

AN ESRI
PROPOSAL

June 30, 2024

Proposal for Professional Services for Various Departments and Agencies of the County of Hawai`i Letter of Interest

Prepared for:

Mr. Victor Kandle
County of Hawai`i
25 Aupuni Street
Hilo, Hawai`i 96720

Esri Proposal # P018879

380 New York Street
Redlands, California 92373-8100 USA
909 793 2853
info@esri.com
esri.com



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1.0 Letter of Interest

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Mr. Victor Kandle
County of Hawai'i
25 Aupuni Street
Hilo, Hawai'i 96720

June 30, 2024

RE: Letter of interest for Professional Services for fiscal year 2024 – 2025

To Whom it May Concern,

Environmental Systems Research Institute, Inc. (Esri) is pleased to have the opportunity to express its interest in providing professional services for Geographic Information Systems (GIS) to Various Departments and Agencies of the County of Hawai'i (County).

We would like to be considered for Category TA.4 for Community Planning (Public Transit Mapping and Graphic Design) respectively. Please find below the contact information for Esri's points of contact for contractual matters and receipt of any future notices.

For the purpose of this proposal, Esri's points of contact will be:

Esri Contractual POC	Esri Future Notices Receipt POC
Jasmine Deo 380 New York Street Redlands, CA 92373 Phone: (909) 793-2853 x 4309 E-mail: JDeo@esri.com	Justin Parrish 380 New York Street Redlands, CA 92373 Phone: (909) 369-4600 Email: jparrish@esri.com

Please don't hesitate to contact Justin Parrish or Jasmine Deo should you have any questions regarding our proposal. We look forward to the opportunity to work with the County on any future projects or services needs that may arise.

Sincerely,

John D. Perry
Contracts Department Manager
Esri Professional Services

2.0 Statement of Qualification

2.1 Statements 1 – 5

As requested by the County of Hawai`i in its notice, Esri is providing the following statements of qualification to supplement the letter of interest above.

Statement 1: Name of firm or person, contact information, principal place of business, and location of all its offices.

Esri Response:

- Environmental Systems Research Institute, Inc. (Esri)
- Contact Information:

Esri Contractual POC	Esri Future Notices Receipt POC
Jasmine Deo 380 New York Street Redlands, CA 92373 Phone: (909) 793-2853 x 4309 E-mail: JDeo@esri.com	Justin Parrish 380 New York Street Redlands, CA 92373 Phone: (909) 369-4600 Email: justinparrish@esri.com

- Esri's Corporate Headquarters are located at 380 New York Street, Redlands, CA 92373
- Esri has offices in the following locations:

Office Type	Locations
Regional and Satellite Offices	Redlands, CA; Sacramento, CA; San Diego, CA; Denver, CO; Washington D.C., Washington D.C; Miami, FL; Atlanta, GA; Chicago, IL; Boston, MA; Portland, ME; Minneapolis, MN; St. Louis, MO; Charlotte, NC; New York, NY; Portland, OR; Philadelphia, PA; Houston, TX; San Antonio, TX; Lodi, WI; Arlington, VA; Berkeley, CA; Olympia, WA
International Offices	Abu Dhabi, AE; Dubai, AE; Sharjah, AE; Vienna, AT; Melbourne, AU; Ottawa, CA; Zurich, CH; Beijing, CN; Paris, FR; New Delhi, IN; Rotterdam, NL; Singapore, SG; Cardiff, UK; Edinburgh, UK; Ankara, TR; Stuttgart, DE
Individual Home Offices/Remote Employees	Esri has many more employees supporting from home office locations or remotely as well throughout the United States and internationally.

Statement 2: The age of the firm and its average number of employees over the past five years.

Esri Response:

- Esri was founded in 1969 and has been in business for 55 years
- The average number of domestic employees employed at Esri for the past five years has been 4,592 (YTD)

Statement 3: The education, training, and qualification of key members of the firm.

Esri Response:

Esri has identified key resources that are representative of the skillsets and experience that would suit Category TA.4 Community Planning (Public Transit Mapping and Graphic Design) that Esri would like to be considered for. Therefore, Esri has provided those key resources' resumes below.

Justin Parrish

Project Manager

Dedicated project manager in service of various teams, supporting them in their endeavors to positively impact the communities around us

Summary

Mr. Parrish joined Esri Professional Services division in June of 2019. He has spent 8+ years focusing on project management in a multitude of sectors ranging from green energy to software. As a project manager he has worked with many local and state government planning and building divisions. Establishing these connections has helped ensure projects were completed safely in accordance with local ordinances. His current responsibilities have him continuing these connections managing and implementing ArcGIS solutions. He has collaborated with many municipalities to assess and solve their geo-spatial problems. So far, these have ranged from Enterprise deployments, geodatabase designs, parcel fabrics, and emergency management.

Career Highlights

- Managed the implementation of 12+ ArcGIS Enterprise deployments
- Created workflow documentation streamlining processes for business partners to work with Esri
- Managed 40+ Esri professional services engagements ranging from \$10k to \$150k
- Managed a multi-team collaboration effort between Esri staff, and a business partner to create our first offline mobile map caching application

Experience

Esri: 4 yrs

Total: 10 yrs 4 months

Education

- BA, Sociology, CSUSB, San Bernardino, California, United States, 2011
- MBA, GIS, Redlands University, Redlands, California, United States, 2019

Technical Capabilities

- **Business Skill:** Agile Scrum Master, Business Assessment & Discovery, Business Consultancy, Requirements Gathering & Discovery, Technical Writing
- **ArcGIS Products:** ArcGIS Hub, ArcGIS Urban
- **Engagement Management:** Acceptance Management, Change Management, Close-Out Management, Communication Management, Cost/Financial Management, Procurement Management, Quality Management, Resource Management, Risk & Issue Management, Schedule Management, Scope Management, Stakeholder Management

Selected Experience

Stark County Contact Tracing Deployment

Mr. Parrish was responsible for the coordination and management of Esri's first contact tracing solution for COVID-19. His responsibilities were to collect requirements, assess needs, identify a team, and deploy the solution. This task required consistent and effective communication because of the multitude of stakeholders involved. Mr. Parrish not only needed to communicate with the county's internal health and GIS team but also needed to manage an Esri business partner performing the work. It took three months to accomplish this goal. Stark County was able to deploy their solution and now acts as a lighthouse project for other agencies.

ParcelQuest Land Mgt. and Data Application

ParcelQuest is a data retailer hosting over 13 million parcel records for commercial consumption and provides data for agencies such as CAL OES. Mr. Parrish is managing efforts

from Esri Professional Services and ParcelQuests team to effectively architect and host all of this data. This includes a 3rd party Esri partner assisting with the data management. Currently, Mr. Parrish is managing a multi-team deployment to address these challenges. So far, the team has successfully re-configured their enterprise deployment and is now working with development operations to evaluate scripting tools that will optimize data upload and download speeds.
Time frame. 2021-Present

OCCOG House Element

Mr. Parrish worked with Esri's Urban team and our partners WSP to put a proposal together to support OCCOG updating their housing element. Our job was to provide the GIS knowledge base that would allow the creation of Hub sites, Urban models, training, and 3D development work. This required managing logistics across a large network of teams and various city planning departments. The end products developed for OCCOG would provide cities with the ability to assess areas for development of housing based on HCD requirements.

Employment History

Employer	Position Title	Position Dates
Esri	Program Delivery Coordinator	2019 – Present
Sullivan Solar Power	Project Developer	2017 – 2019
Horizon Solar Power	Senior Designer/Project Management	2015 – 2017
Progressive Energy Solutions, Inc.	Site Technician/Assistant Project Manager	2013 – 2015

Continued Professional Development

Training

- ArcGIS Enterprise: Configuring a Base Deployment, Esri Learning Center, Esri Instructor-Led Online Class, 2020
- ArcGIS 4: Sharing Content on the Web, Esri Learning Center, Esri Instructor-Led Online Class, 2020
- Facilitating Meetings that Work, Facilitation First Inc. Vendor, Redlands, 2019
- Project Leadership, Communication, and Team Building, UC Riverside 3rd Party Certification, Riverside, 2019

Kyle Perri

Software Development Engineer

Dedicated Software Development Engineer with programming, design, testing, and architecture skills.

Summary

Mr. Perri joined Esri's Technology Services Department as a software development engineer in 2018. He has extensive experience in extending the ArcGIS platform. Mr. Perri specializes in languages such as C# and Python, and in ArcGIS SDKs and APIs such as the ArcGIS Pro SDK, ArcPy, and the ArcGIS API for Python.

Career Highlights

- Developed python automation scripts for multiple customers to help them with various tasks in their ArcGIS Portal.

Experience

Esri: 5 yrs 8 months

Total: 6 yrs 10 months

Education

- BS, Computer Information Systems, California Polytechnic State University, Pomona, Pomona, California, United States, 2018

Technical Capabilities

- **ArcGIS Platform:** ArcGIS Desktop, ArcGIS Pro
- **ArcGIS for Developers:** ArcGIS for JavaScript, ArcGIS for Python, ArcGIS Pro SDK, ArcGIS Runtime SDK for .Net, ArcGIS Runtime SDK for Android, ArcGIS Runtime SDK for Java, ArcGIS Runtime SDK for QT
- **Technical Skill:** Desktop Development, Mobile Development

Selected Experience

Portal Metadata Collector, USACE

Mr. Perri was the lead developer on the Portal Metadata Collector, a python tool that sifts through all the items within a specified ArcGIS Portal and pulls out metadata. The tool then consolidates this data into one table that can be used to determine which items are the most popular, how many items are being created every day, etc. Mr. Perri wrote this tool to be run using the Windows Task Scheduler so that it updates the table

daily. Time frame: 2020

Route Exchange Model, AGC

Mr. Perri was the lead developer on the Route Exchange Model ArcGIS Tools. These are python tools that work in both ArcGIS Desktop and ArcGIS Pro that bring in GeoJson from a file and convert them into feature classes for use in ArcGIS. The tools are also capable of taking feature classes and exporting them to GeoJson to be used in other platforms. Time frame: 2020

ART, Sempra

Mr. Perri was the lead developer on the ART Upgrade project, an ArcMap extension that allows users to plan field workers' routes using the routing capabilities of ArcGIS. Mr. Perri upgraded the custom software from ArcGIS version 10.3 to 10.7.1. He also worked on many bug fixes that were requested and upgraded deprecated software. Time frame: 2019-2020

XYZ ArcGIS Pro Integration, HERE

Mr. Perri was the lead developer on the XYZ ArcGIS Pro Integration project, an add-in for

ArcGIS Pro designed to pull data from HERE’s XYZ API as well as push data to it. Users can create data within ArcGIS Pro and then upload that data to XYZ using this tool. They can also do the opposite and create data in XYZ and then pull it into ArcGIS Pro. Mr. Perri leveraged the ArcGIS Pro SDK to create this tool. Time frame: 2018-2019

Portrayal Database Exporter, AGC

Mr. Perri was the lead developer of the Portrayal Database Exporter, an add-in for ArcGIS Pro designed to take layers from maps and portray their symbology in a central database. The add-in allows the user to select as many layers from as many maps as they want within their project and export them all to the same database. Mr. Perri utilized the ArcGIS Pro SDK to create this tool. Time frame: 2019-2020

Employment History

Employer	Position Title	Position Dates
Esri	Software Development Engineer	2018 – Present
Esri	Software Development Intern	2018
Associated Students Incorporated	Web Developer	2017

Continued Professional Development

Training

- Putting ArcGIS to Use Across Your Organization, Esri Learning Center, Redlands, CA, 2020
- Unlisted Learning Center Courses, Esri Learning Center, Redlands, CA, 2018
- ArcGIS Enterprise Data Management and Collaboration (Technical Bootcamp), Esri Learning Center, Redlands, CA, 2018

Pinde Fu

Senior Application Developer

Delivers cost-effective solutions
based on Esri Web GIS platform

Summary

Dr. Fu is a senior application developer and team lead. He joined Esri in 2000 with a Ph.D. in geography from the University of Kansas and an M.S. in geography from the Chinese Academy of Sciences. Dr. Fu has more than 18 years of experience with Web GIS design and app development. His specialties include developing Web GIS apps for national spatial data infrastructure, health and environmental studies, emergency management, planning, oil and gas, utility management, and landscape ecology.

Career Highlights

- Author of "Getting to Know Web GIS", a best seller and a premier textbook in the Web GIS field; Leading author of the book "Web GIS: Principles and Applications" and "Web GIS Principles and Technologies" (Chinese)
- Two projects won the special achievement award at Esri conference, and one project won the Excellence.gov award

Experience

Esri: 22 yrs 8 months

Total: 28 yrs 4 months

Education

- B.S., Geography, Henan University of Kansas, Kaifeng, Henan, China, 1991
 - M.S., GIS/Geography, Chinese Academy of Sciences, Beijing, Beijing, China, 1994
 - Ph.D., GIS/Geography, University of Kansas, Lawrence, KS, USA, 2000
-

Technical Capabilities

- **3rd Party Technology/Platform** - Dojo
- **ArcGIS Apps** - AppStudio for ArcGIS, ArcGIS Earth, Drone2Map for ArcGIS, GeoPlanner for ArcGIS, Navigator for ArcGIS, Web AppBuilder for ArcGIS, Workforce for ArcGIS, Collector for ArcGIS, Explorer for ArcGIS, Operations Dashboard for ArcGIS, Survey123 for ArcGIS
- **ArcGIS Enterprise Extensions** - ArcGIS Image Server, Esri Geoportal Server
- **ArcGIS for Developers** - ArcGIS API for JavaScript, ArcGIS API for JavaScript
- **ArcGIS Online** - ArcGIS Open Data, Configurable Apps, Geocoding Services, Imagery Services, Story Maps, Elevation Services, Esri Basemaps
- **ArcGIS Platform** - ArcGIS Pro, ArcGIS Desktop, ArcGIS Enterprise
- **ArcGIS Solutions** - Esri CityEngine
- **Business Skill** - Agile Product Owner, Agile Scrum Master, Release Management, Requirements Gathering and Discovery, Technical Advisory, Technical Writing, Onsite Implementation, Business Consultancy
- **Programming Language** - C++, Flex, Java, JavaScript, PL/SQL, SQL, Python
- **Technical Skill** - Big Data, Data Visualization, Desktop Development, Enterprise Security, ETL Development, Geodata Management And Migration, Geospatial Analysis, Image Analysis, Platform Configuration, QA/QC, Remote Sensing, Security Design And Engineering, Server Development, Spatial Analysis, System Integration, Test Engineering, UI/UX Design, Web Development, 3D Gis, Cartography, System Architecture Design

Selected Experience

ALB (Asian Longhorned Beetles) Inspection and Removal project, Animal & Plant Health Inspection Service, USDA

Dr. Fu was the technical lead. He designed and developed a complete solution including GIS database, web apps and mobile app for APHIS to efficiently collect, edit, QA/QC, analyze, and report ALB infestation data. The technologies he used include ArcGIS Enterprise, ArcGIS Field Maps/Collector, PostgreSQL, ArcGIS Python API, Arcade, ArcGIS Dashboards, ArcGIS Web AppBuilder, ArcGIS Pro, and ArcGIS Online Assistant. Time frame: 2018 – 2021

Park Evaluation Solution, County and City of San Francisco (CCSF)

Dr. Fu was the technical lead. This project designed and implemented a solution for CCSF to efficiently assign park evaluation tasks to evaluators, evaluate park facilities in the fields, calculate scores, and report evaluate results. He designed the database, mobile survey forms, and web apps. The technologies he used include ArcGIS Online, ArcGIS Survey123, Survey123 Connect, ArcGIS Workforce, ArcGIS Python API, and ArcGIS Dashboards, and ArcGIS Web AppBuilder. Time frame: 2019 – 2020

Accelerated Wildfire Risk Reduction Vegetation Management (AWRRVM), Pacific Gas & Electric Company (PG&E)

Dr. Fu was a lead developer. This project developed a solution including GIS database, web apps and mobile app for PG&E to efficiently assign vegetation reduction tasks to contractors, collect vegetation removal data, report the progress, and calculate payments. He used technologies include ArcGIS Online, ArcGIS Enterprise, ArcGIS Collector, ArcGIS Python API, and ArcGIS Dashboards, and ArcGIS Web AppBuilder. Time frame: 2019 – 2020

Asset Viewer and Management web app, California Water Service (CalWater)

Dr. Fu was the tech lead. This project developed a web app with a series of custom widgets for CalWater to view and manage its assets & facilities. This project was developed using ArcGIS Enterprise, ArcGIS Web AppBuilder, ArcGIS API for JavaScript. Time frame: 2019 – 2020

American Tower Site Locator, American Tower Inc

Dr. Fu was the lead developer. This project developed custom reporting capabilities and related data storage configuration for tracking and reporting specific user interactions with the American Tower Site Finder Application. This project was developed using ArcGIS Enterprise, ArcGIS API for JavaScript, ArcGIS Web AppBuilder, and ArcGIS Dashboards. Time frame: 2019 - 2020

Employment History

Employer	Position Title	Position Dates
Esri	Senior App Developer @ Apps Development servicesLead @ Platform Engineer team	2000–Present
Adjunct Instructor	Harvard Extension School	2012–Present
University of Kansas	Graduate Research Assistant and System Administrator	1997–2000

Continued Professional Development

Training

- Platform Engineering Summit, Esri Applied Technology, Redlands, CA, 2017
- Inspiring Trust, Esri Professional Development, Redlands, 2016
- Introduction to the ArcGIS GeoEvent Extension for Server, Esri Learning Center, Redlands, CA, 2016
- Clarifying Your Teams Purpose, Esri Professional Development, Redlands, 2016
- Influencer, In-House, Redlands, CA, CA, 2016
- Situational Self Leadership (SSL) - Virtual Class, Ken Blanchard Companies Professional Development, Online, 2016
- Enterprise Health Check, Esri Applied Technology, Redlands, CA, 2016
- Portal for ArcGIS, Esri Learning Center (unlisted), Redlands, CA, 2015
- Introduction to ArcGIS Pro for GIS Professionals (Class ID 50136267), Esri Learning Center (unlisted), Redlands, CA, 2015

Presentations

- Publish vector tiles, 3D scene layers, and custom web tools using Web GIS, 7/2018, Esri Education User Conference, San Diego
- Teaching Web GIS with Getting to Know Web GIS 3rd Edition, 12/2018, AAG Annual Meeting, New Orleans, LA
- Best Practices for Web GIS App Development, 2/2018, Southern California Edison, Ontario, CA
- Develop Custom Widgets in Web AppBuilder for ArcGIS, 11/2016, City of Seattle, WA
- Teaching Web GIS – Lab Design, 7/2016, Esri Education User Conference, San Diego, CA
- Teaching Web GIS – Lab Design, 4/2016, AAG Annual Meeting, San Francisco, CA
- Add Web GIS to your Curriculum, 7/2015, Esri Education User Conference, San Diego, CA
- Add Web GIS to your Curriculum, 4/2015, AAG Annual Meeting, Chicago, CA
- Develop Custom Widgets in Web AppBuilder for ArcGIS, 2/2015, City of Seattle, WA

Luci Coleman

Senior Technical Consultant

Technology expert specializing in ArcGIS configuration for natural resource management and conservation.

Summary

Ms. Coleman joined Esri's Professional Services Division in 2017 as a technical consultant and project manager on the natural resources team. In this role, she also supported the Esri Advantage Program as a technical adviser. She has a background in GIS with specific expertise in conservation and natural resources. As a consultant for Esri, Ms. Coleman is responsible for implementing the ArcGIS platform for customers through repeatable geospatial capabilities. She assesses user needs, develops conceptual solution designs, and configures Esri's off-the-shelf technology; her specialty includes field mobility, web app configuration, and design.

Career Highlights

- Completed a Fulbright Fellowship at the University of the Western Cape, South Africa

Experience

Esri: 6 yrs 6 months

Total: 9 yrs

Education

- BS, Biology and Environmental Geology, University of Mary Washington, Fredericksburg, VA, United States, 2015

Technical Capabilities

- ArcGIS Platform:** ArcGIS Online, ArcGIS Enterprise, ArcGIS Pro, ArcGIS API for Python, ArcGIS Arcade
- ArcGIS Apps:** ArcGIS Dashboards, ArcGIS Hub, ArcGIS Survey123, ArcGIS Field Maps, ArcGIS Experience Builder, GeoPlanner for ArcGIS, Insights for ArcGIS, ArcGIS Quick Capture, ArcGIS Workforce
- Business Skill:** Agile Product Owner, Agile Scrum Master, Project Management, Business Assessment & Discovery, Business Consultancy, Onsite Implementation, Release Management, Technical Advisory
- Technical Skill:** Solution Design, Data Engineering, Scripting and Automation, UI/UX, Geodata Management & Migration, Performance Testing, Workflow Design, Geocoding, Cartography, Data Visualization

Selected Experience

ArcGIS Dashboards Configuration Support, African Wildlife Foundation

Ms. Coleman supports the African Wildlife Foundation to design, build, and deploy a site suitability and forecasting application. The application focuses on key ecological assets and existing infrastructure investments to identify potential opportunities for projects. The analysis also highlights potential risks and costs. This support includes the use of ArcGIS Dashboards and ArcGIS Hub. Time frame: May 2022 – Present

Technical Leadership for US Geological Survey

Ms. Coleman has supported the US Geological Society since 2021 in their efforts to support President Biden's 30x30 initiative. This initiative sets forth to conserve 30% of the United States by 2030. Together with the US Geological Society, the team has deployed an integrated suite of mapping and visualization tools that use authoritative data to display, prioritize, and track conservation efforts. The platform supports automated workflows for data consolidation and data

production workflows. This support includes the use of ArcGIS Online, ArcGIS API for Python, ArcGIS API for JavaScript, ArcGIS Hub. Time frame: Sep 2021 – Present

Field Operations Support, The Nature Conservancy Africa

Ms. Coleman supported The Nature Conservancy Africa to develop a protected area field operations workflow. The workflow enabled field staff to track wildlife observations as well as their interactions with local communities. Data collected in the field is shared to the patrol headquarters, including the live locations of rangers. Aggregate statistics are available to highlight hotspots, patrol coverage, and temporal trends in wildlife migrations. This support included use of ArcGIS Survey123, ArcGIS QuickCapture, ArcGIS Dashboards, ArcGIS Arcade. Time frame: Jan 2021 – Dec 2021

ArcGIS Hub Configuration Support, US Forest Service

Ms. Coleman has supported the US Forest Service to deploy ArcGIS Hub for the Feds Feed Families federal initiative. She designed and implemented the Hub Site as well as configured various configurable apps to collect, manage, and share data (ArcGIS Dashboards, Survey123, Web AppBuilder for ArcGIS). This support included the use of ArcGIS Hub to manage operations and participation in events. Time frame: 2018 – Present

ArcGIS Hub Enablement, NatureServe

Ms. Coleman has supported NatureServe to deploy ArcGIS Hub in support of the Gulf of Mexico Alliance Open Data Initiative. This deployment focused on sharing of data resources and promoting collaboration across the Alliance. Ms. Coleman supported NatureServe to streamline their data management practices and automate aggregation of data products through use of the ArcGIS API for Python. Time frame: 2019 – 2020

Esri Advantage Program, South Carolina Department of Natural Resources

Ms. Coleman has supported South Carolina Department of Natural Resources as its technical adviser for its Esri Advantage Program. Ms. Coleman advised SC DNR on the ArcGIS platform, relevant GIS strategies, architectures, product selection, and release planning. This support included familiarity with SC DNR business and technical vision, goals, and objectives to provide guidance in how best to use the ArcGIS platform. Time frame: 2018 – 2020

Employment History

Employer	Position Title	Position Dates
Esri	Technical Advisor	2017 – Present
Esri South Africa	Geospatial Analyst Intern	2017
University of the Western Cape	Researcher and Lecturer	2016 – 2017
NT Concepts	Data Manager	2016
NT Concepts	Business Intelligence Engineer	2015 – 2016
NT Concepts	Intern	2015
Friends of Tanzania	Volunteer/Grant Writer	2015 – 2016

Continued Professional Development

Training

- Delivering Consumer Grade Applications, Esri In-House, 2022
- Enterprise Administration, Esri Learning Center, 2021
- Certificate of Project Management, University of California at Riverside, 2020
- Field Data Collection and Management Using ArcGIS, Esri Learning Center, 2019
- User Workflows for ArcGIS Online Organizations, Esri Learning Center, 2017
- ArcGIS 4: Sharing Content on the Web, Esri Learning Center, 2017
- Deploying Portal for ArcGIS, Esri Learning Center, 2017
- ArcGIS for Server: Site Configuration and Administration, Esri Learning Center, 2017

Presentations

- Esri Industry Blog for Conservation and Restoration, March 2023 (available [here](#))
- Esri Conservation Summit, Technology Update, 2021
- Building Focused Web Sites & Initiatives, Esri Federal User Conference, Washington DC February 2019
- ArcGIS Hub: Fostering Community Engagement, Esri Federal User Conference, Washington DC February 2019

Other Achievements

- Fulbright Fellow, University of the Western Cape, 2016-2017
- Recipient, Colgate W Darden Jr Award for Valedictorian Class of 2016

Selim Dissem

Application architect and
development lead

Application Architect / Technical Lead

Summary

Mr. Dissem joined Esri as a software developer in 1998. He has served as the lead programmer for numerous projects and has 27 years of software development experience. Mr. Dissem is expert in ArcGIS Enterprise capabilities and geospatial web.

Career Highlights

- Lead developer for multiple successful projects (California, Pennsylvania, Department of Housing and Urban Development (HUD))
- Multiple years of experience working with ArcGIS Enterprise
- Supported the implementation of DevOps in the Professional Services division

Experience

Esri: 26 yrs 5 months

Total: 32 yrs

Education

- Science, Computer Science, Institut Supérieur de Gestion, Tunis, Tunisia, 1991

Technical Capabilities

- **APIs & Frameworks** - .Net, Runtime SDK, ArcObjects
- **ArcGIS Apps/Mobile** - Collector for ArcGIS
- **ArcGIS Developer** - ArcGIS Pro SDK, ArcGIS Runtime SDK for .NET
- **ArcGIS Platform** - ArcMap, ArcGIS Enterprise, ArcGIS Desktop (ArcGIS Pro)
- **Business Skill** - Project Management, Proposal Development, Onsite Implementation, Technical Lead, Release Management, Requirements Gathering and Discovery
- **Database** - Oracle, SQL Server
- **Emerging Technology** - AR/VR
- **Platform** - IIS, Windows, Android, Azure
- **Programming Language** - WPF, Silverlight, SQL, C#
- **Technical Skill** - Mobile Development, Performance Testing, System Architecture Design, System Integration, Web Development, QA/QC, ETL Development, Server Development, Desktop Development, Enterprise Security

Selected Experience

NYPD Geocoder Proxy

Mr. Dissem was the lead developer and designer for the NYPD Geocoder Proxy, a .NET Web API designed to support calls from various systems to the Esri Geocoder and enrich its results with attributes from other data sources. The NYPD Geocoder Proxy emulated the API provided by ArcGIS Server for Geocoding operations and extended it with end points specific to some of the systems it serves. Time frame: 2019

SOPPM Support, State of New York

Mr. Dissem is part of the development team and has been focused on writing Geo Processing routines in Python to support the various operations of the solution. The solution is an integration of Esri's ArcGIS Enterprise with Oracle services the state has and relies on the Linear Referencing Solution (LRS) to compute various statistics that the state's Department of Transportation needs to manage its road network and the work associated with it. Time frame: 2017-Present

State of Michigan Imagery

Mr. Dissem was the lead developer / designer for the State of Michigan Imagery publicly facing website. As part of this effort, he wrote an ArcGIS Server, Server Object Interceptor (SOI) that leverages the user's login to filter access to the imagery through a website (REST), WMS clients, and ArcMap (SOAP). He also wrote a .NET Web API to support the self-signing workflow the site provides, using Microsoft Active Directory as the users repository.

Time frame: 2016-2020

Employment History

Employer	Position Title	Position Dates
Esri	Technical Lead	1998–Present
Tunisair	Chef de Service (Service Manager)	1993–1998
IRSIT	Research Engineer	1992–1993

Continued Professional Development

Training

- Putting ArcGIS to Use Across Your Organization, Esri Learning Center, Redlands, CA, 2020
- Unlisted Learning Center Courses, Esri Learning Center, Redlands, CA, 2017
- Legendary Service, Esri Professional Development, Redlands, 2017
- 2D/3D Publishing Best Practices Workshop, Esri Applied Technology, Redlands, CA, 2016
- Windows Azure Infrastructure as a Service (IaaS), Esri Applied Technology, Redlands, CA, 2016
- Microsoft Cloud Roadshow, Microsoft Professional Development Conference, Los Angeles, CA, 2016
- Portal Training, Esri Learning Center, Redlands, CA, 2015

Sonya Chin

Technical Analyst

Technical analyst dedicated to ensuring that Esri's customers are successful and self-sufficient

Summary

Ms. Chin joined Esri as a Technical Analyst in 2022. Her responsibilities include technical consulting and configuration of COTS software. She specializes in WebGIS and has supported a wide variety of industries. In her position, Ms. Chin assesses user needs, suggests and designs solutions, and works with customers to deliver the best possible service.

Experience

Esri: 1 yr 1 month

Total: 2 yrs

Education

- BA, Geography with Data Science, University of Washington, Seattle, WA, United States, 2022

Technical Capabilities

- 3rd Party Technology:** Google Cloud Platform, Salesforce
- App Builders:** ArcGIS Dashboards, ArcGIS Experience Builder
- ArcGIS Apps:** ArcGIS Field Maps, ArcGIS Maps for Adobe Creative Cloud, ArcGIS Survey123, StoryMaps
- ArcGIS Products:** ArcGIS Enterprise, ArcGIS Living Atlas of the World, ArcGIS Online, ArcGIS Pro
- Technical Skill:** Cartography, Data Visualization, UI/UX

Design, Webhooks

Selected Experience

Product Engineer Intern, Esri ArcGIS Maps for Adobe

Ms. Chin participated as a scrum team member in the agile software development process regularly tested Maps for Adobe extension and logged bugs for daily builds. During this effort, she also developed storyboard and wireframe solutions for creating faster transit maps between ArcGIS Pro, Adobe Illustrator, and the extension. Time frame: 2022

Urban Trails & Bikeways Intern, Seattle Department of Transportation

Ms. Chin performed data analysis using GIS to determine priority spots for future bike facilities. She conducted site visits to investigate bike infrastructure adherence to city guidelines and curated reports based on findings. Ms. Chin also assisted in the development of presentations for urban planning projects by creating explanatory graphics and gathering spatial information. Time frame: 2021 – 2022

Employment History

Employer	Position Title	Position Dates
Esri	Technical Analyst	2022 – Present
Esri	Product Engineer Intern	2022
Seattle Department of Transportation	Urban Trails & Bikeways Intern	2021 – 2022

Continued Professional Development

Training

- Sharing Content to ArcGIS Enterprise, Esri Virtual Campus, 2022
- ArcGIS Pro: Essential Workflows, Esri Virtual Campus, 2022
- Managing Geospatial Data in ArcGIS, Esri Virtual Campus, 2022
- Getting Started with ArcGIS Dashboards, Esri Virtual Campus, 2022
- Field Data Collection and Management Using ArcGIS, Esri Virtual Campus, 2022
- Creating Maps and Visualizations with ArcGIS, Esri Virtual Campus, 2022
- Introduction to ArcGIS Indoors, Esri Virtual Campus, 2022

Sabrina Ayyoub

Technical Consultant

Technical consultant, delivering innovative solutions, leveraging spatial analysis, and driving effective decision-making for diverse industries

Summary

Sabrina Ayyoub is a highly skilled technical consultant with experience as a Product Engineer Intern on the ArcGIS Indoors team and an Integrated Marketing Intern. Specializing in web app creation and implementation, spatial analysis, cartography, and problem-solving through GIS, Sabrina excels in several different platforms, including ArcGIS Online, Enterprise, and desktop. Proficient in languages like Arcade and Python, she customizes workflows and automates processes for optimal efficiency. Her responsibilities encompass needs assessment, design development, coordination, client relations, and adherence to project schedules.

Career Highlights

- Designed and Implemented symbology set of 30+ symbols being utilized across several airports
- Developed a event management system for WA DFW to monitor public engagement

Experience

Esri: 3 yrs

Total: 4 yrs

Education

- BS, Spatial Data Science and Technology, University of Oregon, Eugene, OR, United States, 2021
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Technical Capabilities

- **3rd Party Technology:** Asana, FME, Jupyter Notebooks, Microsoft Power Automate, Salesforce, SharePoint, Windows
- **App Builders:** ArcGIS Dashboards, ArcGIS Experience Builder, ArcGIS Instant Apps, ArcGIS Web AppBuilder
- **ArcGIS Apps:** ArcGIS Field Maps, ArcGIS Maps for Adobe Creative Cloud, ArcGIS Survey123, StoryMaps
- **ArcGIS Products:** ArcGIS Enterprise, ArcGIS Hub, ArcGIS Indoors, ArcGIS Online, ArcGIS Pro, ArcMap
- **Technical Skill:** 3D GIS, Big Data, Cartography, Data Visualization, Image Analysis, Performance Testing, QA/QC, Remote Sensing, Spatial Analysis, Test Engineering, UI/UX Design, Web Development, Webhooks, Workflow Design

Selected Experience

Technical Consultant | Jan 2022 - Present

As a Technical Consultant, Ms.Ayyoub collaborated closely with the Washington Department of Fish and Wildlife to identify, design, and certify key GIS workflows for the ArcGIS platform by implementing a Dashboard and Survey123 workflow. She provided platform configuration guidance and best practices, ensuring seamless integration with customers' solutions vision.

Integrated Marketing Intern | Jun 2021 - Sept 2021

During her internship, Ms.Ayyoub played a pivotal role in supporting multiple inbound and outbound Esri Marketing Campaigns, including ArcGIS Image, ArcGIS Platform, and GeoBIM. She defined and documented Integrated Marketing conversion goals, identified opportunities to enhance engagement and conversions by incorporating Learn ArcGIS Paths into campaign nurtures. conducted comprehensive content inventory, lead tracking, multi-year summary brief,

and market analysis for each campaign. Leveraging Esri software, she effectively mapped marketing data retrieved from Adobe Analytics using ArcGIS Enterprise.

Project Manager - University of Oregon | Oct 2020 - Dec 2020

Ms.Ayyoub oversaw an accessibility project in Portland to create a platform for the City of Portland to identify the most accessible parts of their city and where they need to implement more accessibility. Leading a team of GIS technicians and UX/UI developers, she executed the development of a 2D map, 3D visualization, and iOS mobile app prototype. Maintaining regular communication with clients and stakeholders, Ms.Ayyoub ensured that project progress and deliverables met their expectations. She skillfully troubleshooted technical issues, including those related to cartography, 2D/3D visualization, and UX/UI.

Product Engineer Intern | Jun 2020 - Sept 2020

During her internship at Esri, Ms.Ayyoub contributed in various ways by building ArcGIS Pro Templates for the ArcGIS Indoors Space Planner and ArcGIS Indoors Viewer. Utilizing her creativity and technical skills, Ms.Ayyoub brainstormed, researched, created, and implemented symbology designs using Adobe Illustrator. She played a crucial role in testing and validating bugs and newly developed features for the ArcGIS Indoors toolbox on ArcGIS Pro, employing pre-written Python test cases. Additionally, Ms.Ayyoub performed thorough quality checks through mobile certification for the ArcGIS Indoors iOS Application in both Arabic and English, ensuring a seamless user experience.

Employment History

Employer	Position Title	Position Dates
Esri	Associate Technical Consultant	2023 – Present
Esri	Technical Analyst	2022 – 2023
University of Oregon	Geographic Information Systems Technician	2019 – 2021
University of Oregon	DREAM Lab Assistant	2019 – 2020
Esri	Product Engineer Intern	2020
theCoderSchool	Coding Coordinator	2019

Continued Professional Development

Training

- ArcGIS Pro: Essential Workflows, Esri Learning Center, Redlands, CA, 2022
- Creating Story Maps with ArcGIS, Esri Learning Center, Redlands, CA, 2022
- Get Started with ArcGIS Dashboards, Esri Learning Center, Redlands, CA, 2022
- Sharing Content to ArcGIS Enterprise, Esri Learning Center, Redlands, CA, 2022
- Managing Geospatial Data in ArcGIS, Esri Learning Center, Redlands, CA, 2022
- Field Data Collection and Management Using ArcGIS, Esri Learning Center, Redlands, CA, 2022

Poornima Sapkal

Developer

Software Developer experienced in working with the full Software Development Lifecycle from designing solutions, implementing and deploying them into production.

Summary

Ms. Poornima Sapkal joined Esri's Professional Services division in July 2021. She recently graduated with a master's degree in Computer Science from RIT. She has experience working with the full software development lifecycle from developing solutions, implementing them, and deploying them into production. Her goal is to constantly learn, grow and adapt to new tools and technologies in the market that help build better software.

Career Highlights

- Experienced with the full Software Development Lifecycle from designing solutions, implementing them and deploying them into production across various platforms.

Experience

Esri: 3 yrs

Total: 7 yrs

Education

- BE, Computer Engineering, University of Mumbai, Mumbai, IND, 2016
- MS, Computer Science, Rochester Institute of Technology, Rochester, NY, 2021

Technical Capabilities

- GIS:** Web GIS, Cloud GIS, Mobile GIS, ArcGIS Enterprise, ArcGIS Geodatabase, Spatial Analytics
- Programming:** Python, C, C++, C#, SQL, JavaScript, HTML, REST API, XML, JSON
- Databases:** Oracle, Microsoft SQL Server, ArcGIS Geodatabase
- Enterprise Architecture:** Security, Performance, Availability/DR, Cloud Computing, UML

Selected Experience

Software Engineer (Co-op), Amplify Education, Inc.

Ms. Poornima Sapkal was responsible for leveraging AWS Lambda and Python to build a scalable API to retrieve data from DynamoDB. She Collaborated with UI/UX designers to build beautiful, usable and accessible React components for Lantern VR, Amplify's voice recognition product. She was responsible for implementing smoke, functional, feature and unit tests for API endpoints using Jest, ensuring 100% code coverage. She

executed migration of packages from Amplify's private npm repository to Artifactory using Jenkins. She automated creation of user roles and policies using Terraform.

Software Developer, Fusion Engineering

Ms. Poornima Sapkal spearheaded research on time series & pattern recognition algorithms for the Rep-up app. She Analyzed movement patterns for over 100 different workouts. Along with that, she developed and designed interface for applications on iOS and WatchOS.

Employment History

Employer	Position Title	Position Dates
Esri	Software Engineer	2021 – Present

Amplify	Intern	2020
Fusion Engineering Tech	Software Developer	2017 – 2018
Tata Consulting Servicers	Assistant Systems Engineer	2017 – 2018

Continued Professional Development

Publications

- Sentiment Analysis and Text Summarization Across different domains of data - Springer Nature - Research book series : Transactions on Computational Science & Computational Intelligence.
- Poornima Sapkal, Hans-Peter Bischof Sentiment Analysis and Text Summarization Across Different Domains of Data, The 23rd International Conference on Artificial Intelligence, Las Vegas, USA , July 2021

Jeff DeWeese

Senior Enterprise Solutions Architect

Expert enterprise solutions architect with 30+ years of broad IT experience leading teams, architecting and implementing systems, and evaluating technology

Summary

Mr. DeWeese joined Esri in 1998 as a senior field support engineer and is currently a senior Enterprise Solutions Architect within Esri's Implementation Services Department. Mr. DeWeese has over 30 years of experience leading teams, supporting sales initiatives, providing technical management, architecting systems, implementing systems, evaluating technology, and providing technical consulting to meet customer business objectives.

Career Highlights

- Architect lead for multiple GIS systems for one of the largest gas/electric utilities in the United States
- Architected GIS system for the largest water utility in the United States
- Architected GIS system for largest utility in Canada

Experience

Esri: 26 yrs 5 months

Total: 33 yrs 4 months

Education

- Technical, Electronics, Devry College, City of Industry, California, USA, 1988
- Technical, Technical Management, Devry College, Pomona, California, USA, 1998
- MBA, Business, Keller Graduate School, Online, USA, 2012

Technical Capabilities

- **ArcGIS Enterprise Roles and Extensions** - ArcGIS Monitor
- **ArcGIS Platform** - ArcGIS Enterprise, ArcMap
- **Business Skill** - Onsite Implementation, Business Consultancy, Project Management, Requirements Gathering and Discovery, Technical Advisory, Technical Lead, Technical Writing
- **Database** - Oracle, SQL Server
- **Platform** - Android, Azure, Citrix, IIS, Linux, Windows
- **Programming Language** - Python
- **Technical Skill** - Enterprise Security, Geodata Management and Migration, Performance Testing, Platform Configuration, Security Design and Engineering, System Architecture Design, System Integration

Selected Experience

ArcGIS/Citrix Performance Investigation, American Water

Mr. DeWeese is actively working with project and technical staff to review the Citrix deployment at American Water and troubleshoot specific issues related to the ArcGIS deployment.

ArcGIS/Citrix Performance Investigation, United Water

Mr. DeWeese worked with project and technical staff to review the Citrix deployment at American Water and troubleshoot

specific issues related to the ArcGIS deployment.

GIS System Architecture Review, Cal Water

Mr. DeWeese reviewed the GIS system architecture for Cal Water and made recommendations related to their plans for upgrading their ArcGIS infrastructure from ArcGIS 9.3.1 to ArcGIS 10.1. This involved identifying new server hardware to support the upgrade and also identifying any issues with the current architecture.

Deploying New Web Applications, Metropolitan Water Reclamation District of Greater Chicago (MWRDGC)

Mr. DeWeese provided an updated system architecture document addressing additional requirements and changes as they related to a system architecture design review that was performed in 2010. The original review focused on evaluating various aspects of the GIS and supporting infrastructure and identified additional computing capacity requirements to support future web application growth.

Employment History

Employer	Position Title	Position Dates
Esri	Enterprise Solutions Architect	2007–Present
Esri	Senior System Design Analyst	1998–2007
AlliedSignal Technical Services	Operations Systems Engineer	1991–1998

Continued Professional Development

Training

- ArcGIS Enterprise Data Management and Collaboration (Technical Bootcamp), Esri Learning Center, Redlands, CA, 2018
- Spatiotemporal Big Data Store, Esri Learning Center, Redlands, CA, 2016
- Project Management Essentials, Knowledge Structures Inc. Professional Development, Redlands, 2016

Statement 4: A list of recent projects and the names of up to five clients who may be contacted, including at least two for whom services were rendered during the preceding year.

Esri develops geographic information systems (GIS) software that helps organizations deliver effective and sustainable solutions to problems around the world. Esri software and services support more than 350,000 organizations. As the industry leader in GIS, Esri is engaged in over 2,000 projects and completed over 4,500 projects for government agencies since May 2015. Some have been for individual aspects of a GIS implementation, and others have been comprehensive, turnkey solutions involving all aspects of GIS implementation, from needs assessments to database design to operational rollout, and much more. Below is a sampling that Esri believes represents the type and scale of recent projects we have completed for other clients.

Client Contacts – Ongoing work				
Name (Title)	Organization	Project Title	Telephone Number	Email Address
Ms. Joan Delos Santos (IT Specialist, Enterprise Technology Services Offices)	State of Hawaii	Esri Advantage Program Renewal Fiscal Year 2025	(808) 220-3941	joan.m.delossantos@hawaii.gov
Ms. Lyann Okada (Manager, Technical Engineering Project Branch)	City & County of Honolulu	Esri Advantage Program Renewal (2023- 2024)	(808) 748-5255	Lokada@hbws.org

Client Contacts – Previous work			
Name (Title)	Organization	Telephone Number	Email Address
Ms. Lyann Okada (Manager, Technical Engineering Project Branch)	Honolulu Board of Water Supply	(808) 748-5255	Lokada@hbws.org
Ms. Joan Delos Santos (IT Specialist, Enterprise Technology Services Offices)	Hawaii Statewide GIS Program	(808) 220-3941	joan.m.delossantos@hawaii.gov
Ms. Justine Nihipali (Coastal Zone Management Program Manager, Planning & Sustainable Development Office)	Planning & Sustainable Development Office	(808) 587-2875	justine.w.nihipali@hawaii.gov
Ms. Kristana Erikson (GIS Manager)	County of Maui Information Technology Services Division	(808) 270-7518	kristana.erikson@co.maui.hi.us
Ms. Bertha Yagi (Honolulu Land Information System)	Honolulu Dept. of Planning & Permitting	(808) 768-8064	byagi@honolulu.gov

Statement 5: Any promotional or descriptive literature which the individual or firm desires to submit.

Esri Response:

Esri is providing the following information relating to its corporate history, experience, and what forms of support we envision being able to provide in support of the breadth of types of work the County of Hawai'i may require assistance on.

Esri Company Profile

The world's greatest challenges—including climate change, sustainability, and social and economic inequality—are interrelated and inherently tied to issues of geography. A science-based, geographic approach can help to understand these interconnected problems holistically by integrating all kinds of information. Esri takes a geographic approach to problem-solving and empowers all organizations to embrace this approach. Esri makes the world's most powerful geographic information system (GIS) software.

Our GIS

To solve our most complex problems, we must first understand them in the crucial context of location. Hidden patterns, trends, and relationships emerge when you visualize and analyze data on a map. This location intelligence provides unique insights that empower real-time understanding and transform decision-making. By collectively creating and sharing multidisciplinary knowledge, GIS enables smarter decisions about managing the world through building a collaborative digital geospatial system for the entire planet. Esri is committed to using science and technology to build a sustainable world.

Beyond sophisticated maps and advanced geospatial analytics, Esri technology enables:

- **Mapping**— Spot spatial patterns in your data, facilitate collaboration, and make better decisions. Create, use, and share maps on any device.
- **Field operations**— Improve coordination and operational efficiency in field workforce activities. Reduce or eliminate reliance on paper.
- **Spatial analysis and data science**— Reveal hidden connections using the most comprehensive set of analytical methods and spatial algorithms available.
- **Real-time visualization and analytics**— Accelerate response times, optimize safety, and improve operational awareness by monitoring any type of sensor or device.
- **3D visualization and analytics**— Bring real-world context to your maps and data. Instantly transform your data into smart 3D models and visualizations.
- **Imagery and remote sensing**— Manage and extract answers from imagery and remotely sensed data. Access the world's largest imagery collection.

- **Data management**— Collect, store, maintain, prepare, and share your data. Integrate data from business systems and geoenable any data from any source.

ArcGIS is an enterprise technology:

- **Scalable**— As usage needs scale, ArcGIS scales to meet demand, supporting organizations as data increases in size, complexity, and velocity.
- **Secure and private**— Trusted by even the most regulated industries, Esri embeds security, privacy, and compliance into the core of ArcGIS.
- **Integrative and flexible**— ArcGIS integrates into key enterprise systems and workflows. It runs in your infrastructure or on cloud providers such as AWS or Microsoft Azure.

Our Customers

Business and government leaders around the world apply Esri's technology to understand and address important challenges such as climate change, supply chain resilience, public health, and social equity. Our customers' work is the inspiration for everything Esri does.

Over 650,000 customer organizations, including 90% of Fortune 100 companies, most national governments, 30,000 cities and local governments, all 50 US states, and 12,000 universities are using ArcGIS to solve the world's most complex problems:

- **Businesses**— Leading companies use Esri technology for operational intelligence, market and competitive analysis, risk assessment, real-time situational awareness, and business continuity.
- **National government agencies**— Officials in health and human services, infrastructure, public safety, transportation, agriculture, earth sciences, and other disciplines use Esri technology to support high-level decision-making.
- **Cities and local governments**— Community leaders apply Esri technology to drive economic development; manage public works; and advance sustainable, equitable urban planning.
- **Nonprofit organizations**— Leaders use Esri technology to make data-driven decisions, inform and mobilize stakeholders, ensure sustained revenue, and analyze social inequities to effect positive change.

Beyond our own capabilities, Esri works with a global ecosystem of thousands of partners who support customers through their knowledge and expertise, solutions, implementation services, and content. Esri technology is open and interoperable. We pursue strategic partnerships to continue advancing geospatial technology.

Our Past

Since 1969, Esri has supported customers with geographic science and geospatial analytics, what Esri calls “The Science of Where.” Esri initially focused on performing environmental studies

for land-use planning projects and quickly gained a reputation as a pioneer in digital mapping, helping develop some of the first tools for digitizing maps, computer mapmaking, and spatial analysis, as well as developing the first commercial GIS software.

Headquartered in Redlands, California, USA, Esri has 49 offices worldwide, including 11 research and development facilities. Esri's diverse workforce comprises more than 6,000 employees from 73 countries. We hire passionate, skillful people and strive for an inclusive, collaborative workplace. Esri's team is motivated by knowing our work supports organizations around the world as they use GIS and a geographic approach to solve difficult problems, and contributes to important initiatives such as sustainability, equity and social justice, and humanitarian aid.

Our Future

Esri is the global market leader in geographic information system (GIS) software, location intelligence, and mapping. We invest in innovation. As a privately held, debt free company, Esri can chart our own future. We are committed to sustainable growth, with thirty percent of Esri's annual revenue—more than twice the industry standard—reinvested in research and development. We stay at the forefront of technological advances, rapidly evolving our software so you can do more with it. Together, we have the power to transform society and design a better, more sustainable future.

Esri Professional Services Expertise

Esri's Professional Services Division has been supporting Esri's customers for over 50 years by supporting the implementation, configuration, and customization of Esri's ArcGIS Enterprise Platform and products. Esri's services run the gamut from focused consulting services, enterprise architecture design, implementation support, interactive workshops, application design, requirements analysis, data conversion and migration, installation, customized training, and more.

Our technical staff is composed of experts in consulting, architecture, programming, program and project management, and data conversion and migration. They bring extensive experience in using GIS as the core technology platform for business application integration. These include systems engineering, cartography, computer science, operations research, logistics management, business management, facilities management, planning, land surveying, terrain modeling and analysis, geodesy, geology, hydrology, and many others. Additionally, many of our staff are subject matter experts within several industry verticals such as 3D and Facilities, Utilities, and State and Local Government.

Because GIS needs can come in many forms, we in Professional Services have a number of different engagement options to best provide what our customers need, when they need it. These options include:

1. Project-based services – on a time-and-materials (T&M) or firm-fixed-price (FFP) basis
2. Technical consulting – short-term hourly engagements that provide the skills of highly capable and experienced consultants and technical staff members to Esri GIS users
3. Integrated support – builds on the level of service provided by Standard or Premium Support Services through additional technical resources, a broader scope of work, and an Integrated process
4. Service packages – short-term, high-impact services that provide knowledge transfer, best practices, and consulting support on a variety of Esri products and GIS management tasks
5. Esri Advantage Program – annual subscription program for a flexible framework for focused and dedicated support towards meeting an organization’s vision to broadly adopt GIS for business objectives
6. Managed Cloud Services – offers Esri hosted and managed environments as well as other services such as cloud system architecture workshops and readiness assessments and proofs of concept

Each of these options are described in more detail below.

It is critical to implement GIS and related technologies within the context of the organization’s mission statement and goals. Esri can support development of comprehensive strategic implementation plans that provide a blueprint for developing and maintaining GIS operations within the organization. This planning can address administrative, policy, and personnel considerations as well as the specific detailed steps of supporting a complete GIS system. Critical success factors, deliverables, realistic schedules, measurable milestones, and an assessment of personnel requirements are all part of this planning process.

With over 800 staff in the Professional Services division, we anticipate being able to form the necessary teams to best support any required support services request.

Professional Services Avenues of Engagement

During a requested service activity review, Esri would work closely with our business partner to understand the requirements, the level of effort, and the schedule. Based on this, Esri and its partner would decide which service offering would best support the requirements, timeline, and staffing needs.

Below is a more detailed description of the various ways customers may engage Esri Professional Services.

Project-based Services – Firm Fixed Price (FFP) or Time and Materials (T&M)

If the requested support is based on a need that requires designed deliverables with user acceptance testing, Esri would provide a proposal with detailed tasks and deliverables covering the design, development, testing, delivery, and maintenance project life cycle. The proposal

would include agreed-upon product acceptance criteria, a defect management process, firm fixed prices by task, and a detailed project schedule. Additionally, Esri can support providing project-based services on a time and materials basis for activities.

Technical Consulting – Short-term Hourly Engagements

Esri has provided on-site technical and consulting support to meet our users' diverse and growing needs through our Technical Consulting services program since 1988. The Technical Consulting program provides the skills of highly capable and experienced consultants and technical staff members to Esri GIS users. Users define a work agenda and take advantage of a consultant's specialized services on a short- or long-term basis for a predetermined period of time. The program has placed Esri staff members with extensive Esri software experience in their professional areas of expertise at user sites around the world for periods ranging from a few hours to several months.

Through the Technical Consulting program, Esri offers a full range of support including on-site technical and consulting support; assistance with GIS database and system design, installation and configuration; application development; data management; and operations, performance, and scalability.

Esri provides technical consulting services to both beginning and advanced Esri GIS users located domestically and internationally.

Integrated Support

Integrated Support builds on the level of service provided by either Standard or Premium Support Services. It provides additional technical resources, a broader scope of work, and an integrated process to elevate support cases between Esri support analysts and professional services consultants who are familiar with your environment, infrastructure, and applications. As an Integrated Support customer, you will still have access to all the components provided under Standard Support, which is included in your annual maintenance, or Premium Support, available on a subscription basis. This includes:

- A technical account manager (TAM) who acts as a single point of contact and works with your organization to ensure that your engagement with Esri Support is consistent and effective.
- Prioritized case management to ensure cases are routed with elevated priority to senior technical support staff who respond within an hour of submission to Esri.
- Proactive reviews and information sharing to review your support cases, as well as proactively communicate Esri software news and updates.

Integrated Support also covers cases related to your configuration of ArcGIS, as it was designed and/or implemented by Esri Professional Services during a project or consulting engagement. As an integrated support customer solution support engineers (SSEs) will become familiar with your

environment, support history, use cases, workflows, and restrictions. The SSEs work with the TAM and support analysts to triage cases, provide insight, and lead case management and troubleshooting of the cases as needed. Due to the SSEs familiarity with your environment and their broader scope of work the Integrated Support team can quickly troubleshoot customer specific environment and application issues that fall outside of the normal scope of support.

Service Packages

Esri Service Packages are short-term, high-impact services that provide knowledge transfer, best practices, and consulting support on a variety of Esri products and GIS management tasks. Service Packages are delivered by Esri professionals to assist you with implementing Esri products faster and becoming self-sufficient with Esri technologies and are designed to help you:

- Reduce product installation and implementation time.
- Quickly adopt new Esri technologies.
- Improve productivity and operational effectiveness.

Service Packages are standardized service offerings with a defined scope and fixed price. The following types of Service Packages are offered:

- **Workshops:** Interactive, hands-on technology transfer to help you become self-sufficient in using Esri technology. Workshop-based packages cover specific Esri technology and GIS- or industry-related activities. Examples include the ArcGIS Data Reviewer and ArcGIS Workflow Manager workshops, both described in more detail below.
- **Jumpstarts:** Designed to help you quickly become self-sufficient in installing, implementing, and managing Esri software. Jumpstart packages typically provide knowledge transfer and best practices for the use of Esri products. Examples include the ArcGIS Enterprise Jumpstart and Web GIS Launch Kit.
- **Remote Support:** Provides a defined number of hours of telephone and email assistance after the conclusion of a workshop or jumpstart Service Package.
- **Enterprise Consulting:** Offers specific assistance from our Enterprise Services consultants in key areas such as enterprise GIS architecture design and health checks.

Advantage Program

In addition to project and technical consulting support, Esri offers its Advantage Program. The Advantage Program is a flexible framework to help organizations reach their vision for broadly adopting ArcGIS to meet business objectives. The program provides proactive technical advisory, annual planning/review meetings, a collaboratively developed technical work plan, participation in community technology webcasts as well as access to consulting services, premium technical support, and training.

The Advantage Program provides a means of assisting organizations with a variety of possible activities such as:

- Conduct a review of client's current GIS environment, capabilities, and targeted objectives
- Provide recommendations for potential growth and expansion of GIS and geospatial enabled workflows across your business operations and technology environment
- Engage key Esri technical and industry subject matter experts to discuss, plan, and/or demonstrate key concepts and capabilities
- Provide the opportunity to leverage prioritized technical support to assist with key enterprise applications
- Grow foundational GIS knowledge for the organization through focused workforce development and training

The flexible framework of Esri's Advantage Program allows for choice and configuration to meet objectives. The program provides access to a range of activities including technology strategy review, system design review, standard launch kit and jumpstart packages, and other general technical consulting activities. However, project-specific activities requiring Esri's Professional Services will be scoped, budgeted, and scheduled separately from the program.

Managed Cloud Services

Esri developed its Managed Cloud Services (Managed Services) practice to assist customers interested in deploying the ArcGIS platform in the public cloud. For the past 10 years, the Managed Services team has helped 100-plus customers move all or part of their GIS practice to the cloud. Organizations across the globe, from a wide variety of industries, have trusted Esri Managed Services to design, deploy, and manage GIS applications, data, and workflows in the cloud. Customers who leverage these services get access to cloud and GIS experts with years of experience helping customers realize the promised benefits of the cloud. With the assistance of our Managed Services team, customers are free to focus on their business while trusting the administration of their platform to Esri.

The services offered through Esri's Managed Services are designed to help customers regardless of where they are in their cloud adoption journey. Managed Services offers both managed services as well as consulting services. Managed service environments are designed to grant customers access to all of the features of the ArcGIS platform while removing the responsibilities normally associated with administering the platform. These environments are designed, deployed, monitored, and managed by the Managed Services team. Managed Services offers a range of environments suited to your organization's size, security, and service requirements. For customers looking for additional information or experiences before determining their next steps, Esri's Managed Services offers a variety of consulting services. These services range from cloud system architectures to proofs of concept. Engaging the

Managed Services team through a consulting engagement gives organizations the confidence they need to make a cloud migration decision. Regardless of the type of engagement, customers using Managed Services are able to reduce their time to value and dedicate administrative resources elsewhere within the organization.

Related Projects

[Kauai County Housing Department](#)

Kauai planners have employed ArcGIS Urban to visualize existing conditions in the community of West Hanapepe. The West Kauai form-based code guides growth in this community, with a goal of preserving and enhancing walkable urbanism. Smart planning, using 3D models, has helped Kauai County housing department codify the neighborhood's essential elements, while clarifying how development should proceed.

[Honolulu Planners Visualize Housing Patterns](#)

The Honolulu Department of Planning and Permitting used 3D visualization tools to examine and visualize the proposed low-rise apartment zoning change in the neighborhood of *Mo'ili'ili*. Honolulu worked with Esri, piloting the capabilities of [ArcGIS Urban and CityEngine in a recent webinar](#).

[CRASAR Responders to Kīlauea Volcano](#)

In response to the volcanic eruption in 2018, robots from the Center for Robot-Assisted Search and Rescue, or CRASAR were sent in lieu of human or dog emergency responders. A five-person team of highly trained volunteers from CRASAR deployed to Kīlauea a few days after the eruption. CRASAR used specialized software to automatically tag images with their locations. They visualized the information in real time on a digital map by using [geographic information system \(GIS\) technology](#). They employed another application to take panoramic aerial photos automatically instead of manually, expediting situational awareness.

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