Leveraging Esri's Managed Cloud Services to Help Your Organization

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Session Description

Our contract together

Organizations are increasingly turning to the cloud to deliver capabilities and information more reliably and securely than they have in the past. Esri Managed Cloud Services is helping organizations leverage the benefits of the cloud to achieve their business strategy. Focusing on specific customer use cases, discover why, how, and what organizations are doing to accomplish their business goals and objectives through a managed cloud services approach.

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Key Takeaways

What are managed cloud services?

How might the cloud benefit my organization?

How is the cloud being used to deliver capabilities?

Agenda

Customer Use Cases

Capabilities Overview

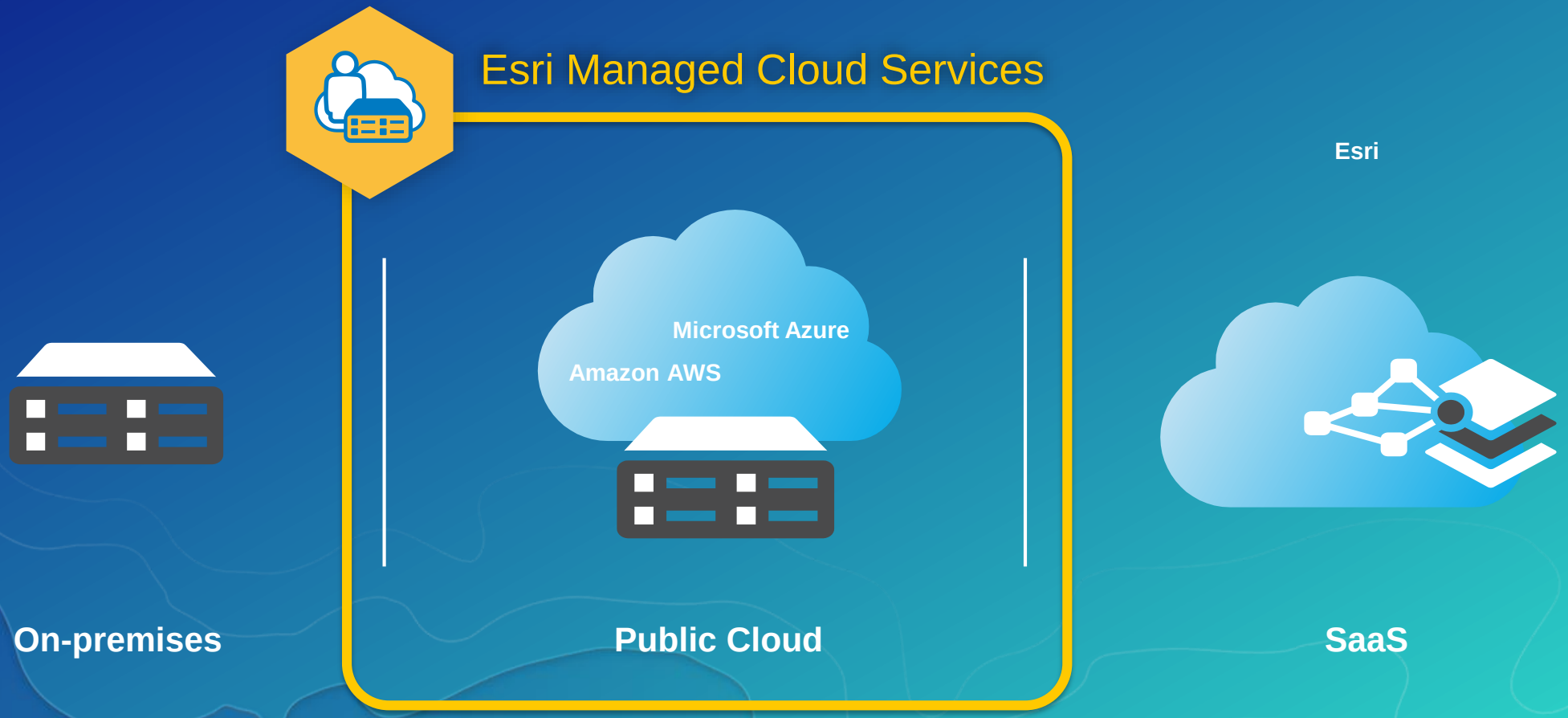
Introduction and Session Overview

Managed Cloud Services Approach

Benefits of the Cloud

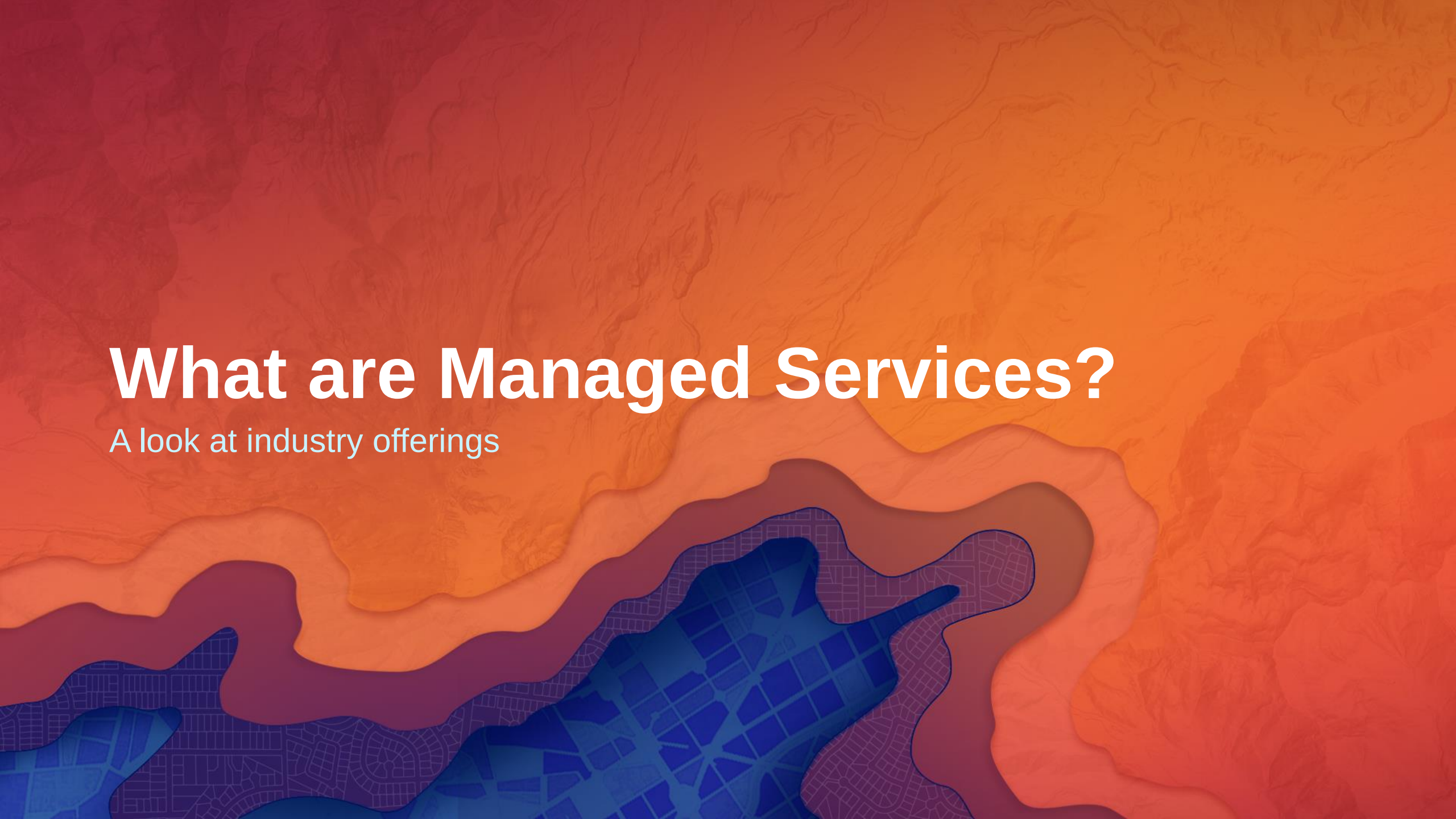
Deployment Architectures

Deploy ArcGIS on-premises, in public clouds (PaaS), and/or use Esri's cloud (SaaS)



What are Managed Services?

A look at industry offerings



“Managed Services is the **proactive management** of an IT (Information Technology) asset or object, by a third party typically known as a Managed Service Provider (MSP), **on behalf of a customer**. The operative distinction that sets apart a MSP is the **proactive delivery of their service**, as compared to reactive IT services, which have been around for decades.”

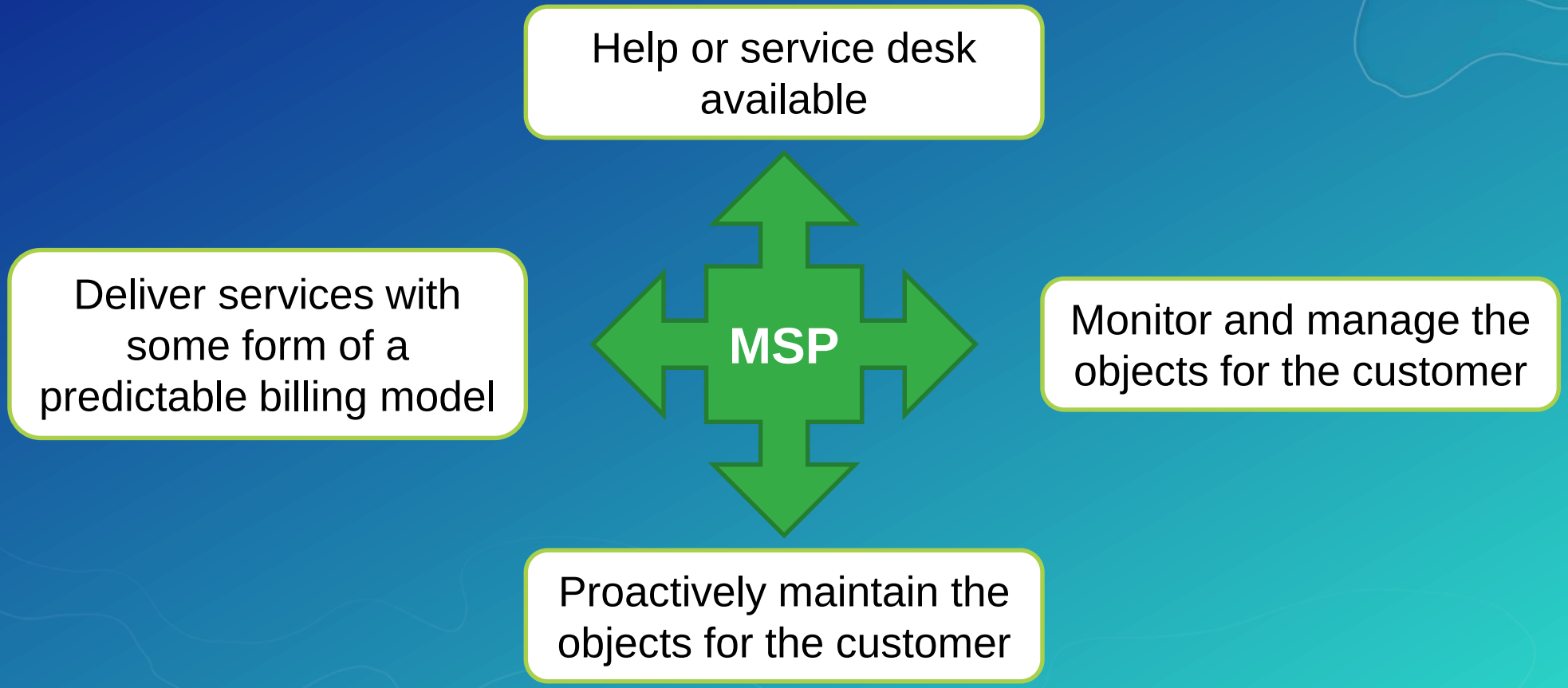
MSP Alliance

International Association of Cloud and Managed Service Providers

Managed services cover a variety of IT services

- Managed computer support (help desk)
- Managed security
- Managed hosting
- Managed network services
- Managed print services
- Managed spam filtering
- Application managed services
- Payroll services
- Customer service
- Disaster/ Recovery
- Backup
- Managed storage
- Remote monitoring
- Network management (NOC)
- Private cloud
- Telco services/ Managed VoIP
- Patch management
- Colocation
- Mobile device management
- Vendor management
- Hardware as a service
- Software license management
- Warranty management

Regardless of the IT service, all Managed Service Providers (MSPs) share certain characteristics



How many present are using a managed service provider of some sort?

Answer = 50%

What is the Cloud?

A quick definition

"We think the notion of cloud as a style of computing is **mainstream**. It's **not a matter of if, it's a matter of when** and how and where. And does this style of computing evolve on internal private systems you control, external public systems, or some combination that's a hybrid. Regardless of how it comes down we think **everyone is really moving** towards that cloud-style of computing."

David W. Cearly – Gartner Fellow, Gartner's Top 10 Strategic Technology Trends for 2015

How has the market responded to the cloud?

Additionally 56% of organizations are still identifying IT operations that are candidates for cloud hosting

2016 IDG Enterprise Cloud Computing Survey
https://www.idgenterprise.com/resource/research/2016-idg-enterprise-cloud-computing-survey/

How many present are using a currently using the cloud?

Answer = 6/7

How many present are planning on shifting to the cloud in the next 12 months?

Answer = 33%

How many present are planning on growing their adoption of the cloud in the next 12 months?

Answer = 100%

There are certain, essential characteristics of the cloud

On-demand self-service

- Consumer can provision resources
- Provisioning happens automatically
- Does not require human interaction with service provider

Broad network access

- Accessible over the network
- Available through thick or thin clients

Resource pooling

- Computing resources pooled
- Service of multiple consumers (multi-tenant)
- Physical and virtual resources assigned dynamically
- Sense of location independence

Rapid elasticity

- Capabilities scale inward and outward
- Can be automatically triggered
- Appear to have unlimited capacity
- Provisioning can happen at any time and in any quantity

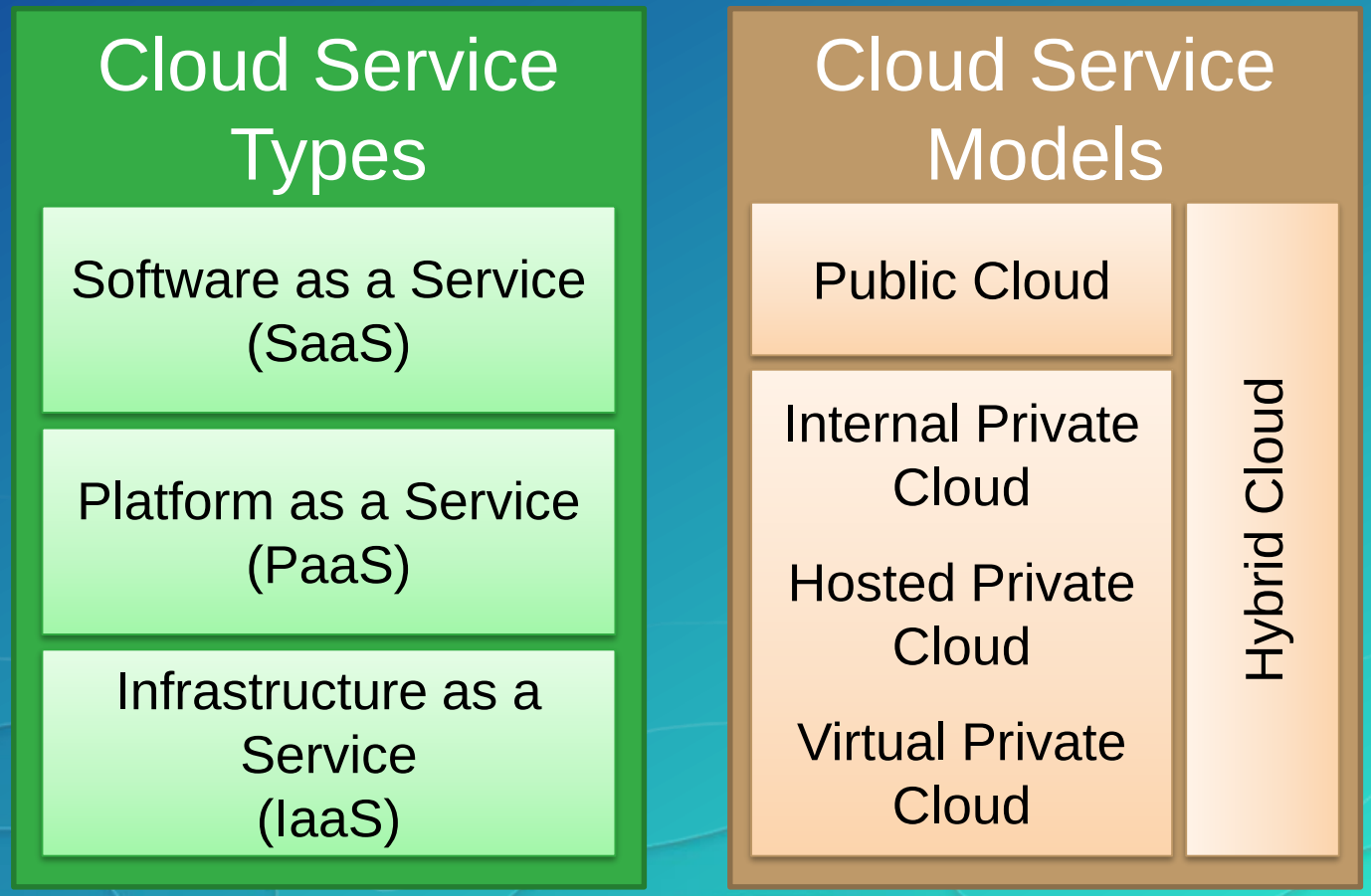
Measured service

- Systems are typically metered
- Resource usage can be monitored, controlled and reported
- Allows for optimization of resources

The US National Institute of Standards and Technology Definition of Cloud Computing (http://csrc.nist.gov/publications/nistpubs/800-145/SP800-145.pdf)

At its core, cloud means providing IT capabilities as a service

"A style of computing where scalable and elastic IT-related capabilities are provided 'as a service' to customers using internet technologies."
– Gartner



An introduction to the cloud service types

SaaS Software applications running on a cloud infrastructure delivered to consumers via the web

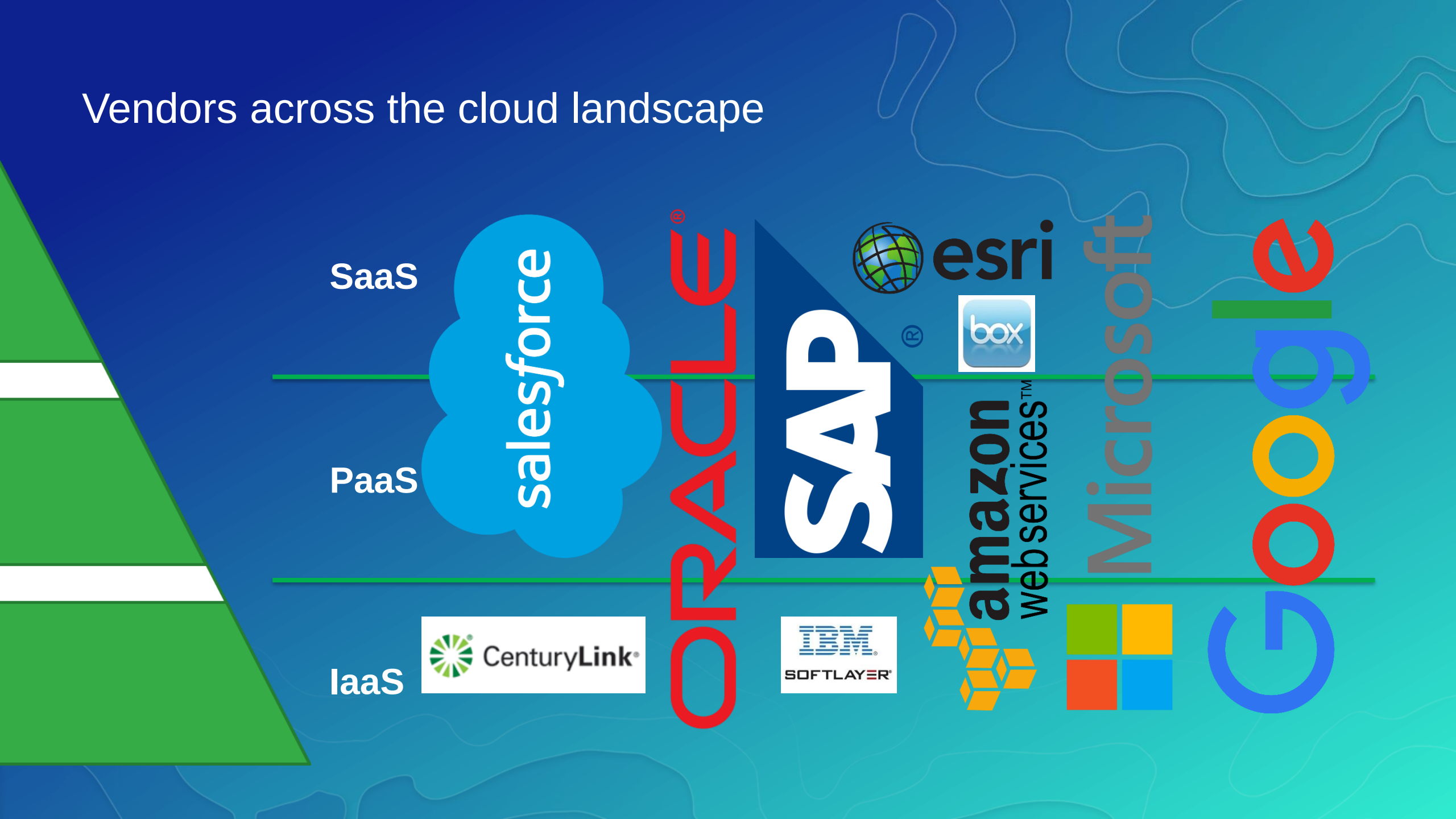
PaaS Consumers are given the capability to build, test, and/or deploy created or acquired application using platform-specific languages, libraries, services, and tools supported by the provider

IaaS On-demand delivery of cloud computing infrastructure – servers, processing, storage, network, and OS

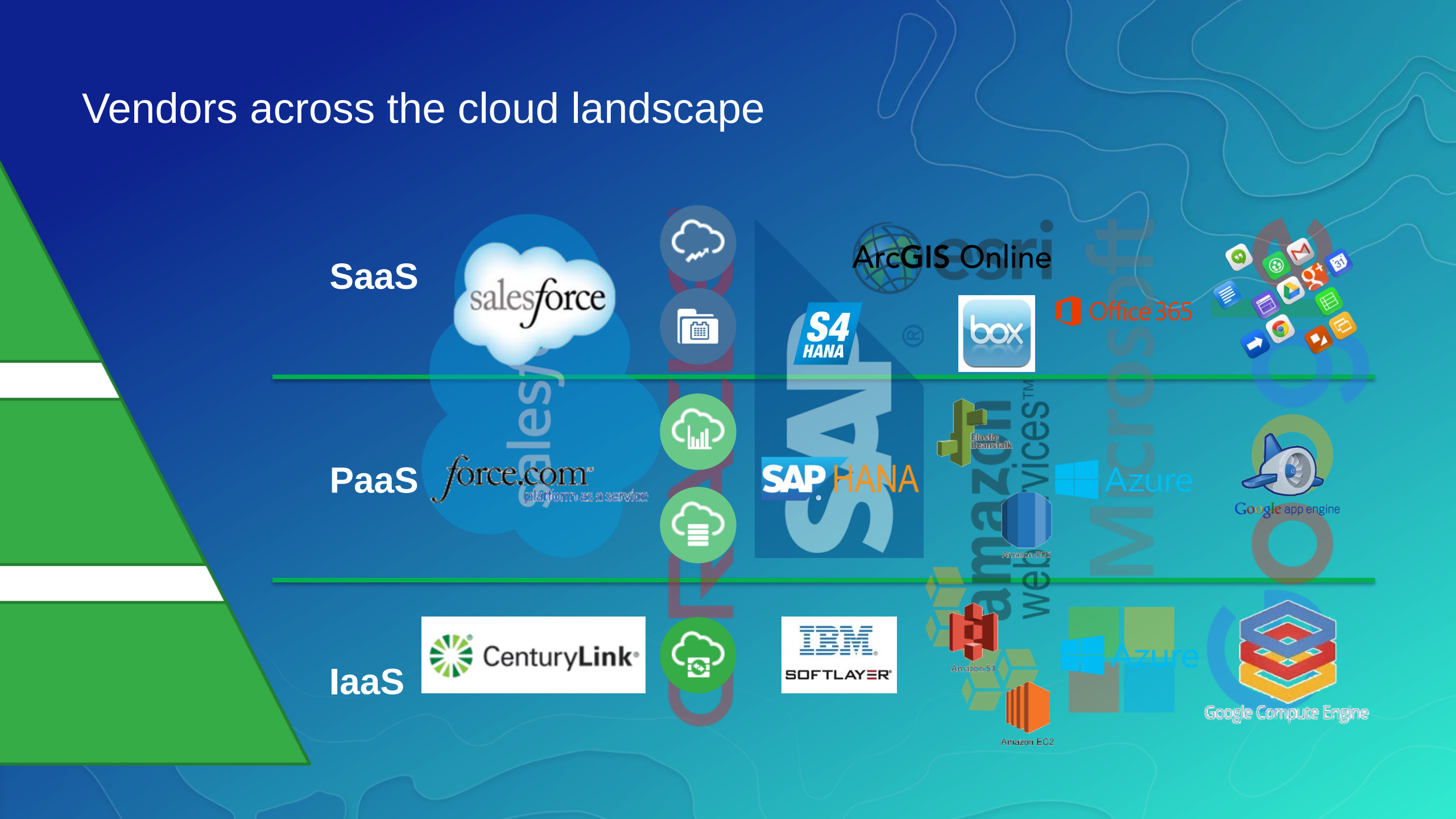
Vendor vs. consumer cloud computing responsibilities

	Service provider does	Consumer does
SaaS	• Updates code and manages releases • Manages infrastructure transparently to consumers • Delivers up-time SLA • Usage tracking (typically # of users)	• Designates users and associated roles • Limited customizations to software • NOT pick hosting location • Pay based on usage
PaaS	• Maintains and updates languages, libraries, services and tools for integration with platform • Typically controls underlying cloud infrastructure (network, servers, OS, storage)	• Builds, tests, and deploys COMPATIBLE applications on the platform • May configure some of the infrastructure settings, but not the infrastructure itself • May or may not pick hosting location
IaaS	• Owns hardware associated with cloud • Provides up-time SLAs associated with hardware and network connectivity • Provides metered usage to consumers	• Decides the how much, what, and (sometimes) where of their environment • Picks OS and ALL software deployed within their environment • Pays for usage of hardware

Vendors across the cloud landscape

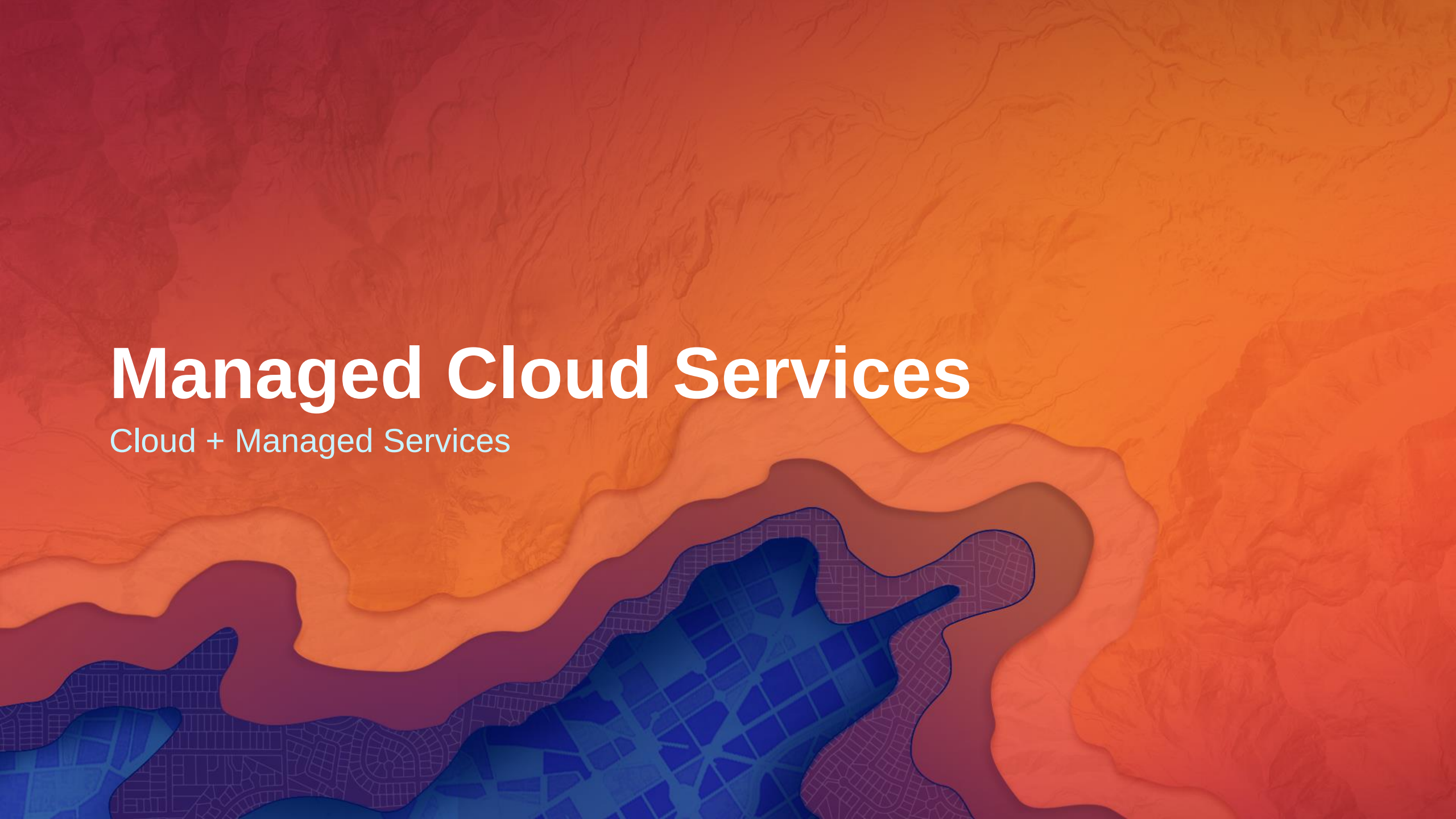


Vendors across the cloud landscape



Managed Cloud Services

Cloud + Managed Services



“Managed [Cloud] Services is the proactive management of [cloud] assets or objects… on behalf of a customer.

Adapted from MSP Alliance

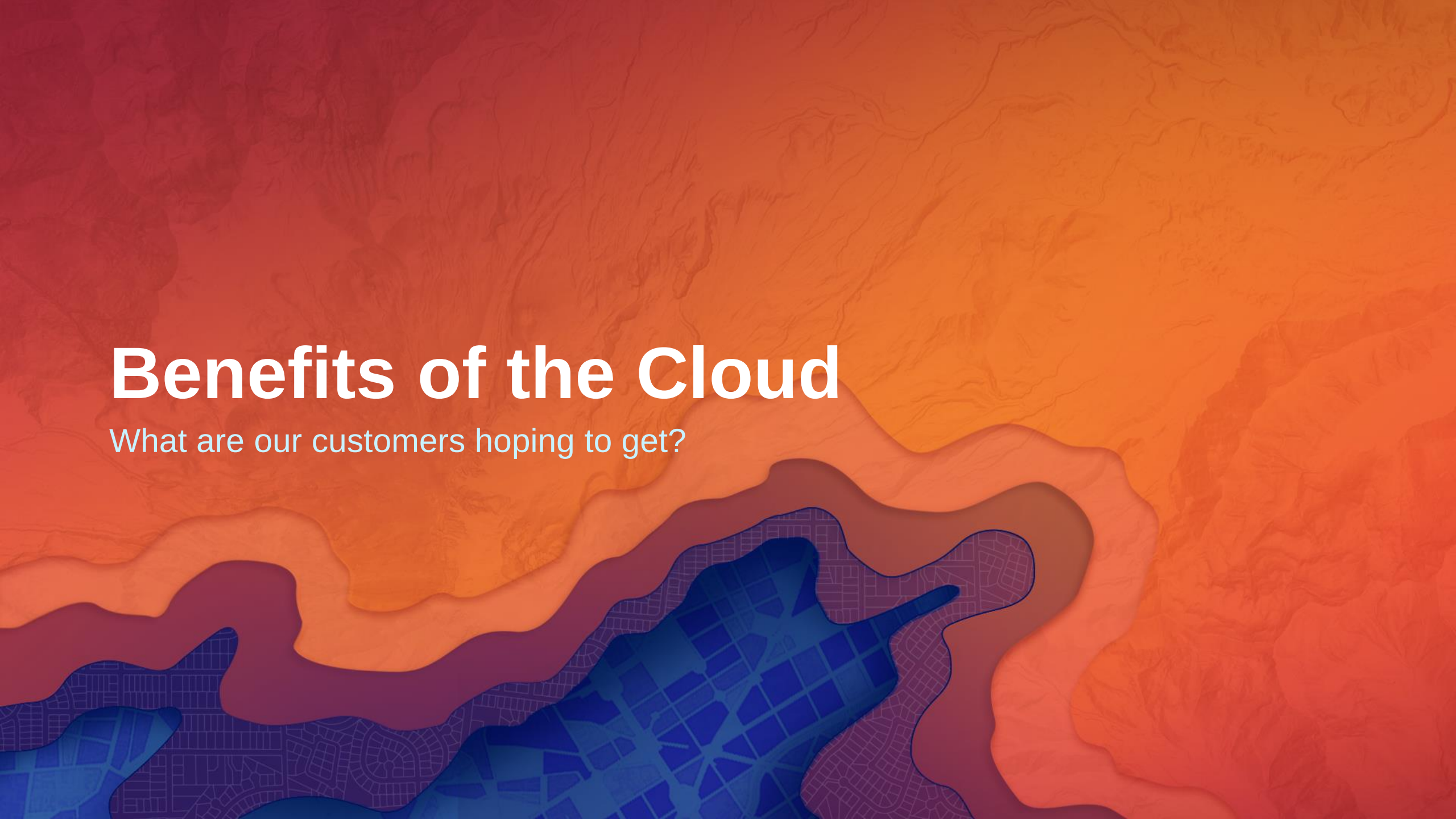
International Association of Cloud and Managed Service Providers

Managed Cloud Services is…

	Managed Service Provider does	Consumer does
SaaS	• Configures users and roles • Customizes software on behalf of customer • Implementation and delivery of initial operating capabilities • Bills as project or by user	• Designates users and associated roles • Pays based on usage • Uses the software
PaaS	• Deploys applications on behalf of customers • Configures & maintains infrastructure settings to optimize both platform & architecture • Applies patches and updates to platform • Bills as value added service based on consumption (by server or by user)	• Builds and tests applications on the platform • Uses platform based applications • Provides feedback to service provider
IaaS	• Proactively manages customer's cloud environment, how much, what and where resources are best deployed • Deploys software and applies patches and updates to environment • Bills as value added service based on consumption (typically by server)	• Uses the infrastructure environment • Deploys software on top of environment for usage

Benefits of the Cloud

What are our customers hoping to get?



The Benefits of the Cloud

What benefits have you seen from the cloud?

Answers

Ability to support multiple geographies and reduce latency

Easier relative to on-premises (rely on others, “always there”)

If the cloud provides so many benefits on its own, why are customers seeking out GIS-based Managed Cloud Services?

Driver	Yes/No	Comments/Notes
Looking for specific GIS capabilities	Y	
Looking for GIS-based industry capabilities / solution	Y	
Looking for increased performance & flexible infrastructure	Y	
Outsourcing IT/GIS operations: reduce expenses/costs	Y	
Outsourcing IT/GIS operations: lack skills / resources	Y	
Want to try ArcGIS technology before they buy	Y	
Want GIS capabilities sooner (than they could do in-house)	Y	
Other	Y	

What our customers said…

Driver	Yes/No	Comments/Notes
Looking for specific GIS capabilities	**Y**	**Especially administrative capabilities**
Looking for GIS-based industry capabilities / solution	Y	Not across all industries
Looking for increased performance & flexible infrastructure	**Y**	**Especially true in government**
Outsourcing IT/GIS operations: reduce expenses/costs	Y	Not primary driver
Outsourcing IT/GIS operations: lack skills / resources	**Y**	**True for smaller customers**
Want to try ArcGIS technology before they buy	Y	High conversion rate to larger opps
Want GIS capabilities sooner (than they could do in-house)	**Y**	**One of the primary drivers**
Other	Y	“Cloud first” initiatives

How would you answer this question?

Driver	Yes/No	Count
Looking for specific GIS capabilities	Y	Stay more current with Enterprise
Looking for GIS-based industry capabilities / solution	Y	
Looking for increased performance & flexible infrastructure	Y	
Outsourcing IT/GIS operations: reduce expenses/costs	Y	
Outsourcing IT/GIS operations: lack skills / resources	Y	Spread thin hard to get time
Want to try ArcGIS technology before they buy	Y	
Want GIS capabilities sooner (than they could do in-house)	Y	
Other	Y	Trying to reduce redundancy across government by consolidating, considering cloud

Capabilities

What are we delivering to our customers?

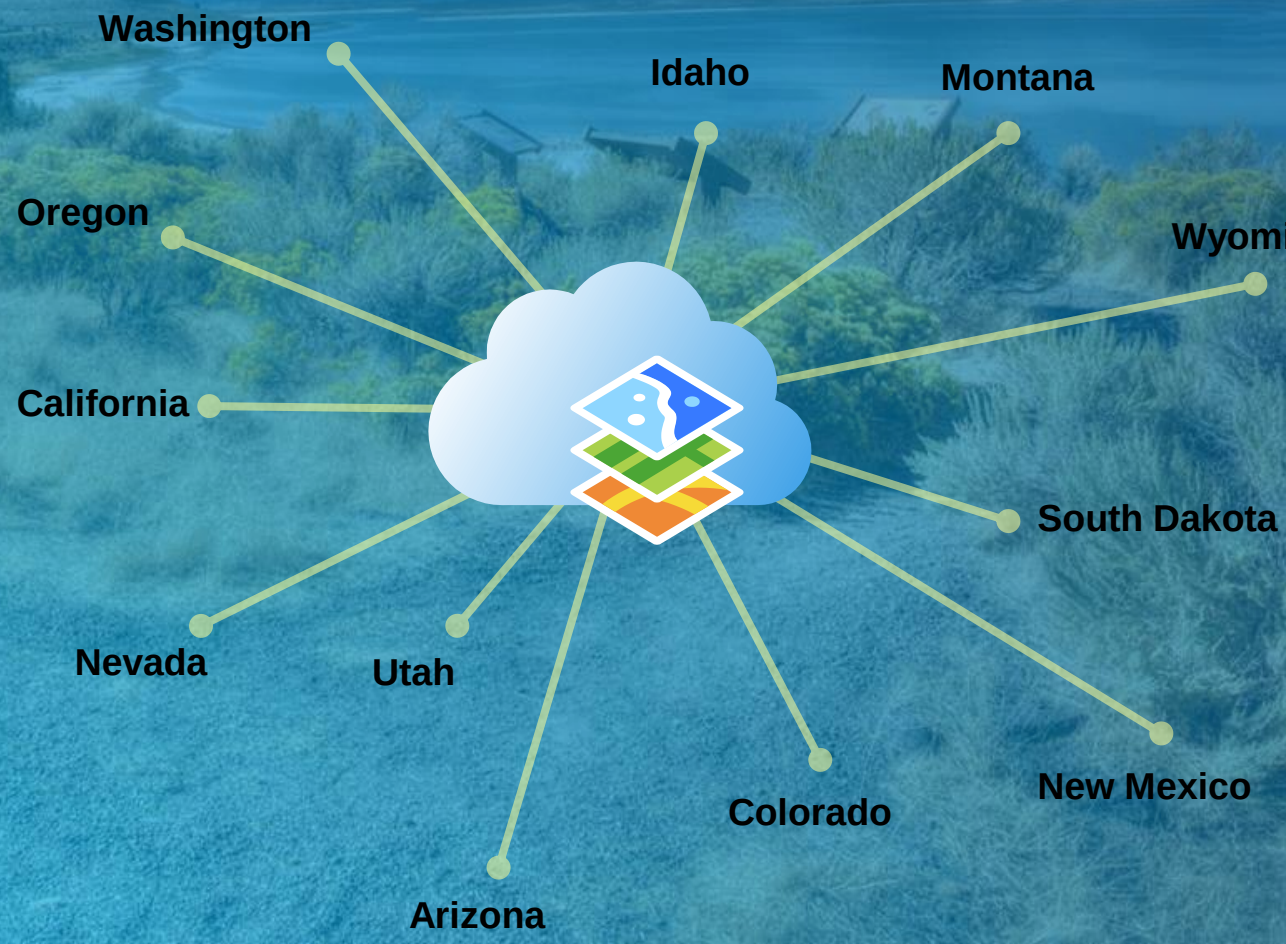
Capabilities and Client Examples

- **Consulting Services – US Bureau of Land Management**
- **Content Hosting (Web Service) – State of Michigan**
- **Application Hosting – Avingrid**
- **Sandbox/Prototype – USDA Forest Service**
- **Business Continuity/Recovery – Cook County**
- **Outsourced GIS Operations – Fort Hill Natural Gas**

Data Center Consolidation Initiative

Reducing costs and improving GIS operations

Consulting Services



Navigating the journey to the cloud

3 month proof of concept

Evaluating ArcGIS for Desktop in the cloud

BLM and the cloud

Decreasing cost of hosting imagery

Expert guidance for cloud options

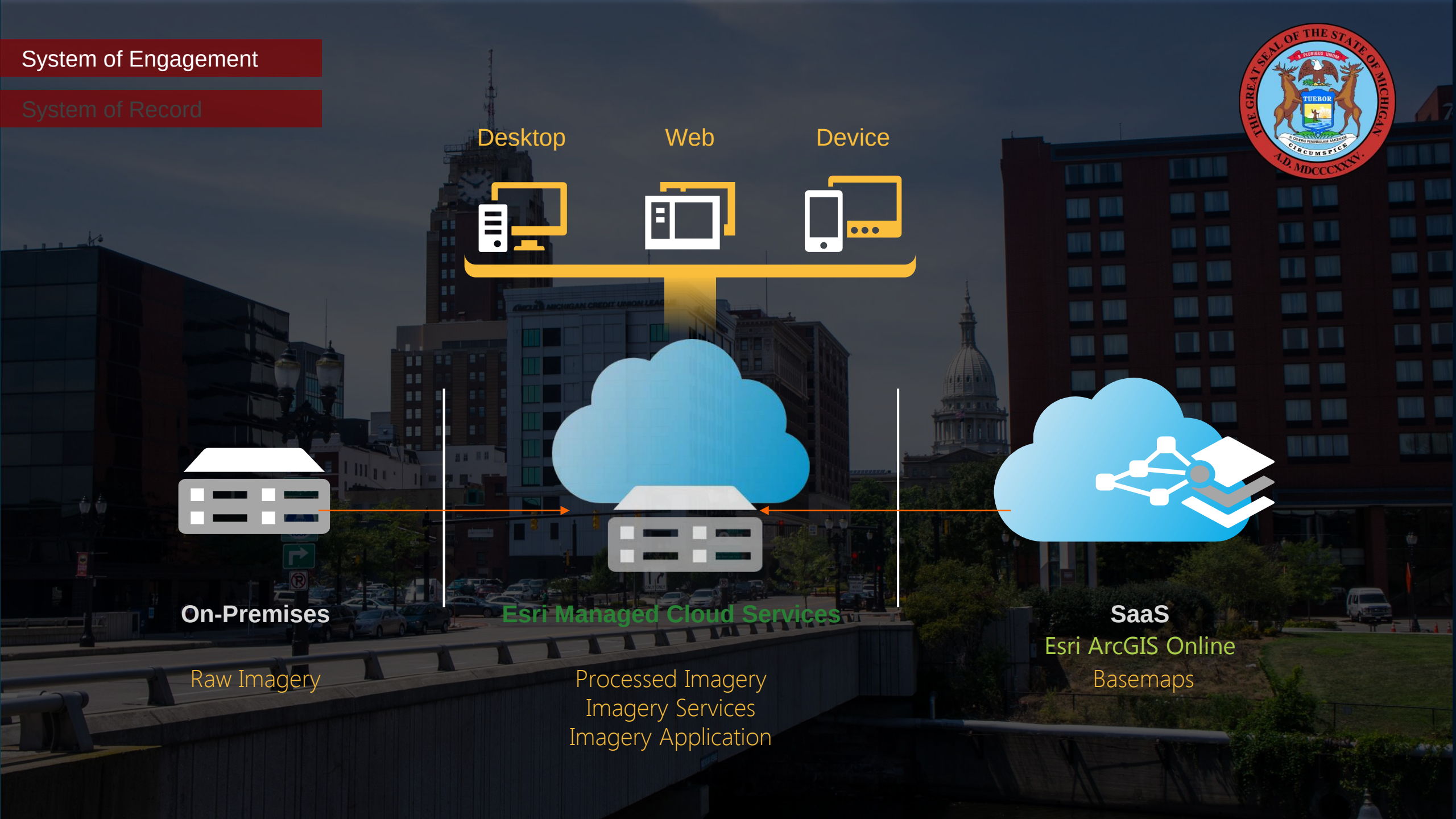
Cloud management & expertise

Optimizing imagery services

Services and Data

System of Engagement

System of Record

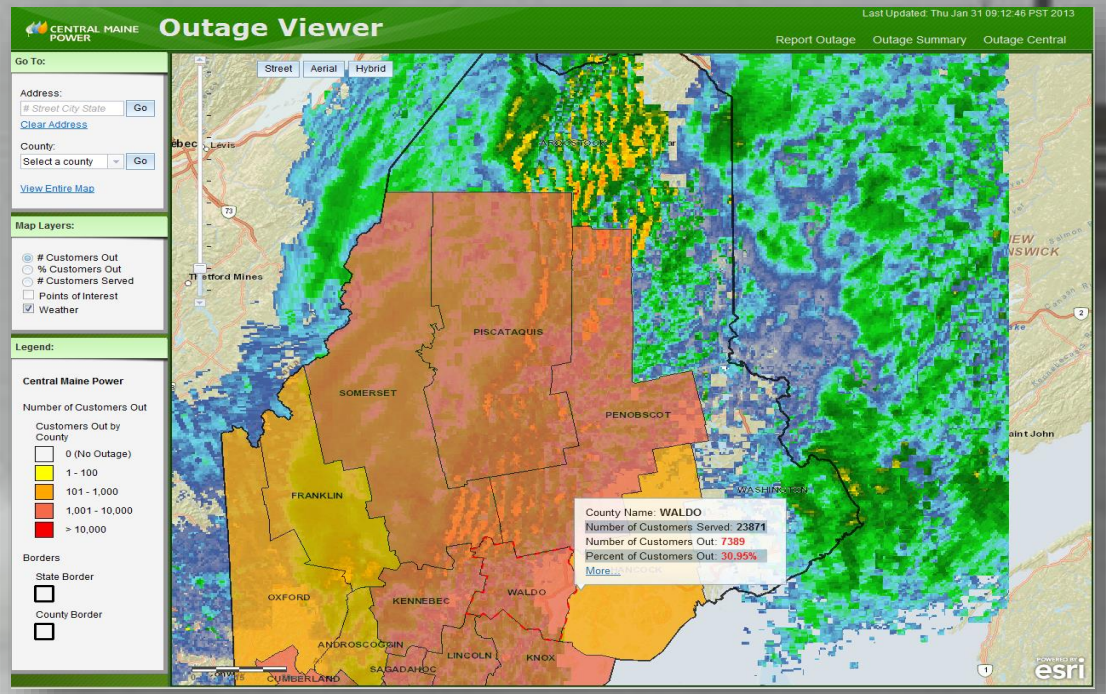


State of Michigan and the Cloud
Cost savings
Flexibility and scalability
Increased security
Shorten time to value
Shared accountability
Try before you buy
Access to innovation

Application Hosting

Outage Viewer supports variable usage

Bringing critical outage information to the general public



AVANGRID

- Highly available, scalable systems
- Supports day-to-day usage and major events
- Frequent, automated data updates

System of Engagement

System of Record

On-Premises

Data
3rd Party Systems

Esri Managed Cloud Services

Outage Application
Replicated data

SaaS

Esri ArcGIS Online
Basemaps

Avangrid and the Cloud

Forest Service Cloud Proof of Concept

Experience necessary to make a confident migration decision

Sandbox/Prototyping

On-prem and cloud performance comparison

Data publishing and validation

Security review and integration

USFS and the Cloud

System of Engagement

System of Record

System of Monitoring

On-Premises

Raw Imagery

Esri Managed Cloud Services

Processed Imagery
Imagery Services
Imagery Application

SaaS

Esri ArcGIS Online
Basemaps

Business Continuity

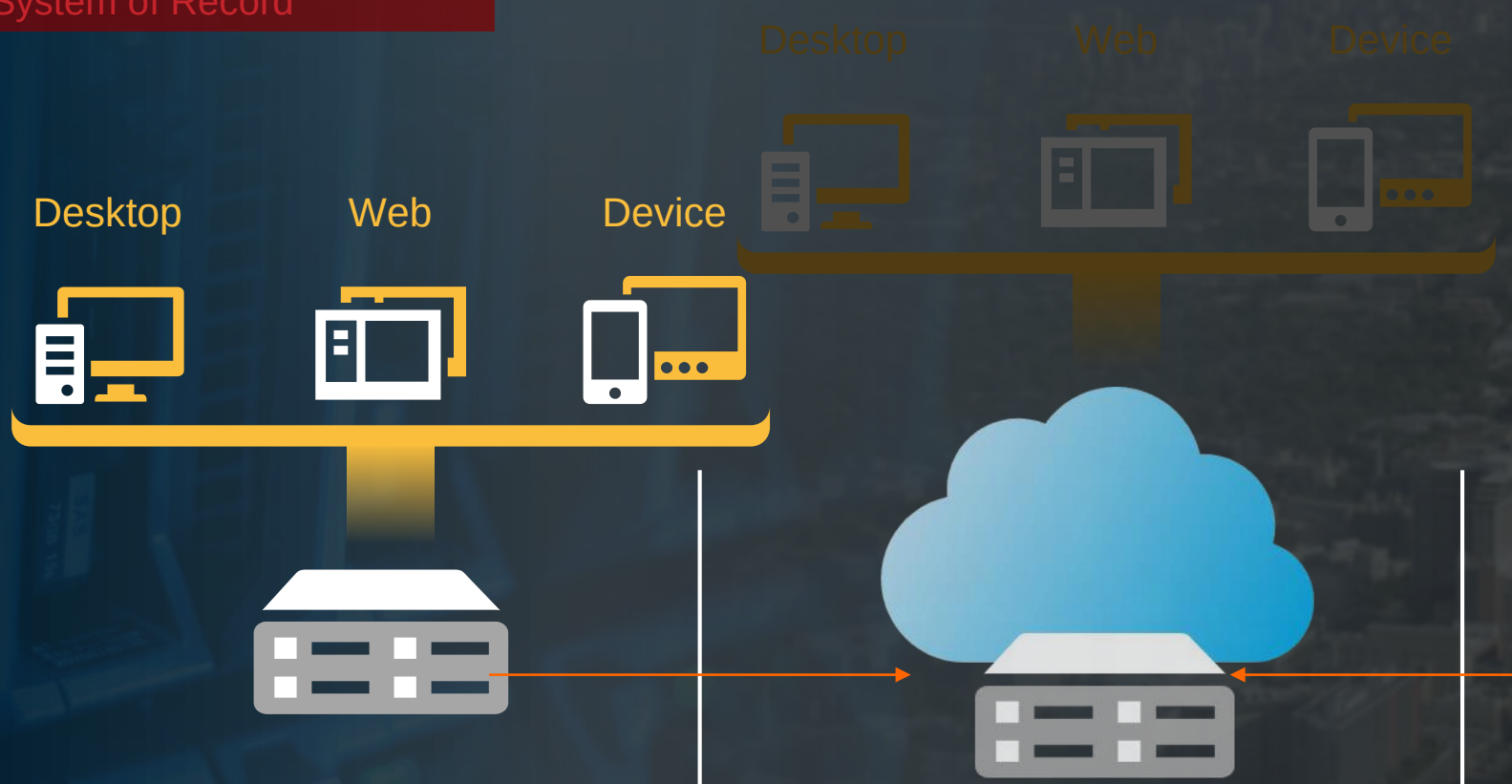
Off-site back-up and recovery

Always ready in the event of a disaster

- Off-site replication of production environment
- Leveraged during maintenance windows
- Instant on in the event of local outage

System of Engagement

System of Record



On-Premises

Operational GIS

Esri Managed Cloud Services

Back-up of Operational GIS
Replicated Data

SaaS

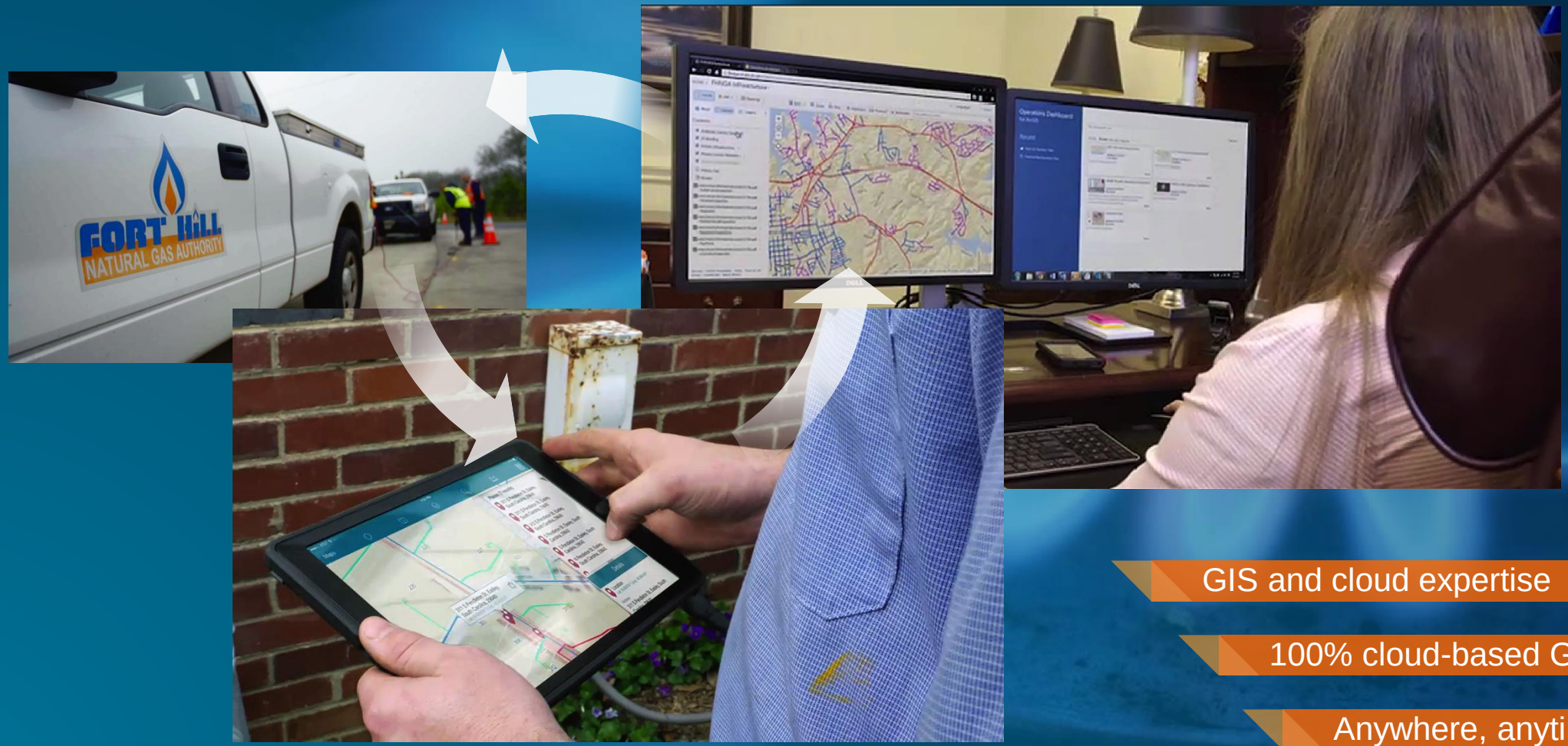
Esri ArcGIS Online

Basemaps

Cook County and the cloud

Outsourced GIS Operations

A complete GIS managed in the cloud

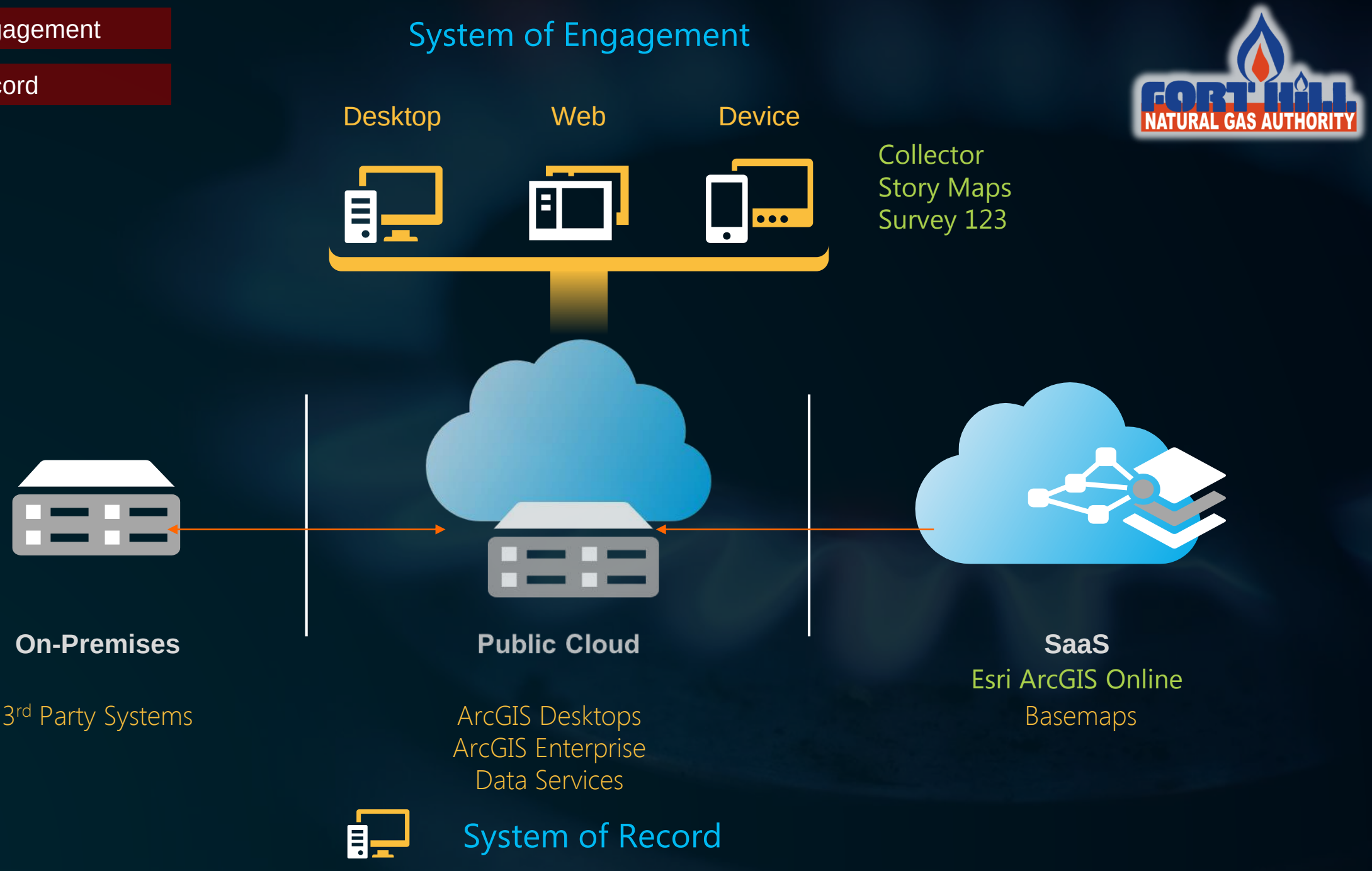


- GIS and cloud expertise
- 100% cloud-based GIS practice
- Anywhere, anytime on any device

Outsourced GIS Operations

System of Engagement

System of Record



Fort Hill Natural Gas Authority and the cloud

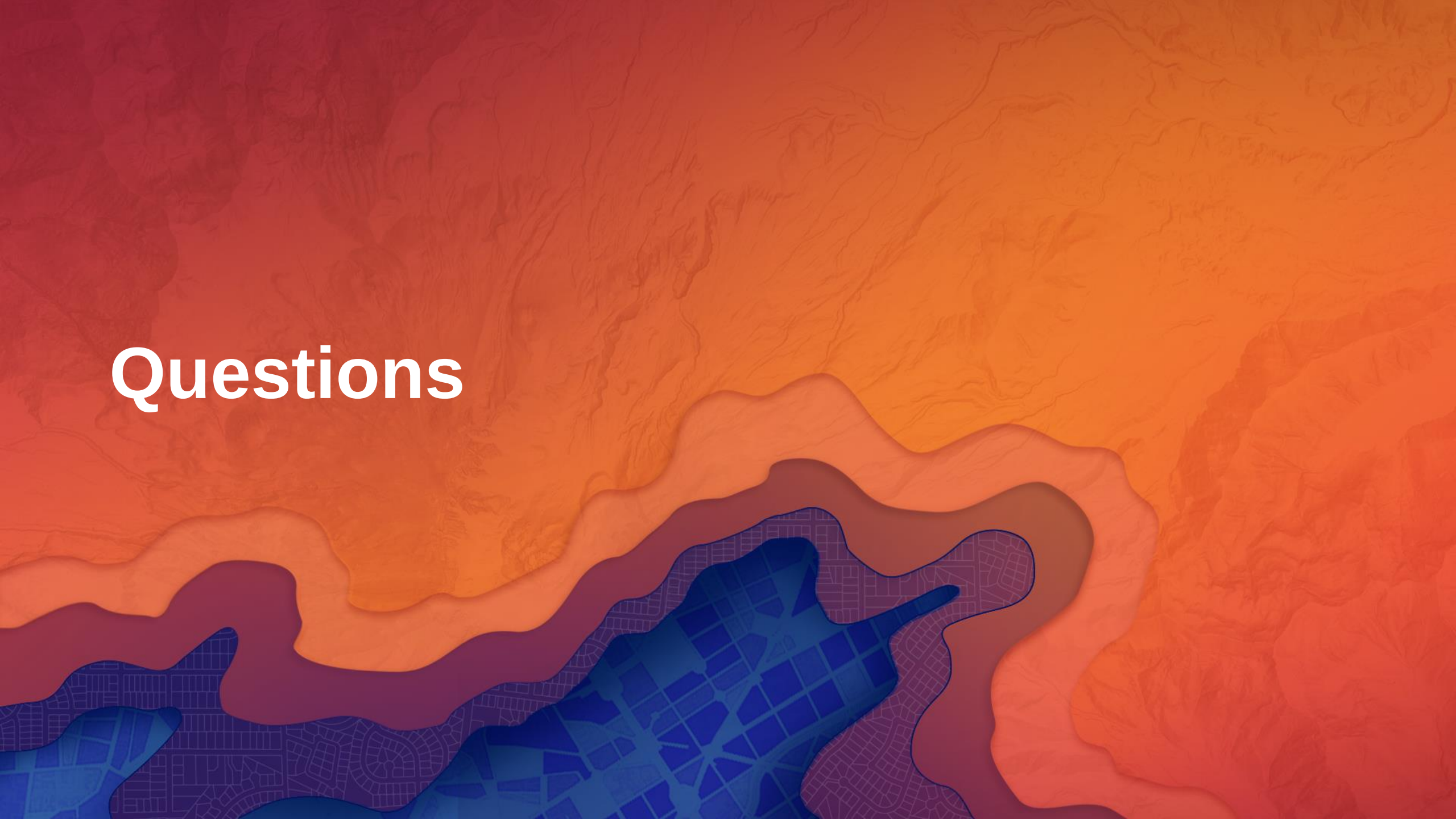
Key Takeaways

What are managed cloud services?

How might the cloud benefit my organization?

How is the cloud being used to deliver capabilities?

Questions



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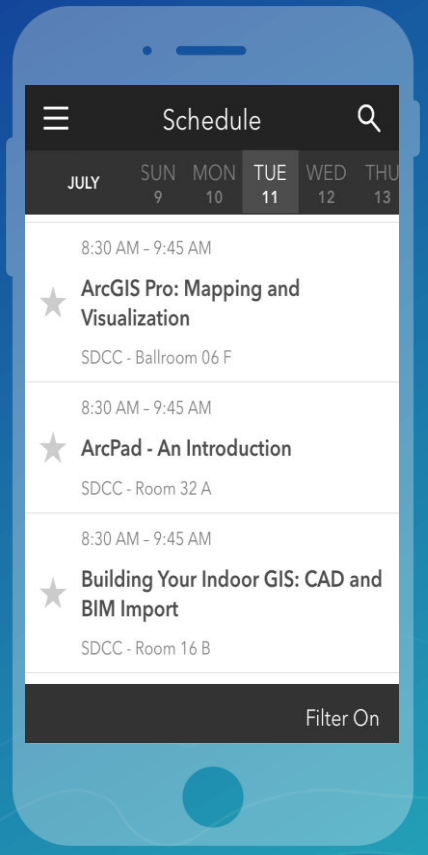
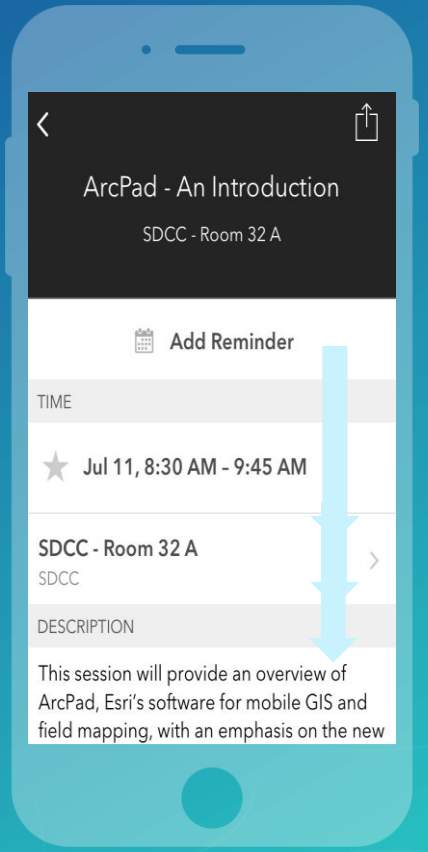
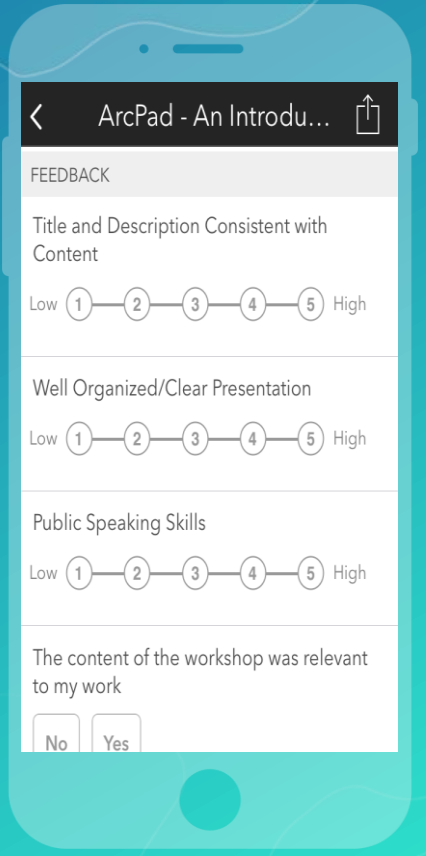
Select the session you attended



Scroll down to find the survey



Complete Answers and Select "Submit"



esri
THE
SCIENCE
OF
WHERE