

ITIL VS LEAN SIX SIGMA: WHAT'S THE DIFFERENCE?



Organizations use [ITIL](#)[®] to create business value and deliver quality IT services. Organizations also use Lean Six Sigma (LSS) for managing overall production and process quality, which in turn creates value for their customers. ITIL is used in ITSM. LSS is heavily used in all processes, from manufacturing to products to services. Traditionally, they comfortably co-exist in separate organizational silos.

In this blog, I'll explore the different needs that ITIL and LSS satisfy, where their usage intersects, and how and where they should be used cooperatively in an ITSM environment.

What is ITIL?

ITIL is a global best practice framework for aligning IT with business values and for [delivering IT services](#). Figure 1 shows the processes and practices available in ITIL v3 and ITIL 4. Organizations use ITIL to improve the value of their services by focusing on co-creating business value and solving business issues, as well as improving their IT capabilities. ITIL provides a framework for aligning all of an organization's activities, components, and resources to implement capabilities that create business value.



ITIL v3 Processes	ITIL 4 Practices
Service strategy	General management
Financial management Demand management Service portfolio management	Architecture management Continual improvement Information security management Knowledge management Measurement and reporting
Service design	Organizational change management Portfolio management Project management Relationship management Risk management Service financial management Strategy management Supplier management Workforce and talent management
IT Service continuity management Availability management Capacity management Service level management Supplier management Information security management Service catalogue management	Service management
Service transition	Availability management Business analysis Capacity and performance management Change control Incident management IT asset management Monitoring and event management Problem management Release management Service catalogue management Service configuration management Service continuity management Service design Service desk Service level management Service request management Service validation and testing
Service asset & configuration management Release & deployment management Change management Knowledge management Service validation & testing Evaluation Transition planning & support	Technology management
Service operation	Deployment management Infrastructure and platform management Software development and management
Problem management Incident management Access management Request fulfillment Event management Application management IT operations management Technical management Service desk	
Continual service improvement	
Service measurement Service reporting 7 step improvement process	

Figure 1: Processes and practices framework items in ITIL v3 and ITIL 4

What is Lean Six Sigma?

Lean Six Sigma (LSS) combines two popular methodologies—Lean and Six Sigma—to improve quality, cost, delivery, and nimbleness. LSS provides methodologies and tools for continuous improvement through process optimization, which leads to increased efficiency and profitability.

Lean Methodologies

[Lean methodologies](#) emphasize eliminating eight types of process waste ([figure 2](#)) by applying four principles ([figure 3](#)).



Figure 2: The eight wastes Lean aims to eliminate. The first letter of each waste category spells the acronym **DOWNTIME**

Lean Principle	Description
Pull	Let the customer or the next step in the process pull value through the chain. Avoid over-production and excess inventory.
Zero defects	Avoid rework and quality issues by identifying errors as close as possible to their origin point.
One-piece flow	Align and focus all process steps to add value and eliminate waste every step of the way. Value is added from start to finish in a process, in a smooth uninterrupted flow.
Takt	All goods and services are produced in a continuous flow or rhythm to meet customer demand.

Figure 3: The four Lean principles

Six Sigma

Six Sigma emphasizes identifying and eliminating the causes of process defects and reducing process variation, using statistical quality control techniques and data-driven methodologies, such as:

- **Define-Measure-Analyze-Improve-Control (DMAIC)** for existing process improvement
- **Define-Measure-Analyze-Design-Verify (DMADV)** for new process development

Combined: Lean Six Sigma

Used together, LSS attempts to:

- Prevent process defects
- Streamline and make processes nimbler
- Decrease lead time

Lean Six Sigma is universally applicable. It can be applied to all kinds of products, domains, and industries.

Integrating ITIL with Lean Six Sigma

ITIL and Lean Six Sigma is not a case of either or. Many organizations use ITIL for [IT business alignment](#) and Lean Six Sigma for non-IT processes, products, and goods production.

There are several areas where ITIL and LSS can easily be integrated. It's important to note that the ITIL framework defines the "what" of ITSM: the processes, practices, and workflows that should be set up and what's needed in a workflow. But ITIL doesn't specify "how" to set up the workflow.

For example, there are service desk processes and practices in ITIL v3 and 4, but the standards don't specify whether you should use BMC Helix for service and operations management or whether another software package is preferred. For integration, ITIL 4 has become more flexible in embracing other frameworks, such as Lean, [DevOps, and Agile](#), and providing guidance on their use.

There are many opportunities for using Lean Six Sigma in ITIL practices. Here are some relevant practices where Lean Six Sigma methods can be used in an [ITSM\ITIL environment](#):

- Continual Improvement
- Measurement and reporting
- [Availability management](#)
- Capacity and performance management
- [Incident management](#)
- Problem management
- Monitoring and [event management](#)
- Service level management

Each of these practices (and others) can benefit from using LSS strategies such as DMAIC, DMADV, waste elimination, or adherence to the four principles. If you're already using Lean Six Sigma in your production processes, you should definitely consider using it for ITSM as well. Using LSS will provide for business alignment between your ITSM environment and your line of business processes. [Software deployment has become a product in the age of software](#). As much as possible, it should be managed the same way you manage your other production processes.

Many organizations already have expertise in using LSS and the strategies are a great fit for your ITSM\ITIL workflows. You don't need to reinvent the wheel in this case and come up with new strategies for your workflows. Integrating ITIL and Lean Six Sigma in your ITSM system just makes sense and should be encouraged.

Additional resources

For more on this topic, browse our [BMC Service Management Blog](#) or check out these articles:

- [The State of ITSM in 2020](#)
- [ITIL 4 Guide](#), with 30+ articles
- [Introduction To Kaizen: A Valuable ITSM Tool](#)
- [Who Uses ITIL in 2020?](#)