

RISE8

TOGETHER, WE CREATE CONTINUOUS IMPACT

Software Dev Best
Practices



Agile

“Intelligence is the ability to adapt to change.”

-Stephen Hawking

Description

Culture that emphasizes individuals, interactions, working product, customer collaboration, and responding to change.

Need Indicators

- Inability to pivot with evolving needs
- Failure after long delivery times

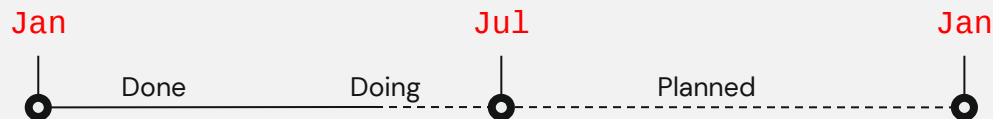
Resources

[Agile Manifesto](#)

[The Epic Guide to Agile](#) by Dave Todaro

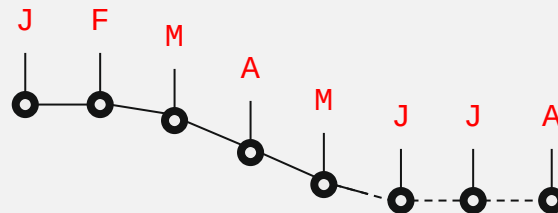
Waterfall

Long static plans, infrequent delivery, high risk



Agile

Short evolving plans, frequent delivery, low risk



Lean

"The most dangerous kind of waste is the waste we do not recognize."

-Shigeo Shingo

Description

Practice of maximizing efficiency
& reducing waste.

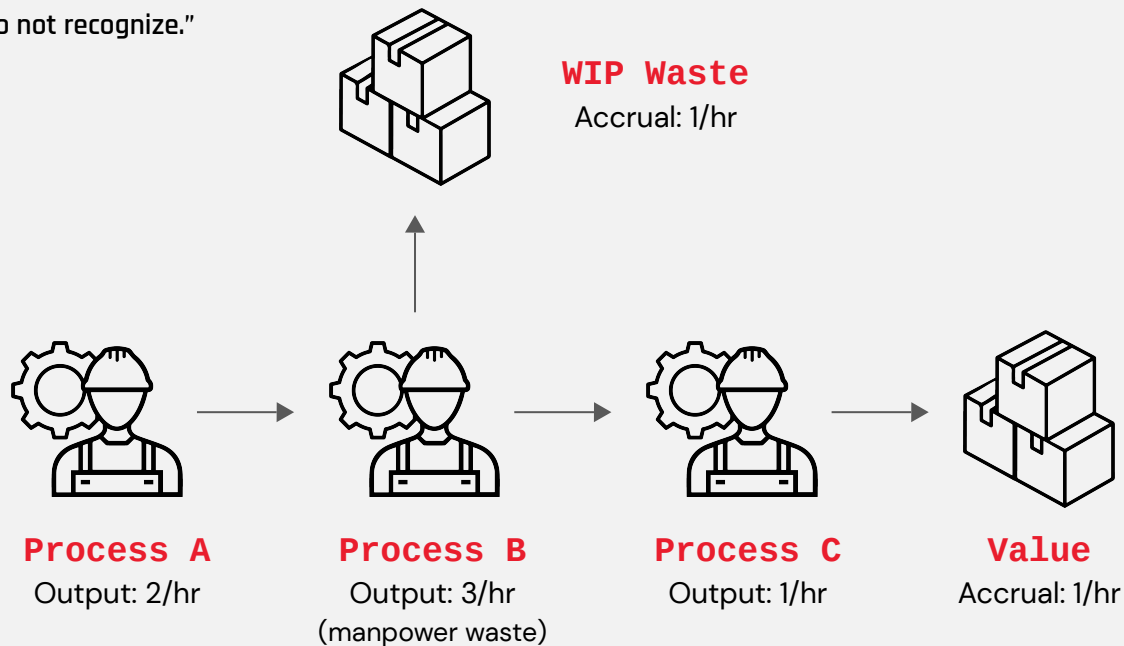
Need Indicators

- Production bottlenecks
- Long lead times
- Excessive waste (like inventory)

Resources

[The Lean Enterprise Institute](#)

[The 8 Wastes of Lean](#) by Nawras Skhmot



DevOps

“Alone we can do so little; together we can do so much.”

-Helen Keller

Description

Removal of barriers between 2 traditionally siloed teams (development & operations) to maximize delivery & reliability of products.

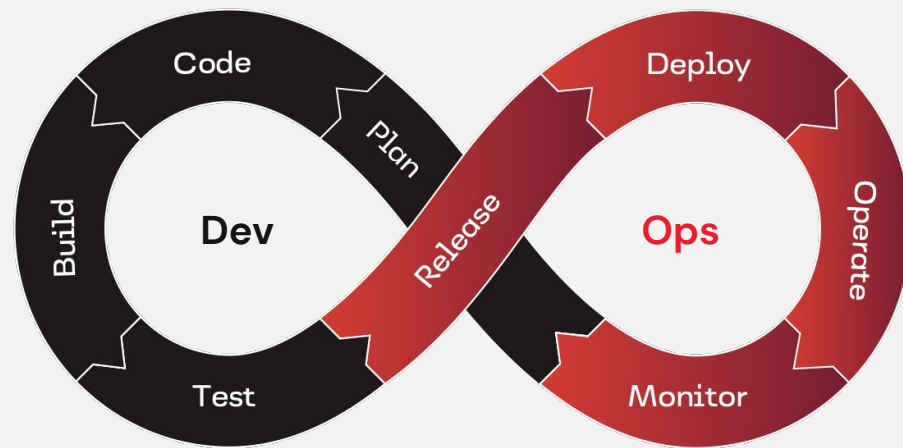
Need Indicators

- Unaligned teams (often pointing fingers)
- Issues with timelines, stability, and quality

Resources

[What is DevOps?](#) by Amazon Web Services

[The 5 Ideals of DevOps](#) by Gene Kim



Project Aristotle

“The whole is greater than the sum of its parts.”

-Aristotle

Description

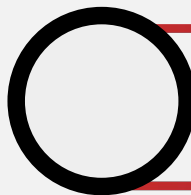
Google research project seeking to answer ‘What makes a team effective.’ Discovered 5 main factors (in order of importance): psychological safety, dependability, structure/clarity, meaning, & impact.

Need Indicators

- Low performing teams
- Lack of collaboration
- Low employee happiness or retainability

Resources

[Guide: Understand Team Effectiveness](#) by re:Work
[What Google Learned From Its Quest to Build the Perfect Team](#) by Charles Duhigg

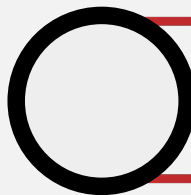
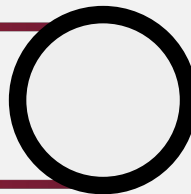


Psychological Safety

Team members feel safe to take risks and be vulnerable in front of each other.

Dependability

Team members get things done on time and meet Google's high bar of excellence.

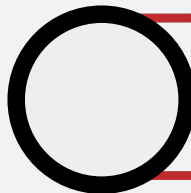
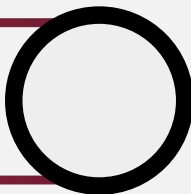


Structure & Clarity

Team members have clear roles, plans, and goals.

Meaning

Work is personally important to team members.



Impact

Team members think their work matters and creates change.

Double Diamond Design Framework

“Design is not just what it looks like and feels like. Design is how it works.”

-Steve Jobs

Description

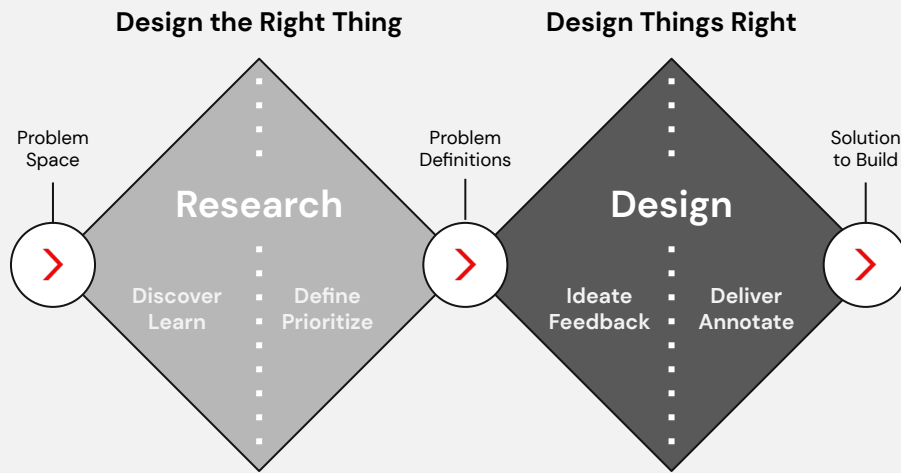
Repeatable process for identifying which problems to solve and how to best solve them.

Need Indicators

- Teams aren't solving the most valuable user/business problems
- Solutions are ineffective or inefficient
- Users frequently complain about solutions

Resources

[What is the Double Diamond Design Process?](#) by Jeff Humble



User Centered Design

"If I had asked people what they wanted, they would have said faster horses."

-Henry Ford

Description

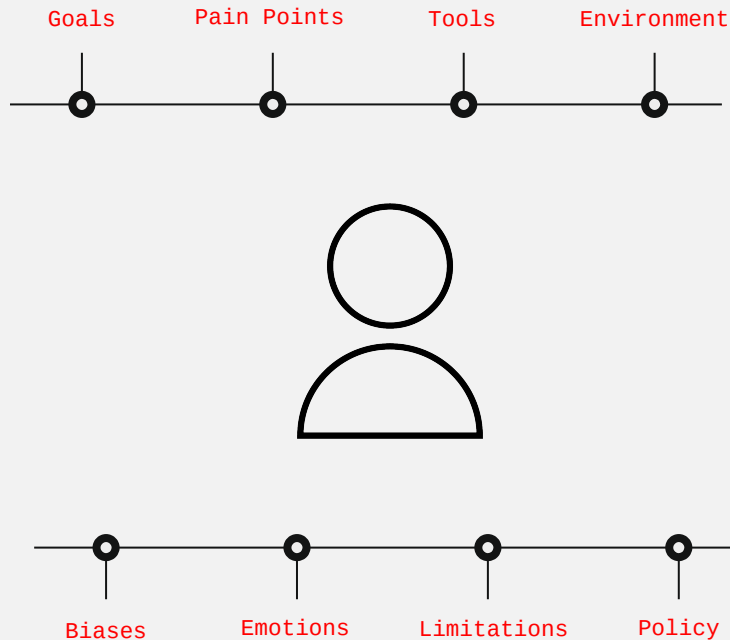
Iterative design process focusing on the holistic needs of the users in each step of the process.

Need Indicators

- Teams aren't involving users in design
- Teams are building user/business wants without analyzing the needs
- Product & design decisions aren't data driven

Resources

[A Survey of User-Centered Design Practice](#) by Vredenburg, Mao, Smith, & Carey



Continuous Integration

"The earlier you catch defects, the cheaper they are to fix."

-David Farley

Description

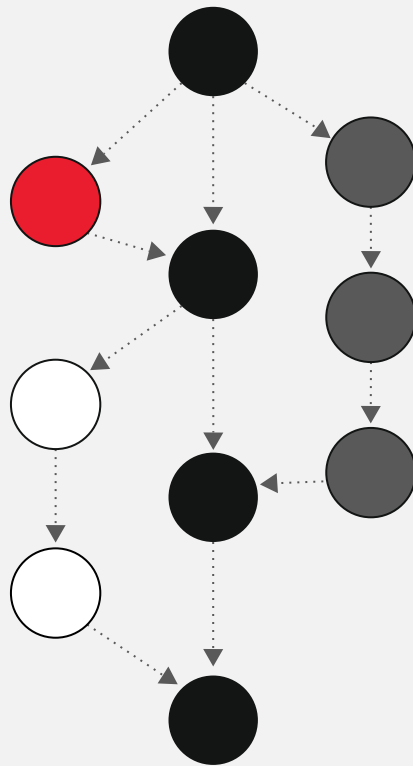
Practice of testing then merging changes to the main code repository, often.

Need Indicators

- Large merges causing consistent conflicts, issues, or breaking changes
- Excessive time wasted handling merge conflicts, issues, or breaking changes

Resources

[Continuous Integration](#) by Martin Fowler



Continuous Delivery

"I wanna go fast."

-Ricky Bobby

Description

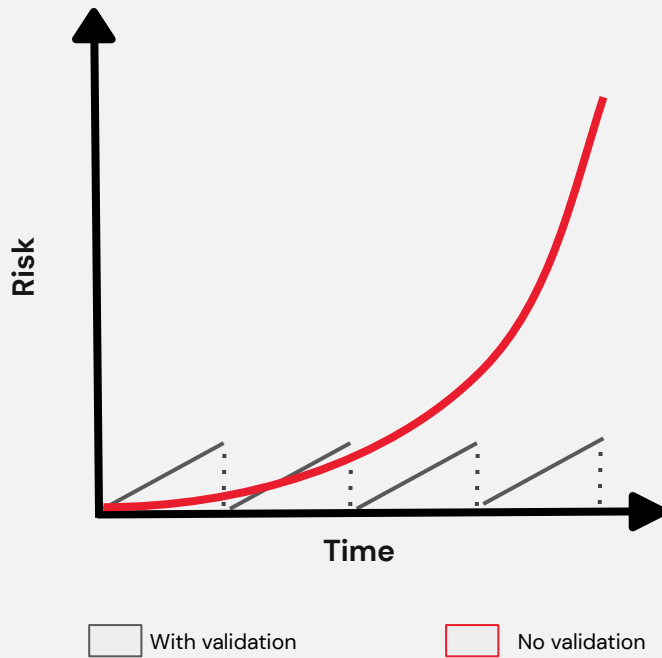
Practice of leveraging automation to deliver value to customers in small, secure, reliable increments, often.

Need Indicators

- Failure after long delivery times
- Infrequent validation loops
- Users & business distrust app in prod
- High change lead times (DORA metric)

Resources

[Continuous Delivery](#) by Jez Humble & David Farley
continuousdelivery.com



Test Driven Development

“Write tests until fear is transformed into boredom.”

-Kent Beck

Description

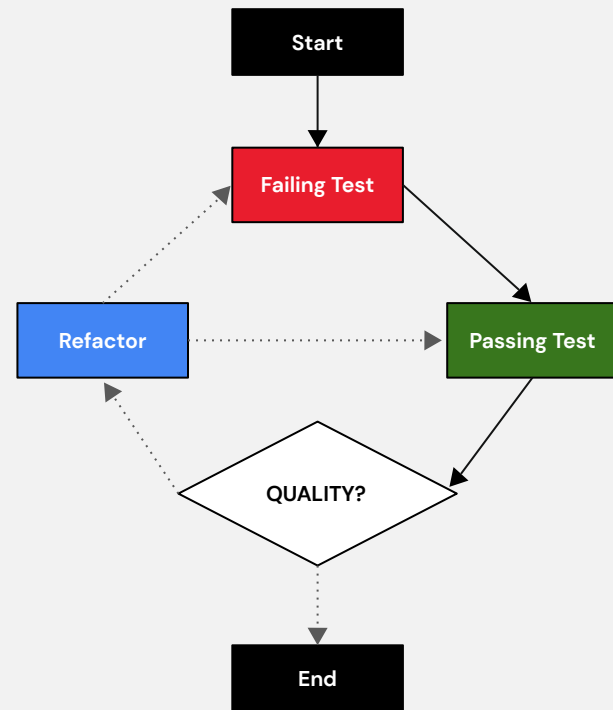
The practice of writing minimum testable success/fail criteria before minimum functional code.

Need Indicators

- Teams overcomplicate solutions
- Teams struggle with solution design
- Quality issues with modularity, flexibility, and extensibility
- Bugs frequently caught by users not test suite

Resources

[TDD – Clean Code: Fundamentals](#) by Robert ‘Uncle Bob’ Martin



Paired Programming

“Two heads are better than one, not because either is infallible, but because they are unlikely to go wrong in the same direction.”

-C.S. Lewis

Description

The practice of working in pairs, with the roles of ‘driver’ and ‘navigator’, switching often, on a singular task or workstation.

Need Indicators

- Worker skills are siloed (‘Only John can do X’)
- Lack of shared codebase ownership/knowledge
- Workers often get stuck for long periods of time
- Unhappy workers

Resources

[On Pair Programming](#) by Martin Fowler



Want To
Pair With Us?

