



How Web GIS Changed the Modern Role of GIS in Today's Planning Department

Keith Cooke

Esri

An abstract 3D architectural graphic on the right side of the slide. It features various geometric shapes like rectangles and cylinders in shades of blue, teal, orange, and green, creating a sense of depth and perspective. The background is a dark teal color.

GIS
INSPIRING
WHAT'S
NEXT

A Modern Community Development Solution

Delivering a complete GIS for Planning and Community Development

**Develop Partnership with
the Community**

**Track and Evaluate
Current Planning Projects**

**Prioritize Resilience
Planning**

**Support Long-Range
Planning Initiatives**

**Stimulate Economic
Growth**



GIS is a System of Systems

GIS



System of Engagement

System of Insight

System of Record

System of Record for Community and Economic Development

My Neighborhood Services ...locate facilities and services in our community

Locate Services

Search for an address or locate on map

115 S Washington St, Nape X

Show results within 1 Miles

- Cemeteries (2)
- Community Centers (1)
- Libraries (2)
- Museums (3)
- Theatres (3)
- Government Offices (4)
- Hospitals and Clinics (1)
- Fire Stations (1)

Land Use Regulations

Current land use: Single Family
Proposed land use: Low Density Residential (2.5 Units Per Acre)

Zoom to

Park Locator

Search Results

Found 31 facilities near this address

- Armenick Park (3.27 Miles Apart)**
- Compton Park (3.43 Miles Apart)**
- Knott Park (3.49 Miles Apart)**

Park: Compton Park

Full Address: 100 W Jackson Ave

Address: 100 W Jackson Ave

Hours: 5:00 AM - 10:00 PM

Phone: 630.221.1171

Size of Park: 100 (1) 11.71

Directions to Compton Park

Distance: 0.73 Miles

- Start at 123 W Foster Ave, Naperville, Illinois, 60563
- Go east on W Foster Ave toward S Hill St (US-58)
- Turn left on S Hill St toward S Hill St (US-58)
- Turn right on S Hill St (US-58)
- Turn left on Jackson Ave (US-58)

714404009 De Lacey Ronald	1129 Candlenut Dr	Naperville IL	60540
714403008 Damore Phillip A	109 Longleaf Dr	Naperville IL	60540
714403010 Green William F & Dawn	1201 Candlenut Dr	Naperville IL	60540
714403002 Kubatzki Thomas G	112 Pepperidge Rd	Naperville IL	60540
714205015 Belle S Richard & K A	1203 Hidden Spring Dr	Naperville IL	60540
714205012 Morrison Neil M	1209 Hidden Springs	Naperville IL	60540
714207015 Maiorano Carmen R & N M	1131 Laurel Cir	Naperville IL	60540
714205021 Kapraun Dennis	1127 Hidden Spring Dr	Naperville IL	60540
714205017 Qunell Lucille H	603 Rymer Way	Louisville KY	40223
714207002 Marshall David & Kathleen	1132 Hidden Springs	Naperville IL	60540
714207014 Sprague Thomas & Mary	204 Longleaf Dr	Naperville IL	60540
714206003 Livanos Maria T	207 Longleaf Dr	Naperville IL	60540
714404012 O Neill John & Margaret	1117 Candlenut Dr	Naperville IL	60540
714404007 Murashige Danl & Shu	100 Longleaf Dr	Naperville IL	60540
714207005 Clarke Troy & Jean	1124 Hidden Spring Dr	Naperville IL	60540
714207003 Szilagyi Bernard & Renee	1130 Hidden Spring Dr	Naperville IL	60540

ArcGIS Solutions

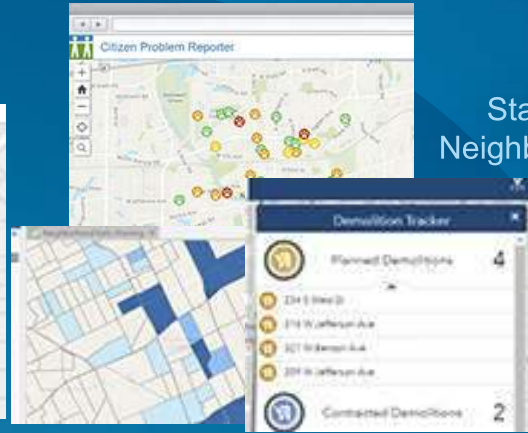
Industry-Specific Apps, Maps, and Tools . . . Extending Your GIS

Planning and Community Development Solution Components

Encourage Orderly Growth



Stabilize Neighborhoods



- Popular (500K Downloads)
- Extensive (450+)
- Open Source
- Fully Supported



Promote Vibrant Economies

Review Proposed Developments



Tools

Data Models

Apps

Workflows

Maps

Widgets

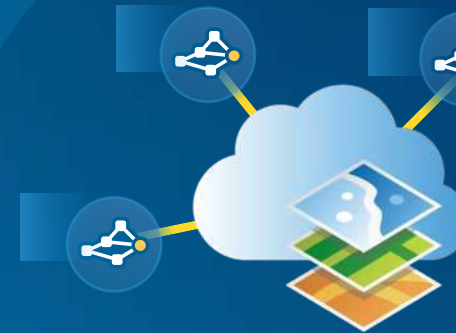
Add-Ins

Dashboards

Solution Configurations

New

Preconfigured



Ready to Deploy

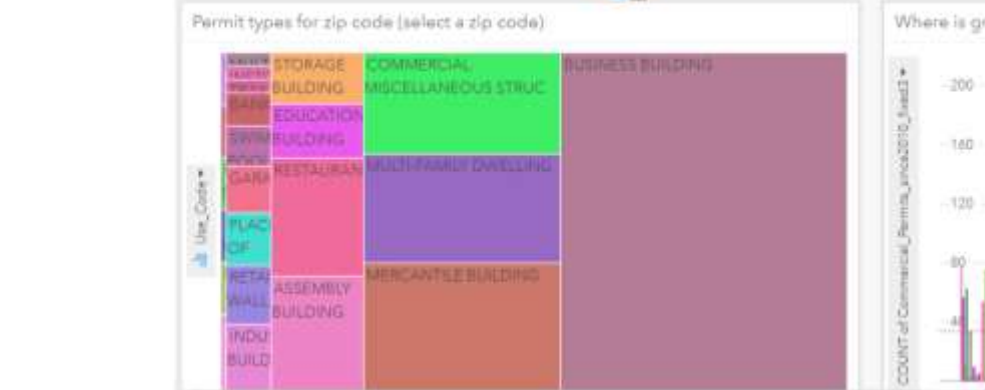
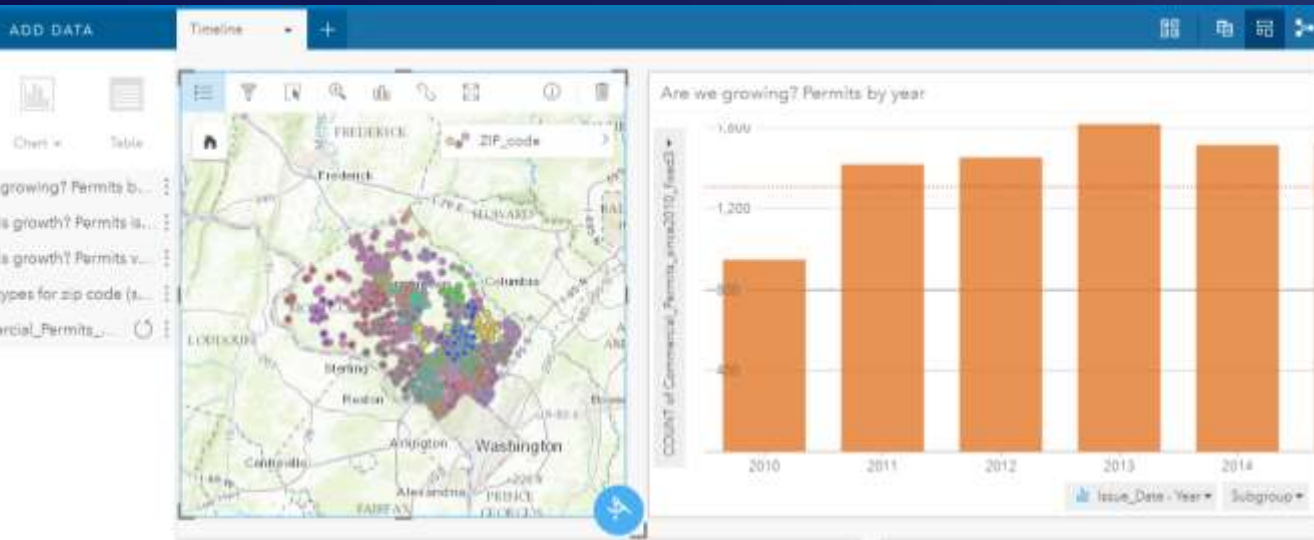
- Technology
- Workflows
- Implementation
- Training
- Support

*Rapidly Delivering Value . . .
. . . Implemented by Users, Partners, and Esri*

Field GIS | Taking ArcGIS Beyond the Office

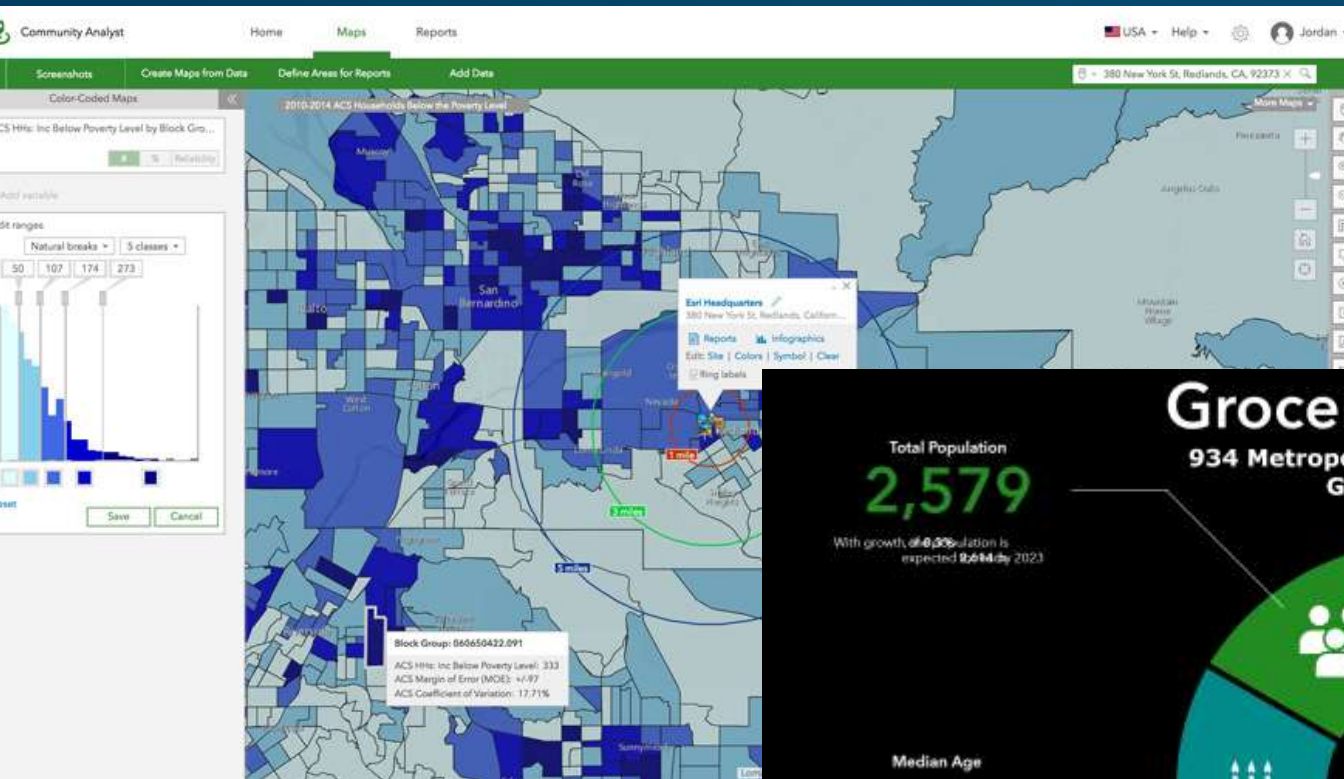


System of Insight for Community and Economic Development



Community Analyst

Understanding your neighborhoods...allocating resources fairly.



esri Custom Community Profile

THE SCIENCE OF WHAT?™

Earl Headquarters
380 New York St, Redlands, California, 92373
Rings: 1, 5, 5 mile radii

Prepared by Esri
Date: 24.05.2019
Language: 117.130027

	1 mile	3 miles	5 miles
Population Summary			
2000 Total Population	12,142	63,985	132,512
2010 Total Population	12,853	70,805	148,144
2017 Total Population	12,939	74,193	154,912
2017 Gross Quarters	143	2,265	3,618
2022 Total Population	13,312	76,584	160,118
2017-2022 Annual Rate	6.58%	6.68%	6.66%
2017 Total Daytime Population	24,043	85,274	186,088
Workers	17,032	46,314	100,745
Residents	7,011	38,960	85,323
Household Summary			
2000 Households	5,120	23,991	48,849
2000 Average Household Size	2.38	2.68	2.78
2010 Households	5,165	25,779	58,360
2010 Average Household Size	2.46	2.66	2.67
2017 Households	5,188	26,724	52,194
2017 Average Household Size	2.56	2.68	2.95
2022 Households	5,232	27,488	53,899
2022 Average Household Size	2.52	2.71	2.91
0-4%	0.45%	0.55%	0.57%
5-9%	3.88%	17,406	18,753
10-14%	3.34	8,211	3,38
15-19%	3,064	16,819	37,020
20-24%	3.18	3.25	3.41
25-29%	3,134	18,544	28,053
30-34%	3.21	3.27	3.43
35-39%	0.45%	0.55%	0.56%
40-44%	5,400	25,287	49,938
45-49%	31.0%	53.3%	54.3%
50-54%	63.8%	41.7%	38.2%
55-59%	5.2%	3.5%	6.8%
60-64%	5,622	27,748	54,288
65-69%	29.7%	52.1%	53.8%
70-74%	82.2%	40.8%	38.2%
75-79%	8.1%	3.1%	7.2%
80-84%	5,617	28,732	50,133
85-89%	28.5%	33.4%	51.9%
90-94%	62.7%	42.5%	41.1%
95-99%	8.1%	7.0%	7.8%
100%	5,778	28,629	57,047
20-24%	28.0%	48.8%	51.4%
25-29%	62.4%	42.7%	41.3%
30-34%	9.6%	2.3%	7.3%
\$0-\$19,999	\$91,302	\$66,463	\$64,461
\$20-\$29,999	\$84,752	\$74,006	\$71,442
\$30-\$39,999	\$40,219	\$36,453	\$35,093
\$40-\$49,999	\$308,522	\$423,972	\$424,436
\$50-\$59,999	\$29,271	\$34,420	\$31,534
\$60-\$69,999	\$31,946	\$38,190	\$35,042
\$70-\$79,999	31.8	34.8	34.0
\$80-\$89,999	38.4	36.2	35.1
\$90-\$99,999	33.3	37.2	36.3

Average Household Size is the household population divided by total households.
By birth, marriage, or adoption. Per Capita Income represents the income received by
each individual in the community.
and 2022 San Gabriel County, 2000 data from 2010 geographic.

July 20, 2019

Page 1 of 7

- Access to 1700+ variables
- Business Search
- Service Areas
- Reports
- Infographics

Grocery Store Site

934 Metropolitan Pkwy SW, Atlanta, Georgia, 30310

Total Population
2,579
With growth of **6.3%**, population is expected to reach **2,644** by 2023.

Median Age
34.2
26.2% are under 18, 83.2% 18-65 and 10.4% 65 or older.

Disposable Income
\$20,120
Household expenditure is \$29,264
\$1,408 more than retail, \$3,459 on top of \$1,022 retail.

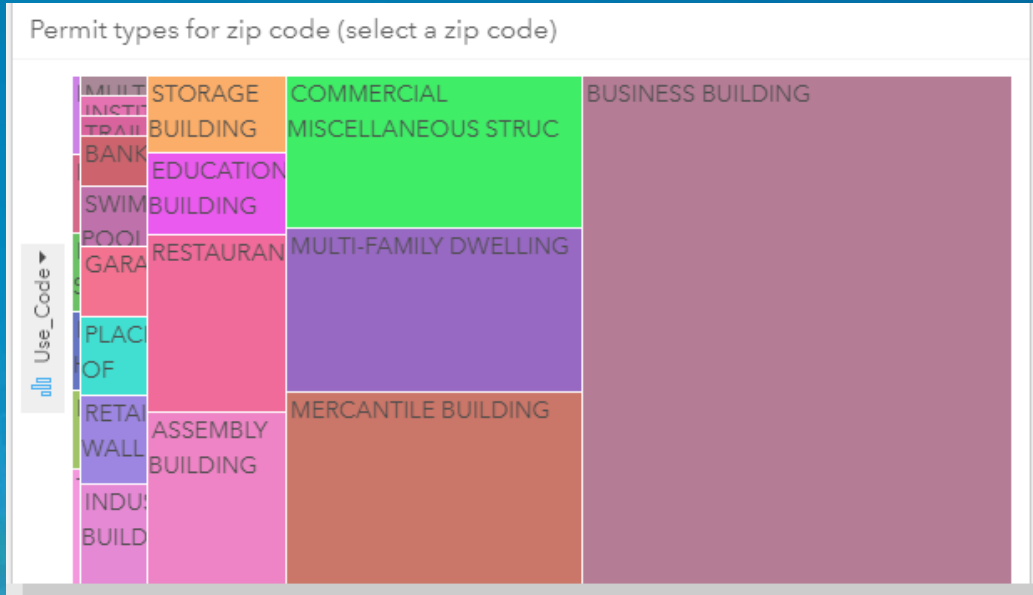


Total Households
890
An estimated **87.2%** live below the poverty line or more in disposable income.

Home Value
\$154,661
Home ownership rate is 28.2%
rental vacancy is 86.6%
vacant.

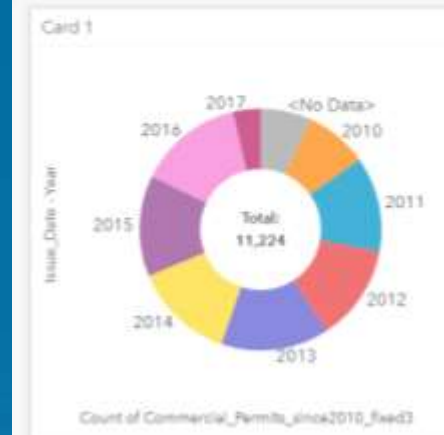
Household Income
\$22,740
With an average of 2.89 people per household, the per capita income is \$7,497.

Insights | Opening Location Analytics and Business Intelligence to Everyone.



Use_Code	COUNT of Commercial...
ASSEMBLY BUILDING	394
BANK	87
BIO SCIENCE	3
BOARDING HOUSE	-3
BUSINESS BUILDING	3,461
COMMERCIAL MISCELLANEOUS 1	1,187
EDUCATIONAL BUILDING	658
FACTORY	4
FENCE	10
GARAGE	56
HOSPITAL	143
HOTEL	44
INDUSTRIAL BUILDING	93
INSTITUTIONAL BUILDING	30
MERCANTILE BUILDING	1,019
MISCELLANEOUS (STRUCTURE)	9
MULTIFAMILY DWELLING	1,838
MULTIFAMILY SENIOR CITIZEN B...	31
MULTIFAMILY DWELLING HIGH RI...	10
MULTIFAMILY DWELLING LOW RI...	31
OWNERSHIP UNIT	1
PLACE OF WORSHIP	167
RESTAURANT	638
RETAINING WALL	185
SHED	28
STORAGE BUILDING	209
SWIMMING POOL	31
SWIMMING POOL & FENCE	5
THEATER	1
TOWER	14
TOWNHOUSE	680
TRAILER	91
UTILITY MISCELLANEOUS	1
Total 11,224	

- Mapping
- Analytics
- Charting



Transforming Planning Operations and Design

Enabling Smart Cities

Plans

Land Use
Zoning
Overlays

Projects

Buildings
Infrastructure

Indicators

Baseline
Suitability
Impact Models

Stakeholders

- Government
- AEC
- Real Estate
- Citizens
- NGOs

Track and Evaluate Projects



Immersive



Create
Planning Scenarios



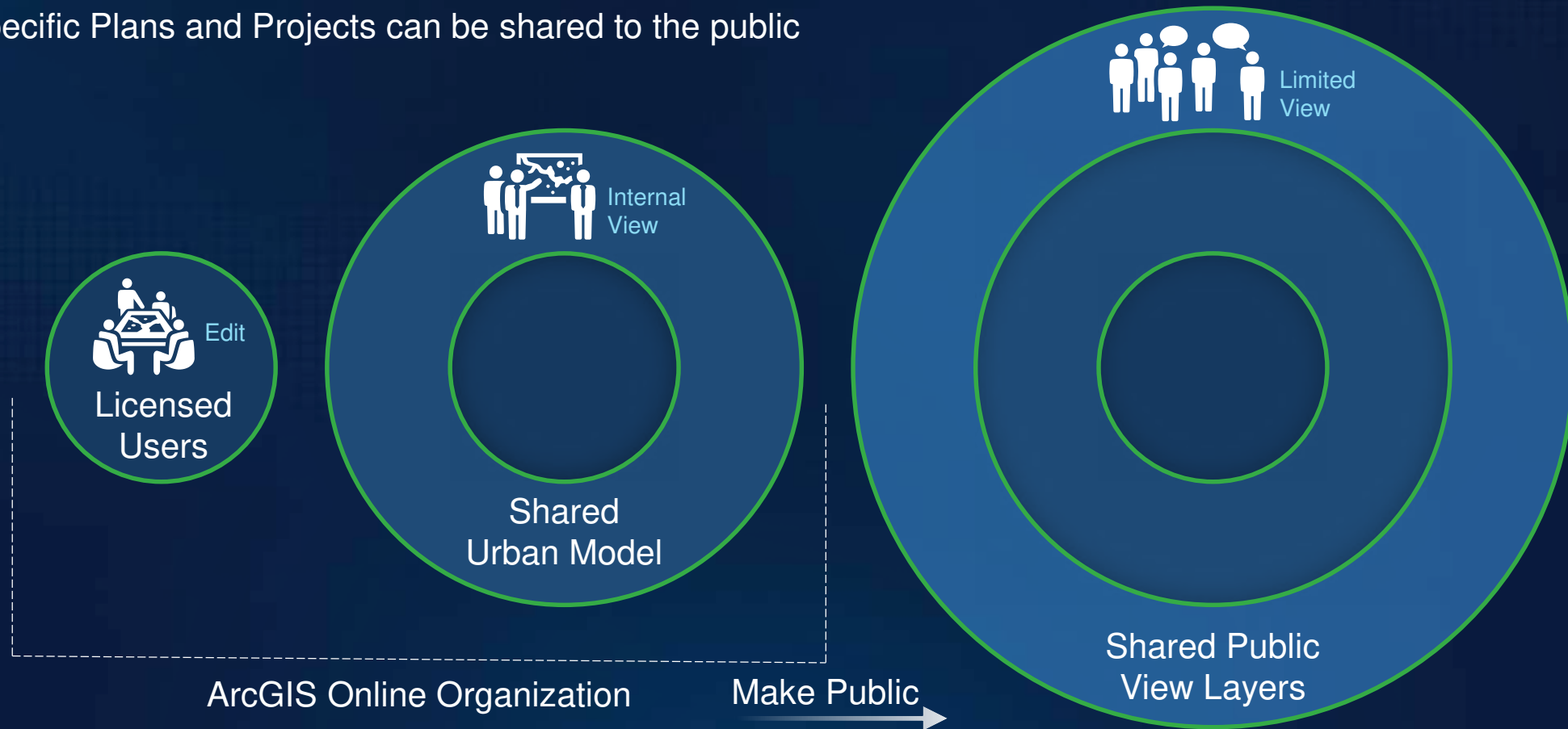
Report and Engage



Visual, Analytic & Interactive

Sharing ArcGIS Urban Across Organizations

- Share to a select stakeholders within the organization
- Specific Plans and Projects can be shared to the public




System of Engagement for Community and Economic Development



2018 Report to the Community



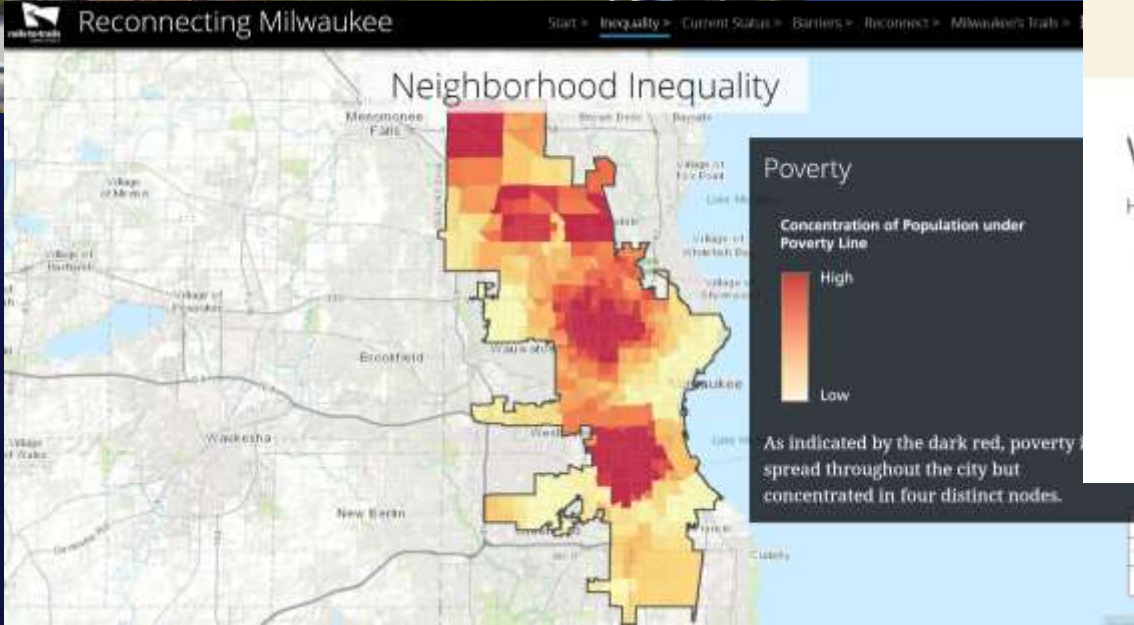
Esri Community Development



Intro


Everyone has a story to tell and we are sharing a particular policy that we will be sharing.

[Go to the Data](#)



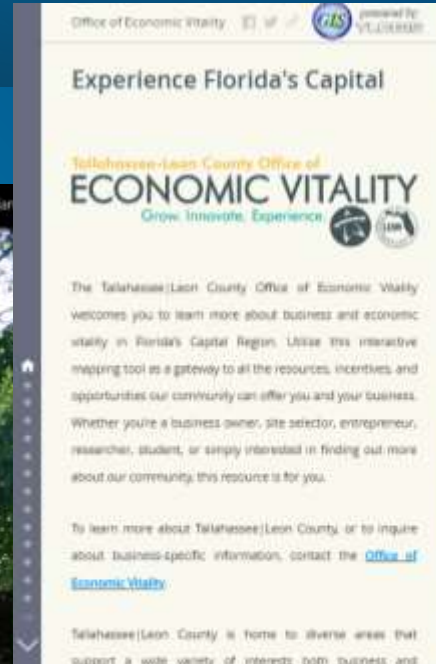
Where We're Going

Here are the next steps and how we need your help to improve this data:



Story Maps | Every planner has a story to tell...

Ready to Use

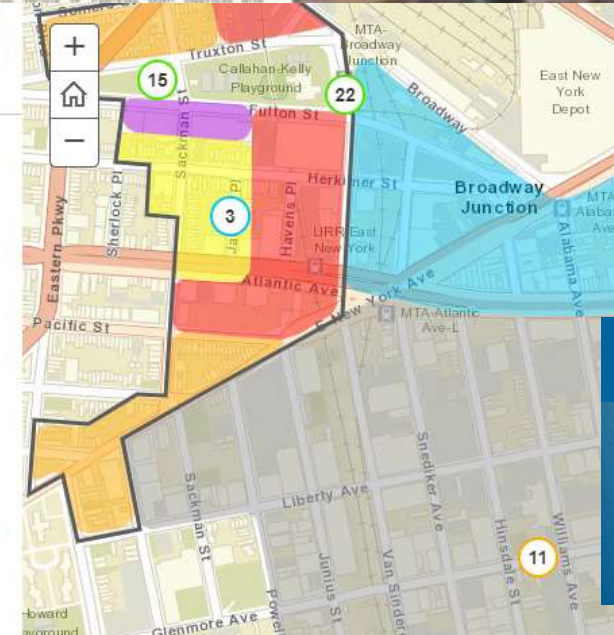


New York City Department of City Planning

East New York Neighborhood Plan

11. Bring Broadband Access to the IBZ

The City will bring affordable, high-speed broadband access to 250 businesses in the IBZ. The new broadband will greatly improve the reliability, capacity, and speed of internet and phone service.



Exponentially Growing

- Over a Million Stories
- 3,000+ / Day
- Millions of Views / Week

ArcGIS Hub | Is Transforming Community Engagement and Collaboration

Connecting Organizations & Communities of Interest

Initiatives

Website
Apps & Content
Engagement Tools
Crowdsourcing

Organize Communities

Identities and Groups
Sharing Data
Events and Discussions
Participation / Feedback

Open Data

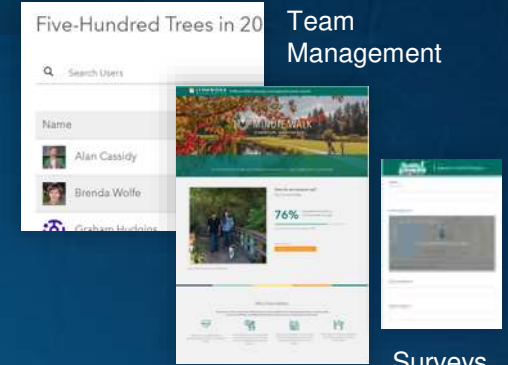
Multiple Formats
Open APIs
Maps & Charts

FREE



Stakeholders

- Governments
- Communities
- Universities
- NGOs
- Citizens
- Staff



Event Calendars



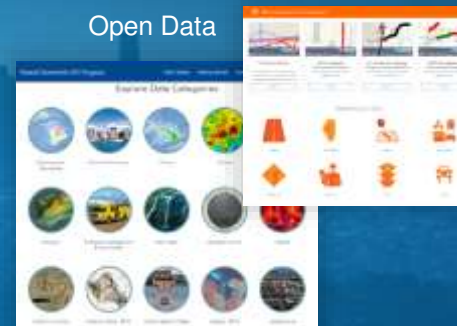
Initiatives



Performance Reporting



Open Data



A Smart System for Planning

- Gain high-level insight into planning activities
- Insure a data-driven approach to planning projects.
- Stay on the same page with planners, developers and the public.

Executive Office



- Visualize and Analyze Proposed Development
- Streamline Permitting and Review Workflows
- Develop and Model Land Use Scenarios
- Evaluate Buildout Analysis

Planners



Field Staff



- Conduct Code Enforcement & Site Inspections
- Review digital plans in the field.
- Optimize routing to multiple sites.

Public



- Be Informed about initiatives for Comprehensive Planning, Development Reviews, and Special Projects
- Access to purposeful open data
- Public Notification
- Project-Focused Public Surveys

A Modern Community Development Solution

Delivering a complete GIS for Planning and Community Development

Track and Evaluate Current Planning Projects

- Review, Visualize and Analyze Proposed Development
- Streamline Permitting and Review Workflows
- Support Digital Plan Submission
- Conduct Code Enforcement & Site Inspections
- Perform Land Use Inquiry and Assessment
- Measure Green Infrastructure Impact
- Report on Building Activity and Code Violations

Develop Partnership with the Community

- Inform Public About Priority Initiatives for Comprehensive Planning, Development Reviews, and Special Projects
- Launch Open Data Portal & Encourage Public Input
- Establish Public Notification and Monitor Opinions
- Conduct Project-Focused Public Surveys
- Support Charrette Activities

Prioritize Resilience Planning

- Assess Conservation and Preservation Activities
- Manage Acute Shocks & Mitigate Chronic Stresses
- Support Economic Sustainability Planning
- Promote Social Equity & Healthy Communities
- Analyze Green Infrastructure Impact
- Blight Remediation & Neighborhood Stabilization
- Establish Measurable Indicators

Support Long-Range Planning Initiatives

- Establish Data and Plan Foundations
- Develop and Model Land Use Scenarios
- Generate Environmental Impact Analysis
- Evaluate 3D Buildout Analysis
- Modernize Zoning Ordinances
- Asset, Resource, and Quality of Life Assessment

Stimulate Economic Growth

- Support BRE Efforts
- Attract New Investments
- Promote Destination Branding
- Manage Community Events



A Modern Community Development Solution

Delivering a complete GIS for Planning and Community Development

Key Takeaways

- The Web GIS pattern puts GIS functionality in the hands of non-GIS professionals.
- Web apps allow planners to be more proactive and data-driven in their efforts.
- Story Maps will be your best friend.
- 3D is no longer a luxury.
- It's not about public notification. It's about citizen engagement.
- Digital collaboration between departments and organizations is easy and secure.





esri

THE
SCIENCE
OF
WHERE

Keith Cooke

kcooke@esri.com

205-215-2832

@RKeithCooke



LinkedIn