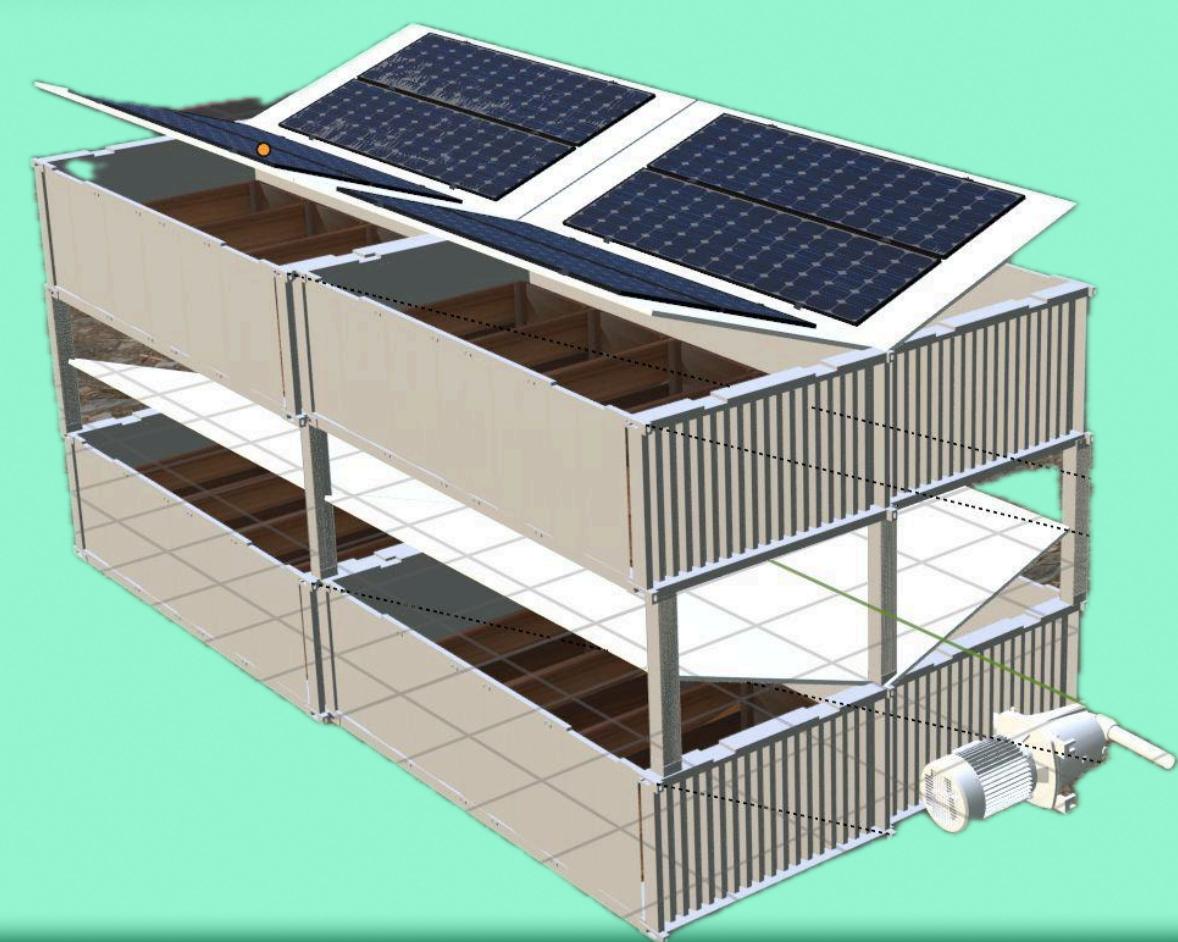
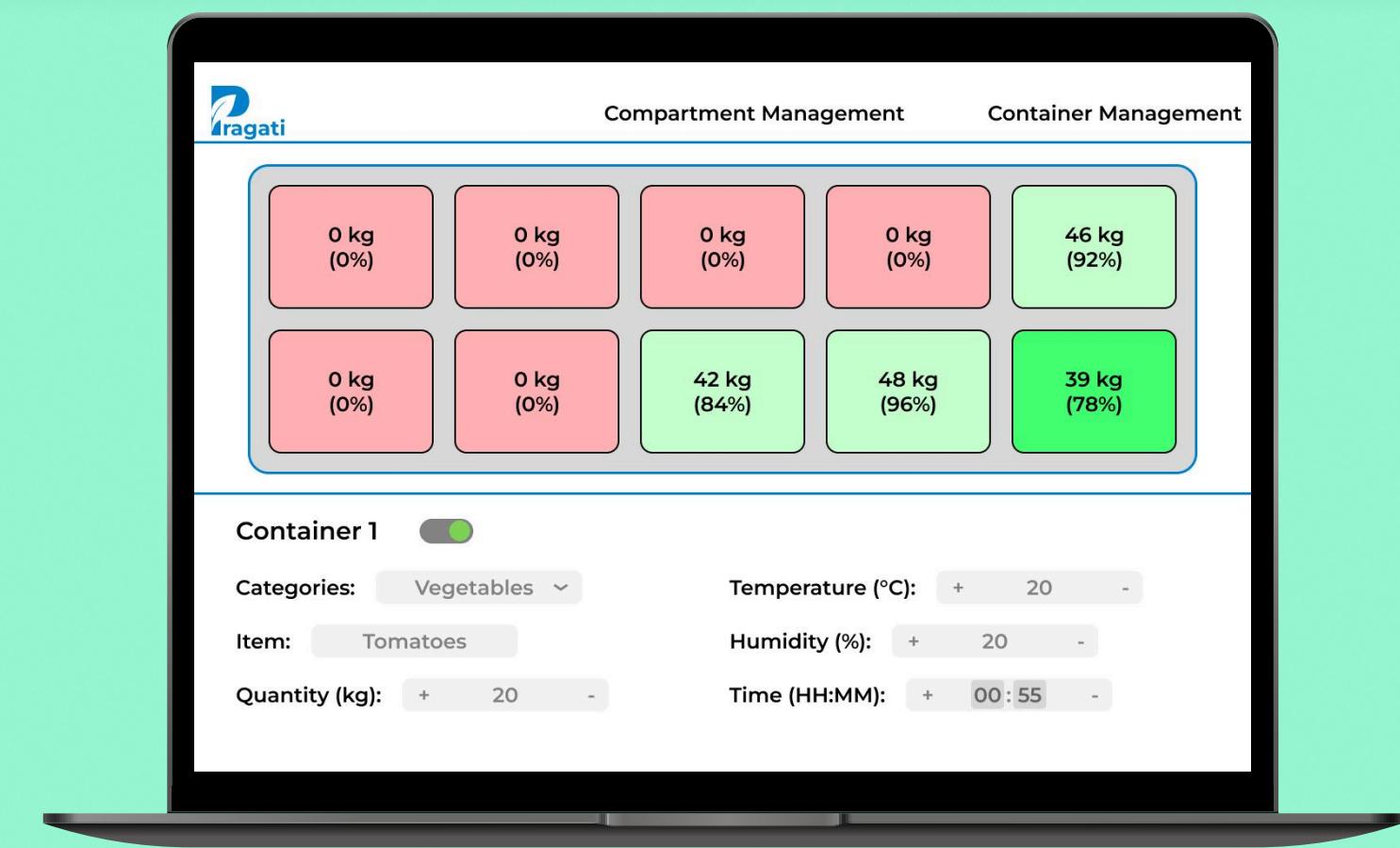
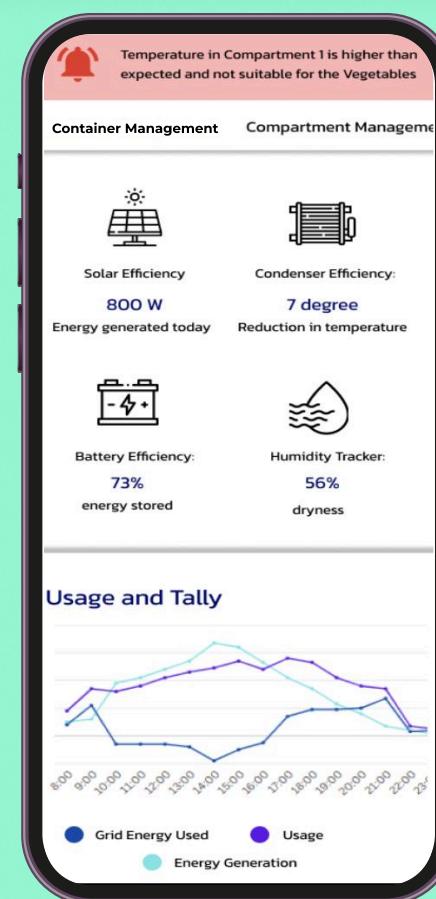


TEAM

INVICTUS**DEVANSH
JAIN****SSVKSS
JYOTHIRADITYA****GAJANAND
GENA****ragati**Freshness Retained,
From Farm to Market

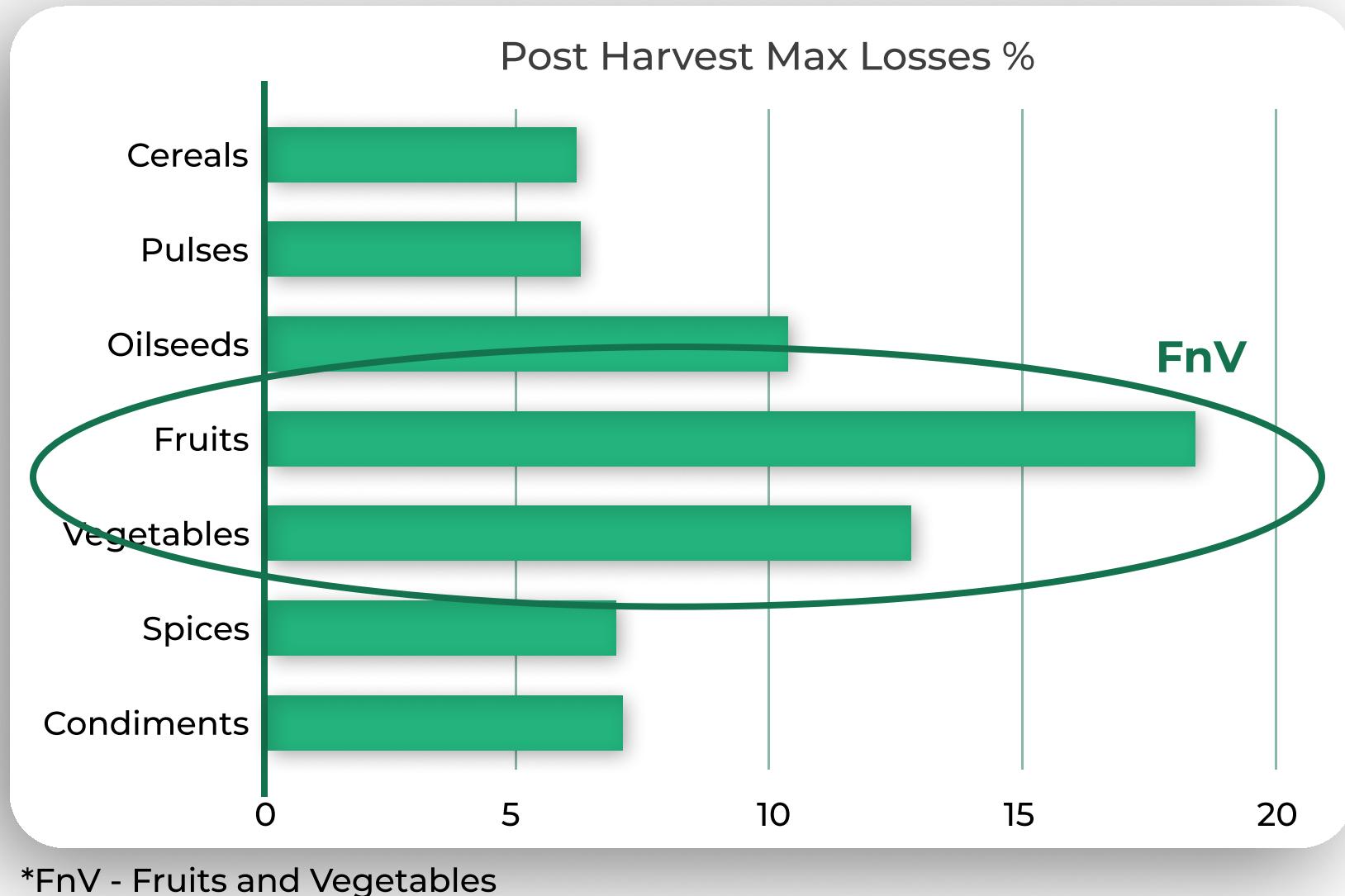


India wastes around **40%** of its total food production, and Indian households wastes **25%** of their purchase

Per capita food wastage in India is approximately **50 kgs** of which fruits and vegetables are in the top 5 commodities



The total value of the food wastage, approximately **INR 92,000 crores**, makes up **0.74%** of the GDP (2014)



Storage
Improper Storage, Lack of Pest Management

Extent of Issue
Foodgrain losses due to improper handling and storage reach as high as **10%**

Supply chain & market
Market glut, Lack of info and transparency, Lack of access to market, Lack of cold chain

Food losses at the front end of the supply chain account for **27%** of food loss and food waste (FLW) in India

[Link to our website](#)

Primary Research



Farmer

- Average FnV farmer
- Water Conscious
- Cost conscious

Needs

Affordable cold storage/ Preservation solutions

Low cost & energy efficient storage techniques

Pain Points

Short shelf life for perishable products

Vendors are unable to store products in case they don't sell



FnV Retailer

- Retailer in Mandi's
- Price fluctuations
- Lower income levels

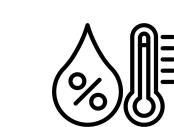
Apt cold storage solutions

Low cost efficient techniques

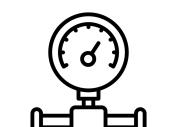
Our Solution

- Introducing Pragati, an advanced design agricultural storage: the Modular Compartmentalized Container, a multi-tiered, portable cold storage solution
- This device aims to create cold storage system with 6 layer smart solution using sustainable materials with building process to help farmers to reduce losses in handling FnV

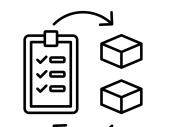
Features



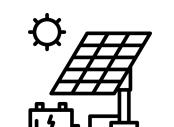
Humidity Level Detector



Discharge Pressure Detector



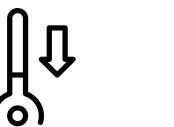
Inventory Management



Uses renewable solar energy



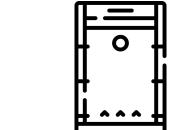
Battery voltage



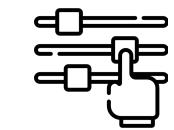
Natural Cooling



Energy Optimisation



Ripening chamber based on concentration levels



Adjustable chamber



Pest detector & controller



Shelf time of FnV increases



Chamber auto locking feature

Problem



Market Size

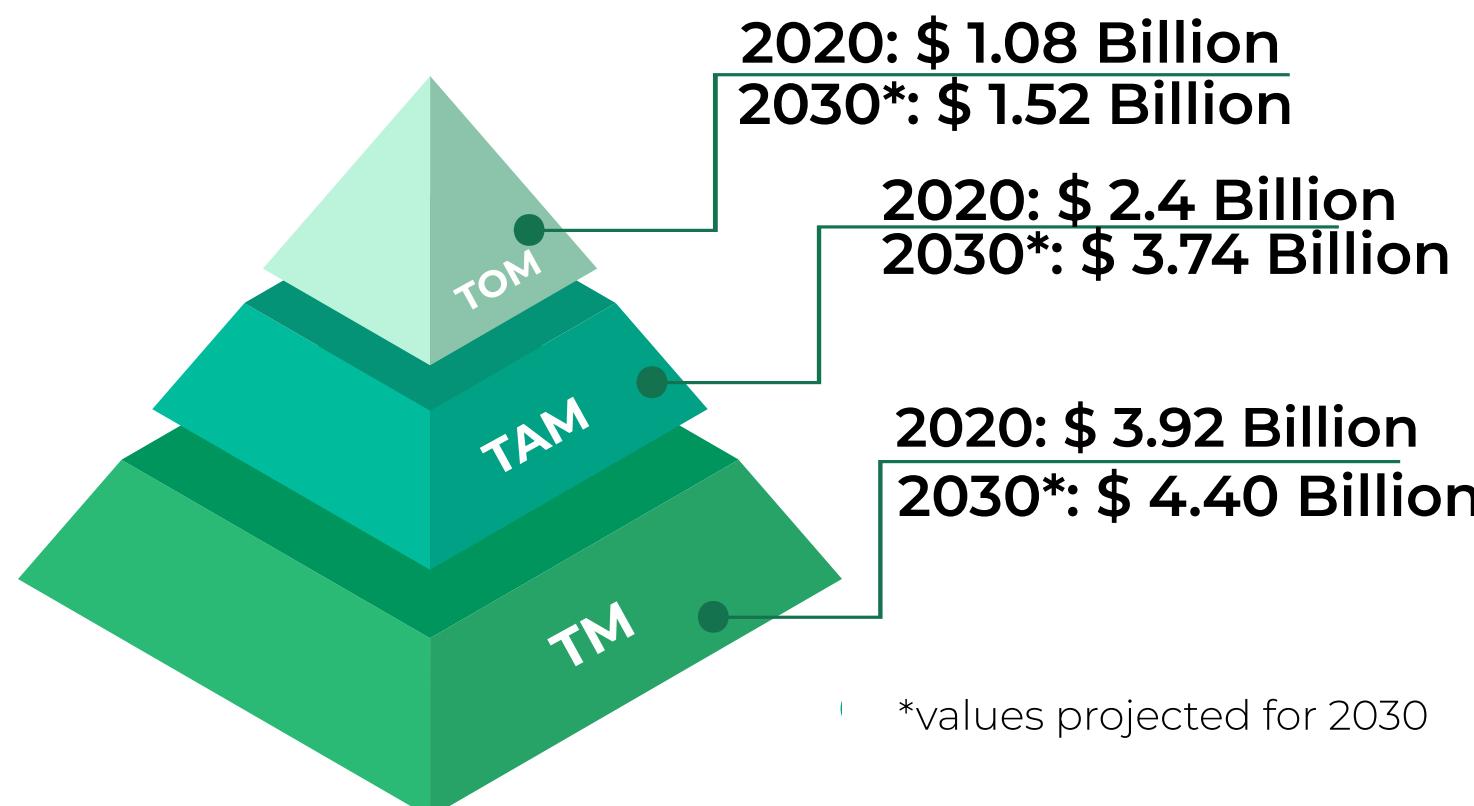
Market Entry Strategy

Competitor Analysis

[Link to detailed product](#)

India's vast CCI market, valued at \$3.92 billion, presents a massive opportunity

Link to financials



\$ 3.92 B

TM = A + B

- Total Cold Storage Infrastructure Market (A): \$1.26 B
- Overall Cold Chain Logistics Equipment Market(B): \$2.66 B
- Market Growth Rate by 2030 = 12.5%

Key Assumptions

- Reduction of market size in cold storage infrastructure: 80%
- Reduction of Market Size in Chain Logistics Equipment Market: 20%
- Addressable Market Growth Rate by 2030 = 55%

\$ 1.08 B
TOM

- Avg. Market Penetration Rate = 45%
- TOM = Penetration Rate * TAM
- CAGR of Obtainable Market = 40.7%

80% of A +
20% of B =
\$ 2.4 B
TAM

- Key Assumptions**
- Penetration rate of Chain Logistics Equipment = 40%
 - Penetration of Cold Storage Infrastructure = 35%

*CAGR - Compound Annual Growth Rate

Problem**Market Size****Market Entry Strategy****Competitor Analysis**

Challenges in Food Wastage and Cold Chain Infrastructure in India

bt Business Today

Indian households second-highest in food wastage in the world

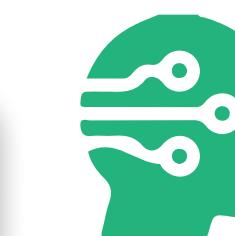
Indian households accounted for 7.4% of the entire 931 million tonnes of food wasted in the world in 2019. Globally, a household on average...

Moneycontrol

India's cold chain infra needs to grow swiftly to smoothen food inflation

Vegetable price spikes may be transient but are becoming frequent for India, complicating inflation management. Cold chain infrastructure is...

Value Chain	CCI components	Required Nos	Created Nos	Gap
	ColdPackhouses	83,041	675	99%
	ColdStorage-bulk	6,669	6,026	10%
FFV	ColdStorage-hub	231	225	2%
	ReeferVehicles	70,035	11,000	84%
	Ripeningchambers	12,654	1,232	90%



Limited CCI deployment



Varied CCI needs



Affordability

- Less than 10% agricultural produce pass through cold chain
- Most FFV losses occur between farmgate and post-harvest handling

- Not all value chains have the same CCI needs
- Compared to FFV, fish and dairy, the CCI required for meat is negligible, as 90% of the meat market is informal

₹1.6L Cr CCI Market Size by 2030

35-50% Subsidized rates for adopting CCI by govt.

- CCI in India is owned and operated by APMCs (Agriculture Product Marketing Committee) & private players
- Unaffordable assets for small and medium-sized farmers

₹273 Cr Economic loss in FFV due to lack in CCI

*CCI - Cold Chain Infrastructure

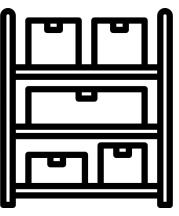
*FFV - Fresh Fruits and Vegetables

Partner with government to provide reliable CCI, unlocking India's agricultural potential

Objectives	Phase 1 Market Penetration	Phase 2 Community Engagement	Phase 3 Government Collaboration	Phase 4 Increasing Revenue
 <p>Strategy</p> 	<p>0-3 months Acquire 200+ customers</p> <p>Customer Acquisition Cost</p> <p>Customer Growth Rate</p> <p>Direct Sales & Field Marketing</p> <p>Farmer's Cooperatives & Associations</p>	<p>4-6 months Building supportive community</p> <p>Community Growth Rate</p> <p>Engagement Rate</p> <p>Local Marketing</p> <p>Social Media Marketing</p>	<p>7-12 months Govt. resources for support</p> <p>Endorsement Monitoring</p> <p>Collaboration Impact</p> <p>Govt. Events</p> <p>Public Pvt. Partnerships</p>	<p>1 Yr+ Drive sales & maximise profitability</p> <p>Revenue Growth Rate</p> <p>Sales Pipeline Velocity</p> <p>Digital Marketing</p> <p>Corporate Partnerships</p>

Key Metrics
Marketing

Business Model

Direct-to-Farmer (Average Farmer)
Charging based on per unit
 Customized storage plans to meet individual farmer needs, enhancing crop preservation & reducing waste.
 Flexible pricing models , offering affordable and scalable options to support farmers of varying sizes

Selling to FPO (Group of Farmers)		
Charging a discounter price for multiple units		
 Volume discounts	 Pay-as-you-store	 Market connectivity
 Flexible pricing models , offering affordable and scalable options to support farmers of varying sizes		

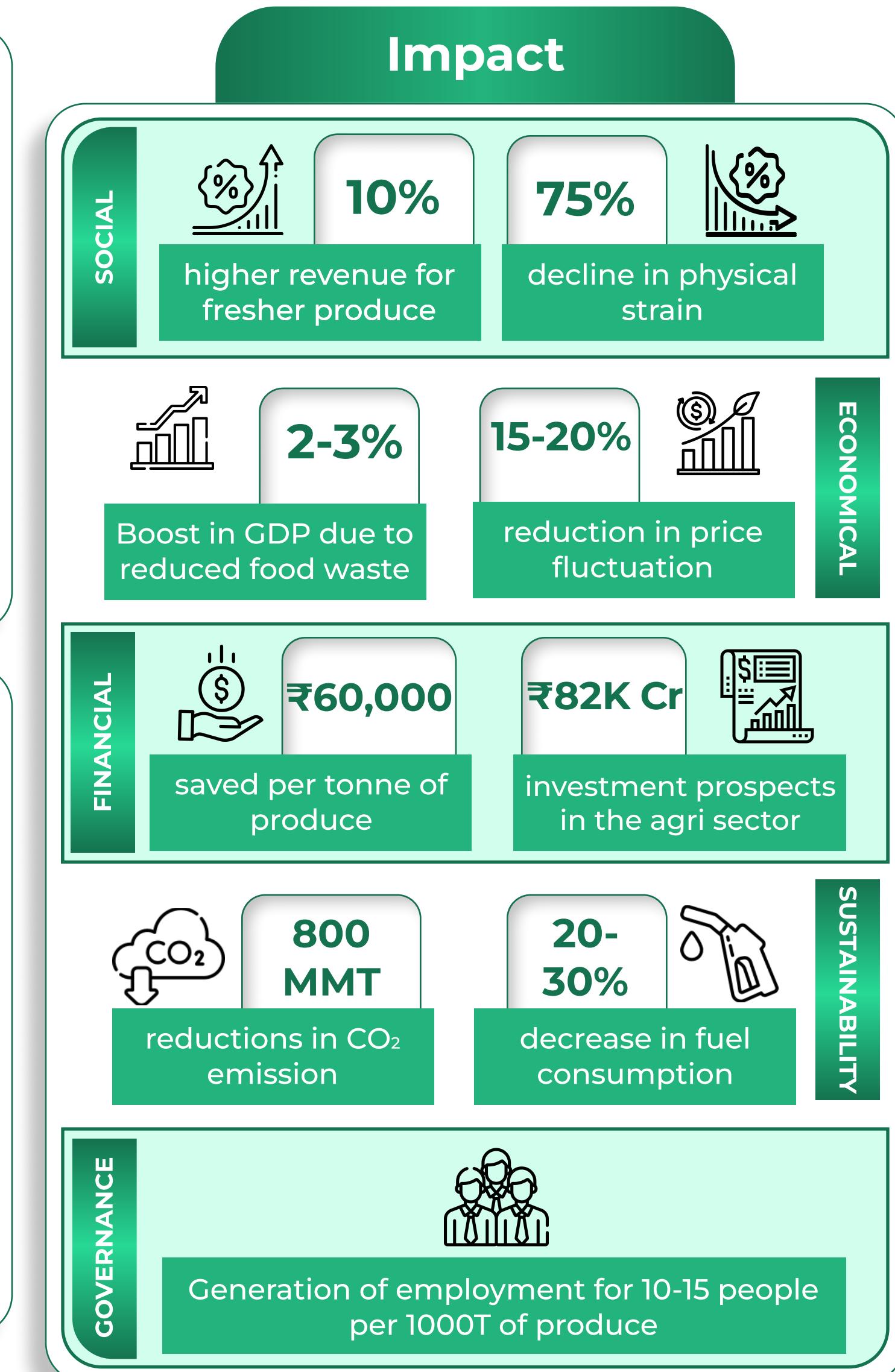
Government Partnerships	
Providing multiple units on subsidy with EMI	
 Collaborative projects to strengthen regional agricultural infrastructure and improve food security	
 EMI	 Insurance
Rs.3000 @0%	Govt. backed insurance solutions

Link to report

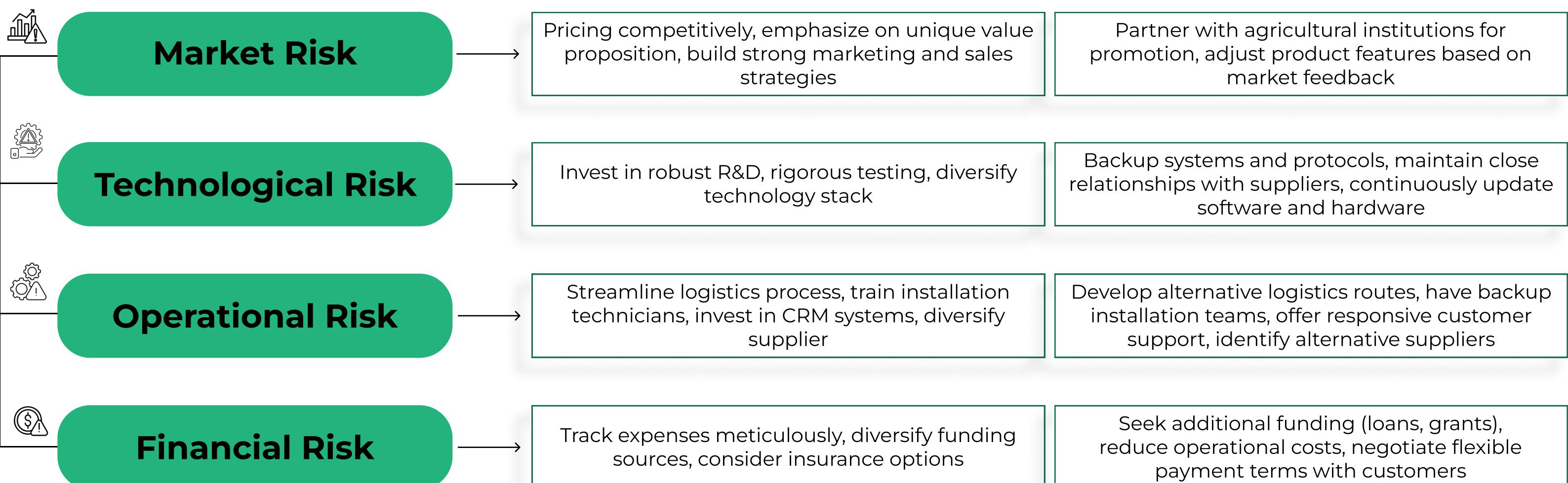
*FPO - Farmers Producer Organisation

Competitor Analysis & Impact

	Cost	AI and IOT	Modular	Compartment	Eco-friendly
	₹2,50,000 & above	IOT-based Intelligent Technology Integrations	Modular Cold Rooms	Compartmentalised	Waste Reduction
	₹500,000 & above	Optimized Resource Management	Modular Cold Rooms	Space Considerations	Ecologically Damaging
	₹350,000 - ₹1 million	Lack of IOT-based Tech. Integrations	Limited Flexibility	Singular Temperature Control	High Carbon footprints
	₹250,000 - ₹2 million	Lack of IOT-based Tech. Integrations	Integrated Design	Lack of Usage based Customization	Energy Inefficient



Risk Mitigation



Problem

Market Size

Market Entry Strategy

Competitor Analysis