

Material for the RIETI-Waseda University joint symposium



Initiatives at Daikin for Human Resources Development
in Digital Fields and Reskilling

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Company Profile

(As of March 31, 2023)

Company Name	Daikin Industries, Inc. Name changed from Osaka Kinzoku Kogyo Co.,Ltd. in 1963
Founded	In Osaka, Japan, on October 25, 1924 Founder: Akira Yamada
Established	February 11, 1934
Capital	85.0 billion yen
Number of employees	Consolidated: approx. 100,000
Chairman and President	Chairman: Noriyuki Inoue, President and CEO: Masanori Togawa
Main Office	Kita-ku, Osaka City
Number of Group Companies	322 consolidated subsidiaries (30 in Japan, 292 overseas)

Business Areas

Air Conditioning business



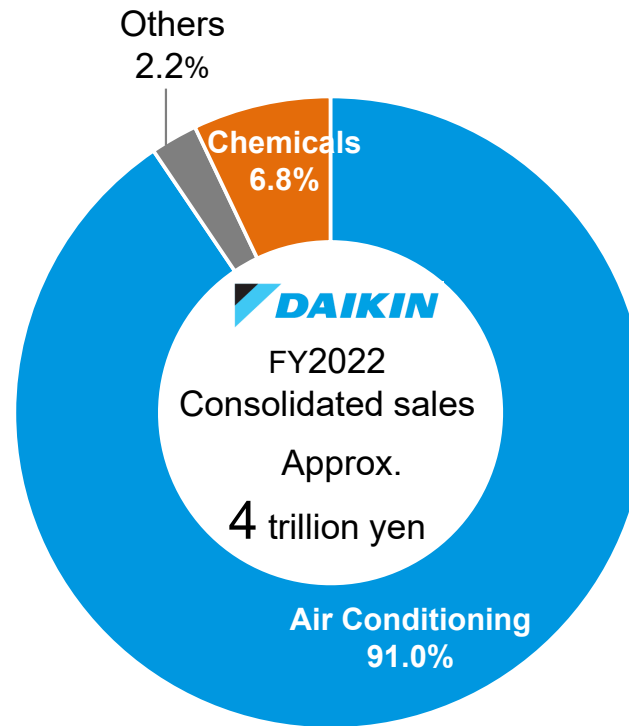
Residential



Commercial



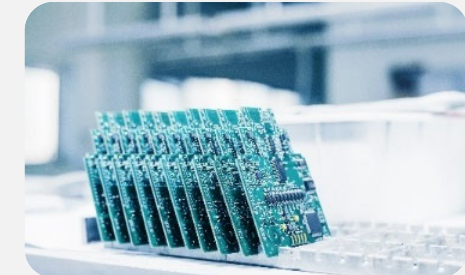
Service



Chemicals business



Refrigerant



Semiconductors



Automotive

Other businesses



Hydraulic equipment



Oxygen concentrators

Founded in 1924
99 years of history

**People-centered
Management**

Comprehensive air
conditioning manufacturer
dealing with both air
conditioners and
refrigerants

**Global production
bases
Over 100 locations**

**Total sales
4 trillion yen**

100,000 employees
Overseas employees account
for over 80%

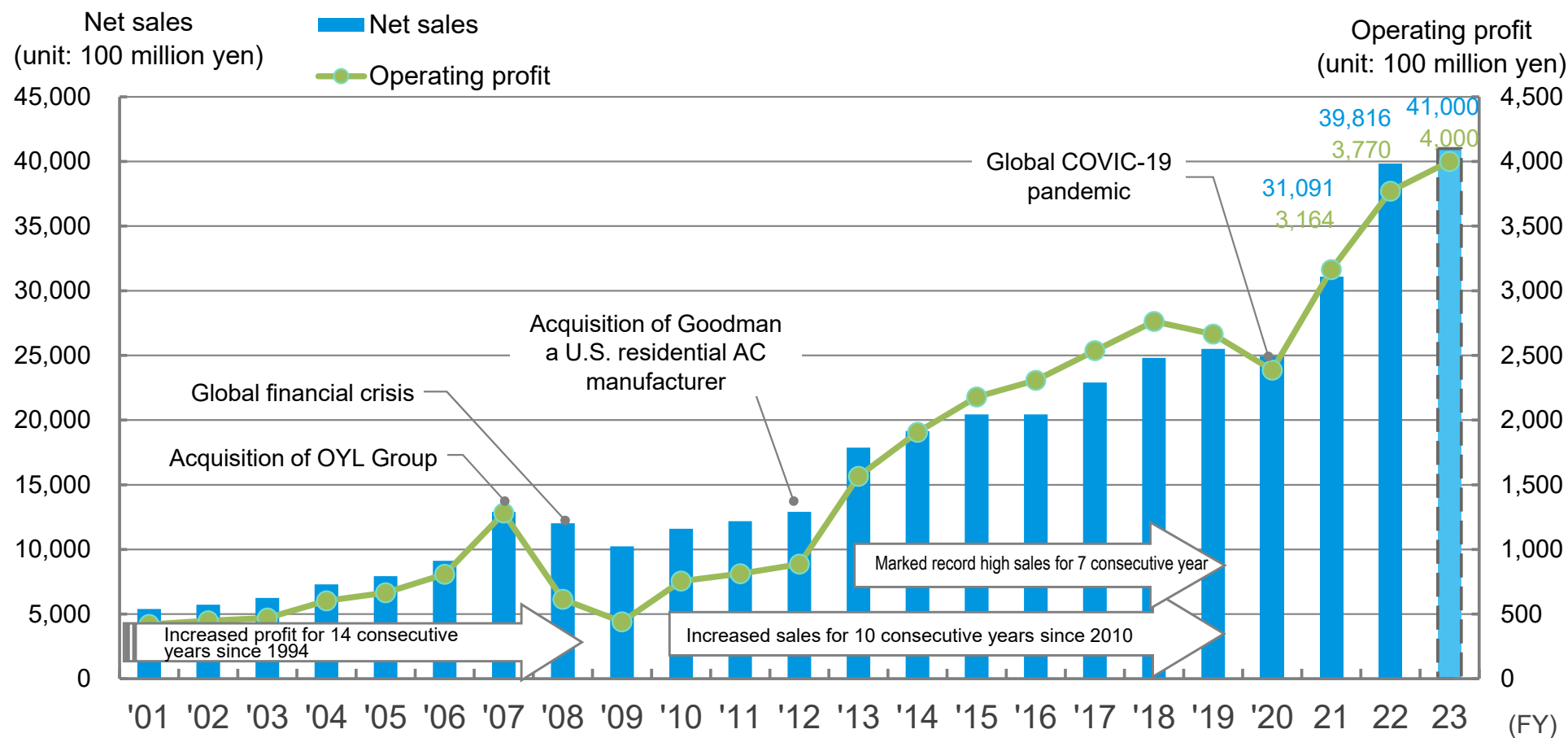
**Operations in
over 170 countries**

**Overseas sales ratio
85%**

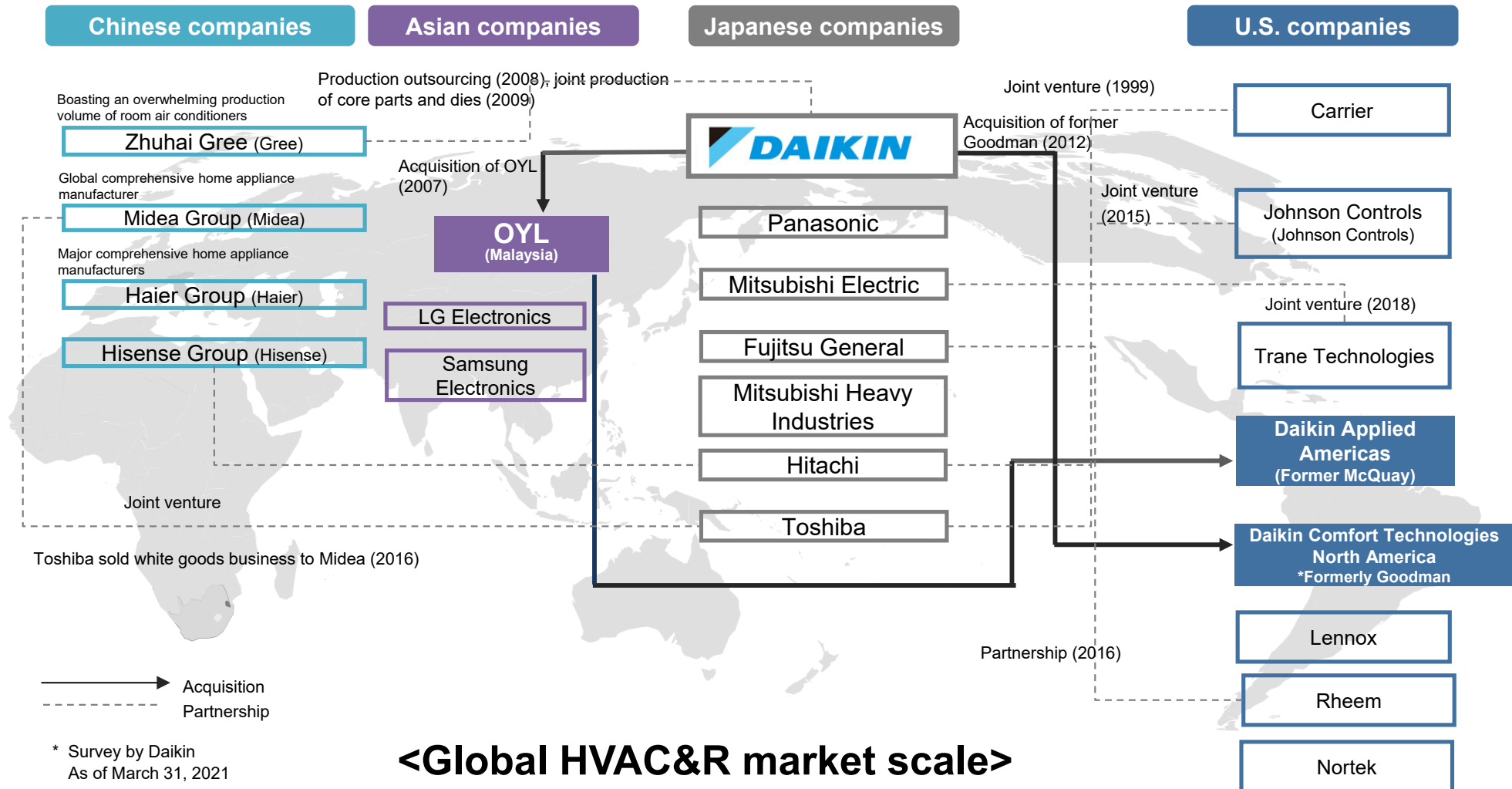
Pichon-kun



After falling into the red for the first time in 27 years in FY1993, expanded business mainly on a global basis, and increased profit for 14 consecutive years since 1994. After the Lehman shock, increased sales for 10 consecutive years since FY2010. Net sales exceeded 3 trillion yen in FY2021, and marked record high performance for the second consecutive year in FY2022.



[Reference] Major AC equipment manufacturers around the world



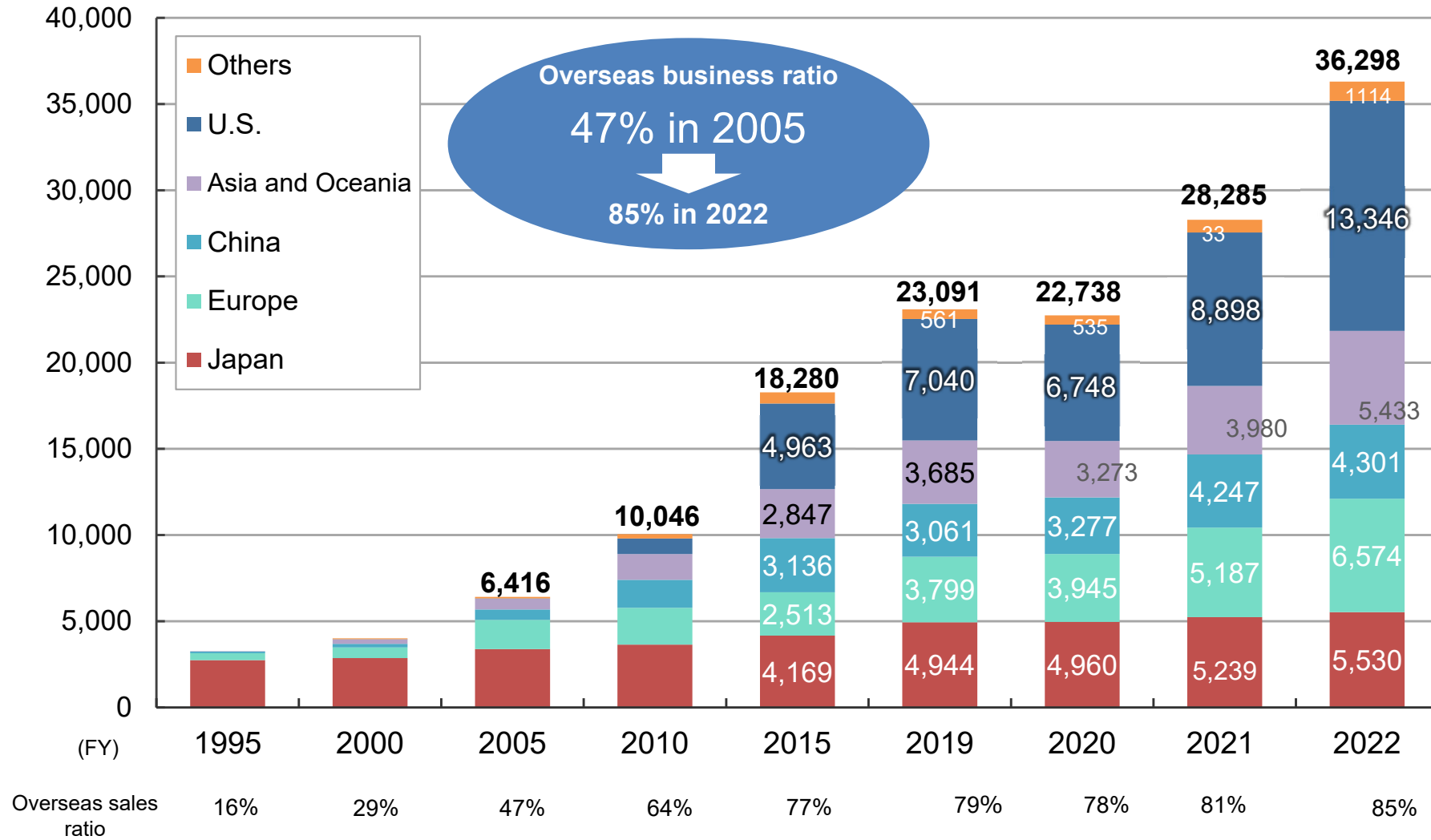
* Survey by Daikin
As of March 31, 2021

<Global HVAC&R market scale>
¥3.4 trillion in 2020 ⇒ ¥4.3 trillion in 2025

[Reference] AC Business Sales by Region

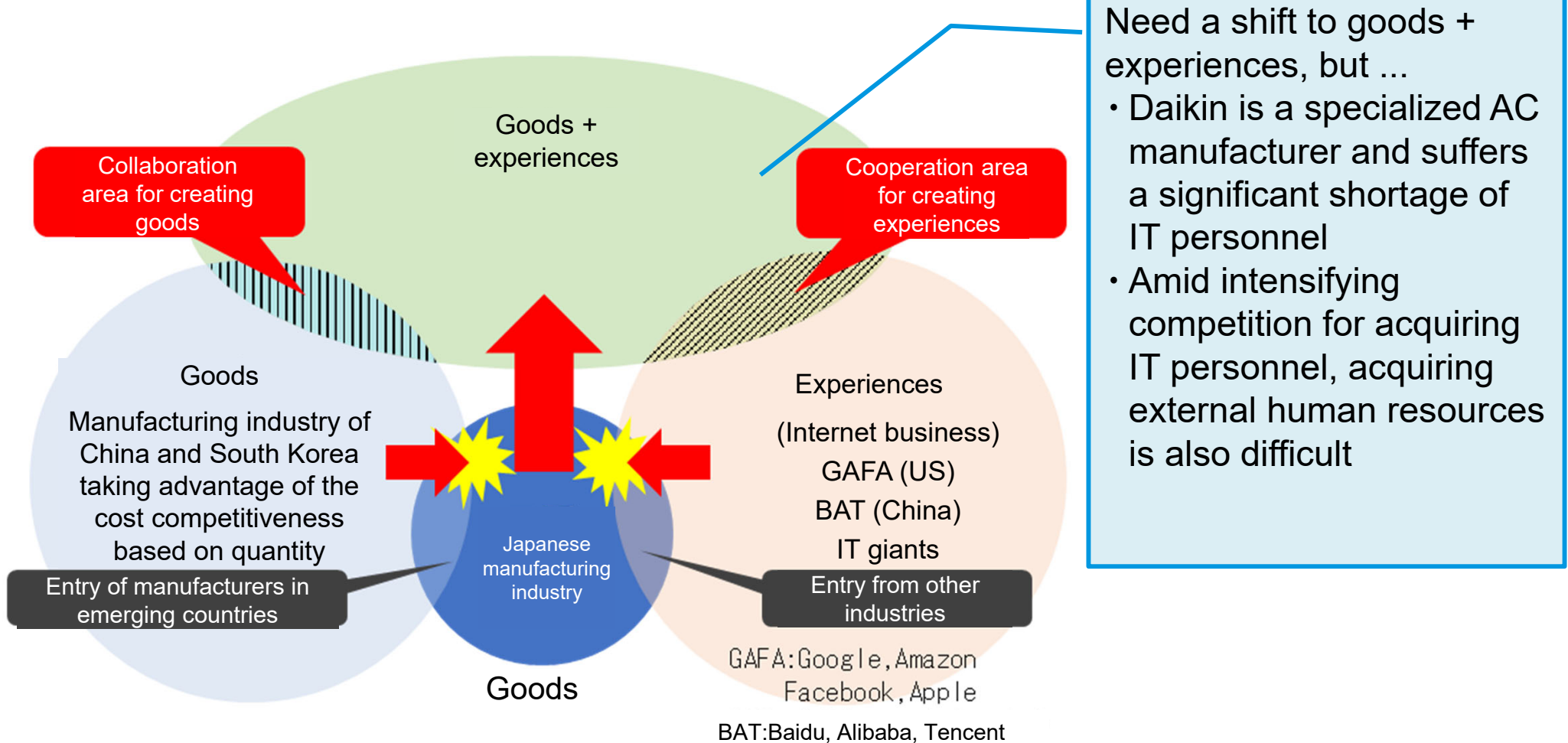


(unit: 100 million yen)



2. Measures to develop human resources in digital fields at Daikin

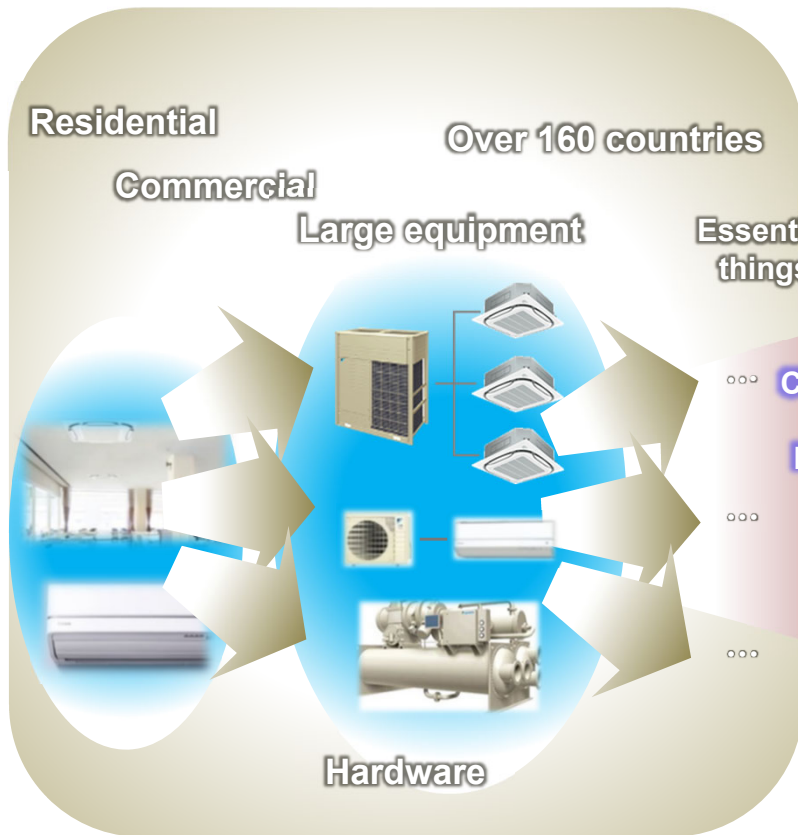
Background of the establishment of Daikin Information and Communications Technology College



Background of the establishment of Daikin Information and Communications Technology College

Past **Mass consumption society**

Future **Diverse society**



Commoditization

Entering an era where further provision of value is demanded



Manufacturers

End users



Background of the establishment of Daikin Information and Communications Technology College

◆ Aim of the establishment of Daikin Information and Communications Technology College

AI and data analysis technology is an important technology expected to be used in all segments of the Daikin Group. It is therefore urgently necessary to develop human resources who can promote it.

To facilitate use of AI technology,

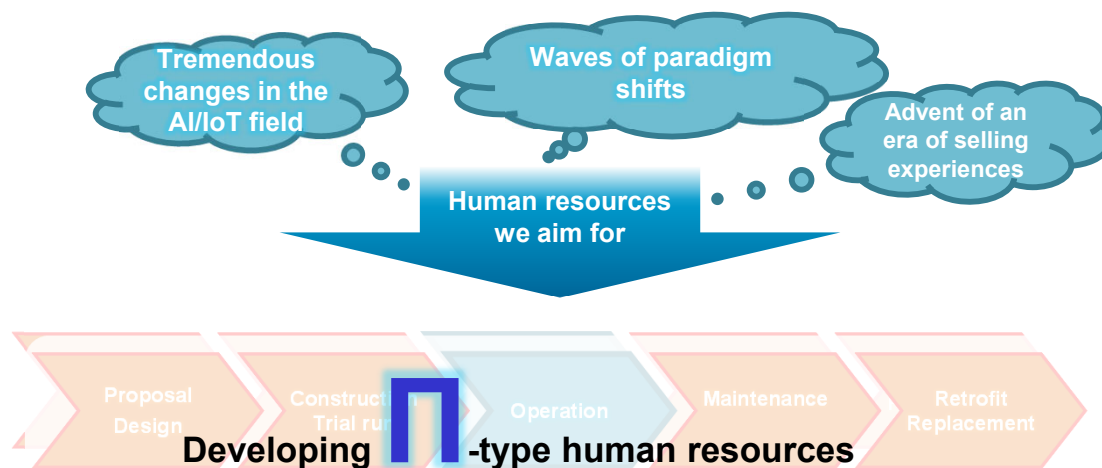
human resources in all three fields of (1) AI utilization (business proposal ability), (2) AI technology development (ability to solve problems with AI), and (3) system development (AI realization ability) are necessary. However, at the time of the College's establishment, there were very few human resources in the field of (2).

In the fields of (1) and (3), the personnel was also insufficient in terms of both quality and quantity, and therefore needed to be promptly strengthened and trained.

Daikin Information and Communications Technology College was opened in December 2017 for the purpose of promptly developing (2) AI technology development human resources while at the same time developing currently insufficient (1) AI utilization human resources and (3) system development human resources.



[Reference]



- We ultimately aim for human resources who:
 - (1) promote digital utilization from a company-wide perspective across departments;
 - (2) create innovations that go beyond the boundaries of existing business, services, and products; and
 - (3) tackle fundamental reform of production, development ,and indirect operations without being bound by fixed ideas of departments.

[Reference] Daikin Information and Communications Technology College course

To have executives understand the impact of digital transformation (DX) on their own companies/departments and the importance of business model transformation

External lecturers talk on the future outlook and possibilities from the management perspective based on the basics of AI, such as how the decision making, roles and responsibilities of management will change.

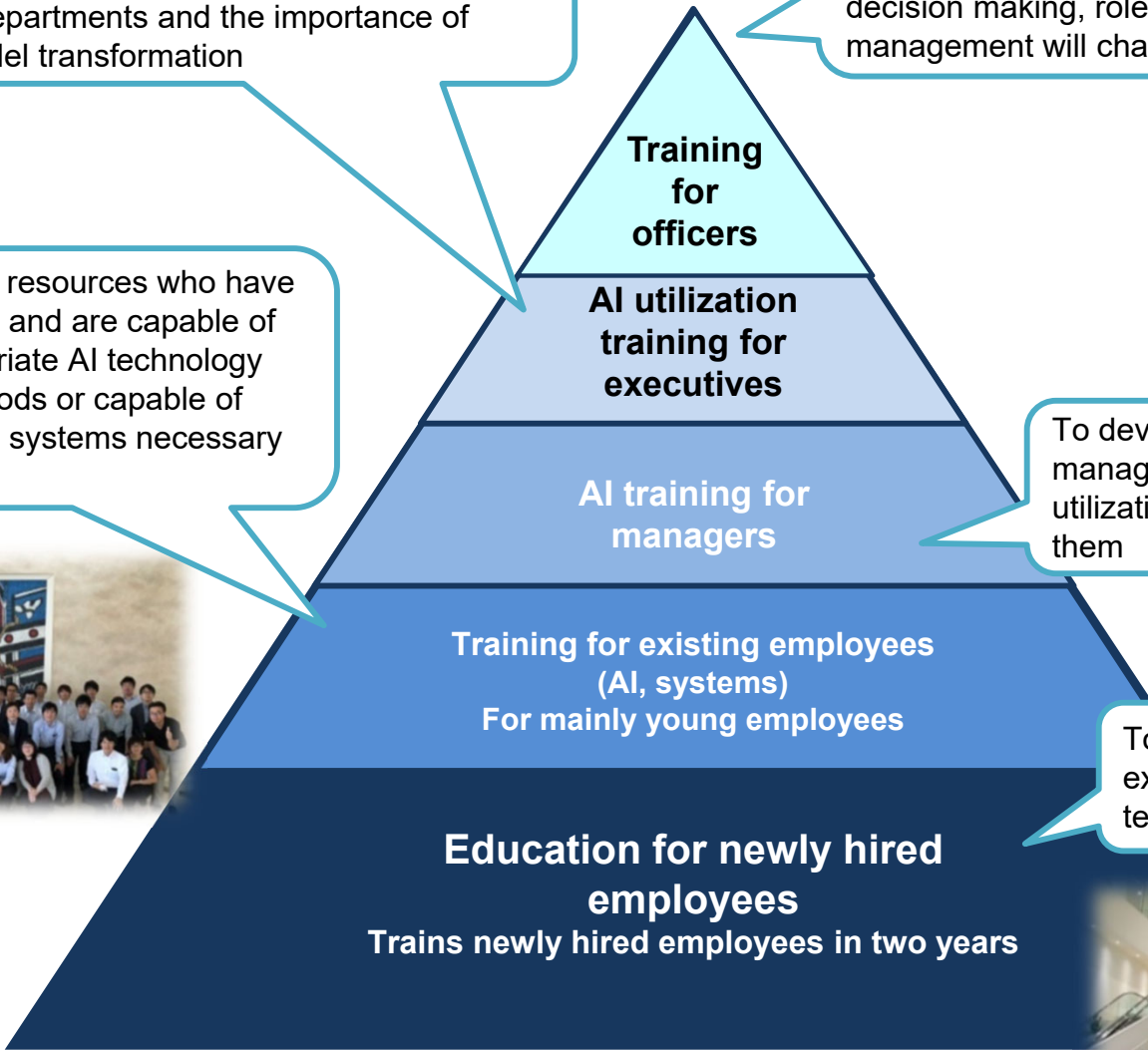
To develop human resources who have domain knowledge and are capable of developing appropriate AI technology development methods or capable of developing various systems necessary to implement AI



To develop human resources capable of managing young members who plan data utilization themes and actually implement them

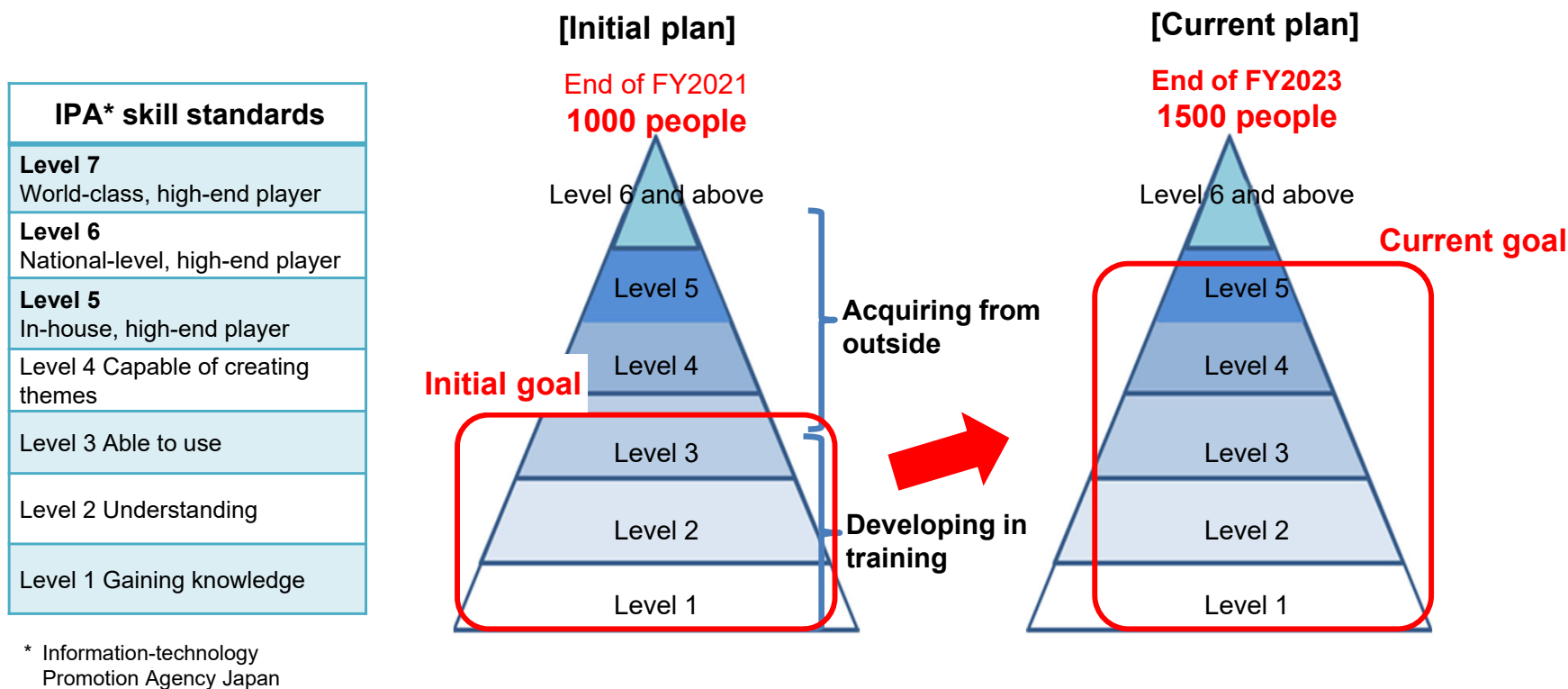


To develop Daikin's unique IoT/AI experts who understand AC technologies, etc.



[Reference] Human resources in digital fields at Daikin

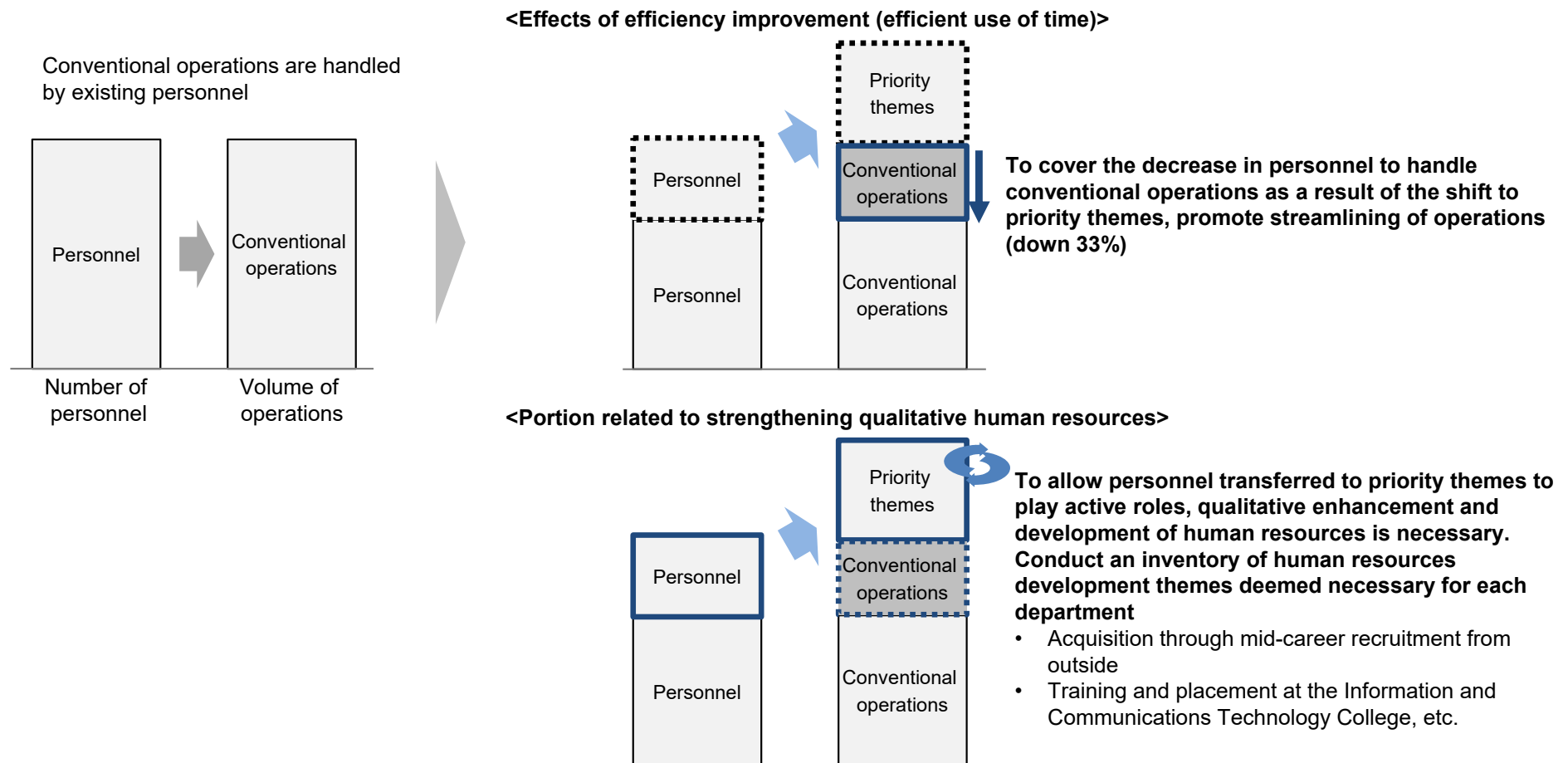
- Five years have passed, **development of human resources who understand AI/IoT (Level 2) and human resources who are able to use AI/IoT (Level3) have steadily progressed.**
- Going forward, to allow these human resources play active roles in their respective departments, **it is most important to acquire and internally develop higher level (Level 4) human resources capable of creating and implementing specific themes.**



3. Improving efficiency of indirect operations and personnel allocation with a view to reskilling

Improve efficiency in indirect operations and shift focus to priority themes

- For indirect productivity, streamline operations so that existing operations can be handled by remaining staff after the shift of personnel to priority themes.
- On the other hand, promote acquisition, development, and enhancement of qualitative human resources to support the shift to priority themes (overseas expansion, solution business, etc.).
 - As a productivity project, we are working on the development of human resources for process innovation.
 - For other themes, each relevant department and HR take the lead in starting initiatives for human resources development.



[Reference]

- The project to improve efficiency of indirect operations launched in August 2020 started with **1) inventory taking of existing operations**. To ensure that the operation improvement will go beyond the conventional framework of operations, the project promoted the approach of implementing efficiency improvement measures after **2) reviewing work processes** through comparison with cases of competitors and other best practices.
- Starting from January 2021, over 400 measures in total of **3) company-wide common measures** (31 measures in total), which include streamlining of routine operations using RPA and digitization of paper-based forms, and **4) departmental measures** unique to each department, have been planned and being implemented according to the implementation plan.

○ Examination (from Aug. 2020)

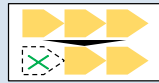
1) Inventory of existing operations

Focusing on high-load operations

2) Review of work processes

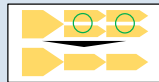
E(Eliminate)

:Reduction/elimination of processes



C(Combine)

:Concentration/standardization of processes



R(Rearrange)

:Process change/rearrangement



S(Simplify)

:Simplification of processes



Review indirect operations, mainly “operation management processes,” through comparison with competitors and other best practices.

○ Deployment of measures (from Dec. 2021)

3) Company-wide common measures to improve efficiency

Total 31 measures *Roughly, streamlining of:
(1) routine operations using RPA and AI-OCR;
(2) paper –based forms through digitization;
(3) planning operations through data collection using AI;
(4) in-house information sharing, application, and work inquiries; and
(5) expense calculation through process reform

IT department takes the lead in examining and deploying company-wide common measures that will contribute to improving efficiency, in cooperation with corporate departments such as HR



4) Improving efficiency through departmental measures

Perspectives for streamlining

- Fundamental review of departmental work processes
- In line with the above review, expansion of functions of existing systems and updating of core systems
- Concentration and outsourcing of non-core operations
- Streamlining and improvement of operations using the latest IT (AI, etc.)

Have each department set targets after providing guidelines, to improve efficiency of individual departmental operations.



Perfecting the Air