5, 6, 11, 23, 28, 34, 35]. However, the translation of the findings into an all encompassing working plan needs to be completed. Some authors [1, 20] do offer a set of explicit steps. A project management approach is adopted to integrate the disparate set of research findings and case studies into a useful tool for managers to consider when leading a large-scale organizational change. The project management approach emphasizes the need to explicitly define a set of steps and the linkage among those steps with goals (e.g., cost, schedule, performance). The purpose of this research is to help managers understand, discuss, and take action on their organizational change and transition. To accomplish this purpose we seek to assimilate the best practices and the theory behind the practices into a framework. We use four related models to describe a set of implications to consider in conducting an organizational transition. The four models are:

1. Doing the right work the right way with the right people at the right time.
2. An organizational transition is an "All-term" transition.
3. Transition drivers lead to actions which lead to results.
4. An organization must be aligned both externally and internally.

From these four models and associated implications, a set of steps are defined to lead an organization through its transition and are represented as a work breakdown structure. In this paper, I explain the models, provide the rationale for them, and highlight a set of steps to implement the implications of the models. The objective of the research was to develop a "Transition Framework" including a plan which KSC management can use to answer: What is the integrated and sequenced set of activities we need to perform over the next four-plus years to ensure a "successful" transition to a new KSC state?

We propose a model for organizational change, shown in Figure 1, which describes the fundamental problem that KSC is experiencing when managing a large-scale transition or change:

Doing the right work the right way with the right people at the right time.

We use this model to connect the other three models together. Addressing the problem of the right work is a process of flowing requirements down from the mission/vision set forth by NASA HQ and senior management of KSC. The requirements are based on the current, transition, and future states of the organization. The right work is a function of items such as mission, agency requirements, meaningful work, and products and services the customer desires. The right way includes the processes, structures,

and tools by which the work is completed and managed. The right people is derived from understanding how people are organized to complete the work and the tools they use. The right people encompasses issues such as skill needs from a process and structure perspective, number aligned with budget, and training. The right time is the proper timing of doing the work to meet near-term work requirements, near-term transition actions to ensure long-term success, and long-term work requirements. The box in the middle of the “triangle” shows a basic approach to addressing the “right” set of issues and is the foundation for the framework. An organization must decide on the approach to align these components (i.e., work, processes, structures, tools and people) [13]. In summary the implications of Figure 1 include:

- KSC is transitioning from it’s current to future state to ensure the right work is completed;
- the requirements for KSC flow down from NASA’s definition of KSC’s mission;
- the right work (i.e., products and services) are defined from the mission;
- the right way includes the processes, structures, and tools to produce the products and services;
- the right people (i.e., skill mix) is derived from the above three implications; and
- the right work includes the transition actions to move the organization from it’s current to future state.

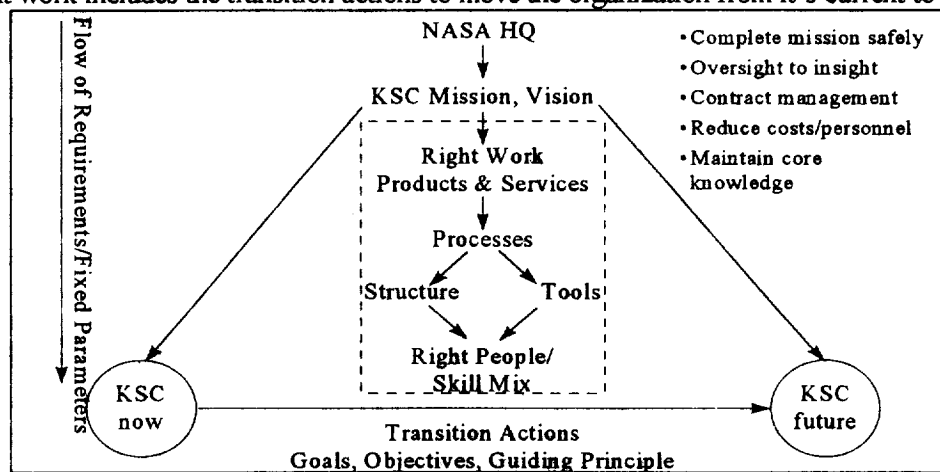


Figure 1. Doing the right work the right way with the right people at the right time.

2. METHODOLOGY

The methodology was designed to ensure a theoretically sound, valid framework was developed which reflected KSC’s unique environment, goals, objectives, and concerns because there isn’t a universal change model [12, 21]. The methodology was also designed to address validity issues associated with conducting change studies in the field aimed at meeting a specific organizational need [7, 9]. A goal of the project was to understand the unique KSC environment and to ensure the models reflected the concerns of KSC. The boxes represent the steps and the ellipses represent the major outputs from the steps. Three types of studies were executed: literature reviews, internal studies, and external field studies. A theoretical, literature basis was used to develop conceptual models, interpret data from interviews, and elicit best practices. KSC internal interviews and focus groups provided insight into the concerns of the KSC civil servants. The “future-state” focus groups reviewed and discussed the results of the senior management interviews. The “transition” focus groups reviewed and discussed an initial draft of the transition framework. The focus groups consisted of selected members from KSC’s middle management. Past studies of KSC’s organization were also reviewed [14, 27]. External interviews with heads of organizations who have completed large-scale transitions provided lessons learned.

3. RESULTS: A FRAMEWORK FOR ORGANIZATIONAL TRANSITIONS

The results of the study are best displayed in a framework consisting of four models and a project management work breakdown structure. The first model was given as the problem statement in Figure 1. This model was developed after the contractor interviews and before the “transition” focus groups were completed. The implications of the problem statement model were discussed in the introduction.

3.1. “All-Term” Transition

The second model, given in Figure 2, represents KSC’s transition as an “all-term” transition. This model was developed based on Beckhard and Harris [2], personal communication, and the “future state” transition focus groups. Beckhard and Harris [2] portray an organizational transition as containing a present and future state. When we started, we were talking about two circles (i.e., year 1996 for the present state and year 2000 for the future state). However, after the senior management interviews and the “future-state” focus groups we added the third circle to reflect the later time period. The focus groups emphasized the need for KSC to define their future state beyond the near-term time frame. They felt the year 2000 mid-term state was transitory and wanted to define and take action for the long-term state. The word “all-term” was developed by a senior executive at Westinghouse who described his management style as “all-term” to reflect the need to balance the organizations for both the near and long term. The general implications of this model include:

- requirements to be met by the transition flow from the definition of the future state;
- the organization must understand the current, near term, and long-term future states and the relationships among them;
- the transition actions move the organization from the current to the desired future state;
- actions must balance survival in the near term with long-term development;
- long-term actions can be defined in more general terms than the near-term actions [12];
- earlier actions should be chosen with care because they impact choices for longer-term actions [12];
- the strategic direction defines requirements and time frames from which actions are taken; and
- all employees including those that survive the transition must be planned for [3, 25].

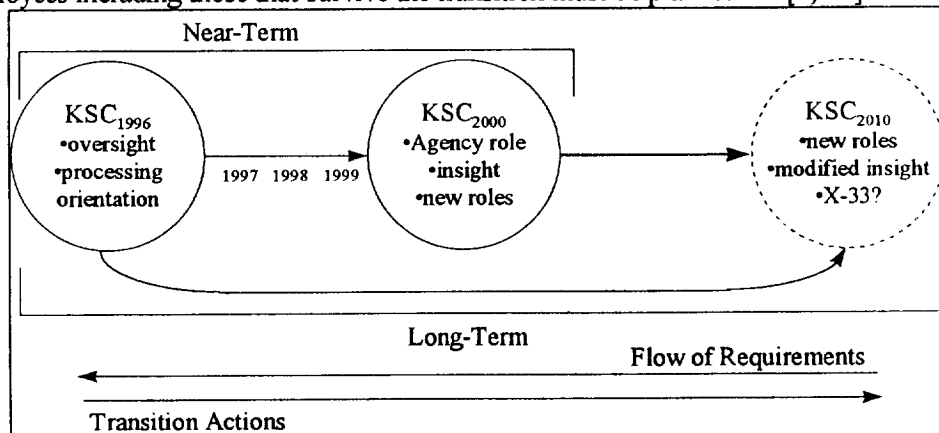


Figure 2. KSC is undergoing an “all-term” transition.

The senior management interviews, focus groups, and contractor interviews provided the data to support this notion of an all-term transition. As shown in Figure 2, the model directly applies to KSC. The roles of KSC are changing from oversight (i.e., current) to insight (i.e., near), and modified insight (i.e., long). KSC must define the actions they need to take today in the current and near term to ensure the long-term

state is reached. What actions should KSC perform to ensure they have the capability and are chosen to be a launch and landing site for X-33? KSC can use this model to balance their actions to ensure current, near-term, and long-term needs are met.

3.2. Best Practices and Lessons Learned for Organizational Transitions

The third model, given in Figure 3, represents the best practices gleaned from the literature. The representation is based on the antecedents-behavior-consequences model applied to organizational actions[17]. This model was developed by integrating the comprehensive studies of organizational change/downsizing [5, 6, 11, 23, 28, 34, 35] and works describing organizational change in general [15, 16, 18, 22, 26, 30].

The model shows that organizations take transition actions in response to drivers with the goal of producing positive and minimizing the negative results. The “drivers” represent the forces acting on the organization. These drivers provide the basis for defining specific goals and objectives of the transition. The literature has provided a description of some of the actions associated with positive results. The actions include a strategic, systematic orientation to the change. Typical negative results resulted from a loss of institutional memory, knowledge, and skill to perform the work. These results occurred because the transition was not planned systematically. The use of across the board cuts or attrition to reduce the workforce left the organization void of critical skills. The people remaining in the organization did not have the skills to complete the job. Long-term innovation and improvement suffers from the lack on in-depth knowledge of the organizational systems. This set of best practices is supported by both the contractors and the concerns of KSC’s focus groups. The implications of this model include:

- an organization must design actions which produce positive and minimize the negative results;
- an organization must clearly understand the forces or drivers of the change;
- strategic, systematic actions lead to more positive results;
- a change without planning leads to negative results for the organization; and
- the potential positive and negative results from an action must be understood before action is taken.

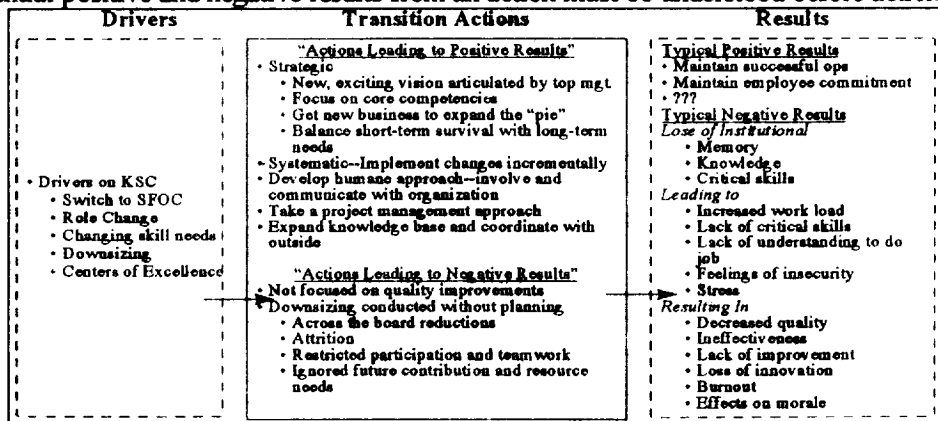


Figure 3. Best practices for organizational transitions.

Given in Figure 4 is a description of the lessons learned contractors described and the concerns of the “future state” focus groups communicated. Contractors described a process of defining the future state for the organization based on a shared understanding of all senior managers. Contractors strongly suggested that senior managers conduct an off-site session in which objective, open dialogue can be developed to

address the fundamental issues facing the organization. During organizational transitions the need to overcome existing “fiefdoms” and recognize the unity of the organization is important to success. Contractors, focus groups, and senior managers were consistent in this message. Once the future state is defined and a time frame for which the future state must be achieved, a set of objectives can be developed to accomplish the future state. A project management approach was also emphasized.

By providing the definition of the future state, the existing organization can be systematically analyzed to determine how the work being completed matches with requirements of the desired future state. Priorities are set to determine which work to continue doing. For example, one organization prioritized their work into three groups based on their level of importance to meeting their mission. Only the most essential work was still completed. Another organization defined a goal to reduce flexibility while maintaining capability (e.g., reduce the number of shifts from three to one). Once the work is determined and the process by which the work is completed, the needed skills can be defined. This systematic analysis leads to process improvements focused on the mission critical areas. The focus group’s supported this systematic analysis focused on mission critical work when they wanted KSC to define “meaningful work” for the civil servants. Two benefits can be received by KSC if they follow this approach. First, employees see that KSC senior management is working a process to attack the transition problem. Employees may not personally like the results of the process to themselves but they are more comfortable knowing that KSC is being proactive. Second, the Agency’s requirements will be met because both the future state definition and analysis of the organization is based on the center’s mission as defined by the Agency. KSC can use Figure 4 as a concise description of a transition process.

- Senior Management establish a
 - **UNIFIED FUTURE STATE/VISION** with a specific **TIMEFRAME** based on shared understanding
 - set of objectives and ground rules
 - project management approach (leadership, task team, outside help)
- which allows the **SYSTEMATIC ANALYSIS** of
 - requirements—fixed/known and unknown
 - priorities
 - tasks--processes
 - personnel skills
- to support **PROCESS IMPROVEMENT** by
 - surgically eliminating unneeded work processes and positions
 - focusing on **MISSION CRITICAL** and **CORE COMPETENCY** areas
- with benefits of
 - regularly communicating a systematic process or rationale for decisions and actions to stakeholders
 - providing value added service to the agency. (Contractors & Focus Groups)

Figure 4. Lessons learned and concerns describe an approach for organizational transitions.

3.3. Aligning the Organization

Figure 5 portrays the fourth model which shows the need to align KSC both externally and internally with the needs of the customers. The external alignment is in matching the organization’s products and services with the market and customer needs. This alignment also includes the high-level definition of the organization’s roles and core processes. Based on this high-level definition, the organization can align the internal components of the organization. The model is adapted from Kurstedt’s [17] management system model by emphasizing the macro representation of the organization. We use the model to show how an organization needs to align its components: the process by which work is completed, the tools people use to complete the work, and the people completing the work [10]. The alignment comes through the interfaces

of the components: the structure by which people are organized to do the work (i.e., processes and people), the information available to the worker (i.e., people and tools), and the metrics used (i.e., processes and tools). When changing the organization, the organization must align these components and interfaces. For example, an organization cannot do the same work (i.e., products and services) in the same way (i.e., process, tools, and structure) by reducing the people. The changes in components must be balanced and aligned with each other. The dotted arrows inside the circle show the systematic, logical way to use the model. The analysis and implementation starts from the products and moves to the people. An across the board reduction and then adjustment in process may not produce the customer's desired results. The implications of this model include:

- the external world defines the market's needs;
- the organization must align its products and services with customer needs;
- the products and services are developed from core processes;
- the organization must align processes, structure, tools, and people to deliver products;
- an organization cannot reduce people without affecting the process and process performance; and
- changes in any of the one components will affect the other components and organizational performance.

This model can be used for both macro level (i.e., KSC as a whole) and at a micro level (i.e., an individual's work process). KSC can use this model to address the issue of what the product and processes of KSC for a given range of civil servants are. KSC can also use this basic model to address issues about the "insight role": What is the insight process? How will civil servants and contractors be organized to complete insight? What measurements and data will be used for insight? What tools will be used to convert the data to information for insight? What is the skill mix needed for insight?

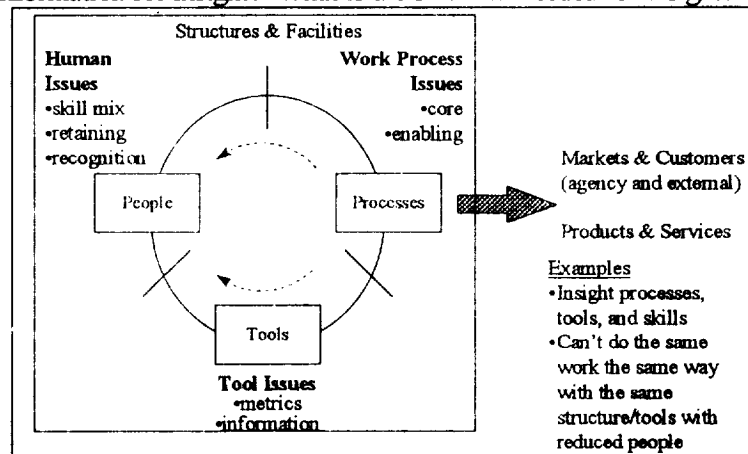


Figure 5. An organization must be aligned both externally and internally.

3.4. Level-1 Work Breakdown Structure

Based on the models, best practices, lessons learned, and concerns developed from the literature, contractor interviews, senior management interviews, and focus groups, we have developed a work breakdown structure (WBS) to implement the concepts in the models. Figure 6 is a flow representation of the six steps in the level-1 WBS. In the paper, we concentrate on level-1; a full WBS has been defined.

Strategic direction provides both the future state and overall philosophy (e.g., goals, ground rules, focus) for the transition [4, 24, 31]. In this step senior management articulates and communicates a unified

message to lead the transition. Defining roles provides an explicit description of what KSC will do and how it relates to its external world. For example, KSC would define its relationship to other Agency centers and the contractors [29]. Aligning processes aims to improve KSC's process to meet the defined roles and to ensure KSC's processes contain only value-added activities [19]. Aligning structures aims to ensure KSC's people are organized to complete the work processes. Aligning the workforce ensures the right people (skills and numbers) are available to meet the requirements as defined by the previous four high-level steps of the transition and addresses options to align the workforce [8, 33]. Managing the process ensures a smooth proactive transition. This steps includes the crucial steps of leadership, communication [32] and a project management approach. The implications of this model include:

- the strategic direction drives the actions;
- aligning the workforce is the last step;
- the "right work" is define by aligning the strategic direction and roles;
- the "right way" is defined by aligning the processes and structures;
- the right people is defined by aligning the workforce.

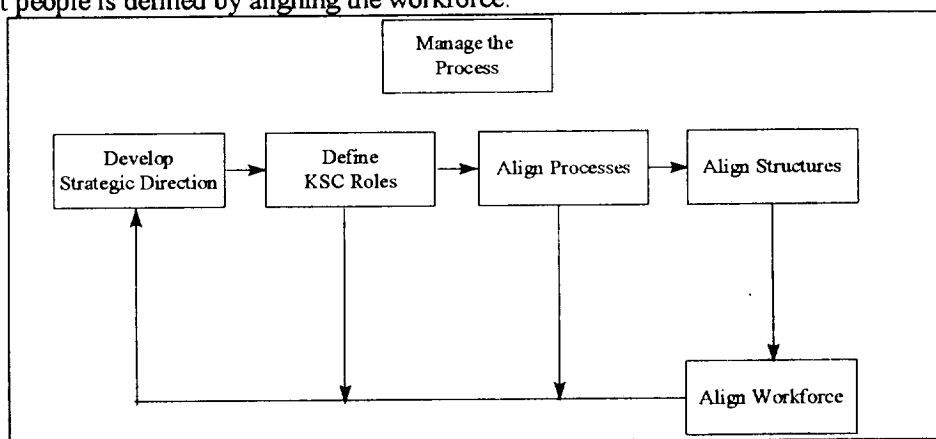


Figure 6. The transition has six high-level steps.

5. CONCLUSION

In this paper, we presented a transition framework based on a project management approach and a set of models. The models and associated implications provide an integration of the key issues to consider and the work breakdown structure provides a set of steps to use when undergoing a large-scale change. The framework is not an answer, but an evolving set of actions to validate, add, delete, and refine to reflect further research and the unique characteristics of a given organization. As with all projects, a process must be used to assign responsibilities and monitor progress. The initial framework and WBS is provided in this paper for an organization to begin its change efforts. The framework is designed to help an organization do the right work the right way with the right people at the right time.

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