

Case of triangular cooperation activities towards circular economy – Case of Japan

~ An example of circular economy business models ~

14th December, 2020

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A Better Life, A Better World



A Better Life

Achieving “better living” with continued happiness

A Better World

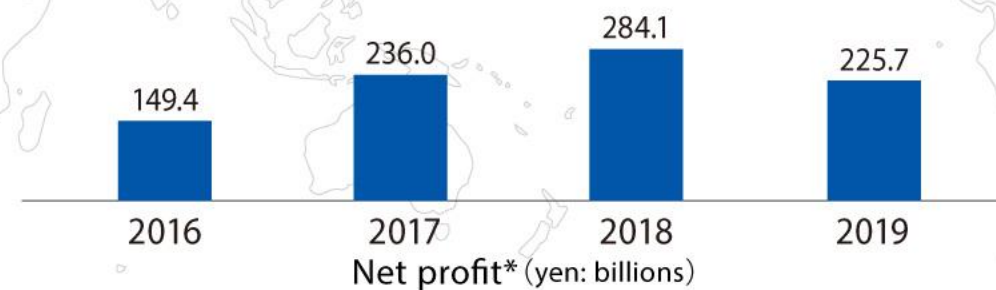
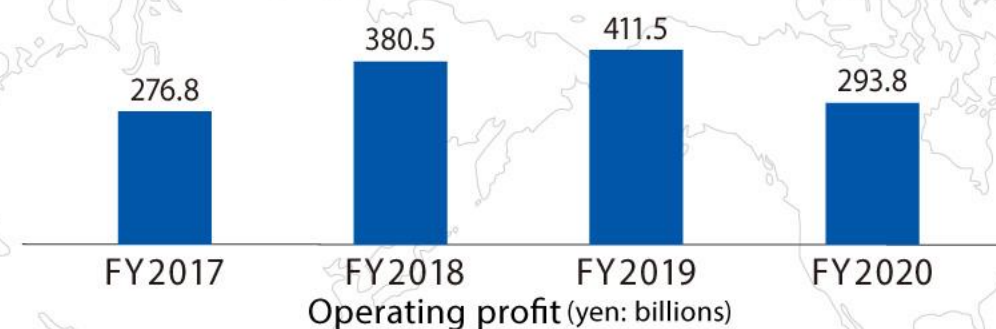
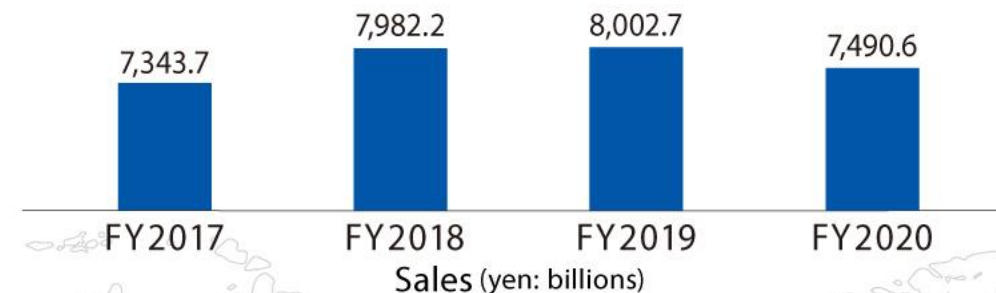
Achieving a sustainable society



Kazuhiro Tsuga
Chief Executive Officer



Head Office	Kadoma City, Osaka, Japan
Sales	¥ 7,490.6 billion
Employees	approximately 259,000
Group Companies	529



*attributable to Panasonic Corporation stockholders

7 Companies

Appliances Company



Masahiro Shinada



Life Solutions Company



Masaharu Michiura



Connected Solutions Company



Yasuyuki Higuchi



Automotive Company



Yuki Kusumi



Industrial Solutions Company



Shinji Sakamoto



China & Northeast Asia Company



Tetsuro Homma



US Company



Mototsugu Sato



The Biggest Environmental, Social and Economy Issue in the World

Climate Change

Energy



*Challenge to solve it
through our businesses*



Resource

Panasonic Environment Vision 2050

To achieve “a better life” and “a sustainable global environment,”
Panasonic will work towards
creation and more efficient utilization of energy
which exceeds the amount of energy used,
aiming for a society with clean energy and a more comfortable lifestyle.

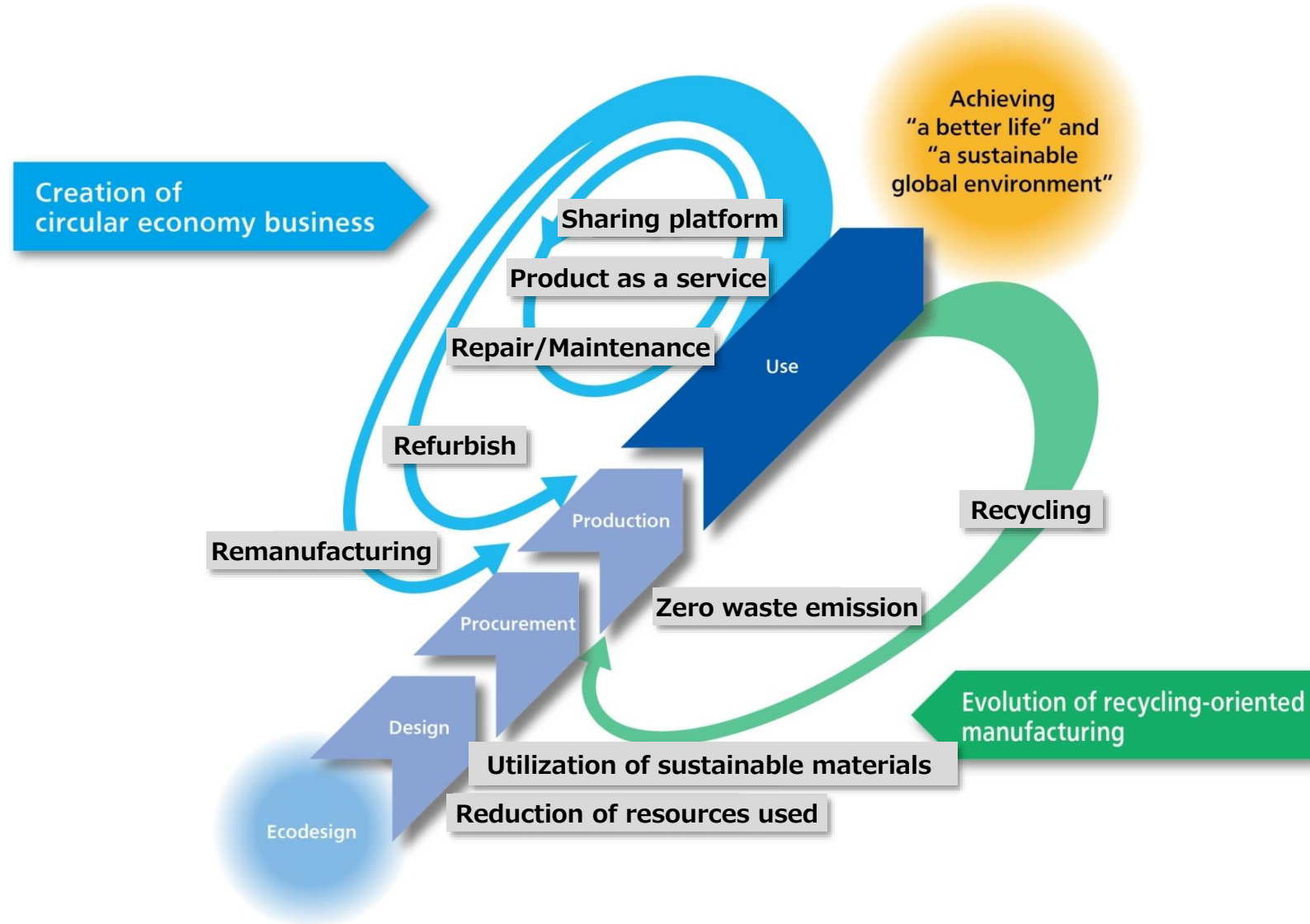
Energy used < Energy created

+

**Actions
for Improving
Resource Efficiency**

14th Dec, 2020
10th Regional 3R and CE Forum
In Asia and the Pacific

6



Maximize customer value for resources by expanding three cycles

Cycle of "Products"

- Establishment of a fusion model with UX x DX
- [1] Visualization of life cycle cost and value

Creation of
circular economy business

Sharing platform

Product as a service

Repair/Maintenance

Refurbish

Remanufacturing

Production

Procurement

Design

Ecodesign

Utilization of sustainable materials

Reduction of resources used

Zero waste emission

Achieving
"a better life" and
"a sustainable
global environment"

Cycle of "Materials"

- Creating customer value for recycled materials
- Strengthen QMS of recycled materials SCM
- [2] Development and practical application of new sustainable materials

Recycling

Evolution of recycling-oriented
manufacturing

Cycle of "Parts"

- Product design suitable for dismantling
- Development of dismantling and reuse production technology
- Promotion of renovation business
- [3] Promotion of Revalue project

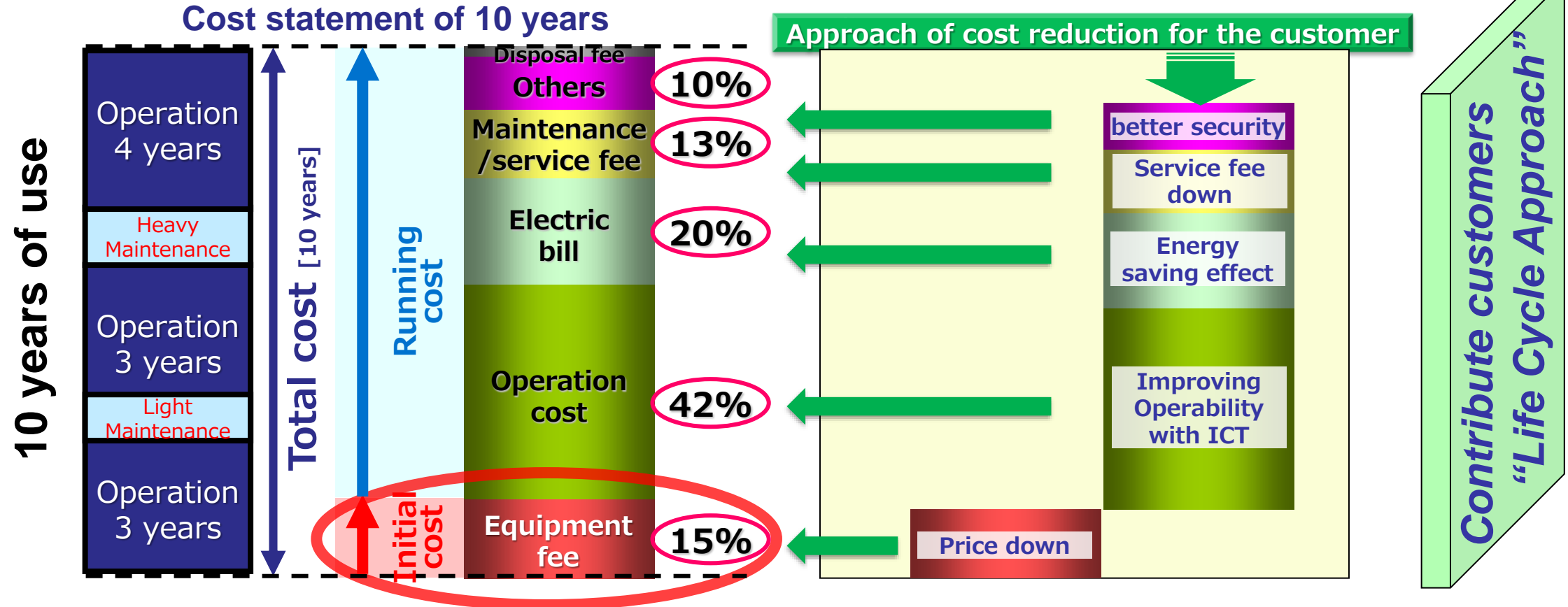
[1] Visualization of Life Cycle Cost and Value

Key Approach for Circular Business Model

→ Contribution to Customer's Life Cycle Cost of an electrical equipment (B2B)

- Sellout model : ~ 15%
- Circular model : Maximization by increasing direct contacts with customers

Life cycle cost effect = Initial x 7



We implemented pilot refurbish projects in cooperation with local governments, with support from the MoE-J, In 2018 and 2019.

Business Lineup

a B2B solutions company
in Panasonic group

Products



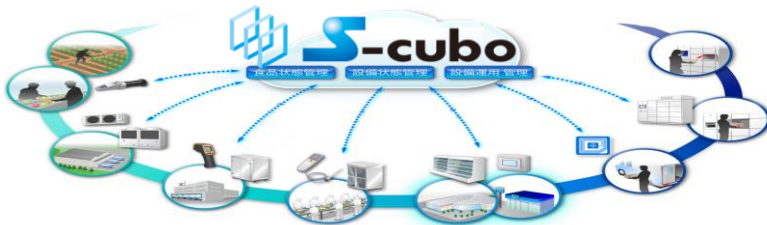
Refrigeration & Air-Conditioning
system

Installation-Service



Total solution

IoT - Data service



Contribute "Safety of food" & "Deliciousness"
from food production to table

Customer



Support businesses of customers;
administrators of buildings, offices, schools, institutions, restaurants and
grocery stores,
based on **core business** = "Service & System Solution of
Refrigeration and Air-Conditioning"

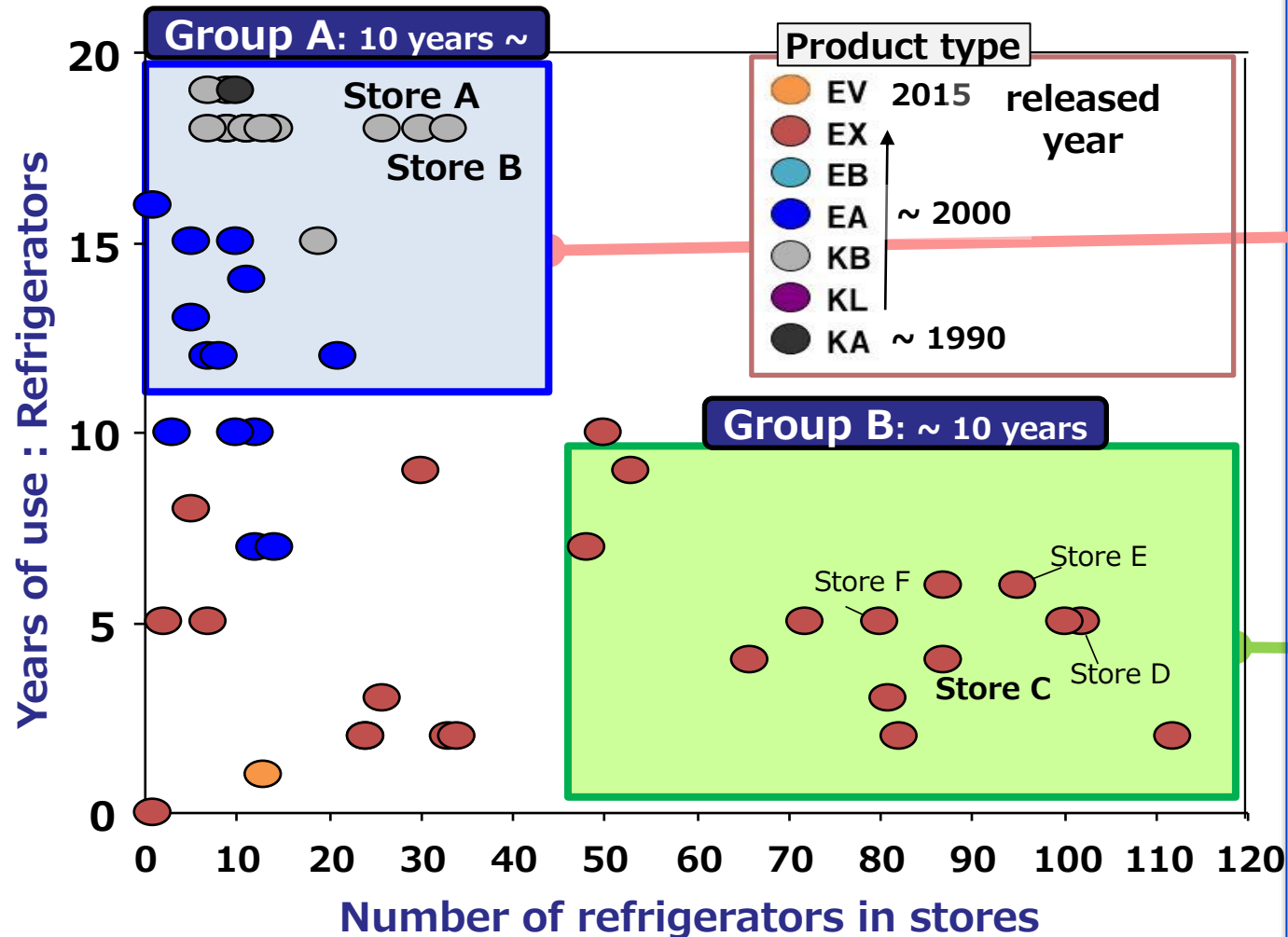
< New Challenge >

Solve the issue of a food distributor
; as supermarket, convenience store;
using "Circular Economy Business"



- Dispersion of aging facilities among stores due to investment in accordance with sales
- Difficult to make balanced investments for all stores

an Asset Portfolio: a Major Chain with a lot of Stores



Issues of Stores

Current situation

Aging Refrigerators without investment

- Increase energy in cost
- Increase maintenance in cost
- Still use R22 (CFC refrigerant)

Issues

- **Limited investment**
- **Increased cost**
- **Risk of compliance**

Current situation

Needs of renovation for leading stores
Competitor: a lot of numbers

Issues

Obligation management of depreciation
→ Accelerate early renovation

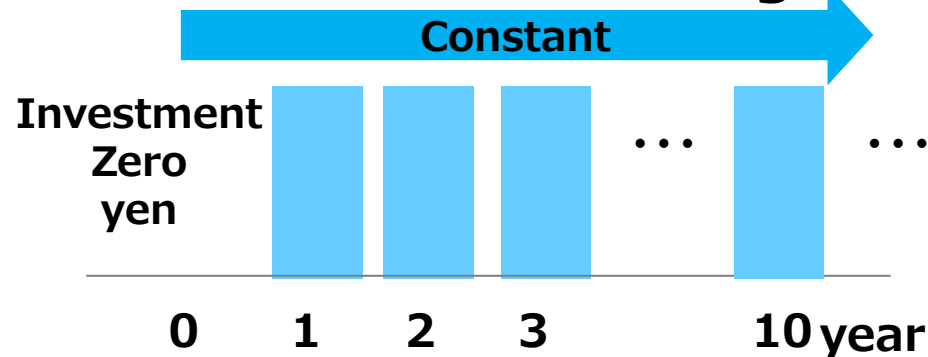
< Benefits of performance-based flat-rate plans >



Not "Equipment" but "Cooling value"

Including equipment, energy saving control
and maintenance

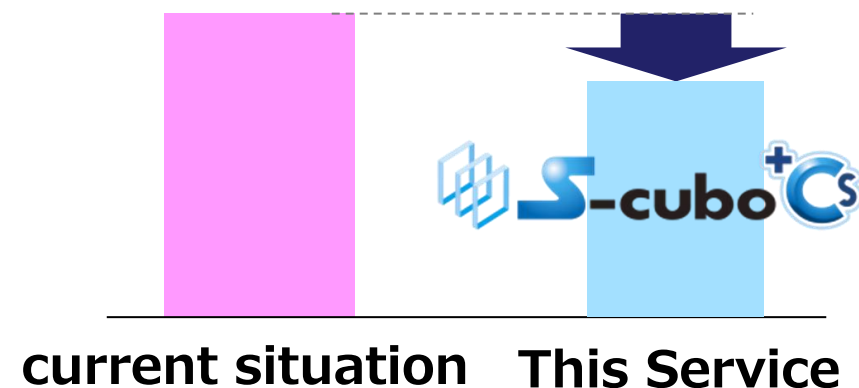
Flat service charge



**No initials on flat-rate model
(Introduced within the annual budget)**

- Panasonic owns the refrigerating equipment.

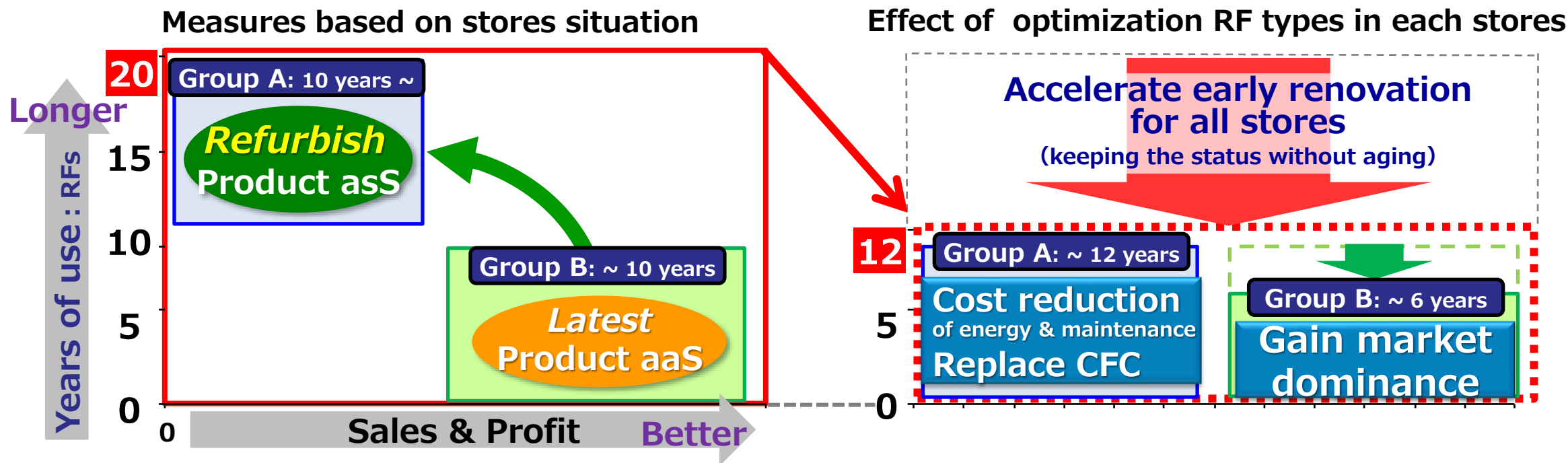
Total cost (life cycle cost)



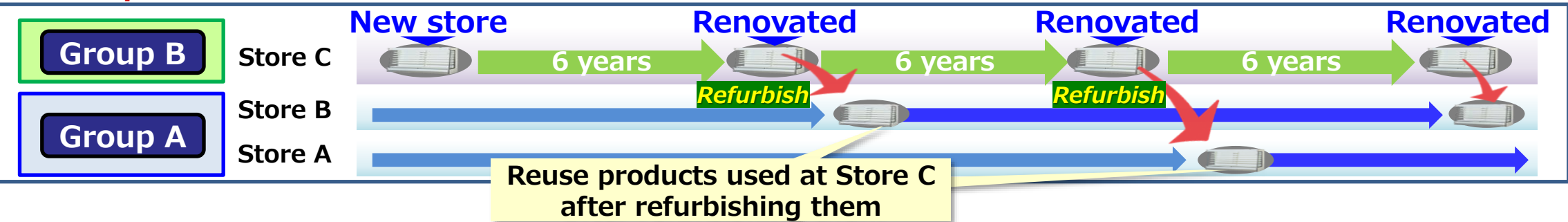
**Reduce lifecycle costs
Improve operational efficiency**

- Remote monitoring prevents failures and reduces maintenance times
- Reduces purchased power cost by energy saving equipment and control

Efficient renovation investment at all stores → Contributing to improved competitiveness



< Concept of Business Model >



Solutions to challenges = Proper operations and Business continuity
→ Resolve them by the pilot projects and Start the actual business

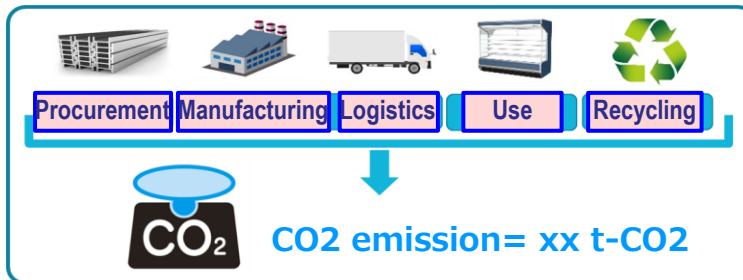
Producer # Panasonic

- Difficult to sell products ? ?
- New design for refurbish



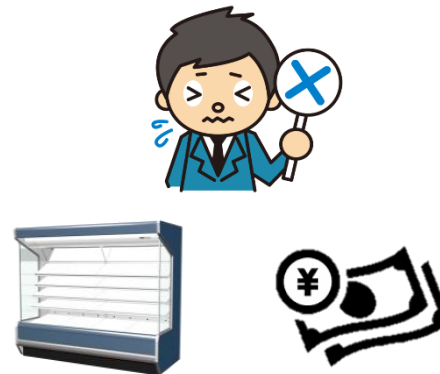
Module design
3R design

- Visualize and verify environmental advantage
Carbon footprint assessment



Partner # for Refurbish

- Difficult to prepare storage
RF for commercial use: large size
- Deterioration of products
quality preservation
energy saving performance
gas leakage

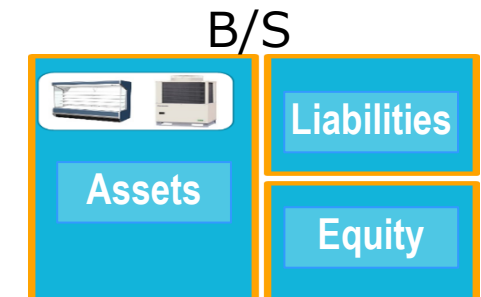


Customer

Major chain: supermarket

- Change the current scheme
Buy new products and use them until breaking them
- Visualize financial efficiency
- OPEX accounting processing

Investment effect
New < Refurbish



Reduction of plastic use with composite plastic containing plant-derived cellulose fiber

- Application to products

Cordless stick cleaner power cordless
(Available August 2018)



With both lightness and strength,
Reduction in plastic consumption

- Technology development and practical use

High concentration cellulose fiber molding material
(Announced July 2019)



Cellulose is blended at a high concentration of 55% or more.



In collaboration with Asahi Breweries, Ltd.
Began development of environmentally friendly reuse cups

◆ Creating Value with Ideas and Design (Revalue)

Creating new value through creative design, as a completely different product
We are working on "Revalue Project" to create new value.

◆ A Product Born from Co-Creation (up-cycle product)

Co-created with Open A*₁ to produce bookends, lighting and tables based on factory wastes the manufacturing process of irons, rice cookers and system kitchens.
These are used at Circle Lounge in the TENNOZ Rim*₂.

*1: Open A= Developing activities across media and real estate based on architectural design

*2: TENNOZ Rim= A regional revitalization project utilizing idle assets owned by Panasonic
<https://www.tennoz-rim.tokyo/>

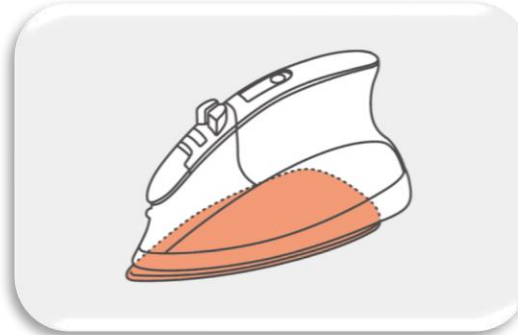
◆ Next Actions

In addition to creating new products that utilize factory waste
We will work together with our customers to create new value.

A Product Born from Co-Creation (up-cycle products)

Iron bookends

Before



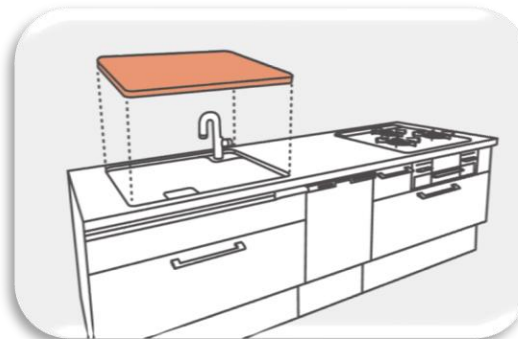
After



**Lamp of
the rice cooker**



**System kitchen
tabletop table**



Empathy with "Design" x "Story" expressing Fun

Questionnaire results for visitors to "Ikasu Kurashi Exhibition" (1st Jun ~ 13th Oct, 2020)

	Counts	%
1. Which furniture do you like?		
Rice cooker lighting	205	40%
Artificial marble table	185	36%
Material table	51	10%
Iron Bookends	39	8%
Metal parts mobile	27	5%
2. What did you like about it?		
I like the design.	107	39%
I feel happy.	78	29%
I like the story of the material	53	19%
Be friendly to the environment	34	13%
3. What kind of place do you think it suits?		
Living room	104	41%
Public space (Schools, restaurants, etc.)	70	27%
One's own room	64	25%
Entrance	14	5%
Others	3	1%



**Thank you very much
for your attention !**

***Let's Work Together
toward a Sustainable Society!***