



Faster, more Secure Application Modernization and Replatforming with **PKS**

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Companies have many ways to package and run their workloads in the cloud



CONTAINERS



Batches



EVENT-DRIVEN
FUNCTIONS



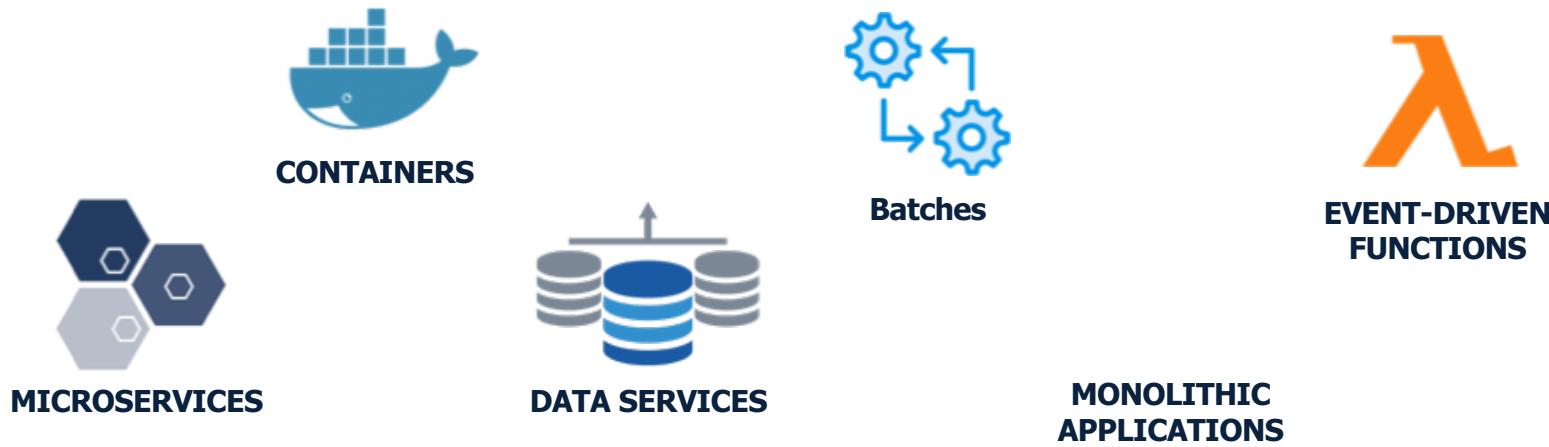
MICROSERVICES



DATA SERVICES

MONOLITHIC
APPLICATIONS

Their goal: pick the right runtime for each workload

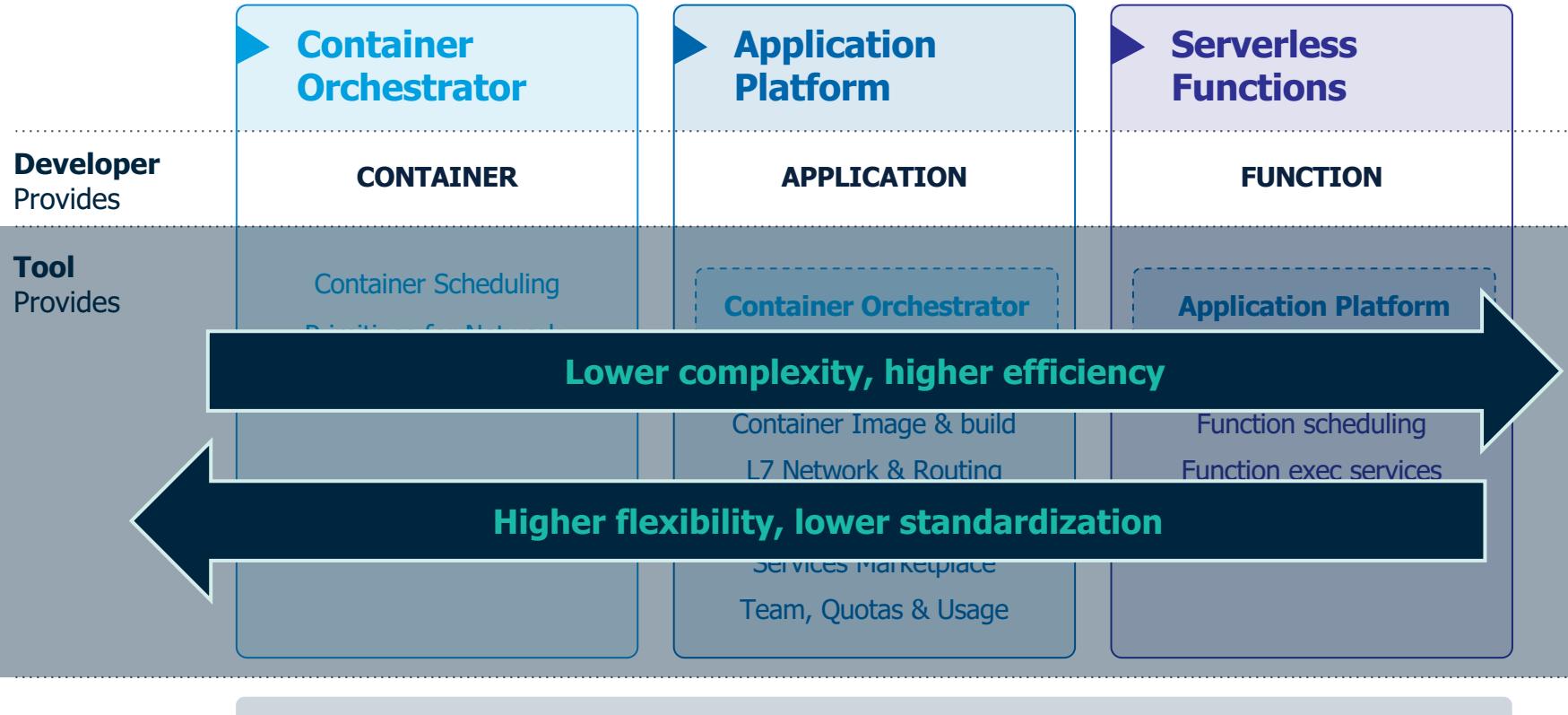


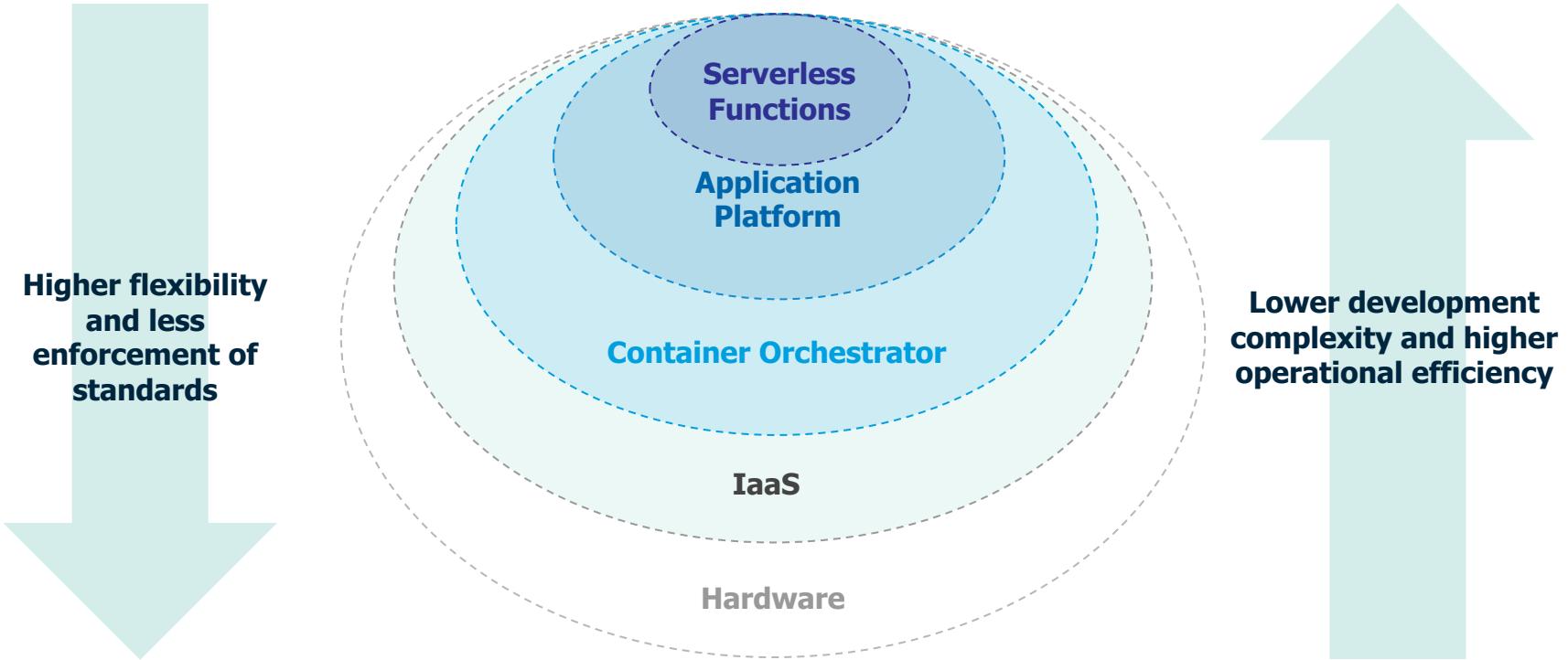
Choose the right tool for the job

	Container Orchestrator	Application Platform	Serverless Functions
Developer Provides	CONTAINER	APPLICATION	FUNCTION
Tool Provides	Container Scheduling Primitives for Network, Routing, Logs & Metrics	Container Orchestrator + Container Image & build L7 Network & Routing Logs, Metrics, Monitoring Services Marketplace Team, Quotas & Usage	Application Platform + Function scheduling Function exec services

IaaS

Choose the right tool for the job





Strategic goal: Push as many workloads as technically feasible to the top of the platform hierarchy

Challenges with any App

Day 1 - Build (Greenfield)

Development The team can make progress in developing the core application

CI/CD CI/CD pipelines drive the testing and promotion of artifacts

Consistency Provide a consistent setup experience, across different environment configurations.

Setup time How long does it take to setup a real world working environment? Think hours, not weeks.

Day 2 - Operate & Enhance (Brownfield)

Patches Patching App and System components as CVEs occur

Scaling Seamlessly scale of App components to accommodate changing demand.

Upgrades. How do you roll out new versions of the App with the lights on?

Operating Effort Operating the app should require very few resources and minimum manual intervention. Otherwise, you will be spending lots on operational support!



The background features a stylized illustration of a port. On the left, a large green shipping container sits on a truck, with two workers standing on its side. In the center, a large cargo ship is docked at a pier. The ship's holds are filled with shipping containers, but instead of standard boxes, they are represented by a grid of binary digits (0s and 1s) in various colors. A large industrial crane is positioned above the ship, with a hook holding a single binary digit '0' in a blue cube. In the background, there are more shipping containers stacked on the pier and some industrial buildings under a clear sky.

CONTAINERIZATION IS A STARTING POINT



WHERE TO GET STARTED

With MOVING WORKLOADS

To PKS?

Replatforming vs Modernization for PKS

Lift & Shift / Replatforming

- Lift and Shift with “just enough modernization”
- You may not have access to the code
- Revisit decisions made in Greenfield time
 - Around CI/CD process
- Get some quick wins through platform capabilities
 - Reduced operating and infrastructure cost
 - Improved speed to scale
 - Faster patching of kernel level vulnerabilities

Modernization

- Leverage features in modern cloud platforms by changing existing code
 - Blue/Green deploys
 - Auto-healing
 - Auto-scaling
 - Advanced routing/networking automation
- Design and build based on known Cloud Native patterns
- Longer term investment in the application
- Likely you have access to the code
- Plus everything mentioned in “replatforming”

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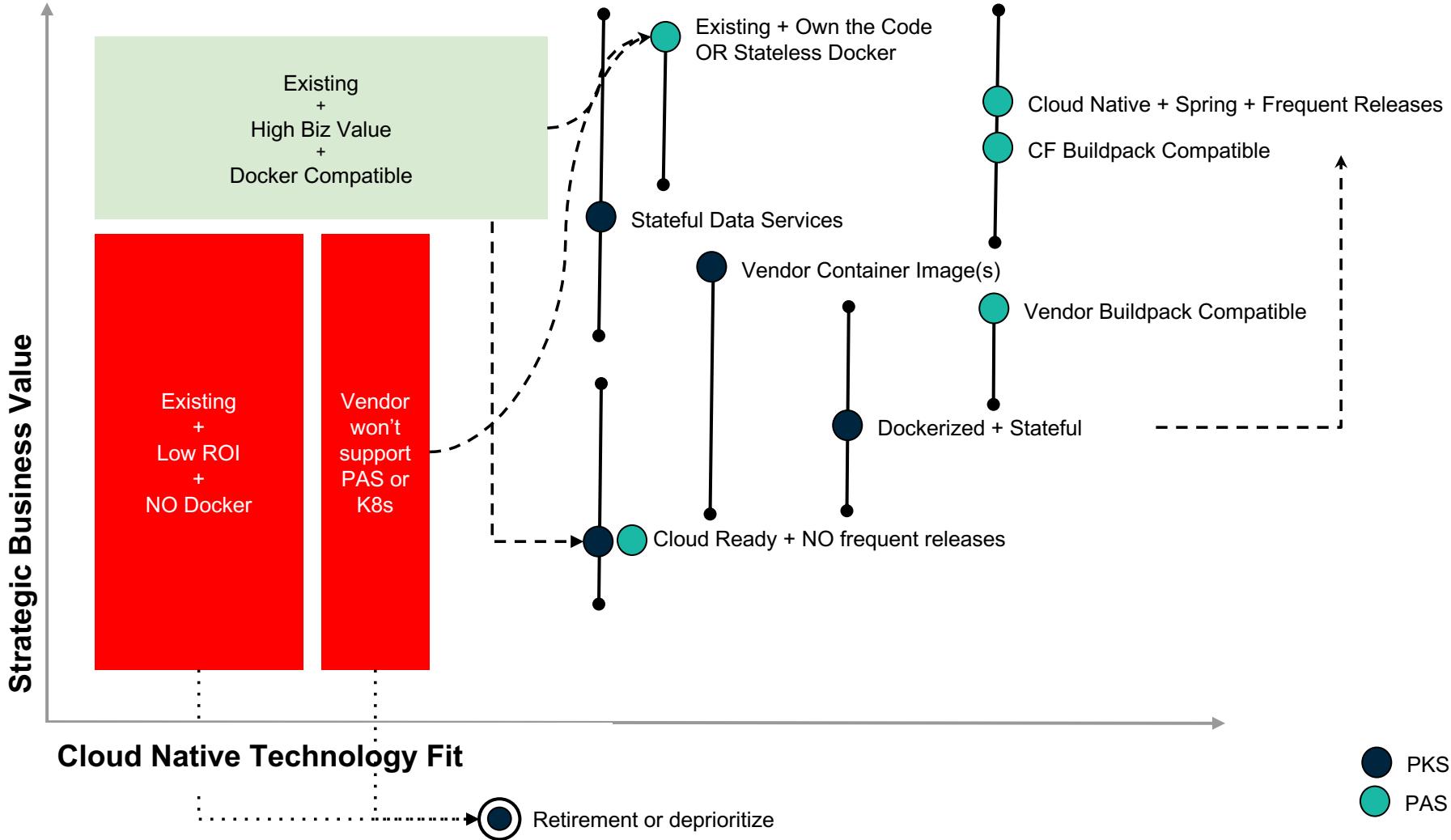
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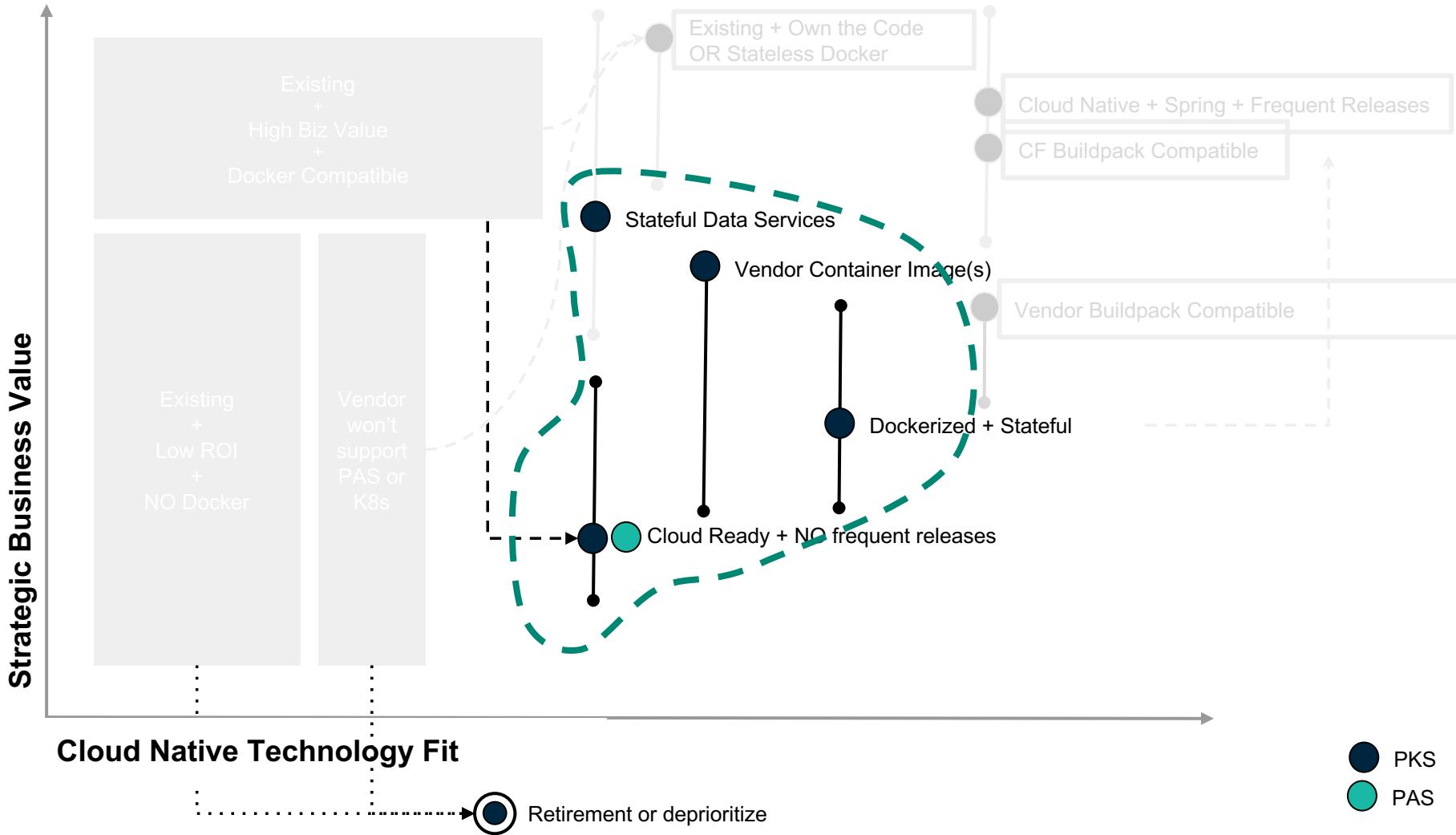


Identify Candidates for PKS

First Round: App Portfolio Identification by Bucket

	BUCKET 1 Independent Software Vendor (ISV) COTS	BUCKET 2 Middleware Vendor	BUCKET 3 .NET Core or .NET (Windows Server)	BUCKET 4 Legacy Java	BUCKET 5 Modern Java
Application Prioritization Criteria	Vendor provided software (ISV or COTS) or no access to source code	IBM Websphere, Weblogic, Mulesoft, TIBCO etc	3-5 years old	Java (under 7 years old)	Java (Spring / NO Application Server Specific libraries)
Example	<i>Example ISV product. Depends on MySQL DB and stores large files on disk.</i>	<i>Example app that is built on WebSphere. No dependency on WebSphere libraries.</i>	<i>Example app. 4 services built using .NET core and uses Microsoft SQL Server.</i>	<i>Example app uses Java EE, fronted by API gateway ISV product, uses OracleDB.</i>	<i>Example App uses Spring Boot, 6 Microservices, some legacy data sources but there are behind an API.</i>
Application 1 ?					
Application 2 ?					
Application n...?					







2



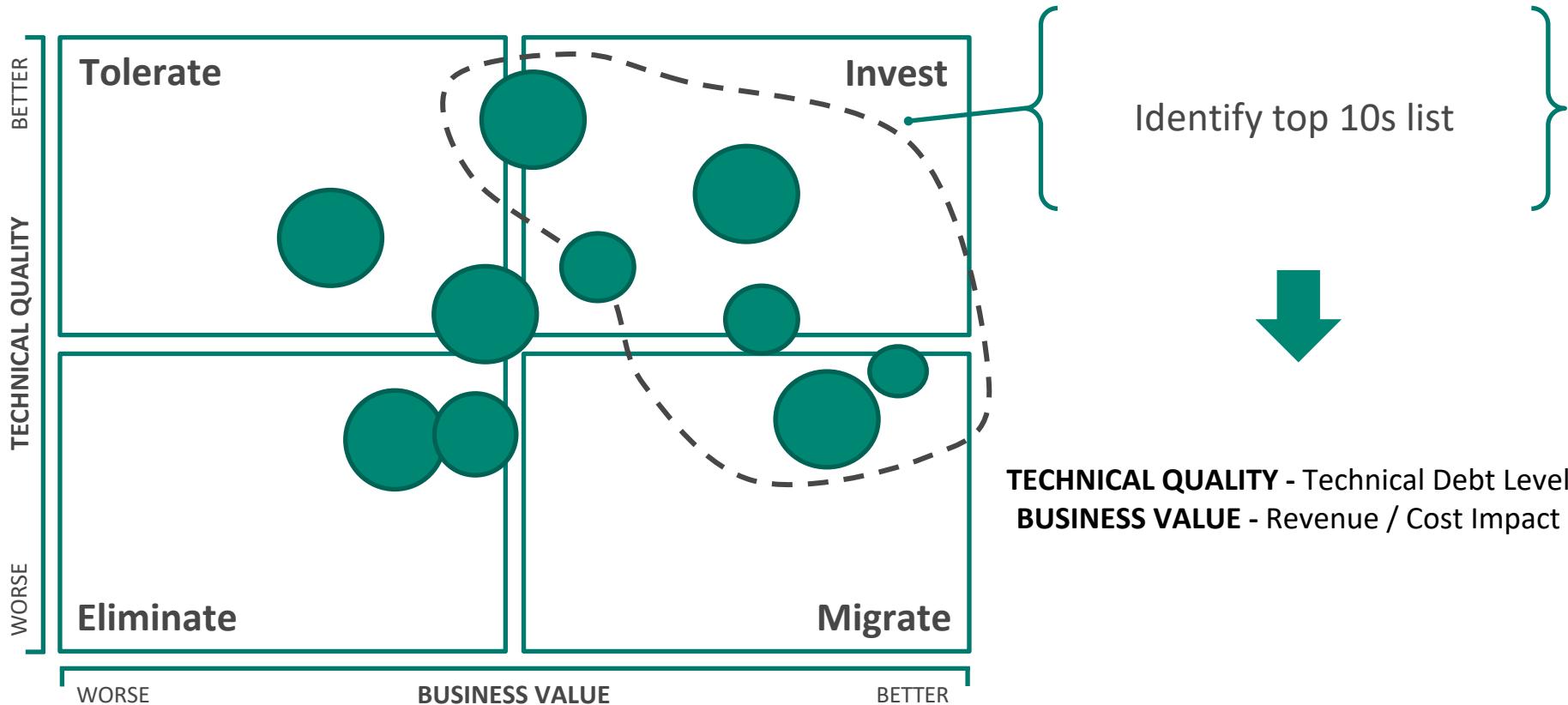
Assess the Value + ROI

How We Think about the Business Case



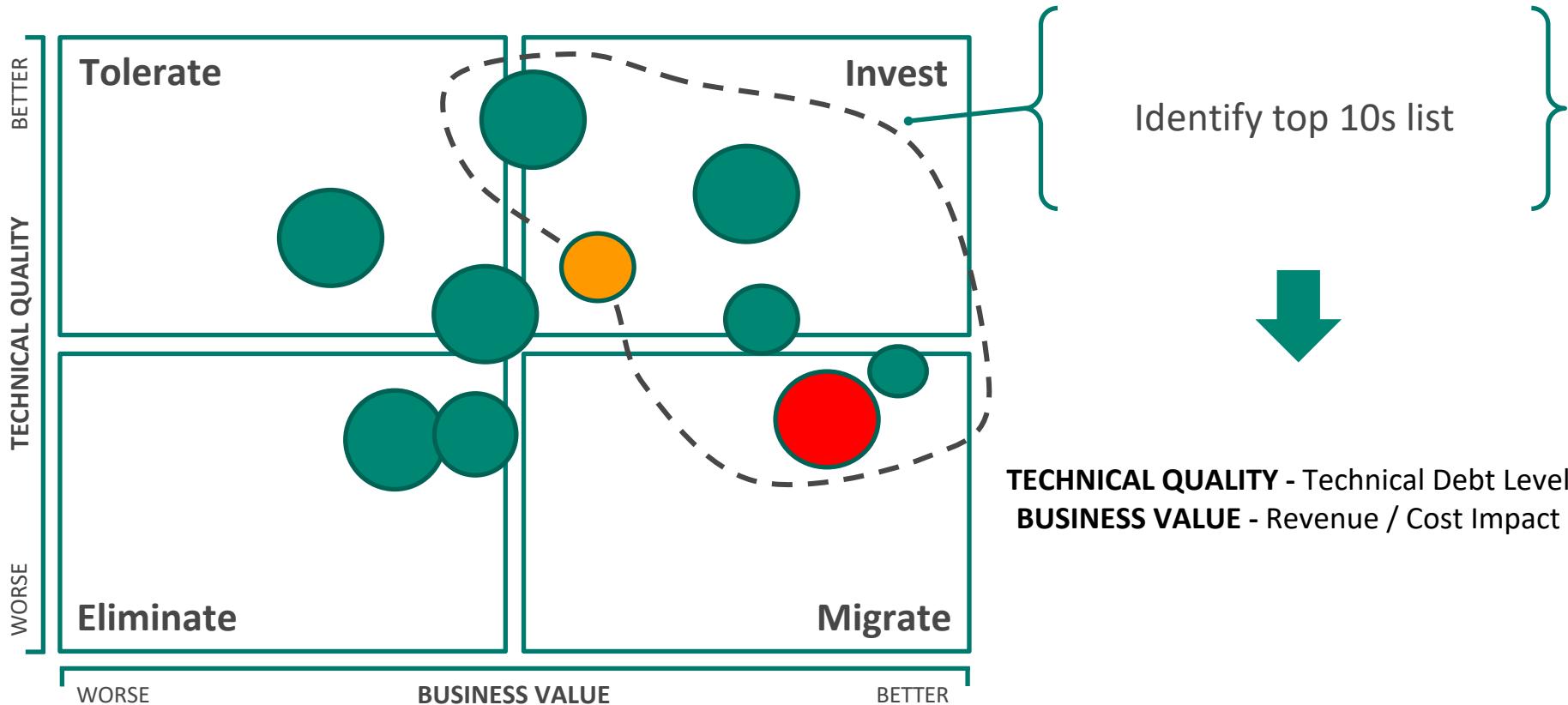
PLATFORM VALUE STREAM AND METRICS

TIME Methodology



* Gartner's TIME methodology for Application Portfolio Rationalization

TIME Methodology



* Gartner's TIME methodology for Application Portfolio Rationalization



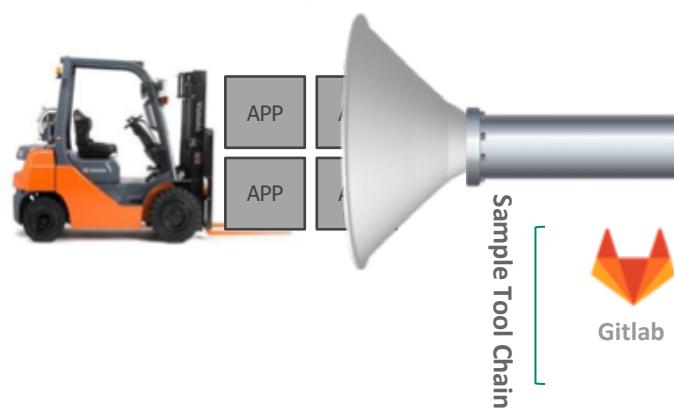
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Get Started!

1

Identify 5-10 apps confirmed as suitable to run on PKS



2

Work on a short project to push a few apps *all the way to prod* and measure the ROI metrics



DOCS

The package manager for Kubernetes

Helm is the best way to find, share, and use software built for Kubernetes.

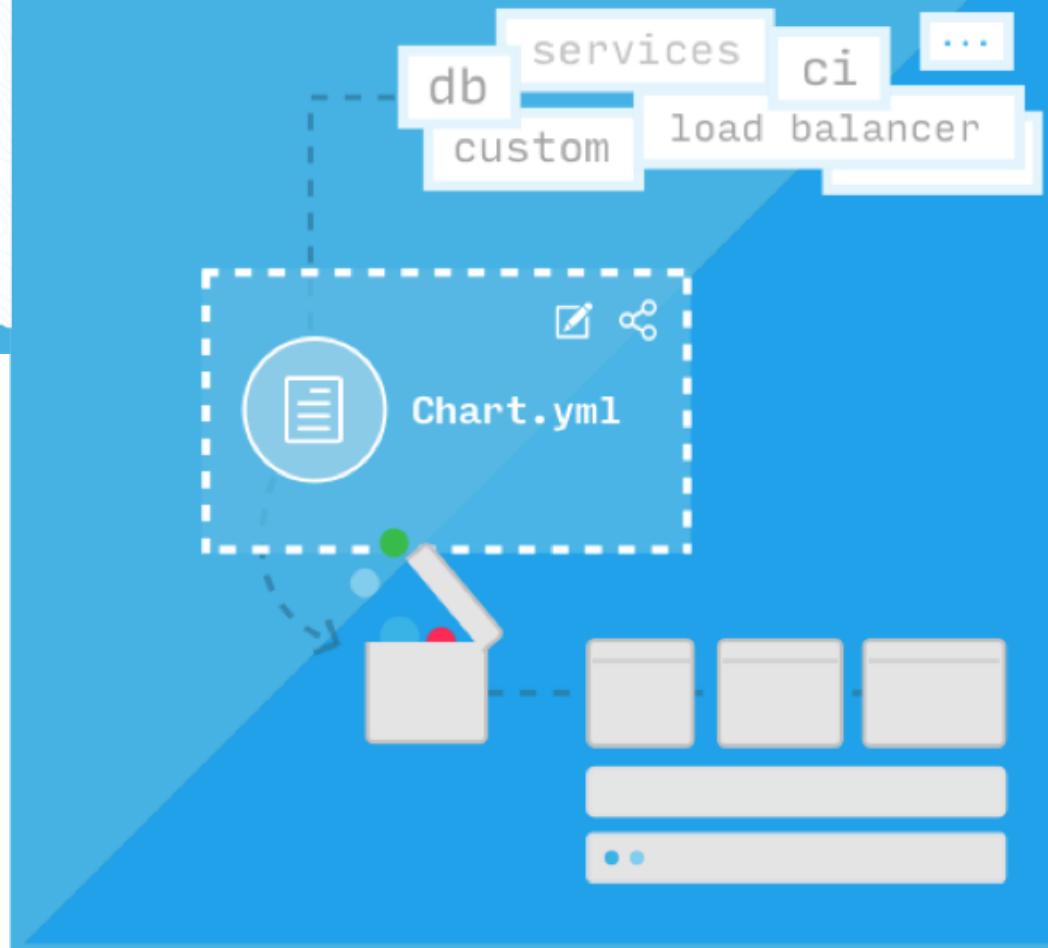


Helm helps you manage Kubernetes applications

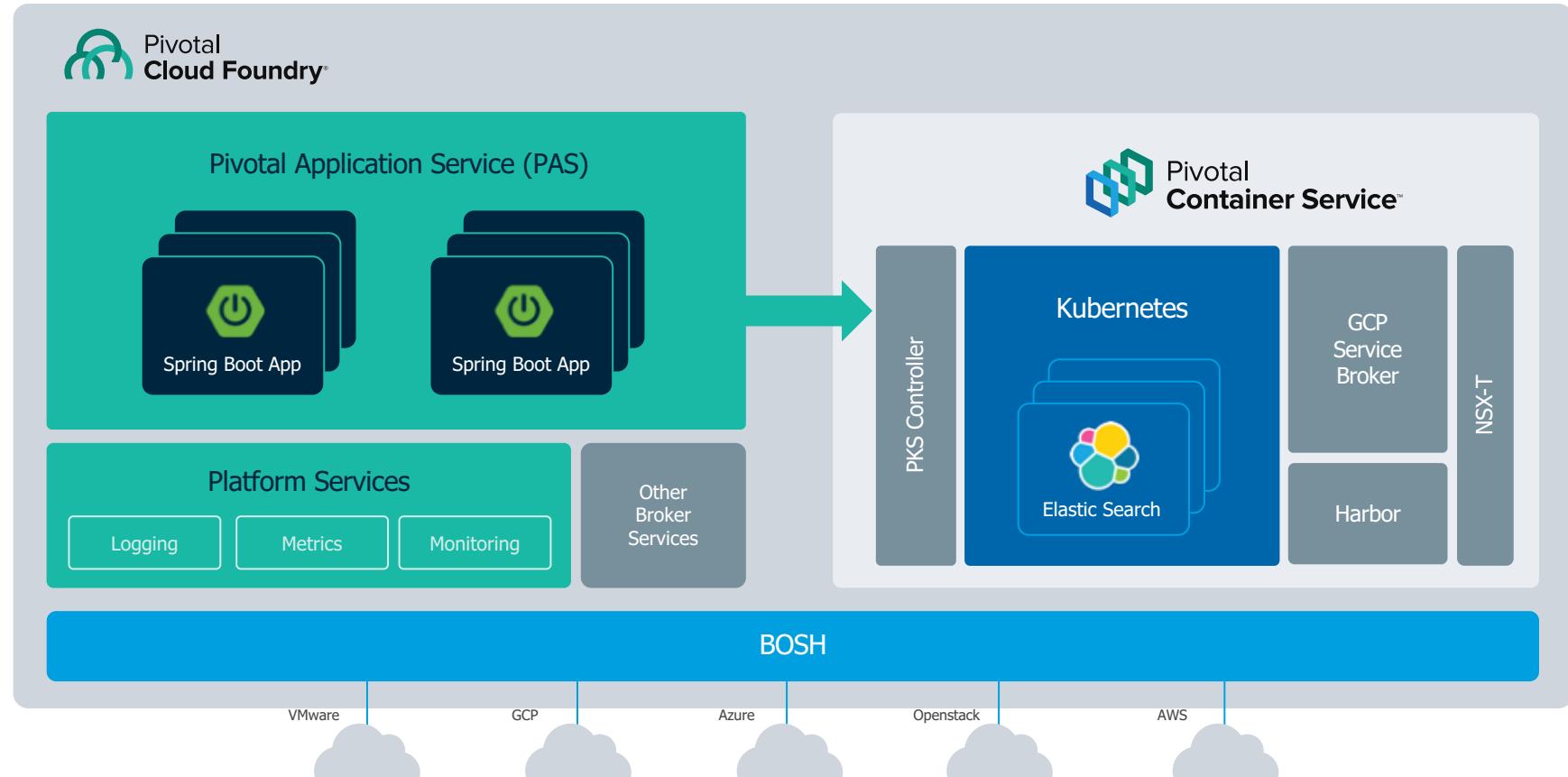
Helm Charts helps you define, install, and upgrade even the most complex Kubernetes application.

The latest version of Helm is maintained by the [CNCF](#) - in collaboration with [Microsoft](#), [Google](#), [Bitnami](#) and the [Helm contributor community](#).

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Sample Use Case of PAS + PKS



Recap...

1

Identify candidate applications

2

Assess the value of each application and the ROI

3

Get started!

Pivotal

A dark, atmospheric photograph of an industrial interior, likely a steel mill or refinery. The scene is filled with complex steel structures, including walkways, ladders, and large pipes. Overhead, several large, dark overhead cranes with hooks are visible against a lighter sky. The lighting is dramatic, with bright highlights on the metallic surfaces and deep shadows in the corners.

THANK YOU

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