Annual Investors' Meeting 2024

Nitto Denko Corporation
Hideo Takasaki
President, CEO and COO

Yosuke Miki
Board Member
Senior Executive Vice President, CTO

September 13th, 2024

Innovation for Customers

Contents

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Contents

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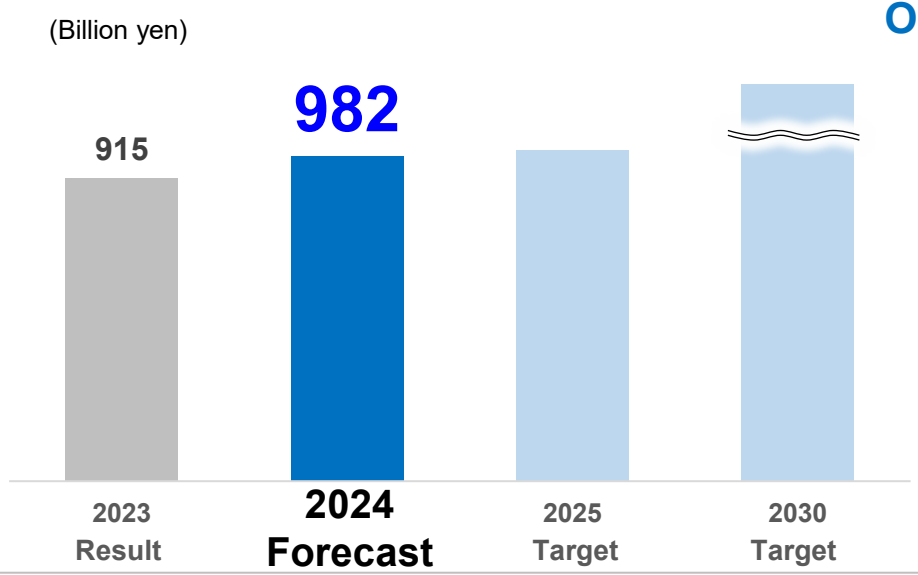
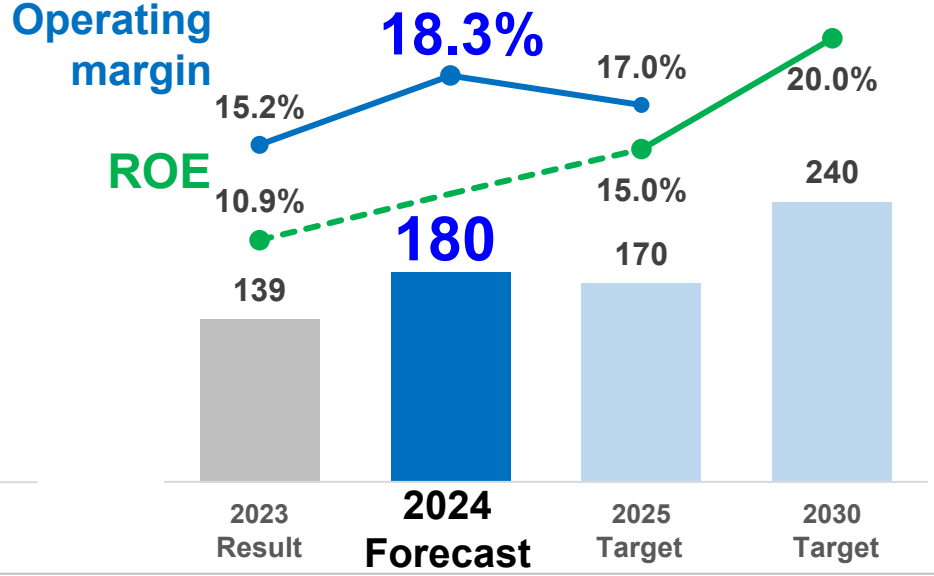
Financial Targets – Progress to Date

Having revised full-year forecasts for FY2024, expecting to achieve a record high for both revenue and operating profit

Revenue



Operating profit, ROE (%)



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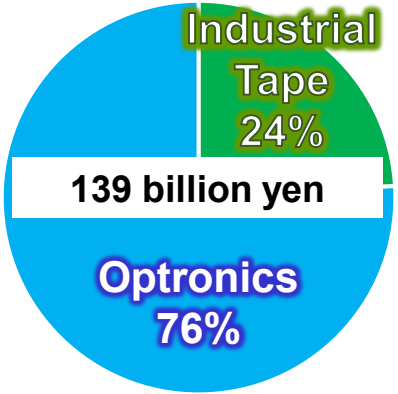
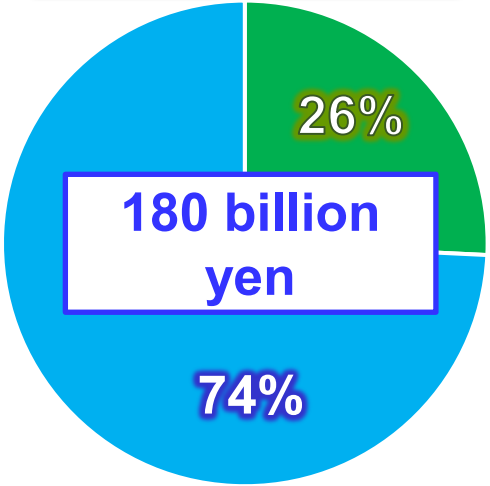
Current Business Portfolio (Operating Profit)

Profits from Industrial Tape and Optronics expanding
Optimize profits in Human Life to become a more well-balanced business portfolio

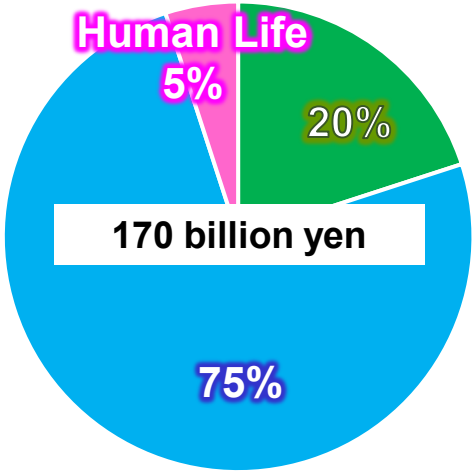
FY2023 Result



FY2024 Forecast



FY2025 Target



* The segment compositions do not include Corporate/Elimination and segments with a loss.
* Assumes that that Corporate/Elimination and segments with a loss in FY2025 will be the same level as in FY2022.

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Update on Future-Financial Targets

FY2025 targets achieved

Several FY2025 targets achieved ahead of schedule
Revised to a more stringent CO_2 emissions reduction target

Ongoing Targets

	FY2023 (Result)	FY2025 (Target)	FY2030 (Target)
New products ratio	41%	At least 35%	At least 35%
CO_2 emissions	525 kton/year	470 kton/year	400 kton/year
Female leaders ratio	20%	24%	30%

Revised to a more stringent target from the previous 550 kton (Scope 1+2)

New Targets

		FY2023 (Result)	FY2025 (Target)	FY2030 (Target)
Products	**Niche Top sales ratio** The indicator measuring the expansion of essential Nitto products	44%	50%	At least 50%
Products	**PF/HF category sales ratio** The indicator measuring the expansion of PlanetFlags/HumanFlags products	36% * Flags certified products	40%	At least 50%
Environment	**Waste plastic recycling ratio** The indicator measuring the progress toward circular economy initiatives	47%	50%	60%
Environment	**Sustainable materials procurement ratio** The indicator measuring the procurement of materials considering the environment	16% * In Japan (non-consolidated)	20%	30%
HR	**Engagement score** The indicator measuring employees" "sense of belonging," "work environment," and "physical and mental well-being"	81	78	85
HR	**Challenge ratio** The indicator measuring the percentage of employees who have taken on the challenge for value creation	37%	70%	85%

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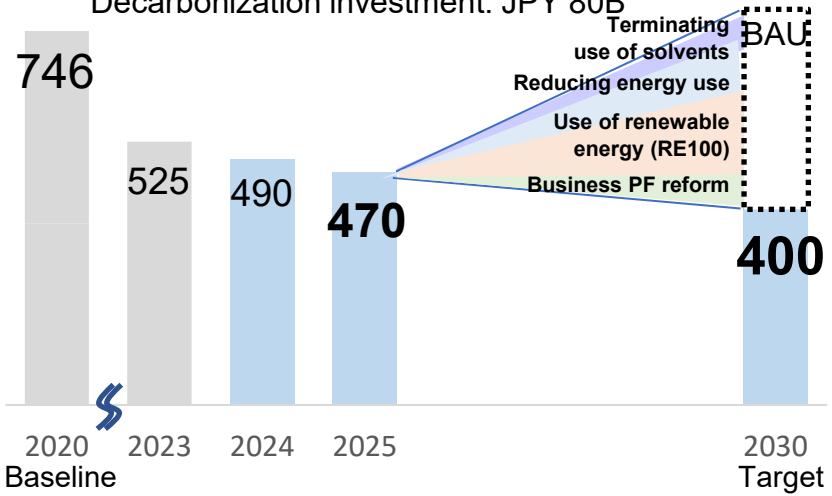
GHG(CO_2) Emissions Reduction Plan by Setting Science Based Targets (SBT)

Received SBT certification and revised to a more stringent target for Scope 1+2

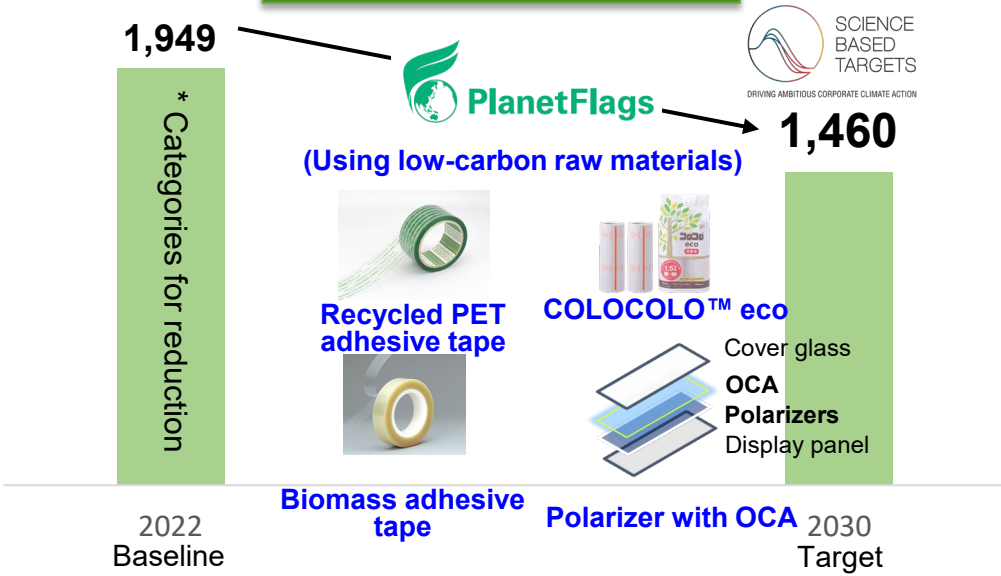
A new target set for Scope 3 emission reduction, aiming for GHG(CO_2) emission reduction throughout the supply chain

Scope 1+2 (kton)

FY2021-2030
Decarbonization investment: JPY 80B



Scope 3 (kton)



* 1. Purchased goods and services (weight basis), 3. Fuel- and energy-related activities not included in scope 1 or scope 2, 4. Upstream transportation and distribution, 5. Waste generated in operations, 12. End-of-life treatment of sold products

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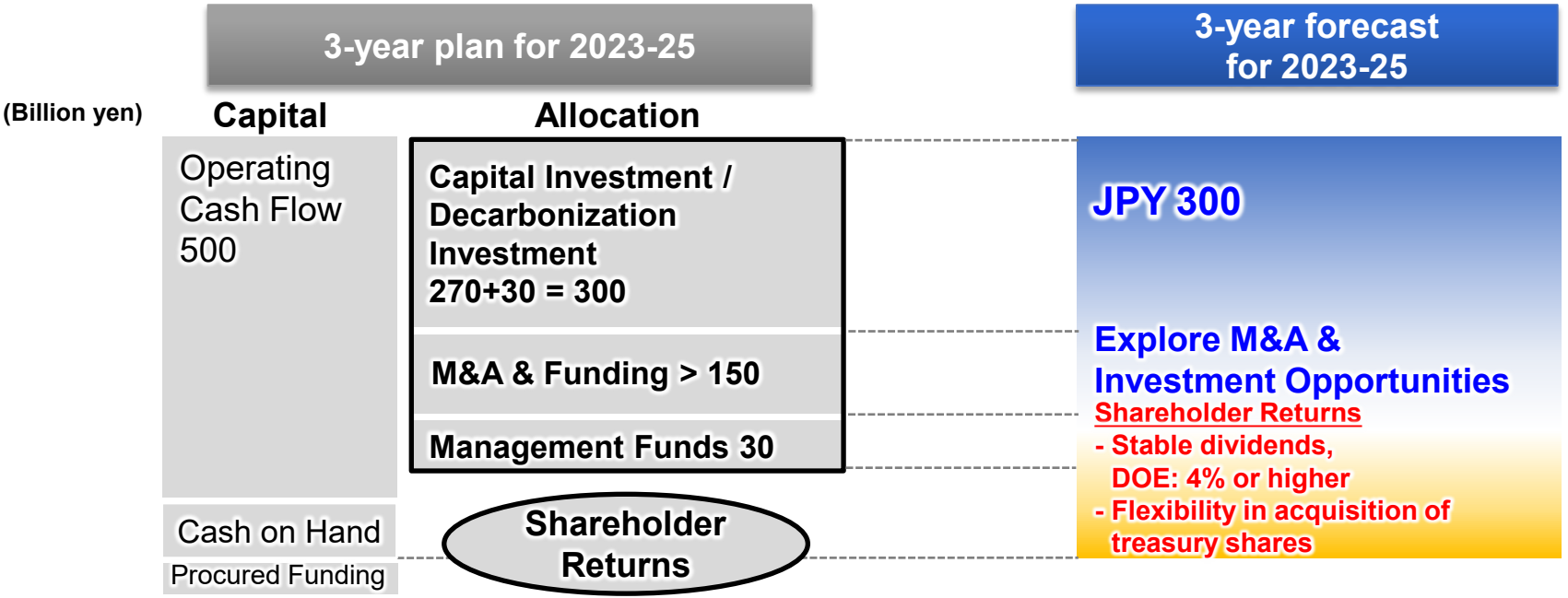
Cash Allocation

Cash deployed to capital investments on track to plan
Stable dividends the foundation for shareholder return, with flexibility in acquisition of treasury shares



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Contents

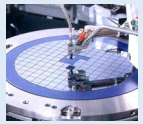
Creating New Products from Release Technology

Enabling Right to Repair – Tapes that peels off cleanly and without damaging products

Production Process

Optimize Production Process
Improve productivity

MLCC



Semiconductor

Heated Foam Release

UV Release

Right to Repair

Ease of Fix
Repair and Replace

Smartphones (Battery Replacement)

Electric Release

Alcohol Release

Improve
Recyclability and Reusability

Household Appliances

Automobiles

Simple and easy separation for repairs!

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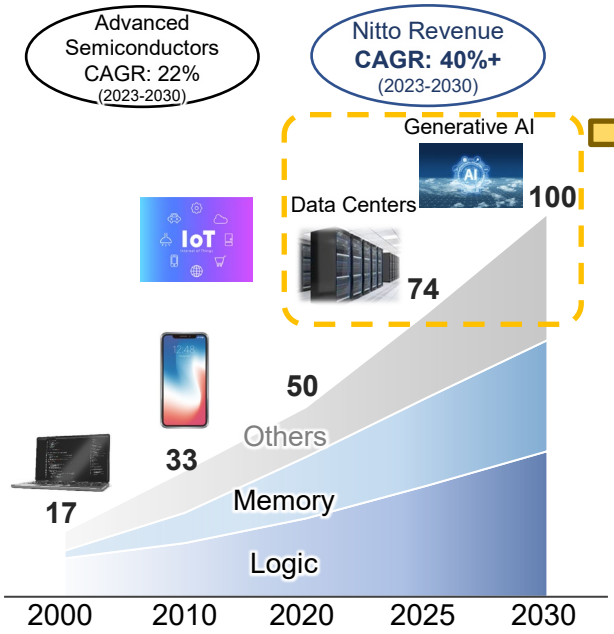
Advanced Semiconductors - Initiatives in Back-End Process Materials (Releasing)

Driven by generative AI, addressing new demand for back-end process materials in the advanced semiconductor field

Global semiconductor shipments

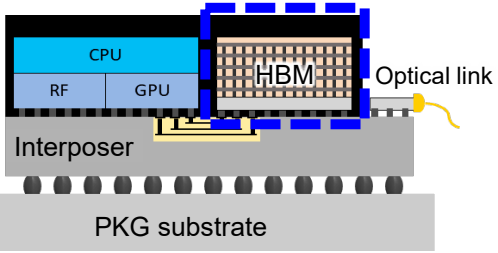
(Trillion yen)



Materials demand for advanced semiconductors

Introducing new technology to back-end processes

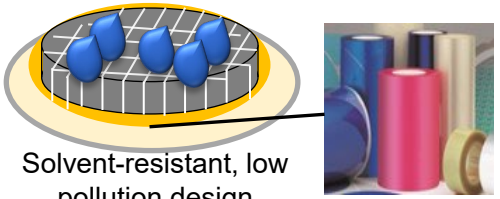
Higher performance requirements have resulted in denser and more miniaturized package structure



Proposed process materials to support next-generation lamination technology

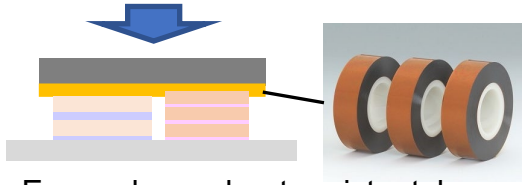
Example of products used in advanced semiconductors

Protective tape used in high bandwidth memory wafer production process



Solvent-resistant, low pollution design

For releasing during chip bonding



Easy-release, heat-resistant, low pollution, and low-damage design

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Products Contributing to Power & Mobility

Nitto products supporting both enhanced engine performance and comfort in EVs

Silent tires

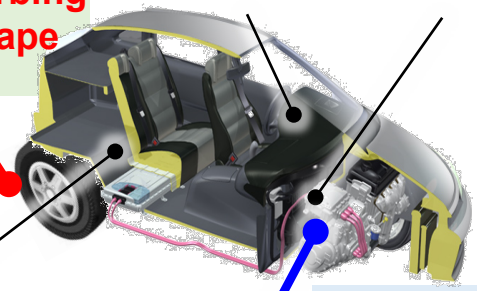
Sound absorbing materials tape

Automotive displays

High durability polarizers/ adhesives
Anti scattering film

Inverters

Process/structural materials for power semiconductors



Fuel cells

Subgasket materials

Motors

Pressure control parts

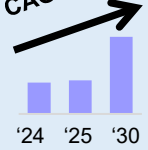
Insulation paper

Insulation paper in motors

For large JP/NA car manufacturers

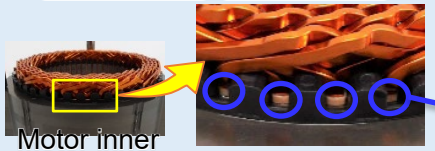
Revenue Forecast

- **Insulation paper use in oil-cooled motor structure (illustrative)**



Thinner

Insulating | Durable

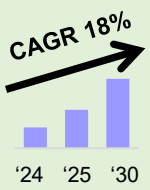


With thinner insulation paper contributing to downsizing motors

Sound absorbing materials tape in silent tires

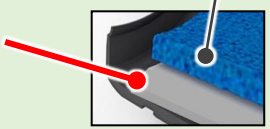
For large EU/JP tire manufacturers

- **Tape use in silent tires (illustrative)**



Nitto's double-sided tape

Sound absorbing foam



With superior durability tapes for demanding conditions contributing to enhanced interior comfort

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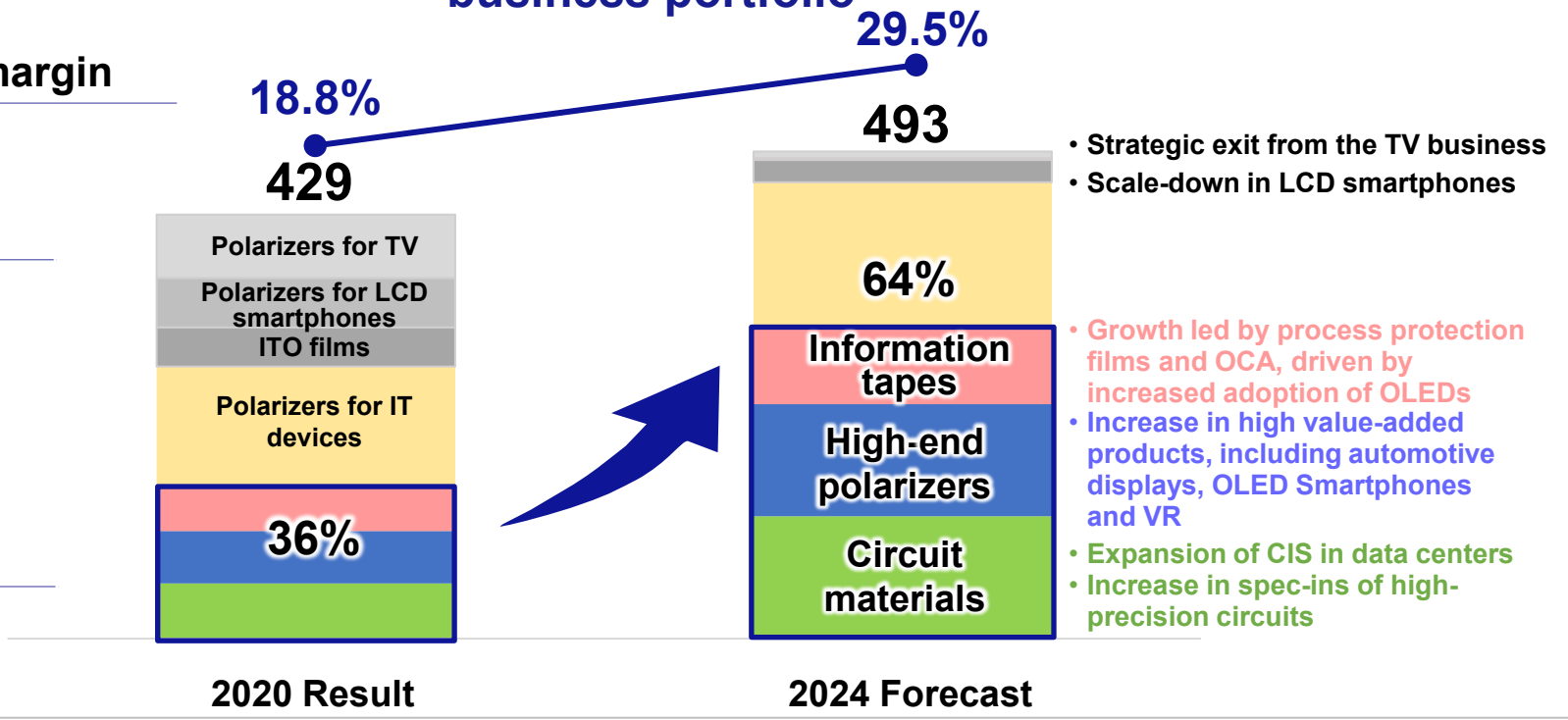
Optronics Business Portfolio Transformation

No.1 Market Share in the high-end market, evolved into a highly profitable business portfolio

Operating margin

Revenue (Billion yen)

Revenue breakdown



- Strategic exit from the TV business
- Scale-down in LCD smartphones

- Growth led by process protection films and OCA, driven by increased adoption of OLEDs
- Increase in high value-added products, including automotive displays, OLED Smartphones and VR
- Expansion of CIS in data centers
- Increase in spec-ins of high-precision circuits

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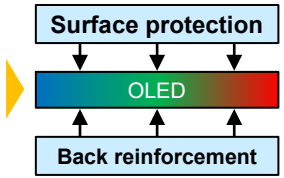
Overview of Information Tapes and the History Behind it's Growth

Intimate customer relationship leading to spec-ins in growth markets and expansion of applications
Currently evaluating multiple investment options to pursue further expansion

Information tapes:

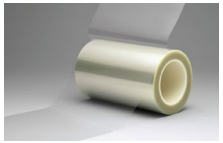
■ Process protection films

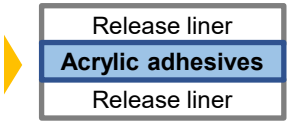
Protective film for optical components



■ OCA (Optical Clear Adhesive)

Fills gaps between polarizers and touch sensors, etc. to enhance visibility of displays





Revenue growth over the years

Spec'd-in to OLED models

Began supplying to high-end OLED smartphones
Process protection + OCA

New applications

2014~
Surface protection
+
Back reinforcement

Evolving in tandem with displays

OLED tablets
Process protection + OCA

Increase in foldables penetration
PWO (Polarizer + OCA)

Eco-friendly UV coaters

Reduced solvent use leading to lower CO_2 emissions

Improvement in smoothness and production yields

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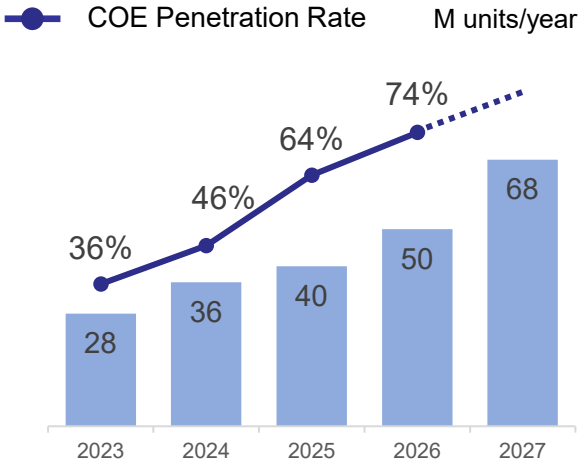
Initiatives in the Growing Smartphones and Foldable Market

Revenue of non-polarizer components have expanded with the evolution of the display market
Nitto will continue to hold high market share in growth anticipated foldable OLED market by delivering best-in-class solutions

Foldable volume and COE* penetration rate (Forecast)

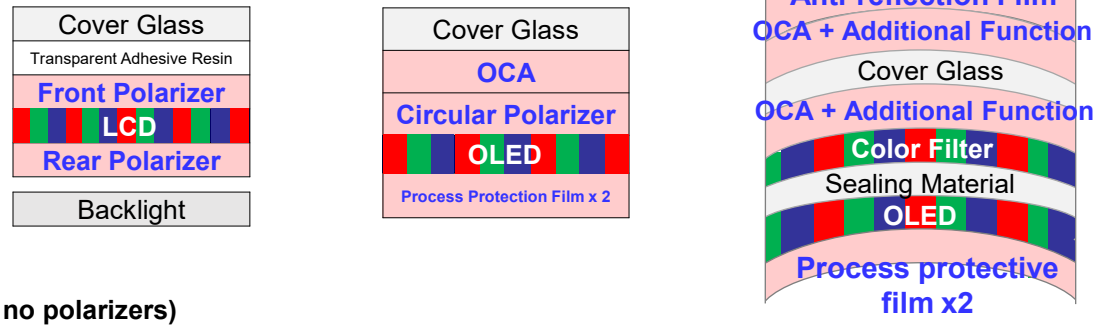


Optimizing product mix in line with the change in display panels

No. of components used : Revenue indexed

LCDs	Flexible OLED	Foldable OLED COE
2 parts : 1	4 parts : 2.5	5 parts : 3.5

*Screen size held constant for comparison



*Color Filter on Encapsulation (= no polarizers)

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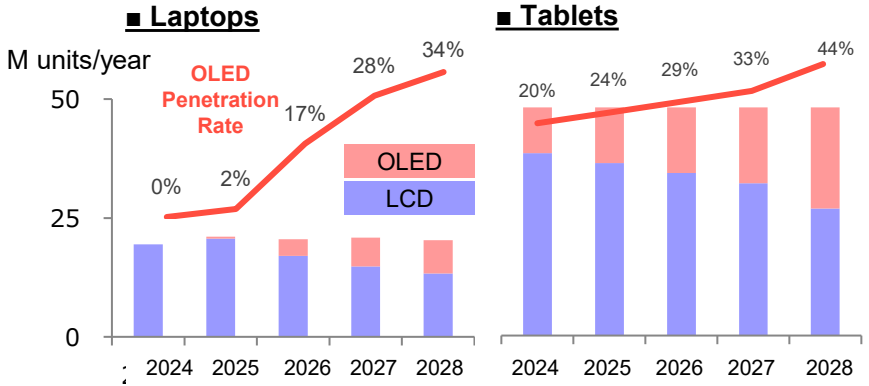
Addressing OLED Demand Outside of Smartphones

OLEDs adoption continues in high-end laptops and tablets – Maximize revenue through increased spec-ins
Increased OLED adoption for super-large automotive displays in luxury vehicle – Nitto to win by supporting large sized and uniquely shaped displays

Product volume by application and OLED penetration rate (Forecast)



Change in unit prices resulting from the shift to OLEDs from LCDs (Ex. OLED tablets)

	LCD	OLED
Revenue indexed	1	1.6

OLEDs for automotive displays

■ Support super-broad displays

Increase in demand for super-broad displays over 1,000 mm (One-Large) for luxury models anticipated

■ OLEDs are needed due to:

- Ease of design
- Bendability

Investment in supporting OLEDs for uniquely-shaped super-large displays

Support unique and super-long formats

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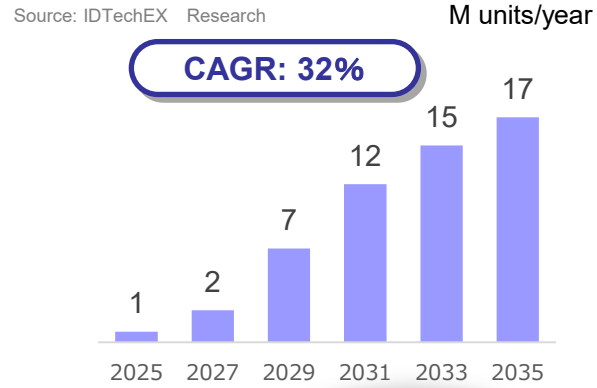
Nitto's Solutions to the Expanding AR Market

Combining Nitto and TLO's strengths in hologram lamination/mass production capability to resolve thickness/weight challenges in AR glasses

■ Forecast of AR glass shipments

Source: IDTechEX Research



Current challenges

Thick Heavy

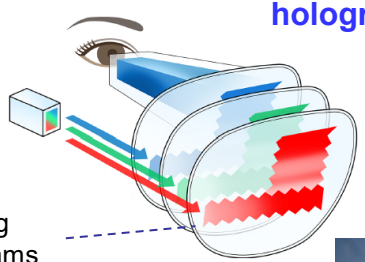
Power consumption, design and etc. has been the bottle-neck behind broad uptake

Nitto + TruLifeOptics

Lamination technology | Pasting technology | Mass-production technology

Holographic light-guiding technology

Lamination / mass-production of holographic materials



Light guiding with holograms

Thin Light

Achieves both thin/ light-weight models together with high light-guiding accuracy

HumanFlags

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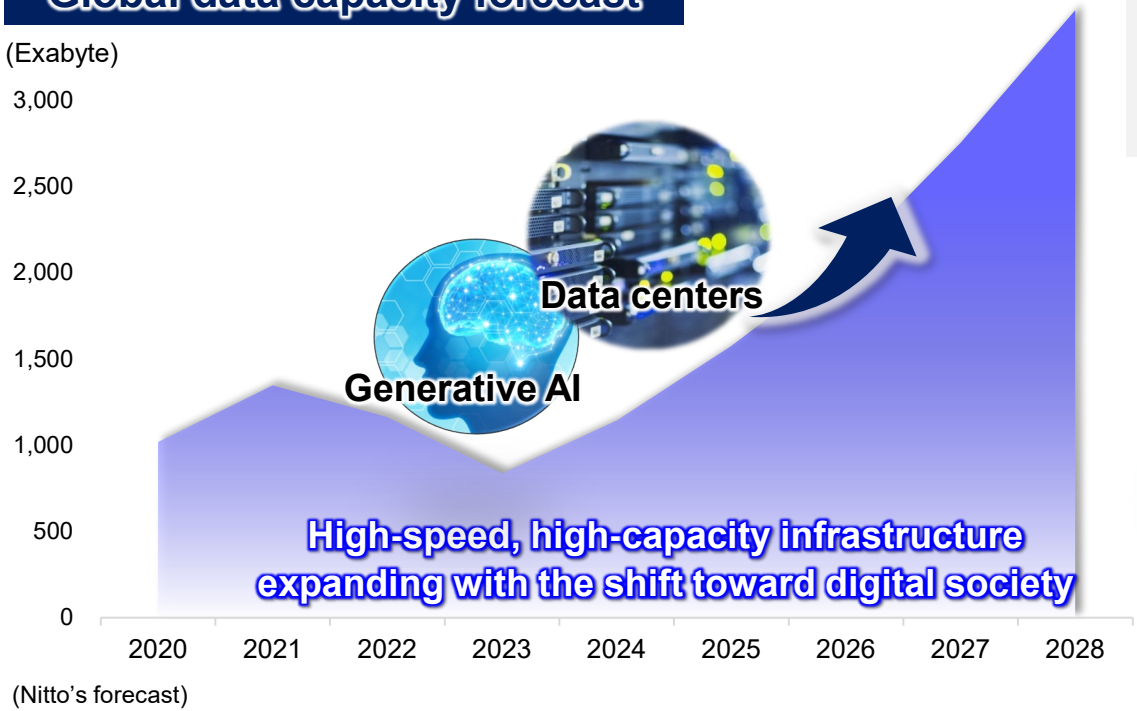
Nitto-CISFLEX™ Supporting the Expanding HDD market and the Evolution in Higher-Capacity Storage

Global data capacity forecast



(Nitto's forecast)

Higher-capacity HDDs

Nitto's technology contributing to practical application of HAMR*

*Heat-Assisted Magnetic Recording

Support high-density wiring

Photosensitive polyimide
Micro wiring technology
Metal-base material

Electric connection function added to metal-base material

CISFLEX™

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Growth Strategy for the Circuit Materials Business

Create new demand by offering value based on “circuit technology+α”

New markets

Smartphones Market

high-precision circuits

➡ Expand to other applications within smartphones

HDD Market

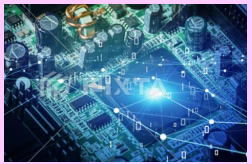
CISFLEX™

Photosensitive polyimide
Micro wiring technology
Metal-base material

Flexible printed circuit (FPC)

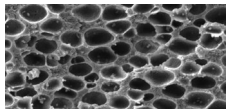
Etching technology

Creating new demand



Entering high-speed communication and semiconductor markets

Porous formation technology



Thermal conduction technology

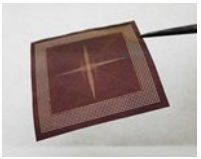
New technologies

Low dielectric substrates

Micro wiring technology
Porous formation technology

Semiconductor package substrates

Micro wiring technology
Thermal conduction technology



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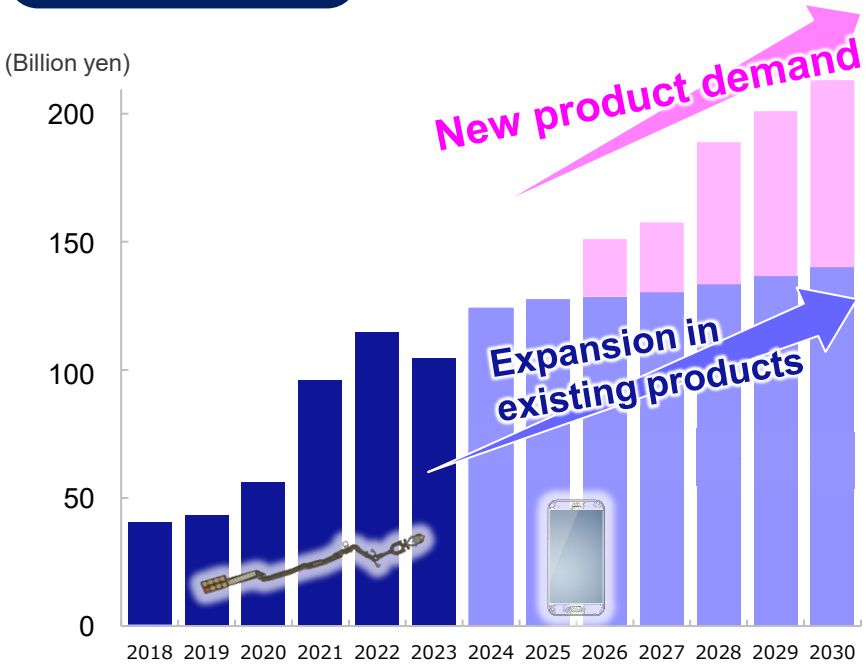
Revenue Forecast and Capacity Ramp-Up of the Circuit Materials Business

Revenue Forecast



Reassessed natural disasters and geopolitical risks
Considering for new opportunities in high-precision circuits, revised investment plans within new plants

New plants scheduled to open in FY2024

Establish a two-plant setup for high-precision circuits production (Kameyama, Vietnam)

Completed in Apr. '24

Completed in Sept. '24

Scheduled completion in Dec. '24

*CISFLEX™

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Contents

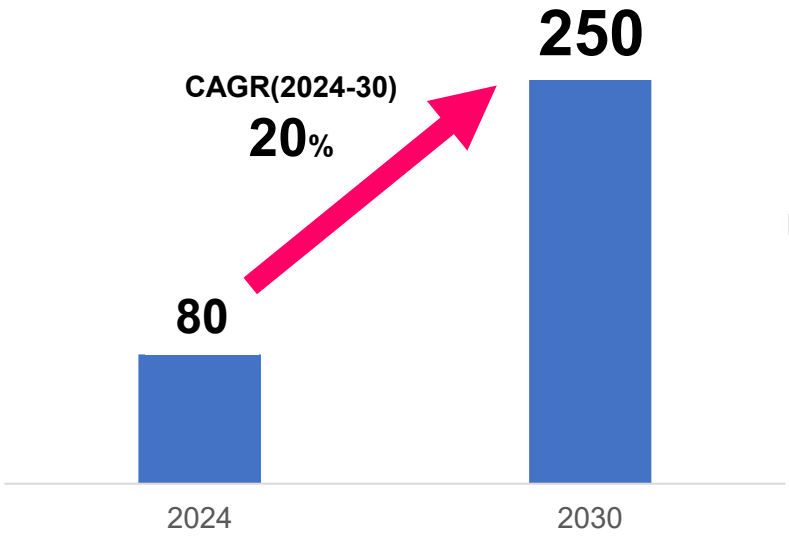
Growth Potential of the Oligonucleotide (Oligo) Contract Manufacturing Market

Market is expected to grow 20% a year, driven by increase in clinical cases and expansion of commercial drugs targeting large population diseases

Oligo CMO market size

EvaluatePharma report and Nitto Estimate

(Billion yen)



Oligo drug pipeline

of drugs : Nitto Estimate

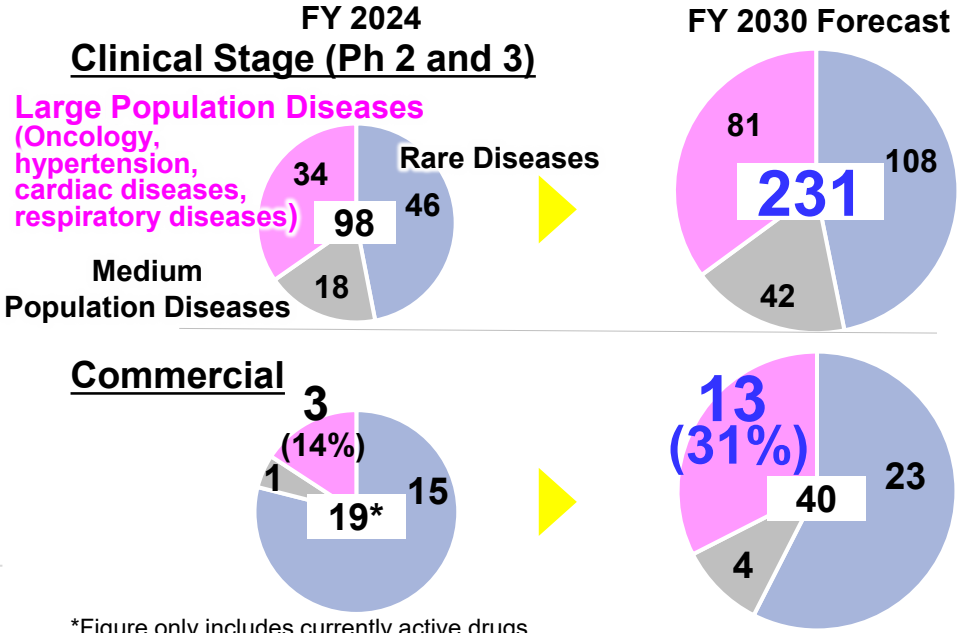


*Figure only includes currently active drugs

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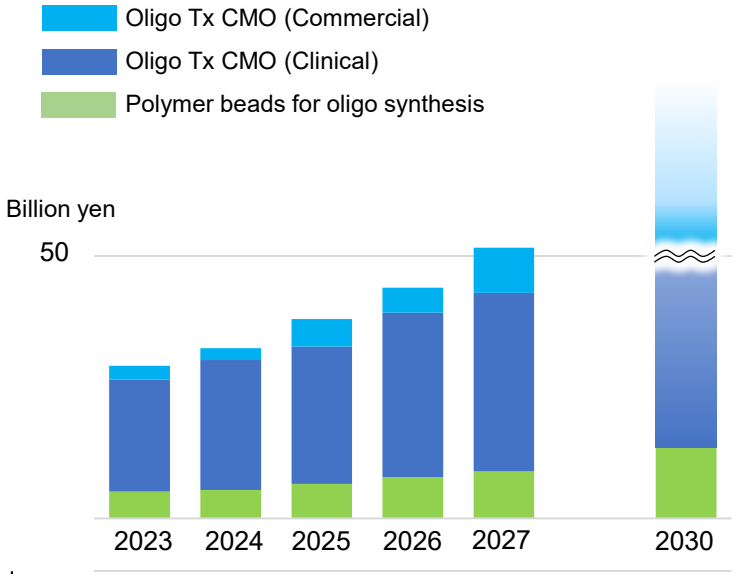
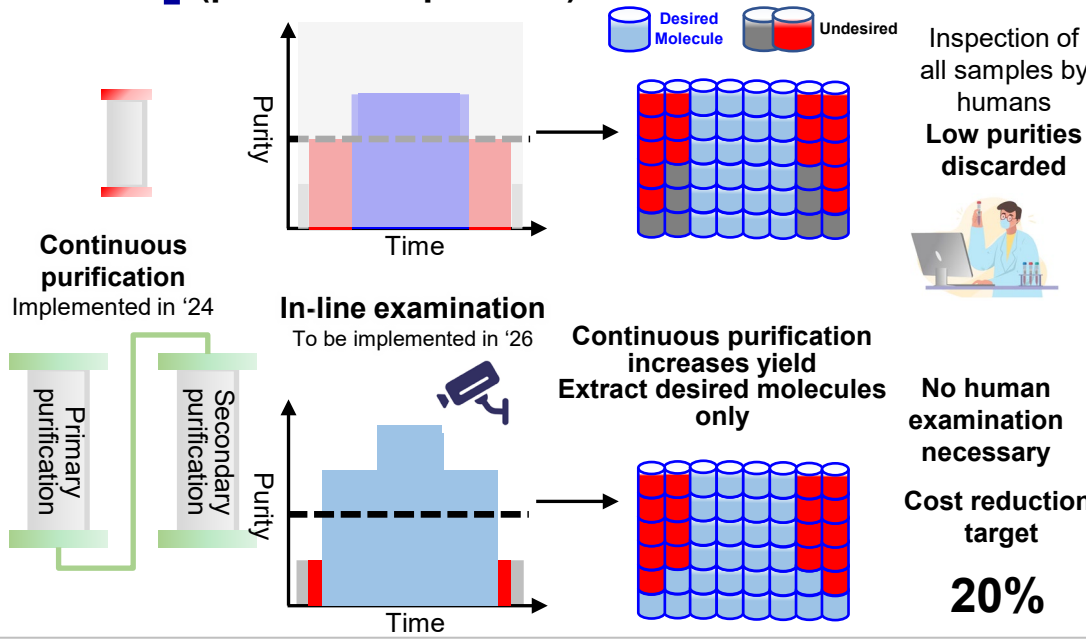
Business Plan for the Oligo Manufacturing Business

Expand the business toward 2030 by capturing emerging demand with focus on commercial drugs
Implement new mfg. technology at U.S. plant as part of measures to optimize profit

Mid/long-term revenue plan



Implement new mfg. technology (purification process)



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Growth Strategy for the Oligo Business

In anticipation of market growth, increased production capacity of process materials and oligo CMO

Process materials → **Oligo drug substance contract manufacturing**

Miyagi Plant
Beads production

New plant to begin operation: **FY2024**

San Diego Plant
Beads processing

Kinovate Life Sciences, Inc.
San Diego

FY2025

Cincinnati Plant
(Research ~ Early clinical stages)

Nitto Denko Avecia Inc.
Cincinnati

Capacity ramp-up FY2024

Boston

Milford Plant
(Late clinical stages ~ Commercial drugs)

FY2023

Pharmaceutical companies, oligo CDMOs, research institutions

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Miyagi Plant – Installed First Hydrogen Conversion System/Boiler Equipment within Nitto Group

Installed hydrogen boiler and hydrogen converter for surplus solar power Operation to begin 2H/FY24, promoting efforts to reduce CO_2 emissions to zero

Electric power

Increase green electricity supply

- Double solar power generation panels
- Procure green electricity

Before: Power generation shut down on holidays

Going Forward: Generate power to convert into hydrogen

Hydrogen conversion device
(Electricity → Hydrogen)

Hydrogen boiler
(Hydrogen → Steam)

Steam

Boiler fuel **changed from LPG to hydrogen. It will now supply "heat (steam)" that emits zero CO_2**

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Initiatives for Bio-Solvents

A biomaterials-development startup (in which we have a minority stake) will pursue the development of bio-solvents for social implementation

Crysalis
Advancing Zero Carbon Futures

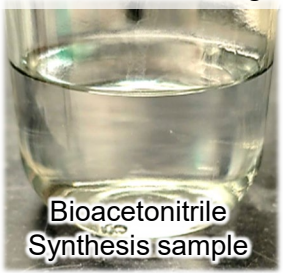
Industrial corn → Feedstock → **Bioethanol** (Commence business) → Feedstock → **Bioacetonitrile** (Commercialized in future)

May 2024
Production equipment to begin operation

Manufacturing site (Sauget, Illinois, U.S.)

July 2024
Introduce pilot equipment for development

Mass-production to begin in 2026
Used as raw material in oligo contract manufacturing



Bioacetonitrile
Synthesis sample

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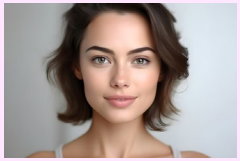
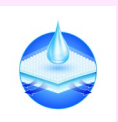
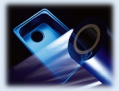
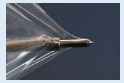
Growth Strategies for Personal Care Materials

Sustain growth with product lineup that adapt to changes in the environment

Growth strategies	Proprietary technology	Key initiatives
 **Create eco-friendly products** ➢ Propose products that comply with tighter environmental regulations	**- Biodegradable non-woven fabrics** **- Thinning technology**	**Actively expand ESG-friendly product offerings**   
 **Create new products in growth areas** ➢ Expand adult and femicare product lines	**- Anisotropic contraction film technology** **- Liquid absorbing non-woven fabrics**	**Launch comfort-enhancing products to market**  
 **Portfolio transformation** ➢ Make an entry into industrial materials applications through intra-group collaboration	**- Multi-layer lamination films** **- High strength/High extensibility**	**Promote synergistic development themes**   

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Contents

History of CO_2 Separation Membrane Business

Project began in February 2020, and following the successful recovery of 300t in Shiga pilot plant, mass production of CO_2 separation membrane planned to commence in 2025

Negative Emission Factory (NEF) concept

2016
Research Commences

NEF−PJ
Feb. 2020

Shiga Plant 300t recovery demonstrated
Apr. 2023~

Confirmed CO_2 recovery rate of 90%+

External announcement
Investors' Meeting
May 2023


日東電工、膜でCO₂分離
25年度にも実用化 稼働コスト安く

Nihon Keizai Shimbun
July 22nd 2023 News article

Capital investment
Feb. 2024

Mass production to begin Dec. 2025

First shipment expected in 2026

Target 10 billion yen in revenue by 2030

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Development of CO_2 Conversion Technology

Began initiatives to produce formic acid from biomass derived CO_2 using proprietary CO_2 conversion technology

Solutions to reduce CO_2 emissions

Nitto aims to provide total solutions to reduce CO_2 emissions

CO_2 emission sources → Separation/ recovery → Fixation/ conversion

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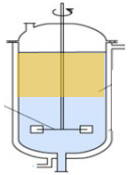
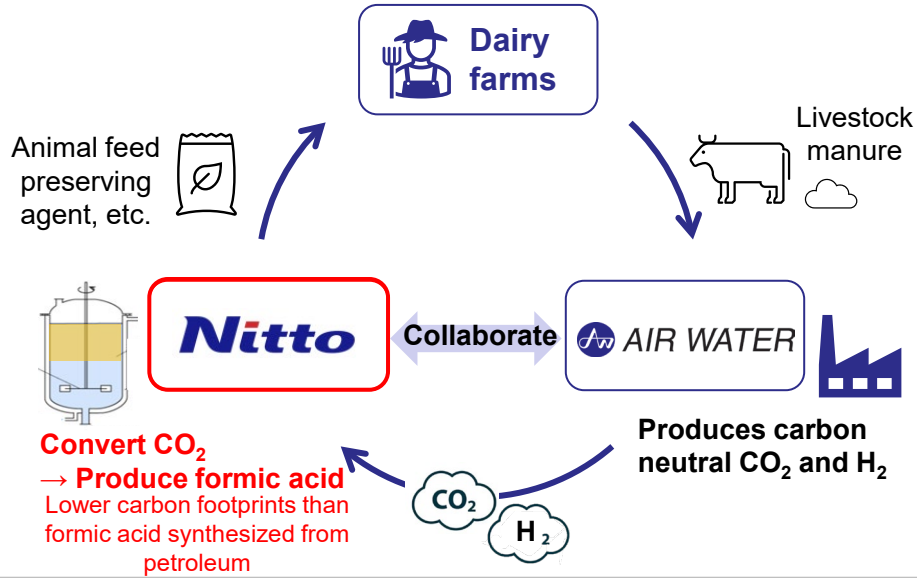
Power stations
Factories
Atmospheric CO_2
Dairy farms

CO_2 separation membranes



Unique CO_2 conversion technology
Synthesize formic acid from CO_2

Example theme on CO_2 conversion technology: Biomass-derived CO_2 → Produce formic acid



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Environmental Contribution – Recovery of Factory Solvent Waste

Realizing Cost and CO_2 reduction by utilizing Separation Membrane

Water + Alcohol-based
+Impurities

Old Model (Combustion)

Combustion

New Model (Recycle)

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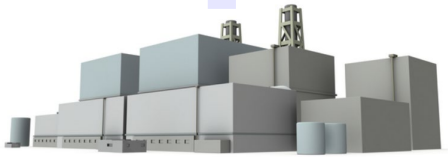
Condense 10%→50%

Refine

CO_2

Reuse Solvents (Cost Reduction)



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