



**THE DISTRIBUTED HANGOVER:
WE WERE PROMISED DEVOPS**

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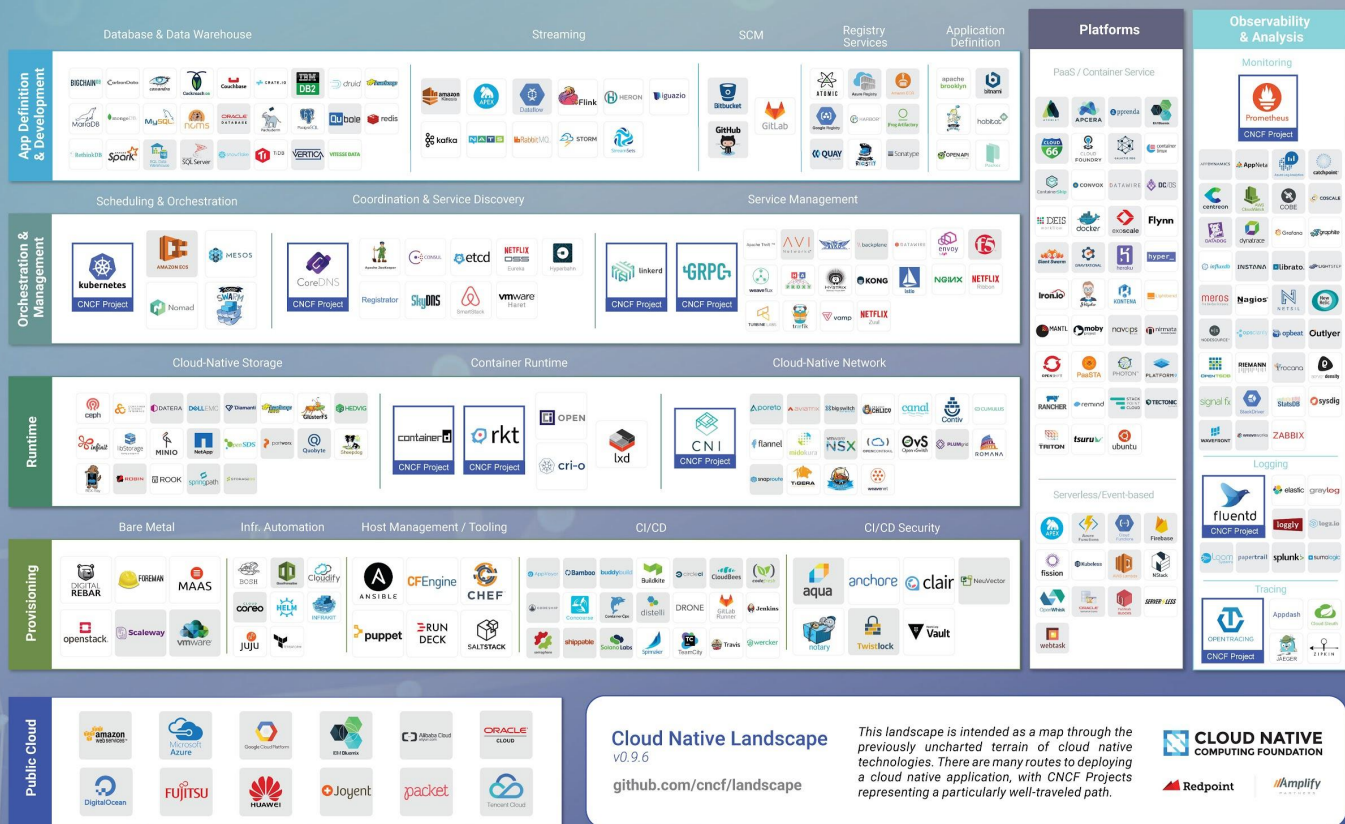


Can you identify the solutions you're expecting new tools to provide?

“Digital Transformation”







Greyed logos are not open source



10 deploys per day

Dev & ops cooperation at Flickr

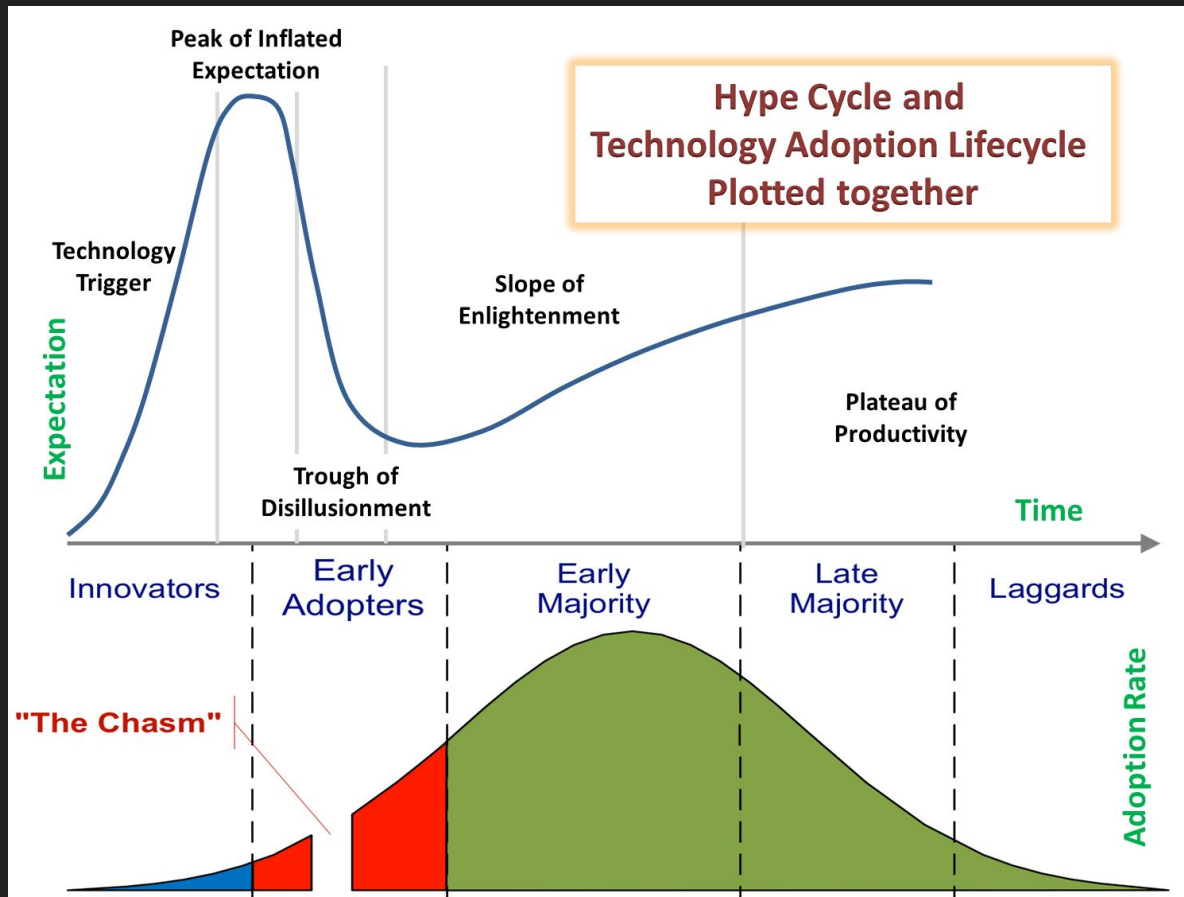
John Allspaw & Paul Hammond
Velocity 2009

*"Failure is the opportunity to begin again,
more intelligently."*

- Henry Ford

"The future is already here — it's just not very evenly distributed."

- William Gibson



Majority != Innovators || Early Adopters

TYPES OF TRANSFORMATION

- Technical (“easier”)
- Cultural

MICROSERVICES



DISTRIBUTED DEVELOPMENT

- Fallacies of distributed computing
- CAP theorem
- CI (continuous validation)
- Twelve-Factor App
- Conway's Law



HUGE IO

@HUGEIO

Follow



You can't fix fundamental problems by adopting advanced practices. Fix the fundamentals first.

2:12 PM - 28 Jan 2019 from Franklin, TN

19 Retweets 47 Likes



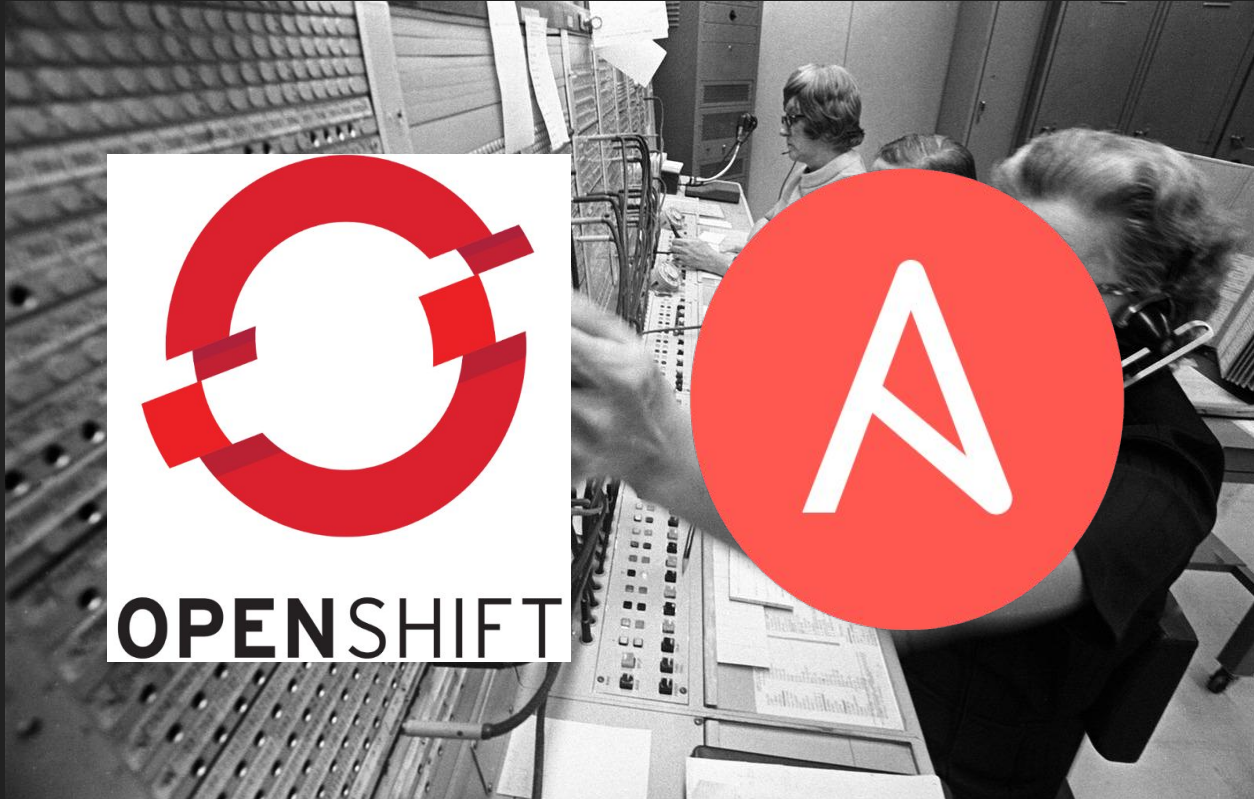
19

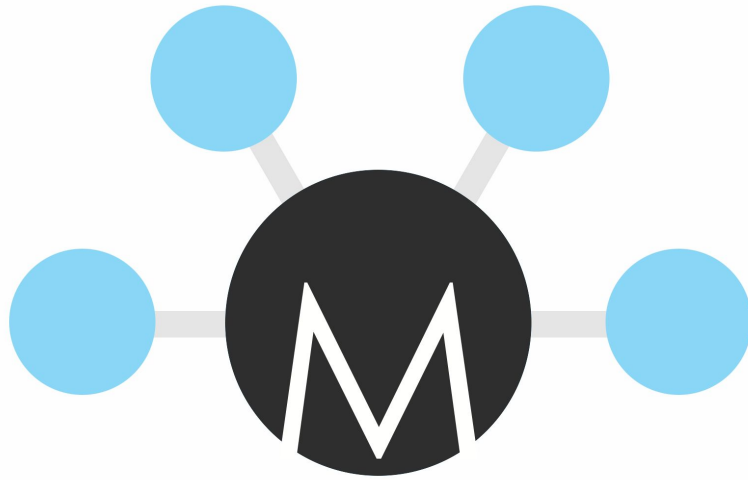


47



CLOUD NATIVE OPERATIONS





Molecule

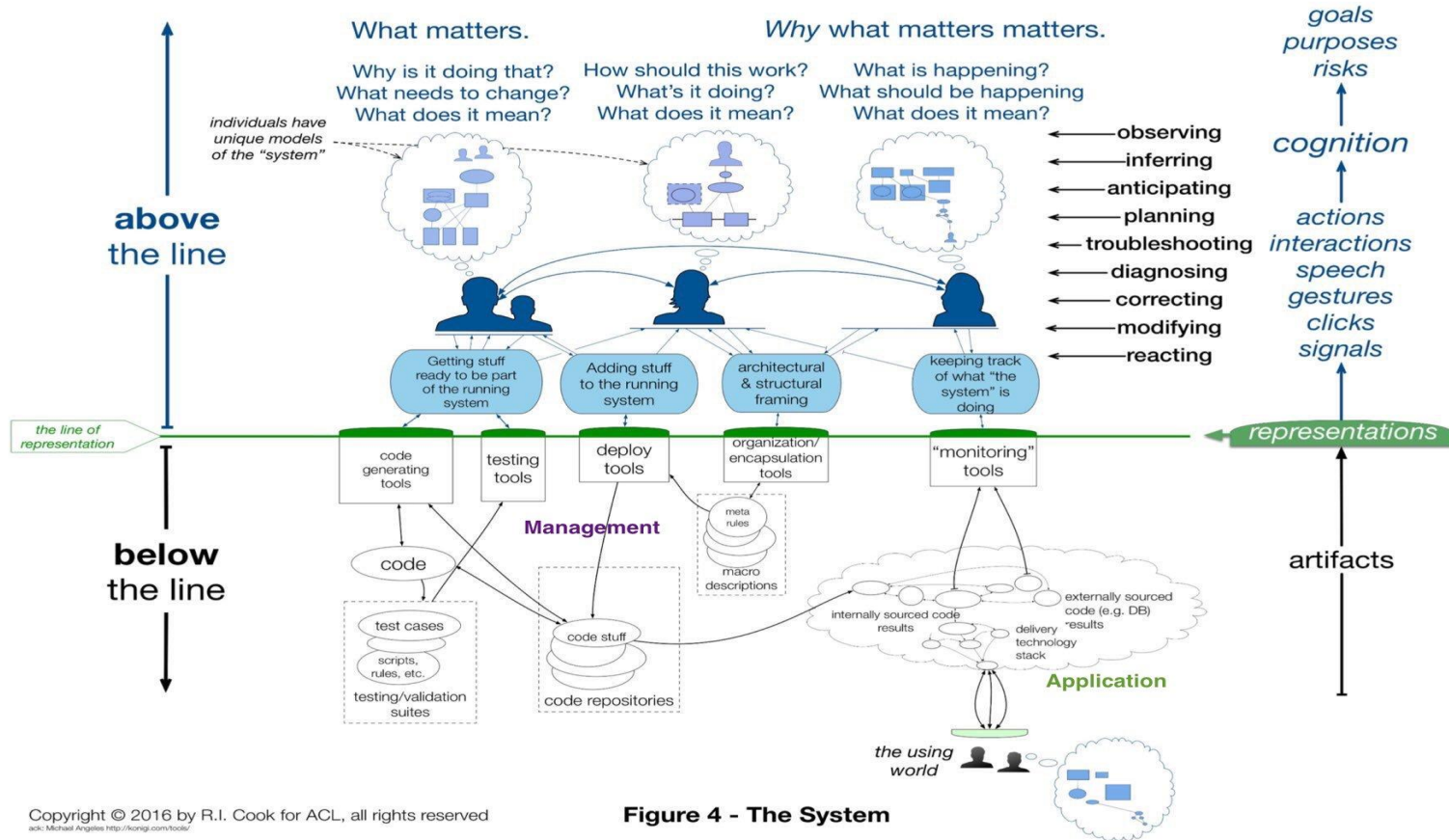


Figure 4 - The System



Honest Status Page

@honest_update

Follow



We replaced our monolith with micro services so that every outage could be more like a murder mystery.

6:10 PM - 7 Oct 2015

3,015 Retweets 2,577 Likes



22



3.0K

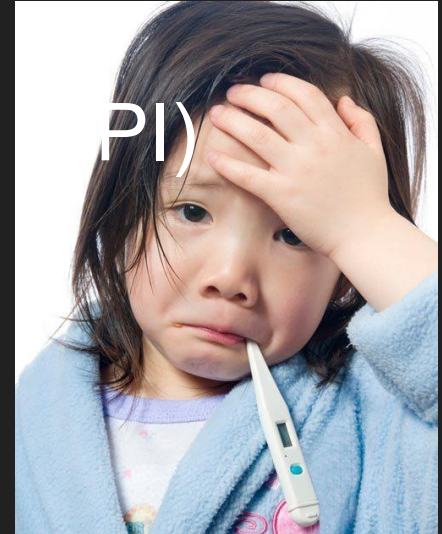


2.6K





Service Level Indicator (SLI)



Key Performance Indicator (KPI)

“You are either building a learning organization....or you will lose to someone who is.”

- Andrew Clay Shafer

TYPES OF TRANSFORMATION

- Technical
- Cultural (“hard”)



It is not necessary to change. Survival is not mandatory.

- W. Edwards Deming -

quoteparrot.com

CALMS

Culture

- Business value incentives
- Embraces change
- Empathy
- Feedback
- Trust
- Freedom and responsibility

Automation

- Infrastructure provisioning
- Testing
- Deployments
- Service discovery
- Observation
- HA/FT

Lean

- Value streams
- Eliminate waste
- Built-in quality
- Theory of constraints
- WIP management

Measurement

- Data over opinions
- Value focused telemetry

Sharing

- Eliminate knowledge silos
- Enable others

WESTRUM TYPOLOGY OF CULTURES

Pathological (power-oriented)	Bureaucratic (rule-oriented)	Generative (performance-oriented)
Low cooperation	Modest cooperation	High cooperation
Messengers shot	Messengers neglected	Messengers trained
Responsibilities shirked	Narrow responsibilities	Risks are shared
Bridging discouraged	Bridging tolerated	Bridging encouraged
Failure leads to scapegoating	Failure leads to justice	Failure leads to enquiry
Novelty crushed	Novelty leads to problems	Novelty implemented

Netflix Culture:
Freedom & Responsibility



NETFLIX

1

We Seek Excellence

Our culture focuses on helping us
achieve excellence

Spotify Engineering Culture

Part 1 of 2

Henrik Kniberg

Jan 2014





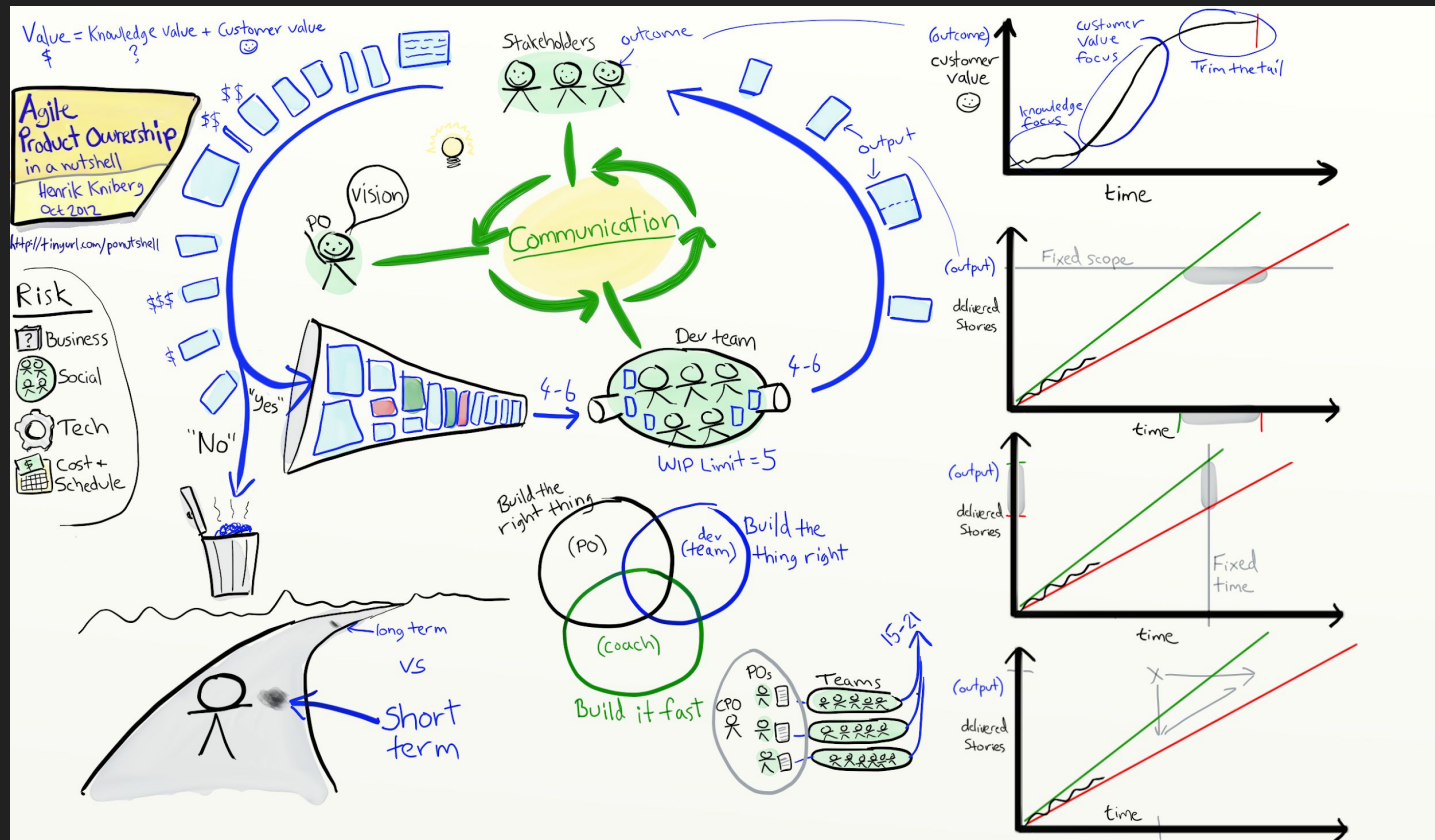
2018

Accelerate: **State of DevOps**

Strategies for a New Economy



AGILE PRODUCT OWNERSHIP IN A NUTSHELL





PRINCIPLES OF

AGILE

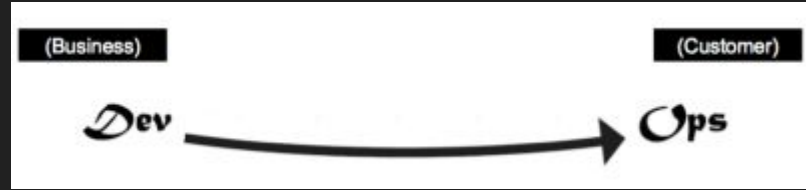
1. SATISFY THE CUSTOMER THROUGH EARLY AND CONTINUOUS DELIVERY
2. WELCOME CHANGING REQUIREMENTS
3. DELIVER WORKING SOFTWARE FREQUENTLY
4. BUSINESS AND DEVELOPERS WORK TOGETHER DAILY

1. SATISFY THE CUSTOMER THROUGH EARLY AND CONTINUOUS DELIVERY

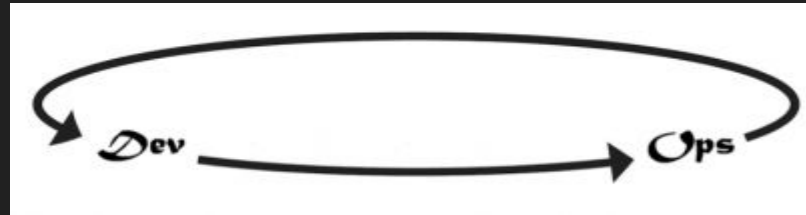
7. WORKING SOFTWARE IS THE PRIMARY MEASURE OF PROGRESS
8. AGILE PROCESSES SHOULD PROMOTE A SUSTAINABLE PACE
9. CONTINUOUS ATTENTION TO TECHNICAL AND DESIGN EXCELLENCE
10. MAXIMIZE THE AMOUNT OF WORK NOT DONE WITH SIMPLICITY
11. SELF-ORGANIZING TEAMS PRODUCE THE BEST WORK
12. REFLECT AND ADJUST AT REGULAR INTERVALS

THE THREE WAYS OF DEVOPS

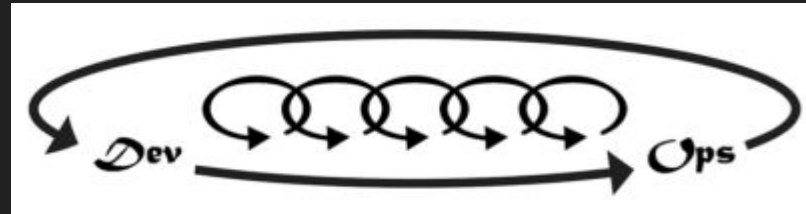
Systems Thinking:
(Flow)

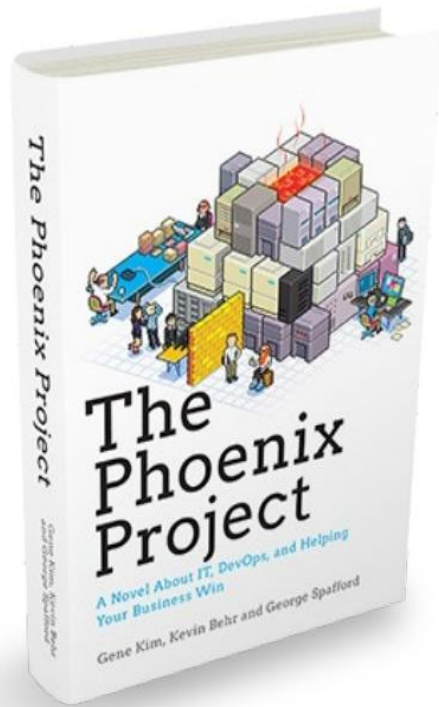


Feedback Loops:



Learning and
Experimentation:





*“When hoping to improve performance, organizations often focus on buying solutions in the form of tools, vendors, and methodologies. **However what’s important is the capabilities these solutions enable, not the solutions themselves.**”*

- 2018 State of DevOps Report

vulnerability

 Search

**Christian Tragesser**
DevOps Consultant at World Wide Technology

Tools & Technologies

Python (Programming Language) · 1

Docker · 1

Amazon Web Services (AWS) · 1

Red Hat Linux · 2

Git · 1 

Terraform

Core Values

THE PATH


to employee and company success

- T**rust - In character and competency
- H**umility - stay grounded; never forget where you come from
- E**mbbrace change and diversity of people and thought
- P**assion and a strong work ethic
- A**ttitude - be positive and open-minded
- T**eam player - proactively share ideas
- H**onesty and integrity

The World Wide Way.



World Wide Technology, Inc.

ing Notifications  Me Work

Add profile section

"Vulnerability is the birthplace of innovation, creativity, and change."

- Brené Brown

NOTES

- *10 deploys per day: Dev and Ops cooperation at Flickr* - John Allspaw/ Paul Hammond : <https://www.youtube.com/watch?v=LdOe18KhtT4>
- Fallacies of distributed computing:
https://en.wikipedia.org/wiki/Fallacies_of_distributed_computing
- CAP Theorem: https://en.wikipedia.org/wiki/CAP_theorem
- Continuous Integration:
<https://continuousdelivery.com/foundations/continuous-integration/>
- Twelve-Factor Application: <https://12factor.net/>
- Conway's Law: https://en.wikipedia.org/wiki/Conway%27s_law
- Molecule(Ansible test framework): <https://molecule.readthedocs.io/en/latest/>

NOTES

- *How Your Systems Keep Running Day After Day* - John Allspaw:
<https://www.youtube.com/watch?v=xA5U85LSk0M>
- Netflix Freedom and Responsibility Culture:
https://igormroz.com/documents/netflix_culture.pdf
- Spotify's Engineering Culture:
<https://labs.spotify.com/2014/03/27/spotify-engineering-culture-part-1/>
- DORA State of DevOps Report: <https://devops-research.com/>
- Agile Product Ownership in a Nutshell:
<https://www.youtube.com/watch?v=502ILHjX9EE>
- *Listening to Shame* - Brené Brown:
https://www.ted.com/talks/brene_brown_listening_to_shame/transcript?language=en#t-911129

THANK YOU FOR ATTENDING

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