Lesson 1.4: DevOps Principles: The Seven Principles and Seven Wastes of Lean

DEVOPS CULTURE AND MINDSET

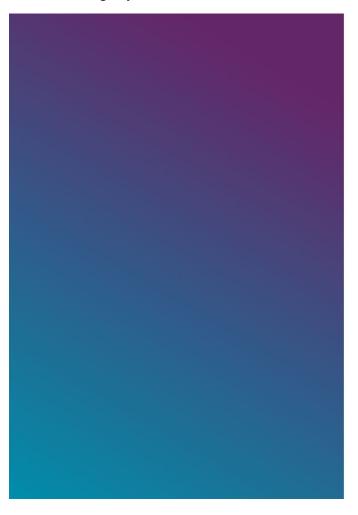
DevOps Principles: The Seven Principles and Seven Wastes of Lean



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Slide 1: Learning Objectives



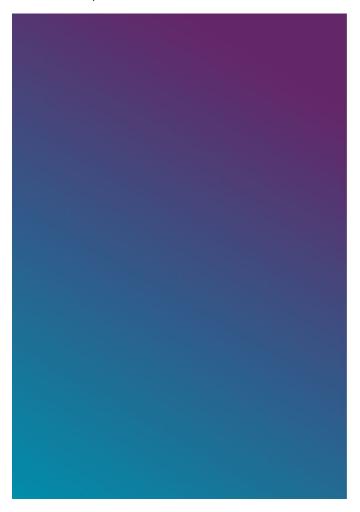
Learning Objectives

Identify 7 principles and wastes of Lean

Describe how these pertain to software development

Access work of Mary & Tom Poppendieck

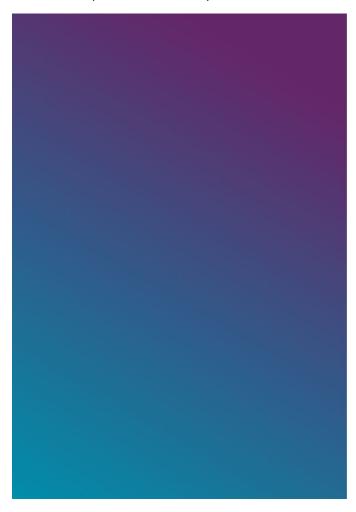
Slide 2: Principal #1: Eliminate Waste



Principle #1: Eliminate Waste

Don't code more features than needed

Slide 3: Principle #2: Build Quality In



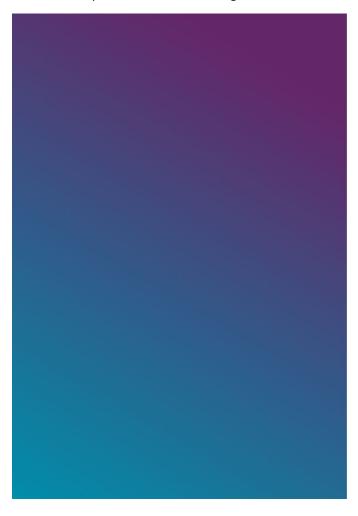
Principle #2: Build Quality In

"Quality is everyone's responsibility."

- W. Edwards Deming

Verify that quality is built into the product and process

Slide 4: Principle #3: Create Knowledge



Principle #3: Create Knowledge

AKA: Amplifying learning

Development is constant learning

Slide 5: Principle #4: Defer Commitment



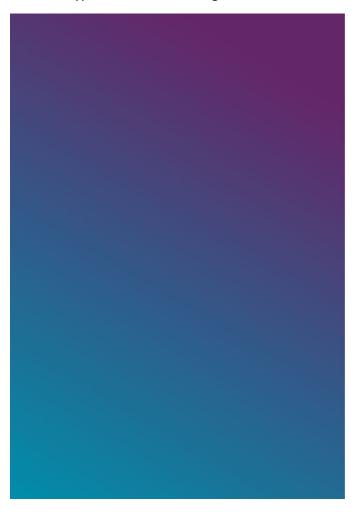
Principle #4: Defer Commitment

Make decisions at the right time

After analysis and consideration

Delay decisions until you have more info

Slide 6: 2 Types of Decision Making



2 Types of Decision Making

One-way door: can't come back

Two-way door: you can come back

Decision-making depends on distinction

Slide 7: Principle #5: Deliver Fast



Principle #5: Deliver Fast

Ensure feedback received early & often

Allow for course correction

Smaller batches allow you to deliver faster

Slide 8: Principle #6: Respect People

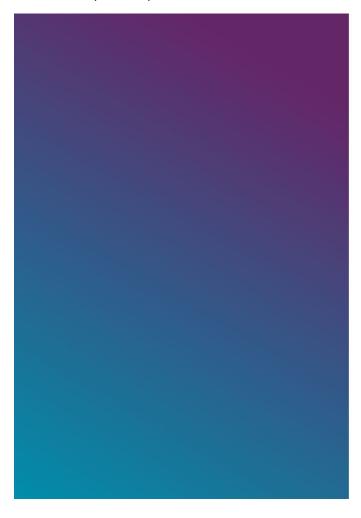


Principle #6: Respect People

Lack respect for people in your culture?

Lean and DevOps falls apart

Slide 9: Principle #7: Optimize the Whole



Principle #7: Optimize the Whole

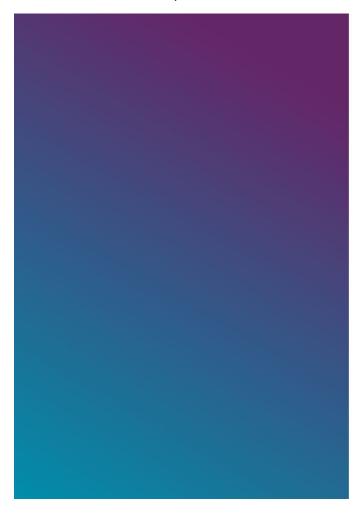
Employ systems thinking

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



Translating Lean's 7 Wastes into Software Development

Slide 11: Waste #1: Partially Done Work



Waste #1: Partially Done Work

Examples:

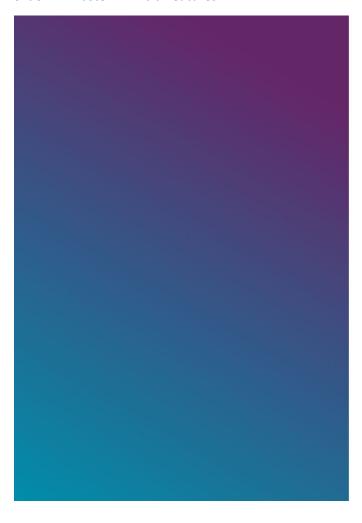
Completed code not checked into repository

Undocumented code

Untested code

Delays delivery of value and leads to quality issues

Slide 12: Waste #2: Extra Features



Waste #2: Extra Features

Don't build more than customer needs

Slide 13: Waste #3: Revisiting Decisions



Waste #3: Revisiting Decisions

Resurfacing decisions or information is wasteful

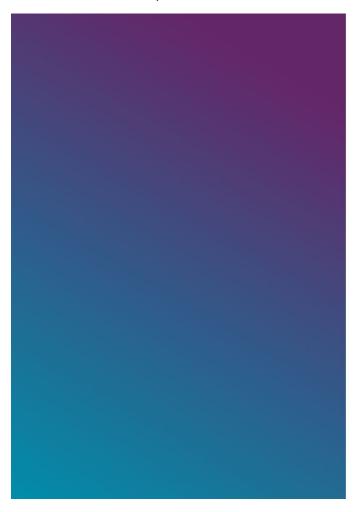
Slide 14: Waste #4: Handoffs



Waste #4: Handoffs

Includes back and forth communication

Slide 15: Waste #5: Delays



Waste #5: Delays

Whenever process has to wait to proceed

Slide 16: Waste #6: Task Switching



Waste #6: Task Switching

Research proves "multitasking" is the enemy of all productivity!

Slide 17: Waste #7: Defects



Waste #7: Defects

Build quality in from the get-go!



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