BRIDGING THE GAP

Tapping into a demand in the industry for diagnostics devices that will improve patient treatment, the DxD (Diagnostics Development) Hub was set up to accelerate the development of these technologies from initial discovery to market viability.

The DxD Hub brings together a variety of professionals from the research and business sectors in the biomedical industry, and practising clinicians, allowing the Hub to garner valuable input for clinically-validated, market-ready diagnostics solutions.

Established in November 2014, the DxD Hub currently has around 350 projects in the pipeline.

“The vision for the DxD Hub revolves around three objectives: capability, capacity, and the impact to the patient.”

To gain a deeper perspective of the inner workings of the DxD Hub, Talent Times sat down with the CEO of the DxD Hub, Dr. Sidney Yee.

How has the DxD Hub transformed the development of the local diagnostics and medical devices ecosystem?
The whole point of DxD Hub is competency transfer. We’re able to not only build a team to help, but to also transfer knowledge to our local enterprises. Our approach lies in asking the right and relevant questions, identifying gaps in product development, and co-developing with local companies to plug these gaps. Hopefully, the cost-sharing aspect of what DxD Hub does will allow more local enterprises to embark on such a route.

In other words, we are in a collaborative partnership with the company. In that process, the company will eventually gain the know-how and competency to develop their own products, and garner important industry validation and deals.

One example of such a collaborative partnership was with a local startup, which has experience in industry research, but not in product development. In the 18 months of working with DxD Hub, the startup closed a credible industry deal with a publicly listed European company dealing with molecular diagnostics solutions.

What are some key challenges that the DxD Hub face?
A key challenge is the different perspectives of research, and of the market. A critical gap lies in the understanding of steps taken from a lab discovery, to a product with commercial value that someone will buy.

From the market’s perspective, the intended use – whether it is screening, early detection, or a complementary test – is an important concept. It is only after we’ve understood the intended use that we can go back to decide what we can do to develop a product that fulfils the intended use.

DxD Hub is the “translator” in the ecosystem. We need to look at the data and identify the most suitable intended use. Then we can proceed to guide the researchers on their next steps towards product development.

What we hope to guide and work towards is a very measured and calculated road map for product development, versus only viewing it from the research point of view where it begins with the discovery, and from possible experiments which are derived from the discovery.

Can you share with us some details of the current and upcoming projects that the DxD Hub is working on?
The bulk of our projects at the moment lies in molecular diagnostics. One of these involves applying liquid biopsy in detecting liver cancer. Instead of physically taking a piece of tissue from the patient, we can take a blood sample for analysis to determine if he or she is at high risk of developing liver cancer.

There is also a cluster of projects in imaging analytics, which involves using technology to assist pathologists to analyse tissue samples objectively and efficiently.

We’re also beginning to bring in devices under the area of intraoperative diagnostics, which are tools that will allow clinicians to diagnose, and treat patients at the same time.

As the CEO of DxD Hub, what is your vision for the Hub in the next five years?
The vision for the DxD Hub revolves around three objectives: capability, capacity, and the impact to the patient.

The fact that Singapore is a small market forces us to think differently. We need to think global, and to regard the whole world as our potential market. No matter where the product is being sold, we need to ensure that value is captured here in Singapore. This can be done by way of manufacturing, and by ensuring that companies have the capabilities to manufacture with value in product design, in addition to contract manufacturing.

The second objective is capability. DxD Hub aims to help more companies to be able to eventually license and develop their own products.

With more parties in the ecosystem that are able to do so, it will help us scale our capacity, by translating a lot more of our intellectual property from public institutions into marketable products.

Ultimately, we have to consider the overarching question, which is “whether this product has the potential to change clinical practice”. If the answer to the question is yes, then the impact to the patient will be incredible and the product will have far-reaching effects.