Containers & Cloud-Native Roadshow

Do more now. Build what's next.

AGENDA

- Introduction (**V.Colabella**)

- Container e DevOps al servizio dei cittadini: il caso di INAIL

  (**Paolo Guidelli, Antonio Tommaso, Anna Sappa, G.Magalotti** Par-Tec)

- Why 'Cloud Native' : challenges and benefits (**V.Colabella**)

- Success Stories with our partners

    Luca Tiberia (Cloud Architect Manager – Accenture)

    Michele Solazzo (Sales&Marketing Director - Kiratech)**, Massimiliano Romano (**DevOps Expert - Kiratech)

- Lunch Break

- Technical Deep Dive with Demo (**U.Landini** – Principal Solution Architect)

redhat.

RED HAT'S INTENTIONAL 25-YEAR JOURNEY

1993 — FOUNDED

1999 — IPO

2002 — FIRST RELEASE OF ENTERPRISE LINUX

2006 — JBOSS ACQUIRED

2009 — RED HAT VIRTUALIZATION RELEASED

— **RED HAT ADDED TO S&P 500 INDEX**

2011 — **OPENSHIFT RELEASED**
GLUSTER ACQUIRED
FUSESOURCE, POLYMITA & MANAGEIQ ACQUIRED

2012 — **$1 BILLION IN REVENUE**
RED HAT STORAGE RELEASED
CLOUDFORMS RELEASED

2013 — **RED HAT OPENSTACK PLATFORM RELEASE**D
OPENSHIFT ENTERPRISE RELEASED

2014 — INKTANK (CEPH),
ENOVANCE (OPENSTACK),
& FEEDHENRY (MOBILE) ACQUIRED

2015 — **ANSIBLE ACQUIRED**

2016 — **$2 BILLION IN REVENUE**

— 3SCALE (API MANAGEMENT) ACQUIRED

2017 — PERMABIT, CODENVY & COREOS ACQUIRED

2018 — **$3 BILLION ANNUAL RUN RATE REVENUE**

redhat.

OUR BUSINESS

Red Hat is an enterprise-class software company with an open source development model

THE PILLARS ARE INTERCONNECTED, WITH LINUX AT THE CORE
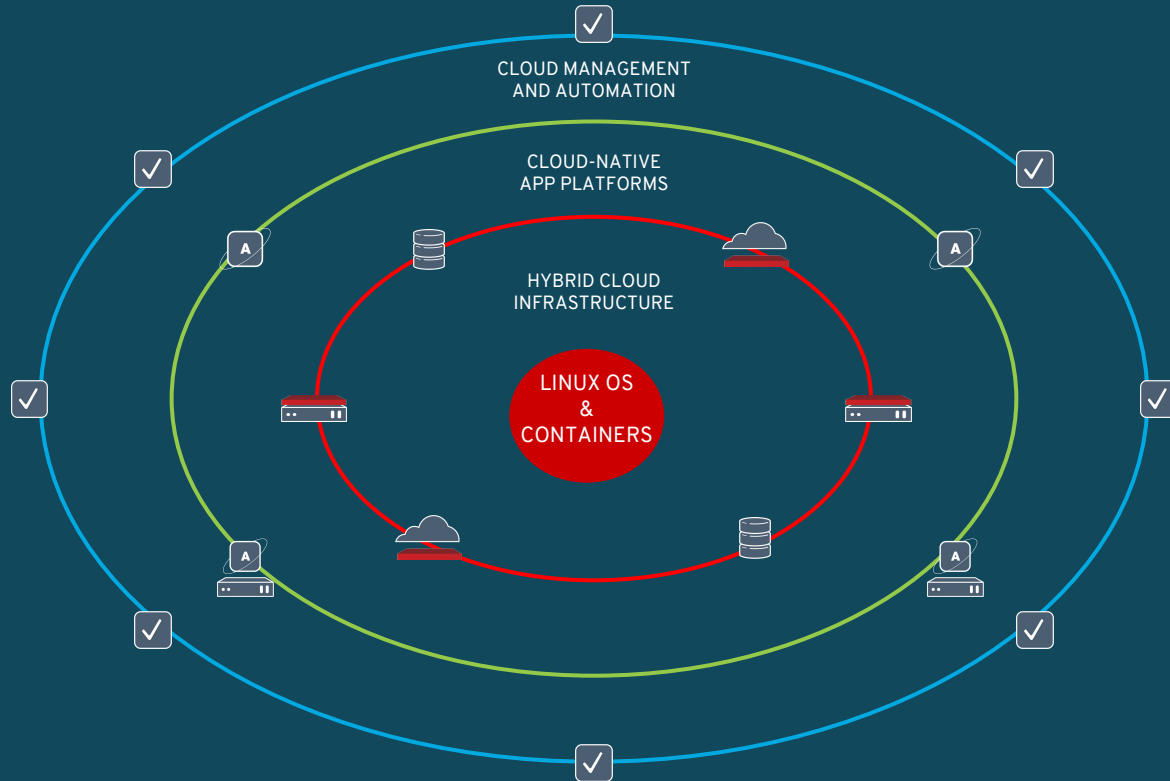
CLOUD MANAGEMENT
AND AUTOMATION

CLOUD-NATIVE
APP PLATFORMS

HYBRID CLOUD
INFRASTRUCTURE

LINUX OS
&
CONTAINERS

redhat.

CLOUD-NATIVE APPLICATION PLATFORMS

OPEN HYBRID CLOUD

HYBRID CLOUD INFRASTRUCTURE
Infrastructure software across the 4 footprints, with RHEL at the very core

CLOUD-NATIVE APP PLATFORMS
Software designed to rapidly & efficiently develop & deploy apps across hybrid cloud

MANAGEMENT & AUTOMATION
Software designed to simplify management & automation of hybrid cloud environments

redhat.

JOINT DEVELOPMENT DRIVES INNOVATION

Driving **innovation** in **processing**.

Unleashing the **power of compute through software**.

20+ years of collaboration fueling business speed.

RED HAT AND INTEL: DELIVERING CONTAINERIZATION

Red Hat OpenShift Container Platform offers:

Fast, flexible app delivery

Accelerated delivery of new features and services

Standard app components and configurations

Automated app build, test, and deployment

DevOps adoption

Continuous integration/continuous delivery (CI/CD) pipeline

INTEL XEON SCALABLE PROCESSORS

Optimize performance

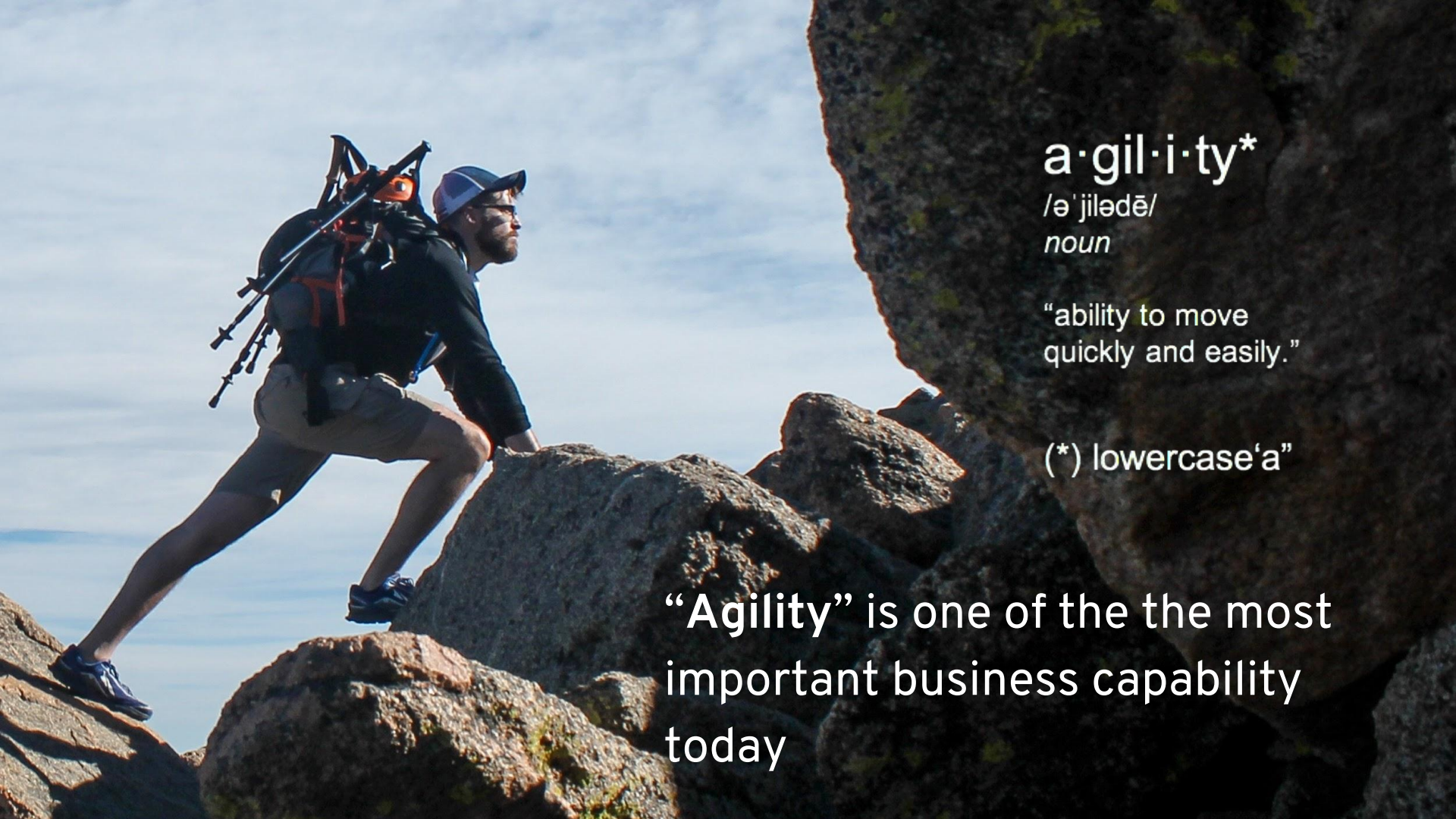for advanced analytics, HPC, and data compression.

Accelerate critical workloads

with faster data compression and cryptography.

Operate more efficiently

with lower system and power costs and improved block and virtual machine transfers.

Improve security

without compromising performance.

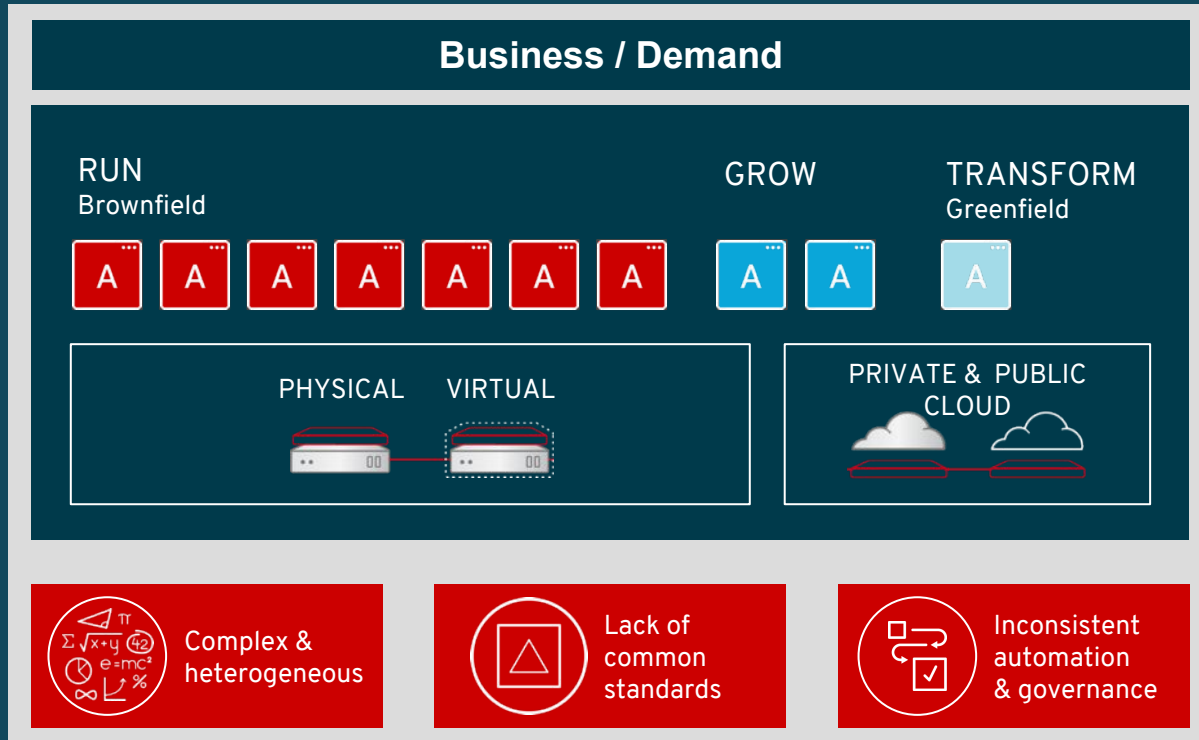Why 'Cloud Native' : challenges and benefits

a·gil·i·ty*
/əˈjiledē/
noun

"ability to move
quickly and easily."

(*) lowercase 'a'

"**Agility**" is one of the the most
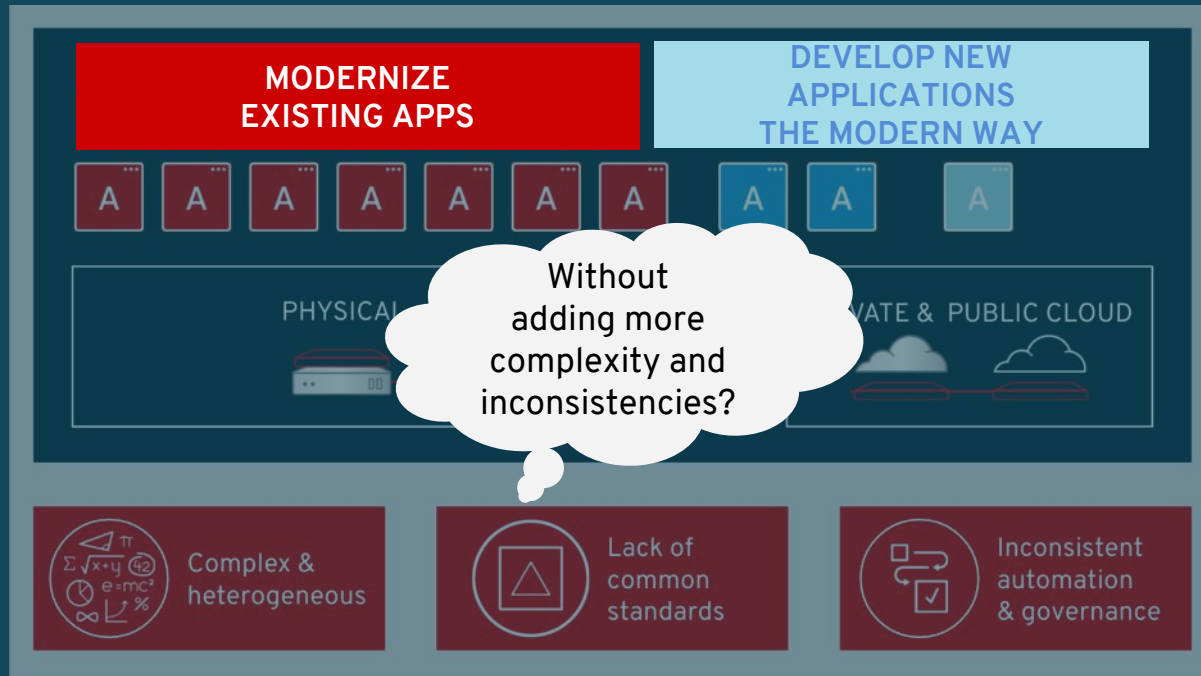important business capability
today

TYPICAL CUSTOMER LANDSCAPE TODAY

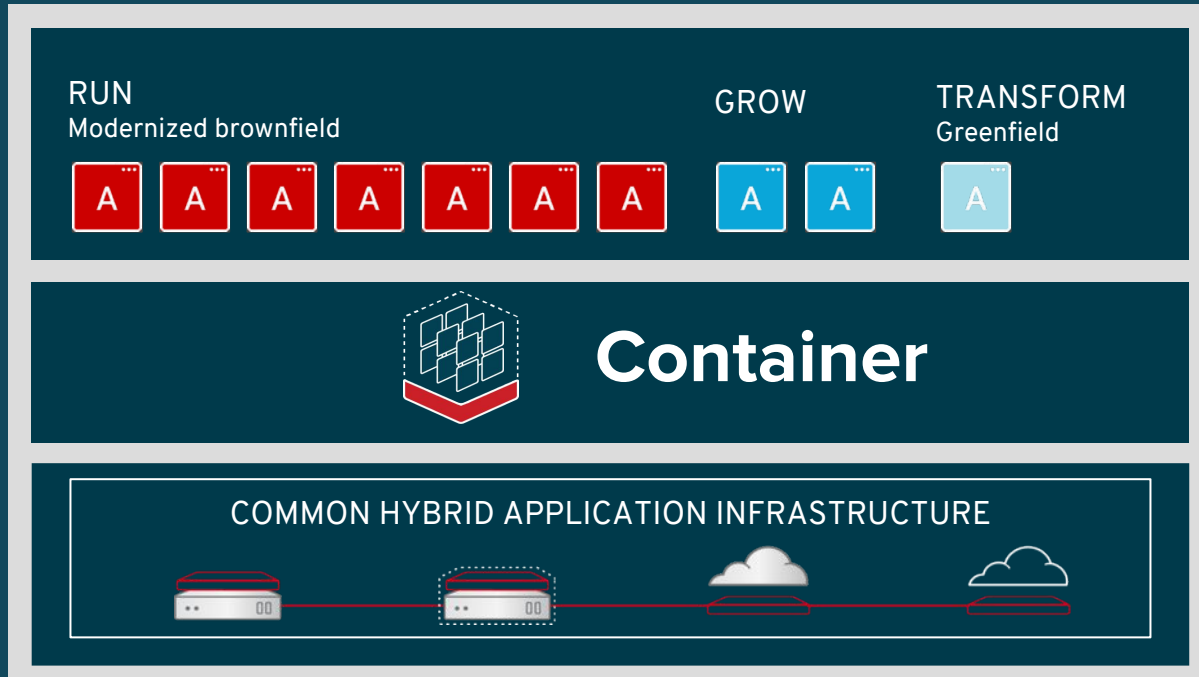Where the journey starts...

TYPICAL CUSTOMER LANDSCAPE TODAY
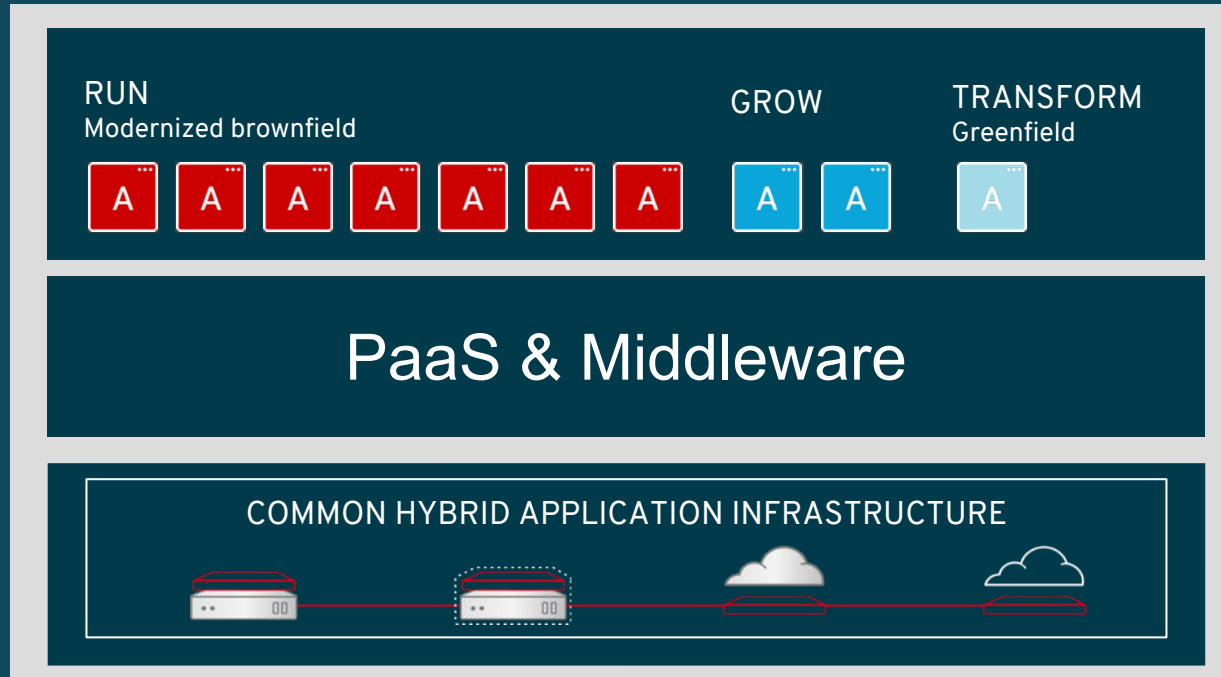
Where the journey starts...

APPLICATION AND INFRASTRUCTURE MODERNIZATION
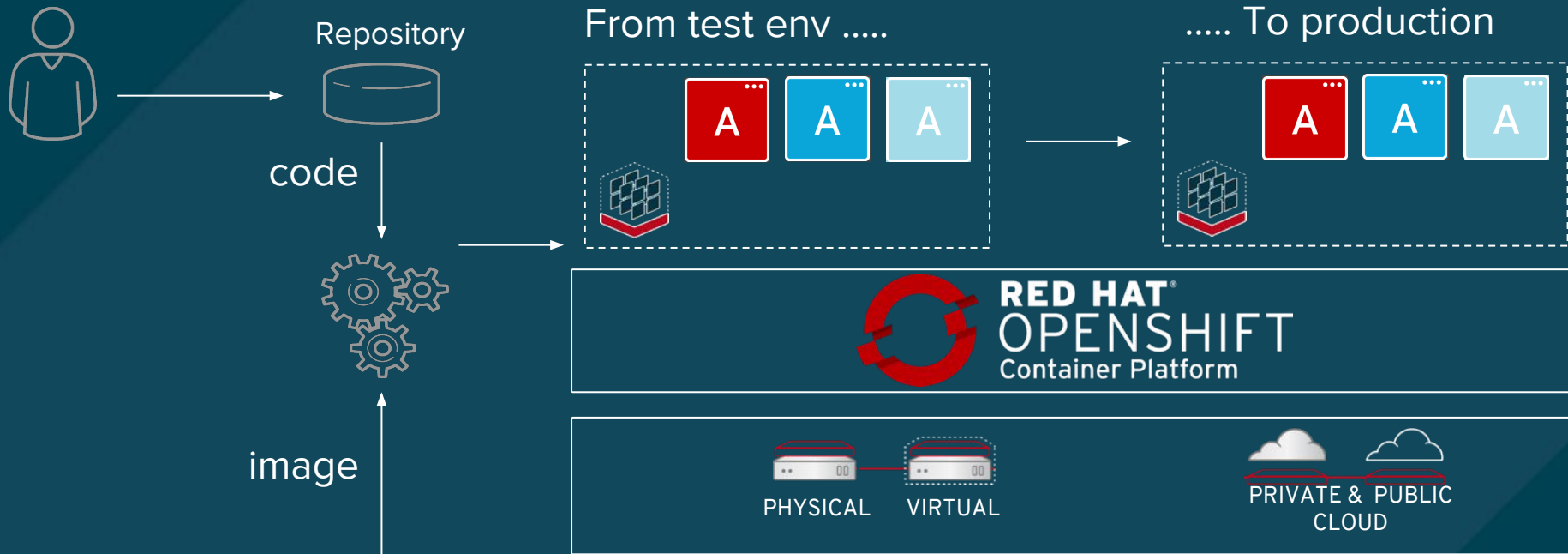
One platform to support you today and tomorrow

APPLICATION AND INFRASTRUCTURE MODERNIZATION

One platform to support you today and tomorrow

DEVOPS IN A 'HYBRID CLOUD" SCENARIO
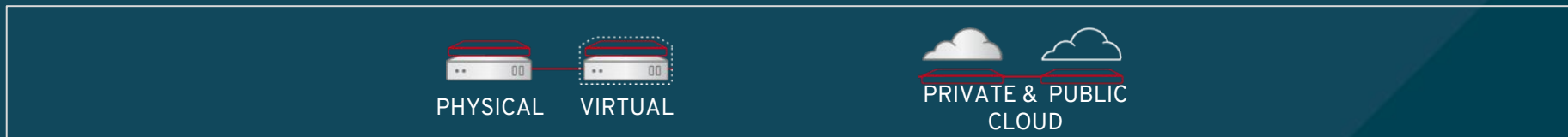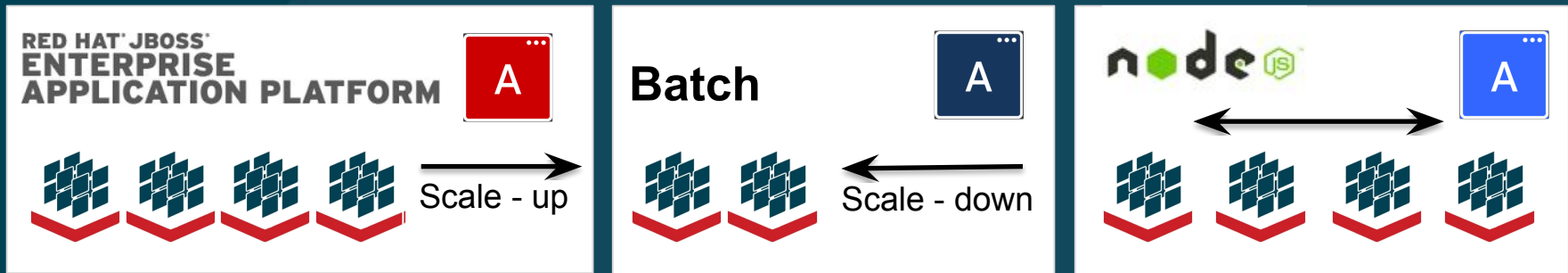
IT resources optimization
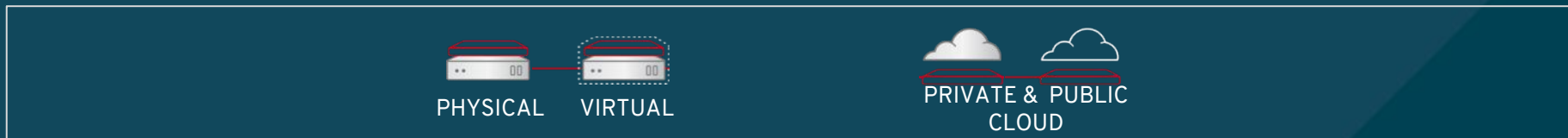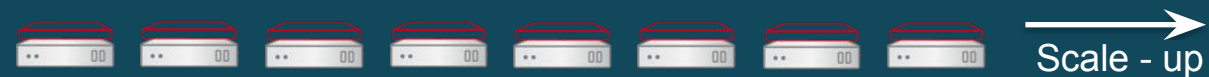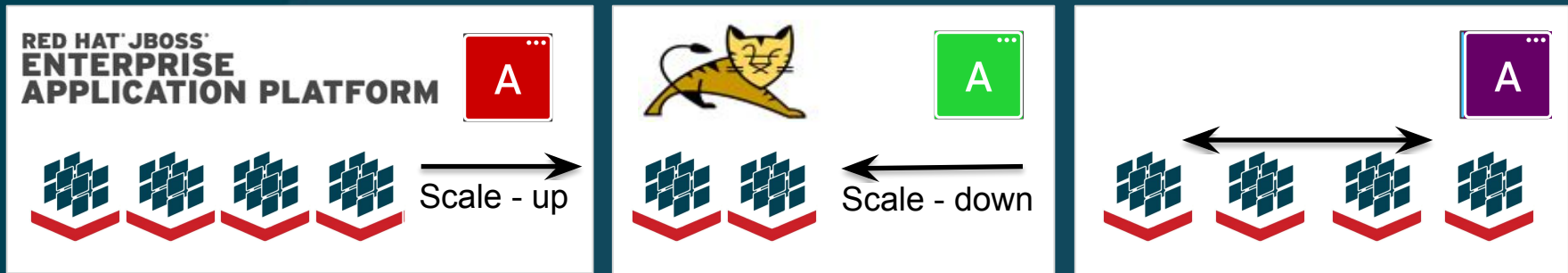
IT resources optimization

IT'S ALL THERE!
COMPLETE TECHNOLOGY STACK FOR HYBRID CLOUD

DEVELOPER TOOLS

RED HAT JBOSS DEVELOPER STUDIO

RED HAT CONTAINER DEVELOPMENT KIT

RED HAT OPENSHIFT Container Local

RED HAT OPENSHIFT.io

SECURITY & MANAGEMENT

RED HAT CLOUDFORMS

ANSIBLE by Red Hat

RED HAT SATELLITE

RED HAT INSIGHTS

MIDDLEWARE AND APPLICATION SERVICES

FOUNDATION
RED HAT JBOSS ENTERPRISE APPLICATION PLATFORM
RED HAT JBOSS WEB SERVER
RED HAT JBOSS DATA GRID
RED HAT MOBILE

INTEGRATION
RED HAT JBOSS FUSE
RED HAT JBOSS AMQ
RED HAT JBOSS DATA VIRTUALIZATION
3scale BY RED HAT

AUTOMATION
RED HAT JBOSS BRMS
RED HAT JBOSS BPM SUITE

+ RED HAT OPENSHIFT Application Runtimes
WildFly SWARM
VERT.X node spring

CONTAINER PLATFORM

RED HAT OPENSHIFT

INFRASTRUCTURE SOFTWARE

RED HAT ENTERPRISE LINUX
RED HAT STORAGE
RED HAT OPENSTACK PLATFORM
RED HAT VIRTUALIZATION

PHYSICAL   VIRTUAL   PRIVATE CLOUD   Google   amazon web services   Microsoft Azure   OTHER CLOUD PROVIDERS

redhat.

Kubernetes and OpenShift

CONTAINER   CONTAINER   CONTAINER   CONTAINER   CONTAINER

SELF-SERVICE

OPENSHIFT SERVICES | SERVICE CATALOG

DEPLOYMENT STRATEGIES

OPENSHIFT BUILDS | OPENSHIFT DEPLOYMENTS

APPLICATION LIFECYCLE AUTOMATION

ORCHESTRATION | CLUSTER SERVICES

ORCHESTRATION | CLUSTER SERVICES

SECURITY

STORAGE INTERFACE | NETWORK INTERFACE

SECURITY | TELEMETRY | STORAGE | NETWORK | REGISTRY

PACKAGING FORMAT

RED HAT ENTERPRISE LINUX | ATOMIC HOST

PHYSICAL | VIRTUAL | PRIVATE | PUBLIC

RED HAT®
OPENSHIFT
Container Platform

redhat.

Latest news around OpenShift

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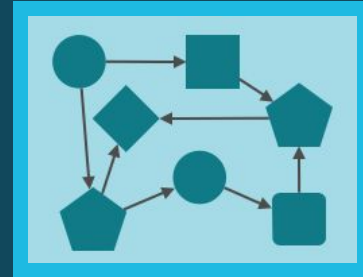
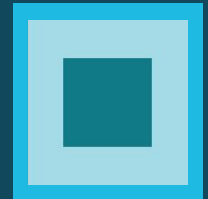# Modern Applications

➜ *Small footprint* ➜ *Containers*

Deployment Speed

Monoliths are typically more complex to build, test and move into production.

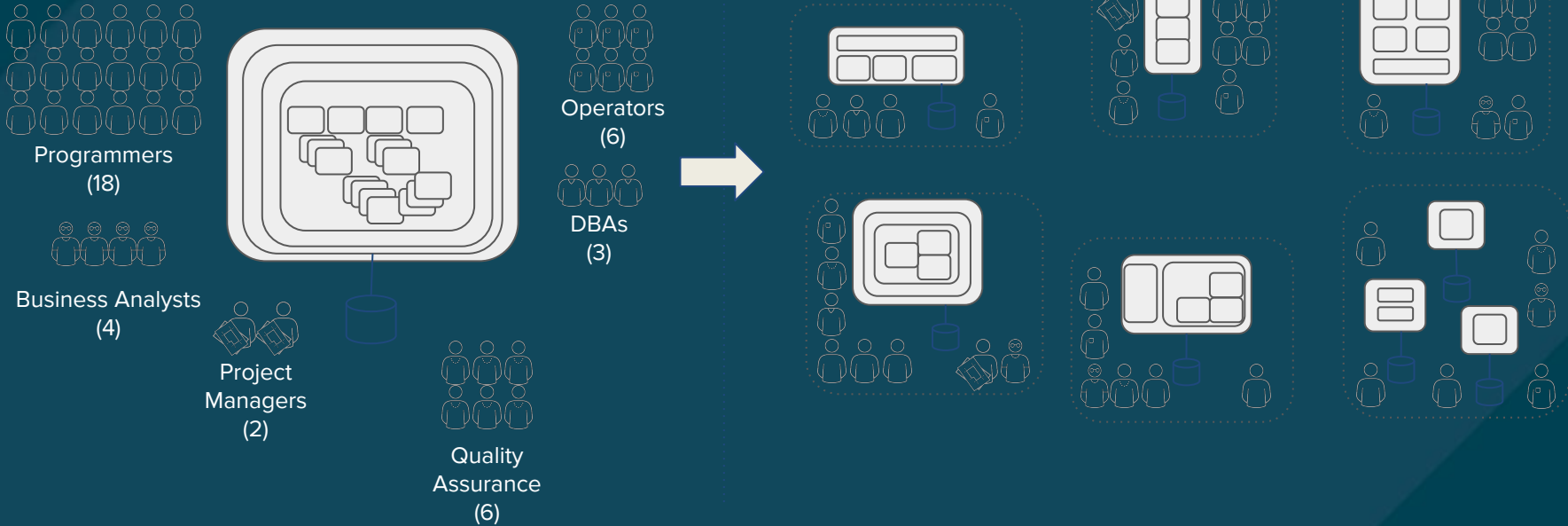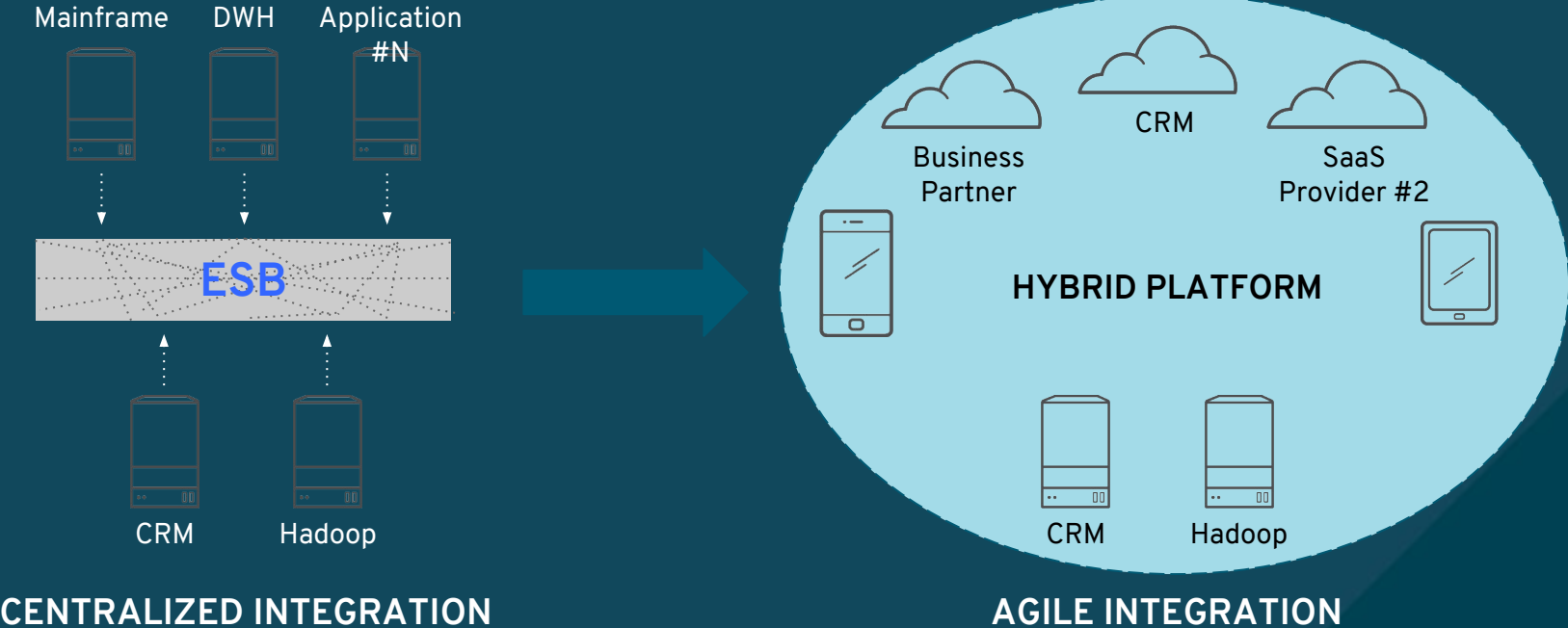Microservices are smaller, easier to test and therefor easier to package into containers.

vs

Development Speed

Using smaller teams

Programmers
(18)

Business Analysts
(4)

Project
Managers
(2)

Quality
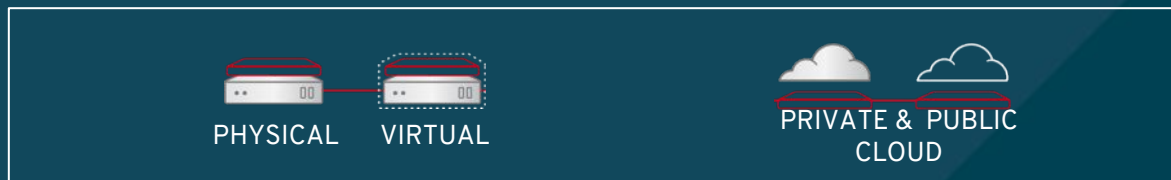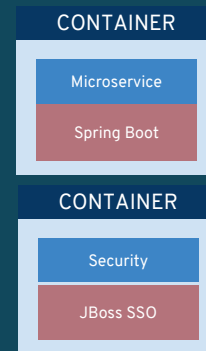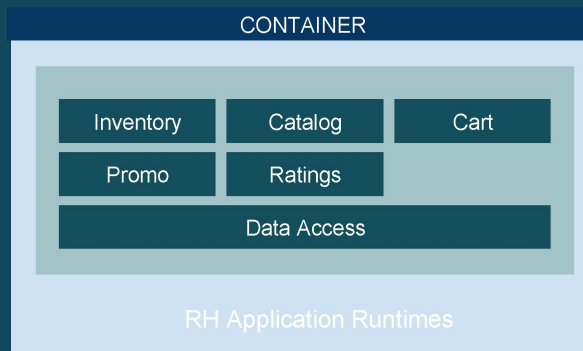Assurance
(6)

Operators
(6)

DBAs
(3)

FASTER, API-ENABLED: AGILE INTEGRATION

ELIMINATES CENTRALIZED COMPLEXITY TO GIVE YOU AGILITY

Mainframe   DWH   Application #N

ESB

CRM   Hadoop

CENTRALIZED INTEGRATION

Business Partner   CRM   SaaS Provider #2

HYBRID PLATFORM

CRM   Hadoop

AGILE INTEGRATION

redhat.

Smooth Transition

HTML | Javascript | Web
Inventory | Catalog | Cart
Promo | Ratings | Orders
Data Access

Java EE Application Server

VM

CONTAINER

Inventory | Catalog | Cart
Promo | Ratings
Data Access

RH Application Runtimes

CONTAINER

Microservice
Spring Boot

CONTAINER

Security
JBoss SSO

RED HAT® OPENSHIFT Container Platform

PHYSICAL   VIRTUAL

PRIVATE & PUBLIC CLOUD

redhat.

Transition to 'cloud native'

Break Up Monolith
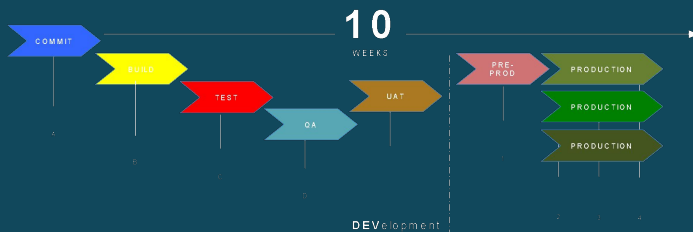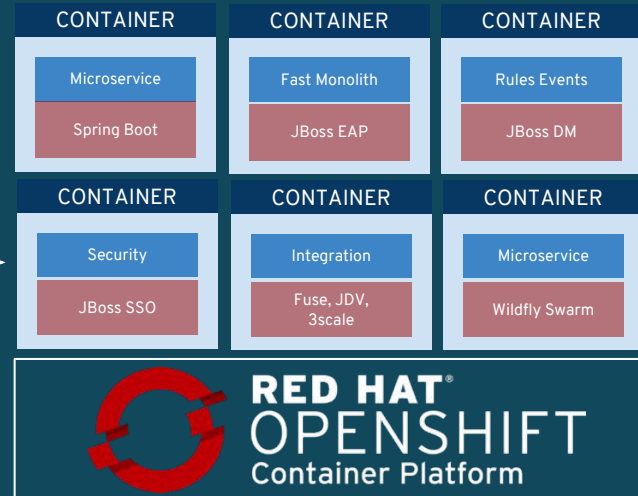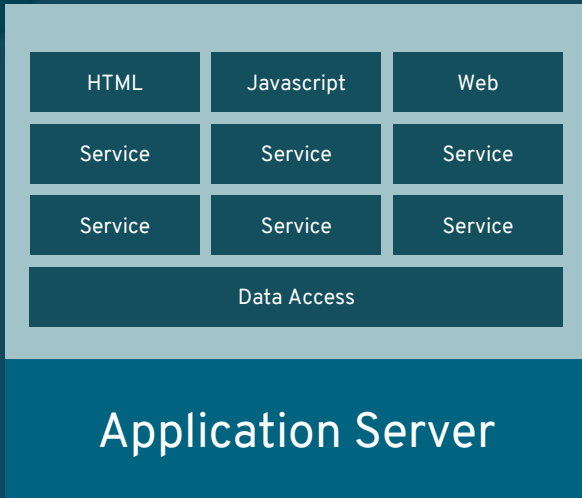
HTML	Javascript	Web
Service	Service	Service
Service	Service	Service
Data Access		

Application Server

CONTAINER	CONTAINER	CONTAINER
Microservice Spring Boot	Fast Monolith JBoss EAP	Rules Events JBoss DM

CONTAINER	CONTAINER	CONTAINER
Security JBoss SSO	Integration Fuse, JDV, 3scale	Microservice Wildfly Swarm

RED HAT® OPENSHIFT Container Platform

10 WEEKS

COMMIT
BUILD
TEST
QA
UAT
PRE-PROD
PRODUCTION
PRODUCTION
PRODUCTION

DEVelopment

COMMIT BUILD TEST QA UAT PRE-PROD PRODUCTION

"We used to have **10 weeks** from code commit to production, with OpenShift we are down to **20 min**. It is a game changer"

Large Nordic Bank

redhat.

CLOUD-NATIVE APPLICATION PLATFORMS

OPEN HYBRID CLOUD

HYBRID CLOUD INFRASTRUCTURE
Infrastructure software across the 4 footprints, with RHEL at the very core

CLOUD-NATIVE APP PLATFORMS
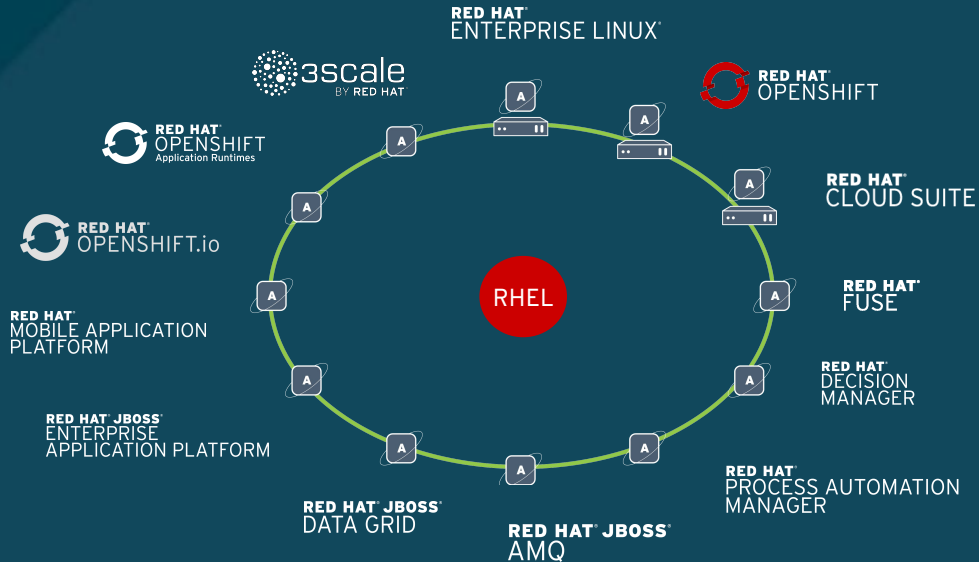Software designed to rapidly & efficiently develop & deploy apps across hybrid cloud

MANAGEMENT & AUTOMATION
Software designed to simplify management & automation of hybrid cloud environments

redhat.

CLOUD-NATIVE APPLICATION PLATFORM
ENTERPRISE CONTAINERS WITH APPLICATION SERVICES

- Enterprise Kubernetes container platform built on Red Hat Enterprise Linux

- OpenShift delivered across physical, virtual, private and public cloud

- Complete application services portfolio integrated with OpenShift

- Integration and API Management to help hybrid cloud deployments

- Application modernization for any app with JBoss and OpenShift

RED HAT AMQ STREAMING

What is Apache Kafka?

Developed at Linkedin back in
2010, open sourced in 2011
Designed to be fast, scalable,
durable and available
Distributed by nature
Data partitioning (sharding)
High throughput / low latency
Ability to handle huge number
of consumers

ENABLING MILLIONS OF APPLICATIONS WITH THE POWER OF OPENSHIFT + IBM

IBM & RED HAT PROVIDE WEBSPHERE & CLOUD PRIVATE INTEGRATION WITH OPENSHIFT

- **IBM middleware (WebSphere, DB2, MQ) packaged as Certified RHEL Containers**
  - Millions of IBM based applications enabled for modernization with OpenShift
  - Enabling IBM's software to be integrated with cloud-native OpenShift applications

- **IBM Cloud Private and Red Hat OpenShift Container Platform integration**
  - Any IBM Cloud Private service natively available to OpenShift applications
  - IBM Services deployed in OpenShift automatically monitored, logged, and metered

- **Consistent Hybrid platform of OpenShift and IBM Cloud Private available on-premise and in the IBM Cloud**

- **Aligned consultancy and implementation services from IBM Garage and Red Hat Innovation Labs**

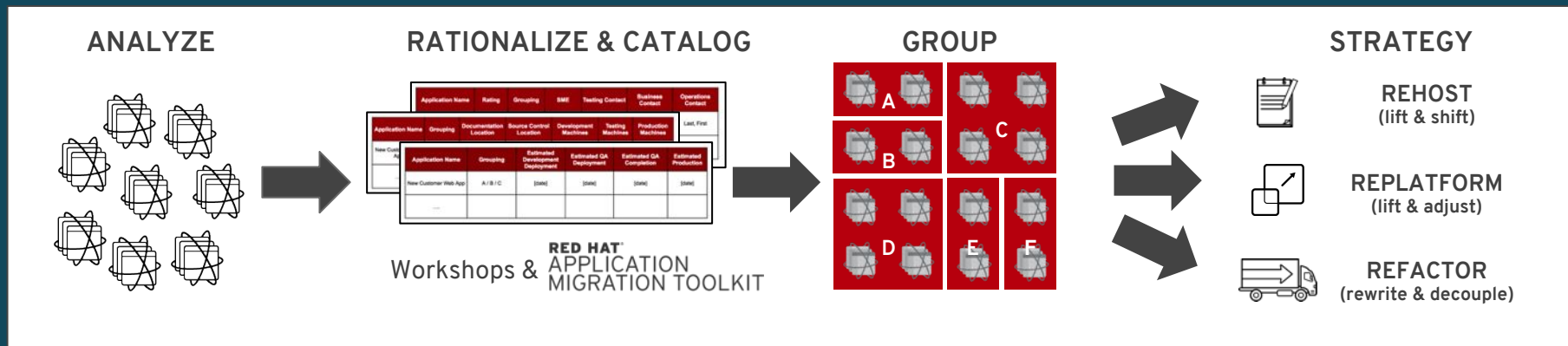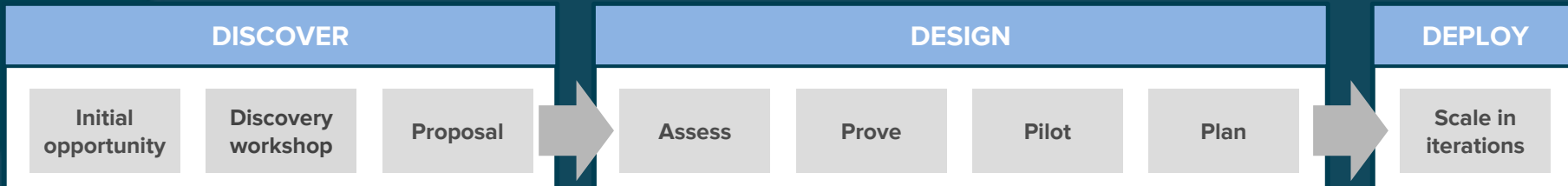# THE INDUSTRY'S FIRST JOINTLY MANAGED OPENSHIFT OFFERING IN THE PUBLIC CLOUD
AN UNPARALLELED HYBRID CLOUD OFFERING FROM THE LEADING KUBERNETES AND LINUX PROVIDER + LEADING CLOUD INFRASTRUCTURE PROVIDER

- **INTRODUCING OpenShift on Microsoft Azure: the first jointly operated and managed OpenShift service**

- **OpenShift support on Microsoft Azure Stack**

- **OpenShift support for both Windows Container and RHEL Containers**
  - Heterogeneous containers, managed uniformly in a single container platform

- **Enhanced Developer and Application Support for OpenShift**
  - Microsoft SQL Server as a certified RHEL container for deployment in OpenShift
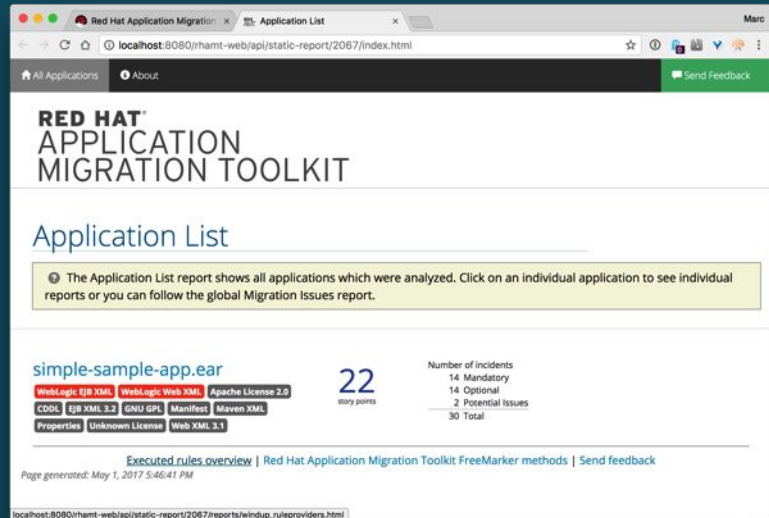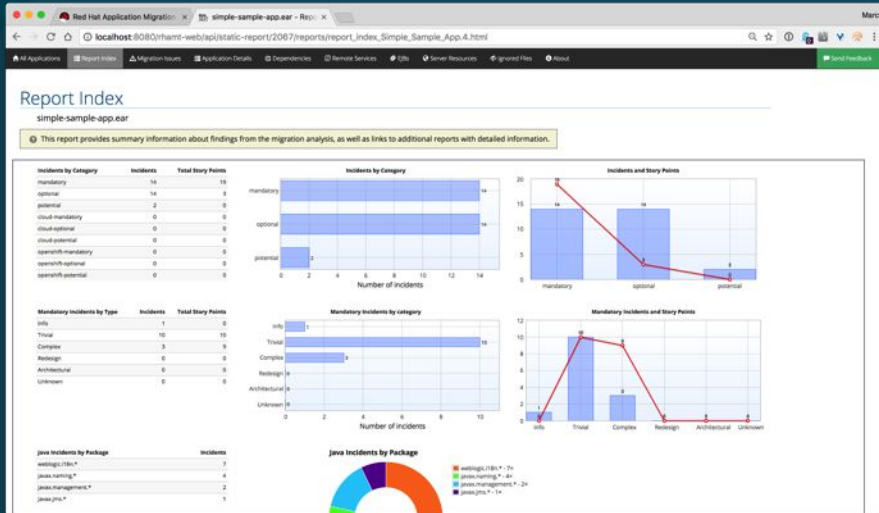 - RHEL available within Visual Studio subscriptions for no additional fee

METHODOLOGY

Iterative, managed service, factory scale up.

| DISCOVER | DESIGN | DEPLOY |

| Initial opportunity | Discovery workshop | Proposal | → | Assess | Prove | Pilot | Plan | → | Scale in iterations |

ANALYZE   **RATIONALIZE & CATALOG**   **GROUP**   **STRATEGY**

Workshops & **RED HAT® APPLICATION MIGRATION TOOLKIT**

REHOST
(lift & shift)

REPLATFORM
(lift & adjust)

REFACTOR
(rewrite & decouple)

redhat

RED HAT® APPLICATION MIGRATION TOOLKIT

Reports: issue type analysis and support for effort estimation

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Red Hat | Success stories

redhat | Success stories