

The background features a large, abstract graphic design. On the left, a large green shape curves upwards and then downwards, forming a partial frame. In the center, a white circular area contains a gold sphere. To the right, a large, flowing gold ribbon-like shape curves downwards and then upwards, ending in a pointed tip. The overall composition is clean and modern, with a focus on organic, flowing forms.

COMPANY PROFILE
GRANDLINE
INNOVATION



GRANDLINE
INNOVATION

BUSINESS PHILOSOPHY AND PRINCIPLES

GRANDLINE INNOVATION CO., LTD. (GLi) was established in 2010 and has consistently operated with a clear commitment to delivering innovative solutions and services. We strive for sustainable growth and aim to create value that meets our clients' needs in a meaningful way. Our management approach is guided by three key principles: Innovation, Quality, and Good Governance.

We begin with the principle of **"Innovation"**, where our management places great emphasis on providing advanced equipment and high-performance tools to meet the evolving needs of our customers. These technological solutions maximize value and satisfaction, particularly for key government sector clients. Access to state-of-the-art equipment plays a vital role in supporting business operations and driving national development.

"Quality" is another core principle of the company's management, which we are committed to upholding consistently through the implementation of the international standard **ISO 9001:2015**, under the company's quality policy: "Driving innovation with quality, protecting the environment, maximizing benefits, and ensuring the highest customer satisfaction."

Since 2023, the company has reinforced its commitment to environmental sustainability, placing greater emphasis on environmentally responsible operations. We have also obtained certification for **ISO 14001:2015**, the international standard for environmental management, and **ISO 14064-1:2018**, the standard for greenhouse gas management and carbon footprint reduction within the organization. These certifications demonstrate our dedication to strict standards and quality, along with a continuous focus on minimizing environmental impact.

The final and indispensable principle is **"Good Governance"**, which serves as the foundation for organizational stability and is embedded in our corporate operations through sound governance practices. We are committed to conducting business with honesty, transparency, and sincerity towards ourselves, our customers, our partners, and society. This is recognized as part of our corporate culture that all management and employees are expected to follow, as a guideline for driving quality innovation and delivering customer service to ensure the highest level of satisfaction and long-term sustainability.



INNOVATION



GOOD GOVERNANCE



QUALITY



VISION

We aim to become a leading company in creating valuable innovations and advanced technologies to elevate national and ASEAN infrastructure with sustainable quality.



MISSION

We are committed to continuously driving innovation to deliver products and services that ensure the highest customer satisfaction, based on good governance. We strive to become a digital organization focused on learning, enhancing employee capabilities, and modernizing the company. We are dedicated to conducting business in alignment with ESG principles to promote sustainable development.



CORE VALUE

ABSOLUTE

Striving for perfection without limits.





Business Goal

Grandline Innovation Co., Ltd. is committed to becoming a leading provider of services, product design, and new product development that can be successfully brought to market. We strive to play a key role in advancing national and regional infrastructure, as well as information and communication technology across Thailand and the ASEAN region. Our ultimate goal is to deliver high-quality technologies, materials, and equipment that are practical, environmentally friendly, and meet the needs of modern living – efficiently, comprehensively, and with the highest level of satisfaction.

Business Direction

Grandline Innovation Co., Ltd. operates in the fields of technology innovation, construction and infrastructure management, railway engineering, and Eco Solution, which specializes in comprehensive environmental management. Our primary focus is on projects that support the development of essential public infrastructure (Smart Utilities) and promote the sustainable use of resources, such as smart water management systems, wastewater treatment, waste disposal, and renewable energy. In addition, we provide support for logistics system development and the expansion of the State Railway of Thailand's operations.

The company targets continuous growth of 15–20% annually, with a firm commitment to expanding our customer base both domestically and across the ASEAN region. This is driven alongside our focus on continuous research and development of innovation to meet the demands of modern technology. We are equally committed to promoting long-term sustainability through our Green Business approach and advancing toward our Net-Zero goal – for the future of both our organization and the environment.



COMPANY HISTORY

Grandline Innovation Co., Ltd. was established on January 7, 2010, with a registered capital of 20 million baht. The company initially operated in the fields of flood protection, water drainage, environmental system installation, and electrical power engineering, under its engineering business unit.

With the rapid growth and advancement of technology, the company has recognized the need to reform and transform its business approach to effectively respond to changing circumstances and keep pace with modern developments. As part of this transformation, technology, digital systems, and innovation have been increasingly integrated into the business to support national policies that prioritize infrastructure development. These include projects such as Smart Utilities, high-speed rail, double-track railway development, and the expansion of the State Railway of Thailand's rail network. To seize these opportunities and adapt to the evolving landscape, the company has expanded by establishing new business units, including Technology Innovation, Railway Engineering, and Eco Solution, while consistently adhering to its core management principles of **"Innovation, Quality, and Good Governance"**.

In 2019, the company increased its registered capital from 100 million baht to 200 million baht. Looking ahead, we have plans to further increase our registered capital to support business expansion in line with the management's vision. With over a decade of proven experience, the company has built a strong track record and earned widespread recognition, particularly among government sector clients. A significant portion of our work involves public infrastructure projects, which has established our reputation for reliability and excellence. In addition, many satisfied clients have recommended our services to other agencies, contributing to our continuous growth to this day.

ECO SOLUTION



Providing Solution management for Environmental and Natural resource issues.

TECHNOLOGY INNOVATION



Research and development of innovations, providing comprehensive digital solutions and digital transformation services – including IoT technology, AI technology, digital security, and more – to empower businesses in achieving success in the digital era.



RAILWAY ENGINEERING

Providing design, supply, and installation of Railway signaling systems, led by a team of skilled professionals with extensive experience and international standards ensuring safe and punctual travel for passengers.



CONSTRUCTION MANAGEMENT

Providing Turnkey engineering and environmental management solutions, covering Civil, Electrical, Mechanical engineering, Hydrology, and Technology. We also supply, install and sell high-quality, modern equipment.

TECHNOLOGY INNOVATION

The company provides installation and consulting services in Digital solutions, offering tailored solutions to meet the needs of customers as follows:

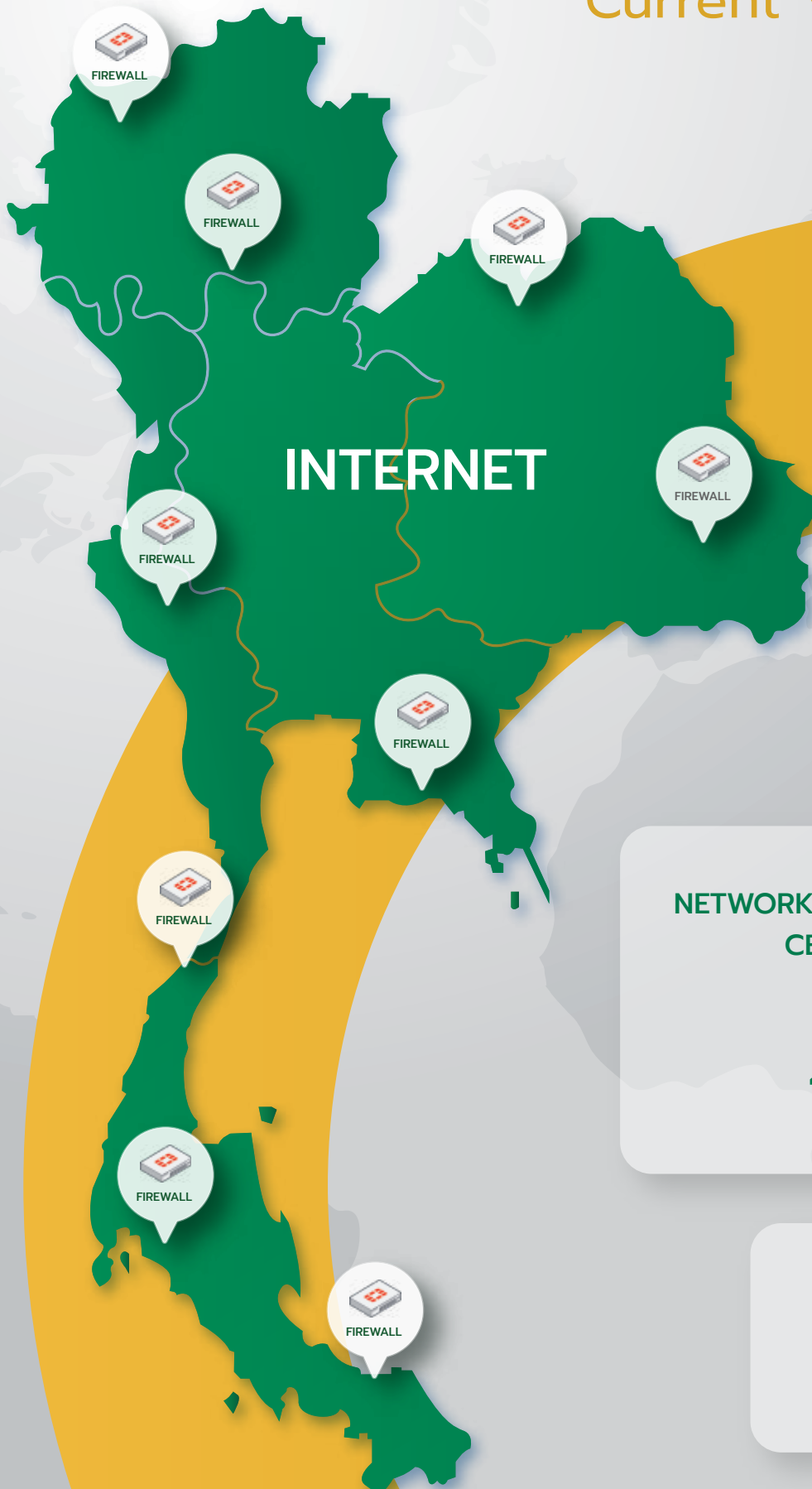
Private Cloud And Hybrid Cloud Solution We offer comprehensive Private Cloud and Hybrid Cloud professional services to help our clients achieve their business goals. Our team of experts works closely with clients at every stage – from consultation to designing a tailored cloud adoption strategy – ensuring maximum benefits from their cloud infrastructure. We also provide ongoing after-sales support and maintenance services to guarantee the cloud system remains reliable and ready for continuous operation.

Communication and Security We provide comprehensive services covering every layer, from network infrastructure to application security, both of which are fundamentally connected. A failure at any single point can inevitably affect the overall system performance. Therefore, careful and integrated system design is essential in every aspect. With this approach, our company is committed to delivering the best user experience, backed by our expertise in providing large-scale communication and security solutions.

Big Data Solution The process of collecting, filtering, analyzing, and processing vast and diverse data can be highly complex and challenging. Effective collaboration between data owners and data management experts is essential to ensure meaningful analysis and support seamless operations. With our team's extensive experience, we are ready to work alongside our clients in designing, implementing, maintaining, and providing expert consultation for big data systems – to ensure maximum benefits aligned with the client's objectives.

SYSTEM DIAGRAM

Current Version



NETWORK OPERATION
CENTER (NOC)



DATALOG

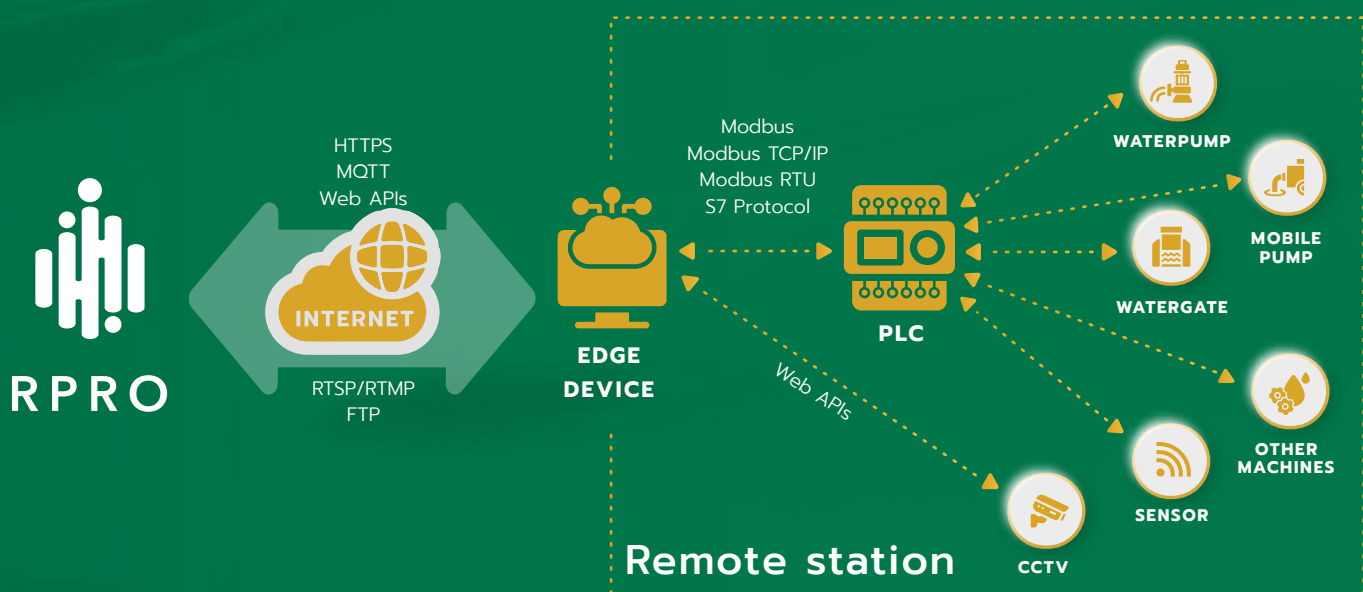
CENTRALIZED WATER MANAGEMENT AND CONTROL SYSTEM

RPRO

It is a web-based platform that utilizes IoT technology to collect real-time data and status information from monitoring devices and machinery, as well as to remotely control the equipment. The system integrates this data with external information sources and applies Big Data technology to simulate and predict potential situations. This enhances centralized water monitoring and management, providing faster, more convenient analysis and evaluation, enabling timely and effective decision-making for long-term, sustainable operations.

Furthermore, the platform has been developed using modern technologies to overcome the limitations of traditional water management tools. The user interface is designed with a strong focus on user experience, transforming complex data from machinery and monitoring devices into a format that is easy to understand and operate. This significantly enhances the overall water management experience, making it more efficient and user-friendly.

CONNECTION BETWEEN THE STATION AND RPRO





Centralized Water Management Data

Water - related data and other relevant information from each area are collected and stored in a centralized, digital format. This enables integrated data analysis and knowledge development to support effective water management.



Applying Machine Learning and AI

We leverage centralized data storage by integrating it with external data sources, such as weather forecasts and rainfall information, both historical and real - time. Using Machine Learning and AI technologies, the system can simulate potential scenarios, support accurate forecasting, enhance planning, and assist in effective decision - making for water management.



Enhancing Workforce Efficiency

- Reduces workload by automating tasks that previously required manual operation through the platform.
- Users no longer need to learn multiple systems, as this centralized platform is designed for seamless use across all stations.



Scalability to Support Platform Expansion

- Individual services can be scaled up or down to meet usage demands at any given time.
- The platform supports the addition of servers to accommodate future data growth without affecting existing systems, eliminating the need for separate system installations (SCALABILITY).



Convenient Map - Based Interface

The system presents water-related situations through an interactive map view that displays real - time conditions for each area. This makes it easier to assess situations, plan operations, and issue commands effectively.



User - Centric Design

The system is designed with a strong focus on user experience, featuring a Thai-language interface complemented by numbers, icons, and color-coded indicators to help users easily identify and monitor abnormalities. The display can also be customized for different stations, machinery, or devices to suit various operational requirements.



Decentralized Water Management Via Central Platform

User access and permissions can be defined to support remote command and control at each station. This reduces long - term management costs by eliminating the need for separate systems.



Secure Command Operations

- User authentication via one - time password sent to mobile phones (Time-Based OTP) enhances command security.
- All command activities are logged for traceability and review.



Reduced IT Resource Requirements

- As a centralized platform, the system reduces the need for separate installations and maintenance at each station.
- The system is accessible via standard web browsers without the need for additional software installation on user devices.



Flexible Usage Rights

- Usage rights are based on the number of connected data points (Sensor Points) linked to the main platform. The platform can be used indefinitely with no expiration.
- Usage rights can be expanded without impacting or upgrading the existing platform.

*Dependent on the resources of the platform's host server.



Unlimited Data Expansion

The platform is designed to support unlimited expansion of stations, machinery, monitoring devices, or users without affecting the existing system.

*Subject to applicable usage rights.



Expert Consultation and Support

The platform is developed entirely by a 100% local software development team, ensuring users receive efficient consultation, maintenance, and technical support directly from the platform's developers.

NEXUS G

It is a device designed and developed to support a wide range of applications across various industries. It is highly durable and can withstand harsh environmental conditions. The device also supports connectivity, data transmission, and efficient management of both hardware and software.

With its powerful processor, memory, and support for multiple communication protocols, Nexus G offers flexible integration with various solutions.



KEY SPECIFICATIONS



PROCESSOR

Supports up to 1.5 GHz, 64-bit for high-performance computing and large data transmission



MEMORY

Supports up to 8 GB, ideal for multitasking and simultaneous operations.



STORAGE

Supports up to 32 GB, capable of handling large data storage requirements.



PROTOCOL SUPPORT

Supports open protocols for seamless data transmission, including TCP/IP, Modbus, OPC UA, and MQTT.



WATER AND DUST PROTECTION

- Water and dust resistant.



EXPANDABLE I/O INTERFACE

- Supports 2-channel digital input and output.
- Compatible with various standard interfaces such as RJ45, HDMI 2.0, USB, RS485/232 for flexible device connectivity.
- Supports I/O expansion for additional inputs and outputs.

Others :

- Equipped with RTC (Real-Time Clock) and Watchdog Timer to synchronize system time and provide reset protection.
- Operates reliably in temperatures ranging from -20°C to 60°C.
- Optional features such as hardware management tools, firmware update tools, and status monitoring tools to enhance system management efficiency.
- Additional accessories such as UPS, encrypted storage, status LEDs, and surge protection devices to increase durability and system security.
- Optional waterproof casing.



RAILWAY ENGINEERING

Railway System Services

We provide design, installation, and testing services for railway signaling, telecommunications, and power supply systems, including:

Power Supply Systems for Railway Signaling

Uninterruptible Power Supply (UPS)
and Generator

Power Supply Systems for Railway Operations

- Traction Power Supply for trains
- Auxiliary Power Supply for stations and facilities
- Overhead Catenary System (OCS)
- Third Rail System

RAILWAY SIGNALING AND TELECOMMUNICATION SYSTEMS

- Signal and Location Cabinet
- Switching Device – Point
- Track Circuit and IRJ - Insulated Rail Joint
- Level Crossing System
- Arial and Buried Cable
- ARI & CBI - All Relay Interlocking and Computer Base Interlocking
- ETCS - European Train Control System
 1. ATP Wayside
 2. ATP Train Borne
 3. Track Data Collection and Survey
- Network and Telecommunication System
- SCADA



RAILWAY ENGINEERING



SWITCHING DEVICE – POINT



COLOR LIGHT SIGNAL



DATA COLLECTION



DERAILER



SIGNAL CONTROL CABINET



TRACK CIRCUIT

CONSTRUCTION MANAGEMENT

GLi provides comprehensive engineering services including design, procurement, construction, and installation under a Turnkey Project model, categorized as follows:

Underground Cable System

This involves the construction of underground conduits with installed electrical cables for high-voltage transmission between substations and low-voltage distribution to end users. It is suitable for areas where overhead lines are impractical, such as urban zones, residential communities, or locations requiring enhanced environmental aesthetics and landscape preservation.



DUCT BANK FOR UNDERGROUND POWER CABLE 22 kV SUBSTATION

CONSTRUCTION MANAGEMENT

HIGH VOLTAGE SUBSTATION

A substation receives electrical power from the generation system and converts the voltage for transmission through high-voltage power lines and the distribution system, delivering electricity to various end users such as factories, industrial areas, communities, and residential zones. Substations are available in two types: Air Insulated Substation (AIS) and Gas Insulated Substation (GIS), which uses SF6 gas as the insulating medium.

CONTROL BUILDING 22 kV SUBSTATION



High Voltage Transmission Line System

This system transmits electricity generated from various sources, such as dams, power plants, thermal power plants, and hydropower plants, to substations or between substations. The high-voltage transmission network delivers electricity over long distances, operating at voltage levels ranging from 115 kV to 500 kV.

22 kV MAIN INCOMING
22 kV SUBSTATION

CONSTRUCTION MANAGEMENT





22 kV SWITCHGEAR
22 kV SUBSTATION



AC-DC DISTRIBUTION BOARD
AND 125 VDC BATTERY CHARGER
22 kV SUBSTATION



H.V. POWER CABLE
22 kV SUBSTATION

ECO SOLUTION

We are committed to addressing and solving environmental challenges through innovative approaches and sustainable development processes that integrate with daily life and business operations. Our focus is on minimizing environmental impacts, reducing waste, and continuously enhancing quality of life for communities, while ensuring long-term value.

With our team's in-depth expertise, the company has been trusted to provide comprehensive waste and grease management services for Bangkok Metropolitan Administration (BMA), including overseeing and maintaining internal machinery and equipment in production plants, as well as continuous operations of grease treatment and conversion facilities.

The company takes pride in being part of sustainable urban development, contributing to environmental stewardship and public health for the well-being of future generations.





ECO SOLUTION

From our expertise in wastewater treatment to High - Performance Activated Carbon for industrial filtration. The company has conducted research, development, and enhancement of absorbent materials for a sustainable future, supported by extensive experience in wastewater treatment and continuous research and development (R&D).

Our company is committed to developing technologies that truly meet both environmental and industrial needs. One of the outcomes from integrating this knowledge is High-Performance Activated Carbon, which can be applied in :

- **Water and Wastewater treatment**
- **Industrial Oil Purification**
- **Material for Battery Electrodes**



PROJECT REFERENCE

Project :

Management of the Grease Disposal and Processing Plant at the Nong Khaem Solid Waste Disposal Center, Phase 2

Client : Bangkok Metropolitan Administration (BMA)



Project :

Management of the Nong Khaem Waste Treatment Plant, Phase 6

Client : Bangkok Metropolitan Administration (BMA)





Project :

Upgrading of the 22 kV Substation System from Outdoor to Indoor at Lampang 2 Substation, Lampang Province, and Mukdahan 2 Substation, Mukdahan Province.

Client : Provincial Electricity Authority (PEA)



Project :

Installation of Telemetry System for Water Monitoring at the Irrigation Building, 2023, for Telemetry to Monitor and Manage Water in the Irrigation Project Area, Water Situation Monitoring and Forecasting Division, Nakhon Chai Si Road Subdistrict, Dusit District, Bangkok.

Client : Royal Irrigation Department (RID)

PROJECT REFERENCE

Project :

Enhancement of Information Technology and Communication System Management for Irrigation Works, Phase 6, Bangkok.

Client : Royal Irrigation Department (RID)



Project :

Construction of the Bang Na Krong Canal Sluice Gate and Pump Station, Bang Duan Subdistrict, Mueang Samut Prakan District, Samut Prakan Province.

Client : Samut Prakan Provincial Administrative Organization.





Project :

Procurement and Installation of a 125 m³/min Water Pump (1 set) at Bang Phli Pumping Station, including other related works under the 9th Master Plan for Waterworks Improvement.

Client : Metropolitan Waterworks Authority (MWA)



Project :

6 - Wheel Trucks with Hydraulic Cranes and Accessories, 10 Units

Client : Bangkok Metropolitan Administration (BMA)

PROJECT REFERENCE

Project :

Improvement of the power distribution system to underground cables along Rattanakhet Road, Phahonyothin Road, and Thanalai Road in Chiang Rai Province (Civil Works)

Client : Chiang Rai Municipality



Project :

Improvement of the power distribution system to underground cables along Rattanakhet Road, Phahonyothin Road, and Thanalai Road in Chiang Rai Province (Electrical Works)

Client : Provincial Electricity Authority (PEA)





Project :

Procurement of Multi-Purpose Vehicle for Construction, Area Improvement, Maintenance, and Agricultural Work, Brand: Multione, Model: 10.9 (75 Horsepower), with 6 Sets of Attachments, 1 set.

Client : Internal Security Operations Command (ISOC)



Project :

Air Quality Monitoring Equipment on Steel Poles, 46 Sets, and Mobile Air Quality Monitoring Units (Vehicles Equipped with Monitoring Instruments), 4 Units

Client : Bangkok Metropolitan Administration (BMA)

PROJECT REFERENCE

Project :

Procurement of Vehicle and Transportation Equipment: Long - Distance Water Pumping Vehicle, 4 Units

Client : Samut Prakan Provincial Administrative Organization



Project :

Fresh Branch Shredders for Diameter Not Exceeding 150 mm, Equipped with Automatic Branch Lifting System and Accessories, with Installation, 75 Sets

Client : Bangkok Metropolitan Administration (BMA)





Project :

Procurement of 4 Units of Sludge Suction and Sewer Cleaning Vehicles with Accessories

Client : Samut Prakan Provincial Administrative Organization



Project :

Electrical and Radio Equipment (Generator) – 3 units, installed on towable trailers with accessories.

Client : Samut Prakan Provincial Administrative Organization

PROJECT REFERENCE

Project :

Procurement of Agricultural Equipment: Horizontal Split Case Centrifugal Water Pumps, Diesel Engine Driven, with Discharge Pipe Size Not Less Than 14 Inches, 2 Units

Client : Rangsit City Municipality



Project :

Procurement of Towed Mist Sprayers for Dust and Smoke Suppression, 3 Units

Client : Samut Prakan Provincial Administrative Organization





Project :

Mobile Compost Turners with
300 Horsepower Engine, 4 Units

Client : Bangkok Metropolitan
Administration (BMA)



Project :

Trailer-Mounted Generators
with Capacity Not Less Than 300 KVA,
Complete with Accessories, 10 Units

Client : Bangkok Metropolitan
Administration (BMA)

PROJECT REFERENCE

Project :

Project to Support Flood Prevention and Mitigation in the Area of Machinery, 5 Items

Client : Bangkok Metropolitan Administration (BMA)



- **CAR GENERATOR**

Trailer - Mounted Diesel Generator with Capacity Not Less Than 300 kVA, Complete with Accessories





Project :

Project to Support Flood Prevention and Mitigation in the Area of Machinery, 5 Items

Client : Bangkok Metropolitan Administration (BMA)



- **CAR GENERATOR**

Trailer - Mounted Diesel Generator with Capacity Not Less Than 500 kVA, Complete with Accessories

PROJECT REFERENCE

Project :

Project to Support Flood Prevention and Mitigation in the Area of Machinery, 5 Items

Client : Bangkok Metropolitan Administration (BMA)



- **CAR GENERATOR**

Trailer - Mounted Diesel Generator with Capacity Not Less Than 1000 kVA, Complete with Accessories





Project :

Project to Support Flood Prevention and Mitigation in the Area of Machinery, 5 Items

Client : Bangkok Metropolitan Administration (BMA)

- **Truck mounted hydraulic crane**

Trailer Truck with Hydraulic Crane, Capacity Not Less Than 45 Ton - Meter, Complete with Accessories



- **Truck mounted hydraulic crane**

Trailer Truck with Hydraulic Crane, Capacity Not Less Than 15 Ton - Meter, Complete with Accessories

CUSTOMERS



National Broadcasting and Telecommunications Commission (NBTC)



Internal Security Operations Command (ISOC)



Provincial Electricity Authority (PEA)



Bangkok Metropolitan Administration (BMA)



Metropolitan Waterworks Authority (MWA)



Royal Irrigation Department (RID)



State Railway of Thailand (SRT)



Department of Public Works and Town & Country Planning (DPT)



Samut Prakan Provincial Administrative Organization



Department of Disaster Prevention and Mitigation (DDPA)



Trang City Municipality

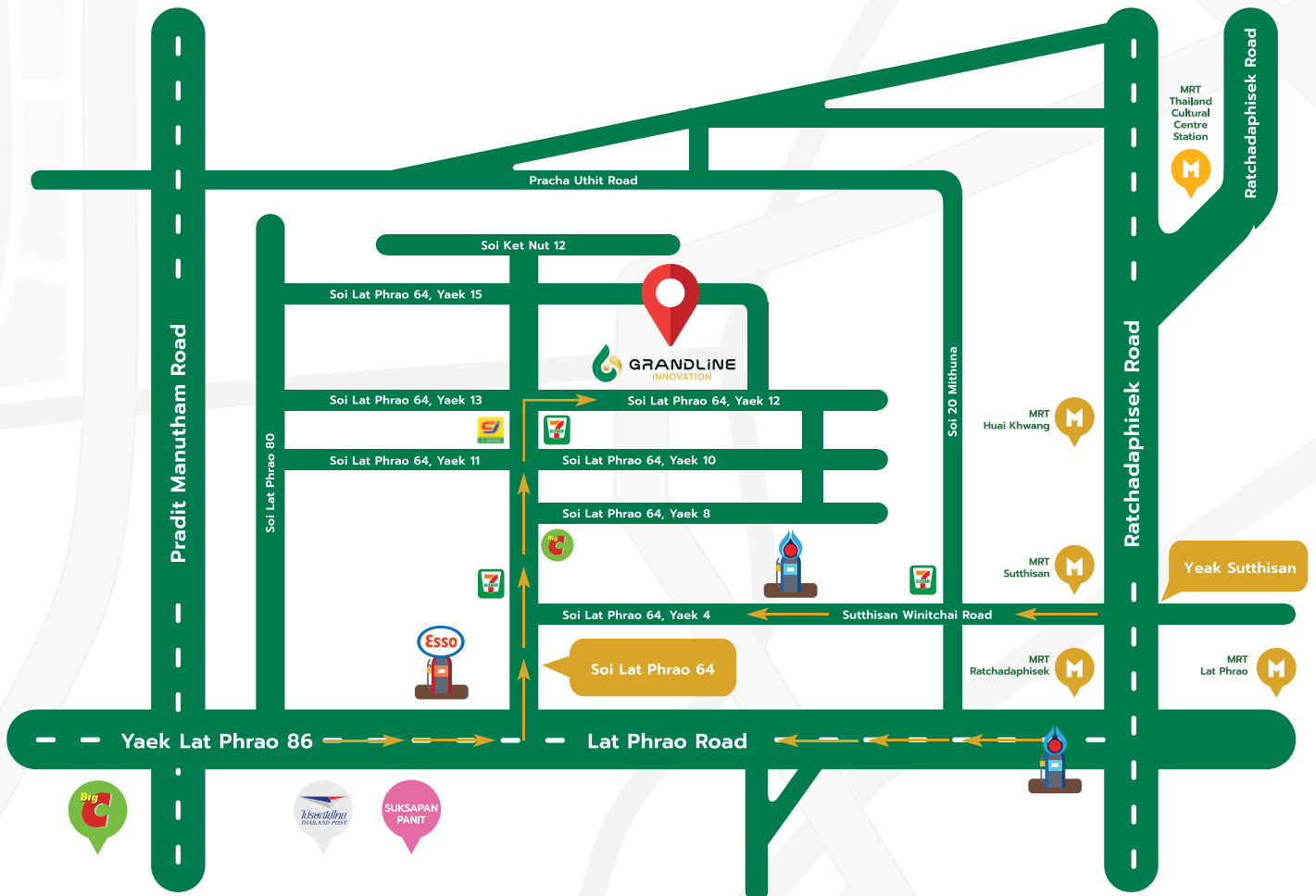


Chiang Rai Municipality



Rangsit City Municipality

COMPANY LOCATION MAP



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Google Maps



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