Introduction to DevOps

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Disclaimer

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About Me - Missy Januszko

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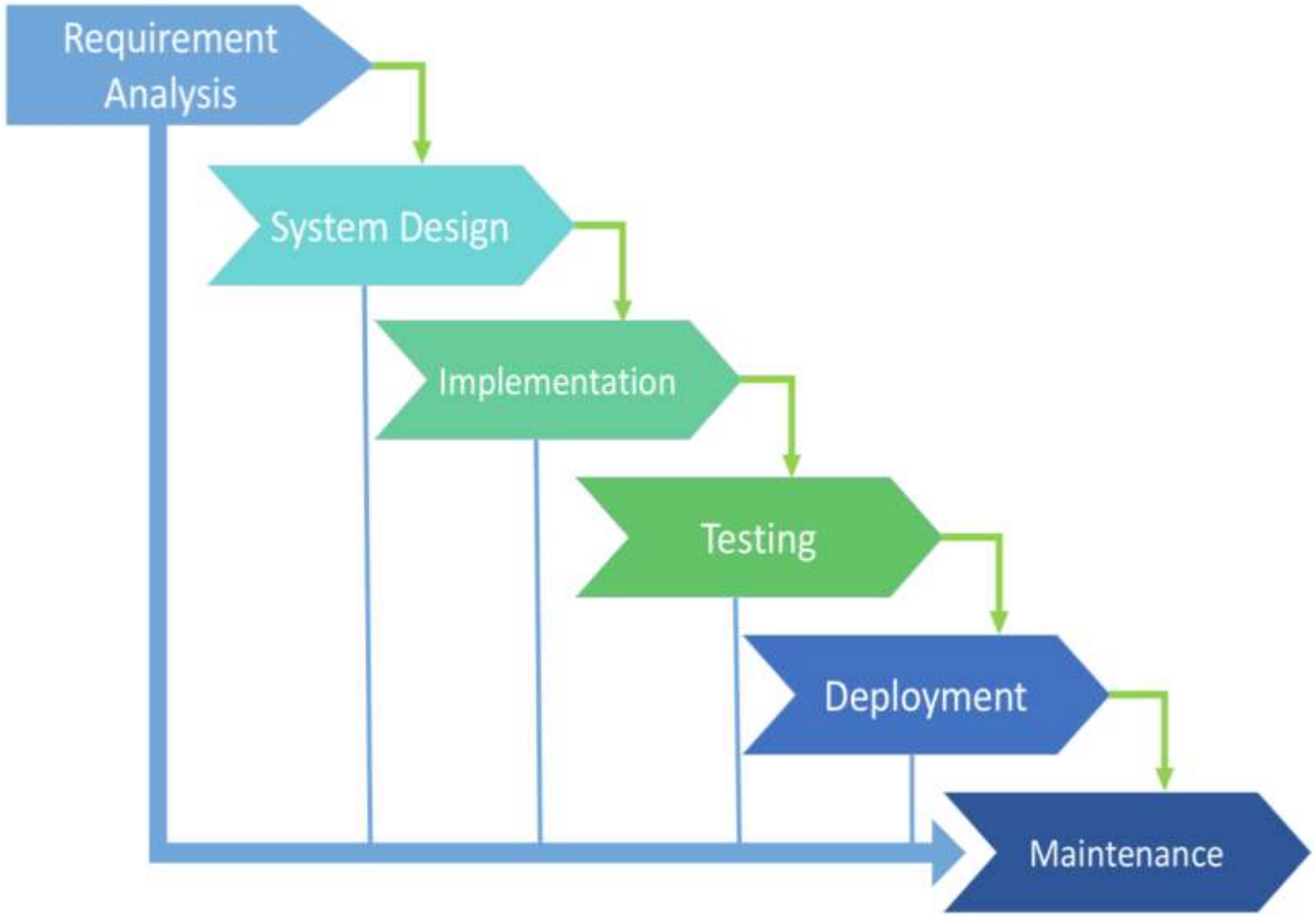
Software Development Lifecycles

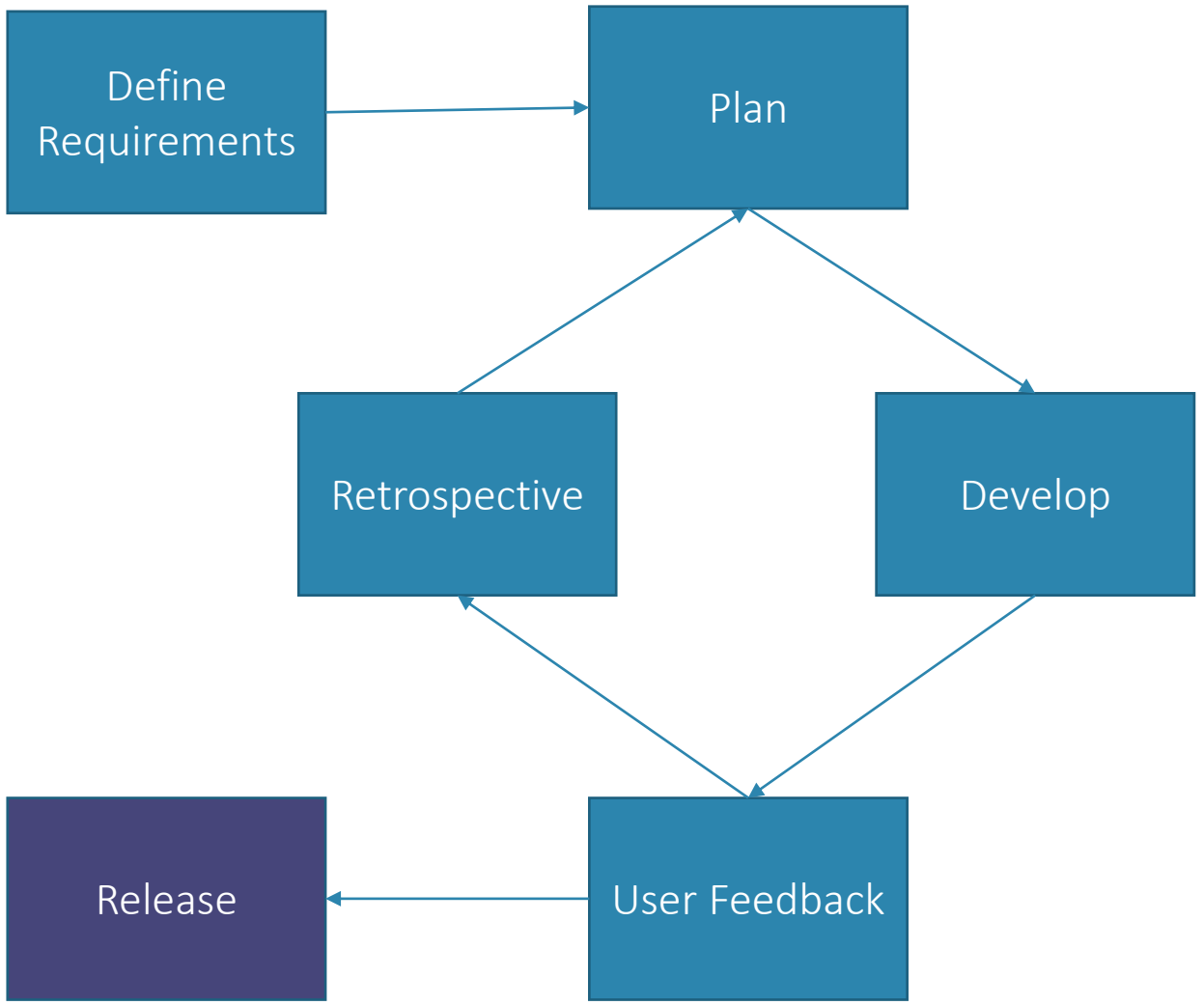
Waterfall SDLC

- Benefits:
  - Requirements do not change
  - Detailed documentation at every step
- Disadvantages:
  - Timeframe
  - Is what you built what the customer wanted?



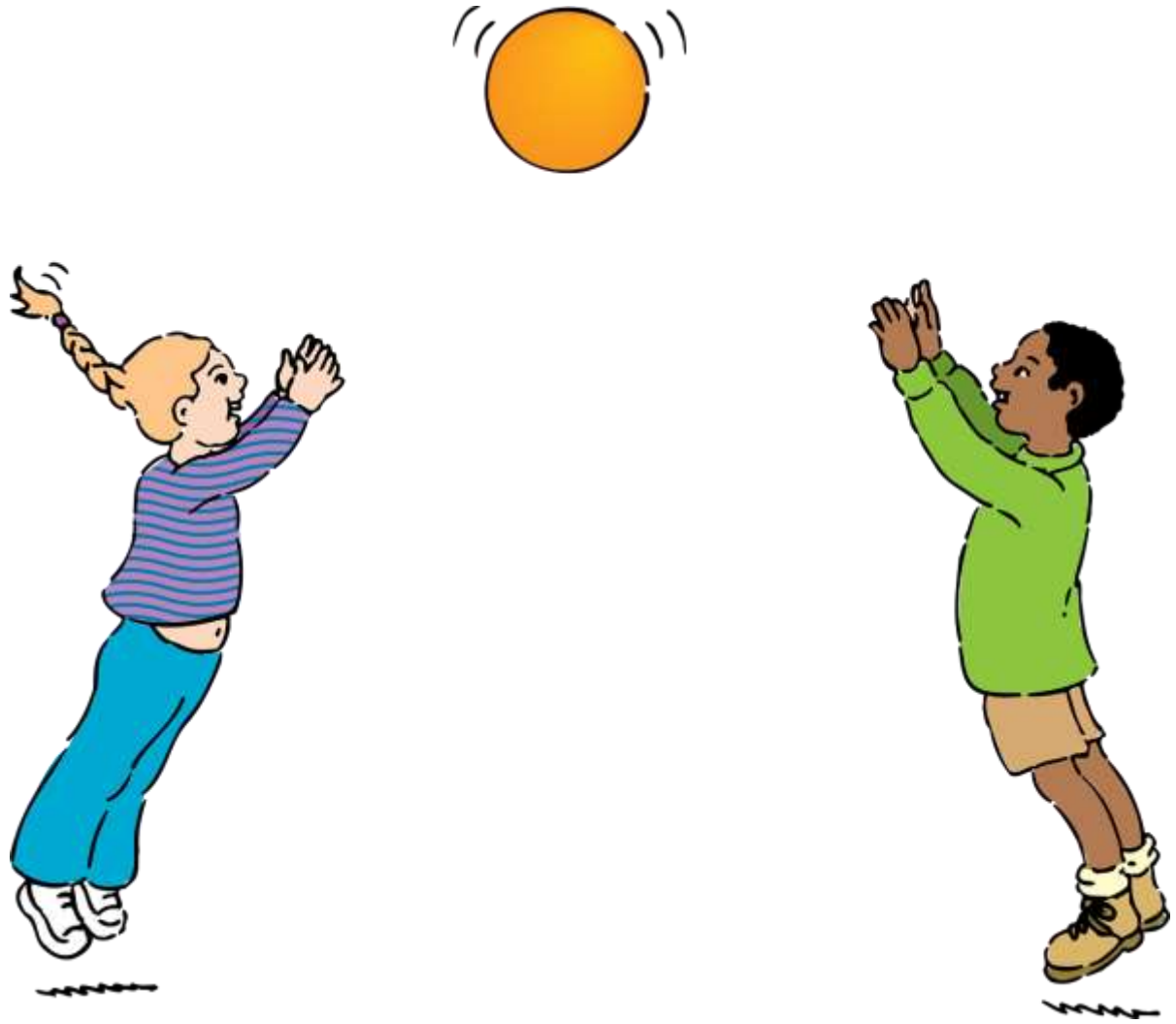
Agile Software Development

- Benefits:
  - Very short cycles
  - Little “sunken fallacy” cost
  - Incorporates user feedback
- Disadvantages:
  - Can be harder to estimate
  - No “design” phase
  - Greater demands on clients
  - Little to no documentation



Software Release – Waterfall Method

- Separate ops team tasked with running the software
- If something didn't work as expected, whose responsibility was it?

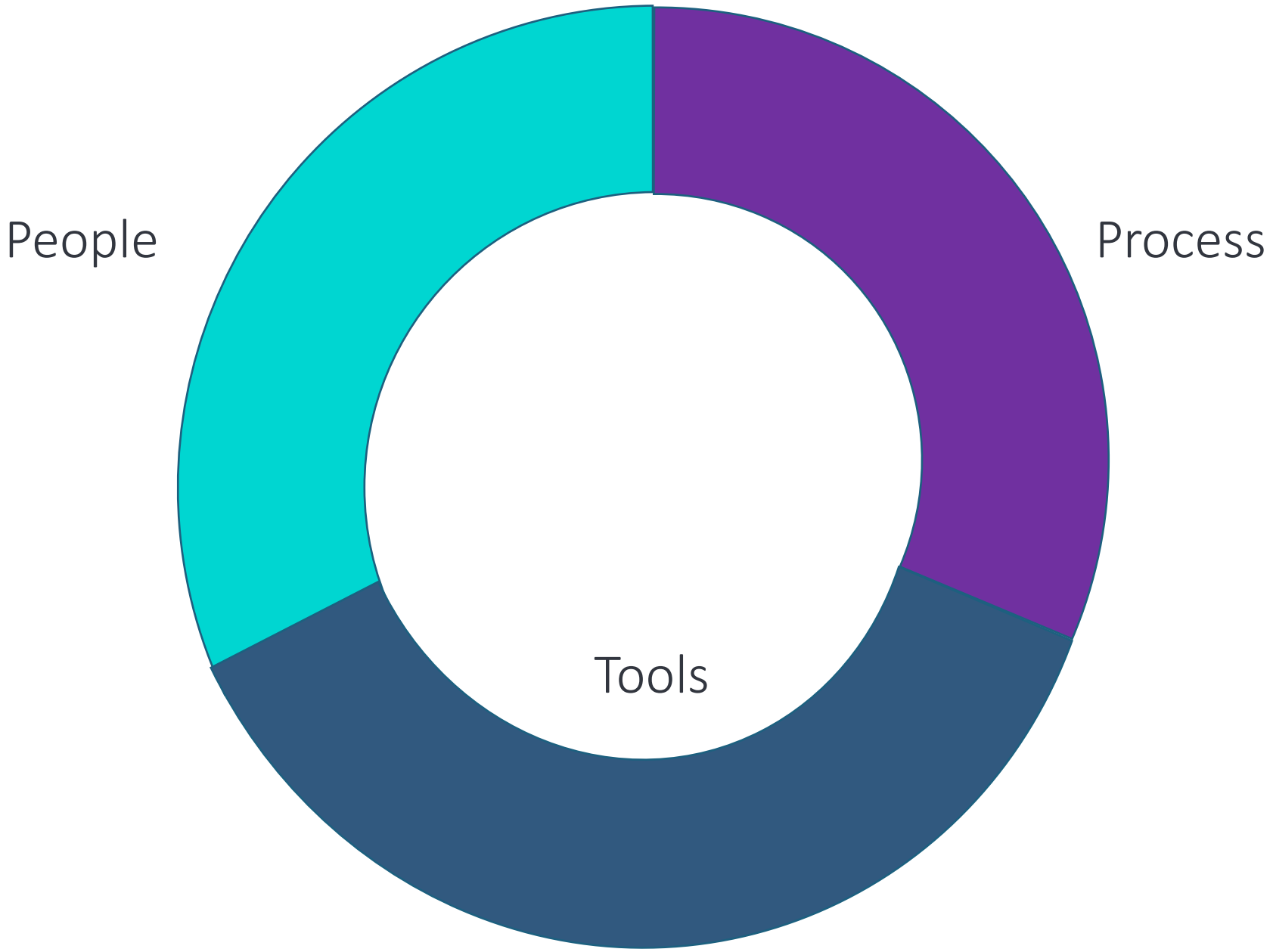


Software Release – Agile Method

- Faster Releases
- What happens to Ops?

Introducing DevOps

The DevOps Paradigm



People – an Organizational Culture Shift

- Dev and Ops on same team = Closer collaboration
- Shared responsibilities and goals
- Makes operational requirements as important as design and development

- Employees have a connection to what they are building
- Higher levels of IT performance = job satisfaction
- Autonomous teams with fast feedback

Processes – The Release Pipeline Model

Source – Track who changed what and when

Build – Can elements be combined cleanly to produce the correct results?

Test - How do I know this change will work?

Release – How do I keep services consistent throughout my environment?

Measuring of Key DevOps Metrics

Rate of Deployment

Lead Time To Change (LTTC)

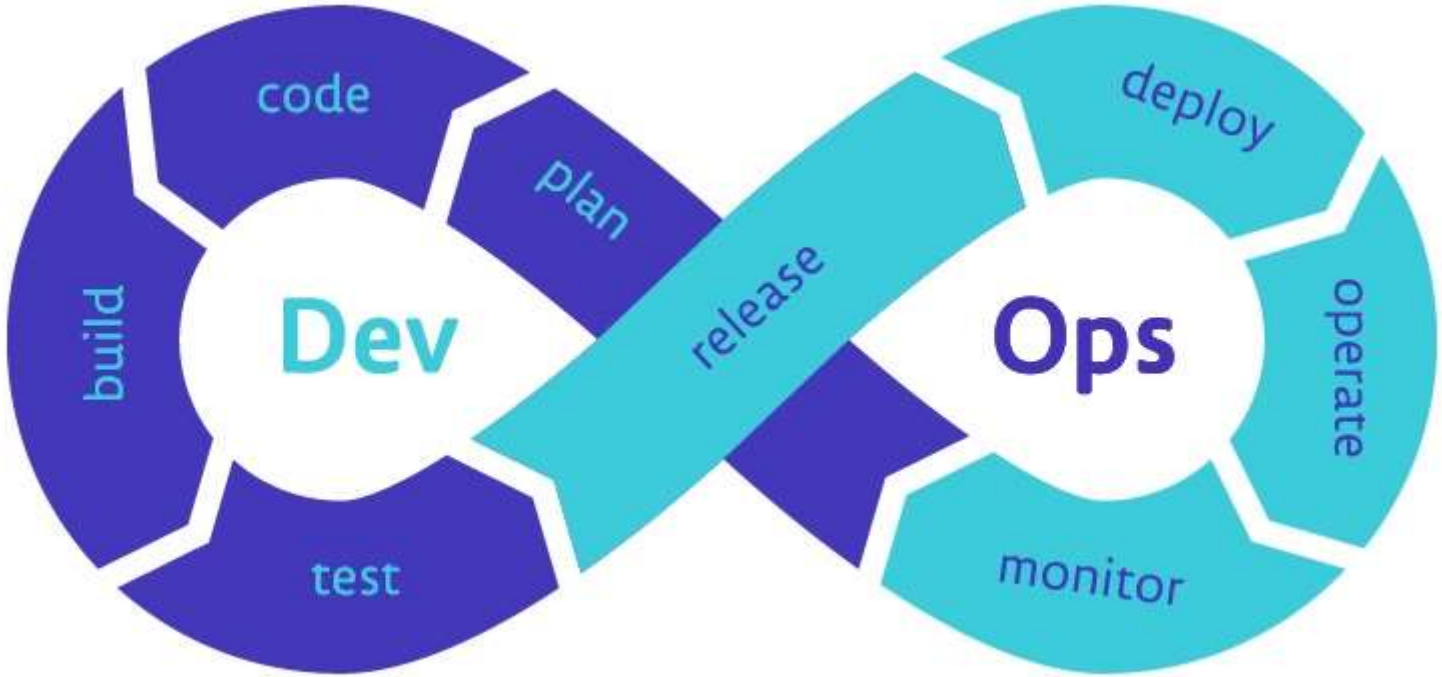
Change Failure Rate

Mean Time to Recovery (MTTR)

Tools: Automate to go Faster

- Source
- Build
- Test
- Release
- Measure

DevOps Software Development Lifecycle



Benefits

- Speeds up delivery
- Includes security, and reliability
- Improves business outcomes
- Deploy 200 times more frequently
- Better employee loyalty
- Less time on unplanned work
- Less time on rework
- Makes it ok to experiment

Blockers

- Culture
- Resistance to change
- Legacy architecture
- Shortage of skills
- Lack of automation
- Unclear goals and objectives

References

- The Phoenix Project
- The DevOps Handbook
- State of DevOps Report 2021 | Puppet
- The Release Pipeline Whitepaper
- Continuous Delivery
- Accelerate

Questions?