



Optimizer Odyssey

Business Operations and Supply chain Case Competition

Tackling Food Wastage and Losses in India

Team: Brew Crew

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India's Food Problem

Total Food Produced

330.5

Million tonnes
in a year

Total Food Wasted

74

Million tonnes
in a year

Every person wastes

50 kgs

Food

Cost of Food Waste

\$7

Billion Dollars

India's

16.6%

Population is
Undernourished

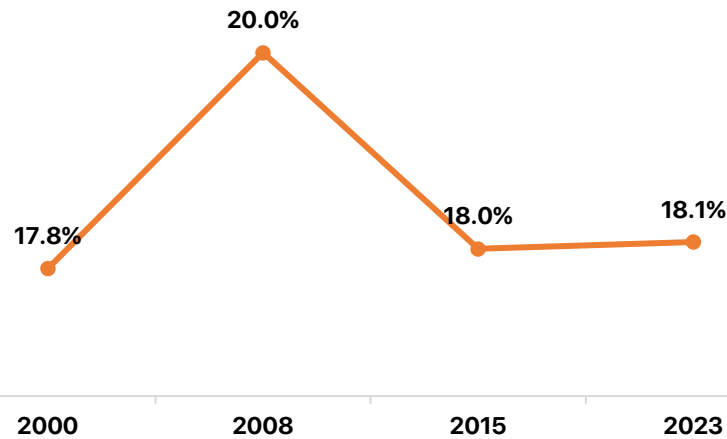
Approximately

1/3

Undernourished
People live in India



Percentage of Child Wasting in India



India Ranks below
Pakistan and **Sri Lanka**
in Global Hunger Index



Every Week, Every Family

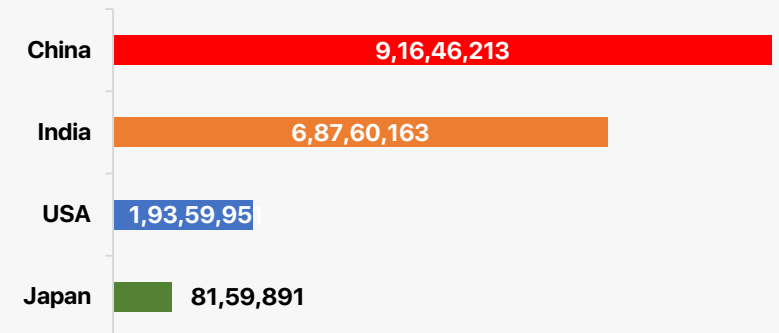
can be gifted with

5kg of Fruits & Vegetables

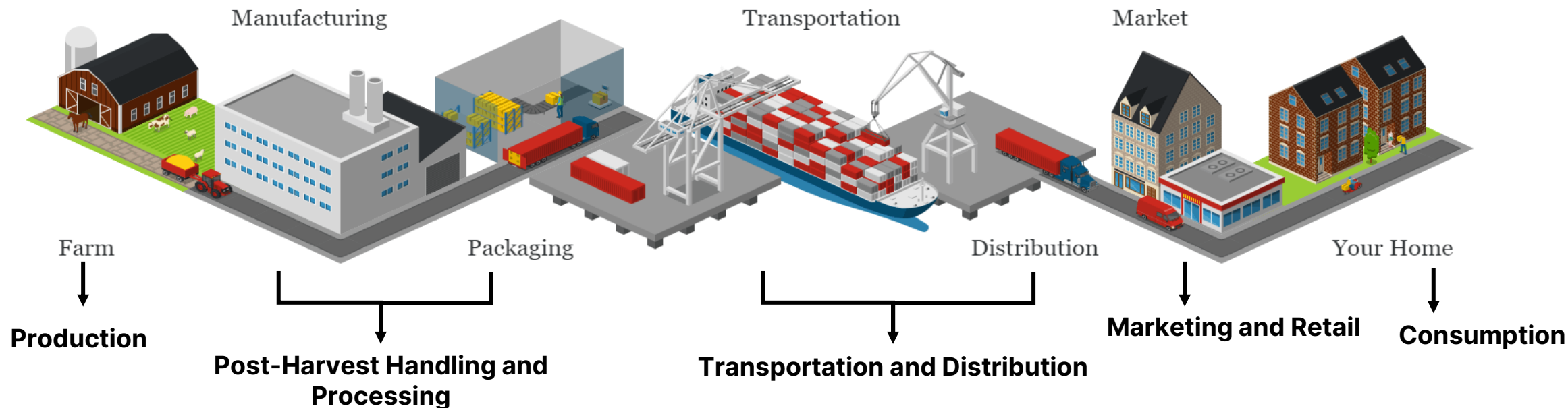
Free of cost, if we saved food
losses

India Ranks **111/125** in
Global Hunger Index

Indian Household 2nd-Highest in
Food Wastage in the World



Food Supply Chain

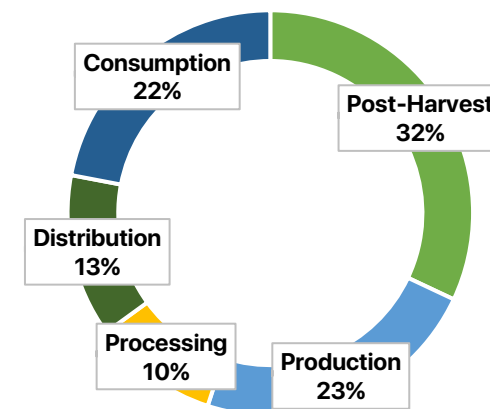


Why **Post-Harvest** causes Food Waste?

Up to **40 per cent of food** is lost after harvesting, during handling and storage — never making it to the shops at all.

- **Poor Practices:** Improper handling, storage, and transportation of crops after harvest can lead to spoilage and losses.
- **Technical and Technological Limitations:** Lack of suitable technologies for post-harvest handling can lead to spoilage
- **Lack of Infrastructure:** Poor road conditions can delay the delivery of crops to storage facilities, leading to spoilage

Post-Harvest wastes the most



India *grows more*, *waste more* while *more go hungry*

India's food policy remains pro-cereal over the last 50 years

1970's

Expenditure on cereals **41.1%**



more cereals and **less** vegetables, pulses, dairy and meat

But, As India become **wealthier**

Indian food consumption baskets have changed significantly

Present



Expenditure on cereals **10.8%**

less cereals and **more** vegetables, pulses, dairy and meat

Where is the problem?

FCI still buys millions of tons of wheat and rice at MSP

Incentivizes Farmers to produce cereals. This has meant more than adequate supply

The supply of vegetables and pulses in the country has not risen as it should have.

Staple Food



Demand



Supply

Non-Staple Food

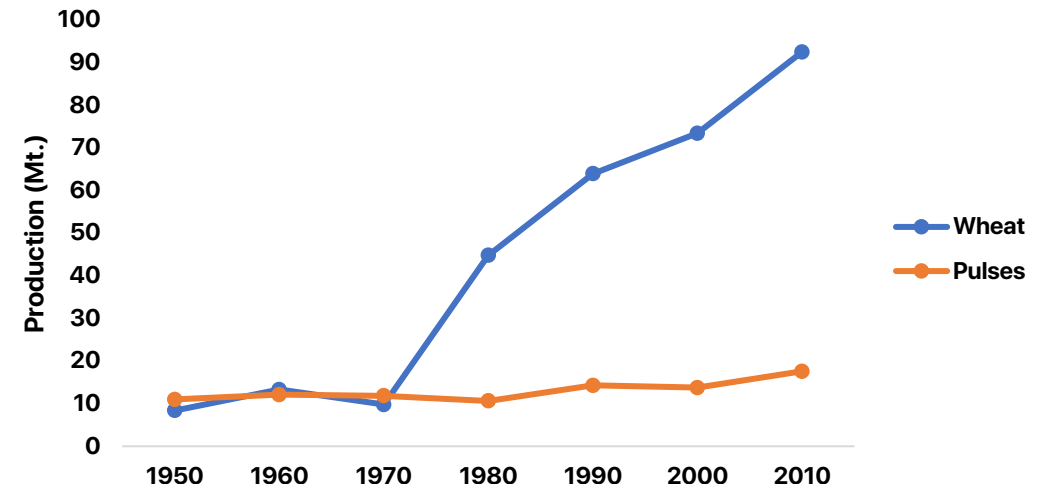


Demand



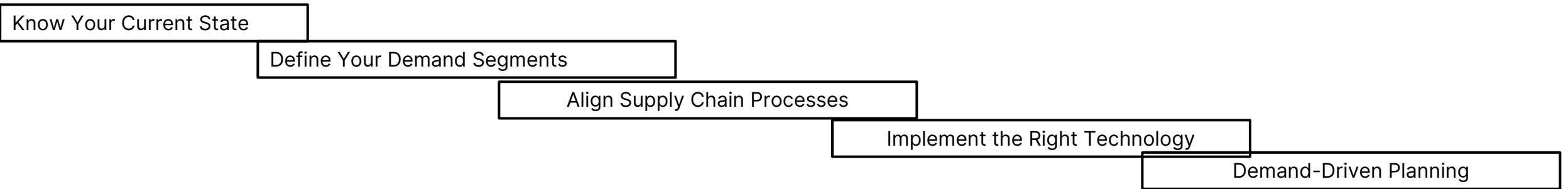
Supply

Wheat grown 7X more than Pulses



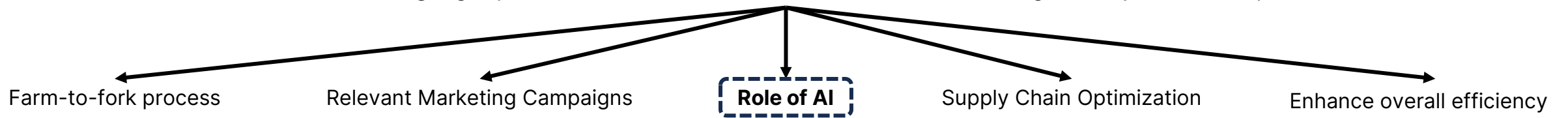
Demand-Driven Supply Chain

In 2019-20, total food grain production was **estimated at 292 million tonnes**, while as per estimates, **225-230 MT is needed** to feed its population in a year; more than **60 MT food was overproduced and wasted**



Farmers want to know how, when and what to grow

Demand Forecasting aligns production and distribution with forecasted demand significantly reduces surplus food.



Last Mile Optimization

AI extends its impact to the last mile of the supply chain, ensuring that products reach consumers in optimal condition and punctuality.



Optimized Delivery Routes

AI leverages its capabilities to calculate the most efficient delivery routes, reducing transportation time and minimizing spoilage and losses.



Automated grading and sorting

It can accurately grade, and sort produce based on quality, size, and ripeness. This ensures that only the best products reach consumers, reducing waste from suboptimal items.

Thank You