THE SHINGO PRIZE
for OPERATIONAL EXCELLENCE

MODEL
APPLICATION GUIDELINES

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TRANSFORMATION MODEL

1. Cultural Enablers
   - Respect for the Individual Humility

2. Continuous Process Improvement
   - Flow/Pull
   - Process Focus
   - Scientific Thinking
   - Integration of Improvement with Work
   - Seek Perfection

3. Consistent Lean Enterprise Culture
   - Systemic Thinking
   - Consistency of Purpose

   3.1 Enterprise Thinking
   3.2 Policy Deployment

4. Business Results
   - Create Value
   - 4.1 People Development
   - 4.2 Quality
   - 4.3 Delivery
   - 4.4 Cost
   - 4.5 Financial Impact
   - 4.6 Competitive Impact

LEVELS OF TRANSFORMATION

- **PRINCIPLE-DRIVEN**: Embedding principles into culture
- **SYSTEM-DRIVEN**: Structuring tools into a systems context
- **TOOL-DRIVEN**: Using specific methods to create point solutions
The Shingo Prize Model is based on the lean management approach and model taught by Dr. Shigeo Shingo. 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 refer to as levels of transformation: Principles, Systems, and Tools & Techniques. 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.

As organizations begin a lean transformation, it is usually at the Tools & Techniques level in specific areas of the organization. Ideally, the lean journey then proceeds to the Systems level, creating a more integrated and sustained improvement model. Eventually all employees throughout all business processes develop a deeper understanding of Principles (the ‘know why’), empowering the organization to develop and deploy specific methodologies and practices unique to the organization.

The Shingo Prize Model is a pictorial representation of how a company progresses along a lean transformation journey. It is designed to help managers identify where their company is on the lean journey, and to assess the breadth and depth of lean implementation already in place within the organization. The model is composed of four dimensions: Cultural Enablers, Continuous Process Improvement, Consistent Lean Enterprise Culture, and Business Results, to which all lean transformation must lead. Within these dimensions, organizations are also adapting and moving through the levels of transformation. Lastly, the dimensions overlay five business processes — Product/Service Development, Customer Relations, Operations, Supply, and Management — categories defined to cover all activities that take place within an organization, regardless of industry.

The Shingo Prize Model is an engine for transformation that speeds an organization through the challenges toward the real prize — exceptional business results and customer satisfaction. Managers should use The Shingo Prize Model to assess lean understanding throughout their organization’s business processes and to drive lean transformation. When evaluating an organization, note that application of the model — like real transformation — is not a sequential, well-cadenced progression throughout a company. The dimensions are not meant as separate and successive achievements of progression. For example, the Shingo levels of transformation can vary within a dimension or business process, and, further still, some aspects of a business process might be developed to an Enabler dimension while others operate at a more advanced Process-Focused Improvement dimension. Similarly, business processes will move through dimensions at varying rates (e.g., in manufacturing companies it’s not unusual to see Operations leading the lean charge, well ahead of other non-production functions). And while we attempt to place specific practices and concepts within the dimensions, there is obviously some overlap in their use and applicability throughout dimensions (e.g., scientific thinking).

While progress for companies working through The Shingo Prize Model varies, the ultimate goal is clear: integration of lean philosophy across the enterprise and its value streams to create a complete, systemic view, leading to consistent achievement of business results. Consequently, a Shingo Prize recipient is expected to have applied lean Principles — the highest level — in most aspects of all of its business processes: Product/Service Development, Customer Relations, Operations, Supply, and Management.

The Shingo Prize Model is meant to be flexible so that it can be applied to organizations in:

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

Because of this flexibility, some aspects of the model may be more applicable to an organization than others. For example, a plant without on-site product development processes will assess the practices and performances of this function differently than would an entire company complete with research and development and new product development activities.

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CULTURAL ENABLERS

LEAN DIMENSIONS IN RELATION TO SHINGO LEVELS OF TRANSFORMATION

The following pages provide an understanding of each dimension in The Shingo Prize Model as it relates to Shingo’s levels of transformation. Within all the dimensions, organizations will find themselves at various levels of transformation. The following descriptions of dimensions are intended to help managers by:

- Providing a deeper understanding of what each dimension in the model represents;
- Defining what it means to progress through each individual dimension, with respect to Shingo levels (Tools & Techniques, Systems, Principles); and
- Enabling organizational assessment along the lean transformation journey.

DIMENSION 1 — CULTURAL ENABLERS

Cultural Enablers make it possible for an organization to start the lean transformation journey, progress in their understanding, and ultimately convert to a lean culture. There are four primary Cultural Enablers:

- **Leadership** ensures the organization has a visionary management team willing to champion and sustain the concept throughout the journey.
- **People development** creates “new scientists” throughout the organization.
- **Empowerment** allows the company to capitalize on the growing understanding accomplished through education and training. And since “doing” is a form of learning, as employees carry out improvement projects they learn more thoroughly about the value and application of lean concepts, embedding the lean philosophy more deeply into the organization’s culture.
- **Environmental & Safety Systems** must be the basis of work and epitomize respect for the individual and individuals (community).

Lean transformation cannot be accomplished through top-down directives or piecemeal implementation of tools. It requires a widespread commitment throughout the organization to operate using lean Principles. Management must also demonstrate a high level of respect for the individual, which is encompassed in the Enabler dimension. Respect for the individual is a principle that drives education and development of people, creating the impetus for empowered associates to improve the processes that they “own.” There is also a need for humility on the part of all members of an organization. Humility is a principle that precedes learning.

**Respect for the Individual**

Respect for the individual naturally evolves into respect for the community. Individuals — customers, suppliers, employees, or members of the community — 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.

**Humility**

One common trait among all students of lean is a sense of humility. Ideas can come from anywhere. One can learn something new from anyone else. Management accepts that all workers develop expertise that is valuable in identifying problems and improving processes.

An organization has reached Shingo’s Principles level of understanding with regard to Enablers when:

- The improvement program becomes employee-driven rather than management-driven,
- Lean concepts are applied in innovative ways outside the context in which they were conceived, and
- Improvements are made with the impact on all stakeholders in mind.
1.1 CULTURAL ENabler — LEADERSHIP & ETHiCS

The lean journey typically begins with an enlightened leader who decides to champion lean concepts and pushes the organization to adopt lean practices. At the Tools & Techniques level of understanding, this leader is associated with a single business process. The leader in this area will begin utilizing basic lean techniques, usually with a narrowly focused event (e.g., 5S, value-stream mapping, kaizen event). As progress is made within this first business process, it becomes apparent that further improvements can only be made in concert with other processes.

At the threshold where lean progress requires the participation of other processes, point leaders in the other business processes are identified and lean spreads. Once the organization has developed leaders in all the business processes, a system to ensure the integration of and collaboration among, these processes exists.

As the organization’s leaders mature with respect to lean, they acquire a higher level of respect for the individual, recognizing that processes (not just people) determine the quality of the organization’s outputs. Leadership invests heavily in employee development and encourages workers to take ownership of both processes and the improvement program itself. Consequently, employees begin to drive the improvement process and view this aspect of their work — developing better work activities — as part of their jobs. The Leadership enabler has reached the Principles level when the term “leadership” itself becomes an oxymoron. Everyone in the organization is a leader with regard to eliminating waste, adding value, and process improvement.

1.2 CULTURAL ENabler — PEOPLE DEVELOPMENT

People Development has emerged as one of the most important and powerful cultural enablers. The appropriate culture for lean transformation is dictated by respect for the individual and hence includes education, training, and coaching; empowerment and involvement; and environmental and safety systems. People Development goes hand-in-hand with Leadership and Ethics in developing a culture in which lean principles can be taught and practiced.

1.2.1 CULTURAL ENabler — EDUCATION, TRAINING, & COACHING

An organization’s leaders must be committed to developing people and disseminating the lean knowledge base. At the Tools & Techniques level of understanding, this commitment may take the form of specific training on lean philosophies, such as waste elimination and the tools associated with waste elimination. As the organization matures, effective systems are developed to ensure that opportunities for education are offered to and required of everyone in the organization. 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.

As an organization progresses to the Principles level, people development becomes integrated with carrying out the work on a daily basis. The lean philosophies themselves are so well understood that they become the underlying guides behind regular experimentation with work processes. The evolution and development of further improvement concepts, as well as improvement in actual work processes, are guided by these experiments. At this point, People Development has evolved to capture the lessons learned from these experiments and disseminate them throughout the organization and beyond. In addition, the program also has mechanisms to ensure that any improvements are sustained. Through People Development, the organization creates the “new scientists” that will drive the future continuous improvement.
1.2.2 CULTURAL ENABLER — EMPOWERMENT & INVOLVEMENT

Empowerment & Involvement ensure that an organization is fully capitalizing on the knowledge base it has developed through the People Development enabler. Without empowerment and involvement, the value of training investments is limited. When improvement efforts are limited to management and a few key personnel, opportunities are limited.

Empowering employees allows ownership of the lean transformation to disperse throughout the entire workforce, allowing the organization’s culture to become dedicated to the principles of lean and continuous improvement. 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.

1.2.3 CULTURAL ENABLER — ENVIRONMENTAL & SAFETY SYSTEMS

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 & Safety Systems are included under leadership because this enabler embodies a philosophical and cultural commitment that begins with leadership. When leadership is committed, then the organization creates and supports appropriate systems and behaviors, such as:
• Proactive systems to maintain an ergonomic, clean, and safe work environment;
• 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

The Continuous Process Improvement (CPI) dimension is based on a Tools & Techniques understanding and deployment. But maturity through this dimension to Principles is reflected in the depth of organizational transformation through each tool or practice for driving continuous improvement.

2.1 CONTINUOUS PROCESS IMPROVEMENT — LEAN PRINCIPLES

A business process focus brings clarity to the continuous improvement methodology. Continuous Process Improvement begins with easy-to-understand and implement Lean Concepts at the activity or event level within processes. The concepts are educational in that they teach users over time to move from their basic application (concepts as Tools & Techniques) to the Systems aspects of lean, especially those necessary for sustaining improvement. Over time the power of these Lean Concepts are fully realized as Principles.

Described here at the highest Principle level, the Lean Concepts are so closely linked that any attempt to transform an organization by isolating one from the others will substantially limit the results. These concepts must be viewed as integral pieces of the system of continuous process improvement.

Business Process Focus

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 naturally leads to flow thinking. Flow — producing one item or performing one service component a step at a time and in a series of continuous steps flowing toward the customer (rather than batching products or service steps) — 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. In order to achieve flow, process fluctuations must be stabilized, work standardized, and overburden and safety concerns eliminated. Product flowing through the process must be compliant with specifications, with errors or non-conformances quickly identified and eliminated.
A focus on process lends itself to scientific thinking — a natural method for learning and the most effective approach to improvement. All workers 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.

Scientific thinking is mentioned here and elsewhere in The Shingo Prize Model because it is critical to lean transformation and touches so many aspects of the transformation. Regarding business process focus, scientific thinking is embodied by workers using basic concepts (Tool level) and then spending time reflecting on the experience, gradually beginning to see and think differently. Eventually they build consistent Systems of application, reflection, and learning, which in turn produce increasingly better results. Finally they think differently — they know no other way to approach problems, projects, or opportunities with business processes — and have achieved a Principles level of understanding. Scientific thinking is the system that makes Continuous Process Improvement part of daily work.

Flow and Pull

Flow and pull create enormous positive benefits in all operations. Pull is the concept of matching the rate of production to the level of demand, the goal in any service environment. Yet pull is not feasible or cost-effective without the flexibility and short lead times that result from flow, which removes all barriers (waste) that impede the creation of value throughout the value stream. Flow and pull require:

**Stability and Standardization**

Stability and standardization create a foundation of consistency and repeatability, which provides a basis for problem identification, continuous improvement, and predictable results. While stability is a necessary precondition for creating flow and improvement, standardization builds control into the process itself, eliminating the need to control operations through cost standards, production targets, or other traditional supervisory methods.

**No Defects Passed Forward**

Jidoka is commonly described as intelligent automation. In the Shingo Model, it is viewed more broadly as the intelligent use of technology and information systems. It is the combination of three principles: (1) do not pass defects forward, (2) stop and fix problems, and (3) respect for the individual. Defects are a source of instability and waste, so jidoka requires the establishment of processes for recognizing errors in the process itself. This may be accomplished by simple visual or physical checks that are part of the process (i.e., poka yoke). However, given today’s technologies, it also can be an intelligent machine that recognizes when the quality is compromised and either stops or fixes 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.

**Continuous Improvement Focused on Flow of Value**

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. By combining employees’ use of scientific thinking with empowerment and involvement, the organization will appropriately leverage the improvement capability of management and engineering, with value clearly defined at every step of the process.

As employees 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. In addition, we must also understand that non-financial outcomes will

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Continuous Process Improvement

over time become financial outcomes, thus, requiring a healthy balance of improvement across both financial and non-financial outcomes. Non-financial outcomes are really a misnomer; too often, we simply fail to translate and explain the anticipated outcomes in financial terms (e.g., many organizations could not financially justify investments and expenses associated with protecting the environment, but now face enormous clean-up expenditures; most organizations do not capture the cost of delayed quality feedback or delayed introduction of new product features which results from excessive inventory).

Continuous Improvement Focused on Flow of Value requires both scientific thinking and the capacity to identify and eliminate waste:

Scientific Thinking

Scientific thinking is the natural method for learning and problem solving, acknowledging that we learn by doing. It also affirms that we improve by doing, not just analyzing and planning. 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:

- Clear understanding of the current situation;
- Well-defined future state or objective, closely linked to customer needs;
- Data collection and reporting that supports process improvement and the elimination of waste;
- Use of systematic methods to identify root causes;
- Experimentation;
- Timely measurement of the effectiveness of improvements;
- Reflection and adjustment; and
- Incorporation of changes into standardized work;

It is valuable for organizations to establish systems and culture for applying scientific thinking to solve problems and create continuous improvement and learning. This may include company-wide tracking of process improvement — in the eyes of internal and external customers and what they perceive as value.

Identify and Eliminate Waste

Because identification and elimination of waste is a primary approach to making processes flow, it necessarily becomes the primary focus of continuous improvement. It is a powerful guiding 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 sophisticated metrics.

Some wastes can be easily eliminated by application of tools and techniques at their most basic levels. For example, reducing production lot sizes and keeping production matched to demand will immediately lower inventories, reduce space requirements, create more connection in the process, etc. However, to get at subtler, more stubborn wastes, the tools and techniques must be applied with a systemic approach and an understanding of all the underlying principles.

Integration of Improvement with Work

Continuous Process Improvement does not — cannot — occur by sticking with traditional management and engineering approaches. The Lean Concepts necessary for transformation have become increasingly common in the language of many businesses and industries. To keep them from being misunderstood and poorly applied, lean concepts must migrate from a narrow Tool-level application to a deeper, ingrained Principles level understanding. For examples, see Appendix A – Examples of Lean Concepts: Levels of Transformation.

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. Workers 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.
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.

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2.2 CONTINUOUS PROCESS IMPROVEMENT — VALUE STREAMS & SUPPORT PROCESSES

A business process focus and continuous improvement principles must be applied across Value Streams & Administration Processes (i.e., the management and activities supporting value streams). The processes associated with each of five typical business areas could include:

**Customer Relations**
- Sales process,
- Advertising/promotion,
- Voice of the customer,
- Order processing and tracking,
- Responsive/flexible scheduling,
- Invoicing and collections,
- Containing cost escalation,
- Crisis planning,
- Warranty, and
- Customer service.

**Product/Service Development**
- Defining customer value;
- Market segmentation and selection;
- Product or service design;
- New product or service launch, and
- Development of products or services, processes, and prototypes.

**Operations**
- Production or service process,
- Materials,
- Process engineering,
- Maintenance,
- Quality assurance and reliability, and
- Testing.

**Supply**
- Supplier selection and qualification,
- Supplier development and partnering,
- Procurement process, and
- Logistics.

**Management**
- 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,
- Computer application design and/or support, and
- Networking systems and support.

Many, if not all, of these administration processes are fundamentally non-value added in a pure lean sense. However, much like “necessary work” that is neither waste nor value-added, these are 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 lean concepts 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.

Continuous process improvement concepts should be applied conscientiously in all of these value stream and support processes. As understanding deepens to the principle level and application broadens throughout all of the business processes, a consistent lean culture develops which is self perpetuating and self directing. There are principles which underlay the development of powerful culture, which are discussed in Dimension 3.
**Lean Enterprise Culture**

**Dimension 3 — Consistent Lean Enterprise Culture**

Understanding and applying the lean principles in all business processes and at all levels of an organization is the essence of a consistent lean enterprise culture. The combination of all the principles with deepened understanding develops into systemic thinking. Systemic thinking is the principle that unifies all the other lean principles, and enables companies to sustain their lean culture and develop a constancy of purpose centered on continuous improvement.

**Systemic Thinking**

As managers move up Shingo’s levels of transformation (i.e. Tools & Techniques, Systems, Principles), they also inevitably shift their method of thinking about lean business systems. In the first two levels of transformation, focus tends to be on comprehending the tools, their specific purposes, and how they contribute to improving business performance. This is an analytical approach to thinking about lean business systems: breaking a process down into its constituent parts. It remains an essential part of understanding lean systems — but it is incomplete. Once managers begin to appreciate the Principles underlying the parts of a lean system, they begin to see the interrelationships between those parts. They 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 lean systems to thinking systemically. Systemic Thinking is comprised of three parts: Holistic Thinking, Dynamic Thinking, and Closed-Loop Thinking.

**Holistic Thinking** is about seeing the “big picture.” It requires two things. First, it requires that everyone has a common vision concerning what they are working to achieve. This vision should be on a higher level than simply performing a job well or meeting a production target. It should be something that enables the employees to truly take pride in their work. For example, one of Toyota’s visions is to be the first company to produce a car that can drive from coast to coast in the U.S. on a single tank of gas. In healthcare there is an initiative called ‘Saving 100,000 Lives’ focused on improving hospital safety. This unifying vision is part of the constancy of purpose discussed below.

The second requirement of holistic thinking is transparency across the system. This enables people working within the system to know who their upstream suppliers are as well as their downstream customers. This transparency allows all participants within the system to view the system as a whole. In turn, this enables employees to take ownership of continuous improvement by helping them to understand who and what are affected by changes in the system. Improvement experiments are then conducted on a regular basis, with work and improvement increasingly integrated.

**Dynamic Thinking** requires recognizing that all current situations are the result of interactions between parts of a system that occur over time, rather than snap-shot events. What is often perceived to be the cause of a problem, because it occurred shortly before the problem surfaced, is really a symptom of the behavior over time between key parts of the system. This recognition eventually leads managers to look at problem solving/continuous improvement as an ongoing process that never ceases. They recognize that the term “solution” is misleading, because it implies finality; in reality, actions that resolve a problem, leverage an opportunity, complete a project, or improve performance today will eventually become obsolete — or even hindrances. Steven Spears and Kent Bowen point out that within the Toyota lexicon associates talk in terms of “countermeasures” rather than “solutions” to emphasize that in a dynamic environment today’s solutions inevitably create tomorrow’s problems or opportunities. By thinking dynamically and incorporating a holistic view, the organization evolves as necessary to accommodate future conditions. Dynamic thinking also leads to the ability to recognize patterns of behavior between key variables that point to future problems enabling managers to be more proactive in their problem solving efforts.

**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. This ensures that as improvement experiments occur, information about their impact is disseminated throughout the value stream to ensure that their affects are fully understood. Individual experiments then lead to collective organizational awareness, learning, and improvement (or to feedback regarding negative consequences elsewhere in the organization).

As managers move into systemic thinking, the full value of a lean implementation is realized by spreading lean 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 management-driven to employee-driven, allowing management to devote more attention to strategy and vision.
Constancy of Purpose
The first of W. Edwards Deming’s “14 Points” is to create constancy of purpose. It is incumbent upon leadership 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. As organizations learn and grow within the principles of lean, they develop a greater appreciation for constancy of purpose. Lean teachers 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.

3.1 Lean Enterprise Culture — Enterprise Thinking
From the stakeholders’ perspectives, the full potential of lean is realized only when most critical aspects of an enterprise share a common platform of lean principles, management systems, and tools. While it is expected that organizations develop some unique elements of their local culture, it is also expected that lean 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.

Typical top-level leadership roles that lend themselves to lean application include:

**Financial and Other Reporting**
Reporting requirements should be based on lean principles and policy deployment models agreed to with the operating units. Financial reporting must comply with regulatory standards but also strive to embrace lean accounting practices. As such the reporting system should strive to accurately capture the costs generated within the value stream only requiring that which adds value and directly contributes to the goals of the enterprise while actively discouraging game playing on paper to look good.

**Business Development & Organization Design and Development**
As enterprise decisions are made related to the delivery of products and services in the operating units, consideration should be given to creating continuous flow and eliminating waste in the entire system. This includes decisions such as building capabilities, capacity planning at each facility, and the rationalization of products and services in a way that supports customer requirements and principles of lean.

**Information Management**
Information systems in a lean environment should become more visual and simple. The development of common systems at the enterprise level that have lean principles, systems, and tools embedded in them, will lead to better standard work, more consistent results, and a common customer experience across the enterprise. In addition, firms should start tracking the interaction between key variables in an effort to understand how changes in one variable affect others and the time lags between cause and effect. This can be done by developing Behavior Over Time Graphs which plot two to four key performance variables on one graph in order to show how they are changing over time and in reaction to changes within the system.

**Leadership Development**
Enterprise leaders define the attributes they seek to develop in their next generation leadership and reinforce these attributes not only through their examples but also through the processes they put in place that provide developmental opportunities. It is expected that part of the development of leaders includes demonstrated experience working with continuous improvement concepts and the leadership of multiple improvement projects. In addition, lean leadership attributes should include: respect for people, long-term thinking, application of scientific approaches to problem solving, relentless passion for the elimination of waste, and customer focus, as well as a commitment to create flow, speed, and flexibility in all of their value streams. In addition, there is an expectation that leaders will be systemic thinkers, looking at the big picture beyond their own sphere of responsibility. Finally, new leaders should be honing the skills necessary to develop others, including coaching and careful listening.
3.2 Lean Enterprise Culture — Policy Deployment

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 techniques 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 A3 thinking and reporting helps keep everyone, literally, on the same (single) page, pointed in the same direction.

Scientific Thinking as a Philosophy

Scientific thinking is a philosophical underpinning of excellence. Continuous improvement recognizes that scientific thinking is a learning cycle. The term ‘problem solving’ may imply that after a ‘solution’ is implemented, improvement is done. Continuous improvement and scientific thinking instead seek countermeasures not game-ending solutions and then revisits the issue again and again, pursuing perfection without really expecting to find it. All members of an organization are expected to incorporate scientific thinking (and, therefore, continuous improvement) into their daily work.

Scientific Thinking as a Management Process

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’s processes. Policy deployment requires a management process built around scientific thinking, with more emphasis on cycles of learning than on perfect plans. The alignment of learning cycles throughout an organization may be achieved by a method similar to catchball (see below). Once again, A3 thinking (see below) and reporting (or something similar) is the vehicle by which communication, consensus, and accountability occur and execution and countermeasures are planned and tracked, whether through PDCA or a similar methodology.

Catchball and A3 Thinking are illustrations of how scientific thinking can be integrated into management processes.

Catchball

Catchball is a method of idea generation and sharing that mimics a child playing catch with a parent. The key principle behind the method is respect for the ideas and abilities of others. The ‘need,’ a proposed vision or direction, is expressed by the leader, and the subordinate responds with an interpretation of what that direction will mean within the subordinate’s realm of responsibility. The leader then reviews the response with humility, open to proposals or ideas previously not considered by the leader. As the ball (idea) is passed back and forth, new ideas emerge, as do consensus on the right course of action. This process exemplifies the principle-based thinking that is a hallmark of excellence.

A3 Thinking

Decentralized planning and execution are facilitated by carefully crafted single-page reports that become working discussion documents. A3 is a size of paper (approximately 11-inch by 17-inch). An A3 report may be a proposal, a plan, a status report, or the final documentation for archival and sharing. The format uses scientific thinking, but is flexible enough to accommodate unique issues and a variety of uses. A3 design guidelines include:

- Less is more,
- A picture is worth a thousand words (e.g., charts),
- Visual clarity and 5S are maintained, and
- Functionality outweighs beauty (i.e., A3s often get passed back and forth — catchball — with multiple erasures and revisions; use a pencil).

The A3 tells a compelling story then directs resources and action through action-oriented communication. A3 thinking also supports 15-minute standing meetings that get to the point and focus on results.

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6 Pascal Dennis, Getting the Right Things Done. Lean Enterprise Institute, 2006.
DIMENSION 4 — BUSINESS RESULTS

The basic principle of Dimension 4 is that businesses must flow value, with value typically defined as something for which customers are willing to pay. Therefore, the definition can include organizations in which many forms of stakeholders are willing to “pay”: investors are willing to invest, communities are willing to support, and employees are willing to invest their trust, confidence, and commitment. Lean implementations flow value to all stakeholders, improving customer satisfaction and stakeholder value, while maintaining a safe and healthy environment.

Create Value

It is important to evaluate the outcomes of Dimensions 1, 2, and 3 of The Shingo Prize Model. Scientific thinking drives continuous process improvement, flowing value to customers. This means that each component of value must be measured, interpreted, and reported at the micro level — to provide an accurate picture of the current state, to monitor process performance, and to enable continuous pursuit of the future state. Operational excellence at the micro level should create world-class results and continuous improvement in macro business outcomes, such as customer satisfaction and profitability. Without producing better bottom-line results, few organizations would be interested in implementing lean. Measurement at the macro level also helps to avoid local optimization at the expense of organization-wide results.

Measurement is vital to scientific thinking. In enterprise planning and deployment, described in Dimension 3, ‘needs’ are clearly identified and used to drive objectives; measurements should therefore be linked to these same needs, helping to quickly expose abnormalities. Measures should be chosen carefully to be consistent with lean thinking, providing critical feedback to leaders and workers. Real improvement should be reflected in a good measure, while shell-game improvements should not. In The Shingo Prize Model there is equal focus on both choice of measures and improvement in the chosen measures.

An organization should measure all aspects that Create Value, including multiple dimensions of quality, flexible responsiveness to customers, and return to stakeholders (e.g., growth, revenue, profit, safety, and environmental impact). Measures should be provided at the end of the value stream and at reasonable intervals throughout the value stream (so as to make problems visible and quickly resolvable).

4.1 BUSINESS RESULTS — PEOPLE DEVELOPMENT

Respect for the individual and employee involvement requires that an organization not only mitigate risks, but proactively protect the health and safety of its employees and the community. Ongoing improvement in the conditions of the workplace, reduced consumption of resources, and protecting the environment are all part of these values.

Categories of importance may include the following:

- Safety,
- Training,
- Voluntary involvement in continuous improvement,
- Education,
- Environmental health,
- Employee satisfaction.

4.2 BUSINESS RESULTS — QUALITY

The objective of Quality and quality improvement is to ensure that no errors — whether in the form of materials or information — are passed to a downstream process or to the external customer, and that in-process defects are continually reduced. The goals are zero defects and continually improved stability throughout the value stream. Quality measurements should be developed and regularly monitored by management in the following categories:

- 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.
### Business Results

- Unplanned scrap rate,
- Overall cost of quality,
- Process variation measures,
- Warranty cost, and
- Other appropriate measures.

### 4.3 Business Results — Delivery

The objective of delivery and service improvement — Flexible Responsiveness — is to ensure that customers are getting what they need in the time, quantity, and manner (e.g., container size, service delivery method) necessary, and that flexibility exists within the organization to adjust to changing customer needs. Measurements should be regularly monitored by management in the following categories:

Categories of importance may include the following:
- 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.

### 4.4 Business Results — Cost

There is clearly an objective of continuous improvement focused on reducing cost structure, resulting from careful changes in product and process design, and waste elimination effort. Organizations must be vigilant in assuring that “cost cutting” does not erupt into senseless elimination of essential process that support stability, standardized work, or quality, such as maintenance, critical spare parts, training, employee development, qualified materials, etc. Rather, the focus is on carefully examining customer need at the conceptual level, enabling the identification and elimination of wastes.

Categories of importance include the following:
- 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.
4.5 BUSINESS RESULTS — FINANCIAL IMPACT

Financial impact is a function of consistent, predictable growth in cash flows over time compared to risk. Growth is therefore an important measure, along with revenue, market share, cash flow, and long-term profitability. All these measures are impacted by lean: cost and productivity, for example, are tied directly to the elimination of waste. Consistency in processes leads to predictability which leads to lower perceived risks, which improves the flow of value to all stakeholders, including customers, employees, investors, and community.

Categories of importance include the following:
- Growth in revenues, physical output, or whatever is considered most representative;
- Energy;
- Profit attributable to this organization;
- Cash Flow;
- Capital Budget/expenditure trend;
- Success of new products;
- New contract awards;
- Value stream margins; and
- Other appropriate measures.

Organizations should define specific measures in each category and use them to drive achievement of financial impact.

4.6 BUSINESS RESULTS — COMPETITIVE IMPACT

Competitive impact cannot be completely measured through traditional financial measures. Many of the capabilities of formidable competitors will not show up in the financials immediately. For example, shorter lead time provides substantial competitive advantage. However, the financial impact of this advantage will not be fully realized until the organization can leverage that advantage into increased market share, higher pricing, and deeper customer partnerships. Customer satisfaction has a similar competitive impact.

Categories of importance may include the following:
- 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.

Organizations should define specific measures in each category and use them to drive achievement of Competitive Impact.
Lean 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 lean transformation in the systematic manner outlined within the Shingo Prize Model; at the other end, many more firms are haphazardly trying individual tools or techniques, failing to understand what Shingo, Toyota’s leaders, and other Lean Thought leaders really taught.

So while The Shingo Prize Model enables identification of 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 trusted lean philosophies. 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 migrate through The Shingo Prize process, expanding their lean focus to all their business processes and through all the Shingo levels 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 healthcare, efficient transportation, emerging global environmental concerns — will be beyond the reach of lean thinkers, provided those seeking to overcome obstacles truly “know why.”
# APPENDIX A

## EXAMPLES OF LEAN CONCEPTS: LEVELS OF TRANSFORMATION

<table>
<thead>
<tr>
<th>Lean Concepts</th>
<th>Tools Level</th>
<th>Systems Level</th>
<th>Principles Level</th>
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<tbody>
<tr>
<td>Kaizen</td>
<td>• Kaizen events planned by management for selected parts of the process; not tied to strategic direction.</td>
<td>• Systematic and ongoing identification and elimination of all forms of waste, variation, and overburden tied to value-stream mapping and company strategies; still management- and engineering-driven.</td>
<td>• Spontaneous continuous improvement via project, event, or a just-do-it approach; sponsored by management, engineering, work team, or worker. • Kaizen activity is part of everyday work.</td>
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<tr>
<td>5S, Workplace Visuality, and Visual Management</td>
<td>• 5S is an event-based activity that happens irregularly. It focuses on junk removal and keeping things clean. • Questions must be asked to distinguish normal from abnormal. • Visual Displays/Production Control Boards are either non-existent or superficially functional.</td>
<td>• Visual displays and Production Control Boards capture a substantial level of operational detail and feedback. • Operational employees demonstrate an understanding and use a visual vocabulary as well as the principles of workplace visuality. • Visuality is being deployed systematically, as a requirement of all improvement activity. It is understood that if a solution is not anchored in visuality, it is not yet complete. • Measures are collected and made visual on area and company wide bulletin boards, drive scientific thinking, and change in response to real-time data. • Functionality is captured through visual devices and systems.</td>
<td>• It is easy to distinguish, at-a-glance, between normal and abnormal conditions and outcomes. • Creating a visual workplace is owned as a vision, process, and an outcome by executive leadership. • Visuality is a constant, dynamic and required component of the company’s improvement, lean conversion and Total Productive Maintenance processes. • The level of current visuality demonstrates a work environment that is self-ordering, self-explaining, self-regulating, and self-improving—where what is supposed to happen, does happen, on time, every time, day or night—because of visual devices. (Definition provided by Quality Methods International)</td>
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<td>Transition from large lots toward one-piece/continuous flow</td>
<td>• Kanban implemented in limited production and supply processes, with attention to disciplined use. • Reduced production lot sizes through quick changeover (SMED)</td>
<td>• Continued reduction of kanban quantities as process instability issues are resolved.</td>
<td>• Where feasible, kanban quantities reduced to one or zero pieces—the continuous-flow ideal. • Process improvement actions initiated when kanban reductions stall.</td>
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<tr>
<td>Level loading</td>
<td>• Leveling of product volume and mix in large time buckets applied to a few sub-processes in the value stream.</td>
<td>• Leveling of product volume and mix in smaller time buckets applied to complete value streams, including suppliers.</td>
<td>• Integration from customer to supplier to level product volume and mix, in smallest possible time buckets.</td>
</tr>
<tr>
<td>Lean Concepts</td>
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| **Product-family/ customer-family (value-stream) focus.** | • A few value-stream maps with limited usage to impact change or improvement.  
• Key production resources and support functions reorganized and re-laid-out by value streams. | • Multiple value-stream maps, reaching to key suppliers, which determine the appropriate kaizen improvements and set priorities.  
• Systematically finding stress points and their root causes.  
• High degree of internal resources reorganized by value streams (few "silos" remaining). | • Thinking supports economies of flow rather than economies of scale.  
• Management recognizes benefits of flow (e.g., reduced inventory, space, and cost).  
• Organization-wide commitment to shorter lead times.  
• Value-stream management integrated into the daily work of leaders.  
• Value stream focus extending to customers and suppliers. |
| **TPM** (considered relative to equipment, but also extends to IT applications and systems in accounting, HR, quality, etc.) | • System assures regular preventive maintenance on all systems, predominantly by maintenance team.  
• Goal of minimal MTTF (mean time to failure), MTTR (mean time to recover) — limited interruptions. | • System assures productive maintenance on all systems; cooperation of operators and maintenance.  
• Goal of zero unscheduled downtime — 100% availability.  
• Operators assuming first responsibility for equipment, with backup and oversight by plant maintenance experts. | • Includes designing systems for reliability and maintainability.  
• Predictive maintenance programs where needed.  
• Goal of OEE (comprehensive of performance, quality, and availability).  
• Operators acquiring technician-like knowledge and responsibility for their equipment. |
| **Cells** | • A few cells and cross-trained cell teams in use—in assembly, fabrication, and/or support services. | • Feeder cells/cell teams integrated—physically, or through kanban—with user cells.  
• Cross-trained cell members rotating frequently to maintain skills. | • Cellular integration, beginning to ending operation, where feasible.  
• Understanding of the power of teams, proximity, employee involvement and empowerment, TPM, etc. |
| **PDCA/DMAIC** | • Major project focused usage of the scientific thinking process and associated problem-solving tools.  
• Tool Thinking — “What is the solution?” | • Systematic use of the scientific thinking process throughout the organization.  
• Root cause and corrective action processes.  
• Closed-loop continuous improvement methodology, where a solution is the target.  
• System Thinking — “What is the root problem?” | • Thinking of countermeasures instead of solutions (need to revisit always present and understood).  
• Reflection becomes the primary learning activity in the process rather than problem resolution.  
• Scientific thinking permeates the culture and provides a common language and approach to organizational learning and continuous improvement.  
• Principle Thinking — “What is the need?” |
APPLICATION GUIDELINES

THE SHINGO PRIZE
for OPERATIONAL EXCELLENCE
APPLICATION & ASSESSMENT PROCESS

Eligibility Requirements

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

- An entity should be in business long enough to establish stability. For example, when a lean company sets up a new facility it may only take 24 months to stabilize, whereas a transformation may take three years or more.
- An applying entity must be able to show metrics that are specific to the applying entity (divisional or corporate metrics are not sufficient). In general a minimum of three full years is required unless the condition above is met. If documentation of three full years of metrics is an issue it should be discussed with The Shingo Prize office before preparing the achievement report. Further explanation of metrics is provided in dimension four, Business Results, below.
- Applicants may be eligible in one of three categories: Small, Medium, and Large. Achievement qualifications are the same for each category, and since organizations are not competing against each other, reference to size is useful only for purpose of pricing and planning for assessment teams. Small businesses are defined as independent entities with fewer than 250 full-time equivalent employees; applicant may not be part of a larger organization. Medium businesses are defined as independent entities with fewer than 500 and more than 250 full-time equivalent employees; applicant may not be part of a larger organization. Small and medium-size businesses may challenge for The Shingo Prize provided that the above provisions are met. Large businesses are defined as entities with 500 or more full-time equivalent employees. All Public Sector or government applications are considered large business. Large business entities may challenge for The Shingo Prize according to the following provisions:
  - Separate organizational units of a large business may apply individually, but must apply in the large business category, regardless of the number of employees in the applying unit.
  - Multiple entities within one company, subsidiary, business unit, or division may apply individually in the same year. Each will be considered a large business application.
- 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 us to evaluate eligibility.

Re-applications

Re-applications will be accepted for the following:

- 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 advance its status (in general it will take at least two years between applications 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.

We encourage recipients at all levels to submit required measures annually. This allows us to hold organizations somewhat accountable for long-term sustainment and continuous improvement, better prepares us to evaluate a facility upon re-application, and will also provide key anonymous information to our database of applicants to be used for research and potential benchmarking. We will request these key measures update 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

The Shingo Prize has organized some regional partners to help administer The Shingo Prize. All applications for the Public Sector are processed at The Shingo Prize headquarters at Utah State University. Awards achieved are consistent regardless of the office that administers the process. The three award levels that can be achieved are the Shingo Bronze Medallion, the Shingo Silver Medallion, and The Shingo Prize. If you are uncertain who you should be working with in your area, please contact The Shingo Prize staff at the Utah State University headquarters office (435) 797-2279. We will make sure your application is filed in the correct office.

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 shaun.barker@usu.edu.
Application & Assessment Process

Application Forms, Profile Sheets, and Measures Form

An application form, profile sheet, and measures form should be sent to The Shingo Prize office when an applicant decides to pursue The Shingo Prize or the Silver or the Bronze Medallions. The application should be sent as soon as possible, 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, profile sheet, and measures form will be processed as received and should be sent in for approval 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. 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 a two-page (maximum) company profile sheet that is formatted according to examples provided at www.ShingoPrize.org and the measures form. Please do not include any confidential or classified information in the profile sheet. They may be posted to the web site or provided to media. All forms are available at www.ShingoPrize.org.

No fees are due at this point in the process.

Achievement Reports

Achievement Reports should be written after the application is approved, this ensures an eligible applying entity. Achievement Reports will be accepted at anytime throughout the year. Achievement Reports not received in time to process before the Annual Shingo Prize International Conference and Awards Ceremony (usually held in April or May) 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 by 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 still may be processed in time for the conference.

Applicants will be advised of an approximate-process time table based on the date the achievement report is received and the workload 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.

Each applicant can be assured that information obtained through the Achievement Report is held confidential. Every examiner involved with the review, handling, and processing of application reports must sign a Nondisclosure Agreement that is kept on file at The Shingo Prize office. Business entities that have representatives on the 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 for the category in which they are challenging. Applicants are not expected to and are encouraged not to divulge proprietary information regarding products, processes, or sensitive financial results. Please do not include any classified information in the achievement report.

The application fee is due with the Achievement Report.

An Achievement Report processing fee of $5,000 for large businesses, $3,000 for medium businesses, and $1,500 for small businesses 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 granted based on the Achievement Report review and recommendations. Candidates being considered, based on Achievement Report, for any level of recognition by The Shingo Prize will receive a site visit assessment by a team of examiners. A single large business facility application will generally require a team of four (4) to eight (8) examiners. The official language of the site visit assessment is English.

Site visits will be scheduled throughout the year 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 April or May) 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 metrics reported in their Achievement Report during the site visit assessment.

Applicants will be notified whether or not a site visit will be granted approximately 30 days after the Achievement Report is received. Applicants granted a site visit will be contacted to make arrangements.
Each applicant can be assured that information obtained through the site visit assessment is held confidential. Every examiner involved with the site visit assessment must sign a Nondisclosure 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 organization will authorize all examiners that participate on the site visit assessment. Business entities that have representatives on the 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 for the category in which they are challenging. Applicants are not expected to divulge proprietary information regarding products, processes, or sensitive financial results.

Applicants selected for a site visit assessment pay an additional 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 $7,000 and $12,000 for single, large business applications, utilizing four to eight site visit examiners. Medium and small business locations 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 may be subject to additional fees to cover additional travel expenses for examiners; these fees will be determined during the application process.

The site visit fee will be invoiced and sent to you within 30 days of the site visit

Assessment Process

The Shingo Prize assessment process includes the following six steps:

- An application form, profile sheet, and measures form should be sent to The Shingo Prize office as soon as an applicant has decided to pursue The Shingo Prize or the Silver or Bronze Medallions.
  - Preferred timing: One year before intended Achievement Report submittal

- Achievement Reports are submitted and reviewed. Achievement Reports must mimic the format below that closely aligns with The Shingo Prize model.
  - Approximate lead time: 30 days

- Achievement Reports with positive recommendations from examiners will receive a site visit assessment.
  - Preferred timing: 30 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 the Shingo Bronze Medallion, the Shingo Silver Medallion, or The Shingo Prize.

- The Executive Committee reviews the recommendations. Organizations will be notified of their recipient status in no more than 30 days after the site visit assessment. Official recognition will be given at the Annual International Conference and Awards Ceremony and may also be given at a Regional Conference and Awards Ceremony where applicable. 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: 30 days

- Organizations that desire additional recognition at the local facility level may request a Shingo Prize representative to attend their celebration. The organization will only be expected to cover travel expenses.

The times given are approximate and are subject to change dependent 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.

**ADMINISTRATIVE FEES**

**Application and Re-application Fees**

An Achievement Report processing fee of $5,000 for large businesses, $3,000 for medium businesses, and $1,500 for small businesses must be submitted with the Achievement Report. For payment information, please call The Shingo Prize office at (435) 797-2279.

**Site Visit Examination Fees**

Fees generally average between $7,000 and $12,000 for single, large business applications, 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 may be subject to additional fees to cover additional travel expense for examiners; these fees will be determined during the application process and collected before the site visit occurs.
**Writing the Achievement Report**

The Achievement Report is the primary document for assessment of an organization, prior to the site visit. Shingo Prize applicants must prepare an Achievement Report that demonstrates how well the organization understands and applies the principles of lean represented in The Shingo Prize Model. This is largely accomplished by describing the management systems that have been utilized in each dimension of the Model, along with the selected tools and techniques. The limited information in this report will determine whether or not an applicant receives a site visit.

The Achievement Report should have dimensions and component labels that match the outline below which closely aligns with The Shingo Prize Model. Each dimension should address application of principles, selection, development, and effectiveness of systems, and choice and use of tools and techniques. This is intended to facilitate both the writing of the report, as well as the assessment process. The required measures under Section IV Business Results are considered essential for all organizations. An applicant would also include any measurements that assist in controlling and improving those basic business processes, as shown in the outline. Applicants should explain and support their choice of measures, rather than creating new measures specifically for this assessment. A Measures Form must be turned in with each application. It is important that all categories of measurement are addressed. The intent of this form 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. It is important that results in the Achievement Report are understandable and have explanations where needed. Please refer to Dimension 4 – Business Results in the model for complete details on measures.

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. Please do not feel that you need to fill all 75 pages, this should be looked at as a maximum. The intent of this report is to tell the examiners your lean transformation story as simply as possible. Pictures should be used where possible to limit verbal explanations.

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 consistency of purpose). Measures should be specific to the applying entity. If it is necessary to provide an overall organizational measure it should be clearly labeled as such. 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, the following:

- A copy of the application form;
- A summary of all accomplishments relative to the achieved level of operational excellence;
- A copy of the two-page profile sheet;
- The completed measures form (available at www.ShingoPrize.org); and
- A supplemental measures form, if applicable.

The report must be printed on 8½ x 11-inch paper using a fixed pitch font of 11 characters per inch or a proportional spacing font of point size 12. Sheets should be double-sided, single spaced. The report is generally limited to a maximum length of 75 printed pages. The report should be coil bound. The official language of the Achievement Report is English.

Ten (10) hard copies and one digital copy on a CD or thumb drive of the Achievement Report, meeting all above-stated criteria and format requirements, can be turned in up to one year after the application has been approved.
THE SHINGO PRIZE APPLICATION GUIDELINES

1. CULTURAL ENABLERS (175 POINTS)

In this dimension an organization should describe the leadership culture that is enabling lean transformation. Care should be taken to sufficiently describe how these activities, practices, and systems are implemented at the principles level as described in The Shingo Prize Model. Discuss examples in each of the subsections below.

1.1 LEADERSHIP & ETHICS (50 POINTS)

Activities, practices, and systems that support Leadership at a Principles level could include, but are not limited to:

- 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);
- Exemplary involvement and personal commitment of all the organization’s leaders in finding and eliminating waste (muda, mura, and muri), or anything that inhibits the flow of value;
- The use of a business assessment system that evaluates all aspects of performance, not just financials (e.g. Balanced Score Card);
- The use of an ethics policy and/or committee;
- The use of knowledge management systems and active information and idea sharing at all levels of the company and across the greater enterprise;
- Emphasis on direct observation (go and see) and data-based decisions and actions;
- An organizational philosophy that encourages and recognizes innovations, entrepreneurship, and improvements wherever they originate in the organization;
- Systems to develop and sustain ethical behavior in organizational governance, management, and fiscal accountability; and
- Proactive relationships with key stakeholders such as stockholders, employees, governments, communities, and educational institutions.

1.2 CULTURAL ENABLERS - PEOPLE DEVELOPMENT (125 POINTS)

1.2.1 PEOPLE DEVELOPMENT - EDUCATION, TRAINING & COACHING (50 POINTS)

Activities, practices, and systems that support Education & Training at a Principles level could include, but are not limited to:

- 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;
- Systems that make the customer/supplier linkage visible throughout all stages of the process, and encourage/require regular communication;
- 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.

1.2.2 PEOPLE DEVELOPMENT - EMPOWERMENT & INVOLVEMENT (50 POINTS)

Activities, practices, and systems that support Empowerment at a Principles level could include, but are not limited to:

- 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.; and
• Recognition and reward systems for the organization (e.g., gain sharing), teams and/or individuals contributing to continuous improvement.

1.2.3 PEOPLE DEVELOPMENT - ENVIRONMENTAL AND SAFETY SYSTEMS (25 POINTS)
Activities, practices, and systems that support Environmental & Safety Systems at a Principles level could include, but are not limited to:
• 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.

2. CONTINUOUS PROCESS IMPROVEMENT (400 POINTS)

2.1 CONTINUOUS PROCESS IMPROVEMENT - LEAN PRINCIPLES (0 POINTS)
Describe your organization’s philosophy toward applying the lean principles and concepts below. 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 outlined in Subsection 2.2.

Principles:
• Business Process Focus;
• Flow and Pull;
  o Stability and Standardization;
  o No defects passed forward; and
  o Continuous Improvement Focused on Flow of Value.
• Scientific Thinking;
  o Identify and Eliminate Waste
• Integration of Improvement with Work; and

Systems:
• Kaizen and breakthrough improvement;
• 5S, Visual Workplace, Visual Displays, and Visual Management;
• Zero Defects through Poka-yoke;
• Value Steam Mapping;
• Value Analysis;
• Distributing work intelligently and efficiently or level loading;
• Theory of constraints – managing bottlenecks;
• Quick change-over;
• 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.

2.2 CONTINUOUS PROCESS IMPROVEMENT - VALUE STREAMS & SUPPORT PROCESSES

2.2.1 CUSTOMER RELATIONS (50 POINTS)
Discuss the application of your continuous process improvement philosophy relative to the principles and concepts described in the Customer Relations Processes section in The Shingo Model and discuss the following ideas:
• Process for assessing the voice of the customer; and
• Customer facing processes such as order taking, delivery commitment, flexibility for change orders, responsiveness to problems, invoicing, and collections.

Customer Relations Measures
Include in this section a discussion of the key measures used to drive continuous improvement.

2.2.2 PRODUCT/SERVICE DEVELOPMENT (25 POINTS)
Discuss the application of your continuous process improvement philosophy relative to the principles and concepts described in the Product/Service Development Processes section in The Shingo Model and discuss the following ideas:
The Shingo Prize Application Guidelines

• 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;
• 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; and
• Involve suppliers and customers in product/service design.

Product and Service Development Measures

Include in this section a discussion of the key measures used to drive continuous improvement.

2.2.3 OPERATIONS (175 POINTS)

Discuss the application of your continuous process improvement philosophy relative to the principles and concepts described in the Operations Processes section in The Shingo Model. Discuss the following ideas:
• Flow and Pull;
• Value stream mapping;
• Time-based or just-in-time manufacturing;
• Total productive, preventive, or predictive maintenance TPM;
• Quick changeover or setup reductions (SMED);
• Poka yoke;
• Reducing information deficits, human error, and scheduling complexity through visual devices and systems (or “through visual solutions”);
• Cellular layout;
• 5S;
• 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-why’s, or similar problem-solving techniques); and
• Production Process Preparation (3P).

There are multiple ideas that can be applied in this section. The above list is not intended to be comprehensive. Organizations should use those ideas that are appropriate for their operation.

Operations Measures

Include in this section a discussion of the key measures used to drive continuous improvement.

2.2.4 SUPPLY (50 POINTS)

Discuss the application of your continuous process improvement philosophy relative to the principles and concepts described in the Supply Processes section in The Shingo Model. Discuss the following ideas:
• 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; and
• Commitment to supplier development.

Supply Measures

Include in this section a discussion of the key measures used to drive continuous improvement.

2.2.5 MANAGEMENT (100 POINTS)

Discuss the application of your continuous process improvement philosophy relative to the principles and concepts described in the Administration Processes section in The Shingo Model. Discuss the following ideas:
• Alignment and integration of administration functions to support the value stream;
• Flow and Pull;
• Value stream mapping with emphasis on information flow;
• Total productive, preventive, or predictive maintenance TPM;
• Quick changeover or setup reductions;
• Poka yoke;
• Reducing information deficits, human error, and scheduling complexity through visual devices and systems (or “through visual solutions”); and
• Tools of quality (i.e., pareto charts, storyboarding, cause and effect diagrams, 5-why’s, or similar problem-solving techniques).

Administration Measures

Include in this section a discussion of the key measures used to drive continuous improvement.
3. **CONSISTENT LEAN ENTERPRISE CULTURE** (150 POINTS)

3.1 **CONSISTENT LEAN ENTERPRISE CULTURE – ENTERPRISE THINKING IN A GLOBAL ENVIRONMENT** (75 POINTS)

Discuss your enterprise culture relative to the principles and concepts described in Section 3 of The Shingo Model and discuss the following ideas:

- Reporting requirements based on lean principles and policy deployment;
- Common management and reporting systems across the enterprise, with some allowances for local variations;
- Financial reporting embraces lean accounting practices;
- Continuous flow and eliminating waste in the entire enterprise;
- Simple and visual information systems; and
- Leadership development.

3.2 **CONSISTENT LEAN ENTERPRISE CULTURE - POLICY DEPLOYMENT** (75 POINTS)

Discuss your enterprise culture relative to the principles and concepts described in Section 3 of The Shingo Model and discuss the following ideas:

- Scientific Thinking as a Philosophy;
- A planning process for establishing and deploying vision, mission, values, strategies, and goals (e.g., Policy Deployment, Management by Objective, etc.);
- Alignment of objectives and projects with multi-lateral discussion; and
- Constancy of Purpose.

4. **BUSINESS RESULTS** (275 POINTS)

As explained in The Shingo Model, there are three main internal measurement areas for operational excellence: quality, cost and productivity, and delivery (flexible responsiveness). Each of these has its own required measurement areas. As also explained in The Shingo Model, though financial measures are not exclusively attributable to operational excellence, they are gathered to give a general overview of success of the organization.

Include the following items in the report:

- Describe your organization's philosophy toward creating value as it relates to the principle in The Shingo Model.
- Provide the measures used in each required area below. Report anything that is used effectively in the organization.
- Measurements should be provided on the Measures Form and included in the Achievement Report. The measures form will also be sent in with the application and profile sheet. All metric categories must be addressed either with a measurement and the discussion points below or a full explanation of why a category is not measured.

Discussion of each measure should contain:

- A definition of the measure and its computation clearly;
- 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.

In addition, a list of supplemental measures is provided to more fully describe the model and stimulate thinking, but supplementation is not limited to those measures. 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. It is possible site visit examiners may ask for a less aggregated version of that data, but it does not need to be included in the report. 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, and use appropriate scales. Provide the data as you would normally use it.
4.1 People Development (25 Points)

Measures to be provided on the Measures Form:
- Safety,
- Training,
- Voluntary involvement in continuous improvement, and
- Education.

Supplemental data could include:
- Environmental health, and
- Employee satisfaction.

4.2 Quality (50 Points)

Measures to be provided on the Measures Form:
- Internal quality - quality within the plant, and
- Quality to the customer - quality received by customers.

Supplemental data could include:
- 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.

4.3 Delivery (50 Points)

Measures to be provided on the Measures Form:
- Total Lead Time – the time from customer order to customer receipt (assuming no finished goods inventory), and
- On-Time Delivery.

Supplemental data could include:
- 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.

4.4 Cost (50 Points)

Measures to be provided on the Measures Form:
- Labor Productivity – organizational physical or financial output as compared to labor quantity,
- Asset Productivity – organizational output compared to value of physical assets employed, and
- Inventory Turns – organizational raw, working, and finished inventories compared to relevant total cost or revenue.

Supplemental data could include:
- 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.

4.5 Financial Impact (50 Points)

Measures to be provided on the Measures Form:
- Growth in revenues, physical output, or whatever is considered most representative;
- Energy; and
- Profit attributable to this organization.

Supplemental data could include:
- Cash Flow,
- Capital Budget/expenditure trend,
- Success of new products,
- New contract awards,
- Value stream margins, and
- Other appropriate measures.

4.6 Competitive Impact (50 Points)

Measures to be provided on the Measures Form:
- Market share, and
- Customer Satisfaction – external and internal.

Supplemental data could include:
- Lead time,
- Flexibility,
- Ease of doing business,
- Linked and synchronized processes,
- Customer survey results,
- Customer awards,
- Customer audits, and
- Other appropriate measures.
SCORING SYSTEM

The Shingo Prize Examiners review the applicant based on the assessment scale. Dimensions I, II, and III refer primarily to Principles, Systems, and Tools. Dimension IV refers to Results. The score of each dimension’s components will be determined first by the quadrant that best describes the company’s current practices based upon the individual descriptors, then is qualitatively based on whether the current practice is high, mid, or low within the quadrant. A qualitative percentage is selected and multiplied by the point value of the criteria element to determine a current practice score.

Specific factors relating to each assessment scale are described below.

Principles, Systems, and Tools – Assessment Scale

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:

- The organization's maturity in understanding and deploying lean principles, systems, and tools;
- A commitment to the principles of lean throughout the organization;
- The effective implementation of systems to support lean principles;
- The effective selection and use of appropriate tools, techniques, and technologies throughout the organization;
- The acceptance and use of Shingo’s comprehensive view of “waste” identification and elimination or prevention;
- The degree of organizational focus on value-added activities;
- The extent to which goals focused on strategic value drive the continuous improvement throughout the organization; and
- The demonstrated cooperation and integration between employees’ efforts at all levels.

<table>
<thead>
<tr>
<th>PRINCIPLES, SYSTEMS, TOOLS – Assessment Scale</th>
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<tbody>
<tr>
<td>Organizations which fully match the descriptors would score at the top of the indicated range.</td>
</tr>
<tr>
<td>100%</td>
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<td>80%</td>
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<td>79%</td>
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<td>39%</td>
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<tr>
<td><strong>100%</strong></td>
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<tr>
<td><strong>clear and ingrained understanding and implementation of lean principles</strong> throughout the leadership team, the value stream, and the support processes</td>
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<td><strong>widespread involvement and empowerment</strong>, breadth and depth of strategic alignment with company key objectives</td>
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<td><strong>tenacious strategic focus</strong> on high-value-added processes and issues</td>
</tr>
<tr>
<td><strong>major, fully completed waste prevention</strong> applications that could be considered best practices examples</td>
</tr>
<tr>
<td><strong>79%</strong></td>
</tr>
<tr>
<td><strong>many good Lean systems</strong>, which capitalize on the integration of work and improvement.</td>
</tr>
<tr>
<td><strong>recognition of strategic priorities</strong>, tying Lean systems development to strategic needs.</td>
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<tr>
<td><strong>frequent use</strong> of appropriate human and technical resources to reach beyond the conventional solution, but occasional problems in getting integrated action</td>
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<tr>
<td><strong>59%</strong></td>
</tr>
<tr>
<td><strong>existence of some strategic ideas</strong> but rarely applied systematically</td>
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<tr>
<td><strong>a few good applications of appropriate Lean tools and techniques, more are planned as time permits</strong></td>
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<tr>
<td><strong>some use of human and technical resources</strong> beyond conventional, but difficult to get integrated cooperation and action</td>
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<tr>
<td><strong>20%</strong></td>
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<tr>
<td><strong>no evidence of strategic focus</strong>; reactive only to day-to-day issues</td>
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<tr>
<td><strong>minor, incomplete, limited-value</strong> applications of Lean tools</td>
</tr>
<tr>
<td><strong>no evidence of use</strong> of human and technical resources in problem solving</td>
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Results – Assessment Scale

- The demonstrated improvement trend in each key component;
- The level of performance in each key component;
- A clear understanding of world-class performance, based on benchmarking and other industry data;
- The choice and use of appropriate measures for each specific purpose, and the proper technical adjustments; and
- The use of measured results to stimulate further improvement.

<table>
<thead>
<tr>
<th>RESULTS – Assessment Scale</th>
<th>100%</th>
<th>80%</th>
<th>79%</th>
<th>60%</th>
<th>59%</th>
<th>40%</th>
<th>20%</th>
<th>39%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizations which fully match the descriptors would score at the top of the indicated range.</td>
<td>• <strong>excellent improvement trends</strong> in key strategic areas and within the waste-prevention projects</td>
<td>• <strong>high and predictable levels</strong> of performance with active programs based on goal setting</td>
<td>• <strong>focused choice</strong> of appropriate indicators with demonstrated validity</td>
<td>• clear evidence of ingrained, routine feedback of results to those responsible for improvement</td>
<td>• <strong>good</strong> improvement trends in the key strategic areas and in improvement projects</td>
<td>• <strong>good level</strong> of performance in most areas and projects; some attention to goal setting</td>
<td>• <strong>appropriate</strong> measures used with demonstrated validity</td>
<td>• <strong>good evidence</strong> of feedback of results to those involved in improvement on a regular basis</td>
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</table>
Contact Information

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Associate Director
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Application forms are available online at www.ShingoPrize.org