



**Asia-Pacific
Economic Cooperation**

2013/SOM3/PPFS/005

Agenda Item: 5, 8, 9

Cold Chain Infrastructure - Suggestions from Japan As Solution Provider

Purpose: Information
Submitted by: Japan



**Second Policy Partnership on Food
Security Meeting
Medan, Indonesia
22-25 June 2013**



**Asia-Pacific
Economic Cooperation**



WG 3: Facilitation on Investment and Infrastructure Development
 Priority3: Infrastructure development and Public Private Partnership (PPP)

WG4: Enhancing Trade and Market
 Priority3: Enhancing supply chain connectivity for food
 Priority5: Reducing post-harvest losses and food waste and increasing food safety, including development of food industry


Cold Chain Infrastructure -Suggestions from Japan as Solution Provider-

APEC Policy Partnership on Food Security (PPFS)
Medan, Indonesia, June 22, 2013




NAOJI KATO
 Director, Executive Vice President
 Nichirei Foods Inc.


Corporate Profile “Nichirei Corporation”




Nichirei Corporation -Holding Company-
Group Statement: Networking “Good Taste” and “Freshness”




Nichirei Foods Inc.
Processed Foods



Nichirei Logistics Group Inc.
Logistics



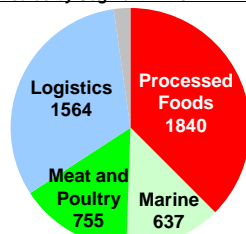
Nichirei Fresh Inc.
Marine & Meat and Poultry



Nichirei Biosciences Inc.
Biosciences

Net sales by Segment FY2012: Million \$

- Established: **December 1, 1945**
- Head Office: **Tsukiji, Chuo-ku, Tokyo**
- Paid in Capital: **\$303 million** (@JPY 100/\$)
- Net Sales: **\$4.7 billion** (FY2012 ended March 2013)
- Number of Employees (consolidated): **12,082**



Segment	Net Sales (Million \$)
Processed Foods	1840
Logistics	1564
Meat and Poultry	755
Marine	637

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Preface



1. Cold Chain Infrastructure - Key part of food supply chain

Well recognized in the past presentation, as below:

- September 2012: Presentation at PPFS Work Shop in Tokyo, Japan
- January 2013: Presentation at PPFS in Jakarta, Indonesia
"A Cold Chain Proposal for Food Loss - Learning from the Past and Present of Japan -"
- May 2013: ABAC Japan Forum of Mid-Year Activities in Tokyo, Japan
"Building of Cold Chain Infrastructure through PPP"

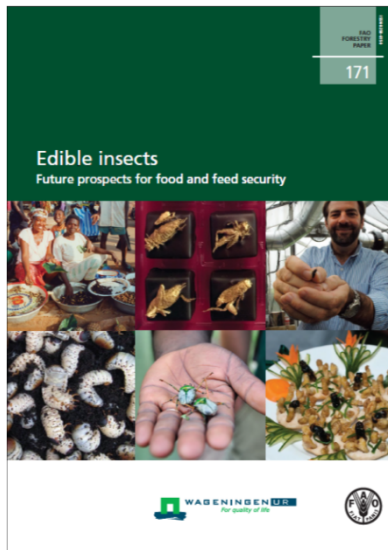
2. Cold Chain Infrastructure - Solution for sustainable economic growth

- Food Producer groups
- Food Processors, Manufacturers, Retailers, Food Services
- Communities

3. Establishing the Cold Chain Infrastructure

- Requires a strong Policy Partnership of Public and Private – Japan case

FAO "Edible insects" released on May 13, 2013



- Estimated 2 billion people are eating
- More than 1900 insect species consumed
- Rich in protein and good fats, and high in calcium, iron and zinc
- 2 kilo grams of feed to produce 1 kilo grams of insect meat vs. 8 kilo grams for beef



Banana bees cooked and prepared for sale at a food market in Chiang Mai, Thailand



Japan's bee larvae

Source: FAO "Edible insects"

Current Food Loss / Waste in the World



■ Rapid Growth of World Population

- 2011: 7 billion 2050: 9 billion

■ Starving and Malnourished people

- World: 900 million people are starving
- ASEAN: 17% of children suffering malnutrition

■ Food Losses & Waste

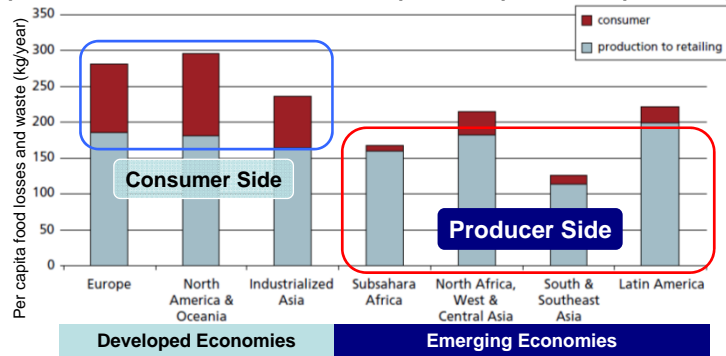
- About 1.3 billion tons a year in the world
- 1/3 of total food production in the world
- Largest for fruits & vegetables (Around 20% at Producing Level)
- Substantial gaps in knowledge throughout the food chain
- Loss reduction as an important option to increase food availability

Source: Save Food Congress, Dusseldorf, 16 May 2011

Causes of Food Losses & Waste by Region



Per capita food losses and waste, at consumption and pre-consumptions stages



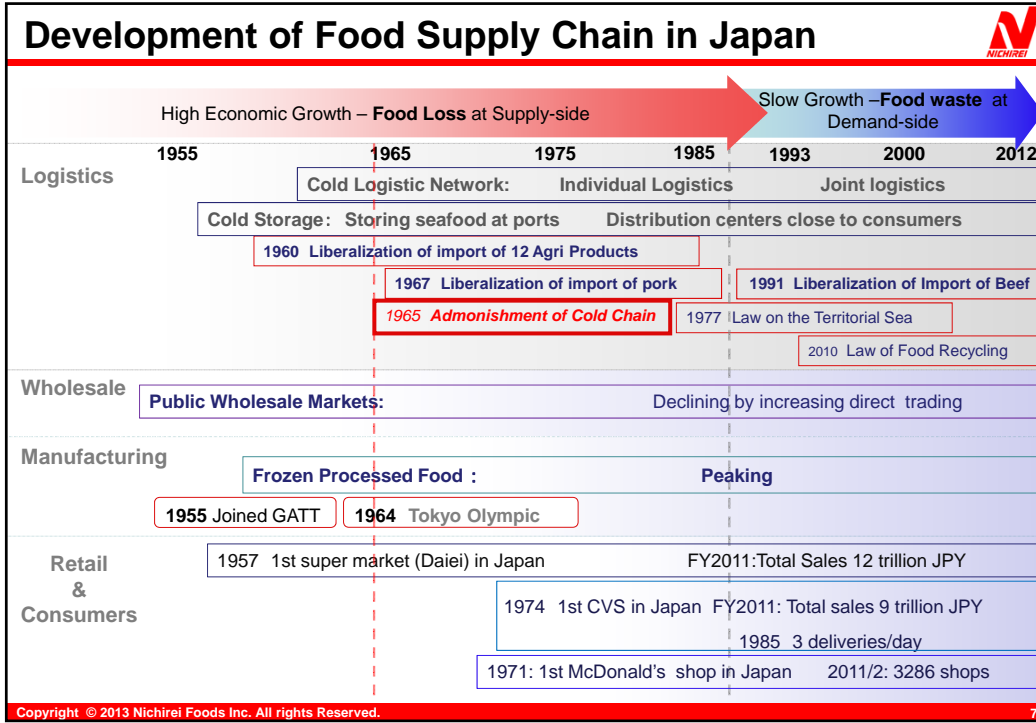
Latest Initiative – 5th June, 2013
USDA/EPA launched the U.S. Food Waste Challenge, calling on others across the food chain—including producer groups, processors, manufacturers, retailers, communities, and other government agencies - to join the effort to reduce, recover, and recycle food waste.

Awareness of Communities

- Poor storage facilities
- Lack of refrigeration
- Lack of primary processing facilities
- Poor transportation
- Inadequate market system and facilities
- Poor packaging

Need for Cold Chain Infrastructure

Source: FAO "Global Food Losses and Food Waste", 2011

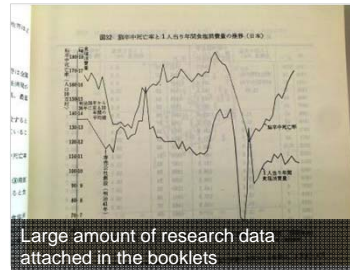
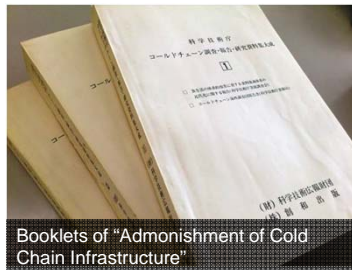


Japan Government's Initiative in 1965

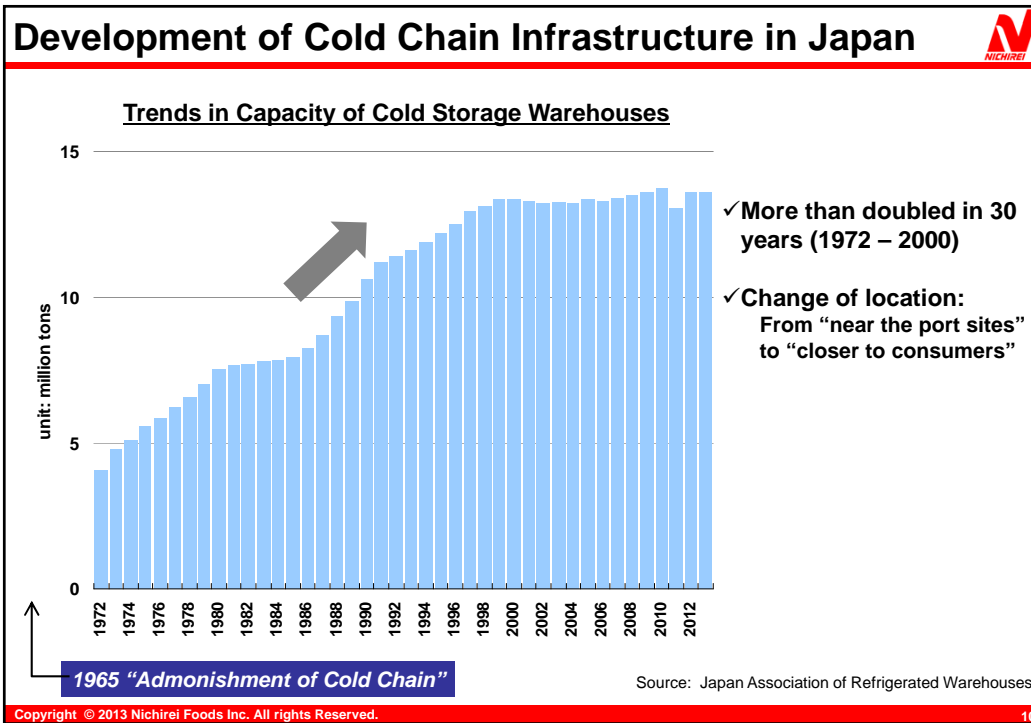
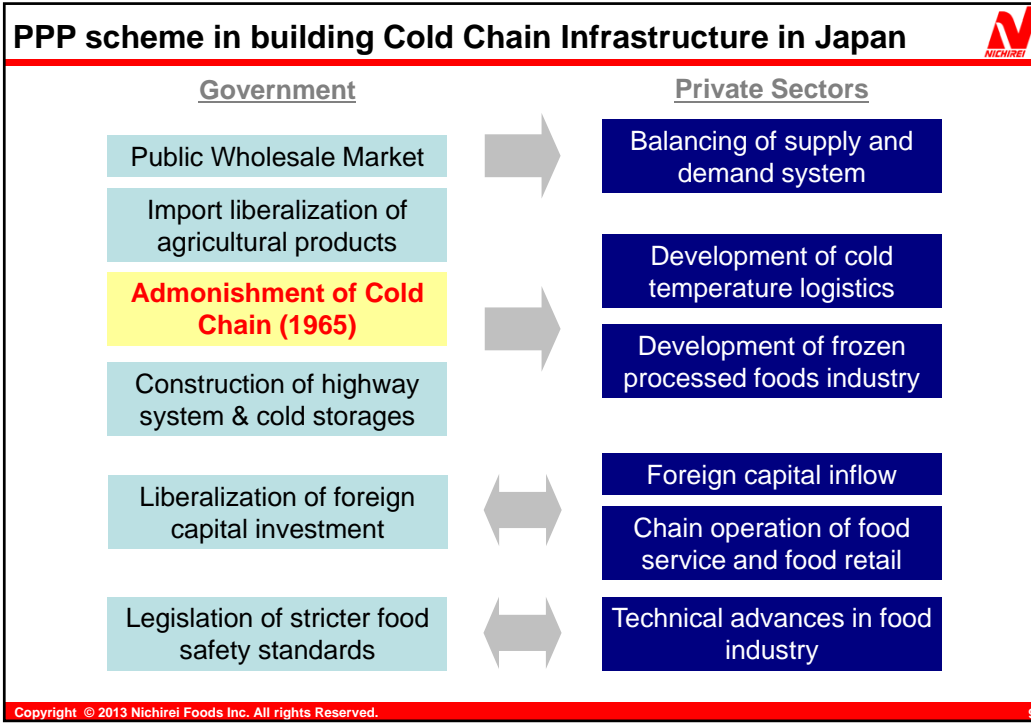
“Admonishment of Cold Chain Infrastructure”:

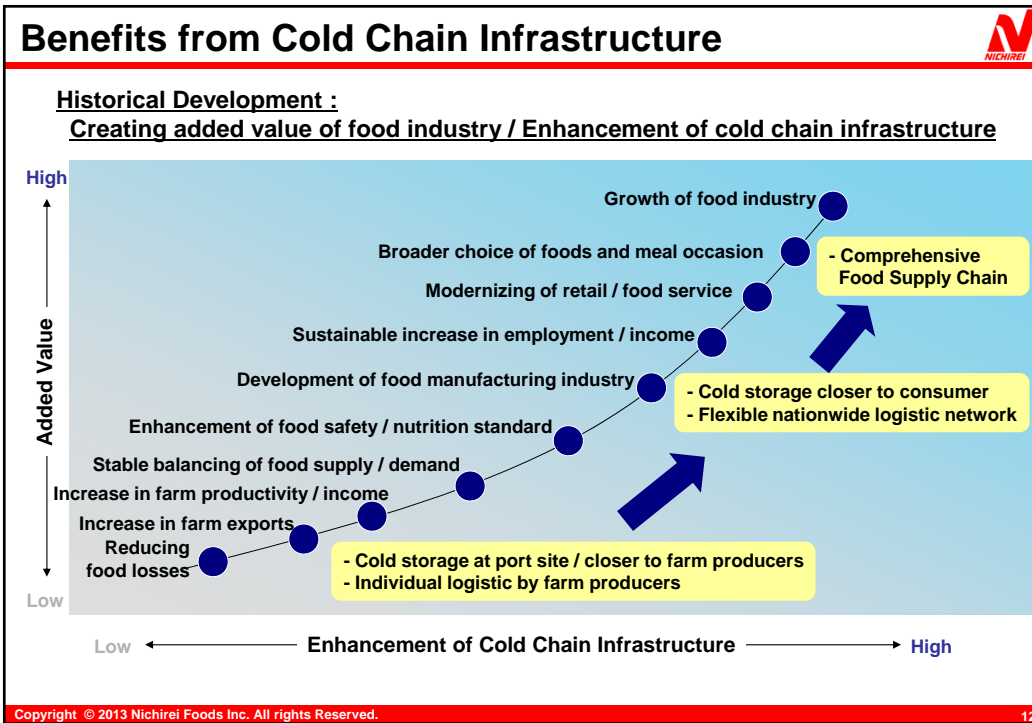
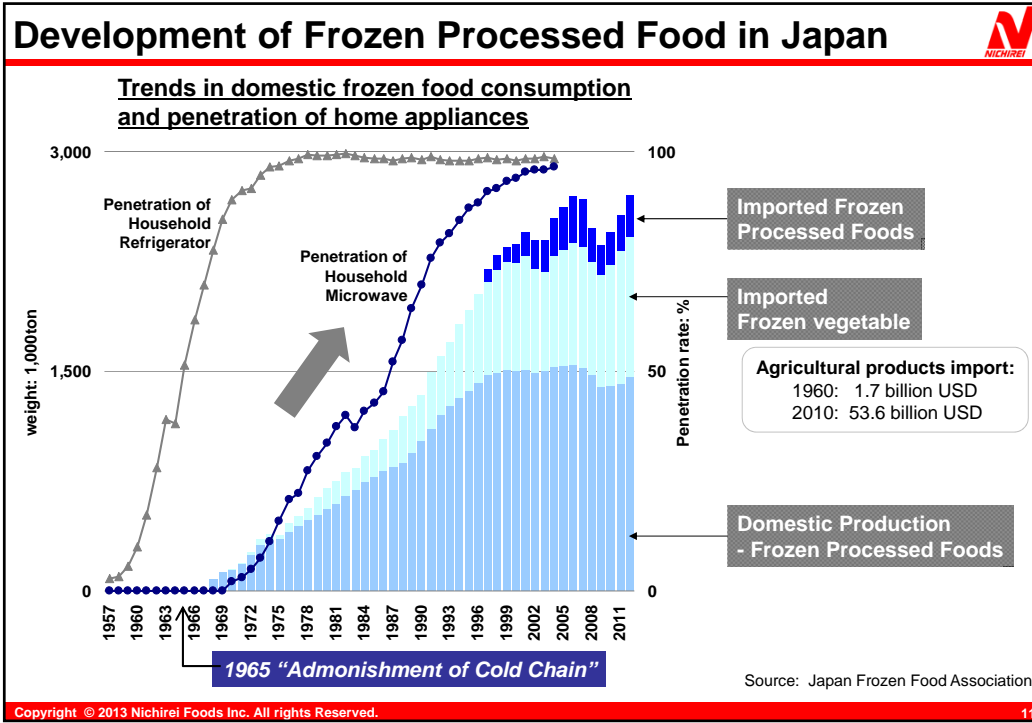
Recommendation to modernize the comprehensive food supply chain system to contribute to the systematic development of diet style

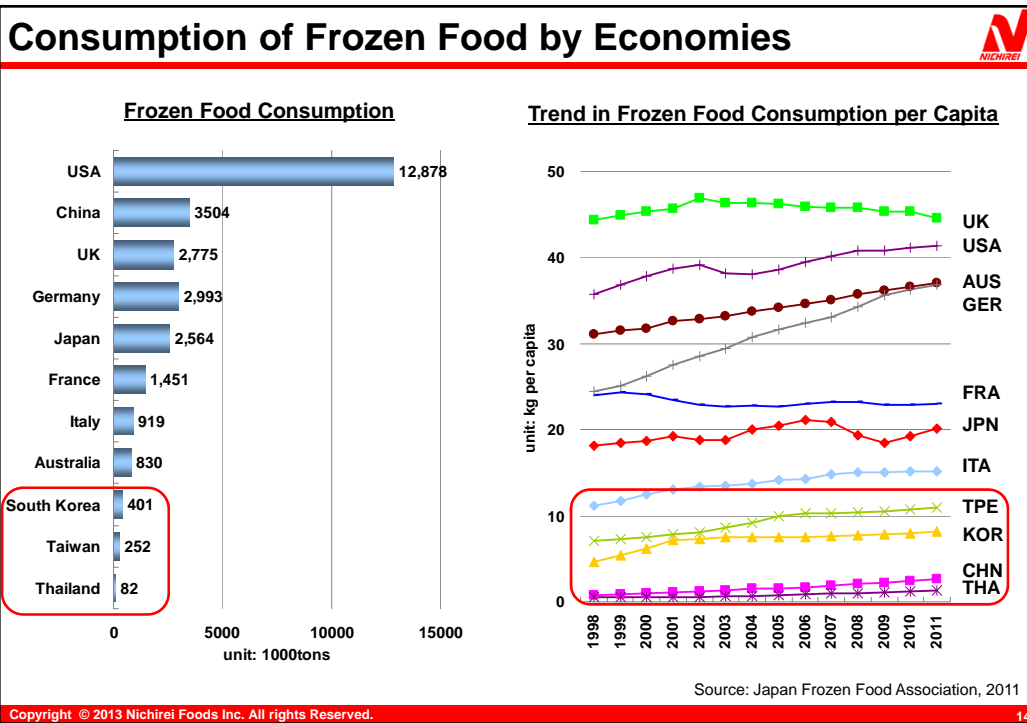
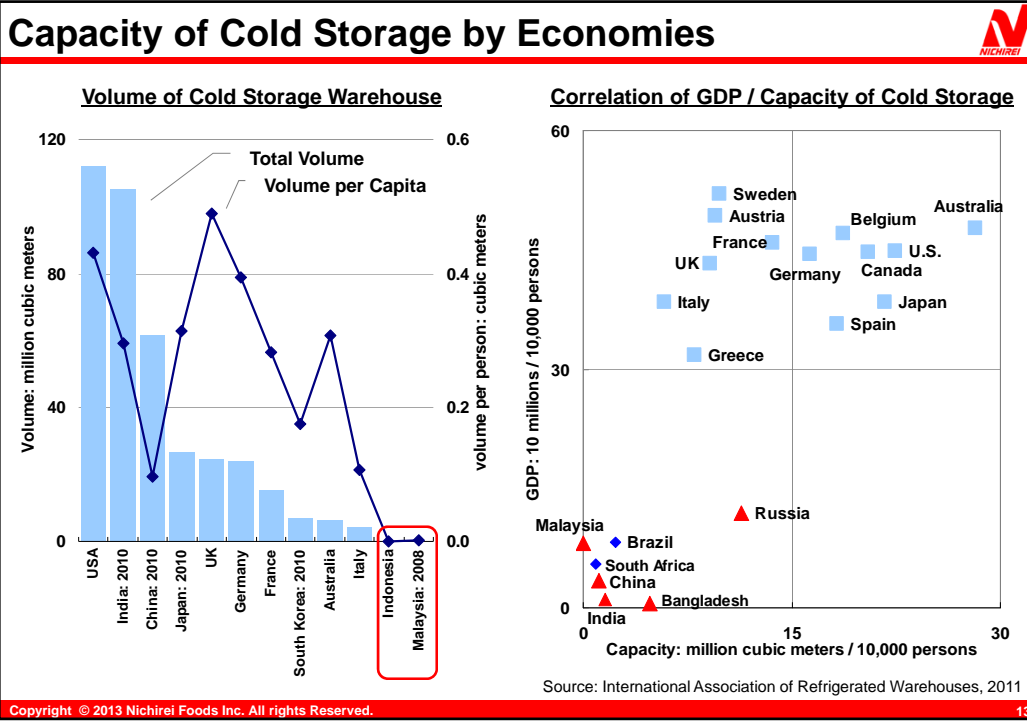
1. Construction of cold chain
2. National food grades/standard and inspection system
3. Information system on food distribution
4. Processing & transfer center system
5. R & D of food distribution

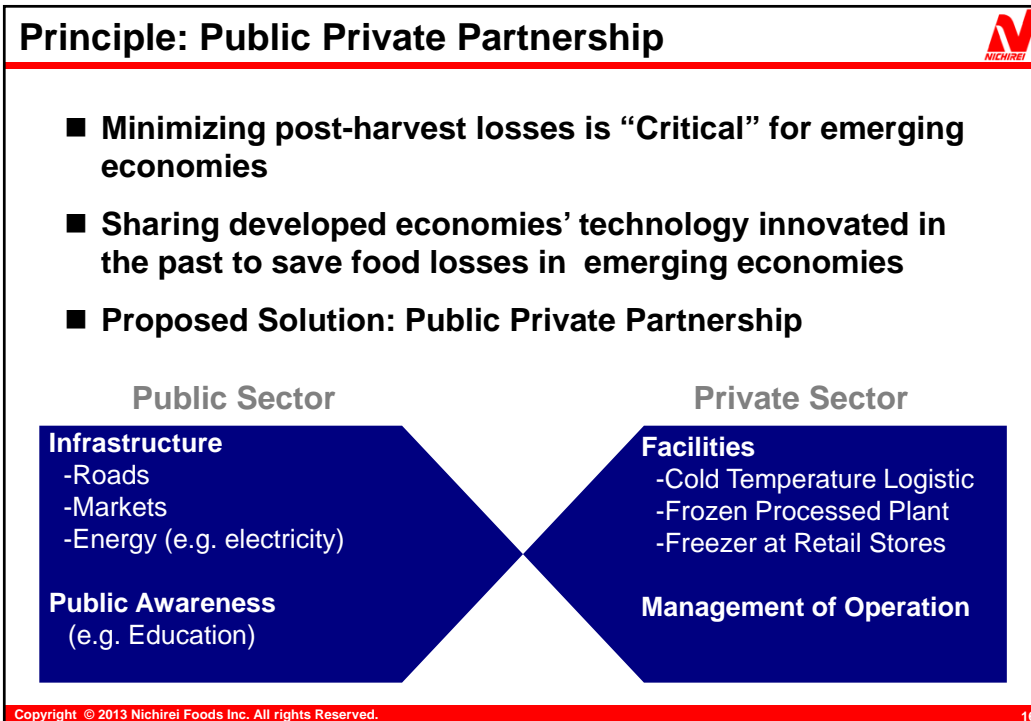


Source: Science and Technology Agency, Resources Research Council, 1965









Ongoing Infrastructure PPP Projects



1. Ongoing Public Infrastructure Projects:

- Extendable to include the development of food manufacturing industry
 - Jakarta's Metropolitan Priority Area (MPA)
 - Greater Mekong Sub-region's Economic Corridors
 - East-West Economic Corridor (EWEC)
 - Southern Economic Corridor (SEC)
 - North-South economic Corridor (Kunming-Bangkok Expressway)

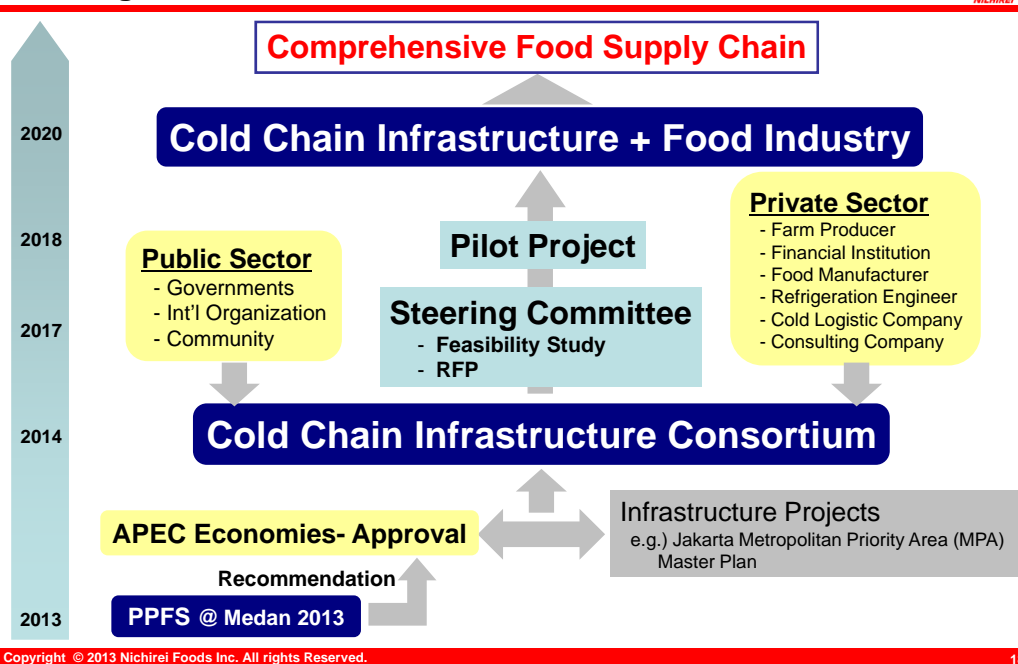


GMS Economic Corridors

2. Private Sector – Nichirei Group:

- JV with Thai's Siam Cement Group in building a network of cold storage facilities
 - Sep. 2013 – Cold temperature logistic business in Thailand and export of chicken products & fruits juice
 - Future plan – Business expansion to Vietnam and Malaysia
- JV with local food partners
 - Chicken processing business in Thailand - export of processed chicken products
 - Processed food business in Viet Nam

Building a PPP Platform for Cold Chain Infrastructure



Proposition – Next Steps



Steps for building the Cold Chain Infrastructure through PPP:

1. Framework of dialogue between Public and Private (2013-2014)
 - Cold Chain Infrastructure Consortium
2. Formulation of public policy (2015-2016)
 - Food supply chain system, Farm production, Food manufacturing industry
3. Steering Committee (2017)
 - Feasibility study, Research Team,
4. Launch of selective PPP pilot projects (2018)
 - RFP, Project SPV, Project finance
5. Creation of comprehensive food supply chain
 - Farm production:
 - Regional network of public wholesale market, cold storage & primary processing facilities
 - Cold temperature logistics
 - Food manufacturing industry
 - Food retailing, Food service

Combination with Declaration in NIIGATA / KAZAN



Cold Chain Infrastructure – Achieving the goals of two Declarations

Shared Goals

NIIGATA Declaration

1. Sustainable development of the agricultural sector
2. Facilitation of investment, trade and markets

KAZAN Declaration

1. Increasing agricultural production and productivity
2. Facilitating trade and developing food markets
3. Enhancing food safety and quality
4. Improving access to food for socially vulnerable groups of population
5. Sustainable ecosystem management, and anti-illegal fishing

Cold Chain Infrastructure

- ✓ Increasing farm productivity
- ✓ Increasing income for farmers
- ✓ Increase of food export
- ✓ Developing food industry
- ✓ Improving hygiene and nutrition
- ✓ Reducing food losses
- ✓ Sustainable food supply chain



**Thank You Very Much
for Your Attention!**



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