Real-World AI Use Cases and Agentic AI: – From Planning to Production

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Book Meeting

Albert Shpatollaj

AI & GTM Lead – EMEA North

AI Specialist team

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Agenda

Why this session is valuable what are the top 13% doing with AI

Why Cisco?

AI Use cases + Internet of Agents

How we work to find and validate AI usecases

Results and ROI from AI workshops

Next step

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Why is it so hard to get to fully agentic AI? And how we at Cisco solve it

Chatbots

Humans talk to AI

Agentic

Workflows get automated

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MIT Technology Review

Organizations face 3 challenges: **Security concerns**, **Complexity**, Cost control.

Compiled by MIT Technology Review Insights, based on data from Cisco, 2025

Evolving risks

Security risks across the AI lifecycle

Integrations, How can we make different agents talk to each other?

Cost control

Uncertain ROI to build AI-ready environments

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MIT Technology Review

Companies around the world are feeling the pressure to adopt AI

98% feel increased urgency over the past year.

85% say they have less than 18 months to deploy an AI strategy, or they will see negative business effects.

For 50% of organizations, CEOs and leadership—more so than any other factor—are driving urgency for AI.

AI is a priority spend for IT budgets; 50% of companies say they've already dedicated 10 to 30% of their budget to AI.

13% of companies globally are ready to leverage AI and AI-powered technologies to their full potential.

Source: Compiled by MIT Technology Review Insights, based on data from Cisco, 2025

Compiled by MIT Technology Review Insights, based on data from Cisco, 2025

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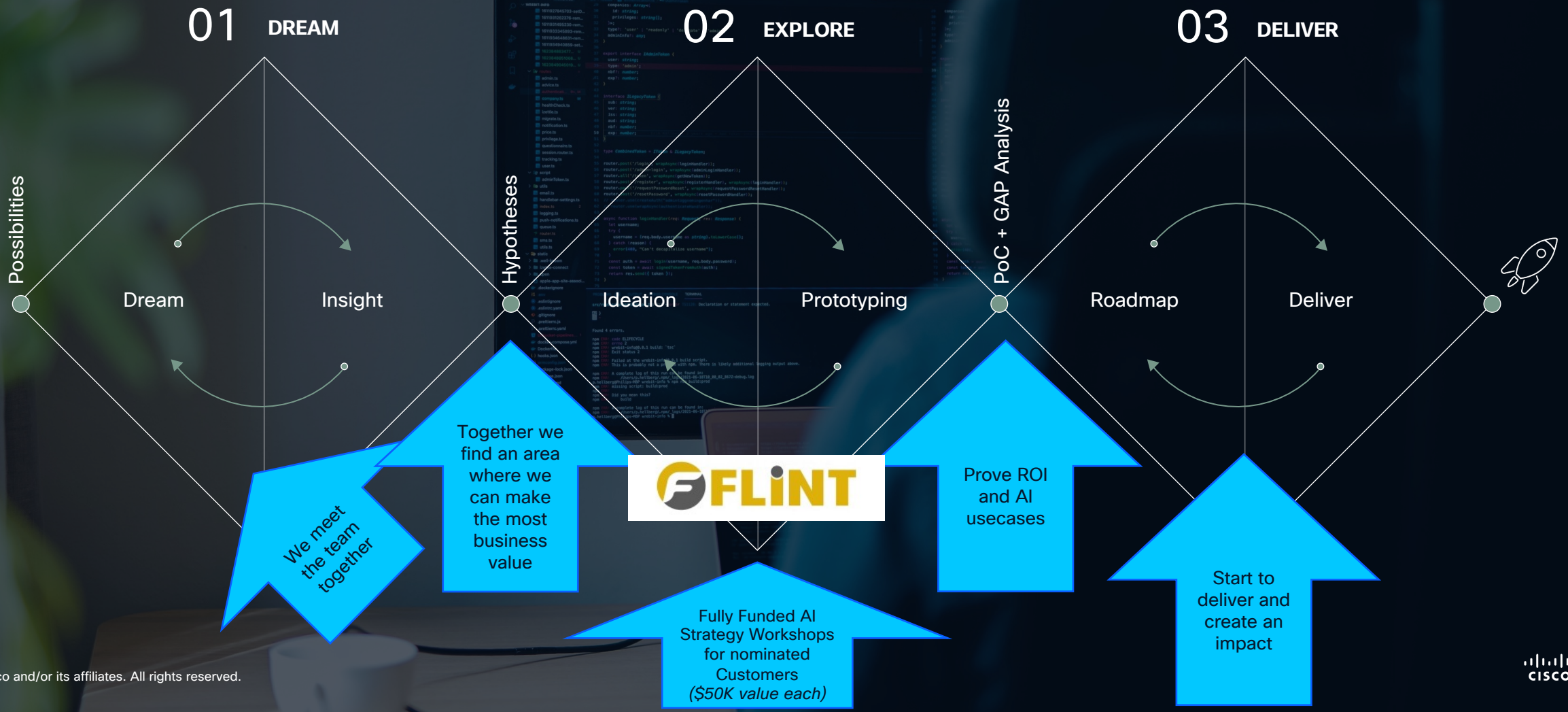
How we get to 13% Dream Explore Deliver



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Why Cisco?

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50%
faster code
review process
OpenAI DevDay [2025]

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Organizations face 3 challenges: **complexity**, **fragmentation**, and **security concerns.**

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How can you trust AI agents?

AI AGENTS

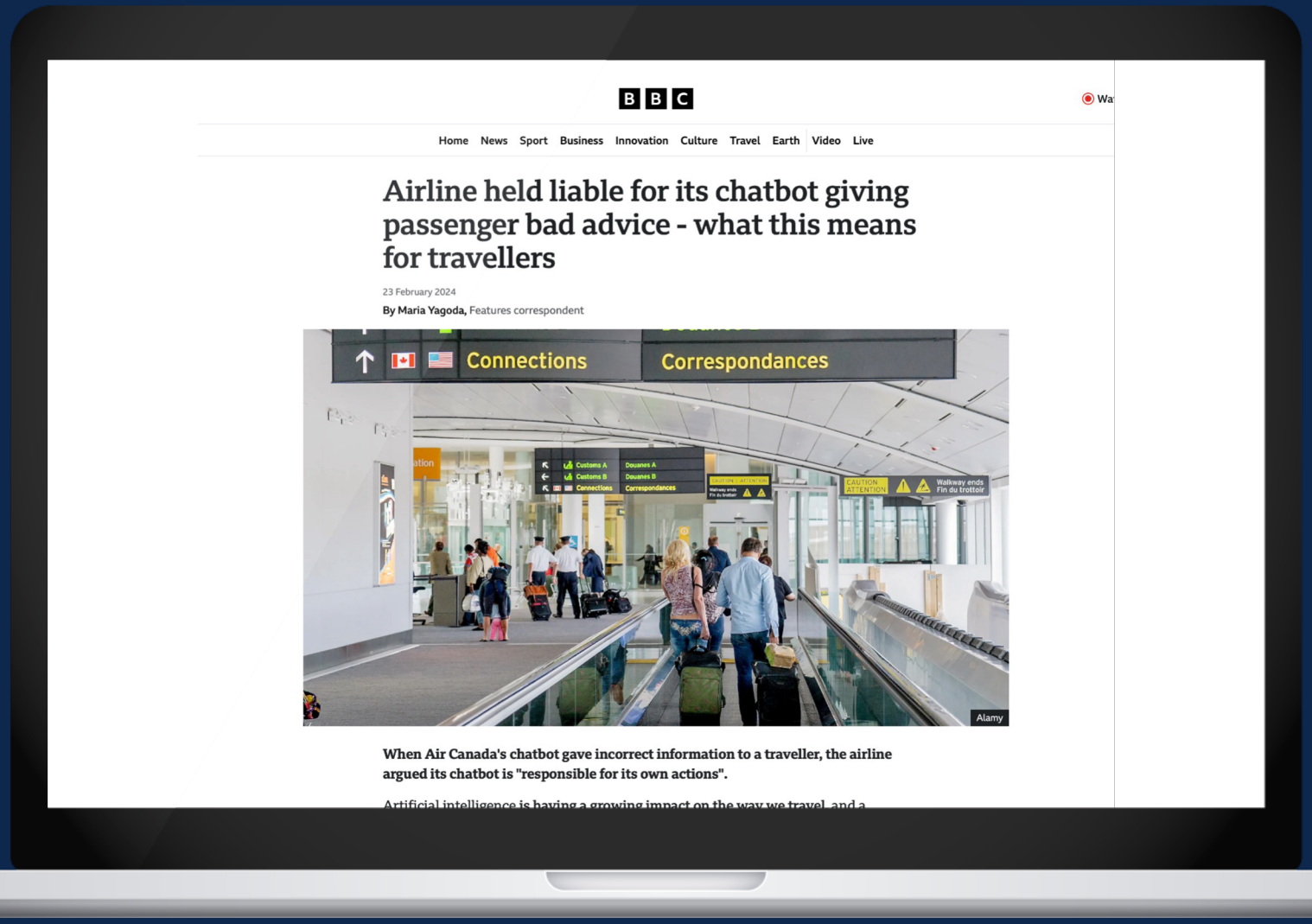
AI APPS

AI at the Edge

HUMANOIDS

Major consequences of unmanaged AI Agents risk

- Financial damage
- Litigation risk
- Reputational damage
- Compliance risk
- Security risk
- IP leakage



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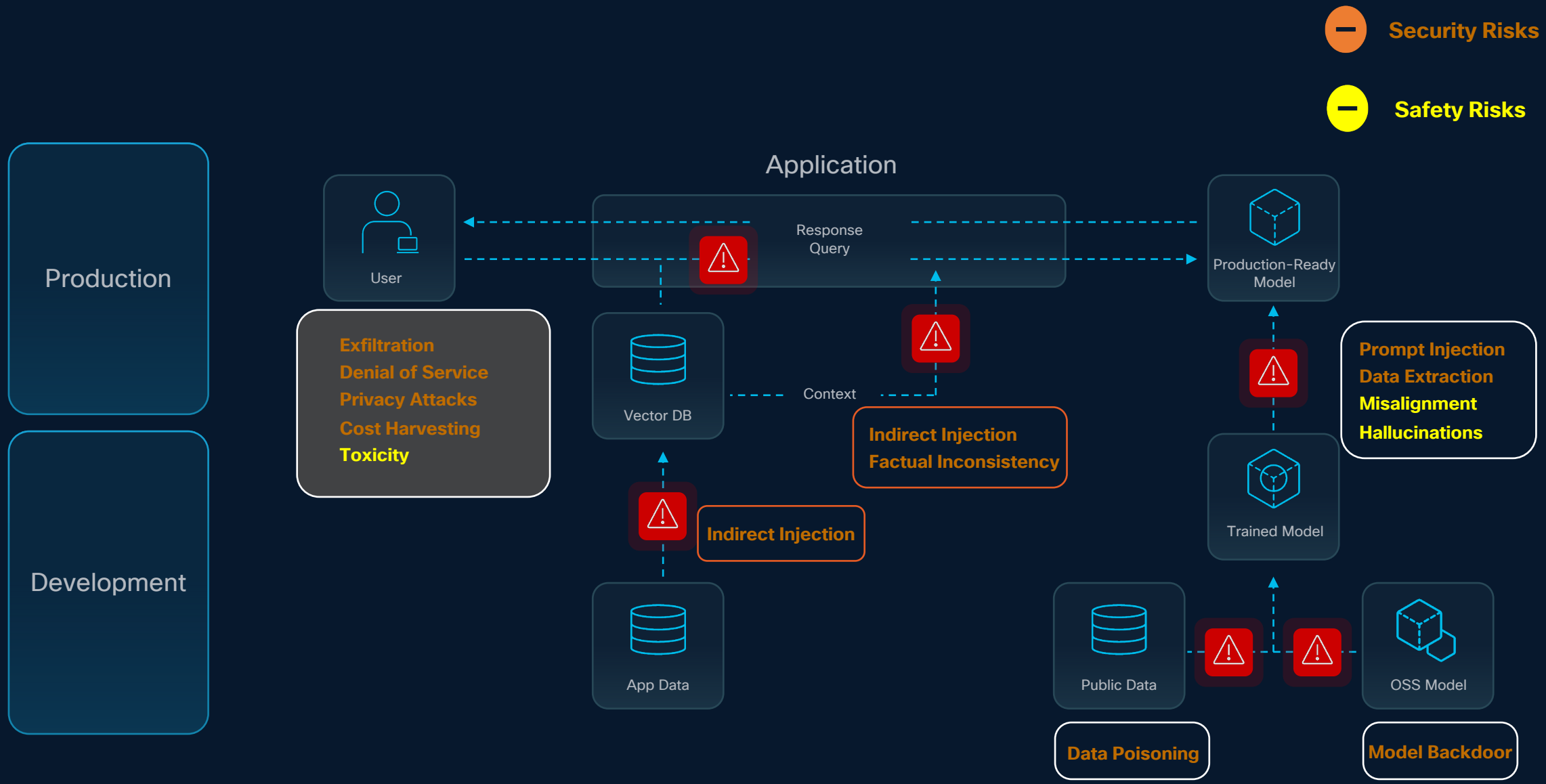
How are enterprises using AI applications?



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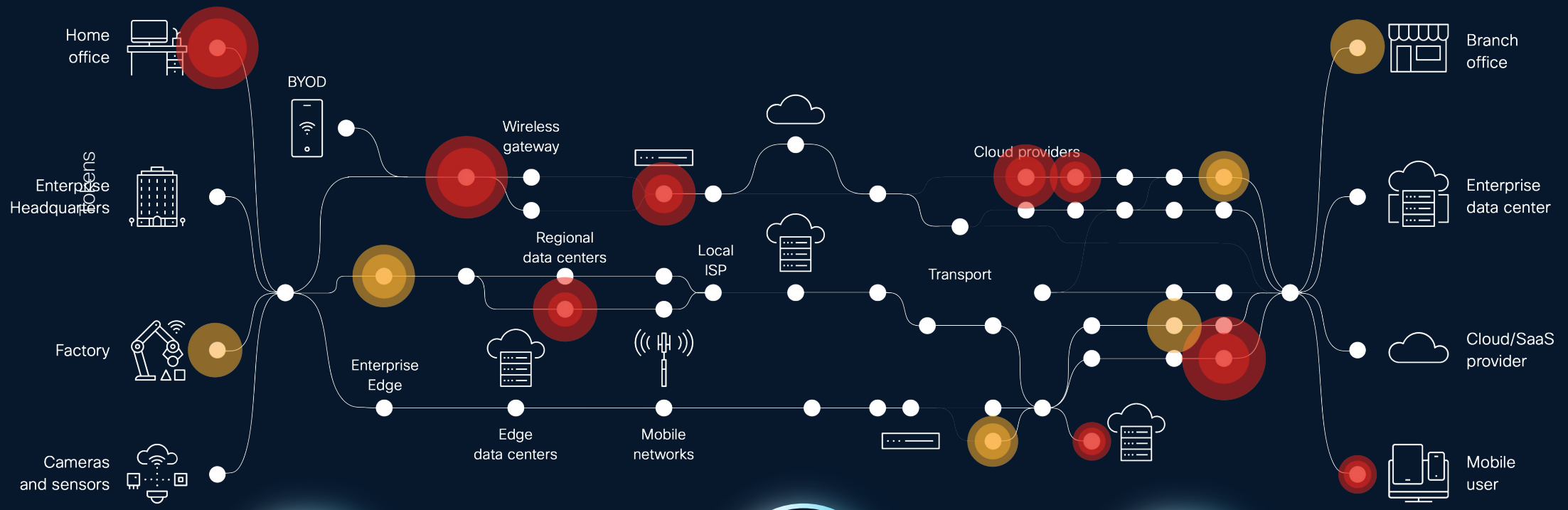
Why AI projects don't scale: Complexity creates **risk**
How can we unleash fully automated agents and trust them?



Cost control

Integrations

Evolving risks

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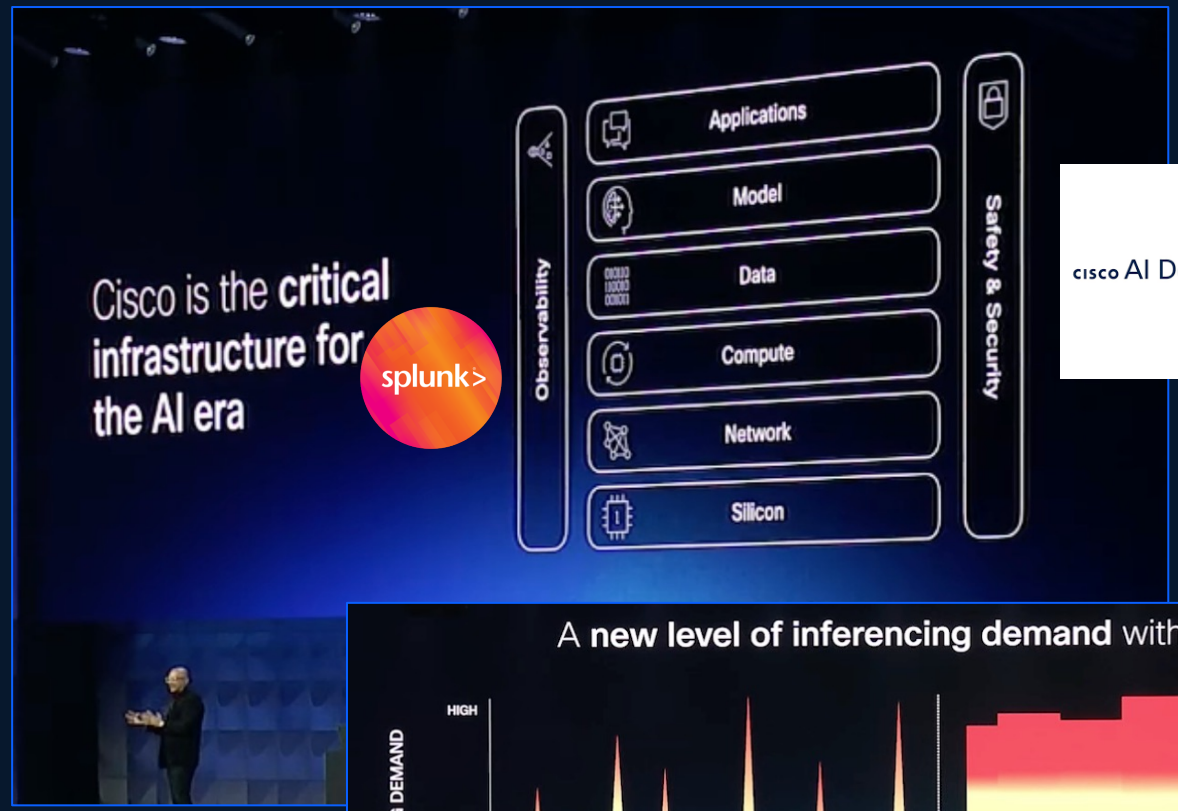
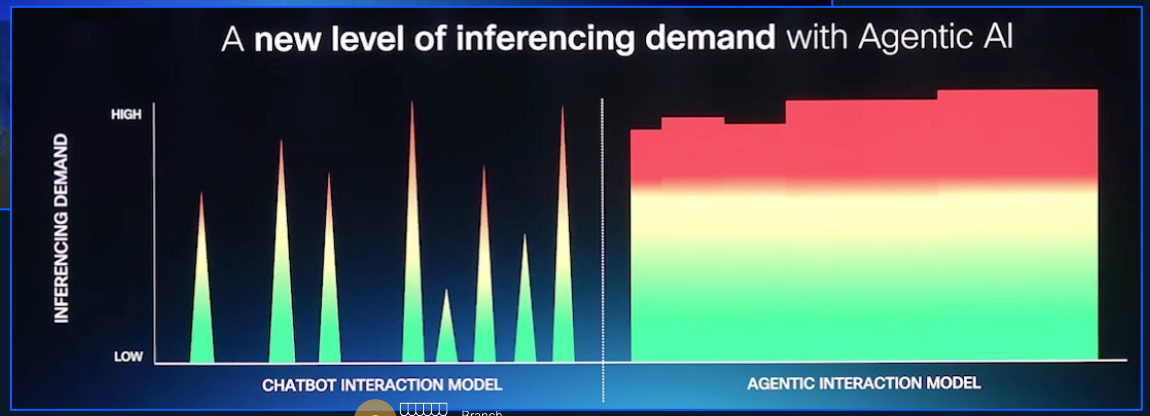
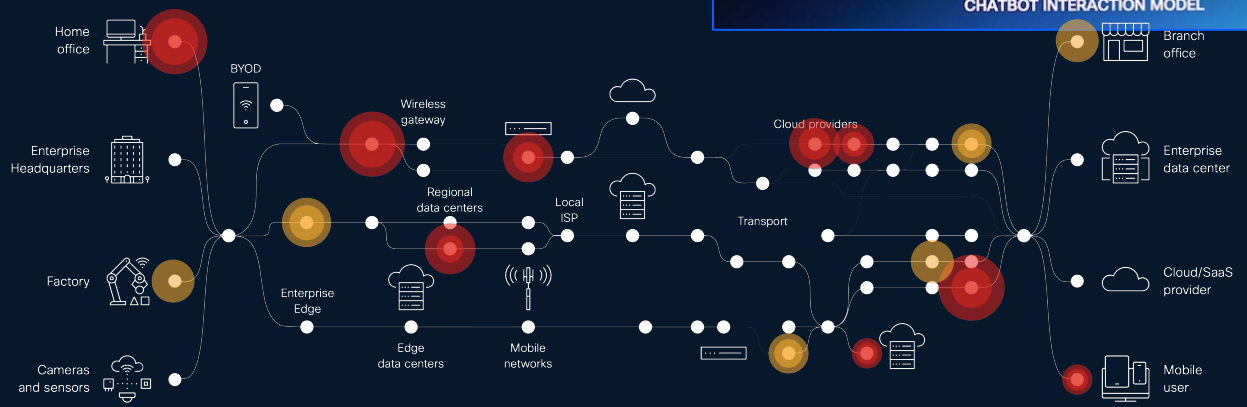
“Cisco is the only company in the world who can fully secure AI itself, thanks to the global network we built for 40 years.”

-Jeetu Patel CPO Cisco







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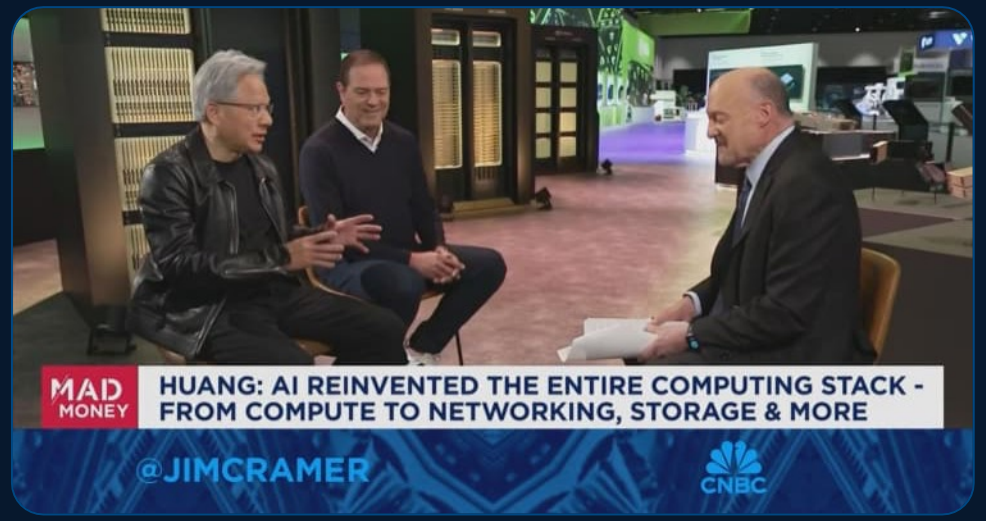
NVIDIA + CISCO + Ecosystem Partners

“

This is why we are partnering up with Nvidia to secure AI end-to end

– Chuck Robbins CEO Cisco



“

You can't partner with a company with more might and more domain expertise.

– Jensen Huang CEO Nvidia

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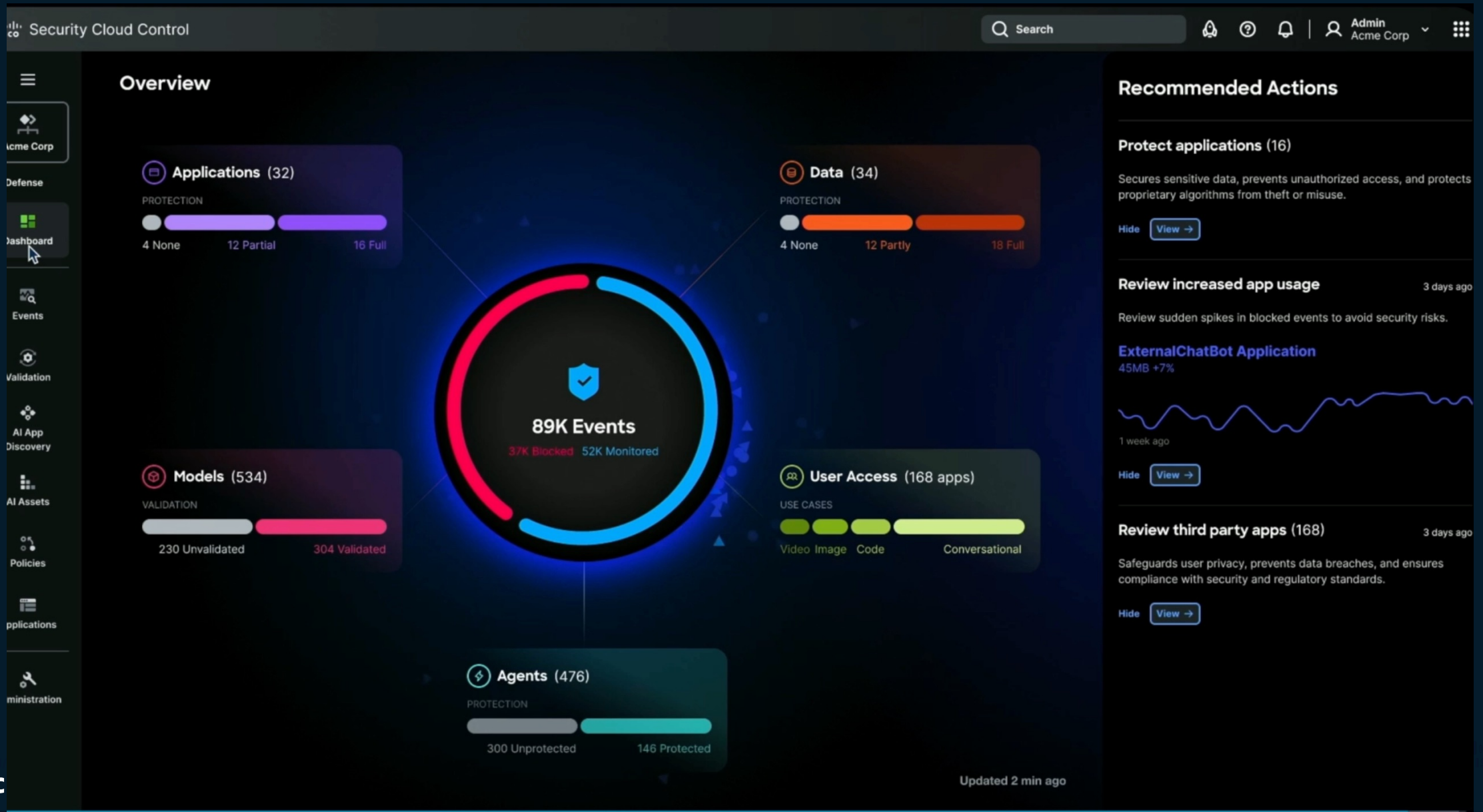
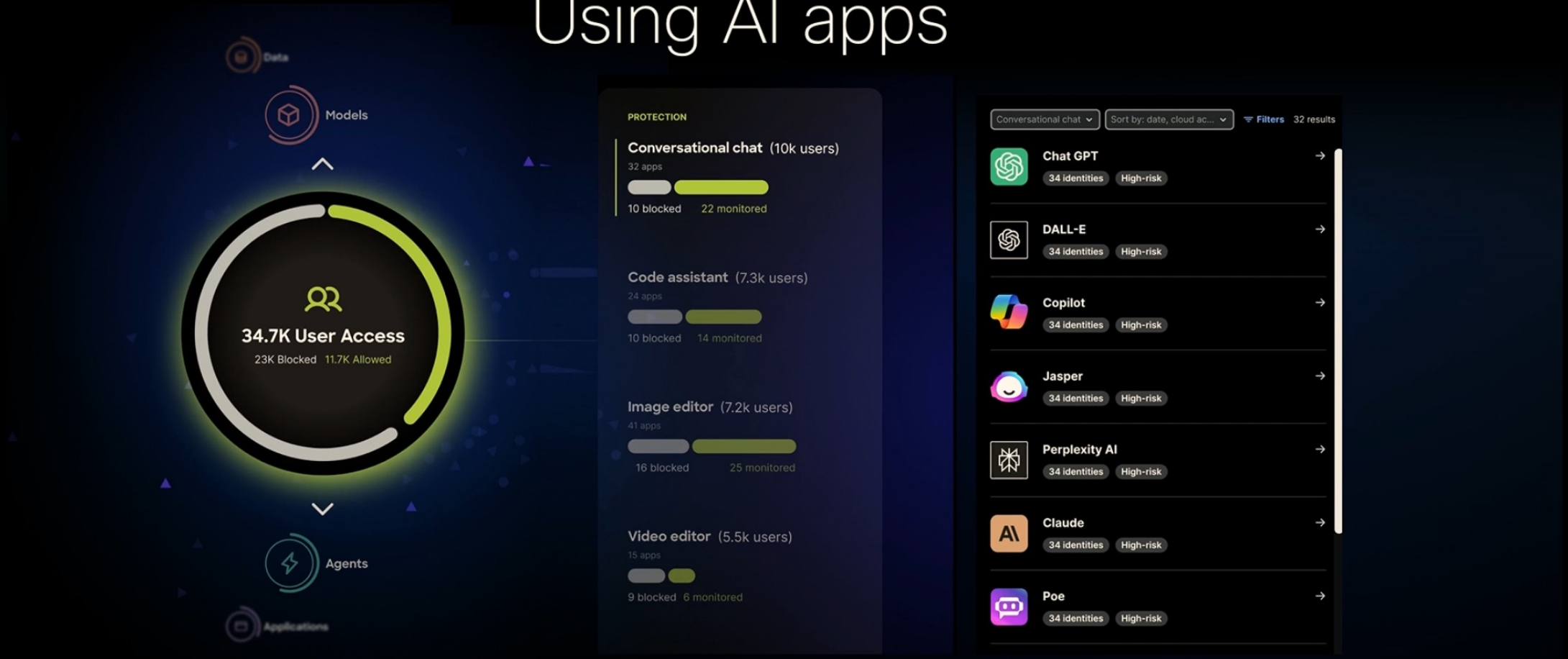
We can secure AI itself by Monitoring the AI agents in real time, thanks to the network



Using AI apps

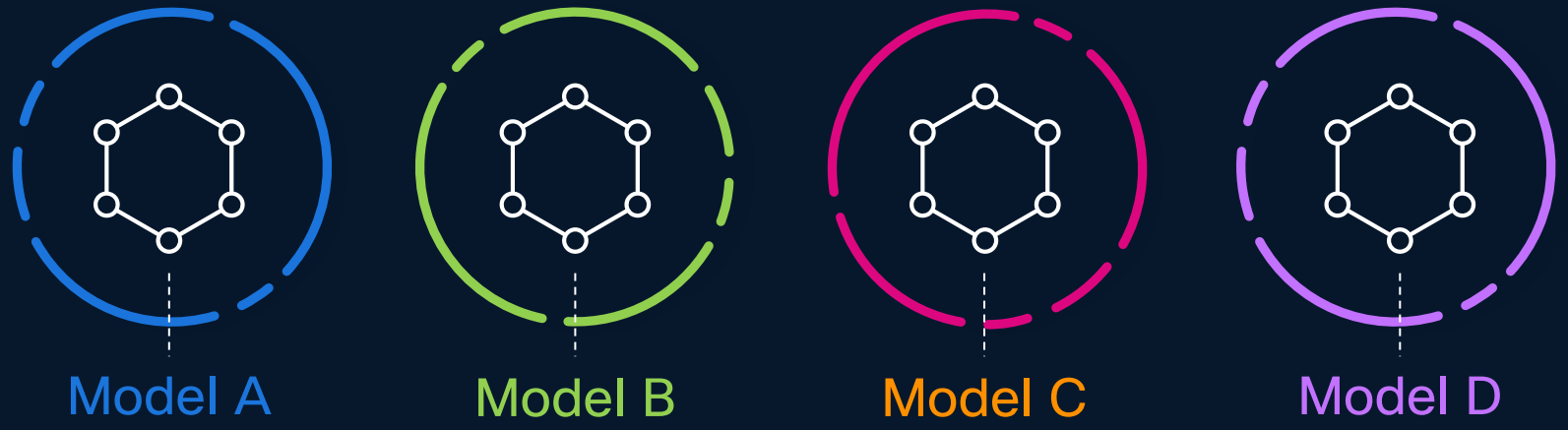


Visibility into
3rd party AI apps

Enforce policies
to ensure compliance

Works seamlessly with
Cisco Secure Access

Model security is inconsistent



Built-in guardrails are different for each model, optimized for performance over security, and easily broken when changing the model.

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Model security is inconsistent

Enterprise guardrails provide a common layer of security across models, allowing AI teams to focus fully on development.

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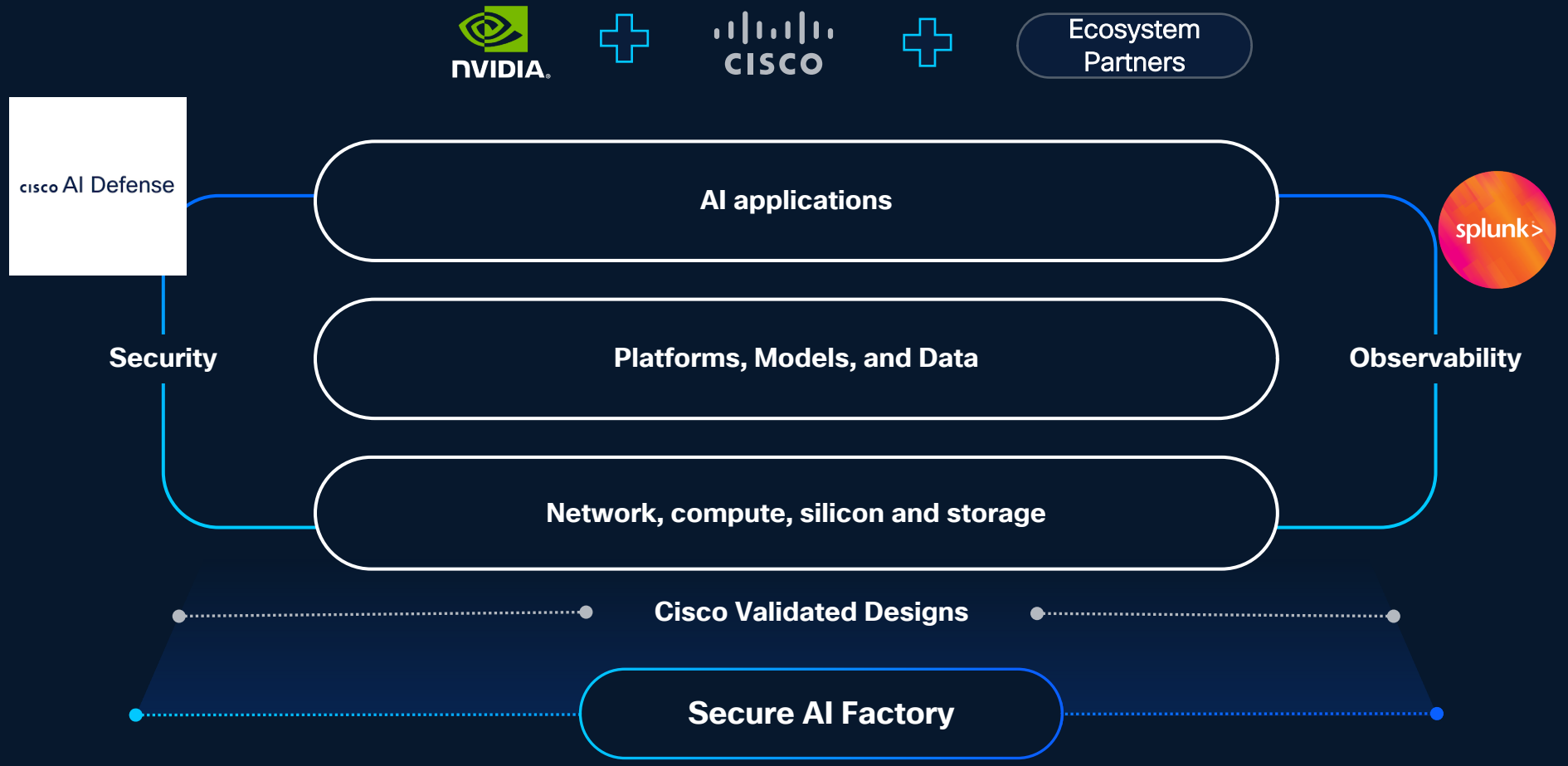
Awarded no1 Cisco Secure Air gapped AI Factory

Accelerate AI adoption with integrated AI infrastructure and software



Secure AI

Security First AI

Embedded security at every layer ensures the models you build, or use are compliant and protected

High Performance

High performance networking, compute, storage and security delivered as vertically integrated or modular stacks

Pre-validated

Reduce risk and accelerate deployment with certified Nvidia Enterprise reference architecture (ERA) and Cisco validated designs (CVD)

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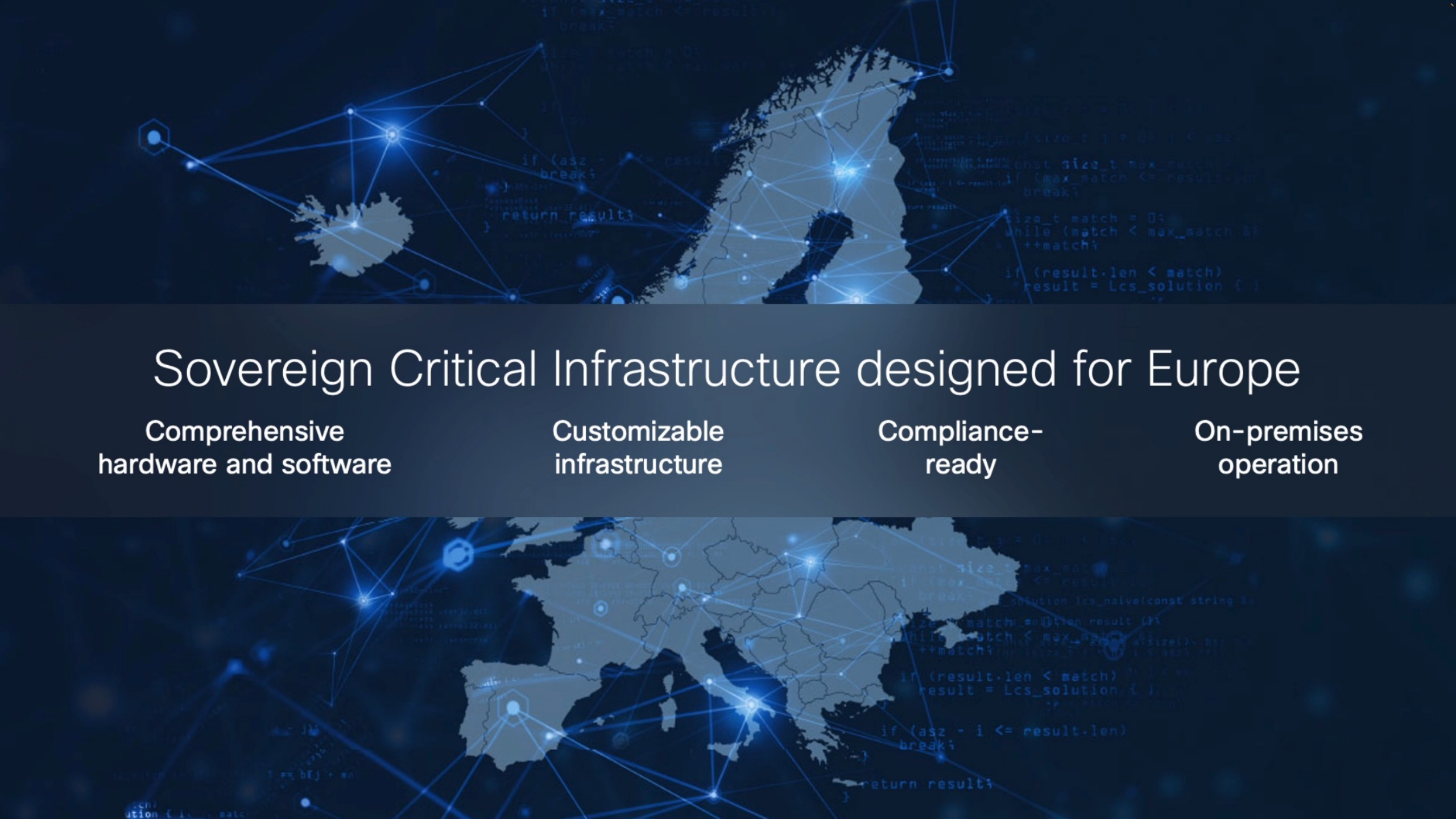
< Government & Private Sector />
Best Cybersecurity Team 2025
CISCO



Sovereign Critical Infrastructure designed for Europe

Comprehensive hardware and software

Customizable infrastructure

Compliance-ready

On-premises operation

What are customers building now when they can trust AI itself?

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Cisco strongest AI Use Cases

Manufacturing & Telco

- Asset Visibility & Control
- Digital Twin
- Inventory Management
- Industrial Automation

Government & Military

- Citizen Experience
- Transportation
- Public Safety
- Security Resilience

Education

- Personalized Experiences
- Hybrid Teaching
- Research Computing
- Smart & Secure Facilities

Financial Services & Government

- Fraud Detection
- Anti-Money Laundering
- Digital Experience Assurance
- Digital Journey

Healthcare

- Image Analysis
- AI Ready Infrastructure
- Patient Monitoring
- Patient Engagement

Retail

- Loss & Fraud Detection
- Safety & Surveillance
- Digital Merchandising
- Drive-thru Optimization

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Example Agentic + Digital Human Use Case

Digital Human

Audio2face

Parakeet

Llama3

Observability

splunk>

Multi AI Agents

Security & Guardrails

cisco AI Defense

Vector search engine A

Vector search engine B

Web Search

Product Database

Inventory Database

Email/Text

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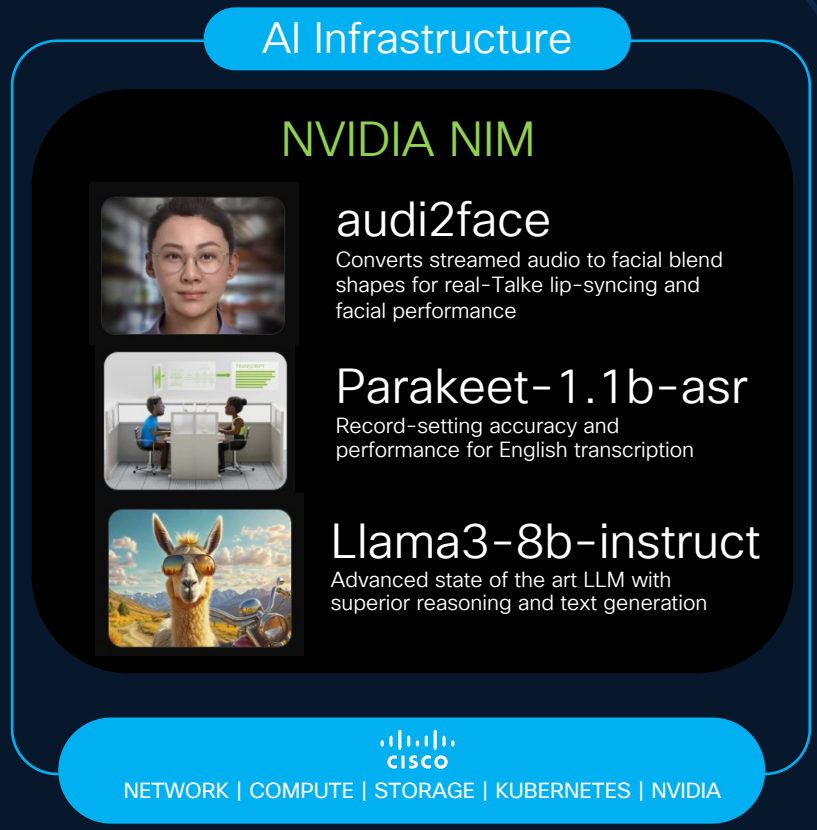
Example Multi Agent Use Case

Meet James, our interactive digital human when powered by the NVIDIA Product knowledge base, understands NVIDIA product context. James uses a collection of NVIDIA NIM inference microservices, NVIDIA ACE, and ElevenLabs digital human technologies to provide natural and immersive responses

Nvidia Digital Human

https://build.nvidia.com/nvidia/digital-humans-for-customer-service



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Example Agentic + Digital Human Use Case

Digital Human

Audio2face

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Multi AI Agents

Security & Guardrails

cisco AI Defense

Vector search engine A

Vector search engine B

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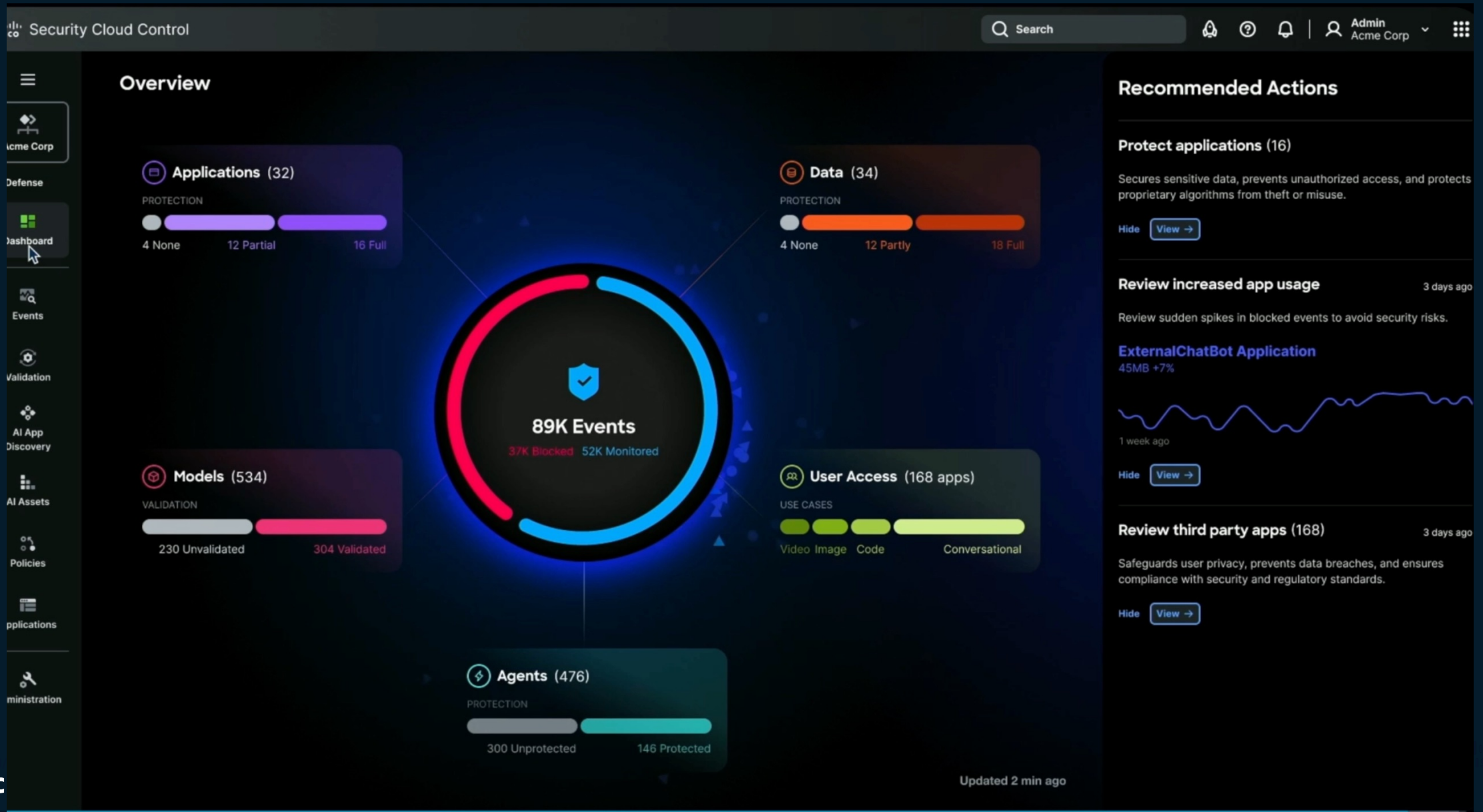
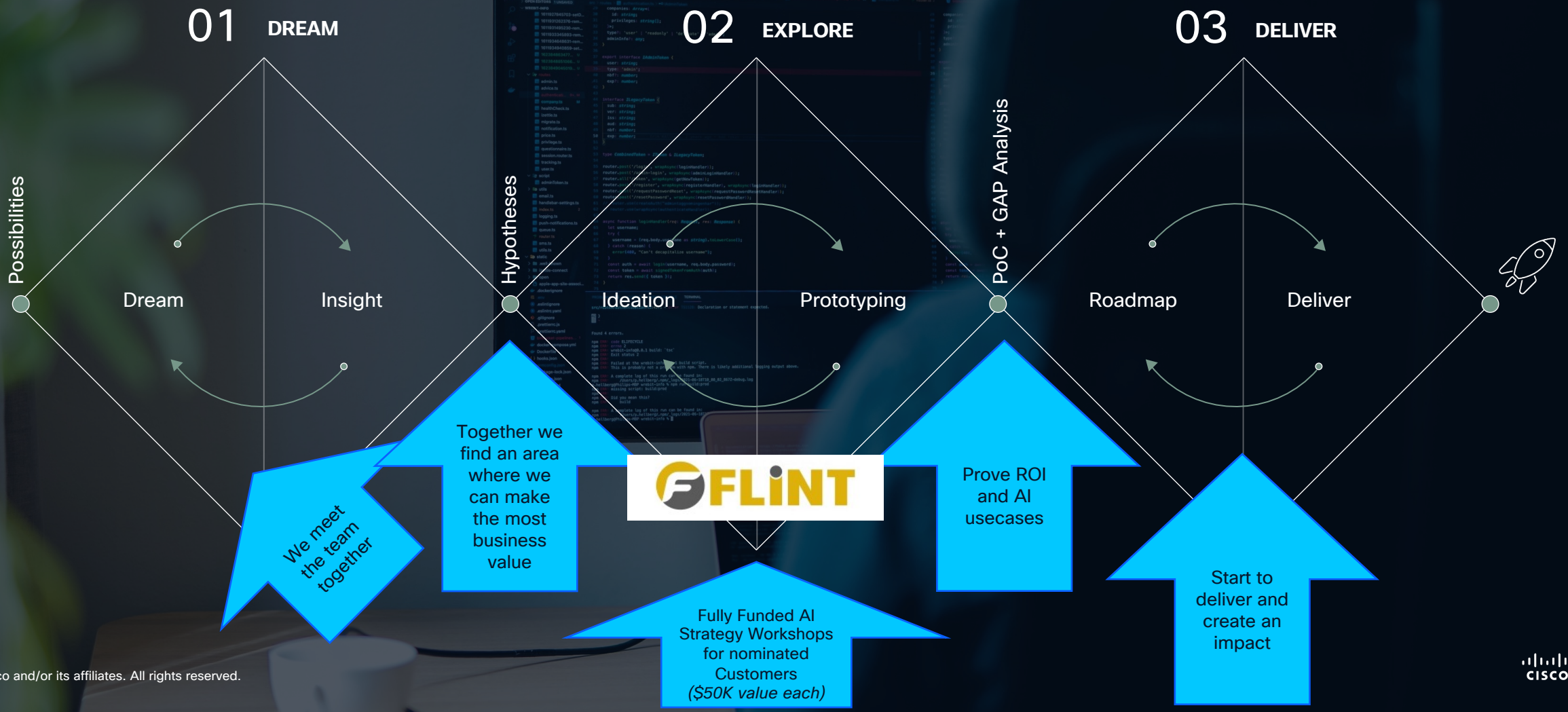


Recap
Dream Explore Deliver



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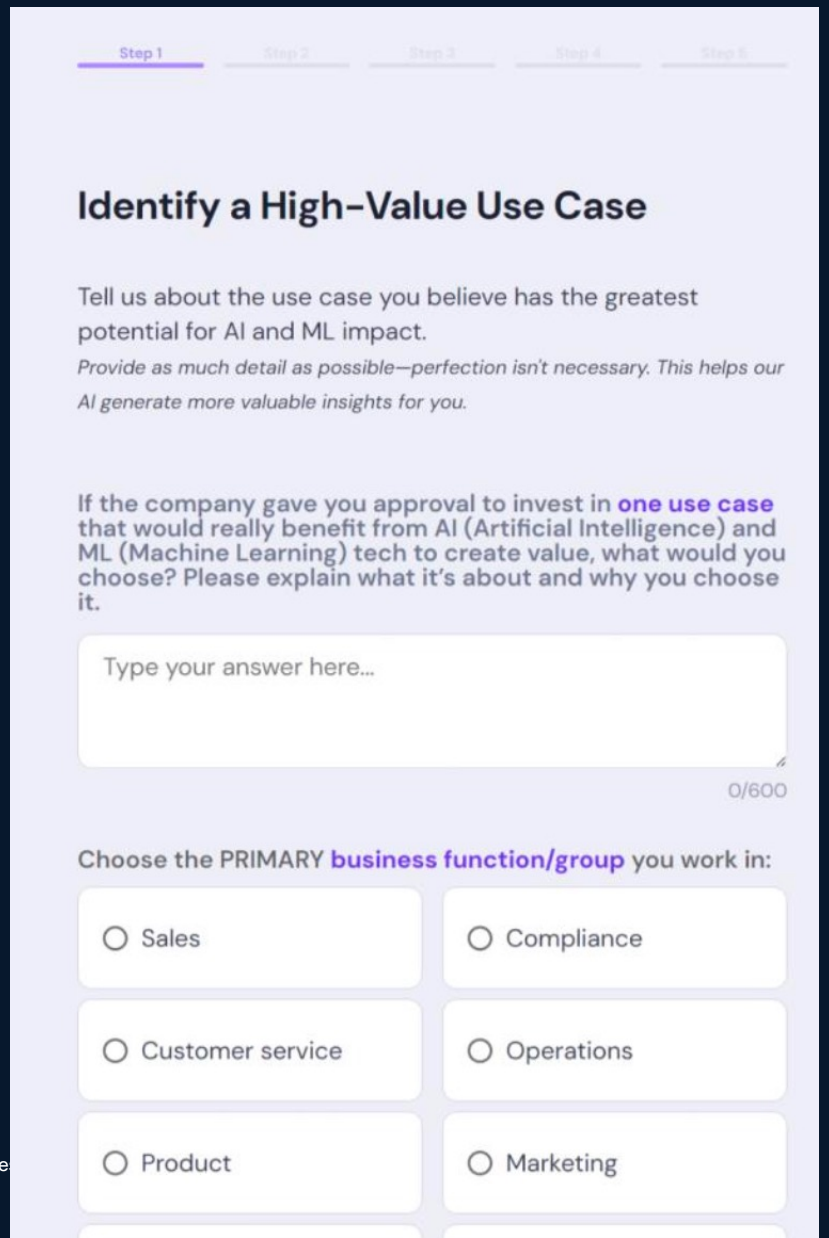
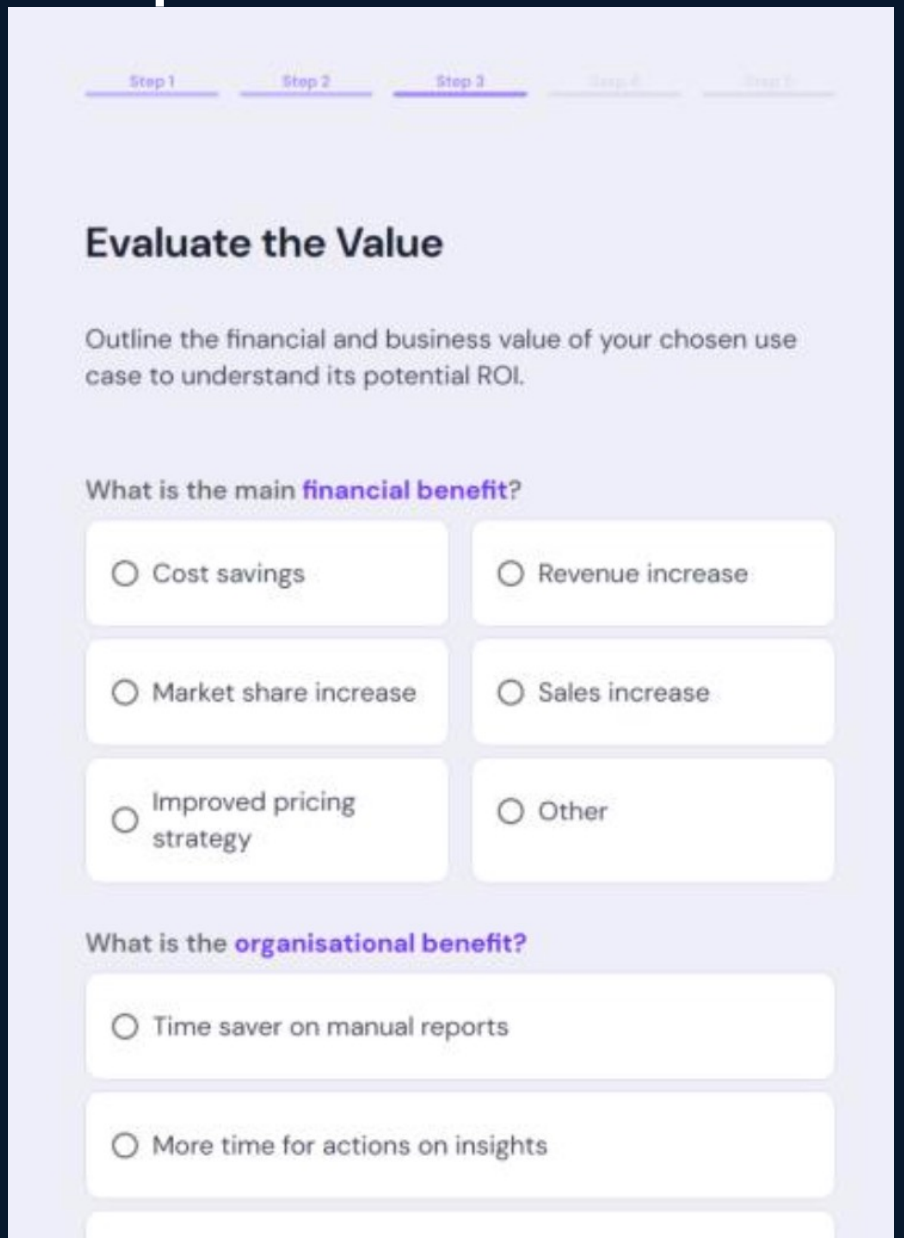
How does the pre workshop assessment work? It takes 20-30 min to complete





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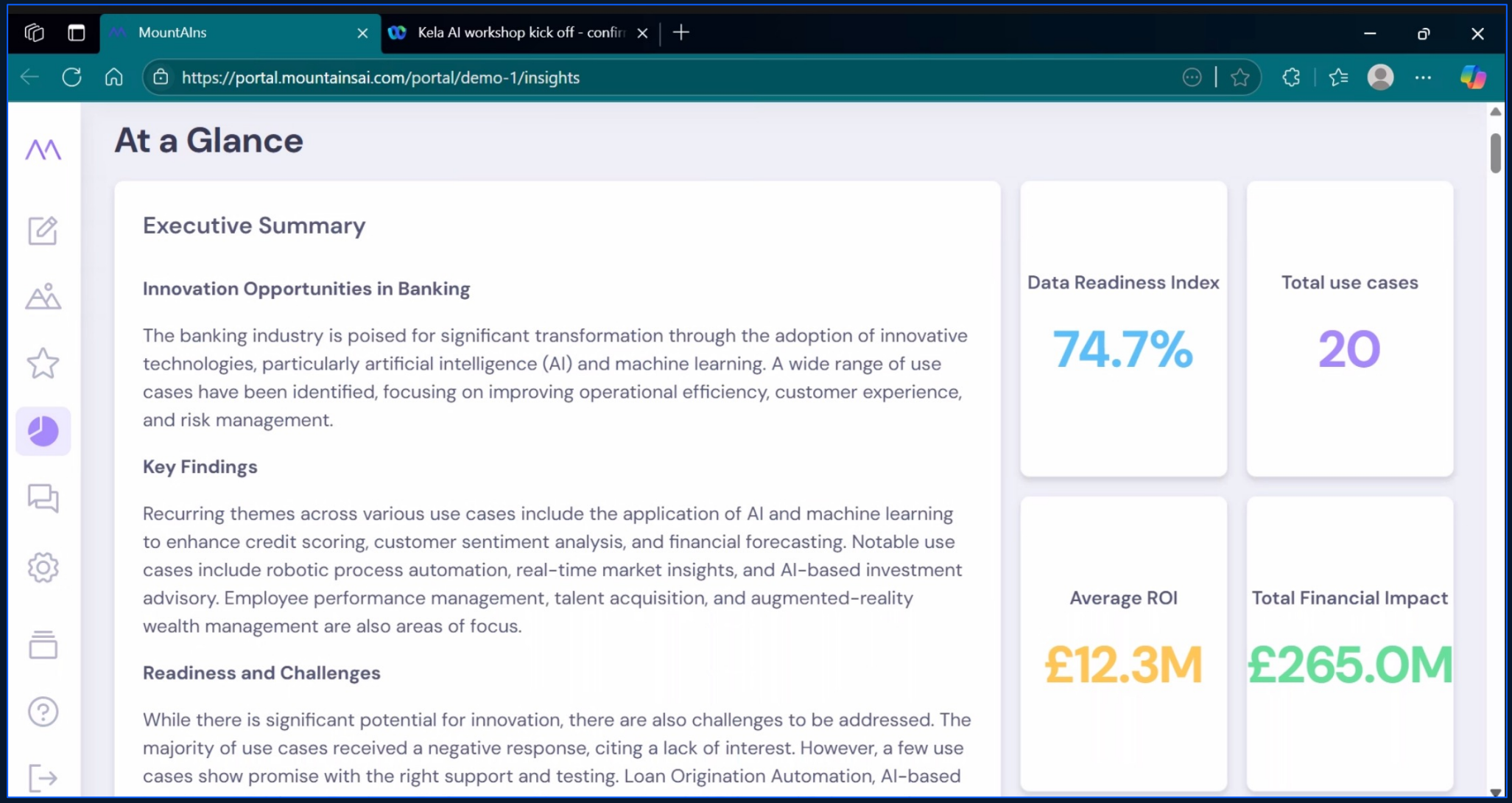
Results of the first AI assessment (This is being used as the foundation for the upcoming Workshop)



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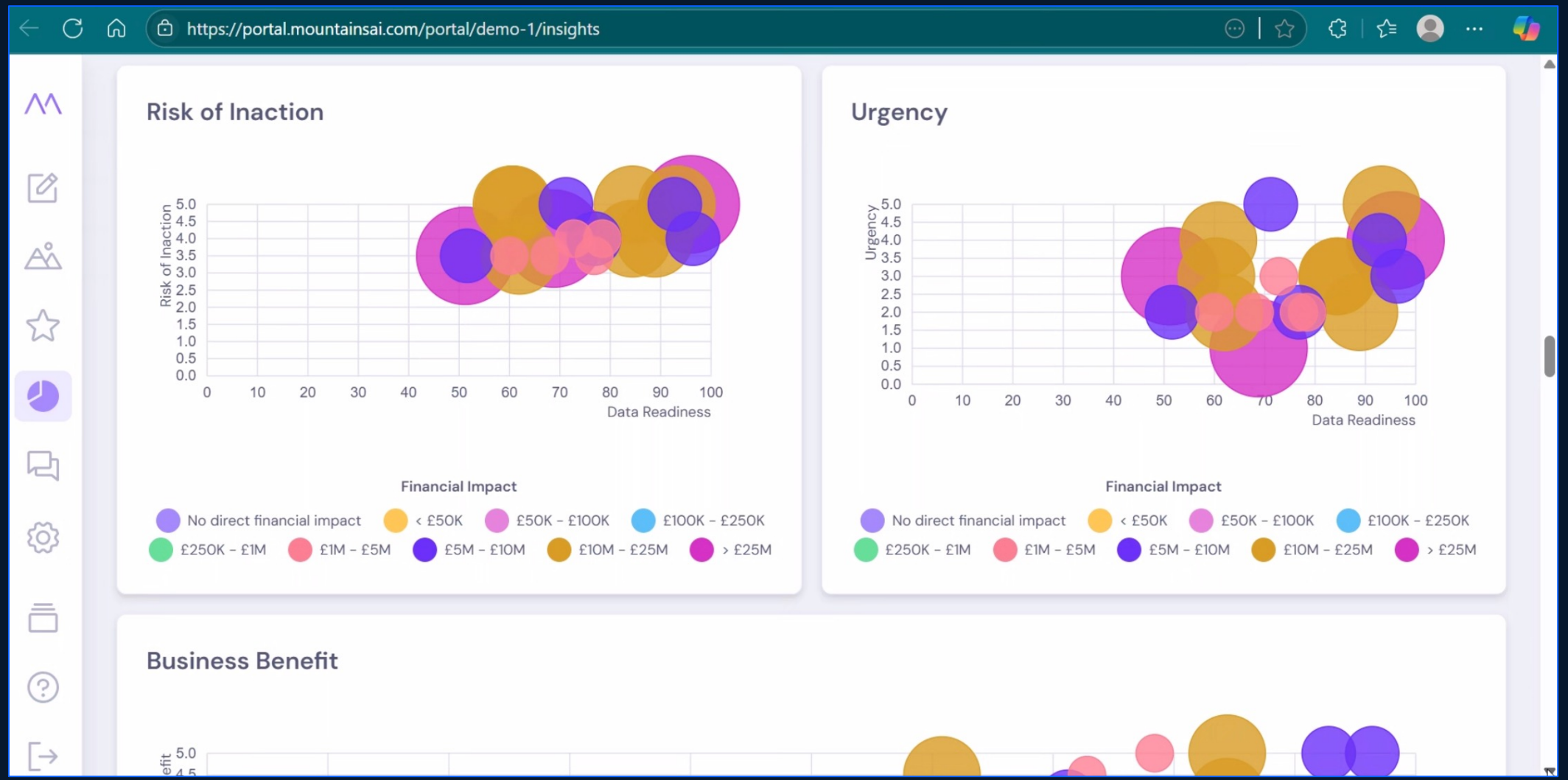

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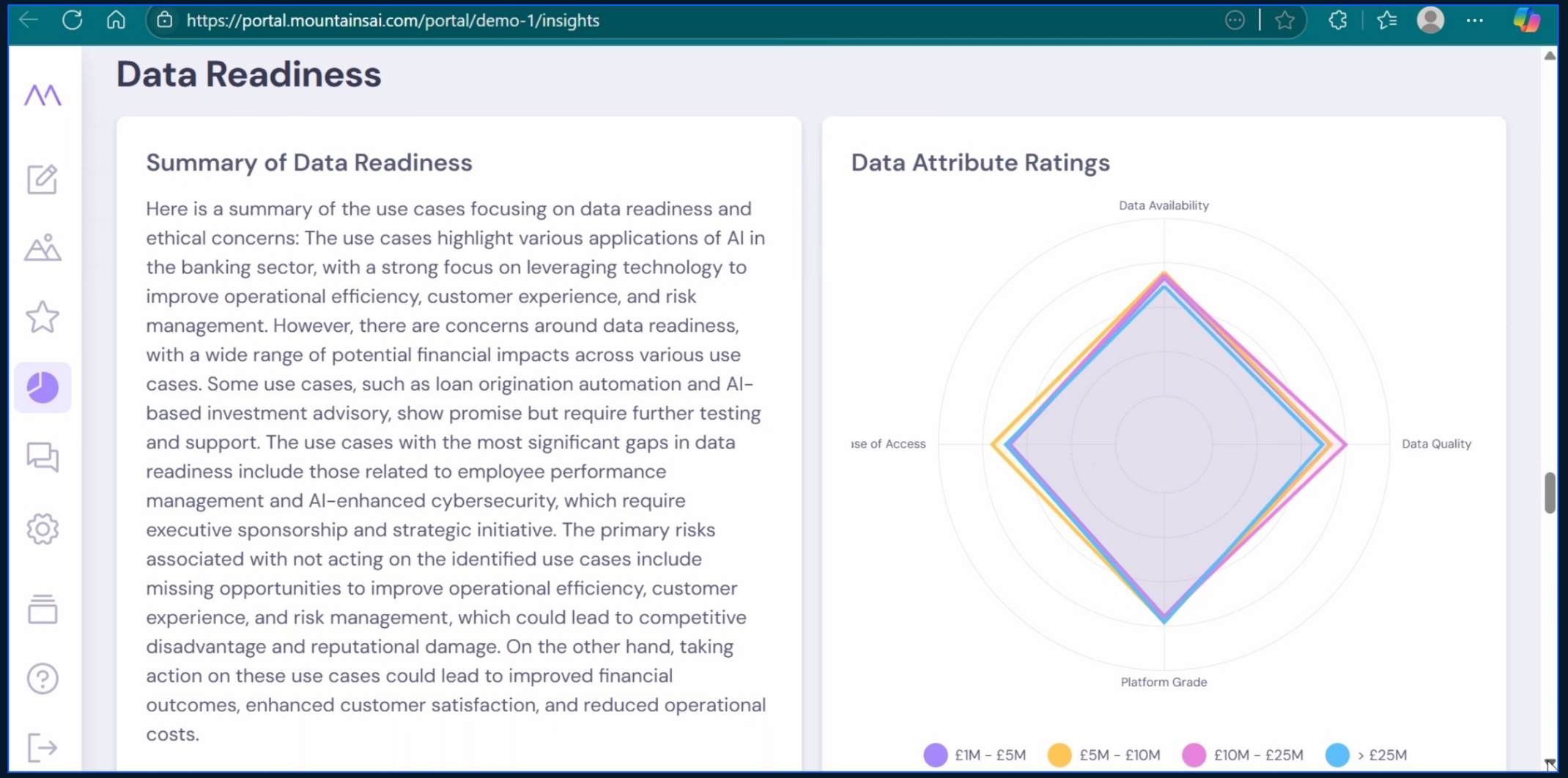

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Example on the identified AI Use cases

Top Use Cases

The following summary highlights the top five use cases, ranked by our Net Prioritization Score. A full list of all use cases and their respective scores is available for download.

1. AI-driven Drug Discovery

The implementation of AI-driven drug discovery can significantly reduce the time and costs associated with discovering new drug candidates. By analyzing large datasets of molecular and clinical information, AI can predict efficacy and toxicity early in the process, leading to faster development timelines, reduced R&D costs, and higher probabilities of clinical trial success. This can result in cost savings of up to £30 million annually and revenue generation of £150 million over 5 years.

Financial impact:	> £25M
Total cost of ownership:	> £1M
ROI:	£28.75M
Data Readiness Index:	74.8%

Use Case Rating

#	Use Case Name	NPS (Net Prioritization Score) over 100
1.	AI-driven Drug Discovery	93.7
2.	Personalised Medicine Development	90.9
3.	Sales Lead Conversion	88.7
4.	Epidemiology Forecasting	84.6
5.	Smart Inventory Management	82.8
6.	Clinical Trials	82.1
7.	Fraud Detection	72.8
8.	Talent Acquisition	72.8
9.	Financial Forecasting	72.1
10.	Personalised Marketing	71
11.	Automated Patient Support	69.8
12.	Clinical Trial Recruitment	68.8
13.	Tax Compliance Automation	67.7
14.	Adverse Event Detection	66.8
15.	Employee onboarding revolution	66.3
16.	AI-enhanced Biomarker Discovery	61.6

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Your team vote for what AI project to focus on. And we sponsor a workshop on site to deep dive

Kinderspital Frame Workshop - proposed approach and agenda

Delivering a high-impact, half-day AI use case workshop requires a structured approach that aligns AI opportunities with Kinderspital's business objectives, technical landscape, and organisational readiness. The goal is to collaboratively develop a single, high-value AI use case and produce two key outputs following the workshop:

1. A detailed technical design for the selected AI use case.
2. A comprehensive Return on Investment (ROI) and Total Cost of Ownership (TCO) analysis for its deployment.

Kinderspital Recommended Workshop Agenda

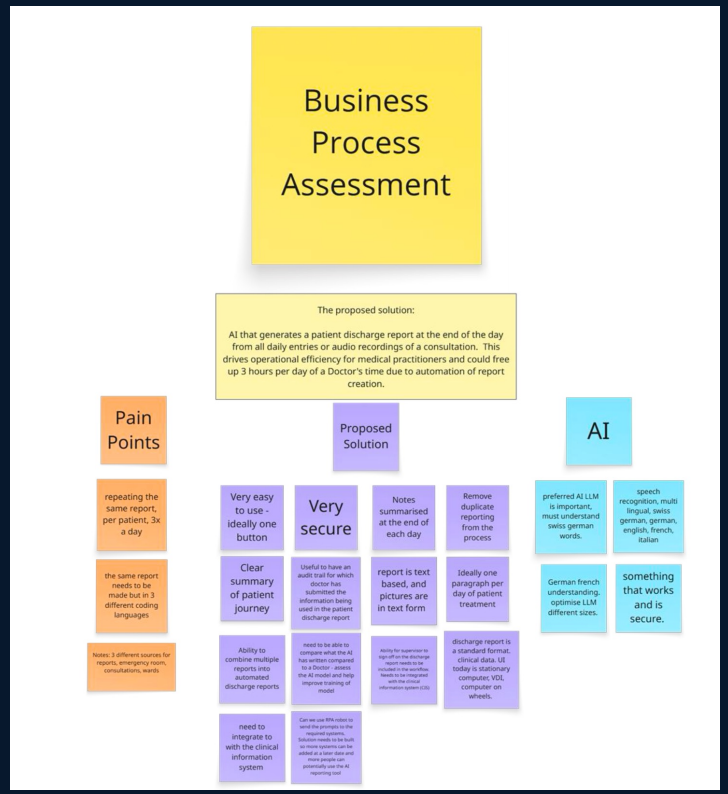
During the workshop, for certain activities, the participants will join either the Blue Group or Green Group to consider different elements of the chosen AI use case. The agendas for both groups are summarised below:

Blue Group – Medical Practitioners

Time	Module
13:00 - 13:15	Introduction and Objectives
13:15 - 14:00	Use Case Introduction and Business Process Assessment
14:00 - 14:30	Stakeholder Analysis
14:30 - 14:45	Break
14:45 - 15:30	People and Change Management Considerations
15:30 - 16:00	Blue and Green Team Summary Presentations
16:00 - 16:45	AI Use Case Definition and ROI/TCO Analysis
16:45 - 17:00	Wrap-up and Next Steps

Green Group – Technical Team

Time	Module
13:00 - 13:15	Introduction and Objectives
13:15 - 14:00	Use Case Introduction and Business Process Assessment
14:00 - 14:30	Technical and Infrastructure Review
14:30 - 14:45	Break
14:45 - 15:30	Technical and Infrastructure Review – part 2
15:30 - 16:00	Blue and Green Team Summary Presentations
16:00 - 16:45	AI Use Case Definition and ROI/TCO Analysis
16:45 - 17:00	Wrap-up and Next Steps



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15.	Employee onboarding revolution	66.3
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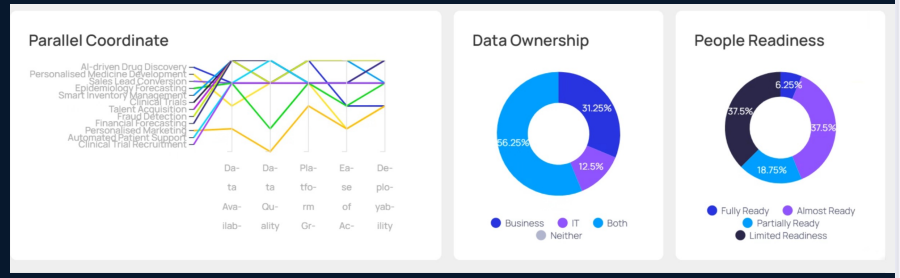
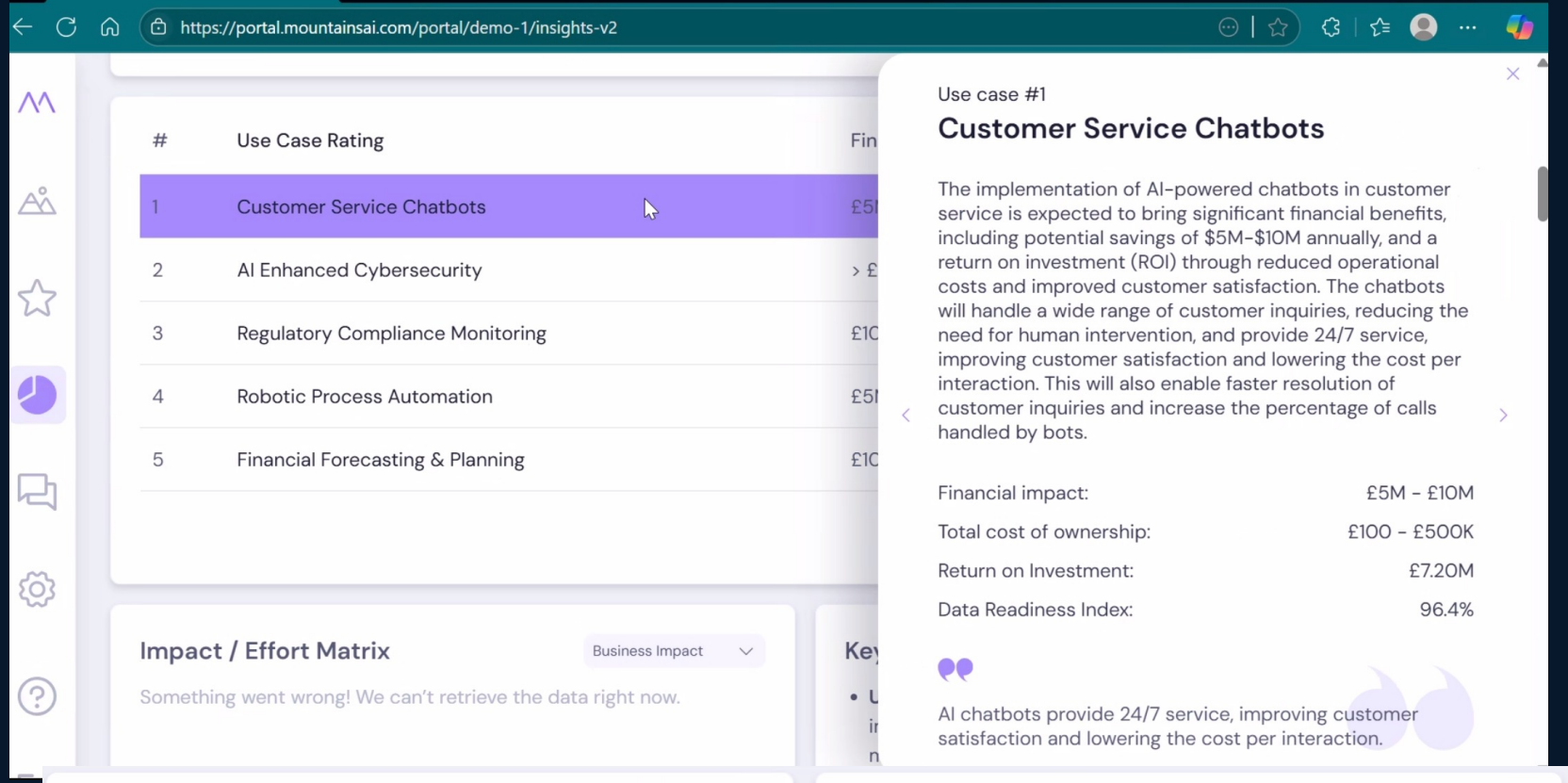
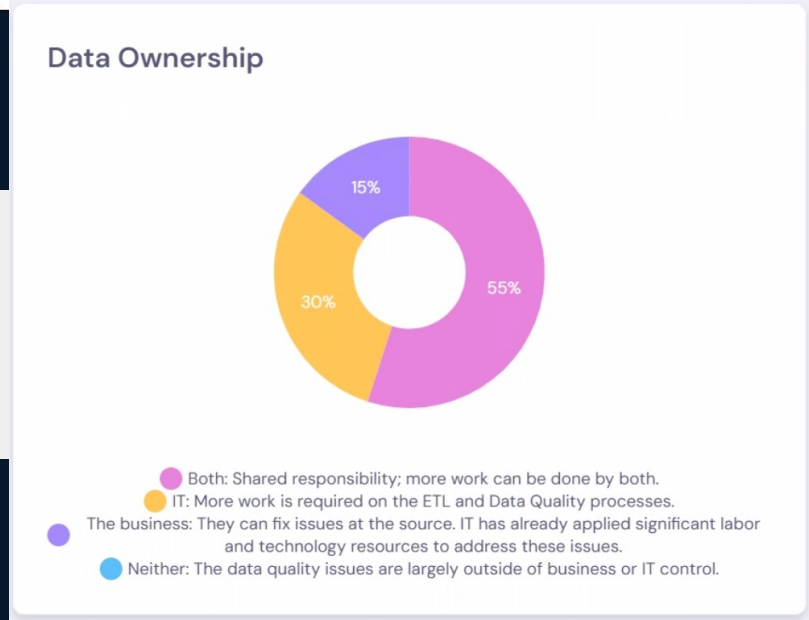
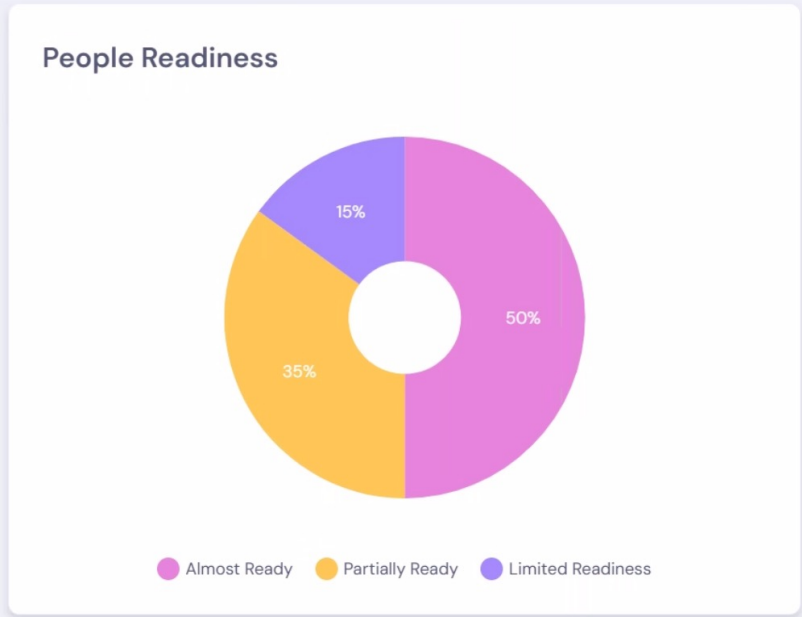
We address risk and pitfalls and how to avoid them









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The report will also address common AI Pitfalls

Skills & Talent Gap

People & Process requirements

Infrastructure Planning Neglect for Scaling AI

Undefined Use Cases & Data Readiness

Public AI Tool Usage – Data Security & Governance Risks

Blind Investment in AI Technology

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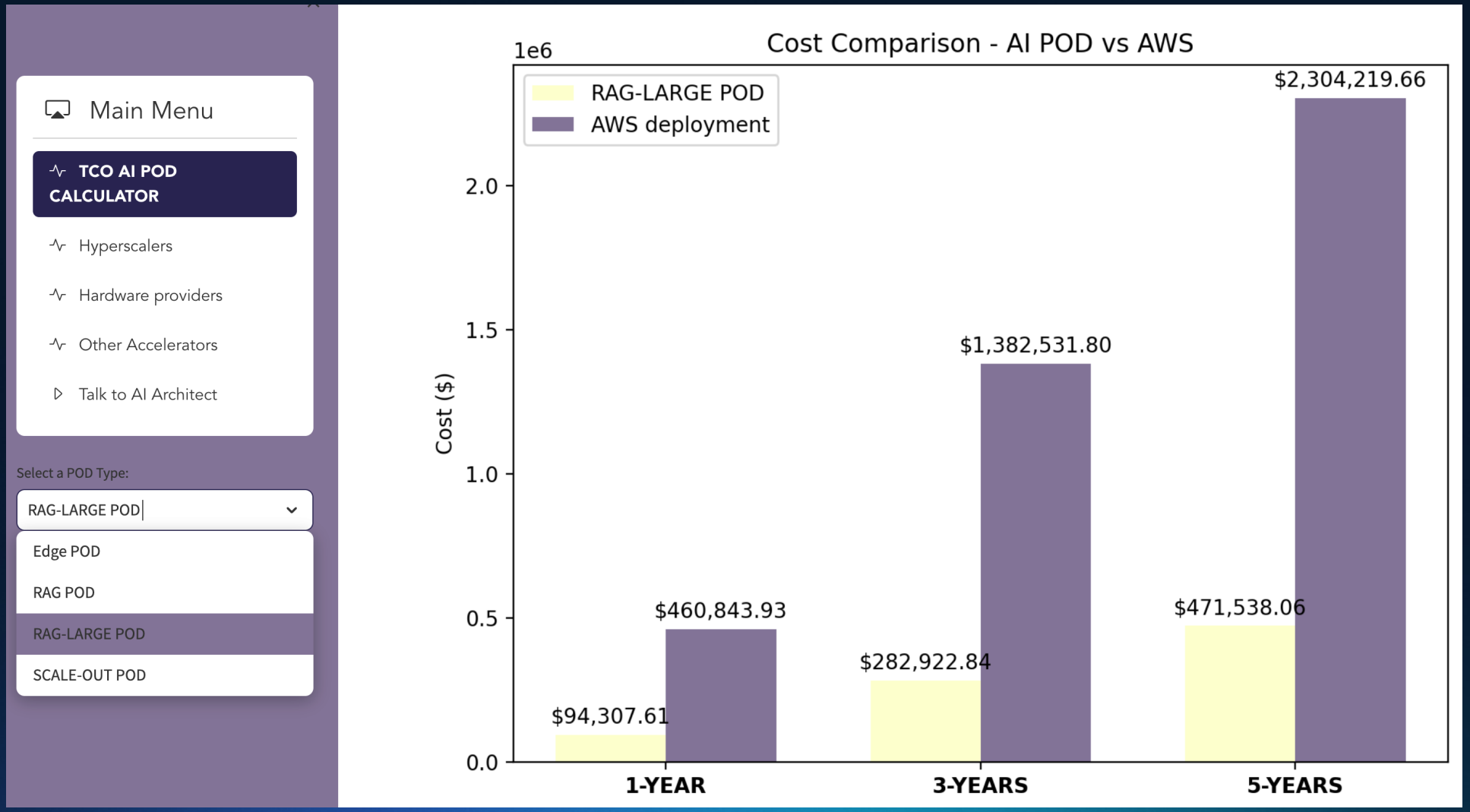
We provide the right comparison tools, that are tailored to your specific AI use case



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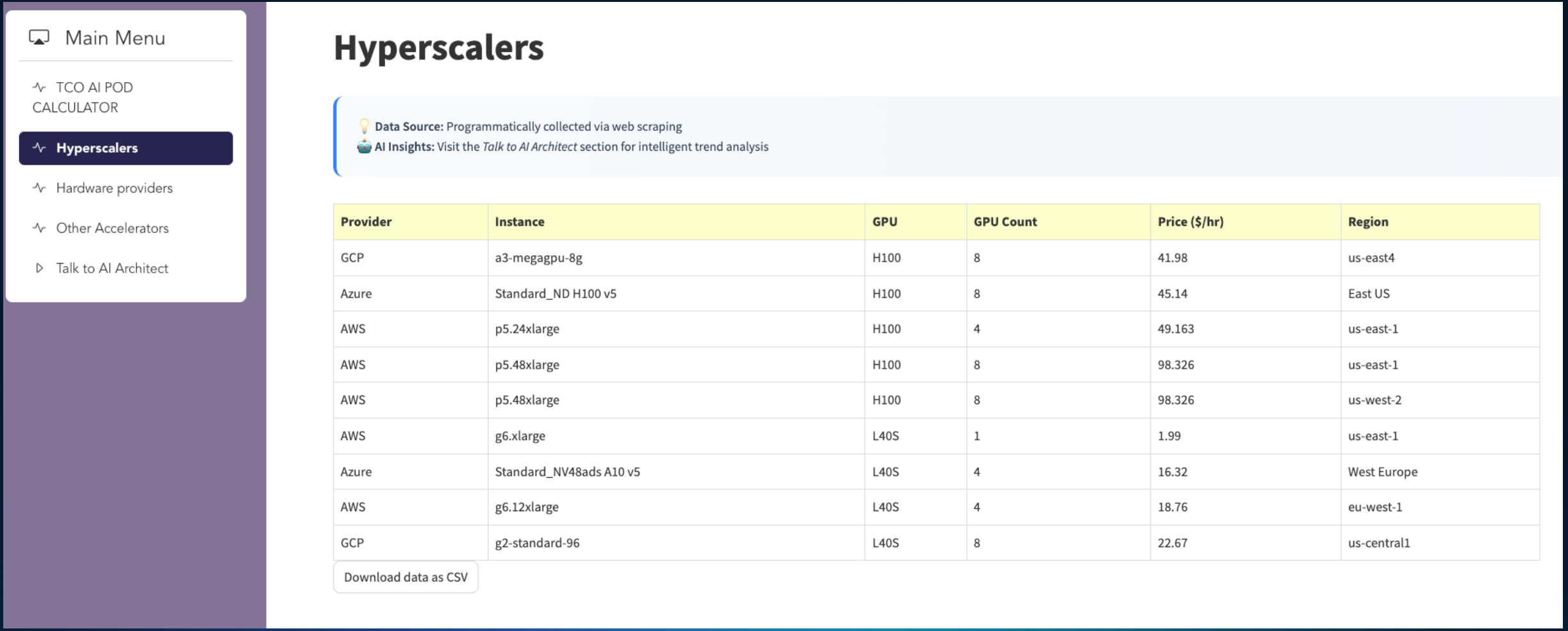

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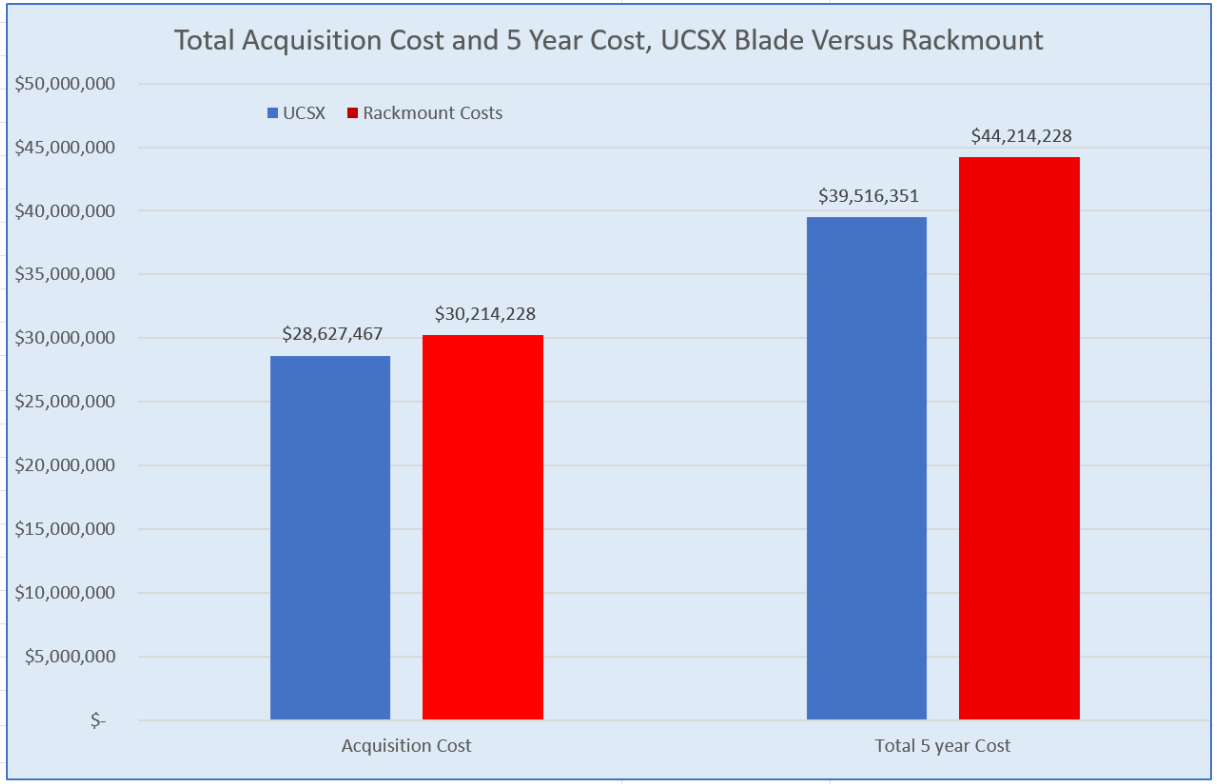
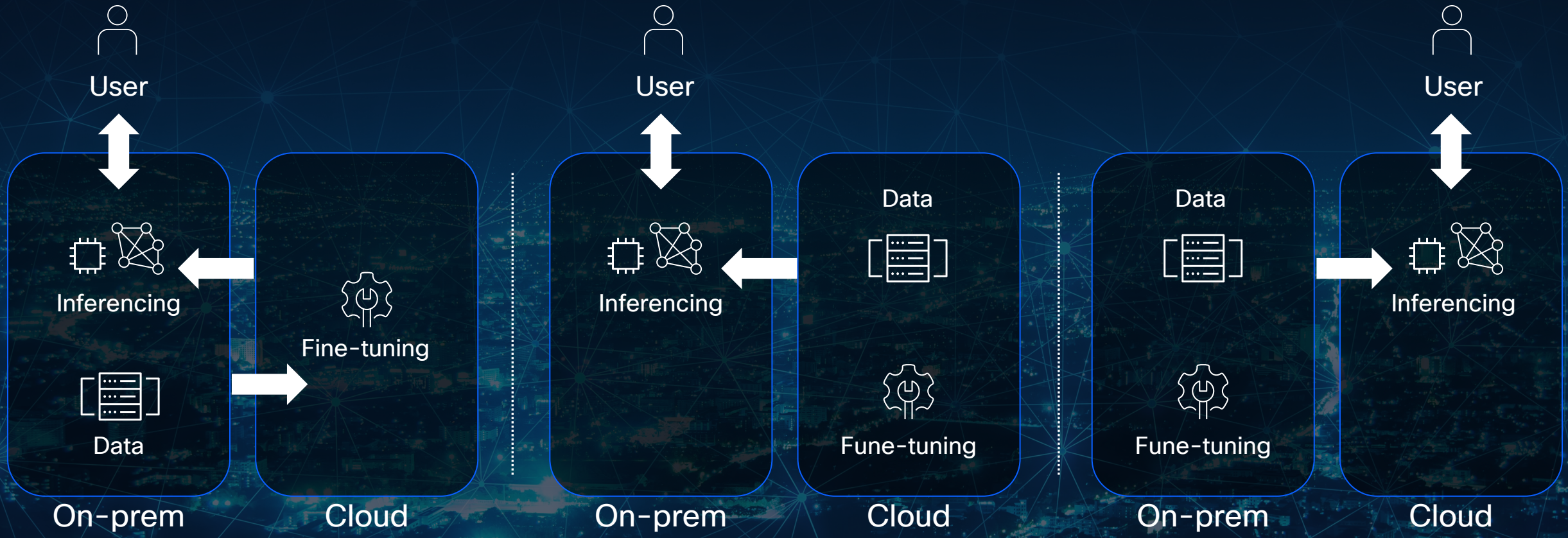
We give you a detailed TCO

Example below

Acquisition and Setup Costs.		Cisco		Rackmount		Delta
Total Servers Installed		700		700		
Server hardware	$	27,578,152	$	23,285,566	$	(4,292,586)
Network Hardware	$	144,416	$	1,375,328	$	1,230,912
San Hardware	$	254,805	$	1,706,476	$	1,451,671
OOB/Mgmt Hardware	$	2,398	$	83,939	$	81,541
Optics	$	549,696	$	3,202,920	$	2,653,224
Fiber and Mgmt Cabling	$	98,000	$	560,000	$	462,000
Total Server Cost to put into Service	$	28,627,467	$	30,214,228	$	1,586,761
Upstream Costs to Operate						
Per Rack Monthly Usage Charges	$	4,000	$	4,000		-
Racks Required	$	50	$	58	$	8
Expected Useful Life (months)	$	60	$	60		
Total DC Costs	$	12,000,000	$	14,000,000	$	2,000,000
Total Cost	$	40,627,467	$	44,214,228	$	3,586,761
Residual Value at Refresh	$	1,111,116	$	-		
Total Cost Less Residual	**$**	**39,516,351**	**$**	**44,214,228**	**$**	**4,697,878**



Given your current architecture, we help you find the optimal AI-architecture with thanks to Cisco Validated design



Scenario 1

- ✓ On-prem inferencing
- ✓ Cloud fine-tuning
- ✓ Data on-prem

Scenario 2

- ✓ On-prem inferencing
- ✓ Cloud fine-tuning
- ✓ Data in cloud

Scenario 3

- ✓ Cloud inferencing
- ✓ On-prem fine-tuning
- ✓ Data on-prem

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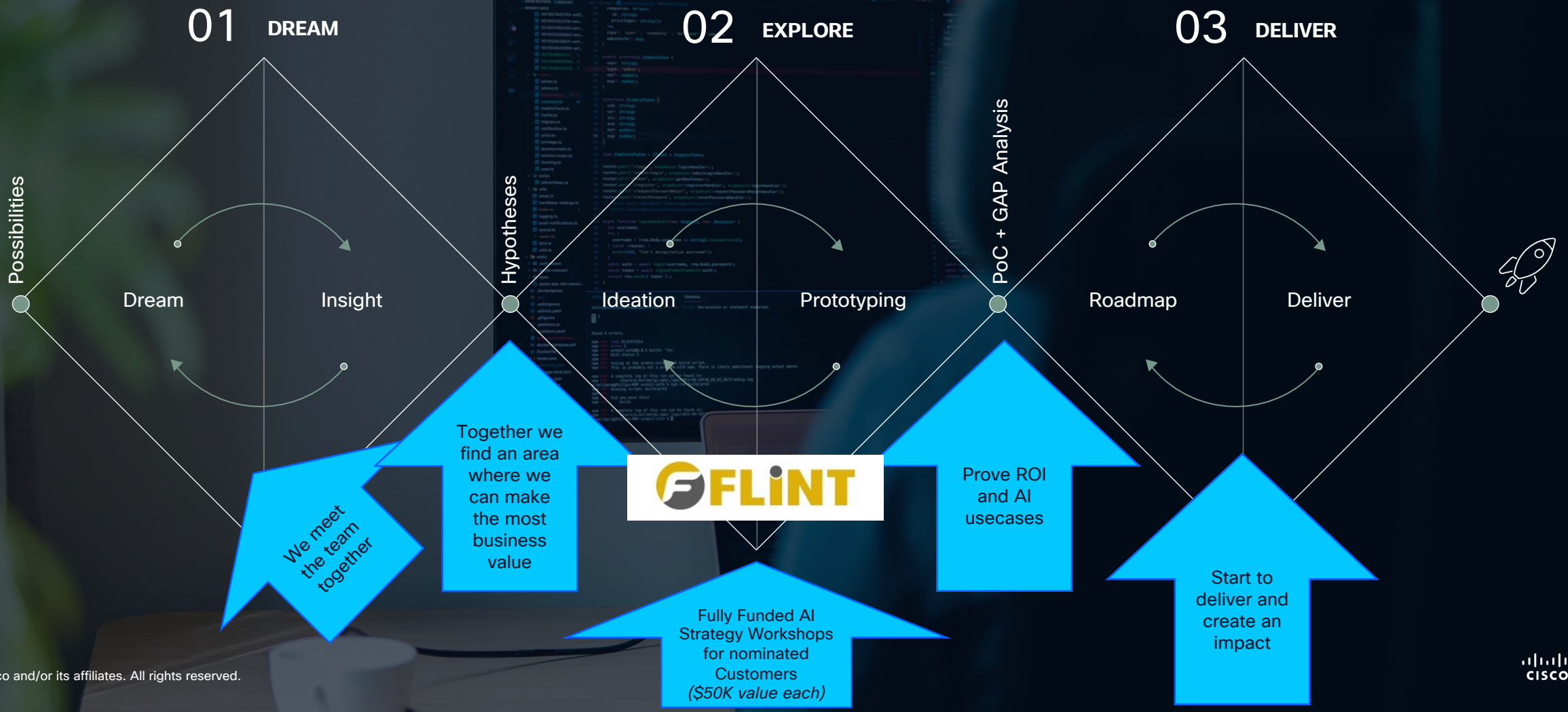
After the workshop, you will receive a 30-page executive report including:

- ROI analysis
- Key pitfalls and recommendations
- Cisco Validated Design
- Detailed implementation roadmap

Recap
Dream Explore Deliver



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After delivery, Governance model

We involve you in round table discussions with partners and customers with similar challenges

Roundtable Discussion

OMDIA

James Crawshaw
Head of SP Transformation

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Guillaume De Saint Marc
VP, Outshift Engineering

Red Hat

David Szegedi
Chief Architect, Field CTO

VAST

Dan Chester
Regional Director, CSP

accenture

Cédric Sidier
Managing Director, Communications

NVIDIA.

Franck Jonas
Regional Manager, France

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We only have a limited number of sponsored workshops slots left for 2025.

Next step: Reach out to your Cisco contact to book a meeting where we can deep-dive into your industry with relevant usecases and ROI:S.

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Book Meeting

Albert Shpatollaj

AI & GTM Lead – EMEA North

AI Specialist team

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