



# Global FOODTURE

The workshop will start soon.

# Personalised nutrition: How to bring personalised nutrition to the mass?

Workshop 6

16 March 2022



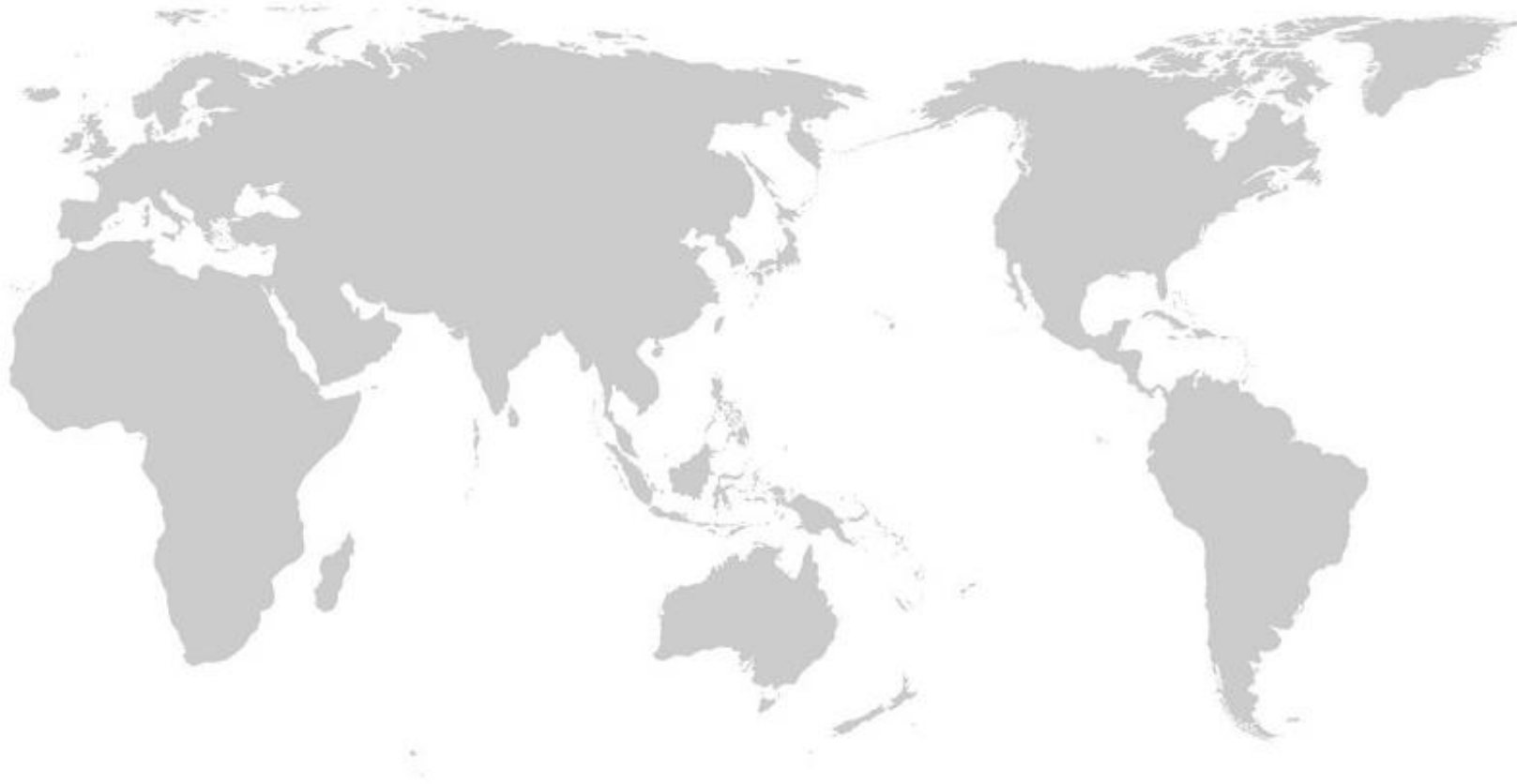
# Organisers



**Food & Bio Cluster**  
Denmark



# Welcome!



Over 220 Participants

From 30 Countries

70 from Asia  
150 from Europe  
& other regions



# Global Foodture project



European project, collaboration of 7 European Clusters and Asian partners: Enterprise Singapore, Foodpolis, FoodInnopolis, TMA Thailand, Kobe University and NARO.

Aiming to stimulate innovation collaboration between European SMEs and Asian organisations – Japan, Singapore, South-Korea Thailand

2022 – 2023: Several activities, including matchmaking, training program, international missions and online thematic workshops

Themes:

- Agriculture - cultivation & support solutions
- Alternative proteins
- Sustainable packaging
- Solutions to reduce food waste
- **Health products, functional and personalised food**



# Programme

- 09.00 Welcome & General Introduction
- 09.05 What is Personalised Nutrition? Introduction & European perspective by Judith van der Horst, Innovation Lead Food & Health, Foodvalley NL
- 09.20 Introduction to personalized Nutrition from the Asian perspective by Usha Viswanathen, Nutrition & Public Health Director, Integrated Nutrition Solutions

## Masterclass 1: Personalised Nutrition from the Asian perspective

- 09.35 Presentation by Singaporean Company Amili by Gwen Tan, Vice president
- 09.45 Presentation by South Korean Advances Institute of Convergence Technology by Seoyoung Kim, Senior Researcher

## Masterclass 2: Personalised Nutrition from the European perspective

- 10.00 Presentation by Natural Machines by Lynette Kucsma, Co-Founder & CMO
- 10.10 Presentation by Venner Oy by Tuulia Jarvinen, Founder & CEO
- 10.20 Presentation by Movesca by Jon Henningsen, CEO
- 10.30 Open talk moderated by Anni Simonsen, Food & Bio Cluster Denmark & Project coordinator of Global Foodture
- 10.55 Wrap-up & Closing
- 11.00 Opportunity for matchmaking via the Global Foodture Community Platform



# Questions?



Do you have any questions to our speakers?  
Please raise them in the Questions-box in Zoom and we will address them during the session.

Please state the following in the Question-box:  
Your name, company name, speaker to address the question to & question itself





**Foodvalley**  
Shaping the Future of Food Together

Dr. Judith van der Horst - Graat  
Lead Food & Health  
[Judith.vanderhorst@foodvalley.nl](mailto:Judith.vanderhorst@foodvalley.nl)



Your DNA as cornerstone  
Genotyping



Do it yourself measurements  
Genotyping + phenotyping



Ecosystem  
Joint innovation

2006

2012

2017

2011

2018

Medicalised

Biotech-oriented

More parameters & input

Consumer in control

Niche

Expensive

Personalised psychology  
& behaviour

Data

Trust

Transparency

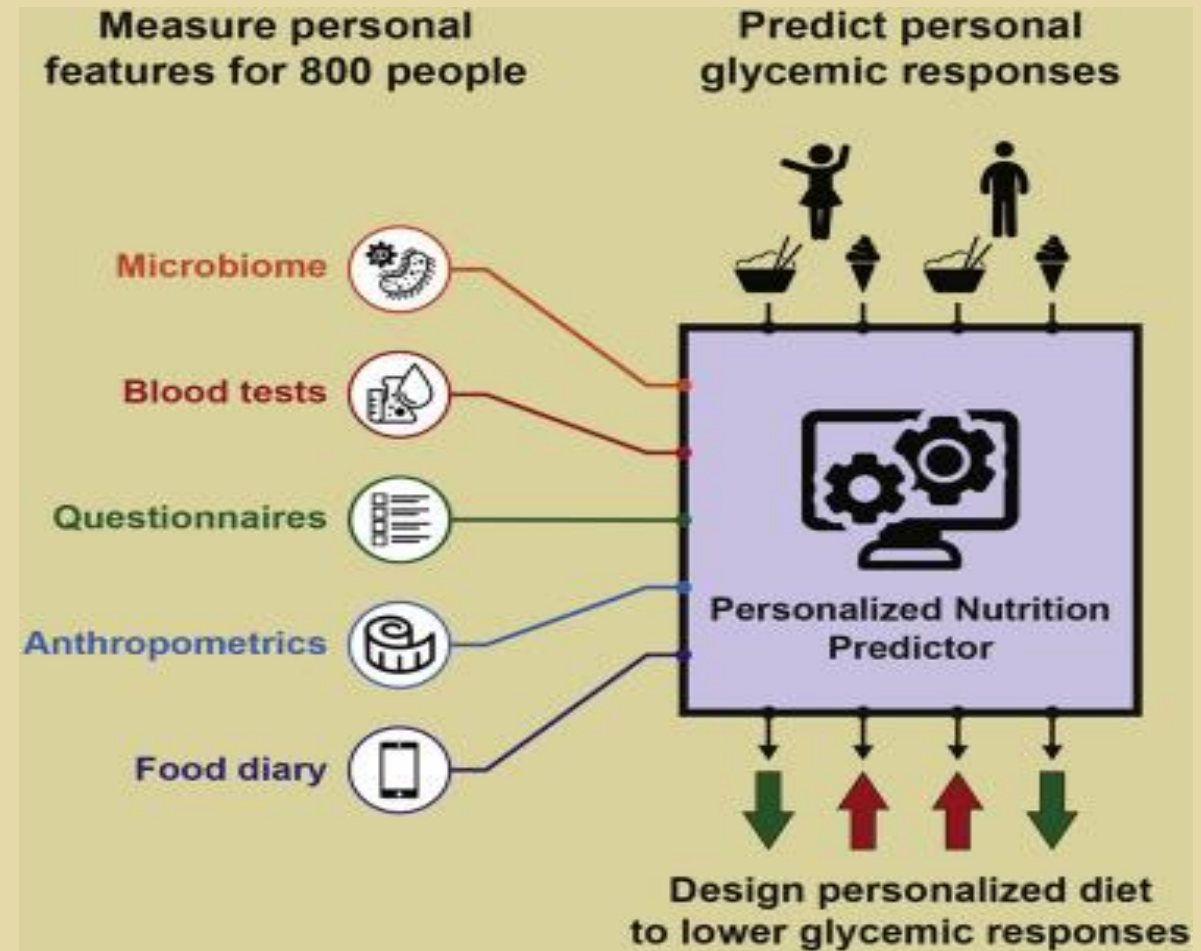
Ecosystem innovation



# WE ARE ALL UNIQUE

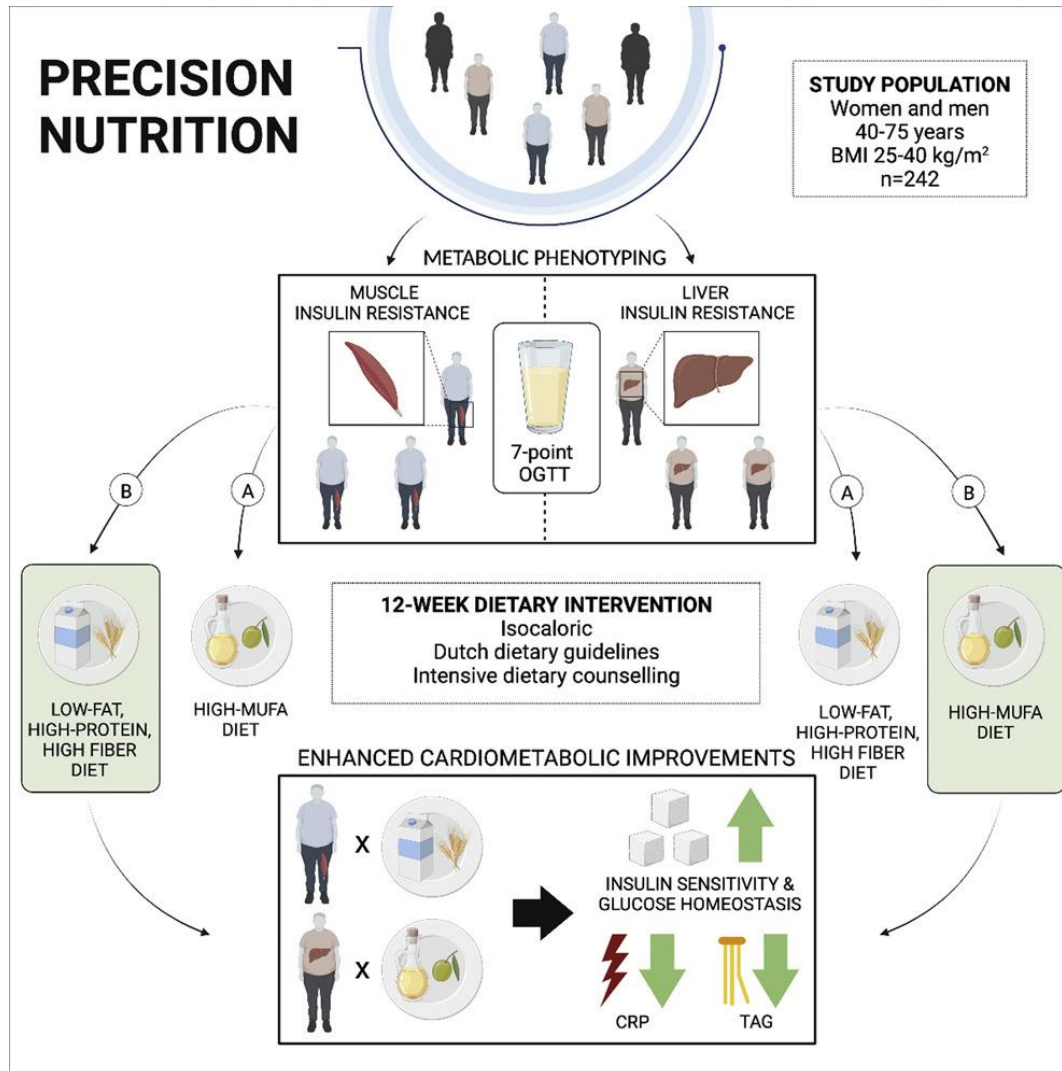
The same meal elicits different responses in different people

Zeevi et al. 2015, A landmark study in PN



# COMPLEX STUDY SIMPLE OUTCOME

Metabolically different people need different diets to thrive





Your DNA as cornerstone  
Genotyping



Do it yourself measurements  
Genotyping + phenotyping



Ecosystem  
Joint innovation

2006

2012

2017

2011

2018

Medicalised

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More parameters & input

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Niche

Expensive

Personalised psychology  
& behaviour

Data

Trust

Transparency

Ecosystem innovation

## Stakeholders



Retail



Ingredient suppliers



Medical tech



Food logistics



Food producers



Consumer tech



Hospitality industry



Data companies



Investors



Health insurance



Healthcare



Education



Knowledge institutes



Governments



NGO's

**Healthy choice  
=  
Easy choice**

## Products & services



New food products



Digitalisation



Healthy eating environment

## Conditions



Affordable



Health & Sustainability



Convenient



Accessible



Attractive





# DOWNLOAD

<https://www.foodvalley.nl/wp-content/uploads/2021/10/Personalised-Nutrition-Position-Paper-final.pdf>

*Personalised nutrition could be a service or a product*

*It uses individual-specific information*

*Is founded in evidence-based science*

*Has the goal to give consumers control*

*Promotes a positive, sustainable dietary behavioral change*

*Results in measurable benefits for personal goals*

# MAKE THE HEALTHY CHOICE THE EASY CHOICE

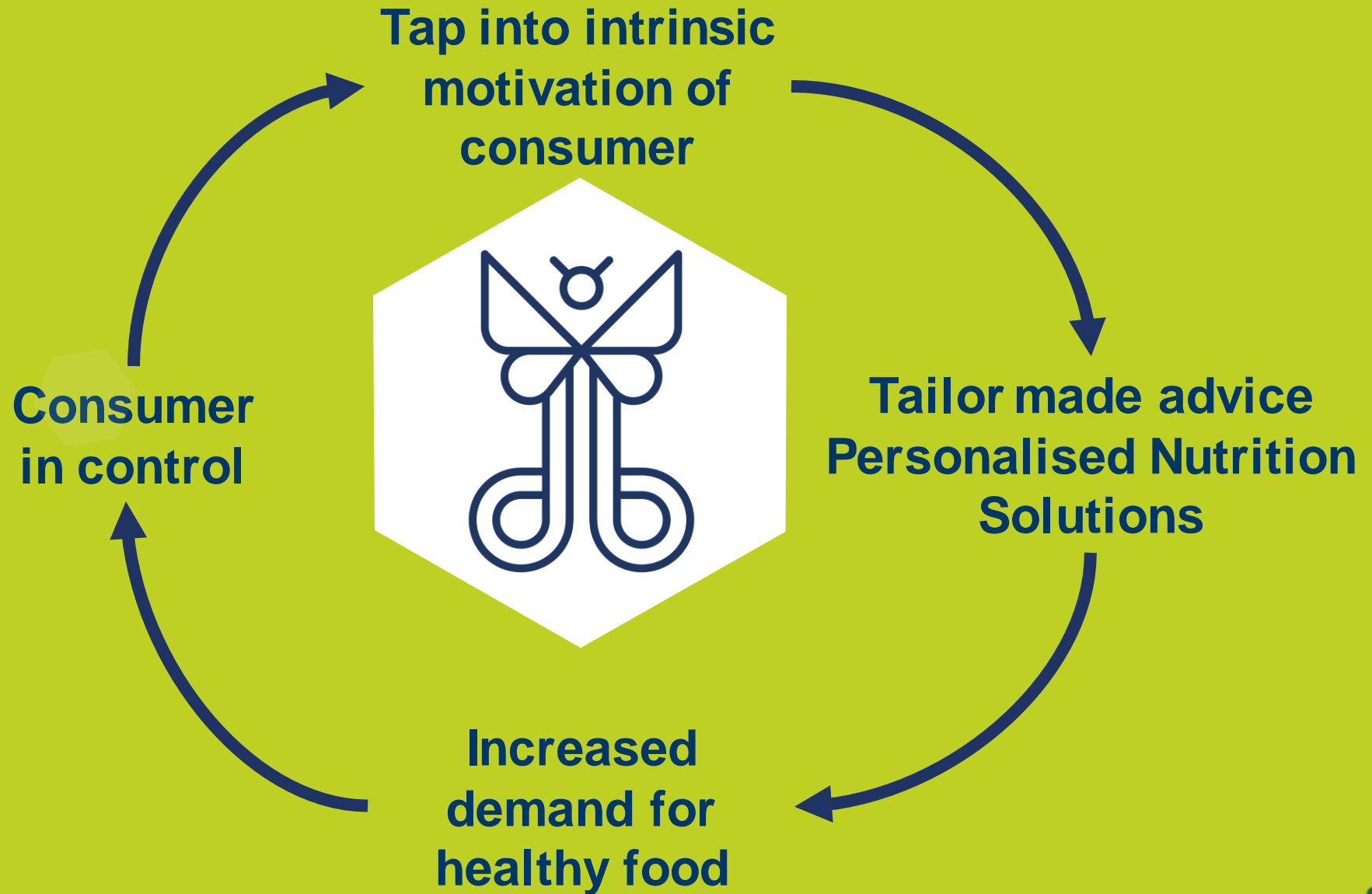


by balancing  
supply and  
demand

resulting in  
higher vitality  
and well – being



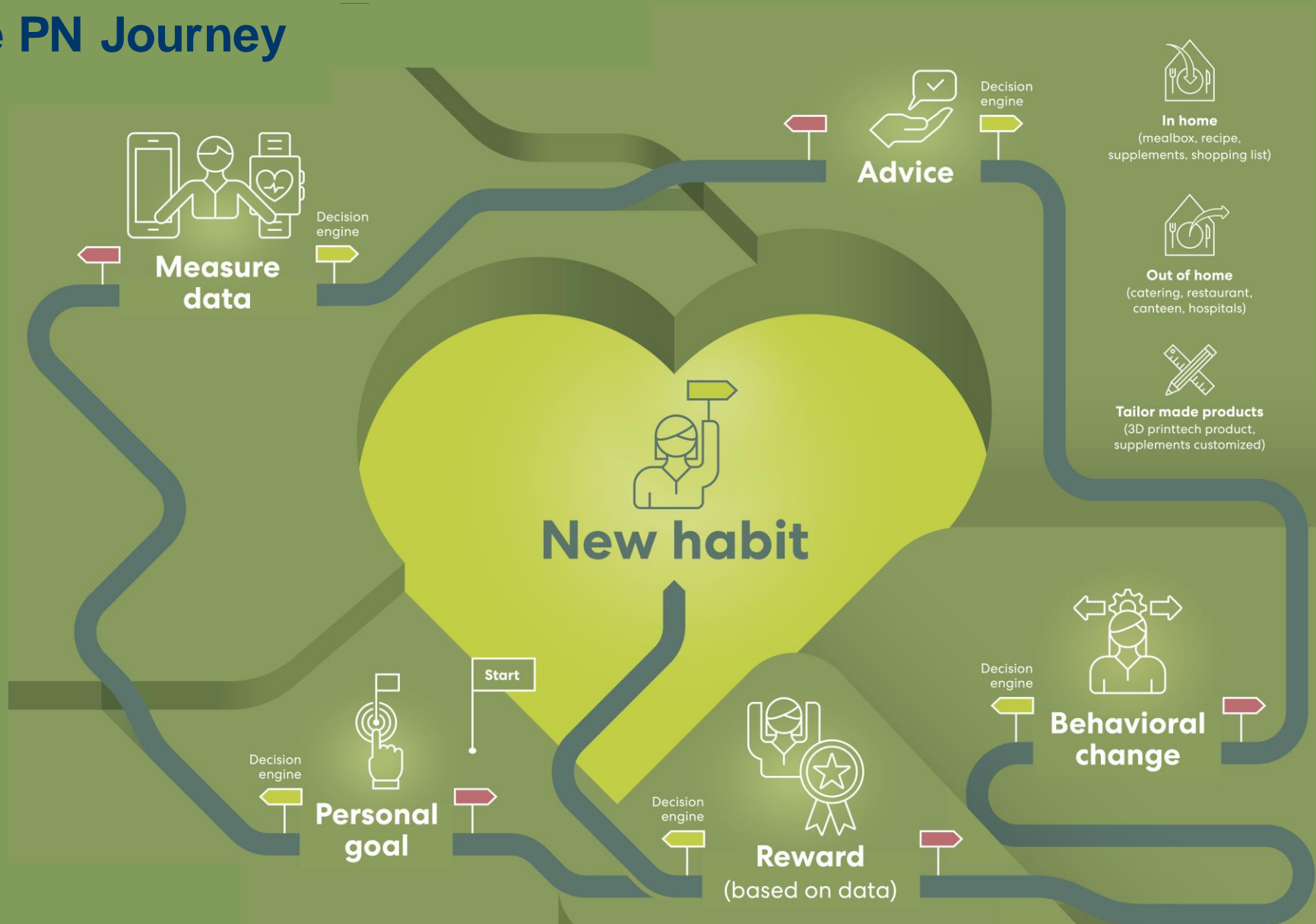
# SUPPLY AND DEMAND





# YOU TAKE CONTROL

Join the PN Journey



# QUESTIONS THAT CANNOT BE SOLVED INDIVIDUALLY



## ACCELERATE

Science and data, independent insights.



## CONNECT

Connected, knowledgeable and supportive ecosystem



## GROW

Business models for mass market





# PRIZE BASED CHALLENGES

PN Community breeding ground



Nutritional strategies for health

Nutritional solutions



Corporate canteens



Interactive Advice



ai

AI Nutrition tracker



NUTRINOMICS

Accessible nutrition



VERDIFY

Hyper Personalised

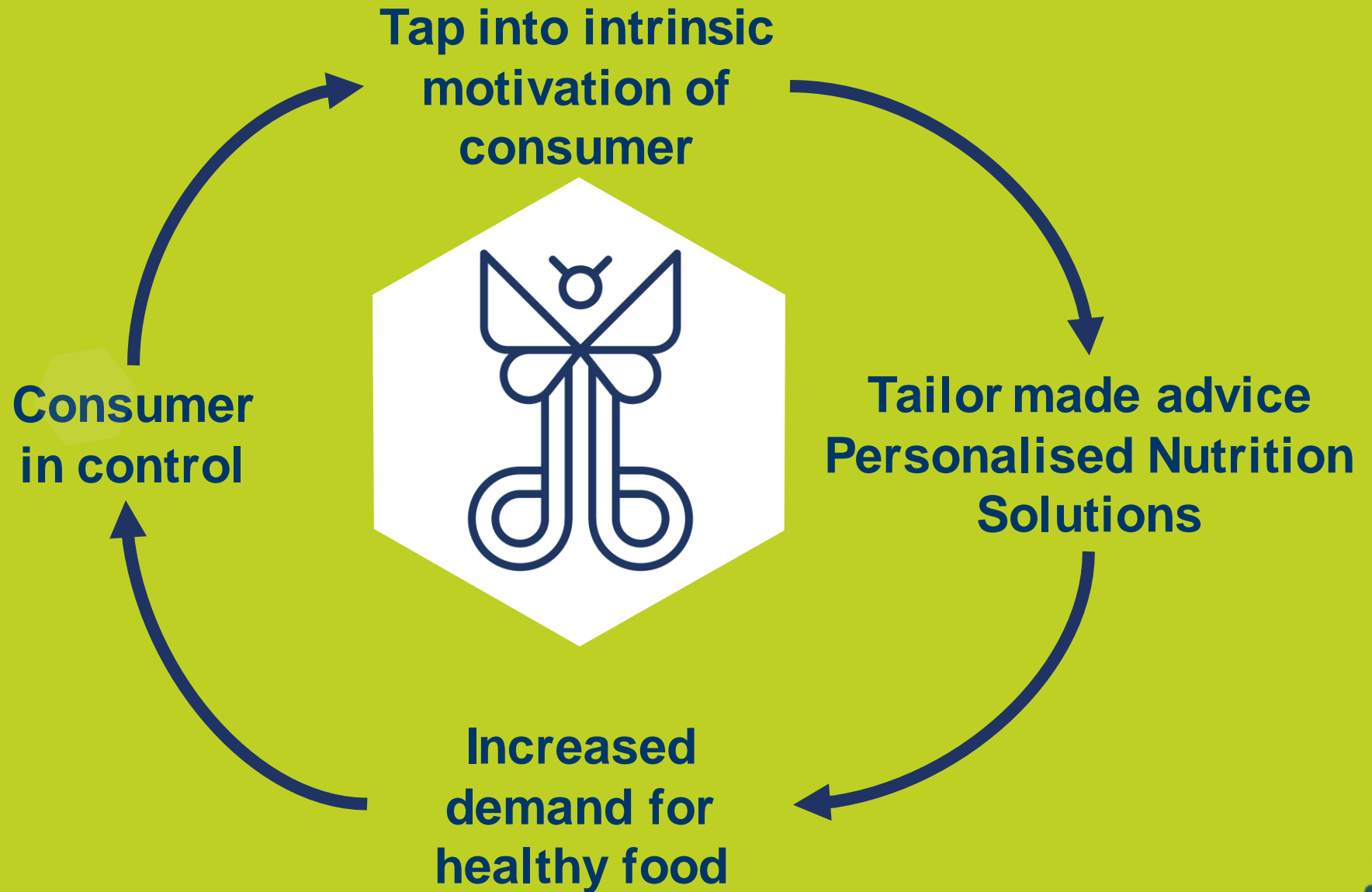


VENNER

Food education



# SUPPLY AND DEMAND

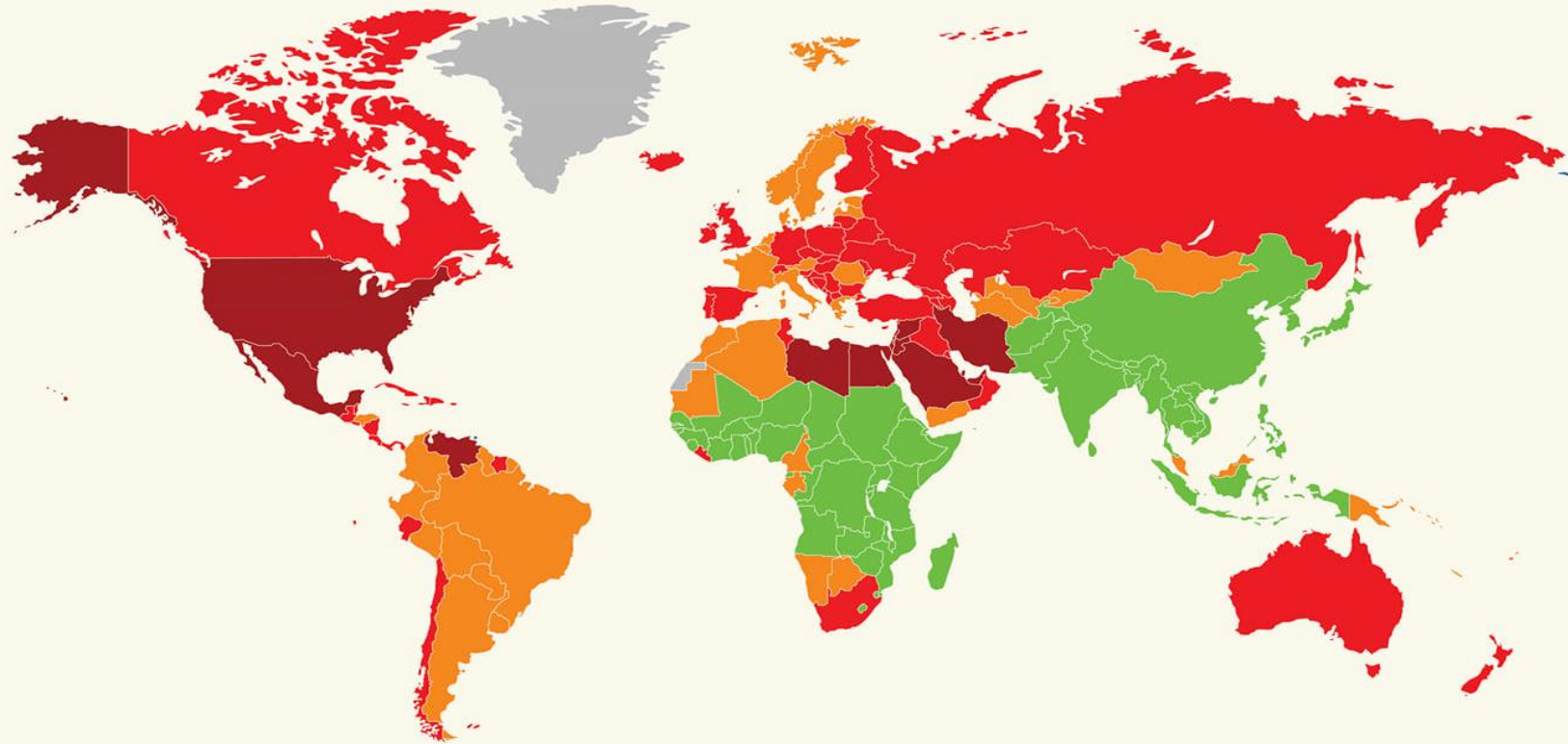


A collage of various fast-food items including burgers, fries, donuts, pizza, and drinks. The items are arranged on a dark, textured surface. The text 'FOOD 4 HEALTH COMMUNITY' is overlaid in large, bold, blue letters in the upper right quadrant. Below it, 'START SUMMER 2023' is written in a smaller, blue font. The background features a semi-transparent hexagonal pattern on the left side and a colorful, dotted pattern in the bottom right corner.

# FOOD 4 HEALTH COMMUNITY

START SUMMER 2023

# A WORLD IN SBALANCE



The Percentage of Obesity



# MAKE THE HEALTHY CHOICE THE EASY CHOICE

[Judith.vanderhorst@foodvalley.nl](mailto:Judith.vanderhorst@foodvalley.nl)





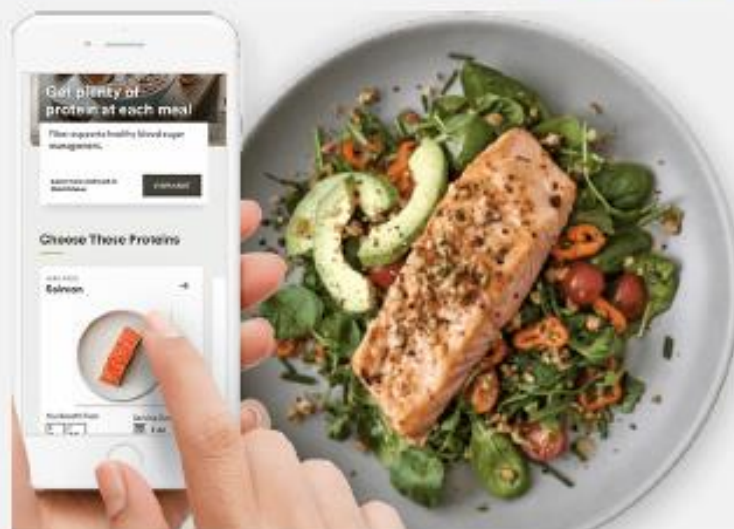


# PERSONALISED NUTRITION

## An Asian Perspective

Usha Viswanathen

## Discussion points



01

Understanding Shifts In Consumer Behaviours

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02

Overall Goal Of Personalised Nutrition

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03

Personalised Nutrition Market in Asia Pacific

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04

Factors Driving & Delaying Personalised Nutrition In Asia

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# With Growing Awareness of Individual Differences and Needs, Consumer Behaviours Have Shifted To More Personalised Nutrition Solutions

## Health Focus Post Covid-19 Pandemic

- Poor fitness levels, excess weight gain and weaker immune system resulting from unhealthy lifestyle during pandemic
- Asia Pacific Survey\* showed that during the pandemic:
  - 51% had excessive weight gain
  - 69% picked unhealthy eating habits (with incessant snacking)
  - 80% of consumers are looking to re-focus on their health

## Lets Get Personal With Nutrition

- Increasing awareness of individual health risks, differences in body type, unique preferences and realization that 'one solution does not fit all'
- Demand for customized health and nutrition guidance, solutions & services

## Improving Immunity Via Digestive Health


- Growing recognition of the need to boost immune system/immunity (especially post pandemic)
- Knowledgeable on gut microbiota and how healthy microbiota supports the immune system

## Digital Devices

- The growing popularity of digital gadgets/tools which allow the individual to collect personalized health & lifestyle data

**8 out of ten consumers in the Asia Pacific region want to kick unhealthy lifestyle habits they developed during the pandemic\***

## The Overall Goal Of Personalised Nutrition All Over The World Remains A Constant



### Overall Goal Of Personalised Nutrition

- Support individuals in achieving lasting dietary behaviour change that is beneficial to health<sup>2</sup>
- Based on the theory that individualising nutritional advice, products, or services will be more effective than more generic approaches
- Preserve or increase health using genetic, phenotypic, medical, nutritional, and other relevant information about individuals to deliver more specific healthy eating guidance and other nutritional products and services<sup>1</sup>

**Personalised nutrition solutions is to motivate and enable each person to make appropriate and sustainable changes to his or her eating pattern**

# Personalised Nutrition Market In Asia May Be Trailing Behind Europe And US, But Increasing Interest From Consumers/Multi-national Companies Driving Its Growth

1

High Growth  
Rate

- Asia-Pacific's personalised nutrition market has undergone significant growth in the last few years and is anticipated to increase considerably (CAGR of 13.2%) between 2021 to 2071<sup>1</sup>
- This market growth offers opportunities for Food Industry to focus on PN research, products and services

2

Advanced  
Countries  
Leading

- Growing trend in Asia, with developed countries such as Japan, South Korea and Singapore seeing most activity
- Between 2022 and 2032, China is expected to lead the East Asian PN industry<sup>2</sup>
- China is estimated to account for more than 35.6% of demand in East Asia<sup>2</sup>

3

Food  
Companies +  
Start-Ups

- The increasing number of start-ups in the region is responsible for the growth
- Leading food companies are investing in nutrition research targeting individualised concerns and solutions

## There Are Many Factors That Drive The Growth Of PN In Asia – Though A Lot Of Work Remains To Be Done

### Factors Driving Growth of PN in Asia

- Post Covid pandemic, there is increased consumer emphasis on health and fitness. Consumers recognize their unique individuality and turn to personalized nutrition solutions to meet their health needs
- Scientific data showing targeted nutritional advice, products, or services support consumers to achieve sustainable dietary change beneficial for health<sup>1</sup>
- Advances in digital technology, Bluetooth access and wearable digital solutions that provide instant access to personalized health and lifestyle data
- Food Companies investing in research, products and services to meet consumer needs and expand their market presence

### Factors Delaying Growth of PN in Asia

- Differences in socio-economic status, varied access to healthcare, inability to target consumers via medical channels  
Consequently, less developed countries are lagging due to high cost of personalized nutrition programs
- Need for robust science and evidence backed data to substantiate the benefits and to show what works and what does not
- Data Privacy - Personal data needs to be kept secure
- Meeting cultural preferences - 80% of Asia-Pacific consumers have stated the importance for products to be made with familiar or well-known ingredients<sup>1</sup>

## **CONCLUSION: Everyone Wants To Live As Healthy As Possible. Personalised Nutrition Solutions Provide A Key To Achieving This**

- Personalised Nutrition recognizes that consumer needs are unique, and are motivated to purchase products that reflect their specific, personal goals
- Personalised Nutrition Solutions and Services support individuals in achieving sustainable dietary behaviour change to benefit their health
- Food companies, academicians and industry need to work together to provide robust scientific data to showcase the benefits of personalized nutrition solutions



**Bringing Personalised Nutritional to the Mass**





## About Us

**AMILI is a precision microbiome company based in Singapore, serving the region. It is building the world's largest multi-ethnic Southeast Asia microbiome database and stool bank of healthy individuals and those with various medical conditions.**

**Through AMILI's proprietary Stool Bank and discovery engine PRIME, AMILI developed Food Validation tests and microbiome-modifying interventions to enhance human health.**

**THE STRAITS TIMES**

"Donate your poop to save lives", published on 7 Dec 2019

# Overview [ Translate Science to Industry ]

AMILI is Proprietary Bio & Tech Assets are well positioned to assist companies in capturing wallet share from the growing number of health & wellness markets

## AMILI TEAM

Experienced Team to develop clinical products and scientific food related validation services

## Proprietary ASSETS

Product and Database suitable for Asian-centric target markets or research

## Product and Food for Health Services

Focused on improving patient and consumer wellness and health outcomes in Asia

### Data, Technology & Scientific Team



### BIOBank

>3000 stool Samples available for Research and services

### TECH

AMILI PRIME  
>1000 Lifestyle data and >5000 microbiome data.  
Multi ethnicity, wide demography

### Fecal Assay Ingredient Validation

AMILI In-house Protocol To evaluate the impact of ingredient/food on the fecal microbiome community from AMILI Stool bank. This approach enables us to verify and identify bacteria whose growth is regulated by ingredient/food



### Fecal Microbiota Transplant (FMT)

Comprehensively screened Donor Stool Samples  
Developed FMT in the form of Enema & Capsules  
Sole Supplier and partner in Singapore



### Human Trial

AMILI in-house IRB Committee Target Subjects suggested from different demographic and GMB profile .

The outcomes provide insight on the ingredient's/food impact on human gut health to support potential regulatory application



### Databases & Analytic Pipelines

Reference range (richness, abundance of taxa, pathways etc), reflective of the gut microbiome influenced by Asian genetics and diets.



# Food for Health Validation Services

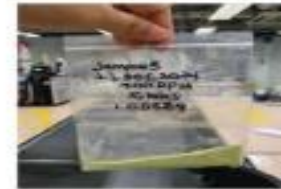
AMILI's expertise in gut microbiome science allows it to assist food companies in validating and developing healthy new product line



## Singapore-Based Vertical Farm

### In Vitro Test

- The Singapore-based Vertical Farm sought to find a use case for its vegetable stalk waste by-product
- AMILI ascertained that the stalk contains prebiotic fibres that could grow a beneficial bacterial strain 5x faster
- AMILI's validation work highlighted the nutritional value of the vegetable stalk waste by-product, prompting the exploration producing soluble powder that can be added into other food products and optimized for delivering gut benefits



## Malaysia-Based Agriculture

### In Vitro Test

- East Malaysia agriculture sought to validated the prebiotic potential of its crop
- AMILI ascertained that the crop has high soluble fiber that could promote specific Lactobacillus growth
- AMILI's validation work leading to follow-up symbiotic food ingredients or dietary supplements development



# Food for Health Validation Services

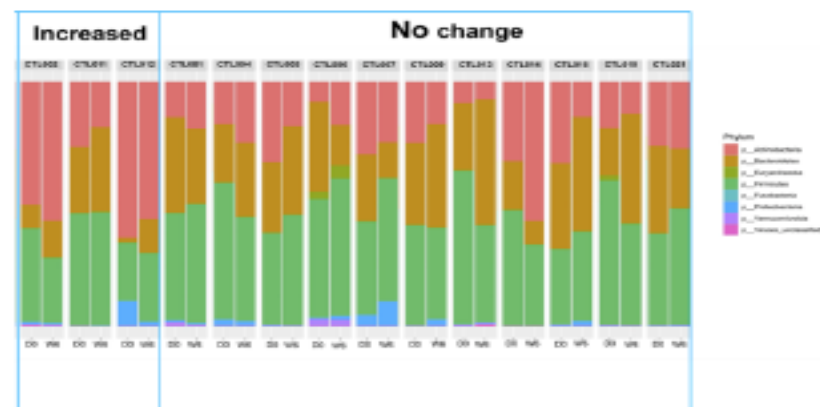
AMILI's expertise in gut microbiome science allows it to assist food companies in validating and developing healthy products



## Leading, Public Listed CPG Group

### Human Trial

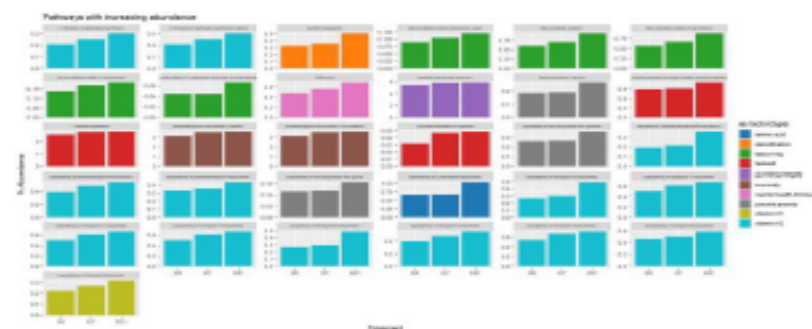
- The CPG group sought to differentiate its beverage in a crowded market of established CPG groups and insurgent entrants
- AMILI showed that the beverage lowered fecal calprotectin levels in the human gut (thereby proving its anti-inflammatory properties)
- Following the successful health validation of the beverage, the CPG group can now broaden its appeal to health-conscious consumers



## Start-up Ready-to-Heat Functional Meals

### Human Trial

- The startup sought to validate and designed personalized meal plan for target customers.
- AMILI showed that all participants reported improved SCFA production, better insulin signalling and Higher GABA signalling after AWE diet (Functional pathway analysis)
- Following the successful health validation, the startup can design specific 1 week and 2 weeks meal regimen that appeal to specific target group consumers



# Publication

## AMILI Research know-how and AMILI platform in Health & Wellness



### Paper Publication, Conference and Poster Presentation

Kwa WT, Sundarajoo S, Toh KY, Lee, J **Application of emerging technologies for gut microbiome research.** Singapore Medical Journal 64(1):p 45-52, Jan 2023 doi: 10.4103/singaporemedj.SMH-2021-432

Hooi SL, Dwiyanto J, Rasiti H, Toh KY, Wong RKM, Lee JWJ. **A case report of improvement on ADHD symptoms after fecal microbiota transplantation with gut microbiome profiling pre- and post-procedure.** Curr Med Res Opin. 2022 Oct 7:1-6. doi:

Lydia Lim Wan Zhen, Kai Yee Toh, Rachel Quek Boo Eng, Jeremy Lim Fung Yen (2021) **Understanding the knowledge, awareness and perceptions of the gut microbiome and FMT in Singaporean adults.** Oral Presentation at APRU Global Health Conference 2021

Jacky Dwiyanto, Kai Yee Toh, Jia Pei Ho, Tin Tin Su, Jeremy Lim, Jonathan Wei Jie Lee, Sadequr Rahman, Chun Wie Chong IDDF2021-ABS-0150 **Influence of ethnicity on the gut microbiota of Singaporean and Malaysian communities** Gut Sep 2021, 70 (Suppl 2) A48-A49; DOI:

Haohui Liu, Meihui Xu, Kai Yee Toh, Chun Wie Chong, Jeremy Fung Yen Lim, Jonathan Wei Jie Lee IDDF2021-ABS-0140 **Gut microbiota significantly correlate with body constitution in Traditional Chinese Medicine** Gut Sep 2021, 70 (Suppl 2) A47-A48; DOI: 10.1136/gutjnl-2021-IDDF.45

Tzi Shin Toh, Jonathan Wei Jie Lee, Kai Yee Toh, Jia Pei Ho, Jeremy Fung Yen Lim, Ai Huey Tan, Chun Wie Chong IDDF2021-ABS-0165 **Psychological well-being and sleep quality among healthy stool donors in Singapore: a cross-sectional study** Gut Sep 2021, 70 (Suppl 2) A50-A51;

Shiang-Chiet Tan, Kai Yee Toh, Jia-Pei Ho, Chun-Wie Chong, Jeremy Fung-Yen Lim, Jonathan Wei-Jie Lee IDDF2021-ABS-0169 **The association between exercise, nutrient and food habits with the Singaporean gut microbial composition** Gut Sep 2021, 70 (Suppl 2) A3; DOI: 10.1136/gutjnl-2021-IDDF.3

Dwiyanto, J, Chia, BB, Look, MCM, Fong, J, Tan, G, Lim, J & Chong, CW. **Effects of OsomeFood Clean Label plant-based meals on the gut microbiome.** Manuscript submitted in Jan 2023.

Suet Li Hooi, Jacky Dwiyanto, Kai Yee Toh, Gwendoline Tan, Chun Wie Chong, Jonathan Wei Jie Lee, Jeremy Lim. **The microbial composition and functional roles of different kombucha products in Singapore.** bioRxiv Preprint <https://doi.org/10.1101/2022.11.14.516366>



Thank you

Reach me at [gwen.tan@amili.asia](mailto:gwen.tan@amili.asia)

# Personalized diet platform for food companies

Kim, Seo-Young

Senior Researcher

Advanced Institute of Convergence Technology

# Background

MFDS Notice 2020-114, Nov. 26, 2020 (Enforcement date : Jan. 1, 2022)

- Food Code > 11. Foods for Special Medical Purposes

## 11-1 Standard Nutritional Formulas



Balanced nutritional formulas for patients



Nutritional formulas for diabetics

## 11-2. Customized Nutritional Formulas



Formulas for congenital metabolic diseases



Special formulas for infants and young children

## 11-3 Meal type dietary management foods for patient



meal kit



meal box

manufacturing standards for  
(2020) diabetic patients, kidney disease patients  
(2021) cancer patients  
(by 2026) high blood pressure patients, lung disease patients, liver disease patients, inflammatory bowel disease patients, and fluid/electrolyte supplementation



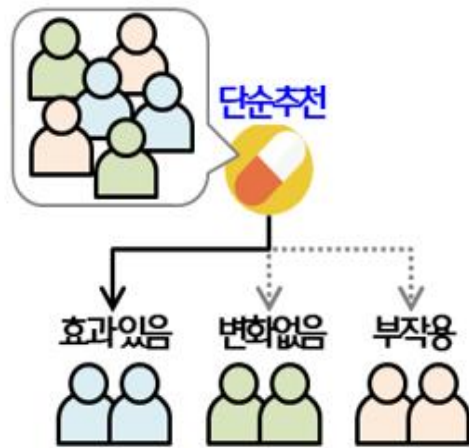
# Scope of "Personalized"

Recommendation by public information

Recommendation for target groups

Recommendation by individual information (DNA, Microbiomes etc.)

Recommendation by individual responses

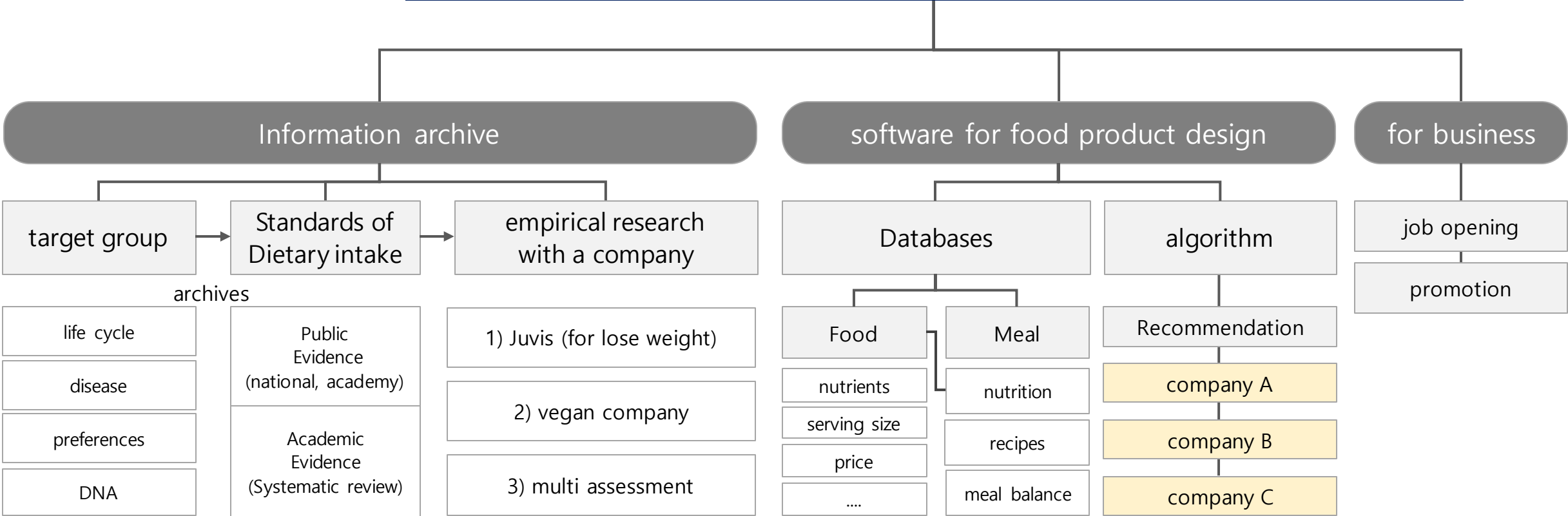


※ 과학기술정보통신부, 인공지능 R&D 전략(2018)

# Platform overview

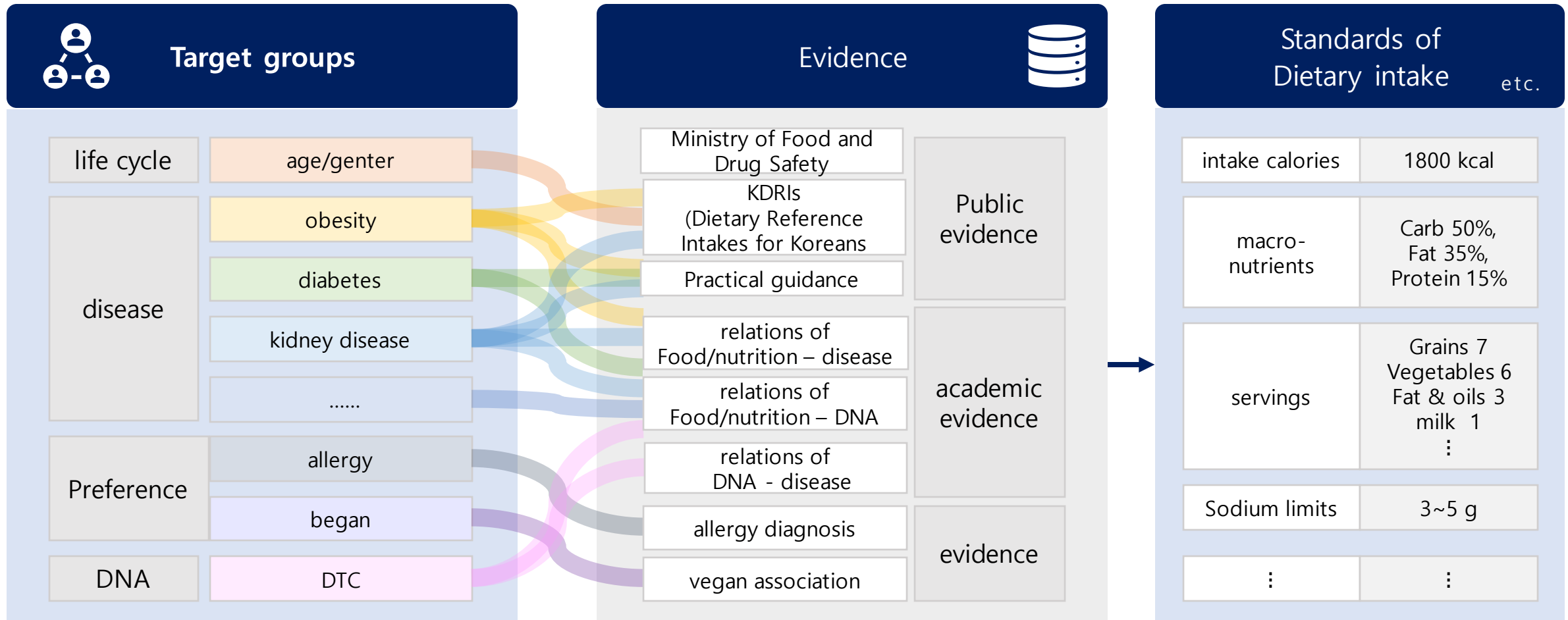
Target      Food/Service companies

Purpose      Provide reliable and useful Information



# (1) Information Archive

Providing reliable information helps food companies establish recommendation algorithms according to the user's life cycle, disease, personal preference, and gene type.



# (2) Service scenario for a food product design

## 1) choose the meal box types

### Type A



Rice 1 + meat 1 + vegetable 2

### Type C



rice with mixed food

### Type B



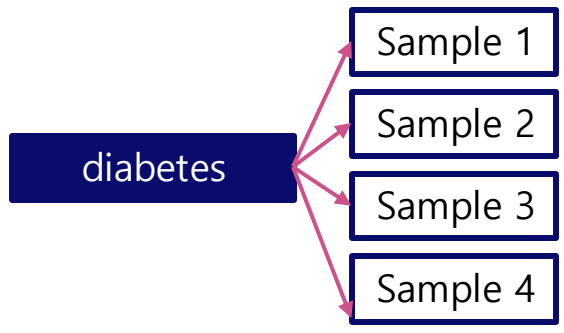
meat 3 + vegetable 2

### Type D



rice 1 + small portions of side dishes

## 2) choose the target groups



## 3) Choose and change the meal compositions

## 4) Choose and change the recipes

## 5) nutritional assessment

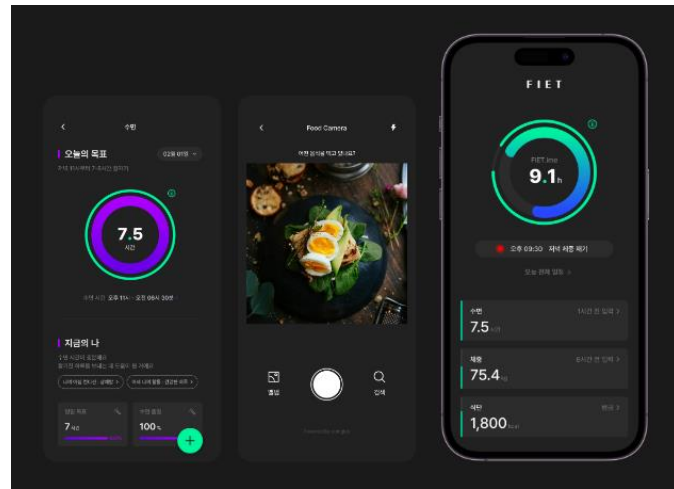
## 6) Price assessment

# (3) Collaborative research

## 1) the Diet company FIET

Provide database  
& food recommendation algorithm

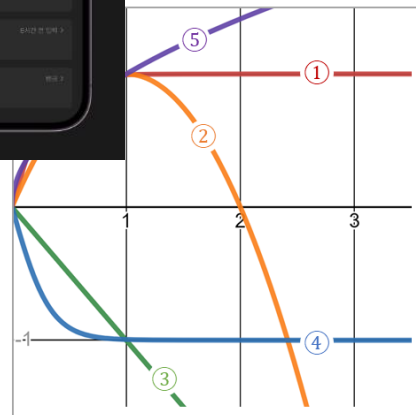
# FIET



Sugar  
Sodium  
saturated fatty acid

Cholesterol

fiber



## 2) Collaboration Program

Plan for weight control diet program

high protein breads



high protein noodles



low sodium meal box



low fat meal kit



# (3) Collaborative research

## 3) vegan service program

How to know if the food products are vegan?  
Provide public DB and algorithm



1

제품명	미어로 화이바	식품유형	혼합음료
원재료 및 함량	정제수, 기타과당, 폴리덱스트로스(식이섬유 70%(3.551%), 과당 산수초절제, 합성향료(오렌지향, 비타민C, 감귤추출물)에이치디, 락톰		
반품교환장소	영양사 및 구입처		
제품신고번호	F1: 영일음료주 1990871019462 F2: 풀립인내내서울주 2019367504268	소비자상담실(수시제부담)	1699-9979

2

종류분류: 전체 | 업체명: | 제품명: 미어로화이바 | 검색

신고번호: 2019057504268 | 결과내역: | 포괄검색: | 식품유형: |

총 1건이 검색되었습니다.  
2017년 이후 식품(농산물) 제이티는 내수용과 원산지 수출용 제이티만 제공되고 있습니다.

번호	식품신고번호	업체명	식품유형	유통기간	제품명	분류
1	2019057504268	풀립인내내서울(주)	혼합음료	제조일로부터 12개월	미어로화이바	식품

성분 및 원료

번호	성분 및 원료	비고
1	역당과당	
2	폴리덱스트로스	
3	감귤과당	
4	구연산	
5	구연산칼슘나트륨	
6	오렌지향	HKS-0431
7	오렌지향	HK-18191
8	비타민 C	
9	감귤추출물	
10	락톰	JS-15997
11	정제수	

3

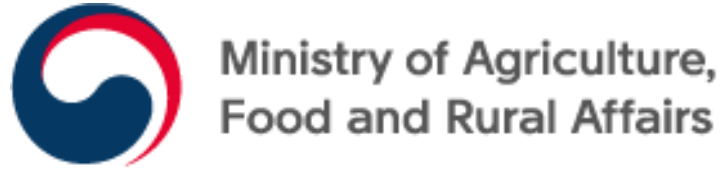
4

성분 및 원료에 "락톰" 포함 → NON VEGAN 결과 송출

- ① 관심 제품 발견
- ② 품목신고번호 및 제품명으로 검색
- ③ 원재료 API 통하여 플랫폼 내 검색 결과 제공  
→ 동물성 성분 및 원료 감지
- ④ 해당 성분 및 원료 정보 + 섭취 가능여부 표시

## Education camp program





서울대학교  
SEOUL NATIONAL UNIVERSITY



차세대융합기술연구원  
ADVANCED INSTITUTE OF CONVERGENCE TECHNOLOGY



FOODPOLIS  
한국식품산업클러스터진흥원



SEOUL NATIONAL UNIVERSITY  
HOSPITAL

# BRINGING PERSONALIZATION TO THE MASSES







**Pharma**



**Skin Care**



**Personalized  
Nutrition**

**49 Food**



Barcelona



New York



Beijing



Tokyo



Top emerging  
health & wellness  
startup



## THE TOP 5 KITCHEN ROBOTICS & SMART APPLIANCES COMPANIES

THE TOP 5 GLOBAL SUCCESS STORIES FROM THE KITCHEN  
ROBOTICS & SMART APPLIANCES CATEGORY

IN PARTNERSHIP WITH



NEOM

SUSTAINABLE DEVELOPMENT **GOALS**

**12** RESPONSIBLE CONSUMPTION AND PRODUCTION

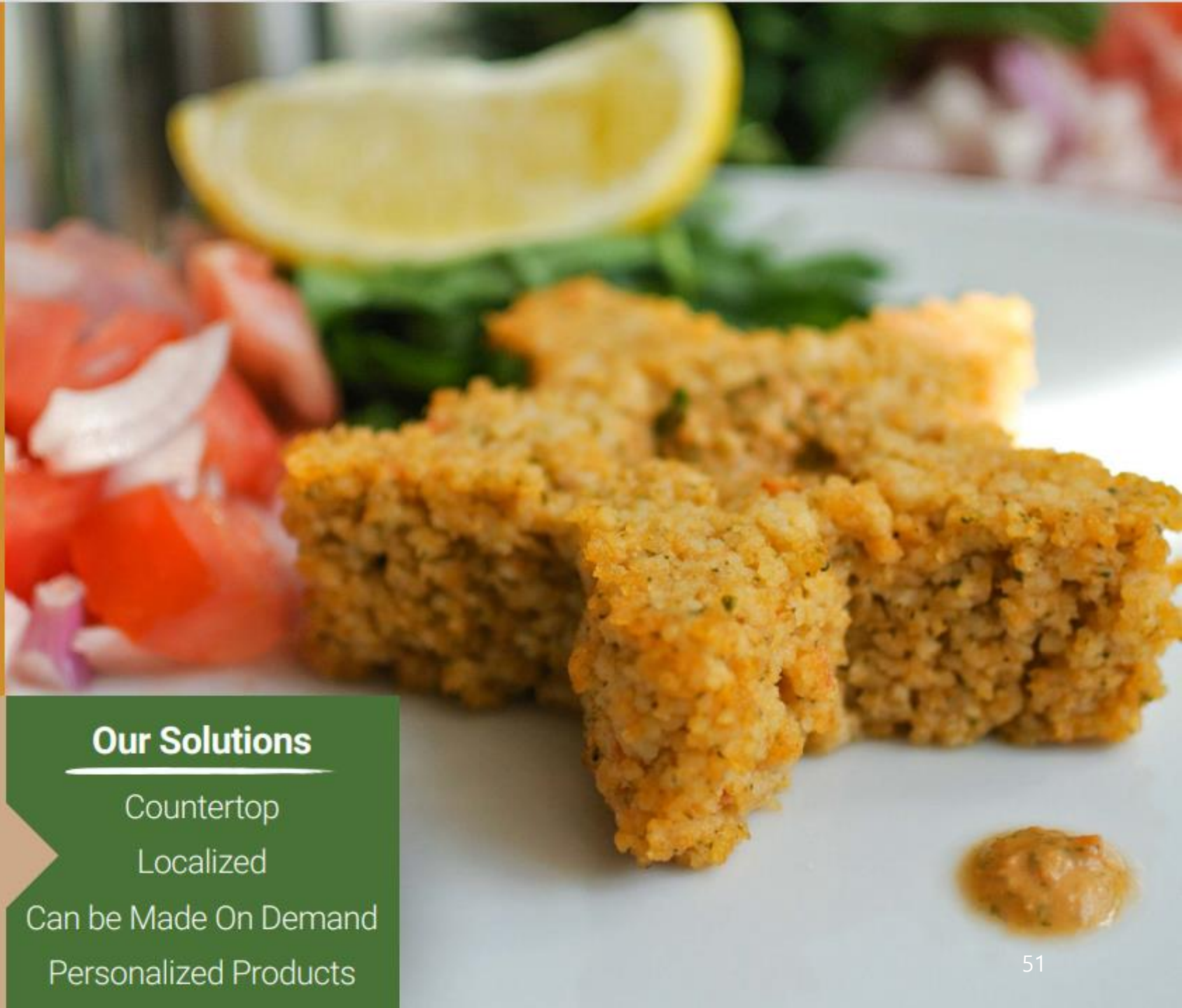


**Factory**

Large  
Centralized  
Pre-made  
Mass Market Products

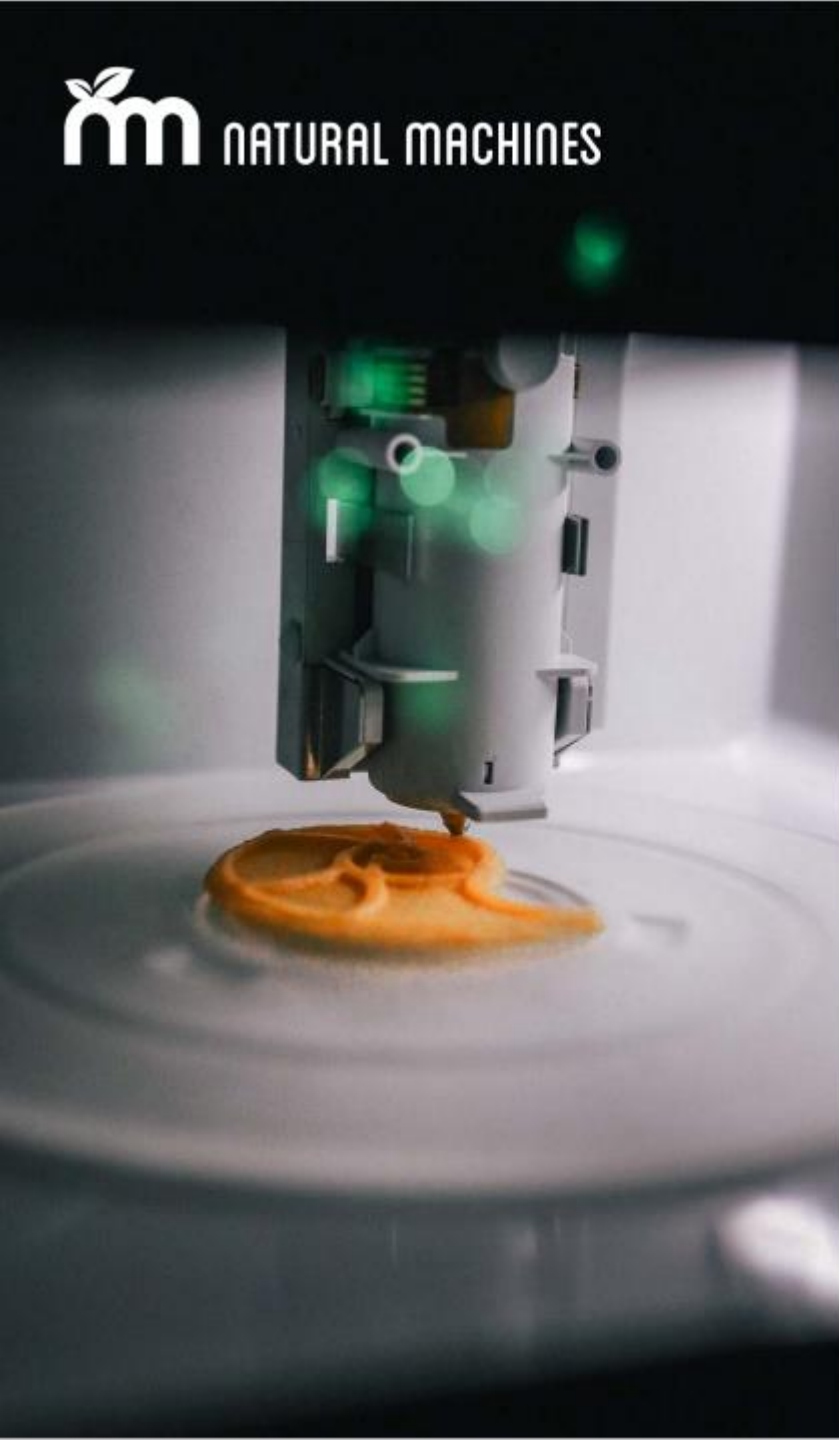
**Our Solutions**

Countertop  
Localized  
Can be Made On Demand  
Personalized Products











VS













LYNETTE KUCSMA  
Co-Founder



# VEGEMMI



# VEGEMMI

## INTRODUCING "THE HAPPY MEAL" OF THE VEGGIE WORLD!

VEGEMI, A GOOD TUMMY BACTERIA LIVES INSIDE  
OF YOU, AND ALSO IN HIS VERY OWN APP ☆

VEGEMI GETS SUPERPOWERS  
WHEN YOU FEED HIM FRUIT & VEGGIES,  
& GETS KIDS AROUND THE WORLD EXCITED TO EAT THEIR  
"5 A DAY" LEADING TO CLIMATE FRIENDLY DIETS.

THE APP RECOGNISES REAL FRUITS & VEGETABLES & COMBINES  
THEM WITH APPROVED HEALTH CLAIMS.





# Veganni

## COMBINES PLAY + TECH + ANIMATION

...educating young children about nutritious & sustainable food choices, featuring;

GAMIFICATION

FRUIT & VEGGIE RECOGNITION

APPROVED HEALTH CLAIMS

& IS FREE FOR USERS TO DOWNLOAD



# THE PROBLEM

THE PROBLEM IS CHILDREN'S LOW VEGGIE & FRUIT CONSUMPTION AND HIGH ULTRA-PROCESSED FOOD CONSUMPTION. THIS IS LEADING TO VARIOUS PHYSICAL AND MENTAL HEALTH AND ENVIRONMENTAL PROBLEMS.

## HEALTH:

POOR MENTAL HEALTH  
CHILDHOOD OBESITY  
TYPE 2 DIABETES  
DIET-PREVENTABLE ILLNESSES  
LOWER MICROBIOME DIVERSITY

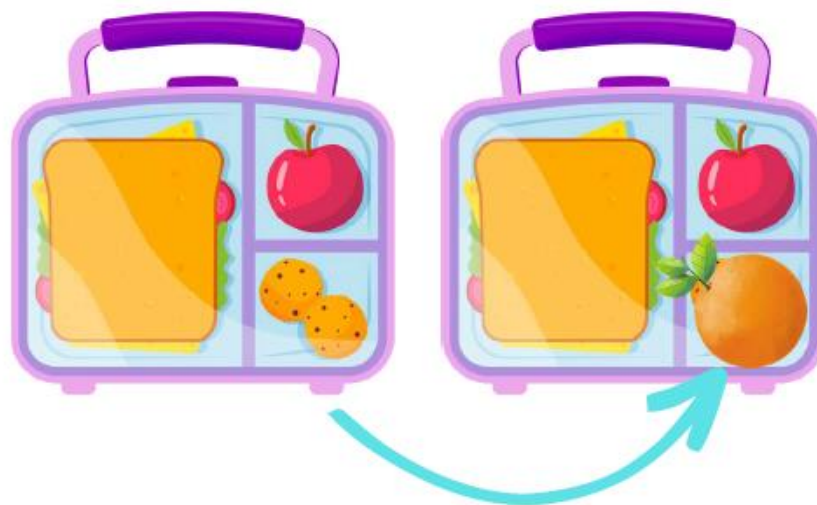
## CLIMATE & ENVIRONMENT:

ULTRA-PROCESSED FOOD  
CONSUMPTION LEADS TO  
INCREASED CO2 EMISSIONS  
&  
DECREASED PLANETARIAN  
BIODIVERSITY



# WAGNI

**IN AVERAGE, IF WE SWOP ONE PORTION (66G) OF ULTRA PROCESSED FOODS TO ONE PORTION OF FRUITS OR VEGETABLES (66G) DAILY, WE DECREASE CO2 EMISSIONS WITH 100.92 KG CO2 EQ / CHILD / YEAR AND DECREASE TYPE 2 DIABETES RISK W/ 25%**



BASED ON: IN AVERAGE FRUIT & VEGETABLES HAVE CO2EQ EMISSIONS OF 1.084/G, AND PROCESSED FOODS (CHIPS, COOKIES, FRIES, CHOCOLATE) HAVE CO2EQ EMISSIONS OF ON AVERAGE 5.17/G. THESE CO2 EQ VALUES ARE BASED ON VALUES ESTIMATED IN NETHERLANDS (WITHOUT TRANSPORTATION).  
SOURCE: [HTTPS://FOODFOOTPRINT.NL/](https://foodfootprint.nl/)



# VEGEMI 1.0

VEGEMI MVP IS ON THE MARKET SINCE 06/22 WITH VERY PROMISING FIGURES AND EXCITED END USERS.

WE HAVE STRONG INTEREST FROM EXISTING RETAIL CUSTOMERS AND POTENTIAL CUSTOMERS – ONCE THE GAMIFICATION & INTEGRATIONS ARE ON PLACE TO CREATE THE ECOSYSTEM TOGETHER: VEGEMIVERSE



# VEGEMIVERSE

# FIXING THE WORLD THROUGH B2B2C PARTNERSHIPS

## RETAIL -

SCALABLE LICENSE MODEL TO INCREASE FRUIT &  
VEGGIE SALES & CREATE SOCIAL IMPACT  
+ DATA INSIGHTS ON CONSUMER BEHAVIOUR

## FOOD BRANDS -

COLLABORATION WITH FOOD BRANDS OFFERING  
HEALTHY & SUSTAINABLE CHOICES



# THE VEGEMIVERSE ECOSYSTEM FOR RETAIL

A Scalable Licence Model / ACTIVE ON THE MARKET / PILOT PHASE

## VEGEMI IN-STORE/WEB STORE



Licensed designs for in-store experience and fruit & vegetable promotion.



Rights to Vegemi app & brand for use in events, marketing & PR.

Vegemi 1.0 launched 06/22.

## VEGEMI AT HOME



Retailer specific content in-app with photo recognition connecting the customer's in-store & at home experience

# PERSONALISED NUTRITION PIPELINE - BUILDING AI MODEL



FRUIT & VEGETABLES VARIETY & "VEGEMI MICROBIOME" COUNT



BUILDING AI TO SUPPORT PERSONALISED FRUIT & VEGGIE  
INTAKE, VARIETY, OFFICIAL GUIDELINES CONCERNING  
CHILDHOOD NUTRITION - AND CO2 EMISSION DECREASE!

# VEGEMIVERSE 3.0 PERSONALISED PRODUCTS FOR ONLINE RETAIL STORE

## VEGEMIVERSE PERSONALISED VEGGIEBOX



Personalised fruit&veggie boxes, based on real usage data from the Vegemi-game and/or shopping data (through AI model)

## VEGEMIVERSE AT HOME



The box includes weekly fruit&veggies based on personalisation & nutrition, including educational inspiration + gamification for kids.

# APP GAMIFICATION PIPELINE



Real fruit & vegetables are needed to open new words in the game!

## VEGEMI'S WORLD EVOLVING



### VEGE METER

Vege meter shows the status of Vegemi's adventure energy.

With the adventure energy Vegemi is able to open new worlds.



### FRIDGE

The fridge reminds the player of the importance of eating veggies. The fridge is a different game track that evolves with new friends coming in.



### WORLD 2.0

Different worlds have their own veggie related stories, games and tokens.

#### Worlds are:

- Brains
- Gut
- Eyes
- Heart
- Muscles
- Bones
- Immunity



# VEGEMIVERSE



# IN PIPELINE: INTEGRATION DATA FROM VEGEMI TO RETAILER LOYALTY APP

CHILDREN VEGGIE FAVORITES



PARTNER RETAILER



DATA EXCHANGE AND INTEGRATIONS WILL CREATE NEW  
PRODUCTS, HEALTHY FOOD SALES & IMPACT DATA FOR ALL  
PARTIES  
INVOLVED IN THE ECOSYSTEM!

# Feedback from the parents:

"(Name of the child) has started to eat carrots from her soup!"



"They (the children) competed at home who would eat apples fastest to get the superpowers of it fastest!"

"(Name of the child) did not eat all of her candies as Vegemi does not like sugar too much"

"1st thing in the morning (name of the child) wants to feed his Vegemi with real fruits and veggies, and he asked us to make "Vegemi-soup" that was cauliflower soup - which he enjoyed!"

"(Name of the child) got a little tantrum as we didn't have kale at home 😊 - since when has she even known what is kale!"







may the  
**VEGGIE FORCE**  
be with you

MAR. 2023

# PERSONALISED FOOD FOR PATIENTS COST AND CARE

– Jon Henningsen  
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# MOVESCA - WHO ARE WE?



Jon Henningsen  
CEO (Founder)



Jess Riis Jensen  
COO (Co-founder)



Mai Hoberg Nielsen  
Usability & Impl. Lead



Charlotte Nørregaard  
Quality Mngt.



Carsten Andersen  
Development lead



Alina  
Development  
(UX & design)



Olexander  
Development  
(Backend)



Mike  
Development  
(Frontend)



## Chairman: Ole Strange (Investor)

- US Country Manager Ambu A/S
- CEO Dansac A/S
- Chairman OJ Electronics A/S

## BM: Søren Vang Hansen (Investor)

- PA Consulting Group, IBM, Ernst & Young etc.

## BM: Jes Henningsen Doctor Physics & PhD (Investor)

- University of Cph, Uni. of Maryland etc.

-----  
Group of eight BA's with multiple investments

# THE PROBLEM

➤ **Problem:** One in five hospital patients are mal nourished and the same applies for nearly half the residents in nursing homes and elderly receiving meals from the municipality

➤ **Consequence:** Mal nourished elderly are committed to hospital twice as often and stay four times as long as the average patient – and require significantly more support after hospital admission



➤ **Cause:** The primary nutrition challenges are the lack of focus, knowledge and resources in the health care system

➤ **Effect:** Mal nourishment reduce the effect of both hospital treatment and rehabilitation significantly

# MINMENU – HOLISTIC APPROACH

MinMenu has been developed in corporation with researchers from Herlev Hospital, Copenhagen University and the Capital Region of Denmark. The solution has been clinically tested in multiple research projects.

MinMenu optimises care by offering food which automatically comply with care plans and nutrition guidelines for people with special dietary needs.

MinMenu improves self mastery, physical health and quality of life for people with nutritional challenges.

MinMenu supports effective treatment reducing the risk of frequent and costly hospital readmissions.



# MINMENU – HOLISTIC APPROACH





## Patients & relatives

- Health and Quality of Life



## Nurses & dieticians

- Realtime overview
- Mal nutrition & dehydration – not on my watch!



## Management

- Readmissions



## Kitchen

- Food waste

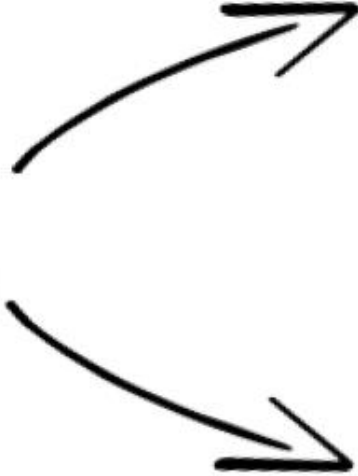
# INFRASTRUCTURE



SaaS



Enterprise Software



Health and Quality of life



Reduced food waste



Process quality



# CASES – DOES IT WORK?

## **Gødstrup Hospital (Production)**

**25,000 orders / month**

**80,000 dishes / month**

## **Odense Municipality (Production)**

**1,100 citizens – Meals on Wheels**

**125 carehomes – 1,500 citizens**

**12 kindergardens**





# THANK YOU

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# Open Talk



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# Wrap Up & Closing



# Next activities

## Global Foodture mission Thailand, 22 - 26 May

Including company visits, matchmaking, networking, visiting the Thaifex Anuga



## Online Activities

- 5 April  
International Training Program & Matchmaking Singapore
- 20 April  
Workshop 7: Plant-based and alternative proteins, new ingredients: source of innovation
- 11 May  
Workshop 8: Importance of food waste reduction in the supply chain and valorising side streams like brewer spent grain

# Matchmaking Events

- Prepare for the event by improving your profile
- Fill in the Marketplace
- Browse through the Participants and/or Marketplace
- Find relevant meeting partners
- Request meetings - or be booked for meetings
- Wait for acceptance - sometimes also no thank you
- Have the meeting on the day



# Matchmaking beyond events

- **Long term matchmaking**
- You can book and have meetings beyond the dedicated events throughout the entire period from October 2022-October 2023.
- Eg. You e-meet a participant at one of the workshops or trainings, then you through your profile then request a meeting with the person. Wait for a reply and if positive, then book and have the meeting



# Thank you and see you around For more events, visit the **Global Foodture community platform**



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