

Certified by the Minister of the Environment in Japan.

Daiwa House Group®





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www.fujita.co.jp

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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.



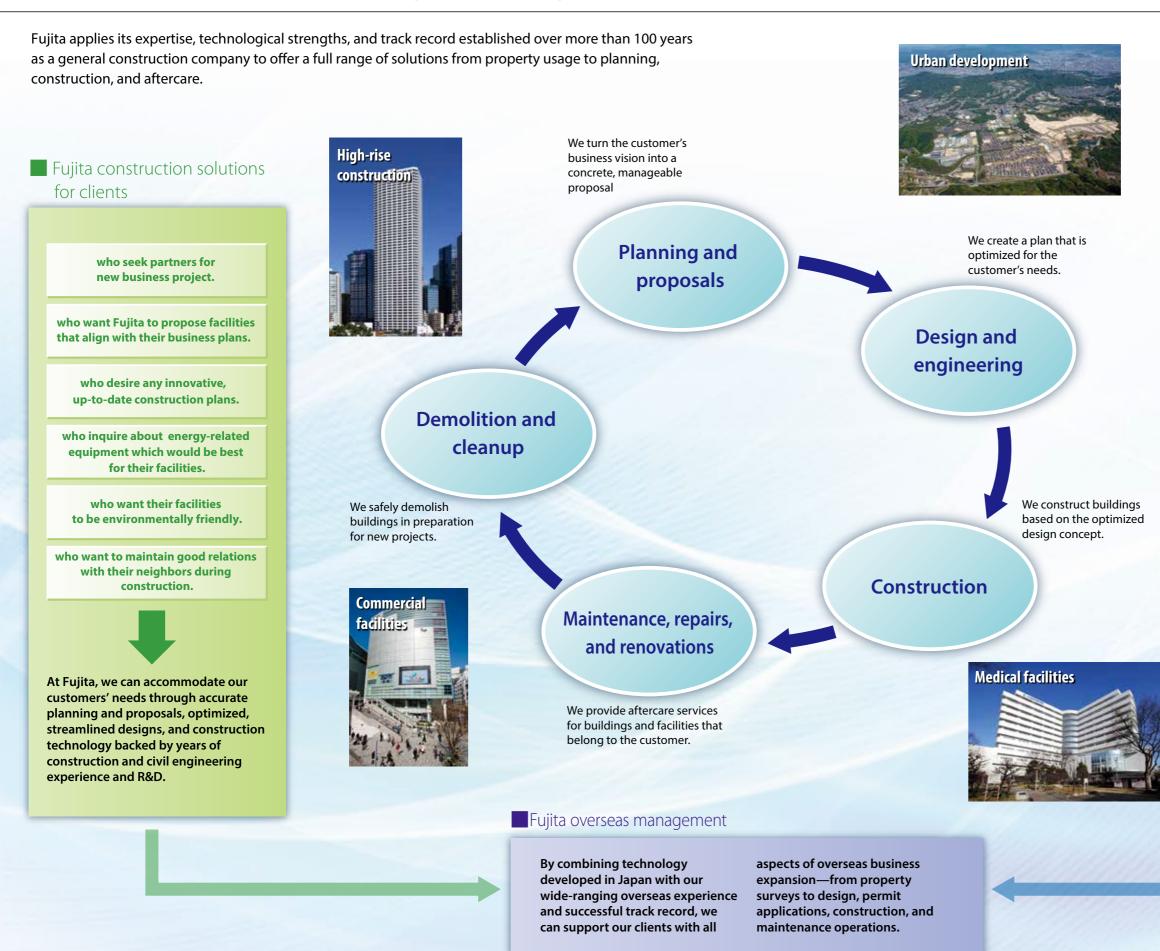
Creating the future, together

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 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

P.8

P.3

Information,

Communication

and

Robotization

Technology

We realize construction

productivity improvement by

and robotization technology.

implementing state of the art IC

P4

→ P.11

Fujita technology

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

Construction technology

We help our customers grow their businesses through advanced engineering that includes skyscraper construction technology and earthquakeproofing tecnnology.

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.



With an impressive overseas track record, we help customer with global expansion—both in Japan and abroad.



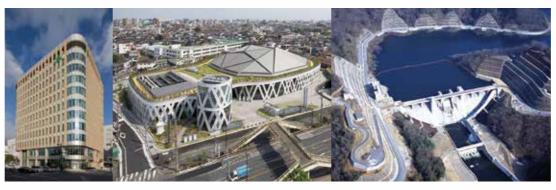
neighborhoods and nunities as urbar development specialists.



environment through our pioneering environmental

Fujita's track record-→ P.24

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



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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

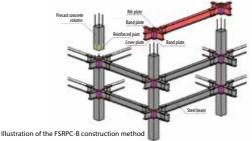
Hybrid building systems (the FSRPC-B and FRASH construction methods)

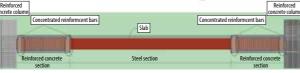
> The FSRPC-B construction method is a proprietary Fujita technology that uses column and beam joints that combine reinforced concrete columns with steel beams. The FRASH construction method is a new hybrid method that uses reinforced concrete wrapped around the ends of steel beams.

- 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 te





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

We create high-rise buildings using reinforced concrete.

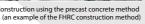
Reinforced concrete high-rise technology

(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

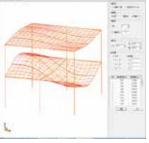




Examples of FIRST brace usage



Tuned mass damper



Example of vibration prediction using Yureiza II

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

https://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

Maintaining safety by preventing pile and foundation damage during earthquakes

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:

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-confor-
- mance 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.

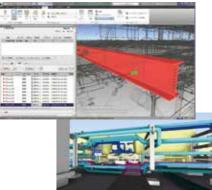
We want to speed up recovery from emergencies and disasters.

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.

IJITA technology: Providing solutions to our customer's needs









Please see our website for more detailed information on our technology

https://www.fujita.co.jp/solution-and-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-quality concrete lining.

- 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

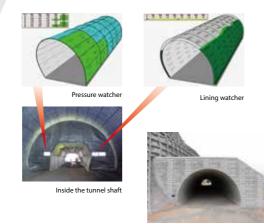
We want more precise tunnel boring.

Real-time measuring of segment assembly precision

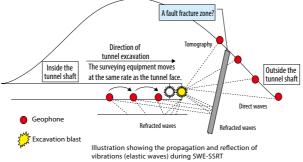
Fujita high-quality tunneling shields

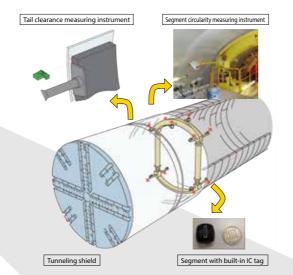
High-quality construction management is possible by digging tunnels with a tunneling shield (tunnel boring machine) and assembling cylindrical tunnel segments (tunnel construction components) one-by-one behind it.

- 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

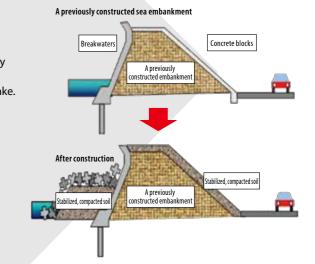
> This system uses multiple robotic jacks to raise work platforms that include integrated scaffolding and forms. Because it can be asembled and disassembled on the ground, it is very safe and economical.

- 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.

https://www.fujita.co.jp/solution-and-technology,

Fujita technology:

Providing solutions to our customer's needs

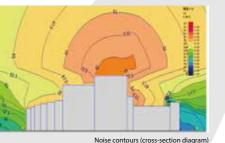
Environmental technology

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.



bise contours (cross-section diagram)

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

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.

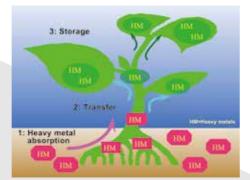


Diagram illustrating phytoremediation

We want to recycle incinerated ash

Desalination of incinerated ash and low solubility of lead etc.

The FAST-BOX system FAST : Fujita's Ash Stabilization & Treatment System for Disposal Facilities

The system consists of remodeled portable iron containers, watering equipment above the container and a carbon dioxide aeration system positioned at the base of the container.

- A compact and effective on-site stabilization accelerating system for ash produced during incineration of general waste.
- This system can be used for pre-treatment of ash prior to final disposal or recycling, desalination of incinerated ash, or reformulation of ash to meet acceptance standards.
- This system can contribute to safe and secure final waste disposal site.
- This system can contribute to the promotion of recycling of waste other than incinerated ash (e.g., residue on sieve and sludge)

We want to reduce low frequency sounds generated by construction work.

Reduce low frequency sounds using the wave nature of sound

Active Noise Control (ANC)

The ANC system reduces the low frequency sounds contained in construction machinery noise and tunnel blasting charge sounds by putting a reverse phase sound wave on top of one another.

- ANC system can reduce the low frequency sound which is difficult to reduce by the soundproofing wall.
- The ANC system can be attached to noise sources that move (e.g., backhoes).

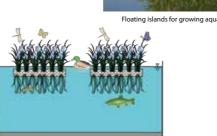
We want to quickly improve soft ground.

Environmentally friendly soil improvement additive

FT Madokira

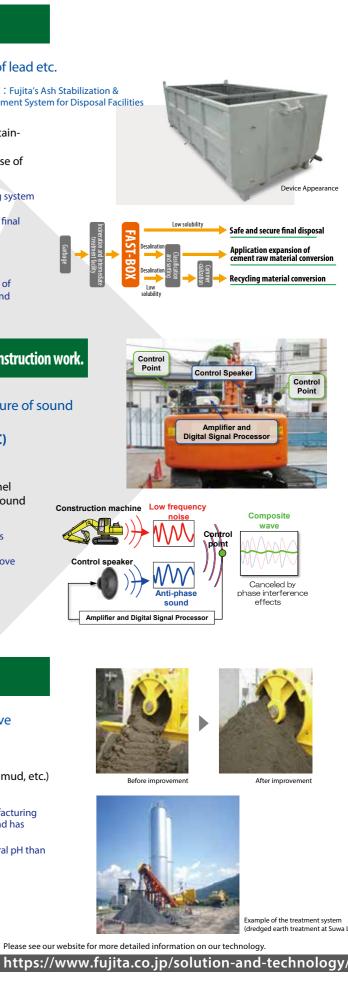
Soft, water-logged soil (dredged soil, excavated soil, mud, etc.) can instantly be improved by mixing in this additive.

- 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.



tion showing festa metho

Solution&Technology



Overseas operations

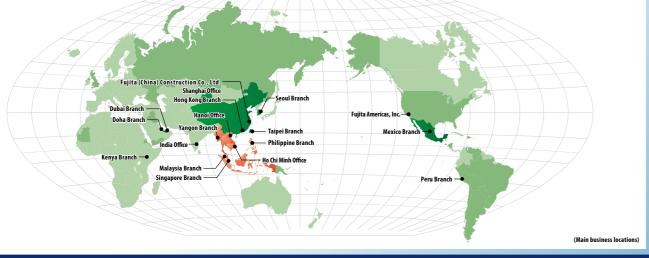
Supporting the overseas expansion of companies based in Japan

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)



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The overa aiwa House Groi

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 custo

Hang Seng Bank Tower (Shangha

Infrastructure





wan High Speed Rail, THSF

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

https://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

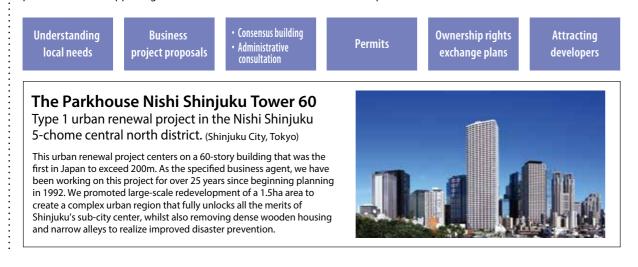
Urban renewal	Land reallocation	Equivalent exchange	Real estate investment	Project proposals
We support initiatives that promote city-wide redevelopment to solve urban problems.	We create vibrant communities through urban development and urban nurturing based on the Land Readjustment Act.	We effectively 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



large-scale apartment complexes and commercial facilities, working alongside the region to promote

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.

Business Permits Land acquisition **Project Proposal**

Logistics warehouse development



Rental apartment development



above ground.



The overa Daiwa 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.

Lilas Shinagawa-Minami

(Shinagawa City, Tokyo)

This property is a rental apartment building with a total of 85 units in 12 floors

It has a very convenient location - approximately 14 minutes on foot from JR Shinagawa Station and approximately six minutes on foot from Shimbamba Station on the Keikyu Main Line - among rental apartment development projects being deployed mainly in central Tokyo.

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

https://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.

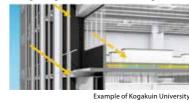
SOLUTION

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.

the use of energy-conserving techniques and renewable energy. Ichinomiya Town Hall An environmentally fr



Air conditioning usage is minimized by installing eco-atria that make use of natural breezes and light.





measurements).

* 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

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



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. Our efforts on animal and plant conservation utilizing this technology won a prize in the protection category at the Biodiversity Action Award 2018 organized by the Japan Committee for United Nations Decade on Biodiversity.

Reducing construction site carbon dioxide (CO₂)

We have introduced FCMS, a system that constantly measures the Measurement and mmunication equipmer Power Server amount of CO₂ generated by construction machinery and equipment at tunneling shield and other construction sites. This Internet makes CO₂ emissions "visible" to increase energy conservation board • WEB: Graph, History, Overview awareness. Used in combination with CO2 reduction technology • Warning: Alert mail rent (CT), voltage according to the generated CO₂, this system significantly reduces Security: User authenticatio Heavy equipment CO₂ emissions. FCMS : Fujita CO₂ Monitoring Syste **Client headquarters** measuring board (major) offices Webpage CO₂ reduction technology leavy equipment CO2 Generated (O) Using power generated when tower cranes unload materials for other eavy equipmen asuring equipment Outilizing hybrid backhoes and other energy-saving construction Voltage, Demand, equipment Generated CO₂, Dail Tachometer Using LEDs for temporary shield pit lighting. and monthly report seat mo 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 guality 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.



acility that has been given CASBEE® rank

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

aiwa House Gro





Envire







ring of the power facilities

Visit our website for more information on our environmental effort

https://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, welfare, en 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.

Complex facility development

GRANODE Hiroshima

(Hiroshima City, Hiroshima)

GRANODE Hiroshima is a complex facility developed by Daiwa House Industry in Block 5 of the Futaba no Sato area at the North Exit of JR Hiroshima Station. It was completed in March 2019 with the design and construction by Fujita. This complex building consists of stores, offices and a hotel in a total floor space of 50,000 m² in 20 floors above ground and two basement floors.

It is hoped that this will be a base of business and tourism as well as the new face of the JR Hiroshima Station area.



Eastern Isehara 2nd Land Reallocation Project (Isehara City, Kanagawa)

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

Daiwa Roynet Hotel Nishi-shinjuku

(Shinjuku City, Tokyo)

This is a hotel development project with a total floor space of 120,000 $\ensuremath{\mathsf{m}}^2$ and 280 guest rooms in 14 floors above ground and one basement floor in the Nishi-Shinjuku area where

redevelopment is underway. Quadruple rooms and junior suites have been incorporated into two of the upper floors of this building. This has made it a hotel that can meet diverse demands with an upgraded feeling. In addition, this is a project that can contribute to urban development as the Daiwa House Group because it is combined with the construction of a building of Daiwa House Industry that has 29 floors above ground in the adjacent area on the north side



SOLUTION

Overseas business partnerships

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

The Waterfront City Project

(Haiphong, Vietnam)

We are developing hotels and extended stay hotels with Daiwa House Industry in Haiphong, the third-largest city in Vietnam. Fujita is constructing this 20-story (1 basement level) building with 39,000m² of floor space, whilst management is being entrusted to Okura Nikko Hotel Management and condominium operation is being handled by Daiwa Living Management Co., Ltd. Combining each company's specific knowhow enables us to grow Japanese business while responding to the needs of stationed employees, guests on business trips and tourists.

The Queretaro Hotel & Serviced Apartment Project

(State of Queretaro, Queretaro City, Mexico)

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 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	

lietna







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]

Matsuzaka Cluster Plant [Mie, 2017]

Amada Fukushima Plant [Fukushima, 2014]



Global Authentication Infrastructure Development Project [Fukushima, 2016]



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



Nagasaki West Plant [Nagasaki, 2016]

Educational facilities





Kogakuin University Hachioji Campus Bld. 2 [Tokyo, 2017]



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]

Sonic City [Saitama, 1988]



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]

26





The Parkhouse Oppama [Kanagawa, 2015]

Laurel Tower Yuhigaoka [Osaka, 2014]



Geo Senri-Chuo The Residence [Osaka, 2017]



The Parkhouse Tama Center [Tokyo, 2016]

Aeon Mall Musashimurayama [Tokyo, 200



Flags [Tokyo, 1998]



G Building Jiyugaoka 01 B- Bld. [Tokyo, 2016]



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]



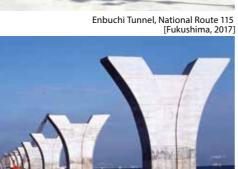
Toda Crossing Underpass [Kanagawa, 2016]



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





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]



Nakayama Sta. [Kanagawa, 2008]

Odakyu Kitami train maintenance base [Tokyo, 1994]



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]



4-go Park underground pondage [Saitama, 2011]



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





Shirasagi Water supply ground [Tochigi, 2010]



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]

Agricultural engineering



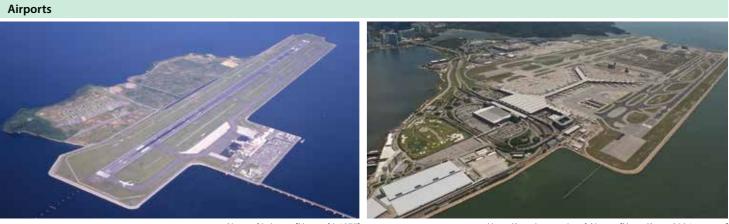
Matsugahana farm pond [Kagoshima, 2005]







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



Nagasaki airport [Nagasaki, 1975]





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]



project Sougokita pumping station [Chiba, 2016]

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



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]

and the



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



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



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



Medical facilities, educational facilities, office buildings



Hang Seng Tower [China, 1998]

Roads, rails and airports





KVMRT Project [Malaysia, 2016]

Taiwan High Speed Rail, THSR [Taiwan, 2004]





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]

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]

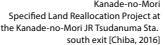


Dubai Metro (Red Line) [United Arab Emirates, 2009]

Urban renewal

Land readjustment project





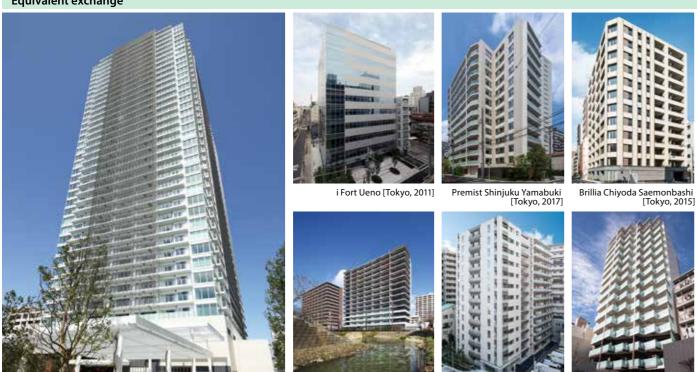




Myoden area Land Reallocation Project [Chiba, 2001]

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

Equivalent exchange



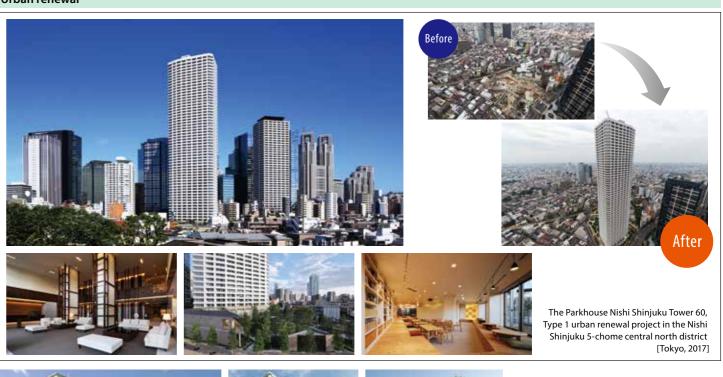
Lefond Matudo Residence [Chiba, 2015]

. .

Asakusa Tower [Tokyo, 2012]

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

Urban renewal





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.

Value (Value) = $\frac{Function (the magnitude of the e ectiveness obtained)}{Resources} (the amount of the resources used)$

"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 is 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.



VE workshops in China



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 around 25%, for a company-wide ratio of around 12% in 2019, greater than that at the time of introduction. Additionally, the number of female managers has increased from 0 to 10, 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 stay-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



Training at the practical training for new employee seminar (Fuji Education and Training Center)

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.





General training for handling a major earthquak

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.



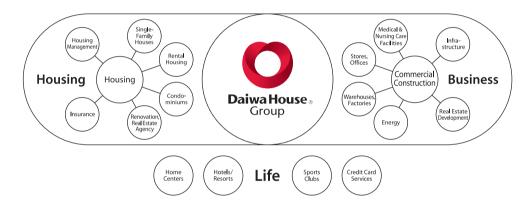
Creating Dreams, Building Hearts

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	y Daiwa Information Service Daiwa Royal Nihon Jyutaku Ryutu Royal Home Center		Daiwa Energy	Daiwa House Insurance	Fujita	Daiwa House property	
Daiwa Lease			Eneserve Osaka Marubiru Nishiwaki Royal Hotel	Investment Management D.U-NET	Cosmos Initia	Management Daiwa Royal Hotel Cit DD Innovation	
DesignArc					Cosmos More		
Daiwa Logistics					Cosmos Life Support		
Daiwa Living Management	Daiwa House Reform		Sports Club NAS	Double-D	Daiwa Cosmos Construction	Royal Gate	
Daiwa Living	Daiwa House Chintai R	eform	Media Tech	HeartOne Trust	Cosmos Hotel Management	acca international	
Daiwa Estate	Daiwa Resort		Shinwa Agency	Daiwa Living Stay	Wakamatsu KONPOU UNYU SOKO	DiceNext	
Daiwa Living Uti l ities	Daiwa Royal Golf		Daiwa CoreFactory	Daiwa Living Care	JUST Logistics		
Daiwa LifeNext	Daiwa Lantec		Daiwa House Asset Management	Daiwa LogiTech	Daiwa House Parking		
Global Community	Daiwa House Life Support		Daiwa House Financial	Frameworx	Parking Solutions		
DH (Dalian) Administrative M Consulting Center	lanagement	Taiwan		Daiwa House Vietnam	DH Asia Investment		
Fan I Daiwa House (Changzhou) Real Estate		Fan Lu C	Construction Industry	Daiwa Living Vietnam	Daiwa Living de Mexico		
		Daiwa H	louse Texas	Daiwa Logistics Vietnam	Stanley-Martin Communi	ties	
Development Daiwa I		Daiwa Living California		DT Deve l opment Vietnam	Rawson		
		Daiwa House Australia		DH Logistic Property Vietnam	Trumark		
liuxin(Changzhou) Real Estate Development		Daiwa R	esort Australia	Daiwa Join Indonesia	Daiwa House Europe		
		s Australia Daiwa LifeNext Indonesia		Jan Snel			
Property Management		Daiwa L	iving Australia	Nas Fitness Indonesia			
ujita (China) Construction		Daiwa L	iving Nesuto Holdings	Daiwa House Indutry (Thailand)			
Shanghai Hebao Property Se	rvice	Daiwa H	ouse Malaysia	Daiwa House Industry India		(As of April 1, 202	

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