

TechConnect Ventures **Sprint Challenge Brief:**

Simulation Platforms for Beverages and Packaging

ABSTRACT

A global food company is actively seeking innovative simulation software to accurately model powdered beverages and packaging, enabling the prediction of shelf stability. The company highly values approaches that enable simultaneous modeling of both the package and the consumable powder, as well as those that incorporate AI/ML components for enhanced predictive performance.

BACKGROUND

Modern food producers frequently conduct shelf-stability studies to comprehend the changes that occur in their products and packaging over time. These studies are crucial for ensuring the delivery of safe, high-quality products to consumers. However, traditional shelf-stability studies are time-consuming, utilize sellable products, and often necessitate repetitive evaluations of potential storage conditions or when modifications are made to product or package. Fortunately, modern simulation platforms provide a virtual pathway to augment or expedite these studies, enabling rapid prediction of risks and potential issues while saving valuable time and resources.

TechConnect's client, a global beverage and snack company with widespread locations and distribution, intends to implement simulation software specifically designed for modeling their powdered beverage mixes and corresponding packaging. The client is particularly interested in approaches that offer the ability to simulate the failure of the product (the powder, the packaging, or both) through moisture ingress.

The client is primarily interested in approaches that can comprehensively model the package and its contents and accurately assess the reciprocal effects between them. However, simulation platforms specializing in separately modeling the packaging or powders are also highly desirable. Additionally, the client is keen on exploring technologies that utilize artificial intelligence and/or machine learning to provide predictive insights into the packaging or the powder.

While responses from academic institutions are welcome, it is essential that all proposed approaches be ready for industrial deployment by Q1 2024. The client is open to considering both on-premise and cloud-based solutions.

The goal of this sprint is to facilitate contact and interactions between the Sprint sponsor and commercial entities (including Start-ups) or technology developers or research organization/university in this space. Submissions from all viable subject matter experts are of interest including those from academia and commercial entities.

REQUIREMENTS

Solvers submitting an Entry are encouraged to highlight capabilities in their Submission that meet criteria including:

- Simulation target(s):
 - Packaging
 - Powder
 - Both
- Parameters simulated
- Customization options
- Availability of demonstration data
- Experience with food and beverage applications
- Timeline to implementation
- Technical maturity

BUSINESS OPPORTUNITY FOR SOLVERS

All complete and eligible Entries will be included in an exclusive Innovation Opportunity Report that will be presented to our client. Solvers with well-matched capabilities may be contacted directly by either TechConnect Ventures or the client to discuss potential partnership opportunities, including – but not limited to – demonstrations, consulting, contract research, licensing, and more. Top-rated Entries may also be invited to register or participate in an upcoming TechConnect Ventures event or pitch program.

PARTICIPATION RULES & GUIDELINES

Solvers are encouraged to review the [Rules](#) and [Guidelines](#) provided on the Sprint page for details about participation, including submission criteria, eligibility information, and more.

QUESTIONS? Contact challenge@techconnectventures.com