

COLD CHAIN in Japan

as social infrastructure



Nichirei Logistics Group Inc.
Overseas Business Development Division

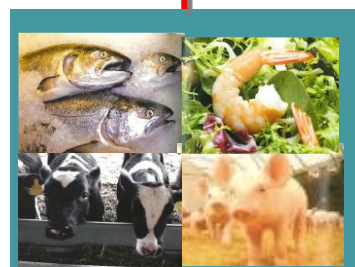
Presenter: Motoyuki Hazu, Executive Officer

Nichirei Corporation Profile

Nichirei Corporation
—Holding Company—



Nichirei Foods Inc.
Processed Foods



Nichirei Fresh Inc.
Marine & Meat and Poultry



Nichirei Logistics Group Inc.
Logistics



Nichirei Biosciences Inc.
Biosciences

■ Overview of Nichirei Group

Paid in Capital : \$252 Million

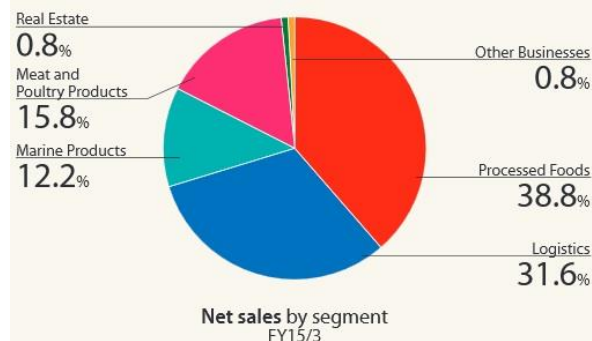
Net Sales : \$4.53Billion

Operating Profit : \$147 Million

(FY2014) ※@JPY 120.27/\$

No. of Employee : 13,551

Nichirei 2015



1. Stabilizing Food Supply
2. Reduction of Food Loss
3. Promotion of new Food Processing Businesses
4. Price stabilization with Gap Filling between supply and demand



New issues have been rising

- Food Safety issues
- Global Environment issues (We could reduce Food Loss but we increase electricity consumption a lot)

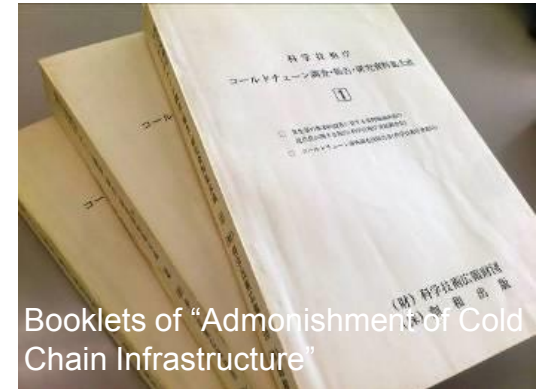
1965 Cold Chain Recommendation in Japan

Modernization of food distribution system for improving dietary life

Aim : Create Japanese Healthy Dietary life
Report : Recommendation for
Cold Chain Improvements

Main Recommendations

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

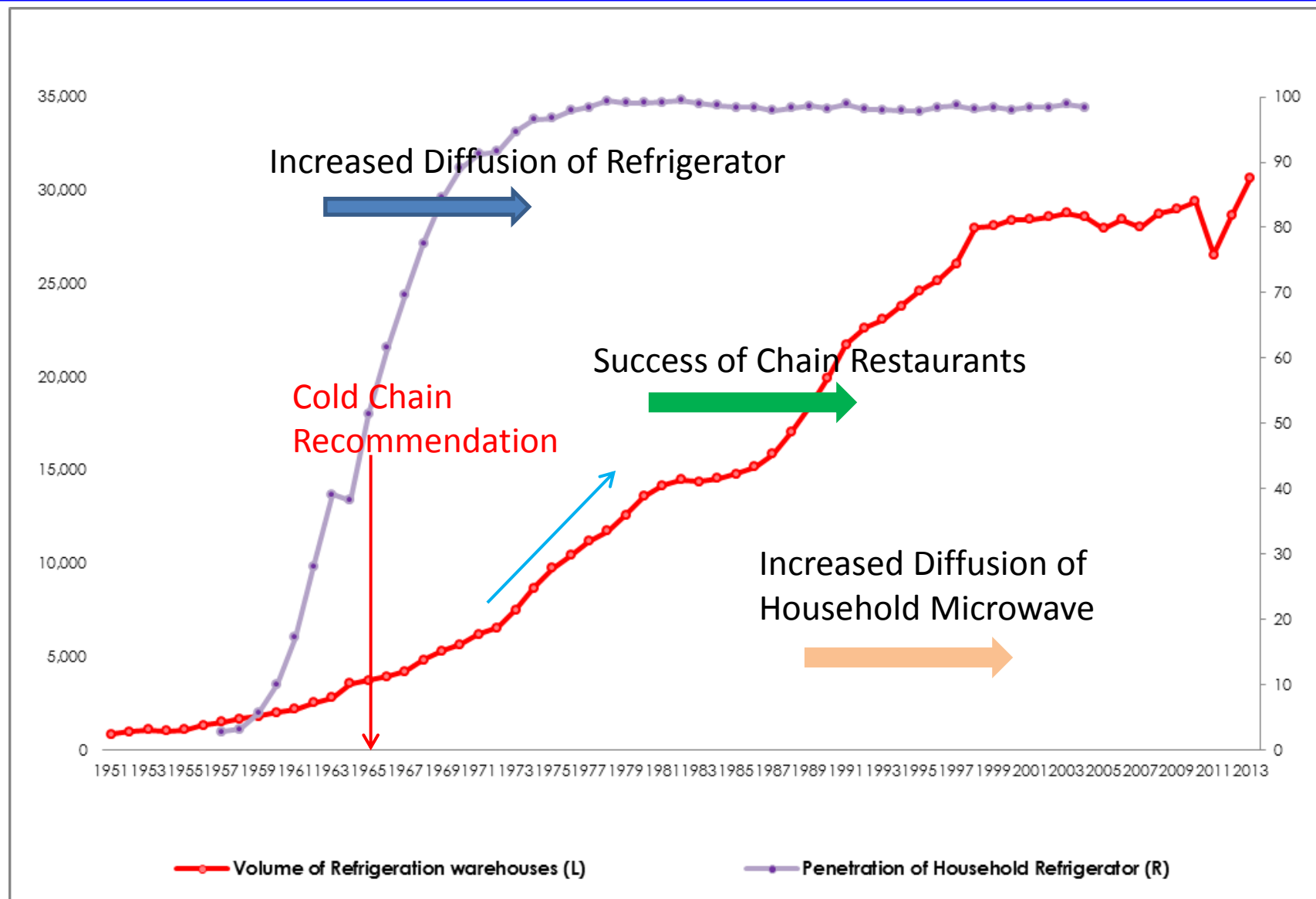


Booklets of "Admonishment of Cold Chain Infrastructure"

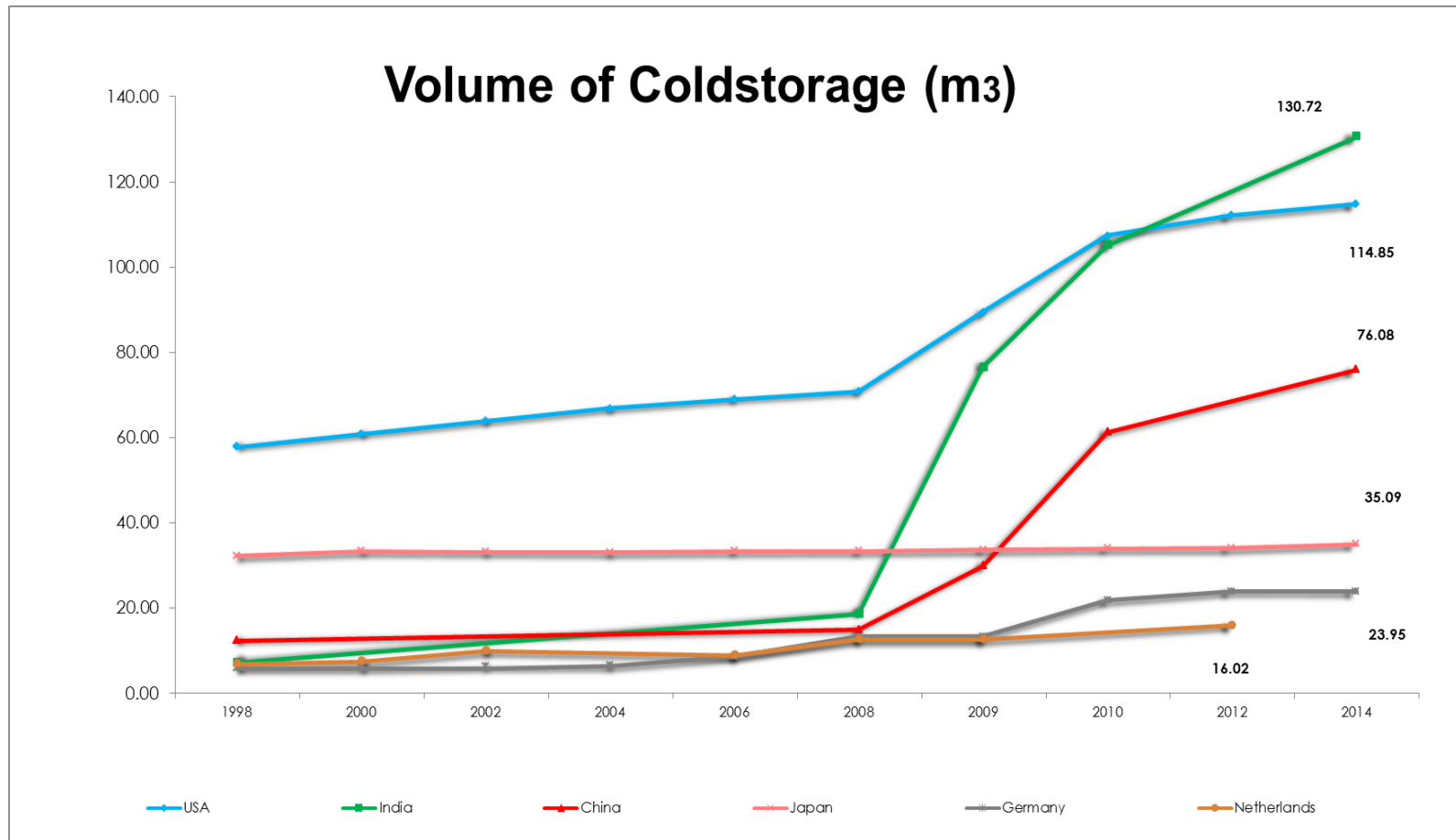


Official Assistances for Cold Chain Improvement

Coldstore Development in Japan



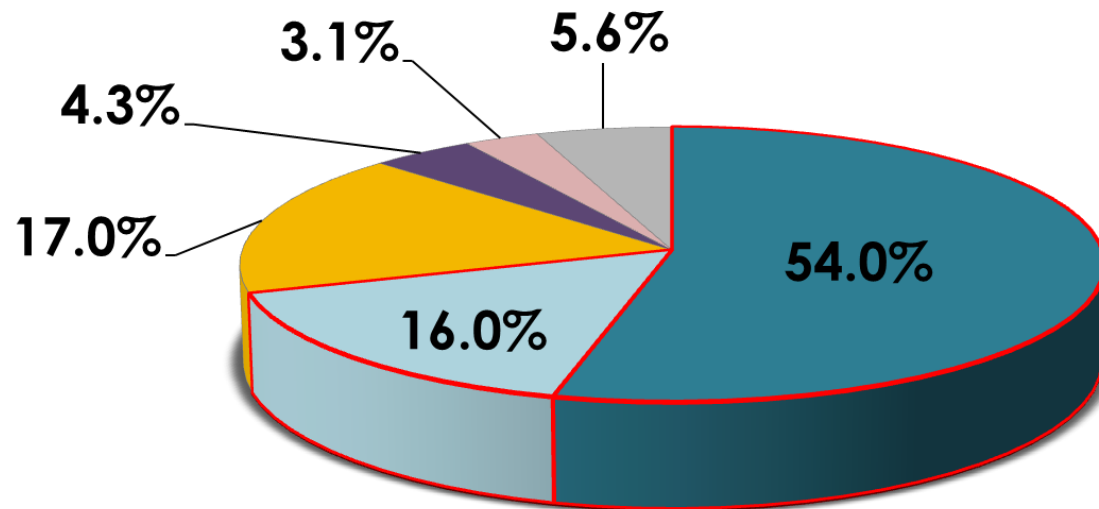
Coldstore Capacity trend in major Countries



Capacity per
population

	1998	2000	2002	2004	2006	2008	2009	2010	2012	2014
USA	0.210	0.215	0.222	0.228	0.231	0.233	0.291	0.347	0.357	0.360
India	0.007					0.016	0.064	0.087		0.103
China	0.010					0.011	0.023	0.046		0.056
Japan	0.256	0.263	0.261	0.259	0.261	0.261	0.263	0.266	0.267	0.276
Germany	0.073	0.073	0.078	0.079	0.106	0.163	0.164	0.267	0.298	0.296
Netherlands	0.446	0.471	0.619		0.551	0.766	0.762		0.956	

Annual Electricity Consumption of Nichirei Logistics Group in Japan



-  Warehouse Cooling Facility
-  Cargo Handling Area Cooling Facility
-  Lightings
-  Office
-  Cargo Handling Equipments

Our Energy Save Work



Innovation :
ηMax Refrigeration System
(20% Energy saving cooling engine)



Sprinkle Water

Proper door Closing

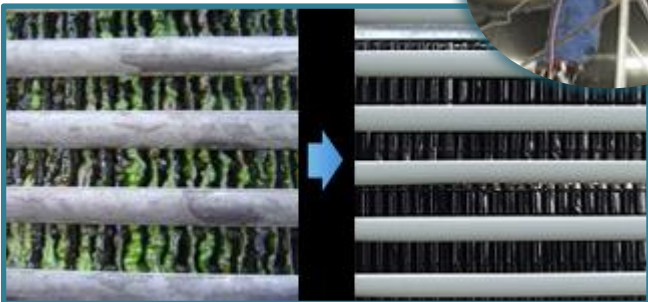


Overhaul
Maintenance

Sun Shade



Cleaning



Continuous Saving
Annually around 5%
for more than 5 Years

New Food Loss

- Expiration of Sales Limitation Date
- Damaged Package, etc.



Increasing New Type of Food Loss,
although still edible

= MOTTAINAI



- Nichirei Foods aims to reduce MOTTAINAI

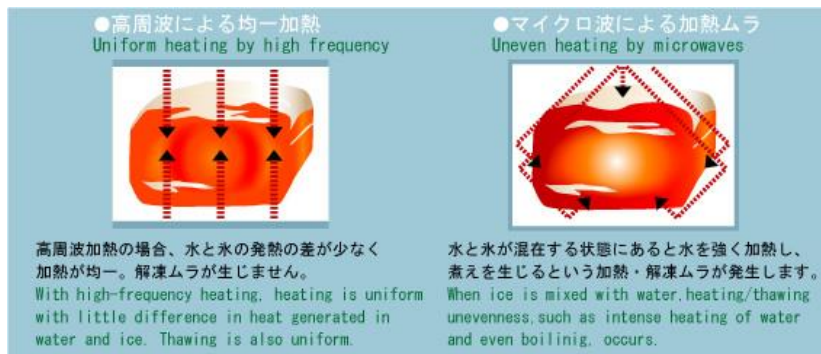


- Cooperation with Food Bank, Second Harvest Japan

- Nichirei Flesh
 - Development of New Eatable Fishes
 - Utilising uneatable Fish Parts

 Changing Waste to New Resources

- Nichirei Logistics Group
 - High Frequency Wave Defroster



Quick Defrost with very little drip



High Quality Meat supply from Frozen Stock

COLD CHAIN in Japan



Thank You for Your Attention!