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HEROZ
JAPAN

Presentation Material for FY04/2022 Full Year Financial Results

June 10, 2022

HEROZ, Inc. (4382)

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JAPAN

1. Executive Summary
2. Business Overview
3. FY04/2022 Full Year Performance
4. FY04/2023 Forecast
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Executive Summary of FY04/2022

- Net sales were 1,482 million yen (-4.7% YoY), consisting of
  - AI (B-to-B) services: net sales of 564 million yen(-17.4% YoY)
  - AI (B-to-C) services: net sales of 918 million yen (+5.2% YoY)
- In the AI (B-to-B) service, sales decreased 17.4% YoY due to the termination of services for game operations with our AI and delays in acquiring initial setup fees, etc. In the AI (B-to-C) service, sales increased 5.2% YoY due to the effects of "Shogi Wars", including increased attention to Shogi following the achievement of Sota Fujii's fifth championship and events held in the application.
- EBITDA was 188 million yen (-48.4% YoY), operating profit was 34 million yen (-88.2% YoY), ordinary profit was 87 million yen(-69.3% YoY).This was due to increases in labor costs, depreciation and amortization, and recruiting and training expenses, but the investments were generally within the scope of the plan, as they contribute to our medium-term growth. Net income was 49 million yen (-76.2% YoY),due to the impact of the expansion of income tax credits associated with these increased expenses, etc.
- Difference from forecast mainly due to lower sales in AI (B-to-B) services.

Strategy of FY04/2023

- In FY4/2023, in addition to stable growth of AI (B-to-C) services, we will strengthen sales and marketing functions for growth of AI (B-to-B) services, and as a growth investment, we will strengthen promotion of collaboration with VarioSecure Inc.

AI (B-to-C) services

- Stable business growth mainly by Shogi Wars
- In May 2022, dlshogi with HEROZ won the World Computer Shogi Championship. We launched "Kishin Analytics," which supports professional Shogi AI research using our Shogi AI, for professional Shogi players through AI SaaS model.

AI (B-to-B) services

- Although the company has not focused on customer acquisition activities due to its focus on its highly skilled engineering team, the company will launch a sales and marketing organization by May 2022 and strengthen our customer acquisition activities for our future growth.
- Several AI products under development will be available by the end of FY04/2023.

Investment For Growth

- Collaboration with VarioSecure Inc., to establish an "AI Security Company" between the two companies.
- As a first step, we will incorporate our AI into the managed security services provided by VarioSecure to strengthen product attraction.

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Company Overview

Name	HEROZ, Inc.
Location	PMO Tamachi 2F, 5-31-17 Shiba, Minato-ku, Tokyo
Established	April 2009
Representatives	Takahiro Hayashi/Tomohiro Takahashi
Business Description	AI (B-to-B) services: HEROZ Kishin AI (B-to-C) services: “Shogi Wars”, etc.
Membership	Japan Deep Learning Association, The Japanese Society for Artificial Intelligence

2022
Moved to the Tokyo Stock Exchange Prime Market

2021
Capital and business alliance with VarioSecure Inc.

2019
Listed on the First Section of Tokyo Stock Exchange (TSE)

2018
Listed on Tokyo Stock Exchange (TSE) Mothers
Capital and business alliance with Netmarble Games Corporation

2017
Capital and business alliances with Takenaka Corporation and Koei Tecmo Games

2016
Capital and business alliance with Bandai Namco Entertainment

2013
Shogi AI, developed by engineers who was member of Heroz at that time formerly with HEROZ, defeated a shogi professional

2012
Launched mobile app, “Shogi Wars”

Representative Director and Co-CEO
Takahiro Hayashi

Graduated from Waseda University
Joined NEC as a technology engineer
Experience at IT strategy division, business planning division
Founded HEROZ

Shogi Track Record
Amateur 6th dan (highest rank after becoming national amateur champion)
7th dan, Shogi Wars
Amateur Kisen Champion (7-time title defender as national champion)
Played against Yoshiharu Habu (permanent 7 title holder)

Representative Director and Co-CEO
Tomohiro Takahashi

Graduated from Waseda University
Joined NEC as a technology engineer
Experience at Business Planning Division, BIGLOBE
Founded HEROZ

Director, and COO
Daisuke Asahara

Graduated from Kyoto University
MBA from Wharton School
ex-Goldman Sachs

Director and CTO
Keiichi Iguchi

Graduated from
Tokyo Institute of Technology
Joined NEC Central Research Labs

Our Vision

HEROZ JAPAN

Creating the future through artificial intelligence (AI) revolutions

Global Leader in Mind Game AI

Chess AI

Deep Blue (’97) defeated a professional Chess player

IBM

Shogi AI

AI developed by our engineers who was member of HEROZ at that time defeated a professional Shogi (Japanese Chess) player (’13)

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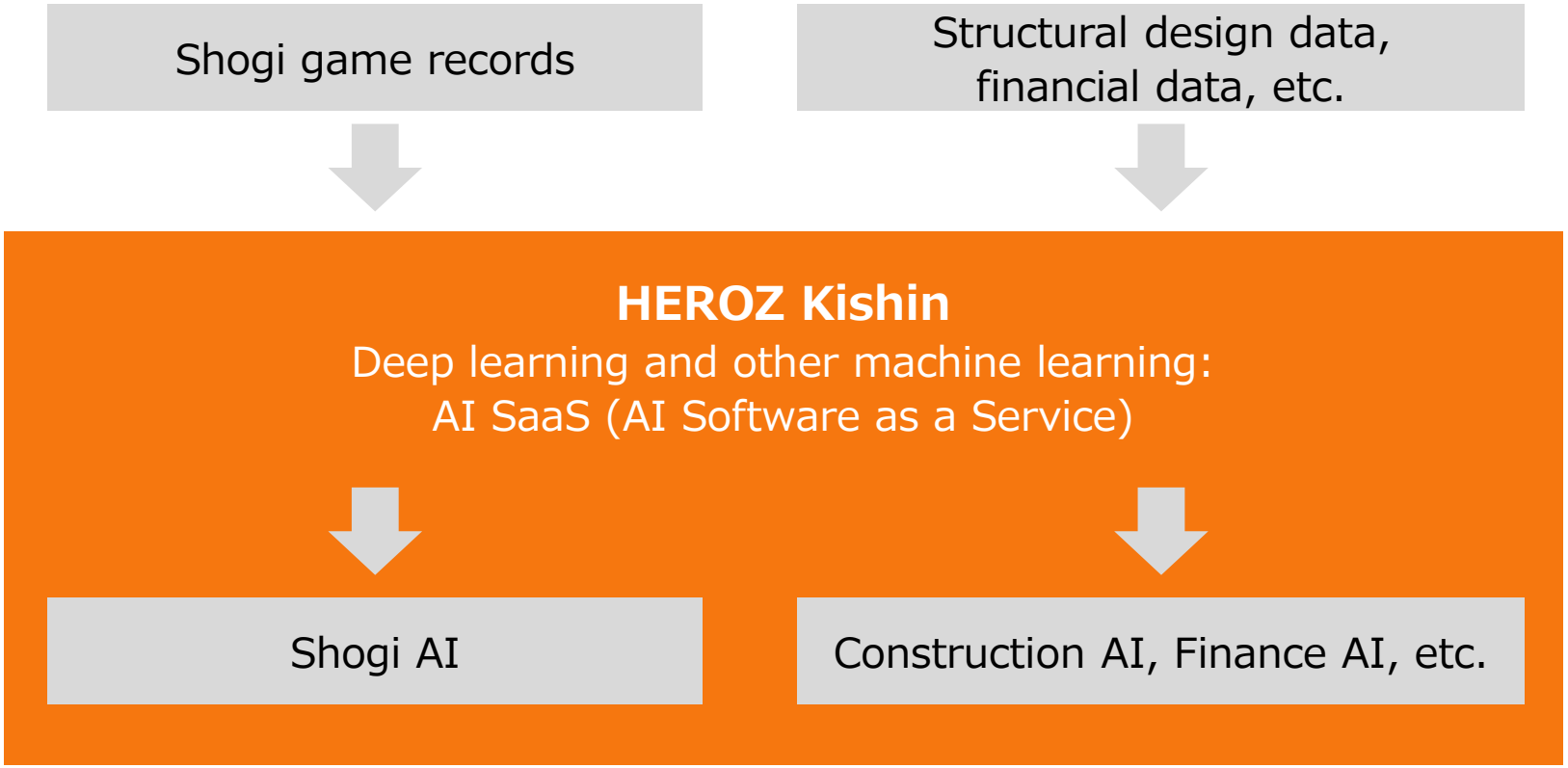
Go AI

Google acquired Deep Mind (’14)
AlphaGo, developed by Deep Mind, defeated a professional Go player (’16)

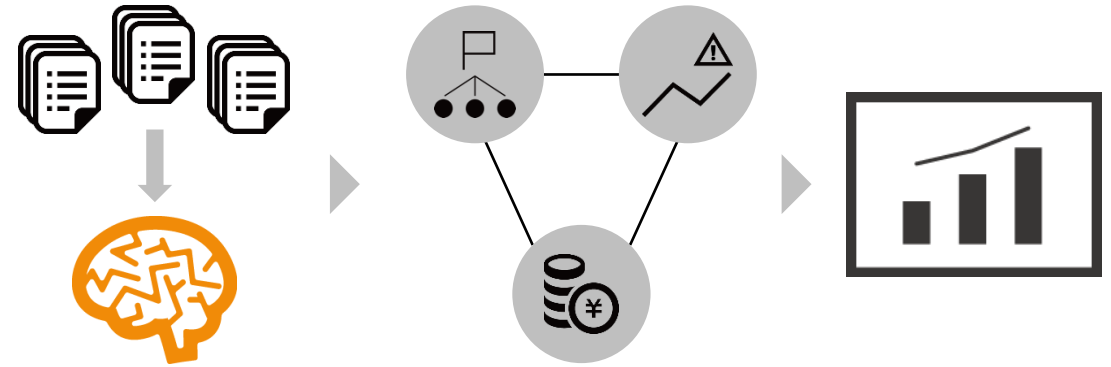
Google

B-to-B Services: Machine Learning by Replacing Shogi Game Records with Other Data



AI Software : What is AI Software as a Service?
Provides models, developed by machine/deep learning, as a service

B-to-B Services: Profit Model and High Switching Costs



Client's data sent to HEROZ Kishin/model developed by machine learning

Output after machine learning through deep learning, etc.

Output applied in business settings

Accumulated data to be used for further machine learning

Output precision increases through repeated machine learning

Research/develop Shogi AI

Standardize AI technology accumulated through shogi AI

Establish "HEROZ Kishin"=AI SaaS (AI Software as a Service)

Establish an infrastructure which allows HEROZ to provide AI services efficiently to solve various challenges in various industries just by changing input data

Provide comprehensive AI services with massive servers

Achieve stable, sustained earnings and high switching costs

Earning structure: initial setup fee and ongoing fees

B-to-B Services: Engines included in HEROZ Kishin and Examples of Applications

- Create AI products by combining engines and achieve an efficient operating structure

AI-related technology and R&D capabilities
(deep learning, etc.)

Mind game engine | Game processing engine | Route optimization engine | Placement optimization engine | Prediction engine

HEROZ Kishin

Optimal solution search engine | Classification engine | Anomaly detection engine | Text processing engine | Image recognition engine

×

Know-how on development and service operations
(massive servers, etc.)

- Con-struction: Structural design support, Control of building equipment
- Finance: Market forecast, Fraud detection
- Enter-tainment: Mind game AI
- Media: User retention, Optimization
- HR: Matching jobseekers with corporations
- Others: Real estate revenue/logistics optimization, Sales forecast

We aim to create the industry standard for AI in each sector through collaboration with companies which own high-quality private data

B-to-B Services:
Areas of Focus and Examples of Services Provided

- Focusing on construction, finance, and entertainment for the foreseeable future
- Earning structure is initial setup fee and ongoing fees

*Examples of clients served

Construc-tion

想いをかたちに 未来へつなぐ
TAKENAKA

TOYO ENGINEERING

Structural design support, Construction support, Control of building equipment, etc

Fi-nance

SMBC日興証券

ARUHI

Market forecast, Fraud use detection, etc

Enter-tainment

BANDAI NAMCO Entertainment

BANDAI

Creation of high-quality NPCs, game balance adjustment, etc. (In B-to-B service, HEROZ is not a game operator/publisher but a background AI provider)

Initial setup fees: new revenue recognition standard are applied since May 2021
Ongoing fees: mostly fixed fees recognized monthly

B-to-C Services: Fees from Application Users

Charging fees for B-to-C content which user AI

- Shogi Wars has grown into a solid revenue base through the distribution of brain games such as Shogi that utilize AI-related technologies.
- Shogi Wars is a platform that matches users with each other in real time, and the number of paying active users for Shogi Wars has exceeded both the previous year and the initial plan.
- The number of paid active users is on an upward trend due to the increased attention to Shogi by Sota Fujii's fifth championships, and events held in Shogi Wars.
- In May 2022, Shogi AI service "Kishin Analytics" launched, initially for professional Shogi players, with plans to introduce for general users in the future.

Shogi Wars

Animal Shogi Wars

Earning structure: monthly membership fees, Kishin (AI) usage fees, etc.

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Our Key Performance Indicator

- We believe that EBITDA, as calculated below, is our key performance indicator

EBITDA = Operating Profit + Depreciation/Amortization Expenses

- In AI-related businesses, investments in compute servers, etc. are required to engage in advanced machine learning, leading to various depreciation/amortization expenses. We aim to continuously enhance enterprise value/equity value via EBITDA growth, without being concerned about fluctuations in one-time depreciation/amortization expenses.
- In-house compute servers are mainly depreciated based on the declining-balance method with a useful life of 5 years.

FY04/2022 Full Year Financial Performance

- Net sales: AI (B-to-B) service decreased from the previous year due to the termination of game operations with our AI and delays in acquiring initial setup fees. AI (B-to-C) service continued to generate stable growth from the previous year due to increased attention to Shogi and events held in “Shogi Wars”.
- EBITDA: Decreased due to depreciation and amortization associated with the purchase equipment for machine learning, telecommunication expenses, human resource-related expenses, and an increase in product development expenses.

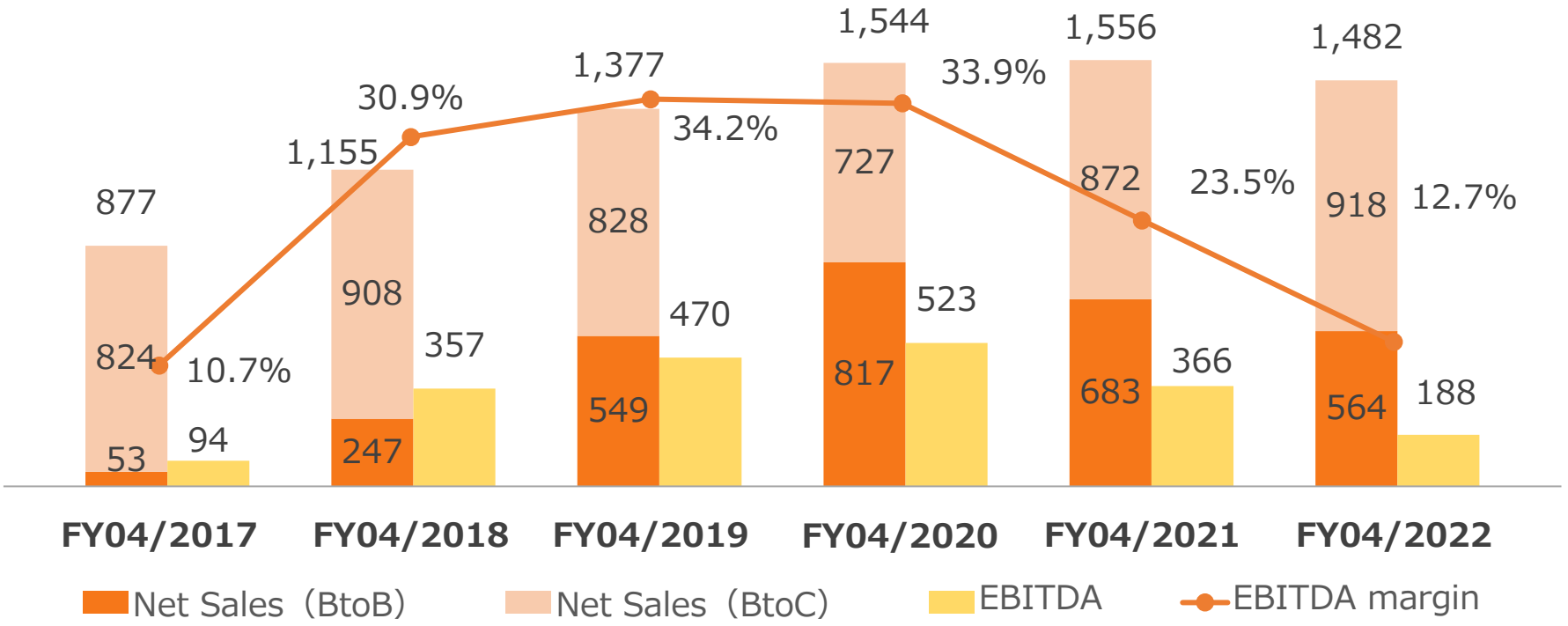
(Units: JPY millions)	FY04/2022 Actual	(Reference) FY04/2021 Results	YoY	FY04/2022 Forecast	Actual to Forecast (%)
Net Sales	1,482	1,556	-4.7%	1,700	87.2%
EBITDA*	188	366	-48.4%	280	67.4%
EBITDA Margin	*12.7%*	*23.5%*	–	*16.5%*	–
Operating Profit	34	294	-88.2%	100	34.8%
Operating Margin	*2.3%*	*18.9%*	–	*5.9%*	–
Ordinary Profit	87	285	-69.3%	90	97.5%
Net Income	49	207	-76.2%	63	78.4%

* EBITDA = Operating Profit + Depreciation Expenses + Amortization of Lease Deposits

Net sales and EBITDA Trends

- Sales of AI (B-to-B) services decreased due to the termination of some existing projects. However, the business is gradually recovering toward the end of the period, including a new project related to data analysis for future introduction of AI.
- Sales in AI (B-to-C) services exceeded the previous year's sales due to continued stable sales growth of "Shogi Wars" and other services.

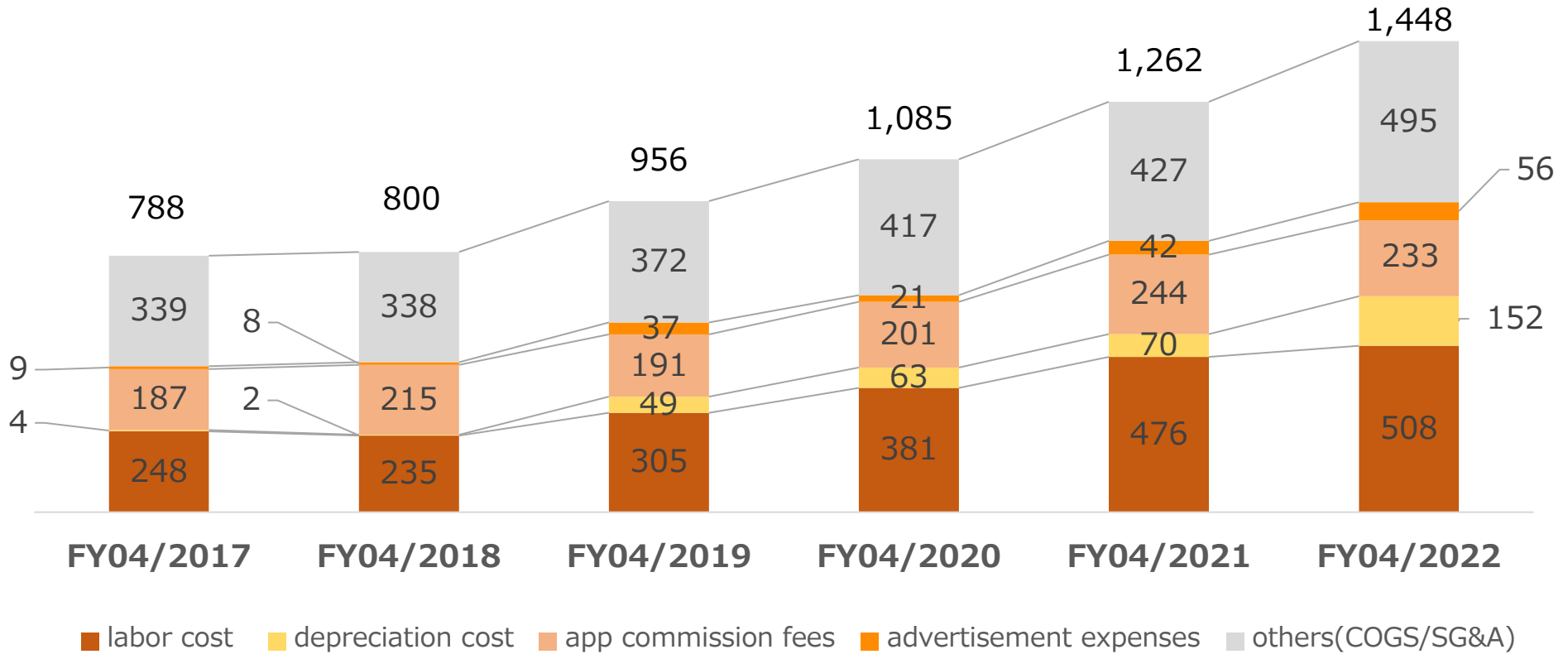
(Units: JPY millions)



COGS and SG&A Trends

- Aggressive investments were made in SG&A, including an increase in depreciation and communication expenses (121 million yen) due to the purchase of equipment such as servers for machine learning, etc., an increase in personnel recruitment expenses (16 million yen), and an increase in R&D expenses (42 million yen).
- In FY4/2023, plan to increase personnel expenses by forming a sales and marketing team, aiming to grow sales of AI (B-to-B) services.

(Units: JPY millions)



Balance Sheet (End of April 2022)

- On September 10, 2021, we concluded a capital and business contract with VarioSecure Inc. and acquired its affiliated company shares (1,995 million yen (including related costs)).
- Cash and deposits will be used for investments to realize our Medium-term growth strategy.

Units: JPY millions	As of 4/30/2022	As of 4/30/2021
Current Assets	3,959	5,786
Cash and deposits	3,660	5,554
Fixed Assets	2,675	759
Property, plant and equipment	260	424
Intangible assets	25	17
Investments and other assets	2,390	318
Total Assets	6,635	6,546
Current Liabilities	194	143
Fixed Liabilities	–	–
Net Assets	6,440	6,403

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FY04/2023 Financial Forecast

- Recognizing that demand is expected to continue to grow in the AI-related market
- We will continue to invest aggressively for the growth of AI (B-to-B) services by establishing a sales and marketing organization.
- we expect net sales of 1.7 billion yen and EBITDA of 200 million yen. The company expects to receive approximately 50 million yen in dividends from VarioSecure Inc. The plan does not include the contribution to sales of "Kishin Analytics," a new service to be launched.

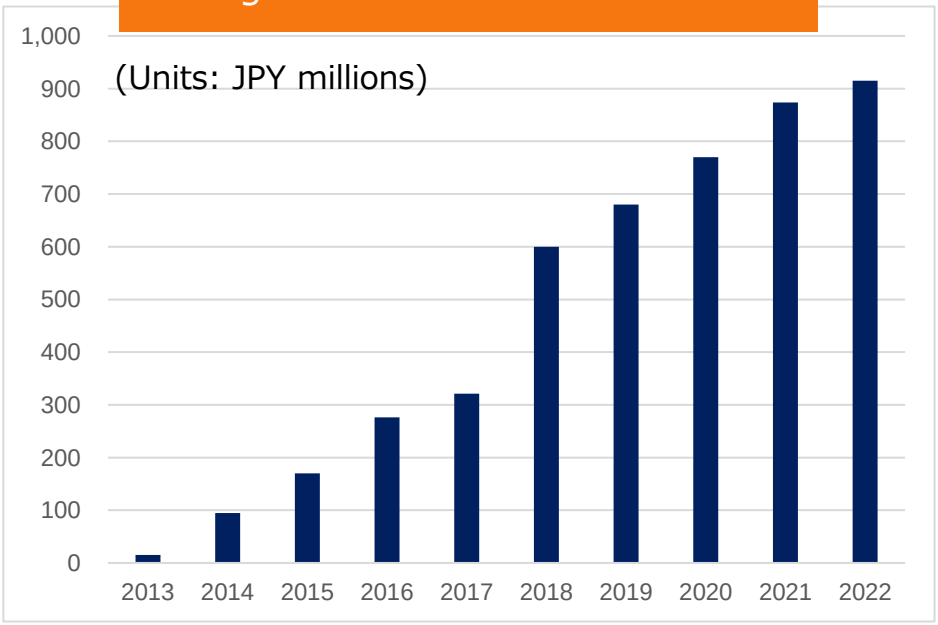
(Units: JPY millions)

(Units: JPY millions)	FY04/2022 Actual	FY04/2023 Forecast	YoY (%)
Net Sales	1,482	1,700	*+14.6%*
EBITDA	188	200	*+5.9%*
EBITDA Margin	*12.7%*	*11.8%*	–
Operating Profit	34	50	*+43.7%*
Operating Margin	*2.3%*	*2.9%*	–
Ordinary Profit	87	100	*+13.9%*
Net Income	49	60	*+21.4%*

AI（B-to-C）Services Strategy

- Stable business growth centered on Shogi Wars
- The service was launched on May 21, 2012. The number of users is steadily increasing and the number of games played between users exceed 700 million by April 2022.
- In addition to acquiring monthly users, our Shogi AI (Kishin) has been widely used, providing experiences where users can generally experience the use of AI in the world of Shogi.
- In May 2022, dlshogi with HEROZ won the World Computer Shogi Championship.
- Started providing "Kishin Analytics," which supports professional Shogi AI research using our Shogi AI for professional Shogi players through AI SaaS model.

Shogi Wars Related Sales Trends

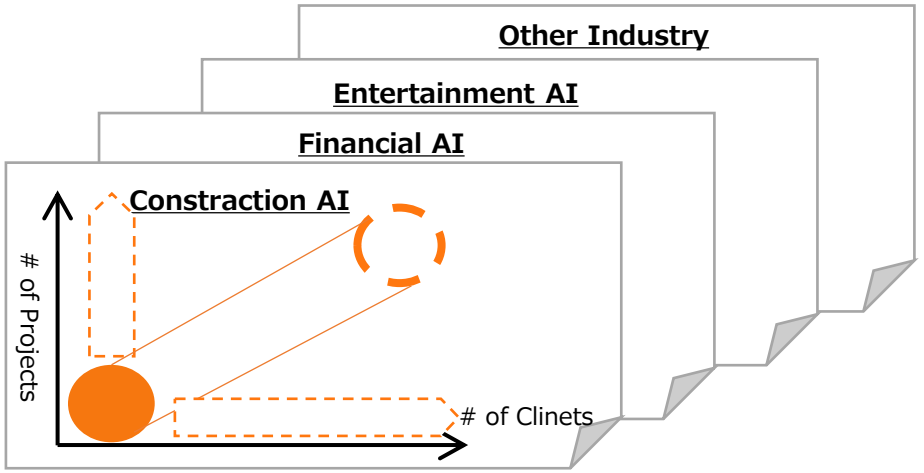


Kijin Analytics Screen

AI（B-to-B）Services Strategy

- As a group of highly skilled engineers, we promote AI (B-to-B) services to solve various problems of our clients.
- On the other hand, since the company has not focused on customer acquisition activities due to its focus on its group of highly skilled engineers, sales growth peaked in FY04/2020, and sales have been declining due to the termination of existing projects.
- The company aims to achieve sales growth by strengthening client acquisition activities in conjunction with the launch of a sales and marketing organization by May 2022, focusing on cultivating existing clients and developing new clients.
- Currently working to promote AI/DX in the industry by deploying AI products, some of them are scheduled to be available by the end of FY04/2023.

deepen cultivation of existing customers X cultivation of new customers)



AI Product Deployment

Automatic design support AI service (in cooperation with Draft Co., Ltd.)

AI for automatic creation of architectural plans (in cooperation with Tusk Inc.), etc.

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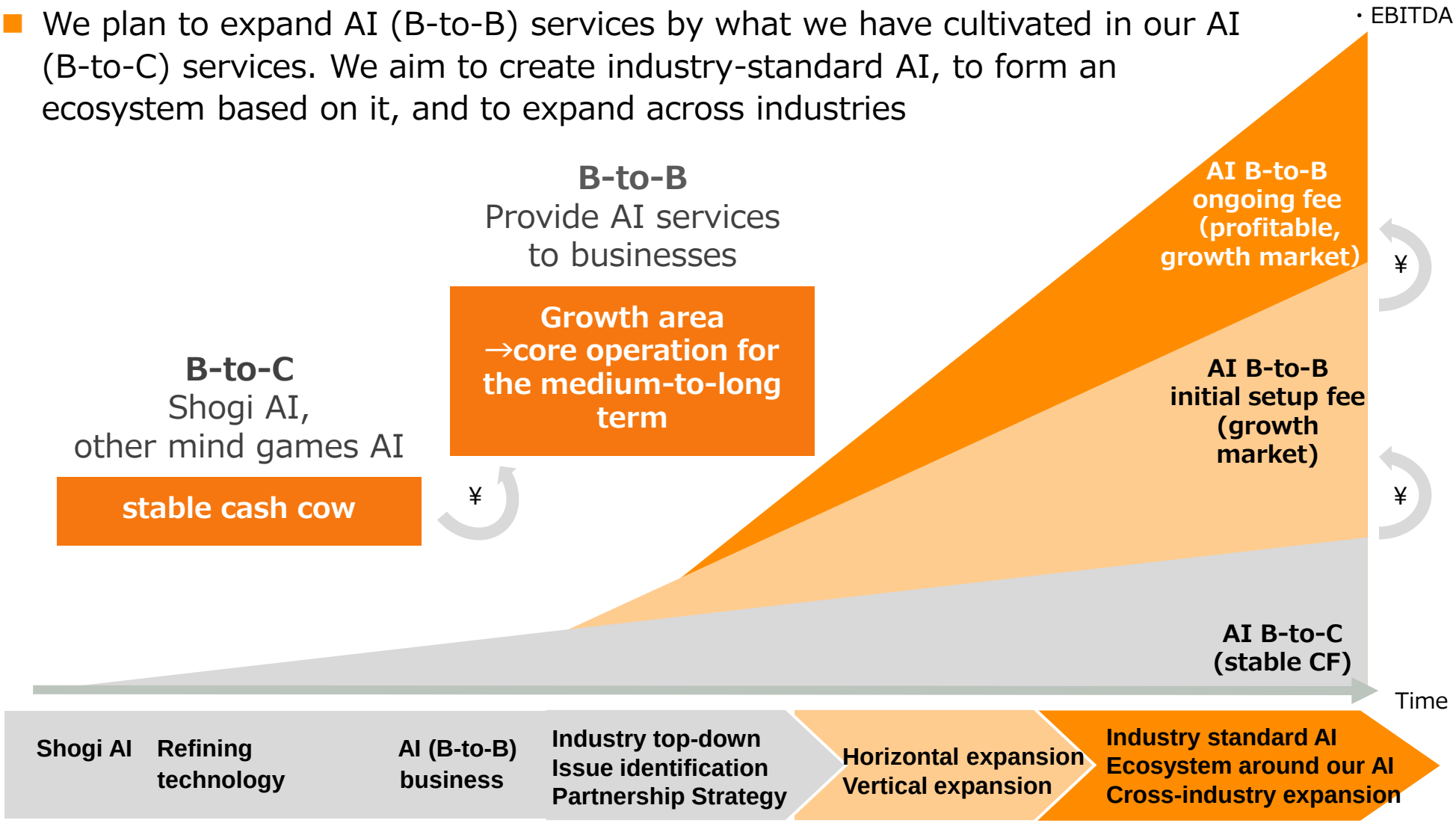
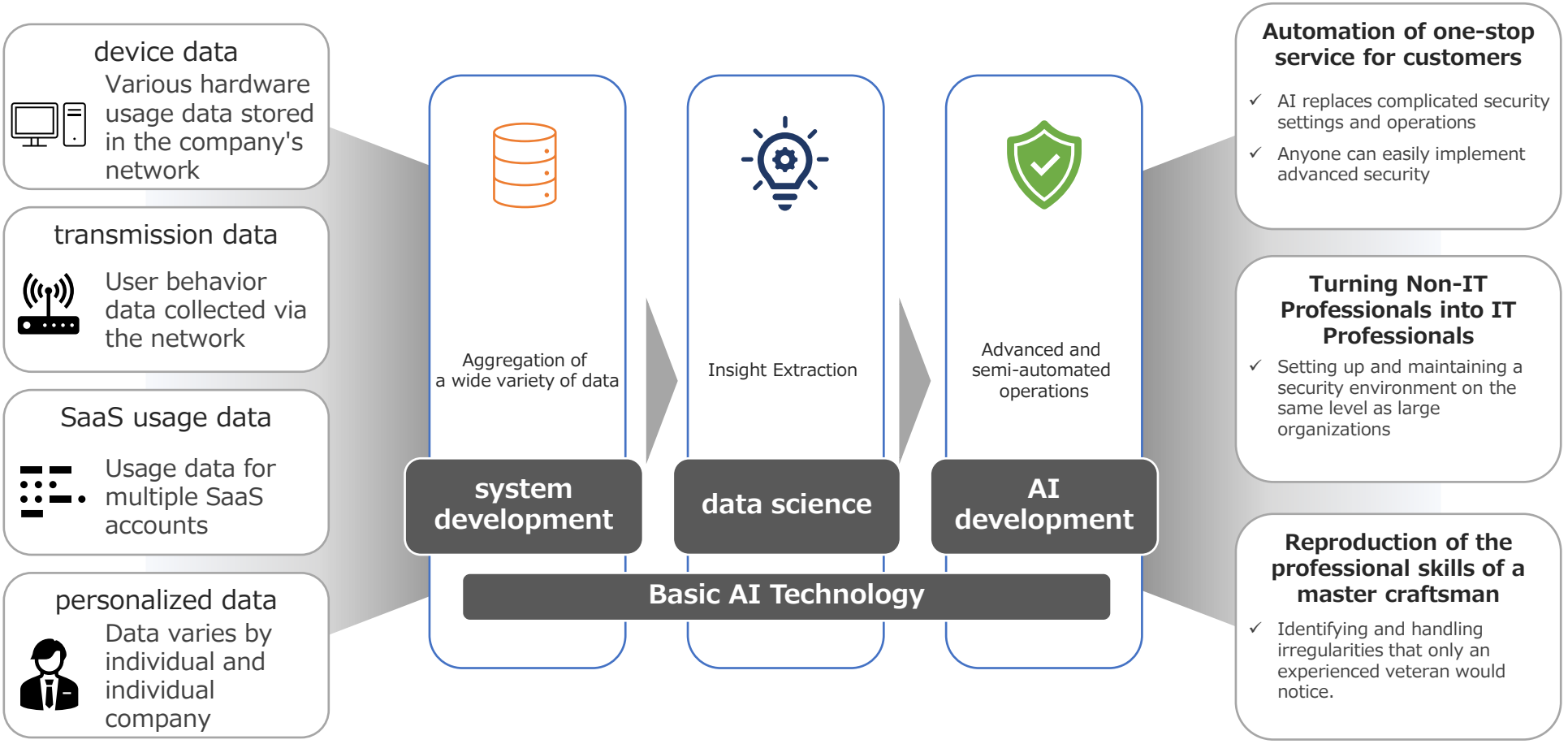
Medium-to-long term Growth Strategy

- We plan to expand AI (B-to-B) services by what we have cultivated in our AI (B-to-C) services. We aim to create industry-standard AI, to form an ecosystem based on it, and to expand across industries



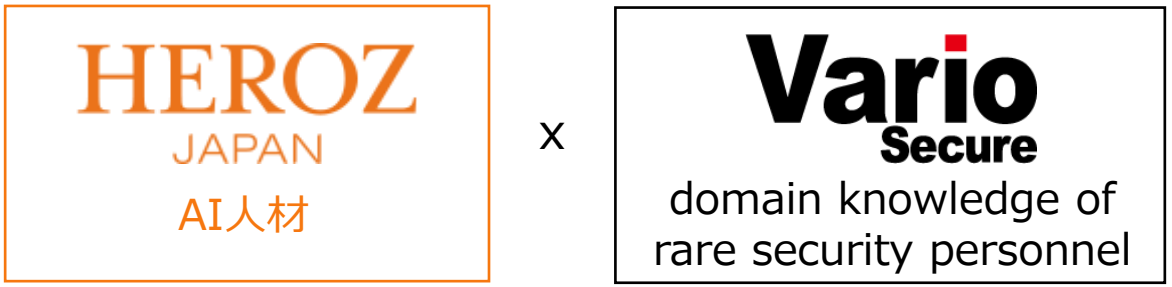
Initiatives Aimed at Achieving the Growth Strategy I
～ Collaboration with VarioSecure Inc. to Realize AI Security ～

By utilizing a variety of corporate data, we will provide customers with a new level of safety and security in the age of zero trust through the power of AI.
And aiming to support corporate safety and security, and supporting digital transformation



Initiatives Aimed at Achieving the Growth Strategy I
～ Implementation of our AI in VarioSecure's VSR ～

- Capital and business alliance with VarioSecure Inc, and joint development of services
- Through this alliance, we aim for further growth by establishing a system for continuous creation of new services that can only be achieved by a group of technology specialists, based on "HEROZ's AI human resources" and "VarioSecure's domain knowledge of rare security personnel".



- From May 2022, a closed beta version of a traffic prediction monitor and VSR resource monitoring monitor based on AI analysis using HEROZ Kishin is included in the VSR "n Series" of managed security services sold by VarioSecure Inc.

Initiatives Aimed at Achieving the Growth Strategy Ⅱ
～ Shogi AI utilization platform "Kishin Analytics" launched～

- “Kishin Analytics” is available from May 2022.The company launches "Kishin Analytics," a platform to support professional Shogi AI research using Shogi AI.
- Kishin Analytics" is a service that allows users to easily analyze the latest Shogi AI using a browser. The service supports Shogi AI research by providing a UI/UX environment that can be easily operated by anyone at the touch of a button, without expensive initial investment.
- The scope of the service will be expanded in stages, and in the future, the service will be offered to all Shogi fans.

Kishin Analytics screen on PC (smartphone version also provided)

Initiatives Aimed at Achieving the Growth Strategy Ⅲ ～ Won the World Computer Shogi Championship "Developing the world's strongest AI ～

- Team "dlshogi with HEROZ", consisting of HEROZ AI engineers, won the 32nd World Computer Shogi Championship in May 2022.
- The World Computer Shogi Championship is held once a year by the Computer Shogi Association of Japan with the aim of improving the skills of Shogi software. 51 teams participated in this year's tournament.
- Through the development of brain games, we will continue to accumulate AI-related methods based on machine learning that can be applied to other fields and provide them to various industries.
- “dlshogi with HEROZ" team members
  Kaoru Kawashima (HEROZ AI engineer, pen name: Tadao Yamaoka)
  Kunihiko Kano (HEROZ AI engineer)
  Yuhei Omori (HEROZ AI engineer)
  Yu Yamaguchi

LIVE Report: Final League
The 32nd World Computer Shogi Championship
From the official YouTube channel

Interview with the winner

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Potential AI Demand in Our Areas of Focus

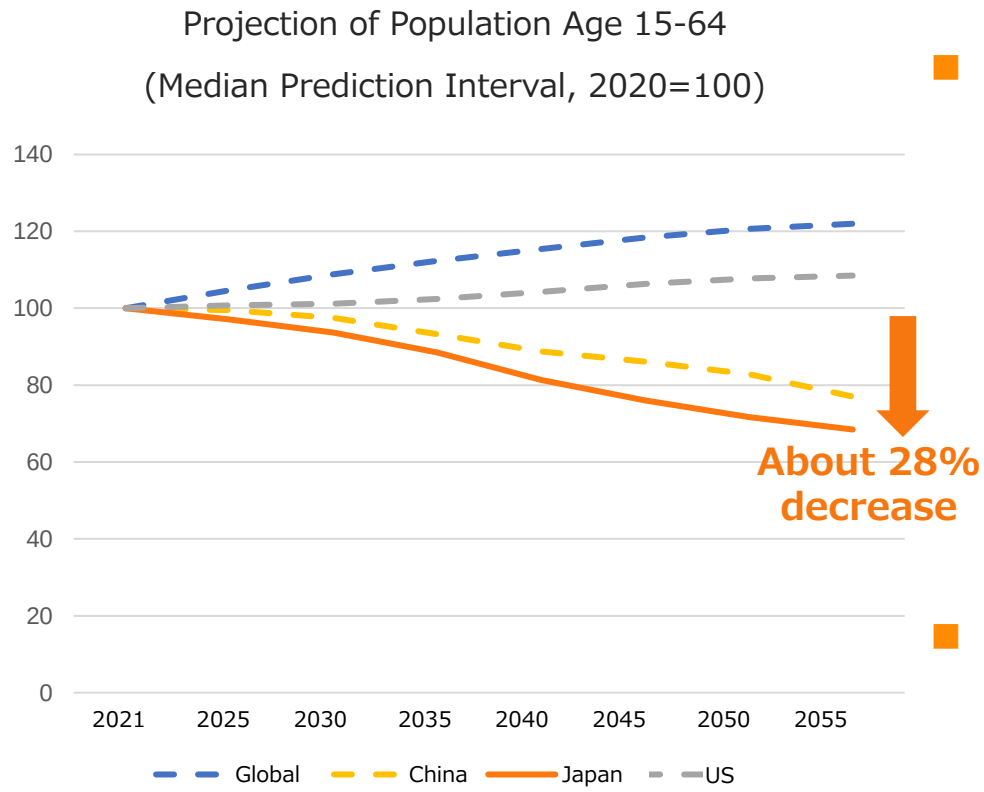
- We believe there is also significant potential demand for enhancing operational efficiency through AI in the construction industry, which is one of our areas of focus

Challenges faced by the Construction Industry	Chronic Shortage of Man-power	■ There will be a shortage of 110,000 construction technicians by 2025 (source: Human Touch Research Institute, “status quo” scenario in the Proprietary Analysis Monthly Report, December 2017)
		■ Over 1/3 of first-class registered architects are over 60 (average: 56.2 years old) (source: Report on Construction-related Administration Aimed at Securing Safety of Architecture, Social Infrastructure Council, August 2006)
		■ The number of construction and mining industry workers is expected to decrease from 5.05 million in 2014 to 4.16–4.24 million in 2030, with some variability depending on future economic growth and labor market participation trends (source: JILPT, 2015 Estimated Labor Supply/Demand)
	Soaring Materials Prices	■ The national construction materials price index has increased by 17% since 2010 (source: Economic Research Association)

- We entered into a capital and business alliance with Takenaka Corporation in 2017 and became a member of i-Construction. We aim to create the industry standard AI for the construction industry, enhancing productivity and creating a new, attractive construction site

Japan:
Potential AI Demand is Among the Largest Worldwide

- Potential AI demand in Japan can be expected to be among the largest worldwide, as the working population is expected to decrease significantly going forward



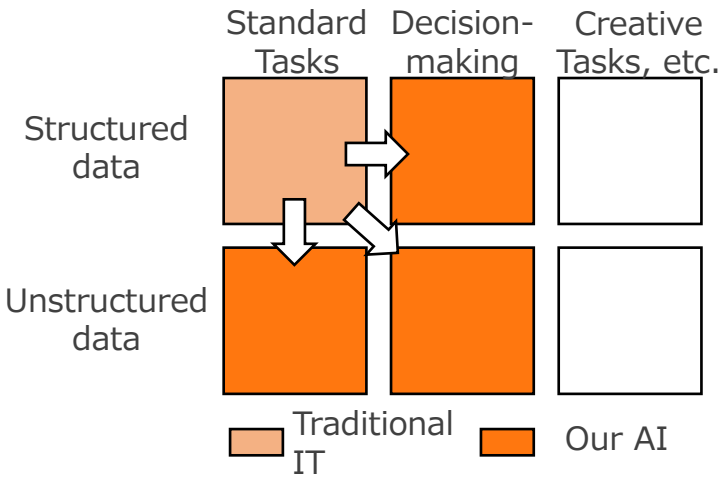
Source: Prepared by HEROZ based on United Nations, World Population Prospects, The 2019 revision

- When defining the working population as those aged 15-64, the world average is forecasted to increase by about 12% from 2020 to 2035 and by about 21% from 2020 to 2055. On the other hand, the working population is expected to decrease by about 11% and about 28% during the same periods, respectively

- Based on such forecasts, the Japanese working population will show the largest decrease among leading GDP nations

Use of Our AI in DX

- Domestic DX (digital transformation) is expected to accelerate due to the future decrease in the working population as well as the impact of the COVID-19 pandemic
- AI allows for DX of a wide variety of operations including those involving decision-making, which were previously considered difficult to automate



- DX will begin with standard tasks based on structured data and is expect to expand to decision-making and tasks which utilize unstructured data
- Our AI can automate a wide variety of operations including those requiring decision-making. We have also achieved DX for unstructured data, which were traditionally considered difficult for DX
- We are promoting DX and building a track record in areas including construction, finance, and entertainment

Disclaimer

The contents set out in this material are prepared based on generally acknowledged economic, social and other conditions, and on certain assumptions deemed rational by HEROZ, Inc. and may therefore be subject to change without prior notice due to changes in the managerial environment or for other reasons.

The forward-looking statements set out in this material including performance outlooks are based on information currently available to HEROZ, Inc. and on certain assumptions deemed rational, and may therefore differ materially from actual results due to uncertainties in judgements or assumptions, or for other reasons.
Such factors of uncertainty and change include both general, domestic and international economic conditions, such as general industry and market conditions, interest rates, and foreign exchange fluctuations. HEROZ, Inc. shall not undertake any obligations to update or revise any forward-looking information set out in this material even in the event that new information becomes available or certain events occur hereafter.

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