



Yokogawa Bridge Holdings Corp.

Sixth Medium-Term Management Plan (FY2022-FY2024)

– Moving into the Next Phase of Growth –



May 20, 2022

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Corporate philosophy

Contribution to society and the public, and sound management

Management vision

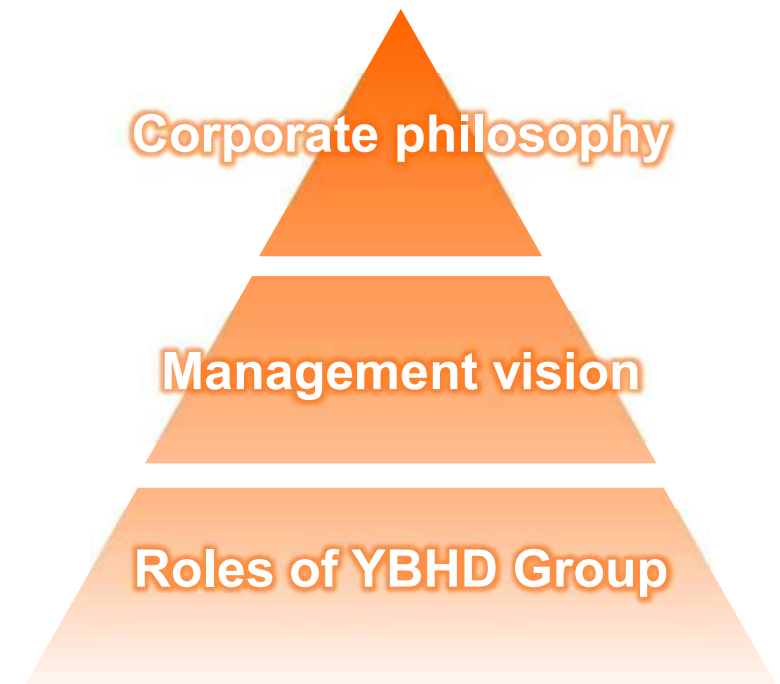
Realization of

- **long-term protection of bridges**
- **multifaceted steel structure engineering**
- **creation of a resilient social environment and harmonious coexistence with the natural environment**
- **construction of a robust operational foundation**

as well as the pursuit of sustained expansion

Roles of YBHD Group

- Creating value for society and the public by building and protecting high-quality products and connecting them to future generations
- Contributing to the improvement of regional convenience and the development of social life and logistics through infrastructure development
- Contributing to and driving the development of each business segment as a leading company
- Contributing to the development of the human talent that underpins national and regional economic development by transferring technology and knowledge through our overseas business



2. Review of Fifth Medium-Term Management Plan (1):

Sales and Operating Profit

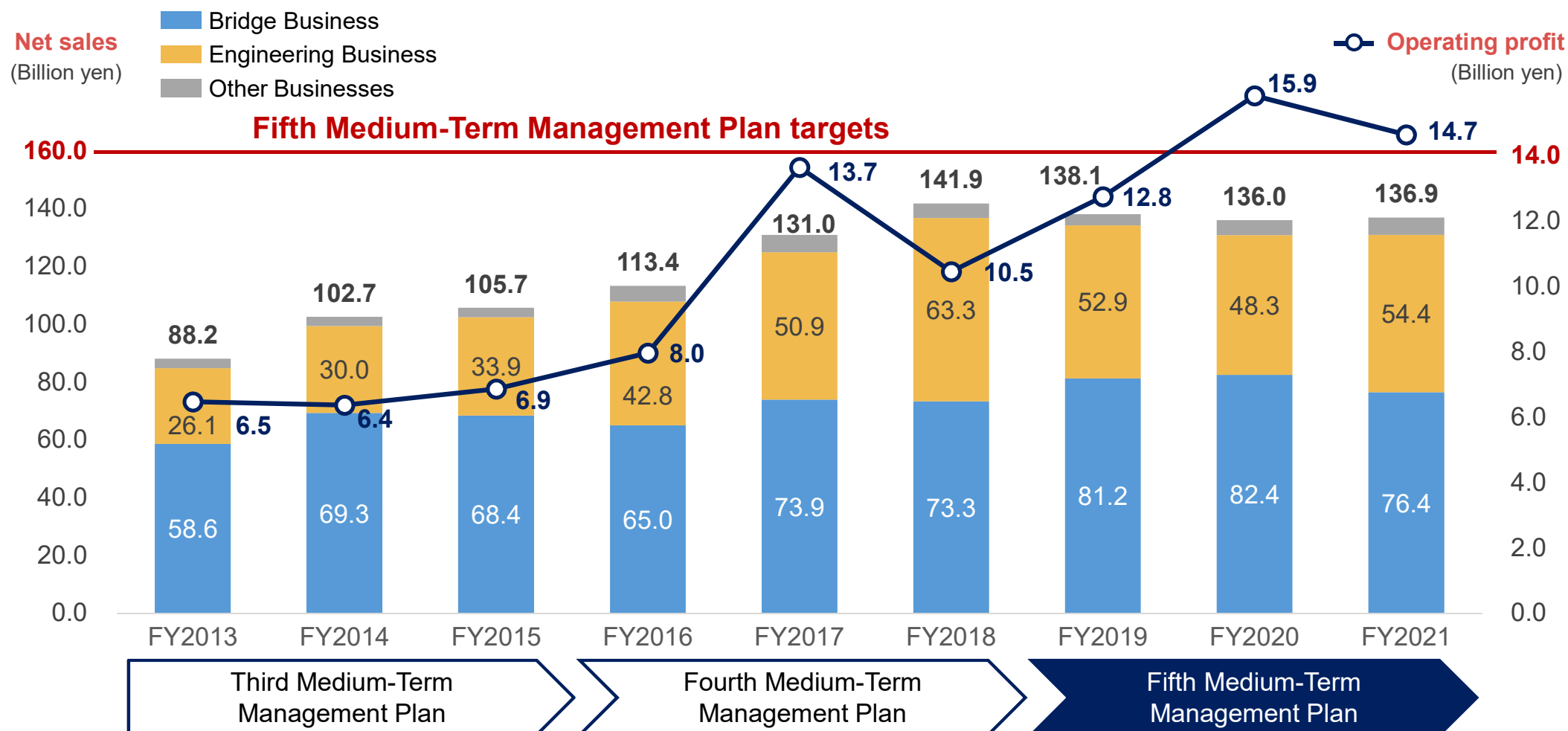


Despite changes in the business environment since the plan was formulated, we achieved the operating profit target one year early by conducting business activities in line with the plan's basic policy.

FY2021 performance targets

Net sales **¥160.0 billion**
Operating profit **¥14.0 billion**

EPS **¥230**
ROE **8% or higher**



2. Review of Fifth Medium-Term Management Plan (2):

EPS and ROE



Earnings per share (EPS) surpassed the plan's ¥230 target one year early

Return on equity (ROE) is trending around 10%, above the plan's target of 8% or higher

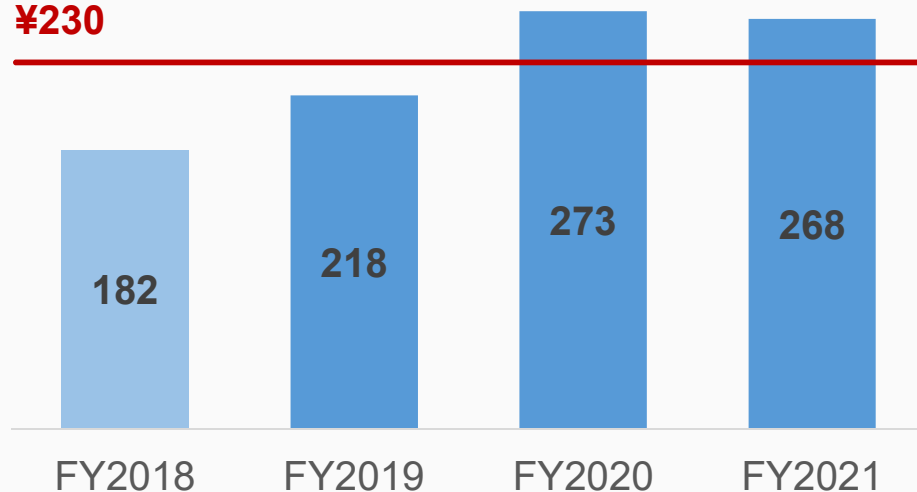
FY2021 performance targets

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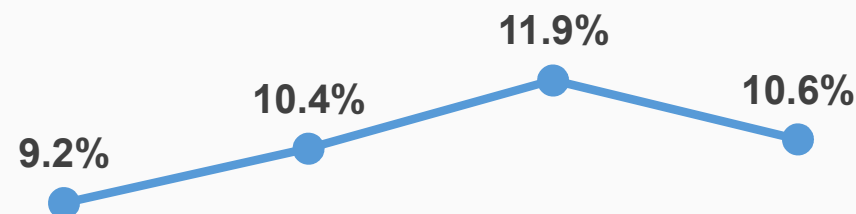
Earnings per share (EPS) (Yen)

**Fifth Medium-Term Management Plan targets:
¥230**



Fifth Medium-Term Management Plan

Return on equity (ROE)



**Fifth Medium-Term Management Plan targets:
8% or higher**

FY2018 FY2019 FY2020 FY2021

Fifth Medium-Term Management Plan

2. Review of Fifth Medium-Term Management Plan (3):

Progress vs. Goals











The engineered structure system business, which is on track to become a second key source of earnings, missed its targets; the core bridge business secured major bridge construction and maintenance orders, and other segments broadly achieved their targets.

Basic policy	Progress and Attainment
1 Optimize and maintain growth in the bridge business by reinforcing maintenance business to complement new construction work	✓ Strong orders for new bridge construction and maintenance, such as projects to expand highways to four lanes and major upgrade projects; performance outpaced targets, with record earnings and orders in FY2020
2 Establish a dual-plant framework and strengthen profit-loss management to drive further growth in the engineered structure system business	✓ Work on establishing the dual-plant system generally proceeded as planned; orders started recovering in 2H FY2021, but earnings underperformed targets due to the impact of the COVID-19 pandemic
3 Further expand the civil engineering steel structure engineering business, as exemplified by tunnel segments	✓ Earnings missed targets due to sluggish orders and production, reflecting delays to work schedules for shield tunneling projects
4 Expand the overseas bridge, aluminum products, and precision equipment manufacturing businesses	✓ The overseas bridge business was weak due to the COVID-19 pandemic, but earnings were firm in aluminum products and precision equipment manufacturing

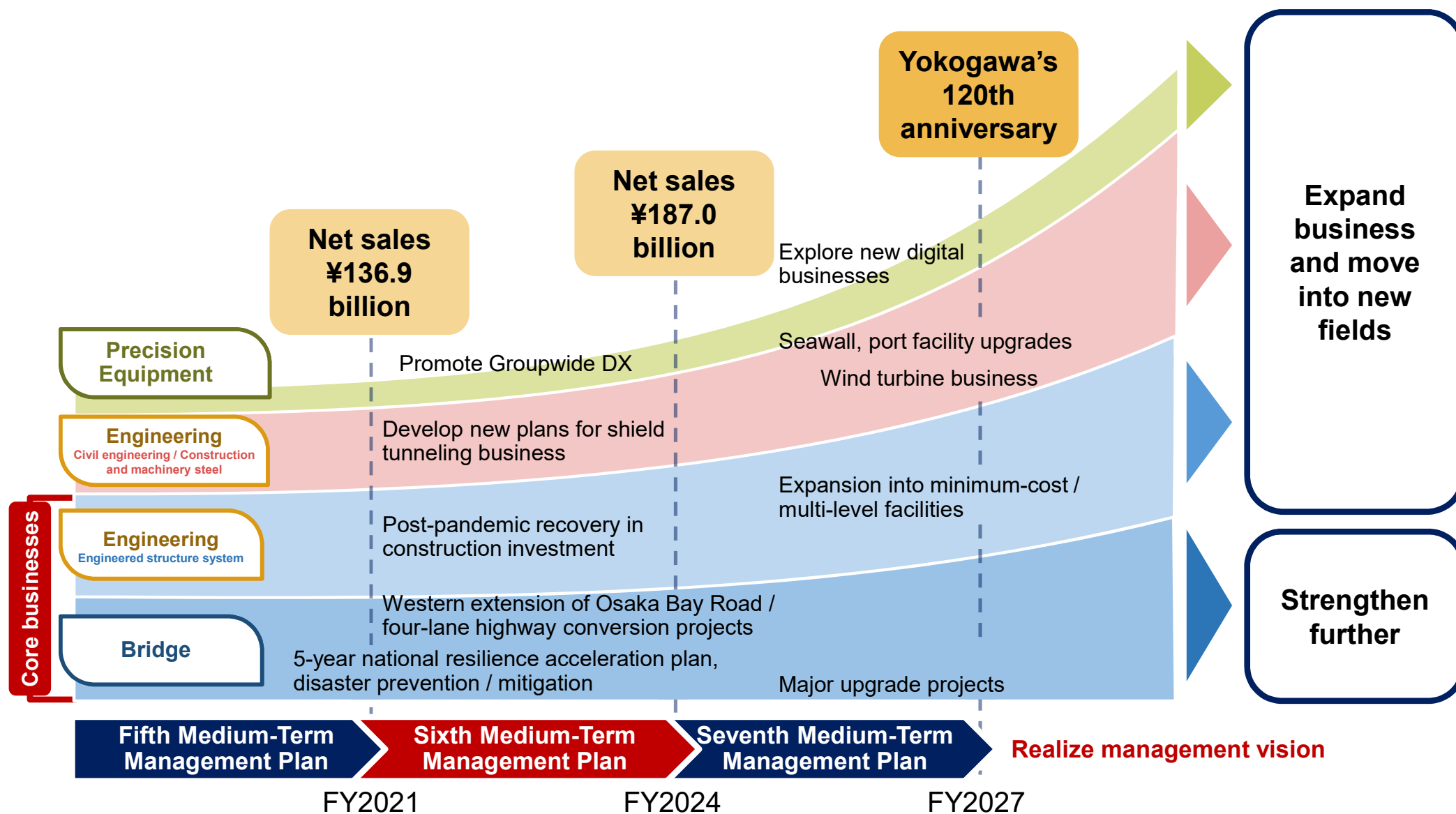
3. Business Environment and Longer-Term Vision (1)

The business environment is likely to remain positive for the Group; we forecast expansion in the bridge construction market over the next three years and longer-term growth in civil engineering demand, supported by projects related to national resilience, disaster prevention and mitigation, and carbon neutral strategies

Segment		Medium term	Long term
Bridge		 Growth in new construction order volume, driven by projects to expand highways to four lanes and the start of orders for the western extension of the Osaka Bay Road	 Moderate decline in new construction order volume; continued steady level of maintenance projects such as earthquake-proofing and major upgrade work
Engineering	Engineered structure system	 Private sector investment contracted due to the pandemic, but the market is recovering on moves to bring supply chains back to Japan	 Rising investment in warehouse and logistics facilities spurred by growth in the e-commerce market, as well as upgrades to aging facilities and consolidation / redevelopment of existing facilities
	Civil engineering / Construction and machinery steel	 Firm demand for tunnel segments, supported by planning and implementation of major infrastructure projects such as the maglev Chuo Shinkansen high-speed rail line	 Increase in demand in the carbon neutral-related market for civil engineering steel structures such as wind turbines
Precision Equipment		 Flat demand in the mainstay market for LCD and OLED panel manufacturing equipment	 Continued growth in demand for semiconductor production equipment
Key themes for the Group		(1) Tackle ESG issues	(2) Implement DX
		(3) Address labor shortage	(4) Eliminate serious workplace incidents / accidents

3. Business Environment and Longer-Term Vision (2)

The Sixth Medium-Term Management Plan is positioned as a period to build the foundations for realizing our management vision.



4. Basic Policy of Sixth Medium-Term Management Plan

<Basic Policy> Build a Highly Resilient Business Base

(1) Further reinforce core businesses

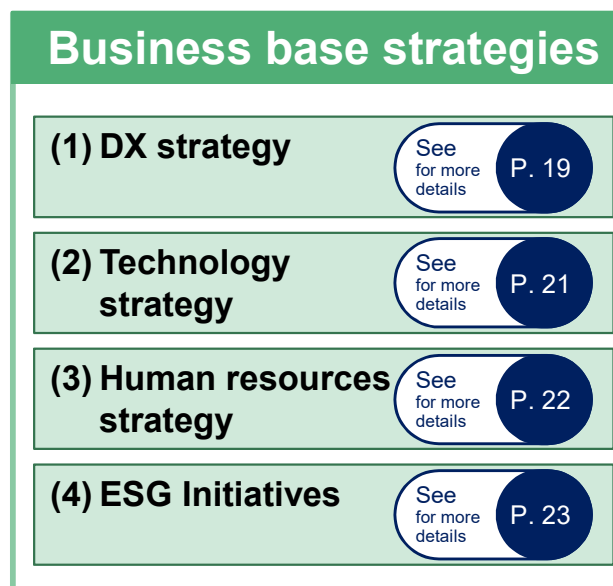
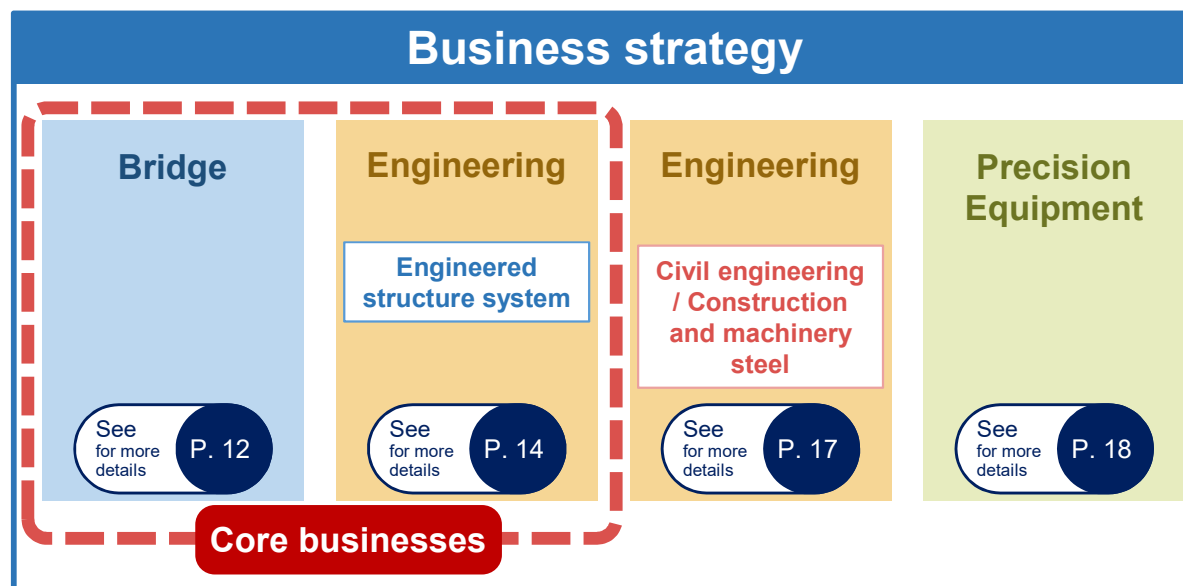
Bridge business: Reinforce maintenance services, secure orders for major new projects
Engineered structure system business: Develop various management systems to improve coordination between orders and production, and make additional capital investments to improve productivity

(2) Create and develop diverse businesses

Move into new business fields such as seawall / port facility upgrades, wind power generation

(3) Establish a robust business base for the next 100 years

Develop new materials, construction methods and other technologies with low environmental impact, promote wider use of renewable energy, double investment in IT, accelerate DX measures



5. Sixth Medium-Term Management Plan: Earnings Targets (1)



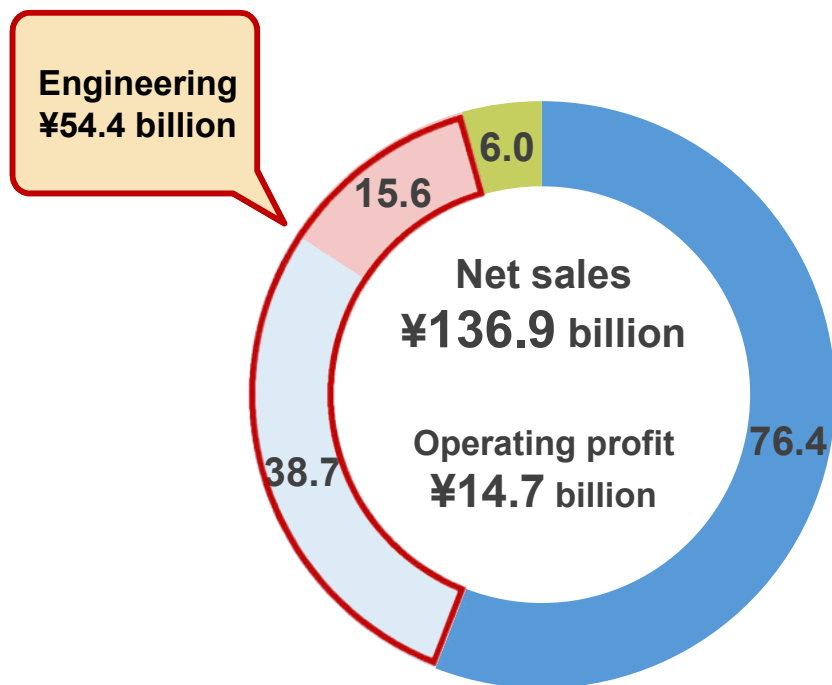
	Fifth Medium-Term Management Plan				Sixth Medium-Term Management Plan
	FY2021 targets	FY2019 results	FY2020 results	FY2021 results	FY2024 targets
Net sales (billion yen)	160.0	138.1	136.0	136.9	187.0
Operating profit (billion yen)	14.0	12.8	15.9	14.7	18.3
EPS (yen)	230	218	273	268	290
ROE	8% or higher	10.4%	11.9%	10.6%	9% or higher

* Cost of equity assumption is roughly 7.3%

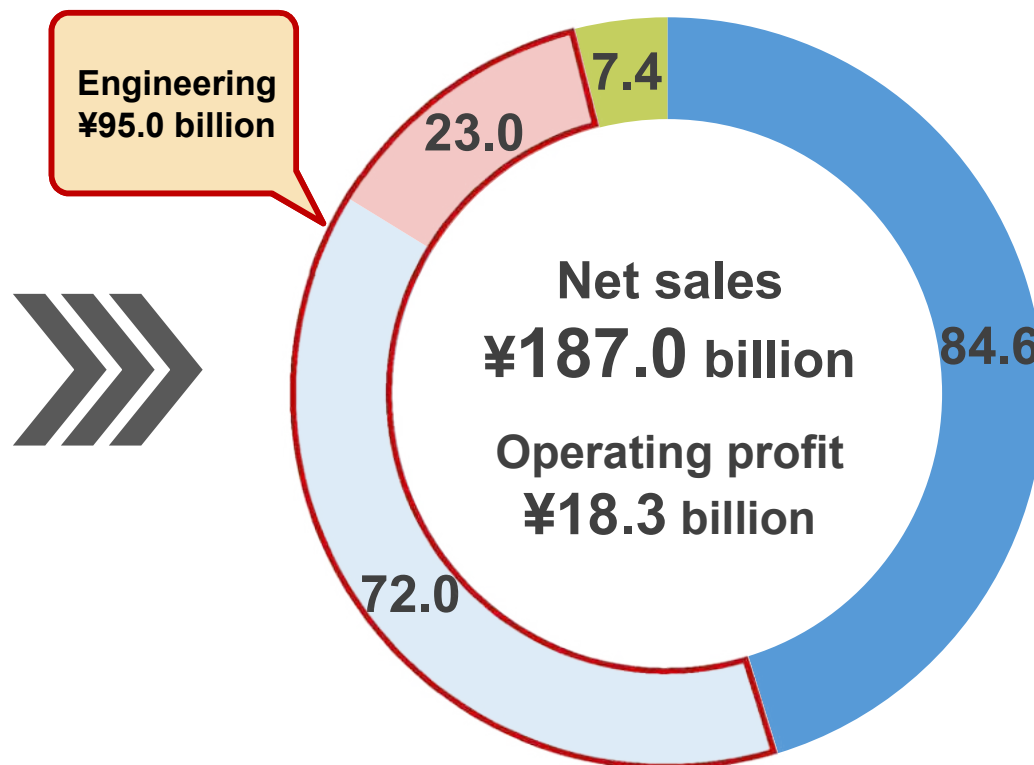
5. Sixth Medium-Term Management Plan: Earnings Targets (2)

We aim to sharply increase earnings by expanding the bridge business and the engineered structure systems business.

**Net sales by segment
(FY2021)**



**Net sales by segment
(FY2024)**



■ Bridge

■ Engineering

- Engineered structure system
- Civil engineering /
Construction and machinery
steel

■ Precision Equipment, other

6. Capital Policy

We will continue to pay stable dividends while also increasing shareholder returns by raising the target dividend payout ratio (to 30% or higher) and buying back shares, to maintain and increase ROE.

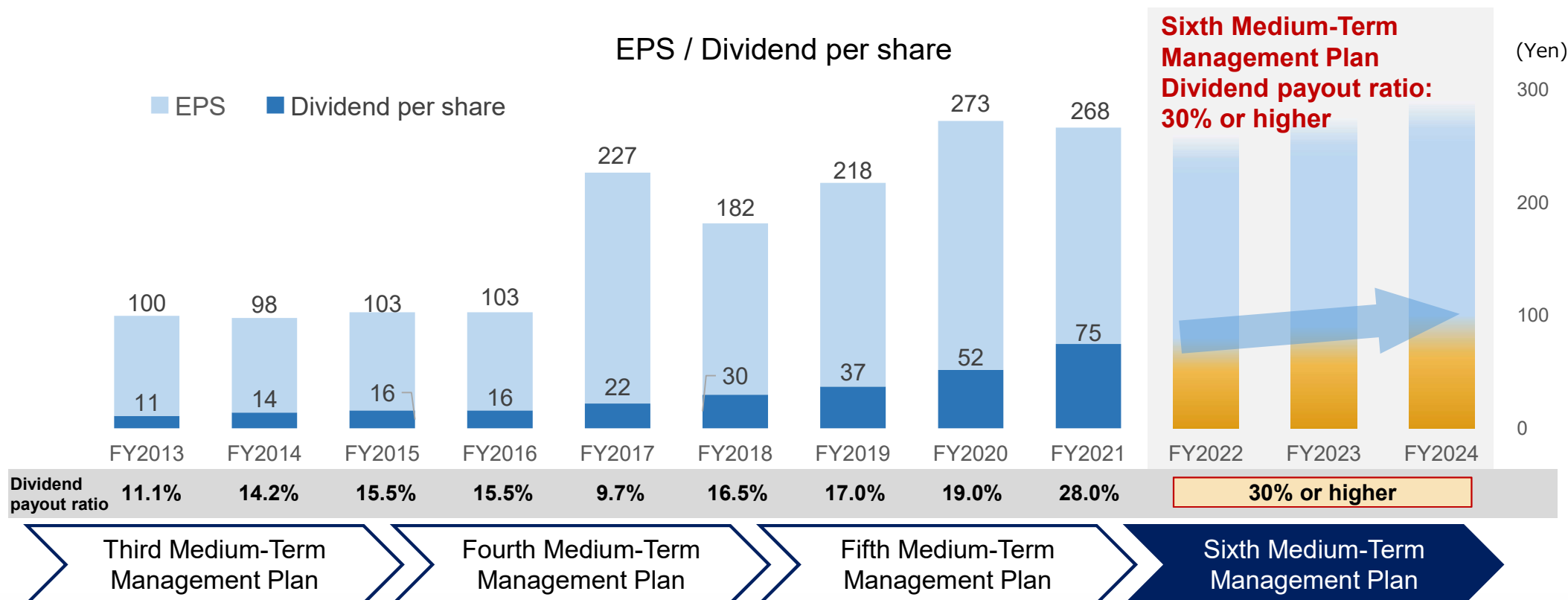
Capital policy and shareholder returns

The basic goal of our capital policy is to balance sound finances with capital efficiency. We also aim to maintain dividend increases based on a payout ratio target of 30% or higher, and buy back a certain amount of shares depending on conditions.

Cross shareholdings

Yokogawa holds shares in other companies (cross shareholdings) when doing so is deemed beneficial to increasing corporate value over the medium and long term by maintaining and strengthening business relationships and business alliances.

We are working to further reduce cross shareholdings based on dialogue with the companies in which Yokogawa holds shares.



7. Business Strategy (1)

(Bridge Business: Basic Policy and Initiatives)

Policy

- Focus on securing orders for major new bridge projects starting in the next few years; also, with the new-build market likely to contract in future, strengthen the bridge maintenance business to capture emerging demand for aging infrastructure repair work
- Implement DX to achieve the new “3K” (kyuryo [wages], kyuka [time off] and kibo [prospects]) for construction workers, and reinforce safety measures

Business environment

- Projects to expand highways to four lanes, ramping up orders for western extension of Osaka Bay Road
 - ➔ **Projected large increase in order volume for the new bridge construction business**
- Ongoing major upgrade projects, mainly centered on expressway operators, etc.
 - ➔ **Sustained strong levels of demand in the bridge maintenance business**

Initiatives

- Address engineer shortage, improve productivity
 - ➔ **Wider use of ICT (improve worksite efficiency, secure capacity in design departments, etc.)**
- Tackle more technically challenging projects (earthquake-proofing truss and arch bridges)
 - ➔ **Actively respond to demand, including through tie-ups with other companies**
- Use large upgrade projects etc. to stand out in the market
 - ➔ **Develop upgrade technology / processes**
- Develop technologies that help to reduce environmental impact
 - ➔ **Development work or new materials that reduce construction times, such as precast components, accelerated engineering processes**

Bridge Business net sales



7. Business Strategy (2)

(Bridge Business: Maintenance Business Operating Environment)



Large-scale upgrade and maintenance projects - projected market of ¥3 trillion

Deck replacement, girder replacement, etc.

Maintenance work such as reinforcement of bridge piers, girders, decks

Functional improvements such as road widening, addition of connecting roads

East Nippon, Central Nippon, West Nippon Expressway Companies

Large-scale upgrade and repair projects (girder and deck replacement, girder reinforcement) worth roughly ¥2.2 trillion

Metropolitan Expressway Company

Large-scale upgrade and repair projects (bridge replacement, widening, deck replacement, deck, pier and girder reinforcement) worth roughly ¥630 billion

Hanshin Expressway Company

Large-scale upgrade and repair projects (deck replacement, deck, pier and girder reinforcement) worth roughly ¥370 billion

Ministry of Land, Infrastructure and Transport (existing bridges)

Replacement of reinforced-concrete decks: around 2,100 bridges, repair steel decks: 370 bridges

Five-year program to accelerate disaster prevention / mitigation and national resilience set to get underway

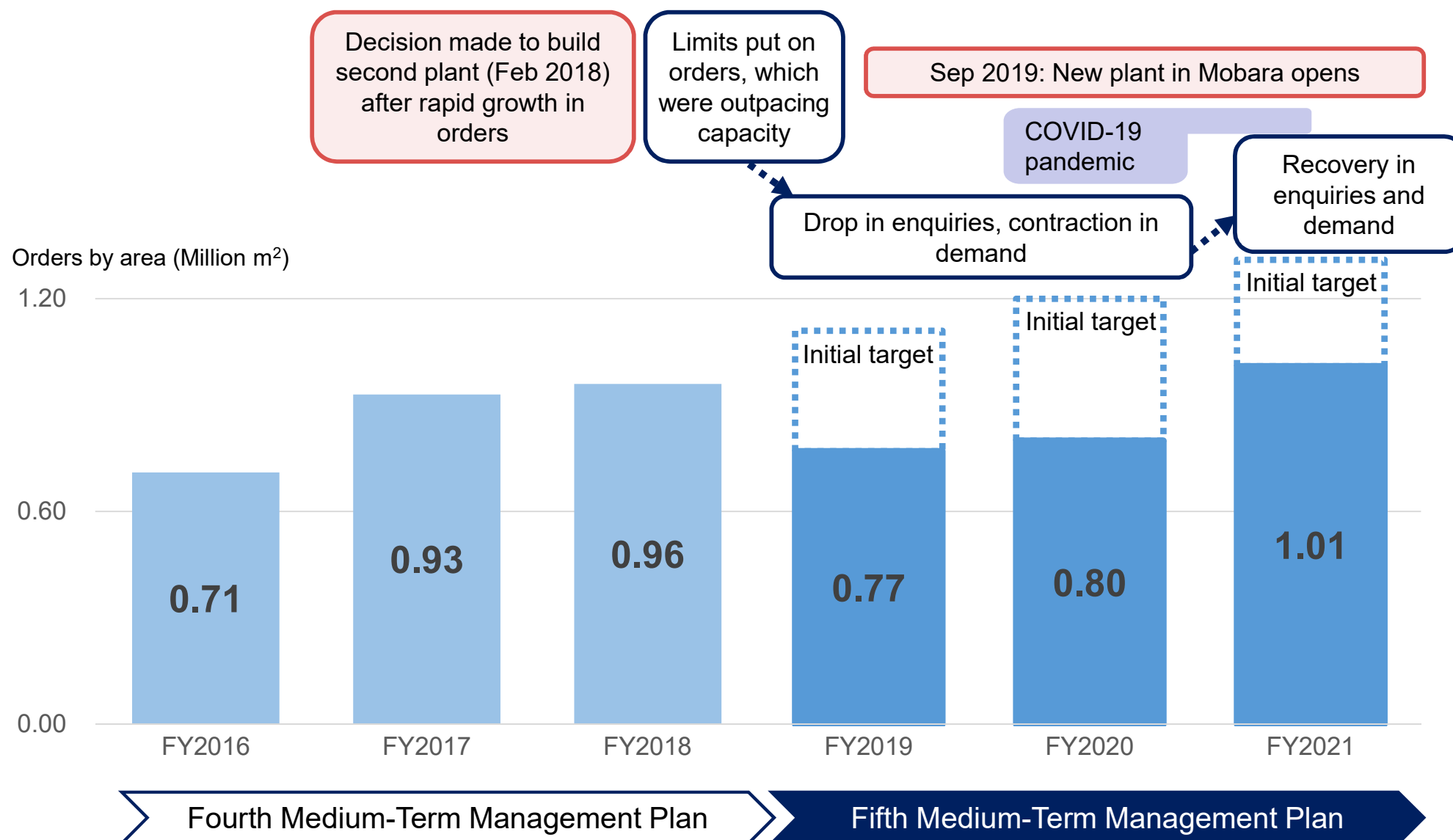
7. Business Strategy (3) (Engineering Business)

Engineered
structure
system

Fifth Medium-Term
Management Plan
Review



Sharply underperformed targets in plan's first two years due to limits put on orders and project delays caused by the pandemic; orders recovered from 2H FY2021, with 4Q order volume reaching record levels



7. Business Strategy (4) (Engineering Business)

Engineered
structure system

Market Trends
and Targets

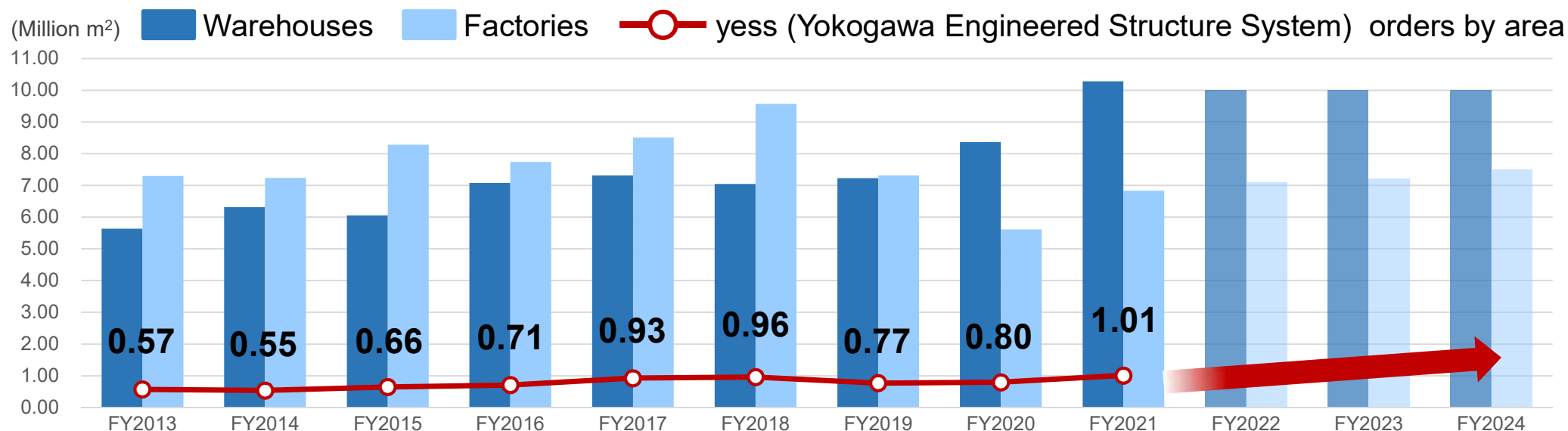


Trends in construction starts by area

- Construction of warehouses with rampways continue to lift overall construction start area and demand for low-rise warehouses also still firm; demand for factories clearly recovering on normalization of economy, return of offshore manufacturing to Japan

Targets

- Secure orders for more than 1.3 million m² by steadily promoting adoption of engineered structure system construction for low-rise warehouses and factories



Source: Statistics of Building Construction Starts Report

Order area compiled from "Number of buildings and floor area by structure, application and size (steel frame)," "Factories and workshops," and "Warehouses."

Actual

Forecasts

Third Medium-Term
Management Plan

Fourth Medium-Term
Management Plan

Fifth Medium-Term
Management Plan

Sixth Medium-Term
Management Plan

7. Business Strategy (5) (Engineering Business)

Engineered
structure system

Basic Policy and
Initiatives



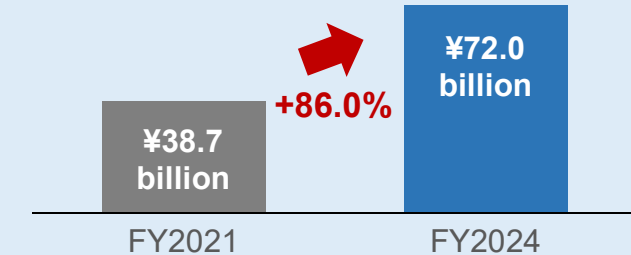
Policy

- Targeting annual orders of at least 1.3 million m² by expanding orders and production
- Achieve the above target by using ICT etc. to drive DX

Initiatives

- Initiatives to increase market share
 - ➔ Step up proposal-based marketing (identify customer needs, develop proposals that combine sales and technology)
 - ➔ Lower prices (reduce costs by introducing ICT across all divisions)
 - ➔ Shorten construction times (adopt new engineering processes and project management systems)
- Reinforce plant and worksite production systems
 - ➔ Improve coordination between dual-plant system (Mobara, Chiba) and other Group plants
 - ➔ Expand worksite support activities, identify and foster new partner companies
- Use ICT to improve productivity
 - ➔ Develop sales management and production management systems to improve business efficiency and productivity

Engineering Business (Engineered structure system) net sales



7. Business Strategy (6) (Engineering Business)

Civil engineering /
Construction and
machinery steel



Policy

- In the civil engineering business, continue to secure orders and production work for tunnel segments and make preparations to move into new areas such as seawalls, port facility upgrades and wind turbines

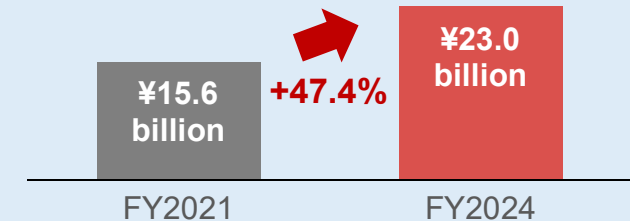
Business environment

- Continued growth in demand for deep underground tunnels in major cities
 - ➔ **Tokyo: Haneda Airport Access line, maglev Shinkansen lines; Osaka: Naniwasuji line, etc.**
- Wind power market expected to expand, spurred by carbon-neutral initiatives
- Many port facilities in Japan have aging bridge-type piers approaching the end of their lifespan
- In the construction market, many redevelopment projects and special large-scale projects (sports stadiums, etc.) are in the pipeline, mainly in large cities

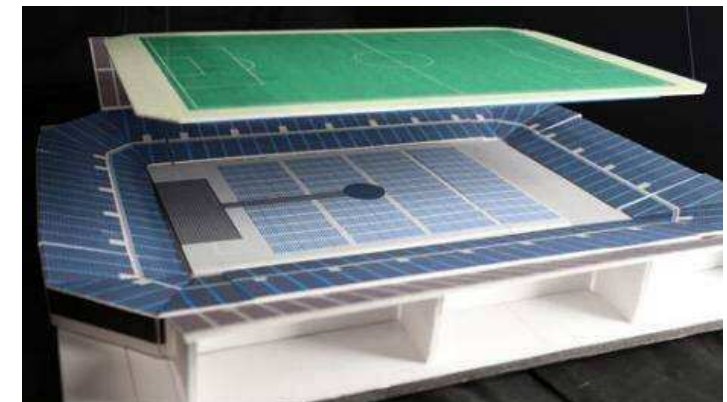
Initiatives

- Win tunnel segment orders using strengths of new products developed with proprietary technologies
 - ➔ **Develop new types of tunnel segment for soil remediation projects that utilize underground spaces**
- Develop new technologies to rapidly launch businesses in new fields with good growth prospects, such as wind power generation and port facility upgrades
 - ➔ **Step up efforts to capture demand for tsunami protection projects, including precast concrete seawalls**
- Continue to target special construction projects such as redevelopment work and sports stadiums

Engineering Business (Civil engineering / Construction and machinery steel) net sales



Expressway tunnels



Phovare – Pitch Hovering Arena

7. Business Strategy (7) (Precision Equipment Business / New Businesses)

Policy

- The advanced technology business will step up efforts in semiconductor production equipment, demand for which continues to grow, and in panel manufacturing equipment; the information processing business will support the Group's DX strategy and digitization, and maintain and expand sales of existing software
- In new businesses, we will leverage proprietary technology, develop new technology using the latest advances, and explore new business opportunities

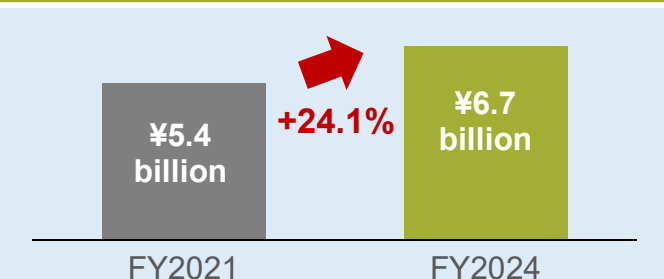
Business environment

- Demand for LCD / OLED panel manufacturing equipment is flat
Semiconductor production equipment likely to see continued modest growth
- Aiming to use DX to gain competitive advantages in the Group's business fields
- Uncover dormant potential in the Group (needs and business seeds) to support new businesses

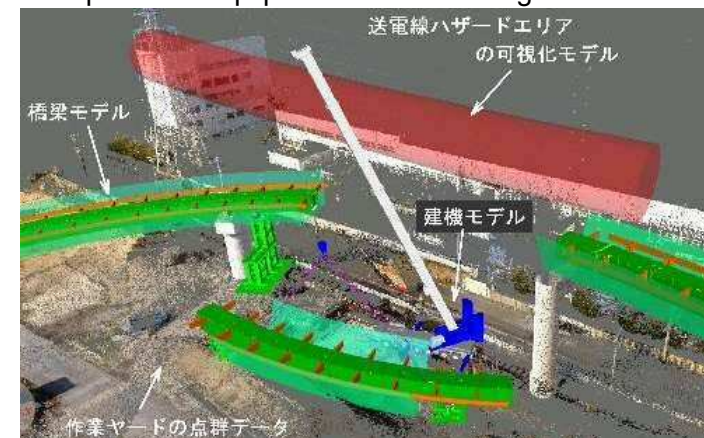
Initiatives

- In the advanced technology business, continue to put forward technological ideas for high-end products, and actively target production of high-volume products
- Continue to develop software that realizes i-Construction
- Explore alliances in business fields where Yokogawa has limited experience

Precision Equipment Business (Precision equipment manufacturing / Information processing) net sales



Highly damped structures – product made by the precision equipment manufacturing business



Bridge construction plan using 3D modeling

8. Business Base Strategies (1)

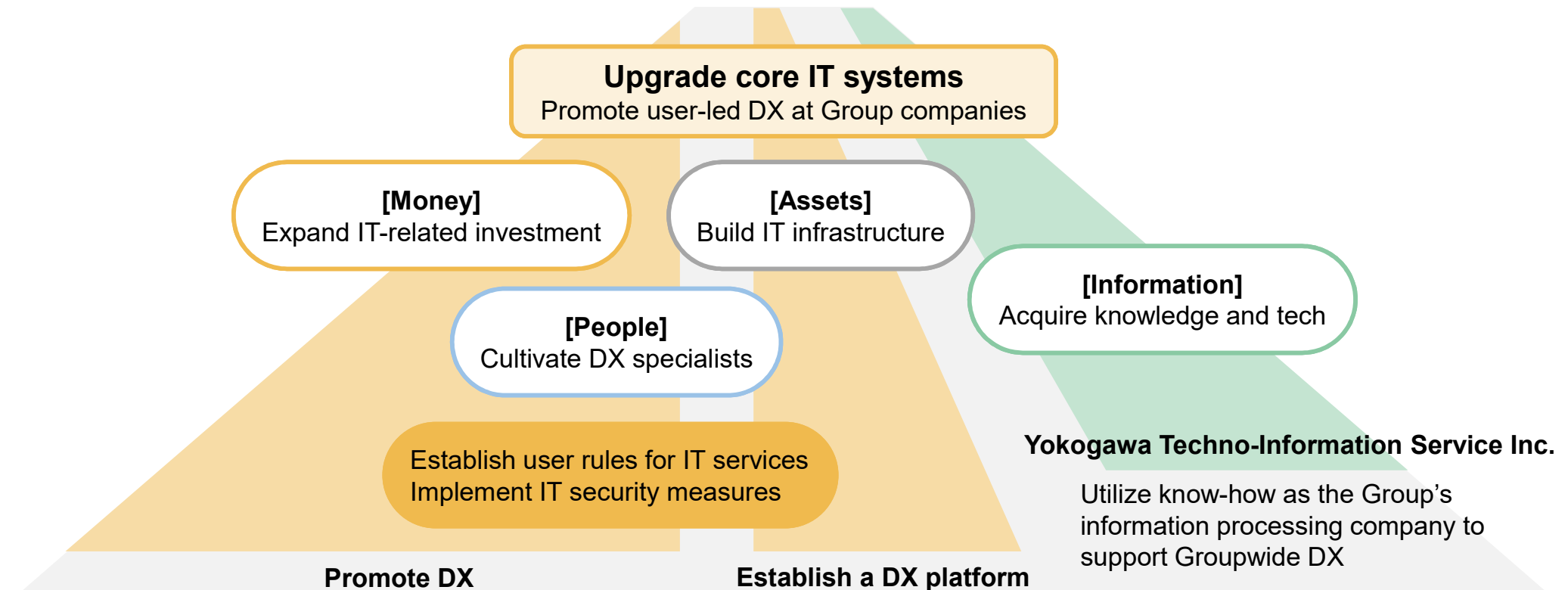
(DX Strategy: Harnessing Digital Tools to Transform, Grow and Support)



DX vision

1. Use DX to reform work practices, improve productivity and deliver the new “3Ks” at worksites (kyuryo [wages], kyuka [time off] and kibo [prospects])
2. Use digital tools to reinforce safety measures
3. Use digital tools to preserve and utilize the skills of Yokogawa’s master engineers
4. Use DX to support and accelerate growth in the engineered structure systems business
5. Use DX to explore new business opportunities

Realize our DX vision



8. Business Base Strategies (2)

(DX Strategy: Harnessing Digital Tools to Transform, Grow and Support)



Channel business resources into DX and build an implementation framework to create a DX platform and realize our DX vision

Cultivate DX specialists

- To promote DX in back office departments, cultivate expert IT engineers through a select → train → certify process; establish an in-house certification system for employees that attain a certain level of expertise; aim to certify around 50 employees Groupwide during the Sixth Medium-Term Management Plan

Build IT infrastructure

- Introduce new networks, PCs and other IT equipment and new technologies, products and services that support information sharing and teamwork
- Build a new core IT system during the Sixth Medium-Term Management Plan to promote DX in back office departments, i.e. shift to paperless systems and improve workflow

DX KPIs

Bridge business

Construction project performance
Average of 80 points or higher

Engineered structure system business

Activate management systems on schedule and secure orders and production of at least 1.3 million m² by FY2024



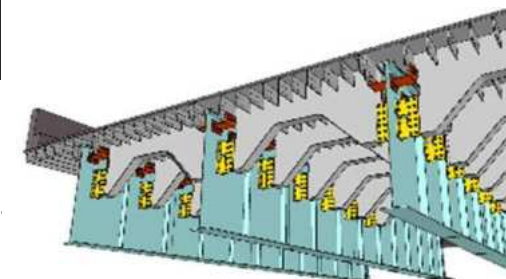
8. Business Base Strategies (3) (Technology Strategy)

Basic Policy on R&D

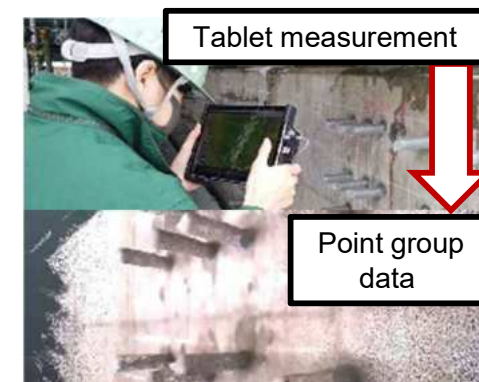
1. Raise technology level to maintain competitiveness
2. Develop technologies to support moves into new markets
3. Provide environmentally friendly technology to support society's decarbonization
4. Actively promote Construction DX to improve quality, productivity and safety

Technology strategies in each business

Business		Technology strategies in Sixth Medium-Term Management Plan
Bridge	New bridge construction / Maintenance	<ol style="list-style-type: none"> 1. Further develop technologies to support maintenance and upgrade work 2. Increase added value in bridge-related products and develop new products
Engineering	Engineered structure system	<ol style="list-style-type: none"> 1. Reduce costs and improve functionality to boost sales of engineered structure systems (Streamline designs, adopt multi-level designs)
	Civil engineering / Construction and machinery steel	<ol style="list-style-type: none"> 1. Expand applications for civil engineering steel structures (floating wind turbines, etc.) 2. Promote R&D in environmental technologies (next-generation water-processing facilities) 3. Commercialize Phovare – Pitch Hovering Arena
Precision Equipment	Precision equipment manufacturing	<ol style="list-style-type: none"> 1. Improve performance of highly damped structures
	Information processing	<ol style="list-style-type: none"> 1. Increase competitiveness by adding / improving functions of software-aided bridge design and manufacturing 2. Support DX rollout at Group companies
Groupwide technology strategy		<ol style="list-style-type: none"> 1. Actively promote use of Construction DX at production sites 2. Reduce Scope 1 and 2 environmental impact



Steel-C.A.P road bridge deck replacement method



Using tablet devices to measure anchor bolts (Construction DX)

Chronic labor shortage due to Japan's aging / shrinking population

Basic policy

- Improve business efficiency across the whole Group
- Attract, retain and train human resources, secure work for employees
- Reform work practices

Attract human resources

- **Pass on technological skills and know-how**
Hire people with the goal of maintaining the Group's longer-term competitiveness
- **Further improve the retention rate**
Create motivating workplaces

Train human resources

- **Enhance personnel assets**
Step up training initiatives

Personnel plan

Increase Group headcount by around 200 to roughly 2,150 by FY2024 in line with business expansion

Create a diverse workforce


- Hire people from different backgrounds (new graduates, mid-career)
- Work with overseas Group subsidiaries to train and utilize talented personnel
- Explore career design paths for female staff in general and managerial roles

8. Business Base Strategies (5) (ESG Initiatives)

Continue to support the environment and society through the Group's business activities, such as maintaining and upgrading public infrastructure

Environment



- **Capture demand from national resilience plans**
Develop underground river structures, seawalls, bridge deck replacement methods
 - **Develop green energy and technologies with low environmental impact**
Make effective use of floating wind turbines, next-generation water treatment facilities, low-carbon materials, etc.
 - **Reduce CO₂ emissions**
Switch to renewable energy, install solar power facilities, etc.
- 

FY2024	20% reduction
FY2030	50% reduction
FY2050	Carbon neutral
- * vs. FY2020, Scope 1, 2
- **TCFD-based information disclosure**

Social



- **Promote diversity**
- **Reform work practices**
- **Train human resources, pass on technical skills**
- **Support disaster recovery**, carry out emergency checks, provide temporary bridges
- **Eliminate serious workplace accidents and incidents**
Enforce safety measures, improve onsite installations, use DX to improve safety

Governance



- **Reinforce risk management**
Group internal control system, voluntary audits
- **Enforce compliance**
Compliance Committee, internal whistleblower system
- **Strengthen corporate governance system**
Evaluate board effectiveness, improve cooperation with outside directors
- **Implement IT security measures**
Reevaluate and strengthen current measures

Key investments during Sixth Medium-Term Management Plan

Investments in IT and decarbonization

- Invest a total of ¥7 billion in IT over three years to drive DX
- Invest ¥0.33 billion in solar power systems at offices and plants

Key investments (three-year total)

Purpose	Amount (Billion yen)
Additional capacity	1.6
Rationalization, labor saving	0.6
Maintenance, upgrades	4.2
Environmental initiatives	0.4
DX / IT related	7.0
Other	4.2
Total	18.0

Projected cash flow during the Sixth Medium-Term Management Plan

We forecast cash inflow of ¥31 billion over three years.

Roughly 60% is to be allocated to capex, with the remaining 40% for shareholder returns



* Three-year totals

Composition of Yokogawa HD Group segments

Bridge Business	New bridge construction	<ul style="list-style-type: none"> ● Design, manufacture, and on-site construction of new bridges
	Maintenance	<ul style="list-style-type: none"> ● Maintenance and repair of existing bridges
	Overseas	<ul style="list-style-type: none"> ● Design, manufacture, and on-site construction of bridges outside Japan
Engineering Business	Engineered structure system	<ul style="list-style-type: none"> ● Design, manufacture, and on-site construction of system structures (“yess buildings”)
	Civil engineering	<ul style="list-style-type: none"> ● Design and manufacture of tunnel segments ● Design and manufacture of off-shore and port structures
	Construction and machinery steel	<ul style="list-style-type: none"> ● Construction of steel frameworks and forge work for high-rise buildings, etc. ● Design, manufacture, and on-site construction of moveable building systems (YMA) ● Water treatment equipment manufacturing business
Precision Equipment Business	Precision equipment manufacturing	<ul style="list-style-type: none"> ● Production of high-precision frames for manufacturing equipment for LCD panels, OLED panels, and semiconductors
	Information processing	<ul style="list-style-type: none"> ● Software development
Real Estate Business		<ul style="list-style-type: none"> ● Leasing some real estate owned as logistics warehouses, etc.