Nutrition Innovation Playbook

Accelerating the transition to a healthy and sustainable food system: from renovation to reinvention



















As the global food system faces unprecedented challenges, the need for bold solutions has never been more critical. This playbook is a call to action for industry leaders and innovators to reinvent global food portfolios with health and sustainability as core drivers of change.

Introduction



Fiona Bennie Sustainability & Consumer Goods, Managing Director, Accenture Song



Juliana Weltman Glezer **Consumer Goods Innovation** Senior Manager, Accenture Song



Ideation

By leveraging the latest advancements in nutrition science, Al and sustainable solutions, we can address the dual crises of diet-related disease and environmental degradation. Creating a world where healthy, sustainable food options accelerate into mainstream adoption, fast becoming the norm, not the exception. The potential for positive impact is immense, from radically improving public health outcomes to enabling resilient food systems that can feed 10BN people, restore nature and withstand the pressures of climate change.

As you delve into the playbook, we invite you to join us on this journey towards a future where nutritious food is accessible, sustainable, and desirable. Change at this scale requires openness and collaboration, and sectorshifting technologies scaled across the ecosystem.

It's our belief that the most progressive food companies, in collaboration with the brightest minds in science and innovation, can drive us towards a food system that supports both human and planetary health.

FOREWARD

The world is seeking a new food and nutrition narrative, one with refined principles encompassing human health, nourishment, and sustainability.



Andy Moose Head of Health & Wellness World Economic Forum Ideation

We stand at a crossroads, facing the challenges of a growing population, the escalating burden of diet-related disease, and evolving consumer demands. Amidst these complexities lies opportunities for change within the food eco-system.

Innovation has the power and ability to leap-frog our current food system beyond its initial focus on the provision of calorierich foods. Innovation will allow us to venture beyond the status-quo, unlocking new areas of growth while leveraging breakthroughs in scientific research. It is for this reason that we have created an industry playbook to support organisations through nutrition-led innovation.

This playbook serves as a guide, a collation of best practices, and most importantly a catalyst for creative disruption and increased collaboration across the entire food ecosystem.

We invite you to redefine what is possible, and we hope that this playbook will be the start of many discussions to come as we support human health through nutrition.

IMAGE 1 Renovation vs. Reinvention

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Ideation _

- Generate n
 - Lateral in
- Speculat

IMAGE 2 Portfolio goals and KPIs





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& planetary health

with generative AI

Accelerate innovation

to reinvention

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Introduction

This innovation process describes how to move from product renovation to systems reinvention. Following the launch of a single product, the framework outlines the launch of a sustainable and healthy product accelerated by AI.

What you'll find in this guide	€
The burning platform	⇒
From renovation to reinvention	€
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WHAT YOU'LL FIND IN THIS GUIDE

This playbook leverages nutrition and sustainability to accelerate food system innovation. Through a combination of practical frameworks, real-life case studies, and interactive activities, product teams can reinvent how we produce, distribute, consume, and discard food.



We need to think about nutrition as the largest global health challenge and a core sustainability issue.

Brenda de Kok, Senior Researcher, Access to Nutrition Foundation

The playbook tracks an entire innovation cycle, using the co-benefits of nutrition and sustainability to move from strategy and ideation to testing and post-launch, with critical guidance on measuring and sustaining an innovative approach. We highlight strategies for an effective market entry plan, essential to maintaining your brand's relevance and competitive edge.

As the food industry evolves, our approach must change apace. But no matter the shifting imperative, products designed to improve human and planetary health will be drivers of growth in the coming decades, elevating brand engagement, profitability, and operational resilience in a rapidly evolving market.

Disclaimer: This playbook is intentionally focused on what is inside the packaging – the ingredients, formulations, and innovations that shape a sustainable and nutritious food portfolio.



As the food system emphasises scale, shelf-life, and convenience, the hidden costs of today's diet are more than double the cost of food itself.

While advances in nutrition and medicine have lengthened average life expectancy, poor diets are devastating communities worldwide. Obesity now surpasses hunger in annual fatalities, affecting more than 1 billion people globally. And this scenario is at risk of becoming more extreme. By 2050, more then 50% of the world population could be obese.¹ Beyond healthcare, the economic costs of a poor diet represent 2% of global GDP, which is projected to reach 3.3% by 2060.²

At the same time, the modern food system is accelerating climate change. At present, one-third of greenhouse gas emissions come from agriculture. Extreme weather events like heatwaves, floods, and hurricanes cause crop failures and higher mortality rates, while air and water pollution from food production exacerbates respiratory and cardiovascular diseases. Demand for land will only intensify unless we innovate food production.

By 2050, food production must increase 60% to feed 10 billion people worldwide.³

Businesses that fail to adapt to climate risks may face threats to their long-term viability such as supply chain disruptions, investor flight, regulatory penalties, and reputation damage. In its latest report, the FAIRR Initiative found that half of food companies surveyed could operate at a loss by 2030 because of climate risks. In total, global supply chains are facing from \$4 trillion to \$25 trillion in economic loss between now and 2060 due to climate change.⁴

To navigate the complexities of a rapidly changing world, transforming the food industry has never been more pressing. With human and planetary health as non-negotiables, the following approach prepares companies to develop products that are as nutritious as they are sustainable.

Ideation







FROM RENOVATION TO REINVENTION

Transforming the food system



Introduction





FROM RENOVATION TO REINVENTION

The food transition aims to reshape the way society produces, distributes, consumes, and discards food – a transformation which requires the mutual advancement of human and environmental health.

Introduction

The scale of change is akin to the energy transition. Reorienting to a low-carbon economy requires intervention at every level of strategy. For example, industries must adopt new sources of power such as solar and wind. Companies must develop new technologies like batteries and storage, and consumers must shift modes of consumption through energy cooperatives and electric vehicle use.

Within the food industry, there are two stages of transition – **Renovation** and **Reinvention**. As opposed to portfolio strategies that prioritise financial targets, the intent here is systemic change. To achieve lasting and sustainable transformation, it is crucial to prioritise scaled reinvention alongside ongoing renovation. This approach ensures continuous improvement and drives the fundamental changes necessary for long-term impact.

We can talk about what could be the next futuristic product, but we need to focus on what has to be done immediately.

Alon Chen, CEO and Co-Founder, Tastewise

It's about grow and guide – grow the portfolio of more nutritious food and guide consumers to make informed food choices.

Marie Chantal Messier, Assistant VP & Global Head of Food and Industry Affairs, Nestlé





FROM RENOVATION TO REINVENTION

The main difference between renovation and reinvention is the potential to change the food system.



Renovate formulations

The first stage of the food transition is renovation. It prioritises the immediate reduction of the more harmful ingredients and components in food products, including excessive levels of salt, sugar, fat, and additives. When scaled, these nutritional changes can mitigate adverse effects on public health quickly, including the rise of chronic diseases such as obesity, diabetes, and cardiovascular conditions.

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Renovating scaled product lines has a significant and immediate impact on diet, because you are improving nutrient density in products with widespread adoption. For example, increasing wholegrain at a product level will increase wholegrain intake at a population level.

Marianne O'Shea, VP Global Nutrition Science, PepsiCo

Reinvent the system

Despite the incremental benefits of renovation, shifting formulas cannot address the myriad challenges facing the food industry. Reinvention calls for a radical overhaul of food innovation. Companies must operationalise new methods for producing, distributing, and consuming food, focused on availability, nutrition, and sustainability.

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The challenge isn't delivering product innovation but embracing systems thinking and design. This means addressing problems at the systemic level rather than just the product level.

Christian Saclier, VP Innovation, PepsiCo

BALANCE HUMAN & PLANETARY HEALTH

Food system reinvention is powered by the mutual reinforcement of human and planetary health. Innovation must move beyond a singular aspect of sustainability to capture the synergies of nutrition and environmental regeneration.

Inspired by Kate Raworth's book Doughnut Economics, this playbook proposes that future-proof innovation must satisfy both human and planetary health, without exceeding the two boundaries. The ultimate impact of your product is the benefits to people and planet, minus the damage that its production can cause for both elements.

In many instances, benefits build upon each other. For example, a farmer could grow no-till, rotating crops to improve soil biodiversity. More varied micro-organisms can protect the farmer's livelihood through pest resistance, while increasing the nutritional density for end consumers.

Strategies that over-index on benefits to people or planet exclusively risk exceeding the healthy limits of the other, as illustrated in the outer ring of this diagram. For example, a product formulated with 100% naturally-derived flavourings and minimal processing will significantly improve its vitamin and phytonutrient content.

However, if those flavours are produced from conventionally farmed, water intensive plants, sales of that healthy product might increase water pollution and deforestation, as opposed to the lighter environmental footprint of synthetic alternatives. These tradeoffs are inherent to any product development, making the dual foundation of innovation essential.



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INNOVATION ACCELERATED BY GENERATIVE AI

Artificial intelligence reshapes product innovation from concept development to scaling. By matching deep proprietary learnings with human insight, Al's rapid, precision testing can refine audience and need, creating a wider variety of products within an accelerated innovation timeline.





Delivery

Expertise & knowledge integration

Al aggregates and synthesises knowledge from diverse domains. In the context of innovation, this capability integrates critical expertise at the earliest stages of innovation strategy, including proprietary research, technical knowledge, and development insights. Al tools can also analyse vast datasets from previous projects, current market trends, and consumer behaviour to propose solutions aligned with strategic goals. For instance, within consumer trends, AI can create in-house 'living databases' that update teams in real-time.



R&D acceleration

Generative AI can expedite time-to-market to develop novel food formulations. This technology can swiftly generate ingredients, simulate experiments, and predict outcomes from countless iterations. For example, companies like NotCo, BrightSeed Bio, and Climax Foods have developed proprietary algorithms that propose unusual ingredient selection and combinations, injecting greater variety and ingenuity into the process in plant-based solutions.

Process innovation

Al creates a more iterative, dynamic, and cost-effective innovation process. Traditional linear models become agile cycles that quickly adapt to new information or market feedback. Al's ability to rapidly process and analyse data means that businesses can continuously refine and test ideas. For example, AI will even evolve the process illustrated on the previous page, with shorter and more frequent experimentation cycles.

Human-Al collaboration

The innovation process benefits greatly from a symbiotic relationship between human creativity and AI's computational power. Humans oversee the strategic direction, quality, and relevance of AI-generated solutions, embedding essential values and ethical considerations into the process. The collaboration is evident during the development phase. Al algorithms suggest optimal formulation modifications, but engineers make final decisions based on taste, industrial performance, food safety, and consumer preferences.



User experience testing

Al can also create synthetic personas for market testing, allowing companies to explore concepts with curated customer archetypes. Al can test infinite combinations of sustainability features, nutritional profiles, and consumer preferences, all while ensuring the viability and marketability of new products. For instance, Al can predict taste preferences earlier in development, significantly reducing the time and resources spent on validation trials. This approach aligns products with precise consumer needs and regulatory standards.



INNOVATION ACCELERATED BY GENERATIVE AI



Innovation strategy

Begin your innovation process by setting a strategy that combines portfolio level goals, sustainability ambitions, and company business targets. You'll then evaluate your portfolio based on the limits of human and environmental health.

> Set your goals \Rightarrow Balance human \ominus & planetary health





SET YOUR GOALS

OVERVIEW







People Senior leadership Strategy and product team



Prework

Gather all the required research, reports, and customer insights



Deliverables

A statement with the portfolio goal and main metrics to measure it

What will you accomplish?

Develop a comprehensive nutrition-led innovation strategy that aligns business operations with evolving market dynamics, consumer expectations, and nutritional science advancements. This strategy captures emerging opportunities in healthfocused markets, mitigates risks associated with changing dietary trends, and ensures regulatory compliance. You'll also develop concrete and measurable Key Performance Indicators (KPIs) to accompany your targets.

Why is it important?

- **Competitive positioning:** Companies with a dynamic innovation strategy stay ahead of trends, technological advancements, consumer shifts, and regulatory changes.
- Focus and alignment: KPIs ensure that everyone in the organisation understands what matters most and aligns their efforts towards these priorities.
- Improved decision-making: With specific and measurable indicators, leaders can prioritise projects based on data-driven performance.

Ideation

How do you plan this?

Make sure you include your business and market leads in these sessions to include their vision and secure early buy-in. These activities should be completed before your team begins ideation.

- 1. Portfolio targets
- 2. KPI map

SET YOUR GOALS: PORTFOLIO TARGETS

INSTRUCTIONS

Examine the two types of factors to be considered in drafting a nutrition-led innovation strategy.

Internal drivers

External forces

Based on the examples to the (2) right, are there any areas your team may need to research before starting your strategy? Who outside your team can bridge this expertise?

L

Al accelerator:

Browse new food trends, consumer tastes, startups, and technologies with food and beverage intelligence engine Spoonshot.

- Based on your team's research, (3)map the different drivers and forces to the worksheet. Consider the prompts on this page as you brainstorm. For extra market scanning, jump to Key resources on food trends.
- Based on market and company (4)requirements, synthesise one statement as your guiding goal for portfolio change. Refer to the example on the following worksheet for inspiration. Your statement might include:

Social, environmental, or health ambition

- # or type of new products or lines
- # of customers or % market share
- Method of achieving these goals
- Timeline or milestones

Ideation

INTERNAL DRIVERS

Company strategy: Write down your overall company strategy. From this large vision, you'll define how your portfolio can achieve it. This could be market leadership in a specific sector, growth in certain locations etc.

Core competencies and assets: List the company's key capabilities, technologies, areas of expertise, and facilities that can be leveraged in new products.

Current portfolio: Analyse your current product portfolio to identify gaps and white spaces. A portfolio can be organised in various ways, including target audience and moment of consumption. Analyse the gap between your company vision and your portfolio reality.

Nutrition and sustainability commitments: Embed your nutrition and sustainability commitments into your innovation strategy.

For example, if your organisation's goal is to reduce sugar by 5%, translate this into a tactical plan specifying which product lines will be targeted.

Regulatory compliance: Analyse upcoming regulatory changes and reporting requirements across your different markets. Assess how your portfolio can meet these standards. Some literature suggests that future regulations could also emerge as an external force.

EXTERNAL FORCES

Game-changing research, technology, and start-ups: Engage in your local startup ecosystem to track breakthrough technologies and disruptive products. Attend events, welcome pitches, and foster collaborations to learn direction of growth. Collaborate with academia to access broader research in nutritional science, digestive health, biotechnology, soil science, and climate change that can shape your portfolio. Tracking research in mobility, energy, and manufacturing technologies may present opportunities for competitive advantage.

Emerging market signals and consumer demand: Conduct comprehensive market research and long-term foresight analysis to understand emerging trends, consumer preferences, and potential unmet needs. For example, upcoming generations might strongly prefer traceable ingredients, creating their own flavours, or brands that stand for social causes. You might also use resources like the World Economic Forum's annual Global Risks report to gain insights into the broader socio-economic, environmental, and geopolitical dynamics. By synthesising this data with specific consumer insights, you can identify external forces that will shape future consumption patterns, ensuring that your strategy aligns with global trends and consumer expectations.



SET YOUR GOALS: PORTFOLIO TARGETS

EXAMPLE

WORKSHEET

Our portfolio will provide personalised nutrition solutions at scale by 2030.

We aim to launch at least 50 combinations of personalised nutrition products, reaching 100 million dollars in revenue with a accretive margin and a 90% customer satisfaction rate. This will be accomplished by investing in advanced data analytics and AI, collaborating with nutrition experts, and targeting specific consumers for engagement. Key milestones include piloting products by 2025, expanding offerings by 2027, and launching the product at scale by 2030, with regular progress monitoring and adjustments based on consumer feedback.

INTERNAL DRIVERS —

Company strategy, core competencies and assets, current portfolio

INTERNAL DRIVERS -

Nutrition goals, sustainability commitments, regulatory compliance

Ideation

Development



EXTERNAL FORCES

Game-changing research, technology, and startups

Portfolio goals and **KPIs**

EXTERNAL FORCES

Emerging market signals and consumer demand

SET YOUR GOALS: KPI MAP

INSTRUCTIONS

- To measure the comprehensive impact of innovation, you will need two layers of metrics – strategic and tactical. You will evaluate company performance and product-level attributes, in addition to process and team efficiency.
- Reflect back on your portfolio goals. Identify (2)key strategic outcomes you will target with your new product. This should reflect the Strategic Layer. Use the examples on the following page as thought starters.
- For the Tactical layer, identify critical processes and activities involved in your innovation projects (e.g. idea generation, experimentation, product development). Discuss and list potential metrics.
- As you brainstorm, make sure your layers (4)have an equal spread of Activity and Impact measurements. Depending on the balance, propose some additional quantitative measures.
- Select the most relevant metrics for your organisation. As you develop more specific concepts, continue to add more concrete KPIs, such % plant-based ingredients or hectares of land protected from deforestation.



conducted interviews.



SET YOUR GOALS: KPI MAP



Layer	Туре	Theme	Metrics Examples		
Strategic	Impact	Health and quality of life impact	Percent of revenue gain from 'healthy' products to eat a balanced diet		nillion people anced diet
Strategic	Impact	Environmental impact	Tons of CO2 reduced due to sustainable production,Percent reducedmeasured against SBTibenchmarks and targetsand packaging		Percent reduction in and packaging waste
Strategic	Impact	Alignment with sustainability goals	Degree of progress with the company's sustainability benchmarks and commitments, as biodiversity, waste, social impact etc.		
Strategic	Impact	Balance between Renovation and Reinvention	Percent of innovation portfolio investment on Renovation and on Reinvention <i>(this may be a net new target)</i>		
Strategic	Activity	Public perception of quality and health of product portfolio	Number of New Partnerships Formed to address nutrition	Number of p about comp	positive media mentions any's public health efforts
Tactical	Impact	Customer acceptance and satisfaction	Percent of market captured by the new product/business	Customer fe review ranki	edback and ngs
- Tactical	Activity	Product / business feasibility and viability	Projected ROI from 'nutrition-led' or sustainable new products	Technical ar efficiency of	nd operational new products
- Tactical	Activity	Product development and validation	Number of consumers providing product	t feedback	



Ideation

This section will provoke your team to think beyond your current formulations, production lines, and product categories. You'll imagine bold futures and new avenues for collaboration.

Generate new futures	⇒
Food trends tracking	€
Cultivate dual value	∋
Refine your impact	€















GENERATE NEW FUTURES

OVERVIEW







People

Strategy, innovation, research and product team



Prework

Complete Lateral invention, or review Portfolio goals & KPI map



Deliverables

Batch concepts and feature refinements

What will you accomplish?

Challenge your team's creativity beyond your current portfolio, facilities, and markets. Through two different ideation exercises, you'll brainstorm against competitors, new technologies, and speculative scenarios to conceptualise new products and brand engagements.

Why is this important?

- Strategic foresight: Position the business to capitalise on future opportunities in a rapidly evolving market landscape. Gain momentum with changing consumer needs while creating new trends to drive growth.
- Future resilience: Pinpoint current vulnerabilities from changes to regulation, supply chain, and consumer preferences. Maintain continuity and ensure long-term viability in the face of uncertainties.
- **Competitive positioning:** Gauge best in class customer experiences from peers and other industries alike.
- Enhanced employee engagement: Deepen team inspiration with activities that stretch creativity and connection to products they are proud to represent.

How do you plan this?

Feel free to complete these activities in any order. You may use them within the same workshop or separate into two sessions. The team might revisit after rounds of testing your assumptions.

- 1. Lateral invention
- 2. Speculative scenarios
- 3. Food trends tracking



GENERATE NEW FUTURES: LATERAL INVENTION

INSTRUCTIONS

- These cards can be used as part of a full day workshop or within a team meeting. As a group, decide the innovation areas that will be the session focus. You might choose a specific nutrition or sustainability goal, a distinct customer segment, or a new market or product line.
- Look at all cards on the following pages. (2)Select 2-3 prompts that apply to your challenge. Either individually or with your whole group, take 5 minutes to add new products, innovation activities, or campaign ideas.
- Consider adding a <u>round robin</u> or <u>crazy eights</u> (3) to your brainstorm. Ask people to generate the most ideas in a short period of time, and invite participants to build on each other's concepts.

Al accelerator: Generate dozens of divergent responses to your prompt with tools like Seenapse.

With the remaining time, examine each example. What features could you borrow? How could you partner with this company or industry?

Come back together as a smaller group (5) or with your whole workshop. Share your favourite ideas, and cluster together similar concepts and features.

6 concept to develop further



Expert tip: Create your own cards based on new trends, technologies, or even rival competitors. Use the blank templates at the end of this activity to add to the deck.



To close this session, you might give each participant three votes or ask each team to select their favourite



How might you.. /ith a mainstream retailer?



Marks & Spencer partnered with precision nutrition startup Zoe to create a gut shot. Based on Zoe's microbiome research and their direct to consumer testing platform, the beverage allows customers to drink over five billion live cultures rom 14 strains of bacteria



Carrefour, Danone. Unilever + Bel formed n international coalition o boost plant-based product sales by 65% hev partner on marketing ampaigns, taste and flavour innovations, and sales drives.



How might you... test your oroducts with a digital tongue?



dpairing uses AI to ulate virtual taste testi e software analyses the emical composition of foo d creates virtual taste ofiles. It can test differer avour combinations and gather feedback from digital onsumers without the need or physical product samples



Tastewise is a gen-Al platform which conducts nthetic consumer testinc/ about trends in ingredients astes, and eating habits Companies can test agains heir model or develop new products and highly targeted campaigns.

OMMUNICATIONS & BRANDIN



How might you... make your most popular campaign



s on a mission to ake 100% slave fre chocolate the norm. The campaigns speak frankly and lirectly about modern lavery in cocoa supply chains, and they have developed their own proprietary cocoa tracke which features prominently ir rketina materials



Kaffeeform produces eusable coffe cups made o coffee grounds for different bakeries and coffee chains including German favorite Julius Brantner and espresso machine maker DeLonghi

How might you. Find an example or two and add them below:

ſony's Chocolonel



GENERATE NEW FUTURES: LATERAL INVENTION

WORKSHEET

EXAMPLE

PARTNERSHIPS



How might you... co-develop a product directly with a mainstream retailer?



Marks & Spencer partnered with precision nutrition startup **Zoe** to create a gut shot. Based on Zoe's microbiome research and their direct to consumer testing platform, the beverage allows customers to drink over five billion live cultures from 14 strains of bacteria.



Carrefour, Danone, Unilever + Bel formed an international coalition to boost plant-based product sales by 65%. They partner on marketing campaigns, taste and flavour innovations, and sales drives.

PARTNERSHIPS









How might you... design your next product with a non-food expert?



Whole Foods Accelerator mentors innovative food brands to prepare them to be stocked on their shelves. They provide education, coaching and a possible \$25k equity investment.



The Ellen MacArthur Foundation partnered with the Sustainable Food Trust to launch the Big Food Redesign Challenge. The program brings together ambitious producers, retailers, start-ups, and suppliers to design new or existing food products that regenerate nature. Winning products will be stocked in mainstream UK retailer Waitrose at the end of the competition.

PARTNERSHIPS



How might you... partner with a popular brand or cultural influencer?







Mob Kitchen partnered with Tim Spector to doctor their most popular recipes for nutrient diversity and gut health. These two different audiences are making gut health cool and mainstream.



Nestle launched a line of frozen meals to accompany GLP-1 medications like Ozempic and Mounjaro. Vital Pursuit products include pastas, pizzas, and sandwich melts, and each have at least one essential nutrient.

GENERATE NEW FUTURES: LATERAL INVENTION

WORKSHEET

EXAMPLE

COMMUNICATIONS & BRANDING



How might you... make your biggest PR challenge into your most popular campaign





Tony's Chocolonely is on a mission to make 100% slave free chocolate the norm. Their campaigns speak frankly and directly about modern slavery in cocoa supply chains, and they have developed their own proprietary cocoa tracker which features prominently in marketing materials.

Kaffeeform produces reusable coffe cups made of coffee grounds for different bakeries and coffee chains, including German favorite Julius Brantner and espresso machine maker DeLonghi

COMMUNICATIONS & BRANDING



How might a child... describe why your product is their favourite food?







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	HA	VARTI	1	
550	HAN D	*		

Arla's 'Live Unprocessed' campaign touches on food processing without overtly pointing a finger at processing, but by highlighting that its cheese ingredients are all kid-friendly.



Chipotle's 'can a burrito change the world?' campaign takes the perspective of an inquisitive child imagine how growing food sustainably can creates new world of possibility

COMMUNICATIONS & BRANDING

How might you... create a real dialogue with your consumers?



Flora plant-based butter activated their quippy 'Skip the Cow' campaign with a series of cow sculptures made of items people are more willing to cut back on to reduce their environmental impact, including fast fashion, water, and driving.



Oatly's 'Help Dad' campaign cleverly reverses the roles of parent and child to tackle the potentially divisive family topic of traditional cow's milk versus an oat alternative.



GENERATE NEW FUTURES: LATERAL INVENTION

WORKSHEET

EXAMPLE

FOOD BIOTECH

How might your... manufacturing actually improve the environment?



Moolec Science uses

Molecular Farming to insert animal protein genes into the plant genome, creating foods that combine the functionality and nutritional value of animal proteins with the sustainability of plant cultivation. This reduces natural resource use, agricultural runoff, and greenhouse gas emissions.



Ivy Farm Technologies is a

British company specialising in the production of lab-grown meat, which reduces greenhouse gas emissions compared to industrial farming. They produce real meat, free from antibiotics, high in protein and low in saturated fat.

FOOD BIOTECH









How might you... produce your ingredients from waste?

> **Savor** converts carbon dioxide into lipids through fermentation and chemical reactions. This method avoids the use of agricultural land and eliminates dependence on animals and palm plantations.

C16 Biosciences uses processes such as precision fermentation and carbon capture to to produce fats and oils. Their Palmless palm oil substitute is 250x more efficient in land use and 100% traceable supply.

Symplicity Foods makes products from sausages to sauces through zero-waste fermentation. They use waste ingredients in their recipes likes tomato water and beet peals and personalise for awardwinning chefs and restaurants.

FOOD BIOTECH



How might you... create a product with the exact micronutrient profile of its replacement?



Nature's Fynd produces fungus-based proteins using biomass fermentation. The novel protein is low in fat, a a good source of digestible fibre, and has all 20 amino acids, making it a complete protein comparable to animalbased products.



California Cultured uses cell cultivation technology to produce cocoa and coffee sustainably. They grow cocoa and coffee cells in controlled tanks that mimic rainforest conditions. This method reduces the need for traditional agriculture, reducing greenhouse gas emissions and soil degradation.

GENERATE NEW FUTURES: LATERAL INVENTION

WORKSHEET

EXAMPLE

TECH ACCELERATORS



How might you... test your products with a digital tongue?



Foodpairing uses AI to simulate virtual taste testing. The software analyses the chemical composition of food and creates virtual taste profiles. It can test different flavour combinations and gather feedback from digital consumers without the need for physical product samples.



Tastewise is a gen-Al platform which conducts synthetic consumer testing about trends in ingredients, tastes, and eating habits. Companies can test against their model or develop new products and highly targeted campaigns.











How might you... choose every ingredient from a plant?



Climax Foods uses data science and AI to power "precision formulation." The algorithm generates optimal ingredient and process combinations that fully harness the power of plants.

TECH ACCELERATORS



If you could... ask the biggest tech company for three wishes, what would they be?



Walmart and IBM partnered to create a food traceability system. Blockchain technology allows Walmart to trace mangoes in its US stores within 2.2 seconds, leading to more transparency and trust with shoppers.



Nescafé Origens Brasil

uses blockchain to track the precise transfer of coffee beans. This traceability allows consumers to follow the entire coffee journey from farm to shelf, all while learning about the family and their sustainable farming practices.

GENERATE NEW FUTURES: LATERAL INVENTION





How might you...

Find an example or two and add them below:



Introduction

GENERATE NEW FUTURES: SPECULATIVE SCENARIOS

INSTRUCTIONS

- In an internal meeting or a broader company workshop, divide into multiple teams of 2-4 people. You can assign a concept, product, or even campaign.
- In 5 minutes, analyse the underlying causes (2) of the scenario. Focus on challenges to human and planetary health
- Take 30 minutes to evaluate your current (3) portfolio or concepts from the lateral invention activity. You might ask:
 - 1. What in our portfolio is currently at risk?
 - 2. What changes to current products or concepts would mitigate these risks?
 - 3. How could existing products reverse negative impacts?
 - 4. How could existing products build on positive impacts to people and the environment?

- $\left(4\right)$ new concepts. You might ask:



Al accelerator: Immerse your team in a scenario by asking tools like Synthetic Users or Userdoc to describe how people might think, feel, smell, perceive taste in new realities.



With the last 30 minutes, try generating

1. What new product or service could reverse the negative impacts?

2. What parts of this scenario could improve human and ecological health? How could a new product amplify these further?

3. What change or new idea could prevent this scenario from happening in the first place?

4. In the face of this scenario, what features could enhance long-term desirability, viability or feasibility?

1

Imagine it's 2035... all single use plastic has been banned

All packaging must be edible or compostable at home (no industrial composting).

More companies and governments adopt circular economy principles, which emphasise the reuse and recycling of materials to minimise waste and reduce the dependence on virgin materials.

Companies have had to reimagine how their products are packaged, shipped, and consumed.

8

Imagine it's 2035... traces of forever chemicals (PFAS) have been found in most processed food sources

There's public outcry about forever chemicals - major influencers are campaigning bringing light to the issue.

Many markets in the Global North have passed restrictive regulation to stop the use of PFAS that are used in aerospace, automotive, construction, and electronics industries, and are rewarding innovations to combat their damage.

This affects global supply chains as growers struggle to access restricted markets

Disclaimer: These are strictly speculative and the scenarios do not represent the viewpoints or an endorsement of a particular product, trend, etc. These are scenarios for discussion and intended to spark conversation and ideation only.



Expert tip: Create your own scenarios which support or challenge goals you have identified for your innovation process.







Nutrition-led innovation strategy

GENERATE NEW FUTURES: SPECULATIVE SCENARIOS

1

Imagine it's 2035... the population in the Global North has declined by 30%, and the growing Global South is refusing to import "Western diets and culture"

India and China have the highest populations (over 1.5 billion each), followed by Nigeria.

Certain processed ingredients are banned, and companies must prove product's nutritional value and cultural relevance to export to developing markets.

A sugar tax is applied to all companies manufacturing and selling food, eating into 20% of total revenue.





Diet revamped – **GenZ** children eat only raw, whole foods



Join me as I try some of the processed food our parents used to eat 3D printed snack food on the rise: choose your ingredients and favorite flavour

GENERATE NEW FUTURES: SPECULATIVE SCENARIOS

2

Imagine it's 2035... plant-forward diets are mainstream, driven by regulation and retail

Supermarkets stock just 10% of products derived from animals. The price of meat and dairy has increased 400% due to externalities like carbon taxes and regular crop shortages.

Advancements in plant-based technologies make it possible to mimic the taste and texture of animal products, and people are eating entirely novel products that have no relation to animal proteins at all.

'Biotech as a service' models create greater manufacturing capabilities for methods like precision fermentation, making production cost equivalent and energy efficient.





How New York City Mayor changed the face of food service with zero carbon emissions from food

Revealed: Global healthcare system saved £10TN annually between 2030-2040 thanks to mainstreamed plantbased diets

Dutch retailers reveal that 84% of proteins sold in 2049 were plant**based**: how your meaty portfolio could be costing you millions





Nutrition-led innovation strategy

GENERATE NEW FUTURES: SPECULATIVE SCENARIOS

3

Imagine it's 2035... community-owned food networks and cooperatives have the largest share of food production and retail

Over 80% of the population lives in urban areas, and 50% of families grow their own vegetables.

Abandoned office blocks and residential buildings have been repurposed as urban farms.

Three of the top 10 largest food producers are employee owned, and all food companies have at least one working farmer on their board.

Neighbourhood bartering groups are increasingly pushing retailers out of business districts.



What I eat in a day from only 5 miles around central Tokyo





Passing on wisdom to the next generation: meet the Gen Z grandparents refusing to retire from their food growing communities

Ancient cities from Cairo to Istanbul create a new food belt, with tourists clamouring to walk along the edible trail.



Nutrition-led innovation strategy

GENERATE NEW FUTURES: SPECULATIVE SCENARIOS

4

Imagine it's 2035... climate change has impacted global food supply chains

Cocoa and coffee production are worst affected and are only able to produce 15% of the quantity available in 2020.

Maize, wheat and barley crops often fail due to extreme flooding or drought – reliable production zones are able to produce 60% of the quantity produced in 2020.

The main reliable crops are now legumes, pulses and heritage grains.

grains.



Cocoa and coffee production are worst affected, only able to produce 15% the quantity of 2020.

The main reliable crops are now legumes, pulses and heritage

Maize, wheat and barley crop often fails due to extreme flooding or drought – reliable production zones are able to produce 10% of the quantity produced in 2020.

GENERATE NEW FUTURES: SPECULATIVE SCENARIOS

5

Imagine it's 2035... new technologies fill shortages in the food industry

Government subsidies move away from supporting industrial monoculture farming and towards novel ingredient production to meet the demand following climate shocks to supply chains.

The industry has reached the necessary scale and price parity to plug the demand gap of 60% since 2030.

Prominent celebrities run mainstream campaigns promoting precision fermentation derived food for gut health.

Nature's answers: the world's largest food producers imitate nature's symbiosis to create the century's most successful closed-loop food systems



Development Delivery

Climate change killed the olive tree: precision fermentation and the new cooking oil industry in Southern Europe

Nutritious foods have never been so delicious: fermented ingredients make most iconic comeback 2,000 years later



GENERATE NEW FUTURES: SPECULATIVE SCENARIOS

6

Imagine it's 2035... Food is medicine

After several high-profile lawsuits against major pharmaceuticals, there is a big cultural movement away from conventional medicine and towards food, natural wellbeing and lifestyle medicine to improve health.

The **Rise of Nutraceuticals** —food products that are specifically designed to have medicinal benefits. These products are tailored to individual genetic profiles, lifestyle choices, and specific health needs.

Agriculture focuses on bio-fortified crops that are designed to grow with enhanced nutritional profiles. Genetic editing and sustainable farming techniques produce crops that can help in combating common deficiencies and boosting immune health.



FDA Approves First Genetically Edited Superfood to Combat Diabetes

From Pills to Plants: How the Pharma Giants Are Pivoting to Nutraceuticals

The End of Pharmacies? New Law Requires Nutritional Prescriptions for Common Ailments

> Tech Breakthrough: Wearable Devices Can Now Detect Nutritional Deficiencies in Real-Time

Nutrition-led innovation strategy

GENERATE NEW FUTURES: SPECULATIVE SCENARIOS

7

Imagine it's 2035... traces of forever chemicals (PFAS) have been found in most processed food sources

There's public outcry about forever chemicals - major influencers are campaigning bringing light to the issue.

Many markets in the Global North have passed restrictive regulation to stop the use of PFAS and are rewarding innovations to combat their damage.

This affects global supply chains as growers struggle to access restricted markets.





Revealed: PFAS and the global food industry – which brands to avoid at all costs

Irrefutable evidence links birth defects to forever chemicals in food

GENERATE NEW FUTURES: SPECULATIVE SCENARIOS







FOOD TRENDS TRACKING

As you're inventing new ideas and market opportunities, track the latest technologyand industry trends





CULTIVATE DUAL VALUE

OVERVIEW





People Project Team



Prework

Completed Speculative scenarios and Balance the need is helpful Consumer knowledge and research



Deliverables

New product/ business Core Value definition

What will you accomplish?

Develop products that improve human and ecological health. This focused value proposition treats environment need equal to that of consumers. You will refine your ideas based on their co-benefits, building positive impact into your innovation DNA.

Why is this important?

- Embed the triple bottom line: Innovate against environmental impact by evaluating it with the same attention as a tried and true innovation step. Understand the co-benefits of human and ecological health.
- Clear target audience and their needs: Avoid creating products with a limited addressable market. You'll also ensure you don't alienate current customers.
- Simplify sales and marketing: A well crafted value proposition can align campaign messaging and targeting, with clearer priorities to focus customer acquisition and retention.
- Refine and prioritise by positive impact: Refocus concept areas and features based on continuously validated assessments of healthy and sustainable products.

Ideation

How do you plan this?

Revisit your value proposition with each round of refinement and assumptions testing. You should continue to sharpen or disproved your statements as your team moves through the innovation process.

Make sure the value propositions are aligned to your original portfolio goals.



CULTIVATE DUAL VALUE

INSTRUCTIONS

- Divide your team by concept area. You might (1) also assign a researched consumer segment like rural multigenerational households or urban professional families.
- Take 30 minutes to analyse how your product (2) can support people's nutrition and overall wellbeing, focusing on unmet needs, pains, and gains. Use the prompts on the first worksheet and record your answers.
- Now consider your product's environmental (3) value. Think about the entirety of the environment, including water, soil, air, and living creatures like plants and animals. You'll be considering again the pains, gains, and unmet needs on the second worksheet. Make sure you are considering how the product is grown, manufactured, distributed, and disposed.

After examining all pains, gains, and needs, (4)select other unmet needs that most solve a pain. Place them on the third worksheet. Now add the needs that provide the greatest gain.

As you look at both sets of unmet needs, craft 5 a concise statement that explains how your product supports the pressing concerns of consumers and the environment. Try using the formula on the third worksheet.



Expert tip: Once the needs, gains and pains are mapped out that there are iterations of the product that can be made to minimize the pains or maximize the gains – ultimately it's a balance, and trade-offs have to be made. The exercise of mapping these trade-offs, enables teams to determine how and where to take action.





CULTIVATE DUAL VALUE

WORKSHEET

PAINS

What obstacles such as lack of time, money, or information could prevent product selection?

How could your product conflict with your consumer's identity?

How might your product negatively impact your mental or physical health?

GAINS

How can this product improve your consumers' physical or mental health?

How does this product help your consumer accomplish something they care about?

How can this product improve the livelihoods of the people growing, manufacturing, or distributing it?







PEOPLE

UNMET NEED

What changes in health and diet do your consumers want to make in their daily life?

How your consumer want to feel e.g., proud, connected, safe, strong, energised?





CULTIVATE DUAL VALUE

WORKSHEET

PAINS

What is the potential for your product to negatively impact the environment across its lifecycle, for example through ingredient sourcing, manufacturing, consumer use and end of life.

GAINS

How can this product actively clean or regenerate soil, water, or air?

How does this product protect or repopulate wildlife?

How can this product create more energy than it uses?







ENVIRONMENT

UNMET NEED

How can your new product create opportunities for nature regeneration across its lifecycle?



PEOPLE

CULTIVATE DUAL VALUE

WORKSHEET



SAMPLE VALUE PROPOSITION

A global leader in the processed meat industry is committed to sustainability and innovation. They have strategically invested in a new line of plant-based products, using advanced technology to replicate the taste, texture, and nutrition of real meat. Their mission is to reduce the environmental impact of traditional meat production while offering options that appeal to both meat enthusiasts and vegetarians. UNMET NEEDS

+

[customer] needs [customer's need] so that [insight into their deeper desire]



ENVIRONMENT

[planet] needs [planet's need] so that [insight into their deeper need]

VALUE PROPOSITION

This product helps [customer and environmental target] to [action that solves a painpoint or meets a need] by [a unique and different product]. Unlike [product alternative], this service [main differentiator], as demonstrated by [evidence of benefit].

REFINE YOUR IMPACT

OVERVIEW





People Multi-disciplinary project team



Prework

A batch of concepts, each with developed dual value propositions



Deliverables

Evaluation of solutions to carry forward

What will you accomplish?

Refine concepts developed in ideation activities with an augmented version of the desirability, feasibility, viability (DVF) framework, adding impact as a new dimension. Evaluate how concepts deliver value to people, planet and business – with nutrition and sustainability as core focus areas.

Why is this important?

- Embed social and ecological value: Weigh health and planetary impact equal to traditional business metrics, as opposed to rationalising in the marketing phase.
- Monetise unmeasured value: Note where soil, and ecosystems can be measured and financially quantified as part of a larger investment strategy.
- **Prioritised investment:** Evaluate ideas to assign team time, budget, and lab space based on the largest opportunities. You may further organise into short-, medium- and long- term actions.
- MVP shortlist: Map what features will be tested at each level of prototype fidelity.

unquantified value like health impacts on people,

How do you plan this?

Make sure that you've completed at least one round of concept generation. The more ideas to validate and refine, the better.

This exercise can be used in conjunction with Balance the need and Speculative scenarios.



Nutrition-led innovation strategy

REFINE YOUR IMPACT

INSTRUCTIONS

- Start with your top 5 concepts or concept (1)areas. This can be done all together or by assigning a concept to smaller groups. Make sure you think about your entire product life cycle, from sourcing and manufacturing to consumption and disposal. Reflect back to your 'Balance the need' analysis throughout.
- Start with the concepts' desirability. Using the 2 prompts in the following worksheet, answer the questions from the perspective of your current customer, intended future customer, and even the retailers that will stock the product.
- Next consider the viability. Can your product 3 pay for itself? To anticipate push-back, focus on how cost, revenue, and profit is different than a conventional product or one in a similar category. Make sure to include how your product could reduce climate-based risks, legal costs from greenwashing, or damage to brand reputation.

(4) products or services?

- (5)
- 6 any combination therein.
- (7) value proposition.

Ideation

When thinking about the feasibility of bringing a product to market, consider how much additional research and testing would be required. Would these unlock future

Finally, evaluate your product impact from the perspective of human and environmental health. Make sure to include positive and negative changes and the scale of impact.

As you analyse your results, consider where you can bring comprehensive value across desirability, viability, feasibility and impact, or

With your whole team, compare concepts based on your four fields of evaluation. Consider prioritising with a vote or scheduling another round of ideation to further refine product features the



Expert tip: Cross reference the 'Speculative scenario' cards to evaluate your concept based on longer-term consumer preferences, investments, and resilience.



Nutrition-led innovation strategy

€R

IMPACT

REFINE YOUR IMPACT

• **Desirability** | The human challenge

Why would a consumer choose this product over their current selection? Over an alternative made by a competitor?

What need does this product meet?

What about this product makes it enjoyable to use? Why would people rebuy it?

Are the sustainability or added health features easier to use or more enjoyable than the conventional alternative? Does it taste good?

How does this product make the consumer feel about themselves?

• Impact | The longevity challenge

How does the product affect consumer health? Public health at large?

How does it enable people to access healthy, diverse, and nutrient dense food?

What are the biggest environmental impacts from producing and using this product?

What resources does it consume (energy, packaging, bi-products)?

How can this product expire or spoil? How is the product and packaging disposed of?

How are the required ingredients grown?

How far do ingredients travel? How is the product shipped from factory to retailer to customer?

How does this contribute to achieving your ESG or nutrition commitments?

What is the potential to scale health or environmental benefits beyond this product line? Beyond this company? Beyond this industry?



Ideation



Viability | The financial challenge

What new customers would this product attract? How might it increase sales or repeat purchases?

What are the major upfront costs? What are the profit margins versus a conventional product in the same category?

What are additional costs resulting from the products sustainability or healthier profile? How can those be offset?

How can this product create new revenue streams? New markets? New retail, distribution, or manufacturing partners?

What model (Build/Buy/Partner) would optimise costs in an MVP? At scale?

How will this product be brought to market?

• **Feasibility** | The technical challenge

How much R&D would be required to develop the formula? How costly are smaller production runs? Would this research unlock future capabilities or products?

What existing technologies, production lines, or manufacturing facilities can be leveraged?

What are needed changes in energy sourcing, water use, waste processing, or logistics?

What is the sourcing and production strategy? How does that mitigate risks from climate-related shocks you supply chains?

How does this prepare for upcoming sustainability or health regulations? For product labelling? Ingredient disclosures? Packaging reclamation? ESG data disclosures?

Development

This chapter dives into the experimentation phase of concept development. You'll determine key assumptions affecting your product's potential impact on health and sustainability, as validated through different tests and Al-assisted exercises. The team will refine concepts until they have confidence in their successful launch. Based on your most validated assumptions, you'll then weigh different models of innovation, comparing speed, precision, and cost.

Test your assumptions

 \Rightarrow

Choose your innovation model





TEST YOUR ASSUMPTIONS

OVERVIEW





People Multidisciplinary team

(E.g product development, sales, marketing, R&D)



Prework Refine your impact



Deliverables

Hypothesis map, **Prioritisation & Validation**

What will you accomplish?

Shape and prioritise ideas based on measurable data and validated evidence across desirability, feasibility, viability, and environmental and social impact.^{xi} You will identify assumptions that could undermine product success. At the end, test your overall confidence before moving forward to development.

Why is this important?

- **De-risk the investment:** Conducting early, low-cost experiments can build confidence with internal stakeholders and show proxy evidence for determining product market fit.
- Accurately size opportunities: Provide databacked estimation of commercial viability and technical feasibility by pressure testing what could prevent product success.
- Move quickly and efficiently: Small-scale tests ensure that good ideas don't fail too fast and time isn't invested in unviable concepts. In an emotionally resonant area like food, mainstream consumer relevancy is essential.

How do you plan this?

This set of activities requires the most iterations in the innovation process. You will continue to review and refine as you prioritise testing key assumptions.

You will also continue to develop the <u>Refine</u> your impact activity. It is both a guide to initial assumptions and a check to make sure your product can still be successful.

- 1. Research statements
- 2. Prioritisation matrices
- 3. Experimentation methods
- 4. AI-Assisted research
- 5. ACE Confidence score



TEST YOUR ASSUMPTIONS: RESEARCH STATEMENTS & PRIORITISATION MATRICES

INSTRUCTIONS

- When defining assumptions, think about (1)what needs to be true for your concept to succeed. Alternatively, what would cause the product to fail if proven false? Start with your answers to the Refine your impact activity. Expedite your statements using the prompts on the following worksheet.
- Assumptions can be at all levels of granularity (2) or specificity. You should validate the problem you are solving, aspects of the solution, its impact, and how your team would produce it. It is easiest to prove or disprove assumptions worded in the positive. Make sure they are different from each other and can be measured with a quantifiable KPI.
- After your first round of assumptions, (3) use the second worksheet to prioritise their urgency. You may evaluate based on risk or based on impact, depending on what creates more value in your experiments. Map the assumptions on your chosen matrix. The top right quadrant represents the most important assumptions to be validated.

- $\left(4\right)$
- (5)



For the highest priority assumptions, determine how you will test each statement. Some will require desk research, some interviews, and many some type of MVP development, ranging from marketing collateral and label design to in-market pilots. Reference the Experimentation methods list on page 51 for inspiration. Remember that your tests should be fast, cheap, and only evaluate the minimum assumption.

As you run your experiments, place a checkmark on those that are validated. Make sure to continually re-prioritise and develop more specific or concrete statements. You will also pivot concepts, pause them, or even eliminate them through the process.

> Al accelerator: Find dozens of platforms to conduct faster and cheaper AI experiments on page 52.





TEST YOUR ASSUMPTIONS: RESEARCH STATEMENTS







TEST YOUR ASSUMPTIONS: PRIORITISATION MATRICES

WORKSHEET

FIGURE 9 **Risk Matrix**









EXAMPLE

Design Test:

Below are some methods that can be used to validate research assumptions.¹¹ Tests vary in complexity, cost, and accuracy and can be done in combination. Make sure to integrate multiple teams like R&D, sustainability, and facilities management for the most precise results.

> An experiment does not need to be a product!

(2)

(3)

A/B testing: Compare two different flavours, nutritional labelling, brand names, or even campaign imagery. Marketing health or sustainability might lead to smaller audiences.

Pilot testing: Conduct a limited version of the product/service for a small group of customers and evaluate results before full rollout.

Market testing: Launch the product in a specific market to assess cultural relevance or even efficacy of waste or recycling infrastructure.

Introduction

Ideation

Development

Fake product launch: Generate a landing page, advertisement, or social media post to gauge interest. Consider posting in adjacent communities like fitness influencers, viral recipe creators, or coupon groups. Within sustainability, try testing where people invest in their local communities, like social non-profits, churches, or community centres.

Consumer research: Analyse consumer (5) data through interviews, surveys, and even AI generated personas to validate demand, preferences, and product acceptance.

Taste testing: Offer free product 6 samples for consumers to try and provide immediate feedback. Try new retailers, restaurants, convenience stores, or even outdoor food stalls.

Nutrition modelling: (7)

Use a digital twin to test reactions in the tongue and stomach for flavour, nutrient absorption, and effects on the microbiome.

Life Cycle Analysis & risk modelling: 8

Conduct a preliminary environmental impact assessment online or review the companies or competitors climate risk modelling and scenarios, often disclosed in ESG reports. Make sure to partner with your sustainability or compliance department. You can also consult an outside expert for more accurate data.









TESTING RESEARCH HYPOTHESIS: AI-ASSISTED RESEARCH

How can AI accelerate confidence in the experimentation phase?

Gauge interest Write an assumption with AI for social listening and other to test in your experimentation phase (E.g <u>HyperWrite</u>) customer data (E.g <u>Symanto</u>) Combine trends and data Predict customer responses to marketing collateral and to generate new assumptions product images in seconds (E.g <u>Taskade</u>) (E.g Neurosinc) Conduct user research with Al participants (E.g <u>Synthetic Users</u>) Create Al-driven user personas, including journeys and requirements (E.g <u>Userdoc</u>) **HyperWrite** *III* mida Ineurons **UD** Userdoc 🗑 taskade SPOONSHOT[®] symanto psychology ai Syntheticusers psychology ai

Development

Design stunning mockups

and product stimuli in minutes (E.g <u>uizard</u>)

Build a website or a landing page to gauge interest in 30 seconds (E.g <u>durable</u>)

Create product concepts, product labelling, or packaging designs from text prompts (E.g. <u>Midjourney</u>)

Make presentations and pitch decks with a click of a button (E.g <u>Tome</u>)

Otome

Uvizard

∽ durable

Userdoc

A Midjourney

Gather data and learn Automate your qualitative data analysis (E.g <u>Viable</u>)

Automate summaries of user reviews (E.g <u>Kraftful</u>)

Conduct research analysis based on combined collected qualitative and quantitative

testing data (E.g <u>Userdoc</u>)



Kraftful





Nutrition-led innovation strategy

TESTING RESEARCH HYPOTHESIS: ACE CONFIDENCE SCORE

INSTRUCTIONS

The ACE framework is a decision-making method that helps evaluate and prioritise ideas and projects

To gauge readiness for product development, asses the answer, confidence, and evidence for each of the questions in the diagram to the left.

Answer:

This clear yes/no/maybe marker sets a definitive points to evaluate your concept.

Confidence:

This is the level of trust you assign to your response. It is a subjective measure of certainty regarding the accuracy of your answer.

Evidence:

This information and data supports your response. Evidence may include facts, statistics, research, previous experiences, or any other information that corroborates your conclusion.

ANSWER

SCORE

EVIDENCE

ANSWER

SCORE

EVIDENCE

Has the team identified an acute pain point (i.e., problem) that is felt by a specific group of people (i.e., target customer)?



Research on user needs has identified well-articulated pain points and a sense of urgency. Users expressed distress at their situation and frustration at their lack of ability to reconcile. The team can predict the ability to recruit other users with similar issues based on understanding the user segment.

Does the team clearly understand how customers are resolving these pain points today?

ANSWER

CONFIDENCE SCORE



EVIDENCE

Customers expressed a low level of satisfaction with currently available solutions. They have articulated what is working and what is not working and may have explained workarounds and / or tricks that point to a new set of solutions.

Does the team have a commanding understanding of the competitive landscape?



The team can intelligently explain who is doing what in the solutions space, including large companies and small startups, recent investments, acquisitions, and failures. They must be able to explain technological, design and or business innovations.

Has the team validated that they can reach a target customer with a value proposition that addresses the pain point?

ANSWER



CONFIDENCE SCORE



EVIDENCE

Efforts were made to clearly define the target groups, including demographic and psychographic descriptions. They can be clearly defined through social platforms (e.g. Facebook). These groups have a measurable positive response to the value proposition (click-through rate / conversation rate is 2x to 3x the benchmark).



CHOOSE YOUR INNOVATION MODEL

OVERVIEW







People Strategy and product team



Prework Portfolio targets & KPI map



Deliverables

Innovation model prioritization

What will you accomplish?

Select different models of innovation based on internal capabilities and market readiness. You can make this decision as you evaluate your portfolio goals or after determining concrete product directions.

Why is this important?

- Accelerate new business development: Selecting the right model can greatly speed up the development of new technologies, markets, or even new audiences.
- **Optimise company resources:** Evaluate the most efficient use of time and budget based on relative cost of internal capabilities versus outside contractor or partner.
- Uncharted territories: Uncover unusual cross industry partnerships or untapped audiences by considering how to bring a product to market by collaboration.
- Spread the risk: Onboarding new investors, R&D capabilities and go to market partners reduces distributes costs and risk of failure

How do you plan this?

From the very beginning of your innovation process, you should be considering the different models to bring concepts to life. You can incorporate this at the innovation strategy level, and you may even want to overtly test a new innovation model as one of your goals.

As you continue to develop more concrete concepts, continue to revisit what you need to succeed based on your most important assumptions.

CHOOSE YOUR INNOVATION MODEL

INSTRUCTIONS

- Choosing the right innovation model involves considering your organisation's specific needs, resources, and goals. There is no universal solution and combining different models can be practical.⁵
- Reflecting on both your portfolio goals (2)and concept requirements, evaluate your company's internal assets, capabilities, or relationships that are comparatively strong. This can include R&D capabilities, workforce competence, and technological infrastructure. You may want to note these in a large table to share with leadership.
- Then consider the market readiness for (3) this concept. This includes technological advancements, consumer behaviour changes, regulatory changes, and sustainability issues.

Finally, consider your organisational $\left(4\right)$ structure and culture. Assess the scalability of each model based on past efforts, openness to change, and approval pathways.

Based on the information collected, examine the diagram on the next page to explore what model matches your company strengths and product market positioning. Make sure to evaluate the benefits and risks of each model. For example, while a model could enable faster scaling of technology and production, it might remove company control or create a dependence on external funding.

5

Ideation

Development

POTENTIAL INNOVATION MODELS

- 1. Mergers & Acquisitions: Strategic consolidation or acquisition of companies aimed at enhancing capabilities in developing nutritious and sustainable food products
- 2. Internal Research & Development: A Company's dedicated effort to innovate focused on healthier and more sustainable food products; This involves investing in new technologies, processes, and ingredients to enhance nutritional profiles and improve environmental impact
- 3. Corporate Venture Capital: Investments made by established food industry companies in startups or emerging companies that focus on innovative solutions in nutrition and sustainability
- 4. Open innovation: The practice of collaborating beyond organisational boundaries with external entities such as universities, startups, and other corporations to co-develop innovative solutions
- 5. Corporate Venture Building: Creating new ventures or startups within the corporate structure to rapidly adapt to market changes and consumer demands



CHOOSE YOUR INNOVATION MODEL



Ideation

Mergers & Acquisitions (M&A) can quickly acquire capabilities and market share, especially when the market is difficult to penetrate organically. E.g. Unilever has two M&A areas, Unilever M&A and <u>Unilever Ventures</u>.

Internal Research & Development (R&D)
 is suitable when there's market demand without
 a proper supply, or a future need is mapped.
 E.g. Nestlé has 23 <u>R&D centres</u> globally.

• Corporate Venture Capital (CVC) can leverage internal capital and external partnerships to drive innovation. It's ideal when the market is trending towards new solutions.

E.g. <u>Snacks Futures</u> Ventures is Mondelēz's CVC hub created to accelerate growth.

• **Open Innovation** is most effective when there are strong networks and partnerships with external entities like universities, startups, and research institutions.

E.g. <u>Nestlé Panela</u> is the hub for all Open Innovation initiatives in Brazil, including startups and universities.

Corporate Venture Building (CVB) achieves optimal results when it operates under a well-defined governance structure that expertly balances diligent oversight with the flexibility to pursue innovative ideas.

E.g. <u>PepsiCo's Pantry Shop</u> is a venture that enables users to order snack kits.

CHOOSE YOUR INNOVATION MODEL

CASE STUDY

Large food companies are betting on reinvention initiatives by investing in existing companies (M&A)

In the past 10 years, the Unilever M&A team acquired 17 companies, transforming its business through emerging brands like Onnit, Liquid I.V., and OLLY PBC. These acquisitions represent new product categories for the company, but they also allow for greater agility and autonomy within the units. While the estimated revenue of these brands is €2.5 billion (4% of the total company), the incremental contribution was €1 billion (20% of Unilever's total growth) between 2020 and 2022.7

Additionally, Unilever partners with established companies to pilot and scale new technologies through The Unilever Foundry, while their Garagem platform relies on open innovation in Brazil to source new ideas.



DNNIT

Total

15 PACKETS





Delivery

This section of the playbook complements your path to production readiness. While priority is given to sourcing, manufacturing, and distribution budgets and roadmaps, make sure that efforts to market and sell the product proceed with equal precision.

Build a platform for change 🛛 🔿















BUILD A PLATFORM FOR CHANGE

Despite efforts to connect people with sustainable and nutritious food consumption, most products remain niche. Recent research from Accenture Song Sustainability identifies a **Relevancy Gap,** illustrating that companies and people approach these topics very differently.¹²

Closing the Relevancy Gap will deliver brand value, revenue, and resilience. This section of the playbook contains real-world examples of how other brands have used the 'dark arts' of marketing for good. It contains brand guidance and best practices for market success, alongside examples of what to avoid.





Consumers are
becoming much more
granular, so general
reference to health or
healthy food
is declining. What's
increasing is e.g.
menopause, stress,
hydration etc.

Alon Chen, CEO and Co-Founder, Tastewise

Until we stop this dichotomy between fun and health we'll be missing the biggest opportunity there is fun and health, no difference between one and the other!

Pietro Antonio Tataranni, Chief Medical Officer and SVP R&D Life Sciences, Pepsico





BUILD A PLATFORM FOR CHANGE

Healthy doesn't need to look healthy

EMBRACE

Bring joy and excitement.

Consider not talking about health or sustainability, at all.

Contribute to cultural trends/ references.

AVOID

Avoid beige, muted colours or identifiably talking about nutrition.

Steer clear of stereotypical imagery, for example healthy people doing yoga

Refrain from visual cues that suggest a clinical medication or prescribed health product.







Califia Farms' campaign 'Calilujah!' took cues from musical theatre to promote their plant-based milk alternatives, bringing to life the product in a way that breaks with the seriousness of traditional plant-based options.



Frutas Nijasol partnered with Meteorito studio to create these monster boxes that present tomatoes as packable, delightful treats that children can take on the go.

Health-Ade promoted its Ginger Lemon Kombucha with a fashion-forward print campaign and a Gen-Z aesthetic, while also sharing recipes for mocktails based on their gut-focused drink.



Nutrition-led innovation strategy

BUILD A PLATFORM FOR CHANGE

Stand for/against something

EMBRACE

Craft snappy, witty statements

Pick relevant or adjacent topics – know what your audience cares about

Highlight measurable actions to back up your claims



AVOID

Don't use your vision and values alone to cover negative externalities

Avoid empty statements that can't be validated by data

Being quiet is also taking a position





Ice Cream Flavours - Where To Buy - Shops & Catering - Activism

Our Values, Activism and Mission

We believe that ice cream can change the world. We have a progressive, nonpartisan social mission that seeks to meet human needs and eliminate injustices in our local, national, and international communities by integrating these concerns in our day-to-day business activities.



Who Gives a Crap is made from 100%

recycled bamboo and donates half their

make you forgot its the 'social' choice.

catching roll covers and cheeky messaging

profits to water charities. Their eye

Ben & Jerry's identifies as an activist organisation that makes ice cream. They use their platform to stand up for environmental and social issues.

Patagonia is leading a movement to defend 640 million acres of public lands in the U.S. that are at risk from development and extraction.



BUILD A PLATFORM FOR CHANGE

Be transparent about your flaws

EMBRACE

Use playful messaging to tackle tricky topics.

Lean into the conversation. It's ok that you don't know everything.

Highlight where you might have gone wrong, address consumer complaints and cultural discourse.

AVOID

Don't hide from contentious topics.

Don't misrepresent your capabilities as a company, or the potential benefits of your product.

Don't make consumers search for information to trust you.





Sustainability is a journey, not a destination. We're not chasing shortterm fixes; we're finding long-term solutions for meaningful progress towards our goals.

F*ck Oatly head on addresses every time Oatly has been criticised in the media or in lawsuits. It uses humour to laugh at silly mistakes and more serious approach to how they tackled big mistakes.

> Krave Beauty partnered with Bluebird to provide carbon emissions and waste impact scores for every product. They specifically point out why they are still using plastic packaging, and they even have materials flash cards to understand the conflict benefits of different packaging. They also provide extremely detailed recycling diagrams with searchable instructions by location.

Carlsberg uses its iconic line to address the difficulty in moving away from single use plastics and being honest about the journey.

BUILD A PLATFORM FOR CHANGE

Reframe change as an adventure

EMBRACE

Use exciting, colourful imagery.

Suggest simple, impactful changes

Create a utopian image – talk about adding, not subtracting.

AVOID

Don't scare people with doomsday facts and figures

Don't suggest sacrifice or need to have less

Avoid blaming consumers, for example through personal carbon footprints.



Chobani's 'Dear Alice' animated film brings to life a beautiful, futuristic sustainable reality alongside the known, idyllic representation of a smallholder farm to speak to the future of dairy with a positive outlook: 'How we eat today, feeds tomorrow'.





Kraft is suggesting healthy vegetable pairings for its widely popular cheese products, encouraging people to make a healthy change while keeping it tasty.



Sainsbury's ad suggests a simple way to incorporate healthier, plant-based ingredients into people's classic recipes without forcing them to abandon meat entirely.

Acknowledgements & references











CONCLUSION

The food industry stands at a pivotal crossroads. Reinvention is no longer an option but a necessity. If we wait for mainstream consumers to demand nutritious, sustainable food we will continue down the untenable pathways of increased diet-related disease and climate change. By embracing innovation, creativity and systemic thinking, the food industry can generate mainstream consumer demand capitalise on new revenue opportunities and build brand relevance. This transformative journey hinges on four core pillars: Reinvention, Resilience, Revenue and Relevance.

Reinvention: Driving nutritional impact

Organisations that prioritise nutrition-led innovation can offer products that support overall wellbeing and disease prevention. Envision a major snack food manufacturer undergoing a radical transformation to enhance its products' nutritional profiles. The company could develop a new line of snacks using bioengineered ingredients that offer health benefits beyond basic nutrition, boosting gut health, immunity, and/or mental health.

Resilience: Navigating volatility with confidence

In today's shock-prone world, the food industry must adapt to supply chain disruptions like climate impacts and cost volatility. Companies that prioritise sustainable sourcing and supplier relationships, invest in circularity and renewable energy, and are willing to collaborate, will be better positioned to navigate these challenges.

Global food companies have the opportunity to reinvent their supply chains by investing in sustainable agriculture and Agtech. By partnering with local farmers and using real-time geo-spacial monitoring, the company can better manage soil health and crop yields, mitigate climate risks, and ensure a stable supply of raw materials.

CONCLUSION

Revenue: Unlocking new market opportunities

Reinvention opens up new revenue streams and market opportunities. The growing demand for health-conscious and sustainable products presents a lucrative avenue for innovation – though it must be noted that neither of the above will trump taste, which will forever be a nonnegotiable. Consider a major dairy producer investing in plant-based R&D and innovation as much as traditional dairy. By launching a line of plant-based dairy alternatives that meet functional and taste expectations, the company could cater to mainstream, vegan and lactose-intolerant consumers, opening up new avenues for growth.

Relevance: Aligning with consumer preferences

None of the above works without the consumer proposition being built in from the get-go. Industry are increasingly building bridges between R&D and Brand/ Marketing teams and this is a fundamental internal collaboration in order to accelerate nutrition-led, sustainable innovation. Equally, understanding how we position nutritious and sustainable foods is critical – and very audience dependent. For many, neither sustainability nor nutrition would be viewed as a 'core benefit'. Imagine a global fast-food chain introducing healthconscious options that look and taste as delicious as the rest of the menu. By integrating a mobile app, the chain could offer personalised views of the products, considering consumer's preference for nutrition and sustainability so it can be dialled up or down depending on preference.

The path forward

Reinvention is not merely a strategic choice but an imperative for food industry companies aiming to thrive and remain relevant well into the long-term. As the food industry stands on the cusp of transformative change, companies must seize the opportunity to innovate and lead. The journey of reinvention promises a brighter, healthier future for all, ensuring the food brands we all love not only survive but thrive in the years to come.

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