



# TIPPS ZUR OPTIMALEN EINFÜHRUNG VON CLOUD-NATIVE TECHNOLOGIEN

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# WHAT IS CLOUD-NATIVE APPLICATION DEVELOPMENT?



Service-based



API-driven



Containers



DevOps

AN APPROACH TO BUILDING AND DEPLOYING APPLICATIONS UTILIZING  
THE ADVANTAGES OF THE CLOUD COMPUTING MODEL

# WHY SHOULD YOU CARE?

CLOUD-NATIVE DELIVERS BUSINESS VALUE

## AGILITY AS A COMPETITIVE ADVANTAGE

Cloud-native enables faster software delivery and rapid response to market changes

## INCREASE RESILIENCE AND QUALITY

Cloud-native pushes teams to build resilient services with quality in mind

## EXPERIMENT AS A KEY TO INNOVATION

Cloud-native reduces idea-to-prod cycles and enables experimentation

# DIGITAL LEADERS ARE HIGH PERFORMERS

I.T. THROUGHPUT MEANS MOVING QUICKLY TO ANSWER DEMAND

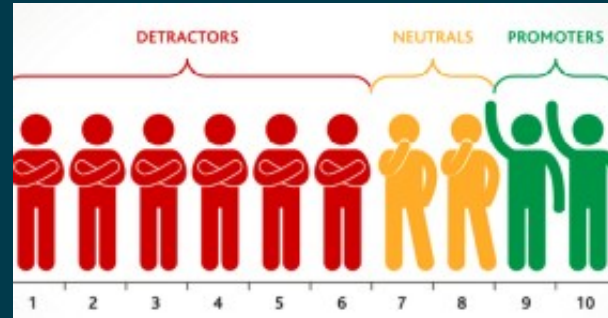
High-performing organizations deploy code

**46x**

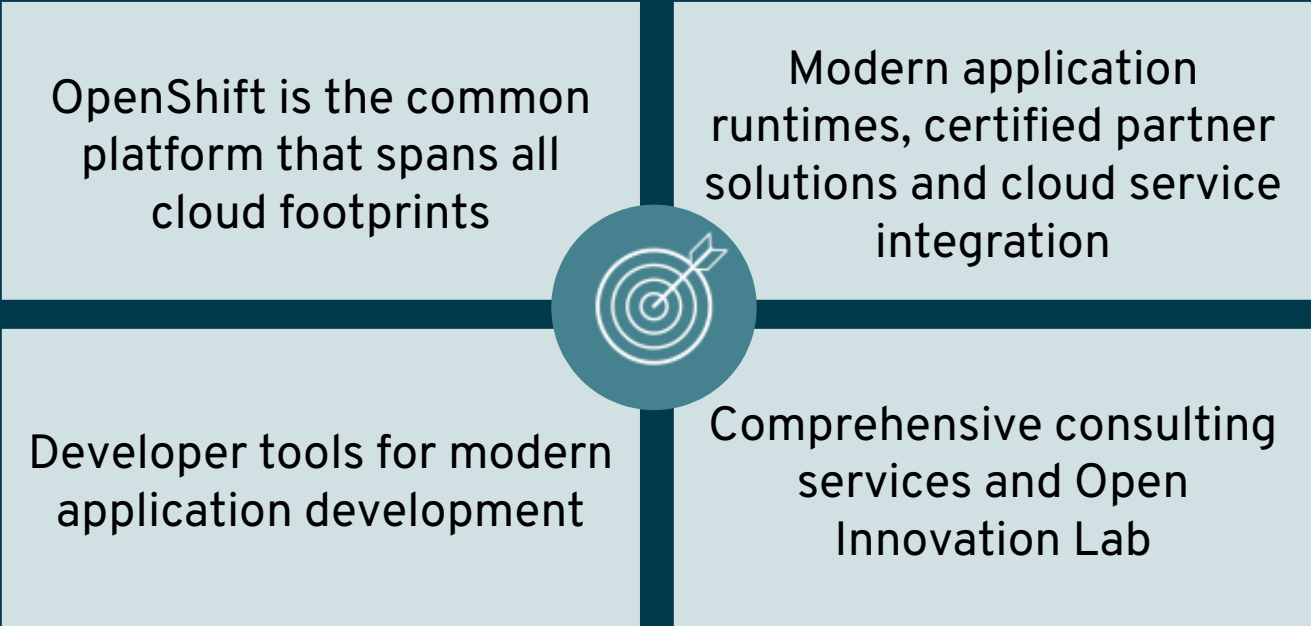
more frequently than low-performing ones

# NEW BUSINESS METRICS

- Net Promoter Scores
- App Store Ratings
- Peer Reviews
- Employee Engagement
- Social Media Sentiment



# RED HAT PORTFOLIO FOR CLOUD-NATIVE APPLICATION DEVELOPMENT





# HOW DO WE GET THERE?

LESSONS LEARNED FROM LONG-TERM RED HAT OPENSIFT CUSTOMERS

# DEVOPS

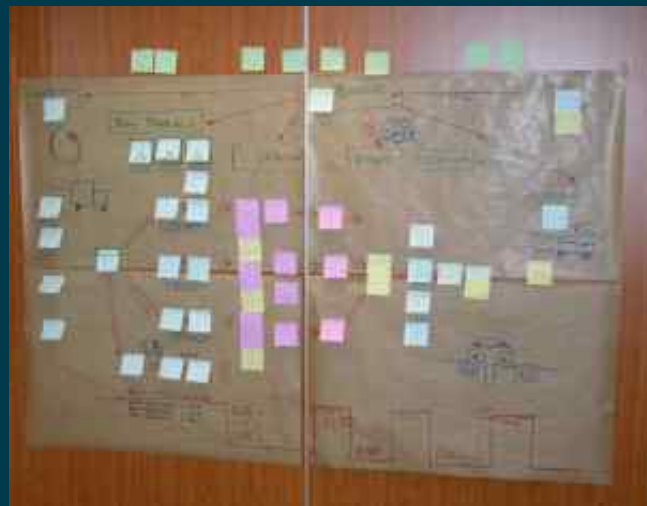


- Truly adopt DevOps... it takes time!
- Small Cross-functional Product Teams
- Automate Everything
- Start Small, Expand with Success



# VALUE STREAM MAPPING ACCELERATE BUSINESS PROCESSES

**Value-stream mapping** is a lean-management method for analyzing the current state and designing a future state for the series of events that take a product or service from its beginning through to the customer.



“We removed 4 weeks from a process by rethinking how things are done.” -Major EU FinServ

# MOVE TO HYBRID AND MULTI CLOUD



- Improve Regional Performance
- Mitigate Risks
- Balance Costs
- Change the Disaster Recovery Game



# INTERNAL EVANGELISM AND EDUCATION



Drive adoption of Containers & Cloud-Native App Dev through proactive outreach.

- Launch days
- Hackathons
- Genius-bars
- Office-hours bridges
- Marketing videos
- Buy-in across all the LOB's



# COMMON PITFALLS & MISTAKES TO AVOID

## LACK OF EXECUTIVE SUPPORT

Container- and cloud-native technologies are transformative and require executive sponsorship

## LACK OF TEAM BUY-IN

Recommendations from developers and/or IT Ops teams are ignored and/or a different vendor solution is forced onto them

## LACK OF PLANNING

No clear goals or purpose, success criteria and plans beyond initial deployment leads to shelfware and empty clusters

## DIY APPROACH

Building and maintaining open source projects on your own is a wasted effort

CASE STUDY:

RED HAT

ON RED HAT

# THE CHANGING DIGITAL BUSINESS

THEN



**BORDERS**

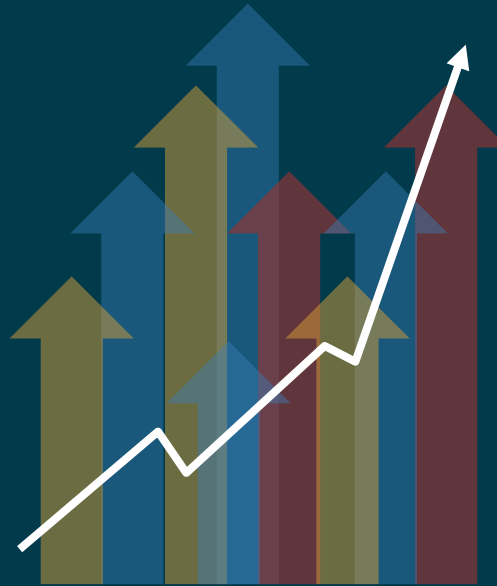
**TOWER RECORDS**  
www.towerrecords.com

NOW

**NETFLIX**

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 **Spotify**



Fundamental change is required to remain relevant.

# HOW WE THINK ABOUT IT

What got us here won't get us there - fundamental change is required to remain relevant.

## the Why

We believe Open Hybrid Cloud will enable us to...

- match the speed and adaptability demands of the digital business
- improve availability, resiliency and durability of our digital systems

while we continue to reduce operating expense.



## the How

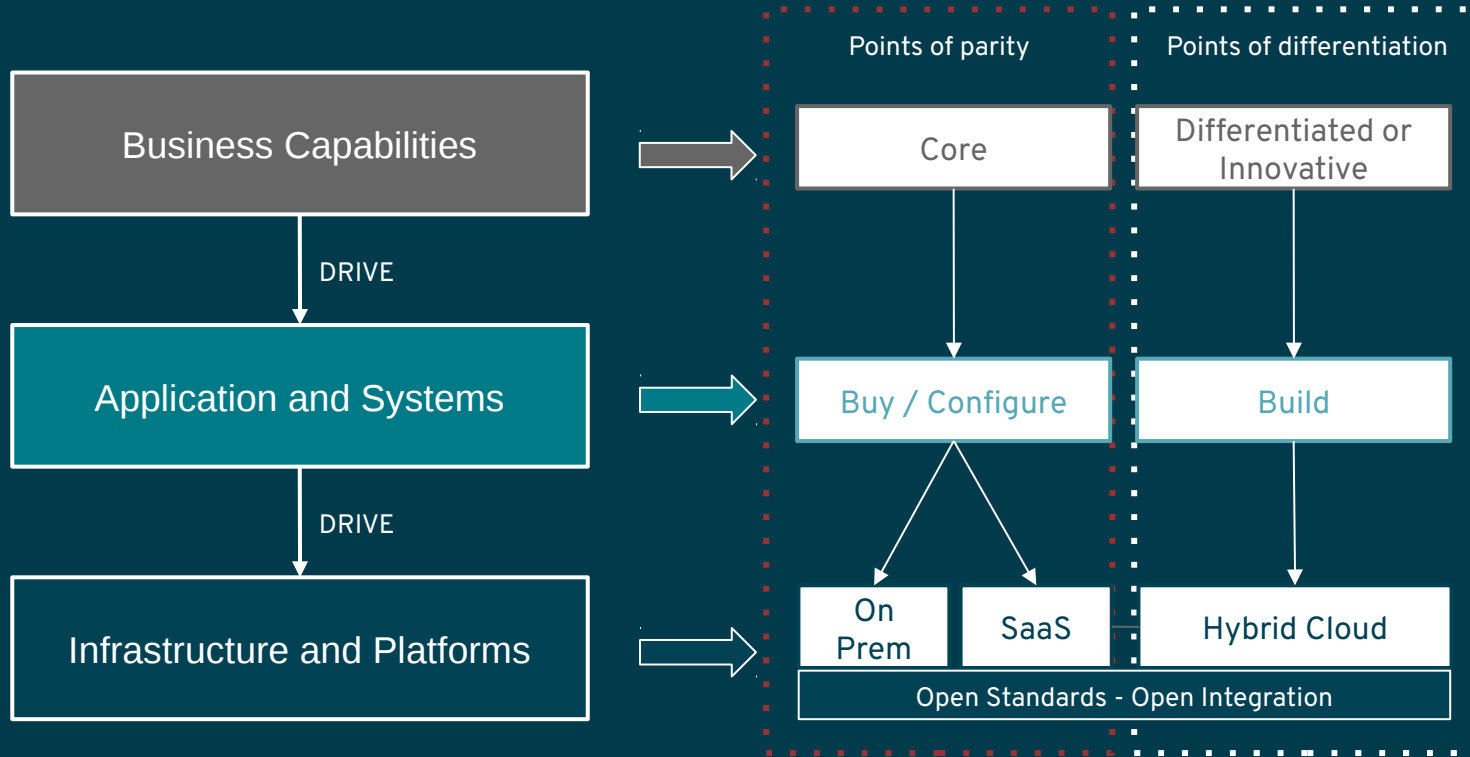
How we get there:

1. Think business first
2. Guide work via a roadmap
3. Adapt based on data





# OUR APPROACH TO DIGITAL BUSINESS

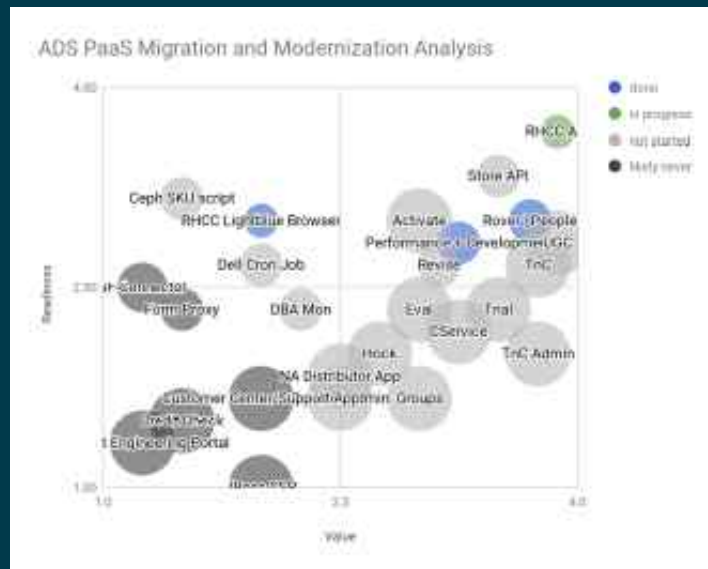


# HOW TO IDENTIFY & PRIORITIZE APPLICATIONS

REWRITE, REPLATFORM OR DO NOTHING?

Assess value and readiness of each application

- Value criteria
  - Change rate
  - Lifespan
- Readiness criteria
  - Business criticality
  - Business support
  - Architectural gaps



\* Note: specific use cases like EOL hardware or constraints on OS upgrades (e.g.) may justify a re-platforming approach and yield other technical benefits.

# OPENSIFT DEPLOYMENTS @ RED HAT



## Empowering innovation

**Why:** Innovation

**Who:** Any associate

**What:** Single cluster, public cloud

**How Much:** 1000+ apps



## Development & Delivery Pipeline

**Why:** PnT Development & Build

**Who:** PnT primarily

**What:** Single cluster in DC

**How Much:** 689 projects across  
34,530 containers



## Mission-critical workloads

**Why:** enterprise availability

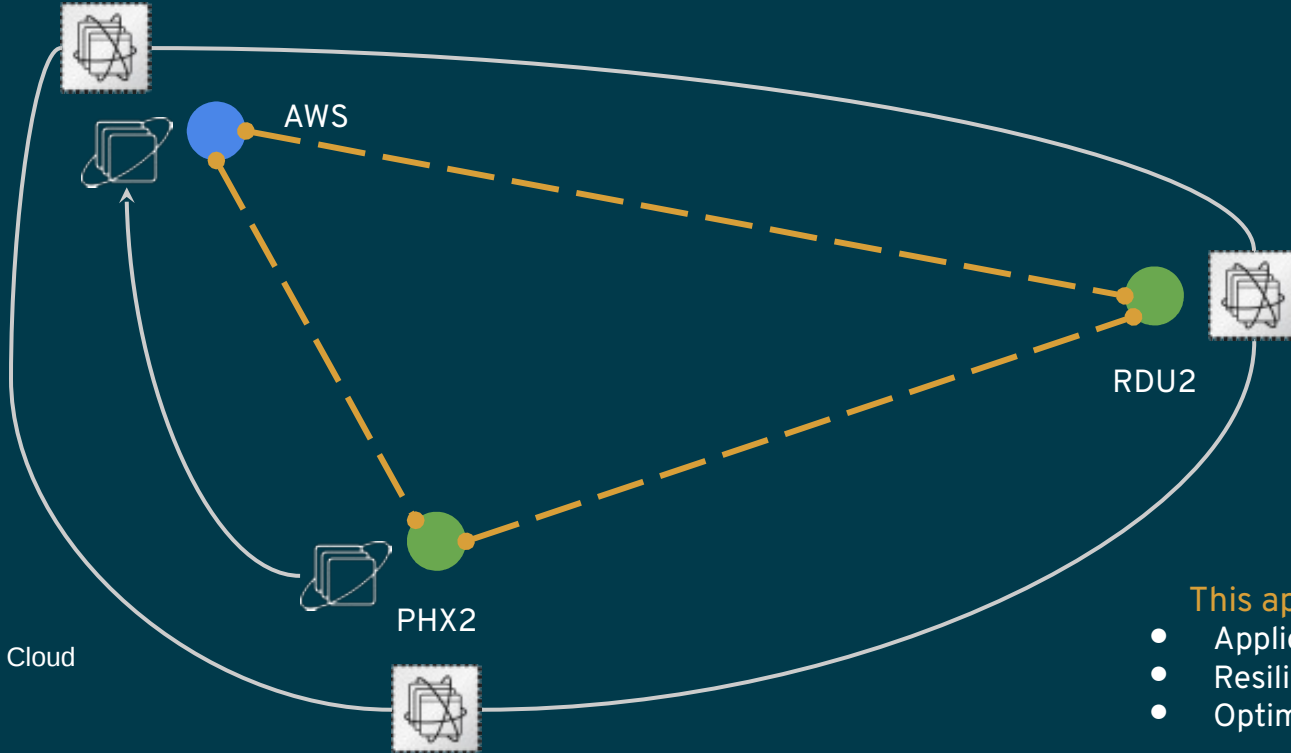
**Who:** mission-critical systems

**What:** 3x multi-site clusters

**How Much:** 125+ apps, including  
customer facing

# OPEN HYBRID CLOUD IN ACTION

Multi-site active workloads across the globe for key data and business function services.  
(diagram is illustrative only)



This approach enables

- Application portability
- Resiliency + availability
- Optimized costs



# OUR CONTAINER ENVIRONMENT

## ADOPTION RESULTS



### GAIN EFFICIENCY

~55% lower infrastructure footprint per application



### IMPROVE SECURITY

Automatic platform + image rebuilds weekly and automatic CVE-triggered rebuilds



### INCREASE RESILIENCE

Multi-site-active, hybrid cloud deployment = zero downtime



### MOVE FASTER

15 Minutes to deploy app changes.

# RED HAT SERVICES AVAILABLE TO YOU

## RED HAT OPEN INNOVATION LABS



### EXPERIMENT

Rapidly build prototypes, do DevOps, and be agile.



### CATALYZE INNOVATION

Bring modern application development back to your team.



### IMMERSE YOUR TEAM

Work side-by-side with experts in a residency-style engagement.

**TO SHOW YOUR TEAMS HOW OPENSIFT AND MODERN DEVELOPMENT PRACTICES CAN DRIVE INNOVATION: START WITH A 4- TO 12-WEEK LABS RESIDENCY**

## RED HAT CONTAINER ADOPTION PROGRAM



### FRAMEWORK FOR SUCCESSFUL CONTAINER ADOPTION AND I.T. TRANSFORMATION:

Mentoring, training, and side-by-side collaboration to:

- Create a production platform and team to run it
- Create end-to-end, container-driven deployment automation
- Scale application onboarding expertise
- Guide new Kubernetes-native development
- Align business with IT through included **Red Hat Open Innovation Labs**

**TO BEGIN A COMPREHENSIVE PROGRAM (INCLUDING OPEN INNOVATION LABS): START WITH THE 12-WEEK [RED HAT CONSULTING CONTAINER PLATFORM PILOT](#)**



# THANK YOU



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