

**luxexecutivesummit 2018**

Boston • April 9-11

# You need a new strategy for food innovation

Using data to de-risk decisions | April 10

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Senior Analyst







**“I REALLY  
LIKE FROZEN  
YOGURT.**

THERE'S SOMETHING SO  
HUMAN ABOUT TAKING  
SOMETHING GREAT  
AND RUINING IT A  
LITTLE SO YOU CAN  
HAVE MORE OF IT.”

— MICHAEL

#THEGOODPLACE

STREAMING NOW







INC. 5000

## How This Upstart Ice Cream Company Began Outselling Ben & Jerry's and Haagen-Dazs

Halo Top Creamery exploded off the shelves when a GQ writer ate nothing but ice cream for 10 days.





halo top sales



All

Shopping

News

Images

Maps

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Tools

About 611,000 results (0.42 seconds)



## NEW Moo-phoria light ice cream | 140-160 calories per serving

(Ad) [www.benjerry.com/moophoria](http://www.benjerry.com/moophoria)

Delicious light ice cream, full of the chunks & swirls you love

Buy Online · Find A Scoop Shop · Schedule Factory Tour · In Business Since 1978

Products: Chocolate Milk & Cookies, Caramel Cookie Fix, P.B. Dough

📍 Framingham · 1 retailer nearby

### Grab a pint today

Find flavors at your scoop shop, grocery, or our delivery partners

### Chocolate Milk & Cookies

Chocolate and vanilla ice creams swirled with chocolate chip cookies

## Halo Top looks sweet as low-calorie ice cream sales soar

<https://www.ft.com/content/45db2ade-fd6c-11e7-9b32-d7d59aace167>

Jan 25, 2018 - The reason for all the interest is that **Halo Top sales** grew 2,500 per cent year-on-year in 2016; it has taken a 5 per cent scoop of the US ice-cream market within two years. That rate of growth is enough to make multinational food producers choke, given annual sales growth was languishing at an average of ...



**Food  
innovation  
today is  
stressful.**



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**The data you rely on now are:**  
**Lagging indicators | Qualitative | Fragmented**

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**This is a  
data  
problem.**





How do  
you solve  
this data  
problem?



How do  
you solve  
this data  
problem?

**Better data:**

Leading indicators

More quantitative data

Centralized mechanism to derive  
insights from data

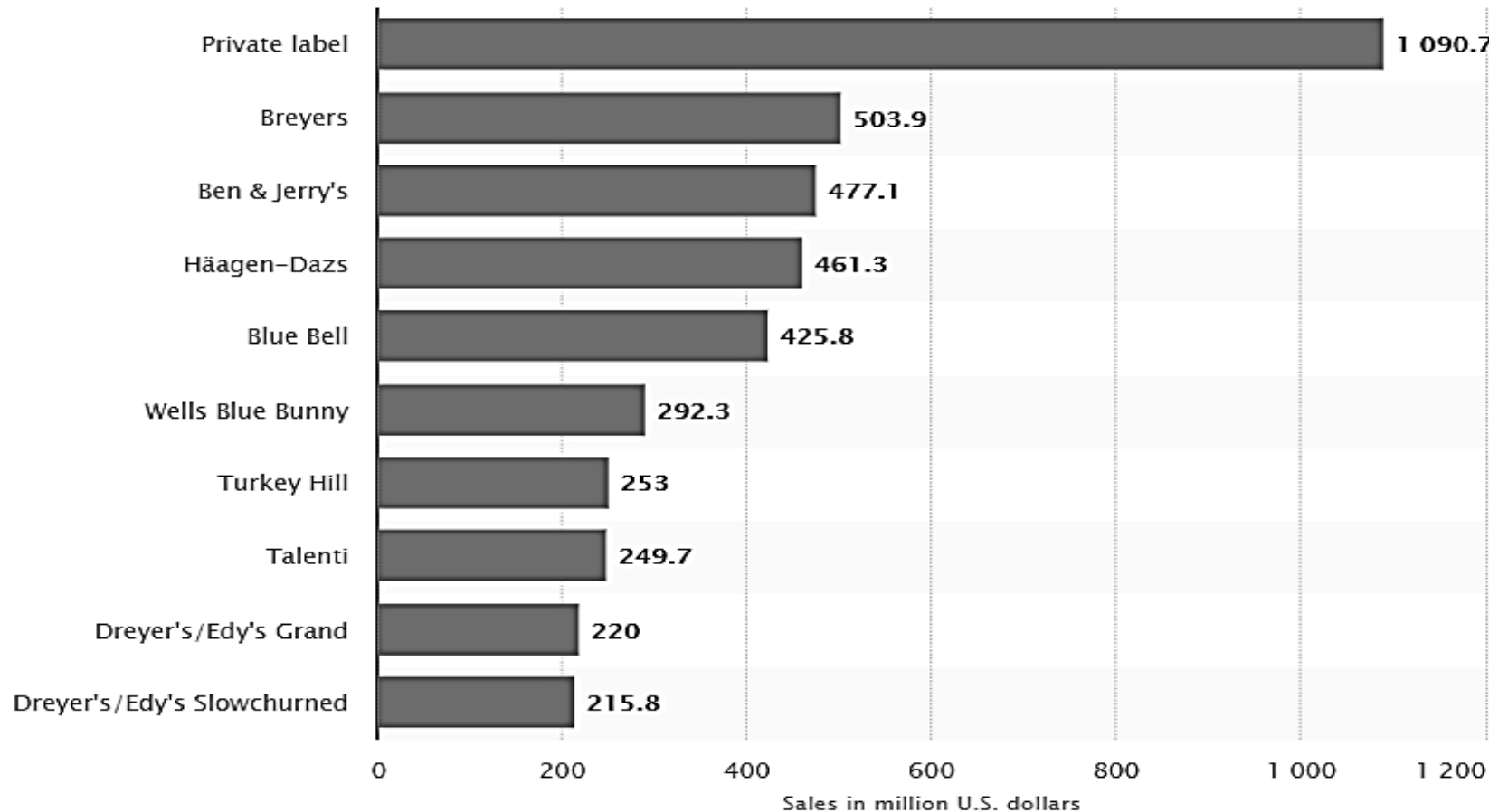
# **Sales data are too little, too late**

You have to create, formulate, produce, package, distribute, and sell your idea before you can generate sales figures

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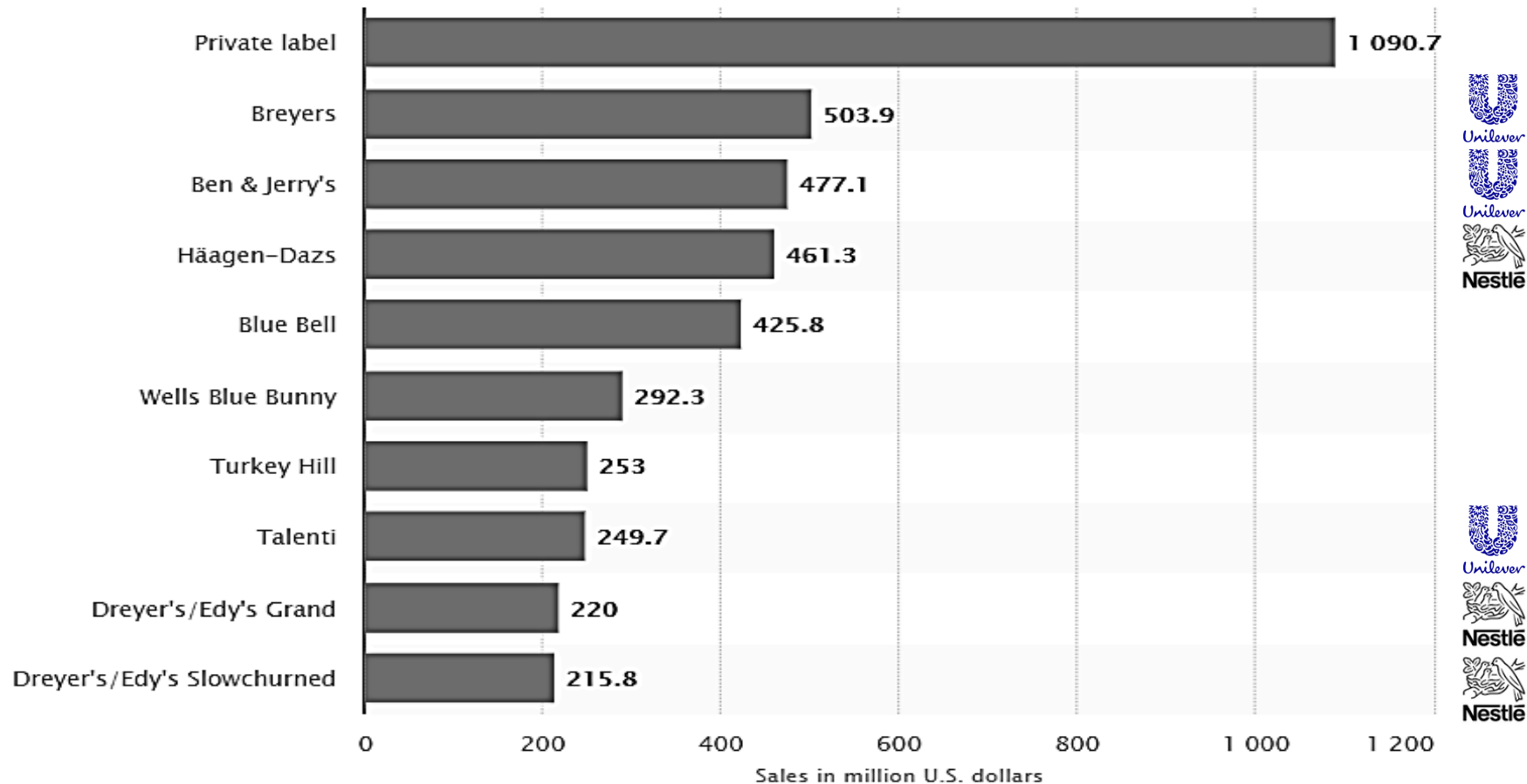
U.S. Ice Cream Sales by Brand, 2017



# Sales data are too little, too late

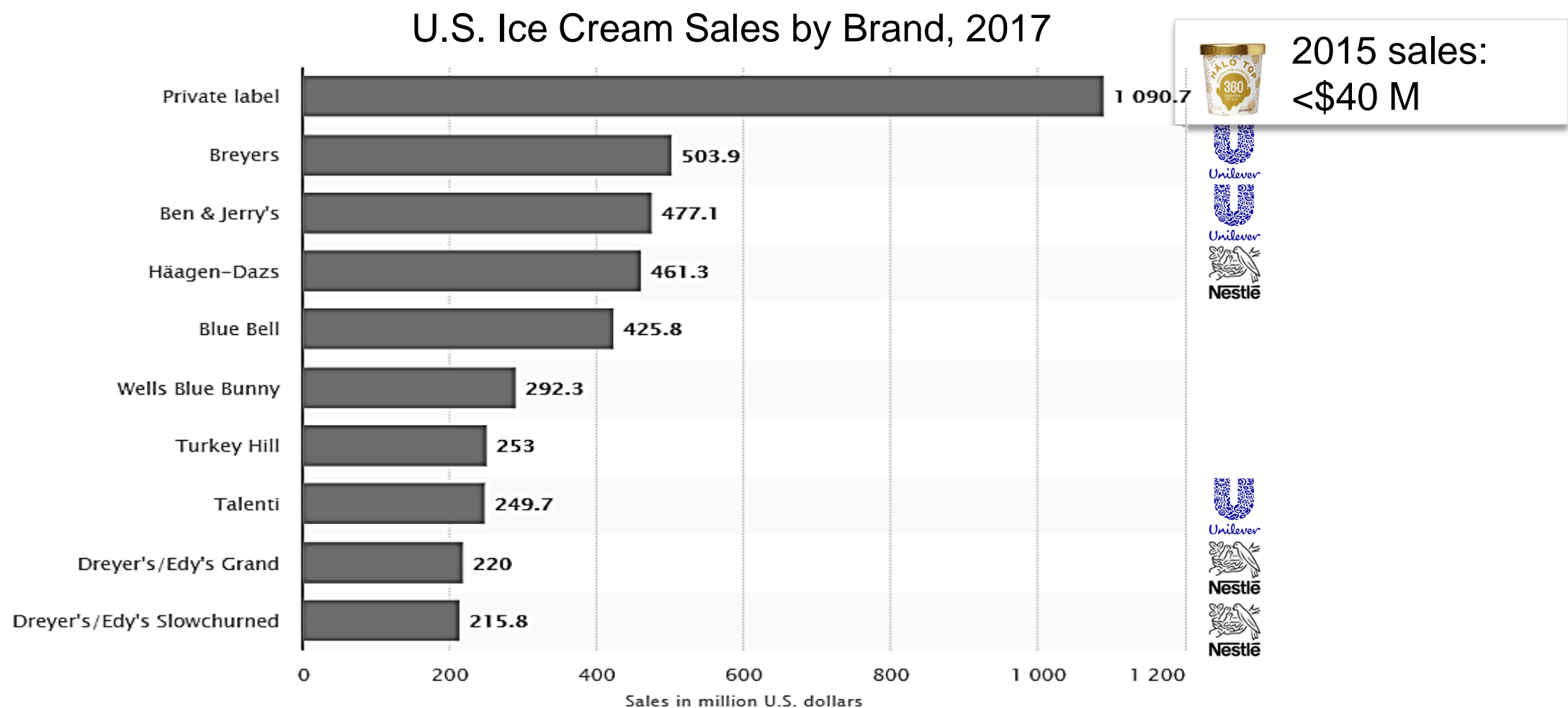
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# If a newcomer is quickly on the rise, can you afford to wait until they're taking market share to notice their presence?



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**Focus group data are qualitative  
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## Focus group data are qualitative and not comprehensive

“This compostable packaging makes me feel better about buying Sun Chips over other chip brands.”

“Sure, it’s crinkly, but I’m an environmentally conscious consumer, so I’ll tolerate a louder bag if it’s ‘green.’”





# Focus group data are qualitative and not comprehensive

## Potato Chip Technology That Destroys Your Hearing



# With decentralized data, how do you work efficiently?

# With decentralized data, how do you work efficiently?



**MARKETING**



**FORMULATION**



**SENSORY**



**DESIGN**

# With decentralized data, how do you work efficiently?



We need sugar reduction!



Sure, we took out half the sugar and used sucralose instead!



Hmm...the product isn't fluffy anymore. Can you just take out the calories?



Our closest competitor is using stevia. Use that so we can call it "natural."



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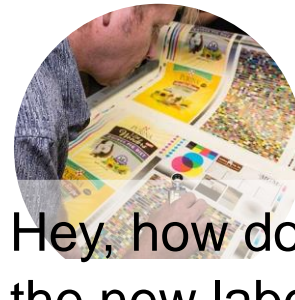
Our closest competitor is using stevia. Use that so we can call it "natural."



Okay we used a synbio derived stevia and added dextrose for fluff.



Perfect!



Hey, how do we want the new label to look since we can't say "No GMOs" anymore?



Whoa, whoa, whoa! Who said anything about GMOs? Start over!!



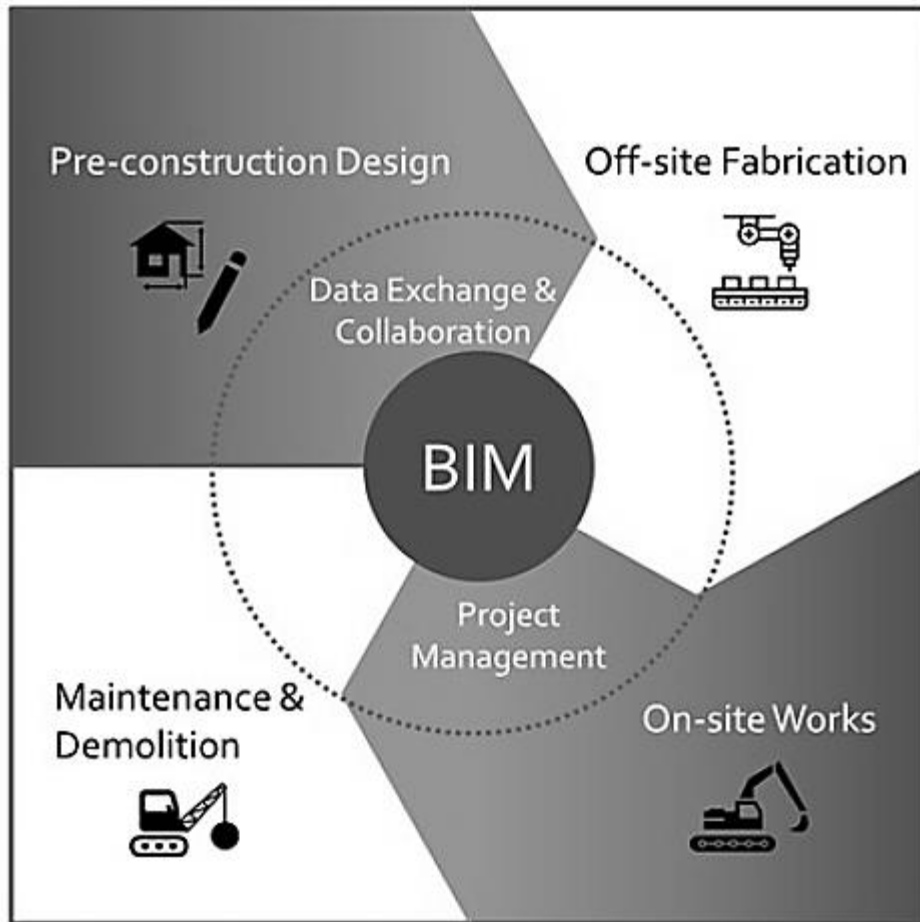


**This is a  
data  
problem.**

# Real progress will take an integrated approach

Get comfortable with Ingredient Informatics

# Applying learnings from other industries



## Materials Informatics

### Rapidly accelerating the process of R&D

Applying data science and artificial intelligence methods to materials science and engineering to better understand the use, selection, development, and discovery of materials.



# Ingredient Informatics as an innovation strategy

Quantitative data

Centralized data  
platform

Mining existing  
portfolio





**Quantitative data**



**Centralized data  
platform**



**Mining existing  
portfolio**



**Sensory experts and panels are expensive and problematic –  
quantitative measurements are critical for a simpler process**



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quantitative measurements are critical for a simpler process







**Quantitative data**

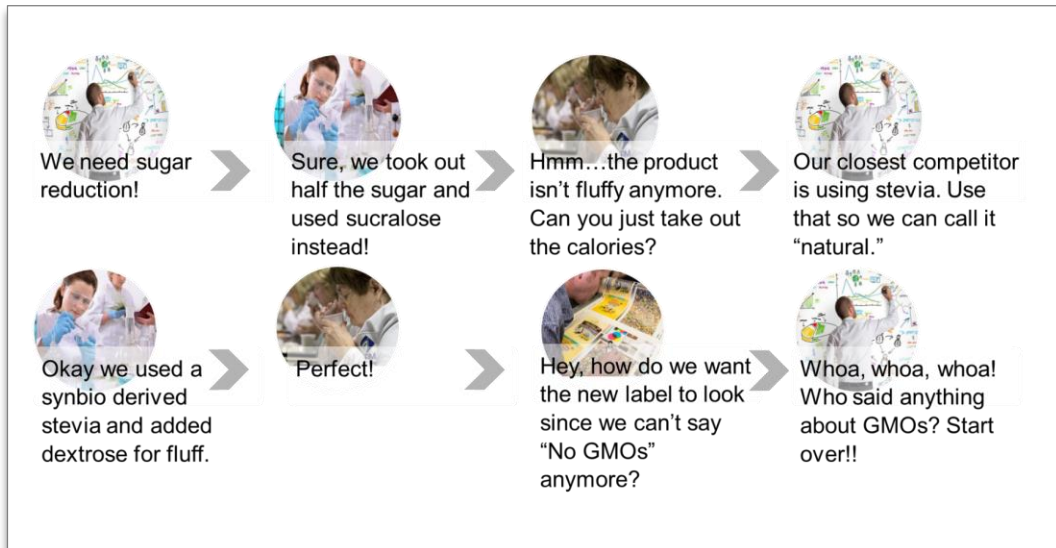


**Centralized data  
platform**

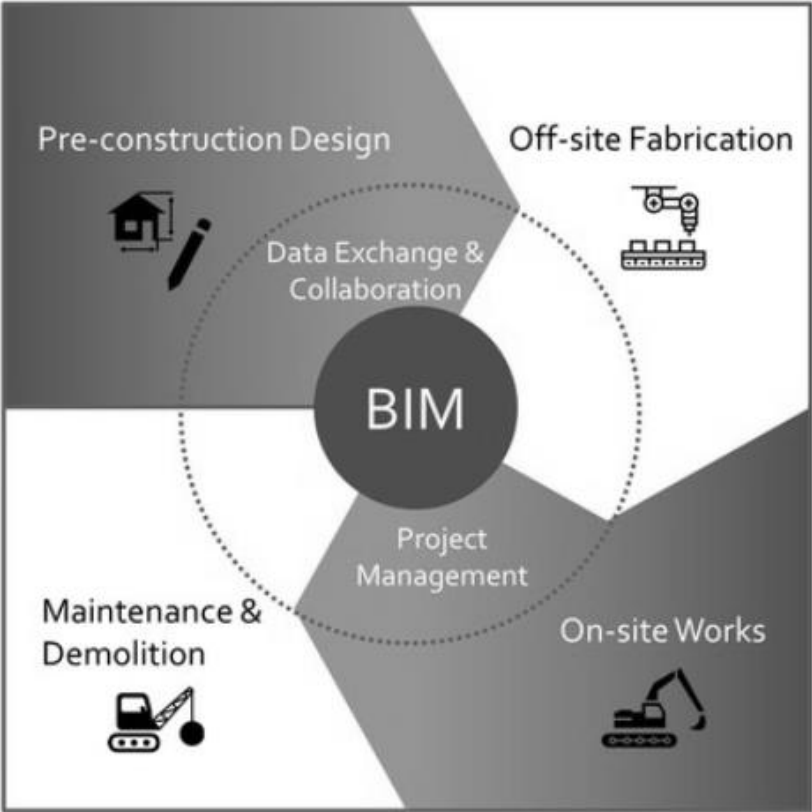


**Mining existing  
portfolio**

# Centralizing your data

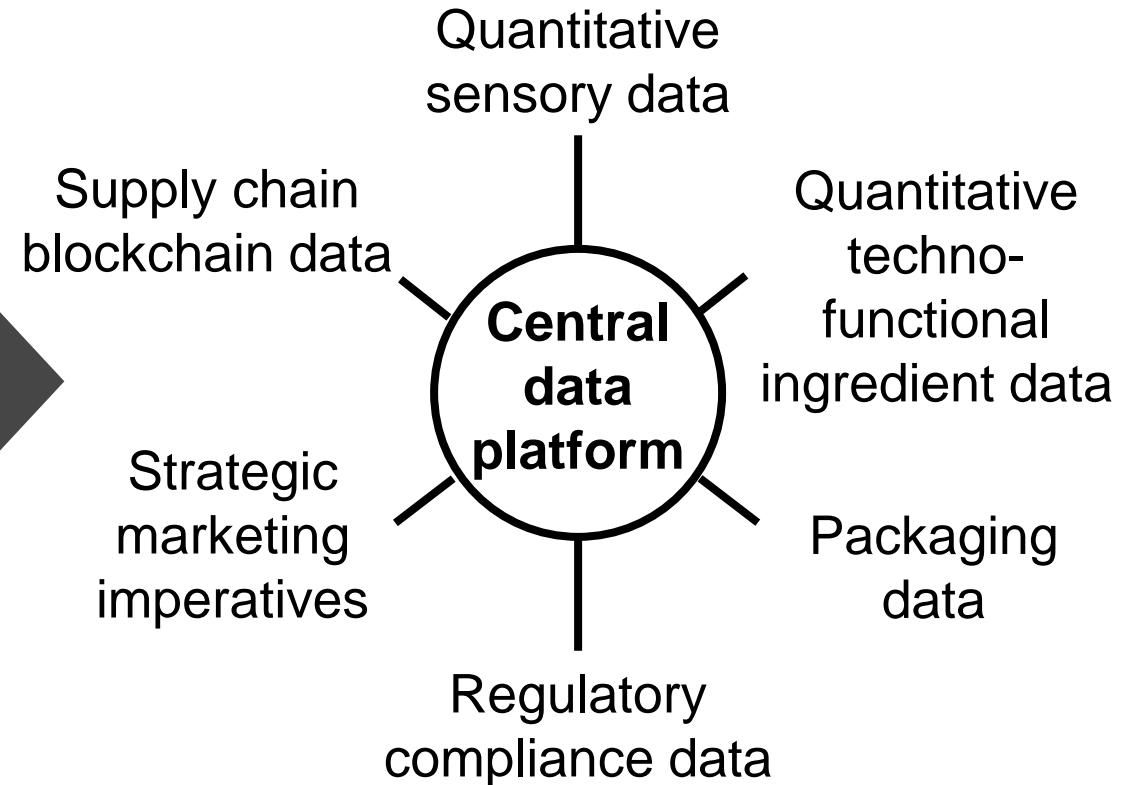


# Centralizing your data





# Centralizing your data





**Quantitative data**

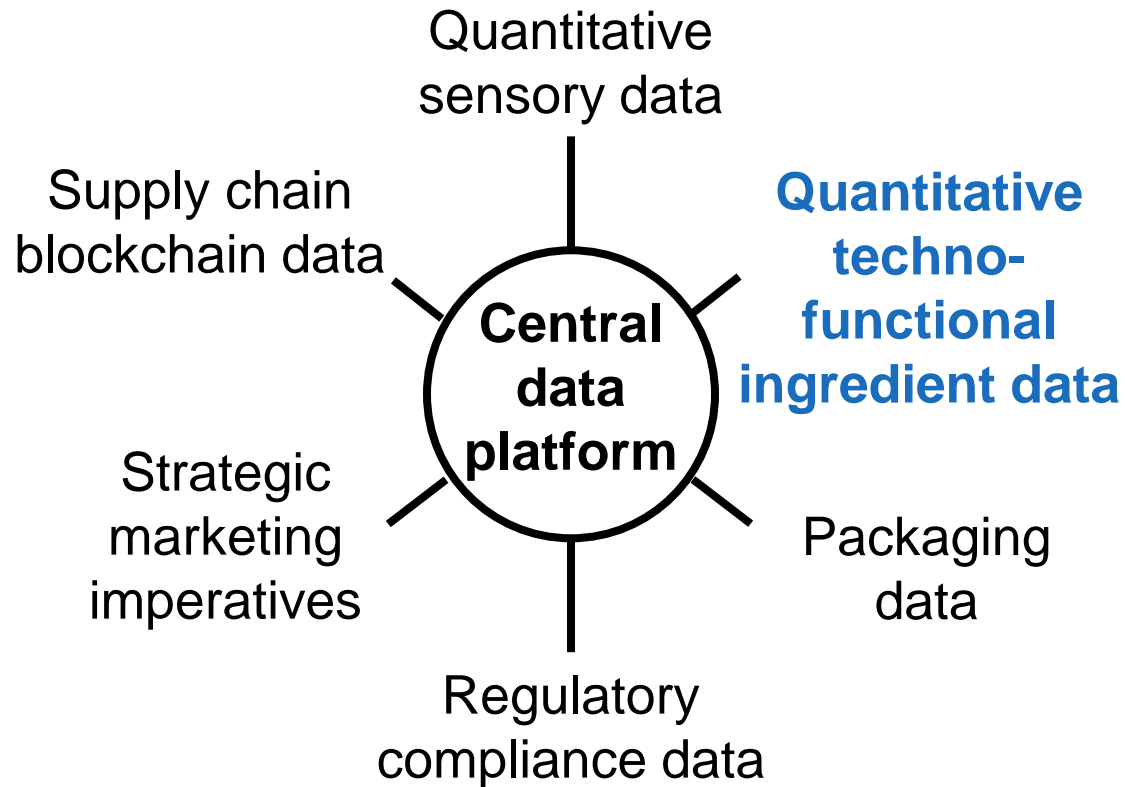


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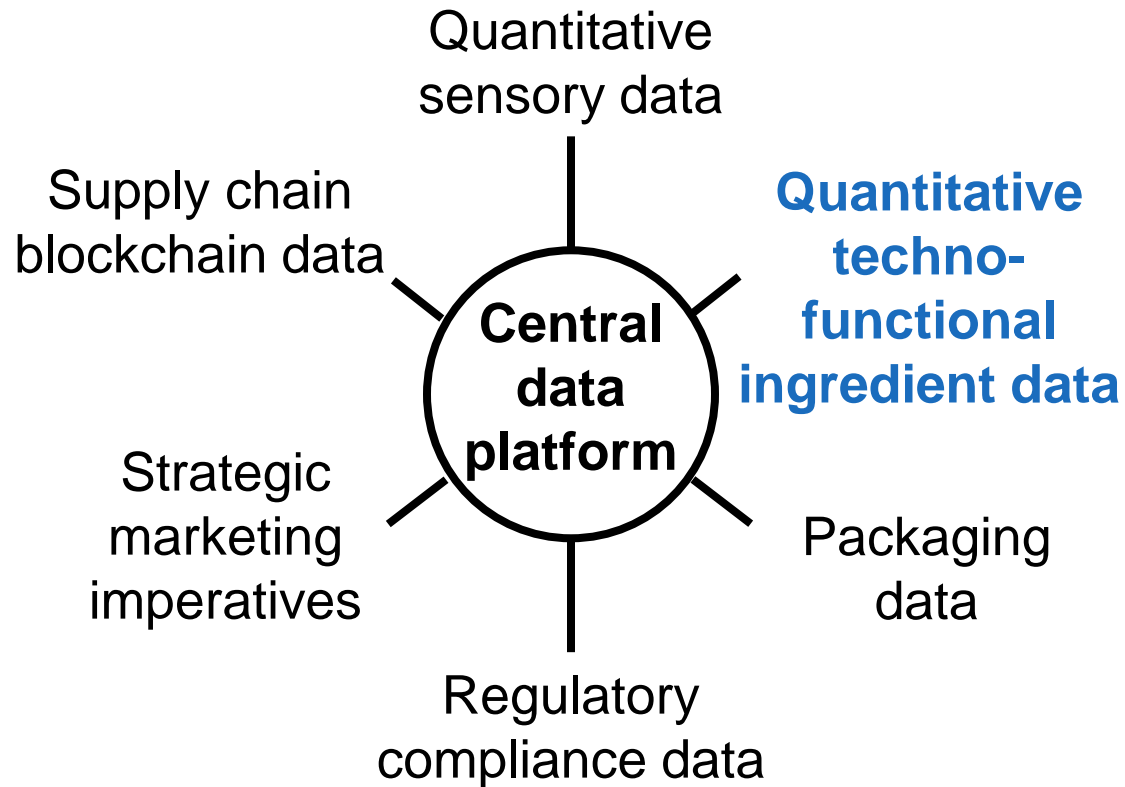


**Mining existing  
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# Mining a robust data library drives incredible value

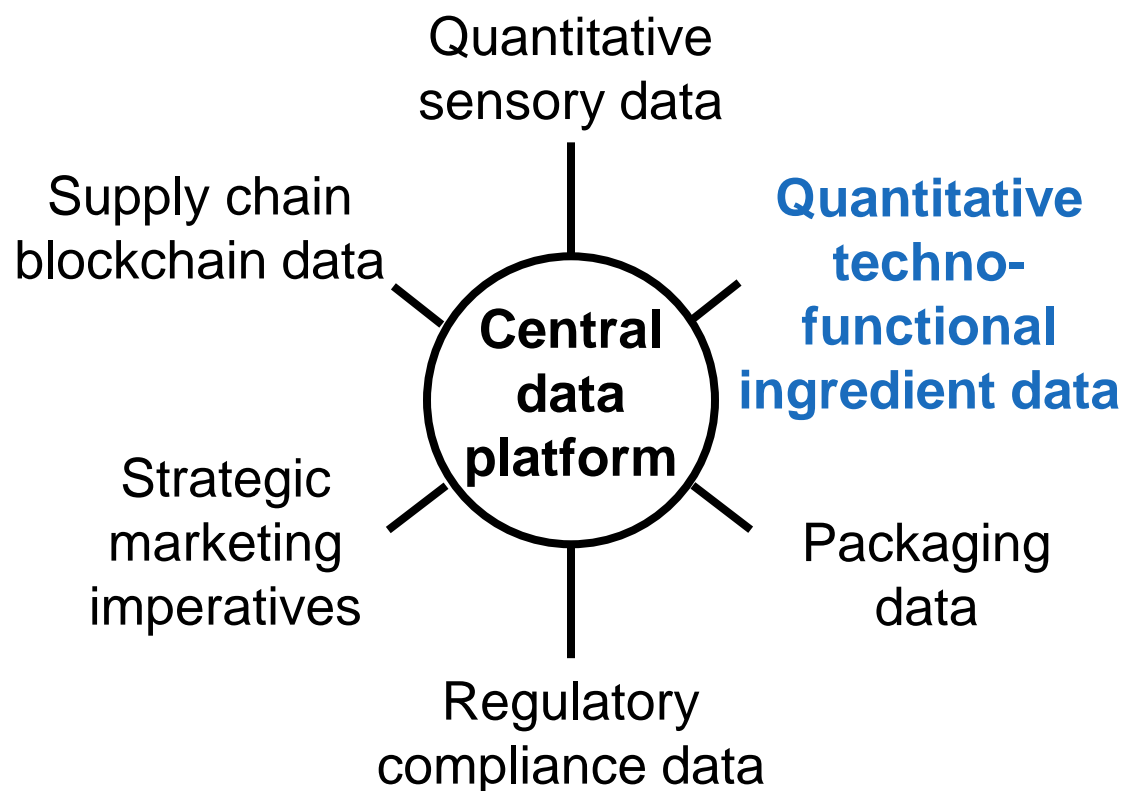


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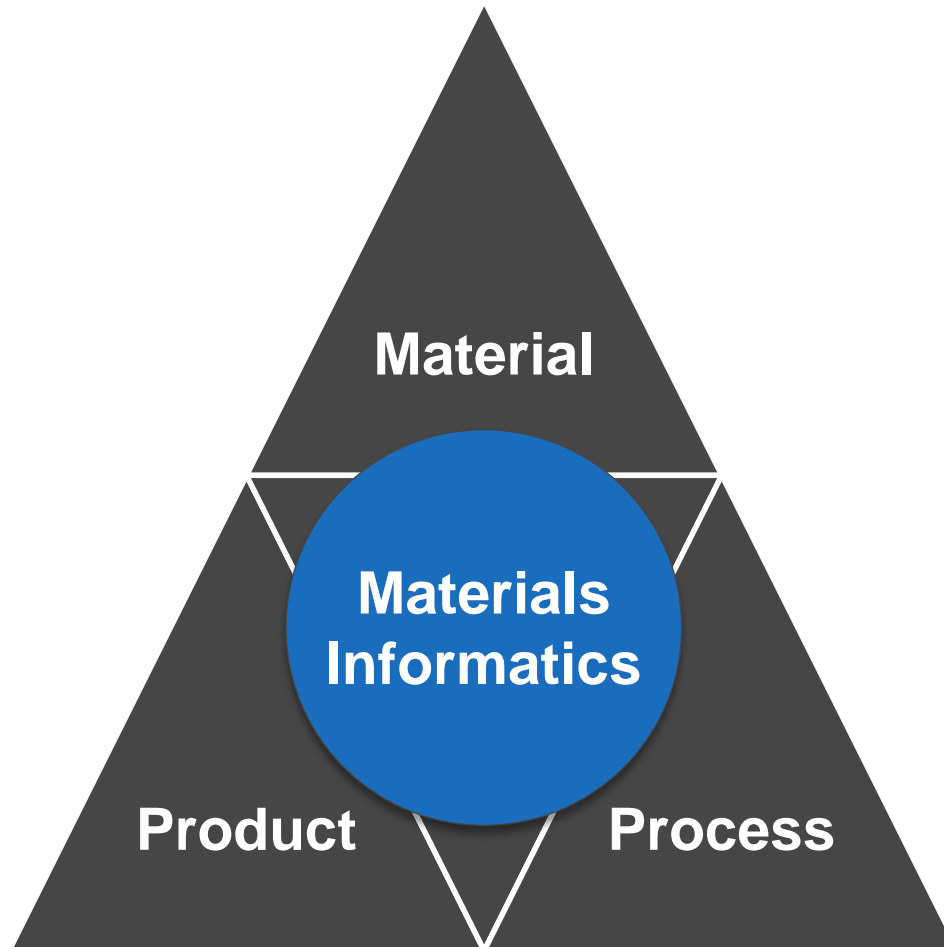


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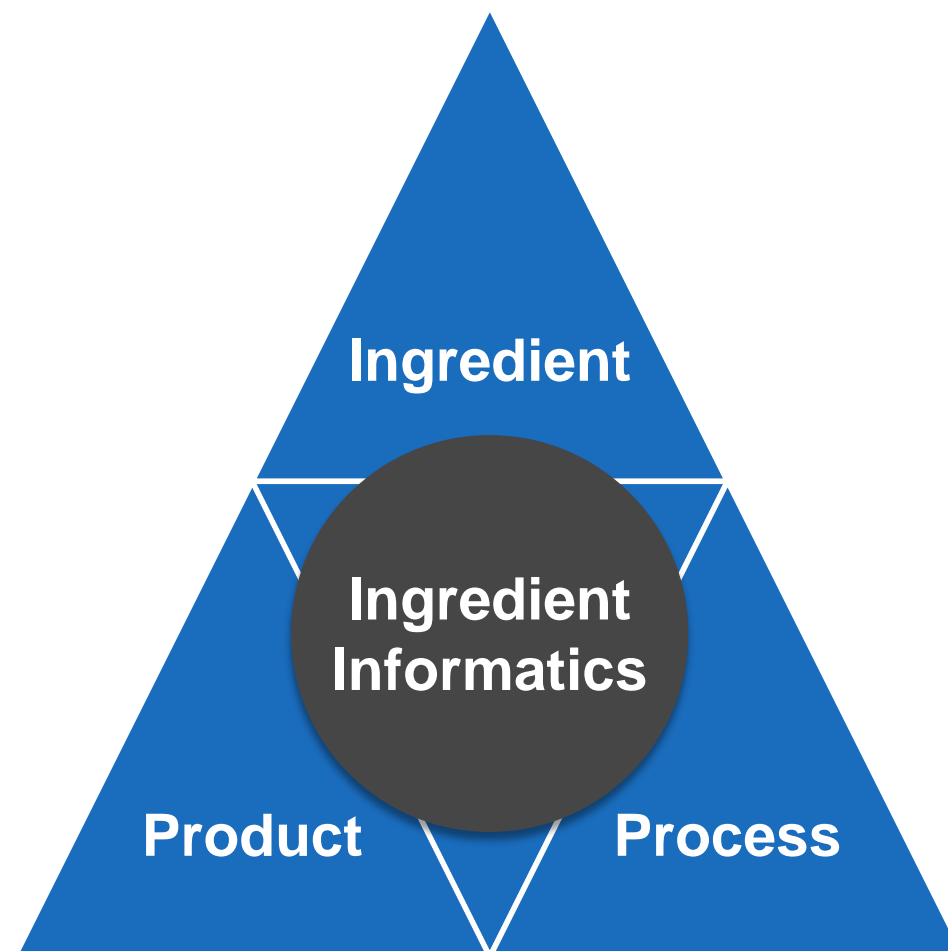
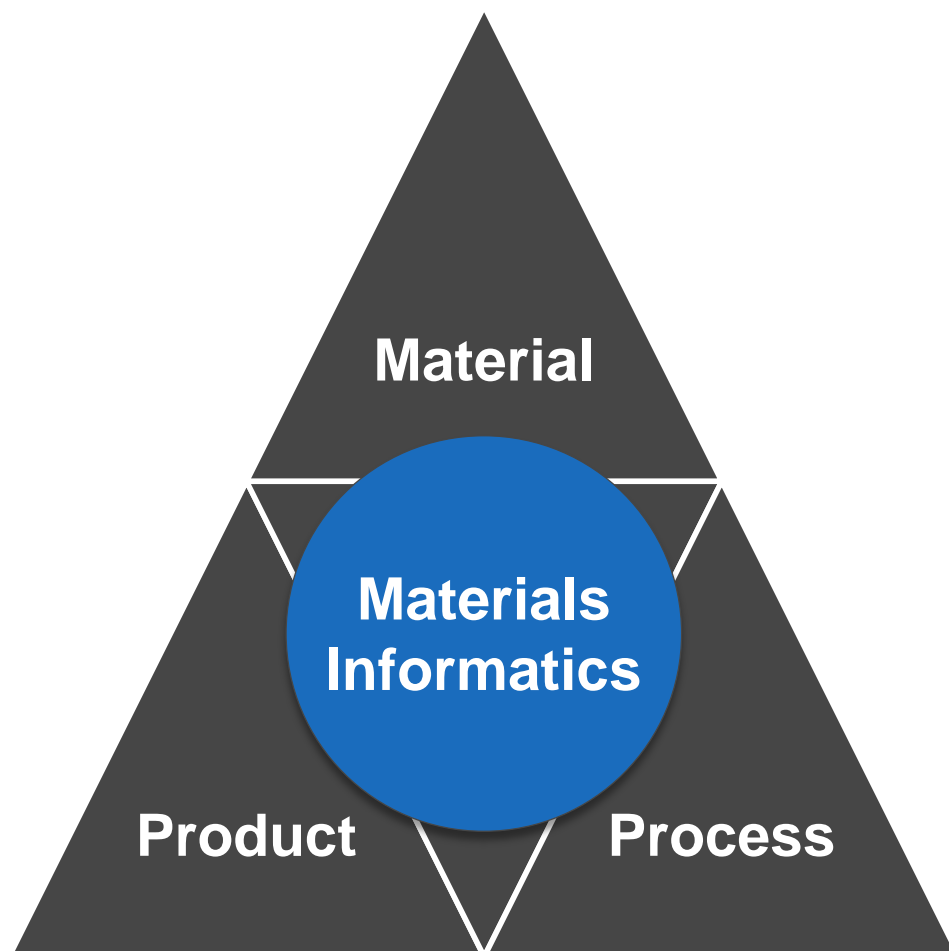




# Structuring your “techno-functional” ingredient data





**Think of the ingredients in your portfolio as materials to be formulated and re-formulated**








**This is a  
data  
problem.**




Look for  
INGREDIENTS


choose a  
DISH


pick a  
STYLE



start  
AGAIN




FAVORITES

### STRAWBERRY


The garden strawberry (or simply strawberry / *strɔːb(ə)rɪ*; *Fragaria × ananassa*) is a widely grown hybrid species of the genus *Fragaria* (collectively known as the strawberries). It is cultivated worldwide for its fruit. The fruit (which is not a botanical berry, but an aggregate accessory fruit) is widely appreciated for its characteristic aroma, bright red



 W

### KING SALMON


Salmon / *sæmən*/ is the common name for several species of fish in the family Salmonidae. Other fish in the same family include trout, char, grayling and whitefish. Various species of salmon display anadromous life strategies while others display freshwater resident life strategies. Salmon are native to tributaries of the North Atlantic (genus *Salmo*) and



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### ACACIA HONEY


Honey / *hʌni*/ is a sweet food made by bees using nectar from flowers. The variety produced by honey bees (the genus *Apis*) is the one most commonly referred to, as it is the type of honey collected by most beekeepers and consumed by people. Honeys produced by other bees (bumblebees, stingless bees) and insects (honey wasps) have different properties,


 W






### BOURBON

Bourbon whiskey is a type of American whiskey: a barrel-aged distilled spirit made primarily from corn. The name is ultimately derived from the French Bourbon dynasty, although it is disputed whether the namesake Kentucky county or New Orleans street inspired the whiskey's name. Bourbon has been distilled since the 18th century. The name "Bourbon"


 W


BACK


SYNERGY


MORE

#### HERE ARE SOME IDEAS



#### Strawberry Fish Dish

Based on: [grilled salmon with ponzu sauce and vegetable slaw](#) from [Bon Appétit](#)

cornstarch, acacia honey, bourbon, water, king salmon, vegetable oil, apple juice, orange juice, strawberry, oyster sauce, cumin, ground coriander

## Cognitive Cooking with Chef Watson

Recipes for Innovation from IBM & the Institute of Culinary Education

# X NotCo



THIS is



NotCo uses quantitative ingredient data and AI to reformulate familiar products





**This is a  
data  
problem.**

# How to start making it better

Getting a handle on the data you need



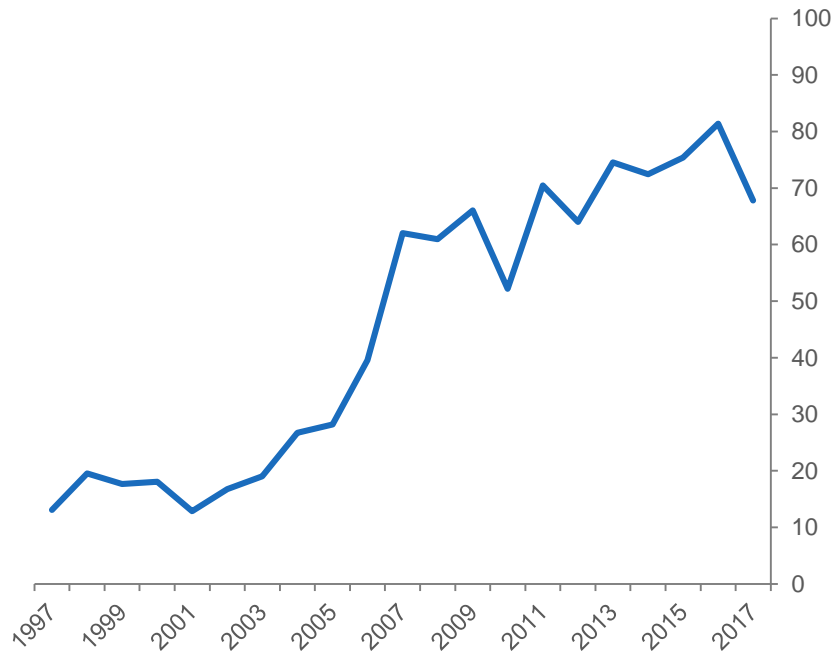
Can we use  
this approach  
to solve the  
diet ice cream  
brain freeze?



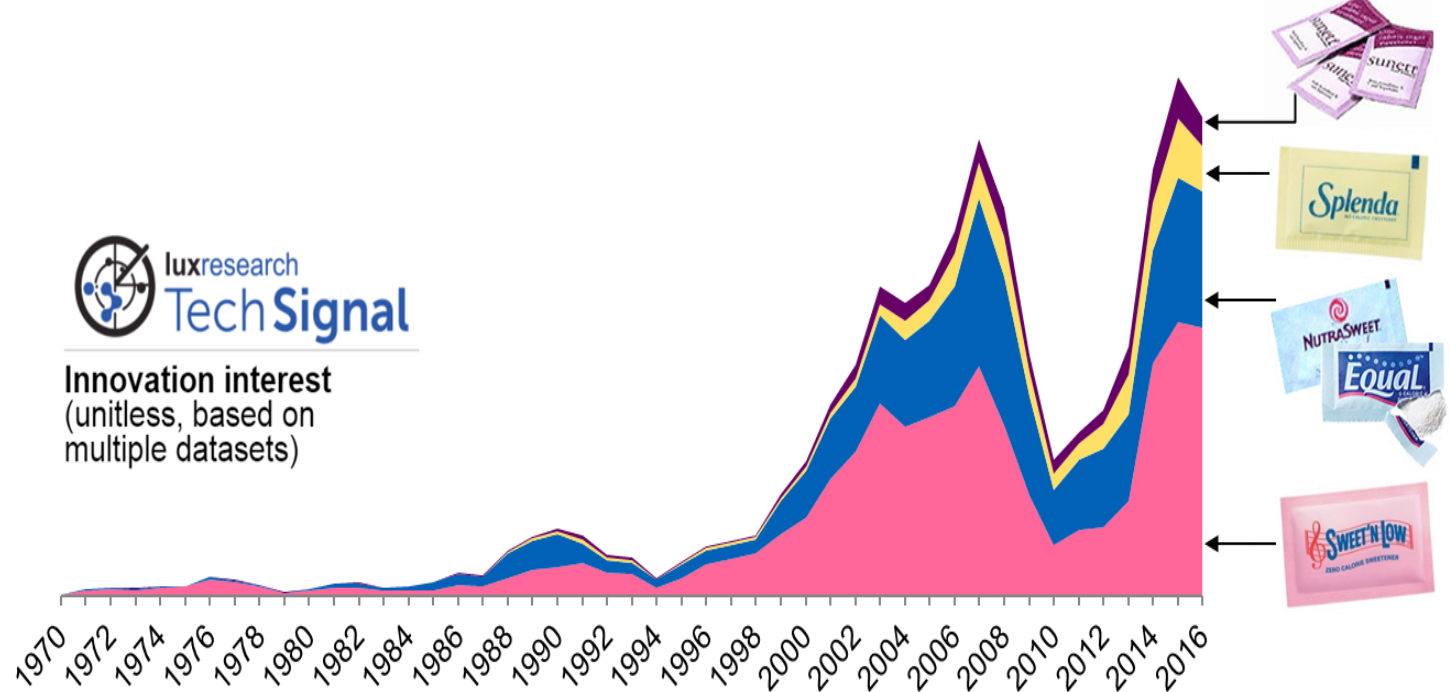
Start by finding *leading* indicators

# Start by finding *leading* indicators

## SUGAR REDUCTION TECH SIGNAL



## SWEETENER TECHNOLOGY TECH SIGNALS

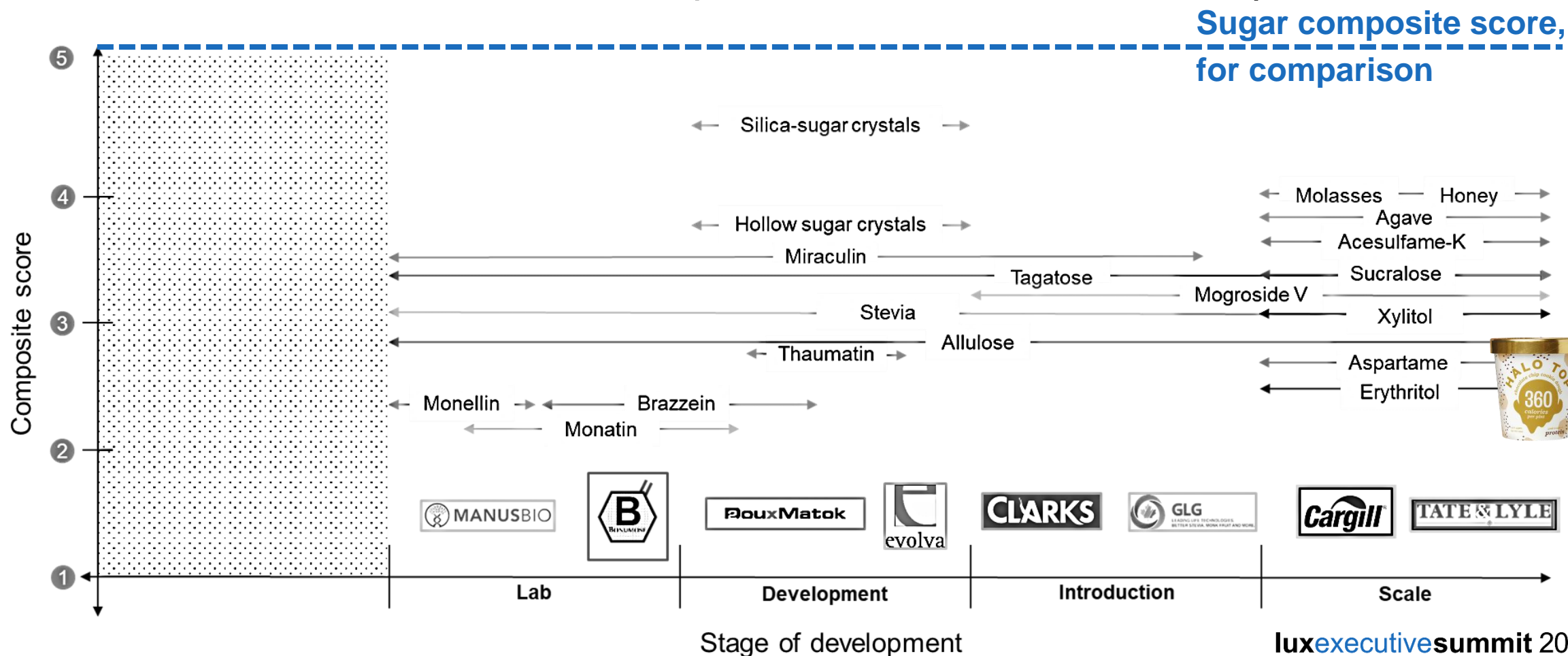




# Add expert insight

## Add expert insight

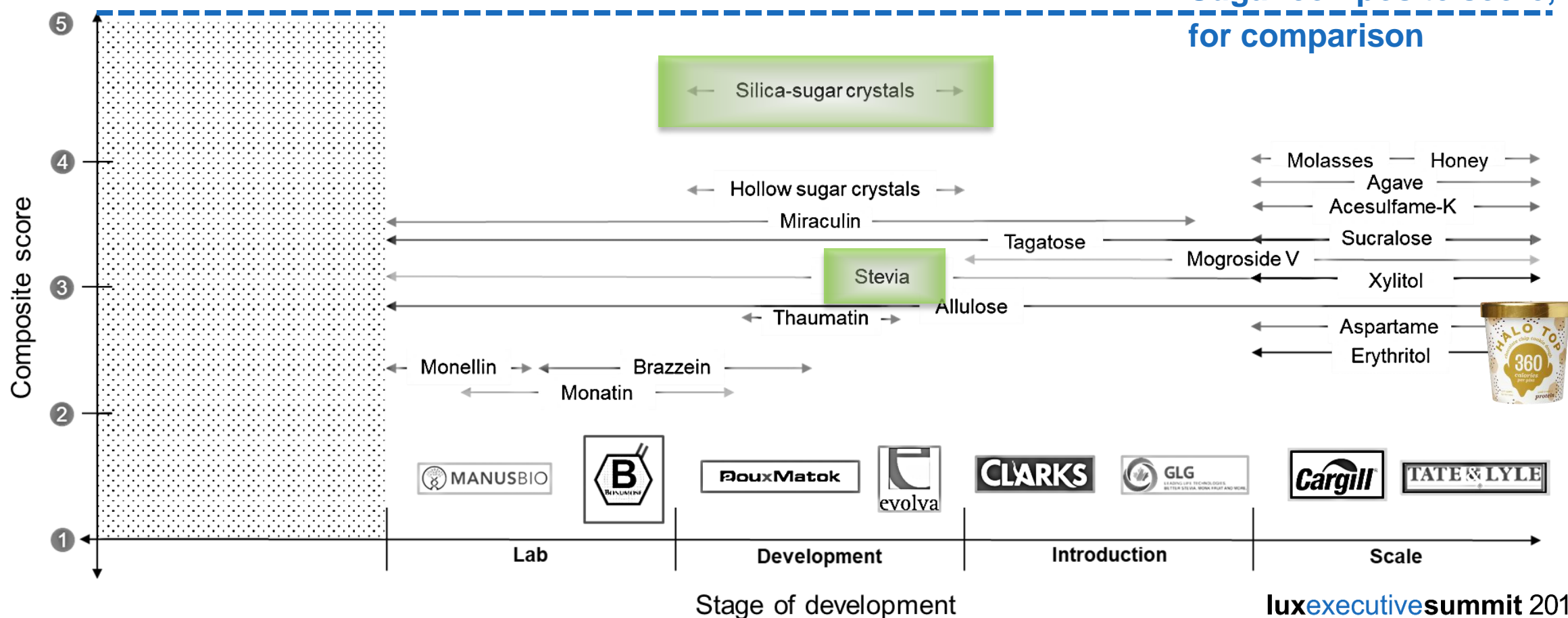
Alternative sweeteners don't stack up to sucrose; look to blend replacements



## Add expert insight

Alternative sweeteners don't stack up to sucrose; look to blend replacements

Sugar composite score,  
for comparison



**How would I find the who?**

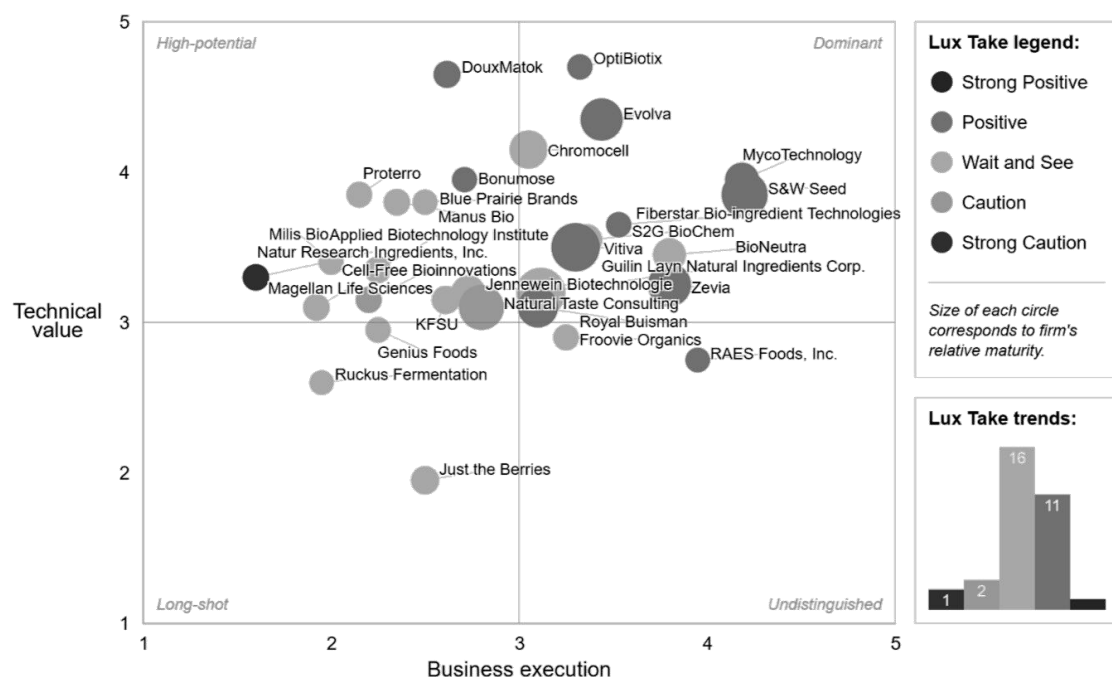
**Use a data-centric approach to evaluate developers' capabilities**



# Use a data-centric approach to evaluate developers' capabilities

Sweetener-related technologies can compensate for alternative sweetener shortcomings

## Lux Innovation Grid for sweetener developers



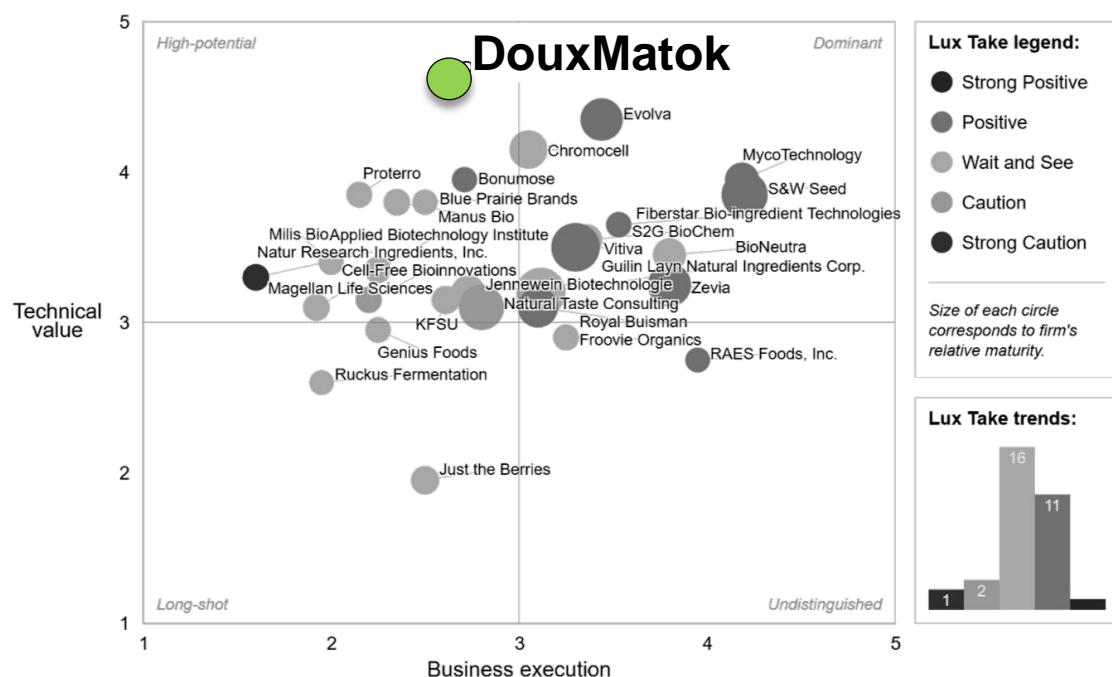
## Stevia developers span segments



# Use a data-centric approach to evaluate developers' capabilities

Sweetener-related technologies can compensate for alternative sweetener shortcomings

Lux Innovation Grid for sweetener developers



Stevia developers span segments



## Putting it all together...



**What?**

**Technologies to prioritize:**

Lux Tech Signal  
Patents  
Funding



**Who?**

**Who to work with:**

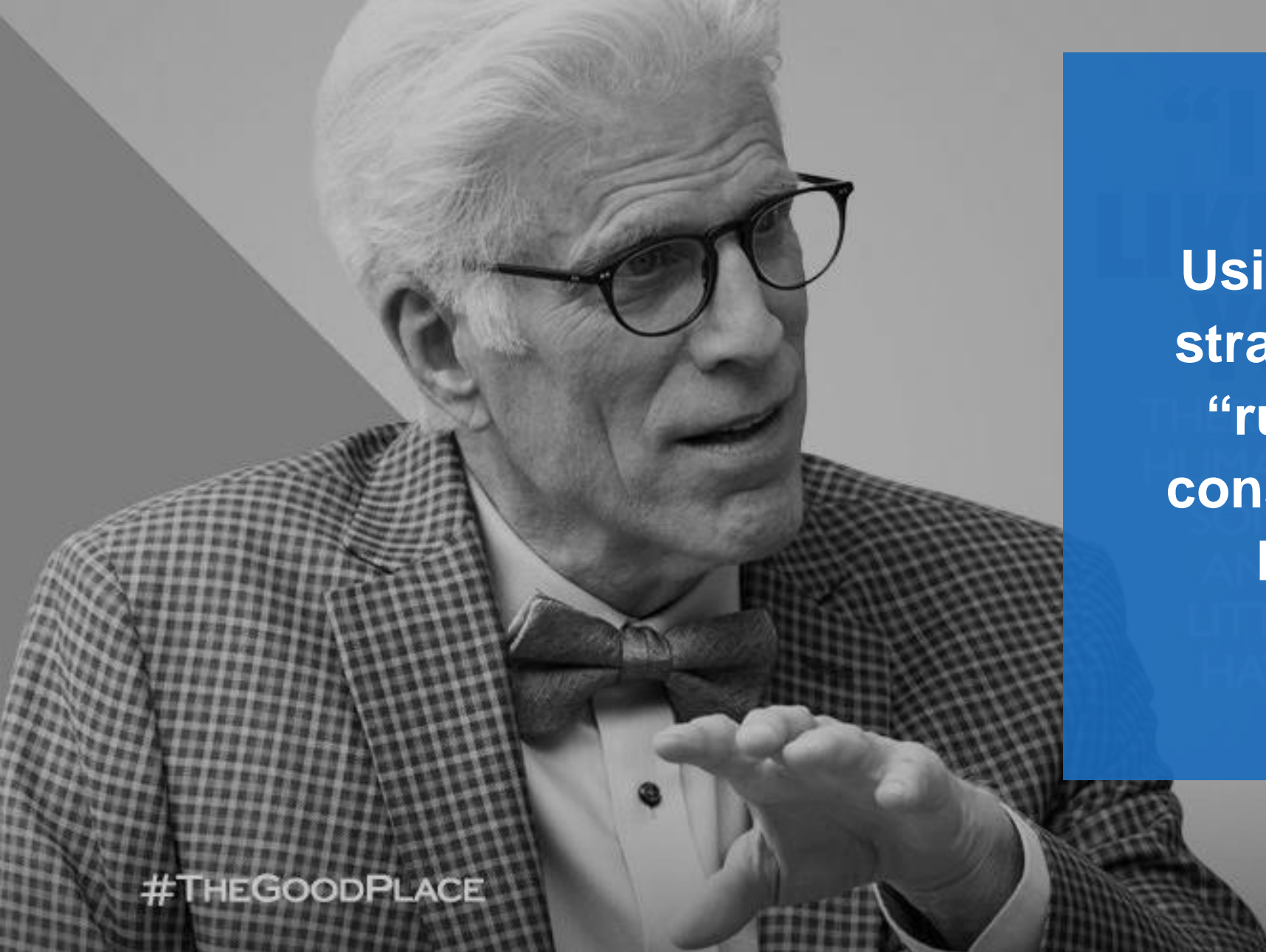
Partnership maps  
Lux Innovation Grid



**How?**

**How to implement:**

Quantitative data  
Centralized platform  
Mine your portfolio



Using this data-driven strategy, what can you “ruin” just a little so consumers will want to have more of it?

—MICHAEL

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STREAMING NOW 





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*Thank you for joining us.*





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