



CHEF™

DevOps in the Enterprise

Michael Ducey - Chef - Global Evangelism



Who am I?

- Linux Engineer
- Operations
- Performance and Capacity
- Cloud Architect
- Automation
- MBA, MS



Where did DevOps Start?

10 deploys per day

Dev & ops cooperation at Flickr

John Allspaw & Paul Hammond
Velocity 2009

The first “Enterprise DevOps”



Little bit weird
Sits closer to the boss
Thinks too hard



Pulls levers & turns knobs
Easily excited
Yells a lot in emergencies

Where did DevOps Start?

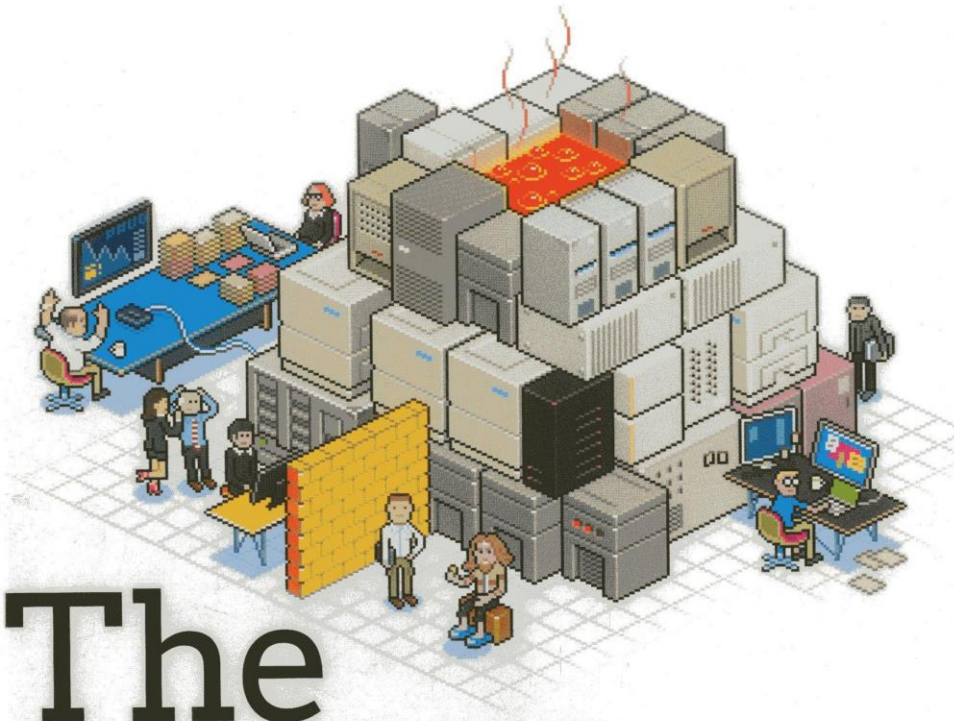


Patrick Debois



Andrew Clay Shafer

From the authors of *The Visible Ops Handbook*



The Phoenix Project

A Novel About IT, DevOps,
and Helping Your Business Win

Gene Kim, Kevin Behr, and George Spafford



The Growth of the Community

devopsdays events

Past

2009	2010	2011	2012	2013	2014	2015
Ghent	Sydney 2010	Boston 2011	Austin 2012	New Zealand 2013	Nairobi 2014	Ljubljana 2015
2009	Mountain View	Mountain View	Tokyo 2012	London 2013	Ljubljana 2014	Paris 2015
	2010	2011	Delhi 2012	Paris 2013	Austin 2014	Denver 2015
	Hamburg 2010	Melbourne 2011	Mountain View	Austin 2013	Pittsburgh 2014	New York 2015
	Sao Paulo 2010	Bangalore 2011	2012	Berlin 2013	Amsterdam	Austin 2015
		Göteborg 2011	Rome 2012	Amsterdam 2013	2014	Toronto 2015
		Manila 2011	New York 2012	Silicon Valley	Silicon Valley	Washington, DC
				2013	2014	2015
				Downunder 2013	Minneapolis	Amsterdam 2015
				Bangalore 2013	2014	Minneapolis 2015
				London Autumn	Brisbane 2014	
				2013	Boston 2014	
				Barcelona 2013	Toronto 2014	
				Vancouver 2013	New York 2014	
				Portland 2013	Warsaw 2014	
				New York 2013	Chicago 2014	
				Atlanta 2013	Berlin 2014	
				Tel Aviv 2013	Belgium 2014	
				Tokyo 2013	Helsinki 2014	
					Vancouver 2014	
					Tel Aviv 2014	
					Bangalore 2014	

Future

2015
Melbourne - July 2015
Pittsburgh - August 2015
Chicago - August 2015
Bangalore - September 2015
Boston - September 2015
Tel Aviv - October 2015
Perth - October 2015
Singapore - October 2015
Berlin - October 2015
Silicon Valley - Nov 2015
Detroit - Nov 2015
Ohio - 2015
Charlotte - 2015
Edinburgh - 2016
Seattle - 2016

What is DevOps?

DevOps Everywhere

- Everyone is “selling DevOps”
- Everyone is “doing DevOps”
- Everyone is “hiring DevOps”



Everyone is selling DevOps

DevOps Cloud Solutions - ibm.com

Ad www.ibm.com/cloud ▼

Redefine **Development** & Operations w/ **Cloud**. Read About **DevOps**
IBM Cloud Computing has 6,608 followers on Google+
[IBM Cloud Computing Facts - Private and Hybrid Clouds - Infrastructu](#)

Development, Operations – DevOps Solutions | HP® Nederland

www8.hp.com/nl/nl/software-solutions/software.html?... ▼ Hewlett-Packard ▼

HP development and operations, **DevOps** method, enables your team to communicate, collaborate and integrate between software developers and IT ...

BMC bolsters DevOps story with Varalogix buy — Tech Ne...

gigaom.com/.../bmc-bolsters-devops-story-with-varalogi... ▼ GigaOM Media ▼

Aug 8, 2012 - BMC is **buying** more application deployment or **DevOps** expertise with the acquisition of Varalogix, a privately held application deployment

The CollabNet DevOps Framework | CollabNet

www.collab.net/products/teamforge/deploy ▼ CollabNet ▼

Industry leaders CollabNet and Automic Software Partner have introduced the first Enterprise-Grade **DevOps** platform to market.

Everyone is doing DevOps

- No one wants to be a SysAdmin
- “DevOps Engineer with 10+ years experience”
- “Did DevOps before it was cool”

Everyone is hiring DevOps

[DevOps Engineer](#)

Zonar Systems - Seattle, WA

We are looking for a **DevOps engineer** who can apply their process....

[DevOps Engineer](#)

Concentra Inc. ★★★★★ [241 reviews](#) - Addison, TX

The **DevOps Engineer** in partnership with Enterprise Release Management, Change Management, and Incident Management is also responsible for developing and...

25 days ago - [save job](#) - [block](#) - [email](#) - [more...](#)

[DevOps Consultant](#) - new

Collabera ★★★★★ [55 reviews](#) - Dallas, TX

We are seeking a Dev Ops Engineers/ Project managers to manage and support our software development teams and customer production environments....

1 day ago - [save job](#) - [block](#) - [email](#) - [more...](#)

10022 (Midtown area)

CLEAR is looking for a seasoned **DevOps Engineer** who has been "battle tested" at fast growth companies and blends the skills of a business analyst with technical...

1 day ago - [save job](#) - [block](#) - [email](#) - [more...](#)

[DevOps Engineer](#)

E*Pro Inc - Emeryville, CA

As a **DevOps Engineer**, reporting to the Director of automated deployment scripts and tools....

8 hours ago - [save job](#) - [block](#) - [email](#) - [more...](#)

[DevOps / Cloud Engineer](#)

Elastica - San Jose, CA 95128 (Willow Glen area)

We are looking for a highly motivated Senior Cloud / **DevOps** Engineer to join our innovative startup. The candidate we are looking for is an experienced cloud...

1 day ago - [save job](#) - [block](#) - [email](#) - [more...](#)

[DevOps Engineer](#)

Indieo000 - San Francisco, CA

[Sr Linux DevOps Engineer](#)

CBRE ★★★★★ [125 reviews](#) - Dallas, TX

Knowledge of **DevOps** trends and best practices. Build automation tools to support the development and network operations teams....

25 days ago - [save job](#) - [block](#) - [email](#) - [more...](#)

[Sr Linux DevOps Engineer](#)

CBRE ★★★★★ [125 reviews](#) - Dallas, TX

Build automation tools to support the m.

What DevOps Is Not



What DevOps Is

- Cultural and Professional
- Movement



What DevOps Is Not

A team, a role, or
a job description

What DevOps Is

Making the organization
better

What DevOps Is Not

A solution for small teams,
start-ups, or web
only companies

What DevOps Is

A movement that can
impact and change even
the largest organizations

What DevOps Is Not



What DevOps Is



But what *IS* DevOps?

“Increasing the flow of
work through the IT system.”

But what *IS* DevOps?

C.A.L.M.S.

Culture

- Inclusive culture that encourages learning, personal
- improvement, failure, betterment of the organization

Automation

- Automation of all aspects of the organization to increase
- the flow of work, eliminate manual tasks, reduce errors,
- improve test coverage, and improve the time to value

Lean

- Adopting Lean principles to improve the value streams
- of the organization and eliminate waste

Measurement

- Measuring all aspects of operations to provide metrics for
- improvement, gain visibility, and improve customer value

Sharing

- Sharing all aspects of the value stream to
- allow for any member to provide insight
- & improve the overall process of value delivery.

DevOps in the Enterprise

Why?

“...software is eating the world.”

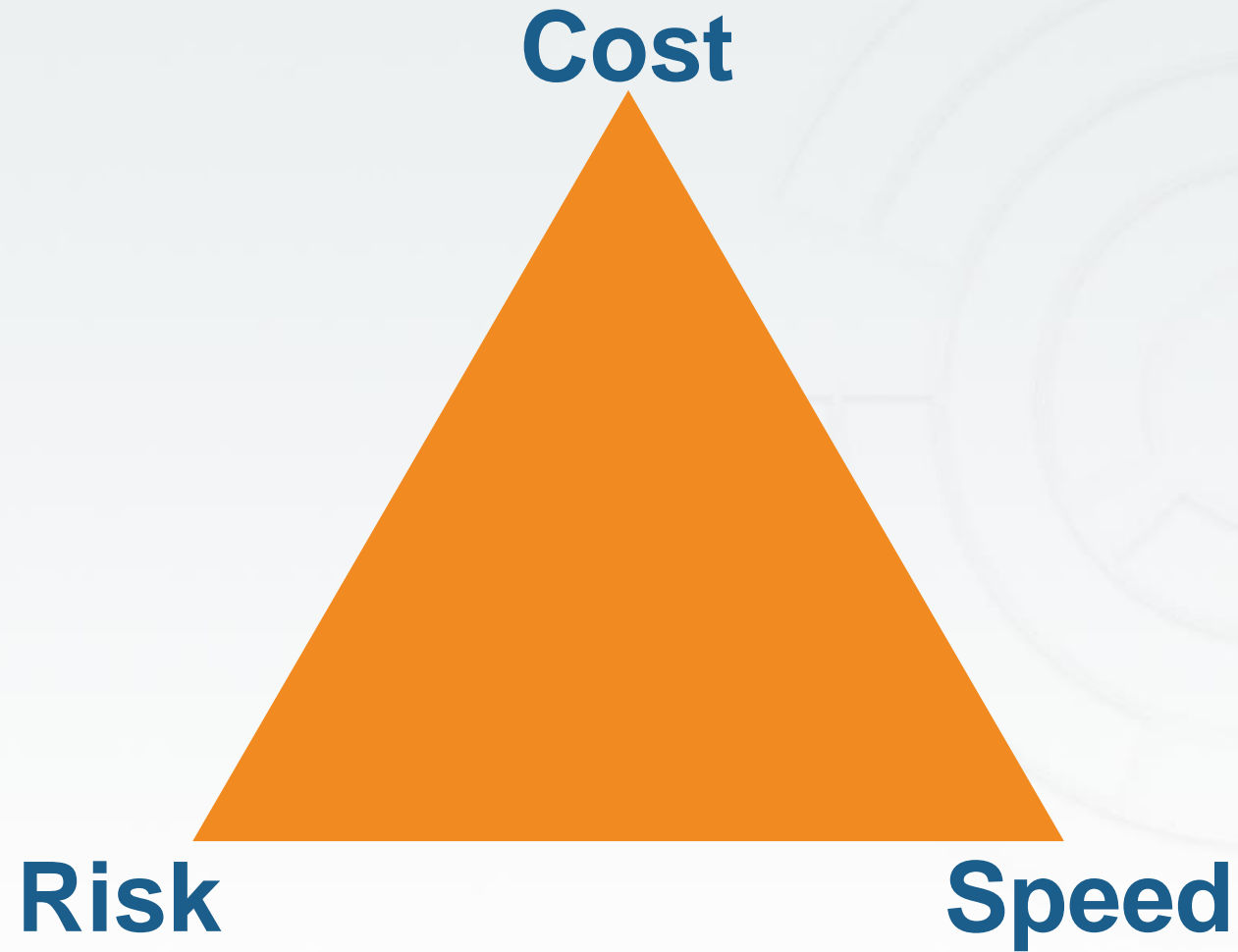
- Marc Andreessen

EVERY business is a software business



We're not an airline. We're a **software company** with wings.

Balancing Act



“By 2016, DevOps Will Evolve From a Niche to a Mainstream Strategy Employed by 25 Percent of Global 2000 Organizations”

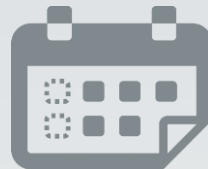
--Gartner

Example: Major Telco

Before DevOps



4 weeks to deploy



Not open Sundays
due to deployments



Losing competitive
advantage



After DevOps



2 hours to deploy



Serves customers
7 days a week



Leveling the
playing field

Example: Target



	build times in (Hrs)	estimated cost per server	estimated cost per 200 deployments	estimated cost to automate	savings per 200 deployments
traditional build	80	\$ 5,200	\$ 1,040,000	\$ 260,000	\$ 780,000
automated build	1	\$ 65	\$ 4,225	N/A	N/A

How Are Enterprises Succeeding?

How are Enterprises Succeeding?



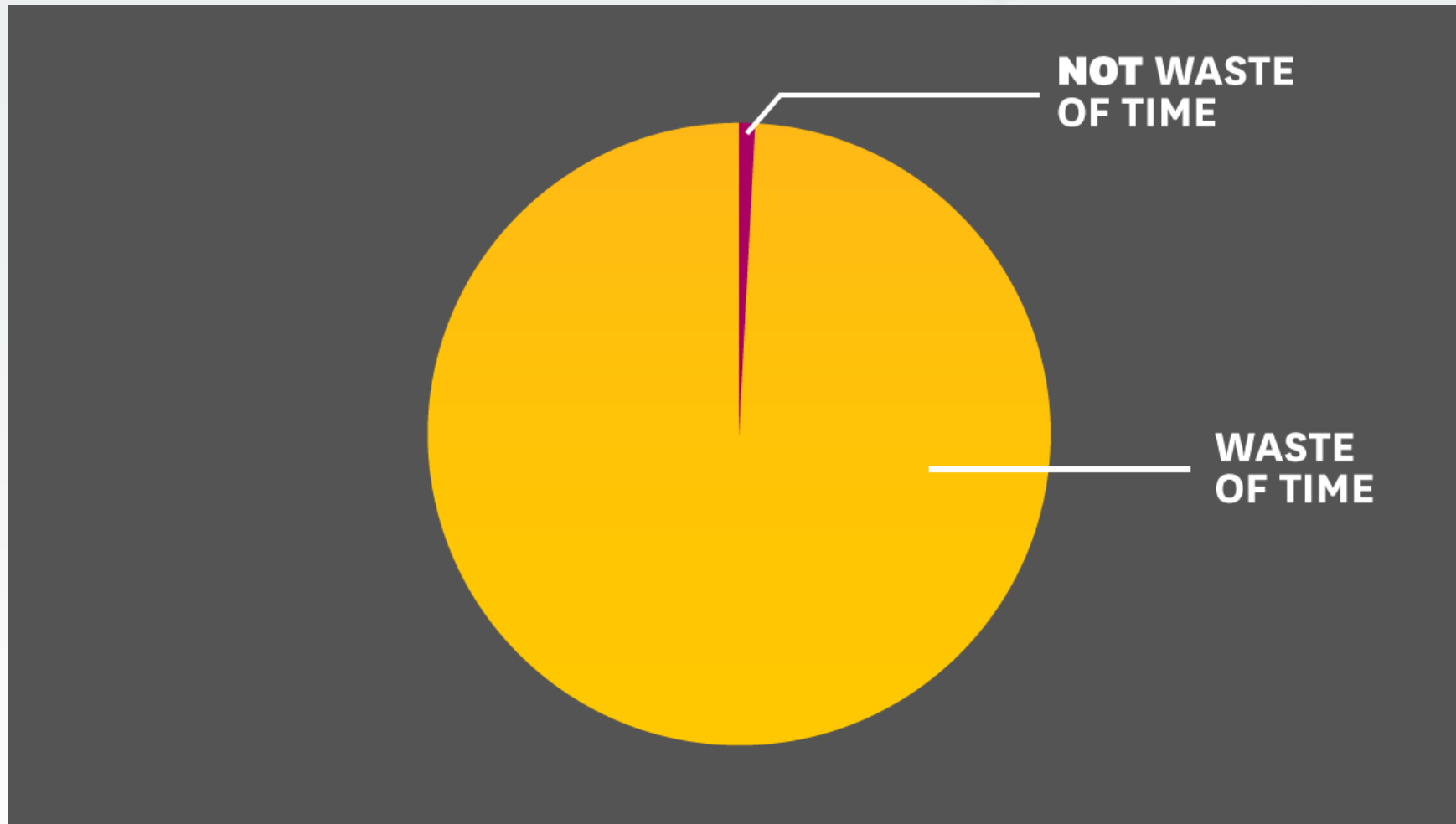
<http://goatcan.do>

Three Ways

- Lean
- Community
- Culture



Lean



https://hbr.org/resources/images/article_assets/2015/01/Jan15_21_piechart.png

Lean

“If you were to release everyday, how much of your time would be spent on process?”

- Adrian Cockcroft

Lean - Muda

1. Defects (Bad builds)
2. Overproduction of things not demanded by actual customers
3. Inventories awaiting further processing or consumption
4. Unnecessary over-processing (for example, relying on inspections rather than designing the process to eliminate problems)
5. Unnecessary motion of employees (meetings)
6. Unnecessary transport and handling of goods (Approvals)
7. Waiting for an upstream process to deliver, or for a machine to finish processing, or for a supporting function to be completed, or for an interrupted worker to get back to work...

30 Day Challenges

- Time boxed project
- Gives organizations chance to experiment
- Eliminates old processes to prove new
- Eliminates waste

30 Day Challenges



TARGET

30 Day Challenges

- DevOps Dojo

Build a team of experts

Use those experts to train other teams

Execute a 30 Day Challenge to prove the methods

Community



Community

Enterprises are emulating
external communities.

Community

- External Communities:

- Highly Distributed

- Leverages Social Tools

- Leverages events for ideation

- Open to everyone



Community

- Enterprise Challenges

- Highly Distributed

- Tools already in place

- Culture doesn't encourage cross-silo communication

- Process walls



Community

- Enterprises evolving:

Tools to enable highly distributed teams

Github

Slack

Hipchat

Video Conferencing



Community

- Enterprises evolving:

- Social Media Communities

- Rebuilding the community internally.

- Yammer

- Chatter

- Forums



Community

- Enterprises evolving:

 - Internal Events

 - Bring the conference to the attendees

 - Automation Symposium

 - Cloud Symposium

 - DevOps Days



Culture

“Culture cannot be managed; it emerges. Leaders don’t create cultures; members of the culture do. Culture is an expression of people’s deepest needs, a means of endowing their experiences with meaning. Even if culture in this sense could be managed, it shouldn’t be (···) it is naive and perhaps unethical to speak of managing culture.”

Culture

- Leaders are getting out of the way of culture.
- Managers are no longer managers
“The team I support”
- Culture is now a differentiator
[Nordstrom Technology NorDNA](#)



Culture

“We can’t copy Netflix because it has all those superstar engineers, we don’t have the people”

- Fortune 100 CIO after a Netflix presentation, 2013

“We hired them from you, and got out of their way”

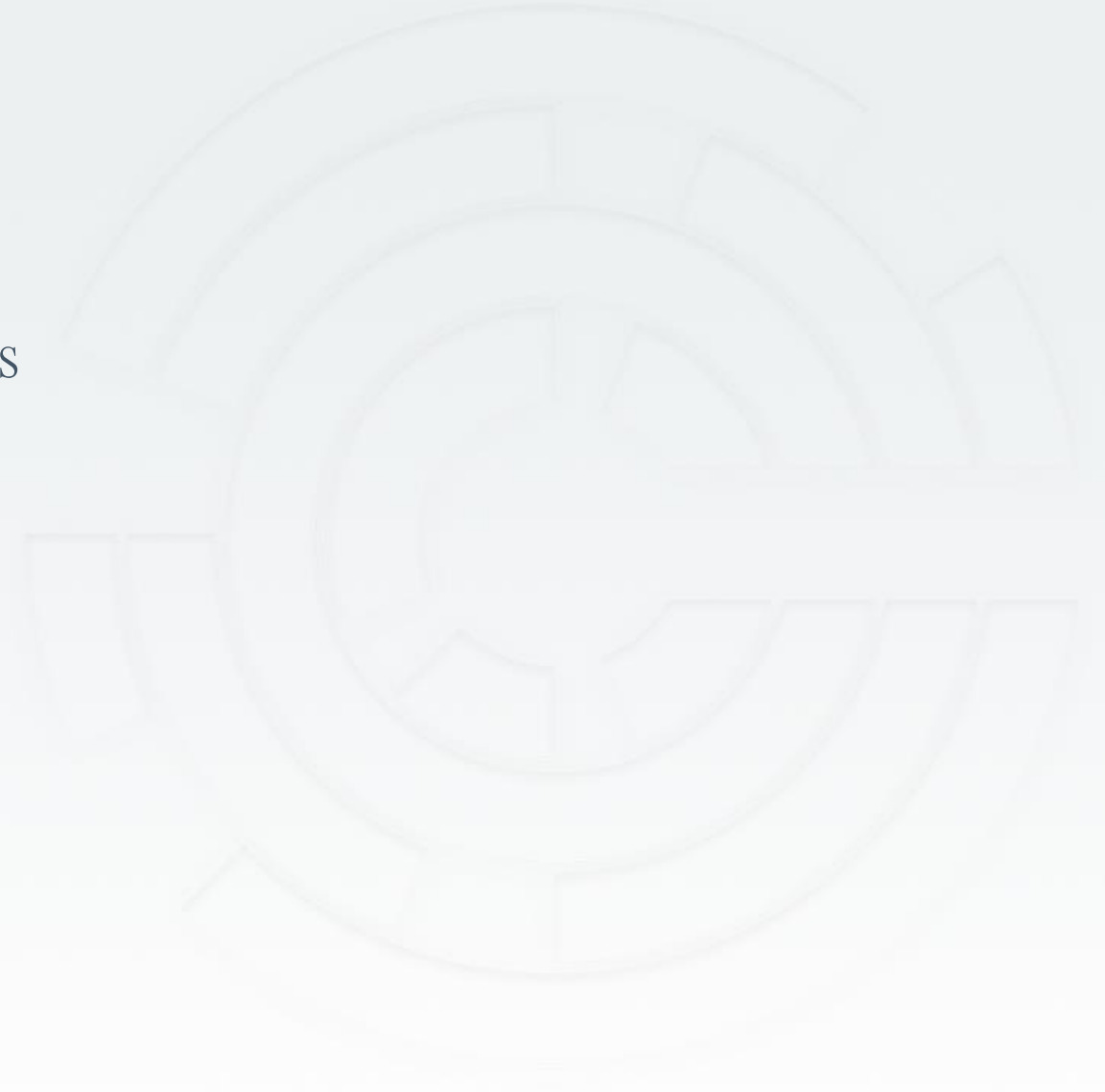
- Adrian Cockcroft, in response

Culture

- The Coaching Kata:
 1. What is the target condition?
 2. What is the actual condition?
 3. What are the obstacles?
 4. What is the next step?
 5. When can we see what we've learned from that next step?

Culture

- Breaking down of hierarchies
 - Managers seen as Coaches
- Individual Contributors seen as decision makers
- Failures treated as learning experiences



In Summary

- DevOps is no longer fringe; becoming mainstream
- Large Enterprises are having success with DevOps
DevOps Enterprise Summit - <http://devopsenterprise.io/>
- Enterprises are winning with:
 - Lean Practices
 - Building Strong Communities
 - Rebuilding their Culture