Cognizant®

Case Study: Healthcare

Track Possible COVID-19 Symptoms? There's an App for That

Sensyne acts quickly during the pandemic to provide people with a digital medical symptom tracker to help individuals and families monitor their own health and support members of the community who are most in need.

In times of crisis, the ability to respond quickly makes all the difference. As COVID-19 began to take hold worldwide in March of this year, Sensyne jumped in rapidly to help the community. We helped build the application, based on Microsoft technology.

A clinical artificial intelligence (AI) company, Sensyne was already working with the National Health Service (NHS) in the UK, delivering software applications to help clinicians remotely monitor and manage patient symptoms. It was working to advance medical research by applying machine learning to ethically sourced anonymized electronic patient record data received from its unique partnership with the NHS.

We worked with Sensyne to create a free digital-first mobile app called CVm Health that helps people record and monitor their symptoms to assess their COVID-19 risks. It also includes

At a glance

From the earliest days of the coronavirus pandemic, healthcare technology company Sensyne wanted to help people — even those without internet access — track their symptoms and share information with medical providers. Up against the clock as the virus spread, Sensyne designed a free digital app for people to use to monitor both their own and neighbors' symptoms.

Outcomes

▐ Sensyne responded to the challenges posed by the COVID-19 pandemic by delivering the digital symptom tracker app to the community.

▐ The Cognizant team built the app quickly, launching in just 16 days, based on Microsoft Healthcare Bot.

Sensyne Health

July 2020

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> **Suzanne George, Chief Architect — Modern Workplace, Cognizant Interactive**

a vital signs tracker to record and store users' vital signs, including blood oxygen rate (via data from a pulse oximeter), blood pressure (from a pressure cuff) or temperature (via thermometer). The app also monitors and manages a user's COVID-19 testing status. All of this data is easy to share with a medical provider, improving the speed and efficacy of care during this crisis.

The aim was for individuals to share with doctors all the information that they need in one place to expedite decision-making when the situation is critical. A low blood-oxygen level, for example, could indicate lung impairment, making it even more critical for the patient to get medical help as soon as possible.

Patients without smartphone or internet access can choose to have a friend or family member use the app to track their symptoms to report to a doctor or other healthcare provider.

Besides getting fast treatment to those most at risk, Sensyne's objective was also to help people avoid unnecessary trips to the hospital where they might be exposed to COVID-19.

Partners at speed

When Sensyne approached us about the project, the COVID situation was evolving daily if not hourly. Sensyne had a vision of a symptom tracker to be shared with the community. The most important thing: The app needed to be easy to use and accessible across devices to encourage maximum use among people with poor technology literacy or no access to the Internet. From a technical standpoint, the development team knew the

solution needed to be General Data Protection Regulation (GDPR)-compliant and feature advanced security as it would contain sensitive healthcare data.

We proposed an app based on the Microsoft Healthcare Bot service integrated with Microsoft Azure B2C authentication, Microsoft Healthcare Bot verification and Microsoft Azure Cosmos DB. Being built within a "low code/no code" environment helped speed the development. We designed a mobile-first, omnichannel user experience so patients could access the app via smartphone, tablet, or computer. Our close partnership with Microsoft helped speed the development; Microsoft engineers were immediately available whenever we ran into issues.

The user experience and feature requirements emerged in a matter of a few days. On the fifth day, in fact, the team had a working prototype to take into production. By day 10, the app was completed. By day 16, it was launched. Just that quickly, the global team delivered a mobile-first, GDPR- and security-compliant COVID-19 health monitor with Power BI reporting. The app integrated with Azure B2C authentication, Healthcare Bot verification, CosmosDB and the Microsoft Healthcare Bot Framework. A complex architecture like this usually takes months, if not years, to build.

Our joint project team with Sensyne was particularly close. "Having been in this industry for 30 years, I have never known a team that can react and respond in an incredibly professional manner to detailed and fluid requirements to meet a compelling social need," says Alan Payne, Sensyne Health CIO. "The leadership was quite frankly inspiring."
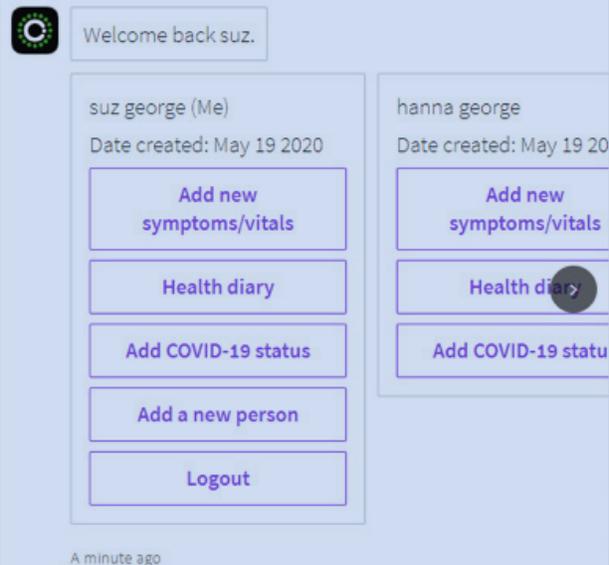
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Around-the-clock development

Leveraging Microsoft Teams for all communication, meetings and information was critical to maintaining the momentum. Team members could meet virtually and add others via a single click. Working side by side — virtually, if necessary — helped ensure that everyone was productive.

The development team used best practices for Agile development, including virtual meetings with Sensyne staff and separate technical team meetings, as development happened around the clock.

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Chief Architect — Modern Workplace, Cognizant Interactive. "Low code/no code technologies based upon Office 365 and Azure brought a wealth of functionality without being excessively complicated to use to build and develop applications."

All involved needed to understand both the strategic and tactical nature of the requirements. Something that would have taken months took only a few weeks, proving not only that necessity is the mother of invention but also that a strong partnership is key to execution.

"COVID is teaching us we are a small planet and we are all connected," says Lord Paul Drayson, chief executive officer for Sensyne. "Working together, we can beat this thing."

About Sensyne

Sensyne Health plc is a healthcare technology company that creates value from accelerating the discovery and development of new medicines and improving patient care through the analysis of real-world evidence from large databases of anonymised patient data in collaboration with NHS Trusts. These anonymised patient data are ethically sourced in that any analysis of anonymised patient data (and hence the Company's access to it) must be pre-approved for each programme on a case-by-case basis by the relevant NHS Trusts. This is to ensure that the purpose of the anonymisation and the proposed analysis are subject to appropriate ethical oversight and information governance, including conformance with NHS principles, UK data protection law and applicable regulatory guidance. Sensyne Health is an early signatory to the Department of Health and Social Care's "Initial Code of Conduct for data-driven health and care technology." Learn more at www.sensynehealth.com.

About Cognizant

Cognizant (Nasdaq-100: CTSH) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 194 on the Fortune 500 and is consistently listed among the most admired companies in the world. Learn how Cognizant helps clients lead with digital at www.cognizant.com or follow us @Cognizant.

Cognizant

World Headquarters

500 Frank W. Burr Blvd.
Teaneck, NJ 07666 USA
Phone: +1 201 801 0233
Fax: +1 201 801 0243
Toll Free: +1 888 937 3277

European Headquarters

1 Kingdom Street
Paddington Central
London W2 6BD England
Phone: +44 (0) 20 7297 7600
Fax: +44 (0) 20 7121 0102

India Operations Headquarters

#5/535 Old Mahabalipuram Road
Okkiyam Pettai, Thoraipakkam
Chennai, 600 096 India
Phone: +91 (0) 44 4209 6000
Fax: +91 (0) 44 4209 6060

APAC Headquarters

1 Changi Business Park Crescent,
Plaza 8@CBP # 07-04/05/06,
Tower A, Singapore 486025
Phone: + 65 6812 4051
Fax: + 65 6324 4051