Five Targets for Modernization

Quick Wins for Assessors with GIS

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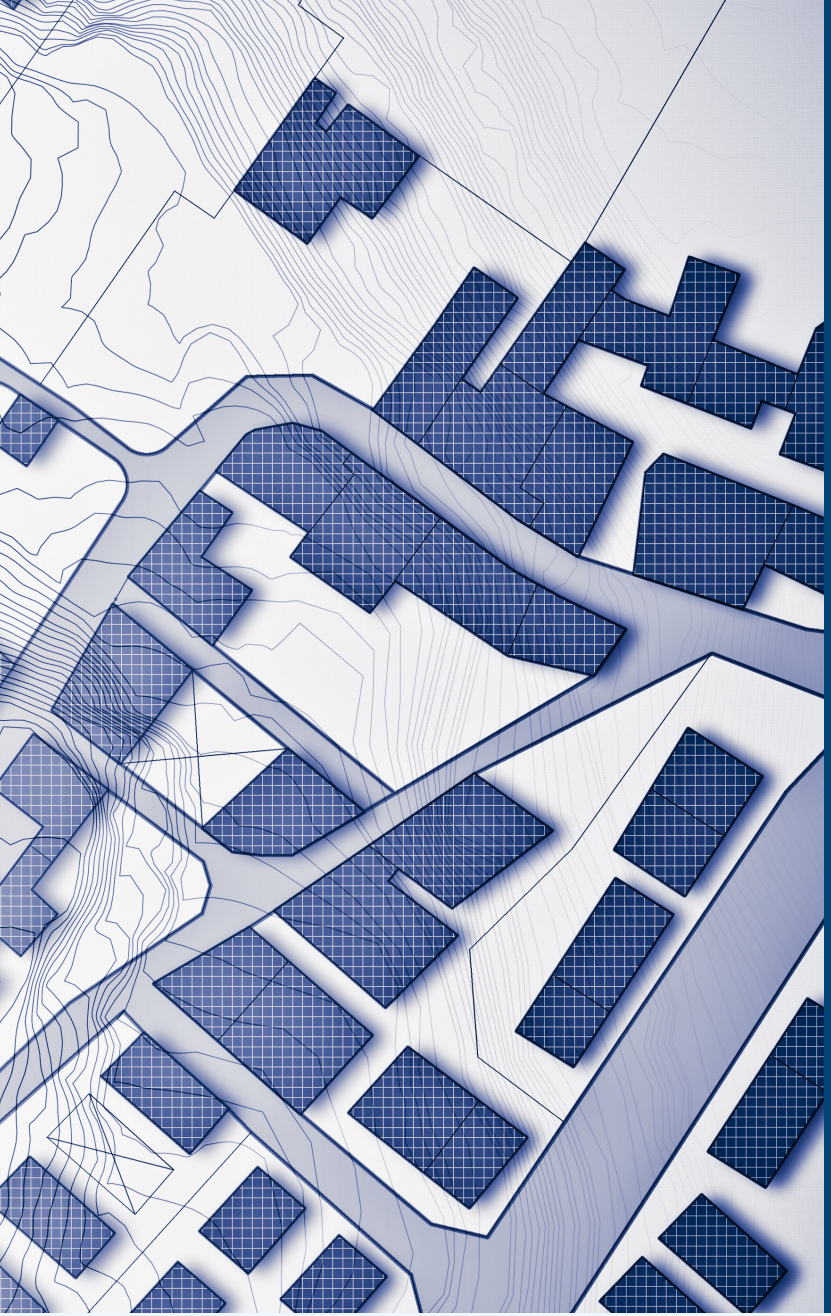
Introduction

There's a lot going on in the assessor's office: collecting data in the field, publishing property characteristics for government and the public to use, answering questions about property taxes, analyzing property values, responding to appeals, and keeping parcel data up-to-date and accurate.

As busy and maddening as this work can be, you may be wondering if there's a better way—a more modern way to apply technology to your work. What can you do to help staff be more efficient? How can you improve the quality of engagement with taxpayers? Can you improve analysis for better valuations? How can you reduce and better respond to appeals? Where should you invest in technology to make the biggest impact?

Follow along and discover the five key targets and how The Science of Where can help you achieve them.



5 Targets of modernization

Answer today's taxpayers
Instantly provide tax, assessment, and value information to constituents

Minimize appeals
Streamline the process and defend values

Optimize field operations
Empower your field staff with tools for efficiency

Dive deeper into your data
Simplifying your work and deliver accurate results

Leverage industry-standard workflows
Centralize your boundary, zoning, land-use and, assessment data, and much more

Answer today's taxpayers

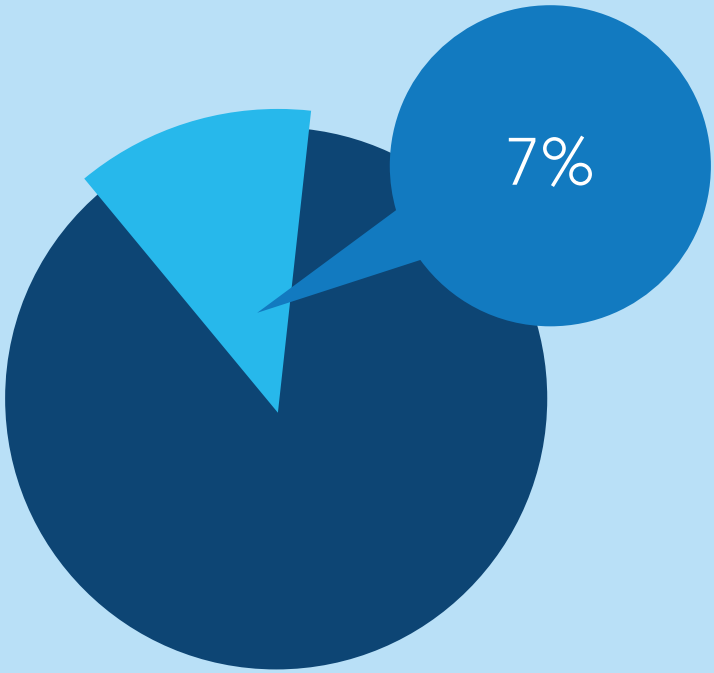
Instantly provide tax, assessment, and value information to constituents

How we interact with the public has changed dramatically in just a few years.

Not too long ago, assessors were using paper tax maps and property record cards. Then came PDF maps, and then online maps made it easy to access property information by using a web browser. However, modern public engagement extends far beyond a web map of parcels, property characteristics, and property values.

Today's taxpayers and citizens expect answers to their questions to be found easily and for the information to be current and complete. Searching online isn't about finding raw data; it's about understanding context and having your questions answered.

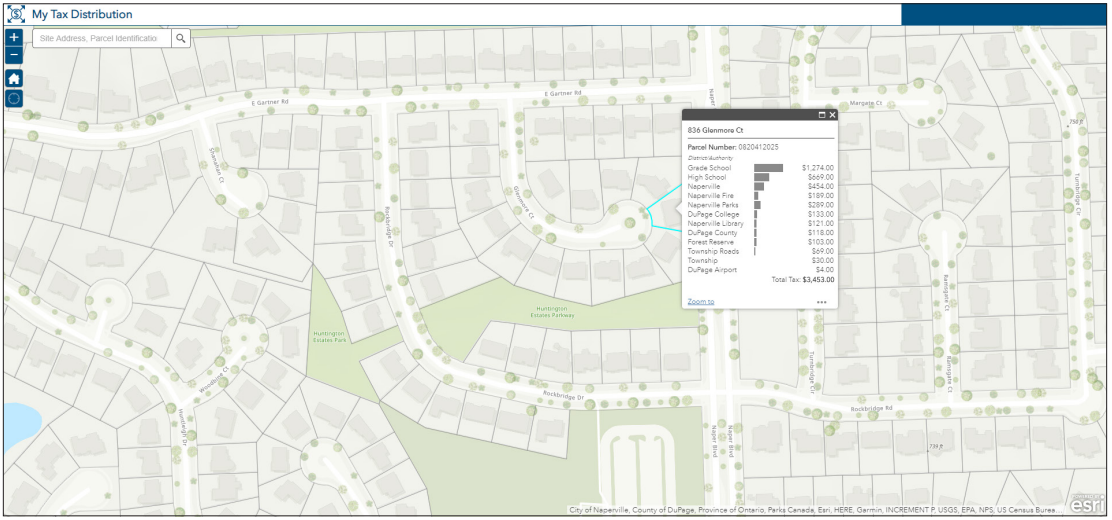
"Few Americans think governments are very effective in sharing data they collect with the public: **7%** say local governments share data very effectively, with another 45% responding somewhat effectively."



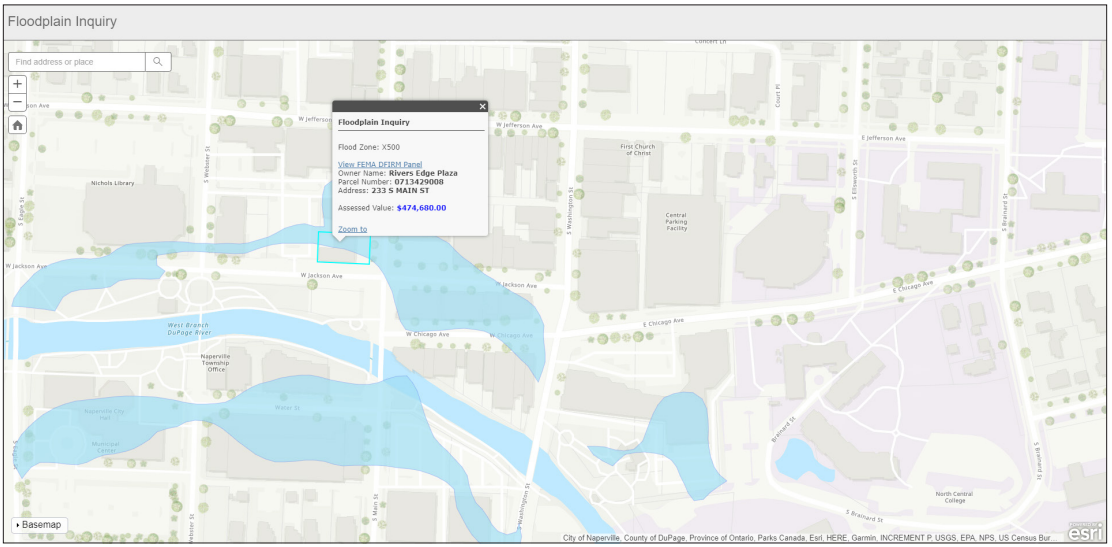
"Americans' Views on Open Government Data." Pew Research Center, Washington, DC (April 21, 2015) www.pewinternet.org/2015/04/21/open-government-data/

Where do my property tax dollars go? This may be one of the most asked questions of assessors. So, why not provide a simple web map that can answer that question? While you're at it, why not make that web map accessible to anyone using a common web browser on their computer or smart device?

For example, what if you want to know which properties have recently sold that are like your property? In an instant, a web map can show you not only where comparable sales have occurred, but you also get an immediate sense of proximity and tax revenue distribution across your community. Want to know if a property is in the floodplain? A simple yes or no answers some of the question, but it's incomplete. You need context to get a more satisfying answer. With a web map, you can **visualize and investigate every attribute about the property** and the floodplain simultaneously.



The *My Tax Distribution* app conveys to the public where property tax is being distributed.

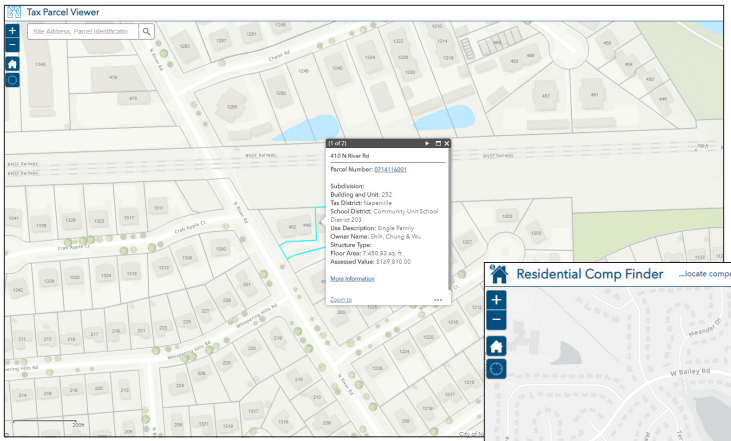


The *Floodplain Inquiry* app is a great tool for citizens and prospective property owners to compare structures and parcel boundaries to the flood extent.

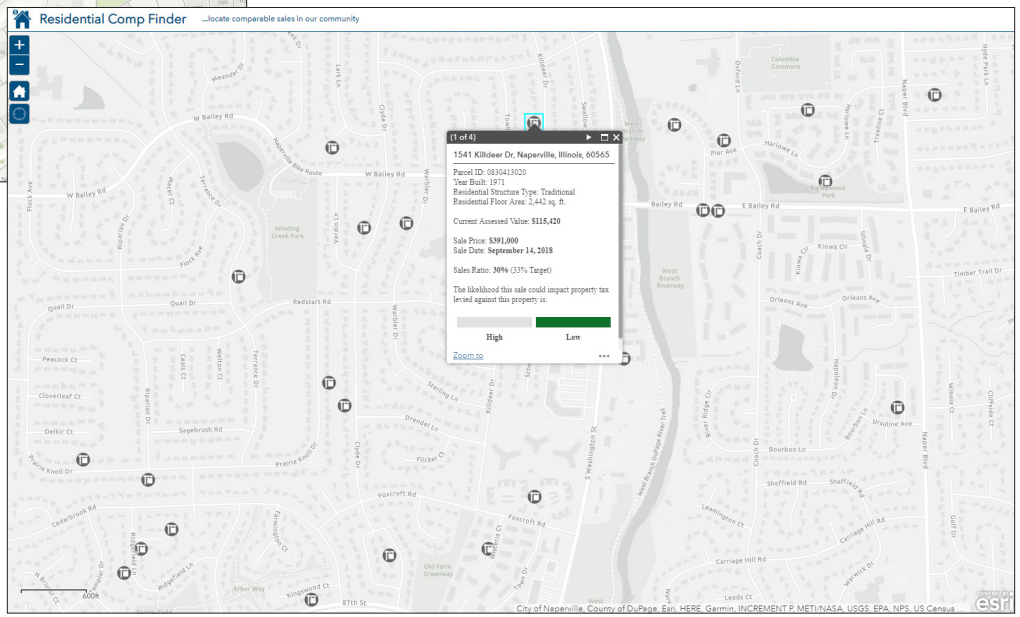
These new capabilities can help establish a dialog within your community to improve responsiveness, transparency, and engagement. Taking the initiative to inform those you serve builds rapport and trust and allows citizens to count on their government to be there when they need authoritative information.

Web maps make it easy to understand the relationships between a piece of property and its

- Physical surroundings.
- Tax revenue data.
- Change of value over a period of time.



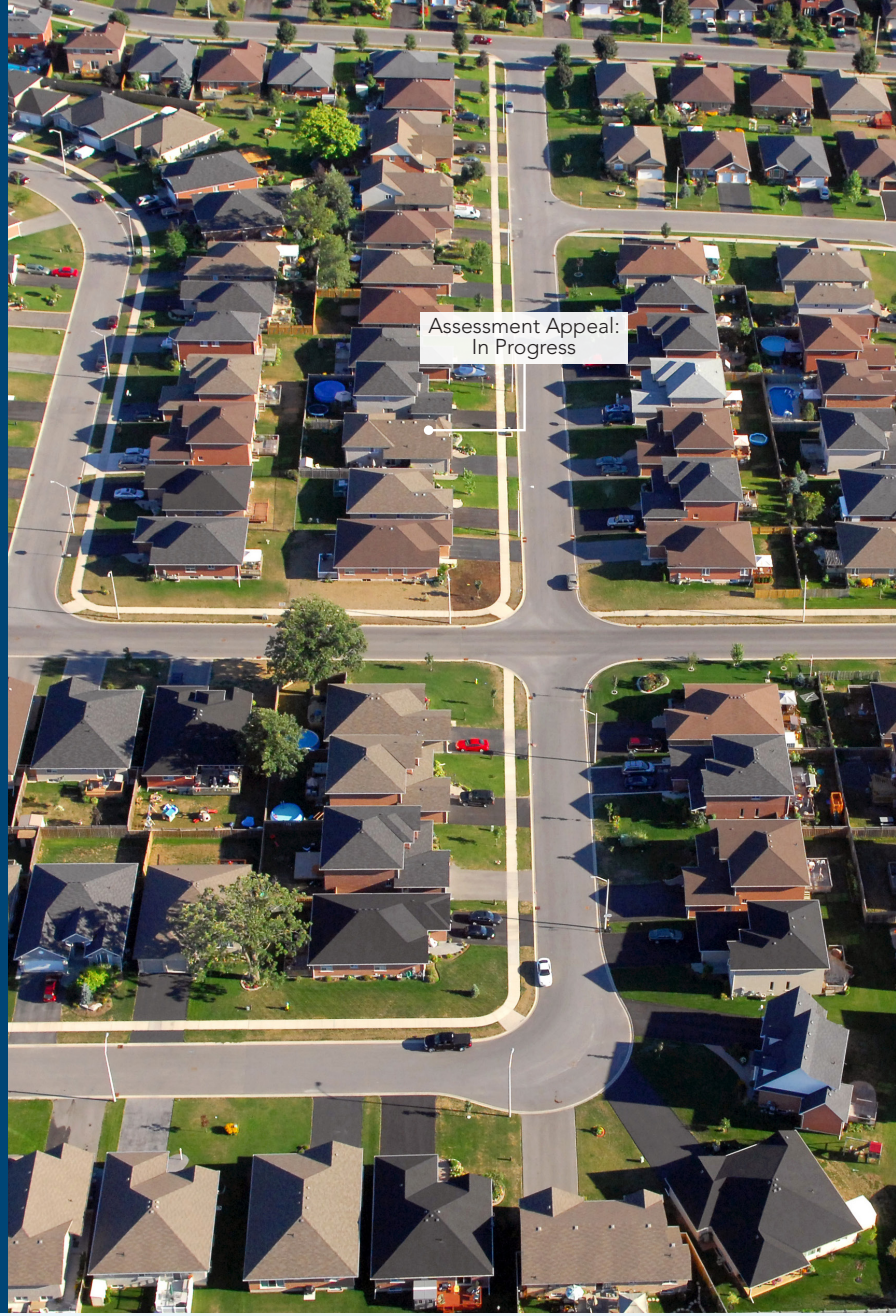
The *Tax Parcel Viewer* app is used by the public to access property tax and assessment information.



The *Residential Comp Finder* app is utilized to quickly find comparable sales and related property information.

Minimize appeals

Streamline the process and defend values



Appeals…
not as bad as you think

Defending against tax and value challenges costs local governments a significant amount of money, resources, and time every year. **Better analysis delivers more accurate values, helping to *minimize* appeals.** Providing useful data, analysis, and comparable sales data helps too. But appeals occur nonetheless. Having the ability to investigate where the appeals are happening and whether there are discoverable patterns can change your approach to these problems. It might even change the way you work and how you communicate with the public.

A geographic approach helps you simplify the appeals process and provides tools to oversee and analyze appeals with ease. It also delivers the ability to communicate how the value is determined; show the location and distribution of comparable properties, identify property sales and foreclosure trends in the area. Digital maps provide the means to **communicate complex analysis and deliver a greater understanding**.

Optimize field operations

Empower your field staff with tools for efficiency

Turbocharge your workforce

Optimizing field operations efficiencies is more than simply routing. It's about organizing data to optimize work assignments; for example, you can use web maps to cluster properties by type (i.e., residential, commercial, and industrial) so the appropriate staff are assigned. Then, **using routing capabilities (the same routing that major delivery companies use today)**, you can save a significant amount of time and reduce vehicle wear and fuel costs.

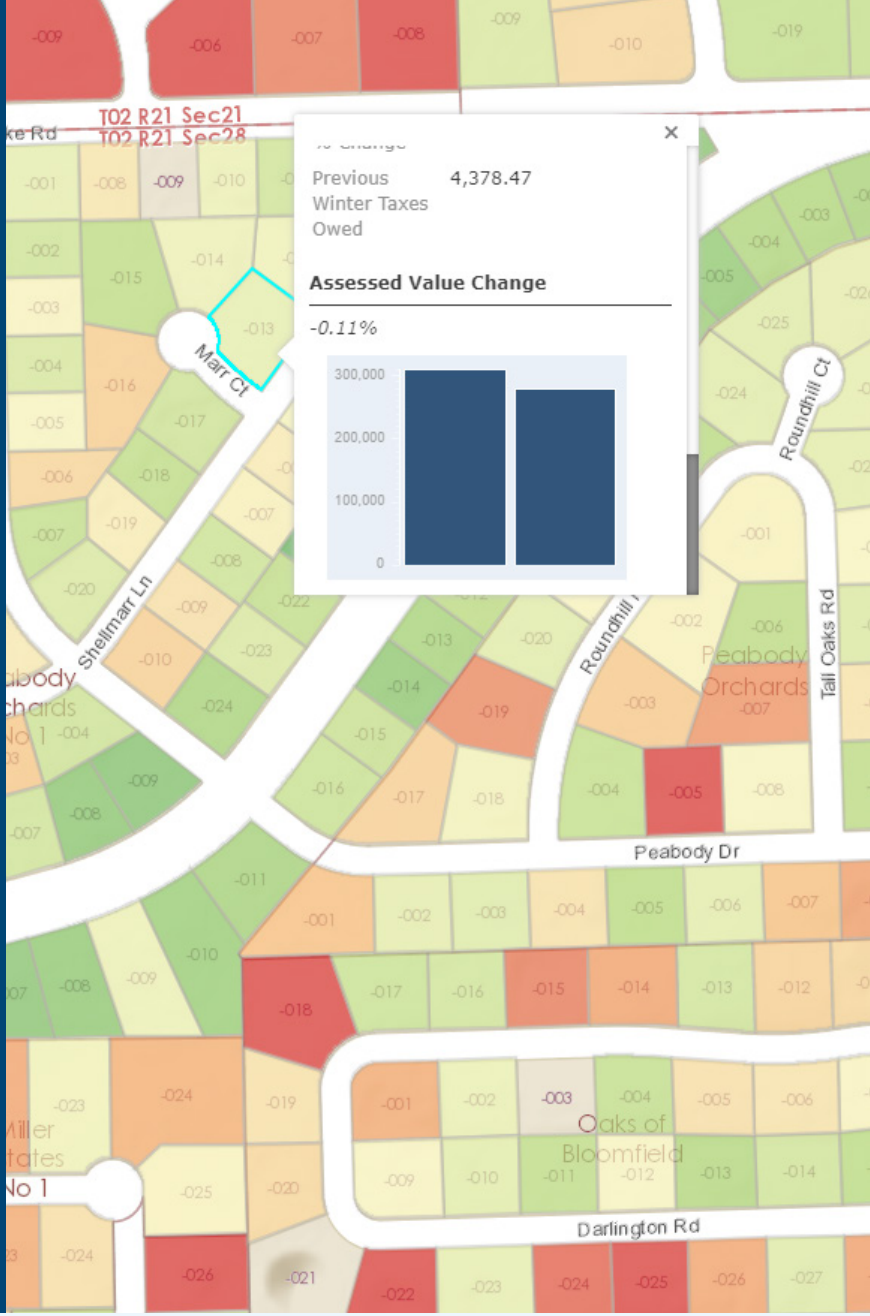
Geographic information system (GIS) dashboards deliver information to the assessor's fingertips, helping them make informed decisions by closely monitoring key performance indicators (KPI). Your staff resources and scheduling are driven by real-time data—the *who*, *what*, *when*, and, perhaps most importantly, *where*—helping you meet regulatory requirements and follow internal guidelines.

The work is the same, but how it gets done shifts to a geospatial way of thinking, a way that everyone intuitively understands. Implementing a field operations scheduling system that optimizes your staff time by using location and routing appropriately will deliver **tangible and measurable results**.

- Assign/Change field assessment inspections to personnel
- Know the status of work at all times
- Provide feedback and update those in the office instantaneously

Dive deeper into your data

Simplify your work and deliver accurate results



GIS puts location to work for you

Assessors go through a painstaking amount of work analyzing data to develop assessments that directly relate to market value. They collect a lot of data for this and model it to understand how property characteristics affect value.

The **power of location** is often overlooked in this analysis or not used to its full extent. You've no doubt heard the mantra, "location, location, location," emphasizing the importance of location, but using location analytically to help determine and support values and improve existing modeling techniques makes that old saying even more meaningful today.

Stop the data crunching…

Comprehensive spatial analysis delivers a better understanding of value. Leveraging geographically weighted regression and using new, advanced charting and graphing tools help you improve values and **deliver more accurate assessments**, leaving less property undervalued.

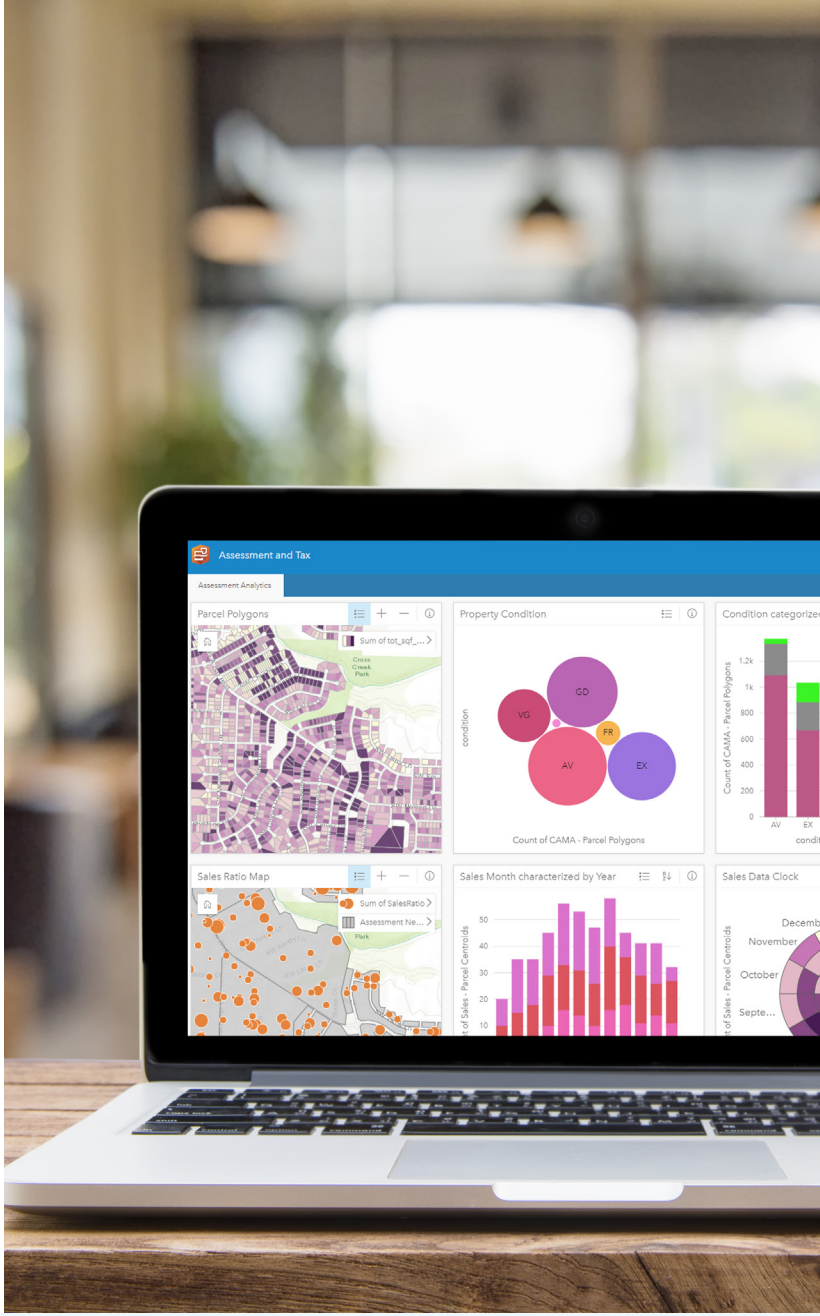
Analyze property orientation and sun exposure, track shadows, and investigate elevation to assess the positive or negative impact of those things on the value of property. Working in a full 3D GIS environment allows you to simulate views and understand how location, both horizontal and vertical, impacts values.

and start the problem solving

Visualize the impact of sales, foreclosures, and assessment appeals on property value in a neighborhood or tax district.

Investigate your data with histograms and trend analysis, explore data variability and clusters, and visualize spatial correlations.

Improve data quality by identifying outliers and displaying on maps the results from tabular queries that you can customize.



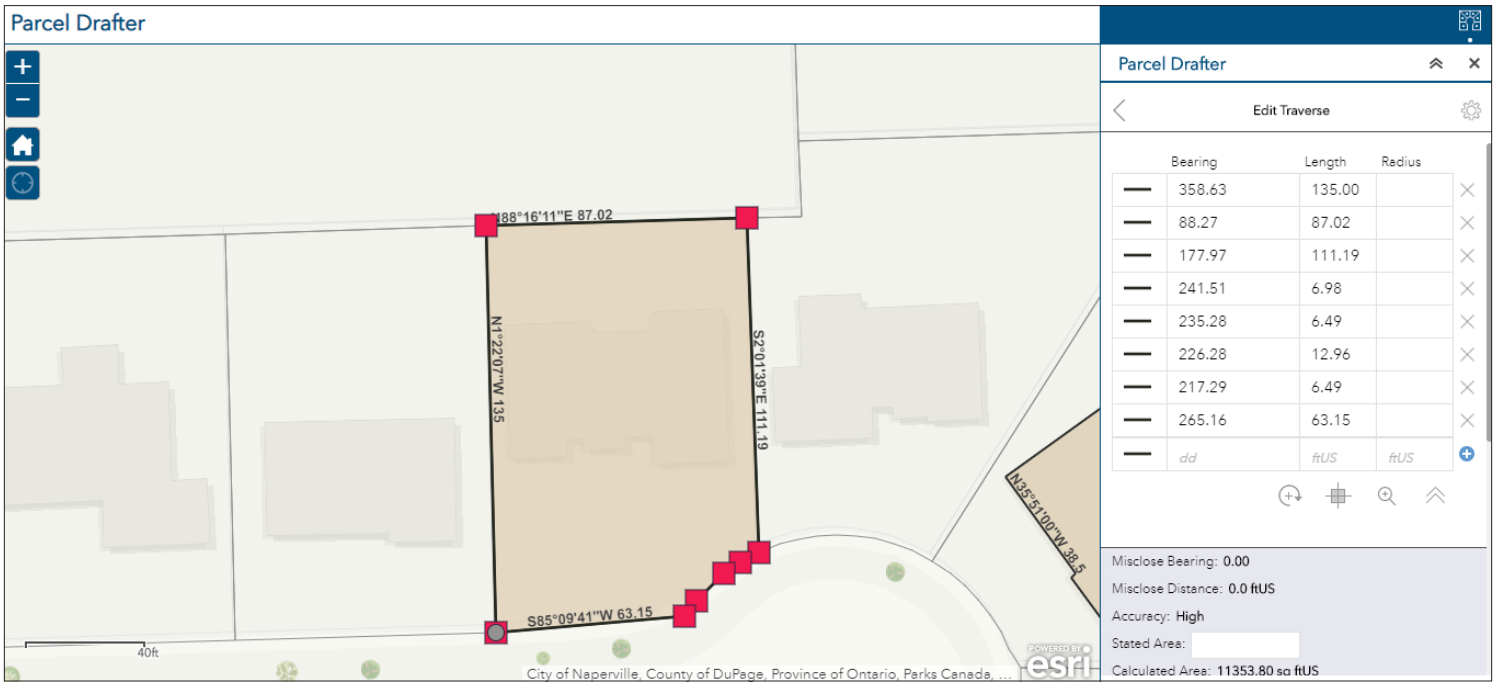
Leverage industry-standard workflows

Centralize your boundary, zoning, land-use and assessment data, and much more

This includes parcel data

Parcel data is perhaps most in demand in local government. Everyone needs parcel information. Everyone wants parcel data to be accurate. In jurisdictions where there are a lot of property transfers and subdivisions, **GIS tools are particularly useful for modernizing parcel management**. Many offices use homegrown workflows cobbled with whatever technology was current when work with digital parcels began.

Managing parcel data requires much more than just drawing lines. And as quality and accuracy demands have evolved, so too have the tools for managing parcels. A standardized system specifically designed and built for managing parcels is crucial; it adds efficiency, improves data quality, and manages data integrity. Implementing modern parcel management **eliminates the need for custom training** and custom software applications



Parcel Drafter is an easy-to-use web-based app that speeds parcel data entry.

Redefine what you do

Driving engagement with the public, delivering an open data portal, creating new web maps, and elevating your exposure may seem to be a lot to take on. **It's not**.

It may appear that implementing advanced spatial tools for managing field operations won't deliver efficiencies. **It will**.

Using advanced spatial analysis and implementing new ways to visualize data to understand trends and patterns and detect outliers may seem like they're beyond what your office can do. **They're not**.

You may believe that you don't have the time to improve your appeals process and better communicate internally and with taxpayers. **You do**.

The timing may not seem right for you to modernize your parcel editing and managing environment. **But it is**.

All the arguments you just read (or may have thought of) are problems that ArcGIS can solve. GIS leverages the *where* component in your data. GIS is not only a desktop application. GIS is not just a server, cloud, or group of apps. GIS is not solely an advanced analysis tool. GIS is not only about data. GIS is not just a visualization tool. GIS is all these and a lot more. It's your platform for modernization. And it's not just for the GIS professional anymore. GIS is for everyone, including assessors.

Are you ready to modernize?

Get Started

About Esri

Esri, the global market leader in geographic information system (GIS) software, offers the most powerful mapping and spatial analytics technology available. Since 1969, Esri has helped customers unlock the full potential of data to improve operational and business results. Today, Esri software is deployed in more than 350,000 organizations including the world's largest cities, most national governments, 75 percent of Fortune 500 companies, and more than 7,000 colleges and universities. Esri engineers the most advanced solutions for digital transformation, the Internet of Things (IoT), and location analytics to inform the most authoritative maps in the world. Visit us at **esri.com**.

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