

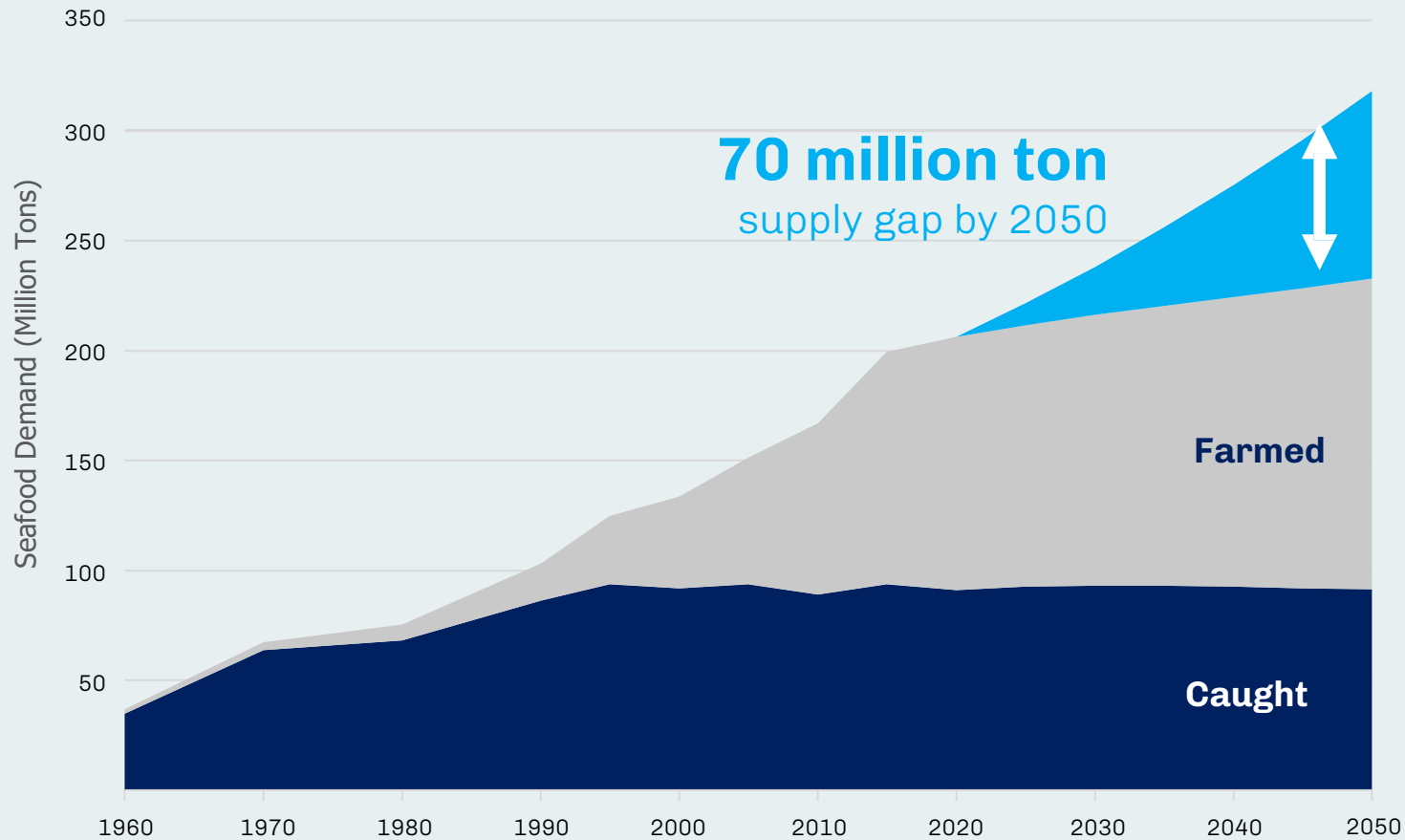
The background of the slide is an aerial photograph of ocean waves, showing white foam and deep blue water. The text is centered on a white rectangular box.

# **UMAMI BIOWORKS**

**Unlocking the Future of Sustainable  
Seafood with Advanced  
Biomanufacturing**

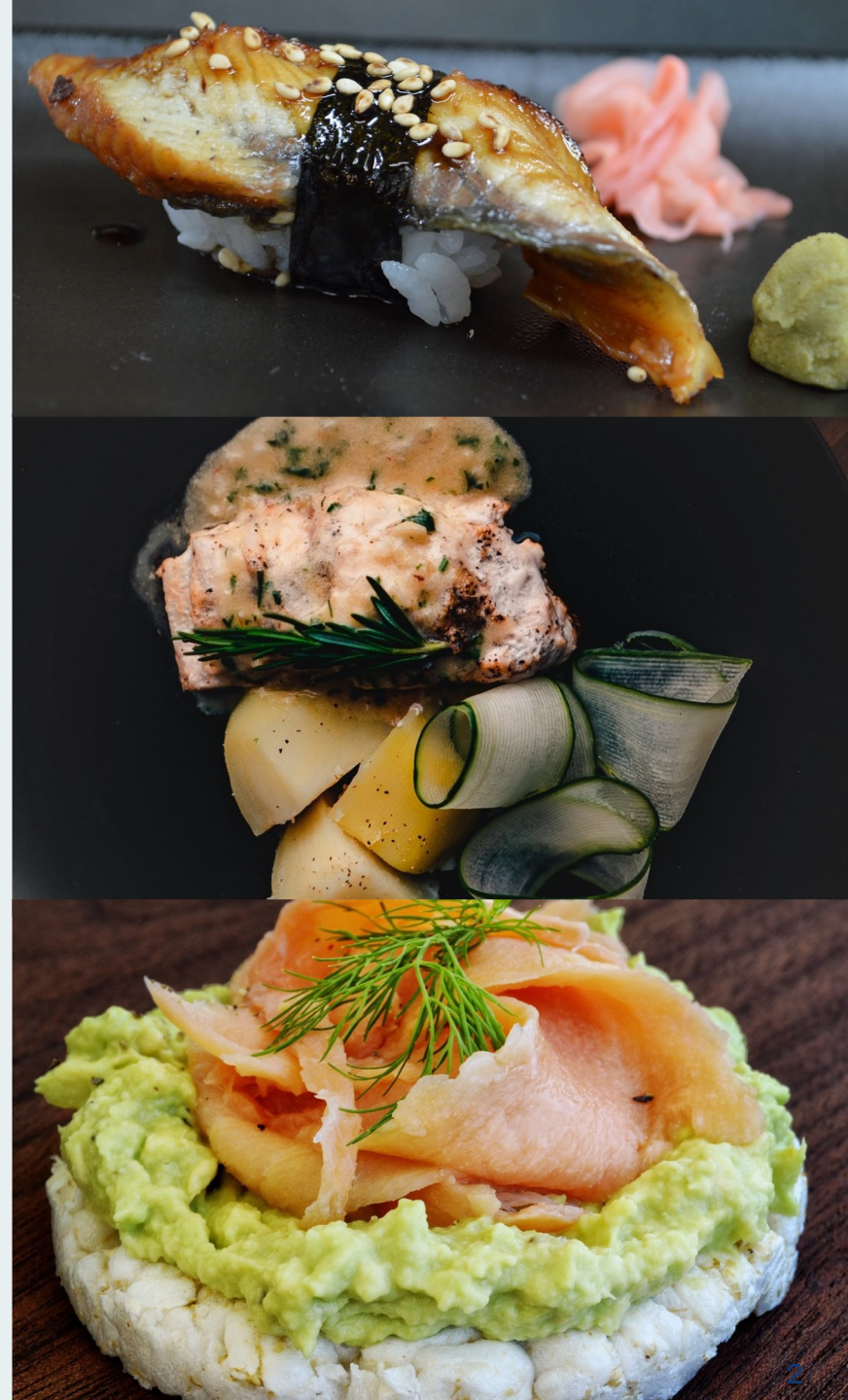
**February 29, 2024**

# Seafood demand is outstripping supply, presenting a clear opportunity



## But producers face growing challenges:

Climate change | Microplastics | Heavy Metals Pollution | Overfishing | Antibiotics Residues



# State of seafood production is not sustainable

## Overfishing



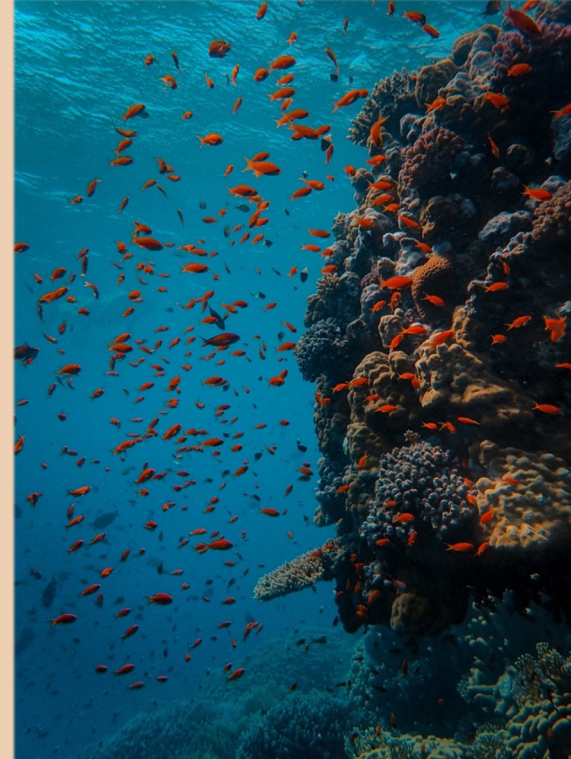
90% of fish stocks are fully exploited or overfished

## Microplastics & Pollution



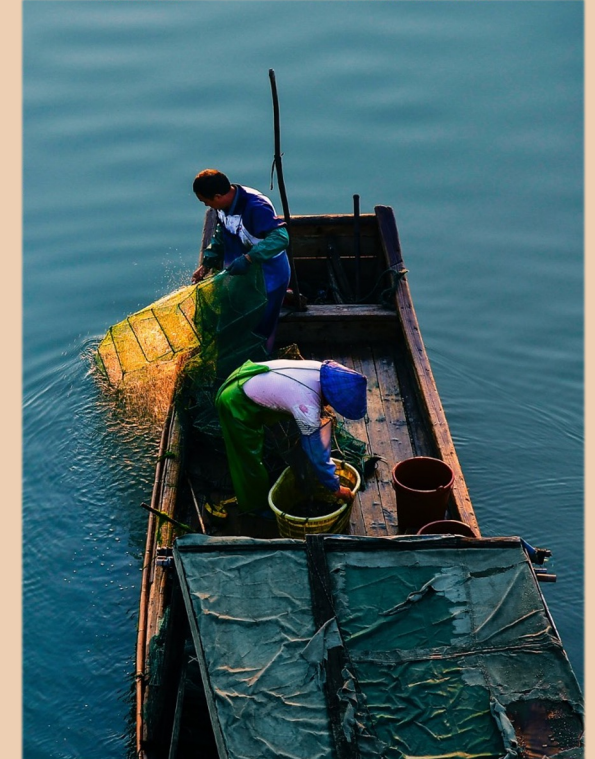
Plastics, heavy metals, & antibiotics are increasingly found in food supply

## Biodiversity Loss



95+ species of fish at high risk of extinction

## Small scale fishing decline



Industrialization of fishing harms rural economies & our oceans

# At UMAMI Bioworks, we're building the Operating System for cultivated seafood

We are developing a **standardized, modular, automated** production system

empowering food producers to manufacture and launch cultivated and hybrid seafood brands

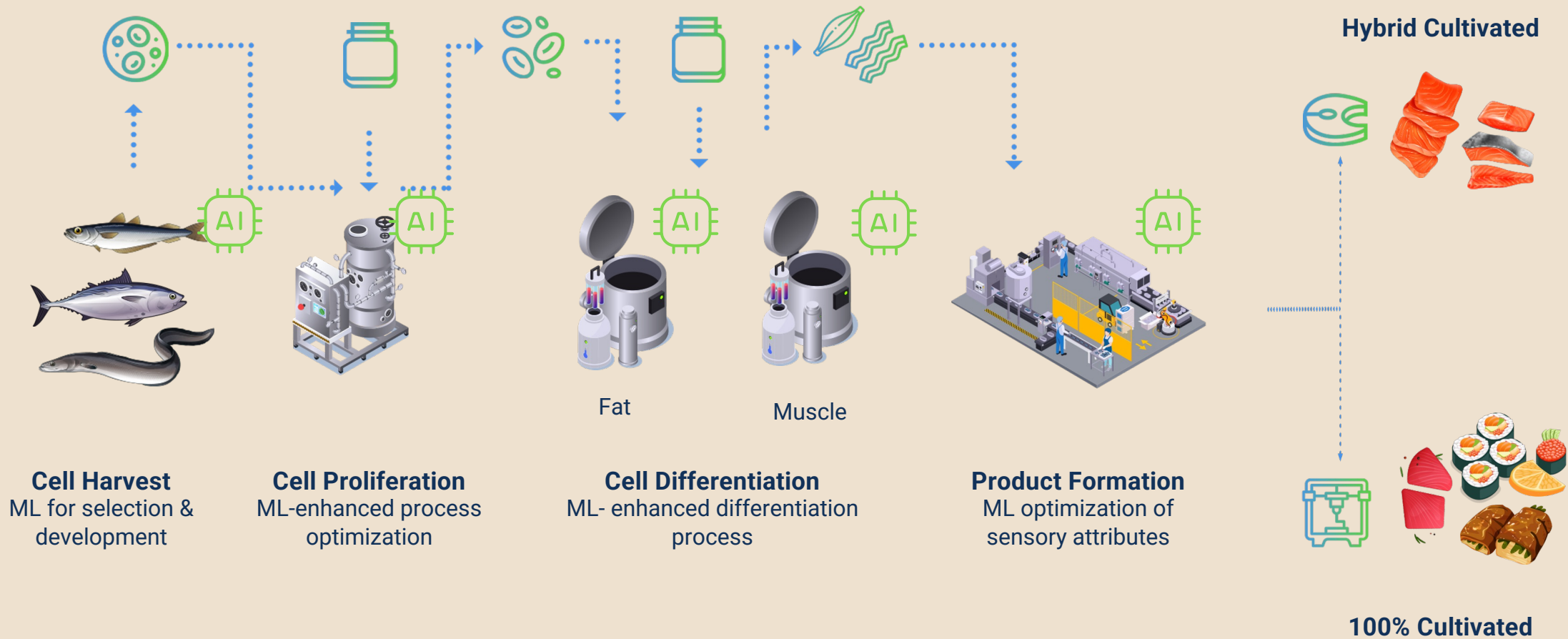
We aim provide people around the world with:

- locally-produced
- stable
- resilient
- contaminant-free

supply of seafood for generations to come



# UMAMI uses Bioinformatics + ML + Automation to make affordable, delicious cultivated seafood possible



**We're on a mission to make the world's best seafood without compromises**

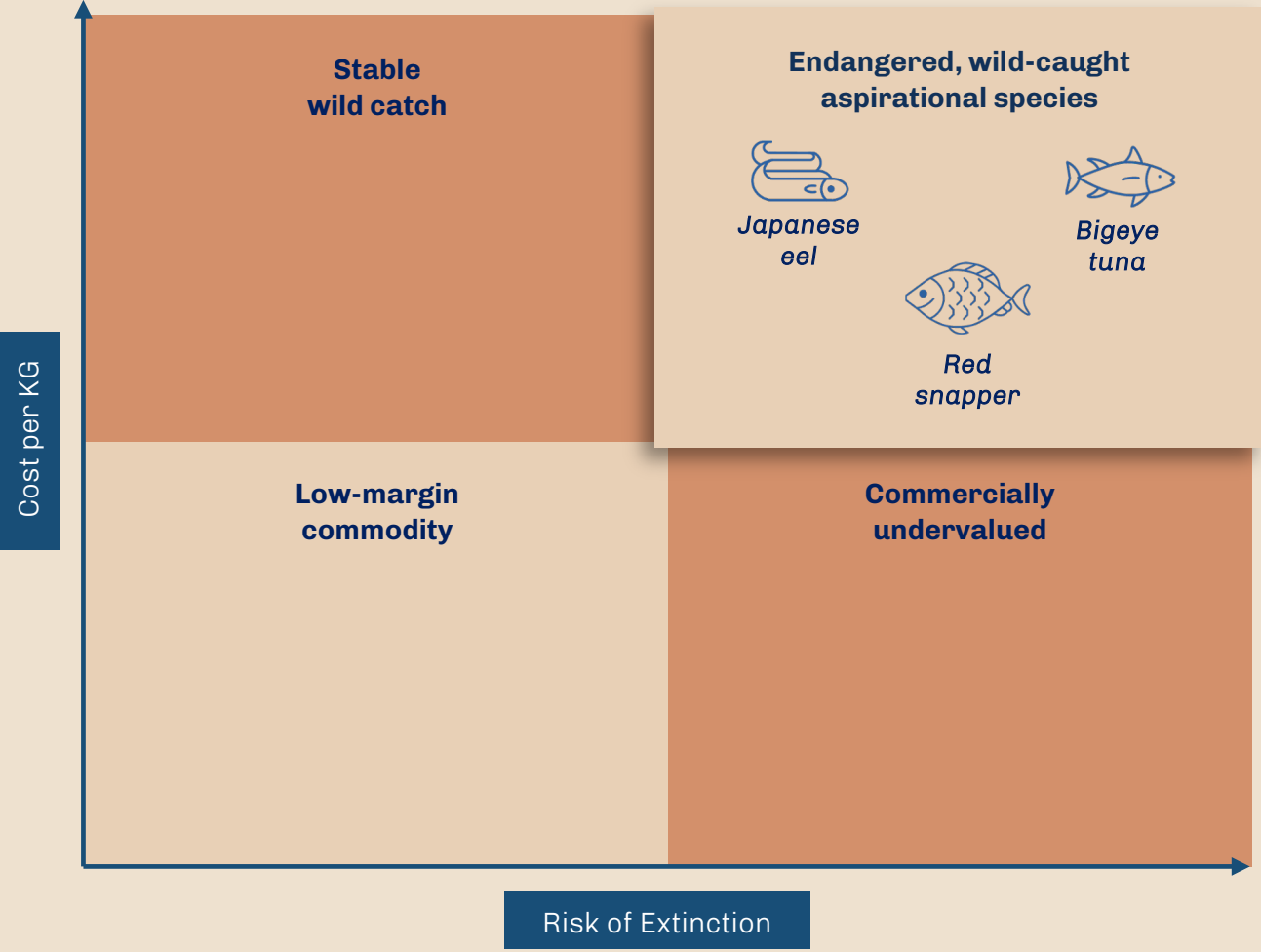
**UMAMI  
BIOWORKS**

**Co-developed with  
Steakholder  
FOODS**



**Free from Mercury ■ Dioxins ■ Microplastics ■ Antibiotics**

# UMAMI Bioworks is focused on segments that unlock the greatest commercial value & face limited supply



MARKET OPPORTUNITY:  
**\$60 BILLION**



Unsuitable for farming



On IUCN Red List



Growing demand



Premium price

# How do we industrialize cultivated production?

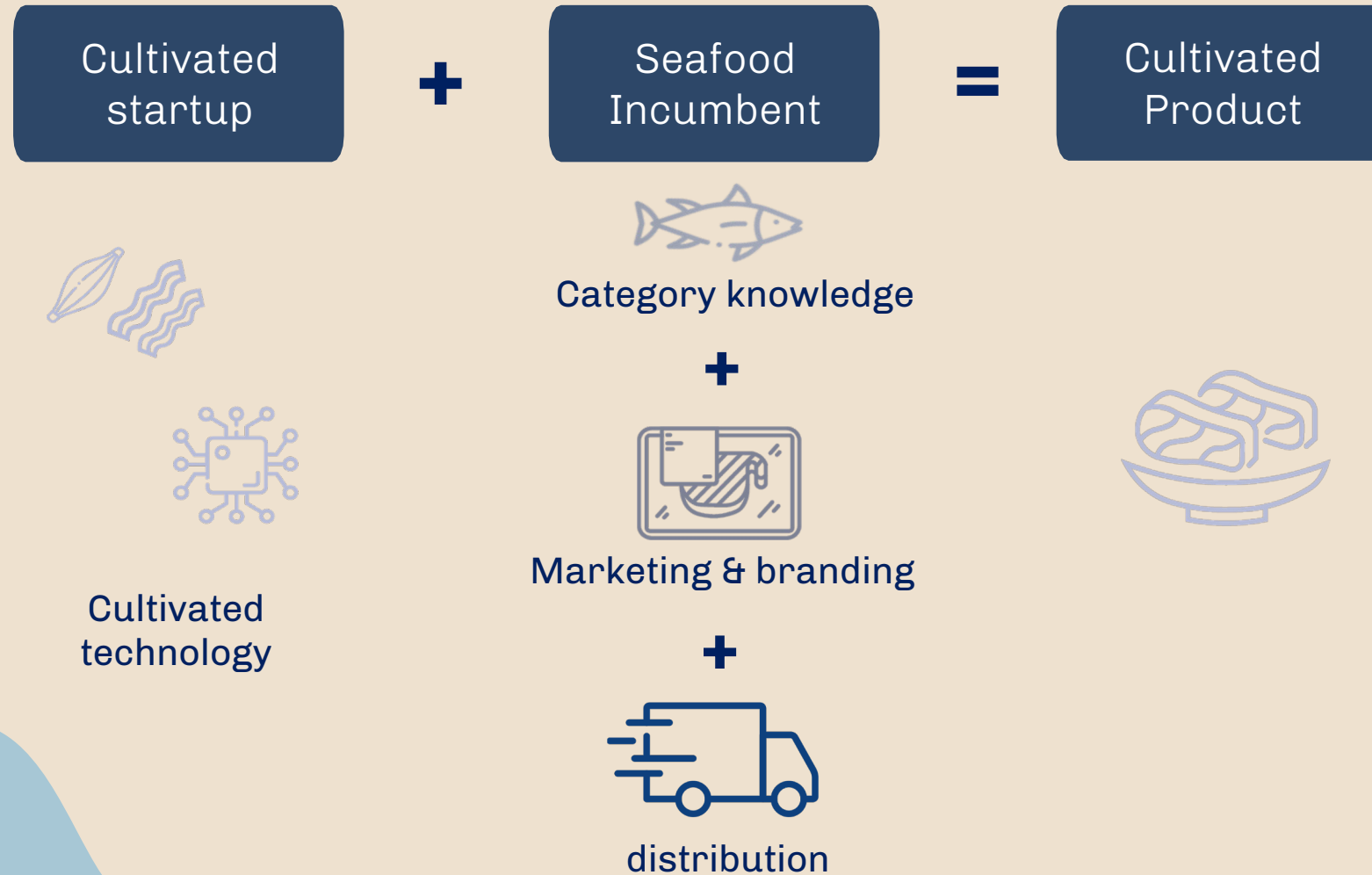
Current challenges include:

- High capital costs
- Limited risk capital
- Low appetite for CapEx investments





# UMAMI's philosophy: partner with incumbents to leverage respective strengths



CapEx borne by incumbent food company with cheaper cost of capital

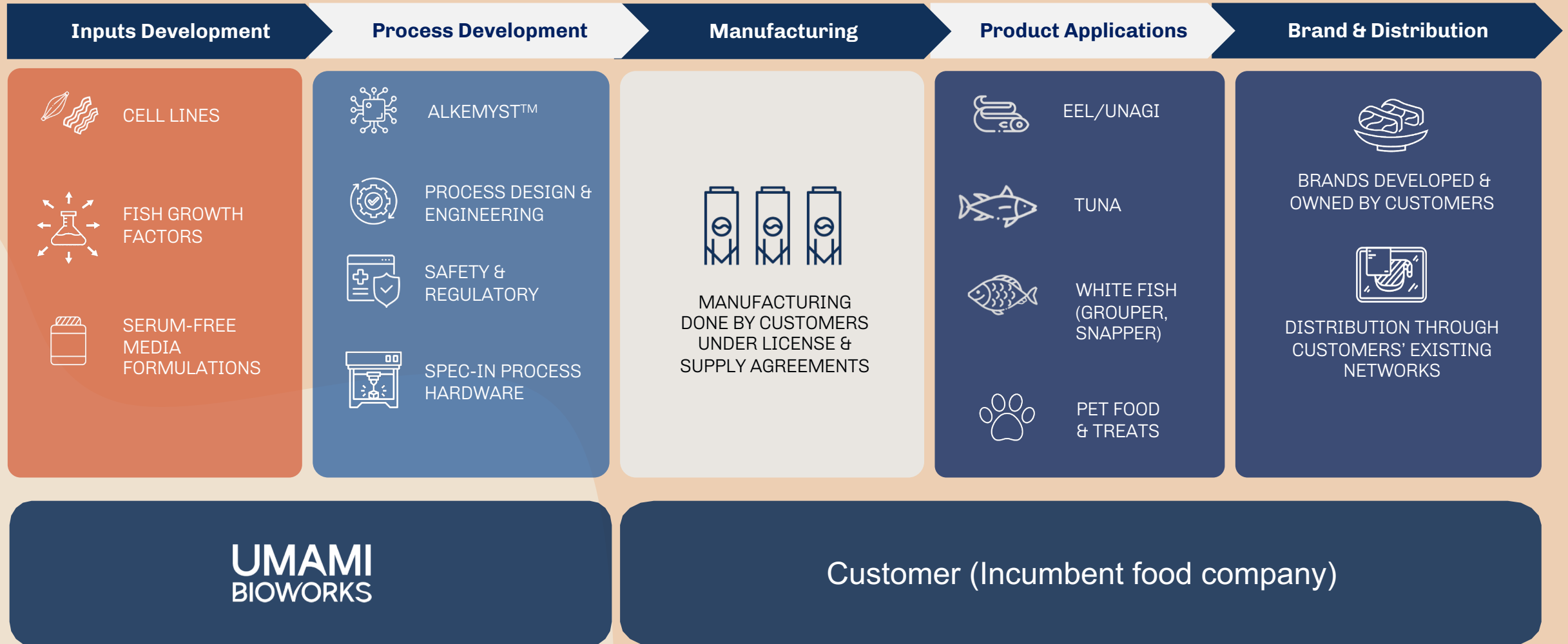
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Startup stays tech-led, increasing scalability & investor ROI

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Core IP allows us to build compounding value for customers

# In this model, UMAMI is a tech platform, not a manufacturer or consumer brand



# Our ambition is a range of cultivation centers around the world , making delicious, nutritious seafood ‘Crafted with UMAMI’™



**But this relies on one  
BIG core assumption:**



**that food companies are  
capable of operating  
cultivated factories**

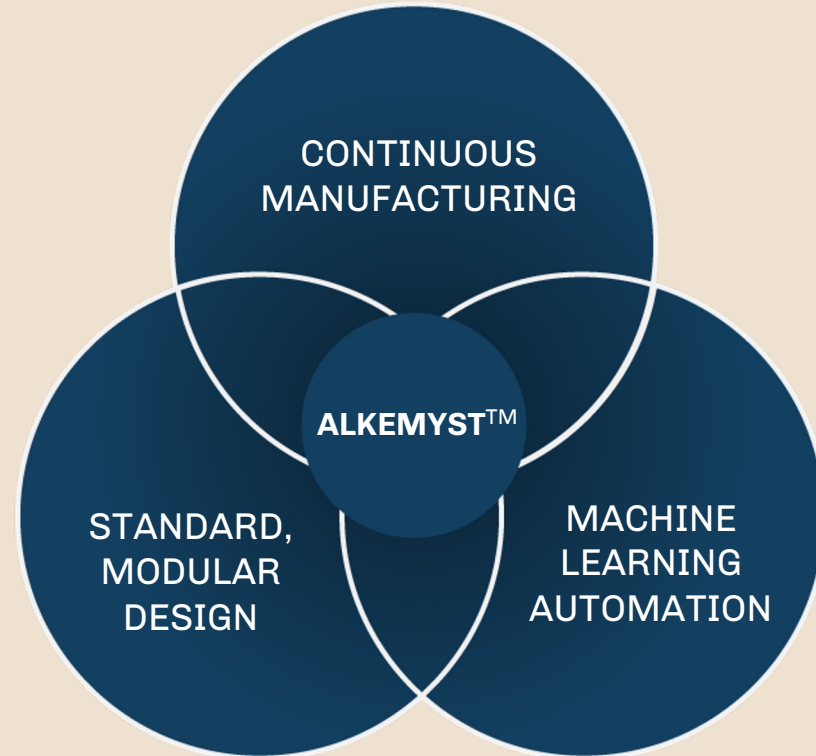
# Our solution to unlock customer-owned biomanufacturing

A plug-and-play system built on:

**Continuous manufacturing**

**Standard, modular design**

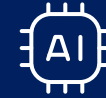
**ML-based automation**



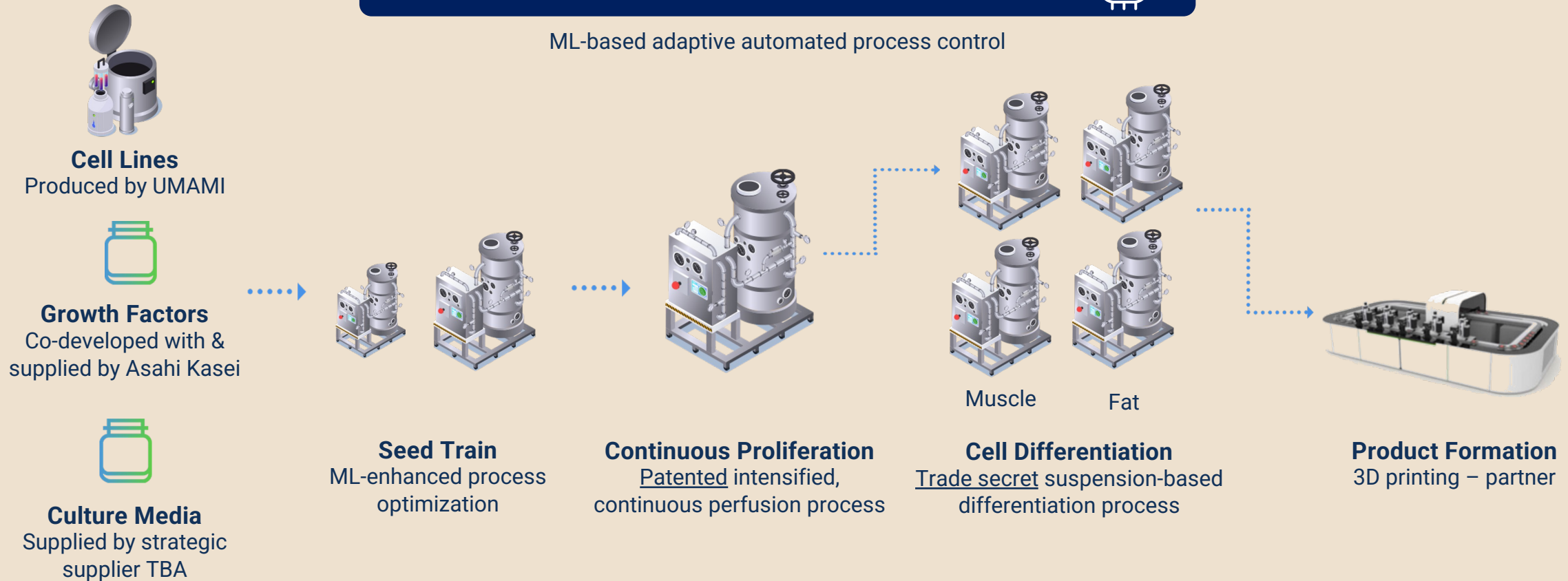
# CRUCIBLE™

## Our modular, automated, 'plug & play' production solution

UMAMI KATALYST™



ML-based adaptive automated process control



Regulatory Pre-Approved

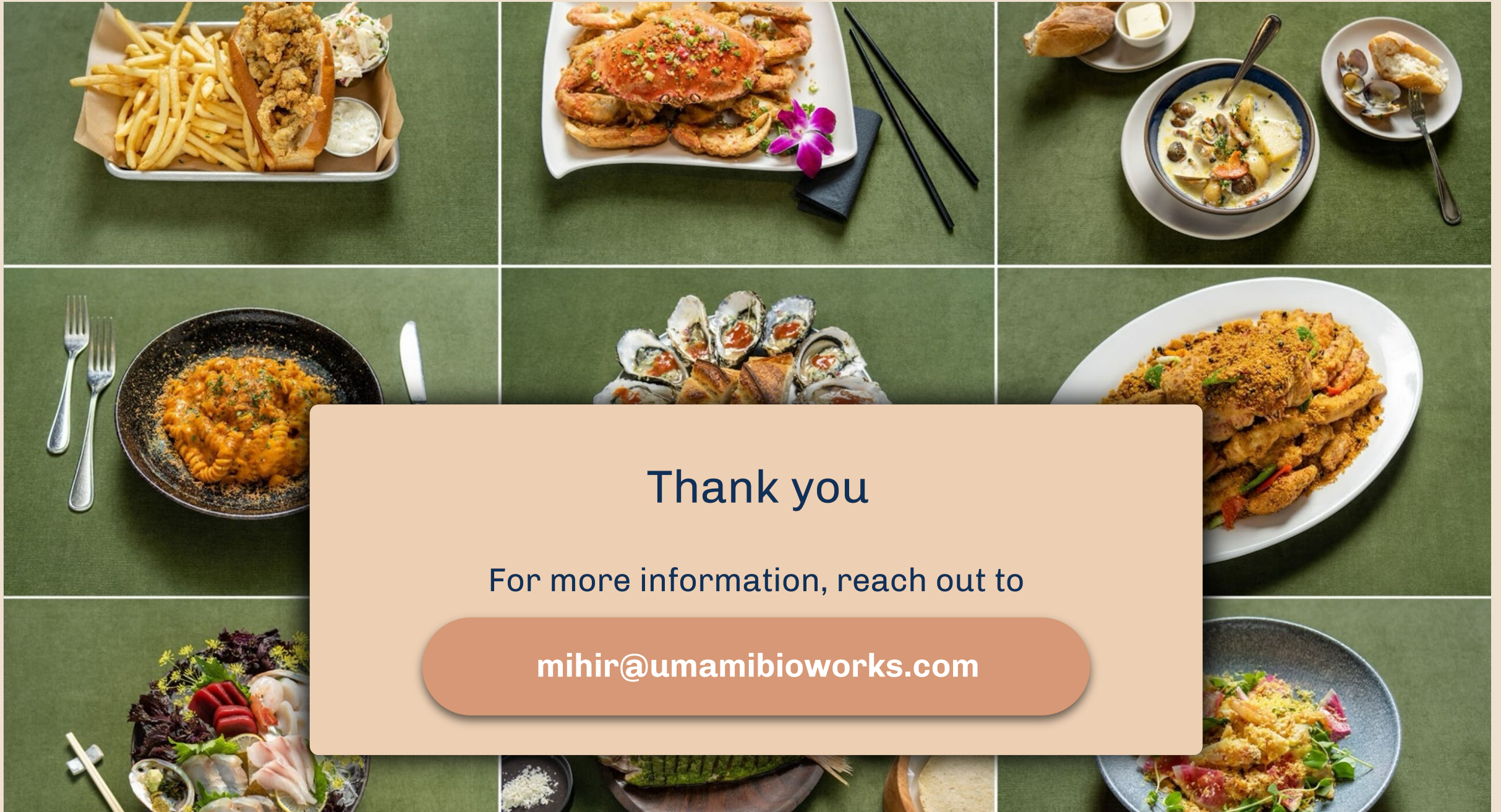
Rapidly Deployable

~25% CapEx vs. traditional

Over-the-air Updatable

To succeed globally, cultivated seafood must go local.  
We're building a network of partners to power global success.





Thank you

For more information, reach out to

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