

## **Presentation Material**

for the Fiscal Year Ended March 31, 2022

May 12, 2022

Tokyo Stock Exchange Prime Market: Code 3676

https://www.digitalhearts-hd.com/



## **Summary of Business Results**

## **New Group Organization**



New group organization with two core companies of AGEST, Inc. and DIGITAL HEARTS Co., Ltd. since April 1, 2022.

Aiming to improve each expertise and create new values creation in each business field

**Enterprise Business** 

















#### **Business Activities**

- System Testing
- · IT engineer platform service
- Support of ERP Introduction
- Security testing and security monitoring
- System development
- Maintenance and operation support

#### **Entertainment Business**





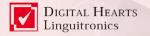












#### **Business Activities**

- Game debugging
- Marketing support
- · Operating of game media
- Translation/LOA
- Support of game software development
- Customer support

# Highlights for the Fiscal Year Ended March 31, 2022



## Summary of Business Results

## Significant record-high net sales and operating income

Net sales

¥ **29,178** mn (YoY 128.7%)

Operating income

¥ 2,701 mn (YoY 141.5%)

- Double-digit growth of net sales and segment income in both Enterprise and Entertainment business.
- Over 110% organic growth of sales, excluding M&A impacts
- Achieved the full-year forecasts revised upward in February 2022

## **Topics**

### Three M&As for future growth

identity

identity Inc.

Consolidated since Q2 FY2021 PL

Developing SES business utilizing a pool of highly-skilled freelance engineers.

## dws

#### **DEVELOPING WORLD SYSTEMS LIMITED**

Consolidated since Q4 FY2021 PL

A gold partner of Oracle. Support for the introduction, maintenance, and operation of Oracle system in the U.K. and the U.S.



#### CEGB Co., Ltd.

To be consolidated since Q1 FY2022 PL

Introduction and operation consulting for SAP and system development support

## **Summary of Financial Results for FY2021**



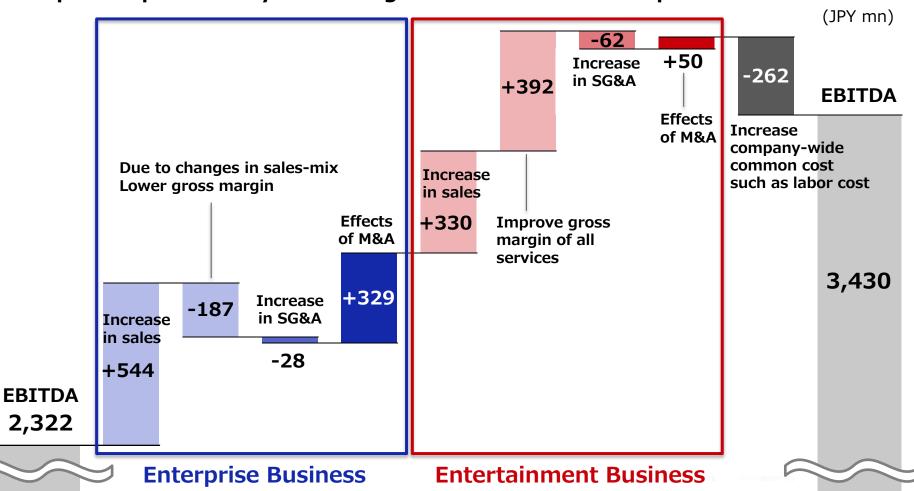
Achieved significant growth of sales and profit with existing businesses growth and the impact of M&As. Improved OP margin even with investment for future growth.

(Mln Yen)	FY2020	FY2021	YoY Cha	ange
Net sales	22,669	29,178	6,509	128.7%
Cost of sales	16,235	20,787	4,551	128.0%
Cost of sales (%)	71.6%	71.2%		-0.4points
Gross profit	6,433	8,391	1,957	115.5%
SG&A	4,524	5,690	1,165	108.3%
Operating income	1,394	2,701	792	141.5%
Operating income margin	8.4%	9.3%		+0.8points
Ordinary income	1,975	2,778	803	140.7%
Profit attributable to owners of parent	974	1,780	806	182.7%
EBITDA	2,322	3,430	1,107	147.7%

## **Analysis of Changes in EBITDA**



Significant increase in EBITDA by approx. 1.5 times due to higher sales and improved profitability in existing businesses and the impact of M&As.



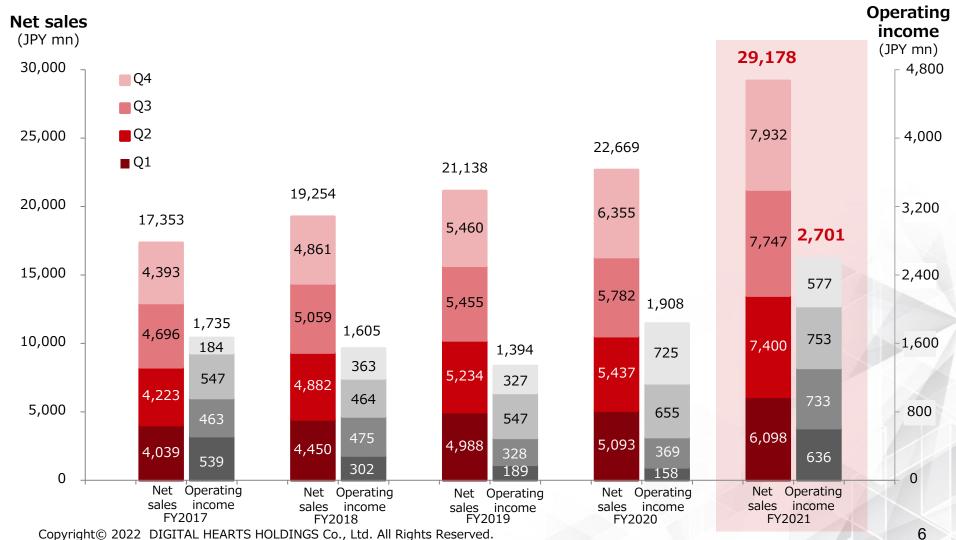
FY2020

FY2021

## **Trend in Net Sales and Operating Income**



Significant record-high net sales and operating income even with continuous investments in human resources and M&As for future growth.



## **Consolidated Balance Sheets**



(JPY mn)	Q4 FY2020 (As of March 31, 2021)	Q4 FY2021 (As of March 31, 2022)	YoY Change
Total assets	14,338	17,565	3,226
Current assets	9,744	10,392	647
Cash and deposits	5,076	5,208	132
Noncurrent assets	4,593	7,172	2,578
Property, plant and equipment	598	693	94
Intangible assets	2,670	5,094	2,423
Goodwill	2,467	4,763	2,295
Investments and other assets	1,324	1,384	59
Total liabilities	8,024	9,989	1,964
Current liabilities	7,904	9,679	1,774
Short-term loans	4,728	5,421	692
Noncurrent liabilities	119	309	190
Total net assets	6,314	7,576	1,261
Shareholders' equity	5,642	6,776	1,133
Accumulated other comprehensive income	48	228	179
Subscription rights to shares	13	-	-13
Non-controlling interests	610	572	-38
Total liabilities and net assets	14,338	17,565	3,226

## **Consolidated Statements of Cash Flows**



(Mln Yen)	FY2020	FY2021	YoY Change
Net cash provided by operating activities	1,416	3,077	1,660
(*Cash flows before income taxes paid)	1,869	3,740	1,871
Net cash used in investing activities	-1,813	-2,537	-723
Net cash used in (provided by) financing activities	1,730	-546	2,276
Effect of exchange rate change on cash and cash equivalents	7	139	131
Net increase in cash and cash equivalents	1,341	132	-1,208
Cash and cash equivalents at the beginning of period	3,704	5,041	1,337
Decrease in cash and cash equivalents resulting from exclusion of subsidiaries from consolidation	-3	-	3
Cash and cash equivalents at the end of period	5,041	5,173	132



## FY2021 Financial Results by Segment

(Notice regarding Earnings by Segment)

- Net sales by segment include inter-segment sales or transfers.
   Segment income is based on operating income.
- Sub-segments of Entertainment Business changed from Q1 FY2021. For this reason, the figures for FY2020 and earlier by sub-segments of Entertainment Business are reclassified to reflect the change in sub-segments, and comparisons are made.

## **Summary of Financial Results by Segment**



(JP	Y mn)	FY2020	FY2021	YoY
N	et sales	22,669	29,178	128.7%
	Enterprise	7,021	11,491	163.7%
	Entertainment	15,647	17,687	113.0%
	Adjustments	-	-	-
0	perating income	1,908	2,701	141.5%
	Enterprise	188	649	344.8%
	Entertainment	3,077	3,668	119.2%
	Adjustments	-1,356	-1,616	
E	BITDA	2,322	3,430	147.7%
	Enterprise	424	1,082	255.0%
	Entertainment	3,226	3,938	122.1%

## **Financial Result of Enterprise Business**

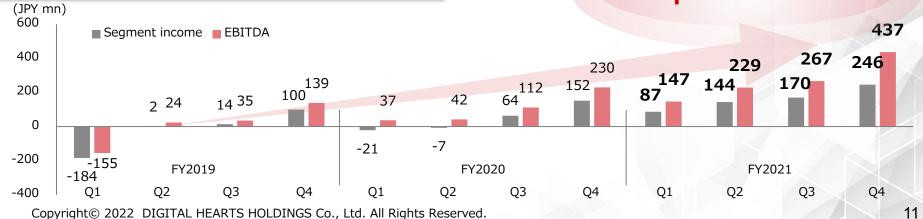


Achieved sales increase by YoY 1.6 times and improved a segment income margin to 5.7% with DX acceleration in the market.

(JPY mn)	FY2020	FY2021	YoY
Net sales	7,021	11,491	163.7%
System Testing	3,581	4,954	138.3%
IT service /Security	3,439	6,537	190.1%
Segment income	188	649	344.8%
EBITDA	424	1,082	255.0%

## **Quarterly results of Enterprise Biz**

### Stable profit contribution



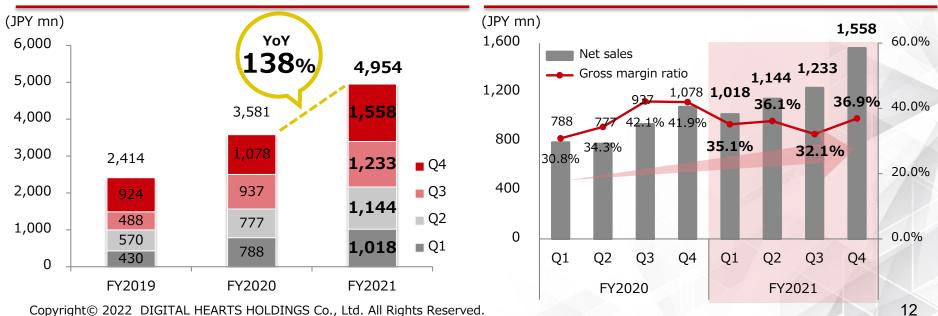
## Enterprise Business - System Testing div. -



- Increased in number of clients and improve the scale of transactions with existing clients by actively proposing total solutions for quality improvement, such as manual testing, vulnerability diagnosis, and test automation.
- Contribution of newly joined companies through M&As and others, MK Partners and TPP SOFT since Q2 and DEVELOPING WORLD SYSTEMS since Q4.
- Organic growth of net sales YoY 120%, excluding the effects of M&As.
- Kept high gross margin ratio 35.2% as annual, while keeping investing in business expansion.



### **Quarterly trend**



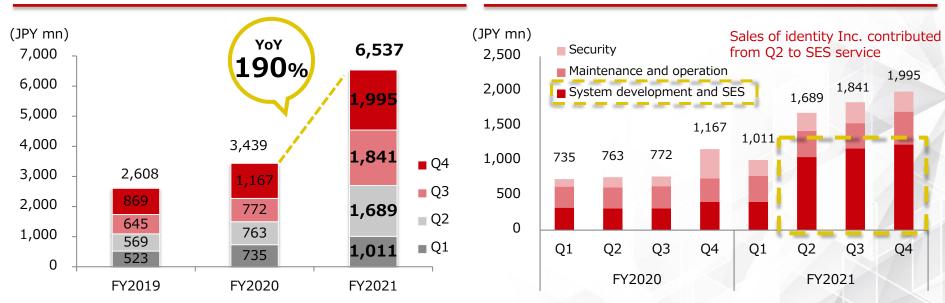
## Enterprise Business - IT Services / Security div. -



- Achieved YoY growth of over 120% in all categories of Security, Maintenance/operation, and System development/SES services.
- Sales of System development/SES grew significantly more than doubled YoY by contribution of newly acquired identity Inc. since Q2.
- Approx. YoY 1.4 times increase in the number of internal security personnel by utilizing our unique training program for cyber security personnel. Aiming to train and develop more security personnel in the future.

### **Quarterly sales**

### Quarterly sales by service



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### **Financial Results of Entertainment Business**



- Sales growth in both Domestic Debugging and Global and others by capturing increasing demand in the booming console game market and in the accelerating overseas expansion of entertainment contents.
- New record-high profits with high segment income margin of 20.7% thanks to the effects of higher sales and the gross margin improvement.
- From Q1 FY2021, the classification of sub-segments has been changed to visualize "Global and others" as a growth driver of Entertainment business.

(JI	PY mn)	FY2020	FY2021	YoY Change
Ne	et sales	15,647	17,687	133.0%
	Domestic Debugging	11,536	12,123	105.1%
	Global and others	4,111	5,563	135.3%
Se	gment income	3,077	3,668	119.2%
EB	ITDA	3,226	3,938	122.1%

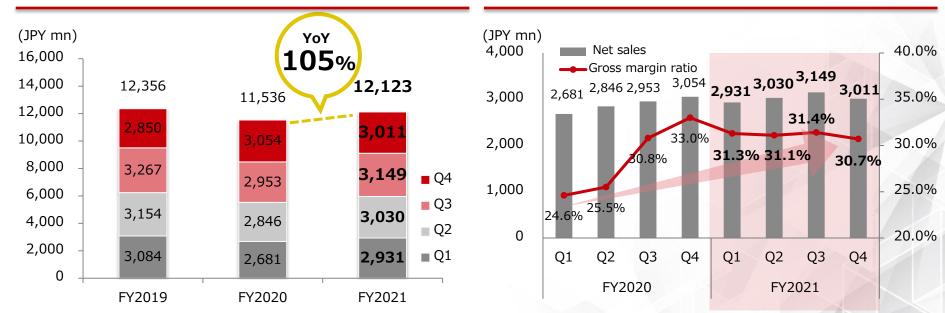
## **Entertainment Business** - Domestic Debugging div.



- The growth in the Domestic Debugging division has been driven by its services for console games with active new title developments in the market.
- Full-year gross margin ratio was 31.1%, improved by 2.5P YoY, due to higher sales and aggressive operational reforms, even with a rise in national minimum wages in the market.
- Aiming to further improve its profitability by increasing market share as a leading company and by developing higher operational efficiency.

### **Quarterly sales**

### **Quarterly trend**



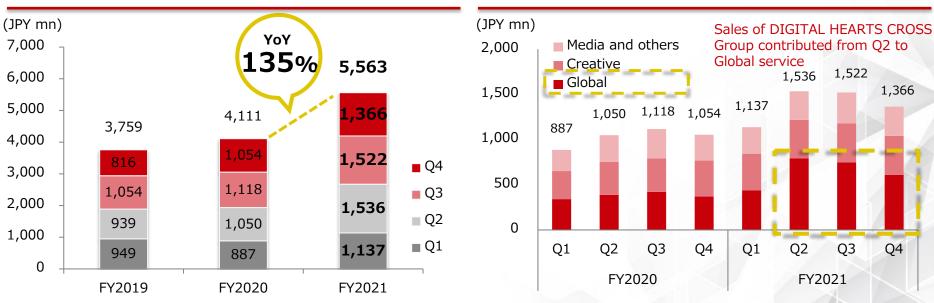
### Entertainment Business - Global and others div.-



- Achieved double-digit sales growth in every Global, Creative, and Media services by steadily acquiring cross-border projects against the backdrop of booming market conditions.
- The existing businesses achieved double-digit sales growth, and newly consolidated **DIGITAL HEARTS CROSS group** contributed since Q2.
- Aiming for rapid expansion especially in Asian market by pursuing synergies with DIGITAL HEARTS CROSS group amid brisk expansion of contents abroad.

### **Quarterly sales**

### Quarterly sales by service



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## **FY2022 Consolidated Financial Forecast**

### **FY2022 Consolidated Financial Forecast**



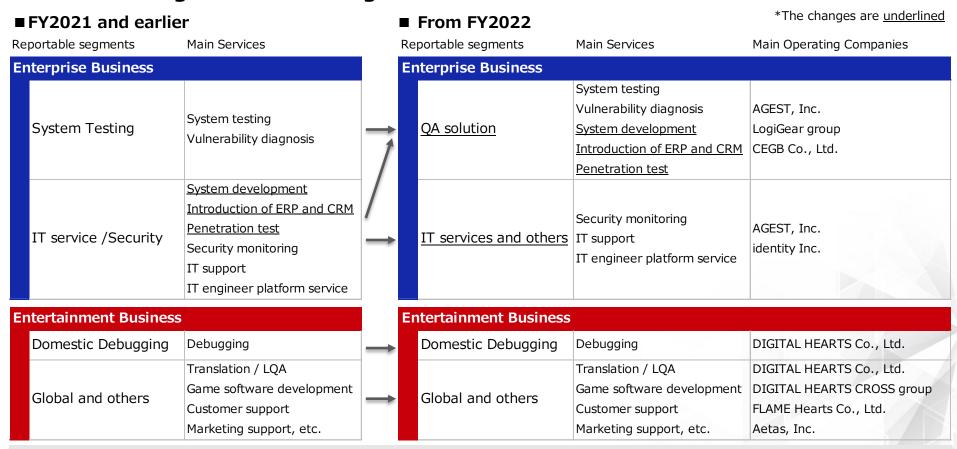
- Aiming for record-high net sales and operating income while accelerating investment for future growth.
- **■** Enterprise Business will keep driving the growth of the group.

(Mln Yen)	Full-year FY2021 (Actual)	Full-year FY2022 (Forecast)	YoY Change
Net sales	29,178	35,500	121.7%
Enterprise	11,491	15,375	133.8%
Entertainment	17,687	20,125	113.8%
Operating income	2,701	3,290	121.8%
Operating income margin	9.3%	9.3%	+0.0points
Ordinary income	2,778	3,290	118.4%
Profit attributable to owners of parent	1,780	2,250	126.4%
EBITDA	3,430	4,240	123.6%

## Changes in sub-segments



## With the change in the actual services of Enterprise Business, sub-segments are changed from FY2022.



#### (Reason for Change)

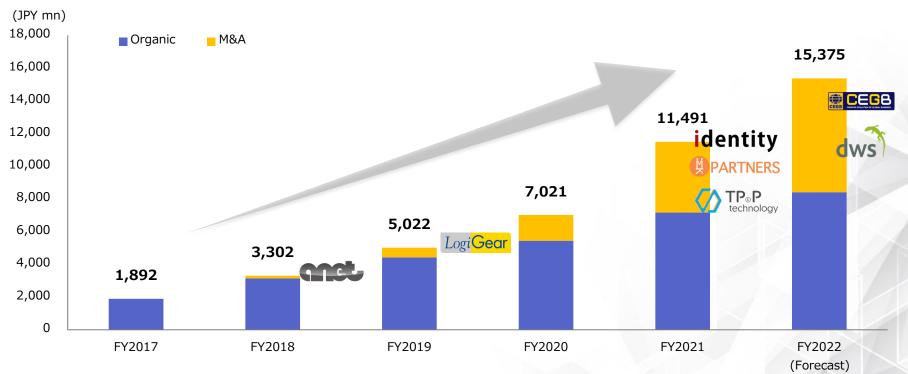
- Through cross-selling initiatives, increasing in the number of projects providing "one-stop" service including development, testing, and security services.
- Expanding the range of solutions by accelerating group collaboration and generating synergies through aggressive M&As.

## Enterprise Business - FY2022 Plan -



## Strong growth with booming market conditions including an acceleration of DX as a tailwind.

- 1. To accelerate the growth of existing businesses by aggressively investing in human resources and technologies.
- 2. To pursue their own growth of newly acquired companies in FY2021 and early synergies with existing subsidiaries as well.



## **Enterprise Business - Major initiatives -**



#### **Organic growth**

## To further develop business foundation, plan to invest approx. 0.3 bn yen in growth

#### **01** Hiring engineers

- > Strengthen referral recruitment
- Increase the number of candidates by deeper relationships with recruiting agents
- Human resource development through AGEST Academy
- Branding initiatives to establish a "tech-oriented" brand different from the previous "gaming culture"

#### 02 Marketing and promotion

- Actively participate in exhibitions and hold seminars by CTO and CTSO.
- Strengthen cross-selling, such as testing, security, and system development support
- Promoting Technological Sales

#### **03** QA solutions with experts

- Developing advanced testing and next-generation QA solutions utilizing cutting-edge technologies.
- Strengthening conventional test outsourcing service.

#### M&As

## To pursue their own growth of acquired entities and early synergies with group

#### **01** Maximize synergies with our group

identity X AGEST : Leverage freelance engineers

 $\bigcirc$  CEGE  $\times$  AGEST : Expand SAP business in Japan

dws × Esser : Develop new automation tools

ws) X LogiGear : Expand SAP business in U.S. and Europe

## **02** Aggressive strategic M&As to strengthen human resources and technologies

- Target companies include software testing companies and ERP-related companies.
- Continue to implement appropriate governance, including strict ROIC standards and reviews by the Investment Committee.

## **Enterprise Business - Key KPIs -**



Improve the number of clients and the average sales per client, through strengthening the cross-selling and increasing in engineer resources.

KPI for QA solution	FY2021 (Actual)	FY2022(Target)
Number of clients with orders	748 companies	830 companies
Annual sales per client	JPY <b>10</b> mn	JPY <b>12</b> mn
Number of engineers	924 people	1,100 people
Sales ratio of Advanced Testing and Next-generation QA	28.9%	45.0%

Number of clients with orders: Number of clients with transactions in the fiscal year

(Including oversea group companies)

Annual sales per client: Average annual sales in the fiscal year per client

Number of engineers: Test engineers, development engineers, infrastructure engineers, security specialists and

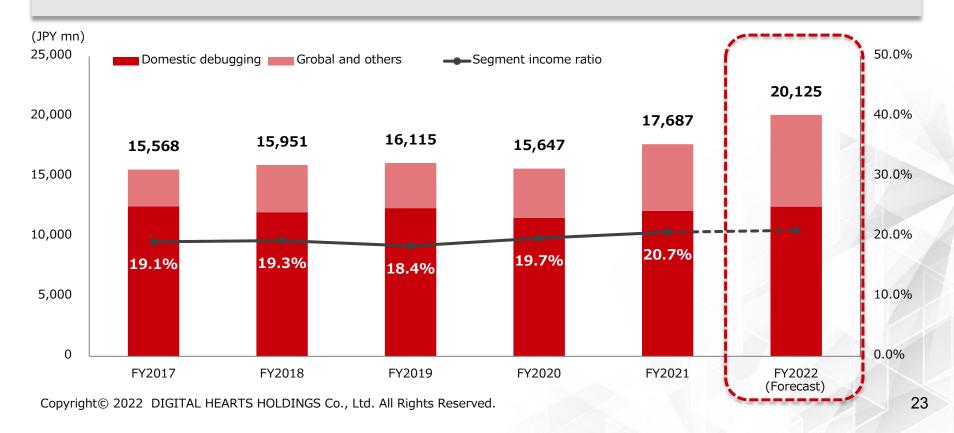
others. (Excluding the number of part-time job testers and business partners)

### Entertainment Business - FY2022 Plan -



# As a stable cash-generating business basement of the group, aiming for continuous growth and profitability improvement centered on the highly profitable "Debugging" business

- 1. To improve the profitability by obtaining large-scale titles' order and strengthening the service quality in the Domestic Debugging division.
- 2. To expand sales by capturing global demand through strengthening subsidiaries in overseas.



## **Entertainment Business - Major initiatives -**



In the growing game industry with a rapid change, aiming to become a "Global Quality Partner" with a strong commitment to the success of game companies

### Changes in the market environment



Severe competition among major IT companies to acquire excellent contents







#### **Key Strategies**

## Strengthen the quality of services

- To Define and pursuit quality of customer satisfaction
- To optimize quality, cost, and speed
- To strengthen the organization and human resources
- > To utilize tools and technology

#### **Expand services**

- Full-scale marketing support service
- Multi-linguistic support and collaboration with marketing, for customer support service
- New service of development support and debugging, for NFT games and Metaverse-related

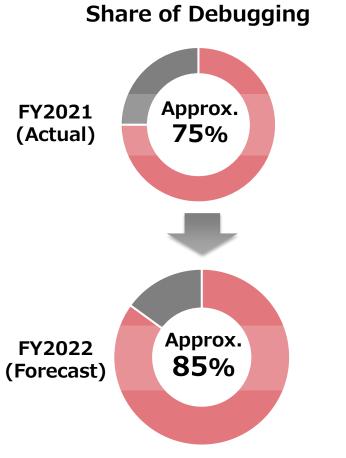
## Improve capability for globalization

- To expand localization services
- To utilize AI translation
- To use overseas media as global support for Japanese clients
- To provide total support for overseas game clients into the Japanese and Asian markets

Improvement of Reliability, Profitability and Cash generating power

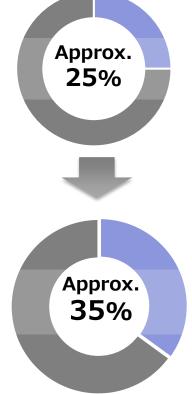
## **Entertainment Business - Key KPIs -**





Debugging service involvement ratio among top 100 new game titles in the market\*





Ratio of providing multiple services among main debugging projects of us\*

Global sales ratio



Ratio of Global and others service in Entertainment Biz

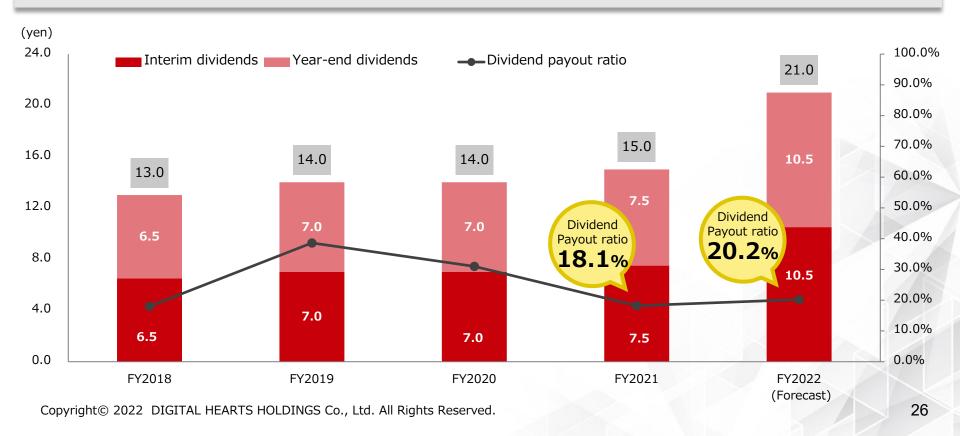
### **Dividends Forecast of FY2022**



Reflecting strong profit growth of FY2022 to shareholder returns plan. Annual dividend is planned to be ¥21.0, an increase of record-high ¥6.0 YoY.

#### **Basic Policy to Return Profits to Shareholders**

While securing sufficient internal reserves to invest in business growth and strengthen our management structure, stable dividends to shareholders with a payout ratio of 20% as the minimum target





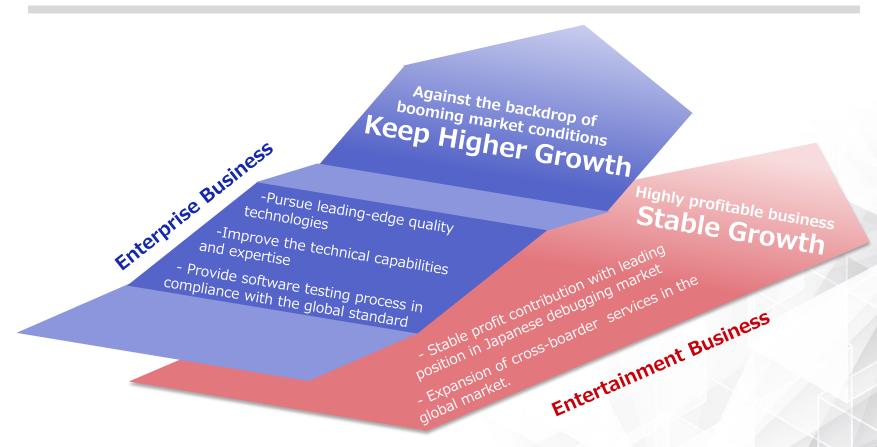
## **Growth Strategy**

## **Our Growth Strategy**



Based on the stable growth of highly profitable Entertainment Business, accelerating the rapid expansion of Enterprise Business through strengthening human resources and technology to provide the best QA solution services

## To be a Global Quality Partner



## **Environment surrounding Enterprise Business**



With the acceleration of Digital Transformation and technological evolution, demand for software testing is growing rapidly and requiring higher expertise.

Changes in utilization of technology







- Web system
- Built-in software system

**Development Methods** Waterfall type



Software application

- IoT equipment
- X-Tech related IT system

CASE

- **Smart City**
- Metaverse

**Development Methods** Agile type

### Changes in needs for testing

- > Comprehensive testing including non-functional aspects such as cyber-security
- > Verifying that the system operates as planned in the final process of development

- > Test consulting in the early stage of the development life cycle (=Shift-Left)
- > Improving the efficiency of test processes by test automation or use of impact analysis tools
- > Providing suitable testing service to ever-evolving technology

## **Vision of Enterprise Business**



By utilizing leading-edge quality technologies, to become a service provider of optimum QA solutions at a high level to diversifying needs

#### **SAVE the DIGITAL WORLD**

Supporting the innovation of clients' business with rich user experience

Next-Generation QA Provide quality assurance service in areas such as CASE and Smart City, with testing methods not developed yet in the market.

Help streamline the testing process by leveraging technology

Contribute to improve quality of software including non-functional aspects such as security, or efficiency of testing processes with automation tools.

**Advanced Testing** 

Supporting the testing process from a third-party perspective

Providing outsourcing services to support clients with insufficient experiences and resources for software testing.

**Test Outsourcing** 

## **Enterprise Business Plan**



In FY2022, further investing in the business foundation such as human resources and technology, and strengthening higher services as "Advanced Testing" and "Next-Generation OA"

Next-deficiation QA	`	2022-	
2017- Launching Enterprise Business	2020-2021 Developed the 'Second Pillar' of the Business	Evolving the business for Next-Generation QA	2023- To be a leading-edge quality technology company
<ul> <li>Aggressive investment in engineers.</li> <li>Expansion of services through alliances.</li> <li>Built an operation system.</li> </ul>	<ul> <li>Turned profitable in FY2020.</li> <li>Expansion of the talent pool of IT human resources and improve technological capability by aggressive M&amp;As.</li> <li>Decision of group reorganization for further growth</li> </ul>	<ul> <li>Developing all three aspects of business, as human resources, technologies", and processes, to be with a global standards, centered on "AGEST, Inc."</li> <li>Expand the client base by strengthening the marketing and sales structure.</li> <li>Keep aggressive M&amp;As.</li> </ul>	<ul> <li>Contribute to the creation of a secure and safe digital society by providing unprecedented QA solutions.</li> <li>Continue to research cutting-edge technologies and continuously update testing methods.</li> </ul>
FY2017 (Actual)	FY2021 (Actual)		FY2023 Target
Net sales ¥1.8 bn	Net sales ¥11.4 bn	FY2022 Plan	Net sales ¥25.0bn + a
OP margin (Operating loss)	OP margin <b>5.7</b> %	Net sales ¥15.3 bn	OP margin <b>8% - 10%</b>
		OP margin <b>5% - 6%</b>	

## **Enterprise Business Plan**



With a view to develop "Next-Generation QA", to develop three areas of the quality, such as human resources, technologies, and processes according to global standards

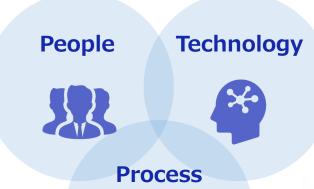
Leading-edge quality technologies

Acquisition of global standards in testing industry

Exploration of advanced and practical testing methods

## Recruit engineers with specialized knowledge and skills

- > Technology experts
- > Infrastructure engineers
- > Development engineers
- > Security specialists
- Testing engineers
  - QA consultation
  - · Automation engineer
  - Test plan / designer
  - Test operation



Leverage cutting-edge tools for software testing

Acquire specialized knowledge in new testing methods



Develop optimal testing processes suitable for each QA solution

## **Enterprise Business - People -**

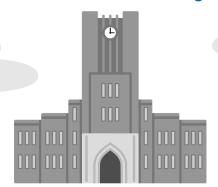




Established "AGEST Academy" to study software testing knowledge both academically and practically, to standardize engineer skills and improve capability of the group.

### **AGEST Academy**

Test engineer training programs along "ISTQB(\*)" syllabus, supported by Mr. Black



**CYBER BOOT CAMP** to learn practical skills from active ethical hackers

Providing an AI test training program supervised by Dr. Reid

Regular lecturers by industry experts

## To develop rich contents supported by authorities in software testing industry in Japan and overseas

#### Mr. Rex Black



Worldwide authority to software testing. Former President of the ISTOB. Many authored works.



#### **Hung Nguyen**

Worldwide authority to software testing. The co-author of a major book for test engineers. Representative of our subsidiary LOGIGEAR CORPORATION.



#### Juichi Takahashi

A pioneer in software testing in Japan. Hold a Ph.D. in software testing and many authored works. Our Chief Testing Solution Officer (CTSO).

## **Enterprise Business - Technology -**





To take initiatives such as researching advanced technologies and developing new testing methods

01

Improving and developing test automation tools

- ➤ Developing test automation tools for SAP systems through group collaboration.
- Strengthening alliances to expand QA services with automation tools.

**Automation Tools** 





Panaya

WORKSOFT.

Selenium

appium

02

Promoting R&D of new testing methods through industry-university collaboration

As a new R&D center,

Newly established AGEST Testing Lab.

# Research Activities Researcher

Adaptation of Software Testing to AI Products



The University of Electro-Communications Dr. Yasuharu Nishi

Research on agile testing



WASEDA University Dr. Hironori Washizaki

R&D on security testing using fuzzing testing methods



University of Nagasaki Dr. Masahiko Kato

## **Enterprise Business - Process -**





## In early compliance with "ISO/IEC/IEEE 29119," to be the Leading Company in the Testing Industry

#### What is ISO/IEC/IEEE 29119?

An international standard for software testing. It was released in some stages from 2013 to 2016 as the world's first testing standard and is designed to be used in any form of software testing for any organizations.

#### Supported by

#### **Dr. Start Reid**



The founder of the ISTQB. Advising the development of global standards for the testing process as the convener of ISO Software Testing Working Group 26, which has published software testing standard, "ISO /IEC/IEEE 29119."

## To develop a testing process in compliance with "ISO/IEC/IEEE 29119."

➤ Improve the accuracy and quality of testing services by developing a testing process in compliance with the global standard.

# The first developed training program for "ISO/IEC/IEEE 29119" in Japan, supervised by Dr. Reid

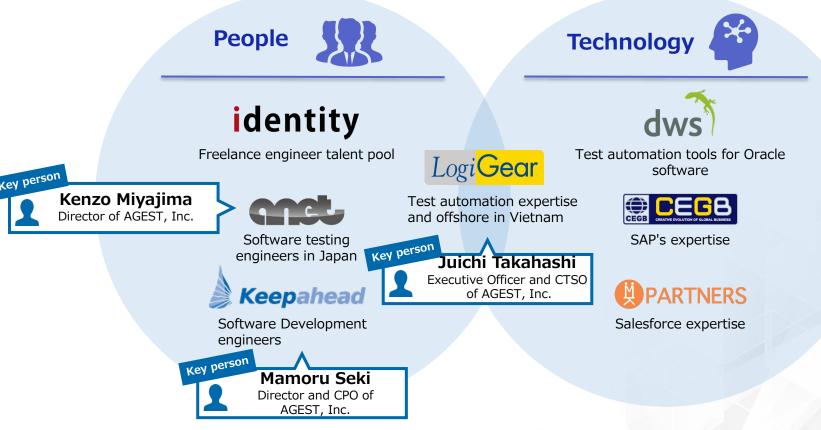
➤ Have a single global standard of testing quality with all internal engineers by providing this training program through "AGEST Academy."

## **Enterprise Business - M&As -**



Accelerate strengthening human resources and technologies with aggressive M&As.

### Past M&As

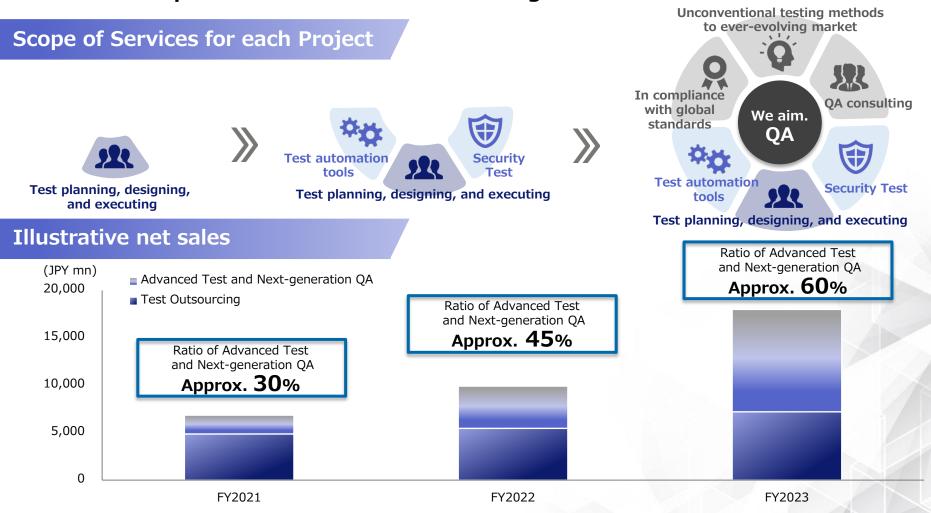


M&As have contributed to strengthen management personnel as well.

## **Illustrative growth of Enterprise Business**



Providing optimal QA solutions for more diverse testing needs with "Use of leading-edge tools," "Compliance with global standards," and "Development of unconventional testing methods"



## **Medium-Term Targets** (FY2021-FY2023)



## FY2023 Target

Group Business	<fy2020 result=""></fy2020>	<fy2021 result=""></fy2021>	<fy2023 target=""></fy2023>
Consolidated Sales	¥ <b>22.6</b> bn	¥ <b>29.1</b> bn	<b>&gt;&gt;&gt; ¥50.0</b> bn
ROIC (*1)	16.8%	22.0%	<b>)&gt;&gt;</b> over <b>15</b> %
M&A and alliances	3 projects	3 projects	5 projects (in 3years)
Number of Clients in Japan as a group	878 companies	1,005 companies	>>> 2,000 companies

#### **SDGs**

Number of IT Human Resources incl. Qualitist (*2)	4,517 people	<b>10,660</b> people	<b>&gt;&gt;</b>	20,000 people
Female managers ratio (ratio to total managers) (*3)	10.7%	11.8%	<b>&gt;&gt;</b>	over <b>20</b> %

<sup>\*1</sup> ROIC=EBITDA $\times$ (1-effective tax rate) $\div$ (interest-bearing debt+shareholders' equity)

<sup>\*2</sup> Qualitist...Our original term for specialist contributing to the quality incl. engineers
\*3 calculated from the data of our group companies in Japan

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## Strategic growth with M&As based on a strict discipline.

#### **M&A Strategy**

- 1. Strict ROIC standards to maintain higher investment efficiency and profitability \*ROIC=EBITDA×(1-effective tax rate)÷(interest-bearing debt+shareholders' equity)
- 2. Targeting companies with future growth potential and current stable profitability
- 3. Well balanced PMI initiatives between its organic growth and synergies with our group

## **Target Companies**

To obtain engineer human resources

- Software testing companies
- Companies with engineers especially for development of open systems
- SES providers with rich human resources as own employee

To strengthen technology capability

- ERP-related service providers in Japan

## Size of target companies

Net sales: ¥0.5 - 3.0 bn

Number of engineers: 30 - 150 engineers

Acquisition price: Max. ¥3.0 bn

## Number of projects

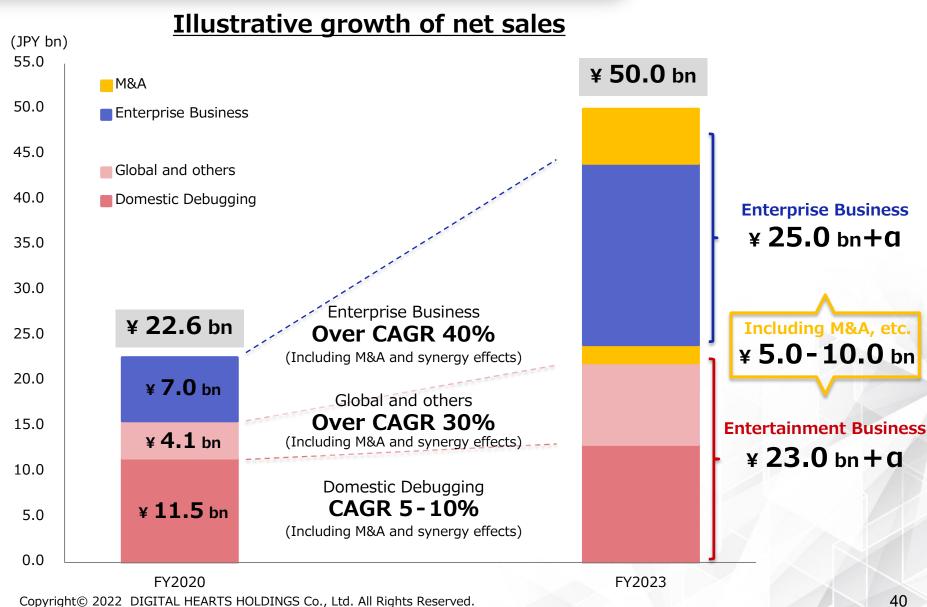
Around 2-3 projects per year as a plan

#### Governance

- Internal Investment Committee from various views including business operation, legal, finance, HR, and others.
- Board of Directors including advices from outside directors with rich knowledge and experience of M&As or finance.

## **Medium-Term Targets** (FY2021-FY2023)





## For Future Sustainable Growth



With our mission "SAVE the DIGITAL WORLD", we keep contributing to the development of digital society.

Improve tech capability and expand human resources with aggressive M&As.

#### **M&A Growth**

¥ 50.0 bn

FY2023 (Target)

¥ 29.1 bn

¥ 17.3 bn

Organic Growth

**Enterprise Business** and Global Service.

Strong growth of

Illustrative consolidated net sales

FY2017 FY2021 Copyright© 2022 DIGITAL HEARTS HOLDINGS Co., Ltd. All Rights Reserved. **Providing "Quality"** for Digital Society

#### **New Value Creation**

Develop innovative value for x-Tech, CASE, Smart City, Metaverse and more.

Sustainable
Growth



## **Appendix**

## Why Invest in DIGITAL HEARTS















## **Corporate Profile**



**Our Mission** 

## SAVE the DIGITAL WORLD

Market environment

Growth of console game market

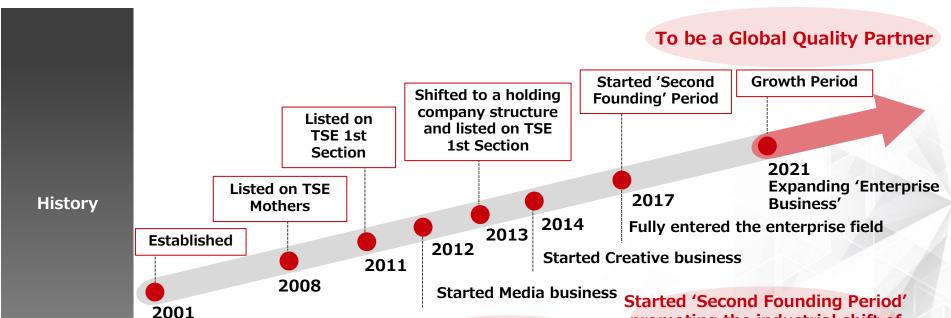
Growth of mobile game market

**Expansion** of **IoT** 

Expansion of DX

promoting the industrial shift of

"debugging" business



**Accelerating** 

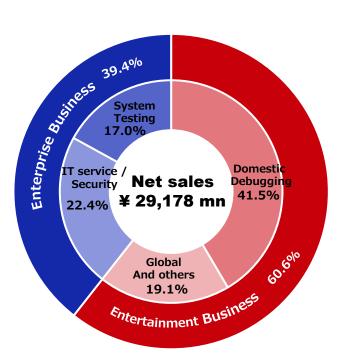
diversification in the game industry

**Started Debugging business** 

'First Founding Period'

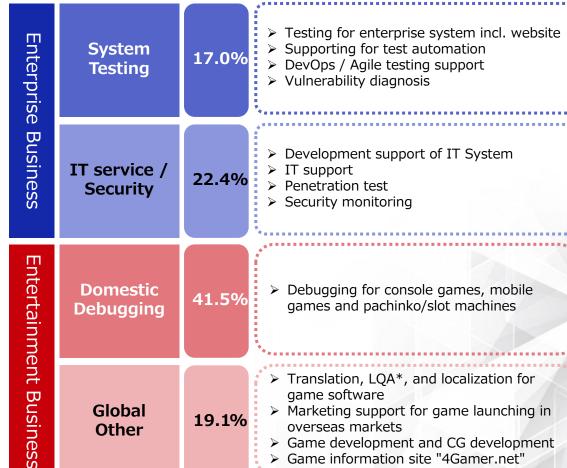


## Our core business: System Testing and Debugging



## Sales breakdown by segment (FY2021)

XSales of each segment and unit include intercompany sales and/or transfers.



## **Outline of System Testing and Debugging**



#### **Our Services**

Develop	Test	Maintain after a product release
Test Design	Running various tests	Continuation test
<ul><li>Test consulting</li><li>Planning for test and schedule</li><li>Supporting for test automation</li></ul>	<ul> <li>Functional test</li> <li>Performance test</li> <li>Stress test</li> <li>Acceptance test</li> <li>Usability Test, etc.</li> </ul>	<ul><li>Operations management</li><li>Evaluation and improvement</li><li>Update</li></ul>

_	Outline of Service	Description	Main client	Outsourced Projects Ratio	
	System Testing	Detection of bugs in enterprise systems from a test-engineers' knowledge.	<ul><li>SIers</li><li>Development vendors</li><li>Core system enterprises</li></ul>	Middle  † Human resource shortage in IT Industry.  † Knowledge and expertise on software testing is required.	Low
	Debugging	Detection of bugs in games from a player's perspective.	– Game makers	High  A license for purchasing dedicated equipment for debugging is required.  Knowledge and expertise on human resource managemen to accommodate changeable development schedules are required.	High t

## **Outline of Our System Testing**



## **ISTQB Global Partner** (One of three companies in Japan)



Largest class in Japan

> Number of people with ISTQB qualifications 365 people

> > (Consolidated base as of March 31,2022)

#### What is the ISTOB?

ISTQB is an international accreditation body for software testing.

ISTQB has four partner programs: [Silver], [Gold], [Platinum] and [Global].

Global partner is required, as a group, to have one or more Platinum companies and Gold companies in two or more countries.

### **Diverse automation tools**

One of the largest variety of tools in the domestic software testing industry









Panaya



Selenium

appium

## Supported by global authorities in software testing



Dr. Stuart Reid The founder of the ISTQB. The convener of ISO Software Testing Working Group 26



Mr. Rex Black Former President of the ISTQB



The co-author of a major book for test engineers.

Hung Nguyen



A pioneer in software testing in Japan. Many authored works.

Juichi Takahashi

## **Strength of Entertainment Business**



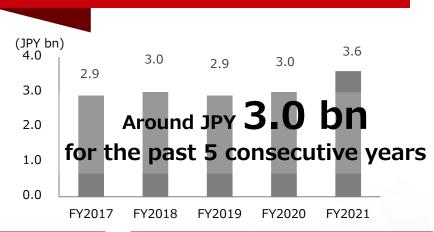
# Market Leader in domestic debugging service

Debugging service involvement ratio among top 100 new console game titles \*

**Approx. 75%** 

\*An internal investigation

## Strong operating profit



Passionate talents who love game

Approx. **8,000** registered testers

Abundant and wide variety of test terminals



Game consoles 2,054



Smartphones 6,782

(As of March 31,2022)

20+ offices and operation centers

Domestic

**13** 

Global

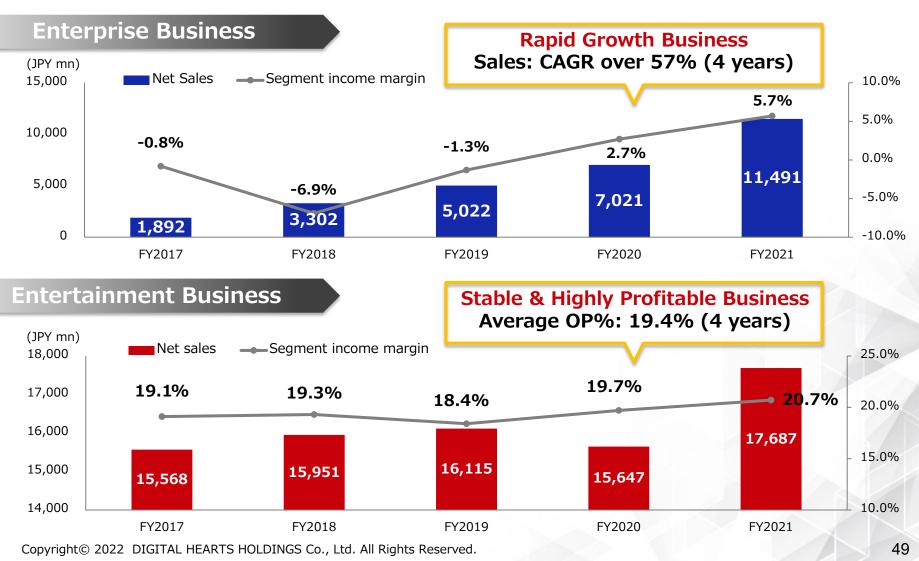
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(As of March 31,2022)

## **Our Growth Strategy**



## Rapid expansion of the Enterprise Biz the foundation of the Entertainment Biz



## **Consolidated financial statement**



(JPY mn)	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021
Net sales	13,285	15,011	15,444	17,353	19,254	21,138	22,669	29,178
Enterprise Business	1,713	2,382	1,952	1,892	3,302	5,022	7,021	11,491
Entertainment Business	11,609	12,696	13,544	15,568	15,951	16,115	15,647	17,687
Adjustments	-39	-70	-52	-108	-0	-	-	_
Operating income	1,517	1,963	1,906	1,735	1,605	1,394	1,908	2,701
Enterprise Business	50	71	203	-14	-226	-67	188	649
Entertainment Business	1,915	2,379	2,453	2,966	3,086	2,964	3,077	3,668
Adjustments	-447	-486	-750	-1,215	-1,254	-1,503	-1,356	-1,616
Operating income margin	11.4%	13.1%	12.3%	10.0%	8.3%	6.6%	8.4%	9.3%
Enterprise Business	2.9%	3.0%	10.4%	-	-	-	2.7%	5.7%
Entertainment Business	16.5%	18.7%	18.1%	19.1%	19.3%	18.4%	19.7%	20.7%
Profit attributable to owners of parent	539	361	795	1,200	1,575	792	974	1,780
Total assets	8,272	6,533	7,651	8,575	9,832	10,637	14,338	17,565
Current assets	5,756	5,064	6,221	6,813	7,403	7,453	9,744	10,392
Cash and deposits	3,058	2,197	3,344	3,894	4,197	3,739	5,076	5,208
Noncurrent assets	2,516	1,469	1,430	1,761	2,428	3,183	4,593	7,172
Goodwill	1,169	437	201	150	481	1,027	2,467	4,763
Total liabilities	4,104	3,444	4,793	5,005	4,819	5,198	8,024	9,989
Interest-bearing liabilities	1,865	1,367	1,646	1,610	1,764	2,553	4,797	5,590
Total net assets	4,168	3,089	2,858	3,570	5,012	5,438	6,314	7,576
Shareholders'equity ratio	4,092	2,814	2,632	3,369	4,791	4,922	5,691	7,004
Shareholders' equity ratio	49.5%	43.1%	34.4%	39.3%	48.7%	46.3%	39.7%	39.9%
Net cash	1,193	830	1,698	2,283	2,433	1,186	278	-382
Debt Equity Ratio	0.5	0.5	0.6	0.5	0.4	0.5	0.8	0.8
Net cash provided by operating activities	870	1,080	1,825	1,436	889	1,086	1,416	3,077
Net cash used in investing activities	-568	-17	-610	-618	62	-1,018	-1,813	-2,537
Net cash provided by (used in) financing activities	-950	-1,913	-69	-250	-693	-515	1,730	-546
ROE	13.8%	10.5%	29.2%	40.0%	38.6%	16.3%	18.4%	28.1%
Dividend Payout Ratio	37.6%	60.4%	32.3%	20.9%	18.0%	38.6%	31.0%	18.2%

#### Aims Past M&As





engineers in Japan

Logi Gear

TP®P technology Software development engineers in Vietnam

## identity

High skill domestic freelance engineers

Technological Capability Acquisition









Acquisition of new services for game industry



Japan's largest game information website "4Gamer.net"



Game software development / CG content development



DIGITAL HEARTS
CROSS
MARKETING & SOLUTIONS

**Geographical expansion** 



Game translation in South Korea



Game translation in Taiwan

Marketing and promotion support in China and Asian countries

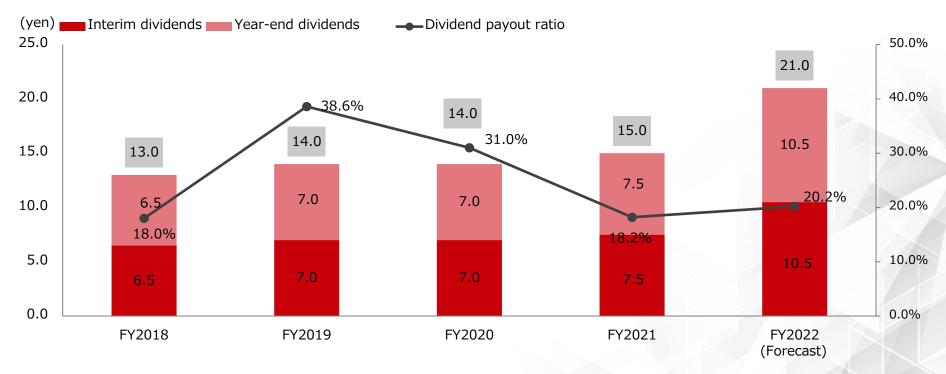
## **Shareholder Returns**



## **Basic Policy to Return Profits to Shareholders**

While securing sufficient internal reserves to invest in business growth and strengthen our management structure, stable dividends to shareholders with a payout ratio of 20% as the minimum target

## **Changes in dividends**





## **Major risks**

### **Countermeasures**

- Leakage of confidential information
- Prohibiting staff members from bringing personal items into the test room
- Physical security measures including access control with fingerprint authentication and the installation of security cameras
- Introduction of a personal reference system that applies to all registered testers
- Obsolescence of existing services by technological innovation
- Focusing on the application of the latest technologies, including a test automation project
- Focusing on the development of new services to improve added value

- Reduction of productive population in Japan
- Developing internal training programs that will enable the active participation of members with diverse generational, racial, and other backgrounds
- Securing human resources strategically by using overseas offices as well

- 4. Expansion of corporate acquisition and new businesses
- In-depth market research and due diligence
- Reducing risks by building a system for appropriate business management after acquisition

# (Ref.) Our Aims for Sustainable Value Creation



## **Our Major Initiatives and Sustainable Development Goals (SDGs)**

## Human resource

#### To resolve the shortage of IT human resource

- In-house support system for all employees (incl. part-timers) to acquire the test engineer's qualification "JSTQB".
- Ethical hacker training courses and engineer training programs for employees.
- Opened a free school for engineers in collaboration with WORKPORT, inc.
- Project to discover and foster potential ethical hacker candidates among high school students in collaboration with HASSYADAI.social.





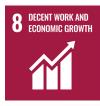


#### Human resource

#### Workplace for diverse human resources

- Provide workplaces for diverse people such as students, part-timers, young actors and musicians, and people with disabilities at test centers with over 3,000 people every day.
- Employ foreign nationalities of more than 20 countries/areas, such as Asia, Europe and the U.S., who engage in translation/linguistic debugging service, etc.







#### Technology

#### To realize a secure and safe digital society

- Contribute to improve quality of various kinds of software through game debugging, system testing, and other services.
- Preservation of information assets in the net society through cyber security services.
- Challenges for technological innovation through research and development on test automation and AI utilization.

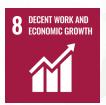




#### Communities

#### To revitalize local community and resolve IT disparities

- Create jobs through out nationwide test centers (Lab.) and promote teleworking/ work-from-home style by Remote Debugging service.
- Implemented "Cyber Security Support Team for SMEs in Tohoku region" as one of projects of Information-technology Promotion Agency, Japan (IPA)







## **Group Companies**





#### **Enterprise Business**

## AGEST, Inc.

System testing, Cyber-security, etc.

#### LogiGear Group

System Testing, Test Automation Support

#### MK Partners, Inc.

Salesforce consulting

#### TPP SOFT, JSC

System development

#### **DEVELOPING WORLD SYSTEMS LIMITED**

Introduction and maintenance support for Oracle products

#### **ANET Corporation**

System Testing

#### identity Inc.

IT freelance engineer platform service

#### CEGB Co., Ltd.

SAP implementation and operation support, system development support, etc.

### **DIGITAL HEARTS Co., Ltd.**

Game debugging, Localization, etc.

#### **DIGITAL HEARTS CROSS Group**

Marketing support, etc.

#### DIGITAL HEARTS (Shanghai) Co., Ltd.

Game debugging, Localization, etc.

#### **DIGITAL HEARTS USA Inc.**

Game debugging, Localization, etc.

#### Orgosoft Co., Ltd.

Game debugging, Localization

#### Digital Hearts Linguitronics Taiwan Co., Ltd.

Game translation

#### FLAME Hearts Co., Ltd.

Game development and CG content development

#### Aetas, Inc.

Operation of a game information site, "4Gamer.net"

#### **Entertainment Business**









































Terms	Meaning			
Enterprise Business	Our business segment of services for non-game, enterprise software including software testing and cyber security. It is our group's growth driver with big social change of DX.			
Entertainment Business	Our business segment of services for game and entertainment industries including debugging and localization. It is our "cash cow" in Japan and growing in the global market.			
System Testing	Detecting enterprise system bugs for ERP, websites, business apps and others. We use this word for "Enterprise Business."			
Debugging	Detecting game software bugs from the user's perspective. We use this word for "Entertainment Business." "Debugging" may refers to identification and correction of errors, but we specialize in "identifying and reporting bugs" without correcting them.  1/3 of debugging is for console games and 2/3 is for mobile games.			
QA	Abbreviation for "Quality Assurance", including software testing and game debugging.			
LQA	Abbreviation for "Linguistic Quality Assurance" such as translating to foreign language and detecting errors the game software from localization view.			
Test engineer	Engineers for software testing. It is not popular in Japan as a job career, and we have recruit IT engineers and trained them to become test engineers.			
Tester	We refer "tester" as staff who carries out debugging service. Most of our testers are registered part-time jobbers. Some are trained to work as test engineers or cyber-security specialists.			
Console games	A game played using dedicated hardware devices such as Nintendo Switch and PlayStation.			
Qualitist	Our original term for specialist contributing to the software quality. It includes not only various IT specialists such as test engineers and cyber-security specialists for Enterprise Business, but also testers, translators, 2D/3D graphic designer and others for Entertainment Business in the game industry.			



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