



*Aluminum lightens the world*

アルミでかなえる、軽やかな世界

# Current Situation and Future Initiatives in the Flat Rolled Products Business

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**June 7, 2023**

**UACJ Corporation**



# **Demand Environment and Current Status of the Flat Rolled Products Business**



# Global demand outlook for aluminum sheets

## Global aluminum sheet demand is increasing year by year

### Background for increased aluminum sheet demand

Global demand for environmentally friendly containers



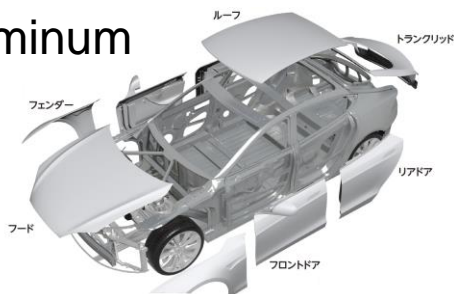
Can stock: Recycling-oriented business (Can-to-Can) harnessing aluminum's **high recyclability**



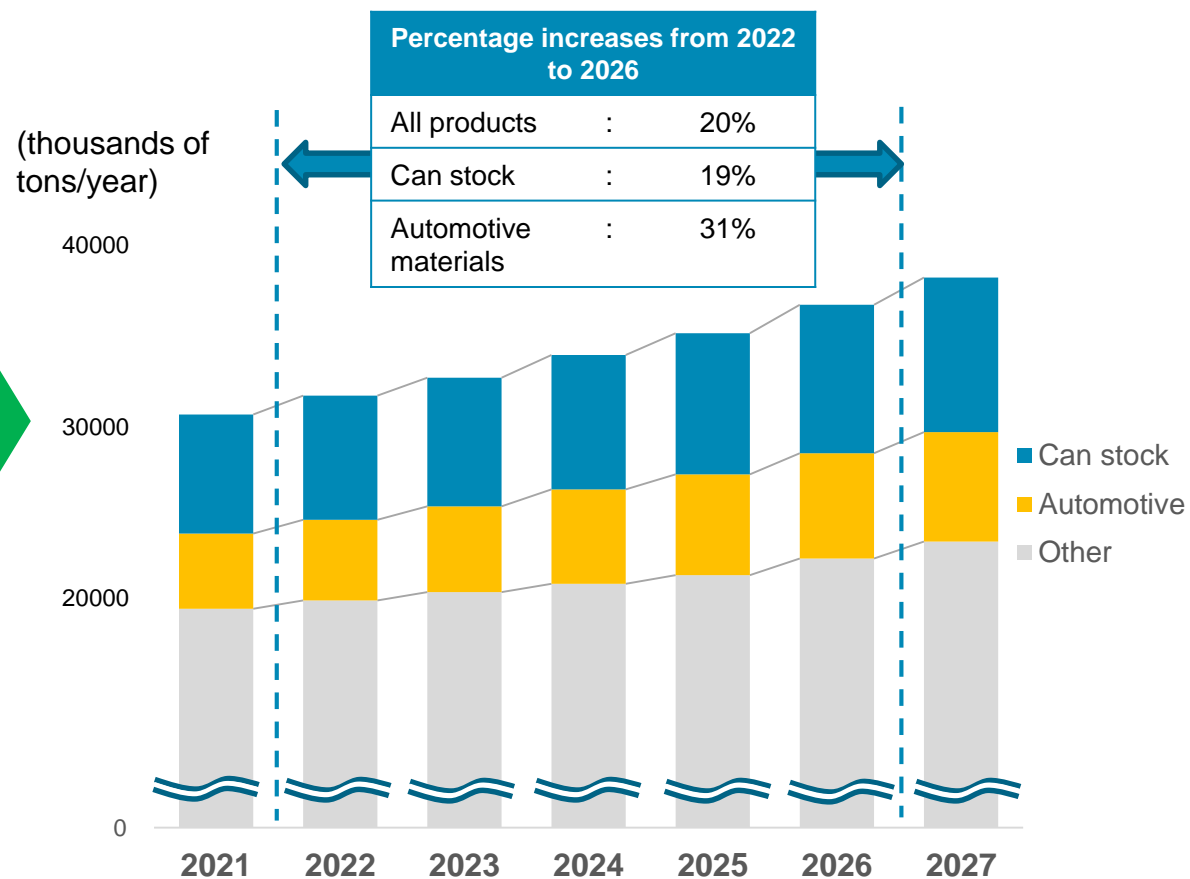
Realizing a decarbonized society



Automotive materials: In addition to more vehicle models/parts that use aluminum to achieve **weight reduction**, demand for batteries is also increasing due to **electrification**



### Global aluminum sheet demand forecast



# Flat Rolled Products Business Strategy

Aiming to supply 1.5 million tons per year globally by taking advantage of our three-point global supply system

**Japan** : Improving earning power

Solid customer base, capability to handle high-mix products/various applications  
Profit structure resistant to environmental changes through structural reforms and price system corrections  
Focusing on growth areas, promoting recycling process

**UATH** <sup>\*1</sup> : Reinforcing system to reach 340,000 tons of production

Establishing a global supply system as the only integrated plant in Southeast Asia, and establishing a recycling system in the region

**TAA** <sup>\*2</sup> : Capturing robust demand in North America over the medium to long term

Solid customer base in the robust North American can stock market over the medium to long term  
Aiming to increase revenue and recoup investment

## Flat Rolled Products Division

Global supply through our three-point business system  
Maximizing earnings by developing each unit's strengths

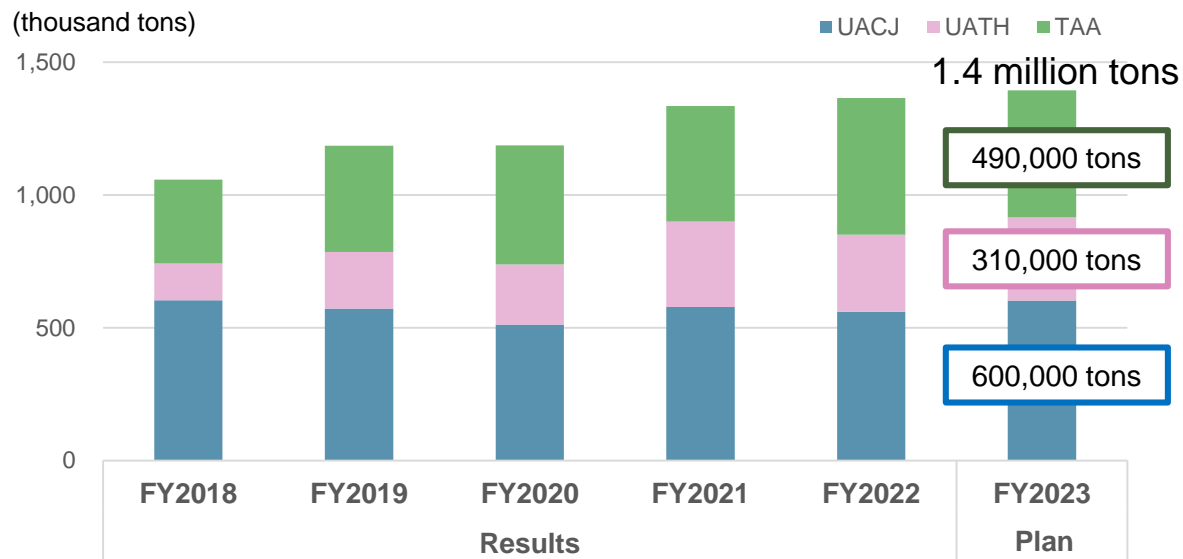
\*1 UATH: UACJ (Thailand) Co., Ltd.

\*2 TAA: Tri-Arrows Aluminum Holding Inc.

# Flat Rolled Products Business: Total Sales Volume and Ordinary Income for All Three Units

Amid firm demand, sales volume and ordinary income are on an upward trend for our three units in the Flat Rolled Products Business

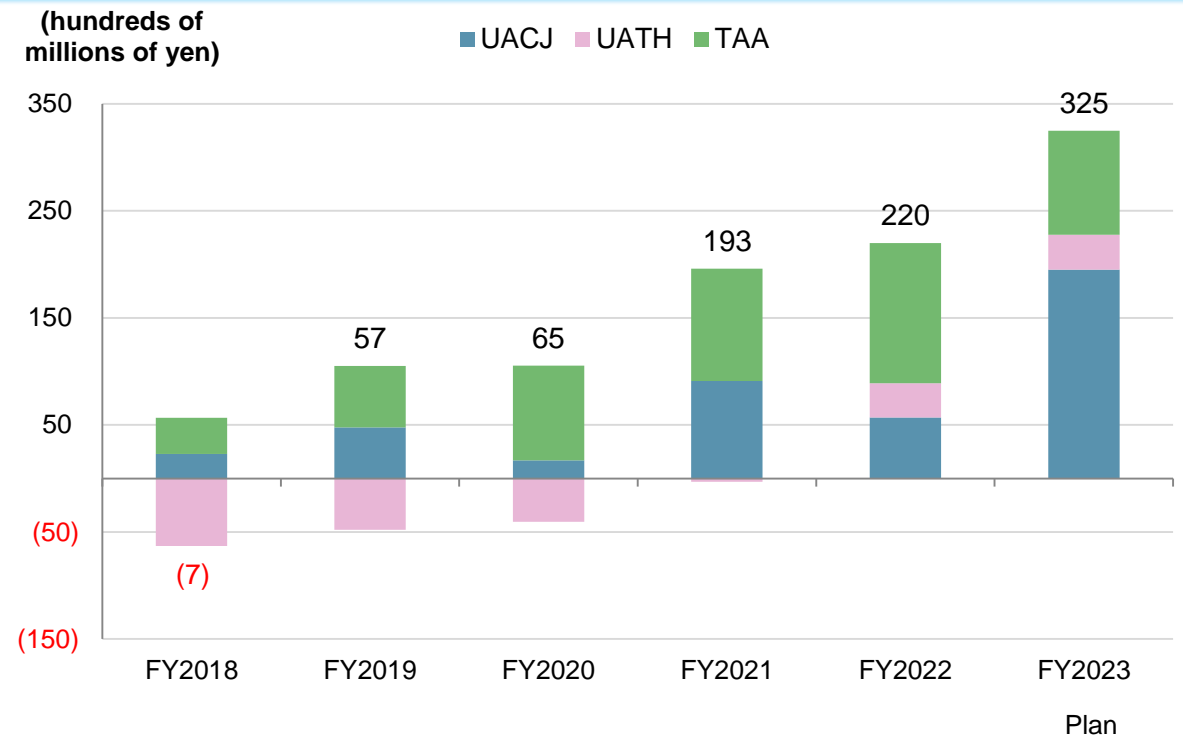
Annual sales volume trend per location (three units)



FY2022 - FY2023: Approx. 1.4 million tons

Future: Total of 1.5 million tons for all three units

Flat Rolled Products Business: Ordinary income before inventory valuation effects (three-unit total)



Increase in sales volume

Improvement in ordinary income

# Strengths of Works in Japan, UATH, and TAA

Doing business utilizing our solid customer base, ability to design products that meet their needs, and production capacity

FY2023: 290,000 tons

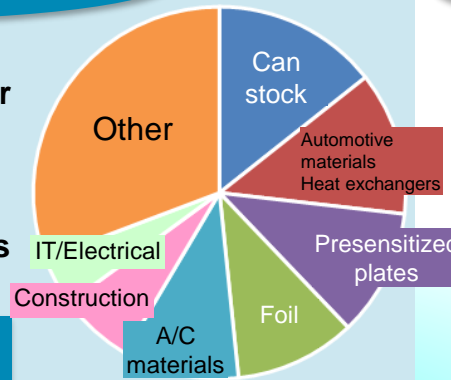
Providing quality, delivery, and service with unrivalled competitiveness, especially in can stock and automotive materials



**Fukui Works**

FY2023: 270,000 tons

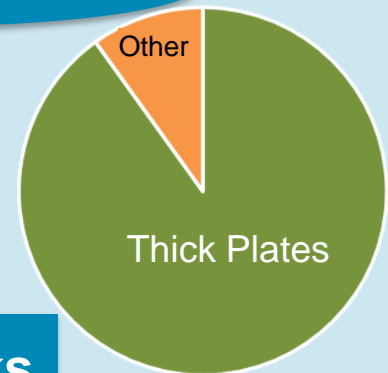
Contributing to the creation of new value for our customers through our ability to handle high-mix products and various applications



**Nagoya Works**

FY2023: 40,000 tons

Using advanced technology to create added value in thick plates

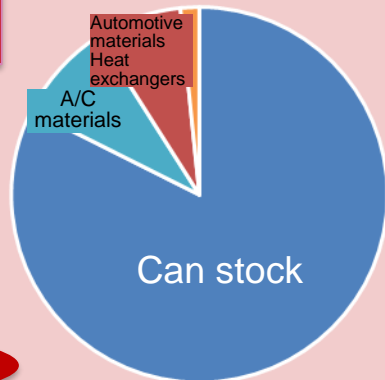


**Fukaya Works**

A supply system harnessing the unique qualities of each location

**UATH**

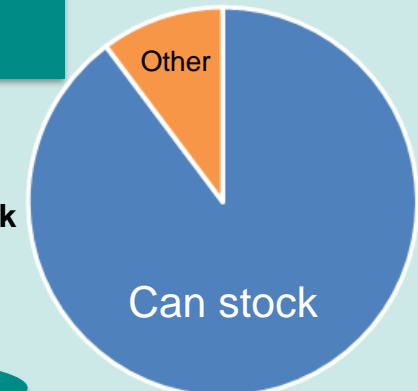
A global materials supply base for air conditioning and automotive heat exchangers, in addition to can materials



FY2023: 310,000 tons

**TAA**

U.S. location focusing on can stock



FY2023: 490,000 tons

# **Sales Trends and Profit/Loss Outlook for the Domestic Flat Rolled Products Business**

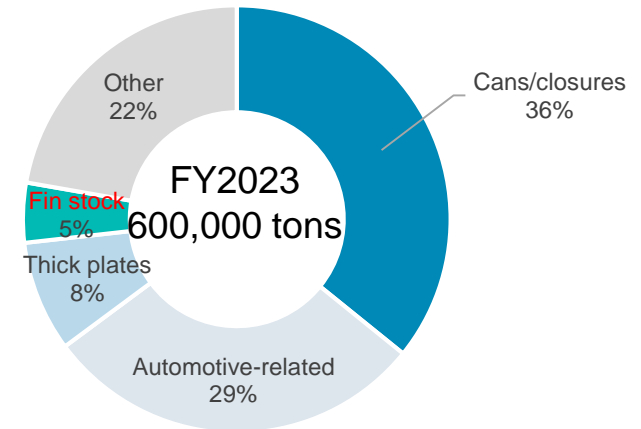
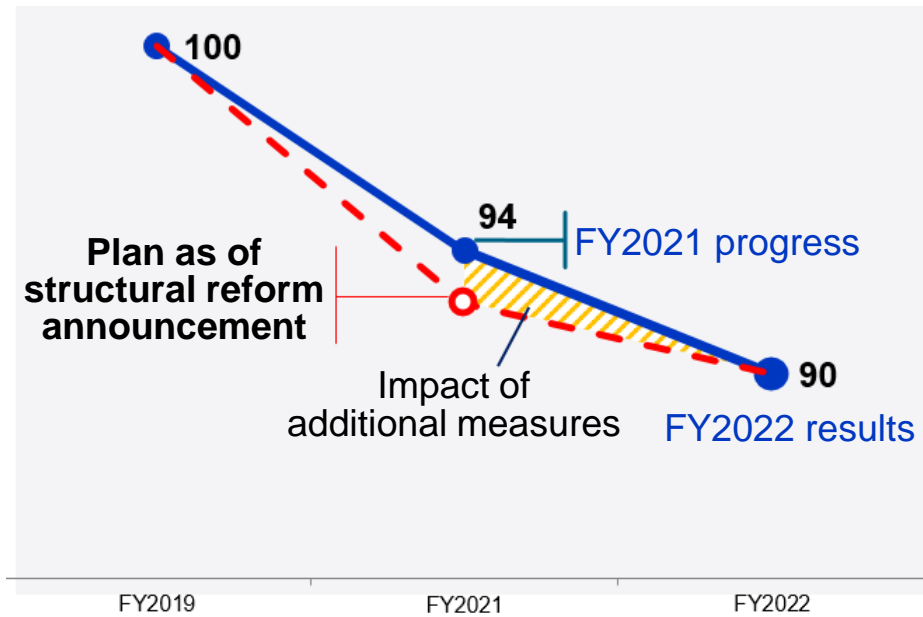


# Sales Trends

**Aiming for total sales of 600,000 tons per year at the three domestic works, mainly in our mainstay can stock and automotive-related products**

Domestic Flat Rolled Products Business break-even point  
(index: FY2019 = 100)

Sales product mix composition and sales policy for FY2023



Can stock: Promoting recycling and aiming for stable orders

Automotive-related: Increasing sales due to recovery in automobile production  
Capturing demand for batteries

Thick plates: Capturing medium- to long-term expansion of semiconductor demand, demand for fuel carriers

IT, electrical, A/C, etc.: Activities to win orders by taking advantage of recycling

- Expansion of highly profitable products
- Consolidating manufacturing

Improving break-even point

Improved earning power

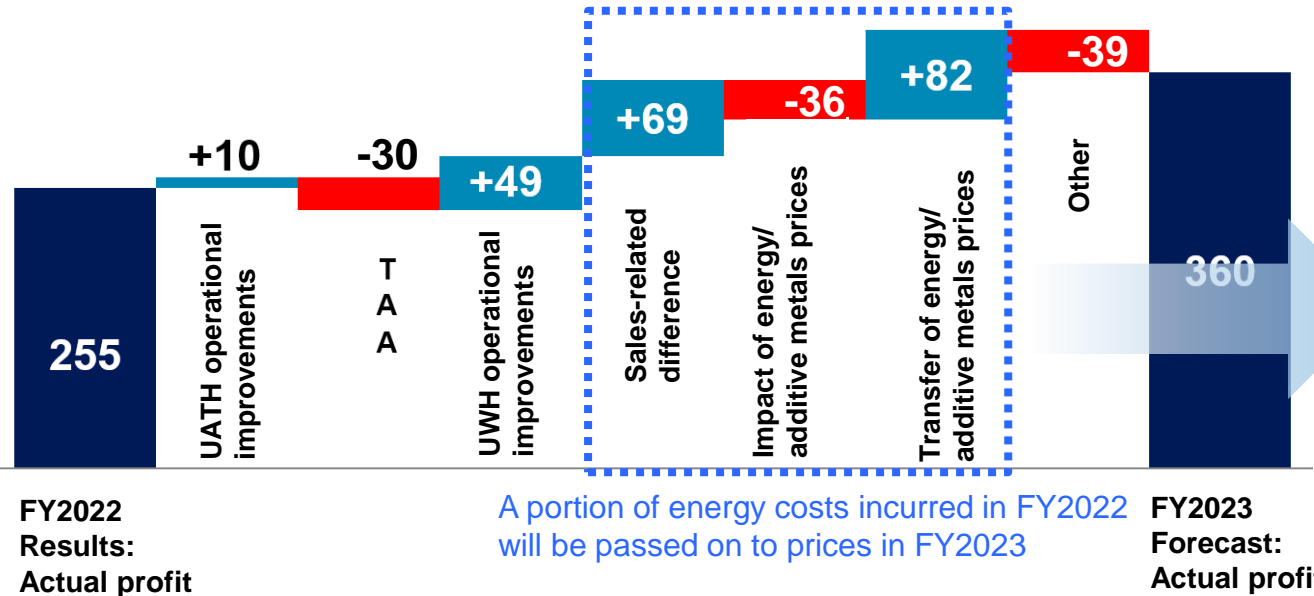


# Profit and Loss Forecast

## Cost transfer systems in response to market fluctuations already in place

FY2022 → FY2023 change in ordinary income before inventory valuation effects (consolidated)

(hundreds of millions of yen)



Market fluctuations in energy prices and additive metals

⇒ Decrease (variation) factors for ordinary income

- ✓ Expansion of high-margin products and amending prices
  - ✓ Energy
  - ✓ Additive metals
- Have introduced a surcharge formula to handle market fluctuations

Introduced from the second half of FY2022, annual contribution from FY2023

From FY2023 onward:  
Price system correction effects increase

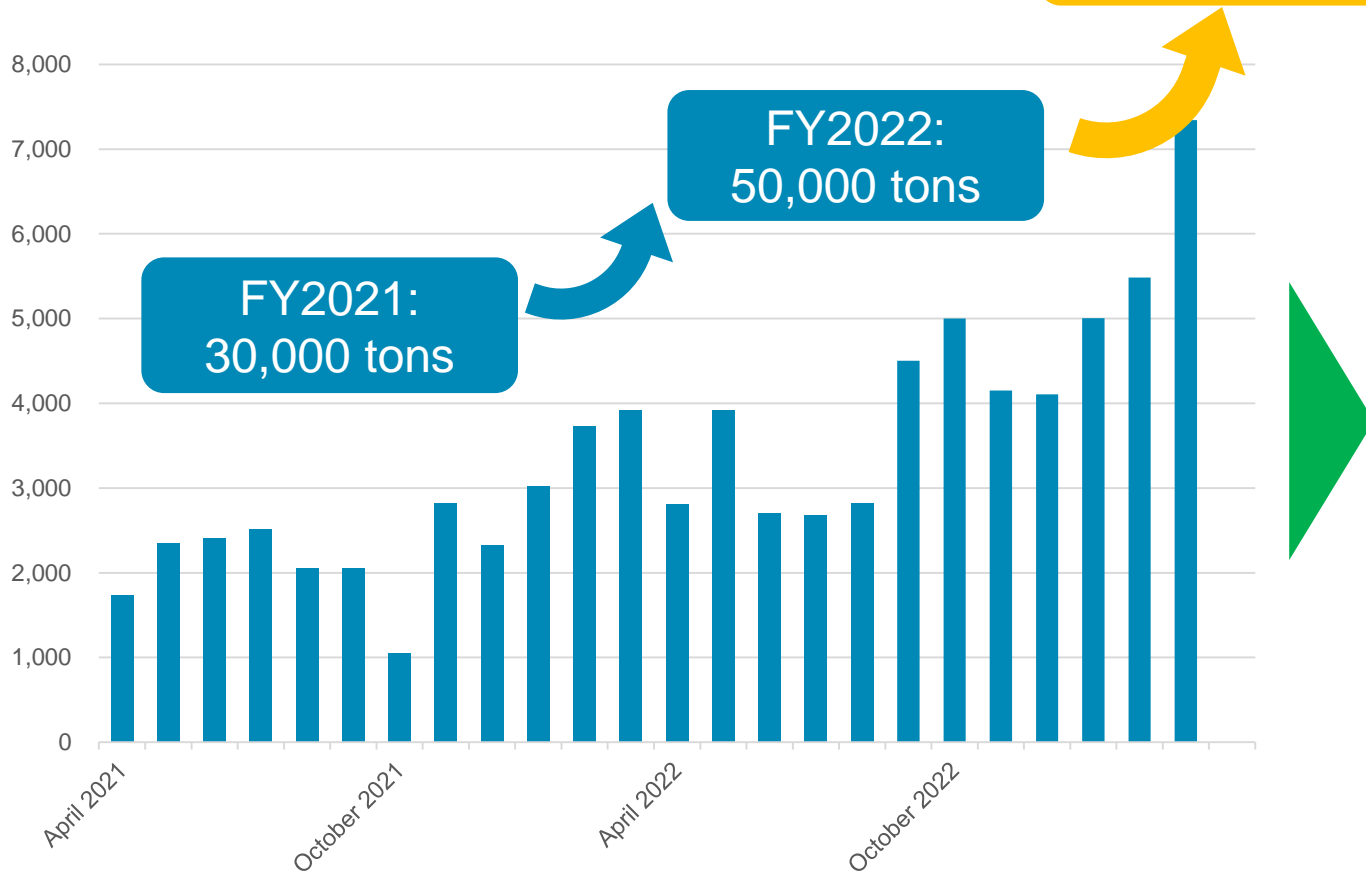
# Initiatives in Growth Areas

- **Automotive Materials**
- **Thick Plates**
- **Air Conditioning Fin Stock**
- **Foil for Lithium-Ion Batteries**
- **Can Stock**
  - **Business Alliance Agreement with Toyo Seikan Group Holdings**
  - **Joint Venture Agreement with Yamaichi Metals Corporation**

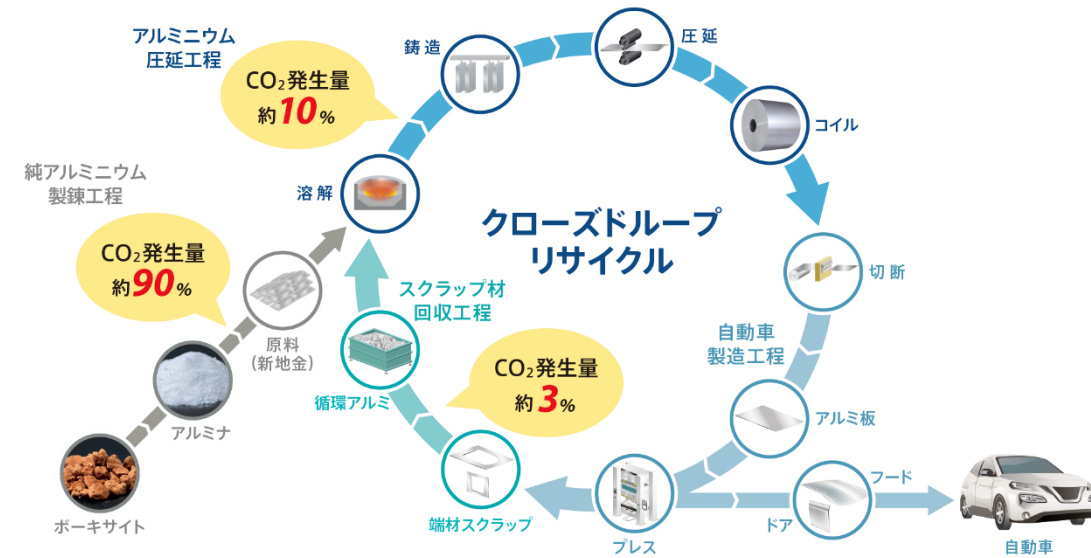
# Automotive materials

Capturing strong demand for aluminum, completed the Fukui CALP launch. Promoting environmental capability and development of new applications

Fukui CALP utilization results (tons/month)



- Environmental capability
- Promoting closed-loop recycling

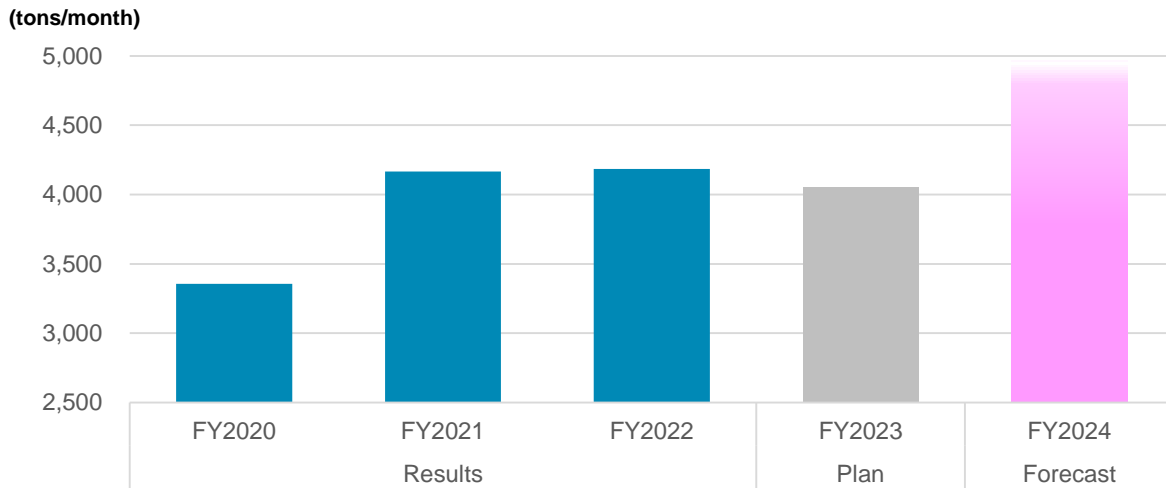


- Developing UACJ SMART Mass Balance using green ingots and recycled raw materials
- New application development
- Supporting electrification (battery pack materials, etc.)
- Expanding applicable parts due to weight reduction

# Thick Plates

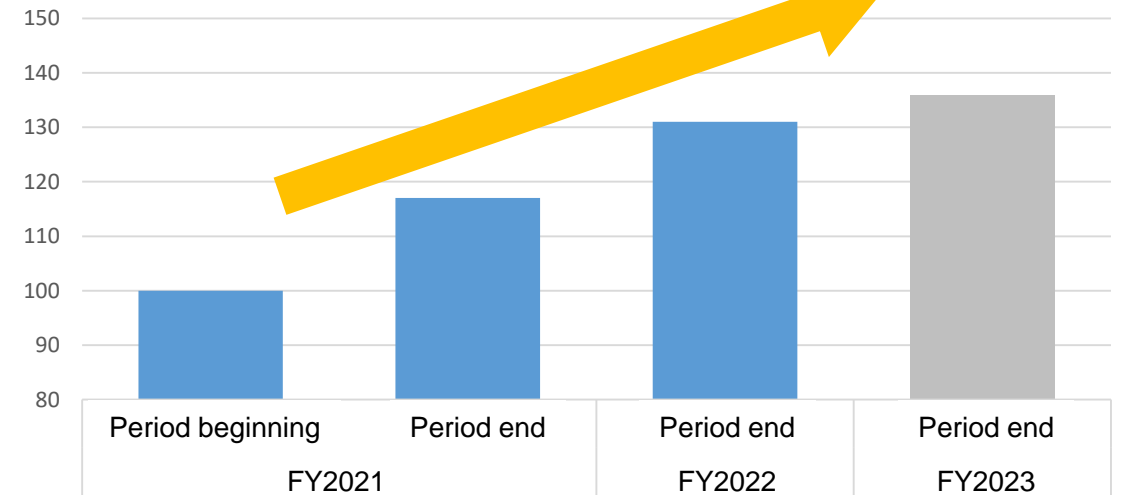
## Improving thick plate productivity to address recovery in demand for semiconductor manufacturing equipment in FY2024 and beyond

Thick plate sales volume results and forecasts



Manufacturing response to increased sales of thick plates

Trend toward thick plate productivity improvement  
(index: beginning of FY2021 = 100)



### Semiconductor production equipment demand trend (per UACJ research)

FY2022 results : 7% year-on-year increase

FY2023 forecast : 11-12% year-on-year decrease

FY2024 forecast : 17-18% year-on-year increase

### Fukaya Works/Fukui Works

Eliminating bottlenecks

Improving yield

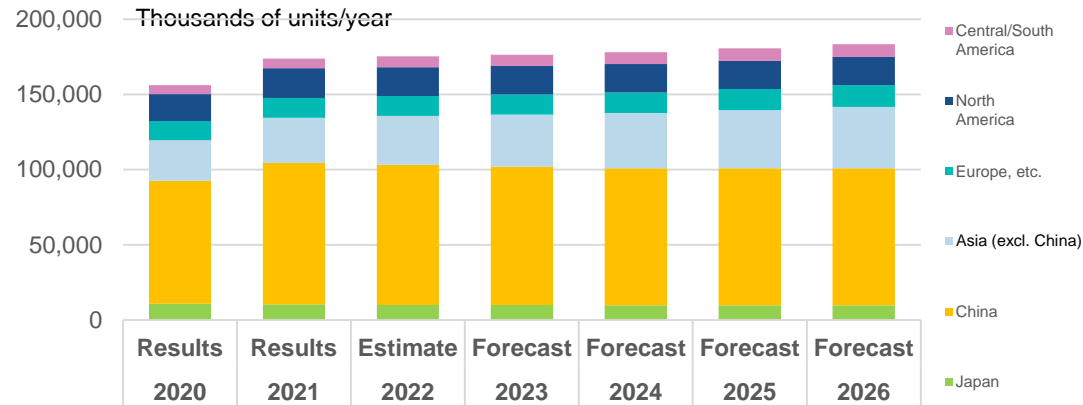
Increased productivity

# Air Conditioning Fin Stock

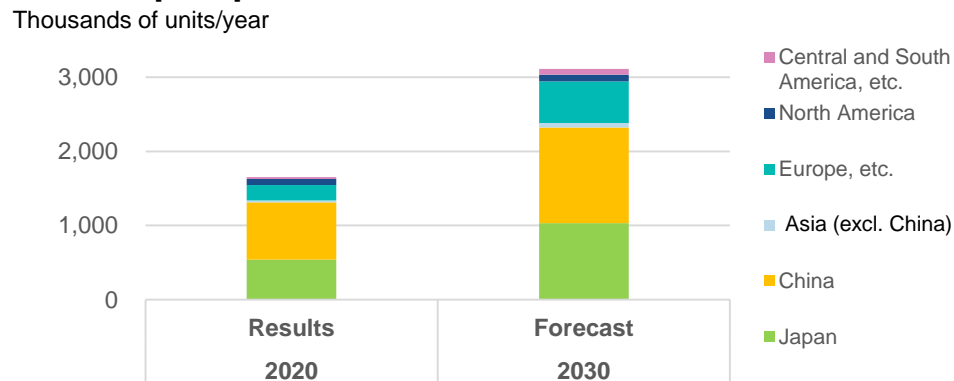
## Technology development with Japanese customers and responding to overseas market growth

### Sales trends by product type and region

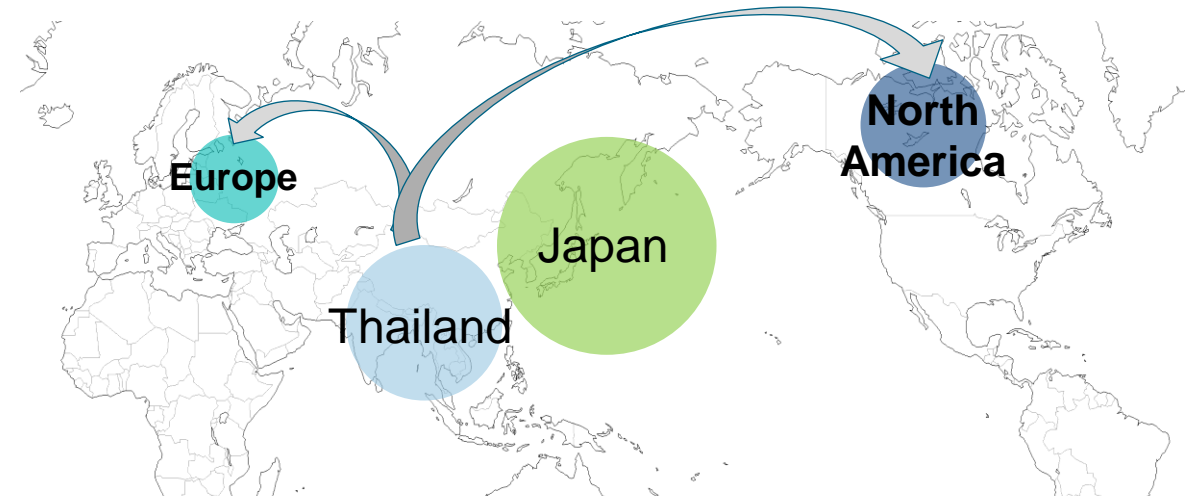
#### ● Room air conditioner and package air conditioner market



#### ● Heat pump water heater market



### Supply system tailored to market needs

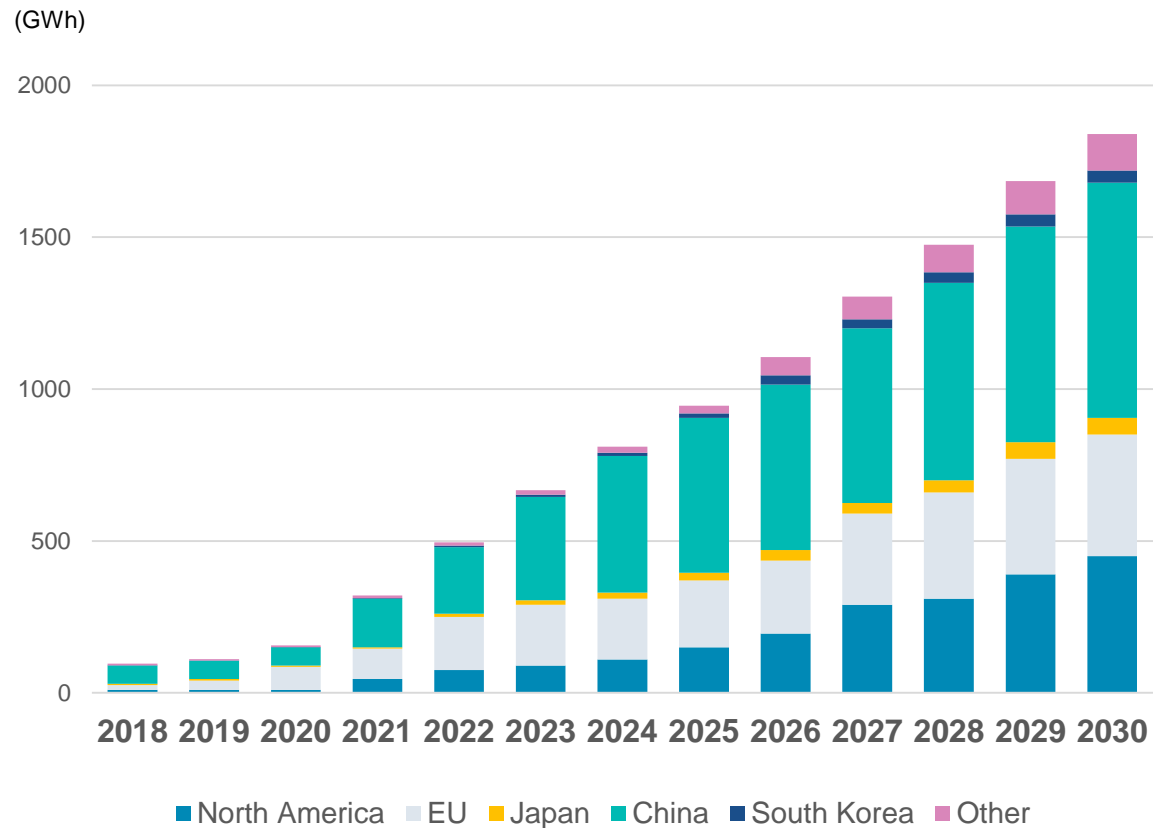


- Strong relationships with Japanese air conditioner manufacturers and development of new technologies
- Air conditioning market to more than triple by 2050
- Supply from UATH mainly to Southeast Asia, U.S., and Europe
- Responding to growing demand for inverter air conditioners in North America and heat pump water heaters in Europe

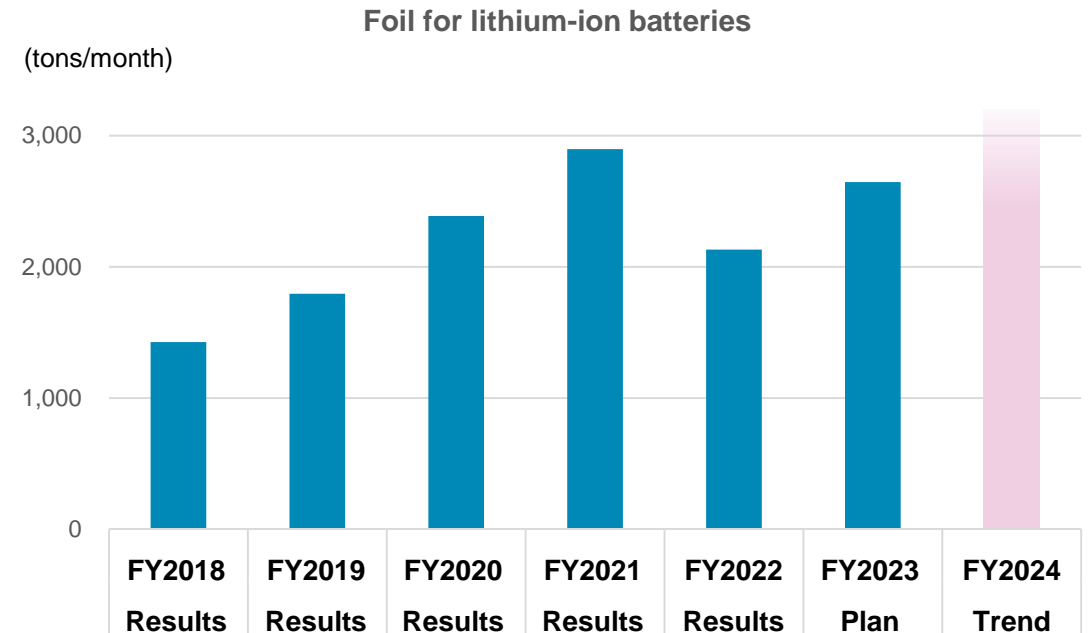
# Foil for Lithium-Ion Batteries

Expecting strong demand due to growth in the lithium-ion battery market

## Lithium-ion battery demand trend



## Sales through FY2023 and demand forecast

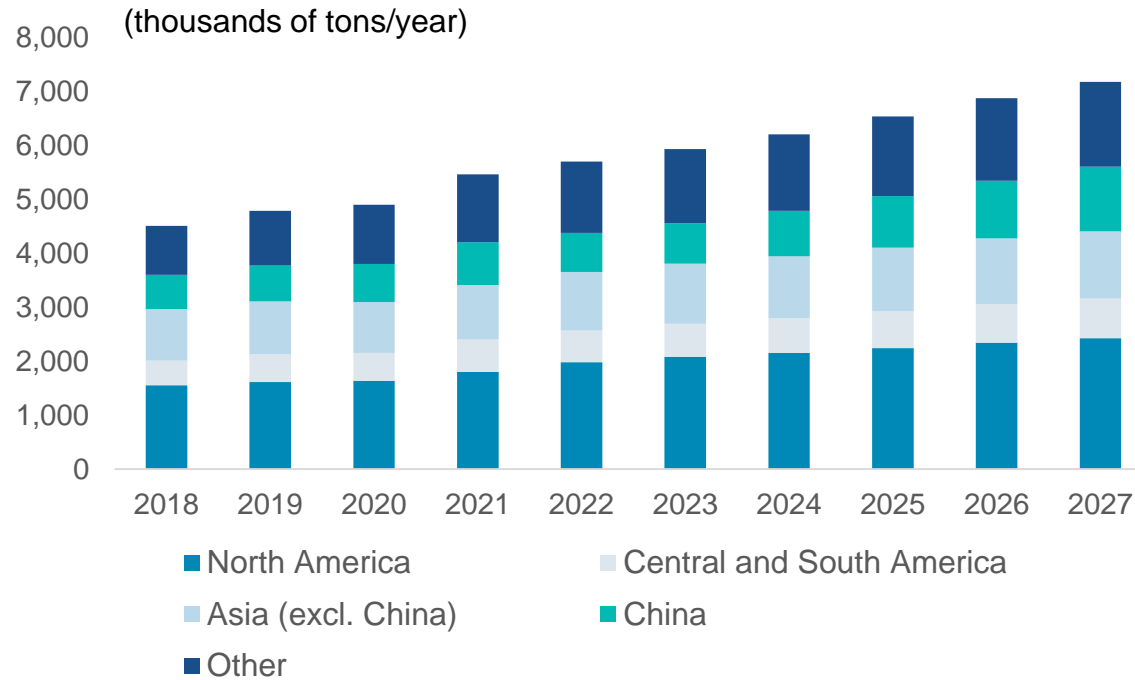


- Stable supply to domestic foil manufacturers with a large share of the lithium-ion battery foil market
- Demand expansion in North America, Europe, and South Korea

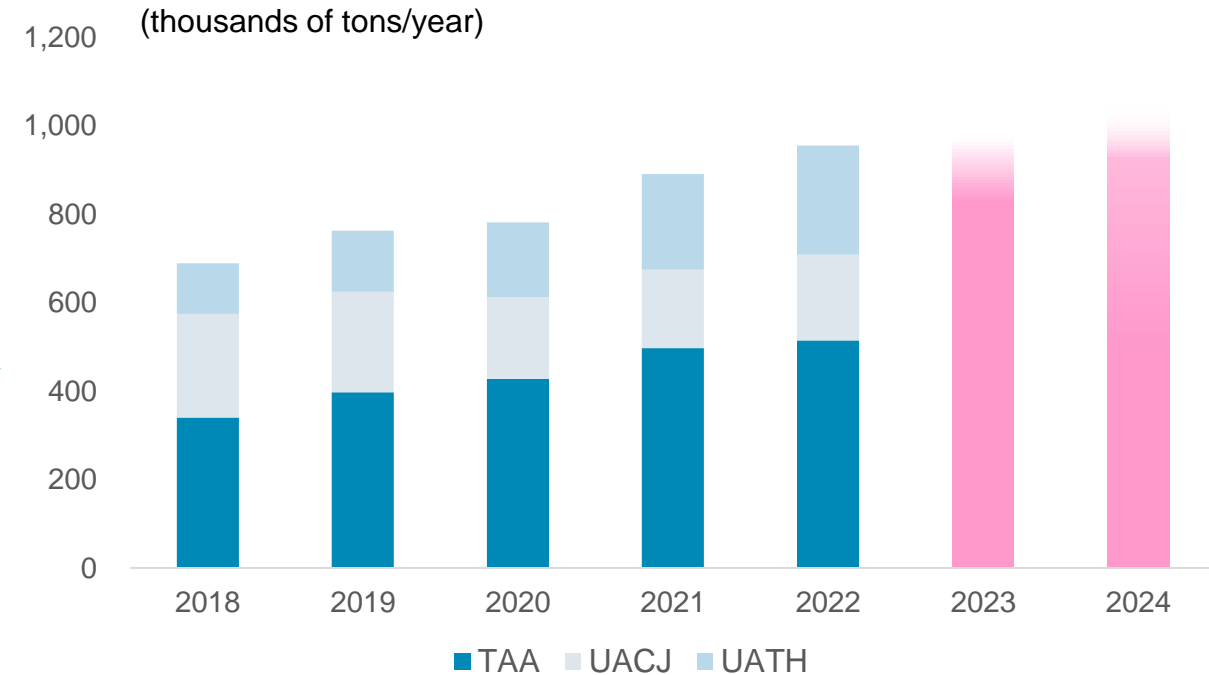
# Can Stock

## Continuing to capture strong demand for can stock through a three-point global supply system

### Global can stock demand



### Can stock sales volume trend for three units



### Can stock initiatives of our three units

**Japan: Business alliance with Toyo Seikan Group Holdings, UBC processing with Yamaichi Metal**

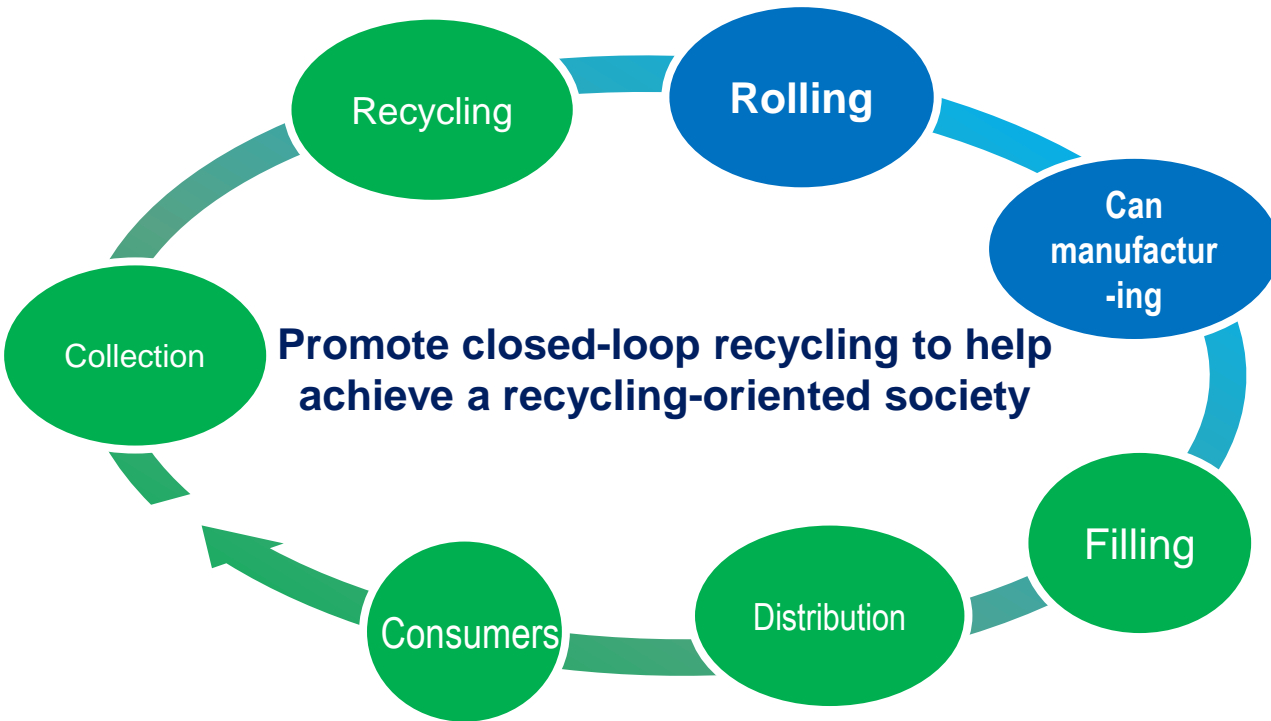
**TAA: Investment in hot rolling expansion**

**UATH: Intra-regional closed-loop recycling, dedicated melting furnaces for recycled materials**

# Concluded a Business Alliance Agreement with Toyo Seikan Group Holdings

Combining both companies' technologies to reduce CO<sub>2</sub> emissions throughout the beverage container supply chain

Joint development of environmentally friendly aluminum cans



Investigate closed-loop recycling of used aluminum cans

Joint development of environmentally friendly aluminum cans through the organic use of the two companies' technologies, know-how and other resources



Promote closed-loop recycling of used aluminum cans

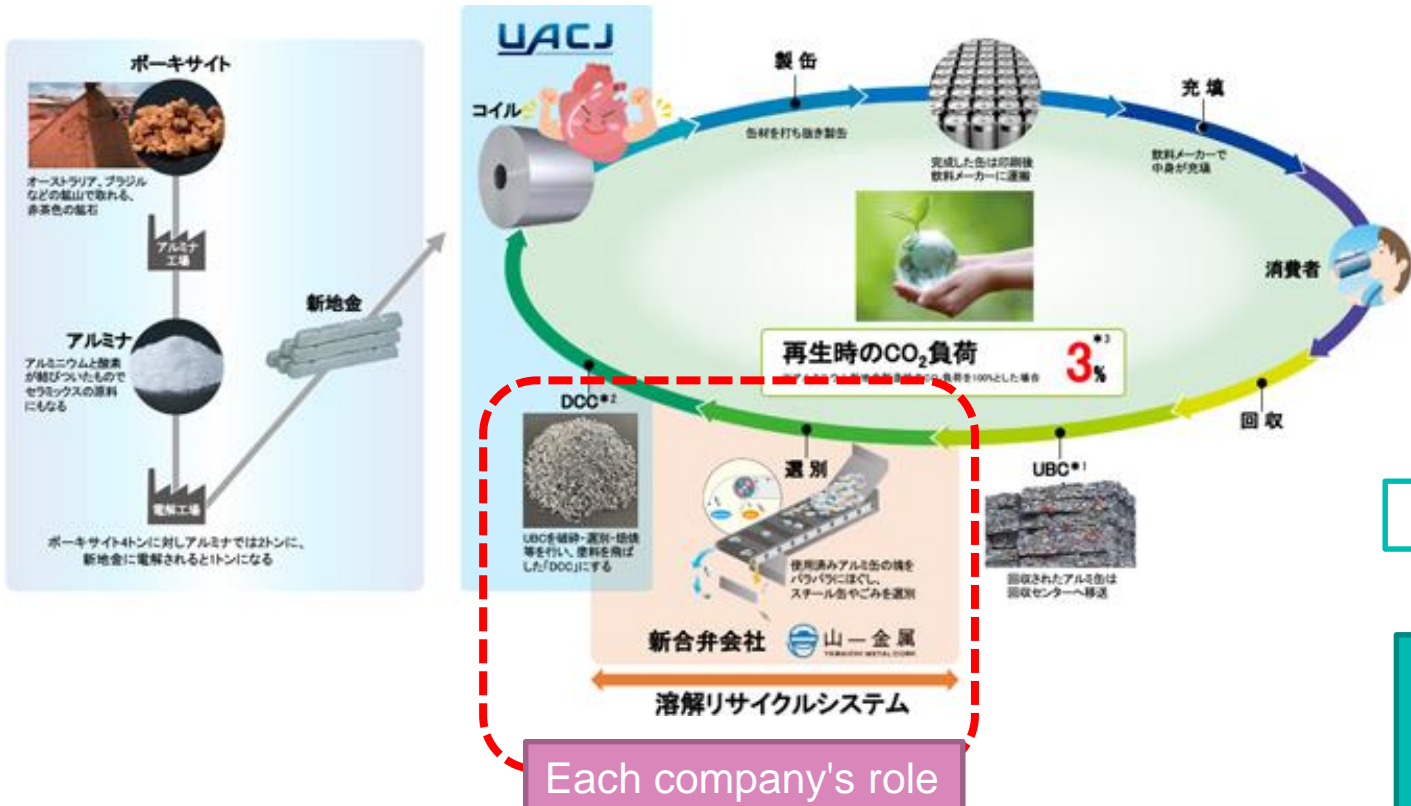
Reductions in CO<sub>2</sub> emissions for the beverage container supply chain as a whole

Enhanced environmental value of aluminum cans expected to lead to further market expansion



# Concluded a Joint Venture Agreement with Yamaichi Metals Corporation for UBC Processing (Promotion of Closed-loop Recycling for Aluminum Cans)

Contributing to the realization of a recycling-oriented society through the construction of a UBC\* pelletization recycling system



Establishment of joint venture company and construction of pelletization recycling system  
 ⇒ Processing and pelletization of UBCs is integrated, improving the supply chain flow

Increased use of UBCs

Supplying products that increase can-to-can recycling rates

- ◆ Reduced CO<sub>2</sub> emissions throughout the beverage can supply chain
- ◆ Contribution to the realization of a recycling-oriented society

<p><b>UACJ</b>                  Installation of UBC treating and processing equipment, supplying products that increase recycling rates</p>	<p><b>Yamaichi Metal Corporation</b>                  Procurement of raw materials such as UBCs, provision of technology and expertise</p>
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Each company's role



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