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Corporate profile **Fujita Corporation**

has contributed to society and continued moving forward to create new value through construction operations.

By adding the comprehensive strength of the Daiwa House Group to the domestic and overseas construction engineering know-how passed down through our "Enterprising Sprit" and "Honest Production", we now offer a wide range of total solutions that extends beyond the construction sector.

day by day. We handle this constantly changing economic environment by responding in the best way possible on a global scale, meeting the needs of our customers and society, handling new challenges with a spirt that propels us towards solutions that are "Newer, Stronger, Better".

Thanks to your continued support and patronage, we will continue to provide the comprehensive strength of Fujita to propose new values that meet our customers' needs.



Creating the future, together

In October 2015, Daiwa Odakyu Construction Co., Ltd. and Fujita Corporation—both companies with over 100 years of history—merged to form a single company. With the intention of making our customers' dreams come true in more ways than one—by combining the experience and abilities of both companies with the traditions we have developed as members of the Daiwa House Group we will construct our future.

In the more than 100 years since our founding, Fujita

The world continues to change at a remarkable rate

Fujita construction engineering

Fujita applies its expertise, technological strengths, and track record established over more than 100 years as a general construction company to offer a full range of solutions from property usage to planning, Urban development construction, and aftercare. We turn the customer's High-rise business vision into a **F**ujita construction solutions concrete, manageable construction proposal for clients We create a plan that is **Planning and** optimized for the who seek partners for customer's needs. proposals new business project. who want Fujita to propose facilities **Design and** that align with their business plans. engineering who desire any innovative, up-to-date construction plans. **Demolition and** who inquire about energy-related cleanup equipment which would be best for their facilities. who want their facilities We construct buildings We safely demolish to be environmentally friendly. based on the optimized buildings in preparation design concept. for new projects. who want to maintain good relations with their neighbors during Construction construction. Commercial Maintenance, repairs, facilities and renovations **Medical facilities** At Fujita, we can accommodate our customers' needs through accurate We provide aftercare services planning and proposals, optimized, for buildings and facilities that streamlined designs, and construction belong to the customer. technology backed by years of construction and civil engineering experience and R&D. Fujita overseas management By combining technology aspects of overseas business developed in Japan with our expansion—from property wide-ranging overseas experience surveys to design, permit and successful track record, we applications, construction, and

can support our clients with all

maintenance operations.

Fujita property solutions for clients

who want property information in order to expand their business.

who have unused land and would like to utilize effectively.

who would like advice on adding their property.

who want to promote development operations that meet the needs of the community.



We assist customers who are thinking about acquiring property for business development, using the equivalent exchange method to build a jointly owned building, redeveloping an urban area etc. using our technology and expertise earned through our construction and urban renewal businesses to ensure a high degree of satisfaction.



The new Fujita

Introduction Fujita construction engineering

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Civil engineering

Fujita technology

We use advanced technology to solve our customers' diverse problems.

The Fujita advantage

Our goal is to become our customers' number-one partner through knowledge and experience gained over many years using our technological strength as our advantage.



Fujita's track record $\longrightarrow P.24$

We have an impressive track record spanning everything from urban renewal to large-scale overseas projects.



C O N T E N T S



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Fujita technology:

Providing solutions to our customer's needs

Construction technology

We want to have wide open spaces inside our building.

Designing space the way the customer wants it Hybrid building systems (the FSRPC-B and FRASH construction methods)

> The FSRPC-B construction method is a proprietary Fujita technology that uses column and beam joints that combine reinforced concrete columns with steel beams. The FRASH construction method is a new hybrid method that uses reinforced concrete wrapped around the ends of steel beams.

- We create column-less wide open spaces for logistics facilities, commercial facilities, hospitals, offices, and more
- Our construction times and costs are lower than when conventional steel-reinforced concrete columns and steel beams are used.
- By combining conventional reinforced concrete and steel construction methods, we enable more flexible material selection and achieve more streamlined construction systems



enter built using hybrid building t





We want to build residential high-rise buildings that are highly earthquake-resistant.

We create high-rise buildings using reinforced concrete.

Reinforced concrete high-rise technology

(the FHRC construction method)

Residential high-rise buildings can be built using reinforced concrete construction, which has excellent heat and sound insulation properties and doesn't sway much during earthquakes or in strong winds.

- The use of ultra-strong concrete for columns, with a compressive strength in excess of 100 N/mm², creates a smaller cross-section to increase usable living space
- The precast concrete construction method, in which components are made in a factory, achieves higher quality and shorter construction times.



We want to strengthen our building in preparation for major earthquakes.

Seismic isolators act to prevent swaying Seismic isolation technology

- Installing seismic isolators between the building and the ground inhibits the transfer of earthquake ground movements to the building.
- Seismic isolators are flexible in the horizontal plane, withstanding
- significant deformation in order to absorb the energy of earthquakes. • We have developed viscous dampers that utilize laminated rubber
- bearings and oil and put them to practical use as seismic isolators.

Prevent the building itself from swaying

Seismic quake control technology

The use of seismic quake control devices installed inside buildings greatly inhibits the swaying of buildings during earthquakes.

- Swaying energy is absorbed through the deformation of seismic quake control devices.
- We have developed steel panel dampers and viscous dampers and have put them to practical use as seismic guake control devices.

The steel is reinforced to resist bending.

Buckling-restrained braces

(FIRST braces)

By covering the steel core with buckling-resistant materials, we create high-performance earthquake-proof components that prevent buckling during compression.

- This beam consists of a steel H-beam core inside a steel pipe made from buckling-restraining materials, with the space in-between filled with mortar
- This simple structure reduces component production costs.

We want to have living areas that are both spacious and comfortable.

Simulation of floor vibration during the design phase Yureiza III, a floor vibration analysis system

By using Yureiza III, a floor vibration analysis system, we can predict floor vibrations with high precision over short periods of time and take that into account in our designs.

- Ideal for designing spaces that span large areas with few columns and are prone to swaying.
- Floor vibration can be shown via 3D animation.
- We have developed and put into practice a variety of technologies for counteracting vibration, including a device (a tuned mass damper, or TMD) that absorbs vibration by means of a moving weight.





Laminated rubber bearing





Steel panel dampe



Viscous dampe





Examples of FIRST brace usage



Tuned mass damper



Please see our website for more detailed information on our technology.

http://www.fujita.co.jp/solution-and-technology

We want to create a high-quality building foundation.

High-quality, defect-free pile construction

The F-ED method

Concrete cast-in-place pile construction method (earth-drilled piles)

Fujita is able to construct high-guality, high-performance earth-drilled piles using five technologies that incorporate proprietary improvements.

- We construct high-quality piles with greater construction accuracy than conventional methods.
- We have achieved reliable earthquake-proof performance by making changes to pile head concrete compaction and reinforced frame assembly.



Pile head vibrator installation



The FSR-pile method

The semi-rigid pile head connection method for concrete cast-in-place piles

- This method can halve the effect of earthquakes and can greatly reduce the damage to the pile head and foundation.
- We have also adopted an extremely tenacious, breakage-resistant structure for connections.
- We reduce the soil left behind after excavation and the amount of concrete and rebar used for the piles and foundation, which also reduces the environmental impact.

High-effciency foundation beam through-hole reinforcement method

The star-shaped foundation beam construction method

This construction method provides effcient reinforcement and lets us reduce the height of foundation beams compared with conventional methods. This is done by combining two isosceles triangle-shaped rebars into a star shape.

- This method is ideal for condominiums, service-oriented residences for the elderly, hospitals, schools, and steel-frame buildings with pits.
- It shortens construction time and reduces construction costs.



We want to reduce the radioactive waste produced.

A revolutionary technology that prevents concrete from becoming radioactive

Low activation concrete

Nuclear reactors and particle accelerators for medicine and research use concrete shielding to help block radiation. When the reactor is scrapped or the equipment is dismantled, radioactive waste is produced. Using low activation concrete makes it possible to reduce the amount of radioactive waste produced.

- This concrete is just as easy to work and process as normal concrete.
- This concrete can reduce the enormous disposal costs resulting from the production of radioactive waste



Fujita technology: IJIta technology: Providing solutions to our customer's needs Solution&Technology Information, communication and robotization technology

We want to use computerization to provide buildings that satisfy customers

Revolutionizing building production through 3-D modeling

We realize efficient building production processes by combining various architectural information, from design to construction and maintenance, into 3-D models. *BIM stands for building information modeling. Using this technique, a 3-D construction model is made and the information it provides is used to improve construction quality.

BIM^{*}

- 3-D models allow design information to be visualized, expediting stakeholder consensus.
- Prevents errors during execution by enabling the discovery of interference or non-conformance between parts.
- Information given to the 3-D model is used for aggregating components and managing maintenance.

We want to reduce inspection labor and improve construction quality.

inspection system Finish checker

This system performs interior finish inspections using a tablet pc to considerably reduce time compared to conventional methods where materials are hand-written.

- Easy operation that even first time users can handle.
- 90% reduction in the time needed to create revised instructions manuals.
- Faster than handwriting to improve inspection productivity by 50%.
- Eliminates the necessity of waiting for residents to show their apartments, which enables inspections to progress smoothly.

We want to centralize construction data and make construction more efficient

Improving quality through 3D modeling and time-axis management

Quality and flexibility in woodworking construction can be improved by adding the time axis to 3D modeling data to manage the data in four dimensions *CIM stands for Construction Information Modeling/Management. It is a new system that combines and integrates construction data, treating the entire construction and production process in a unified manner

- Comparative reviews and consensus-building during the design stage can be accelerated by effective use of construction ICT.
- This improves the quality and flexibility in woodworking construction, and it raises the level of maintenance management.

We want to speed up recovery from emergencies and disasters.

Making it possible to work safely and quickly even in dangerous locations **Remote control robots Robo QS**

Recovery activities carried out at the site of debris flow disasters and collapses can be carried out safely and guickly through remote control of construction machinery by human operators from a safe location.

- The robot can easily be installed in the driver's seat of standard construction equipment
- Fujita also has a successful track record with other unmanned construction technologies, including remote earthworks systems, unmanned RCC construction, unmanned steel frame construction, and unmanned measuring systems.







Please see our website for more detailed information on our technology





Fujita technology:

Providing solutions to our customer's needs

Civil engineering technology

We want to built a high-quality, highly durable tunnel.

Visualization of the state of concrete lining using sensors

Multifunctional form systems

At Fujita, we monitor the concrete construction process using a variety of sensors in the forms used for constructing the concrete lining that serve as the tunnel walls. Optimized construction allows us to make high-guality concrete linina.

- We conduct real-time large-scale monitoring of the locations where concrete is poured, the temperature distribution, the form pressure, and other data.
- Concrete curing management can be automated by combining the temperature and humidity sensors with sprinklers and thermostats.

We want to bore tunnels in a safe manner.

Probing ground conditions accurately

SWE-SSRT Winner of the Prize for Excellence at the 13th Infrastructure Technology Development Awards in 2011 (Seismic While Excavating SSRT)

This is a technology that conducts continuous, highly accurate surveying of ground conditions up to 300 meters ahead of the tunnel face (the furthest point of the tunnel bore) by conducting a shallow seismic reflection tunnel survey (SSRT) using the tunnel excavation blasts themselves as the seismic wave source.

- Measurements both within and outside the shaft are taken continuously with
- every blast, improving the surveying accuracy. • The surveying does not interrupt the tunnel boring process, as it happens while
- tunnel boring occurs. • This process costs less than processes that require a special seismic wave source
- Normally, ground conditions 300 meters ahead of the tunnel face can be analyzed, which provides margin for changing plans and procuring equipment

We want more precise tunnel boring.

Real-time measuring of segment assembly precision Fujita high-quality tunneling shields

High-quality construction management is possible by digging tunnels with a tunneling shield (tunnel boring machine) and assembling cylindrical tunnel segments (tunnel construction components) one-by-one behind it.

- The circularity of segments can be automatically measured in real-time.
- Non-uniform tail clearance (the gap between the walls of the bore hole and the outer surface of the tunnel segments) can be avoided
- The displacement of tunnel segments continues to be measured even after assembly in order to produce a high-precision primary lining.









We want to reinforce a dam or embankment in preparation for natural disasters.

Utilizing bottom mud from the bottom of ponds and reservoirs as embankment construction material

The stabilized muddy soil embankment method

If a fill dam embankment needs repairs, bottom mud and other accumulated soil can be freely used to produce embankment soil with excellent strength, water shielding properties, and deformation resistance.

- This method is useful for both repairing embankments and removing bottom mud.
- No money is spent purchasing embankment soil.
- Even if the soil undergoes deformation, it sticks together and resists cracking

Reinforcement of sea embankments to protect against tsunamis

The fresh bank method

The stabilized muddy soil embankment method was developed to turn existing sea embankments into "sticky structures" that were suited to the tsunami protection measures promoted after the Great East Japan Earthquake.

- Reinforcing the embankment surface protects it from encroachment by waves and tsunami overflow.
- It has excellent deformation qualities and is resistant to damage during earthquakes.

We want to build bridges and aluminum domes in a safe and economical manner.

Raising work platforms using robotic jacks

The FCF method

Winner of the Prize for Excellence at the 5th Infrastructure Technology **Development Awards in 2003** FCF: Fast Failsafe Climbing Form

> This system uses multiple robotic jacks to raise work platforms that include integrated scaffolding and forms. Because it can be asembled and disassembled on the ground, it is very safe and economical.

- Control devices and sensors allow the work platform to remain level while being raised.
- This technique combines the advantages of the form construction method and the sliding form method.
- The FCF method combined with aluminum dome roofing allows the installation of safer work platforms with fewer constraints for constructing dome roofs.

Solution&Technology



Example of fill dam embankment repair using stabilized muddy soil embankment me





Aluminum dome roof installation example

Please see our website for more detailed information on our technology.

http://www.fujita.co.jp/solution-and-technology

Fujita technology:

Providing solutions to our customer's needs

Environmental technology

We want an estimate of the effects our construction project will have.

Noise and vibration simulations

We can estimate how noise and vibration produced during construction and by building operations will affect the neighborhood.

• We estimate noise and vibration and assess changes to the surrounding environment. • We propose effective countermeasures.



Wind environment simulations

We estimate changes to the wind environment surrounding the building.

- We estimate wind direction and speed and assess changes to the surrounding environment. •We propose effective countermeasures.

Air flow around the building



Maintenance-free algae growth prevention

The maintenance-free festa method

This method prevents algal growth and improves water quality without the need for ongoing maintenance, with the installation of floating islands for growing rabbit-ear irises and other aquatic plants in ponds.

- The plants on the floating island grow back each year without the need for gardening maintenance.
- Water quality can be improved without the need for any manual intervention
- Floating islands become a habitat for aquatic organisms, helping to preserve biodiversity.

We want to clean up heavy metal pollutants.

Removing pollutants using special plants

Phytoremediation

The use of plants that can remove toxic heavy metals is a cost-effective, environmentally friendly way of cleaning up pollutants.

- We use special plants (hyperaccumulators) that can absorb and store high concentrations of specific heavy metals.
- These plants store more than 80% of the heavy metals they absorb in their stems and leaves, making it possible to efficiently remove pollutants by harvesting the above-ground plant matter.
- We have hyperaccumulators that effectively remove cadmium zinc, and arsenic.



ving the maintenance-free festa method

We want to create a final disposal site that is considerate of the surrounding environment.

Reducing the environmantal impact of final waste disposal sites

The FAST system FAST: Fujita's Ash Stabilization & Treatment System for disposal facilities FAST: Fujita's Ash Stabilization &

You can greatly lower your post-landfill environmetal burden by pretreating the waste with incinerated ash for 40 days to stabilize it.

- The use of sprinkled water and ventilation to pretreat waste can quickly dissolve and extract salts; heavy metals can be contained through carbonation; and ventilation promotes the biological decomposition of organic substances.
- Seepage water will have low concentrations immediately after landfill, with little risk to the surrounding environment, so the disposal site can be closed shortly after the landfill is completed.

We want to avoid polluting the air with automobile exhaust fumes.

Purifying exhaust fumes by passing them through soil

The EAP (Earth Air Purifier)

This system purifies air polluted by automobile exhaust fumes by using the air pollution removal capacity of soil.

- Polluted air is passed through a layer of soil, removing nitrogen dioxide and PM_{2.5}.
- No chemicals are used and no waste is produced.
- High performance is maintained even after long periods of operation

We want to quickly improve soft ground.

Environmentally friendly soil improvement additive

FT Madokira

Soft, water-logged soil (dredged soil, excavated soil, mud, etc.) can instantly be improved by mixing in this additive.

- With paper sludge ash produced during the paper manufacturing process as its base substance, this additive is non-toxic and has excellent water absorption properties.
- This environmentally friendly substance has a more neutral pH than generic cement-based and lime-based solidifiers.



Solution&Technology



S : Salts

: Microorganisms







Diagram illustrating EAP









mple of the treatment syst ged earth treatment at Suwa Lake

Please see our website for more detailed information on our technology.

http://www.fujita.co.jp/solution-and-technology/

Overseas operations

Supporting the overseas expansion of companies based in Japan

We offer high-quality, rapid construction of the factories, logistics centers, and operational centers required by our customers who are planning overseas expansion. Our local employees understand the unique business environment, climate, and culture of that country or locale and can propose the plan most suited to the customer's overseas strategy.

With the proven track record and overall capabilities of the Daiwa House Group, we aim to offer our support services for companies expanding overseas.



Top-class Japan-based general contractors in China and Mexico Active business development in ASEAN countries and India



SOLUTION

We can recommend general contractors that offer Japanese levels of quality overseas.

At Fujita, we strive to help you with business localization, which includes recommending accurate technology and high-quality services of the level available only from Japanese general contractors that train and utilize outstanding local human resources overseas. Our own local employees provide reliable support for our customers' overseas strategies that ranges from preliminary property surveys and basic design to post-construction maintenance.





SOLUTION

Technological strengths (construction capabilities) for meeting the needs of customers overseas

Overseas climates and soil conditions pose the risk of lower building durability and safety. At Fujita, our personnel understand Japanese business practices as well as the local culture and systems, allowing us to build reliable factories, logistics centers, residential and commercial facilities, high-rise buildings, and infrastructures. Fujita also provides help in applying for the permits required by the laws of each country in order to enable rapid start and completion.

Factories









Shimano (Kunshan) Co., Ltd. (China)

The overa aiwa House Gro

Localization services by Fujita (China) Construction Co., Ltd.

With some 30 years of experience and expertise, our local Chinese subsidiary Fujita (China) Construction Co., Ltd. has both Japanese employees and Chinese employees who understand local conditions as well as Japanese business practices and can provide detailed solutions to customer needs.





Hang Seng Bank Tower (Shangha

Infrastructure





wan High Speed Rail, THSF

For more detailed information about our overseas operations, please see our website

http://www.fujita.co.jp/global,

Urban renewal

Developing attractive communities

Fujita has the ability to improve customers' property values and business values through project proposals based on our construction technology, our ability to coordinate complex local ownership rights, and our expertise backed by specialized knowledge related to diverse business methods and permits.

Achieving urban renewal through a variety of business methods

Urban renewal	Land reallocation	Equivalent exchange	Real estate investment	Project proposals
We support initiatives that promote city-wide redevelopment to solve urban problems.	We create vibrant communities through urban development and urban nurturing based on the Land Readjustment Act.	We effectively use land by developing apartment complexes and co-op buildings through use of joint projects that make use of special taxes in property exchange.	We acquire land and optimally construct and manage buildings such as hotels and offices to revitalize the community.	We have a proven track record of receiving and completing orders for numerous major projects through our technological strengths and our ability to propose projects that meet our customers' needs.

SOLUTION

Urban renewal

We support urban redevelopment in our efforts to realize the Compact City Plus Network.

Joint rebuilding project based on the Urban Renewal Act to tackle issues such as the expansion of the station plaza and elimination of disaster risks. We are also involved in urban development for disaster protection whilst supporting efforts that contribute to the formation of compact cities in rural areas.



SOLUTION

Land reallocation

We conduct urban development and community planning that maintains public facilities such as roads and parks whilst promoting utility value of residential lots.

In this comprehensive urban development method based on the Land Readjustment Act, we improve roads, parks and other public facilities as well as residential lots whilst taking full advantage of existing ownership rights relationships. Fujita acts as the urban development coordinator, utilizing this method to work with landowners, administrators and enterprises to develop diverse and complex range of city plans for housing, industry, commerce, logistics, etc., to create a sustainable



SOLUTION

Real estate investment

We contribute to area development by providing new added value to cities.

Fujita acquires land, then constructs and maintains optimal buildings, such as distribution centers, hotels, rental apartments, offices and commercial facilities upon consideration of the area, market trends, etc.





Hotel development

Hotel Vista Premio Tokyo (Akasaka) (Minato City, Tokyo)

Hotel development project along Hitotsugi-dori in Akasaka, Minato City, an excellent location about a 4-minute walk from Akasaka Mitsuke Station. This 11-floor hotel with specialized accommodations has a floor space of approximately 4,400m and is planned for a June 2018 opening.

Rental apartment development

Lilas Togoshi (Shinagawa City, Tokyo)

Asakusa Line



Jrban renewa

The overa aiwa House Grou

i Missions Park Misato (Misato City, Saitama)

Agricultural land to be urbanized was obtained via permit according to procedures detailed in article 34 section 12 of the City Planning Act, and the facility was then constructed. This 3-story distribution center has a floor area of approximately 22,700m and is utilized as a logistics network base.



Rental apartment development project based in the center of Tokyo. The 14-floor building features 130 units and features a convenient location about a 5-minute walk from Togoshi Station on the Toei

Visit our website for more information on our city revitalization efforts.

http://www.fujita.co.jp/toshisaisei/

Environment Advanced solutions for helping the global environment

The environment is one of the pillars of our operational focus, in accordance with the Fujita Eco-Charter. We contribute to the creation of a sustainable society through a variety of efforts, from constructing buildings that combine energy efficiency with comfort, to developing environmentally friendly construction methods and through water treatment and renewable energy projects. We then share our techniques and know-how with the world to solve social issues indicated as UN SDGs (sustainable development targets).

Environmental efforts

As a general construction business, Fujita has been actively engaged in important environmental issues from early in our history.

- •1989: Established the first Global Environment Office in the general construction industry.
- •1990: Created the company slogan: "Creating Superior Environments".

• Some of Fujita's most notable environmental technologies are showcased on pp.14-15

- •1993: Created the Fujita Eco-Charter.
- •1997: ISO14001 is obtained by the Tokyo branch—the first time for a general construction company
- •2010: Created our biodiversity conservation policy.

We operate environmental management systems throughout the company and continue to improve environmental performance based on risk and opportunity.

SOLUTION

Projects and proposals for addressing environmental issues

We provide construction plans, including zero-energy buildings (ZEBs)*, that combine both environmental friendliness and comfort.

Eco-friendly natural lighting

Eaves (including balconies) and movable louvres control sunshine and sunlight, reducing the energy spent on lighting and air conditioning.



Landscaping in harmony with nature

We propose comfortable spaces with lush greenery. Planting is performed on walls to fuse buildings with nature, effectively improving the urban environment by reducing the heat island effect, promoting energy conservation, ensuring biodiversity and improving the landscape.

* What is a zero-energy building (ZEB)? This is a general term for structures that

consume zero net primary energy throughout the course of a year thanks to the use of energy-conserving techniques and renewable energy. Ichinomiya Town Hall An environmentally fr

Effective energy conservation using natural air flow

Air conditioning usage is minimized

by installing eco-atria that make use

of natural breezes and light.



SUSTAINABLE

DEVELOPMEN1

GÖALS

Simulation technology for making environmentally friendly designs Buildings can be designed to be very energy

ecient by the use of simulation technology to conduct light and air ow analyses (eectiveness measurements)





ved the Ministerial Prize for Green Walls at the 15th Rooftop and Wall Special Green Technology Con Canal City Hakata, Fast Bld. (Fukuoka)

SOLUTION

Considering the natural environment at construction sites.

Construction considering endangered species, etc.

We developed the Ikimono Kenbunroku (Record of Living Creatures) for the conservation of animals and plants at construction sites. Flora and fauna conservation efforts and management are undertaken using portable information terminals with GPS (such as a smartphone) to record on-site flora and fauna information, then register it to a GIS (geographical information system) where it can be shared with stakeholders online

Reducing construction site carbon dioxide (CO₂)

We have introduced FCMS, a system that constantly measures the amount of CO₂ generated by construction machinery and equipment at tunneling shield and other construction sites. This makes CO2 emissions "visible" to increase energy conservation awareness. Used in combination with CO2 reduction technology according to the generated CO2, this system significantly reduces emissions. FCMS : Fujita CO₂ Monitoring Syste

CO₂ reduction technology

- Using power generated when tower cranes unload materials for other equipment.
- Utilizing hybrid backhoes and other energy-saving construction equipment
- Using LEDs for temporary shield pit lighting.
- Setting up solar panels in offices, work sites
- Dehydrating drilling sludge to reduce its volume as well as fuel consumption

SOLUTION

Overseas environmental projects

Providing quality water treatment services

- In 2013, we established a Mexican subsidiary, Fujita Integral México S.A. de C.V., for domestic provision of maintenance and related services for wastewater treatment because water is such a valuable and expensive resource in the country.
- In April, 2016, the water quality analysis center affiliated with the company acquired certification (ISO17025) from EMA, a domestic certification organization. This certification enabled the provision of even more reliable water quality analysis services to our customers.

Using rice husks as fuel to generate efficient biomass energy

- In October, 2017, we started a project selling electricity generated from facilities we built that use rice husks to generate this power in the Ayeyarwady region of Myanmar.
- We faced issues such as pollution generated by improper processing of rice husks from the polishing mills as well as chronic power shortages.
- By taking the rice husks, which had not been effectively utilized, and using them as fuel, we further realize biomass power generation with higher efficiency and lower cost to contribute to the creation of a low-carbon community in the region.

aiwa House Gro

Envir









ing of the power facilities

Visit our website for more information on our environmental effort

http://www.fujita.co.jp/environment/

The overall capabilities of the Daiwa House Group

Group synergy effect

Fujita became a member of the Daiwa House Group in January 2013. The Daiwa House Group is a company committed to "co-creating the value for people, cities, and lives", a company with major growth potential in a wide variety of business sectors that has accepted the challenge of creating new value through its "future-indispensable"¹ operations aimed at benefiting society. By harnessing the capabilities of this group, the technological strengths and expertise developed by Fujita will be even more effective at meeting the expectations of customers and society.

SOLUTION

Business partnerships throughout Japan

* This is the approximate translation of a Japanese anagram coined by the company that stands for "safety, speed and stock, v health, communications, and agriculture" — keywords that describe the Group' s new global operations.

We are expanding on various development projects by combining Fujita's wealth of development and construction know-how with the Daiwa House Group's wide range of business capabilities.

Industrial complex development

Ibarakikita Techno Town

- (Ibaraki City, Osaka)
- We are developing an approximately 47ha integrated
- industrial complex for distribution processing and logistics
- related companies complete with living arrangements in
- proximity to the Shin Meishin Expressway Ibaraki Sendaiji
- Interchange. Saito Tobu LLC (SPC), which was formed by
- Fujita and Daiwa House Industry will be responsible for
- enforcing the land reallocation agreement while Fujita will
- handle construction. We will combine the two companies'
- management resources (building design, construction,
- management and operations knowhow) in order to
- promote the sale of industrial land and attract companies as well as revitalize regional economy.

Composite facility development

The Hiroshima Futaba-no-Sato Project (tentative name) (Hiroshima City, Hiroshima)

Fujita is handling planning and construction for the 5-city block building complex being developed by Daiwa House Industry at Futaba-no-Sato at the north exit of JR Hiroshima

Station. This 20-story complex (with 2

- basement levels) will feature about 50,000m² of floor space for shops,
- hotels, offices, etc.
- Through this project, we
- are looking to put a new
- face on the gateway to Hiroshima, the JR
- Hiroshima Station Area
- whilst creating a base for
- business strategy for a
- wide range of operations
- in western Japan.



As the agent responsible for aggregation in land allocation projects, we are developing a new 22ha industrial complex that takes full advantage of highly efficient transportation. We formed an SPC with Daiwa House Industry to acquire the greater part of these land reserves while managing land reallocation, corresponding with landowners, improving infrastructure, attracting business and other joint project efforts.

Hotel development

Nishi Shinjuku 6-Chome Hotel Plan (tentative name)

(Shinjuku City, Tokyo)

Development is progressing in the Nishi Shinjuku area,

where we are promoting the development of a 14-floor (with 1 basement level), 280 room hotel with a floor area of about 12,000m². Fujita is handling design and construction, while Daiwa Royal is responsible for operation of this premium boutique hotel intended to be a base of operations for both business and tourism.



SOLUTION

Overseas business partnership

We will be offering flexible solutions to the needs of custom operate overseas through a combination of our strengths in construction technology, development knowhow and local which are key Fujita advantages, with the wide-ranging bus which Daiwa House Industry is active.

The Waterfront City Project (tentative name) (Haiphong, Vietnam)

We are developing hotels and extended stay hotels with Da in Haiphong, the third-largest city in Vietnam. Fujita is const (1 basement level) building with 39,000m² of floor space, wh being entrusted to Okura Nikko Hotel Management and cor operation is being handled by Daiwa Living Management C each company's specific knowhow enables us to grow Japa responding to the needs of stationed employees, guests on business trips and tourists.

The Queretaro Hotel & Serviced Apartment Project (tentative name)

(State of Queretaro, Queretaro City, Mexico)

with Daiwa House Industry's information and management skills to provide a safe and comfortable living environment that showcases the full strength of the group.

SOLUTION

Creating outstanding technology through a cooperative system

Through the synergy between Fujita's technological strengths as a general contractor and Daiwa House Industry's technological and commercial development capabilities as a home builder, we are putting our effort into the development of new technologies to meet our customers' needs.

Our synergy produces results time after time

Steel buckling-restrained braces

These braces resist bending even when compressive force is applied during earthquakes.

DFII-glas

This is simulation software that calculates delivery times from car navigation data and suggests optimal locations for central logistics facilities

The Daiwa compression brace earthquake-proofing method

This is a new method developed for the purpose of reducing noise, vibration, and dust in comparison with conventional construction.

(We obtained a Building Technique Performance Certification from the General Building Research Corporation of Japan in May 2013.)

The Fujita advantage	Overseas operations	Urban renewal — The environment —	e overall capabilities e Daiwa House Group
DS hers who n overseas lization services, siness areas in	ta's network, k record, and chnological trengths in Vietnam	Daiwa House Industry's business capabilities	÷÷
) tiwa House Industry tructing this 20-story nilst management is ndominium Co., Ltd. Combining nese business while			

Artist renderin

We are developing a hotel and serviced apartment in conjunction with Daiwa House Industry in Oueretaro, which is a 3-hour drive from the capital of Mexico, Mexico City. Queretaro has been gaining traction due to urban functionality expanding as the population grows, and industrial complexes centered around the automobile and aircraft industries as well as low risk of earthquake. Our facilities boast 280 rooms with a total floor space of 17,000m and are equipped with features rare in the country, such as a large public bath and a golf practice facility. Fujita has combined our accumulated construction knowhow



Floor vibration analysis system for large facilities

The power of this system has been demonstrated through the design of logistic facilities, factories, and more. It allows post-completion floor vibration to be analyzed.

The star-shaped foundation beam construction method

This reinforcement method makes it possible to install large-diameter through-holes and passageways in reinforced concrete foundation beams

Dual core braces

These braces increase the range of usability for steel buckling-restrained braces as vibration control components. They improve the flexibility of component design and remove constraints for connectors.

Construction

Distribution



Yamato Group Chubu Gateway [Aichi, 2016]



SBS Logicom Shin Sugita Logistics Center Branch [Kanagawa, 2016]



Kyuso Distribution System Tokorozawa Distribution Center [Saitama, 2014]



SG Realty Kashiwa A / B Bld. [Tokyo, 2013]



Prologis Park Osaka 5 [Osaka, 2015]





Saitama Sekishinkai Hospital [Saitama, 2017]



Hiroshima Red Cross Hospital & Atomic-bomb Survivors Hospital [Hiroshima, 2015]



Kitakyushu General Hospital [Fukuoka, 2016]



Medical Care Town Higashi Ojima [Tokyo, 2014]

Production facilities



Handa Plant [Aichi, 2016]





YKK Snap Fastener Co., Ltd. Ageo Plant [Saitama, 2015]

Public facilities



Nagahama City Hall New Office [Shiga, 2015]



Tokyo Metropolitan Tama Library [Tokyo, 2016]

Kikkoman Arena (Nagareyama Municipal Gymnasium) [Chiba, 2015]

Matsuzaka Cluster Plant [Mie, 2017]

Cheerio Corporation Shiga Plant [Shiga, 2015]

Amada Fukushima Plant [Fukushima, 2014]

Global Authentication Infrastructure Development Project [Fukushima, 2016]





Nagasaki West Plant [Nagasaki, 2016]

Educational facilities







Shonan Gakuin High School [Kanagawa, 2013]



Hiroshima Shudo University Classroom Bld. 3 [Hiroshima, 2013]

Office buildings





Co-op Kyosai Plaza [Tokyo, 2016] Wakayama JA Bld. [Wakayama, 2013]



Shin Urayasu TK Bld. (Urayasu Ongaku Hall) [Chiba, 2017]



Tamachi Front Bld. [Tokyo, 2014]



The Parkhouse Chitose Karasuyama Glorio [Tokyo, 2016]





Ario Kitasago [Tokyo, 2010]



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The Parkhouse Oppama [Kanagawa, 2015]

Laurel Tower Yuhigaoka [Osaka, 2014]



Geo Senri-Chuo The Residence [Osaka, 2017]



The Parkhouse Tama Center [Tokyo, 2016]



Flags [Tokyo, 1998]

ViNAWALK [Kanagawa, 2002]



Odakyu Marche Tamagawa Gakuenmae [Tokyo, 2015]

Civil engineering

Roads





Tomizawa IC, Chubu Odan Expressway [Yamanashi, 2016]

Nukata IC, Dai 2 Tomei (Tokyo-Nagoya) Expressway [Aichi, 2015]



Kasamori Tunnel, Ken-O Expressway [Chiba, 2010]



Toda Crossing Underpass [Kanagawa, 2016]



Yawata Junction, Shin-Meishin Expressway [Kyoto, 2017]



Koremasa Bridge [Tokyo, 2017]



Bridge pier part, Tokyo Wan Aqua-Line Expressway [Chiba, 1994]



Haizuka Dam [Hiroshima, 2006]



Ogura Dam [Niigata, 2006]

Railways



Odakyu Kitami train maintenance base [Tokyo, 1994]



Imizu Ima Kaihotsu Viaduct, Hokuriku Shinkansen [Toyama, 2012]



Soshigaya Okura Sta. – Seijo Gakuen-mae Sta. [Tokyo, 2005]



Hakone Yumoto Sta. [Kanagawa, 2009]

Dam



Kita-sando Sta. [Tokyo, 2009]







Shin Hakushima Sta. [Hiroshima, 2015]



Tamagawa Bridge [Tokyo, 2008]



Owakudani Sta. [Kanagawa, 2013]

Civil engineering

Waterways



Saigawa River Tunnel [Nagano, 2014]



Oguraike Drainage Station / Sluiceway [Kyoto, 2004]



No.5 Vertical shaft inflow facility, Outer Underground Discharge Channel [Saitama, 2007]



Water and sewage



Kimitsu Futtsu Sewage treatment plant [Chiba, 2014]



Harisaki rain water pumping station [Aichi, 2014] Oyama City Oyama water processing center [Tochigi, 2010] Zasshonokuma Dai 6 rain water main line [Fukuoka, 2015]





Matsugahana farm pond [Kagoshima, 2005]



Inba-numa 2nd period agricultural water conservatory Ryoso water Dai 1 irrigation pumping station [Chiba, 2005] project Sougokita pumping station [Chiba, 2016]





Nagasaki airport [Nagasaki, 1975]

Developments



Seifushinto Central City [Hiroshima, 2015]



Hokusetsu Sanda Dai 2 Techno 2nd period construction [Hyogo, 2016]



FY 2013 Act to Assume Debts No. 1, Urban area around Shin Yamashita Station outside of maintenance construction [Miyagi, 2016]



Hong Kong International Airport [Hong Kong, 2004-present]



Development of infrastructure, Mitsui Shopping Park LaLaport Fujimi [Saitama, 2015]



Renai Oppama development program creation [Kanagawa, 2012]



Fukuoka southern urban area final disposal site [Fukuoka, 2016]

Overseas

Production facilities





Oji Myanmar Packaging Co., Ltd. [Myanmar, 2016]



Mazda de Mexico Vehicle Operation (MMVO) [Mexico, 2014]

Asahi Kasei Jyuko Vietnam [Vietnam, 2016]

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NPR Auto Parts Manufacturing India Private Limited [India, 2017]



FCC Automotive Parts de Mexico S.A. DE C.V. [Mexico, 2014] The new 2nd Plant, JATCO Mexico, S.A. de C.V. [Mexico, 2014] Shimano (Kunshan) Bicycle Components Co., Ltd. [China, 2013]



Nikko Metals Taiwan Co., Ltd. Longtan Plant [Taiwan, 2013]



Piolax India Private Limited [India, 2016] Kyocera Document Technology Vietnam Co., Ltd. [Vietnam, 2012]



Medical facilities, educational facilities, office buildings



Hang Seng Tower [China, 1998]

Roads, rails and airports





Nicaragua bridge [Republic of Nicaragua, 2013]





KVMRT Project [Malaysia, 2016]



Japanese School in Seoul [South Korea, 2010]



Chennai Children's Hospital [India, 2016]



Shanghai Japanese School Pudong Campus [China, 2006]



Hong Kong International Airport [Hong Kong, 2004 – Present]



Tin Shui Wai Sta., KCRC [Hong Kong, 2003]



Dubai Metro (Red Line) [United Arab Emirates, 2009]

Taiwan High Speed Rail, THSR [Taiwan, 2004]

Urban renewal

Land readjustment project









Myoden area Land Reallocation Project [Chiba, 2001]

Tomimsato City Tomisato Dai 2 Industrial park Land Reallocation Project [Chiba, 2006]

Equivalent exchange



Asakusa Tower [Tokyo, 2012]

Lefond Matudo Residence [Chiba, 2015]

Mid Residence Bunkyo [Tokyo, 2014] The Parkhouse Yanaka Dokanyama Residence [Tokyo, 2017]







Ines Fukuyama [Hiroshima, 2011] Richmond Hotel Utsunomiya Ekimae Annex [Tochigi, 2011]

Real estate investment





i Missions Park Misato (Saitama, 2017]





Comfort Hotel Toyohashi (Aichi, 2016)



GEO Takatsuki Muse EX [Osaka, 2013]



ANA Crowne Plaza Hotel Kushiro (Hokkaido, 1993)

Oasis Hiroba 21 (Oita, 1998)

Soma Solar Power Plant (Fukushima, 2013)

Fujita management

A business foundation for providing high quality and high added value

Through diversity initiatives and value engineering, which our construction business was amongst the first to adopt, we have established a business foundation that aims to improve product quality assurance and customer satisfaction, thus providing high quality and high added value.

Value engineering for better construction and better service

Fujita introduced value engineering (VE) early on — in 1968 — in an effort to bolster the company's construction technologies, construction capabilities, expertise, and intelligence. Today, we carry out VE activities into every field and department.

What is value engineering (VE)?

Value engineering is an engineering method for providing customers with high levels of satisfaction by determining the relationship between the work (function) demanded by customers and the resources needed to provide that, and then proposing the optimal solution.

Function (the magnitude of the e ectiveness obtained) Value (Value) = Resources (the amount of the resources used)

**Resources" refers to materials, personnel, finances, time, information, and so on.
* This overview is an excerpt from p. 8 of the Value Standard, 2007 Edition, by the Society of American Value Engineers.



Recipient of the Miles Award

As a company, Fujita has received the Miles Award numerous times in recognition of its outstanding value engineering activities. This s a prestigious award named after L.D. Miles, the originator of value engineering

* Both the Miles Award and the VE Manager Award are adjudicated and awarded by the Society of Japanese Value Engineering

VE activities deployed overseas by Fujita

Fujita conducts VE training for its in-country personnel and local construction companies. They hold VE workshops in Vietnam and China to teach the fundamentals and how to put them into practice.





Recipient of the VE Manager Award

The VE Manager Award recognizes leadership and promotion of VE by managers as well as noteworthy results, and Fujita's previous president, Mr. Ueda, was a recipient in 2012. Vice-president Baba had previously won it in 1990, making Fujita one of only two companies to have ever received it twice

Diversity activities

In the 10 years that have passed since introducing diversity efforts, today we have promoted "diversity for a stronger Fujita" in a myriad of ways, such as forming the president's diversity policy and setting up our diversity promotion department, and these efforts continue in 2018.

In 2007 we introduced F-net (Fujita Comprehensive Female Employees Network) as an effort to push for greater female representation in general and create a more comfortable working environment. As a result, the ratio of female employees has increased to 25%, for a company-wide ratio of 9.2% in 2017, five times greater than that at the time of introduction. Additionally, the number of female managers has increased from 0 to 6, and there are a variety of role models in every branch.



F-net (Fujita Female Network) members and Diversity Promotion Office

Our newly introduced teleworking system and satellite offices enable our employees to balance their responsibilities at the office with providing nursing or childcare at home . We will continue to work towards the creation of a working environment where all our employees can achieve their potential.

Human resource training initiatives

- At Fujita, we use a personnel training system that combines Off/JT with our main system of OJT, which is conducted at important career milestones. For OJT, we use a CDP system that takes in personal suitability and preference, allowing employees to systematically experience multiple career paths (jobs/workplaces) to provide areas to grow. Additionally, we use a career report system which helps check on an individual's future objects while supporting them on their way.
- We conduct an Off/JT for a variety of purposes according to level and position, such as at Fujita Construction Academy. Furthermore, we offer language training from native instructors and overseas study to respond to global business developments.

Construction education activities to broaden the appeal of the construction business

- Fujita's construction education activities target the children and young people of the next generation as well as the members of the community to convey the importance of craftsmanship through construction as well as consideration for the environment.
- Fujita has been developing these construction education activities so that as many people as possible will appreciate and understand the scale of the construction business, its contributions to society, its advanced technological strengths, and other appealing characteristics. Through these activities, we want to encourage the education and training of children and young people interested in becoming construction engineers who will build the future of Japan and indeed the world.

Business continuity planning (BCP) to prepare against disasters and other emergencies

At Fujita, we have implemented business continuity planning in order to fulfill our corporate responsibilities even in the event of a major natural disaster (earthquake) or other diffcult circumstances. In addition to maintaining safety confirmation measures and stockpile preparations as preparatory measures, we are putting more effort into examining the safety checks, shelters, and stav-at-home/office measures to be followed during disasters and identifying yearly issues at our head office and branches, as we implement periodic training and ensure the effectiveness of these activities. We are also developing a support framework for emergencies on a regular basis through close partnerships with the customers with whom we have accident cooperation agreements. These measures have



ing at the practical ing for new employee nar (Fuji Education and

At Fujita Construction Academy, professionals inside Fujita become our professors, giving lectures based on practical experience as well as on advanced theory in order to pass down all the technique we have cultivated and improve practical skills and abilities.





Construction site tours

Construction can be divided into 2 categories: building construction and civil engineering construction. The term "construction education" encompasses both these categories





been comprehensively evaluated and authorized by the Ministry of Land, Infrastructure, Transport, and Tourism for our BCP manual.

The BCP Promotion Department is an in-house organization that develops company-wide activities based on our company's action plan. We introduced map and roadway information acquisition system to secure goods distribution based on our experiences in the Great East Japan and Kumamoto earthquakes. In addition to direct earthquake response, our training also includes remote area support, such as in the event of a Nankai Trough earthquake, to improve emergency response with every day.



Creating Dreams, Building Hearts

The Daiwa House Group symbol — the Endless Heart — represents our vision of building endless emotional connections with each and every one of our customers, as well as the solidarity of the Daiwa House Group. As a group that co-creates value for individuals, communities,

and people's lifestyles, we are working to create new value for society.

Daiwa House Group —

working to co-create value for individuals, communities and people's lifestyles



Daiwa House Group www.daiwahouse.com

Japan				
Daiwa House Industry Co., Ltd.	Nihon Jyutaku Ryutu Co., Ltd.	Sports Club NAS Co., Ltd.		D.U-NET Co., Ltd.
Daiwa Lease Co., Ltd.	Daiwa Homes On l ine Co., Ltd.	Daiwa House Asset Management Co., Ltd.		Double-D Co., Ltd
DesignArc Co., Ltd.	Royal Home Center Co., Ltd.	Daiwa House Real Estate Investment Management Co., Ltd.		Frameworx Co., Ltd.
Daiwa Logistics Co., Ltd.	Daiwa House Reform Co., Ltd.	Daiwa House Financial Co., Ltd.		Fujita Corporation
Daiwa Living Management Co., Ltd.	Daiwa Resort Co., Ltd.	Daiwa House Insurance Co., Ltd.		Cosmos Initia Co., Ltd.
Daiwa Living Co., Ltd.	Daiwa Royal Golf Co., Ltd.	Daiwa Core Factory Co., Ltd.		Cosmos More Co., Ltd.
Daiwa Estate Co., Ltd.	Daiwa Energy Co., Ltd.	Shinwa Agency Co., Ltd.		Cosmos Life Support Co., Ltd.
Daiwa Life Next Co., Ltd.	Eneserve Corporation	Media Tech Inc.		Daiwa Cosmos Construction Co., Ltd.
Jobal Community Co., Ltd.	Daiwa Lantec Co., Ltd.	Nishiwaki Royal Hotel Co., Ltd.		Daiwa Living Stay Co., Ltd.
Daiwa Information Service Co., Ltd.	Daiwa House Life Support Co., Ltd.	Daiwa Living Utilities Co., Ltd.		Daiwa House Property Management Co., Lt
Daiwa Royal Co., Ltd.	Osaka Marubiru Co., Ltd.	Daiwa Ho	ouse Parking Co., Ltd.	Heart One Trust Co., Ltd.
Overseas				
DH (Dalian) Administrative Managemen	nt Shanghai Hebao Property Service Co., Lto		Daiwa House Guam Co., Ltd.	Daiwa Living California Inc.
Daiwa House (Wuxi) Real Estate Development Co., Ltd.	Baoye Daiwa Industrialized House Manufacturing Co., Ltd.		Daiwa House Australia Pty Ltd	PT Daiwa Manunggal Logistik Properti
			Daiwa House Vietnam Co., Ltd.	PT Daiwa Tetra Manunggal Konstruksi
Daiwa House (Changzhou) Real Estate Development Co., Ltd.	Fujita (China) Construction Co., Ltd. Daiwa House California Inc.		Daiwa House Real Estate Development Co., Ltd.	Stanley-Martin Communities LLC
			Daiwa House Malaysia Sdn. Bhd.	
Daiwa Baoye (Wuxi) Property Management Co.,Ltd.	Daiwa House Texas Inc.		Cosmos Australia Pty Ltd	(As of April 1, 201

