Warner De Gooijer, strategic analyst and project manager for global supply chain operations at Cisco Systems, Inc., was one of the speakers at the Esri Business Summit plenary session.

Transforming Business with Geographic Knowledge

By Karen Richardson, Esri Writer

Patrick O'Hagan, Starbucks Coffee Company's manager of global market planning for the world's largest retail coffee chain, served some great advice to executives at the 2011 Esri Business Summit: Don't put the buggy before the horse.

Starbucks first began using GIS technology and data in the late 1990s. To make vital business decisions about company stores, employees needed to understand store trade areas. The company's GIS staff flooded its staff members with data, especially those working with real estate.

O'Hagan's team created an Esri ArcReader application that allowed staff members to access all the geodemographic and topographic data that was available for use in the company. While it was important to allow staff to have access to the data they requested, this approach didn't quite catch on.

"We held pretty true to the putting the buggy before the horse allegory, but in a futuristic sense," O'Hagan said, speaking in San Diego, California, to a group of 200 business executives from all over the world. While Starbucks staff had access to massive amounts of data, they had no way to easily analyze it. Today, instead of a flood of data, O'Hagan's team provides analytics and business support to its real estate section. The team uses ArcGIS for Server to create data-rich applications that staff members can access from desktops, the Internet, and mobile devices in the field.

O'Hagan pointed out during a panel discussion why this was a successful approach: "Our people don't want to know what GIS means or what it can do. They care about functionality, speed, and convenience. ArcGIS allows us to create replicable consumer applications that are exactly what they need."

Communicating through Maps

Other Business Summit speakers included Matt Mikula, a principal at Edward Jones, an investment company that serves nearly seven million investors. Edward Jones has licensed Business Analyst software and business datasets to assist in opening new branches. It is looking forward to using the technology to better understand customers' financial needs, whether they are saving for a child's college education or getting ready for retirement.

Nigel Davis, director of product development at Willis Re, a reinsurance adviser headquartered in London, England, also spoke on the importance of using geographic data to help his customers—in this case, insurance brokers—understand information to make better business decisions. Willis Re created eCOMPASS, a

cloud-based application based on ArcGIS, for its customers. It supplies data covering major perils worldwide, from flood zones in Latin America to earthquakes in New Zealand.

When the magnitude 9.0 earthquake rocked Japan on March 11, 2011, and set off a tsunami, Willis Re staff were able to quickly gather critical information, including policy locations, hazards, and other related spatial data, for its insurance clients to view and analyze. In keeping with the Business Summit theme, Davis reiterated the need to keep things simple so people can really understand the information that is being transmitted. Davis agreed with O'Hagan. He explained that "interactive maps help in communication, but you have to be careful. Part of the challenge is not to overload people with information."

Preparing for the Worst

Willis Re began working on this innovative platform last year when the company anticipated that a large number of hurricanes would make landfall in many countries. It wanted to make impact assessments before tropical storms began. By knowing where client exposures were and what they had at risk and viewing this information with a digital rendering of a live storm track, it was able to better estimate total exposure for its clients.

This was done quickly by physically locating all policies contained within the footprint of a storm and representing them by geocoded points on a map. Willis Re's clients logged on and selected their policies inside the storm area to access all the descriptive information associated with these policies for further analysis and action. Using this data, loss adjusting activities could be contemplated and policyholders could be contacted, ensuring that service would be swift and accurate.

When the earthquake and subsequent tsunami hit Japan, Willis Re staff derived a bespoke tsunami zone, a digital elevation model (DEM), and ground observations to create an estimated representation. The DEM was derived from data supplied by Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) sensors. ASTER provides remotely sensed terrain data at a resolution of 30 meters that is easy to access and provides wide coverage. Elevation and slope of the land were derived to analyze where inundation from water would take place. This tsunami dataset was loaded to eCOMPASS Online soon after the event for analysis purposes. Willis Re staff also provided earthquake ShakeMaps from USGS and displayed this data on top of a world topographic map from Esri.

"One of the powerful analytic functions of the solution is the tsunami impact footprint," said Davis. "Using a mapcentric view of risks in a portfolio makes it much easier to identify risks that are impacted by the tsunami. Using GIS, risks that are in the tsunami's path can be found without guessing, extracted, and exported for an offline loss estimation."

Streamlining Business Processes

Warner De Gooijer, strategic analyst and project manager for global supply chain operations at Cisco Systems, Inc., also spoke at the summit, explaining how his company uses GIS. Cisco, worldwide leader in networking, offers products and services that help companies share data and information securely anywhere in the world. Cisco is adopting Esri GIS technology and data to streamline its global supply chain and continue providing high levels of customer service.

"Leveraging GIS technology advances our analysis capabilities and introduces new methodologies for business analytics," said De Gooijer. "We realized that this important service could be enhanced with spatial analysis."

ArcGIS will be used to create web maps and analysis services that help position the company's service depots to provide customers with the best service quickly. The business requirements and factors that determine the response times vary worldwide, so finding a solution that worked across the company and could be adapted to each country was important.

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>
> Allan Pym
> APOS Systems

Becoming a Believer

Using geography as an information filter transformed the companies that presented during the Plenary Session. Matthew Felton, director of GIS and research at MacKenzie Commercial Real Estate Services, explained that once his company got past the problem of not knowing what it was missing, the company was sold on using GIS to visualize and analyze its data.

"GIS is like a smartphone: if you use it, you are a believer," Felton said. "Those that don't have one don't really get it. But like how an iPhone seems to transform the people who use it, this is how our company feels about GIS."

Felton introduced his company to Business Analyst and Business Analyst Online. "For the first time, I think members of my company really saw their real estate," Felton said. "We had a lot of fun with the data, viewing and exploring information in a way they hadn't experienced before. The more they saw in the maps, the more questions they would ask."

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Targeting the Audience

The afternoon session included breakout sessions and an invitation-only media summit for publishers, editors, and journalists using or interested in using GIS in telling news stories. The media session began with Lightning Talks from leaders in higher education and the industry, including Matt Carmichael, director of information projects with *Advertising Age* in Chicago. Carmichael describes himself as the publisher's resident stats geek, covering demographics, consumer trends, and analytics for the publisher. *Advertising Age* is a weekly publication focused on advertising and has been using Esri's GIS technology and data to better understand where people that buy certain things are located.

A recent story, entitled "Pain at the Pump: Running on Empty, Americans Cut Spending," used Esri data to analyze income and spending data and determine where the people who will be most impacted by gas price increases live. Esri's consumer spending data augments other data from the government and private industry that helps Carmichael look in depth at certain aspects of popular trends. "We regularly use many different sources for our data in order to classify thousands of human behaviors that consumer products companies can track at the brand level," said Carmichael. "Synthesizing the information based on geography makes sense because many times, we are where we live."

Left to right: Matt Mikula, a principal at the investment company Edward Jones; Matthew Felton, director of GIS and research at MacKenzie Commercial Real Estate Services; and Patrick O'Hagan, manager of global market planning for Starbucks Coffee, all spoke at the Plenary Session.

If I Only Had a Whole Brain

This sentiment also held true in another afternoon session entitled Location Intelligence—The Power of Where. Presenters, including Allan Pym, chief operating officer for APOS Systems, discussed the need for understanding business data through a geographic context. The company provides integration between SAP BusinessObjects and ArcGIS so information analysts can see, understand, and communicate business intelligence and geospatial data more quickly and more completely.

Pym grabbed the attention of his audience as he asked them, "How many of your business decisions have you really made with only half a brain?"

He explained that business intelligence is traditionally handled by the left side of the brain, which is oriented more toward linear reasoning and language. By also engaging the right side of the brain, which can more easily engage with and interpret patterns, shapes, and colors, decision makers can up their cognition and comprehend with better understanding all that their data has to offer them. "Dashboards, pie charts, and bar graphs are really just window dressing that can't hide the fact that the left brain is in control," said Pym. "Seeing data through a mapping context greatly increases the possibility of deeper analysis and better decision making."

Pym went on to explain that using maps and location intelligence will improve the efficiency of analysis, reporting, and communication in any industry. "If your marketing, planning, asset management, resource tracking, or service management are based even partly on geography, then location intelligence will have a noticeable impact on your organization," said Pym.

The biggest effect will be found wherever business intelligence is highly geospatial in nature. For example, retail chains, whether expanding or contracting, need the best possible intelligence about store locations. Using GIS can help retail chains channel products to the appropriate markets, understand local and regional requirements, and maintain optimal inventory levels at stores and distribution centers. By displaying the purchasing history of stores on maps, retail chains can plan effectively for seasonal marketing campaigns. By displaying demographics on maps, planners can forecast future selling patterns.

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