

Results of Operations for 2023

Headwaters Co., Ltd.

February 27, 2024

Securities code: 4011

Table of Contents

01

The History of Headwaters

- Past
- Present
- Future

02

Highlights of 2023

- Accomplishments
- Improvements

03

Consolidated Forecasts for 2024

04

Challenges and Strategies

Appendix

01 — The History of Headwaters

- Past
- Present
- Future



Name	Headwaters Co., Ltd.
Established	November 2005
Representative:	Yosuke Shinoda, Representative Director
Head office	Shinjuku i-Land Tower 4F 5-1, 6-chome, Nishishinjuku, Shinjuku-ku, Tokyo
Capital	369 million yen
Number of employees	166 (including contract employees)

* As of the end of December 2023

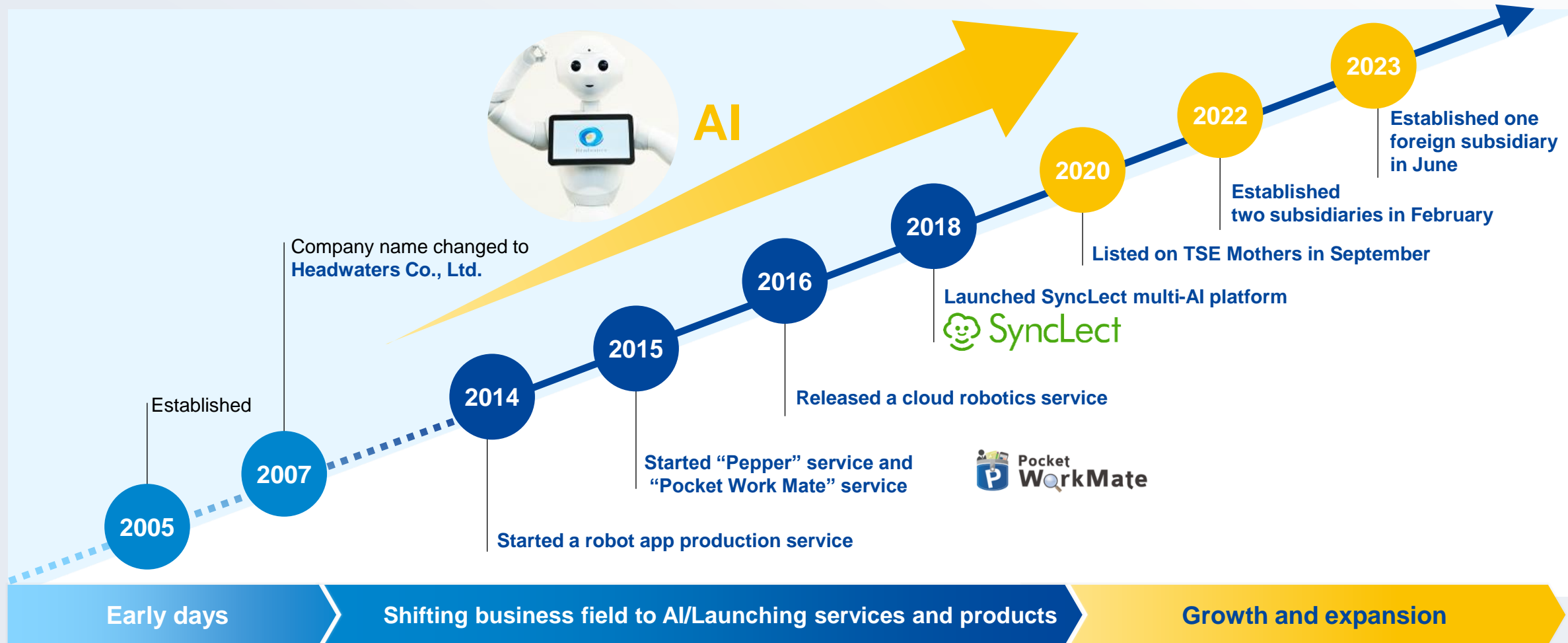
**Becoming
the center of industry,
headwaters.**

Engineering × Business = ∞

**Implement new technology
to the society**

▶ Our Commitments Since 2005

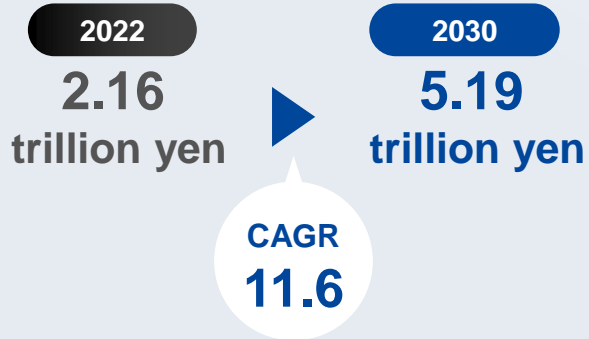
Headwaters is a front-runner in the field of AI, with abundant data, analytical methods, and development capabilities accumulated since the early days of AI.



▶ The Market Environment

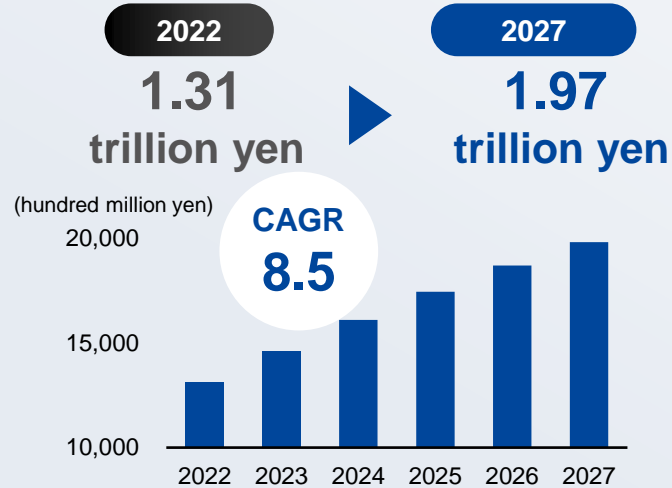
The demand for DX and AI utilization is increasing rapidly in Japan because of the falling working age population resulting from the low birthrate and aging society and the 2024 problem in the logistics industry caused by work-style reform laws. Demand in the generative AI category is expected to increase by 15 times.

The DX Market in Japan



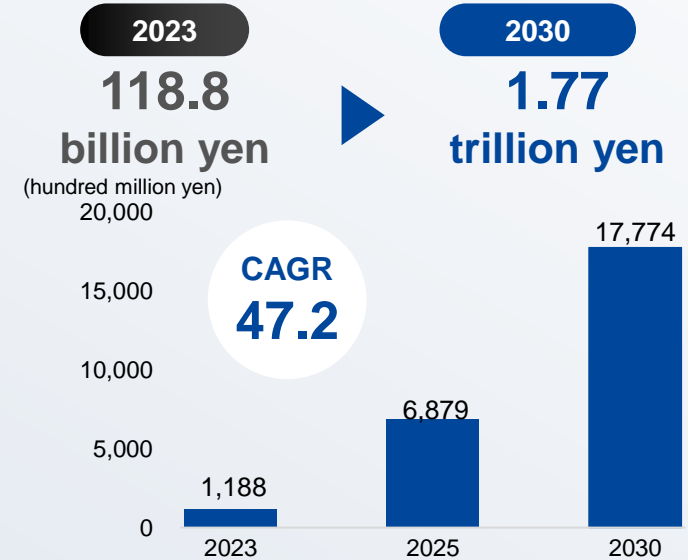
Industry-specific DX Market	CAGR
Manufacturing DX market	11.2
Distribution/Retail DX market	16.8
Transportation/Logistics DX market	13.5
Real estate DX market	12.4
Municipality DX market	19.0

The AI Business Market in Japan



AI Business Market in Japan	CAGR
Service market	8.2
Application market	8.4
Platform market	9.0

The generative AI Market in Japan

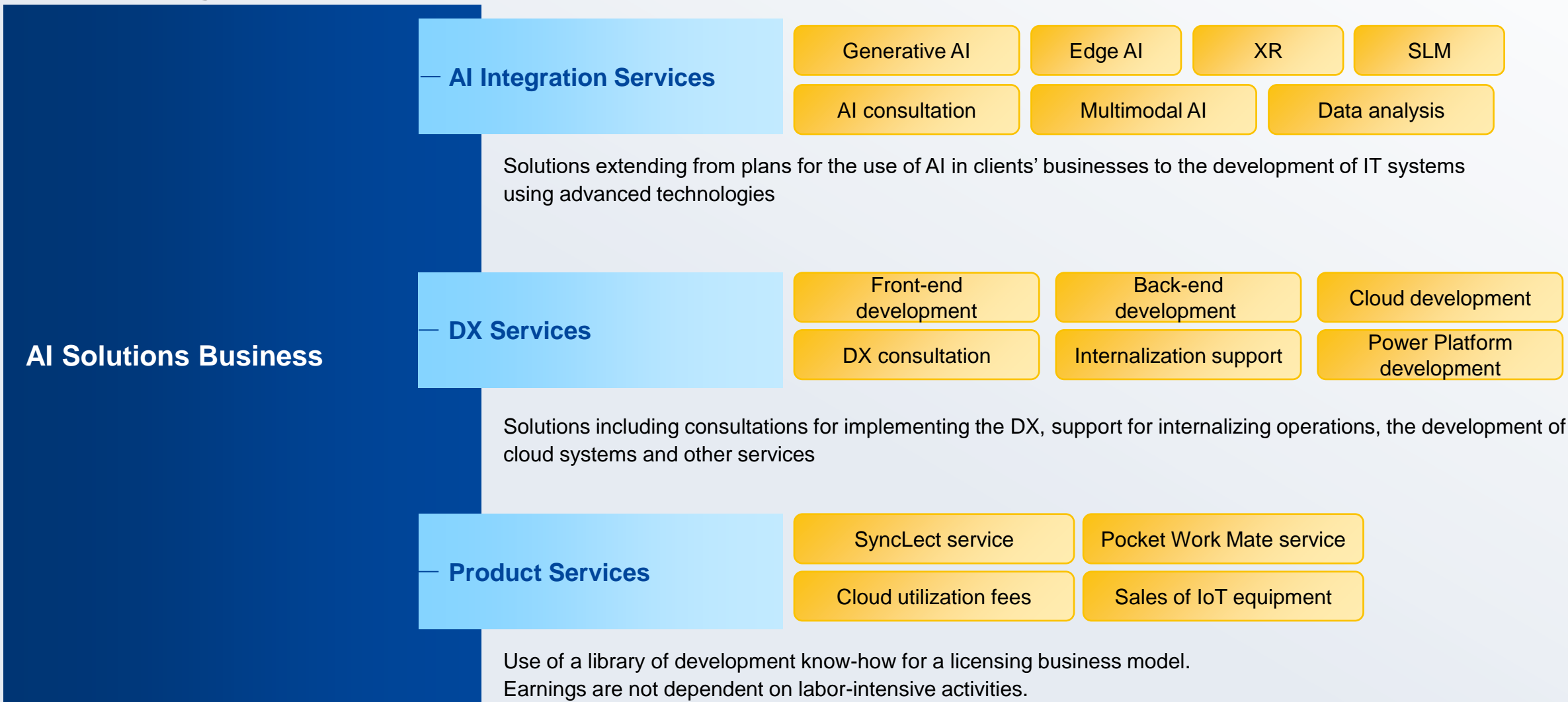


Generative AI Market in Japan	CAGR
Generative AI foundation model	46.0
Generative AI-related applications	46.6
Generative AI-related solutions services	52.2

Source: Compiled by Headwaters based on the "2022 Artificial Intelligence Business Comprehensive Survey," "Future Outlook of the 2022 Digital Transformation Market" by Fuji Chimera Research Institute Co., Ltd., "Survey on IT Personnel Supply and Demand" by Mizuho Information & Research Institute, Inc. and "2023 Survey of Trends in Key Business Sectors" by Japan Electronics and Information Technology Industries Association



Offering services by dividing our AI solutions business into three service categories and synergistically combining them

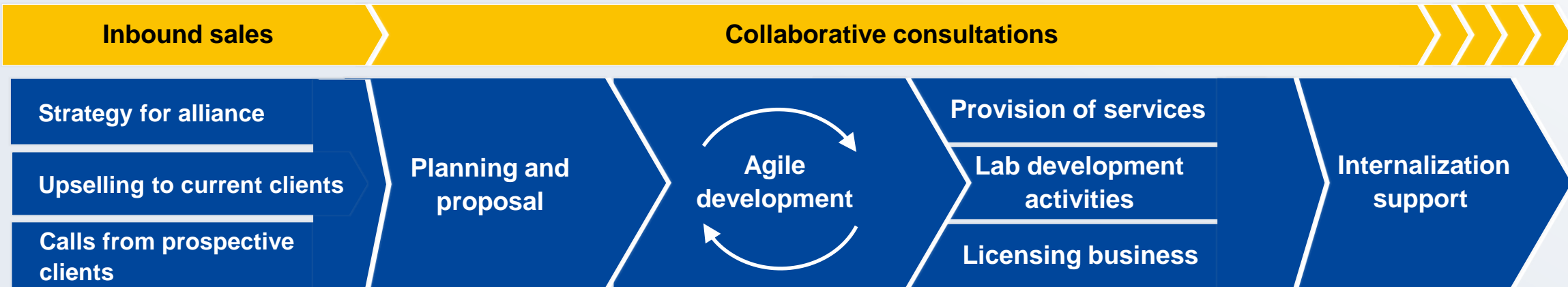
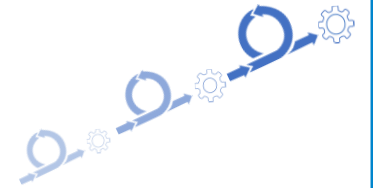


▶ AI Solutions Business

After engaging in extensive communication with our customers, Headwaters provides a highly practical system with “end-to-end” functionality

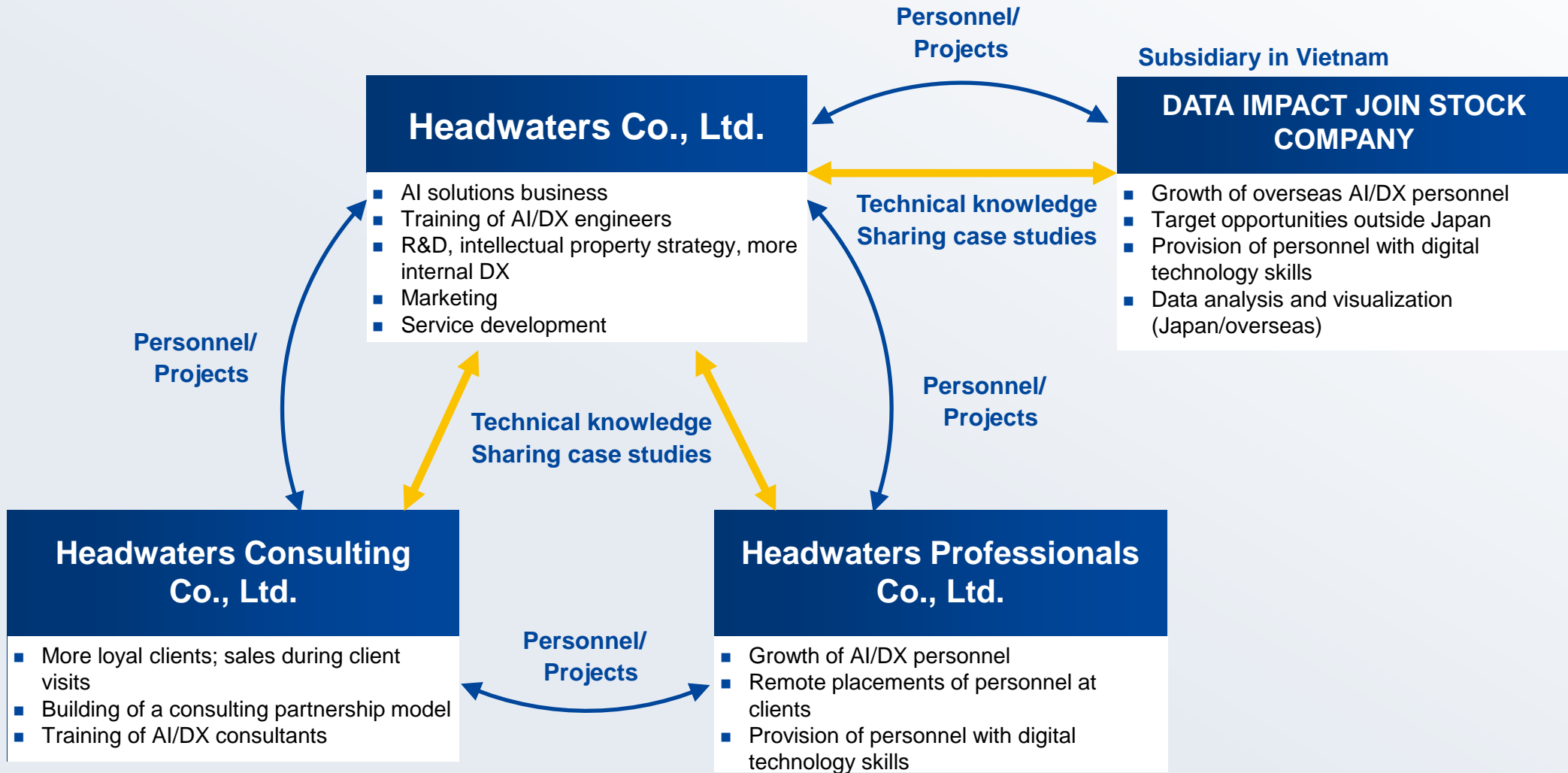
— The key points

- **Collaborative consultations** with clients to prevent misunderstandings that could lead to ambiguous requirements and unreasonably high expectations about the benefits of AI
- Enlargement of support capabilities for planning/proposal and DX execution at projects requiring generative AI, XR, edge AI and other elements to meet clients’ needs
- **Agile development methodology** for the ability to make updates using the latest technologies whenever possible
- Use **inbound sales** backed by active IR/internet disclosure of info about advanced technologies to enable engineers to use technologies for effective sales activities

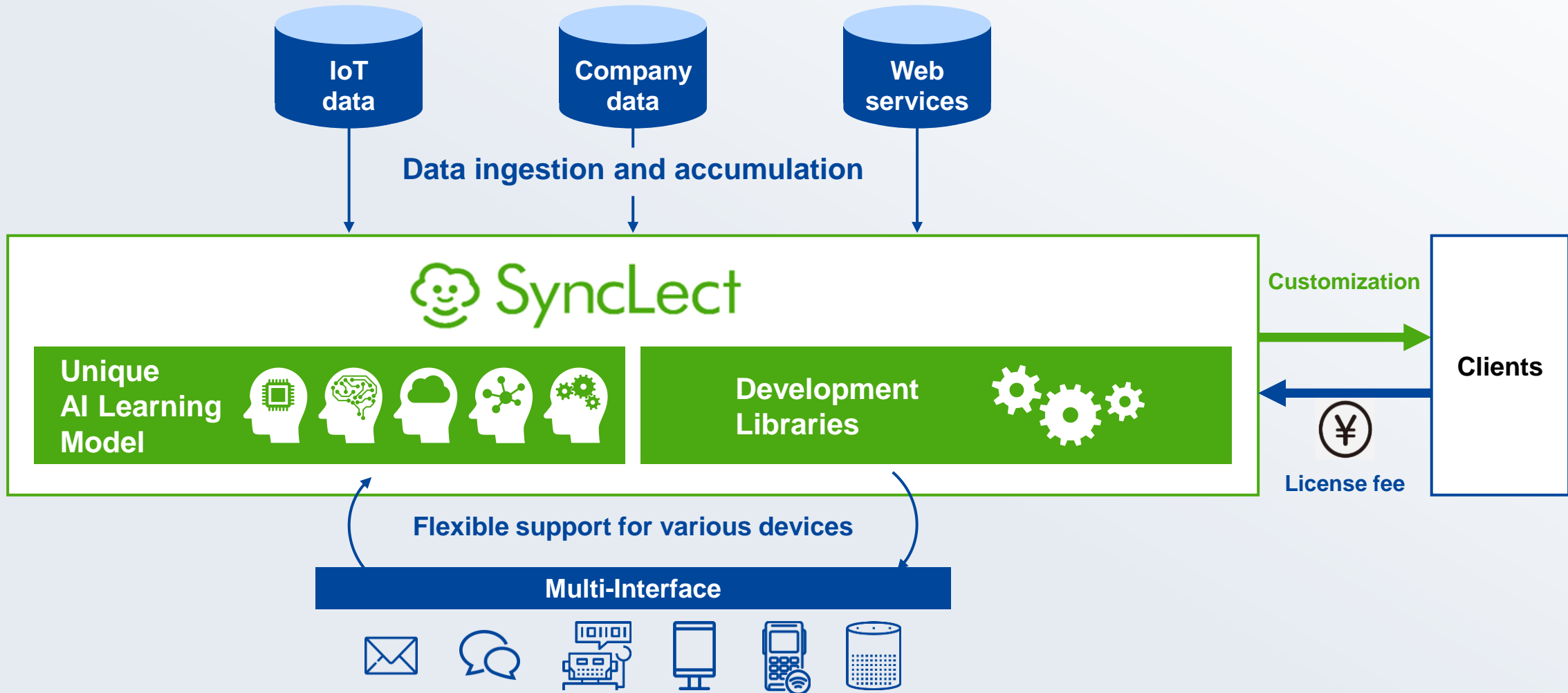




The Roles of Group Companies



"AI + IoT + Big Data Development & Operation Platform" that enables parts to be reused.





Solutions Span Many Market Sectors

Public Sector/Government

- Osaka Smart Senior Life project
- Kumamoto Prefecture (Sojo University × AITRIOS)
- Ministry of Economy, Trade and Industry online application system
- Regional disaster prediction solution

Smart Store

- In-store purchase behavior analysis
- Facial recognition payment platform
- Smart speaker payment
- Detection of in-store unusual behavior

Communications

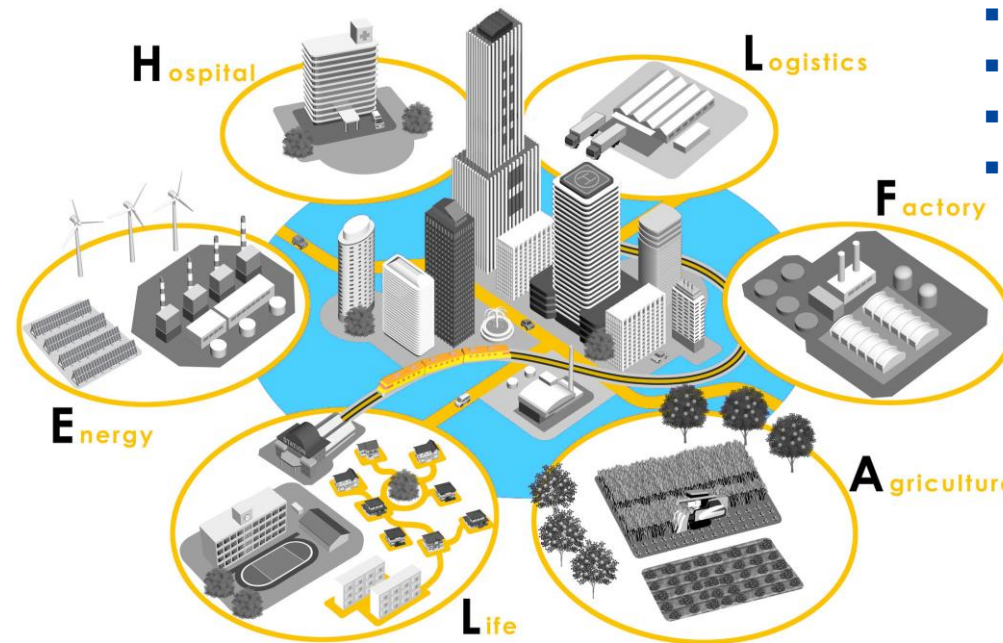
- Next-generation IoT communication technologies
- Generative AI dialog concierge
- XR platform

Smart Factory

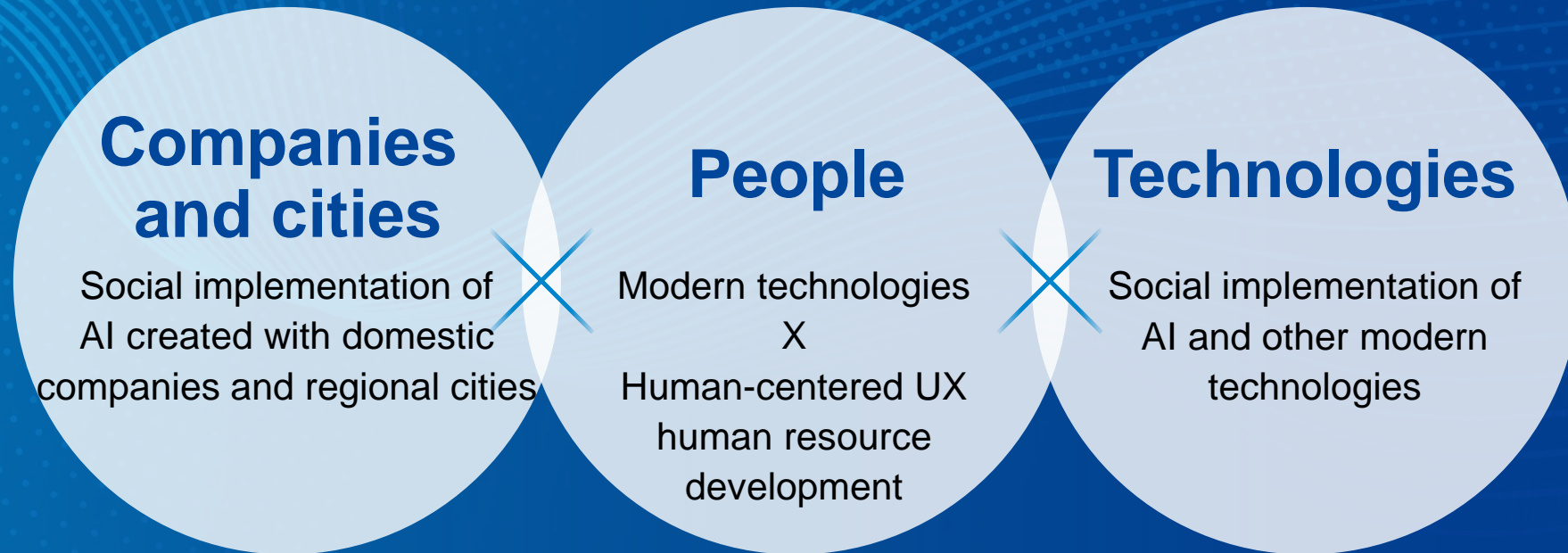
- Remote robot system
- Image analysis for mobility
- Smart glasses
- 5G solutions
- Automation and higher precision of external inspections

Smart Building

- LifeCycleOS
- Detection of lost items in restroom
- Congestion visualization service
- Digital twin



Social implementation of AI technologies for achieving Society 5.0



02 — Highlights of 2023

- Accomplishments
- Improvements



2023 Consolidated Financial Results Overview

(Thousand yen)

(Thousand yen)

	2022 Results		2023 Results			
		Pct. to net sales (%)		Pct. to net sales (%)	YoY change (%)	Vs. annual plan (%)
Net sales	1,574,596	100.0	2,315,088	100.0	147.0	99.7
AI	506,359	32.1	950,620	41.1	187.7	101.6
DX	767,135	48.7	1,066,178	46.1	139.0	101.5
Product	115,947	7.3	108,707	4.7	93.8	91.2
OPS	185,153	11.7	189,581	8.2	102.4	87.5
Operating profit	110,019	6.9	94,861	4.1	86.2	78.8
Ordinary profit	106,916	6.7	98,300	4.2	91.9	78.6
Profit	75,143	4.7	71,229	3.1	94.8	82.2
Profit attributable to owners of parent	-	-	70,683	3.1	-	-
Net income per share	40.13 yen		37.70 yen			

Net Sales

2,315 million yen

- YoY change: **+47.0%**
- Vs. annual plan: 99.7%

All-time High

2023 Key Performance Indicators: **Sales, Recruiting**

Accomplishments

- Sales, which is a key performance indicator, **increased 47.0%** in 2023 **to a new record high for the fifth consecutive year.**
- Increasing number of loyal clients due to progress with the alliance strategy
→ Change in client segments served is raising sales per client
- Raised the 2023 sales forecast in November due to strong sales in the first three quarters because of sales from large AI and DX projects.
- In the fourth quarter, there was an extremely large volume of interactions with customers regarding the demonstration trial phase for the use of generative AI in business operations.
Large companies are establishing budgets to start using generative AI in 2024 or later. To serve these companies, Headwaters is placing priority on generative AI projects and assigning many people to this category.

Improvements

- Opportunity loss in sales activities due to unprofitable projects in the second quarter
→ There were even more opportunities for sales growth.

▶ Financial Summary

Operating Profit

94 million yen

- YoY change: -13.8%
- Vs. annual plan: 78.8%

Ordinary Profit

98 million yen

- YoY change: -8.1%
- Vs. annual plan: 78.6%



Accomplishments

- Gross profit reached a **new record high for two consecutive years**
 → Gross profit: 855 million yen, up 32.4% YoY

All-time High

Improvements

- Operating loss of 14 million yen in the second quarter
- The gross profit margin decreased because the cost of sales increased faster than sales did.
 → Cost of sales: 1,460 million yen, up 57.1% YoY
 → The main reasons were higher rates for payments to partners, a higher pct. of sales involving partner companies and the need to assign people to generative AI projects.

Recruiting

Accomplishments

- Recruiting activities went well and the number of employees increased to a record high.
 - The number of employees (as of the end of December 2023): **166** employees *including 1 contract employee
 - **Net increase of 53 employees** across the entire group (net increase of 23 in 2022)
- Strengthened back office and middle office operations
 - Currently reinforcing the framework for the HR Group, use of partners, support teams and other activities



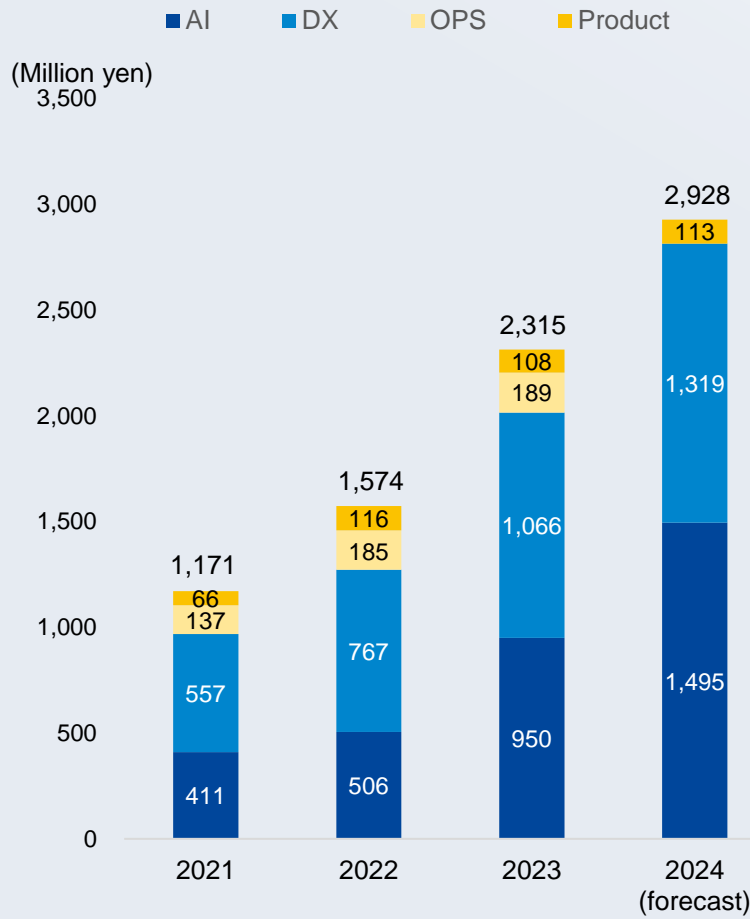
Others

Accomplishments

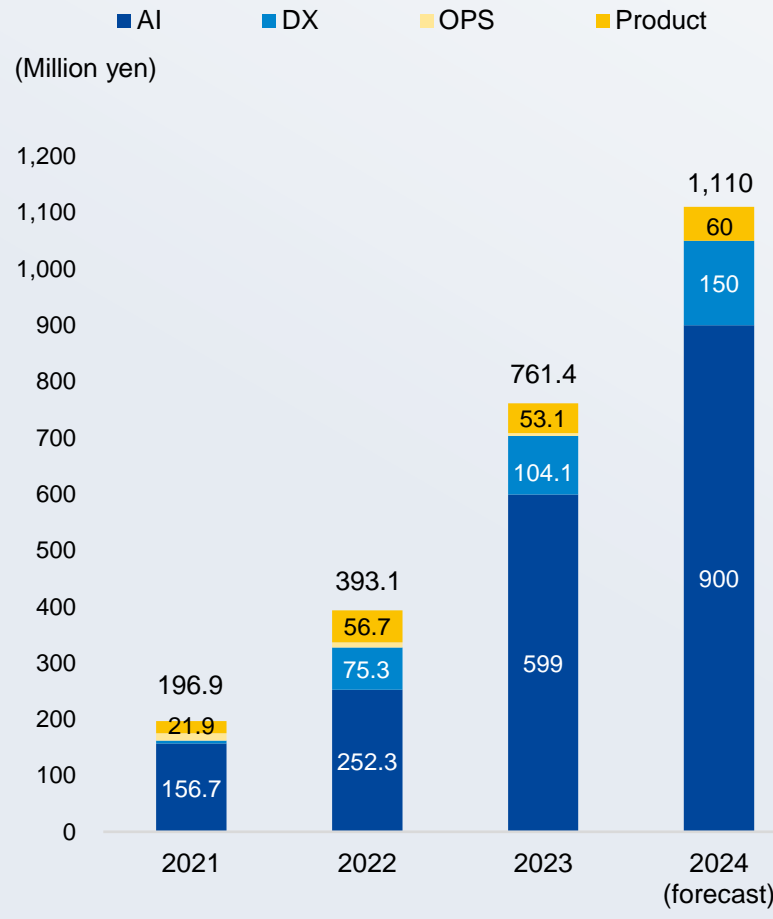
- Established a restricted stock compensation plan
- Established a foreign subsidiary DATA IMPACT JOINT STOCK COMPANY in June
 - Received a medal in the Kaggle competition
 - Data analysis and many other AI projects are under way
- Implemented a stock split at the end of June
 - To increase the stock's liquidity and attract a broader range of investors



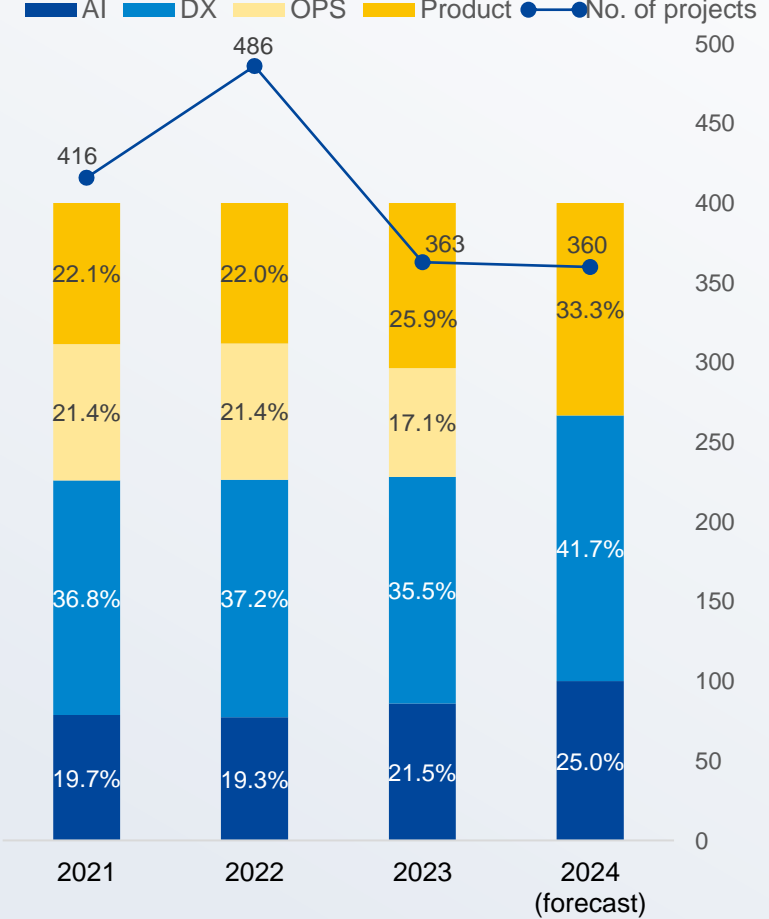
Net Sales by Service Category



Alliance Strategy-Related Sales



No. of Projects and the Ratio of Projects by Service Category



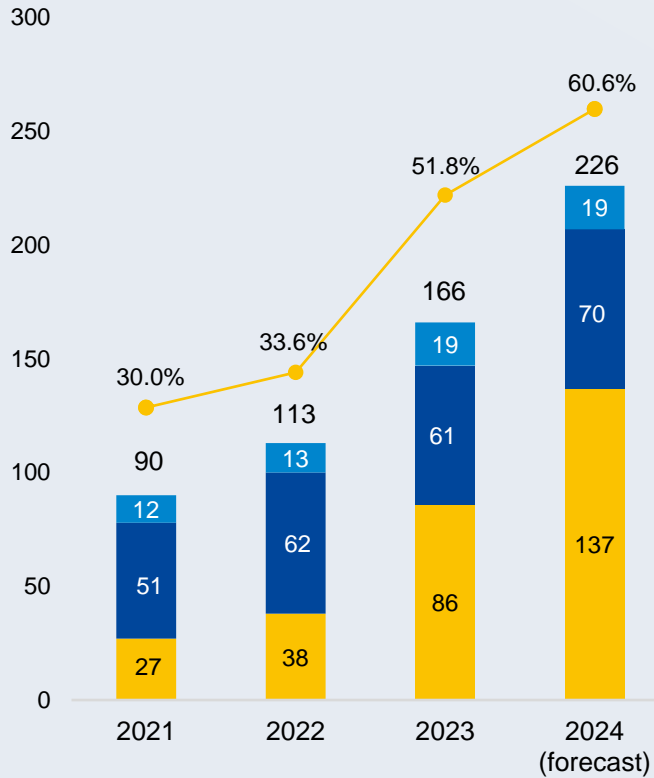
*The OPS services category was terminated at the end of 2023.

*2021 is non-consolidated figures and the following years are consolidated figures.



No. of Employees and AI Engineers

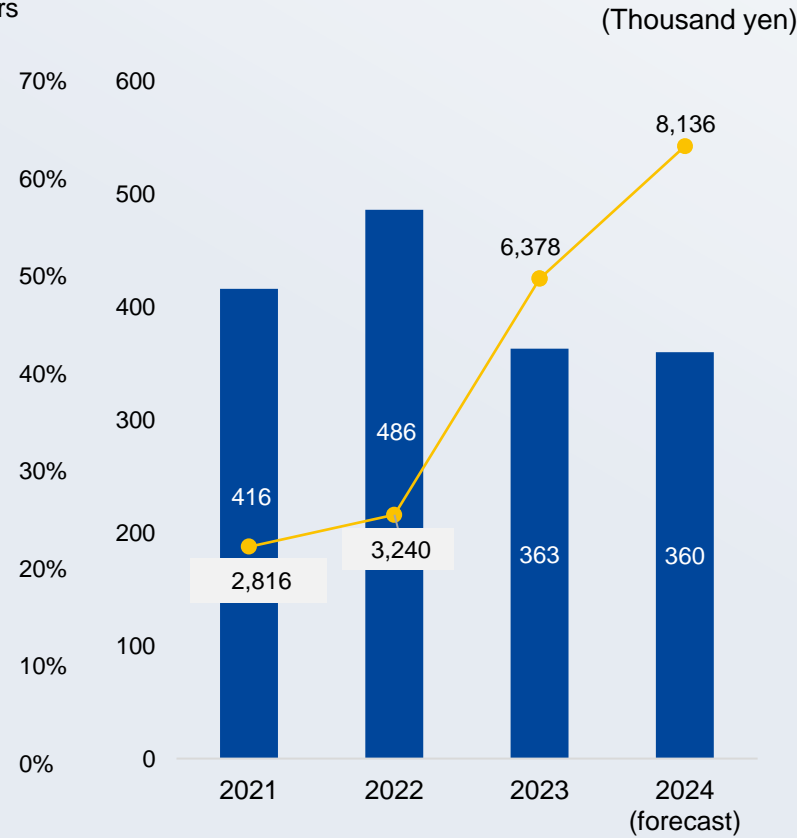
- No. of AI engineers
- No. of other engineers
- No. of non-engineers
- Pct. of AI engineers



*includes contract employees

Sales per Project

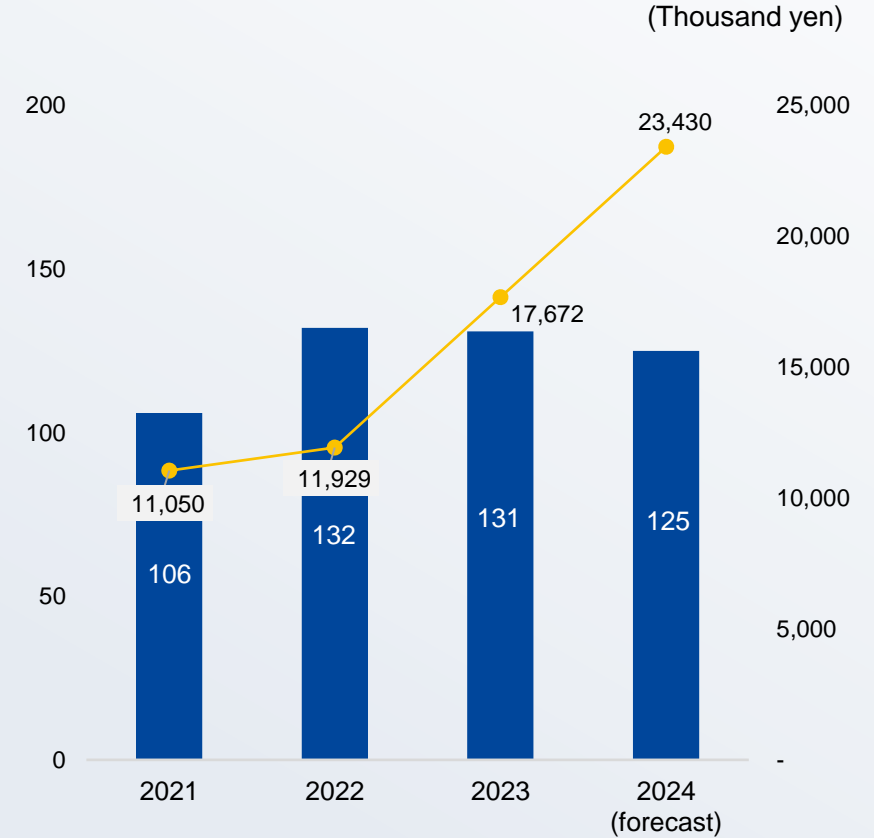
- No. of projects
- Sales per project



*2021 is non-consolidated figures and the following years are consolidated figures.

Annual Sales per Client

- No. of clients
- Annual sales



▶ The Progress of the Growth Strategy

Short term

— Meet Demand for Generative AI

Sales and training activities under way concerning needs involving generative AI (provision of products, lab services, workshops and other activities)

— Utilize External Resources

Sales is increasing rapidly through **alliance strategy**. Strengthened collaborations with major companies, such as Microsoft

Reference: KPI
 Net Sales by Service Category
 No. of Projects and the Ratio of Projects by Service Category

Reference: KPI
 Alliance Strategy-Related Sales
 Annual Sales per Client

Medium to long term

— Increase Recurring Revenue

Improving the sales strategy and contract formats to establish a base for consistent revenue

— New Sources of Revenue

Use R&D for new technologies and develop innovative services to support the licensing business model.

Reference: KPI
 Net Sales by Service Category

**Microsoft
Intelligent Cloud**

- Certified Microsoft Solution Partner
- Azure OpenAI RA Advanced Partner
- Microsoft Enterprise Accelerator GovTech

We will promptly catch up with the advanced technologies offered by various companies and implement them for our clients with agility.

Technologies/Knowledge



**Certified Solution Provider
for Global Technology Companies**

Social implementation of
new technologies

Technologies/Knowledge

**SONY
Sensing Technology**

- Edge AI Sensing Platform "AITRIOS"
- Intelligent Vision Sensor "IMX500"
- Sony's wireless communication standard "ELTRES IoT Partner"

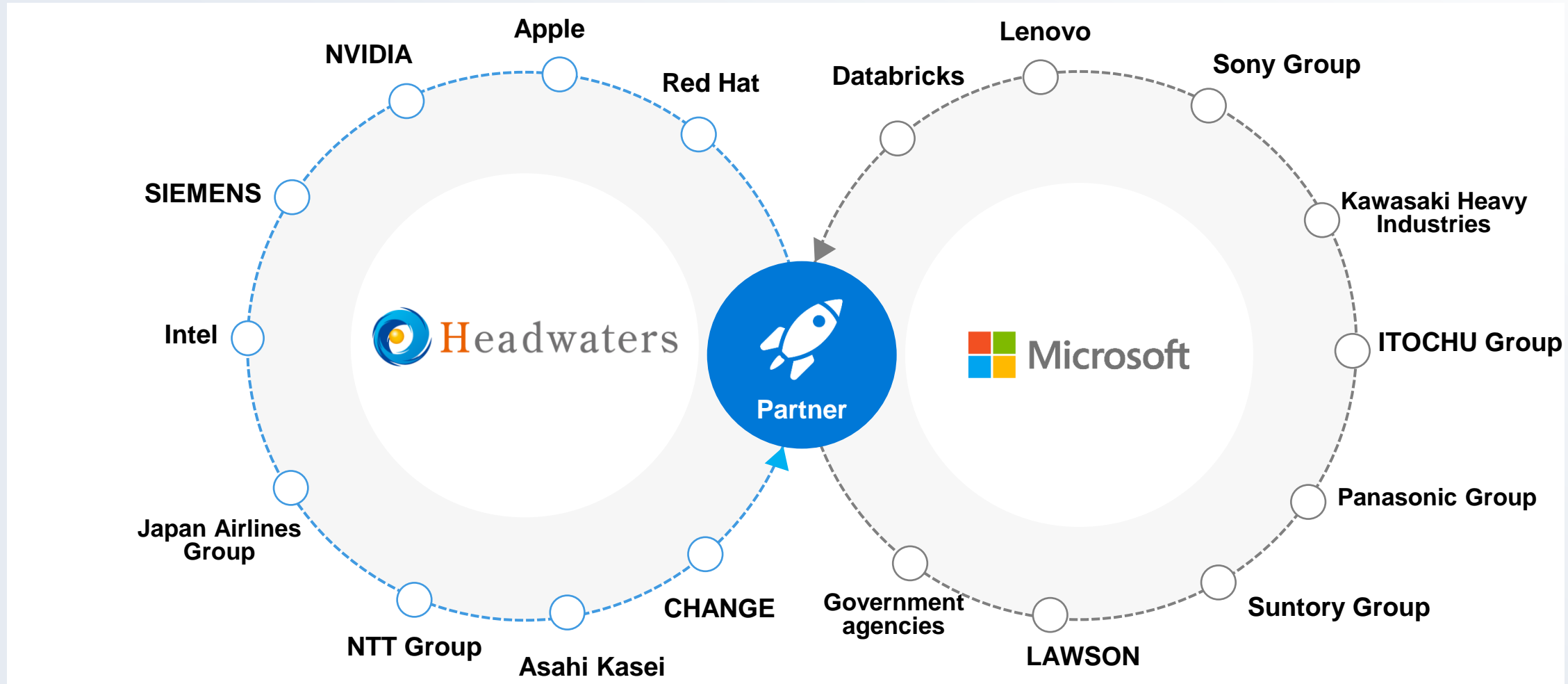
Technologies/Knowledge

**NVIDIA
Supercomputer**

- Participated in NVIDIA Metropolis Partner Program
- Participated in NVIDIA Omniverse Partner Council
- NVIDIA DX Acceleration Program

▶ Alliance Strategy: Microsoft × Partner To Partner

Accelerating business by leveraging Microsoft's customer base and technology along with our own customer base and technical expertise and building an ecosystem through "Joint Sales x Joint Marketing x Joint Solutions."



Upgraded alliances and used web-based pull marketing for business with leading firms in many industries and fields

Manufacturing

- Sony Corporation
- Sony Semiconductor Solutions Corporation *
- Sony Semiconductor Manufacturing Corporation *
- Panasonic Appliances Air-Conditioning and Refrigeration Systems Co.,Ltd.
- YKK Corporation *
- ROHM Co., Ltd.
- Asahi Kasei Corp. *
- Lion Corporation *
- FUJIFILM Holdings Corporation *
- Hitachi Construction Machinery Co., Ltd. *
- ShinMaywa Industries, Ltd. *

Trading/Transportation

- ITOCHU Corporation *
- Toyota Tsusho Corporation *
- Japan Airlines Co., Ltd.

Robot

- Kawasaki Heavy Industries, Ltd.
- Remote Robotics Inc.
- SoftBank Robotics Corp.

Food/Beverage

- Suntory Spirits Ltd.
- Sapporo Holdings Limited
- ITO EN, LTD.
- Nisshin Flour Milling Inc.

Media/Education/Entertainment

- Benesse Corporation *
- NHK Technologies, Inc. *
- Avex Entertainment Inc. *

Real Estate/Construction

- TAISEI CORPORATION
- SHIMIZU CORPORATION
- Mitsui Fudosan Co., Ltd.

Communication

- Apple Inc. *
- NIPPON TELEGRAPH AND TELEPHONE EAST CORPORATION *
- NTT DATA Japan Corporation
- Sony Network Communications Inc.

Finance/Insurance

- Nippon Record Keeping Network Co., Ltd.
- Meiji Yasuda Life Insurance Company
- Tokio Marine dR Co., Ltd.
- Seven Bank, Ltd. *

Retail/Distribution

- Lawson, Inc.
- Pan Pacific International Holdings Corporation
- BICCAMERA INC. *
- SEVEN-ELEVEN JAPAN CO.,LTD. *
- NITORI Co., Ltd. *
- Village Vanguard Co., LTD.

Government/Public Sector

- Ministry of Economy, Trade and Industry
- Osaka Smart Senior Life Demonstration project promotion council
- Shibuya City Office *
- Kobe University *
- Sojo University *
- National Agriculture and Food Research Organization

(In no particular order; an asterisk denotes a new client acquired within the past year.)

03 — Consolidated Forecasts for 2024



Consolidated Forecasts for 2024

(Thousand yen)

	2023 Results	
		Pct. to net sales (%)
Net sales	2,315,088	100.0
AI	950,620	41.1
DX	1,066,178	46.1
Product	108,707	4.7
OPS	189,581	8.2
Operating profit	94,861	4.1
Ordinary profit	98,300	4.2
Profit attributable to owners of parent	71,229	3.1
Net income per share	37.70 yen	

(Thousand yen)

	2024 Forecasts		
		Pct. to net sales (%)	YoY change (%)
Net sales	2,928,807	100.0	126.5
AI	1,495,449	51.1	157.3
DX	1,319,720	45.1	123.8
Product	113,638	3.9	104.5
OPS	-	-	-
Operating profit	226,025	7.7	238.3
Ordinary profit	229,085	7.8	233.0
Profit attributable to owners of parent	156,778	5.4	221.8
Net income per share	83.34 yen		

04 — Challenges and Strategies



Future Initiatives

Increase in Sales

- Addition of loyal clients as planned
 - ▶ By strengthening our consulting team, we leverage the advantage of being our one-stop solution
 - ▶ Strengthening alliances

Improvement of Profit Margin

- Strengthening the recurring revenue business, including the licensing model
- Higher unit sales price, control of the percentage of sales involving partner companies, and the use of generative AI to increase operational efficiency

Stabilization of Revenue

- Expanding recurring business through team development under a lab-type contract
- Improvement of sales ratio in the recurring revenue business
 - ▶ Use one-time AI and DX projects for the steady growth of OPS (operation and maintenance) and product sales

Securing Human Resources

- Continuous talent recruitment, including three subsidiaries
 - ▶ Strengthening internal programs for the purposes of upgrading training and increasing employee engagement
 - ▶ Talent acquisition through M&A

Enhancement of Employee Benefits

- Engineers with a wide range of technical skills
 - ▶ Reexaminations to maintain a proper salary framework for job categories when new companies join the group
 - ▶ Enhancement of welfare benefits (Restricted stock compensation plan and other benefits)

Challenges for companies in utilizing ChatGPT

When specialized for corporate use

- Security concerns
- Lack of familiarity with the latest information (Content learned by ChatGPT does not include the past year.)
- Lack of standardized or organized prompt management
- Character limits when using ChatGPT API
- Inability to reference internal company knowledge (documents in Excel, Word, PDF, etc.)
- Request for training on company-specific public information via URL
- Less GPT training accuracy in Japanese compared to English

Proprietary Generative AI Solution Service SyncLect Generative AI

About SyncLect Generative AI

- Convenient feature set for further leveraging GPT
- Quick and cost-effective implementation after resolving challenges
- Azure OpenAI Service GPT-4 and ChatGPT API accessible to non-technical users





Headwaters is assisting ITOCHU with the creation of businesses using generative AI, which is a project of ITOCHU's Virtual Office, a platform for collaboration across an entire organization. Our support includes the use of ideathons and minimum viable product (MVP) for higher operational efficiency at ITOCHU as well as support for an external sales business that uses generative AI.

The Virtual Office

The Virtual Office is a collaborative platform spanning an entire organization for the purposes of conducting projects involving all parts of an organization and speeding up the creation of new businesses.



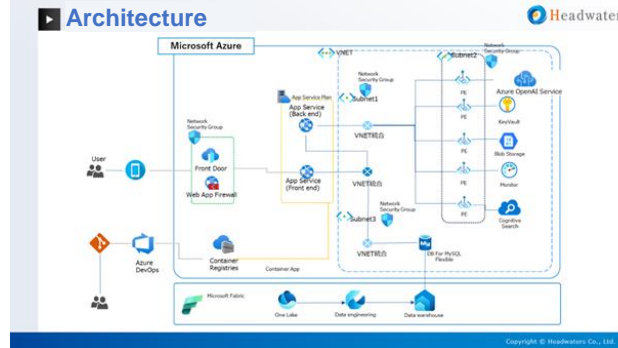
Employees with a strong interest and motivation involving a project work together



Formation of virtual organizational units with people from many departments



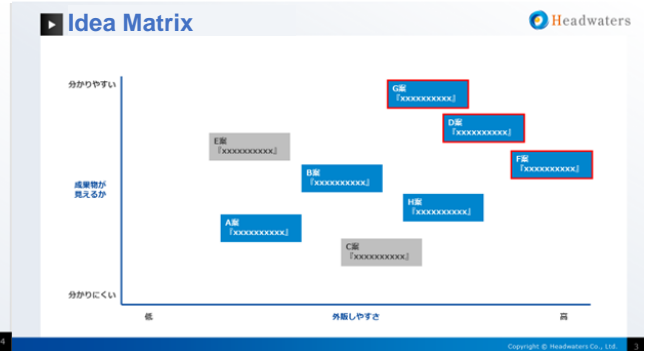
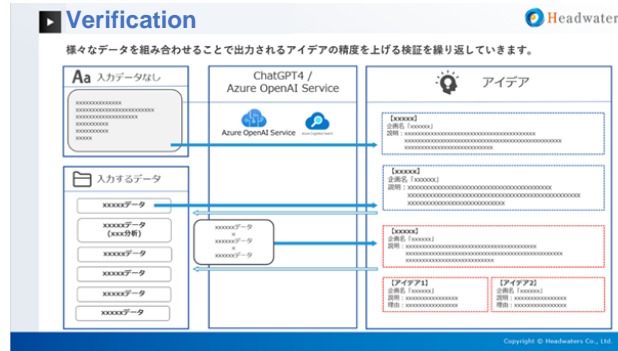
Use of a team's collective knowledge for efficiency to complete projects faster



Project Campus

1. 目的・目標		10. 基盤的・一次的な効果	
2. 利用シーン		3. 学習の利便性	
3. 学習方法・インフラ		4. 成功の指標	
4. 成功の指標		5. 期待される効果	
5. 期待される効果		6. 基盤的・一次的な効果	
6. 基盤的・一次的な効果		7. 最終システム	
7. 最終システム		8. 基盤的・一次的な効果	
8. 基盤的・一次的な効果		9. 期待される効果	
9. 期待される効果		10. 基盤的・一次的な効果	
10. 基盤的・一次的な効果		11. 期待される効果	
11. 期待される効果		12. 期待される効果	

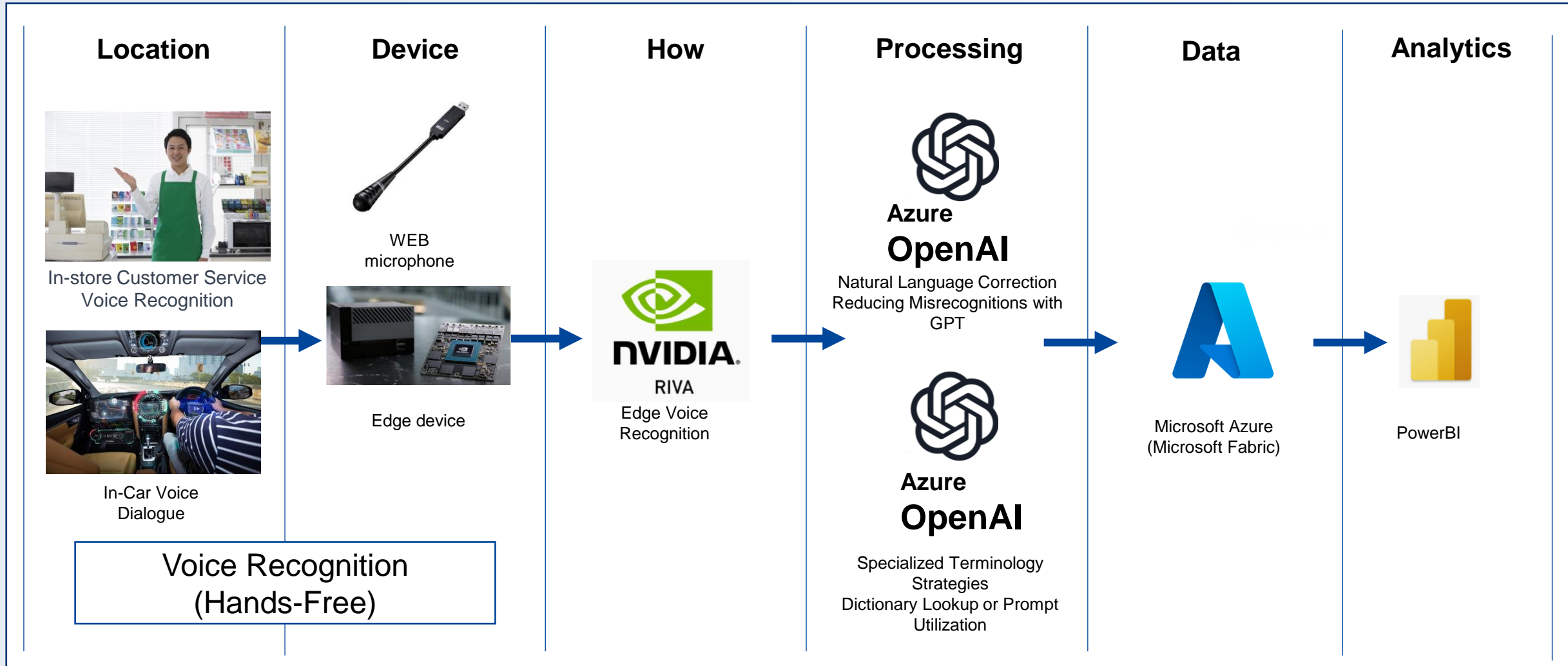
Copyright © Headwaters Co., Ltd.



A Virtual Office presentation at the Microsoft Ignite Japan event on December 13

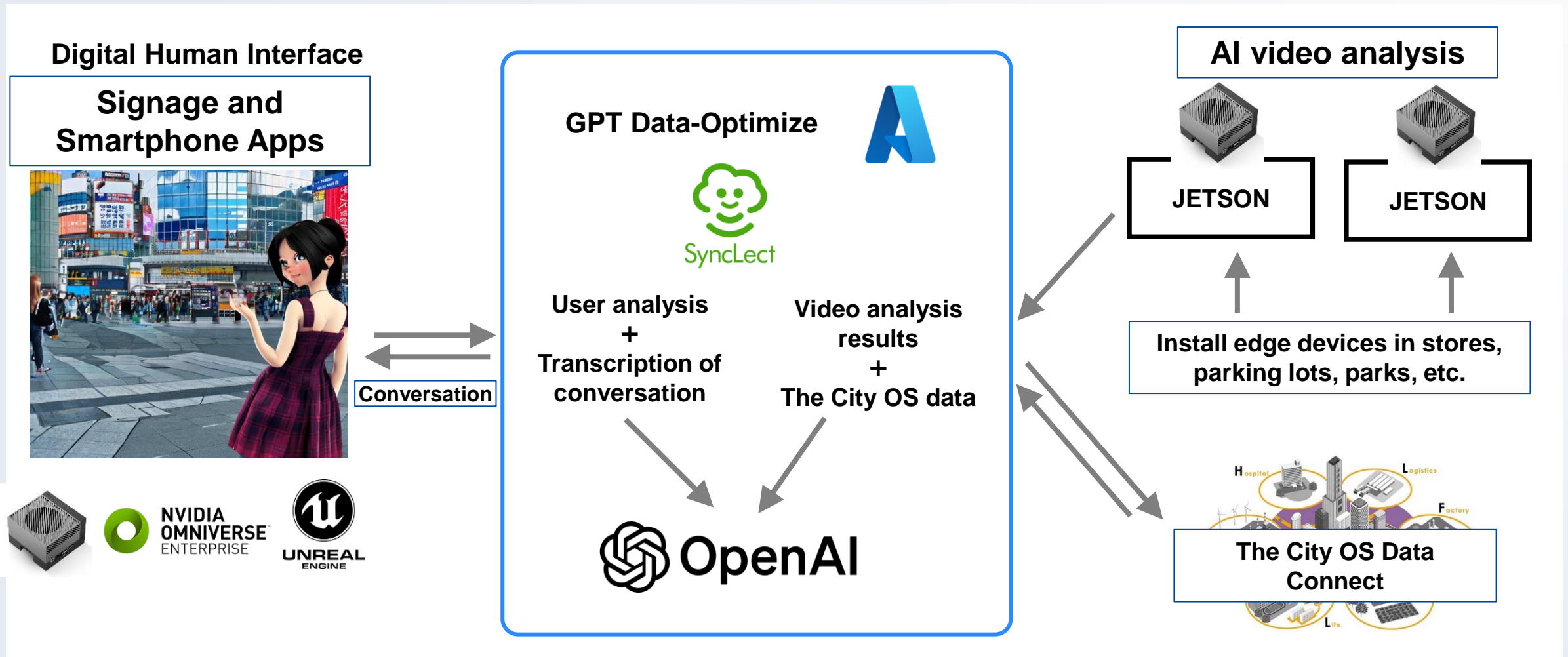
▶ Generative AI (Example-2)

Speech Recognition with NVIDIA Edge x Azure OpenAI Service



▶ Generative AI (Example-3)

Smart City: Accessing real-time data integrated with the City OS by interacting with animations and engaging in conversations displayed on signage and smartphone apps.



Much interest in generative AI development and orders are increasing due to the growing use of ChatGPT

Inquiries and orders

Inquiries

91 companies 

Orders

25 companies 

*Figures are for 2024
*Includes large companies

Our solutions

- Multimodal AI Lab Service
- Copilot Internalization Support Service
- SyncLect GenerativeAI Service
- Prompt Engineering Lab Service

Examples of building a stronger collaboration infrastructure



**Microsoft's Azure OpenAI Service
Advanced Partner**




**Databricks'
SI Consulting Partner**



The Azure OpenAI Service uses Power Platform to meet the needs of companies that want to start using this service **with speed and ease**. This service **can be added in a single day** in a secure manner for use with Microsoft 365.

GPT3.5 AI Chatbot GPT4

Prepare a proposal for a project to build a big data analysis system.

 [Company name] [Address] [Telephone number] [e-mail address]
[Date]
[Client name] [Client company name] [Client address]
Title: Proposal for a project to build a big data analysis system
Dear [Client name]

As a company with a proven track record and expertise in building big data analysis systems, [Your company name] is proud to offer innovative solutions for your business. We are pleased to submit our proposal for building a big data analysis system for your company.

This proposal represents a plan for building a system to achieve the following objectives.

1. Efficiently collect, analyze, and visualize big data
2. Provide insight to support decision-making for business operations
3. Propose strategic actions to improve management efficiency and business performance

The main phases in system construction are as follows.

1. Launch a project
 - Select a project team
 - Confirm a project scope
 - Establish project schedule

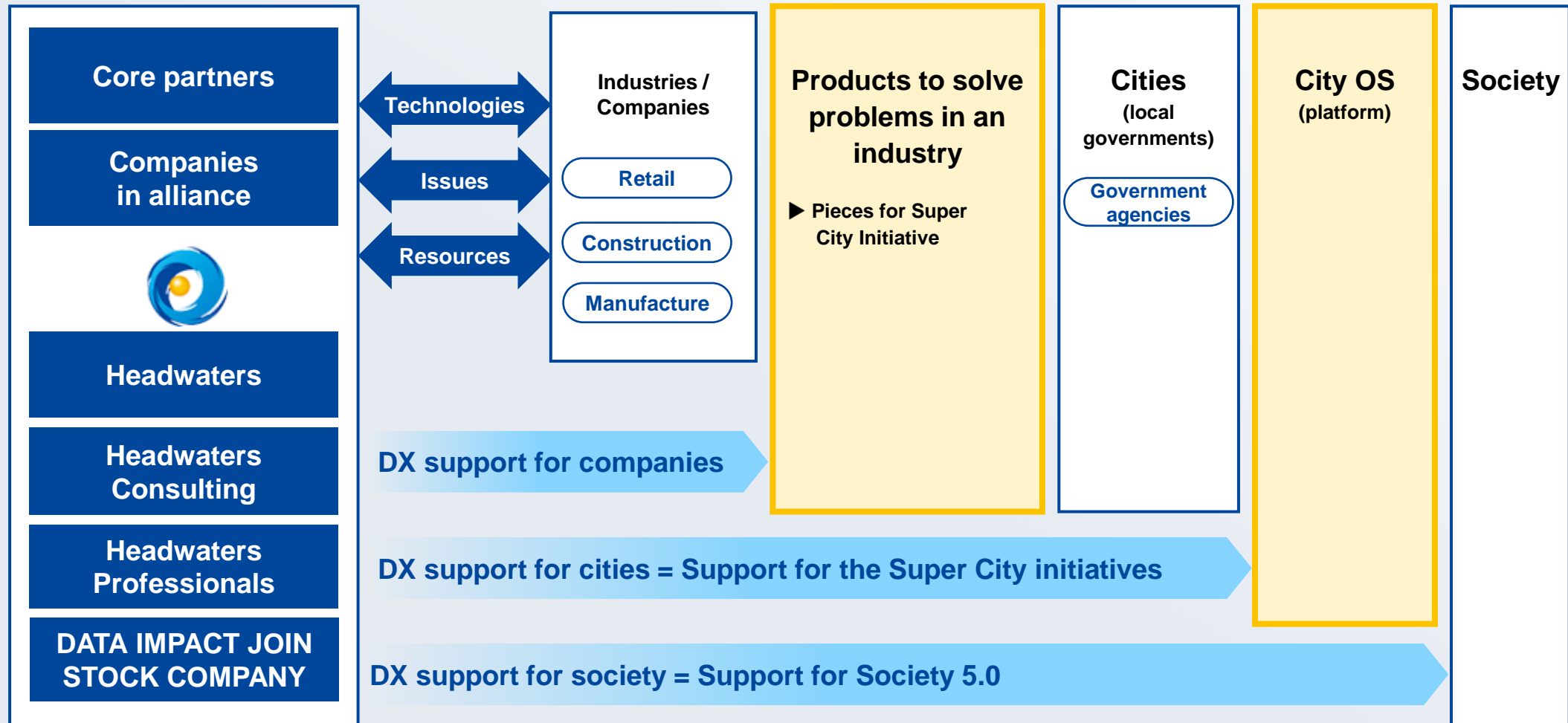


Power Apps



Power Automate

Developing a foundation to enable close communication with industries and companies for Society 5.0





Scenario for developing a successful model for our AI and DX-related businesses

DX for
In-house

DX for
Companies/
Industries

DX for Cities
(Super City Initiative)

DX for Society
(Society 5.0)

AI/ IoT /
Big data

AI/ IoT /
Big data

AI/ IoT /
Big data

**Our capability to achieve DX as social deployment of
advanced technologies in each phase**

Consultation/UX



Modern technology centered on AI

— Appendix

- **Certified as an advanced partner of the Azure OpenAI Service Reference Architecture joint program (November 14)**



Azure OpenAI Service Reference Architecture

- Headwaters announced SyncLect Generative AI, a generative AI platform that functions as an Azure OpenAI Service Reference Architecture for the purpose of enabling companies to use generative AI with confidence. Following this announcement, Headwaters was certified as an Azure OpenAI Service Reference Architecture joint partner program advanced partner.
- This certification is expected to strengthen ties with Microsoft for creating proposals for clients and developing technologies. Furthermore, the greater recognition of SyncLect Generative AI and increase in its reliability are likely to increase the number of clients using this technology.

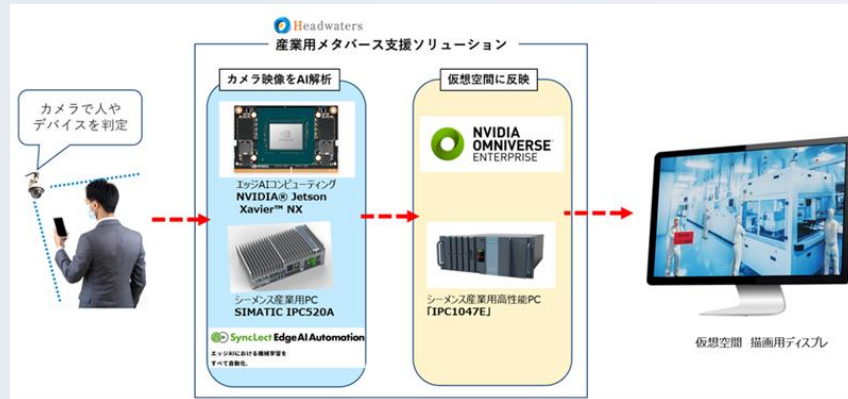
- **Launched the SyncLect Generative AI service, a generative AI utilization platform for data learning by the Azure OpenAI Service (August 17)**



- Headwaters started offering the SyncLect Generative AI service, which is a generative AI platform that uses the Azure OpenAI Service of Microsoft Japan.
- To use ChatGPT for corporate activities, individual companies need to transfer their business knowledge into a GPT model. Then companies must customize this model to receive responses that match specific applications.
- The SyncLect Generative AI service makes it possible to perform learning for specific business tasks by using a company's internal data as well as external data. Enabling companies to quickly start using a GPT model platform is another benefit. With these features, the new service can further improve a company's operational efficiency and allow a company to use generative AI in its services.

▶ 2023 Main Topics (2)

- Headwaters Industrial Metaverse Use Support Solution newly compatible with NVIDIA Omniverse™ and the Siemens industrial high-performance PC - Exhibited at the Siemens booth at SEMICON JAPAN 2023 (December 6)



- The Industrial Metaverse Use Support Solution of Headwaters became compatible with a 3D design collaboration provided by NVIDIA, the NVIDIA Omniverse™ Enterprise digital twin simulation development platform, and the Siemens IPC1047E industrial high-performance PC.
- The Headwaters Industrial Metaverse Use Support Solution allows the use of AI cameras at factories, stores and other distant locations and incorporating data from the cameras in a virtual space (metaverse) on a real-time basis. The benefits are improvements in safety and efficiency.

- Certified as a NVIDIA Inception partner company (June 29)



- Headwaters has been certified as a partner company of NVIDIA Inception, a program that supports AI start-up companies.
- By working with NVIDIA, Headwaters has been receiving an increasing number of projects that involve a start-to-finish line of support for the DX of client companies or the use of “smart” processes and equipment. Support extends from initial concepts and strategies to determination of actions and the eventual execution of the plan. Headwaters became a NVIDIA Inception partner to strengthen collaboration with NVIDIA.
- As a partner, Headwaters has access to NVIDIA’s latest technical tools and AI resources and can receive support concerning technologies. In addition, Headwaters can use an education support program.

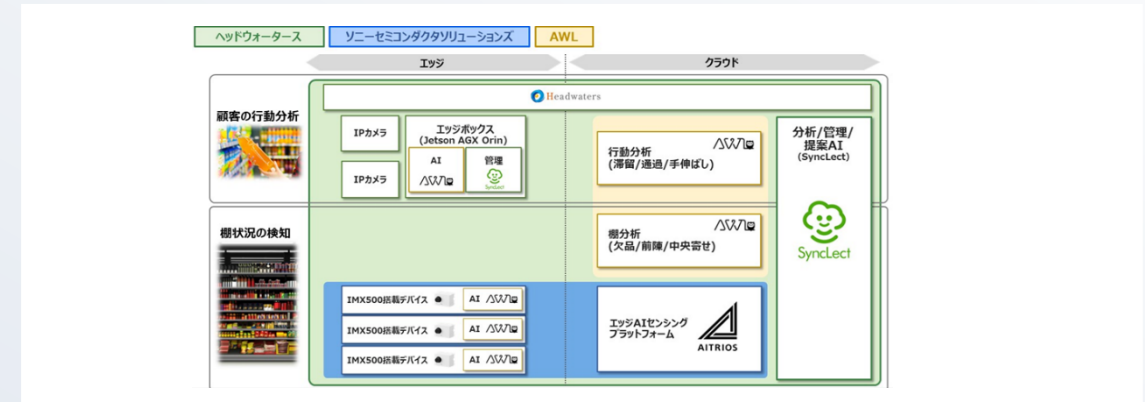
▶ 2023 Main Topics (3)

- Support for data platform utilization for ITOCHU's Virtual Office generative AI, Microsoft Fabric and other services -Information presented at Microsoft Ignite Japan (December 8)



- Headwaters has provided support for Business Creation Using Generative AI, a project involving Virtual Office of ITOCHU Corporation, which enables employees to work together across organizations.
- Headwaters was selected as a partner for this project because of its advanced technologies and accomplishments concerning the use of generative AI.
- Headwaters support contributed to the establishment of minimum viable products (MVP), which allow quickly and easily obtaining benefits, for the use of the Azure OpenAI Service, Microsoft Fabric and other data platforms.

- Edge AI demonstration trial (March-August 2023) for the DX of Lawson convenience stores raised operational efficiency by using edge AI technology for analyzing store shelves and customer purchasing patterns (November 16)



- Headwaters, Sony Semiconductor Solutions and AWL conducted an edge AI demonstration trial for the digital transformation (DX) of Lawson convenience stores.
- Using edge AI technology with Microsoft Azure, a cloud platform, resulted in the efficient automatic monitoring of store shelves for the visualization of merchandise levels. Furthermore, AI technology was used to study the movements of customers in stores, how much time they stayed in stores and other aspects of customer activities. We worked on creating a process for using these data to improve store operations.

▶ 2023 Main Topics (4)

- Certified as a Red Hat Ready Business partner (November 15)



- Headwaters has been certified as a Ready Business partner by Red Hat, one of the world's leading providers of open source solutions.
- As a Ready Business partner, Headwaters is increasing collaboration with Red Hat. The main goal is to use edge computing and hybrid clouds to create a larger lineup of services for customers.

- Report of completion of procedures to establish subsidiary DATA IMPACT JOINT STOCK COMPANY (June 23)



- Headwaters established a subsidiary called DATA IMPACT, which is based in the Southeast Asia region, to perform the following activities that reflect the increasing number of large clients with global operations.
 - 1) Recruiting and training of skilled AI and data professionals in Japan and other countries
 - 2) Capturing orders in the AI and data domains outside Japan for the growth of business operations in other countries
- Maximizing the resources of the Headwaters Group is expected to increase the number of projects involving AI and data in other countries and contribute to the growth of the AI solutions business.



List of TOPICS (1)

No.	Title	Category
1	<Joint Seminar> Generative AI potentials and methods and issues for the use of generative AI - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
2	Held an app creation workshop for Tokyo metropolitan school students in collaboration with the Tokyo Metropolitan Government Board of Education - Headwaters Co., Ltd. (headwaters.co.jp)	DX
3	The Headwaters Group's supports were featured at the Microsoft Ignite Japan session "The Use of Generative AI at Itochu Corporation and Expectations for Azure AI Studio and Fabric" - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
4	Make a speech at the webinar "Latest AI Use & Hybrid Work - the Latest Devices for Using Generative AI in Businesses and Hybrid Work" - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
5	Supported ITOCHU's Virtual Office for the use of generative AI and Microsoft Fabric and other data platforms - Information will be presented at Microsoft Ignite Japan - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
6	Industrial Metaverse Use Support Solution newly compatible with NVIDIA Omniverse™ and the Siemens industrial high-performance PC - Exhibited at the Siemens booth at SEMICON JAPAN 2023 - Headwaters Co., Ltd. (headwaters.co.jp)	Edge AI
7	Cooperated in the UI/UX development of CogFest, an online job fair operated by Forum Engineering - Headwaters Co., Ltd. (headwaters.co.jp)	DX
8	Launched Copilot Internalization Support Service to provide support for business use of Azure OpenAI Service and Microsoft Copilot - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
9	<Headwaters, Sony Semiconductor Solutions and AWL> Edge AI demonstration trial (March-August 2023) for the DX of Lawson convenience stores raised operational efficiency by using edge AI technology for analyzing store shelves and customer purchasing patterns - Headwaters Co., Ltd. (headwaters.co.jp)	Edge AI
10	Certified as a Red Hat Ready Business partner - Headwaters Co., Ltd. (headwaters.co.jp)	Partnerships



List of TOPICS (2)

No.	Title	Category
11	Certified as an advanced partner of the Azure OpenAI Service Reference Architecture joint program - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
12	Cooperated in the AI development to support structure review operations at SHIMIZU CORPORATION - Headwaters Co., Ltd. (headwaters.co.jp)	AI
13	Joint support with rinna for AI robot development of Yamaha Motor - Exhibited a robot equipped with song-generating AI at Japan Mobility Show 2023 - Headwaters Co., Ltd. (headwaters.co.jp)	Edge AI
14	The video about the digital signage demonstration trial conducted with Village Vanguard was released on the official YouTube channel of Microsoft Japan - Headwaters Co., Ltd. (headwaters.co.jp)	Edge AI
15	Developed Industrial Metaverse Use Support Solution using advanced technologies of Siemens and NVIDIA - Introduced at the Ryoyo Electro exhibition booth at the 2nd Metaverse Expo Tokyo - Headwaters Co., Ltd. (headwaters.co.jp)	Technology development
16	Power Platform workshop plan is now available on Azure Marketplace - Headwaters Co., Ltd. (headwaters.co.jp)	DX
17	Headwaters was included in the Industry Map 2024 in TOYO KEIZAI's Japan Company Handbook - Headwaters Co., Ltd. (headwaters.co.jp)	Media
18	Launched AI chatbot installation service for Power Platform on Azure Marketplace - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
19	Started collaboration with Management Solutions to provide Generation AI Project Lab that comprehensively supports the use of Azure OpenAI Service and organizational penetration - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
20	Certified as a partner of the Azure OpenAI Service Reference Architecture joint program - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI



List of TOPICS (3)

No.	Title	Category
21	Received "Certificate of Declaration" for Healthy Company Declaration - Headwaters Co., Ltd. (headwaters.co.jp)	SDGs
22	An article on a partner project to promote regional DX in Kumamoto, "How will the edge AI sensing platform contribute to DX human resources development at Sojo University in Kumamoto?" was published on the website of Sony Semiconductor Solutions - Headwaters Co., Ltd. (headwaters.co.jp)	Edge AI
23	Launched the SyncLect Generative AI service, a generative AI utilization platform for data learning by the Azure OpenAI Service - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
24	Launched the Prompt Engineering Lab service for companies using the Azure OpenAI Service to share knowledge of LLM technology and establish a support system - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
25	Joined the Shibuya Smart City Promotion Organization - Headwaters Co., Ltd. (headwaters.co.jp)	Smart city
26	The GPT service lineup for companies using "Azure OpenAI Service x Voice" - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
27	Make a speech at AI & ChatGPT Exhibition in Takeshiba - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
28	Strengthened collaboration with Village Vanguard and started the digital signage demonstration trial utilizing Sony's AITRIOS™ and Microsoft Azure - Headwaters Co., Ltd. (headwaters.co.jp)	Partnerships
29	DX support service jointly provided with Microsoft Japan was featured on the Microsoft customer case study website - Headwaters Co., Ltd. (headwaters.co.jp)	Partnerships
30	Make a speech at the webinar "RYOYO Generative AI Edge Week - the latest case study of ChatGPT using NVIDIA Jetson" - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
31	<Activities of SDG Committee> Developed the "Tabenate" app for the enjoyment of meals and reduction of food loss - Headwaters Co., Ltd. (headwaters.co.jp)	SDGs



List of TOPICS (4)

No.	Title	Category
32	Introduced as a partner of the Azure OpenAI Service Reference Architecture joint program at Microsoft Build Japan hosted by Microsoft Japan - Headwaters Co., Ltd. (headwaters.co.jp)	Partnerships
33	Certified as a partner company of NVIDIA Inception - Headwaters Co., Ltd. (headwaters.co.jp)	Partnerships
34	Participation in the METI's GX League - Headwaters Co., Ltd. (headwaters.co.jp)	SDGs
35	Report of completion of procedures to establish subsidiary DATA IMPACT JOINT STOCK COMPANY - Headwaters Co., Ltd. (headwaters.co.jp)	Establishment of a group company
36	Headwaters Professionals certified as a company that complies with the Telework Tokyo Rules proposed by the Tokyo Metropolitan Government - Headwaters Co., Ltd. (headwaters.co.jp)	SDGs
37	Headwaters Consulting certified as a company that complies with the Telework Tokyo Rules proposed by the Tokyo Metropolitan Government - Headwaters Co., Ltd. (headwaters.co.jp)	SDGs
38	Started collaboration with Scenera, a member of the NICE Alliance - Headwaters Co., Ltd. (headwaters.co.jp)	Partnerships
39	Started AI chatbot installation service for Power Platform, which enables companies using Microsoft365 to start using Azure OpenAI Service in a single day - Headwaters Co., Ltd. (headwaters.co.jp)	AI
40	Collaboration with Macnica to provide comprehensive support from planning to operation for edge AI using NVIDIA® Jetson™ - Headwaters Co., Ltd. (headwaters.co.jp)	Edge AI
41	Joint exhibition with Fast Label at the Annual Conference of the Japanese Society for Artificial Intelligence, 2023 - Headwaters Co., Ltd. (headwaters.co.jp)	AI
42	Strengthening the edge AI solutions business in collaboration with Sony Group's MEEQ - Headwaters Co., Ltd. (headwaters.co.jp)	Edge AI



List of TOPICS (5)

No.	Title	Category
43	Added payment services for smart cities and smart stores in collaboration with ROBOT PAYMENT - Headwaters Co., Ltd. (headwaters.co.jp)	Smart city
44	Strengthened collaboration with rinna - Expansion of Azure OpenAI Service and GPT4 language model AI service - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
45	Started collaboration with GEOCODE in utilizing ChatGPT - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
46	Multi-AI platform SyncLect was featured in “Intel® Solution Connect” - Headwaters Co., Ltd. (headwaters.co.jp)	AI
47	All Headwaters group companies started using GitHub Copilot for Business, an AI programming assistant that utilizes the GPT model - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
48	We are now a partner of Sony Network Communications’ ELTRES™ IoT Network Service - Headwaters Co., Ltd. (headwaters.co.jp)	Partnerships
49	Developed SyncLect Edge AI DMS, an edge AI device management solution compatible with NVIDIA Jetson series - Headwaters Co., Ltd. (headwaters.co.jp)	Edge AI
50	Strengthened DX support services through collaboration with Branding Engineer - Headwaters Co., Ltd. (headwaters.co.jp)	Partnerships
51	Joint exhibition at Gunma Digital Land, an event hosted by Gunma Prefecture, with the IoT and AI Center of Sojo University - Exhibition of DX-Collabo that connects DX hubs in Kumamoto area - Headwaters Co., Ltd. (headwaters.co.jp)	Smart city
52	Certified as a company that complies with the Telework Tokyo Rules proposed by the Tokyo Metropolitan Government - Headwaters Co., Ltd. (headwaters.co.jp)	SDGs



List of TOPICS (6)

No.	Title	Category
53	Expansion of the GPT service lineup for companies using Azure OpenAI Service - Headwaters Co., Ltd. (headwaters.co.jp)	Generative AI
54	Strengthened collaboration in secure and retail DX development - Accelerate store DX support services for major retail companies - Headwaters Co., Ltd. (headwaters.co.jp)	Technology development
55	Endorsement of the METI's GX League Basic Concept - Headwaters Co., Ltd. (headwaters.co.jp)	Smart city
56	Strengthened collaboration with BTM - Accelerating and expanding Smart City and corporate DX support services in regional areas - Headwaters Co., Ltd. (headwaters.co.jp)	Partnerships
57	Enhanced services to support smartification of companies using the SyncLect series, utilizing the AITRIOS™ edge AI sensing platform and the IMX500 intelligent vision sensor - Headwaters Co., Ltd. (headwaters.co.jp)	Edge AI
58	Participation in the NICE Alliance - Headwaters Co., Ltd. (headwaters.co.jp)	Partnerships
59	Started a partner business with IoT and AI Center of Sojo University to promote regional DX in Kumamoto - Headwaters Co., Ltd. (headwaters.co.jp)	Smart city
60	Earned Kurumin certification from the Minister of Health, Labour and Welfare as a company that supports employees raising children - Headwaters Co., Ltd. (headwaters.co.jp)	SDGs
61	Sapporo Holdings official app Uchirepi uses SyncLect multi-AI platform - Headwaters Co., Ltd. (headwaters.co.jp)	AI
62	Endorsed the TCFD recommendations and participated in TCFD Consortium - Headwaters Co., Ltd. (headwaters.co.jp)	SDGs

▶ **Initiatives for SDGs (1)**

Addressing climate change issues and promoting diversity

- Expressed support for the Task Force on Climate-related Financial Disclosures (TCFD)
- Participated in the TCFD consortium, where companies and financial institutions discuss climate-related issues
- Participated in the OSAKA Zero Carbon Foundation, which facilitates activities by the Osaka prefectural government, Osaka municipalities and companies for helping accomplish the SDGs and achieve decarbonization
- Activities for using working style reforms for lowering CO2 emissions
- Earned Kurumin certification from the Minister of Health, Labour and Welfare as a company that supports employees with children; Activities are under way for obtaining Platinum level certification

Expressed support for the TCFD recommendations



Participated in the OSAKA Zero Carbon Foundation



Participated in the TCFD consortium



Obtained the Kurumin certification



- More use of parental leave
- Improve the short-time work system
- Build a diverse working environment

▶ Initiatives for SDGs (2)

- Participation in the Ministry of Economy, Trade and Industry’s “GX League”
- Developed the “Tabe nate” app for the enjoyment of meals and reduction of food loss
- Certified as a company that complies with the Telework Tokyo Rules
- Received “Certificate of Declaration” for Healthy Company Declaration



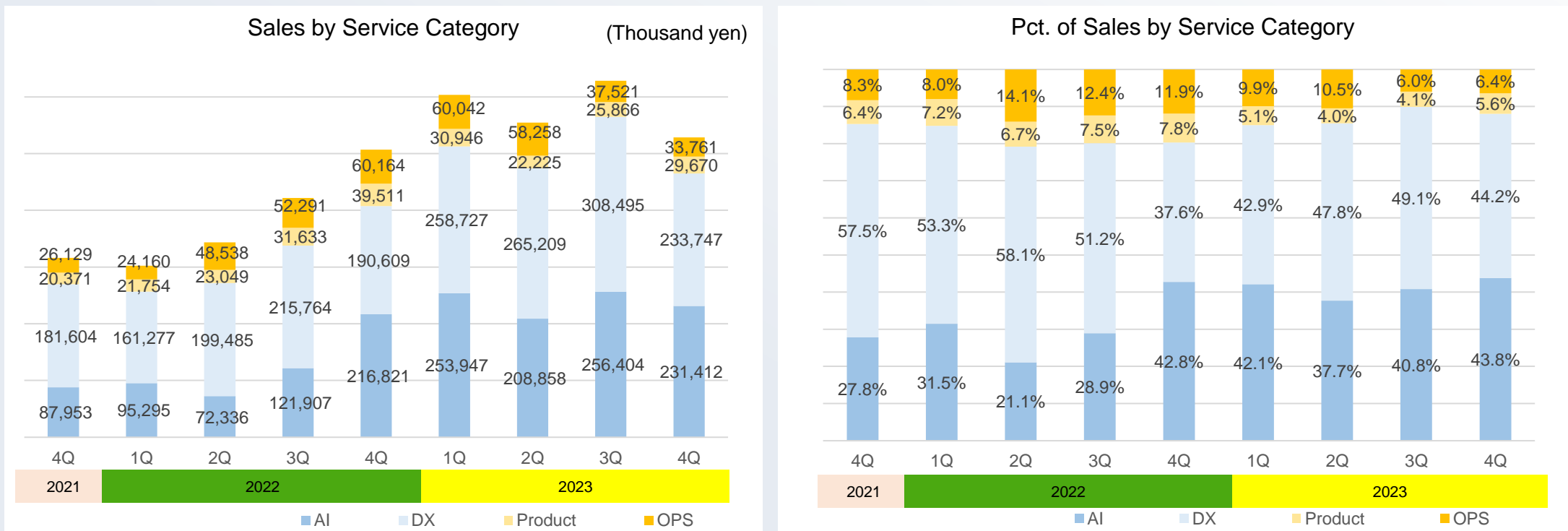
- The GX (Green Transformation) League consists of a variety of organizations that are dedicated to accomplishing a green transformation by playing a role in achieving carbon neutrality by 2050 and significantly altering society. Sustainable growth today and in the future is another goal. Members of the league include companies, public-sector organizations and academic institutions. Activities are guided by the Basic Concept of the GX League.
- To contribute to 2050 carbon neutrality, Headwaters is working on the use of a new methodology with the aim of determining policies and actions by using dialogues among entities that are at the forefront of green transformation initiatives.



- Headwaters has an SDG Committee that conducts activities for the establishment of a foundation for activities concerning the SDGs. One result of the committee’s activities is the development of “Tabe nate,” an app that originated with an idea at a workshop about reducing food loss.
- “Tabe nate” is an AI app designed to enable people to have new meal discoveries and experiences by enjoying ingredients and items they did not know about. Linking this app with a store’s inventory data can produce ideas for random orders that use the entire inventory, thereby lowering food loss.

Net sales increased 47.0% YoY in 2023 in part due to large projects that contributed to consistent increase in sales.

AI sales increased 87.7% because of the strong growth of orders for midsize projects, in addition to large projects.



Recurring Revenue Business (Service Category: OPS, Product): Down 1.0% YoY; no change in a QoQ basis

OPS: Up 2.4% YoY; No change in sales from 2022 because of the termination of unprofitable projects starting in the third quarter.

Product: Down 6.2% YoY; Sales decreased because of the one-time contribution to 2022 growth of sales of equipment for large projects.

Pay-Per-Service Business (Service Category: AI, DX): Up 58.3% YoY; Down 17.7% QoQ

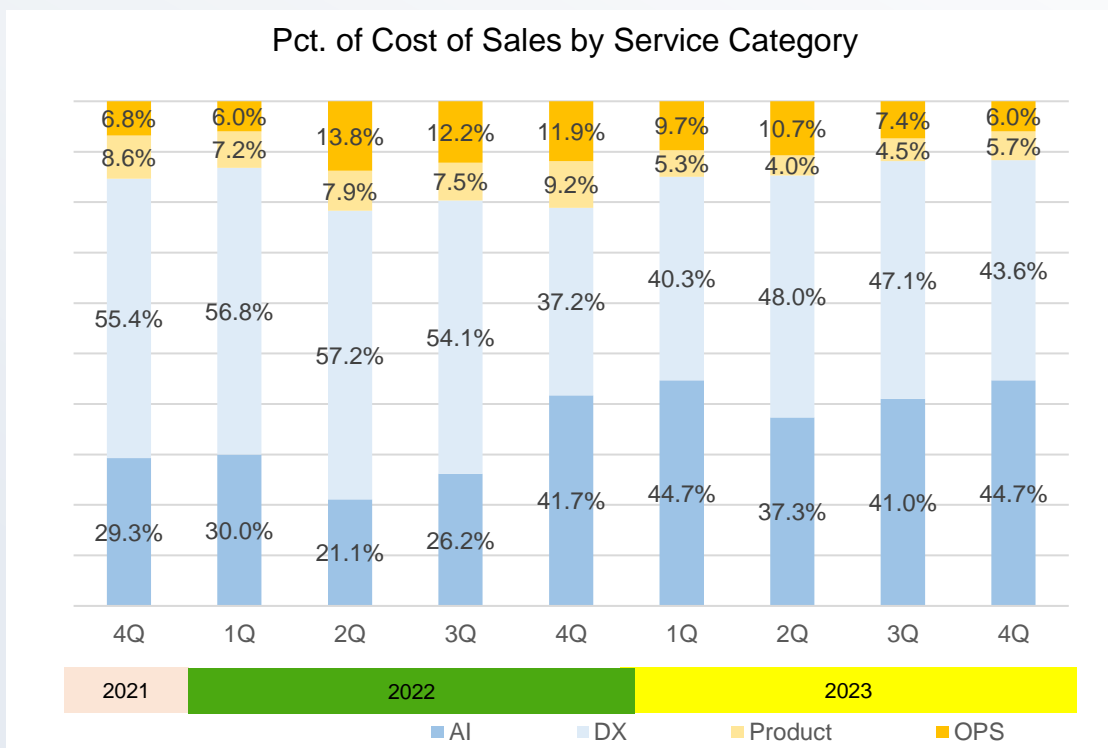
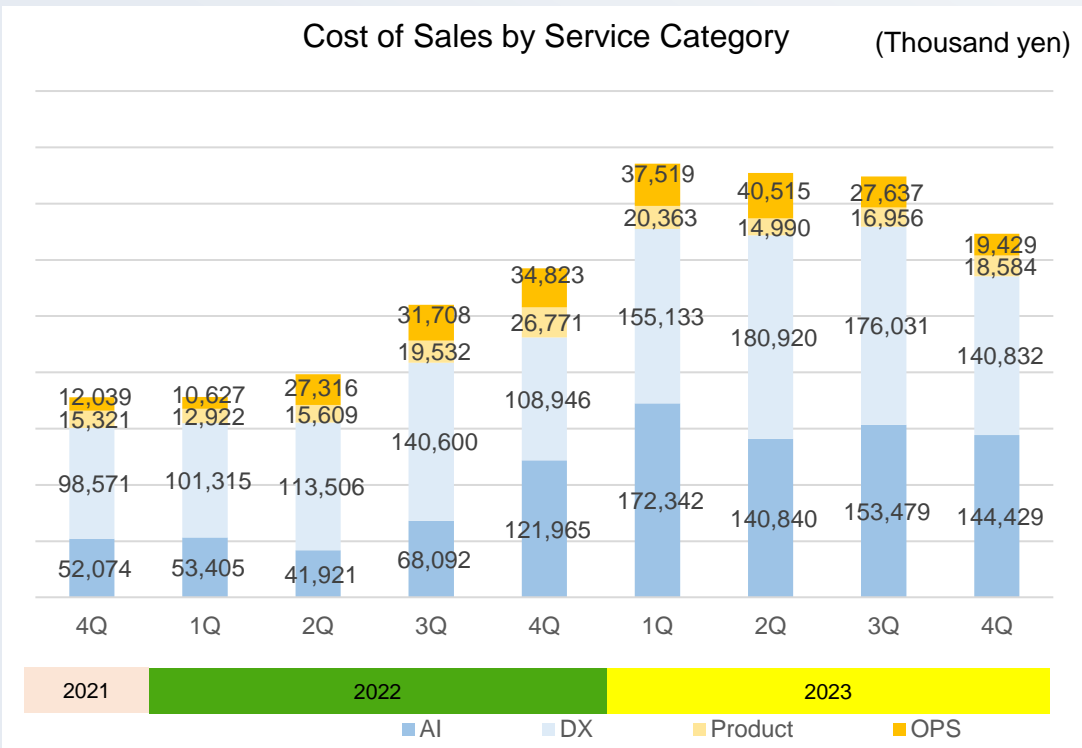
AI: Up 87.7% YoY; Following the third quarter end of large projects, shifting resources for emphasis on generative AI.

DX: Up 39.0% YoY; Only a small sales decline after the end of large projects because of many midsize Azure Cloud and DX consulting projects.



Cost of Sales

The cost of sales increased 57.1% YoY due mainly to sales growth. Major components of the increase are higher rates for payments to partner companies, a higher pct. of sales involving partner companies, and numerous measures required to add skills for using new technologies.



Recurring Revenue Business (Service Category: OPS, Product): Up 9.3% YoY; Down 14.8% QoQ

On a QoQ basis, numerous measures were able to hold down the cost of sales while maintaining sales in both the OPS and product categories.

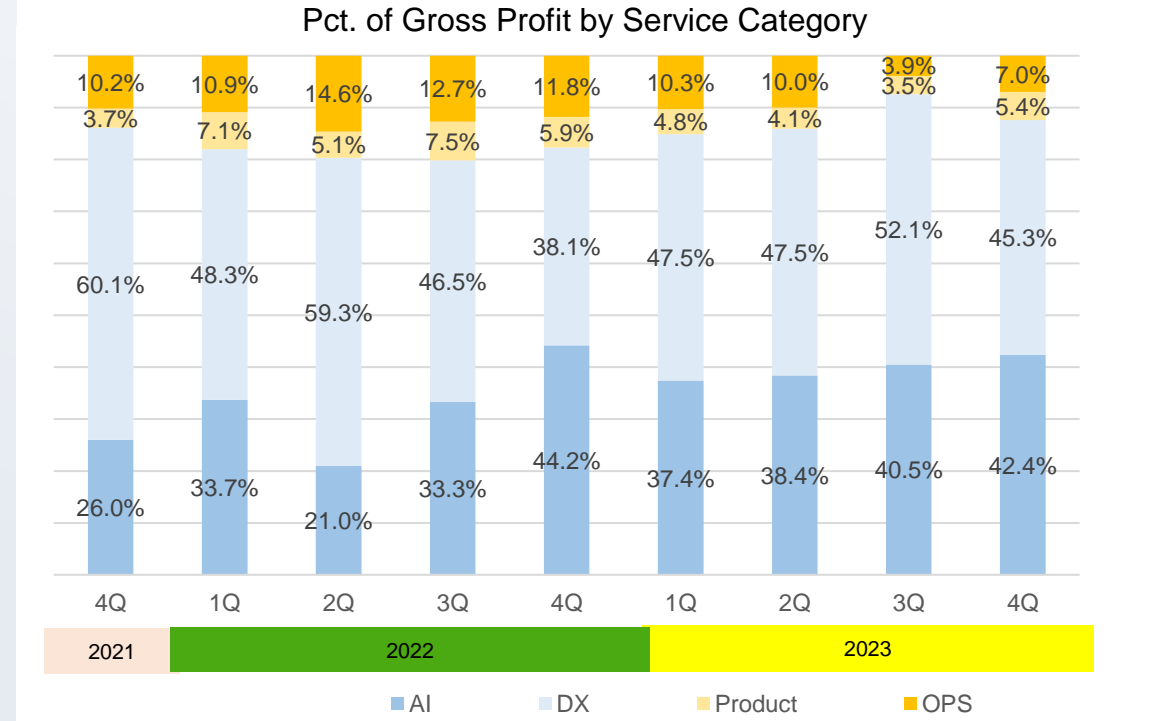
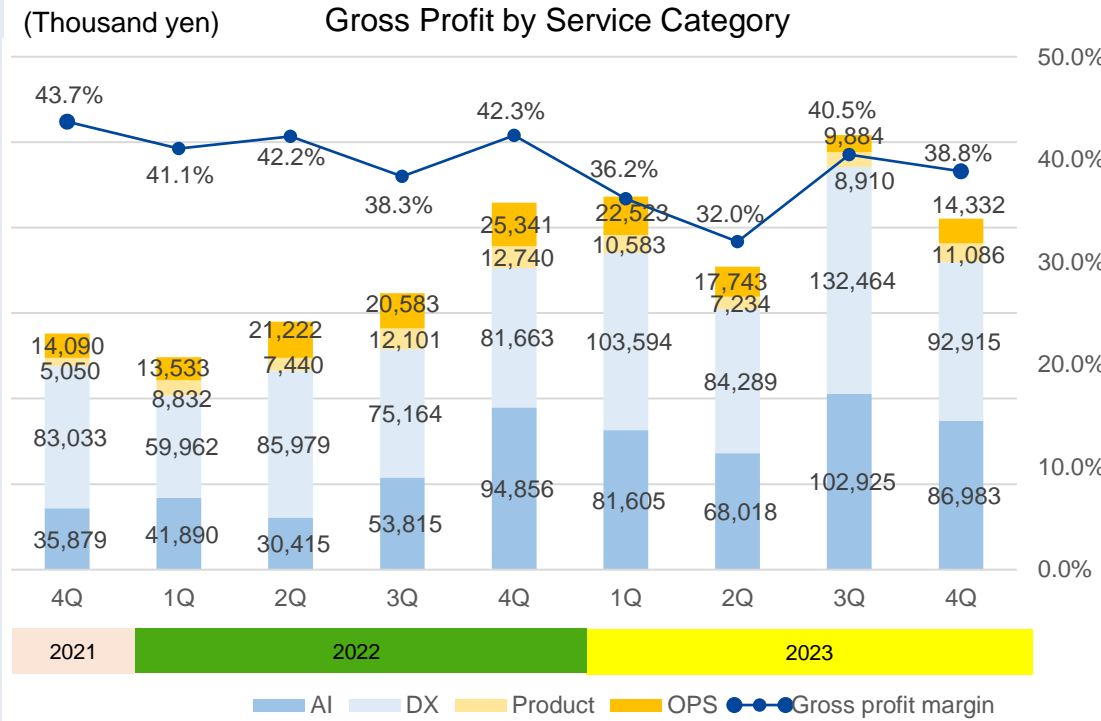
Pay-Per-Service Business (Service Category: AI, DX): Up 68.5% YoY; Down 13.5% QoQ

At generative AI, DX and other projects that use new technologies, the cost of production increased because more people were assigned to ensure consistent progress during the start-up phase.

Gross Profit

Gross profit increased **32.4% YoY in 2023**.

In part due to emphasis on sales as a key performance indicator, the gross profit margin in 2023 was 36.9% because of higher rates for payments to partner companies and a higher pct. of sales involving partner companies.



Recurring Revenue Business (Service Category: OPS, Product): Down 16.1% YoY

OPS: Decreased 20.1% YoY because of the termination of unprofitable projects starting in the third quarter but is now improving as shown by a 45% QoQ increase.

Product: An 8.1% decrease YoY in part due to large projects, but currently increasing (up 24.4% QoQ) because of SyncLect Generative AI orders that started in the third quarter.

Pay-Per-Service Business (Service Category: AI, DX): Up 43.7% YoY

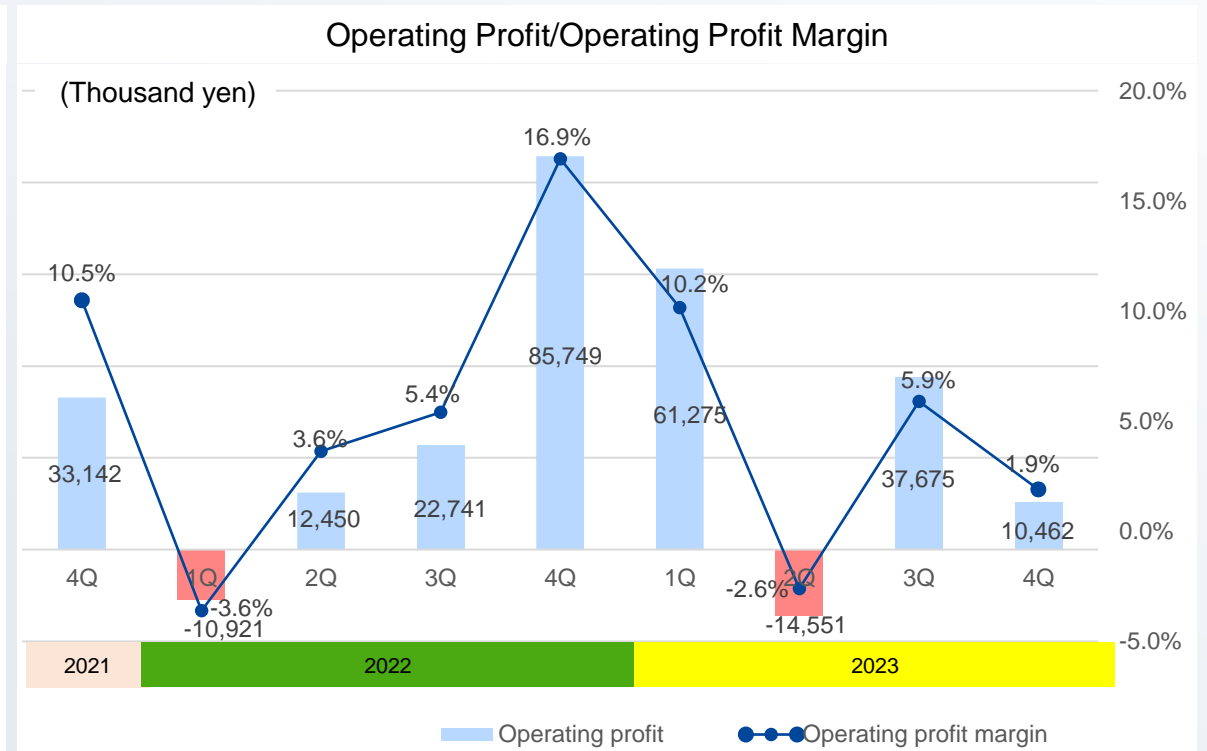
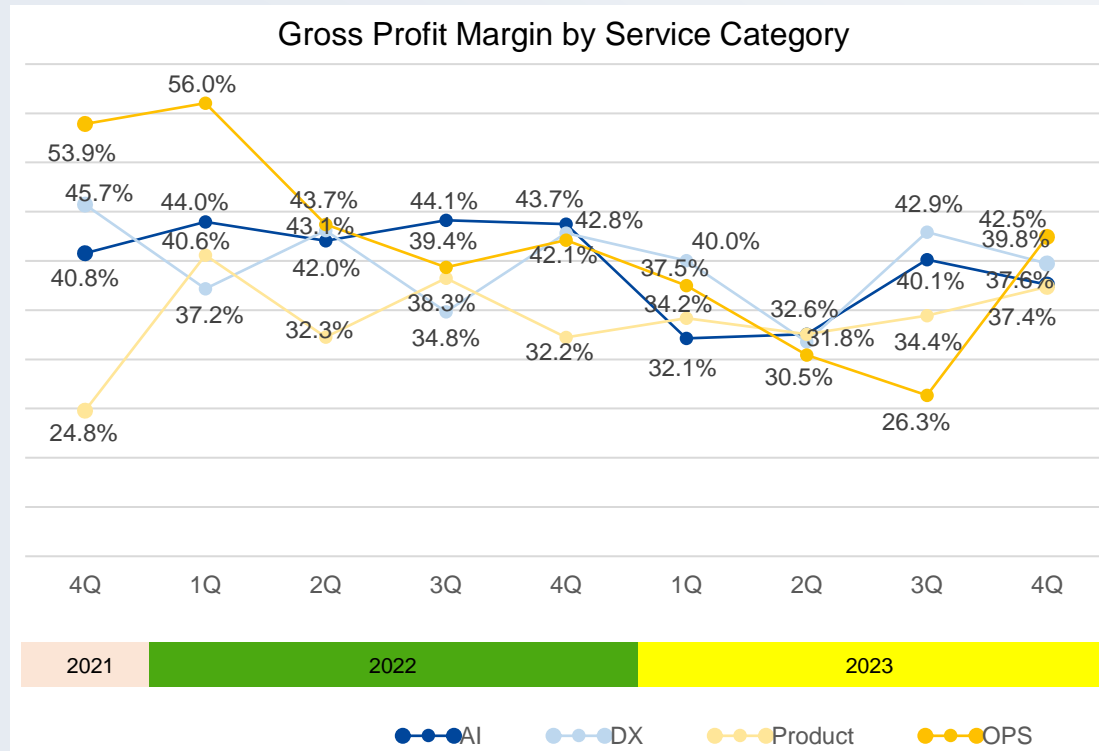
AI: Down 15.5% QoQ due to the end of a large project but up 53.6% YoY.

DX: Down 29.9% QoQ due to the end of a large project but up 36.4% YoY.



Gross Profit Margin by Service Category/Operating Profit Margin

Operating profit in 2023 was the result of a third quarter improvement following the second quarter loss and the growth of the number of contacts and orders for generative AI in the third and fourth quarters. There was a profit even as investments were made in the fourth quarter to establish a strong competitive position in the generative AI market in 2024 and afterward.



Recurring Revenue Business (Service Category: OPS, Product)

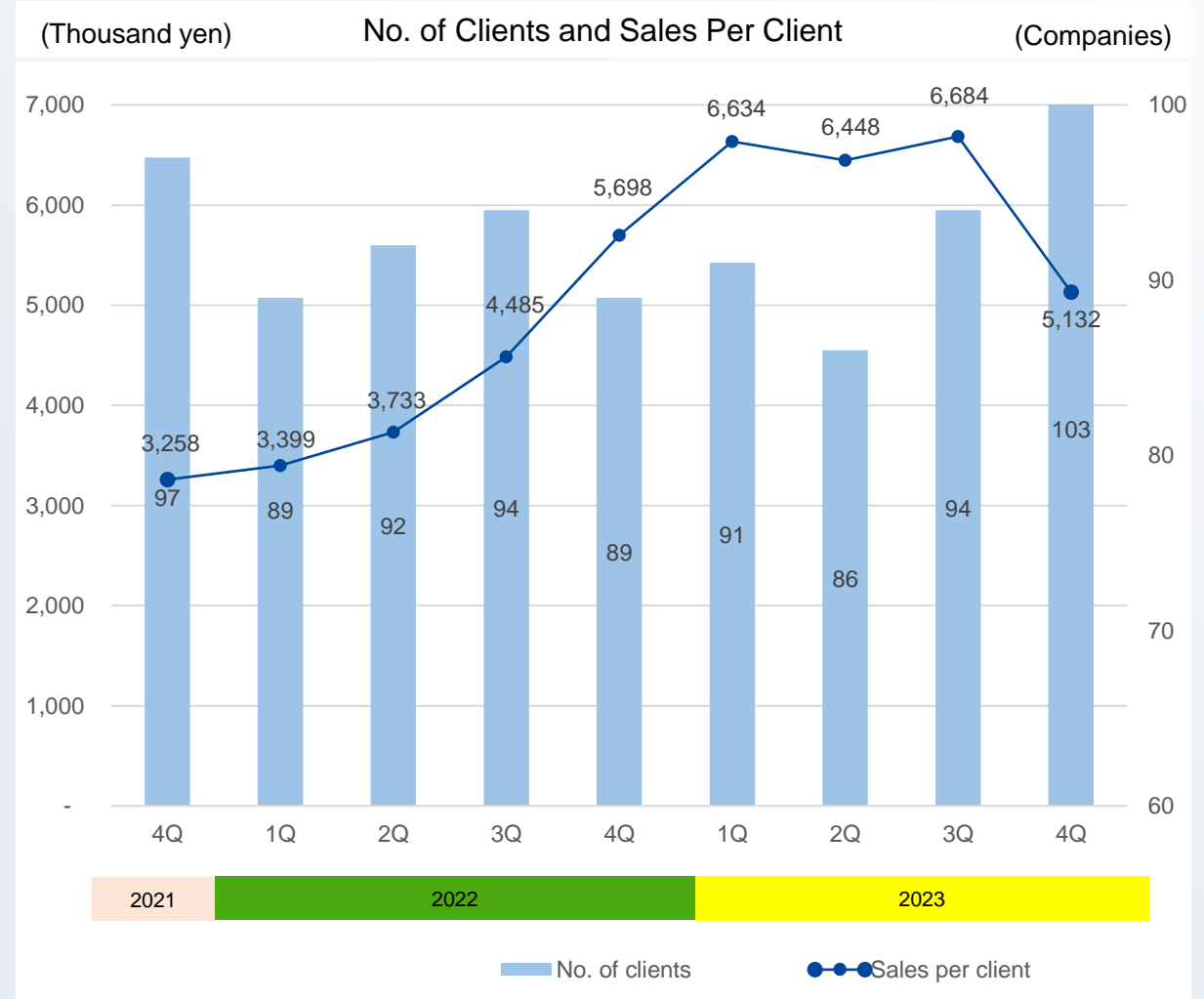
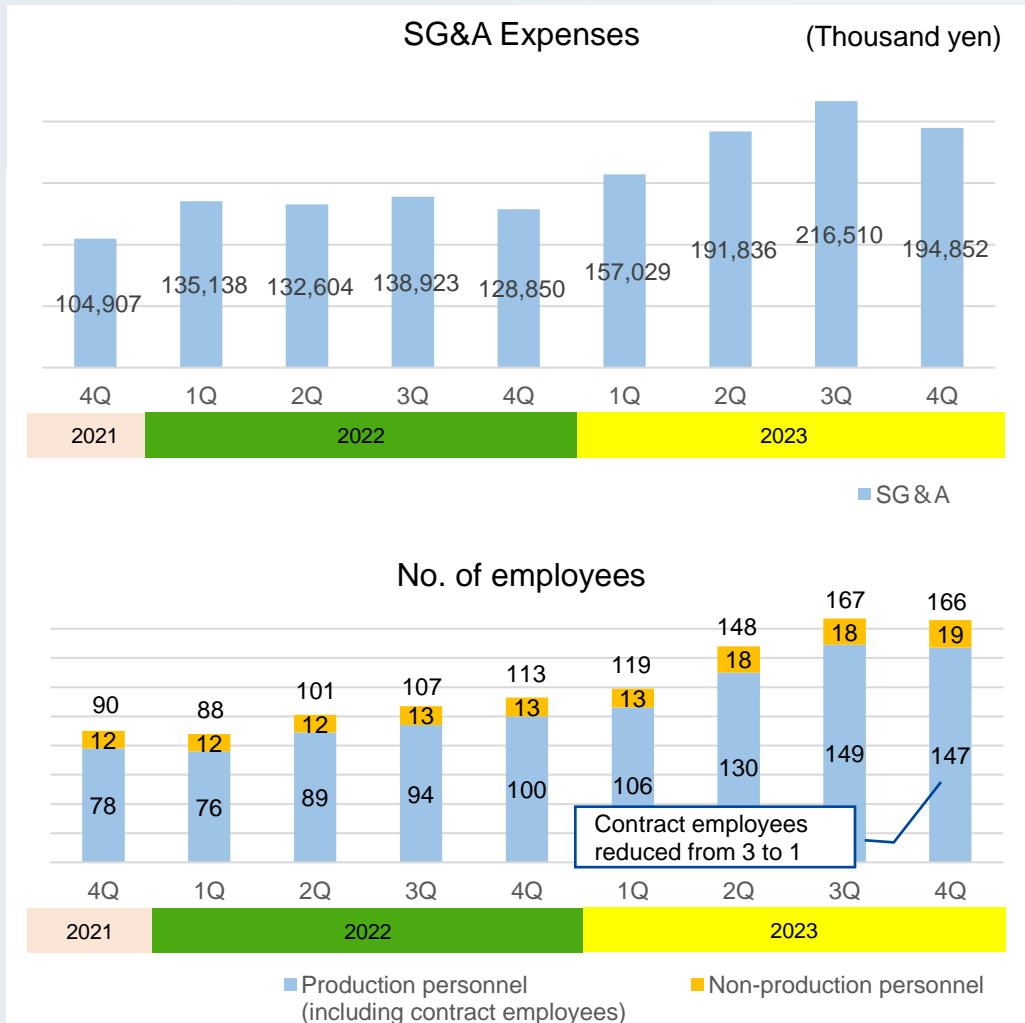
The gross profit margin is recovering in the OPS and product categories because of the termination of unprofitable projects and higher sales of Headwaters services.

Pay-Per-Service Business (Service Category: AI, DX)

A small decrease in the AI gross profit margin as more people were assigned to generative AI projects at an early stage. Also a small decrease in the DX gross profit margin, the result of a higher pct. of sales involving partner companies.

▶ SG&A Expenses, Employees, Clients and Sales Per Client

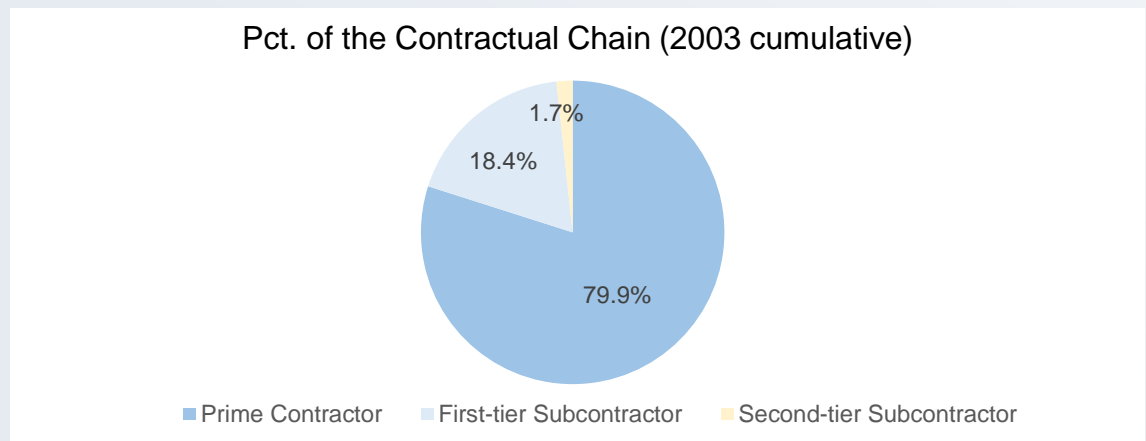
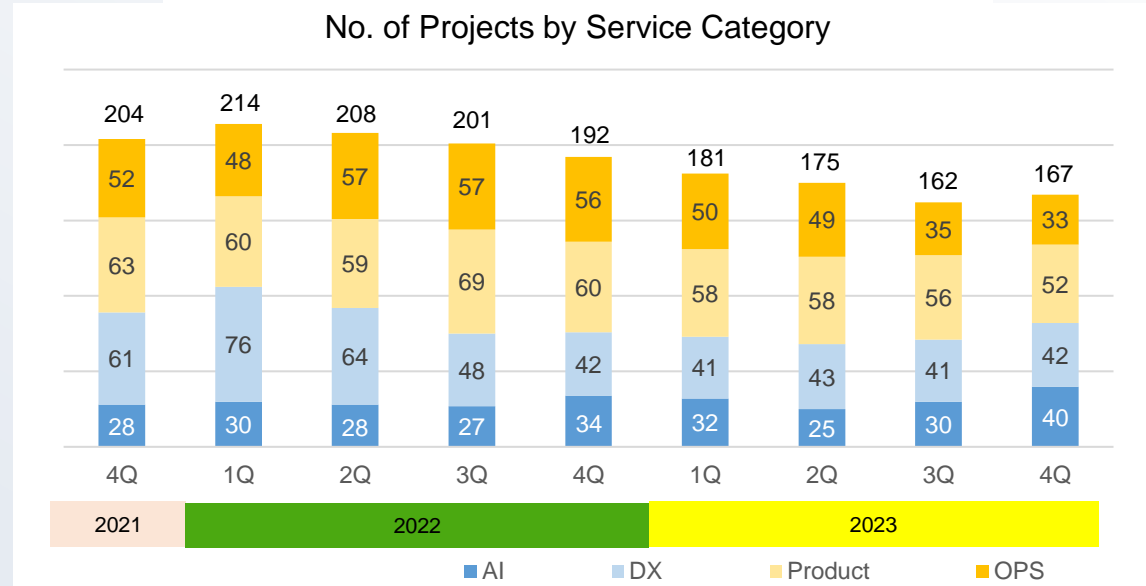
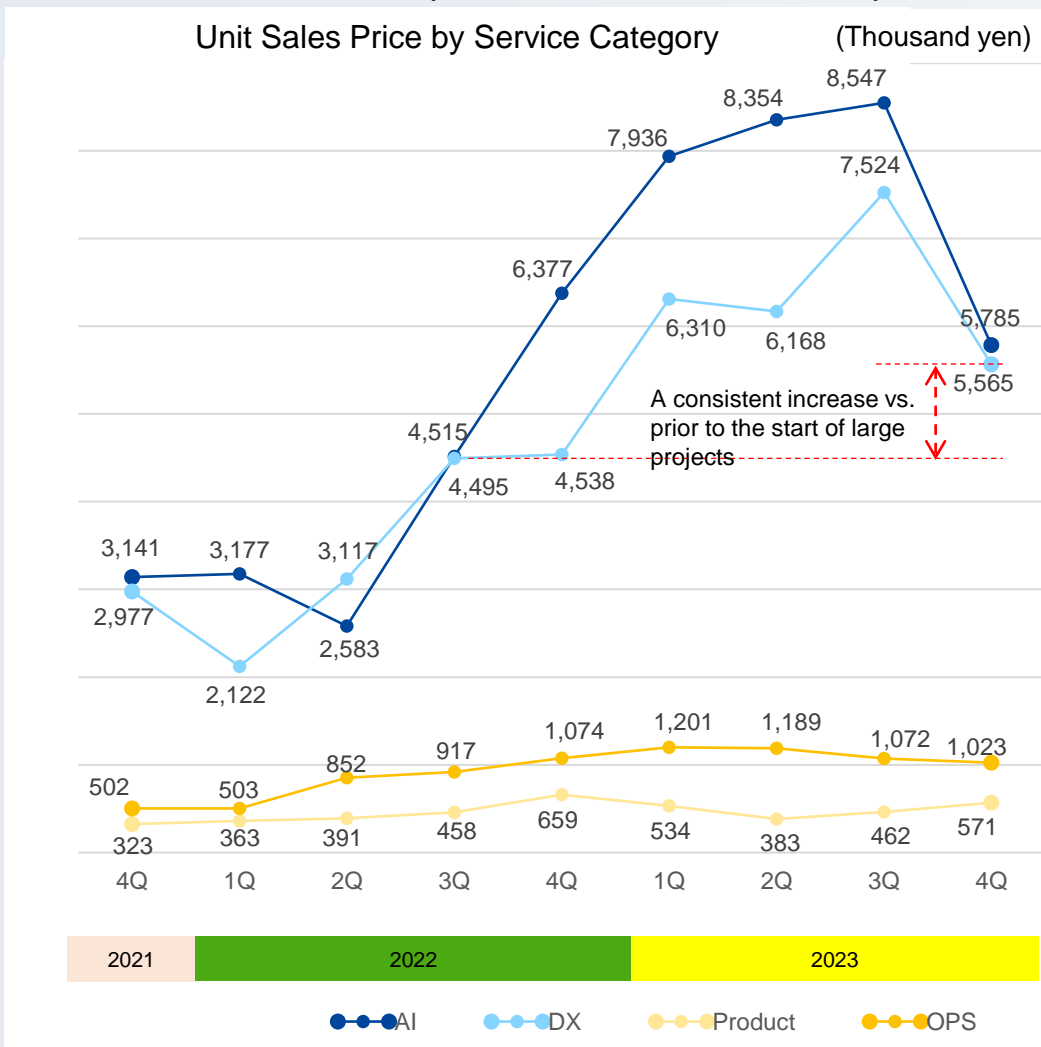
The number of clients decreased and sales per client increased as people were assigned to clients as selected by Headwaters, which was made possible by measures during the first half of 2023 to increase the number of loyal clients. The number of clients increased with the growth in generative AI orders that started in the third quarter. Sales per client temporarily declined in 2023 because major clients have not yet established large budgets for generative AI.





Unit Sales Price, Number of Projects and Contractual Chain Status by Service Category

A contribution to higher unit sales prices of large AI and DX projects in the first three quarters. In the fourth quarter, the unit sales price decreased for AI due to more projects as the number of clients increased and for DX due to the end of large projects. There has been a steady increase since the third quarter of 2022, which was prior to the start of the large projects.





Notes on Forward-looking Statements

- This document contains outlooks, future plans and management goals related to Headwaters. Descriptions regarding these forward-looking statement are based on assumptions made at the current moment about future events and trends, and there is no guarantee that these assumptions are accurate. Various factors may cause actual performance to significantly differ from what is described in this document.
- The figures in this document represent consolidated figures for the entire group, including DATA IMPACT JOINT STOCK COMPANY established in June 2023.
- In this document, numerical comparisons are presented in the following three categories.
 - **QoQ:** A comparison between the figures of the previous quarter and the current quarter
 - Comparison between figures of 3Q 2023 and 4Q 2023
 - **YoY:** A comparison between the cumulative figures of the previous fiscal year and the current fiscal year
 - Comparison between figures of 2022 and those of 2023
 - **YoY for the Quarter:** A comparison between the figures of the corresponding quarter for the previous fiscal year and the current fiscal year
 - Comparison between figures of 4Q 2022 and 4Q 2023
- Unless otherwise specified, the financial information in this document is based on generally accepted accounting principles in Japan.
- Information regarding companies other than Headwaters is based on generally known information.
- As explained in Consolidated Financial Results for the Fiscal Year Ended December 31, 2023 (*kessan tanshin*), Headwaters has terminated OPS services, which is services for the operation and maintenance of IT systems. Therefore, Headwaters has three service categories in 2024: AI Integration Services, DX Services and Product Services.