

The Value of Automation in Next Generation IT

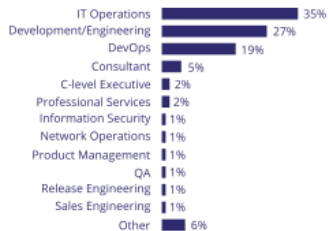
Glenn Gerrard – Regional Country Manager, N.EMEA

2015 STATE OF DevOps REPORT

In Partnership with

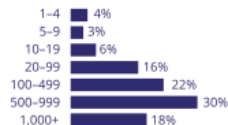
IT REVOLUTION

Departments



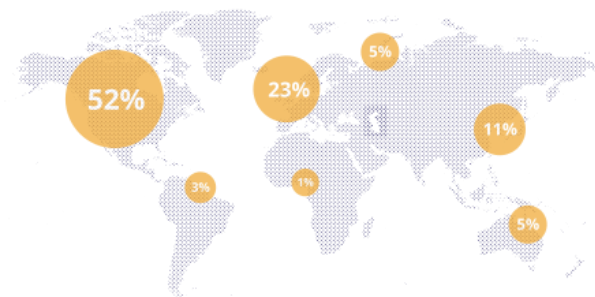
One notable difference this year was an increase in DevOps departments. This year, 19 percent of respondents were part of a DevOps department, up from 16 percent last year.

Size of Infrastructure by Number of Servers



This year, 4,976 respondents completed the 2015 State of DevOps Survey. Compared to last year, we saw similar distributions across geographies, company size, industries and size of infrastructure.

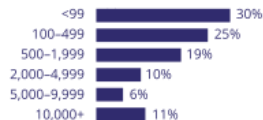
Geography



Industries



Company Size



Gender



See [page 29](#) for more about women in tech.



DEVOPS

DEVOPS EVERYWHERE

People don't buy **what** you do,
they buy **why** you do it.

Simon Sinek

<http://bit.ly/sinektedtalk>

Conflicting Incentives

Business Delivering value to customers

Dev teams Delivering new features

Ops teams Ensuring stability of systems

Quality teams Ensuring quality of software releases

Aligned Incentives

Why you exist as a business

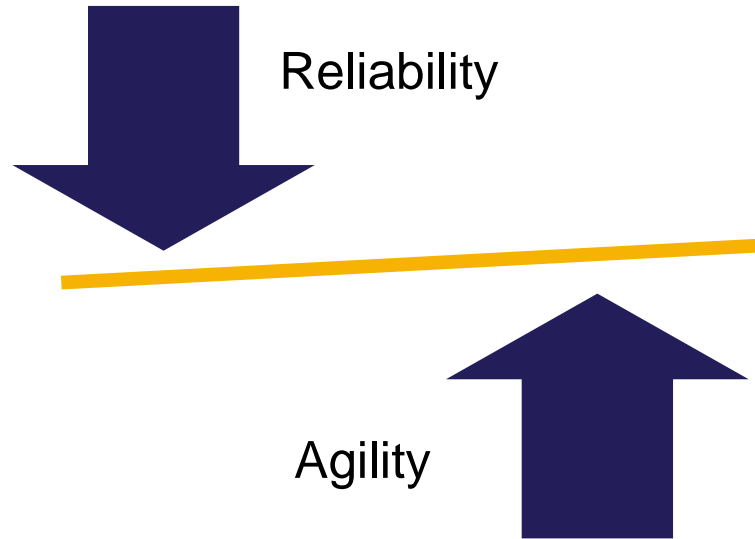
Business

Ops
teams

Quality
teams

Dev
teams

Opposing Forces



High-performing IT orgs are more agile

30x

More frequent
deployments

200x

Faster lead times
than their peers

Source: Puppet Labs 2015 State of DevOps Report

High-performing IT orgs are more reliable

60x

Change success
rate

168x

Faster mean time to
recover (MTTR)

Source: Puppet Labs 2015 State of DevOps Report

High-performing IT orgs are winning

1.5x

More likely to exceed
profitability, market
share & productivity
goals

50%

Higher market
capitalization growth
over 3 years.*

Source: Puppet Labs 2015 State of DevOps Report

**Learning is not compulsory,
but neither is survival.**

Edward W. Deming

<http://bit.ly/deming14pts>

Identify the Desired State

Organization

Low trust culture → High trust culture

Siloed teams → Cross-functional teams

Lack of alignment → Aligned around business goals

Processes

Lots of manual work → Mostly automated work

Long cycle times → Short cycle times

Poor visibility → Fast feedback & insight

People

High burnout → High job satisfaction

Monoculture → Diversity of people and ideas

Checking boxes → Creative innovation

“Trying to effect process, people, technology and cultural changes across the entire application portfolio, in a globally dispersed team and with a lot of associated technical debt, is an epic challenge.”

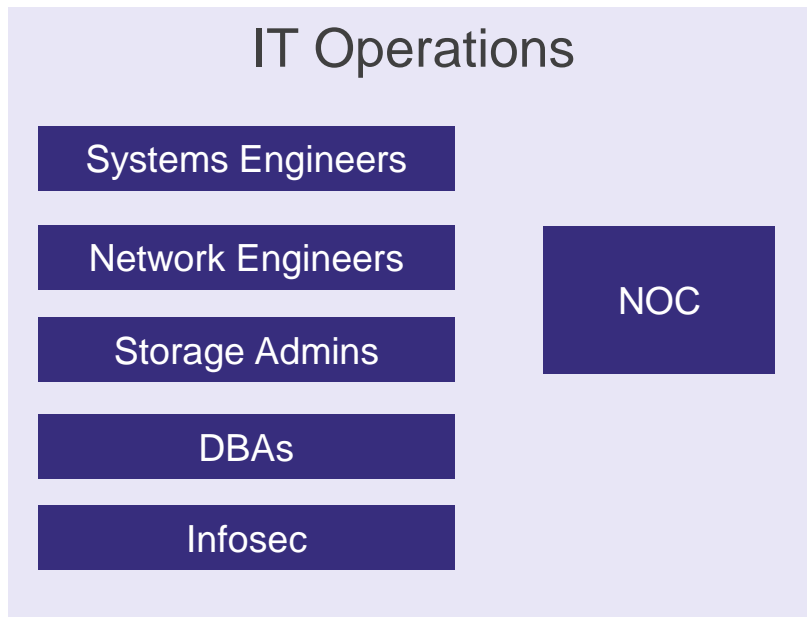
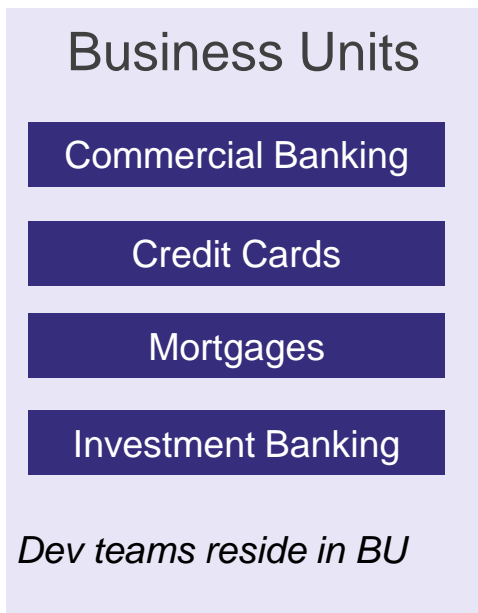
Jonathan Fletcher
Enterprise Architect and Lead for Technology,
Platform and DevOps at Hiscox
<http://bit.ly/devopshiscox>

Hiscox: Results

- Reduced cost per release on one application by 97%
- Reduced time per release by 89%
- Reduced staff required to release by 75%
- Automated testing reduced multiple man days of effort down to an overnight hands-free process

Team Structure Matters

Typical Enterprise Org Structure



Roles & Responsibilities

Roles

Responsibilities

“The Business”

Understand market trends and identify customer needs

IT Manager

Build trust with counterparts on other teams; create culture of learning and continuous improvement; delegate authority; remove roadblocks

Dev Manager

Build trust with Ops counterpart; bring Ops into the planning process early

Systems Engineer

Automate the things that are painful; help devs get feedback

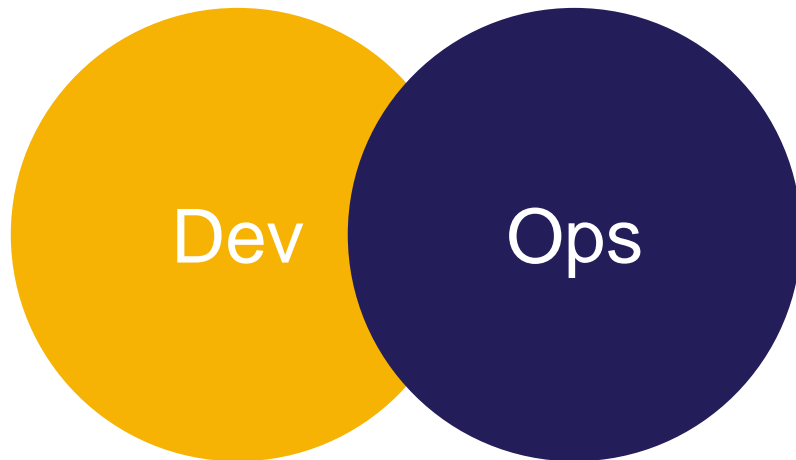
QE

Provide input into scale and performance; provide feedback on staging environments

Devs

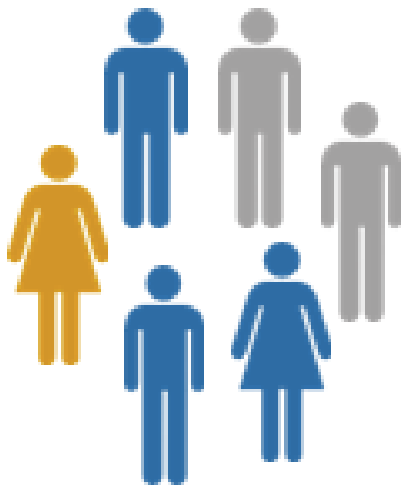
Plan for deployment as you're planning new features; get feedback from ops and work with them on deployment process

Pattern 1: Smooth Operations



Recommended Reading: <http://blog.matthewskelton.net/2013/10/22/what-team-structure-is-right-for-devops-to-flourish/>

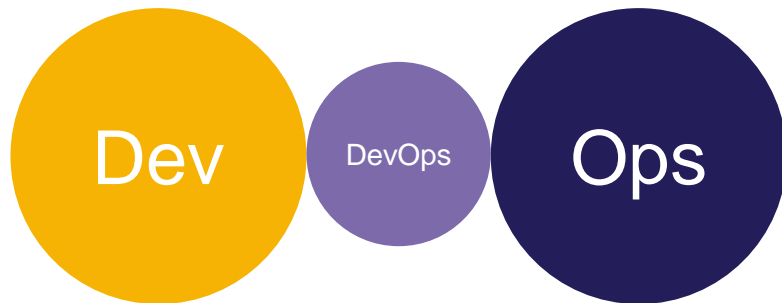
Pattern 2: Cross-functional team



Characteristics

- Consists of devs, testers, ops, product owner, etc.
- Focused on delivering a single application
- Self-sufficient
- Optimized for throughput

Pattern 3: DevOps Team



Characteristics

- Consists ideally of devs with systems experience, or sysadmins with programming experience
- Focused on automating pain points
- Responsible for building a platform that allows devs to self-service
- Provides a toolchain to enable devs to build, test and deploy their systems
- Coaches other teams

Diversify Your Team






















Teams with more women have higher:

- Financial performance
- Stock market performance
- Hedge fund returns
- Collective intelligence

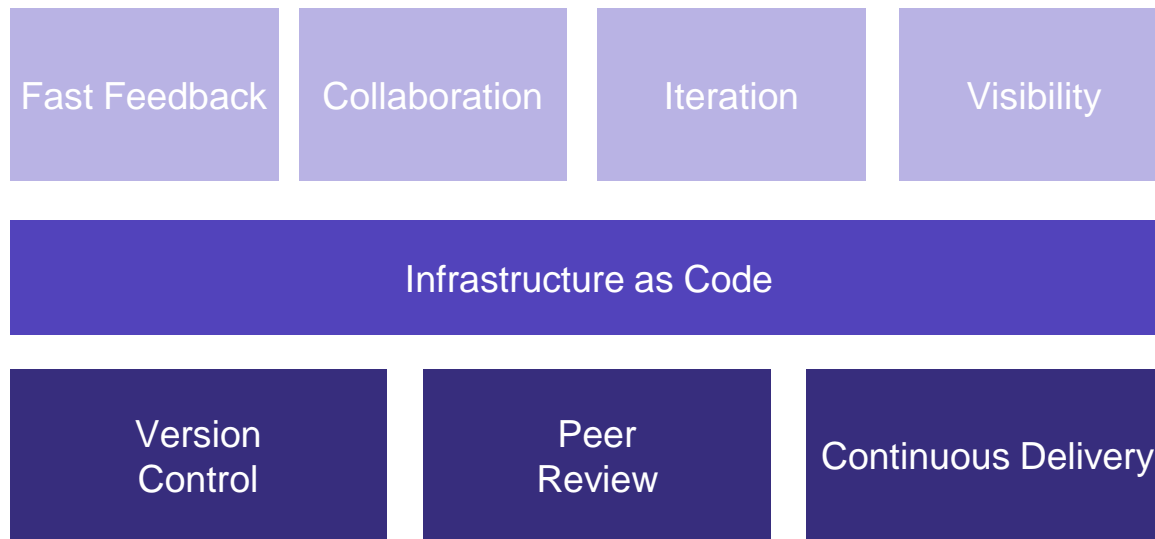


More than half report working on teams that are less than **10% female.**

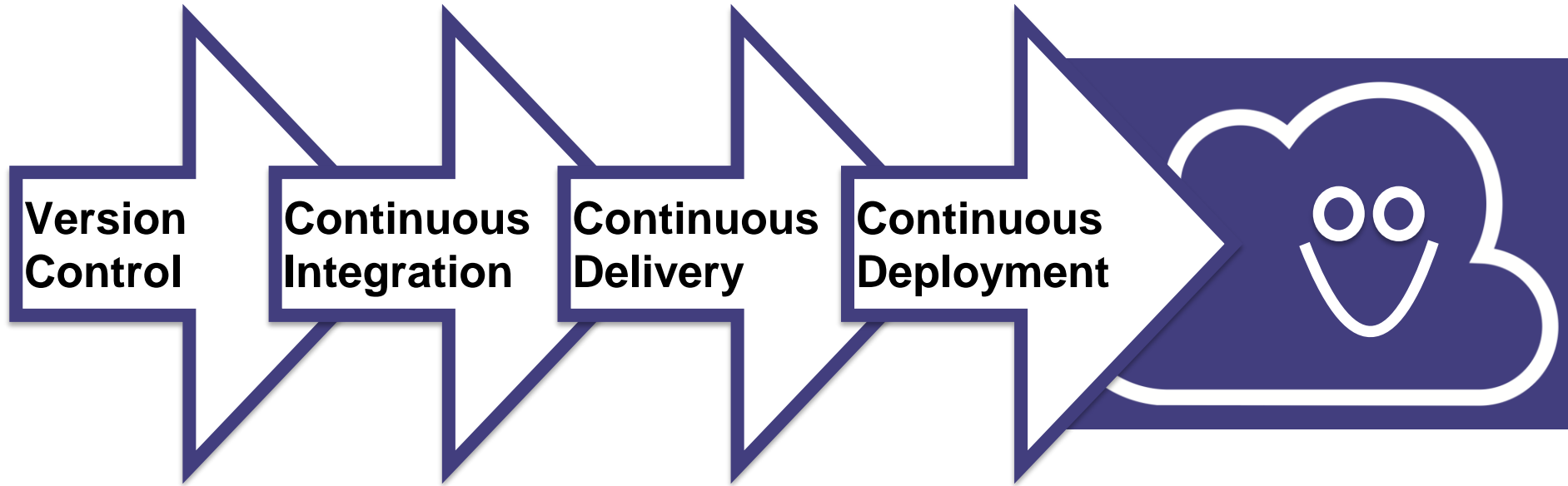
DevOps Toolchain

Version Control	Configuration Management	Continuous Integration	Deployment Tools	Monitoring
     	  <p>BMC / CA And others...</p>	  <i>Continuous Delivery</i>   	  <p>The Marionette Collective <small>A modern scalable distributed orchestration framework</small></p>	     

Infrastructure as Code



Continuous Delivery



The Puppet Approach

Define

Test

Enforce

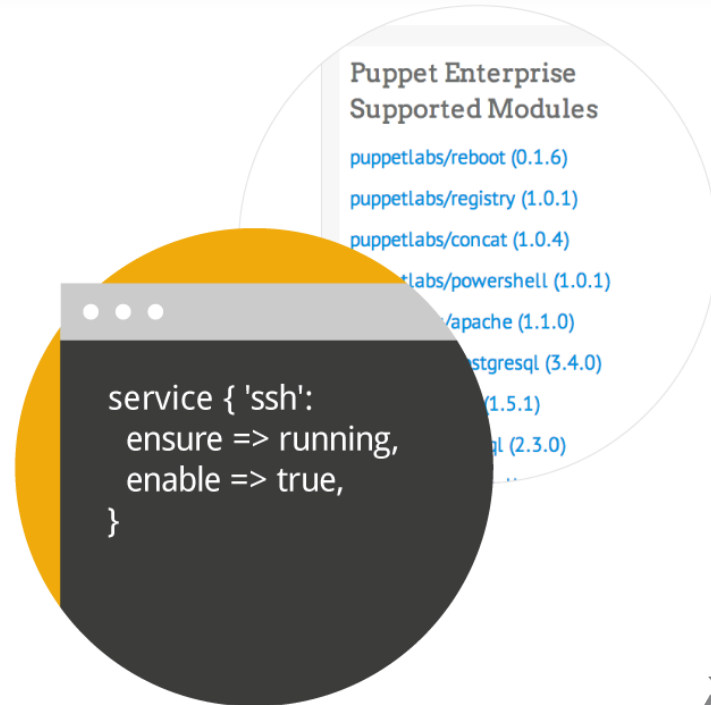
Report

Define the desired state using a powerful, declarative language.

Test using unit and integration tools plus "no-op" simulation runs

Enforce with battle-tested agent software on all OS'es

Report using Puppet Enterprise web console and Event Inspector



Puppet Enterprise

Puppet Apps

Purpose-built applications focused on solving IT automation challenges in new, innovative ways

Node
Management

Configuration
Management

Code
Management

Application
Orchestration

Open Source Components - Puppet Enterprise Core - Agent Technology



And over 3,000 more integrations, extensions, and other content



Resources

- The 2015 State of DevOps Report
<https://puppetlabs.com/2015-devops-report>
- *The Phoenix Project* by Gene Kim
- *Continuous Delivery* by Jez Humble
- PuppetConf 2016: <http://puppetconf.com/>