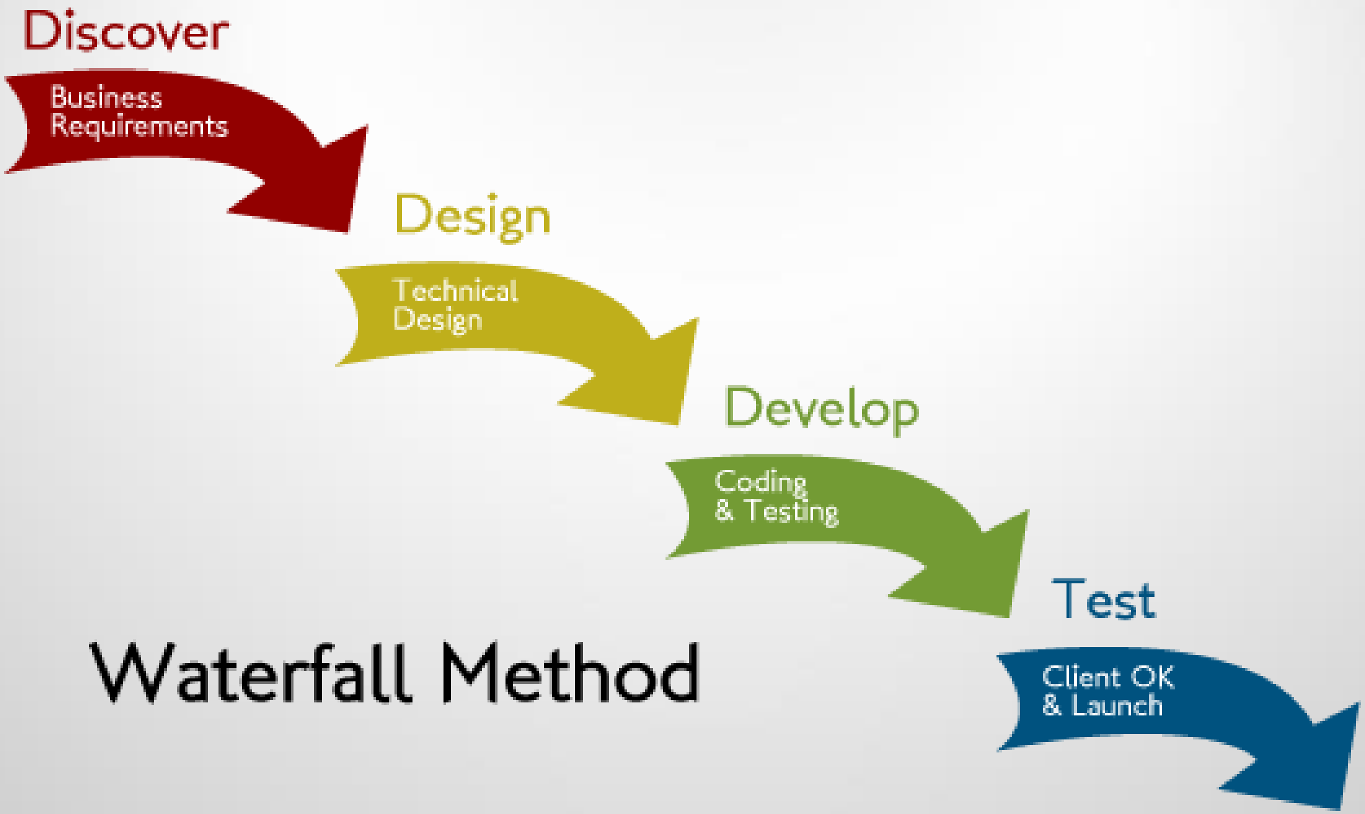
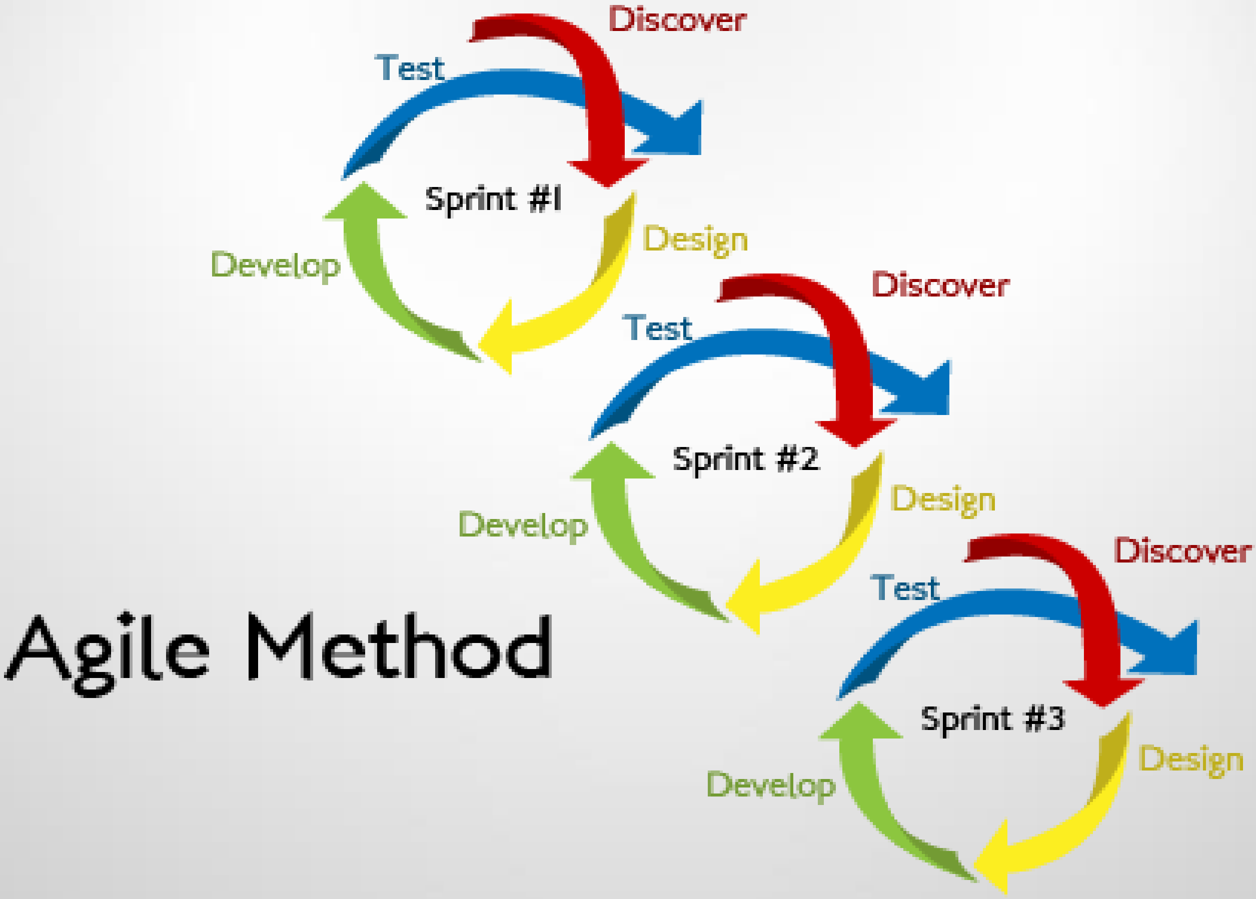
DevOps

Simon Chen
Consulting Manager

Waterfall Methods


Discover
Business Requirements
Design
Technical Design
Develop
Coding & Testing
Test
Client OK & Launch
Waterfall Method

Agile Methods


Agile Method
Sprint #1
Discover
Design
Develop
Test
Sprint #2
Discover
Design
Develop
Test
Sprint #3
Discover
Design
Develop
Test

Operations Under Pressure

Environments Out Of Control

LAST SAB: NEXT-GENERATION I.T. INFRASTRUCTURES

BUSINESS/CONSUMER

APPLICATIONS AND WORKLOADS WITH RED HAT

Red Hat Enterprise Linux, Red Hat JBoss Middleware, Red Hat Storage

redhat

APPLICATIONS AND WORKLOADS WITH RED HAT

OpenShift by Red Hat

PaaS

Ruby · Java · php · spring · django · Sinatra

INFRASTRUCTURE-AS-A-SERVICE WITH RED HAT

Red Hat Cloud Infrastructure, Red Hat Storage

IaaS

redhat · vmware

CLOUD BROKERING

PUBLIC CLOUD RESOURCES	PUBLIC CLOUD RESOURCES	PUBLIC CLOUD RESOURCES	PRIVATE CLOUD
amazon web services	rackspace hosting	RED HAT CERTIFIED CLOUD PROVIDER	

VIRTUAL RESOURCES

redhat · vmware · Microsoft

PHYSICAL RESOURCES

redhat · cisco · hp

I.T. MANAGEMENT/PROVIDER

RED HAT CLOUDFORMS, RED HAT SATELLITE

SERVICE MANAGEMENT | **MONITORING AND EVENT MANAGEMENT**

cisco · servicenow · bmcsoftware · hp

AUTOMATION

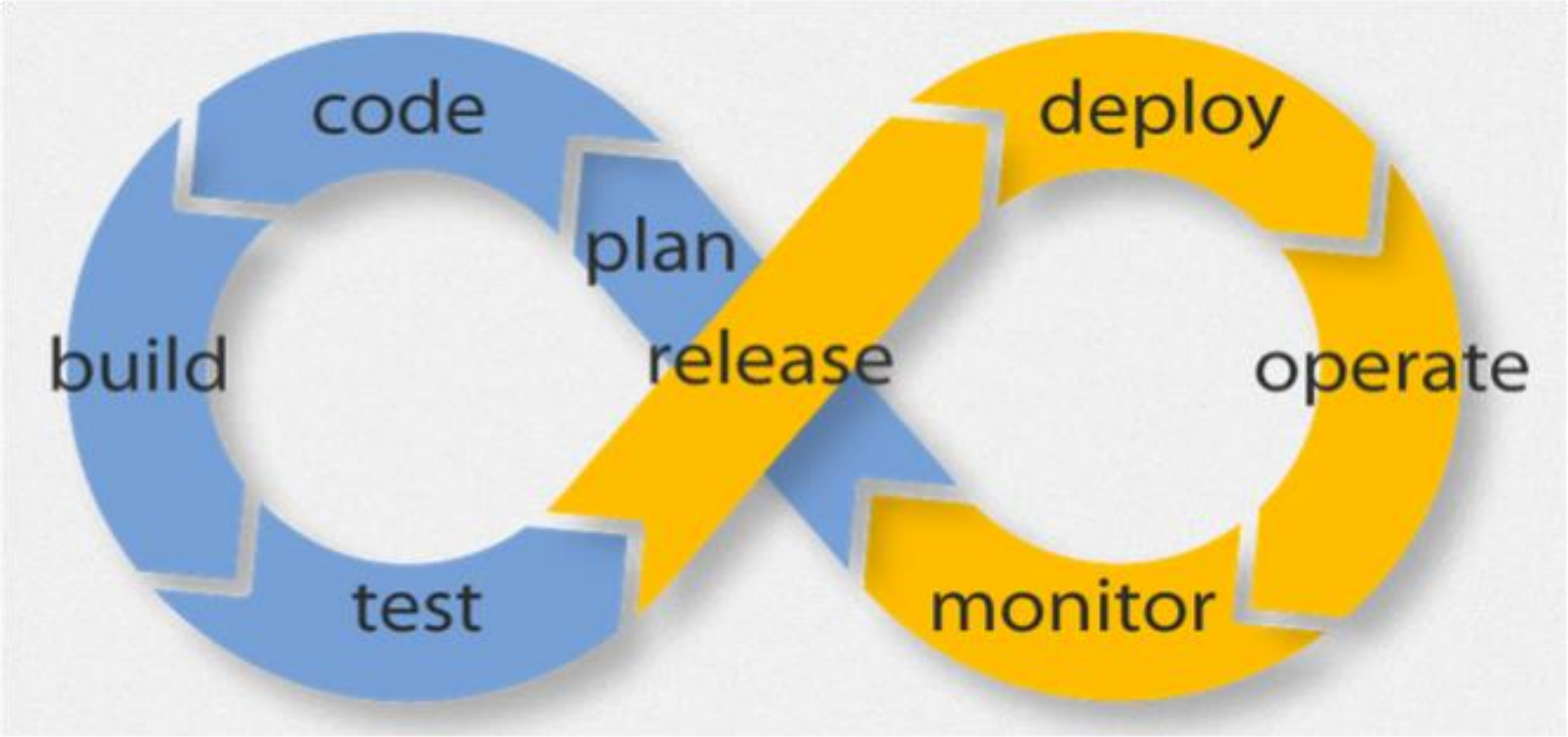
cisco · IBM · bmcsoftware · hp

LIFECYCLE MANAGEMENT

IBM · servicenow · hp · bmcsoftware · Microsoft

CONFIGURATION MANAGEMENT

DevOps Cycle


code
plan
build
test
release
deploy
operate
monitor

DELIVERING SOFTWARE TODAY: THE REALITY VS. THE GOAL

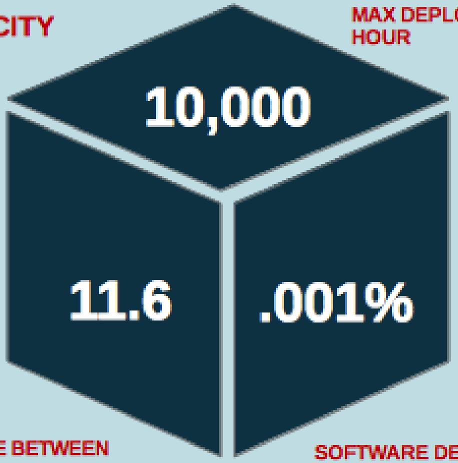
BUDGET	TIME	VALUE
45% OVER	**7%** OVER	**56%** LESS

Source: Delivering large-scale IT projects on time, on budget, and on value
McKinsey & Company, October 2012

ORGANIZATIONS IMPLEMENTING DEVOPS

Better deployment quality	63%
Faster release frequency	63%
Improved process visibility	61%

DEVOPS VALUE IN ACTION: VELOCITY AT AMAZON AWS



MAX DEPLOYMENTS/ HOUR

10,000

11.6

.001%

MEAN TIME BETWEEN DEPLOYMENTS (SECONDS)

SOFTWARE DEPLOYMENTS CAUSING AN OUTAGE

Source: 2014 State of DevOps Report
Puppet Labs, IT Revolution Press, ThoughtWorks

DEVOPS WORKFLOW

OPS

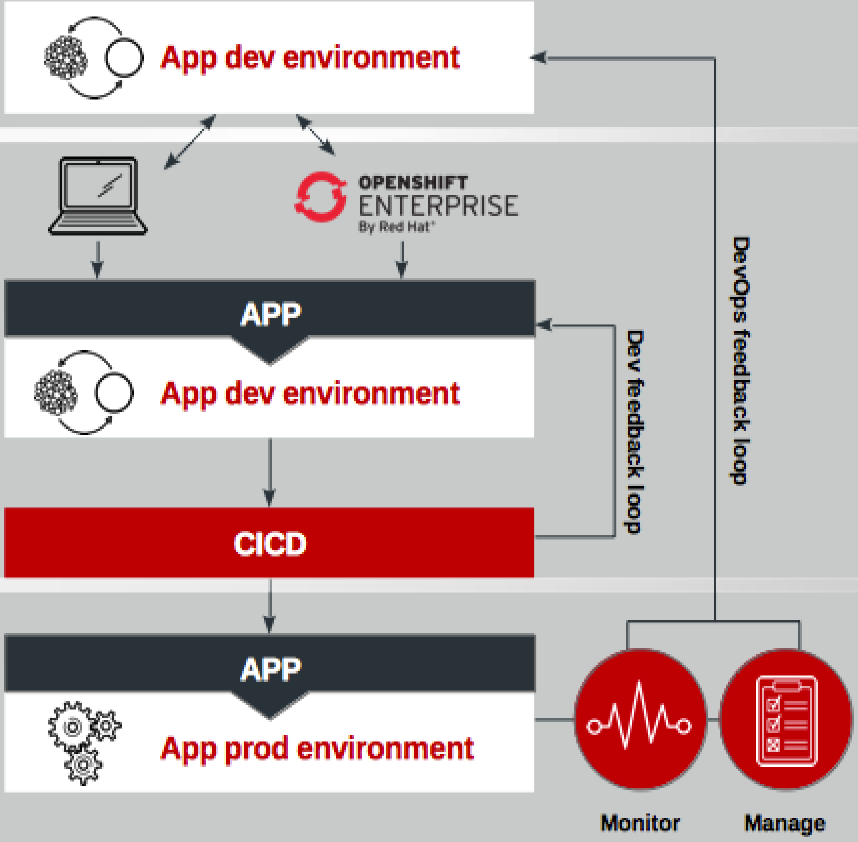
- Create containerized IaaS or PaaS development environment

DEV

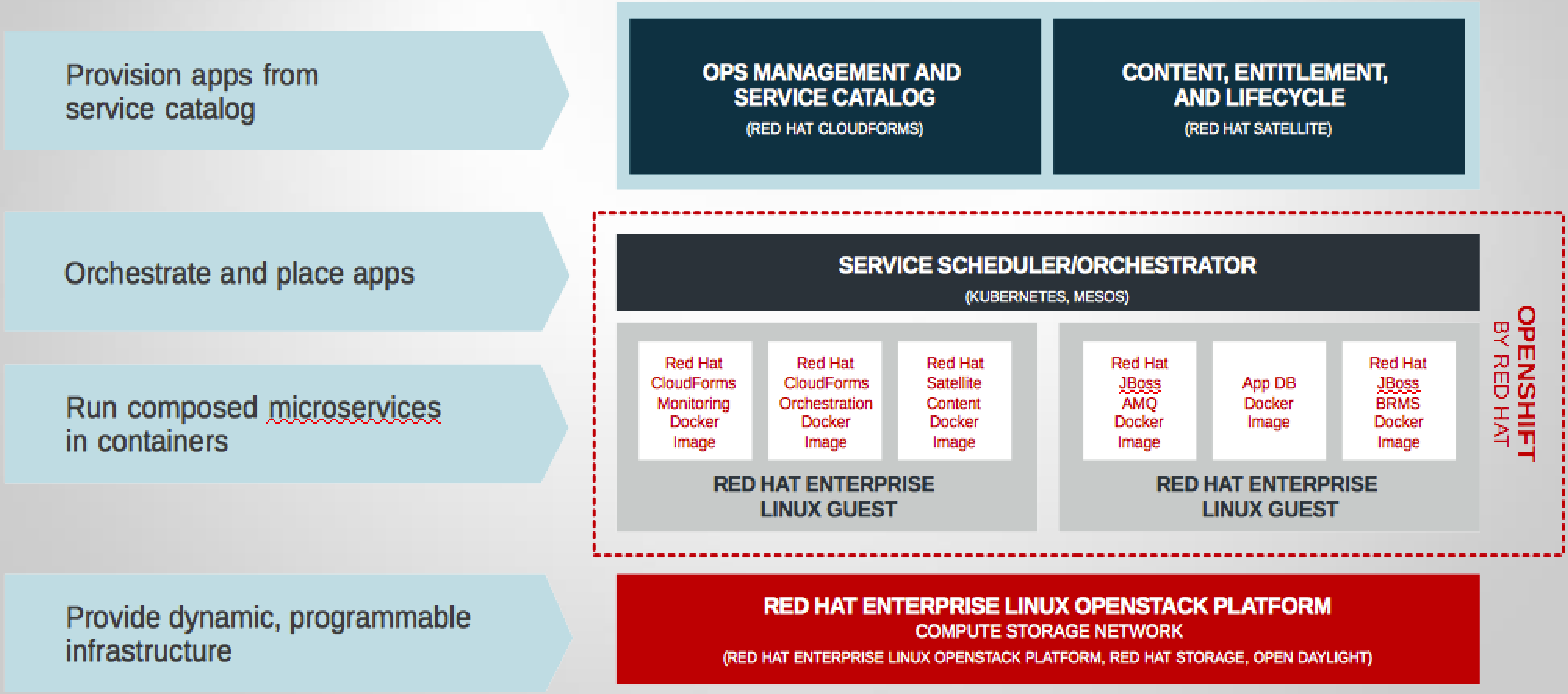
- Provision environment locally or at OpenShift by Red Hat
- Write app as containerized microservices cluster and commit changes
- Push changes through CICD and automated testing system to containerized staging

DEVOPS

- Scheduler orchestrates and deploys app
- Monitor and operate app


App dev environment
OPENSHIFT ENTERPRISE By Red Hat
APP
App dev environment
CICD
Dev feedback loop
DevOps feedback loop
APP
App prod environment
Monitor
Manage

A CLOUD PLATFORM FOR MICROSERVICE CLOUD APPS



Provision apps from service catalog

OPS MANAGEMENT AND SERVICE CATALOG
(RED HAT CLOUDFORMS)

CONTENT, ENTITLEMENT, AND LIFECYCLE
(RED HAT SATELLITE)

Orchestrate and place apps

SERVICE SCHEDULER/ORCHESTRATOR
(KUBERNETES, MESOS)

Run composed microservices in containers

Red Hat CloudForms Monitoring Docker Image

Red Hat CloudForms Orchestration Docker Image

Red Hat Satellite Content Docker Image

RED HAT ENTERPRISE LINUX GUEST

Red Hat JBoss AMQ Docker Image

App DB Docker Image

Red Hat JBoss BRMS Docker Image

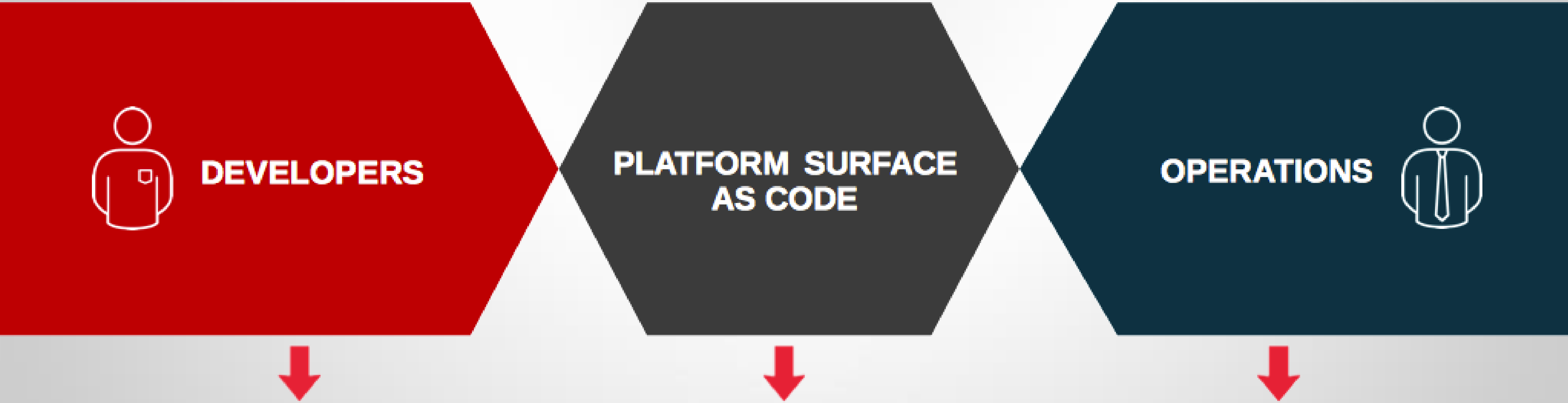
RED HAT ENTERPRISE LINUX GUEST

OPENSHIFT
BY RED HAT

Provide dynamic, programmable infrastructure

RED HAT ENTERPRISE LINUX OPENSTACK PLATFORM
COMPUTE STORAGE NETWORK
(RED HAT ENTERPRISE LINUX OPENSTACK PLATFORM, RED HAT STORAGE, OPEN DAYLIGHT)

THE ROAD TO DEVOPS: THREE CONVERGING PATHS



DEVELOPERS

PLATFORM SURFACE AS CODE

OPERATIONS

Increase developer productivity and release agility for ops

Increase platform infrastructure automatability

Increase ops agility and feedback for developers

DEVOPS + CLOUD = INDUSTRIALIZE

CRAFTWORK

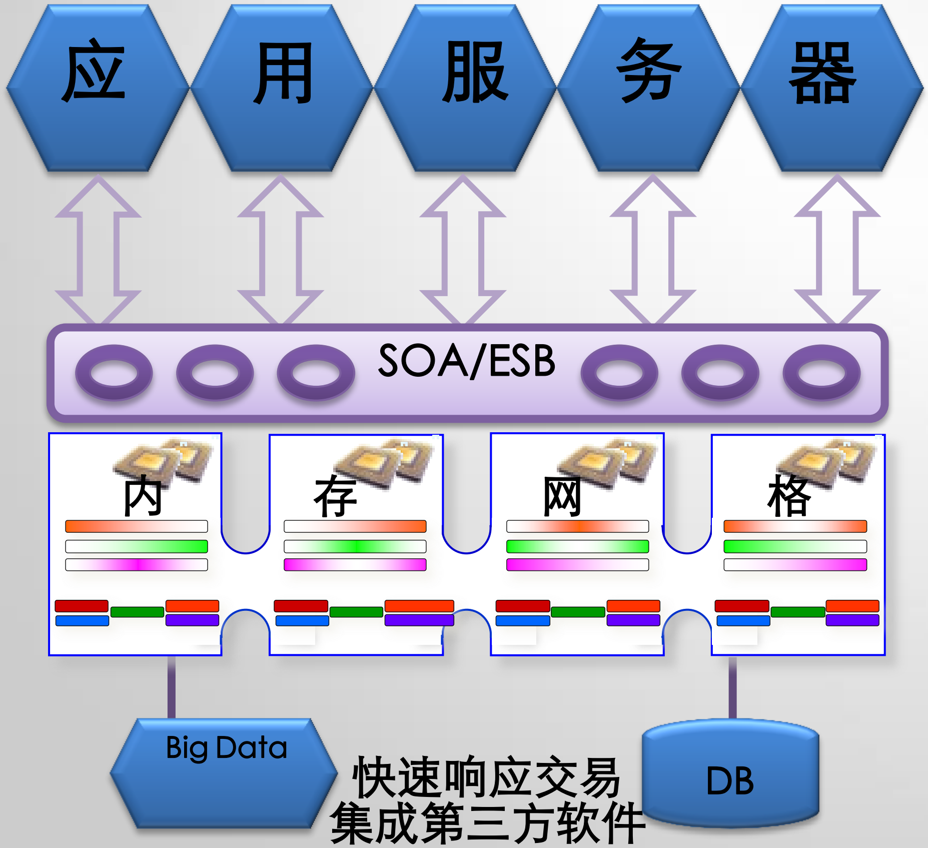
WORKSHOP

MANUFACTURING
(DEVOPS)

FACTORY
(CLOUD)

移动互联网时代
快速响应交易处理

毫秒级别服务响应

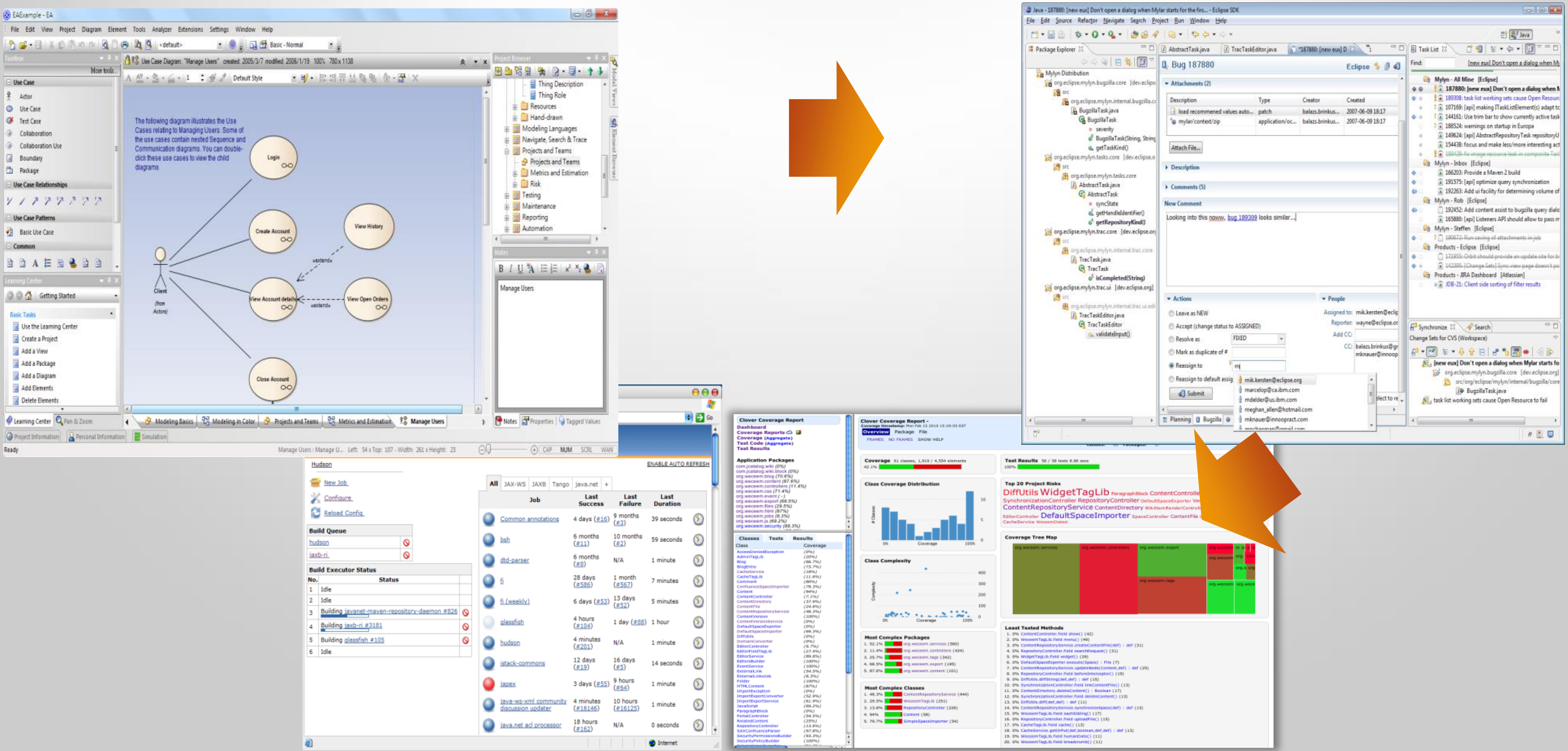

应
用
服
务
器
SOA/ESB
内
存
网
格
Big Data
快速响应交易
集成第三方软件
DB

应用场景

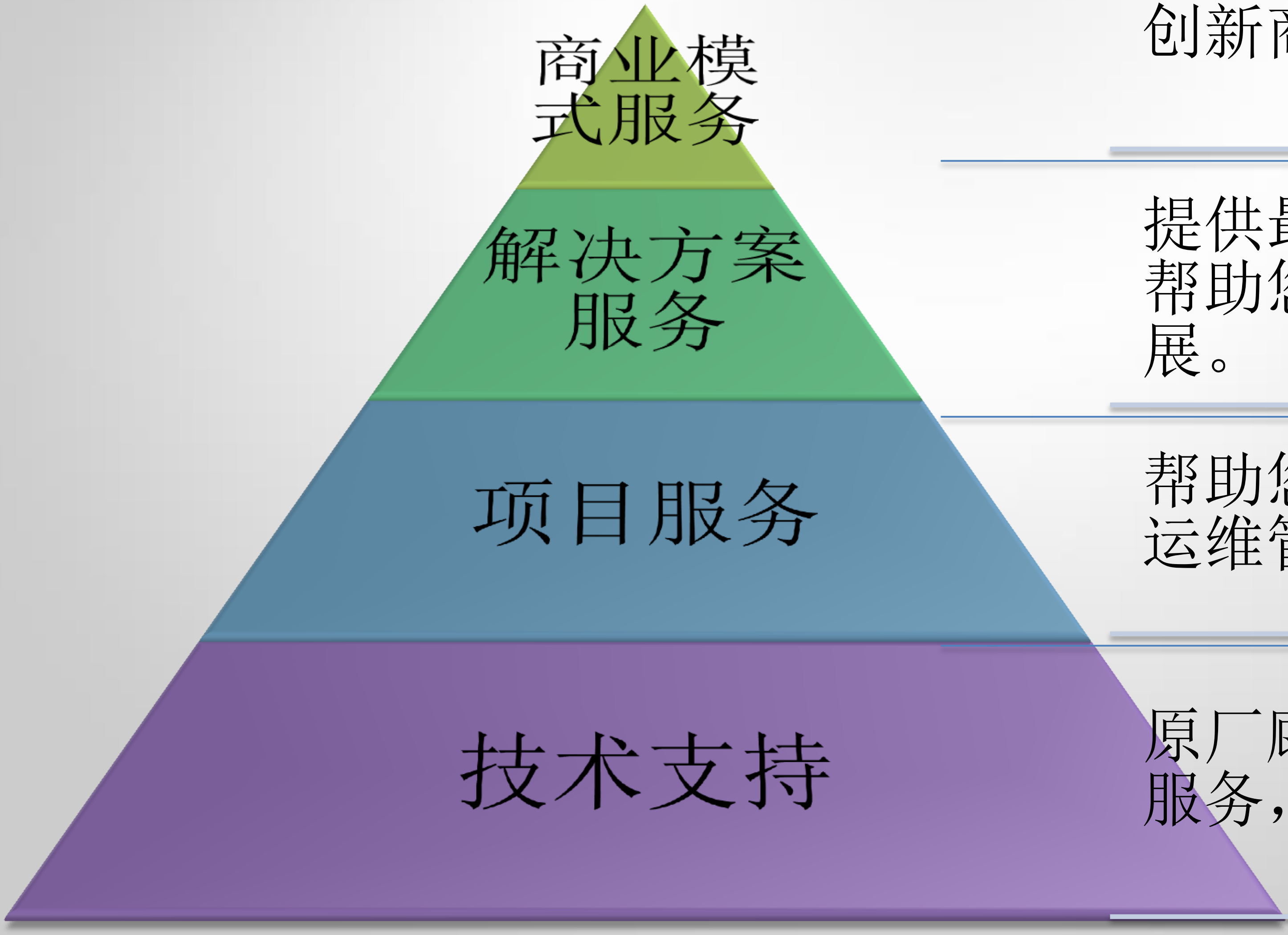
- 网上交易,互联网银行
- 海量交易处理
- 门户服务
- 实时数据集成

协助构建开源云开发平台

- 协助构建开源云基础环境
- 协助构建自动化开发，设计，测试及布署环境
- 知识传递 Design Patterns, Defect Tracking, Programming, Automatic Testing



红帽-中间件服务体系



商业模式服务	帮助您运用开源技术以创新商业模式。
解决方案服务	提供最新解决方案服务，帮助您快术创新业务发展。
项目服务	帮助您加速项目开发与运维管理。
技术支持	原厂顾问现场技术支持服务，让您高枕无忧。

红帽-中间件服务内容

开源顾问服务

- 企业导入开源应用顾问服务
- 智慧开源应用架构顾问服务

解决方案顾问服务

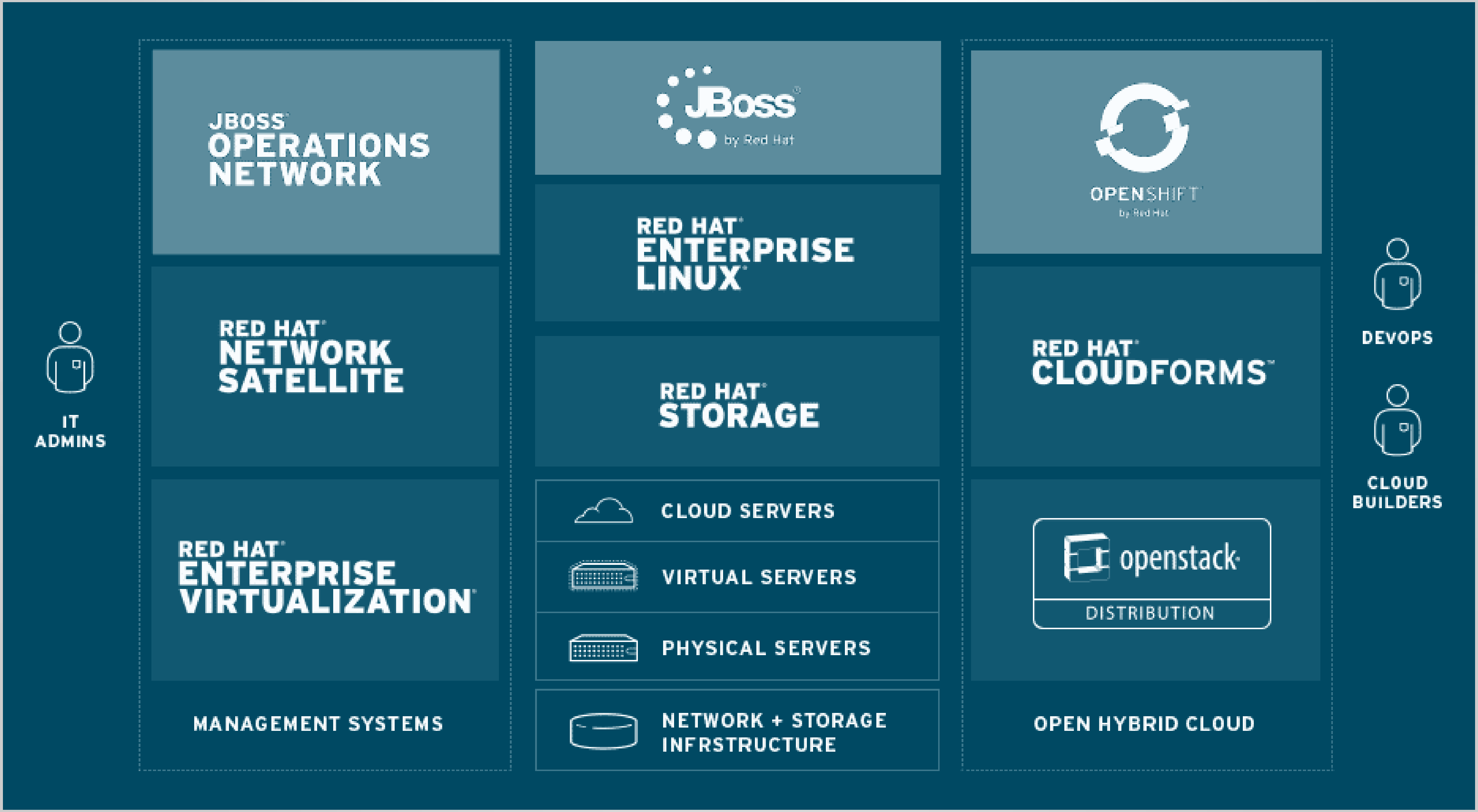
- 智慧互连网应用解决方案服务
- 自动化开发运维解决方案服务
- 企业平台云解决方案服务

产品技术顾问服务

- JBoss 中间件服务
- Fuse 中间件服务
- BPM 中间件服务
- 智慧规则中间件服务
- MQ 中间件服务
- xPaaS 平台云服务

项目技术服务

- JBoss 中间件架构设计服务
- JBoss 中间件最佳设计模式
- JBoss 中间件开发服务
- 现场技术支持服务



IT ADMINS

JBOSS OPERATIONS NETWORK

RED HAT NETWORK SATELLITE

RED HAT ENTERPRISE VIRTUALIZATION

MANAGEMENT SYSTEMS

JBoss by Red Hat

RED HAT ENTERPRISE LINUX

RED HAT STORAGE

CLOUD SERVERS

VIRTUAL SERVERS

PHYSICAL SERVERS

NETWORK + STORAGE INFRSTRUCTURE

OPENSHIFT by Red Hat

RED HAT CLOUDFORMS

openstack DISTRIBUTION

OPEN HYBRID CLOUD

DEVOPS

CLOUD BUILDERS

THANK YOU.

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