

# Challenges and Opportunities Cold Chain - India



# Cold Chain

## for Value Preservation



### Cold Chain

A cold chain is a climate-controlled supply chain, consisting of storage and distribution activities which maintains a product at a given ambient range.

### Segments

#### Refrigerated Transport

Uses refrigerator trucks, cars, van, rail, containers and ships for transporting perishable products

#### Surface Storage

Consists of refrigerated warehouses for storage of perishable products

### Key Activity

#### Transportation

Activities related to transportation to market from production locations

#### Quality Assurance

Activities to assure Technical and Quality parameters to ensure Shelf Life and saleability.

# Executive Summary

## India Scenario

### Market

- Nascent Yet increasingly Demanding, Estimated USD 9 billion in 2015.
- Increasing Volumes and global exposures.
- Domestic development, burgeoning parity.
- Fragmented and disjointed.

### Drivers & Challenges

#### Drivers:

- Growth in Organized Retail
- Shift Towards Horticultural Crops
- Growth in Processed Food Sector
- Government Initiatives
- Growth in Bio-Pharma sector

#### Challenges:

- Human Resources
- Lack of Logistical Support
- Uneven Distribution of Cold chains
- Cost Structure
- Power Supply

### Trends

- Cold Chains based on Public Private Partnership (PPP) model
- Rail Based Reefers, organised distribution.
- Backward Integration, forward economy.
- Cold Chain Facilities for exports.

### Competition

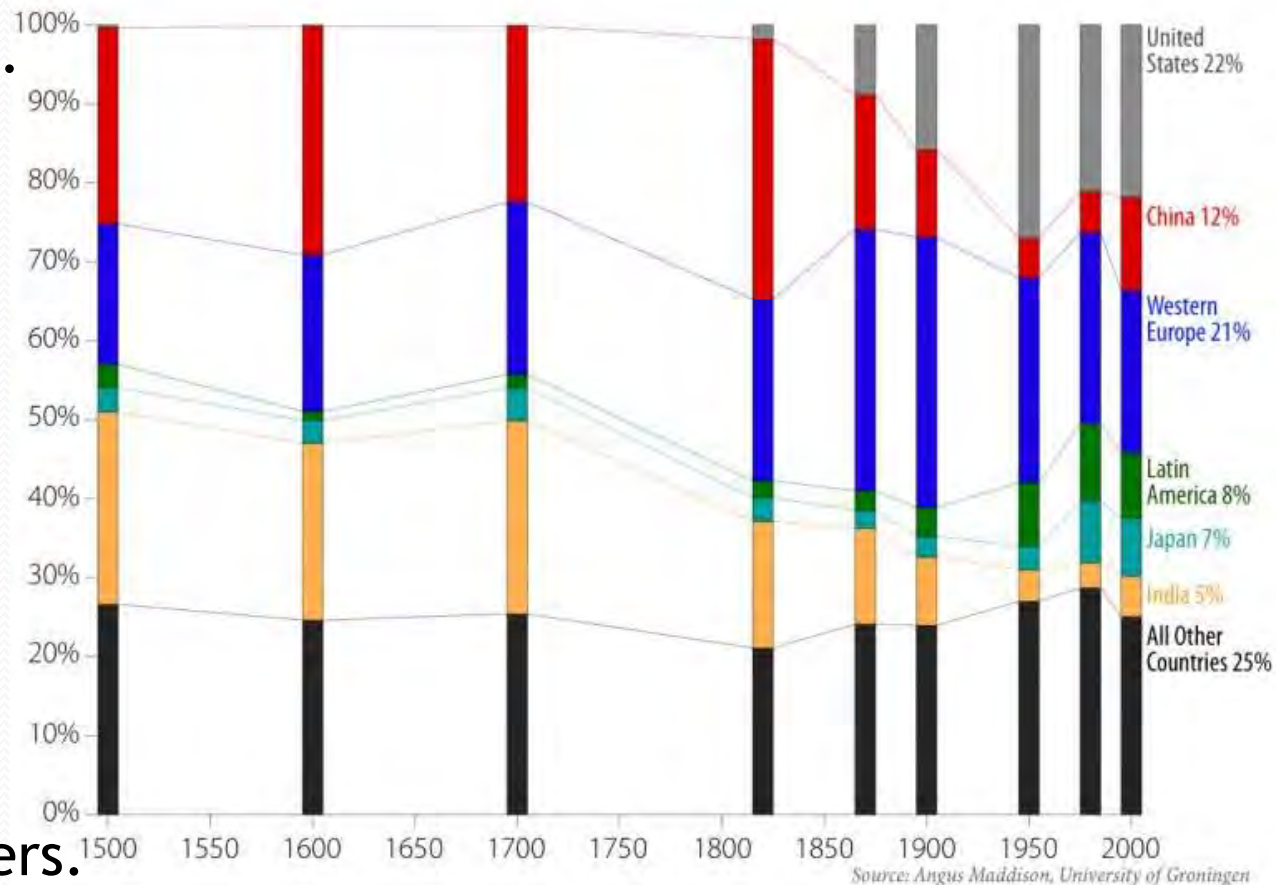
- Minimal: Few Private and State owned players.
- Surface Storage comprising of both organised and unorganised.
- At least 50 companies are offering refrigerated transport services in India
- Captive establishments & New entrants.

# Economic Scenario

## Globalisation

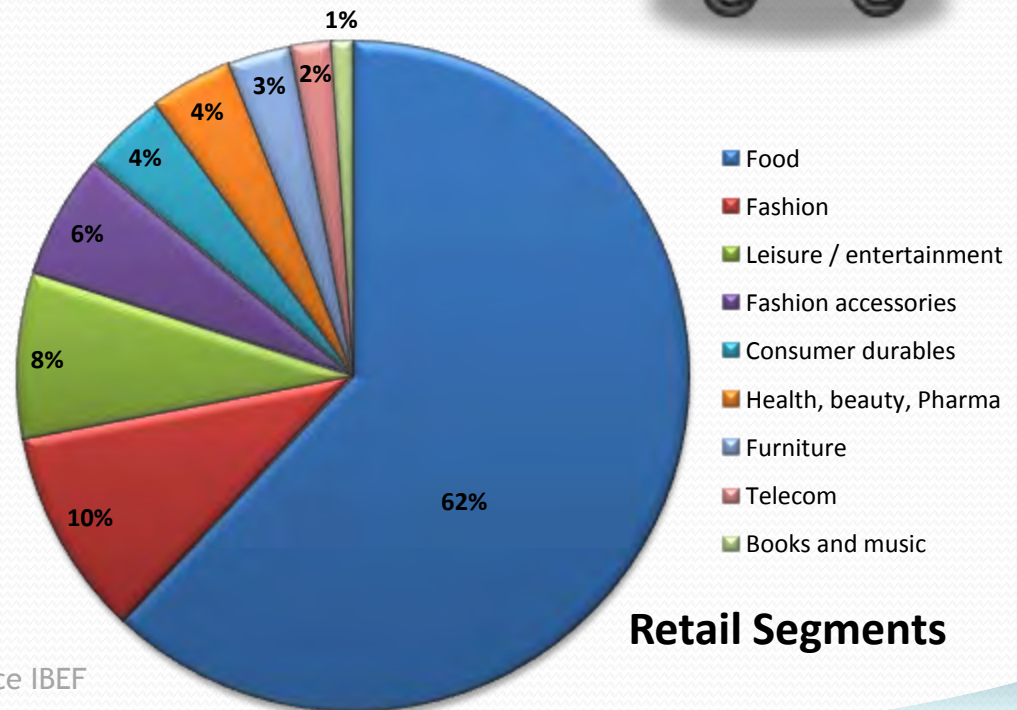
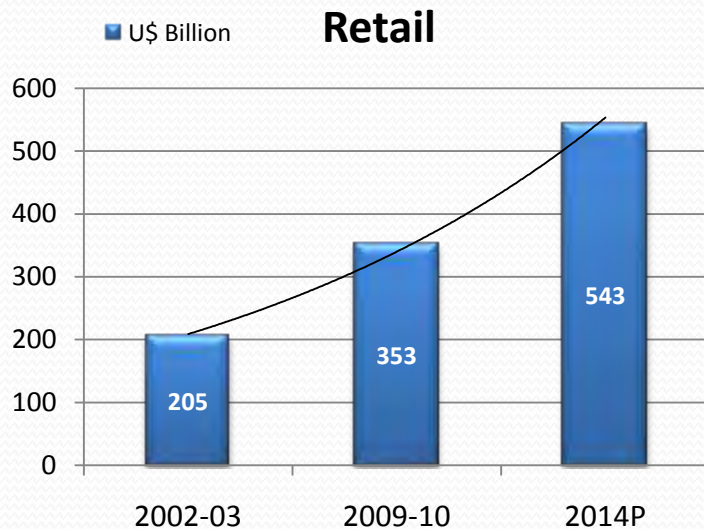
- Process Integration.
- Bilateral trade.
- Diminishing world, singular demands.
- Right Cost Country optimisation.
- Business friendly Global Banking.
- Borderless consumers.

**Percentage of World GDP (last 500 years)**  
China, India, Japan, Latin America, Western Europe, and United States



# Retail and Horticulture

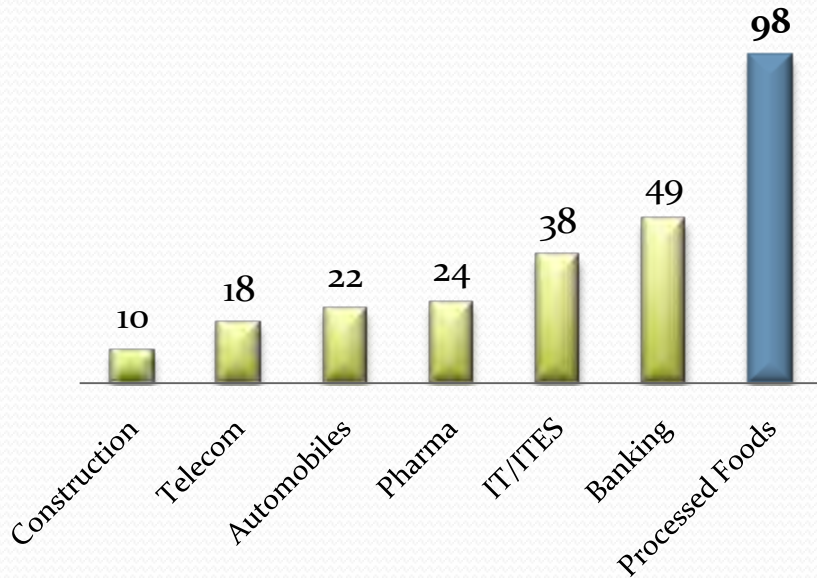
- 5<sup>th</sup> largest retail market worldwide.
- 62% of retail - food; fresh & processed.
- Farmers shifting to horticultural crops.



Source IBEF

# Food Sector

Industry turnovers (US\$ bn)



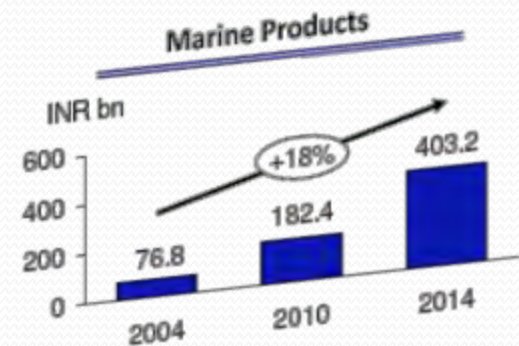
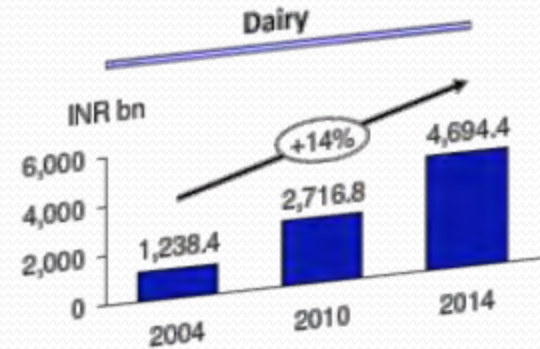
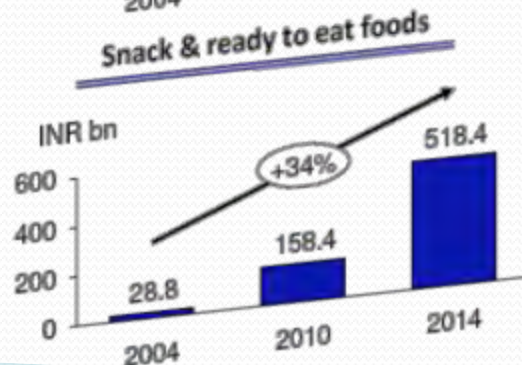
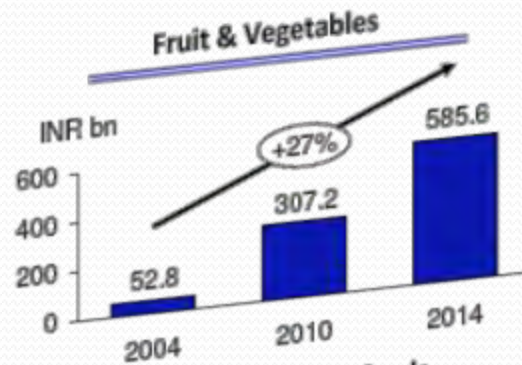
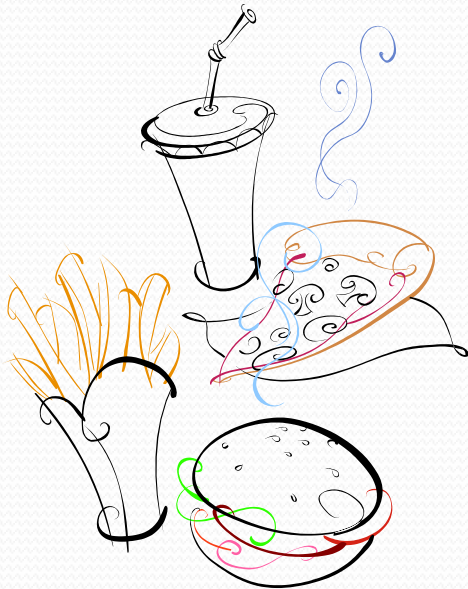
Segment	Size-output/value (2007-08)	Projected growth	Processing levels	Organised players
Dairy products	US\$ 62.67 billion	15%	37%	15%
Fruits & Vegetables	2.33 million tonnes	20%	2%	48%
Meat and poultry	US\$ 13 million	10%	1%	5%
Fisheries	6.4 million tonnes	20%	12%	N/A
Packaged foods	US\$ 2 billion	8%	3%	80%
Beverages	US\$ 155 million	27%	N/A	77%

Source IBEF

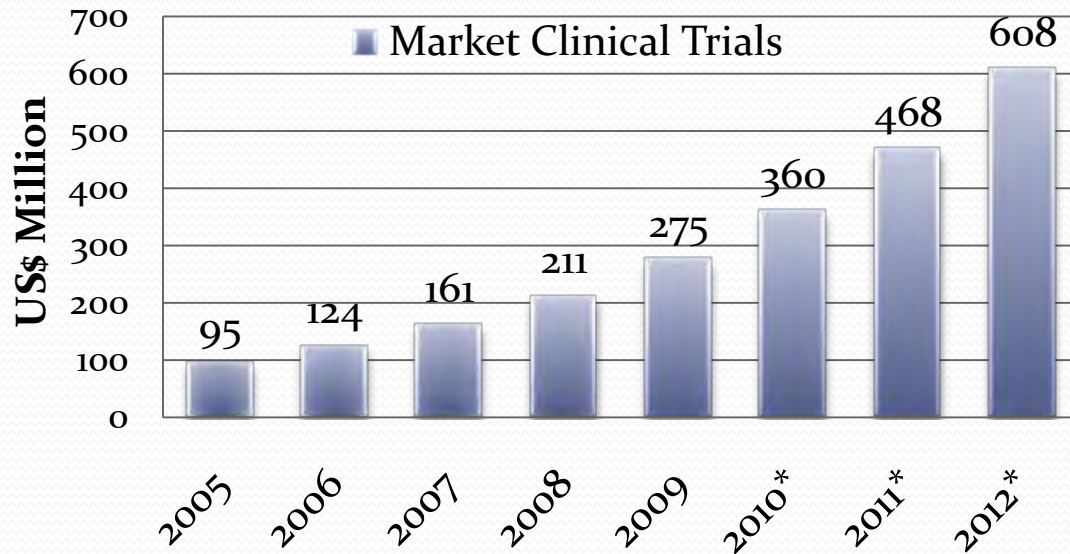
- ✿ Food processing (US\$98 bn), 9% of GDP, growing at 15% last 3 years.
- ✿ **Vision 2015** (GOI) action plan to double processed foods to US\$210 bn.
- ✿ **MoFPI** Envisages investment of US\$21.05 bn in next 5 years.
- ✿ **FICCI-E&Y** study sees investment opportunities to shoot up by 42.5% to US\$ 181 billion in 2015 and to US\$ 318 billion by 2020.

# Food Processing

- Changing consumer trends for convenience and processed foods.
- Government of India's setting up 30 mega food parks
  - To propel demand for cold storage and transportation.



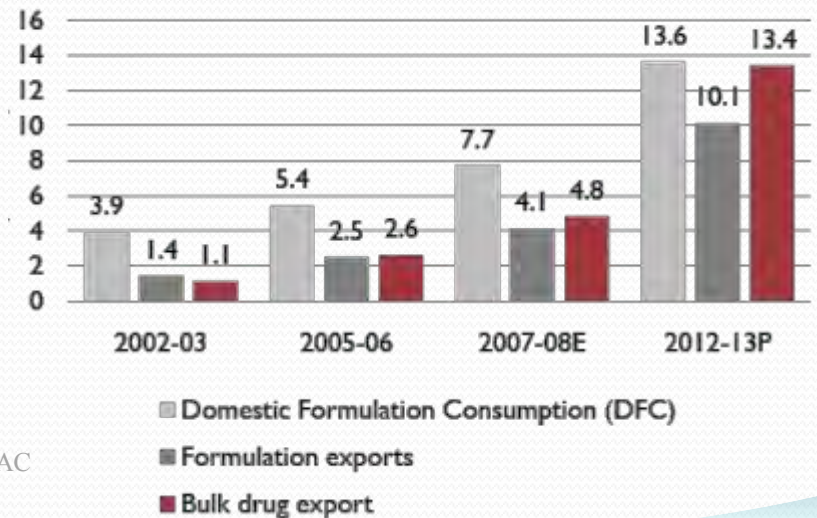
# Bio-Pharma Sector



Indian clinical trials market currently sized at US\$ 250 mill to US\$ 275 mill and expected to grow at CAGR of 30%, at almost double the global average.

Indian Pharma Industry: US\$ 20 billion in 2009; the domestic retail market is expected to cross the US\$ 10 billion mark in 2010 and reach an estimated US\$ 12 billion to US\$ 13 billion by 2012.

Domestic pharma retail market



Source: IBEF, CRIS INFAC

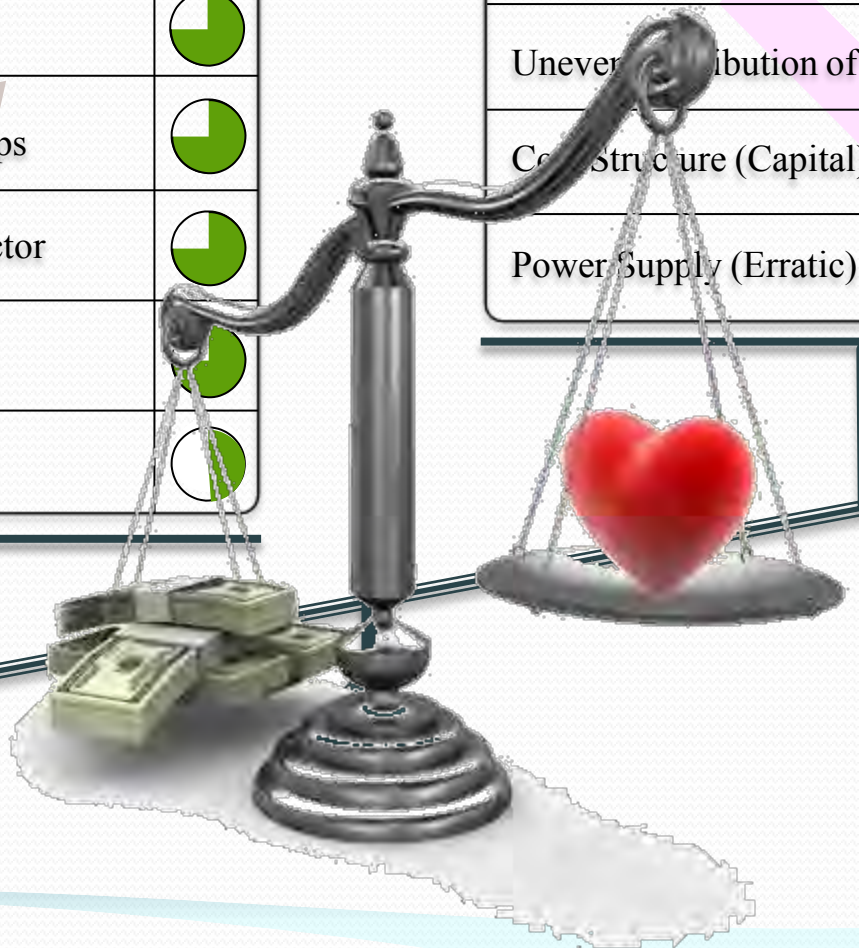
# Drivers / Challenges

## Drivers

Growth in Organized Retail	
Shift towards horticultural crops	
Growth in Processed Food Sector	
Government Initiatives	
Demand from all user sectors	

## Challenges

Human Capital, Domain Skills	
Lack of Logistical Support	
Uneven Distribution of Cold Stores	
Cost Structure (Capital), Parity	
Power Supply (Erratic)	





# Other Bottlenecks

- Capital Intensive Infrastructure.
- Restrictive land use and other regulations.
- High Operational costs, Low yield models.
- High Insurance/risk coverage premiums.
- Nascent, Limited knowledge, limited experience.
- Large gap in demand supply conducive to small unorganised service providers.
- Users have developed captive resources.
- Federal tax and commercial regulations.
- No fast-track perishables corridor.



# Policy as Catalyst

Government  
policy as a  
'Catalyst'

Encourages  
Investments

Encourages  
Organised  
Sector

Liberalises  
Marketing  
Norms

Rationalises  
Tax Laws

Grants &  
Subsidies

Foreign  
Investment  
Eased

Agri/Foods  
identified as  
priority sector

ECB route  
opened,  
Import duty  
relaxed

Focus on  
increased  
Retail,  
improved  
supply chain.

Moving  
towards  
uniform  
VAT/GST

VG Funding,  
Grants,  
Infrastructure  
status

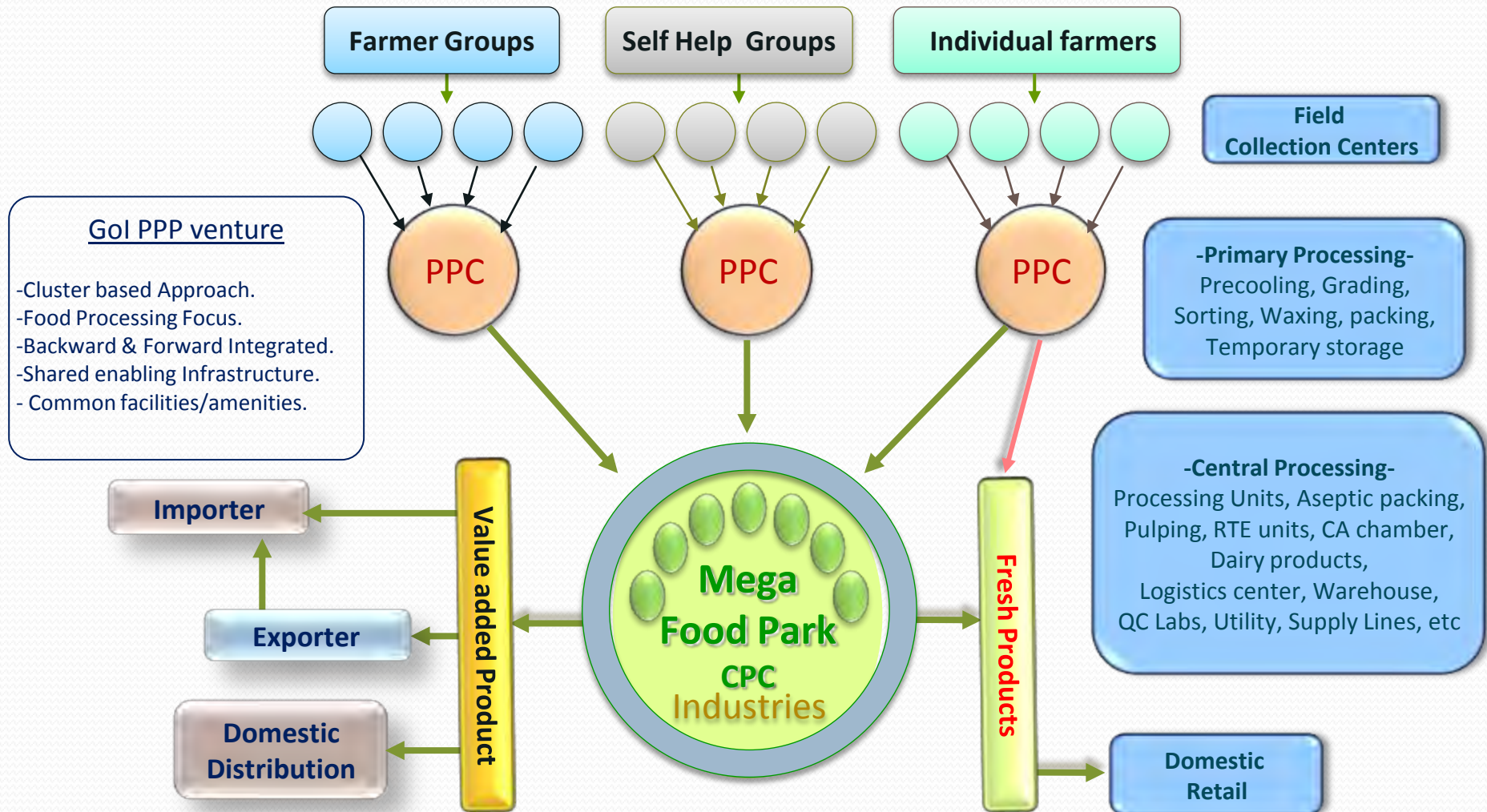
100% FDI in  
food sector,  
ECB for cold  
chain.

# Gol Initiatives

## Focus Cold-chain

- Excise waived on F&V, meat preparations, ice cream, other RTE food mixes.
- Automatic approval for 100% foreign equity in processed food items.  
External Commercial Borrowing opened (except alcohol, beer, etc).
- Priority lending status; Duties reduced on imports; zero service tax on installations.
- EOI floated for 30 mega food parks - allocated US\$ 1.02 billion by 2012.
  - Objective of the scheme is to provide backward and forward linkages as well develop reliable and sustainable supply chain
- Gol initiating National Highway Development Program and partnering with Indian Railways to establish cold chain infrastructure.
  - Indian Railways is planning to invite private parties to run refrigerated container trains for transporting agricultural products across the country.
- Integrated Food Law (FSSA) notified and ready for implementation.
- Rs 1000 cr corpus for agro-processing industry and market development.
- Task Force on Development of Cold-Chain established & National Centre for Cold Chain Development (NCCD).
- 100% capital depreciation for cold chain.
- Weighted deduction 200% for R&D in Pharma.

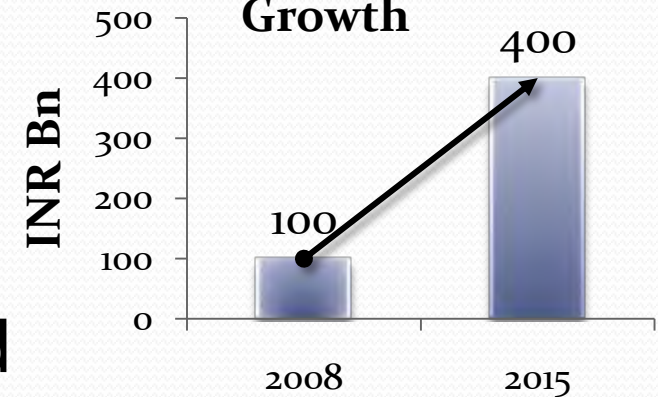
# Mega Food Park Model



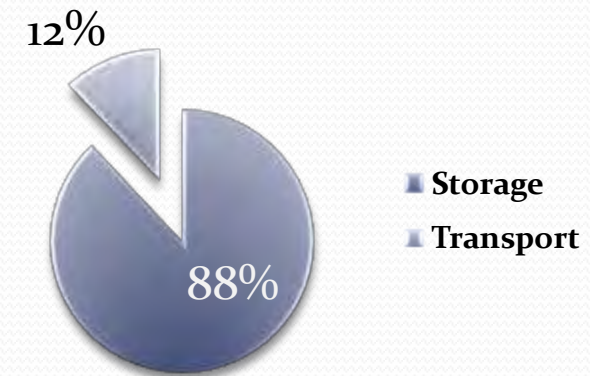
# Market Grows yet fragmented

- Large area spreads.
- Increasing volumes in each sector, large service gap.
- Rising Demand, yet misaligned / fragmented.
- Case - 1: Vaccines Distribution
- Case - 2: Seafood Distribution
- Case - 3: Agri Farm to Fork

Market Size and Growth



Market Segments



Source: USTDA, 2008 ; Supply Chains.com July 2009 ; Transport Reporter

# Challenges or Opportunity?

## Cold Supply Chain (India): Poised for a Quantum Jump

- Best practises for India Market.
- Demand for training establishments.
- Gaps in appropriate Infrastructure development.
- Adoption of energy efficient technology.
- Adapting to Indian backdrop - move from mass storage to direct access storage.
- Partner with networked Indian logistics companies.
- Manage and develop Multiple complexities in human capital development.
- Anticipate ahead of a developing market.



Here is History in the making and the Opportunity to be part of it. A market develops to oblige!

# Manage Information

- Changing Perceptions
  - Process delays - understanding.
  - Control - global.
  - Quality - total.
- Customer Attrition and Loyalty.
- Market specific Branding.
- India specific USPs.
- Socio-ecological interactions.
- Inter-cultural communications.



# Manage Customer

## Global Exposure / Needs

- Multi-modal risk managed movement.
- Single window service.
- Solutions biased provider.
- Cost effectual transactional process.
- Pro active communication.
- Transparent Supply chain.
- JIT – Shortened lead time.
- Extended Reach – wide network.



“Globalisation increases the scope and involvedness of the supply chain manager”

# A Human Chain

## Manage People

- People.
  - Cross cultural exposure
  - Local Knowledge
- Leadership Mix.
  - Best practices in cross functions
  - Synergise corporate and managerial mores
- Laws & Norms.
  - Commercial Taxation
  - Regulatory Compliances
  - Corporate Governance
- Affiliation with Trade Development Bodies.
- Partner Integration, Cross-enterprise processes.



# Chain of Trends

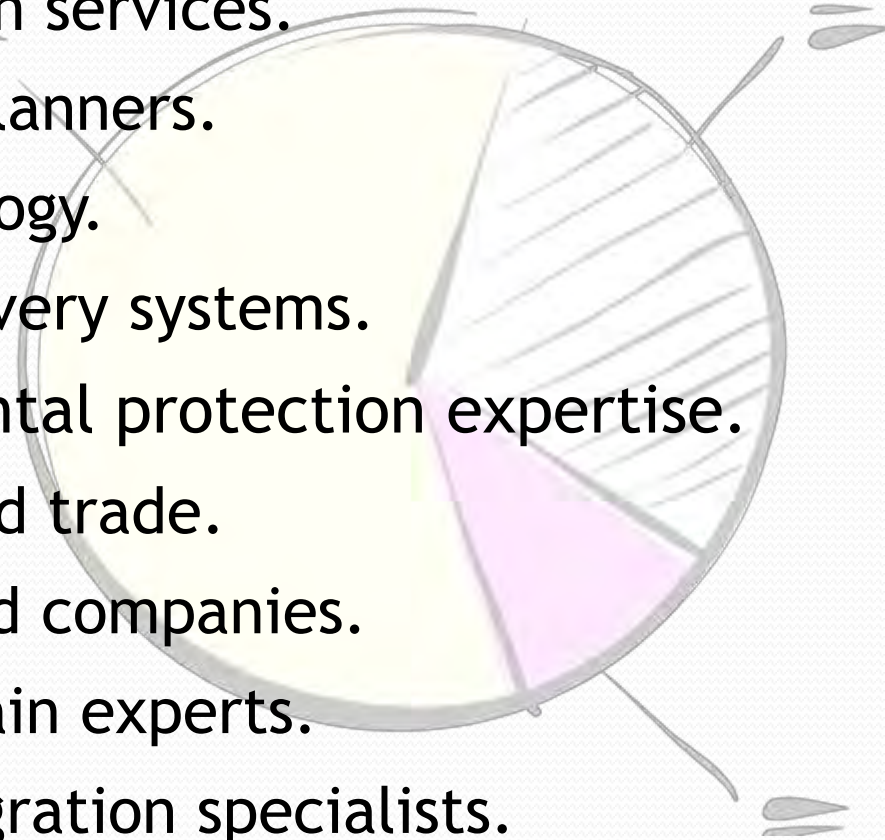
## Manage Strategy

- Changing Demographics.
- Modified Purchase Habits.
- Traceability and flexibility.
- Free Trade Agreements.
- Inclusive Globalisation.
- Security & IP Concerns.
- New Business & Opportunities.
- Affected National Priorities.
- Environmental Sustainability.
- Changed perceptions, fading borders.
- Technology reliant business processes.



# Clarion Call for...

- Technology Provision and implementation.
- Cold Logistics and Supply Chain services.
- Infrastructure designers and planners.
- Scalable Refrigeration technology.
- Refrigerated Vehicles and delivery systems.
- Alternate energy, environmental protection expertise.
- Shipping and international food trade.
- Innovators and solutions biased companies.
- Education, Training & Cold chain experts.
- Knowledge Managers and Integration specialists.



There is a fledgling Cold chain awaiting shape - to serve a billion people.

# End of Deck



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## Thank You

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