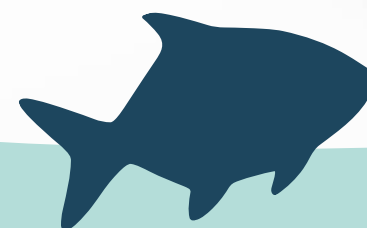
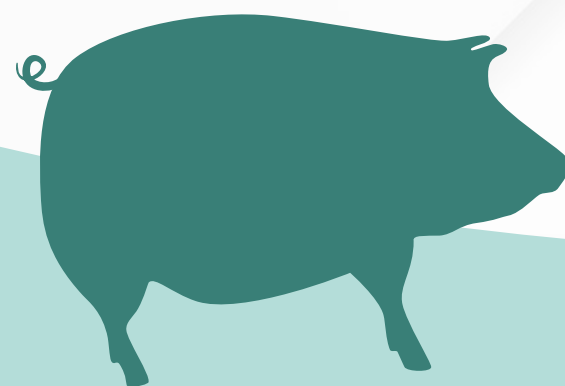
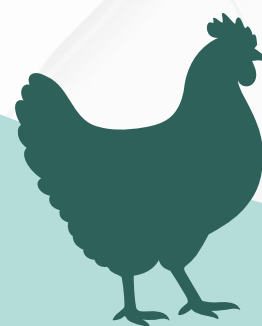
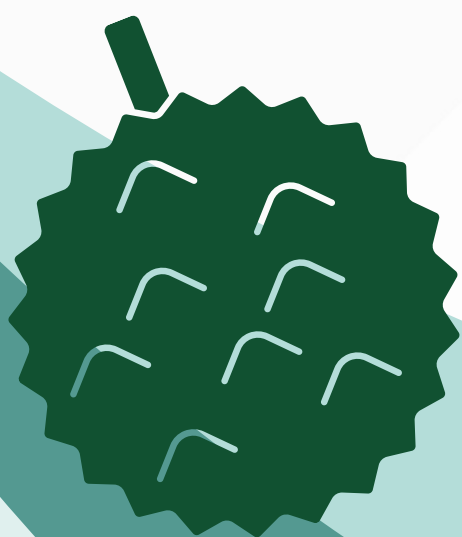




ZENX TAG

FOOD SAFETY!

WE CARE



1



Presented by

Chow Tsz Wing, Giselle

Problems

ZenxTag recognizes the major urgent issues facing society:
Lack of real-time food freshness monitoring technology

- leading to **1.3 billion tons** of food waste annually, as the food industry typically discards or returns products to distributors three months before their expiration date.



- some products may spoil before their expiration date. This risk leads to significant financial losses and damages manufacturers' reputations.

- Taxes and fines for reducing food waste.



- The **ripeness level of fruits** is difficult for consumers and even retailers to accurately assess with the naked eye, making fruits a major source of food waste

Background of Food Spoilage

Different kinds of food will generate various of chemical gas/ liquid (Biomarker) when they are spoilage.



**Biogenic
Amine**

**Nitrate/
Nitrite**



Ethylene

Mercaptan

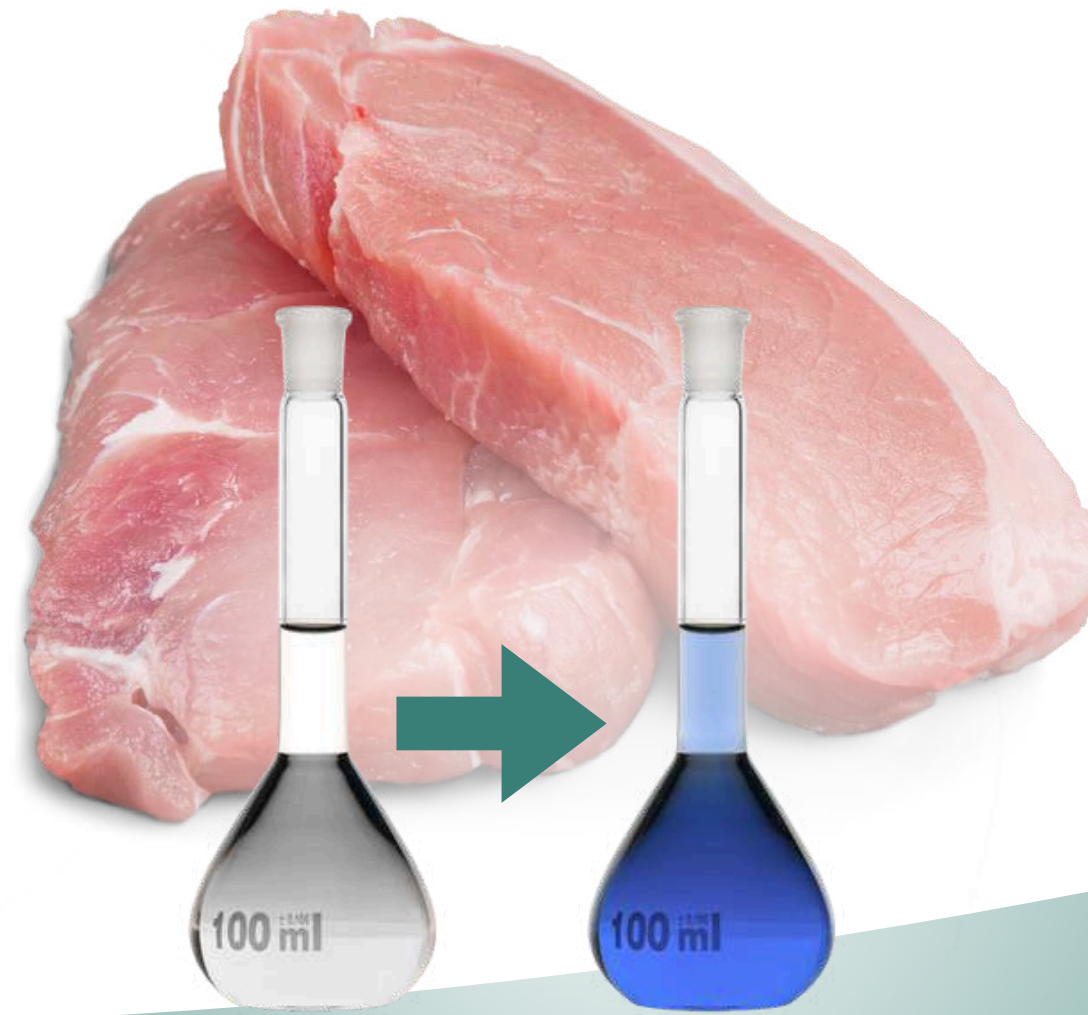


Solutions

Our research team developed three chemosensing inks that change colour when food spoils or ripens by detecting released biomarker gases or liquids.



Before After
**Mercaptan
Sensing Ink**

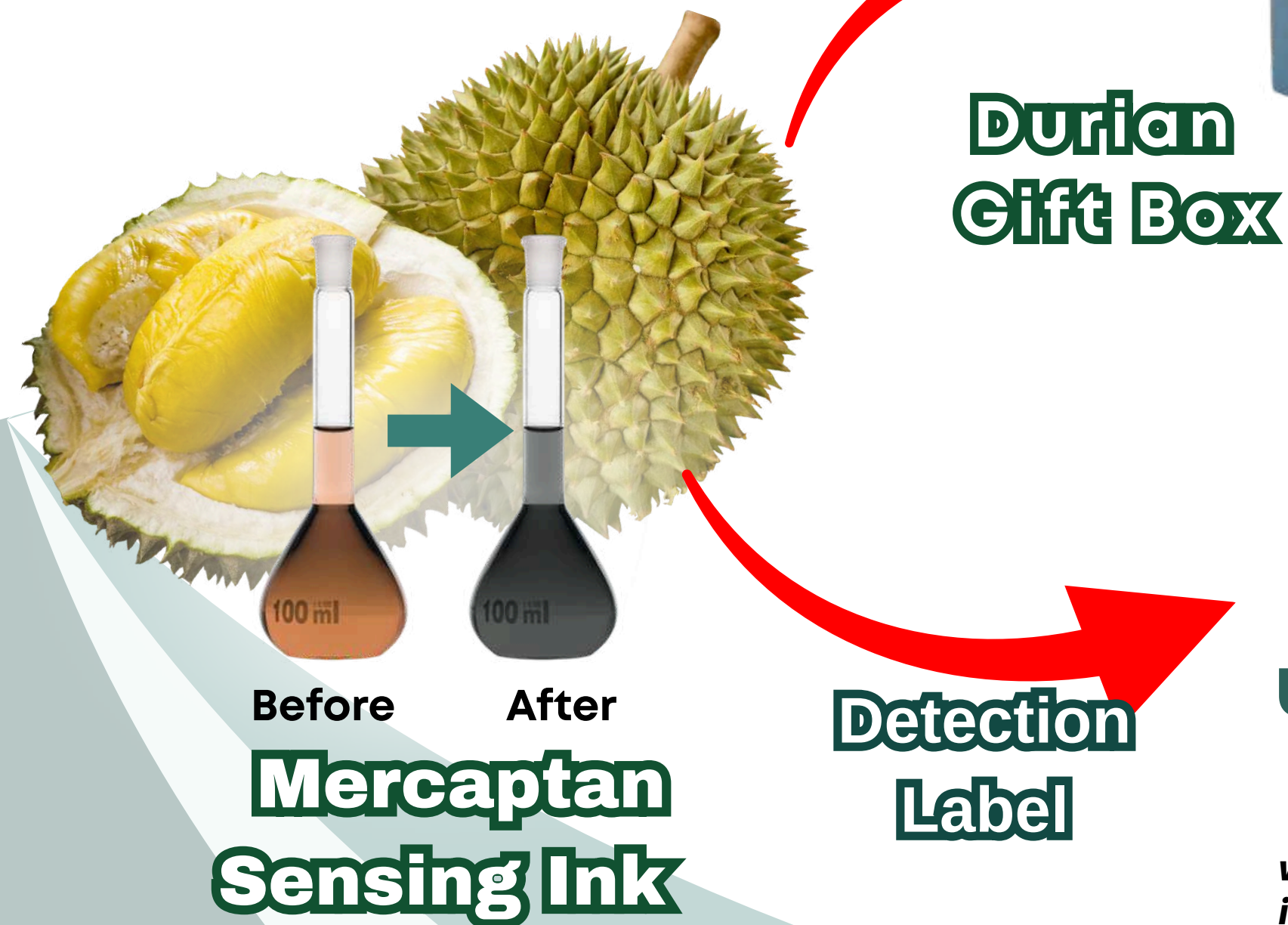


Before After
**Biogenic Amine
Sensing Ink**

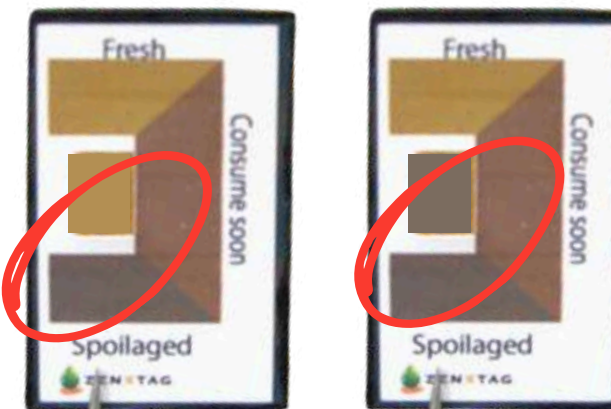


Before After
**Ethylene
Sensing Ink**

Products



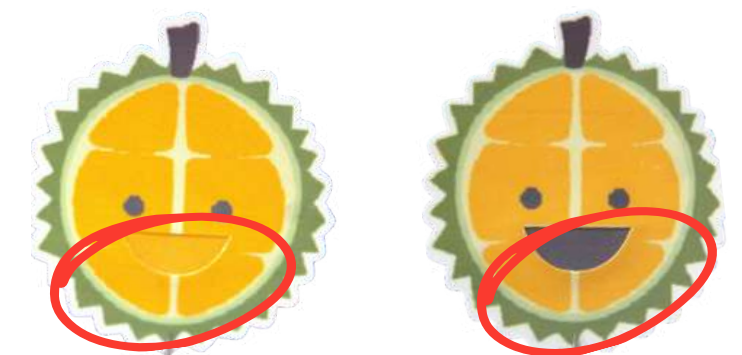
For the easier application of the label, Durian Gift box with detection label



unripe ripe

For pros

with a colour scale for easy identification of the central colour indication by internal QC staff, allowing them to decide on selling strategies.

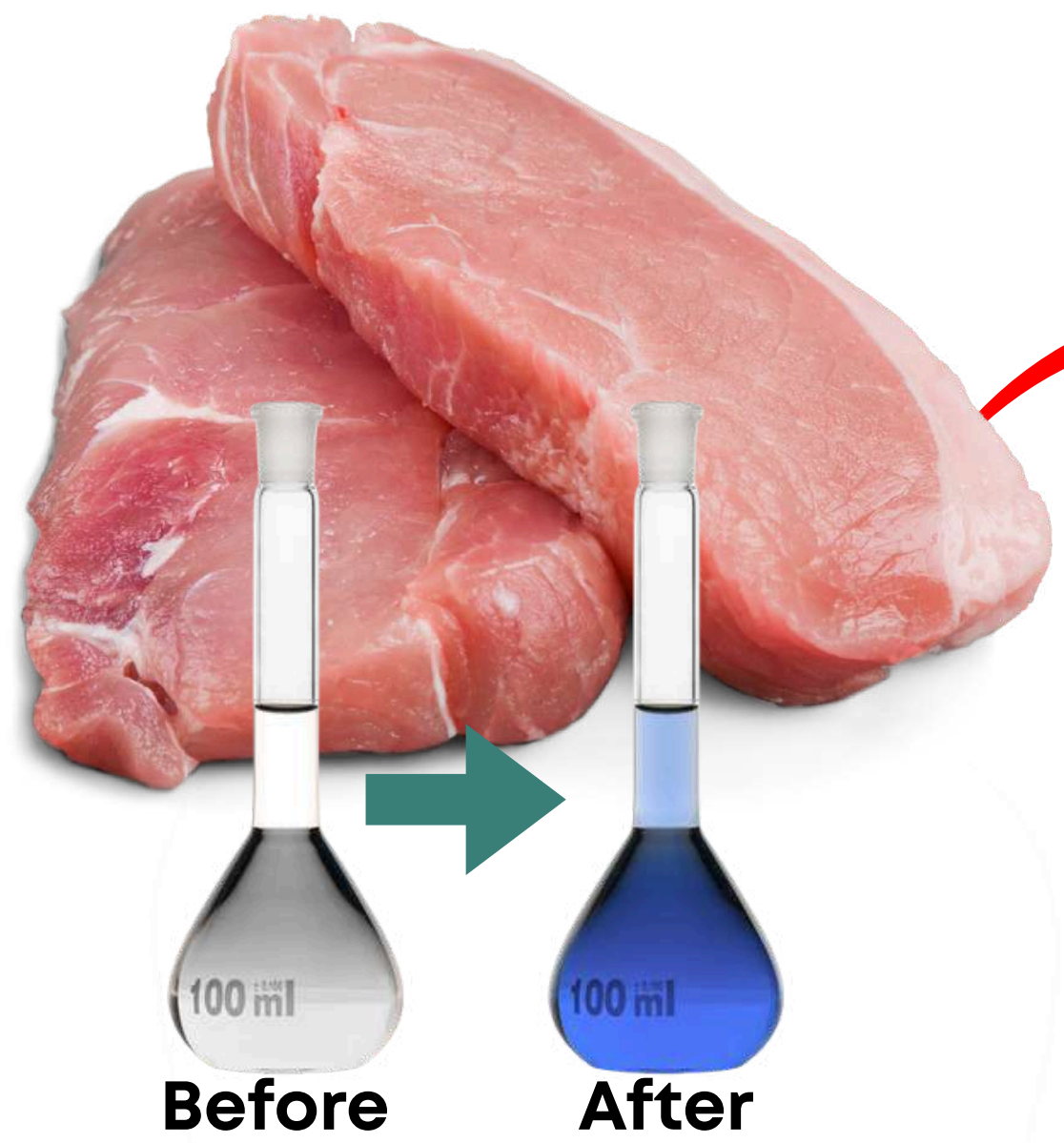


unripe ripe

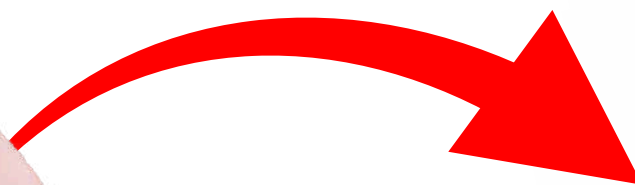
For customer

without a colour scale, allowing customers to identify it more simply

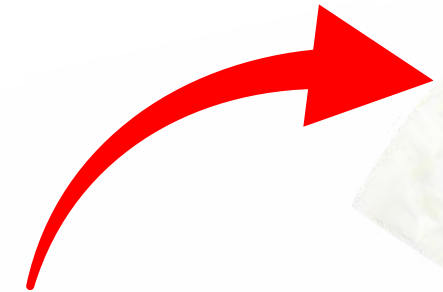
Products



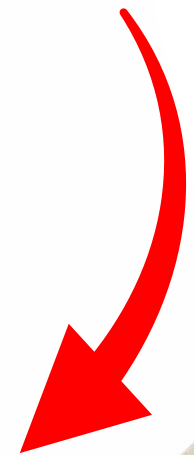
**Biogenic Amine
Sensing Ink**



**Biogenic Amine
Sensing Pad**

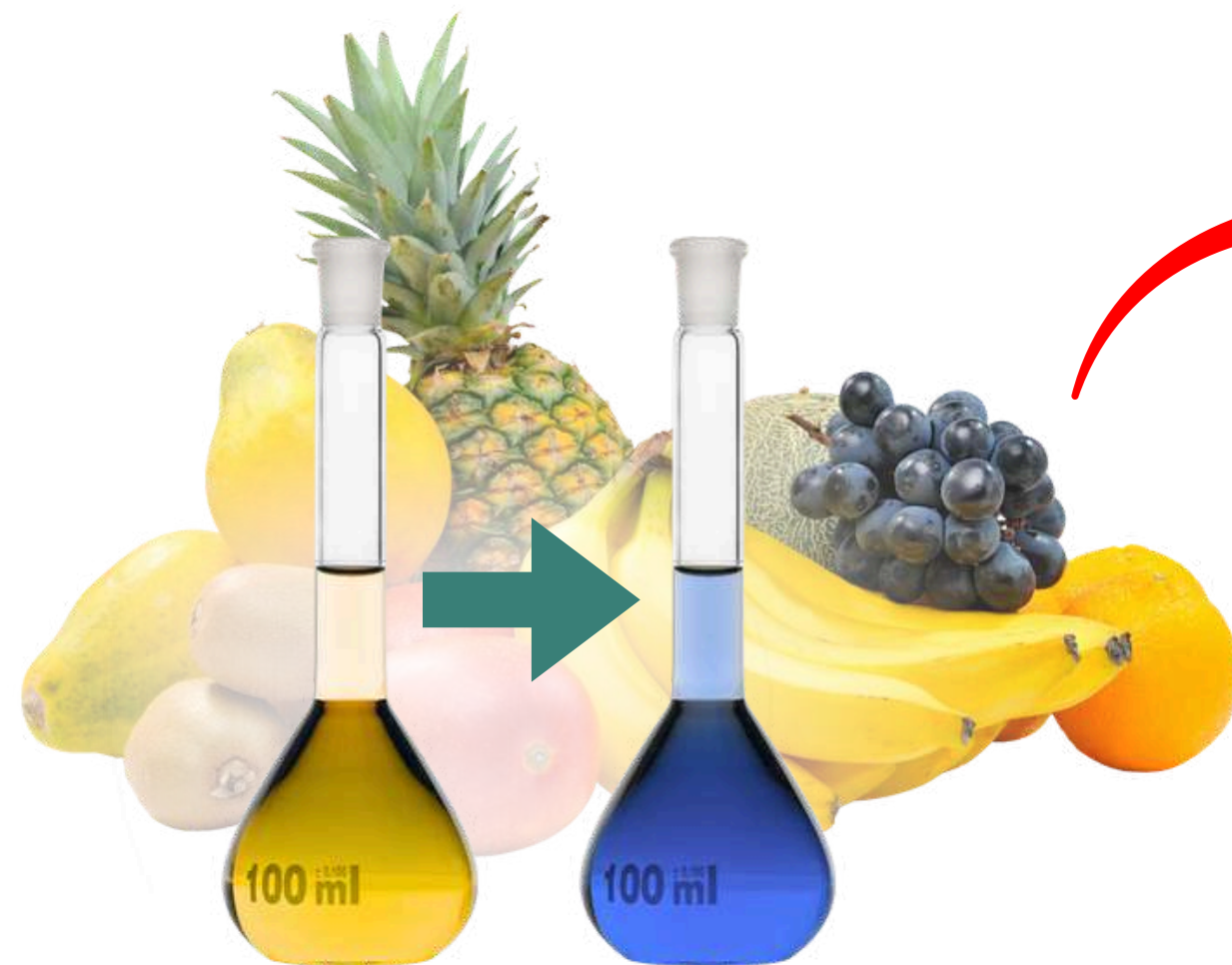


**Colorless
Fresh**



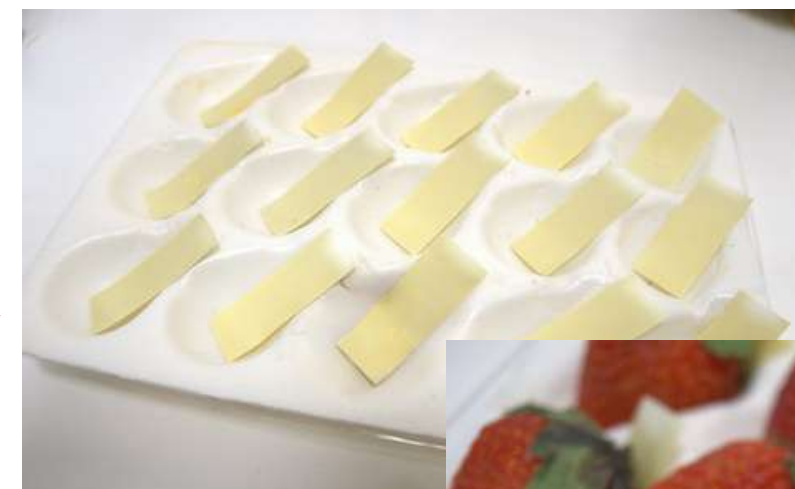
**Blue
Spoiled**

Products

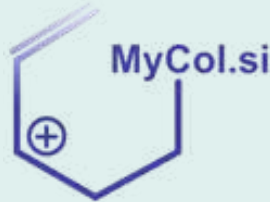


Before After
**Ethylene
Sensing Ink**

**Ethylene
Sensing Pad**



Competitive Analysis

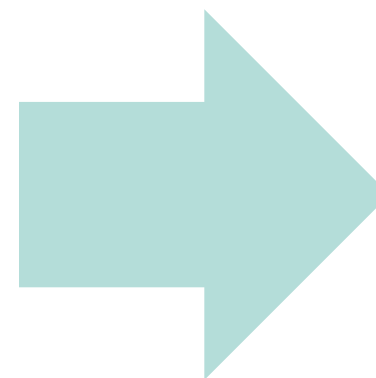
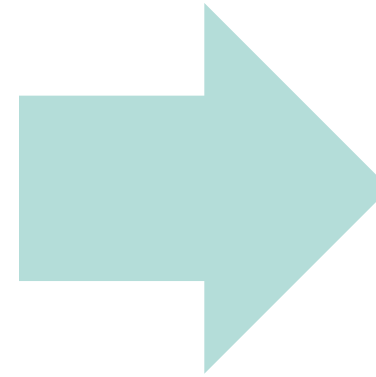
	 ZENXTAG	3rd Testing Lab	 MyCol.si	
Technology	Biomarker sensing Technology	Total Bacterial Count	Time Temapture indicator	Estimated Expiry date
Cost	< \$0.1 EURO	~\$100 EURO	N/A	< \$0.1 EURO
Time	Real Time Monitoring	at least 8 hour	real time monitoring	N/A
Accuracy	High	High	Low	Low

Business Model

B2B/B2C/B2B2C Model

Selling SMDT

Increase revenue
by 10% and reduce
costs and food
waste by 20%



Target Customers:
Hotels, Fruit Distributors,
Food Factories

Price: < \$ 1 EURO per pad

Profit Model: Channel:
B2B Increase revenue,
reduce costs

Target Market

China, Europe,
Southeast Asia,
Australia and
China

A mid-sized
supermarket in
Hong Kong can
save about 10-15%
of its annual
revenue by
reducing waste
caused by
cosmetic defects.

Market Entry Strategy



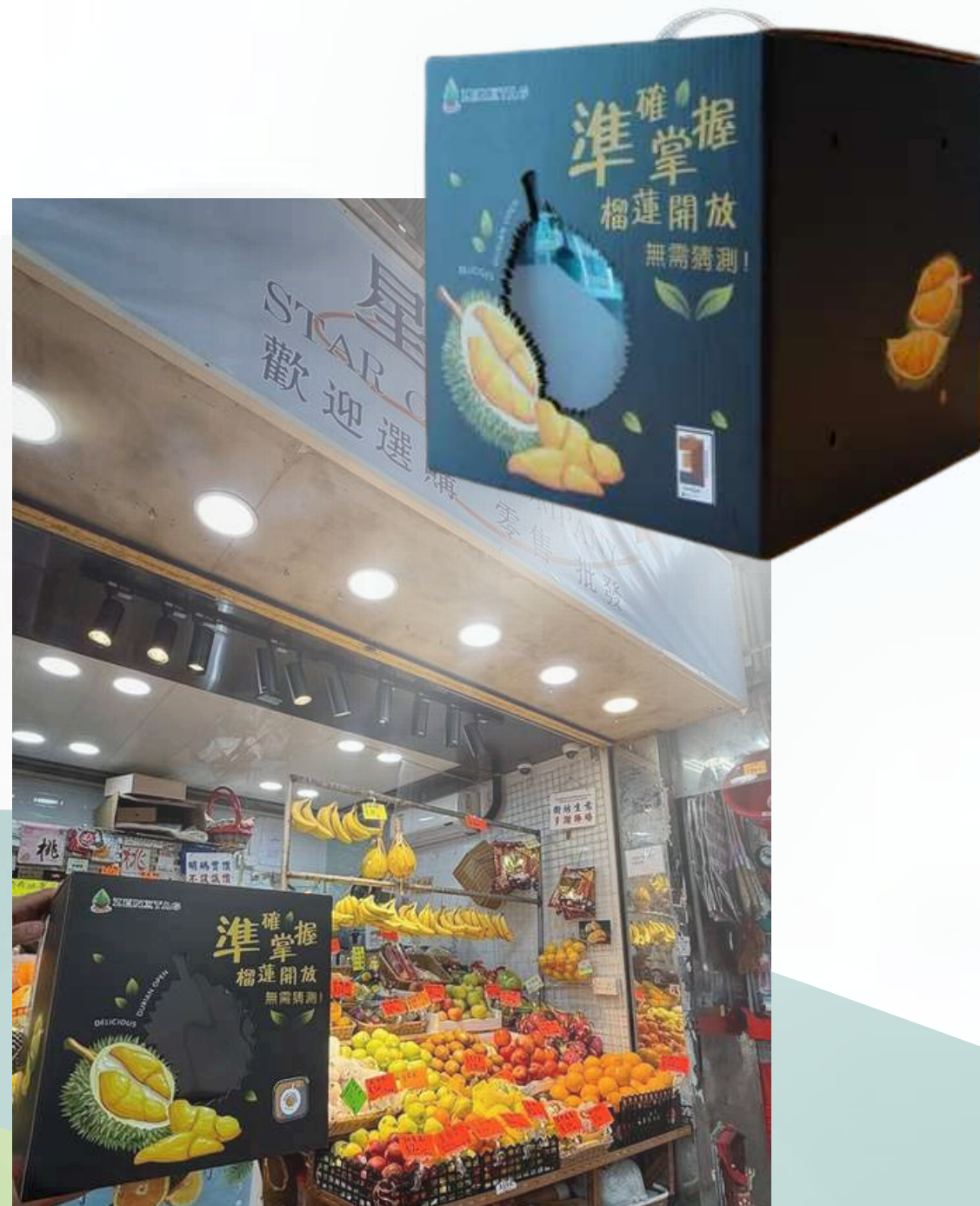
- Phase 1: Launch in Hong Kong
- Distribution Channels: Fruit retailers, central kitchens, chilled food factories



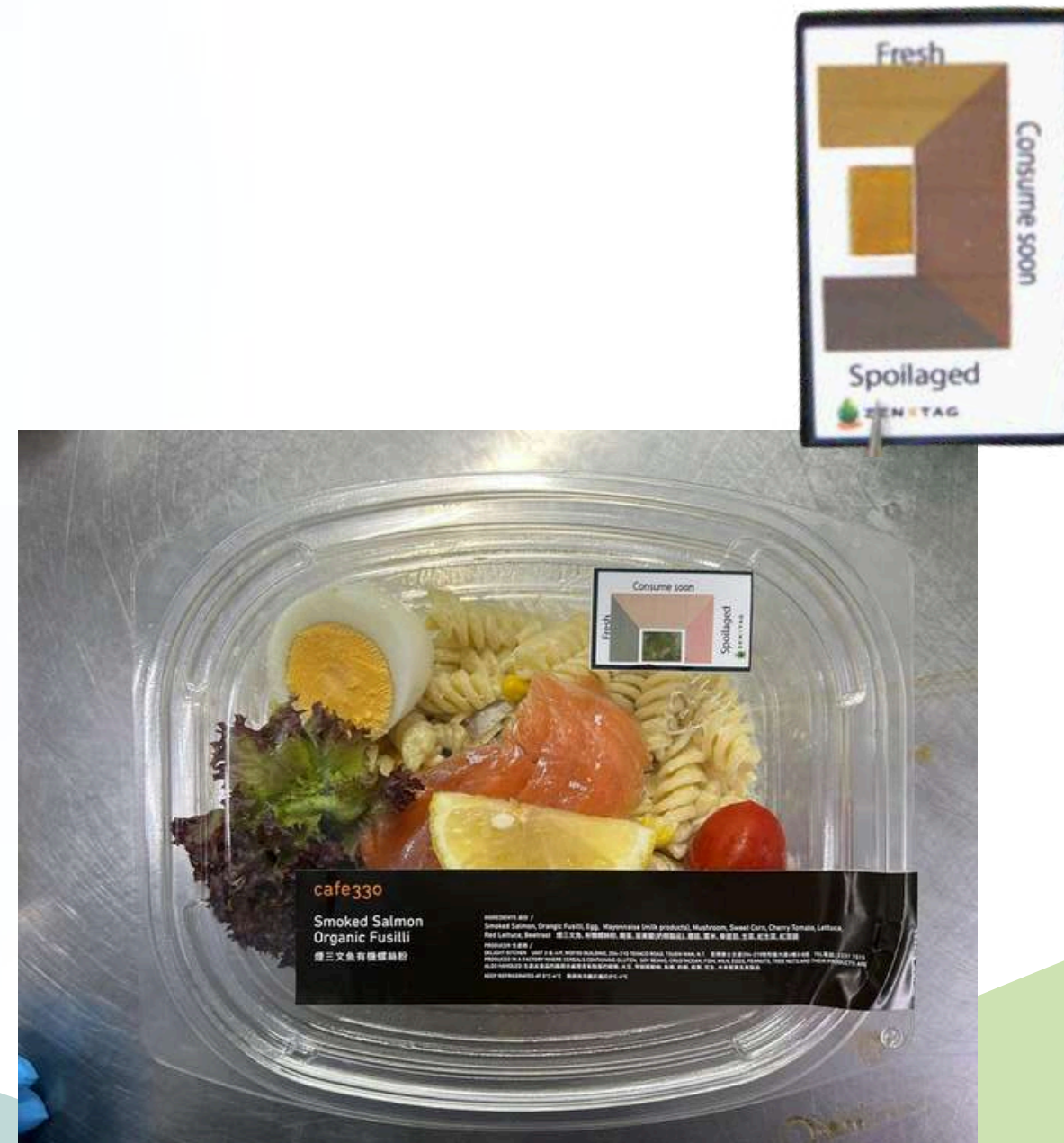
**Phase Two:
Expanding into the Greater Bay Area
and Southeast Asian Markets**

Product Applications

- Real-world Application Scenarios



Hong Kong fruit retail

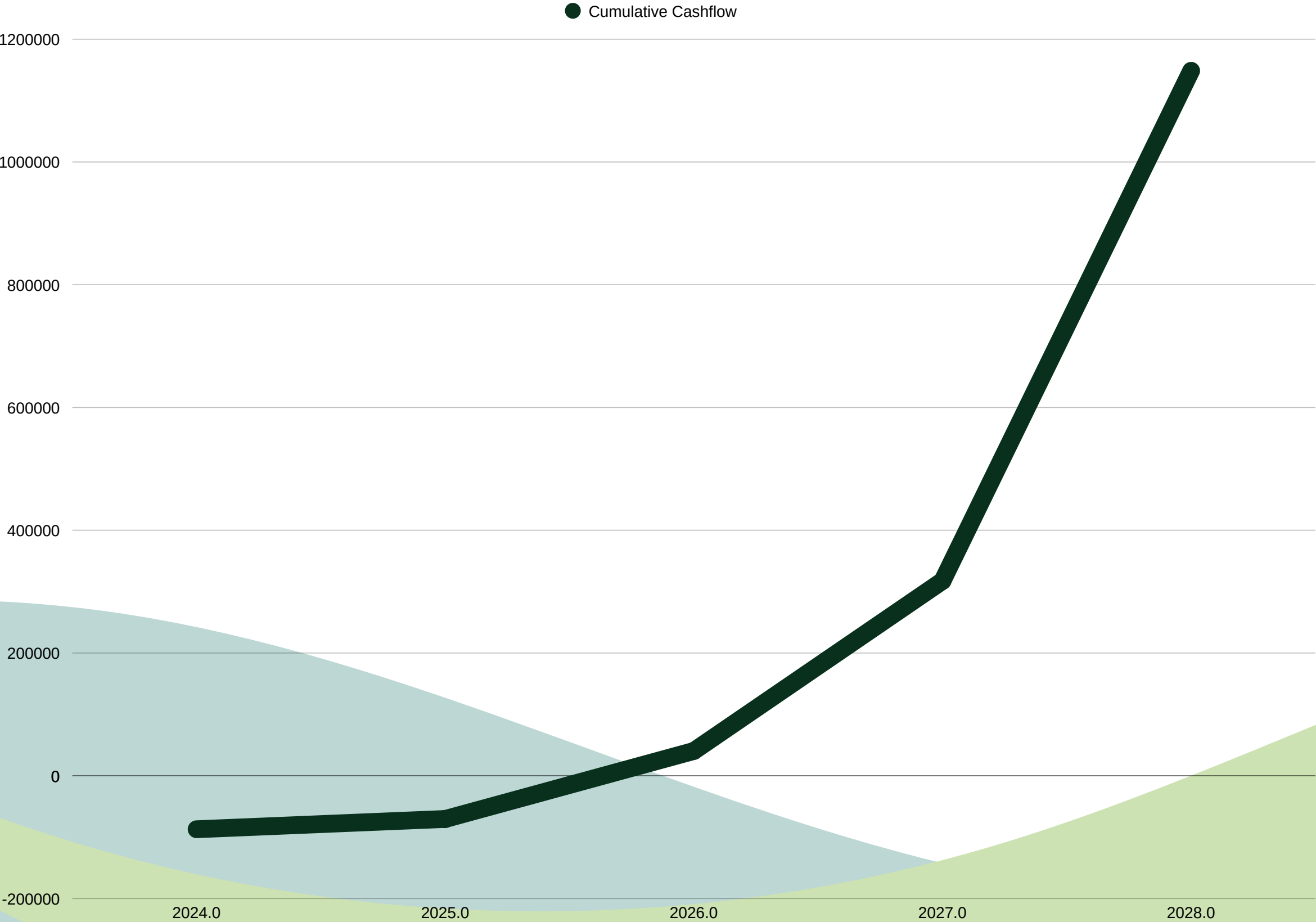


Hong Kong Central Kitchen



**Hong Kong
Frozen Food Factory**

Financial Forecast



Summary

2028 revenue

\$1,250,000

Net profit in 2028

\$1,148,000

Gross profit margin

80%

net profit margin

65%

Marketing size

TAM
\$160.5 billion

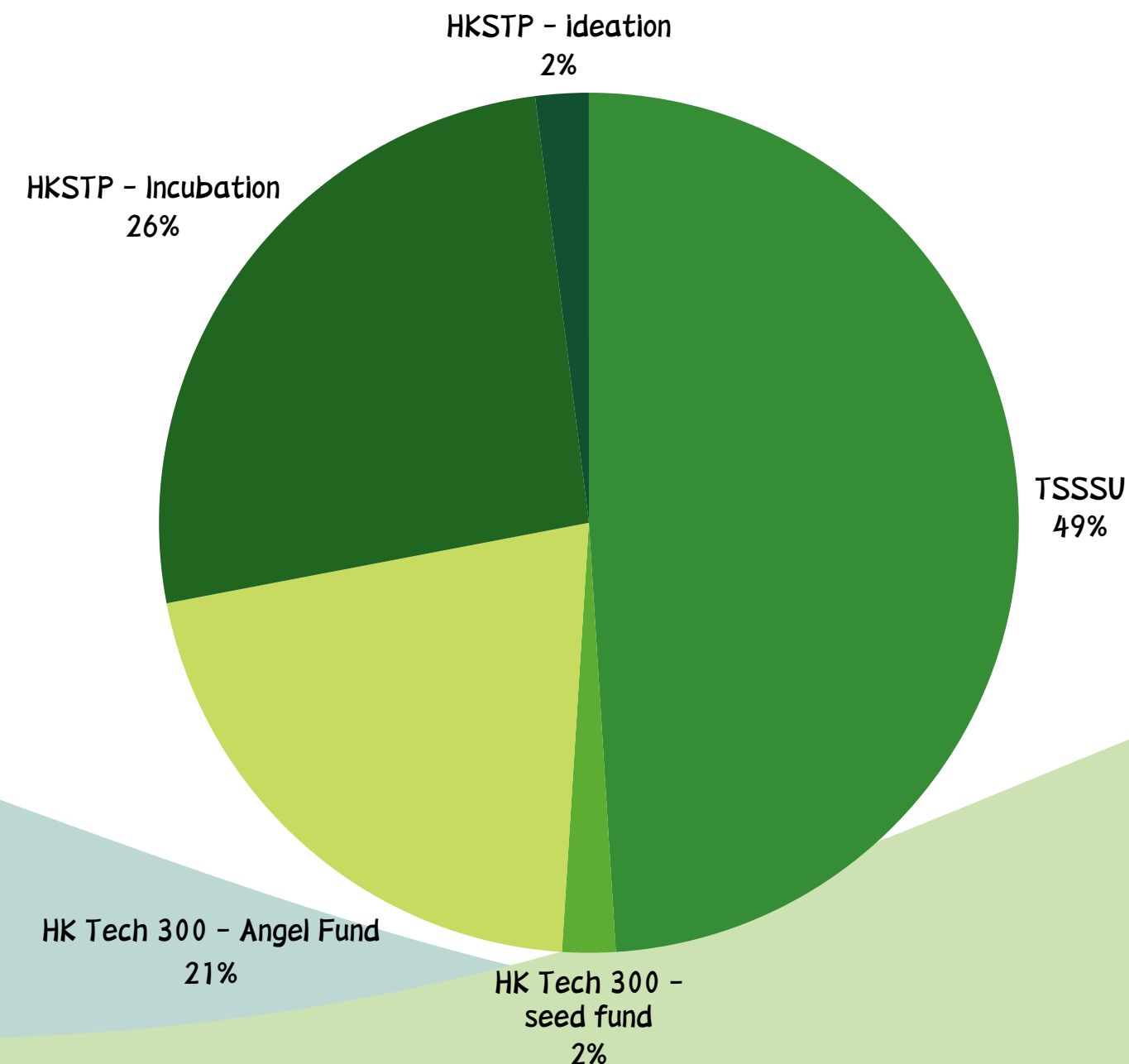
SAM
\$800 million

SOM
\$174.38 million

LM
\$79.67 million

Funding

The project received a total of \$ 500,000 in funding, of which 49% came from TSSSU grants, 26% from the Hong Kong Science Park, and 21% from City University of Hong Kong.



Environmental, Social and Community Impact

- Reduce food loss in the supply chain
- Increase overall food supply
- Improve the efficiency of the refrigerated food industry



- Enhance food safety by preventing the consumption of spoiled food
- Reduce the incidence of food poisoning and promote a safer supply chain



- Reduce food waste at the global retail and consumption stages
- Reduce food loss during production and supply chain stages

Achievements Validation and Cooperation Opportunities

Market Validation Achieved & Cooperation Potential

Prizes

Partners:



AGRI-FOOD
TECH EXPO
ASIA



Collaboration Directions:

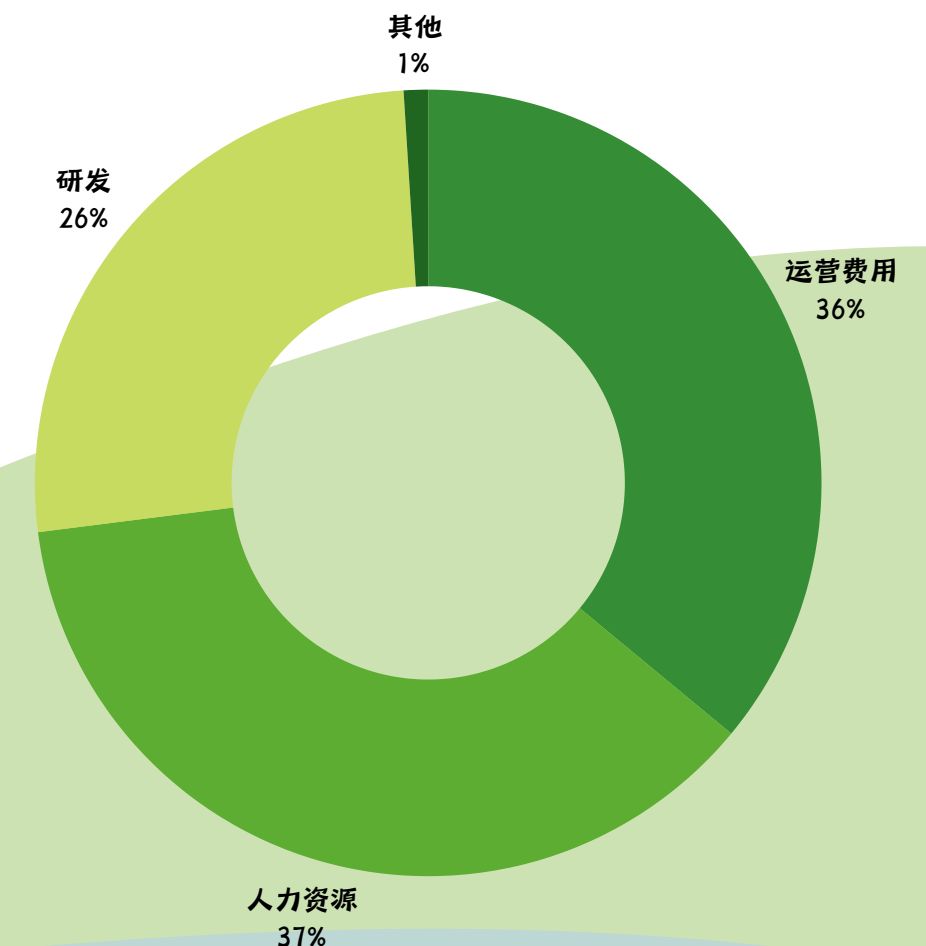
- Joint pilot projects (hotels, central kitchens, agricultural farms)
- Industry–Academia–Research collaboration (Chinese universities + CityU)
- Support Zhejiang’s “Digital Agriculture” and food safety traceability initiatives

Financial Projections

Funding Requirements: \$900,000 EURO over three years.

Use of Funds:

- 37% for Human Resources (converting part-time to full-time staff, recruiting sales team and management personnel)
- 26% for Research & Development (product improvement and laboratory setup)
- 36% for Operating Expenses (marketing & promotion, pilot projects, and infrastructure)
- 1% for Others (contingency funds)



SWOT Analysis

SWOT Analysis

Strengths:

- Superior Accuracy and Cost-Effectiveness
- Direct Biomarker Sensing Technology
- Targeted Differentiation
- Innovative and Cost-Saving Solution

Opportunities

- Growing Demand for Precise, Real-Time Freshness Monitoring
- Expansion into High-Volume Markets
- Sustainability and Innovation Edge

Weaknesses:

- Limited Market Penetration and Brand Recognition
- Dependency on Technology Validation

Threats

- Intense Competition from Established Players
- Potential Market Resistance to New Technology
- Technological Replication Risk

Awards and Achievement



Collaborators



About our team

We're a young and talented group of chemistry students and research staff in City University of Hong Kong with an innovative idea that we hope will contribute to a better tomorrow. We provide some smart solutions for improving the testing method of food (such as food labels) and enhancing the accuracy, precision, and speed of internal quality control.



Co-Founders
Miss. Chow Tsz Wing,



Co-Founders
Prof. Lam Hon Wah



CTO
Dr. Justin Shum



Business
Prof. Howard Ling



Marketing Officer
Miss. Chow Ho Yee



Packaging Designer
Miss. Zoe Leung

Let's keep in touch and grow together

Thank you for taking the time to review our ZenxTag Technology Limited Proposal.

www.zenxtag.com



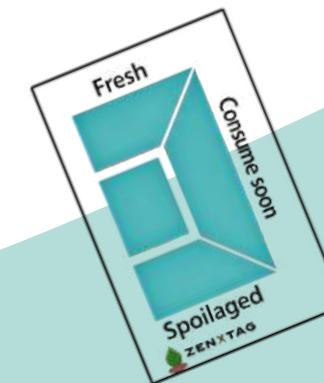
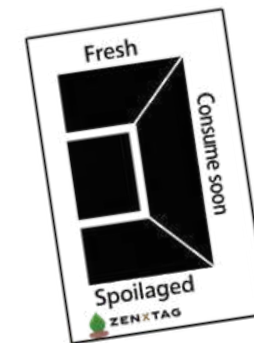
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