

EXECUTIVE SUMMARY

Finding Business Success in Personalized Nutrition

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Executive Summary

Personalized nutrition is a space with as many opportunities as pitfalls. **In 2019, three prominent companies failed: Habit, uBiome, and Arivale.** This was despite each being backed by more than \$50 million and having strong technological foundations.

Given the pressure to reduce rising healthcare costs and chronic disease prevalence, finding business success for novel solutions like personalized nutrition is paramount. Here, we apply a framework to assess the business failures of Habit, uBiome, and Arivale in order to guide future decision-making and avoid expensive mistakes.

A deficiency in one or more of the four categories ultimately led to the demise of each personalized nutrition solution (as shown to the right). **All four are requisite for business success, stressing the need to cultivate all aspects equally.**

Driver Neutral Inhibitor

	PRODUCT	PRICE	PEOPLE	PARTNERSHIP
HABIT	Inhibitor	Neutral	Neutral	Inhibitor
UBIOME	Driver	Driver	Inhibitor	Driver
ARIVALE	Inhibitor	Inhibitor	Neutral	Neutral

Personalized nutrition has both hope and hype

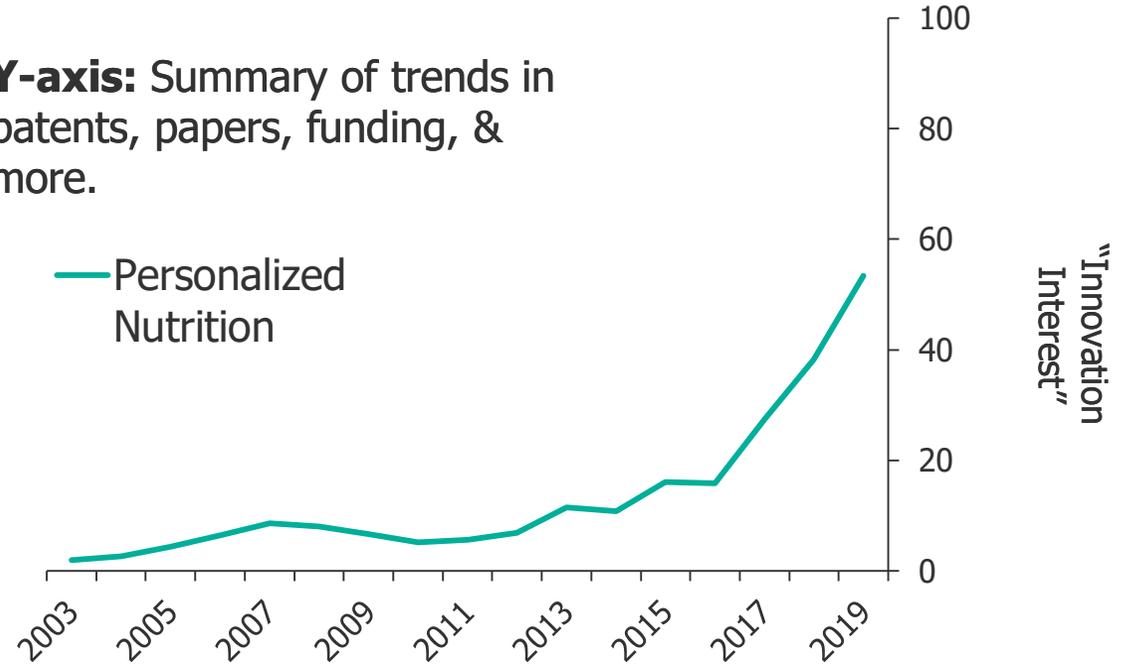
Innovation interest in personalized nutrition is surging, up 3.4× from 2017 to 2019. Events so far in 2020 indicate that this momentum will continue.

There are strong drivers maintaining that momentum, with **more than a billion people around the world diagnosed with diet-related diseases** like [diabetes](#) and [obesity](#) and the price tag for their care ballooning to well over [\\$1 trillion per year](#). More effective and more affordable solutions are needed to prevent and manage these diseases, and **personalized nutrition presents a high-potential mechanism to fulfill this need.**

However, there are as many opportunities as pitfalls in this space. In 2019, Campbell's divested its \$75 million* investment into Habit. In the same year, highly funded startups uBiome and Arivale, backed by \$110 million and \$53 million, respectively, ceased operations entirely.



Y-axis: Summary of trends in patents, papers, funding, & more.

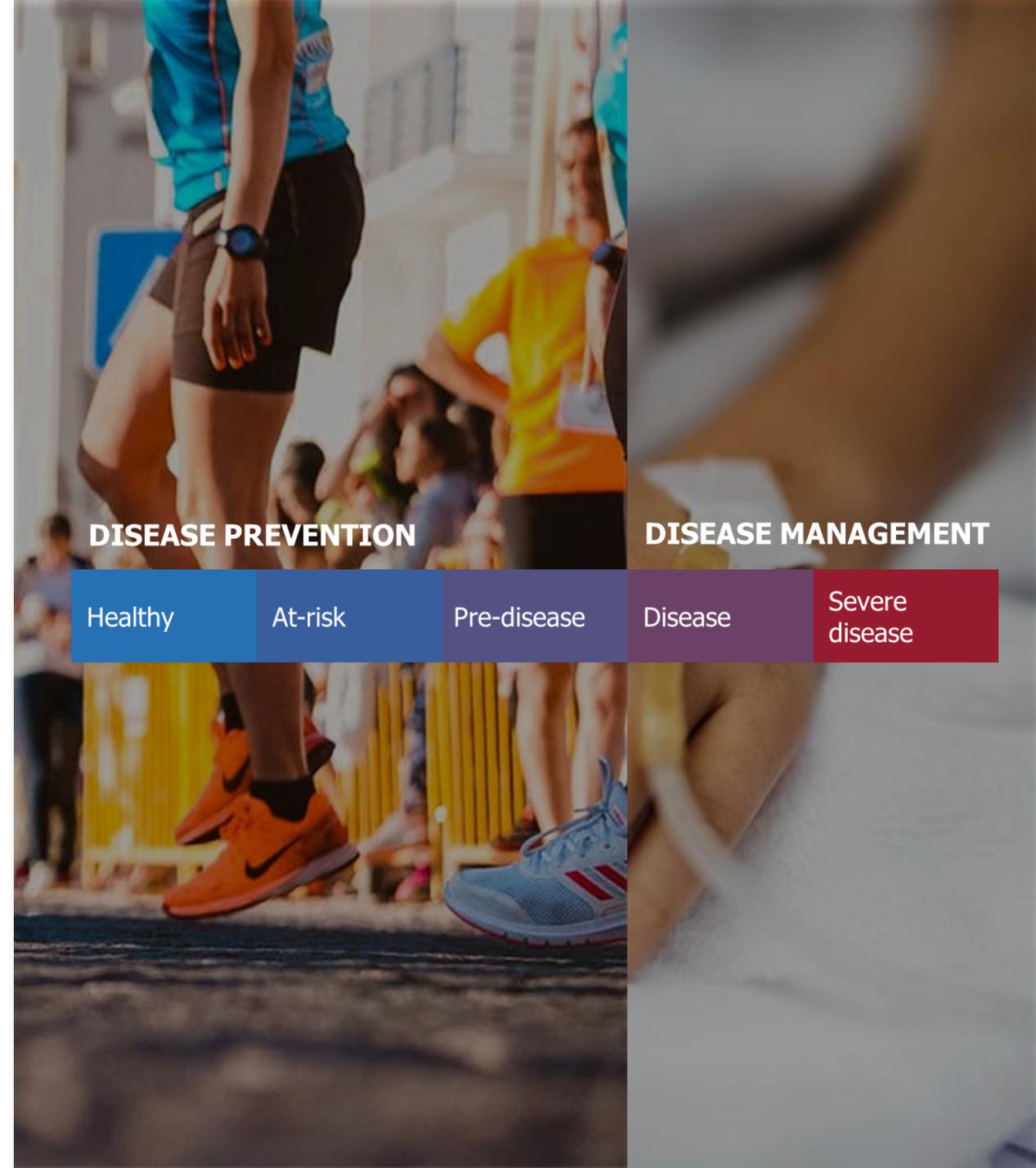


These failures can be used to guide future decisions

A flurry of activity is transpiring in the personalized nutrition space, and **there are many more developers still available for large companies to form alliances with going forward.**

However, few players find business success for their solutions. The examples of Habit, uBiome, and Arivale underscore this. With rising healthcare costs and chronic disease prevalence, there is still a clear need to deploy such solutions across the health spectrum (depicted to the right). The COVID-19 pandemic has exacerbated this, and diabetes and obesity management remain key global challenges.

What will unlock personalized nutrition's potential to play an integral role in health? **It is much easier to analyze what "not to do" than what "to do."** A framework to evaluate previous failures is the best tool to guide future decision-making and avoid expensive mistakes.



Methodology

To assess the business prospects of personalized nutrition solutions, we developed a four-part framework, adapted from the ["4 Ps" of marketing](#). We will apply this framework to Habit, uBiome, and Arivale, looking at factors within each category that were drivers (+), inhibitors (-), or neutral (o) for that company.

PRODUCT

Pertains to the set of goods and services made available through a personalized nutrition solution. Goods typically include testing kits and dietary products (e.g., supplements), while services are typically dietary recommendation reports and apps.

PEOPLE

Relates to the management team structure and background. This is applicable to both startup executive teams and large company stakeholders managing personalized nutrition programs.

PRICE

Refers to the price paid by a customer, which could be an end consumer or business but is most commonly the former. One-time or recurring payments are another dimension, as is qualification for reimbursement.

PARTNERSHIP

Denotes the partnership network to assist in validating and growing a personalized nutrition solution. This includes, but is not limited to, research partnerships, pilot testing, sales and distribution, and strategic investments.

CASE STUDY

Habit

[Habit](#) aimed to help users along the entire consumer journey, offering meals and coaching in addition to its baseline product. It made headlines in 2016 with a \$32 million investment from Campbell's, which was the lone investor and later contributed another \$43 million*. According to those previously working with its technology, users (of which it gained [tens of thousands](#)) were ultimately underwhelmed by the level of personalization. In 2019, Campbell's sold Habit to Viome for an undisclosed amount.

LUX TAKE

The gap between perceived and experienced value underscores the need to clearly align a product to user needs. A gap will only lead to user disappointment and attrition.

PRODUCT

-  Provided an at-home test kit in the U.S. to analyze DNA makeup (cheek swab) and 70+ blood biomarkers (finger prick), accompanied by a meal replacement shake to measure response to macronutrients
-  Users were given a digital dashboard of results and personalized nutrition recommendations, but it reportedly lacked valuable insight
-  As an add-on, personalized fresh meals were available for doorstep delivery in the U.S. Bay Area; Habit put expansion of this service on pause in 2018
-  Additionally, remote coaching sessions with registered dietitians were also an option to give holistic guidance

PRICE

-  \$299 for the test kit and dashboard; in 2018, it allowed users to upload DNA data from either 23andMe or AncestryDNA for a \$100 discount
-  \$8 to \$14 per personalized meal, including delivery
-  \$149 for a 20-minute coaching session over the phone plus four weeks' guidance via text message

CASE STUDY

Habit

PEOPLE

Founded by Neil Grimmer (CEO), former co-founder of Plum Organics, an organic baby food company acquired by Campbell's in 2013, as well as Dr. Josh Anthony (CSO), who also held the role of VP of global R&D, nutrition, and regulatory affairs at Campbell's

PARTNERSHIPS

Campbell's served as the sole investor, contributing a total of \$75 million (according to those familiar with the exit deal to Viome); Campbell's turbulence and change in executive management in 2018 likely contributed to the divestiture

Established a research partnership with TNO in the Netherlands to conduct proof-of-concept work around the systems biology approach

TIMELINE

- 2015 – Company founded
- 2016 – Campbell's invests \$32 million
- 2017 – Launches testing kit and meal delivery beta program in U.S. Bay Area
- 2017 – Rolls out testing kit nationwide in U.S.
- 2017 – Announces plans to expand meal delivery service nationwide in U.S. over next 12 to 18 months
- 2018 – Pauses plans to expand meal delivery service nationwide in U.S.
- 2019 – Acquired by Viome for undisclosed amount
- 2019 – Viome shuts down Habit

Analysis at a glance

Driver
 Neutral
 Inhibitor

	PRODUCT	PRICE	PEOPLE	PARTNERSHIP
HABIT	Personalization level was weak, and end-to-end solution was simply not scalable.	\$199 to \$299 for base offering was relatively affordable but high enough to create strong expectations from users.	Good mixture of business and science backgrounds, but CSO's dual role may have caused distraction.	The investment from Campbell's ultimately did not favor Habit given the turbulence within Campbell's core business.
UBIOME	Flagship consumer product was a straightforward offering that gained significant market traction. Clinical testing kits were sound in theory.	Out-of-pocket payment for consumer product was available below \$100, which is rare, and clinical testing kits allowed for reimbursement.	Lack of business expertise was likely a major factor influencing questionable practices around clinical testing kits.	Held research collaborations with several prominent organizations for product validation and research.
ARIVALE	Solution had too many complex components that inhibited scaling.	Exorbitantly high at \$999 for core offering, making it only accessible to a niche consumer base.	Like Habit, good mixture of business and science backgrounds, but having an investor also serve in management likely created distraction.	Had a few scattered research partnerships with various organization types.

CONCLUSIONS

Each “P” is requisite to achieving business success in personalized nutrition

PRODUCT

There must be alignment between the product and user need, rather than providing a generalized solution meant to fit all customers. Bundling offerings all in one like Arivale did is certainly not the path to go, yet even Habit’s “a la carte” model shows that all individual components (e.g., meal kits) must be able to scale.

PEOPLE

A blend of technical and business expertise is a must. uBiome’s blunder underscores how a lack of the latter can be extremely compromising. Separately, dual roles held by management team members at Habit and Arivale suggest that conflicting interests and commitments can jeopardize chances of success.

PRICE

Personalized nutrition solutions are very price-sensitive, with a price point around \$100 being an ideal target (for a base offering in consumer markets). The value obtained by a user must meet or exceed the monetary cost. Any gap between perceived and actual value, as reportedly was the case with Habit, will inhibit a personalized nutrition solution.

PARTNERSHIP

Partnerships are important – but the “right” partnership at the “right” time is even more important. The mismatch between Habit and Campbell’s exemplifies this notion. Good intentions were there, but the volatility of Campbell’s core CPG business likely sped up termination of that relationship.

OUTLOOK

Personalized nutrition will become more personal – and more responsive to the needs of consumers and industry

PRODUCT

Solutions will evolve to a multifaceted model, allowing users to self-select what goods and/or services are most relevant to their needs. This in turn will enhance user retention for subscription programs, as well as compliance with prescribed dietary regimens.

PEOPLE

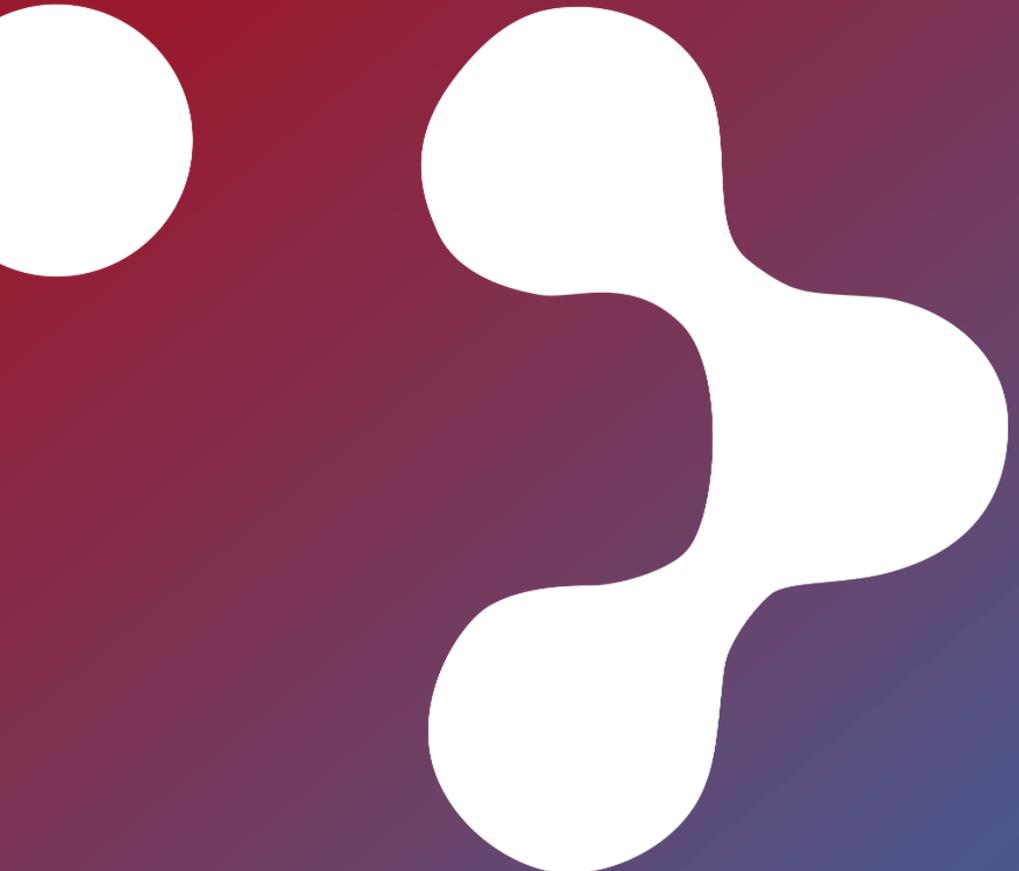
Anticipate that personalized nutrition solutions built by people without business experience will fail. Business strategy and development will be critical skills in the success of personalized nutrition businesses.

PRICE

Reduced costs of testing (e.g., DNA sequencing) will drive down out-of-pocket costs for users. Expect players to monetize data on the back end, adding revenue streams that can reduce consumer-facing price points further. Reimbursable schemes may become more prevalent but are essentially irrelevant today.

PARTNERSHIP

Despite recent market consolidation in the space, future partnerships will be smaller-scale pilots rather than serious investments or acquisitions. This de-risks relationship development between corporations and their would-be partners or investment targets.



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