esri | THE SCIENCE OF WHERE

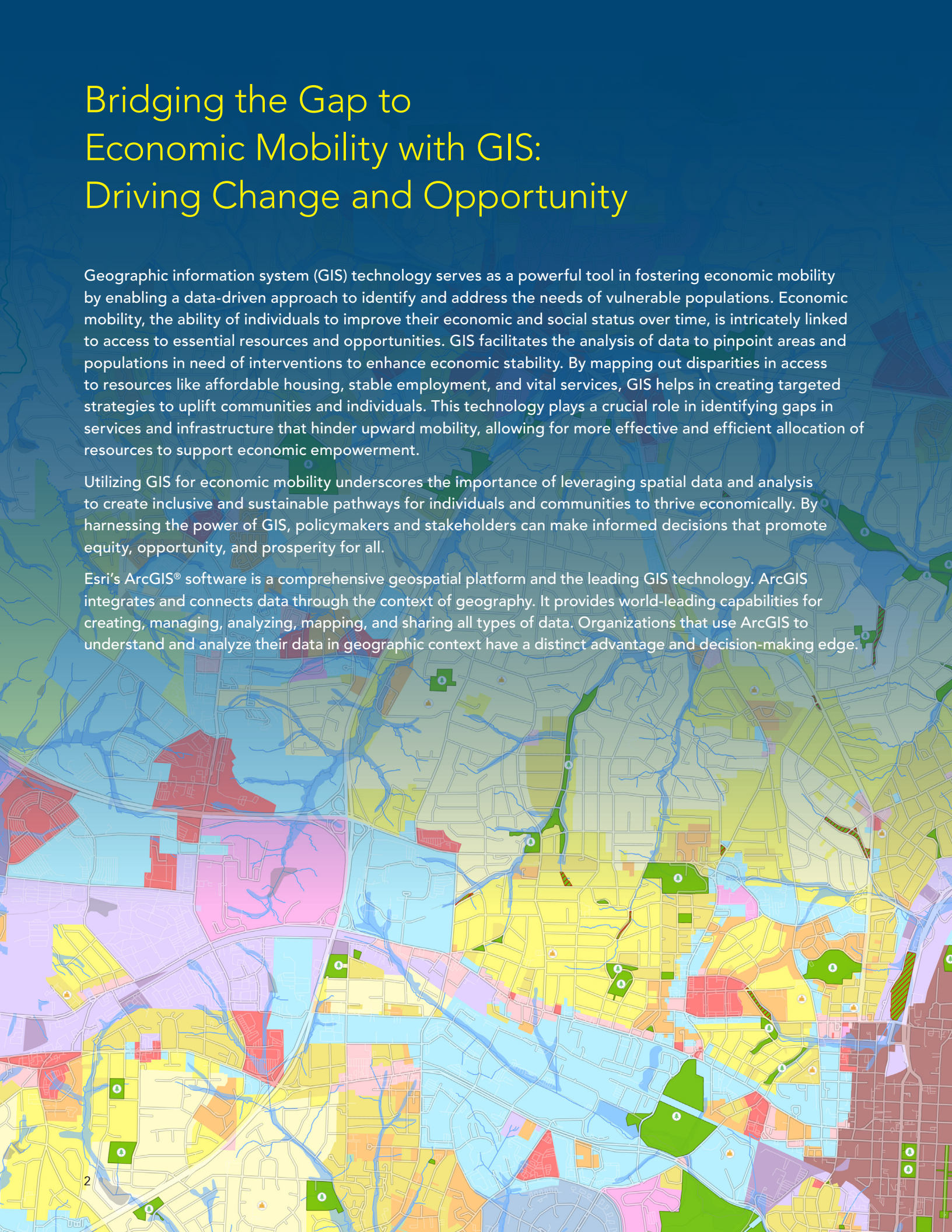# Empowering Organizations with GIS for Economic Mobility

A Framework for Building Inclusive and Prosperous Communities

Bridging the Gap to Economic Mobility with GIS: Driving Change and Opportunity

Geographic information system (GIS) technology serves as a powerful tool in fostering economic mobility by enabling a data-driven approach to identify and address the needs of vulnerable populations. Economic mobility, the ability of individuals to improve their economic and social status over time, is intricately linked to access to essential resources and opportunities. GIS facilitates the analysis of data to pinpoint areas and populations in need of interventions to enhance economic stability. By mapping out disparities in access to resources like affordable housing, stable employment, and vital services, GIS helps in creating targeted strategies to uplift communities and individuals. This technology plays a crucial role in identifying gaps in services and infrastructure that hinder upward mobility, allowing for more effective and efficient allocation of resources to support economic empowerment.

Utilizing GIS for economic mobility underscores the importance of leveraging spatial data and analysis to create inclusive and sustainable pathways for individuals and communities to thrive economically. By harnessing the power of GIS, policymakers and stakeholders can make informed decisions that promote equity, opportunity, and prosperity for all.

Esri's ArcGIS® software is a comprehensive geospatial platform and the leading GIS technology. ArcGIS integrates and connects data through the context of geography. It provides world-leading capabilities for creating, managing, analyzing, mapping, and sharing all types of data. Organizations that use ArcGIS to understand and analyze their data in geographic context have a distinct advantage and decision-making edge.

Four Pillars to Achieve Economic Mobility

Quality of Life:
Enable targeted interventions to enhance residents' overall well-being

Inclusive Infrastructure:
Expand access to public resources that improve opportunities for advancement

Civic Inclusion:
Prioritize transparency and accountability to increase community engagement

Financial Stability:
Invest in the potential of disadvantaged populations to boost economic security

Public Safety

Neighborhood Revitalization, Transparent Policing, Response Time

Social Equity

Age, Gender, Accessibility, Affordable Demographics

Transportation Equity

Access to Transit, Transit Cost, Infrastructure Investment

Energy Equity

Power Outage Restoration Plans, Investment in Clean Energy

Housing,

Education
Workforce Development, Child Care Access, Digital Equity

Environmental Justice
Conservation, Land Management, Safe Water

Health Equity
Access to Health Care, Food Security, Park Accessibility, Social Determinants of Health

Enable targeted interventions to enhance residents' overall well-being.

Our overall quality of life is influenced by various factors such as the maintenance of buildings, air quality in our neighborhood, access to food, and educational opportunities. These elements not only impact our housing situation but also our ability to lead a stress-free life. Social class, education level, mobility, and age play a significant role in shaping our community and neighborhood dynamics, affecting how we navigate the world.

GIS plays a crucial role in visualizing community dynamics and facilitating interventions for positive change. You can use GIS to identify key points of interest and map out their proximity to essential locations like stores, parks, and places of worship. Overlaying demographic and environmental data using ArcGIS software enables you to gain insights into these factors. Subsequently, you can map out potential policy changes and assess their impact on the neighborhood, such as establishing new educational institutions, determining locations for homeless shelter assistance, and planning for new grocery stores and parks. Identifying areas of need through GIS can reveal barriers to a high quality of life, such as limited green spaces, inadequate access to grocery stores, and unsafe walking infrastructure. These insights can guide the creation of spaces for community initiatives like farmers markets and community gardens, fostering a more vibrant and sustainable neighborhood.

Improve the quality of life for your residents by using GIS to

- Map and identify at-risk populations with demographic, socioeconomic, and lifestyle information for additional insight.
- Identify patterns of inequities to establish priorities that are specific to your community.
- Analyze and share the impact of potential policy changes.
- Inform locations for stores, parks, hospitals, and other areas of interest.
- Support decision-making by providing data-driven insights.
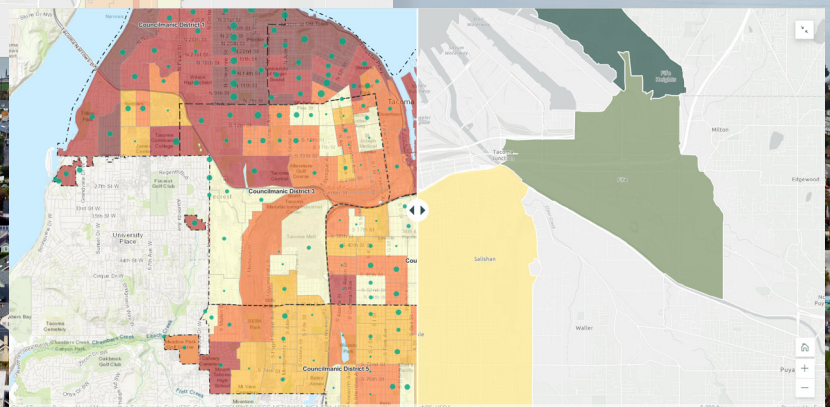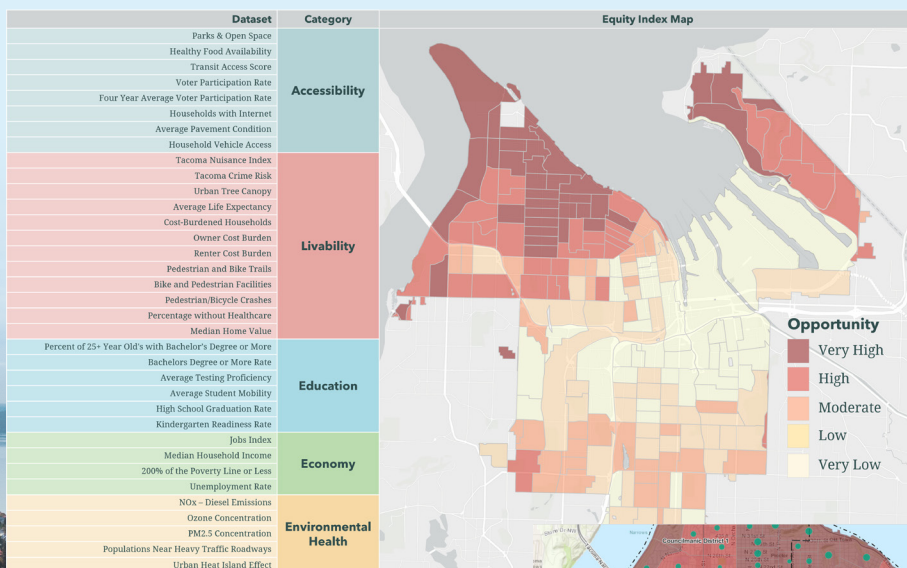- Connect communities to the public benefits they need most.

Addressing Housing Inequities with a Citywide Approach: City of Tacoma, Washington

In 2018, the City of Tacoma introduced the Equity Index, an interactive tool that visually highlights access to opportunity by mapping disparities across the city. It uses 32 data points sorted into five categories to determine where community members are not able to access services or where services do not meet community needs. It is one of the primary tools that city staff, partners, and other decision-makers use to help ensure they are making data-informed decisions to improve access to opportunity for all community members. One specific application for the tool is the housing crisis the city is facing amid rapid population growth.

City officials recognized that the lack of affordable housing continues to restrict lower-income and historically marginalized communities from securing a place to live. In response, the city used ArcGIS StoryMaps[SM], an interactive storytelling application, to build the Home in Tacoma Project. It keeps the community educated about the benefits of diversifying housing types; the history of redlining, a discriminatory practice that made it difficult for people of color (POC) to become homeowners; and how the city is revisiting previous housing policies.

"As the city moves forward with modifications to land use, we will definitely continue to present data by using ArcGIS StoryMaps to show the justifications for proposal changes. This project illustrates the importance of data and spatial analysis, as well as how telling a story with spatial data can have a real impact on our community."

Christina Chelf,
GIS Supervisor,
City of Tacoma

Inclusive Infrastructure

Expand access to public resources that improve opportunities for advancement

Inclusive infrastructure focuses on ensuring that all members of a community have equitable access to essential assets and resources in their area. This concept underscores the significance of addressing disparities in access to opportunities that can significantly impact an individual's future success. Where one grows up plays a pivotal role in shaping their trajectory towards success, highlighting the importance of creating inclusive environments that support growth and development.

GIS plays a vital role in facilitating informed decision-making regarding infrastructure investments. By leveraging spatial data and analysis, GIS can help identify areas with high concentrations of at-risk populations, enabling policymakers to prioritize infrastructure projects in these neighborhoods. This targeted approach ensures that resources are allocated efficiently to address the specific needs of vulnerable communities, ultimately fostering more inclusive and sustainable development. Improving infrastructure holds immense value as it directly impacts the quality of life and opportunities available to individuals within a community. Leveraging GIS to prioritize human needs in infrastructure projects allows societies to build environments that guarantee equitable access to essential services, promote economic development, and boost overall well-being. Prioritizing human-centric infrastructure development not only fosters social equity but also contributes to building more resilient and thriving communities for the future.

Foster human-centric infrastructure by using GIS to

- Map and analyze demographic data, socioeconomic indicators, and spatial patterns to identify areas where infrastructure needs are most pressing and where vulnerable populations are located.
- Identify and address barriers to infrastructure access for people with disabilities, older adults, and other vulnerable groups, promoting inclusive design and services.
- Create interactive maps and dashboards that engage communities in the planning and design of infrastructure projects.
- Help decision-makers understand the needs and distribution of diverse populations to inform equitable infrastructure investments.
- Plan and deploy digital infrastructure, ensuring that everyone has access to the internet and digital services, which are increasingly essential for social and economic participation.

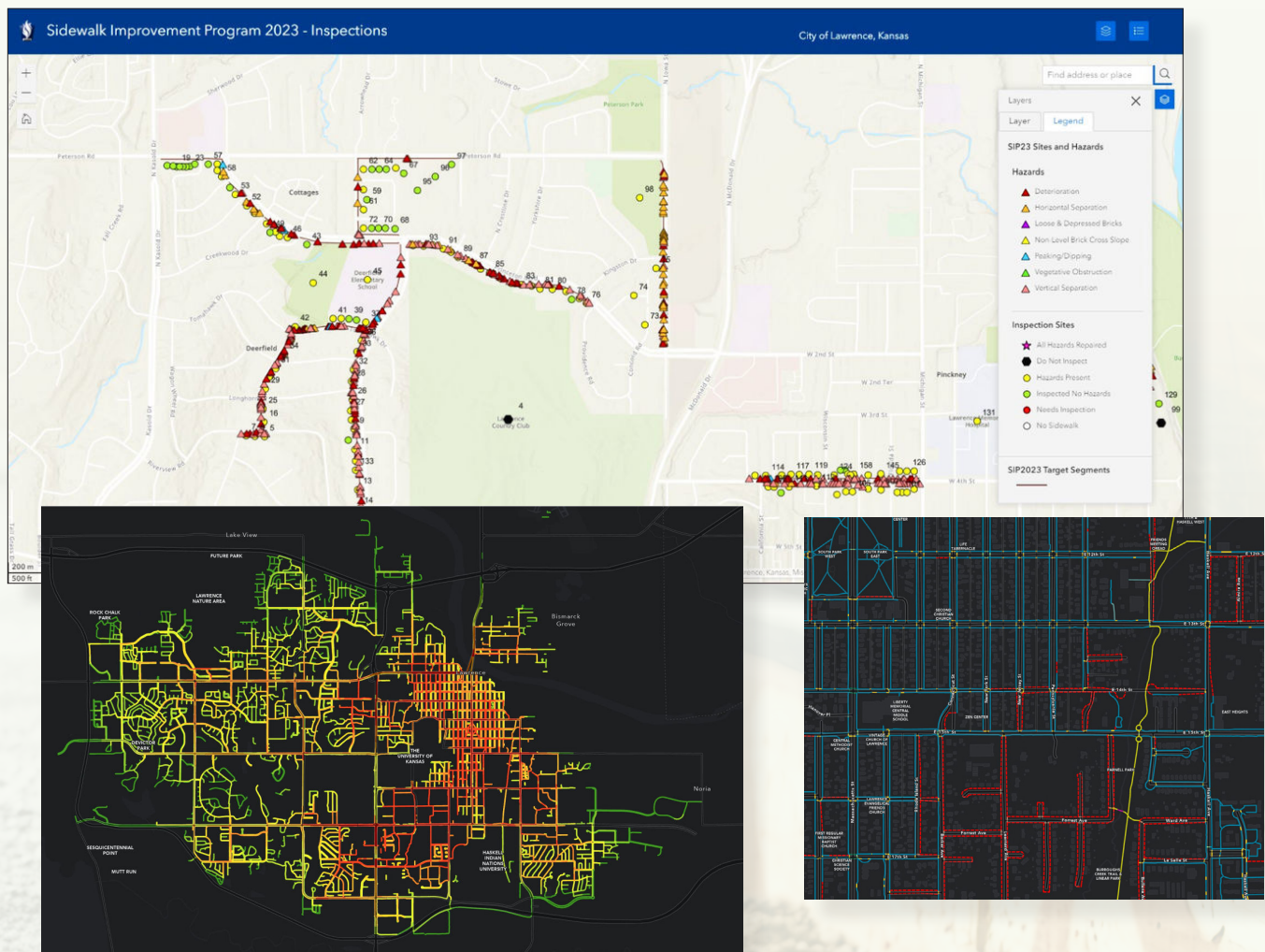# Equitably Prioritizing Sidewalk Repairs: City of Lawrence, Kansas

The City of Lawrence, Kansas, is improving the walkability of the city, especially in downtown areas where pedestrian foot traffic is high.
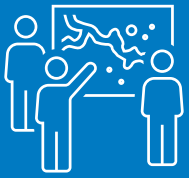
Before, the city would inform homeowners of sidewalks that needed repair. The city incorporated GIS as an essential business function to continue its initiatives for fixing the sidewalks in the most equitable and transparent manner. A GIS sidewalk network model was built to help the city make informed decisions on which sidewalks to prioritize.

Areas in the sidewalk network were narrowed down in GIS by using a transportation disadvantaged populations layer, which reflects additional priority to provide an improved means for multimodal trips. This layer provides more context to the area and elevates equity by including people with disabilities, communities of color, single-parent and zero-vehicle households, and other disadvantaged characteristics.

The GIS-based methodology behind the sidewalk network analysis can also be attributed to the city's wider-scale Americans with Disabilities Act (ADA) Transition Plan initiative. Improving walkability for all residents is the goal, but accessibility is another key driver to attaining a multimodal network for all residents.

Prioritize transparency and accountability to increase community engagement

State and local governments play a pivotal role in promoting inclusivity and accessibility for everyone. By establishing transparent communication channels and bridging service gaps, they can prevent marginalization within communities. Civic inclusion, characterized by transparency, accessibility, and accountability, is fundamental for public-facing organizations. Building robust community relationships involves providing information through online platforms and face-to-face interactions, engaging in public dialogues on local issues, and hosting forums where residents can express concerns and showcase neighborhood features, which can be visualized effectively using maps.

GIS emerges as a potent tool for simplifying complex information, making it more accessible to the public, enhancing community understanding of local challenges, and facilitating active participation in decision-making processes. The integration of GIS amplifies community engagement by enabling residents to contribute to data collection, participate in local projects and initiatives through online platforms, and advocate for their needs and priorities by documenting neighborhood conditions. This proactive, GIS-driven approach nurtures improved communication, engagement, and empowerment within the community, fostering a well-informed and interconnected society where residents can actively participate in shaping their living environment.
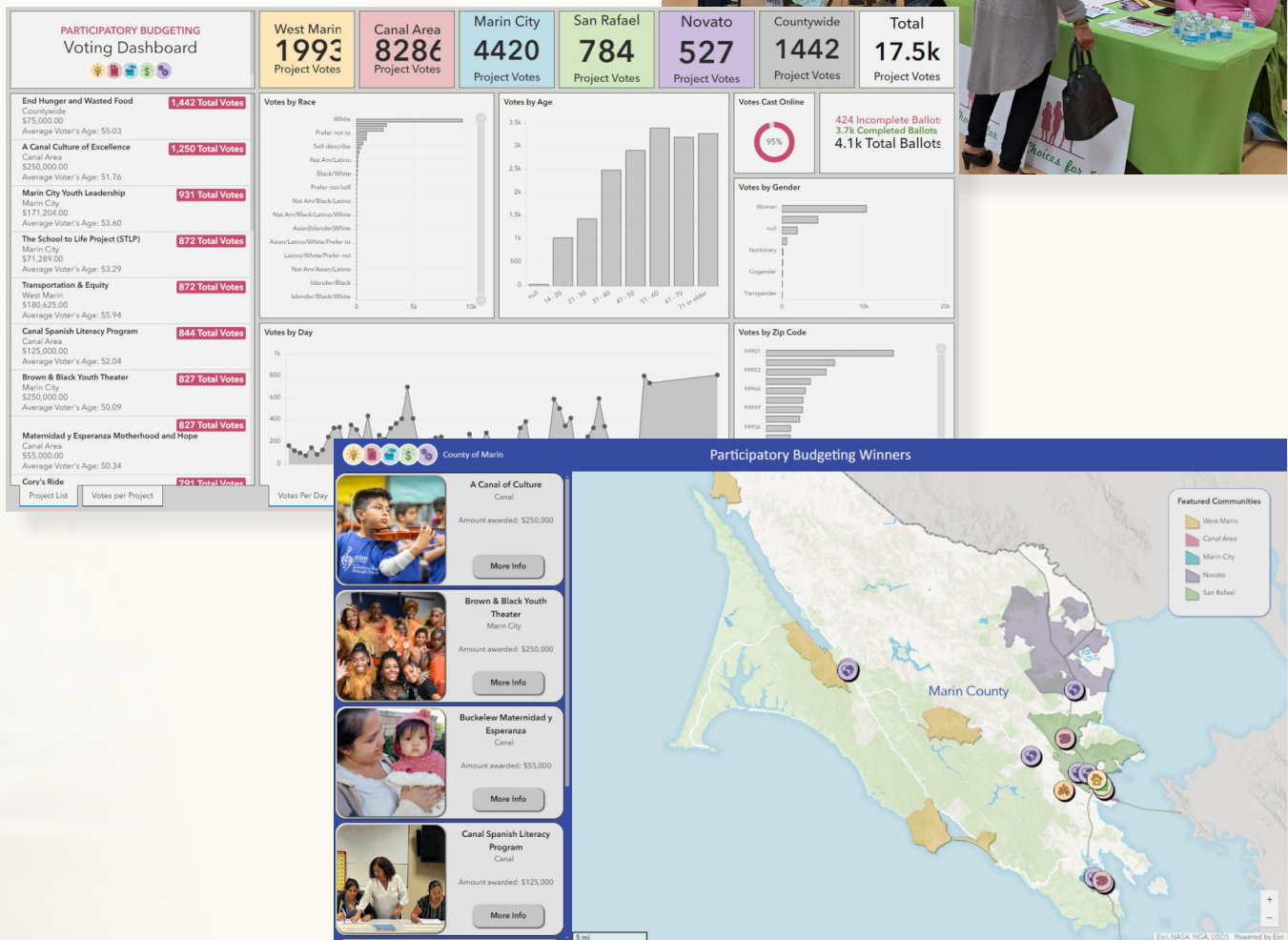
Communities can foster civic inclusion by using GIS to

- Provide visual representation of data to empower citizens and facilitate more inclusive decision-making.
- Make data publicly available to allow governments to increase transparency and accountability, fostering greater trust with residents.
- Create easy-to-consume maps, dashboards, and other tools that allow residents to visualize data, provide feedback, and participate in the planning process.
- Develop communication strategies that are tailored to different audiences and language preferences, ensuring that all residents can access information and participate in civic processes.

County of Marin Creates New Site with ArcGIS Hub to Engage Local Community and Promote Racial Equity Projects

In California, the County of Marin launched its first-ever Participatory Budgeting (PB) process, which invites the community to help decide how to spend federal funds allocated for addressing racial disparities in the county. The Office of Equity and the Information Services and Technology Department partnered to create a site with ArcGIS Hub℠ that allowed for the collection of community ideas, the submission of grant proposals, and public voting. Using ArcGIS Hub facilitated efficient communication and community involvement, and the site was designed to be accessible, multilingual, and user-friendly to engage a diverse audience.

"Our goal was to appeal to a wide range of audiences and community members. We were very intentional with the design of our tools, [including] the multilingual features, digital accessibility, and avoiding jargon in our content," says Jamillah Jordan, director of Marin County's Office of Equity. "The site is a powerful way for us to tell our story of how PB can transform the way governments share decision-making power and engage with community members."

Increase financial stability by investing in the potential of disadvantaged populations

We would all like to be financially stable as individuals, families, and communities. The foundation for economic stability lies in securing full-time, living wage employment, ensuring housing costs remain below 30 percent of income, providing access to safe and affordable financial services, offering non-predatory loans, and encouraging savings to cover basic needs. This stability paves the way for wealth building through opportunities such as career advancement, long-term savings, homeownership, and financial planning for education and family needs. In the realm of public-private partnerships, collaboration between sectors is crucial for driving economic growth and community development.

GIS plays a pivotal role in interventions for success by providing spatial data analysis that can identify areas in need of economic empowerment initiatives. By mapping out economic disparities, access to financial services, and employment opportunities, GIS helps stakeholders target interventions effectively.

GIS also aids in monitoring the effectiveness of these initiatives over time, enabling adjustments for maximum impact. Looking towards the future, enhancing financial security and mobility through GIS-informed strategies is an investment in sustainable community development. By leveraging GIS for economic empowerment, communities can create a more inclusive and prosperous environment where shared prosperity leads to long-term growth and well-being for all residents.

Integrating GIS into financial empowerment initiatives enhances decision-making processes, facilitates targeted interventions, and promotes sustainable economic development for individuals and communities alike.
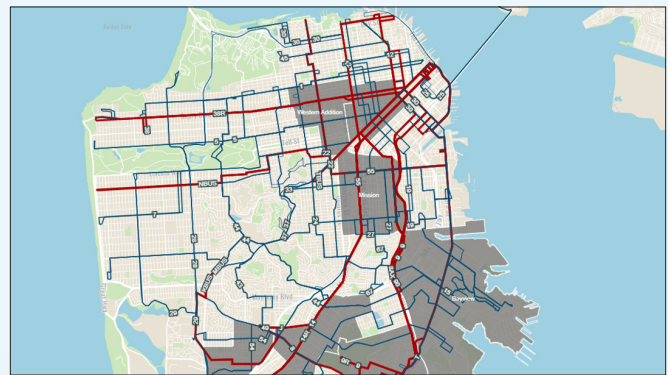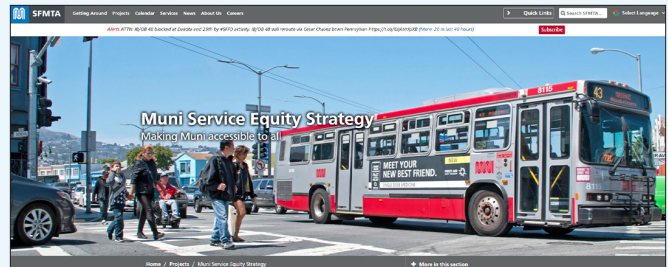
Increase financial security of communities by using GIS to

- Track economic indicators like employment, income, and poverty levels to identify trends and inform policy decisions.
- Identify areas with high economic potential, including areas ripe for investment and job creation.
- Help design strategies that foster economic growth and create opportunities for residents to move up the economic ladder.
- Understand the geographic distribution of low-income populations to help direct resources and programs to those most in need.
- Map out locations for new businesses to invest in.
- Recruit sustainable new investments and expand existing ones for economic growth.

San Francisco Municipal Transportation Agency, California: Connecting People to Opportunity Through Transit Access
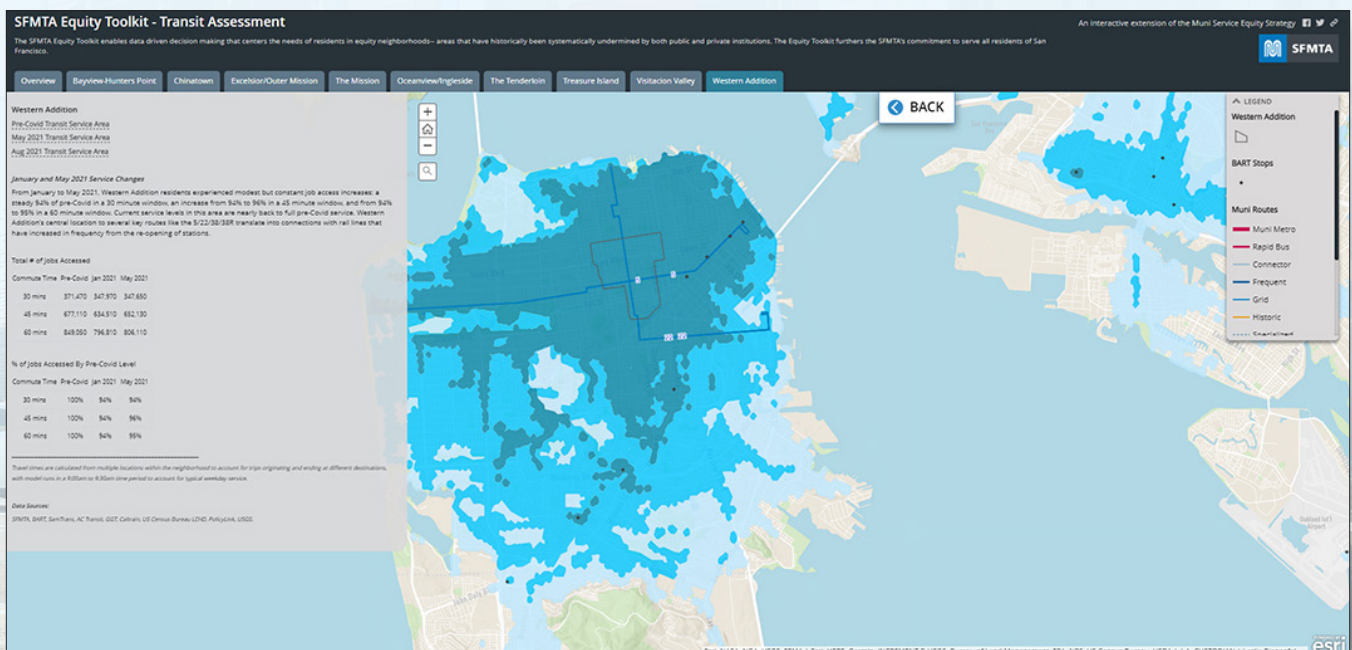
Several factors, both large and small, impact opportunities for people to improve their quality of life. Reliable, affordable transportation is often critical in accessing educational opportunities, jobs, and housing to enhance economic and social mobility. Recognizing this, the San Francisco Municipal Transportation Agency (SFMTA) leveraged GIS technology capabilities to develop the SFMTA Equity Toolkit. The toolkit was designed to help transportation professionals address social and economic issues and create a more equitable transportation system for their diverse city.

The toolkit identifies gaps in service, enabling transit planning staff to make service-change decisions to fill those gaps. SFMTA identified nine San Francisco neighborhoods as Equity Neighborhoods. Equity Neighborhoods are where equitable transit is most important, as their populations rely especially heavily on public transportation. To achieve the ultimate goal of the SFMTA Equity Toolkit, the team is keen to modify both the toolkit and the process to evaluate the impacts of service changes before they are implemented.

"Using the power of data and mapping tools to visualize transit impacts allows us to work at dismantling the systemic barriers that harm communities."

Steph Nelson,
GIS Developer and Administrator,
San Francisco Municipal Transportation Agency

Your GIS Framework for Achieving Economic Mobility for Your Community: Esri Professional Services Offerings

GeoEquity Strategy Consulting

This offering is designed to conduct a comprehensive assessment of your organization's equity-related vision. We partner with you to learn about the existing equity-focused initiatives and help identify other potential initiatives from your business goals, as well as operational objectives that could benefit from incorporating an equity lens. Our goal is to create a road map that harnesses the power of GIS, location intelligence, and analytics to achieve equity-related outcomes. This strategic plan enables your organization to effectively utilize spatial data, analytics, and visualization, applying a geographic perspective to better understand the population you serve. It aims to help operationalize equity across the organization by recommending equity toolkits that can be easily adapted across different departments.

GeoEquity Index Development Support

This offering provides assistance and guidance to organizations who would like to use Esri's Social Equity Analysis solution to calculate their equity index. We ensure that Geoequity best practices are applied and provide assistance when necessary.

Build your strategy with core GIS software and location data. Data resources such as ArcGIS Living Atlas of the World and Esri Maps for Public Policy provide ready-to-use basemaps, maps, apps, and more from Esri and the global GIS community. ArcGIS Pro, Esri's desktop GIS software, and ArcGIS Online, Esri's web-based mapping software as a service (SaaS), allow staff to create and manage data, build interactive maps, run complex analysis, and share insight.

Quality of Life: Enable targeted interventions to enhance residents' overall well-being

Inclusive Infrastructure: Expand access to public resources that improve opportunities for advancement
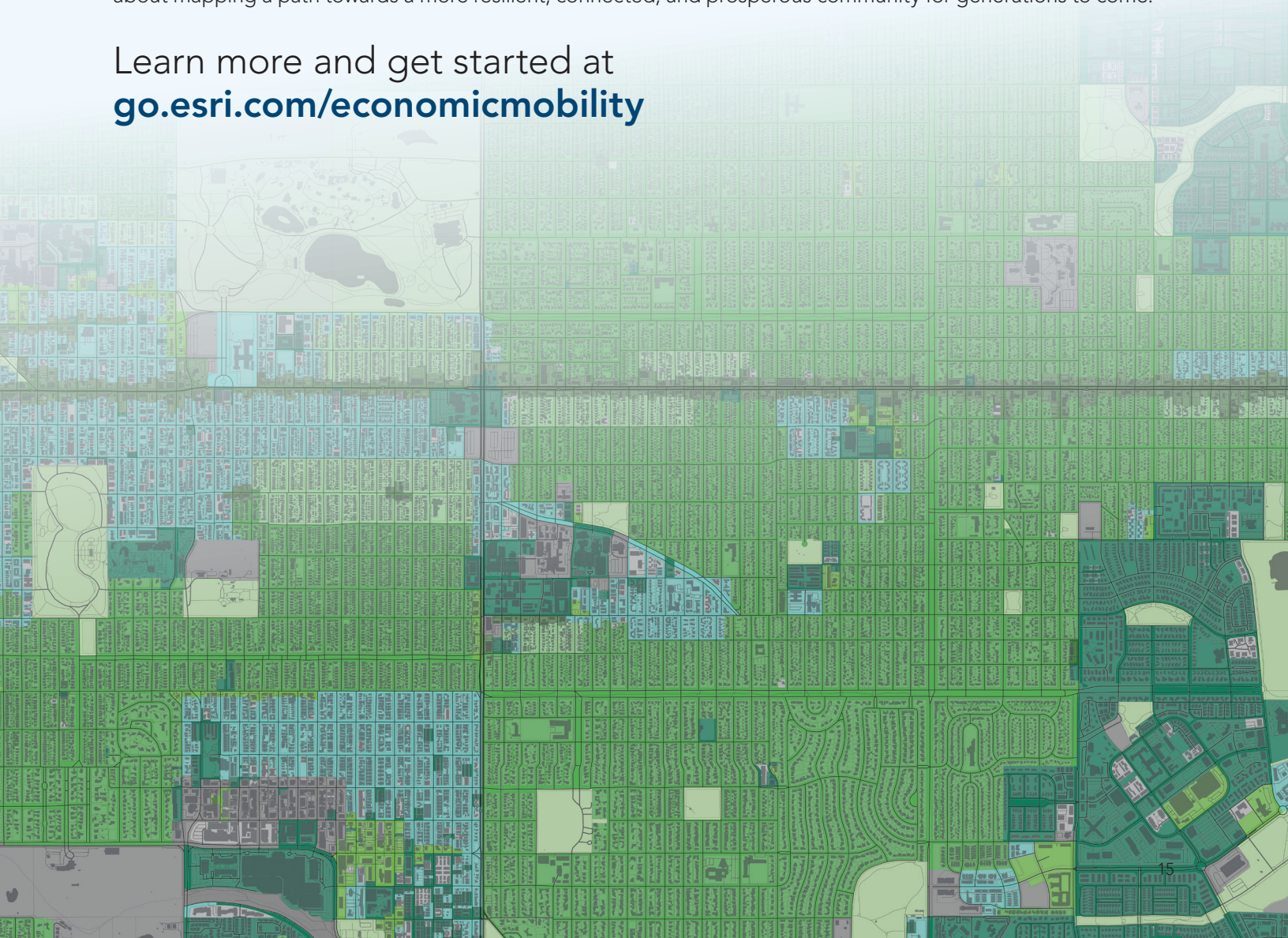
Civic Inclusion: Prioritize transparency and accountability to increase community engagement

Financial Stability: Invest in the potential of disadvantaged populations to boost economic security

GIS stands as a transformative tool that empowers communities to address economic disparities, enhance quality of life, foster community engagement, and create pathways for economic opportunity. By leveraging GIS technology, stakeholders can make informed decisions, target interventions effectively, and promote equitable access to essential resources. The relationship between GIS and economic stability paves the way for sustainable growth, social equity, and a brighter future for all residents. Embracing GIS is not just about mapping data; it's about mapping a path towards a more resilient, connected, and prosperous community for generations to come.

Learn more and get started at
go.esri.com/economicmobility

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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.

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