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HEROZ
JAPAN

Presentation Material for
FY04/2022 Q2 Financial Results

December 10, 2021

HEROZ, Inc. (4382)

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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 AI (B-to-B) services: HEROZ Kishin
Description AI (B-to-C) services: “Shogi Wars”, etc.
Membership Japan Deep Learning Association,
The Japanese Society for Artificial Intelligence

2021

Capital and business alliance with VarioSecure

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 HEROZ engineers, 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



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

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)



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

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 defeated a
professional Shogi
(Japanese Chess)
player ('13)

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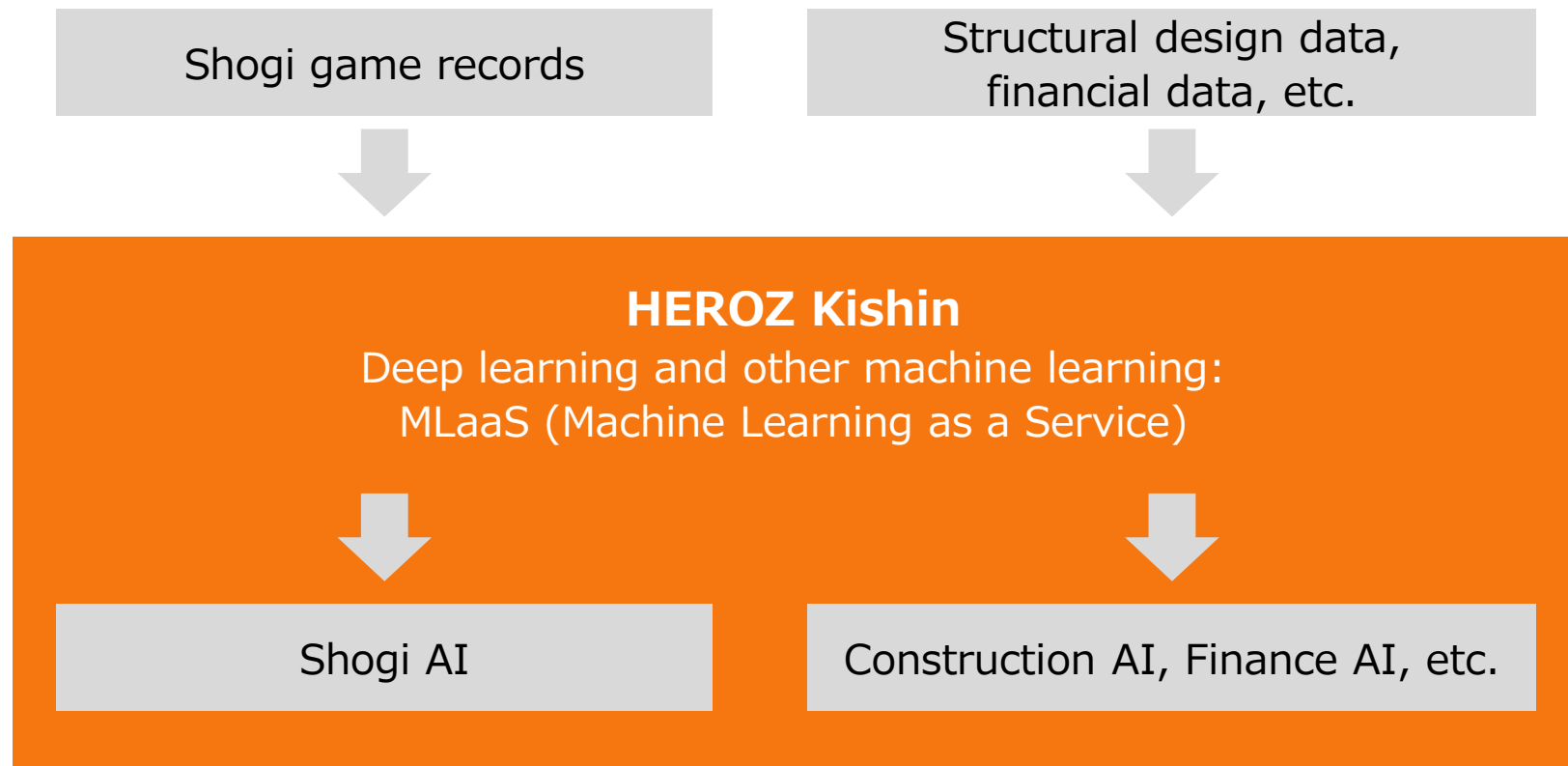
Go AI



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

Google

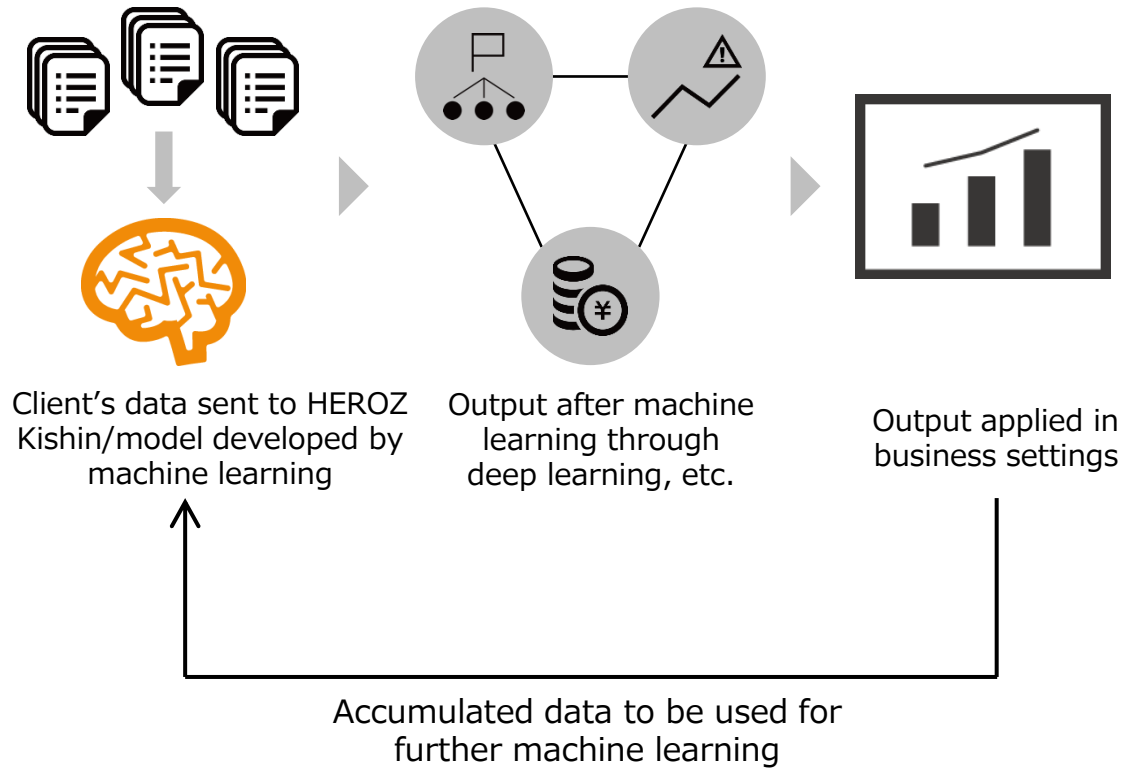
B-to-B Services: Machine Learning by Replacing Shogi Game Records with Other Data



MLaaS : What is Machine Learning as a Service?

Provides models, developed by machine/deep learning, as a service

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



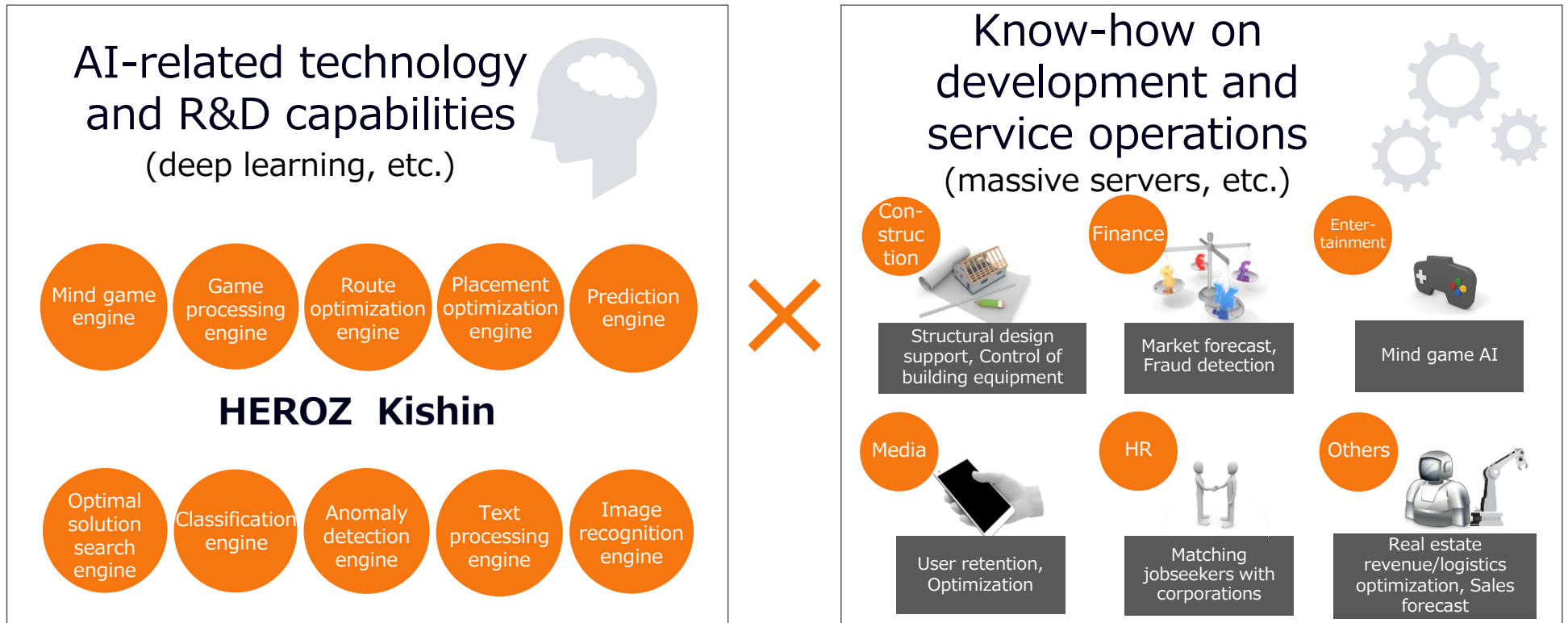
Output precision increases through repeated machine learning

- Research/develop Shogi AI
- Standardize AI technology accumulated through shogi AI
- Establish "HEROZ Kishin" = MLaaS (Machine Learning 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



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



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

Fi- -nance



A R U H I

Market forecast, Fraud use
detection, etc

Enter- -tainment

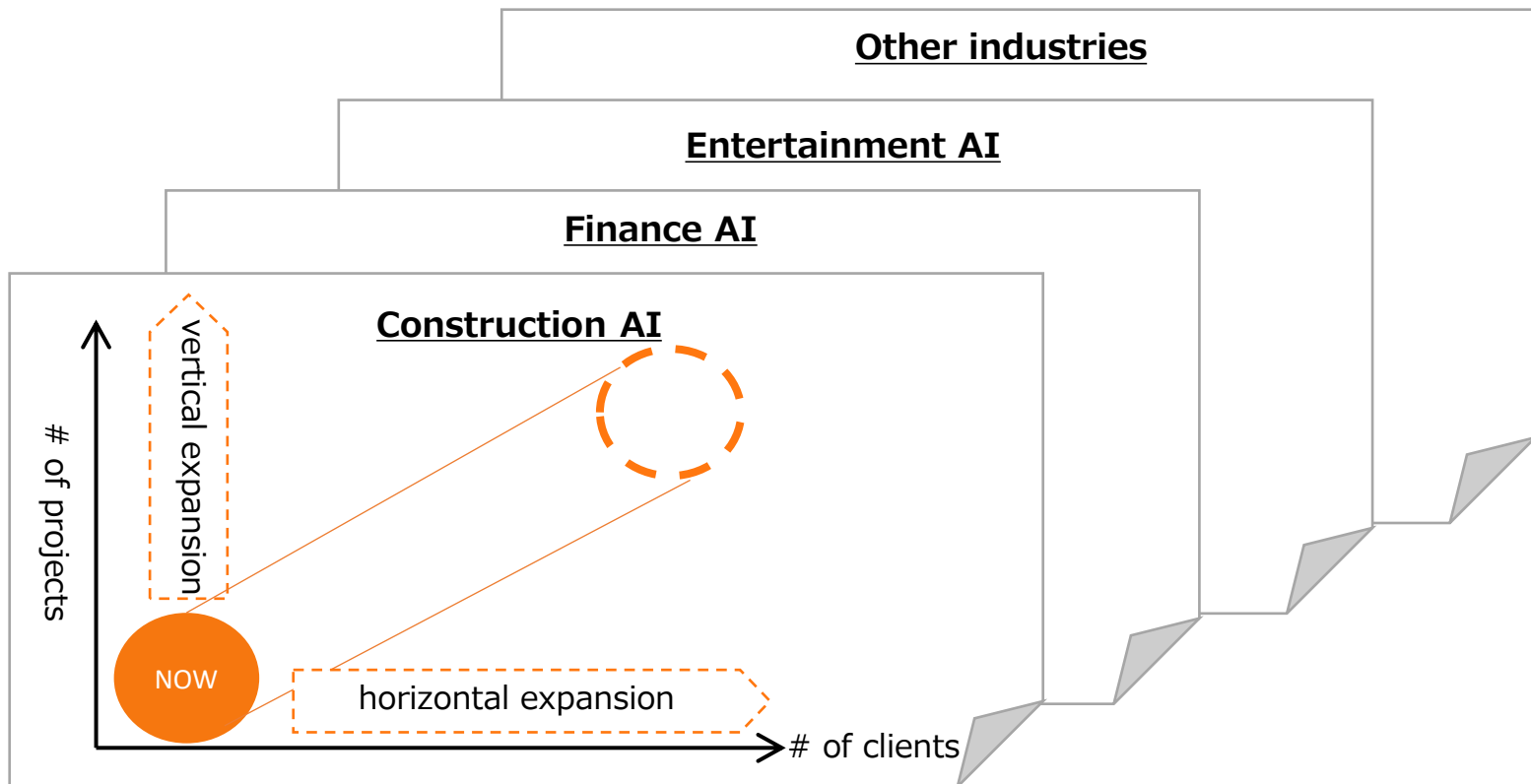


Creation of high-quality NPCs,
game balance adjustment, etc.
(In B-to-B service, HEROZ is
not a game
operator/publisher but a
background AI provider)

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

B-to-B Services: horizontal x vertical expansion across industries

- We aim to create industry-standard AI through horizontal and vertical expansion, applying into various industries
- After creating the industry-standard AI, we plan to form an ecosystem based on it



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

- Leveraging AI-related technology to provide mind game mobile apps such as shogi
- Shogi Wars has remained cash cow backed by increase of paid users on a YoY basis
- Staying longer at home due to Covid-19 has led to increased demand for our mobile apps, with an increase in our paid active user base



Shogi Wars



Animal Shogi Wars

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

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

$$\text{EBITDA} = \text{Operating Profit} + \text{Depreciation/Amortization Expenses}$$

- In AI-related businesses, server investments, 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.

Performance Overview (May-October 2021)

- Net Sales: Net Sales from AI (B-to-B) services decreased year-on-year, mainly due to allocation of personnel to product development aimed at creating future profits and the termination of gaming services based on our AI services in the entertainment business. On the other hand, AI (B-to-C) services benefited from continued stay-at-home demand as well as online shogi tournaments and newly added functions
- Profits: Profits decreased not only due to decreased Net Sales, but also as a result of increases in depreciation and communications expenses arising from the acquisition of servers for machine learning and other equipment, personnel hiring expenses, and product development costs

(Units: JPY millions)	FY04/2022 Q2 Actual	(Reference) FY04/2021 Q2 Actual	(Reference**) YoY***	FY04/2022 Forecast	Progress**
Net Sales	729	753	△3.2%	1,700	42.9%
EBITDA*	70	178	△60.7%	280	25.1%
<i>EBITDA Margin</i>	9.6%	23.8%	—	16.5%	—
Operating Profit	△6	152	—	100	—
<i>Operating Margin</i>	△0.8%	20.3%	—	5.9%	—
Ordinary Profit	△12	147	—	90	—
Net Income	△10	100	—	63	—

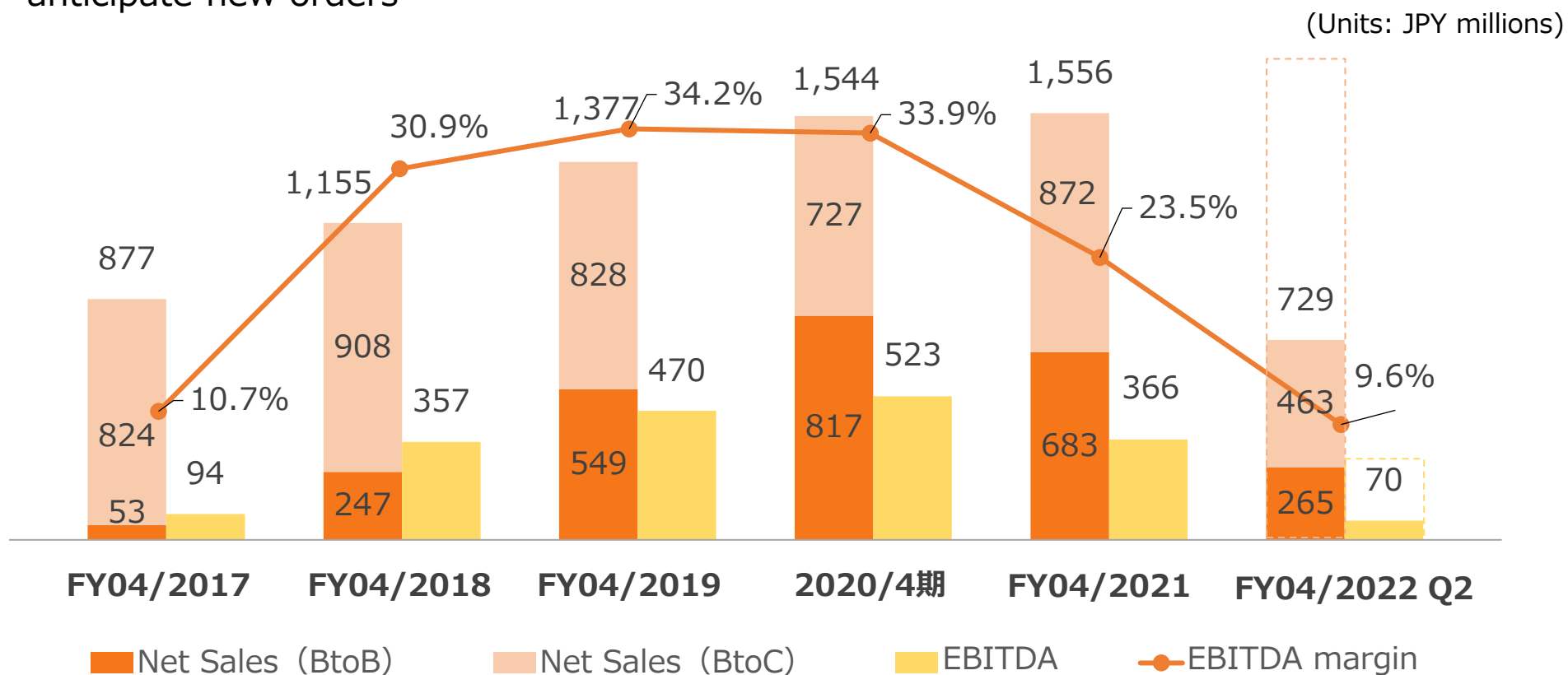
* EBITDA = Operating Profit + Depreciation Expenses + Amortization of Lease Deposits

**Where negative figure were reported for the fiscal year, ratios are marked with a “-”

***As the revenue recognition accounting standard has been applied from the current fiscal year, comparisons with the previous year (under previous standard) are for reference only

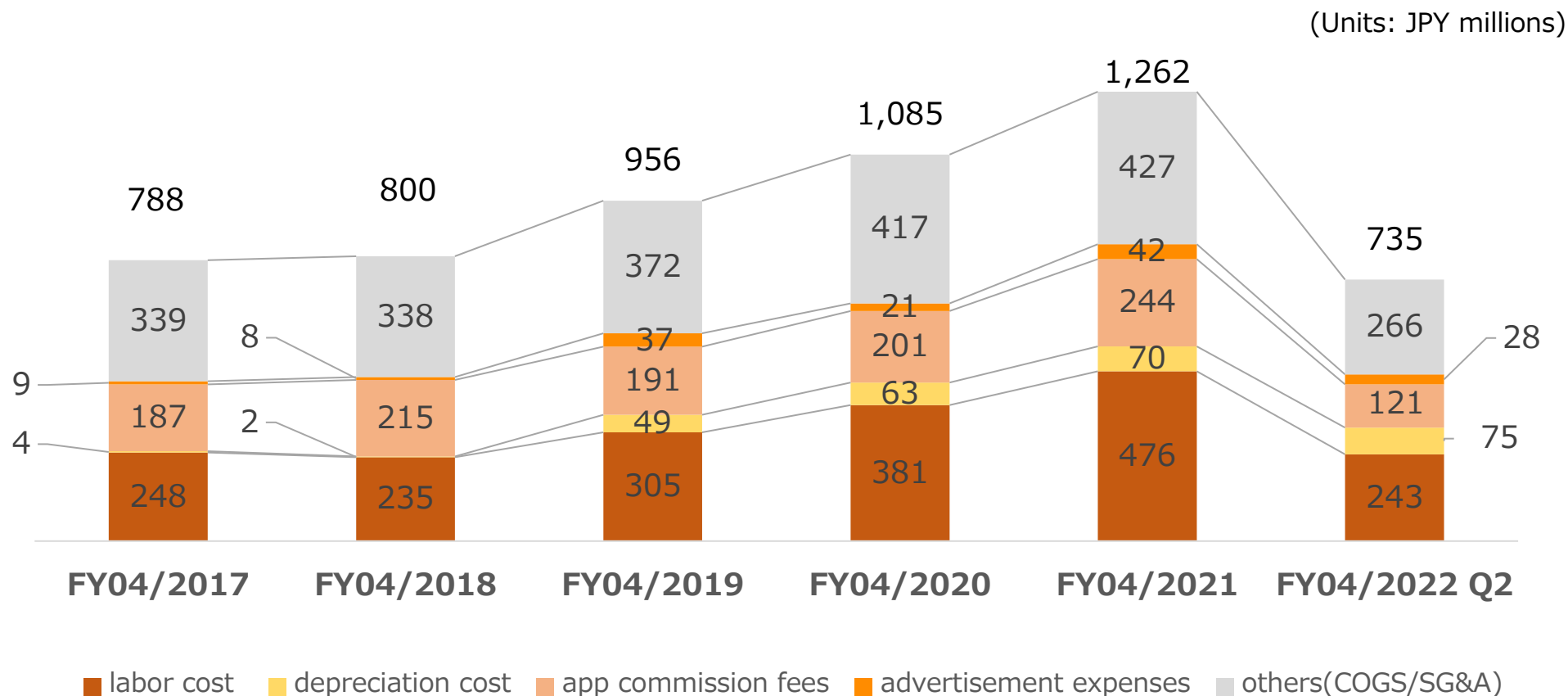
Net sales and EBITDA Trends

- Net sales of AI (B-to-C) services increased compared with our forecast and the previous fiscal year led by “Shogi Wars”
- While AI (B-to-B) services experienced a decrease following the termination of some existing projects, we expect a trend towards recovery in the second half as we anticipate new orders



COGS and SG&A Trends

- SG&A expenses trended upward, with increases in depreciation and communications expenses due to the acquisition of servers for machine learning and other equipment (+72 million yen year-on-year), personnel hiring expenses(+20 million yen), and R&D expenses (+23 million yen)



Balance Sheet (as of October 31, 2021)

- On September 10, 2021, we entered into a capital and business alliance agreement with Vario Secure Inc. As a result, we acquired the shares of Vario Secure and positioned it as our affiliated company (19.95 million yen (including deal-related expenses))
- We plan to invest Cash and deposits in efforts to achieve the medium-to-long term growth strategy (e.g. hiring for AI engineers, in-house computing servers and external cloud computing services, investments to companies with peripheral technologies which can be applied to our operations, working capital)

Units: JPY millions	As of 10/31/2021	(Reference) As of 4/30/2021
Current Assets	3,819	5,786
Cash and deposits	3,606	5,554
Fixed Assets	2,750	759
Property, plant and equipment	342	424
Intangible assets	15	17
Investments and other assets	2,392	318
Shares of subsidiaries and associates	1,995	–
Total Assets	6,570	6,546
Current Liabilities	190	143
Fixed Liabilities	–	–
Net Assets	6,379	6,403

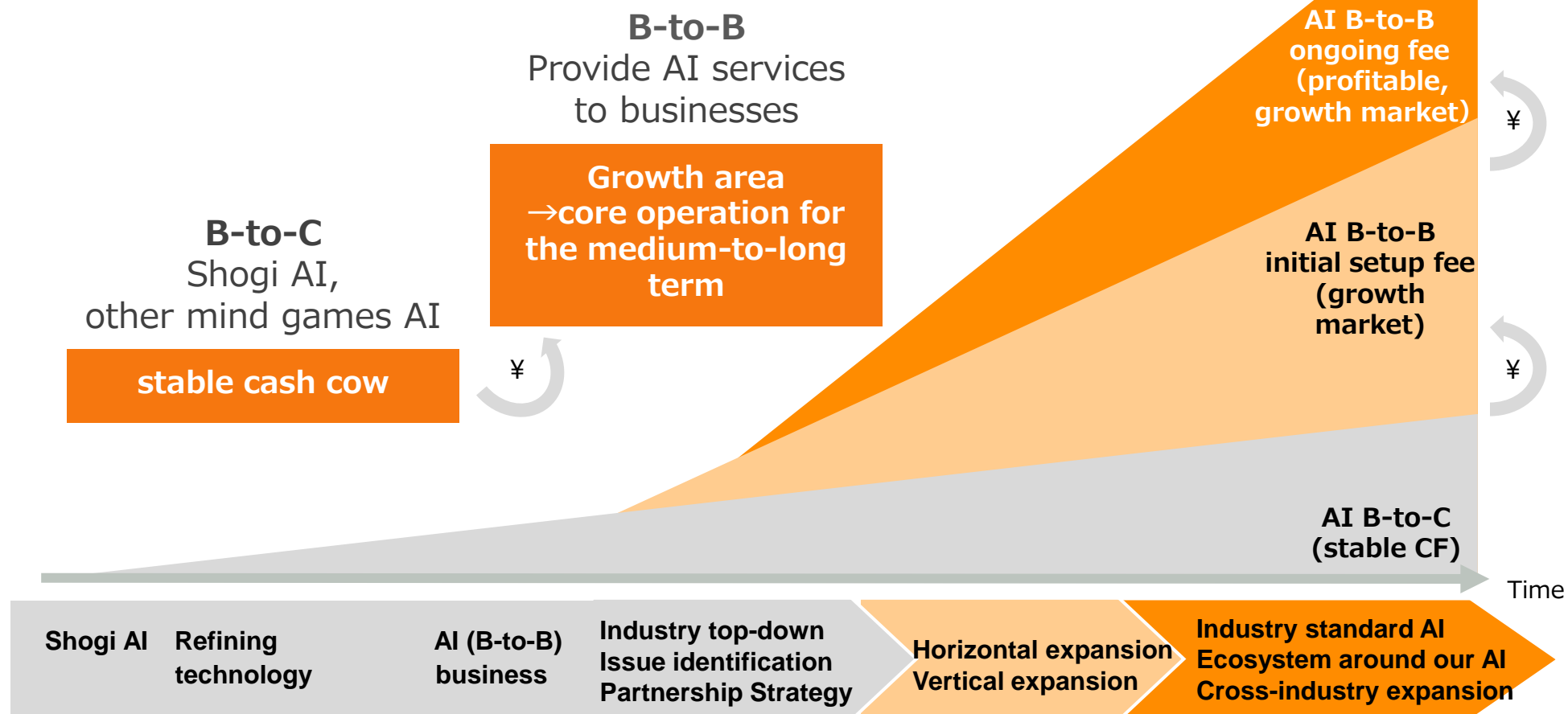
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Medium-to-long term Growth Strategy

- 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



■ **August 2021~ Introduced the executive officer system**

- We introduced an executive officer system in order to accelerated management decision-making and to resume operational growth in AI (B-to-B) services trend
- Executive Officers: CFO Hiroya Mori / CSO Kyota Seki / VPoE Tatsuya Imai / CAIO Yu Yamaguchi / Head of Development Div. Junichiro Nishi

■ **November 29, 2021 Business alliance with DRAFT Inc. (TSE Mothers: 5070)**

- We entered into a business alliance with DRAFT, a design company focused on interior and construction design, to engage in co-development of “AI services to support automated design” aimed at enhancing productivity in designing operations
- This initiative reverses the traditional design process which starts with drawings and creates 3-dimensional images, creating 2-dimensional pictures based on data extracted from 3-dimensional models, pursuing a system which automates the creation of voluminous development diagrams and cost estimates
- By combining our AI technology and development capabilities with DRAFT’s design capabilities and specialized technology, we will continue to support DX of the entire construction design industry and to enhance the value of designs

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Potential AI Demand in Our Areas of Focus

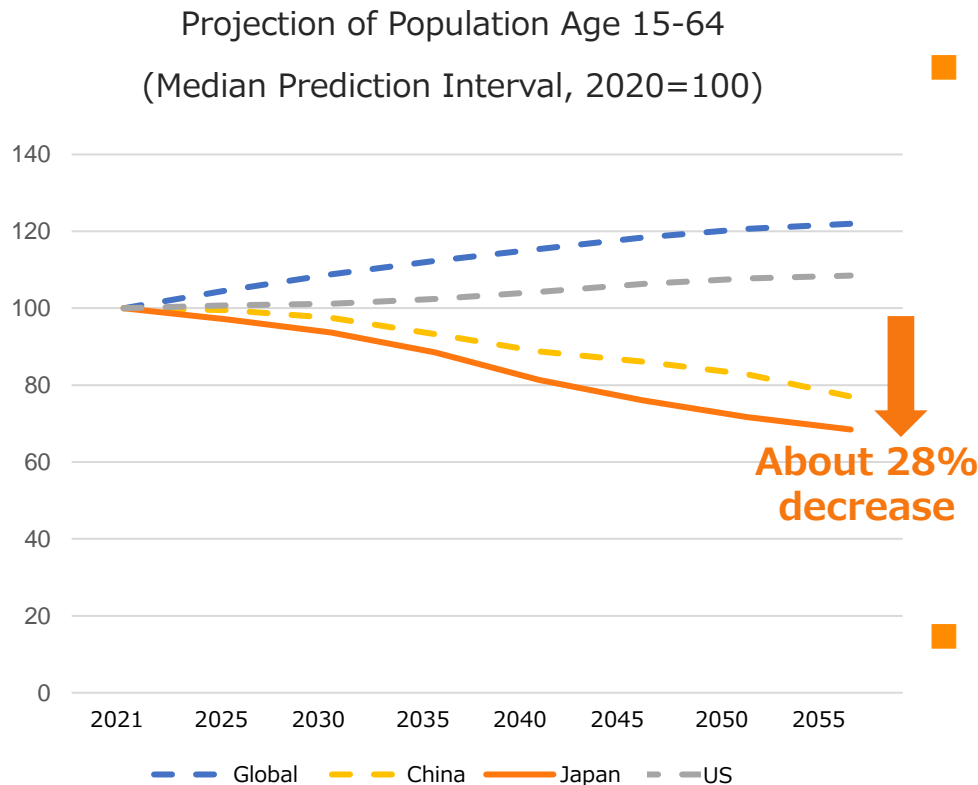
- We believe there is also significant potential demand for enhancing operational efficiency through AI in the construction industry, which is one of our areas of focus



- 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

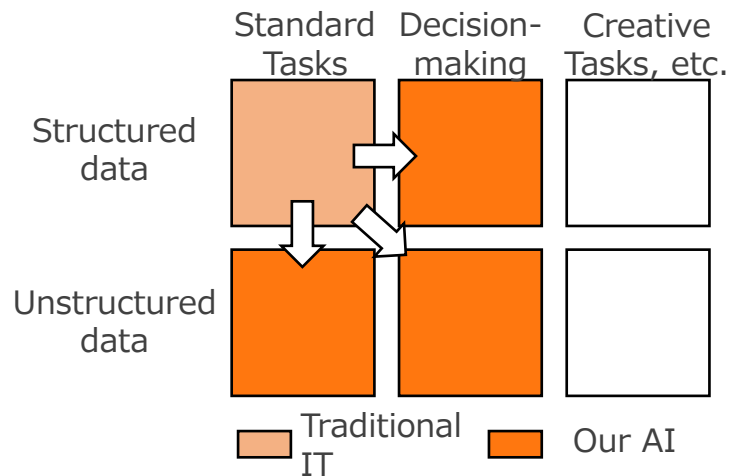
- Potential AI demand in Japan can be expected to be among the largest worldwide, as the working population is expected to decrease significantly going forward



- 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

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

- 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 expected 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

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.

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