< Toray IR Seminar – No.2 >

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Toray's Strategy of Films Business

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Toray Industries, Inc.

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Contents

Films Business Overview

Organization of Plastics and Films Division

- Plastics and Films Div.
  - Plastics Div.
  - Films Div.
    - Industrial 1st Dept.
    - Industrial 2nd Dept.
    - Recording Media Films Dept.
    - Films Trading Dept.
    - Domestic and Overseas Subsidiaries and Affiliated Companies

Manufacturing Div.

- Shiga Plant
- Gifu Plant
- Mishima Plant
- Tsuchiura Plant

- Film Technical Dept.
- Advanced Film Technical Dept.
- Film Products Development Center
- Films and Films Products Research Laboratories

Toray's Film Products

Brand	Material
LUMIRROR*	Polyester Film (**PET**)
TORAYFAN*	Polypropylene Film (**PP**)
TORELINA*	Polyphenylene Sulfide Film (**PPS**)
MICTRON*	Para-Aramid Film
TUFTOP*	Scratch-resistant Film
HIGHBEAM*	Spattered Film
AC/MC LUMIRROR* AC/MC TORAYFAN*	Metallized Film for Capacitor

Films

Processed Film Products

< * stands for brand names of the Toray group.>

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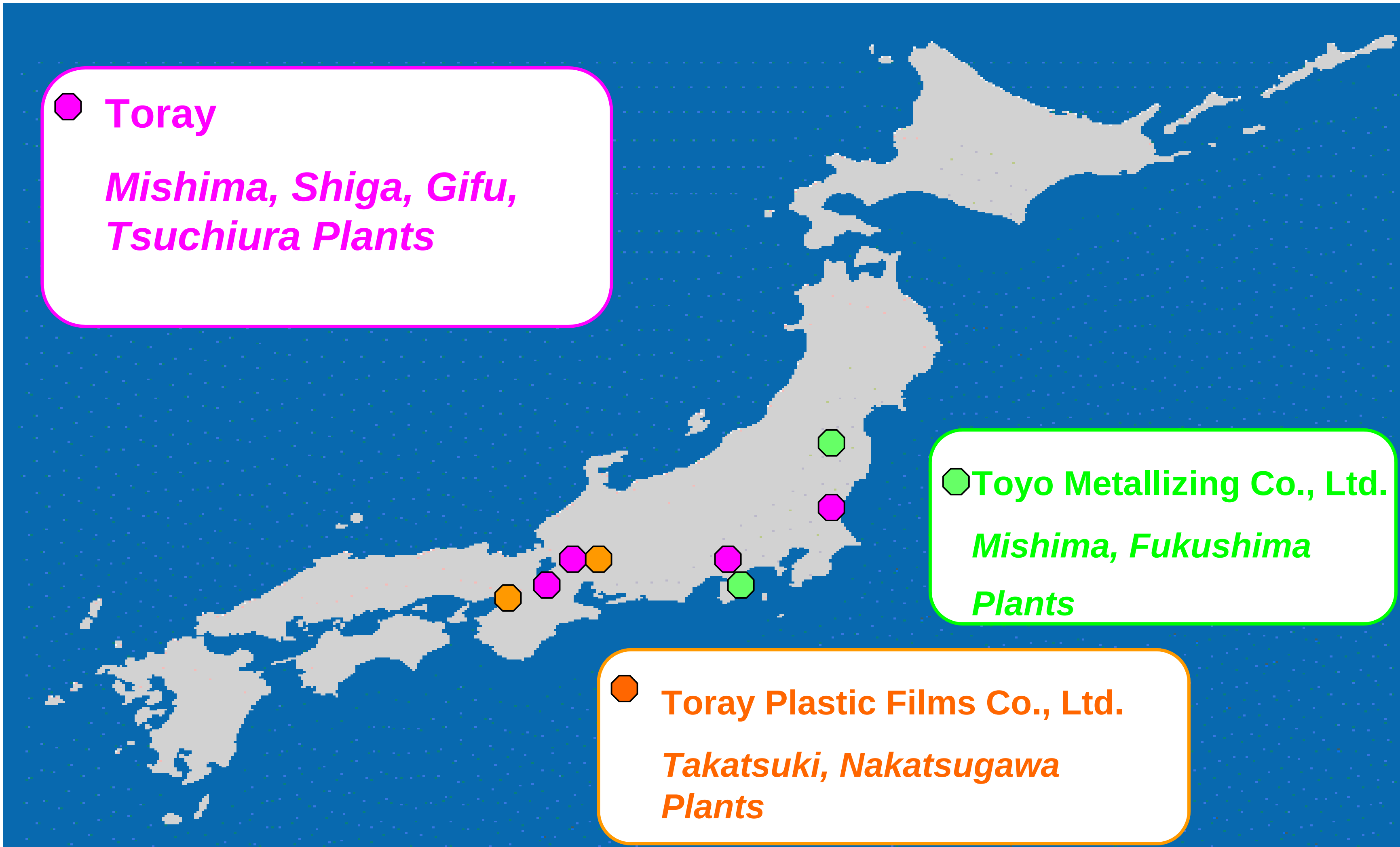
Features and Applications

Brand	Features	Major Applications
LUMIRROR	High Strength, Transparency, Chemical Resistance	General Industrial, Packaging, Magnetic, Capacitors
TORAYFAN	Lightness, High Tensile Strength, Electrical Properties, Mechanical Properties, Chemical Resistance, Moisture Resistance	General Industrial, Print Lamination, Packaging, Capacitors
TORELINA	High and Low Temperature Resistance, Non-flammability, Chemical Resistance, Hydrolysis Resistance, Creep Characteristics	Capacitor, Electric Insulation, Electronic Components
MICTRON	High Rigidity, Heat Resistance, Excellent Moisture-proof Property, Gas Barrier Property, Surface Smoothness	Magnetic Recording Media

Film Manufacturing Sites in Japan



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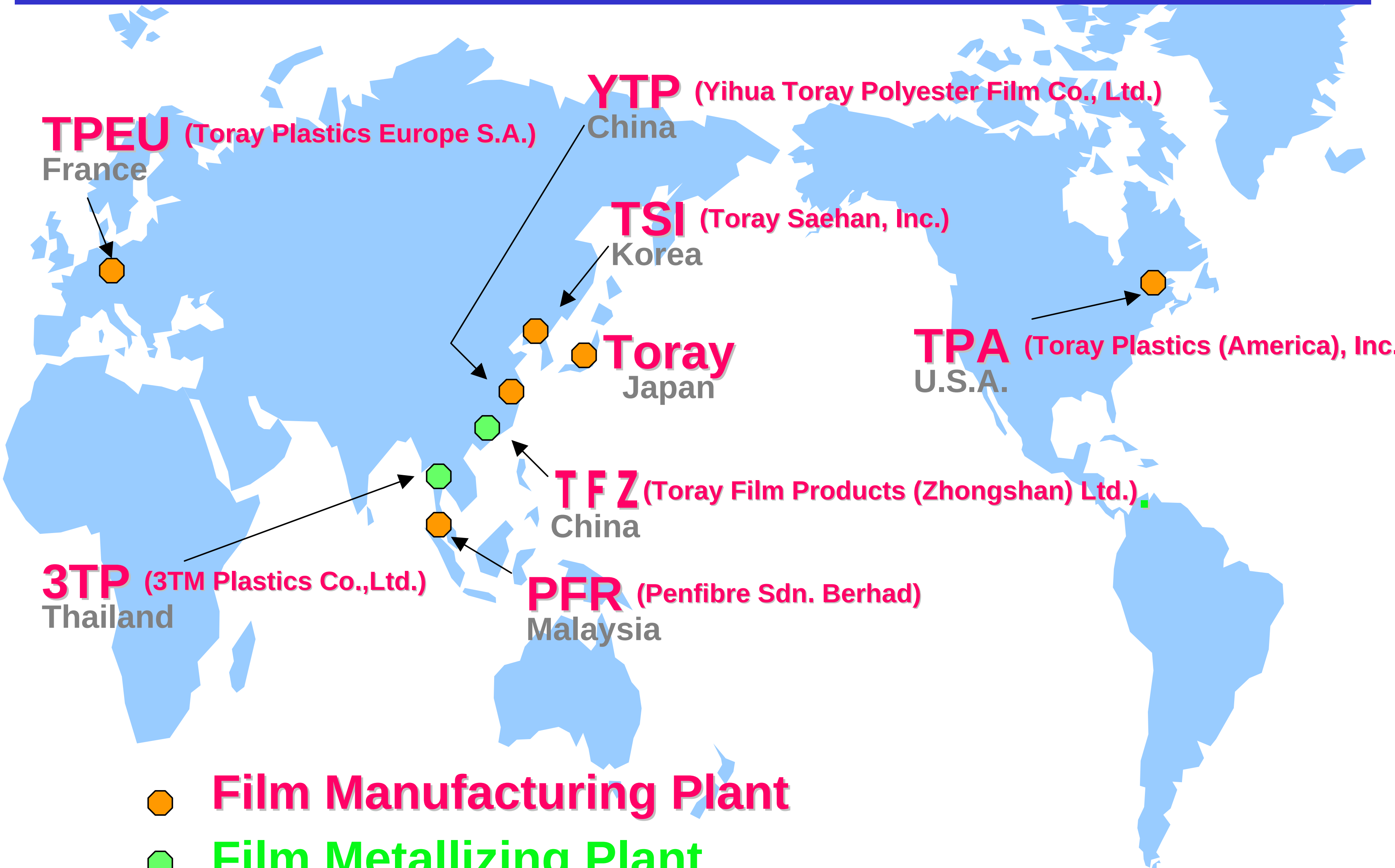
Worldwide Film Manufacturing Sites



Film Manufacturing Plant

Film Metallizing Plant

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Lumirror* Business Operations, a mainstay PET Film

Lumirror* Applications

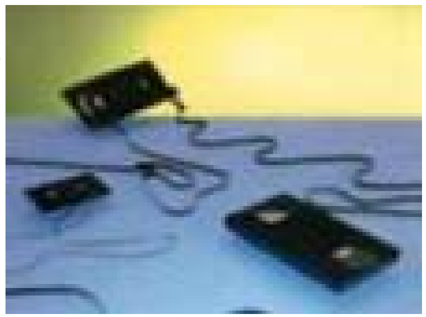
Magnetic Applications

Home Video

Magnetic Tape

Digital Linear Tape (DLT)

Linear Tape Open (LTO)



Packing Applications

Industrial Applications

Electronic Components

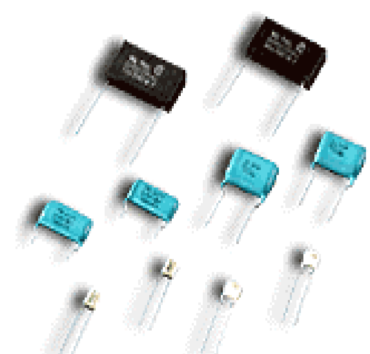
Casting / Release

Label, Cards

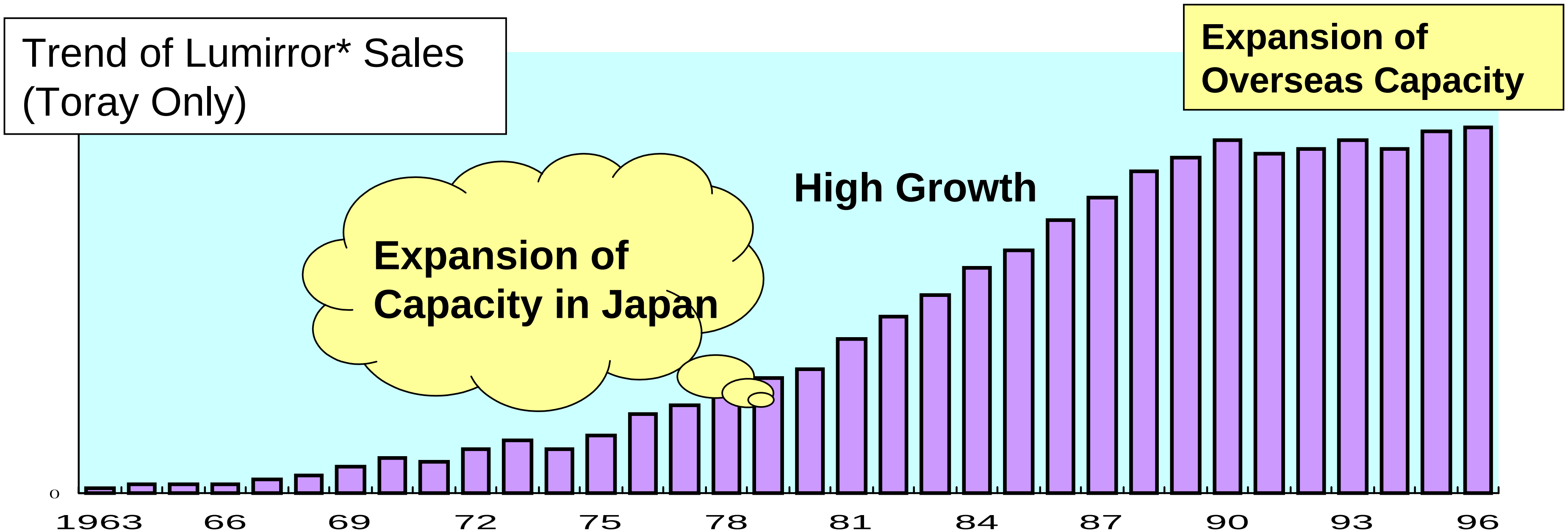
Graphic Art Base, IC Card

Optical (LCD, PDP)

Capacitor



Lumirror* Operations History in Japan



Lumirror*, the Top PET Film Brand

1985〜 1990

High Growth mainly by Home Video Application

Expansion of Industrial Applications (Capacitor, TTR, etc.)

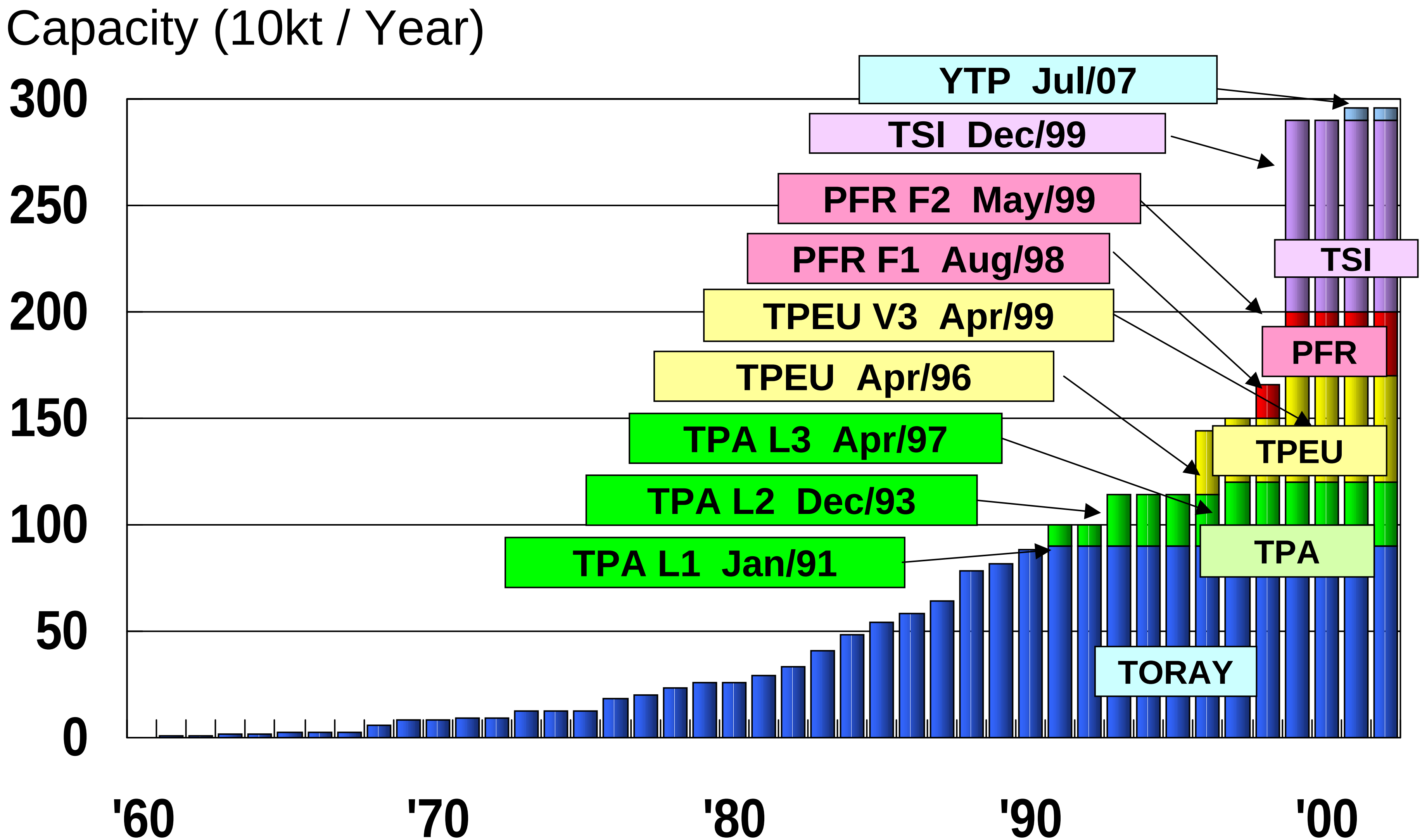
1990〜 2000

Strong Yen

Customers' Transfer of Production To Overseas

Built up Global Operations and 6 Global Production Sites to become the No.1 PET Film Manufacturer in the World

Lumirror* Off-Shore Operations History



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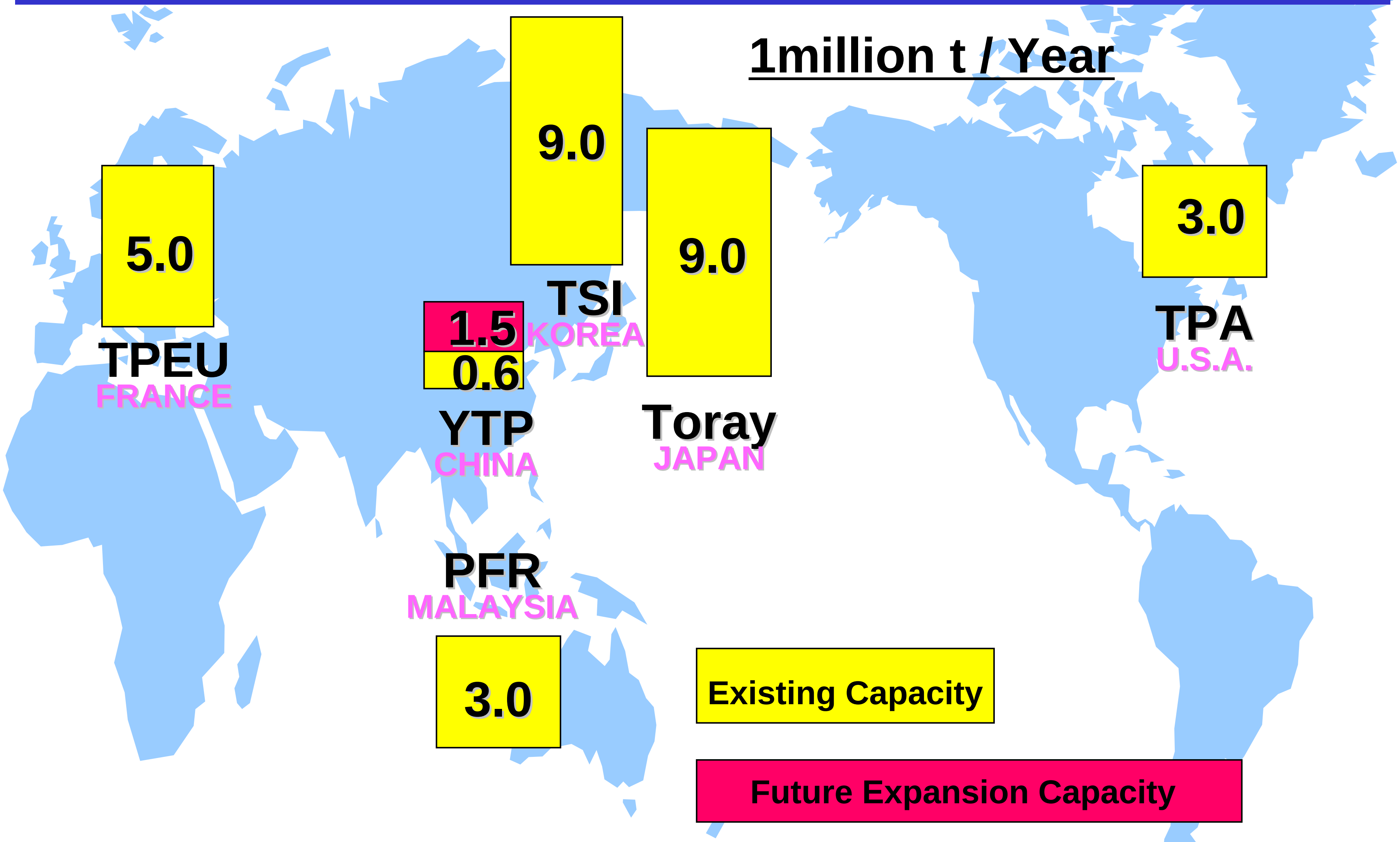
Current Lumirror* Production Capacity

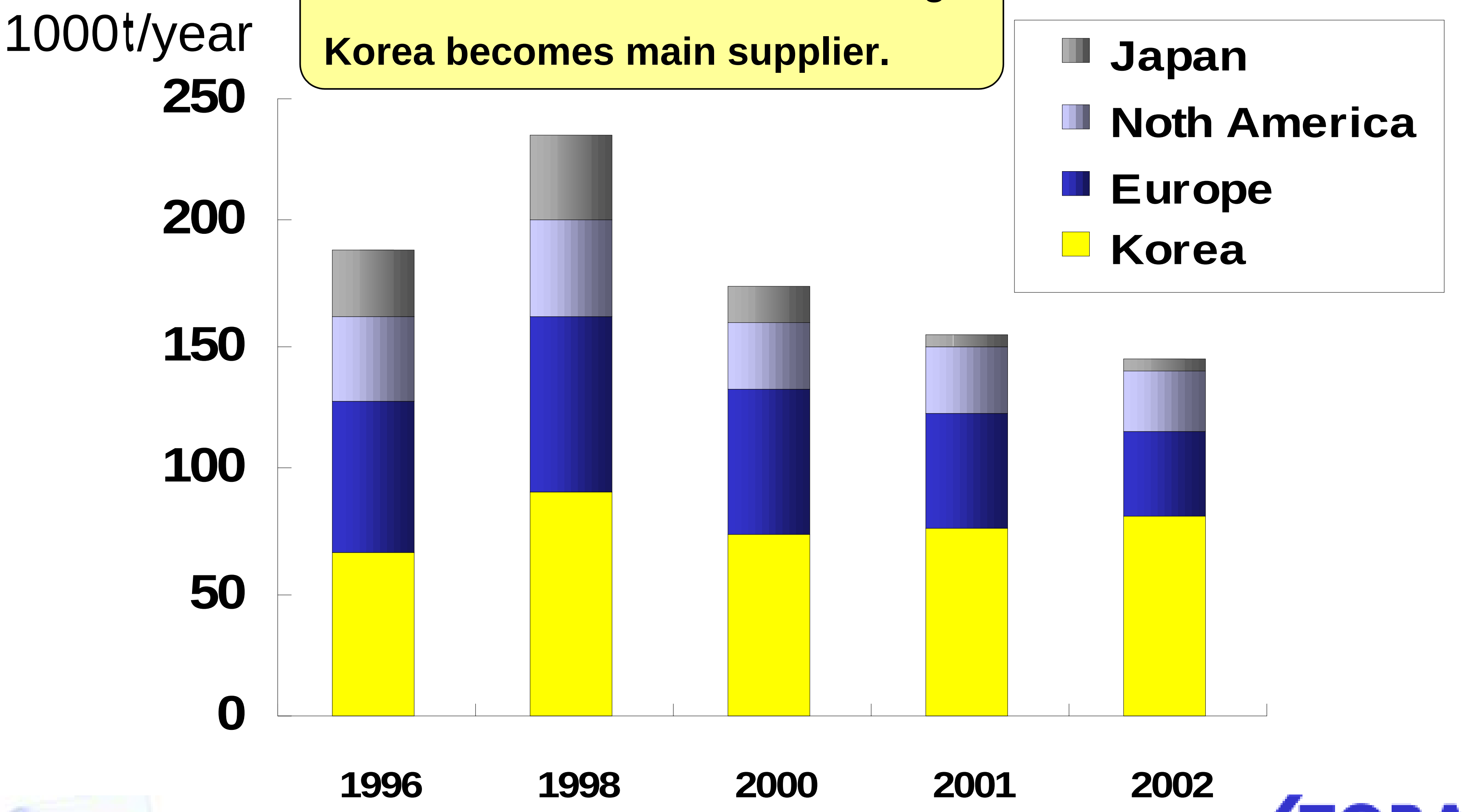


<Will start up the 2nd Machine in YTP during the 1st half of 2004.>

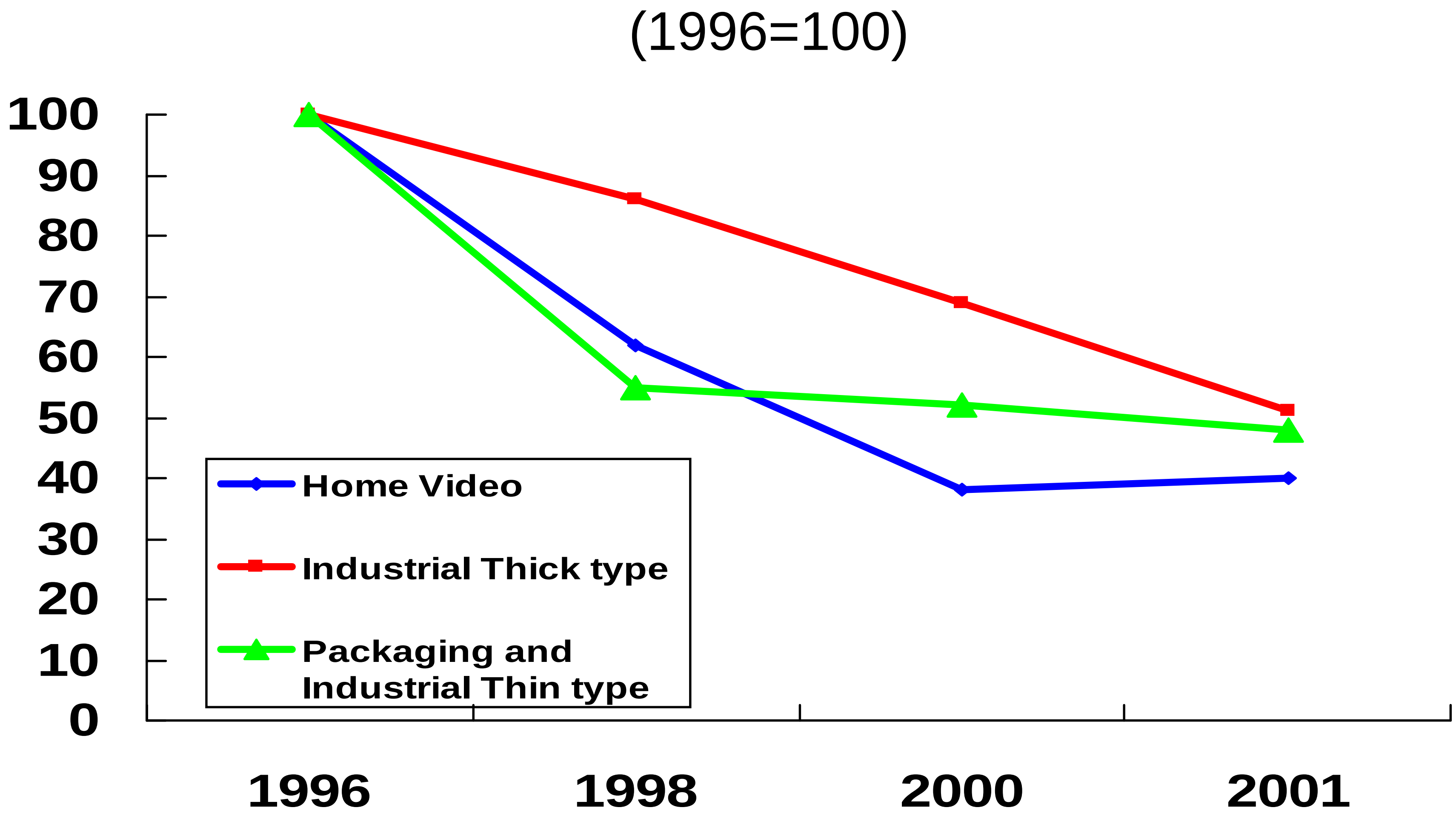
Base Film Demand Trend for Home Video Applications

Worldwide Demand is decreasing.

Korea becomes main supplier.



PET Films Price Trend (Commodities)



Strategy for Business Environmental Change

Change of Business Circumstance	Our Strategy
Severe Competition in Packing and Industrial Commodity Market	Establishment of PFR (Malaysia),1998 as Cost-Competitive Production Base
Demand Shift of Home Video Application to Korean Market Demand Decrease Worldwide	Establishment of TSI (Korea), 1999 Product Mix Change from Magnetic to Industrial Applications in Japan and U.S.A. (TPA)
Expanding Demand in China	Establishment of YTP (China), 2001

Lumirror* Business Policies Mid-Term Plan 2003-2005

Basic Policies of Film Business Mid-term Plan

Business Circumstance

Slowdown of Market Growth (+4.4%)

Imbalance of Demand and Supply

Capacity : 150million tons/year
Demand : 120million tons/year

Price Bottoming Out

Change of Market Structure in Japan, America, and Europe

Increase of Specialty Application Demand

Severe Competition for Packaging Applications

Expansion of China Market

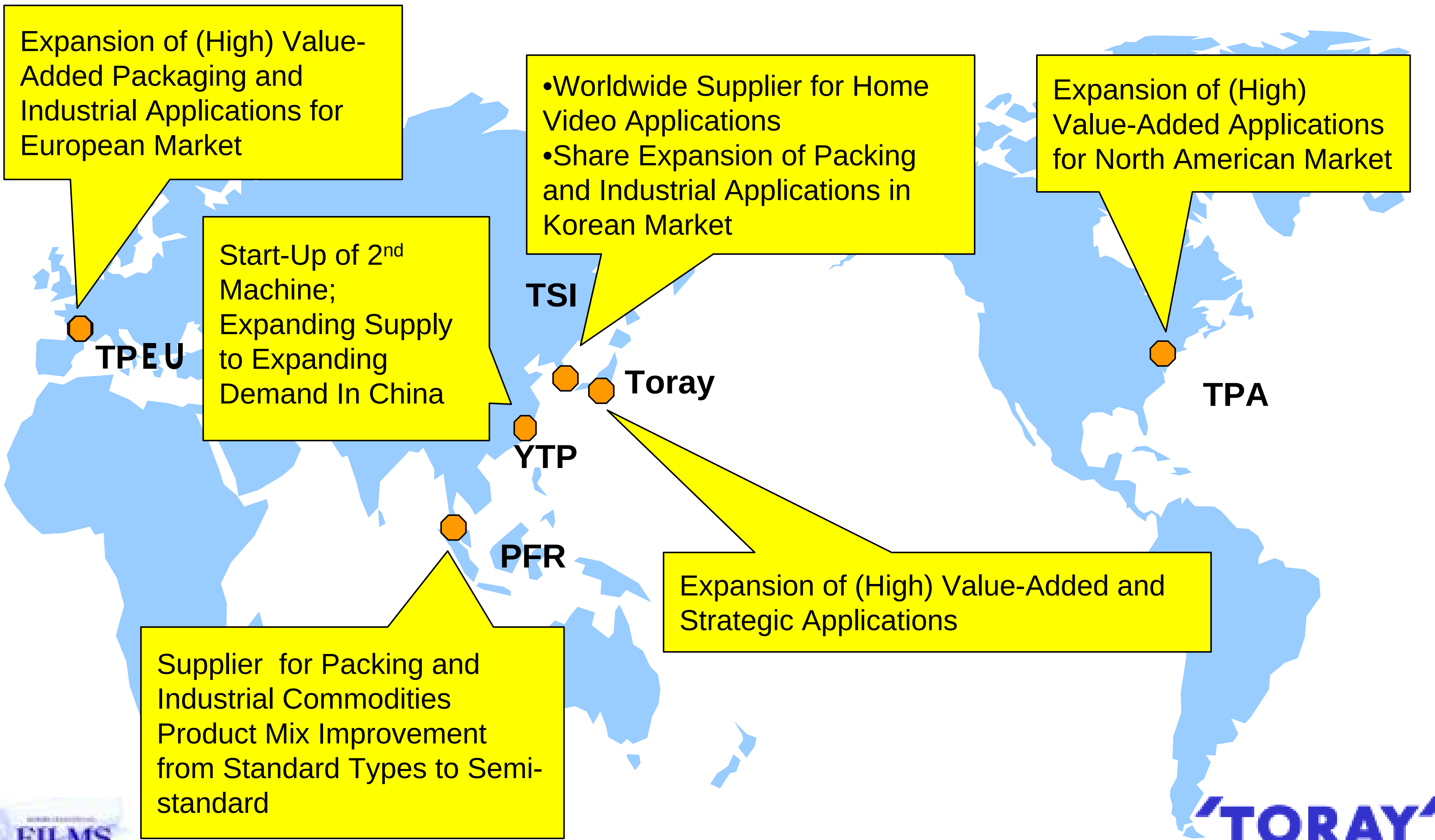
Basic Policies

Profitability Improvement and Business Expansion by Evolution of Global Operations

Expansion of Processed Film Products Business

"New Value Creator"

Profitability Improvement and Business Expansion by Evolution of Global Operations



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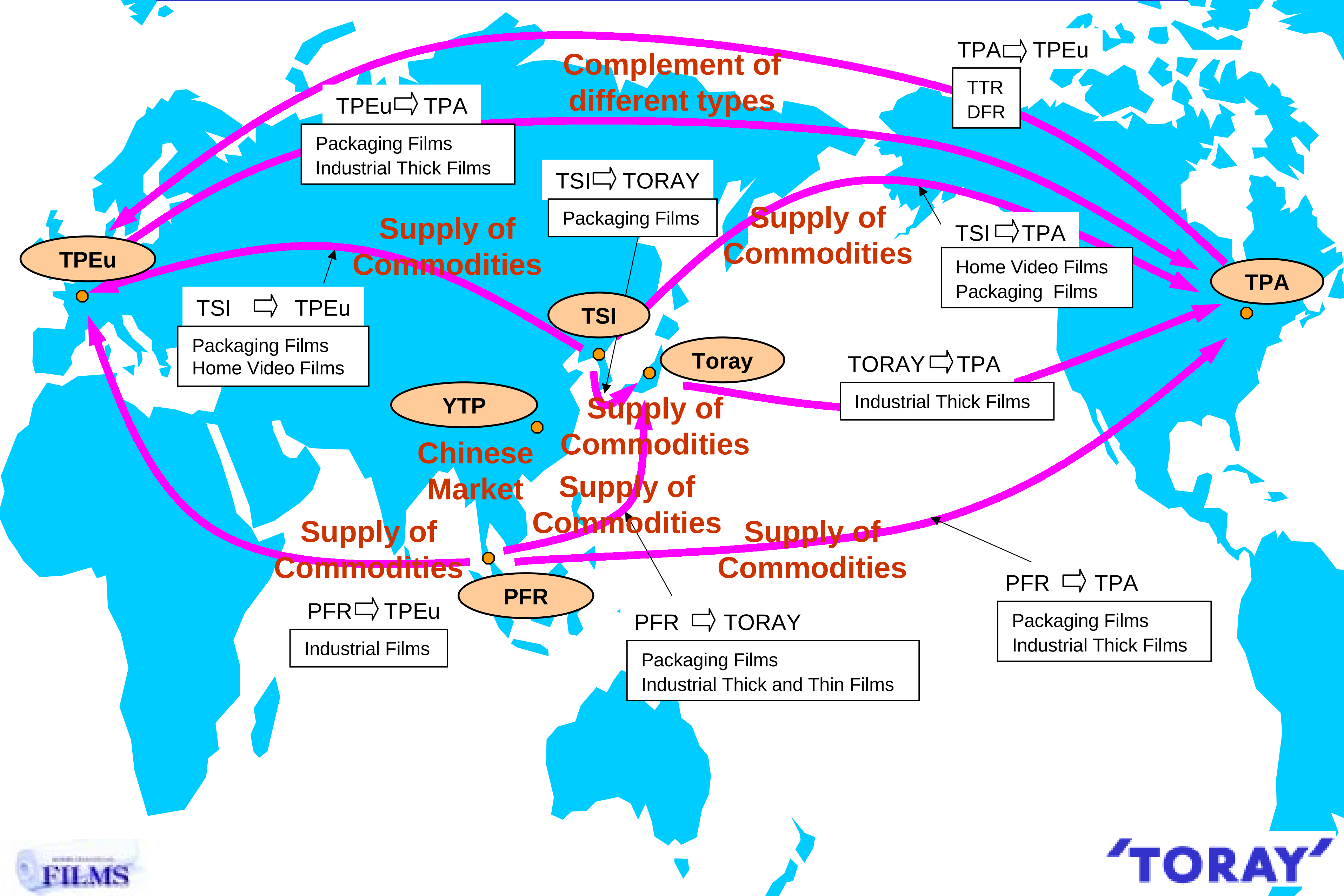
Current Global Operation



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Expansion of High Value-added and Strategic Applications in Japan (Toray)

Magnetic Applications	**Computer Data Storage (SDLT, LTO)** **Digital Video Cassette**
Industrial Applications	**IT-related Applications** **(LCD,DFR, Release)**
	Expansion of Thin and Ultra-thin Films for Capacitors
Packaging Applications	**Expansion of High Value-Added New Products (APT,NOA)**
New Applications	**New Type Films**

Japan (Toray) as Development Center of the Toray Group → Establishment of Advanced Film Technical Dept.

IT-related Films Applications

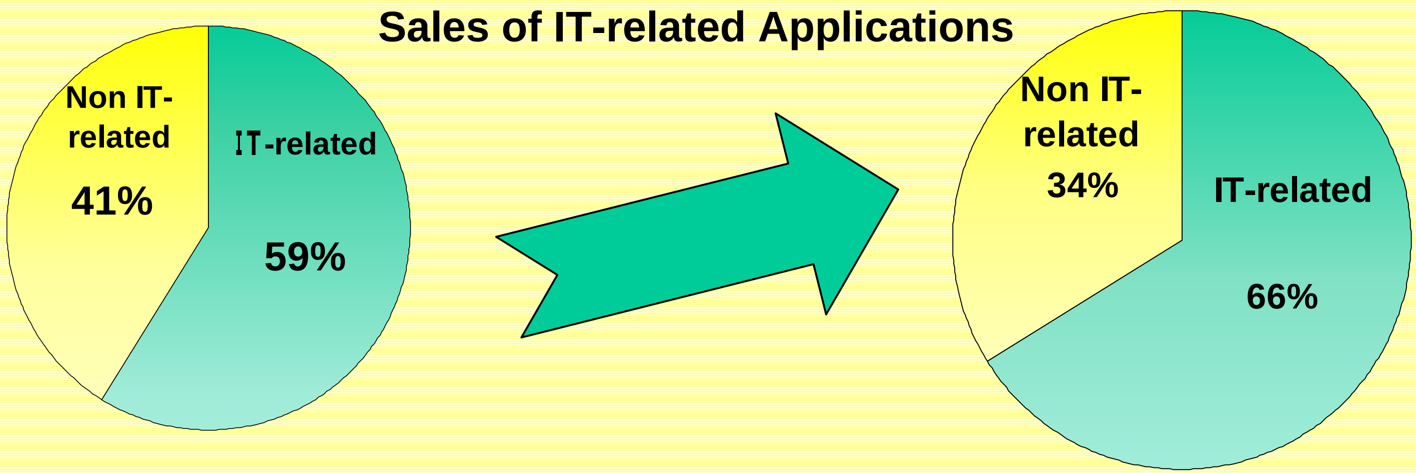
Information Processing Applications	**Electronic Components, Release Films for Ceramic Capacitors,** **DFR (Dry Film Photoresist),** **Film Capacitor, Circuit Materials, OA Equipment**
Information Display Applications	**Optical Applications (LCD, PDP)**
Information Recording Applications	**Digital Video, Data Recording Tape, TTR, Mimeograph Printing, Graphic Arts Base, Home Video, IC Cards**

Expanding Strategic Businesses

1) Expansion of IT-related Applications Market

2002 | 2005

Sales of IT-related Applications

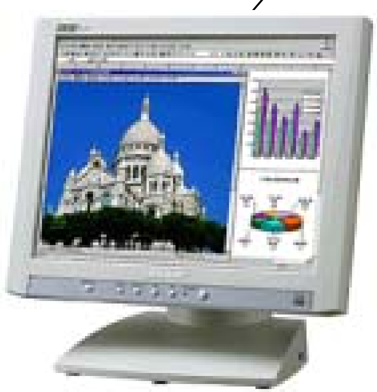


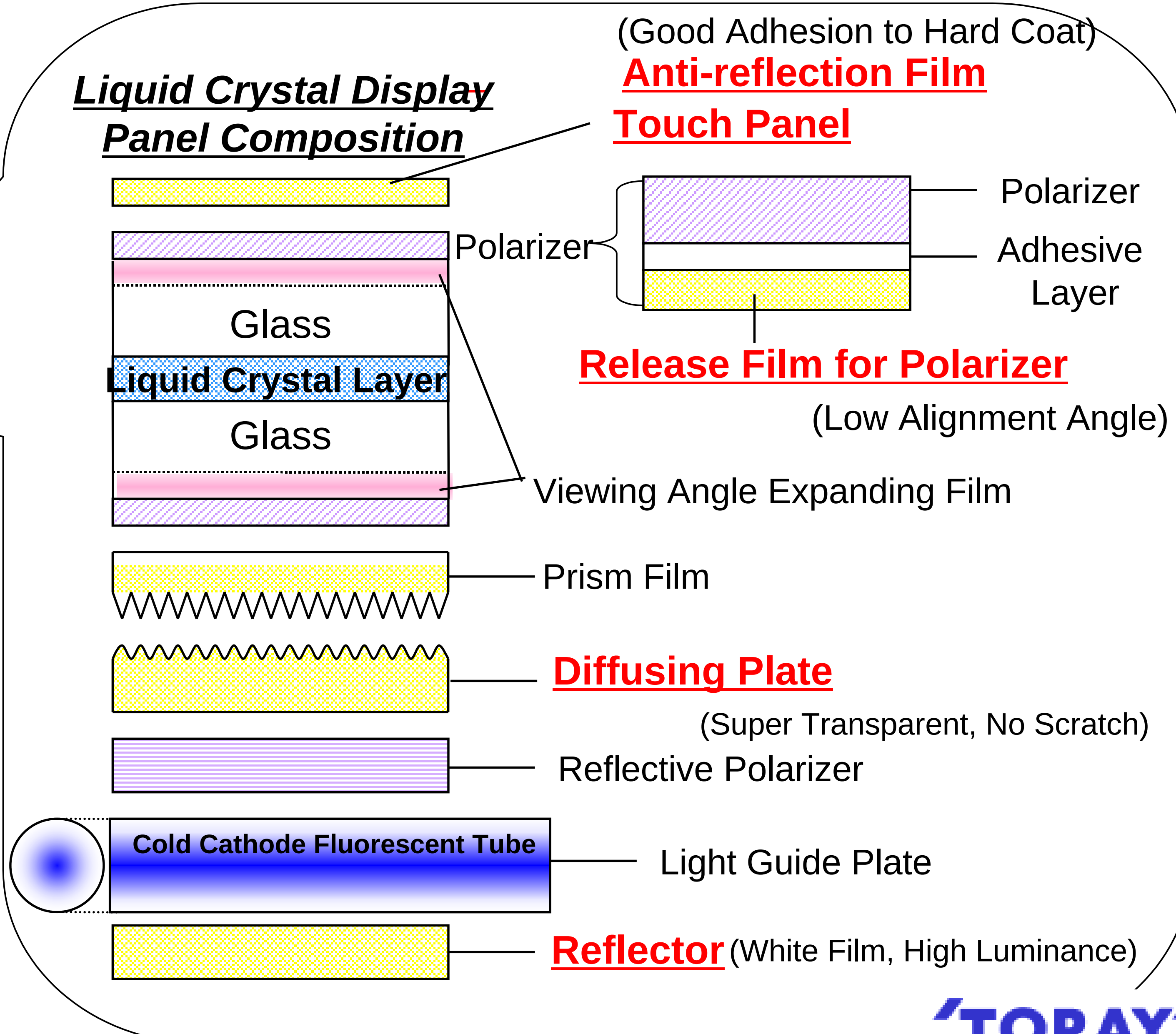
2) Expansion of Environmental Protection Products Market

Demand Increase of “Energy Conservation,” “Extension of Product Life,” “Environmental Safety,” and “Waste Reduction”

PET Films for LCD

Liquid Crystal Display





Production of Ultra High Quality Grade Lumirror* with Innovative Equipment

Plant:	Mishima Plant (Mishima-shi, Shizuoka Pref.)
Capacity:	2,500 Tons/year (4 micron conversion)
Start:	End of 2002～
Feature:	Enable to Produce Ultra High Quality Films
	(Excellent Tensile Strength, Great Dimensional Stability, Ultra Smoothness and No Scratches on Surface)
Applications:	Advanced Digital Data Storage Applications Ultra-Thin Industrial Applications (Capacitors)

Value-Added New Products for Packaging Applications - NOA, APT

NOA Nano-Order Alloy Controlled PET film

High Strength of Nylon + Stable Processing of PET

APT Amorphous-controlled PET film

Heat and Freezing Resistance + Environmental Stability

Easy Forming + High Lubricity

Expansion of Processed Film Products

1) Expansion of Packaging Metallizing Business

Expansion of High-Barrier Flexible Packing Application Demand (Ex. Retort, Pouch)

Progress of Substitution for Aluminum Foil (Environmental Request)

Business Expansion and High Profit from Global Operations

Toray Plastic Films Co., Ltd. / Toyo Metallizig Co., Ltd. ,
3TM Plastics Co., Ltd. (Thailand), Toyo Saehan, Inc. (Korea)

Demand Exploitation of Processed New Type Films (NOA, PBT, etc.)

2) Expansion of Processed Film Products Business for Industrial Applications

Evolution and Expansion of IT-related and Display-related Demands

Expansion of IT-related, Environmental, and Medical Application Businesses by Full Use of Sputtering and Coating Technologies (Toyo Metallizing , others)

Capacity Expansion in TSI and Development of Korean Market

3) Reorganization of Capacitor Metallizing Business

Demand Shift of Commodities from Japan and U.S.A. to other areas, especially China

New Demands Expansion in Japan and U.S.A.

Business Expansion of TFZ (China)

Development of New Advanced Films in Japan (IT-related and Automotive-related Applications)

Toyo Metallizing Co., Ltd.

No.1 Manufacturer of Packaging Metallizing in Japan

Main Businesses

1. Manufacture and Marketing of Vacuum Metallized Products
2. Manufacture and Marketing of Processed Film Products

Head Office: Nihonbashi, Chuo-ku, Tokyo

Plants: Mishima and Fukushima

Industrial Materials : Label, Lumiace*, Cerapeel*

Packaging Materials ：Packaging Commodities, Barrialox*,

Capacitor, Anti Reflection Film, Metaloyal*

Metaloyal* is a Two-layer Adhesiveless FPC Material (a Copper Layer is plated directly on Polyimide Film).

Toray Film Products Co., Ltd.

Main Businesses: Manufacturing, Processing and Marketing of Plastic Films

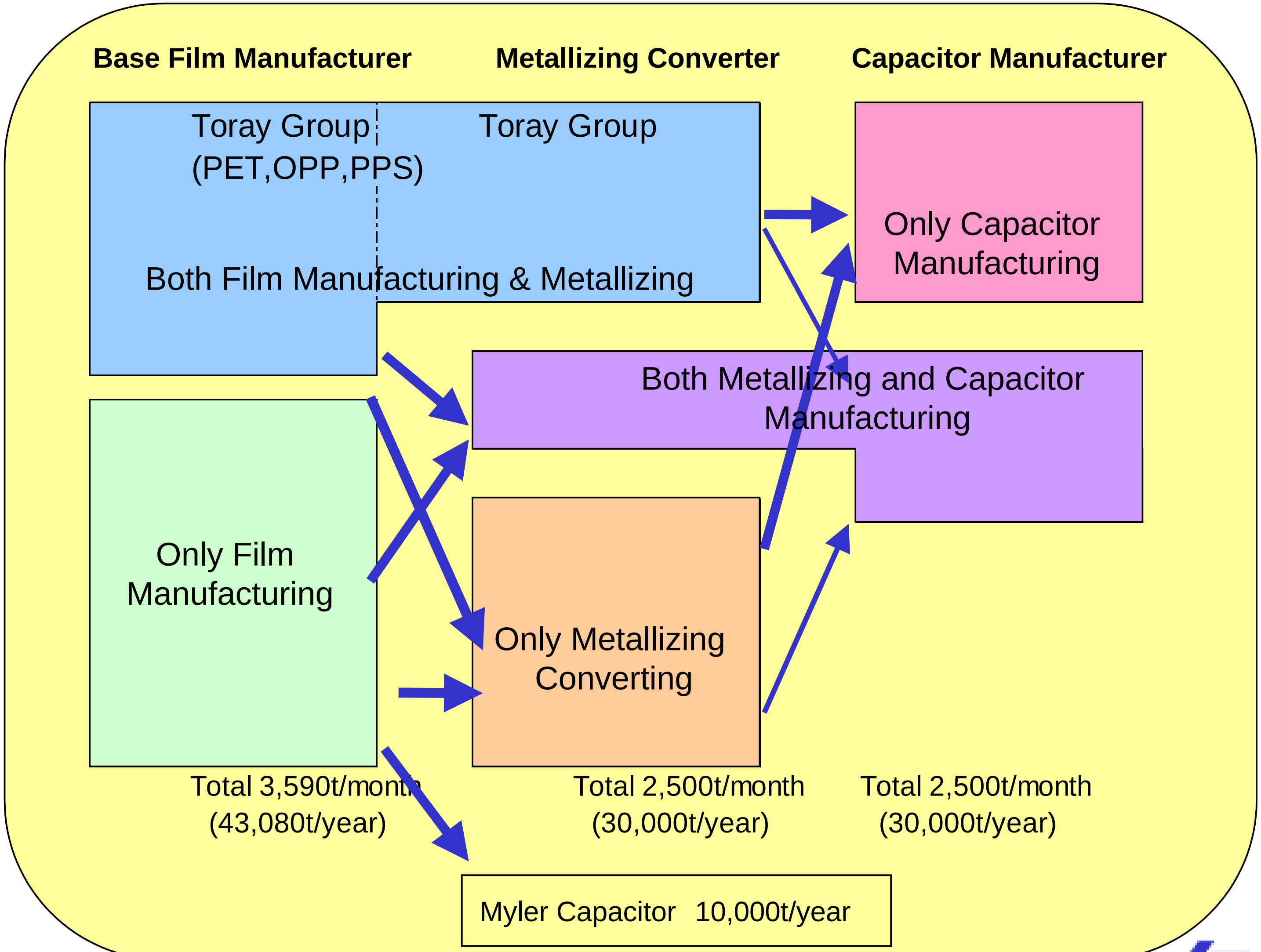
Head Office: Takatsuki-shi, Osaka

Plants: Takatsuki and Nakatsugawa

Brand	Material/Application
Torayfan* NO	Non-Oriented Film (CPP)
CF Film	Peelable Film
Toretec*	Surface Protection Film
Rayfan* NO	Nylon Film
Toyoflon*	Fluorine Film
LL Film	Linear Low Density Polyethylene
Torepalloy*	Polycarbonate-Copolyester Composite Film

Film Capacitor Market and Our Position

1. Capacitor Supply Chain



Film Capacitor Business Strategy by Product

Business Environmental Change of Film Capacitor Market

1. Worldwide Recovery of Electronic Components Demand
2. Severe Competition with Other Types of Capacitors => Downward Price Pressure
3. Rapid Transfer of Production Sites(From Japan, U.S.A., and Europe to China and Other Asian Countries)

Our Strategy

1. Strengthen New Product Development in Japan
2. Global Production Reorganization based on Demand

Material	Production Base	New Development (Japan)	Reorganization Strategy
Lumirror* (PET)	Japan (Shiga, Mishima) Korea (TSI)	Development of Advanced Super Ultra Thin Film Development of Heat-Resistance Improved Film	Production Transfer of Commodities to Korea (TSI) and China (YTP) Reorganization of Domestic Production Structure
Torayfan* (OPP)	Japan (Tsuchiura)	Development of Ultra-thin Film for Hybrid Car	Concentration on Advanced Applications
Torelina* (PPS)	Japan (Gifu)	Development of Super Ultra Thin Film (Sub-Micron)	
Metallized Films	Japan (Toyo Metallzing Co., Ltd. , Kakogawa) U.S.A. (TPA)	Development of Special Metallized Film for Hybrid car	Early Start up of New Metallizer in China (TFZ) Reorganization of Metallizing Business

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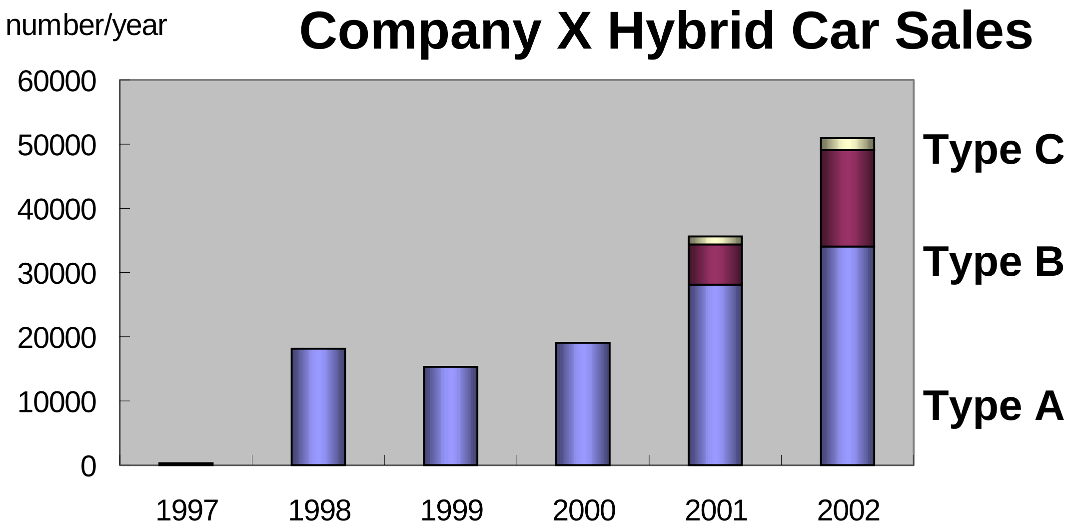
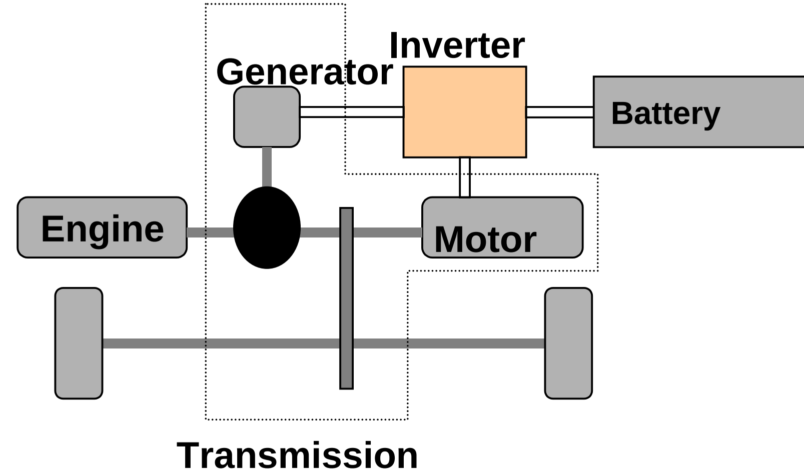
Development of Advanced Film Capacitor for Hybrid Car

Company X Hybrid Car Sales





Higher Inverter Voltage

Film Capacitor is Superior for Hybrid Cars to The Other Type of Capacitors

Hybrid Car Market Size: 300,000 units/year in 2005

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Summary

Lumirror*	**Keep the No.1 Position in the Global Market** **Improve Profitability through Evolution of Global Operations** **Assign Roles and Functions to Each of Six Production Sites**
Torayfan*	**Pursue Specialty Market Demand** **Keep the No.1 Market Position for Capacitor Application in the World**
Torelina*	**Expand Business as the Sole PPS Film Manufacturer in the World**
Mictron*	**Increase Sales of Advanced Films for Next-Generation Digital Storage and Industrial Applications**
Processed Film Products	**Expand New Processed Film Products Business**

As a World-leading Total Film Supplier

Descriptions of predicted business results, projections and business plans contained in this material are based on predictive forecasts of the future business environment made at the present time.

The material in this presentation is not a guarantee of the Company's future business performance.