

The background features a vibrant, abstract design. On the left, there are horizontal, wavy bands of color in shades of red, orange, yellow, and green. On the right, a bright white light source emits a series of colorful rays in shades of blue, cyan, and yellow, creating a sunburst effect. The overall composition is dynamic and energetic.

CISCO *Live!*

Let's go



The bridge to possible

# Cisco Full Stack Observability

Blueprint for the Journey

Ben Haddox, FSO Global Architect

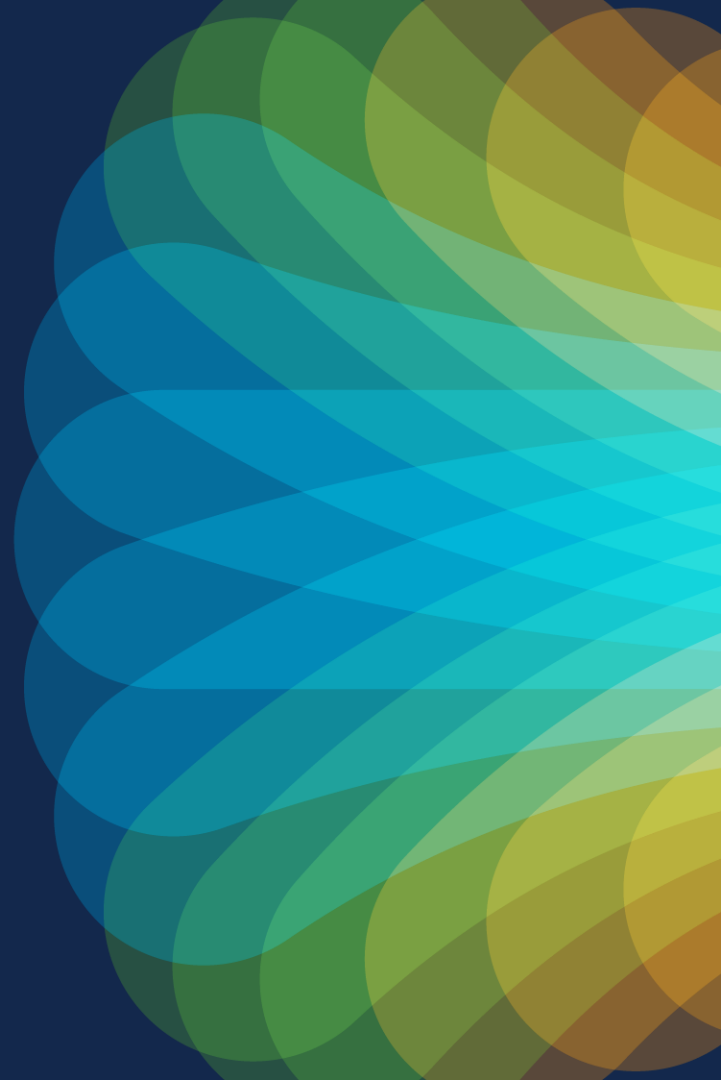


BRKAPP-2489

# Agenda

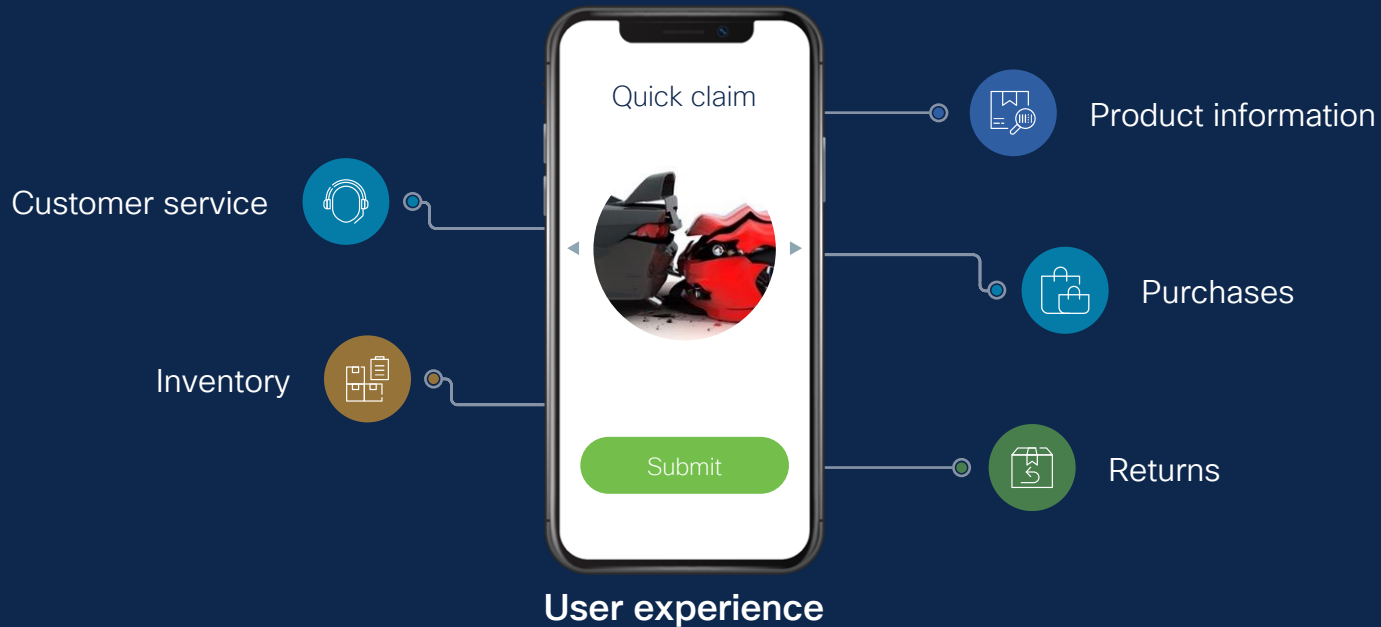
- What/Why Observability
- The Observability Journey
- People, Process, and Tech
- Case Study
- Demo
- Conclusion

# What/Why Observability



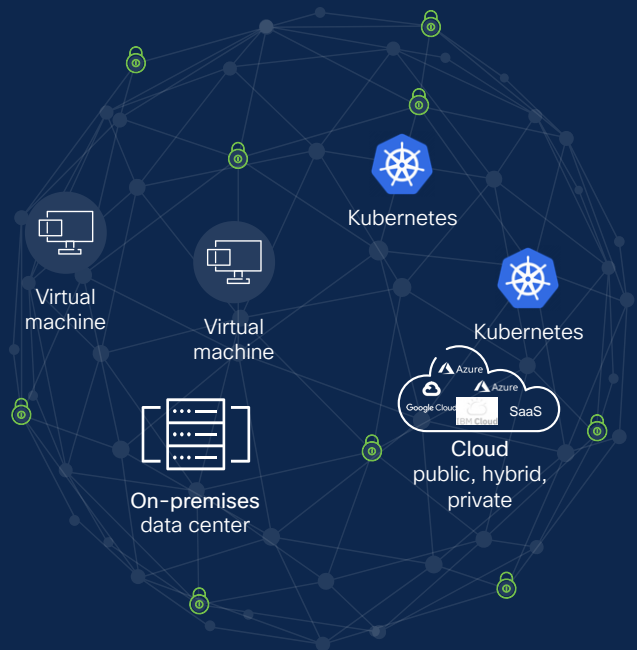
# Digital transformation has revolutionized the customer experience

Applications are today's storefronts, and businesses are looking to provide a more user-friendly experience

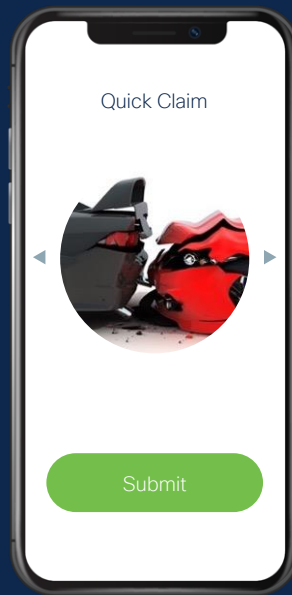


# Providing seamless digital customer experiences increases complexity for IT teams






## Underlying IT



## User experience

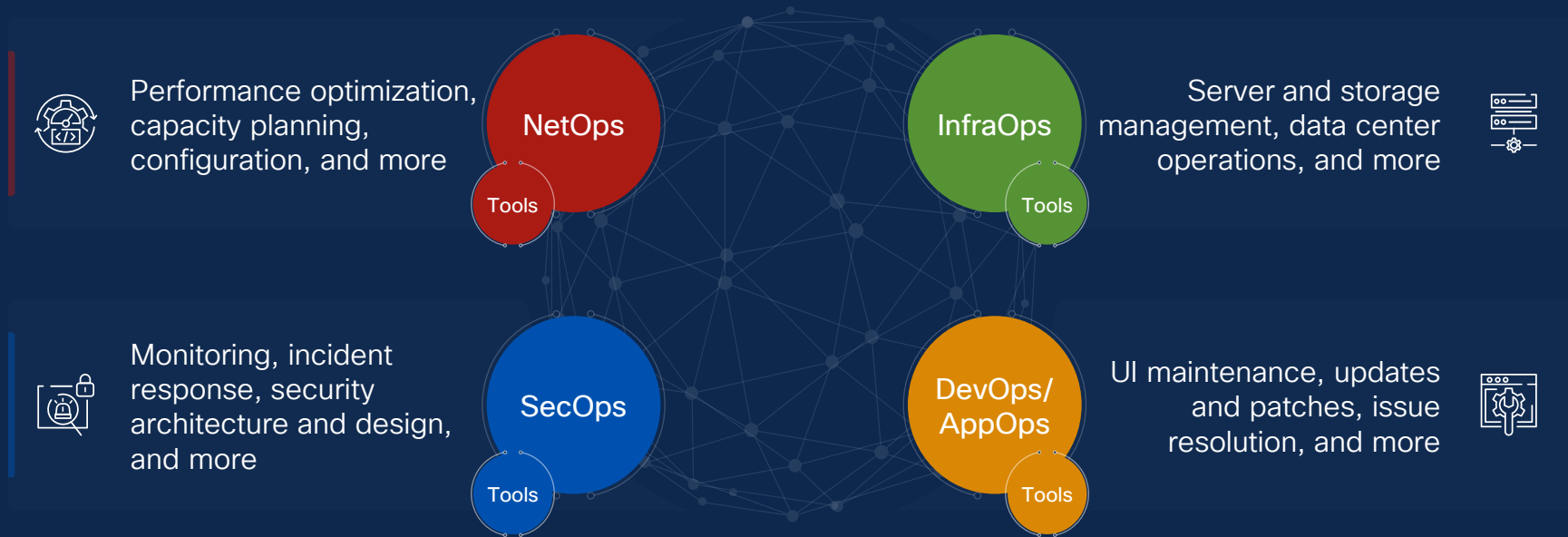


## Challenges

-  Managing operational complexity
-  Prioritizing and diagnosing problems quickly
-  Growing number of tools and increasing TCO
-  Ongoing friction between teams
-  Always reacting to technology issues that impact the business

# The siloed nature of IT teams and increasing amount of the tools they use creates challenges

Teams are responsible for domains impacting applications with real business impact, but they often operate in vacuums with little overlap



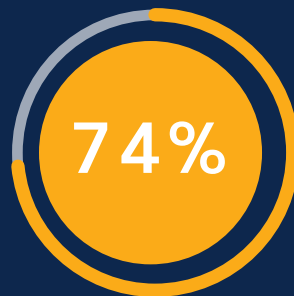
# Growing complexity and tool sprawl build siloes between teams and don't provide a complete view



Use more than ten application observability/monitoring tools<sup>1</sup>



Say most observability tools serve narrow requirements and fail to enable a complete view<sup>1</sup>



Struggle with data collection and correlation<sup>1</sup>

1. Stephen Elliot and Mark Leary. "[An Executive Blueprint for an Observability Platform: Driving Operational Excellence and Business Outcomes through Analytics and Automation.](#)" IDC (2023).

# Tool and team siloes can have significant long-term effects on a business



## Wasted resources

- Tool and team sprawl
- Siloed data and data overload
- Increased maintenance efforts



## Security risks

- Larger attack surface
- Environment obscurity
- Slow issue identification and resolution



## Overcomplexity

- Network and infrastructure complexity
- Challenges with variable application architectures
- Failure cascades

# Creating connections between teams and the tools they use can revolutionize business outcomes



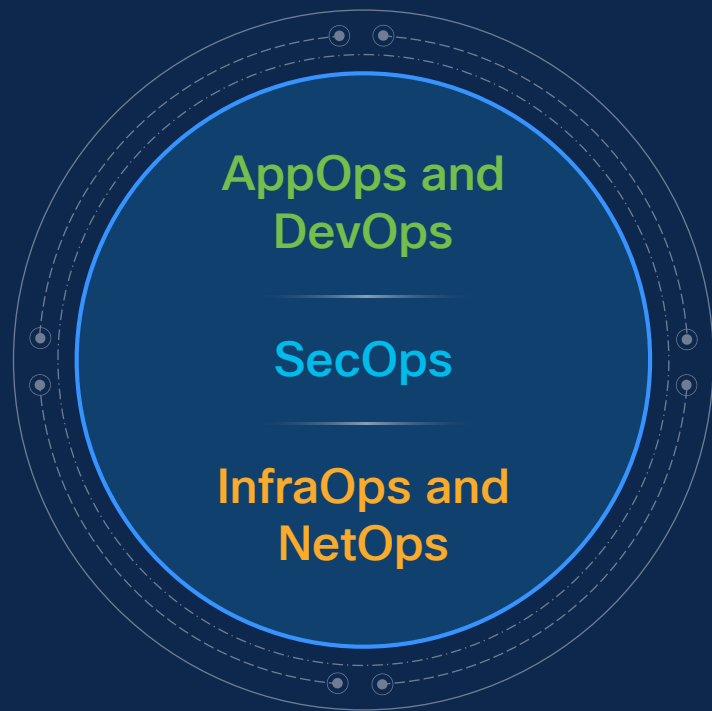
## Benefits

- Enable connected teams to see beyond their primary environments
- Better understand your environments and the relationships between them to reduce time to issue resolution
- Efficiently mobilize monetary and human resources to more quickly improve the customer experience
- Unify tools to a single source of truth to connect teams and ease remediation across applications

# Teams need to see the full-stack of available data

# 68%

Of businesses are looking to consolidate multiple operations tools to empower teams to better collaborate<sup>1</sup>



1. Stephen Elliot and Mark Leary. "[An Executive Blueprint for an Observability Platform: Driving Operational Excellence and Business Outcomes through Analytics and Automation.](#)" IDC (2023).

# What is Cisco Full-Stack Observability?

Cisco FSO provides real-time visibility, insights, and recommended actions enriched with business context, enabling teams across multiple domains to:



**Focus on what matters most:** revenue, user experience, risk, costs



**Reduce time to resolution** of incidents and performance issues



**Minimize tool sprawl** by providing a unified solution



**Break down silos** by reducing friction among teams

# Cisco Full-Stack Observability unlocks business value

Observe, secure, and optimize your whole environment



Observe



Secure



Optimize



Extend your  
observability

65% of respondents say they want a programmable and extensible observability solution that can be used for use cases specific to their business and environment<sup>1</sup>

1. Stephen Elliot and Mark Leary. "[An Executive Blueprint for an Observability Platform: Driving Operational Excellence and Business Outcomes through Analytics and Automation.](#)" IDC (2023).

# Cisco Full-Stack Observability unlocks business value



## Observe

Enhance application performance and improve end user experiences by observing and understanding how systems, domains, and people impact your application experience through holistic visibility across applications, networks, and cloud/hybrid/cloud native environments. Proactively identify issues and pinpoint the root cause.



## Secure

Protect applications, your end users, and your business by more easily pinpointing areas of vulnerability and their impact on business risk so you can effectively remediate vulnerabilities and threats and prioritize where to continually improve your security posture.



## Optimize

Optimize operational processes and workflows and lower costs by increasing asset utilization and better allocating resources by proactively identifying the problems, resource usage patterns, and user behavior that led to application inefficiencies.



**Extend with the Cisco Observability Platform** – Extend your observability use cases with the Cisco Observability Platform. Built from day one on the OpenTelemetry Framework and anchored on metrics, events, logs, and traces across any domain, it provides an open and scalable single source of insight across your technology stack and business. It also unlocks a vibrant ecosystem of development partners actively developing applications and modules to tackle additional important use cases.

# Cisco Full-Stack Observability unlocks business value



## Observe

Understand hybrid app performance

Understand modern app performance

See how network and app performance impact customers

Uncover gaps in network visibility



## Secure

Understand where hybrid apps are vulnerable

Understand where modern apps are vulnerable



## Optimize

See how resources are allocated

Understand how to optimize costs



Extend with the **Cisco Observability Platform** – Set a foundation to extend into custom observability use cases, developed by Cisco and Partners and aligned with your specific needs

# And helps address key observability use cases



## Observe

Hybrid application monitoring

Modern application monitoring

Customer digital experience monitoring

Application dependency monitoring



## Secure

Hybrid application security with  
business risk observability

Cloud application security with business  
risk observability



## Optimize

Application resource optimization

Hybrid cost optimization



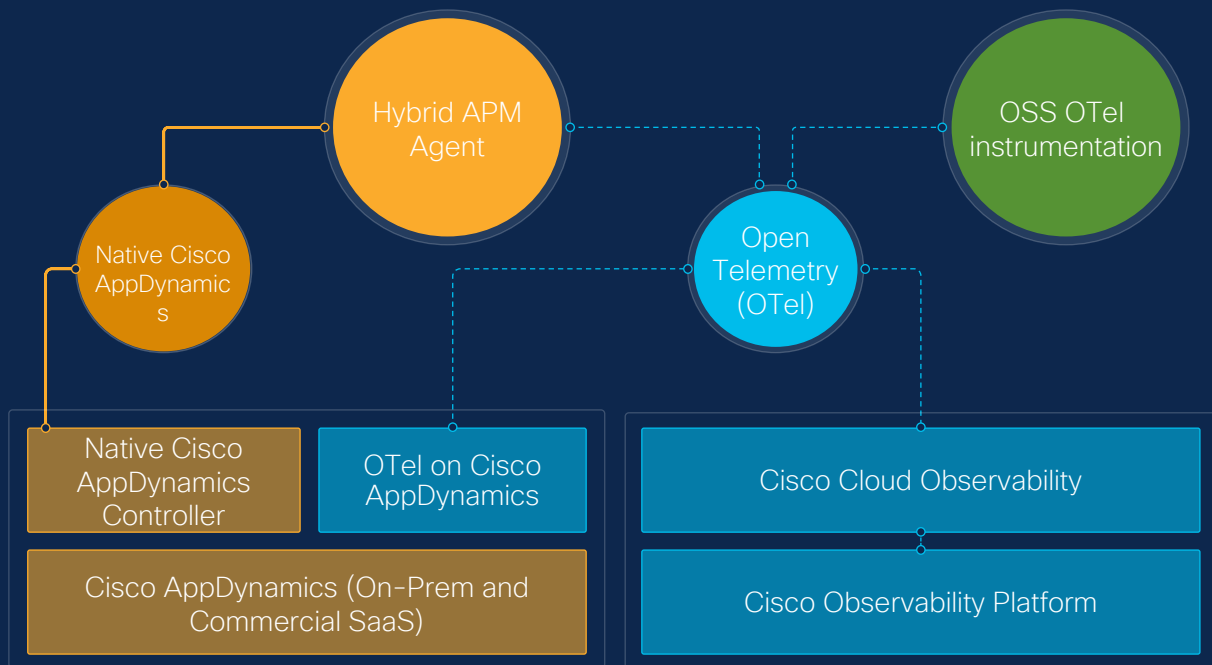
**Extend: FSO Use  
Cases Unlocked  
by Partners**

Capacity planning and  
forecasting

FinTech

vSphere observability  
and data modernization

# Investing in Cisco AppDynamics will remain relevant as you progress along your FSO journey



End-to-end visibility for mixed instrumentation environments

Output OTel for Cloud Native Application Observability and 3<sup>rd</sup> – party consumption

Simplify your path from Cisco AppDynamics to Cisco Cloud Observability

Gain OTel experience without manually re-instrumenting

# Bringing together years of expertise, investment, and innovations to achieve Full-Stack Observability

The Cisco difference:



Only Cisco brings together cross domain data to correlate business context and impact for real-time insights



Only Cisco has the range of solution options to meet customers wherever they are on their journey to FSO

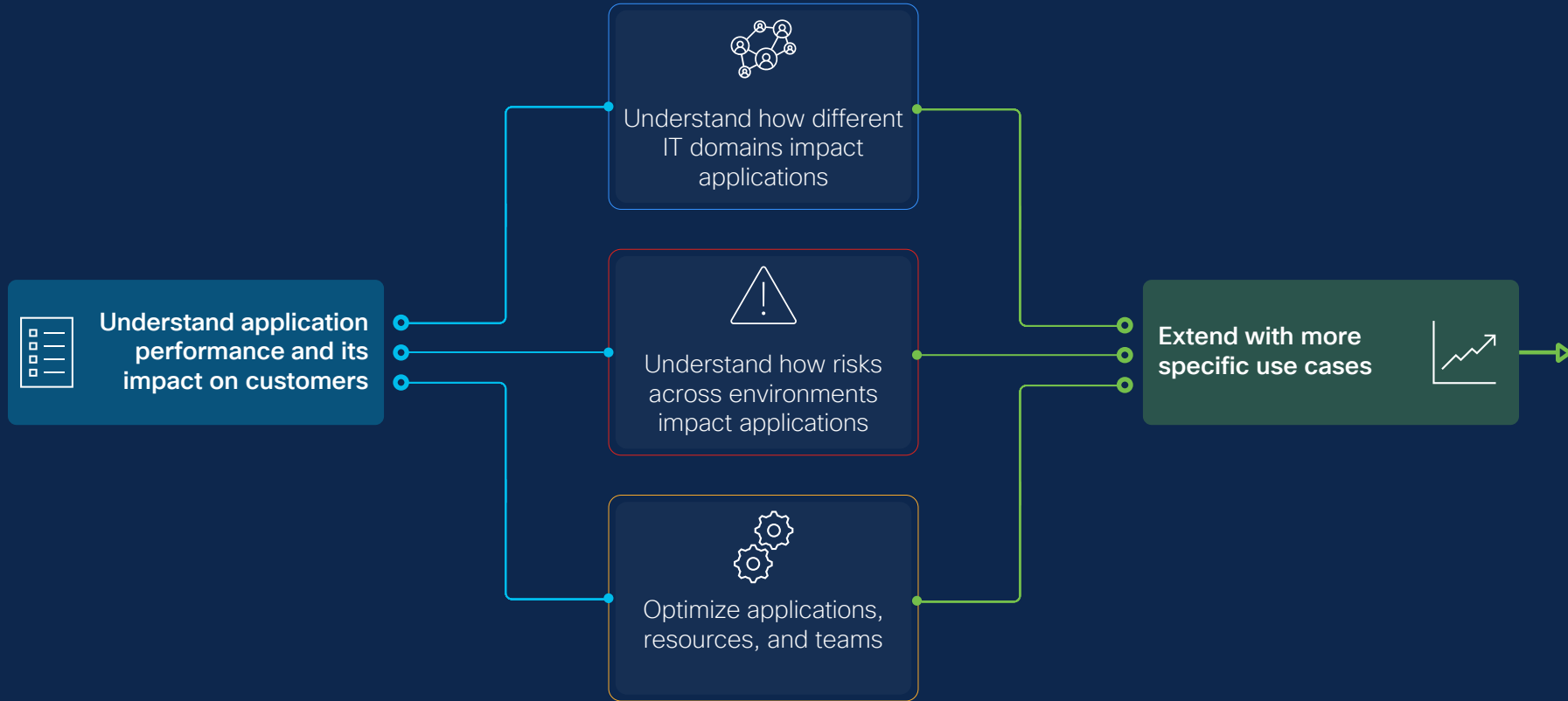


Only Cisco has an entity-based observability platform built to be scalable, open, programmable, and extensible



Only Cisco has the deep, cross-domain expertise and experience to help customers address their most critical challenges

# Cisco meets you wherever you are along your journey



# The Observability Journey

# Tiger





**Social**  
Solo



**Tactics**  
Ambush Hunter



**Success Rate**  
5% - 10%



# Falcon



**Social**  
Solo



**Tactics**  
Speed & Pursuit



**Success Rate**  
40%



# African Wild Dogs





## Social

Pack Dependent



## Tactics

Coordination &  
Group Dynamics



## Success Rate

60%-90%



# Dragonflies



**Social**  
Solo



**Tactics**  
Intercept



**Success Rate**  
95%



# Why?



# Intercept

Eyes

360° Observability



Agility

Flight in Any Direction



4 Wings

Independent Muscles for Each Wing



Prediction

Targets Future State of Prey



# Becoming a Dragonfly

Full Stack Observability



Visibility



Action



Insight





**Social**  
Solo



**Tactics**  
Intercept



**Success Rate**  
95%



# FSO Journey



Tiger



Falcon

Pack Dogs

Dragonfly

# People, Process, and Tech



# FSO Journey



Tiger



Falcon

Pack Dogs

Dragonfly

# FSO Journey

## Hybrid Application Monitoring Modern Application Monitoring

### Individual Driven:

One to Two people in the organization that understand your environment end-to-end

Point  
Solution



Falcon

### Efficient Teams:

Better equipped to focus troubleshooting within siloes

Tiger



# Hybrid Application Monitoring

**Hybrid Cloud** – See Applications and workloads between on-prem and cloud environments



**Supply Chain** – Gain observability into SAP environments connecting them to Applications



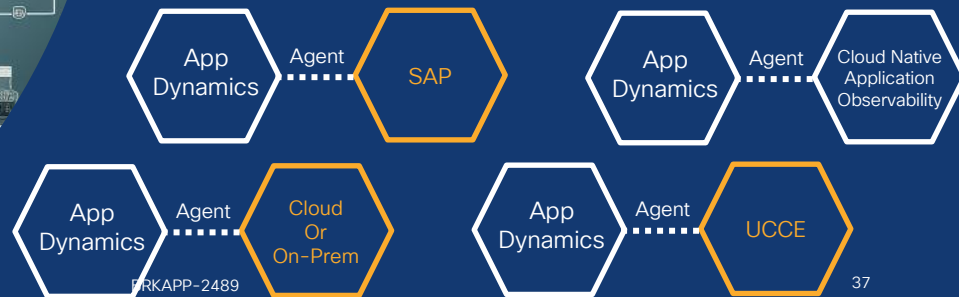
**Modern Apps** – See Hybrid cloud environments side-by-side with cloud native



**Contact Center** – Treat your contact center environment like your dev apps troubleshooting with the power of APM



## Value Chains



# Modern Application Monitoring



**Containers** – Purpose built visualization to see MELT data across containerized environments



**Cloud Native** – Gain greater observability into Cloud Native Application environments



**Module Enrichment** – Add greater visibility with purpose-built modules shaping your data



**Expansive Data Sources** – Tap into any telemetry data source and auto-correlate data with the FSO Platform and its OTEL data modeling

## Value Chain



# FSO Journey

## Hybrid Application Monitoring Modern Application Monitoring

### Individual Driven:

One to Two people in the organization that understand your environment end-to-end

Point  
Solution



Falcon

### Efficient Teams:

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Tiger



# FSO Journey

Digital Experience Monitoring  
Third Party Dependency Monitoring  
Business Risk Observability

**Efficient Teams:**  
Better equipped to  
focus troubleshooting  
within siloes

Pairwise  
Integration



**Coordinated Teams:**  
Enable Teams to  
Coordinate across  
Individual siloes

Pack Dogs

Falcon

# Digital Experience Monitoring



**Network & Application** – See both environments in a unified view



**Customer Experience** – Follow a customer's experience from physical locations to mobile



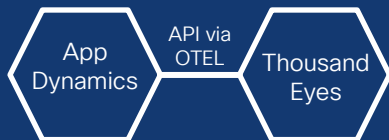
**Time to Innocence** – Red, yellow, green view of Network, Infrastructure, & Apps



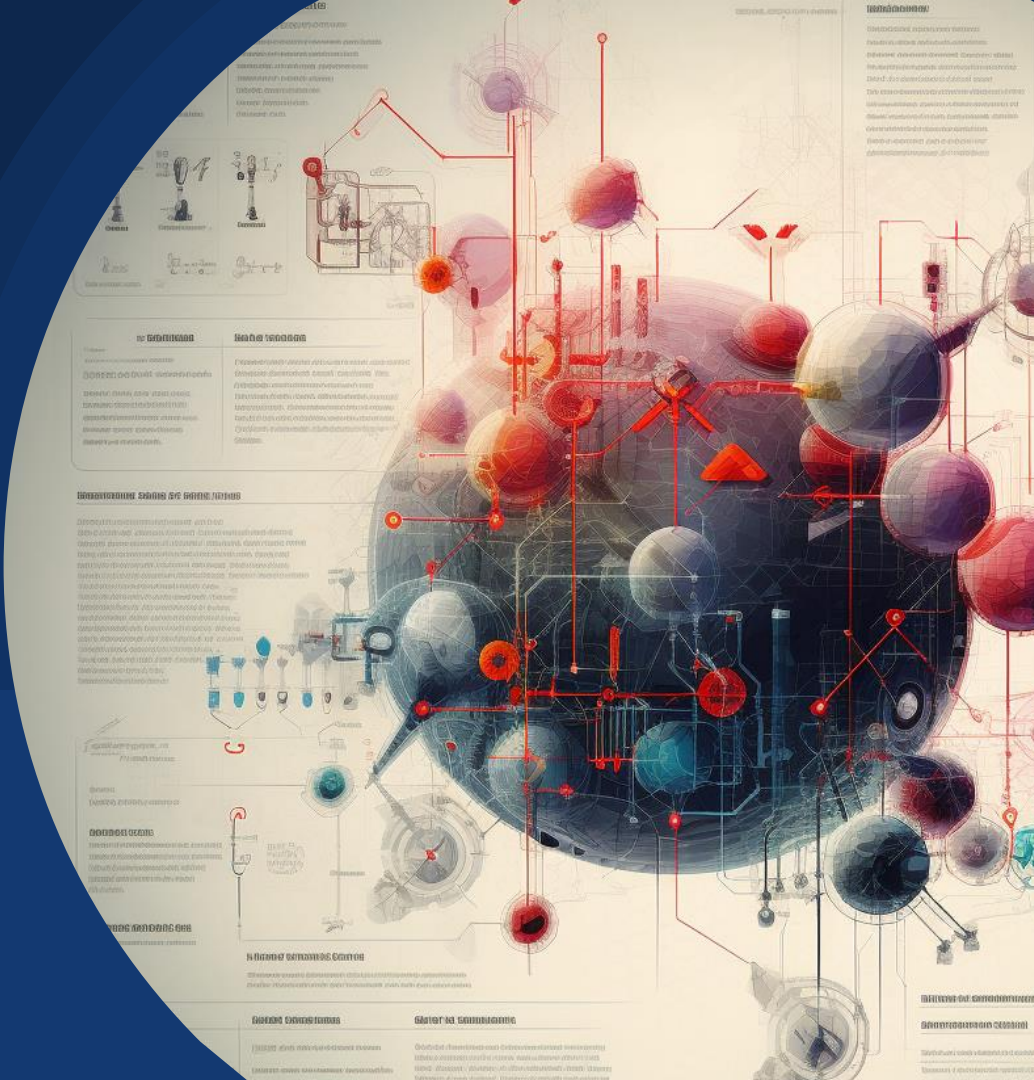
**Correlation** – Correlate data across both Network and Application in time, event, and incident

## Value Chain

Digital  
Experience  
Monitoring



Application  
Dependency  
Monitoring



# Third Party Dependency Monitoring

**Network & Application** – See both environments in a unified view



**3rd Party Performance** – Understand 3rd party service impacts on the User Experience



**Time to Innocence** – Red, yellow, green view of Network, Infrastructure, & Apps



**Correlation** – Correlate data across both Network and Application in time, event, and incident



## Value Chains

Digital  
Experience  
Monitoring



Application  
Dependency  
Monitoring

# Business Risk Observability



**Business Impact** – Tie code level concerns back to business impact, and prioritize greatest risks



**App Vulnerability** – See how customer application code vulnerabilities affect business KPIs



**Threat Ranking** – See multiple threat rankings side by side to correlate biggest threats



**Multiple Threat Databases** – Source data from Talos, Panoptica, and Kenna scoring in one place

## Value Chains

Application  
Security



# FSO Journey

Digital Experience Monitoring  
Third Party Dependency Monitoring  
Business Risk Observability

**Efficient Teams:**  
Better equipped to  
focus troubleshooting  
within siloes

Pairwise  
Integration



**Coordinated Teams:**  
Enable Teams to  
Coordinate across  
Individual siloes

Pack Dogs

Falcon

# FSO Journey

Cost Insights  
Application Resource Optimizer  
Business Risk Observability

## Unity:

All teams acting in unison  
to support Business  
Outcomes

Dragonfly

FSO  
Platform



Pack Dogs

## Coordinated Teams:

Enable Teams to  
Coordinate across  
Individual siloes



# Cost Insights



**Cloud Native** – Understand and optimize container costs across your cloud native workloads



**Cloud Cost Analysis** – gain deeper control over your existing cloud cost centers



**Per Service Cost Analysis** – Understand your costs from expansive workloads to micro-services



**AWS Ready** – Built for cloud environments, and upgradable to VM environments with CloudFabrix VSphere Module

## Value Chains



# Application Resource Optimizer

**Optimization** – Balance and Optimize workloads based on your cloud native resource needs



**Resource Utilization** – Understand where the need is to balance workloads for micro-services



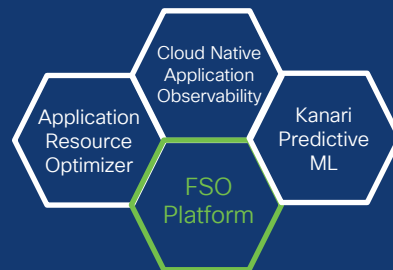
**Cloud Native** – Purpose built visualization to see MELT data across containerized environments



**Predictive ML** – Add Kanari's Predictive ML engine to forecast utilization and see needs before the demand arises



## Value Chains



# Business Risk Observability



**Business Impact** – Tie code level concerns back to business impact, and prioritize greatest risks



**App Vulnerability** – See how customer application code vulnerabilities affect business KPIs

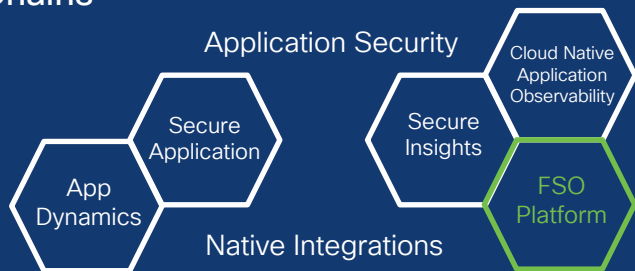


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## Value Chains



# FSO Journey

Cost Insights  
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Business Risk Observability

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Dragonfly

FSO  
Platform



Pack Dogs

## Coordinated Teams:

Enable Teams to  
Coordinate across  
Individual siloes



# FSO Journey





Dragonfly


Custom Ops




# Custom Ops

**Unified View** – See entire environment in a single source of truth 

**Scalable** – See the full-stack including networking, Application, infrastructure, logs, and events 

**Multi-Source** – Out-of-the-box data sources or custom based your environment's needs 

**Custom:**  
Your Data + Your Context = Your Observability 

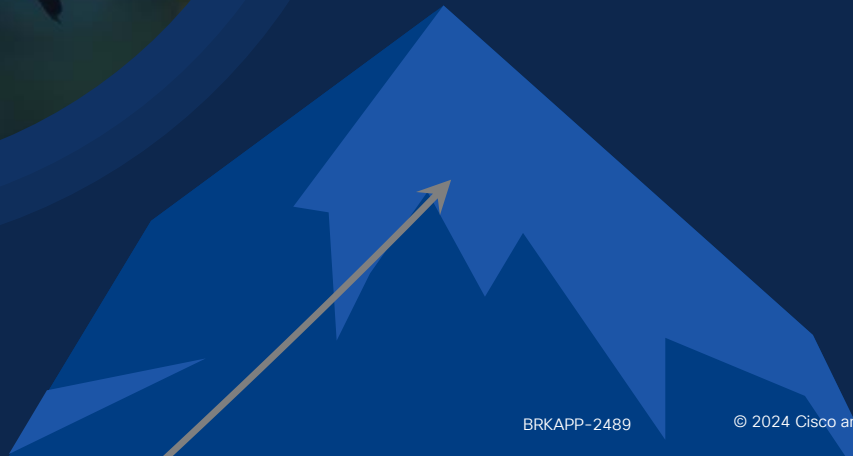


## Value Chain

# FSO Journey



Dragonfly



# FSO Journey



Tiger



Falcon

Pack Dogs

Dragonfly

# Case Study

# The Vision – Over the top virtual simplicity, insights, and action



## Platform Agnostic

Any platform, any location, any operational domain, easy and fast on-boarding.

## Insights

Inter-domain metric and incident correlation, of incidents and services across all operational domains – AppOps, NetOps, InfraOps, SecOps, CollabOps

## Unified Visualization

Inter-domain 5 levels of persona-based end-to-end visualization of entire I&O system health on a single screen

## Actions

Discover actionable events from correlated alerts and notifications and act on it

# Cisco IT Observability Landscape



2M events  
/day



40+  
Integrations



800+ Policies



500+ KPI's



Availability  
Monitoring for  
292,500+ Endpoints



1500+  
IT Users

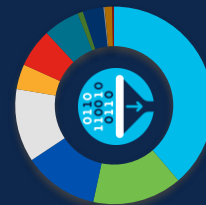


100 Services



21,000+ App Endpoints  
2900 + prod Applications

## Event Distribution



- Infra-alerts
- Sciencelogic
- Sciencelogic-cms
- AppDynamics
- OEM
- ThousandEyes



4,881  
Routers



7,366 LAN  
Switches



11,000+ UCS  
servers



56,553  
Virtual Machines



300,000+  
Nodes



24,000+  
Access points



**CISCO** *Live!*

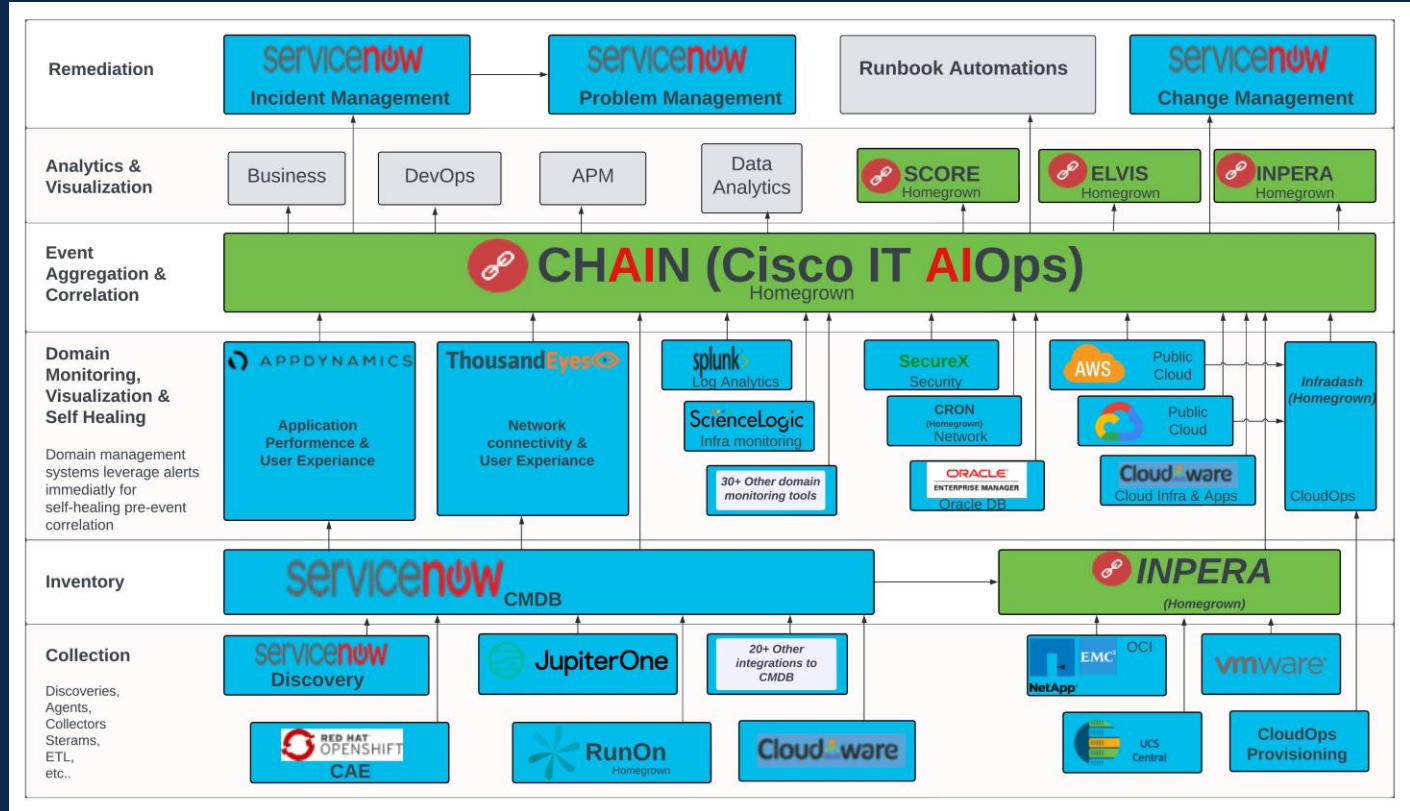
# Out-of-box Brownfield Inter-domain Integrations



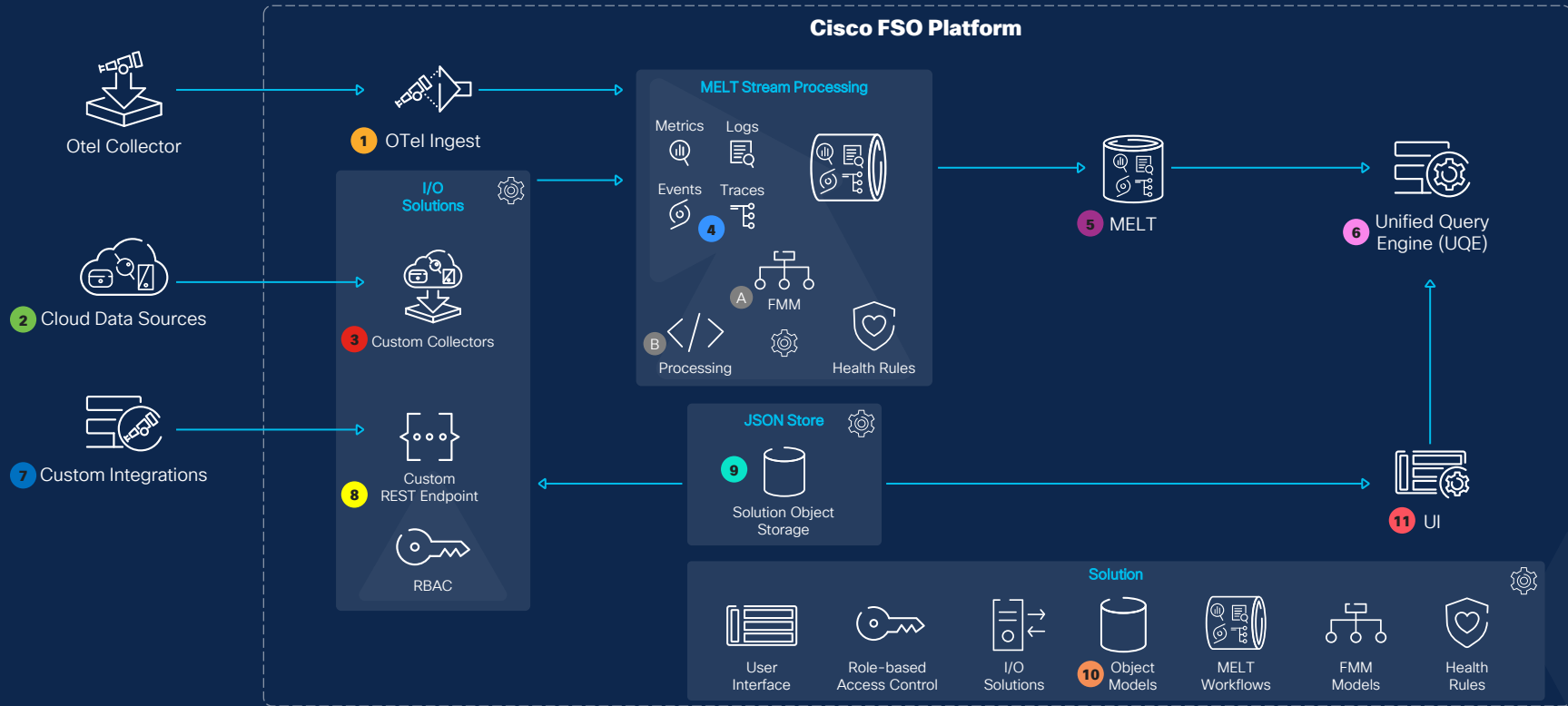
# Monitoring & Observability in IT – Today

Aggregating events and metrics into a single view

Focusing on Cisco solutions but providing support for a dynamic range of monitoring tools



# The Cisco Observability Platform's Architecture





# Demo



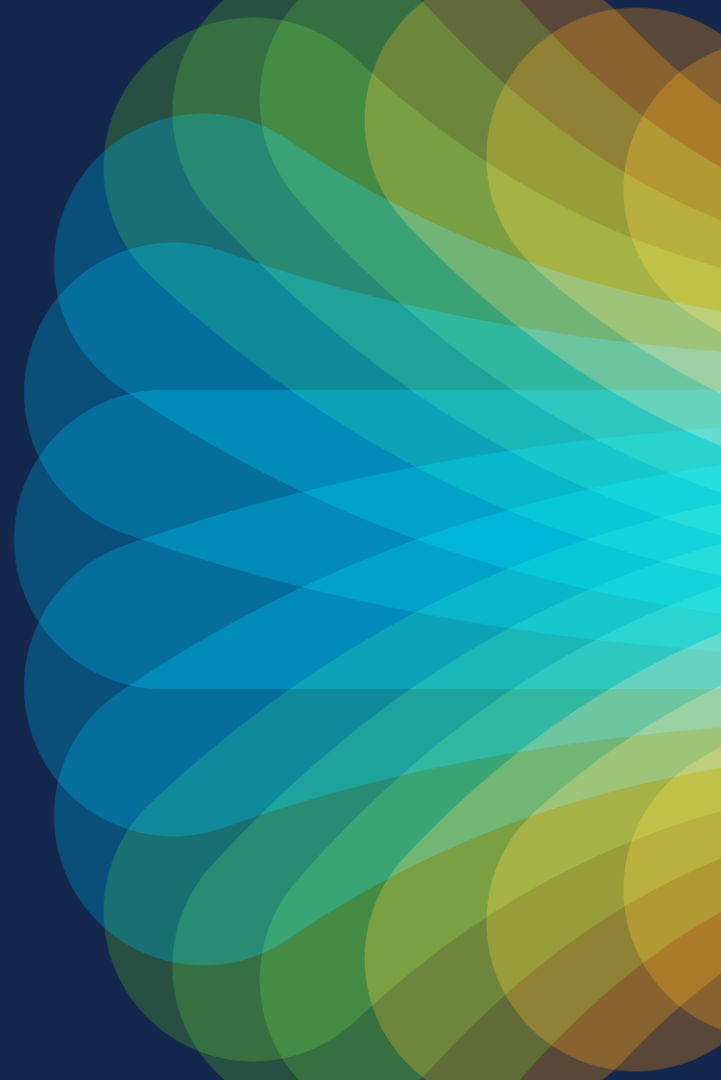
The bridge to possible



The bridge to possible

# Thank you

CISCO *Live!*



The background of the slide is a vibrant, abstract graphic. It features a large, stylized cloud shape on the left side, composed of overlapping, semi-transparent layers of orange, red, and yellow. To the right of the cloud, a bright, multi-colored sunburst or starburst pattern radiates from a central point, with rays extending towards the right edge of the frame. The colors in the sunburst transition through a spectrum from blue and purple on the left to yellow and orange on the right. The overall effect is energetic and colorful.

cisco *Live!*

Let's go