Results for First Quarter of Fiscal 2018 (Year Ending March 30, 2018)

July 27, 2017

ZENRIN CO.,LTD.

Maps to the Future

ZENRIN
Maps to the Future

Note: This document contains forward-looking statements based on assumptions, forecasts and plans in light of information available to ZENRIN Co., Ltd. as of the preparation date of this document. Actual performance may vary significantly from the forecast figures due to various risks and uncertainties owing to global economic trends, market demand, status of competition, exchange fluctuations and other factors.

The information that appears in this document rounds down fractions to the nearest specified unit and rounds off decimals in the percentage of change to the first decimal place.

In addition, cases where the percentage of change exceeds 1000% and cases where one or both are negative are shown as "–."

1. Results for First Quarter of Fiscal 2018

1）Overview of Results for First Quarter

2）Changes in Net Sales, Income and Profit

3）Causes for Change in Operating Income

4）Segment Information

5）Net Sales by Business
under Medium- to Long-Term Business Plan ZGP2020

1-1）Overview of Results for First Quarter

ZENRIN
Maps to the Future

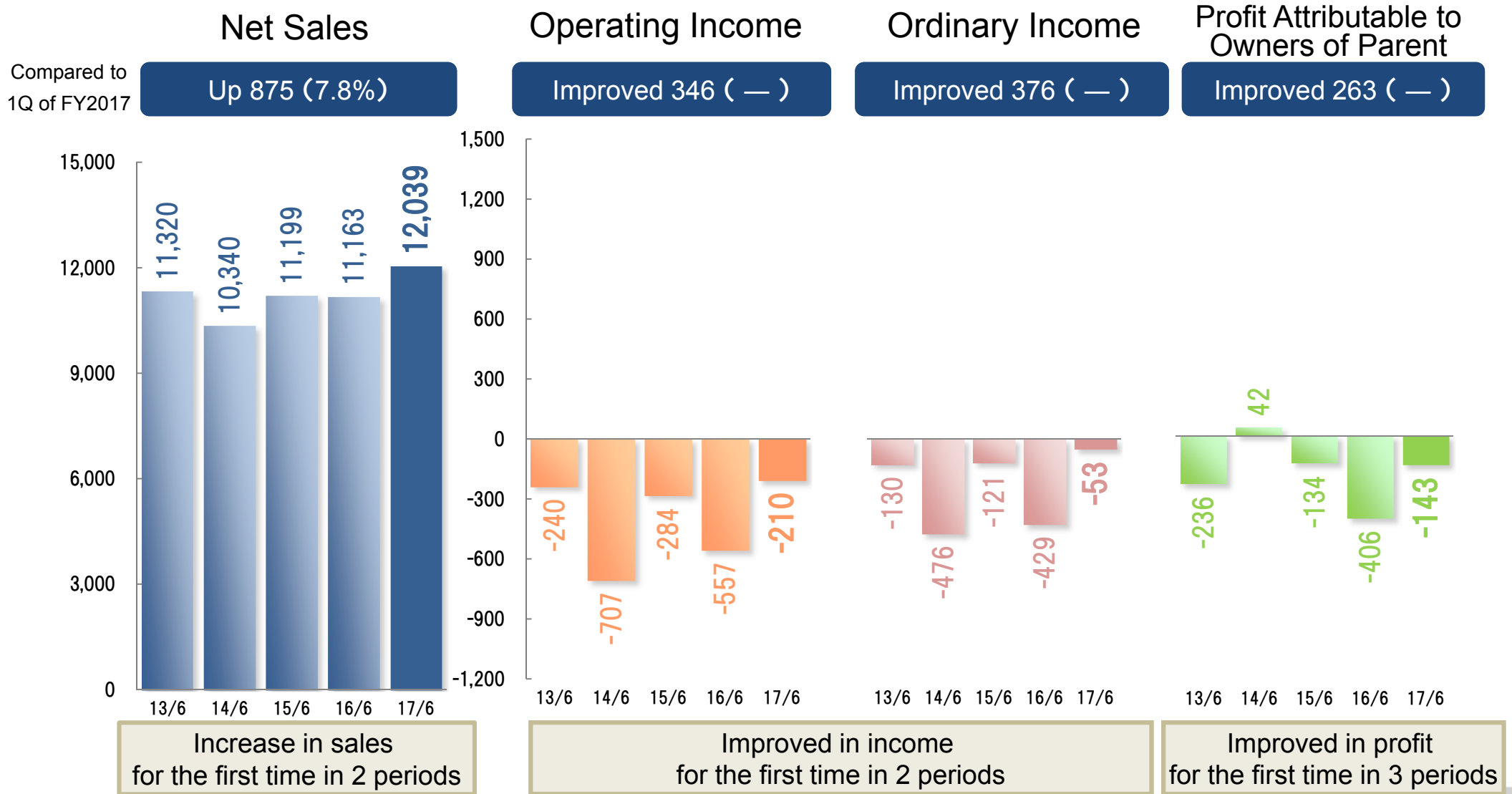## Key Points of Results for First Quarter of Fiscal 2018

■ Net sales increased for the first time in two periods, operating income and ordinary income improved for the first time in two periods, and profit attributable to owners of parent improved for the first time in three periods.

■ Robust sales related to GIS-utilizing residential map databases, in addition to the increase in ITS-related sales including sales from data for Japanese in-car navigation systems.

■ General and administrative expenses including personnel expenses increased, in addition to the increase in cost of sales.
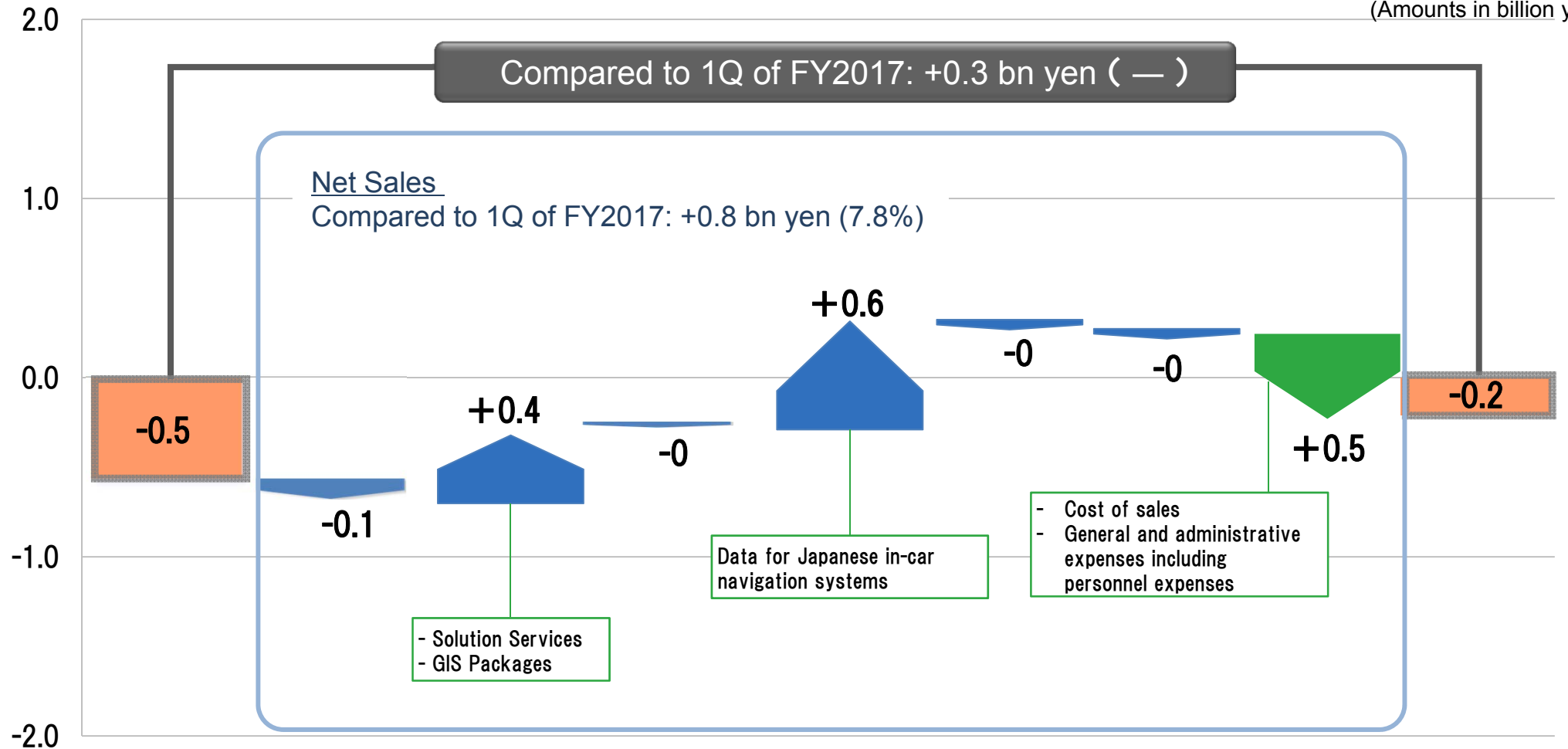
(Amounts in million yen)

	1Q of FY2017 Actual	1Q of FY2018 Actual	Compared to 1Q of FY2017	% of Change
Net Sales	11,163	12,039	875	7.8
Operating Expenses	11,720	12,250	529	4.5
Operating Income	-557	-210	346	–
Operating Margin	-5.0%	-1.7%	3.3pt	
Ordinary Income	-429	-53	376	–
Profit Attributable to Owners of Parent	-406	-143	263	–

1-3）Causes for Change in Operating Income

Results for First Quarter of Fiscal 2018

(Amounts in billion yen)

Compared to 1Q of FY2017: +0.3 bn yen（—）

Net Sales
Compared to 1Q of FY2017: +0.8 bn yen (7.8%)

-0.5

-0.1

+0.4

-0

+0.6

-0

-0

+0.5

-0.2

- Solution Services
- GIS Packages

Data for Japanese in-car navigation systems

- Cost of sales
- General and administrative expenses including personnel expenses

| 16/6 | Publishing Business | GIS Business | ICT Business | ITS Business | Global Business | Other Business | Operating Expenses | 17/6 |

1-4）Segment Information

Sales Composition

83.8%

1. Map Database Segment

Main Items: Printed residential maps,
residential map databases,
map data for Japanese and overseas
in-car navigation systems,
services for smartphones,
map data provision, etc. for various media/devices

6.7%

2. General Printing Segment

Main Items: Commercial printing

9.5%

3. Other

Main Items: Purchased products,
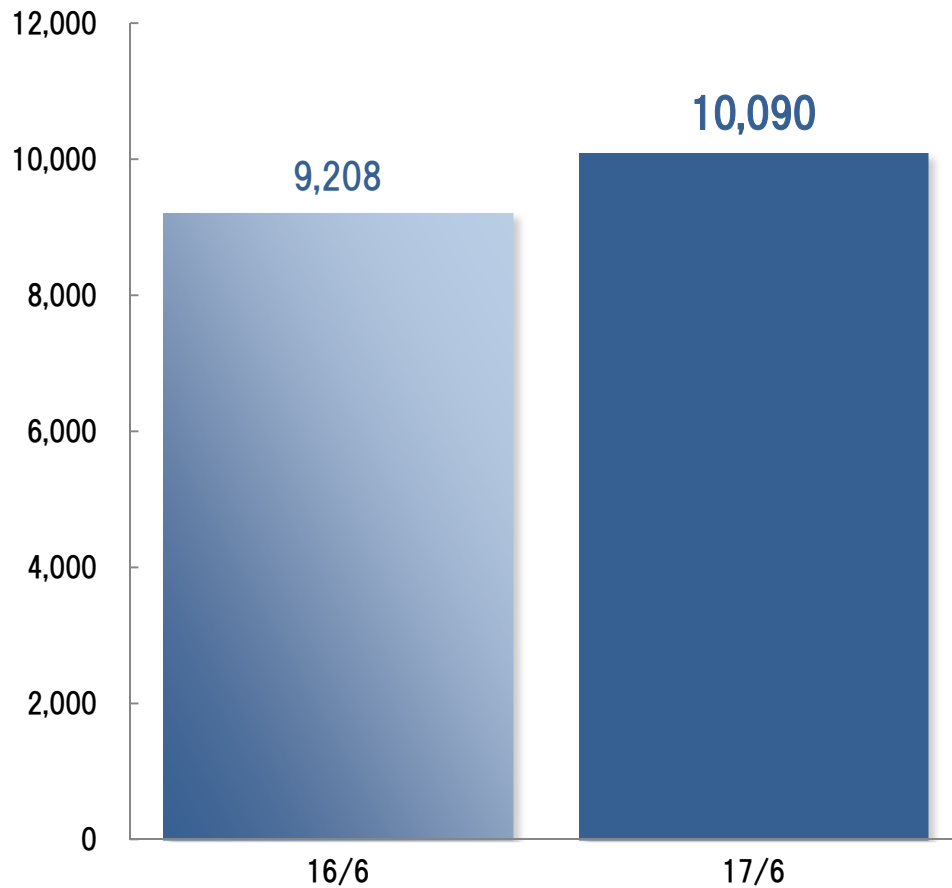digital signage,
direct mail delivery services,
in-ship advertising

1-4）General Printing Segment, and Other

ZENRIN
Maps to the Future

(Amounts in million yen)

General Printing Segment

Net Sales

Compared to
1Q of FY2017 — **Down 29 （-3.5%）**

- 16/6: 832
- 17/6: 803

Operating Income

Improved 19 （ー）

- 16/6: -41
- 17/6: -21

Other

Net Sales

Compared to
1Q of FY2017 — **Up 24 （2.1%）**

- 16/6: 1,122
- 17/6: 1,146

Operating Income

Downturn of 10 （ー）

- 16/6: 4
- 17/6: -5
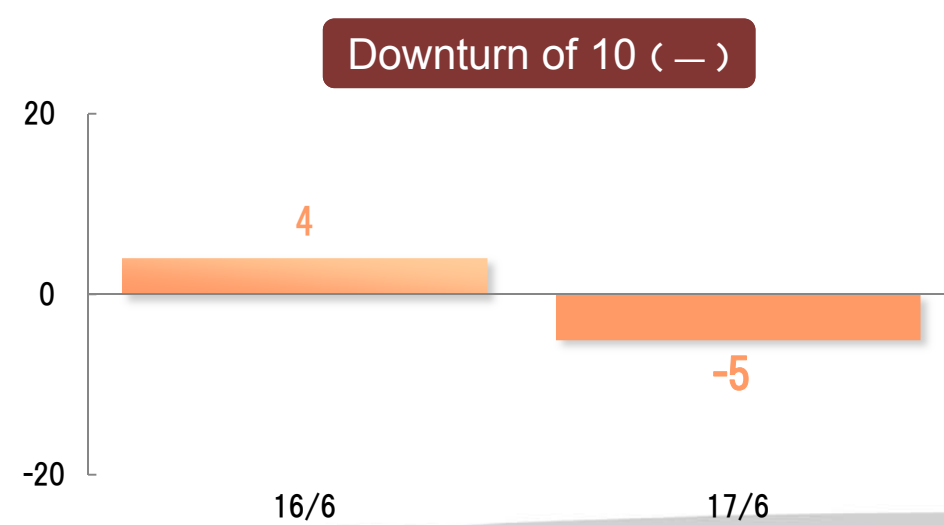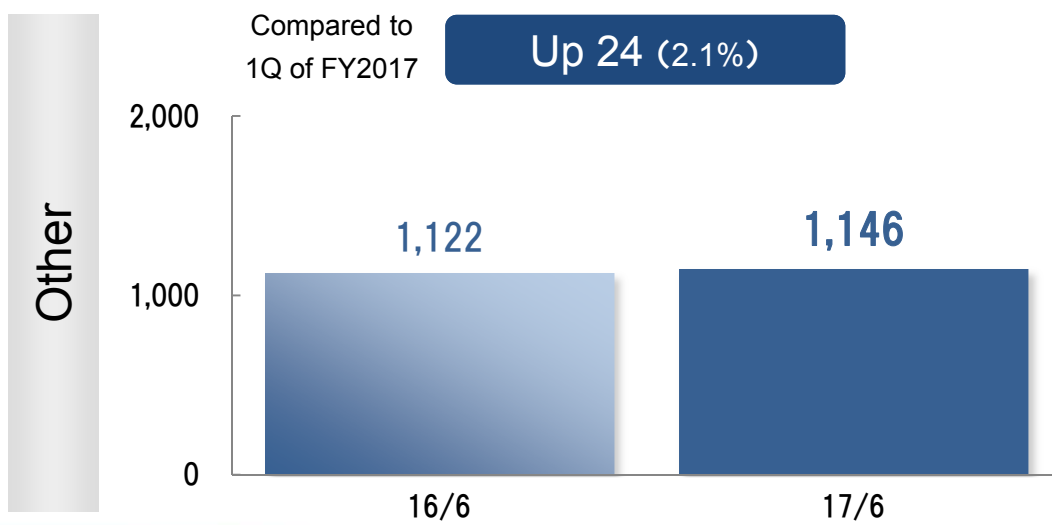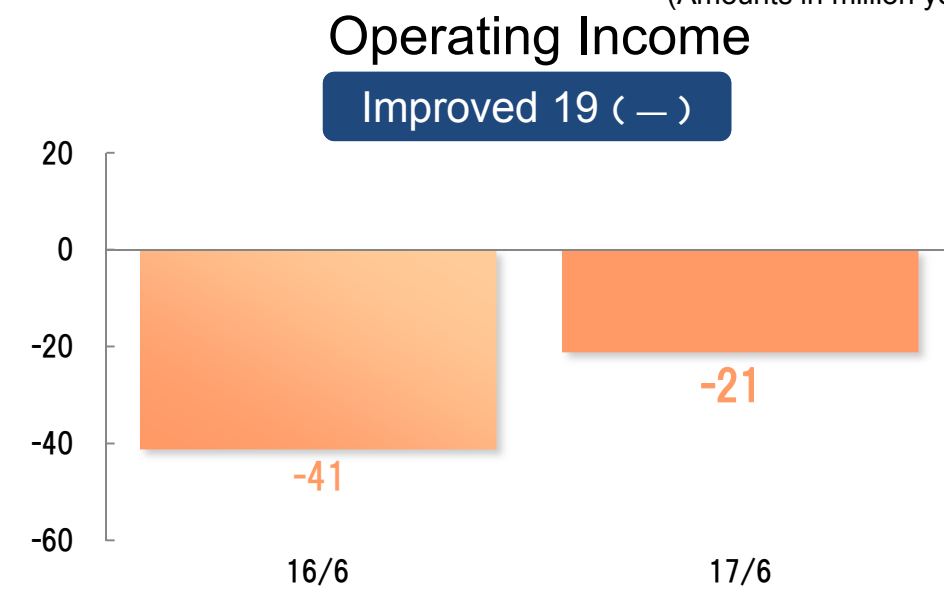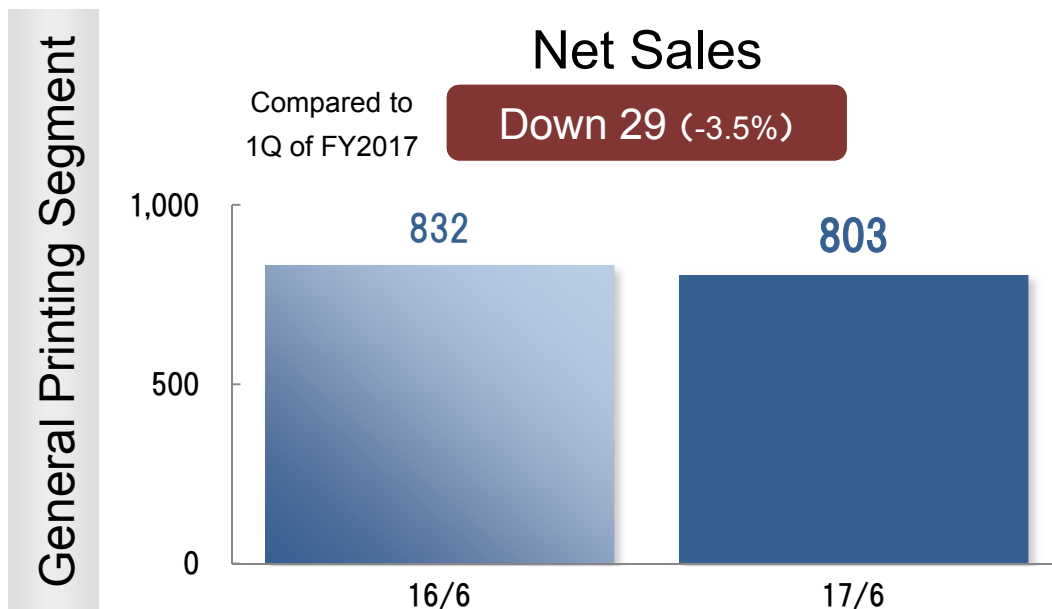
1-5） Net Sales by Business
under Medium- to Long-Term Business Plan ZGP2020

Results for First Quarter of Fiscal 2018

(Amounts in billion yen)

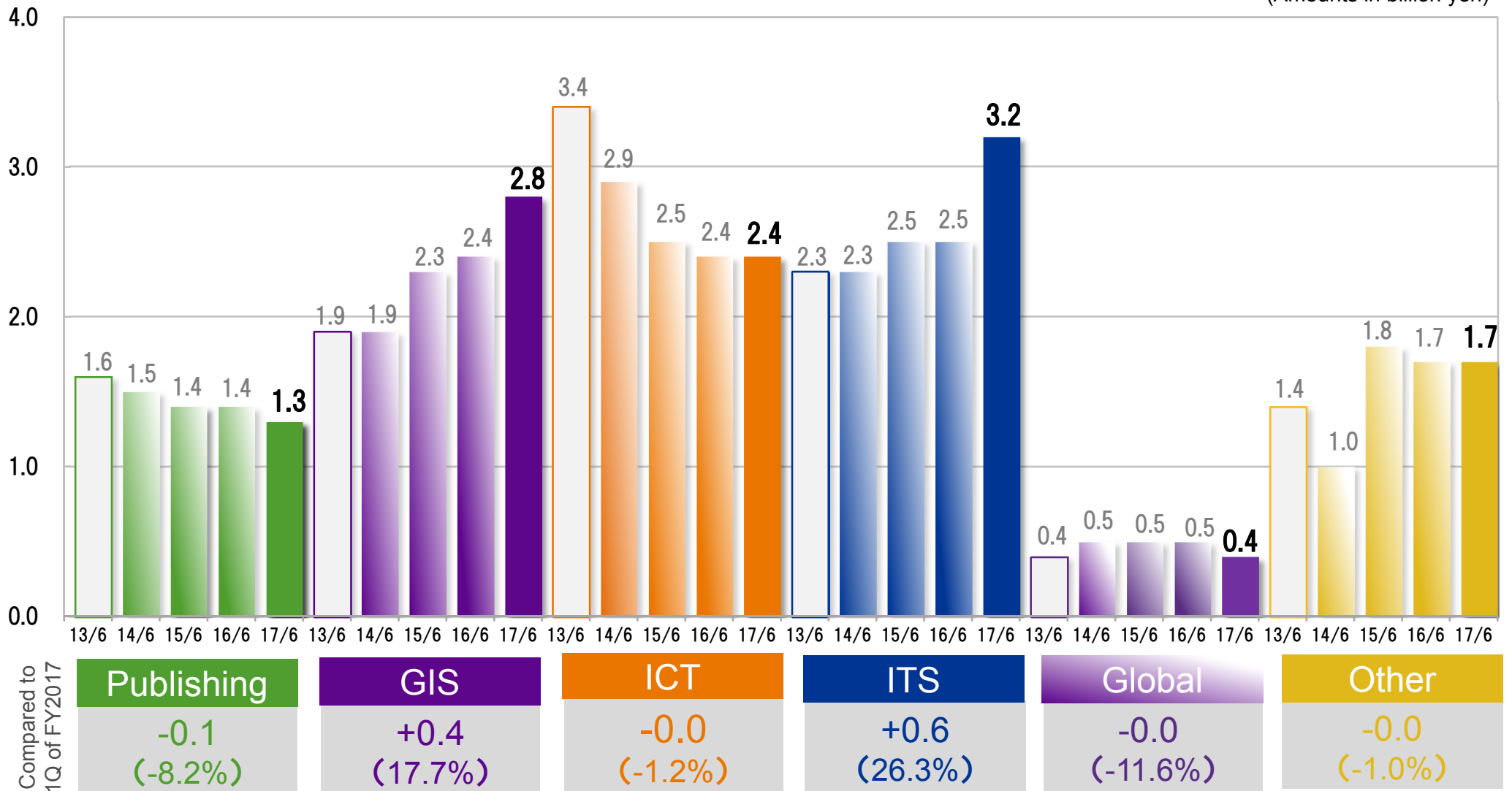|	Publishing	GIS	ICT	ITS	Global	Other
Compared to 1Q of FY2017	-0.1 (-8.2%)	+0.4 (17.7%)	-0.0 (-1.2%)	+0.6 (26.3%)	-0.0 (-11.6%)	-0.0 (-1.0%)

* Net sales for the first quarter of fiscal 2014 (period ended June 2013),
  which are the outlined open bars on the bar graph, are net sales compiled based on the business composition under ZGP2015.
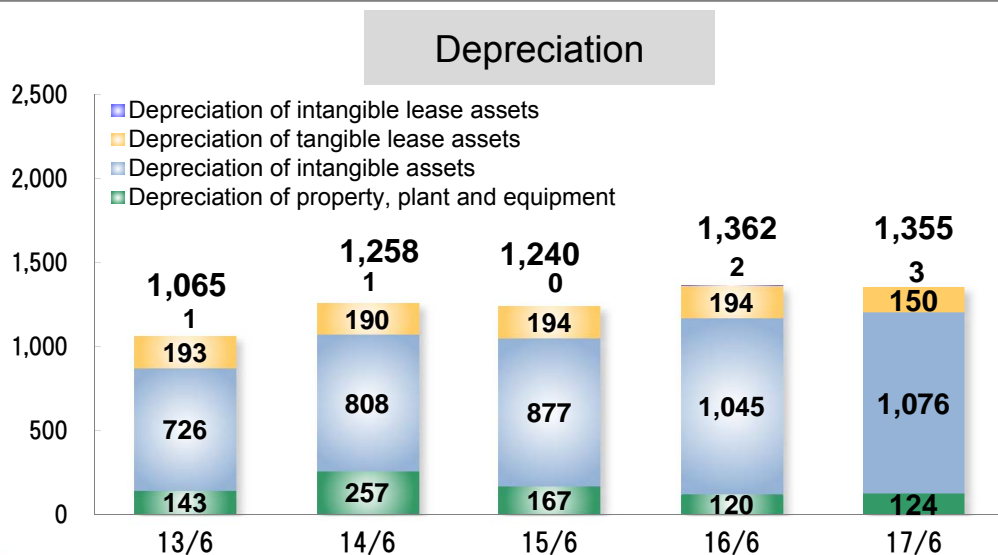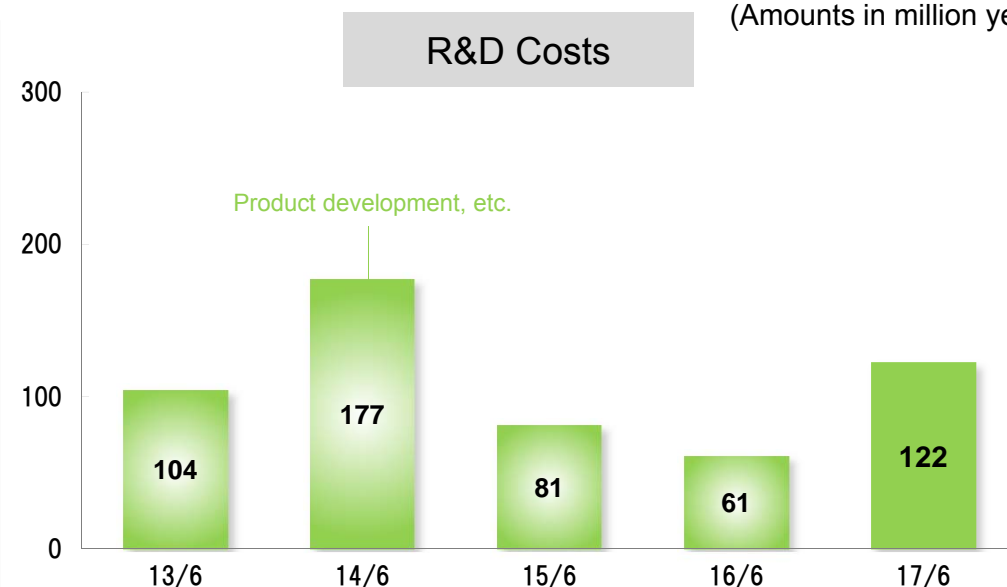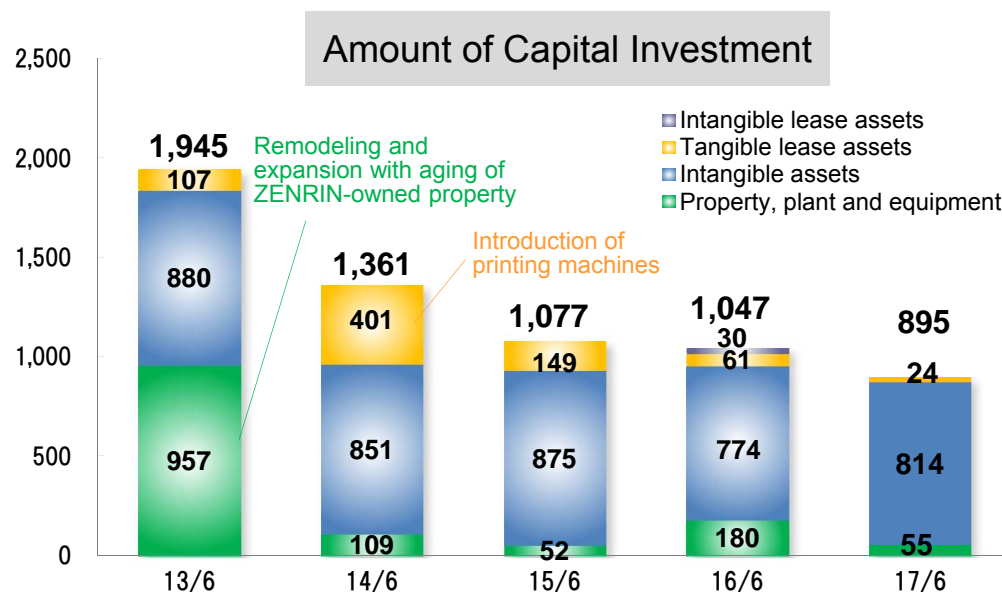
(Amounts in million yen)

Amount of Capital Investment

- Intangible lease assets
- Tangible lease assets
- Intangible assets
- Property, plant and equipment

Remodeling and expansion with aging of ZENRIN-owned property

Introduction of printing machines

1,945
107
880
957

1,361
401
851
109

1,077
149
875
52

1,047
30
61
774
180

895
24
814
55

13/6　14/6　15/6　16/6　17/6

R&D Costs

Product development, etc.

104
177
81
61
122

13/6　14/6　15/6　16/6　17/6

Depreciation

- Depreciation of intangible lease assets
- Depreciation of tangible lease assets
- Depreciation of intangible assets
- Depreciation of property, plant and equipment

1,065
1
193
726
143

1,258
1
190
808
257

1,240
0
194
877
167

1,362
2
194
1,045
120

1,355
3
150
1,076
124

13/6　14/6　15/6　16/6　17/6

2-2）Earnings Forecast for Fiscal 2018

(Amounts in million yen)

Earnings Forecast for First 2 Quarters of Fiscal 2018

	First 2Qs of FY2017 Actual	First 2Qs of FY2018 Forecast	Compared to First 2Qs of FY2017	% of Change
Net Sales	24,783	25,000	216	0.9
Operating Expenses	25,161	25,000	-161	-0.6
Operating Income Operating Margin	-378 -1.5%	0 —	378 —	— —
Ordinary Income	-207	0	207	—
Profit Attributable to Owners of Parent	-387	0	387	—

Earnings Forecast for Fiscal 2018

	FY2017 Actual	FY2018 Forecast	Compared to FY2017	% of Change
Net Sales	57,819	60,000	2,180	3.8
Operating Expenses	53,584	55,500	1,915	3.6
Operating Income Operating Margin	4,234 7.3%	4,500 7.5%	265 0.2pt	6.3
Ordinary Income	4,527	4,700	172	3.8
Profit Attributable to Owners of Parent	2,462	2,700	237	9.7

2-3）Net Sales by Business
bvb njunder Medium- to Long-Term Business Plan ZGP2020

(Amounts in billion yen)

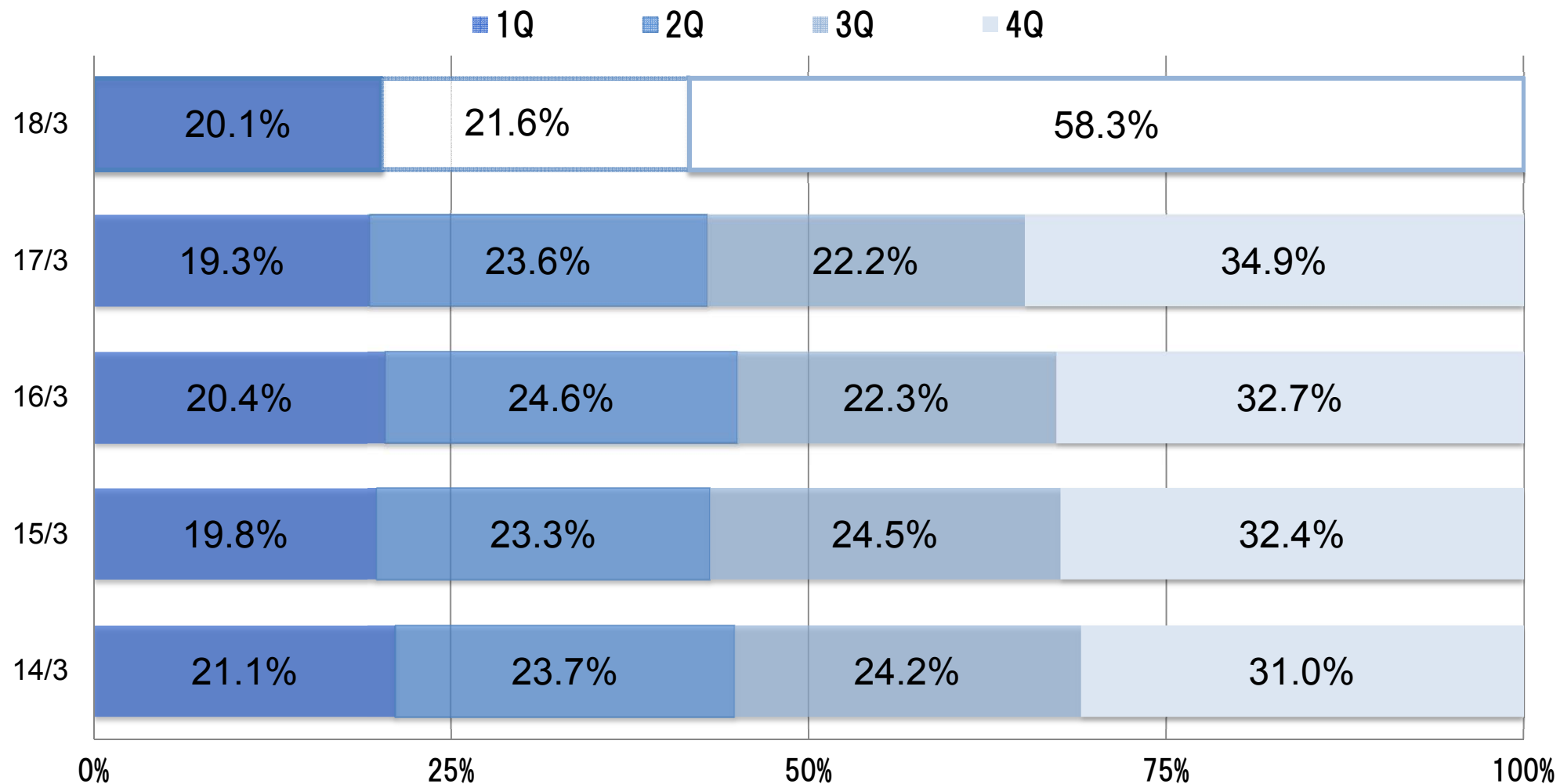| Compared to FY2017	Publishing	GIS	ICT	ITS	Global	Other
	-1.0 (-1.4%)	+1.7 (13.3%)	+1.3 (11.7%)	-0.5 (-3.8%)	+0.1 (4.4%)	-0.2 (-3.9%)
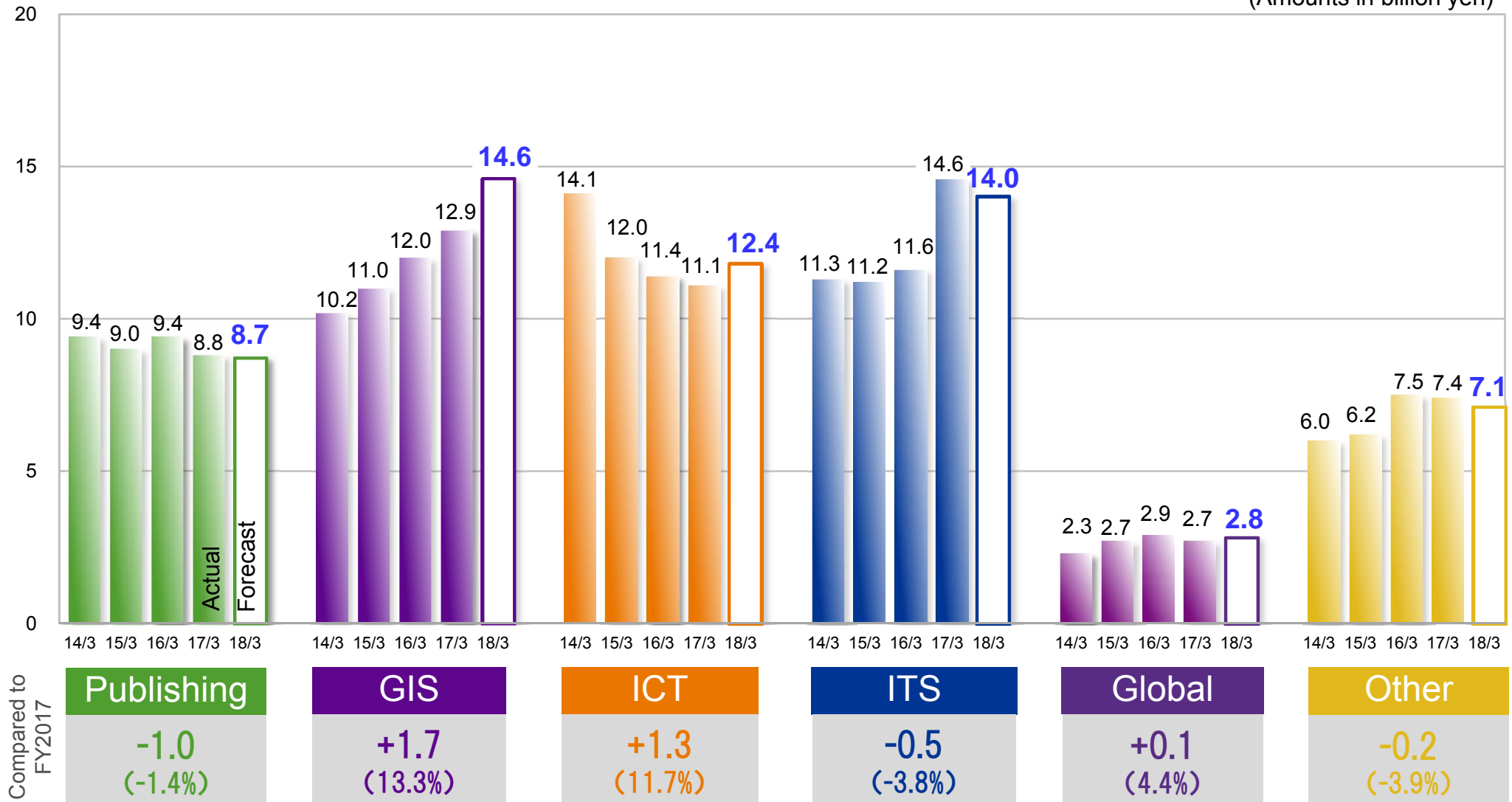
*Net sales for fiscal 2014 (year ended March 31, 2014) are net sales compiled based on the business composition under ZGP2015.

2-4）Changes in Composition of Net Sales by Quarter

Legend: ■ 1Q ■ 2Q ■ 3Q ■ 4Q

Year	1Q	2Q	3Q	4Q
18/3	20.1%	21.6%	58.3%	
17/3	19.3%	23.6%	22.2%	34.9%
16/3	20.4%	24.6%	22.3%	32.7%
15/3	19.8%	23.3%	24.5%	32.4%
14/3	21.1%	23.7%	24.2%	31.0%

■ Commencement of the provision of AI Infotainment Services　　　　　　　　（Announced on April 13, 2017）

　～ Will develop into a personalized car navigation system in conjunction with AI functions ～

ZENRIN DataCom, NTT DOCOMO, and the Company jointly developed and began providing AI Infotainment Services^{TM}, AI voice assistant services for automobiles, to car navigation system manufacturers and other corporations. The search engine necessary to use the maps and contents that the Company provides for car navigation systems and the AI technologies (natural-language dialogue technology, action anticipation technology, advanced information retrieval technology) were newly developed by ZENRIN DataCom and NTT DOCOMO, respectively.
The use of safe and convenient AI-based services is rendered possible by linking together car navigation systems, PND, various in-vehicle devices and smart phones.

<Image of AI Infotainment>
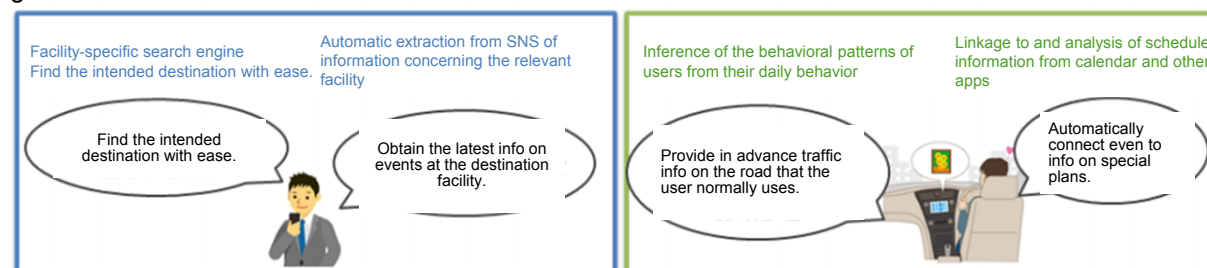
*1 "AI Infotainment Services" is a trademark of NTT DOCOMO.

*2 Infotainment is a term that was coined by the automotive industry from the words "information" and "entertainment".
The services are designed to provide both information and entertainment.

2-5）Business Topics
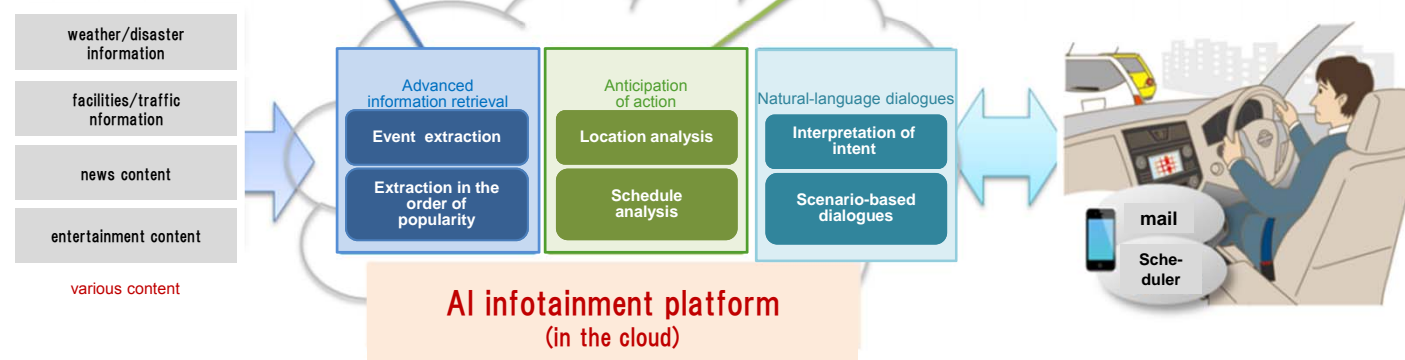
■ Acceleration of the drone project

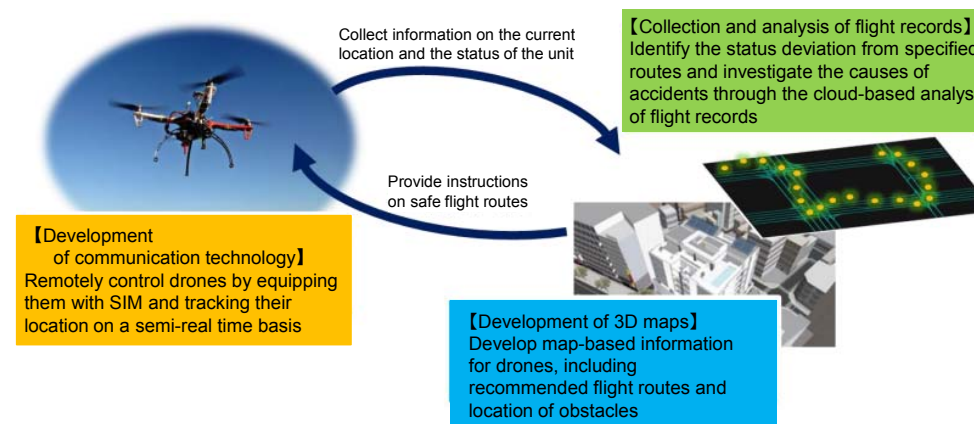~ Began demonstration tests for early realization of autonomous flights ~

The Company is working on the research and development of 3D aerial maps for the safe and secure navigation of self-flying drones, which are expected to be used for the resolution of social issues such as the delivery of materials to mountainous areas and remote islands as well as disaster response.
We are proactively promoting collaboration among the industry, government and academia, and participate in various projects. We have also commenced demonstration tests beginning this fiscal term.

(1) 3D Aerial Mapping Information Demonstration Project for the Early Realization of Safe Urban Flights by Drones

The Company's project won an award at the 2nd IoT Lab Selection sponsored by the Ministry of Economy, Trade and Industry and the IoT Acceleration Lab in July 2016 and was adopted by NEDO (New Energy and Industrial Technology Development Organization), an institution that supports the IoT Acceleration Lab. The Company and NEDO commenced demonstration tests with the cooperation of Kitakyushu City in order to test and evaluate the autonomous flight support system for drones utilizing 3D aerial maps. Based on the findings from the demonstration tests (conducted on June 2), we will continue to improve the system in an effort to achieve the early realization of autonomous flights in urban areas.

<Overview of the autonomous flight support system for drones that we are developing>

Collect information on the current location and the status of the unit

【Collection and analysis of flight records】
Identify the status deviation from specified routes and investigate the causes of accidents through the cloud-based analysis of flight records

Provide instructions on safe flight routes

【Development of communication technology】
Remotely control drones by equipping them with SIM and tracking their location on a semi-real time basis

【Development of 3D maps】
Develop map-based information for drones, including recommended flight routes and location of obstacles

(2) Project for the Realization of an Energy-Saving Society Where Robots and Drones Play an Important Role

The Company proposed the "development of an aerial information platform for the safe navigation of self-flying aircraft" in response to NEDO's solicitation for the above project and was adopted as a subsidy project. (decision made on May 16)
We will aim to "develop an operation control system and collision evasion technologies for self-flying aircraft" also in cooperation with other companies.
The development of robots and drones, research and development for the construction of operation systems, and demonstration tests utilizing the Fukushima Robot Test Field as well as other facilities are scheduled under this project.

2-5）Business Topics

■ Transition of DMP from a planning company to a business company　　　　　　（Announced on June 13, 2017）
　　~ Commenced development of High-Precision 3D Map Data for Automated Driving Systems ~

Dynamic Map Planning Co., Ltd. which was established in June 2016 with Zenrin, Pasco Corporation and Mitsubishi electric Corporation as the incorporators, has transitioned into Dynamic Map Platform Co., Ltd. a business company, and has begun developing data for all nationwide expressways and motorways with the goal of completing the work by FY2018. Dynamic Map Platform Co., Ltd also allocated new shares to third parties in order to strengthen the structure for the continuation of business.

source：Dynamic Map Platform Co., Ltd.
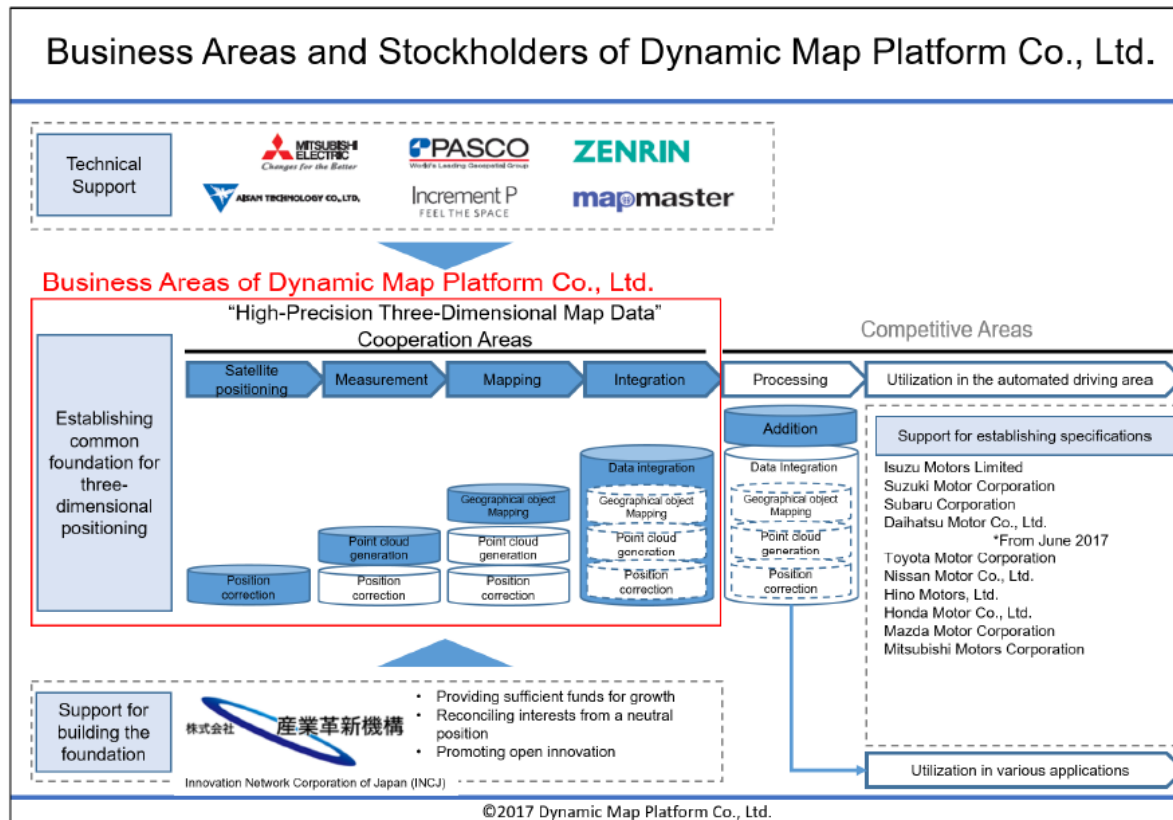
Stockholders of Dynamic Map Platform Co., Ltd.

Company name	Investment ratio
Innovation Network Corporation of Japan	33.50%
Mitsubishi Electric Corporation	14.00%
ZENRIN CO., LTD.	12.00%
PASCO CORPORATION	12.00%
AISAN TECHNOLOGY CO., LTD	10.00%
INCREMENT P CORPORATION	8.00%
TOYOTA MAPMASTER INCORPORATED	8.00%
Isuzu Motors Limited	0.25%
SUZUKI MOTOR CORPORATION	0.25%
SUBARU CORPORATION	0.25%
DAIHATSU MOTOR CO., LTD.	0.25%
TOYOTA MOTOR CORPORATION	0.25%
NISSAN MOTOR CO., LTD.	0.25%
HINO MOTORS, LTD.	0.25%
HONDA MOTOR CO., LTD.	0.25%
Mazda Motor Corporation	0.25%
MITSUBISHI MOTORS CORPORATION	0.25%

ZENRIN
Maps to the Future