The main environmental laws, regulations, etc. and their planning and design include:

- **Basic Environment Act**
- **Kyoto Protocol**
- **Kyoto Mechanism**
- **Outline for Promotion of Efforts to Prevent Global Warming**
- **Kyoto Protocol Target Attainment Plan**
- **Act on the Rational Use of Energy**
- **Act on the Promotion of New Energy Usage**
- **Urban Green Space Conservation Act**
- **Housing Quality Assurance Act**
- **Fluorocarbons Recovery and Destruction Act**
- **Tokyo Metropolitan Environmental Preservation Law**

The execution includes:

- **Zero emission construction (3kls of waste)**
- **Energy efficiency improvement**
- **Building energy management**
- **Application of energy-saving construction methods**
- **Continuous belt conveyor tunnel construction method**
- **Harmonic method (large-section divided shield construction method)**
- **Paving** (using Vicco-Mix (medium-temperature compound material))
- **Recycled ferro concretes segments**
- **Improvement of transport methods**
- **Reduced transport distance**
- **Electric-powered backhoe, LED lighting, solar power**
- **Use biodiesel fuel**

Environmental Data

- **Local Environmental Issues**
  - **Basic Environment Act**
  - **Vibrational Control Act**
  - **Sewerage Act**
  - **Act on Regulation, Etc. of Emissions From Non-road Special Motor Vehicles**
  - **Air Pollution Control Act**
  - **Act on Prevention of Marine Pollution and Maritime Disaster**
  - **Water Pollution Control Act**
  - **Noise Regulation Act**
  - **NOx/IPP** Act
  - **River Act**
  - **Purification Tank Act**

- **Hazardous Substances**
  - **Basic Environment Act**
  - **Soil Contamination Countermeasures Act**
  - **Act on Special Measures Concerning Disinfect**
  - **Law Concerning Special Measures Against PCB** Waste
  - **Building Standards Act**
  - **Act on Prevention of Health Impairment due to Asbestos**
  - **PRTX** Law
  - **Law Concerning Special Measures Against Contamination by Radioactive Materials**

- **Environmental Assessment**
  - **T-Heats (heat island countermeasure)**
  - **T-Diff (air pollution prediction and evaluation system)**
  - **T-Sounds (comprehensive noise prediction system)**
  - **T-Heats (heat island countermeasure)**
  - **T-Feels (TAISEI Eco-material comprehensive evaluation system)**
  - **TAS-Fine (ultra high-strength thin RC columns)**
  - **T-RESQF (earthquake emergency management system for production facilities)**
  - **T-FPOP (construction technology)**
  - **T-POP construction method (ultra-light long-span precast concrete beam)**
  - **T-POP construction method (ultra-light long-span precast concrete beam)**
  - **T-Green BEMS**
  - **T-Smart Focus (next-generation human detection sensor)**
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- **Environmental Monitoring**
  - **Air conditioning and lighting equipment**
  - **Efficient use of soil generated by construction**
  - **Super-Eco buildings**
  - **Energy-saving construction methods**
  - **Long-life design (develop materials, construction methods)**
  - **Zero emissions plans (3kls of waste)**
  - **Ultra-high-strength concrete construction planning technology**
  - **Automatic warehouse rack vibration control system**
  - **Zero emissions plans (3kls of waste)**
  - **Ultra-high-strength concrete construction planning technology**
  - **Automatic warehouse rack vibration control system**

- **Environmental Information**
  - **Basic Environment Act**
  - **The Basic Act for Establishing a Sound Material-Cycle Society**
  - **Law for Promotion of Effective Utilization of Resources**
  - **Construction Material Recycling Act**
  - **Law on Promoting Green Purchasing**
  - **Waste Management and Public Cleansing Law**
  - **Act on Sophisticated Methods of Energy Supply Structure**

- **Establishing a Recycling Society**
  - **Basic Environment Act**
  - **New Energy Usage Act**
  - **Basic Environment Act**
  - **Basic Environment Act**
  - **Law Concerning Special Measures Against PCB** Waste
  - **Basic Environment Act**
  - **Basic Environment Act**

- **Improving Environmental Technology Research and Development and Proposal-Making Capability**
  - **Law Concerning Special Measures Against PCB** Waste
  - **Basic Environment Act**
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- **Planning and Design**
  - **Local Environmental Issues**
  - **Hazardous Substances**
  - **Environmental Monitoring**
  - **Environmental Information**
  - **Improving Environmental Technology Research and Development and Proposal-Making Capability**
  - **Planning and Design**
  - **Execution**

- **Environmental Impact Assessment Act**
  - **Act on Conservation of Endangered Species of Wild Fauna and Flora**

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### Operation, Renovation, Demolition

We engage in earthquake proofing to give building structures longer lives, we extend the life of existing structures, and we efficiently demolish structures.

- General renovation work
  - Extending building life, installing information telecommunications capability, conversion to barrier free design, conversion to energy-saving design
  - Energy-saving renovation work
  - Energy management
  - T-Green BEMS
  - T-Carbon Conductor
  - T-Smart Monitor
  - Demand response technology
  - ECOS business
  - Recovery and destruction of Fluorocarbons
  - Recovery of SF6

- Zero-emission demolition (3R of waste)
- Conversion (technology to change use of building)
- Renovation (improving the performance of buildings)
- Life-extending repair
  - Earthquake resistance, base isolation, seismic vibration control
  - Use of ground flex mole method (flexible boring) for anti-seismic reinforcement of tank conforming to old law
  - Embankment structure anti-seismic reinforcement method
  - Anti-seismic reinforcement by Post-Head-bar (retrofitted steel bar reinforcement against shear)
  - Pipe refreshing method (restoration of marine pipes)
  - Measures against liquefaction of existing facilities with the groundwater level lowering method
  - Measures against liquefaction of existing facilities with the WinBLADE method (improved soil mixing method by opening impellers in the ground)
  - Efficient use of concrete debris

- Relocation and preservation of historic buildings
- Inherit and develop local culture
- Conservation of cultural assets
- Forest saver project
- Forest restoration

- Environmentally friendly demolition planning
- TECORP system (environmentally friendly method for demolition of very tall buildings)
- Low-noise, low-vibration work method using wire saw
- Laser non-slip work method

- Remediation of contaminated soil (volatile organic compounds, petroleum, heavy metals, PCBs, dioxins, etc.), in-situ remediation
- Asbestos countermeasures
  - Robot to remove spray-on asbestos inside elevator shafts
  - Asbestos removal in subways using specialized wagon
- Incinerator demolition system compliant with laws
- Proper storage of PCBs
- Radiation decontamination

- Soil and groundwater remediation
- Sick house countermeasures
- Robot to remove spray-on asbestos
- On-site asbestos abatement decontamination system
- Radiation decontamination

- Business of improving and operating final disposal sites through PFI, DBO
- Business of restoring final waste disposal sites
- Business of carbonizing and recycling city waste through PFI
- Biogas fermentation of domestic animal waste, garbage, and use for electric power generation
- Methane fermentation without dilution by water

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### Application of Research and Development Technology

We engage in research and development of methods and technologies related to construction, and push the level of technology up to practical application.

- Use renewable energy
  - Mega-Solar power generation system
  - Concentrated Solar power generation system
  - Tidal current power generation system
  - Geothermal utilization system
  - CO2 underground sequestration technology
  - Develop liquefied CO2 storage facilities
  - Heat-recovering solar battery coolers
  - Light-modulating ceiling system
  - T-Smart Focus (next-generation human detection sensor)
  - Low-carbon city block and city simulator
  - BIM and VR coupled functionality
  - T-Site View (on-site panoramic photography system)
  - Mole navigator (underground location finding system using sound waves in the ground)

- Inter-seasonal ice storage air-conditioning system
- Plant factory with inter-seasonal ice storage air-conditioning system
- Vegetable plant (thin LED grow light unit)
- Aquarium using artificial seawater
- Methane hydrate gas leak monitoring
- CO2 underground sequestration (CO2 injection simulation, CO2 transportation)
- Electric power stabilization by electric power storage evaluation system (NaS battery)
- Distributed energy network technology (smart grid, smart city construction)
- Mega-Solar power generation system using the top of final landfill site
- Wind power generation

### Creation of New Business

We create new businesses in the environmental field.

- Aquatic environment restoration
- Restoration of tidal flats and Zostera beds
- Placement and promotion of animal pathways on existing roads
- Drinking water business

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### KPIs

- *Geographic information system
- *10 Assesses effects of creating a space that considers biodiversity by showing the organisms that may potentially visit.
- *11 Material safety data sheet
- *12 A system that varies the energy demand to achieve a balance between supply and demand.
- *13 Business providing comprehensive services including energy-saving proposals, provision of facilities, maintenance, and management.
- *14 Sodium-sulfur batteries
- *15 A business method similar to the private finance initiative (PFI) in which the public sector takes on fund-raising and contracts design, construction, and operation to the private sector.