Densify

Hybrid Cloud & Container Resource Optimisation

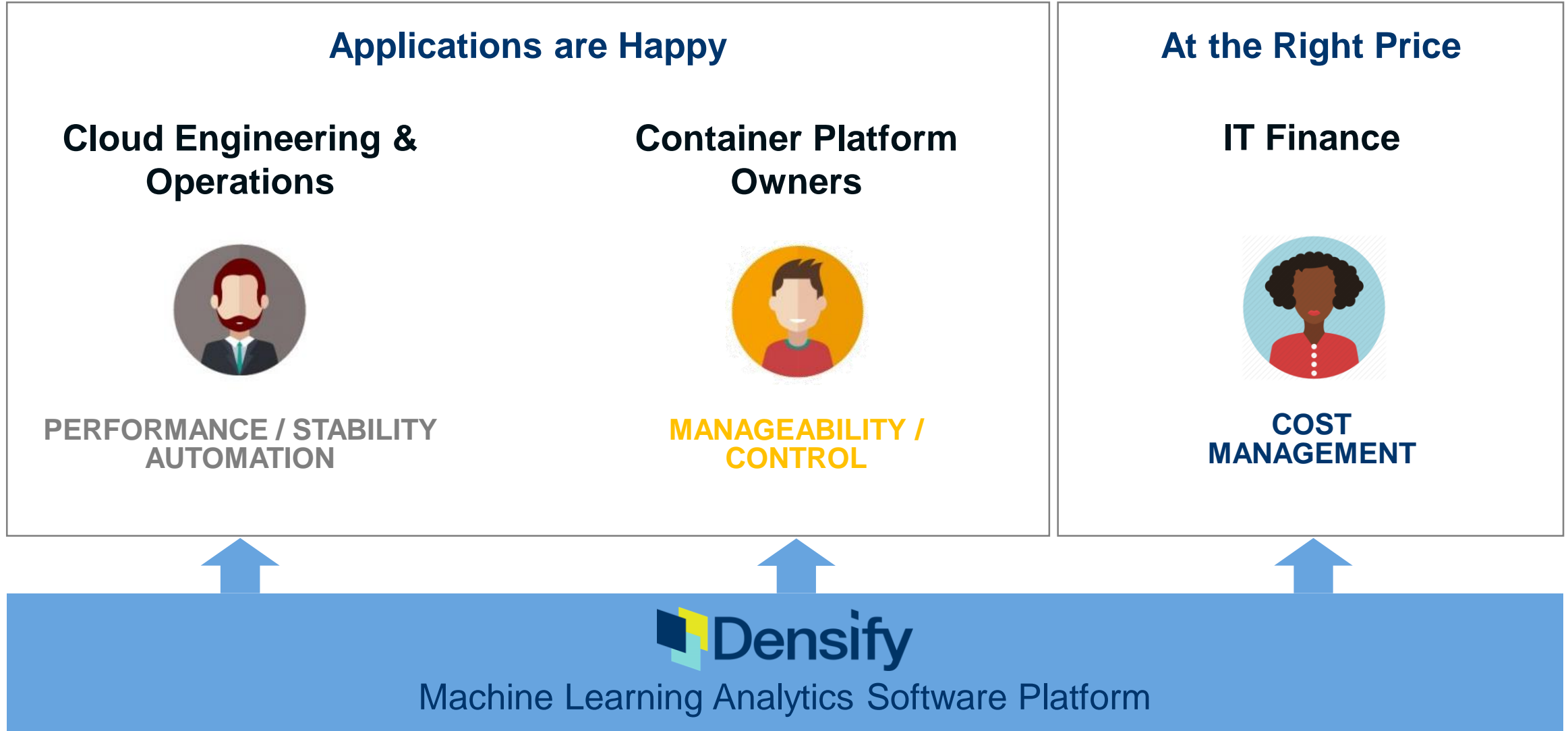**Ayman Gabarin**

SVP EMEA

Cloud Expo Europe

10 March 2020
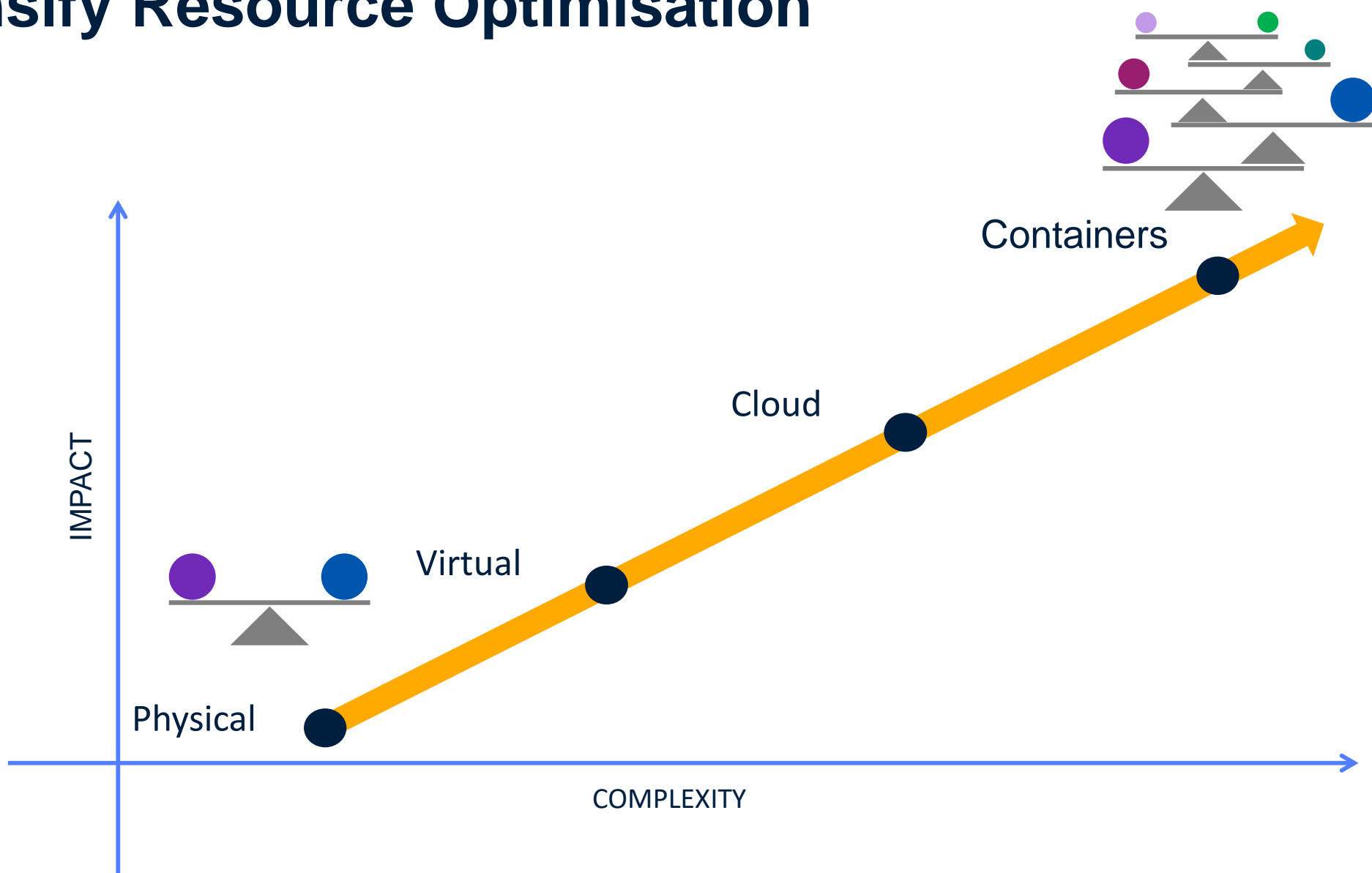
A Single Analytics Platform to Address Everyone's Needs

Applications are Happy

At the Right Price

Cloud Engineering & Operations

Container Platform Owners

IT Finance

PERFORMANCE / STABILITY AUTOMATION

MANAGEABILITY / CONTROL

COST MANAGEMENT

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Machine Learning Analytics Software Platform

Densify Resource Optimisation

IMPACT

COMPLEXITY

Physical

Virtual

Cloud

Containers

Optimizing Hybrid Cloud Resources

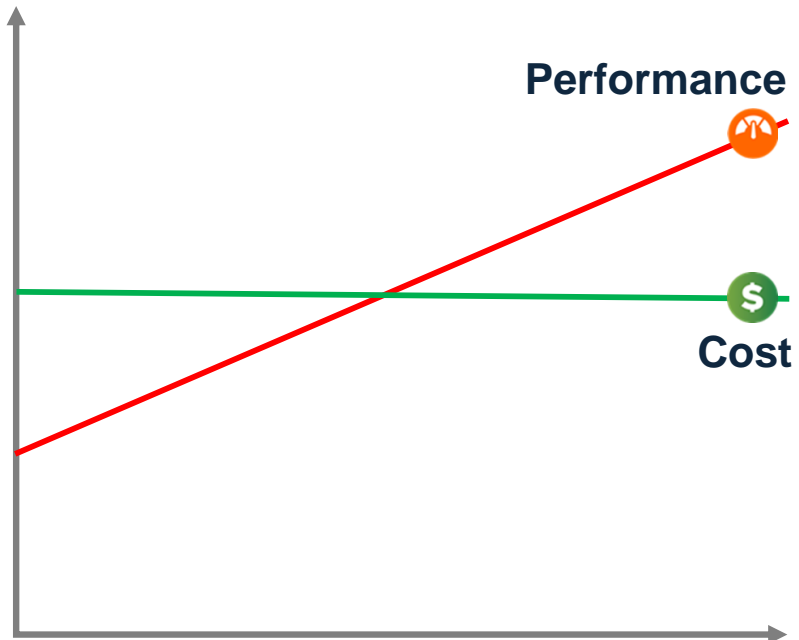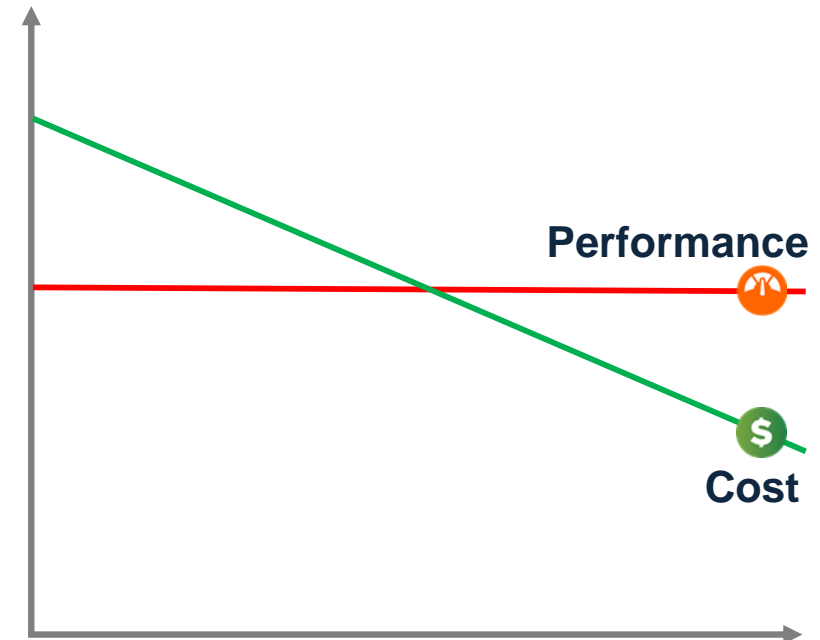| 1 | Resource Observability |
| 2 | Resource Optimisation |
| 3 | Procurement Optimisation |

What is "Optimal"?

Cloud Engineering & Operations / App Owners
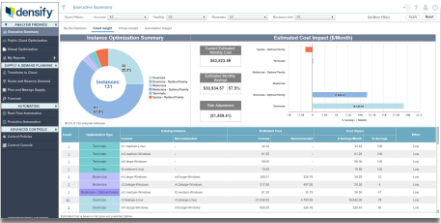
PERFORMANCE / AGILITY FIRST

IT Finance

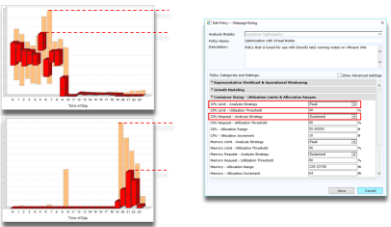**COST FIRST**

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Strategies & Tactics to Get It Right

Engineering Operations App Owners

 Performance & Stability

 Cost Appropriate

IT Finance

Instance Resource Optimisation
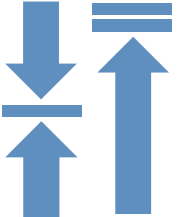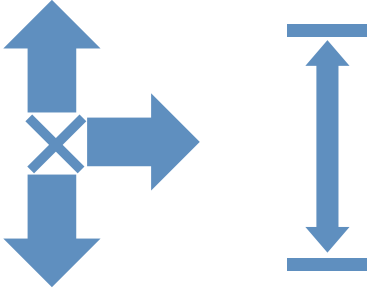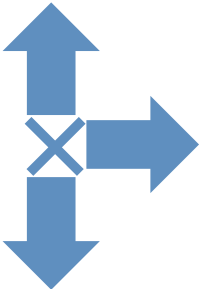
- Upsize
- Modernise
- Cross-Family
- Reclaim
- Terminate

Scale Group Optimisation

- Node Upsize
- Node Downsize
- Modernise
- Cross-Family
- Scaling Min/Max

Container Resource Optimisation

- Requests
- Limits
- Initial Values

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Predictive Analytics - How it Works

Fit for Purpose Policy

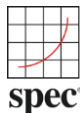**Business & Functional Constraints** (Tags)

Application Demand Patterns

MEM

CPU

I/O
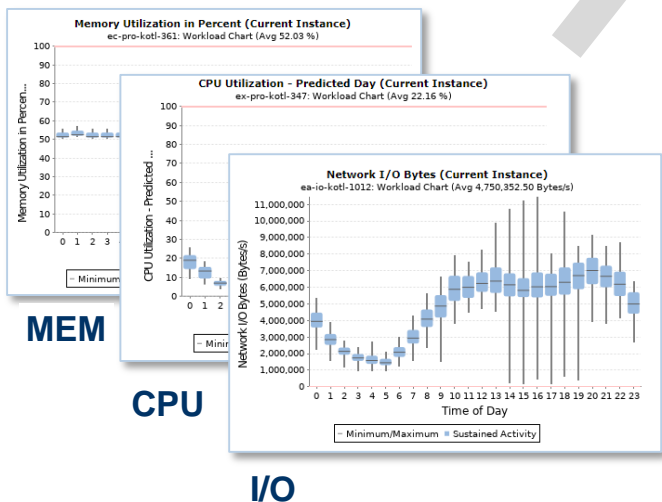
Infrastructure Characteristics

aws

Google Cloud Platform

Microsoft Azure

IBM Cloud

vmware

Cost & Savings

Performance Benchmarks

spec

Technical Rules & Effort

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Precise Resource Specifications

Cloud Resource Optimisation	Virtual & Container Optimisation	Migration Optimisation	Financial Optimisation

Savings / RI

%

Answers can go to

Collaboration

People / Reports

ITSM / Ticketing

servicenow

Jira

Automation API's and Infrastructure as Code

HashiCorp Terraform

CloudFormation

ANSIBLE

vmware
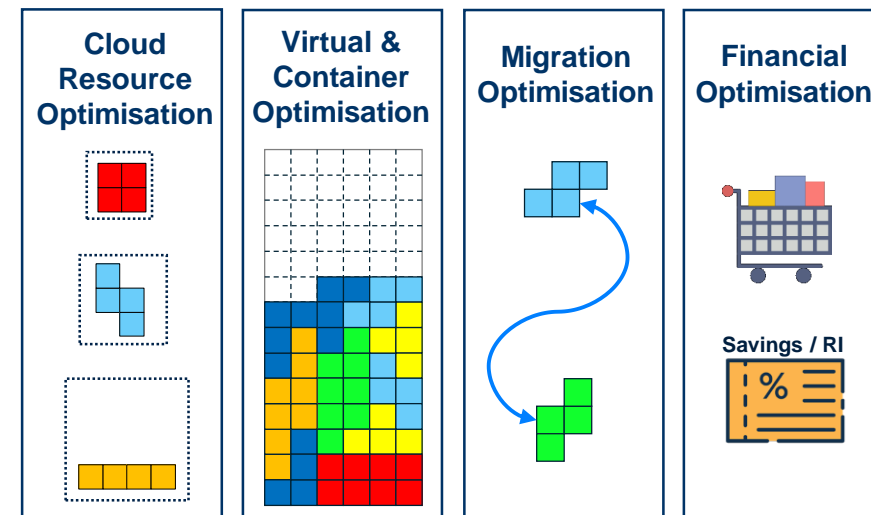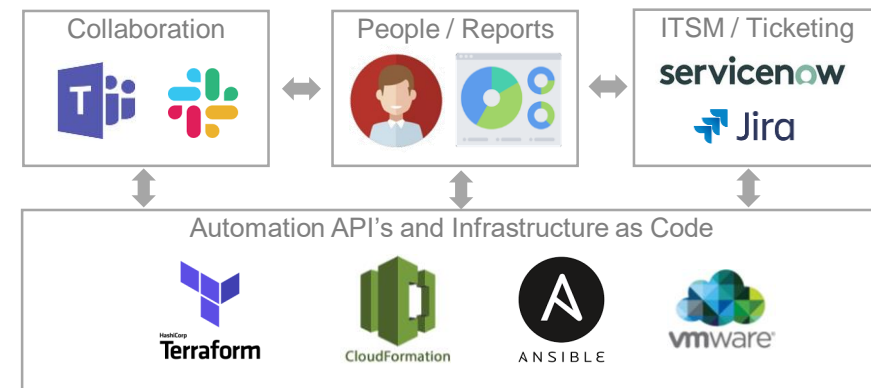
The Hybrid Journey - Customer Examples

Financial
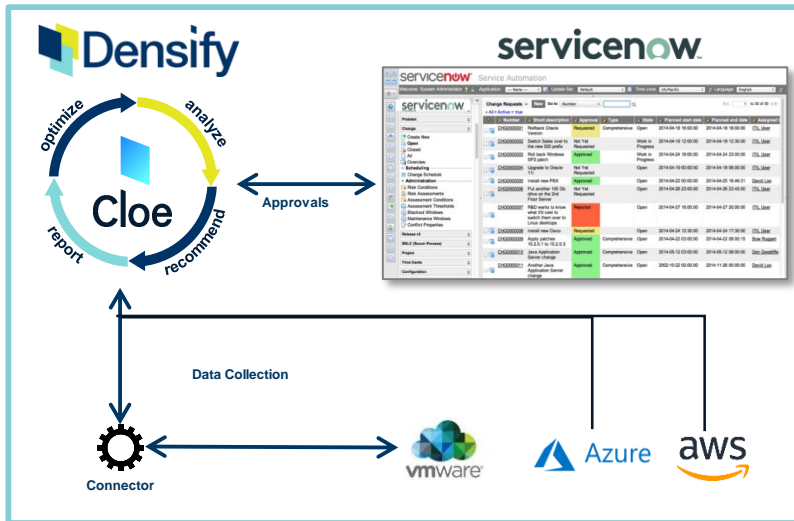
80,000 Instances

Tech
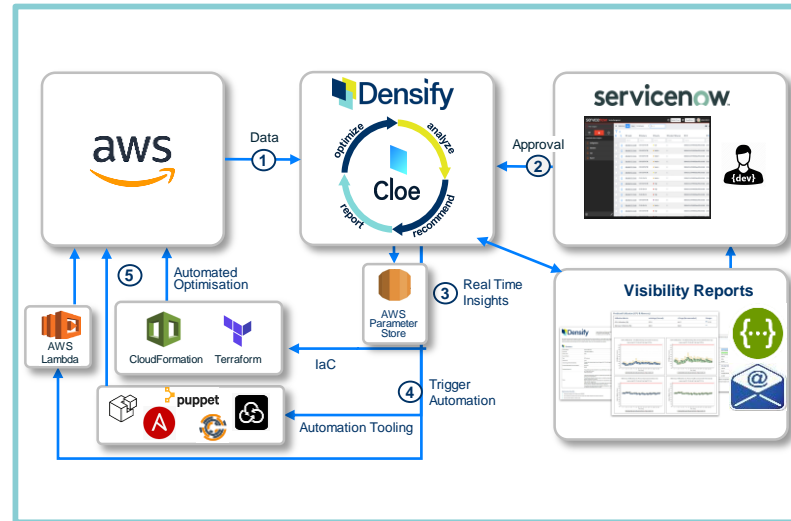
> $20M in annual spend

Retail
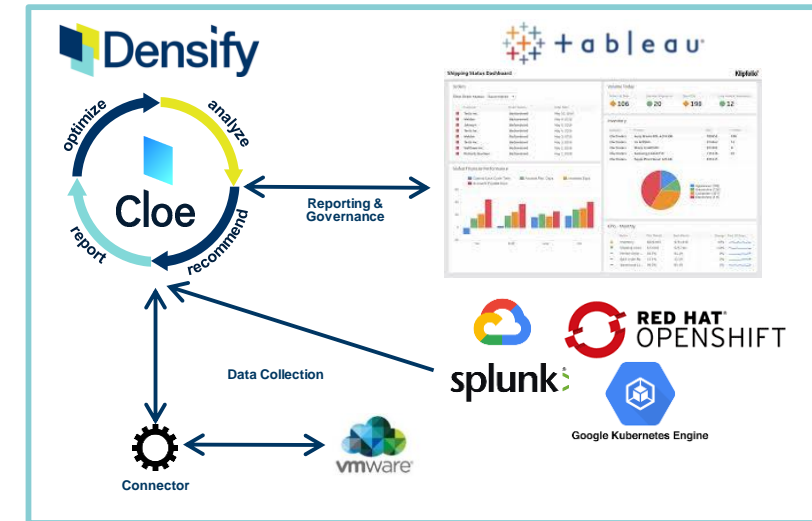
47,000 Instances

Example Cloud Optimisation Analysis and Answers

Step 1: Build Confidence with the App Owner
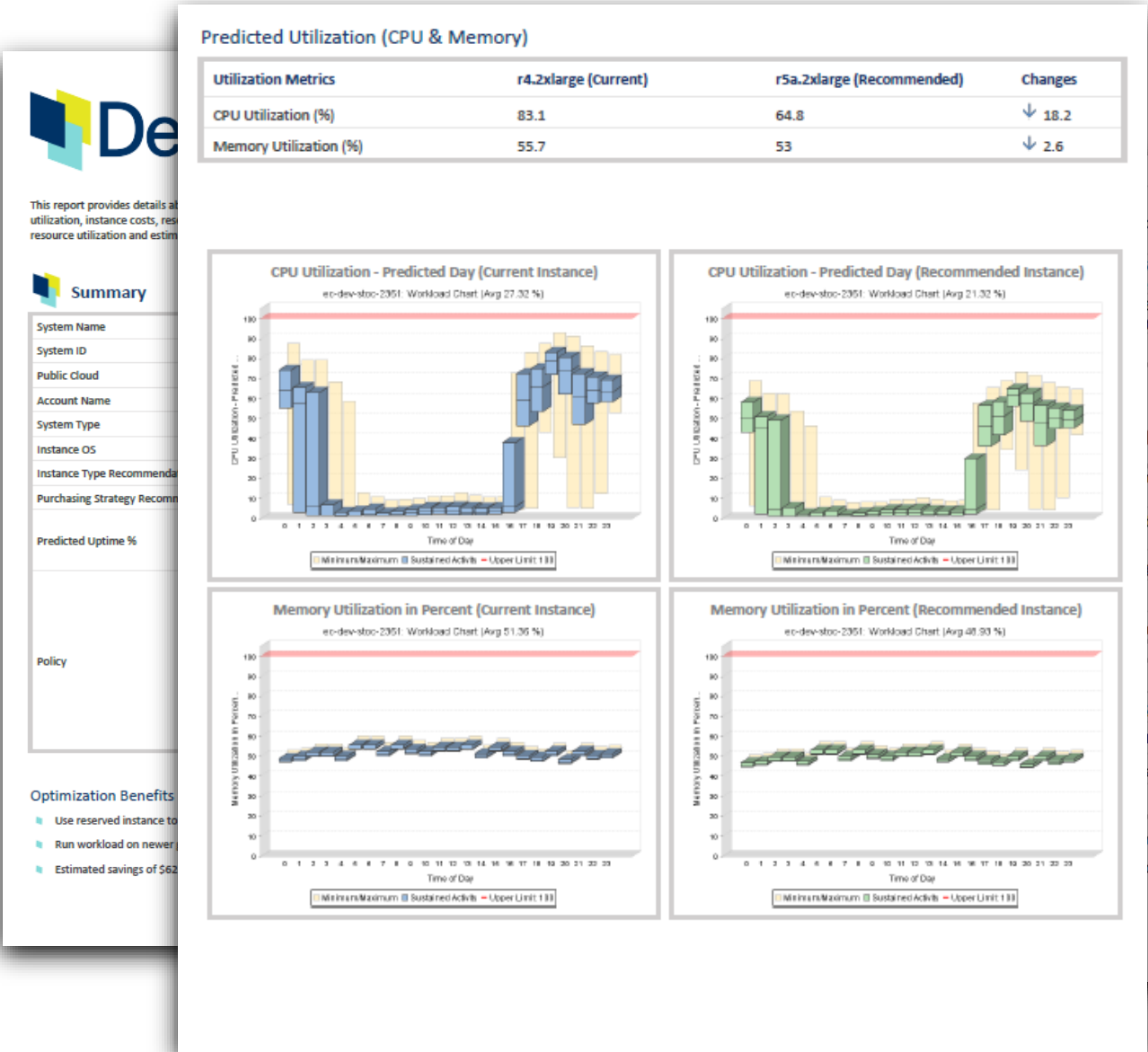
Step 2: Enable CI/CD/"CO"

Continuous Optimisation with "Infrastructure as Code"

?

Cloud Engineering

```
1    provider "aws" {
2      region = "${var.aws_region}"
3    }
4
5    resource "aws_instance" "web" {
6        name = "Web Server"
7
8        instance_type = "m4.large"    = "Purchasing as Code"
9
10       ami = "${lookup(var.aws_amis, var.aws_region)}"
11   }
```
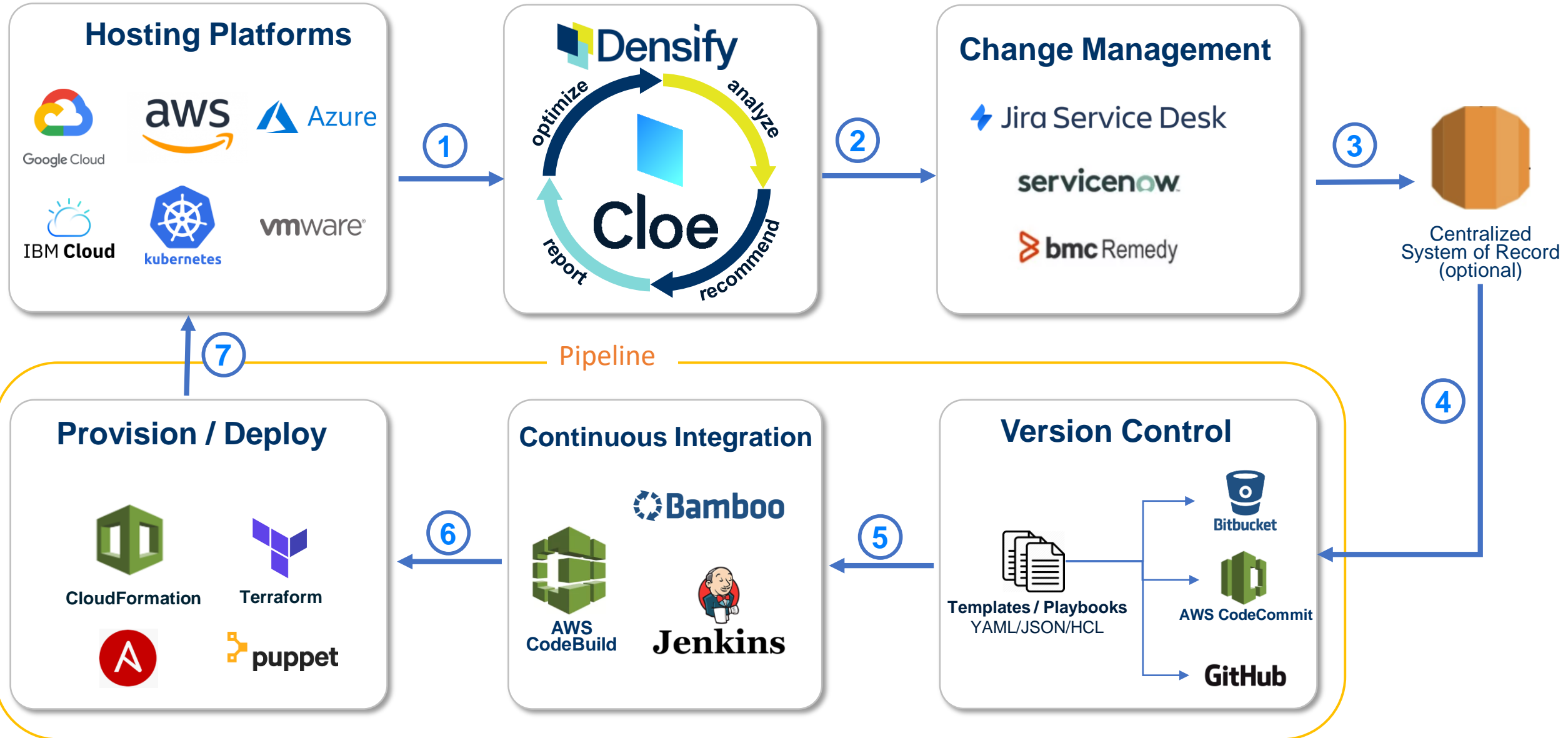
CloudFormation

HashiCorp Terraform

Densify

Continuous Optimisation with "Infrastructure as Code"

Cloud Engineering

```
1    provider "aws" {
2      region = "${var.aws_region}"
3    }
4
5    resource "aws_instance" "web" {
6        name = "Web Server"
7
8        instance_type = "m4.large"
9        instance_type =["${aws_instance.tags:Densify-optimal-instance-type}"]
10
11       ami = "${lookup(var.aws_amis, var.aws_region)}"
12   }
```

From "hard coded guess" to "self optimising"

Step 3: Complete Self-Service

■ **Subscribe to what I care about**

■ **Get Optimisation Recommendations**

■ **Ensure my Apps are always Happy**

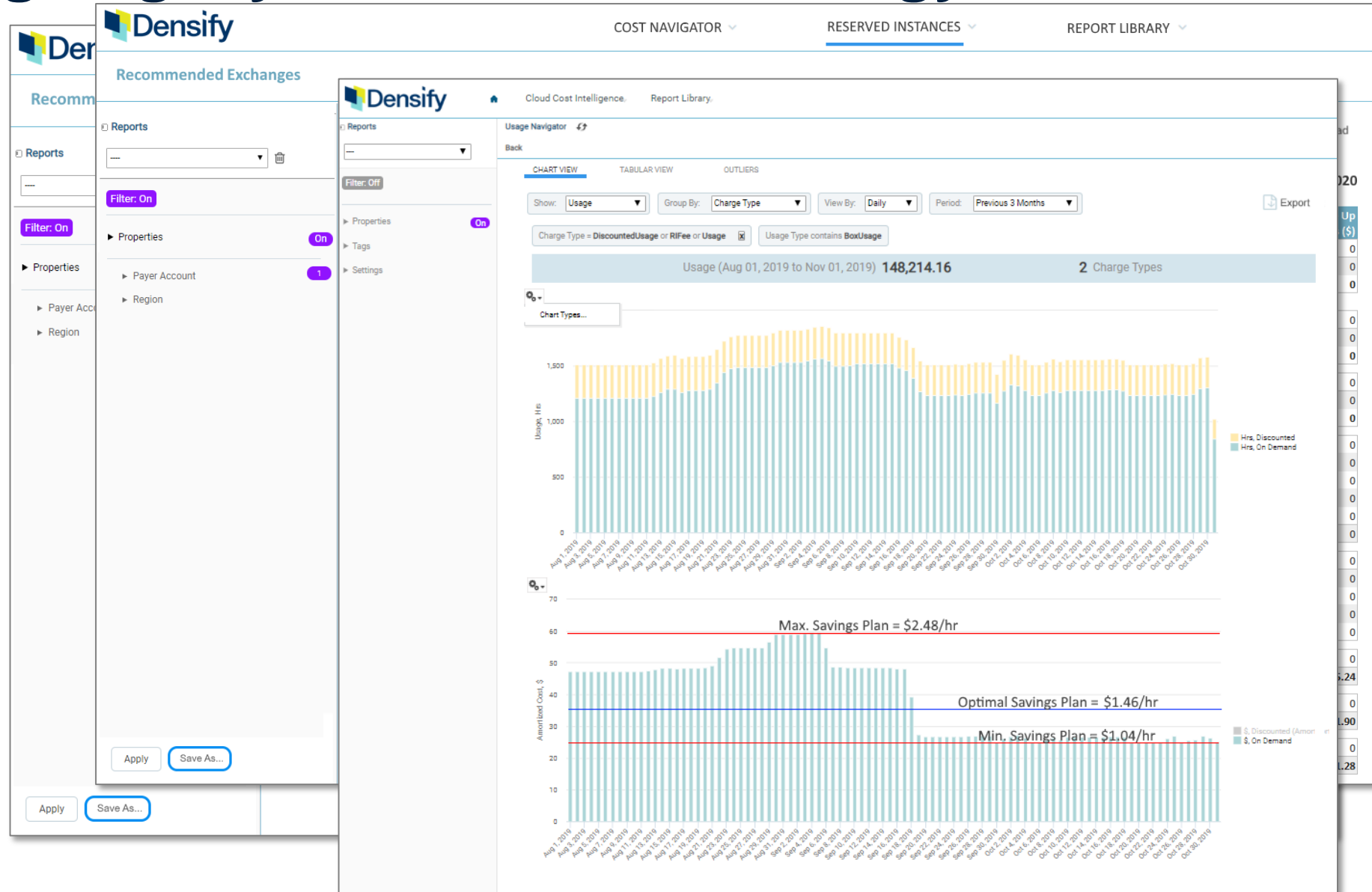# What about aligning my Procurement Strategy?

IT Finance

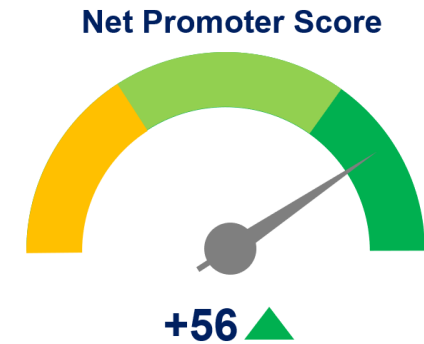**Constantly leverage the right RI portfolio**

Optimise with Savings plans

So…what's involved in trying it?

Rapid setup then
get back to day job

No software to learn,
we'll show you around

Net Promoter Score

+56 ▲

We think you'll love it just
like our customers do

Densify

Densify

Thank you!