Kumagai Gumi Group

Medium-term Management Plan

（FY2018 - 2020）

-- Strategies for Accelerating Growth --

March 29, 2018

Kumagai Gumi Co., Ltd.

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1 . Kumagai Gumi Group's Management Planning System

Building upon our group vision, we will steadily implement our medium-term and long-term plans, aiming for sustainable growth and an increase in corporate value.

Group Vision:

A corporate image
Kumagai Gumi Group strives for

ta ka me ru　tsu ku ru　so shi te　sa sa e ru
高める、つくる、そして、支える。

Heighten our individual workplace skills*1,
Create our original values (quality of happiness*2)
and continue with all our effort to
Support our customers and community.

Medium-term & Long-term Management Direction:

Management Direction
Looking ahead 5-10 Years in the Future

- A more flexible approach in dealing with the qualitative and quantitative changes in the construction market
- Continue to offer our outstanding construction services
- Strengthen management through the ESG perspective
- Contribute to the creation of a sustainable society

Refer to Page 6

Medium-term Management Plan:

Strategies and Target Figures for the Next 3 Years

- 【Strategy-1】Maintain and increase contracted construction businesses
- 【Strategy-2】Create new and innovative businesses
- 【Strategy-3】Strategic alliances with other companies

Refer to Pages 7-9

*1 Excellent technical skills together with resourceful manpower translate into the superb execution of tasks at the workplace
*2 It's not just the quality of outward appearances and of function of buildings and facilities; it's the quality that gives the people who gather there a continued sense of satisfaction.

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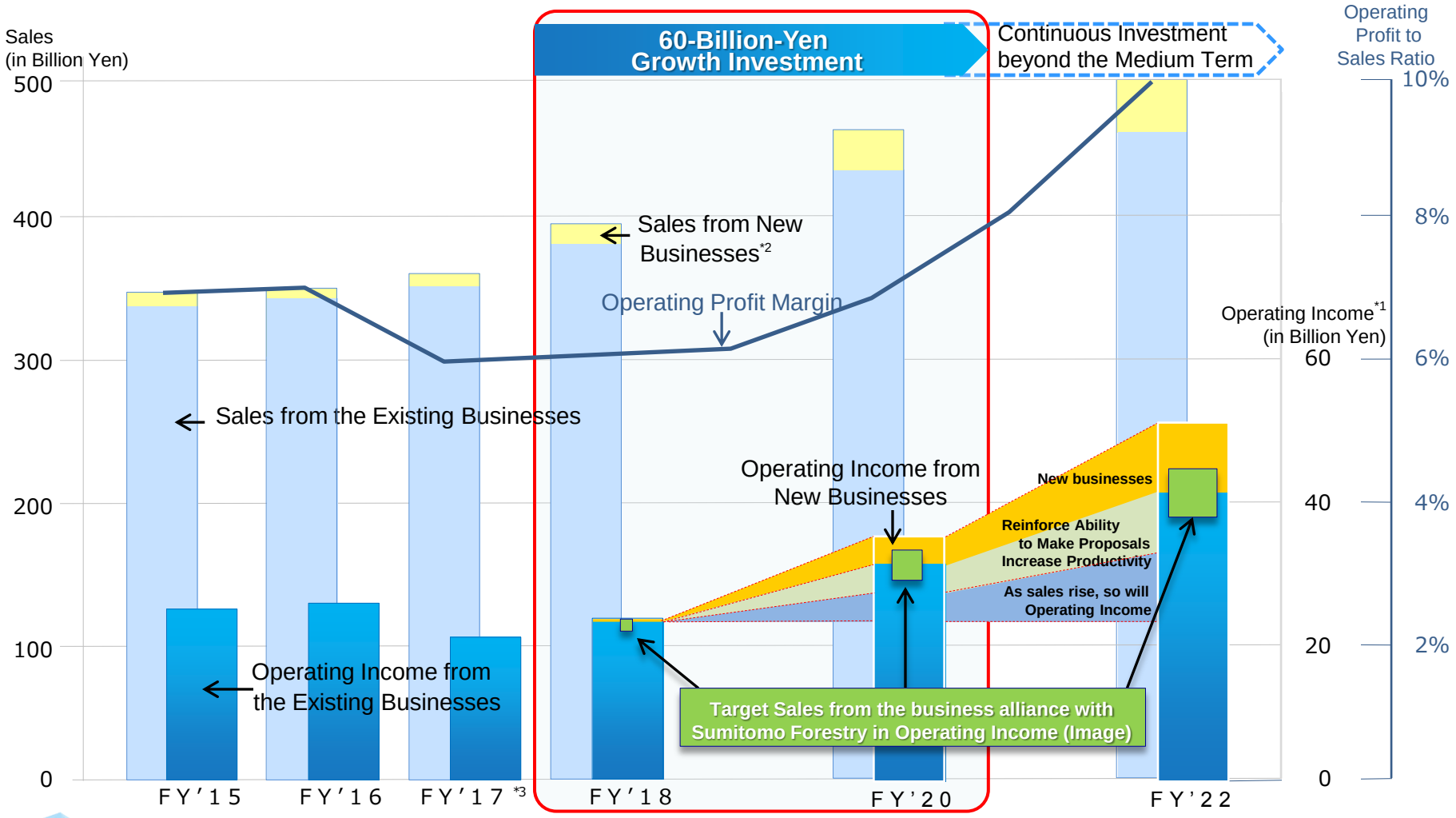
2. A Clear Vision for the Future

With a goal of consolidated sales reaching 500 billion yen and a combined income of 50 billion yen by FY2022, Kumagai Gumi Group plans to implement a 60-billion-yen growth investment program over the next 3 years.



*1 Investment income and dividend income included
*2 Overseas businesses, real estate, investment income and dividend income
*3 These numbers are based on results estimates in "Consolidated Financial Results for the Third Quarter Ending December 31, 2017" released on February 8, 2018.

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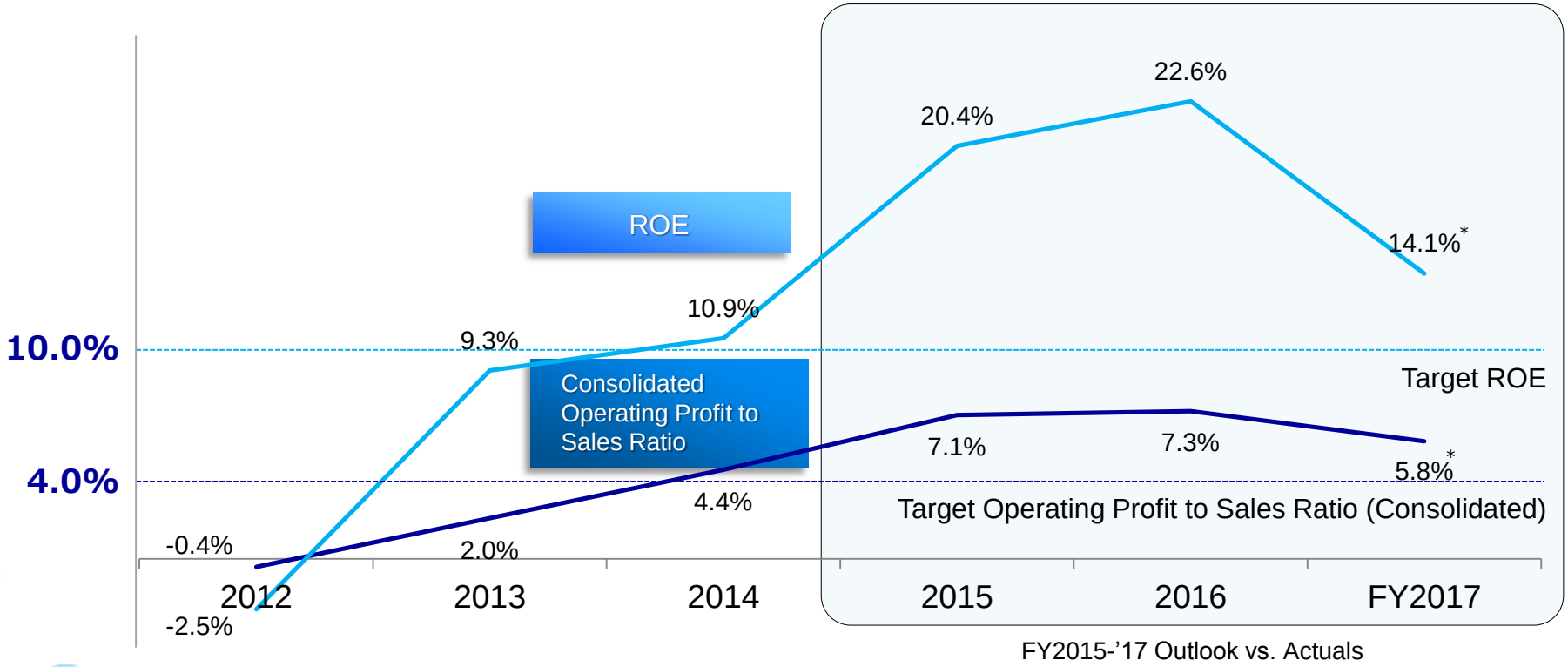
3. Review of the FY2015-2017 Results -1

The actual results significantly exceeded the company's previous outlook.

	Target	Actual Results
Key Performance Indicators	■ Maintain a consolidated profit margin of over 4% ■ ROE of over 10%	■ Given the favorable market environment, the target operating profit to sales ratio was achieved beyond its projections due to Kumagai Gumi Group's thorough cost management efforts. ■ Despite the effects of the capital increase (approx. 34.7 billion yen) in FY2017, the target ROE was successfully achieved.



* These numbers are based on results estimates in "Consolidated Financial Results for the Third Quarter Ending December 31, 2017" released on February 8, 2018.

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3. Review of the FY2015-2017 Results -2

The issues we tackled were such things as strengthening the ability to make proposals, technical prowess, and profitability in the contracted construction business, the creation of new businesses, group company partnerships, and business alliances with other companies.

	Goal／Direction	Result	Issue
Contracted Construction Business	■ Maintain and expand our stable work orders and sustainable profitability. • Enhance our brand power • Strengthen our competitive edge • Improve productivity • Advancement of technological development	Civil Engineering construction: ・Participated in large-scale infrastructure renewal (different industry JV) and disaster recovery projects (unmanned construction) ・Increased the volume of orders received for large-scale construction projects including preliminary survey, field study and civil engineering design that utilized our proposal ability Architectural construction: ・Improved the ratio of sole-source contracts and of design and construction ・Expanded orders for large construction projects with high production efficiency Common: ・Established “Safety,Quality&Environment Division” and strengthened our efforts, working together with “Yuuei Kyouryoku Kai” Partnership. ・Increased productivity by utilizing CIM/BIM	■ Bolster proposal ability ■ Strengthen technological ability ■ Improve profitability
International Business	■ Business development and Operational presence in Taiwan, Vietnam, Myanmar, etc. ■ Establish systems overseas for improving the business performance	■ Further enhanced our brand strength through another landmark construction in Taiwan, following the example of Taipei 101. ■ Established a stationary construction organization in Myanmar, India, etc. ■ Participated in MOM* businesses in Hong Kong	■ Secure global human resources ■ Strengthen risk management ■ Improve profitability
New Business	■ Stabilization and variation of the revenue sources	■ Participated in PFIs through investment (e.g. final disposal site) ■ Started to get involved in urban renewal projects ■ Promoted strategic alliances with other companies	■ Expand participation in project implementing bodies through investment ■ Accelerate strategic alliances with other companies
Group Company Partnership	■ Growth brought about by the synergy produced among group partnerships	■ Established the group company cooperative system by increasing our focus on growth as a whole.	■ Expand efforts to make proposals that can fully utilize our strengths as a whole group (in projects, construction, and technological development)
Management Infrastructure	■ Commercialization of technology, development of technology that can be put into practice ■ The increase of high-value-added human resources ■ Maintenance and improvement of corporate valuation	■ Strengthened the technological development system (“Technical Research&Development Division” established in 04/2017) ■ Invested more in human resources and promoted work for women and the elderly ■ Increased the net worth and the dividend payout ratio	■ Promote open innovation ■ Strengthen human resources development ■ Further increase dividend payout ratio

*MOM stands for ‘Management, Operation, and Maintenance’

4. Understanding the Business Environment Going Forward

During the period of time in which this business plan takes effect, we assume that the favorable economic situation will continue. However, we also predict that the marketplace environment will by and large slowly change after FY2021.

	Time Period of This Business Plan (FY2018-'20)	The Future (from FY2021 onward)
Marketplace Environment	**A generally favorable situation forecast** ■ Disaster prevention and reduction business prepared for catastrophic natural disasters will increase in scope and volume. ■ Business related to the superannuation of social infrastructure put in place during a period of high economic growth in the 1960s will increase in number. ■ Business related to constructing facilities for the 2020 Tokyo Olympics will expand.	**The construction marketplace to change qualitatively and quantitatively** ■ The domestic marketplace will shrink due to Japan's population decline. ■ Public investment will be limited due to financial constraints. ■ Construction demand will qualitatively change. (New construction will decrease, whereas maintenance and renewal of buildings will increase, as well PPP, PFI and Concession.)
Construction Environment	■ The number of newer, younger workers will decrease, whereas skilled laborers leaving their jobs will increase due to old age.	■ Due to the aging society and diminishing birthrate, the number of architect engineers and skilled laborers will decrease drastically.

5. Medium-term & Long-term Management Direction

Based on its medium-term and long-term management direction, Kumagai Gumi Group plans to implement three strategies:

Medium-term & Long-term Management Direction
(released on 11/09/2017)

- A more flexible approach in dealing with the qualitative and quantitative changes in the construction market and continuously offering our outstanding construction services
- Strengthen management by introducing the ESG perspective to realize long-term growth, as well as contribute to the creation of a sustainable society

Three Strategies

Strategy-1

Maintain and Increase Contracted Construction Businesses

Strategy-2

Create New and Innovative Businesses

Strategy-3

Strategic Alliances with Other Companies

6. Strategy-1: Maintain and Increase Contracted Construction Businesses

Kumagai Gumi Group will strengthen its proposal capability to increase the number of orders received, promote technology development to enhance productivity, and maintain and increase the earning power from its core business of contracted construction business.

Fields to Focus on for FY2018-'20

	by strengthening our proposal capability and expand orders received	Efforts to improve productivity (cost reduction, manpower saving, etc.)
Domestic Civil Engineering	■ Large-scale infrastructure renewal such as superannuated highways and others ■ Renewable energy including wind power, biomass, hydropower, geothermal energy ■ Disaster prevention and reduction prepared for catastrophic natural disasters ■ Civil engineering projects making the most of wood, which will lead to forest preservation	■ Make a good use of ICT and AI ■ Strengthen on-site technical skills and resourceful manpower
Domestic Architectural Construction	■ Hotels and accommodations facilities in light of ever-increasing inbound demand ■ Welfare and medical facilities that cater to the aging society ■ Production, commerce, and distribution facilities with high productive efficiency ■ Medium- and large-scale wood construction ■ Complete renovation for multiple dwelling complexes	■ Make a good use of BIM/IT ■ Promotion of precast concrete ■ Strengthen on-site technical skills and resourceful manpower
International Business	■ Strengthen the sales and marketing network of pre-existing international offices including Taiwan, Myanmar, and India. ■ Secure global human resources and reinforce project managers. ■ Secure reliable production systems by building good relationships with local partners. ■ Infrastructure development and renovation work.	
Technology Development	■ Technology that satisfies the needs of society, e.g. disaster prevention and reduction technologies, renewal of superannuated structures and deterioration prediction technologies, light and highly-intensified building materials, and others. ■ Technology that corresponds with a recycling society, e.g. renewable energy technology, medium- and large-scale wood construction technology, ZEB technology, among other things.) ■ Technology that contributes to improved productivity and safety, e.g. robotics, cost reduction technology, construction time reduction technology, and others.	
Human Resource Development	■ Secure personnel to reinforce construction systems, as well as personnel that are experts in the new field of international business and real estate ■ Promote diversity and inclusion to create the workplace environment where a variety of personnel can use their abilities to the fullest, as well as the human resources management system. ■ Advance a human resources development system for employees to improve their skills and expertise, e.g. OJT, group training and self-development)	

6. Strategy-2: Create New and Innovative Businesses

Together with utilizing its expertise, experience, and technology, Kumagai Gumi Group will make effective investments and seek to create new revenue sources other than contracted construction business.

Fields to Focus on for FY2018-'20

	Japanese Markets	Overseas Markets
Endeavors as Project Commissioning Entity*	■ Renewable energy ■ PPP, PFI, and Concession ■ Urban renewal and redevelopment ■ A series of redevelopments in the area surrounding the Kumagai Gumi headquarters building ■ Projects utilizing forest resources	■ High-end multiple dwelling complexes ■ High-end elder-care facilities ■ Renewable energy ■ MOM (Management, Operation and Maintenance) businesses
Sale of Commercial Products Developed by Kumagai Group Companies	■ Sale of bridge members in large infrastructure renewal marketplaces ■ Sale of paving materials for roads called FFP that help prevent traffic accidents ■ Commercialization of patents that apply unmanned construction technology ■ Lease of the steel frame erection piece named Ace Up. ■ Sale of the walker for home use named Flora Tender.	■ Lease of the steel frame erection piece named Ace Up ■ Overseas expansion of other commercial products developed by Kumagai Group companies

*Participation in business that comes with investment, such as facility ownership and management, real estate development, etc.

6. Strategy-3: Strategic Alliances with Other Companies

In addition to growth from its group partnership, Kumagai Gumi Group is aiming for an innovative type of growth through synergistic creation and promotion of cooperation that surpasses its group framework.

Fields to Focus on for FY2018-'20

Partners

- Sumitomo Forestry
- Renewable Energy Companies
- Design Companies
- Specialty Construction Companies
- International Business Partners

		Field of Business	Necessary Corporate Resources
Contracted Construction Business		■ Large-scale infrastructure renewal	■ Bridge design technology ■ PC manufacturing technology ■ Repair and reinforcement technology
New Business	Japan	■ Renewable energy ■ Medium- and large-scale wood construction ■ A series of redevelopments in the area surrounding the Kumagai Gumi headquarters building ■ Projects utilizing forest resources	■ Expertise in planning, development, and operation ■ Refractory technology, technology required for designing and constructing wood buildings ■ MOCCA (application of timber and wood products) and greening technology ■ Expertise in modeling development for the utilization of forest resources
	Overseas	■ International construction projects ■ High-end multiple dwelling complexes ■ High-end elder-care facilities ■ Renewable energy	■ Expertise in international business (construction management and execution of works) ■ Expertise in planning, development, and operation

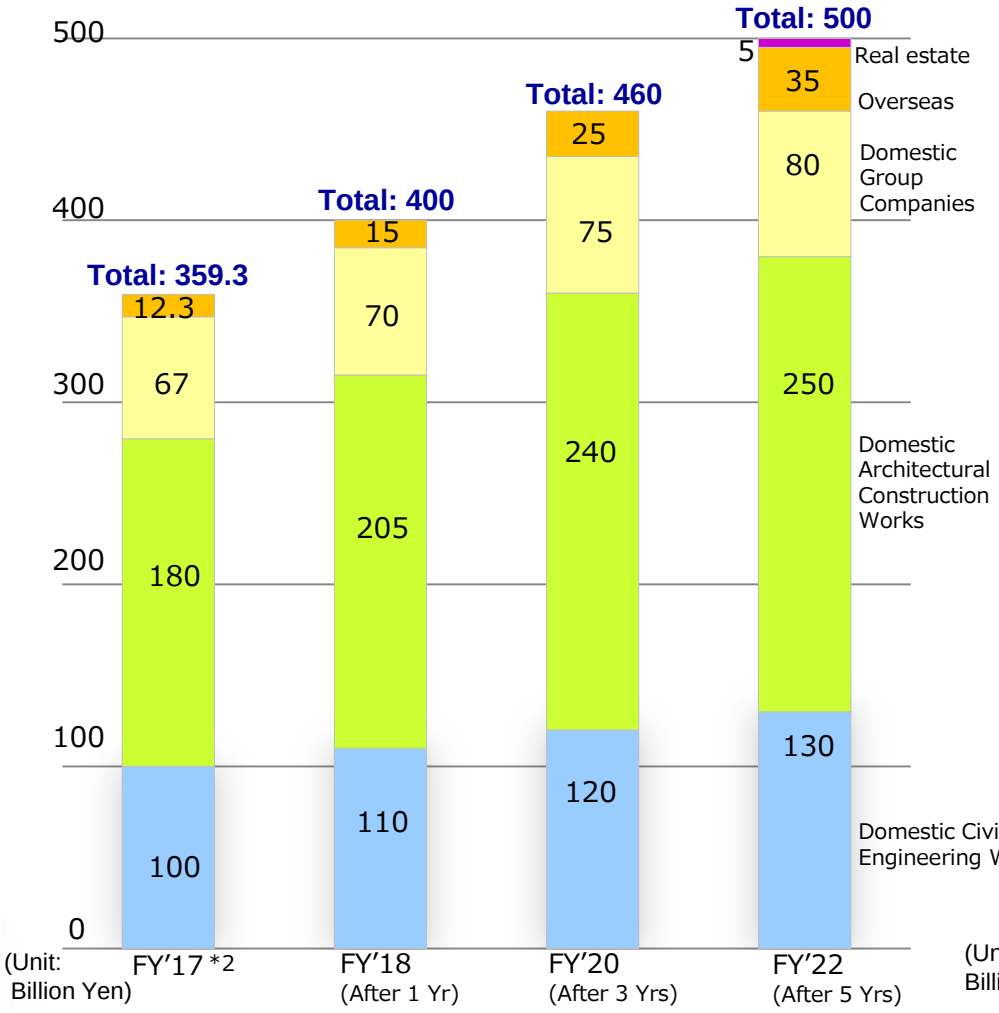
7. Key Performance Indicators

With the goal of consolidated sales reaching 500 billion yen and a combined income of 50 billion yen by FY2022, Kumagai Gumi Group aims to achieve the following four target performance indicators during the current business plan period:

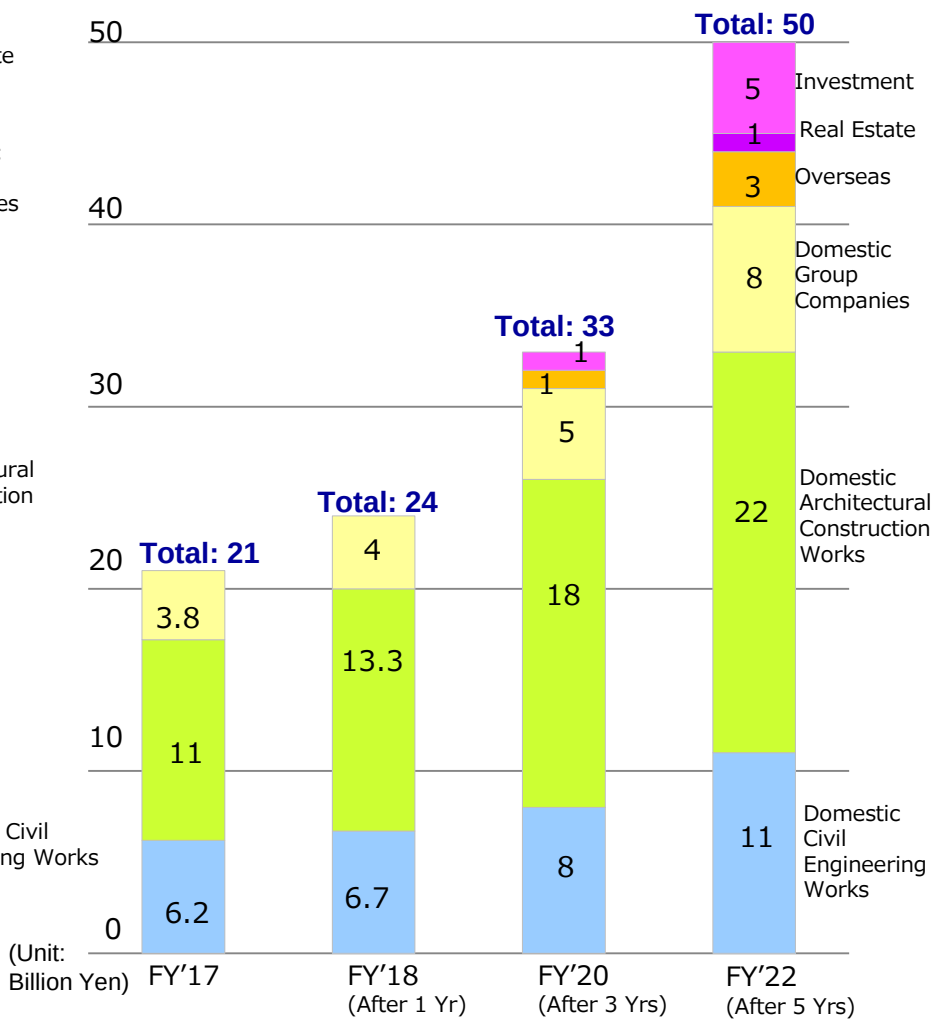
4 Target Indicators to Achieve for This Period （FY2018-’20）	
Consolidated Sales	460 Billion Yen
Consolidated Operating Income	33 Billion Yen
ROE	12%
Dividend Payout Ratio	30%

7 . Key Performance Indicators (by Segment)

Consolidated Sales



Consolidated Operating Income *1



Domestic Civil Engineering Works
Domestic Architectural Construction Works
Domestic group companies
Overseas *3
Real estate
Investment*4

*1 The investment income and dividend income are calculated as operating income.
*2 These numbers are based on the results estimates from the "Consolidated Financial Results for the Third Quarter Ending December 31, 2017" released on February 8, 2018
*3 The businesses of overseas group companies included.
*4 The dividend income included.

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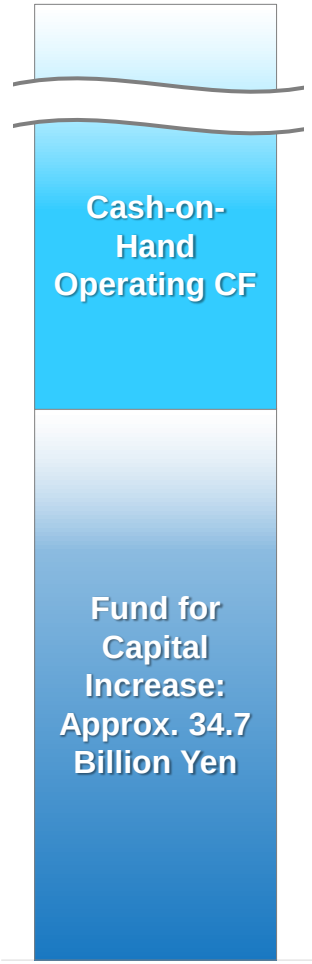
8. Investment Plan

In order to maintain and enhance its competitive edge and expand its revenue sources, Kumagai Gumi will invest in growing areas.



Growth investment

60-Billion-Yen Investment

- Domestic and International Business Alliance: 23 bn yen
- Renewable Energy and PFI: 7 bn yen
- Domestic Real Estate: 21 bn yen
- International Real Estate 3 bn yen
- Technology Development: 6 bn yen

3-year Investment Plan

Major Investment Breakdown

■ Domestic and International Business Alliances
(to acquire specialized skills and expertise in new fields.)
- Medium- to large-scale wood construction (Schematic design, design, and construction)
- Large-scale renewal of infrastructure (Civil engineering drafting and design, the development of construction methods and tools, and construction)
- International Business Partners

■ Renewable Energy Business
- Biomass power generation

■ PPP / PFI / Concession Business
- Hydroelectric power plants and toll roads

■ Domestic Real Estate
- A series of development of the areas surrounding headquarter buildings
- Acquisition of income properties

■ International Real Estate
- The development of high-end condominiums and congregate care facilities for seniors in Taiwan, Myanmar, among other things

■ Technology Development and Equipment
- Wood building technology, ZEB technology, and unmanned construction technology
- IT and personnel development related business

Target Income* (After 5 years)

7 Billion Yen

*The sum of operating income and investment income

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9. Dealing with the ESG Issue

Kumagai Gumi Group will contribute to solving social issues through its core construction business, aiming for an increase in corporate values.

Build in Harmony with Nature
Geared toward People's Activities

ESG's Perspective

Environment

- Continuous efforts toward environmental burden reduction
- Wood-building businesses
- Forest preservation businesses
- Renewable energy businesses
- Establish ZEB technology and others.

Social

- Promotion of diversity and inclusion
- Realization of work-life balance
- Improvement of workers' health and prevention of occupational injury
- Continuation of school building donations in Myanmar and proposing opportunities for its clients participation in such work, among other things.

Governance

- Improvement of the effectiveness of board meetings
- Strengthening compliance
- Proactive communication with stakeholders and others.

10. Business Alliance with Sumitomo Forestry

Synergy is anticipated through the Kumagai Gumi/Sumitomo Forestry strategic alliances in various fields.

Categories	Major Undertakings
MOCCA (Lignification) and Greening-related Construction Projects	■ Proposal for “wood” housing complexes and elder-care facilities ■ Design and construction of medium- and large-scale wood buildings (To start the project called “W70”*2 at the earliest possible time.) ■ Cooperation in the renovation of housing complexes and accommodation facilities (e.g. hotels/Japanese-style inns) ■ M&A of and business alliance with architecture design/design/construction companies ■ Consulting activities related to the 2022 productive greening issue
Renewable Energy Projects	■ Domestic biomass, wind power, solar power, low-head hydropower generation ■ The development of large-scale domestic projects through the business alliances with Sumitomo Forestry and other
Overseas Projects	■ High-end housing complex and elder-care facility developments in Taiwan ■ High-end housing complex developments in Myanmar and Vietnam ■ Business Alliances with construction/interior/greening companies in Asia, North America, and Australia ■ Renewable energy businesses with Sumitomo Forestry and other companies in Asia ■ M&A of foreign construction companies
Peripheral Business Areas (Healthcare Products and Technologies and Others)	■ Leasing and selling of technologies and products developed by Kumagai Gumi Group companies (e.g. Steel frame erection jig “Ace Up”, Walker for home use “Flora Tender”), that make use of Sumitomo Forestry’s international and domestic marketing bases.
Joint Research & Development (New Construction Methods, Components, Robotics and Others)	■ Establishment of technology for Sumitomo Forestry’s plan “W350” ■ Development of forest road construction technology and unmanned construction technology that support forest conservation projects, utilizing the Forest Environment Tax funds and the local governments' Forest Conservation System ■ Development of robotics in the interest of labor-saving in construction and forestry

Target Income
in 5 Years as a Result of Successful Alliances
(Kumagai Gumi Portion Only)

Existing Business:

3 Billion Yen

+

New business:

3 Billion Yen

↓

Total:
6 billion Yen

*1 The sum of operating income and investment income
*2 70-meter-high structures with hybrid components made from wood and steel

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高める、つくる、そして、支える。

KUMAGAI 熊谷組

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