

# Software engineering

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## Lean agile

is a development method that helps teams identify waste and refine processes. It's a guiding mindset that facilitates efficiency, effectiveness, and continuous improvement.

## The development of lean agile

Lean agile, or lean software development, originates from the principles of lean manufacturing. The concept was brought into manufacturing to improve profits by reducing costs instead of solely relying on increased sales. If a company can eliminate waste and become more efficient, it can save money, thereby increasing overall profits.

Lean agile is an agile methodology that, in basic terms, is quite simple: improve efficiency by eliminating waste. Unlike traditional, waterfall project management, which dictates a set plan laid out by a project manager, lean agile strives to reduce all tasks and activities that don't provide real value. This helps ensure everyone involved in a project or product development can work at optimal efficiency.

If you're looking to dive into the history of lean agile, Lean Enterprise Institute Inc., founded in 1997 by James P. Womack, PhD, is a leading resource for lean methodology. It aims to help people and teams work better through lean thinking and practices.

Lean practices are popular because they can be applied to other agile approaches and software development methods. Lean agile provides a clear application for scaling agile, which is often difficult for large or growing organizations.

## **The benefits of lean agile**

### **Waste less time**

Time is wasted when processes don't run smoothly. In lean manufacturing, it's important for goods and services to be delivered quickly and effectively. No one's time should be wasted on the job, and companies should aim for shorter lead times without sacrificing quality.

Wasting time in any industry is expensive, but it's particularly important to pay attention when working in agile software development. Even a small bottleneck or broken process can completely throw off a workflow or product deadline. Lean agile helps development teams manage time effectively to ensure everyone is utilized, no one's time is wasted, and roadblocks are anticipated in advance.

## **Reduce costs**

When businesses eliminate waste, they save money. In its original form, lean manufacturing ensured companies had the right amount of materials, employees, and working hours at any given time. Overproduction, overhiring, or simply having too many materials to store are expensive wastes that can be eliminated through better management of systems and processes.

Any business, no matter the industry, will save money with improved efficiency. Lean agile ensures that waste is continually eliminated and agile teams continue to fine-tune processes for optimal efficiency.

## **Improve work quality**

With lean agile, it's not only about efficiency — it's about maintaining efficient processes while bringing a quality product to customers and stakeholders. When businesses intentionally improve processes, they remain competitive. Lean principles consider the customer value of any action or decision to ensure needs are always met or exceeded.

# The five principles of lean agile

1. Identify value
2. Map the value stream
3. Create flow
4. Establish a pull system
5. Seek perfection