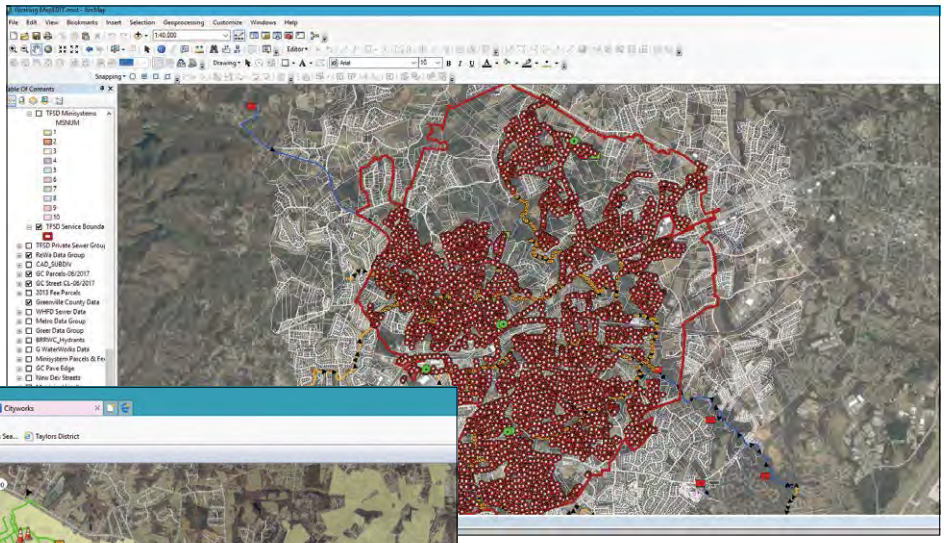
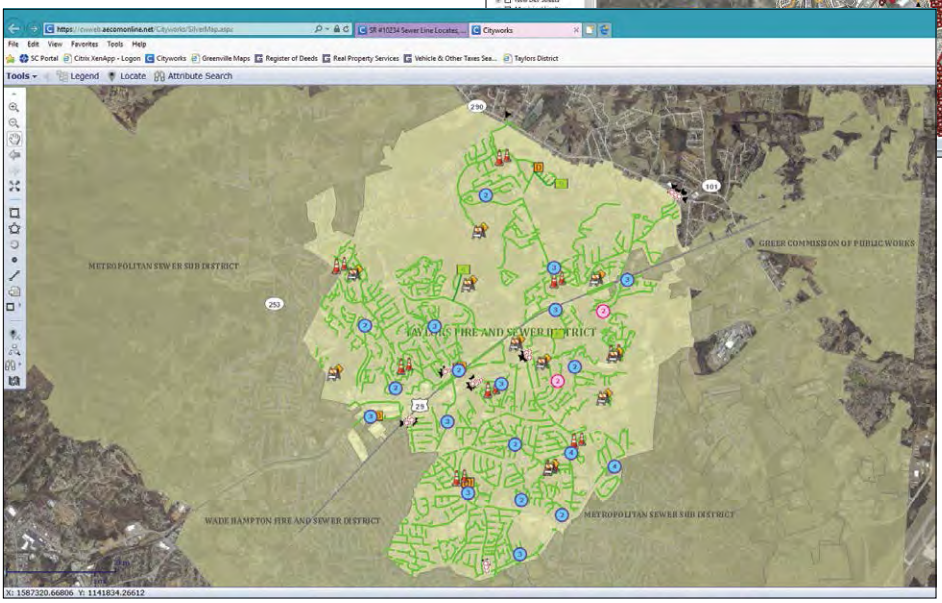
Esri News
for State & Local Government
Fall 2017

Calm, Collected, and I/I Compliant with a Little Help from Digital Technology

Taylors Fire and Sewer District serves about 11,000 parcels in central Greenville County, South Carolina, and is responsible for the wastewater collection system that includes nearly 130 miles of gravity line and 3,602 manholes. Taylors' service territory is divided into 10 minidistricts. One of those, Mill Hill, "was our main problem area," said Samantha Babb, director of sewer services. Her department knew its circa-1920s infrastructure was seriously past its design life and a likely culprit in tremendous flow rises during heavy rain.





The Challenge

"Everything at that point was just guessing," Babb recalled. Taylors had nine required in-line flow monitors and some spotty legacy analog inspection records. Babb's staff realized that they had no substantial empirical data about their system's problem spots. "Until we did postwork monitoring, we didn't know the actual I/I [that] Mill Hill was responsible for, but we knew it was substantial."

Babb's team knew "just guessing" wouldn't make them compliant; they'd need to inspect their entire system; identify problem areas; then plan, schedule, and budget for rehabilitation. They began monitoring with flow meters in 2006 when the inflow and infiltration (I/I) reduction order came down. They quickly estimated how long initial CCTV inspections would take and started them immediately.

Taylors got a $2 million state revolving fund loan to subcontract cured-in-place pipe (CIPP) repairs and pipe replacement, but all in-house cleaning, inspection, and preparatory work were going to

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Calm, Collected, and I/I Compliant with a Little Help from Digital Technology

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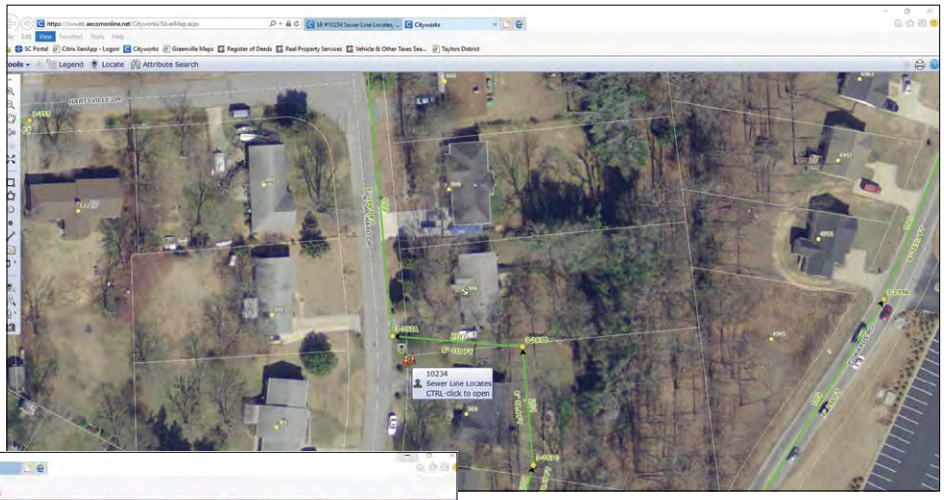
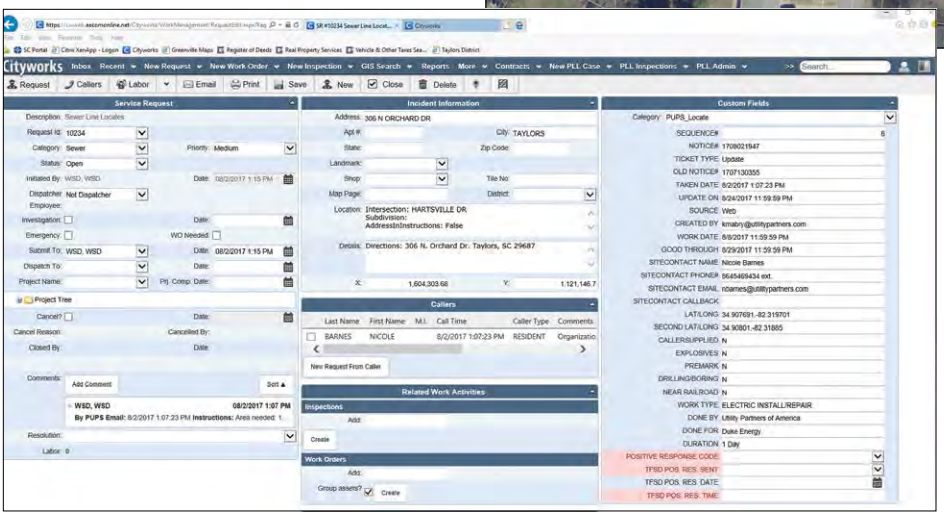
be labor-intensive and costly. Taylors realized that the one way to keep costs as low as possible would be to switch to all-digital CCTV inspection systems. This would allow Taylors to

- Realize economies of scale when all units could connect and share data.
- Decrease the significant person-hours required by clunky analog systems.
- Eliminate errors introduced into analog data through less accurate analysis and reporting processes.





Operation supervisor Gary Cantrell remembers of the predigital era, "Every time we'd find something [during a CCTV inspection], we'd have all the issues written on separate sheets of paper. [To find something,] we'd hunt through folders by line and segment numbers for still photos, then lay them all out and try to figure out which was which." Going all digital was a no-brainer, but it meant significant changes to existing equipment.

The Partners

In 2008, Taylors staff made their first move toward digital, replacing an old Pearpoint rig with a Ford F450, outfitted with a CUES K2 Base Station, TV reels, and software from the old truck: Pipelogix Inc.'s Flexidata, its Digital Video Survey (DVS) module; the existing geographic information system (GIS) package; and Windows 7 OS. In 2010, Flexidata was rebranded as Pipelogix, and Taylors licensed its Esri GIS software module. Taylors also turned to Esri Platinum partner Cityworks to manage all the assets.

The Solution

Onboard inspection software now includes Pipelogix with Lateral Module, and the Cityworks/ArcGIS computerized maintenance management system (CMMS) integrated digital utilities management package has replaced the old MS Access database-generated hard-copy orders. "Our crew uses Cityworks to locate and track assets, manage workflow, and prioritize repairs," Babb said.

Taylors quickly realized that it would be beneficial to port the Pipelogix information directly to Cityworks, allowing upper management to review work orders as well as work that is in progress while analyzing completed work. "It also allows us to have all the information about our CCTV inspections in one place," Babb said.

The Results

Pipelogix software also enables compliance with Taylor's new SC811 safety hotline program, which requires property owners to call in before they dig to avoid striking underground utilities. The subdistrict processes more than 500 of these work tickets monthly.

Along with upgraded equipment, the new software allows Taylors' staff to focus CCTV inspection and reporting efforts where they are most effective for I/I reduction. The efficiency has paid off, allowing them to exceed their annual goal of inspecting at least eight miles of line annually.

The project is ahead of schedule and on track to be completed by 2020, a year earlier than anticipated. The investment in digital, integrated technology has proved itself a greater boon than expected.

To learn more, go to go.esri.com/Taylors-SC

Build Prosperous Communities

Community well-being relies on a healthy economy. Citizens with a good standard of living and reliable personal income contribute to a stable tax base. This helps local, county, and state government provide services that residents expect and desire.

Economic development planning is a practice that works to build prosperous communities. Effective economic development planning requires goals; review and coordination with other plans; understanding of economic trends; open participation; and success measures. It also requires a special emphasis on land use.

Land use describes business location, housing capacity, and supporting infrastructure and has two parts: current and planned. The difference between current and planned land use depicts a community's growth goals.

The Perfect Match: GeoPlanner for ArcGIS and Economic Development

Economic development planning is a broad endeavor that unifies different stakeholders, subject matter experts, and domains. Esri's GeoPlanner for ArcGIS is the perfect tool to support economic development planning, as it provides an environment for planning, visualizing economic trends, enabling participation, and measuring success.

GeoPlanner for ArcGIS is an easy-to-use, web-based application that allows you to design and test growth scenarios in 2D and 3D. It enables you to discover, use, and share your land-use, transportation, and other infrastructure plans so that you can identify key assets to support development in your community. With access to more than 3,000 socioeconomic and landscape factors, you can understand the demographics of your community to better support its needs.

GeoPlanner for ArcGIS has simple sketching tools and real-time dashboards to help you visualize different planning alternatives. Its evaluation tools enable you to compare scenarios and measure differences by using indicators and metrics. This helps you make better decisions about land use, economic development, and resource allocation.

It is also a tool that promotes collaboration and communication. GeoPlanner for ArcGIS allows you to share plans with other stakeholders and work with project teams to define alternative plans. You can then publish these plans so that they can be shared with community leaders and the public.

Five Steps to Economic Growth

The following presents five steps to a smarter, more prosperous community:

Step 1—Set Goals

Clearly define goals to ensure that stakeholders and the community benefit from your plans. Identify indicators to measure success.

Step 2—Review Data

Review land-use plans to understand land-use types for your community. This will give you a starting point and a foundation to determine where your community stands.

Step 3—Visualize and Analyze on a Map

Bring all your data onto a map. This will help you identify areas that are suitable for development uses and types missing from your land use plan. Use analysis tools to understand the socioeconomic factors in your community. Bring in assets like Esri's green infrastructure datasets to identify areas you need to protect from development.

Step 4—Determine Opportunities

Now that you have analyzed your community makeup, create scenarios that show changes in land use or infrastructure to accommodate development. Evaluate these scenarios using key performance indicators (KPI), side-by-side comparison maps, and 3D. Are you making smart development choices?

Step 5—Engage Stakeholders and Share the Vision

Present scenarios to stakeholders in charettes or story maps. Using stakeholder feedback, revisit step 4 until consensus is reached and KPIs report significant progress in goals and objectives. Publicize your plans to the community to communicate your vision.

Getting Started

GeoPlanner for ArcGIS can simplify the economic development planning process by helping you map your existing land use and infrastructure, identify areas suitable for development, understand your community's socioeconomic dynamics, propose different plans, and measure progress toward goals in those plans. GeoPlanner for ArcGIS gives you a unified environment in which your project team and stakeholders can collaborate. It enables you to share the work you have done with the community to help you gain consensus and support for your plans.

GeoPlanner for ArcGIS is available today through an ArcGIS Online or Portal for ArcGIS organizational account. Esri's Economic Development Planning template is freely available with a GeoPlanner for ArcGIS license.

Don't have an ArcGIS Online account? Sign up for the free trial today at go.esri.com/GeoPlanner4EconDev.

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Iowa Scales Snow Solution to Calculate Costs across the State

The Iowa Department of Transportation (DOT) created a statewide winter storm calculator. The application takes all the data collected from individual plows, then aggregates and calculates it and posts it on an interactive map interface. The application's map displays the past 48 hours of road maintenance data, broken down into the categories of materials, labor, and equipment costs.

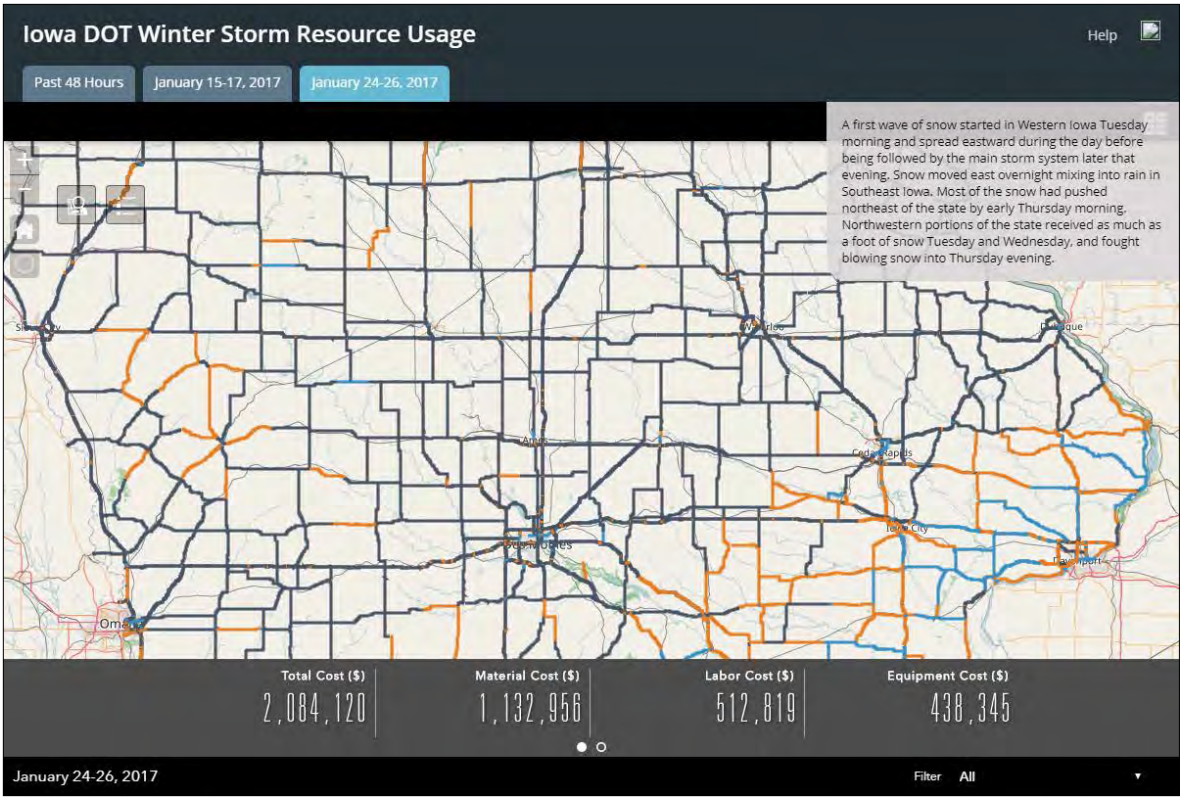
The application also includes tabs for several of the most impactful storms of the season. For instance, there was an ice storm in mid-January that started on a Sunday, followed by conditions that warmed to the point of rain the next day and cooled to freezing temperatures again that evening. This prolonged freeze-thaw-freeze cycle caused infrastructure, safety, and maintenance problems across the entire state. The total tally for the storm's impact was $2,459,161, with material costs of $1,609,861, labor costs of $457,892, and equipment costs of $391,408. Users can filter this data on a county basis and click on a road segment to understand a storm's impact on individual arteries.

"Our snowplow trucks are now equipped to collect a wealth of information," says Eric Abrams, the Iowa DOT's GIS coordinator. "Some of it is more useful to managers and supervisors at the DOT, and some of it helps everyone."

This resource provides the clear financial cost of winter weather for citizens. It also allows state, county, and local governments to gain a new perspective on the impact that the changing weather has on their areas and their budgets.

The Iowa DOT has an open data outlook, assuming that all data is open unless proved otherwise. This philosophy breeds a nimbleness to create purpose-driven applications. The DOT's data sharing extends beyond Iowa's borders—the department ingests data feeds from other states and makes its own data available: the location of DOT plows, dashboard camera shots from plows, fixed camera location feeds, road conditions, traffic reports, and other data. The DOT's own snowplow tracking site includes weather and road conditions in neighboring states, with the understanding that travelers want the wider picture.

To view the application, go to: go.esri.com/IowaWinterCalculator.



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Real-Time ArcGIS Solutions for Government
Showing a Return on Investment

ORGANIZATION	DEPARTMENT	PROBLEM
Madison County, KY, USA	Public Works and Road Departments	Madison County was interested in understanding snowplow locations to help manage snow response and inform citizens.
City of Oakland, CA, USA	Oakland Police Department	The City of Oakland's goal was to fulfill public records requests more efficiently and effectively. Specifically, it wanted an interactive, data-rich crime map that could be shared with the general public.
White House Utility District, TN, USA	Public Works and Utilities	The White House Utility District's (WHUD) large coverage area of 600 square miles, with a population of 94,000, posed a number of unique challenges for the district. The number one challenge was getting accurate information that could be analyzed quickly.
Washington Suburban Sanitary Commission, MD, USA	Public Works and Utilities	Previously, field crews received static job lists. But if the job facts or the priority level changed, the static lists did not, so crews may have acted on outdated information.
City of Columbus Department of Public Services, OH, USA	Public Works	Managing the complexities of new GIS software, three consultants, more than 100 snow operation vehicles, and a street network of approximately 2,000 miles is a daunting task. The City of Columbus Department of Public Services (DPS) had to devise a system that efficiently and seamlessly managed all the diverse personnel and special expertise involved in the task.
City of Long Beach, CA, USA	Port of Long Beach	Occupying more than 3,200 acres (13 km^2) of land with 25 miles (40 km) of waterfront, the Port of Long Beach poses a major challenge for security operations, particularly since it is an open port that provides docking services to pleasure and small business craft and commercial cargo ships.
The City of Los Angeles, CA, USA	Bureau of Sanitation Solid Resources Collection Division	The city needed a system to better manage, monitor, maintain, and route its large fleet of trucks to help conserve fuel and time. The trucks are responsible for picking up everything from yard trimmings and recyclables to broken, large appliances in Los Angeles and surrounding communities.

SOLUTION USING GIS	RETURN ON INVESTMENT
The Snow Common Operational Picture (SnowCOP) solution, with the addition of ArcGIS GeoEvent Server, provided citizens with operational insight and transparency.	Public perception changed from uncertainty that the drivers were working to confidence in the county's hard work.
In less than three months, the city's IT team developed the custom-designed JavaScript app that pulls in data from ArcGIS Enterprise and GeoEvent Server. The Oakland Police Department (OPD) Calls for Service web app provides real-time crime data using an interactive map available from both OPD and city websites.	Now, instead of waiting weeks or months for a public records request, the public can use the app to gain instant insight into the operations and activities of OPD. Citizens can now map real-time data from 911 calls of incidents happening in their communities, anything from reports of thefts to barking dogs.
By working closely with Esri, WHUD was able to configure a connection that feeds real-time information from the district's smart meters into ArcGIS. All the district's flow meters are set up with high- and low-flow alarms. Anytime a meter's readings go above or below the gallons-per-minute (GPM) thresholds, an alarm is sent. ArcGIS GeoEvent Server receives that alarm and creates a GIS feature that notifies WHUD's personnel.	Previously, it could take months to narrow down an underground leak to a specific location. Now, leaks are detected and repaired within two to three weeks. The district will be able to cut repair times to 72 hours. The monetary savings that can be realistically achieved will likely exceed $1 million annually.
The Washington Suburban Sanitary Commission (WSSC) is using Esri's mobile and online GIS apps, such as Collector for ArcGIS, to eliminate the need for paper forms. In the future, WSSC will implement ArcGIS GeoEvent Server.	Using Esri's ArcGIS Online, the utility reduced project costs by 10 percent. The reduction stemmed from the utility collaborating with local agencies, such as the state highway administration, on scheduled maintenance. A shared web map might show that the utility and state both planned projects on one road, so the two agencies could coordinate one dig up and repavement, eliminating redundant roadwork. The web maps saved time and, ultimately, improved customer satisfaction.
To be prepared for this year's snow season, the DPS Snow Warriors are using a new GIS web application they named Warrior Watch, which utilizes Esri's ArcGIS GeoEvent Server. This new GIS technology will internally monitor both real-time and historical performance of the city's snow and ice removal activities.	The City of Columbus can now efficiently coordinate resources during snow events and track information associated with cleanup efforts.
Virtual Port, created with Esri ArcGIS, was added to help visualize security operations. Other software includes ArcGIS GeoEvent Server, which is used to display dynamic services and feeds, such as asset or automatic identification system vessel tracking. Rule-based alerts are built into GeoEvent Server and provide instant notifications to port personnel.	Partner agencies can connect to Virtual Port and access its common operational picture to collaborate and share information to ensure the resiliency of the facility. Port officials can also run what-if scenarios that model chemical plumes and other hazards to help agencies prepare for and better understand the impact of potentially dangerous situations.
Esri technology is being used to track and schedule maintenance on the City of Los Angeles Bureau of Sanitation Solid Resources Collection Division (SRCD) fleet. The software complements fleet data by displaying fleet location and other data specific to operations in maps fed with data processed by ArcGIS GeoEvent Server.	The integration of inspection data into the SRCD's GIS allows staff to automate curbside route generation and provide a real-time estimated time of arrival for service calls. Additionally, the web service allows the drivers to find their route map in Collector for ArcGIS and then enter the field data they need to collect, such as service resolution, items collected, and quantities.

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Technology and Data Drive Economic Growth

The Oklahoma Department of Commerce is the primary economic development entity in the state. It's responsible for attracting new investment, stimulating growth among existing businesses, and promoting the development of a skilled workforce. The department's mission is to create and deliver high-impact solutions for positioning communities to be favorable for investment, leading to more prosperous lives for all Oklahomans. Adopting the right technology is critical to its success.

The Challenge

The department licensed an online self-service solution to publicly share economic development information such as site, building, and market data. But over time, the staff realized that the volume and nature of inbound requests, which were increasingly consuming staff resources, indicated that the online solution was not being utilized.

Internally, the staff used ArcGIS to produce detailed market profiles and demographic reports for customers. But the public online solution and the data were incompatible with ArcGIS, so users were not receiving the Esri datasets that the department was using.

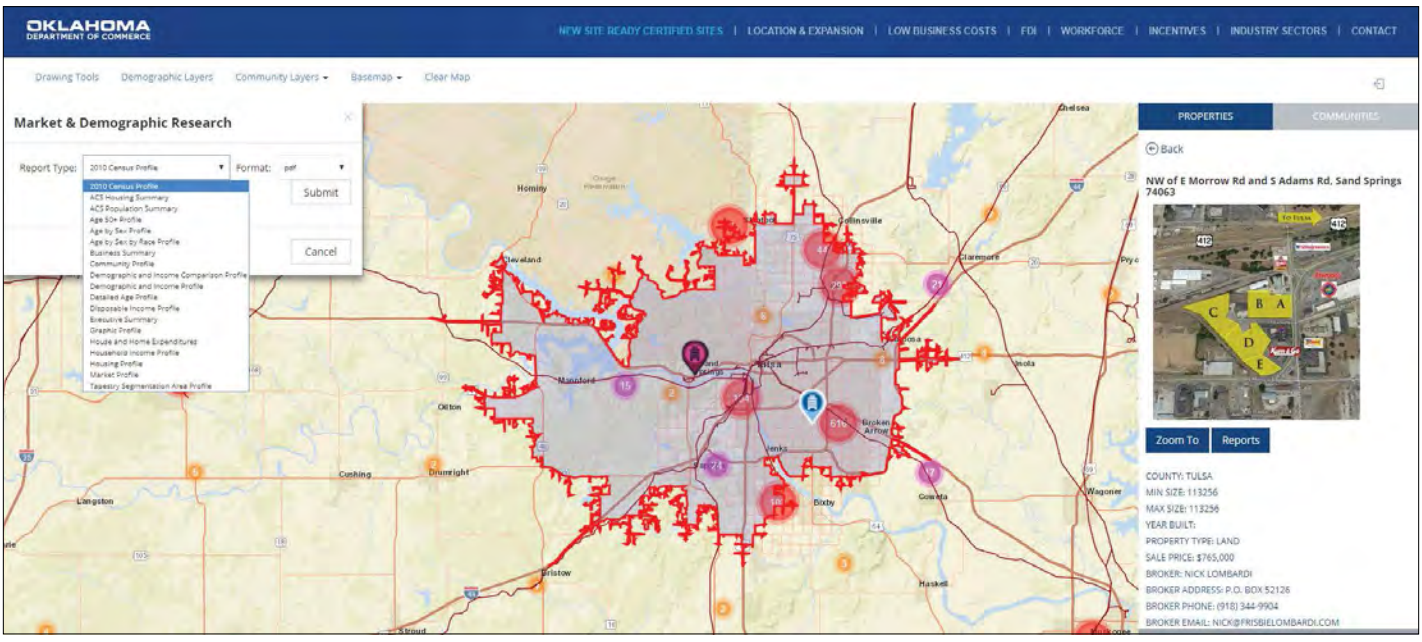
↑ Tulsa Port of Catoosa

The Partner

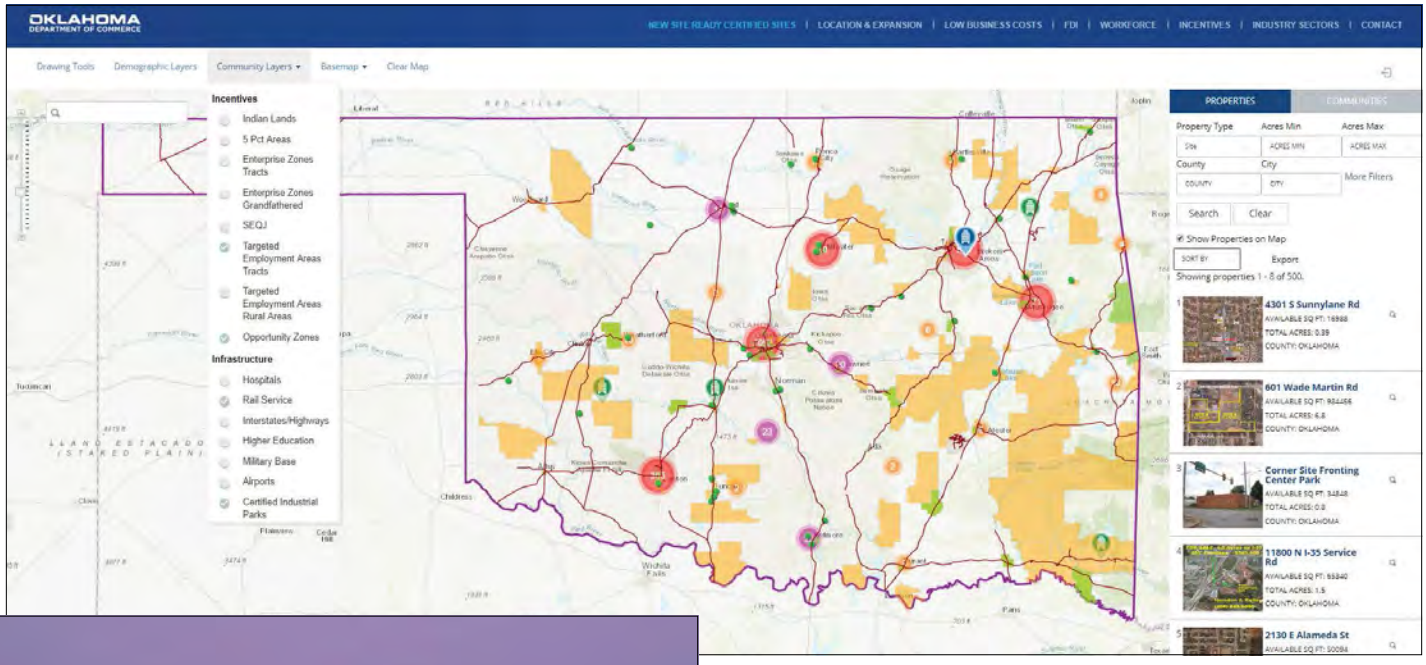
GIS WebTech, a technology developer, creates solutions for economic development. Recruit, the company's flagship solution, helps economic development organizations attract investment and grow existing businesses within their communities. Using Recruit, site selectors can easily identify and analyze ideal locations. GIS WebTech solutions are built natively in the ArcGIS platform, ensuring compatibility and data consistency with other Esri GIS products.

The Solution

A meeting with stakeholders confirmed that an intuitive user interface was required for delivering a better user experience and encouraging the self-service review of data, which would allow users to generate their own reports and conduct spatial analysis. This would directly decrease staff time spent on



↑ Users perform demographic analysis within a specified drive-time distance showing infrastructure and incentive areas.



↑ Clients are able to manage their infrastructure layers, providing users with unprecedented data access.

↑ Oklahoma City Skyline

inbound requests. The solution needed to be compatible with Esri's ArcGIS, ensuring that online solution users would have access to the same Esri data that staff used to respond to requests for information.

GIS WebTech implemented its online solution, Recruit. In addition to its intuitive user interface, Recruit is built in the ArcGIS platform and provides users with access to the Esri market and demographic data that staff use in resolving data discrepancies. Also, Recruit enabled the use of an automated data feed of available sites and commercial properties from Xceligent, a leading provider of real estate data. This further reduced staff time and processing requirements.

The Results

Inbound requests for data and analysis have dropped dramatically. The staff saved more than 50 percent of their time, which is now focused on high-value, high-opportunity activities. Online users have access to the same Esri data that staff use, eliminating the need to reconcile discrepancies between two datasets.

Recruit provides unique advantages. It easily consumes the map layers of other government and utility organizations also using ArcGIS, eliminating the need to re-create map layers. The staff now activate layers in Recruit, such as infrastructure and incentive areas. This provides businesses and site selection consultants with the most comprehensive view of the Oklahoma business environment, helping to make the state a more popular destination for investment.

Since 2016, there have been $3.5 billion spent on new investment and more than 7,400 jobs created. Department staff are now leveraging the solution through a statewide, interactive workshop to teach organizations how to use data sources to complete RFPs—critical to business attraction. This has resulted in positive feedback and increased use of the public site and its data. Also, because smaller communities outside Oklahoma's major metro areas tend to have fewer resources, Recruit has helped fill the by gap by providing access to data tools to bring attention to these communities.

Learn more at go.esri.com/WebTech_OKC.

British Columbia Automates Its Parcel Workflow

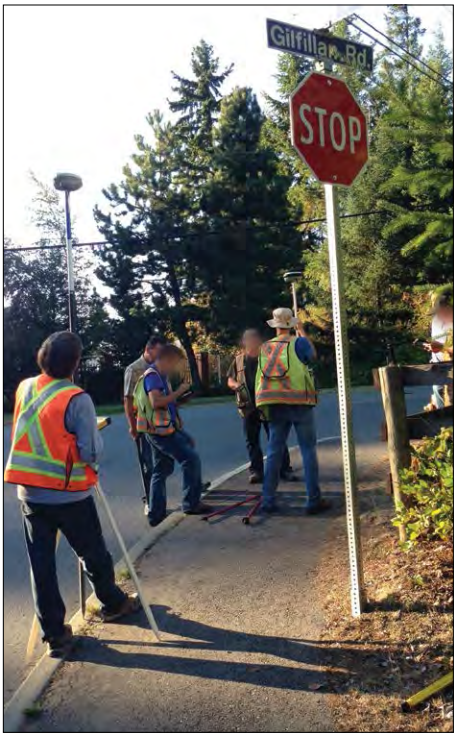
The Land Title and Survey Authority of British Columbia (LTSA) is a publicly accountable statutory corporation responsible for administering land title and survey systems in British Columbia (BC), Canada.

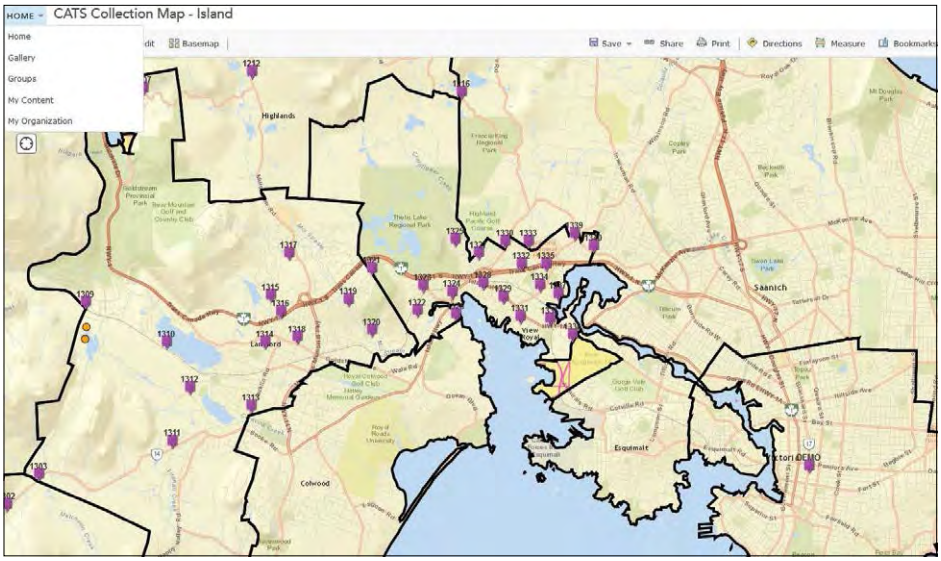
The Challenge

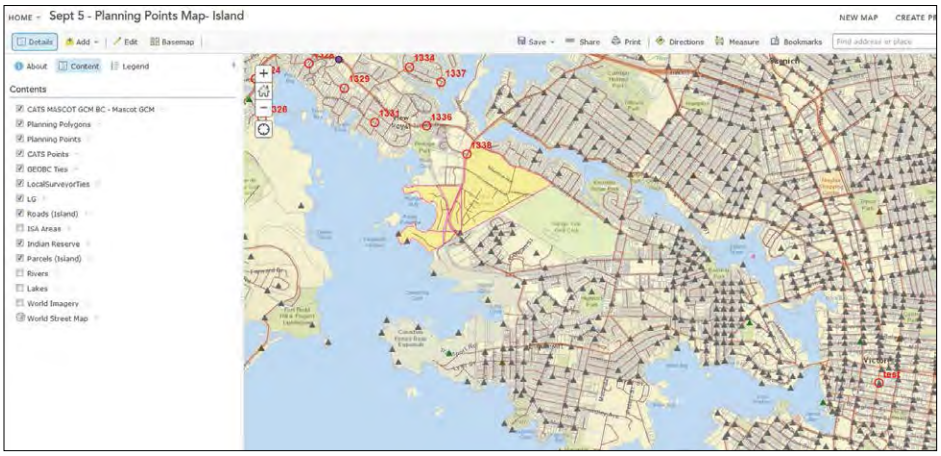
The challenge was to build a parcel fabric of all titled and surveyed Crown land parcels to a known level of quality. Stakeholders needed an easy, efficient means of accessing land title and survey information by using an electronic map of surveyed parcels in BC.

The Partner

MNC Ltd. is a geomatics engineering firm located in Calgary, Alberta, that specializes in working with very large city-, county-, and province-wide datasets across multiple formats and platforms. It has completed numerous projects in Canada and the United States.







↑ This geospatial solution enables information from a parcel to be displayed as editable features.

The Solution

MNC helped create a complete and sustainable parcel fabric of every surveyed and provincial Crown land parcel within BC. The firm collected over 2,600 cadastral tiles in the field, integrating them into BC's parcel database to support ongoing spatial improvements to the fabric. Engineers at MNC also built an automated solution, based on the firm's digital survey plan submission architecture, which sped the electronic submission of digital survey plans to LTSA for operational maintenance.

The Results

The Province of British Columbia now has a complete, comprehensive, and actively maintained parcel fabric with a known level of accuracy throughout, which will support fundamental economic growth throughout the province. In addition, LTSA customers now have map-based access to electronic services.

esri.com/landadministration

Use Maps to Attack the Opioid Crisis

Christopher Thomas, Esri Director of Government Markets

Chris Thomas, Esri

The Key Word Is *Crisis*

In 2014, more than 30,000 people in the United States died of opioid overdoses. Since then, the number has kept rising. Forecasting shows that trend continuing unabated into the future. The victims of opioid addiction are average people: soccer moms, pastors, students, husbands, grandparents, and children. It seems that no one is immune. What's going on?

Opioids are often prescribed and then used by people to relieve pain. Some of those people become addicted. Some of them accidentally overdose and die. Many store opioids in their home medicine cabinets, where the drug is discovered and tried by family members and friends. Some of those people become addicted, overdose, and die. This cycle radiates out from homes across the country and is as likely in small towns as in big cities. The war on drugs doesn't seem to impact the problem, which has grown into a very real crisis.

Is there a way to attack the problem and make a difference? Perhaps the solution starts with government. State and local governments have a lot of experience in dealing with crises. Think of all that they've learned from responding to earthquakes, wildfires, floods, and hurricanes. Governments know how to prepare for and attack disasters. They know how to assess catastrophic situations, mobilize resources, adjust to changing conditions, and then transition into recovery mode once the crisis has passed. Couldn't government play a strong role in combating the opioid abuse crisis?

Phase 1

Governments have been using GIS technology and mapping as part of the planning, response, and recovery process for decades. For example, when governments confront a crisis such as a natural disaster, their first order of business is to quickly pull together all the information they have about the geography, current conditions, historical events, and the current demographics of an impacted area. GIS is particularly well-suited for bringing together complex data from many different sources and breaking down that information into meaningful and actionable chunks.

Governments can apply the same strategy to address the opioid abuse epidemic. In the first phase, they can use GIS to pull together data about prescriptions written, overdoses, deaths, and arrests and combine it with population details. This information can be compared to data on social service programs, law enforcement intervention, and relative population health. In a very short time, a baseline can be set and the locations of hot spots can be determined.

Phase 2

Just like dealing with natural disasters, the second phase is to use GIS to bring new data in from the field. New data can consist of geoenabled surveys conducted by volunteers and crowdsourced information collected by using map-based websites. Local public safety departments do this all the time. They call it "monitoring situational awareness." In the case of opioids, measuring data points—such as the effectiveness of drop-off locations for unused prescriptions—can be used to bring in new data.

What is being suggested is a local government rapid response system to the opioid abuse crisis. While there will continue to be the more drawn-out processes of studying the problem, communicating findings, and establishing programs, governments can be more proactive by using familiar strategies in something akin to emergency management, where GIS is used to rapidly collect and analyze vital data so that informed decisions can be made fast and tactics can be adjusted quickly based on new information.

Phase 3

In the third phase, maps and geospatial analytics provide data-driven opportunities for allocating resources in the form of staffing, funding, programs, and equipment. GIS is used to target where those resources are most needed and who they will help.

Perhaps one of the most important benefits of using GIS is the rapid deployment of information products—namely, maps—that keep the public informed and engaged. Online interactive maps can help citizens recognize the scope of the problem and make it easier to see how it might affect them and their loved ones. Maps offer a visual common language that everyone understands. Governments can use maps to simplify citizen access to resources, such as apps that point individuals to programs that connect addicts and their families to services near them or help them find a drop-off location for unused prescriptions. They can use GIS to put a face on the problem, using story maps to tell compelling, geocentric stories about people and their community.

When responding to a natural disaster, seconds matter. Why shouldn't the same apply to the opioid abuse crisis? Governments can measure data points and make rapid strategy adjustments

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Digital Transformation Pays Off for Carbon County, Utah

The Challenge

Daniel Campbell, the road supervisor for the Carbon County Road Department, was striving for a more efficient process for annual signage inventory. Campbell and his team would take five weeks to inventory 1,500 signage assets, using multiple devices and people to collect the data. Campbell wanted to find a way to simplify the process while still collecting all pertinent information.

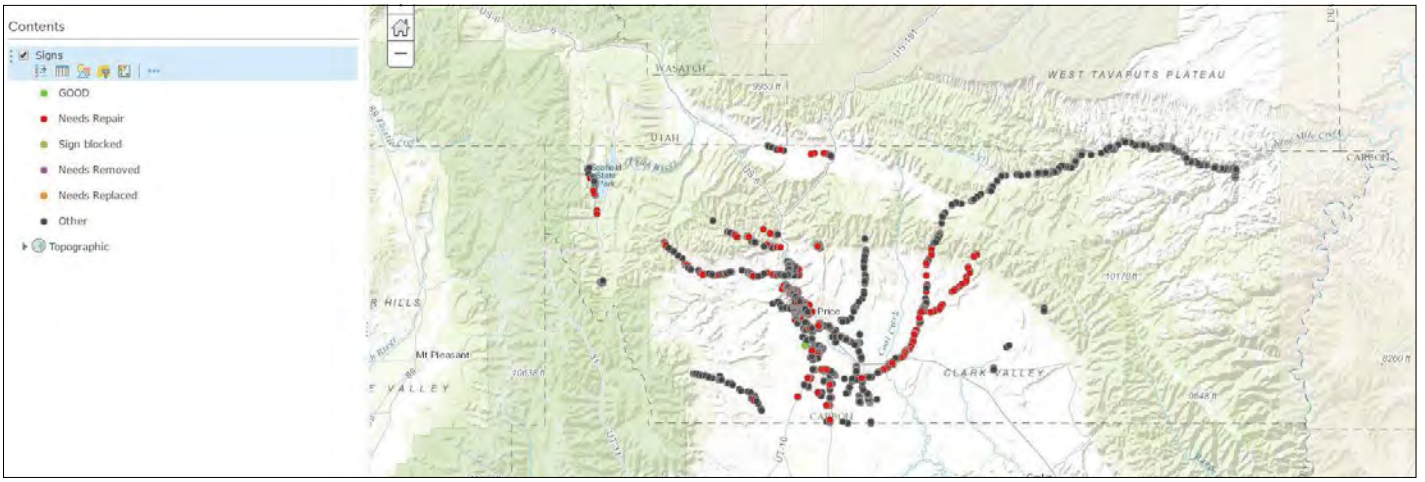
The Partner

Spike by ikeGPS, a mobile GIS and laser measurement solution, allows users to measure objects such as signs, roads, and culvers, simply by taking a photo with the Spike laser device and their smartphones. Spike enables users to be more efficient by cutting back on time, costs, and equipment. And when paired with Collector for ArcGIS, it's easier to conduct signage inventory in the field, even offline.

The Solution

Campbell turned to colleague Mellissa Lasslo, GIS specialist with Carbon County, to develop a more efficient signage inventory process. Spike, together with Collector for ArcGIS, allowed Campbell and his team to efficiently record signage inventory, using a minimum amount of equipment and people. Instead of sending many workers, Campbell now sends two team members into the field, one to drive and the other to take measurements. The Spike app is used to mark the location, take a picture, and calculate the measurements of each sign. Once the sign measurements have been taken, a feature is created in Collector, where the photo is attached and any necessary notes about the condition of

↑ Campbell and Lasslo take all their photo measurements using Spike Cloud. Inset: The Spike device pairs with smartphones or tablets via Bluetooth. Spike's laser range finder works jointly with a smartphone or tablet's camera, GPS, compass, and connection to the Internet.



↑ Campbell and Lasslo import the Spike feature into ArcGIS Collector.

the sign are added, including the measurements taken. After a sign is repaired, a new photo is taken and attached to the feature in Collector, making the sign history complete and easily accessible.

The Results

Once the Carbon County Road Department began using Spike with Collector for ArcGIS, Campbell and his team were able to reduce the amount of time taking signage inventory from five weeks for 1,500 signs to collecting data on 322 signs per day or 1,620 in a one-week period. What once cost the Carbon County Road Department $50,000 annually now costs only $5,000. That amounts to an astounding 568 percent return on investment on Carbon County's most recent annual sign data collection. According to Lasslo, Collector and Spike have significantly impacted how the GIS and Road Departments capture field data. Carbon County is successfully using Spike to measure trench length and depth, diameters of culverts, widths of road surfaces and sidewalks, lengths of drainage ditches, and much more.

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Use Maps to Attack the Opioid Crisis

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that save lives. They've learned how to do it by responding to other types of crises. Governments can use a wide variety of data to keep people informed and bring the power of community to bear on serious issues. Using GIS to make data-driven decisions results in new funding mechanisms and programs optimized for success.

Can you see how these tactics and GIS could be applied to the opioid crisis?

For more information, I welcome you to view go.esri.com/OpioidCrisis

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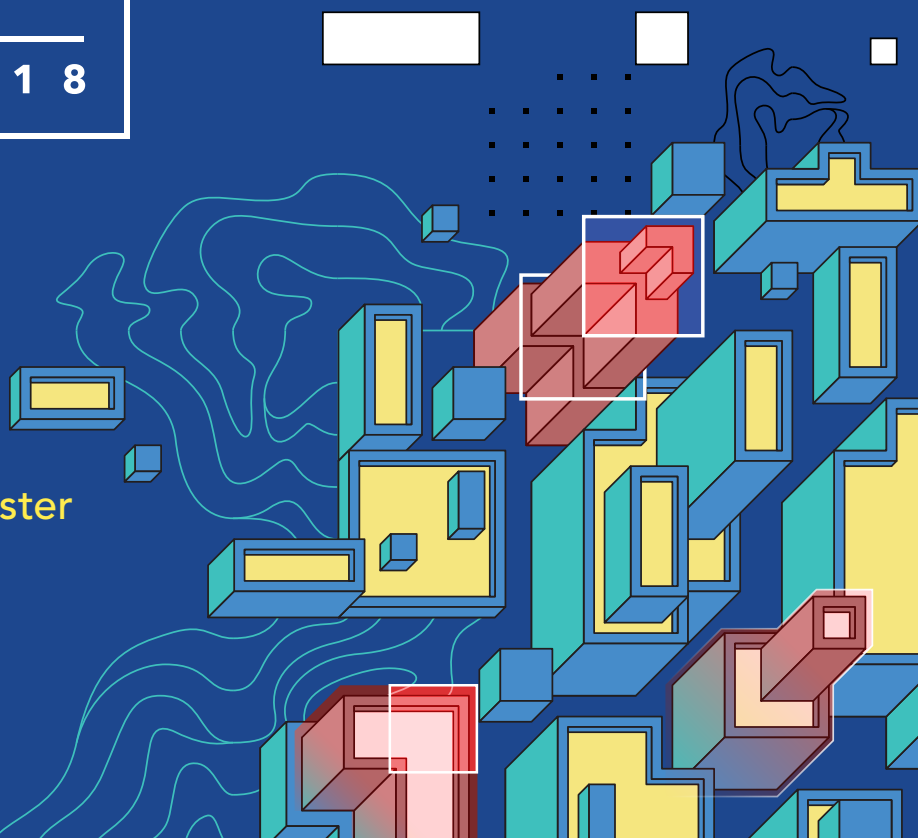

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