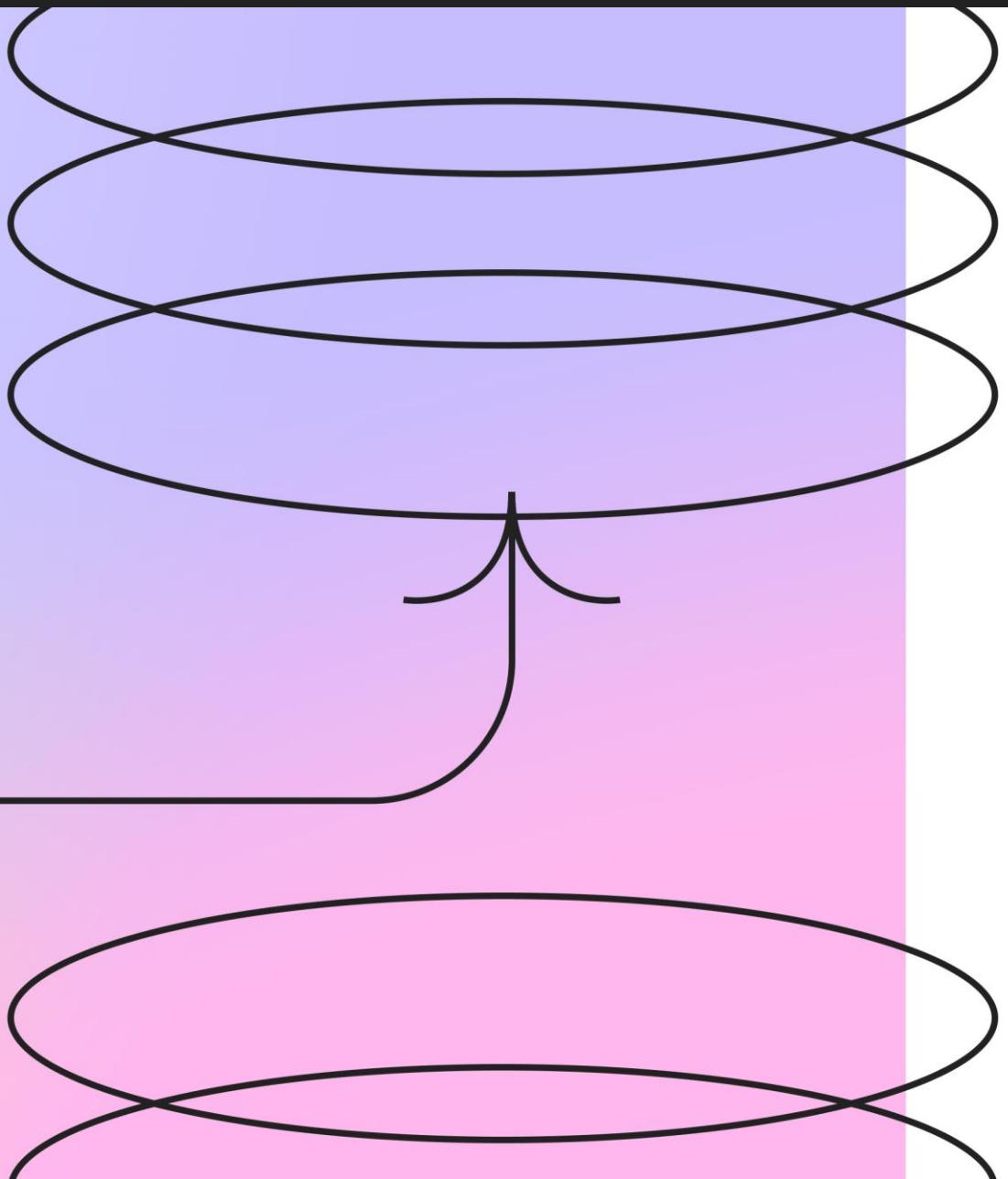




● A CLOUD CONFERENCE



TUESDAY,  
DECEMBER 13

© COLUMBUS,  
OHIO

# Cloud

Thank you!



T LEADERS  
— ALUMNI GROUP —





**U2 LIVE; SPRINGSTEEN PREVIEW**

ISSUE 402 • APRIL 1996 • \$3.95 • CAN \$6.95

# Rock Stone

NEW FACES  
OF ROCK  
• 1 · 9 · 9 · 2 •



ORPORAT  
MAGAZINE  
STILL  
SUCK

# NIRVANA

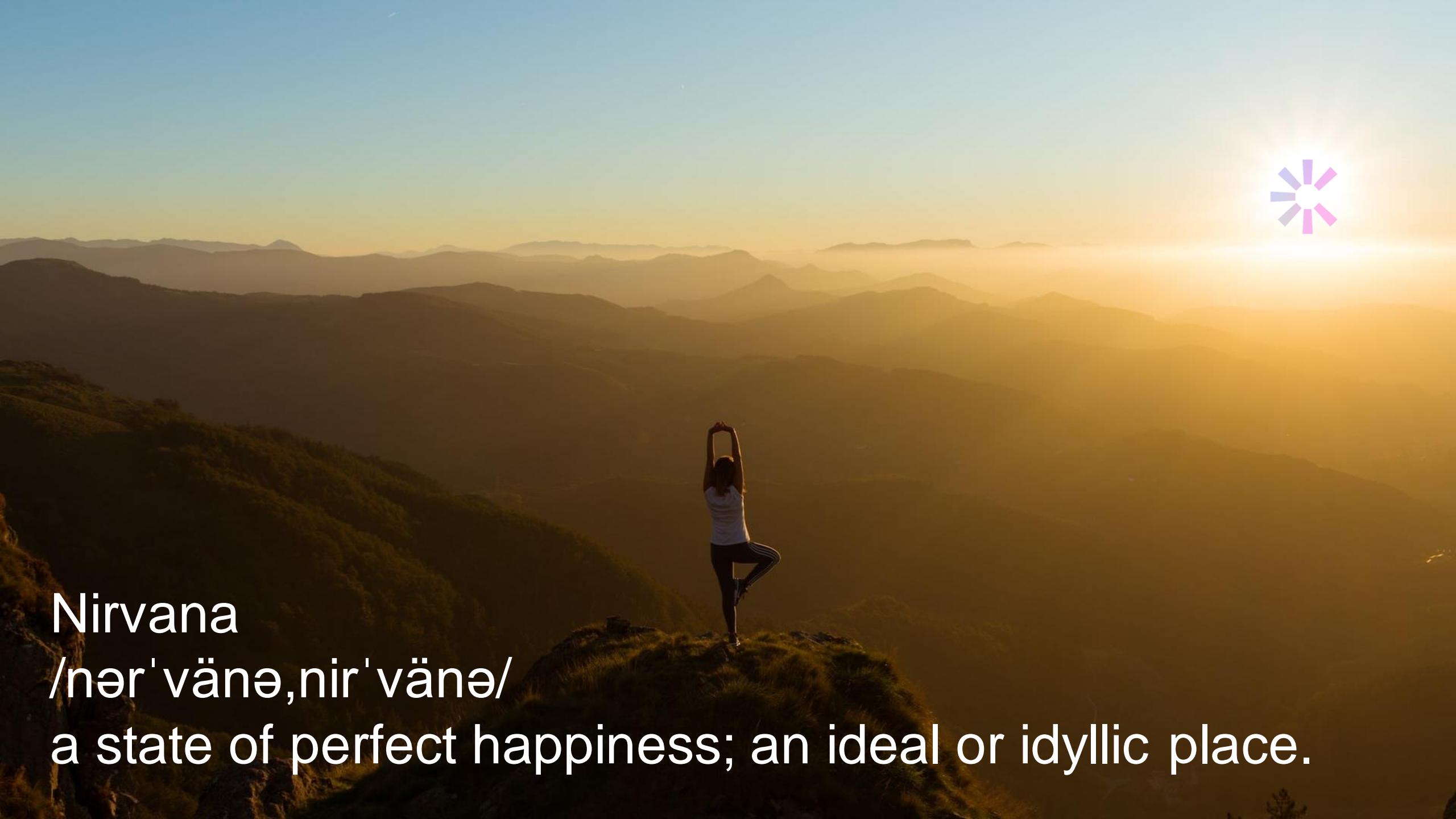


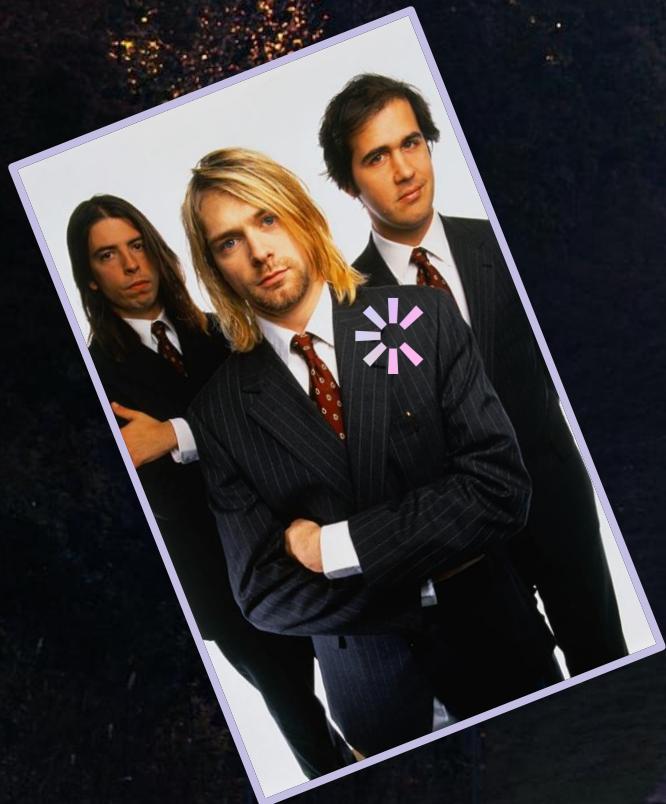


Nirvana

/nər'vänə, nir'vänə/

a state of perfect happiness; an ideal or idyllic place.



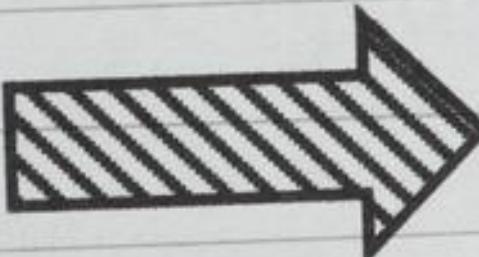


# The Promise(s) of Cloud Computing





Free Lunch  
This Way







MIND

TUESDAY,  
DECEMBER 13



Cloud Economics  
Cloud Sustainability  
Cloud Security  
Cloud Agility  
Cloud Innovation

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OHIO

# \*The Cathedral + the Bazaar





# Open Source

*Creating a Community-CCOE*

IDEAS

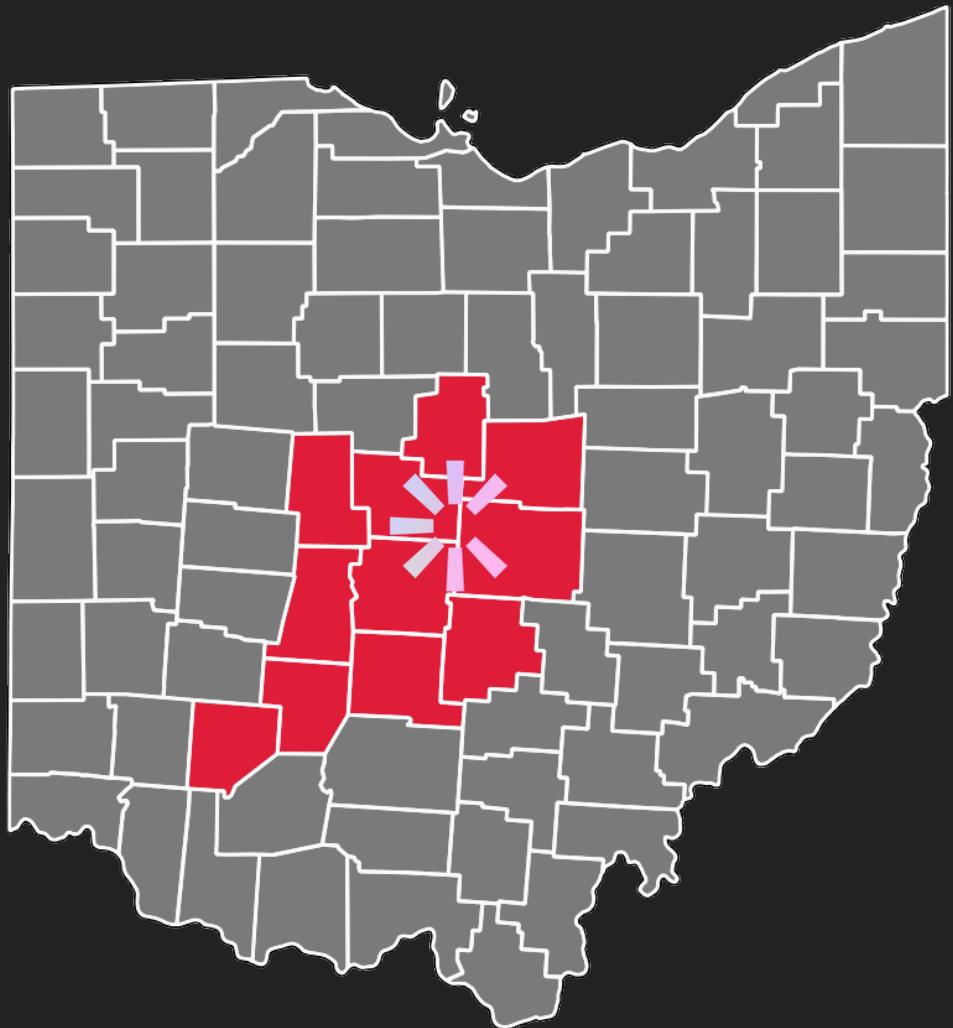
SOLUTIONS

PATTERNS

INNOVATIONS

CULTURE

COMMUNITY





# Cloud

# Cloud

# Cloud

# Cloud

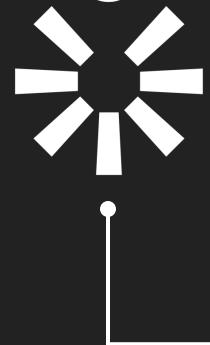
# Cloud

## Cloud nirvana AGENDA

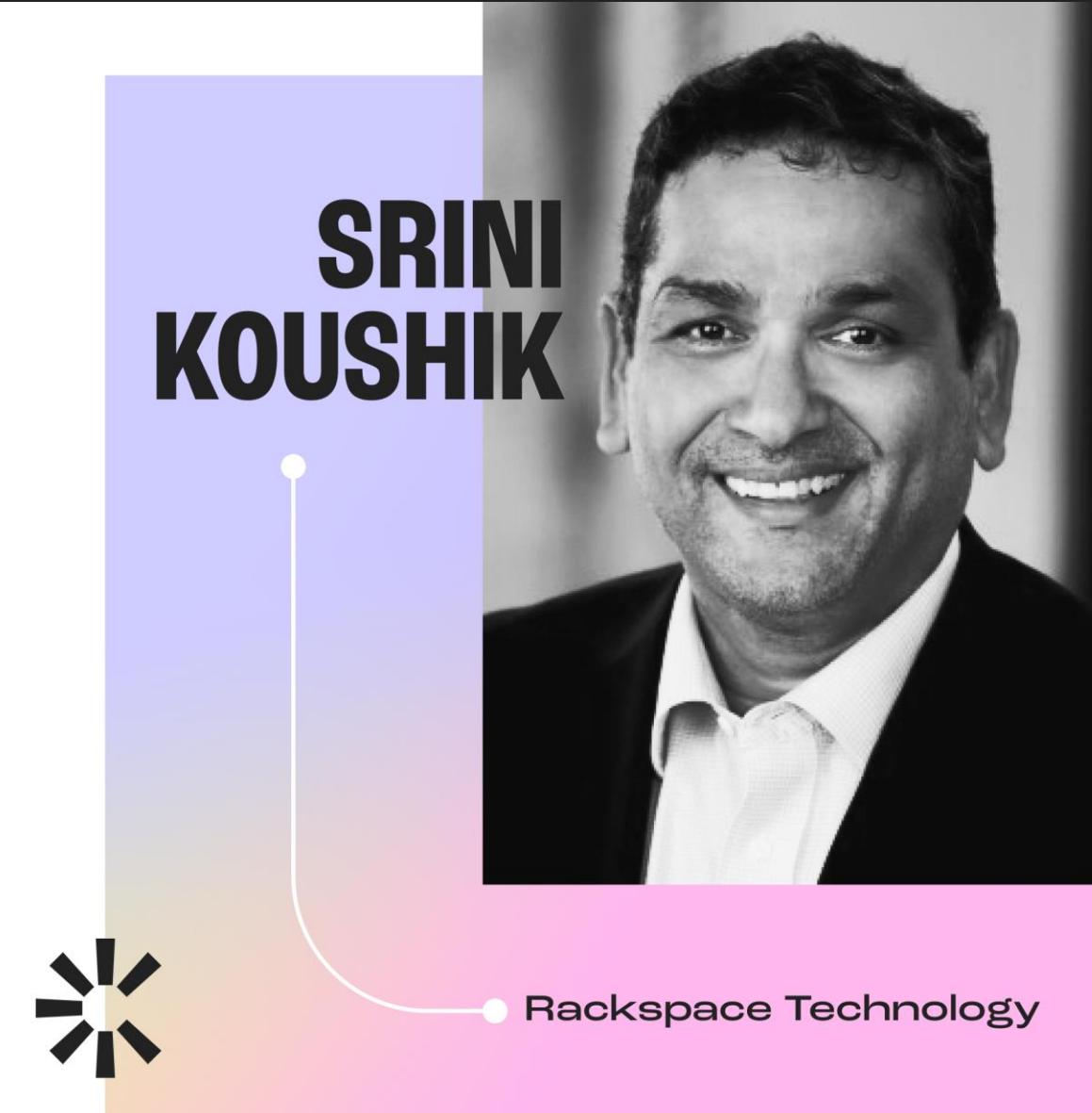
- 12:30–1:00      Keynote, Cloud Sustainability, *Srini Koushik*
- 1:00–1:45      Panel discussion, Why Cloud? *Jim Shingler, Ray Bajaj, Patrick Farrell + Moderated by Steve Gruetter*
- 1:45–2:00      Break! *Feel free to visit the “Chalk Talk” (Seeing Plaid) Room*
- 2:00–2:45      Panel, App Dev, Agility & Innovation in the Cloud, *Chris Judd, Patrick Farrell, Jim Shingler + Moderated by Ben Blanquera*
- 2:45–3:15      Strategic Optimization, *Ursula Laveck*
- 3:15–3:30      Break! *Feel free to visit the “Chalk Talk” (Seeing Plaid) Room*
- 3:30–4:15      Panel, Cloud Security, *Doug Hoke, Jana Moore, Nathan Case, + Moderated by Jim Shingler*
- 4:15–4:45      Cloud Nirvana! *Sean Erikson + Patrick Farrell*
- 5:00              Adjourn + Happy Hour!



# KEYNOTE SPEAKER



cLOUD NIRVANA



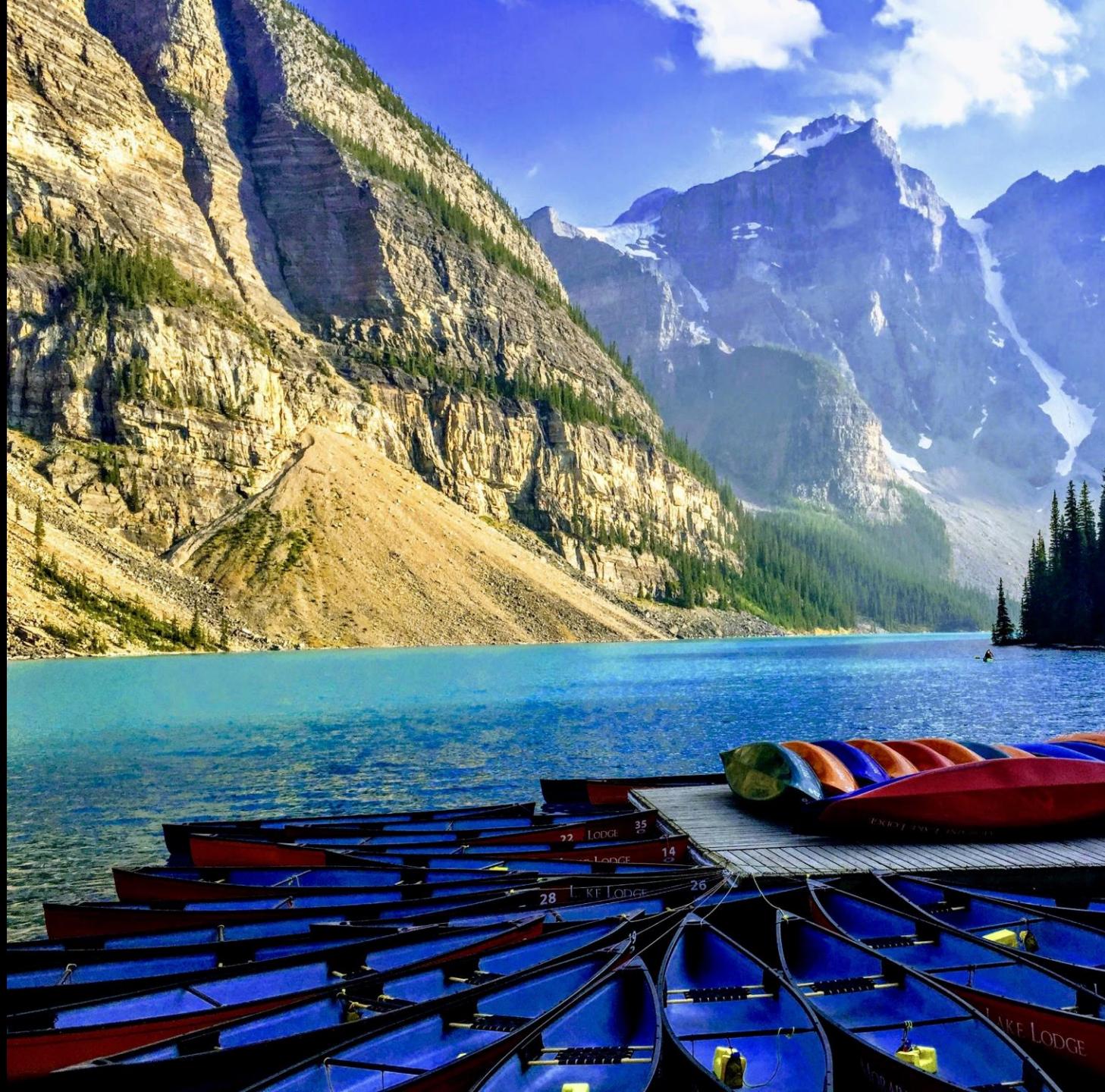
cLOUD NIRVANA

CLOUD SUSTAINABILITY

# Building Sustainable Multicloud Solutions

Srini Koushik

*We did not inherit this earth  
from our ancestors, we are  
borrowing it from our children*



**Technology is a significant driver of the consumption of energy and natural resources.**

## Energy Consumption Trends

- Datacenter energy consumption will increase to 8% - 20% by 2030.
- AI power consumption doubles every 3 – 4 months. Large AI training jobs have a lifecycle carbon footprint of 5 cars (red AI)
- **Cryptocurrency mining is estimated to consume ~46 TWH in 2018. By comparison, Data Center energy consumption in the US in 2017 was 78TWH**

## Market trends

- **Double-digit Public Cloud and single digit Private Cloud Growth**
- Datacenter carbon footprint as the new battleground for cloud providers (IDC)
- CIOs are taking a leadership role in driving sustainability in more than 50% of companies.
- Being Green is now becoming a make-or-break issue for Cloud Services deals.

## What can IT leaders do?

- **Make sustainability an NFR in how you build solutions**
- **Make "Greener" Technology choices**
- **Actively monitor and optimize utilization of resources**

# The Current State of the Cloud Market

Public Cloud revenues have grown 10x in the past 3 years from \$15B in 2018 to \$150B in 2022

However, **85% of workloads** are still on Private Cloud and On-prem Data Centers

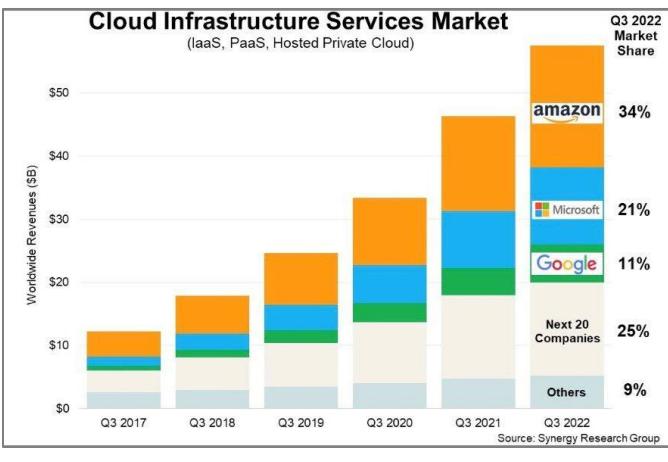
Most IT leaders (**+ 80%**) say they have a Multicloud Strategy

**Early adopters** who migrated their workloads to the public cloud focused on cost and speed as a priority and focused on leveraging IaaS and PaaS to help them on their journey.

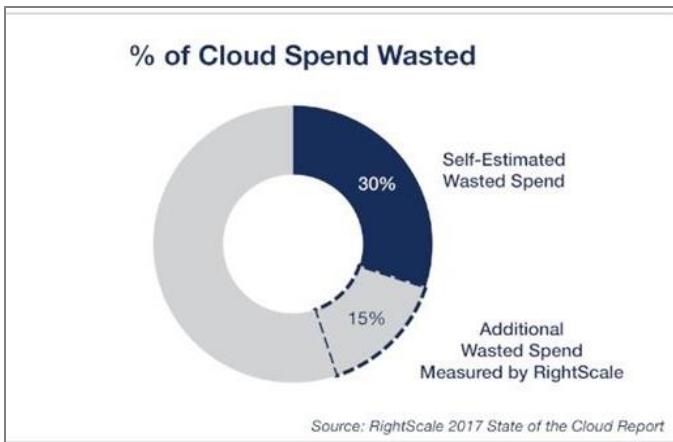
**Fast followers** can learn and evolve from early adopters by considering the implications of sustainability, data gravity, sovereignty, cost, and ongoing operations as they look to truly take advantage of all the benefits of Cloud Computing.

# Lessons learned from Wave 1 of Cloud Transformation

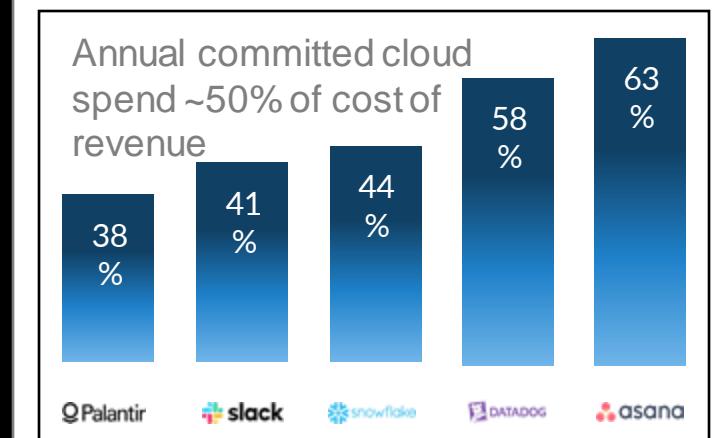
**Public Cloud providers** have continued to grow, but the growth has slowed in 3Q2022 and is **expected to slow further in 2023**



**Early adopters** who migrated their workloads to the public cloud have self reported that **30-45% of Cloud Spend is wasted**



**Technology Companies** that were built on the public cloud are now seeing a major part of their revenues go toward their Cloud spend.



# Lessons learned from Wave 1 of Cloud Transformation

Technology

Lack of discipline on NFRs for current workloads

Lack of understanding of Data Gravity and its implications

Modernizing workloads requires more investments in IT

Unrealized Cloud Benefits

Operations

Traditional processes used for managing IT are inadequate

Interactions between multiple systems introduce more breakpoints

Significantly Increasing Complexity of Operations

Unexpected operational costs

People

Too many cloud services to learn and master

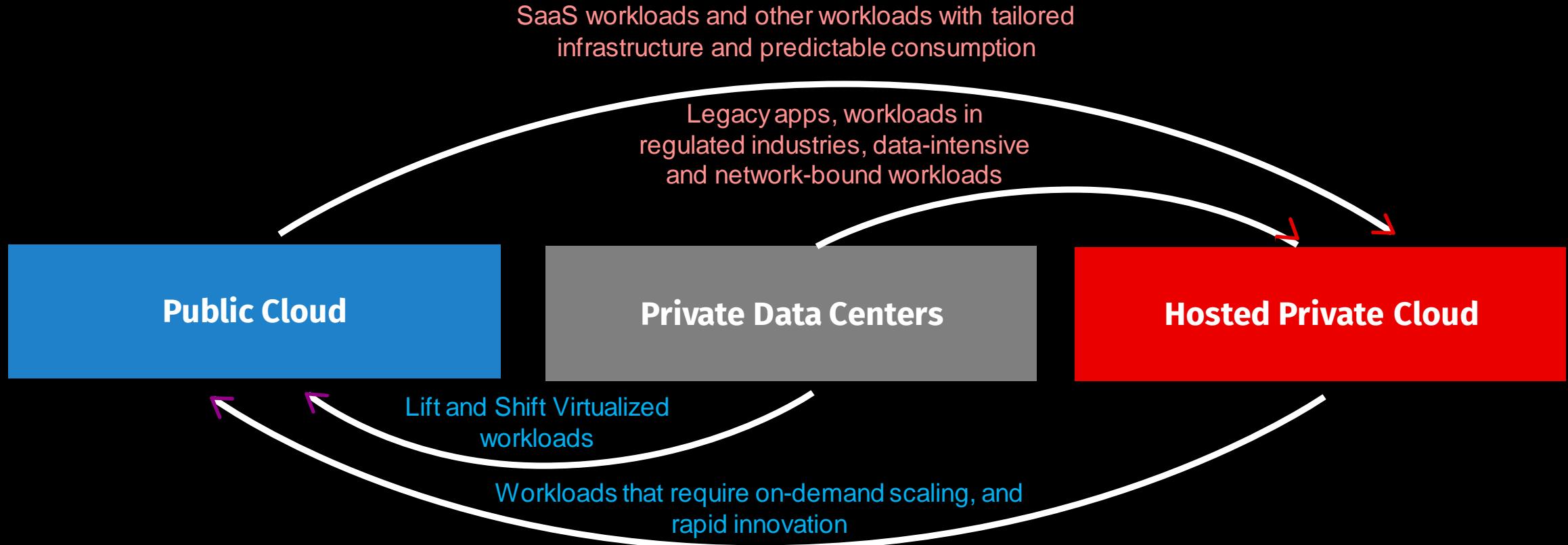
The speed of innovation outpaces people's ability to learn

Ongoing shortage of Cloud Architecture Expertise and skills

Unsure about the way forward

Managing Cloud Solutions is complex and the challenges go beyond technology

# The next Cloud Transformation Wave is **Multicloud**



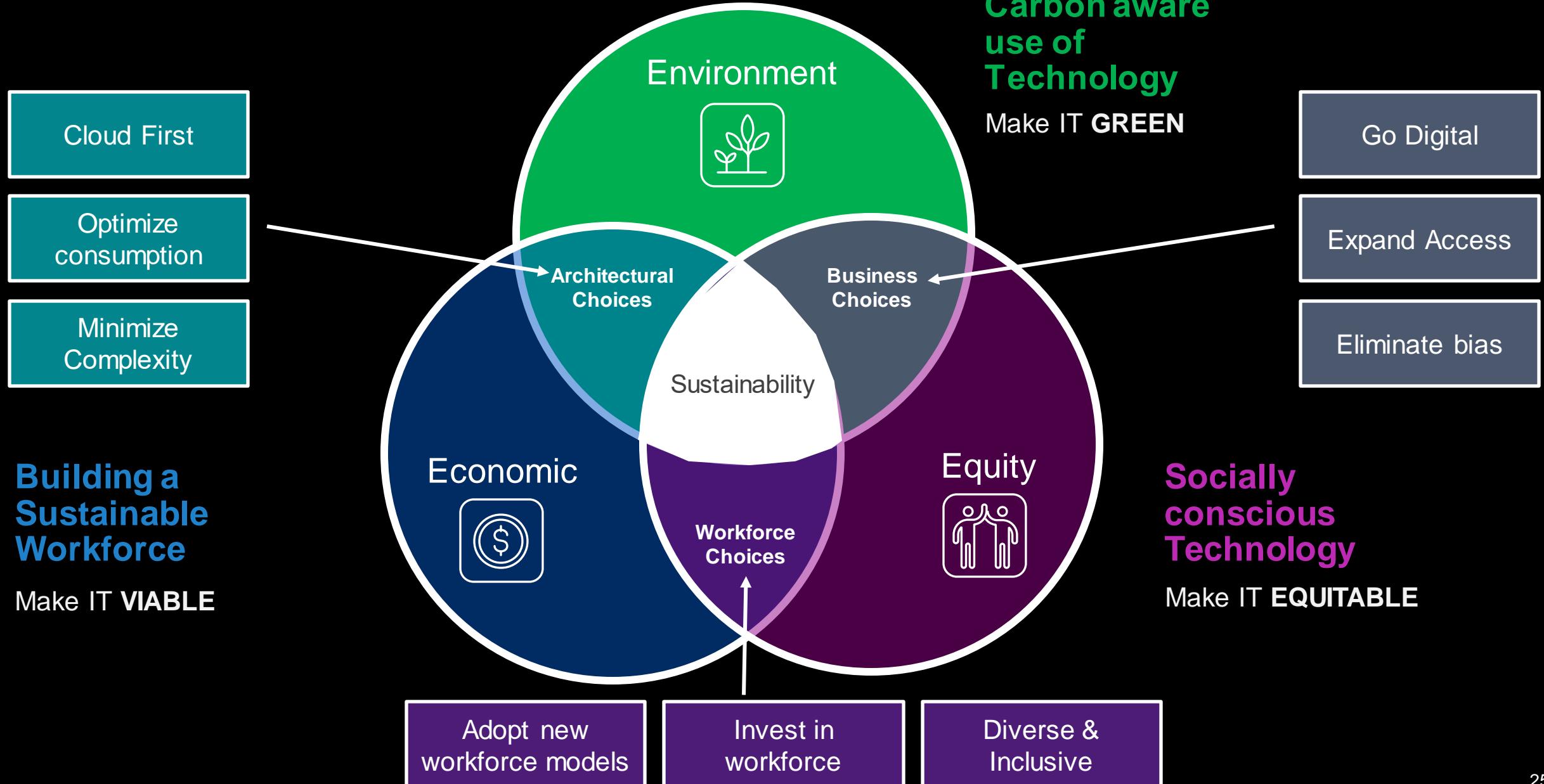
This next wave will be accelerated by the need to manage operational costs during the global economic slowdown

# Our Approach to building Sustainable Technology Solutions

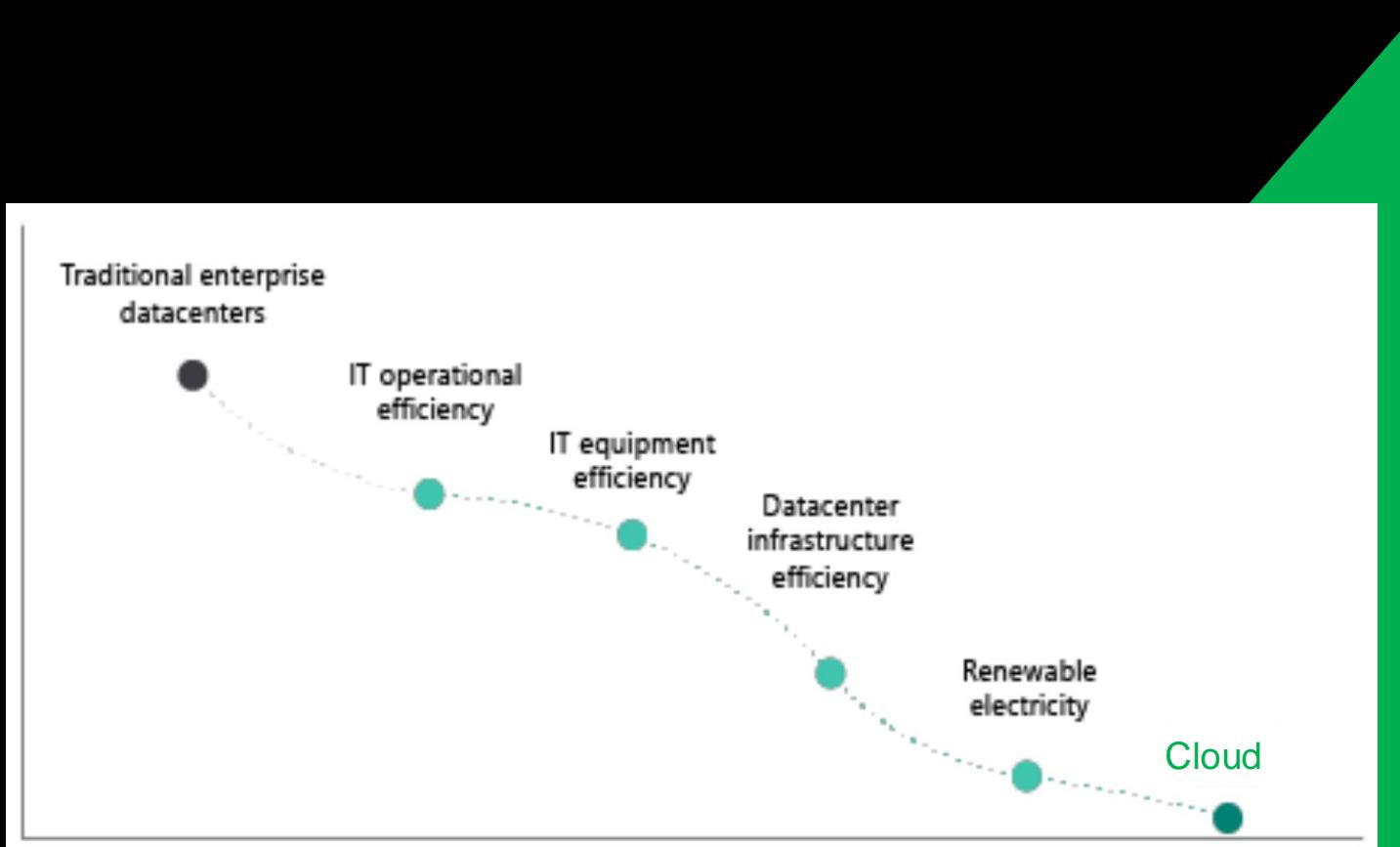
*The greatest threat to our planet is the belief that someone else will save it*



# What is Sustainable IT?



# Embrace Multicloud – Cloud solutions are “Greener” Solutions



## rackspace Private Cloud technology

Rackspace provides a global network of energy efficient and highly utilized private cloud data centers interconnected by RackConnect Global a high-speed dark fiber network designed to optimize the movement of data



85% of AWS Data Centers powered by Renewable Energy Sources in 2021

## Microsoft Azure

Azure is between 72 and 98 percent more energy efficient (when you factor in green energy sources) than traditional enterprise datacenters



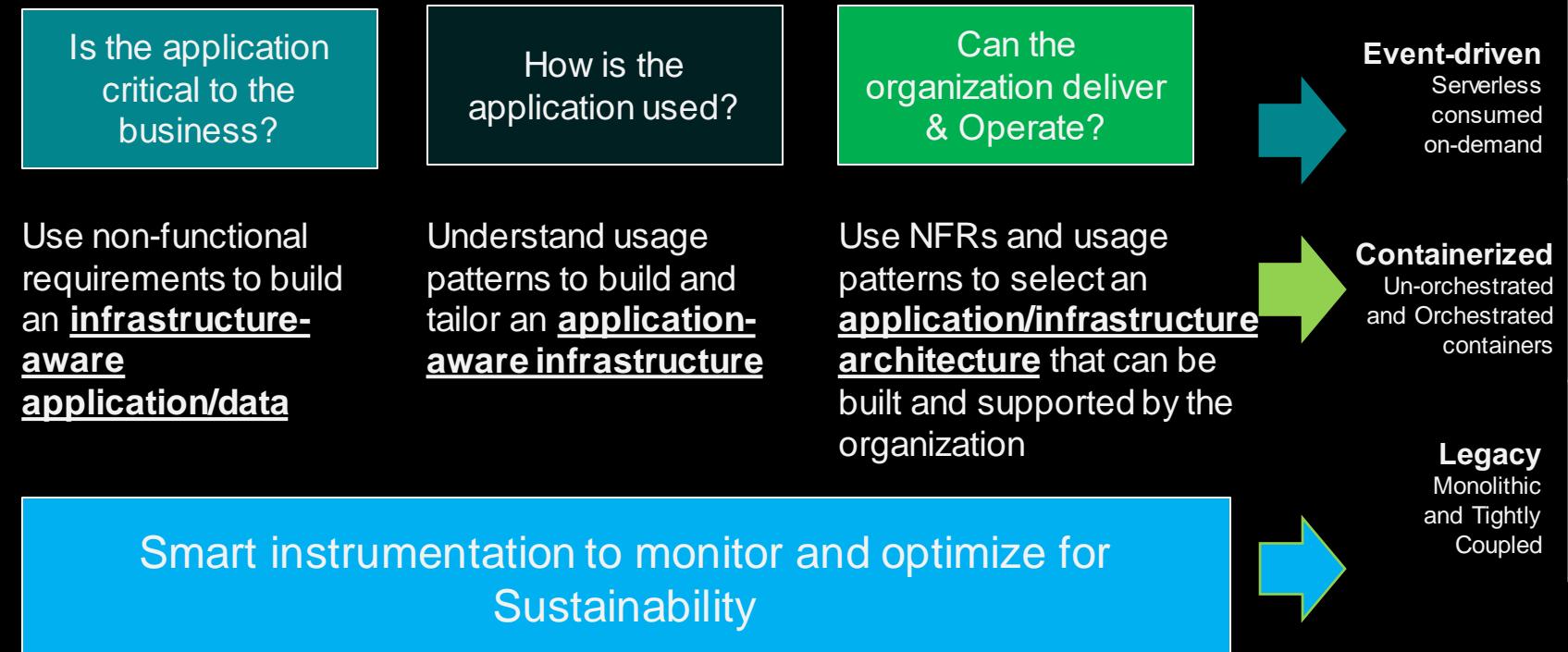
Google Cloud uses 100% renewable energy sources in all regions of the world

# A 7-step checklist to develop Sustainable Cloud Solutions

1. Understand the **Non-functional requirements** (NFR) of the Workload
2. Understand **usage patterns** and potential consumption
3. Tailor **Infrastructure** to the Application/Data Workload
4. Engineer landing zone in your **Multicloud estate** - Public or Private
5. Understand **data gravity and data flows** to optimize Data Transport
6. Design and Implement **Information Lifecycle Management** for your data
7. Build **instrumentation** to actively monitor and control consumption

# Our Framework for building Sustainable Solutions

Our Business and Domain Driven Architecture framework uses 15+ decision criteria to guide our clients toward a sustainable Multicloud architecture:



Infrastructure / Cloud Platform		
On Prem Data Centers	Private Cloud and Edge	Public Cloud AWS, Azure and GCP
3	6	9
2	5	8
1	4	7

# So, what can all of you do?



[State of Climate Action 2022](#)

[GHG Protocol](#)



[Sustainable IT](#)

[The World Economic Forum](#)



[Check your Cloud Footprint](#)

[AWS](#)

[Azure](#)

[GCP](#)

*The best way to predict the future is to create it*

Peter Drucker



cLOUD NIRVANA



Srini Koushik

EVP & CTO at Rackspace Technology



cLOUD NIRVANA

# Best Practice in reporting Sustainability – AWS 2021 ESG Report



# Cloud

# Cloud

# Cloud

# Cloud

# Cloud

# Cloud



PANEL DISCUSSION  
+ q&a



**RAY  
BAJAJ**

• Cardinal Health



**STEVE  
GRUETTER**

• Expeditient



**JIM  
SHINGLER**

• Silicon Valley Bank



**PATRICK  
FARRELL**

• Grange Insurance

Moderated by:

*Why cloud?  
What is the board conversation?*



CLOUD NIRVANA

# VIEW FROM THE FUTURE

• COLUMBUS, OH

15 minute  
BREAK

Please visit the  
chalk talk room for  
more opportunities  
to collaborate!

# Cloud



## PANEL DISCUSSION + Q&a



Manifest  
Solutions



GEICO



Grange  
Insurance

Moderated by:



Rackspace Technology

*App dev, agility  
+ innovation In the cloud*

STRATEGIC OPTIMIZATION



**URSULA  
LAVECK**

Nationwide



Strategic optimization

- This is not a prescriptive list of tools and processes to reduce cloud expenses.
- This is the beginning of a conversation that helps you build a system to drive sustainable optimization (savings plus growth).
- We will start with strategy.



A close-up photograph of a surgeon's face. The surgeon is wearing a light blue surgical cap and a white surgical mask. They are looking down and to the right, focused on a task. The background is blurred, showing other medical equipment and possibly a patient.

# Strategy: Get to the Cloud?

- Reduce IT costs
- Improve IT efficiency
- Reduce risk
- Reduce IT footprint
- Increase IT ROI
- Value
- Involve business in development
- Accelerate application delivery
- Innovation

# Post Migration | Current State

Vision	+	Skills	+	Incentives	+	Resources	+	Action Plan	= Sustainable Change
	+	Skills	+	Incentives	+	Resources	+	Action Plan	= Confusion
Vision	+		+	Incentives	+	Resources	+	Action Plan	= Anxiety
Vision	+	Skills	+		+	Resources	+	Action Plan	= Resistance
Vision	+	Skills	+	Incentives	+		+	Action Plan	= Frustration
Vision	+	Skills	+	Incentives	+	Resources	+		= <b>Treadmill (Bubble)</b>

*\*\*Knoster Model for Managing Change*



Where do we go from here?



## The Missing Piece

- Optimization is a constant and ongoing act, process, or methodology of making something (such as a design, system, or decision) as fully perfect, functional, or effective as possible.
- Optimization is finding the best solution or alternative that is most cost-effective and achieves the best result.
- In business, this is aiming for the highest profits and lowest costs.

Strategy Execution  
≠ Executing the  
Strategy





## Define Strategy

Critical definitions (ex. self service)

### Define Strategy/Outcome (pt. B)

Allocate resource & cascade objectives

Success metrics, RACI & timelines

## Fix Processes

Audit processes

Term or reengineer process flows

Identify integration opportunities

Identify/negotiate enablers

Identify gaps in capabilities; plan to fix

## Execute / Work

Execute the strategy (develop & operate)

Process, tools and people in place from previous step

Leverage run and build methodologies: DevOps, Lean, Six Sigma, Agile

Use strategy documents and tools



## Build Roadmaps (Plan)

Define current state (pt. A)

Plan: Map objectives & measures (pt. A to pt. B)

Prioritize work

## Learn / Correct

Measure/track progress

Analyze

Reprioritize & improve the plan

Communicate

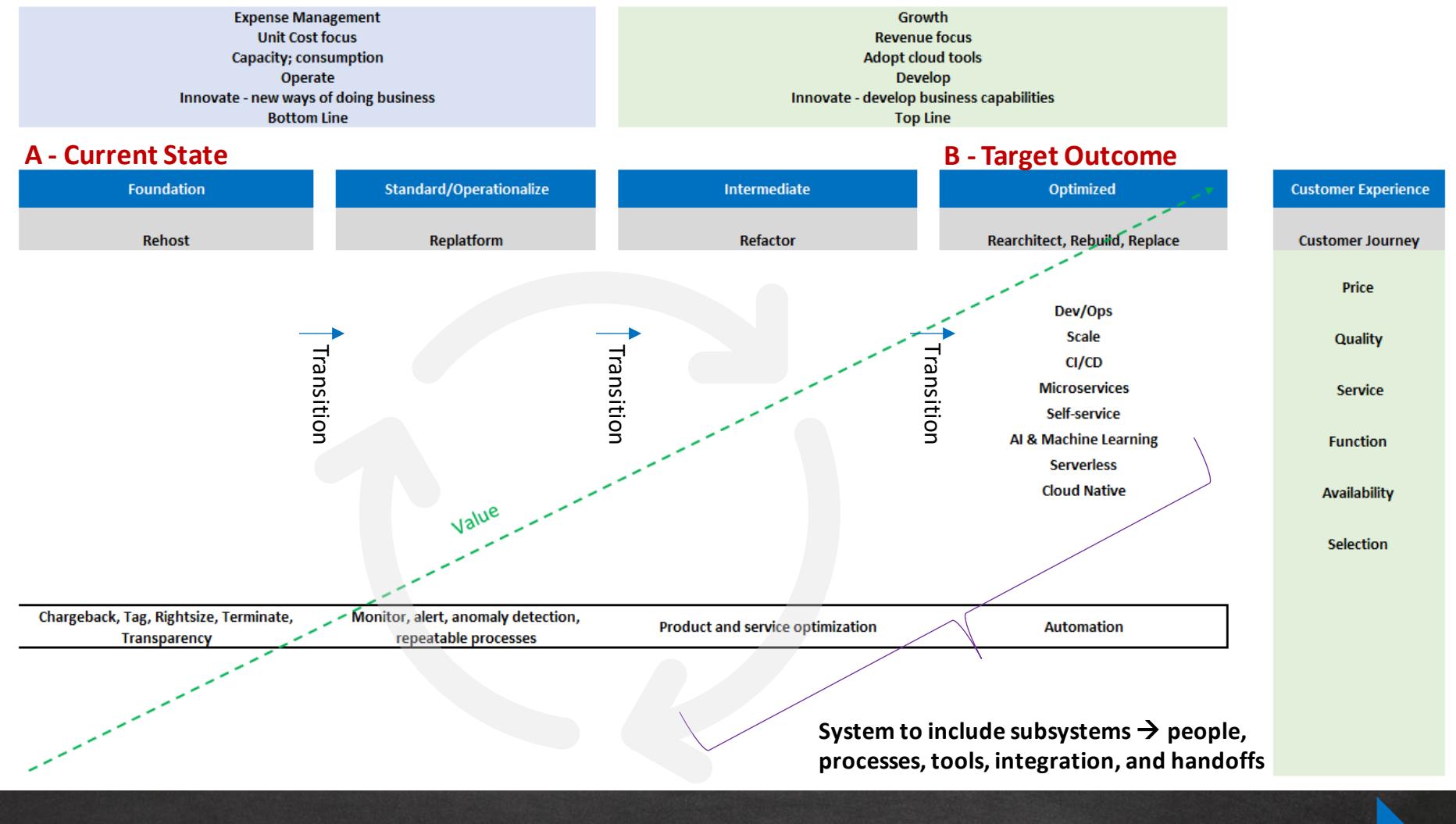
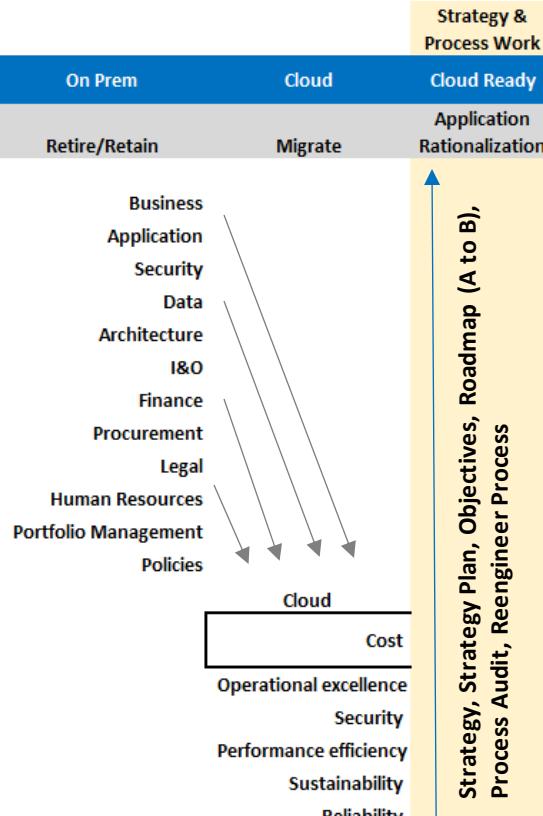
Iterate steps

Do for subsystems (Cloud Optimization)

# Strategic Plan | Map from A to B | Optimization | Build a System

**Shift Up & Left | Start Here**

**X**



Increased benefit realization / Move from point A to point B via business processes / Meet objectives that deliver outcomes to achieve strategy



2023  
Planning

---

Data driven assessment

---

Define optimization

---

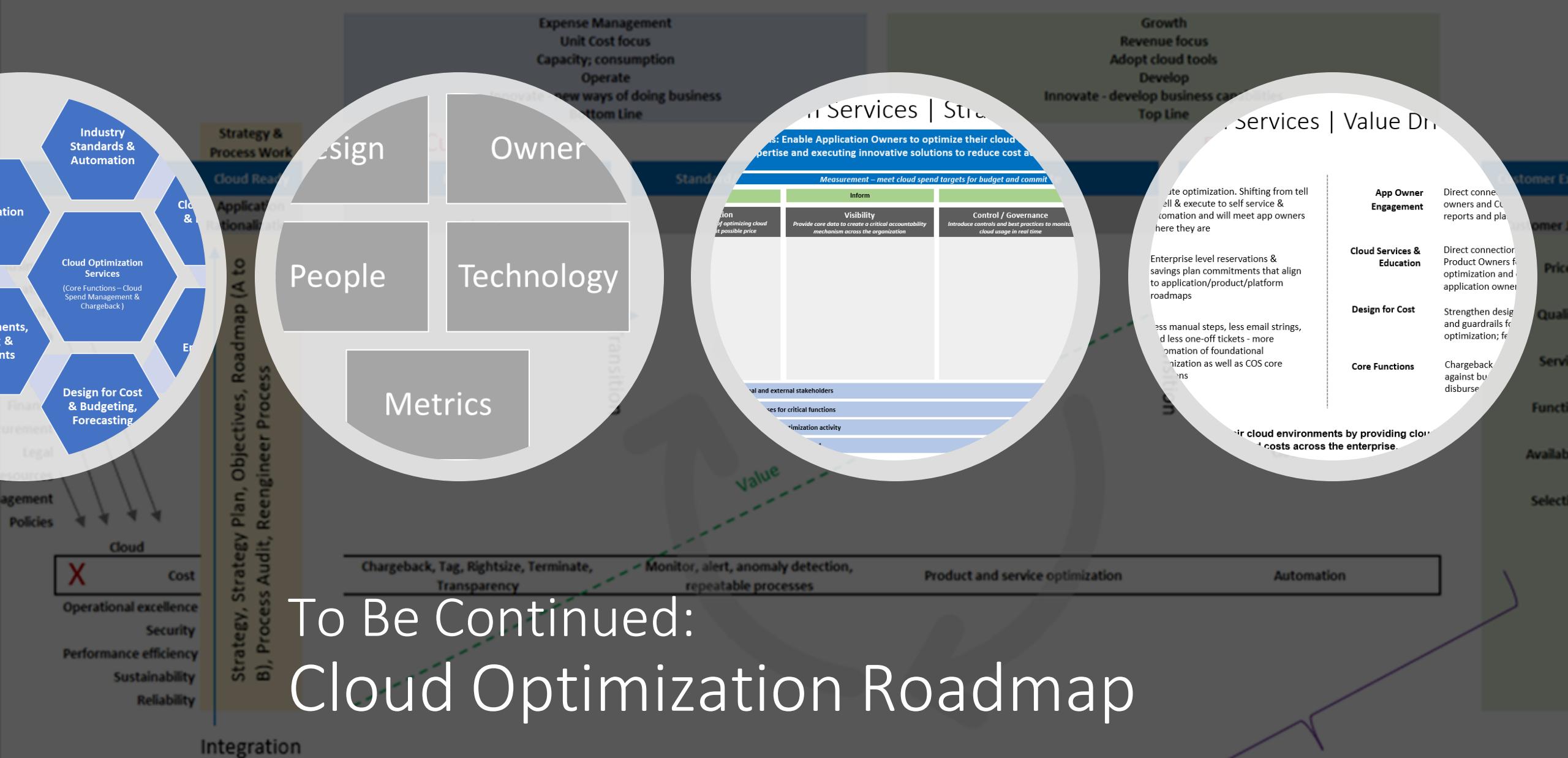
Build into strategy

---

Start roadmaps

---

Start process audits



# To Be Continued: Cloud Optimization Roadmap

Move from point A to point B via business processes to meet objectives that deliver outcomes to achieve strategy

System to include subsystems → people, process, tools, integration and handoffs

CLOUD NIRVANA

# VIEW FROM THE FUTURE

• COLUMBUS, OH

15 minute  
BREAK

Please visit the  
chalk talk room for  
more opportunities  
to collaborate!

# Cloud



## PANEL DISCUSSION + Q&a



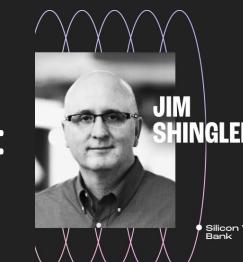
Belron  
International



Silicon Valley  
Bank



Datadog



Silicon Valley  
Bank

Moderated by:

*Cloud  
security*



Cloud Nirvana!



cLOUD NIRVANA



**SEAN  
ERIKSON**



Grange  
Insurance

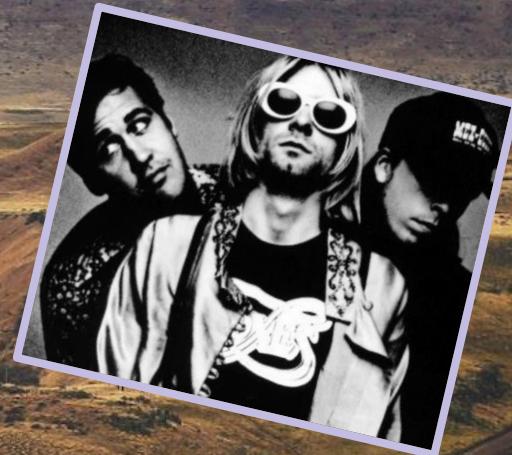


**PATRICK  
FARRELL**



Grange  
Insurance

Cloud nirvana!



# \* Starting a Journey is Exciting



\* But There Will Be Obstacles...

VUCA

**U.S. ARMY WAR COLLEGE**



Complex

Volatile

Uncertain

Ambiguous



Volatile

vol·a·tile

/'välədl/

liable to change rapidly and unpredictably,  
especially for the worse.

Complex

Uncertain

Ambiguous

# \* Volatile

## External Volatility

- Economic pressures
- Environmental impacts
- Political instability
- Geopolitical instability
- Global pandemics

## Internal Volatility

- Transformational projects underway
- Budgetary and funding issues
- Enterprise political and cultural issues
- Swings in morale
- Loss of resources / people

*Change happens. It always has and always will.*



Volatile

un·cer·tain

/,ən'sərtn/

not able to be relied on; not known or definite.

Complex

Uncertain

Ambiguous

# Uncertain

## **External Uncertainty**

- Economic unpredictability
- Environmental anomalies
- Social unrest
- Geopolitical unpredictability
- Safety and well-being

## **Internal Uncertainty**

- Industry + technology disruption
- Technology complexity
- Negative organizational change
- Project success/failure

*Uncertainty hampers our ability to reliably predict the future.*



Volatile

Uncertain

com·plex

/,käm'pleks,kəm'pleks,'käm,pleks/

not easy to analyze or understand;  
complicated or intricate.

Complex

Ambiguous

# \* Complex

## External Complexity

- Economic complexity
- Environmental complexity
- Social complexity / interconnected issues
- Geopolitical complexity
- Regulatory complexity

## Internal Complexity

- Large, interconnected enterprise ecosystem
- Significant technical debt
- Technology complexity
- Process complexity
- Organizational complexity
- Prioritization complexity

*The more complex our world, the harder it is to analyze and make decisions.*



**Complex**

**Volatile**

**Uncertain**

**Ambiguous**

am·bi·gu·ous  
/am'bigyooəs/

unclear or inexact because a choice  
between alternatives has not been made.

# \* Ambiguous

## External Ambiguity

- Globalization
- Economic complexity
- Environmental complexity
- Social complexity / interconnected issues
- Geopolitical complexity

## Internal Ambiguity

- Undocumented enterprise ecosystem
- Systems lacking subject matter expertise
- Lack of roadmaps
- Lack of standards
- Lack of knowledge and training

*The more ambiguous our world, the harder it is to interpret.*

\* Focus on what you can control

*...and flip the script...*





FITNESS.



NUTRITION.



GRATITUDE.

\* CLOUD NIRVANA

EBOOK AVAILABLE HERE



<https://bit.ly/3jevBvl>

**INTREPID**  
MY JOURNEY



# 13 WEEKS

...to a lifetime of better  
fitness, nutrition, and  
unlimited gratitude

SEAN ERIKSON



\* CLOUD NIRVANA



GRATITUDE



Focus on the 95%

## 5 FOUNDATIONAL PATTERNS



Burn Your  
Trophies



Hack Your Social  
Media



Track Your Journey  
Through Playlists



Share Your  
Journey With  
Friends



FITNESS



Prefer Fasted  
Cardio



Differentiate  
Activity From  
Exercise



Establish a  
Baseline Workout  
That You'll Do



“Gamify” Your  
Workouts



Emphasize  
Resistance-Style  
Workouts

5

## FOUNDATIONAL PATTERNS



NUTRITION



# 5 FOUNDATIONAL PATTERNS



Track Your  
Calories &  
Macros



Determine Your  
Calorie &  
Macronutrient  
Goals



Fast Between  
(Whole) Meals



Plan Your Meals  
and Take a Weekly  
View



Drink a Gallon of  
Water Every Day

EBOOK AVAILABLE HERE



<https://bit.ly/3jevBvl>

INTREPID  
MY JOURNEY



# 13 WEEKS

...to a lifetime of better  
fitness, nutrition, and  
unlimited gratitude

SEAN ERIKSON



\* CLOUD NIRVANA

A photograph of a man jumping from a wooden dock into clear turquoise water. He is shirtless and wearing dark swim trunks, performing a backflip. The dock is made of weathered wooden planks. The water is a vibrant turquoise color, and the background shows a rocky cliffside.

Let's dive back in...



# The Positive Side of VUCA...

# VUCA





**Clarity**

**Vision**

**Understanding**

**Adaptability**



**Vision**

**Understanding**

**The Destination**

**Clarity**

**Adaptability**



**Clarity**

**Vision**

**The Journey**

**Adaptability**

**Understanding**



Vision

vi·sion

/'viZHən/

the ability to think about or plan the future  
with imagination or wisdom.

Clarity

Understanding

Adaptability



# The Destination: "Vision"

North Star

Compelling  
and inspiring

Align  
stakeholders

Guides your  
decision-making

Values  
based

**VIEW  
THE  
FUTURE**

Document  
and share it!

Think BIG!



**Vision**

**Understanding**

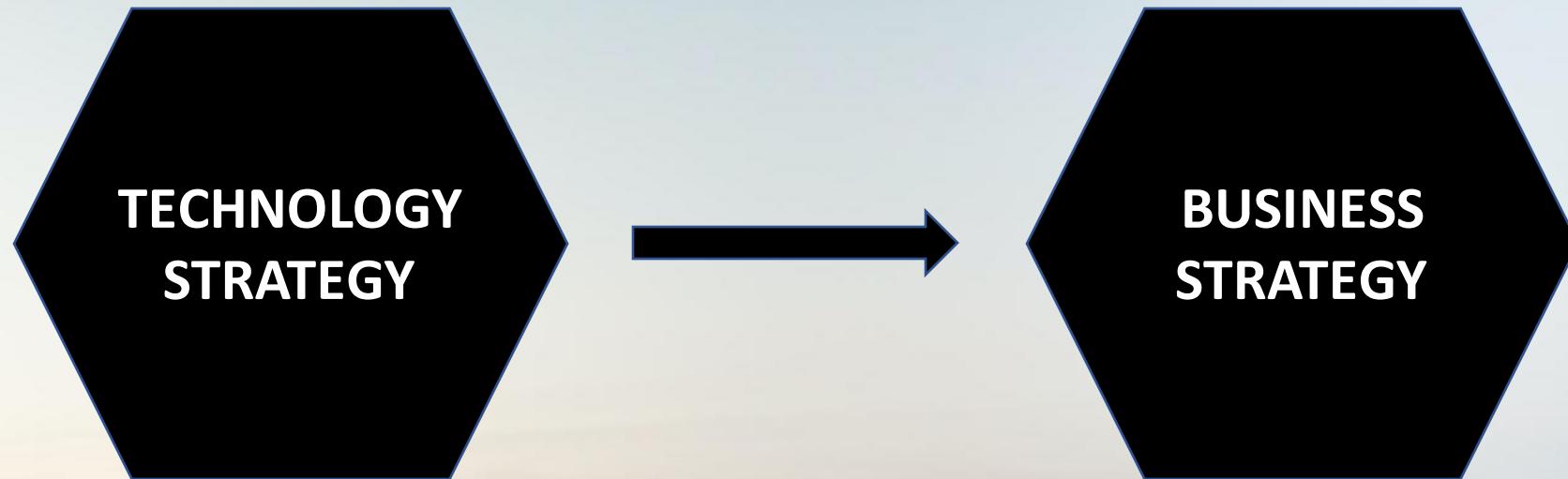
un·der·stand·ing  
/ ,əndər'stændiNG/  
perceive the significance, explanation, or  
cause of (something).

**Clarity**

**Adaptability**



# The Destination: “Understanding”



**What does your  
business strategy  
enable?**

Increased  
Agility

Improved  
resiliency or  
speed-to market

Innovation or  
Emerging  
Technology

Reduced  
risk

Unlock specific  
business  
capabilities



**Vision**

**Understanding**

clar·i·ty

/'klerədē/

the quality of being easy to see or hear;  
sharpness of image or sound.

**Clarity**

**Adaptability**



# The Journey: “Clarity”

Having clarity requires a significant amount of data-gathering and analysis. Don’t underestimate the amount of data you need to be prepared to gather.

*Clarity affords focus.*

*The ability to learn faster than competitors may be the only sustainable competitive advantage.*



**Vision**

**Understanding**

a·dapt·a·bil·i·ty

/ə,daptə'bilədē/

the quality of being able to adjust to new conditions.

**Clarity**

**Adaptability**



# The Journey: “Adaptability”

Those that fail to keep up with the rapid pace of change risk falling behind the competition.

*Culture is everything.*

*Build a culture that values healthy debate,  
experimentation and learning from failures.*



*Creating a Community-CCOE*

PATTERNS

CULTURE

SOLUTIONS

IDEAS

INNOVATIONS

COMMUNITY

Join us on Slack & GIT!

Slack



The invite in the QR code will  
expire on January 7th, 2023

GitHub



<https://github.com/cloud-nirvana>

CLOUD NIRVANA



THANK YOU!

CLOUD NIRVANA

CLOUD NIRVANA

# VIEW FROM THE APPENDIX FUTURE



• COLUMBUS, OH



# VIEW FROM THE **FUTURE**





# Fitness Pattern

*Establish a Baseline Workout You'll Do*

PAGE 13

FITNESS PATTERN

MYINTREPIDJOURNEY.COM

## ESTABLISH A BASELINE WORKOUT THAT YOU'LL DO

Have you heard the running line in fitness circles that quality is much more important than quantity? I hear it all the time: "don't sacrifice form just to get another rep!" While this is true, and I do agree that doing exercises with strict form is ideal, there is something much more important than both quantity and quality combined:

### Consistency.

I'd argue it's orders of magnitude more important that you get a workout done than specifically what workout you did. That's what this pattern is about: ensuring consistency by defining a baseline workout that, whatever happens, you'll be able to get done, no matter what.

**Let's face it:** life happens and sometimes it's just damn hard to squeeze a workout in: we travel for work, go on vacation, emergencies pop up, kids get sick, pets need emergency care. This pattern is here to enable you to steer past the excuse and get done what you know needs to get done.

Consistency over all else is key and sometimes depending how I'm feeling, despite my plans, I have to rely on my baseline workout; a workout I've done probably a hundred times.

A baseline workout is a workout I'll do instead of doing nothing when life gets in the way. The key is to make the baseline fun and make it your own.

### HERE'S WHAT I WANT YOU TO DO

The reality is I have multiple baseline workouts that I've relied on over the years, and depending on my situation, I'll pull one out that matches my mood and goals. My inner dialogue goes something like this: "Dang it's 11pm and I'm supposed to do a Heavy Back Workout today. I don't have access to heavy weights because I struck out today and I'm damn tired. It will have to wait until tomorrow."

I like to think about my workouts as if I have three times "at bat" during any given day, and if I strike out, I have a fail-safe that I try to avoid (because it sucks). In general, the **three opportunities** I have to workout are (1) first thing in the morning, (2) around lunchtime and (3) in the early evening, right after work, and that's how I prioritize them. By and large, I most often workout first thing in the morning. Nothing beats that sense of accomplishment, and it lasts all day. If I don't get it done, then I'll try to get it done at lunch and if that didn't work, I'll do it right after work. What if I strike out? Then I do it late at night, after my kids are asleep. I'm not a night person, so the key is to do a workout you know you can do. Here is a fun workout I've used many times over the years, and occasionally I'll still pull it out in a time of need, I call it the **"Deck of Cards Workout"**:

Get a deck of playing cards and shuffle them. Assign each suit an exercise in the following categories: Hearts: Core, Spades: Upper Body, Clubs: Lower Body, Diamonds: HIIT. Go through the deck, overturning each card, one by one. You'll perform the exercise indicated by the suit in the card. Perform the number reps based on the number shown by the card. Face cards count as 10 and Ace counts as 16. Turned over a 3 of Clubs? Do 3 body weight squats or walking lunges. Turned over a King of Diamonds? Do 10 burpees or jumping jacks.

Of course, choose exercises that fit your fitness level. The key is to make it your own and make it fun.





# What is Your Destination?

- Hybrid-/Multi- Cloud?
- Secure?
- Strategically Optimized?
- Environmentally, Socially, Economically Sustainable?
- Automated?
- Ephemeral?
- Resilient?
- Continuously Improving?
- Effective for Your Business?





# The Destination: “Understanding”

Tie your technology vision directly to your business strategy. Have a deep understanding of how your Cloud Strategy enables the business and even inspires the business to be their thinking.

*Just because you’re running applications in the cloud does not mean you are a cloud-enabled organization.*

Keep this  
slide or  
next?



# The Destination: “Vision”

Create a compelling and inspiring vision that is easy to understand and can help your team make (the right) decisions quickly

*If it doesn't scare you, it's not big enough.*

Keep  
this slide  
or next?

# SRINI KOUSHIK



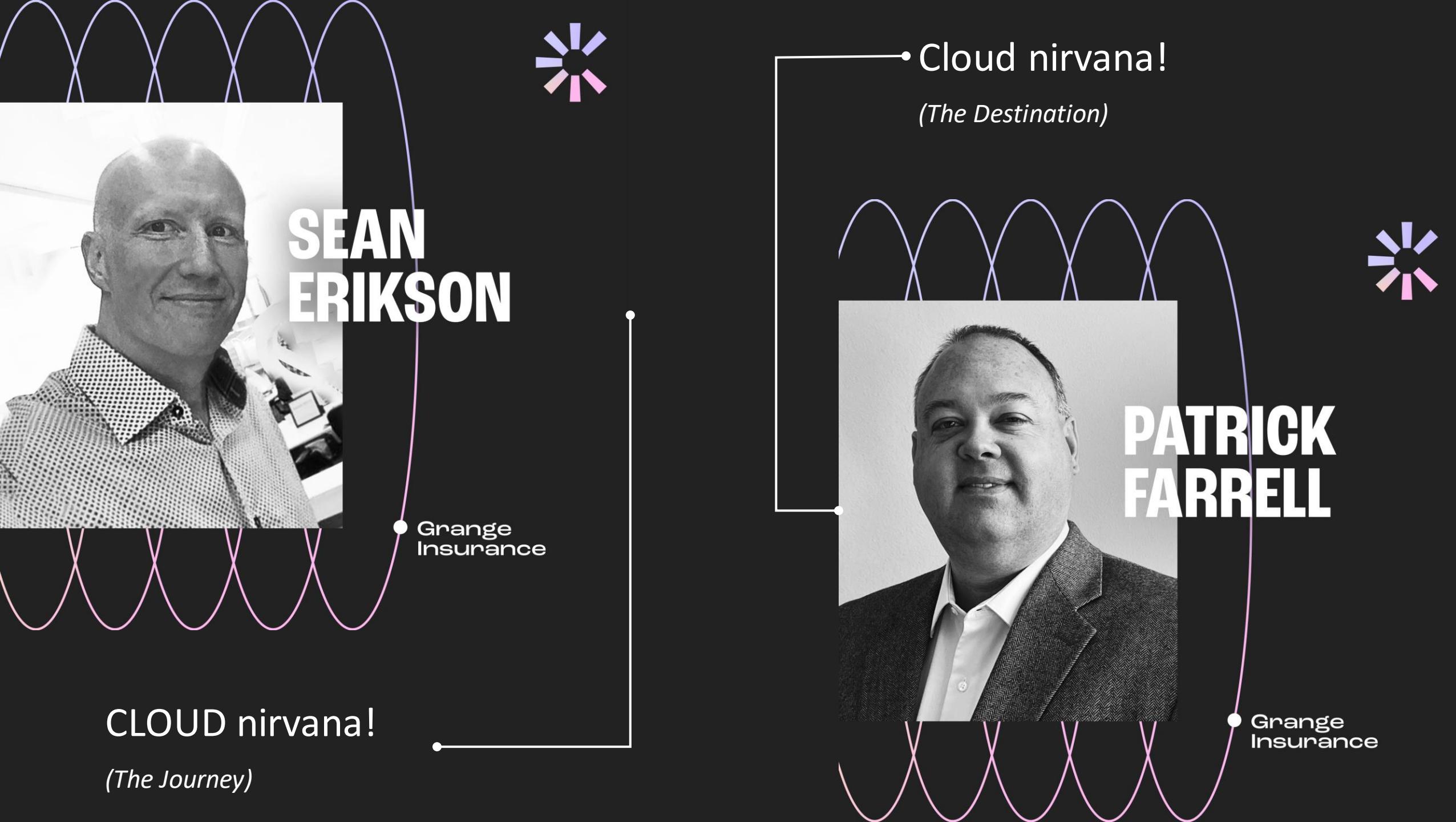
Rackspace Technology

## •STRATEGIC OPTIMIZATION

# URSULA LAVECK

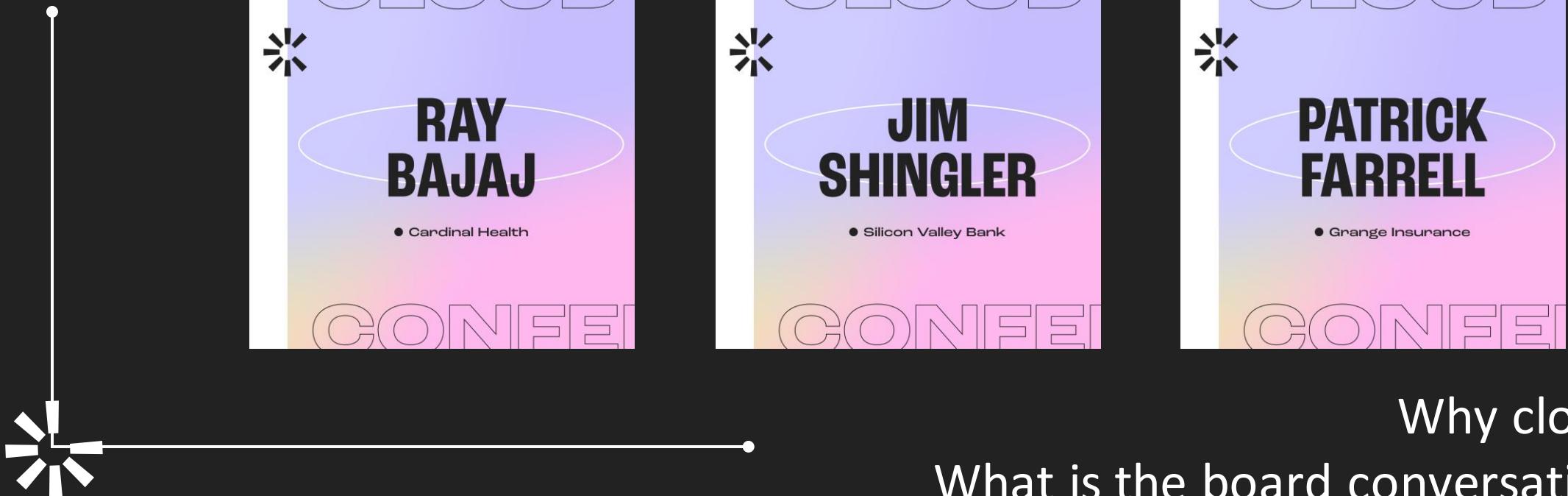
Nationwide

CLOUD SUSTAINABILITY



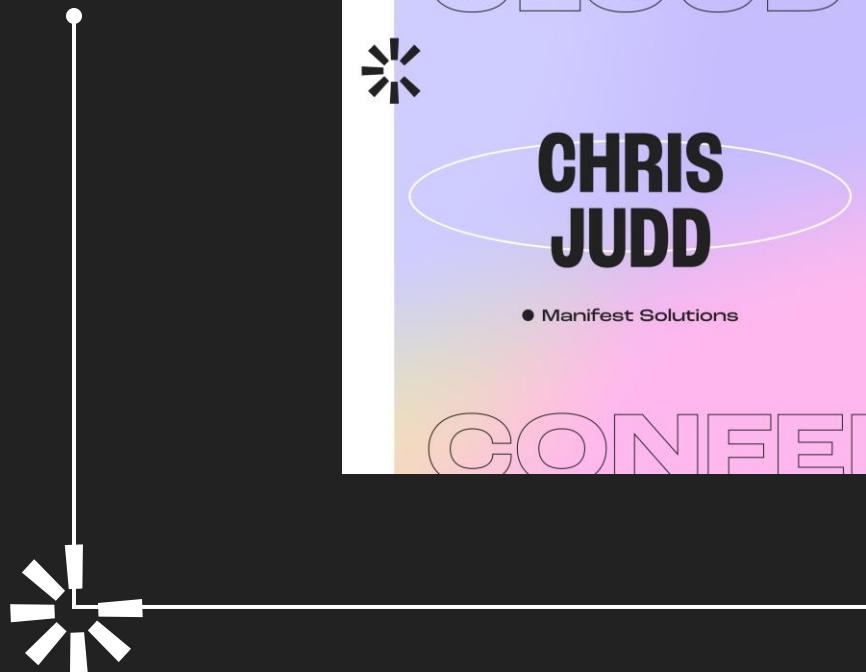


PANEL DISCUSSION  
and  
q&a





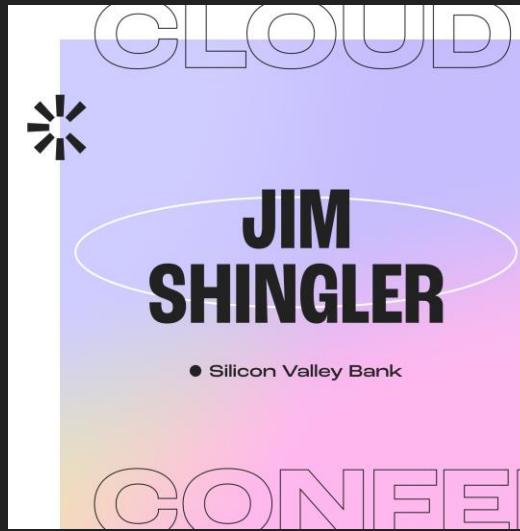
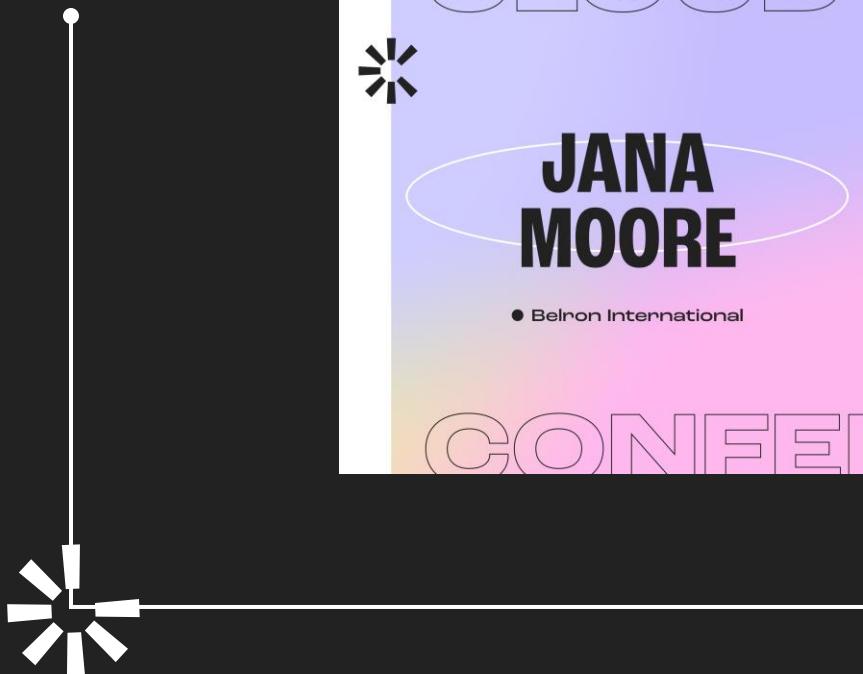
PANEL DISCUSSION  
and  
q&a



App dev, agility & innovation  
In the cloud



PANEL DISCUSSION  
and  
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App dev, agility & innovation  
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