

---

# DevOps

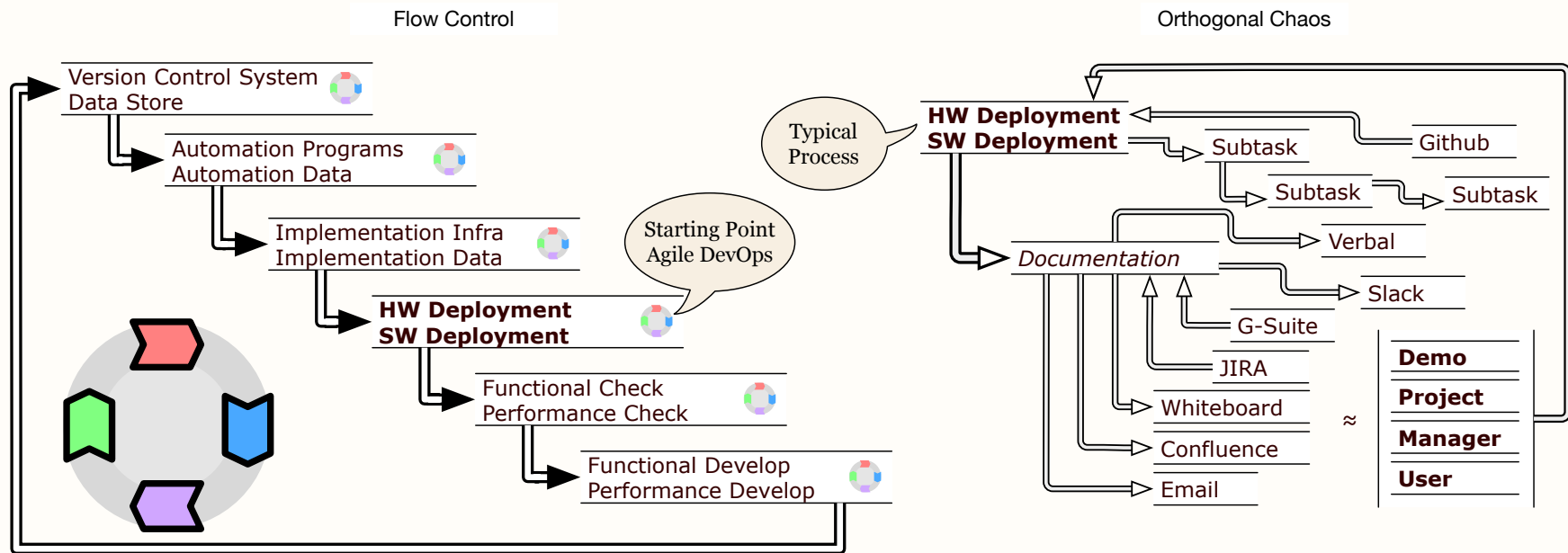
Ordinance: **Rapid Resource Implementation**

Problem: **Data, Provision, Instantiation,  
Management, Geometric Scaling Delay**

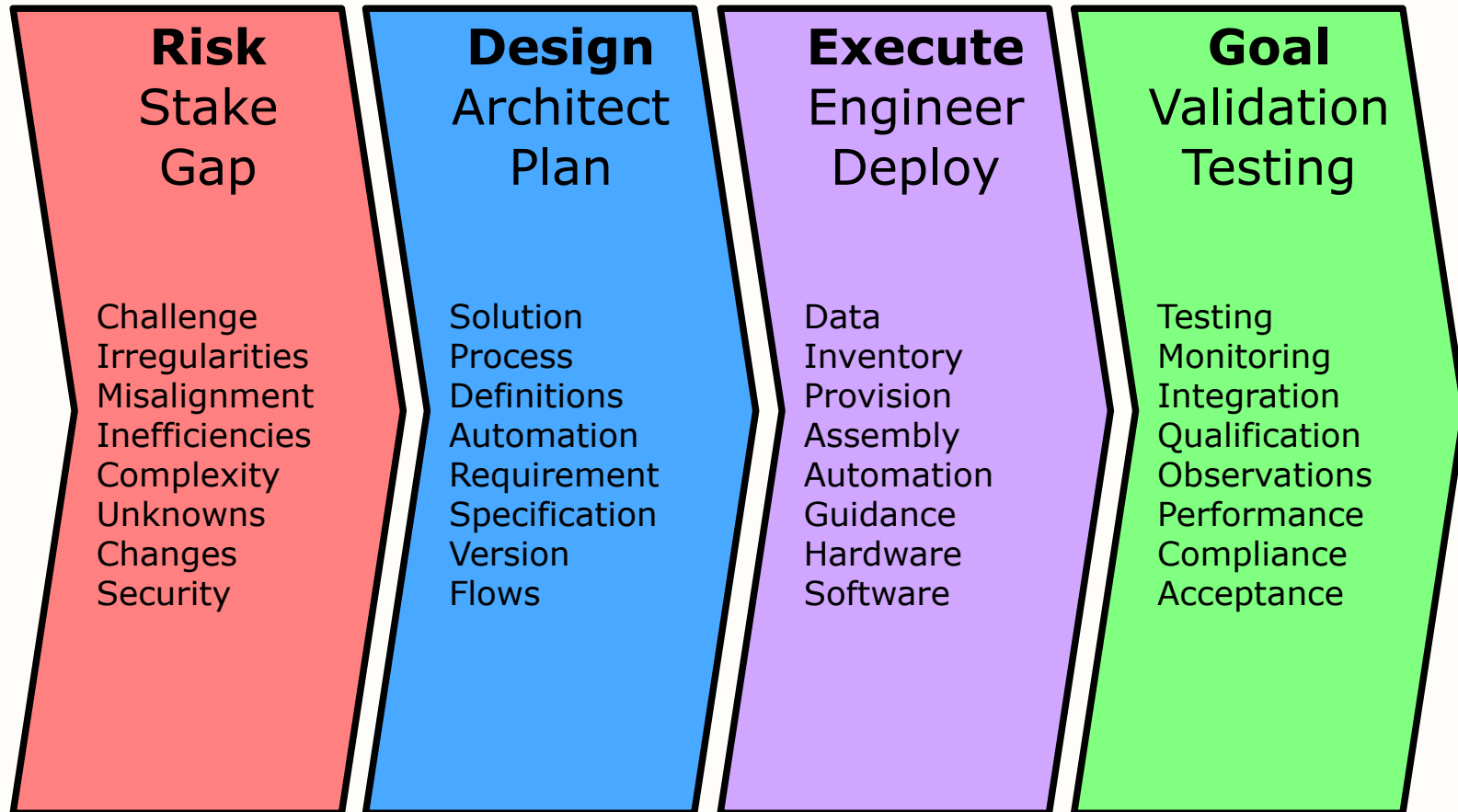
Solution: **Continuous Deployment Automation,  
Hybrid Dual-Vee Checks with Good Automated  
Manufacturing Practice Guidance**

# Integration and Bootstrap Development

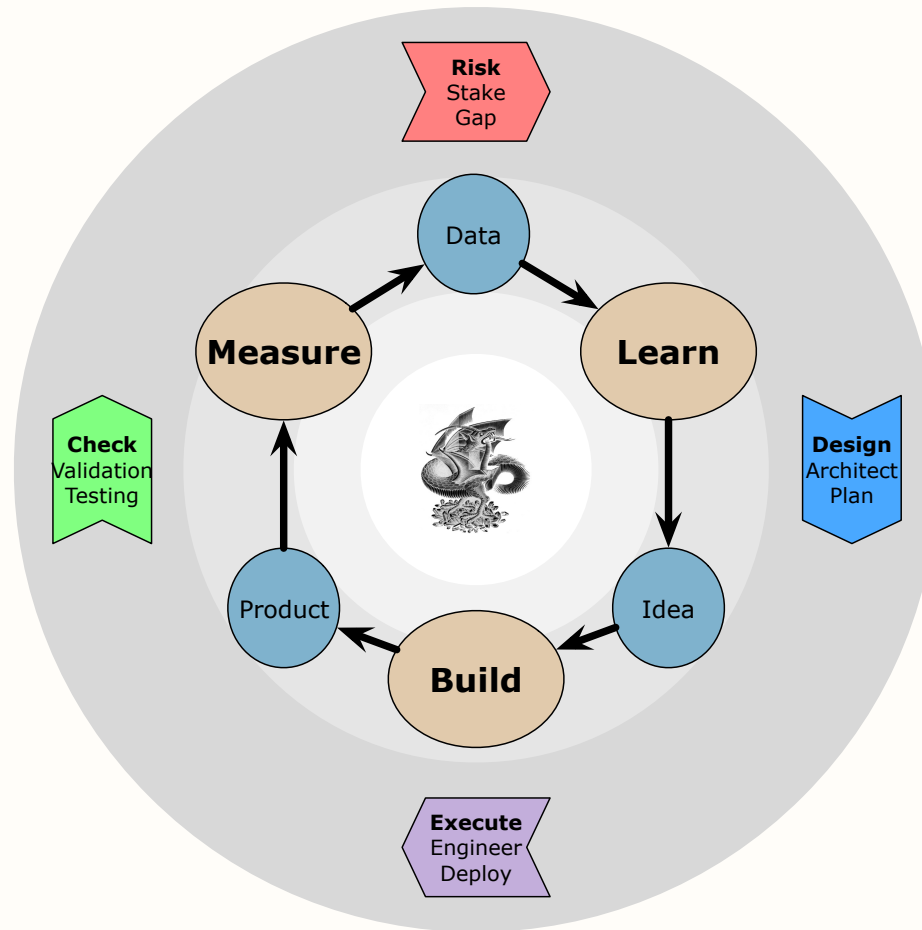
Bootstrap, Flows, Configuration, Performance, Checks



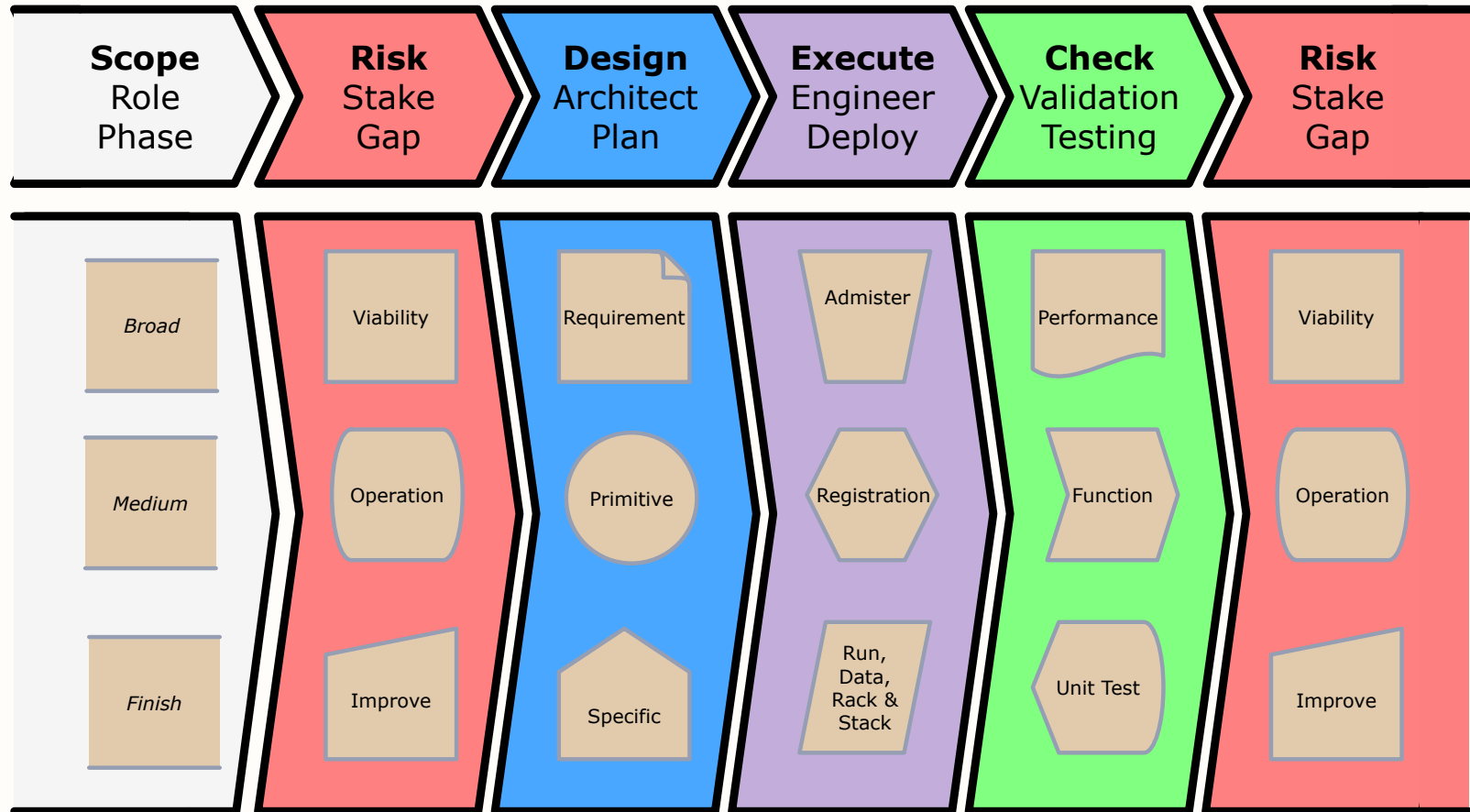
## Four Pillars

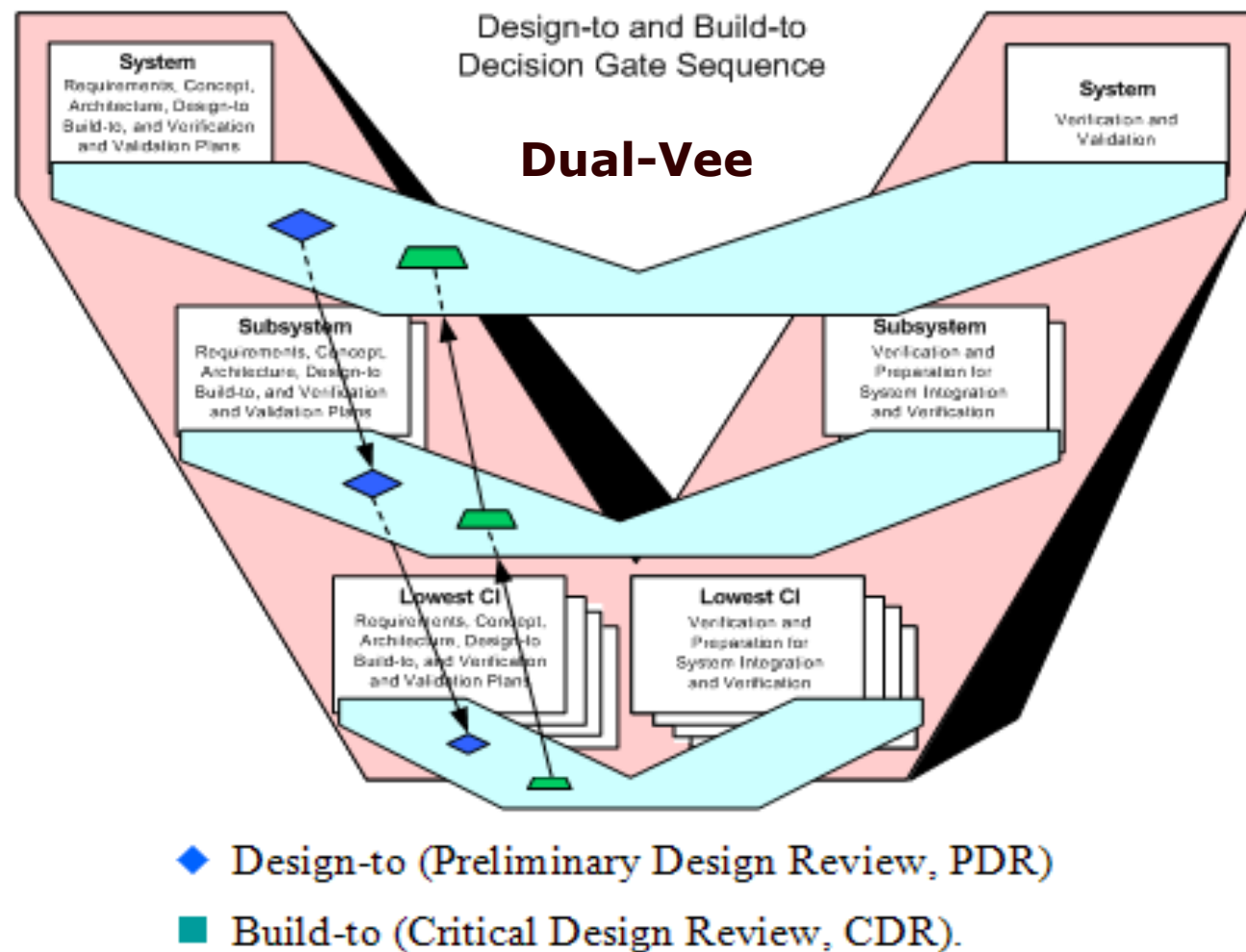


## Feedback Loop



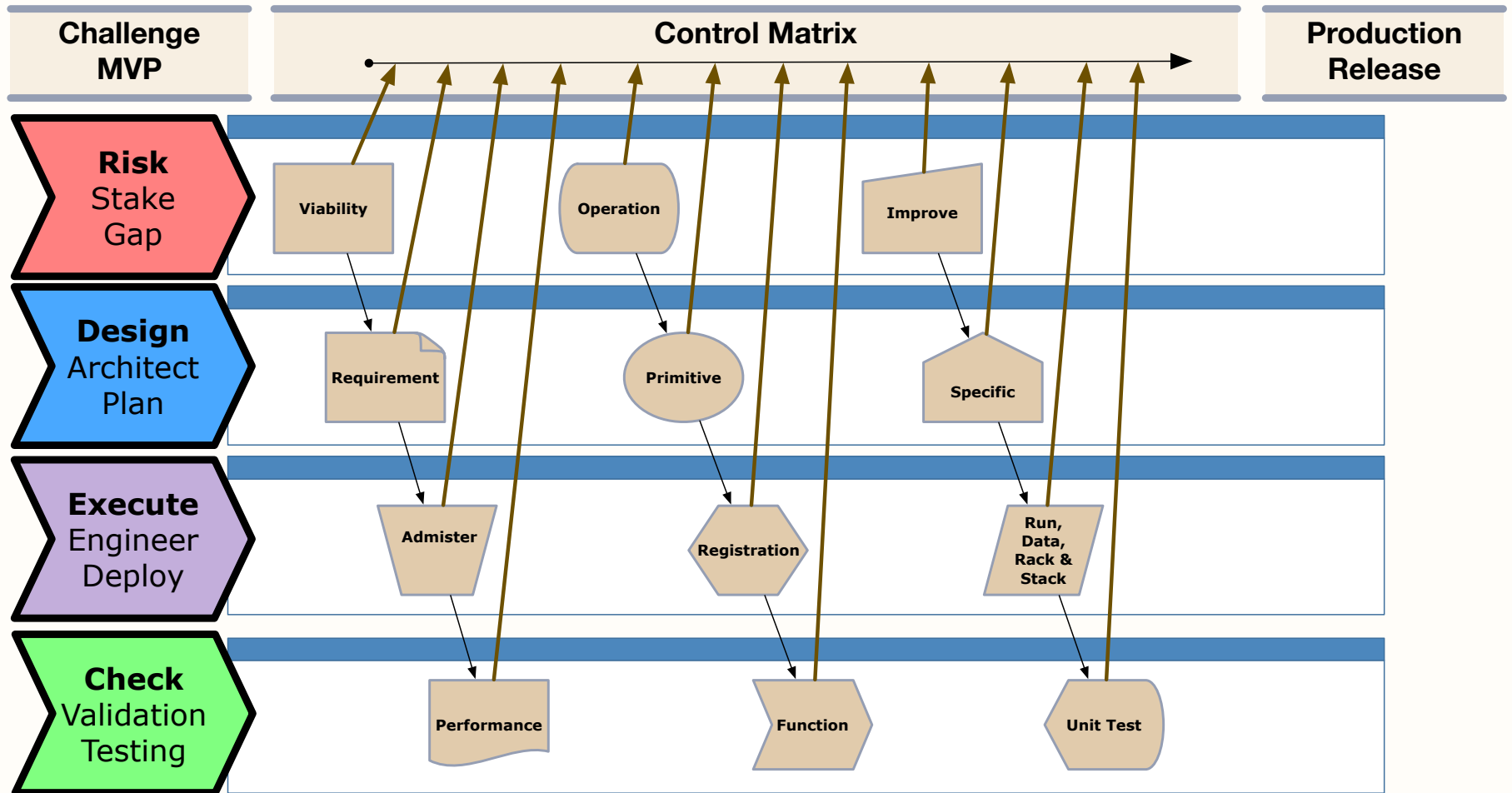
## Continuous Operations



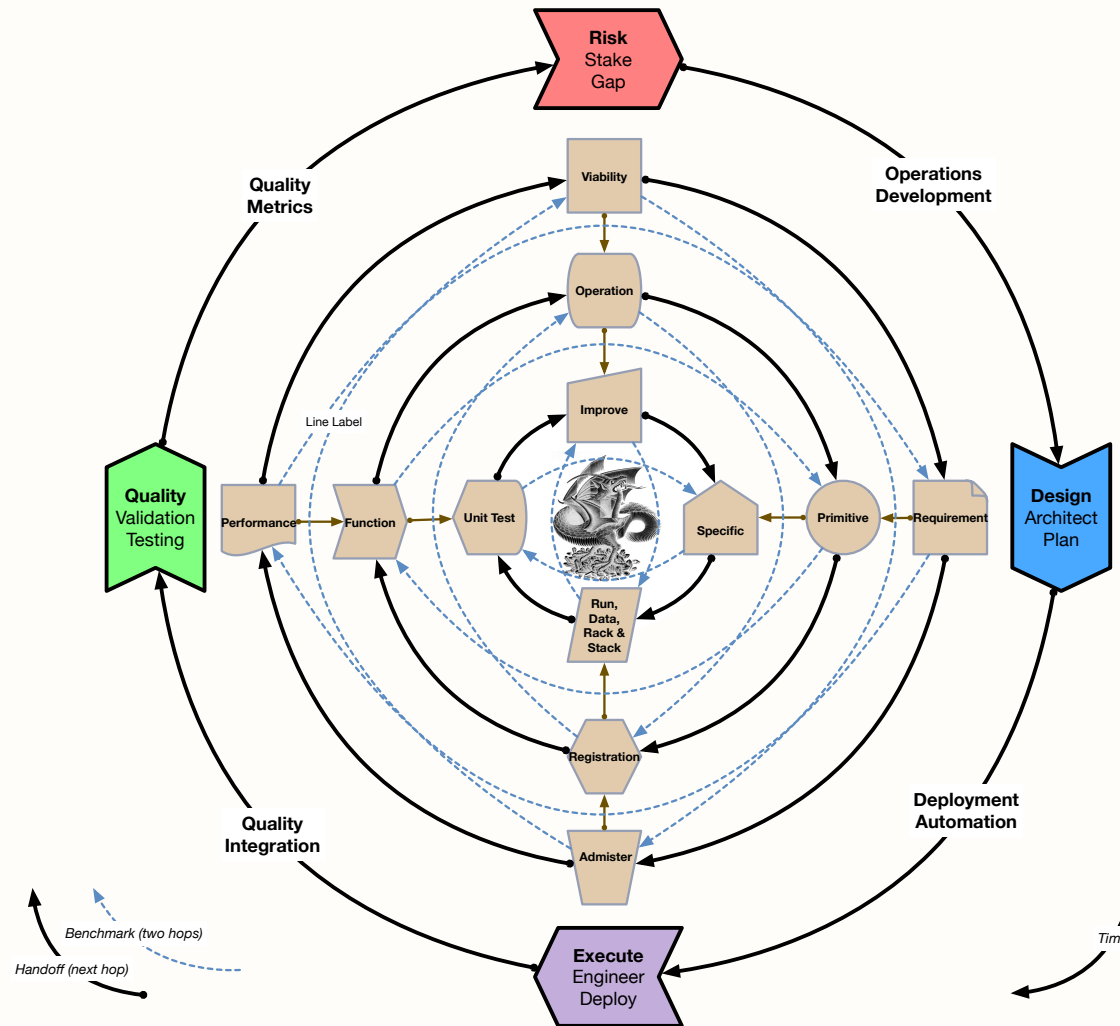


Source: Wikipedia Dual-Vee

## Simultaneous Swimlanes



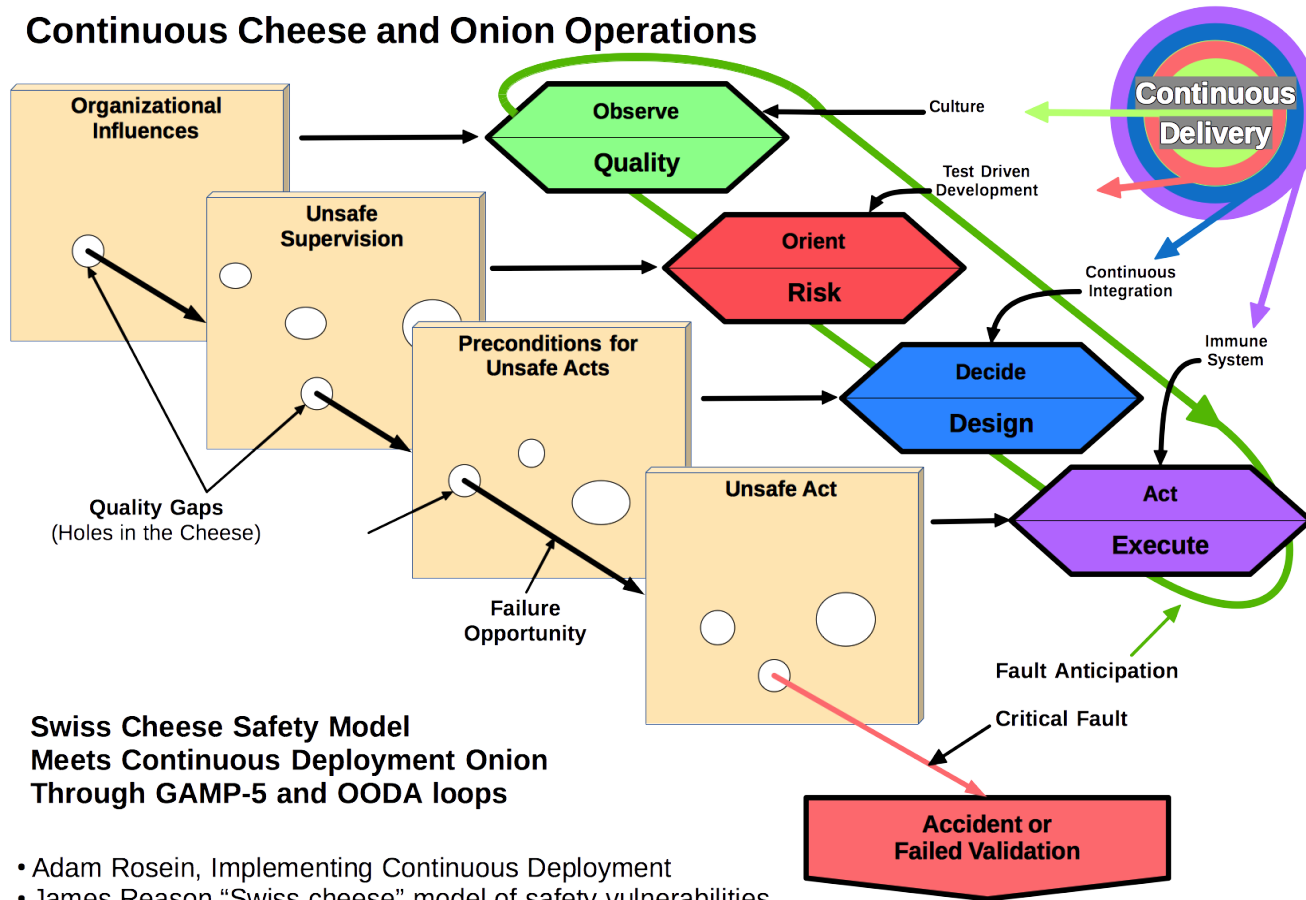
## Input Cycle



Unlimited use with this notice. (C) 2017 George Georgalis



## Continuous Cheese and Onion Operations



- Adam Rosein, Implementing Continuous Deployment
- James Reason, "Swiss cheese" model of safety vulnerabilities
- John Boyd, "OODA Loop": observe, orient, decide and act decision cycle
- ISPE, GAMP-5: A Risk-Based Approach to Compliant GxP Validation