

Investors Meeting for Operating Segments

Power & Environmental Solution Division

ITOCHU Corporation

Wednesday, March 3, 2021



I am One with Infinite Missions

Overview of Power & Environmental Solution Division

- Background for Establishing the New Division
- Organization and Personnel Structure
- Overview of Operations
- Synergy from Integrating the Division
- Vision for the Future

Future Growth Strategy

- Overview of Our Business Strategy
- ITOCHU's Next-Generation Power Business
 - Phase 1: The network ITOCHU has built
 - Phase 2: A virtuous cycle of the environment and economy
 - Phase 3: Realization of distributed power systems and diversification of business models

Overview of Power & Environmental Solution Division

Background for Establishing the New Division



- In order to become a leading company in the field of electric power, which has undergone great changes in recent years, ITOCHU established the Power & Environmental Solutions Division with the following 3 goals in mind.
 1. Integration of downstream contact points
 2. Strengthening cooperation with other industries
 3. Providing a wide range of power and battery solutions based on a market-oriented perspective

Power and Heat Supply Business
(Energy Division, Energy & Chemicals)

Renewable Energy Project
(Machinery)

Energy Storage Business
(Chemicals Division, Energy & Chemicals)



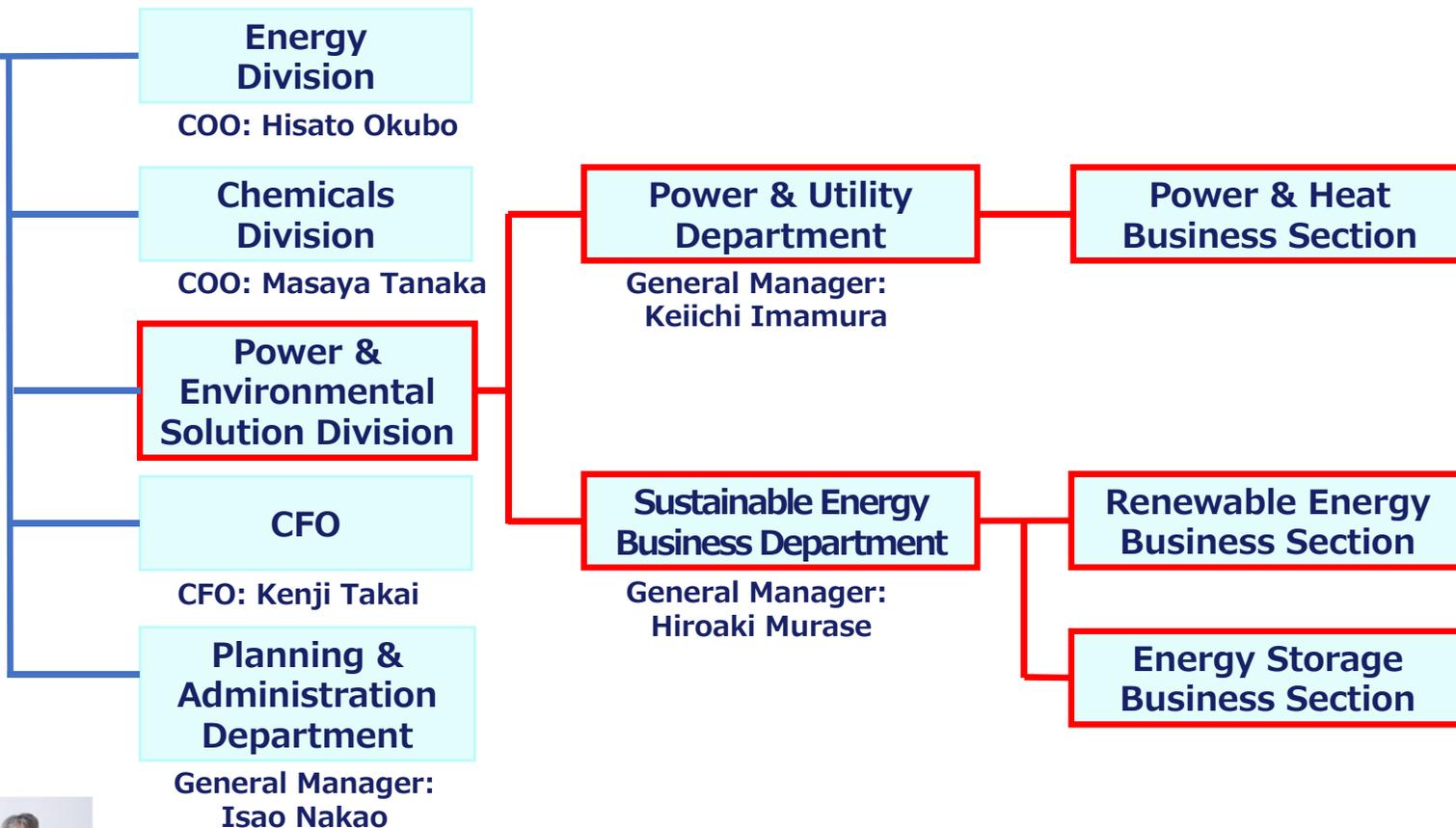
Power & Environmental Solution Division
(Newly established in April 2020)



Organization and Personnel Structure



President, Energy & Chemicals Company;
Chief Operating Officer,
Power & Environmental Solutions Division
Keita Ishii



Okubo Tanaka Takai Nakao

Number of employees (As of February, 2021)

Energy	Chemicals	Power & Environmental Solution	Total
153	224	49	426

Overview of Operations



Power & Utility Department

Power & Heat Business Section

Power and heat supply business centered on power trading

Wholesale of power

Procurement from power generators (2 billion kWh or more)
Wholesale trade and optimization

Retailing of power

Demand aggregation (3 billion kWh or more)
Green power supply

Local heat supply / Energy service business

Aoyama Energy
Gaien redevelopment, etc.

Sustainable Energy Business Department

Renewable Energy Business Section

Renewable energy business centered on development and operation

Development and operation of FIT power sources

Owned: 190 MW (Solar + biomass)
Developed: 500 MW (Biomass + wind)

Distributed power supply / Virtual Power Plant (VPP)

VPP Japan (industrial)
Over 100 plants (25 MW)

Procurement of raw and other materials

Global procurement of biomass fuel and solar panels

Energy Storage Business Section

Battery-related business centered on manufacturing and development of proprietary ESS*

Manufacture and sale of ESS

ESS for households (Smart Star L)
Optimization of charge/discharge using AI (GridShare)

ESS supply chain

Raw material procurement, reuse and recycling

Distributed Power Supply / VPP

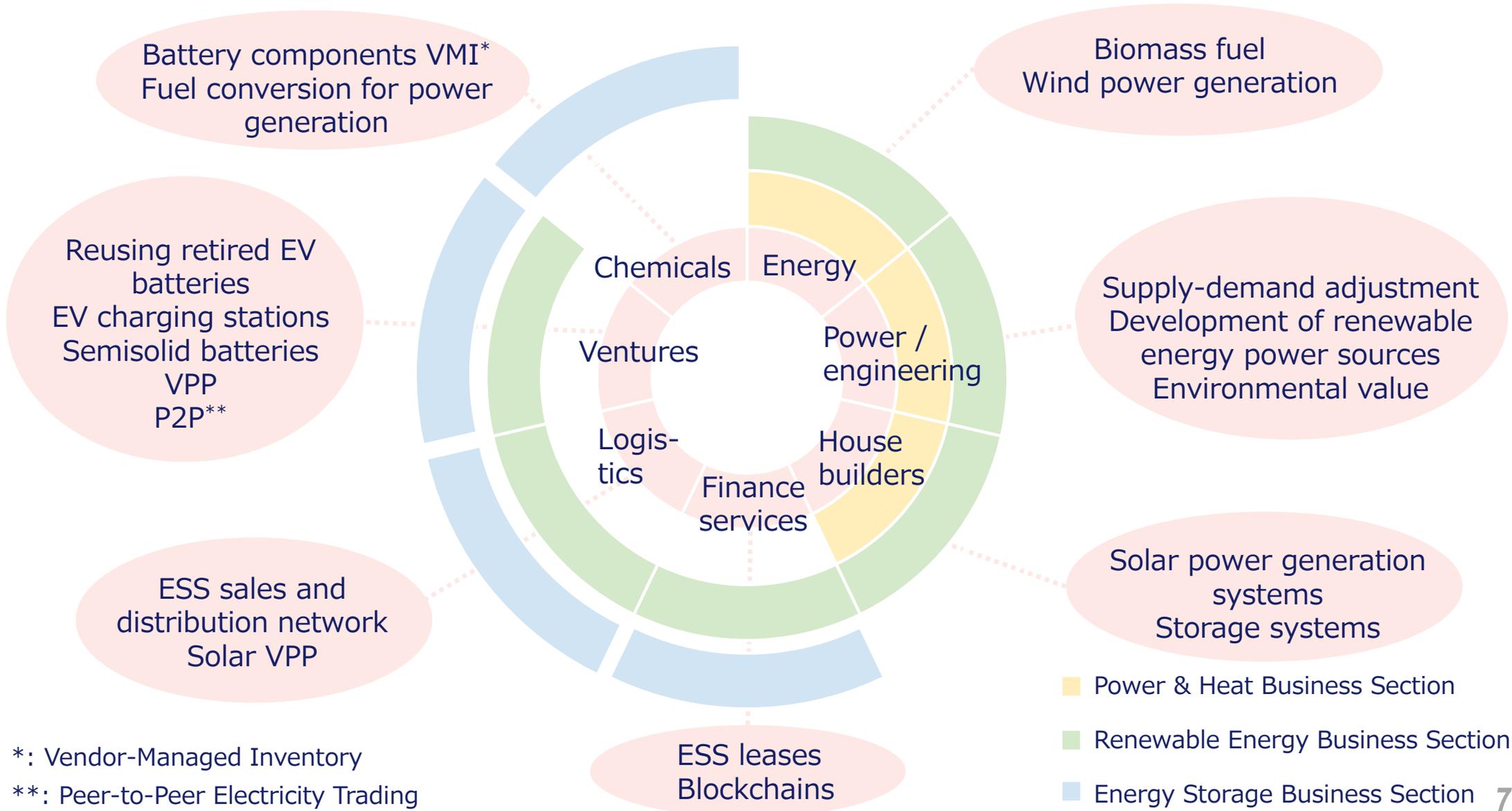
TRENDE (Residential)
U.S. TPO model**
European VPP business

*: Energy Storage System **: Third-party ownership model

Synergy from Integrating the Division



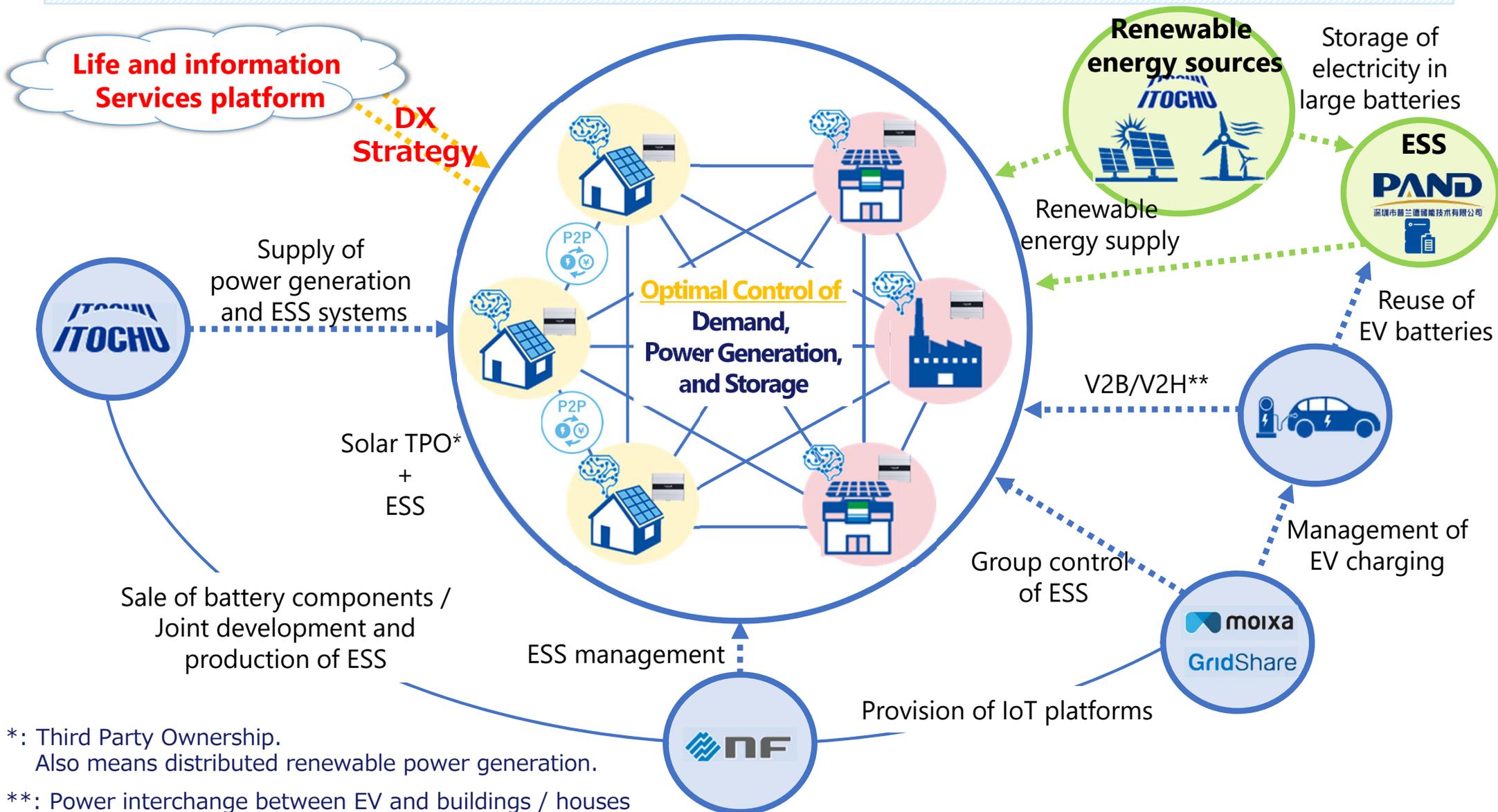
- The integration of the three sales departments has broken down the silos and made it possible to access a wider range of customers.
- Synergy between the efforts of each unit enabled new next-generation power generation proposals.



Vision for the Future



- The shift to an interoperable power network will expand opportunities to provide power and environmental solutions from a market-oriented perspective.
- Our proprietary AI-powered storage systems will be the core for further growth.



*: Third Party Ownership.
Also means distributed renewable power generation.

** : Power interchange between EV and buildings / houses

Realizing business transformation by shifting to a market-oriented perspective

Profit opportunities are shifting downstream

Profit sources are shifting from upstream to downstream. Breaking down the negative effects caused by silos is an urgent task. We will advance business model evolution and growth opportunity creation.

Enhancing our contribution to and engagement with the SDGs through business activities

*Sampo-yoshi** capitalism

To realize a sustainable society, we embrace an approach to capitalism with greater emphasis on serving all stakeholders. Through our business activities, we will contribute to the achievement of SDGs in such ways as maintaining the foundations of everyday life and protecting the environment.

* *"Sampo-yoshi"* is our corporate mission and the management philosophy of the merchants of Ohmi (where ITOCHU was founded). This meaningful phrase emphasizes the importance of activities that are "good for the seller, good for the buyer, and good for society." *Sampo-yoshi* can be said to be the roots of today's idea of sustainability.

Future Growth Strategy

Overview of Our Business Strategy



Accumulated Achievements

Expanding business with decarbonization and electrification shift

Access to households
(Business partners and ITOCHU Enex)

Aggregation of corporate demand
(Convenience stores, Group companies, business partners)

Next generation

Where we are

Past

Utility and overseas collaboration

Leveraging flexibility (kW)

Real-time power data

Fuel conversion and biomass (from Asia and North America)

Non-FIT renewable energy (Capital alliance with VPPJ)

Overseas investment (Reuse, semisolid, control)

Renewable Energy FIT (Solar, bio and wind power)

Power supply and demand adjustment function and optimization

Energy storage systems with AI (Top class in Japan)

Heat supply and ES Business (Collaboration with TEPCO)

Battery components and value chain

Utilization of available grid power (Former general electric utilities and private power generation)

Power generation

Supply/demand adjustment

Demand (Market)



2023 Target of 80,000 units



2020 Over 40,000 units

2019 Approx. 30,000 units

*Large-scale blackout in Chiba Prefecture caused by Typhoon Faxai in October 2019

2018 Approx. 15,000 units

*Hokkaido Eastern Iburi earthquake in September 2018

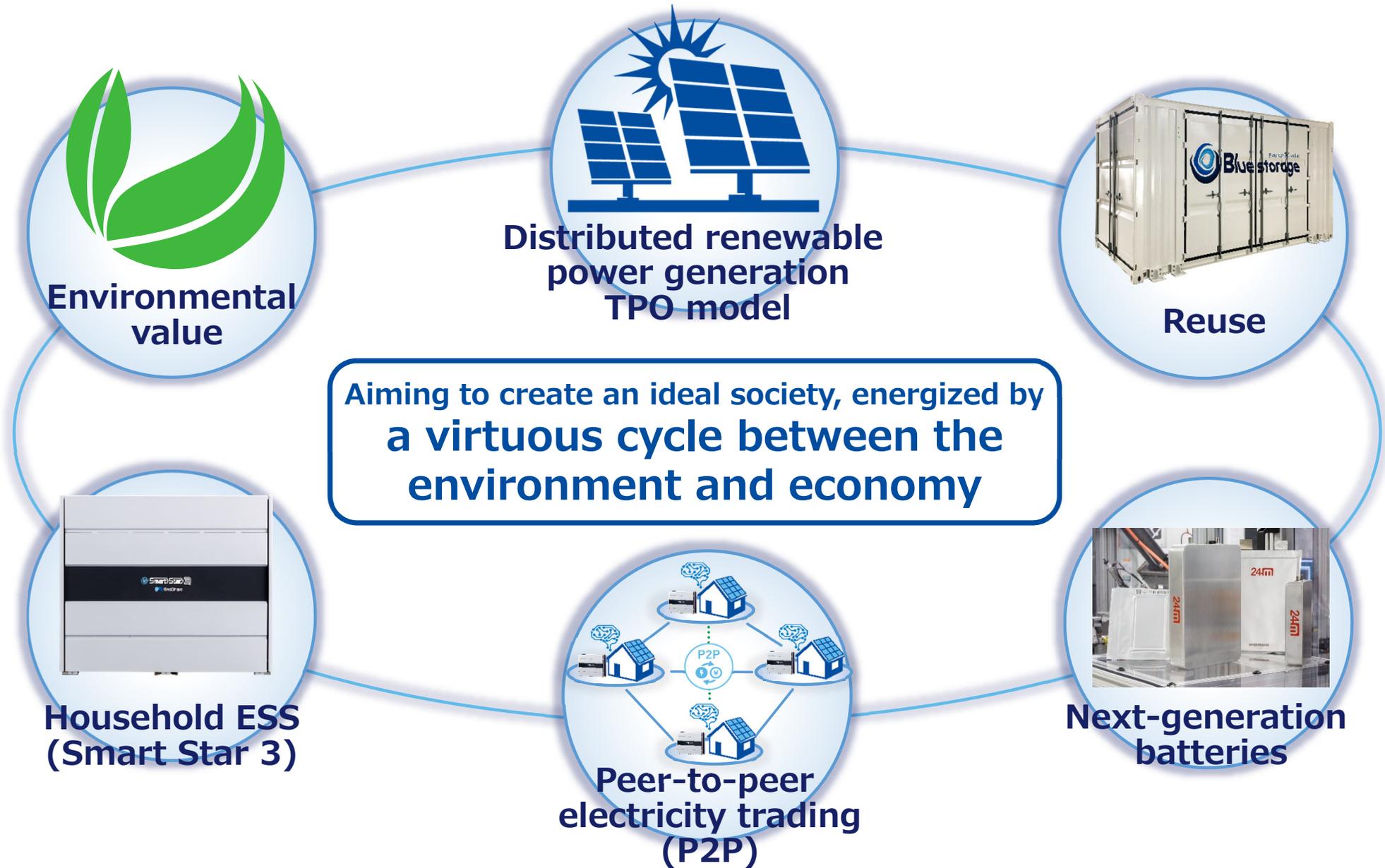
Launch of
Subscription-model
AI control service

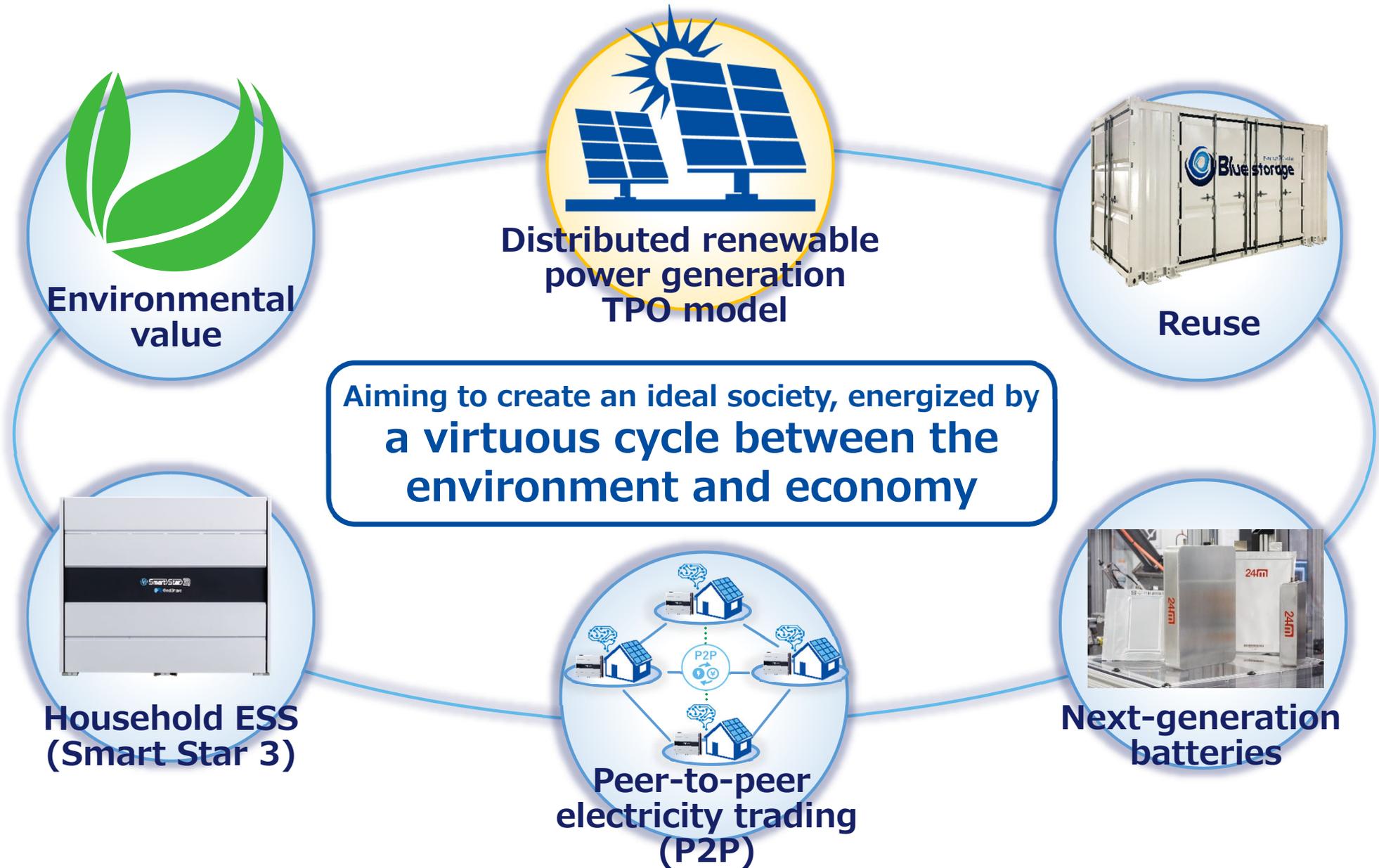
2017 Approx. 5,000 units

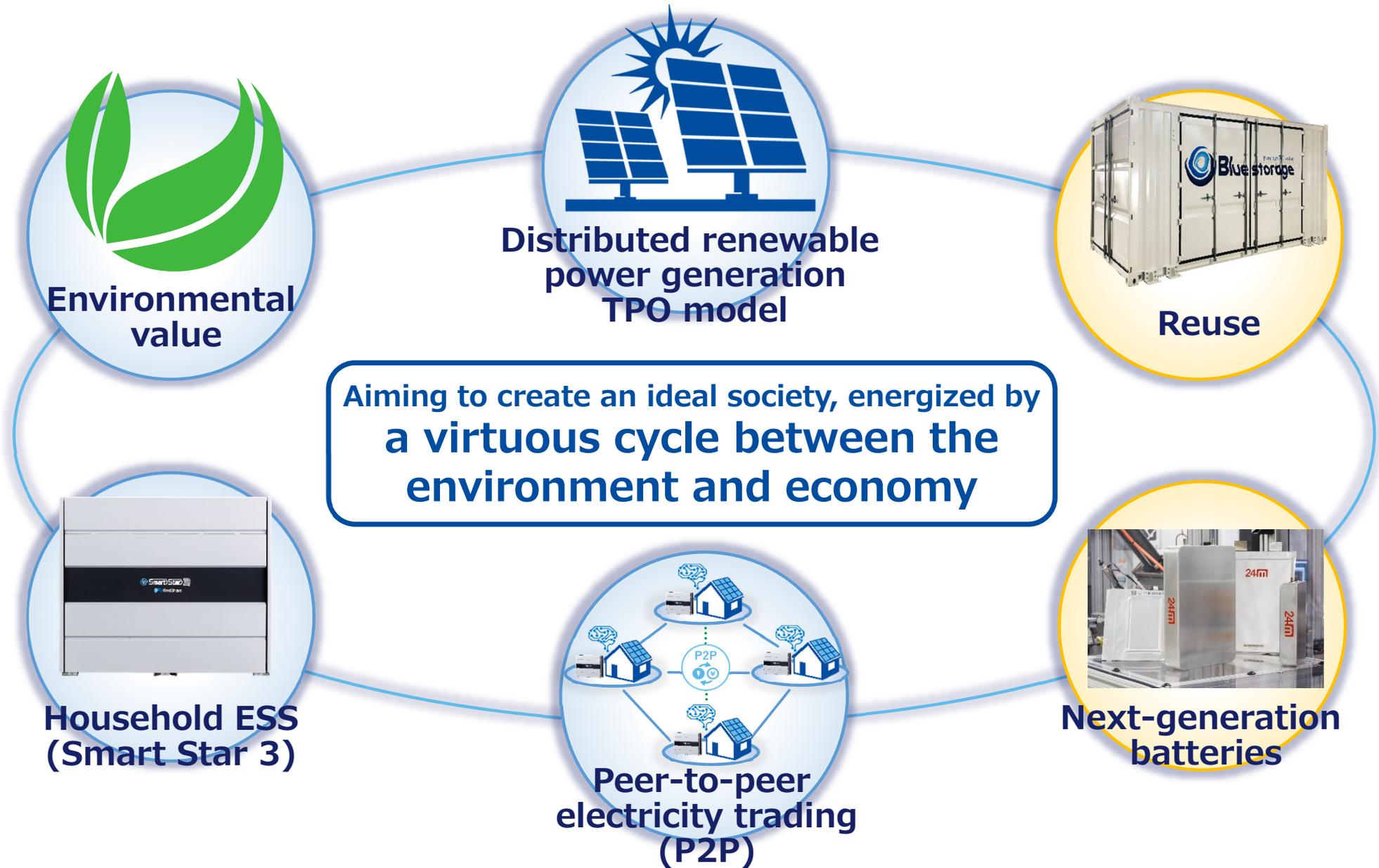
Start of sales of
Smart Star L,
ESS for household use

Top in the industry

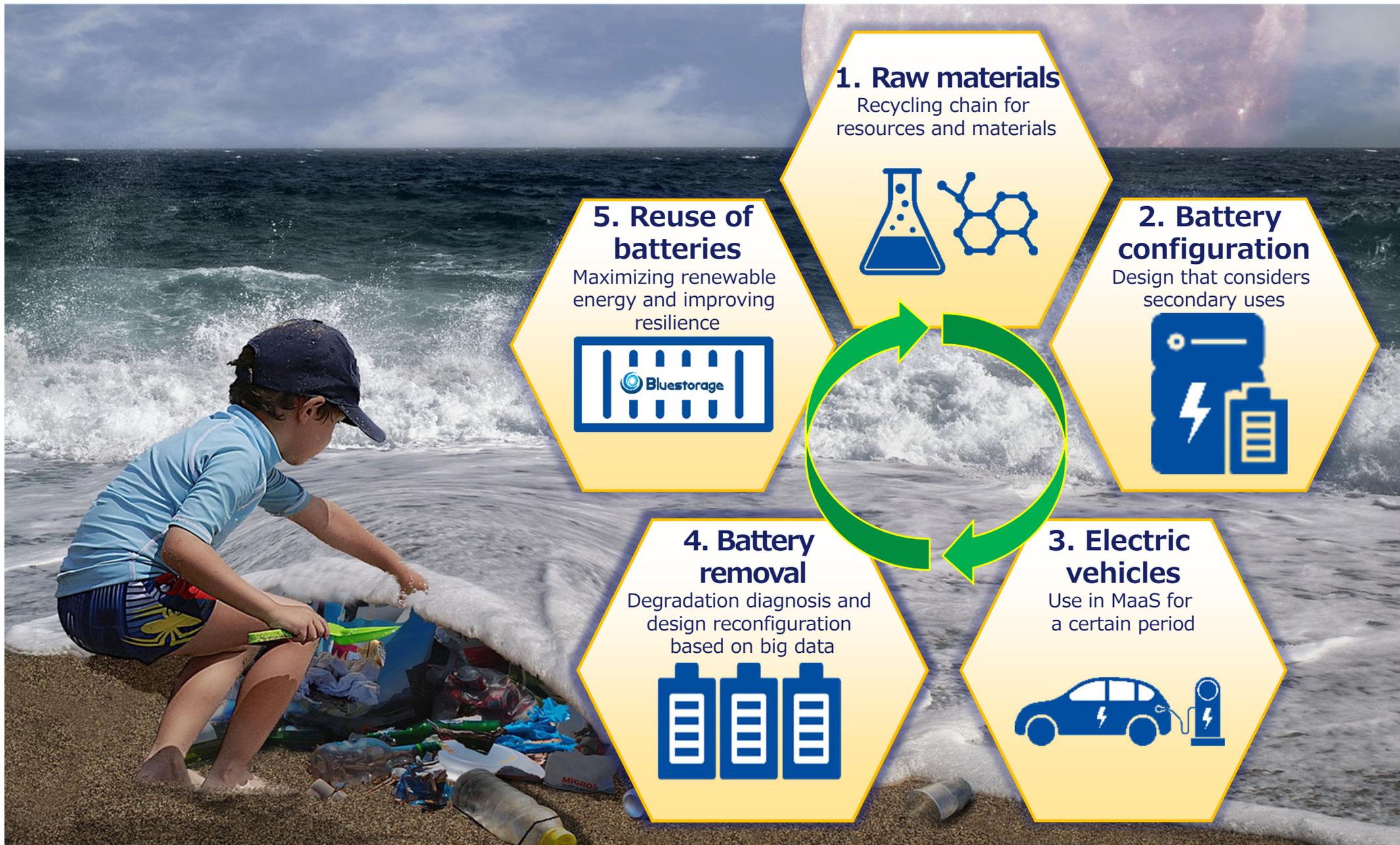
- ESS for household use: ITOCHU Corporation
- Commercial TPO Model: VPPJ
- Residential TPO Model: TRENDE







Phase 2: Efforts to Reuse and Recycle Batteries



Phase 2: Large Power Storage System Composed of Reused Batteries

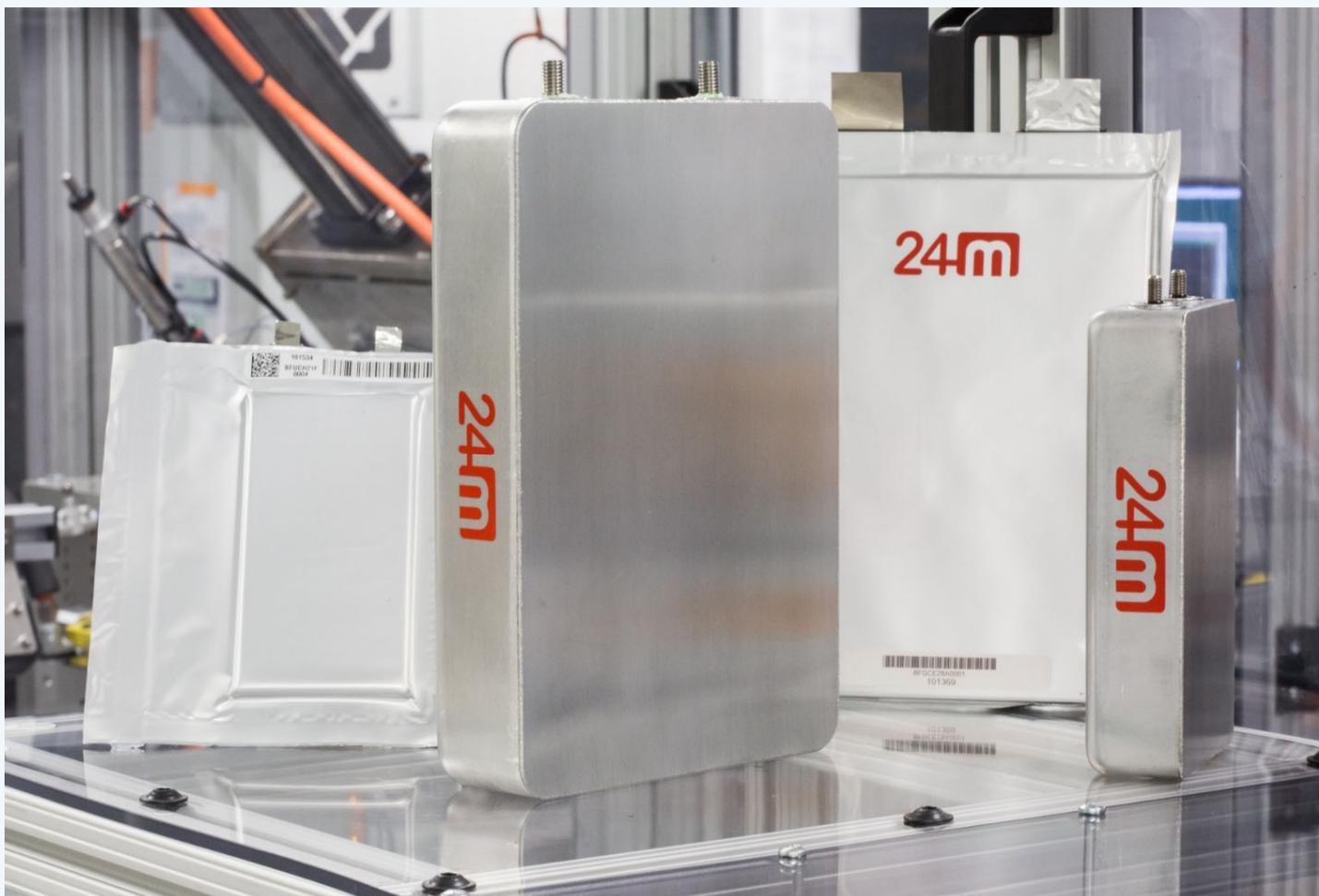


~ Inside the Container ~



1 container can cover
the power consumption of
100 households for 1 day

Phase 2: Next-Generation Lithium-Ion Batteries

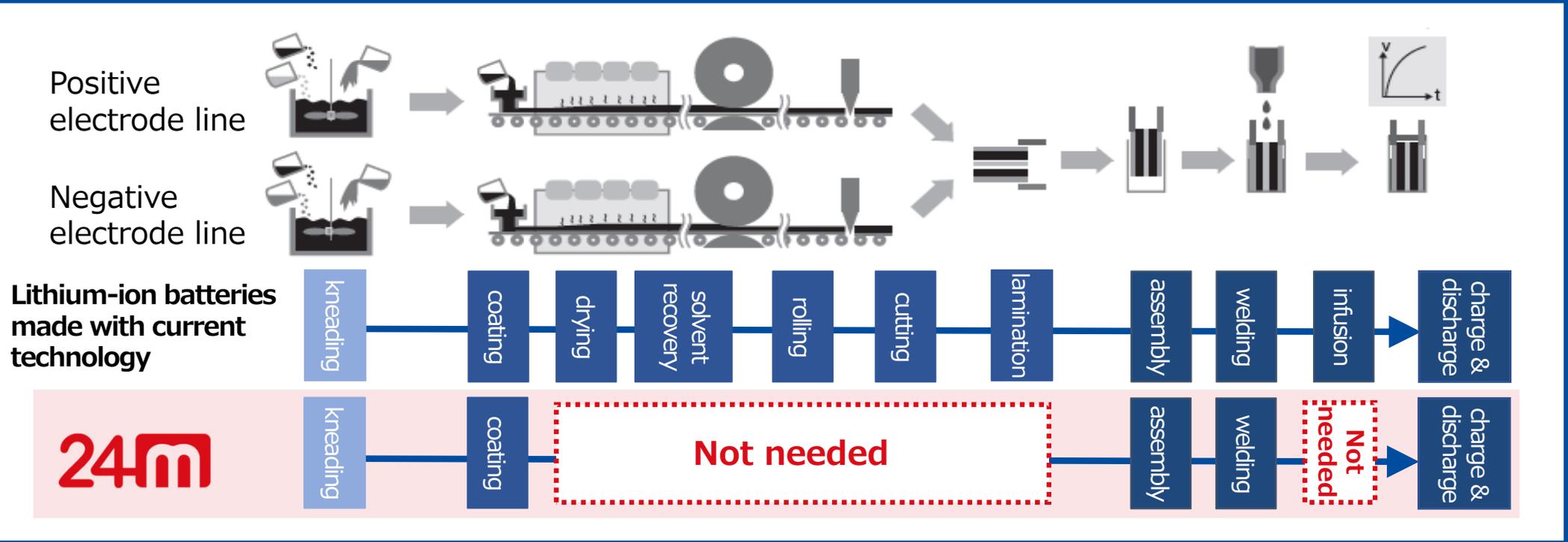


Phase 2: 24M Semisolid Battery – Manufacturing Process



Dramatic simplification of mass production processes

➔ **66% reduction** in capital investment compared to current processes



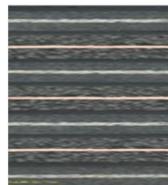
Reducing the number of components

➔ **25% reduction** in parts and materials costs compared to current processes

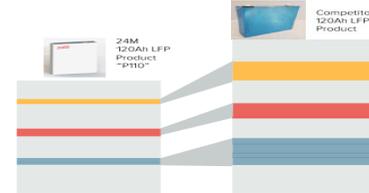
Cost structure



24M



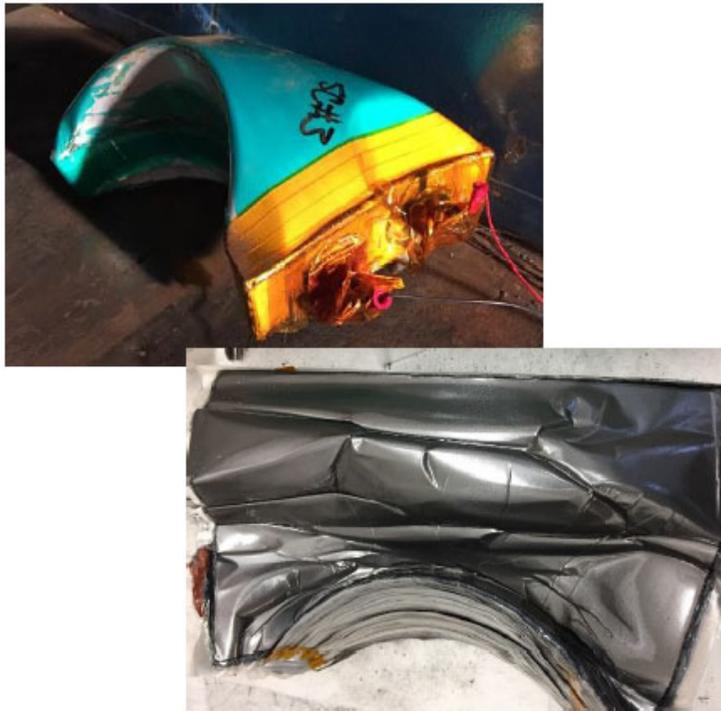
current LiB



24M

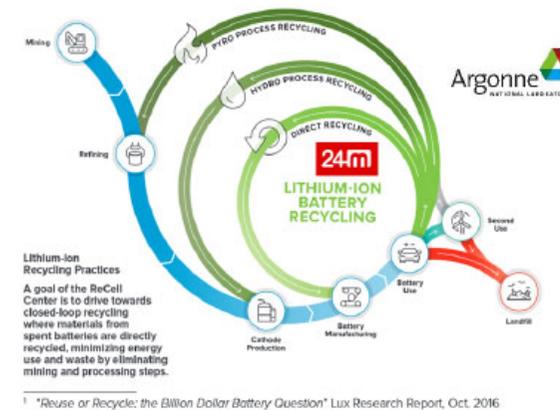
current LiB

Improved safety



- ◆ Characteristic crushing safety performance
- ◆ Excellent overcharge performance

Recyclability



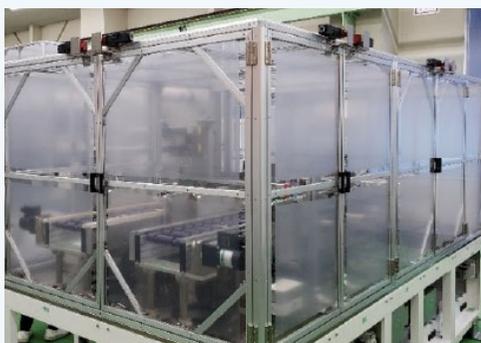
- ◆ Recycling during the manufacturing process
- ◆ Recycling from final products

Phase 2: Global Deployment of 24M Technology

- Pilot line production began in 2019
- Mass production to be started in 2021

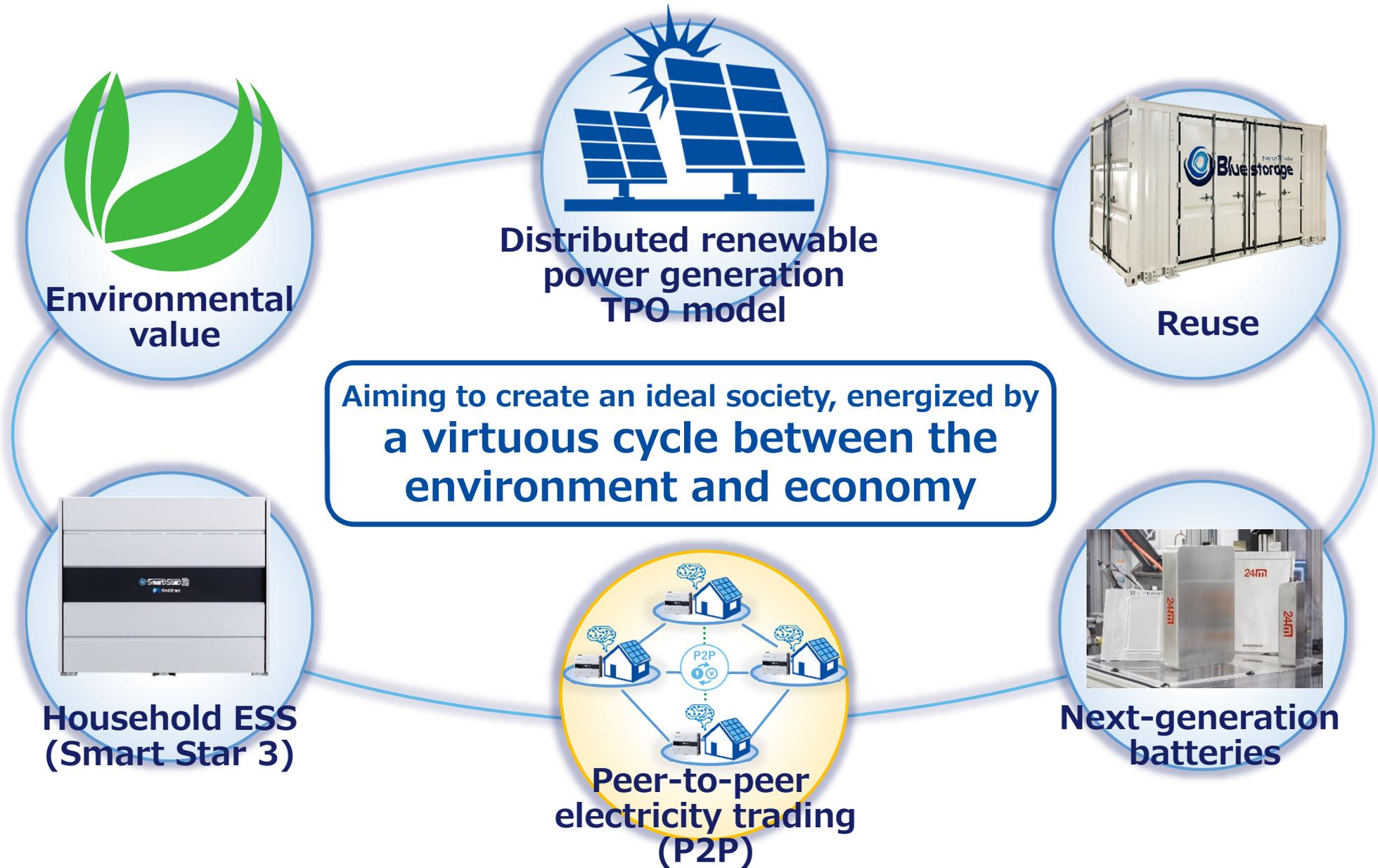


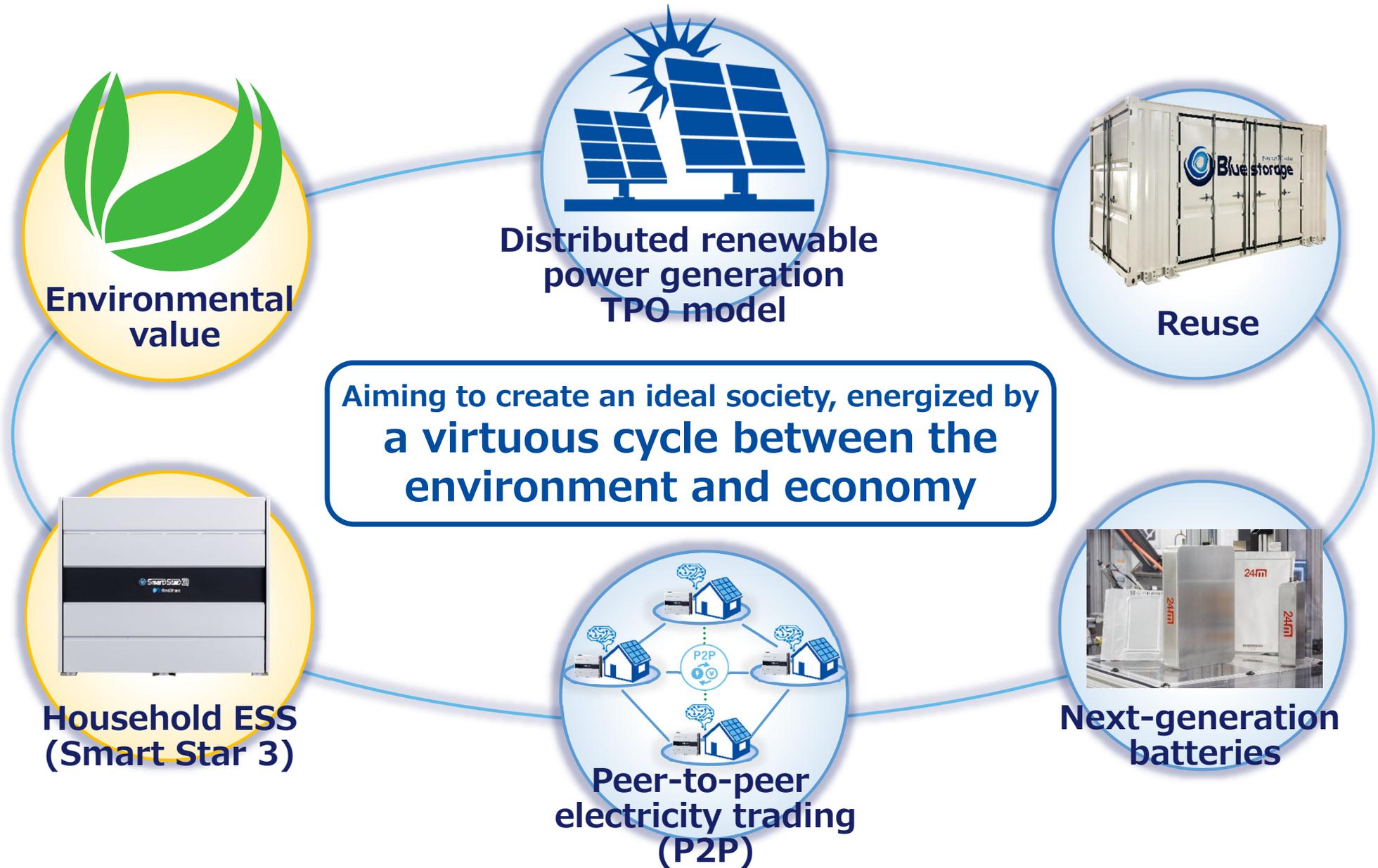
- Mass production to be started in 2021



- Mass production to be started in 2023







Industry-leading
high-capacity /
high-output

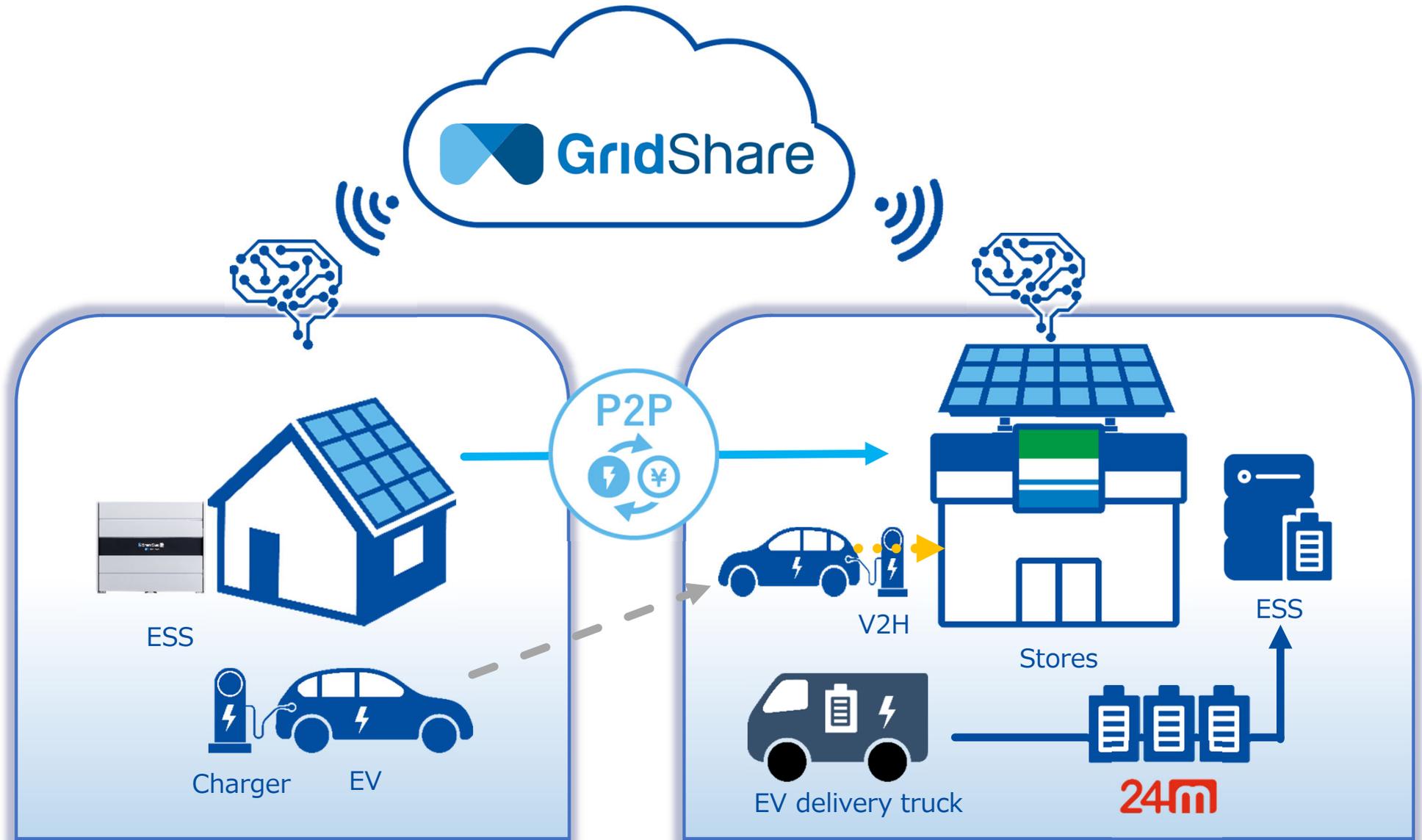
Gridshare
(AI)

Environmental
value

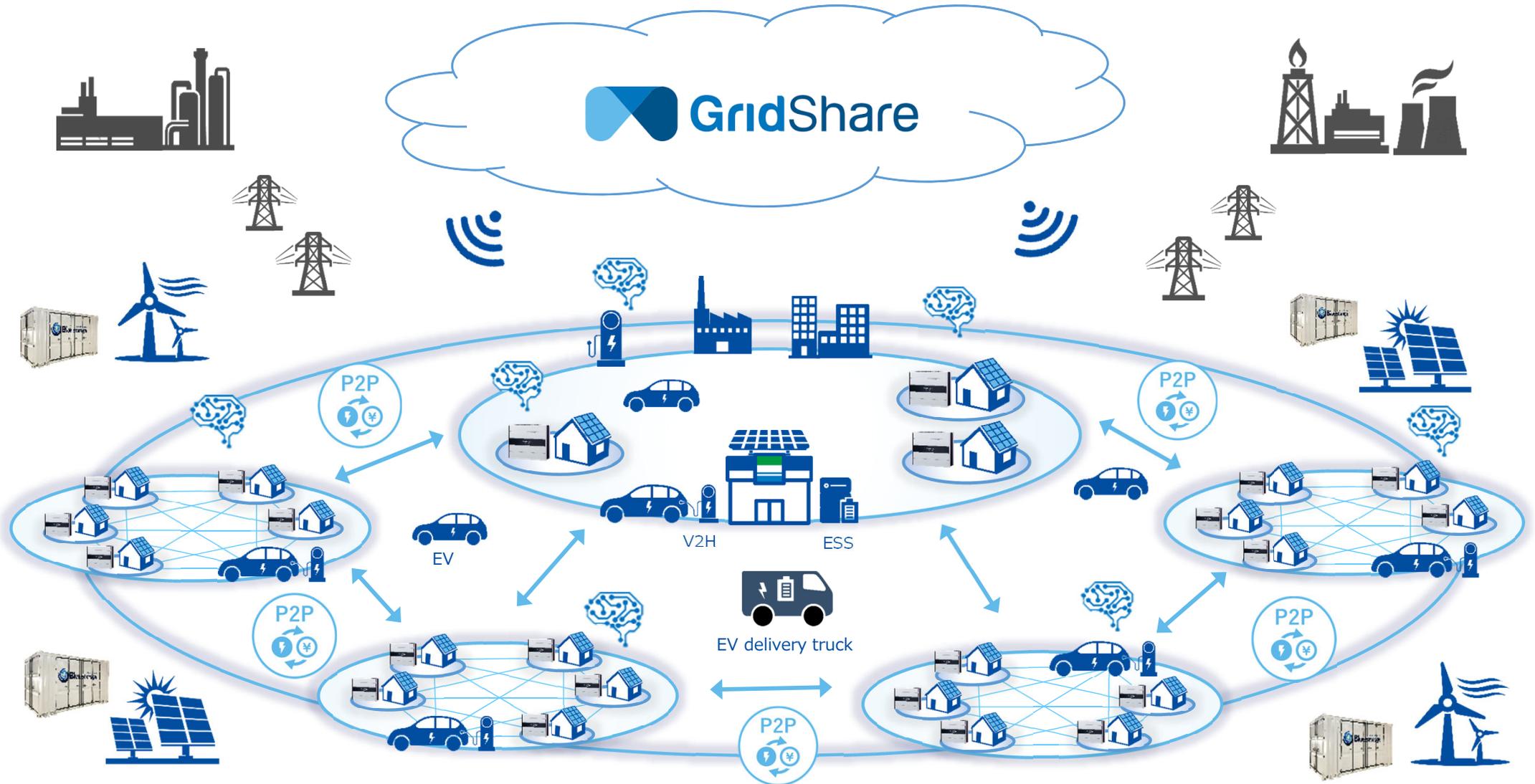
EV charging



Phase 3: Realization of Distributed Power Systems and Diversification of Business Models



Creation of new economic zones utilizing existing networks





株式会社 NFブロッサムテクノロジーズ

(NF Blossom Technologies, Inc.)

VPP JAPAN



TRENDE

PAND



moixa

sunnova



EGUANA

I am One with Infinite Missions



www.itochu.co.jp/