

# DEVOPS CULTURE AND MINDSET

## DevOps Principles: The Seven Principles and Seven Wastes of Lean



Courtney Kissler  
Vice President  
Digital Platform Engineering  
Nike

**UCDAVIS**

Continuing and Professional Education



## **Learning Objectives**

Identify 7 principles and wastes of Lean

Describe how these pertain to software development

Access work of Mary & Tom Poppendieck



## **Principle #1:** **Eliminate Waste**

Don't code more features than needed



## **Principle #2:** **Build Quality In**

"Quality is everyone's responsibility."

*- W. Edwards Deming*

Verify that quality is built into the product  
and process



## **Principle #3:** **Create Knowledge**

AKA: Amplifying learning

Development is constant learning



## **Principle #4:** **Defer Commitment**

Make decisions at the right time

After analysis and consideration

Delay decisions until you have more info



## **2 Types of Decision Making**

One-way door: can't come back

Two-way door: you can come back

Decision-making depends on distinction



## **Principle #5:** **Deliver Fast**

Ensure feedback received early & often

Allow for course correction

Smaller batches allow you to deliver faster





## **Principle #6:** **Respect People**

Lack respect for people in your culture?

Lean and DevOps falls apart



## **Principle #7:** **Optimize the Whole**

Employ systems thinking

Slide 10: Translating Lean's 7 Wastes into Software Development



## **Translating Lean's 7 Wastes into Software Development**



## **Waste #1:** **Partially Done Work**

Examples:

- Completed code not checked into repository

- Undocumented code

- Untested code

Delays delivery of value and leads to quality issues



## **Waste #2:** **Extra Features**

Don't build more than customer needs



## **Waste #3:** **Revisiting Decisions**

Resurfacing decisions or information is wasteful



## **Waste #4:** **Handoffs**

Includes back and forth communication



## **Waste #5:** **Delays**

Whenever process has to wait to proceed





## **Waste #6:** **Task Switching**

Research proves “multitasking” is the enemy of all productivity!



## **Waste #7:** **Defects**

Build quality in from the get-go!



## Summary

Apply Lean's 7 principles to software development

Avoid Lean's 7 wastes in software development

Check out the work of Mary and Tom Poppendieck to learn more