

Transforming Lives with Technology

i-Function Partners with Lunavi to Modernize Cognitive Assessment and Training Tools Aimed at Improving People's Functional Skills, Quality of Life



i-Function is a company on a mission. Its goal is to help people who are older or living with cognitive challenges gain the day-to-day functional skills they need to live more productive and independent lives.

To strengthen their outreach and deliver even more value to users, this healthcare software company needed a strong, collaborative technology partner to help take their products and capabilities to the next level. In 2020, i-Function found that partner in Lunavi.

Over the past year, Lunavi has helped i-Function modernize its software platform and improve its delivery process to streamline innovation, expand and simplify user access, and facilitate cost-effective growth and scalability. Discover how this powerful partnership is advancing the continuous innovation and groundbreaking solutions that are helping change people's lives for the better, every day.

For millions of people, completing everyday tasks in today's fast-paced and increasingly digital world is a constant challenge. Older individuals and those living with mental illness or other cognitive challenges can find it difficult to do things that so many of us take for granted, from navigating a website to using an automated kiosk to downloading a mobile app.

Despite the vast number of individuals struggling with these issues, they are often difficult to identify and alleviate. This is largely due to the fact that many of the organizations that help support and care for these individuals, such as senior centers, often lack the specialized resources and tools needed to properly assess and address them.



Enter i-Function

Cofounded in 2016 by healthcare entrepreneur Peter Kallestrup and university professors Philip Harvey, PhD., and Sara Czaja, PhD., this innovative start-up set out to solve these challenges and help more people overcome these limitations. By merging a research-driven focus with technology, the company sought to create a new generation of assessment and training tools that are not only highly effective, but also affordable, easy to access, and easy to use.

Building breakthrough products that break down barriers to care

Right now, i-Function offers two state-of-the-art tools—one aimed at assessing and improving functional skills and the other at facilitating early and effective diagnosis of cognitive problems. FUNSAT is the company's assessment and training platform as well as its first software-based solution.

This innovative application is already proving to be a gamechanger for the many organizations that i-Function partners with to bring its products to market. These include a growing number of diverse healthcare providers such as memory disorder clinics and mental health centers as well as senior centers and pharmaceutical companies. Whether used independently or in adjunct to other products as part of a more expansive cognitive remediation program, FUNSAT offers some valuable benefits that are fueling adoption.

“One of the biggest benefits is that organizations are able to train more people with less specialized staff,” Kallestrup explained. “Most current training involves one-on-one sessions, typically with a highly specialized clinician. With FUNSAT, one person can train up to 10 people at a time onsite and then have individuals continue training at home when appropriate.”

That boost in productivity is a huge plus for organizations that typically have limited staff and budgets. FUNSAT also makes it easier for providers to personalize training programs, which can contribute to better user experiences and outcomes.



Our mission is to help people lead more productive lives,” said CEO and co-founder Kallestrup. “We’re doing that in a unique way by removing many of the functional barriers to outreach while providing valuable tools and data to support and enhance the work of clinicians, caregivers, and researchers.”

—Peter Kallestrup
CEO and co-founder



From the start, our relationship with Lunavi has been very constructive and collaborative,” Kallestrup said. “They work with us as partners, bringing ideas and helping us talk through problems and possibilities.”

—Peter Kallestrup
CEO and co-founder



Choosing a partner to help navigate and prepare for what's next

With strong support and growing interest for its current and next generation of products, i-Function was poised to take its business and offerings to the next level. The application functionality, however, presented serious limitations that were holding it back.

Although well documented and supported by the National Institutes of Health (NIH) with two Small Business Innovation Research (SBIR) grants, the original computer-based training platform required local installs and lacked compatibility with mobile and other devices, restricting how users could access the software. These limitations also made it more challenging to add new modules to the system.

To move forward, the company needed a technology partner that could help them modernize their existing platform to meet current goals, but also work collaboratively to prepare and position the company for what's next.

That partner turned out to be Lunavi. In 2020, i-Function was introduced to the Lunavi team by one of its existing solution providers.

Removing barriers to innovation and growth

Lunavi recognized the unique nature of i-Function's products and the critical need for a more flexible foundation that could grow and scale with the company over time while minimizing upfront and ongoing IT costs.

Lunavi worked with i-Function's team to create a clear solution roadmap based on their goals, which included adding new modules to broaden

Technology at Work

Lunavi worked closely with i-Function to architect an Azure-based platform that met their goals for the new application while preparing for future growth, scalability, and ongoing efficiency.

The application itself is built on .NET Core. The development team also leveraged Azure native PaaS components including App Services, App Insights, Function App, SQL Database, and Log Analytics, with security features provided through Azure Front Door and WAF Policy, Azure Active Directory, and Key Vault.

The result is a highly scalable application comprised of managed and automated services that minimize the time and effort spent by i-Function staff on managing backend components. As a software provider to both healthcare providers and individual customers, i-Function required secure access to their web app, the ability to autoscale, and simplified monitoring and management – all achievable through Azure PaaS.

Throughout the development process, additional Microsoft tools were used to facilitate agile processes as well as software and infrastructure deployment. The application lifecycle was managed through Azure DevOps while the infrastructure itself was defined and configured through ARM Templates. Meanwhile, the Microsoft 365 Suite was essential for team collaboration and engagement between i-Function and Lunavi.

Finally, ongoing support for the application is provided through Azure Dashboard, Azure Monitor, and Azure DevOps. New features and version control is simplified with the lifecycle management tools within DevOps; while Azure monitoring and alerting tools allow resource management and measurement of KPIs or vital metrics.

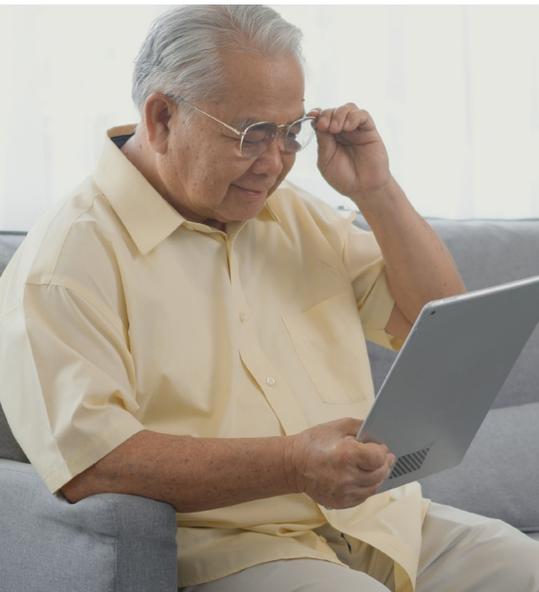
By offering a single platform for development, software delivery, infrastructure management, monitoring, and security, Azure brings modern, scalable cloud apps within reach.





Usually when you're developing software, you're building it for people who are comfortable using the technology," Kallestrup said. "That's often not the case with our users, so we need to test for unusual situations and accommodate for a wide range of skills and experiences."

—Peter Kallestrup
CEO and co-founder



training categories and expanding access to more users and devices. The plan focused on building a new software platform using a modern, browser-based user interface along with a Microsoft Azure cloud-based infrastructure to support advanced performance, security, and availability requirements.

"For organizations like i-Function that have a great vision and a great product but are just getting started, our goal is to create a solution that meets their needs and can grow with them," explained Lunavi's Mike Douglas, Director of Delivery Engineering.

"By building on a platform like Azure," he added, "they have ready access to all the app tools and services, reporting capabilities, data analytics—whatever they need, without having to go back and rework anything or make a huge upfront investment."

Lunavi also worked with i-Function to demonstrate the value of Agile product delivery. Given the company's limited budget and timeline as well as its unique user requirements, embracing an Agile approach offered critical advantages that would help i-Function deliver solutions from ideas to production in a better way.

Using Agile methods and best practices, Lunavi was able to provide the predictability, accountability, and consistency needed to keep projects on track and speed time to value. Lunavi partnered closely with i-Function to test and continuously improve product iterations at every stage of the development process.

For the development team, understanding the special challenges of the end users and how the products could help them actually became a unique source of motivation.

"We build a lot of different types of software, but it's not every day that we get to be involved in building a product and platform that can help make people's lives better," Douglas said. "This is something our entire team believes in strongly."

Looking ahead and building on success

With the new platform and Agile development approach, i-Function has been able to create and release its third generation of FUNSAT, incorporating updated training modules as well as more advanced features, such as built-in timers and automated lesson plans. These changes will now make it possible for clinicians, researchers and caregivers to design

“Our goal is to help people,” Kallestrup said. “It’s why we’re here. It’s why we started this business. And when you see the impact so far and imagine what’s possible—it’s really remarkable.”

—Peter Kallestrup
CEO and co-founder



functional skills-assessment and training programs that directly align with the individual needs of their specific users. It also will allow users to augment their onsite training by using the tools at home, without the need for continuous in-person support. This added convenience is particularly important amid ongoing COVID-19 concerns and precautions.

Already, the new generation of software is generating highly positive reviews from both current and first-time users. A few of the key factors that stand out for many users and have prompted them to upgrade or try FUNSAT for the first time are its easy access, ease of use, intuitive design, published results and its availability in both English and Spanish language versions.

The new Azure-based architecture also expands access to a broader range of user devices, including mobile tablets, while improving scalability to support new modules as research and user demands dictate.

These improvements also support the company’s future distribution goals, which include partnering with third-party healthcare providers and corporate partners to improve customer engagement with currently underutilized products and services.

For i-Function, partnering with Lunavi has opened the doors to even more possibilities for the future.

ABOUT LUNAVI

As a leading managed service provider and consulting firm, Lunavi is focused on helping customers advance their digital transformation goals by modernizing business applications, migrating solutions to the cloud, designing hybrid cloud solutions, and applying Agile and DevOps engineering practices to build new, innovative solutions. Our portfolio of services is designed to provide continuous improvement along each step of the IT journey to maximize business value and success. We are a Microsoft Gold Partner and Azure Expert MSP, offering deep expertise in the Microsoft ecosystem of enterprise IT software and services. Visit us at www.lunavi.com to learn more and follow us on LinkedIn, Facebook, and Twitter.