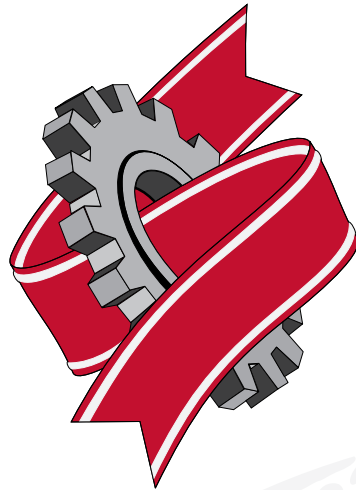


Model & Application Guidelines



THE SHINGO PRIZE

for OPERATIONAL EXCELLENCE

JON M.
HUNTSMAN
SCHOOL OF BUSINESS
UtahStateUniversity

Dear Shingo Associates,

Thank you for taking time to study our model for operational excellence and considering the benefits of using the model within your organization. Many of our associates have indicated that the model and assessment can assist in better understanding where you are on your journey toward operational excellence and how to accelerate your efforts. We sincerely hope that this document will enable you to become more keenly aware of not only your strengths, but also your greatest opportunities for improvement.

If your intentions are to eventually challenge for The Shingo Prize, this booklet will introduce you to the process of applying and preparing your achievement report. You will learn how our examiners, your peers from other companies, will evaluate, score and provide feedback to your facility.

This booklet is different from past issues. Based on our decades of experience in searching for, evaluating and recognizing some of the world's very best companies, we have come to understand how truly difficult it is for even the best to create sustainable transformation and build lasting cultures of operational excellence.

In the past, our search for great companies focused primarily on determining "the degree to which" the organization had successfully deployed the tools and techniques often associated with most of the business improvement programs conceived over the past few decades. Based on our long-term association with these companies and thought-leaders, we have come to understand that the focus on tools and techniques must be led by a thorough understanding of the key concepts -- or guiding principles around which the tools have been developed. Those guiding principles become the bedrock of a corporate mindset and the foundation for the design of systems that reinforce these principles in every action of every associate.

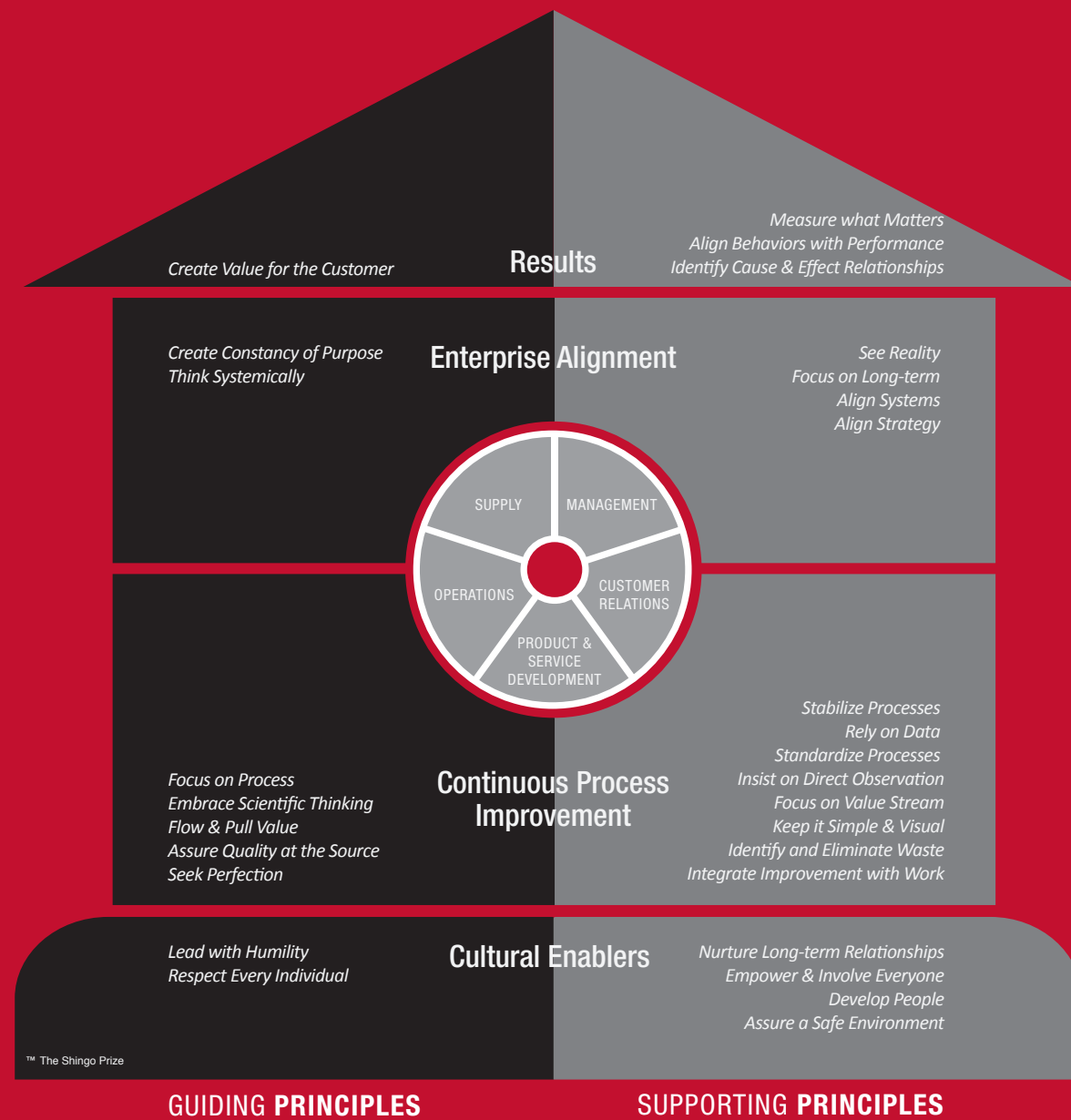
This relationship between guiding principles, management systems and improvement tools is the basis for The Shingo Prize model and our approach to organizational assessment. We invite all to review and engage in critical dialogue with your peers around the ideas presented here. Then contact us at www.shingoprize.org and we will be eager to share with you more of the details behind the model and assessment methodology.

A handwritten signature in black ink that reads "Robert D. Miller". The signature is fluid and cursive, with a large initial "R" and "M".

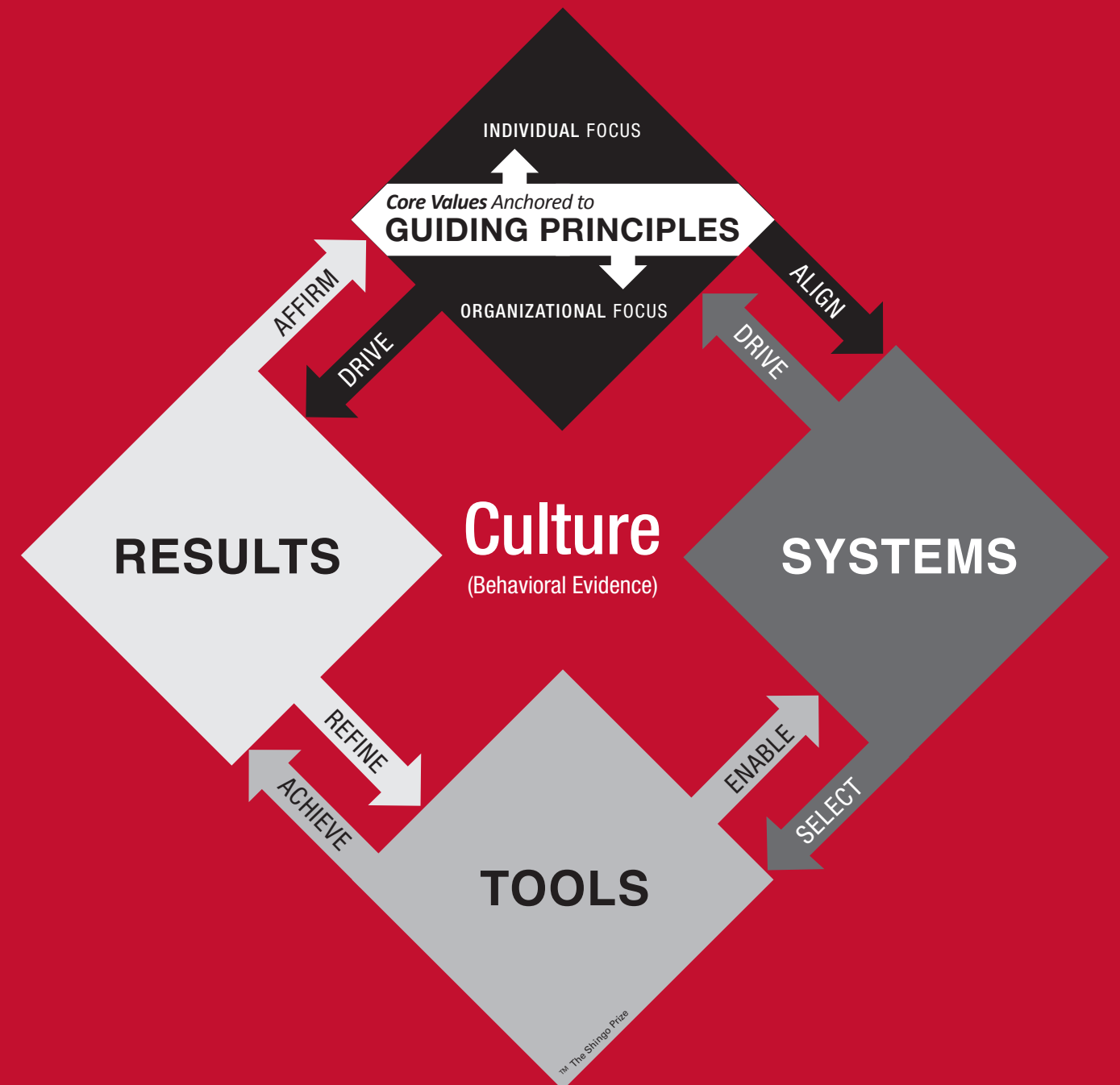
Robert D. Miller
Executive Director
The Shingo Prize for Operational Excellence
Jon M. Huntsman School of Business

The Shingo Model

The Shingo Principles of Operational Excellence



The Shingo Transformational Model



Model & Application Guidelines

THE SHINGO PRIZE FOR OPERATIONAL EXCELLENCE

JON M. HUNTSMAN SCHOOL OF BUSINESS

UTAH STATE UNIVERSITY

LOGAN, UTAH USA

WWW.SHINGOPRIZE.ORG

VERSION 4

MAY 2010

Board of Governors

Brent, Paul A.
General Director
Global Supply Mgt.
Restructuring
Delphi Corporation

Bussell, Jerry
Vice President, Global
Operations
Medtronic Surgical
Technologies

Byrne, Arthur P.
Operating Partner
J.W. Childs Associates

Carlberg, Douglas F.
President & CEO
M2 Global Technology, Ltd.

Convis, Gary
CEO - Dana Holding
Corporation

Corvi, Carolyn
Vice President-General
Manager, Airplane
Programs
The Boeing Company

Costello, Timothy A.
Chairman &
Chief Executive Officer
Builder Homesite, Inc.

DaPrile, Michael N.
Executive Vice President
SW Manufacturing, Inc.

Fawson, Chris
Senior Associate Dean,
Jon M. Huntsman School of
Business
Utah State University

Hamilton, Bruce E.
President
Greater Boston
Manufacturing
Partnership, Inc.

Hartman, Thomas G.
Senior Director of Lean
Consulting
Autoliv North America

Helmboldt, Jack
Senior Vice President
Denso Manufacturing
Tennessee, Inc.

Izquierdo, Luis
Vice President, Corporate
Operations
Raytheon Company

Joyce, Michael
VP, Operating Excellence
& Program Mgmt
Lockheed Martin

Kessler, Bill
Professor and Director of
Executive Programs
Georgia Institute of
Technology
Tennenbaum Institute

Koenigsaecker, George J.
President
Lean Investments, LLC

Madigan, Julie
The Manufacturing
Institute

Martyn, Mike
Principal
SISU Consulting Group

Marushin, John E.
Director
AOMC Alcoa

Miller, Robert D.
Executive Director
The Shingo Prize for
Operational Excellence

Nelson, R. David
Senior Partner
Fenix Group International,
LLC

Patterson, Rusty
Vice President
Raytheon Six Sigma
Business Excellence
Raytheon Company

Pawley, Dennis K.
President & CEO
Pawley Enterprises

Ransom II, Clifford F.
President
Ransom Research, Inc.

Riley, Peter N.
EVP Integrated Operations
Bell Helicopter Textron Inc.

Ronchi, Don
Cerberus Operations and
Advisory Company, LLC
Cerberus Capital
Management

Rowlands, David
CEO
Gold Pride Press

Schonberger, Richard J.
President
Schonberger & Associates,
Inc.

Shook, John
Senior Advisor
Lean Enterprise Institute

Simons, Harold M.
Executive Vice President,
Manufacturing
O.C. Tanner Company

Snyder, Kenneth C.
Executive Dean,
Chief Administrative
Officer
Jon M. Huntsman School of
Business
Utah State University

Thor, Carl G.
President - JarrettThor
International

Van Gels, John J.
V.P. Operations & Supplier
Mgmt.
The Boeing Company

von Rossum, Sr., Alejandro
CEO-Chemical Division
Cydsa Corporativo S.A. de
C.V.

Zak, Helen
COO Lean Enterprise
Institute

ACKNOWLEDGMENTS

We wish to thank various people at The Shingo Prize for Operational Excellence and The Jon M. Huntsman School of Business who made up the team that provided scholarly work, ideas that significantly enhanced the clarity of the model and guidelines, and content editing. Those most closely involved with the project include: Randall Cook, Robert Miller, Jacob Raymer, and Shaun Barker. A special thanks to Brian Atwater for his contribution regarding systemic thinking, especially the idea to create a systemic process model. We would also like to thank the members of our Board of Governors who provided practical insights and critical feedback through the years as the Shingo model evolved. Finally, each time we teach a course we receive valued input and ideas from our Shingo affiliates, whose expertise and friendship we truly value.

Table of Contents

THE SHINGO MODEL FOR OPERATIONAL EXCELLENCE

- 6 The House - The Shingo Principles of Operational Excellence
- 7 The Diamond - The Shingo Transformational Process
- 9 Dimension 1: Cultural Enablers (People)**
 - 9 Principle – Respect Every Individual
 - 10 Principle – Lead with Humility
- 11 Dimension 2: Continuous Process Improvement (Process)**
 - 11 Principle – Focus on Process
 - 12 Principle – Embrace Scientific Thinking
 - 12 Principle – Flow and Pull Value
 - 12 Principle – Assure Quality at the Source
 - 12 Principle – Seek Perfection
- 15 Dimension 3: Enterprise Alignment (Alignment)**
 - 15 Principle – Create Constancy of Purpose
 - 16 Principle – Think Systemically
- 18 Dimension 4: Results**
 - 18 Principle – Create Value For The Customer
- 20 Scope of Transformation**
 - 20 Business & Management Processes
- 22 Summary**

ASSESSMENT GUIDELINES

- 24 Assessment Criteria
- 24 Dimension 1 – Cultural Enablers
- 26 Dimension 2 – Continuous Process Improvement
- 27 Dimension 3 – Enterprise Alignment
- 28 Dimension 4 – Results
- 30 Assessment And Scoring**
 - 31 Assessment Areas
 - 32 Behavior – Assessment Scale
 - 33 Results – Assessment Scale

APPLICATION GUIDELINES

- 36 Application Process
- 41 Writing The Achievement Report**
 - 41 Introduction
 - 42 Dimension 1 – Cultural Enablers
 - 42 Dimension 2 – Continuous Process Improvement
 - 42 Dimension 3 – Enterprise Alignment
 - 42 Dimension 4 – Results
 - 43 Achievement Report Format

The Shingo Model for Operational Excellence

The Shingo Principles of Operational Excellence

Guiding Principles, Supporting Principles, and Dimensions

The Shingo Transformational Process

The Shingo model is based on the Lean management approach and model taught by Dr. Shigeo Shingo, as well as the thinking shared from Toyota and other companies that have achieved new levels of operational excellence. Shingo, a management consultant and a practicing engineer, recognized vital management philosophies and shared them through his many books. His teachings describe three levels of business improvement, which we have translated into a transformation process, comprising principles, systems, and tools. Shingo grasped that true innovation is not achieved by superficial imitation or the isolated or random use of tools & techniques and systems ('know how'), but instead requires the 'know why' — i.e., an understanding of underlying principles. The Shingo model answers some of the most nagging questions of our day:

- Why aren't traditional improvement methods getting the benefits we expect?
- How should we approach transformation in our organization?
- What is the connection between Lean, Six Sigma, Theory of Constraints, and other improvement models?
- Our pursuit of excellence has stalled. How do we get back on track?

The Shingo model is comprised of two elements: the house and the diamond. The house details the principles of operational excellence and the power of balancing effort across all the dimensions. The diamond represents the transformation process for embedding the principles of operational excellence into the organizational culture. The Shingo model is a robust model that characterizes the connections between Six Sigma, TQM, TPS, JIT, and

Lean. It is designed as a baseline to help managers identify where their company is on the journey to operational excellence, and to assess the breadth and depth of transformation within the organization.

The Shingo model is an engine for transformation that propels an organization through the challenges toward the real prize – exceptional business results and value creation for customers. Leaders should use the Shingo model to guide the development of guiding principles, and their alignment with core values. This alignment will lead to the development of systems and appropriate use of tools of operational excellence that reinforce correct behavior and build organizational culture.

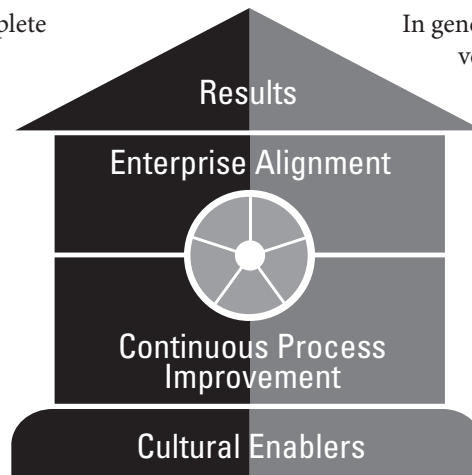
The ultimate goal when pursuing the model is clear: cultural transformation through integration of principles of operational excellence across the enterprise and its value streams to create a complete, systemic view, leading to consistent achievement of results. Consequently, a Shingo Prize organization will have deeply embedded the principles of operational excellence throughout its leadership and in most aspects of its business processes: product/service development, customer relations, operations, supply, and management support processes.

The Shingo model is universal so that it can be applied to organizations in:

- All industries;
- Public or private sector;
- Profit or non-profit arenas; and
- Individual site/plant, a complete division, or the entire business enterprise.

Shingo Principles of Operational Excellence

The Shingo model achieves this objective by identifying and focusing on principles which are universal, timeless, and self-evident.



The principles are categorized into four dimensions: cultural enablers, continuous process improvement, enterprise alignment, and results, to which all transformations must lead. The dimensions overlay four core business processes – product/service development, customer relations, operations, supply – and a variety of management support processes. The pie in the center of the house represents all business and management support processes within an organization.

Guiding Principles, Supporting Principles, and Dimensions

The ten guiding principles of operational excellence have been compiled by some of the best organizations in the world as the foundation for their philosophy of operational excellence. These principles have been distilled through a study of history over the past one hundred years, and through the insights of successful transformation leaders. One of the keys to implementation is to balance all of these principles, rather than picking one or two with a narrow focus. The genius behind ‘The Toyota Way’ has been their ability to knit together a complete set of tools and concepts that fit with their guiding principles and a propensity for continuous improvement that consistently improves the fit. The tendency to disassemble these tools and concepts into Six Sigma, TQM, TPM, JIT, etc., has resulted in a haphazard tools-driven attempt to copy, and delayed understanding of what is really required to become operationally excellent. The other key is to assure that every aspect of the business, including systems, structures, and measures, is scrutinized for consistency with these guiding principles.

In general, the guiding principles are very lofty and somewhat abstract. However they are known and understood among successful practitioners and leaders of operational excellence. They have been learned by years of experience and careful reflection. The supporting principles are a little more practical, and can be learned and understood more quickly. They are building blocks for the guiding principles.

The dimensions are the result of ‘thinking categorically about the principles.’ It is clear that all four dimensions require focus in order to achieve excellence. In the same way that we need to comprehend objects in three dimensions to truly appreciate all of their characteristics; operational excellence needs to be viewed in these four dimensions in order to fully comprehend it.

The Shingo Transformational Process

Individual Focus: A principle-based leader is one that has first, deeply embedded principles in his/her own life and lives congruent with those principles. Having made principles central to one’s own philosophy, a leader is then able to lead others with integrity. This commitment to personally exemplify principles before leading others is called individual focus.

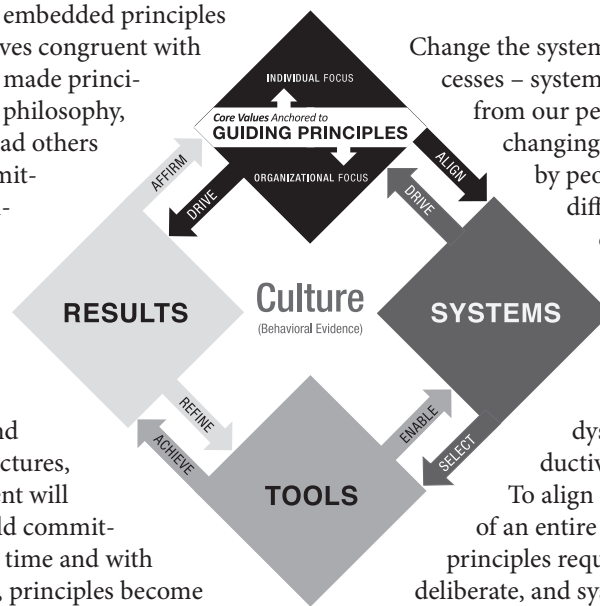
Organizational Focus: An organization that has designed and aligned the systems, structures, and tools for improvement will teach, reinforce, and build commitment to principles. Over time and with continual reinforcement, principles become deeply embedded into the minds and hearts of the people and become the foundation for a new culture.

At the center of the diamond is the actual culture of an organization which is the sum of the predominant behaviors in the organization based on what the people believe is the accepted, appropriate way of working. An assessment of the degree to which a culture is aligned with the principles of operational excellence is the intent of a Shingo Prize assessment.

In reality, organizational culture is developed over a long period of time and is reinforced by the prevailing systems, structures and processes. In the Shingo model, we focus on the necessity for a principle-based leader within the organization to set their internal compass pointed toward the timeless, universal, and self-evident principles of operational excellence. What are the principles of

operational excellence that should define organizational culture? The house of the Shingo model outlines the fundamental principles behind TPS, The Toyota Way, and the philosophies of Deming, Shingo, Womack, and many others.

Once an individual leader embraces the principles, the next and most compelling questions become: “How do I build into every employee in my organization a commitment to the same principles and how do I align all of the individual behaviors in such a way that I can permanently shape the culture of the organization? How do I make everyone principle-based leaders?”



Change the systems, structures, and processes – systems and tools. We all know from our personal experiences that changing the values that are held by people is one of the most difficult things to do. Values drive behavior and values that are not grounded in principles, drive inappropriate behavior. Inappropriate behavior results in a dysfunctional and non-productive organizational culture. To align the vastly diverse values of an entire organization around principles requires a very sustained, deliberate, and systematic process.

The model suggests such a systemic approach.

- 1. Experiment with the principle:** One of the principles of operational excellence is scientific thinking, which is intended to foster a culture of experimentation and deep learning. People must be able to put to the test each of the principles espoused by the principle-based leader. Only when people see for themselves the cause-and-effect relationship of results relative to the principle, will they come to deeply understand the value of the principle to them personally. Repetition through many cycles of learning in the experiment gives people a personal experience with the principle and empowers them to make personal judgments about the rightness or wrongness of the principle.
- 2. Align the systems:** In an organizational context, the business, management, and work systems

of the company must be carefully designed to reinforce the principle being espoused. The principles align the development of systems and the systems drive behavior that is congruent with the principle.

3. Select appropriate tools: For decades, organizations have been introducing new tools or methods in an effort to drive improvement. Unfortunately, learning ‘how’ to do something without learning ‘why’ can lead to misuse, abuse, and possibly perversion of the concept. Tools must be selected to support the systems, not the other way around.

4. Achieve results: The more the result reinforces the application of the principle, the principle eventually empowers the employee to act independently in a way that is powerful and aligned with the intent of the leaders.

Experience has taught us that there are clear organizational roles in a transformation. Top leaders need to spend a significant portion of their time understanding, aligning, and communicating principles and their corresponding values. They must carefully define the expected behaviors desired in the organization and think carefully about the culture they are responsible for building. Appropriate behaviors are the evidence that principles and values are clearly understood and owned by individuals in the organization.

Managers should spend a significant portion of their time defining, managing, and improving systems and measures that will drive the desired culture throughout the organization.

Finally, every person in the organization needs to be actively applying the tools of continuous improvement within the scope of their daily work – every person, every day.



DIMENSION 1

Cultural Enablers (People)

Principle – Respect Every Individual

Principle – Lead with Humility

Cultural enablers make it possible for people within the organization to engage in the transformation journey, progress in their understanding, and ultimately build an operational excellence culture.

Operational excellence cannot be achieved through top-down directives or piecemeal implementation of tools. It requires a widespread commitment throughout the organization to execute according to the principles of operational excellence. A culture must be developed where every person in the organization demonstrates a high level of respect for every other person. Developing mutual respect and humility takes consistent commitment and time.

Principle—Respect Every Individual

Respect is a principle that enables the development of people and creates an environment for empowered associates to improve the processes that they “own.” This principle is stated in the context of “every individual” rather than “for people” as a group. Respect must become something that is deeply felt for and by every person in the organization. It is something that must be reflected at the individual level, because at the end of the day individuals drive continuous improvement throughout an organization.

Respect for every individual naturally includes respect for individuals representing customers, suppliers, the community, and society in general. Individuals are energized when this type of respect is demonstrated. It is important to note that respect is only a slogan unless leadership takes seriously its responsibilities in protecting both the environment and the health and safety of all the organization’s stakeholders.

Principle – Lead with Humility

One common trait among students of lean is a sense of humility. Humility is an enabling principle that precedes learning and improvement. A leader's willingness to seek input, listen carefully, and continuously learn creates an environment where associates will feel respected and energized, and they will give freely of their creative abilities. There is also a need for humility on the part of all members of an organization. Ideas can come from anywhere. One can learn something new from anyone. Improvement is only possible when people are willing to abandon ownership, bias, and prejudice in their pursuit of a better way.

/// SUPPORTING PRINCIPLE – NURTURE LONG-TERM RELATIONSHIPS

The principles of respect and humility lead to recognition of the importance and power of people and relationships. People are an essential part of every value stream, process, and/or system. The principle of nurturing long-term relationships automatically drives the perspective that people and partners are assets. This completely changes the dynamic of relationships and is more consistent with the principles of respect and humility. In this light, long-term should be reflected in decades rather than years.

/// SUPPORTING PRINCIPLE – DEVELOP PEOPLE

People development has emerged as an important and powerful cultural enabling principle. The appropriate culture for operational excellence is dictated by respect for every individual and hence includes education, training, and coaching. People development goes hand-in-hand with developing a culture in which principles of operational excellence can be taught and practiced. Through people development, the organization creates the “new scientists” that will drive the future continuous improvement.

An organization's leaders must be committed to developing people and expanding the knowledge base. Leaders come to realize that expenses for education and training are necessary investments for long-term health; as such, the commitment to this investment does not waver.

/// SUPPORTING PRINCIPLE – EMPOWER & INVOLVE EVERYONE

Empowerment and involvement ensure that an organization is fully capitalizing on the knowledge base it has developed through people development. And since “doing” is a form of learning, as employees carry out improvement projects they learn more thoroughly about the value and application of concepts, embedding the philosophy more deeply into the organization's culture. Without empowerment and involvement, the value of training investments is limited. When improvement efforts are limited to management and a few key personnel, improvement opportunities for the organization are limited.

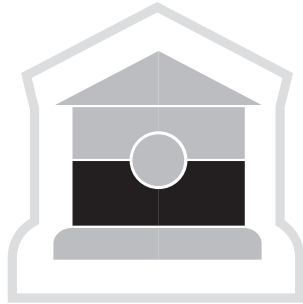
Empowering employees through appropriate vision and direction amplifies the improvement contributions of management and engineering. Management can give individual attention to major, broad-reaching initiatives and the strategic direction of the company (e.g., breakthrough activities), while employees take care of hundreds of day-to-day issues that need attention to execute the vision (e.g., incremental improvements, business fundamentals). The results are spontaneous improvements in the flow of value, achievement of organizational objectives, and job enrichment.

/// SUPPORTING PRINCIPLE – ASSURE A SAFE ENVIRONMENT

There is no greater measure of respect for the individual than creating a work environment that promotes both the health and safety of employees and the protection of the environment and the community. Environmental and safety systems embody a philosophical and cultural commitment that begins with leadership. When leadership is committed, then the organization creates and supports appropriate systems and behaviors.

Combined with the principle of nurturing long-term relationships, the principle of assuring a safe environment extends to creating and protecting employment for its employees and the community, which is emotional and financial safety.

In short, safety is first!



DIMENSION 2

Continuous Process Improvement (Process)

Principle – Focus on Process

Principle – Embrace Scientific Thinking

Principle – Flow and Pull Value

Principle – Assure Quality at the Source

Principle – Seek Perfection

Continuous improvement begins by clearly defining value in the eyes of customers, both internal and external. Expectations must be clearly and unambiguously communicated so that processes can be designed to meet customer needs. Every employee must know “what good is” and what to do if the process is not creating good product or providing good service.

As associates learn to identify and eliminate waste, they will by necessity follow Shingo’s advice: “Improvement means the elimination of waste, and the most essential precondition for improvement is the proper pursuit of goals. We must not be mistaken, first of all, about what improvement means. The four goals of improvement must be to make things: easier, better, faster, and cheaper.” Particular emphasis is placed on quicker, more flexible response throughout the system.

The focus for continuous improvement cannot be only quality or cost, but instead must incorporate all aspects of value as perceived by the customer, including quality, cost, flexibility, quick delivery, and a comprehensive view of environmental health and safety.

Continuous improvement focused on flow of value requires both scientific thinking and the capacity to identify and eliminate waste.

Principle – Focus on Process

A process focus recognizes that all outputs – whether product or service – are created by processes acting upon inputs. This simple truth is often overlooked: good processes will produce the intended output, as long as proper inputs are provided.

Process focus also helps focus problem solving efforts on process rather than people. A complete

shift to process focus eliminates the tendency to find the culprit (person) who made the mistake, but rather leads to a pursuit of the culprit (process) which allowed the mistake to be made. Thus, process focus also supports the cultural enablers, creating an environment where learning from mistakes can become a powerful element of continuous improvement.

Principle – Embrace Scientific Thinking

A focus on process lends itself to scientific thinking – a natural method for learning and the most effective approach to improvement. All associates can be trained to use scientific thinking to improve the processes with which they work, creating a culture that provides common understanding, approach, and language regarding improvement. Scientific thinking is also results-based, placing a premium on defining and communicating desired outcomes throughout the organization.

There are a variety of models that reflect scientific thinking, such as PDCA (plan, do, check, and adjust), the QI Story, A3 thinking, and DMAIC (define, measure, analyze, improve, and control). All of these models include the following elements.

Principle – Flow and Pull Value

Flow thinking is the focus on shortening lead-time from the beginning of the value stream to the end of the value stream, and on removing all barriers (waste) that impede the creation of value and its delivery to the customer. Flow is the best driver to make processes faster, easier, cheaper, and better. Other potential drivers such as unit cost or process variability are too narrowly focused, distorting priorities and delivering suboptimal results. A cost focus is particularly dangerous, when it creates perverse incentives and budget manipulations incidental to actual improvement.

Pull is the concept of matching the rate of production to the level of demand, the goal in any environment. Yet pull is not feasible or cost-effective without the flexibility and short lead times that result from flow.

Flow and pull create enormous positive benefits in all aspects in any business. Focusing on flow will lead to improvements including; better safety and

morale, more consistent quality with fewer defects, increases in on-time delivery and flexibility, and lower costs, without running into the traditional trade-offs. In addition, daily and weekly results become more consistent and predictable.

Principle – Assure Quality at the Source

Assuring quality at the source is the combination of three principles: (1) do not pass defects forward, (2) stop and fix problems, and (3) respect the individual in the process. Defects are a source of instability and waste, so assuring quality at the source requires the establishment of processes for recognizing errors in the process itself. Organizations must commit to stopping and fixing processes that are creating defects, rather than keeping product or services moving while planning to fix the issue later. Proper use of the human element in the process for thinking, analysis, problem solving, and countermeasures is vital to continuous improvement.

Principle – Seek Perfection

It is important to understand that the continuous process improvement journey has no end. This explains Shingo's philosophy that one should always look for problems where there doesn't appear to be any. This is contrary to the traditional belief – 'if it isn't broken don't fix it.' The pursuit of perfection reveals that there are always opportunities for improvement. There is always waste, and the more a process is observed the more waste will be seen.

While focus on process guides and directs the improvement efforts, seek perfection is the engine that keeps improvement energized and moving forward at an aggressive pace. The term problem solving may imply that after a solution is implemented, improvement is done. Seeking perfection and scientific thinking combine to find countermeasures not game-ending solutions and then revisits the issue again and again, pursuing perfection without really expecting to find it.

/// SUPPORTING PRINCIPLE – STABILIZE PROCESSES

Stability in processes is the bedrock foundation of any improvement system, creating consistency and repeatability. Stability is a prerequisite for improve-

ment, providing a basis for problem identification and continuous improvement. Almost all of the continuous improvement principles rely on stability.

Stability is the precursor to achieving flow. Many of the rationalizations for waste are based on the instabilities of processes, as if they are beyond our control. Instead, we should apply the basic tools available to reduce or eliminate instability and create processes that promote the identification and elimination of waste.

/// SUPPORTING PRINCIPLE – RELY ON DATA

Shingo emphasized the importance of being data-driven in the pursuit of continuous improvement. He frequently shared examples of specific situations where data was collected, but it was not the correct data or the data wasn't actually being used in the improvement process. Finally, he was adamant that the understanding of the actual process be so detailed that when implementing a change in the process, the improvement in the data could be predicted. Thus, reconciliation is required between the predicted results and the actual results, making the improvement process truly data-driven. The principle is that when data is treated loosely or imprecisely, there is a tendency to leave potential improvement on the table or even worse, to not achieve any improvement at all.

/// SUPPORTING PRINCIPLE – STANDARDIZE PROCESSES

While stability is a necessary precondition for creating flow and improvement, standardization builds control into the process itself. Standardization is the supporting principle behind maintaining improvement, rather than springing back to preceding practices and results. Standardization also eliminates the need to control operations through cost standards, production targets, or other traditional supervisory methods. When standardization is in place, the work itself serves as the management control mechanism. Supervisors are freed up for other tasks, when they are not 'required' to monitor and control the output and costs.

/// SUPPORTING PRINCIPLE – INSIST ON DIRECT OBSERVATION

Direct observation is a supporting principle tied to scientific thinking. It is in fact the first step of the scientific method. Direct observation is necessary to truly understand the process or phenomenon being studied. All too frequently, perceptions, past experience, instincts, and inaccurate standards are misconstrued as reality. Through direct observation, reality can be seen and confirmed and established as the consensus.

“Companies that have implemented principles taught by The Shingo Prize have made dramatic and measurable progress in achieving operational excellence.”

– Dr. Stephen R. Covey, bestselling author of *The 7 Habits of Highly Effective People*.

/// SUPPORTING PRINCIPLE – FOCUS ON VALUE STREAM

Flow and pull value combined with focus on process lead to the necessity of defining value streams and focusing organizational attention on them. A value stream is the collection of all of the necessary steps required to deliver value to the customer. Defining what customers value is an essential step to focus on the value stream. Clearly understanding the entire value stream, however, is the only way for an organization to improve the value delivered and/or improve the process by which it is delivered.

/// SUPPORTING PRINCIPLE – KEEP IT SIMPLE & VISUAL

“Everything should be made as simple as possible, but not simpler.” ~Albert Einstein

“Simplicity is the ultimate sophistication.” ~Leonardo DaVinci

In society today, there is frequently a bias toward complex solutions and a premium paid to those

who seem to manage complexity well. However, it is usually the case that better results at a lower cost can be achieved by simplification. Shingo's life work in mistake proofing is centered on this principle.

Many of the seven forms of waste are in fact the result of information deficits. Making information visual is the supporting principle that when combined with simplification solves the information deficits.

/// SUPPORTING PRINCIPLE – IDENTIFY AND ELIMINATE WASTE

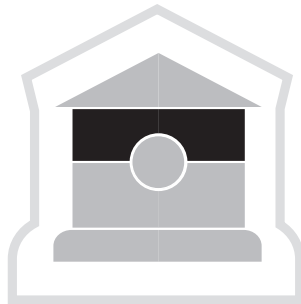
Identification and elimination of waste is a practical principle for making processes flow, thus it becomes a primary focus of continuous improvement. Waste elimination is a powerful supporting principle because it is easily understood by everyone associated with a value stream, compared to the complex concepts and computations often associated with cost per unit, cost variances, statistical variability, and other complex metrics. Focusing on the elimination of waste will consistently drive appropriate behavior, while the wrong focus can frequently become a barrier to improvement, large inventory write-downs, fire sales, or scrap. In the end, identify and eliminate waste is a principle that effectively engages the entire organization in the continuous improvement effort.

/// SUPPORTING PRINCIPLE – INTEGRATE IMPROVEMENT WITH WORK

As this migration toward principles occurs, the activities and approaches for continuous improvement become a part of the everyday work of every employee in an organization. Associates become 'scientists' who continually assess the current state of their processes and pursue a better future state that will enhance the value (or eliminate the waste) and thus pursue perfection.

Each person in an organization carries out daily work, regardless of where in the organization chart that person sits. When improvement is integrated with work, each person accepts responsibility for improvement of the daily work processes. Executives are responsible for improving strategy setting processes or perhaps resource alignment processes. Managers are responsible for improving quality systems, or performance development systems, or value stream flow. Line workers are responsible for

improving their cycle times, or quality of work, or yields. Integrating improvement with work is more than assigning responsibility. It entails the creation of standardized work that defines procedures for improvement.



DIMENSION 3

Enterprise Alignment (Alignment)

Principle – Create Constancy of Purpose

Principle – Think Systemically

One of the most significant failures of modern management education is its focus on strategy and planning without considering execution. To succeed, organizations must develop management processes that align activities with both philosophy and direction, in ways that are simple, comprehensible, actionable, and standardized. Individual leaders cannot develop individual approaches to management without introducing massive waste into an organization.

Policy deployment requires a management process built around scientific thinking, with more emphasis on cycles of learning than on perfect plans. It is essential to establish effective communication, a process for gaining consensus, clear accountability, and systems where execution and countermeasures are planned and tracked, whether through PDCA or a similar methodology. In essence, operational excellence is the definition of successful policy deployment, when policies are aligned with principles.

The sum of individual efforts rarely measures up to the effective alignment of the pieces into a whole. Creating value for customers is ultimately accomplished through the effective alignment of every value stream in an organization.

Principle – Create Constancy of Purpose

The first of W. Edwards Deming's "14 Points" is to create constancy of purpose. It is incumbent upon leaders to find agreement on philosophical and strategic direction that provides a unifying vision. Once this unifying vision is articulated, performance measures that are tied to the attainment of that vision should also be established. Changes in the vision and associated performance measures

should be treated like changes in the national constitution. Organizations that frequently redirect philosophies and strategies don't understand the tremendous waste associated with instability and fluctuation. Lean practitioners frequently use the term 'true north measures' to represent the important and constant focus that organizations should have on customer-centric aspects of value. As organizations maintain that true north focus, they will attain competitive and financial impacts that separate them from the pack. Common categories where customer-focused true north metrics are developed include: 1) morale/safety, 2) quality, 3) delivery, and 4) cost.

Principle – Think Systemically

Systemic thinking is the principle that unifies all the other principles of operational excellence, and enables companies to sustain their lean culture and develop a constancy of purpose centered on continuous improvement.

Leaders realize that the impact of synergy — of all parts working together — is far greater than the sum of the parts. This appreciation requires managers to move from thinking analytically about systems to thinking systemically. Systemic thinking is comprised of three parts: holistic thinking, dynamic thinking, and closed-loop thinking.

“The first responsibility of a leader is to define reality. The last is to say thank you. In between, the leader is a servant.”

- Max De Pree

Holistic thinking is about seeing the “big picture.” It requires two things. First, everyone has a common vision concerning what they are working to achieve. The second requirement is transparency across the system.

Dynamic thinking requires recognizing that all current situations are the result of interactions be-

tween parts of a system that occur over time, rather than snap-shot events.

Closed-Loop Thinking requires understanding how changes within the system ripple across the value stream affecting the work/behavior of other employees in the same department, in other departments, external customers, suppliers, and other stakeholders.

As managers move into systemic thinking, the full value of operational excellence is realized as it moves across the organization, the enterprise it operates within, and ultimately the entire value chain. As employees at all levels of the organization adopt systemic thinking practices, they gain the necessary understanding to safely initiate improvement projects on their own. Ultimately, this understanding is what allows the improvement effort to transition from being solely top-down to more of a grass roots effort.

/// SUPPORTING PRINCIPLE – SEE REALITY

This is a very subtle principle. Most managers and leaders consider themselves quite capable of seeing the world around them and assessing the current situational realities. However, Shingo teaches that people can have blind spots created by long held paradigms, experience, history, expectations, etc.

Thus the practice of “go and see” was developed based on the principle that reality needs to be perceived and understood based upon the five senses.

Another aspect of these blind spots can be understood by reviewing Shingo's three levels of inquiry: 1) basic concepts, 2) systems to give shape to those concepts, and 3) techniques for implementing systems. In order to get beyond the basic technique level of improvement, it is essential to answer deep 'why' questions. This leads to the discovery of underlying systems and the possibility of alternatives. Digging even deeper gets to basic concepts and opens the way for questioning these concepts as to validity and applicability. This level of inquiry and observation gets to the 'reality' that employees are not following procedures, despite the latest lecture, because management systems drive other behaviors.

Further, most organizations unintentionally build cultures that prevent the free flow of information that communicates an honest picture of reality.



Max De Pree said, “The first responsibility of a leader is to define reality.” A leader must establish systems that make organizational performance and associate behavior transparent to all.

/// SUPPORTING PRINCIPLE – FOCUS ON LONG-TERM

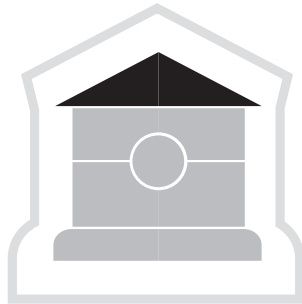
Jeffrey Liker highlights the principle of long-term focus, which provides a foundation of stability in the executive suite that can be achieved in no other way. Frequently, the term true north is used in connection with a focus on safety, quality, delivery, and cost (SQDC) because of its connection to creating value for the customer. When an organization creates a long-term focus, it is more likely that decisions will in fact pursue SQDC rather than monthly or quarterly financial targets or bonus cut-offs. In conjunction with taking care of the short- and medium-term priorities, thinking in terms of 20 to 50 year legacy goals significantly reduces the tendencies for knee-jerk reaction to the urgent pressures.

/// SUPPORTING PRINCIPLE – ALIGN SYSTEMS

From the stakeholders’ perspectives, the full potential is realized only when most critical aspects of an enterprise share a common platform of principles of operational excellence, management systems, and tools. While it is expected that organizations develop some unique elements of their local culture, it is also expected that principles become a common, uniting part of each locale. Top-level leadership, staff, and business processes should exemplify the same principles, systems, and tools as do the operational components of the enterprise.

/// SUPPORTING PRINCIPLE – ALIGN STRATEGY

Policy deployment is a planning and implementation system, based on scientific thinking, employee involvement, and respect for the individual. At the strategy level, policy deployment provides leadership with the necessary principles, systems, and tools to carefully align key objectives and execution strategies — while empowering the organization through cascading levels of detail, to achieve those objectives. Because so many people are involved, clarity is critical; the simplicity of aligning strategy helps keep everyone, literally, on the same (single) page, pointed in the same direction.



DIMENSION 4

Results

Principle – Create Value for the Customer

The basic principle of the results dimension is that businesses must flow value, with value typically defined as something for which customers are willing to pay. Therefore, the definition can include many stakeholders: customers willing to pay; investors willing to invest; communities willing to support; and employees willing to commit their trust, confidence, and careers. Operational excellence creates the flow of value to all stakeholders, improving customer satisfaction and stakeholder value, while maintaining a safe and healthy environment.

Principle – Create Value for the Customer

Every aspect of an organization should be focused on creating value for the customers, investors, employees, and communities. Again, it is helpful to consider the true north concept that should guide decision making and continuous improvement.

An organization should drive all aspects of value, including quality, flexible responsiveness to customers, and return to stakeholders (e.g., growth, revenue, profit, safety, and environmental impact).

/// SUPPORTING PRINCIPLE – MEASURE WHAT MATTERS

Historically, measurement was focused on management – what management needed to know to be able to plan, organize, and control. Within a model where widespread involvement is essential for continuous improvement and consistent performance, it is important to define measures that matter to those who will be using them. Therefore, line associates need different measures than leaders responsible for the overall enterprise. Many thought leaders on measurement have suggested the new measurements need to: 1) be directly tied to strate-

gic priorities – move the dial, 2) be simple and easy to capture, 3) give timely feedback that is tied to the cycle of work, and 4) drive improvement.

When Deming encouraged managers to avoid the use of performance targets, such as units per day, he was providing the initial understanding of measures that matter. Think of the line associate in that situation. The goal is 300 units today, and the display board shows that the station is 100 short with 2 hours left in the day. What is the line associate supposed to do? Hurry up? First, the measure is not timely, or simple, nor does it represent the strategic imperative based upon the Shingo model. The best measure for the associate is ‘following the set procedure within cycle time.’ It is directly tied to the strategic priorities of safety, quality, delivery, and cost. It is very simple: Did I do the necessary work described in the standard work within the cycle time? It is timely, in that each cycle provides feedback as to correctness of the work done. And finally, it immediately identifies abnormalities. If no abnormalities exist, there is the continual drive to be able to do the work correctly in a shorter time – continual improvement.

Measures that matter can be created throughout the organization to assure that everyone is focused on the appropriate strategic activities and driving continuous improvement that moves the whole enterprise ahead.

/// SUPPORTING PRINCIPLE – ALIGN BEHAVIORS WITH PERFORMANCE

Consistent behavior that we know drives the right long-term result, which will happen when the systems that people work in are aligned with principles of operational excellence, and each person has the opportunity to anchor their own personal values with these same principles. Personal values are what ultimately drive individual behaviors. Leaders are responsible for creating the environment and the process for people to evaluate the correctness of their own values relative to the performance results required of the organization.

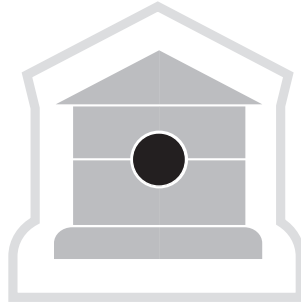
For example, to improve safety, an important aspect of respect for the individual, many companies started reporting and discussing OSHA reportables (a U.S. measure that reflects an accident that caused a certain level of injury and/or missed time). Ultimately, there needs to be a system that is tied to behavior. In this case, organizations

have moved to near miss tracking. If the system is driving for reduced near misses, the behavior might be to stop reporting them. This is counter to the behavioral impact desired. Perhaps orienting the system to increase the number of near misses reported will actually drive the desired behavior. As associates become more vigilant regarding situations that nearly caused an accident they become more aware of safety policies and safe procedures. They are more attentive to their own safety practices and those of others.

/// SUPPORTING PRINCIPLE – IDENTIFY CAUSE & EFFECT RELATIONSHIPS

When we want to make a car go faster, we simply press more on the gas pedal. So, the ‘dial’ is the speedometer. What moves the dial? Pressing on the gas pedal. Why does this work? Because there is a physical linkage from the pedal to the engine to the axle. There is a clear cause-and-effect relationship.

Organizations must follow the linkages to determine the cause-and-effect relationships and how goals can be achieved. This is the same concept as root-cause analysis but applied to creating value.



Scope of Transformation

Business & Management Processes

Business & Management Processes

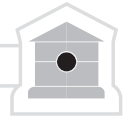
The principles of operational excellence must be applied across all the business and management processes. The pie in the center of the House represents the scope of transformation within an organization, including all basic customer-facing business processes and all management support processes. The processes associated with each of five typical business areas could include:

/// CUSTOMER RELATIONS BUSINESS PROCESSES

- Sales
- Advertising/promotion
- Voice of the customer
- Order processing and tracking
- Responsive/flexible scheduling
- Invoicing and collections
- Warranty

/// PRODUCT/SERVICE DEVELOPMENT BUSINESS PROCESSES

- Defining customer value
- Market segmentation and selection
- Research
- Development of products or services, processes and prototypes



- New product or service launch

- Computer application design and/or support
- Networking systems and support

/// OPERATIONS BUSINESS PROCESSES

- Production or service delivery
- Materials management
- Process engineering
- Maintenance
- Quality assurance and reliability
- Testing

Many, if not all, of these management support processes are fundamentally non-value added in a pure lean sense; that is the customer would not pay extra for these. However, some part of each process is “necessary non-value added work” that is currently vital to the proper functioning of the organization and the eventual effectiveness of the value-added processes (i.e., a company needs to pay taxes, but the customer doesn’t necessarily get value from the process). Applying the principles to these processes assures that they are completed as quickly as possible, as needed, and with the fewest resources possible. In addition to the fundamental principles, focused management and support approaches may include, but are not limited to, alignment and integration of business transactions to support the business enterprise, reduction in the number of transactions in functional offices, and reliably quick administrative processes and support.

/// SUPPLY BUSINESS PROCESSES

- Supplier selection and qualification
- Supplier development and partnering
- Procurement process
- Logistics

Principles of operational excellence should be applied conscientiously in all of these business and management support processes. As understanding deepens and application spreads throughout the entire enterprise, a consistent culture develops which is self-perpetuating and self-directing.

/// MANAGEMENT SUPPORT PROCESSES

- Recruiting
- Compensation and benefits
- Training and employee development
- Employee relations and satisfaction
- Capital budgeting
- Budgeting
- Financial reporting
- Management accounting reporting
- Accounts receivable and accounts payable (A/R and A/P)
- Asset management
- Computer systems and support

Summary

Operational excellence is becoming the preeminent means by which organizations in every industry strive to improve, because it is based on timeless principles which help all members of organizations see improvement opportunities more clearly. There is a wide array of implementation models in use and varying rates of success. At one end of the spectrum, organizations approach transformation in the systematic manner outlined within the Shingo model; at the other end, many more firms are haphazardly trying individual tools or techniques, failing to understand the comprehensive nature of what Shingo, Toyota's leaders, and other lean-thought leaders really taught.

So while the Shingo model enables identification of The Shingo Prize recipients, its broader goal is to serve as a roadmap for organizations around the world to transition more confidently, regardless of their current situation, to a better future state based on universal and timeless principles. The real Shingo Prize is the business result that will come from the pursuit of an ideal. Partners of The Shingo Prize will embark on a journey that will transform their organizations more quickly into powerful, dynamic, nimble competitors.

In doing so, organizations expand their focus to all their business processes and through the cycles of transformation. They implement countermeasures to their corporate challenges, then to the challenges of their supply chains and industries, and, finally, to the challenges of the societies and environments in which they live. No obstacle – affordable health-care, efficient transportation, emerging global environmental concerns – will be beyond the reach of lean thinkers, provided those seeking to overcome obstacles truly “know why.”

Assessment Guidelines

Assessment Criteria

Dimension 1 – Cultural Enablers

Dimension 2 – Continuous Process Improvement

Dimension 3 – Enterprise Alignment

Dimension 4 – Results



DIMENSION 1

Assessment Criteria

This section covers the four dimensions of the model and serves as a reminder to help identify systems and activities that support the principles in each dimension. This section is not intended to be a check list, it simply provides examples Indicative of the assessment criteria.

Dimension 1 – Cultural Enablers (150 Points Total)

Principles:

- Lead with Humility
- Respect Every Individual

Supporting Principles:

- Nurture Long-term relationships
- Empower & Involve Everyone
- Develop People
- Assure a Safe Environment

/// 1.A PEOPLE DEVELOPMENT - EDUCATION, TRAINING & COACHING

The following is a list of systems and activities that support the principles in the dimension. This is not intended to be a check list, nor does it include all possibilities. Not all will be present in every organization, and organizations may have others not listed here, these are simply examples:

- Individual or job-specific development plans;
- On-the-job coaching in lean practices, separating orientation training from regular employee training;
- Structured education programs related to continuous improvement concepts;
- Formal systems (e.g. formal meetings, in-house training programs, etc.) for capturing and transferring lessons learned from improvement efforts;
- The use of standardized work procedures and an organized training program to ensure that all employees know and follow these procedures;
- Specific training philosophy similar to Training Within Industry, which assures everyone knows precisely how to do the job;
- Cooperative endeavors with schools and training organizations to ensure a qualified workforce; and
- Cooperative community endeavors that demonstrate the company and its employees are socially responsible.

▮ 1.B PEOPLE DEVELOPMENT - EMPOWERMENT & INVOLVEMENT

The following is a list of systems and activities that support the principles in the dimension. This is not intended to be a check list, nor does it include all possibilities. Not all will be present in every organization, and organizations may have others not listed here, these are simply examples:

- System for encouraging voluntary employee suggestions and improvement activities;
- Formal system that clearly outlines the boundaries within which employees can act on their own, encouraging and acknowledging employees for taking initiative within those boundaries;
- Company procedures that facilitate all employees sharing problems and exchanging ideas with customer and/or supplier employees;
- Recruitment and succession planning system that proactively ensures a competitive workforce;

- Cross-training program and regular job rotation to maintain skills and enrich the job;
- Carefully designed and clearly communicated hiring and promotion standards for leaders and associates;
- Alignment of job descriptions and compensation to the philosophy of excellence and continuous improvement;
- Union partnership initiatives, including collaborative work arrangements;
- Communication and measurement of quality, cost, and delivery standards throughout the organization;
- An understanding by employees of the strategic goals and objectives and their ability to affect those goals;
- Use of teams for continuous improvement, problem solving, etc.;
- Exemplary involvement and personal commitment of all the organization's leaders in a systematic approach to finding and eliminating waste (muda, mura, and muri), or anything that inhibits the flow of value;
- An organizational philosophy that encourages and recognizes innovations, entrepreneurship, and improvements wherever they originate in the organization; and
- Recognition and reward systems for the organization (e.g., gain sharing), teams and/or individuals contributing to continuous improvement.

▮ 1.C PEOPLE DEVELOPMENT - ENVIRONMENTAL AND SAFETY SYSTEMS

The following is a list of systems and activities that support the principles in the dimension. This is not intended to be a check list, nor does it include all possibilities. Not all will be present in every organization, and organizations may have others not listed here, these are simply examples:

- Proactive systems to maintain an ergonomic, clean, and safe work environment;
- Defining the scope of environmental, health,

and safety (EH&S) efforts to encompass product design from womb to tomb, including alternative materials and supplies, packaging materials, safety features, transportation, intended life span, and recycling or reuse;

- Initiatives regarding environmental issues (e.g., conservation of resources, reducing industrial waste, appropriate handling of hazardous waste, sustainability and management of carbon footprint, etc.); and
- Education, awareness, and practices aimed at employee health and wellness.



Dimension 2 – Continuous Process Improvement (400 Points Total)

Principles:

- Focus on Process
- Embrace Scientific Thinking
- Flow & Pull Value
- Assure Quality at the Source
- Seek Perfection

Supporting Principles:

- Stabilize Processes
- Rely on Data
- Standardize Processes
- Insist on Direct Observation
- Focus on Value Stream
- Keep it Simple & Visual
- Identify and Eliminate Waste
- Integrate Improvement with Work

The following is a list of systems and activities that support the principles in the dimension. This is not intended to be a check list, nor does it include

all possibilities. Not all will be present in every organization, and organizations may have others not listed here, these are simply examples:

- System for assessing the voice of the customer;
- Customer-facing processes such as order-taking, delivery commitment, flexibility for change orders, responsiveness to problems, invoicing, and collections;
- Using quality function deployment, concurrent engineering, etc. for product development;
- Process benchmarking of global best practices and product benchmarking of competitors' products;
- New market development and current market exploitation;
- Systems that make the customer/supplier linkage visible throughout all stages of the process, and encourage/require regular communication;
- Design for manufacturability, testing, maintenance, assembly — i.e., making it simpler and easier to deliver best quality and quickest, most reliable response to the customer at the lowest cost;
- Variety reduction (e.g., component standardization and modularity);
- Innovations in customer analysis, prototype development, test-market design, and/or knowledge management (databases on “lessons learned” design standards, etc.);
- Innovations in market service and logistics;
- Involve suppliers and customers in product/service design;
- Flow and Pull;
- Value stream mapping;
- Value Analysis;
- Time-based or just-in-time manufacturing;
- Total productive, preventive, or predictive maintenance TPM;

- Quick changeover or setup reductions (SMED);
- Zero Defects through Poka-yoke;
- Cellular layout;
- Kaizen and breakthrough improvement;
- Distributing work intelligently and efficiently or level-loading;
- Theory of constraints – managing bottlenecks;
- Benchmarking Processes;
- A3 Thinking;
- 5S, visual workplace, visual displays, and visual management;
- Right-sized equipment and facilities;
- Six sigma, statistical process control, design of experiments (DOE);
- Tools of quality (i.e., pareto charts, storyboarding, cause-and-effect diagrams, 5-whys, or similar problem-solving techniques);
- Production Process Preparation (3P);
- The integration of the company and its suppliers in establishing value-creating methods and practices across company boundaries;
- Recognition that suppliers are part of the value stream and therefore can affect quality, cost, flexibility, and risk;
- Distribution and transport alliances to ensure product quality and productivity;
- Respect for suppliers;
- Commitment to supplier development;
- Alignment and integration of administration functions to support the value stream;
- Emphasis on direct observation (go and see) and data-based decisions and actions;
- Reducing information deficits, human error, and scheduling complexity through visual devices



DIMENSION 3

Dimension 3 – Enterprise Alignment (200 Points Total)

Principles:

- Create Constancy of Purpose
- Think Systemically

Supporting Principles:

- See Reality
- Focus on Long-term
- Align Systems
- Align Strategy

The following is a list of systems and activities that support the principles in the dimension. This is not intended to be a check list, nor does it include all possibilities. Not all will be present in every organization, and organizations may have others not listed here, these are simply examples:

- A system for creating reporting requirements based on lean principles and policy deployment;
- Common management and reporting systems across the enterprise, with some allowances for local variations;
- A financial reporting system embraces lean accounting practices;
- Continuous flow and eliminating waste in the entire enterprise;
- Simple and visual information systems;
- Scientific thinking as a philosophy;
- A planning system for establishing and deploying vision, mission, values, strategies, and goals

(e.g., policy deployment, management by objective, etc.);

- A system for aligning objectives and projects with multi-lateral discussion;
- Assessment system to check reality;
- A system to align tools, systems, and principles to values, mission, and vision;
- A daily management system;
- The development and widespread communication of well-aligned vision, mission, and values statements consistent with lean principles that make sense relative to stakeholder requirements;
- Use of voice of the customer in forming organizational strategy and a system to ensure all business processes are aligned in the pursuit of that strategy (e.g., policy deployment);
- The use of a business assessment system that evaluates all aspects of performance, not just financials (e.g. balanced scorecard);
- Systems to develop and sustain ethical behavior in organizational governance, management, and fiscal accountability;

The use of knowledge management systems and active information and idea sharing at all levels of the company and across the greater enterprise; and Proactive relationships with key stakeholders such as stockholders, employees, governments, communities, and educational institutions.



Dimension 4 – Results (250 Points)

Principle:

- Create Value for the Customer

Supporting Principles:

- Measures that Matters
- Align Behavior with Performance
- Identify Cause & Effect Relationships

The following is a list of systems and activities that support the principles in the dimension. This is not intended to be a check list, nor does it include all possibilities. Not all will be present in every organization, and organizations may have others not listed here, these are simply examples:

- Benchmarking for excellence and a clear understanding of world-class performance,
- Understanding what moves the dial,
- Creating measures that stimulate improvement, and
- Measures reporting system.

/// 4.A QUALITY

Measures that could be provided are:

- Internal quality – quality within the plant,
- Quality to the customer – quality received by customers,
- Designs that meet customer needs,
- Conformance to clearly communicated expectations,
- Ultimate customer satisfaction,
- Finished product first-pass yield and/or rework,
- Unplanned scrap rate,
- Overall cost of quality,
- Process variation measures,
- Warranty cost, and
- Other appropriate measures.

/// 4.B COST/PRODUCTIVITY

Measures that could be provided are:

- Labor Productivity – organizational physical or financial output as compared to labor quantity;
- Asset Productivity – organizational output compared to value of physical assets employed;

- Inventory Turns – organizational raw, working, and finished inventories compared to relevant total cost or revenue;
- Cost structure – reduction in key cost categories;
- Materials;
- Key value stream margins;
- Energy productivity – physical or financial output compared to energy cost or quantity;
- Resource utilization (floor space, vehicles, etc.);
- Maintenance profiles (% preventive for example); and
- Other appropriate measures.

⌘ 4.C DELIVERY

Measures that could be provided are:

- Total Lead Time – the time from customer order to customer receipt (assuming no finished goods inventory);
- On-Time Delivery;
- Time from or to supplier to receipt of materials;
- Customer awards, audits, and surveys;
- Processing cycle time (into manufacturing to out-of manufacturing);
- Premium Freight as percent of production costs;
- Mis-shipments;
- Warranty response and service;
- Reorder rate;
- Field Performance data;
- Backorder data;
- System availability; and
- Other appropriate measures.

⌘ 4.D CUSTOMER SATISFACTION

Measures that could be provided are:

- Market share,
- Customer Satisfaction – external and internal,
- Lead time,
- Flexibility,
- Ease of doing business,
- Linked and synchronized processes,
- Customer survey results,
- Customer awards,
- Customer audits, and
- Other appropriate measures.

⌘ 4.E MORALE

This section will look at behavior as it relates to measures:

- Employee survey,
- Participation in activities,
- Number of ideas per employee,
- Grievances,
- Exit interview data, and
- Referrals for work.

Assessment and Scoring

Assessment Areas

Behavior – Assessment Scale

Results – Assessment Scale

The intent of the assessment is to evaluate the entire applying entity to determine the degree to which the organization is aligned with the principles of operational excellence represented in the Shingo model. The assessment evaluates results as well as behavior. Each business process will be assessed to the entire model (i.e. to all dimensions and principles therein) with primary focus given to particular dimensions and principles of the model as indicated below by weights. Each dimension of the model will score a level of maturity on a scale from one to five. There are weights assigned to each business process and dimension of the model. The assessment will provide a gap analysis that can be used to focus improvement activities. It will provide a baseline of cultural reality that will enable an organization to move forward on its journey toward operational excellence.

The following illustration is representative of processes that are assessed and the dimensions of the model that they are assessed to:

Assessment Areas

Senior Leadership	Customer Relations	Product/Service Development	Operations	Supply	Management Support Processes
-------------------	--------------------	-----------------------------	------------	--------	------------------------------

BUSINESS PROCESSES

Cultural Enablers (150 pts.)	<i>People Development-Education Training & Coaching (50 pts.)</i>						
	<i>People Development-Empowerment & Involvement (50 pts.)</i>						
	<i>People Development-Environmental & Safety Systems (50 pts.)</i>						
	<i>Weight</i>	33%	<i>Weighting in this dimension for the five business processes is determined by the percentage of total associates in each area multiplied by 67%</i>				
Continuous Improvement (400 pts.)	<i>Continuous Improvement</i>						
	<i>Weight</i>	6%	13%	6%	43%	13%	19%
Enterprise Alignment (200 pts.)	<i>Enterprise Alignment</i>						
	<i>Weight</i>	60%	8%	8%	8%	8%	8%
Results (250 pts.)	<i>Quality</i>	Measures (50 pts.)					
	<i>Cost/Productivity</i>	Measures (50 pts.)					
	<i>Delivery</i>	Measures (50 pts.)					
	<i>Customer Satisfaction</i>	Measures (50 pts.)					
	<i>Morale</i>	Measures (50 pts.)					

Behavior – Assessment Scale

Senior leadership at the applying entity and the associates in each business process will be assessed to determine the degree to which their behaviors are in alignment with the principles of operational excellence. Are the leaders, managers, and employees doing things that will result in the desired culture? Examiners will be looking for behaviors and other indicators that define and describe the culture of the organization. The difference between the current culture and the ideal culture is the gap that is identified for improvement focus.

Understanding the principles, throughout the organization, establishing and executing systems that support these principles, and selecting and utilizing appropriate tools and techniques guide an organization to achieve its business plans and goals. Scoring is based on examiners observations as they assess the facility. Examiners are trained to look for behaviors and performance. Behaviors and performance are taken into account in the scoring.

ARTICULATING BEHAVIOR

FREQUENCY – How often do we see the behavior?

DURATION – Are we seeing the behavior for the first time or have we seen this behavior for years?

INTENSITY – Is there a sense of passion and importance for the behavior (i.e. to deviate would signal problems)?

SCOPE – Do we see the behavior in just a few cells/areas or is it widespread throughout the organization?

The following list of descriptors is the basis for assessing Cultural Enablers, Continuous Process Improvement, and Enterprise Alignment.

Statement of Purpose: The purpose of our assessment is to determine the degree to which the behaviors in an organization are aligned with the principles of operational excellence. Ideal behavior (Level 5) is represented as the standard for operational excellence.

Business processes which fully match the descriptors would score at the top of the indicated range.

Behavior Assessment Scale

Operational Excellence (Standard)

Lenses	Level 1 0-20%	Level 2 21-40%	Level 3 41-60%	Level 4 61-80%	Level 5 81-100%
Organizational behaviors relative to the standard of Operational Excellence	Leadership focused mostly on <i>fire-fighting</i> and largely <i>absent</i> from improvement efforts	Leadership <i>aware</i> of other's initiatives to improve but largely <i>uninvolved</i>	Leadership <i>sets direction for improvement</i> and <i>supports</i> efforts of others	Leadership <i>involved in improvement</i> efforts and <i>supports the alignment</i> of principles of Operational Excellence with systems	Leadership focused on <i>ensuring the principles</i> of Operational Excellence are driven deeply into the culture and regularly <i>assessed for improvement</i>
	Management orientation toward <i>getting results "at all costs"</i>	Managers mostly look to <i>specialists</i> to create improvement through <i>project orientation</i>	Leaders and managers involved in <i>developing systems</i> and helping others to <i>use tools</i> effectively	Managers focus on driving <i>behaviors</i> through the design of <i>systems</i>	Management primarily focused on continuously improving systems to drive behavior more closely aligned with principles of operational excellence
	Associates focus on <i>doing their jobs</i> and are largely treated like an <i>expense</i>	Associates <i>occasionally</i> asked to <i>participate</i> on an improvement team usually led by someone <i>outside</i> their natural <i>work team</i>	Associates trained and <i>participate</i> in improvement <i>projects</i>	Associates involved <i>every day</i> in using <i>tools</i> to drive continuous improvement in their own areas of responsibility	Associates understand <i>principles</i> "the why" behind the tools and are <i>leaders for improving</i> not only their own <i>work systems</i> but also others within their <i>value stream</i>
	Effective measures largely <i>missing</i> or driving <i>inappropriate</i> behaviors	Measures primarily focused on business <i>results</i>	Measures begin to communicate " <i>cause and effect</i> " for associates responsible for value creation	Scorecard has broad range of <i>performance metrics</i> and begins to include <i>behavioral elements</i>	Balanced scorecard includes both business <i>results</i> and <i>behaviors</i> relative to guiding principles
Frequency	<i>Infrequent</i> <i>Rare</i>	<i>Event based</i> <i>Irregular</i>	<i>Frequent</i> <i>Common</i>	<i>Consistent</i> <i>Predominant</i>	<i>Constant</i> <i>Uniform</i>
Duration	<i>Initiated</i> <i>Undeveloped</i>	<i>Experimental</i> <i>Formative</i>	<i>Repeatable</i> <i>Predictable</i>	<i>Established</i> <i>Stable</i>	<i>Culturally ingrained</i> <i>Mature</i>
Intensity	<i>Apathetic</i> <i>Indifferent</i>	<i>Apparent</i> <i>Individual Commitment</i>	<i>Moderate</i> <i>Local commitment</i>	<i>Persistent</i> <i>Wide commitment</i>	<i>Tenacious</i> <i>Full commitment</i>
Scope	<i>Isolated</i> <i>Point solution</i>	<i>Silos</i> <i>Internal value stream</i>	<i>Predominantly operations</i> <i>Functional value stream</i>	<i>Multiple business processes</i> <i>Integrated value stream</i>	<i>Enterprise-wide</i> <i>Extended Value Stream</i>

Results – Assessment Scale

The following list of descriptors is the basis for assessing Results.

Business processes which fully match the descriptors would score at the top of the indicated range.

Results Assessment Scale

Lenses	Level 1 0-20%	Level 2 21-40%	Level 3 41-60%	Level 4 61-80%	Level 5 81-100%
Stability	<p>Little to no evidence of stability</p> <p>Little to no predictability</p> <p>Beginning to implement</p> <p>Unpredictable</p> <p>0-1 years</p>		<p>Has begun to stabilize</p> <p>Initiating predictability</p> <p>Building maturity</p> <p>All levels have become comfortable with the measures</p> <p>2-3 years</p>		<p>Stable</p> <p>Predictable</p> <p>Long-term</p> <p>Mature</p> <p>4+years</p>
Trend/Level	<p>Level is low</p> <p>Trend is poor</p> <p>Little to no evidence of goals</p> <p>Little evidence to no evidence of benchmarking</p>		<p>Moderate improvement in level</p> <p>Benchmarking is industry-focused</p> <p>Trends are mostly positive to flat with some backsliding</p>		<p>High level of attainment considered world-class</p> <p>Benchmarks constantly raise the bar and are a function of process not industry</p> <p>Positive trend with very few anomalies to explain</p> <p>Trend is well above expectations</p>
Alignment	<p>Isolated with inconsistent usage of measures</p> <p>Little alignment</p> <p>Strong silos</p>		<p>Some areas aligned, other than operations</p> <p>Performance measures aligned in operations</p> <p>Silos are beginning to fall</p> <p>Working toward enterprise-wide alignment</p>		<p>All measures align to corporate goals and down to the lowest level</p> <p>Enterprise-wide extended value stream</p> <p>No silos</p>
Improvement	<p>Little to no systematic feedback</p> <p>Sporadic feedback</p> <p>Little evidence of goal setting some evidence in operations</p>		<p>Regular feedback in some areas</p> <p>All areas do not address feedback systematically</p> <p>Many areas beyond operations have a process to set goals</p>		<p>Routine feedback to appropriate party</p> <p>Evidence of feedback in all areas</p> <p>Almost all areas have goals that are realistic and challenging</p>



Application Guidelines

Application Process

Application Process

We have developed a three-tier award to enable organizations to challenge early on in their transformation journey using the Shingo assessment process to benchmark and improve their organizations along the way. The Shingo assessment provides valuable feedback from an impartial third party that when utilized can help to accelerate the transformation process. Awards can be achieved at three levels: the Shingo Bronze Medallion, the Shingo Silver Medallion, and The Shingo Prize. We encourage organizations to take the opportunity to contact The Shingo Prize office well in advance of the date they plan to apply. This enables us to help with the process, answer questions, and provide training. And, applying early leaves ample time to execute a plan for the application process and to budget appropriately.

Because the Shingo model focuses on cultural transformation, we strongly recommend as many associates as possible go through the following training programs before an organization applies. These workshops are available to the public, or for maximum effectiveness and participation, the workshop can be delivered on-site at your facility. These workshops have been critical for providing a common understanding of the Shingo model and the assessment process. The training workshops are described below:

/// SHINGO PRINCIPLES OF OPERATIONAL EXCELLENCE WORKSHOP

Workshop participants will gain an understanding of the Shingo model and the underlying principles behind The Shingo Prize philosophy and approach. You will learn and gain experience in aligning principles of operational excellence and core values with your systems. There will be group activities

that help develop skills in assessing alignment, and also how to address misalignments by embedding your principles of operational excellence into the work and management systems of your organization.

SHINGO PRINCIPLE-BASED ASSESSMENT WORKSHOP

This workshop reviews the Shingo model and the underlying principles behind The Shingo Prize philosophy and approach. It is designed to provide participants with an in-depth look at the transformation process and the various business processes that are presented in the model, and to gain an understanding of the exact process our examiner team will use in assessing your organization. In addition, participants will develop a comprehensive working knowledge of The Shingo Prize guidelines, which includes the criteria and methods for assessment of the progress an organization has made in its lean transformation. By completing this training, participants will learn how to use the Shingo model and guidelines to complete internal self-assessments that will clearly identify areas for focus and improvement in the entire organization.

For detailed information on these workshops and other available training opportunities, please visit our website at www.ShingoPrize.org or call our office at (435)797-2279.

Although we will make every attempt to accommodate other languages when possible, the official language of The Shingo Prize is English. This means all training, materials, feedback, and communications are performed in English.

ELIGIBILITY REQUIREMENTS

An entity interested in challenging for The Shingo Prize must meet the following eligibility requirements:

- Applying entities may be from any industry including, but not limited to, services, manufacturing, healthcare, and the public sector. An entity should have common ownership throughout the application, e.g. a manufacturer and supplier, not operated or owned by the same company, should each apply as a separate entity.
- An entity should be in business long enough to establish stability.
- An applying entity may not be in bankruptcy proceedings, or knowingly considering such.
- An applying entity may not be under investigation by any government or private entity for malfeasance.
- An applying entity must be able to show measures that are specific to the applying entity (divisional or corporate metrics are not sufficient). In general a minimum of three full years is required. Most measures should show trends and levels and be tied to improvements. Examiners will be evaluating level, trend, and the correlation between improvement activities and the reported results. It is expected that lean initiatives will have an impact on the bottom line. Keep in mind that the Shingo assessment evaluates the entire applying entity to the model as detailed below. If documentation of three full years of measures is an issue it should be discussed with The Shingo Prize office before preparing the achievement report. Further explanation of measures is provided below in Dimension Four – Results.
- An applying entity may be eligible to challenge as a large or small organization. Achievement qualifications are the same for each, and since organizations are not competing against each other, reference to an organizations size is useful only for purpose of pricing and planning for examination teams. Small organizations are defined as independent entities with fewer than 250 full-time equivalent employees and not part of or owned by a larger organization. All Public Sector or government applications are considered large organizations. Large organizations may challenge for a Shingo Award according to the following provisions:
 - ▶ Separate organizational units of a large organization may apply individually.
 - ▶ Multiple entities within one company, subsidiary, business unit, or division may apply individually in the same year. Each will be considered a large organization application.
 - ▶ **A large enterprise may need to be broken up into smaller value streams for the assessment process. This may result in multiple site visits. It is also possible that the assessment process will take an extended period**

of time to complete depending on size and scope of the enterprise. The details need to be discussed and agreed to before the application process begins.

Questions regarding eligibility must be clarified through The Shingo Prize office during the application process, prior to writing and submitting the achievement report. The application and profile sheets help to evaluate eligibility.

/// RE-APPLICATIONS

Re-applications are encouraged for the following circumstances:

- No recipient status was awarded on the last application;
- Bronze or Silver Medallion status was awarded on the last application and the entity wishes to attempt to advance its status (in general it will take at least two full years of intense focus and commitment between challenges to show the improvements necessary to advance); or
- The Shingo Prize was awarded and the entity is ready to renew its award status which expires after five years for The Shingo Prize recipients and three years for Bronze and Silver Medallion recipients.
- We encourage recipients at all levels to submit measures annually. This allows us to provide key anonymous information to our database of applicants to be used for encouragement, research, and potential benchmarking. We will request these key measures to be updated once a year.

Re-applications must relate to substantially the same entity as the original application. A new application and achievement report must be submitted. Please use the re-application form that is available at www.ShingoPrize.org.

/// WHERE TO APPLY

Please send all correspondence to the following address:

Utah State University
The Shingo Prize
3521 Old Main Hill
Logan, UT 84322-3521

Applications, profile sheets, and other documents must be e-mailed to shaun.barker@usu.edu and ha.chau@usu.edu. Please contact Shaun Barker with any questions you may have by phone at (435) 797-3815 or via e-mail at shaun.barker@usu.edu.

/// APPLICATION FORMS AND PROFILE SHEETS

An application form and profile sheet should be sent to The Shingo Prize office as soon as an applicant decides to pursue an award at any level, even if the intended achievement report submission date is up to one year out. The intent of the application is to help us plan our workload and assist the applicant through a smooth process.

The application and profile sheet will be processed as received and should be approved prior to writing the achievement report. This ensures there are no eligibility issues and that we have addressed all of the applicant's questions and concerns early on. A completed and approved application form is due before the achievement report is sent. A notice of eligibility confirmation will be sent to the applying entity. Application forms should also be accompanied by information pertaining to Dimension Four – Results as described below in the “Writing the Achievement Report” section, along with a two-page (maximum) company profile sheet that is formatted according to examples provided at www.ShingoPrize.org. Please do not include any confidential or classified information in the profile sheet, as it may ultimately be posted to the Shingo website or provided to the media. All forms are available at www.ShingoPrize.org.

There are no fees due at this point in the process.

/// ACHIEVEMENT REPORTS

Achievement reports should be written after the application is approved, ensuring an applying entity is eligible to proceed. Achievement reports will be accepted any time throughout the year. Achievement reports not received in time to be processed before the Annual Shingo Prize International Conference and Awards Ceremony (usually held in March or April) will be recognized at the following Annual Shingo Prize International Conference and Awards Ceremony. If you are trying to assure recognition at a specific year's Shingo Prize International Conference, you should submit your achievement report no later than August 1.

If the achievement report is turned in after this date, we will process it as quickly as possible on a FIFO basis; it may still be processed in time for the conference, but there is no guarantee.

Applicants will be advised of an approximate process time-table based on the date the achievement report is received and that the work is in-process. If an application cannot be processed in time for the next Conference and Awards Ceremony the application will become part of the following year's applications. Please submit the achievement report early if you are concerned about a specific conference date. An application fee of \$6,000 for large organizations or \$3,000 for small organizations must be submitted with the achievement report. For payment information, please call The Shingo Prize office at (435) 797-2279.

/// SITE VISIT ASSESSMENTS

Site visit assessments will be scheduled as soon as possible after a site visit is awarded based on the achievement report review. Candidates being considered for any level of recognition through The Shingo Prize office will receive a site visit assessment by an examination team based on final review of the achievement report. An average large facility will require five to eight examiners.

Site visits will be scheduled throughout the year and are dependent on the applicant's achievement report submission date and availability of the site and examiners for an assessment. Site visits not scheduled in time to process before the Annual Shingo Prize International Conference and Awards Ceremony (usually held in March or April) will be recognized at the following Annual Shingo Prize International Conference and Awards Ceremony. The primary objective of the site visit assessment is to verify, clarify, and amplify the information contained in the achievement report. In terms of clarification, companies should be prepared to update all measures reported in their achievement report during the site visit assessment.

Applicants will be notified whether or not a site visit will be awarded approximately 30 days after the achievement report is received. Applicants awarded a site visit will be contacted to make arrangements.

All examiners are required to sign a non-disclosure agreement that is kept on file at The Shingo Prize

office. Examiners are assigned in such a manner that conflicts of interest are avoided. Each applicant will receive a list of examiners who will be involved on a site visit assessment. The applying organization will authorize all examiners that participate on the site visit assessment. Organizations that have representatives on The Shingo Prize Board of Governors or Board of Examiners are allowed to challenge, but their representative will be disqualified from participation in the assessment, review, and selection processes.

Applicants are asked not to divulge proprietary information regarding products, processes, or sensitive financial results. Our interest is in operational excellence, and we do not require this information. Please do not include any confidential information in your achievement report or other documents sent to The Shingo Prize office.

Applicants awarded a site visit are required to pay an additional site visit fee. The cost of each site visit assessment is based in part on the nature and size of the applying entity and the number of examiners needed. Fees generally average between \$10,000 and \$20,000 for a single organization utilizing four to eight site visit examiners. Small organizations may have lower fees depending on the size of the facility, the product or service, and the number of examiners needed to evaluate the facility. The invoice is for a site visit fee and will not be broken down in any more detail than the total fee. International applications will be subject to additional fees to cover additional expenses; these fees will be determined during the application eligibility process. International applications will be expected to pay the estimated site visit fee prior to the visit.

Site visit fees within North America will be invoiced and sent to the applying entity within 30 days of the site visit. Payment is due upon receipt.

/// ASSESSMENT TIMELINE

The Shingo Prize application and assessment process includes the following six steps:

- An application form and profile sheet should be sent to The Shingo Prize office as soon as an applicant has decided to pursue The Shingo Prize.
- Preferred timing: One year before intended achievement report submittal

- Achievement reports are submitted and reviewed. Achievement reports should be written according to the instructions below under the “Writing the Achievement Report” section.
- Approximate lead time for achievement report review: 30 days
- Achievement reports with appropriate recommendations from examiners will receive a site visit assessment.
- Preferred timing for a site visit: 45 to 60 days after applicant notification
- Based on the site visit assessment results, the Board of Examiners will recommend the applicant to the Executive Committee for: no award level, the Shingo Bronze Medallion, the Shingo Silver Medallion, or The Shingo Prize.
- The Executive Committee reviews the recommendations. Organizations will be notified of their status in approximately 30 days after the site visit assessment. Official recognition will be given at the Annual International Conference and Awards Ceremony. Decisions made by the committee are final and are not subject to appeal. Applicants will receive a written feedback report after status notification.
- Approximate lead time for the feedback report: 30 days
- After an award level has been determined, a recipient may invite, at the recipient’s expense, a member of the Shingo staff to present the award at a local celebration. This is best done after the public recognition occurs, but if the time between the recognition and the Shingo Conference is too great, an organization may schedule it to suit their purposes.
- All recipients from around the world will be recognized publicly at the Annual Shingo Prize International Conference and Awards Ceremony.
- The times given are approximate and are subject to change depending on many factors, including workload in The Shingo Prize office. Please do not use these times to estimate whether or not your application will be completed in time for a specific Awards Ceremony. The staff at The Shingo Prize office will advise you if timing is in

question upon your application submittal.

▮ FEES

Application and Re-application Fees

An application or re-application processing fee of \$6,000 for large organizations or \$3,000 for small organizations must be submitted with the achievement report. For payment processing information, please call The Shingo Prize office at (435) 797-2279.

Site Visit Examination Fees

Fees generally average between \$10,000 and \$20,000 for a single organization utilizing four to eight site visit examiners. Applicants will be invoiced within 30 days after the site visit. The invoice is for a site visit fee and will not be broken down in any more detail than the total fee. **International applications will be subject to additional fees; these fees will be determined during the application eligibility process and an estimated fee will be collected before a site visit occurs.**

Writing the Achievement Report

- Introduction
- Dimension 1 – Cultural Enablers
- Dimension 2 – Continuous Process Improvement
- Dimension 3 – Enterprise Alignment
- Dimension 4 – Results
- Achievement Report Format

The achievement report is the document for determining whether or not an applicant is awarded a site visit. A Shingo Prize applicant must prepare an achievement report that demonstrates how the organization has transformed its culture based on the principles of operational excellence represented in the Shingo model.

The achievement report should be written according to the following format. This format focuses on the areas of the assessment, given the most weight. Please note that if a site visit is conducted all business processes will be assessed to all dimensions of the model.

The business processes include senior leadership, customer relations, product/service development, operations, supply, and management support processes.

Introduction

A two-page introduction allows an organization to highlight some of its strengths and share a brief company overview. The company profile sheet may be used in this section, see www.ShingoPrize.org for examples. (2-page maximum)



DIMENSION 1

Dimension 1 – Cultural Enablers

In this dimension an organization should describe its cultural enablers as they relate to the Shingo model. Care should be taken to sufficiently describe how your organization's systems and practices drive principle-based behavior in each subsection. Clearly discuss examples of tools, systems, and principles in each of the subsections below. Please write this section with primary focus on the following business processes:

- Senior Leadership
 - ▶ 1.A – People Development: Education, Training & Coaching (2-page maximum)
 - ▶ 1.B – People Development: Empowerment & Involvement (2-page maximum)
 - ▶ 1.C – People Development: Environmental & Safety Systems (2-page maximum)
 - Operations
 - ▶ 1.A – People Development: Education, Training & Coaching (2-page maximum)
 - ▶ 1.B – People Development: Empowerment & Involvement (2-page maximum)
 - ▶ 1.C – People Development: Environmental & Safety Systems (2-page maximum)
- ▶ Training and employee development
 - ▶ Employee relations and satisfaction
 - ▶ Capital budgeting
 - ▶ Budgeting
 - ▶ Financial reporting
 - ▶ Management accounting reporting
 - ▶ Accounts receivable and accounts payable (A/R and A/P)
 - ▶ Asset management
 - ▶ Computer systems and support
 - ▶ Computer application design and/or support
 - ▶ Networking systems and support



Dimension 2 – Continuous Process Improvement

DIMENSION 2

Describe your organization's philosophy toward applying lean principles and concepts. At Toyota, this would be a description of the Toyota Production System. Continuous process improvement will be evaluated based upon how well your organization implements this philosophy across all the business processes.

Please write this section with primary focus on the following business processes:

- Operations (8-page maximum)
- Management Support Processes (6-page maximum) – choose three of your best management support areas to write about in the achievement report:
 - ▶ Recruiting
 - ▶ Compensation and benefits



Dimension 3 – Enterprise Alignment

DIMENSION 3

In this dimension an organization should describe its lean culture as it relates to the Shingo model. Care should be taken to sufficiently describe how your organization's systems and activities drive principle-based behavior in each business process. Clearly discuss examples of tools, systems, and principles.

Please write this section with primary focus on the following business process:

- Senior Leadership (6-page maximum)



Dimension 4 – Results

DIMENSION 4

There are five main internal measurement areas for operational excellence: quality, cost/productivity, delivery, customer satisfaction, and morale. Each of these has its own required measurement area.

Include the following items in the report:

- Describe your organization's philosophy toward creating value as it relates to the principles in the Shingo model.
- Provide the measures used in each required area below. Report anything that is used effectively to drive improvement in the organization.
- This measures section of the report should be submitted with the application and profile sheet. All categories in this section must be addressed either with a measurement and the discussion points below, or a full explanation of why a particular category is not measured.

Discussion of each measure should contain:

- A clear definition of the measure and its computation;
- The trend and level of performance in each area as compared to benchmarks or goals;
- Why the measure is the appropriate measure for that subsection or category;
- Any major technical adjustments that have been made to the measure;
- How the measure is used to stimulate improvement; and
- What key activities “move the dial” on that metric.

Please provide enough data so that an analysis of stability is possible. Provide as much data as possible especially if it is data that shows performance before lean implementation began. Provide each measure at the level of aggregation where it is most used by management (monthly at the least). It is possible that examiners may ask for a less aggregated version of specific data. Charts representing measurement and improvement are best displayed with the shortest interval possible. Averaging over months, quarters, or years may mask information that could otherwise be very useful. When data is obviously collected and used weekly, don't average it into monthly or annual figures for the purposes of this report. Please use appropriate scales. Provide the data as you would normally use it.

All measurement categories must be covered and include three years of data (12-page maximum):

- 4.A – Quality
- 4.B – Cost/Productivity
- 4.C – Delivery
- 4.D – Customer Satisfaction
- 4.E – Morale

Achievement Report Format

The achievement report should have dimensions and section labels that follow the outline above. Each dimension should address the application of principles, systems (selection, development, and effectiveness), and choice and use of tools and techniques. The required measures under Dimension Four – Results are considered essential for all organizations. An applicant should also include any measurements that assist in controlling and improving basic business processes: senior leadership, customer relations, product/service development, operations, supply, and management support processes. Applicants should explain and support their choice of measures, rather than creating new measures specifically for this assessment. It is important that all five categories of measurements are addressed. The intent of this dimension is for the applicant to provide information to the examiners about how the organization selects what to measure and how measurements are used to drive improvement. It will also show results of the lean implementation and where the applicant stands relative to best-in-class. Include information that helps examiners understand how the cause-and-effect relationship between measures and results is taught to and understood by all associates. It is important that results in the achievement report are understandable and have explanations where needed. Please refer to Dimension 4 – Results in the model and guidelines for complete details on measures.

Applicants are asked not to divulge proprietary information regarding products, processes, or sensitive financial results. Our interest is in operational excellence, and we do not require this information. Please do not include any confidential information in your achievement report or other documents sent to The Shingo Prize office.

Keep in mind that this report is being reviewed by a team of examiners from a diverse group of

industries; they are very experienced in lean but most likely are not experienced with your organization. Please do not assume that acronyms and organizational language will be understood. Flow, clarity, and conciseness of the report are important; generally, 50 pages is the maximum length. The intent of this report is to tell the examiners your lean transformation story as simply and efficiently as possible. Please make sure that if photos are included in the report they are high impact, legible, and of good quality.

The achievement report is about the applying entity, not the overall organization. **Please limit references to the overall organization to areas that are applicable and critical** (i.e. if you are trying to show alignment of strategy or constancy of purpose). Measures should be specific to the applying entity. **Reports with excessive reference to the overall organization may be returned to the applicant. Examiners cannot evaluate an applicant based on information about an entire organization when the applying entity is really a sub-set.**

The achievement report should include, in the first pages before the table of contents, a copy of the application form.

The report must be printed on 8½ x 11-inch paper using a fixed-pitch font of 11 characters per inch. Sheets should be double-sided, single spaced. The report is generally limited to a maximum length of 50 printed pages. The report should be coil bound.

CONTACT INFORMATION

The Shingo Prize for Operational Excellence
Jon M. Huntsman School of Business

Utah State University
3521 Old Main Hill
Logan, UT 84322-3521
(435) 797-2279
(435) 797-3440 FAX
www.ShingoPrize.org

For questions or comments contact:

Shaun D. Barker
Associate Director
shaun.barker@usu.edu

Application forms are available online at www.ShingoPrize.org



THE SHINGO PRIZE
for OPERATIONAL EXCELLENCE