Eat Well, Live Well.

AJINOMOTO.

Ajinomoto Co., Inc.

DX Initiatives and the Evolution of DX to Support the Transformation of the Ajinomoto Group

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Chief Digital Officer**

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Today's Message

- The Ajinomoto Group positions digital transformation (DX) as corporate transformation leveraging digital technology. We have built a promotion structure that passes a DX-based horizontal axis through the vertical axis of the businesses in which we are historically strong. We are steadily addressing DX, aiming for participation by all employees.

- Seeking to advance the level of data-based management, we are focusing on aggregating wide-ranging business-specific and country-specific data and are advancing construction of a data management foundation, cross-organizational cooperation, and optimal utilization, while connecting these to the creation of successful cases.

- We are building cyber security measures that grow in importance day by day. We are also working to strengthen the development of DX human resources and are advancing value creation through the use of digital technologies.

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I-1. DX in the Ajinomoto Group

DX for the Ajinomoto Group is corporate transformation leveraging digital technologies. By creating value through corporate transformation, we aim to achieve the 2030 Roadmap ASV indicators that are our Group-wide targets.

DX ⇒ d X
(digital TRANSFORMATION)

Corporate transformation
that leverages digital technologies

What we should aim for	Means	Tools
Realization of Vision for 2030	Transformation (business, corporate climate)	Digital technology

I-2. Key Features of DX in the Ajinomoto Group

Through the promotion of ASV initiatives, DX in the Ajinomoto Group has the following characteristics.
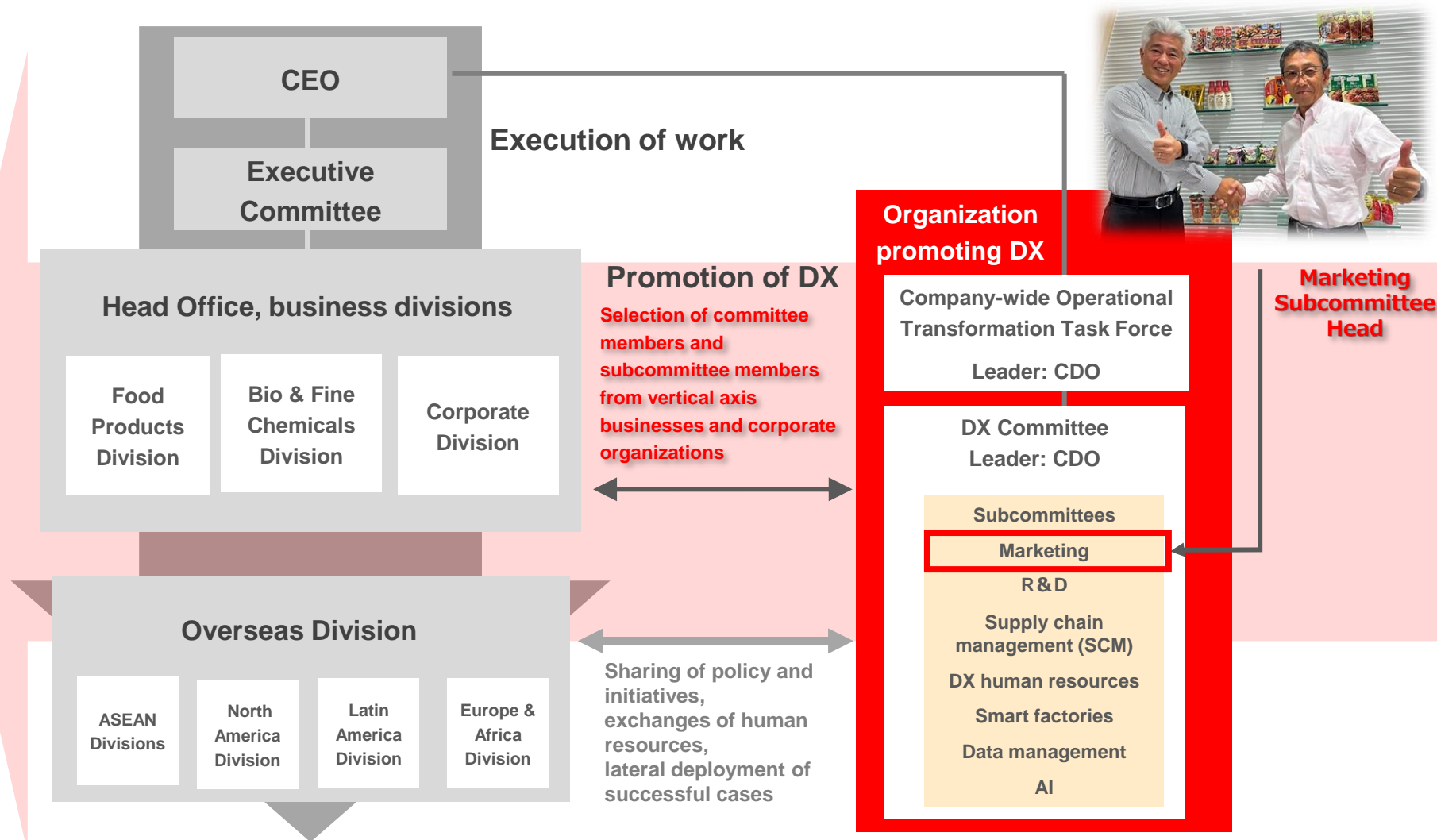
1   **A DX promotion structure that passes a horizontal axis through a strong vertical axis and transforms**

2   **Aims for corporate transformation with participation by all through each person's own initiative**
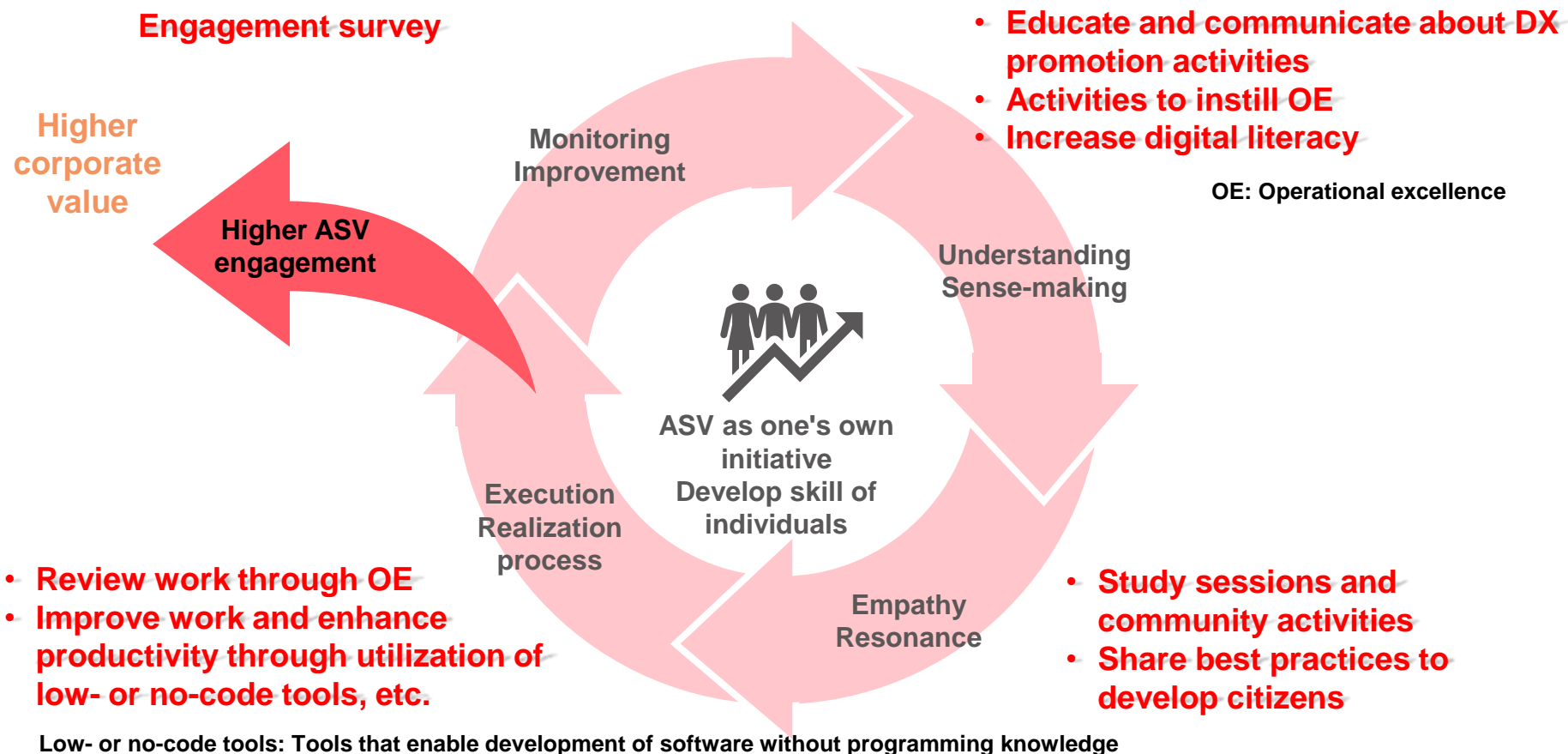
I-2. Key Feature (1): A DX Promotion Structure that Passes a Horizontal Axis through a Strong Vertical Axis and Transforms

Work for corporate transformation with a broad Group-wide perspective that goes beyond business by using DX to pass the horizontal axis through functions in the Ajinomoto Group's value chain.

CEO

Executive Committee

Execution of work

Organization promoting DX

Head Office, business divisions

Promotion of DX

Selection of committee members and subcommittee members from vertical axis businesses and corporate organizations

Company-wide Operational Transformation Task Force

Leader: CDO

Marketing Subcommittee Head

Food Products Division	Bio & Fine Chemicals Division	Corporate Division

DX Committee Leader: CDO

Subcommittees

Marketing

R&D

Supply chain management (SCM)

Overseas Division

Sharing of policy and initiatives, exchanges of human resources, lateral deployment of successful cases

DX human resources

Smart factories

ASEAN Divisions	North America Division	Latin America Division	Europe & Africa Division

Data management

AI

Through ASV as one's own initiative, the cycle of co-growth for individuals, businesses, and organizations will be refined, and we will work toward corporate transformation.
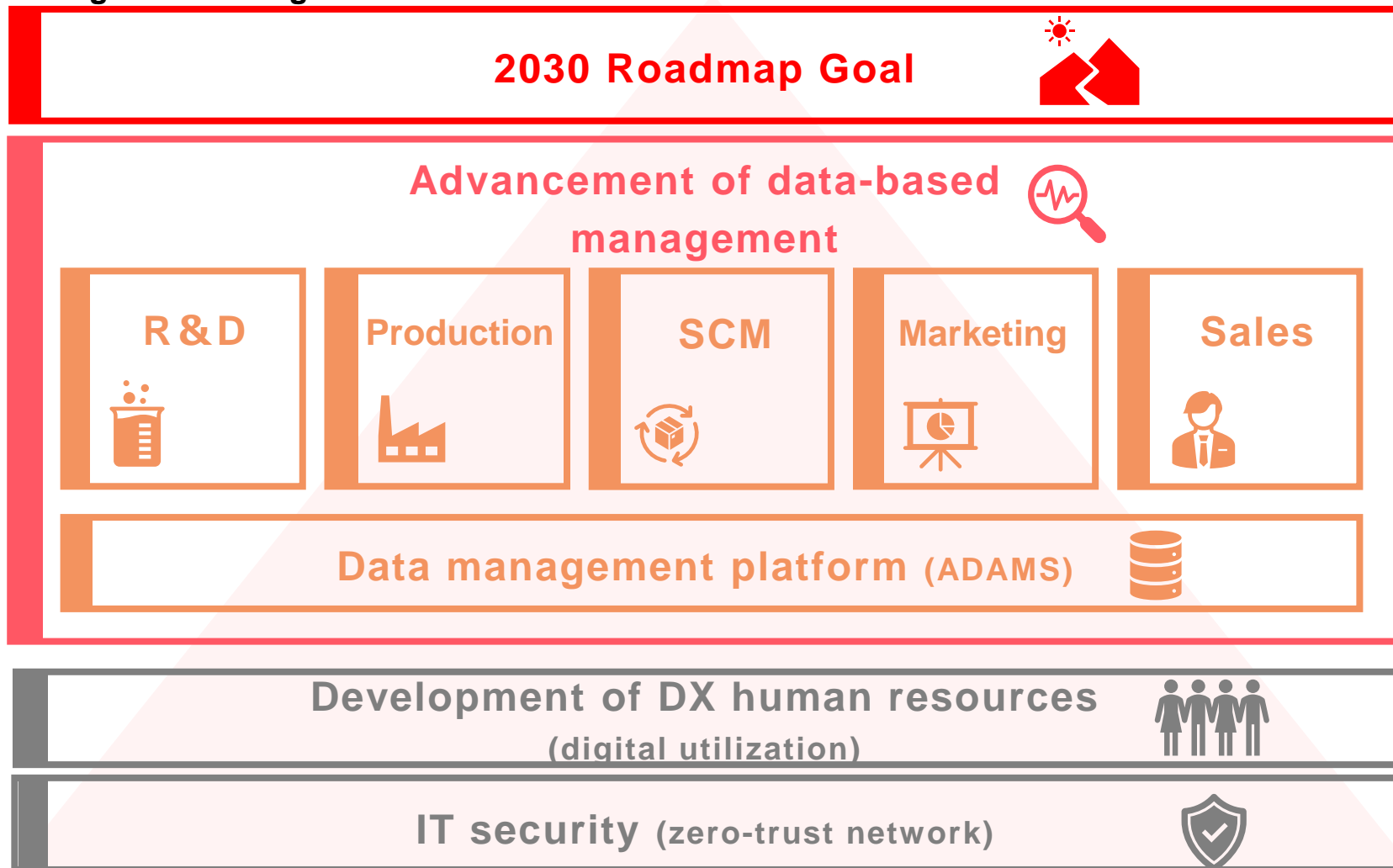
Engagement survey

Higher corporate value

Higher ASV engagement

Monitoring Improvement

- **Educate and communicate about DX promotion activities**
- **Activities to instill OE**
- **Increase digital literacy**

OE: Operational excellence

Understanding Sense-making

ASV as one's own initiative Develop skill of individuals

Execution Realization process

- **Review work through OE**
- **Improve work and enhance productivity through utilization of low- or no-code tools, etc.**

Empathy Resonance

- **Study sessions and community activities**
- **Share best practices to develop citizens**

Low- or no-code tools: Tools that enable development of software without programming knowledge

Basic scheme for corporate transformation: Co-growth of individuals, businesses, and organizations
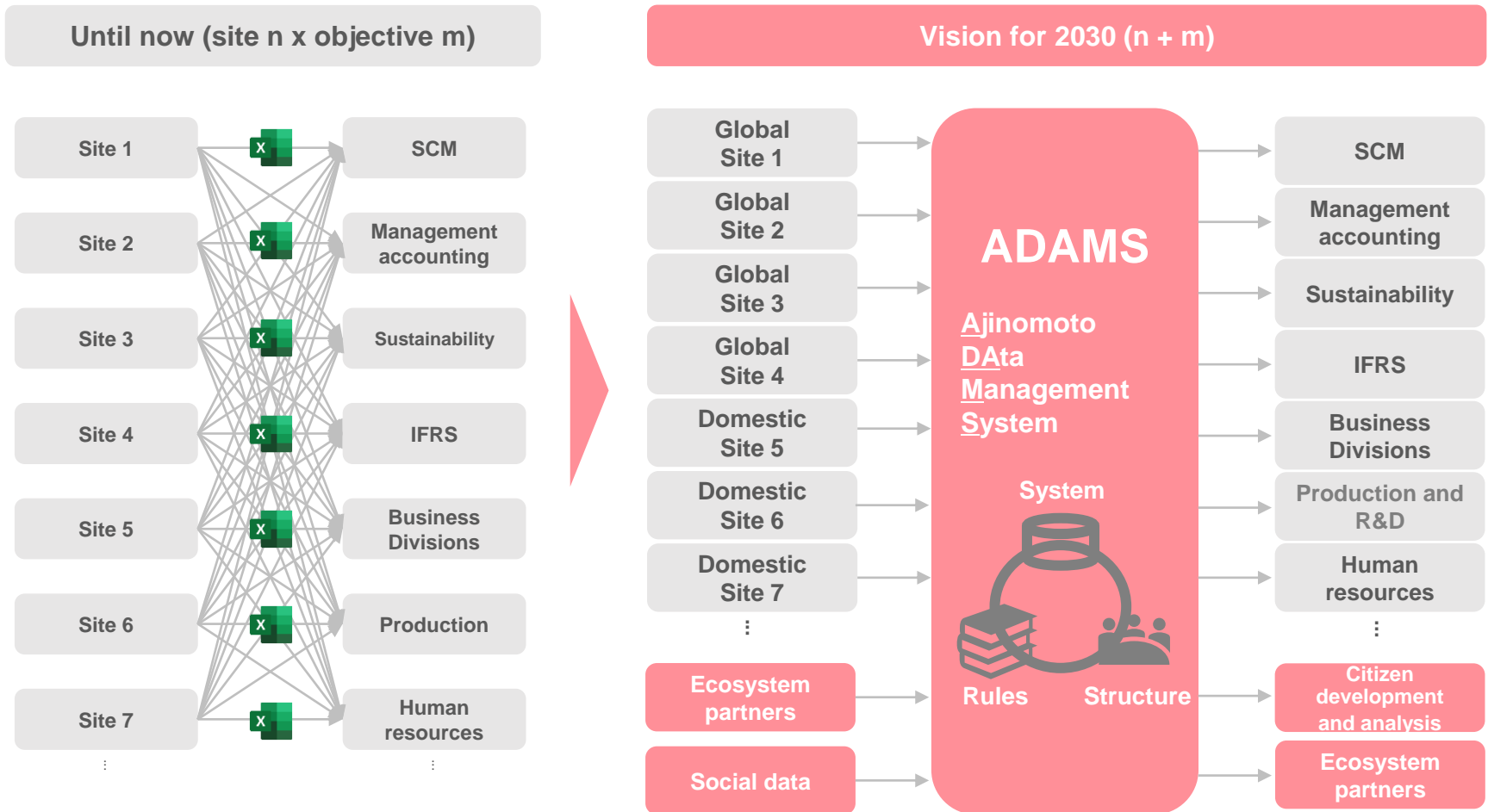
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II-1. 2030 Roadmap and DX Strategy

With data management, DX human resources, etc. as a foundation, we aim to achieve the Roadmap that is our Group-wide goal by promoting the advancement of data-based management through all value chains.

2030 Roadmap Goal

Advancement of data-based management

R & D	Production	SCM	Marketing	Sales

Data management platform (ADAMS)

Development of DX human resources
(digital utilization)

IT security (zero-trust network)

We are developing the Ajinomoto Data Management System (ADAMS), a platform for Group-wide sharing and succession of the Ajinomoto Group's intangible assets as data assets, to create value using knowledge obtained from data.

Until now (site n x objective m)

Site 1 → SCM
Site 2 → Management accounting
Site 3 → Sustainability
Site 4 → IFRS
Site 5 → Business Divisions
Site 6 → Production
Site 7 → Human resources

Vision for 2030 (n + m)

Global Site 1
Global Site 2
Global Site 3
Global Site 4
Domestic Site 5
Domestic Site 6
Domestic Site 7
...
Ecosystem partners
Social data

ADAMS

Ajinomoto **DA**ta **M**anagement **S**ystem

System
Rules   Structure

SCM
Management accounting
Sustainability
IFRS
Business Divisions
Production and R&D
Human resources
...
Citizen development and analysis
Ecosystem partners

II-3. Overview of ADAMS (Three Data Layers)

We will accumulate varied data ((1) Accumulation layer), process and integrate the data for ease of use ((2) Integration layer), then aggregate the data according to purpose of use ((3) Usage layer).

ADAMS

Data sources

(1) Accumulation layer
Data lake
Primary data
collected from sources

(2) Integration layer
Integrated databases
Secondary data
processed for ease of use

Standard code

(3) Usage layer
Data mart
Tertiary data
aggregated according to purpose

Sandbox

Data management rules

Data management structure

Utilization

Users

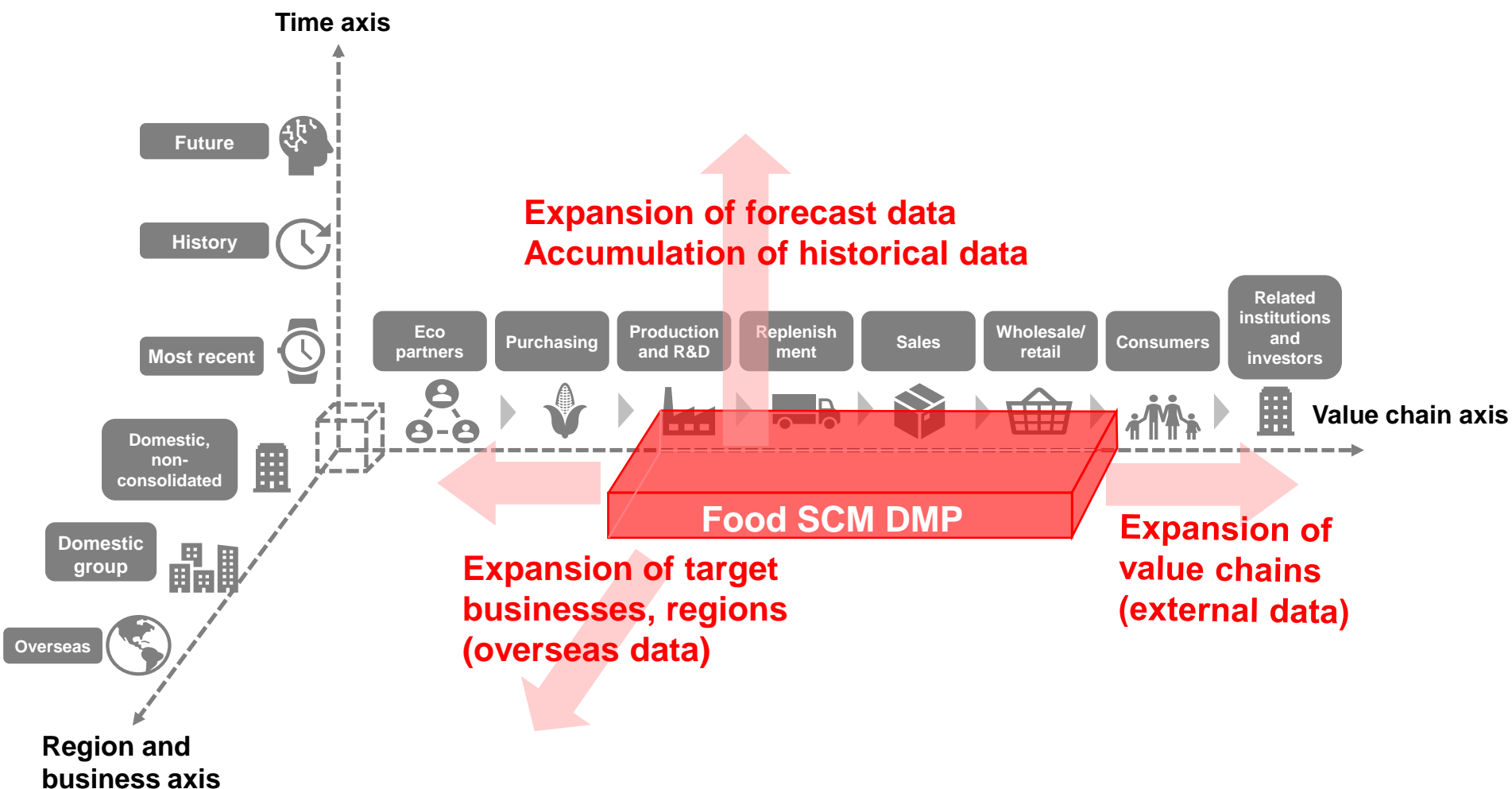Other systems

AI

Ecosystem partners

Data lake: An information repository capable of centrally storing structured and unstructured data

Data mart: A database in which only necessary data is extracted and aggregated according to user department, usage application, objective, etc., and is stored in easily used form

Sandbox: An area from which outside access is severely restricted, prepared as a special execution environment for software

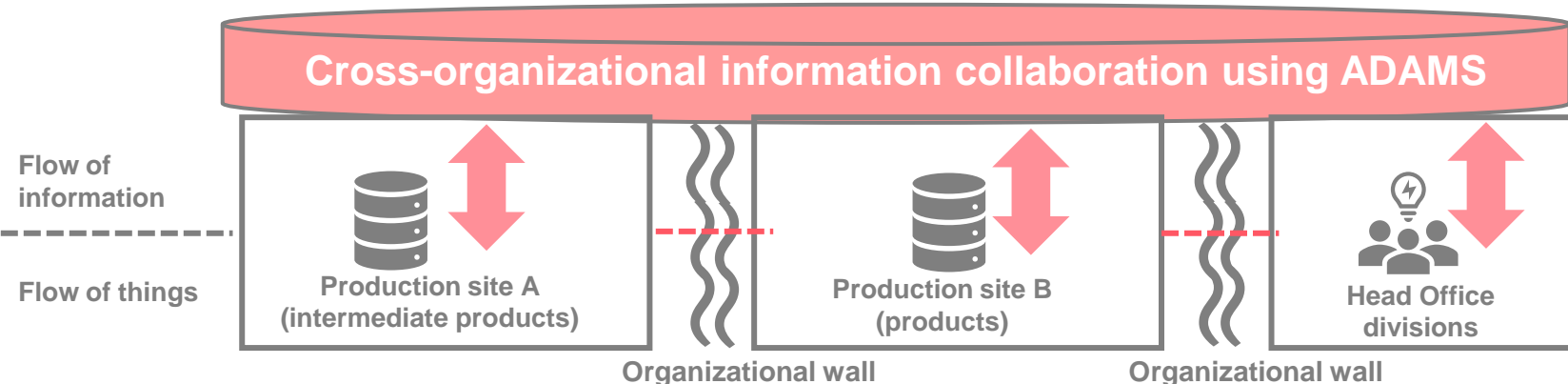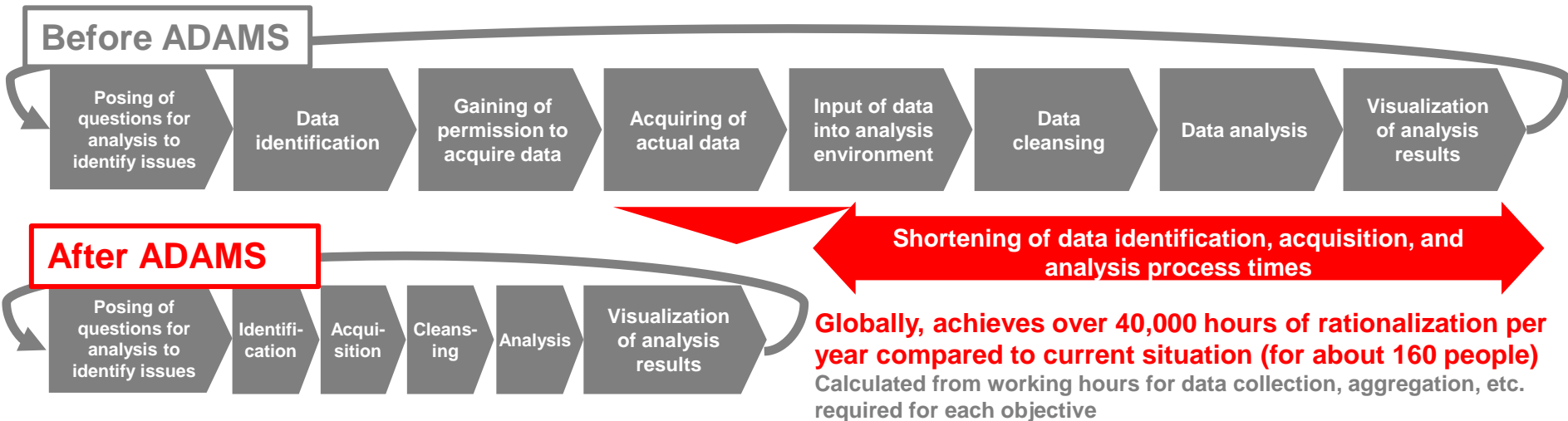# II-4. Roadmap for Development of the ADAMS Platform

From the area of food SCM, we will gradually expand target businesses, regions, and value chains. The aim is a data platform that enables quick tracking of changes, such as adaptations to our four growth areas.

Time axis

Future

History

Most recent

Domestic, non-consolidated

Domestic group

Overseas

Region and business axis

**Expansion of forecast data
Accumulation of historical data**

| Eco partners | Purchasing | Production and R&D | Replenishment | Sales | Wholesale/retail | Consumers | Related institutions and investors |

Value chain axis

Food SCM DMP

Expansion of target businesses, regions (overseas data)

Expansion of value chains (external data)

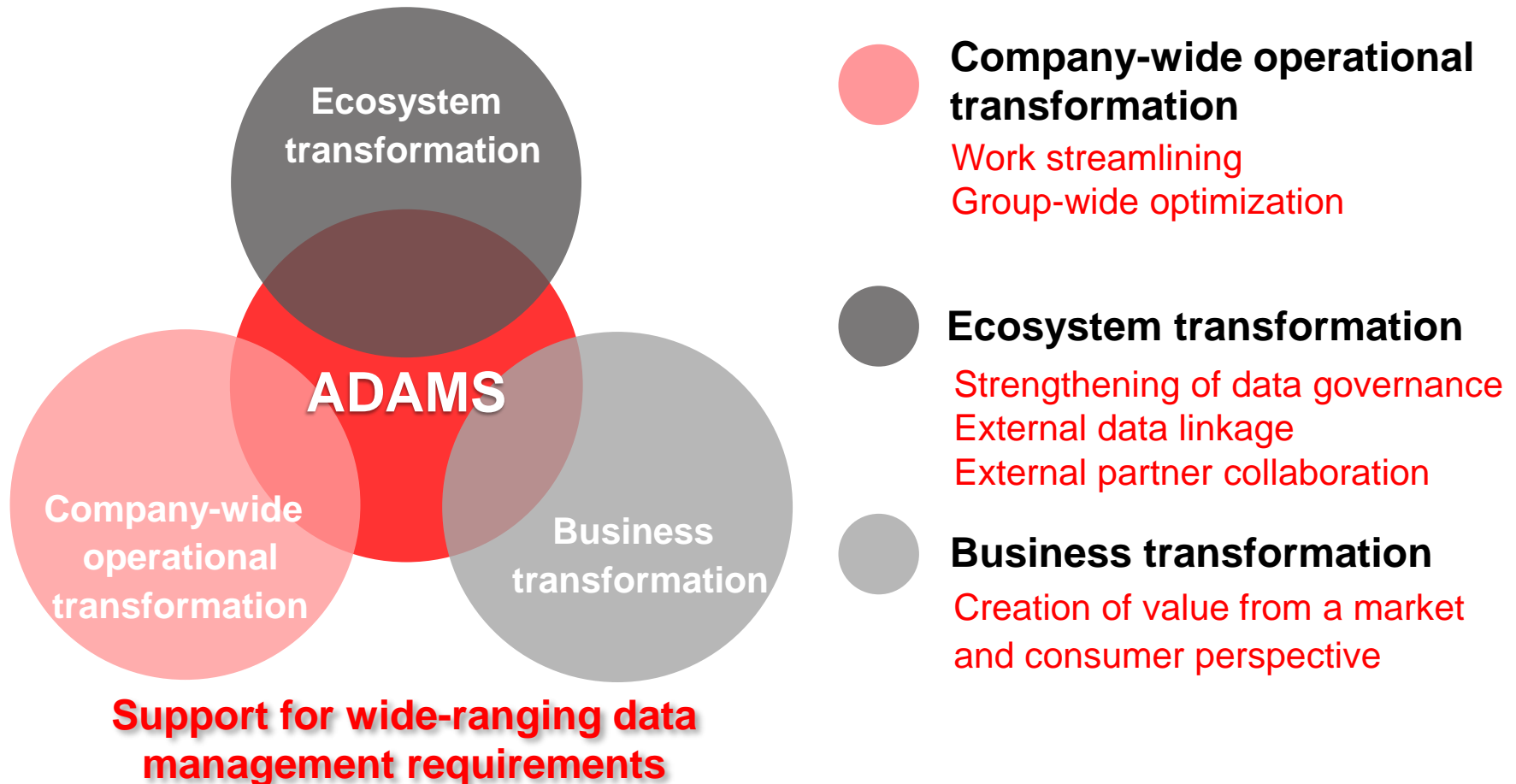# II-5. Efficacy of Introduction of ADAMS

By shortening time in data identification, acquisition, analysis, we are working to shift to high value-added work, energize our human capital, and enhance employee engagement.
We are also working to make overall optimizations and create new value by going beyond organizations to share data that had been closed off in specific countries and offices.

Before ADAMS

Posing of questions for analysis to identify issues → Data identification → Gaining of permission to acquire data → Acquiring of actual data → Input of data into analysis environment → Data cleansing → Data analysis → Visualization of analysis results

After ADAMS

Posing of questions for analysis to identify issues → Identifi-cation → Acqui-sition → Cleans-ing → Analysis → Visualization of analysis results

Shortening of data identification, acquisition, and analysis process times

Globally, achieves over 40,000 hours of rationalization per year compared to current situation (for about 160 people)
Calculated from working hours for data collection, aggregation, etc. required for each objective

Cross-organizational information collaboration using ADAMS

Flow of information

Flow of things

Production site A (intermediate products)

Production site B (products)

Head Office divisions

Organizational wall   **Organizational wall**

We are strategically promoting ADAMS, incorporating forward-looking data management requirements (flexibility to adapt to external collaboration and business transformation, etc.), not only operational efficiency through OE

Company-wide operational transformation

Work streamlining
Group-wide optimization

Ecosystem transformation

Strengthening of data governance
External data linkage
External partner collaboration

Business transformation

Creation of value from a market and consumer perspective

Ecosystem transformation

ADAMS

Company-wide operational transformation

Business transformation

Support for wide-ranging data management requirements

II-7. Development of a Chatbot for ADAMS Users

Taking into consideration members who are unfamiliar with data utilization, we developed a chatbot that uses generative AI.

Chatbot: A portmanteau of "chat" and "bot," referring to a program that automatically converses with and replies to users in response to inquiries and questions.

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III-1. Construction of a Customer Data Platform for Marketing

While aggregating data from various customer contact points, we are also constructing a customer data platform (customer DMP) that also store external data for enhancing customer resolution. We will gradually integrate IDs for services within the Group, and provide customer experiences that combine services, information, and products in ways that better match customers' personal needs.
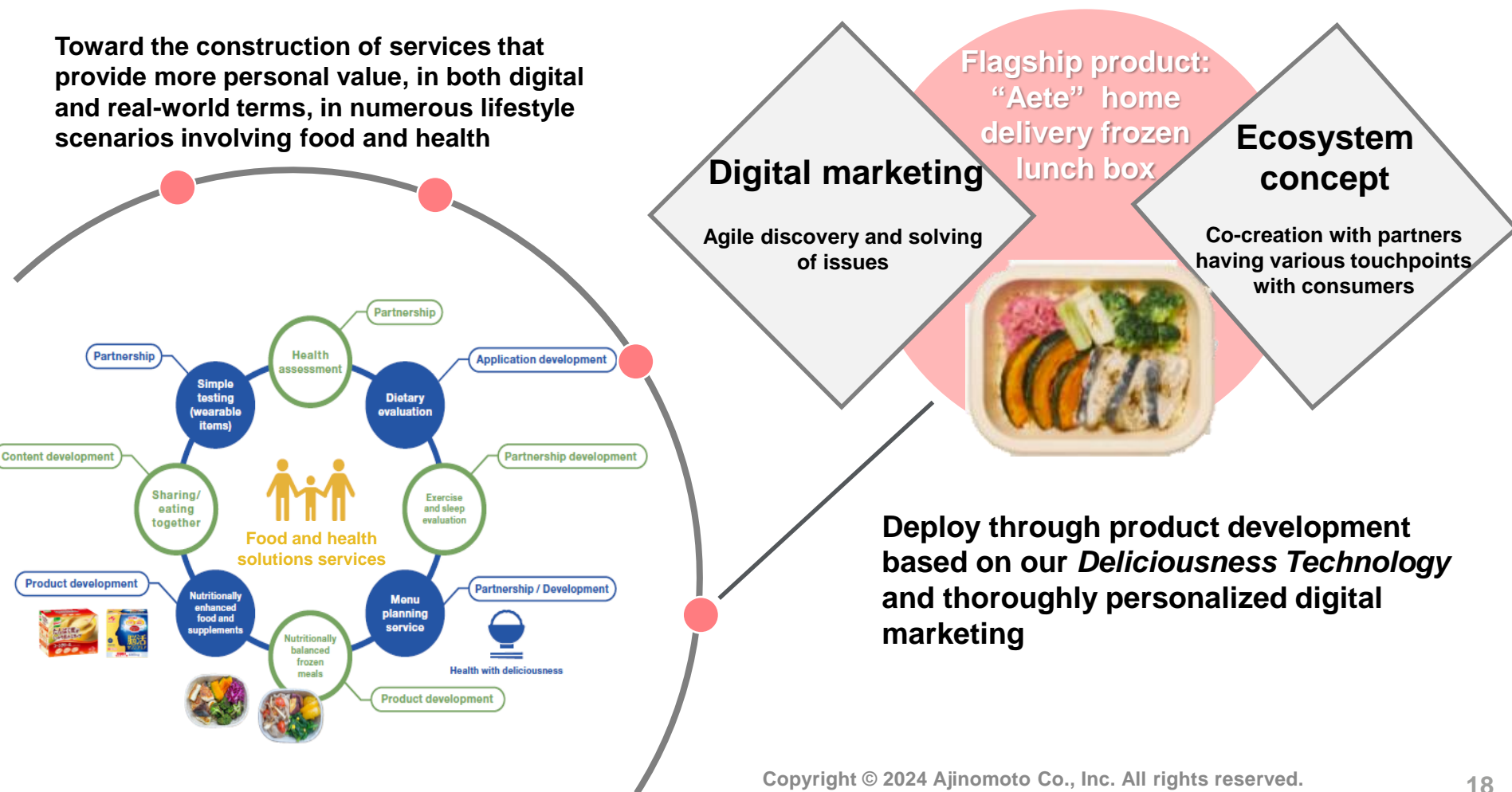
Solving of food and health issues

Customer experiences aligned with consumer scenarios and needs

Providing information matched to circumstances

Placing trust

Providing personal customer experiences

Recognizing value Becoming a fan Drawing close

Maximize value through combinations of services, information, and products

Adver-tising

Stores

AJINOMOTO PARK **Food personal solutions**

AJINOMOTO ダイレクト

AJINOMOTO ID

D2C new business

EC malls

Gradual ID integration of services within the Group

Advertising platform

Customer DMP

EC malls

Seamless data linkage

ADAMS

III-1. Leverage the Ecosystem to Acquire More Customer Data based on D2C Products

We aim to build food and health solutions services, and build an ecosystem with external partners. We developed and launched "Aete" home delivery frozen lunch box, a new D2C product, as the flagship product. Going forward, we will put customer data acquired from the ecosystem into the customer data management platform (DMP). Strong sales performance has exceeded initial targets.

Toward the construction of services that provide more personal value, in both digital and real-world terms, in numerous lifestyle scenarios involving food and health

Flagship product: "Aete" home delivery frozen lunch box

Digital marketing

Agile discovery and solving of issues

Ecosystem concept

Co-creation with partners having various touchpoints with consumers

Deploy through product development based on our *Deliciousness Technology* and thoroughly personalized digital marketing

Food and health solutions services

- Partnership — Health assessment
- Partnership — Simple testing (wearable items)
- Application development — Dietary evaluation
- Partnership development — Exercise and sleep evaluation
- Partnership / Development — Menu planning service — Health with deliciousness
- Content development — Sharing/eating together
- Product development — Nutritionally enhanced food and supplements
- Product development — Nutritionally balanced frozen meals

III-2. Realize High-Speed Development through the Use of Digital Technologies in the Electronic Materials Business R&D

By utilizing digital technology in the electronic materials business, everywhere from sampling work to customer data linkage and new materials searches, we will work toward efficiency and high-speed development.

Develop new material formulations with artificial intelligence (AI) and materials informatics (MI)
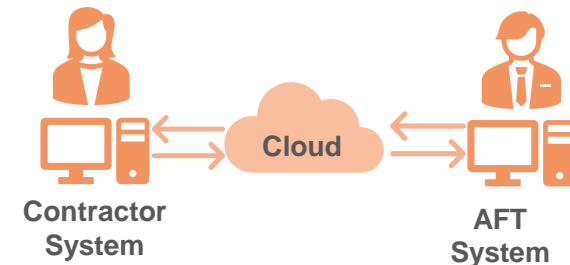
Rapid sample measurement through the introduction of robots capable of operating around the clock

Sampling work

High-speed development

Ajinomoto's proprietary materials development technologies

Customer evaluations

Automated data linkage in the cloud

Cloud

Contractor System

AFT System

AFT: Ajinomoto Fine-Techno Co., Inc.

Identification of customers' new needs

Customer approval

Materials informatics: efforts to improve the efficiency of new materials searches by applying information science to materials development

III-3. Smart Factories: Advance Production Management through the Use of Data

Ajinomoto Food Manufacturing, which produces and packages seasonings and processed foods, has introduced the APPLE packaging management system for standardized process management work, and has developed smartphone apps usable by anyone.
This makes for smart factories that enable rapid data analysis and improvement. Data will be integrated into ADAMS and connected to production plans, profit management, etc.

Overview of APPLE packaging management system

Our vision	• Reduction of record-keeping work load • Securing of work hours for productivity enhancement	• Rapid operation of the PDCA cycle and maintenance of high performance		• Work styles not bound by location • Group-wide optimization of production strategy	
Measures	All equipment: **Automated recording of operational data**	Conversion of all paper forms into **smartphone apps**	**At moment work is completed:** Review of operations	Easily understood visualization of **production KPIs;** immediate analysis and discovery of issues	**Remote** on-site management and approvals **anytime, anywhere**
Developed functions	Data collector (Collection of information on equipment, other systems)	Operations recorder (Smartphone app for on-site recording)	Fact analyst (Data analysis using Self BI)	Dashboard/real-time monitor (Data visualization using BI)	Production reviewer (Web app for approvals)

BI: Business Intelligence

III-4. Operational Excellence (OE) as the Foundation for DX Strategy

Up to now, in complex systems spanning wide-ranging departments, each department executed work through partial optimization. Going forward, we will tackle work improvement from an overall optimal perspective through the visualization of workflows using OE.

Product information management system
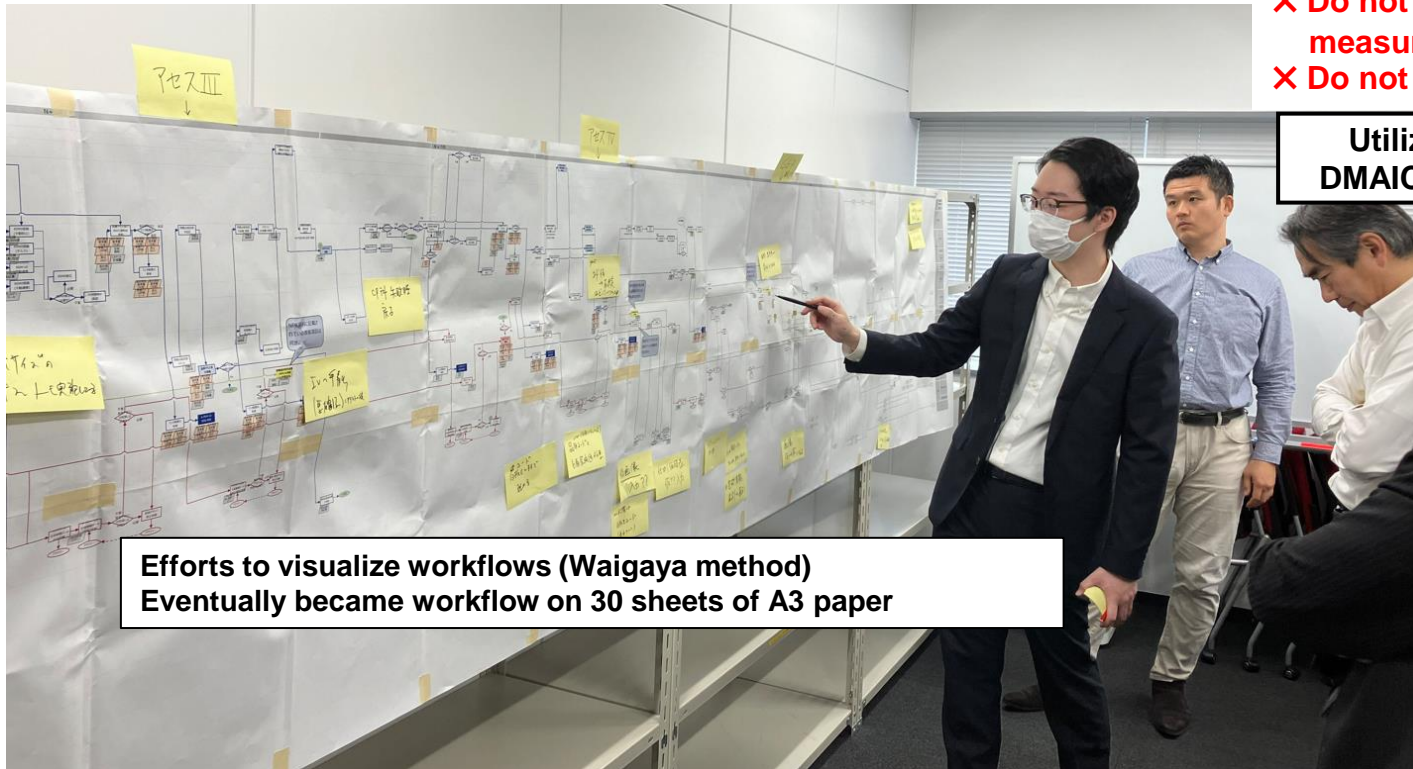
Business divisions → Laboratories → Production factories → Purchasing department → Advertising department → Quality assurance → Sales strategy → Customer Service Center

✕ **Do not jump at easy improvement measures**
✕ **Do not simply introduce a system**

Utilization of Lean Six Sigma's DMAIC work improvement method

Define
  Definition of issues

Measure
  Quantification and visualization of issues

Analyze
  Identification of root causes

Improve
  Selection of improvement measures

Control
  Conversion to know-how, lateral deployment

Efforts to visualize workflows (Waigaya method)
Eventually became workflow on 30 sheets of A3 paper

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IV-1. Initiatives to Reduce Inventories: DIO Target

We are keeping the challenging target of 70 days for days inventory outstanding (DIO) in FY2025. With the external environment deteriorating after the COVID-19 pandemic, due to increasing raw material costs, currency translation impacts, and the securing of stable inventories under geopolitical risks, we intend to reduce DIO through timely visualization of inventories and the setting of appropriate inventory levels and production frequencies.

DIO: A value that expresses the number of days required for turnover of the inventory in question, i.e., the time taken to sell a product after stocking it.

Approx. **90**	**101**	**94**	**70**
FY2023 actual	FY2024 forecast	FY2023 target	FY2025 challenging target
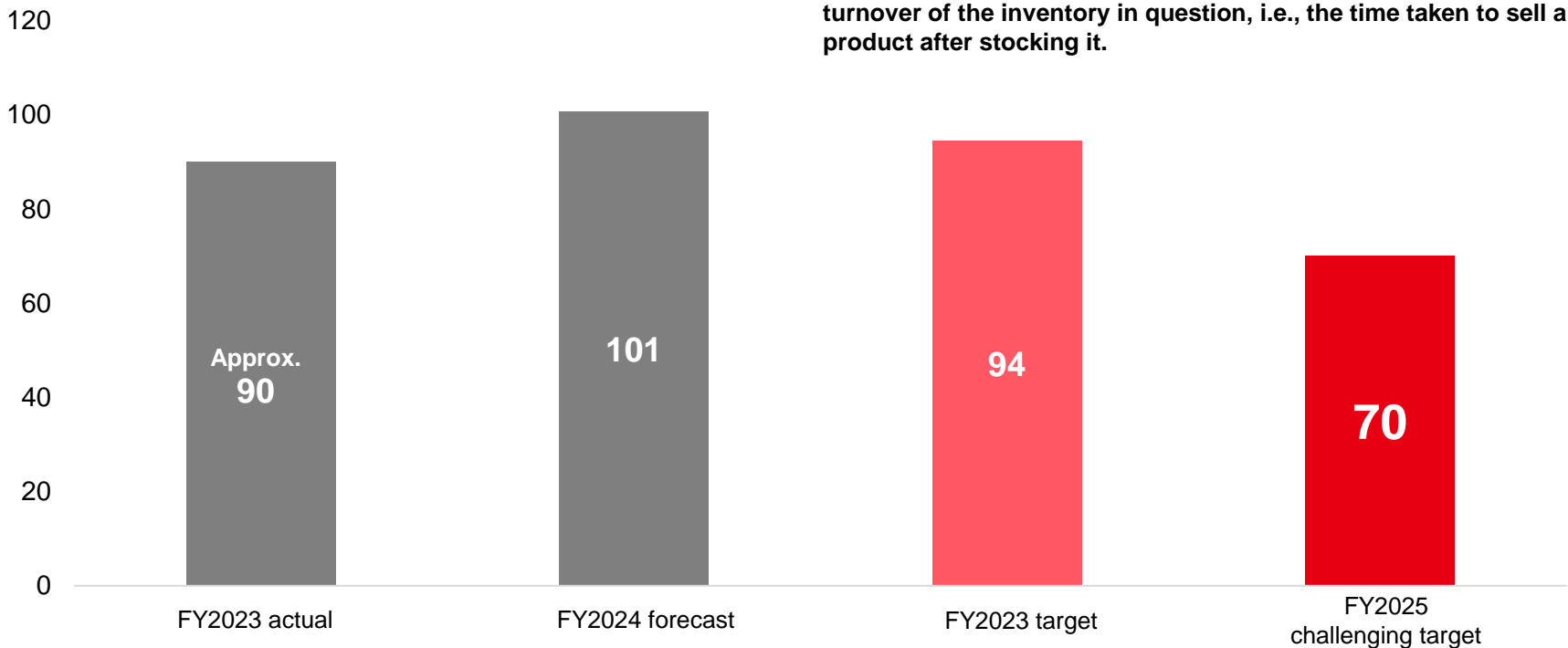
Accelerating efforts to share departments' inventory performance on a monthly basis across the Group, with management praising good performers.

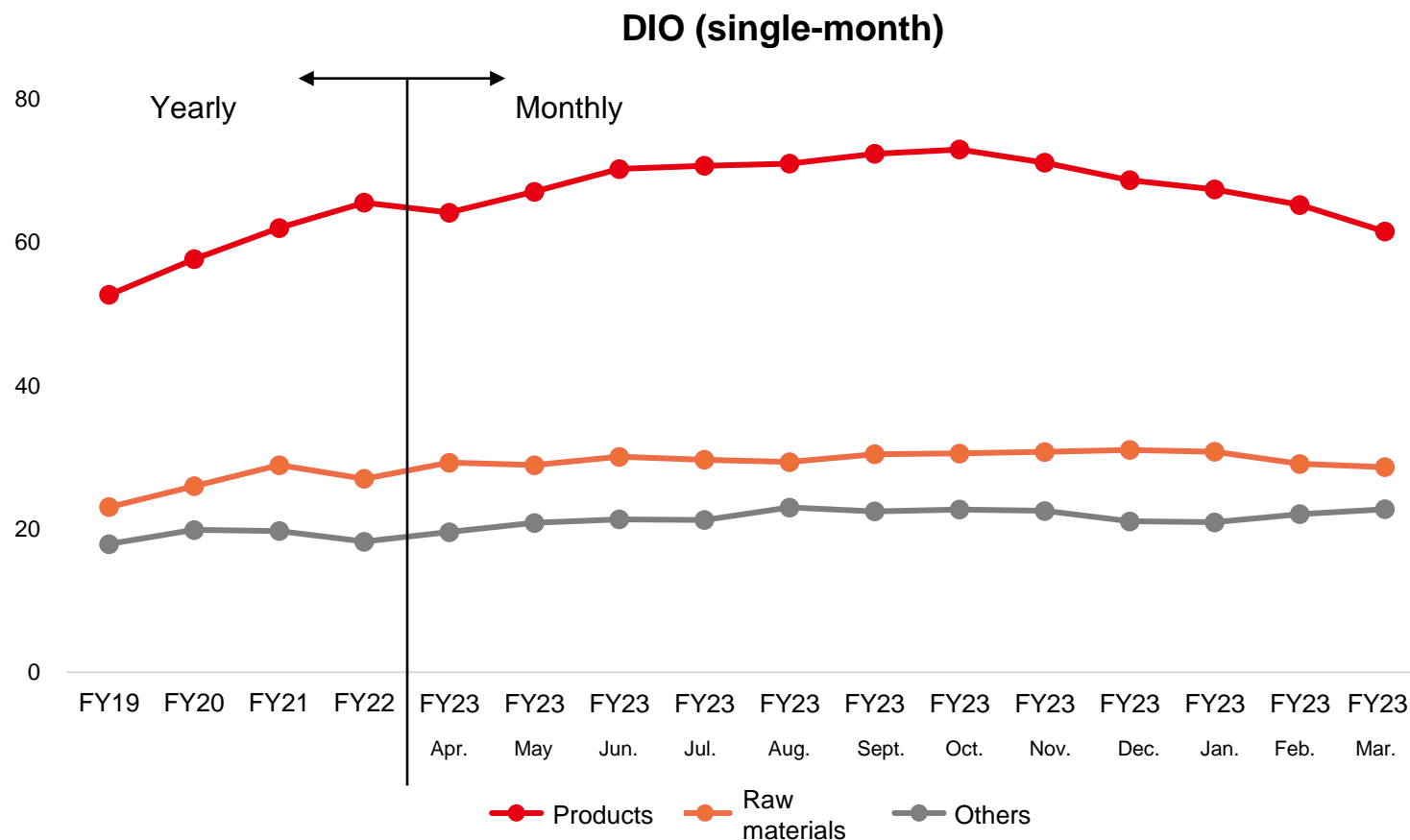We will divide inventory into products, raw materials, and others, and manage DIO, working to reduce DIO overall.

Product DIO: This had been rising through FY2022, but entered a declining trend in FY2023 under successful SCM transformation initiatives

Raw materials DIO: We are strategically securing main raw materials amid soaring prices and procurement risks
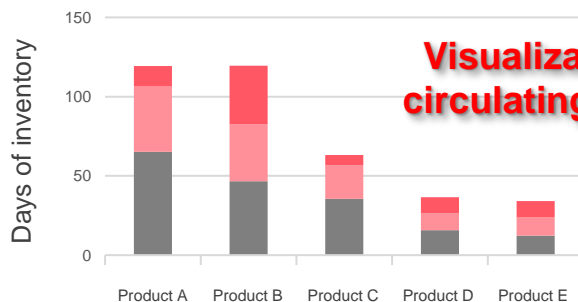
Other DIO: In line with the evolution of our portfolio management, semi-finished goods of products with long manufacturing processes have increased

DIO (single-month)

Improve Forecasting Accuracy by Adding Warehouse Outbound and Market Data

In addition to shipping data, we are acquiring market data and warehouse outbound data, and integrating it into ADAMS. Centrally managing data enables accurate understanding of actual demand and market inventories, along with optimized production adjustments.

Supply chain	Suppliers	Factories	Our Company	Wholesale stores	Retailers	Consumers

Shipping data — **Warehouse outbound data** — **Market data**

Past

Our inventory

View our shipping data as actual demand, and adjust production

Calculated based on difference from warehouse outbound data

Calculated based on difference from market data

Present

Our inventory	Estimated wholesale inventory	Estimated store front inventory

Days of inventory — Product A, Product B, Product C, Product D, Product E (150 / 100 / 50 / 0)

Visualization of all circulating inventory

Also deployed for new products and seasonal products, for which inventory management is difficult.

One of the effects

Reduced the occurrence of shipping products out of order of expiry dates by about 90% compared to 2 years prior.

In global business, we will achieve the reduction of inventories through timely visualization of inventory data from all companies, including overseas affiliates, setting the optimal safe inventory for each overseas site.

Visualization of global PSI (production/sales/inventory)

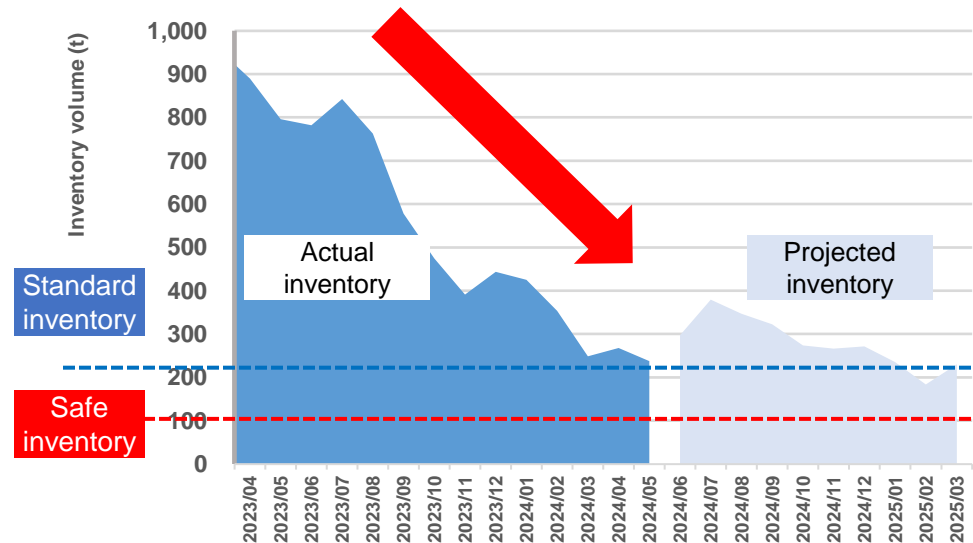Example of visualization of global PSI: personal care product *AMILITE*®

Inventory volume (t)

Standard inventory

Actual inventory

Projected inventory

Safe inventory

1,000 / 900 / 800 / 700 / 600 / 500 / 400 / 300 / 200 / 100 / 0

2023/04 2023/05 2023/06 2023/07 2023/08 2023/09 2023/10 2023/11 2023/12 2024/01 2024/02 2024/03 2024/04 2024/05 2024/06 2024/07 2024/08 2024/09 2024/10 2024/11 2024/12 2025/01 2025/02 2025/03

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V-1. 2030 Roadmap and DX Strategy (Repeat of slide 9)

With data management, DX human resources, etc. as a foundation, we aim to achieve the Roadmap that is our Group-wide goal by promoting the advancement of data-based management through all value chains.

2030 Roadmap Goal

Advancement of data-based management

R & D	Production	SCM	Marketing	Sales

Data management platform (ADAMS)

Development of DX human resources
(digital utilization)

IT security (zero-trust network)

V-1. Education, Development, and Recruitment Based on DX Human Resources Strategy

We have defined DX human resources and are strengthening DX human resources through in-house education, recruitment, utilization of affiliates, etc. Our development and recruitment of higher-level DX human resources is progressing.
At present, we are strengthening utilization of digital technologies (citizen development) education at workplaces.

Achievement of Purpose

Data scientists: Internal development + recruitment (new graduates + mid-career people)

Data scientists

System developers: Utilization of affiliate (NRI System Techno)

System developers

Organizational/work transformation

All employees: Define "Business DX human resources" and educate

Business DX human resources
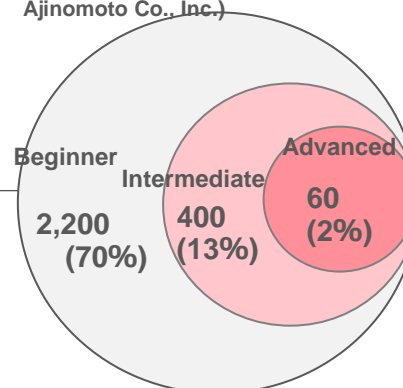(Beginner, Intermediate, Advanced)

Recruitment

We are hiring new graduate and mid-career people in line with departments' business needs. Demand for digital marketing human resources is growing in line with the progress of business model transformation. We strengthened career hire recruitment last year, primarily of product manager human resources.

Education

Through 2020, our focus was on the enhancement of digital literacy. From 2024, we will strengthen the use of digital technologies. We will support citizen development (application development through the use of low- or no-code tools), programming, data analysis, etc.

Number of certified business DX human resources
2020-2023 Ajinomoto Co., Inc.

(Percentages of certified employees in Ajinomoto Co., Inc.)

Beginner
2,200 (70%)

Intermediate
400 (13%)

Advanced
60 (2%)

Development and recruitment of advanced DX human resources is progressing, and intermediate and advanced DX human resources are increasing.

Intermediate DX human resources
Able to determine appropriate utilization policy for actual work transformation

Advanced DX human resources
Able to specifically solve issues and transform on the basis of high-level data utilization and knowledge of statistics and machine learning algorithms

V-2. DX Human Resources Development: Development and Education Programs (Strengthening of Citizen Development)

We will promote the use of tools and methods according to business needs, through community activities and the provision of learning opportunities.
Employees themselves will utilize digital technologies to improve work efficiency and create new value.
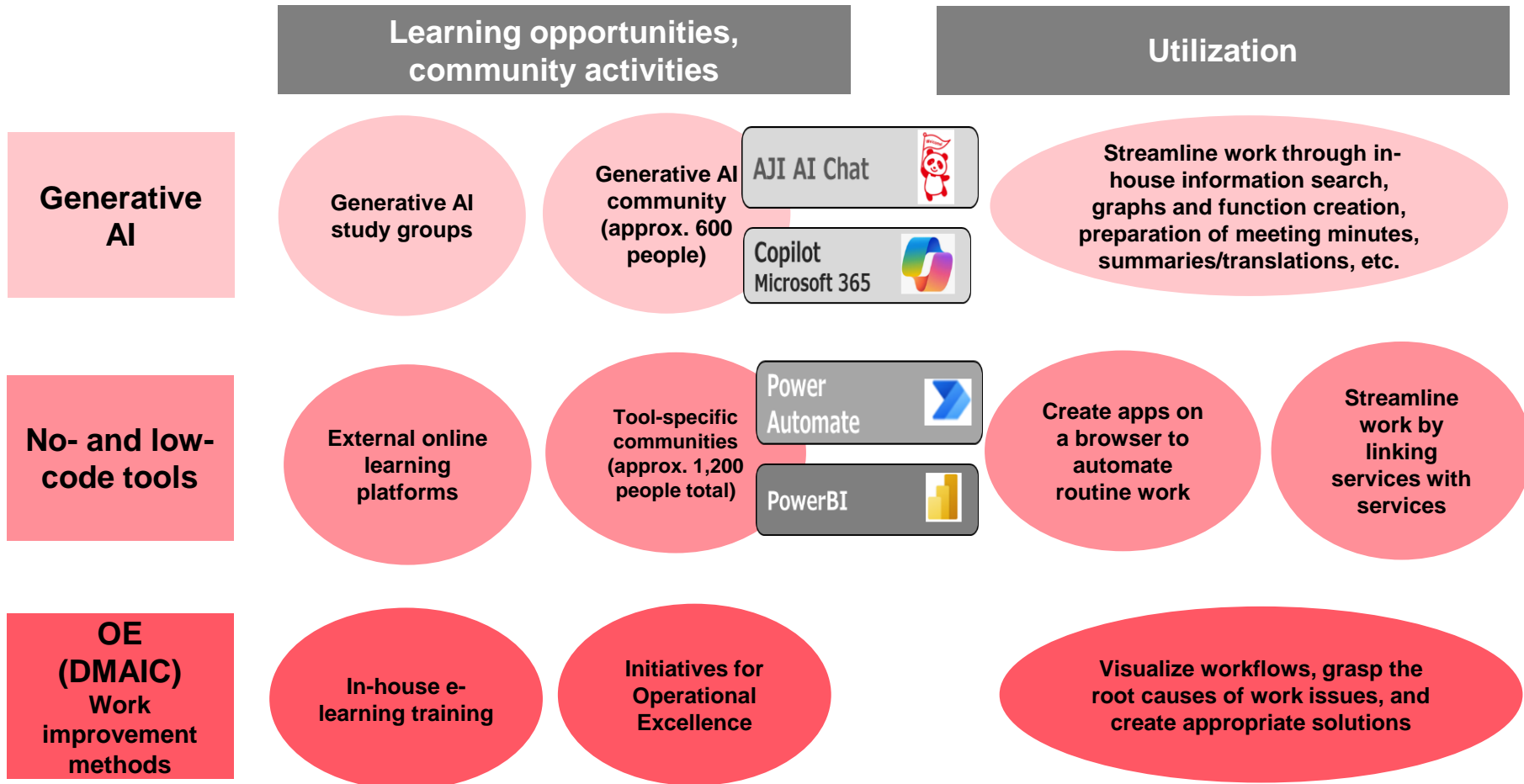
Learning opportunities, community activities		Utilization

Generative AI

- Generative AI study groups
- Generative AI community (approx. 600 people)
- AJI AI Chat
- Copilot Microsoft 365
- Streamline work through in-house information search, graphs and function creation, preparation of meeting minutes, summaries/translations, etc.

No- and low-code tools

- External online learning platforms
- Tool-specific communities (approx. 1,200 people total)
- Power Automate
- PowerBI
- Create apps on a browser to automate routine work
- Streamline work by linking services with services

OE (DMAIC) Work improvement methods

- In-house e-learning training
- Initiatives for Operational Excellence
- Visualize workflows, grasp the root causes of work issues, and create appropriate solutions

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VI-1. 2030 Roadmap and DX Strategy (Repeat of slide 9)

With data management, DX human resources, etc. as a foundation, we aim to achieve the Roadmap that is our Group-wide goal by promoting the advancement of data-based management through all value chains.

2030 Roadmap Goal

Advancement of data-based management

| R & D | Production | SCM | Marketing | Sales |

Data management platform (ADAMS)

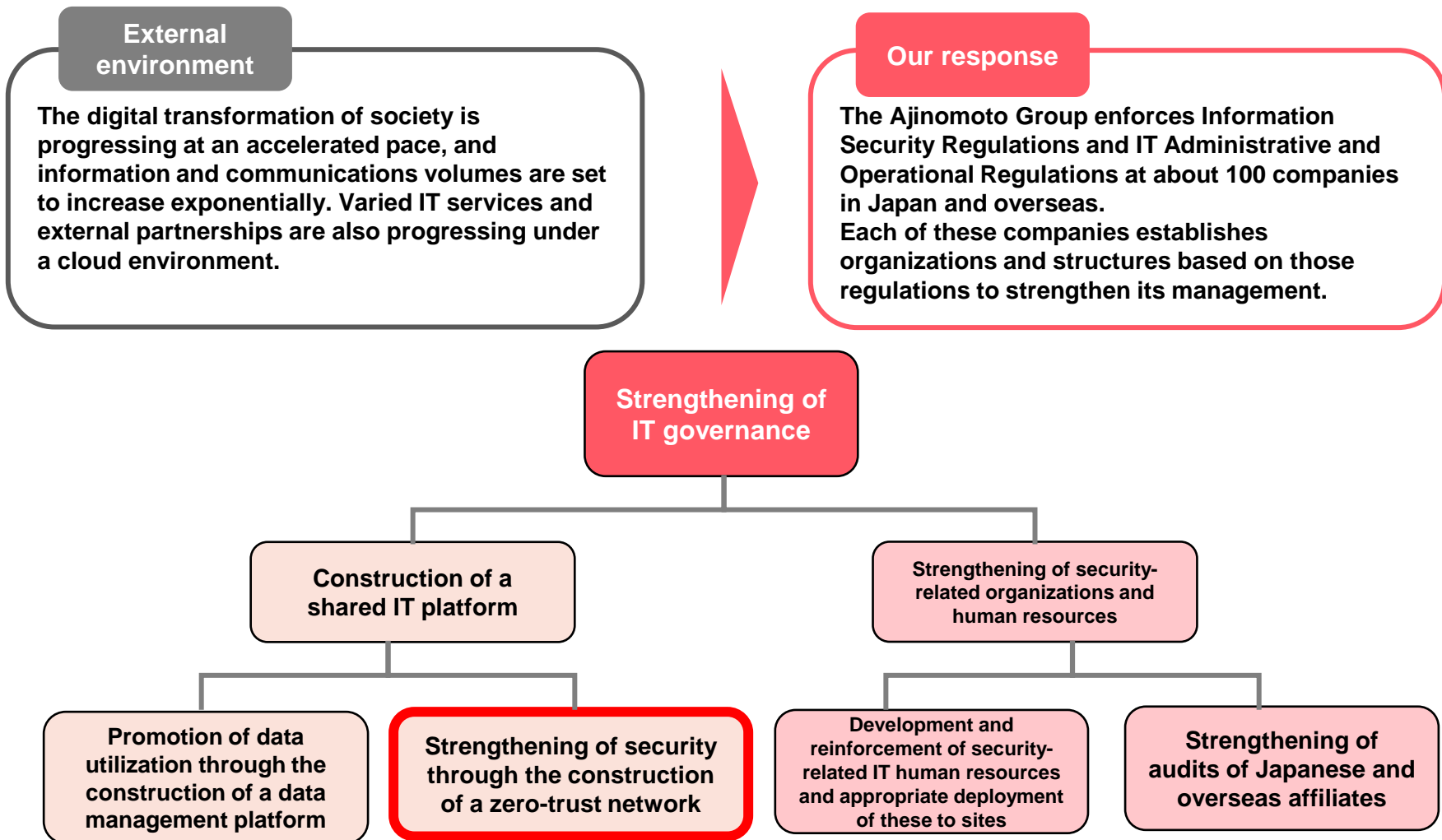**Development of DX human resources** (digital utilization)

IT security (zero-trust network)

VI-1. Strengthening of IT Governance

While enhancing security, we are building an organizational structure and mechanisms to create social and economic value through the utilization of digital technologies. The Ajinomoto Group as a whole, including overseas affiliates, will continuously optimize the effectiveness of IT and digital technologies and reduce risks.

External environment

The digital transformation of society is progressing at an accelerated pace, and information and communications volumes are set to increase exponentially. Varied IT services and external partnerships are also progressing under a cloud environment.

Our response

The Ajinomoto Group enforces Information Security Regulations and IT Administrative and Operational Regulations at about 100 companies in Japan and overseas.
Each of these companies establishes organizations and structures based on those regulations to strengthen its management.

Strengthening of IT governance

Construction of a shared IT platform

Strengthening of security-related organizations and human resources

Promotion of data utilization through the construction of a data management platform

Strengthening of security through the construction of a zero-trust network

Development and reinforcement of security-related IT human resources and appropriate deployment of these to sites

Strengthening of audits of Japanese and overseas affiliates

VI-2. Changes in the IT Environment Surrounding Companies

Amid varied changes in the environment, IT infrastructure and security must transform into a model adapted to the changes.

Offense | Changes in work styles

An environment is needed that enables work Anytime, Anywhere, with Anybody

Anytime	Anywhere	With Anybody

Offense | Expansion of use of cloud services

Active utilization of cloud services to realize invigorated communication, collaboration, and productivity enhancement

Defense | Increasing severity of security threats

Cyber attacks on companies are growing in severity, and new threats are emerging

Worsening of threats	Exposure and threat-based ransomware
Vulnerabilities	Vulnerabilities in VPN devices; uncertified/unauthorized cloud services

## Defense | Corporate liability for security response

The rise of social liability for companies' security response

Financial Services Agency, "Guidelines for Investor and Company Engagement" (revised version)

Does the company appropriately respond to changes in the environment surrounding business, **such as** (omitted) **the need to address cyber security** (omitted)**, in its management strategies and plans?**

VI-3. Transition to the Cloud and to Zero-Trust Networks

To adapt to varied changes in the environment, we will construct an IT platform capable of guaranteeing security and thereby allowing personal working environments to be set up freely. We are developing a "zero trust network" with guaranteed security despite being an open network, and a transition to the cloud aimed at zero on-premise presence.
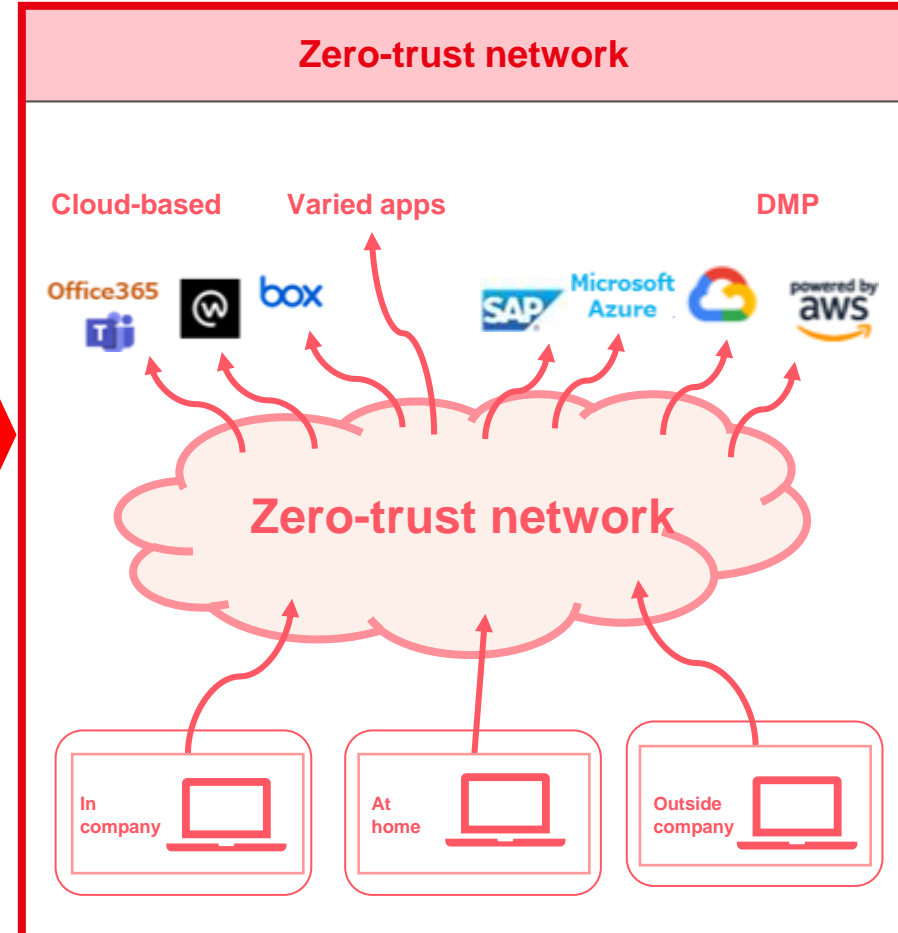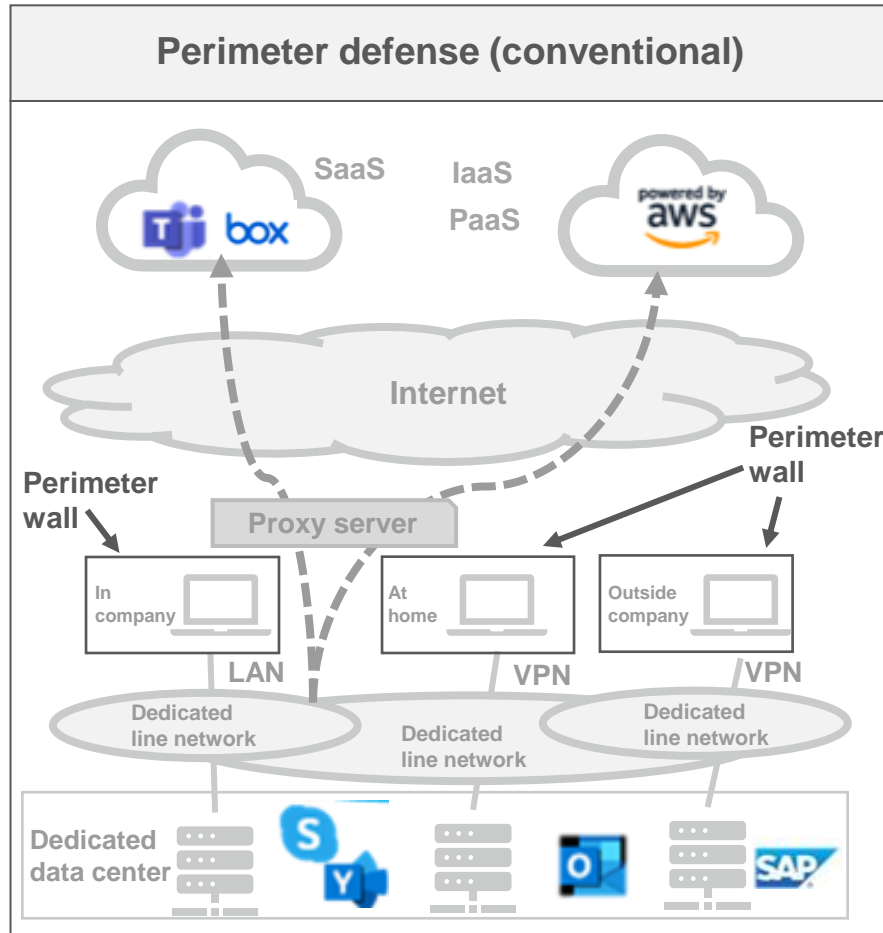
On-premise: A form of operation by which software and hardware necessary for system operation are owned and managed in-house

DX for the Ajinomoto Group is corporate transformation that leverages digital technologies. Through corporate transformation, it will contribute to the enhancement of our corporate value.

Eat Well, Live Well.

➢ **Forward-looking statements, such as business performance forecasts, made in these materials are based on management's estimates, assumptions and projections at the time of publication. A number of factors could cause actual results to differ materially from expectations.**

➢ **This material includes summary figures that have not been audited so the numbers may change.**

➢ **"AminoScience" is a registered trademark of Ajinomoto Co., Inc.**

Appendix

Appendix: Utilization of AI

In FY2024, we established an AI Subcommittee within the DX Committee.
The subcommittee collects information on technology and utilization, makes in-house utilization visual, and makse policy decisions for efficient lateral deployment, security decisions, and utilization on the basis of benchmarking, etc.

Productivity enhancement

Marketing
We will create examples of the effective use of generative AI and guidelines for using prompts.

Research
We are currently verifying the efficacy of the generative AI adoption, mainly in translation, manuscript creation, and code creation. Approx. 200 people: Total reduction of about 43 hours/day.

Intellectual property
We are currently studying the use of generative AI to streamline competitive patent searches. We expect a reduction of about 70% in required time.

Value creation and enhancement

Food product research
We will use AI in *Deliciousness Technology*, CX design technology, food production technology, safety and security design technology, etc.

Web services
We developed the ReTabell® AI-powered web service with Daiichi Sankyo.

ReTabell
～食事を通じてあなたを応援する～

Quality assurance
We use AI in analysis of customer comments.

Introduction of AJI AI Chat
Introduced Ajinomoto-specific generative AI to all Ajinomoto employees in October 2023.