



Esri with Hana: Value Acceleration and User Adoption in San Diego

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Session ID #83903

About the Speakers

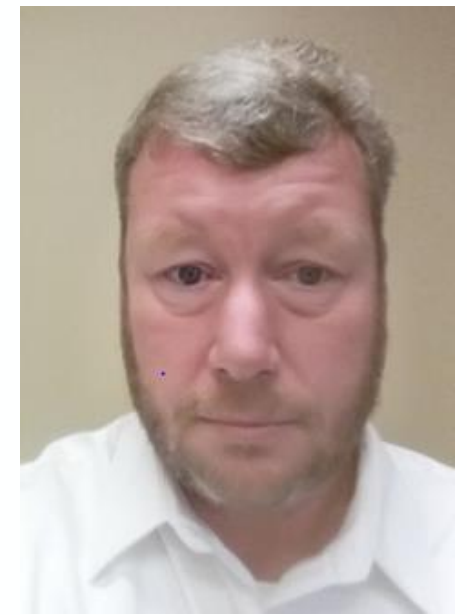
Scott Daeschner

- Enterprise GIS Manager, City of San Diego
- Many years driving GIS to the enterprise and to the world
- Youth ultimate frisbee coach



Mike Eggenberger

- Vice President, Critigen
- Enterprise GIS Strategist with a background in ERP
- Participated in a War of 1812 re-enactment of a shore bombardment



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Key Outcomes/Objectives

- Understand how to take advantage of two major technology advancements to accelerate value to the enterprise
 - SAP's Road to Hana
 - **Technology:** Hana is SAP's in-memory database platform. SAP is moving all its core ERP clients to Hana from other platforms. It has matured and now is a supported Esri platform.
 - **Impact:** All SAP customers will need to make major technology and business transformation in next few yrs.
 - Esri's platform improvements
 - **Technology:** Esri product family release is a major architectural advancement.
 - **Impact:** All Esri customers need to make major technology and business transformation within the next few yrs.

Agenda

- The City of San Diego
 - Who are we?
- Innovation background
 - How did we get here?
- Geo-enablement re-imagined
 - Haven't I heard this before?
- The Value Acceleration process
 - Step-wise approach
- The progress so far
 - Value to the City and its citizens



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The City of San Diego & Innovation Background

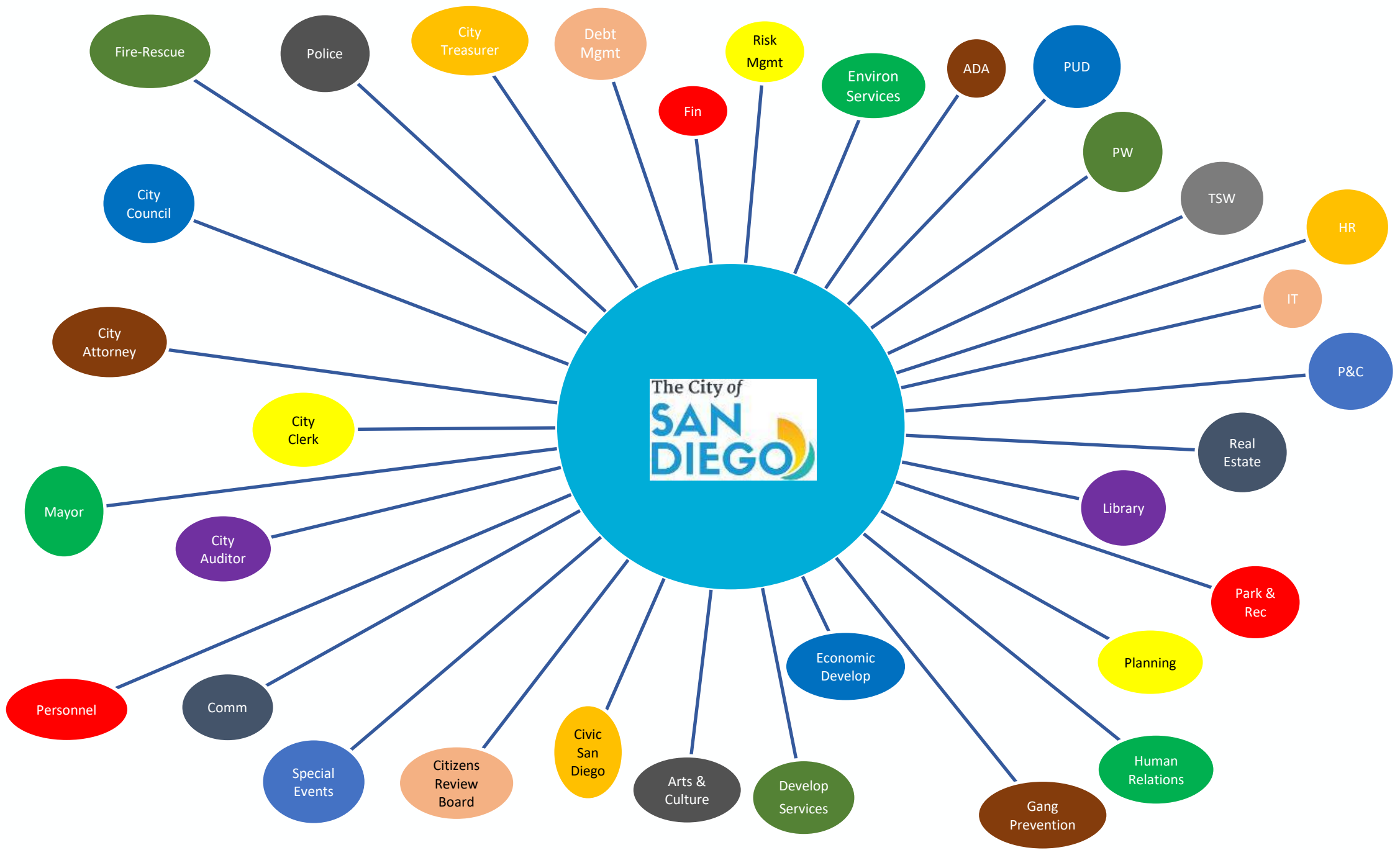


City of San Diego Overview

- The City of San Diego is the 8th largest city in the United States and the 2nd largest in California, with an estimated population of 1.37 million*
- San Diego covers 342 square miles and stretches nearly 40 miles from north to south. There are 93 miles of shoreline including bays, lagoons and the Pacific Ocean*
- The City of San Diego meets the needs of its residents in many critical areas including Public Safety and Health, Park and Recreation facilities, Utility Services, as well as resident and administrative support activities.



*Source: www.sandiego.gov

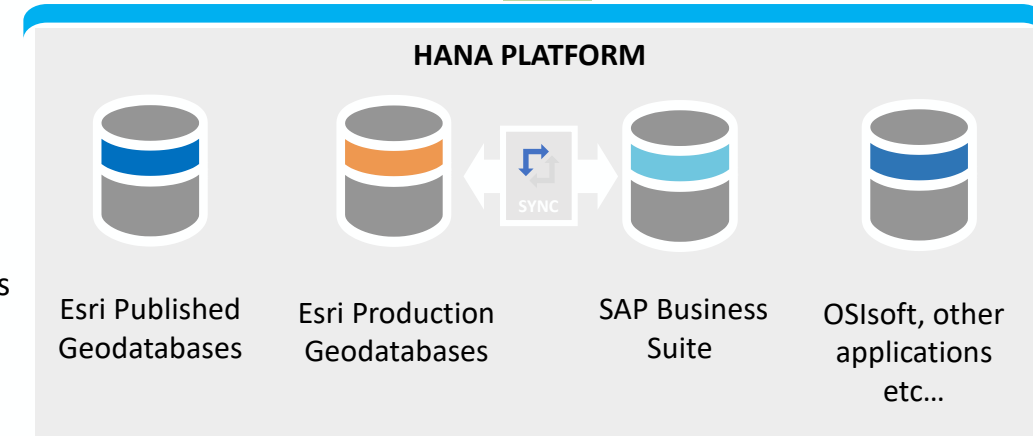
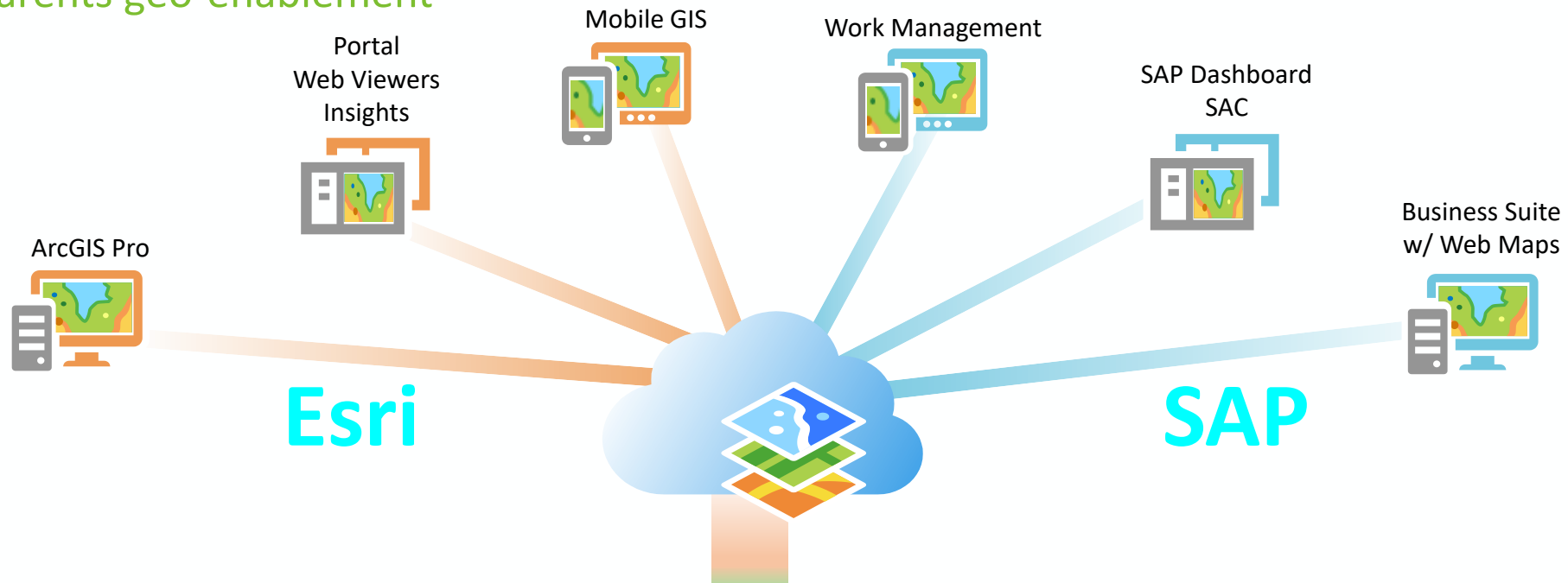


Geo-Enablement Foundation of Success

- ✓ User adoption has been amazing
- ✓ Most new requests for functionality come with a “how can I get a map with this”?
- ✓ Many additional departments and users
 - DSD, Fire, PD, Planning, Environment, Mayor, Special Events

Geo-enablement Reimagined

Not your Parents geo-enablement



Esri's Services Based Architecture

- Geodatabase on HANA
- ArcGIS Pro
- Mobile/Web leveraging common data platform
- SOE, SOI, SOR consume business data
- Feature services available for Enterprise Apps

SAP data integrated into Esri apps and analytics!

Fully Geo-enabled SAP Landscape:

- S/4 and Business Suite on HANA (SOH)
- Mobile Work Management Applications
- Data Sync Frameworks
- Digital Board Room, SAP Analytics Cloud (SAC), etc.

Esri maps & geometry integrated into SAP apps and analytics!

Esri and SAP – The Big Picture

Empowering the Enterprise

System of Record

Integrate ArcGIS and SAP ERP (ECC or S/4HANA) to streamline business processes and workflows

System of Engagement

Use the ArcGIS mapping platform to bring the data stored in a SAP HANA database to life with interactive maps and apps

RESTful Services

Real-Time

Better Together

Apps

On Demand Access

Collaboration

Authoritative Data

System of Insight

Use ArcGIS to bring comprehensive location analytics and data visualization capabilities to your analysts and data scientists

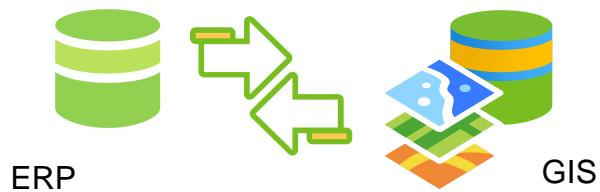
Insights

Python Notebooks

Demographics, Weather, Traffic, ...

Approaches for Integrating SAP EAM and ArcGIS

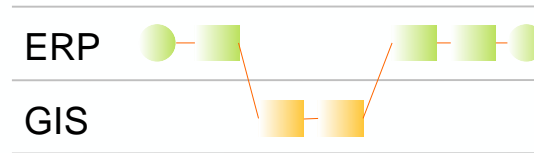
Data



Accomplished Using:

- Synchronizing via APIs (in batch, real-time, on-demand)
- Accessing Database Views in SAP HANA

Workflows & Processes

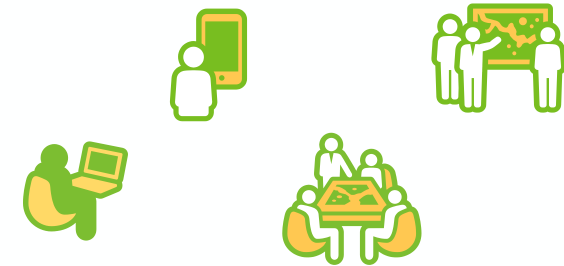


(e.g., move utility pole and all connected assets across the street)

Accomplished Using:

- APIs and Custom Code
- 3rd Party Solutions

Applications People Use



Accomplished Using:

- APIs and Custom Code
- COTS Products from SAP & Esri
- 3rd Party Solutions

Value Acceleration



VALUE ACCELERATION PROCESS

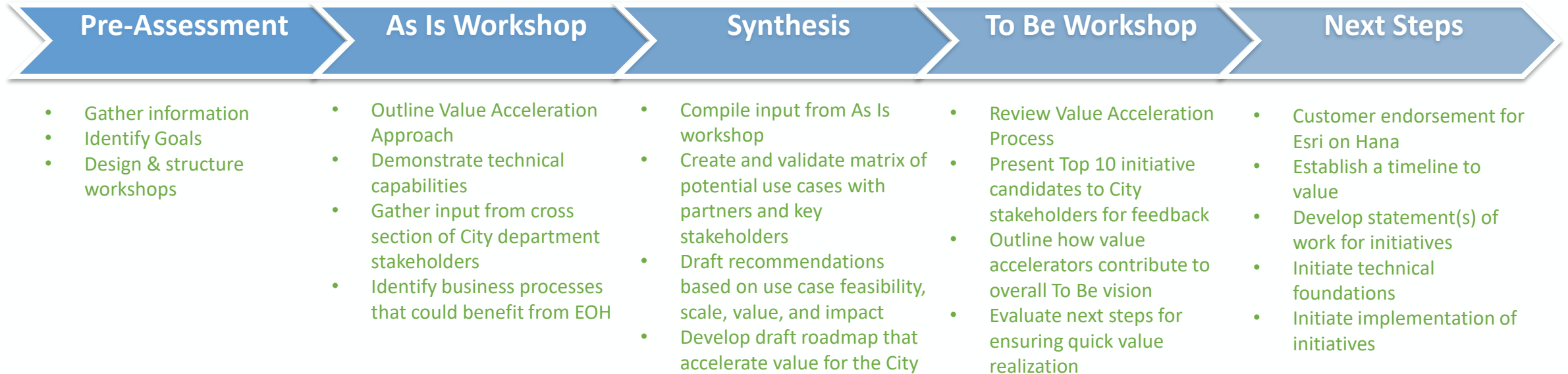
Stakeholder alignment and building organizational momentum

Goals

- Understand and align technology with City strategy and initiatives
- Increase the adoption of technology through value acceleration
- Develop a roadmap with initiatives whose value can be realized in 3-6 months

Success Measures

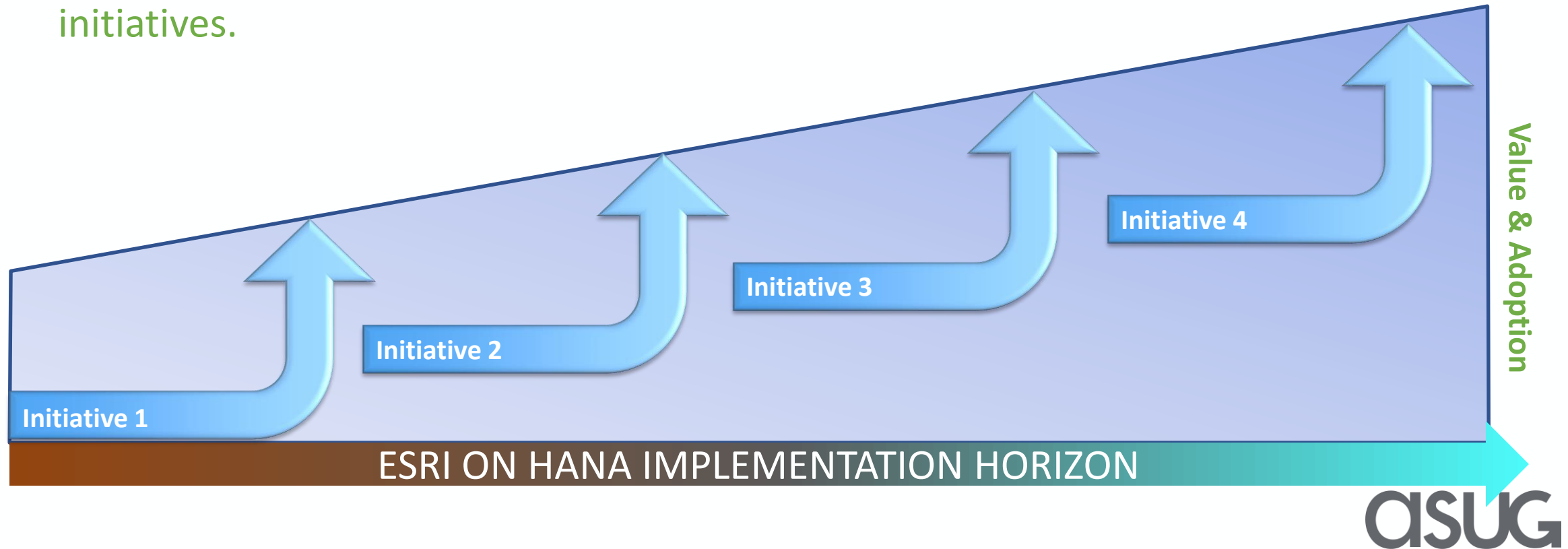
- Identify initiatives that could benefit from technology
- Prioritize initiatives based on complexity, dependencies, department representation, and strategy alignment
- Approval of road map from all stakeholders
- Execution of next steps to begin realizing value



The Enterprise is the killer app

INCREMENTAL – NOT MONUMENTAL

- Value can be found through incremental moves towards tomorrow's vision.
- Leverage today's tools and start to build for tomorrow's enterprise.
- Utilize a measured, initiative-based approach.
- Initiative deployment and use results in the discovery of new use cases and initiatives.



COMPREHENSIVE SELECTION CRITERIA

SETTING THE STAGE

Category	Description
Data Access - Public	Implement tools and processes to provide citizens with information on focused topics. These initiatives inform the community, provide transparency to City initiatives, and allow citizens to engage with the City.
Data Access - Internal	Provide better access of data to internal City stakeholders, as well as establishing enterprise data sources that can be leveraged outside of individual departments.
Data Analytics	Develop and/or implement data products and engagement/insight tools for self-service of analytics by internal stakeholders.
Data Governance	Standardize and/or enhance the management of data to support broader enterprise initiatives.
Process Improvement	Standardize and/or enhance business processes to better support an individual department or the enterprise.

Horizon	Description
Short	Initiative can be implemented quickly based on availability of existing architecture and infrastructure, data, and business process OR priority of significance to escalate the implementation of the initiative solution.
Medium	Initiative is moderately complex with dependencies that must be met prior to full execution of initiative solution.
Long	Initiative complexity will require longer time to implement. Complexity could be based on: required architecture and infrastructure availability or complexity, dependency on supporting data, or significance of change management related to supporting business processes OR lower priority initiatives on longer implementation horizons.

Initiative Scale	Design and Implementation Measure
Small	2-4 months
Medium	4-8 months
Large	>8 months

TOP VALUE ACCELERATION INITIATIVES

Asset Information

Asset Information Viewer

Stormwater Condition and Risk Assessment

Emergency Response and Planning

Fire Hydrant Status Viewer

Emergency Response Routing Enhancements

Emergency Response Analytics Tools

City Planning & Permitting

DSD Geoenablement

Conflict Detection - Pavement Digs

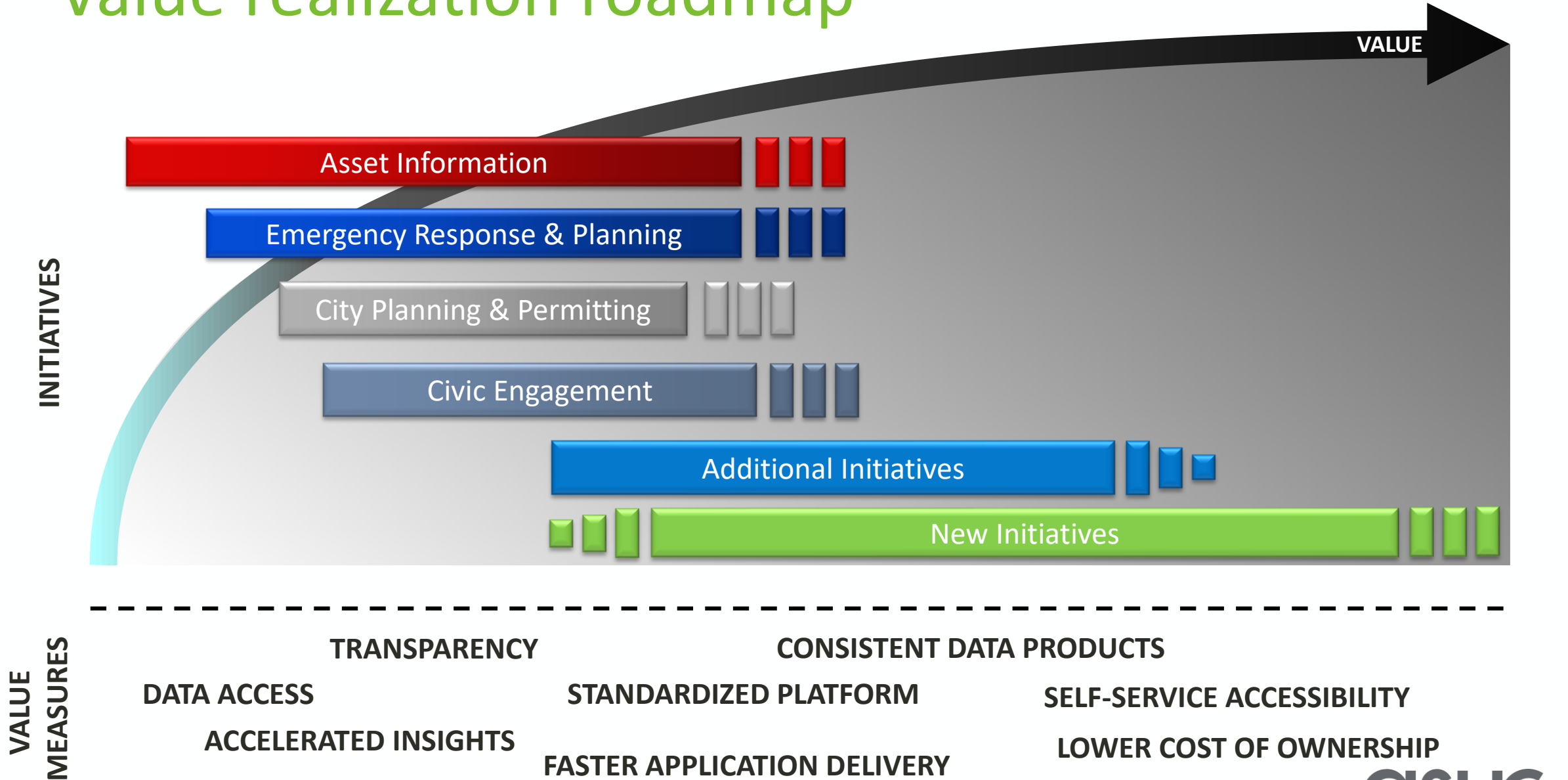
Civic Engagement

Sidewalk Program Viewer

Citizen Project Portal

Homelessness Outreach Initiative

Value realization roadmap



There is a lot more value to come!

Initiative
CIP Status Viewer
As-built Capture and Quality Enhancements
Ortho Imagery and Lidar Data Processing
Available Parking
AVL Analytics - Streets
Opioid Response
Scattershot Information & Analytics
Vision Zero Enhancements
COMNET Water SCADA System Analytics
311 Insights Enhancements
Asset Condition Assessment Enhancements

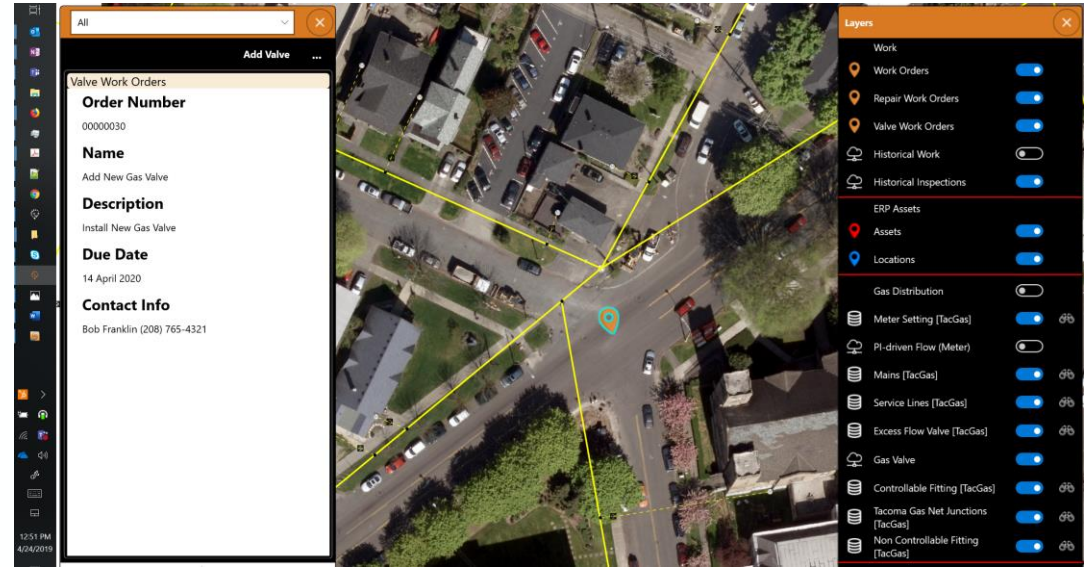
Initiative
Conflict Detection - Projects
Environmental Monitoring Data Enhancements
Predictive Commuting
Sewer Overflows and Water Main Break Analytics
Special Events Attendance Counts
Stormwater Inspections and Violations Enhancements
Streetlight Compliance Driven Placement
Traffic Analytics
Utilities Underground Viewer

See appendix for information on other initiatives



Progress So Far

- Created technology infrastructure, systems and processes to support migration and deployment
- Created Hydrant status viewer
- Created Sidewalk Viewer



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Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

<http://info.asug.com/2019-ac-slides>



Q&A



For questions after this session, contact us at
[Mike.Eggenberger@Critigen.com] and [SDaeschner@sandiego.gov].

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