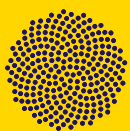


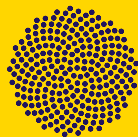
Ireland Where Digital Health Thrives



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How apps help deliver care at home

Garret Coady, CEO of BlueBridge Technologies, talks about how next-generation software can enable positive clinical outcomes.



From drug delivery devices to specialist laboratory instruments, BlueBridge Technologies provides custom medical software and technology consulting. Their clients include pharmaceutical companies and medtech businesses entering into the digital health space.

They create software for phones, the cloud, or clinical grade wearables, which can extract meaningful data about the efficacy of a medical treatment, deliver the treatment, or deliver a diagnostic.

Garret Coady says, "We work on using the phone as a diagnostic platform. We have used software to diagnose multiple sclerosis (MS) or the degree to which a patient has MS. With our custom-built hardware and firmware PC, and machine-vision technology, patients are guided through predetermined movements, captured on video, to let clinicians assess the severity of their symptoms."

Garret says that these new types of software take the burden off health care centres, such as hospitals, as these therapies and diagnostics can be undertaken away from these settings. It can also help healthcare professionals have a more complete picture of patients' health, as they acquire more data about the patient over a period of time rather than single data points when interacting with a healthcare professional. This helps doctors make more informed medical interventions. "We have a particular niche speciality in blending technology developments with the regulatory requirements needed in the connected health space," says Garret. "There are three Ps of why using software can improve healthcare:

“Precision – with better technology, better diagnostics, and better therapeutics, there is more accurate diagnostics or more precise treatment. Prevention – using technology to diagnose the condition before it progresses into something that requires expensive hospital care; and Personalisation – with a data set specific to the individual, particular health care can be tailored for a patient. This way, you get less of a one-size-fits-all type health care approach, so you make things more efficient and targeted.”

Developing partnerships

BlueBridge Technologies has partnered with companies such as Medtronic, Boston Scientific, Novartis, Cook Medical, Roche and West Pharma, to name a few. Companies outsource their research, development, and engineering to BlueBridge to create technologies for them.

An example of a BlueBridge innovation includes developing a medical mobile app for Medtronic that monitors and manages diabetic patients in a home care setting. A Medtronic sensor is placed on a glucometer (which measures how much glucose is in the blood) worn by the patient, and this interacts with the new mobile app to record data.

Garret says, “We engineered the app with our own developers, our own testers, and all of the documentation required. A big aspect of developing this technology is complying with the regulations in the medtech industry. There are design controls, risk management, and verifications of specific parts, and these activities are also outsourced to us by companies. Our systems and procedures are fully vetted to make sure they're compliant with the law, but also that they comply with the specific standards of Medtronic, Novartis, Boston Scientific and any company we engineer for, so that we operate as an extension to the internal development departments within these companies.

In order to get to the market, a high bar is set for demonstrating safety, efficacy, and clinical benefits for medtech under current regulations. Software as a medical device is a new category of software and the United States and the European Union regulate these. They place obligations on manufacturers to ensure devices are safe, fit for their intended purpose. And ensure regulatory compliance in protecting user data.

“The International Medical Device Regulators Forum is a really good global regulatory regime and gives a lot of guidance in this area. The software is closely monitored all the time to ensure it meets regulations.”

Solving problems

Garret says that when creating software, it cannot just be technology for technology's sake; it has to solve a real problem. It is critical to consult with healthcare professionals and patients before and during developing digital therapeutics or “digiceuticals” products. He adds that if not consulted, the product won't be successful.

“The technology has to not only work for the patient and the doctor, but it also has to work for the hospitals and the insurance companies. These are the major stakeholders who all have to see value in what's being delivered.”

Whether that is digitally measuring the medication adherence of patients, or for enabling virtual patient care outside the hospital. Garret notes that the acceptance of this type of technology has been advancing slowly for the past decade, but the Covid-19 pandemic has helped speed up its adoption.

“A lot of the barriers to remote healthcare via technology have fallen because of Covid-19. Suddenly, people are seeing the benefits of using virtual patient/doctor contact. So, the pandemic has actually progressed and accelerated things in this domain.”

Market access

Along with Ireland, Bluebridge Technologies has a big presence in the US, Switzerland, and Germany. Garret remarks that doing these types of digital health activities in Ireland, allows them access to a strong IT sector, medtech centre and medical device sector. This is a real advantage to other markets.

“Attracting and developing talent is essential. Ireland has a workforce, with the skilled graduates that we, as a company and part of an industry, need. The availability of talent from the manufacturing, medtech, pharma, and technology sectors are all required on the frontline to create these solutions. Ibec is great at identifying these in-demand skillsets. They find out what the real needs of the industry are and fuel the ecosystem in digital health while blending the cultures of the different segments.”

Garret adds, “That blend of cultures is why we are able to deliver on the promise of digital health. That's what makes it such a fascinating area to work in and that's what keeps us innovating for the future.”



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