



COLLEGE & UNIVERSITY · UNDERGRAD & GRAD · AGES 19–28

Case Study

Pure Form Solution's Product Innovation

An applied case exploring how a sustainable packaging startup develops PHA-based compostable alternatives to conventional plastic, and the business, technical, and market challenges involved in bringing them to scale.

HOW TO USE THIS CASE

- Assign as a pre-read before an entrepreneurship or ESG strategy seminar.
- Use the analysis questions for a written response or capstone discussion.
- Pairs with Unit 4 of the Full Curriculum Module.

The Challenge & Approach

The global packaging industry is valued at over \$1 trillion and remains dominated by petroleum-based plastics. Pure Form Solution set out to develop PHA-based alternatives — straws, cups, lids, containers, and more — that match the performance of conventional plastic while fully biodegrading at end-of-life.

KEY DECISIONS ALONG THE WAY

- Material selection: choosing PHA over other bioplastics for its marine and soil biodegradability
- Product prioritization: sequencing which product lines to launch first based on market demand
- Manufacturing partnerships: balancing in-house development with contract manufacturing
- Go-to-market strategy: targeting institutional buyers (hospitality, healthcare, education) before mass retail

Data Points & Tradeoffs

CONSIDER THESE TRADEOFFS

Cost vs. impact

PHA materials often cost more per unit than conventional plastic — how does a startup justify that premium to cost-sensitive buyers?

Speed vs. rigor

Bringing a new material to market quickly vs. thoroughly validating biodegradability claims through third-party testing.

Niche vs. scale

Serving institutional buyers with specific sustainability mandates vs. pursuing broader consumer retail distribution.

ANALYSIS QUESTIONS

1. What evidence would you require before believing a compostable packaging claim?
2. How should a startup like Pure Form Solution sequence its market entry to build credibility?
3. What role does third-party certification play in overcoming buyer skepticism?