



Embraco sought Visionnaire to create an Internet of Things (IoT) and Cloud solution, connecting refrigerators to smart mobile applications

Embraco, a global provider of refrigeration technology, operates across residential and commercial markets, serving households, professional kitchens, supermarkets, convenience stores, displays, and medical equipment. In 2006, it began operating as Whirlpool S.A. in Brazil after merging with Whirlpool Appliances. Later, in 2018, Whirlpool announced the sale of Embraco to Japan's Nidec Corporation for US\$ 1.08 billion, and since 2019 Embraco has been officially part of Nidec.

In 2016, Embraco sought Visionnaire to innovate through digitalization with an IoT project for commercial refrigeration.

The challenge was to turn refrigerators into smart devices capable of solving two recurring problems: lack of automated stock management, leading to restocking failures, and misuse, where branded refrigerators were often used to store competitors' products.

The solution aimed to deploy sensors connected to the cloud to track stock in real time, issue automatic replenishment alerts, and identify product brands.

Data would also be integrated into a mobile app for distributors and sales representatives, allowing them to manage deliveries, withdrawals, and consumption more effectively.

Visionnaire, with *expertise* in IoT, Cloud, and mobile apps, led the requirements gathering and designed a scalable, modular cloud architecture prepared for global use. The solution included SaaS deployment in a multi-tenant environment, with the capacity to support millions of devices.

Proposed technologies included IoT sensors, GPS integration, mobile-first apps for iOS and Android, RESTful APIs, JSON communication, and push notifications. The architecture also envisioned future use of machine learning and AI for predictive analytics. The project delivered robust documentation and system architecture in English for global standardization.

As early as 2017, Embraco launched IoT-based solutions, positioning itself for digital transformation, logistics optimization, stronger brand control, and scalability to international markets such as India.