

TGO

An Innovate UK-funded business has developed touch-sensitive technology for the automotive, consumer electronics and gaming markets, reducing assembly times, lowering costs and improving sustainability.

Analysts expect the global automotive control panel market to grow to [\\$165.84 billion by the end of 2026](#). As part of this growth, reducing assembly costs now has [a bigger relative impact on overall costs](#). Companies offering cost-savings on manufacturing assembly can have a competitive advantage.

Technology company [TGO](#) has developed three-dimensional interactive surfacing and control solutions for the automotive, consumer electronics and gaming applications markets.

This design-led patented technology turns industrialised polymers (plastics) into touch sensitive surfaces. It replaces the bulky, laborious metallic sensors often used in car dashboards and gaming control panels with one, easier-to-assemble polymer skin.

TGO's Chief Innovation Officer, Francesca Perona, said: "We make intuitive smart surfaces with any materials. Our technology aims to eliminate up to 50% of assembly line processes.

"We also aim to reduce up to 75% of the mass production bill-of-materials by using one injection-moulded sensor material."

In 2015, inventor Ming Kong and co-founder Liucheng Guo launched TGO. Based in London, TGO's technology from the beginning eliminated complicated electronic assemblies, using the material to do the sensing itself, all underpinned with sustainability.

Perona said: "Our technology offers competitive advantage via freedom of design, cost reduction and increased sustainability."

"Our technology aims to eliminate up to 50% of the assembly line processes and reduce up to 75% of the mass production bill-of-materials."

Francesca Perona, Chief Innovation Officer, TGO

"In all our products, printed circuit boards (PCBs) can be easily replaced/upgraded and at the end of life, disposed of separately from our sensors, increasing recyclability."

In June 2018, TGO received £69,336 of Innovate UK funding, through the [Manufacturing and Materials and Infrastructure Systems co-fund award](#), to develop platform-tactile sensing technology to simplify the manufacturing process. The technology led to easier assembly, creating significant cost savings.

A further Innovate UK grant of £41,957 enabled TGO to develop multi-modal touch-sensing solutions, leading to the launch of its direct-to-consumer product, [ete](#), a button-free, intuitive gaming controller.

In October 2019, Innovate UK awarded a Smart grant of £235,134 to TGO to develop a disruptive method of manufacturing three-dimensional intuitive control interfaces with moulded illumination for automotive touch surfaces and gaming consoles. In May 2021, following engagement with an innovation and growth specialist at Innovate UK EDGE, TGO was also accepted for the [Innovate UK EDGE Scaleup Programme](#), a scheme that helps high-potential businesses to grow.

Perona said: "The Innovate UK grant helped to fast-track our idea-developments into proven prototypes. We've grown from a founding team of two to more than 25 employees, expanding into new markets including gaming, wearables and fitness tech.

"This year we aim to push to commercial-ready solutions. We are working with Tier 1 partners on pilot productions and certification of our products. We project to reach profitability in 2024 from multiple licencing streams in our core markets and our direct-to-consumer product (etee)."

