

## Notice

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**HEROZ**  
JAPAN

Presentation Material for  
FY04/2021 Q1 Financial Results

September 11, 2020

HEROZ, Inc. (4382)

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**HEROZ**  
JAPAN

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# Company Overview

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

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## 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 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

## Shogi Track Record

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



Director and CFO

## Daisuke Asahara

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

Director and CTO, Head of Development Div.

## Keiichi Iguchi

Graduated from  
Tokyo Institute of Technology  
Joined NEC Central Research Labs

# Creating the future through artificial intelligence (AI) revolutions

## 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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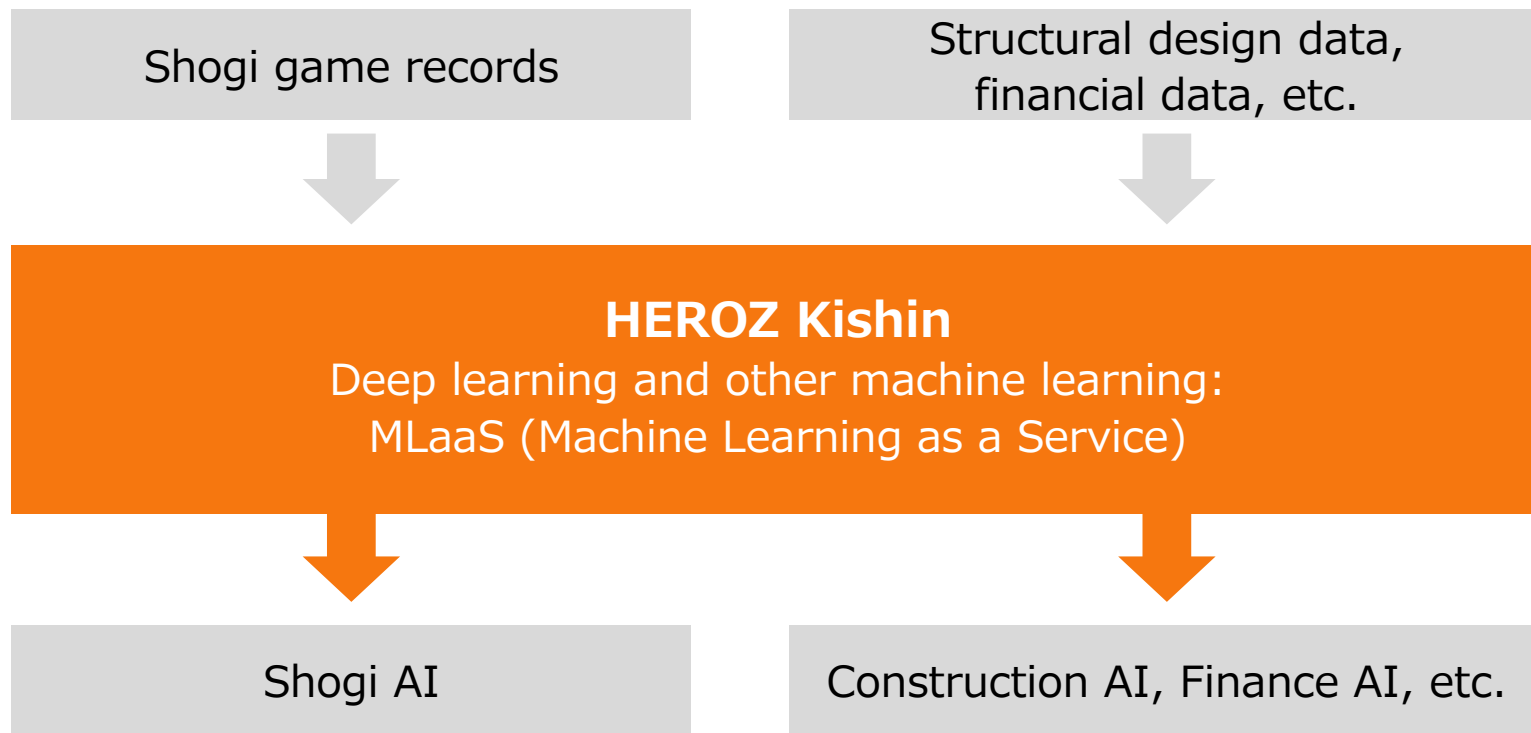
## Go AI



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

**Google**

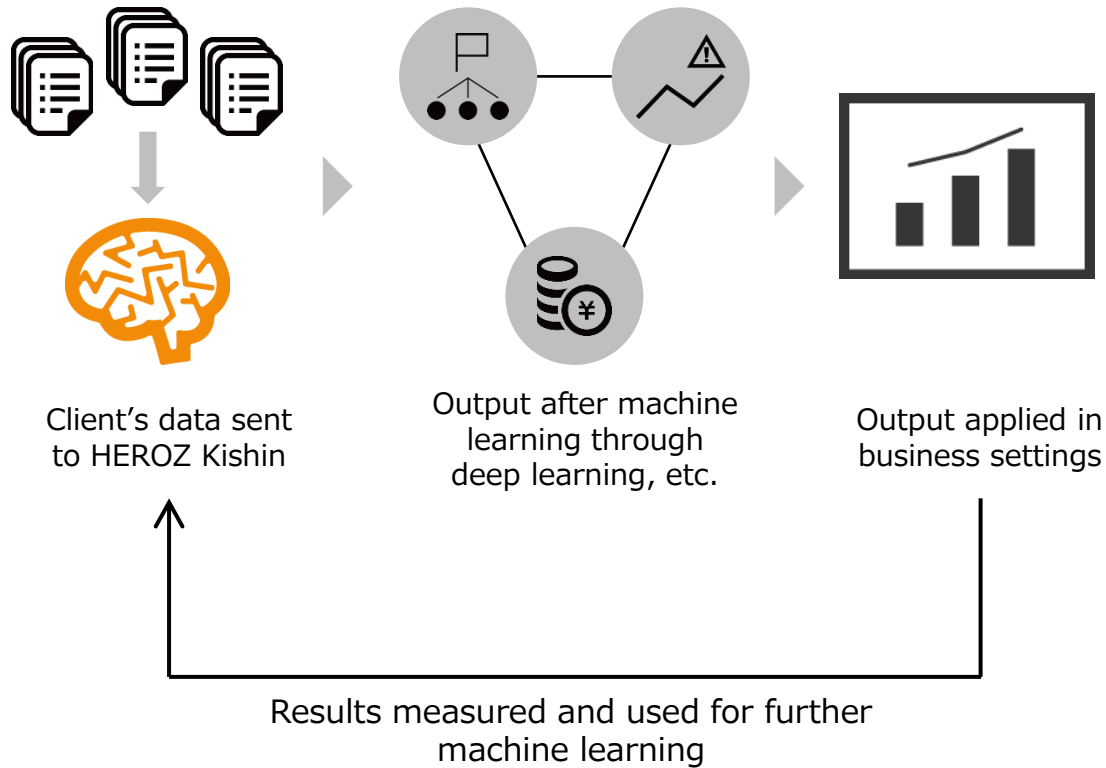
# B-to-B Services: Machine Learning by Replacing Shogi Game Records with Other Data



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

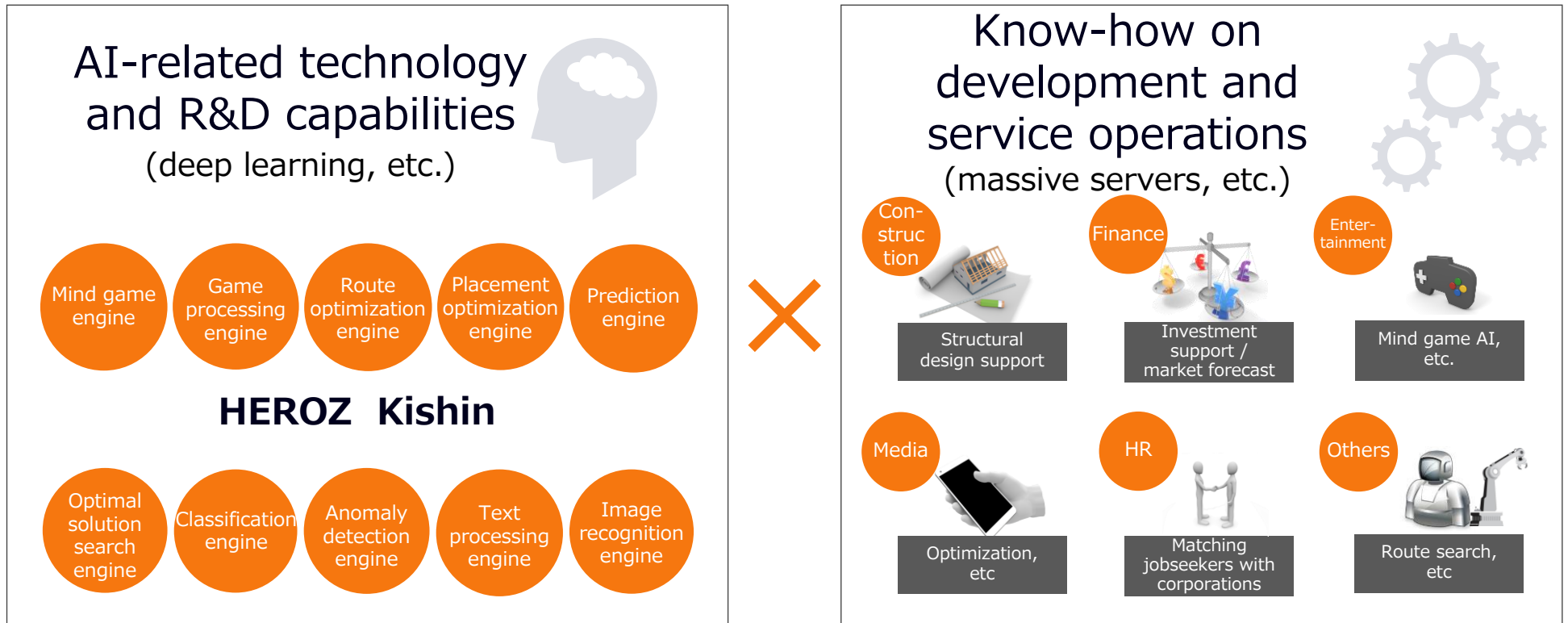
Provide comprehensive AI services with massive servers

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
- Staying home by COVID-19 and shogi boom by a new star player led to increased demand for our mobile apps, with an increase in our paid active user base



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.

# COVID-19 Impact and Assumptions for Forecasts

- Risks relating to COVID-19 are as listed below.

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

- 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 by slowdowns in progress of projects and reduced opportunities for sales discussions due to emergency declared by the government, but is expected to normalize in the second half
  - 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

# Performance Overview (May-July 2020)

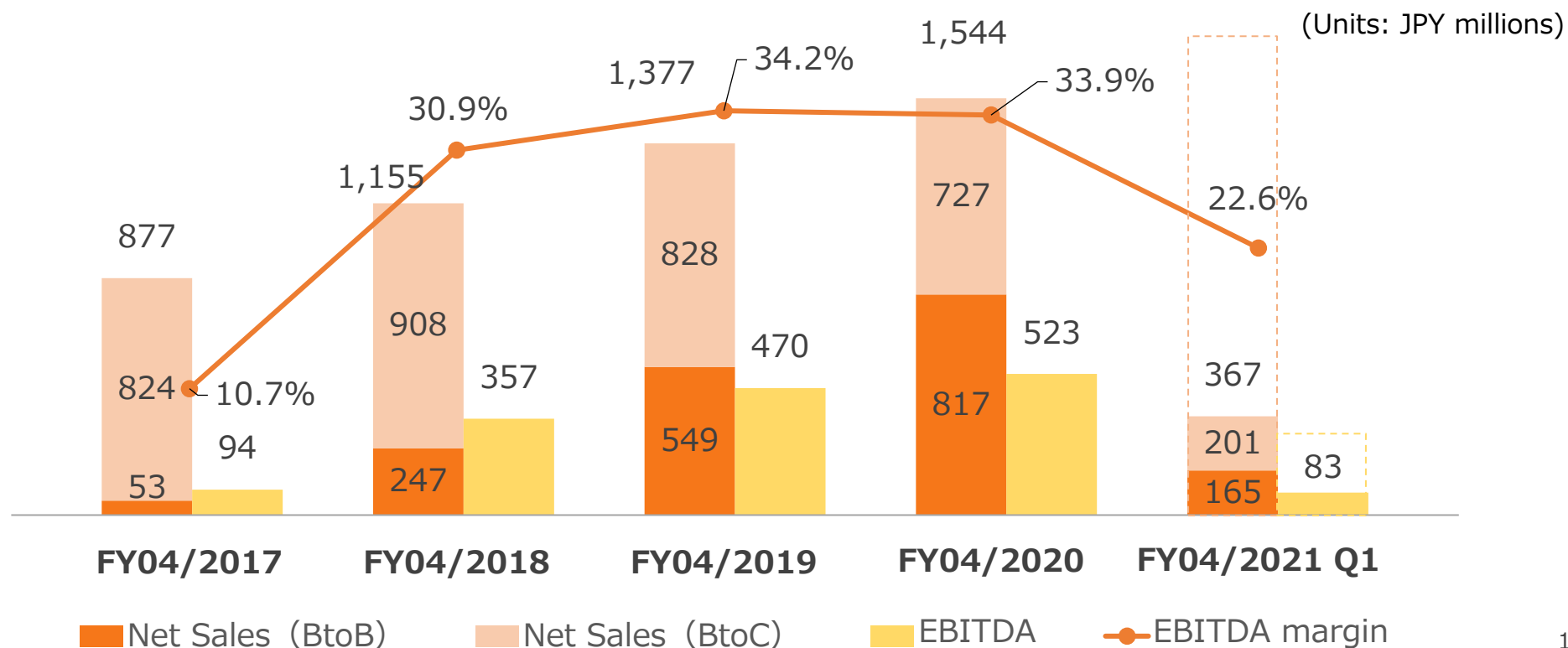
- Revenues decreased as forecasted in the previous page due to emergency declared for COVID-19 by the government, but is expected to be normalized in Q3 and thereafter
- EBITDA and other profits made steady progress towards achievement of fiscal year forecasts while they decreased on a year-on-year basis. We have been investing proceeds from public offering in December 2019 for our medium-to-long term growth

(Units: JPY millions)	FY04/2021 Q1 Actual	(Reference) FY04/2020 Q1 Actual	YoY	FY04/2021 Forecast	Progress
Net Sales	367	376	△2.5%	1,700	21.6%
EBITDA*	83	126	△34.4%	290	28.7%
<i>EBITDA Margin</i>	<i>22.6%</i>	<i>33.7%</i>	–	<i>17.1%</i>	–
Operating Profit	69	111	△37.3%	230	30.3%
<i>Operating Margin</i>	<i>19.0%</i>	<i>29.5%</i>	–	<i>13.5%</i>	–
Ordinary Profit	67	109	△37.9%	220	30.9%
Net Income	46	75	△38.5%	150	30.8%

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

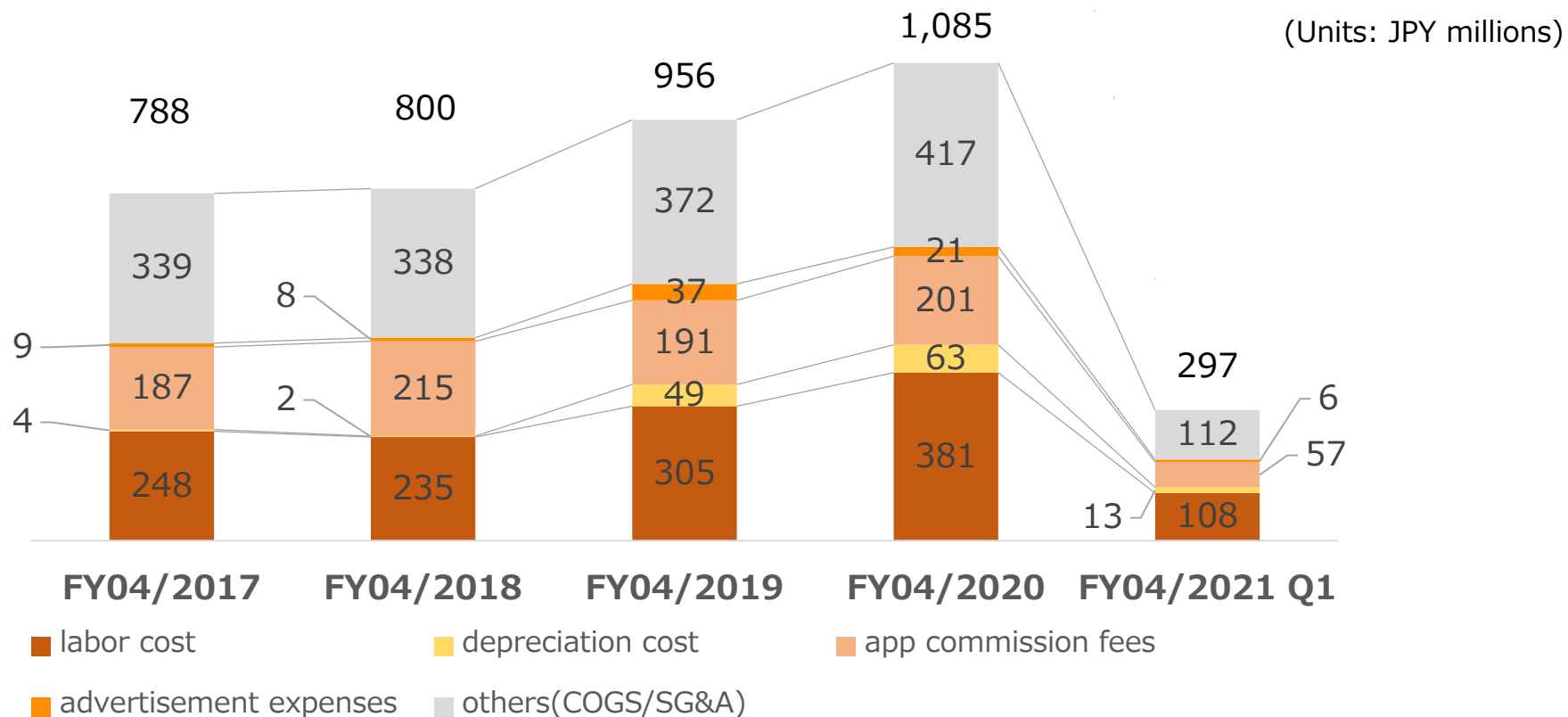
# Net sales and EBITDA Trends

- While growth will slow down in the first half, we forecast over 20% year-on-year revenue growth for AI (B-to-B) services, the core pillar of our growth strategy, in FY04/2021
- Net sales of AI (B-to-C) services increased compared with the previous fiscal year led by “Shogi Wars” although we terminated “Pokémon Duel” in October 2019



# 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
- In addition, there were expenses to improve the workplace environment to counter COVID-19, an increase in size-based business tax, and anticipatory investments of proceeds via public offering for our growth strategy. Although profits were down compared with the previous year, they are in line with our forecast.





# Balance Sheet (as of July 31, 2020)

- B/S remains strong backed by cash and deposits increased via public offering in 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) until 2022

Units: JPY millions	As of 7/31/2020	(Reference) As of 4/30/2020
Current Assets	5,922	5,935
Cash and deposits	5,715	5,562
Fixed Assets	455	473
Property, plant and equipment	119	131
Intangible assets	6	6
Investments and other assets	329	334
Total Assets	6,377	6,408
Current Liabilities	148	226
Fixed Liabilities	-	-
Net Assets	6,229	6,182

# (Reference) Initiatives to Prevent Spread of COVID-19

- We continue to promote efforts to prevent the spread of COVID-19 and prioritize health and safety of our stakeholders including our employees
- There is no significant impact on operations and labor productivity
- No officers or employees have been infected with COVID-19 to date

~April 2020

May

June~

## Internal

- Introduced a selective system for work from home and flexible hours in February
- All officer and employees were instructed to work from home if at all possible, in April
- Set up an internal consultation desk for COVID-19
- Improved the work from home environment through reinforcement of VPN (virtual private network)

- Adopted an optional system for work from home and flexible hours based on Tokyo's roadmap against virus
- Alcohol sterilization and temperature measurements when entering the office
- Weekly online company-wide meeting

- Continue an optional system for work from home and flexible hours
- Promote an internal DX to improve our work productivity

## External

- Transitioned to online internal/external meetings and recruiting interviews

- Alcohol sterilization and temperature measurements when entering the office
- Promoted shift to paperless work

- Held an online financial results meeting
- Held an online recruiting event

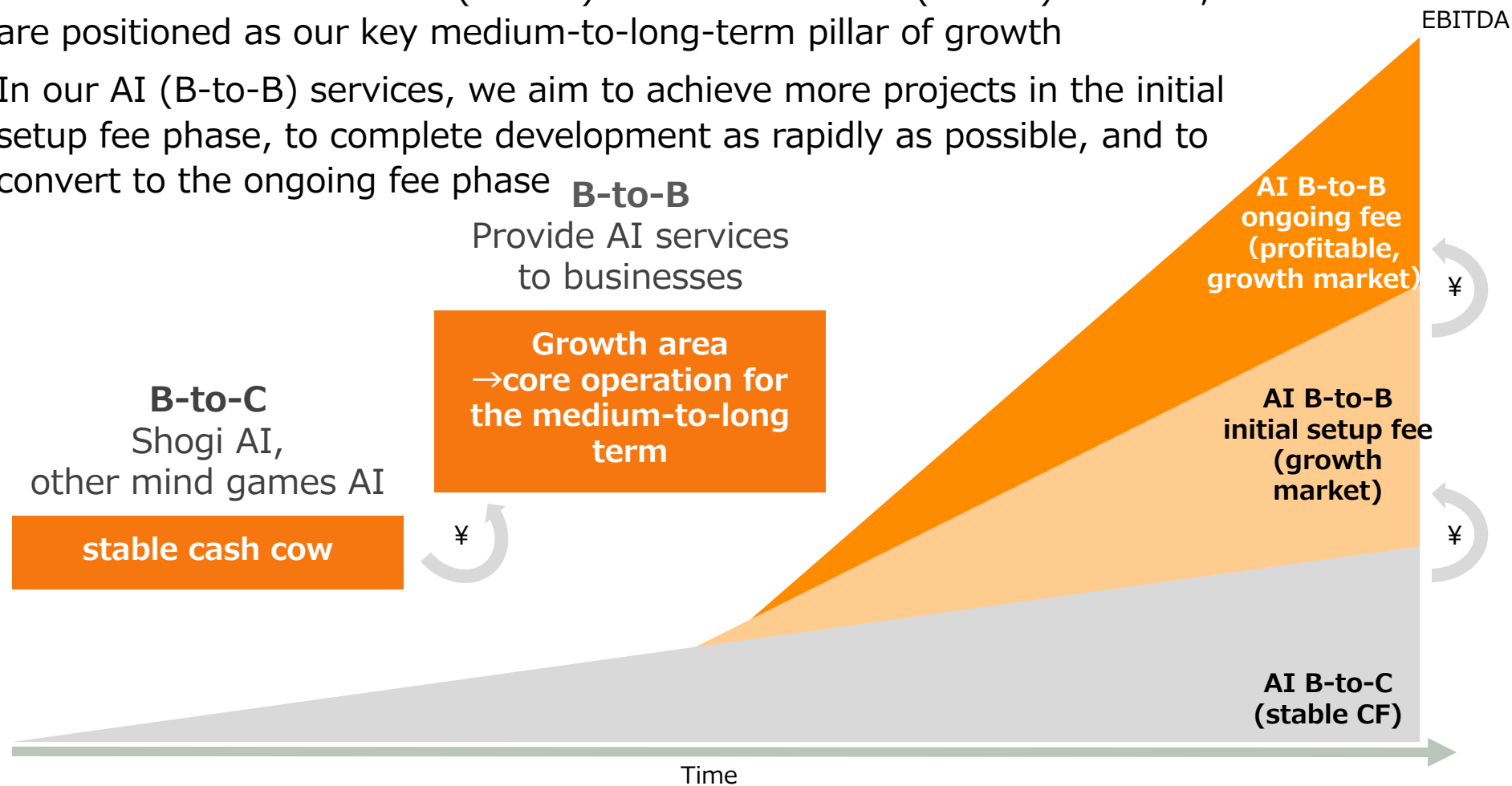
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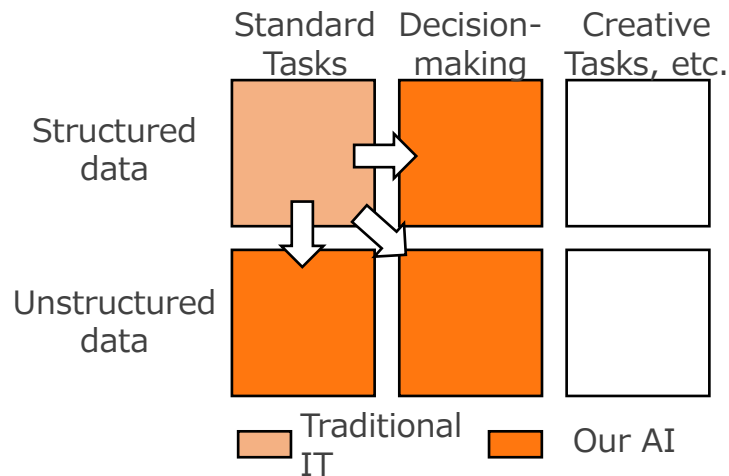
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# Medium-to-long term Growth Strategy

- 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



- 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

## ■ Joined “Super City Open Lab”

- In June 2020, we joined “Super City Open Lab” associated with “Super City Initiative”, which Cabinet Office, Government of JAPAN has challenged
- By participating the Open Lab, we will gain a better understanding of challenges and trends in the whole society in Japan. We will refine our ability to provide practical AI (including DX) that goes beyond the framework of individual areas such as finance, construction and others, enabling us to enter the conceptualization phase of new urban design as well



## ■ Registered as Investment Advisory and Agency Business (Financial Instruments Business) in June 2020

- Aiming at expanding our AI (B-to-B) services in the finance industry, we were registered as Investment Advisory and Agency Business (Financial Instruments Business) in June 2020

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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

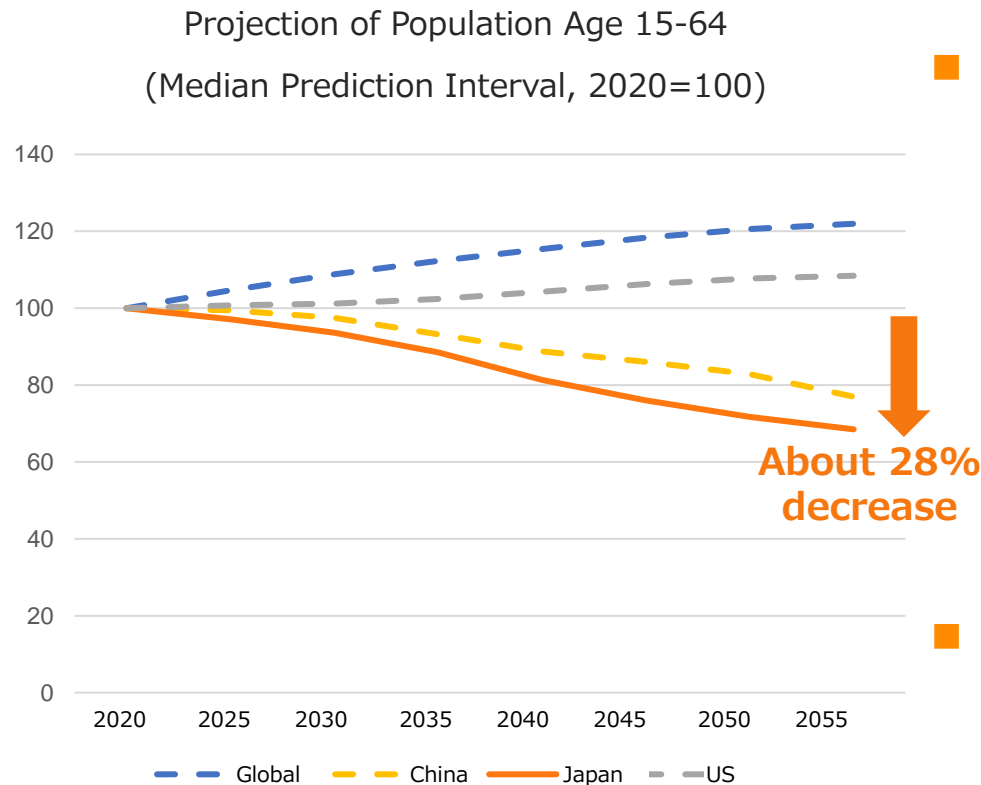


- We entered into a capital and business alliance with Takenaka Corporation in 2017 and became a member of i-Construction. We aim to create the industry standard AI for the construction industry, enhancing productivity and creating a new, attractive construction site



# 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

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