White Paper:
Information Technology Resource Optimization (ITRO®) and Lean Six Sigma

In today’s highly competitive, technology dependent workplace, IT organizations continually struggle to deliver a consistent, high quality customer experience at the lowest possible cost. IT is a service business within the business. Over time, results have shown that both Lean and Six Sigma methodologies achieve process performance improvements relative to cost, time, and quality.

Maryville’s Information Technology Resource Optimization® (ITRO®) methodology is a highly integrated, best practice capability that provides implementation guidance for effective delivery of IT services. ITRO® processes focus on the essential work of IT using best practice techniques and practical experience to solve inherent operational problems and out-of-date policies and procedures.

Each ITRO® process is comprised of key implementation components in the areas of Best Practices, Work Instructions, Metrics/KPIs, Service Level Agreements, Controls, and Templates. These process implementation components provide a solid foundation for effective process design and subsequent deployment efficiency.

Six Sigma is a quality improvement method whose objective is the removal of defects and their root causes from the targeted business process. It focuses attention on any process that exceeds an upper limit deviation from an average number of defects. Often referred to as the DMAIC method, Six Sigma follows a five-step approach to define, measure, analyze, improve, and control each process. In Six Sigma, the relevant components of a process are the process suppliers, inputs, procedures, outputs, and customers (SIPOC).
Six Sigma Typically Follows The DMAIC Method...

Maryville’s Service Component Map (SCM) service modeling method helps put technology component level availability and performance in context and raises awareness of the ways that IT infrastructure supports the business. The resulting IT SCM provides an in-depth focus into enabling technology components to promote effective service improvement activities that is equivalent to Six Sigma’s SIPOC.

Maryville’s Information Technology Resource Optimization® (ITRO®) processes produce operational performance metrics that reflect the results of key operational outputs and controls. Metric trends are analyzed to initiate Service Improvement Programs (SIPs) using an approach that is consistent with Six Sigma resolution techniques.

Maryville’s ITRO® Problem Management process utilizes the Ishikawa 5 Why’s Six Sigma DMAIC analysis technique to determine root causes of reported problems. The 5 Why’s root cause analysis technique asks repeated, in-depth ‘why’ questions until the ‘why’ answer identifies the root cause of the problem. The resulting resolution is then recorded in the Problem Management system and a change request is submitted for deployment approval and implementation under the control of Change Management.

The Service Improvement Program (SIP) is a key result of Maryville’s ITRO® Service Level Management process to enable continuous service level improvement. IT Service enabling components are monitored for availability and performance producing results as measurement trends for review by an IT Service Review Forum. The IT Service Review Forum then initiates SIP activities as indicated by trends not heading in the desired direction, or trends that have missed their intended service level targets. Problem resolution follows the same guidelines as Six Sigma. Improvements are submitted for approval and implementation under the control of Change Management.

ITRO® root cause analysis and Service Improvement Program (SIP) outcomes are facilitated by using cross-functional teams operating under Six Sigma disciplines.
Lean Process Techniques

*Lean* process improvement methods are primarily concerned with the efficiency and optimization of a process flow while continuing to focus on cost reduction. Key *Lean* success factors of zero waiting times, zero inventories, line balancing to just in time raw materials and factory orders, etc., originated within the manufacturing environment.

Within Maryville’s *ITRO*® Service Level Management process, a key factor is to establish a service level target, such as, 100% availability for a given critical IT service. Then, service level achievement is measured in order to initiate service improvements. All Maryville *ITRO*® processes contain embedded metrics and Sarbanes-Oxley / CobIT® controls that are monitored using trend based measurements (lagging performance metrics). In cross-functional team settings these trended metrics are reviewed for intended service level achievement. Formal Service Level Agreements can be used to set service level commitments or a baseline service level target which in turn serves as the basis to initiate SIP improvements that need to be implemented. *Lean* cost reduction is facilitated by Maryville’s *ITRO*® Charge Back process’s ability to calculate the cost of a client facing or shared IT Service. Understanding IT service costs enables informed decisions relative to on-going IT investment in a given IT Service.

Many corporations are interested in an approach that combines both *Lean* and *Six Sigma* methodologies into an integrated improvement roadmap. Maryville’s *ITRO*® process driven methodology incorporates key *Lean Six Sigma* service improvement techniques that provide quality and efficiency based service improvements while focusing on cost reduction through IT Service charge back techniques.

**About Maryville’s ITRO® Methodology:**
Optimized IT operations are dependent upon an integrated, repeatable set of disciplines. Maryville’s ITRO® Methodology focuses on the essential work of running IT like a business. It is a practice and experience driven Service Management approach with ‘ITIL® inside’.

**About Maryville Technologies:**
Maryville Technologies is a leading independent IT professional services firm. Maryville delivers integration services in support of IT service provisioning and IT service management to facilitate IT operational excellence. Maryville’s technical prowess, process expertise, project management discipline and history of facilitating organizational change optimize service levels at the lowest operational cost. Maryville’s IT Resource Optimization ITRO® methodology combines detailed process understanding that maps to industry standards with a practical “how to” implementation approach. Maryville also has extensive experience with the architecture, engineering, integration and management of the technology infrastructures that support critical business applications.

**Contact Information:**
For more information, please visit our web site at [www.Maryville.com/ITRO](http://www.maryville.com/ITRO) or call (636) 519-4100.