



# Pivotal CF

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Overview for PCF Immersion



# Agenda

What we will see today



1

## Evolution

Of Cloud Architectures

2

## Demo

Pivotal CF Live

3

## Industry Trends

Driving Enterprises Today

4

## Cloud Foundry

The OSS Community

5

## Pivotal CF

Enterprise Cloud Foundry

6

## Case Studies

Who's Using It?



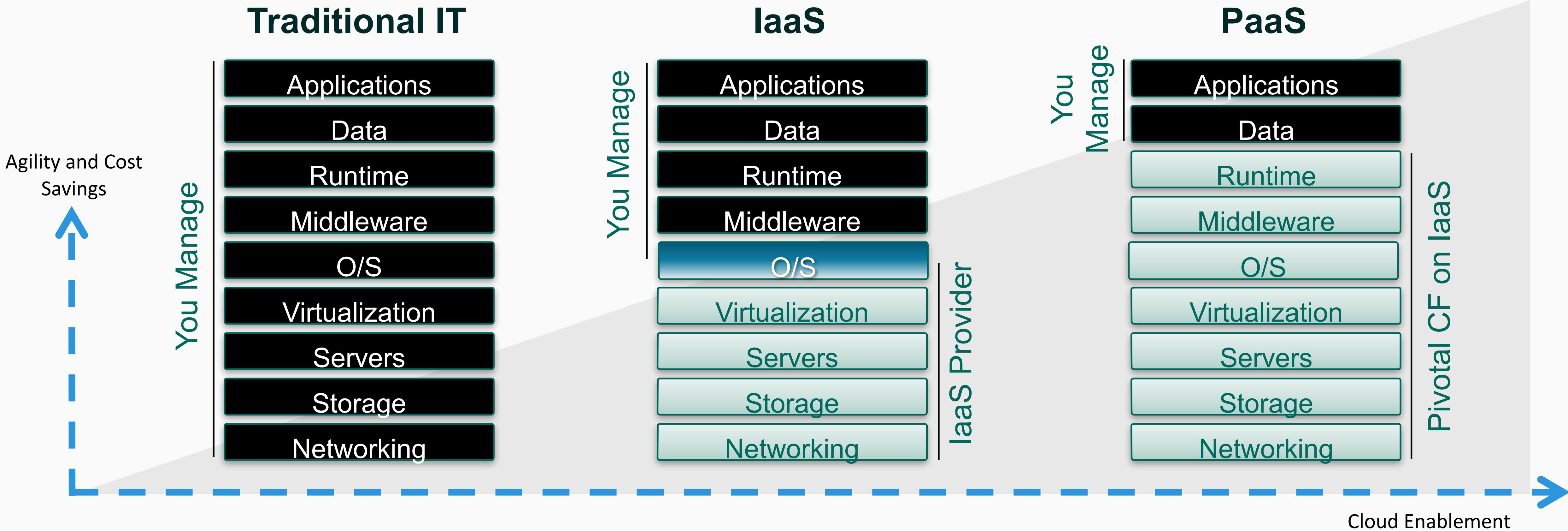


# Evolution of Cloud Architectures

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# The Power of PaaS

The “It Just Works” Experience



# Deploying an Application

IaaS v. PaaS



- ⌚ Provision VM
- ⌚ Install Application Runtime
- ⌚ Deploy Application
- ⌚ Configure Load Balancer
- ⌚ Configure SSL Termination
- ⌚ Configure Service Connectivity
- ⌚ Configure Firewall

cf push

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# Scaling an Application

IaaS v. PaaS



- ⌚ Provision New VM
- ⌚ Install Application Runtime
- ⌚ Deploy Application
- ⌚ Configure Load Balancer / Update Route
- ⌚ Configure Service Connectivity
- ⌚ Configure Firewall

cf scale

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# Industry Analysts

What do they think?



**"IaaS without PaaS capabilities becoming a dying breed."**

In 2014...IaaS providers with no PaaS services...and no ecosystem of developers will go the way of the dodo bird."

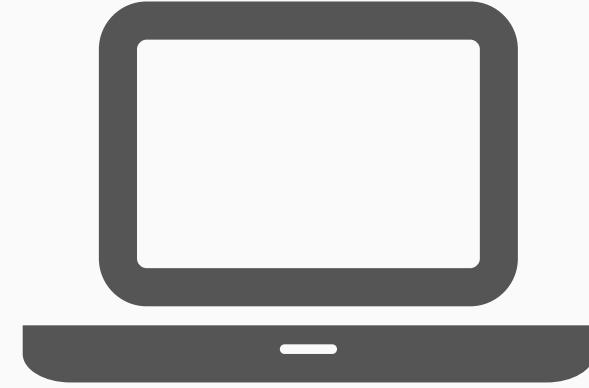


**"The single most powerful thing you can do this year is to enable your developers with a fast and flexible PaaS."**

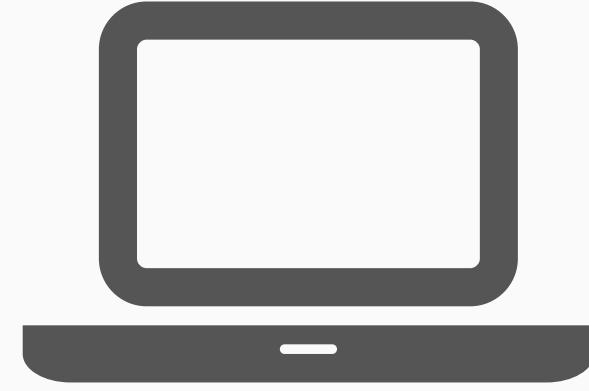
Cloud Foundry fits the bill nicely, and the ease of deployment is the same whether you're deploying a Node.js prototype or a Java project with scads of external services."



DEMO



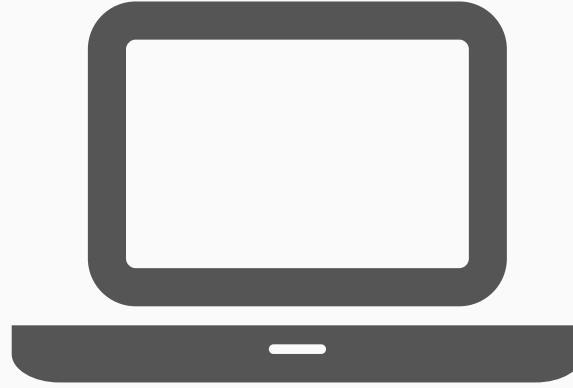
DEMO



DEMO



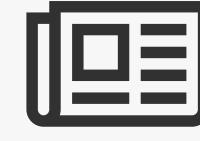
DEMO





# Industry Trends

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## Marc Andreessen

Coauthor of Mosaic, cofounder of Netscape and technology visionary.



*In short, software is eating the world.*



# Software is Changing Industries



Starting



\$3.5B valuation  
Financial Services



\$40B valuation  
Transportation



\$26B valuation  
Entertainment



\$3.5B valuation  
Travel & Hospitality



\$3.2B Acquisition by Google  
Home Automation



\$26B valuation  
Automotive

# Top 5 IT Companies



Since

	FY11				FY12				FY13				FY14				# Quarters	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	3%+	≤2%	
CISCO	19%	6%	5%	3%	5%	11%	7%	4%	6%	5%	5%	6%	2%	-8%	-6%	12	3	
hp	8%	4%	3%	2%	-4%	-7%	-3%	-5%	-7%	-6%	-10%	-8%	-3%	-1%	n/a	3	11	
IBM	3%	7%	8%	12%	8%	2%	0%	-3%	-5%	-1%	-5%	-3%	-4%	-6%	-4%	5	10	
ORACLE	47%	36%	12%	11%	2%	3%	1%	-2%	3%	-1%	0%	2%	2%	4%	n/a	7	7	
Microsoft	25%	15%	13%	8%	7%	5%	6%	4%	0%	3%	8%	3%	7%	14%	8%	14	1	

# What We're Hearing From Customers

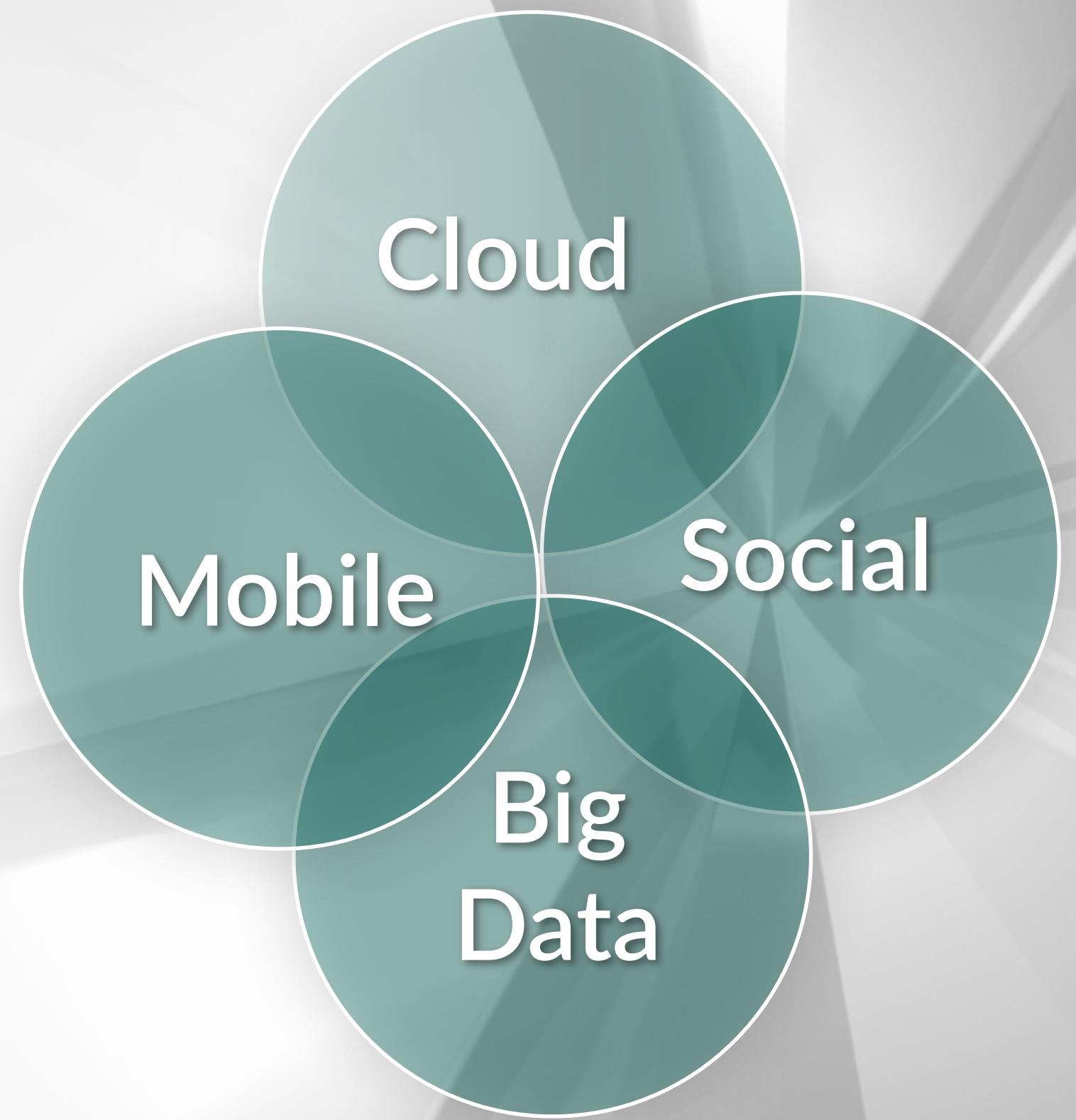


## Need for Speed

Enterprises are being driven to **compete, innovate & execute** faster than ever before:

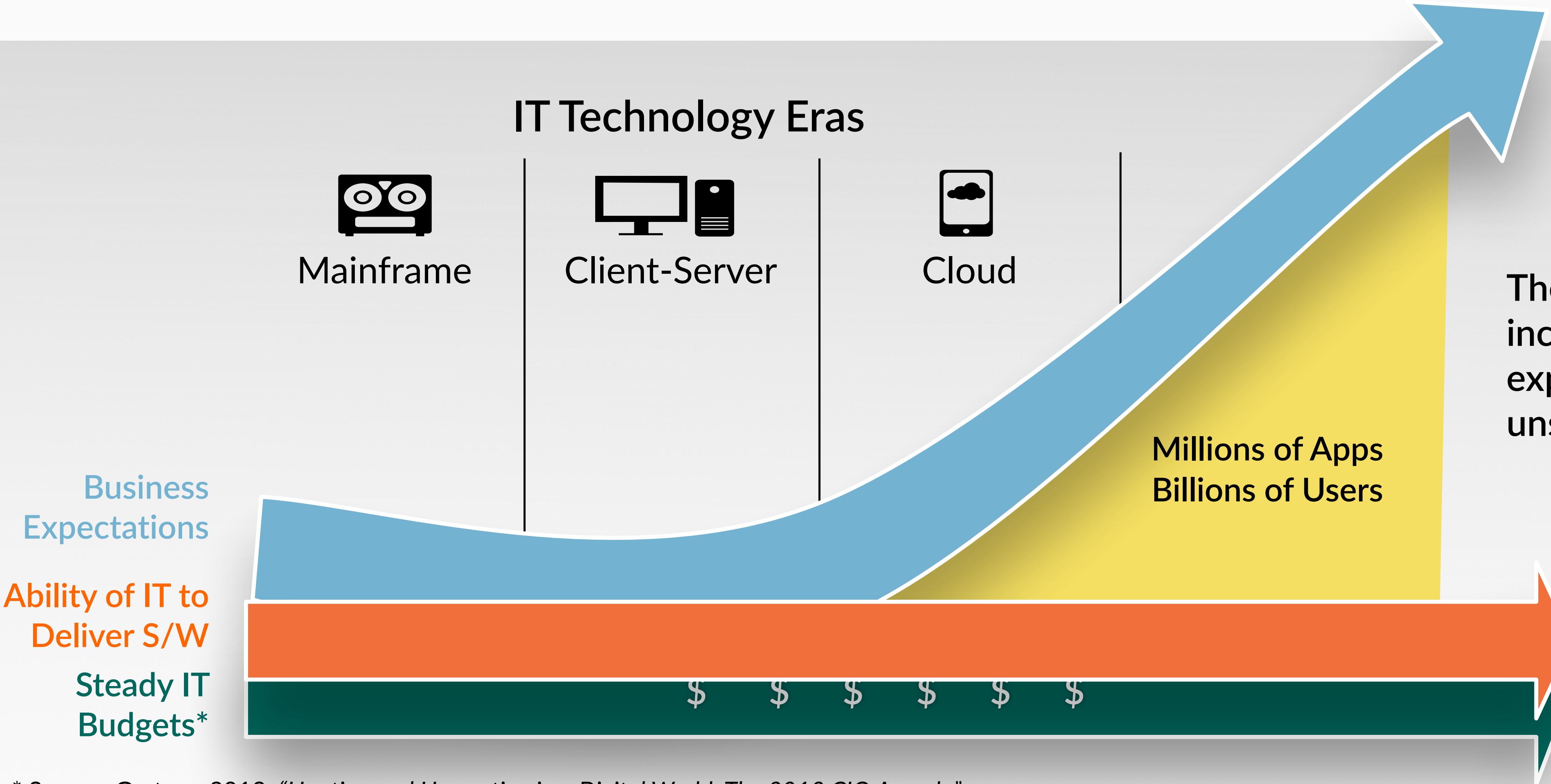
- Global reach and emerging markets
- Ever-increasing customer expectations
- Legacy environment & cost pressures

At a time when we're witnessing the most **disruptive platform shifts** and advances in technology in over 30 years



# Business Expectations Exceed IT Capabilities

The Unsustainable Path for Traditional IT



\* Source: Gartner, 2013: "Hunting and Harvesting in a Digital World: The 2013 CIO Agenda"

# Great Software Remains Constrained By Silos

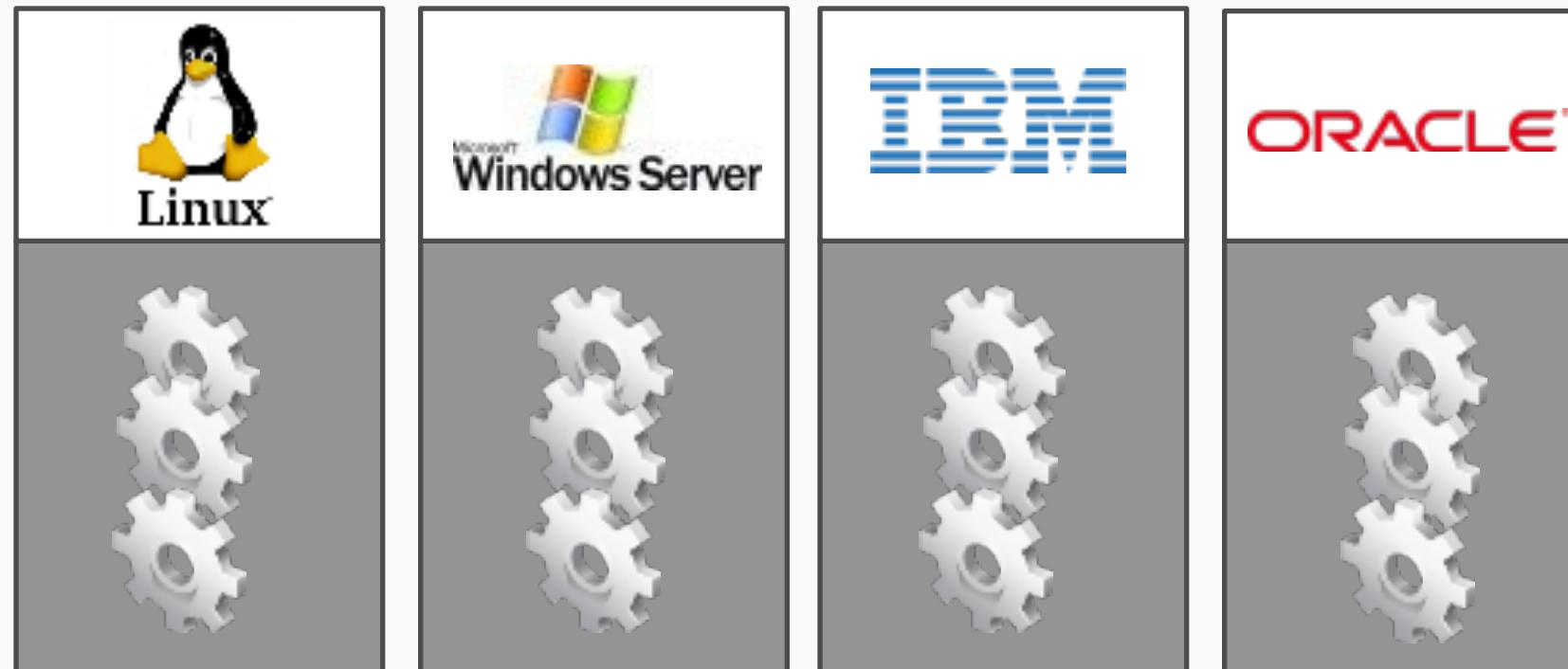
Modern Silos Hold Apps & Data Captive



## Modern Silos



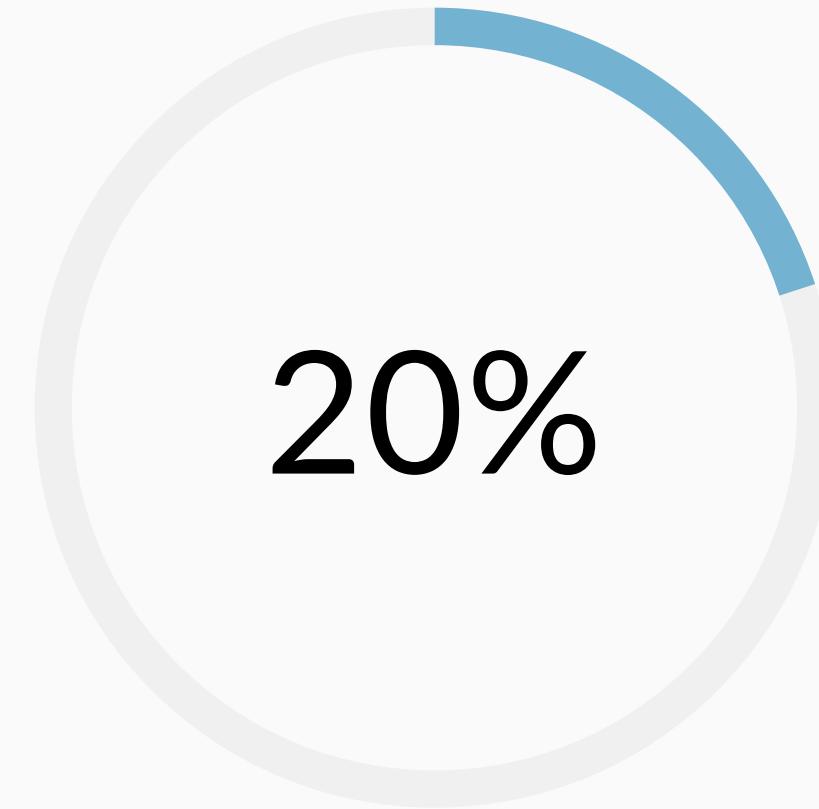
## Legacy Silos



- Captive apps and data
- Closed source/proprietary
- Vendor lock-in
- Talent and Expertise gap

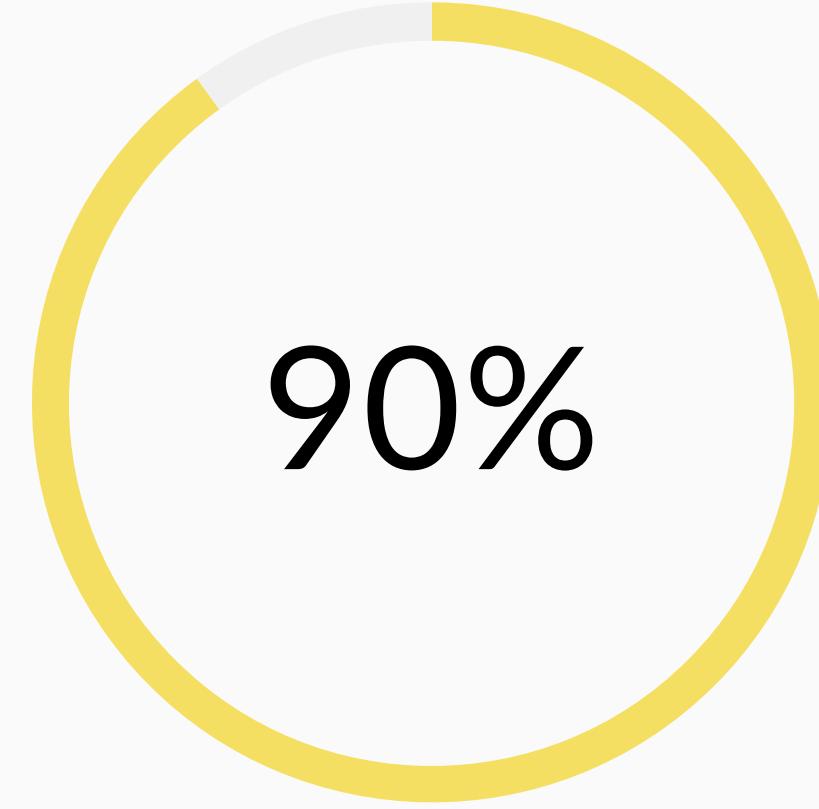
# Mobile Trends in the Enterprise

Where we are heading



2013

20% of enterprise  
apps are mobile



2017

90% of enterprise apps will  
be desktop and mobile

Source: Gartner predicts

# Rapid Innovation Requires a New Approach



## DEVELOPERS



- Dramatically improve the developer experience
- Agile teams, rapid iteration
- Ingest and incubate open source advancements and new data services

## OPERATORS



- Continuous delivery, no planned downtime
- Instant scaling of apps and data services
- Automation and deployment consistency at every step



# Cloud Foundry

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The OSS Community

# Cloud Foundry

Open everything



CLOUD FOUNDRY  
COMMUNITY



# The Cloud Foundry Foundation

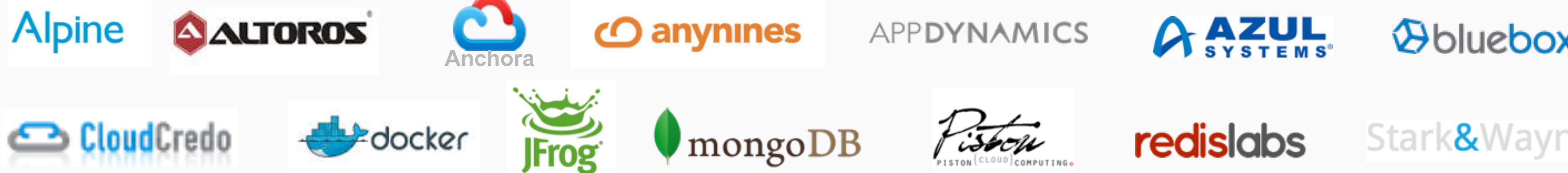
The Largest Open Source PaaS Ecosystem



**Platinum members**



**Gold members**



**Silver members**

Over 100k downloads of Cloud Foundry (OSS) software and tools!

# The Largest Open Source PaaS Ecosystem

Driven by the Community



Pivotal™

vmware®



GE Software

EMC<sup>2</sup>

ALTOROS

Rakuten

sky

swisscom

AppDirect

Baidu 百度

TIER 3

bluebox®

NTT Communications

anynines

canopy

CloudCredo

Cloud Elements

orange™

STOIC

SAVVIS.

CenturyLink™

rackspace  
the open cloud company

verizon

symantec™

SAP®

at&t

IBM.

CISCO

intel

Piston  
PISTON [CLOUD] COMPUTING

Stark&Wayne.

warner | music | group

ActiveState



# Pivotal CF

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The Leading Enterprise Cloud Foundry Distribution

# Core Tenets of Pivotal CF

The Enterprise Platform as a Service



## Radically Simple, Developer Friendly

- Push an app and “it just works”
- Build applications that consume increasing amounts of data, supporting wide ranging use cases
- Support new application patterns like Microservices

*Easy to add and customize*

## Broad Ecosystem Services

### Data Services

### App Services

### Mobile Services

## Operational Benefits for Every Application

- Highly scalable, self healing
- Logging and audit trail requirements
- Existing enterprise policies on user access & authorization
- Application Monitoring and Operational metrics
- Application Uptime SLAs

Deploy, Operate, Update & Scale with minimal downtime on Any IaaS



....and more



## Pivotal CF™

- Certified upgrades, curated & tested quarterly releases
- Operations Manager Cloud Administrative Console
- Elastic Runtime Developer Console
- Built-in Application Performance Monitoring (APM)
- Operational Metrics service
- Auto-Scaling service
- Easy LDAP/Active Directory Integration
- Historical Usage Data per Application Instance
- Declarative Availability Zones
- Behind the firewall download packages (do not require internet access)
- Enterprise documentation (PDF format)

# Pivotal CF Services

Your Service Menu



## Pivotal HD Service for Pivotal CF

Gain insight from the massive data captured by apps, syst...



## API Gateway for Pivotal CF

Create mobile-optimized APIs



## Redis for Pivotal CF

Cloud Foundry Redis service for application development a...



## Riak CS for Pivotal CF

An S3-compatible object store for Cloud Foundry applications



## App Autoscaling for Pivotal CF

Scales bound applications in response to load



## Cassandra for Pivotal CF

Cassandra KV and Table Store



## Elasticsearch for Pivotal CF

Elasticsearch Search Engine



## Jenkins Enterprise by CloudBees

Continuous Integration and Delivery for Software



## Memcached for Pivotal CF

Memcached Elastic Cache Service



## Neo4j for Pivotal CF

Neo4j Graph Database



## Pivotal Spring Insight

Zero touch instrumentation of Java applications



## Push Notifications for Pivotal CF

Add secure push notifications to your mobile apps



## Data Sync for Pivotal CF

Secure data store with mobile-optimized access



## RabbitMQ Service for Pivotal CF

Give your applications a common platform to safely send



## MongoDB for Pivotal CF

MongoDB Data Store



## MySQL for Pivotal CF

MySQL database-as-a-service for Cloud Foundry applications

Not Pictured: Ops Metrics for JMX monitoring

# Pivotal Ops Manager

Managing Your Platform



Click to install

No downtime updates

Explore install logs

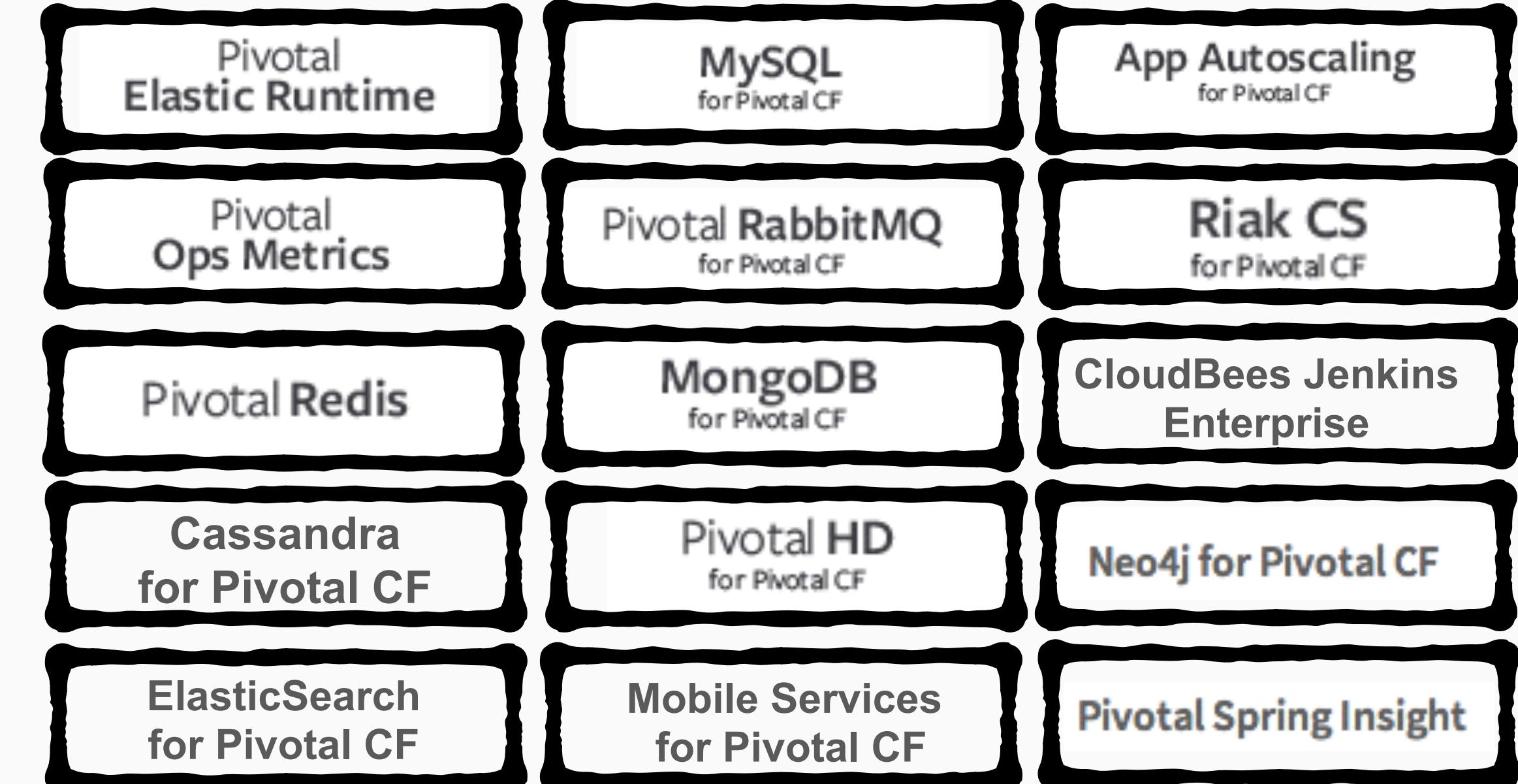
Click to scale the platform

Built-in High Availability

Built-in Platform Monitoring

Integrated services

## Pivotal Ops Manager



BOSH Director

BOSH Agent

IaaS





## Case Studies

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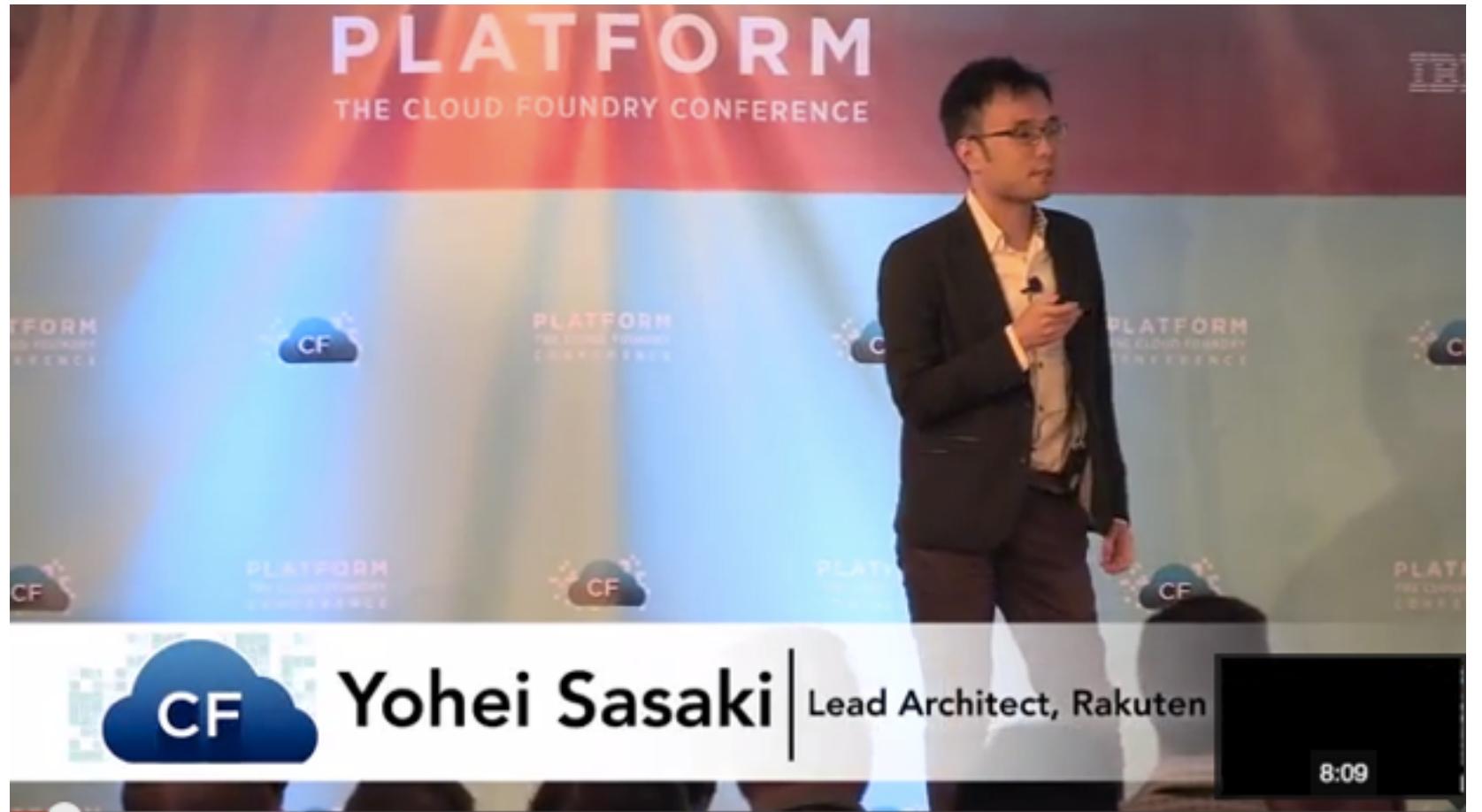
Baidu 百度

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百度一下

百科 文库 hao123 | 更多>>

1 Billion Page Views A Day Powered by Cloud Foundry!



**R**Rakuten

90%



Reduction in  
Operation Costs

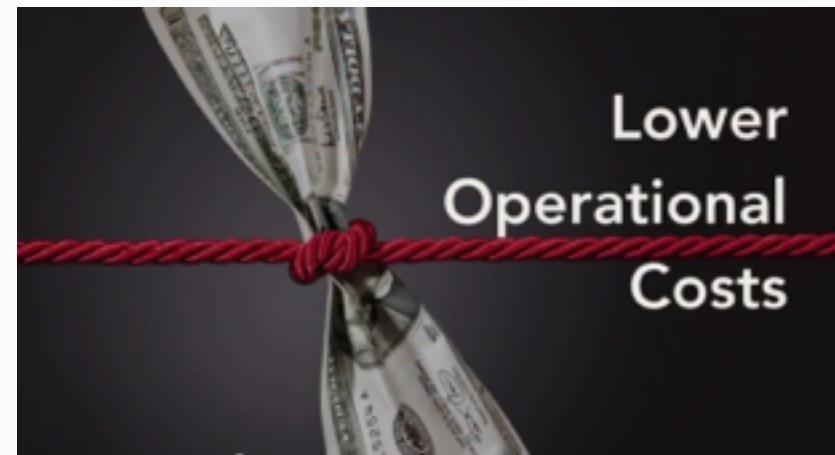


*Big Cost Savings*

Dramatic increase in  
Server to Admin ratio

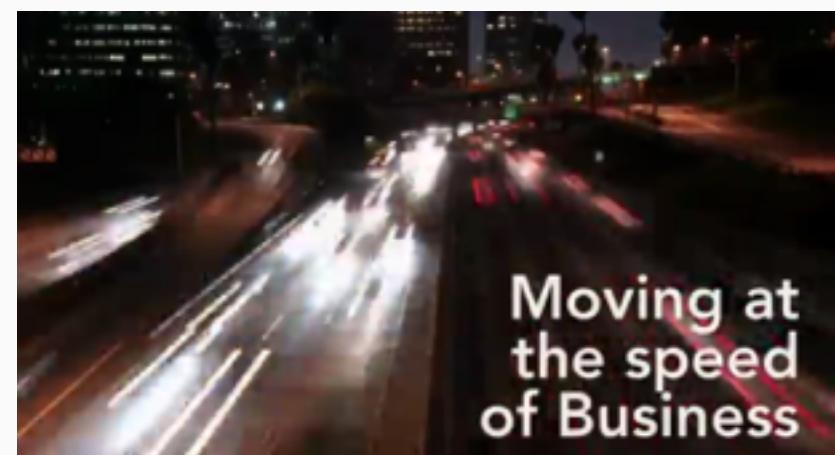
# Warner Music Group

From Zero to Factory



## Fail, Learn, Adapt, Repeat.

*6 Months to 6 Weeks  
\$1.1M Saving per App*





“We made a commitment establish an ecosystem that allows us to provide a **consumer grade client experience** and deliver our **world class financial services** in a really comprehensive way to a much larger audience. PaaS is a critical component of that.”

“It used to be financial services drove the technology agenda. Now it's consumer businesses that are driving the technology.”



“It's not just about the developers, it's about the operations staff.”

“When we look at our next generation PaaS platform it's not just the technology, it's the whole organization. It's a complete transformation of how we're building software.”

<https://www.youtube.com/watch?v=eJ1j6qezthY>



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