



# Hybrid Cloud & Container Resource Optimisation

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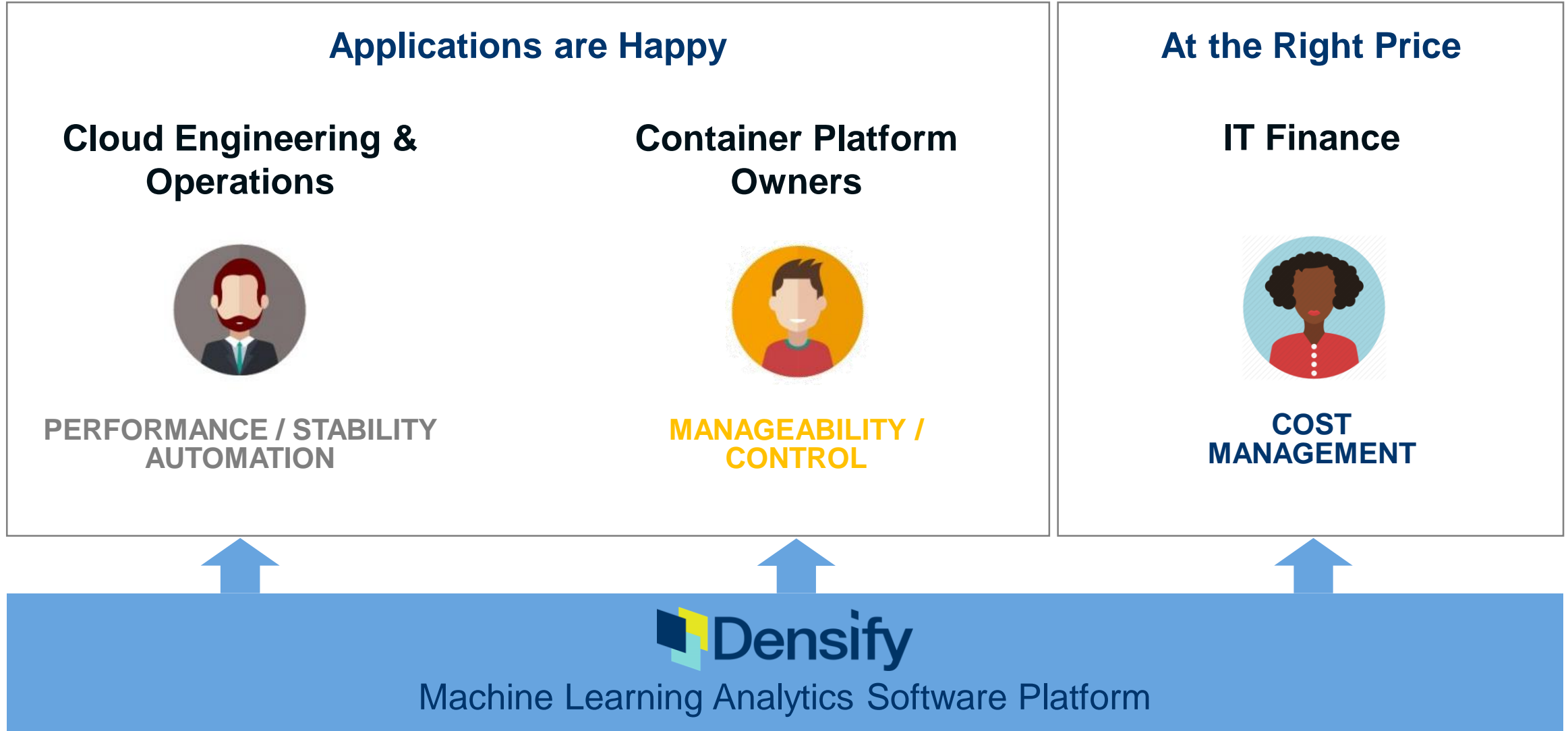
**Ayman Gabarin**  
**SVP EMEA**

## Cloud Expo Europe

**10 March 2020**

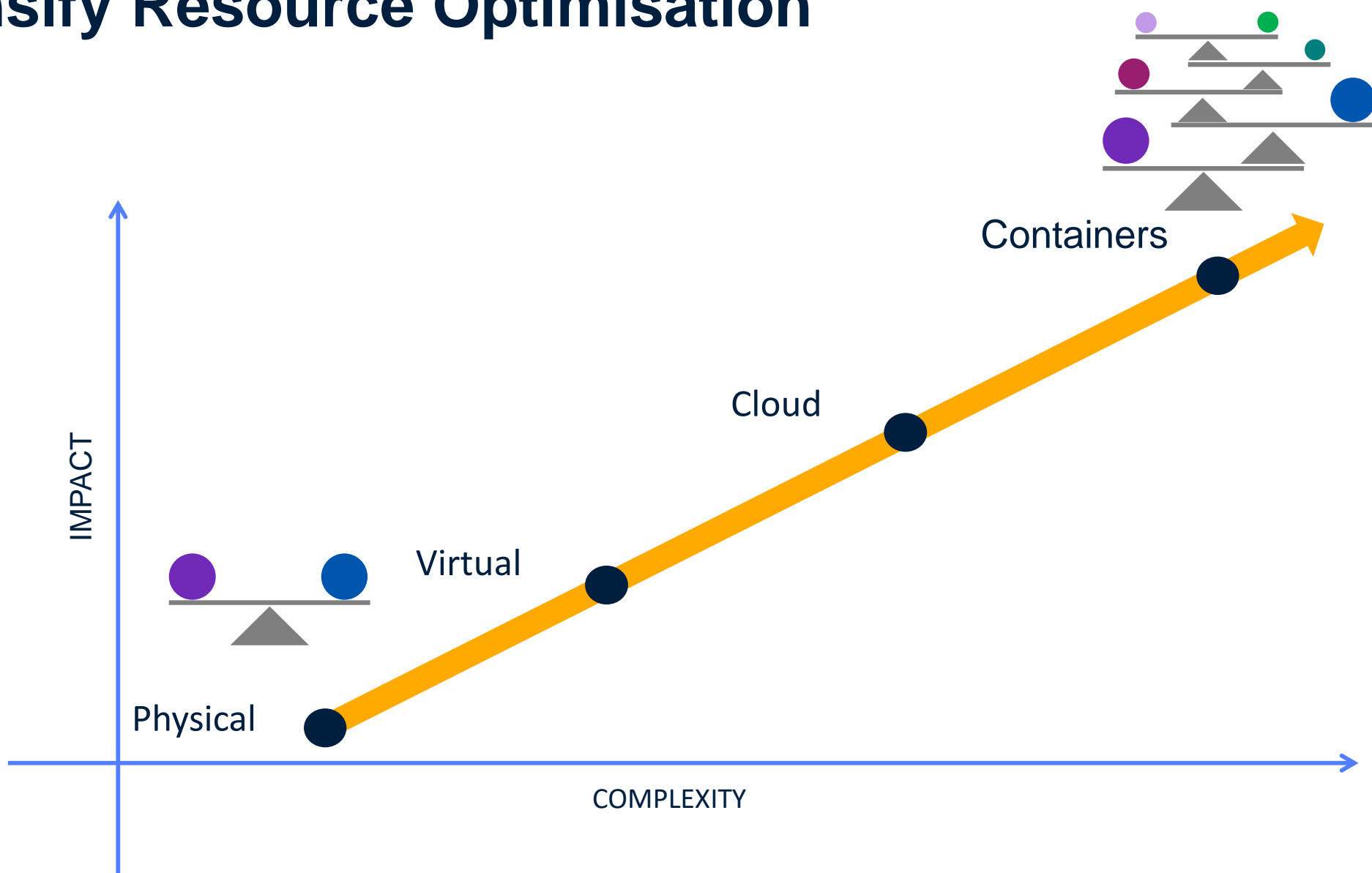


# A Single Analytics Platform to Address Everyone's Needs





# Densify Resource Optimisation





# Optimizing Hybrid Cloud Resources



1

Resource Observability



2

Resource Optimisation



3

Procurement Optimisation

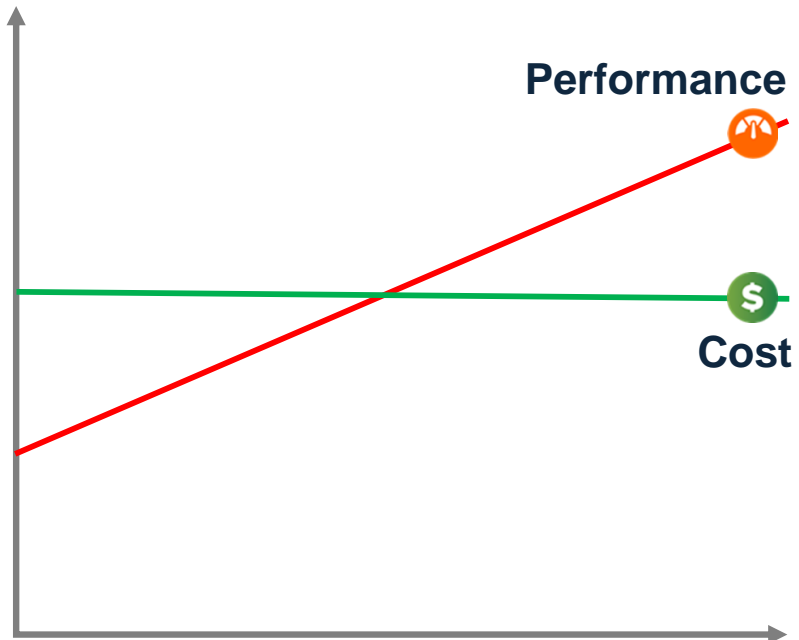


# What is “Optimal”?



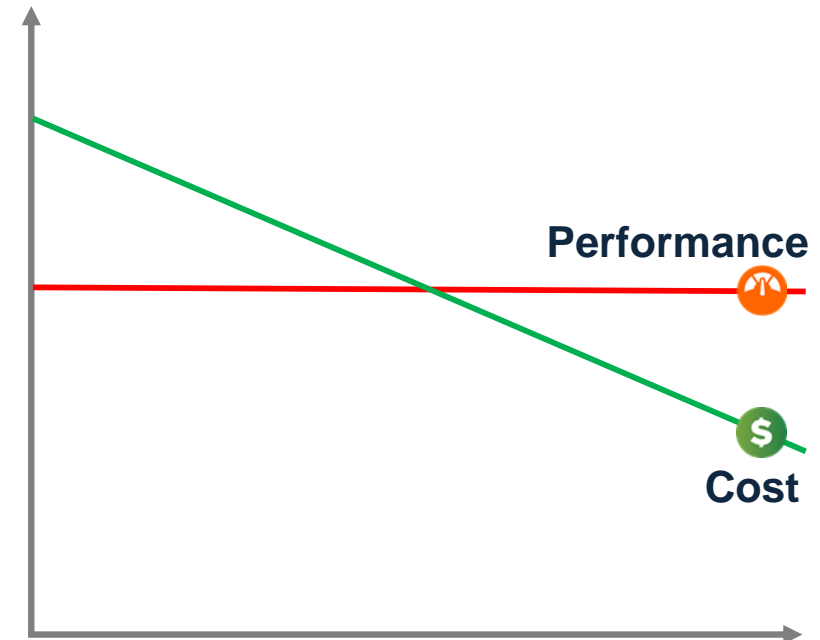
Cloud Engineering &  
Operations / App Owners

**PERFORMANCE / AGILITY FIRST**



IT Finance

**COST FIRST**

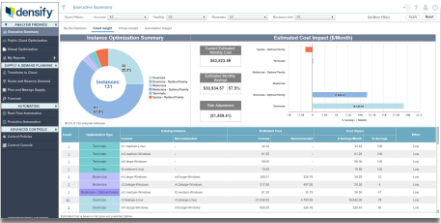




# Strategies & Tactics to Get It Right



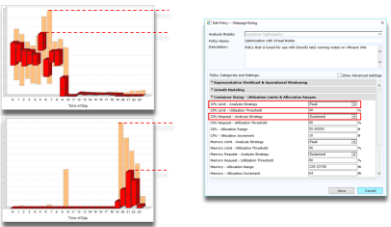
Engineering  
Operations  
App Owners



Instance Resource  
Optimisation



Scale Group  
Optimisation



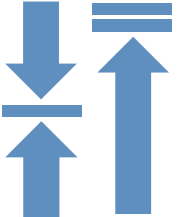
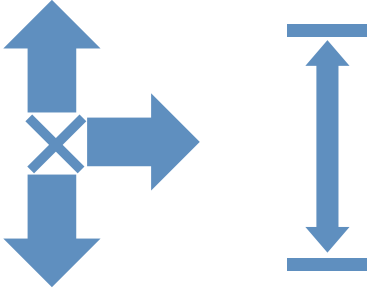
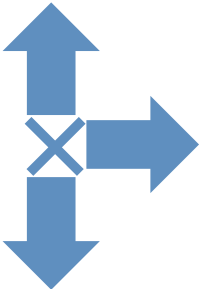
Container Resource  
Optimisation



Performance &  
Stability



Cost Appropriate



IT Finance

- Upsize
- Modernise
- Cross-Family
- Reclaim
- Terminate

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

- Requests
- Limits
- Initial Values



# Predictive Analytics - How it Works

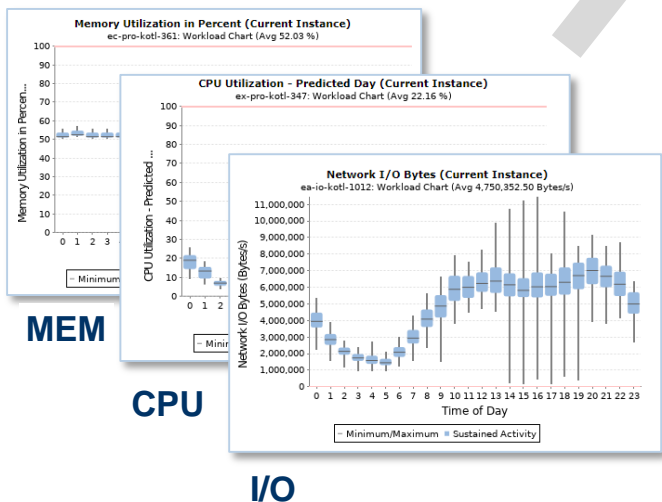
Fit for Purpose  
Policy



Business & Functional  
Constraints (Tags)



Application  
Demand Patterns



## Densify

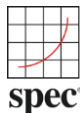
Infrastructure Characteristics



Cost & Savings



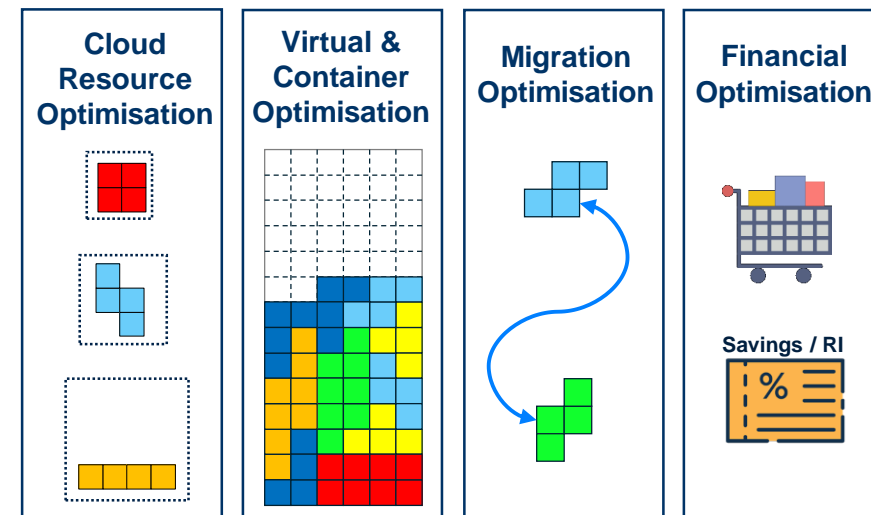
Performance  
Benchmarks



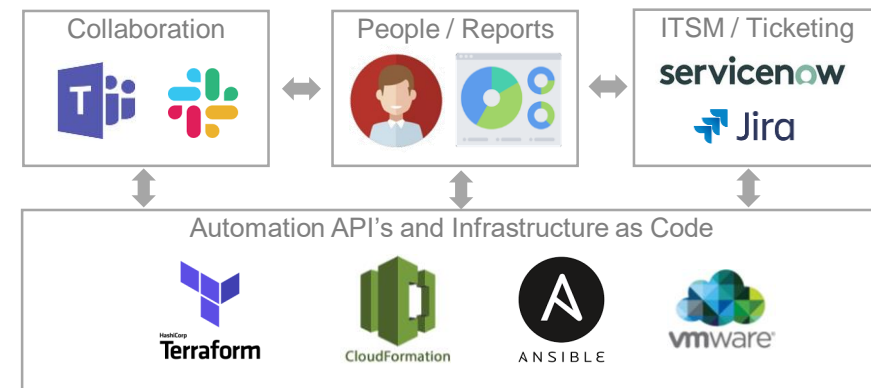
Technical Rules  
& Effort



Precise Resource Specifications



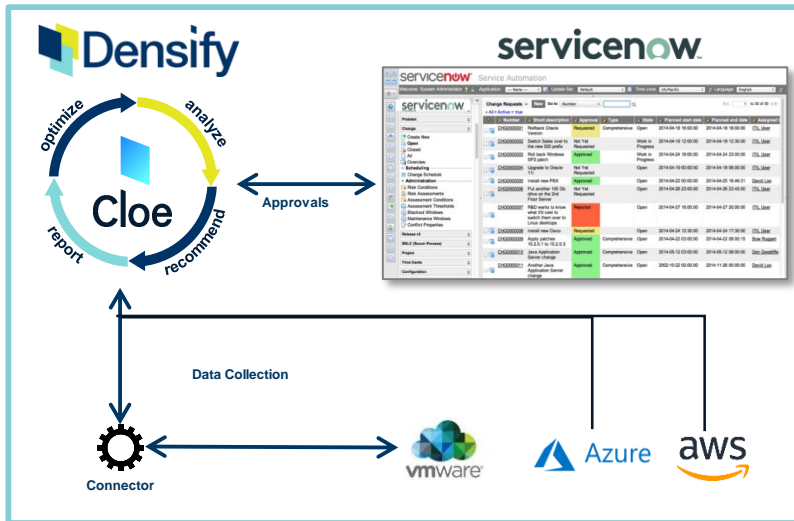
Answers can go to





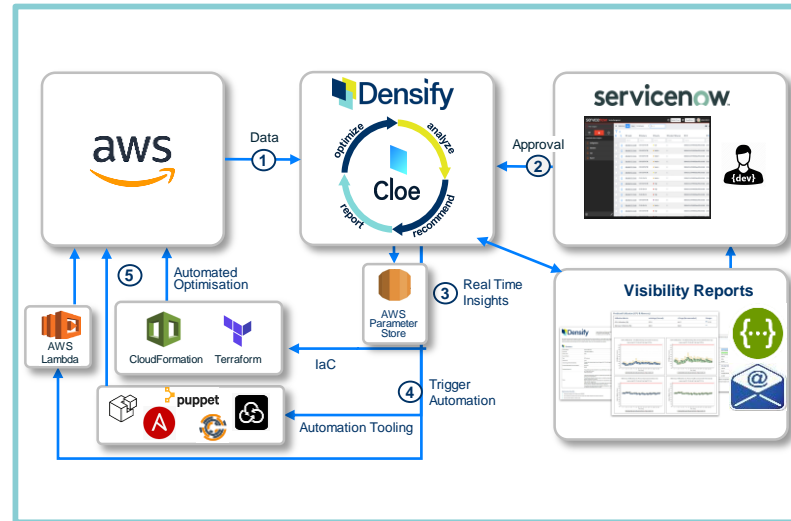
# The Hybrid Journey - Customer Examples

## Financial



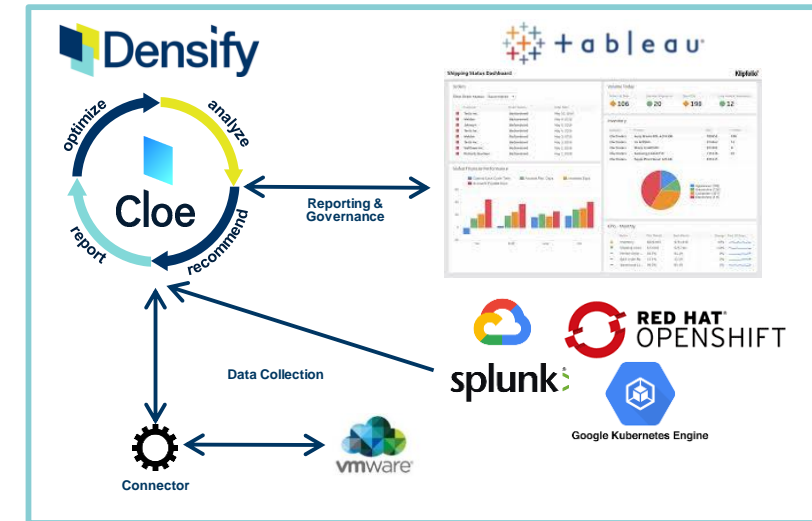
80,000 Instances

## Tech



> \$20M in annual spend

## Retail



47,000 Instances



# Example Cloud Optimisation Analysis and Answers



PUBLIC CLOUD ▾ PRIVATE CLOUD ▾ CONTAINERS DEMAND PLANNING ▾ AUTOMATION ▾ MY REPORTS ▾



## EC2 Instance Optimization Details

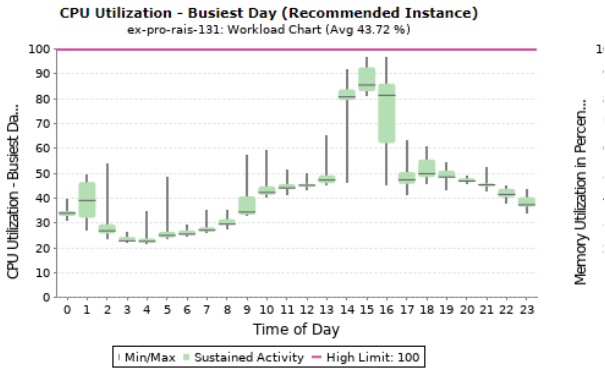
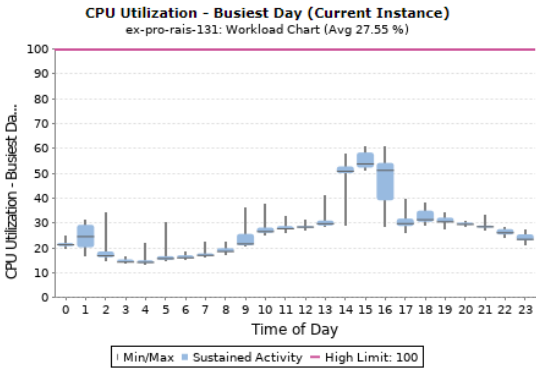
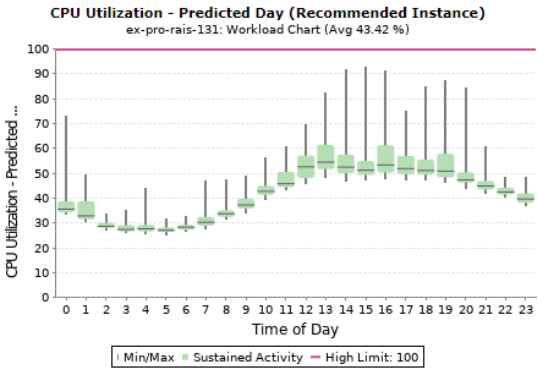
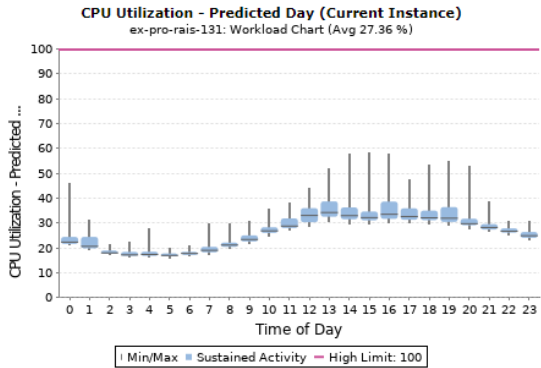
Sort by Overall Status & Optimization Type ▾ 1 Instances \$48 Savings/Month

Environment	Cluster	System	System ID	Overall Status	Optimization Type	Recommendation Reason	Current Instance Type	Current RI Coverage (%)	Recommended Instance Type	Defer Recommendation Until Current RI Coverage Expires ?	Current RI Expiry Date
524756828598	us-east-1c	<a href="#">ex-pro-rai-131</a>	i-036ddcaa03393433b	Savings Opportunity	Downsize - Optimal Family	Less expensive Instance Type can be used for this system	m4.xlarge-Linux	0	r5a.large-Linux	No	-



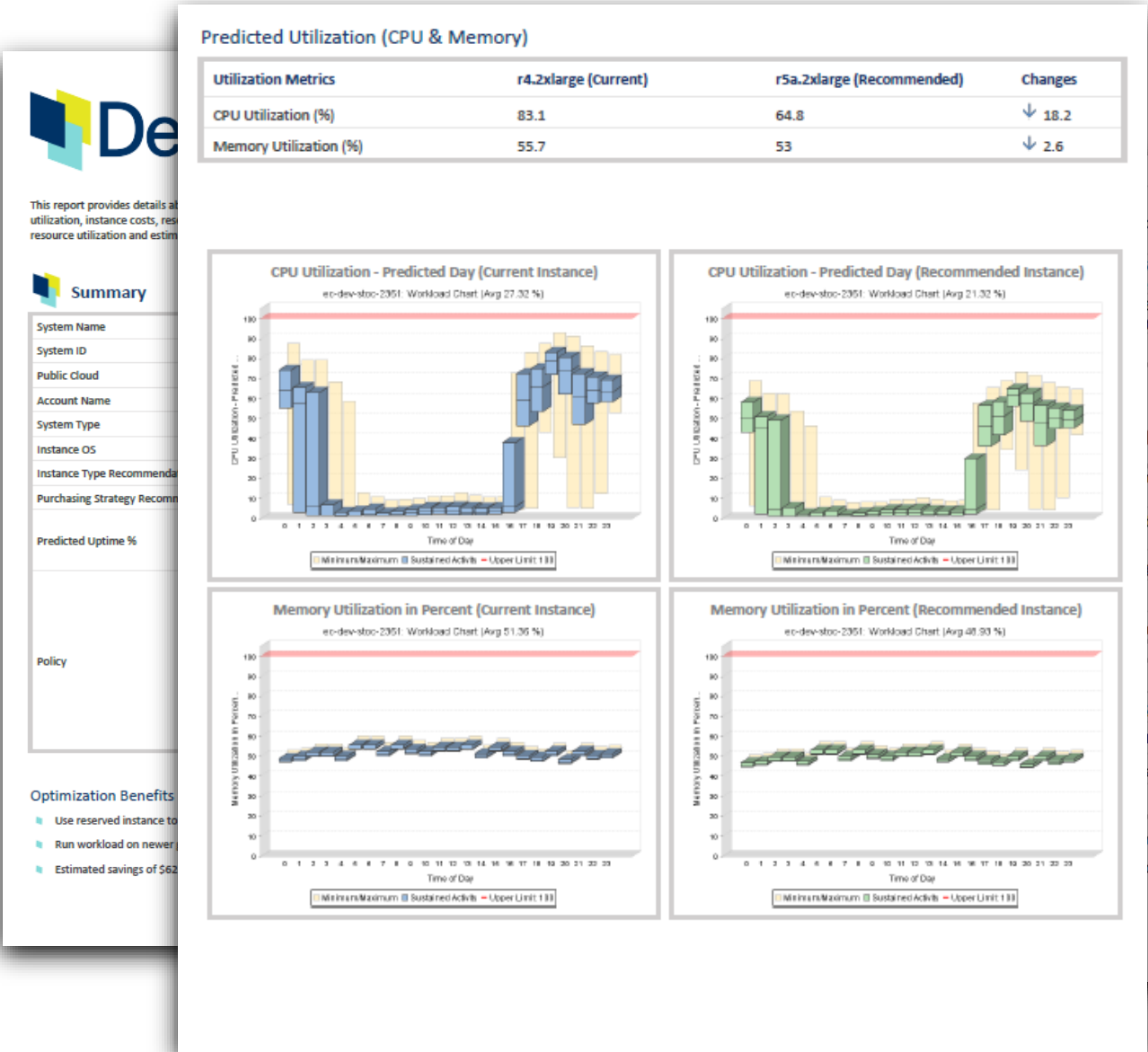
Selected: 1			Net Selected Total:
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Resource Utilization Metrics: Cloud System Information Effort Details Predicted Uptime Details Approvals Edit System Attributes



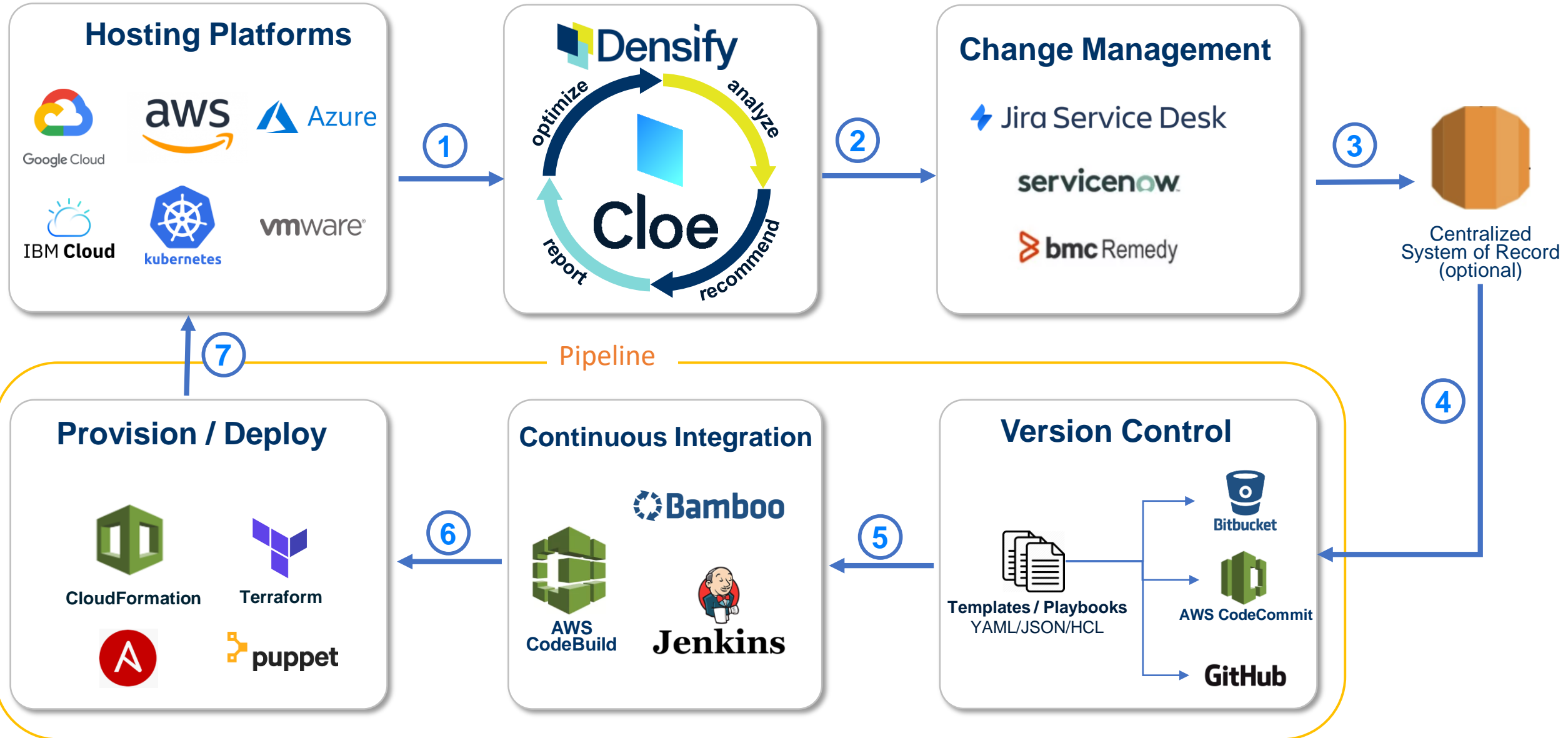


# Step 1: Build Confidence with the App Owner





# 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 }
```





# 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



Cloud Engineering



App Owner

- Subscribe to what I care about
- Get Optimisation Recommendations
- Ensure my Apps are always Happy

The screenshot shows a Slack interface with a sidebar on the left containing a list of channels. The main area displays the #densify-notifications channel. A message from the Densify app is visible, titled "Densify Notifications" and dated "Today". The message content lists several notifications for the "Mobile-Service" app, including RDS, EC2, and ASG instances, each with a recommended action (Downsize, Upsize, Terminate, Just Right). To the right of each notification is a dropdown menu with options like "Select an action", "Approve automated change to t3a.large", and "Suppress further notifications". The bottom of the screen shows a text input field for sending a message to the channel.



# What about aligning my Procurement Strategy?

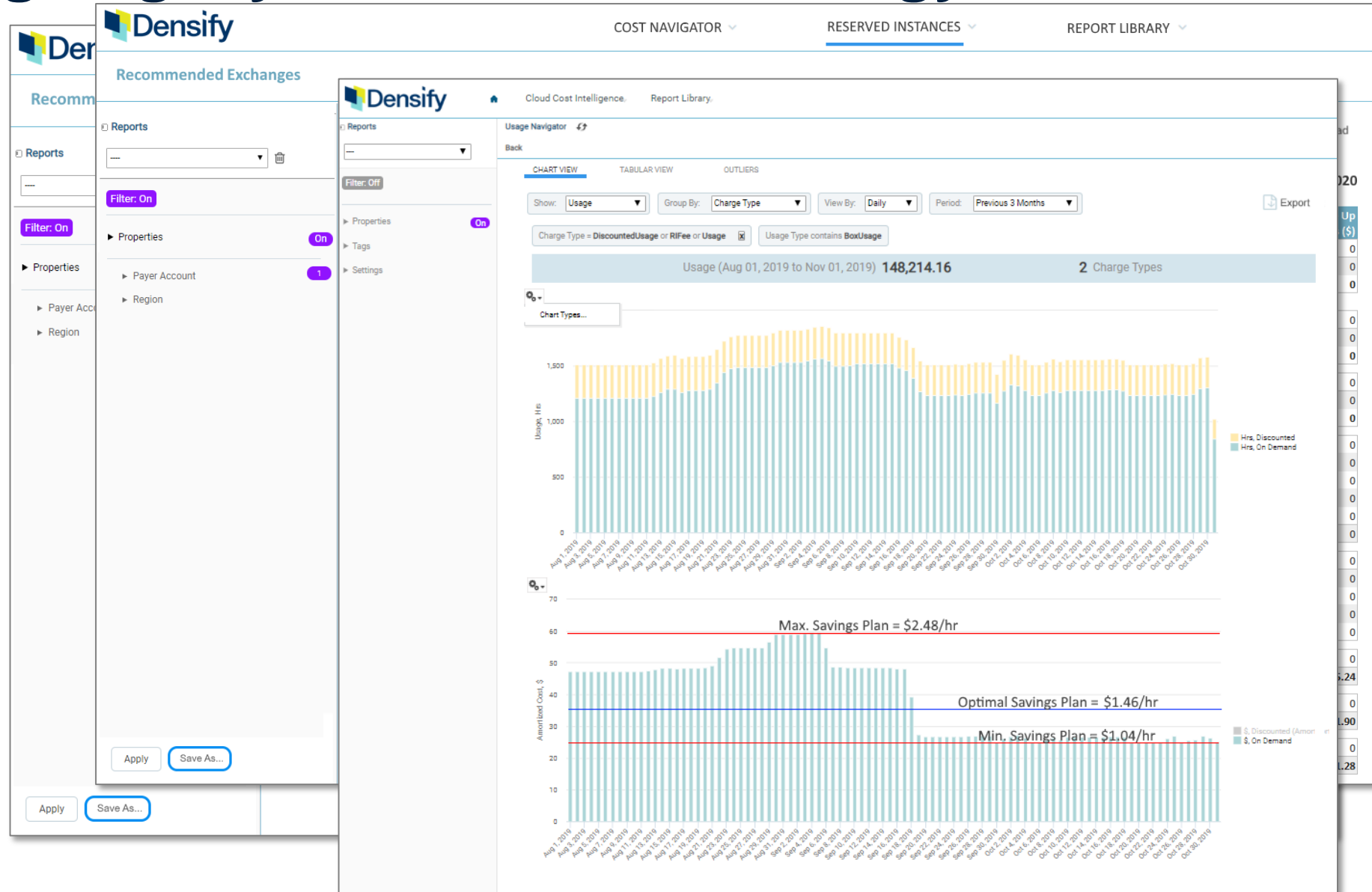


IT Finance



Constantly leverage  
the right RI portfolio

Optimise with Savings  
plans





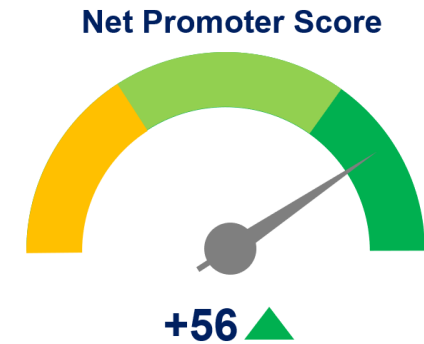
# So...what's involved in trying it?



Rapid setup then  
get back to day job



No software to learn,  
we'll show you around



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





**Thank you!**

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