



# The Next Era of Agrifood and Health



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Senior Director

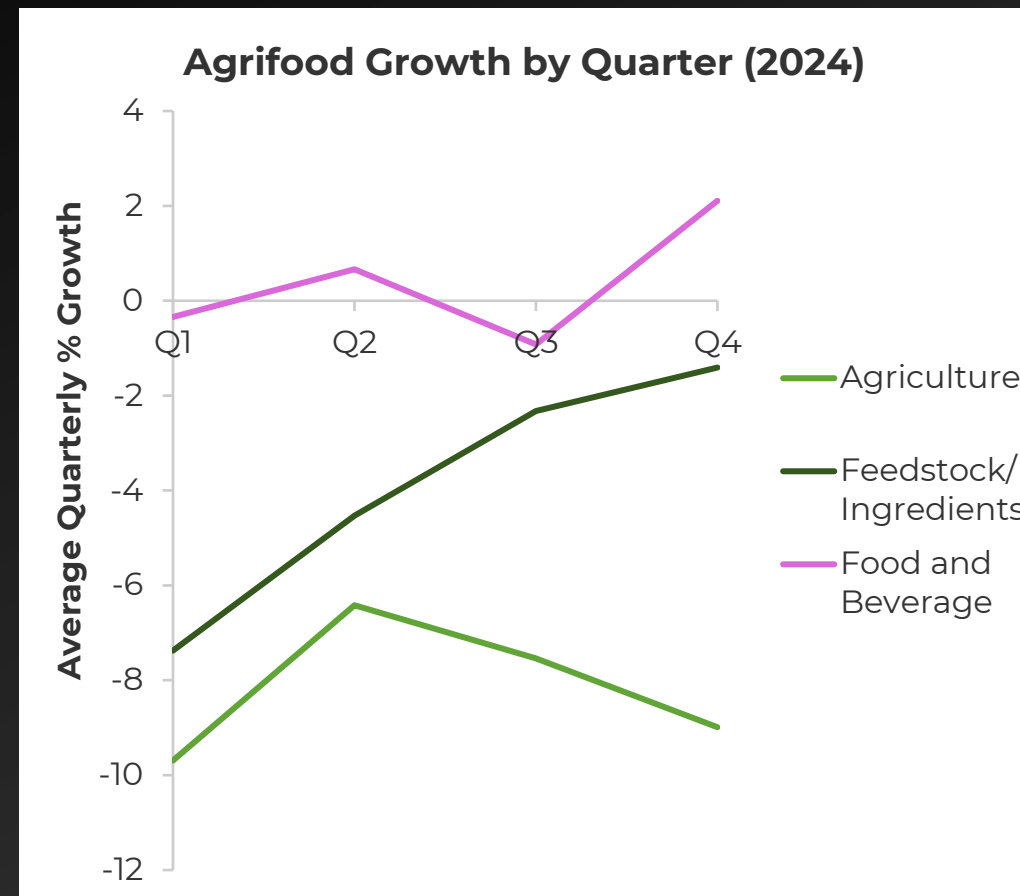


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Associate Research Director

# Market conditions shift toward growth

Growth through innovation is requisite

- **Agriculture** growth is challenged by low commodity prices and complex business models.
- **Feedstock and ingredient** companies grow as policy drives need for alternatives.
- **Food and beverage** growth emerges as wellness opportunities gain regional backing.



## Innovate from the core

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## From novelty to reprioritization

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## From sustainability to resilience

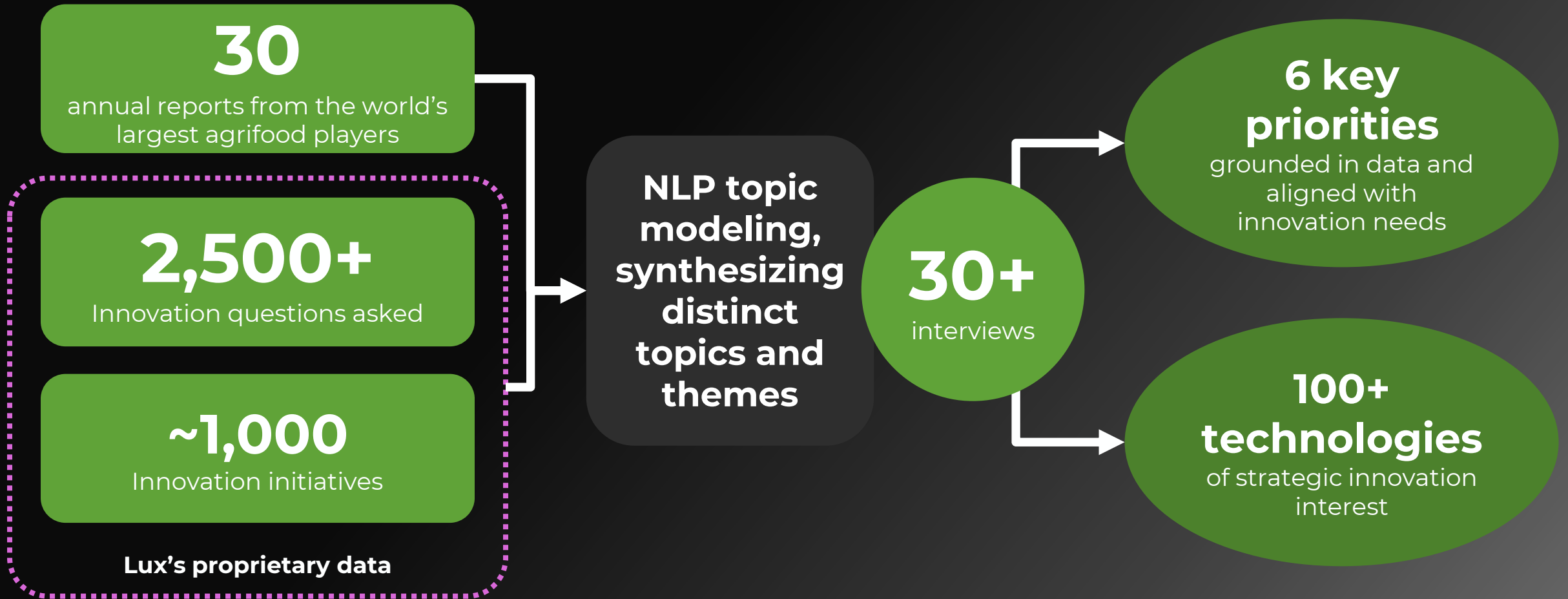
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# Agenda

- 01 | Unbiased, client-centric methodology
- 02 | Lux client priorities for agrifood and health innovation leaders
- 03 | Capitalizing on the next era of agrifood and health innovation

# Unbiased, customer centric



# Agrifood and Health priorities



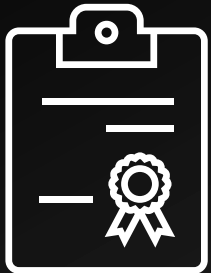
**Enhanced Health and  
Reduced Harm**



**Resilience Building**



**Growth Through the  
Bioeconomy**



**Purposeful Innovation**



**Impactful Packaging**



**Policy and Regulations**



# Agrifood and Health priorities



**85%**

**Enhanced Health and  
Reduced Harm**



**79%**

**Resilience Building**



**65%**

**Growth Through the  
Bioeconomy**



**55%**

**Purposeful Innovation**



**50%**

**Impactful Packaging**



**Policy and Regulations**

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# Lux client priorities for agrifood and health innovation leaders



# Enhanced Health and Reduced Harm

Evaluate better-for-you ingredient formulations and monitoring devices that improve health outcomes and reduce harm.

The agrifood industry faces a dual challenge: supporting human health while mitigating risks from overconsumption, poor diet quality, and exposure to harmful ingredients.

Success through health is about securing long-term growth in a highly competitive industry by connecting consumer needs to innovation scalability.



“What scientific evidence supports the efficacy of next-generation **functional health ingredients** (e.g., prebiotics, polyphenols, adaptogens)?”

“Which technologies advance **sugar reduction**, sodium reduction, or ultra-processed ingredients without compromising taste or shelf life?”

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## Innovation in Action

In May 2025, **PepsiCo** acquired Poppi, a prebiotic soda brand, for USD 1.95 billion, signaling its push into **functional beverages** amid growing demand for gut health and low-sugar options.

# Resilience Building

Strengthen supply chains and services to reduce emissions, use fewer resources, and withstand regional disruptions like land-use restrictions and catastrophic weather events.

Weather extremes, geopolitical instability, and land-use constraints force the agrifood ecosystem to move beyond carbon and efficiency to build resilience.

Agrifood companies must map critical vulnerabilities across geographies and develop multitiered mitigation strategies — from localizing procurement to piloting agriculture innovations and modular processing.



“

*How is **precision agriculture** improving real-time resource allocation and weather resilience at the field level?*

”

“

*How are **advanced membranes** being used to recover water, nutrients, or energy in resource-scarce regions?*

”

# Resilience Building

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## Innovation in Action

In 2024, **Unilever** deepened its partnership with geospatial platform Satelligence to monitor deforestation risks in its palm oil and soy supply chains.

# Growth Through the Bioeconomy

Assess risks and opportunities associated with building or blending biotech-based ingredients into the value chain.

Embedding solutions into legacy food systems presents hurdles, ranging from cost and scale-up to regulatory acceptance and consumer perception.

Identify where biotech enhances existing ingredient capabilities to blend innovation with operational pragmatism.



“

*How are the agronomic and environmental benefits of next-generation **biopesticides** being evaluated?*

”

“

*What are the market entry challenges and sustainability tradeoffs of **single-cell protein** production for food and feed?*

”

# Growth Through the Bioeconomy

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## Innovation in Action

In 2025, **DSM-Firmenich's JV with Fonterra**, Vivici, roped in USD 34 million to expand into the high-value functional dairy ingredients sector. It has recently tested its whey protein at a 75,000-L fermenter at the Bio Base Europe Pilot Plant.

# Purposeful Innovation

Reduce the cost and improve the accuracy of innovation by optimizing discovery, reformulation, and personalization to add value and agility to your portfolio.

Purposeful innovation requires more than novel ingredients or claims: It demands tighter alignment between R&D, consumer needs, and system capabilities.

Companies that embed data-driven approaches with innovations that help understand scenarios will better adapt to quickly shifting priorities.



“ How is **consumer sensory evaluation** evolving to integrate objective data and reduce reliance on subjective panel testing? ”

“ How are **advanced sensors** being used to improve performance and quality testing? ”



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## Innovation in Action

In 2024, Mondelēz International launched the Simoja VR Innovation Center, an immersive environment for R&D collaboration, prototyping, and consumer testing to reduce physical prototyping costs.

# Impactful Packaging

Evaluate technologies and materials that reduce waste and loss, protect quality, and improve the consumer brand experience.

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Advances in recycling, bioplastics, and barrier materials must protect quality while minimizing environmental impact.

Food and beverage companies should prioritize performance-first materials that cut waste, preserve freshness, and strengthen regulatory and consumer trust.



“

*How can **advanced recycling** technologies be integrated into packaging systems for food safety and circularity?*

”

“

*How are active packaging, antimicrobial films, or modified atmosphere systems being applied for **shelf-life extension**?*

”

# Impactful Packaging

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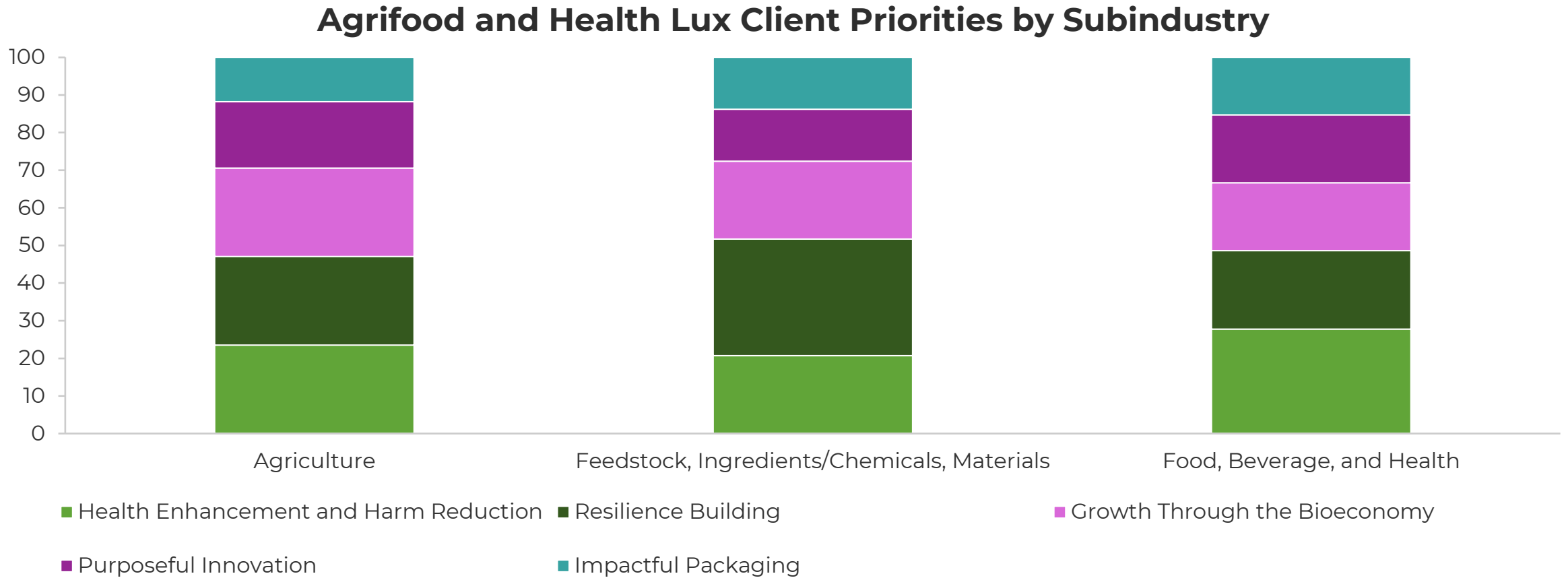
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## Innovation in Action

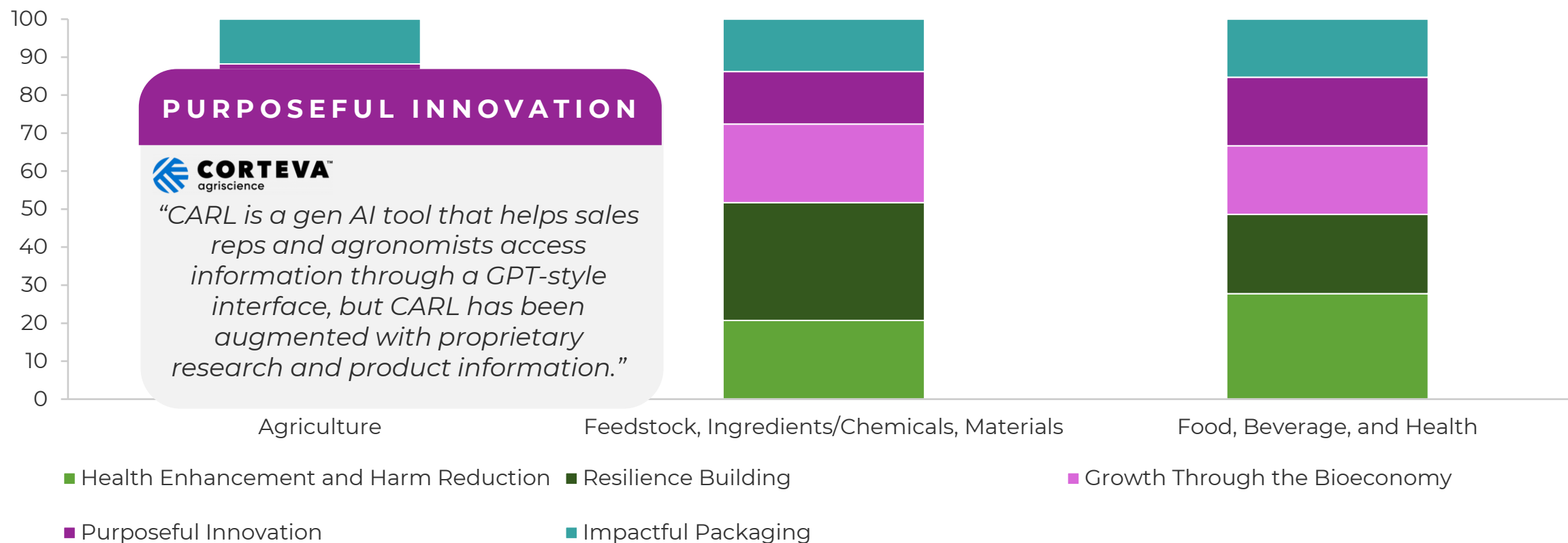
In 2025, **Nestlé** partnered with IBM Research to develop a chemical language model that uses AI to link molecular structure to packaging performance. The tool identifies food-grade films with strong barriers, heat resistance, and recyclability.

# Distinct priorities in subindustries



# Distinct priorities in subindustries

Agrifood and Health Lux Client Priorities by Subindustry



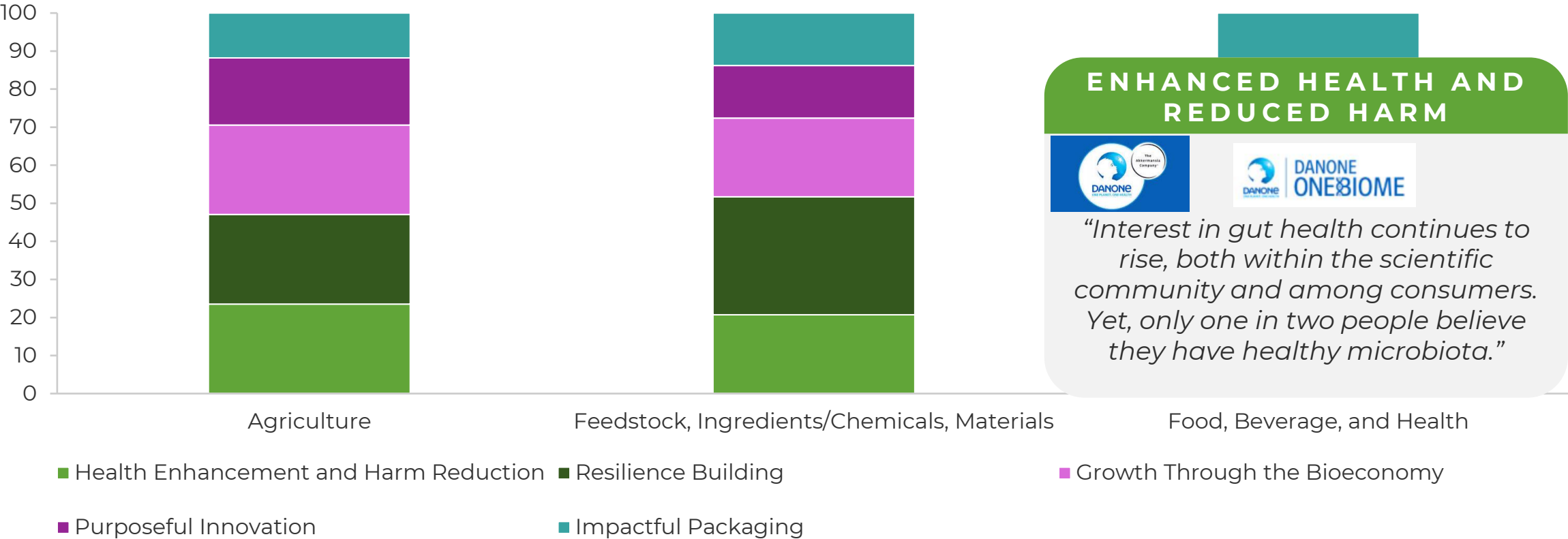
# Distinct priorities in subindustries

Agrifood and Health Lux Client Priorities by Subindustry



# Distinct priorities in subindustries

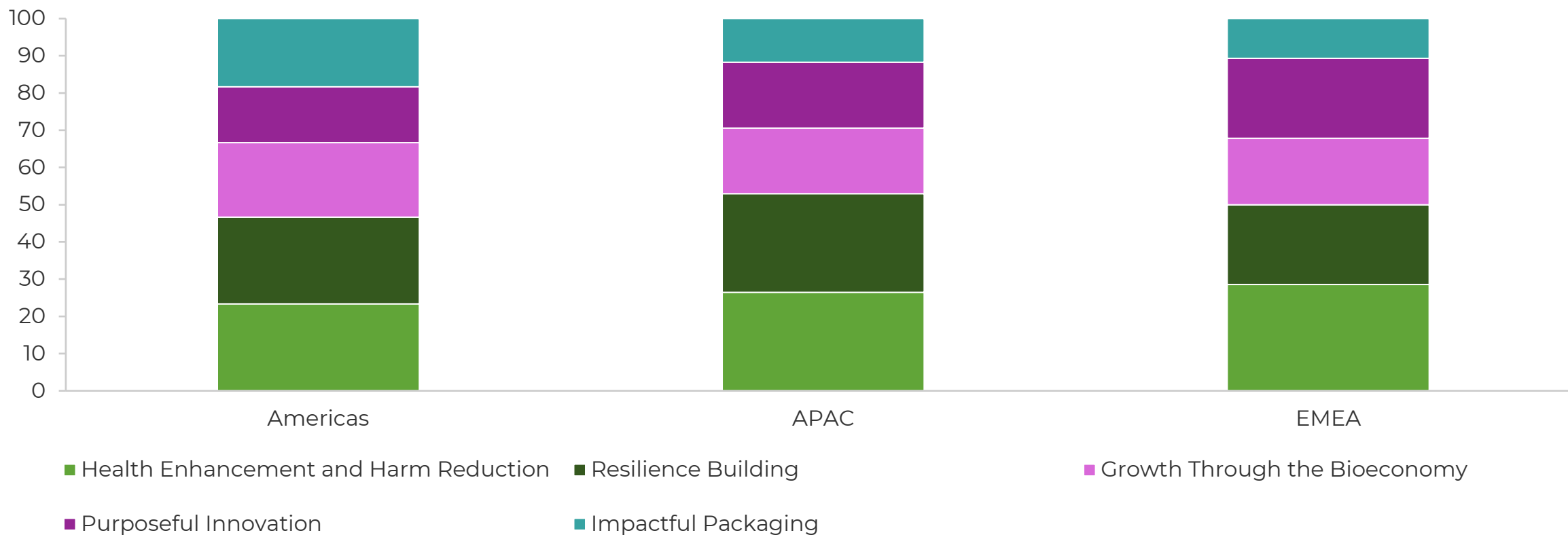
Agrifood and Health Lux Client Priorities by Subindustry





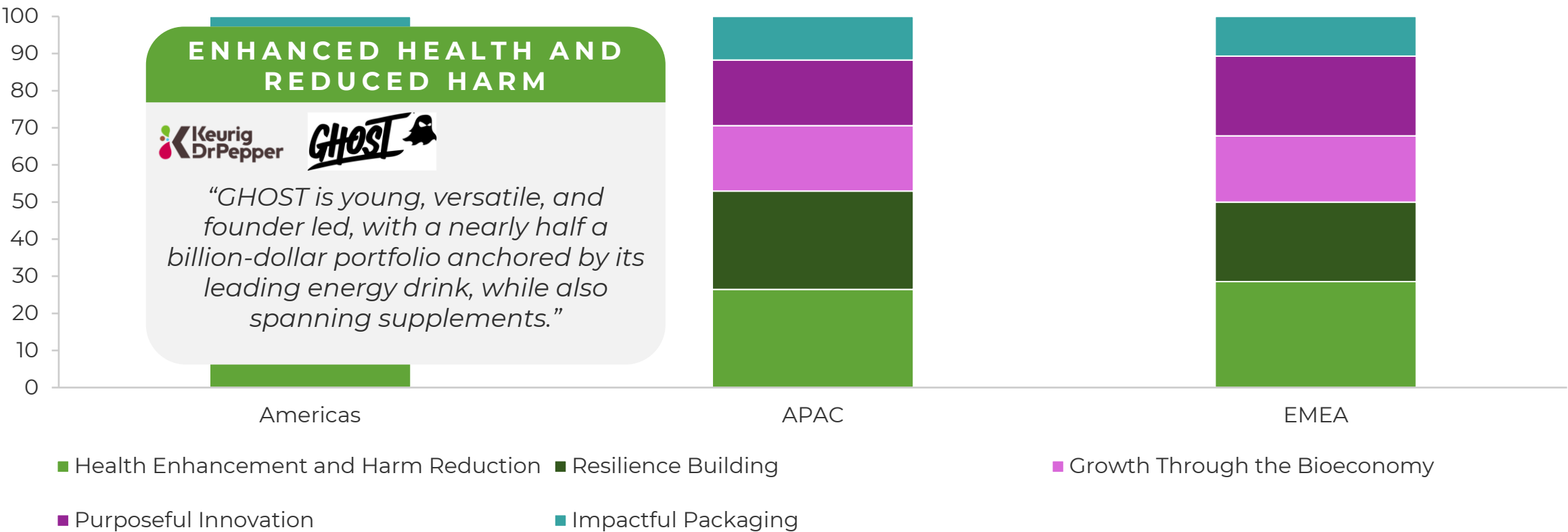
# Regional variation more nuanced

**Agrifood and Health Priorities by Geographic Region**



# Regional variation more nuanced

Agrifood and Health Priorities by Geographic Region



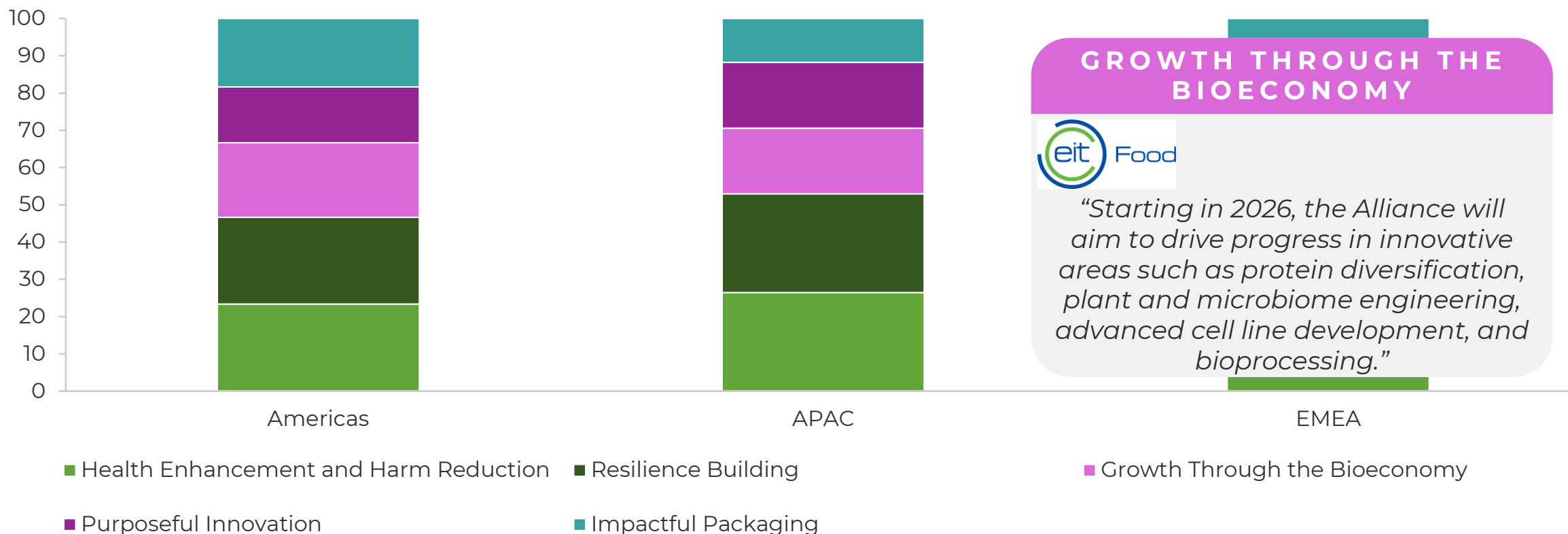
# Regional variation more nuanced

Agrifood and Health Priorities by Geographic Region



# Regional variation more nuanced

Agrifood and Health Priorities by Geographic Region



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# Capitalizing on the next era of agrifood and health innovation

# Understanding adjacencies for health

Assess opportunities across consumer health needs using the Lux Consumer Health Radar and the current positioning of existing or external capabilities and technologies to address health-specific use-cases.



# Unmet challenges assessment

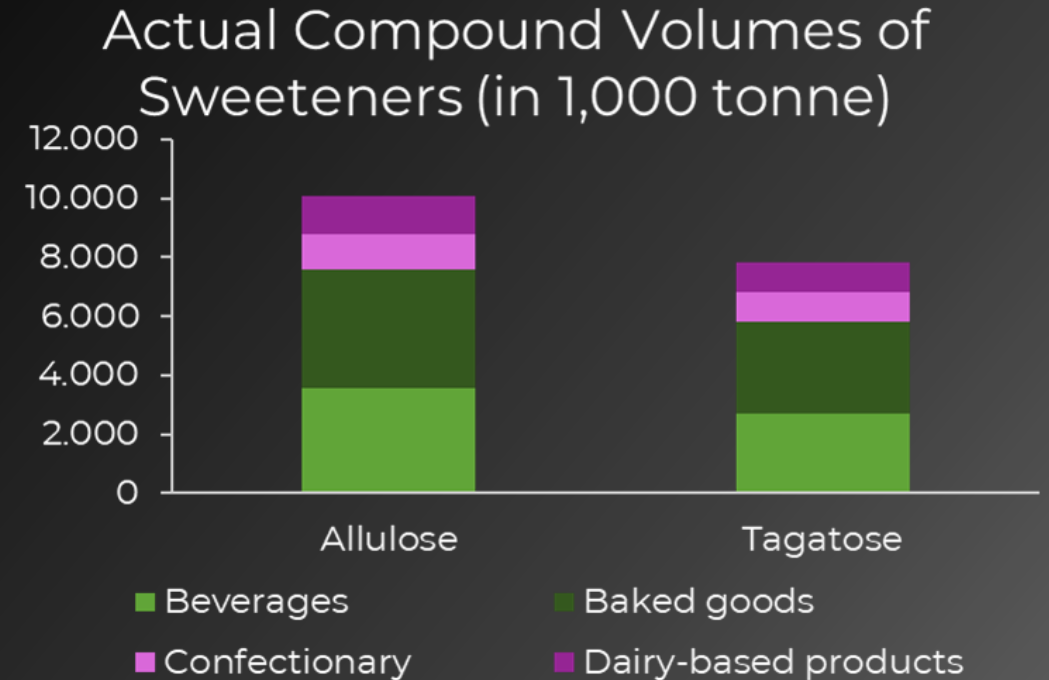
Food companies should primarily engage in the microbiome space by partnering with upstream partners, be it for microbiome analysis or functional biotics modulating gut health.

		Probiotics	Prebiotics	Synbiotics	Postbiotics	Bacterio-phages
GUT	Scientific validation	Low	Medium	High	High	High
	Novel applications	Low	Low	High	High	High
	Scalability	Medium	Medium	Medium	Low	High
	Formulations	High	Low	Medium	Medium	High
	Regulatory path	High	Medium	Medium	Medium	High
	Consumer awareness	Low	Low	Low	Medium	High
SKIN	Scientific validation	High	High	High	High	High
	Novel applications	Low	Medium	High	Low	High
	Scalability	Medium	Low	Medium	Low	High
	Formulations	High	Low	Medium	Medium	Medium
	Regulatory path	Medium	Medium	Medium	Medium	High
	Consumer awareness	Low	Low	Medium	Medium	High
Challenges		High	Medium	Low		



# Moving from functionality to market opportunity

To meet the better-for-you goals of food CPG companies, ingredients players should strategize on drop-in sweetener blends to balance the retail price; rare sugars will be increasingly preferred for that.



# Key Takeaways

01

Innovation in agrifood is shifting focus — from chasing novelty to adding value at the core, strengthening production, supply, and ingredients systems.

02

Health enhancement and resilience building are becoming central to long-term competitiveness.

03

The next wave of agrifood innovation will come from linking health adjacencies, addressing unmet challenges, and moving beyond functionality to market opportunity.



# Thank You



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# About Lux

Lux Research fuels innovators to not only imagine what's possible in the future but also operationalize innovation success in the near term. We deliver research and advisory services to inspire, illuminate, and ignite innovative thinking that reshapes and grows businesses. Using quality data derived from primary research, fact-based analysis, and opinions that challenge traditional thinking, our experts focus on finding truly disruptive innovations that are also realistic and make good business sense.

The “Lux Take” is trusted by innovation leaders around the world, many of whom seek our advice directly before placing a bet on a startup or partner — our clients rely on Lux insights to make decisions that generate fantastic business outcomes. We pride ourselves on taking a rigorous, scientific approach to avoid the hype and generate unique perspectives and insights that innovation leaders can't live without.

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