



x.commerce

OPENSTACK BEIJING CONFERENCE

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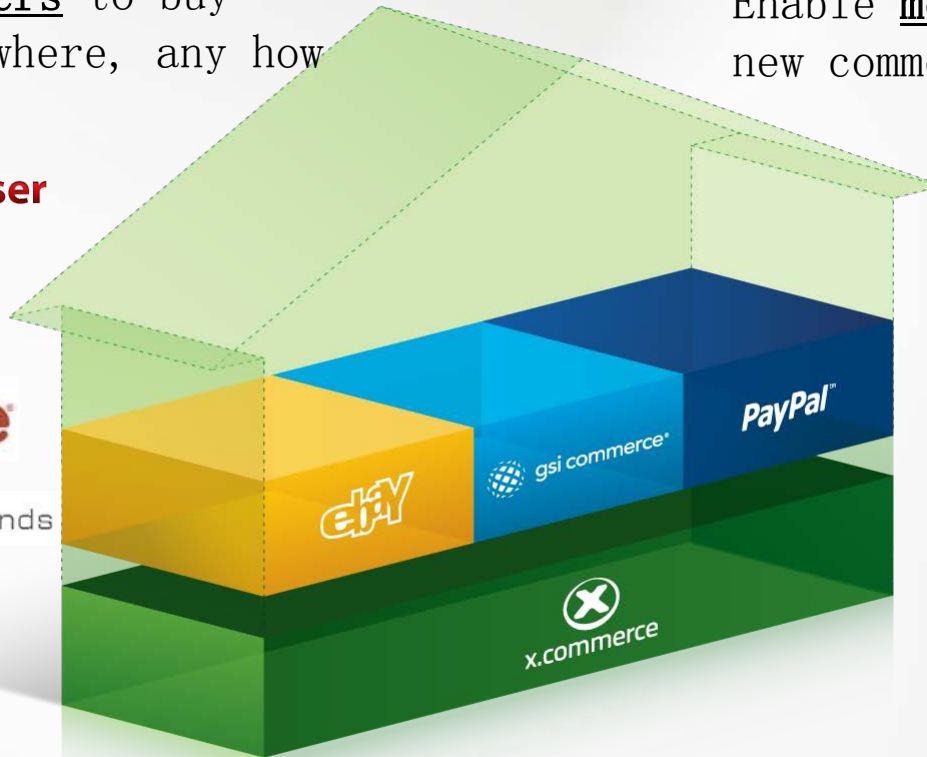
Agenda

- X.commerce, an Introduction
- Platform Vision
- Current Status
- The Opportunity Before Us

eBay Inc. Enables Commerce

Enable consumers to buy anything, anywhere, any how

Enable merchants to succeed in new commerce environment



X.commerce Goal: Build a platform that offers world-class, flexible and scalable commerce capabilities for businesses of all sizes



X. commerce: Largest Ecosystem of Commerce Capabilities

Consumer
Products

PayPal Access

Check out
with **PayPal**

The safer, easier way to pay

Merchant
Products



Magento



gsi commerce®

Other
Storefronts

Platform

X. Commerce Fabric and Open Commerce Language

Commerce
Capabilities



CyberSource



Community

OVER 1.2M DEVELOPERS



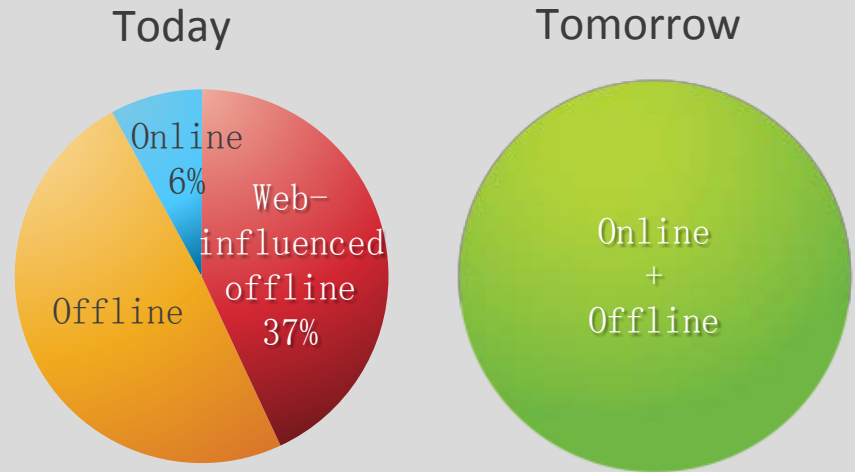
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E-commerce → Commerce

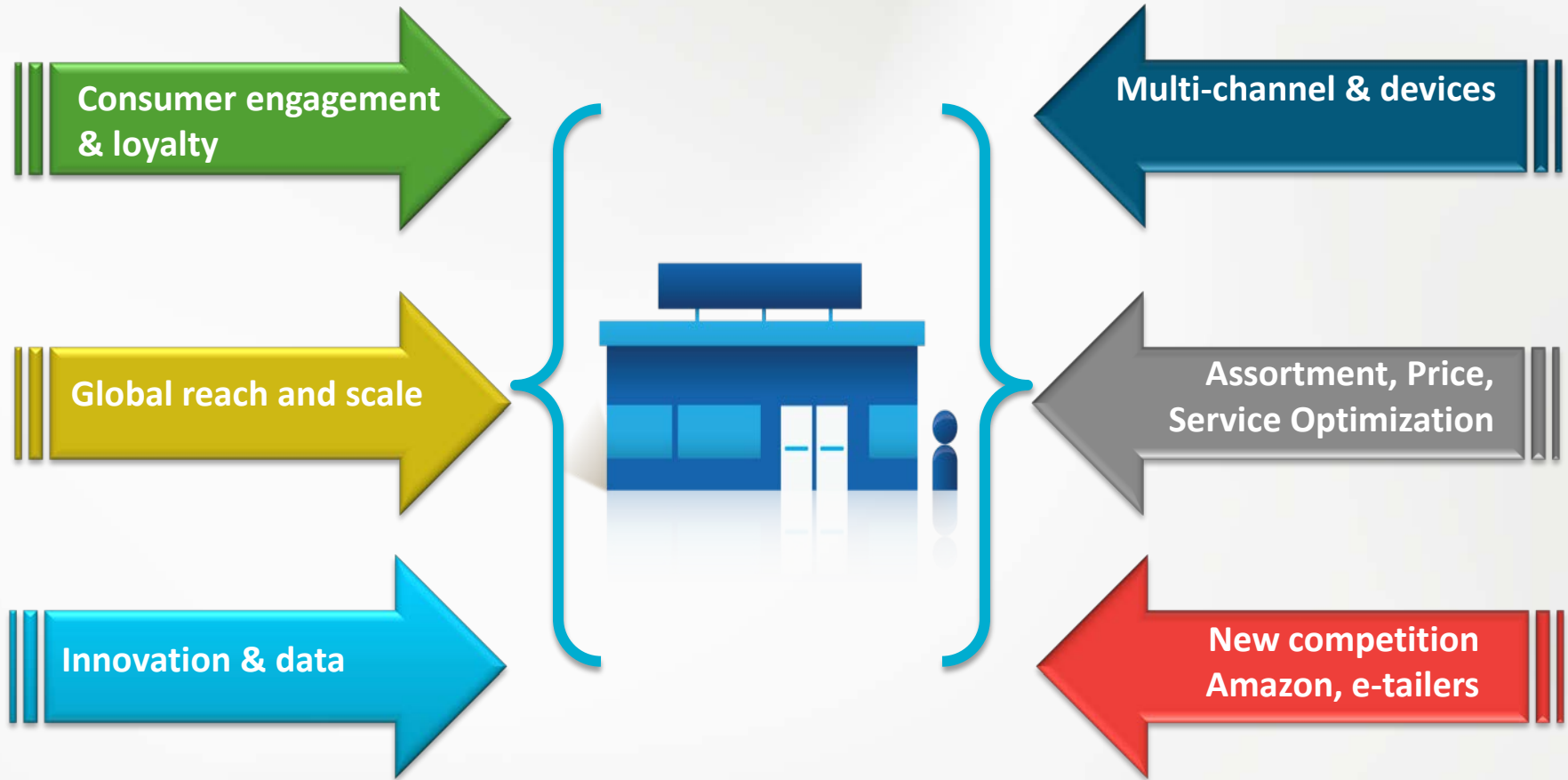
Accelerating pace of innovation



Blurring of online and offline commerce



Merchants' New Competitive Forces



The Emerging Commerce Reality

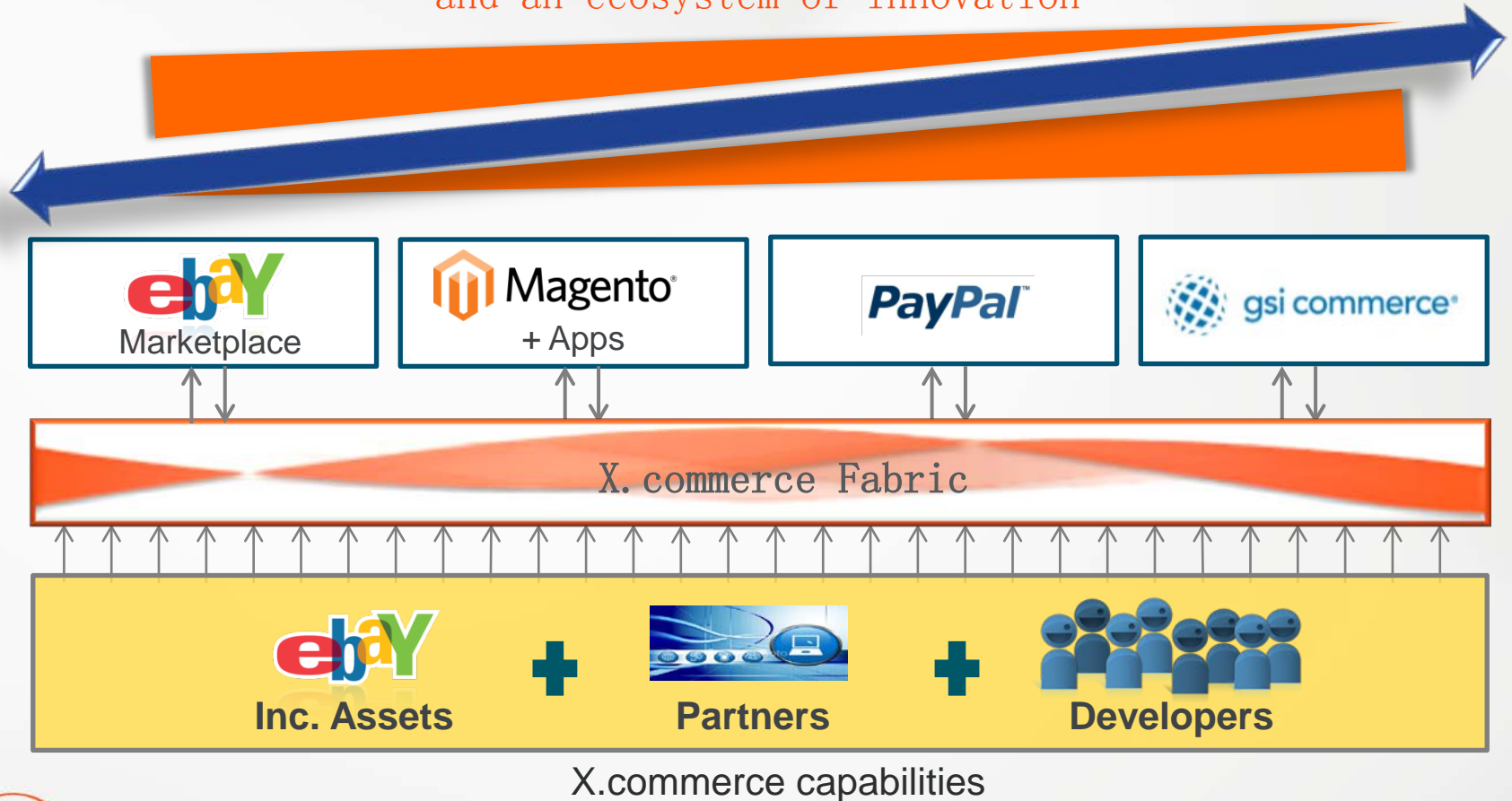


Each Consumer Touchpoint Must Interoperate



Unprecedented Flexibility to Address Merchant Needs

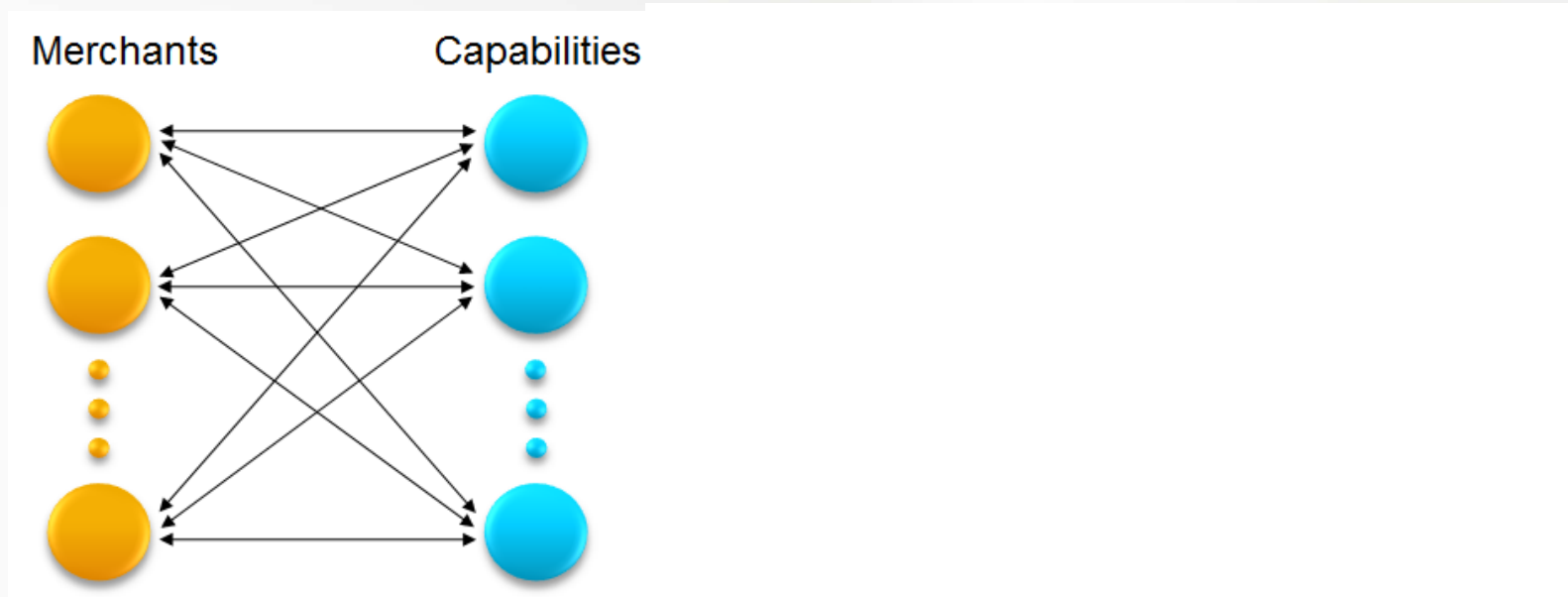
Technology integrated to eBay assets
and an ecosystem of innovation



X.commerce Fabric and the Open Commerce Language

Point-to-point integrations

Reuse model



Fabric and Open Commerce Language

Merchants: easy adoption of new capabilities, low switching cost

Developers: low barrier to entry, easy onboarding of customers

Platform Guiding Principles

- Composability
- Evolvability
- Developer usability
- Operability
- Extensibility
- Data resiliency
- Security

The Cloud, a Journey in progress...

- Prepare for anything to fail
- Capacity modeling
- Automate relentlessly
- Force simplicity
 - Uniform application architecture
 - Storage, integration, scaling
- Ephemeral environments
 - CI/CD
- Hybrid – on/off premise

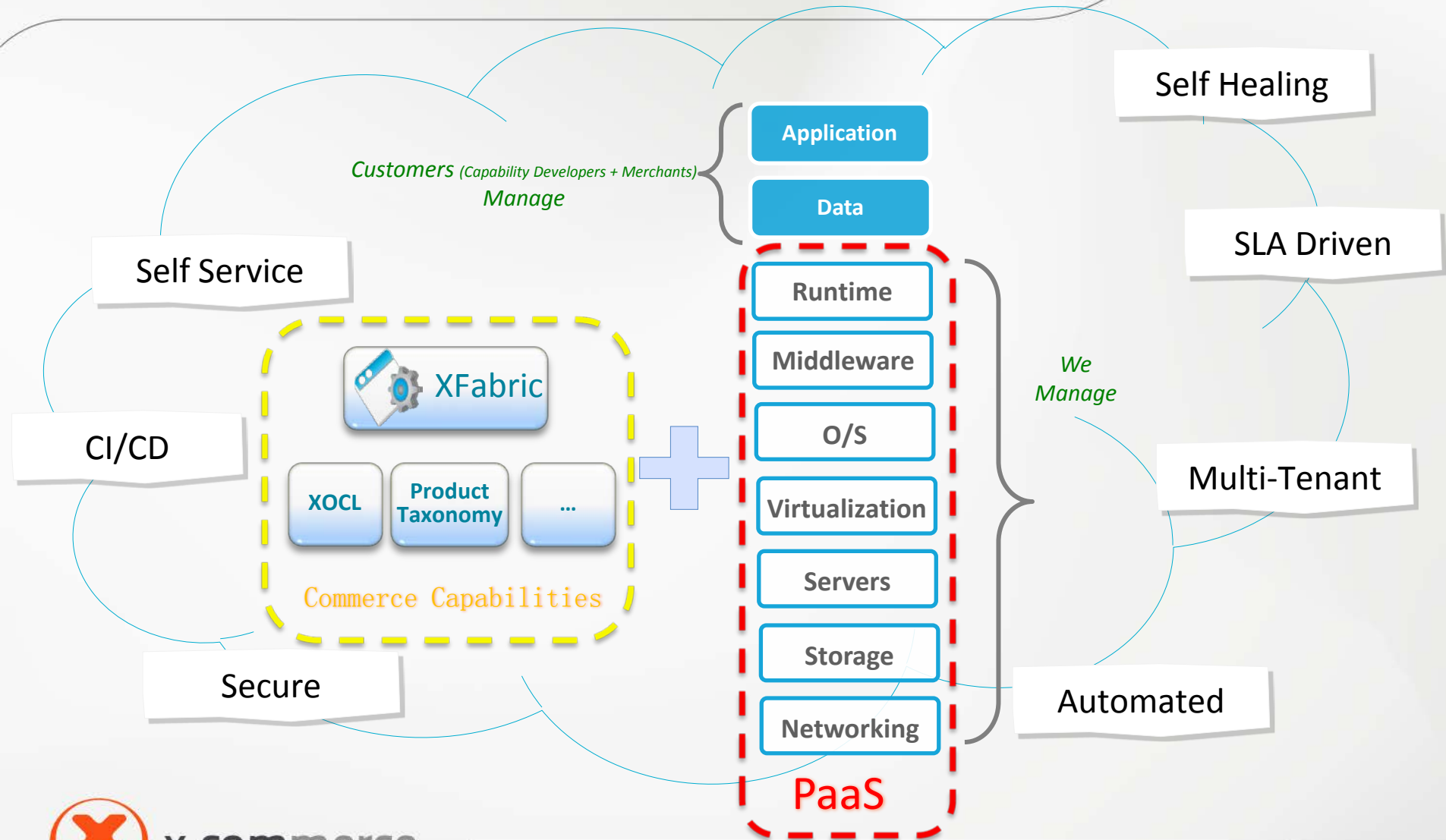
Why OpenStack?

- OpenStack
 - Openness aligns with our need for multi-vendor-ness

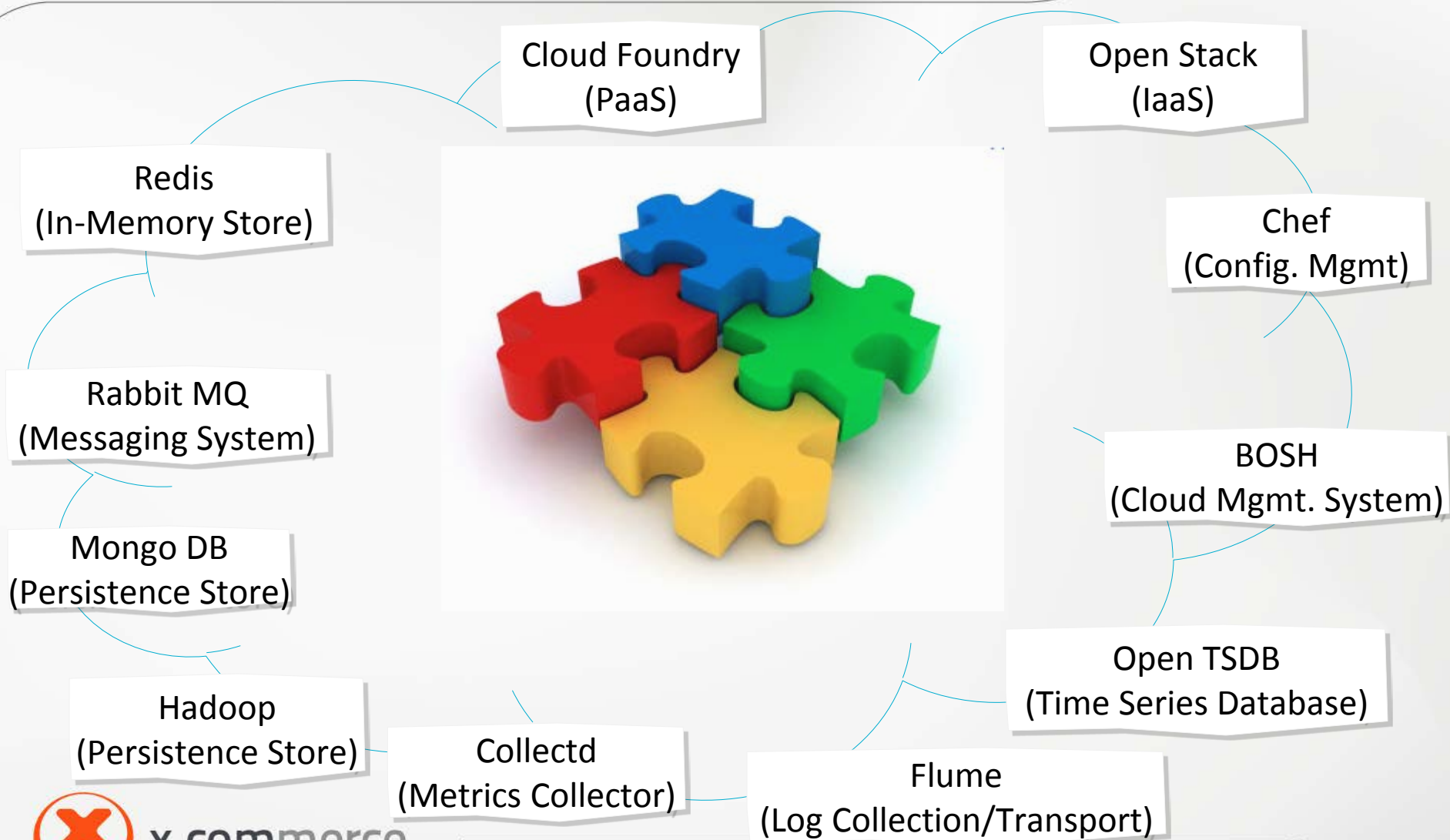
- OpenStack
 - We have lots of moving parts ... flexibility is key

- Momentum ... you' re gonna be around tomorrow, right?

Vision: X.Cloud

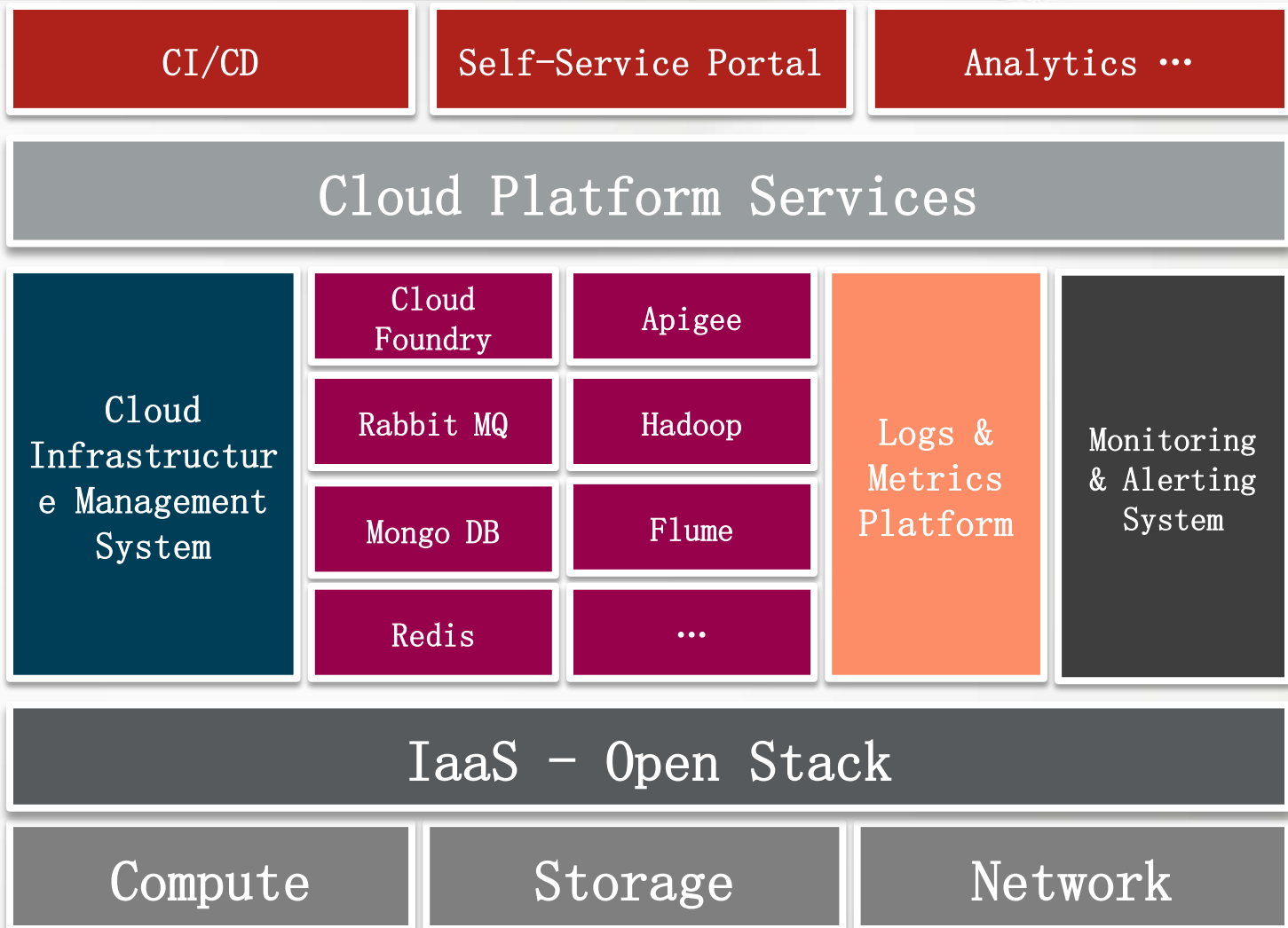


Guiding Principles: An Open Source Philosophy



Do not reinvent the wheel & grow with the community ...

X. Cloud Stack - An Overview

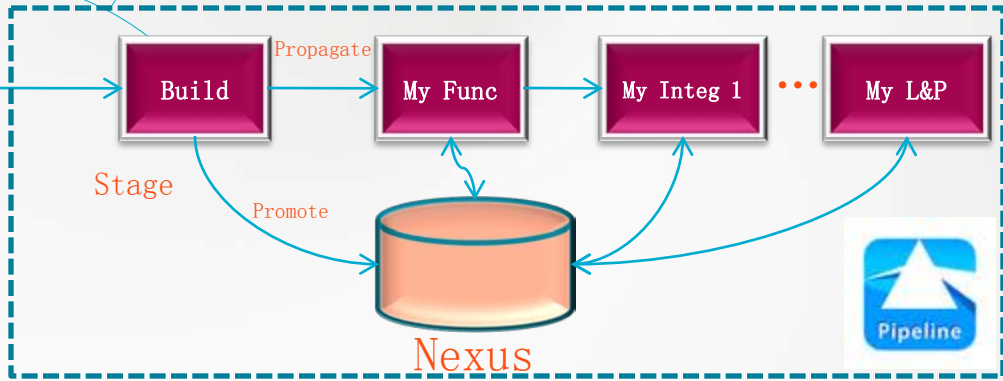


Development Cloud

Developer



Commit



Push Button
Deployment
to Prod

Pipeline Builder/Monitor

Cloud Platform Services



Consistent Management Tools - Basic Monitoring, Logging, Cloud Mgmt



openstack™
CLOUD SOFTWARE

Essex, 2:1 Over Subscribed, Tenants/Quotas By Engineering Groups



x.commerce



Physically Isolated from Sandbox/Production

Logical Zones - Dev Tools (Nexus, SVN, GIT, Jira, etc) , Continuous Integration, Cloud Engg. Test Bed, I&P

Spirit of CI / CD

1

Developer



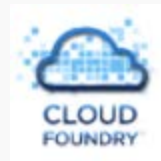
- Environment Type Aware,
- Pipeline/Stage Aware,
- SCM Aware,
- Artifact Aware,
- Application Stack Aware,
- Application Dependency Aware,
- Test Type Aware

2



- Stage Characterized By Test Type
- Automated Test Execution
- Automated Environment Setup
- Automated Deployment
- Automated Propagation
- Automated Promotion
- n: Named Environments ~ n: Pipeline Stages

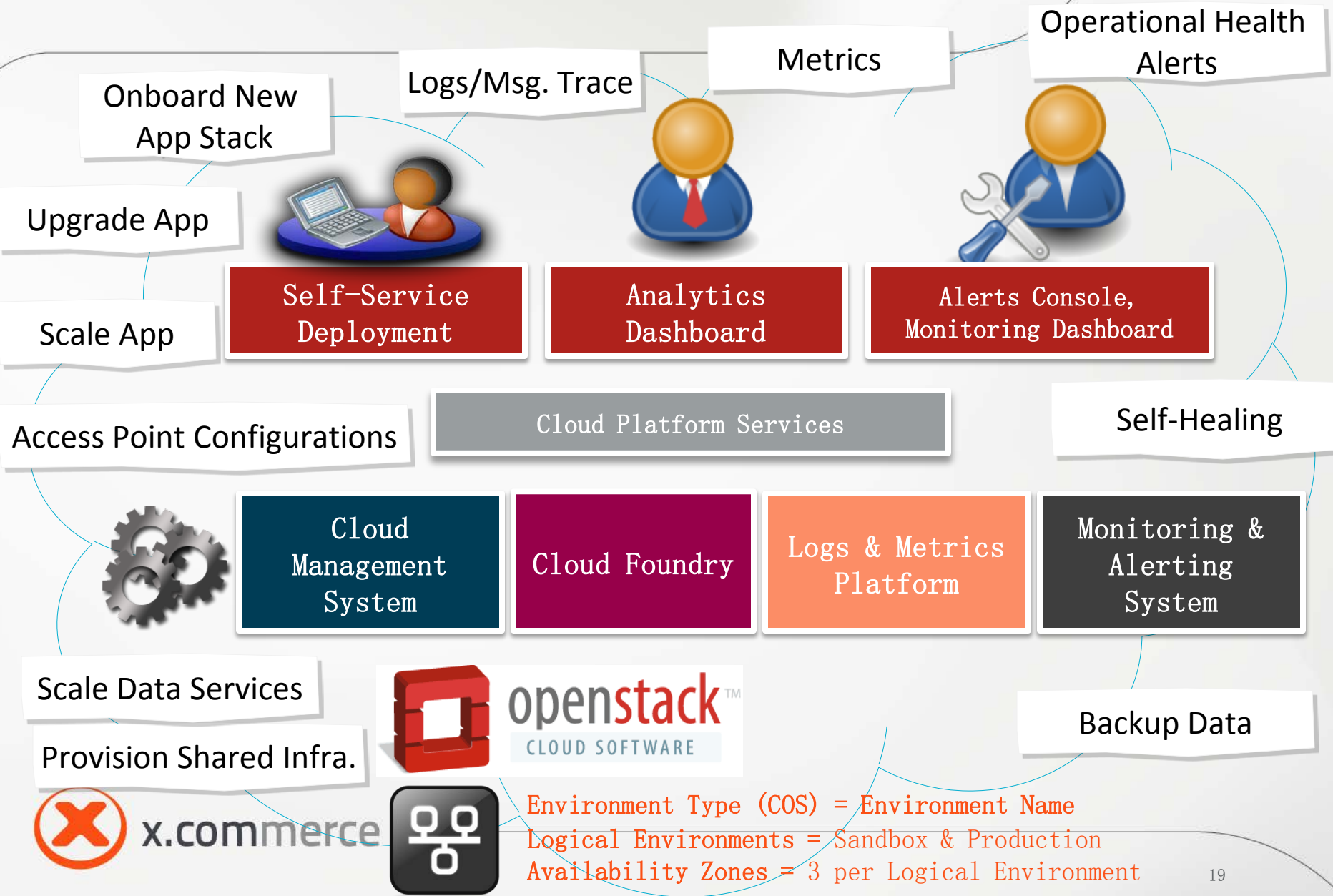
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- Provides **isolation** for logical environments based on users or micro-CF installations
- Supports Java, node.js, Python, PHP, Ruby **runtimes**
- Supports all **atomic PaaS operations** (i.e. deploy, start, stop, restart, scale, etc)
- Manages **environment variables**
- Manages Data Service (i.e. Mongo DB, Rabbit MQ, etc) **Bindings**
- Access to **logs, files, etc**
- Manages routing to Application **Access Points**



Production Cloud



Cloud Management System

The Problem We Are Working Try to Solve ...

Complex
Deployment
Orchestration

- Cloud Foundry
- Hadoop with HBASE
- Apigee
- Mongo DB, Rabbit MQ

Upgrade

From:

2.0

To:

3.0

Replace
Instances

X

Scale Up

From:

To:

Configuration
Management

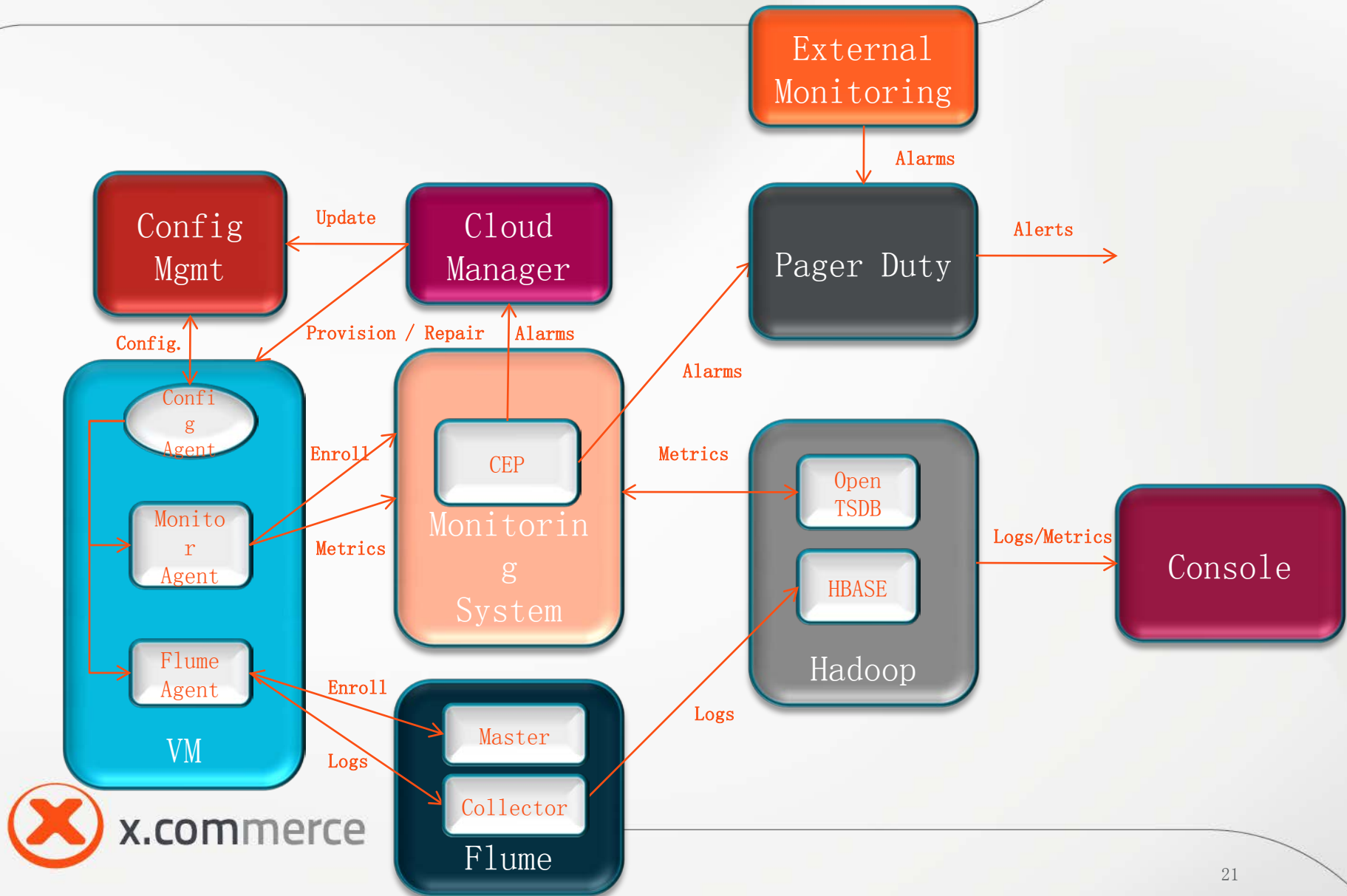
- Manage Instance Sizes/Types
- Manage Packages
- Versioning
- Environment Variables
- Security Settings

Current State: Custom Orchestration, Chef based Configuration M



Future State: BOSH

Logs, Metrics, Monitoring



The X.commerce Technology Stack

- Built greenfield
- Designed for the cloud
 - Assume failure
 - Model capacity
 - Automate relentlessly
 - Force simplicity
 - Environments are ephemeral
 - Expect hybridization
- Completely virtualized operational environment
- Offers a high-level PaaS for commerce applications
- Tooled for continuous delivery
 - CI/CD → DevOps

Current Status

- 18+ months of work with OpenStack
 - X.commerce Production Cloud is running on Diablo
 - Essex upgrade is underway
 - Go-live for Essex production cluster is less than 3 weeks away
 - X.commerce Development Cloud and Developer Sandbox is now running on Essex

- ... and growing – from X.commerce to eBay
 - eBay has just gone live with Nicira

THE OPPORTUNITY BEFORE US

Focus for the future



The Open Cloud: a Call to Action

- Opportunities
 - We see significant opportunities for the OpenStack Community
 - Big Data, Signal Detection
 - Automation
 - Self-healing
 - Open, Commoditized, Public-cloud Bursting
- Challenges
 - We see significant challenges for the OpenStack Community
 - Fragmentation through variability or splintering at the Kernel
 - Speed of Innovation

THANK YOU