Nutrition Challenge: Revolutionizing Nutrition in Developing Countries

Team 10

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Brief introduction to the team

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BACKGROUND AND CASE FOR CHANGE

Around 45% of deaths among children under 5 years of age are linked to undernutrition in LMICs

Malnutrition overview

Malnutrition refers to deficiencies, excesses, or imbalances in a person’s intake of energy and/or nutrients [1]

Risk factors (non-exhaustive list)

1. Unhealthy diets and poor nutrition
2. Lack of access to nutritious food
3. Inadequacies in intake of vitamins and minerals
4. Imbalance between energy consumed and energy expended
5. Geographical challenges hindering favorable conditions for plant growth
6. Poor infrastructure
7. Nomadic lifestyle
8. Lack of awareness of consuming nutritious food
9. Poverty which leads to the prioritization of other needs

Symptoms (non-exhaustive list)

- Wasting - Low weight-for-height due to severe weight loss
- Stunting - Low height-for-age due to chronic or recurrent undernutrition
- Underweight - Low weight-for-age due to stunting and wasting
- Overweight & diet-related NCDs – Obese due to micronutrient deficiencies or micronutrient excess

Case for Change

Adults population in 2014 [1]

<table>
<thead>
<tr>
<th>Underweight</th>
<th>Overweight / obese</th>
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<tbody>
<tr>
<td>462 mil</td>
<td>1.9 bil</td>
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Children under the age of 5 years in 2016 [1]

<table>
<thead>
<tr>
<th>Underweight</th>
<th>Overweight / obese</th>
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<tbody>
<tr>
<td>155 mil</td>
<td>41 mil</td>
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45% deaths in LMICs due to undernutrition

Source: [1] WHO Malnutrition Fact Sheet

NCDs: Noncommunicable diseases; LMICs: Low- and middle-income countries
We have gathered inputs from 3 key public health experts and a local individual to develop the solution

OUR APPROACH

Prof. Dr. Kurt Gedrich, Germany
- Head of Public Health Nutrition, ZIEL - Institute for Food & Health, Central Scientific Institutions, Technical University of Munich

Dr. Claudia Schupp, Germany
- Professor for Global Health, Security and Technology, Munich School of Public Policy, Technical University of Munich

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Ms. Khulan, Mongolia
- Undergraduate student, Mongolia State University, Ulaanbaatar

Interviews are then complemented by desktop secondary research before formulating creative solutions
## OUR RECOMMENDATIONS

The WellLife Hub aims to turn societal challenges in Mongolia into opportunities, improving overall health outcomes

The WellLife Hub app aims to address malnutrition issues in Mongolia and drive the growth of Phronesis business by offering a comprehensive health and nutrition solution

### Market prioritization | Mongolia is prioritized based on existing market coverage

<table>
<thead>
<tr>
<th>1</th>
<th>Launch “Nourish to Flourish” public awareness campaign</th>
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<tbody>
<tr>
<td>• Publish educational nutritional content, in coordination with key advocates and collaborators</td>
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<tr>
<td>• Highlight patient experience sharing and economic benefits of taking supplements to improve health outcomes</td>
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<tr>
<td>• Seek to influence behavior through “Nourish to Flourish” campaign</td>
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<table>
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<tr>
<th>2</th>
<th>“Engage to Change” to expand Phronesis footprint among HCPs</th>
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<tr>
<td>• Work with medical institutions and trade associations to establish Mongolian advisory board</td>
<td></td>
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<tr>
<td>• Organize “Engage to Change” structured outreach to HCPs</td>
<td></td>
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<tr>
<td>• Increase disease / deficiency detection through referral</td>
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<tr>
<th>3</th>
<th>Diversify Phronesis’ business to future farming solutions</th>
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</thead>
<tbody>
<tr>
<td>• Offer individualized farming solutions to empower Mongolians to cultivate their own nutritious food</td>
<td></td>
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<tr>
<td>• Partner with emerging agriculture or tech startups specializing in cutting-edge farming solutions</td>
<td></td>
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<tr>
<td>• Build the capacity for malnutrition problems monitoring, data collection and analysis</td>
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</table>
Our recommended initiatives cover end-to-end sales funnel toward the uptake of supplements and treatments

1. Launch “Nourish to Flourish” public awareness campaign
2. “Engage to Change” to expand Phronesis footprint among HCPs
3. Offer alternative nutritional solutions to customers through future farming solutions
**OUR RECOMMENDATIONS**

“Nourish to Flourish” campaign publishes educational content, in collaboration with key advocates and experts

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**Educate**
Create nutritional education content, with a strong focus on digital media, which affiliates can use to raise awareness and empower patients.

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**Advocate**
Empower key opinion leaders, who are supplements-friendly to advocate for the importance of health screening through digital marketing contents.

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**Collaborate**
Build a winning coalition, by collaborating with Mongolian medical institutions, nutritional society and association to establish legitimacy and widen the reach of the campaign.

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Healthcare is no longer a privilege. Let’s nourish your body to fight against diseases. Eat smart, live well.

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Source: International Union of Nutritional Sciences; Mongolian Association Of Nutrition And Food Service Management; Mongolian Food Safety And Nutrition Society; Mongolian Naran Society; Mongolian Dietetic Association.
A multidimensional partnership is the key to address malnutrition issues and expand Phronesis business in Mongolia

**OUR RECOMMENDATIONS**

**Initiative 1**

1. F&B companies and researchers partnered with government to **rollout nutritious food** to children, raising awareness and improving quality of life.

2. Chair of the family welfare (TP-PKK) initiated a program in SW Papua, providing **free Vitamin A supplements to children aged 6 to 59 months**.

3. The government launches **Weekly Iron and Folic Acid Supplementation (WIFS)** program in Karnataka to combat anemia among adolescents.

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**Use of red palm oil in local snacks can increase intake of provitamin A carotenoids in young aborigines children: a Malaysian experience**

- F&B actively partner with the government to promote nutrition awareness through activities (e.g., cooking competitions and distribution of books on nutrition and nutritious products.)

- Malaysian researchers introduced creatively **modified, nutritious foods**, such as use of red palm oil in local snacks to increase provitamin A carotenoids among the indigenous children.

**Vitamin A Month for children campaign launched in SW Papua**

- The program is a **collaborative effort** with the government to rollout receive essential Vitamin A to infants and toddlers to prevent deficiencies.

- Vitamin A capsules are available at various government health facilities, including integrated health posts (posyandu) and local health centers, emphasizing accessibility for parents.

- This addresses the concerns of vitamin deficiency in 2021 National Nutritional Status Survey, improving nutritional intake among babies and toddlers.

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Building strong connections with HCPs is crucial to increase Phronesis’ supplements accessibility to patients

**Simplified supplements ecosystem**

- Regulator approve new supplement application if it is deemed safe and effective
- HCPs recommend supplements for patients
- Patients consult HCPs on their medical conditions
- Government seeks opinion from top HCPs on pool procurement
- Establish medical / nutrition / dietitians advisory board
- Organize “Engage to Change” structured outreach to HCPs
OUR RECOMMENDATIONS

“Engage to Change” Program keeps HCPs informed and updated with supplements and alternative treatment options

**“Engage to Change” Program**

- **A CME platform to engage healthcare professionals** on Phronesis supplements as the new standard of care in the future
- **Organize in collaboration with medical and patient organizations** such as MNUMS, Mongolian Naras, etc.
- **Eligible for professional development points** to attract healthcare professionals
- **Reinforce products value story** by providing latest data evidences in the area of disease burden, effectiveness, safety, etc.
- **Capitalize on the conferences to capture a pool of healthcare professionals**, and follow up following initial outreach

**Amplify the outreach**

- **Publish articles and release press statement** on the benefits of supplements to address malnutrition issues on media and international platforms, such as Sonos Book, UB Post
- **Implement social media campaign** with adapted Phronesis supplements content to capture HCP attention prior to the medical conferences
- **Feature unbranded video** with third-party KOL in series of posts during and immediately following meeting to support data update
- **Debut HCPs in social media animations**, including to audiences who are looking for new content but may not be directly engaged

CME: Continuing Medical Education, MNUMS: Mongolian National University of Medical Sciences
While supplements offer a short-term solution, growing own nutritious food will be the sustainable and long-lasting answer

**OUR RECOMMENDATIONS**

**Future farming solutions**

Population
Want the best solution to improve health outcomes

Industry
Need to make return of investment from businesses

Government
Want to resolve malnutrition issues in the country

Phronesis provides not only supplements for individuals but also offer **future farming solutions**, thus balancing the interests of the people, industry and government

**Market challenges**

- Skepticism about the effectiveness and safety of OTC supplements
- Differentiating OTC supplements becomes challenging due to competition saturation
- Shifts in consumer preferences towards natural or organic alternatives, leading to challenges to adapt evolving trends

Source: [1] *Future of Food Security is Agritech*; OTC: Over the counter
## OUR RECOMMENDATIONS

### A strategic partnership between a vertical farming company and Phronesis can thrive through a symbiotic relationship

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**PIF And AeroFarms Sign Joint Venture Agreement To Build Indoor Vertical Farms In Saudi Arabia And The Wider MENA Region**

- **Amazon signs pact with ICAR to empower farmers enrolled under Kisan store**

**OUR RECOMMENDATIONS**

**Shared responsibilities** in generating profits with the partners:

- **Collaborative Product Development**: Jointly create products combining agricultural and supplement expertise
- **Equal Capital Investment**: Share financial contributions for infrastructure, tech, and marketing
- **50:50 Profit Sharing**: Agree on a clear and equal profit-sharing structure.

**Performance-based arrangement** often seen in affiliate marketing or sales partnerships:

- **Product Collaboration**: Vertical farm supplies, Phronesis sells
- **Commission Structure**: Phronesis earns a percentage based on sales
- **Flexibility**: Allows for performance-based, scalable collaboration

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**First licensing deal for vertical farming infrastructure**

New Delhi E-commerce firm Amazon India on Friday signed an agreement with the government’s premier agri-research body ICAR to

**UK-based vertical growing technology business, Vertical Future, has announced the launch of their new, fully automated, vertical farming system in a licensing deal set to revolutionise the production of food across the globe.** The company’s new system, comprised of both hardware and software components, offers a 172% increase in output per m² compared to other traditional technologies available on the market.

**This model allows for revenue generation without a direct profit-sharing arrangement**:

- **Intellectual Property License**: License vertical farm’s brand, tech, or techniques
- **Fees or Royalties**: Phronesis pays licensing fees or royalties
- **Clear Terms**: Agreement outlines usage terms and restrictions

WellLife Hub integrates nutrition, sustainable living, and healthcare collaboration, improving users health outcomes

OUR RECOMMENDATIONS

Welcome and Onboarding:
• Introduction: Users are welcomed to the "WellLife Hub," emphasizing a holistic approach to health
• Onboarding: Users create profiles, specifying health goals and preferences

Nourish to Flourish Campaign:
• Highlights: The homepage features the ongoing "Nourish to Flourish" campaign
• Interactive Feed: Users explore nutritional content, success stories, and collaborations with medical societies
• Collaboration Hub: A dedicated space allows users, medical societies, and healthcare professionals (HCPs) to share insights and experiences

Promote Vertical Farming Opportunities:
• Explore Beyond Supplements Section: Users discover the benefits of alternative nutrition through vertical farming
• Virtual Farm Tours: Engaging content includes virtual tours of vertical farms and educational material
• Planning Tools: Users access tools to plan and set up their vertical farming at home

Engage to Change Program:
• Exclusive Program Notification: HCPs receive invitations to join the "Engage to Change" program
• Program Features: HCPs participate in virtual workshops, access educational resources, and collaborate in a dedicated forum
• Referral System: HCPs efficiently refer patients to the app for personalized health plans

Personalized Health Hub:
• User Dashboard: A centralized hub displays personalized content, progress tracking, and recommendations
• Shopping Integration: Seamless access to purchase supplements or vertical farming equipment directly through the app
• Community Interaction: Users share experiences, recipes, and tips within the app's community

Recognition and Rewards:
• Incentive System: Users and HCPs earn rewards for active participation and positive health outcomes
• Recognition Features: Acknowledgment and celebration of milestones within the WellLife community
LESSONS LEARNED THROUGHOUT THE PROCESS

3 key lessons that we have learnt from the program

1. We have learnt to set ambitious goals, make timely decisions, and think about strategic actions for enduring success

2. We have learnt on the importance of championing boldness, revolutionary thinking, and creativity as drivers of innovation

3. We have learnt to prioritize understanding, empathy, and inclusivity, cultivating collaboration and compassionate leadership
Thank You

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