

# Presentation Material

## for the Three Months Ended June 30, 2023

August 10, 2023

Tokyo Stock Exchange Prime Market: Code 3676

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

# Summary of Business Results for Q1 FY2023

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\*The figures for the first quarter ended June 30, 2022 reflect the finalization of provisional accounting treatment for business combination in the last fourth quarter ended March 31, 2023.

## Spin-Off Listing of AGESt, Inc.

aiming to accelerate the growth of the Enterprise Business and to achieve the regrowth of the Entertainment Business

**“Second Founding”, “establishment of AGESt” and to be independent two listed entities by Spin-Off Listing with each different goal and strategy**

### FY2017 Consolidated Financial Results

Net sales  
¥17.3 bn  
Operating income  
¥1.7 bn

### FY2022 Consolidated Financial Results

Net sales  
¥36.5 bn  
Operating income  
¥3.0 bn

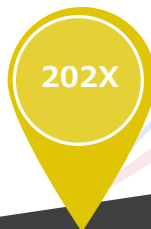
Fully entered the enterprise field as the Company's “Second Founding”



Established AGESt, Inc., the core subsidiary of the Enterprise Business



Spin-Off Listing of AGESt, Inc.



Accelerating the pace of growth  
Shifting from a stable growth to regrowth phase

### FY2028 (Target)

#### New AGESt Group

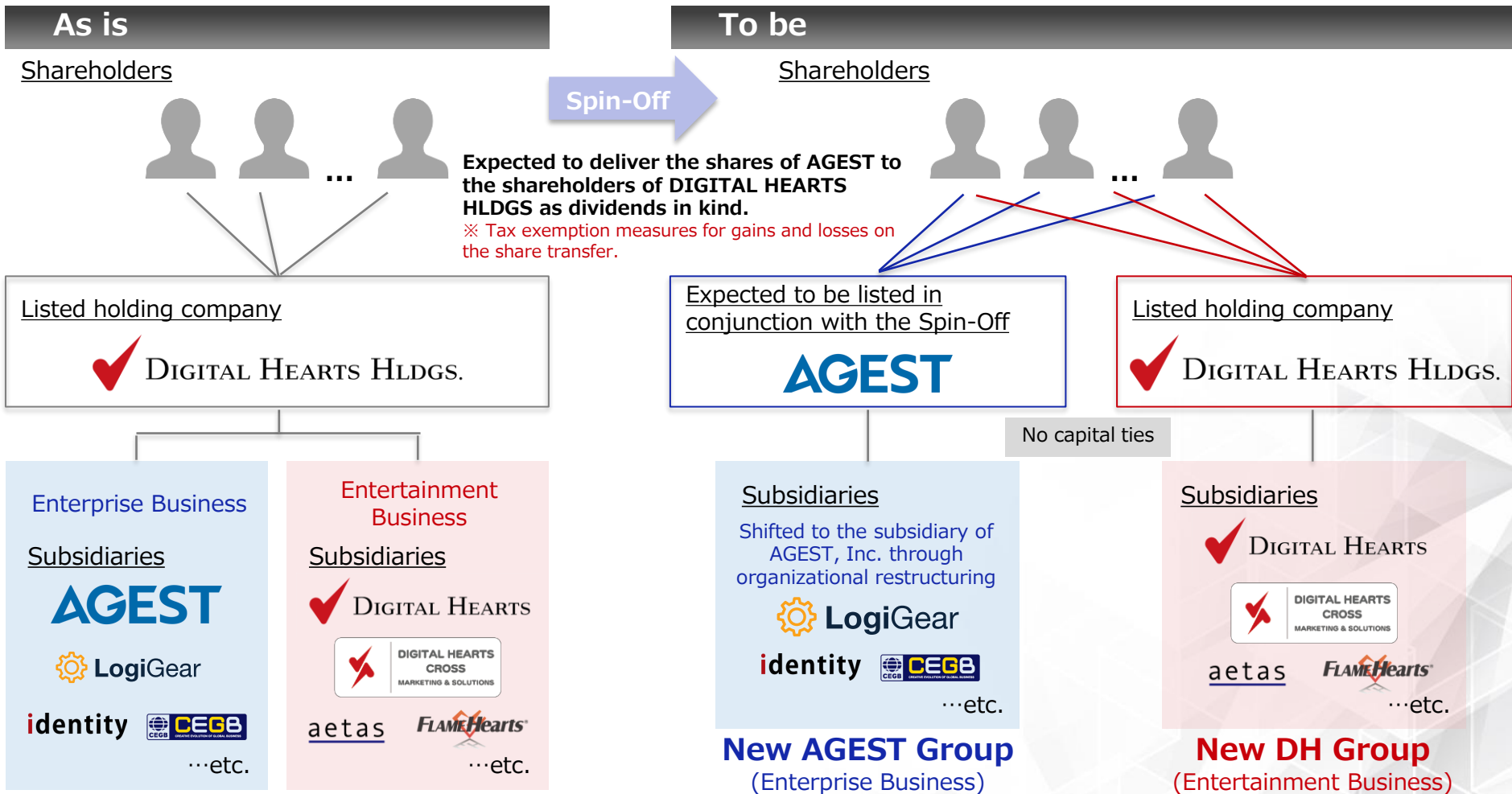
Net sales ¥ 80.0 bn  
Operating income ¥ 8.5 bn

#### New DH Group

Net sales ¥ 35.0 bn  
Operating income ¥ 4.5 bn

# (Appendix) Scheme of Spin-Off Listing

Commence the preparation of the Spin-Off Listing.  
To use the Share-Distribution-Type Spin-Off scheme from the perspectives of “business independence,” “economic rationality” and “existing shareholder’s benefit”.



## Accelerate initiatives for further growing both businesses as the preparation for the Spin-Off Listing of AGEST, Inc.

### Enterprise Business

#### Established new specialized units to accelerate the pace of growth

##### AGEST AI Lab.



- Promote AI-based software testing services, led by our CTO

##### AGEST DX Solution Center



- Strengthen "In-house DX system development support service" with highly-skilled DX personnel in Japan and overseas

#### Formed a business alliance with DIT



##### Digital Information Technologies Corporation

- Wide-ranging businesses collaboration from software development/testing to security services

#### Promoting AGEST, Inc.'s preparations for listing

- Appointing lead manager underwriter and audit firm
- Reallocating human resources and recruit new specialists to build the head office function to be a listed company

#### Acquired GPC K.K as a subsidiary



- Strengthening the ERP business basement
- Consolidated from April 2023

### Entertainment Business

#### Strengthening global services to shift regrowth phase

- Reorganized services in each region for each overseas company through selection and concentration of each one's businesses
- Promoting the establishment of networks and collaboration in the global market through alliances and others

### Corporate

#### Acquired and canceled the 7th and 8th stock acquisition rights

- Re-planning new capitalization policies in line with new growth strategies after Spin-Off Listing
- Proceeded 1.1 billion yen out of planned total transaction size, approximate 4.2 billion yen

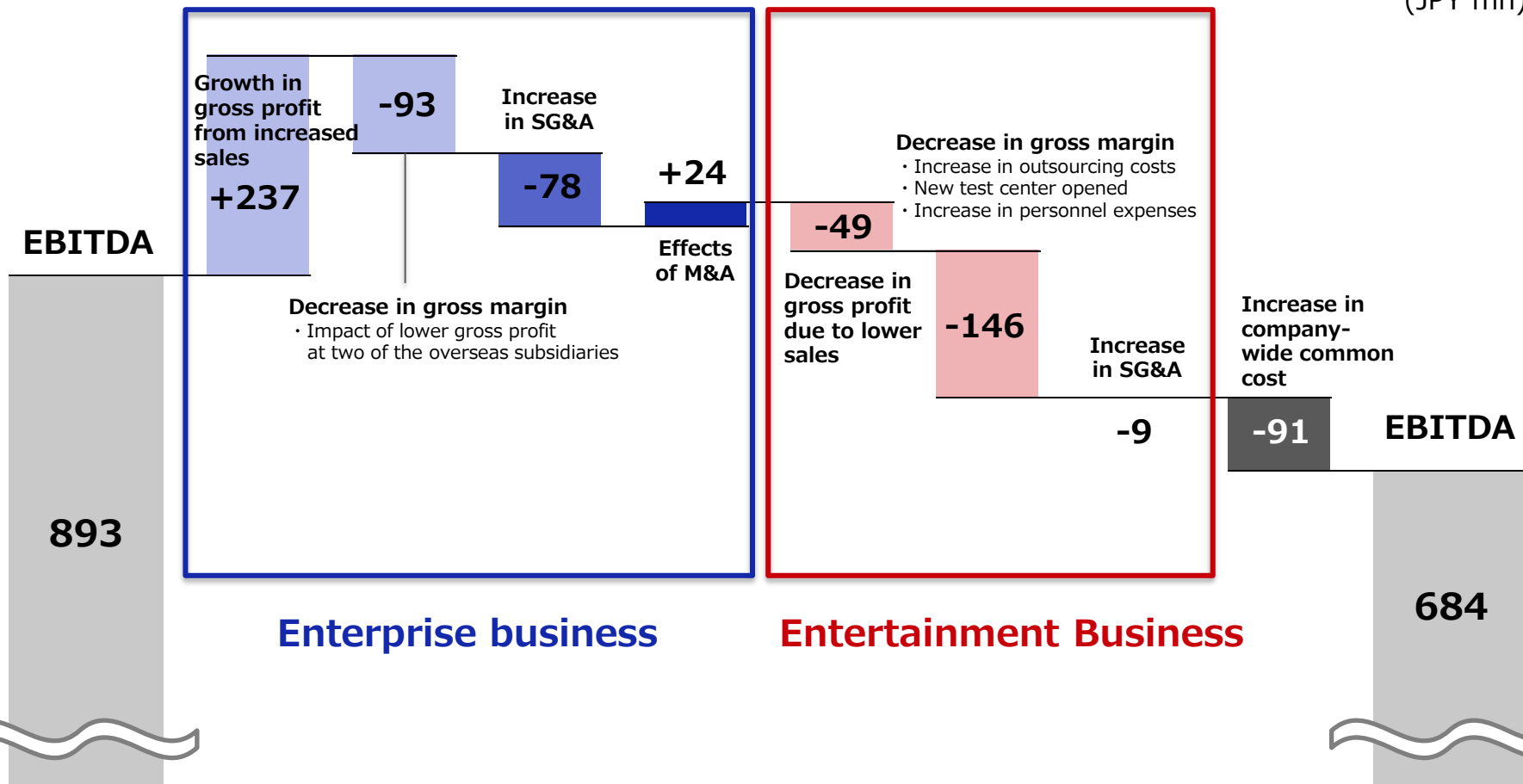
# Summary of Financial Results for Q1 FY2023

Achieved the net sales target driven by Enterprise Business.  
Almost achieved Q1 operating income despite SG&A increase due to strategic investments including Spin-Off Listing costs. Aiming to achieve full year profit target.

(JPY mn)	Q1 FY2022	Q1 FY2023	YoY Change	
<b>Net sales</b>	<b>8,372</b>	<b>9,296</b>	<b>924</b>	<b>111.0%</b>
Cost of sales	5,899	6,890	991	116.8%
Cost of sales (%)	70.5%	74.1%		+3.7points
Gross profit	2,472	2,406	-66	97.3%
SG&A	1,837	2,001	164	108.9%
<b>Operating income</b>	<b>634</b>	<b>404</b>	<b>-230</b>	<b>63.7%</b>
Operating income margin	7.6%	4.3%		-3.3points
Ordinary income	632	415	-217	65.6%
Profit attributable to owners of parent	413	338	-75	81.7%
<b>EBITDA</b>	<b>893</b>	<b>684</b>	<b>-208</b>	<b>76.7%</b>

Despite the decline of consolidated EBITDA due to the decrease in Entertainment Business by the previous year's too strong results, showing increase in EBITDA of growing Enterprise Business while continuing to invest for future growth.

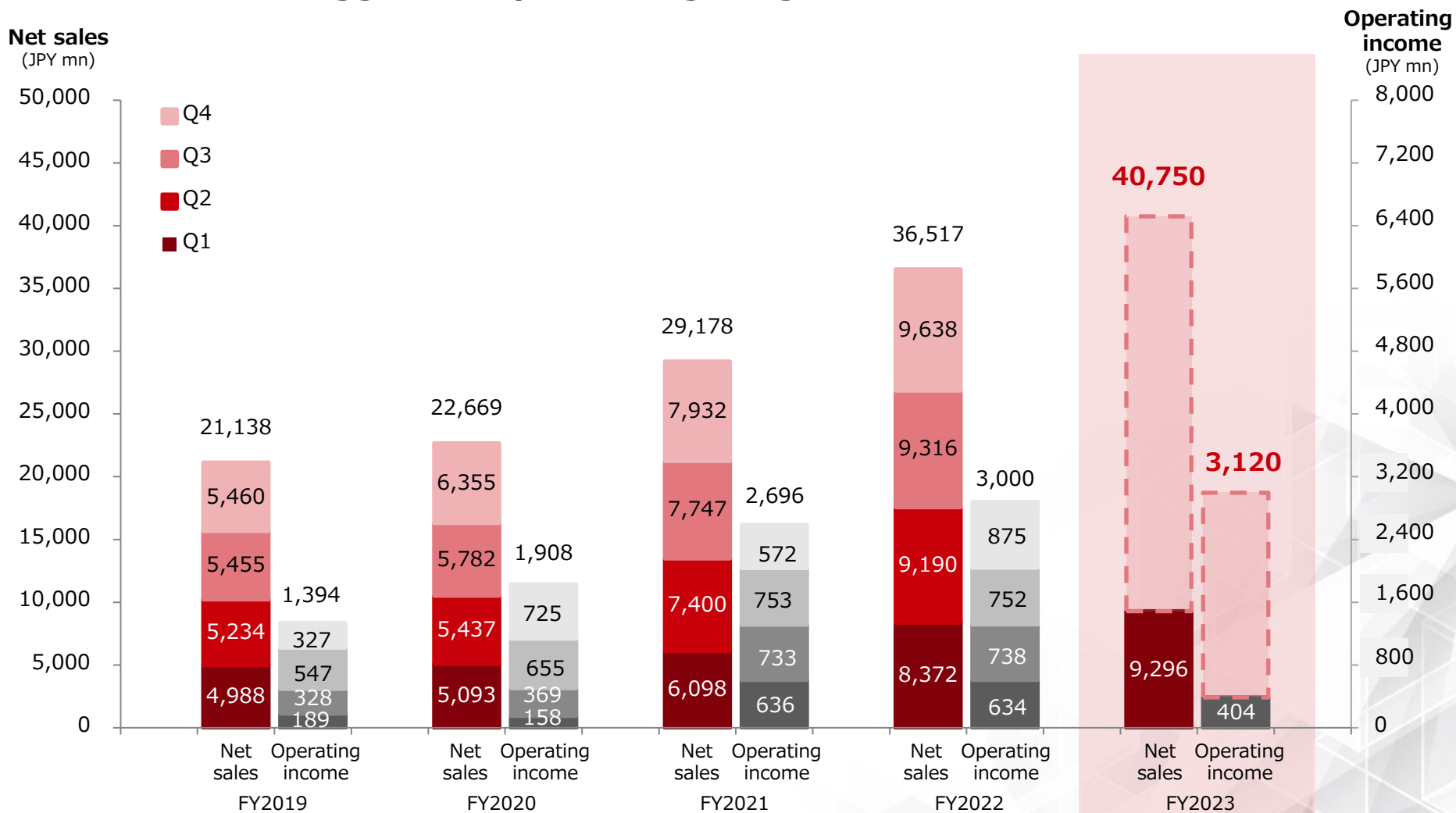
(JPY mn)



Q1 FY2022

Q1 FY2023

**Aim to achieve record-high sales and operating income while aggressively investing for growth in both businesses.**





# Consolidated Balance Sheets

(JPY mn)	Q4 FY2022 (As of March 31, 2023)	Q1 FY2023 (As of June 30, 2023)	Change from Q4 FY2022
<b>Total assets</b>	<b>19,581</b>	<b>19,394</b>	<b>-187</b>
Current assets	12,528	12,160	-368
Cash and deposits	6,456	6,240	-216
Noncurrent assets	7,052	7,234	181
Property, plant and equipment	1,169	1,259	89
Intangible assets	4,188	4,146	-41
Goodwill	3,468	3,411	-56
Investments and other assets	1,694	1,828	133
<b>Total liabilities</b>	<b>10,107</b>	<b>10,311</b>	<b>204</b>
Current liabilities	9,930	10,126	195
Short-term loans	5,106	5,606	500
Noncurrent liabilities	176	185	9
<b>Total net assets</b>	<b>9,474</b>	<b>9,082</b>	<b>-391</b>
Shareholders' equity	8,283	8,061	-222
Accumulated other comprehensive income	522	610	87
Subscription rights to shares	6	—	-6
Non-controlling interests	661	410	-250
<b>Total liabilities and net assets</b>	<b>19,581</b>	<b>19,394</b>	<b>-187</b>

# Q1 FY2023 Financial Results by Segment and Full-year Forecast of FY2023

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Notice regarding earnings by segment

- Net sales by segment include inter-segment sales or transfers. Segment income is based on operating income.
- Some changes were made to the sub-segments of the Enterprise Business in Q1 FY2022. For this reason, the figures for FY2021 and earlier by sub-segments of the Enterprise Business are reclassified to reflect the change in sub-segments for comparison purposes.

# Summary of Financial Results by Segment

(JPY mn)	Q1 FY2022	Q1 FY2023	YoY Change
<b>Net sales</b>	<b>8,372</b>	<b>9,296</b>	<b>111.0%</b>
Enterprise	3,589	4,663	129.9%
Entertainment	4,818	4,661	96.7%
Adjustments	-35	-28	—
<b>Operating income</b>	<b>634</b>	<b>404</b>	<b>63.7%</b>
Enterprise	24	83	340.4%
Entertainment	1,036	844	81.5%
Adjustments	-426	-523	—
<b>EBITDA</b>	<b>893</b>	<b>684</b>	<b>76.7%</b>
Enterprise	185	274	147.7%
Entertainment	1,123	918	81.7%

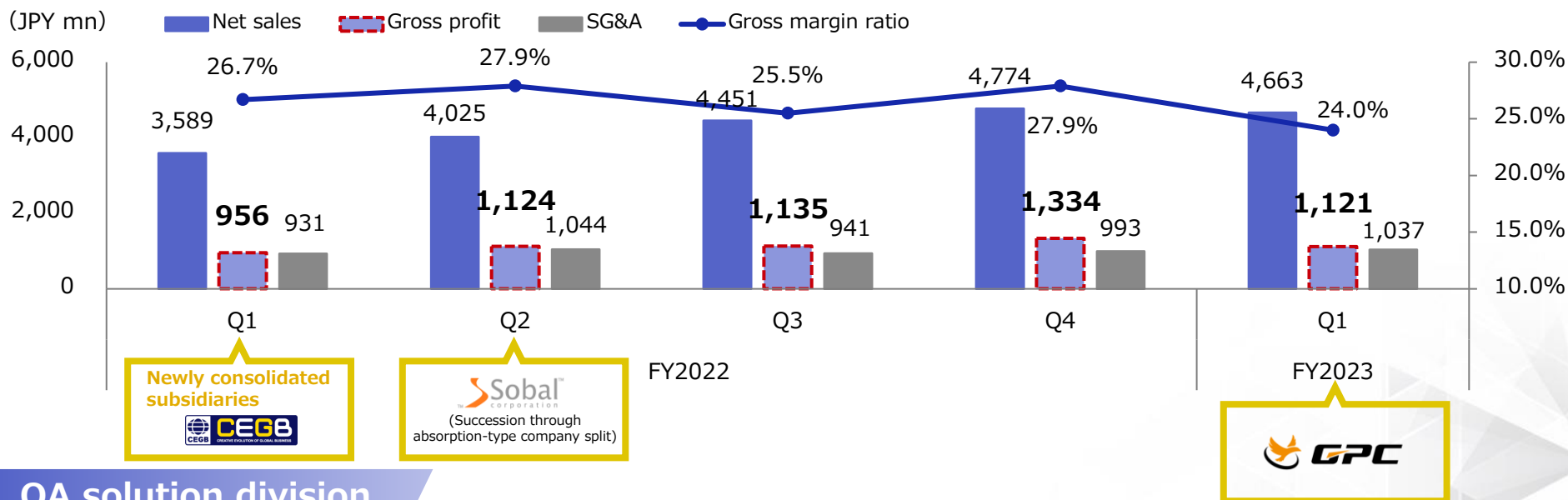
- Sales expanded steadily, centered on the core subsidiary of **AGEST, Inc.** due to the tailwind of the acceleration of DX.
- Sales of QA solutions continued to grow rapidly by **approx. 1.5 times YoY** due to the launch of high-value-added solutions for “Shift Left” and the increase in the number of engineers.
- Segment income **increased by 3.4 times YoY** due to the sales expansion.
- **Started preparing for Spin-Off Listing**, including the development of necessary head office functions in AGEST, Inc. to be a listed company.

(JPY mn)	Q1 FY2022	Q1 FY2023	YoY Change
<b>Net sales</b>	<b>3,589</b>	<b>4,663</b>	<b>129.9%</b>
QA solution	<b>2,102</b>	<b>3,101</b>	<b>147.5%</b>
IT services and others	<b>1,486</b>	<b>1,562</b>	<b>105.1%</b>
<b>Segment income</b>	<b>24</b>	<b>83</b>	<b>340.4%</b>
<b>EBITDA</b>	<b>185</b>	<b>274</b>	<b>147.7%</b>

## Enterprise Business

- Quarterly sales increased by **around 1.3 times YoY** due to expansion of existing businesses and the effects of M&As.
- Gross margin is **expected to recover from this Q2**, despite decline of gross margin in Q1 mainly due to worse profitability of two overseas subsidiaries by weaker sales and heavier personnel costs than before.
- **Controlled SG&A around ¥1 billion**, despite strategic initiatives like marketing and recruiting.

### Performance Trends



## QA solution division

### Number of clients with orders (\*)

Q1 FY2022

**627** companies

Q1 FY2023

**824** companies

### Annual sales per client (\*)

Q1 FY2022

**¥10** mn

Q1 FY2023

**¥13** mn

### Number of engineers

Q1 FY2022

**961** people

Q1 FY2023

**1,047** people

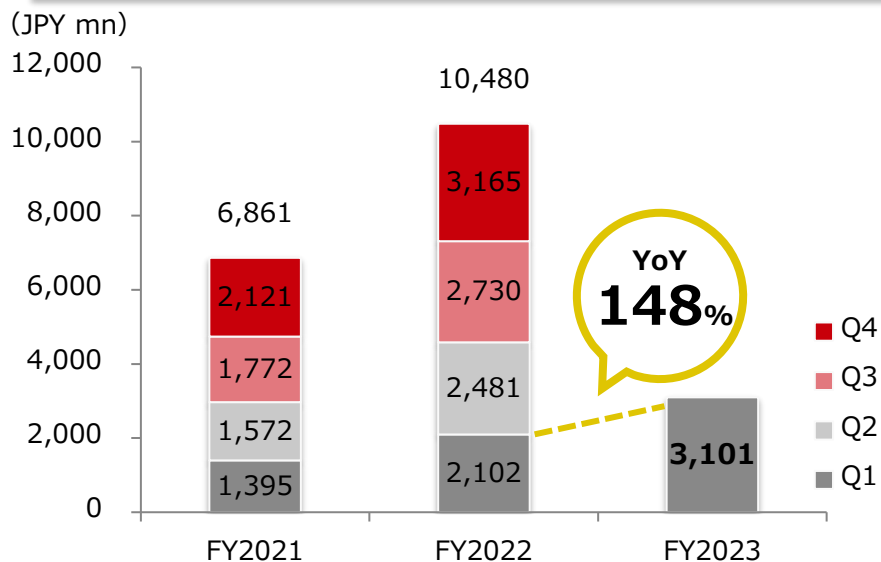
Breakdown of YoY changes in number of engineers

Domestic +206 people

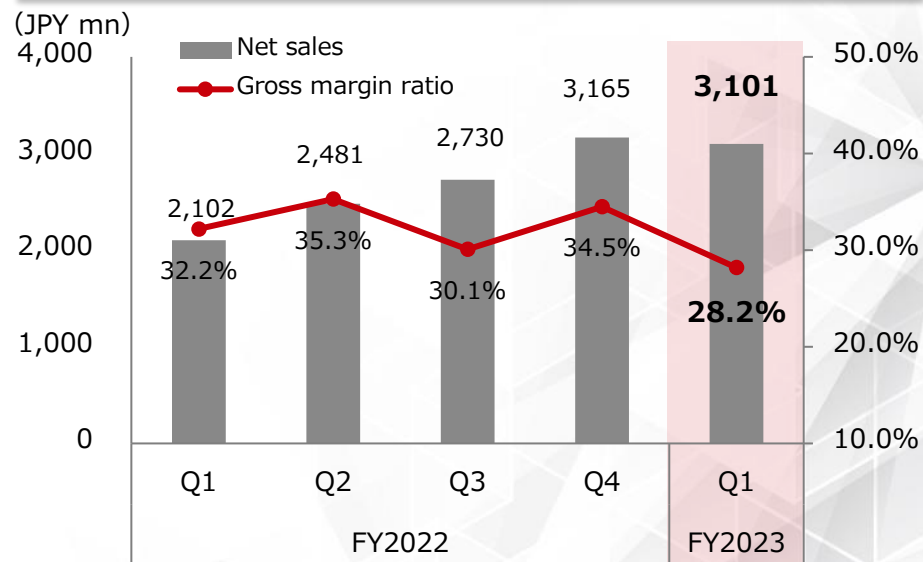
Overseas -120 people

- Started consolidating GPC K.K in Q1 FY2023, and achieved **a significant organic sales growth YoY 138%** excluding the effects of M&A.
- In addition to recruiting mid-career test engineers, **began recruiting non-experienced engineers.**
- Launching new services for **"QA for development"** such as **"Code analysis"**
- Planning **to recover to over 30% gross margin after Q2**, despite a temporary decline of gross margin in Q1 due to weaker sales and profits of two overseas subsidiaries (DEVELOPING WORLD SYSTEMS and MK Partners).

## Quarterly sales

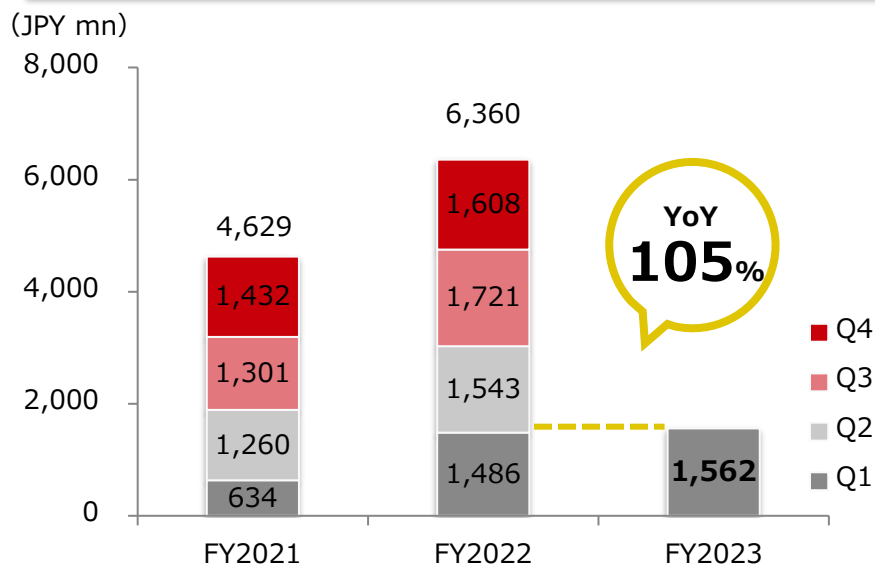


## Net sales and Gross margin ratio

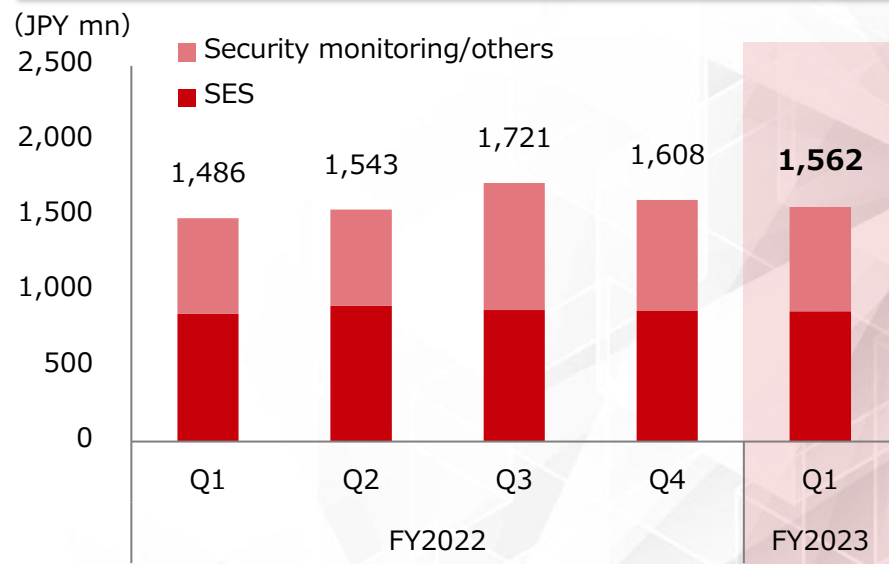


- Security monitoring services reached **a strong sales growth of 127% YoY**, by steadily capturing increasing demand against the backdrop of expansion of remote work.
- The SES businesses of registered engineers in identity Inc. reached **29,000 people**.

## Quarterly sales



## Quarterly sales by service



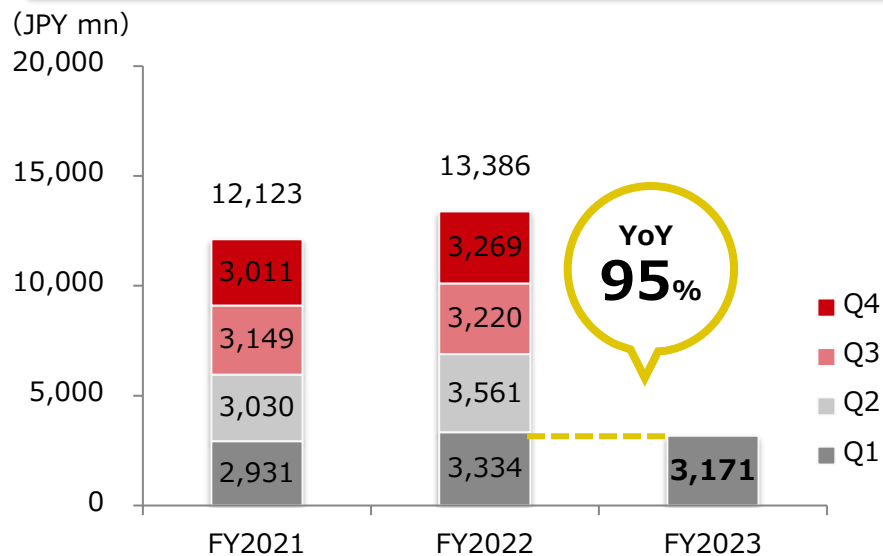
- **Domestic debugging sales were almost in line with the target**, despite a weaker sales against the too strong sales in the previous year mainly for console game which is characterized by sharp fluctuations in sales trend.
- With uncertainty in the Chinese business market, **Global and others maintained same level sales as the previous year** by focusing on promotions for services such as translation, LQA, and marketing support.
- It is expected to **recover in both sales and profit margin in 2H**, despite a temporary decline in Q1 profits due to the impact of weaker sales and the increase in personnel costs.

(JPY mn)	Q1 FY2022	Q1 FY2023	YoY Change
<b>Net sales</b>	<b>4,818</b>	<b>4,661</b>	<b>96.7%</b>
Domestic debugging	<b>3,334</b>	<b>3,171</b>	<b>95.1%</b>
Global and others	<b>1,484</b>	<b>1,490</b>	<b>100.4%</b>
<b>Segment income</b>	<b>1,036</b>	<b>844</b>	<b>81.5%</b>
<b>EBITDA</b>	<b>1,123</b>	<b>918</b>	<b>81.7%</b>

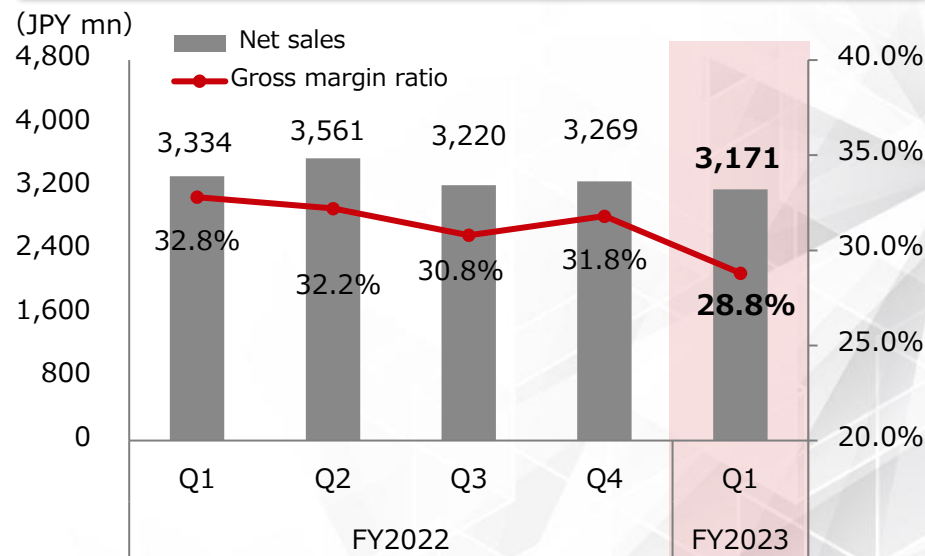


- Domestic debugging performed well almost as planned, **maintaining a high level with quarterly net sales of ¥3.1 billion**, despite weaker sales than previous year when large titles were successively launched in console games.
- Gross margin ratio is expected to **recover to over 30% in 2H** due to sales expansion and the penetration of cost pass-through, despite a temporary decline in Q1 due to the weaker sales, the increase in personnel costs, and the opening of a new test center.

## Quarterly sales

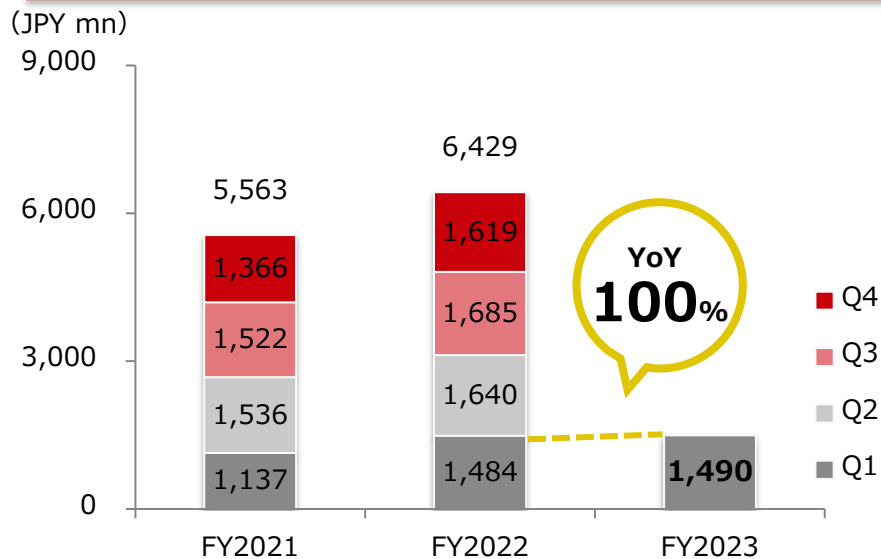


## Net sales and Gross margin ratio

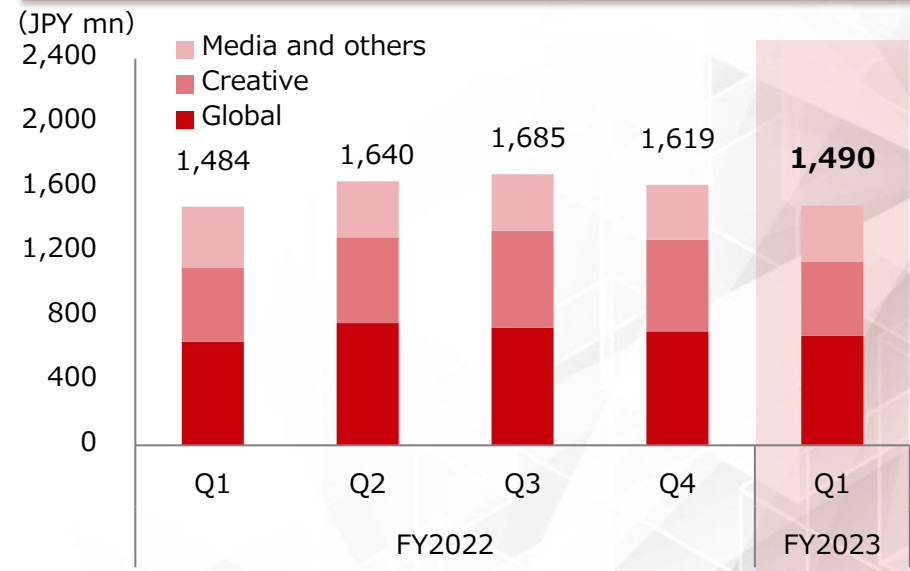


- Even with uncertainty in the Chinese business market partly affected by game regulation changing, sales of global services (translation, LQA, and marketing support) **recorded high growth of 113% YoY** after excluding the impact of businesses restructuring, such as the separation of local advertising agency service in Taiwan.
- **Strengthening marketing services in South Korea and promoting overseas alliances and others** to build a global network, with the aim of expanding businesses for overseas clients in the game industry.

## Quarterly sales



## Quarterly sales by service



- Aim for **record-high net sales and operating income by the strong contribution of the Enterprise Business.**
- **Operating income growth for 4 consecutive years**, despite the expected cost of around 250 million yen for preparation for the Spin-Off Listing of AGESE, Inc.

(JPY mn)	Full-year FY2022 (Actual)	Full-year FY2023 (Forecast)	YoY Change
<b>Net sales</b>	<b>36,517</b>	<b>40,750</b>	<b>111.6%</b>
Enterprise	16,840	20,650	122.6%
Entertainment	19,815	20,100	101.4%
<b>Operating income</b>	<b>3,000</b>	<b>3,120</b>	<b>104.0%</b>
(Excluding costs to prepare for the Spin-Off Listing of AGESE, Inc.)	3,000	3,370	112.3%
<b>Operating income margin</b>	<b>8.2%</b>	<b>7.7%</b>	<b>-0.6points</b>
<b>Ordinary income</b>	<b>3,152</b>	<b>3,160</b>	<b>100.2%</b>
(Excluding costs to prepare for the Spin-Off Listing of AGESE, Inc.)	3,152	3,410	108.2%
<b>Profit attributable to owners of parent</b>	<b>799</b>	<b>2,100</b>	<b>262.6%</b>
<b>EBITDA</b>	<b>4,176</b>	<b>4,180</b>	<b>100.1%</b>

# Spin-Off Listing

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\* Reprinted from “ Presentation Material for the Fiscal Year Ended March 31, 2023 ” disclosed on May 11, 2023.

## Spin-Off Listing of AGESt, Inc.

aiming to accelerate the growth of the Enterprise Business and to achieve the regrowth of the Entertainment Business

**“Second Founding”, “establishment of AGESt” and to be independent two listed entities by Spin-Off Listing with each different goal and strategy**

### FY2017 Consolidated Financial Results

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¥17.3 bn  
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Fully entered the enterprise field as the Company's “Second Founding”



Spin-Off Listing of AGESt, Inc.



Established AGESt, Inc., the core subsidiary of the Enterprise Business

Accelerating the pace of growth  
Shifting from a stable growth to regrowth phase

### FY2028 (Target)

#### New AGESt Group

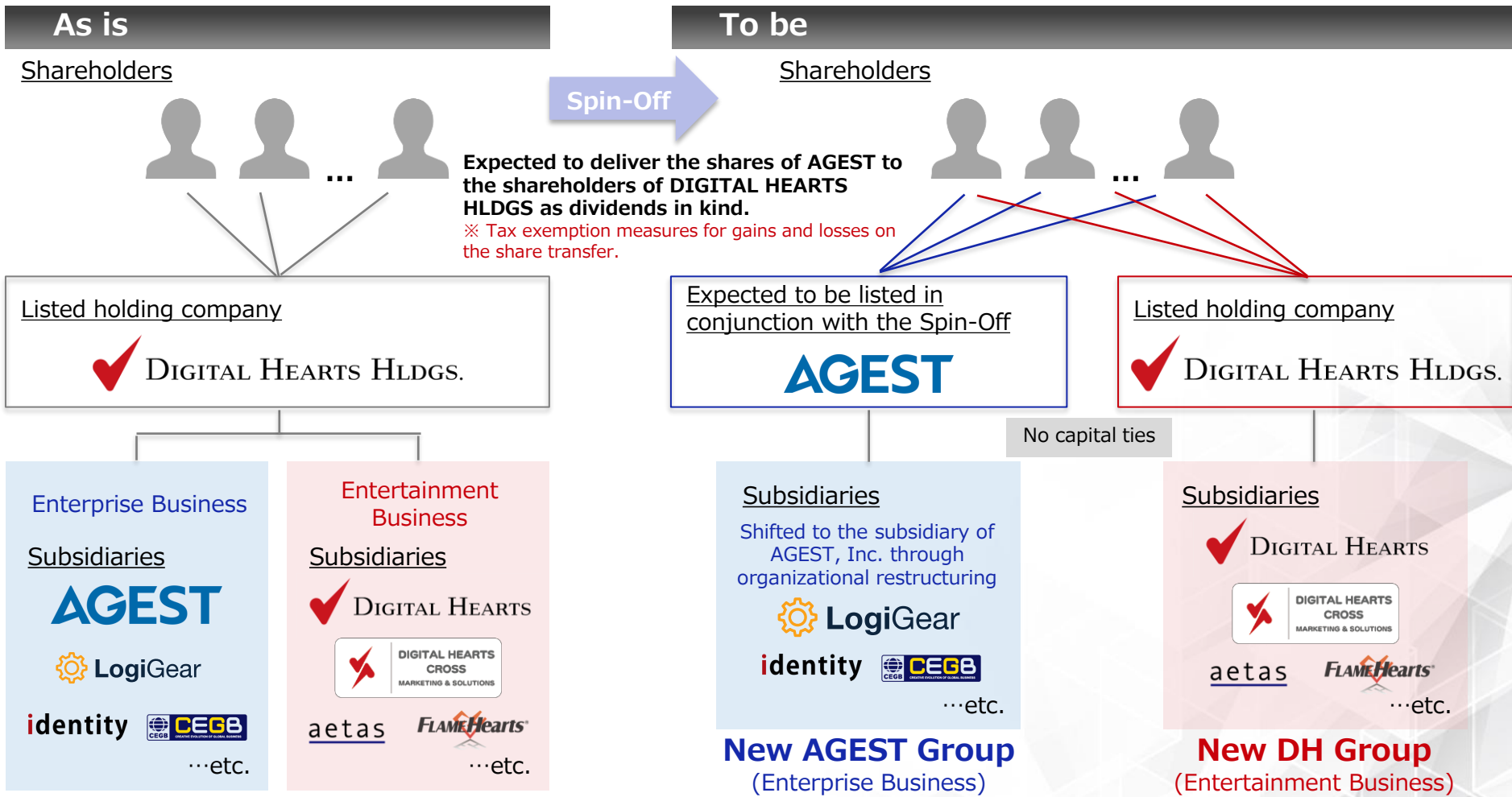
Net sales ¥ 80.0 bn  
Operating income ¥ 8.5 bn

#### New DH Group

Net sales ¥ 35.0 bn  
Operating income ¥ 4.5 bn

# Scheme of Spin-Off Listing

Commence the preparation of the Spin-Off Listing.  
To use the Share-Distribution-Type Spin-Off scheme from the perspectives of “business independence,” “economic rationality” and “existing shareholder’s benefit”.



To maximize growth potential with unique and independent two groups by Spin-Off Listing, different management, independent capital, and unique human capital.

## Expected Effect

	New AGEST Group	New DH Group																								
Corporate Culture and Human capital	<p><b>Recruitment of talented engineers</b> Corporate branding with "Leading-edge quality technology" and stock-based incentives for engineers.</p>	<p><b>Recruitment and training of human resources by leveraging "Game related Business" brand</b> Acquire and train to expand human resources for global expansion and new businesses.</p>																								
Businesses management	<p><b>Pursuit of the leading-edge quality technology in the global markets</b> Shifting to the business management with engineered ideas and knowledge of leading-edge technology.</p>	<p><b>Evolving businesses and new challenges</b> Revitalize existing businesses and improve management from a global perspective to leverage its own strengths.</p>																								
Investment	<p><b>Investment of around ¥10.0 bn in human capital, technology and M&amp;As</b> Flexible fund raising and execution of large-scale investments.</p>	<p><b>Investment in new areas and shareholder returns</b> Invest in new businesses and improve shareholder returns utilizing its stable businesses cashflow.</p>																								
Targets	<table border="1"> <thead> <tr> <th></th> <th>FY2022*</th> <th>FY2025</th> <th>FY2028</th> </tr> </thead> <tbody> <tr> <td>Net sales</td> <td>¥16.8 bn</td> <td>¥32.0 bn</td> <td>¥80.0 bn</td> </tr> <tr> <td>Operating income</td> <td>-</td> <td>¥2.5 bn</td> <td>¥8.5 bn</td> </tr> </tbody> </table>		FY2022*	FY2025	FY2028	Net sales	¥16.8 bn	¥32.0 bn	¥80.0 bn	Operating income	-	¥2.5 bn	¥8.5 bn	<table border="1"> <thead> <tr> <th></th> <th>FY2022*</th> <th>FY2025</th> <th>FY2028</th> </tr> </thead> <tbody> <tr> <td>Net sales</td> <td>¥19.8 bn</td> <td>¥25.0 bn</td> <td>¥35.0 bn</td> </tr> <tr> <td>Operating income</td> <td>-</td> <td>¥3.0 bn</td> <td>¥4.5 bn</td> </tr> </tbody> </table>		FY2022*	FY2025	FY2028	Net sales	¥19.8 bn	¥25.0 bn	¥35.0 bn	Operating income	-	¥3.0 bn	¥4.5 bn
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## New AGEST Group

### To be the leading QA solution provider in the global market with the leading-edge quality technology

-Accelerate business expansion and investment in future growth-

- Pursue leading-edge quality technology and expand businesses globally by strengthening PP&T (People, Process, and Technology).

#### Key initiatives

1. Pursue leading-edge quality technology and expand business globally
2. Accelerate investment in human capital, technologies and M&As
3. Recruit utilizing the brand awareness as a listed company and strengthen human resources with a unique incentive system
4. Strengthen the management and governance system as a listed company
5. Flexible fund raising and quick investment decisions

## New DH Group

### To be the Global Quality Partner in the Entertainment Industry

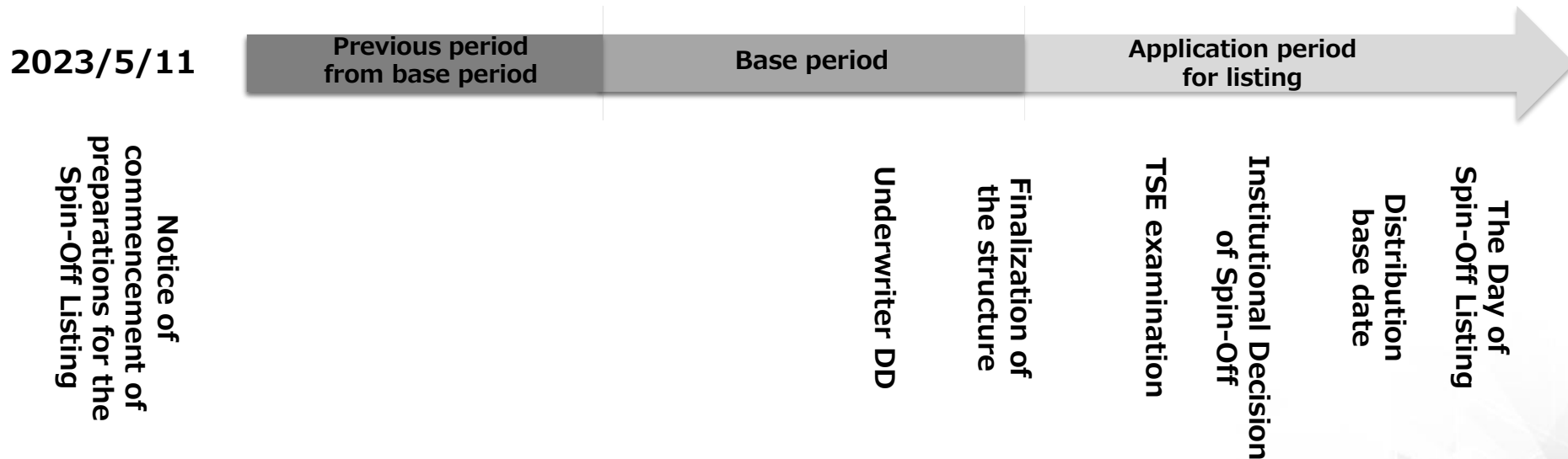
-Regrowth of existing businesses and creation of new businesses-

- Boost, revitalize and evolve the existing businesses, expand the global businesses not only in Asia but also in the U.S. and Europe, and challenge to develop new business opportunity.

#### Key initiatives

1. Leverage core competencies to add higher value and improve productivity of existing business
2. Expand the global business and take on the challenge of entering new businesses areas
3. Recruit and train human resources by leveraging its corporate culture with "Game" branding
4. M&As and strategic investments utilizing rich operating cash flow
5. Improve shareholder returns and expand growth investment





## Preparation period for Spin-Off Listing

- ✓ Establishment of head office functions, including structure of management and governance
- ✓ Conclusion of a lead managing underwriter contract and audit contract
- ✓ Reorganization of group companies
- ✓ Appointment of Independent Director
- ✓ Establishment of Board of Corporate Auditors

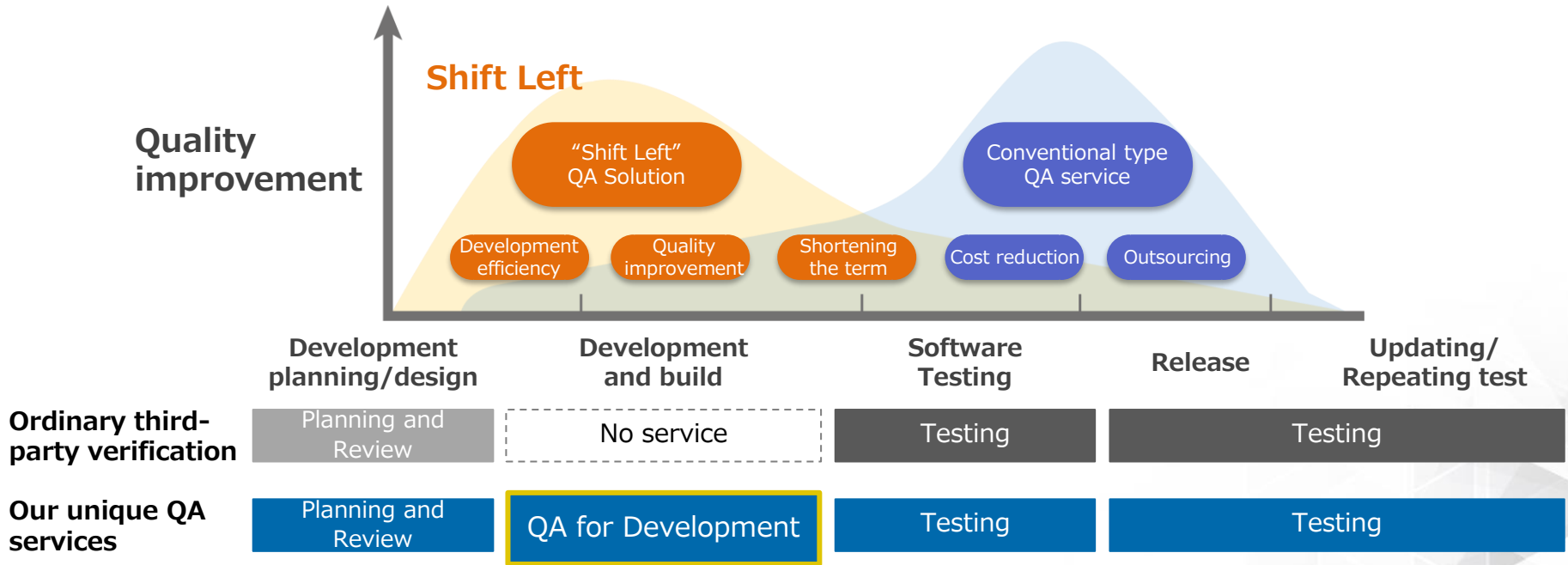
\* Here is an example as an ordinary schedule image plan.  
Actual schedules may be revised in the process of preparing for the Spin-Off Listing.

# Enterprise Business Growth Strategy

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\* Reprinted from “ Presentation Material for the Fiscal Year Ended March 31, 2023 ” disclosed on May 11, 2023.

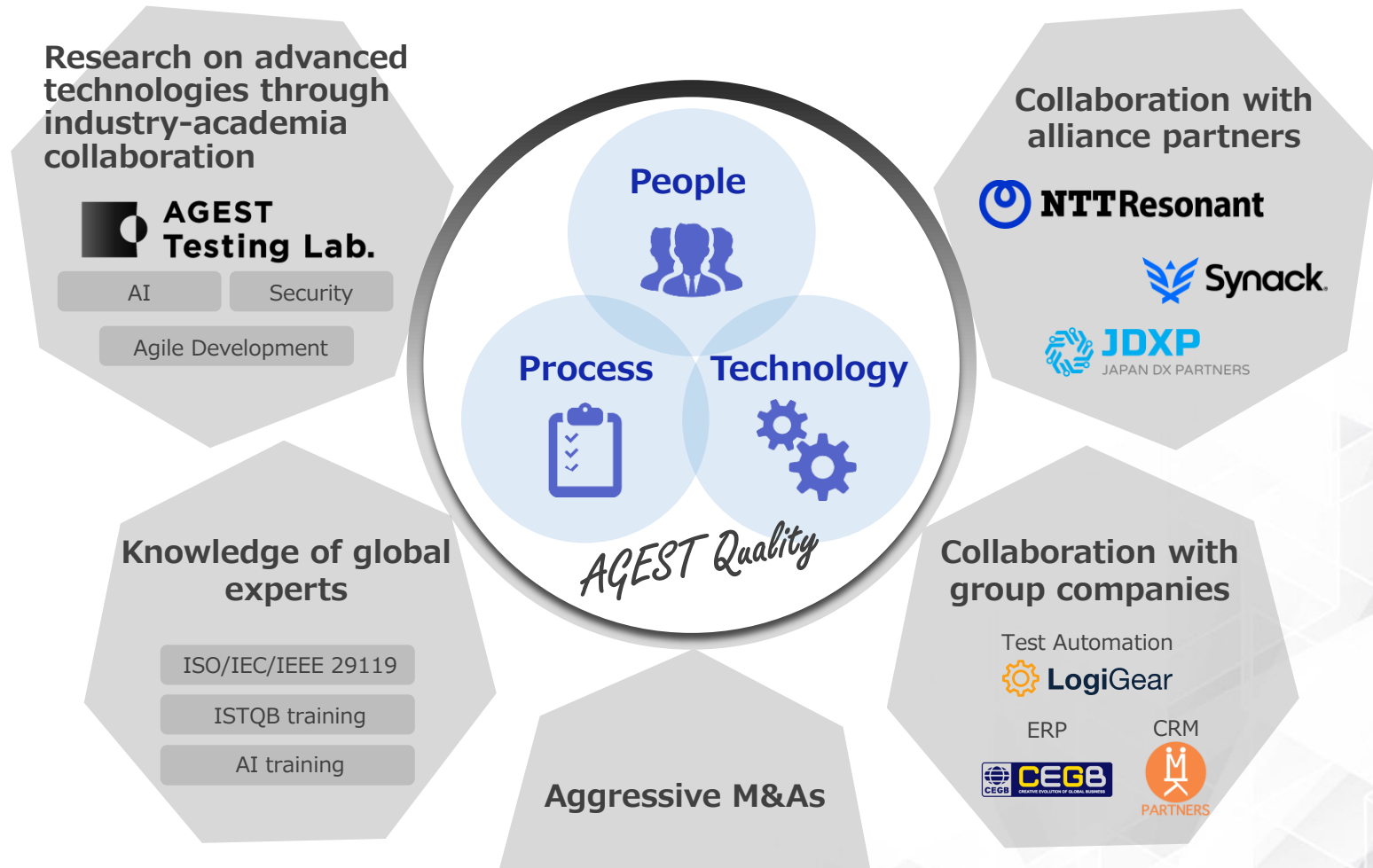
Focus on the strategic investment in "Shift Left" QA solution, with strong demand from clients including advanced IT companies.  
 Provide our unique "QA for development" services to the market.



### "QA for development" Services

- Mutation testing
- Technical review
- Performance tuning
- Code of Coding
- Code analysis
- Risk analysis
- CI/CD
- Refactoring
- TDD support

Further accelerate the strengthening of PP&T (people, processes, and technologies) launched in FY2022, to provide our unique "QA for development" service series.



Accelerate the increase in "Next-generation QA engineers," core engineers to provide "QA for development."

## Next-generation QA engineers

The highest-class QA engineer with deep knowledge of both software development and software testing to contribute to support the quality improvement for all from development to post-release.

FY2022 (actual) **24 People** » FY2028 (Target) **500 People**

\* Including foreign subsidiaries

### Point1

Establish an unprecedented and attractive "Next-generation QA engineers" as the next job career for development engineers by utilizing the AGEST brand

- Appeal the career to support DX and Agile development with leading-edge quality technology.
- Support experienced engineers to challenge new QA careers.
- Strengthen recruitment with improving brand name of AGEST and unique know-how including checking processes.



### Point2

AGEST's support system for changing from one's career from a development engineer to a Next-generation QA engineer



- AGEST academy, an internal educational institution, provides a wide range of opportunities to learn the QA fundamentals and leading-edge QA knowledge.
- Fully utilize the expertise of international software testing experts to develop and support engineers.
- Develop in-house knowledge sharing system and mutual learning cultures, and provide OJT opportunities and regular workshops such as LT (Lightning Talk).

**Aiming for M&As in the range of several billion yen to 10 billion yen over next coming years, targeting companies with leading-edge quality technologies or with talented engineers.**

## M&A Strategy

1. **Strict ROIC standards** to maintain higher investment efficiency and profitability  

$$*ROIC = \frac{EBITDA \times (1 - \text{effective tax rate})}{(\text{interest-bearing debt} + \text{shareholders' equity})}$$
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
- To strengthen technical capabilities
  - ERP-related service providers in Japan
  - Company with cutting-edge technologies

## Size of target companies

Net sales: ¥0.5 - 3.0 bn  
 Number of engineers: 30 – 150 engineers  
 Acquisition price: Max. ¥3.0 bn

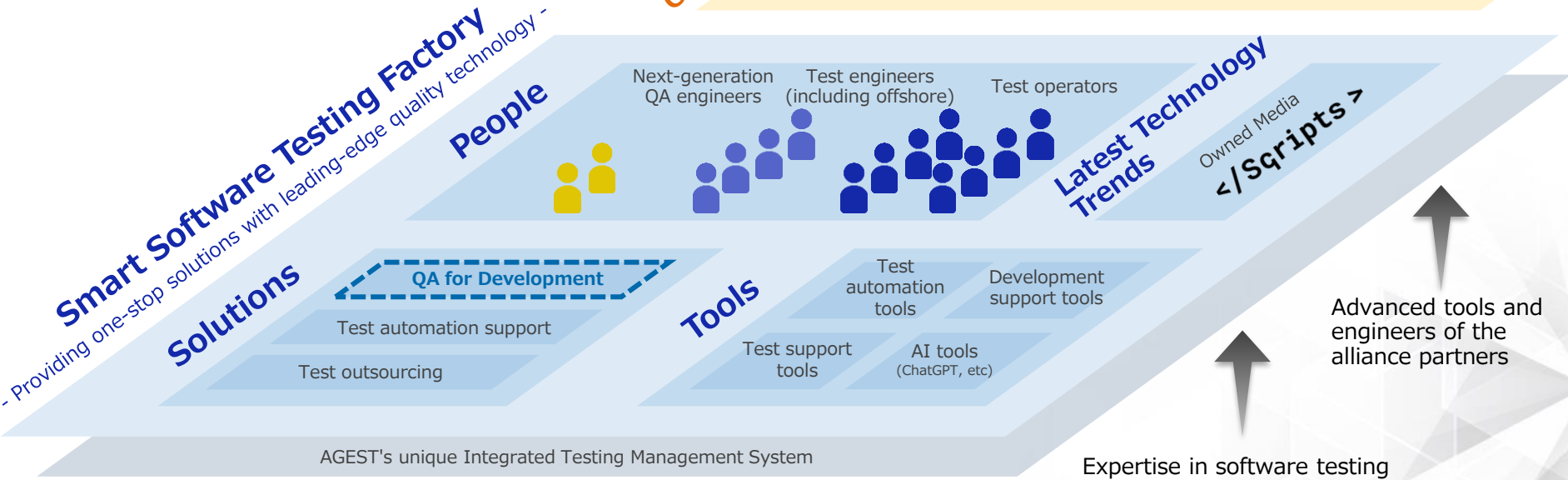
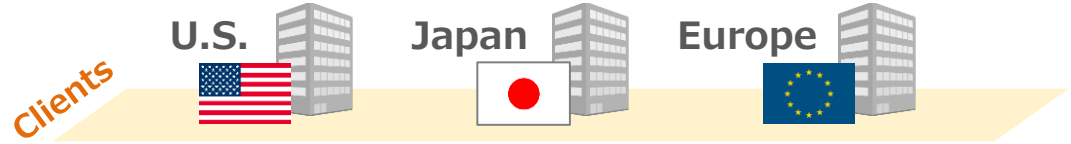
## Number of projects

Around 2-3 projects per year as a plan

## M&A initiatives

- Aim to acquire companies with better synergies by strengthening AGEST’s brand name.
- Consider M&As not only in Japan but also in the foreign markets.
- Develop the organizational capability for ¥10 bn investment in human resources, technologies, and M&As

To develop "Smart Software Testing Factory (SSTF)," aiming to become the leading QA solution provider in the global market with the leading-edge quality technology.



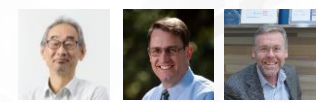
Initiatives for new technologies led by CTO

R&D center for updating advanced technologies

Educational institution from the QA fundamentals to leading-edge QA knowledge

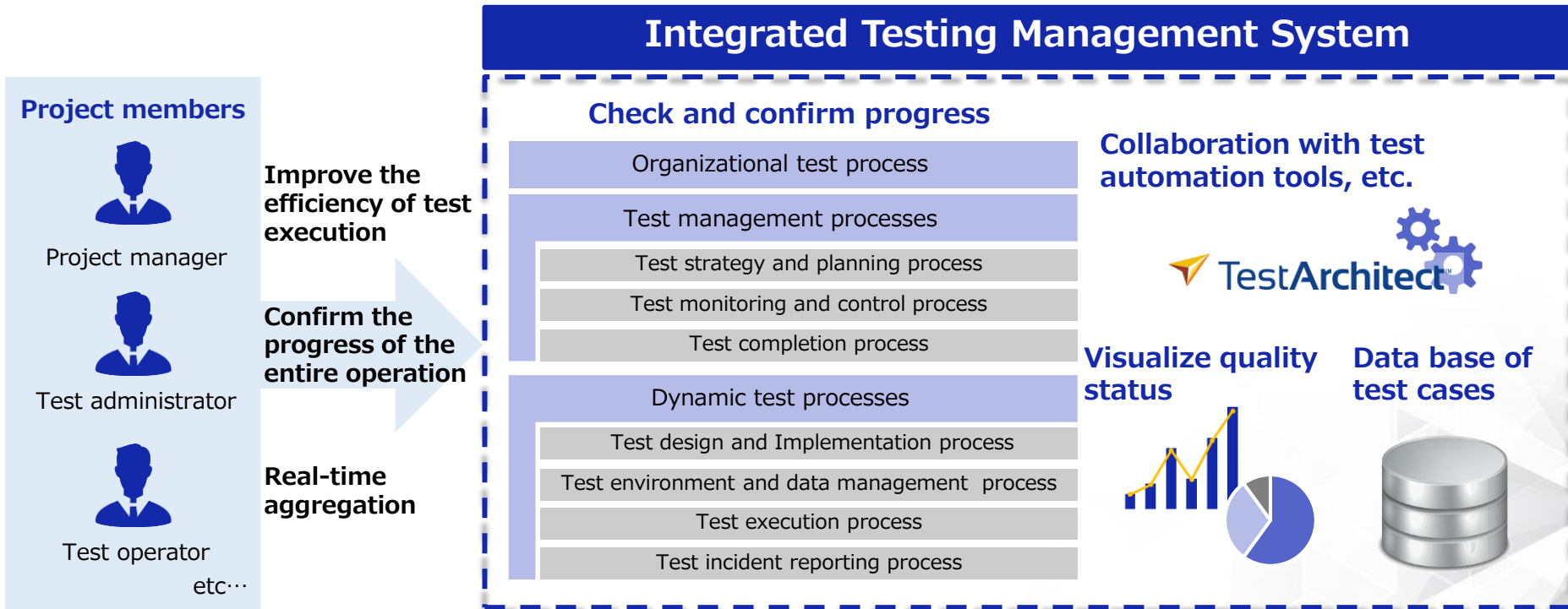


Expertise in software testing worldwide



Advanced tools and engineers of the alliance partners

## Developing unique Integrated Testing Management System as the core system of Smart Software Testing Factory (SSTF).



### Points

- Integrated management of test results in conjunction with third party's test execution tools
- Visualize quality and progress in real time
- In accordance with ISO/IEC/IEEE 29119 standard for software testing
- Planning to work with I18N (internationalization)



## Sales Target

New AGEST Group

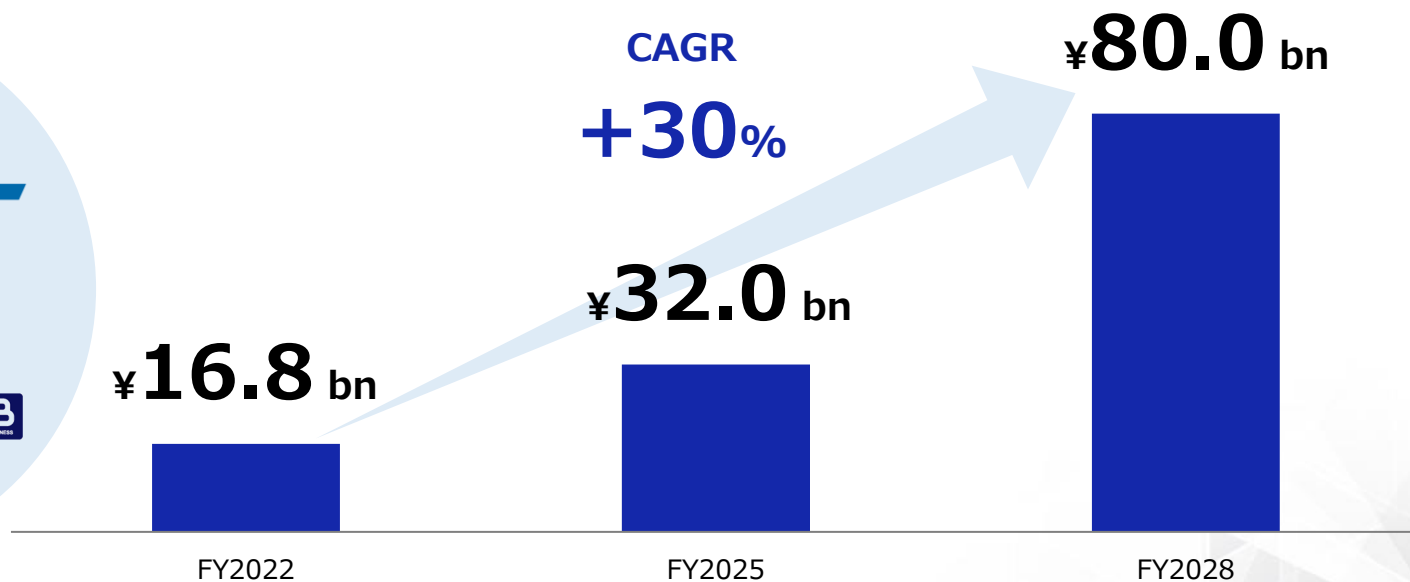
# AGEST

 LogiGear

 identity

 CEGB  
CREATIVE EVOLUTION OF GLOBAL BUSINESS

...etc.



## KPIs of QA solution div.

Number of engineers



**1,009** People

**1,600** People

**3,000** People

Number of clients with orders



**808** companies

**1,500** companies

**3,100** companies

Annual sales per client



¥**13** mn

¥**16** mn

¥**19** mn

# Entertainment Business Growth Strategy

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\* Reprinted from “ Presentation Material for the Fiscal Year Ended March 31, 2023 ” disclosed on May 11, 2023.

To be the “Global Quality Partner in the Entertainment Industry”,  
evolving from “Domestic Game Debugging Company”.

Domestic debugging

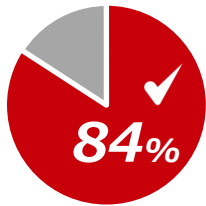
Global business

New business

Management resources cultivated in the game debugging business

Soft Power

Market leader in domestic debugging service\*



High quality service

- Unique Quality Control Method “DHQ”
- Management and analysis tools etc...



Hard Power

Abundant test terminals



Smartdivices  
**7,169**



Game consoles  
**3,019**

Over 20 locations



\*As of March 31,2023

People Power

Diverse professionals from around the world, passionate about games and entertainment contents

Abundant pool of testers

Approx. **8,000**  
registered testers



Diverse human resources

Nationality  
Over **30** countries

Native staff  
Over **300** people



Make people smiling in the world  
through contributing the entertainment industry

**Aiming to make the regrowth of the Entertainment Business by "Evolving and Challenging" using the core competencies and management resources ever developed in debugging service.**

## **1 Improve quality of services (Evolve added value and productivity)**

- Improve and optimize clients' QCD through "DHQ" (Our unique quality-control method)
- Strengthen support service for product planning/development from the user's view
- Stabilize service quality by strengthening programs for hiring and training testers

## **2 Expand services (Evolve solution capabilities)**

- Expand global network (Southeast Asia, North America, and Europe)
- Strengthen and expand solutions (Localization, customer support, marketing, etc.)
- Execute aggressive M&As and alliances

## **3 Challenge new business (Responsiveness to change)**

- Respond to web3.0(NFT), Metaverse, new digital contents and services
- Support for non-game apps and web services
- Develop new services incorporating AI(ChatGPT, etc.) and other new technology

## Market

- Outsourced QA services for game software
- Increase in the process of QA by expansion of total development size of game software
- Mature market with limited new entrants

## Services

- Debugging of console and mobile game software
- Debugging of hardware for amusement devices such as arcade games and slot
- Support for development and planning, such as game review service

## Our Position

- Leading market share in the domestic debugging
- Continuous and strong relationships with most of major game companies
- High competitiveness with abundant human resources and equipment, well prepared security systems, and rich service expertise

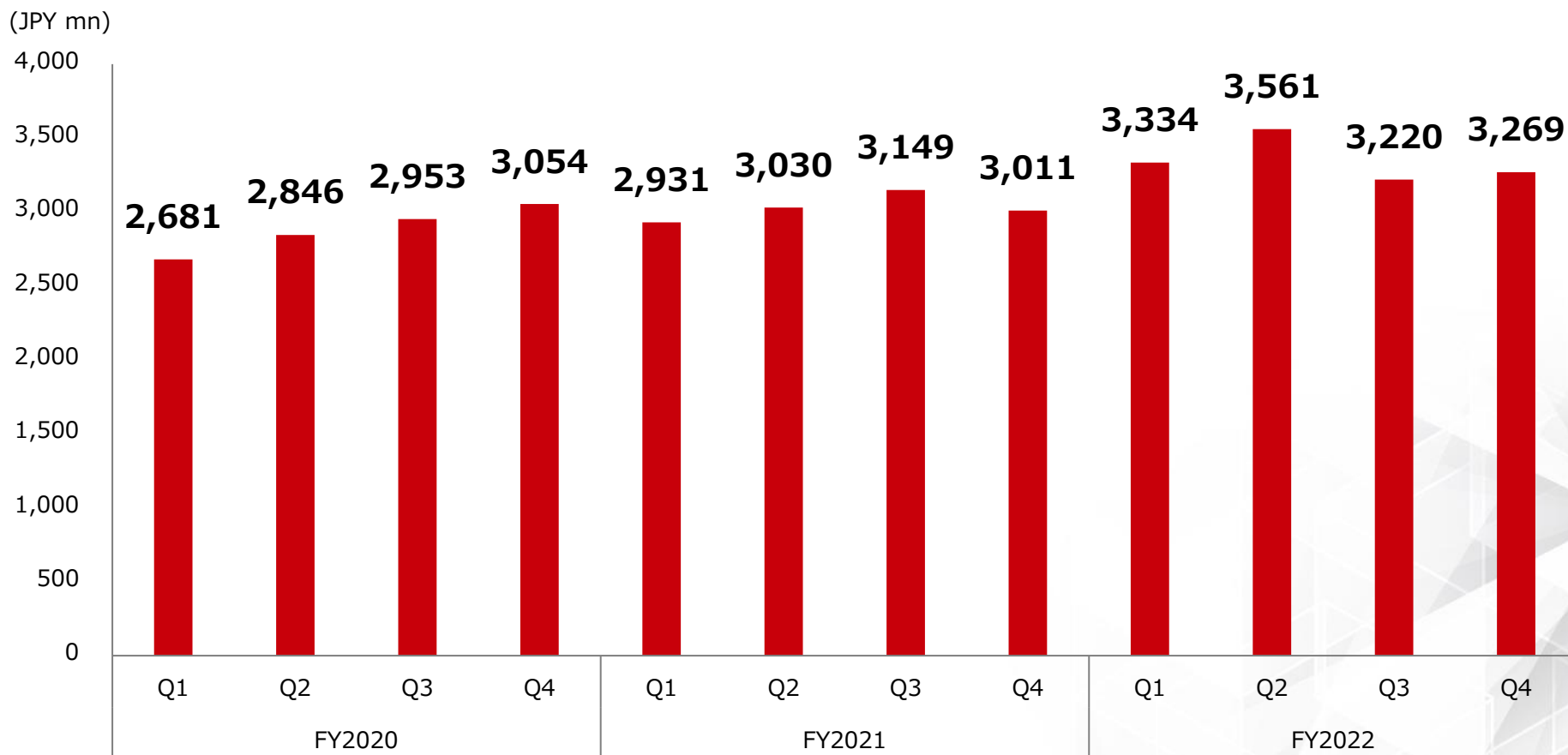
## Growth Strategy

- Improve quality of services by “DHQ” (Improve added value)
- Develop infrastructures including new operation bases and tools (Stabilize service quality and improve productivity)
- Strengthen acquisition and training capabilities for human resources (Aiming to have 10,000 testers as a system)

## In-house KPI

- Involvement rate for newly launching game titles
- Involvement rate with multiple services by each client
- Number of testers

Keep stable growth as our founding business



Improve the involvement ratio in both console and mobile games

## Involvement ratio among top 100 new console game titles

\* Only titles developed in Japan



## Involvement ratio among top 200 new mobile game titles

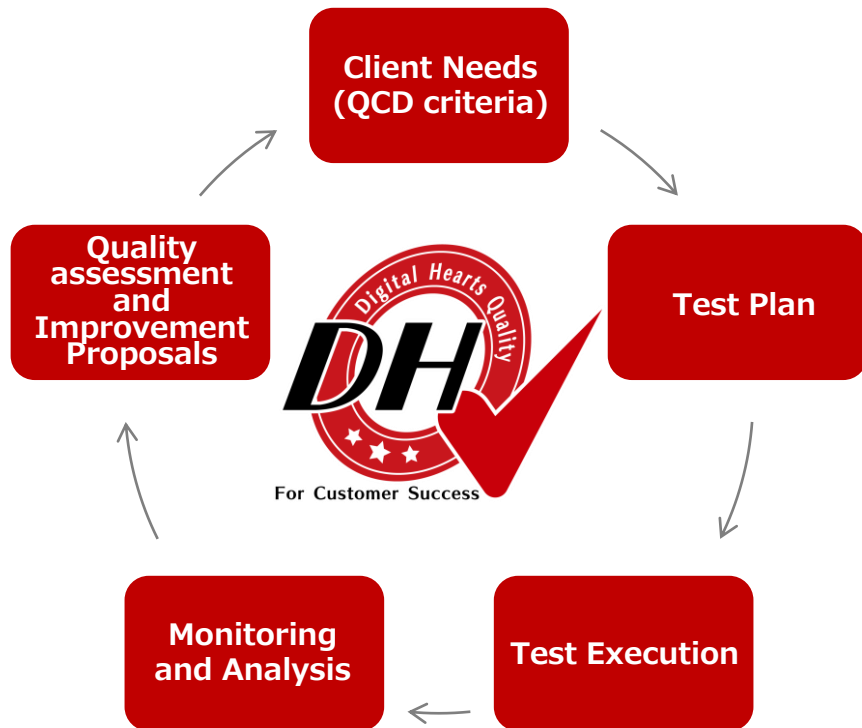
\* Only titles developed in Japan



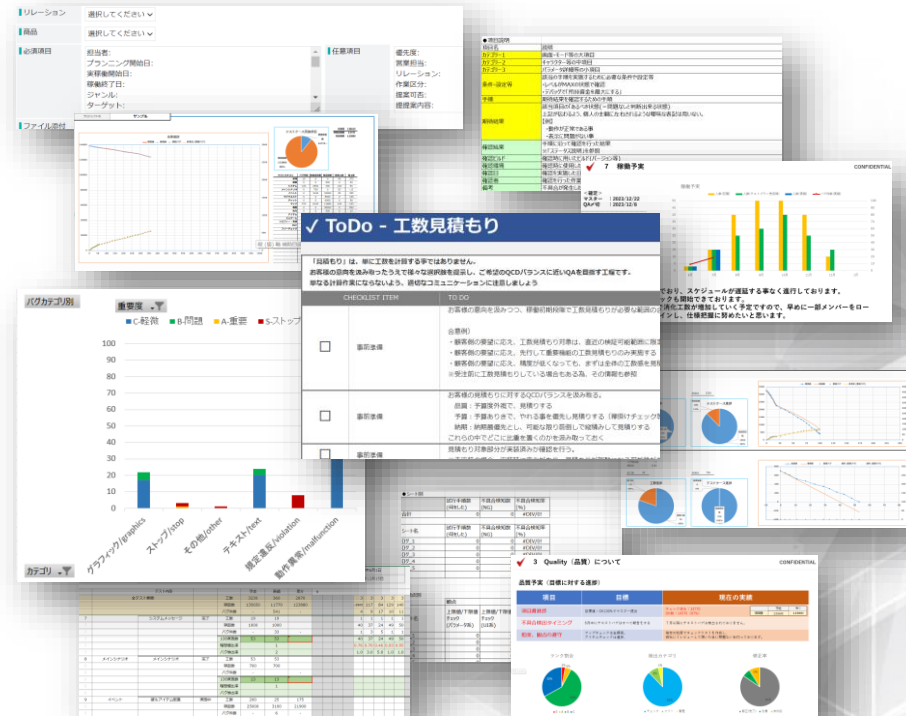
## Initiative of Digital Hearts Quality (DHQ)

DHQ is our unique quality control method to discover defects efficiently and effectively and to achieve the optimal QCD for client companies in QA (quality assurance) service for software development. The company provides client with optimal debugging service by reviewing every process from scratch and improving it, including the required preparation, execution of testing, analytical methods, staffing training, and technological introductions.

### DHQ framework



### DHQ tools



**ToDo - 工数見積もり**

【目的】は、単に工数を算出するものではありません。実際の作業量と比べて、適切なQCDレベルに合わせたQAを算出する工程です。算出された作業量に基づいて、適切なコミュニケーションに役立ちます。

CHECKLIST ITEM

- 確認済
- 確認済
- 確認済

3 Quality (品質) について

項目	目標	現在の状況
品質管理	品質管理	品質管理
品質管理	品質管理	品質管理
品質管理	品質管理	品質管理



## Market

- Expansion of needs to support overseas expansion by domestic and overseas game companies
- Rapid change and globalization, such as worldwide simultaneous launch of large-scale titles
- Only few companies with a capability to support expansion into all area like Asia, the U.S. and Europe

## Services

- Translation/LQA, localization support
- Marketing support suited to the practices in the new region
- Customer support, audio recording

## Our Position

- Large potentiality with our current small share compared to the domestic debugging
- Opportunity to utilize strong client ties in debugging service
- Large number of specialists in each region and language

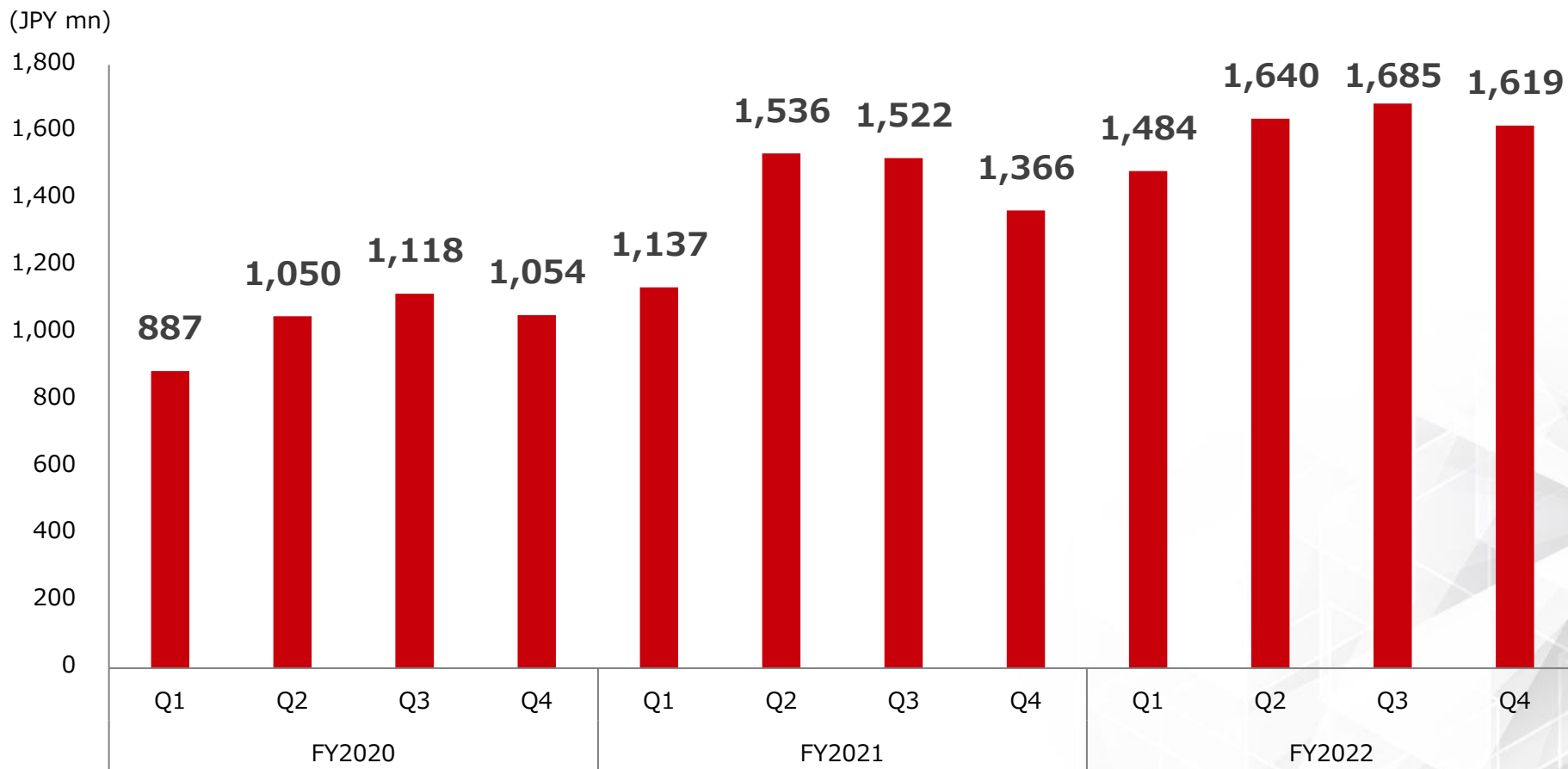
## Growth Strategy

- Expand global network (Southeast Asia, North America, and Europe)
- Strengthen solution (Localization, customer support, and marketing support)
- Acquire new service functions and overseas bases through aggressive M&As

## In-house KPI

- Cross-selling rate
- Global sales ratio
- Number of global human resources

Rapid growth with expansion of existing businesses and the effects of M&As.





## Cross-selling of our services other than the debugging

Strengthening cross-selling by utilizing our strong ties with game companies through our domestic debugging services. Expanding the number of languages compatible with our localization services.

### Cross-selling rate to our top-10 clients

(FY2022 results)

Category	Cross-selling rate	Average number of service categories per client (*)
Company-wide	80%	2.5
Console game clients 	100%	2.7
Mobile game clients 	80%	2.0

\* Average number of service categories per client indicates the average out of 4 different category types such as debugging and localization.

### Number of language pairs compatible with localization services

(FY2022 results)

<b>From</b> Japanese language 	<b>To</b> Others 	14
<b>From</b> Non-Japanese languages 	<b>To</b> Other 	25

## Market

- Game and app markets using Metaverse, Web3.0 (NFT), etc.
- Diversified services of digital contents such as videos, music, and manga(comics)
- Expectations for rapid expansion of the market

## Services

- Debugging and reviewing services for new-type games and apps
- Translation, localization, customer support, and marketing for digital content
- Collaborated development and operation of new digital content and platforms

## Our Position

- Business results for Metaverse, NFT-game and other debugging needs
- Opportunity to utilize our experiences and human resources for game software business to the new digital content services
- Strong relationships with game makers and digital content companies

## Growth Strategy

- Improve quality of services by “DHQ” (Improve added value)
- Collaborate new businesses with game/non-game apps clients and other partner companies
- Improve service quality and speed by aggressive use of AI(CatGPT, etc.) and other IT technology

## In-house KPI

- Sales ratio of new businesses
- Number of new businesses projects

## Projects related to the Metaverse and Web3.0

For new type games utilizing Metaverse and blockchain technologies, we have recently seen an increase in demand for services, such as software development support, QA (quality assurance), and customer support services. We aim to contribute game users to enjoy virtual spaces and NFT games with enough security and comfort, by leveraging our expertise and know-how from past rich experiences of game development and debugging.

### Projects in the Creative division

<b>Metaverse</b>	<b>3 projects</b>	We provide wide range of services, such as concept art, character design, 3D modeling, and avatar tool development.
<b>Web3.0</b>	<b>1 project</b>	It is an outsourced development of front-end software such as UI and engineering work.

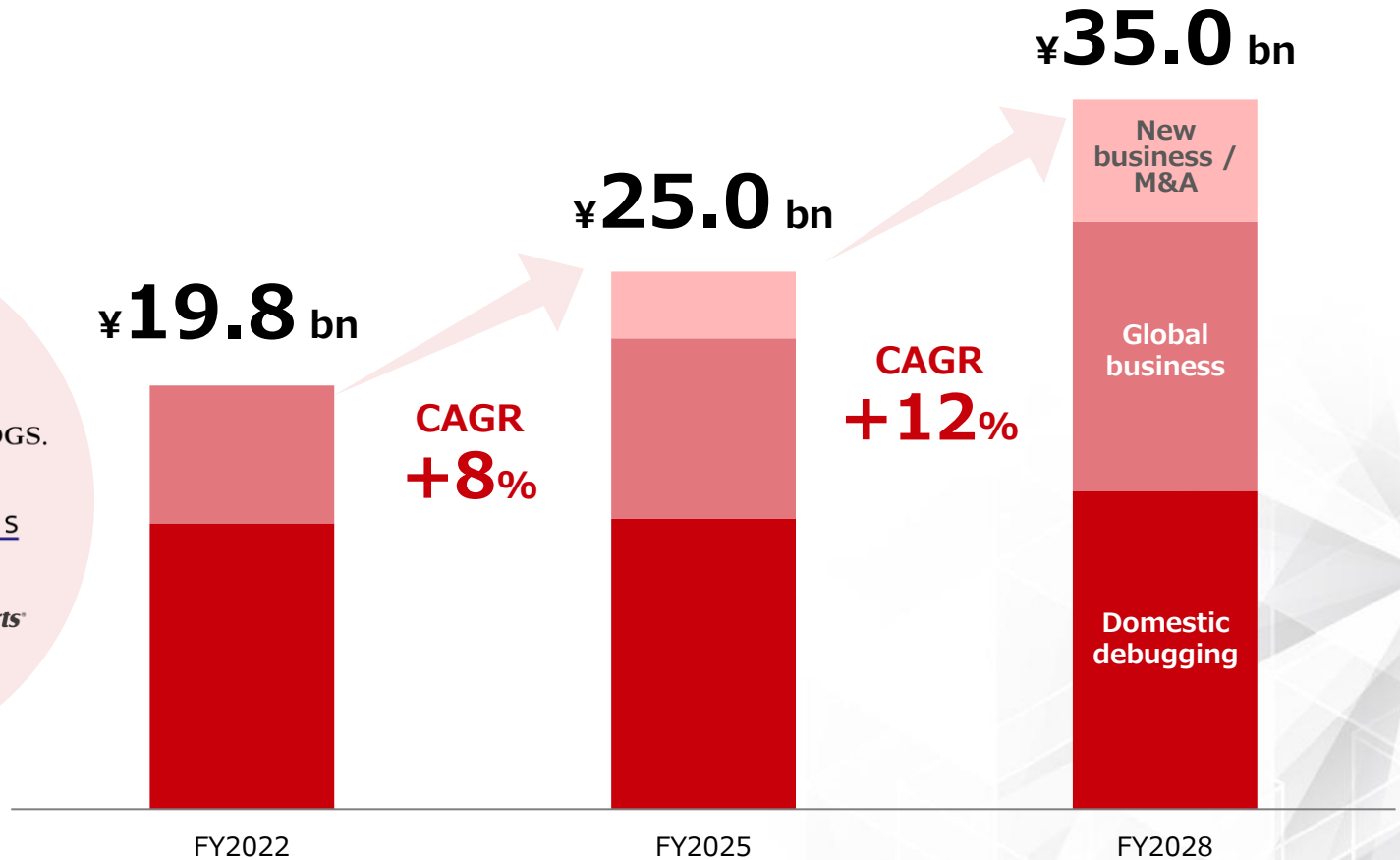
### QA (quality assurance) and customer support projects

<b>Metaverse</b>	<b>7 projects</b>	The projects are for various kinds of Metaverse developed by large game makers and digital contents companies. We provide QA services from a user's view, to different stages of software development including the post-launch period.
<b>Web3.0</b>	<b>6 projects</b>	We provide QA services, customer support services, and identity verification services for client companies who develop games using blockchain technologies and those who provide NFT platforms.

## Sales Targets

New DH Group

-  DIGITAL HEARTS HLDGS.
-  DIGITAL HEARTS [aetas](#)
-  DIGITAL HEARTS CROSS MARKETING & SOLUTIONS
-  FLAMEHearts
- ...etc.



# Appendix

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One of the few  
testing companies in Japan



Ratio of  
outside directors  
**50.0%**



Employment creation  
for more than  
**8,000** testers



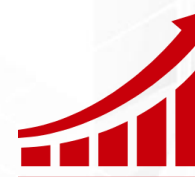
Business that supports  
**Digital security**



Foreign staff  
members of more  
than  
**30** nationalities



High sales growth of  
**CAGR 16%** (\*)





Our mission

## SAVE the DIGITAL WORLD

Market environment

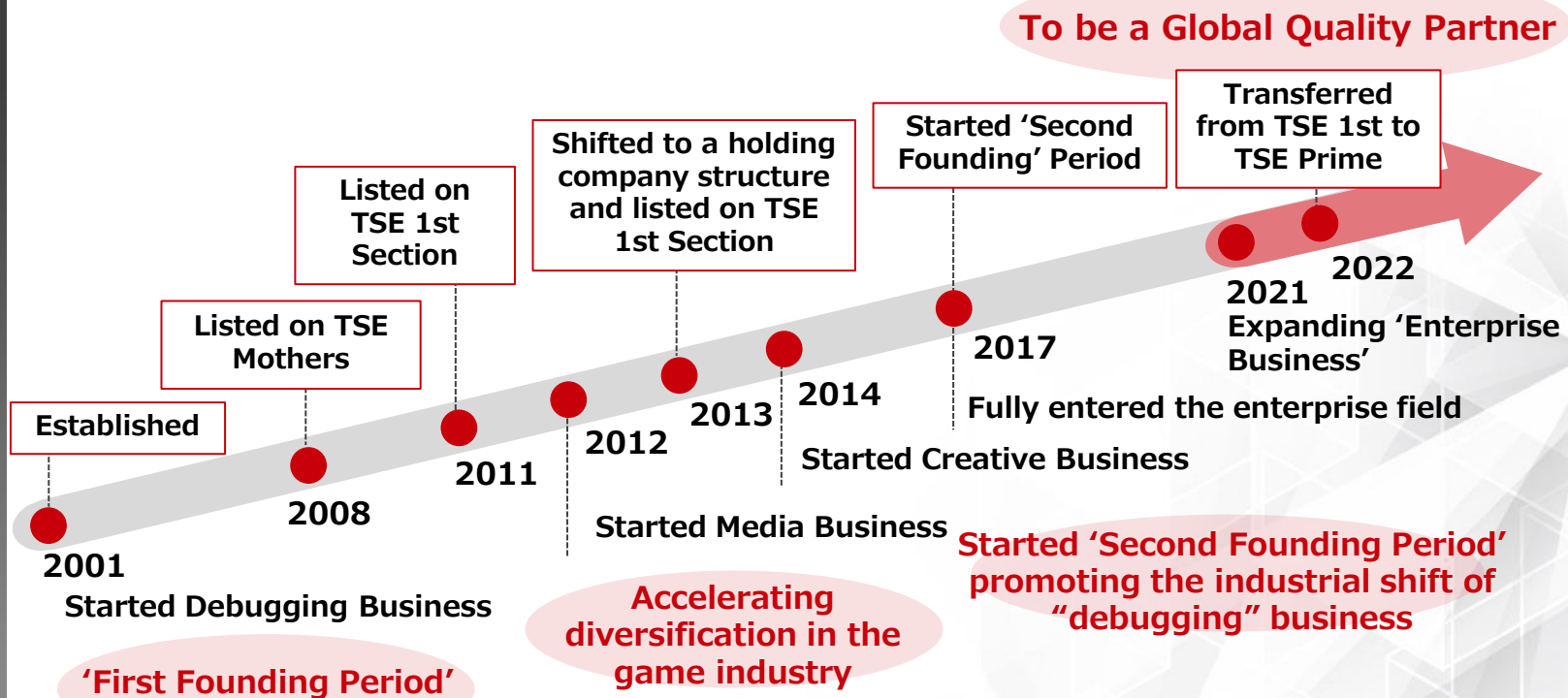
Growth of console game market

Growth of mobile game market

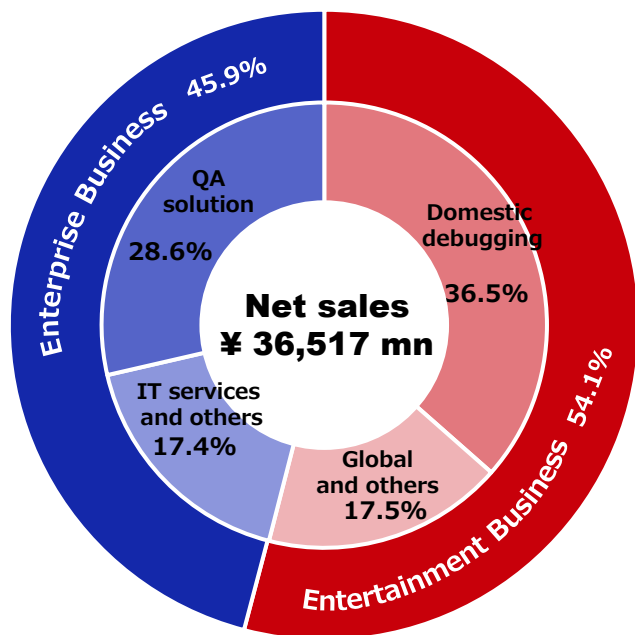
Expansion of IoT

Expansion of DX

History



## Our core business: QA(Quality Assurance) and Debugging



### Sales breakdown by segment (FY2022)

\*Segments include inter-company sales and/or transfers.

Enterprise Business	QA solution	28.6%	<ul style="list-style-type: none"> <li>➤ Testing for business systems incl. online</li> <li>➤ Support for test automation</li> <li>➤ Security test</li> <li>➤ Introduction of ERP and CRM</li> <li>➤ System development</li> </ul>
	IT services and others	17.4%	<ul style="list-style-type: none"> <li>➤ IT engineer platform service</li> <li>➤ Security monitoring</li> <li>➤ IT support</li> </ul>
Entertainment Business	Domestic debugging	36.5%	<ul style="list-style-type: none"> <li>➤ Debugging for console games, mobile games, etc.</li> </ul>
	Global and others	17.5%	<ul style="list-style-type: none"> <li>➤ Translation, LQA*, and localization for game software</li> <li>➤ Marketing support for game launching in overseas markets</li> <li>➤ Game development and CG development</li> <li>➤ Game information site "4Gamer.net"</li> <li>➤ Customer support</li> </ul>

✓ **DIGITAL HEARTS HLDGS.**  
(Holding Company)

(As of June 30, 2023)

## 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

### **identity Inc.**

IT freelance engineer platform service

### **CEGB Co., Ltd.**

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

### **GPC K.K**

SAP/ERP implementation support, System development, etc.

## Entertainment Business

### **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.

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

Game translation, Marketing support, etc.

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

Game translation

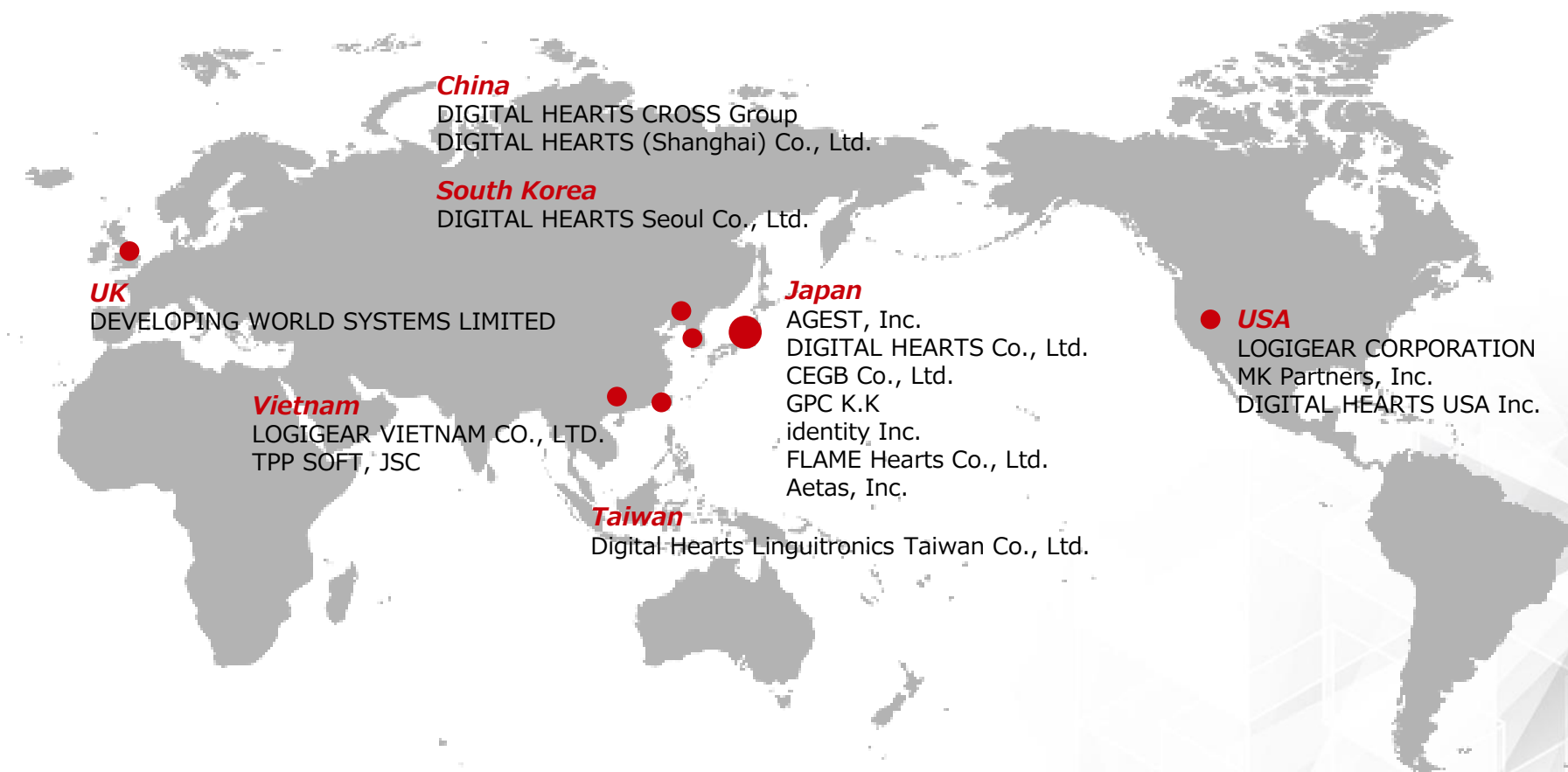
### **FLAME Hearts Co., Ltd.**

Game development and CG content development

### **Aetas, Inc.**

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

(As of June 30, 2023)



Establish PP&T as the Enterprise Business platform by bringing together experts from the frontline of the software testing industry.

## People



**Dr. Juichi Takahashi**

A pioneer in software testing in Japan. Holds a PhD in software testing and has published many works. Director and CTSO of AGESE, Inc., our subsidiary



**Mr. Rex Black**

Worldwide authority on software testing with many published works. Former president of the ISTQB.

## Process



**Mr. Yohei Takagi**

The first Japanese [ISO/IEC/IEEE 29119 Training Trainer]. Executive Officer of AGESE, Inc., our subsidiary.



**Dr. Stuart Reid**

The founder of the ISTQB. The convener of ISO Software Testing Working Group 26, which has published software testing standard, "ISO /IEC/IEEE 29119."

## Technology



**Dr. Yasuharu Nishi**  
**Lecturer, the University of Electro-Communications**

Researcher of AI products and President of NPO ASTER (Association of Software Test Engineering).



**Dr. Hironori Washizaki**  
**Professor, WASEDA University**

Researcher in agile development.



**Dr. Masahiko Kato**  
**Professor, University of Nagasaki**

Researcher in Security Testing.
















**Mr. Kazutaka Jokura**

A former CTO in DMM.com LLC. Worked on expanding and training the company's engineers for seven years. Our Chief Technology Officer.



**Mr. Hung Nguyen**

Worldwide authority on software testing. The co-author of the bible for test engineers. Founder of our subsidiary LOGIGEAR CORPORATION.

	Aims	Past M&As
Enterprise Business	Engineer acquisition	 Software testing engineers in Japan  Software development engineers in Vietnam  Highly skilled domestic freelance engineers
	Technological capabilities	 Test automation tools Offshore in Vietnam  Salesforce consulting  Test automation tools for Oracle software   SAP expertise
Entertainment Business	Services to complement localization	 Japan's largest game information website "4Gamer.net"  Game software development/CG content development
	Geographical expansion	 Game translation in South Korea  Game translation in Taiwan  Marketing and promotion support in China and Asian countries

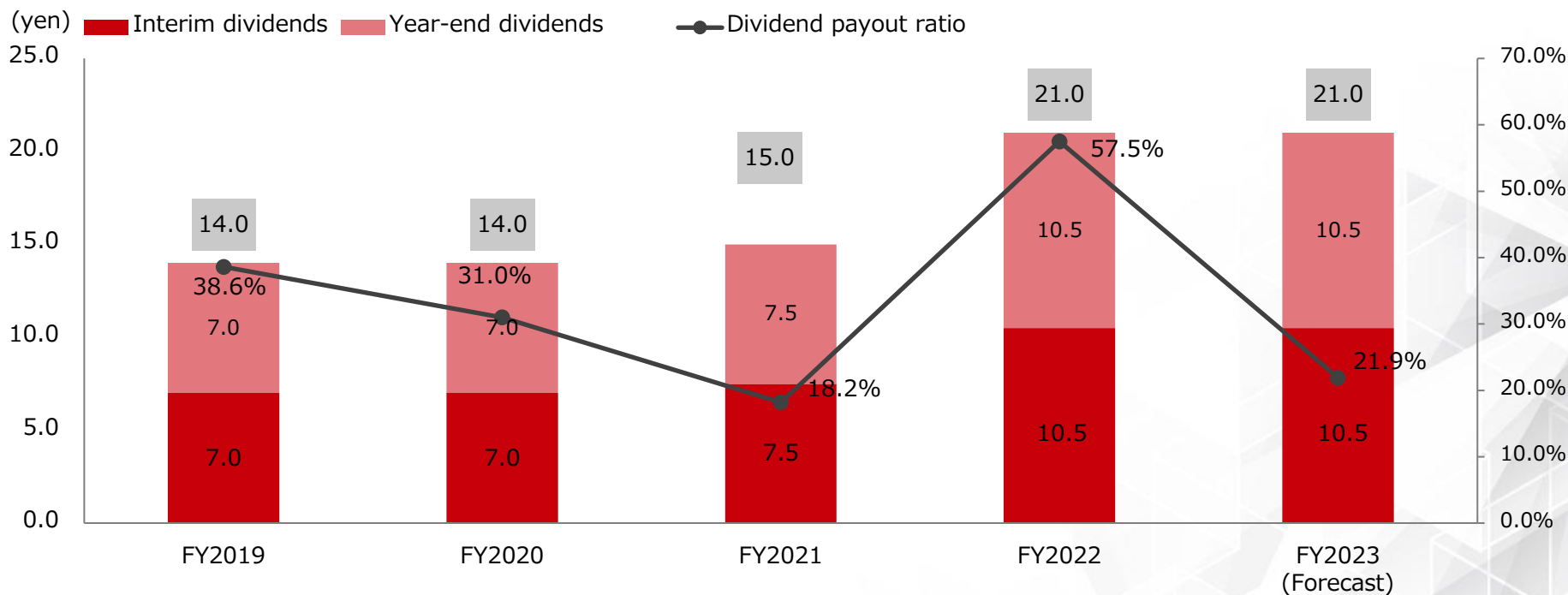
# Consolidated Financial Statement

(JPY mn)	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Net sales	15,444	17,353	19,254	21,138	22,669	29,178	36,517
Enterprise Business	1,952	1,892	3,302	5,022	7,021	11,491	16,840
Entertainment Business	13,544	15,568	15,951	16,115	15,647	17,687	19,815
Adjustments	-52	-108	-0	-	-	-	-138
Operating income	1,906	1,735	1,605	1,394	1,908	2,696	3,000
Enterprise Business	203	-14	-226	-67	188	645	639
Entertainment Business	2,453	2,966	3,086	2,964	3,077	3,668	4,214
Adjustments	-750	-1,215	-1,254	-1,503	-1,356	-1,616	-1,853
Operating income margin	12.3%	10.0%	8.3%	6.6%	8.4%	9.2%	8.2%
Enterprise Business	10.4%	-	-	-	2.7%	5.6%	3.8%
Entertainment Business	18.1%	19.1%	19.3%	18.4%	19.7%	20.7%	21.3%
Profit attributable to owners of parent	795	1,200	1,575	792	974	1,778	799
Total assets	7,651	8,575	9,832	10,637	14,338	17,610	19,581
Current assets	6,221	6,813	7,403	7,453	9,744	10,392	12,528
Cash and deposits	3,344	3,894	4,197	3,739	5,076	5,208	6,456
Noncurrent assets	1,430	1,761	2,428	3,183	4,593	7,217	7,052
Goodwill	201	150	481	1,027	2,467	4,588	3,468
Total liabilities	4,793	5,005	4,819	5,198	8,024	10,044	10,107
Interest-bearing liabilities	1,646	1,610	1,764	2,553	4,797	5,590	5,106
Total net assets	2,858	3,570	5,012	5,438	6,314	7,566	9,474
Shareholders' equity	2,632	3,369	4,791	4,922	5,691	6,991	8,806
Shareholders' equity ratio	34.4%	39.3%	48.7%	46.3%	39.7%	39.7%	45.0%
Net cash	1,698	2,283	2,433	1,186	278	-382	1,350
Debt Equity Ratio	0.6	0.5	0.4	0.5	0.8	0.8	0.6
Net cash provided by operating activities	1,825	1,436	889	1,086	1,416	3,077	2,850
Net cash used in investing activities	-610	-618	62	-1,018	-1,813	-2,537	-1,903
Net cash provided by (used in) financing activities	-69	-250	-693	-515	1,730	-546	141
ROE	29.2%	40.0%	38.6%	16.3%	18.4%	28.0%	10.1%
Dividend Payout Ratio	32.3%	20.9%	18.0%	38.6%	31.0%	18.2%	57.5%

## 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

### 1. 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

### 2. Obsolescence of existing services by technological innovation

- Focusing on the application of the latest technologies, including a test automation project
- The development of new services to improve added value

### 3. 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
- Strategically acquiring human resources through our overseas offices

### 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

- Internal support system for obtaining software test certification of "JSTQB".
- Provide world-class test engineer training program in "AGEST Academy" for employees.
- Provide educational opportunities through collaborations with METI, local governments including Osaka and Gunma prefecture, correspondence high schools, NPOs, and career transition support offices.



### 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.
- Provide employment opportunities through the operation of the Tokyo Metropolis-Certified Social Firm.
- Employ foreign nationalities of more than 30 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

- Established "AGEST Testing Lab. " to promote research on new software testing methods to support the evolving software society through industry-academic collaboration.
- Launched factory cyber security solutions to Japan market collaboratively with four companies including Siemens K.K.



### Communities

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

- Create jobs throughout nationwide test centers (Lab.) and promote teleworking/work-from-home style by Remote Debugging service.
- Contribute to cyber security measures for local communities and SMEs by acquiring a certification from Information-technology Promotion Agency, Japan (IPA).



Terms	Definition
Enterprise Business	Our service-based business segment for non-gaming enterprise software, which provides software testing and cyber security. It is the main driver of growth in our corporate group due to the massive digital transformation currently sweeping through society.
Entertainment Business	Our service-based business segment for the game and entertainment industries, which provides debugging and localization. It is our “cash cow”, primary stream of revenue in Japan and continues to see extensive growth in the global market.
System Testing	This is a term used in our Enterprise Business and the same meaning of software testing. System testing comprises detection of system bugs for enterprise resource planning (ERP) software, websites, business apps, etc.
Debugging	This is a term used in our Entertainment Business. We run tests and find software bugs from the perspective of the user. Debugging generally refers to the identification and correction of errors, but we specialize in identifying and reporting them. Mobile games comprise two-thirds of our debugging requests, with console games making up the other third.
QA	An abbreviation for Quality Assurance. It includes both of software testing and game debugging.
LQA	An abbreviation for Linguistic Quality Assurance. LQA focuses on finding and fixing in-game linguistic errors that occur when translating from a foreign language.
Test Engineer	Engineers who conduct software testing. It has not been popular yet in Japan as a job career and Japan currently has a shortage of test engineers, we often recruit IT engineers and provide them the necessary training.
Tester	Staff members who carry out debugging. Most of our testers are registered part-time workers. Some are trained to work as test engineers or cybersecurity specialists.
Console Games	A game played using dedicated hardware such as the Nintendo Switch or PlayStation.
Qualitist	Our uniquely coined term for specialists who contribute to the quality of software. It refers to all IT specialists such as test engineers and cybersecurity specialists in our Enterprise Business, as well as testers, translators, 2D/3D graphic designers, etc. that work in our Entertainment Business.



DIGITAL HEARTS HLDGS.

<Contact>

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