

Ireland Where Digital Health Thrives



An Ibec Campaign



Irish Medtech
Association
Ibec



biopharmachem
Ireland
Ibec



Technology
Ireland
Ibec

Creating the right solutions

Jim O'Donoghue, President of S3 Connected Health, speaks about how digital health solutions in medtech and pharma are empowering patient self-management and easing burdens on clinicians.



When the number of coronavirus cases started increasing back in March 2020, Dublin-based digital health company S3 Connected Health collaborated with senior respiratory consultants across Ireland to develop a new clinical support tool.

“Clinicians in hospitals urgently needed a way to cope with the crisis and better manage respiratory care delivery for affected patients,” says Jim O’Donoghue, President of S3 Connected Health. “We developed a web-based application that helps support Irish healthcare professionals with triage (the process of determining the priority of patients’ treatments by the severity of their condition or likelihood of recovery), monitoring, and treatment of patients in hospital, as the coronavirus pandemic continues.”

The web-based application uses a Covid-19 specific risk model that was co-designed with clinicians and which acts as an early warning system to support clinicians in identifying patients that are at risk and who could be in need of ICU care.

“The solution is a CE-marked, Class I medical device, which indicates conformity with European health, safety, and environmental protection standards,” says Jim, “and we developed and deployed the solution in a record 10 days; in normal circumstances it would take up to a year”.

Embracing digital in pharma

Digital health solutions are becoming a vital part of today's healthcare system. Jim says, "the Covid-19 crisis has underlined the importance of embracing digital solutions to improve patient outcomes and facilitate more efficient care".

This has always been the aim of S3 Connected Health, whose solutions extend from healthcare delivery and acute patient care in the hospital to management of patients living with chronic conditions at-home.

The company partners with pharma companies to develop digital therapeutics and digital therapy management solutions for patients and clinicians in areas including neurology, immunology, respiratory, and cardiology.

"For example, we partnered with Biogen to develop a digital solution for a disease, which allows clinical teams to assess, monitor and track the disease progression," says Jim. "The solution drives better insights on the management of patients and supports specialists and care teams to make more informed decisions on the treatment of patients.

"We also developed a digital solution for the management of Multiple Sclerosis (MS) with leading pharmaceutical company Merck. This connected auto-injector and patient app supports patients with adherence and disease management, and a clinician portal provides clinicians with oversight and decision support."

Connected medical devices

S3 Connected Health also designs innovative connected medical devices, systems, and solutions for medtech clients, including implantable, wearable, and hospital-based medical devices. "For example, alongside leading health technology company Philips, we developed a wearable device for the treatment of positional sleep apnoea.

"The small palm-sized sensor device prompts patients to change position without disturbing their sleep. A companion mobile app and online portal make treatment progress easy to see; with adherence and positional sleep data accessible via a cloud-based system."

Cloud-based solutions

Affinial is the trusted cloud-based platform S3 Connected Health uses to deliver many of their digital health solutions and services around a disease, therapy, or connected medical device.

Jim says, "Using Affinial as a secure foundation, we create a range of custom-built apps, portals, and connected medical devices under our ISO13485 certified quality management system for the design and manufacture of medical devices. Creating digital health solutions using Affinial accelerates

“

For patients, clinicians, and healthcare providers, they need to be confident and reassured that digital health solutions meet the same exacting safety, security, and regulatory requirements as any medical device or pharmaceutical product.

”

delivery, allows us to quickly scale services, and improves time to market. It's robust, secure, Health Insurance Portability and Accountability Act (HIPAA) and General Data Protection Regulation (GDPR) compliant."

Being regulatory compliant and certified is very important to the company. "We've invested heavily in the regulatory side over the past ten years and have our own in-house regulatory team," says Jim. "For patients, clinicians, and healthcare providers, they need to be confident and reassured that digital health solutions meet the same exacting safety, security, and regulatory requirements as any medical device or pharmaceutical product.

"And as European regulations switch from Medical Device Directive (MDD) to a new set of regulations under the Medical Device Regulations (MDR), there is an increasing focus on clinical evaluation and ensuring that you have the right evidence to demonstrate that your product does what it says it will do."

Building teams for success

As well as having quality and regulatory experts, S3 Connected Health's strong multidisciplinary team includes medical professionals, behavioural scientists, solution architects, user experience (UX) professionals, data scientists, engineers, and business analysts. Having such a cross-disciplinary team means they can essentially build and create the right solutions. However, another vital part of developing digital solutions is consulting with healthcare professionals and patients who will use the final products.

“

Using Affinial as a secure foundation, we create a range of custom-built apps, portals, and connected medical devices under our ISO13485 certified quality management system for the design and manufacture of medical devices. Creating digital health solutions using Affinial accelerates delivery, allows us to quickly scale services, and improves time to market. It's robust, secure, Health Insurance Portability and Accountability Act (HIPAA) and General Data Protection Regulation (GDPR) compliant.

”

“It is always at the forefront of our mind that the end-users of these solutions are patients, healthcare professionals, or healthcare providers,” explains Jim. “We typically engage with clinicians and patients in each of the solutions we develop and really try to understand the challenges that they face. The underlying disease and behavioural challenges can be similar across certain types of solutions, but the way patients experience healthcare can vary significantly. So, you really need to understand the challenges each patient cohort, clinician, or provider face.”

In the case of clinical support tool for Covid-19, S3 Connected Health collaborated with Irish respiratory clinicians, including Professor Richard Costello, Senior respiratory consultant at Beaumont Hospital, as well as respiratory clinicians from the major Dublin hospitals and the HSE.

Ireland's digital health ecosystem

While S3 Connected Health also has offices in the US and Poland, Jim says there are many benefits to being headquartered in Ireland. “Ireland has developed a strong talent pool in the pharma and medtech sectors, with the right mix of small and large companies and a large availability of multi-disciplinary skills.

“This has been the result of a strong digital health ecosystem. Ireland has clinicians willing to provide their clinical insight, local partners who have specialist skills, key leaders, and research collaborators.”

Jim says that the Digital Health Working Group at Ibec has been a great support for the industry. “I am Chair of the group, and it has enabled us to bring together people from the pharma sector, the medtech sector, and the digital health sector, as well as clinicians and different stakeholders to collaborate and identify challenges. The network is very valuable.”

Jim continues, “We are also lucky to have great teams in Poland and in the US, where you'll find the largest pharma market in the world and many of the headquarters for large medtech companies. When we're creating our solutions, we collaborate remotely with our different centres and in today's world, this has accelerated.

“Although we have people in different locations, it's an integrated team. S3 Connected Health's client base is global and local. So, to have access to such a strong digital health ecosystem and many different stakeholders that we can easily engage with, is a unique aspect of being based in Ireland.”



📍 **Ibec Head Office**
84/86 Lower Baggot Street,
Dublin 2.
T: + 353 1 605 1500
E: membership@lbec.ie
www.lbec.ie/membership

📍 **Galway**
Ross House,
Victoria Place,
Galway.
T: + 353 91 561109
E: galway@lbec.ie
www.lbec.ie/west

📍 **Cork**
Knockrea House,
Douglas Road,
Cork.
T: + 353 21 4295511
E: cork@lbec.ie
www.lbec.ie/cork

📍 **Limerick**
Gardner House Bank Place,
Charlotte Quay,
Limerick.
T: + 353 61 410411
E: midwest@lbec.ie
www.lbec.ie/midwest

📍 **Donegal**
3rd Floor,
Pier One Quay Street,
Donegal Town, Donegal.
T: + 353 74 9722474
E: northwest@lbec.ie
www.lbec.ie/northwest

📍 **Waterford**
Waterford Business Park
Cork Road
Waterford
T: + 353 51 331260
E: southeast@lbec.ie
www.lbec.ie/southeast

📍 **Brussels**
Avenue de Cortenberg, 89,
Box 2,
B-1000 Brussels,
Belgium.
T: + 32 (0)2 512.33.33
E: europe@lbec.ie
www.lbec.ie/europe