



Dataware for  
Food Services

# Nuvilab Solutions Catalog 2024

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Service Powered by Vision AI  
Solutions for Food Services

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# Upgrade your food service with data-driven insights



Designed for efficiency and sustainability, we connect data-driven insights **from fork to farm**



Achieve Net-Zero



Optimize Cost



Promote Healthy Eating



Manage Diet



Increase Satisfaction



Reduce Food Waste

Number of food dataset

41m+

Model accuracy

95%

Scanning time

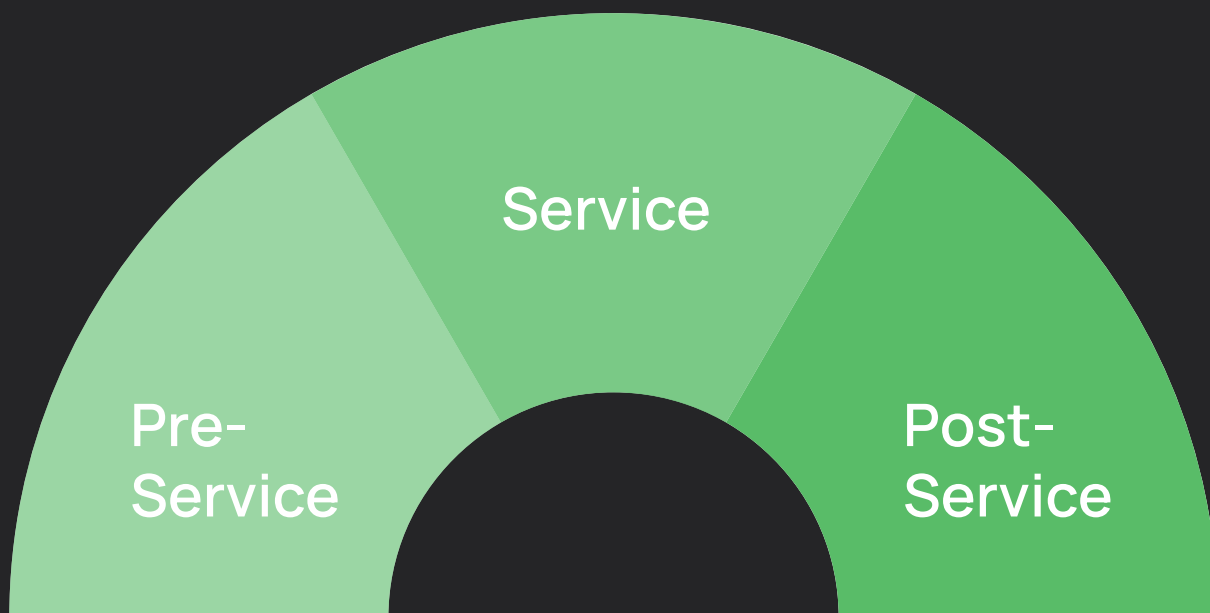
0.97s

Cross-verification

24hrs

# End-to-End Food Service

Each food service site is a unique ecosystem, so we design exclusive solutions tailored to your needs



## Pre-Service

How much of what ingredients to prepare

## Service

Analyzing what, when, and how much an individual consumes

## Post-Service

Analyzing what, why, and how much food is left over

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## Data solution for your food service

Individualization

Optimal Serving

Best Quality Meals

# What does your Food Service need?

Nuvilab's AI Assistant Managers are ready to help your business

Efficient Cost Operation	<b>Kitchen Manager</b>	Overproduction & food inventory analysis solution to optimize material purchase and excess cost  <small>Compatible with AI Food Scanner Pro</small>
Satisfying Menu Options	<b>Hall Manager</b>	Leftover plate waste analysis solution to identify customer meal preferences and offer tailored suggestions  <small>Compatible with AI Food Scanner Air</small>
Personal Nutrition Management	<b>Care Manager</b>	Personal nutrient intake management and consumption analysis to provide pattern insights & dietary recommendations  <small>Compatible with AI Food Scanner Mobile app &amp; CGM</small>
Sustainable Solution	<b>ESG Manager</b>	Integrated solutions for food-borne carbon emission management to promote environmental sustainability  <small>Compatible with All scanner models</small>

# Kitchen Manager

Analyze **overproduction** to reduce unnecessary ingredient purchases and increase cost efficiency

Recommended for

Hotel & Resort

Catering & Buffet

Cruise

Compatible with

AI Food Scanner Pro

## How much food did you overproduce yesterday?

Knowing when and how much of what is left is the essential key to reducing food waste.

Kitchen Manager analyzes the food served but not consumed (or overproduced), suggesting menu compositions and appropriate portions.

Reducing unnecessary purchases and acquiring higher-quality ingredients within the same budget increases cost efficiency.

### Operator

"Without any additional actions, the system automatically measures and analyzes the data, helping us keep track of and optimize material purchases."

### Diner

"Even with the same menu, I feel delighted to eat because the ingredient quality seems significantly fresh and improved."

## How it works



### 1. Data collection

AI Food Scanner Pro installed in the kitchen

Track overproduction data in real time



### 2. Data analysis

Identifies type & quantity of overproduction

Converts 3D data into weight measurements



### 3. Data insight

Web dashboard for operation optimization

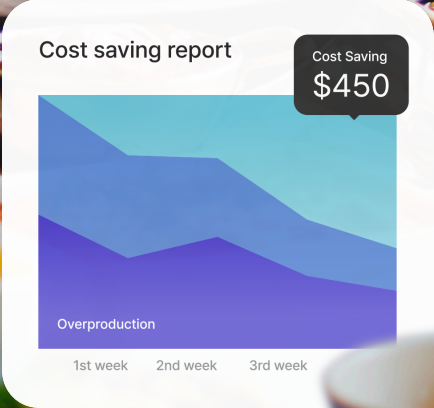
Support kitchen operators with recipe refinement



Comparison of meal counts



Suggestions for appropriate portions



Client Case

## Aramark

After implementing Kitchen Manager, we observed a **6%** decrease in ingredient cost and a **11%** reduction in food waste per portion.



# Hall Manager

Analyze **leftovers** to help formulate menus with higher preference & satisfaction

Recommended for

College & University

Workplace

Food Court

Compatible with

AI Food Scanner Air

## Should a menu with a 'meh?' rating be served again?

It is challenging to recall and evaluate menu preferences for the diners. Yet, the leftover waste on plates after a meal reveals everything.

Hall Manager analyzes the leftovers on diners' plates to understand highly preferred and satisfying menus while suggesting menu compositions.

Continuously offer menus that diners prefer and enjoy will increase their loyalty to the service.

### Operator

"Higher customer return rates made our revenue much more stable."

### Diner

"I tend to visit more often because I am satisfied with the menu composition and the quality."

## How it works



### 1. Data collection

AI Food Scanner Air installed at the tray return area

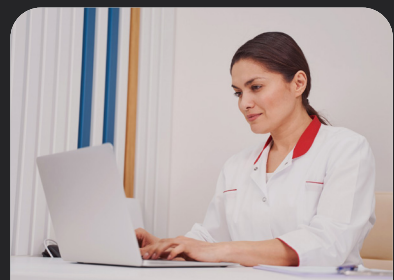
Tracks leftovers data in real time



### 2. Data analysis

Identify the type & quantity of leftovers

Measure the average mealtime of diners



### 3. Data insight

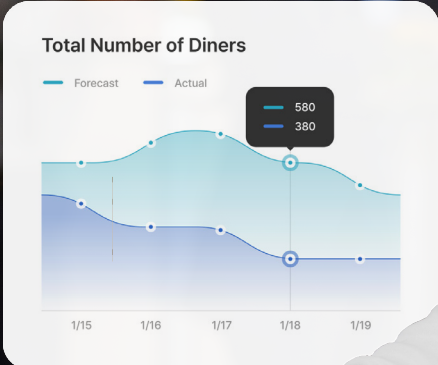
Web dashboard for operation optimization

Support nutritionists & kitchen operators





Daily average of food distributed and returned



Least Preferred Menu

Breakfast	1/19 · A	
Classic Meatballs		829g
Breakfast	1/18 · B	
Club Sandwich		746g

Menu classification on preference & satisfaction

Client Case

Ministry of National Defense  
Republic of Korea

With **Hall Manager**, we identified that **10%** of the served rice was leftover daily. Adjusting serving sizes based on this data led to significant meal cost savings of **\$10M**.



Ministry of National Defense  
Republic of Korea

# Care Manager

Track **individual intake** for precise nutrient care and systematic health management

Everyone recommends a specific diet, but is it really good for me?

Everyone has unique nutritional and caloric needs, especially for growing children and patients requiring precise care.

Care Manager analyzes nutritional intake by assessing their individual food consumption for growth and precise management.

Recommended for

Day Care & Kindergarten

Hospital

Sports Club

Compatible with

AI Food Scanner

Mobile app & CGM Continuous Glucose Monitor

## Caregiver

"Without the need for manual recording, specific nutritional data is readily available allowing full focus on care."

## Diner

"It provides insights and helps me improve eating habits, which I was unaware of, making it easier to manage my health."

## Guardian

"Even without being present with my child for every meal, the mobile platform provides insights on the daily dietary consumption and behavior."

## How it works



### 1. Data collection

AI Food Scanner installed at food counters

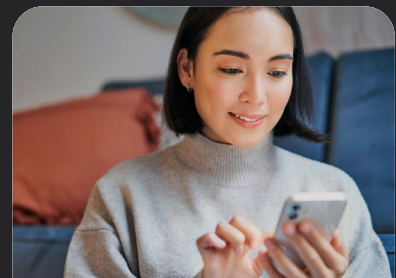
Collects data without deviating the service flow



### 2. Data analysis

Identify the type & quantity of leftovers

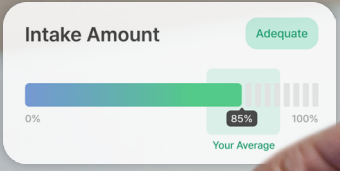
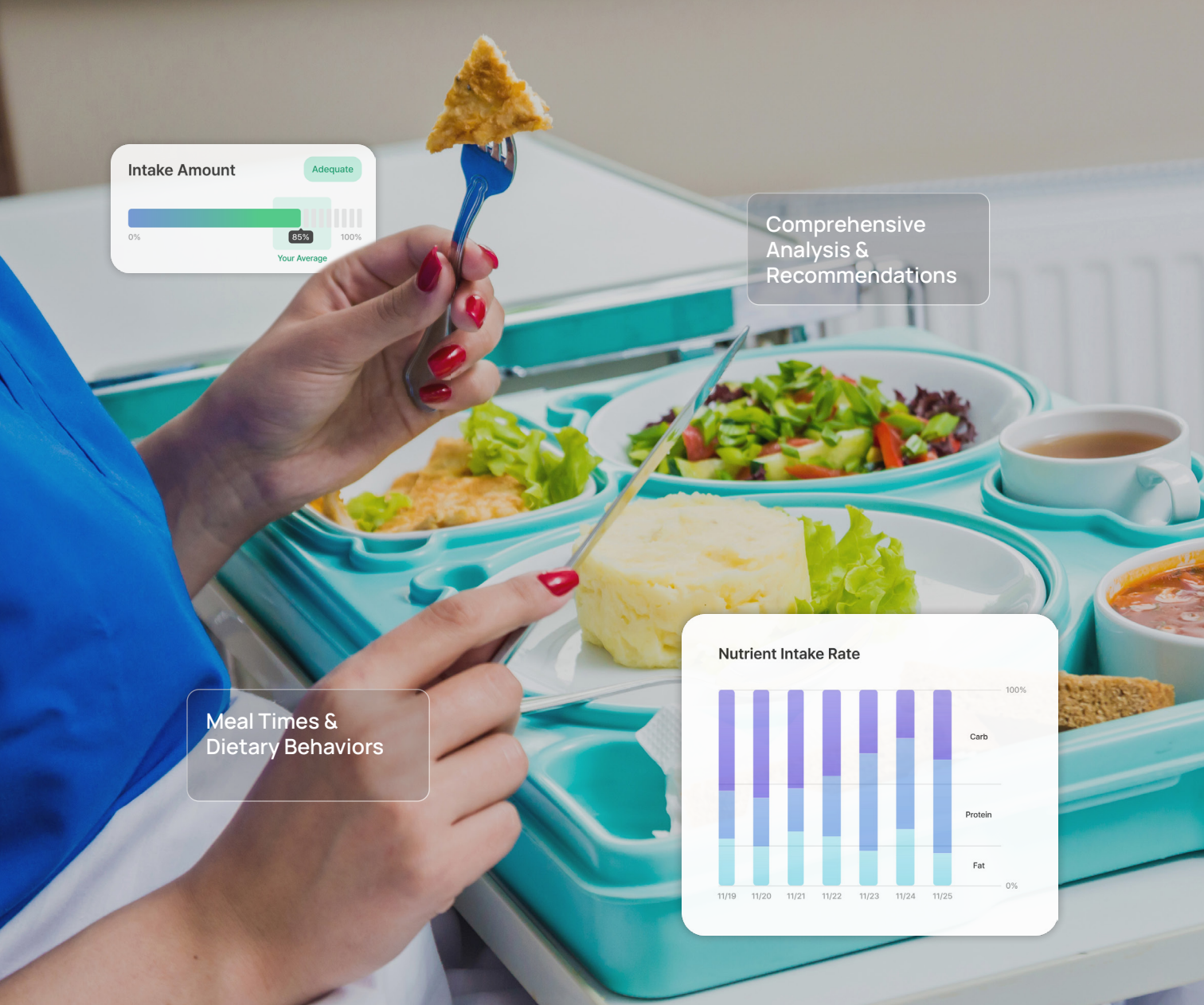
Classify macronutrients in the food served



### 3. Data insight

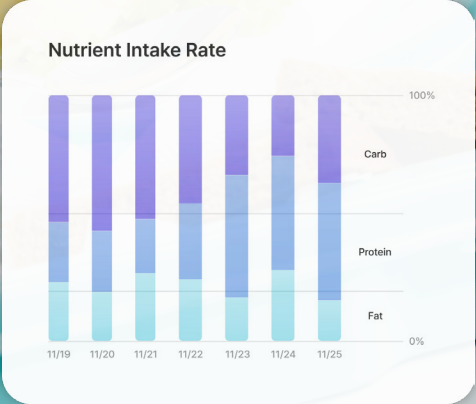
Web & mobile reports for nutrition management

Support caregivers, individuals & guardians



Comprehensive  
Analysis &  
Recommendations

Meal Times &  
Dietary Behaviors



Client Case

## Alexandra Hospital

After implementing **Care Manager**, patient nutritional intake was recorded with a **26%** higher average accuracy than manual recording.



# ESG Manager

Reduce leftovers to help manage **carbon emissions** for environmental sustainability

Recommended for

Educational Institutions

Workplace

Military

Compatible with

All scanner models

## Make and take only what you'll eat.

With visible results, it is easier to stay motivated. Seeing the impact of our leftovers on the environment is what drives change.

ESG Manager guides the voluntary reduction of leftovers by showing the status and the potential reduction of carbon emissions if these were not left.

The data promotes environmental consciousness and encourages consistent practice in daily life, contributing to a sustainable environment.

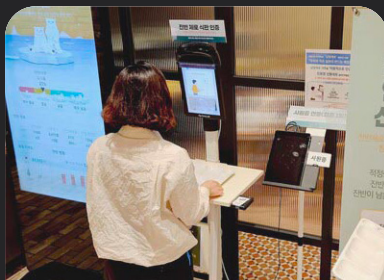
### Diner

"Being aware of the impact of my actions motivates me to leave less leftovers. Making it a habit, now I think about carbon emissions even when I leave food elsewhere."

### Corporates

"Trying to take environmental actions at a corporate level can be unmanageable and counterproductive. This easy way to reduce carbon emissions in our everyday routine raises awareness and protects the environment."

## How it works



### 1. Data collection

Compatible with all scanner models

Track leftover food from individual trays



### 2. Data analysis

Identify the quantity of leftovers

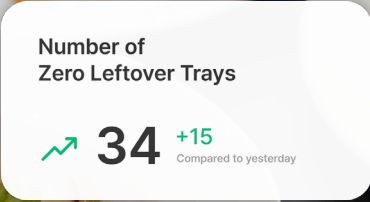
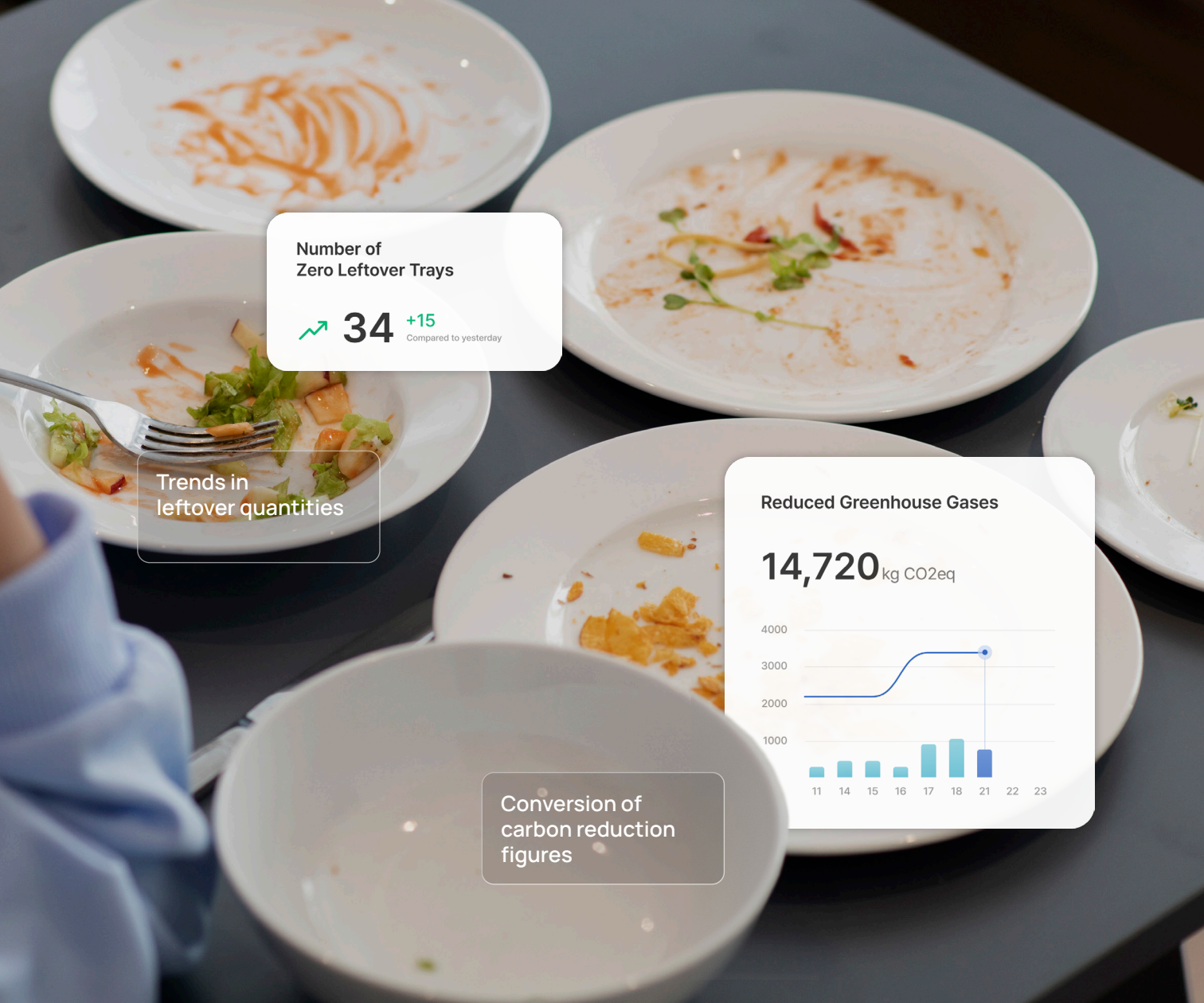
Convert the amount of leftovers into carbon emissions



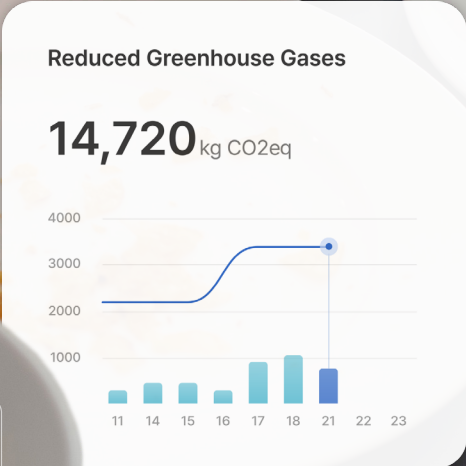
### 3. Data insight

TV dashboard updated for operation optimization

Support sustainability & ESG directors



Trends in leftover quantities



Conversion of carbon reduction figures

Client Case  
**SK Telecom**

After an internal campaign using **ESG Manager**, the number of diners not leaving leftovers in the cafeteria increased by **20%** compared to before the campaign.



# FAQ

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## Data Collection & Analysis

### **How do you analyze non-food items like bones and shells in discarded food?**

If bones and shells are byproducts, not food waste, they are not recognized as food and are analyzed as regular waste.

### **How do you scan covered or invisible food?**

Computer vision is similar to the human eye, and it is difficult for AI to analyze food that the naked eye cannot distinguish. In other words, sodium and sugar content ingredients require pre-entered values. NutriVision AI can analyze food data faster and more accurately than humans.

### **Can AI Food Scanners only analyze food in specific trays?**

AI Food Scanners can analyze food regardless of the container, such as a tray or plate. It can recognize food in our database powered with over 41 million food datasets and identify food at the ingredient level by multi-modal AI.

### **Is food data analysis conducted in real-time?**

Images captured by the scanner are analyzed in real time on our server. The timing of providing the analysis results can be adjusted according to customer requirements and analysis level. To ensure accurate data analysis, we offer a cross-verification service and recommend a regular reporting option, such as weekly or monthly.

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## Scanner

### **What is the purchase price of the AI Food Scanner?**

The pricing is based on a subscription model, and the cost varies depending on the usage environment, such as the number of diners and the solution. For example, the price differs for schools and daycare centers with vacations, military bases, and sports facilities where multiple meals are analyzed daily.

### **Can I continue to use the AI Food Scanner after purchasing it?**

Yes, the hardware is semi-permanent. Nuvilab provides data analysis solutions using the hardware, and you can use the scanner while subscribing to the solution.

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## Solution

### **Can multiple solutions be operated simultaneously?**

If the environment is suitable for installing the necessary scanners, you can simultaneously operate two or more desired solutions.



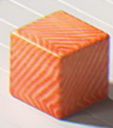
Do you have  
any more questions?

Feel free to  
ask us anything.

NutriVision AI  
NuviLab



NUVILAB  
Data



## History

Nov 2023	Korean-German CCI Innovation Award in Sustainability
Oct 2023	Korea AI Startup 100
Aug 2023	G20 Digital Innovation Startup 2 <sup>nd</sup> Prize
Jun 2023	World Economic Forum Technology Pioneer
Apr 2023	Edison Awards Food & Agricultural Advancements Silver Prize
Feb 2023	Google for Startups Accelerator Circular Economy Cohort
Jan 2023	CES Global Media Award Top 3
July 2022	Shinhan Square Bridge Excellence Award
July 2021	Korea AI Startup 100
Jan 2021	CES Innovation Award Honoree in Healthcare & Sustainability
Dec 2020	AI Grand Challenge Top 3
Jun 2020	Zero Hunger, Zero Waste Project with AWS & UN WFP
Dec 2018	Korean Ministry of Environment Grand Prize
Nov 2018	Company Founded



## Nutrition Vision Laboratory

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Learn more about  
our solutions at  
<https://nuvilab.com>

