



# IBM Bluemix

Digital Innovation Platform

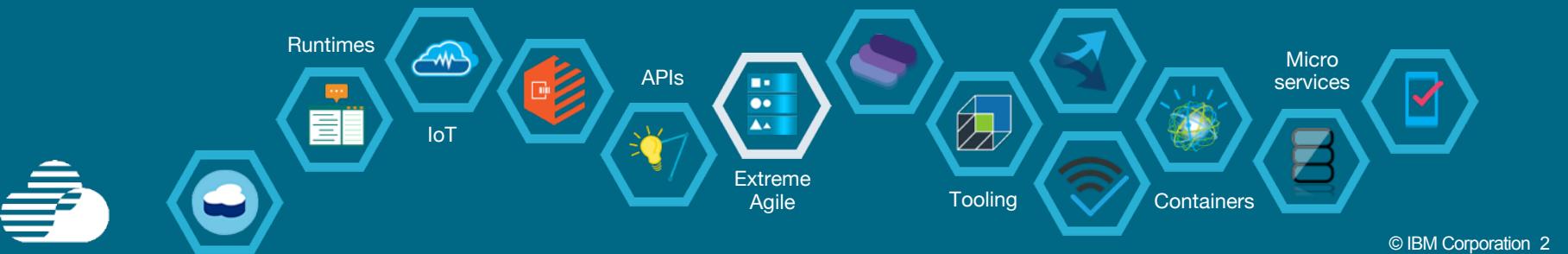
Presented by:  
Jay Desai



# The rate of innovation is increasing

**“Two guys in a Starbucks can have access to the same computing power as a Fortune 500 company.”**

*Jim Deters - Founder, Galvanize*



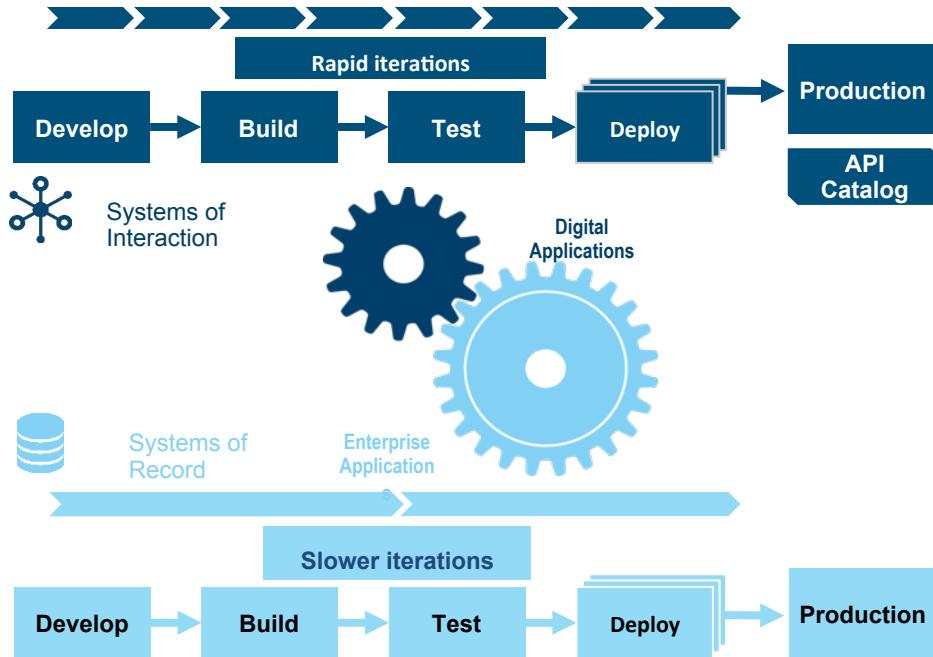
Enterprise want to  
disrupt, but...



New Business  
Value

Existing  
Applications

# Enterprises need instrumented, automated coordination to handle two-speed IT



## Enterprise have different requirements

- ❖ Application monitoring and logging
- ❖ Corporate Policies
- ❖ Regulations
- ❖ White Labelling
- ❖ LDAP Integration
- ❖ Security and Privacy

***Enterprises need to find a balance between IT & Innovation.***

***Hybrid is a great opportunity to develop new business via digital channels.***

***Disruption can occur when enterprises are slow to adapt***

**Bluemix will enable**

# Bluemix delivers the cloud value proposition

Today, cloud is being consumed at an exponential rate.  
Cloud is a game changer in the way we consume and manage IT today.

*Enterprises are aggressively implementing their clouds strategy. However, managing this environment is costly and can be resource heavy.*



- 1 Bluemix provides an Innovation Platform, that is **open and non-proprietary, delivers everywhere and you can start anywhere – public, private, on-prem, or off-prem**
- 2 IBM Managed Cloud allows developers to innovate more quickly and addresses your needs for **security and compliance**.
- 3 Provide **turn key delivery**, that allows you to **get started immediately with Bluemix and grow as your needs mature**.



IBM Bluemix™

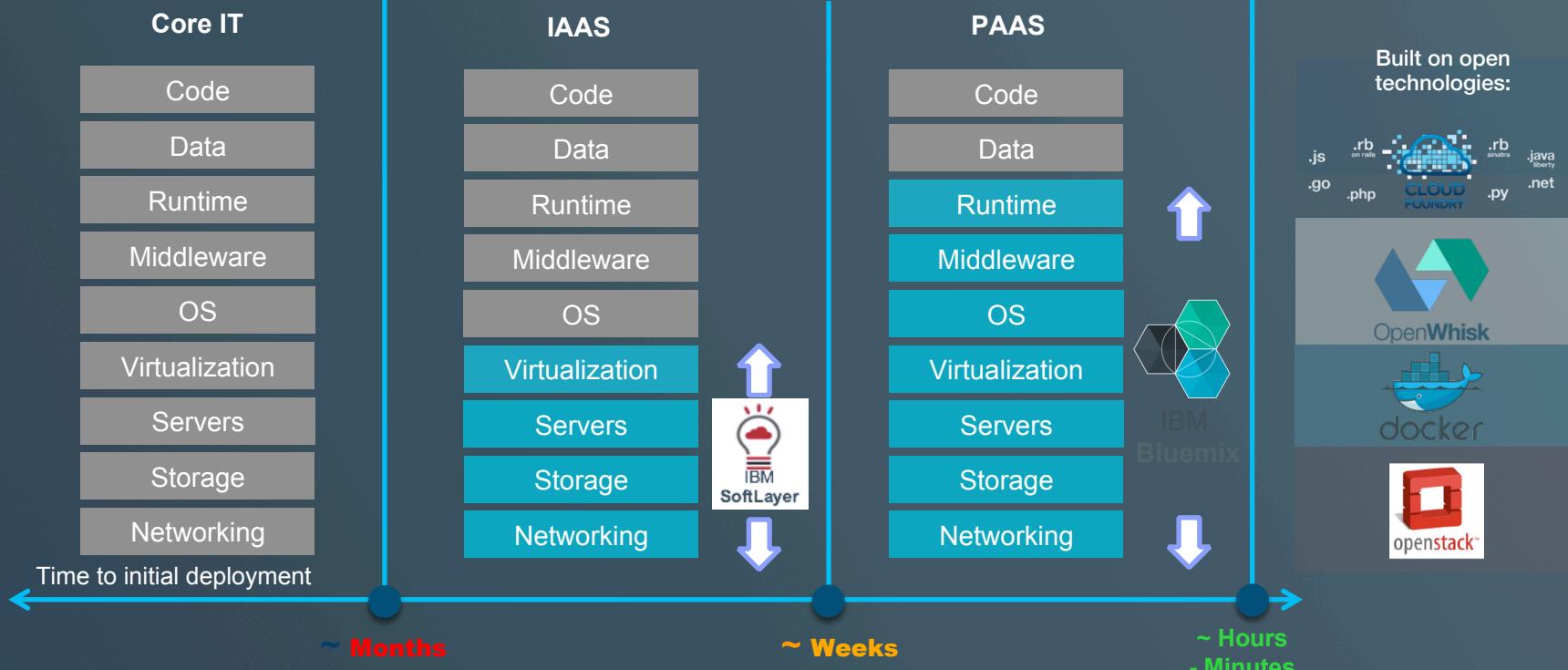
# What is Bluemix?

# Timing Is Critical

Today's apps must keep up with the speed of the app revolution.



- Customer Managed
- Service Provider Managed



# Bluemix: IBM's Cloud Platform

Build, run, scale, manage, integrate & secure applications in the cloud

## Developer experience

- Rapidly deploy and scale applications in any language.
- Compose applications quickly with useful APIs and services and avoid tedious backend config.
- Realize fast time-to-value with simplicity, flexibility and clear documentation.



Built on a foundation of **open technology**.

## Bluemix service categories

- DevOps
- Big Data
- Mobile
- Watson
- Business Analytics

- Database
- Web and application
- Security
- Internet of Things
- Cloud Integration

- API management & Integration
- Blockchain

## Enterprise capability

- Securely integrate with existing on-prem data and systems.
- Choose from flexible deployment models.
- Manage the full application lifecycle with DevOps.
- Develop and deploy on a platform built on a foundation of **open technology**.

# How does Bluemix work?

Bluemix is built on 4 open key compute technologies:  
**Cloud Foundry**, **Docker**,  
**OpenWhisk** and  
**OpenStack**.

Extending each of these with a growing number of **services**, robust **DevOps tooling**, **integration** capabilities, and a seamless **developer experience**.

## DevOps Tooling



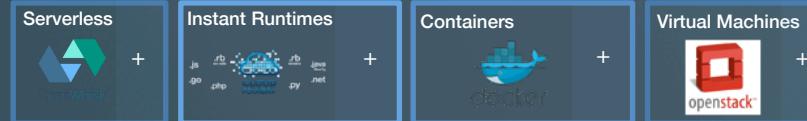
## Your Own Hosted Apps / Services



## Catalog of Services that Extend Apps' Functionality



## Flexible Compute Options to Run Apps / Services



## Platform Deployment Options to meet Workload Requirements



Powered by IBM SoftLayer

In Your Data Center

## Integration & API Mgmt



# Seamless Hybrid Experience

Regardless of whether your apps & services sit in **Public**, **Dedicated**, or **Local**, you can expect a seamless & portable hybrid experience.

## Control

services & platform updates



### Syndicated Catalog

Control your private services and access Bluemix public catalog



### Platform Updates

You choose your update schedule to minimize any disruption

## Visibility

across the platform



### System Information

Control access to services, API's and runtimes and view statistics. Even allow charge back models



### Reports and Logs

See the latest reports and log with Integrated incident management

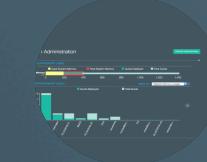
## Govern

users, orgs & privileges



### User Administration

Control access to services and runtimes or implement your own service broker directly into your own catalog



### Org Administration

Govern spent and access level by spaces, orgs or users

# Built on the Highest Performing Cloud Infrastructure

Spanning across the globe

## A different kind of data center

- Every location designed, built, and operated to the **same standardized point of deployment (PoD)** based spec
- **24/7 on-site security** and rigorous controls
- **Public, private, and management networks** all separated
- More than **2,000Gbps between data centers** and **network points of presence (PoPs)**
- **Unmetered inbound public bandwidth** and fully unmetered bandwidth between data centers

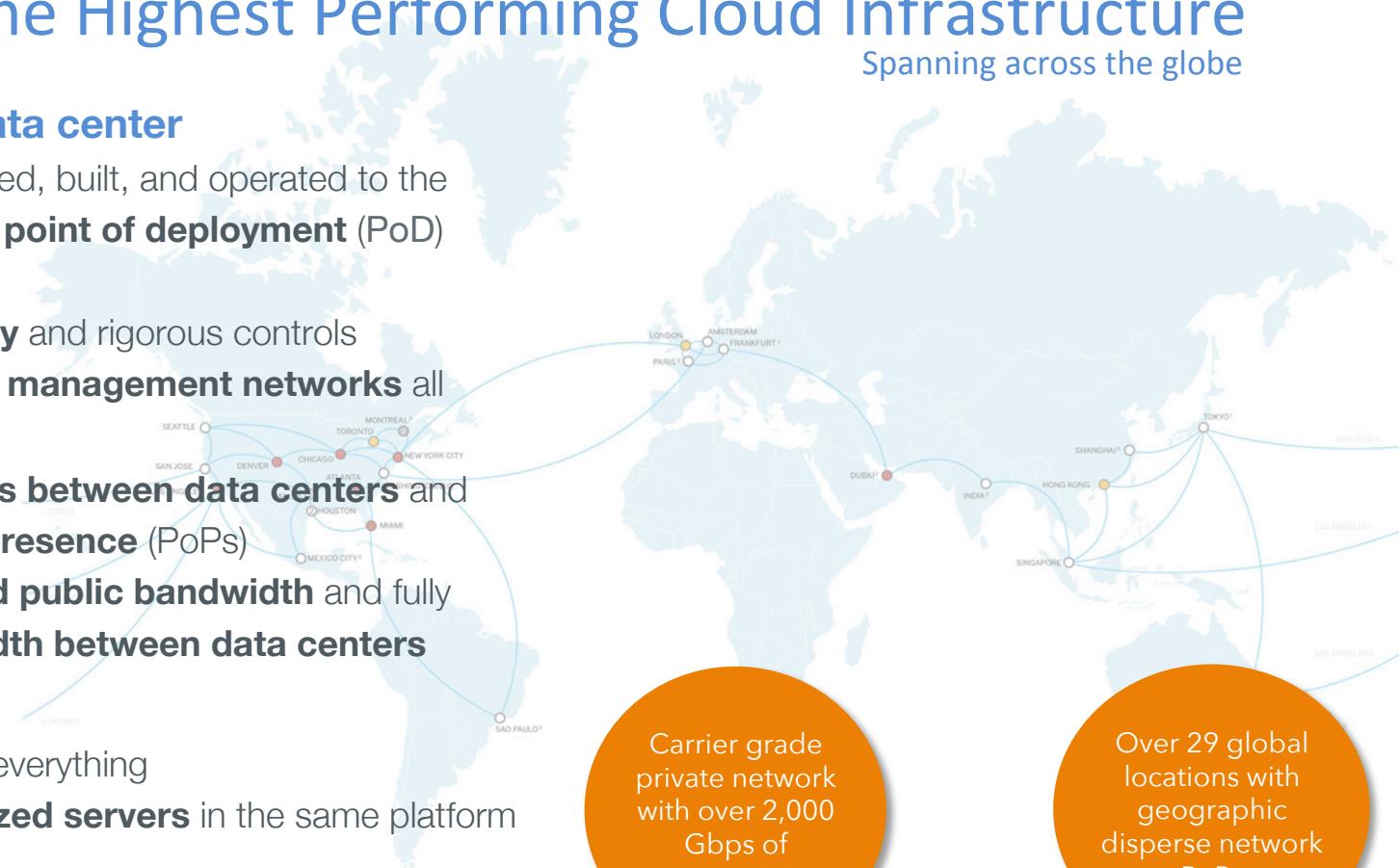
## Entirely automated

- **SoftLayer API** controls everything
- **Bare metal** and **virtualized servers** in the same platform



16/09/16

IBM and Telstra Confidential



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# Supporting All Types of Applications

Enabling enterprises - a single environment for all application types.

## App Type

### New Cloud Native and Mobile

Composable environment to rapidly build and deploy cloud and mobile applications.

### Transitional

Current technology but not an architecture that currently supports app composition. May be broken down into APIs/services or left in tact and run as-is.

### Legacy

Any application with UI and business tightly coupled. Either connected to or left in tact.

## Innovation



## Optimization

## Solutions



bluemix.net



Bluemix  
Dedicated/Local



Bluemix



SoftLayer



SoftLayer



On Premises  
Data Center

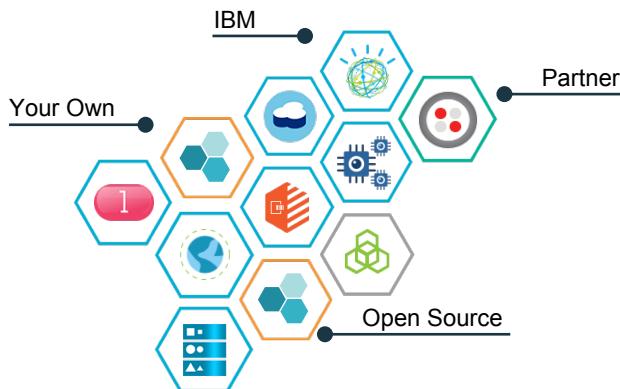


IBM Bluemix™

**Bluemix provides  
services  
for everyone,  
.....everywhere**

# Bluemix Services

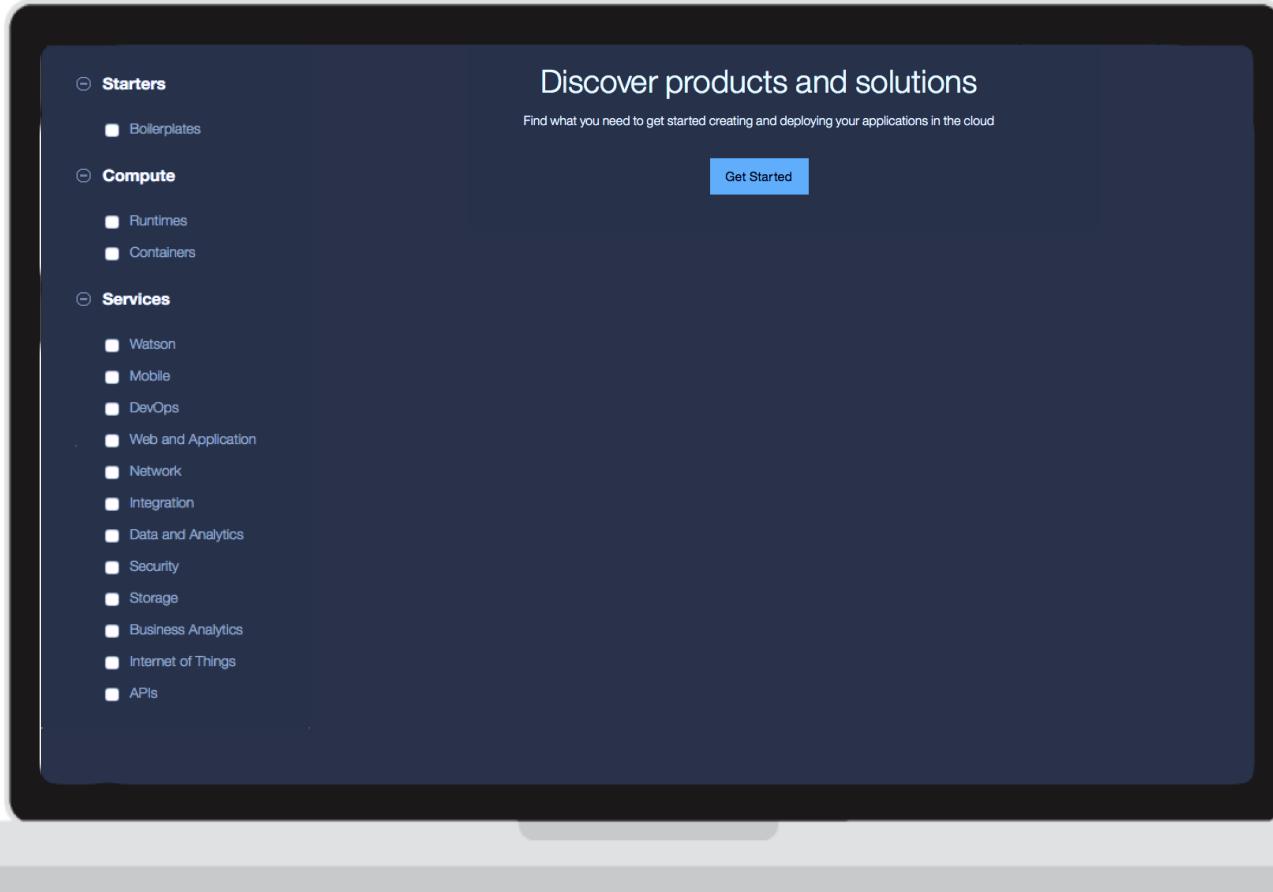
Cloud Foundry PaaS is one thing, but true differentiated business value emerges from a catalog of 150+ IBM and third party services.



- Watson
- Mobile
- DevOps
- Web and Application
- Network
- Integration
- Data and Analytics
- Security
- Storage
- Business Analytics
- Internet of Things
- API's



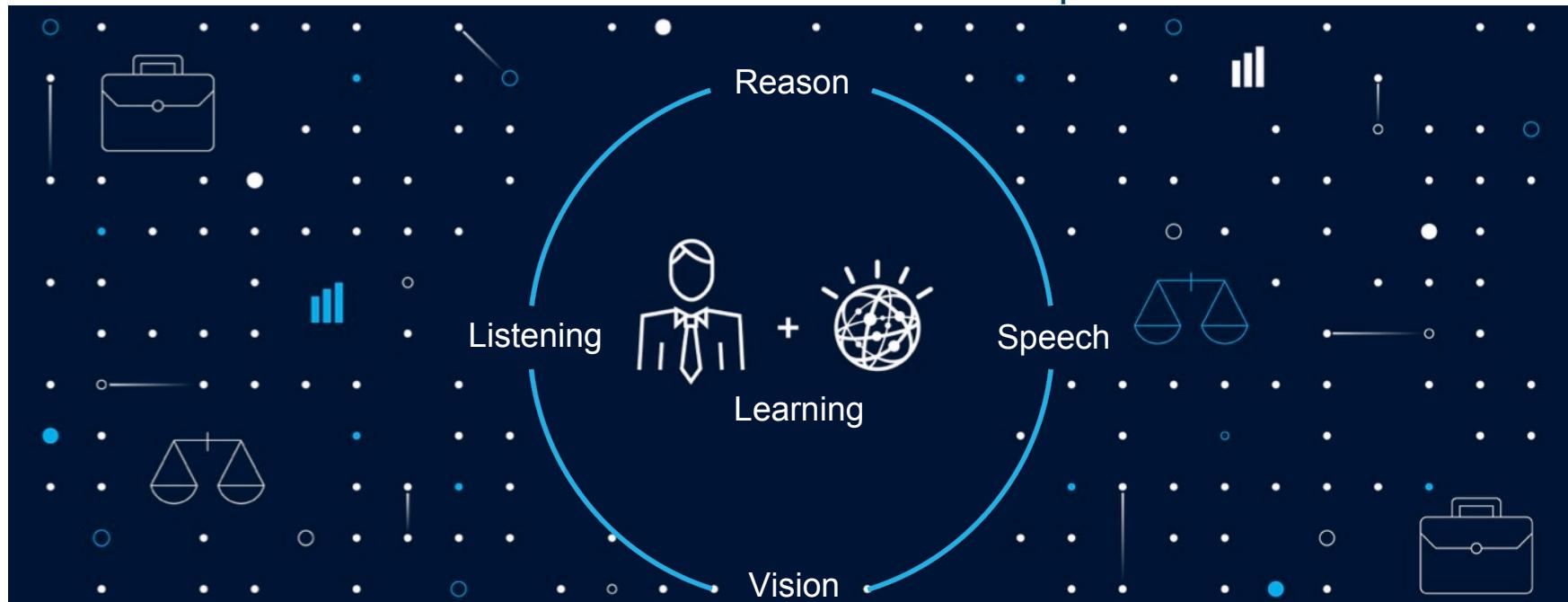
# A huge Catalogue of Business Ready Capabilities



Bluemix has more the **150 Catalogue items** from IBM and 3<sup>rd</sup> parties with more being **regularly added**

# Watson on Bluemix

Watson is creating a new partnership between people and computers, that **enhances**, **scales** and **accelerates** human expertise



IBM Watson services available on Bluemix are the building blocks for developers to create the next generation of cognitive applications to transform the way businesses engage with their customers, discover, innovate and make decisions

# IBM Mobile Services

Core services that just about every App needs

## Core App & Platform Services



Push  
Increase User Engagement with Mobile Push Notifications



Cloudant  
The Ultimate Data Store for Mobile Apps



Mobile Client Access  
Simplified Mobile App User Authentication



StrongLoop Arc  
Enterprise Node.js to build, deploy, scale manage and deploy your mobile APIs

Capabilities to manage the lifecycle of your Apps

## App Lifecycle Services



Mobile App Server  
Manage, secure, and optimize enterprise mobile apps



AppScan Mobile Analyzer  
Identify Mobile App Security Exposures



Mobile Quality Assurance  
Continuously Improve Mobile User Experience

Capabilities to enable apps, to make users more productive based on context

## Contextual Services



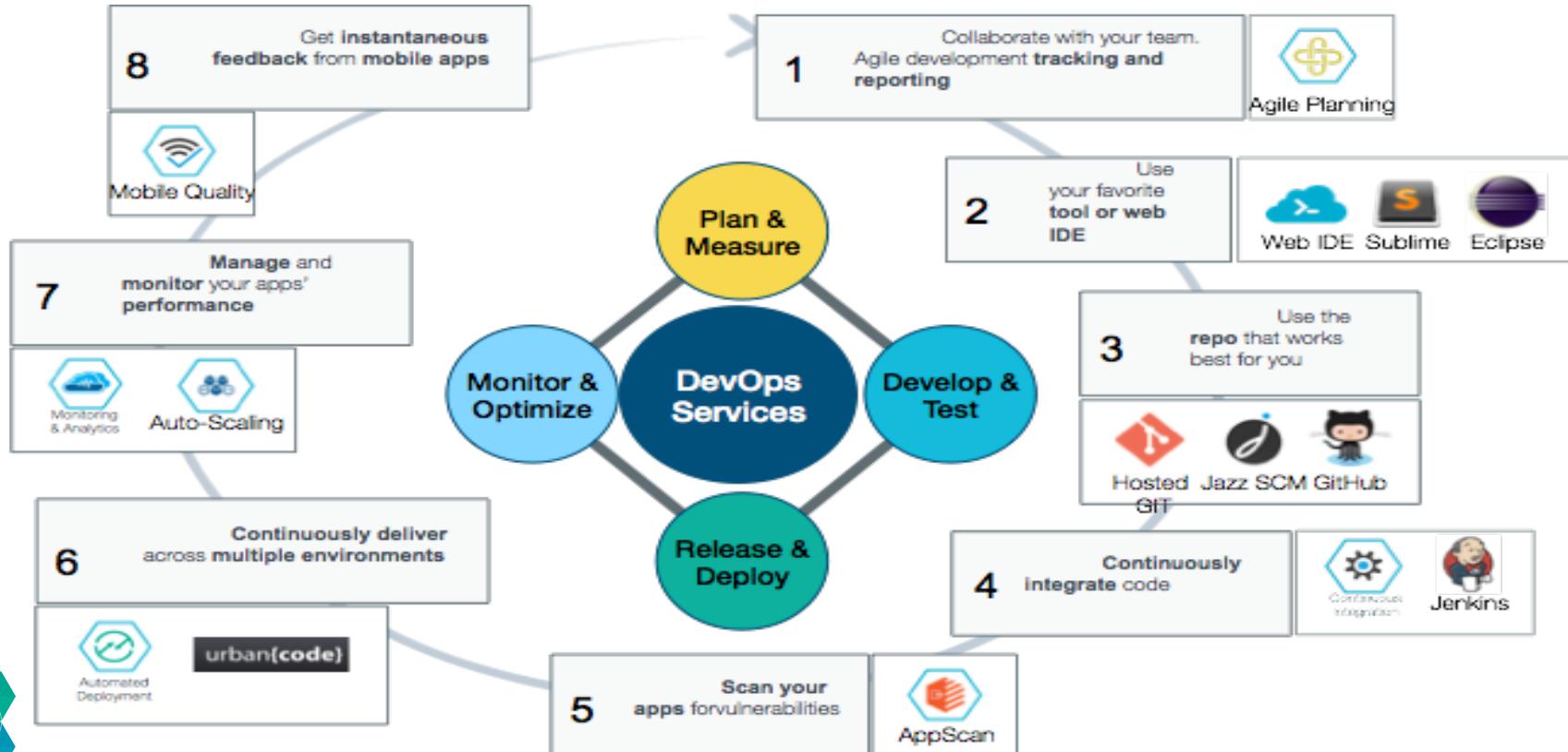
Mobile Content Manager  
Create, manage, and deliver more relevant in-app content



Presence Insights  
Enables Apps with Intelligent Mobile Location Data

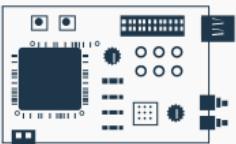
# Continuous Innovation & Delivery

Fit for the enterprise: The DevOps experience is unified and open across Bluemix compute technologies, delivery methods, and integrated systems.



# Internet of Things Foundation

Set up and manage your connected devices, so all your app's can access the data



## Your device or gateway

We start with your device, be it a sensor, a gateway or something else.  
To find out how to get it connected, search our recipes.



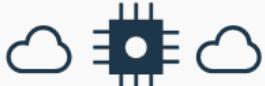
## MQTT

Your device data is sent securely up to the cloud using  
the open, lightweight MQTT messaging protocol.



## REST & Real-time APIs

Use our secure APIs to connect your apps  
with the data coming from your devices.



## IBM Internet of Things Foundation

This is the hub of all things IBM IoT. This is where you can  
setup and manage your connected devices so that your  
apps can access their live and historical data.



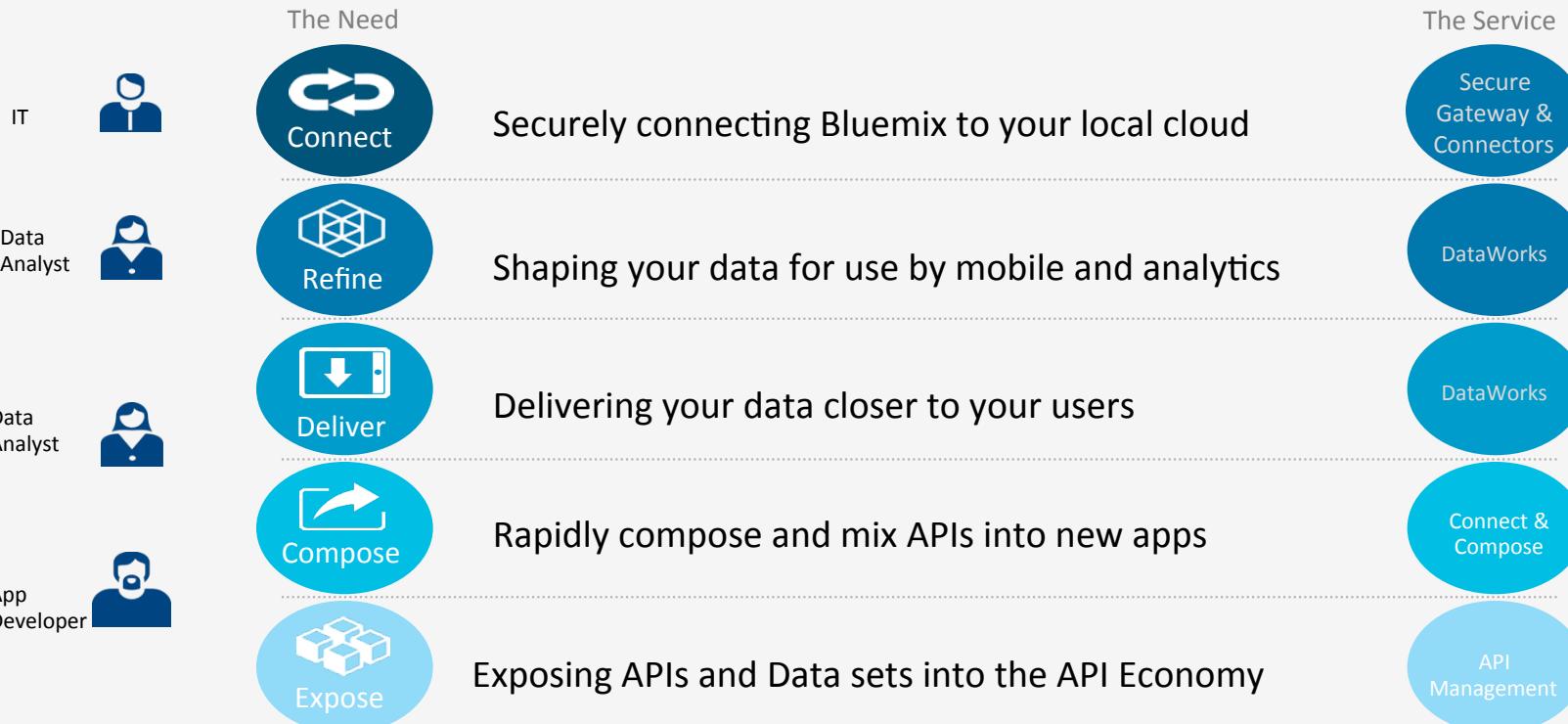
## Your application and analytics

Create applications within IBM Bluemix, another cloud,  
or your own servers to interpret the data you now have access to!



# New Patterns of Integration using Bluemix

## Hybrid Integration



# Secure Gateway - creating a hybrid connection to your on-premises data

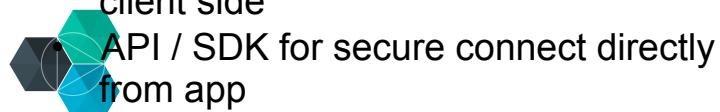
Connect Clouds Securely Together



**IBM Secure Gateway:** Provides secure connectivity from Bluemix to other applications and data sources running on-premise, or in other clouds.

## What's unique?

- Unique passport feature allows for single step download, install, and secure setup of client
- Flexible Gateway topology allows segregation, Load Balancing, and Fault tolerance
- Layered security on the cloud side and client side



A screenshot of the IBM Bluemix Secure Gateway interface. The top navigation bar includes links for IBM Bluemix, SOLUTIONS, DASHBOARD, CATALOG, PRICING, DOCS, COMMUNITY, REGION: US South, and a user icon. The main title is "Secure Gateway". Below the title, there's a section titled "Add Gateway" with three tabs: "Name it" (selected), "Add Endpoints", and "Connect It". A green button at the bottom right says "I'm Done". The main content area asks "How would you like to connect this new gateway?" and provides three options: "IBM Client Installer" (radio button unselected), "Docker" (radio button selected), and "DataPower" (radio button unselected). Below this, instructions say "Open the Docker application and run this command line to connect the gateway." followed by a command line: "docker run -it tonyffrench/bluemix-passport-client 04387e00-9b69-11e4-9f87-01a1455f4f08". To the right, a "Status" box shows "Connected". At the bottom, there are links for "Docker Resources", "Install Docker", and "User Guide".

# API Connect to publish an API to Bluemix for your developers to use as a service

Expose APIs and Data



**IBM API Connect:** Enterprise API Management experience for all of your Bluemix APIs. Discover APIs from on-premises resources. Secure, layer policy, publish, and manage your APIs.

## What's unique?

- Externalize an API from Bluemix to allow secure, governed, monitored usage of your app
- Discover and load APIs to Bluemix from on premise sources like z/OS Connect and an ESB
- Enable partners to innovate on your APIs by publishing into their Bluemix orgs via safe opt-in process

A screenshot of the IBM Bluemix API Manager interface. The top navigation bar includes links for DASHBOARD, API MANAGER (which is highlighted in green), SOLUTIONS, CATALOG, PRICING, DOCS, COMMUNITY, and REGION: US South. A user profile for 'Steve's org' and 'stevebrk@acme.com' is shown. On the left, there's a sidebar with various icons. The main content area is titled '/apimanagement'. It shows a 'Management' section with tabs for 'Production' (selected), 'Plans' (highlighted in blue), and 'APIs'. Under 'Plans', it says '4 Plans'. A 'Gold' plan is listed with a status of '1 version deployed'. The table below shows the details for the Gold plan:

Name	State	Visible to	Can be subscribed by	Enforced	Actions
Gold Version 1	deployed 6 hours ago	None			<ul style="list-style-type: none"><li><a href="#">Edit</a></li><li><a href="#">Publish</a> (highlighted)</li><li><a href="#">Open draft</a></li><li><a href="#">Remove from environment</a></li></ul>

At the bottom of the page, there's a 'Contact Support' link and a small note: '@ibmapimgt'.



IBM Bluemix™

# Bluemix can be used for Many Use Cases

# Some Use Cases

## Web Applications

- Enabling **online experiences in the physical store** for retail
- Leverages BlueMix for data collection APIs and dashboards
- Reduction of **infrastructure setup from days to minutes** by moving off of a pure IaaS

## APIs and On-Prem Integration

- Providing APIs that are **integrated into the BlueMix experience**
- Leveraging **existing on premises databases and technologies**
- Building mobile applications that connect to on-prem data via Bluemix

## Mobile Back Ends

- **Back end services replacing custom code** hosted on IaaS (e.g. Push Notification)
- Cloud Code for **offloading business logic** from the mobile client
- Integrated into iOS and Android native applications using **BlueMix SDK**

## Analytics and Reporting

- Embed **IBM Cognos business intelligence** content into apps
- Use **IBM Analytics Warehouse** to store and analyze business data, **fast**
- Gain immediate **visibility and control** over app **performance** and availability

# Who else is using Bluemix?

## Startups

- Instantaneous productivity
- Start small, grow infinitely
- Sophisticated, consumable services
- Marketplace

## Enterprises

- Enterprise Fit
- Differentiating Content
- Cultural Transformation
- Path to a new way to work





IBM Bluemix™

# Supported by the Bluemix Garage



Design, build, and deploy the right app for your business.

GET STARTED

San Francisco

London

Toronto

Melbourne

Nice

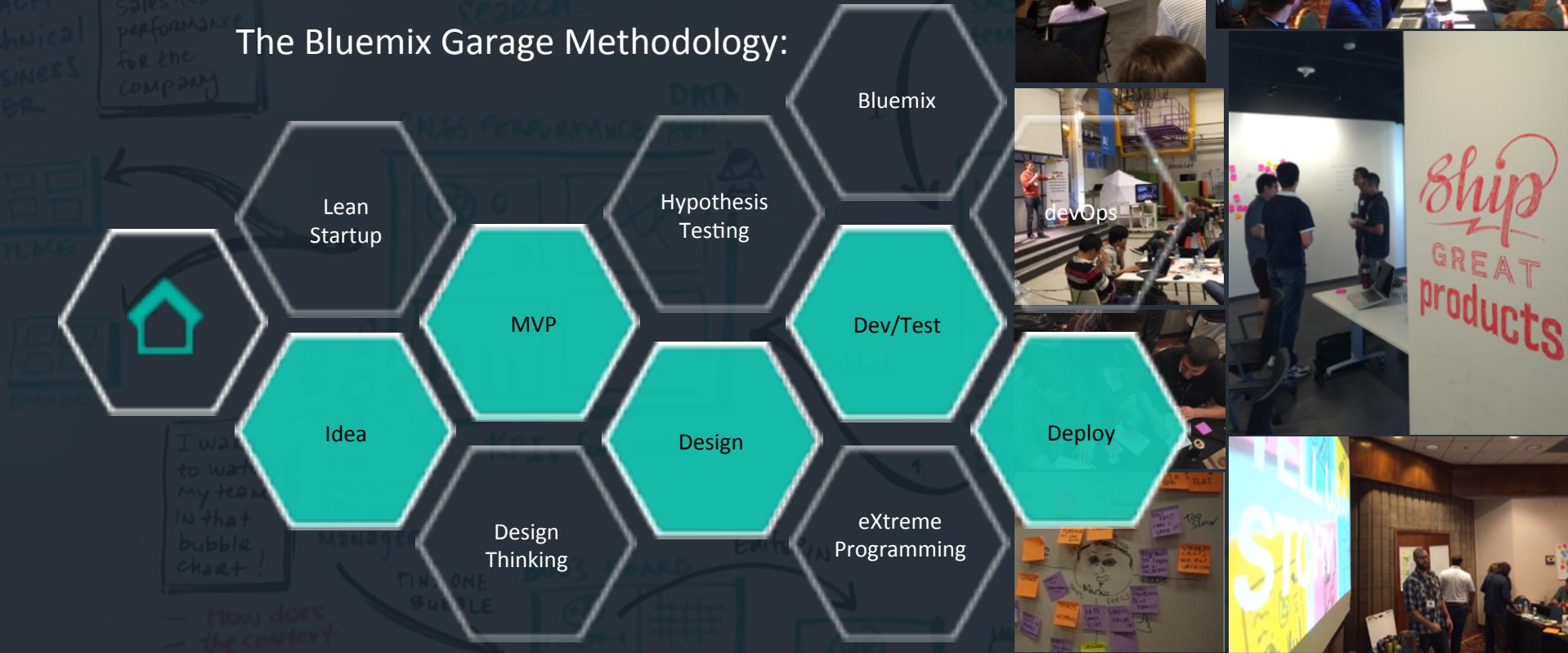
Wherever You Are

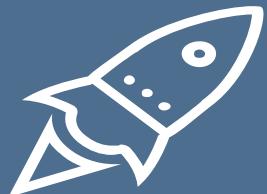
Bluemix Garage - San Francisco partnering with Galvanize in SOMA



Beyond the technology, IBM helps customers of all sizes with the needed cultural change as well.

## The Bluemix Garage Methodology:





# THANK YOU

QUESTIONS?

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