

GET YOUR JAVA EE APPS READY FOR THE CLOUD WITH RED HAT JBOSS EAP 7 AND OPENSIFT BY RED HAT

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Agenda

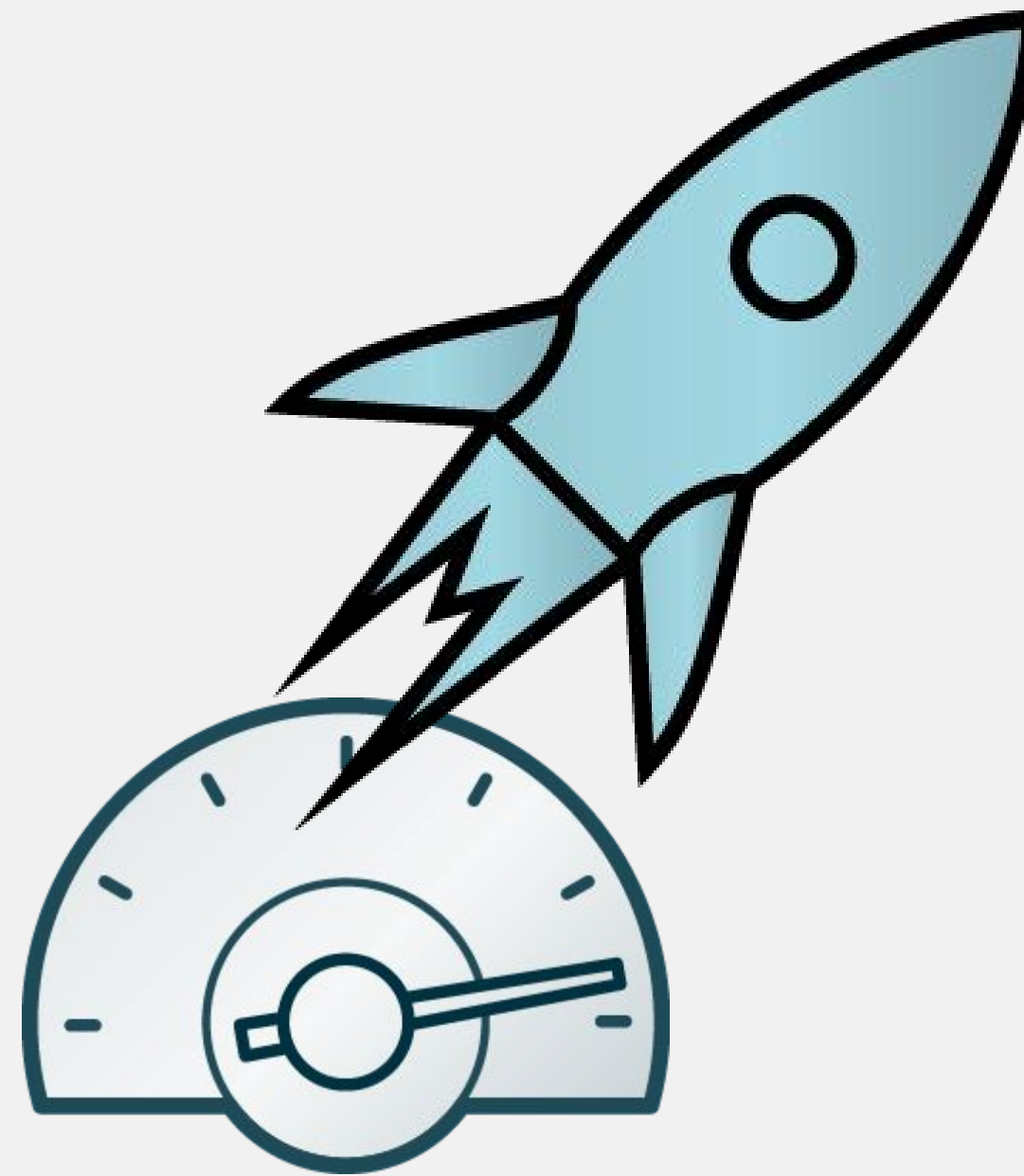
- Application development, evolved
- Java in the cloud
- OpenShift by Red Hat
- JBoss EAP on OpenShift
- Demo
- Wrap up

**Application
development is
evolving**

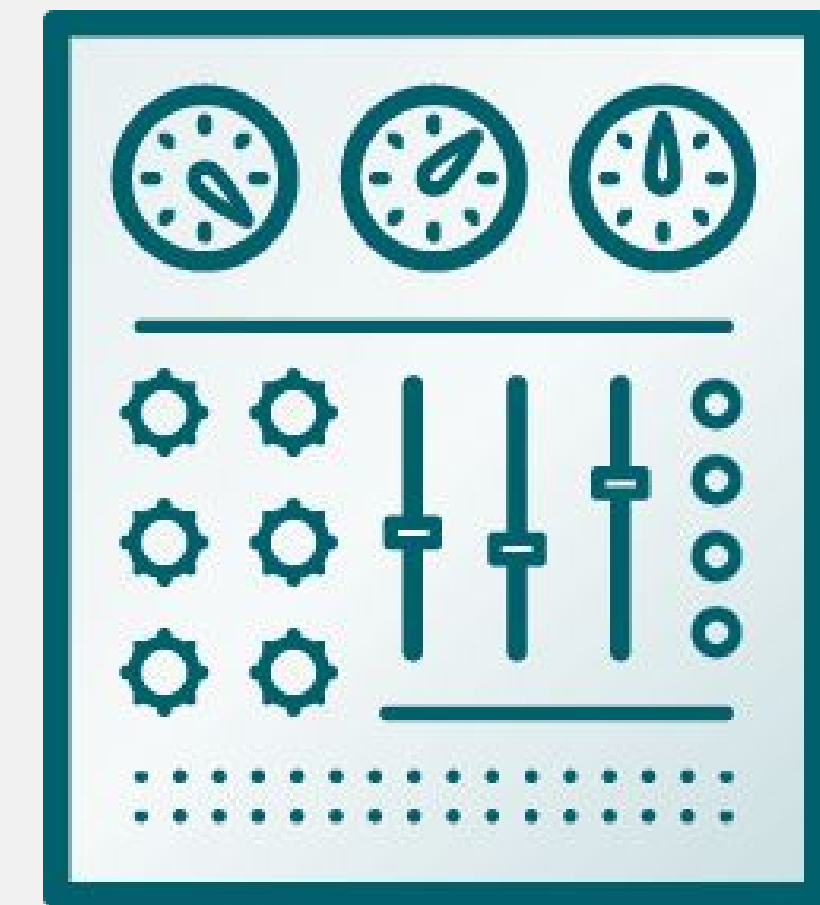
Transform the business, transform application development



**DIFFERENTIATE
(INNOVATION)**



**FAST TO MARKET
(AGILITY)**

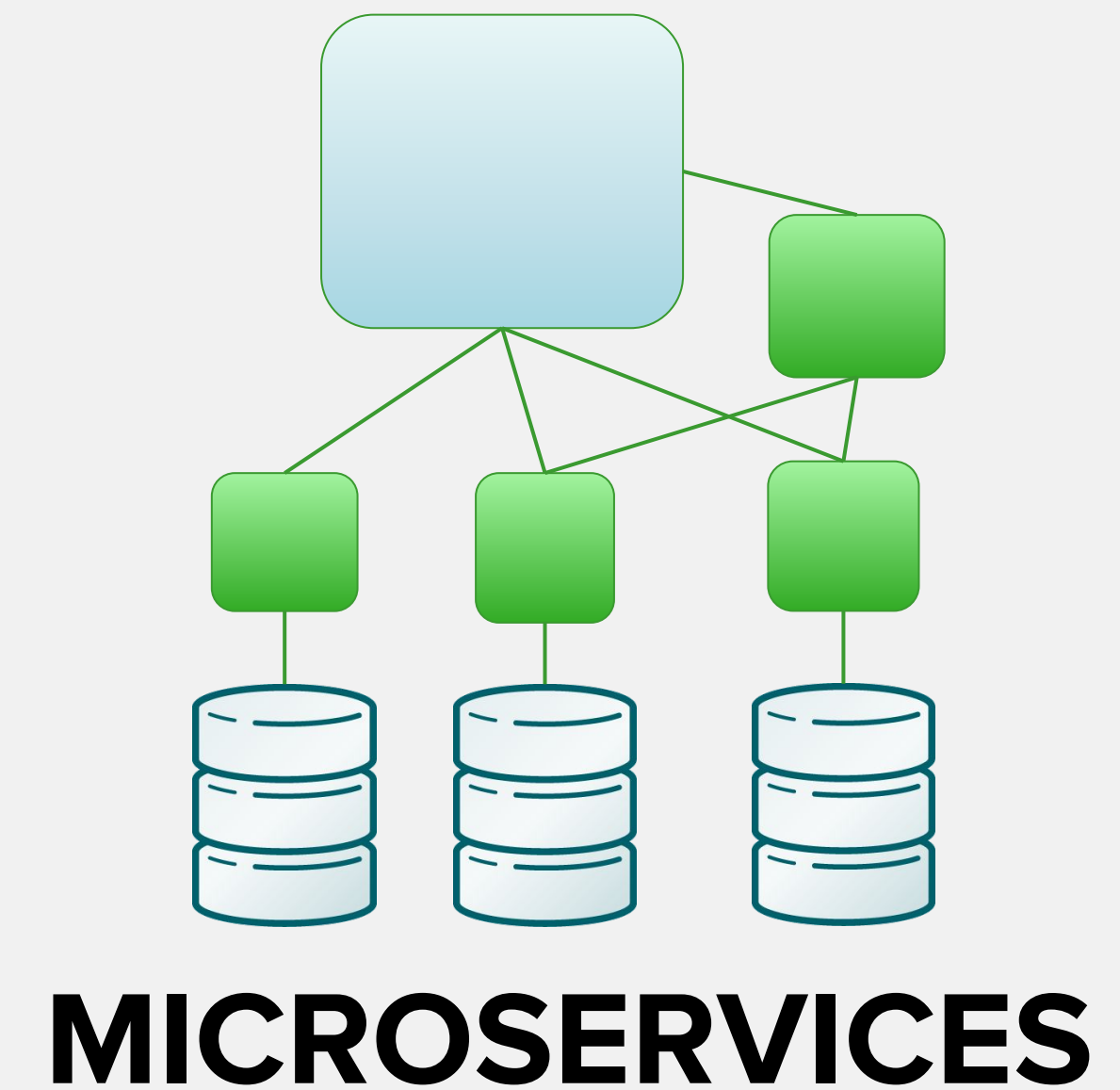
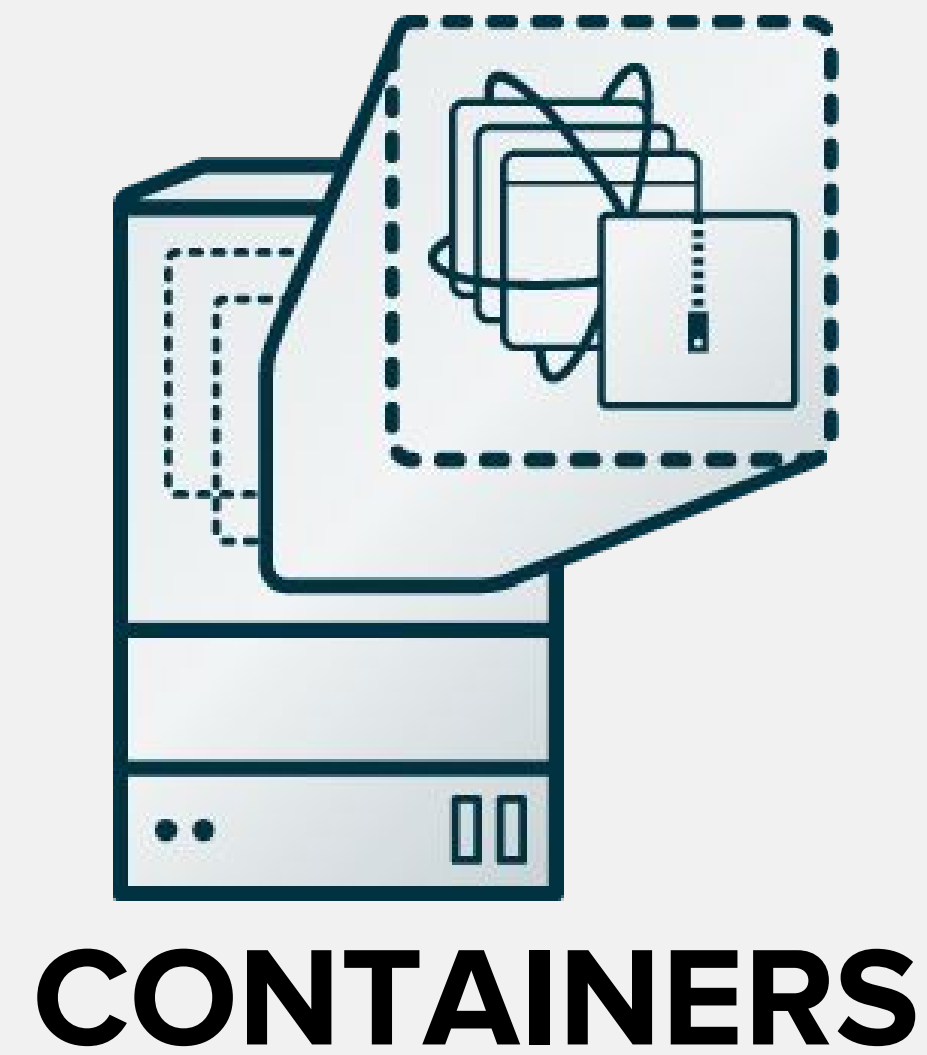
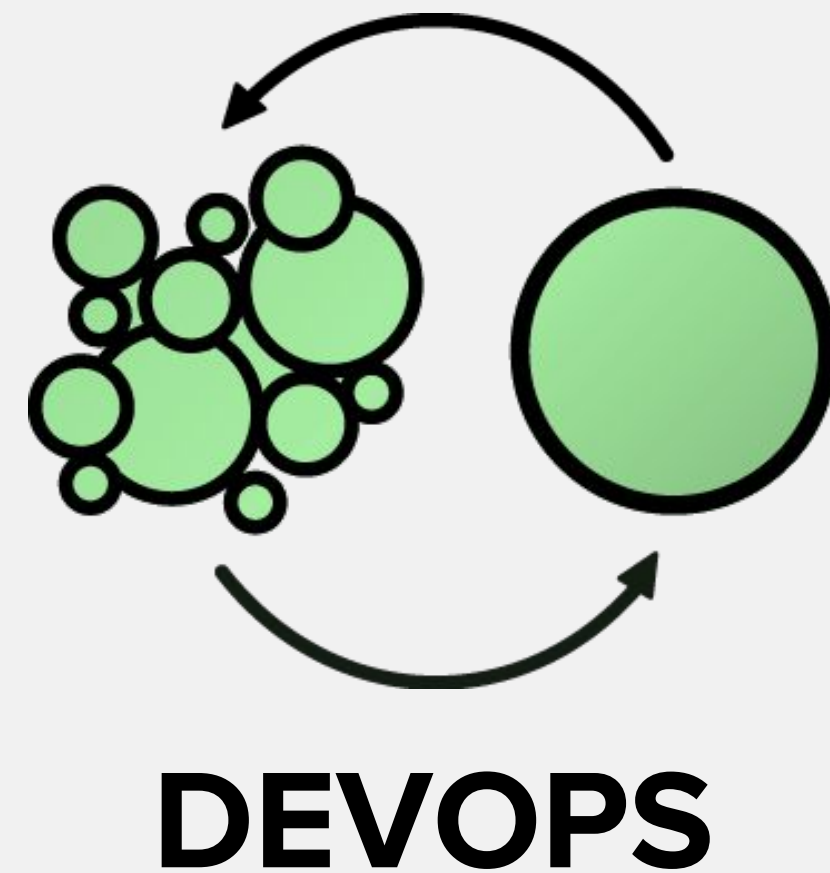
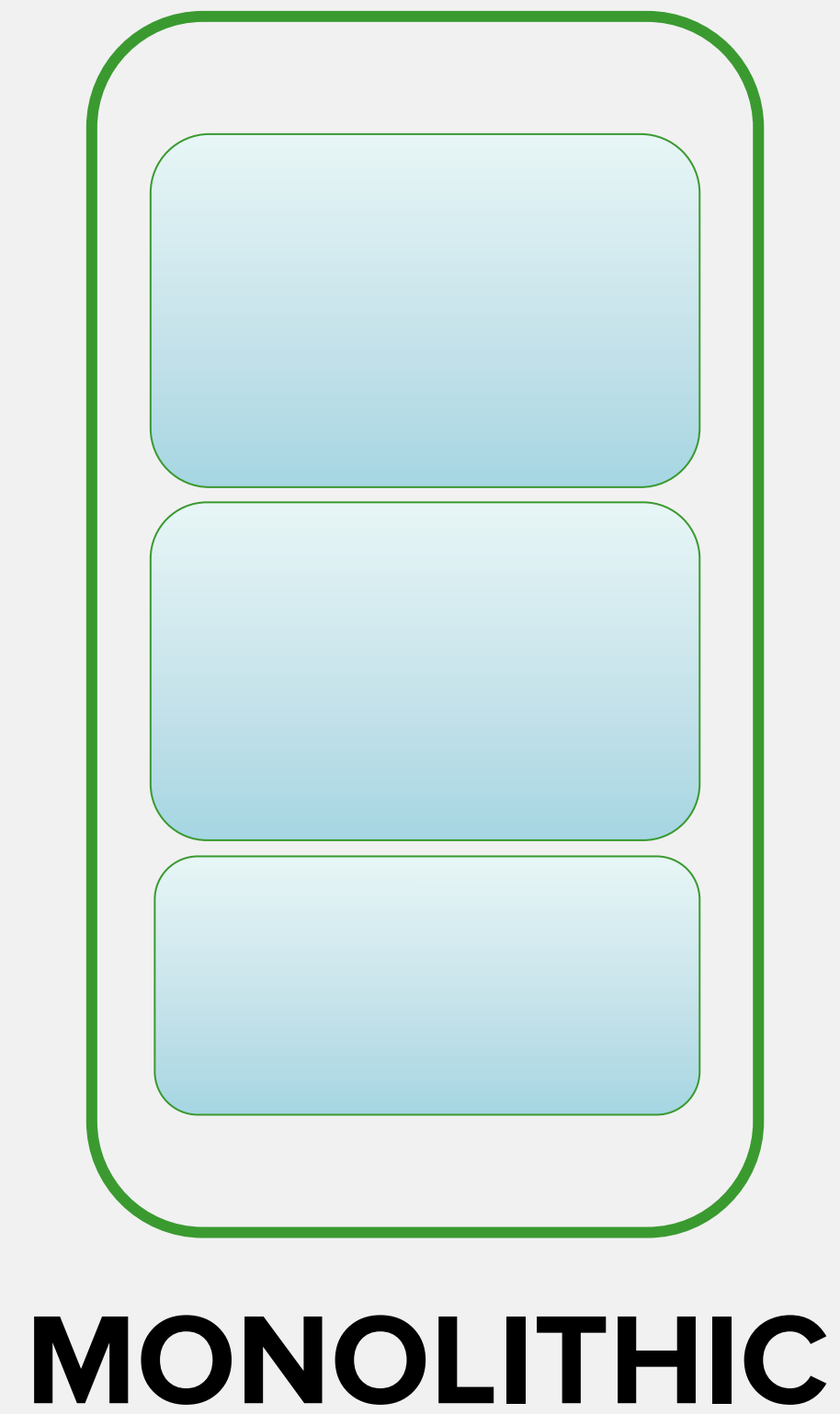
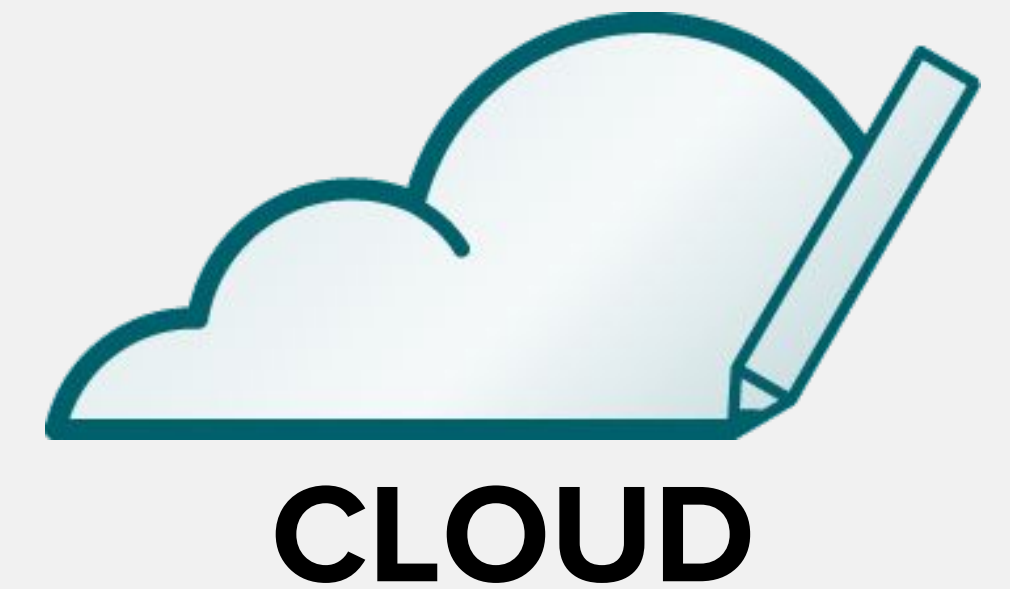


**RUN THE BUSINESS
(EFFICIENCY)**

SOFTWARE IS THE DIFFERENCE

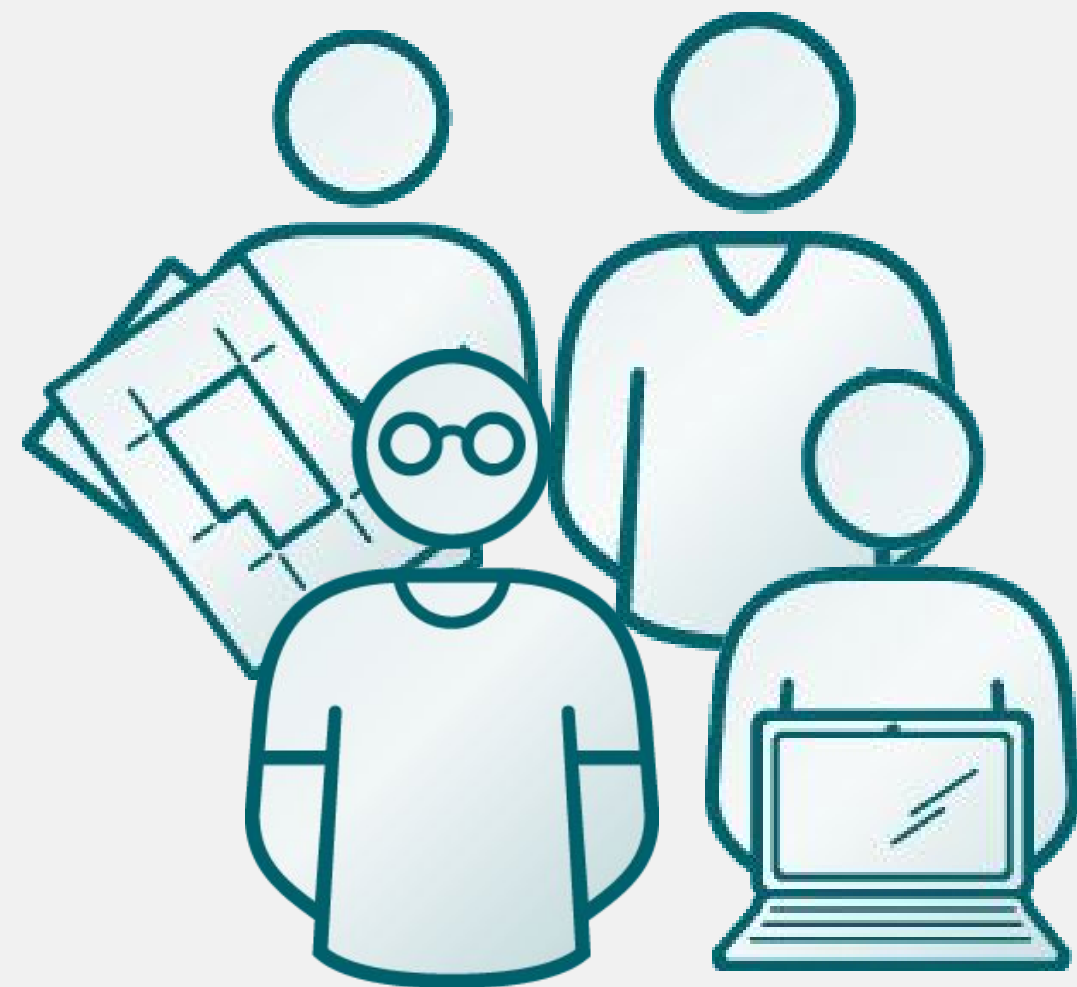
“The scope [of IT] has totally changed.”
“...you have to almost think about how do we [leverage IT] to help our customers...”
“Now, we really have to think more about the revenue side”

IT is struggling to evolve

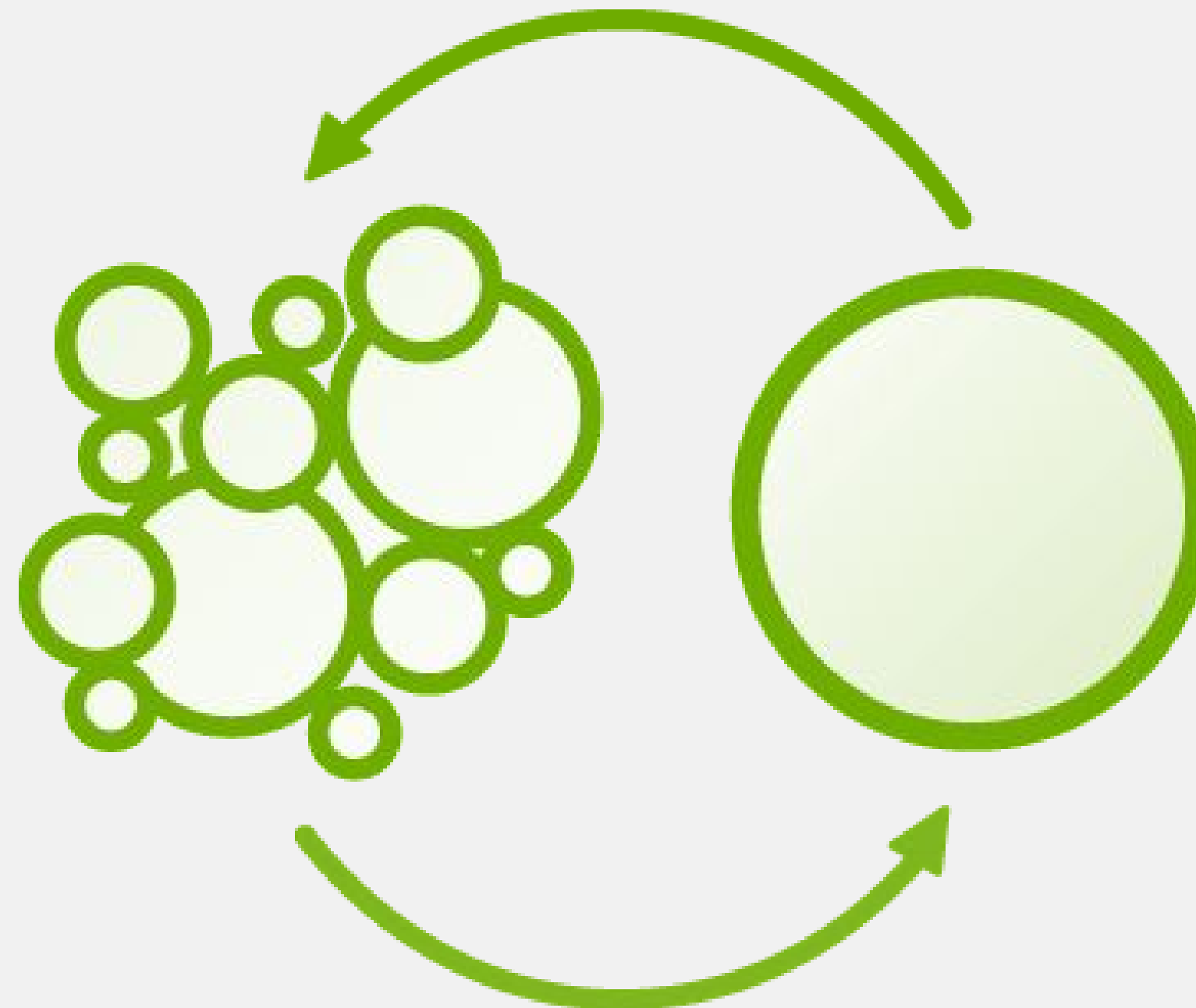
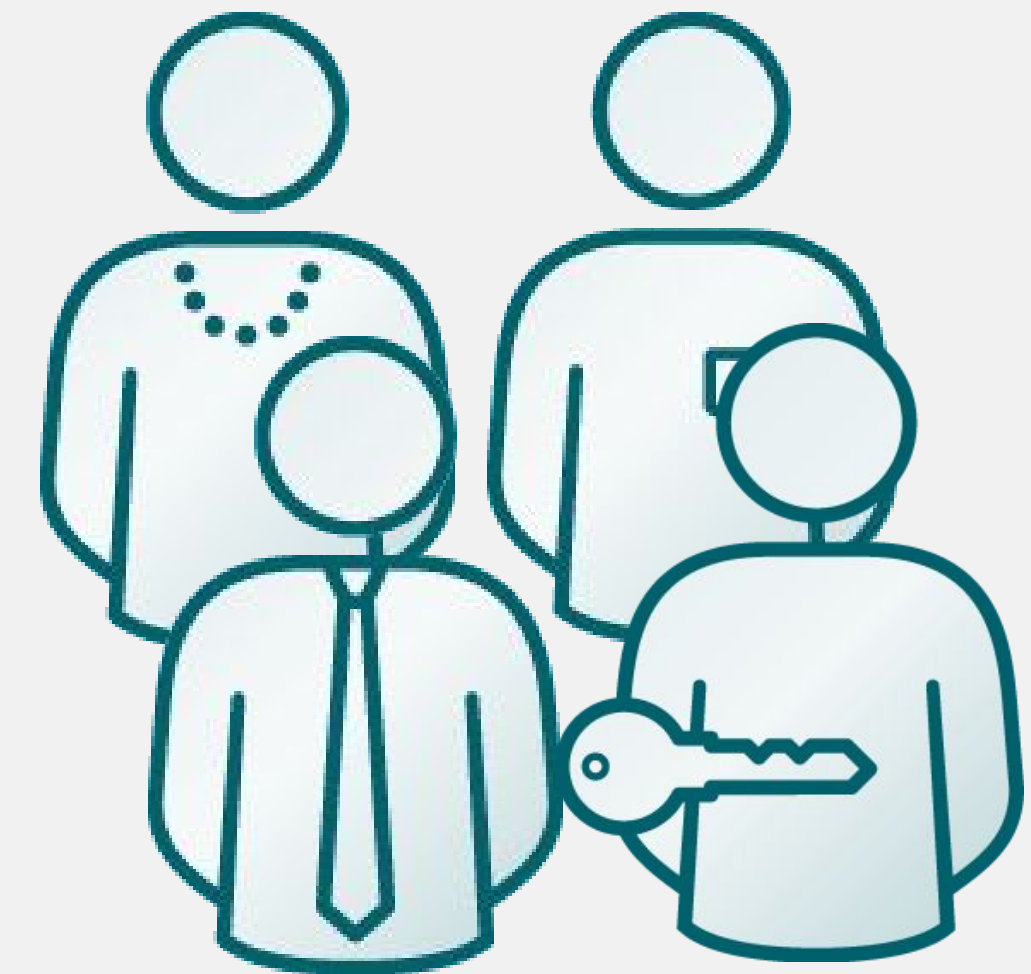


Devops

DEVELOPERS

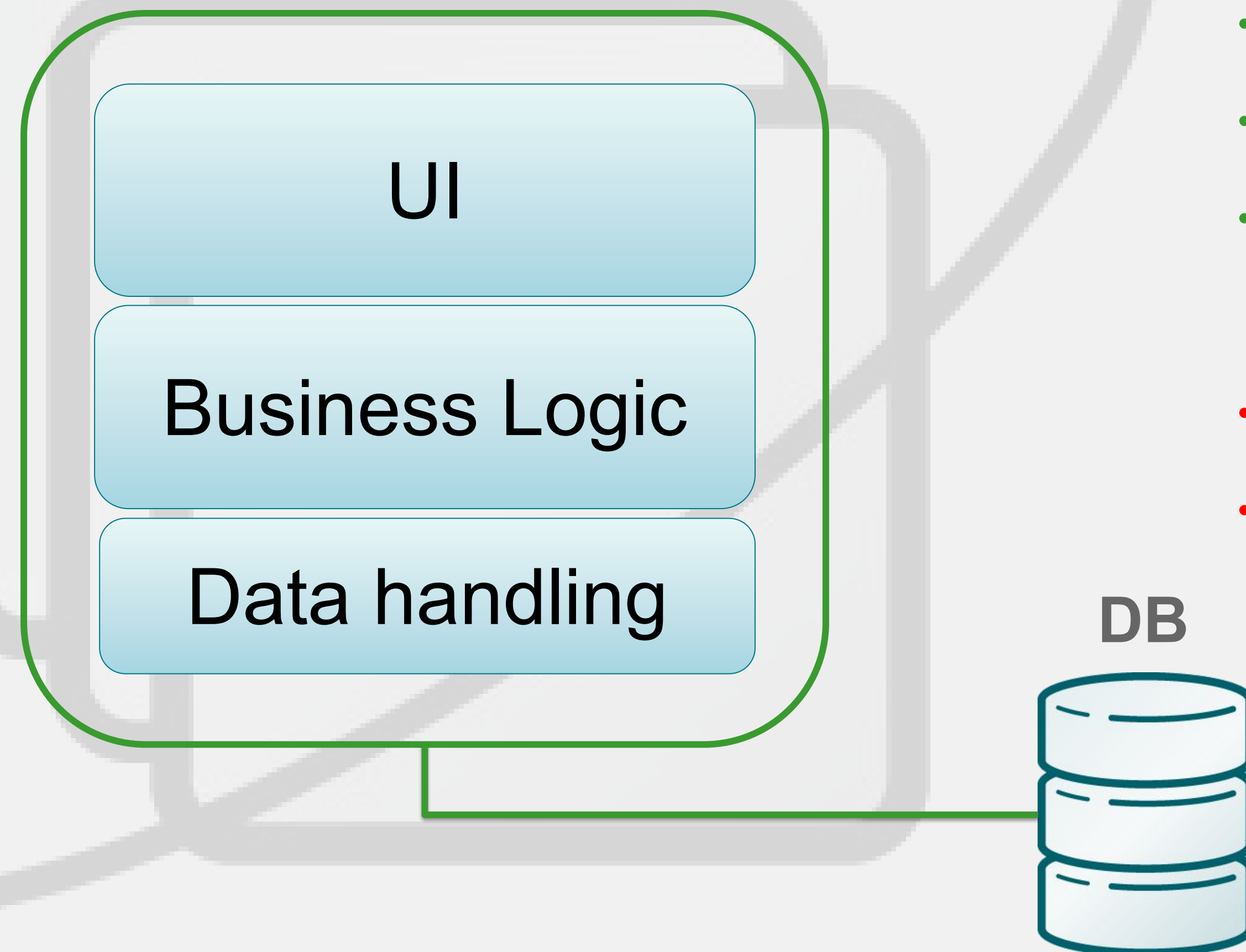


OPERATIONS



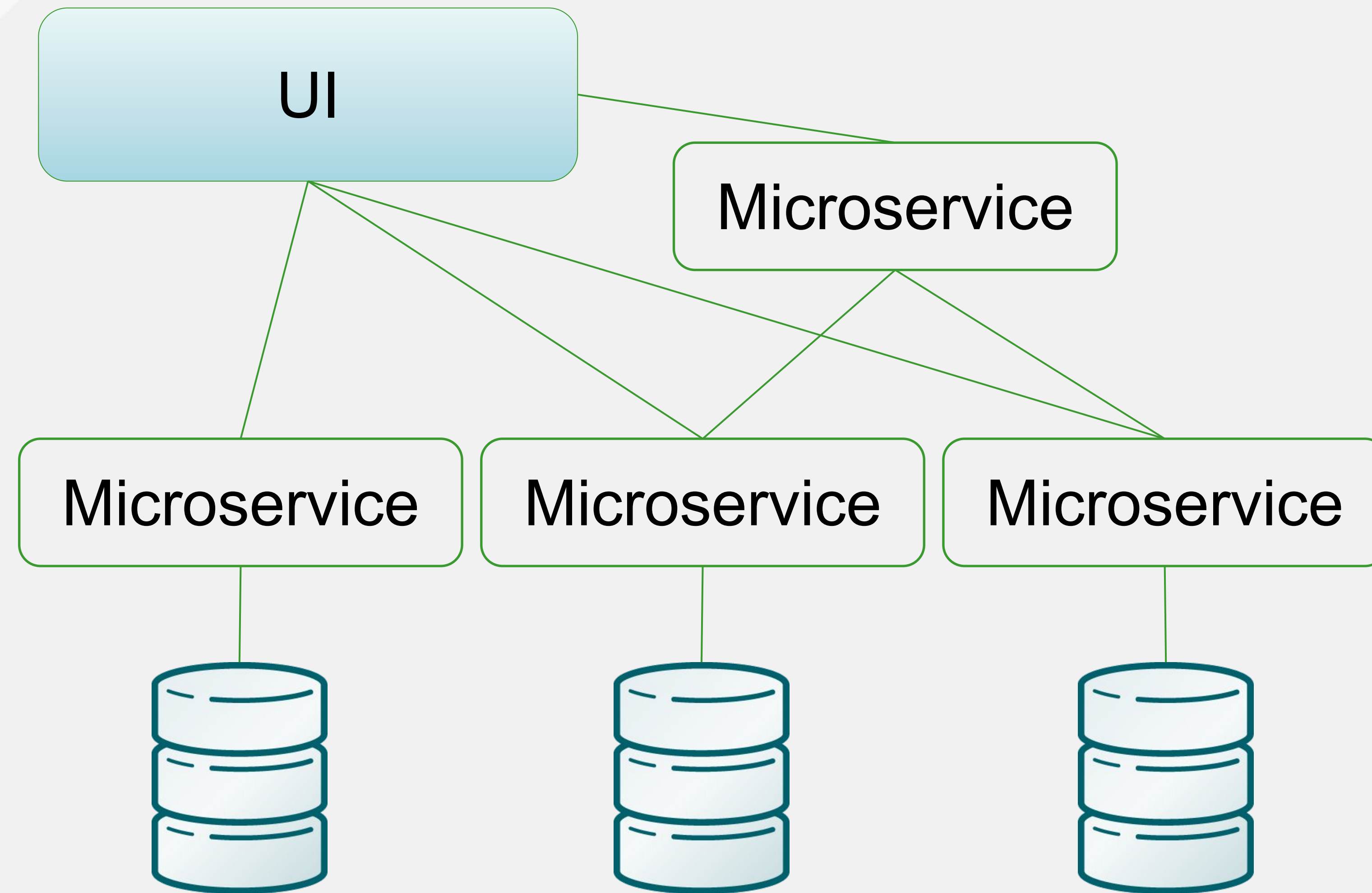
- Process
- Culture
- People
- Technologies

Monolithic architecture



- Single package
- Easy to test
- Straightforward to develop
- Often becomes large and complex
- Required to deploy as single package – even for small updates
- Difficult to push updates out fast

Microservices architecture

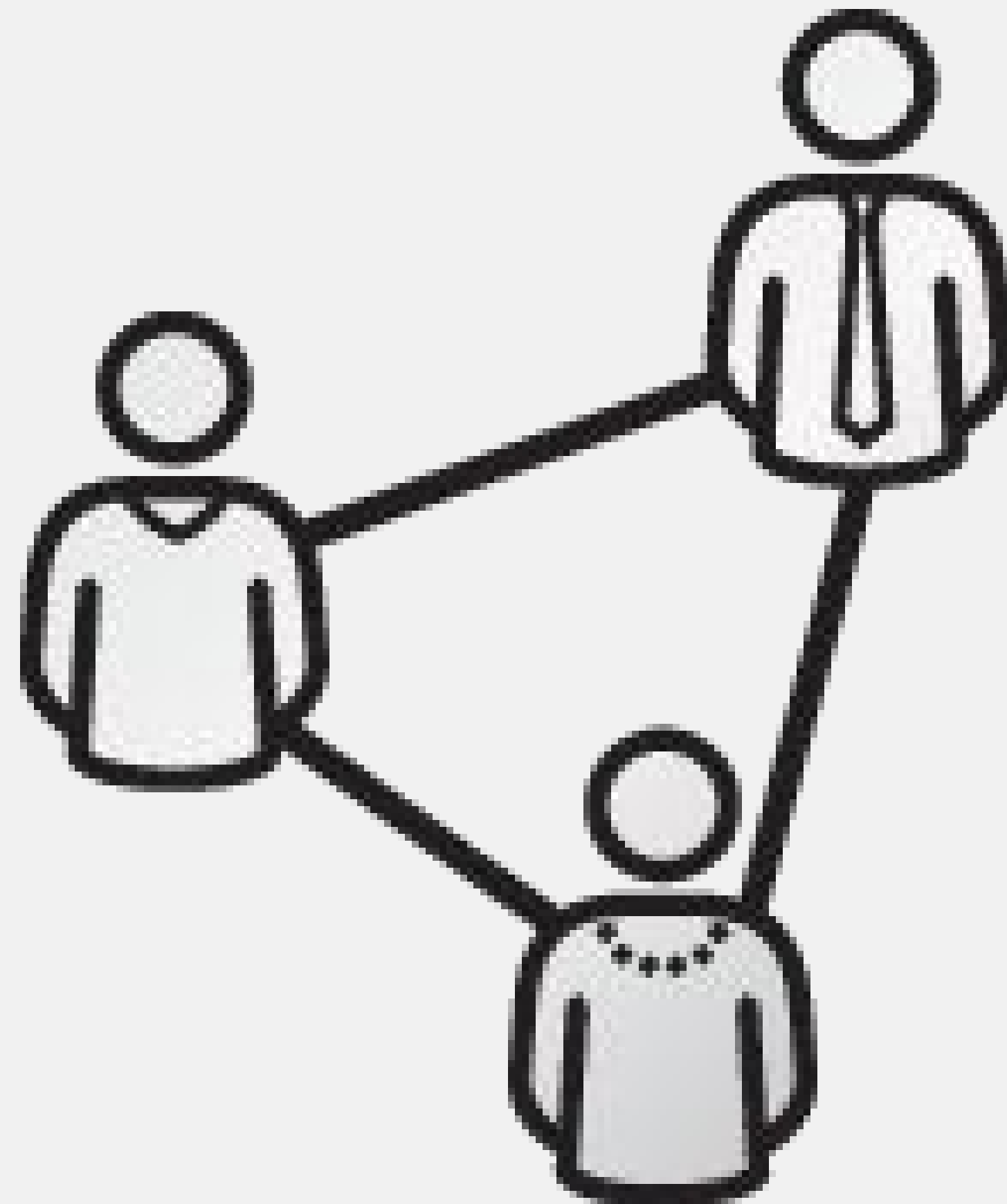


- Application becomes independant services
- Fast to update, replace, deploy, scale
- Requires mature CI/CD pipeline (DevOps)
- Complex coordination, management
- New skills needed

Why Java in the cloud?

Why Java?

- Standardized, open platform built by collaboration
- Large existing skill sets



- Choice (Hardware, OS and vendor)
- Ease of development
- Maturity

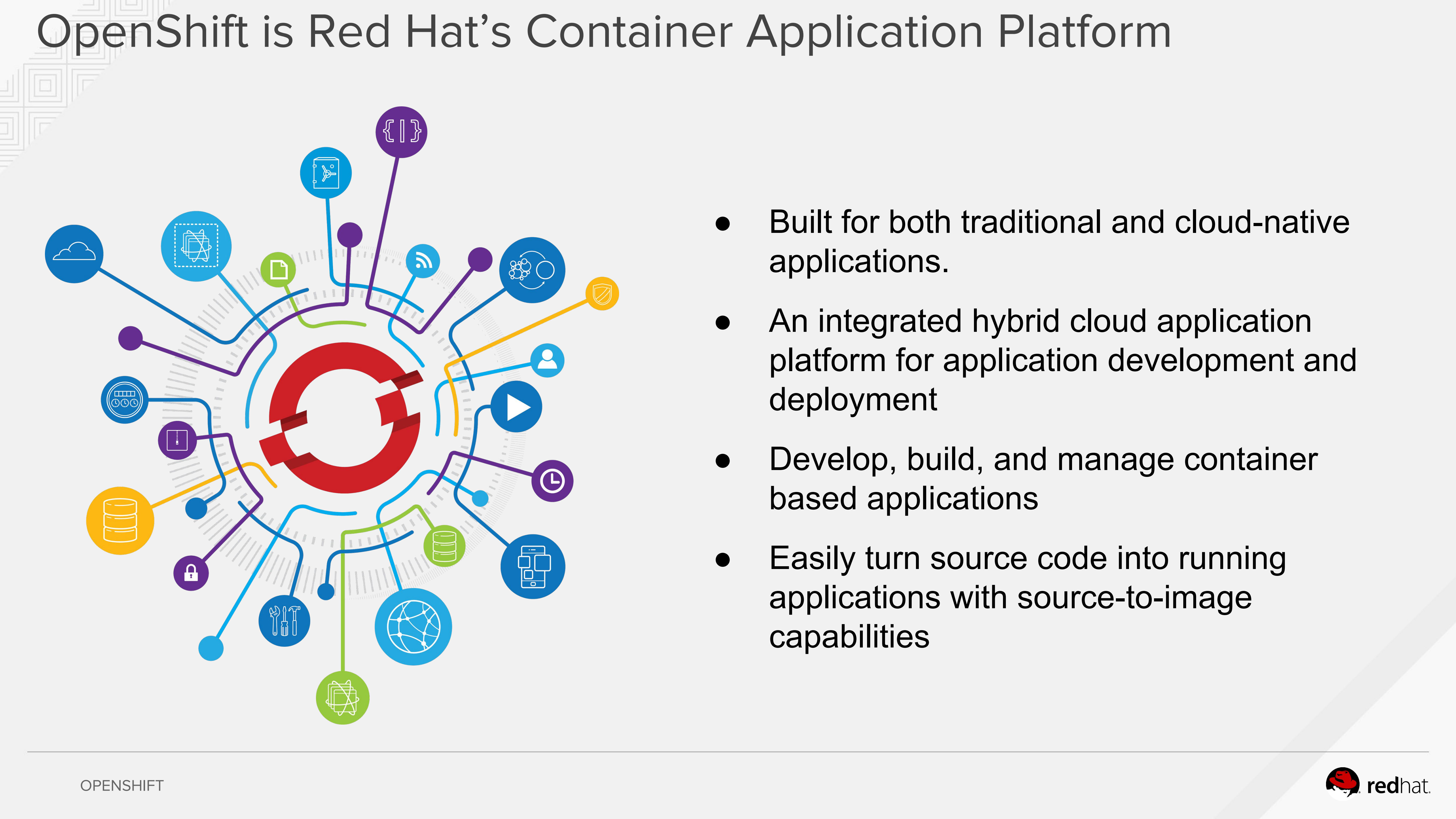
Why Java and cloud?

- Extend Java knowledge and expertise to the cloud
- Modernize for web-scale, highly transactional apps
- Scaling, provisioning, standardized environment
- Containers & orchestration
- Deliver faster, with automation



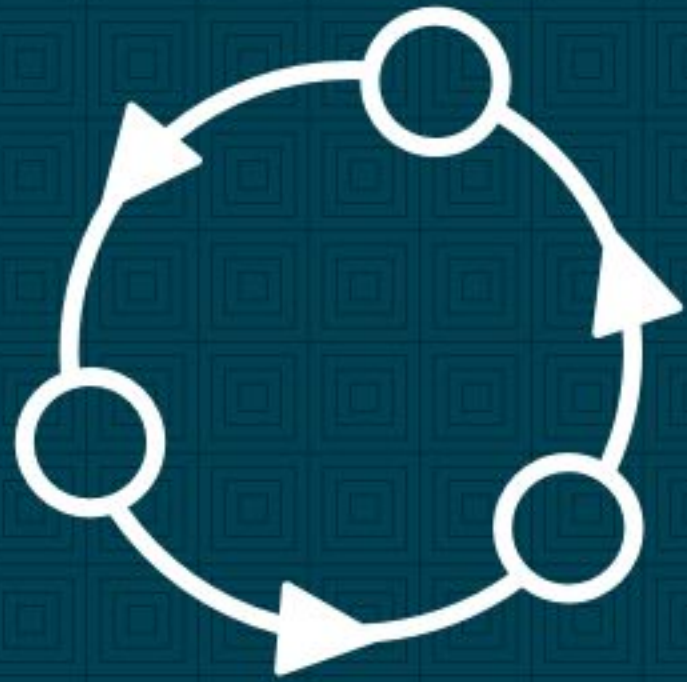
OpenShift by Red Hat

OpenShift is Red Hat's Container Application Platform

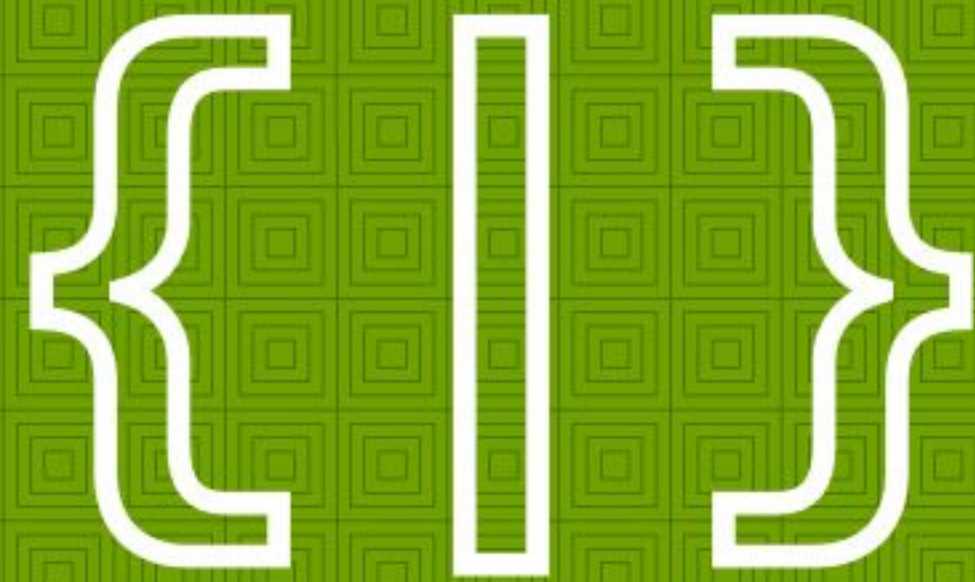


- Built for both traditional and cloud-native applications.
- An integrated hybrid cloud application platform for application development and deployment
- Develop, build, and manage container based applications
- Easily turn source code into running applications with source-to-image capabilities

Value of OpenShift



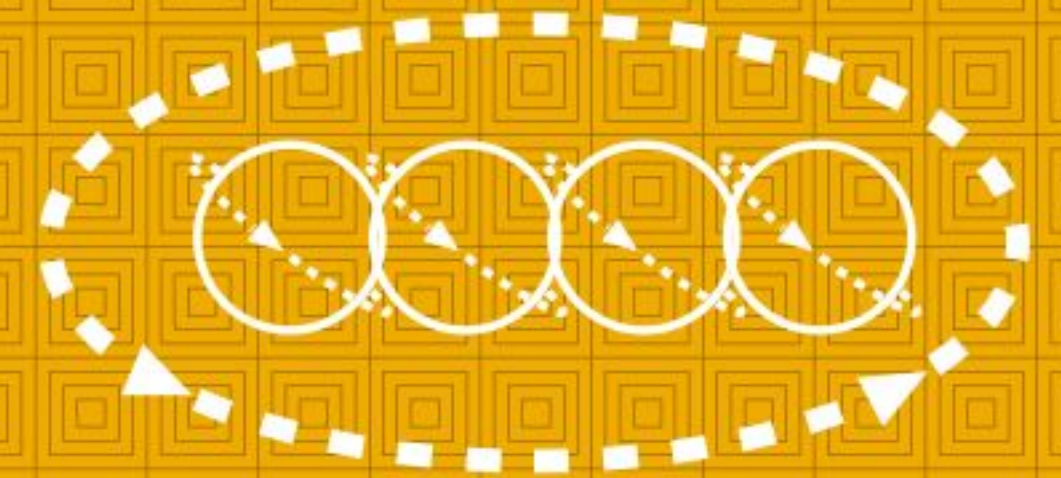
**Expedite
Innovation To Market**



**Accelerate
Application Development**



**Increase
Operational Efficiency**



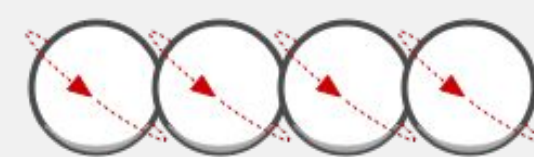
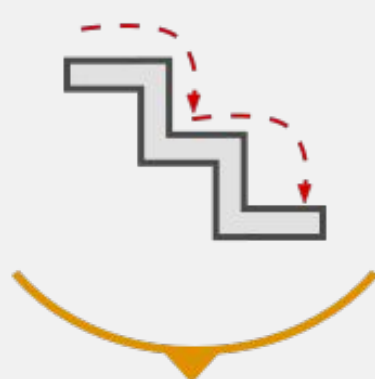
**Enable
DevOps**

JBoss EAP 7 and Openshift. A great combination

IT EVOLUTION

Development Process

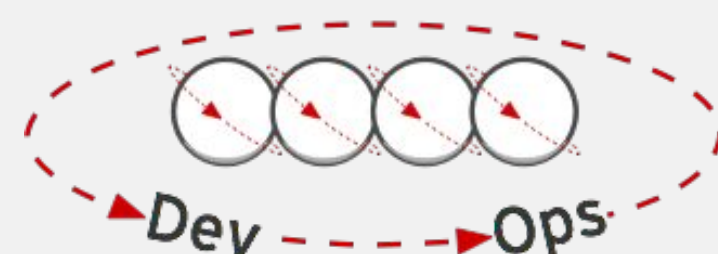
Waterfall



Agile

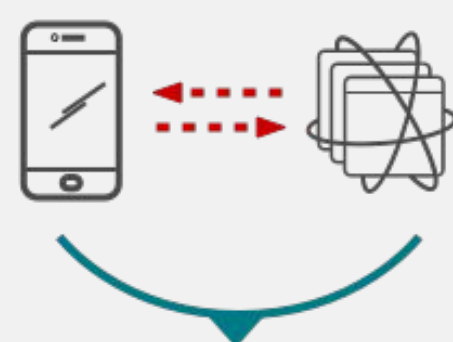


DevOps



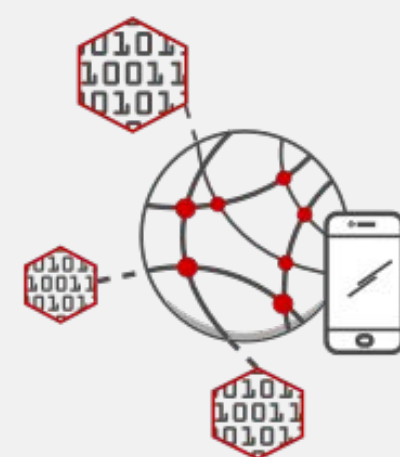
Application Architecture

Monolithic



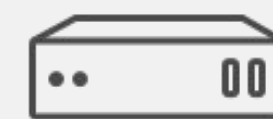
N-Tier

Microservices

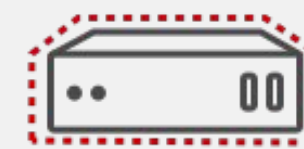


Deployment & Packaging

Physical Servers



Virtual Servers

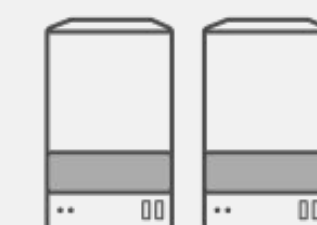


Containers



Application Infrastructure

Datacenter



Hosted

Cloud



JBOSS MIDDLEWARE ON OPENSSHIFT



Application Container Services

JBoss Enterprise Application Platform
JBoss Web Server (Tomcat)
JBoss Data Grid
JBoss Developer Studio



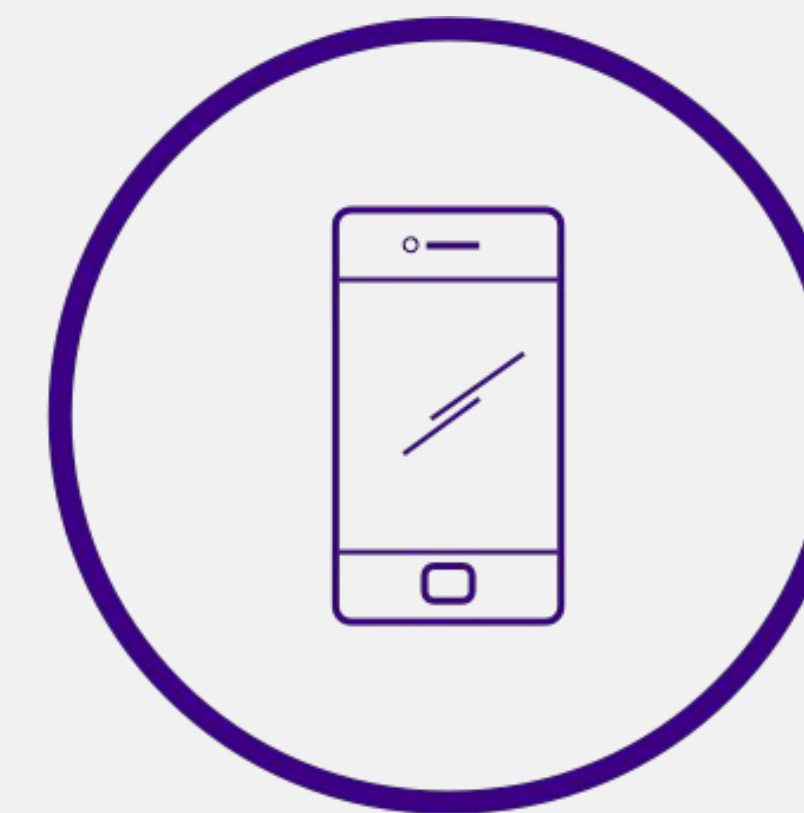
Integration Services

Fuse
A-MQ
Data Virtualization *



Business Process Services

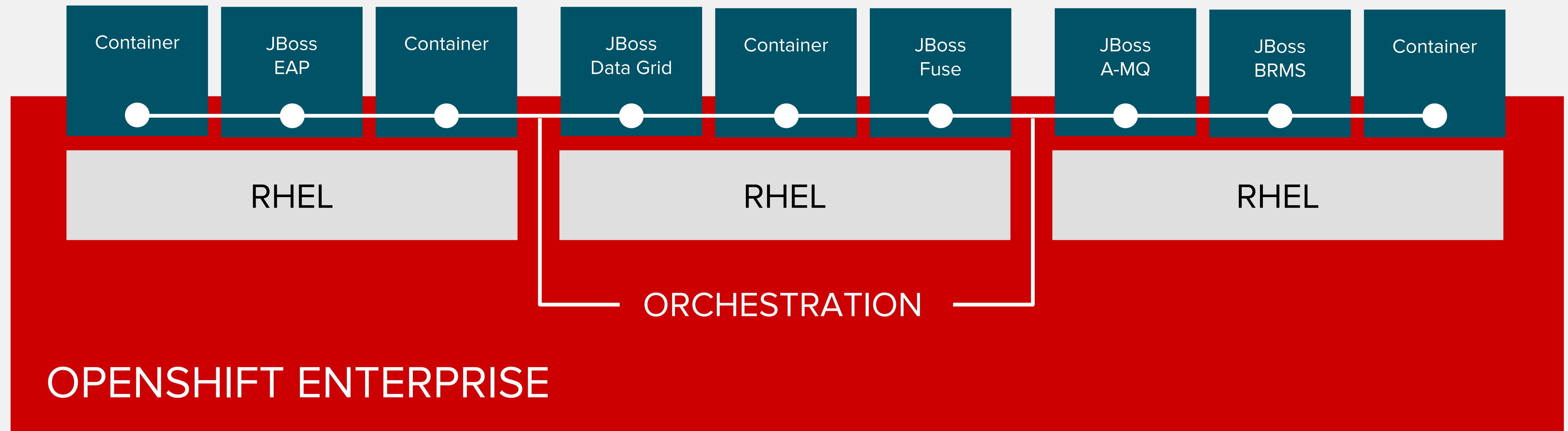
Business Process Management *
Business Rules Management System



Mobile Services

Red Hat Mobile / FeedHenry

* Coming Soon



JBoss Enterprise Application Platform



Application Container Services

JBoss Enterprise Application Platform

JBoss Web Server / Tomcat

JBoss Data Grid

JBoss Developer Studio

- The most popular open source Java EE application server
- Lightweight dynamic architecture
- Choice of programming models - Java EE, Spring
- Supports full spectrum of Java workloads
- Optimized for modern IT infrastructure

WHAT ARE THE SIMILARITIES?

- Still configurable:
 - Security (HTTPS, JGroups, etc)
 - Database connection pools
 - JMS Queues/Topics
- Custom configuration
- Custom modules
- Persistent file data

WHAT ARE THE DIFFERENCES?

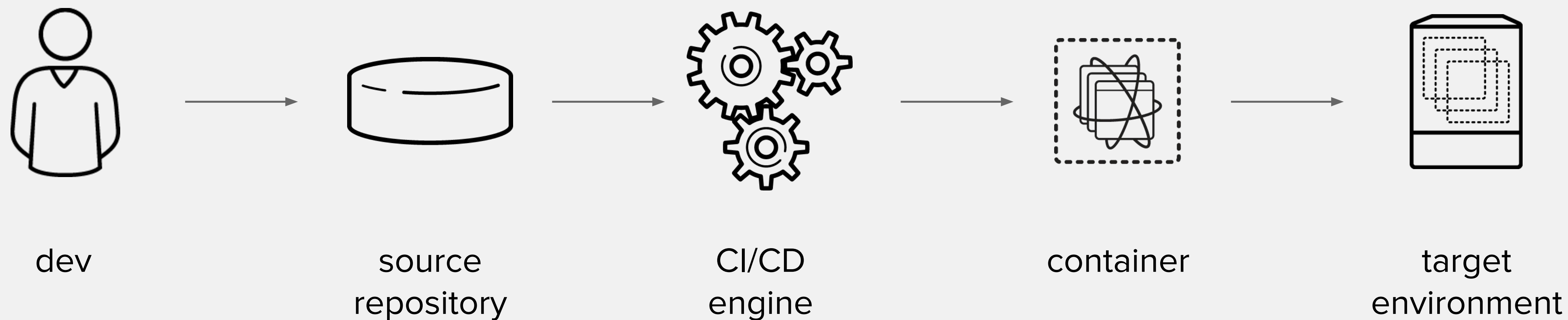
- No web-based Management Console
- JBoss CLI is available from within the container
- No Domain mode. Not needed either when running on OpenShift!
- HornetQ for internal messaging. A-MQ for external
- Default ROOT page is disabled. Deploy your own application!
- Clustering is supported through Kubernetes discovery mechanisms and in future DNS discovery

APPLICATION SUITABLE FOR OPENSSHIFT

Type of workload	EAP 7	EAP 7 on OpenShift	12-factor
Stateless web application	YES	YES	YES
Stateless web application with HA and Scaling	YES	YES	YES
Stateful web application with HA and Scaling	YES	YES	NO
Applications using JMS	YES	YES	NO
Applications using Enterprise Java Beans	YES	YES	NO
Batch Applications (JSR-352)	YES	YES	NO
Application Clients using RMI	YES	NO	NO
Application Clients using CORBA	YES	NO	NO
Application that require native libraries other than RHEL	YES	NO	NO

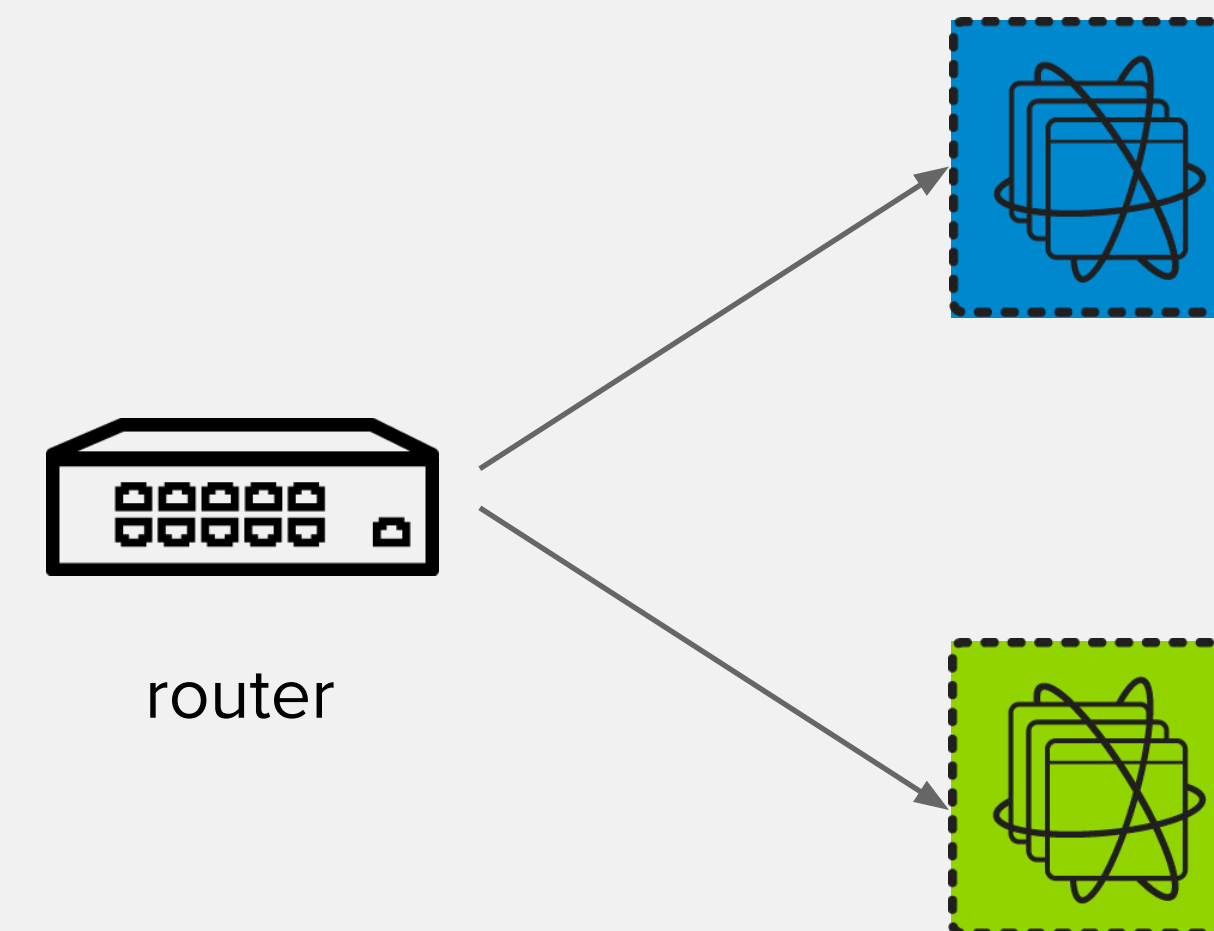
Demo

DEPLOYMENT PIPELINE



BLUE-GREEN DEPLOYMENT

- Reducing downtime and risk associated with release
- Two identical environments in containing two different releases (Blue and Green)
- After validating new release, can switch all traffic to new version
- Quickly roll application back if you find issues



Wrap up

Learning more at Red Hat Summit

Related Sessions

Orchestrate JBoss middleware with Ansible Tower

Marc Zottner, Patrick Steiner

Building Red Hat JBoss EAP microservices on OpenShift Enterprise by Red Hat

Babak Mozaffari

Java EE and NoSQL using JBoss EAP 7 and OpenShift Enterprise by Red Hat

Arun Gupta

From 6 weeks to 6 minutes! - Dienst Uitvoering Onderwijs's migration to Red Hat

Jan-Taeke Schuilenga (DUO), Roeland van de Pol

Migration to Red Hat JBoss Middleware—easy, predictable, proven

Brad Davis, Tobias Hartwig

Modernizing your enterprise application architecture

John Clingan, Bruno Georges

Modernize your Java EE applications with Red Hat JBoss EAP 7

Thomas Qvarnstrom, Marc Zottner



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APPLICATION PLATFORM

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CODE!**



Like a sports car, JBoss EAP 7 is fast, agile, lightweight, and secure.

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Visit display at Moscone West lobby to learn how.



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demo pods in the Red Hat Booth,
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Questions ?