Summary

CUSTOMER

Cognetivity Neurosciences

CHALLENGE

Achieve total data interoperability with healthcare systems

OUTCOME

Fully effective data interoperability and integration with healthcare systems, enabling global growth and expansion for ground-breaking solution

Cognetivity Neurosciences + InterSystems

Cognetivity Neurosciences Leverages InterSystems Interoperability Technology in Addressing the Growing Problem of Dementia

Dementia is a major global problem, afflicting 54 million people, with the number set to rise to 130 million by 2050. Cognetivity Neurosciences, founded by academics at Cambridge University in the UK, designed a cutting-edge solution to help alleviate the global dementia epidemic.

A Simple Solution Rooted in Advanced Neuroscience

Early detection, prior to the development of clinical symptoms, opens the door to specialist interventions and lifestyle changes that could slow the advance of dementia and improve quality of life. Lifestyle changes have the potential to delay the onset of symptoms by up to five years and in turn reduce the prevalence of dementia by 50 percent in the general population.

The Cognetivity Neurosciences Integrated Cognitive Assessment test (ICA) is based on humans' strong reaction to animal stimuli, and the ability of a healthy brain to process images of animals in less than 200ms.

ICA combines cloud-based AI and advances in neuroscience in a rapid animal/non-animal visual categorization test aiming to detect signs of disease before the onset of memory symptoms.

InterSystems™
IRIS for Health

It engages brain areas affected in pre-symptomatic stages of Alzheimer's and detects subtle impairments in information-processing speed.

The cloud-based agility of ICA enables clinicians and users to conduct the ICA test on familiar hardware such as iPads and smartphones, and in any location with internet connectivity.

The Critical Need for Interoperability

The success of any new diagnostic technology is heavily influenced by how easily it can be integrated into existing workflows and information systems. For a solution with huge global potential like the ICA platform to be clinically effective and scalable, it must integrate with pre-existing clinical data. In most countries, this requires full compliance with mandatory healthcare data standards, such as HL7® FHIR® and HL7 V2, which govern interoperability.

Cognetivity Neurosciences selected InterSystems as its technology partner for that essential data management and interoperability. InterSystems IRIS for Health™ data platform is ideally suited to this demanding role, being engineered specifically to extract insight from healthcare data. It is completely cloud-agnostic, supporting deployment on all major public clouds, multi-cloud, and hybrid environments. InterSystems IRIS for Health also enabled the team to limit the number of different technologies used in creating the platform. The result - critical information flows to the right person at the right time, a crucial element required for efficient adoption and effective decision-making.

"InterSystems felt like the natural fit as our interoperability and integration partner," said Jonathan El-Sharkawy, Chief Technology Officer, Cognetivity Neurosciences. "From the outset, we were confident in our decision to bring them onboard to help power our growth. InterSystems IRIS for Health is extremely powerful, proven and fully accepted by the National Health Service (NHS) and, critically, the InterSystems team brings with them a wealth of experience in NHS environments."

A Fully Integrated, User-Friendly Test That Works

InterSystems IRIS for Health enables Cognetivity Neurosciences to connect effectively with consumer devices and medical grade equipment, and lets patients use existing hardware in the form of iPads and smartphones for the ICA test.

A high level of integration with electronic healthcare records (EHRs) is powering the wider adoption of Cognetivity Neurosciences' technology as the company expands beyond the UK. The company is also looking to expand into early detection for conditions such as Multiple Sclerosis.

InterSystems IRIS for Health gives Cognetivity Neurosciences the interoperability and agility its cutting-edge technology requires to help transform dementia care pathways across the NHS, and to meet the wider global demand for remote testing, diagnosis, and monitoring tools.

"The unique data management and integration capabilities of InterSystems IRIS for Health are essential to what we do," El-Sharkawy said. "It is significant for us that InterSystems IRIS for Health has successfully integrated with so many health information systems, including those of the biggest EHR providers. With our platforms working together seamlessly, the scope of international applications now accessible to us is substantial."

Clinical Implementation is Well Underway, With the Potential to Benefit Millions of People

The ICA test is a major advance in early dementia detection, making it faster, cheaper, and more reliable. Its simplicity removes language, cultural or educational barriers, enabling the solution to achieve adoption almost anywhere in the world. The platform is approved by the UK's Medicines and Healthcare Products Regulatory Agency and has been deployed with the specialist NHS mental health organization North Staffordshire Combined Healthcare NHS Trust. It is also in use in primary care in Sunderland, England.

The ICA platform is also accepted by the UK government's G-Cloud and was selected for the final cohort group in the Texas Medical Center's Fall 2020 Innovation program in the US.

The power of its innovation, and the advanced cloud data management and integration capabilities of InterSystems IRIS for Health, positions Cognetivity Neurosciences for significant expansion to help millions of people worldwide.

"Our collaboration with InterSystems has been hugely beneficial, helping us fulfil our ambitions," said Dr. Sina Habibi, Cognetivity Neurosciences CEO. "Like us, InterSystems people are passionate about using technology to make significant, high-impact improvements in patient care. InterSystems IRIS for Health provides us with the interoperability and agility our cutting-edge technology requires to help transform dementia care pathways here in the NHS and internationally. And we can meet the accelerating demand for faster, more accurate, and more cost-effective diagnosis."

WITH OUR PLATFORMS WORKING TOGETHER SEAMLESSLY, THE SCOPE OF INTERNATIONAL APPLICATIONS NOW ACCESSIBLE TO US IS SUBSTANTIAL.