

## THE BRIEF

JPL Flavours are an award-winning company that offer their customers natural and bespoke flavours paired with complete convenience and a unique experience.

Experts in confectionery, bakery, dairy, health and nutrition, JPL Flavours enable their customers to find the perfect product to match their individual preferences whilst being notified of other similar products based on their choices.



## THE APPROACH

Due to unprecedented company success, JPL Flavours was looking to expand their operational premises to meet increased customer demand.

JPL Flavours were planning the building of a new 1,765m<sup>2</sup> state-of-the-art warehouse within Clayhill Industrial estate. This expansion would help them develop their product offering including the introduction of additional specialist equipment.

JPL Flavours approached the Virtual Engineering Centre (VEC) to explore how they could use digital technologies for efficient and effective layout planning, without incurring lag times in production and the services they provide.

The Industrial Digitalisation team at the VEC used a LiDAR 3D scanning camera to map the factory and develop a virtual 3D model of the site. JPL Flavours could 'walk through' this virtual 3D space and easily visualise effective ways to restructure the site. The team could isolate 3D models of their assets whilst adding potential new equipment to quickly redesign their working area for better streamlining workflows and improve planning for future layouts, reducing production time across their varied processes.

Alongside the scan, the VEC collected valuable data from across the factory floor for process simulation, including historic company records for forecasting and predicting trends within the data which can identify internal strengths and weaknesses regarding machine layout and current processes.

## THE BENEFITS

JPL Flavours have been able to restructure the layout of their current processes which they believe have been vulnerable to delays and have now been able to quickly amend these based on the 3D visualisation developed from the factory scan.

The Virtual Engineering Centre has also recommended JPL Flavours explore a factory simulation as part of a wider digital strategy, which will enable for multiple testing on a variety of different processes for the new and extended factory.

A high number of simulations can run simultaneously in a matter of minutes, identifying the most effective configuration for their machinery within the extended factory to ensure bottlenecks do not limit their success.

This offers business owners peace of mind and the confidence that their factory is streamlined in such a way to support the highest productivity levels possible.



*"This support has come at the absolute perfect time for us. Whilst it is great to be in a position where the company is looking to expand our facilities to meet this increased demand, we were very aware of the issues and time penalties we could incur."*

*"The support from the team at the Virtual Engineering Centre has meant that we have been able to make changes and decisions confidently through better informed decisions whilst also exploring the opportunities that these technologies can offer us now and in the future."*

– Jake Lavelle, JPL Flavours Founder