Each organization operates as an enterprise in that it is a collection of processes focused on producing products and services for customers and stakeholders with the goal of creating value, reducing and avoiding cost, and increasing profit. This principle applies regardless of the type or size of enterprise (commercial, non-profit or government) or industry. Since the ability to attract and retain customers is the key to increasing value in the enterprise, customer requirements and expectations must be satisfied cost-effectively, remembering customers buy benefits not features.

As indicated by the Enterprise Excellence Model below, achieving Enterprise Excellence begins with establishing a Quality Management System and Voice of the Customer. These first two elements of the model ensure the organization has the infrastructure, processes, and procedures in place for leading and managing the enterprise, and is focused on the requirements and expectations of the customer. The last two elements, Six Sigma and Lean Enterprise, ensure the effectiveness and efficiency of production and service delivery processes.

Challenges to the organization will arise during the life of the enterprise which will be resolved through the four basic elements of the Enterprise Model, i.e., Quality Management System, Voice of the Customer, Six Sigma, and Lean Enterprise:

**Enterprise Excellence Model**

- **Effectiveness**
  - Start
  - Quality Management System
    - Infrastructure
    - Process Documentation
    - Management Responsibilities
    - Implementation
    - ISO 9000
  - Voice of the Customer
    - IPPD
    - Product to Process Link
    - Performance Requirements
    - Process Requirements
  - Six-Sigma
    - Focused QSS-R
    - Payback
    - Infrastructure Support
    - Enterprise Map
    - DMAIC Methodology
  - Six-Sigma Process Control
    - Process Mapping
    - Process FMEA
    - Statistical Process Control
    - Measurement Systems Evaluation
    - Process Capability
  - Six-Sigma Process Improvement
    - Descriptive Statistics
    - Inferential Statistics
    - Analysis of Variance
    - Linear Contrasts
    - Design of Experiments

- **Efficiency**
  - Lean Project Selection
    - Yield
    - Scrap
    - Rework
    - RTR
    - Cycle Time
    - HPU
    - CPU
    - Product Family
    - DMAIC Methodology
  - Lean Assessments
    - Value Stream Analysis
    - TAKT Time
    - Seven Forms of Waste
    - SS
    - Routing Analysis
    - Process Availability
    - Work Content Analysis
  - Leaning the Enterprise
    - Planning & Control
    - ABC Material Handling
    - Service Work Centers
    - JIT/Kanban
    - Work Center Plan
    - Level Loading
    - Mixed Model
    - Workable Work
  - CMI
    - Enterprise Metrics
    - Balance Scorecard
    - Project Selection
    - Six Sigma Initiatives
    - Kaisen Events

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Quality Management System: A quality management system represents the basic management approach of the enterprise, which reflects the culture of the organization and how the enterprise will be managed. All quality management systems have several baseline requirements in common, including a requirement for processes and procedures and how to control them, a planning process, and the organizational structure with management roles and responsibilities. It describes how the organization will communicate and provides a method for making decisions. The final and most critical element of a Quality Management system is a commitment to Continuous Measurable Improvement (CMI). There are many standardized quality management systems, such as ISO 9000, QS-9000, or ISO 14000, that provide a good structured approach for establishing and maintaining a Quality Management System.

Voice of the Customer: Voice of the Customer refers to a commitment and systems engineering approach for knowing and understanding the full scope of customer requirements and needs, and then using this knowledge to cost-effectively satisfy the customers from concept to obsolescence and disposal. The systems engineering approach provides for the design of systems components and integration of those components into a qualified system acceptable to the entire customer set across the life-cycle of the system. This approach is supported by Design for Six Sigma (DFSS), which is a focused process for identifying customer requirements and expectations, establishing robust products, services and processes, and using Integrated Product and Process Development (IPPD) to develop the products, services and processes for producing them. DFSS brings a process, discipline and methodology that supports systems engineering and ensures that the requirements and expectations of the customer set during the conceptual and preliminary design, detailed design and integration, and production periods of the life-cycle are satisfied effectively and efficiently.

Six Sigma: Six Sigma is a disciplined, structured approach for process and product optimization that is focused on the bottom line of the organization. Six Sigma provides an infrastructure, a well-defined tool set, and a process intended to be used in new product or process development and for improvement projects. In the development of products, services and processes, Six Sigma provides the methodology and tools for achieving the required robustness and effectiveness of processes. Once in production, Six Sigma provides a focused approach and well-defined tool set for achieving CMI. If used properly, Six Sigma will result in direct improvements to the bottom line of an organization by improving quality and meeting operating schedules, while reducing costs and risks. Six Sigma provides a specific tool set and instructions for applying the tools, whereas ISO does not. Although a quality policy promoting a high level process standard is implicit in Six Sigma, the Six Sigma methodology of Define, Measure, Analyze, Improve and Control (DMAIC) is more concerned with producing improvements from the specific application of its tools.

Lean Enterprise (Lean): The Lean Enterprise concept represents the manner in which organizations must be managed in a highly competitive environment. This concept embodies a collective set of principles, tools and application methodologies that enable organizations to remove waste from the system and achieve dramatic competitive advantages in development, cost, quality, and delivery performance. It is a methodology intended to increase the efficiency of an organization’s operation by eliminating or minimizing non-value added tasks. Lean provides a systems engineering approach to the efficiency of the enterprise. It is concerned with eliminating waste, streamlining operations, and coordinating activities that will indirectly affect the bottom line of an organization or company. Applied in IPPD, Lean will ensure the optimal efficiency in the production of products and services, and will assist in early detection and correction of problems. Lean contains five primary elements: manufacturing flow, organization, process control, metrics, and logistics. In Lean, the interconnectivity and dependency among the five elements is critical. Lean calls this a “holistic” approach to management, which is similar to the ISO systems management approach.

The VSE Enterprise Excellence Alliance has a proven track record of helping government and commercial organizations achieve Enterprise Excellence by providing program implementation workshops, consulting, and tools for process and product improvement. VSE’s Alliance members are Lloyd’s Register Quality Assurance, J. D. Power and Associates, and Simpler Incorporated.