Bach Chen – CEO, Maisense, Taiwan



We do not have the strength to compete with traditional players, so being digitally disruptive is our key asset

02.07.2019

Tags: Taiwan, Medtech, Digitalization, AI, Wearables

Bach Chen, CEO of Maisense, highlights the innovative new solutions that the company has created in cardiovascular preventative medicine. Their advanced technology, Freescan, is providing an advanced solution to prevent stroke through Artificial Intelligence. Chen goes on to share the Maisense strategy as a nontraditional startup shaping the way for Taiwan's emerging medical device sector.

Mr Chen, as a co-founder of Maisense, you took on the position of CEO just this past February. What challenges have you faced during the transition and what have been your initial priorities since taking on the role?

One of the biggest challenges I faced during the transition was to define our strengths and set up a new strategy for the company. We spent some time with my team to define our priorities and it appeared that communication is very important. The team is now looking in the new direction and wants to reach the same goals and achievements.

Can you please introduce Maisense and your leading product Freescan, an innovative cardiovascular monitoring system?

Basically, Maisense is creating a mobile device focused on cardiovascular diseases to provide prevention care across multiple parameters. The product Freescan is able to detect the top 3 causes of stroke, arterial stiffness, atrial fibrillation (AFib) and hypertension, on one single device. In our company, and especially in Taiwan, we are strong in information and communication technology. Maisense wants to use this advantage to change healthcare through medical devices – an emerging industry for Taiwan. Since 2010, the medical device industry has been maturing which is why we decided to found Maisense in 2012.

We chose to be focused in the cardiovascular area because stroke is the second cause of death – one in ten people die by stroke. As a chronic disease, which means that it is a lifestyle disease not caused by intruders such as bacteria, stroke is becoming more of an issue. Our mobile device, Freescan, can record data and connect that data to physicians or care providers. As more data is collected, AI algorithms will be able to advise the patient in managing their condition.

Maisense is not a traditional medical device company. We do not have the strength to compete with traditional players, so being digitally disruptive is our key asset.

How is AI being used for early atrial fibrillation and arrhythmia detection as a method to prevent stroke?

There are two tiers of AI application in Freescan. The first one is AI AFib detection based on electrocardiogram (ECG). With the help of AI deep learning, we see significant improvements on the accuracy for AFib detection.

The second tier of our AI is different, having to do with stroke prevention. Freescan gives patient individual scores and potential contributions to the cause of stroke. In the future, we would like to give patients a complete risk score, something needs AI technology to achieve. To train our AI technology, we must partner with healthcare stakeholders to collect sufficient amounts of data. Therefore, we are now partnering with some hospital to exchange and study data.

Last year, the government launched an TWD 36 billion (USD 1.22 billion) four-year action plan to spur innovation and transforming Taiwan into a global AI technology hub. Although this is a large commitment, what are the challenges that still exist today in bringing AI and big data to the mainstream?

The most challenging part of applying AI is the need of large amount of tagged data. To apply AI on ECG or medical imaging, the challenges are to tag the ECG or medical imaging data that exist already. This can be done if we invest enough human resource. But for cardiovascular diseases such as stroke, the useful data may not exist yet. In addition to tagging the data, it takes years to build the data. This is the most challenging part.

How will digitalization reshape the traditional medical device and healthcare sector into the age of medicine 4.0? When it comes to smart health, how challenging is it to motivate not only patients, but traditional healthcare professionals to adopt digital health technologies such as Freescan?

In the beginning, we produced Freescan as a consumer product, but now we market more to health providers directly. At the beginning we were focused on B2C marketing, but we changed our strategy and are more focused on health institutes and care provider. We work with third parties such as insurance companies because Freescan will bring business intelligence to them. They will integrate our product and can introduce Freescan to their members.

The wearable device market is very competitive with many IT players getting involved. Apple's Watch Series 4 can record ECG and has received FDA approval. How is Maisense able to compete with such heavyweights and what competitive advantages distinguish Freescan within the market?

Regarding Apple, their Watch Series 4 is still a consumer product with many non-medical features. Their target audience is people under 40 years old while we target patients above 40 years old. Apple has a strong marketing scheme, but in the end people with heart disease prefer to use medical devices with FDA approval. Physicians understand that they need to recommend specifically designed products like Freescan, so the moment we don't see Apple as a competitor – we are not in the same market.

As a Taiwan based company, what are the markets in which Freescan is distributed and in which countries is the product mostly strongly positioned?

We entered the European market first right after receiving the CE mark for medical device in 2015. At the moment, our biggest market in Europe is Germany. Thanks to the CE mark, we also entered Southeast Asia such as Singapore, Malaysia, and even India. China will be a big market for us and we have applied for CFDA certification. However, the certification process in China may take as long as three years.

What strategic objectives have you set for Maisense in the upcoming ten years as a leader in next-generation cardiovascular monitoring?

We have two strategic objectives in the upcoming ten years. In the first phase, we will market Freescan, the connected multi-parameter cardiovascular monitor, to build distribution channels in order to create customer base and at the same time collect tagged data. In the second phase, based on these tagged data, we will then create a better solution for prevention of cardiovascular diseases with the help of AI.

See more interviews