



# Texture Innovation Day

November 14, 2024

Ingredion



Ingredion



### **Forward-Looking Statements**

This presentation contains or may contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Ingredion intends these forward-looking statements to be covered by the safe harbor provisions for such statements.

Forward-looking statements include, among others, any statements regarding our expectations for full-year 2024 Texture & Healthful Solutions net sales, operating income, operating income margin and EBITDA margin, 2028 Texture & Healthful Solutions net sales, operating income, operating income margin and EBITDA margin, market growth rates for various ingredients or products, and any other statements regarding our prospects and our future operations, financial condition, volumes, cash flows, expenses or other financial items, including management's plans or strategies and objectives for any of the foregoing and any assumptions, expectations, or beliefs underlying any of the foregoing.

These statements can sometimes be identified by the use of forward-looking words such as "may," "will," "should," "anticipate," "assume," "believe," "plan," "project," "estimate," "expect," "intend," "continue," "pro forma," "forecast," "outlook," "propels," "opportunities," "potential," "provisional," or other similar expressions or the negative thereof. All statements other than statements of historical facts therein are "forward-looking statements."

These statements are based on current circumstances or expectations, but are subject to certain inherent risks and uncertainties, many of which are difficult to predict and beyond our control. Although we believe our expectations reflected in these forward-looking statements are based on reasonable assumptions, investors are cautioned that no assurance can be given that our expectations will prove correct.

Actual results and developments may differ materially from the expectations expressed in or implied by these statements, based on various risks and uncertainties, including geopolitical conflicts and actions arising from them, including the impacts on the availability and prices of raw materials and energy supplies, supply chain interruptions, and volatility in foreign exchange and interest rates; changing consumer consumption preferences that may lessen demand for products we make; the effects of global economic conditions and the general political, economic, business, and market conditions that affect customers and consumers in the various geographic regions and countries in which we buy our raw materials or manufacture or sell our products, and the impact these factors may have on our sales volumes, the pricing of our products and our ability to collect our receivables from customers; future purchases of our products by major industries which we serve and from which we derive a significant portion of our sales, including, without limitation, the food, animal nutrition, beverage and brewing industries; the risks associated with pandemics; the uncertainty of acceptance of products developed through genetic modification and biotechnology; our ability to develop or acquire new products and services at rates or of qualities sufficient to gain market acceptance; increased competitive and/or customer pressure in the corn-refining industry and related industries, including with respect to the markets and prices for our primary products and our co-products, particularly corn oil; price fluctuations, supply chain disruptions, and shortages affecting inputs to our production processes and delivery channels, including raw materials, energy costs and availability and cost of freight and logistics; our ability to contain costs, achieve budgets and realize expected synergies, including with respect to our ability to complete planned maintenance and investment projects on time and on budget as well as with respect to freight and shipping costs and hedging activities; operating difficulties at our manufacturing facilities and liabilities relating to product safety and quality; the effects of climate change and legal, regulatory, and market measures to address climate change; our ability to successfully identify and complete acquisitions, divestitures, or strategic alliances on favorable terms as well as our ability to successfully conduct due diligence, integrate acquired businesses or implement and maintain strategic alliances and achieve anticipated synergies with respect to all of the foregoing; economic, political and other risks inherent in conducting operations in foreign countries and in foreign currencies; the failure to maintain satisfactory labor relations; our ability to attract, develop, motivate, and maintain good relationships with our workforce; the impact on our business of natural disasters, war, threats or acts of terrorism, or the occurrence of other significant events beyond our control; the impact of impairment charges on our goodwill or long-lived assets; changes in government policy, law, or regulation and costs of legal compliance, including compliance with environmental regulation; changes in our tax rates or exposure to additional income tax liability; increases in our borrowing costs that could result from increased interest rates; our ability to raise funds at reasonable rates and other factors affecting our access to sufficient funds for future growth and expansion; interruptions, security incidents, or failures with respect to information technology systems, processes, and sites; volatility in the stock market and other factors that could adversely affect our stock price; risks affecting the continuation of our dividend policy; and our ability to maintain effective internal control over financial reporting.

Our forward-looking statements speak only as of the date on which they are made, and we do not undertake any obligation to update any forward-looking statement to reflect events or circumstances after the date of the statement as a result of new information or future events or developments. If we do update or correct one or more of these statements, investors and others should not conclude that we will make additional updates or corrections. For a further description of these and other risks, see "Risk Factors" and other information included in our Annual Report on Form 10-K for the year ended December 31, 2023, and our subsequent reports on Form 10-Q and Form 8-K filed with the Securities and Exchange Commission.

# Today's agenda

9:00  
a.m.

## **Innovation process behind texture and how it drives profitable growth**

- James P. Zallie, President and CEO
- Valdirene Evans, Senior Vice President and President, Global Texture Solutions
- Michael O'Riordan, Senior Vice President, Texture & Healthful Solutions, EMEA and Asia-Pacific
- Michael Leonard, Senior Vice President, Chief Innovation Officer and Head of Protein Fortification
- Jim Gray, Executive Vice President and Chief Financial Officer

**Q&A**

**Break**

11:15  
a.m.

## **Tours and tastings – Food pilot plant/Culinology kitchen/Pilot innovation center**

12:30  
p.m.

## **Texture and tasting experience lunch**

1:30  
p.m.

## **End of program**

# Texture Solutions

**Jim Zallie**

President and CEO

**Ingredion Texture Innovation Day**

**November 14, 2024**





# Unlike flavor, texture has no standardized descriptors

## Texture impacts:

- Appearance
- Mouthfeel
- Flavor release
- Taste
- Auditory experience
- Overall liking



CHINESE LANGUAGE:

140+

Terms for food texture



JAPANESE LANGUAGE:

400+

Terms for food texture

spongy  
gritty slimy pulpy  
creamy crunchy sticky  
chewy juicy flaky  
fibrous crispy rough  
soggy velvety rubbery  
brittle lumpy grainy  
tender gelatinous silky  
firm gooey  
smooth

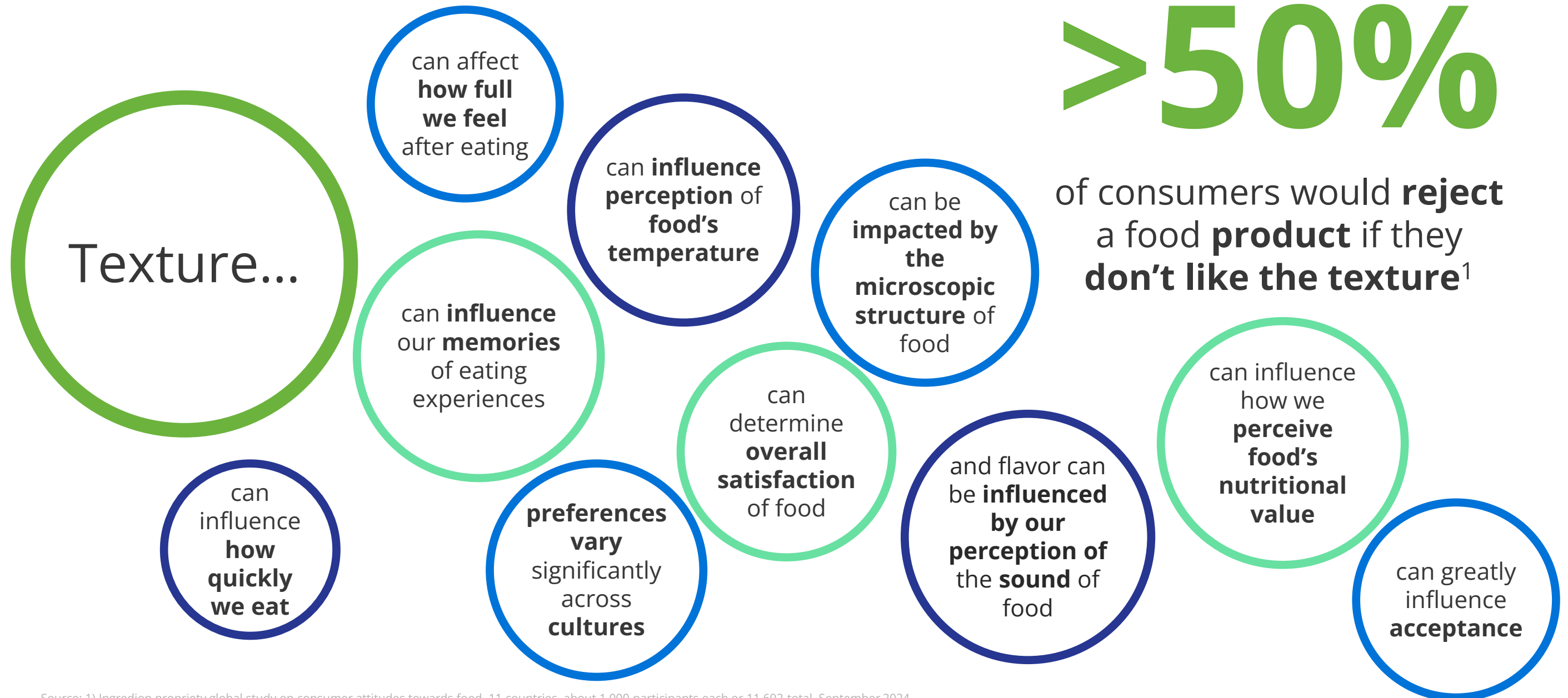


# Yet, all of us have our personal texture preferences ...





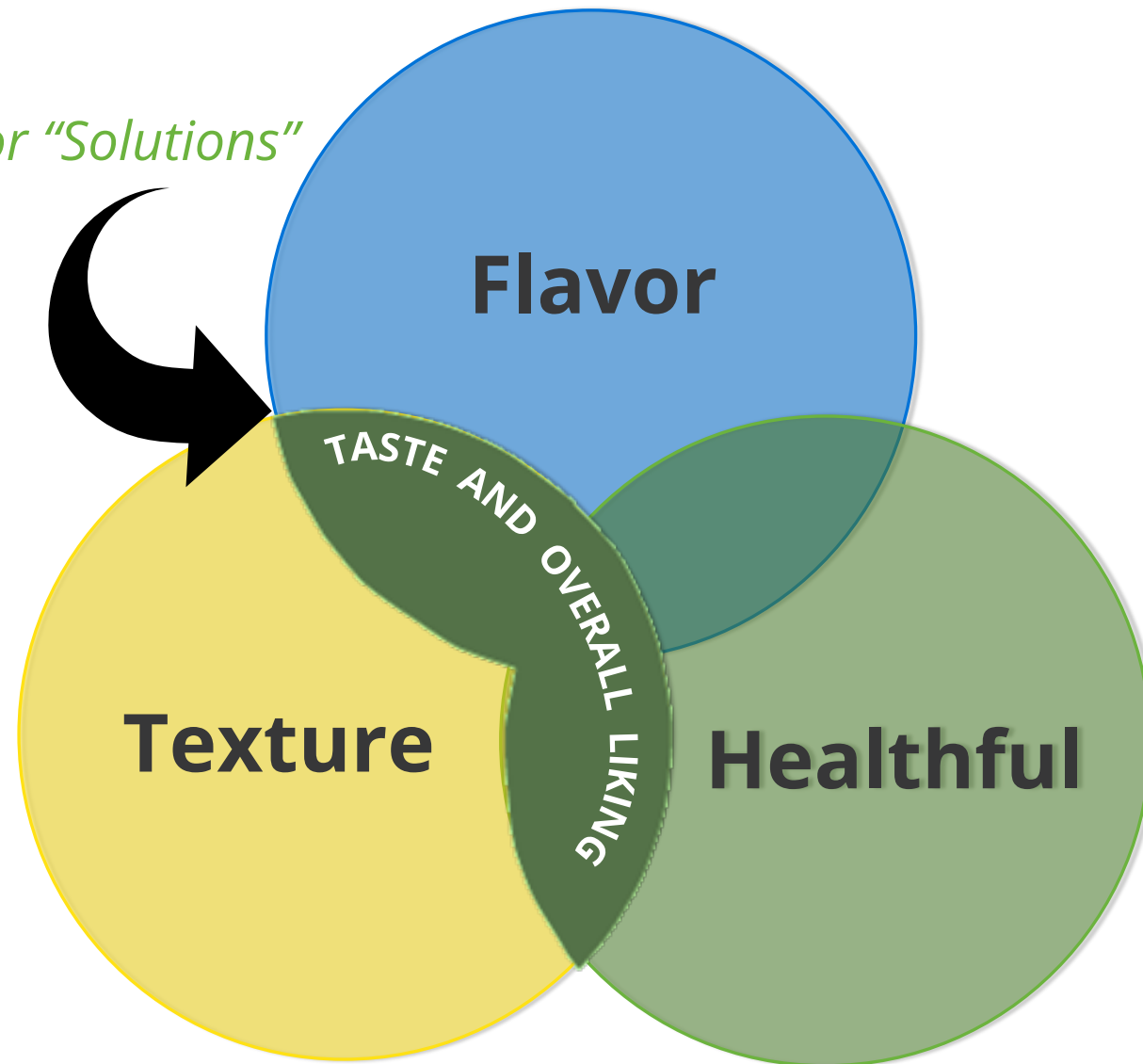
# And if the texture isn't working, then consumers won't come back for more



Source: 1) Ingredion propriety global study on consumer attitudes towards food, 11 countries, about 1,000 participants each or 11,602 total, September 2024

# Texture plays an undervalued but vital role impacting taste and consumers' overall liking

*Sweet spot for "Solutions"*

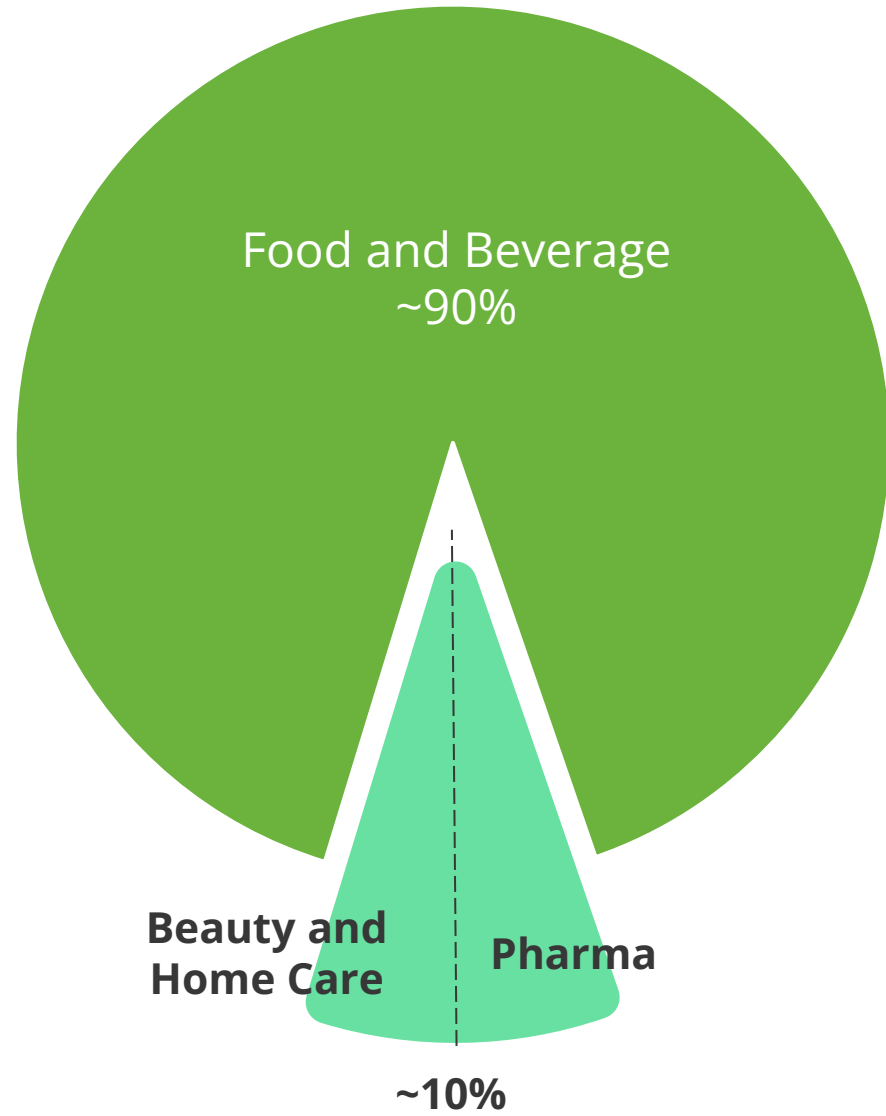


**7 out of 10** consumers agreed that **texture** gave food and beverages a more **interesting experience**<sup>1</sup>

**84%** of consumers associated **light texture** with **healthier options**<sup>2</sup>



# Texture & Healthful Solutions consists of three distinct end markets



**\$2.4 - 2.5B**

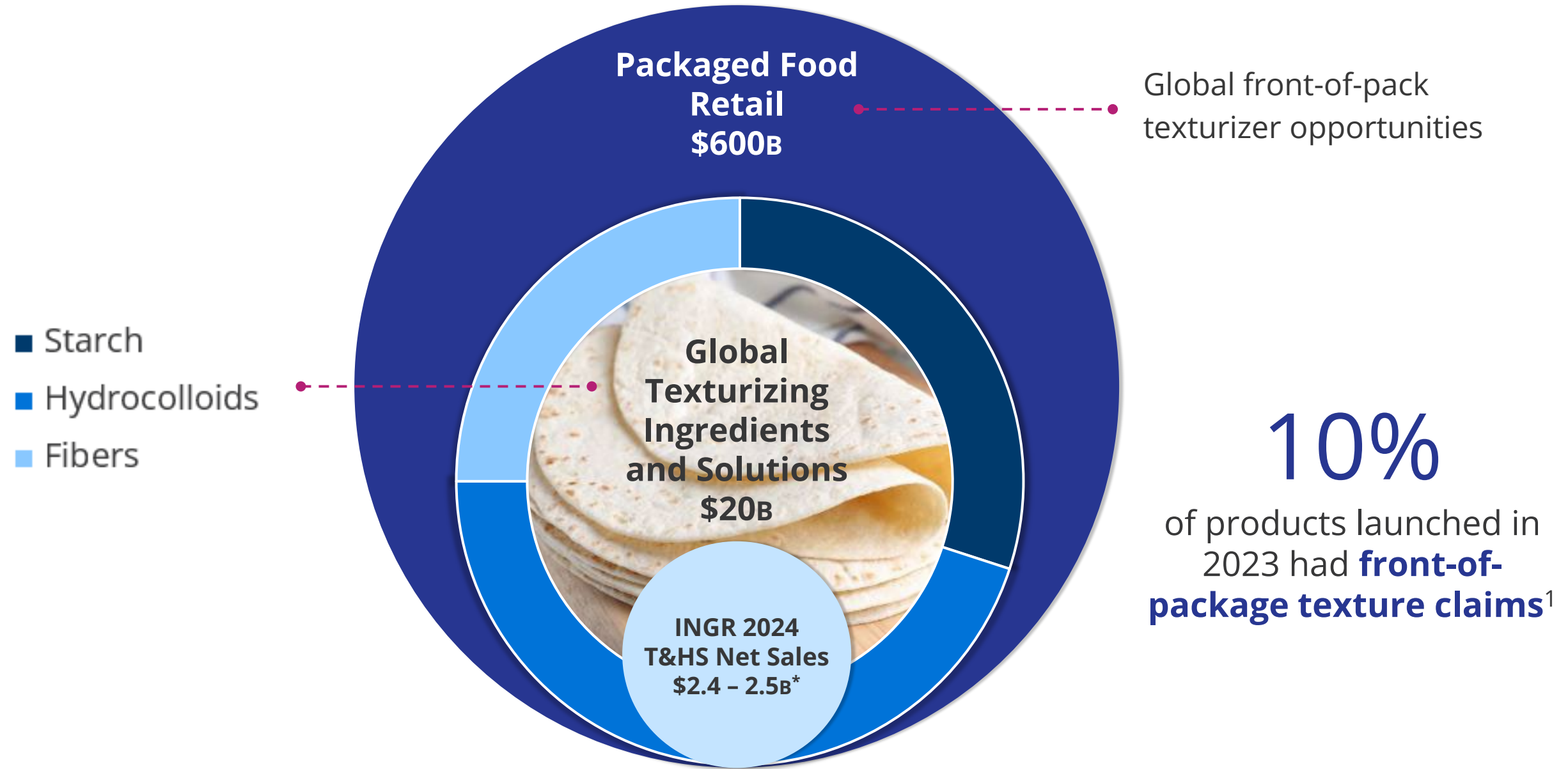
Estimated FY 2024 Net Sales\*

**13% - 15%**

Estimated FY 2024 Operating Income Margin\*

\* Guidance issued on November 5, 2024

# The global texture market is expansive, offering significant potential for growth and margin enhancement



Source: Internally compiled detail across various sources including: Markets and Markets, Technavio, Market Data Research, Statista, Ingredion internal intelligence, 1) Innova  
\* Guidance issued on November 5, 2024



To accelerate growth, we have identified 3 priority consumer benefit areas within our Texture & Healthful Solutions segment to target



**1** The “texture experience”

**2** Affordability

**3** Clean label/Natural/Authentic





- UNIQUELY RECOGNIZED
- RESPECTED, CREDIBLE
- IDEA GENERATOR AND CONCEPT DEVELOPER
- OPPORTUNITY SPOTTER
- PROBLEM SOLVER
- SOLUTIONS PROVIDER
- CO-CREATOR AND INNOVATION PARTNER

## Winning Aspiration:

Be recognized as the **go-to provider** for texture and healthful solutions that **make healthy taste better**

WE STRIVE TO MAKE HEALTHY, HEALTHIER AND HEALTHFUL FOODS TASTE BETTER THROUGH TEXTURE'S IMPACT ON OVERALL LIKING

WE STRIVE TO MAKE FOODS HEALTHIER AND HEALTHFUL



# The Texture Opportunity

**Valdirene Evans**

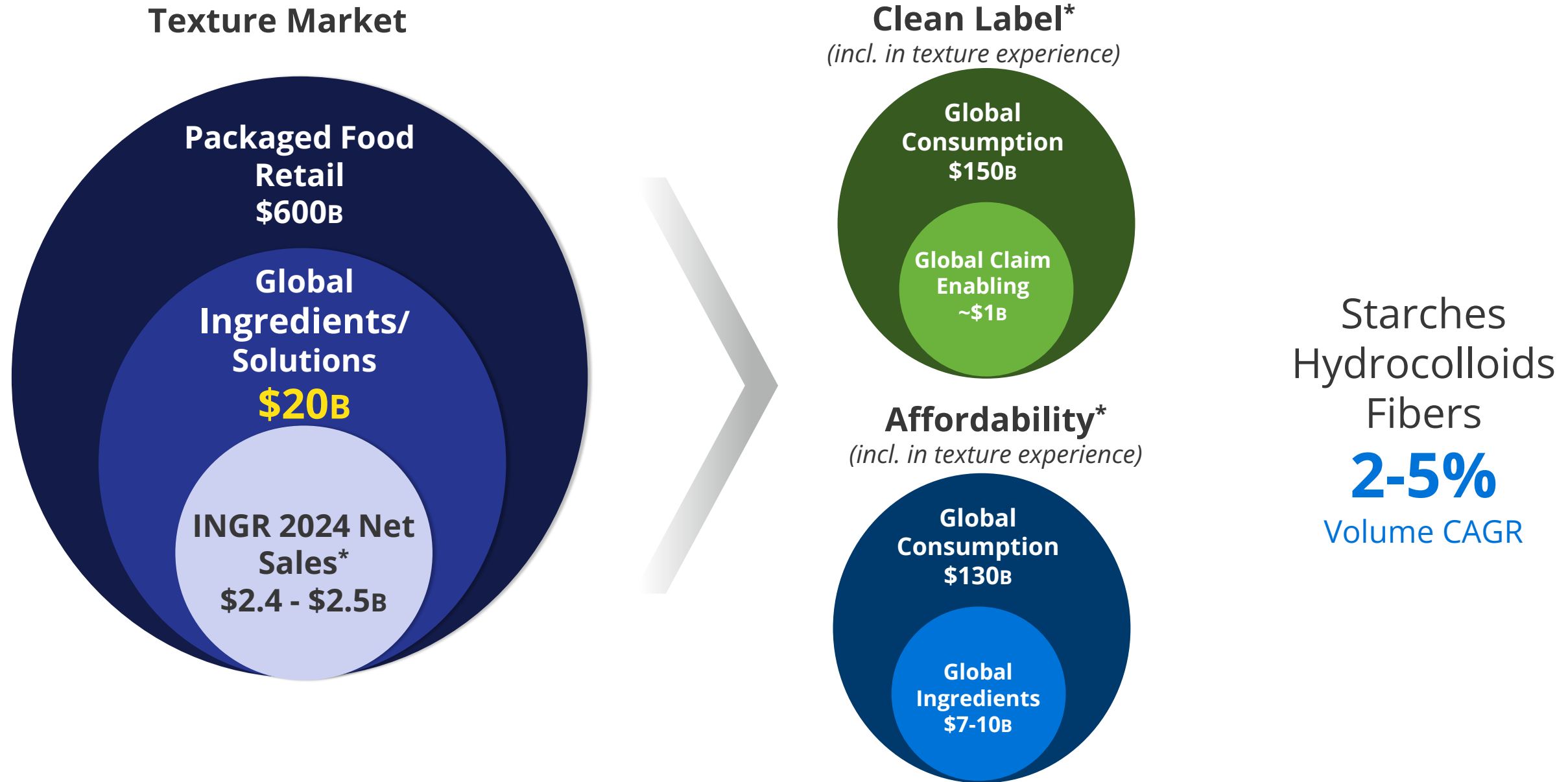
Senior Vice President and President, Global Texture Solutions

**Ingredion Texture Innovation Day  
November 14, 2024**



# Texture market is large and growing

*Affordability and clean label trends represent a large opportunity*



Source: Euromonitor, Innova, internal INGR estimates

\* Guidance issued on November 5, 2024



# Majority of consumers prefer products that are affordable or clean label



Pay attention to the **price** of food and beverage products



Think the **claim "all natural"** is very appealing



Prefer products with **natural ingredients**



Regularly **check the ingredient list**

**What drives demand in  
the texture market?**



# Demand for texture ingredients driven by economic growth and urbanization



- 1


**Developed markets**

High demand for diverse textures, high GDP per capita, lower percentage of daily home-cooked meals – huge demand for convenience
- 2


**Developing markets**

Higher percentage of daily home-cooked meals, due to affordability of basic ingredients and available time, lower GDP per capita

Country	RTE meals <sup>1</sup> (kg)	GDP per capita <sup>2</sup>	Total population <sup>2</sup>
Germany	20 kg	\$52,746	84 million
United States	16 kg	\$81,695	335 million
Thailand	13 kg	\$7,172	72 million
Brazil	6 kg	\$10,043	216 million

Source: 1) Statistica - The Ready-to-Eat (RTE) Meals market covers products that require minimal preparation by the consumer, i.e., meals that only require heating up; Average volume per person in ready to eat meals market 2024 2) Worldbank data

# Significant potential exists for innovative texture ingredients that deliver superior performance

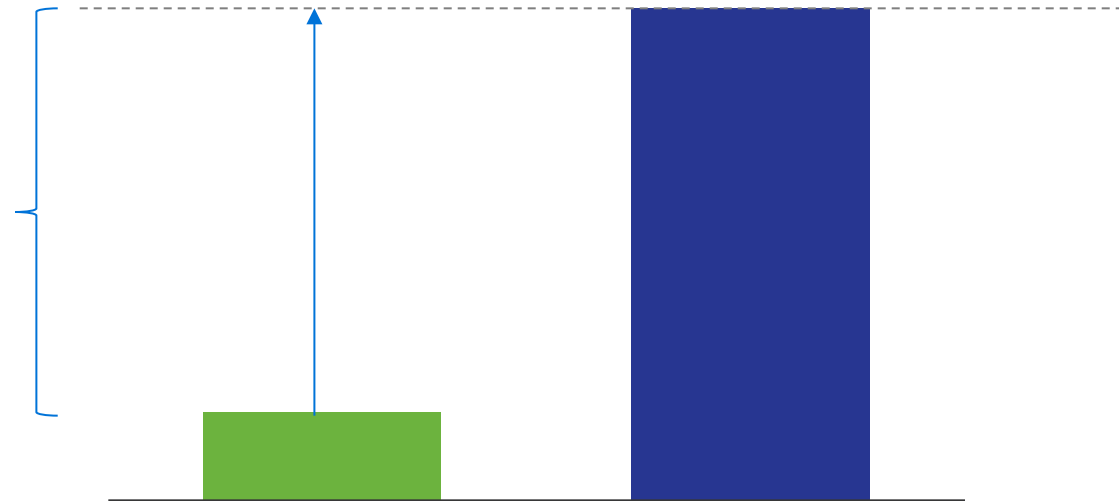
## Modified starch consumption per capita

2023 kg per capita

6x times larger

Significant headroom for growth

*Modified starch consumption per capita comparably low in emerging markets, representing a strong growth opportunity*



World

US

Population (2023)

8.0B

0.3B

Projected pop. growth  
(2023-2030)

+500M

+15M



# Growing trends shaping texture opportunities

## Convenience



Urbanization and lifestyle trends driving

## Delivery



2 billion delivery consumers in 2024  
GrubHub, Deliveroo accelerating technology deliveries

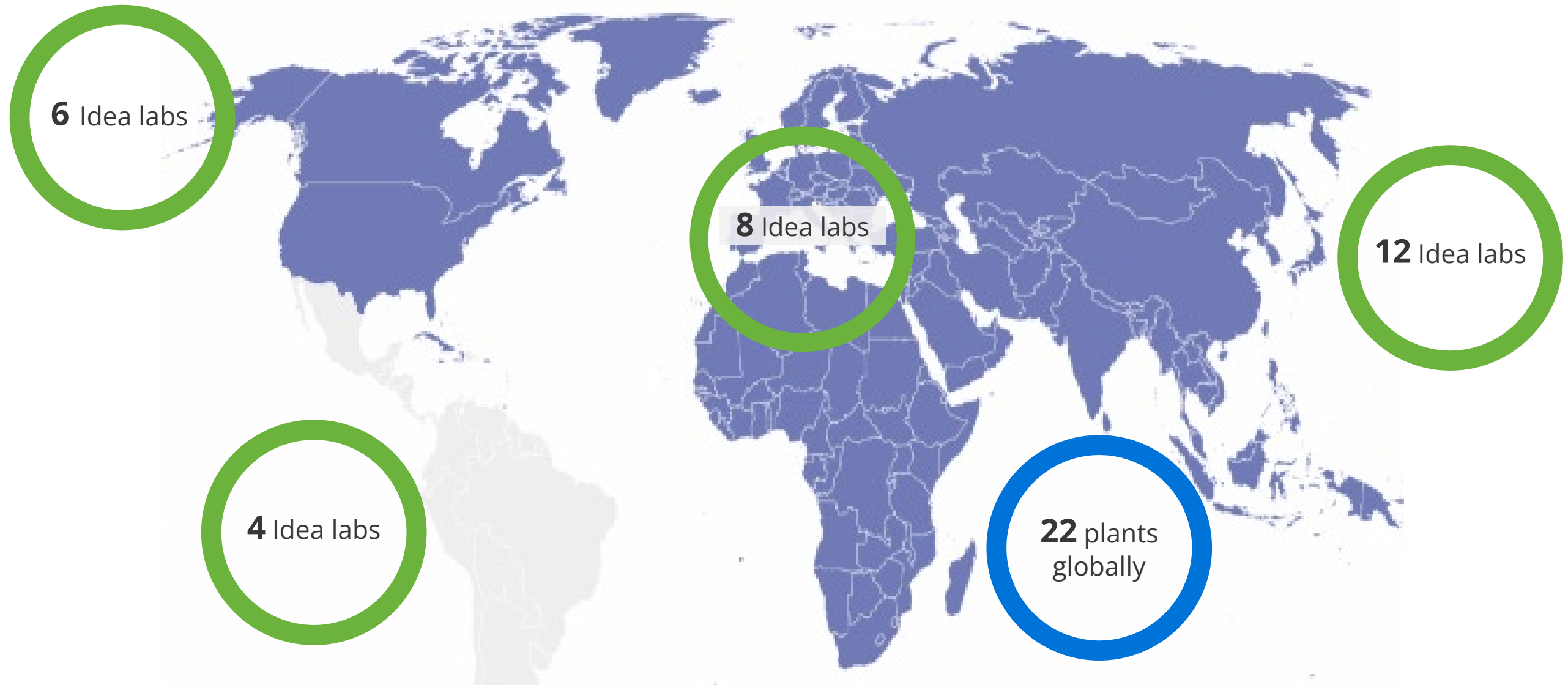
## Multi-cultural foods



60% of consumers prefer multi-texture and multi-flavor foods

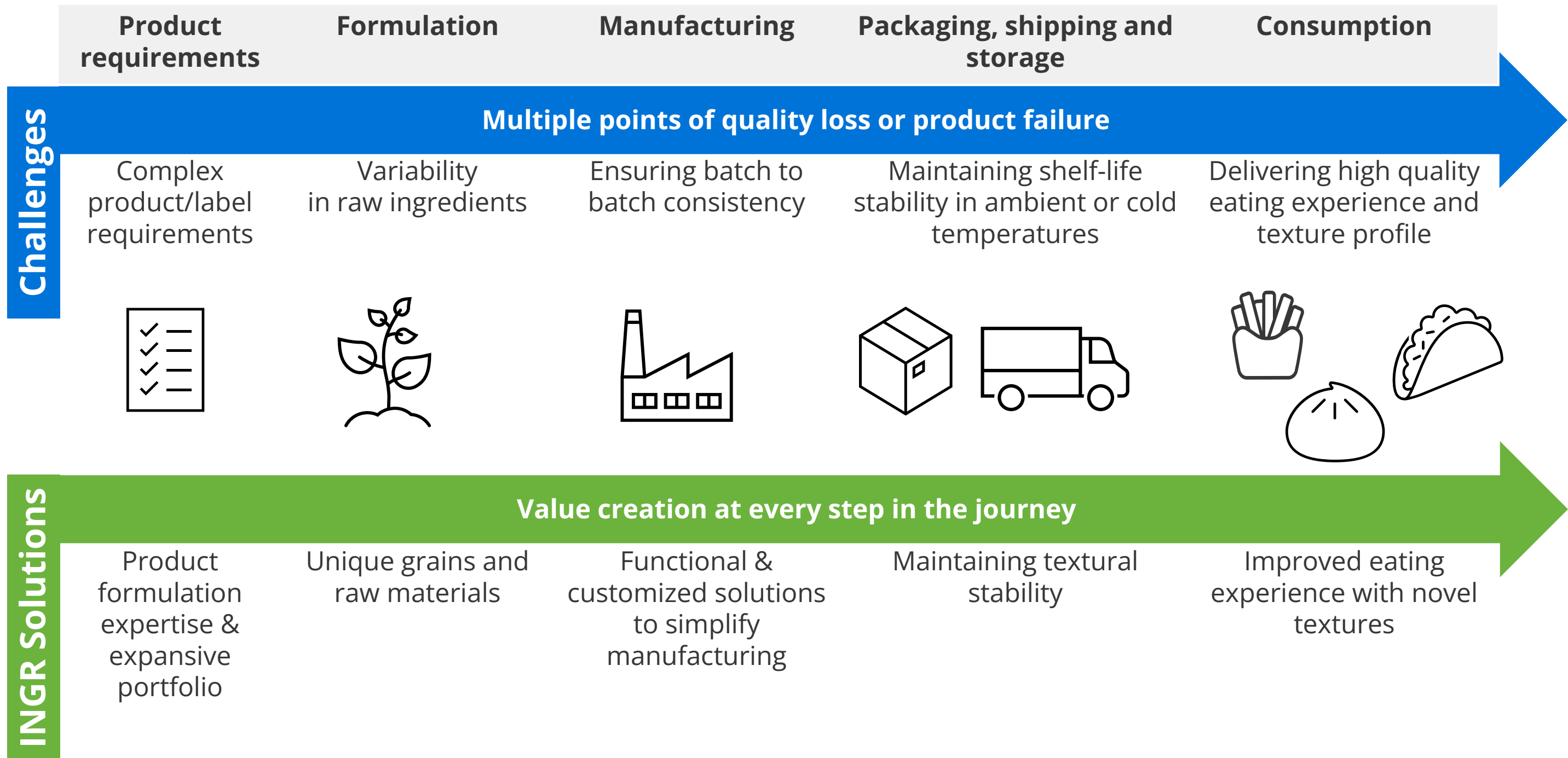
**How does Ingredion meet  
the global texture  
opportunity?**

# The texture opportunity is global, success is enabled by our knowledge of local tastes and preferences

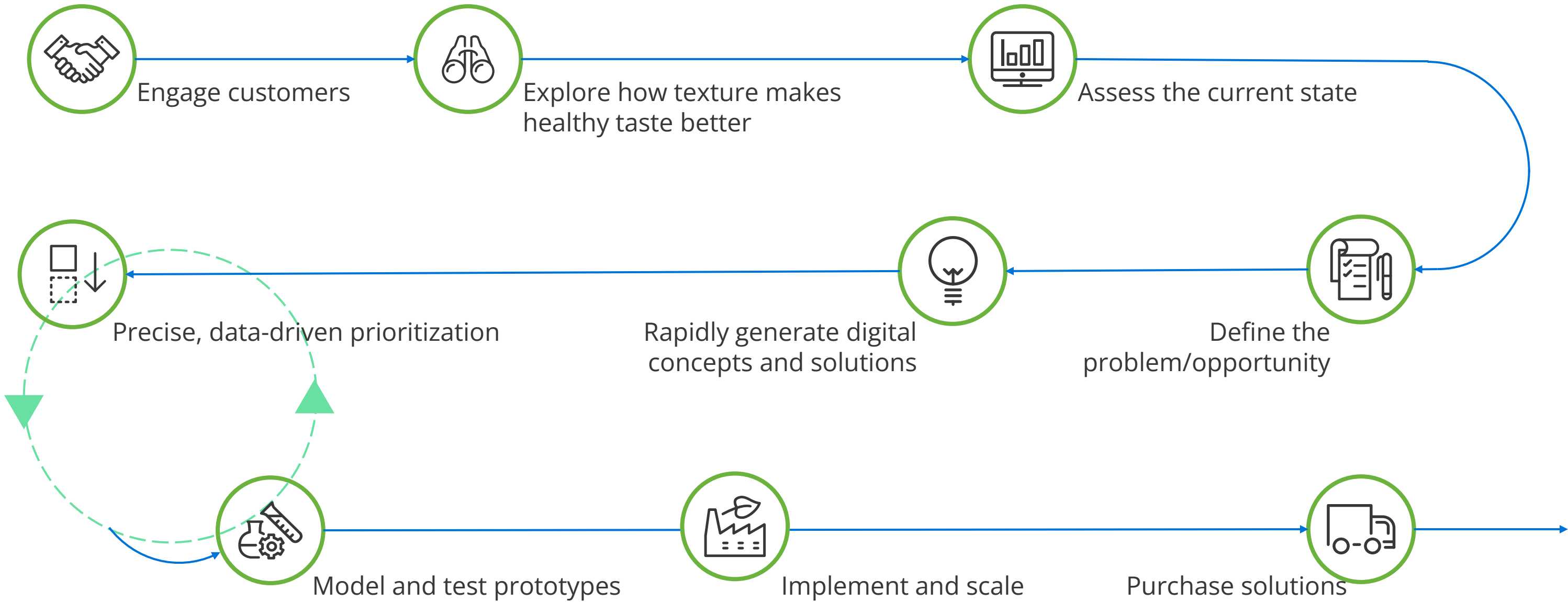




# Our customers' value chain presents challenges and opportunities



# The journey of innovation to enable customer success





# Our texture business is focused on 5 categories, each representing high growth sub-categories



	Savory	Dairy	Bakery	Snacks	Beverage
Focus sub-categories	<ul style="list-style-type: none"> <li>Sauces &amp; dressings (wet &amp; dry applications)</li> <li>Meat, fish &amp; poultry</li> <li>Ready meals (wet &amp; dry applications)</li> <li>Batters &amp; breadings</li> <li>Noodles</li> </ul>	<ul style="list-style-type: none"> <li>Yogurt &amp; yogurt alt.</li> <li>Processed cheese &amp; cheese alt.</li> <li>Creamers and milk alt.</li> </ul>	<ul style="list-style-type: none"> <li>Cake, donut, pastry incl. fillings &amp; toppings</li> <li>Bread, bread mixes, tortillas</li> </ul>	<ul style="list-style-type: none"> <li>Biscuit, cookies and crackers</li> </ul>	<ul style="list-style-type: none"> <li>Sports &amp; energy drinks (Ready to drink &amp; ready to mix applications)</li> </ul>
Texturizer Market Size 2024	\$~5B	\$~1B	\$~8B	\$~2B	\$~1B
Texturizer Market Growth (%CAGR)	2-3%	3-4%	3-4%	1-2%	6-7%

**Global sales from these categories represents >90% of the texture solutions opportunity**



# The opportunity to elevate texture is now . . .

- **Leading global position** in texture
- Adding new capabilities and **unique insights** in texture
- Identify and create **consumer-preferred** textures
- Improve customer **success rates** for new product launches
- Capture value extending **beyond a product-led** model

. . . . and let us share some examples





# Customers . . . and Solutions

**Michael O’Riordan**

Senior Vice President, Texture & Healthful Solutions,  
EMEA and Asia-Pacific

**Ingredion Texture Innovation Day  
November 14, 2024**

# Ensuring product success through superior texture and taste

Approximately

**>80%**

of product  
launches fail

This requires  
**significant knowledge**  
and **know-how**





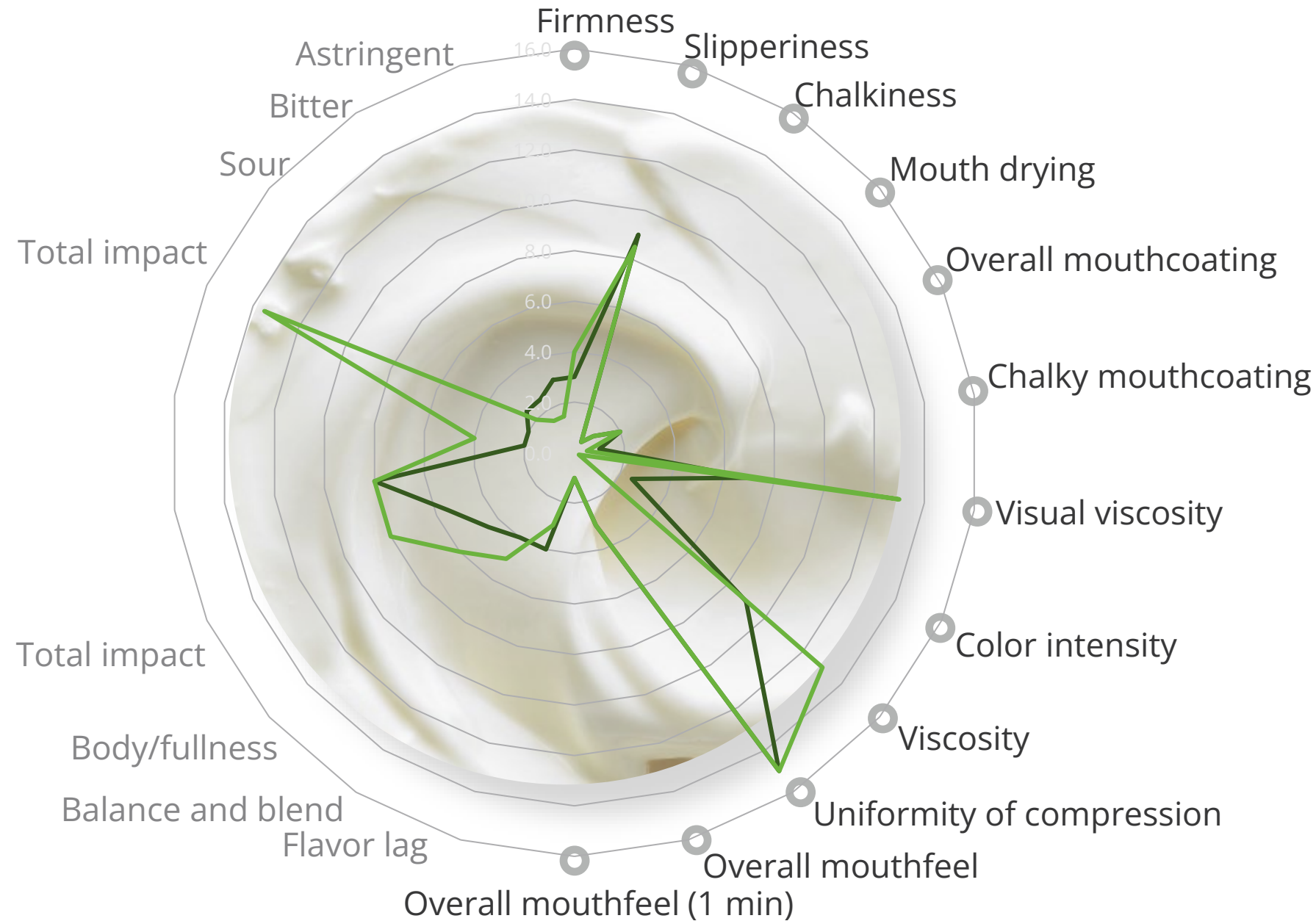
# Texture is the critical element for a favorable eating experience and driving consumers repeat purchase

Texture accounts for

# 40%

of the overall consumer liking<sup>1</sup>

Texture can make or break a consumer's eating experience. Will they purchase again or try something else?



Source: proprietary consumer product evaluations

# Texture is more critical for certain categories of food

**+70%**

of respondents think texture is "Very Important"



**Dairy yogurt**



**Savory bakery**



**Ice cream**



**Noodles/pasta**



**Sweet bakery**

# Eyes on the fries

**\$17B\***  
**Market**  
**15%**  
**CAGR**

**Extending  
hold times**  
unlocks  
**massive value**  
for QSR and  
delivery  
**customers**

## Fry-specific challenges:

- Multiple thermo-cycles greatly impact product texture and quality along with combinations of moisture, heat and oil lead to extremely short hold times





# Flying high with tortillas

**\$45B\***  
**Market**  
**Flat**  
**CAGR**

## Tortilla-specific challenges:

- Thermo processes across formulating, baking, freezing, and microwaving creates multiple points of failure
- Need for better stretchability and texture

## Market growth dependent upon key attributes:

- Lower carb
- Gluten & grain free
- Higher protein

**Multi-form  
function and  
label attributes  
are key drivers  
of market  
growth**

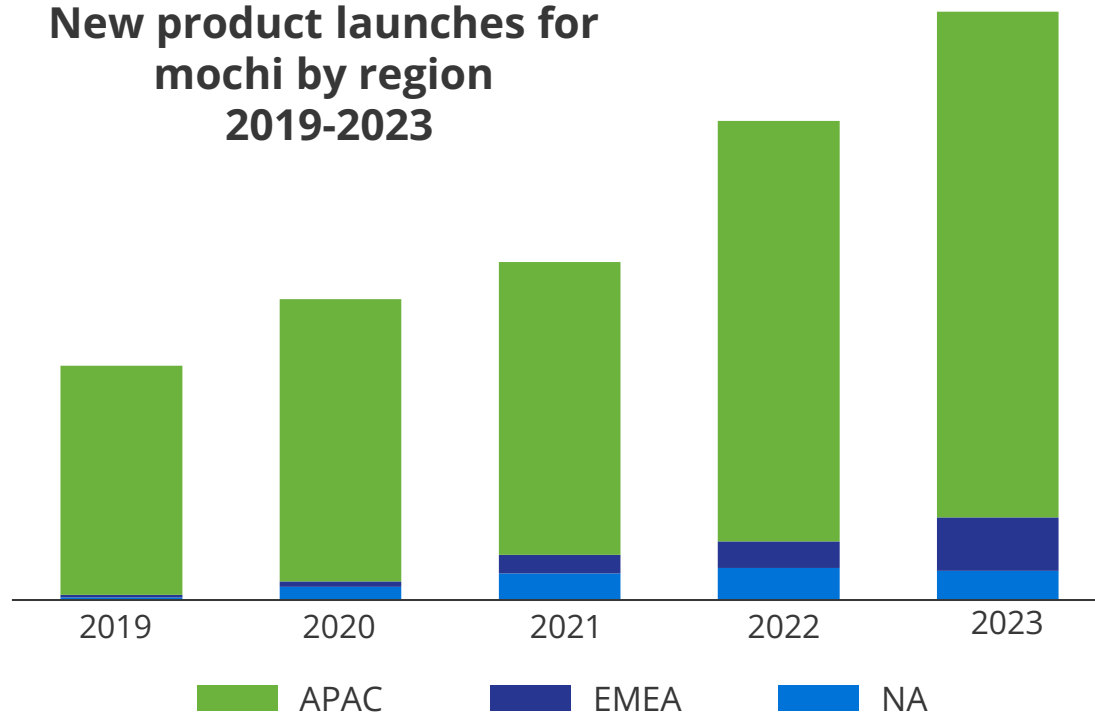
# Much ado about mochi

**\$283B\***  
**Market**  
**18%**  
**CAGR**

## Mochi-specific challenges:

- Bringing new innovations in mochi texture, extending shelf-life and avoiding collapsing post-bake while maintaining desired chewy texture

**New product launches for mochi by region 2019-2023**



**Innovative textural experiences for generational consumers**







# Our approach to texture has broadened over time and our solutions capabilities have become more holistic

## Opportunities for reformulations

Dairy	Milk/dairy solids replacement
Savory/Meals	Egg, oil & tomato solids replacement
Bakery	Egg, fat, gluten replacement



### Crust

- Value-added ingredients
- **Texture: Chewy – Crispy**
- **Gluten-free**
- **Protein enhancement** with pulse flours

### Cheese

- Value-added Ingredients
- **Plant-based cheese**
- Clean label anti-cake for improved melt
- **Systems-based approach**/reduce labor costs

### Sauce

- Value for money through **tomato solids replacement**
- 35% reduction for 10-15% recipe cost savings

**Changing pizza innovation needs**  
 Growth in gluten-free  
 Thin-crust pizza – lower calories  
**Plant-based – vegetarian solutions**  
**High-quality home delivery via extended shelf life**

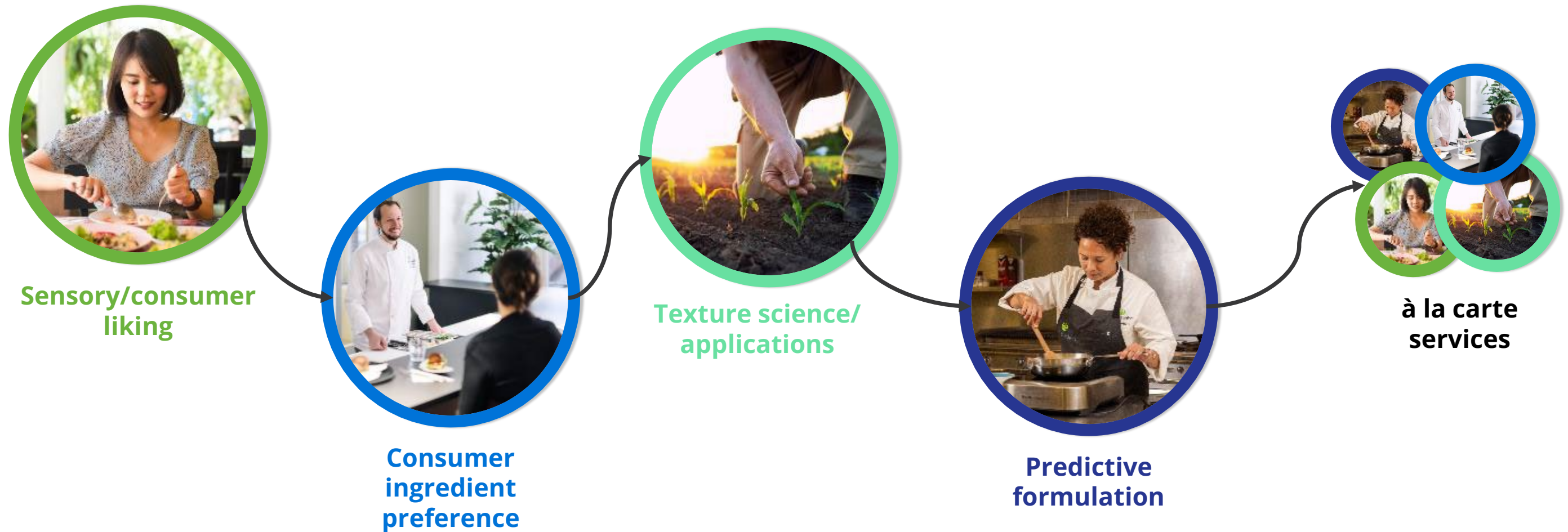
### Toppings

- Value-added ingredients
- **Plant-based meat alternative** pizza toppings



# Elevating texture solutions with a holistic services approach and cutting-edge scientific capabilities

*Understanding and delivering the unique texture, taste and label attributes that drive a product's success*



# The Science: Technology Platforms Supporting Sensory and Formulation

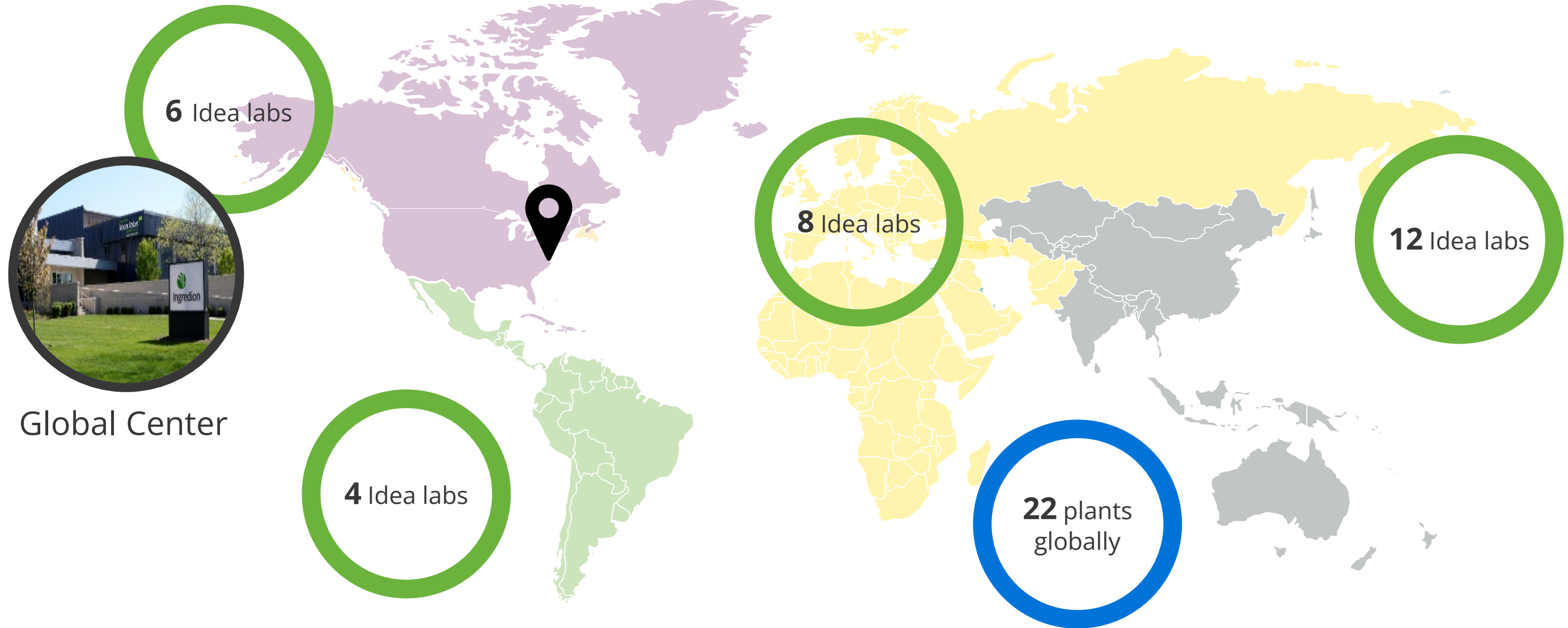
**Michael Leonard**

Senior Vice President, Chief Innovation Officer  
and Head of Protein Fortification

**Ingredion Texture Innovation Day  
November 14, 2024**




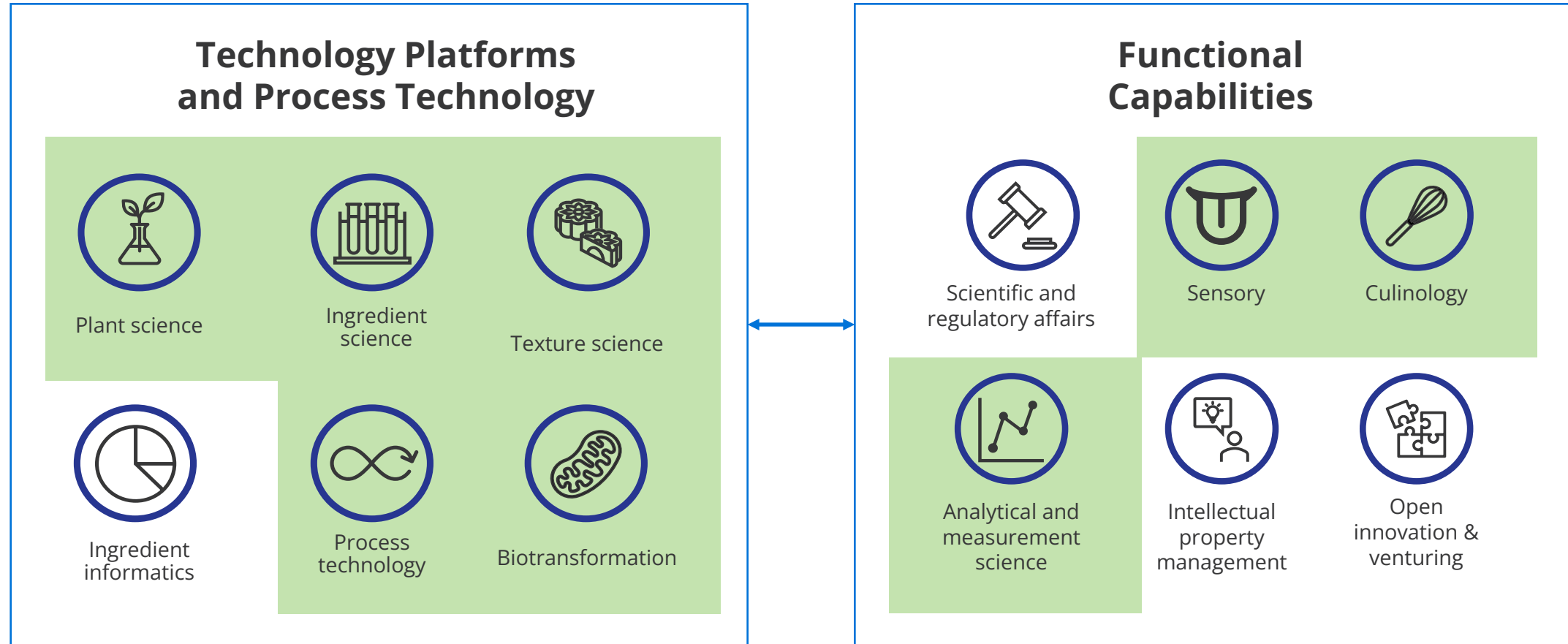
# Consumers are globally diverse and our customer's needs arise from all parts of the world





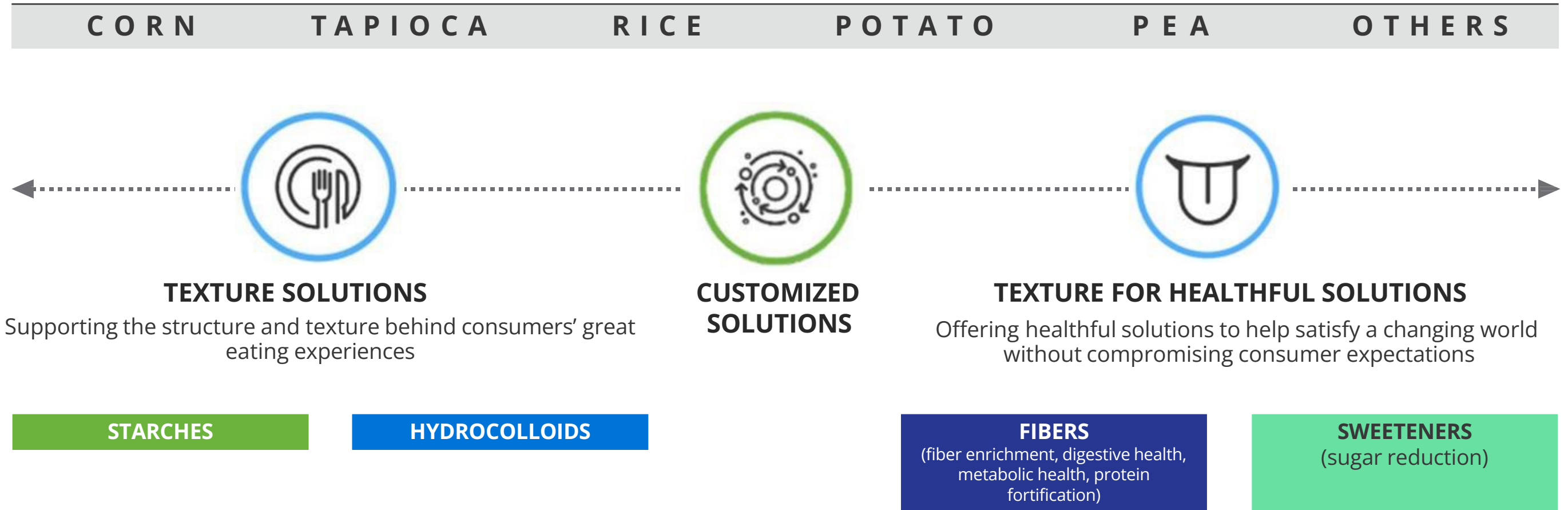
# Unmet customer needs shape our innovation agenda

Consumer,  
industry  
and  
customer  
insights

**We offer the broadest and deepest portfolio of specialty starches, which are foundational to texturizing**

**NATURE-BASED RAW MATERIALS**



# Eating is simple, but food is complicated

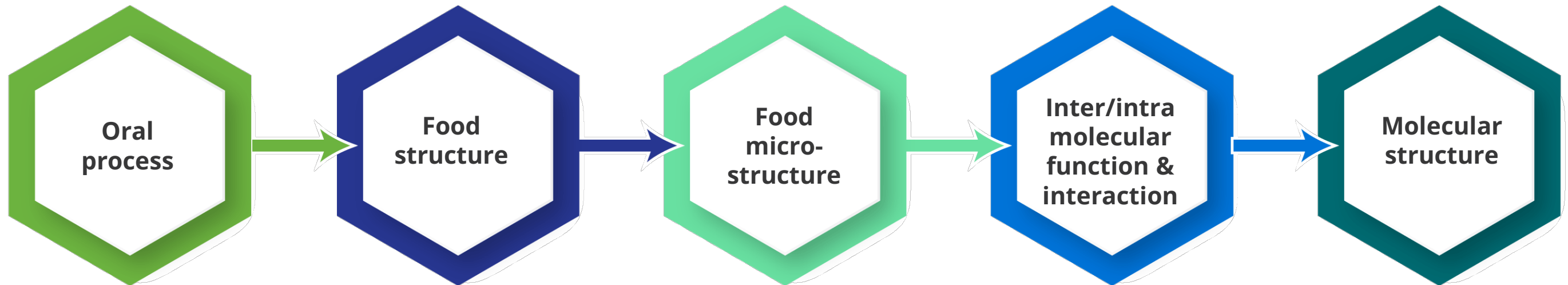
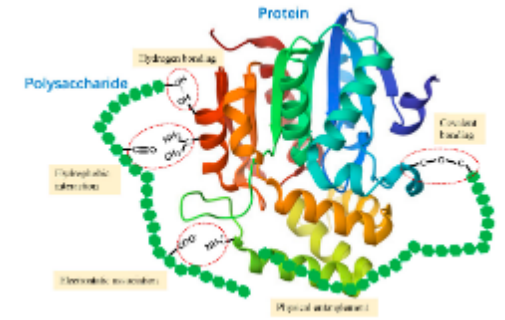
## *Eating Experience Continuum*



Perceived  
Texture



	Raw material	Mixing zone	Melting zone	Die
(a)	PPI-10% amylose		Entanglement	Phase separation
(b)	PPI-10% amylopectin		Phase separation	Protein unfolding





# Getting delicious food to people is also complex

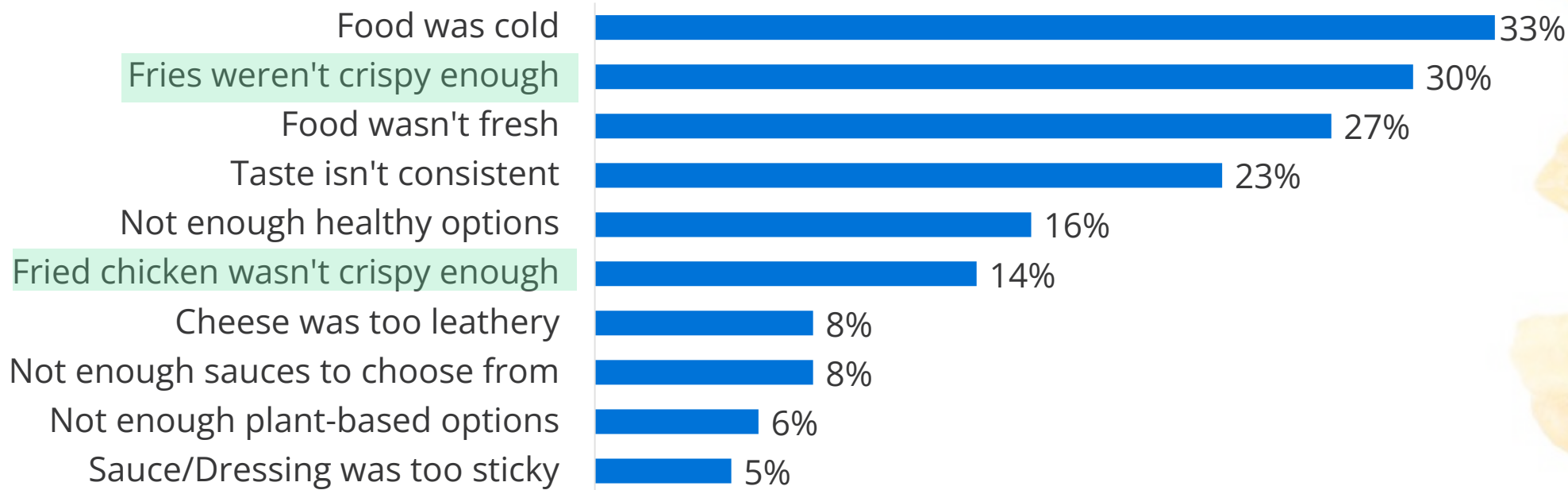


Taste is the most important attribute for consumers buying frozen breaded products.<sup>1</sup>



Not crispy enough fries and chicken are frequent and bothersome issues for QSR and fast casual consumers.<sup>2</sup>

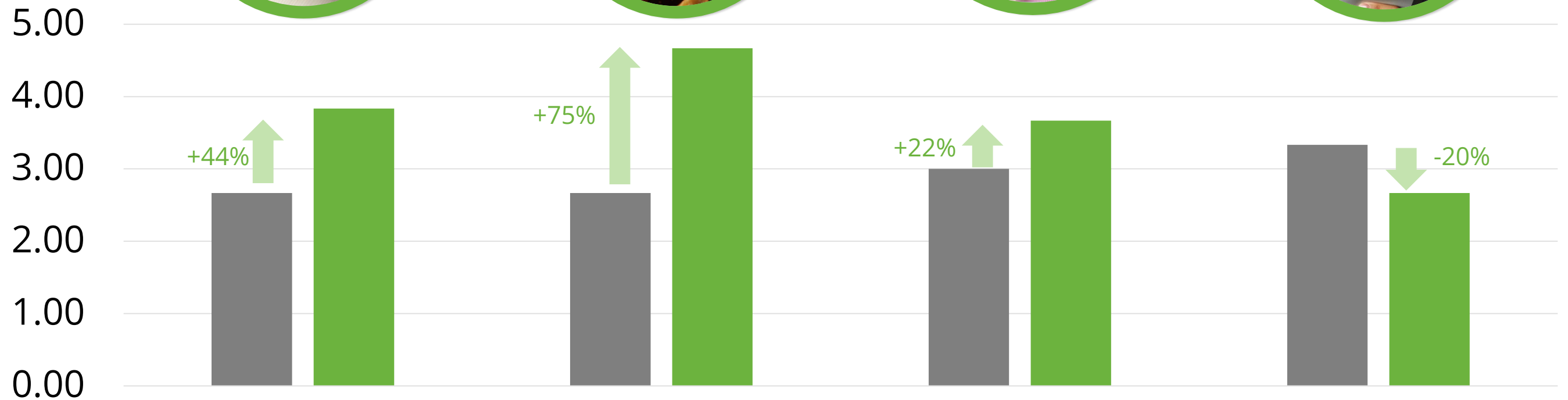
Which of the below have you **ever experienced** when eating at or ordering from fast food/fast casual restaurants?



Sources: 1. Ingredion Proprietary Research, Batter & Breading, 2021; 2. Ingredion Proprietary Research, QSR 2023 (Product specific problems)



# Texture is experienced across multiple senses – our product designs address all of them



Audible Crunch

Crispiness

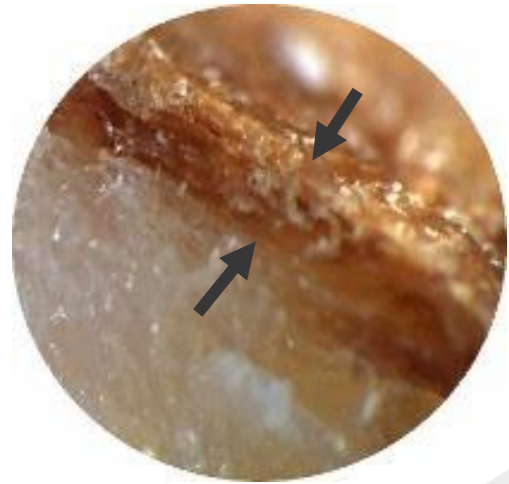
Bite Resistance

Tooth Packing

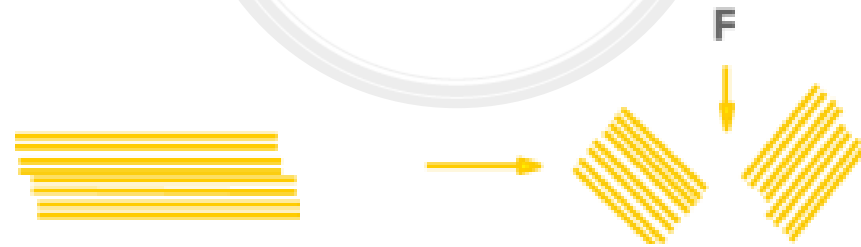
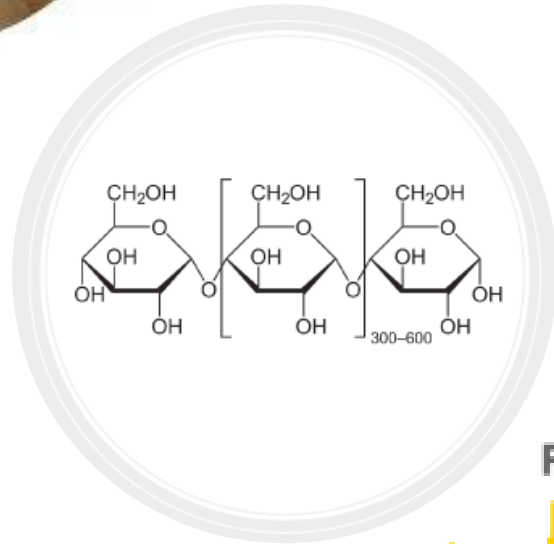
Standard clear coated control

Ingredion optimized solution

# Achieving just-right texture through batters and coatings starts at the molecular level



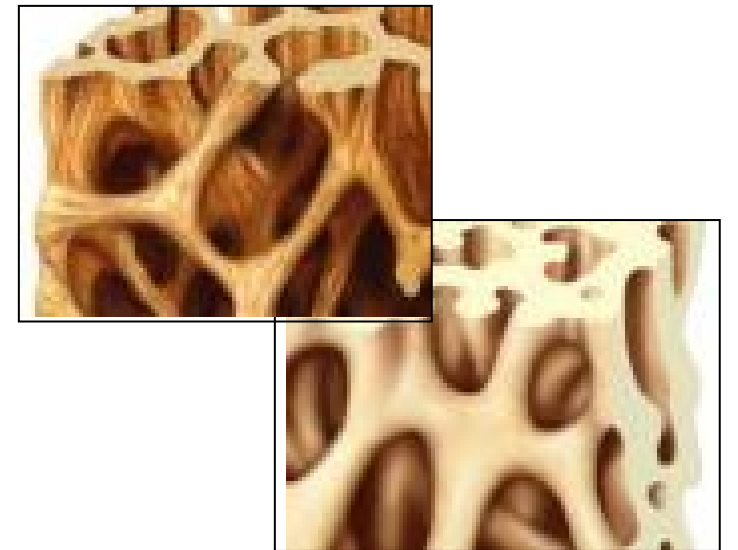
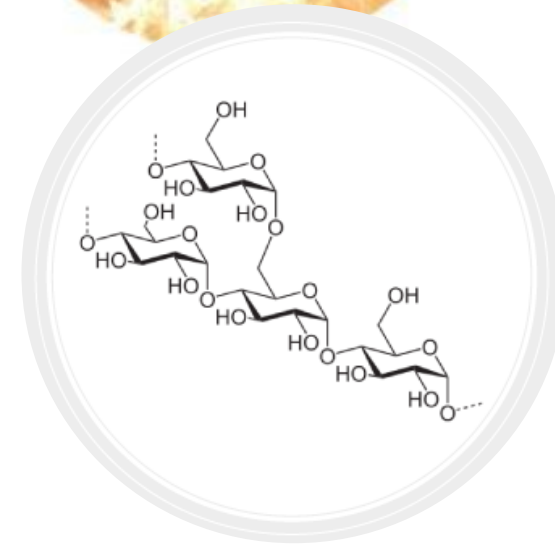
**Amylose-containing starches**, like high amylose maize, are commonly used to increase crunchiness, hardness, and strength.



**Brittle, dense set = Crunch**



**Amylopectin-containing starches**, like waxy maize, are commonly used to increase expansion and deliver crispiness.



**Porous, open, light**

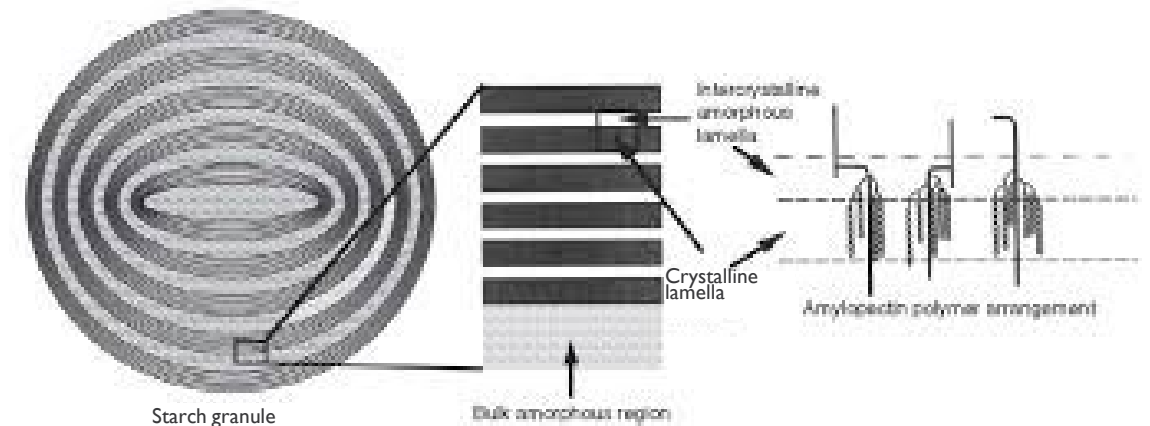
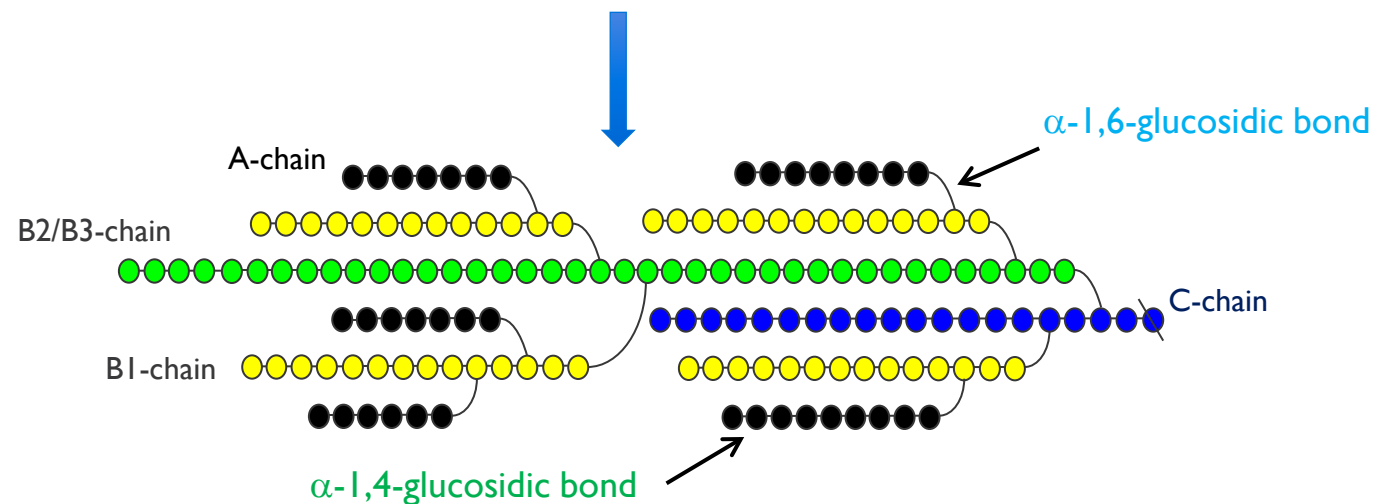
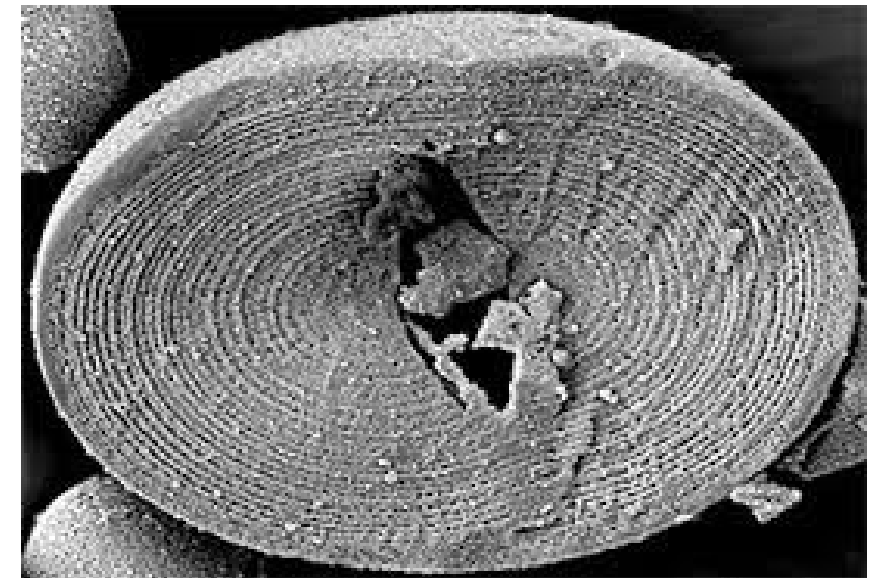
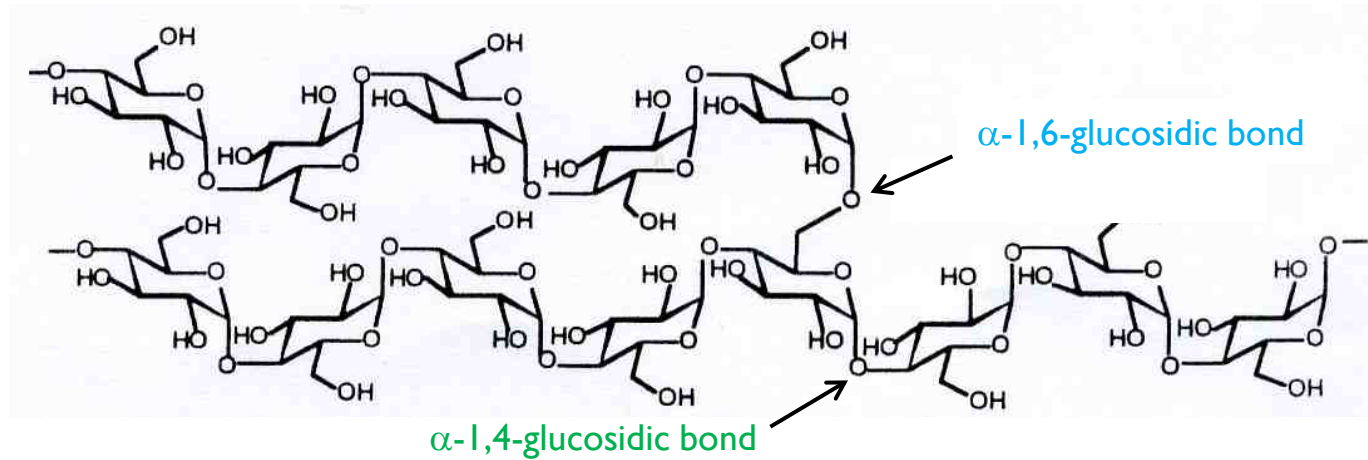




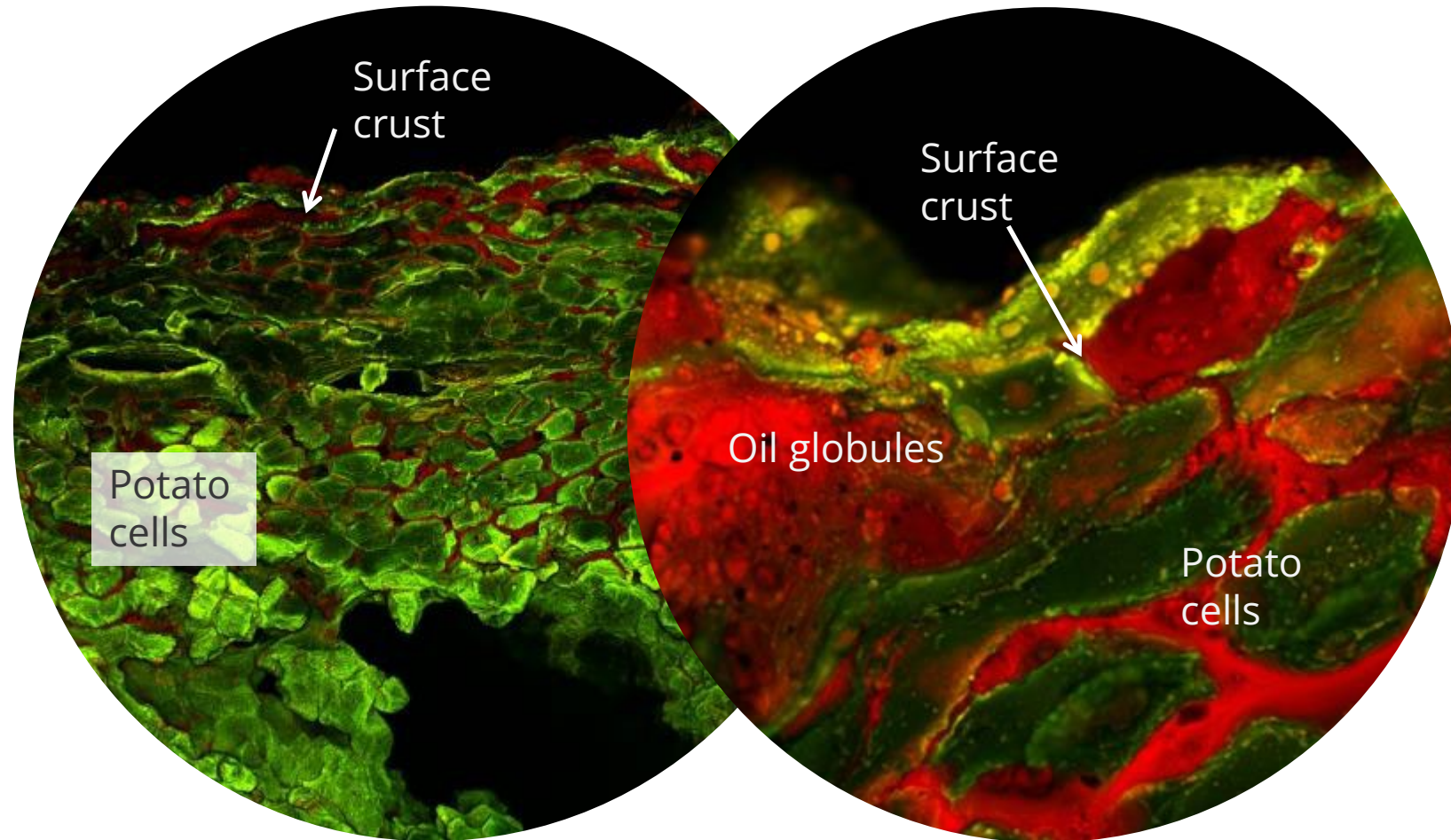
# Doing this successfully requires deep structure-function understanding that is unique to Ingredion

*Amylose and amylopectin molecules can organize in many different ways...*

*...which result in larger structures that are critical to texture*



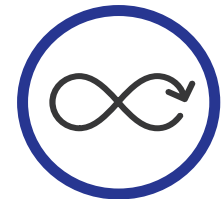
**Our deep understanding of food structure enables us to customize texture experiences**



Confocal laser scanning micrographs of a French fry coating



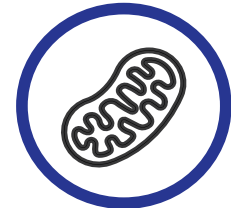
# We have a range of capabilities to drive texture preference, and plant science is among the most powerful



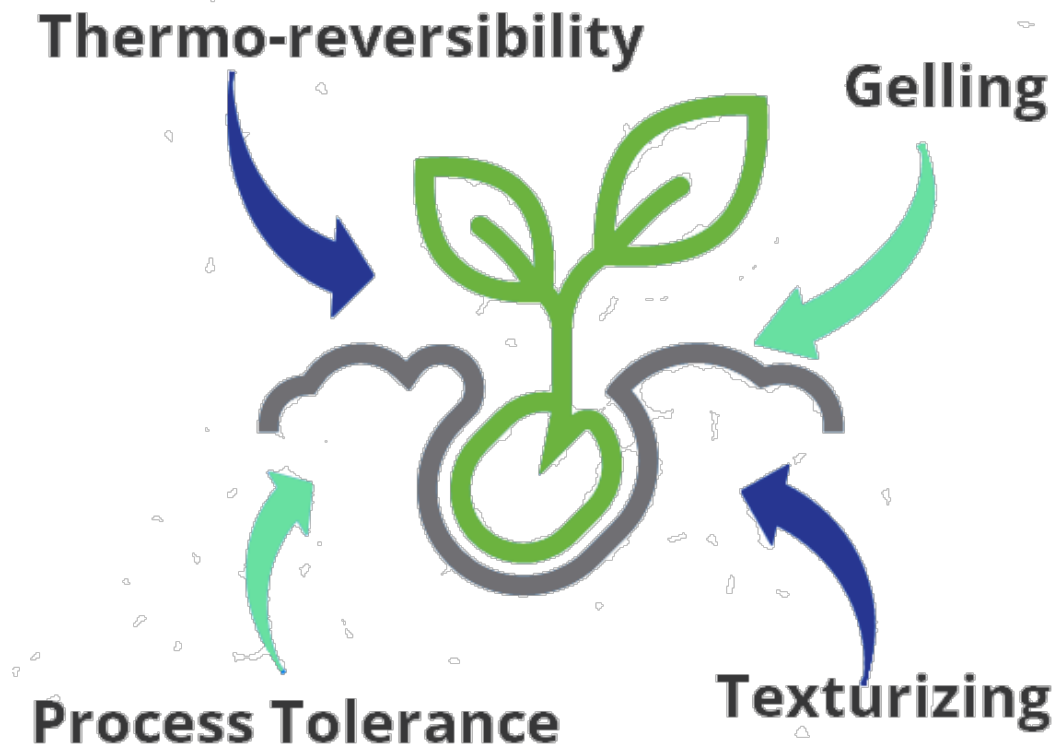
Process Technology



Plant Science



Biotransformation





# Our product portfolio and technical capabilities enable great textures that consumers crave



**Crispier for longer**



**Novel, soft and springy**



**Indulgent creaminess**



**Superior stretch and melt**



# Texture & Healthful Growth: Driving Financial Success

**Jim Gray**  
Executive Vice President and CFO

**Ingredion Texture Innovation Day**  
**November 14, 2024**



## Growth drivers

- 
- 1** — **Volume growth**  
Demonstrated trends around health and wellness, affordability and clean label, as well as expanding pharma and beauty portfolio
  - 2** — **Product mix enhancement**  
Shift towards higher ASP products and customized solutions with unique functionality
  - 3** — **Pricing centers of excellence**  
Driving optimized pricing for premium high-performing solutions with clear customer benefits
  - 4** — **Solutions and services**  
Leveraging our formulation expertise and customers' requirements for speed to market to accelerate innovation



# Ingredion **leading** market positions in **texture** across most markets



## US/CAN

---

**Ingredion**

---

Peer A

---

Peer B

---

Peer D

---

Others

---

## APAC\*

---

**Ingredion**

---

Peer C

---

Peer A

---

Peer B

---

Others

---

## Europe

---

**Ingredion**

---

Peer B

---

Peer A

---

Peer C

---

Others

---

## Middle East & Africa

---

Peer A

---

**Ingredion**

---

Peer E

---

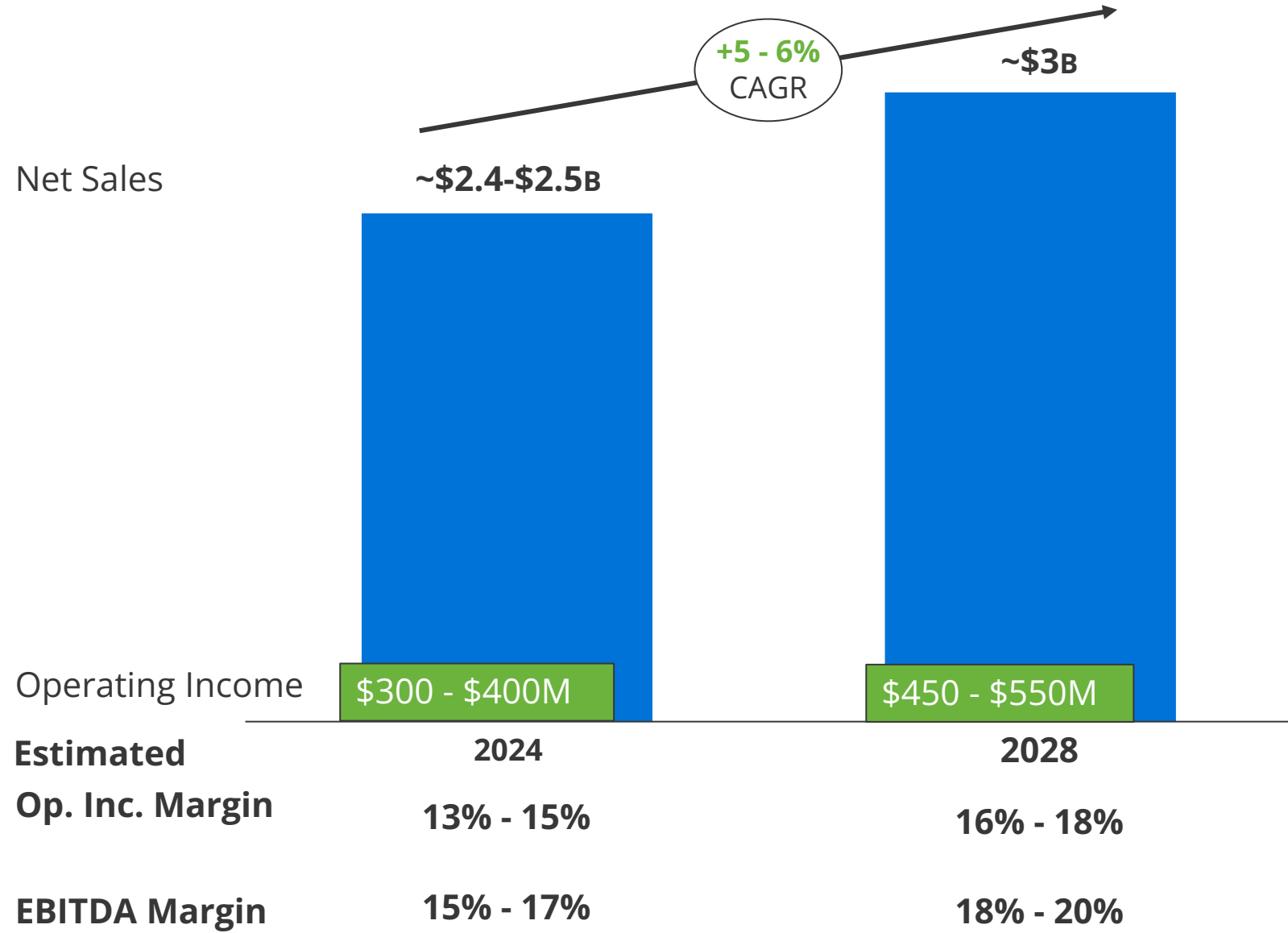
Peer C

---

Others

---

# Texture & Healthful Solutions segment 4 year growth outlook



## Long-term Growth Projections 2025 - 2028





# Texture & Healthful Solutions requires greater investment in R&D and technical solutions capabilities

~2.5% R&D of T&HS  
Segment sales

SG&A  
12%-14% of sales

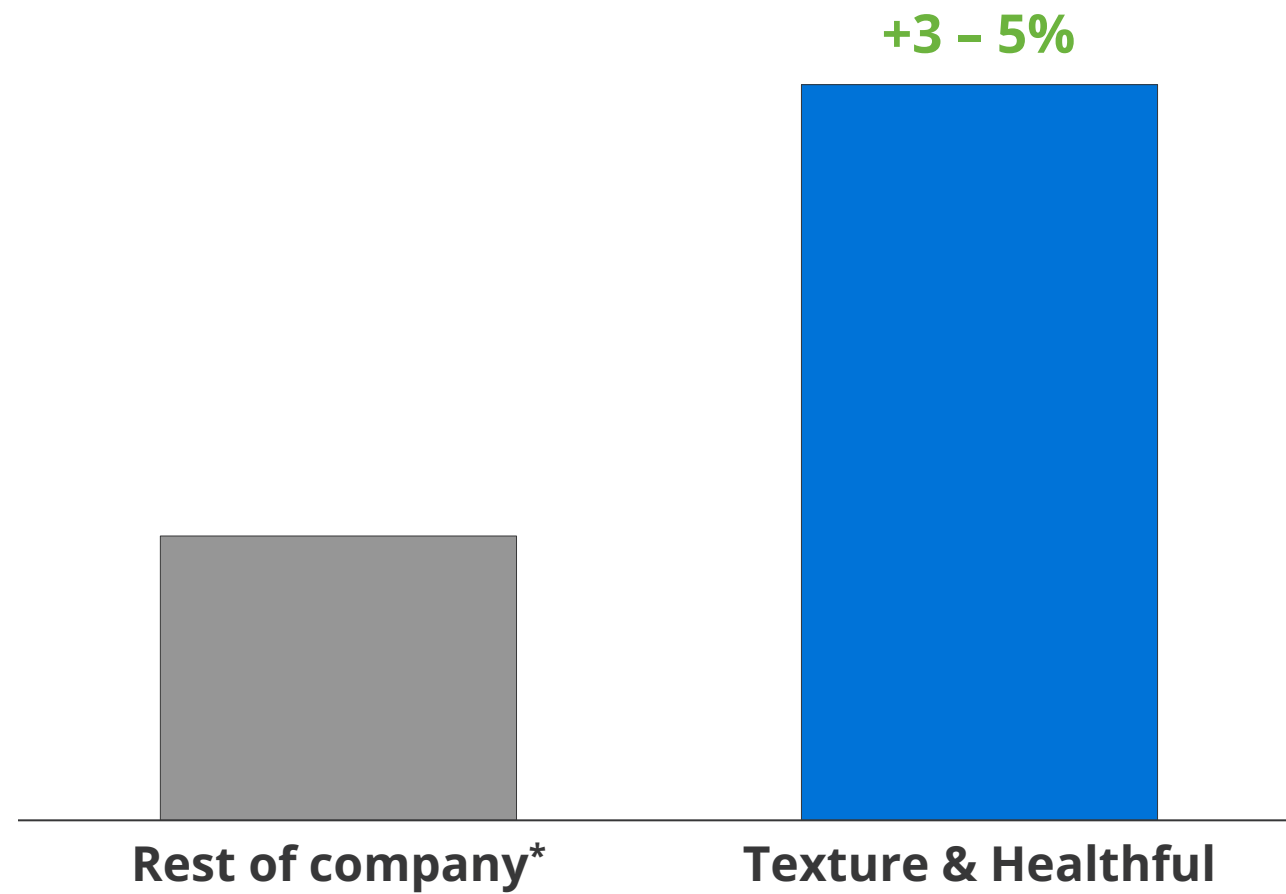
Organic investment  
supporting future capacity

Growing IP library

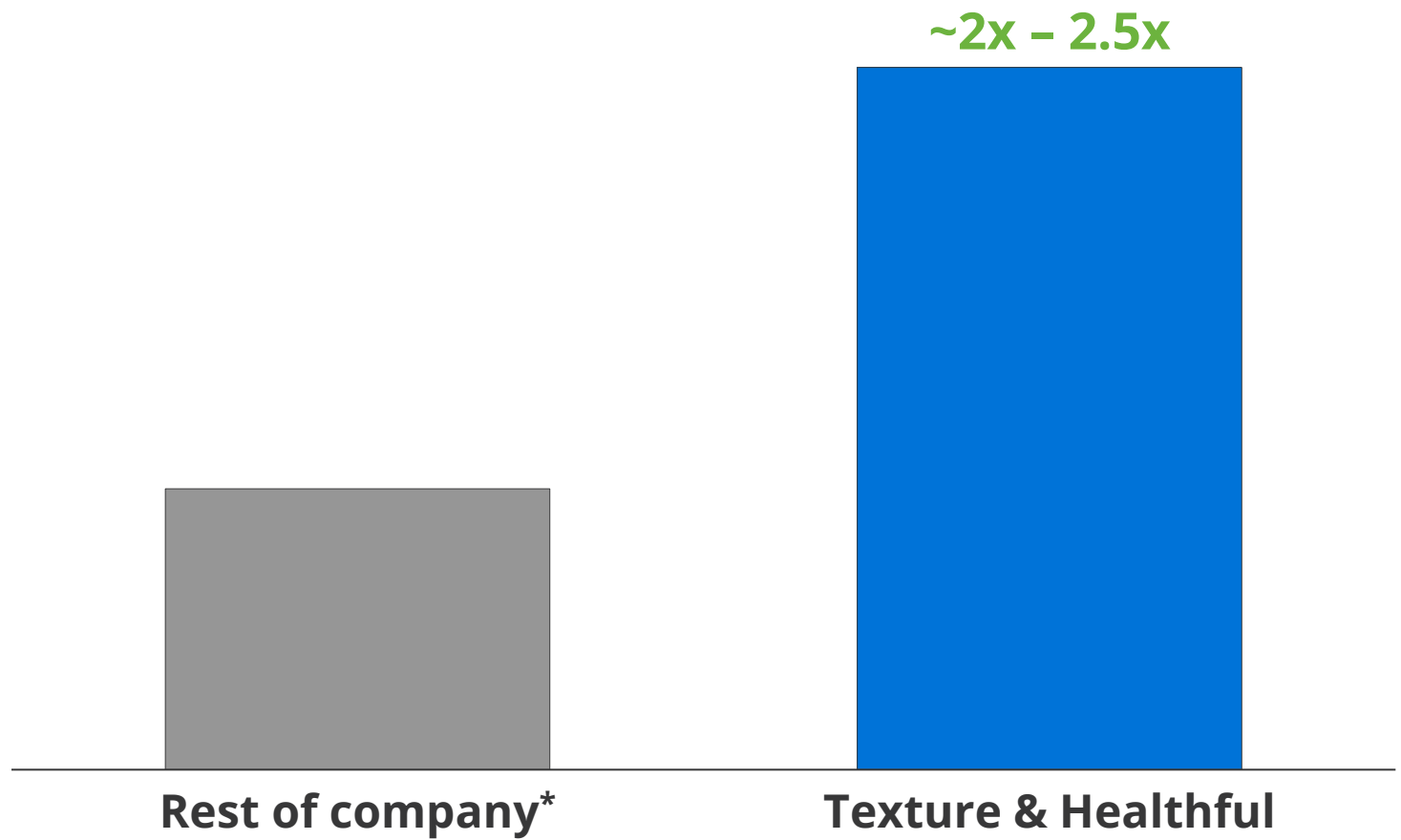


# Margin growth will come from greater incremental mix of higher value products and solutions

*Volume Growth*



*Average Selling Price*



\*Rest of Company includes all remaining businesses of Ingredion

# We will continue to expand our texture portfolio through organic capital investment and strategic M&A

**\$160M**

Starch-based texturizers



Invested over 2021-2024 period

**\$100M**

China expansion



Commissioned in 2022

**\$40M**

Food systems



Integrated and accretive



**KaTech**  
by Ingredion



**MANNITAB**

\* Investments made over previous years and ongoing commitments



- UNIQUELY RECOGNIZED
- RESPECTED, CREDIBLE
- IDEA GENERATOR AND CONCEPT DEVELOPER
- OPPORTUNITY SPOTTER
- PROBLEM SOLVER
- SOLUTIONS PROVIDER
- CO-CREATOR AND INNOVATION PARTNER

## Winning Aspiration:

Be recognized as the **go-to provider** for texture and healthful solutions that **make healthy taste better**

WE STRIVE TO MAKE HEALTHY, HEALTHIER AND HEALTHFUL FOODS TASTE BETTER THROUGH TEXTURE'S IMPACT ON OVERALL LIKING

WE STRIVE TO MAKE FOODS HEALTHIER AND HEALTHFUL



## Q&A

## Our Purpose



Bringing the potential of people, nature and technology together to **make life better**