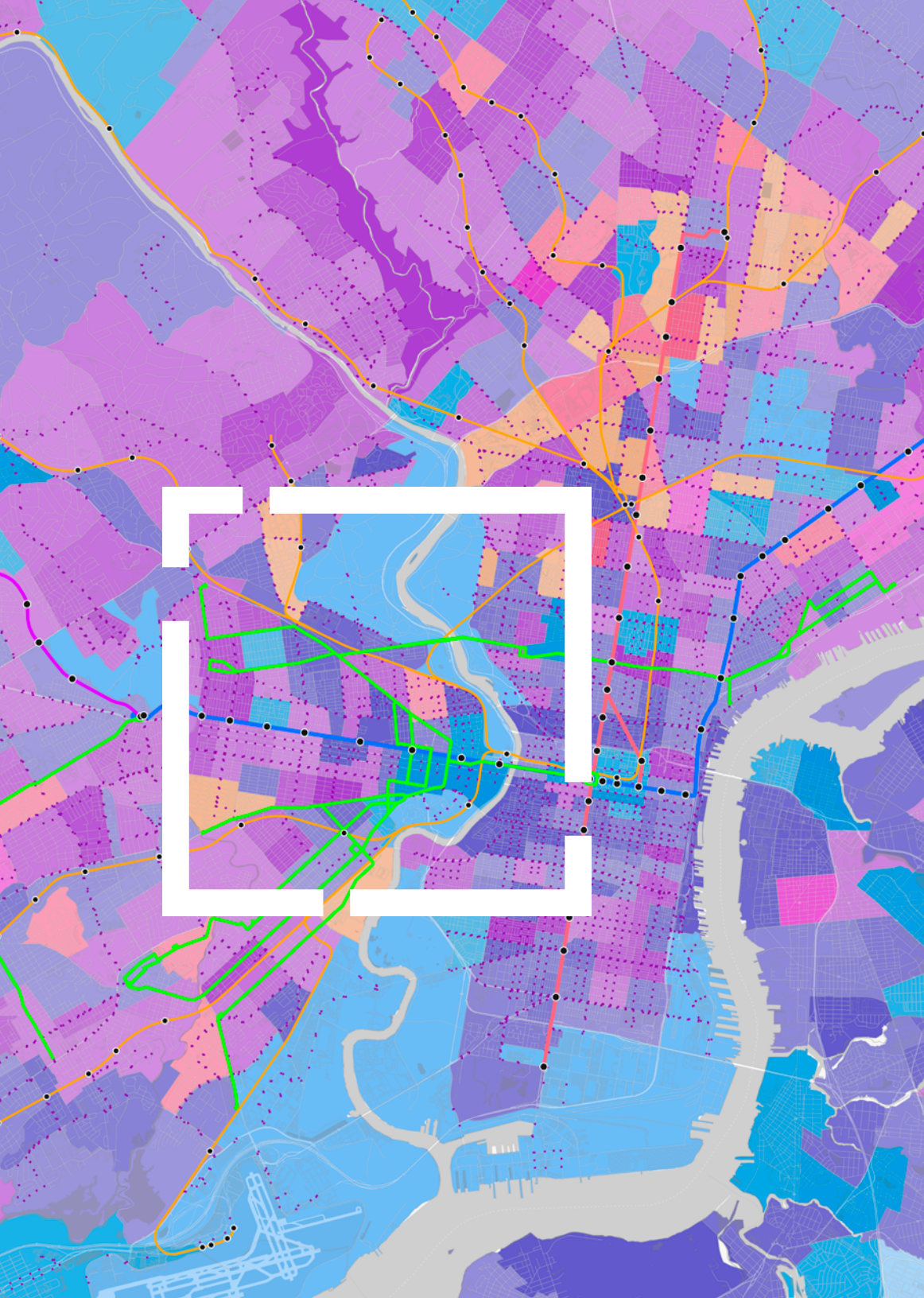




MAPPING AND ANALYSIS FOR PUBLIC SERVICE EXCELLENCE

US Cities and Counties Are Transforming Operations
with Enterprise-Level Location Technology





WHAT'S INSIDE

- 3 The Big Idea
- 4 Executive Overview
- 5 Advantages of ArcGIS®
Across the Enterprise
- 6 Government Applications
- 8 Why Secure an
Enterprise Agreement?
- 9 Customer Use Cases
- 17 Next Steps

THE BIG IDEA

A North Carolina city shares data across 20 departments and 450 staff members for real-time awareness that keeps residents safe and neighborhoods clean. A Texas city switches to digital workflows for faster emergency response and more efficient road maintenance. A California city manages its stormwater more effectively with transparency for taxpayers and other stakeholders.

These are just a few examples of the thousands of **public service excellence** stories that play out every day. It can start with one department, city, or an entire county. It's about finding smarter ways to use the data and technology already in-house or making efficient upgrades for lasting return on investment.

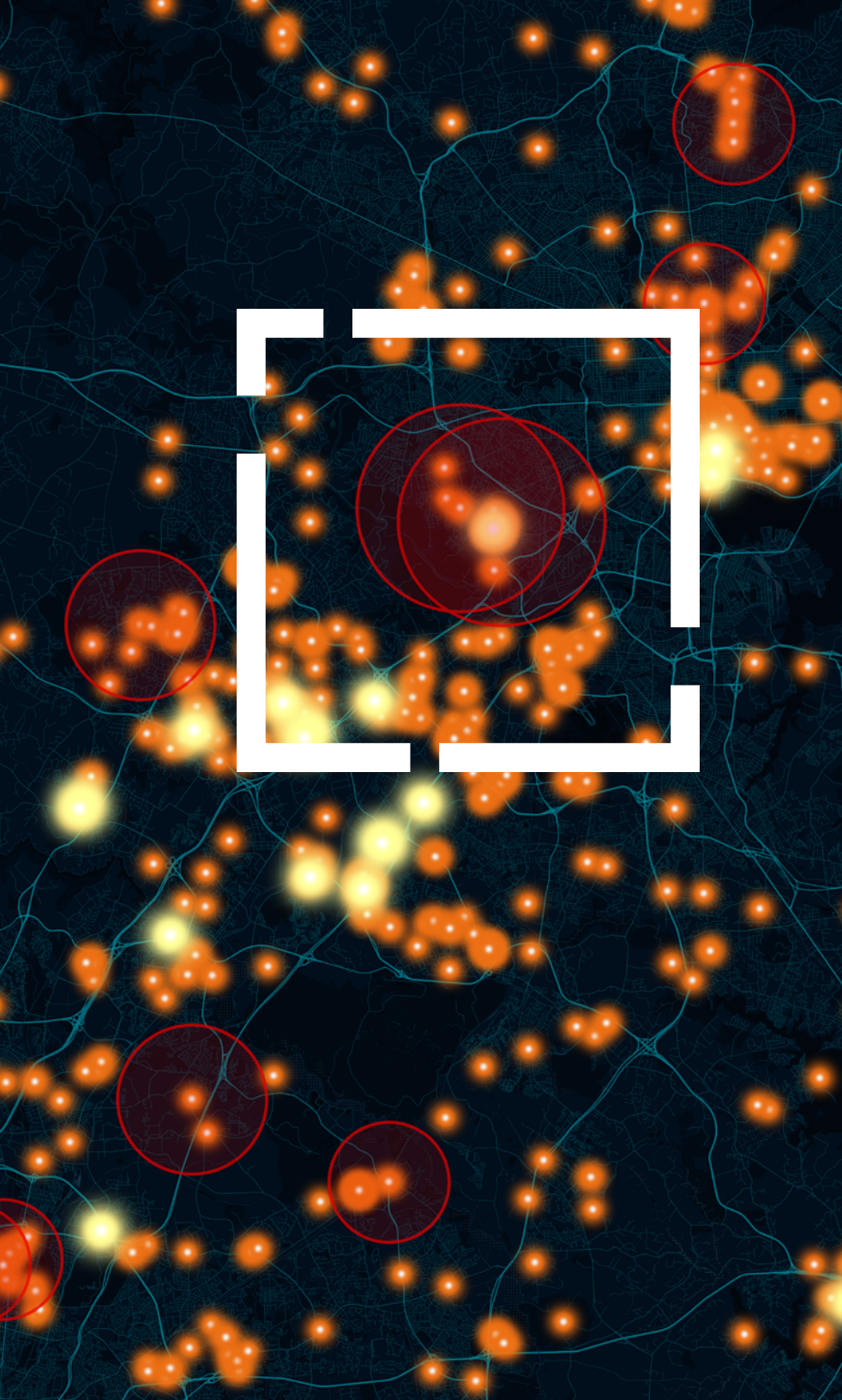
Ultimately, it's about centering critical decisions and essential operations around one key component: location.

Location provides a logical framework for solving problems—or even preventing them. It empowers people across the organization to answer vital questions:

- Where are emergency incidents likely, and how can we plan as well as prepare to respond quickly, reduce impacts, and keep people safe?
- Where should we prioritize green infrastructure investments to reduce urban heat islands, mitigate flood risk, and foster public safety, livability, and resilience?
- Where are our most critical assets, and what is their condition?
- Where are public services falling short of residents' needs, and how can we allocate resources to achieve better outcomes?

The mapping and data analysis technology driving location-aware public service excellence is a **geographic information system**, or **GIS**. The highest-performing organizations across government and business achieve a distinct advantage using **ArcGIS®**, the leading and most comprehensive GIS platform.





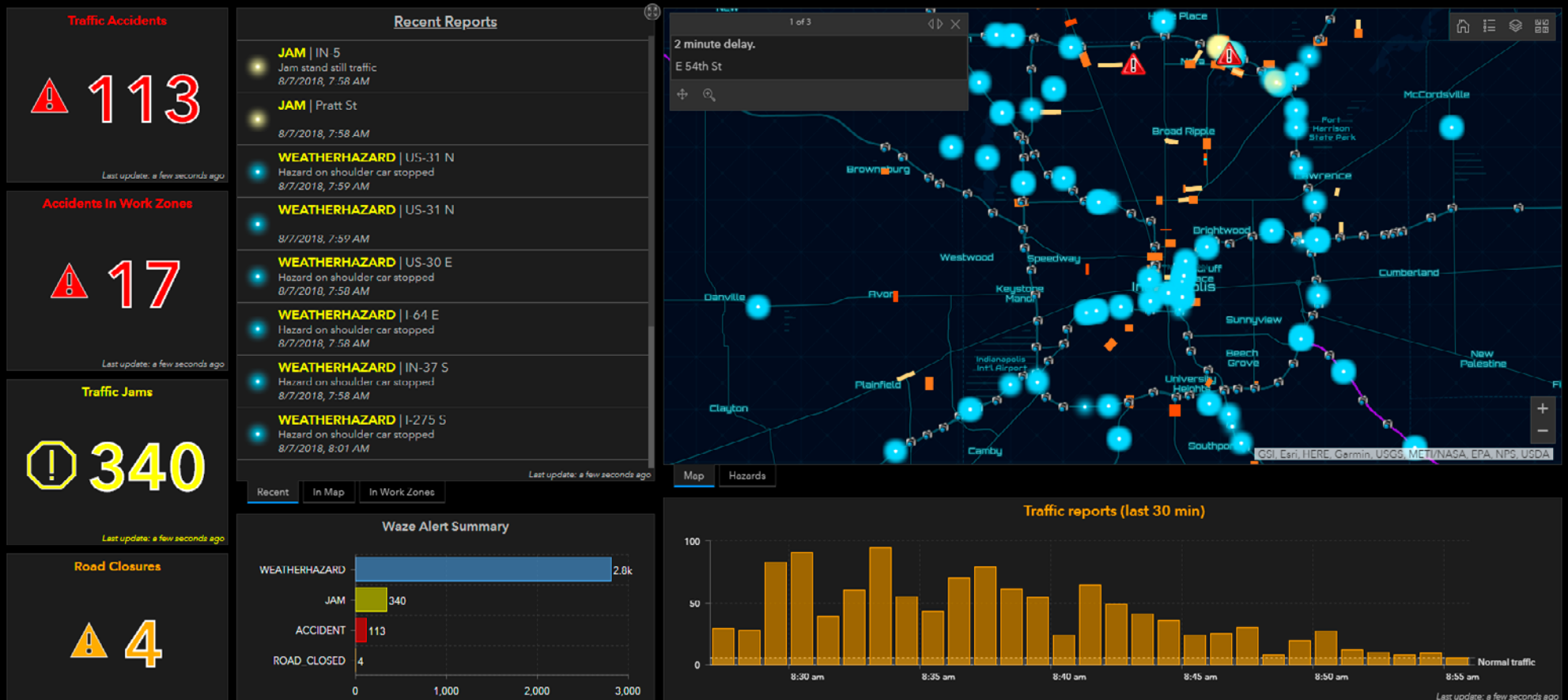
Executive Overview

As part of an enterprise tech stack, **ArcGIS technology integrates an organization's data in the context of location**, making that data more valuable. It delivers mapping and spatial analysis for planning, operations, collaboration, decision-making, and problem-solving across the enterprise.

ArcGIS is distinguished by the most comprehensive set of capabilities available for creating, managing, analyzing, mapping, and sharing data—capabilities that continue to evolve and meet changing customer needs. ArcGIS is secure, scalable, interoperable, and cloud ready.

- **Government leaders** depend on ArcGIS software to guide policy, funding, and other key governance decisions for better community outcomes and sustainable resource stewardship.
- **Public works managers** rely on ArcGIS to unite operations across field and office environments, breaking down traditional silos that hinder public service delivery.
- **Emergency response teams** use ArcGIS technology to collaborate and communicate precisely in real time to prevent damage and save lives.

ArcGIS is used by most of the **world's largest public and private organizations**: 70 percent of the largest global companies, 95 percent of the largest national governments, and 80 percent of the largest cities. ArcGIS is the **flagship technology from Esri**, the recognized leader in GIS technology, with a 55-year record of success and high performance.



Advantages of ArcGIS Across the Enterprise

ArcGIS helps government leaders address urgent problems by showing them how *and precisely where* to act.

An enterprise approach to ArcGIS unifies departments and teams with a shared framework for solving problems along with making decisions—working from **a single source of truth**. This approach breaks down data silos and eliminates duplicate efforts, saving time and reducing operating costs.

Organizations using ArcGIS across their enterprise have reported significant gains, including:

- **Strategic resource allocation** with real-time visibility into critical assets and service delivery gaps
- **Risk mitigation** through predictive analytics and scenario modeling
- **Enhanced stakeholder communication** via intuitive visual dashboards that translate complex data into actionable insights
- **Performance accountability** with transparent metrics tracking and reporting

Government Applications

When shared across a department, city, or county, ArcGIS seamlessly supports government operations

Asset and Network Management: Know the real-time location and condition of moving and stationary assets. Model networks to understand connectivity and performance, manage outages, as well as provide public communication and engagement. Inspect and update conditions efficiently, plan preventive maintenance, and respond to issues quickly.

Policy and Transparency: Allocate resources where they are needed most, and communicate decisions in a powerful visual format. See where to provide resident services and how to ensure equitable funding and policymaking. Use maps along with apps to provide transparency and two-way communication with constituents.

Urban Planning and Development: Create context-rich digital twins that integrate geography with BIM and 3D data. Determine how, where, and when development projects will have the greatest impact. Optimize urban development, improve infrastructure planning, and enhance livability. Create, track, and review projects seamlessly as part of review and permitting workflows.

Land Use and Property Management: Streamline land management with an authoritative geographic database, capabilities, and tools. Use visualization and data management tools to oversee land tenure, value, management, and use; and streamline parcel management, property valuation and analysis, and communication with the public.

Natural Resource Management: Leverage maps, imagery, and remote sensing to manage resources sustainably and equitably. Promote sustainable management of natural resources, from water and forests to oil and natural gas. See where to balance human needs with environmental concerns. ▶





Government Applications (continued)

Transportation and Logistics: Plan efficient routes and manage complex fleet logistics with shared maps and dashboards. Create tools like shared maps, apps, and dashboards to monitor and optimize operations, safety and security, asset management, budgets, and sustainability. Prioritize infrastructure investments and operate safely.

Site Selection: Choose the smartest locations for development with comprehensive place-based data and spatial analysis. Simplify site suitability with precise data paired with powerful spatial analysis tools to visualize data by location.

Public Safety and Security: Enhance situational awareness with precise real-time location data. Use ArcGIS for planning, analysis, and modeling of operational scenarios, as well as leveraging real-time views of risks and incidents. With shared maps, teams can understand crime, accident, or disaster patterns to inform preplanning as well as focused and coordinated responses, thereby protecting against complex threats and hazards.

Environmental Conservation and Monitoring: Analyze environments and ecosystems holistically to create data-driven, area-specific conservation plans. Monitor species, ecosystems, and protected areas in real time, or take mobile tools offline for monitoring in remote areas. Capture the extent of land and wildlife management activities and measure their impact over time.

Risk Analytics and Mitigation: Map assets to pinpoint risk and prioritize mitigation strategies for maximum benefit. ArcGIS provides authoritative hazard data, precise maps, and advanced analytics to pinpoint risks and predict outcomes. Spot crucial trends and patterns, see exactly which risks are most likely to happen, how they will affect people and operations, and what actions will work best, and where. ■



Why Secure an Enterprise Agreement?

Esri designs enterprise agreements to help customers amplify the benefits of GIS. An enterprise agreement **unleashes unlimited use of ArcGIS** products plus **access to the training and support your teams need**.

That means your entire organization can make the most of mapping, analytics, data management and data sharing, 3D digital twins, imagery, field operations, and the latest artificial intelligence (AI) tools. They will have the technology and training they need to achieve operational efficiencies and improve services.

Organizations that secure enterprise agreements **reduce the cost per user** of valuable GIS tools while **simplifying technology procurement and management**. The **included support and training** helps your staff reach departmental goals faster and more effectively.

An enterprise agreement is the simplest way to **maximize your organization's GIS investment** and meet your organization's needs:

- **Future-proofing:** Ensure long-term success with flexible and cost-effective GIS management.
- **Achieve agility:** Build a GIS infrastructure that aligns and scales with business goals.
- **Ease budget planning:** Lock in fixed annual payments to guarantee pricing for the term of the agreement.
- **Reduce complexity:** Simplify license management and gain flexibility to support critical business needs.
- **Reach goals:** Gain access to GIS software and services to help meet specific demands and achieve strategic objectives.
- **Save time:** Streamline procurement processes, optimize spending, and alleviate the workload of transactional activities.

By widening access to GIS technology, support, and training, staff is empowered to create **impactful solutions without increasing costs**.



Customer Use Cases



Case Study

Raleigh

Raleigh Breaks Down Data Silos with Shared Real-Time Awareness

The City of Raleigh, North Carolina, created a tight alignment between the IT department and GIS division to work across 20 departments, sharing data and collaborating on city projects. This move eliminated past patterns of business units independently implementing new technology without sharing data or processes.

“Cities are complex organisms,” said Jim Alberque, GIS and emerging technology manager, City of Raleigh. “If you can just break down some data silos, you see that there’s huge value in data across business units and disciplines.”

In addition to consolidating important data, Raleigh improved operations with GIS capabilities for real-time awareness. Now, it can track and analyze weather conditions, along with the city’s fleet of vehicles, work orders, and the status of assets, including streets, water, and wastewater networks.

Real-time GIS has been instrumental in improving efficiencies in Raleigh. With a new citywide awareness, crews can be dispatched to conduct repairs or notified if weather conditions make the work unsafe. The real-time awareness has been applied to trash pickup, emergency vehicle dispatch, and park maintenance.

More than 450 City of Raleigh employees take advantage of enterprise GIS daily to better understand mobility patterns and traffic volumes, and to automate incident response. IT leadership in Raleigh considers GIS to be a foundational technology, citing its flexibility to craft solutions and answer pressing questions.

[Read the story](#)



Case Study

Vilnius

Vilnius Anticipates Service Needs Using AI, Drones, and Digital Twins

In Vilnius, the capital of Lithuania, city managers have created a GIS-powered digital twin to strengthen and streamline services.

“We are monitoring services provided to citizens,” said Stasys Savilionis, head of the data management group at the Vilnius Data Center. “Our actual goal is to identify problems before our citizens do.”

Snow removal, a perennial necessity in one of Europe’s more blizzard-prone cities, is a key example. Using a combination of AI, GIS, and drone imagery, the digital twin analyzes streets and updates residents on where snow has been removed. Similar workflows relay progress on trash removal and deal with traffic congestion.

With anonymized cell phone location data streaming into the digital twin, Vilnius public transit operators assess current mobility needs and predict how demands will change in the future. They can also spot priorities for street maintenance, assessing road conditions to highlight cracks, potholes, and other damage.

Problem areas appear on GIS dashboards for city leadership, guiding the speedy work of relevant city departments. This information can be shared with the public, increasing transparency and accountability.

[Read the story](#)



Case Study

Fort Worth

Fort Worth Improves Asset Management Workflows

Asset managers often struggle to keep up with repairs, such as fixing streetlights and potholes, and trimming trees away from power lines. The sheer number of inspections and maintenance work orders can create backlogs that take months or even years to clear.

By modernizing its GIS, the City of Fort Worth, Texas, turned its backlog around to fill all potholes within 48 hours. The rapid shift is a result of digital workflows for inspecting, maintaining, and managing its assets.

Mobile staff use GIS apps on mobile devices to connect with the office, improving communications and keeping the city's data up-to-date. Assets are tagged with sensors that give status reports and send failure alerts if something needs immediate fixing. This saves time, reduces errors, and allows managers to track the health of assets.

Stormwater crews, for example, use GIS apps to access maps and receive routing instructions to their next job. They can mark up directly on the map, showing new or missing assets. Backlogged data entry is no longer an issue, and the city saves a great deal of money by becoming proactive.

Before GIS, Fort Worth's asset management decisions were made based on intuition and experience. Now, decisions are data driven.

"We've moved from cleaning stormwater inlets in the entire city every eight years to every three years," said Elizabeth Young, a GIS professional for the City of Fort Worth. "We can go back and see where we've cleaned and how many inlets we've cleaned because we've got the data behind it."

[Read the story](#)



Case Study

Los Angeles

Los Angeles County Tackles Water Challenges

Los Angeles County's Safe, Clean Water Program (SCWP) uses GIS to manage, report, and track nearly 200 stormwater projects and report on improvements to the local water supply.

"Mapping provides a 'wow' element for us to show progress to interested stakeholders and the public," said Kirk Allen, senior civil engineer at LA County Public Works. "It adds a perspective you can't do without a map."

SCWP administrators map and track each project using GIS. LA residents can visit the map to see their tax dollars at work and better understand each project's role. It details relevant information, such as the project location and the goals that will be achieved when it's completed.

SCWP projects include green infrastructure elements such as infiltration basins, rain gardens, bioswales, dry wells, wetlands, and permeable pavement. The efforts contrast with gray infrastructure—such as storm drains, which are typically built with concrete and steel—designed to move water underground and away from property.

In the few years since the SCWP has been in progress, many projects have advanced the program's complex goals and accelerated resilience in Los Angeles County.

[Read the story](#)



Case Study

St. Louis

St. Louis Empowers Self-Service Mapmaking for Public Safety

Crime analysts at the St. Louis Metropolitan Police Department have gone from creating maps on demand to delivering tools that allow anyone to make their own maps.

Since 2007, the department's dedicated crime analysts have used GIS daily to inform patrol plans, aid investigations, and assist with resource allocations. The agency recently expanded access to GIS at the enterprise scale, giving the force of 2,000 people access to location intelligence.

"We can never be blindsided because every single incident that's reported pops up on the map," said Major Christi Marks, a commander with the St. Louis Metropolitan Police Department. "We know exactly where everything happened and can click on the dot to learn more."

Awareness of crime patterns over time and real-time knowledge of incidents inform decisions to increase police presence where it's needed most.

[Read the story](#)



Case Study

Houston

Houston Streamlines Water and Wastewater Workflows

Houston Public Works has many challenges related to its need to serve more than 2.3 million people spread out across more than 640 square miles. Maintaining the city's extensive pipelines—over 6,000 miles for wastewater and 7,000 miles for water distribution—is compounded by flatness and frequent flooding.

Many projects are underway with contractors conducting the work and city staff checking on work quality and progress. Recently, these workflows were streamlined, thanks to a shared map-based awareness and the use of GIS tools.

"The contractors were conducting the work digitally, whether in AutoCAD or GIS, and then we had our internal people recreating it in GIS," said Anthony Powell, interim IT assistant director for Houston Public Works. "So, we created a template for the contractors that eliminates that rework and automates the review process."

Streamlining these workflows helps improve data quality for some of the hardest assets to maintain—those that are underground.

The department's transition to ArcGIS Utility Network has been a key part of this modernization. The new system enhances visualization, management, and analysis of utility data. By capturing networks in 2D and 3D, it provides detailed insights into where pipes are located and how deep they are buried. Features like network tracing help staff quickly identify problem areas, such as water leaks, and better plan and design expansions.

When there is a leak, water division staff can troubleshoot issues more easily, such as quickly pinpointing which valve to turn off and where it is located. This enhanced level of detail helps the city protect public health and the environment while significantly improving customer service.

[**Learn about ArcGIS Utility Network**](#)



Case Study

Riverside

Riverside, California, Collaborates at Enterprise Scale

Collaboration is the key to success for public service in today's fast-paced world. Riverside, California's fourth-most populous county, implemented GIS for better collaboration with the end goal of helping its residents access services.

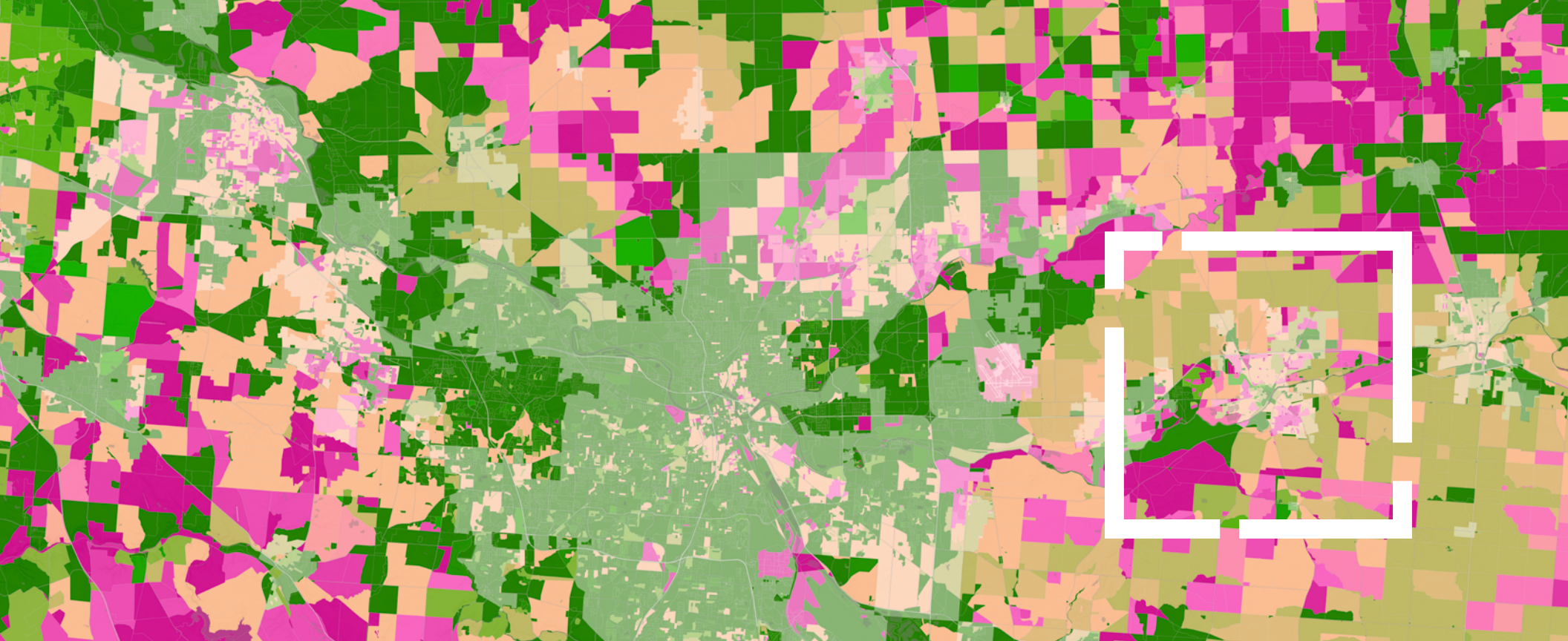
The county needed to coordinate the work of 42 departments, including the health system, child support services, the fire department, and public social services.

The effort required weaving together several technology systems and disparate volumes of data. GIS figured prominently to connect all data to its exact location for visualization and analysis, simplifying collaboration and improving communication.

GIS analysis enabled Riverside County to identify areas where families eligible for assistance were not taking advantage of it. Then, GIS helped multiple departments collaborate to reach those residents and deliver services.

"Instead of sending out flyers to all of our two and a half million residents, we are focusing on the communities where we think they need it most," said Darryl Polk, former CTO of Riverside County.

[Read the story](#)



Next Steps

Take Advantage of the Enterprise Approach

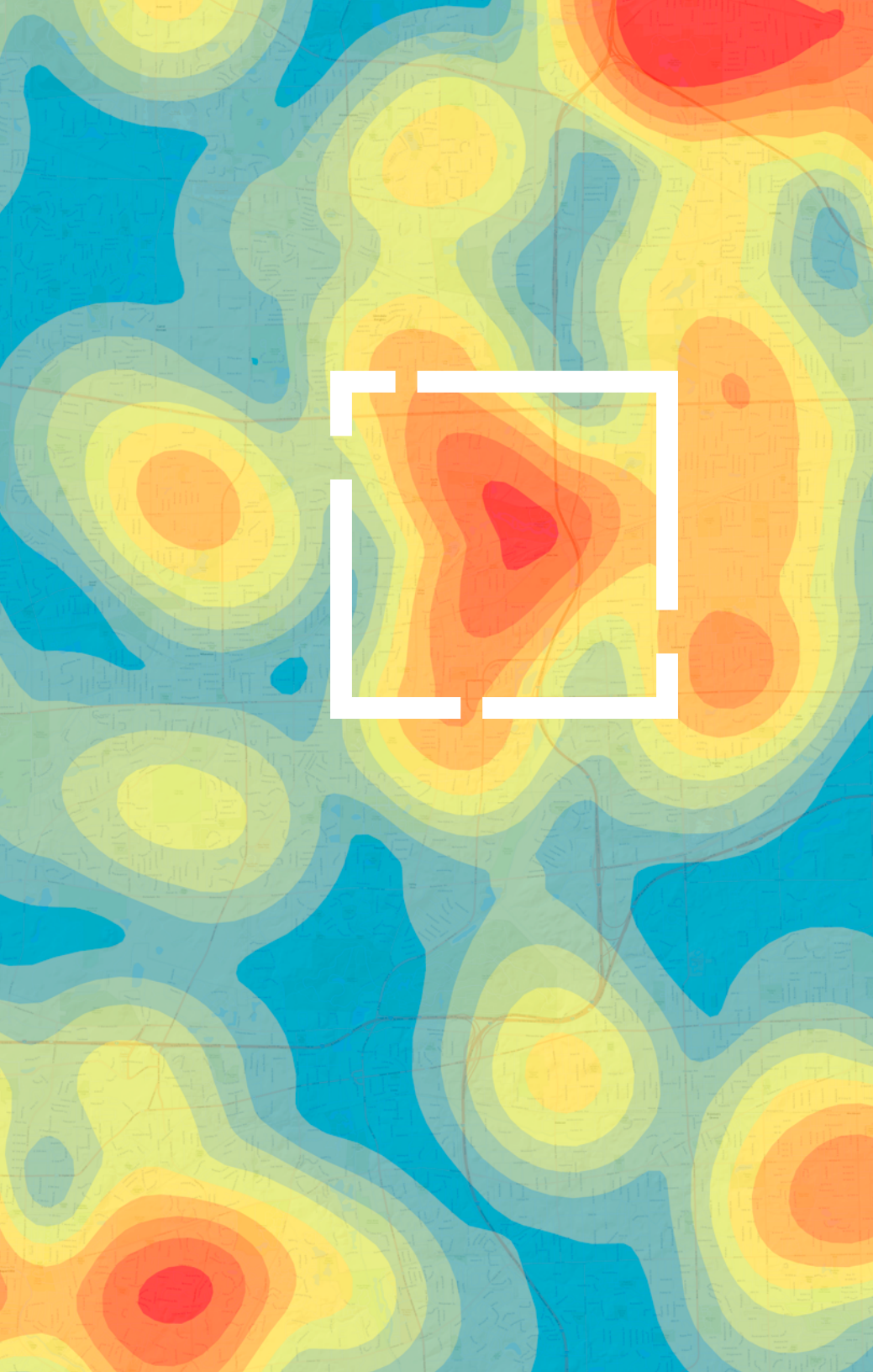
On a small scale, GIS is beneficial. On an enterprise level, GIS delivers transformative results. It centers your staff around a single source of truth, bringing critical data into a clear view through the context of location.

Esri's objective is to get GIS maps, dashboards, apps, and other tools in the hands of as many of your staff as possible so your organization can achieve

positive results. That's why Esri works with each organization to customize an enterprise agreement that best meets your specific needs.

We design our products, support, and training to serve your needs so you can serve the needs of your internal stakeholders—and provide constituents with public service excellence.

Start seeing the benefits of enterprise-wide GIS today.



About Esri

Esri, the global market leader in geographic information system (GIS) software, location intelligence, and mapping, helps customers unlock the full potential of data to improve operational and business results. Founded in 1969 in Redlands, California, USA, Esri® software is deployed in hundreds of thousands of organizations globally, including Fortune 500 companies, government agencies, nonprofit institutions, and universities. Esri has regional offices, international distributors, and partners providing local support in over 100 countries on six continents. With its pioneering commitment to geospatial technology and analytics, Esri engineers the most innovative solutions that leverage a geographic approach to solving some of the world's most complex problems by placing them in the crucial context of location.



esri.com

Copyright © 2025 Esri. All rights reserved. Esri, the Esri Globe and Frame logos, The Science of Where, ArcGIS, and esri.com are trademarks, service marks, or registered marks of Esri in the United States, the European Community, or certain other jurisdictions. Other companies and products or services mentioned herein may be trademarks, service marks, or registered marks of their respective mark owners.

G6430150