

GIS Speeds Parcel Editing and Map Deployment in Osceola County, Florida

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Osceola County, Florida, is in a unique position, both figuratively and literally. Neighboring the tourist mecca Orlando, the county collects much of its revenue from property-owning residents who immigrated for the attractions and strong economy. The property taxes that homeowners pay are critical revenue because Florida does not collect a personal income tax (Florida is one of the few states that don't).

With a growth of 40,000 additional residents projected over the next five years, the Osceola County Property Appraiser's Office must squeeze every dollar out of that revenue it can. To prepare for an increase in parcel edits and quickly create appraisal maps for current and future homeowners, the office transformed its core GIS into a location-based platform, halving parcel editing time and saving money.

Looming Problem

Last year, the office realized its eight-year-old GIS platform would soon experience performance difficulties that would threaten the accuracy of its appraisal work. With a budget largely dependent on a 6 percent property tax revenue, the state expected accurate redrawing of parcels for correctly calculating property taxes for the county. But because its parcel data management tools consisted of fragments of software, the Osceola County Property Appraiser's Office could not meet that expectation. The county's lots, survey framework, subdivisions, and parcels were too disorganized and could not

be cleanly maintained. Staff members were also still using and manually updating static paper and PDF maps when residents made map requests. Unable to serve taxpayers with information or share data with other county agencies and offices, the Appraiser's Office needed a location-based platform that connected all its systems and efficiently converted its appraisal information into live maps.

By migrating its paper and PDF maps to live interactive maps, county staff now have to make applications only once; the maps update themselves and render on any device.

The office's inability to publish data wasn't for lack of trying. Some GIS staff attempted to create apps from scratch with Osceola County's legacy system—a truly Sisyphean task given the advancements in web map publishing since 2008 (when the county's GIS was established). More often than not, staff ended up with buggy, duplicate *solutions* that literally solved nothing.

Consultation Sought

Exhausted from duplication of effort, Osceola County Property Appraiser Katrina Scarborough and her team contacted Esri and GIS consultant Bruce Harris and Associates for a resolution to these issues. They conducted a needs assessment that, unsurprisingly, dis-

covered that the county's parcel data needed a cleaning, including full data standardization.

"Fragmented, unstandardized parcel data is a common problem in many appraisal offices," says Harris. "Updating all parcel data and then converting it to Esri's standard Local Government Information Model (LGIM) makes that data easily sharable and consumable."

Conditioning the data for cartographic expression would prove to be the key for more precise parcel editing at the county.

A recommendation was also made for a full implementation of the commercial off-the-shelf software ArcGIS for Local Government land records solutions—specialized, preconfigured web maps available in ArcGIS Online that would display the clean LGIM data as feature layers.

"Ready-made apps requiring little configuration eliminated the need to code solutions," says Harris. "These maps would be the access points for visitors to obtain county property information."

Gallery of Apps

A new website was created for the appraiser's office that included a scrollable map gallery. The gallery gives users access to a variety of fast-performing, focused web maps. Because property value transparency is a critical service in any county, the consultant and county staff first created the Residential Property Value Changes map. As shown in figure 1, this dashboard map viewer visualizes the impact of sales,

foreclosures, and assessment appeals on property values in a neighborhood or tax district. The dashboard juxtaposes three property value maps from three consecutive years for easy comparison.

“That’s the most useful tool we have—it’s easy for citizens to compare the differences in property value that way,” says Scarborough. “If a picture is worth a thousand words, imagine three pictures side by side. That tells a big story about the dynamics of the home market.”

Soon, web maps at Osceola County were being created in a matter of hours rather than weeks. By migrating its paper and PDF maps to live interactive maps, county staff now have to make applications only once; the maps update themselves and render on any device. Figure 2 is an example of easily accessible property sale information in pop-up map windows.

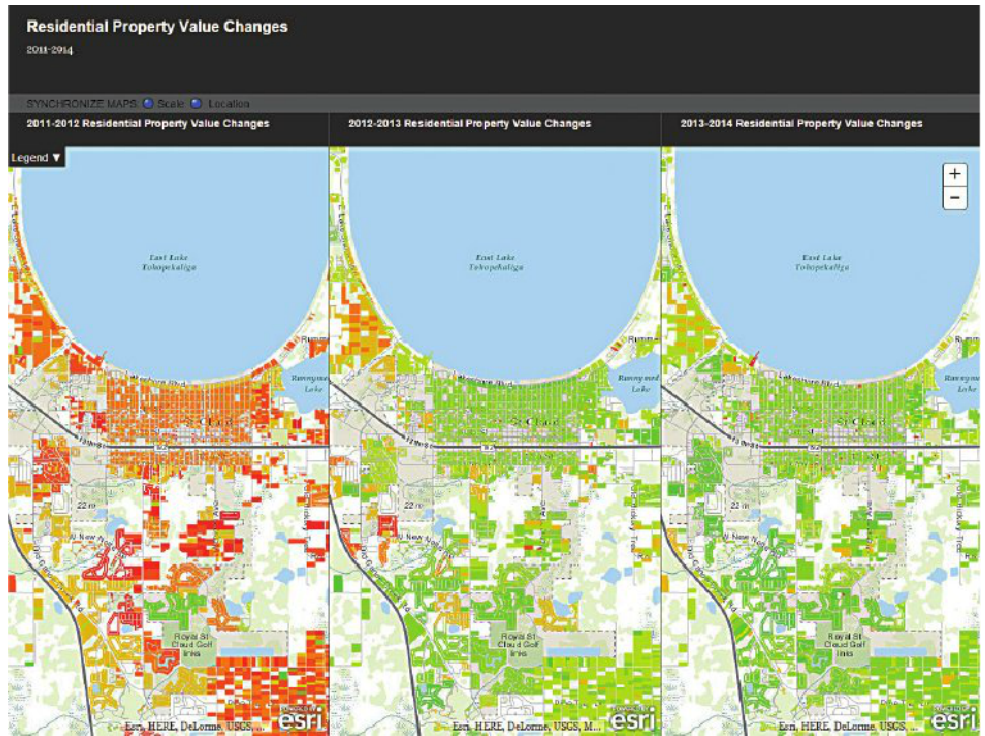


Figure 1. The Osceola County Residential Property Value Changes map juxtaposes maps from three consecutive years for easy comparison.

Fifty Percent Faster

Within a few weeks of implementation, Osceola County transformed its core mapping system into an enterprise location-based platform. The county experienced a 50 percent increase in parcel throughput and reduced counter traffic as citizens opted to view web maps instead of calling or visiting the office. By building a more connected and transparent system, the county earned renewed trust and confidence from Osceola County taxpayers.

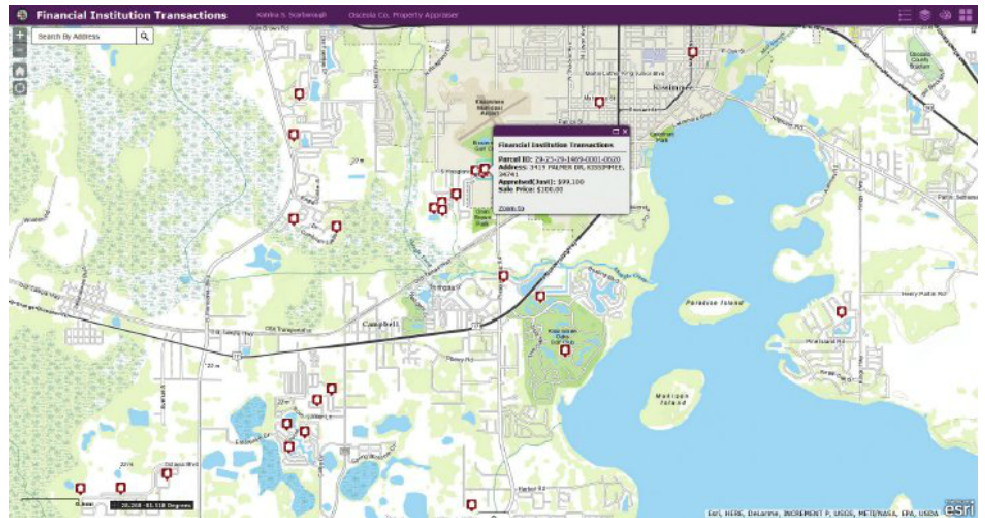


Figure 2. Pop-ups in the Osceola County Financial Institution Transactions app show details of individual property sales in the county.

Katrina Scarborough was elected Property Appraiser of Osceola County, Florida, in 2008 and re-elected in 2012. A 25+ year veteran in the property appraisal field, Katrina has worked in almost every area of the Appraiser’s Office. She briefly left the Appraiser’s Office to work on the senior management staff for Tax Collector Patsy Heffner and in 2006 returned to the office to serve as Chief of Staff.



Katrina is a Certified Florida Appraiser, Certified Cadastralist of Florida, and Master Cadastralist of Florida. She is a member of AAO, the Florida Chapter of IAAO, the Property Appraisers’ Association of Florida, and the Florida Association of Cadastral Mappers. She also is Vice President of the Property Appraisers’ Association of Florida.

Osceola County earned a 2015 Esri Special Achievement in GIS Award for its success in saving time and money with GIS.