



PEPSICO

New inventions and joint ventures
create transformative food innovations

Improved puncture resistance for more sustainable packaging

SUMMARY

Xinova partnered with PepsiCo to achieve sustainability goal by reducing the polymer usage per package while improving puncture resistance of flex film packaging.

THE PROBLEM: FLIMSY PACKAGING

Punctured bags look bad and have stale, inferior snacks. This damages the brand and makes it less likely a customer will purchase again. Thus, dense snacks with sharp edges such as salt-covered pretzels require thicker films to prevent puncture during filling or transport. This increases the amount of required material resulting in increased costs and use of plastics that can't be recycled.

SOLUTION: PEPSICO TAPS INTO THE NETWORK

Xinova worked with PepsiCo to formulate the problem and source solutions through two approaches:

1. Request for Invention (RFI): released this well-defined challenge to the global innovator network. With the diverse background from the network, innovative solutions were collected and reviewed.

→ [Slimmer, Strong Snack Packs](#)

2. Rapid Innovation Session (RIS): the Xinova facilitator and selected innovators collaborated virtually. Following the agile and iterative process, the innovators shared early concepts with PepsiCo engineers for feedback before making improvements and final recommendations.

THE RESULTS: UPGRADING THE MATERIALS

Three promising solutions were selected by the technical team from PepsiCo to achieve better film puncture resistance based on non-uniform density pattern, polymer chemistry, and biodegradable materials. Xinova is partnering with PepsiCo to test these solutions in early proof of concept studies. The potential business impact for our client is up to USD\$50MM per year.

“ The partnership we have with Xinova has focused on timeless key problems to deliver on-trend solutions. We are focused on delivering technical unlocks to sharply prioritized and clearly defined R&D problems that have eluded solutions via usual ecosystems. The partnership has enabled us to tap into thinking from very different industries, to find novel approaches to these evergreen opportunities and then adapt them for our applications.”

– VR Basker
Nutrition Category VP, PepsiCo