Research Proposal:
Alignment of Innovation and Organizational Transformations
Tim Kotnour, PhD
University of Central Florida

1.0 Introduction
Organizations have been and are continuing to be required to change their present operations to better position themselves with the ever-changing environment. Often this need for change leads to a large-scale transformation, including a change in mission or core business. With the change in mission, the organization must also change the manner in which it completes its core business; that is, its processes, tools, and people. An organizational transformation is redefining an organization's business (e.g., mission and products/services) and the way the business is operated (e.g., processes, technology, people, and culture). A fundamental transformation challenge is to determine the best way to ensure successful implementation of a performance improvement approach by overcoming barriers to change (Grover, 1999). Organizations are using many tools to undergo these large-scale performance improvement and change efforts (e.g., total quality management, reengineering, downsizing, lean, six sigma, Baldrige, ISO certification). Other authors have identified critical success factors necessary for successful large-scale changes (Appelbaum, Simpson, and Shapiro, 1987; Cameron, Freeman, Mishra, 1993, Kanter, Stein, and Jick, 1992; Marshall and Yorks, 1994; National Academy of Public Administration, 1996). However, not all of these transformations are successful (Rouse, 2011). The leaders of these organizations are looking for insights into what will make a transformation successful and what methods they should use. This research focuses on the methods to identify and implement a “transformational innovation”—an innovation that will help the organization transform.

1.1 The Challenges of Organizational Transformations
Earlier studies show that over 70% of the change efforts have failed (Champy, 1995). This success rate is not getting any better (Rouse, 2011). Some of the failure can be due to a mismatch in the initiative's goals with the internal and external issues driving the organization to change. Repositioning the organization to the external environment can vary among three levels: organizational automation, enhancement, or redefinition (Davidson, 1993). An organizational transformation is the redefinition of an organization's business (e.g., mission and products/services) and the way the business is operated (e.g., processes, technology, people, and culture). Innovation has been described as a method to transform the business model (Hamel, 2000). The intent of this research is to better understand the role of innovation approaches in organizational transformations.

In response to the increasing need to transform and the decreasing success rate of transformations (Rouse, 2011), many books, training classes, and consulting support has been offered. The academic community has continued to call for developing knowledge that is useful to both the leaders of organizations and the academic researchers (e.g., Lawler, et al, 1999). The intent of this research is to increase our collective understanding about enterprise transformations. The contribution is to provide a framework which provides insight into the factors for considering when implementing an innovation to support an enterprise transformation.

The audiences for this paper include three stakeholders of a transformation. The three stakeholders are from an organization accountable for making a transformation. These stakeholders include: the executive in charge of leading the transformation, the business unit directors within the organization, and the change agent supporting the executive in making the transformation a reality. These
stakeholders can use this paper to understand the issues they need to focus on when making driving an innovation within an enterprise transformation.

1.2 Research Scope
To help organizations implement a transformation, this research will answer an executive’s questions:
- What are the innovation approaches to transform the organization?
- Why are some of our innovations more successful than others?
- What is a decision-making/planning process we can use to guide our thinking?
- How can we ensure our innovation bets are successful?

More specific research questions include:
- How do innovation approaches impact transformational performance?
- How does alignment of innovation approach with the innovation situation and transformation situation (Kotnour, 2011) impact transformational performance?

Figure 1 provides a conceptual model related to these questions.

![Figure 1. Conceptual Model of the Research.](image)

We are driven by an overall hypothesis:
The greater the alignment of transformation situation, innovation situation, and innovation approach leads to greater performance.
- Different types of transformational situations require different types of innovations
- Different types of innovation situations require different types of implementation approaches

The primary research deliverable includes:
- A decision-making and planning process for managers to use when implementing a transformational innovation.
To produce this research deliverable we need to produce the following supporting deliverables:

- Taxonomy of transformation situations
- Taxonomy of innovation approaches
- Alignment matrix for transformational situations and innovation approaches
- Research case studies of transformational innovation approaches
- Evaluation and recommendations of transformational innovation approaches.

2.0 Alignment of Transformational Innovation Efforts
This section provides a brief literature for the research. First, organizational transformations are defined. Second, the emerging factors of innovation are identified. From this foundation, we define the research approach.

2.1 Organizational Transformations
A transformation is the purposeful, intentional, consistent change in business model (Kotnour, 2009). Organizational transformations create the unique need to deliver the current core business while at the same time converting over to the new business. This balancing of the current and new business model creates a set of challenges. These challenges include:

1) Developing the new overall business model concept
2) Developing the new overall business model implementation strategy
3) Creating the conditions for successful implementation
4) Balancing multiple responsibilities
5) Holding people accountable for the transformation (Kotnour, 2009).

The first three challenges focus on the innovation needed to move the organization forward. Figure 2 shows the flow from the current business model to the new business model through a transformation. There may be many ways to develop and implement the new business model. We propose to better understand the innovation process as the means to transform the organization and its business model.

The organization has a limited set of resources and capabilities to deliver the business and to change the business. The organization needs a process to ensure they “place the bets” on the right innovations and innovation strategies.

2.2 Describing Innovations
This section focuses on describing the term innovation within the enterprise transformation context. We need this scope to provide clarity to the research and thought process. In this section we provide an initial model of the concepts used to describe organizational transformations. Figure 3 provides this initial model. This model is built by understanding the literature highlighted in Figure 4. Table 1 provides an example way to describe and summarize the different types of innovations.
What a transformation is

Challenges
1. Develop the new business model concept
2. Develop the new business model implementation strategy
3. Create the conditions for successful implementation
4. Balance multiple responsibilities
5. Hold people accountable for the transformation

(Kotnour, 2009)

Figure 2. The Challenges Created by an Organizational Transformation Drive the Need for Innovation.

What are the different types of transformational situations?
- What is the nature of the transformation?
  - Evolutionary
  - Revolutionary
- What is the driver for the transformation (Porter model focus)?
  - Customers
  - Rivalry
  - Substitute
  - Suppliers
  - Potential entrants
- What are we trying to change?
  - Product (new/existing) vs. customer (new/existing)
  - Product (new/existing) vs. geographical (new/existing)
- How close is the change to the core?
  - Same
  - Change how deliver core
  - New core
- How do our current and end states compare?
  - Old to old
  - Old to old + new
  - Old to old’ + new
  - Old to new

What are the different types of innovation situations?
- What are we innovating?
  - Business model
  - Product
  - System
  - Technology
  - Management system
- What is the level of innovation?
  - Sustaining
  - Disruptive
- What closeness to the current methods (how big is the gap)?
  - Old to old
  - Old to old + new
  - Old to old’ + new
  - Old to new
- What is the response type?
  - Reactive
  - Proactive
- What is the complexity of the innovation?
  - Cost
  - Schedule
  - Technical
  - Familiarity
  - (see project complexity factors)

What is the organizational context?
- What is the capability vs. capacity to make the innovation?
  - Capability (Yes/no) vs. capacity (Yes/no)

What is the innovation approach?
- What are the alternative methods?
  - Source
    - Internal vs external
  - Acquisition
    - License
    - Acquire
    - Merge
    - Partner
    - Consultant
  - Approach
    - Experiment
    - Pilot
    - All in
- How do the methods align to innovation type?
  - New product development process
  - Incubators/centers of excellence
  - Tools
    - Roadmaps
    - ?

Figure 3. Initial Concepts to Describe Organizational Transformation Efforts.
  o Management system innovations
• Gronlund, Sjodin, & Frishammar (2010). Open innovation and the stage-gate process: A revised model for new product
  o Methods for innovation
  o Provide a decision tree for helping making the choice
  o Methods for innovations
  o Provide a decision tree for helping making the choice
• Germand (2010). Integration of intellectual property strategy with innovation strategy. *Research-Technology Management*
  (May-June), pp. 10-18.
  o Need to align innovation methods and strategies at multiple levels
  o Need to providers managers with a model to support making the decisions
• Bowonder, Anirudha, Kumar, Shirodkar (2010). Innovation strategies for creating competitive advantage. *Research-
  Technology Management* (May-June), pp. 19-32.
  o Type of innovation strategies
• Cooper, Edgett (2010). Developing a product innovation and technology strategy for your business. *Research-Technology Management*
  (May-June), pp. 33-40.
  o Product innovation strategies and process with methods
• Igartua, Garrigos, Hervas-Oliver (2010). How innovation management techniques support an open innovation strategy.
  *Research-Technology Management* (May-June), pp. 41-52.
  o Need to align the innovation methods to the type of innovation
  (March-April), pp. 12-23.
  o Integrating technology push-pull
  42.
  o Formal process for process/mfg technology management
  o Looking for new market opportunities
  o Customer/product innovation
  o Aligning innovation method to innovation need and where at on the S-curve
  o Types of innovation: sustaining vs. disruptive innovation
  o Need to align strategies to type
  o Need to build capabilities
  o Factors for successful experimentation
  o Sustaining vs. disruptive technologies
  o Move disruptive technologies to its own organization
  o 4 elements of a business model
  o When need a new business model
  o Need to innovate within corporation
  o Forget, borrow, learn knowledge perspective to innovation
  o 5 key questions to determine if need to change the business (link to sustain or innovate)
  o 7 step process
  o 3 types of product/customer strategies

Figure 4. Summary of Recent Literature.
Table 1. Understanding Innovation Efforts.

<table>
<thead>
<tr>
<th>Type of Innovation</th>
<th>Description</th>
<th>Success Requirements</th>
<th>Challenges</th>
<th>Approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>System</td>
<td></td>
<td></td>
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<tr>
<td>Technology</td>
<td></td>
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<tr>
<td>Management Approach</td>
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</tbody>
</table>

3.0 Research Process
This section defines the research process to be used to conduct the research. First, the research case study process is identified. Second, the cases are described. Third, the cross-cases analysis is described.

3.1 Overview of the Case Research Process
The overall approach will be to conduct a research case analysis (Yin, 1989). The scope for the research process is provided in Figure 5. From this research process we will:

- Update the integrated model of factors
- Update the description of the innovation efforts
- Define an innovation process and provide specific framework, questions, and tools for each step of the innovation process
- Refine the conceptual model and begin to develop a more exhaustive theory.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Sub-cases</th>
<th>Data</th>
</tr>
</thead>
</table>
| Kennedy Space Center (1997-2003)    | • Operations initiatives  
                                           • Development initiatives  
                                           • Management system initiatives | • Historical document analysis                     |
| Launch Services Program (2002-2010) | • Start a new line of business for advisory services  
                                           • Start a new line of business to support emerging alternative launch providers | • Interviews with executive leaders and key members of the project teams |
| Video game making organization      | • Newly launched product A (successful)  
                                           • Newly launched product VP (successful)  
                                           • Newly launched product GS (unsuccessful)  
                                           • In-progress new product M  
                                           • Management process starts (SM, GL, PM) | • Interviews with executive leaders, studio leaders, and key members of the project teams |

Figure 5. Scope of the Research Process.
3.2 Individual Cases
This section will provide the detailed case study analysis of the three organizations.

3.2.1 KSC
This section will describe the results from the KSC case study.

3.2.2 LSP
This section will describe the results from the LSP case study.

3.3.3 Video Game Maker
This section will describe the results from the video game maker case study.

3.3 Cross Case Analysis
This section will provide the results of the cross-case analysis. Figure 6 provides a concept for how this analysis will occur. This cross-case analysis will highlight the generalizable learnings from the cases.

<table>
<thead>
<tr>
<th>KSC</th>
<th>Operations</th>
<th>Development</th>
<th>Management Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSP</td>
<td>Advisory</td>
<td>Emerging Management system</td>
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<tr>
<td>Video</td>
<td>Product A</td>
<td>Product VP</td>
<td>Product GS</td>
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<tr>
<td></td>
<td>Product M</td>
<td>Management System</td>
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<tr>
<td>Cross Case Conclusions</td>
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</table>

Figure 6. Cross-Case Analysis.

4.0 Conclusions
This section will highlight the conclusions from the research.
References


