

Presentation Material

for the First Half of the Fiscal Year Ending March 31, 2019

November 12, 2018

Tokyo Stock Exchange First Section : Code 3676

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

Business Results for the First Half of FY2018

(The six months ended September 30, 2018)

Results for the First Half of FY2018



Record-high
in net sales of
the First Half

Net sales

9,333 million yen
(YoY 113.0%)

Rapid sales growth of
Enterprise Business

Sales of Enterprise Business

1H FY2018

Approx. **2 times** (YoY)

Making active
investments in
human capital

Operating income

777 million yen
(YoY 77.5%)

Training, Recruiting, and M&A
to strengthen human capital

Number of Expert Engineers

Q2 FY2017

Q2 FY2018

69



161

Roughly on target of
the Six months
ended Sep. 2018

Achievement rate for
full year forecast

Net sales

44.4%

Operating income

35.3%

No Change from initial forecast
by recovering of net sales and
profit in 2H

Full year forecast of FY2018

Net sales

Operating income

21.0

Bln yen

2.2

Bln yen

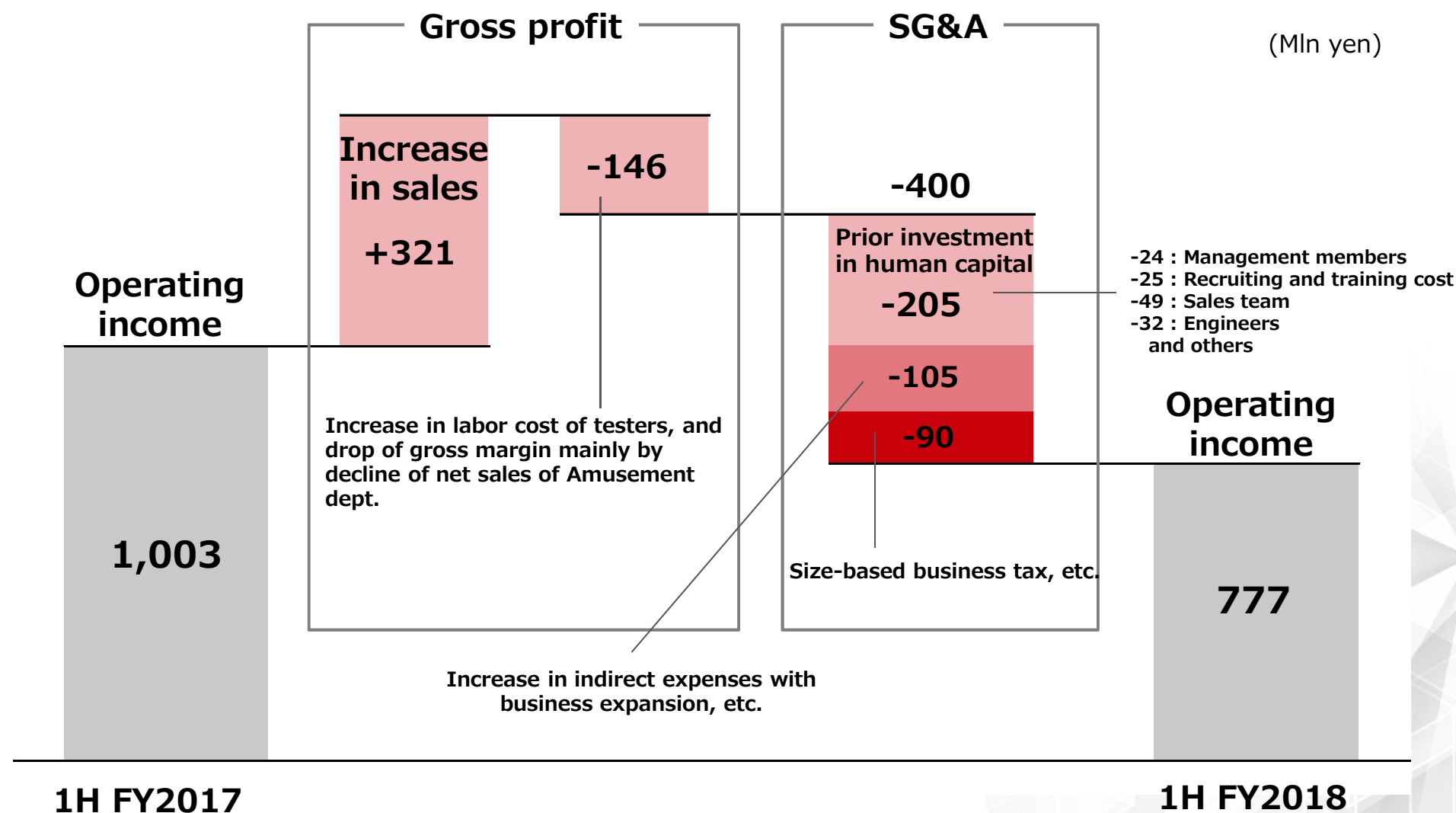
Summary of Business Results for the Six Months Ended September 30, 2018



- Net sales increasing in both Entertainment and Enterprise business
- Increasing Cost of sales and SG&A by **active prior investment** mainly in human capital

(Mln Yen)	1H FY2017	1H FY2018	YoY Change	
Net sales	8,263	9,333	1,070	113.0%
Cost of sales	5,784	6,680	896	115.5%
Cost of sales (%)	70.0%	71.6%	+1.6 Points	
Gross profit	2,478	2,652	174	107.0%
SG&A	1,475	1,875	400	127.1%
Operating income	1,003	777	-225	77.5%
Operating income margin	12.1%	8.3%	-3.8 Points	
Ordinary income	1,008	754	-254	74.8%
Profit attributable to owners of parent	674	508	-165	75.4%

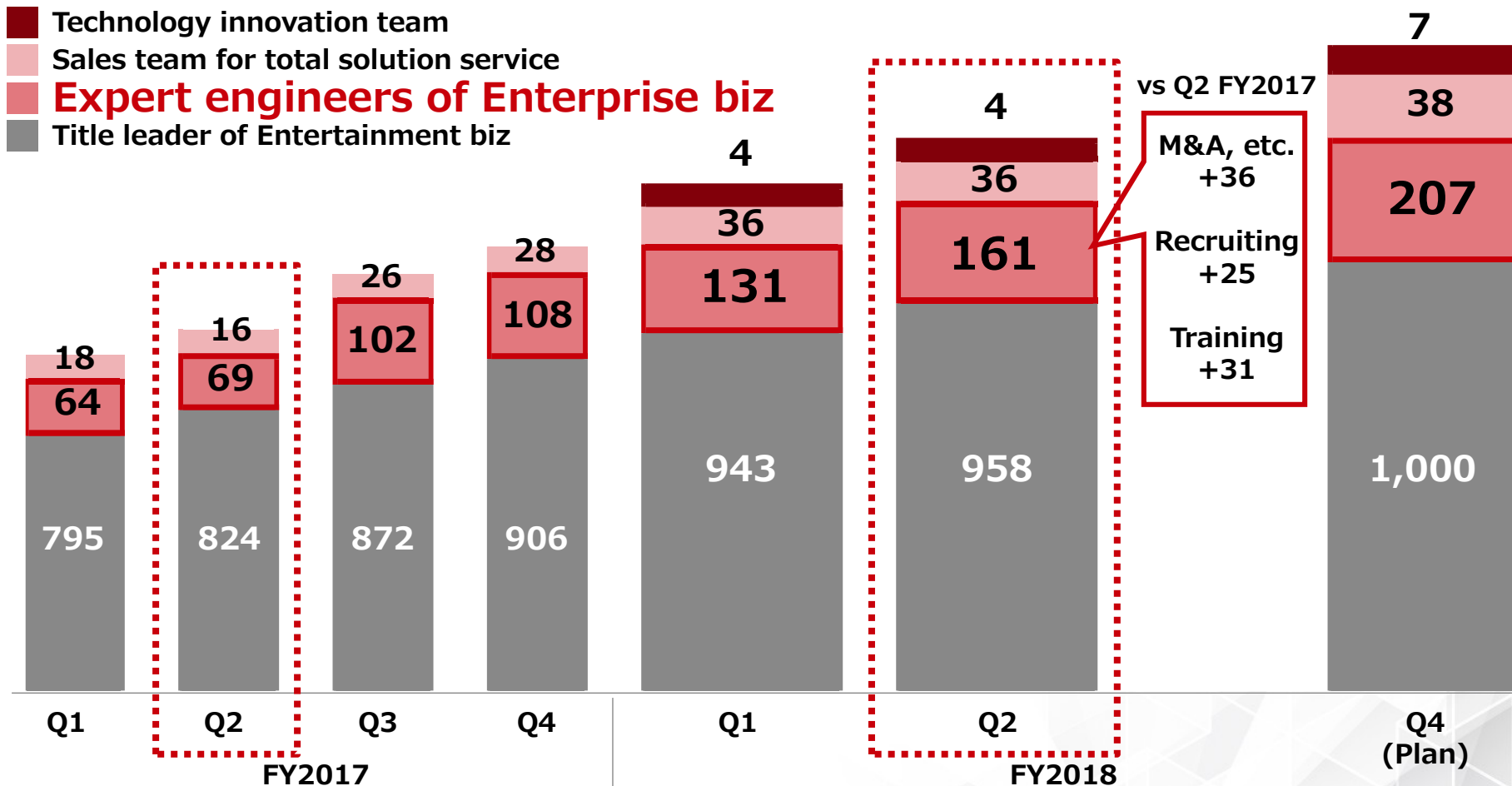
Analysis of Changes in Operating income



Number of Expert engineers **2.3 times** (YoY)

[Number of expert employees]

- Technology innovation team
- Sales team for total solution service
- Expert engineers of Enterprise biz**
- Title leader of Entertainment biz

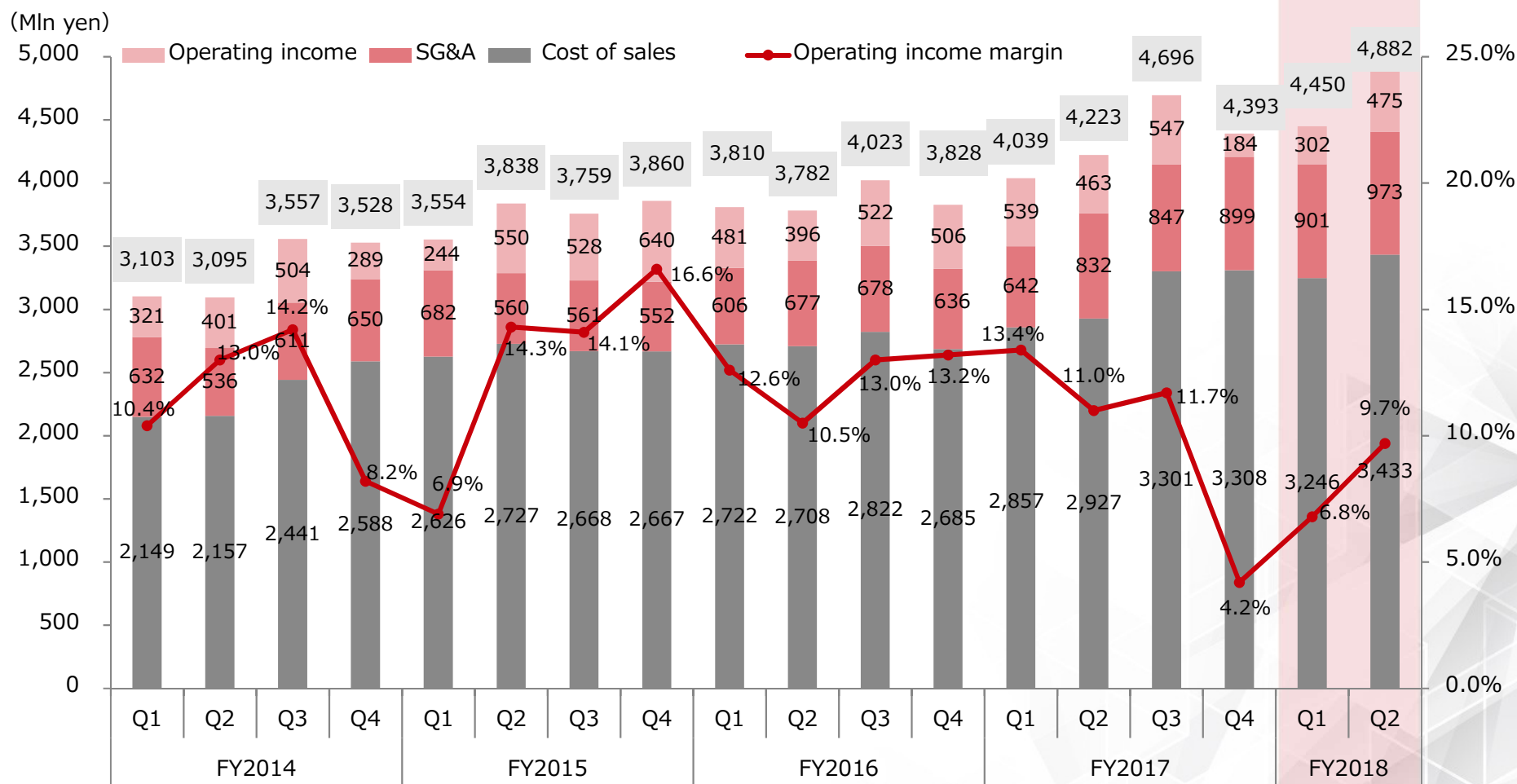


Quarterly sales and operating income



Operating income margin recovering by increasing of Debugging div. sales

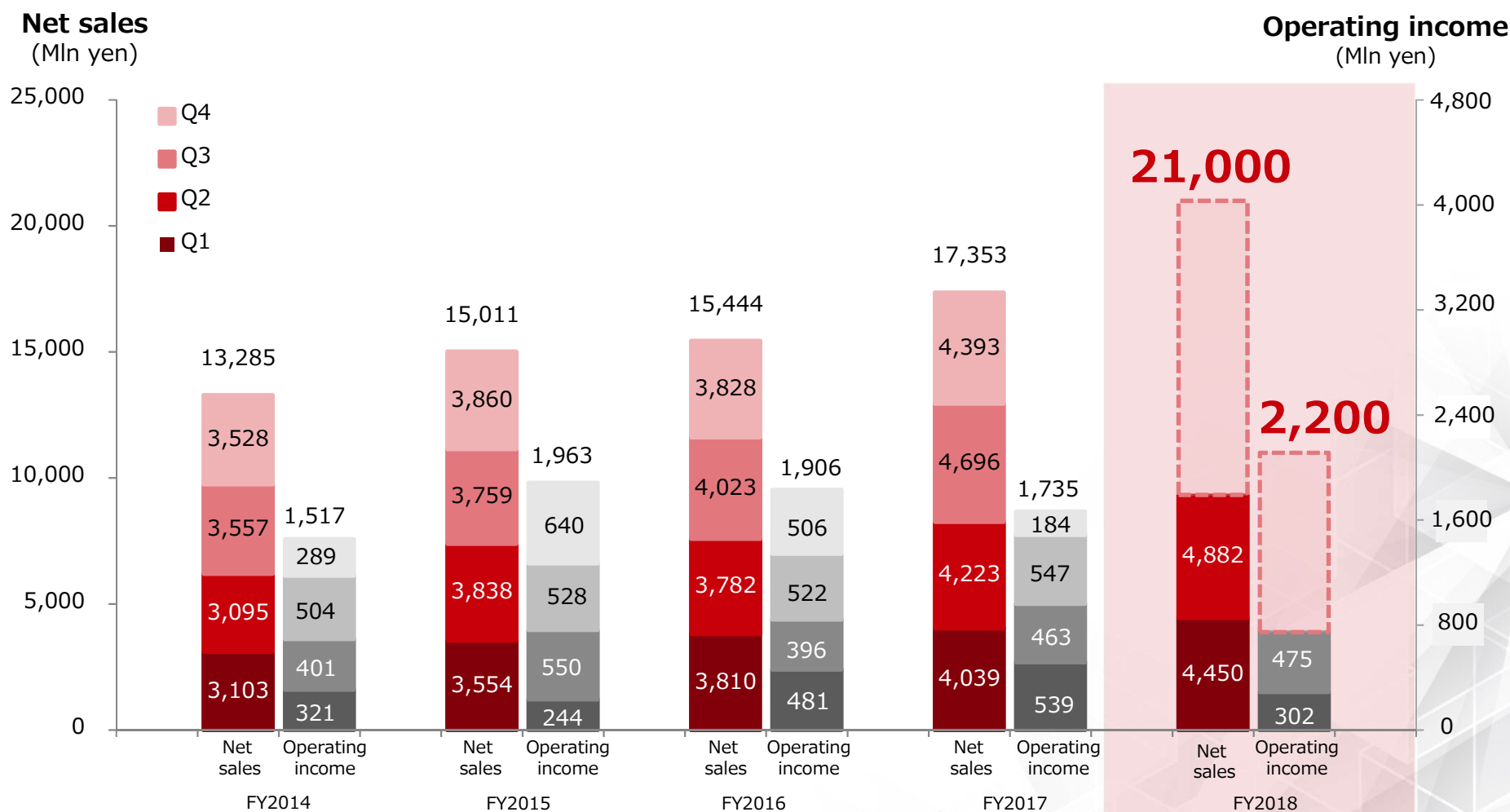
Quarterly results



Trend in net sales and operating income



No change of full year forecast of FY2018 to achieve the record-high net sales and operating income



Consolidated Balance Sheets



(MIn Yen)	Q4 FY2017 (As of March 31, 2018)	Q2 FY2018 (As of September 30, 2018)	YoY Change
Total assets	8,575	9,423	847
Current assets	6,732	6,653	-78
Cash and deposits	3,894	3,767	-126
Notes and accounts receivable-trade	2,480	2,500	19
Noncurrent assets	1,842	2,769	926
Property, plant and equipment	473	477	4
Intangible assets	286	622	336
Investments and other assets	1,082	1,668	586
Total liabilities	5,005	4,886	-118
Current liabilities	3,929	3,708	-220
Short-term loans	1,600	1,700	100
Noncurrent liabilities	1,075	1,177	101
Convertible bond-type bonds with subscription rights to shares	1,017	1,017	—
Total net assets	3,570	4,536	966
Shareholders' equity	3,340	3,836	495
Capital stock	300	300	—
Treasury shares	-2,405	-2,311	93
Non-controlling interests	200	191	-8
Total liabilities and net assets	8,575	9,423	847

Consolidated Statements of Cash Flows



(Mln Yen)	1H FY2017	1H FY2018	YoY Change
Net cash provided by operating activities	858	315	-542
(*Cash flows before income taxes paid)	927	569	-358
Net cash used in investing activities	-332	-449	-117
Net cash used in financing activities	-152	-40	112
Effect of exchange rate change on cash and cash equivalents	-11	2	13
Net increase (decrease) in cash and cash equivalents	361	-171	-533
Cash and cash equivalents at the beginning of period	3,344	3,894	549
Increase in cash and cash equivalents from newly consolidated subsidiary	—	9	9
Cash and cash equivalents at the end of period	3,706	3,732	25

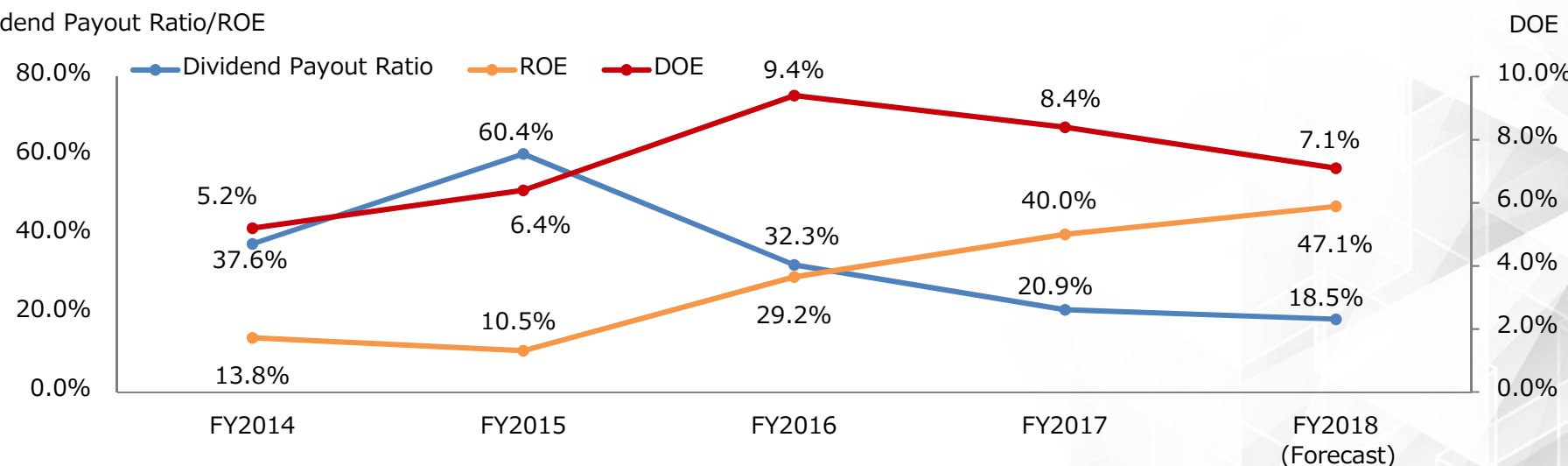
FY2018 Dividends Forecast



An interim dividend of 6.5 yen
A year-end dividend of 6.5 yen (forecast)

	FY2014	FY2015	FY2016	FY2017	FY2018 (Forecast)
Annual dividends	8.5yen	9.5yen	11.5yen	11.5yen	13.0yen
(Interim dividends)	4.0yen	4.5yen	5.5yen	5.5yen	6.5yen
(Year-end dividends)	4.5yen	5.0yen	6.0yen	6.0yen	6.5yen

Dividend Payout Ratio/ROE



*As the company conducted a 2-for-1 common stock split , effective on October 1, 2016, dividends before the interim dividends for FY2016 are accordingly adjusted retroactively to reflect the share splits impact.

Financial results of the First Half by Segment and Full year Forecast of FY2018

【Notice regarding Earnings by Segment】

- Net sales by segment include inter-segment sales or transfers.
Segment income is based on operating income.

Summary of Earnings by Segment



- Net sales increasing in both Entertainment and Enterprise business
- Profit drop mainly by active prior investment in human capital

(Mln Yen)	1H FY2017	1H FY2018	YoY Change
Net sales	8,263	9,333	113.0%
Entertainment	7,603	7,874	103.6%
Enterprise	767	1,459	190.2%
Adjustments	-108	-0	—
Operating income	1,003	777	77.5%
Entertainment	1,644	1,511	91.9%
Enterprise	-38	-119	—
Adjustments	-602	-614	—
Operating income margin	12.1%	8.3%	-3.8 Points

Result of Entertainment Business



- Stable growth in Mobile Solutions dept. of Debugging div.
- Increase of net sales in both Creative and Media div.
- Profit drop mainly by decline of Amusement dept. of Debugging div.

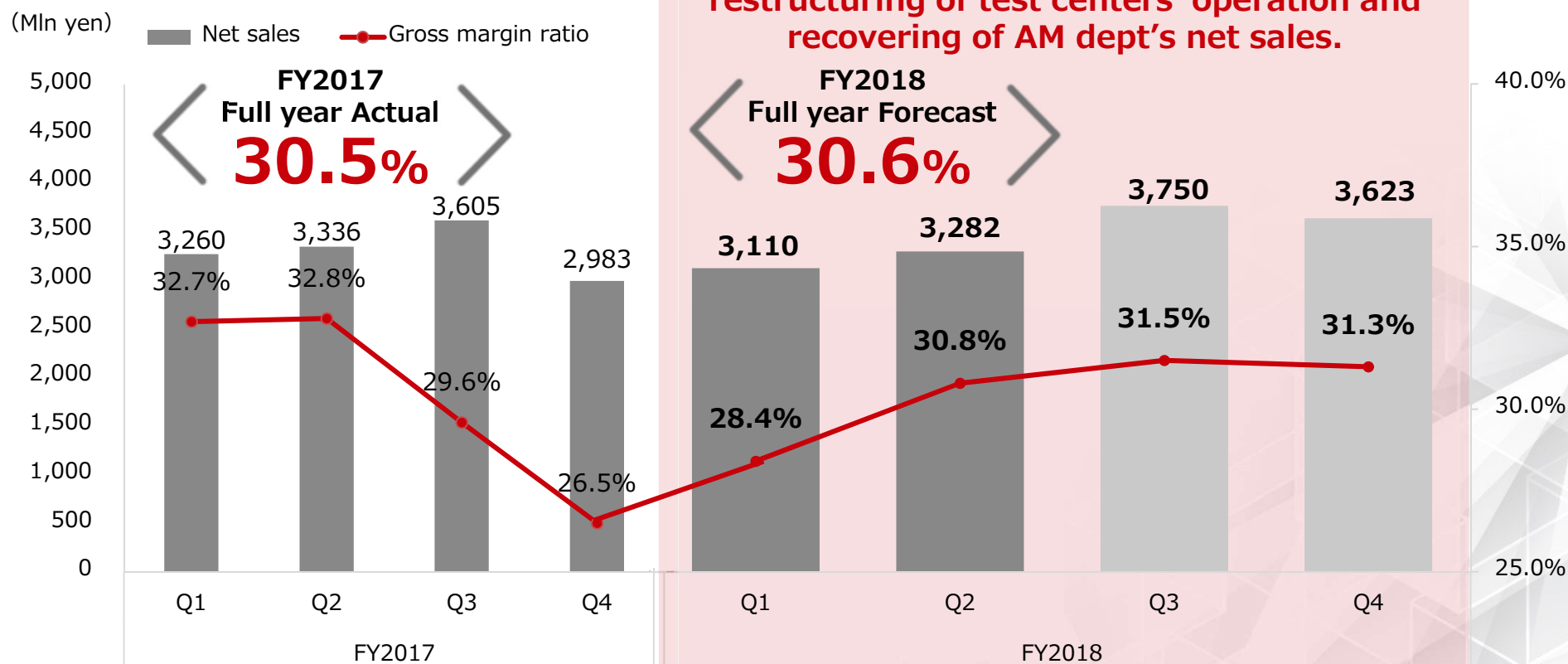
(Mln Yen)	1H FY2017	1H FY2018	YoY Change
Net sales	7,603	7,874	103.6%
Debugging	6,596	6,393	96.9%
Game Console (GC)	2,056	1,981	96.4%
Mobile Solutions (MS)	3,492	4,128	118.2%
Amusement (AM)	1,047	282	27.0%
Creative	735	1,073	145.9%
Media and others	271	408	150.1%
Segment income	1,644	1,511	91.9%

Entertainment Business – Debugging div.



- Debugging div.'s gross margin for Q2 FY18 was 30.8%, higher than our plan.
- Gross margin target for full year is 30.6%, almost same as previous year.
- 2H gross margin will be recovered by labor cost control and growth of sales.

Quarterly results of Debugging div.



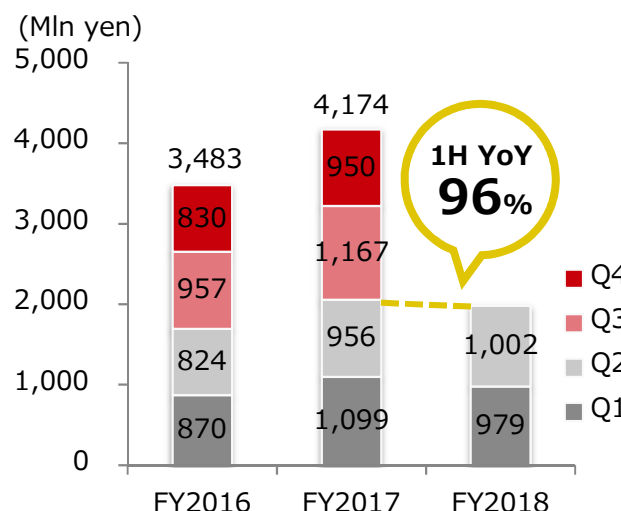
Entertainment Business – Debugging div.



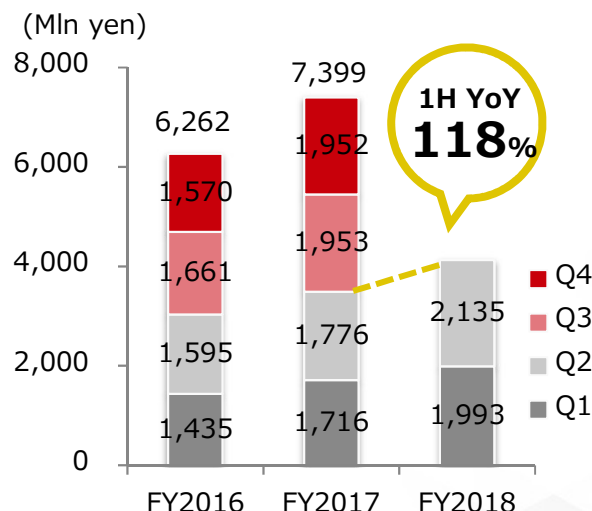
- **Game Console dept. (GC)**
 - Stable sales in 1H and sales growth in Q3 and Q4 as peak season of this year
- **Mobile Solutions dept. (MS)**
 - Larger Q2 sales than Q1 and continuous increase in sales for full year
- **Amusement dept. (AM)**
 - Drop of sales since prev. Q4 by regulatory changes and will recover in this 2H

Quarterly sales

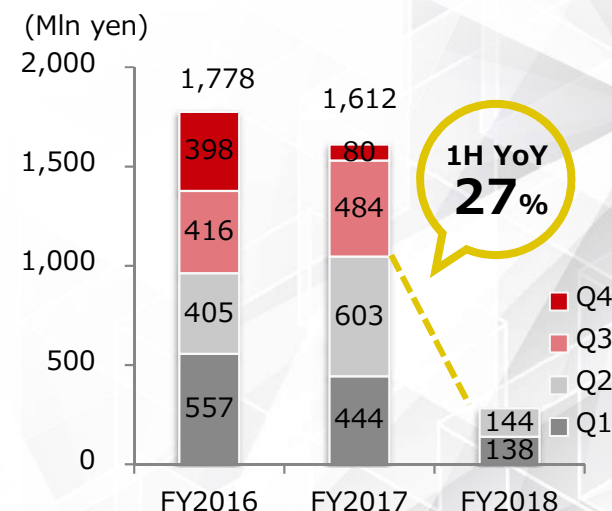
Game Console dept. (GC)



Mobile Solutions dept. (MS)

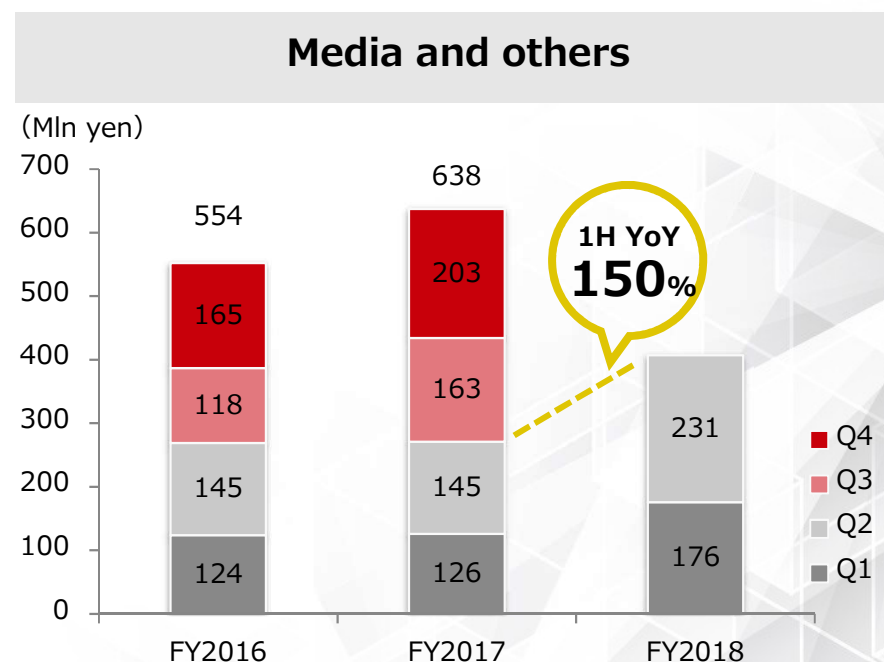
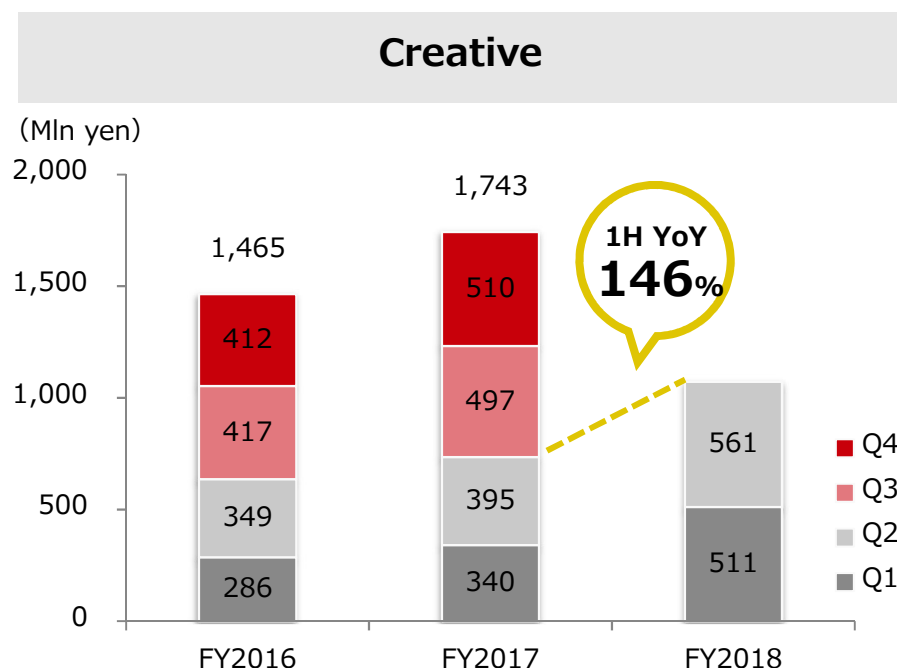


Amusement dept. (AM)



- **Creative**
 - Continuous growth of game development and 2D/3D graphic production
- **Media and others**
 - Stable sales of advertising service of game information site, “4Gamer.net”
 - Contribution of customer support service newly launched last year

Quarterly sales



Result of Enterprise Business



- Enterprise business sales growth of **around 200%** (YoY) by increasing expert engineers and making new business alliances

(Mln Yen)	1H FY2017	1H FY2018	YoY Change
Net sales	767	1,459	190.2%
System Testing	345	545	158.0%
IT service / Security	421	913	216.6%
Segment loss	-38	-119	—

M&A, etc

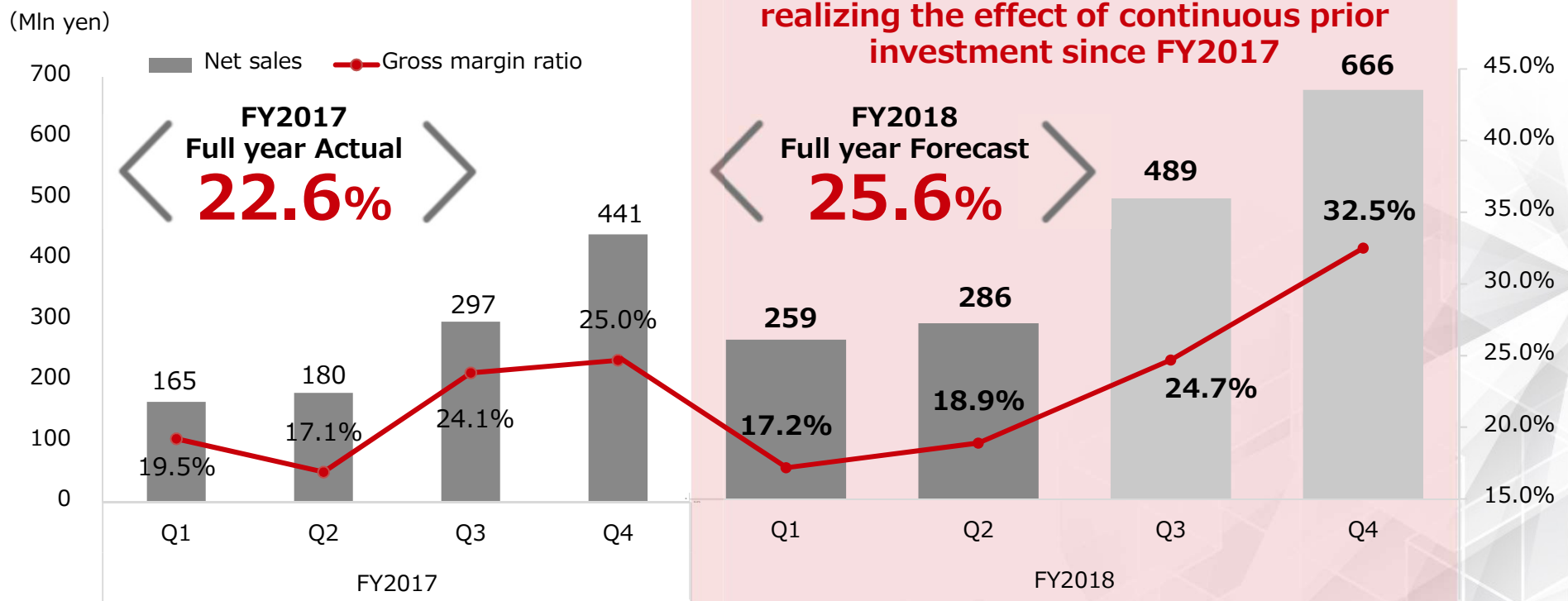
		FY2018			
		Q1	Q2	Q3	Q4
 Acquisition of the system development business from Keepahead Co.Ltd. - Consolidated from June, 2018	 Stock acquisition of medical system testing company, ANET corporation - Consolidated from September, 2018				

Enterprise Business – System Testing div.



- From September 2018, profit from the ANET Corporation, a newly acquired subsidiary, contributed.
- Sales and the gross margin were both revised in the plan for the 2H of the fiscal year. Aiming to reach a 25.6% gross margin in FY2018.
- Gross margin of Q3 and Q4 will be improved by sales growth of the div.

Quarterly results of System Testing div.



■ System Testing

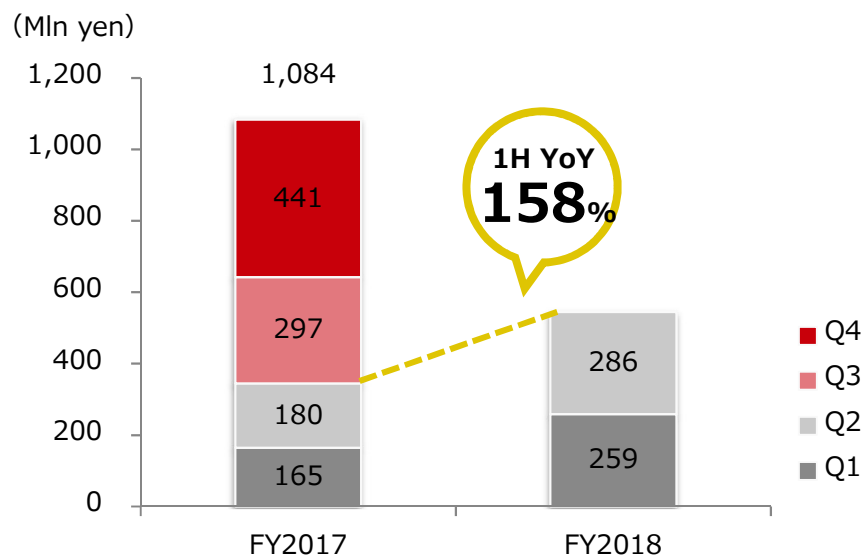
By acquiring new customers in different industries, 2H sales of the div. is planned to increase rapidly

■ IT service / Security

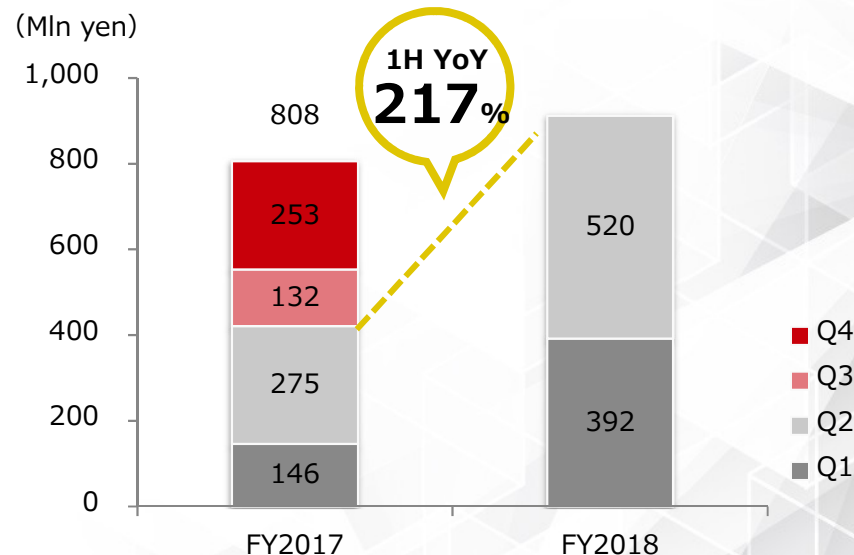
By good sales of new services, 1H sales is already larger than full year FY2017 and 2H sales will be increasing as well

Quarterly sales

System Testing



IT service / Security



FY2018 Consolidated Financial Forecast



- Expecting to achieve new record-high sales and profit of full year with no change from initial forecast
- Operating income margin will be improved in 2H, with a positive effect of prior investment since FY2017

(Mln Yen)	Full year FY2017 (Actual)	Full year FY2018 (Forecast)	YoY Change
Net sales	17,353	21,000	121.0%
Entertainment Business	15,568	17,000	109.2%
Enterprise Business	1,878	4,000	212.9%
Operating income	1,735	2,200	126.7%
Operating income margin	10.0%	10.5%	+0.5Points
Ordinary income	1,782	2,224	124.8%
Profit attributable to owners of parent	1,200	1,533	127.7%

Execution of the growth strategy

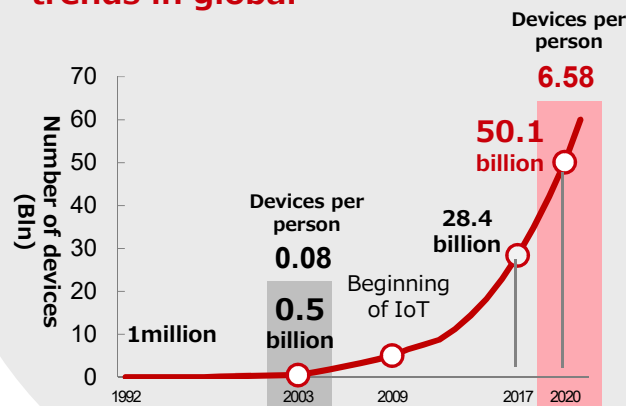
Market trends of testing service



Due to advances in digital transformation (DX), development needs are changing. Outsourcing of testing to specialized companies with a wealth of knowledge and expertise is being accelerated.

Growth of IoT and cloud trends

No. of connected devices due to IoT trends in global



Source: IDC

Increase in outsourcing of testing

Factors driving outsourcing of testing



Source: Trends in software testing July 2016 – KPMG

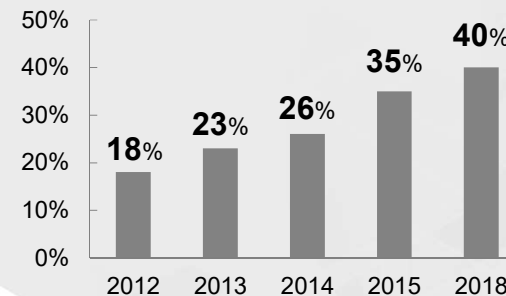
Japan's future shortage of IT human Capital (number of people)

2015 Approx. **170** thousand

2030 Approx. **790** thousand

Source: METI, "Latest trends of IT human resources and survey results concerning the future estimate"

Budget allocation as percentage of software testing



Source: World Quality Report 2015-16

Pursuing the growth of the entertainment business and developing the enterprise business as a second pillar of our group.

Entertainment Business

Enterprise Business

Improvements in customer engagement

- Flexibly assign testers to accommodate changeable development schedules.
- Improve ability to make proposals tailored for each project.
- Expand services based on our clients' needs.

Continuing growth

FY2018
Net sales (Plan)

17.0Bln yen

FY2017
Net sales
15.5Bln yen

Rapid growth

FY2018
Net sales (Plan)

4.0Bln yen

FY2017
Net sales
1.8Bln yen

Expansion as the second pillar of business

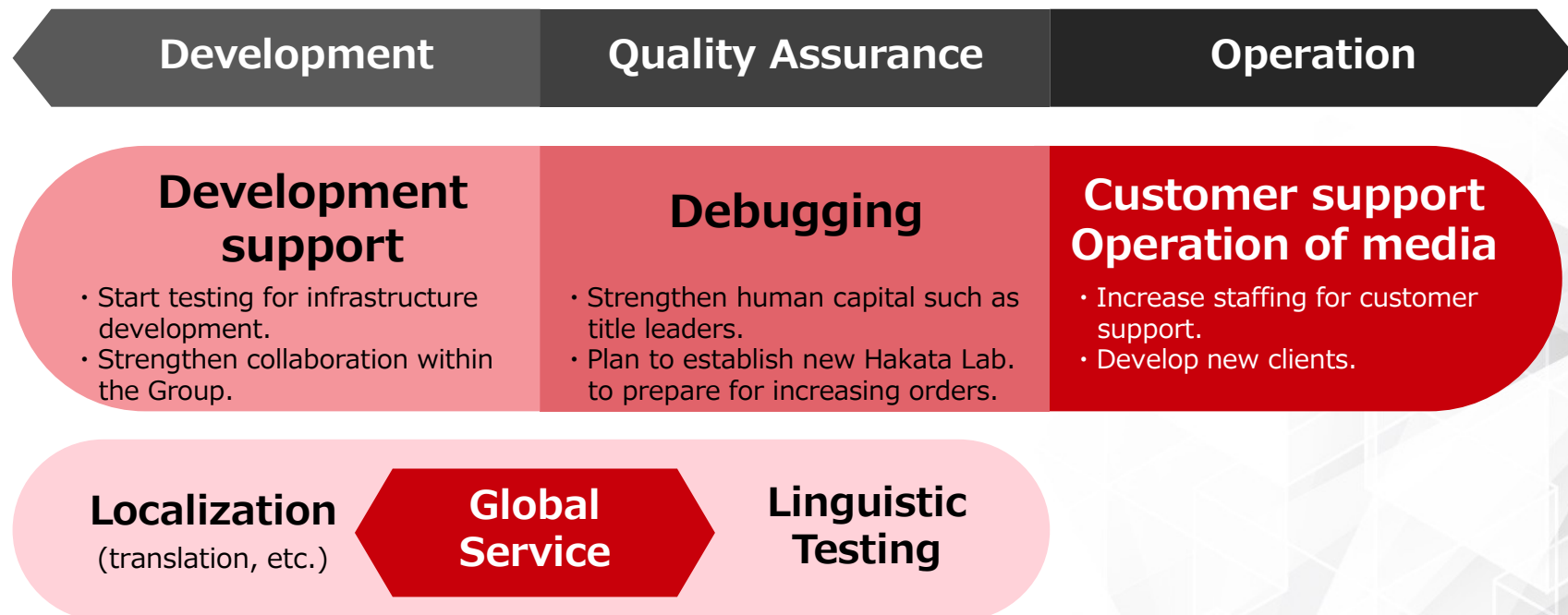
- Expand the service range targeting the rapidly growing market.
- Actively use business alliances and M&A.
- Develop new services with our own technology.

Human Capital and Technology

Improve recruitment and personnel training, and enhance motivation.
Invest in technology, e.g. operational efficiency and service development.

Improvements in customer engagement

Continue to improve game debugging as our core business.
Expand services such as game development support, customer support, and global services, and respond to diverse clients' needs throughout the Group.



Strengthen wide range of services such as localization, linguistic testing, CG content development, and voice/music recording.
Enhance support with Japanese quality in both outbound and inbound services.

Sales growth of Global service

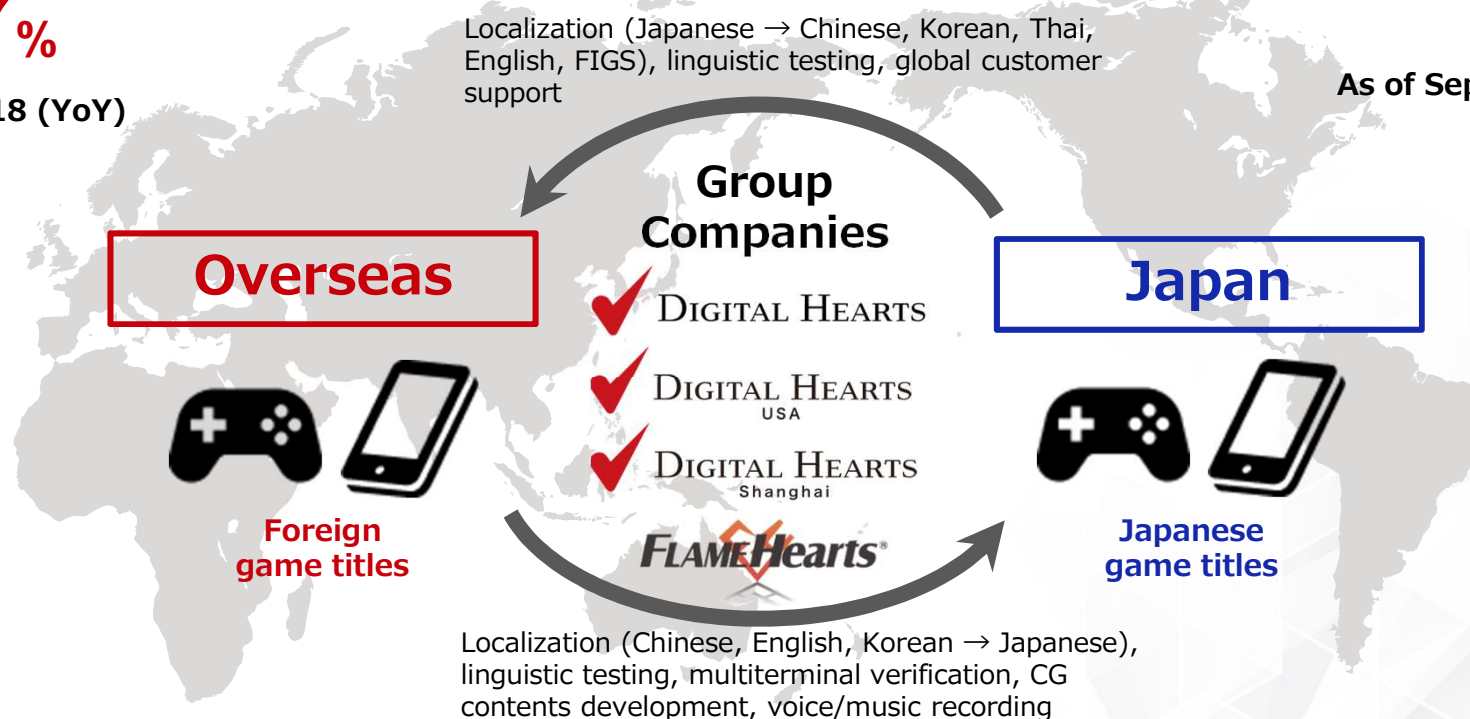
157%

1H FY2018 (YoY)

Number of members of Global service business

219

As of September 2018



Rapidly improve productivity by instituting operational reforms in test centers. Improve all operations, human capital management, and information systems.

Operation

Improve testing efficiency

- Establish a new operational reform support section.
- Simplify and automate operations in Labs.

Human capital management

Strengthen Lab management structure

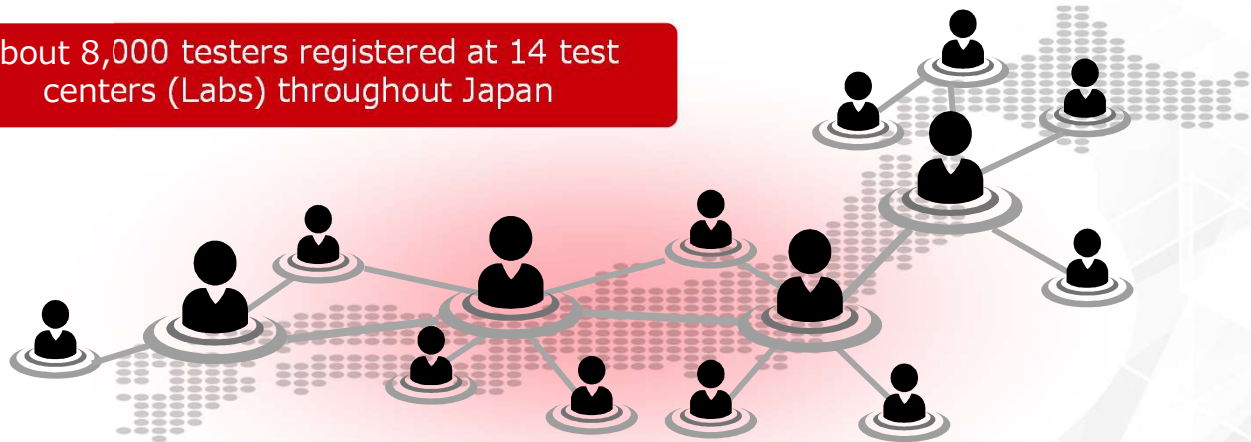
- Redefine each position's role and capacity.
- Retain capable personnel and enhance motivation by improving human capital development support.

Information systems

Renewal core IT system

- Visualize testers' capability and operational efficiency.
- Share information among Labs and implement standardization.

About 8,000 testers registered at 14 test centers (Labs) throughout Japan



Expansion of the service range

Acquiring different kinds of clients in new industries such as real estate or beverage manufacture by continuing active investments and improving human capital, technology, and sales promotion

Testing of systems for consumer use

Mobile / WEB applications
E-commerce sites, etc.

Using common infrastructure with debugging
(e.g. multiterminal verification)

Autonomous driving
Consumer electronics, etc.

System testing from users' eyes using experience gained through debugging

Testing of industrial systems

Operation systems
Medical systems, etc.

System testing conducted by expert engineers secured or trained through alliances, M&A, etc.

Case examples

Online Music Distribution

- ✓ Music distribution system
- ✓ Test automation
- ✓ Vulnerability diagnosis

Internet Services

- ✓ WEB System
- ✓ Test automation

Financial Services

- ✓ Online payment system
- ✓ Stress test
- ✓ Vulnerability diagnosis

Real estate Services

- ✓ Sales support system
- ✓ Property management system

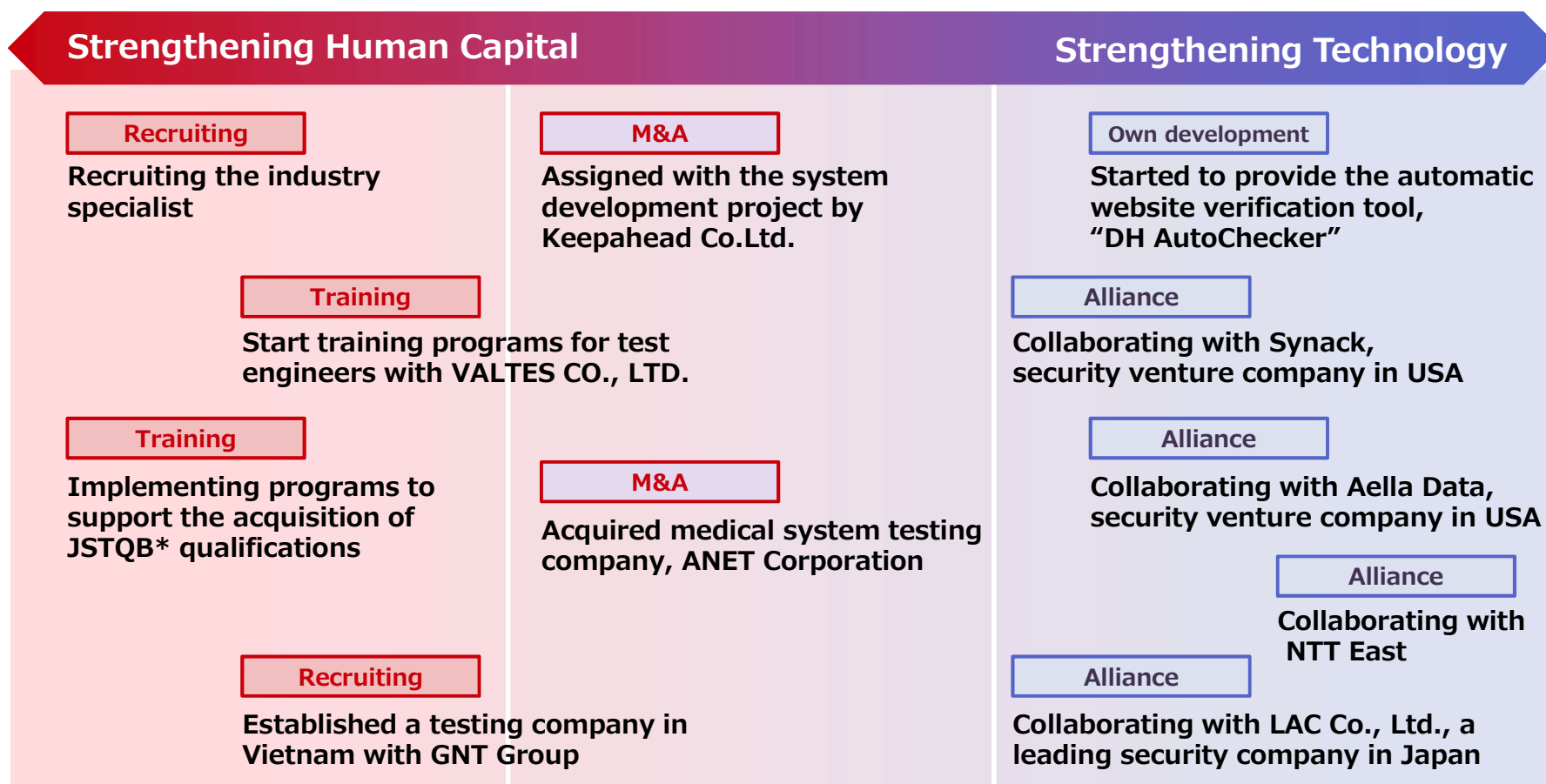
Beverage Manufacturer

- ✓ IoT system
- ✓ Test automation

Auto parts Manufacturer

- ✓ Connected car system
- ✓ Voice recognition system

By focusing on securing and training expert engineers and boosting technology use, promote the improvement of service quality and operational efficiency.



*JSTQB...Qualifications of software testing engineers in Japan

TOPICS
1

Acquired ANET Corporation, a company which has strengths in medical system testing, **as a subsidiary**

- ✓ Further development of the medical and healthcare domain
- ✓ Develop testing engineers with diverse skills by sharing the expertise of ANET Corporation



Corporate Profile

Company Name	ANET Corporation	Consolidated from September 2018
Location	Shimonogo 813-15, Ueda, Nagano	
Representative	President Kenzo Miyajima	
Incorporated	June 1989	
Business Activities	System testing, System development, etc.	
Operating Results	Net sales 251million yen Operating income 20million yen (Fiscal year ended October 2017)	
Number of Employees	29 (including 24 expert engineers)	

TOPICS 2

Number of software testing engineers certified with JSTQB qualifications

To be one of the industry-leading companies

- ✓ Many internal testers passed by organizing programs, etc. for supporting the acquisition of JSTQB-certified qualifications
- ✓ Aiming to be a company with a largest scale of the certified qualification holders in Japan, and become one of Platinum Partners

Personnel with JSTQB qualifications

As of October 31, 2018
(Total number of our group companies)

Advanced Level

8

Foundation Level

325

ISTQB Partners

Platinum Partner

VALTES CO.,LTD. / VeriServe Corporation /
DIGITAL HEARTS Co., Ltd. (Currently applying)

Gold Partner

webrage CO.,LTD. / ELINT System / QaaS Co., Ltd. / Computer Associated Laboratory,Inc / VALTES Advanced Technology, Inc. / VALTES MOBILE TECHNOLOGY CO.,LTD / FUJITSU PUBLIC SOLUTIONS LIMITED / METATECHNO Inc. / MITSUIWA ENGINEERING CORPORATION / Boole Japan Co., Ltd. /
ANET Corporation (Currently applying)

Source: JSTQB's WEB site (As of November 8, 2018)

* Japan Software Testing Qualifications Board (JSTQB) is an organization that certifies software testing engineers in Japan. JSTQB is a member board of the International Software Testing Qualifications Board (ISTQB), which has a membership of organizations certifying testing engineers from all over the world.

* The ISTQB Partner Program accredits companies and organizations that are committed to improving quality technology and testing techniques. The Program comprises four levels of partnerships; Global Partner, Platinum Partner, Gold Partner, and Silver Partner.

TOPICS
3

Enhancing cybersecurity business by utilizing alliances with other companies

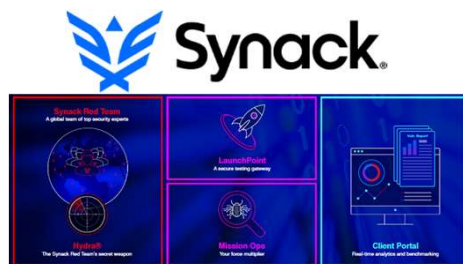
DH Security Solution Center

Testing

New

Started vulnerability inspection services through AI × cloud sourcing

Providing vulnerability diagnosis by world-class white-hat hackers in collaboration with Synack, a professional service firm designated by the U.S. Department of Defense.



Monitoring (Operation)

New

Started to provide abnormality detection systems using AI

In collaboration with Aella Data, an U.S. security venture company, providing services using their highly expandable abnormality detection systems.



Training

New

Introducing practical training courses for security engineers

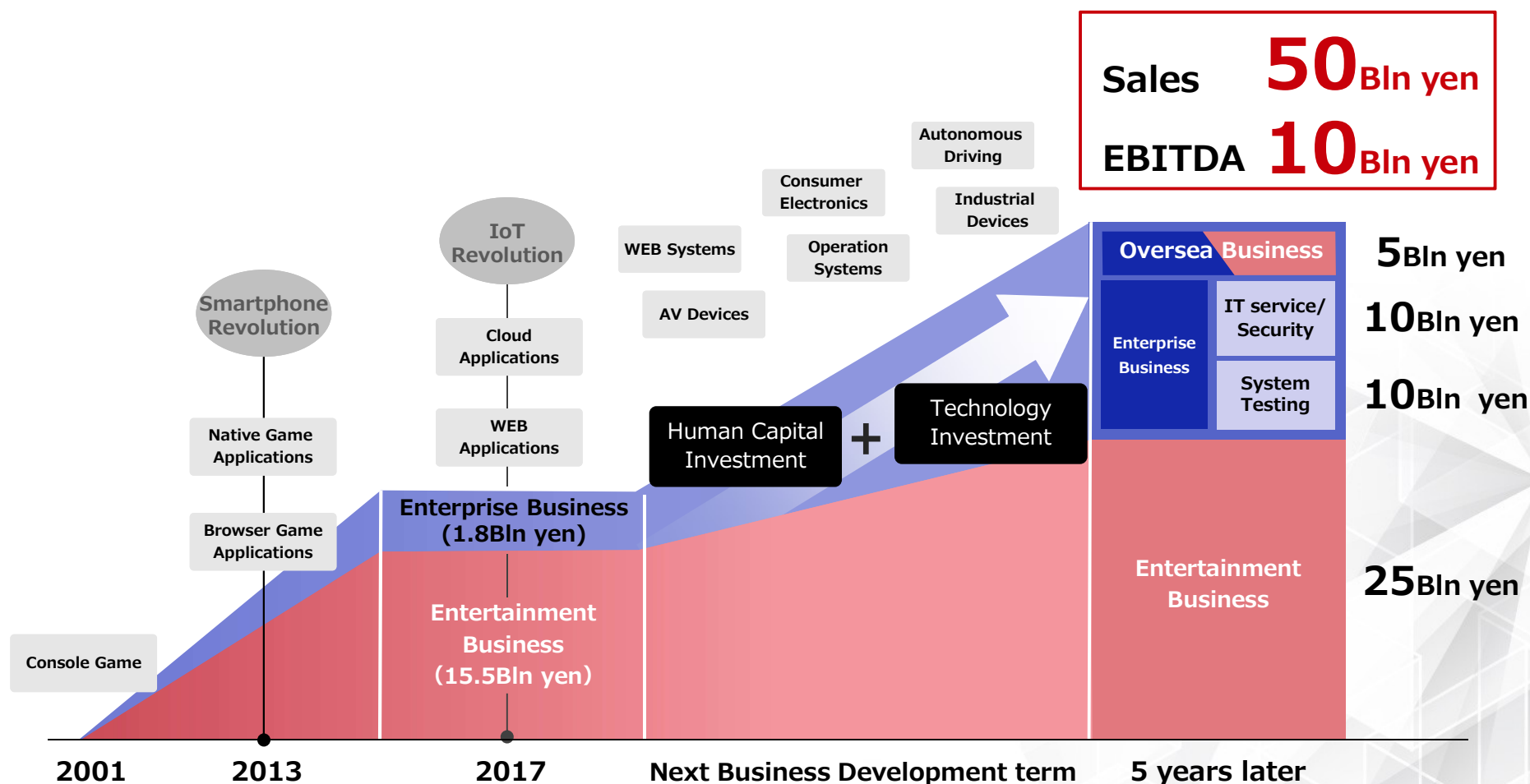
Twenty testers joined the two-week DH security boot camp from Labs throughout Japan. Some of them have already started OJT in security departments.



Mid-term roadmap



To be the Asia's No.1 Company for Comprehensive Testing Solutions



Reference

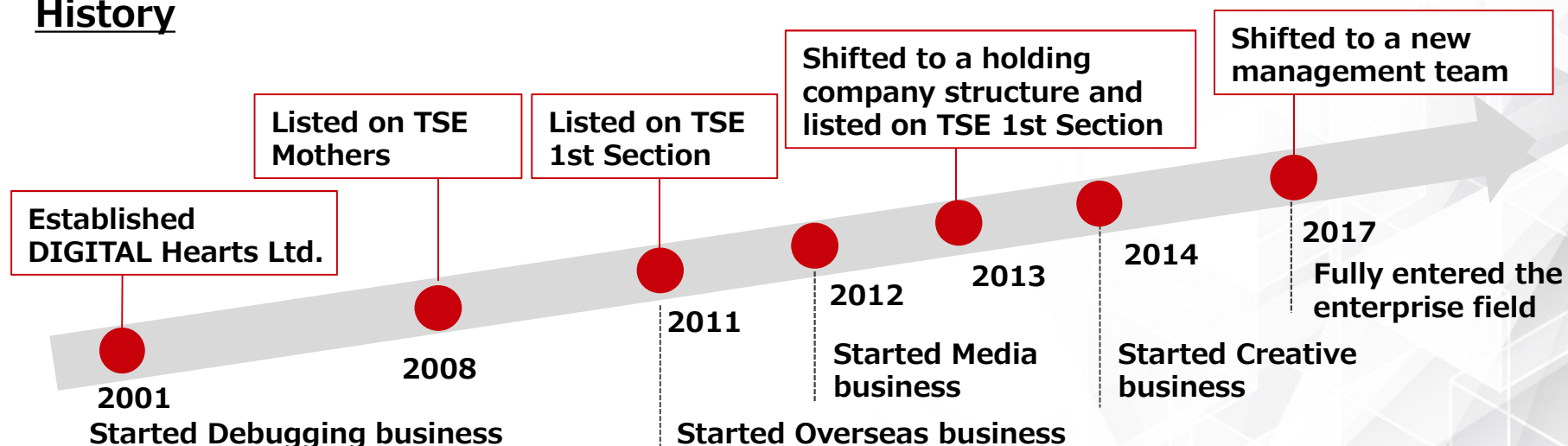
Corporate Profile



Company Name	DIGITAL HEARTS HOLDINGS Co., Ltd.	Capitalization	¥300,686,000
Location	3-20-2 Nishi-Shinjuku, Shinjuku-ku, Tokyo	Shares Issued	23,890,800 Shares
Incorporated	October 1, 2013	Fiscal year end	March 31
Representative	President and CEO, Genichi Tamatsuka	Number of Employees	791(Consolidated)
Stock Exchange	Tokyo Stock Exchange The 1st Section (code : 3676)	Group Companies	Domestic:6 Overseas:3

(As of September 30, 2018)

History



Group Companies



DIGITAL HEARTS Co., Ltd.

Entertainment

Enterprise

Business Activities : Game debugging, System testing, System development, Security, etc.

DIGITAL HEARTS (Shanghai) Co., Ltd.

Entertainment

Business Activities : Game debugging, etc.

DIGITAL HEARTS GNT VIET NAM COMPANY LIMITED

Enterprise

Business Activities : System testing, etc.

DIGITAL HEARTS USA Inc.

Entertainment

Business Activities : Localization, etc.

ANET Corporation

Enterprise

Business Activities : System testing, System development, etc.

Aetas, Inc.

Entertainment

Business Activities : Operation of a game information site, "4Gamer.net", etc.

FLAME Hearts Co., Ltd.

Entertainment

Business Activities : Game development and CG content development

DIGITAL HEARTS NETWORKS Co., Ltd.

Enterprise

Business Activities : Internet communication related business, Security, etc.

ZEG Inc.

(Affiliated company)

Enterprise

Business Activities : Driving test and data collection for the automotive industry

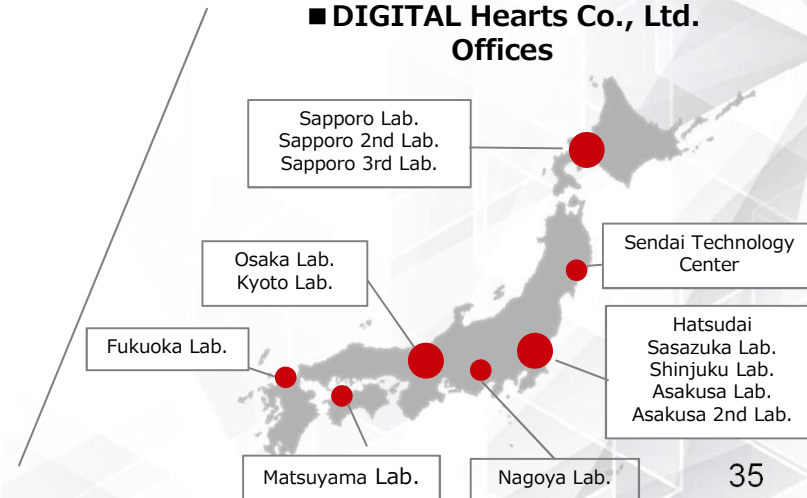
■ Business Sites



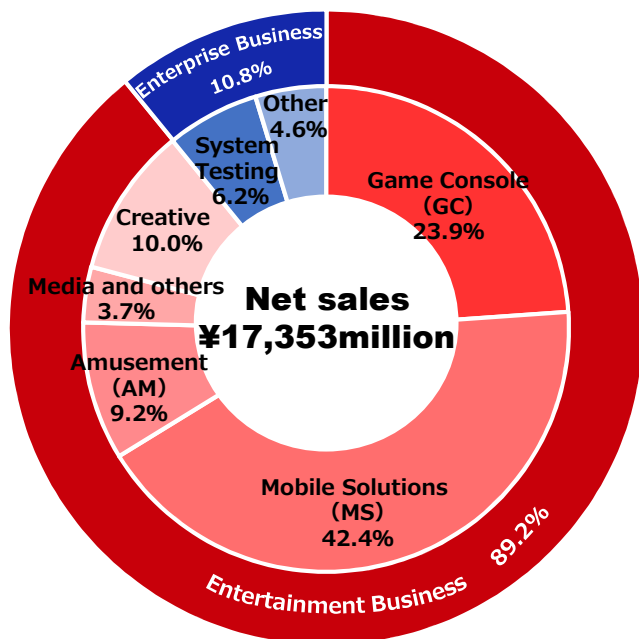
(As of September 30, 2018)

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■ DIGITAL Hearts Co., Ltd. Offices



Business Segment



Sales breakdown by segment (FY2017)

※Sales of each segment and unit include inter-company sales and/or transfers.

Entertainment Business

Debugging

75.5%

23.9%

Game Console (GC)

Debugging for console games, online games, and arcade games

42.4%

Mobile Solutions (MS)

Debugging for mobile games

9.2%

Amusement (AM)

Debugging for pachinko/slot machines

3.7%

Media and others

Managing one of Japan's largest gaming information site "4Gamer.net", and expansion into game music and game events.

10.0%

Creative

Game development and CG content development

Enterprise Business

System Testing

6.2%

Testing for enterprise system and Automobile driving test

4.6%

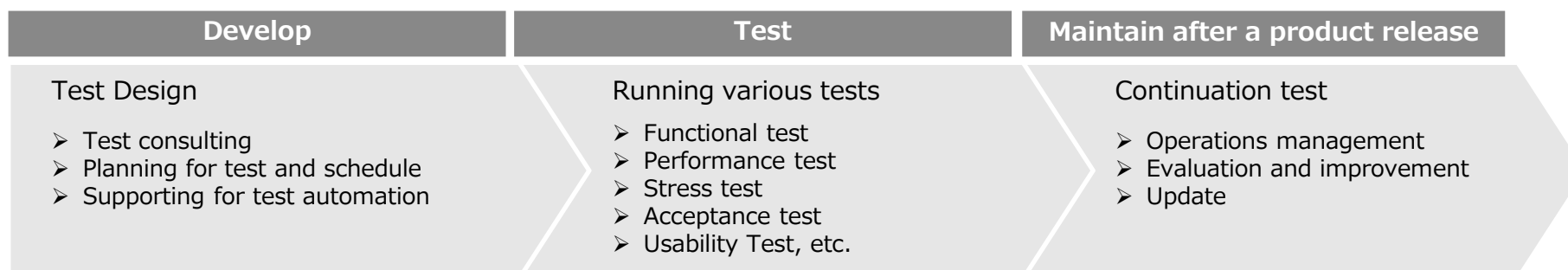
IT service / Security

System development, IT support, Customer support, Security, etc.

Outline of Debugging and System Testing



Our Services



Outline of Services

Service	Description	Main client	Barriers to entry	Outsourced Projects Ratio
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 management to accommodate changeable development schedules are required.	High
System Testing	Detection of bugs in enterprise systems from a test-engineers' knowledge.	– SIers – Development vendors – Core system enterprises	Middle ↑ Human resource shortage in IT Industry	Low

Summary of Earnings by Segment



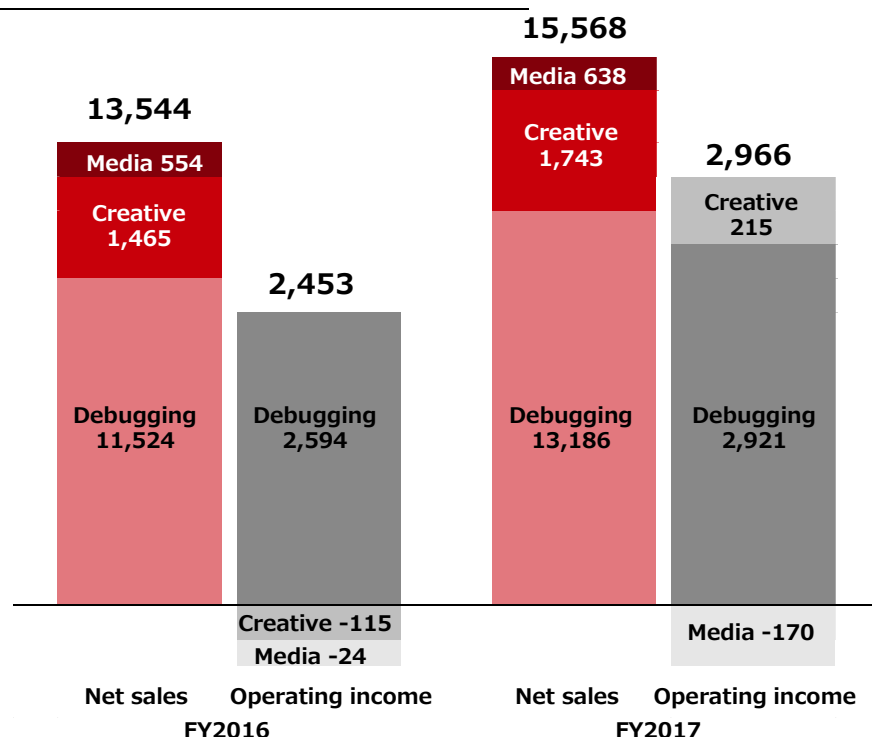
Entertainment Business

- ◆ Stable growth of debugging div. and developing new services such as customer support
- Continue to expand business, aim sales of 25 billion yen by 2022

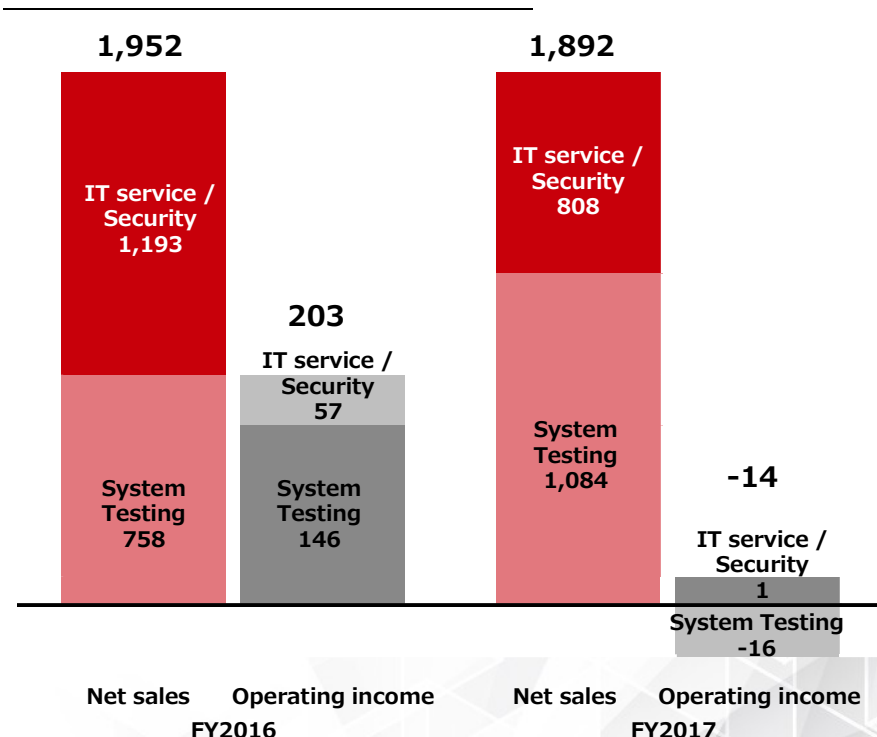
Enterprise Business

- ◆ Accelerate investments in human capital and technologies for further business expansion
- Positioned as growth driver to aim for gross sales of 20 billion yen by 2022

Net sales / Segment income (Mln yen)



Net sales / Segment income (Mln yen)



Summary of Earnings by Segment



(Mln yen)		FY2013	FY2014	FY2015	FY2016	FY2017
Entertainment Business	Net sales	9,360	11,609	12,696	13,544	15,568
	Segment income	No retroactive	1,915	2,379	2,453	2,966
	Debugging	Net sales	8,435	9,430	10,455	11,524
	Game Console (GC)	Net sales	3,392	3,604	3,449	4,174
	Mobile Solutions (MS)	Net sales	2,655	3,554	4,994	6,262
	Amusement (AM)	Net sales	2,388	2,272	2,012	1,778
	Media	Net sales	483	504	512	554
	Creative	Net sales	442	1,675	1,729	1,465
Enterprise Business	Net sales	798	1,713	2,382	1,952	1,892
	Segment income	No retroactive	50	71	203	-14
	System Testing	Net sales	360	380	681	758
	IT service / Security	Net sales	438	1,333	1,701	1,193
	Inter-segments adjustments	Net sales	-24	-39	-70	-52
		Segment income	-353	-447	-486	-750
	Consolidated total	Net sales	10,137	13,285	15,011	15,444
		Operating income	1,780	1,517	1,963	1,906

Financing Via the Target Issue Program



<Outline>

<Objectives>

	4 th Issuance of Stock Options	5 th Issuance of Stock Options	6 th Issuance of Stock Options	HR and technology-related investments aimed at expanding system testing and security business operations in the enterprise field		
Method of issue	Third-party allocation to London Branch of Deutsche Bank			Internal Investments	¥1.00bn	Recruitment of engineers and other external specialists, training and development of internal human resources
Planned amount of funds to be procured	¥11.02 billion ^(a)					
Estimated amount of net proceeds	¥11.02 billion ^(b)					
Number of stock options to be issued	20,000	14,000	6,800			
Number of potential shares resulting from this issue	2,000,000	1,400,000	680,000			
Exercise price	¥2,100	¥3,000	¥3,850	Securing External Resources	¥7.52bn	M&A and capital / business partnerships aimed at securing professional human resources, related technologies and knowhow in areas such as software testing and security
Revision of exercise price	None					
Dilution ratio	17.1% ^(c)					
Period for exercise of stock options	3 years					
Terms & conditions for halting exercise of stock options	Yes					

(a) The planned amount of funds to be procured is the total amount of equity assets to be credited when the stock options are exercised. Depending on fluctuations in share prices during the exercise period, in some cases, there is a possibility that stock options may not be exercised, or that the amount of funds procured may decrease due to retirement.

(b) The estimated amount of net proceeds is the planned amount of funds to be procured, plus the sum total issue price of stock options issued, minus issuance costs.

(c) Regarding the exercise of 4th issuance stock options, the Company plans to prioritize the allotment of treasury shares, in which case the dilution ratio is 8.7%. The dilution ratio value displayed in the table above is the hypothetical dilution value, in the event that all new shares are issued in response to all stock options being exercised.



DIGITAL HEARTS HLDGS.

<Contact>

Investor and Public Relations Division

Phone : +81-3-3373-0081

Email : ir_info@digitalhearts.com

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

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