



MEGAROBO  
镁伽机器人

# Robotic barista makes caramel cappuccino with your name on it

MegaRobo researches and develops artificially intelligent robots known for their ease of use, safety profile and easy integration into other products. They offer flexible and practical automation for life sciences, intelligent retail, manufacturing and unmanned retail industries.

## The Product

MegaRobo designs robotic baristas to serve coffee in public places. These easy-to-install robots are plug and play and ideal for shopping malls, office complexes and subway entrances.

To interact with the robo-barista, customers use an app to scan the QR code indicating the type of coffee they want. The robotic arm then selects the cup size, controls sugar volume, dispenses and even prints the customer's name on the cup, similar to the service customers are used to at other popular coffee outlets.

Coffee-lovers can even place orders online in advance before heading to the nearest MegaRobo coffee machine to pick up their double-espreso, caramel cappuccino or latté on the run.

## Challenges

With a highly precise robotic barista arm to make coffee, MegaRobo wanted to bring its new barista idea to the market. They were looking for a partner that had both technology knowledge and manufacturing expertise to take the product from concept to design right through to manufacturing and distribution. They also wanted to partner with a company that had a good understanding of modern retail experience demands.

MegaRobo was seeking a partner with similar product experience to their own who could speed up their development cycle. They needed supply chain expertise and help in seamlessly moving their product from introduction to mass production and distribution.

## Solutions

We took on this Sketch-to-Scale® project and within two months from project kick-off, produced a customized demo unit. Our services included:

Design and engineering

- » Standard device research and modification
- » Modularization design
- » Quick change-and-replace processes
- » Water, electric and gas routing
- » Machine API secondary development

- » Food safety for production readiness and certification

Software development and support

- » Software architecture
- » Layout and automation process design
- » PLC/Robotic arm programming
- » WeChat application development for product function

Advanced mechanical solutions

- » Product enclosure with sheet metal frame design and fabrication
- » Machine aesthetics

Supply chain management

- » Robust supply chain system setup
- » Lean and scalable supply chain

## Key Success Factors

With prior experience working on a similar product from Sketch-to-Scale®, we were able to deliver targeted solutions to get the automated coffee vending machine to market.

We applied our knowledge from multiple industries to integrate various technologies into the final product. We used our know-how in robotic arm programming, WeChat app development and advanced mechanicals solutions. In addition, we made sure that it met all food safety regulations.

Pairing our past experience with a wide net of knowledge from various technologies and industries, we were able to deliver results at a very quick pace.

## Results

- » Seamless integration of multiple technologies to enable connected intelligence in a consumer-based product
- » Swift progress from concept to delivery with first machine completed in February 2019, only four months after the October 2018 project kick-off
- » Subsequent machines delivered in April and June 2019

**“Flex had the necessary innovation, experience and capability to support our effort to bring convenient automation to everyday lives.”**

Daniel Huang, CEO  
MegaRobo



For more information, please visit [www.flex.com](http://www.flex.com) or follow us on Twitter @flexintl

Flex is the Sketch-to-Scale® solutions provider that designs and builds Intelligent Products for a Connected World®. With approximately 200,000 professionals across 30 countries, Flex provides innovative design, engineering, manufacturing, real-time supply chain insight and logistics services to companies of all sizes in various industries and end-markets. Flex – Live Smarter™.

Copyright © 2019, Flex. All rights reserved. No part of this document may be reproduced in any form without the prior written permission of Flex.

ENG-CST-1-009-00 V1