

# Empowering Urban and Community Planning **through Location**

Using GIS to Determine How, When, and Where Designs Can Have a Lasting Impact



**esri**

THE  
SCIENCE  
OF  
WHERE®





## A Monumental Shift for Planners

There's never been a time of greater challenges across all types of communities for planners than there are today.

From the challenges of dealing with the economic and social impact of a global pandemic, to a growing trend of counterurbanization, to demands to allocate resources equitably, planners have much more on their plate than just subdivision reviews, site plans, and rezonings. But with these daunting challenges come unprecedented opportunities for planners to have a greater role in the detailed design of their community. Understanding where to develop and what types of development their community needs and desires can now be supplemented with the why and the how. In other words, planners can now embrace a comprehensive approach to their work through a single platform.



## Addressing Challenges with Location Intelligence

Today's approach to smart planning prioritizes the human element in designing our communities and is data driven, a data-driven approach, and Esri provides the technology to make it happen.

Planners are advancing beyond many of their traditional workflows to achieve critical strategic goals like policy development. They are expected to design in a real-world environment that models the community that their residents need. The world has become aware of a multitude of challenges that can no longer be ignored ranging, from pandemics to high unemployment to lack of equitable opportunity, and planners are expected to be a key part of the solution. Location is the center point from which all planning practices are applied. Location is what influences where and what developers want to build, and it's what drives the decision-making of elected officials and the public. Esri is the leader in geographic information system (GIS) software and pioneers the technology that helps planning professionals determine how, where, and when their designs can have the greatest impact.





Esri's GIS-enabled  
smart planning system  
empowers planners to

- Assess current planning projects to meet the community's needs.
- Support long-range planning initiatives for sustainable growth.
- Prioritize resilience planning that addresses acute shocks and chronic stresses.
- Stimulate economic growth to promote opportunity and mobility across all demographics.
- Develop a partnership with the community that meets the public's expectations.





## A Data-Driven Approach for Current Planning

Planners find themselves immersed in the many daily challenges faced by cities and counties and need advanced tools and solutions to meet them.

Today, counterurbanization, open streets, curbside management, and micromobility are some of the new concerns that planning professionals must address. GIS adds the element of location into each of these workflows, modifying outdated manual processes. Tasks like public notification and land-use inquiries can be automated. Data from staff in the field can be standardized. All of this input can be leveraged by web applications to visualize, measure, and analyze proposed developments. Esri's GIS-enabled smart planning system provides the tools that planners need to employ humancentric design; meet their deadlines; and make data-driven, sustainable, and justifiable decisions.





## Esri's GIS-enabled smart planning system empowers planners to

- Perform land-use inquiry and permitted-use assessment.
- Review, visualize, and analyze proposed development.
- Streamline permitting and review workflows.
- Support digital plan submission.
- Conduct code enforcement and site inspections.
- Report on building activity and code violations.
- Measure green infrastructure impact.





## Long-Range Planning

Planners have the obligation to focus the path of sustainable and equitable development to deliver opportunities that every resident deserves.

To achieve this, it is essential that planners understand, incorporate, and analyze location as the focal point of their long-range or comprehensive planning. Planners have long embraced the power of location as a way to find the right balance between the built and natural environments. ArcGIS® provides the system for an agile and data-driven approach to leveraging location, sustainability, equity, and public input in comprehensive planning.



Esri's GIS-enabled  
smart planning system  
empowers planners to

- Gather and analyze public needs.
- Quantify and qualify resources, constraints, and quality of life enhancements.
- Validate policy.
- Design multiple future land-use scenarios.
- Evaluate build-out analysis in 3D.
- Modernize zoning ordinances to accommodate needed changes.





## Resilience Planning: Mitigating Challenges by Focusing on Location

Whether dealing with acute shocks—like a pandemic, flood, or wildfire—or chronic stresses like homelessness, lack of economic opportunity, aging infrastructure, or poor transit systems, planners have the responsibility to prepare for and mitigate these challenges by incorporating resilience strategies into their design.

The convergence of all of these factors can affect the very potential of a community to prosper, grow, and be a safe and healthy place for all its residents to thrive. Since location is a factor in every aspect of resilience planning, GIS is a mission-critical system in developing these strategies. GIS provides the tools to create and analyze designs, collaborate with stakeholders, and justify policies that make communities resilient in both the short and long term.



Esri's GIS-enabled smart planning system provides solutions for planners and community leaders to

- Assess conservation and preservation activities.
- Manage acute shocks and mitigate chronic stresses.
- Support economic sustainability planning.
- Promote social equity and healthy communities.
- Analyze green infrastructure impact.
- Mitigate and remediate blight and stabilize neighborhoods.
- Establish measurable indicators for transparency and accountability.





## Citizen Engagement: Utilizing GIS to Create Thriving Communities

Planners and residents rely on each other to meet the community's needs and shape its future.

What occurs in a community is inherently geographically personal; everyone who lives in a place cares about that place. Transparency is not enough. Esri's GIS-enabled smart planning system provides an opportunity to raise the bar as to how planners think about and act on civic engagement and inclusion. It can help raise questions, such as where people are voicing concerns and where are they not, what neighborhoods are at risk of falling behind, and how a connected resident can act as a sensor to help governments better understand their neighborhoods. Mapping, spatial analytics, and focused engagement tools provide the ability for planners to cultivate a partnership with their residents.

Poverty and Urban Stress

### Your Experience With Past Poverty and Urban Stress Reports

Have you used the 2007 and/or 2012 Poverty and Urban Stress Report?

☐ Yes

☐ No

### Wishes For the 2020 Report and Beyond

What data or indicators are you most interested in?  
I.e., poverty rate, crime statistics, educational attainment, housing cost burden, an index that aggregates multiple indicators.

500

At what scale would you prefer to see the data broken down?  
Rank your preference.

	1st Choice	2nd Choice	3rd Choice	4th Choice
City-Wide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Census Tracts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Neighborhood Associations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ward	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In what format would you like to interact with the report?  
Rank your preference.

	1st Choice	2nd Choice	3rd Choice
Written report (so I can easily read and	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>


Poverty and Urban Stress

**Poverty and Urban Stress Demonstration Webinar**  
2020.09.24.10:00 AM UTC  
Poverty and Urban Stress Webinar


the Poverty & Urban Stress Report. In addition to a static written report this year, we've incorporated most of the data into interactive Story Maps that allow users to not only view the city as a whole but also dive into the data in their own neighborhoods and interact with the maps on a deeper level.  
Watch the recording of this demonstration to learn about the features of the Story Maps and how to use them and other sources to answer your own questions about poverty and urban stress in Tucson.

## Tucson Poverty and Urban Stress Reports


We're currently working on the most up-to-date version of the Poverty and Urban Stress Report.



2007 Report



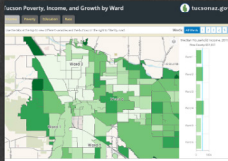
2012 Report



2020 Report: Draft


## How do Tucson's poverty and urban stress vary across the City?

Use these interactive map applications to explore how the geography of Tucson's poverty and urban stress changes by ward or neighborhood.



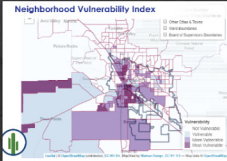
**Indicators of Poverty and Urban Stress by Ward**  
Use this tool to view maps and comparative statistics of the main indicators from the Poverty and Urban Stress Report.

[Open Application](#)



**Poverty, Income, and Growth in Tucson, Arizona**  
Take a guided trip through the data in this Story Map, featuring helpful narratives, interactive maps, and illustrative graphs.

[Open Application](#)



**Neighborhood Vulnerability Index (NVI)**  
The NVI Map classifies areas of Tucson by vulnerability level, or the differing ability to withstand threats such as economic downturns.

[Open Application](#)

Esri's GIS-enabled smart planning system empowers planners to

- Inform the public about priority initiatives for comprehensive planning and development.
- Perform reviews and special projects.
- Create a destination for all initiatives and information related to planning to encourage public input.
- Establish required public notification and monitor opinions.
- Conduct project-focused public surveys.
- Support charette activities.
- Generate project buy-in from residents.





## Economic Development and Restoration

Today, planners play an essential role in supporting the economic development and restoration strategies of their communities.

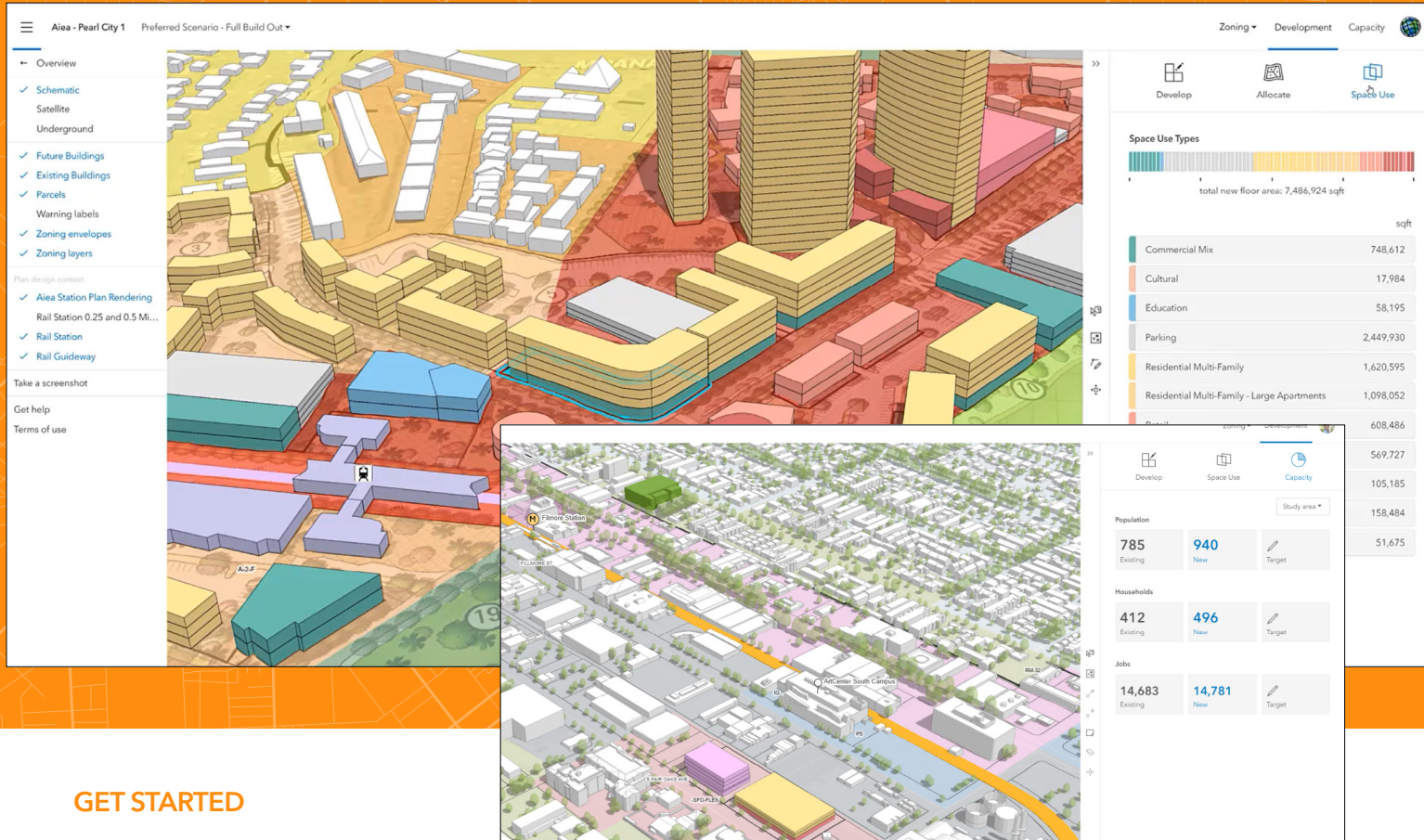
At the core of this new role is understanding the demographics, socioeconomic characteristics, and long-range plan of a community. Planners can design communities with an eye on current land-use mix and zoning needs, and as land-use patterns and populations change, they can adapt to forecast community needs. Location is always going to be at the epicenter of a community's economic development plan. GIS provides a platform to perform demographic and socioeconomic analysis, understand the needs of the community, and leverage sustainable design principles into your strategic economic planning. It provides detailed insight, highlights areas of opportunity, and reveals at-risk areas in need of immediate attention. Finally, it provides a secure platform for collaboration and ensures that all key stakeholders are aligned to promote smarter decision-making and sustainable economic growth.



Esri's GIS-enabled smart planning system provides solutions for planners and economic development professionals to

- Analyze and understand community demographics and socioeconomic characteristics.
- Assess community needs.
- Support business retention and expansion (BRE) efforts.
- Coordinate with economic development organization officials to recruit sustainable new investments.
- Promote destination branding.
- Manage community events.



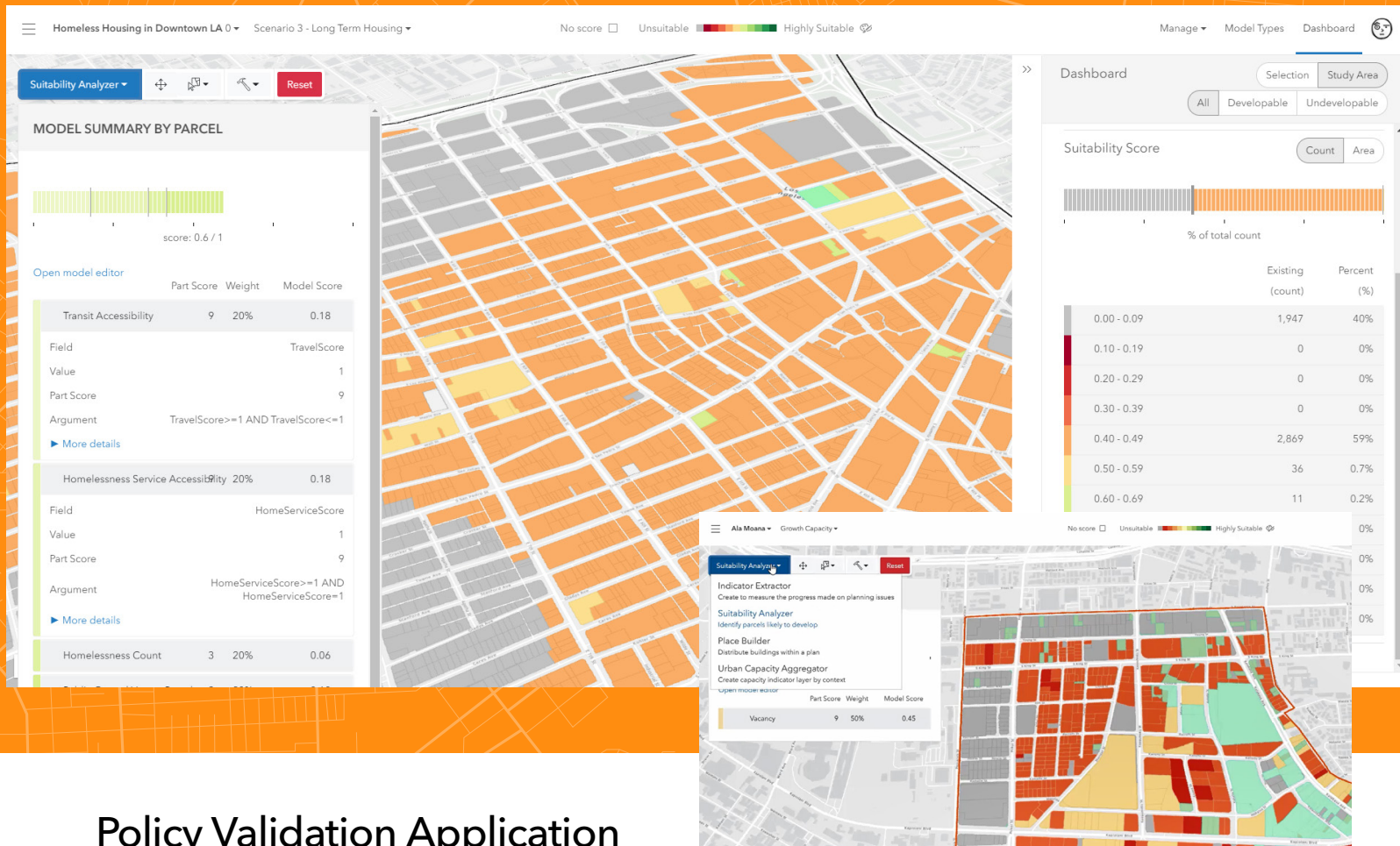


## GET STARTED

# ArcGIS Urban

ArcGIS Urban is a geoenabled system that helps you improve urban planning and make better development decisions. With Urban, planners and designers can streamline the urban development life cycle and create more livable, prosperous, and sustainable cities.

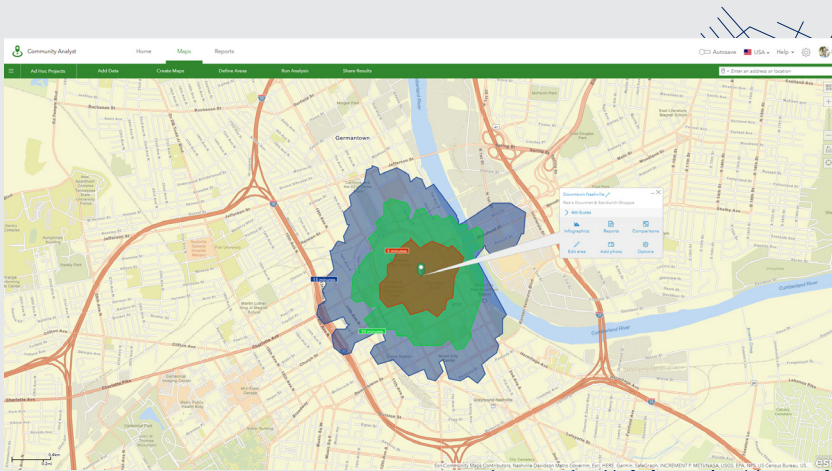
Urban provides a 3D web experience that lets you quickly visualize projects in their local context and evaluate key performance metrics. It also provides web-based tools designed to simplify zoning and land-use planning. You can use Urban to make more informed planning and development decisions and improve collaboration between public and private stakeholders. This helps you stimulate private investment and support development to achieve your vision for the community.



## Policy Validation Application

The web-based Policy Validation Application (PVA) is a web-based application designed to extend the capabilities of ArcGIS Urban and support advanced urban planning workflows related to policy validation. A policy can be any course of action defined to address a problem a city faces, such as homelessness. For example, the PVA could be configured to identify suitable parcels based on the current homelessness conditions and potential at-risk population metrics and then allocate interim and/or permanent housing solutions in those locations. With the PVA, there can be more than one suitability model using different variables to drive different redevelopment scenarios. The PVA enables cities to be efficient and flexible for this kind of analysis and build-out modeling.





## ArcGIS Community Analyst<sup>SM</sup>

ArcGIS Community Analyst helps you gain insight into neighborhood characteristics; provides smarter market planning and site selection for economic development; and improves project planning by combining demographic, lifestyle, behavioral, and spending data, maps, and reports with location-driven analytics. You can identify the underserved neighborhoods, detect walkable and drivable service areas, pinpoint optimal development sites, find where your target workforce lives, and share the market research across your organization.



## Partner Solutions

If you need specialized solutions to meet specific requirements, you can leverage our extensive partner community, which provides cutting-edge planning and community development solutions. Let the technology advance as you do.

Contact your Esri account team to discuss the best partner solution for you. Email [Planning@esri.com](mailto:Planning@esri.com).





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