Organizational Assessment Models for Enterprise Transformation

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Abstract. Organizational assessment is becoming increasingly important, both as a cross-time and cross-industry measurement and as a guiding force in enterprise transformation. Assessments provide crucial information about strengths, areas for improvement and potential investment strategies for achieving performance benefits. As performance is being recognized as a complex and multifaceted construct, assessment tools seek to incorporate and reflect a holistic measurement of performance across multiple dimensions such as stakeholder value, leadership, culture and quality.

With a growing range of tools available, this paper examines four prevalent assessment strategies as examples of different approaches to organizational assessment. We compare these tools in terms of use cases, principles measured, outputs and contextual factors. Due to a lack of causal evidence between the principles assessed and objective evidence of improved organizational performance, organizations should utilize the assessment tool that best aligns with key transformation values or goals. By committing to a relevant and useful assessment tool and fully integrating it into strategic processes, organizations are able to achieve the internal knowledge and historical data necessary to improve performance and drive ongoing transformation efforts.

Introduction

Assessment has long been an integral tool in business transformation. By performing assessment, businesses can understand their current state and use the results to help chart out a transformational path. During the transformation process, assessment provides feedback and a measurement of progress in achieving the desired transformation. Assessment has often been done at several levels of business ranging from specific programs, projects or teams to international enterprises.
Increased globalized competition and rapid innovation have generated a new focus on enterprise-wide transformation (Rouse 2005), accompanied by a broader, multidimensional measurement of enterprise performance. Rather than simply using bottom-line costs and financial measures (Bourne, Franco et al. 2003), enterprises are now approaching transformation with an eye on culture, quality, stakeholder value, leadership commitment, process flow and organizational learning (among others) (Maskell 1991). As mounting evidence backs this growing array of factors, enterprise assessment becomes both more important and more complex. These intangibles that benefit organizational performance are harder to measure, because they are not readily apparent in existing data collection strategies (e.g., culture is often not reflected in traditional organizational metrics).

These new organization-wide assessments are not a replacement for departmental or process evaluation, assessment and transformation, but rather a complement. By examining the broad structural elements and performance indicators of an organization, new insights are gained that aid in aligning organizational actions with sustainable long-term goals (beyond the ongoing, short-term financial goals) (van De Ven 1976).

This paper seeks to introduce a handful of organization-wide assessment tools and describe some of the important criteria that can be used to differentiate such tools. We begin by reviewing the role of assessment at an organizational level, and then examine four prevalent models used today. With these four models, we examine the different assessment modes, stakeholders, input principles and outputs that tie into the transformation process.

Why Assess Organizations?

Assessments have longed been used for business and operations management. Assessing can act as a leading indicator for shifting performance (for example, “are we retaining our strong performance in these areas?”) and for identifying program strengths and/or weaknesses (Hallam 2003). In addition to these internal roles for assessment, it is equally important outside the organization. Assessing can be used to create cross industry comparisons or assist in benchmarking against competitors and standards (such as Baldrige). These results can serve to motivate the organization, boost morale, help complete sales (by sharing assessment results with customers) and even receive recognition or awards. When an enterprise assessment is shared with suppliers, it can be used to align and motivate all companies and players throughout a supply chain to drive a smooth production process and boost output.

In addition, assessments are becoming an increasingly important tool in process and departmental improvement, and new tools offer organization-wide assessments that provide a holistic vantage for identifying the complex interactions across a broad enterprise. In order to design, execute and measure an enterprise transformation strategy, having assessments that evaluate multiple dimensions of performance is crucial, both in terms of understanding the current state and charting out the transformation plan. Increasingly, enterprises are trying to leverage the multifaceted nature of performance in order to gain a competitive edge and maximize value delivery (Kueng 2003; Burton and Obel 2004). Early stage assessment helps to identify performance gaps and prioritize points of focus, and plays a role in helping to generate a future-state vision for the organization as well as investment precedence. By showing problems with process flow or bottlenecks in organizational performance, assessments provide a key tool
in identifying opportunities for improvement. As the transformation plan is implemented, ongoing assessment can then offer feedback and a measurement of progress and return on investment. With this feedback, the transformation plan can be reviewed and revised over time. During enterprise transformation, having a strong and useful assessment tool is crucial in identifying where an organization is, where it wants to go, its rate of progress, and how best to approach that future state (Nightingale and Mize 2002). And with so much evidence to suggest that simply measuring something leads to improvement (Hauser and Katz 1998), organizational assessment ties in to the incentives and motivation for the overarching transformation plan.

**Challenges to Assessment**

The benefits to organizational assessment are many, but there are challenges to the assessment process as well. When looking at program or process assessment, it is easier to find assessments that work across companies and industries. But at the scale of organizational assessment, there is greater variability, both in structure and in values (what should be measured). As a result of this variability, it is significantly more difficult to create a one-size-fits-all tool for assessment. The needs and values of a manufacturing business are quite different than those of a service-oriented business. As a result, organizational assessments have to make a tradeoff between industry or sector granularity and broad applicability. Even then, organizations will bypass assessment, feeling that their unique situation cannot be reflected by a general assessment, but this is often a misconception. Organizations may have unique challenges, but this does not stop an assessment from being useful; instead, the transformation plan and goals must be internally derived to reflect the unique nature of the business.

Other challenges result from conflicts between leadership and assessment tools. Organizational assessment may highlight different foci than the leadership intends, or may be tailored or executed in a way that simply reflects the leadership’s desired outcome. Hence an important challenge to good assessment is commitment at multiple levels of the organization, both to the assessment tool and its role in the broader transformation process. For the value of an assessment tool to be maximized, an organization must commit to using a tool over a period of time (switching tools in the middle of a transformation plan undermines the role that assessment plays in the whole transformation plan), so it is often beneficial to begin assessment on a pilot basis with selected projects before making a larger commitment. Only as familiarity and understanding of an assessment tool grow (as well as historic data), will the organization come to fully trust and therefore benefit from assessing. Just as with transformation, assessments must be used to complement leadership (rather than undermine or blindly support leadership values), and require commitment to accurate and on-going usage from those implementing the tool.

A final challenge of assessing an organization is the cost or resource allocation required during the assessment process. Either the organization must invest in an outside assessment service or key internal personnel must be recruited to participate in the assessment process. This challenge can undermine the near-term support for ongoing or regular assessments. Yet as the benefit and importance to organizational transformation described above shows, the value from assessment often makes such an investment worthwhile. One of the ways successful organizations justify assessments is by making them integral to the transformation cycle, as the Check step in every Plan-Do-Check-Act cycle. In that light, assessments are a part and parcel of improvement.
Assessment Tools

With an increasingly number of organization assessment tools (both public and proprietary), we have opted to bound our analysis to publicly available tools that produce a numeric performance score (useful for comparing across assessments and measuring transformation success). Of this subset, we will address four different specific assessment tools in this paper: the Malcolm Baldrige National Quality Award, the Good to Great Diagnostic, the Lean Enterprise Self-Assessment Tool and the Shingo Prize for Operational Excellence. Each is introduced below along with relevant background. Two of the assessment tools are also business recognition awards, which have widely published their assessment criteria and process. These are included here because organizations have been able to adapt published criteria to create internal assessment tools (Abdimomunova 2010). Of course, such award-based assessment tools have added incentives for implementation. In addition to measuring and assessing transformation or other internal processes, the organization focuses on improving qualities that can draw in national or international recognition.

Baldrige Prize. The Malcolm Baldrige National Quality Award is a program funded by the US Department of Commerce to recognize organizations that demonstrate performance excellence, as well as world-class product or service quality (NIST 2009). The program has been managed by the National Institute of Standards and Technology (NIST) since its inception in 1987. The program has been viewed as successful in motivating and driving quality and performance values, with net private benefits to the economy estimated at over $24 billion (Link & Scott 2006).

The program has a clearly defined and published set of criteria for the Baldrige award, which includes scoring guidelines and self-analysis tools (such as preliminary and supplementary self-assessments). Although designed for evaluating and awarding the national prize, the criteria reflect a range of important organizational performance indicators that are used to drive a transformation plan. The assessment involves mapping out key processes and answering qualitative questions regarding organizational strategies and practices; these questions are then scored against clearly defined criteria. Each score can then be combined to a total score, up to 1,000 points.

The Baldrige criteria provide a thorough, quality and performance driven assessment that can be performed internally. It’s applicable to many sectors, and has complementary criteria sets specific to certain sectors and sizes (including healthcare, education, manufacturing, and small businesses).

Good to Great Diagnostic. The Good to Great Diagnostic tool is based on the book Good to Great: Why Some Companies Make the Leap... and Others Don’t by Jim Collins (2001). In this book, 1435 good companies are examined to identify those that made a substantial and sustainable increase in performance (a sudden inflection point). Of those that made this performance shift, 11 were selected and examined to understand what indicators and common elements may have influenced their exceptional performance. From this analysis, a book of observations and best practices was created as a guide for achieving “greatness” in companies (Collins 2001).

Along with the book, Jim Collins developed a diagnostic tool for differentiating between “good”
and “great”. The assessment includes ten key inputs (concepts that need to be implemented) and 3 key outputs (indicators) to measure both the implementation of the concepts identified in the book as well as trends in their implementation.

The tool is broadly applicable (the 11 companies used were from a range of industries and sectors, and focuses on the common, cross-sector best practices). Overall, it examines quality leadership and commitment to core values, with a willingness to approach all others ideas with flexibility and honesty.

The Good to Great Diagnostic is easily implementable and provides a summary of some top level, broadly assessable indicators that are associated with and demonstrated by companies that are able to achieve strong growth patterns over a substantial amount of time.

**Lean Enterprise Self-Assessment Tool.** LESAT (Lean Enterprise Self-Assessment Tool) is a tool developed by a team of industry, government and academia members brought together and facilitated by the Lean Advancement Initiative at MIT (our program at our institution). It is a questionnaire designed to be used as a self-assessment, involving the top leadership of an organization. The tool was originally designed to fit into an existing transformation plan – the TTL (Transition to Lean) Roadmap (MIT 2000), which has since been replaced with the Enterprise Transformation Roadmap (Nightingale 2009) – but works independently of these frameworks. LESAT includes leading indicators associated with organizational “leanness” (a broad business paradigm that has been gaining interest and adoption, and is based on principles identified in the success of the Toyota Production System (Womack, et al. 1990)) and prioritizing/assessing gaps between the current state and a desired state (Nightingale and Mize 2002). Because of the tool’s dual purpose in measuring the current state and envisioning a future state, it has substantial value from a transformation perspective.

The tool was originally developed with input from the aerospace industry, yet it has substantial applicability for manufacturing enterprises in a diverse range of industries. Increasingly, the tool is being used in healthcare and service industries. LESAT is notable in its role as self-assessment, integrating many perspectives and vantage points into an assessment that can drive transformation by identifying performance gaps and measuring improvements in the implementation of lean enterprise principles.

It differs from the Baldrige Award in that it is based on a specific paradigm (lean) and it explicitly evaluates performance relative to lean practices. Because Baldrige was developed through an aggregation of best practices, its criteria reflect some lean concepts. A mapping of practices between the two assessments identified 17 practices in LESAT that are not specifically addressed in the Baldrige Award (MIT 2001).

**Shingo Prize for Operational Excellence.** The School of Business at Utah State University awards the Shingo Prize for Operational Excellence annually to companies that achieve world-class manufacturing (The Shingo Prize for Operational Excellence 2009). It was started in 1988 and named after Shigeo Shingo, a Japanese industrial engineer who played an important role in designing the Toyota Production System. As a result, the Shingo Prize reflects a number of similar criteria addressed in LESAT, including lean implementation and value creation.

The Shingo prize addresses a range of dimensions, including organizational culture, continuous
process improvement and business results. Scores are assigned across a number of dimensions and these are combined into a weighted overall score, which – if above a certain threshold – correspond with an achievement level of Bronze, Silver or Gold.

The Shingo prize has its origins and focus in manufacturing, but has recently been revised to offer a holistic assessment of a range of performance indicators. The shift in focus is mirrored in its name, having previously been called the “Shingo Prize for Excellence in Manufacturing”. The Shingo Prize has a many conceptual similarities to both the Baldrige Award and LESAT. Like the Baldrige Award, it seeks to balance several proven best practices, ranging from personnel development to financial success. Like LESAT, Shingo Prize has its origins in lean concepts (via the Toyota Production System). These complementary concepts are combined in a unique framework describing the hierarchical progression of organizational performance, moving from cultural enablers up to business results.

**Comparison of Organizational Assessment Tools**

The four assessment models described (Baldrige Quality Award, Good to Great Diagnostic, LESAT and the Shingo Prize) are all strong assessment tools that can provide the much needed data to drive organizational performance or enterprise transformation.

Yet, each tool has different strengths and the choice of assessment tool can be influenced by a variety of criteria. The following criteria are discussed in terms of the four models listed, but can easily be applied to any assessment tool. We have selected our analysis criteria include: (1) the causative or correlative link with improved outcomes, (2) the mode of assessment, (3) the assessment stakeholders, (4) assessment inputs or criteria, and (5) assessment outputs or information gleaned. Collectively, these criteria provide an overarching understanding of the assessment tool and it use. By addressing and understanding the criteria listed in this section, selecting the most appropriate assessment tool will be easier. We do not propose to identify one assessment as superior, but simply intend to show differences in focus, scope and implementation, so that potential practitioners can select the most fitting assessment for their needs.

**Causality**

The ideal criterion for picking an assessment tool is the evidence establishing a causal link between actions taken to improve assessment scores and an improvement in organizational performance (i.e., as a company makes changes to improve its assessment score, these changes result in improved performance). Unfortunately, this sort of causal link has not been established and isolating such a causal link is almost impossible. The reason for this gap in understanding has to do with the challenges associated both with isolating the factors that influence performance and with conducting organizational experiments. Enterprise performance is multidimensional, influenced by a range of factors (e.g., climate, culture, strategy, investment, quality, innovation, etc), where many of these factors have complex interactions (i.e., two independent qualities associated with success may combine to become a deterrent) and time delays (Burton and Obel 2004). As a result of the complex, systemic nature of performance, the direct causal influence of assessment principles on increased performance is difficult to tease out of available data. To further complicate the analysis, implementation and utilization of assessment tools varies substantially between organizations, so assessment scores may not be
consistent in their representation of corrective action.

Most assessments are built from correlative data or demonstrated organizational models. As a result, the assessment looks at principles or strategies that have a strong correlation with successful organizations. For example, the “Good to Great Diagnostic” looks for common cultural elements and business practices among exceptional companies. But the data to show that these principles or strategies cause the success do not exist (van De Ven and Ferry 1980).

Although understanding this causal link would make evaluating different assessment methods much more concrete, we instead must accept the lack of solid data and look at different criteria. Assessment tools should be evaluated based on their alignment with the organizational mission or values. Even though the assessed variables cannot be shown directly to increase performance, they will drive the core organizational values and help ensure that the enterprise reflects those values. And once selected, an organization should commit to the assessment tool, as well as the broader transformation process, to maximize the value derived from ongoing assessment and transformation. Too often organizations switch assessment tools thinking that an alternative tool improves performance more. But as described, such causal data does not exist and switching might undermine value alignment and commitment intended by the first assessment.

Selecting an assessment tool that reflects core mission values and receives buy-in from all parties is crucial to maximizing the benefits from assessment. As experience and understanding of the assessment tool grows, results and performance for the core values will also grow (as mentioned earlier, evidence suggests that measuring certain criteria will naturally result in increased performance) (Hauser and Katz 1998). Therefore, despite the lack of causal evidence associating an assessment method with performance, commitment and value alignment improve the value gain from assessment.

In order to compensate for the inability to show crucial causation data, research has been done to compare model reliability and validity based on correlations. Internal correlations (looking at cross-correlations in assessment criteria) can be used as an indicator of strong model reliability, since the criteria are all measuring a certain common factor (in this case, a holistic view of organizational performance), assuming it exists (Furr and Bacharach 2008). Other studies have examined the progression of assessment results over time as evidence of model validity (Hallam 2003). These correlation studies help fill in some of the questions left unanswered by the lack of causal data by investigating the internal validity and reliability of assessment tools.

**Assessment Modes**

Organizational assessment can be performed a number of different ways. Broadly grouped, there are three primary modes. Different assessments lend themselves better to different implementations, but can easily be adapted to another usage. In addition, each usage carries distinct advantages and disadvantages which may influence both the assessment used and how it is implemented.

**Managed or External Assessment.** Both with proprietary assessment tools, and with the award/prize-based assessments, the intention is to have a third-party perform some of the data collection and compilation of assessment results. In these cases, assessment experts who are familiar with the assessment model can be hired to perform the actual assessment. This can result
in objectivity, consistency and reliability (van De Ven and Ferry 1980) because of the advantage in terms of tool knowledge. This knowledge helps make sure the assessment is performed in a manner consistent with its intent, and can even be used to tailor the assessment tool to the needs of the organization. External assessment provides opportunities for benchmarking across multiple companies or industries, which is sometimes worthwhile for organizations interested in exploring best practices.

Of course, the high familiarity with the tool comes with an important trade-off: the assessor may have limited knowledge of the organization being assessed. This internal organization knowledge can help guide the assessment process and ensure that all relevant information is reflected in the assessment. In addition, managed assessment can come with a high price tag.

Due to the steep learning curve associated with some tools, managed assessments are beneficial for performing one-time assessments. Managed assessors can also play a role in introducing a new assessment tool, by customizing it, training relevant staff and assisting with the early implementation of the assessment.

**Hybrid Managed/Self-Assessment.** Organizations increasingly are creating or fostering independent internal entities to drive, measure and encourage transformation. Assessments often fall under the purview of such an entity. Assessors within the assessment group can gain a high level of familiarity with both the tool and the organizational structure. As a result, the assessment may be well performed.

Internal divisions may be affected by leadership pressure or bias, but still have the advantage of being a distinct department that allows for a more objective view of processes or performance in other departments. Despite the still rather high costs (maintaining personnel and departmental resources), this approach allows for strong tool and organizational familiarity, along with better data management in terms of tracking or comparing assessment trends over time. In addition, such hybrid models allow for assessment to be fully integrated into the natural business cycle, decreasing the negative impacts or the obstructive nature of outside assessment.

**Self-Assessment.** The third approach to assessment involves self-assessment, where many internal stakeholders or parties take part in the assessment of their own performance. This introduces a broader range of perspectives, and greater familiarity with day-to-day processes and its own set of potential challenges or problems. Case studies suggest self-assessments can be more time intensive, due to the added steps of coordinating and facilitating the assessment process, collecting feedback and reaching consensus among multiple participants (Abdimomunova 2010). Despite this time commitment, the process is often less costly than managed assessment or having a dedicated internal department, since there are less external personnel requirements.

The downside to self-assessment is the high knowledge prerequisite for completing the assessment. Participants must be familiar with the model and the assessment tool. As a result, self-assessment can sometimes be self-selecting by only getting feedback from those most familiar with the model (Abdimomunova 2010); potential strategies exist for overcoming this through facilitation and dedicated, collocated assessment time blocks. Also, self-assessment can result in less consistent results or interpretation of principles. Finally, responses can reflect different sorts of biases (appeasing superiors, over scoring oneself, etc) (van De Ven and Ferry
As the low familiarity obstacle is overcome by education borne through a long-term commitment to the self-assessment strategy, a key advantage of self-assessment appears: greater conversation about assessment principles. As many stakeholders are involved in the assessment process and are brought together in order to discuss diverging scores, the tool can inspire and encourage conversation and cross talk among different personnel, departments and stakeholders.

**Table 1: Summary of different use cases for organizational assessments, comparing advantages and disadvantages.**

<table>
<thead>
<tr>
<th></th>
<th>Managed/External</th>
<th>Hybrid</th>
<th>Self-Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tool/Model Knowledge</td>
<td>Extensive</td>
<td>Hybrid</td>
<td>Limited</td>
</tr>
<tr>
<td>Org. Knowledge</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Costs</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Time</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Bias</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Best Uses</td>
<td>One time assessments or introducing a new tool or exploring best practices</td>
<td>Ideal for long-term, high-commitment transformation plans that involve regular assessment and data analysis</td>
<td>Good for reflecting detail and a variety of vantage points and encouraging conversation or involvement in the transformation process</td>
</tr>
</tbody>
</table>

**Assessment Stakeholders**

Different assessment tools are designed to have different levels of granularity in terms of who is included in the assessment process. In many cases, assessments seek to get the input of individuals who have the best ability to observe and measure the assessment’s critical values and indicators. Often, the assessments can easily be tweaked or modified to change the involvement of the assessment to include more or fewer participants, depending on the goals of the assessment.

In addition, the scope of the principles and results of assessment tools vary. Some have a broad scope that look at a broad range of organization indicators and performance metrics both internally and across stakeholders, while other focus in on a core set of internal indicators.

Depending on the goals of the assessment and transformation plans, both the personnel involvement and the assessment scope are important factors in selecting the right tool.

**Malcolm Baldrige National Quality Award.** The Baldrige assessment process is flexible in its personnel involvement. Since it was originally designed as a prize application, there are few details regarding who should be involved in the assessment process (since all assessments are verified by an independent examiner). When used simply as an internal assessment tool, it can be divided among many people to map out processes specific to their contribution.

The overall scope of the assessment is a high level assessment, with a large leadership focus and substantial attention to the customer/end-user (in terms of quality product or service delivery).

**Good to Great Diagnostic.** The “Good to Great Diagnostic” is designed to be used by top
leadership, who have a comprehensive perspective of company dynamics. The diagnostic tool focuses substantially on personnel, leadership and culture across an organization, but also looks outside the organization to community and shareholder values.

**Lean Enterprise Self-Assessment Tool.** LESAT is a self-assessment tool, and therefore looks for many perspectives and participants. It specifically targets enterprise leadership, who are in touch with the overarching enterprise goals and performance. Since the tool is designed to assess the enterprise as a whole, rather than individual departments, this global perspective is important. The one limiting factor on participation is the fact that the tool requires a substantial level of knowledge regarding lean principles and concepts.

LESAT has a broad scope and looks at the larger context of the enterprise as well. It can easily be implemented or applied across organization boundaries in order to ensure lean principles flow throughout the extended enterprise.

**Shingo Prize for Operational Excellence.** Again, as with the Baldrige Quality Award, the Shingo Prize was originally designed for evaluating award applicants. As a result, using Shingo Prize as an assessment tool requires some modification, but has a large amount of flexibility in terms of the personnel involvement.

**Criteria or Information Addressed**

One of the most important factors in deciding on an assessment model is the information or criteria measured by the assessment. For an assessment tool to succeed and achieve the necessary organizational buy-in, it must measure those principles and criteria that most closely align with either the organizational values or the goals of the transformation plan.

In addition, the actual scoring mechanism is important to assessment, in terms of achieving the desired level of granularity and information specificity necessary to monitor and guide change.

**Malcolm Baldrige National Quality Award.** The Baldrige Award looks at seven different broad performance measures: leadership; strategic planning; customer focus; measurement, analysis and improvement of organizational performance; workforce focus; process management; and results (NIST 2009). Each of these categories has many questions/prompts meant to elicit details regarding the processes, implementations and success of that specific topic. Based on defined scoring levels and criteria, the qualitative responses are converted into a percentage score.

**Good to Great Diagnostic.** The diagnostic tool measures the implementation of five key concept groups, each with two practices described in the *Good to Great* book (Collins 2001). The criteria focus around leadership (“disciplined people”), organizational culture (“disciplined thought” and “disciplined action”), and sustainability (“building greatness to last”). In addition, the diagnostic looks at three outputs that are intended to provide an objective measure of the concept implementation: performance superior to mission, distinctive impact on community, and lasting endurance beyond significant changes.

Overall, there are about one hundred scores assigned, on a grade scale (A-F), as well as trend scores (improving or declining performance). These can be aggregated to provide measure the success of the five key concepts outlined in Collins’s book.
Lean Enterprise Self-Assessment Tool. The Lean Self-Assessment Tool has 54 practices broken into three key categories: lean transformation/leadership, life-cycle processes and enabling infrastructure (Nightingale and Mize 2002). Primarily, the practices and assessment criteria are closely tied to the predominant literature on lean enterprise principles (Murman et al. 2002) and reflect knowledge gained from over 27 theses generated by the Lean Advancement Initiative.

Each principle is scored on a five level scale, meant to provide the level of “leaniness” for each specific criterion. Principles also receive a desired score, which helps in crafting a future vision for the organization and in identifying high-priority areas for transformation.

Shingo Prize for Operational Excellence. The Shingo Prize evaluates 17 key principles, looking at different levels of commitment to the principles. The principles are primarily centered around concepts from the Toyota Production System and lean business practices (The Shingo Prize for Operational Excellence 2009). Principles include cultural enablers (leadership, ethics and personnel development), continuous process improvement (lean ideas, value stream and support processes), consistent lean enterprise culture (enterprise thinking and policy deployment) and finally business results (creating value).

The scope of the assessment is broad, encompassing individual processes, safety, organizational culture and lean thinking. The assessment is defined progressively to measure different levels of innovation and principle adoption, looking first at a tool level, then a system level and finally a principle level. This tiered model makes Shingo Prize a comprehensive assessment of the interconnected dynamics of organizational performance. In addition, some stakeholder values are addressed, in terms of financial results and quality levels.

Each principle has scoring criteria, and is given a weighted score. These scores can be combined into an overall score that is representative of an organization’s operational excellence.

Information Gleaned

The final important element of the assessment process is the output; an assessment tool must provide a usable, understandable output that can guide the transformation process. Some tools also provide overall scores, which can be beneficial in providing cross-industry benchmarks or providing a marketable indicator of success. Important to picking an assessment tool is its ability to output useful, functional results that can guide and measure the transformation process.

With the exception of the Good to Great Diagnostic, the assessment tools reviewed in this paper do not contain explicit interpretation guidelines. Although the models all describe the desired states, most do not have instructions or transformation guidelines that map out the course to move up a level for each performance indicator.

Malcolm Baldrige National Quality Award. The Baldrige Prize provides general criteria for each level of performance, which can guide the transformation process. In addition, they have published worksheets and strategies for identifying opportunities for improvement as well as strengths (further growth), which help in formulating a future state vision while completing the assessment. In addition, the assessment questions include details about actionable items and responsible parties in order to help develop implementable, achievable changes.
Overall, the model encourages working out from core values to develop systematic processes that yield beneficial results. This concept provides a guide to connecting internal processes with stakeholder values to achieve high performance.

In addition, the assessment process generates an overall score that can be used to measure organizational improvement and used as an inter-organization comparison tool.

**Good to Great Diagnostic.** The Good to Great Diagnostic links heavily with the principles and concepts described in Collins’s book on organizational greatness. The scores that come from the diagnostic tool can be used to focus and foster implementation of different concepts from the book (essentially, identifying best practices that can benefit the larger organization being assessed). In this case, the assessment tool is very closely tied with a specific set of organization principles and an associated transformation plan.

**Lean Enterprise Self-Assessment Tool.** LESAT yields two sets of scores, one for the current organization state and one for the future/desired state. Rather than combining the individual scores into an overall, unified score, each is used independently to assess current performance vs. the desired state. Often, the results are analyzed by looking at performance gaps (the difference between the current state and the desired state) in order to identify key priority areas for transformation (Nightingale and Mize 2002). The assessment can later be repeated to measure progress towards achieving the desired state, as well as for measuring organizational focus changes.

In addition, as a self-assessment, LESAT provides interesting results in terms of variability or non-convergent responses. By looking at these variations, organizations can identify perspective difference and misalignment across departments or management levels.

The LESAT was originally designed as a component of the Transition-to-Lean (TTL) roadmap, and it can easily be adapted to other transformation frameworks.

**Shingo Prize for Operational Excellence.** The Shingo Prize generates individual scores for each principle, as well as a single unified score. The unified score can be used as a motivational force (achieving scores associated with “gold” operational excellence), while the principle scores can be used to define the transformation focus. Each principle is accompanied by concepts and criteria to help envision the desired state.

Although the Shingo Prize does not integrate with an implementation strategy, it provides a framework for prioritizing improvement and envisioning a future state. In addition, a unique progression of practices helps enumerate the phases of transformation and adoption (starting at the level of tool-driven change and moving up to principle-driven change).

**Summary**

In summary, the importance of organizational assessment cannot be overstated, though rarely practiced. As enterprise transformation becomes increasingly important to remain competitive, the ability to identify, measure and integrate a multitude of performance indicators is valuable. It provides both a measurement of the organization’s current position within the industry, as well as prioritized focus for how to improve performance.
Because it is quite difficult to demonstrate causality between improving assessment indicators and improving overall organization performance, assessments must be chosen based on a range of other qualities. Most important is that the assessment tool reflects the overarching organization values and intentions. This paper has provided a cursory introduction to four leading organizational assessment tools, and outlined differences in their scope, criteria and outputs (table 2 below summarizes this information). The hope is that this paper provides a starting point for understanding the process of selecting and using an assessment tool.

Of course, the tools outlined in this paper are simply a sampling of those available. More tools are constantly appearing, and existing tools can easily be customized to better align with an organization’s focus and goals.

Most important to the success of organizational assessment is commitment and buy-in, both at the level of leadership and of implementation. Any tool that has a high level of buy-in and aligns with the enterprise goals will be beneficial to the transformation process. A well-aligned tool, if integrated into strategic processes, is able to provide beneficial knowledge about organization performance and priorities, as well as historical data and insights into the multidimensional factors that contribute to success.

Table 2: Summary details from the different tools discussed in this paper.

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<th>Baldrige Prize</th>
<th>Good to Great</th>
<th>LESAT</th>
<th>Shingo Prize</th>
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</thead>
<tbody>
<tr>
<td><strong>Assessment Mode</strong></td>
<td>Award, can be adapted for internal assessment</td>
<td>Internal diagnostic to distinguish between good and great companies</td>
<td>Self assessment in support of transformation planning</td>
<td>Award, can be adapted for internal assessment</td>
</tr>
<tr>
<td><strong>Assessment Stakeholders</strong></td>
<td>Flexible</td>
<td>Top leadership</td>
<td>Enterprise Leadership</td>
<td>Flexible</td>
</tr>
<tr>
<td><strong>Criteria or Information Addressed</strong></td>
<td>Quality and customer commitment</td>
<td>Best principles identified in Good to Great book</td>
<td>Lean enterprise practices</td>
<td>Toyota Production System and lean manufacturing</td>
</tr>
<tr>
<td><strong>Information Gleaned</strong></td>
<td>Areas for improvement and key principles</td>
<td>Trends in implementation of concepts</td>
<td>Gaps and prioritized improvement areas</td>
<td>Successive adoption pyramid guides transformation</td>
</tr>
<tr>
<td><strong>Sectors</strong></td>
<td>Manufacturing, service, small-business, health, education, non-profit</td>
<td>Broad</td>
<td>Designed for manufacturing (aerospace), recently applied to healthcare and services.</td>
<td>Designed for manufacturing, recently expanded to Operational Excellence.</td>
</tr>
<tr>
<td><strong>Sample size (approximate)</strong></td>
<td>Thousands</td>
<td>Based on 11 Usage unknown</td>
<td>Dozens</td>
<td>Hundreds</td>
</tr>
</tbody>
</table>

References


**Biographies**

L. Nathan Perkins is pursuing a Masters degree at MIT in the Technology and Policy Program. As part of his program, he is doing research with the Lean Advancement Initiative on organizational assessment tools/models. Prior to attending MIT, he received his B.A. in Neuroscience from the University of Southern California in 2007 and served as a Peace Corps volunteer in South Africa doing development with rural, non-governmental organizations.

Ricardo Valerdi, Ph.D is a Research Associate in the Engineering Systems Division at MIT. He received his B.S./B.A. in Electrical Engineering from the University of San Diego in 1999, and his M.S. and Ph.D. degrees in Systems Architecting and Engineering from USC in 2002 and 2005. He is the author of over 45 technical publications which have appeared in IEEE, AIAA, and INCOSE conferences. His work has appeared in several journals, including *Journal of Systems Engineering*, *Journal of Systems and Software*, and *CrossTalk - The Journal of Defense Software Engineering*. He serves on the INCOSE Board of Directors as Treasurer and is the co-Editor-in-Chief of the *Journal of Enterprise Transformation*.

Deborah Nightingale is Professor of the Practice of Aeronautics and Astronautics and Engineering Systems at MIT, and Director of the Lean Aerospace Initiative. Dr. Nightingale has over 35 years of broad-based experience with academia, the private sector and the government. Prior to joining MIT, she headed up Strategic Planning and Global Business Development for AlliedSignal Engines. Dr. Nightingale is a Past-President and Fellow of the Institute of Industrial Engineers and a member of the National Academy of Engineering. Dr. Nightingale holds a Ph.D. in Industrial and Systems Engineering from Ohio State University and MS and BS degrees in Computer and Information Science from Ohio State and Univ. of Dayton respectively. Her research interests are focused on lean enterprise design, integration and transformation.

Stan Rifkin is the founder and principal of Master Systems, an advisory service for organizations for which computing is strategic. He was an associate editor in chief of *IEEE Software*. He received his BS in Business Administration – Quantitative Methods from California State University at Northridge, and his MS in Computer Science from the University of California at Los Angeles. In addition, he holds a Doctorate in Education in the area of organizational systems from the George Washington University. Currently he is working for the United States Air Force Office of Scientific Research as a Program Manager. The views presented are those of the author and do not necessarily represent the views of US Department of Defense or its Components.