THE 3 PILLARS OF AGILE INTEGRATION:

Connector, Container and API

Microservices, Containers, APIs & Integration Day
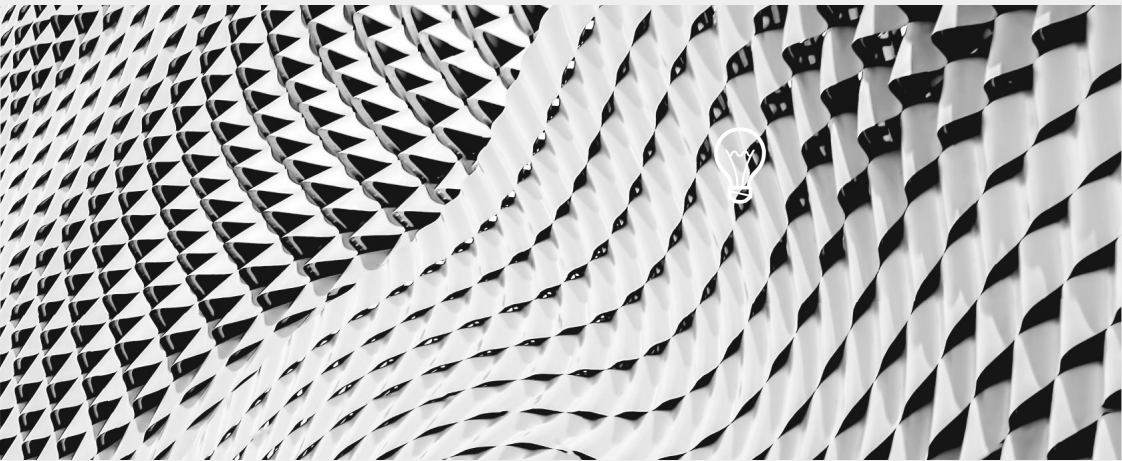
Sameer Parulkar
Senior Product Marketing Manager
May 21, 2019

Red Hat

We will cover

- Changing world of integration

- Blueprint for enterprise architecture -
  Agile integration

- Red Hat technology stack

- Wrap up

Source:

Picture https://unsplash.com

The Changing World of Integration

"Insights and innovations are happening at a rate that we've never seen before. It's an exciting time at UPS, and Red Hat is a significant partner in that transformation."
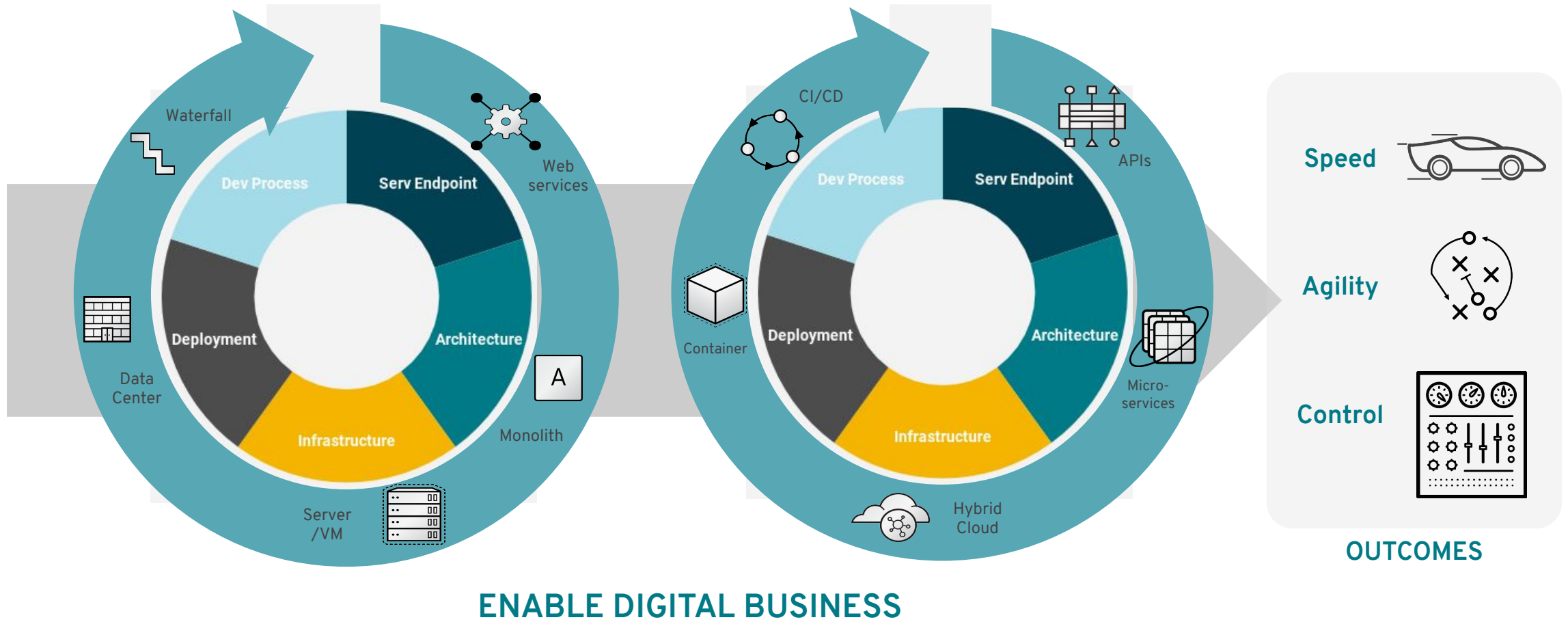
NICK COSTIDES

VICE PRESIDENT, I.T., UPS
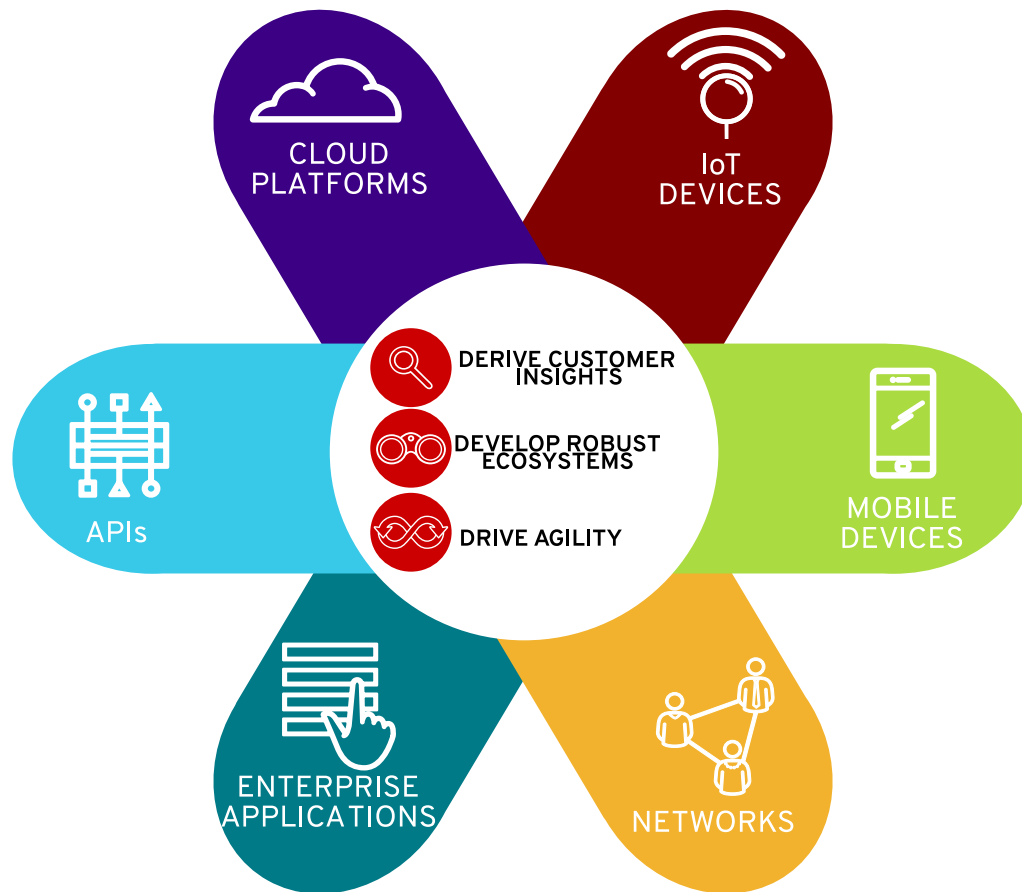
ALL COMPANIES MUST BECOME GREAT SOFTWARE COMPANIES

Peter Schwarzenbauer, member of BMW management, https://www.nytimes.com/2017/02/08/business/germany-bmw-daimler-volkswagen-uber.html?smprod=nytcore-ipad&smid=nytcore-ipad-share

4

GREAT SOFTWARE COMPANIES ARE ADOPTING NEW PATTERNS FOR DEVELOPMENT

ENABLE DIGITAL BUSINESS

OUTCOMES

INTEGRATION IS CRITICAL FOR DIGITAL BUSINESS

Connect new apps, data, devices to get the most value from your data

CLOUD PLATFORMS

IoT DEVICES

APIs

- DERIVE CUSTOMER INSIGHTS
- DEVELOP ROBUST ECOSYSTEMS
- DRIVE AGILITY

MOBILE DEVICES

ENTERPRISE APPLICATIONS

NETWORKS

❏ **Deliver holistic and engaging customer experiences**

❏ **Enable evolving customer engagement models**

❏ **Develop partner and supplier ecosystems**

❏ **Gain more insights into data**

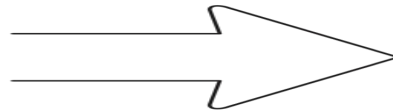❏ **Sustained competitive advantage**

Red Hat

WHAT ABOUT DIGITAL BUSINESS

Integration is essential to get most value from your data
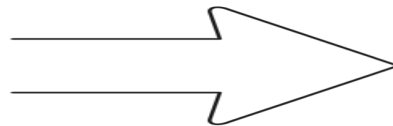
**Digital business
driving demand**

**New IT-Services
(mostly cloud-based)**

Get most Business value
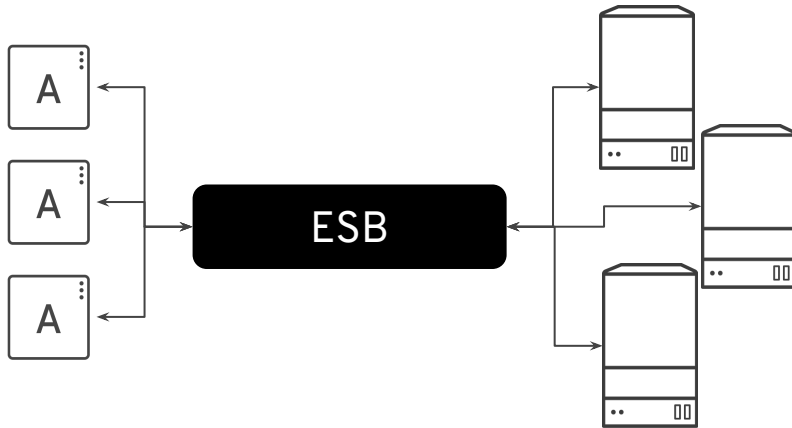Connect to applications to share data and execute business processes

**New Digital Initiatives
(mostly cloud-based)**

Drive requirements
To deliver data and applications to new ecosystem of consumers

Source: Integration Architecture and Platforms Primer for 2019, Gartner

INTEGRATION IS UNDERGOING RAPID CHANGE: ADOPTION OF CLOUD & NEED FOR AGILITY

Traditional integration incompatible with Cloud development

ESB

Centralize ♦ Leverage ♦ Simplify

Internal teams ♦ Maximize use of resources

A

A

A

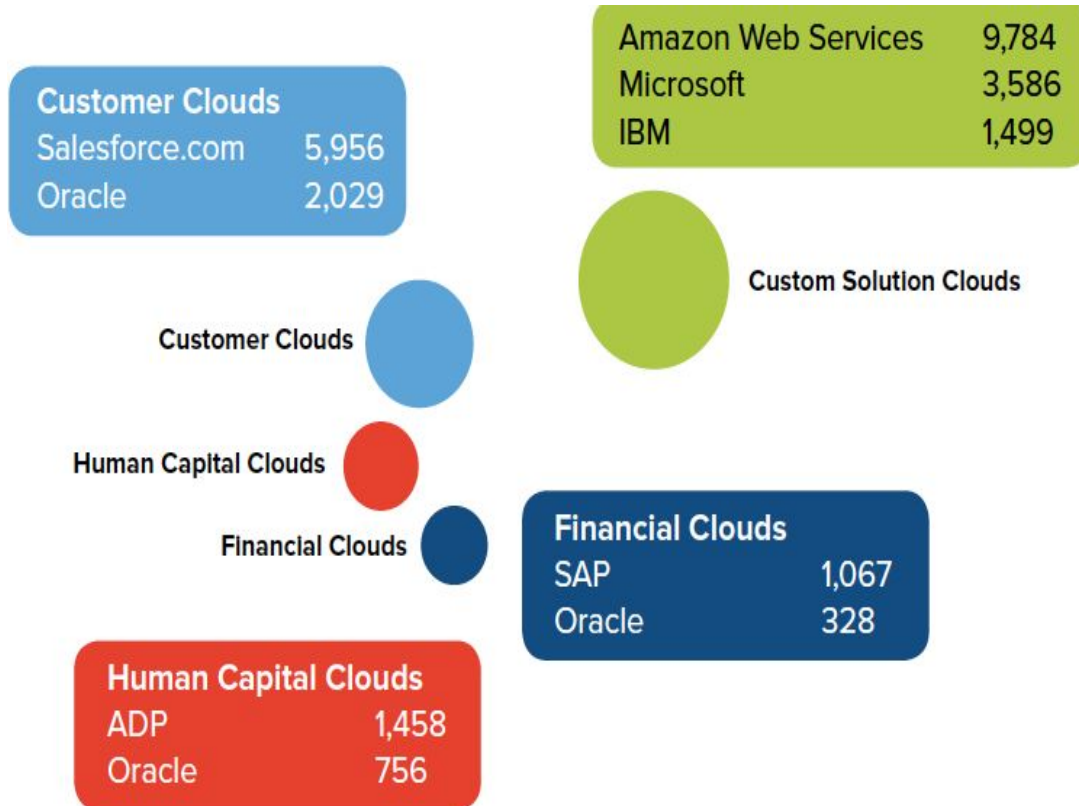Modern architectures and app development requires more agile integration

Distributed Integration ♦ Scalability ♦ Reusability

Agile Teams ♦ Cloud App Dev

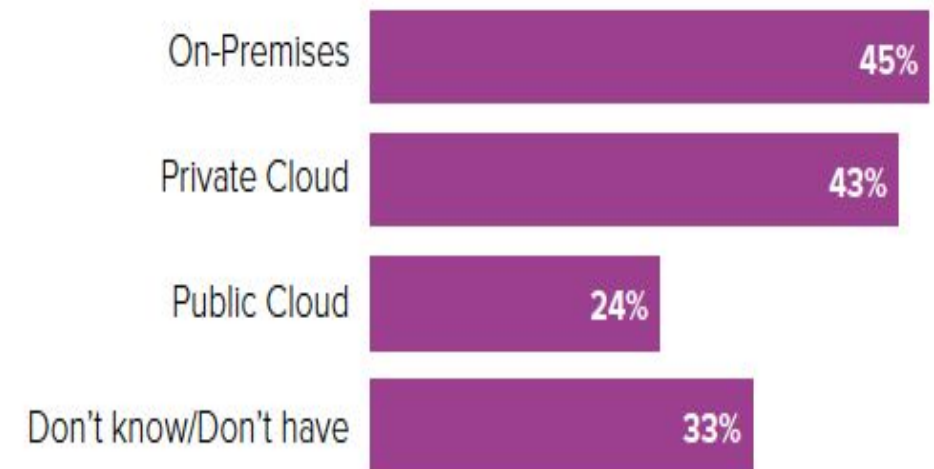**USE INTEGRATION WHERE NEEDED, RATHER THAN CENTRALIZING**

Red Hat

DIGITAL SERVICES: INTEGRATE APPS WHERE DEPLOYED

IDC InfoBrief: Agile Integration for Today's cloud-enabled enterprise (Oct 2017)

Amazon Web Services	9,784
Microsoft	3,586
IBM	1,499

Custom Solution Clouds

Customer Clouds
Salesforce.com	5,956
Oracle	2,029

Customer Clouds

Human Capital Clouds

Financial Clouds

Financial Clouds
SAP	1,067
Oracle	328

Human Capital Clouds
ADP	1,458
Oracle	756

There isn't _one dominant_ cloud

Planned or Actual Location of Custom Solutions

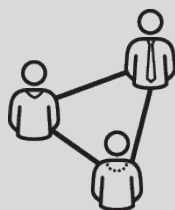| Location	%
On-Premises	45%
Private Cloud	43%
Public Cloud	24%
Don't know/Don't have	33%

45% run bespoke applications in a private cloud or are implementing within 12 months

NEW SERVICES (INNOVATIONS)

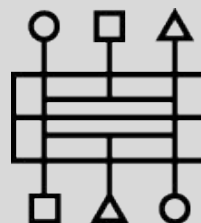**Source:** IDC InfoBrief Agile Integration for Today's cloud-enabled enterprise, Oct 2017

Red Hat

MOVE TOWARDS API CENTRIC FASTER INTEGRATION

SUPPORT NEW USERS, EXISTING & NEW USE CASES - AT SPEED
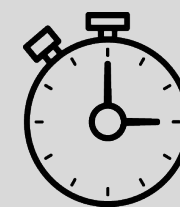
**EASY-TO-USE
TOOLS & PROCESSES**

Integration across the
organization means
getting non-technical
users involved.

**INCREASED
COLLABORATION**

Internal AND external
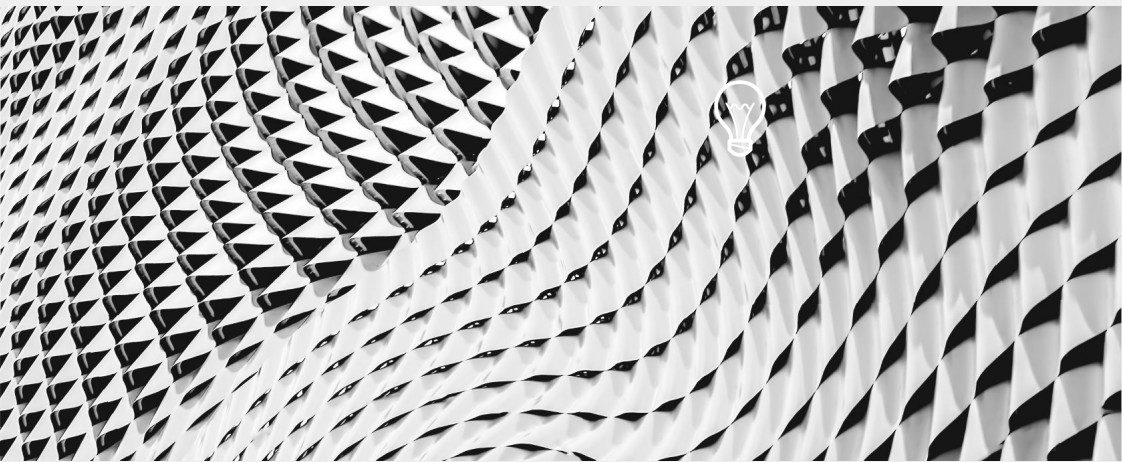integration includes
partners & customers.

**SPEEDY
SERVICE**

Agile development
requires a fast
turn-around. Create
& connect new apps
quickly.

Red Hat

Blueprint for Enterprise Architecture

API-centric Agile Integration

"We've created a team of highly motivated people to challenge traditional banking assumptions. We're creating the capability to sell products in a way that is 100% digital"

SEBASTIAN CARVALLO,
ENTERPRISE ARCHITECTURE
MANAGER, BANCO GALICIA

Red Hat

API-CENTRIC AGILE INTEGRATION

Key foundational capabilities needed by today's enterprises

DISTRIBUTED INTEGRATION

- LIGHTWEIGHT

- PATTERN BASED

- EVENT ORIENTED

- COMMUNITY SOURCED

FLEXIBILITY

CONTAINERS

- CLOUD NATIVE SOLUTIONS

- LEAN ARTIFACTS, INDIVIDUALLY DEPLOYABLE

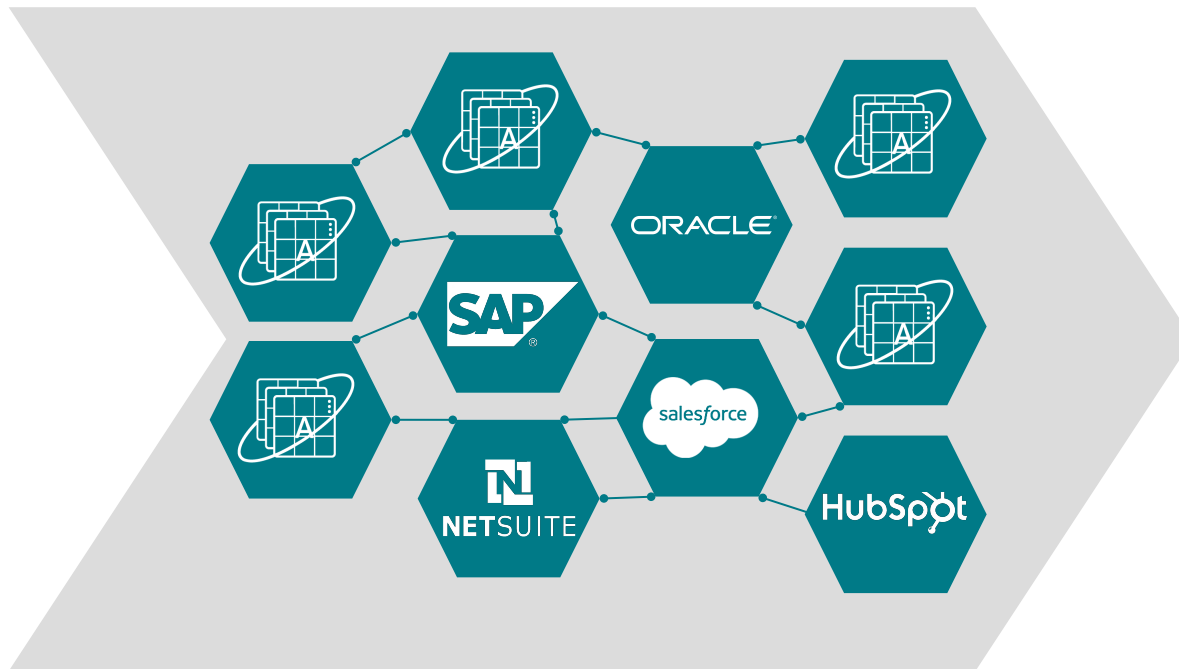- CONTAINER BASED SCALING AND HIGH AVAILABILITY

SCALABILITY

APIs

- WELL DEFINED, REUSABLE, AND WELL MANAGED END-POINTS

- ECOSYSTEM LEVERAGE

RE-USABILITY

Red Hat

DEVELOP APPS WITH AGILE INTEGRATION AT THE CORE

Connect - Mediate - Transform: Data, Services and Information for Microservices, APIs, Legacy services

- Leverage Agile Integration to build new services, experiment with new solutions

- And to integrate with existing services and data

- Integration <u>must</u> be a key capability for <u>all app dev projects</u>

AGILE INTEGRATION: EFFECTIVELY ADDRESS NEW APPROACHES & INITIATIVES

Modern architectures and app development requires more agile integration

Distributed Integration ♦ APIs ♦ Scalability

Agile Teams ♦ Cloud App Dev ♦ DevOps

NEWER/EMERGING APPROACHES

API-FIRST

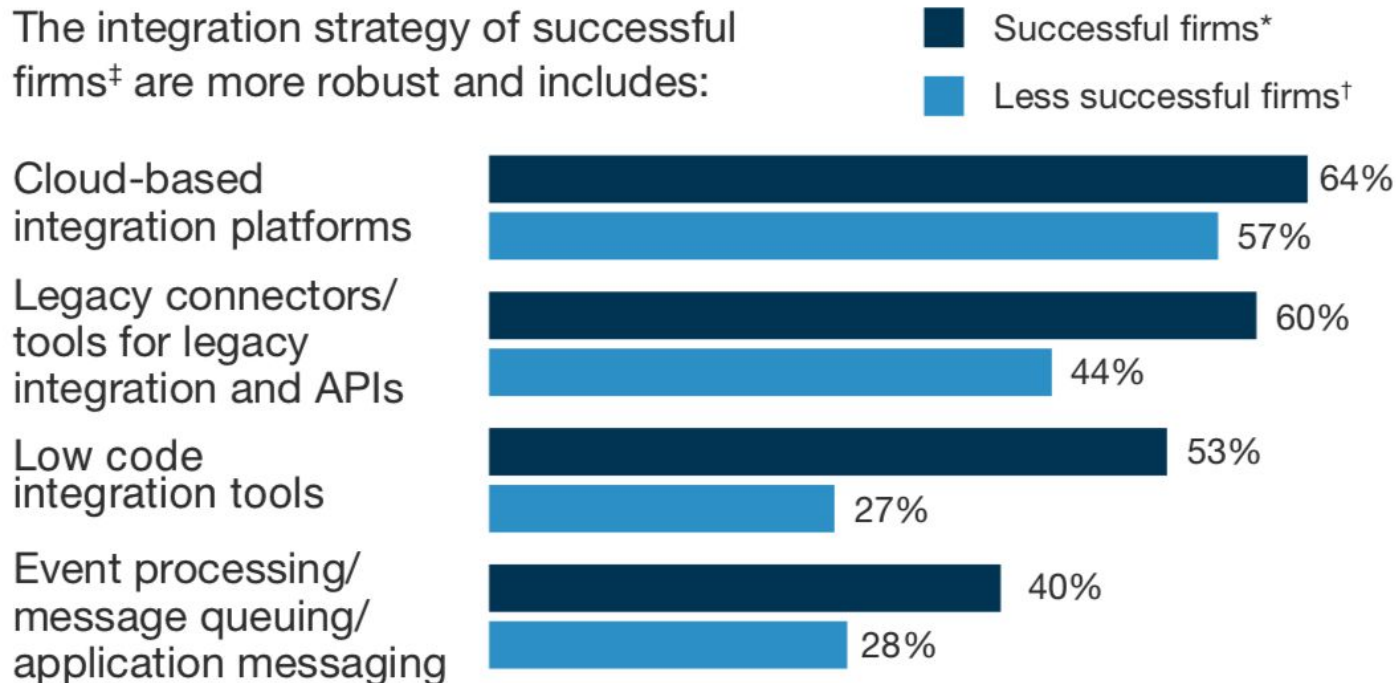**CLOUD-NATIVE SERVICES**

EVENT-DRIVEN STREAMING

LOW-CODE

MULTI-CLOUD

AGILE INTEGRATION: Forrester weighs in

FIRMS NEED AN AGILE INTEGRATION APPROACH TO MATCH THE SPEED OF BUSINESS CHANGE

The integration strategy of successful firms‡ are more robust and includes:

■ Successful firms*
■ Less successful firms†

Cloud-based integration platforms
- 64%
- 57%

Legacy connectors/ tools for legacy integration and APIs
- 60%
- 44%

Low code integration tools
- 53%
- 27%

Event processing/ message queuing/ application messaging
- 40%
- 28%

ACHIEVE FASTER API RELEASES

3X Successful firms with an agile integration strategy release/ update APIs weekly or daily, nearly three times more frequently than less successful firms.

➔ Forrester study (commissioned by Red Hat)
https://www.redhat.com/en/resources/agile-integration-critical-to-digital-transformation-forrester-analyst-report

15

Red Hat
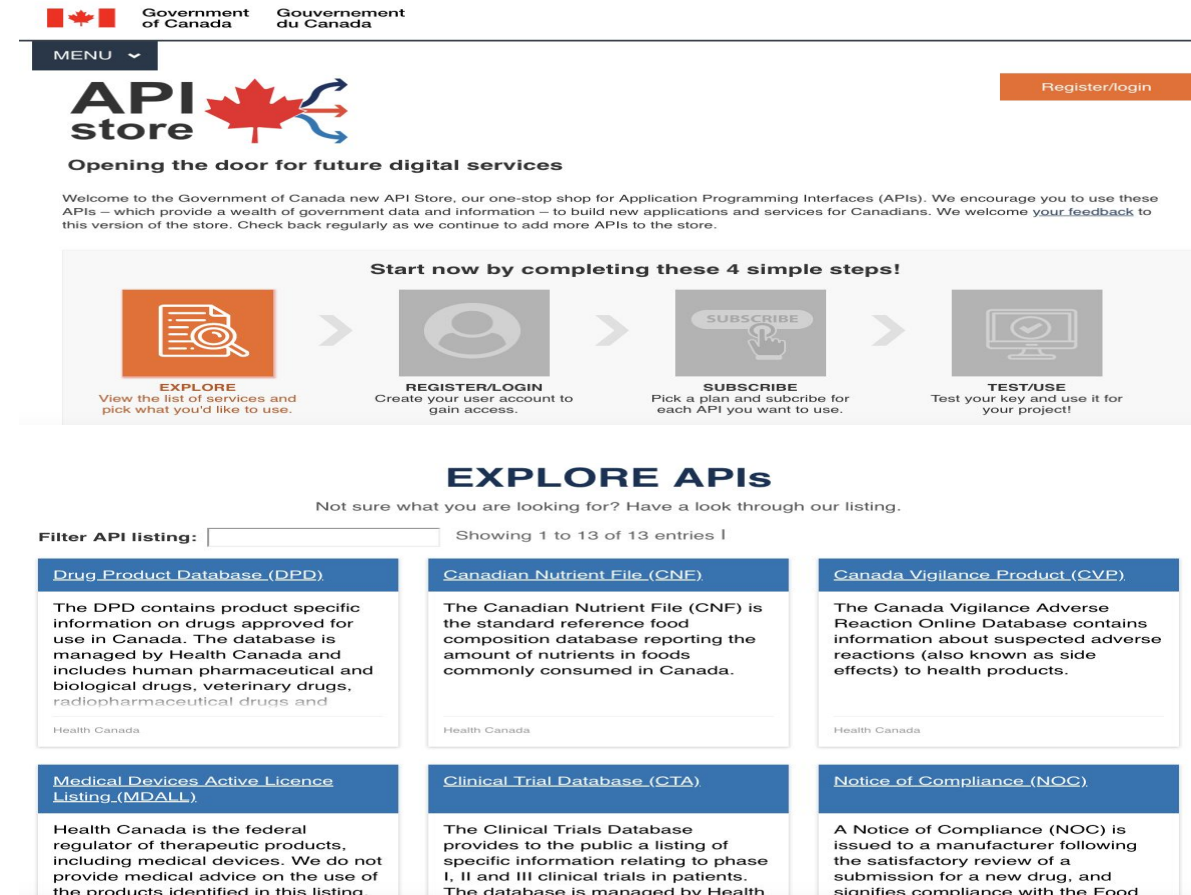
Example: Digital API Program For Citizen Services

Innovation, Science and Economic Development (ISED)

Digital API Program for govt services
APIs are essential for digital journeys. ISED overcame challenges like API discovery, security, scalability, monitoring using RH technologies to create a multitenant API hub to power their innovations.

API Store: https://api.canada.ca

Leading organizations accelerate innovation and business value across hybrid clouds with Red Hat Integration and container technologies

AGILE INTEGRATION CUSTOMER ADOPTION

Red Hat 2019 Innovation Award Winners

bp
Modernized infra and built 1-click CI/CD solution that increases dev speed and boosts collaboration Fuse+Data Grid+Decision Manager+ OpenShift

Emirates NBD
Built open source private cloud platform to deliver innovative banking services 3scale+OpenShift

Red Hat 2019 Innovation Award Honorable mentions

ally
Adopted containerized Hybrid cloud platform and DevOps to gain speed, efficiency and increased competitiveness Fuse+OpenShift

Galicia
Delivers a unified digital experience platform using cloud-native container and integration tech Fuse+3scale+Data Grid+OpenShift

Integration customers who presented at RH Summit 2019
- Government of Canda (ISED) - A digital API program in government
- CIBC Bank - Building the optimal architecture for open banking
- Sparks NZ - A year in the life of moving to open source agile integration
- Duestche Telecom - Building a next generation integration platform for Deutsche Telecom IT
- SWIFT - A blueprint for distributed integration from world's largest financial network

Red Hat

AGILE INTEGRATION CUSTOMER ADOPTION

Streamlines package tracking and delivery using Fuse+OpenShift Shifted to more collaborative and DevOps approach
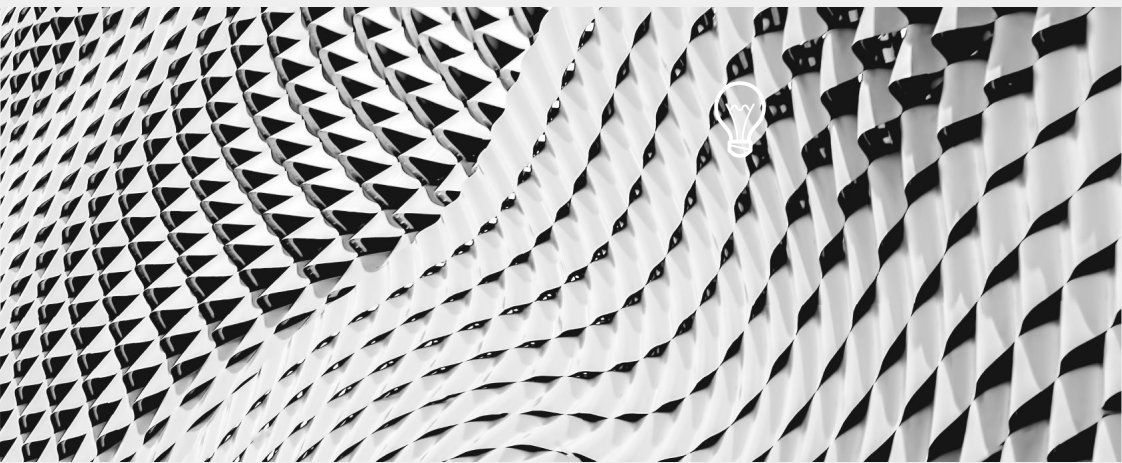
Created an innovative digital platform AVIATOR to Optimize their operations. Fuse+3scale+OpenShift and other RH products.

Argentina's migration department unified national security data to better predict criminal threats. Fuse+OpenShift and other RH products
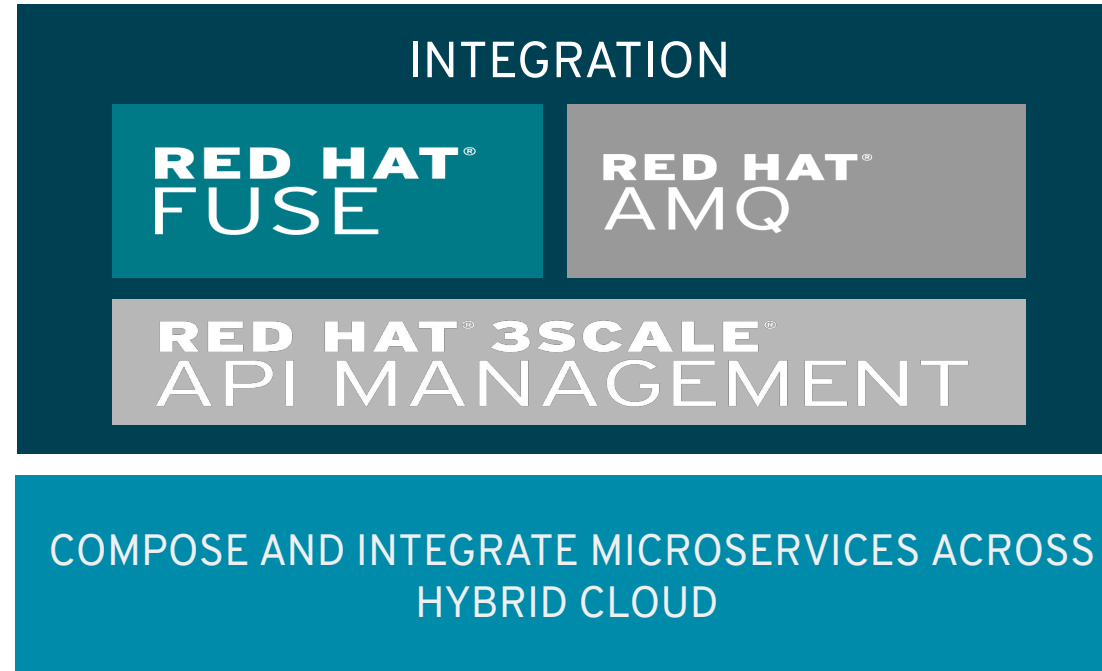
The Red Hat Technology Stack

"What keeps us motivated when working on AVIATAR is that passengers get home on time and can spend more time with their families. We're really improving the passenger experience, and that's something to be proud of."

JOHANNES HANSEN, SENIOR DIRECTOR OF APPLICATION DEVELOPMENT/UX FOR AVIATAR, LUFTHANSA TECHNIK

Red Hat

API-CENTRIC <u>AGILE INTEGRATION</u> PRODUCTS

RED HAT INTEGRATION

BUILD AND CONNECT MODERN SERVICES

INTEGRATION

RED HAT® FUSE

RED HAT® AMQ

RED HAT® 3SCALE® API MANAGEMENT

COMPOSE AND INTEGRATE MICROSERVICES ACROSS HYBRID CLOUD

Connect - Mediate - Transform

Develop, Deploy and Manage Across a Hybrid Cloud

Red Hat

API-CENTRIC <u>AGILE INTEGRATION</u> PRODUCTS

STRATEGIC CAPABILITIES NEEDED BY TODAY'S ENTERPRISES

DISTRIBUTED INTEGRATION

LIGHTWEIGHT

PATTERN BASED

EVENT-ORIENTED

COMMUNITY-SOURCED

Red Hat Integration

CONTAINERS

CLOUD-NATIVE SOLUTIONS

LEAN ARTIFACTS, INDIVIDUALLY DEPLOYABLE

CONTAINER-BASED SCALING & HIGH AVAILABILITY

RED HAT OPENSHIFT
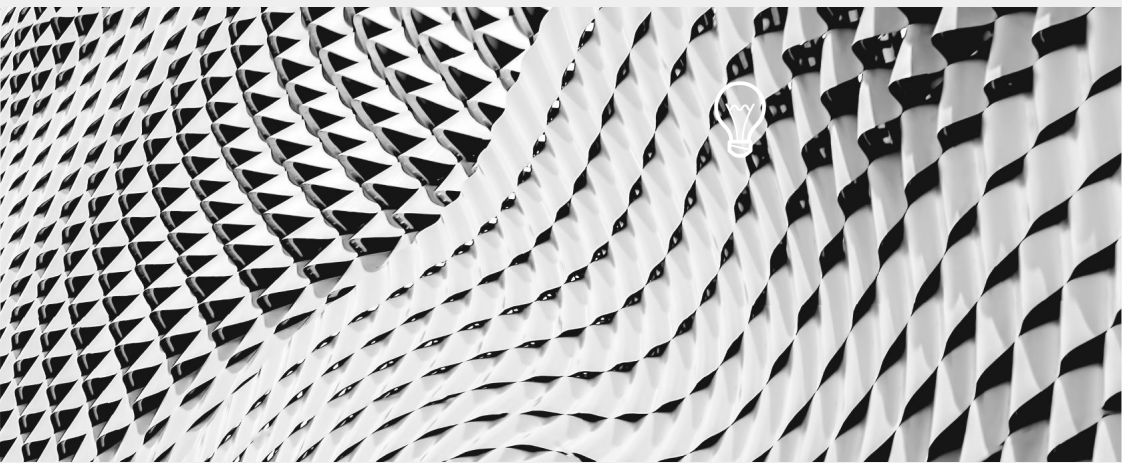
APIs

WELL-DEFINED, REUSABLE, & WELL-MANAGED ENDPOINTS

ECOSYSTEM LEVERAGE

Red Hat Integration
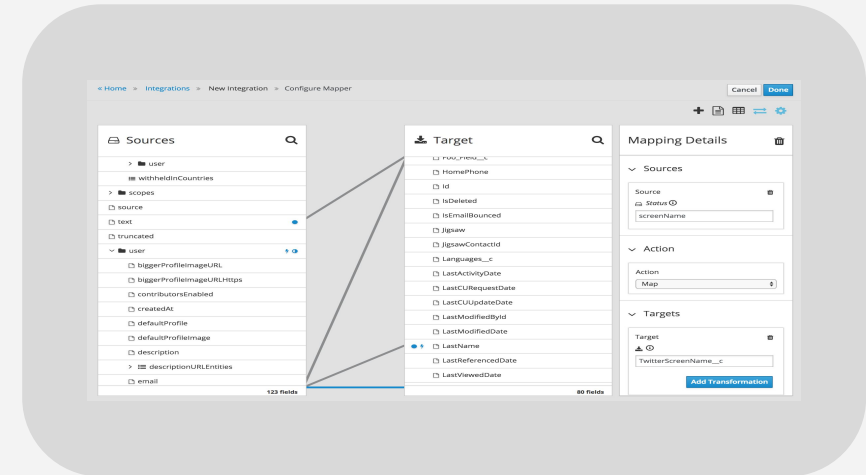
Tools & processes

Red Hat

Wrap Up

Red Hat

TAKE AWAYS

➢ No one is safe from disruption.

➢ More and more markets are characterised by competitive Digital services. Increased agility is the strongest weapon.

➢ Integration is a core capability that everyone should master. However **Integration approaches need to be revised to facilitate agility.**

➢ Red Hat offers the **Agile Integration** concept, which resides on the **three capability pillars:** distributed integration, containerization, and APIs.

➢ The key technologies involved are Red Hat **Integration (Distributed Integration, Messaging, API Management)** & **OpenShift** Container Platform.
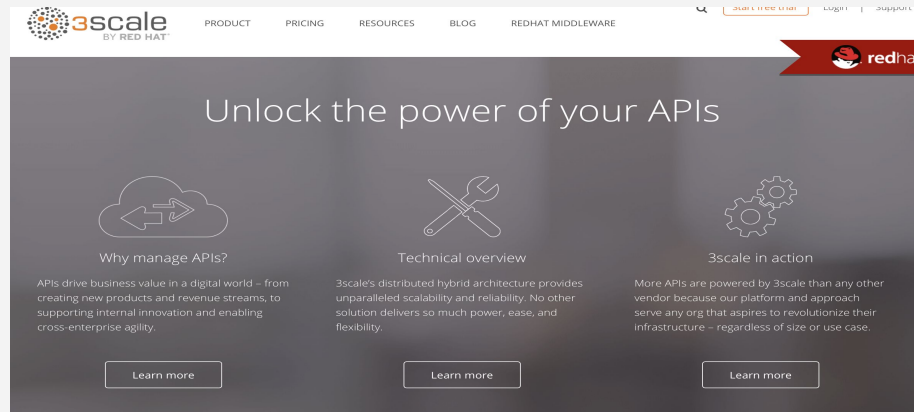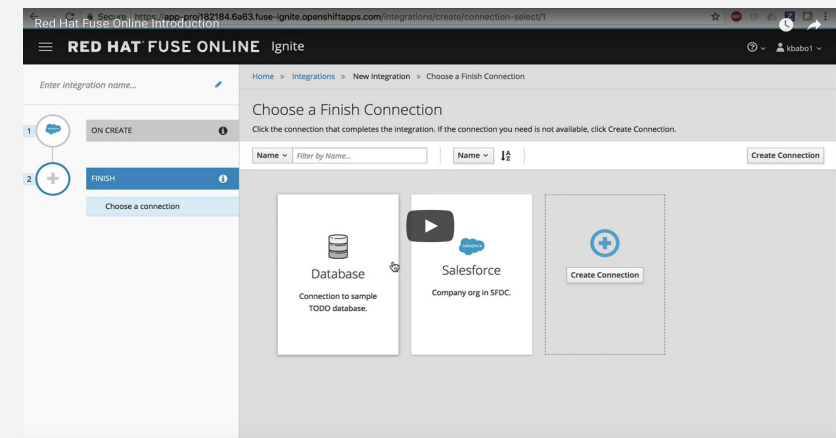
Red Hat

RESOURCES

https://www.redhat.com/en/resources/mi-agile-integration-ebook

Get Started with Fuse Online:
redhat.com/fuseonline

Get Started with API Management:
3scale.net

Watch video: Introducing Red Hat Fuse Online

Red Hat

Thank you

Red Hat is the world's leading provider of enterprise open source software solutions. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500.

linkedin.com/company/red-hat

youtube.com/user/RedHatVideos

facebook.com/redhatinc

twitter.com/RedHat

Red Hat