

# Trusted technology partner to the **health sector**

Flexibility and scalability in a changing landscape

Delivering technology **excellence** 

Nash Tech.

#### Who we are

NashTech are experts in technology, with offices across the globe and award-winning team members based in our development centres in Vietnam and Latin America. We have extensive knowledge and capability across a broad range of technologies and 20+ years experience. NashTech is a division of Harvey Nash Group and is UK owned and regulated.

Unprecedented global conditions mean that IT leaders are seeking better outcomes and greater security from their outsourced teams. Our multi location delivery centres offer secure, scalable and truly agile solutions for organisations globally.

#### What we do

We deliver digital solutions utilising our agile, solution-focused approach, leveraging mainstream and emerging technologies to build robust, scalable and secure digital solutions.

As a trusted partner, we work in close collaboration with you to ensure you realise the value of your software earlier.

#### **Our solutions**



Business process solutions



Software solutions



Data solutions



Digital experience solutions



Application management solutions



Technology advisory



Technology must deliver a positive patient experience, improve patient outcomes and drive operational efficiency.

### A time of disruption and opportunity

Healthcare has faced sudden digital acceleration worldwide and patients now expect a high quality, personalised digital experience. Technology will redefine how healthcare is managed and delivered and has already revolutionised how people approach and manage their own health.

Embracing digital will transform patient pathways, reduce operational costs and inefficiencies, and scale up existing operations. This is where having a partner like NashTech becomes vital.

#### **Featured solutions**



#### Remote services

There is huge opportunity to prove the concept of remote and telemedicine, as well as remote monitoring and wearables. We have experience designing microservices solutions, including web and mobile platforms, for exactly this purpose.



### Planning and management

Staffing solutions such as timesheet management tools and algorithms that calculate pay for zero-hour contracts, integrating RPA into back-office processes and support identifying processes to digitalise, will all help to drive operational efficiency.



#### **Data-driven analysis**

Using data and data science for cohort analysis or triaging patients. Implementing predictive maintenance to know when medical equipment needs replacing.



### Patient data and records

Rebuilding management system solutions to meet the different regulations for various locations and territories. Systems to assist with EHR, migrating data to the cloud and providing remote access.

#### And also:



Building medical and fitness apps



Helping to achieve integration and interoperability



Implementing sensors and IoMT software



Improving patient experience and pathways



Patient admissions systems

#### A trusted partner



Our centres are ISO 27001 accredited. We protect your information as if it were our own.



of our development.

#### Robust governance

Our quality management system (QMS) underpins everything that we do. Our quality assurance service provides end-to-end support across the entire software lifecycle and at all stages of development, from concept to release and beyond.

#### Digital safety and IP

We have 20+ years' experience working within the regulatory environments in which universities, secondary, and further education colleges operate. We always provide solutions that adequately mitigate risks for data security breaches and are clear about ownership of IP.

#### **Expert onshore-offshore engagement**

Our engagement model is designed specifically to meet the challenges of international software development. We successfully deliver projects using an onshore-offshore model where you have a locally based engagement manager, plus an offshore project manager and business analyst.

## Machine learning aids detection of anomalies in cancer diagnosis process



#### **Outcome**

The use of computer vision and machine learning technologies resulted in the reduction in time to detect anomalies as part of the client's cancer diagnosis process. It is anticipated that this will allow medical practitioners to focus on other high value tasks. In addition the overall efficiency of the capsule endoscopy process will be improved.

The solution enabled CHI to evidence the benefits of the ongoing digital innovation in MedTech to improve medical science and diagnostics, and to commoditise a solution for use across the healthcare provider landscape, which will ultimately translate into to better patient care and improved health outcomes.

#### **Client quote**

Good for you if you can set up your own team of developers, engineers, and architects. But if you can't you want to have partner that can get you staff quickly, reliably and cost effectively.

A partner where that team member has a home that makes them stay longer, learn outside the project and collaborate with colleagues. NashTech is such a partner. For the past ten years the NashTech team found the right people for my startups, startups I advise and also in my last corporate position as a global CTO."

Dr. Hagen Wenzek Co-Founder, Corporate Health In<u>ternational</u>



#### **Company overview**

Corporate Health International is a multinational company working to build healthcare solutions to improve consumer medical evaluations.

- Client name: Corporate Health International
- Product type: Medical Technology: Electro-Medical Equipment
- 🏃 **Technology:** Azure, Python, Tensorflow, Nvidia
- **Industry:** Healthcare
- **Location:** United Kingdom

#### The challenge

Corporate Health International (CHI) have a proprietary remote video capsule endoscopy product which is used to conduct minimally-invasive procedures to identify risk or presence of small bowel or colon cancer. This is an invaluable test but it is a manually intensive process and presented considerable challenges and limitations including long and laborious analysis as well as an increased risk of human error in missing lesions in the film. CHI approached NashTech to help increase the velocity, resilience and accuracy of the life-saving tool and diagnostic process.

#### The solution

Partnering with CHI and the University of Barcelona, NashTech developed a computer vision and machine learning solution that rapidly processes capsule endoscopy video and flags when anomalies were detected. The solution is based on Python, Tensorflow, and harnesses Nvidia GPU for video processing.

The team used extensive training data and imagery from the University. The video was ingested into the NashTech solution in order to train the ML model to detect abnormal images from the endoscopic procedure. When the solution identifies an abnormality, it flags and timestamps the video so that medical practitioners can quickly navigate to the relevant image and conduct a more thorough clinical assessment and diagnosis.

The diagnostics team are able to access the data directly through the solution's user interface, and images are in a standard file format, which allows them to be imported into other solutions in the patient care ecosystem such as electronic patient records systems, so that they can be shared across the patient's care providers and the integrated healthcare system.



## **Emerging technology** and trends

Recently, there have been huge advancements in the assets that healthcare providers can utilise and should be implementing right now.

We see the following as the opportunities for transformation and innovation that healthcare organisations should consider:

Artificial intelligence and analytics

Big data and data science

Interoperability across systems and sectors

Mhealth, wearables and remote monitoring services

Predictive and preventative care

We are experts in technology, delivering smart solutions that solve business challenges and create value. Our award-winning teams apply deep expertise and passion to deliver complex IT projects globally.





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