Introducing DevOps

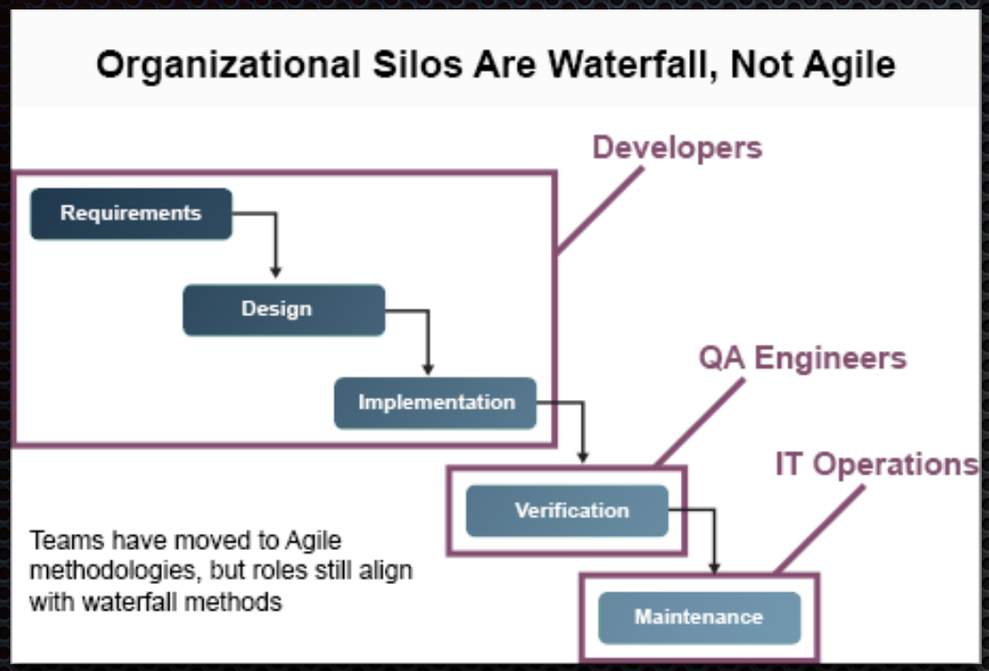
Why DevOps?

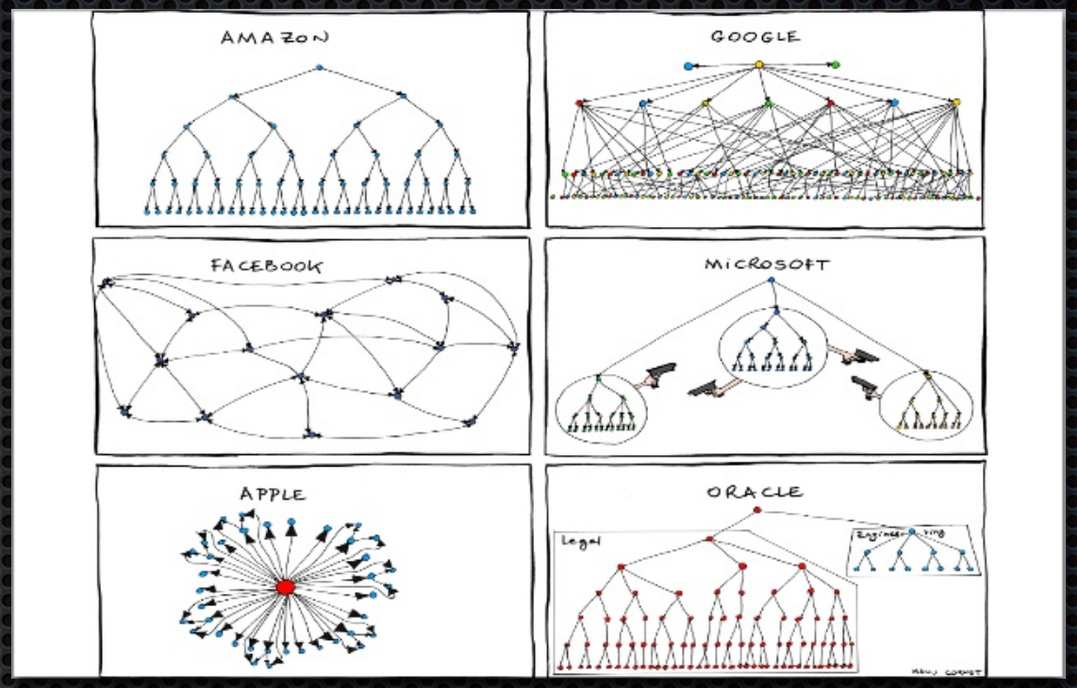
What is DevOps?

Conway's Law

- Organizations which design systems .... are constrained to produce designs which are copies of the communication structures of these organizations.

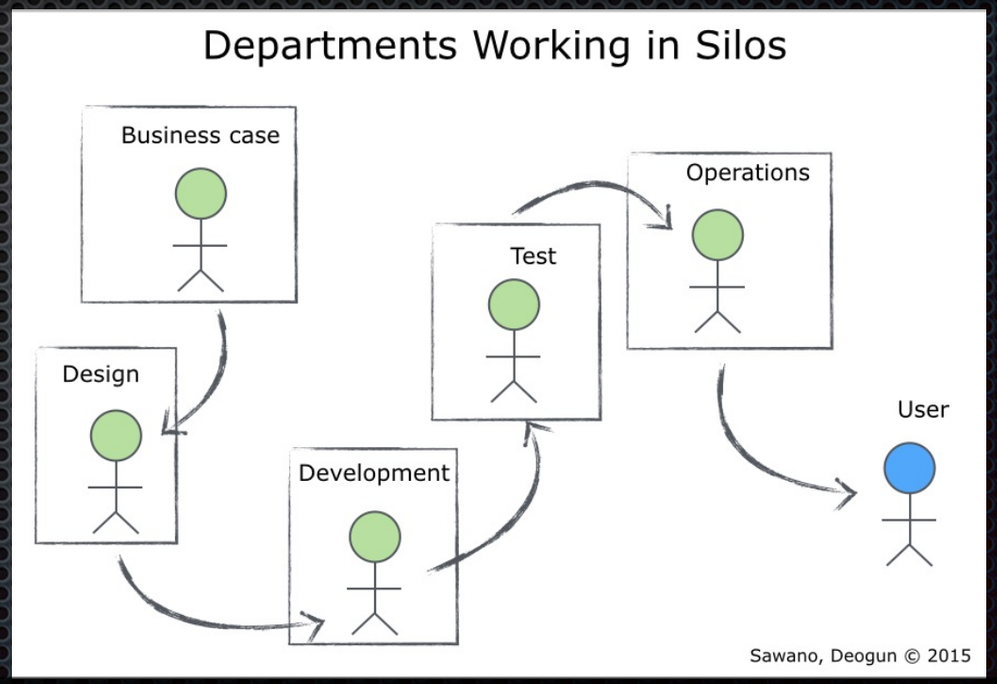
- It was ok for mass production, or industrial machinery.
- Changing requirements, fluid business goals are motivation for changing approach in Software Development.
- Distributed teams tend to develop more modular products.





Constantly changing requirements need new approach.

AGILE!?



What is Agile?

- Incremental vs Waterfall approach.
- Cooperation.
- Goals oriented.
- Continuous attention to technical excellence.
- Self-organizing teams.
- Reflections on how to become more effective.

Towards DevOps

- Addressing Delivery Challenges.
- Developers approach to Operations.
- Automate everything. SRE story in Google.

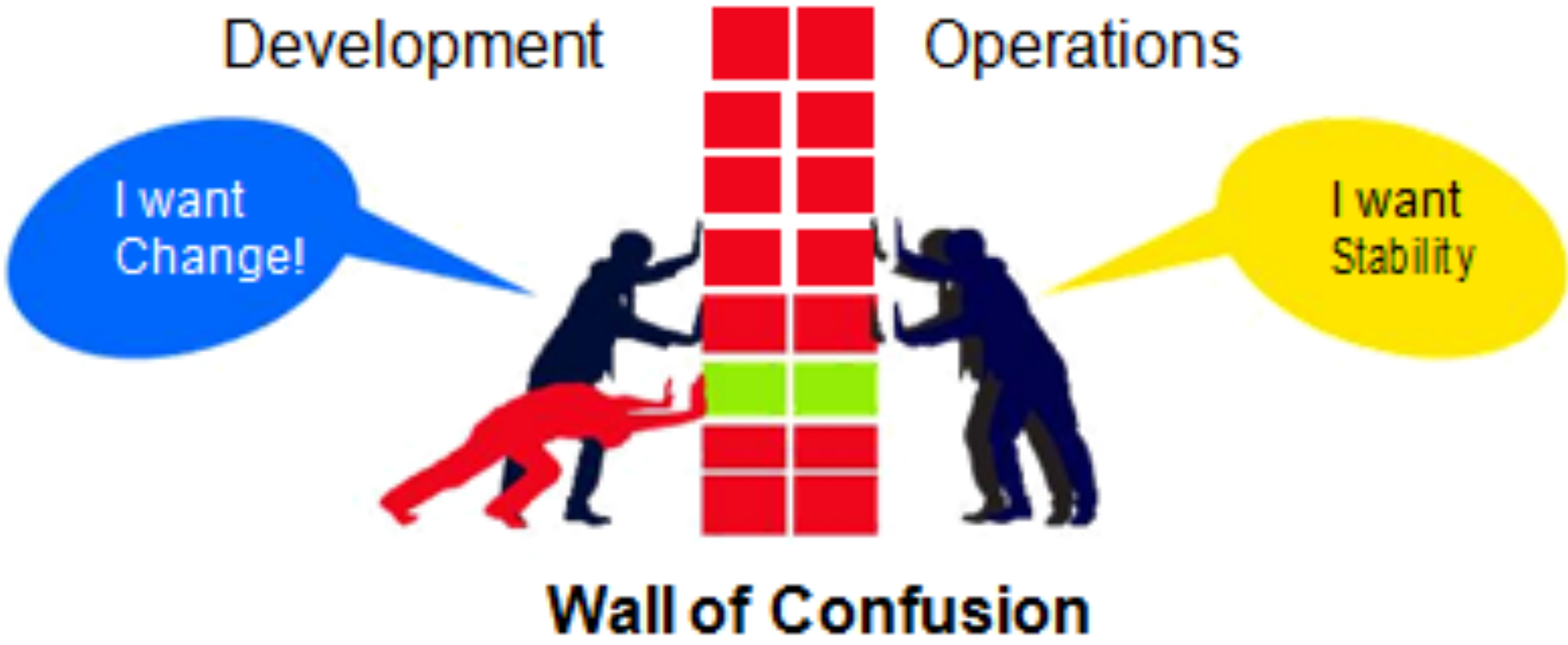
What is DevOps?

- DevOps is the practice of operations and development engineers participating together in the entire service lifecycle, from design through the development process to production support.

- DevOps is also characterized by operations staff making use many of the same techniques as developers for their systems work.

Why DevOps?

- Dev motivation to make and delivery changes.
- Ops motivation to keep things stable.
- Inevitable conflict between.


Development
Operations
I want
Change!
I want
Stability
Wall of Confusion

Principles of DevOps

- **Culture** - People and process first. If you don't have culture, all automation attempts will be fruitless.
- **Automation** - At this point, the tools can start to stitch together an automation fabric for DevOps. Tools for release management, provisioning, configuration management, systems integration, monitoring and control, and orchestration become important pieces in building a DevOps fabric.
- **Measurement** - If you can't measure, you can't improve. A successful DevOps implementation will measure everything it can as often as it can… performance metrics, process metrics, and even people metrics.
- **Sharing** - Creating a culture where people share ideas and problems is critical.

What is not....

- DevOps is not a plan, it’s a reaction
- DevOps is not just a bunch of really smart people
- DevOps is not a product
- DevOps is not a run around traditional IT
- It is not everything.

Main practices

- **Infrastructure Automation** – create your systems, OS configs, and app deployments as code.
- **Continuous Delivery** – build, test, deploy your apps in a fast and automated manner.
- **Site Reliability Engineering** – operate your systems; monitoring and orchestration, sure, but also designing for operability in the first place.


BEING A
DEVOPS
ENGINEER
IS EASY
IT'S LIKE RIDING A BIKE
EXCEPT THE BIKE
IS ON FIRE
AND YOU'RE ON FIRE
AND EVERYTHING IS ON FIRE
AND YOU'RE IN HELL