

Digital Business Expands I&O's Mandate



Source: Gartner (March 2019)

Re-evaluating Application Hosting Decisions

Application Hosting Decision Parameters in Perennial and Perennial + Digital Mandates



Why?

IT Value

Business Value

Who decides?

IT decision made by IT

Business decision led by business and IT

When?

Point-in-Time

Continual

What?

- ✓ Optimizing run costs
- ✓ Delivering on technical requirements
- ✓ Ensuring reliability

- ✓ Optimizing run costs
- ✓ Delivering on technical requirements
- ✓ Ensuring reliability
- ✓ Facilitating experimentation and innovation
- ✓ Enabling analytics
- ✓ Reducing idea-to-production lead time

Source: Gartner (March 2019)

Business-Driven Application Cloud Fit Analysis

Overview

Given I&O's expanded mandate due to digital business transformation, I&O leaders should re-evaluate key I&O decisions. Red Hat made application hosting, cloud migration and application migration sequencing decisions based on business value.

Solution Highlights

Instead of starting with technical considerations, application hosting decisions should be rearchitected around business value.

- **Business-Driven Application Hosting Criteria:** Make business value the starting point of hosting decisions by creating application-level criteria derived from highest-level business goals.
- **Application Hosting Fit Analysis as a Continual Process:** Application fit assessment should be a continual process, and migration criteria and sequencing should mirror changes in business value and team maturity.

About the Company

Red Hat, Inc.

Industry: Information Technology

Revenue: \$2.92 Billion (FY18)

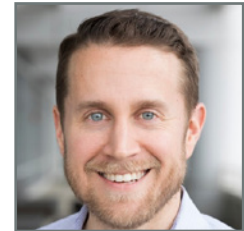
Headquarters: Raleigh, NC, USA

Employees: More Than 13,000 (2018)



Matt Lyteson

Senior Director,
Information and
Technology Services



Bill Montgomery

Senior Manager,
Software Applications



Red Hat's Business Context

New Business Context Leads to a New IT Mission

Business Context

Fast changing industry landscape

Expectation of faster speed-to-market in the enterprise

Competition from SaaS vendors as an alternative to IT

New IT Mission

Co-create business solutions

Innovate rapidly

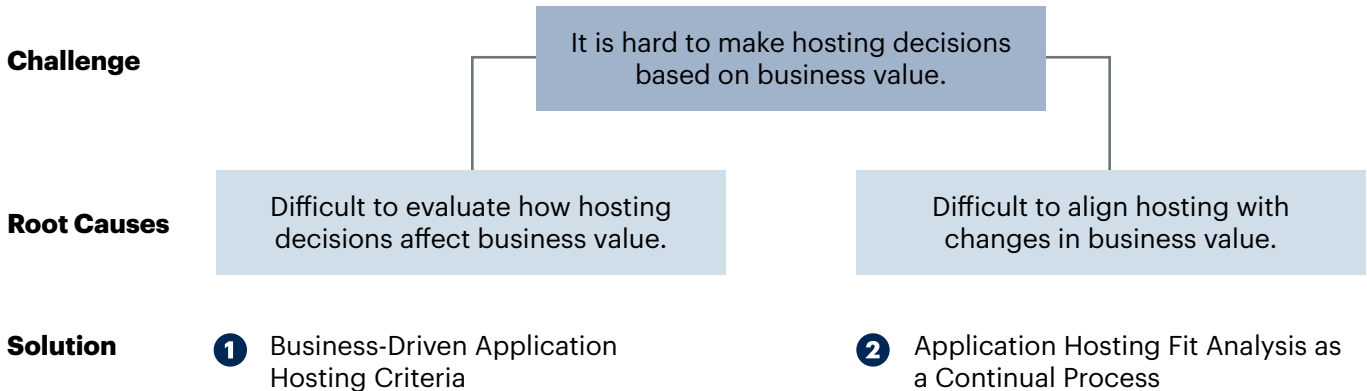
Deliver adaptive hybrid infrastructure platforms

Source: Adapted from Red Hat



Business Value-Driven Hosting

Root Cause Analysis



Source: Adapted from Red Hat



Business Value Flips the Starting Point

App Hosting as a Business Decision



“You must consider business value at the onset instead of just technical fit to justify the investment you will need. You need to make clear why the business should care.”

Bill Montgomery
Senior Manager, Software Applications

Source: Gartner (March 2019)

Note: Refer to [implementation guide](#) for the full chart.



Phase 1 — Risk-Balanced Initial Value Assessment

Initial Application Migration Decisions to Enhance Agility
Application Assessment Criteria

Application	Agility Value			Readiness/Risk				Cloud Migration Decision
	Remaining Service Life (Most = 4)	Change Rate (Highest = 4)	Overall Agility Value Average	Architectural Gaps (Most = 4)	Business Support (Lowest = 4)	Business Criticality (Highest = 4)	Overall Business Risk Average	
A	4	3	3.5	1	2	2	1.66	Migrate Now
B	3	3	3	1	2	2	2	Migrate Now
C	2	2	2.5	2	2	2	2	Migrate Later
D	3	3	3	3	3	3	3	Migrate Later
E	1	1	1	1	1	1	1	Maintain
F	2	2	2	4	4	4	4	Maintain

All applications are assessed.

All application attributes are scored by **quartile** for data reliability and ease of comparison.

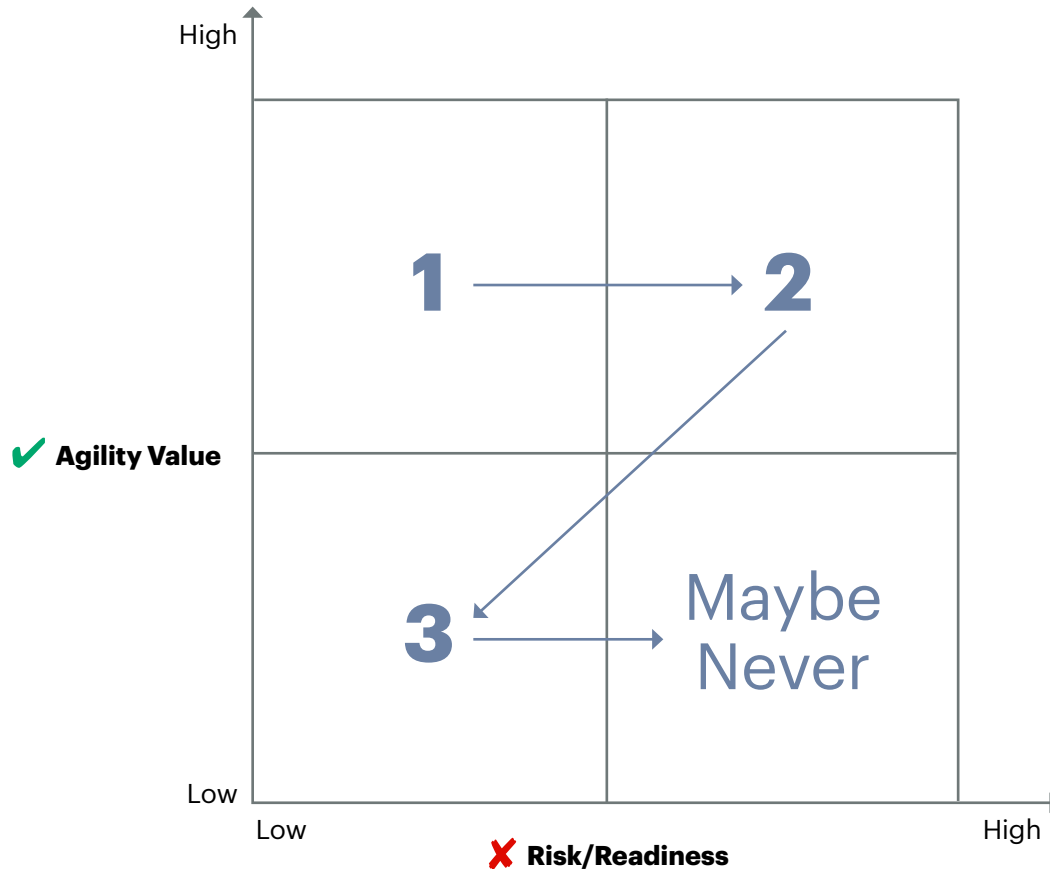
Applications with the highest value scores and lowest risk scores are migrated first.

Source: Adapted from Red Hat



Phase 1 — Risk-Balanced Initial Value Assessment (Cont.)

Sequence of Application Migration

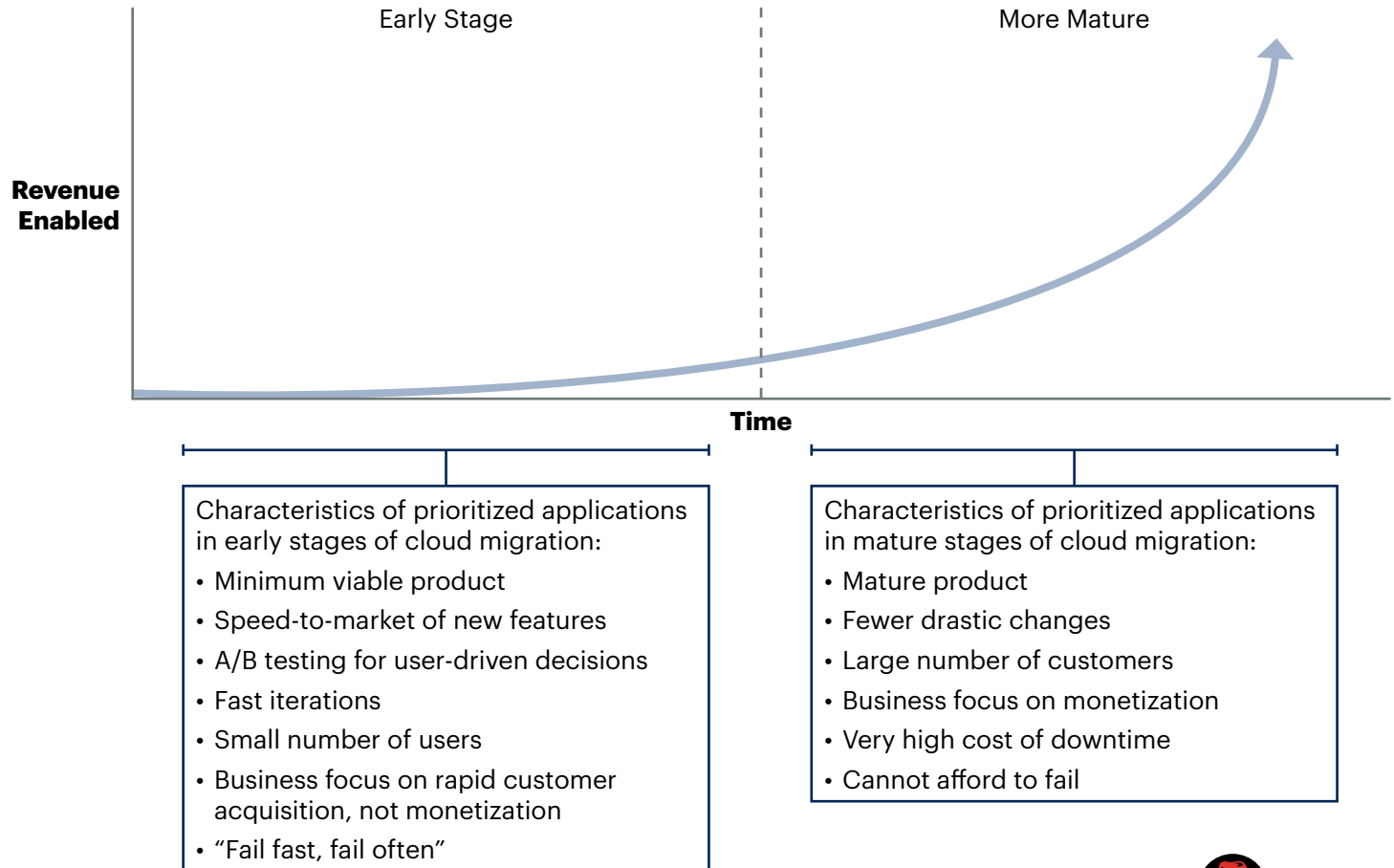


Source: Adapted from Red Hat



Business Value Changes With Maturity

Applications and Revenue Enabled Over Time as Cloud Migration Capabilities Mature
Illustrated



Source: Adapted from Red Hat



Phase 2 — Agility and Resilience Value Assessment

Agility and Resilience Drivers Determine Cloud Migration Decision

Application	Agility Value			Resilience Value			Cloud Migration Decision
	Strategic Alignment (Highest = 4)	Change Rate (Highest = 4)	Overall Agility Value Average	Remaining Service Life (Most = 4)	Business Critically (Highest = 4)	Overall Resilience Value Average	
A	4	3	3.5	4	3	3.5	Migrate Now
B	3	2	2.5	4	4	4	Migrate Now
C	2	3	3	2	2	2	Migrate Later
D	3	3	3	1	3	2	Migrate Later
E	1	1	1	1	3	1.75	Maintain
F	2	2	2	1	1	1	Maintain

No longer scored: Architectural Gaps, Business Support.

All application attributes are scored by **quartile** for data reliability and ease of comparison.

Readiness factors like architectural gaps and business support are not scored as maturity increases.

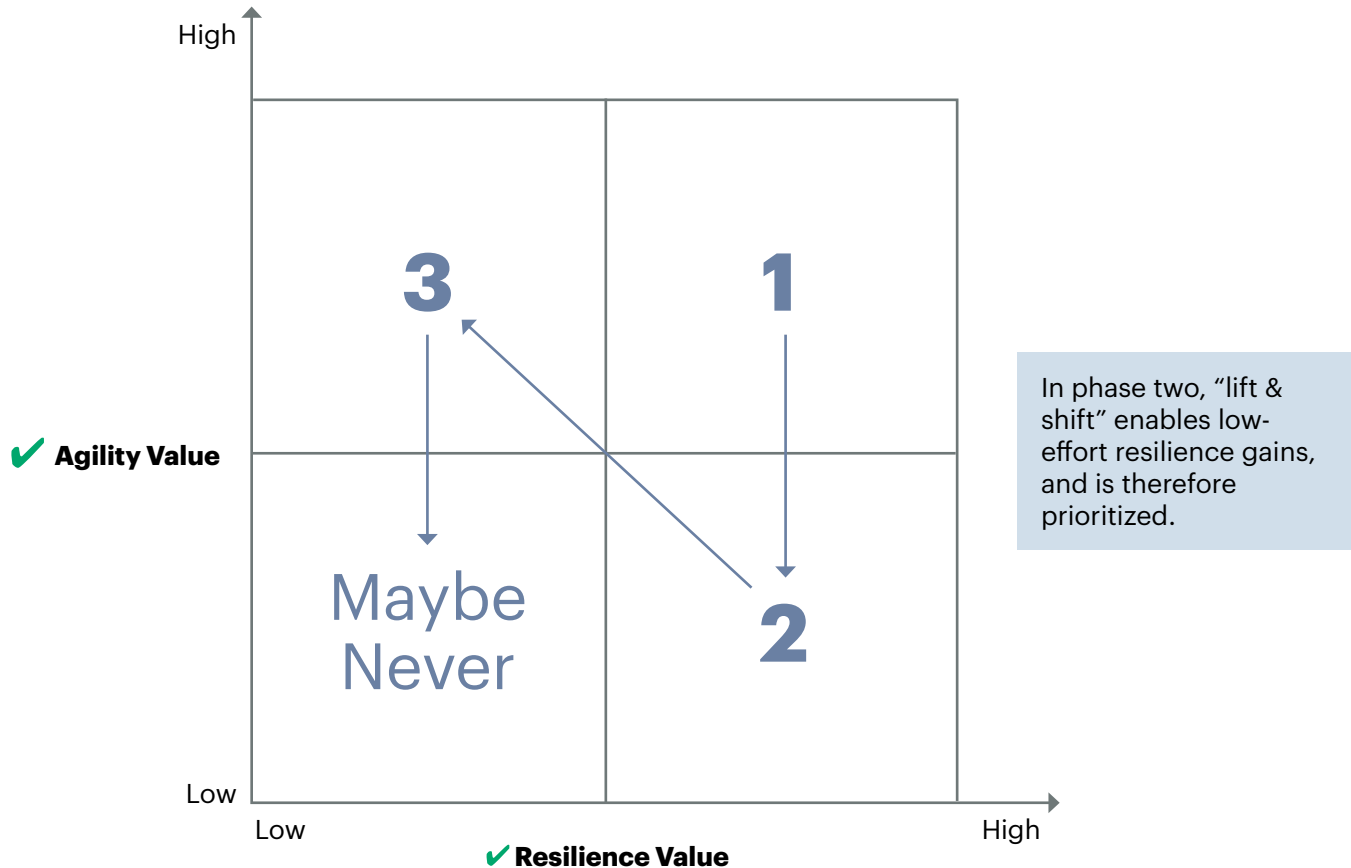
All applications are reanalyzed

Source: Adapted from Red Hat



Phase 2 — Resilience and Agility Value Assessment (Cont.)

Sequence of Application Migration

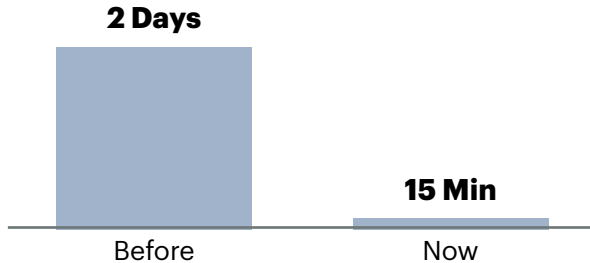


Source: Adapted from Red Hat



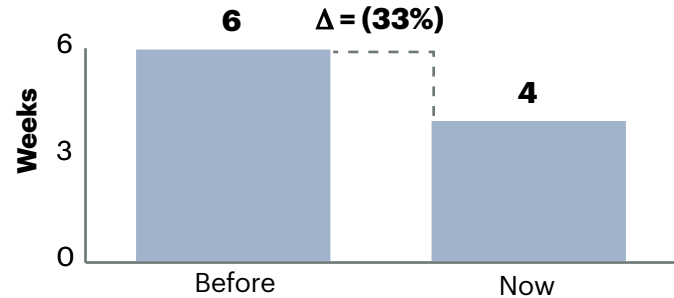
Results of App Modernization and Rehosting

Reducing Time-to-Value *Application Deployment Time*



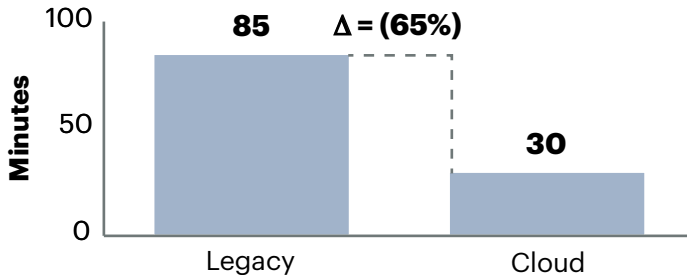
Source: Adapted from Red Hat

Application Change Rate



Source: Adapted from Red Hat

Resilience *Monthly Service Disruption*



Source: Adapted from Red Hat

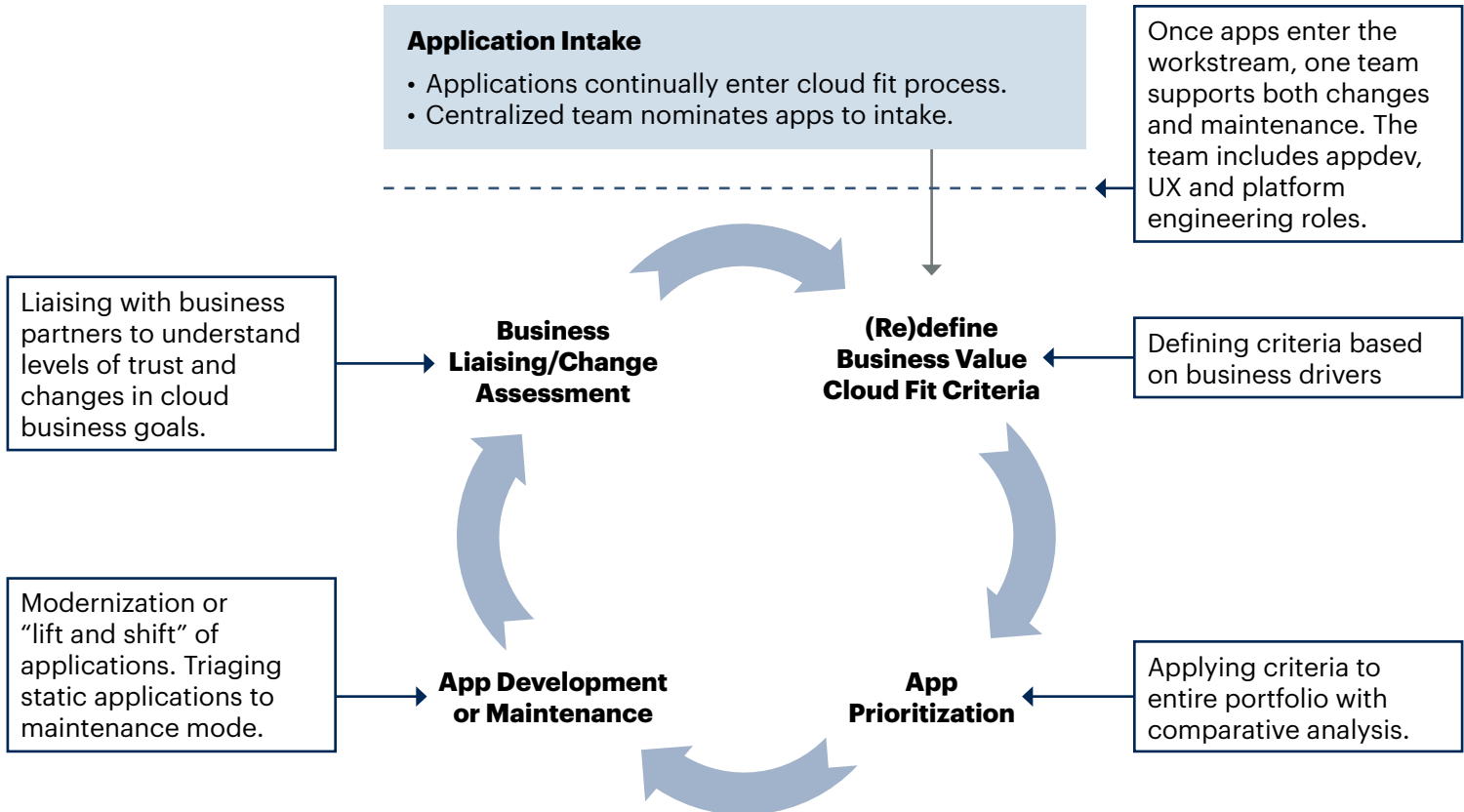
“Cloud migration for us is not just about IT efficiency, it is about IT optimization for the express purpose of enabling and leading the business.”

Matt Lyteson
Senior Director, Information and
Technology Services



Application Hosting Fit Process

Red Hat Application Fit Process Roadmap



Source: Adapted from Red Hat



Application-Level Hosting Criteria

Application Criteria Definitions and Scoring Methodologies

	Change Rate	Business Criticality	Remaining Service Life	Strategic Alignment
Definition	Rate of application change, compared to other applications.	Application criticality to normal business functions on a four-point scale.	Remaining application service life, as per application owner.	Priority of application to key business initiatives, communicated by IT leaders.
Parameters	Number of changes, by quartile.	<ul style="list-style-type: none"> • Number of other applications or systems affected • Estimated revenue loss from application or system downtime. 	<ul style="list-style-type: none"> • Expected remaining lifespan, as per application owner, ranked by quartile. 	<ul style="list-style-type: none"> • Relevance of application to strategic digital initiatives, as communicated by application owners • Priority of digital initiatives, as communicated by IT leadership.
Measured for	Agility Value	Resilience Value and Business Risk/Readiness	Agility and Resilience Value	Agility and Resilience Value

Source: Adapted from Red Hat



Application-Level Hosting Criteria (Cont.)

Application Criteria Definitions and Scoring Methodologies

	Architectural Gaps	Business Support
Definition	Number of known application architectural gaps, based on container-based application design principles.	Application owner trust of platform/migration team (RDDT), as rated by platform/migration team.
Parameters	<p>Examples:</p> <ul style="list-style-type: none"> • Are containers highly observable? • Are containerized applications immutable? • Can containerized applications be easily shut down and restarted in another container and on different hardware?... • Application divided by quartile by number of gaps. 	<p>Examples:</p> <ul style="list-style-type: none"> • Frequency of service interaction with the RDDT. • Resolution rate and time with the RDDT. • Number of contacts between application owners and the RDDT in a given period of time. • Quality of interactions between application owners and the RDDT in a given period of time.
Measured for	Business Risk/Readiness	Agility Value, Business Risk/Readiness and Resilience Value

Source: Adapted from Red Hat

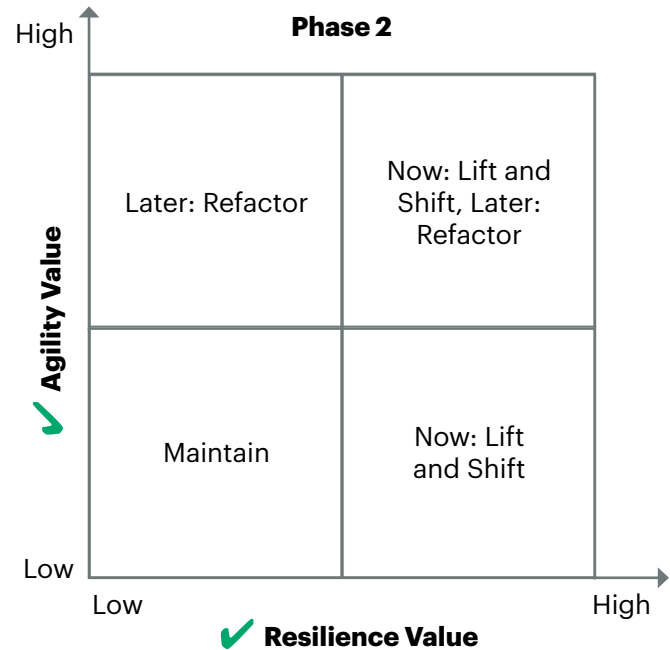
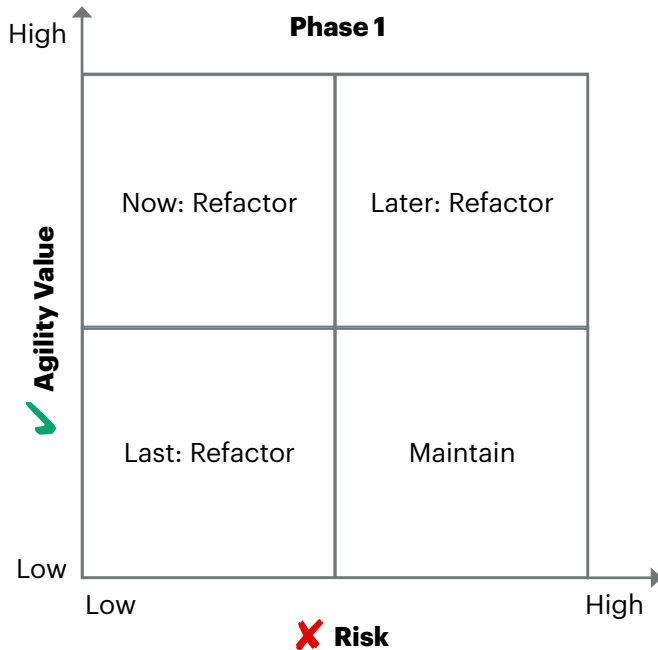


Phase 1 and 2 Migration Actions

Comparison: Application Migration in Phase 1 and 2

At first, Red Hat modernized all applications as part of migration.

Later, Red Hat lifted and shifted applications for resilience value, while still refactoring for agility value.

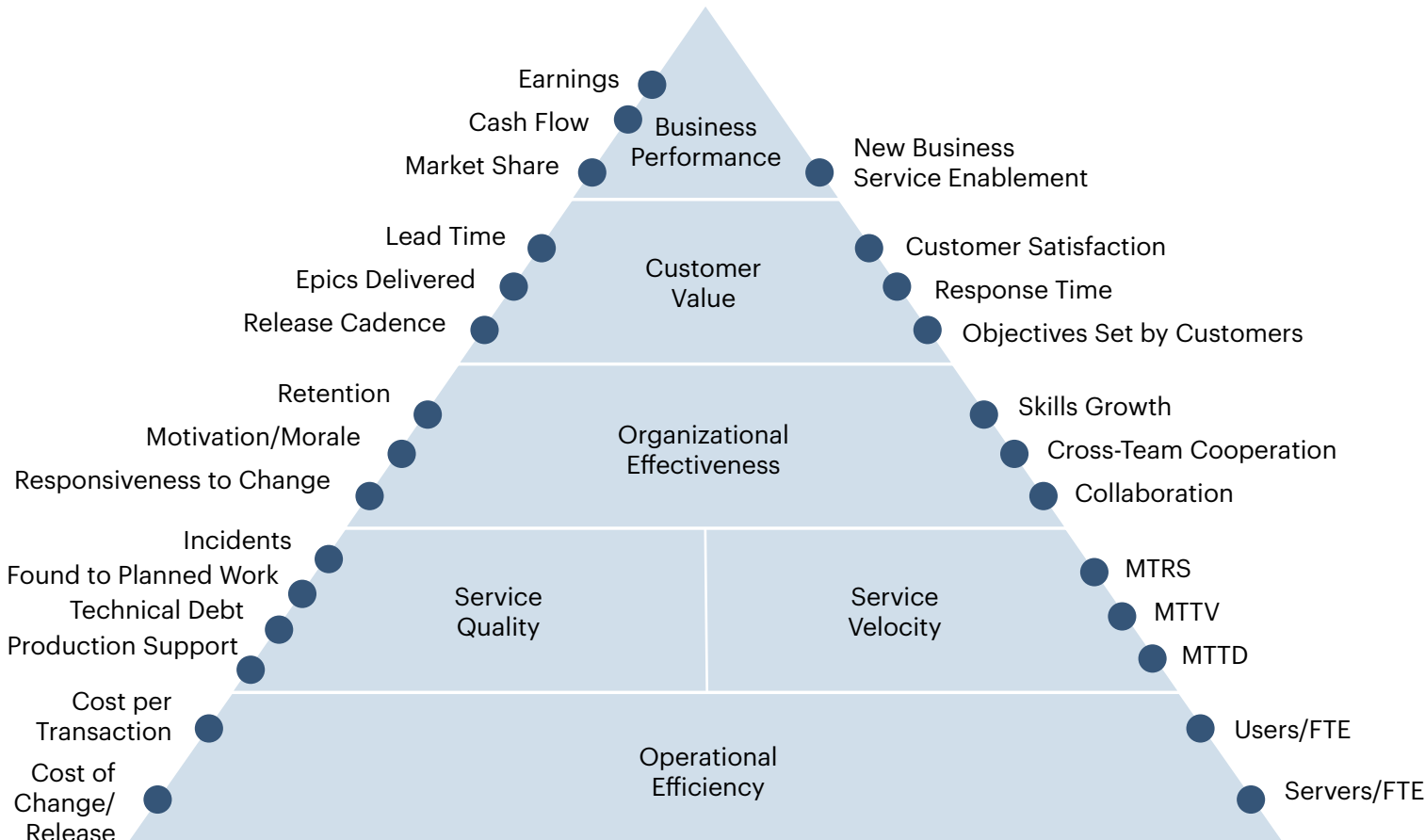


Source: Adapted from Red Hat



DevOps Metrics Pyramid

Metrics for Different Dimensions of DevOps



Source: Gartner (March 2019)

