Continuous Integration

CS480 Software Engineering

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Recap

Collect the Requirements

- Make it faster
- Private browsing mode
- Reading mode
- Trending web pages
- Easy to share/save pages
- Cooler UI
- … …

Prioritize and Finalize the Features

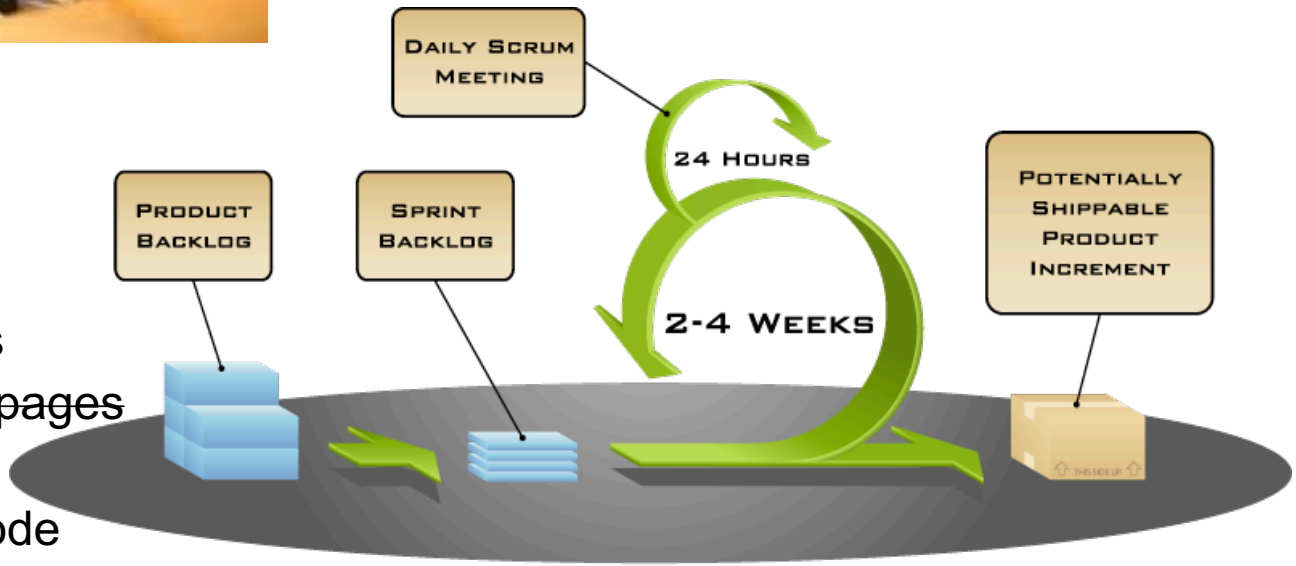
Team Meeting (Business)

- Make it faster
- Reading mode
- Trending web pages
- ~~Easy to share/save pages~~
- Cooler UI
- Private browsing mode
- … …

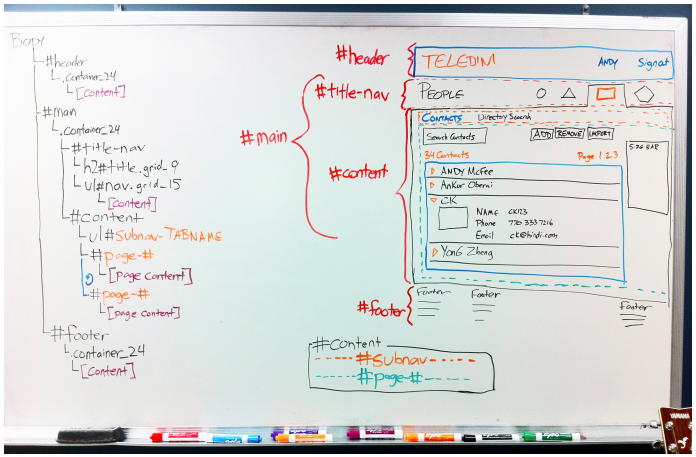
Dev Planning Meeting

Agile Development

- Make it faster
- Reading mode
- Trending web pages
- ~~Easy to share/save pages~~
- Cooler UI
- Private browsing mode
- … …

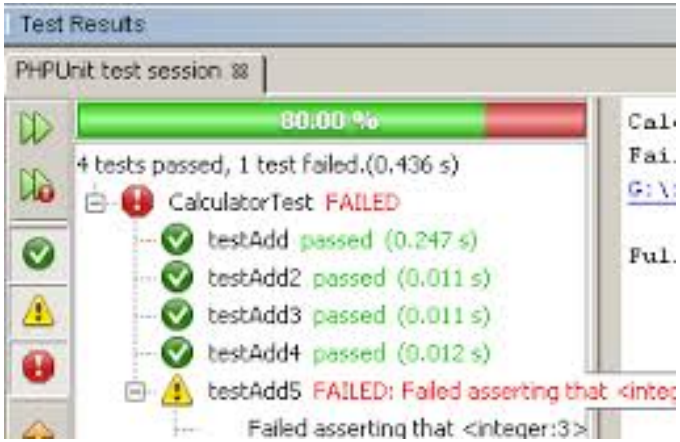


Make the Change

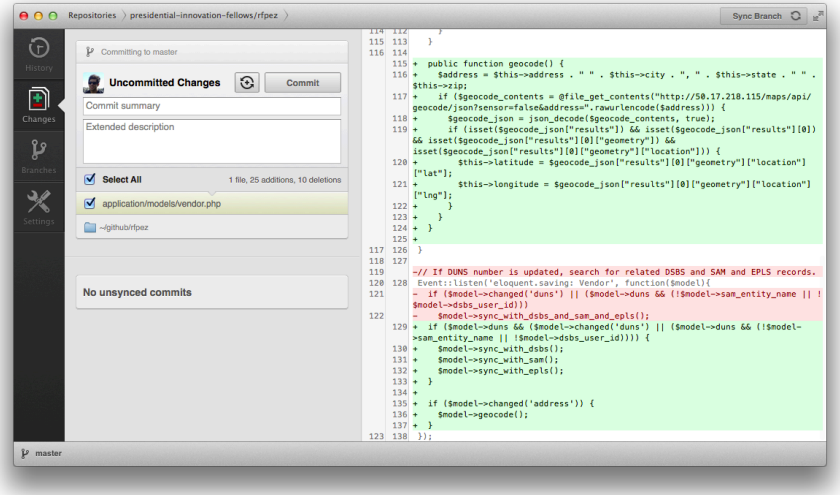


- Design

- Implementation



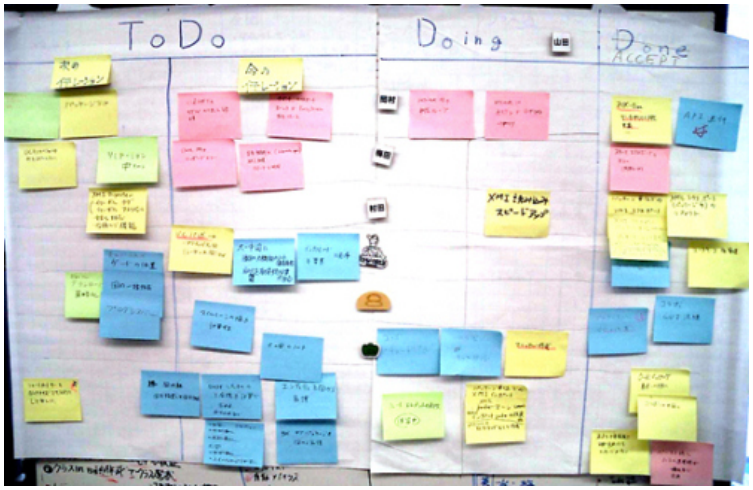
- Testing



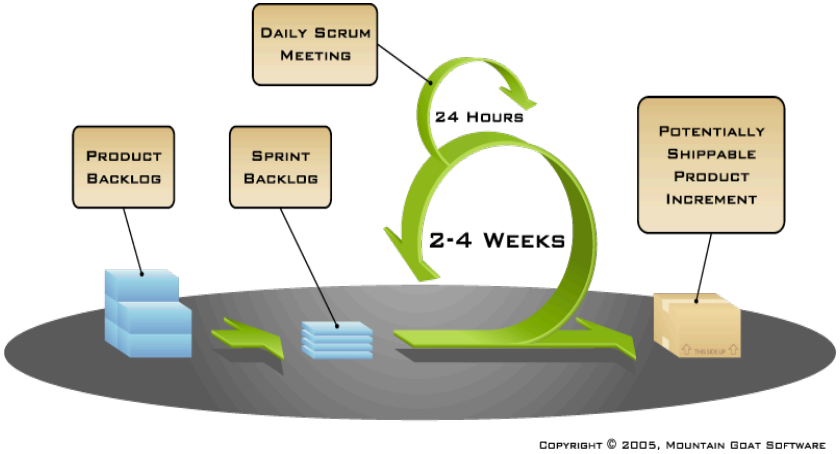
- Code Review

Build & Deployment

Track the Development Progress

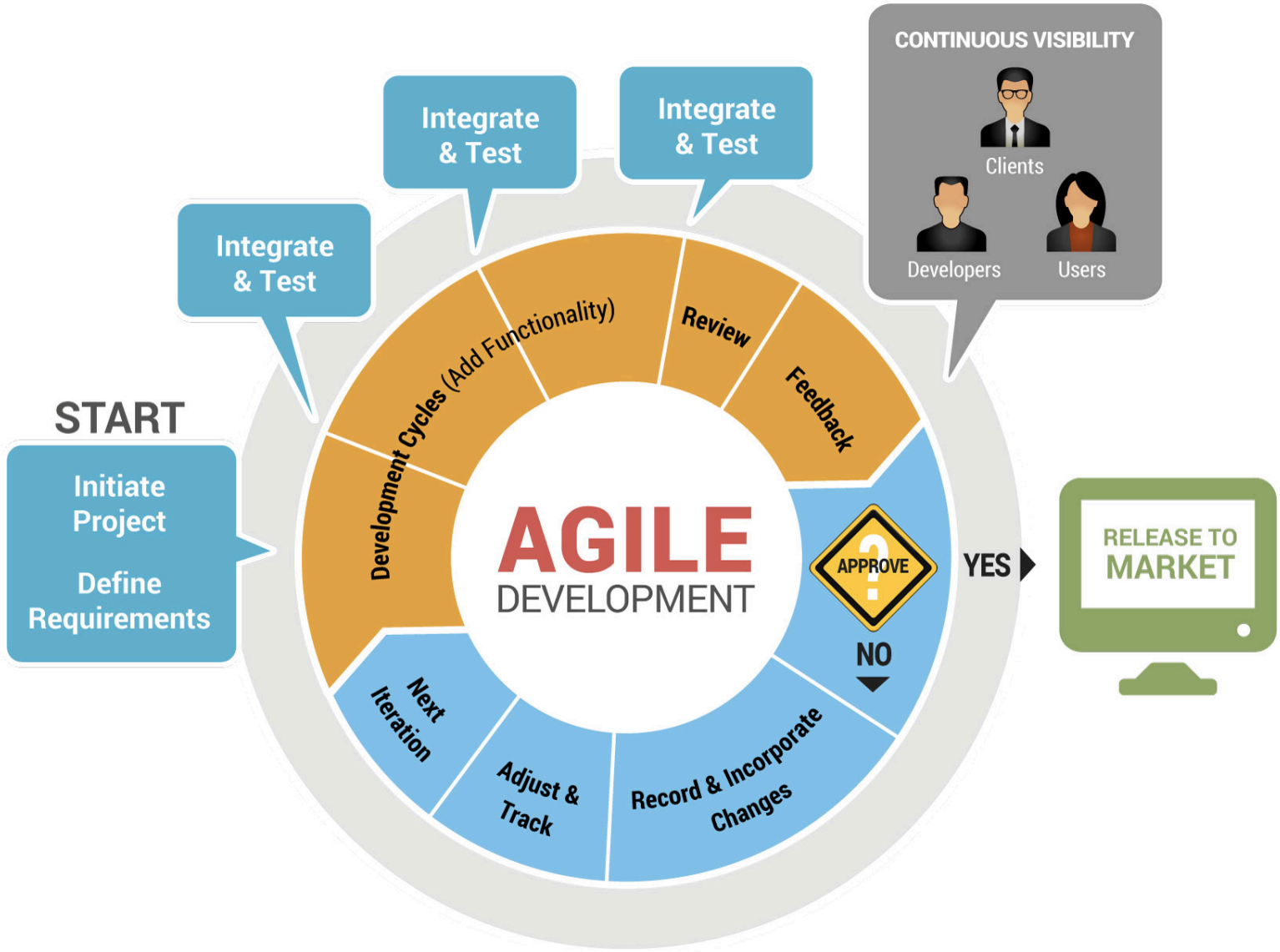


- Daily Scrum

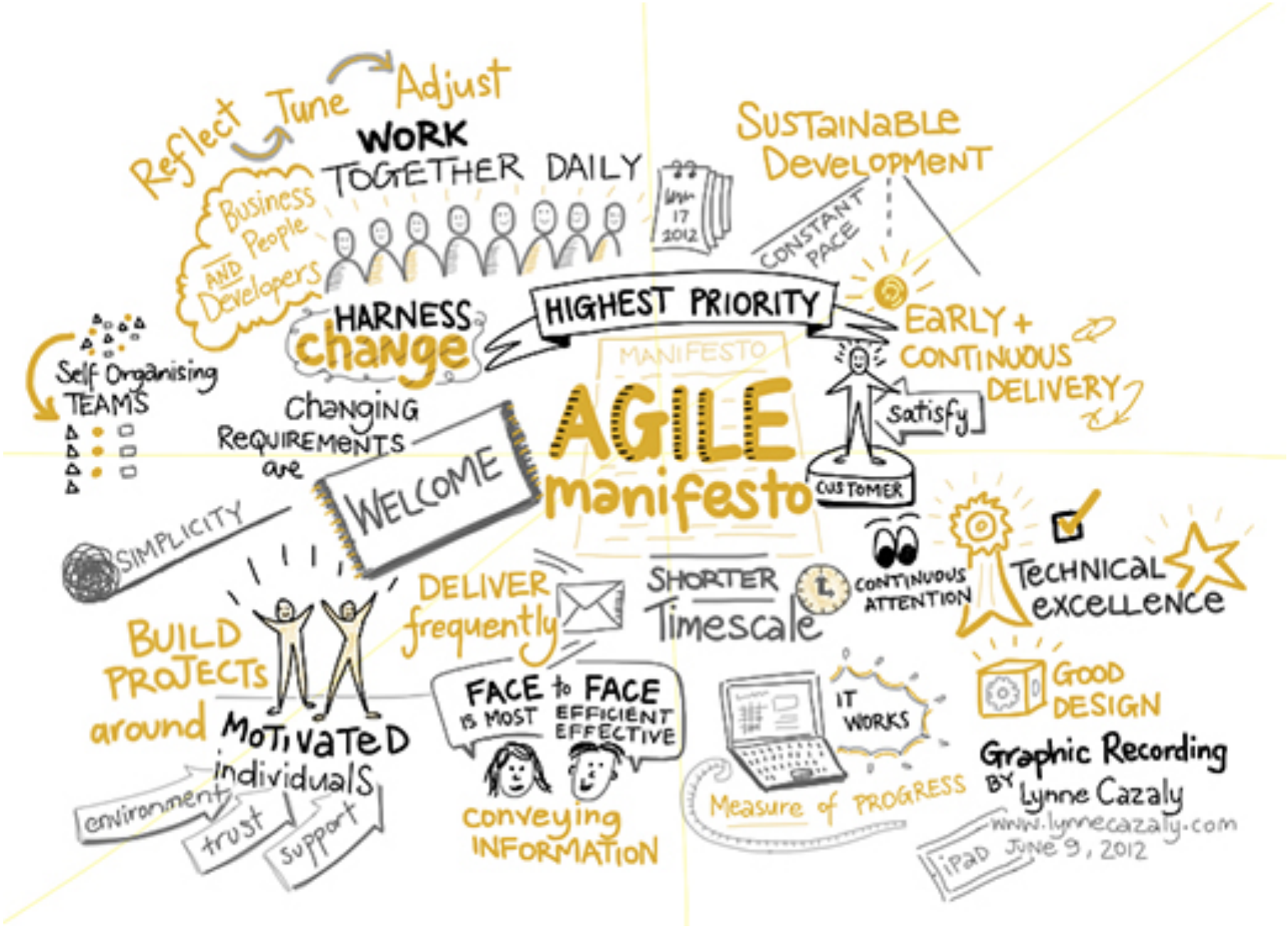


- Sprint Meeting

Agile Development



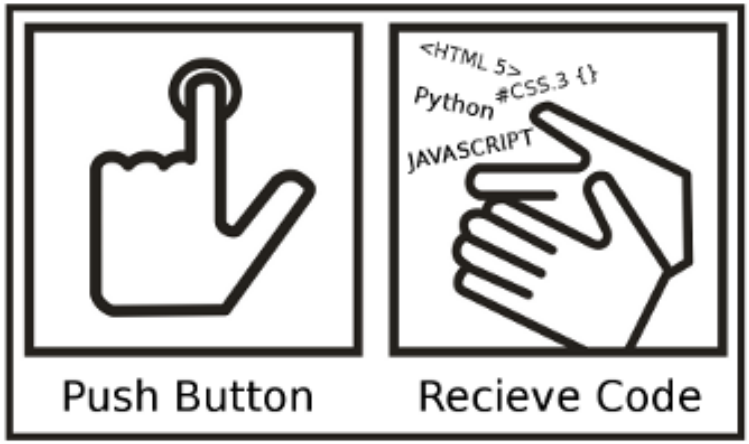
Agile Development

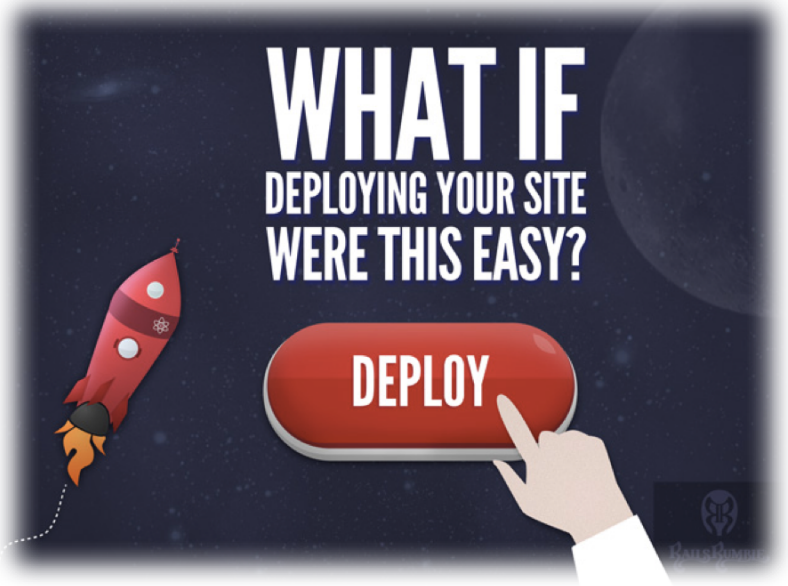


Agile is NOT Trivial

How to Ensure Quality?

How to Ensure Fast Deployment?





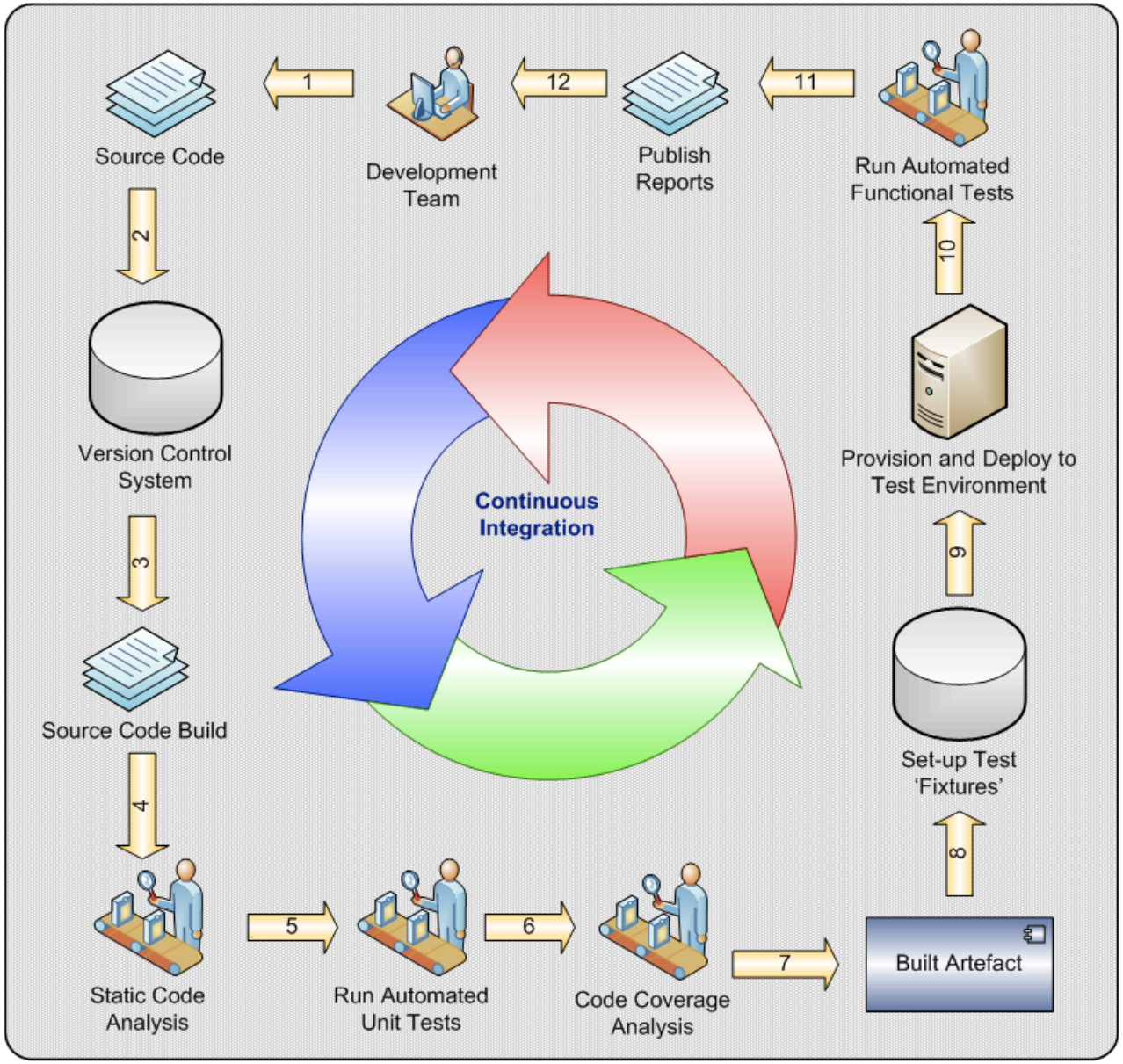
How to Manage Cycles in Large-Scale?

Amazon's deployment service (Apollo)

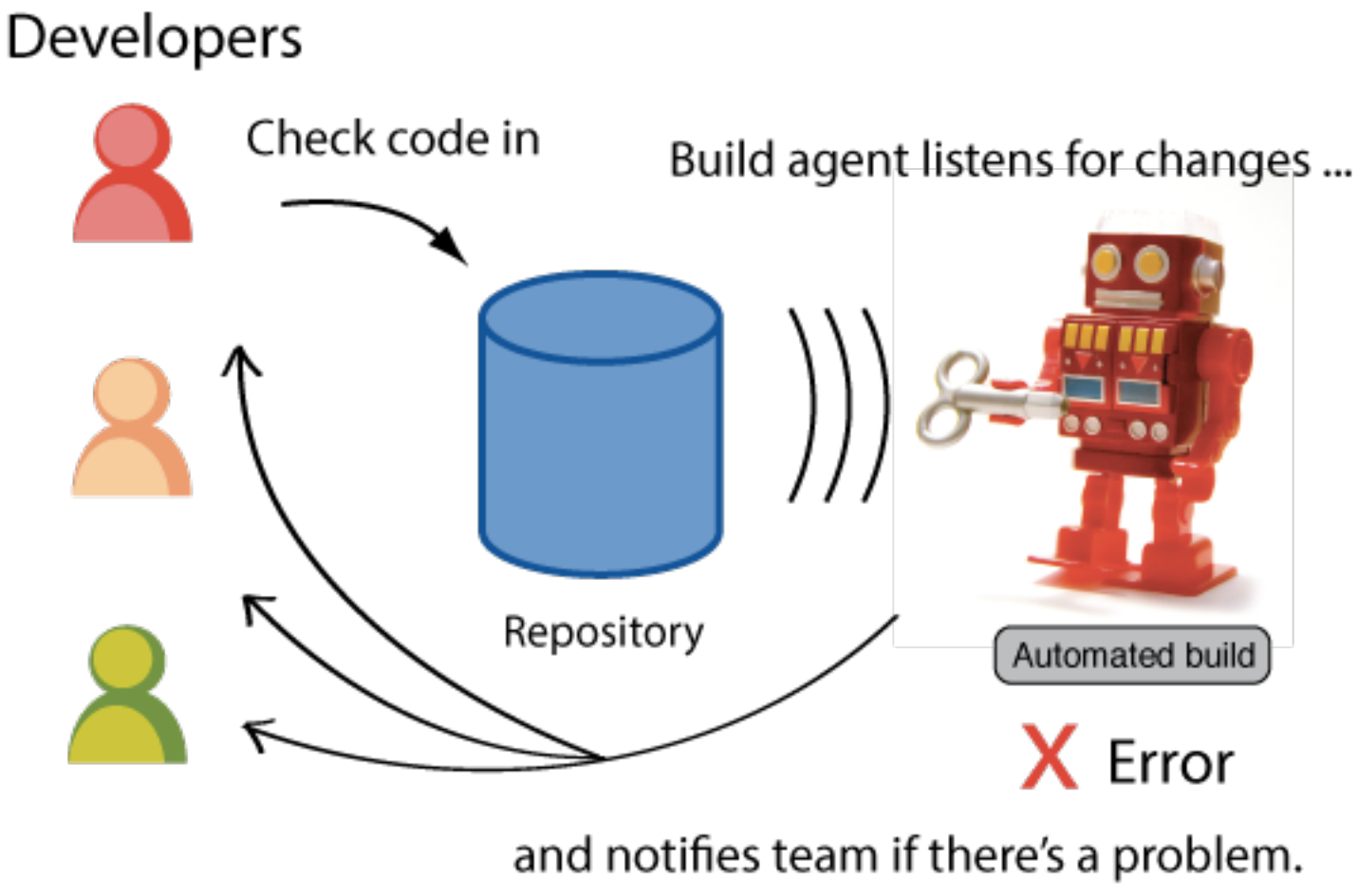
Pushed **50 million** deployments in the last 12 months

(95 every minute)

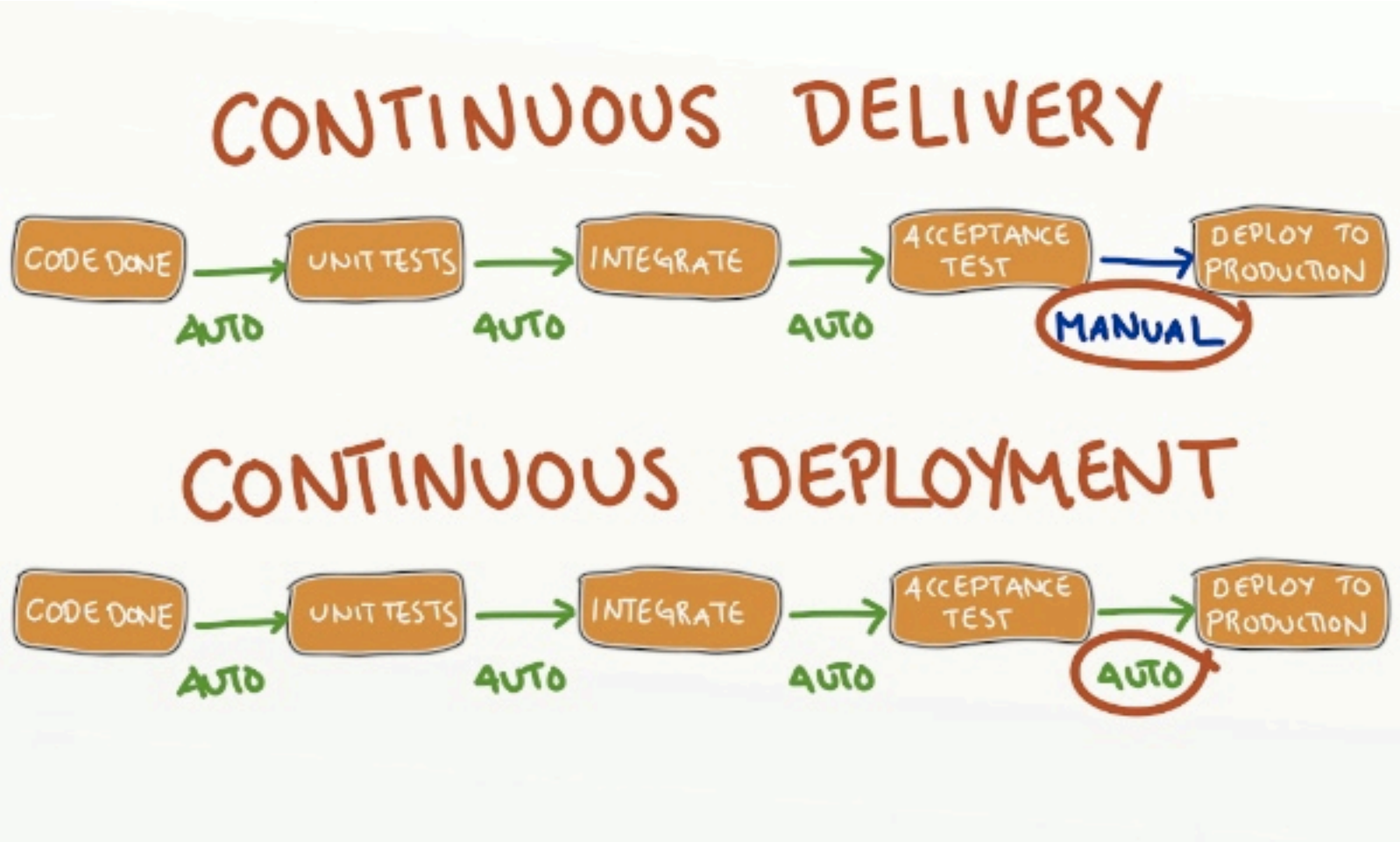
Continuous Integration (CI)



Automated Build and Testing

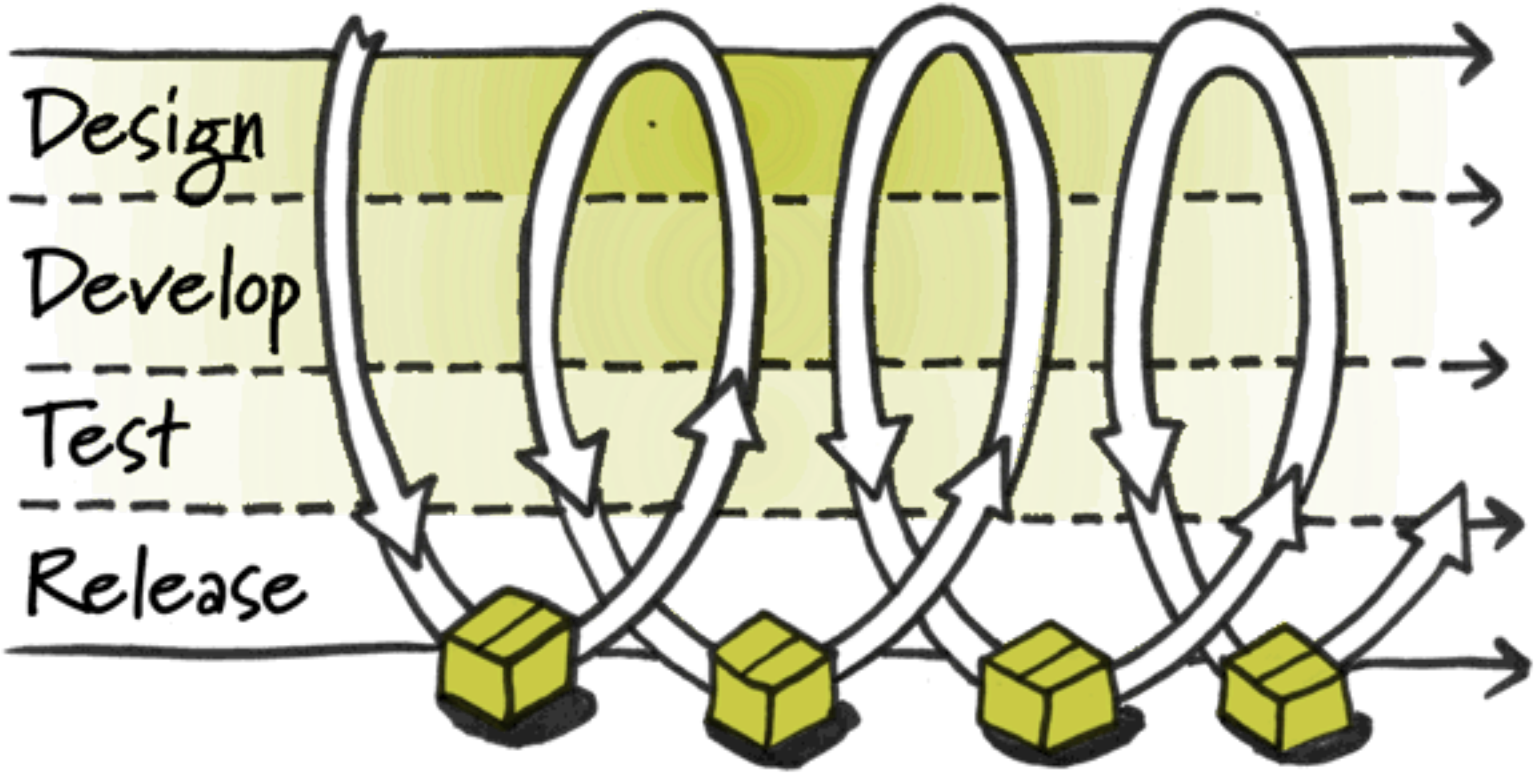


Automated Deployment



Centralized Management

Goal of Continuous Integration



Jenkins Demo