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UK to create digital twin of human heart

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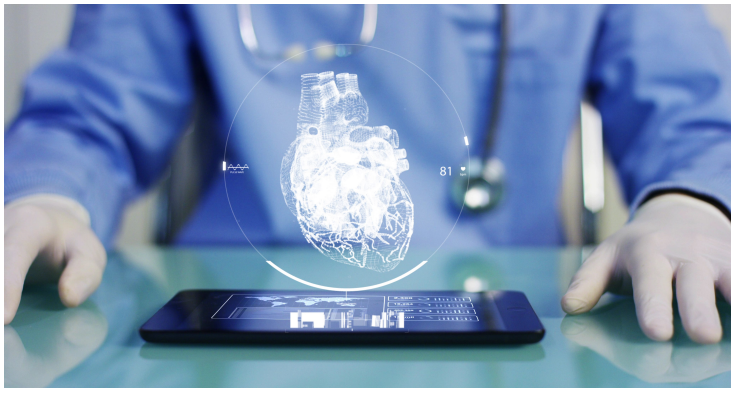
Researchers from the University of Sheffield to help develop the world's first 'digital twin' of the human cardiovascular system



A 'digital twin' of the human cardiovascular system will be developed for the first time by researchers at the University of Sheffield, UK.

The ambitious project aims to transform how doctors diagnose and treat cardiovascular disease, giving patients real-time support to monitor their health alongside care from their doctor.

The 'Enhancing Cardiac Care Through Extensive Sensing' (ECHOES) project will bring together international academic and industrial partners, to develop accessible wearable technology that can be used to capture the experiences, symptoms and cardiovascular data of an individual during their daily life.

The University of Sheffield is a major partner in a research consortium of experts in cardiovascular medicine, science, engineering and computer science, that will develop this next generation health technology.

Artificial intelligence and machine learning techniques will analyse the data alongside genetic and healthcare data, creating a digital twin of a patient's heart to transform the diagnosis, monitoring and treatment of heart and circulatory diseases; leading to better patient outcomes and more effective treatment.

ECHOES was announced as one of the four shortlisted international research projects competing for a single £30 million funding award from the British Heart Foundation's Big Beat Challenge; a global initiative to galvanise researchers and inspire the development of transformational solutions to tackle the world's biggest killer.

ECHOES was chosen as a finalist due to its 'radical' approach to cardiovascular research and the clear benefit it could bring to patients.