

Six Sigma, Lean and The Theory of Constraints

Six Sigma

The assumption is the outcome of the entire process will be improved by reducing the variation of multiple elements.

Lean

Lean focuses on the removal of waste, which is defined as anything not necessary to produce the product or service.

TOC

The performance of the entire chain is limited by the strength of the weakest link.

Comparison of Improvement Programs

Program	Six Sigma	Lean Thinking	Theory of Constraints
Theory	Reduce variation	Remove waste	Manage constraints
Application Guidelines	<ol style="list-style-type: none"> 1. Define. 2. Measure. 3. Analyze. 4. Improve. 5. Control. 	<ol style="list-style-type: none"> 1. Identify value. 2. Identify value stream. 3. Flow. 4. Pull. 5. Perfection. 	<ol style="list-style-type: none"> 1. Identify constraint. 2. Exploit constraint. 3. Subordinate processes. 4. Elevate constraint. 5. Repeat cycle.
Focus	Problem focused	Flow focused	System constraints
Assumptions	<p>A problem exists. Figures and numbers are valued.</p> <p>System output improves if variation in all processes is reduced.</p>	<p>Waste removal will improve business performance.</p> <p>Many small improvements are better than systems analysis.</p>	<p>Emphasis on speed and volume.</p> <p>Uses existing systems.</p> <p>Process interdependence.</p>
Primary Effect	Uniform process output	Reduced flow time	Fast throughput
Secondary Effects	<p>Less waste.</p> <p>Fast throughput.</p> <p>Less inventory.</p> <p>Fluctuation—performance measures for managers.</p> <p>Improved quality.</p>	<p>Less variation.</p> <p>Uniform output.</p> <p>Less inventory.</p> <p>New accounting system.</p> <p>Flow—performance measure for managers.</p> <p>Improved quality.</p>	<p>Less inventory/waste.</p> <p>Throughput cost accounting.</p> <p>Throughput—performance measurement system.</p> <p>Improved quality.</p>
Criticisms	<p>System interaction not considered.</p> <p>Processes improved independently.</p>	<p>Statistical or system analysis not valued.</p>	<p>Minimal worker input.</p> <p>Data analysis not valued.</p>



Wyrick Enterprises specializes in integrating the Lean and Six Sigma toolsets. Wyrick will show you how to make your continuous improvement programs, reliable, sustainable & repeatable.

Learn how, when, why, and where to apply the Lean Sigma tools within your processes and systems.

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It is all about Reliability, Sustainability, & Repeatability