

Intro to Pivotal CF

Pivotal CF

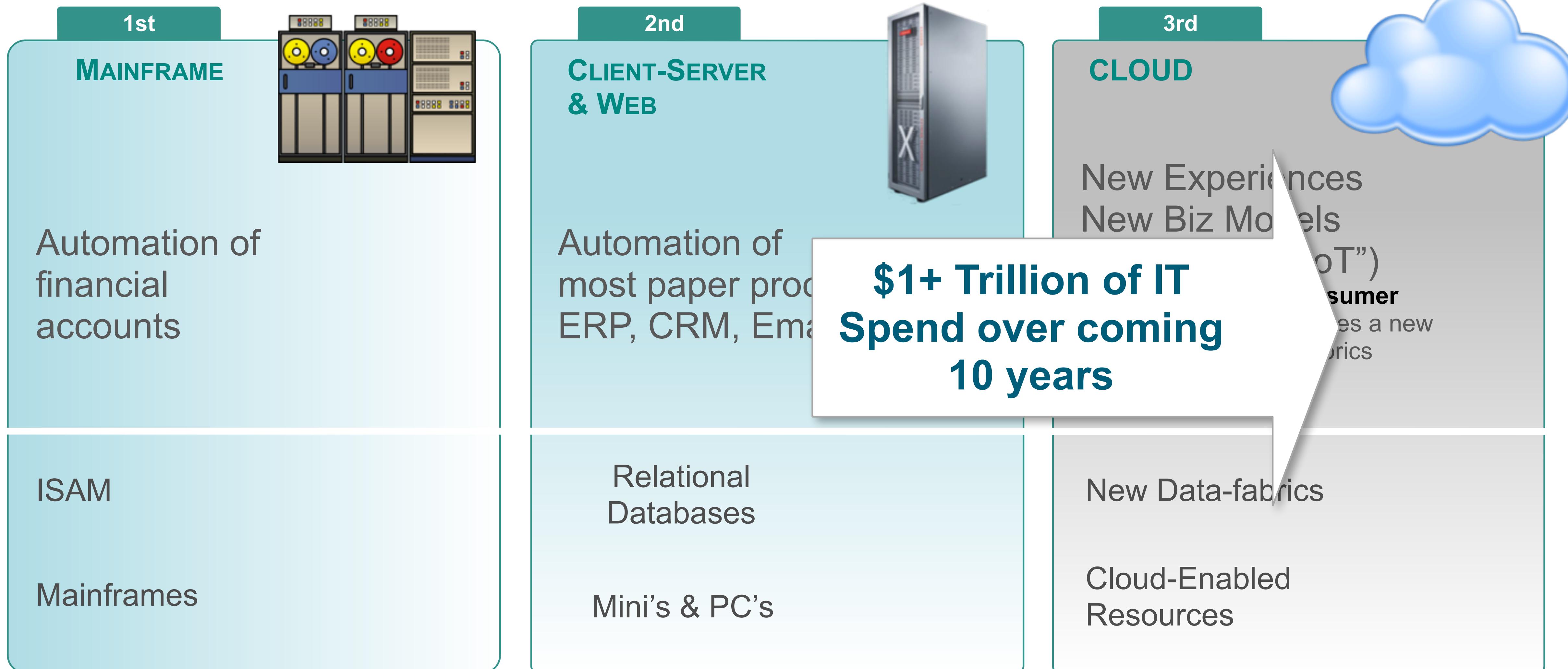
Overview

-
- 1. Industry Trends
 - 2. Cloud Foundry in Action
 - 3. The Cloud Foundry Foundation
 - 4. Pivotal CF
 - 5. Case Studies

Industry Trends

What's happening with apps today

THE SHIFT TO THE 3RD GENERATION PLATFORM



WHAT DO WE SEE HAPPENING?

THE WALL STREET JOURNAL.

Why Software Is Eating The World

By MARC ANDREESSEN

You are either building a software business...

or losing to someone who is

SOFTWARE IS CHANGING INDUSTRIES



\$3.5B valuation
Financial Services



\$19B valuation
Transportation



\$26B valuation
Entertainment



Travel like a human.

\$3.5B valuation
Travel & Hospitality



\$3.2B Acquisition by Google
Home Automation



\$1.1B acquisition
Monsanto--Agriculture

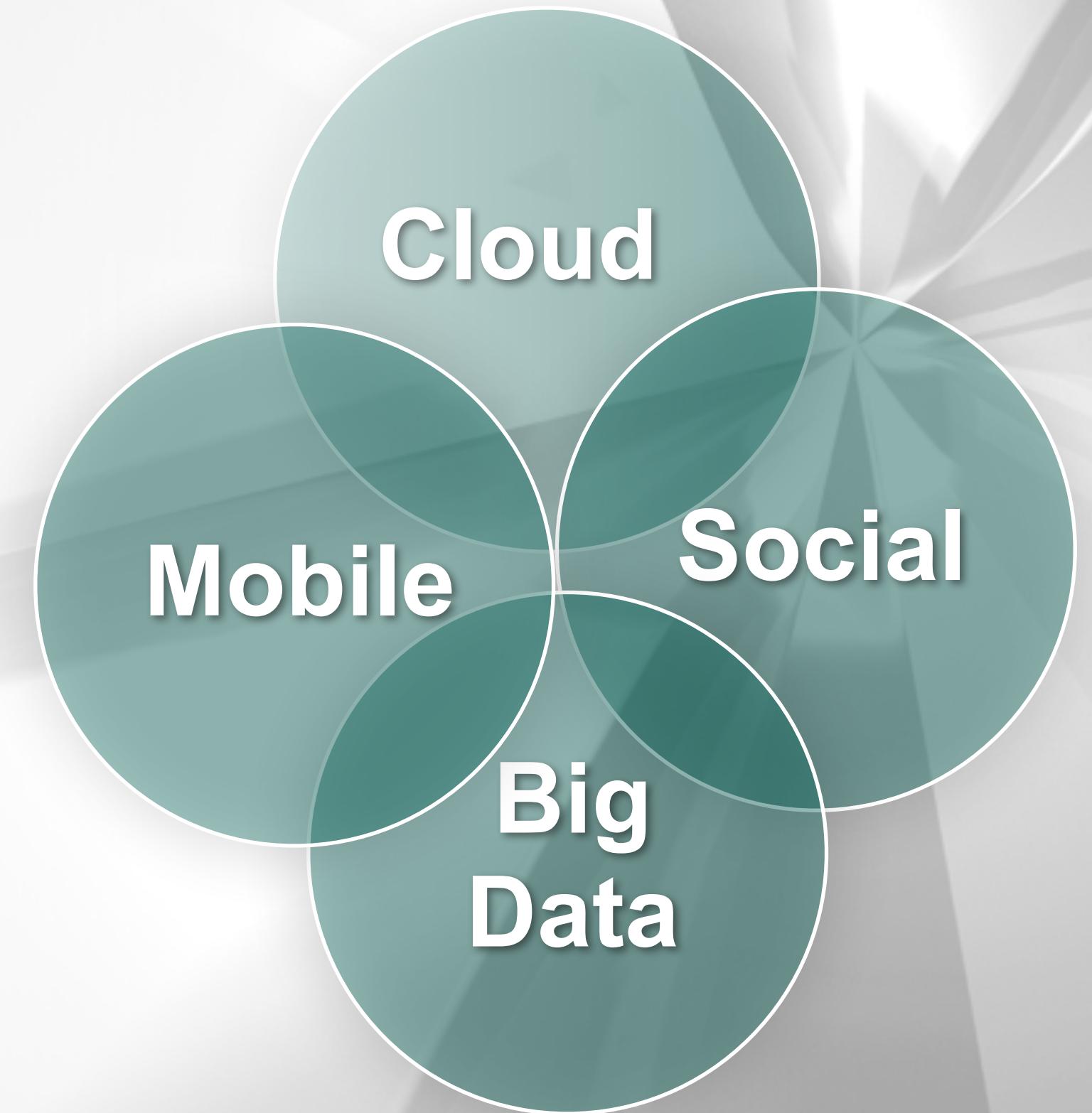


Need for Speed

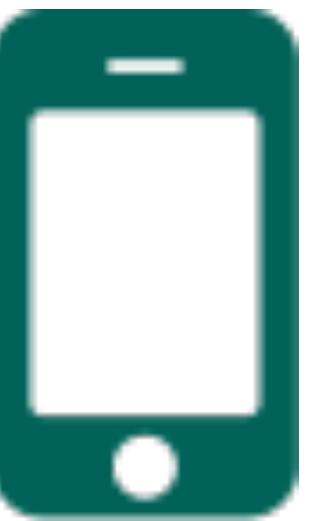
Enterprises are being driven to **compete, innovate & execute** faster than ever before:

- 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



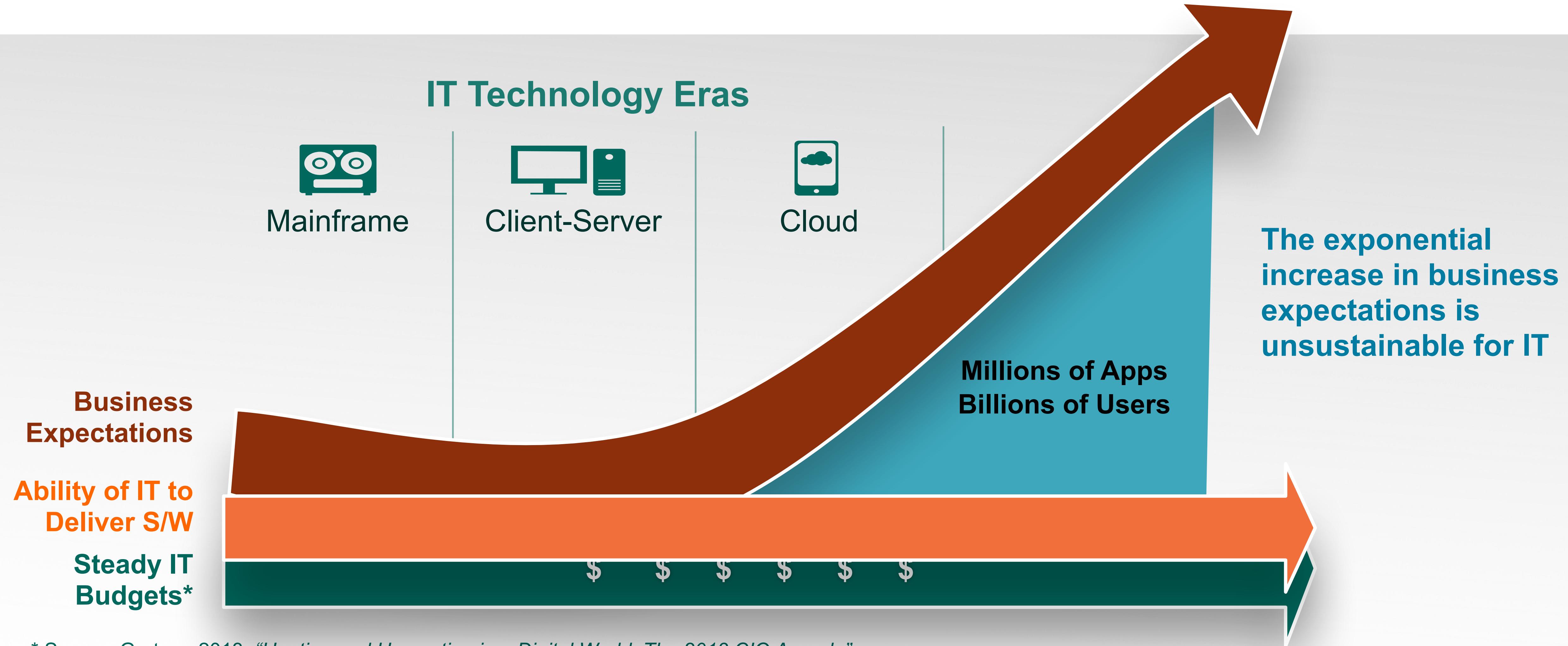
In January 2014, mobile devices accounted for 55% of Internet usage in the United States. Apps made up 47% of Internet traffic and 8% of traffic came from mobile browsers.



<http://money.cnn.com/2014/02/28/technology/mobile/mobile-apps-internet/>

BUSINESS EXPECTATIONS EXCEED IT CAPABILITIES

THE UNSUSTAINABLE PATH FOR TRADITIONAL IT



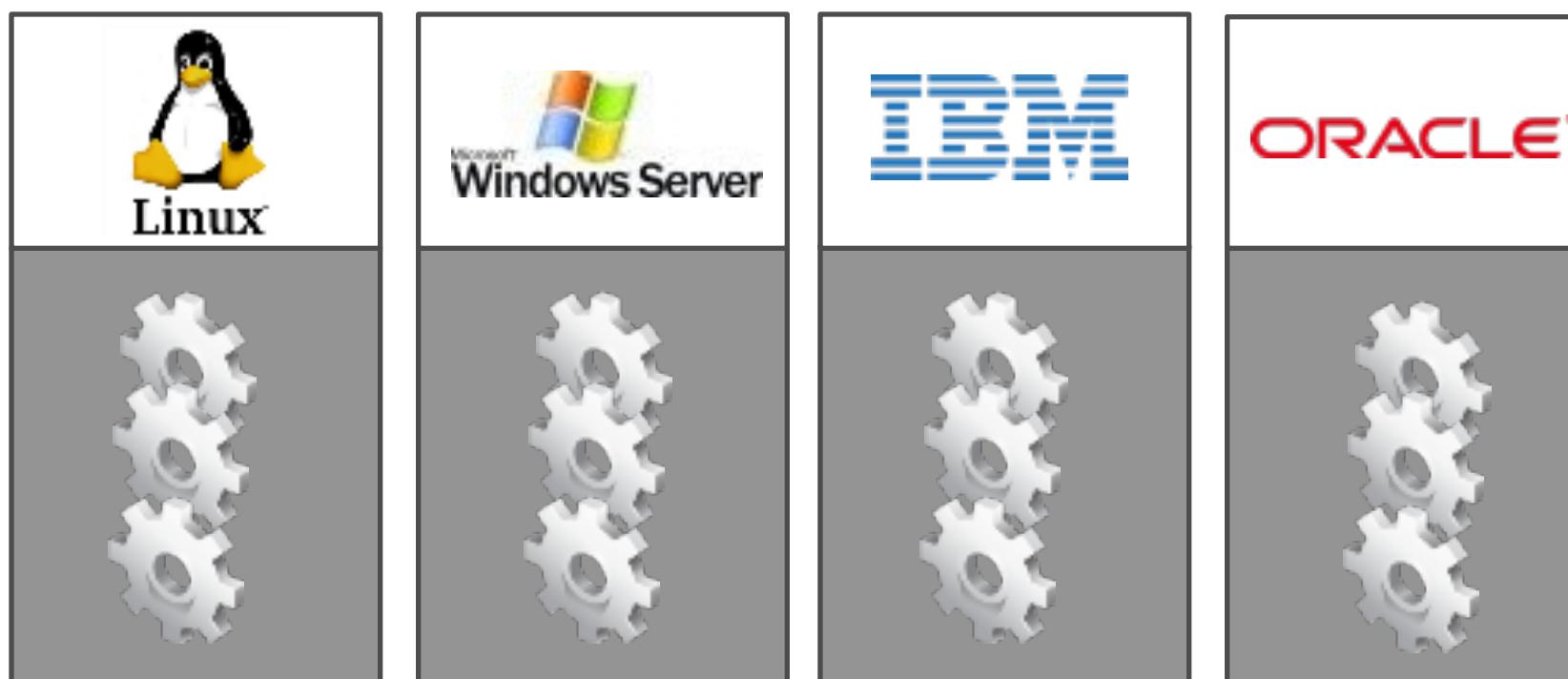
GREAT SOFTWARE REMAINS CONSTRAINED BY SILOS

MODERN SILOS HOLD APPS & DATA CAPTIVE

Modern Silos



Legacy Silos



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

WHY IS AWS SO INTERESTING?

THE ON-DEMAND REVOLUTION



-  **Speed:** True self service model allows access to resources in minutes
-  **Cost Effective:** Clear costing model with no upfront investment required
-  **Open:** Just bring your credit card
-  **Simple:** Intuitive interfaces provide easy access to services
-  **Global:** Geographically dispersed data centers provide global reach & the promise of unlimited capacity

WHY IS AWS SO CHALLENGING?

CREATED BY THE ON-DEMAND REVOLUTION



- ✖ **Divergence:** A la carte options lead to differing versions of operating systems, tools & runtimes
- \$ **Sprawl:** Out of control costs due to 100's or 1000's of accounts & lack of clean
- 👁 **Lack of Security, Visibility & Governance:** Organizations are exposed to high risk due to lack of control
- 🔒 **Vendor Lock In:** Use of proprietary services and technologies are not portable to other cloud platforms

Rapid Innovation requires a **New Approach**

Rapid Innovation requires a New Approach

DEVELOPERS



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

OPERATORS



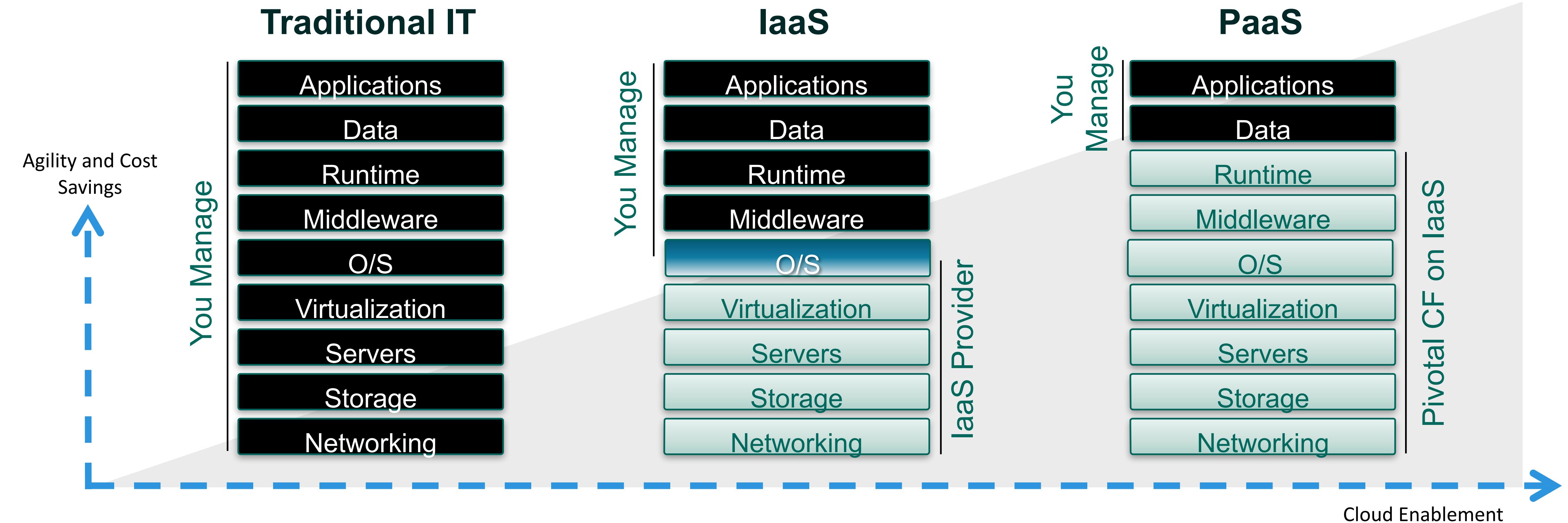
- Continuous delivery, no planned downtime
- Instant scaling of apps and data services
- Automation and deployment consistency at every step

Cloud Foundry in Action

The “It Just Works” Experience

THE POWER OF PaaS

THE “IT JUST WORKS” EXPERIENCE



DEPLOYING AN APPLICATION

IAAS VERSUS PAAS



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

cf push

Pivotal CF™

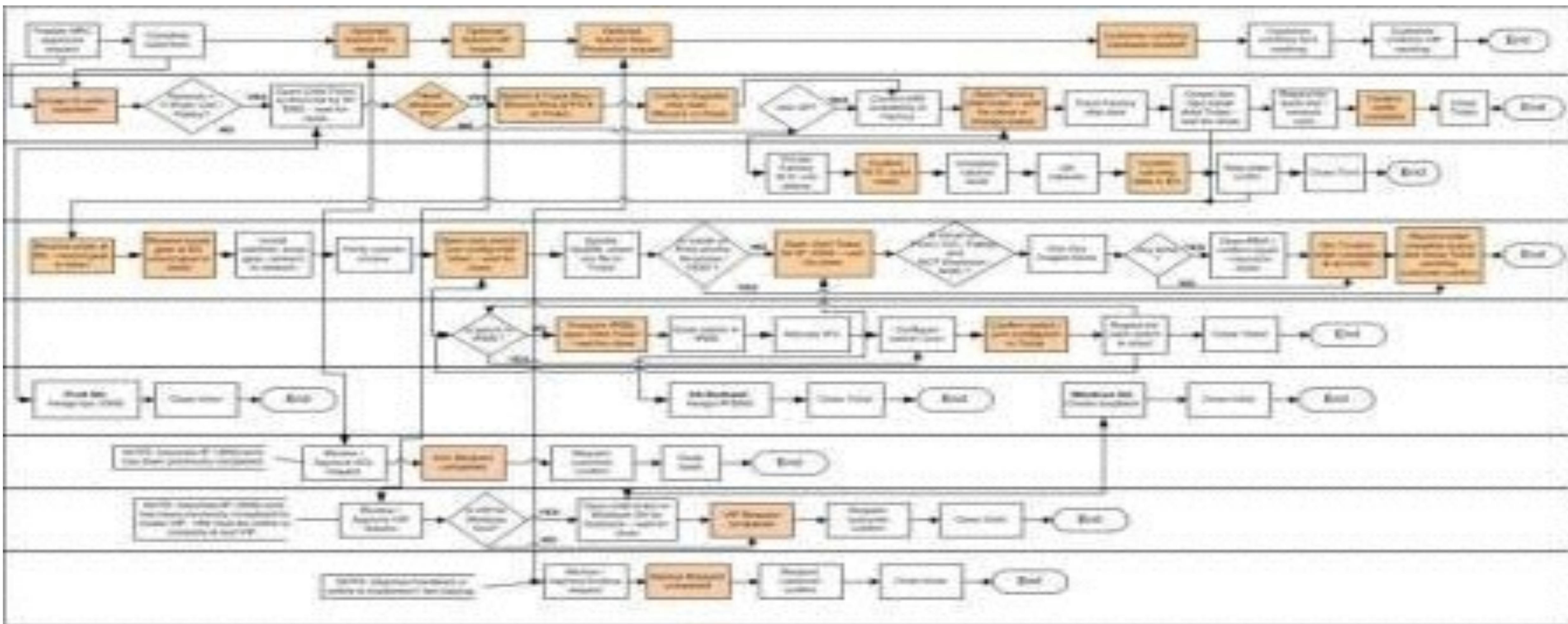


- Provision New VM**
- Install Application Runtime**
- Deploy Application**
- Configure Load Balancer / Update Route**
- Configure Service Connectivity**
- Configure Firewall**

A solid orange circle icon followed by the text "cf scale".

Pivotal CF™

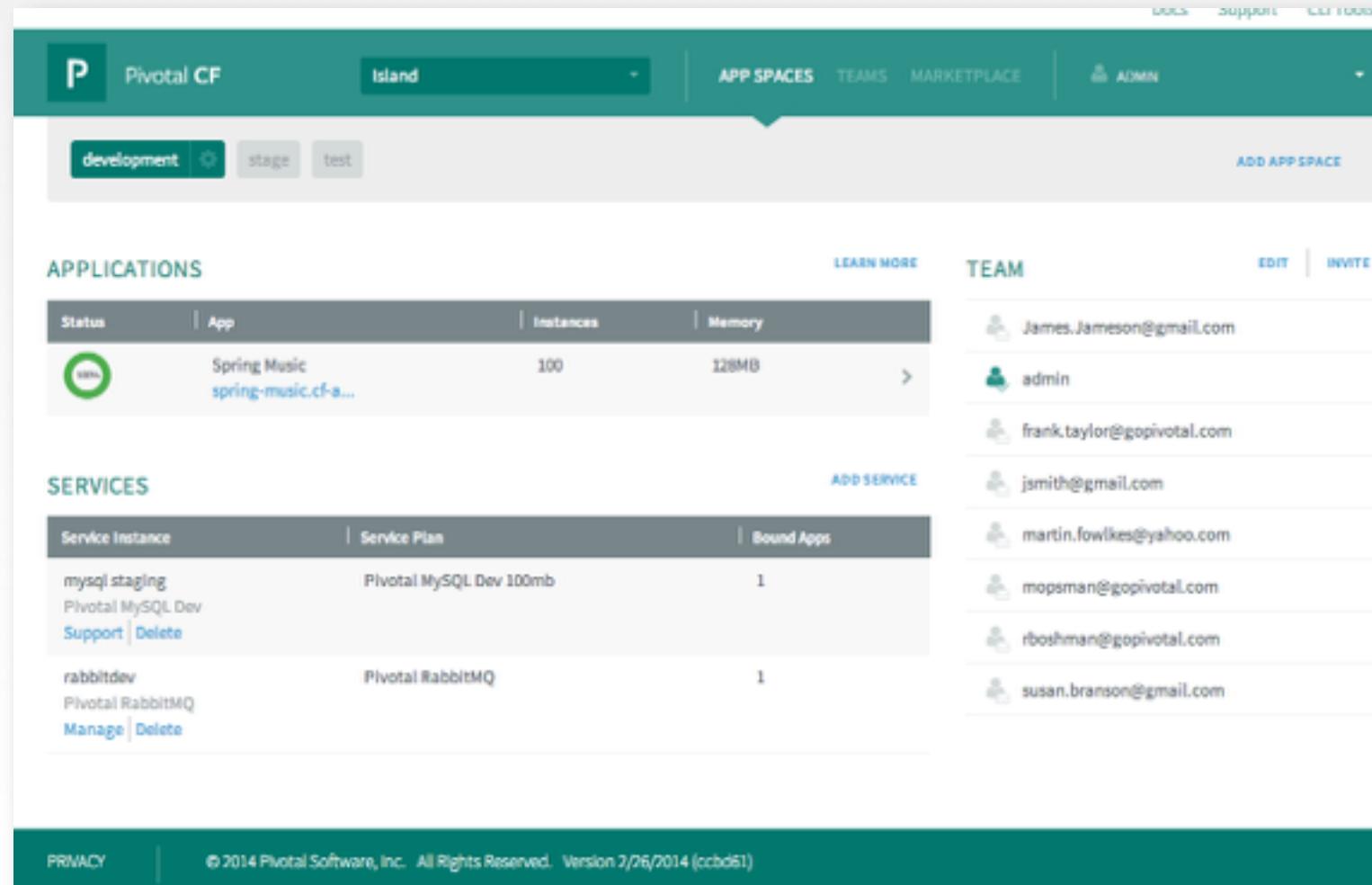
Taking the Application Lifecycles From Months...



...to Hours and Minutes

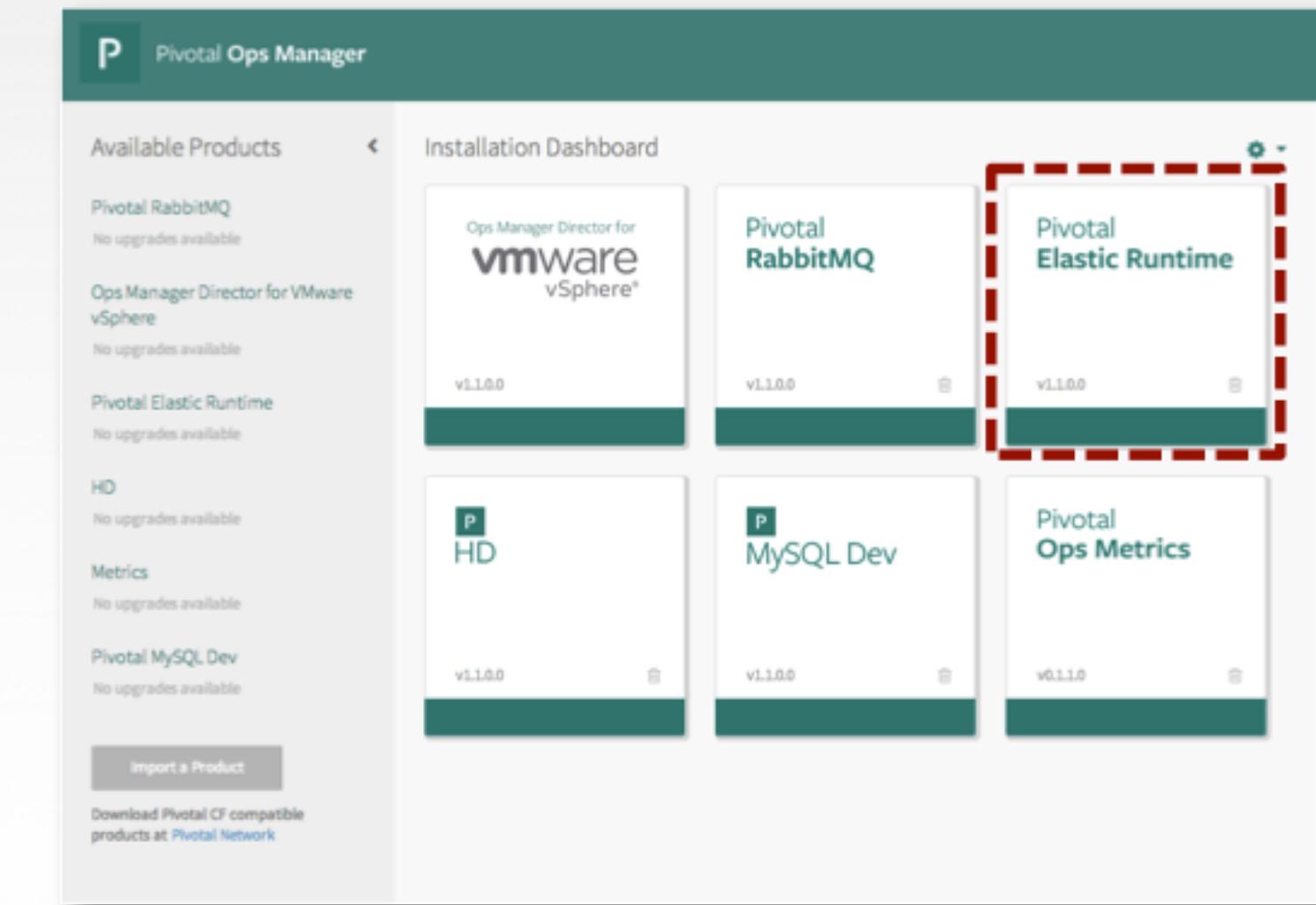
DEVELOPER

Auto-select runtimes
Deploy app
Select and bind middleware
Scale app



OPERATOR

Establish infrastructure
Provision
Add capacity
Control Auth, Policies, HA



App Deployment: 30-90 seconds



Cloud Deployment: 2-4 hours

Cloud Foundry

The community and ecosystem



CLOUD FOUNDRY
C O M M U N I T Y

Cloud Foundry

The Open Platform

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®



EMC²



Rakuten

sky



bluebox®



anynines

canopy

CloudCredo

Cloud Elements



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

Pivotal CF

Enterprise Cloud Foundry



CLOUD
FOUNDRY™

The leading
enterprise distribution
of Cloud Foundry is..
Pivotal CF



Pivotal CF™

Pivotal

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



Install the platform



Target multiple clouds



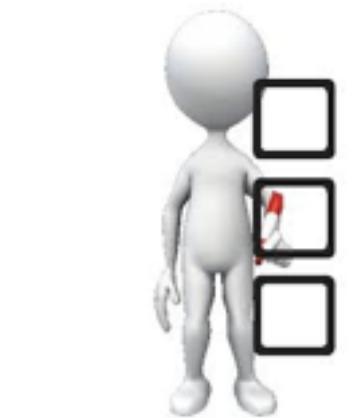
Handle live upgrades and updates

Pivotal Ops Manager

Pivotal CF

CLOUD FOUNDRY

IaaS



Install and manage services



Scale and plan capacity

Pivotal

COMMERCIALLY SUPPORTED ENTERPRISE PaaS BY PIVOTAL

Pivotal CF™

- Certified upgrades, curated & tested quarterly releases
- Operations Manager Cloud Administrative Console
- Elastic Runtime Users 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



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



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



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

Not Pictured: Ops Metrics for JMX monitoring

Click to install

No downtime updates

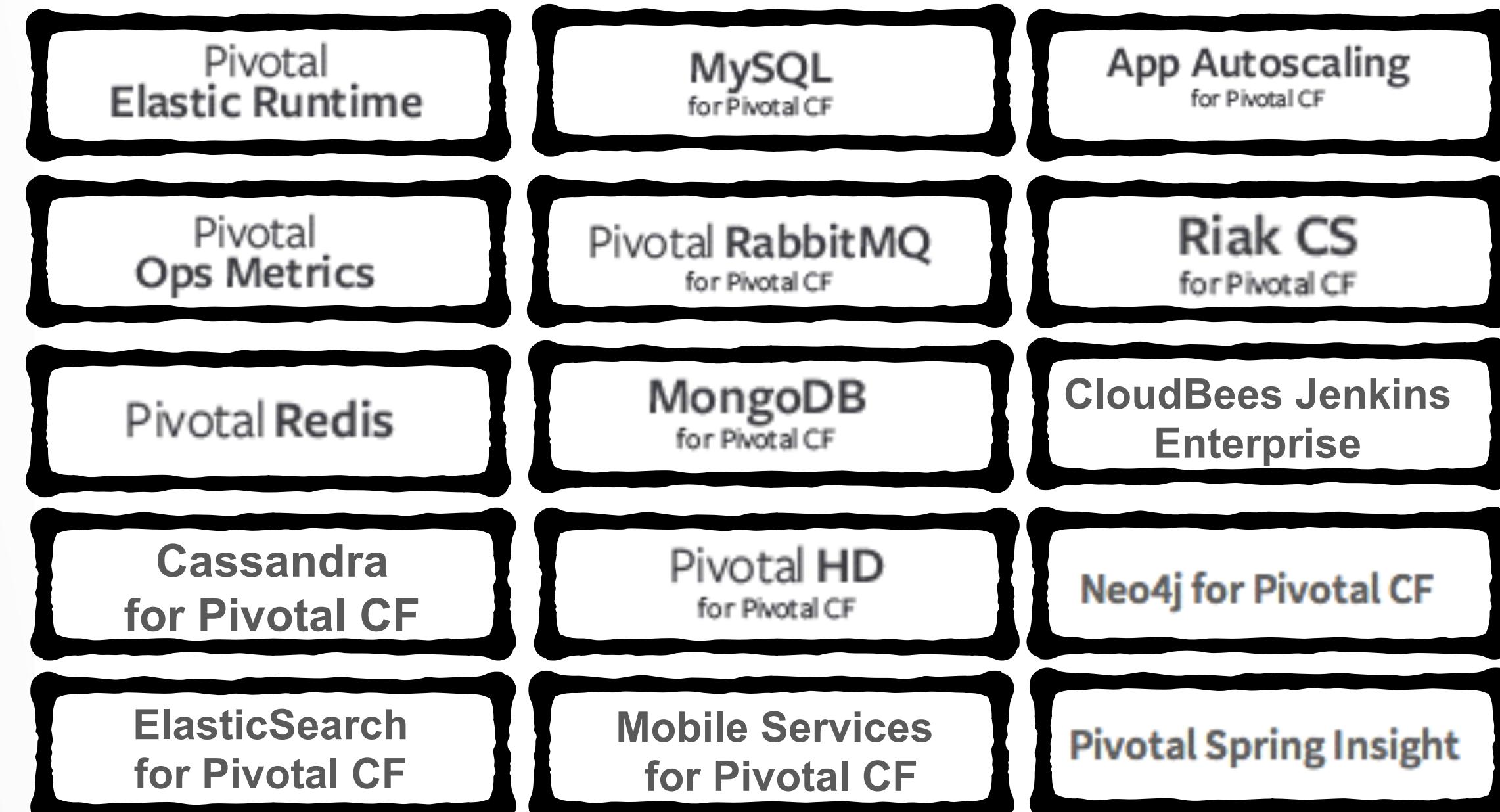
Explore install logs

Click to scale the platform

Built-in High Availability

Built-in Platform Monitoring

Integrated services



BOSH Director

BOSH Agent



Pivotal™

Case Studies



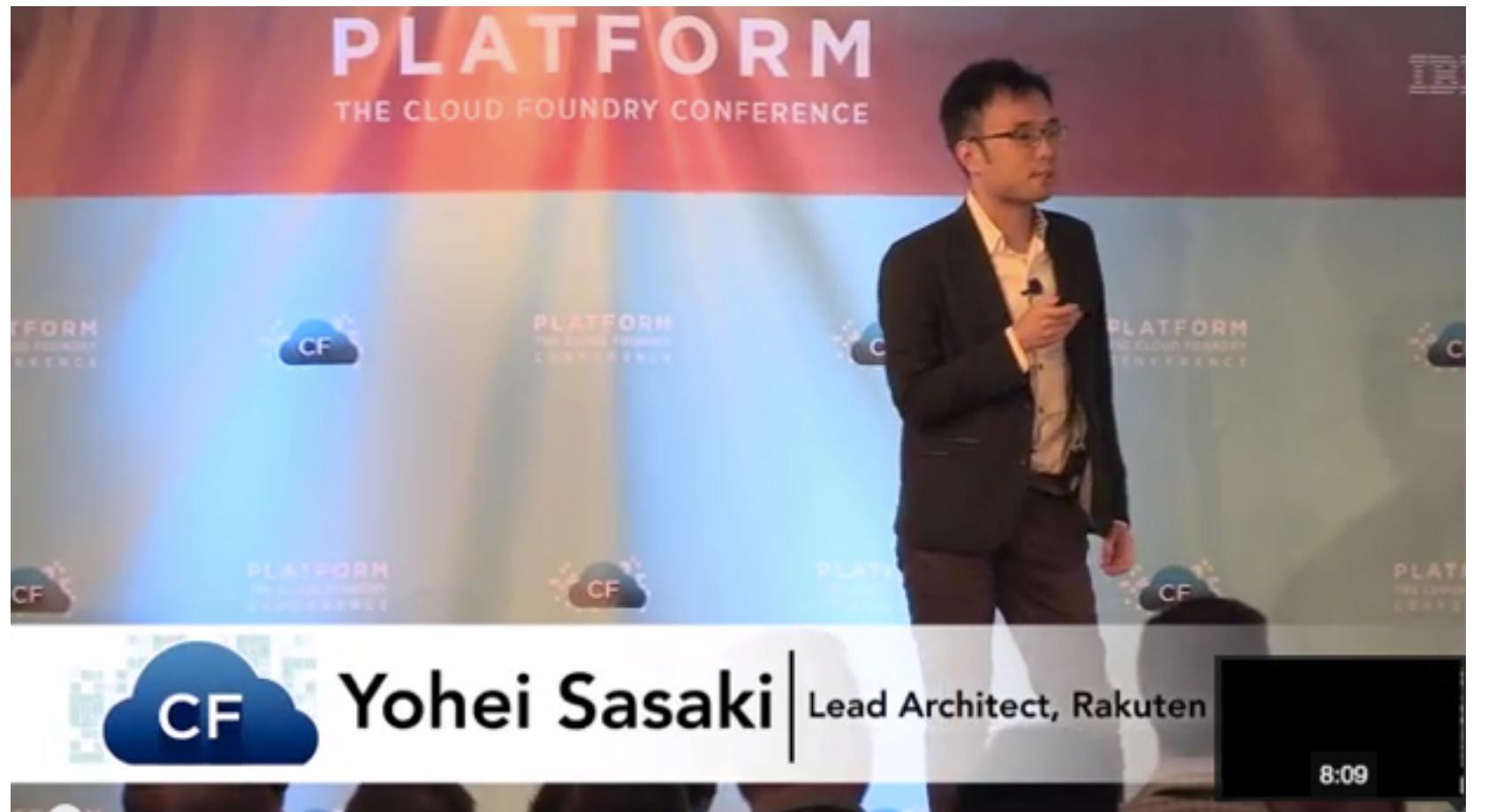
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1 Billion Page Views A Day Powered by Cloud Foundry!



Rakuten

90%

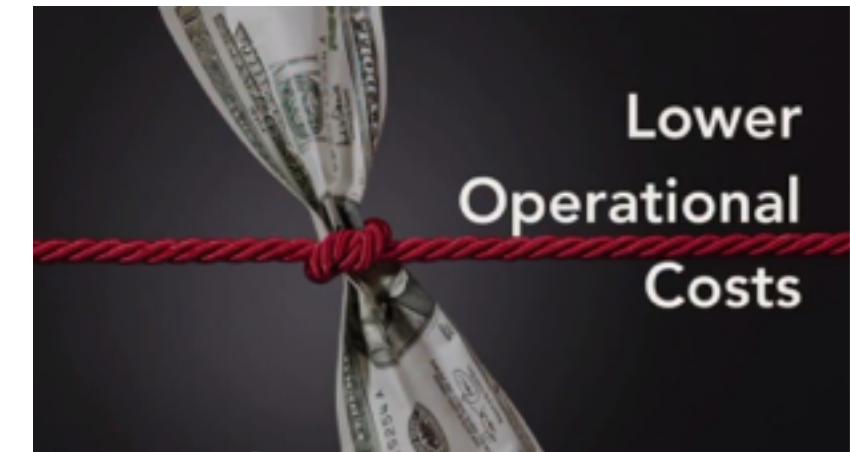


Reduction in
Operation Costs



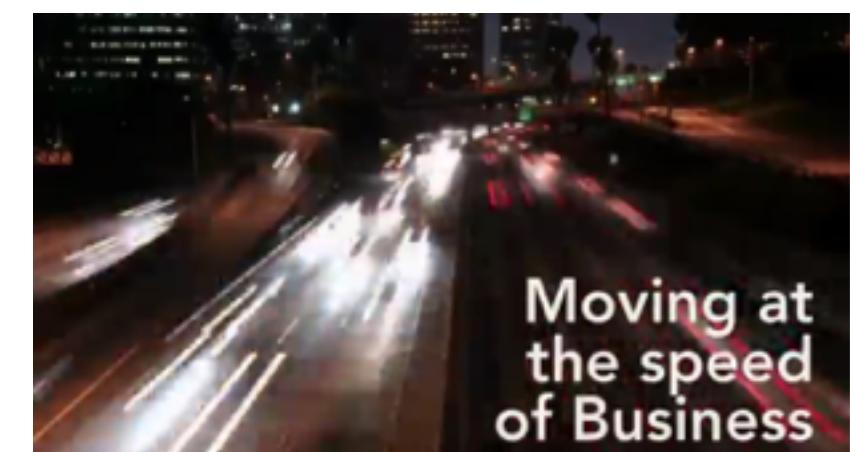
Big Cost Saving

Dramatic increase in
Server to Admin ratio



Fail, Learn, Adapt, Repeat.

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



Real Estate Analytics Company Prepares for a Software-Driven Era



Pivotal Solution includes: Pivotal Cloud Foundry

Challenge:

- Leader in Real Estate Transaction Services must innovate with speed of new market entrants, while contending with years of disparate, legacy infrastructure
- Growth through M&A resulted in disconnected infrastructure
- Systems were expensive and time consuming to maintain

Solution:

- Standardize development infrastructure to convert 700+ applications to 300
- Transform development process and culture with new methodology, technology and skills that mirror the disruptive app development approaches of today's Internet giants

“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.”

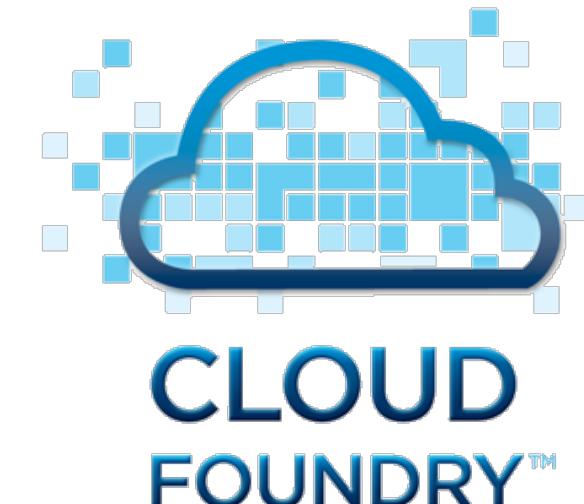


BNY MELLON

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

“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.”

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



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

“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.”



Pivotal

A NEW PLATFORM FOR A NEW ERA