

How do we measure the implementation of large-scale change?

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Summary How do you evaluate the implementation of large-scale organizational change? As more organizations are implementing large-scale improvement efforts, this has become a vital question for organizations. The importance of this question is underscored by the fact that the literature is filled with articles that suggest that many of these projects fail. In this paper, we provide a tool that can be used to measure the implementation of large-scale improvement efforts and then we demonstrate how we used this tool to assess the implementation of a performance management system in the government of Botswana. We end with three benefits of using a large-scale evaluation survey tool: (1) it provides hard data on large-scale implementation; (2) it helps to de-politicize situations caused by the stress of undergoing a large change; and (3) it provides management with a tool to help them understand how their organization is functioning.

Keywords Organizational change, Measurement, Performance management

Organizational change is ubiquitous. However, what is equally common is an understanding that many organizational change projects fail. In 1978, it was reported that organizations (today) must undertake moderate organizational change at least once per year and major change every four or five years (Allen, 1978). Some 25 years later, due to the technology revolution, change has become a way of life in today's organizations. The need for ever-increasing levels of performance improvement to meet increasing stakeholder expectations in cost, quality, and service, has made new programs such as enterprise resource planning, integrated supply chains, restructuring, streamlining government, and mergers and acquisitions almost routine. But even with as much that has been written about change, change remains problematic for management academicians and practitioners. It is estimated that up to 70 percent of new programs fail (Beer and Nohria, 2000). While there are numerous processes that examine why change fails (Cuch and French, 1948; Hammer and Champy, 1993; Kotter, 1995), the literature on how to measure large scale change is not equally as voluminous. This has led some scholars to suggest we could learn more about large-scale organizational change efforts (Longenecker and Fink, 2001).

This paper is part case study and part methodology. We have been involved in a four year project to design and assist in the implementation of a performance measurement system in the country of Botswana (Hacker and Washington, 2003; Washington and Hacker, 2003; Washington *et al.*, 2000). The country of Botswana will celebrate their 50th anniversary of their

independence in 2016. They have created a Vision 2016 that identifies the quantity and quality of service their government (public service) will provide its citizens. Starting in 1999, they have been implementing a performance management system (PMS), a variant of total quality management, as a tool to help them create the necessary processes, activities and results that will get the Botswana public service to its 2016 vision. To help with their efforts to implement PMS, the government has trained more than 700 of its highest non-elected personnel in both PMS and in understanding how PMS links to Vision 2016. Those trained were selected for training based upon their administrative, management, and leadership responsibilities.

The methodology part of this paper is a new way to measure the implementation of a large-scale organizational change project. The case-study part of this paper is an examination of how the measurement tool was used in Botswana. In the next part of this paper, we describe the measurement tool that we created. Then we provide detail of how we used the measurement tool in our project in Botswana. We end with a discussion of how this tool could be used in other large-scale projects.

Measurement of large-scale projects

What makes an organizational change effort successful? The obvious answer is when it achieved its desired results. What makes this a problematic answer for large-scale projects is that often the results take years to realize. This is one of the reasons Kotter (1995) argues change fails; often companies declare success too soon. Thus, organizations need a way to measure the success, not only in terms of final output, but also in terms of process measures and intermediate steps.

One way to measure the success of a large-scale project is to determine if it was implemented properly. From the literature on how to implement large-scale change (Quinn, 1980; Stonich, 1982; Hrebiniak *et al.*, 1984; David, 1987; Slevin *et al.*, 1987; Hambrick and Cannella, 1989; Beer *et al.*, 1990; Alexander, 1993; Kotter, 1995), we think there are six areas that can be evaluated to determine the success of any large-scale implementation effort:

1. Well defined result areas and goals.
2. Well defined objectives.
3. Well defined measurement processes.
4. Well established reviews.
5. Well defined responsibilities.
6. Evidence of continuous improvement.

Below we describe each area in more detail.

Well-defined result areas and goals

The relationship between vision and organizational change failure has much support (Beer, 1990; Kotter, 1995). Thus, the first place to examine organizational change efforts is to determine if the goals and result areas are clearly defined and understood. By clarity, the goals at the unit level should be linked to the overall vision of the organization. Hrebiniak and Joyce (1984) argue that one reason change fails is that the organization's goals are not linked to the unit, or lower level, goals. In addition to identifying the link between the vision and the goals of the lower level units in the organization, we also suggest that the goals need to be appropriate and measurable. Nutt and Backoff (1997) argue that visions need to be possible, desirable, actionable, and articulatable. Desirable and possible ensure that the goals are appropriate (the goals are goals that the organization wants to achieve), actionable and articulatable ensure that the goals are measurable (organizations will know when they have achieved the goal).

Well-defined objectives

Another area of critical concern for implementing large-scale projects is to determine if the organization is using appropriate strategies to achieve their established goal. Implementation is concerned with how to put a formulated strategy into effect; it is the process of carrying out the organization's strategy, which is typically formulated by someone else (Alexander, 1991). Implementation involves translating strategic goals into annual performance objectives, deploying the objectives throughout the organization, allocating resources, and motivating and aligning employees (David, 1987). Additionally, research supports that end results or strategic objectives should be deployed down through the organization, but that the tactics or means is left to the operating unit (Guth *et al.*, 1986; Marcus, 1988). The operating unit being impacted by the strategy should be allowed to influence the means to achieve the strategy (Hamel *et al.*, 1989; Beer *et al.*, 1990).

We suggest that to evaluate the success of any large-scale project, evaluation of the objectives and strategies are also important. Things to consider in the evaluation of the objectives are if the objectives and strategies are linked to the vision, and are the strategies well defined. From the 80/20 rule, we also suggest that the strategies should be prioritized to ensure that the organization is working on the critical few strategies. Similar to the goal, the strategies should be measurable as well; what are the targets, and how do the strategies relate to the typical organization planning cycle.

Well-defined measurement processes

We find that one thing that is missing from much of the literature on organizational change is a measurement system. From the literature that examines why change fails, scant attention is given to the role that measurement plays. However, we know from the axiom, what gets measured is what gets done. Thus, we argue that there should also be an evaluation of the measurement system. This evaluation should be part do the change agents in the organization have the correct measures in place, and part do the change agents understand how to create and interpret data.

Well-established reviews

The literature is full of studies examining the relationship between plans and change. Proven project management concepts and techniques, such as budgeting, scheduling, and contingency planning, is extensive and well documented in the literature (Archibald, 1976; Lewis, 1995). However, many of the factors that contribute to failed implementation relate to the social aspects of the organization (Giles, 1991; Kono, 1992).

Many problems arise not from the quality of the plan, but from the difficulty in implementing it. After an organizational direction has been determined in the strategy formulation phase, many managers leap to implementation, and are surprised at all that is involved and the level of resistance they encounter. Research supports the need to address the reasons behind the resistance or lack of commitment (Stevens *et al.*, 1980; Bourgeois *et al.*, 1984; Alexander, 1985; Guth *et al.*, 1986; Giles, 1991; Alexander, 1993; Kotter, 1995). The empirical research is somewhat weak in its evaluation of specific techniques to overcome resistance. Participation, or involvement, is often cited as a means to overcome resistance and build commitment to a strategy. The empirical literature, however, does not consistently support even this well-known tactic (Bettenhausen, 1991).

Review systems involve determining or studying whether activities are achieving desired results and whether new decisions must be made (Guzzo, 1986). Reviews are one of only two implementation elements appearing in all surveyed implementation models (Alexander, 1991). Research has shown effectiveness in achieving goals is enhanced when reviews are consistently done (McMahon, 1984). Also, Stevens *et al.* (1980) determined strategy is better implemented when managers believe the process to implement the strategy will be reviewed. Anecdotal studies support reviews which provide regular feedback that tests, validates, and modifies the cause and effect relationships assumed in the decision-making process (King, 1989; Collins *et al.*, 1993; Melum *et al.*, 1995; Kaplin *et al.*, 1996).



We think reviews should be evaluated to check if the change agents in the organization understand and accept the strategies and measures. We also suggest the reviews should be evaluated to check if the data is available to have the review, and to see if the follow-up coming from the review is attended to as well as the lessons learned from the communication in the review process noted and used as continuous improvement.

Well-defined responsibilities and evidence of continuous improvement

Institutionalization or standardization is the process by which all persons follow the current standard. After a process has been improved, it is critical for management to ensure the means of achieving the improvement are institutionalized (Collins and Hage, 1993). Although not included in implementation models, most scholars advocate the concept: improvement is inseparable from standardization (Nakamura, 1993); and standardization is inseparable from strategy implementation (Beer *et al.*, 1990; Kotter, 1995; Kaplan and Norton, 1996). Institutionalization, though included in Deming's well-known PDCA cycle, is almost nonexistent in practice. This permits backsliding in the gains achieved from the implementation process (Collins and Hage, 1993). The specific activities associated with institutionalizing the improvements are documenting, training, and monitoring results.

One way to evaluate the standardization of the improvement effort is to identify the roles and responsibilities in the change efforts. Who are the key actors and do they understand their role in the change program. Also, when lessons have been learned, are these lessons "finding their way" into standard operating procedures or current best approaches.

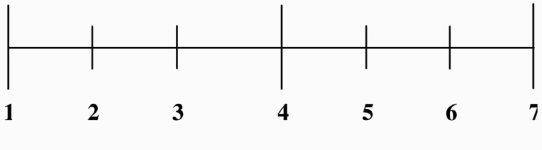
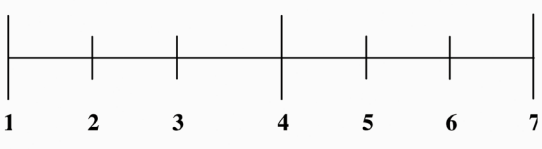
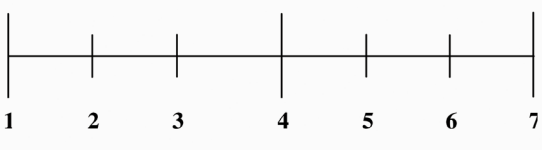
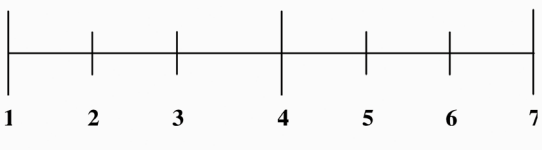

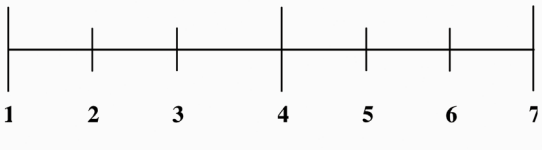
Figure 1 provides the survey tool that should be used to examine large-scale organizational change projects. Note that the scale examines the change efforts by identifying how much of the organization has implemented the change. Often inside an organization, one unit will lead or lag the other units in implementing change efforts. In the next section, we provide a case study to demonstrate how this tool was used to measure the implementation of PMS as the country of Botswana develops strategies to achieve its Vision 2016.

Measurement of the success of PMS in Botswana

This research paper is part of a larger research study examining the large-scale change efforts in the Botswana public service. Botswana is located in southern Africa between Zimbabwe, South Africa and Namibia. Although it has a long history as a British protectorate, Botswana was granted independence in 1966. While still classified as a developing country on some reports, Botswana is the largest exporter of gemstone diamonds in the world and the largest exporter of beef to the EU (www.gov.bw). In line with their 50th anniversary as a nation, Botswana has created their Vision 2016. This vision for the country encompasses goals for each of the 16 ministries, parliament, the national police, and the military. To help achieve the vision, Botswana has begun a nation-wide effort to implement a PMS. Similar to TQM in the USA, PMS is designed to provide systemic thinking to implement change. In the fall of 1999, Botswana started a program to train their top non-elected personnel in understanding the vision and in understanding how PMS can be used to implement the vision.

The authors have been involved with the implementation of PMS from its original inception; they were the key trainers of the first PMS/Vision 2016 awareness workshop in October 1999. The original design of the program was for PMS to be deployed over three years and then PMS to be used to achieve the desired results from Vision 2016. In the spring of 2003, we were approached to provide an assessment of how the country was doing, not only with deploying PMS, but also with achieving the desired results of Vision 2016. The assessment process itself was a one-week engagement where the 22 change agents (individuals assigned with the major responsibility of implementing PMS in 16 ministries in the government of Botswana) were interviewed, documentation on the 16 ministries was reviewed, and the large-scale assessment

Figure 1 Evaluation of large-scale organizational change efforts

<p>1. Well defined Key Result Areas and Goals-</p> <ul style="list-style-type: none"> <input type="checkbox"/> Linked to the Ministry Vision. <input type="checkbox"/> Goals defined as appropriate. <input type="checkbox"/> Cross Ministry Key Result Areas identified as needed. <input type="checkbox"/> Measurable. <input type="checkbox"/> Targets. 	
<p>2. Well defined Objectives-</p> <ul style="list-style-type: none"> <input type="checkbox"/> Linked to specific Key Result Areas. <input type="checkbox"/> Strategies defined as needed. <input type="checkbox"/> Prioritized critical few. <input type="checkbox"/> Measurable. <input type="checkbox"/> Longer term targets. <input type="checkbox"/> Annual Targets. <input type="checkbox"/> Annual Performance Plans include actions to achieve the Objectives. 	
<p>3. Well Defined Measurement Process-</p> <ul style="list-style-type: none"> <input type="checkbox"/> Accepted measures. <input type="checkbox"/> Understanding of measures. <input type="checkbox"/> Reliable data sources. <input type="checkbox"/> Reliable survey mechanics. <input type="checkbox"/> Plotted as time-series. <input type="checkbox"/> Control charted. <input type="checkbox"/> Special causes investigated. <input type="checkbox"/> Control limits revised as appropriate. <input type="checkbox"/> Data interpretations accurate. <input type="checkbox"/> Random variation understood. 	
<p>4. Well Established Reviews-</p> <ul style="list-style-type: none"> <input type="checkbox"/> Quarterly reviews conducted with PS. <input type="checkbox"/> Monthly reviews conducted with Department Heads. <input type="checkbox"/> Status reports generated. <input type="checkbox"/> Follow up from prior reviews. <input type="checkbox"/> Lessons learned discussed. <input type="checkbox"/> Discussion includes plans for next quarter and longer. <input type="checkbox"/> Performance accountability exists. 	
<p>5. PMS Responsibilities Defined and Visible¹</p> <ul style="list-style-type: none"> <input type="checkbox"/> Permanent Secretary. <input type="checkbox"/> Department Heads. <input type="checkbox"/> WITs. <input type="checkbox"/> PICs. <input type="checkbox"/> BNPC Consultants. <input type="checkbox"/> DMPSM 	
<p>6. Continuous Improvement Processes Exist-</p> <ul style="list-style-type: none"> <input type="checkbox"/> PMS process annually assessed. <input type="checkbox"/> WITs' efforts aligned with Key Result Areas. <input type="checkbox"/> Training in PMS provided systematically and broadly. <input type="checkbox"/> New employees trained in PMS. <input type="checkbox"/> Systematic development of PICs' PMS skill level. <input type="checkbox"/> Communication plans keep organization aware of the status of PMS. <input type="checkbox"/> Internal PMS benchmarking across Ministries. 	

¹ These are specific organizations / roles / individuals involved in the PMS effort in Botswana. These names would be changed to reflect the key personnel in the specific's organization's change efforts.

Scale: 1. Implementation not started in the organization.
 2. At least one department partially implemented in the organization.
 3. Some departments partially implemented in the organization.
 4. Partial implementation across all departments in the organization.
 5. At least one department fully implemented in the organization.
 6. Some departments fully implemented in the ministry.
 7. Implementation complete across the ministry.

survey was completed. The change agents had been in their role an average of two years and many had been involved from the beginning with the implementation of PMS.

Out of the 16 ministries reviewed, four ministries average better than 5.0 on all six items of the survey. Eight ministries were between 3.0 and 5.0, and four ministries averaged less than 3.0. From the survey, it was possible to identify the weaknesses of the poorly performing ministries. Overall, all the ministries scored low on having well-defined objectives. In short, there was a gap between having a clear vision, and having the “right” strategies to achieve the vision. This is typical of many change efforts when style is valued over substance. The area that really separated the poorest performers from the rest of the group was the review system. While all ministries are conducting reviews, there was a clear gap in terms of the quality of the reviews with respect to focus on results, lack of accountability and follow-up, and all people not understanding the objectives. From this survey, we made some specific recommendations to help Botswana achieve its Vision 2016.

Discussion and conclusion

There are numerous benefits to developing a measurement tool to evaluate the effectiveness of implementing large-scale change. The first is that a measurement tool gives the organization “hard data”. Because large-scale change projects often require large amounts of time, money, and personnel, it can become easy to think activity equates to progress. In Botswana, there is an enormous effort to publicize, motivate, and make everyone aware of the vision and of the government’s strategies to achieve the vision. However, the assessment tool gave specific feedback, not in terms of the effort, but in terms of the project achieving its desired results.

The second benefit to developing a measurement tool is the ability to use “numbers” to de-politicize a potentially difficult situation. Because large-scale change efforts like Vision 2016 receive so much attention and resources, they can become political “hotbeds”. Ministry or department leaders, might not want to implement the change, but feel like they have to because it is the “boss’s pet project”. Similarly, departments that want to implement the project, but are having difficulty, might feel less likely to be honest about their progress for fear of repercussions. However, having an objective survey, where departments had to justify their ratings, provided enough objectivity to allow the “true” results to be known. One of the major findings that came from the assessment, though not a part of this project, was the lack of senior leadership. The change agents felt comfortable expressing this issue, given it was a part of the evaluation tool (section 5: PMS responsibilities defined and visible). In our opinion, this data would not have been uncovered without the tool, as the change agents would have felt like they were portraying their boss as a bad leader. But using the evaluation tool, and forcing the change agents to provide justification for their rating, made it obvious which senior leaders were not supportive (the change agents had no evidence to support even a two or three rating), and took some of the pressure off the change agents.

The last benefit of this tool is it provides detail as to which parts of the change process is lacking. This allows the organization to retool their efforts, by focusing more on the weak areas (in Botswana’s case the review system and the responsibilities sections) and less on strong areas (measurement and well-defined key results areas and goals). Overall, we feel this is the value of all measurement systems; to provide concrete data to managers on how their organization is functioning. It was with this in mind that we developed, used, and present here, information on how to measure large-scale organizational change. Given that more organizations are implementing change, and that a large number of change programs fail, we feel that even more research should be done to describe how organizational change programs can and are being evaluated.

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