Optimizing costs and opening new geographies

The Customer

Our customer is a top 10 giant in the personal care industry. They have made the strategic decision to use AI for the transformation of their product development process, enabling their team to reformulate and innovate at pace in a global market with educated consumers and fast-moving trends.

The Problem

The customer has a brand of cleansing products built from a base formulation, or chassis. The products vary by application, and their formulations do so as well to achieve specific properties. The goal was to increase chassis consistency, with additional importance placed on reducing costs.

The customer set out to model the chassis so that the formulations can be quickly adapted by future formulators using the experience of today's product experts, opening new geographies and maintaining quality across regions.

The Process

Using the Citrine Platform, the customer team modeled on target properties of the cleansing chassis, including ingredient costs. They trained the AI based on the knowledge of their formulators, incorporating relationships between ingredients and final properties and labeling ingredients.

The AI was then used to suggest formulations that would achieve the target properties and optimize raw material cost. Groups of these suggestions were produced and tested, and the resulting data fed back into the platform to retrain the AI, improving accuracy. While AI needs training, like a junior team member, it can also be used simultaneously on similar projects by the whole team.

The Outcome

- ☑ The customer estimates a **> 20% ingredient cost reduction**.

- ☑ In under 8 months, they optimized for all products on the chassis, with the first being confirmed in half of that time.

- ☑ The progress allowed the customer to use local ingredients and open new geographies due to expanded product margins.