

## ECCO

Wearable sensor breakthrough heralds a new era of customisation

### THE CHALLENGE >

Leading shoe brand ECCO wanted to create a new generation of customised footwear for the mass market. CDP was enlisted to help make this a reality – with unique wearable sensors embedded in the soles of the test shoes.

The biggest challenge was the fact that the sensors are very close to the ground, hidden inside shoes and covered by a human body – yet they need to send data from both shoes simultaneously to a connected device such as a mobile phone.

Reliable communication was crucial – despite the human body acting as an obstacle to the wireless signals. And the mechanical system inside the sensor had to be robust enough for people to walk on.

### THE SOLUTION >

The first prototype of the wearable sensor was created by CDP and ECCO in less than four months.

It collects a multitude of data using gyroscopes, pressure sensors and accelerometers – as well as the temperature and humidity inside each shoe – to create a unique digital footprint.

The inbuilt algorithm translates the data into geometries for in-store 3D printing of customised midsoles for customers, based on each individual's biomechanical and orthotic parameters.

The process is completed in approximately two hours.



### BENEFIT TO CLIENT >

Working with CDP helped ECCO to translate more than 50 years of shoemaking experience into an algorithm. Consumers get a full digital analysis of their feet and gait – and shoes are then tailored to their specific requirements.

ECCO's customised Quant-U ('quantified you') shoes are the first truly mass-market customisation of footwear. Yet for customers it is no more complicated than trying on a shoe in the store and walking for a few minutes.

