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The LeadingAge Center for Aging Services Technologies (CAST) is focused on accelerating the development, evaluation and adoption of emerging technologies that will transform the aging experience. As an international coalition of more than 400 technology companies, aging-services organizations, businesses, research universities and government representatives, CAST works under the auspices of LeadingAge, an association of 6,000 not-for-profit organizations dedicated to expanding the world of possibilities for aging.

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Sprout by HP Offers New Possibilities for People with Developmental Disabilities

Categories

Independence, Quality of Life

Organization Name

Pioneer Center for Human Services

Organization Types

Non-profit human services

Organization Description

For more than 50 years, Pioneer Center for Human Services (Pioneer Center) has been helping people with challenges — including intellectual and developmental disabilities (IDD), mental health issues, homelessness and more.

What started as a day school for children with developmental disabilities in McHenry County, Illinois, Pioneer Center has grown and prospered greatly since 1958. Today, Pioneer Center services approximately 4,800 annually by offering programs and services in three key areas:

- Intellectual & Developmental Disabilities
- Behavioral Health Services
- Homeless Services including community-based group homes

Using technology to help clients achieve their full potential has long been a goal of the organization, and technology advances help push those efforts forward.

“Pioneer Center’s mission has always been to empower individuals to achieve their full potential, and today, learning to use technology goes hand-in-hand with that,” says President and Chief Executive Officer Jackie Wells.

Project Description

For adults with intellectual and developmental disabilities, Pioneer Center often picks up where traditional public schools end: helping clients to set and achieve personal goals, whether they're focused on the simple activities of daily living, having a career, or volunteering in the community.

"In the past, services provided by agencies like ours focused on routine tasks. Too often, technology wasn't utilized," says DJ Newport, director of Vocational and IDD Day Services. "We're using every available tool to make the transition to adult life after school smoother and our clients more productive."

The goal for this project is to use technology to provide training and education through classroom and community based opportunities to enhance life, social, independent living, vocational, and recreational skills for those with developmental and intellectual disabilities.

System Type

HP Sprout's 3-D immersive all-in-one computing platform.

Describe System Embodiment

All-In-One computer equipped with the HP Illuminator, which incorporates an Intel RealSense 3D camera and projection engine; a 20" HP Touch Mat; and a suite of creative applications.

- HP Sprout runs standard touch-enabled Windows, ensuring seamless network integration
- Intel Core i7 processor, NVIDIA graphics and solid state hybrid drive combine enable high performance desktop computing
- Versatility to run standard PC applications as well as unique, graphical application suite in the Sprout Workspace
- An HP Touch Mat as the computer interface allows a more natural, head down position for desktop work
- A large, 20-inch diagonal HP Touch Mat empowers those struggling with fine motor skills to utilize the computer without a keyboard and mouse
- A built-in Sprout Workspace creative suite provides an alternate hands-on approach to computing that may be easier to embrace for those on the Autism spectrum

Business Model

Grant Funded.

Implementation Approach

Sometimes clients are happy to play on a computer. But Pioneer Center's trained staff seizes on opportunities to make every moment a teachable moment. They challenge clients to use whatever computer-based tools they can — from video calling applications like Skype, to creative programs and even productivity tools including Microsoft Office.

"By building technical skills, we hope to open the employment doors for many of our folks, in order for them to play a more active role in the community," says Wells.

Pioneer Center for Human Services deployed HP Sprout all-in-one computers to enhance learning for both life skills and work-related opportunities for the IDD population they serve.

Unfortunately, technology itself also presents barriers. Some clients are unable to master a keyboard and mouse due to difficulties with fine motor skills. Pioneer Center has tried using touch-based consumer tablets, but find they're often too small for the clients' use.

"When considering the number of people we serve and the differences in their needs," Wells explains, "we needed a device that was really versatile. It also needed the ability to run both very common, as well as very specialized, software applications."

For Pioneer Center, the Sprout is a new opportunity to effectively integrate a computer into the life skills training and vocational programs of its clients.

Advantages to the Approach

A better fit for those with special needs

"For some clients, just being able to work with a computer in a natural position, with their head down, is helpful for them. Using the Touch Mat gives them the ability to exercise their motor skills," explains Vance Christy, IT Manager at Pioneer. For clients who are on the Autism spectrum, the built-in apps help them explore new ways to communicate. "And they're able to effectively manipulate a computer that's new and mainstream, rather than traditional, and sometimes cumbersome, assistive technology."

He notes that there are essentially two ways to use the Sprout. One is to use the unique Sprout workspace, which integrates image capture, editing and manipulation. The other is to use a Windows environment to run touch-enabled applications, including Microsoft Office.

Christy says that while the Sprout offers more options in the user interface, users at Pioneer Center who have had difficulty with a keyboard and mouse in the past seem to find the Sprout easy to use. “What really bridges the gap for our users is utilizing the mat as a touchscreen to manipulate the desktop. The applications really seem to jump off the page for them.”

Newport, who is more focused on Pioneer Center’s employment and training programs for those with intellectual and developmental disabilities, likes the versatility the Sprout offers. People who need to run standard PC applications can work in them. People who need to work on other skills can do that, too.

“There is a coloring app that’s really good for working on fine motor skills and control. In another program, users can take an image, break it into puzzle pieces, then manipulate it on the Touch Mat to re-assemble it,” he says. “What we’re seeing is that the tactile experience of working with the HP Touch Mat is helping clients achieve new things with the computer.”

Pioneer Center is just beginning to explore many potential uses and applications with the HP Sprout. “We know our clients will have new opportunities with some of the many applications available for art and creativity,” Christy says. “And the more we use the HP Sprout, the more we’ll see new ways to let our clients explore. It’s an exciting process.”

Wells also notes that the Sprout is providing therapeutic opportunities for many of our clients with barriers including those on the Autism Spectrum. The Sprout helps develop eye-hand coordination skills.

“One of our goals in therapy and education is getting clients used to using their hand to manipulate what they see on the screen. This can help them develop the connection between hand movement and control of onscreen results.” he says.

Pioneer Center initially received a grant to fund the purchase of 18 HP Sprout all-in-one computers to be used for people with intellectual and developmental disabilities. The Sprouts are proving so useful, Wells says,

that Pioneer Center hopes to get additional funding so that it can expand the use to other programs, and also equip eight of the organization’s group homes with a Sprout.

More than assistive technology

One of the things that excite Pioneer Center staff is that it’s not just “assistive” technology that becomes quickly obsolete. The Sprout helps make the power of computers more accessible to clients as the latest advance in mainstream computer technology — with the ability to run the same applications, to access the same networks, and enable its users to interact with other computers and other computer users.

“Today, everybody uses technology—whether it’s a desktop computer, a tablet or a smartphone,” Wells says. “Our clients haven’t always been able to access or use the same technology as everyone else. So the ability to use the Sprout is a new opportunity to help clients achieve their personal, and perhaps even professional, goals. In that sense, it’s pretty inspiring.”

Outcomes

Using the mat as a touchscreen to manipulate the desktop really bridges the gap for Pioneer Center users. The applications seem to jump off the page for them, according to Christy. The tactile experience of working with the HP Touch Mat is helping clients achieve new things with the computer. And the HP Sprout helps users develop their eye-hand coordination skills.

Challenges and Pitfalls to Avoid

Pioneer Center is working to take the new technology beyond daytime use into group homes for ongoing reinforcement. “Whenever you’re working on developing new skills, it’s important to practice and get frequent reinforcement so there is no learning loss,” says Newport, “So being able to transfer what they learn in our day program and repeat those skills at home is very helpful.”

Lessons Learned

Services provided by agencies traditionally focused on routine tasks. And too often, technology wasn’t utilized. Now Pioneer Center is more willing to use every available tool to make the transition to adult life after school smoother and clients more productive.

Advice to Share with Others

Technology can provide users the opportunity to unleash creativity. “The first thing I wanted to do when I saw the Sprout was to touch it,” says Wells. “And we’re seeing the same reaction in many of our clients. It actually draws them in. It provides confidence. We’re finding the more we see how Sprout can be used, the more brainstorming we do to expand possibilities even more.”