



CASE STUDY

AWARE: Make Every Place Your Home

SENSIBLE INNOVATIONS & LRS WEB SOLUTIONS

CUSTOMER

Sensible Innovations

MOBILE APP

Aware Audible Wayfinding

INDUSTRY

Lifestyle



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CUSTOMER PROFILE

The concept for Sensible Innovations comes from its Founder and CEO, Rasha Said. Her mission for the company and the subsequent AWARE wayfinding derived from her son's vision impairment: retinal degeneration that was diagnosed when he was only 5 years old. As his vision gradually deteriorated, Rasha's mission of a wayfinding solution intensified. In 2015, she left a successful career as an Actuarial Analyst to start Sensible Innovations.

With LRS Web Solutions, Sensible Innovations developed and launched the AWARE wayfinding solution in 2016.

What began as a location-based wayfinding solution, AWARE is evolving into a robust app with limitless potential for wayfinding, retail, and tourism. It can even track personal items such as clothing and household items.

Sensible Innovations has won numerous awards, including the CES Innovation Award in 2018 and METRO Magazine Innovation Solutions Award in 2017.

Now a respected advocate for accessibility issues, Said has spoken at the National ADA, the Mobile Enabling Summit in Washington DC, numerous other organizations nationwide and has exhibited twice at the Consumer Electronics Show.



Challenge: A World Without Signs

Imagine if all the signs were gone.

"Imagine there are no signs or labels to identify objects, roads, rooms, buildings, streets. See how convenient life is." That's how Rasha Said describes daily life for her visually impaired son. But Rasha is an optimist.

"If you accommodate, they are not blind," she says. When her son was a young boy, she worked with the school to accommodate him, with things like balls with bells inside so he could participate in PE class.

But outside of the comfort zones, there weren't many ways to accommodate him. The world had to be described in detail, especially tourist locales like

Disney World. But how do you describe a place with such intense and overpowering visuals? Such excursions proved exhausting to family and friends and sometimes frustrating to her son, who yearned for more independence to choose what he wanted to experience.

Rasha says, "We'd imagine how much better life would be if we could tag things, and the tags would speak to you, to tell you what it was when you passed by. It seemed too good to be true."

That dream is now a reality.

The Search for a Solution

Determined to make life better for her son, Rasha, through Sensible Innovations, started searching for a wireless tagging solution, just about the time Apple's SIRI made its debut within the iPhone 4S in 2011. Rasha realized that "if the phone can speak, anything can speak." Wireless ID technology can go everywhere, and the spark of AWARE was born.

Apple developed the iBeacon technology, which is applied to one-way transmitters. The transmitters use Bluetooth via tiny tags. Apple developed the technology originally for retailers to notify shoppers about coupons, sales and push messages in the store.

It is location-based and more precise than previous GPS software. Retail businesses, schools, tourist sites, sports arenas, and others are using iBeacons. Sensible Innovations saw the potential to use the beacons to provide wayfinding and other information to help the visually impaired.

With her goal set, Sensible Innovations needed software to pair with the iBeacon technology, launched in 2013. After combing through proposals from software companies nationwide, Rasha found the best partner in her own town of Springfield, Illinois: LRS Web Solutions.

"I knew this would be a long-term relationship. I cannot build bonds with a long-distance company. And I wanted good, honest professionals who could devote the time I knew was needed for this project. And the LRS proposal was nicely priced."

After 5 years working together, strong bonds have been forged and an amazing wayfinding solution produced.

"The LRS team always meets deadlines and is so accommodating to me when I have changes," Rasha says. "I know I can make promises to my partners, because LRS is reliable."



One-of-a-Kind Innovation

As the Website Solution division of Levi Ray and Shoup, Inc., the team of LRS includes 6 application developers. Deliverables can be a stand-alone platform like AWARE or integrated with a website build.

Sensible Innovations and the LRS development team, including project manager Scott Mehring and developer Darren Glore, along with other developers, built the AWARE solution to give the visually impaired more independent control over their indoor and outdoor wayfinding.

This project was different than other LRS Web Solutions projects. This solution didn't exist in the marketplace. "AWARE gave us the opportunity to learn about and apply the then-new iBeacon technology. We love when clients challenge us with new ideas," says LRS Web Solutions Director Jeff Enlow.

It is based on a mother's concept and driven forward by a mother's passion. As Mehring says, "Rasha's passion keeps everybody going. Her dream never changes."

"We love when clients challenge us with new ideas."

/// JEFF ENLOW, LRS WEB SOLUTIONS DIRECTOR

AWARE is Knowledge

According to the World Health Organization, at least 2.2 billion people have a vision impairment or blindness worldwide. Although assistance software exists for visually impaired, AWARE provides users with proximity-based, turn-by-turn voice navigation. The iBeacon provides a unique ID and a proximity reading. Everything else is done in the application. "AWARE is not an obstacle avoidance solution," Rasha says. "AWARE is knowledge about the surrounding just like printed signs for the sighted. AWARE's goal is to close the

information gap for people who are visually impaired when visiting public spaces."

AWARE's difference, project manager Scott Mehring says, is that it was built with the visually impaired user first in mind. Rasha agrees. "Other solutions don't incorporate certified orientation and mobility specialists, and no one has built it like we have on the back end."

How it Works

The iBeacons send signals to the AWARE solution with specific messages, essentially creating “audible signs.” AWARE can detect iBeacons placed on assigned points of interest, such as “Mary’s Office” or “Snack Vending Machine.” It also can read specific messages to the user as they walk through the venue, allowing the venue manager to create “audible signs” for any point of interest.

For destinations, AWARE uses databases for text-based routing instructions. Unlike other wayfinding solutions, it uses dynamic routing.

Cognitive maps can point out landmarks and provide step-by-step instructions to help vision-impaired people get from one location to another. But AWARE is not limited to the visually impaired. By having vital information at their fingertips, anyone can explore their surroundings.

Users can also learn about a tourist site, store or park before visiting and have a route planned before leaving home.

“The Admin portal is really powerful,” Rasha says. “You can create your own route. That’s unlike other solutions.”

AWARE is a free download through the Apple Store and Google Play. Sensible Innovations has formed partnerships with numerous cities, schools, tourist locales and other organizations.

Sensible Innovations also partners with Ace Sign Co. of Springfield for iBeacon installation and custom bracket fabrications. Independent contractors, including electronic engineers and Certified Orientation and Mobility Specialists assist with site surveys and on-site deployment of the iBeacons.

The first iBeacons were placed on a school bus, so Rasha’s son could find the bus without help. Next was Glenwood High School in Chatham, Illinois. In 2019, AWARE was used for an art exhibit for the visually impaired at the Springfield Art Association. In 2020, Sensible Innovations plans to spread to the Kansas City bus system and the Chicago Lighthouse.

Key Features

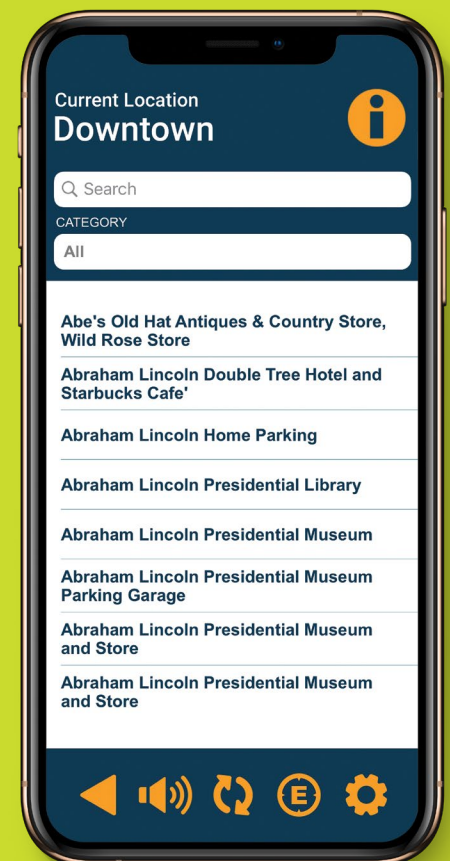
**Integration with
iBeacon Technology**

**Landmark-Based
Navigation**

**Exceeds ADA
Requirements**

**Powerful Admin
Portal**

**Custom Route
Creation**



Results



7

Partnerships / Venues



4

Local Cities / Governments



1

Tourist Sites



2

Awards



3

Booths at CES



3

Patents

Internationally Acclaimed

Better Quality of Life

More Independence for Users

Increased Awareness of Challenges
for People with Visual Impairment

Tagging the World

Since going public in early 2016, the AWARE solution has evolved with more features and more text-based routing. Sensible Innovations will partner with Arch GIS mapping solutions to produce routing instructions. Sensible Innovations will apply to help cities become "Smart Cities." This designation is for cities that use communication technology to improve the quality of life for its residents. Sensible Innovations has a partnership with ESRI to expand positioning technologies to include WiFi and LED, along with the iBeacons.

Closer to home, the results are just as rewarding. Rasha says her son smiles more. "He says, 'Mom, it's liberating!'"

The ultimate goal, Rasha says, is for people not to have depend on AWARE. "If I can help people create maps in their heads, they can navigate more independently. That's the goal. It's about making things equal."

As Rasha told SO Magazine in 2016, "I want to tag the world. I want the walls to talk. I want the signs to talk. I'm in this for the long-term, and I hope LRS is with me, too. It's been a really nice journey."

With LRS Web Solutions, Sensible Innovations and the AWARE solution are ready for what's next. "LRS is a great team to work with. It is nice to work with people who are willing to change things."

The LRS Web Solutions team is ready for the next level and to see how far we can make the world AWARE.

#AWorldWithoutLimits





ABOUT LRS WEB SOLUTIONS

Founded in 1996 as a division of Levi, Ray & Shoup, Inc., LRS Web Solutions provides custom web design and development services to help customers achieve business success. Based in Springfield, Illinois, LRS Web Solutions employs a team of nearly thirty specialists in the areas of web design, web application development, content management systems, mobile apps, search engine optimization, website hosting, graphic design, audio and video production, and network support.

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