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HEROZ
JAPAN

Presentation Material for FY04/2020
Full Year Financial Results

June 12, 2020

HEROZ, Inc. (4382)

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- 1. Executive Summary**
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- Net sales were ¥1,544 million (+12.1% year-on-year), consisting of
 - AI (B-to-B) services: net sales of ¥817 million (+48.9% year-on-year)
 - AI (B-to-C) services: net sales of ¥727 million yen (Δ 12.2% year-on-year)
- AI (B-to-B) services maintained a high growth rate of 48.9% due to a buildup of ongoing fees and initial setup fees. With respect to AI (B-to-C) services, while “Shogi Wars” revenues increased on a year-on-year basis, total revenues decreased by 12.2% year-on-year due to the termination of “Pokémon Duel” in October 2019
- EBITDA and operating profit increased to ¥523 million (+11.2% year-on-year) and ¥459 million (+9.2% year-on-year), respectively. On the other hand, we reported ordinary profit of ¥404 million (Δ 2.5% year-on-year) due to one-time incurred expenses associated with a capital increase described below, and net income of ¥255 million (Δ 13.9% year-on-year) due to impairment losses on investment securities of about ¥39 million
- In December 2019, we completed the listing market change and a capital increase of about ¥4 billion via public offering aimed at achieving medium-to-long-term growth

Initiatives to Prevent Spread of COVID-19

- The following countermeasures have been implemented to prevent spread of COVID-19

Reduced Contact through Work From Home and Flexible Working Hours	Other
<ul style="list-style-type: none">• Introduced a permit system for work from home and flexible hours in late February• Following the state of emergency declared by the government on April 7, all officer and employees were instructed to work from home if at all possible• Continuing a limited form of work from home and flexible hours after the termination of the state of emergency, pursuant to Tokyo's announced roadmap	<ul style="list-style-type: none">• Improved the work from home environment through reinforcement of VPN (virtual private network)• Transitioned to online internal/external meetings and recruiting interviews• Alcohol sterilization and temperature measurements when entering the office• Promoted shift to paperless work

- No officers or employees have been infected with COVID-19 to date
- In light of possible long-term effects from COVID-19, we plan to minimize its negative impact by increasing internal tools to enhance employee productivity
- We achieved record quarterly revenues in Q4 despite the introduction of work from home and other measures indicated above, demonstrating a minimal short-term impact on our labor productivity

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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



Representative Director and 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 COO
Tomohiro Takahashi

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

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”

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 CFO, Business Planning Manager

Daisuke Asahara

Graduated from Kyoto University Graduate School
MBA from Wharton School, University of Pennsylvania (delivered graduation speech as student body representative)
Investment Banking Division, Goldman Sachs



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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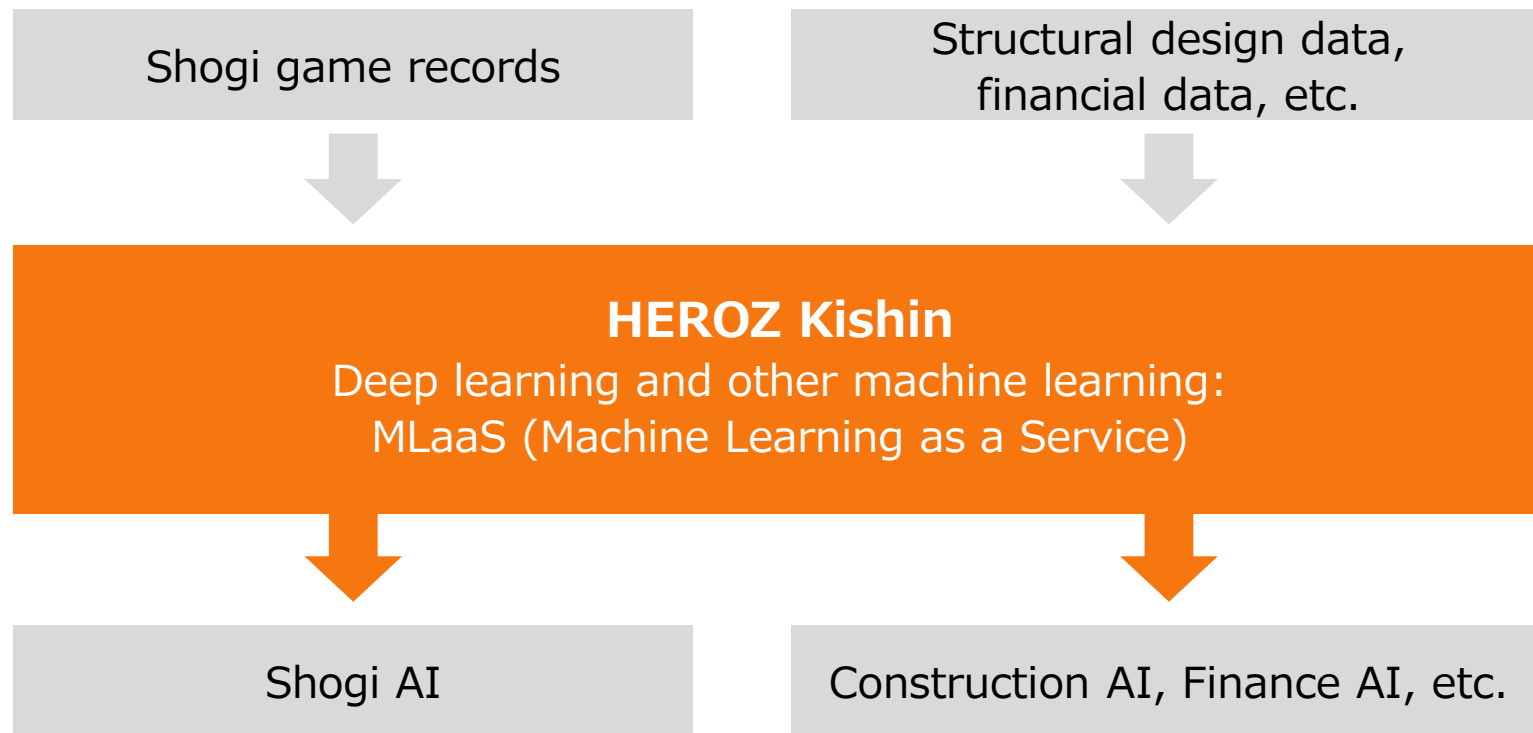
Go AI



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

Google

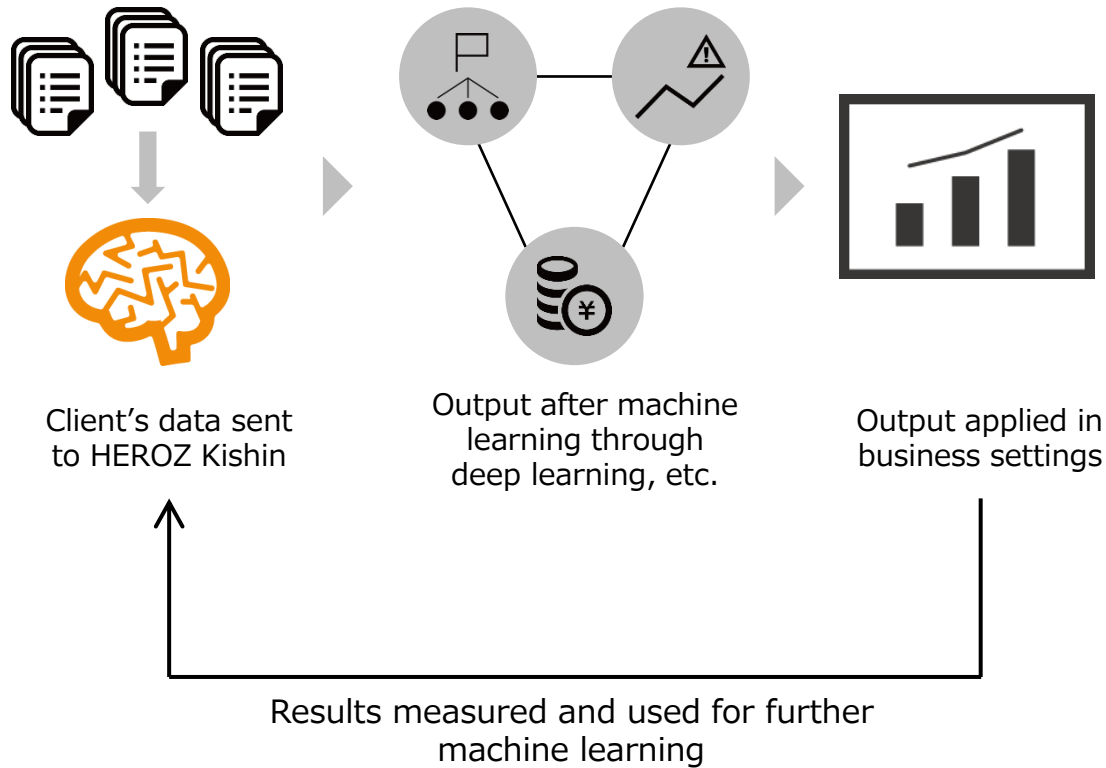
B-to-B Services: Machine Learning by Replacing Shogi Game Records with Other Data



MLaaS : What is Machine Learning as a Service?

Business model which provides machine learning/deep learning as service, similar to SaaS (Software as a Service) and IaaS (Infrastructure 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

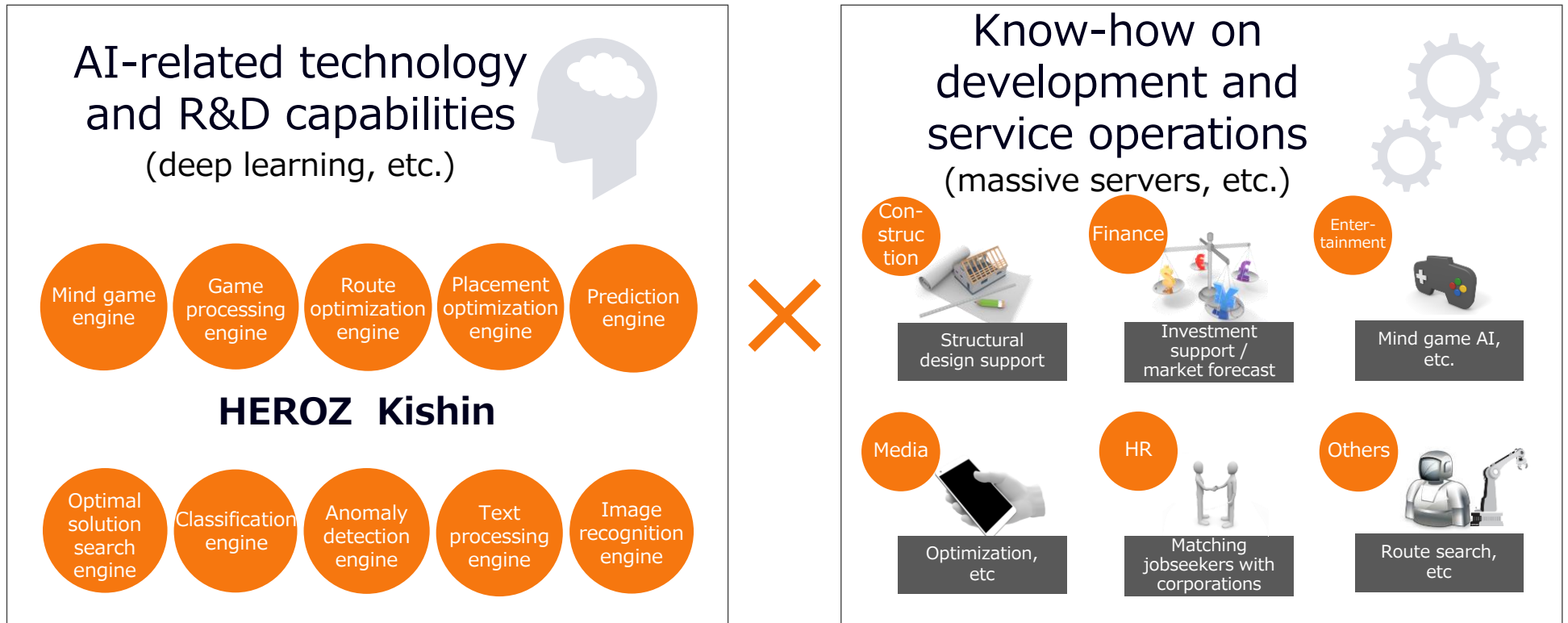
Provide comprehensive AI services with massive servers

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, etc.

Fi- -nance



Investment support,
market forecasts, etc.

Enter- -tainment



netmarble

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)

Depending on the types of projects,
ongoing fees in the form of revenue sharing is also introduced

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

- Leveraging AI-related technology to provide mind games such as shogi, chess, and backgammon worldwide
- Shogi Wars has remained cash cow backed by increase of paid users on a YoY basis
- The governmental requests to stay at home have led to increased demand for our mobile apps, with an increase in our paid active user base in the fourth quarter



Shogi Wars



Animal
Shogi Wars



Igo Wars



CHESS HEROZ
(English)



BackgammonAce
(English)

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.

FY04/2020 Full Year Financial Performance

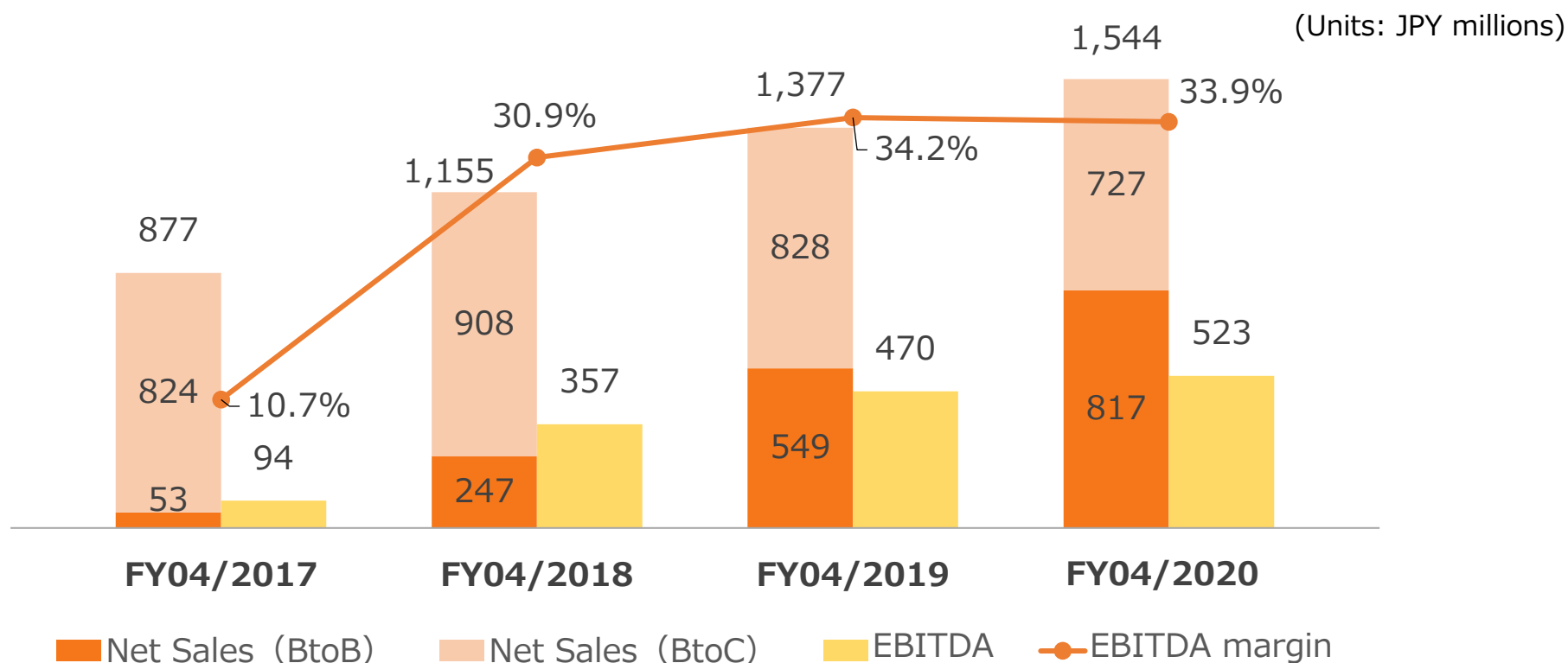
- In FY04/2020, net sales of 1,544 million yen (+12.1% year-on-year), EBITDA of 523 million yen (+11.2% year-on-year) and other profits were below our forecast because some of AI (B-to-B) projects were delayed compared with the original plan and SG&A/COGS increased as represented in page 18. In addition, non-operating expenses of ¥45 million associated with the listing market change/capital increase in Q3 and extraordinary losses of impairment losses on investment securities of ¥39 million (against ¥44 million book value of Pocket Queries, Inc.) in Q4 decreased ordinary profit and net income, respectively

(Units: JPY millions)	FY04/2020 Actual	FY04/2020 Forecast	Actual to Forecast (%)	(Reference) FY04/2019 Results
Net Sales	1,544	1,630	94.8%	1,377
EBITDA*	523	570	91.8%	470
<i>EBITDA Margin</i>	<i>33.9%</i>	<i>35.0%</i>	–	<i>34.2%</i>
Operating Profit	459	520	88.3%	420
<i>Operating Margin</i>	<i>29.7%</i>	<i>31.9%</i>	–	<i>30.5%</i>
Ordinary Profit	404	510	79.3%	415
Net Income	255	350	73.0%	296

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

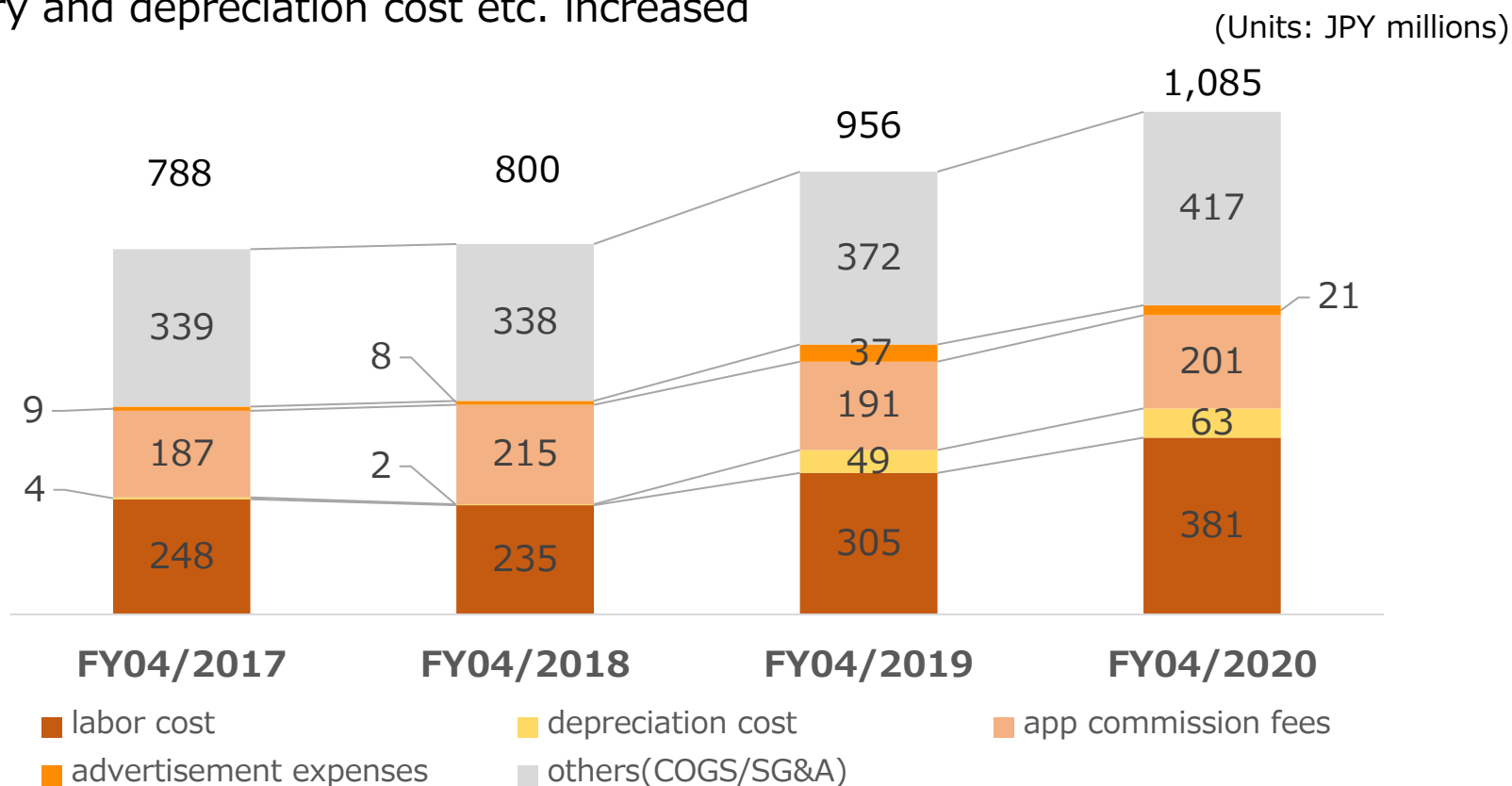
Net sales and EBITDA Trends

- Net sales of AI (B-to-B) services, which is the core pillar of our growth strategy, increased by 48.9% compared with the previous fiscal year
- Net sales of AI (B-to-C) services, which terminated “Pokémon Duel” in October 2019, decreased by 12.2% compared with the previous fiscal year. However, our on-going services such as “Shogi Wars” has kept growing up
- Net sales in Q4 were record-high as our company’s quarterly net sales



COGS and SG&A Trends

- Labor cost has increased on a year-on-year basis and is expected to keep growing to increase our engineering capacity, which will lead to our medium-to-long term growth
- Size-based business tax and one-time incurred expenses associated with the listing market change and capital increase in December 2019, rents by expanding office space in February and depreciation cost etc. increased



Balance Sheet (as of April 30, 2020)

- Cash and deposits increases via public offering in December 2019
- We plan to invest them 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, expansion of office space, investments to companies with peripheral technologies which can be applied to our operations, working capital)

Units: JPY millions	As of 4/30/2020	As of 4/30/2019
Current Assets	5,935	1,659
Cash and deposits	5,562	1,494
Fixed Assets	473	498
Property, plant and equipment	131	150
Intangible assets	6	5
Investments and other assets	334	342
Total Assets	6,408	2,157
Current Liabilities	226	178
Fixed Liabilities	-	-
Net Assets	6,182	1,979

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COVID-19 Impact and Assumptions for Forecasts

- Materialized impact and potential risks relating to COVID-19 are as listed below. While decreased opportunities for sales discussions may slow down growth in the first half, COVID-19 has not had a significant impact on our operations to date

	AI (B-to-B) Services	AI (B-to-C) Services
Materialized Impact	<ul style="list-style-type: none"> Delays in documentation (contracts, receipts, etc.) and decreased opportunities for sales discussions due to work from home Some clients have suspended new projects until the situation settles down 	<ul style="list-style-type: none"> Increased revenues from mobile apps such as Shogi Wars
Potential Upside	<ul style="list-style-type: none"> Increase in the use of AI through promotion of DX (digital transformation) , etc. 	<ul style="list-style-type: none"> Further revenue increase in our mobile apps due to increased use of our online contents
Potential Downside	<ul style="list-style-type: none"> Reduction in client budgets for IT investments, etc. 	<ul style="list-style-type: none"> Troubles due to increased traffic

- FY04/2021 forecasts have been formulated based on the following assumptions
 - External environment: The increase in COVID-19 patients will settle down in the first half
 - Internal environment: Growth will slow down in the first half due to slowdowns/emergency declared by the government in progress of projects and reduced opportunities for sales discussions, but will normalize in the second half

FY04/2021 Financial Forecast

- We plan to invest approximately ¥4 billion, proceeds from public offering in December 2019, in hiring for AI engineers, in-house computing servers and external cloud computing services, etc. until 2022. While earnings will decrease for the foreseeable future as a result, we expect earnings recovery after those investments are completed
- By our investment plan above, we forecast revenues of ¥1,700 million and EBITDA of ¥290 million. While growth will slow down in the first half as presented in the previous page, we forecast over 20% year-on-year revenue growth for AI (B-to-B) services (Units: JPY millions)

(Units: JPY millions)	FY04/2020 Actual	FY04/2021 Forecast	YoY (%)
Net Sales	1,544	1,700	+10.1%
EBITDA*	523	290	△44.6%
<i>EBITDA Margin</i>	<i>33.9%</i>	<i>17.1%</i>	-
Operating Profit	459	230	△49.9%
<i>Operating Margin</i>	<i>29.7%</i>	<i>13.5%</i>	-
Ordinary Profit	404	220	△45.6%
Net Income	255	150	△41.3%

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

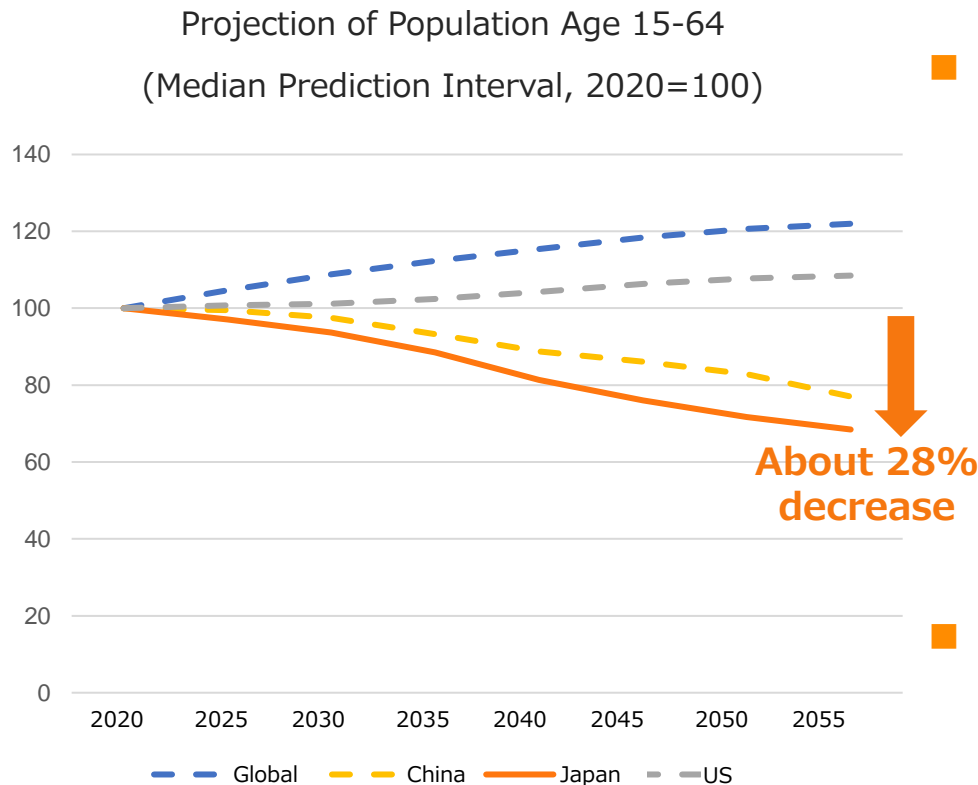
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Japan: Potential AI Demand is Among the Largest Worldwide

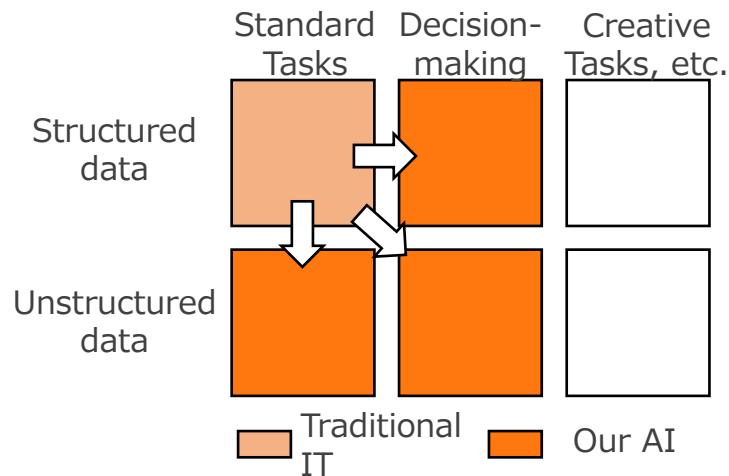
- Potential AI demand in Japan can be expected to be among the largest worldwide, as the working population is expected to decrease significantly going forward



- 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

Potential AI Demand in Our Areas of Focus

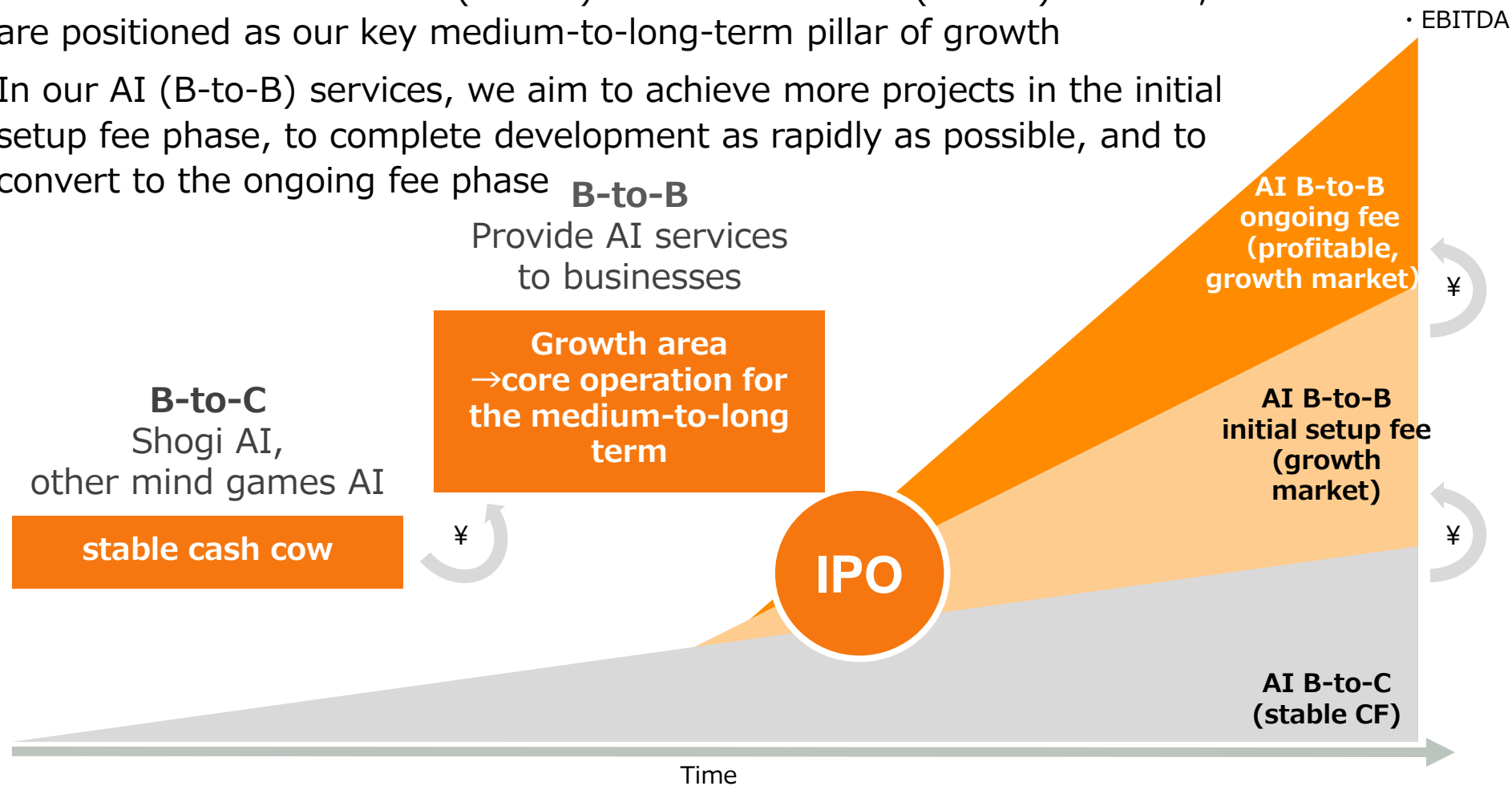
- We believe there is also significant potential demand for enhancing operational efficiency through AI in the construction industry, which is one of our areas of focus



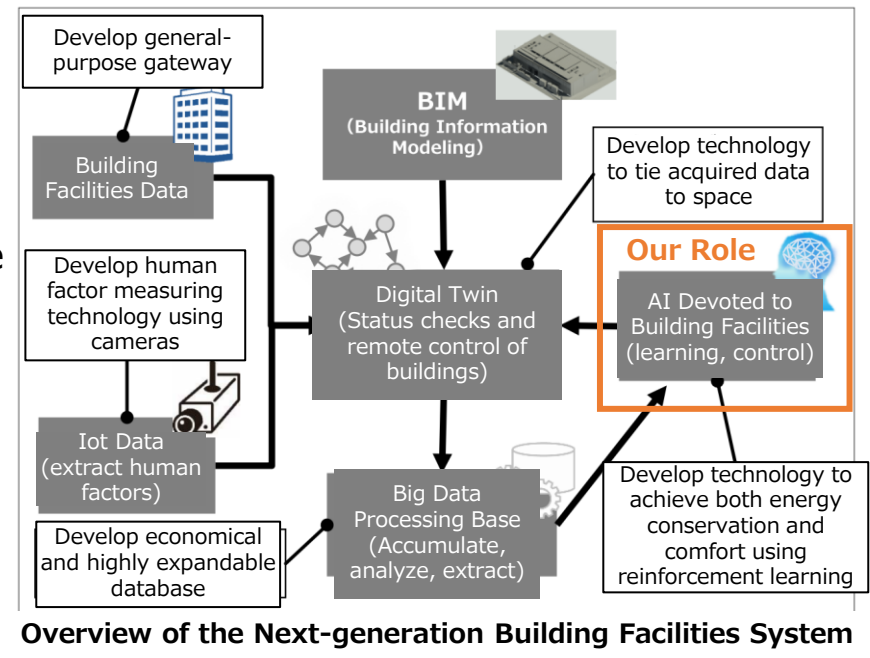
- We entered into a capital and business alliance with Takenaka Corporation in 2018 and became a member of i-Construction. We aim to create the industry standard AI for the construction industry, enhancing productivity and creating a new, attractive construction site

Medium-to-long term Growth Strategy

- We aim to achieve EBITDA growth by investing our cash flows and leveraging our know-how from our AI (B-to-C) services to our AI (B-to-B) services, which are positioned as our key medium-to-long-term pillar of growth
- In our AI (B-to-B) services, we aim to achieve more projects in the initial setup fee phase, to complete development as rapidly as possible, and to convert to the ongoing fee phase



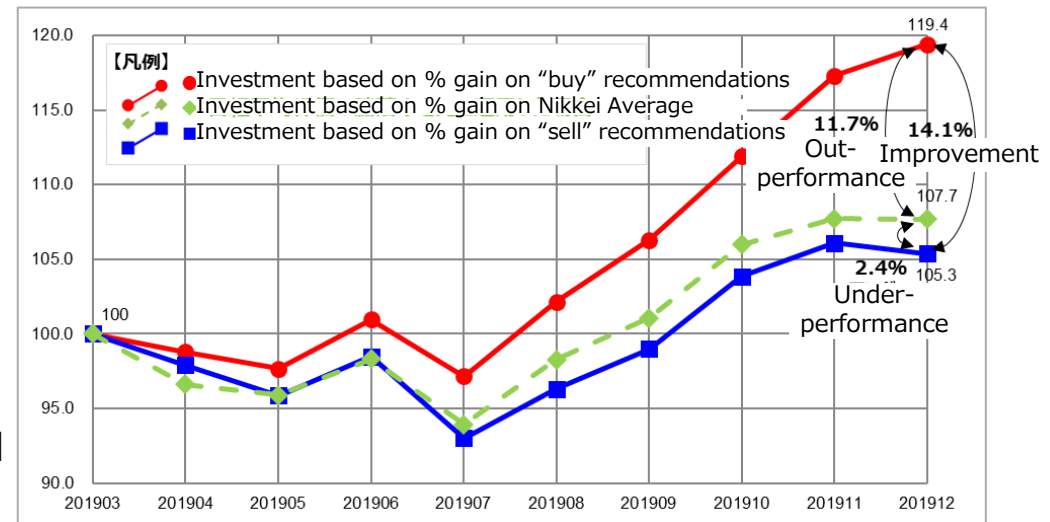
- We commenced development of “AI learning engine for buildings and facilities” under a public call by New Energy and Industrial Technology Development Organization (NEDO)
- Takenaka Corporation’s “Development of a Next-generation Building Control System with Human Factors and Artificial Intelligence” was selected as a practical development phase theme in NEDO’s 2019 Public Call #2 of its Strategic Energy Conservation Technology Innovation Program. The project aims to achieve both energy conservation and comfort while reducing necessary manpower by applying AI to building facilities systems
- We were selected as the contracted developer for the AI portion of this project.
We will optimally control building facilities systems (lighting, air conditioning, etc.) with building sensor information, etc. through the use of reinforcement learning, which is a machine learning methodology
- Together with Takenaka Corporation, we aim to provide various services using state-of-the-art AI technology to “develop AI systems which support structural design operations” in addition to this project



- The diagnostic performance of “AI Stock Portfolio Diagnosis” (the “Service”) provided by SMBC Nikko Securities Inc. (“SMBC Nikko”) to date and the launch of additional functions for the Service were announced in March 2019
- Capital gains (change in market cap) in “buy” recommendations by the Service outperformed “sell” recommendations, and also outperformed the Nikkei Average. In response to various customer needs, we launched an additional function (addition of “investment period” to proposal conditions and allowing customers to receive “buy” recommendations only)
- We entered into an operating alliance agreement with SMBC Nikko in December 2019.

In addition to this project, we aim to provide various services using state-of-the-art AI going forward by enhancing operational efficiency and developing new financial services for SMBC Nikko using our deep learning and other machine learning technologies, in order to accelerate our digital transformation strategy

<Investment Performance Trends>



*Investment performance simulation indexed to 100 as of March 31, 2019

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