INFORMATION, COMMUNICATIONS & BUILDING TECHNOLOGIES
Driving Innovation for Smart Cities
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ATAL Information, Communications and Building Technologies (ICBT) is one of the business segments of ATAL Engineering Group. We offer design, installation and servicing of information and communication technologies, intelligent systems and green building solutions. By incorporating big data analytics into practices, we help you realise your data’s true potential and achieve optimal operation. With our in-house R&D capabilities, all solutions can be tailor-made in accordance with your specifications, catering for any applications. Our deep insights into different industry sectors also enable us to provide customers with guidance on every step of the process, ensuring smooth and successful implementation.

**OUR STRENGTHS**

- One-stop Smart City Solutions
- Licensed Contractors with over 40 licenses
- Experienced Professionals with Diversified Skill Sets
- Extensive Global Partnership Network

**OUR R&D CAPABILITIES**

In-house R&D team:
- Scholars
- IT Specialists
- Green Building Specialists
- Mathematics Specialists

2019 Hong Kong ICT Awards Winner - Silver
2015 Hong Kong ICT Awards Winner - Bronze

Award-winning Technology:
- Physics-guided Machine Learning

Self-developed Solutions:
- Smart Energy Analytics Platform
- IoT Smart Building Platform
- Construction Workers Management System

Specialised in

- AI & Machine Learning
- ICT Technology
- Big Data Analytics
- Energy Analytics
- Smart Building Solutions
- Creativity Analytics
As a leading Internet of Things (IoT) solutions provider in Hong Kong, ATAL has served the IoT needs of many Grade A office buildings, government buildings, residential complexes, as well as shopping malls and school campuses. We are able to offer a range of innovative services, analytics and applications by drawing on our E&M and ICT expertise.

Big Data Processing
We offer data analytics services including data processing, development of AI models for knowledge extraction, as well as deployment and visualisation.

IoT Infrastructure
We ensure consistent network availability and reliable connectivity. It is essential in any businesses for seamless communication, information sharing and operational efficiency.

Smart Building Platform
Smart Building Platform is a holistic IoT-based platform which gathers and analyses any type of building data in real-time, leveraging statistical analysis to optimise building performance and improve tenant experience.

Smart Traffic Detectors
Our smart traffic detectors can monitor road traffic conditions in a comprehensive manner, strengthening the capability in handling traffic incidents as well as traffic management.

Analytics Applications
We help your business leverage big data in a productive manner via discovering hidden patterns, correlations, and other issues. We design, build, and deploy applications using a range of analytics tools and cloud platforms. A dedicated team of R&D professionals, data scientists, and system architects are committed to delivering tailored IoT applications which enable customers to make informed decisions driven by insights fuelled with rich data.

Real-time Locating System (RTLS)
We offer the first end-to-end RTLS solution that enables universal tracking across a complex physical environment, which is both cost effective and energy efficient.
ATAL’s ICT expertise has been channelled into many projects serving industry sectors such as retail, property and hotel, as well as banking, financial service and insurance, plus government. Our ICT solutions are typically applied to projects that involve IP networking, safety, security and digital marketing. We are skilled in systems integration and routinely work with the latest technologies in areas such as optical character recognition, licence plate recognition, fingerprint verification, facial recognition, RFID and vehicle detection and tracking. Our ICT experts are able to integrate and customise different technologies into one single user-friendly platform.

We provide efficient and secure immigration and customs clearance at border checkpoints, applying automation and biometric technology. The streamlined immigration process enables travellers to experience efficient and responsive services, and has also helped border control operators increase their capacity and reduce manpower needs.

We provide traffic control and surveillance systems for use at tunnels, highways, bridges, airports, etc.

Our biometric technology which can recognise fingerprints, iris patterns, or facial characteristics is capable of ensuring fast and reliable controlled access to information.

The passenger e-Channel is an automated border control system built for the HK SAR Government. The system is integrated with a wide range of technologies to enable self-service immigration clearance. By leveraging the smart identity card and biometric verification technologies, the passenger e-Channel is equipped with features such as fingerprint scanning, optical character recognition and radio-frequency identification, streamlining the clearance procedure and enhancing the border control operator’s handling capacity. As of today, over 600 units of automated passenger e-Channels have been built and in operation at various control points.

Using intelligent image processing technology, our container code recognition system is able to recognise the unique codes from an image or video signal through custom-designed algorithms for central processing.

We offer project-specific solutions with a perfect interplay of electrical, mechanical and information technologies to facilitate optimal operational efficiency. All vehicle examination equipment can be controlled by a computer system which enables the examination results of the vehicles to be digitised and displayed on a monitor in real-time. Also the built-in examination equipment sensors are able to differentiate different vehicles to streamline classifications and inspections.

Our biometric technology which can recognise fingerprints, iris patterns, or facial characteristics is capable of ensuring fast and reliable protected access to information.

The smart parking system consists of robotic conveyors, IoT technologies, video analytics, mobile applications, etc. has been designed to enhance user experience and increase efficiency in land use.
**Energy Optimisation Solutions**

We build end-to-end energy-saving solutions that cover everything from audit, survey, consultancy and design through planning and implementation – all suited for IoT-based optimisation systems and crafted to achieve energy-saving objectives. Such solutions are built by our in-house R&D teams and green building experts, such as those with REA, RPE, CEM, CBCP, BEAM PRO, LEED AP credentials and RCx Professionals.

**Chiller Plant Energy Management Platform**

This is an award-winning solution at the Hong Kong ICT Awards 2019 in the category of "Big Data & Open Data Applications". This platform is an all-in-one intelligent system leveraging big data analytics and machine learning (ML) for achieving building energy efficiency and sustainable development. ATAL's Dynamic Optimisation is built upon the basis of self-trained physics-guided ML models using actual operating data. This ensures energy performance of the whole chiller plant being optimised in real-time, using advanced modelling and optimisation techniques. Buildings can achieve up to 30% energy savings on chiller plant operations with the use of the platform, depending on the building types and the buildings' current energy performance.

**Retro-commissioning Service (RCx)**

This is a systematic process to check an existing building's performance to identify operational improvements that can save energy and improve indoor environment. We also provide an on-going commissioning plan for the building owners to maintain the building’s performance to a high level of energy efficiency.

**Energy Analytics**

Energy analytics turns raw data into insightful information and allows users to diagnose discrepancies in energy consumption. The use of energy analytics makes it possible to discover hidden opportunities as well as usage patterns and trends, reducing energy consumption and operation cost.

**Electrical Retrofit Service**

We survey the power quality of your power system and provide a brief report and recommend a suitable power factor correction system, specially designed for your plant.

**Lighting Retrofit Service**

We analyse both interior and exterior lighting systems and address any inefficiencies by upgrading the lighting systems. Through retrofitting and installing superior lighting control systems, we can improve the overall energy efficiency in buildings.

**HVAC Airside Optimisation**

This solution helps fully optimise energy performance of the airside system in real-time using advanced modelling and optimisation techniques. Our unique feature is the fault-tolerance optimisation which allows airside systems to keep a minimum energy use even under the conditions of faulty VAV boxes.

**Fault Detection and Diagnosis (FDD)**

Our FDD solution is an in-house developed, model-based algorithm for automatic detection and diagnosis of faults, including abnormal plant operation, equipment deterioration, as well as temperature and flow sensor faults. Our solution not only summarises the faults being detected, but also provides actionable intelligence to rectify those faults.

**Energy Visualisation Tool**

Our unique energy dashboard provides energy managers with a high-level overview of energy consumption and related cost information. Managers can utilise the information for executing continuous assessment and improving energy efficiency for their buildings and businesses.
Our customised intelligent control solutions are designed to conserve energy and help customers operate efficient facility management. We offer a variety of automation solutions and leverage long-term relationships with best-in-class vendors to serve customers from different industries.

INTELLIGENT CONTROL & AUTOMATION SOLUTIONS

Integrated Building Management System (IBMS)
Our technology knowhow in IBMS allows seamless integration with various building services systems including HVAC, lighting, electrical, fire services, plumbing and drainage, renewable energy, CCTV and access control on a dedicated platform that provides highly efficient centralised control, monitoring and management while increasing the overall ‘smart value’ of buildings.

Programmable Logic Controller (PLC)
Our full PLC product range enables us to customise diverse control solutions and perform different tasks. ATAL’s PLC responds to new challenges promptly, flexibly and cost-effectively.

Supervisory Control and Data Acquisition System (SCADA)
With this advanced system, you can keep monitoring the overall performance of the control loop and entire sites or a host of system complexes spread out over large areas. Special features include true DCS style redundancy, scalability and unrivalled flexibility.

Energy Management System
We offer professional energy management systems featuring real-time trend logs of various types of data. With its user-friendly dashboards and informative energy reports, users can access the performance index easily. It also allows energy managers to identify Energy Management Opportunities (EMO) and review their ROI in an efficient way.

Power Quality Management System (PQMS)
PQMS is a platform and interface to collect, tabulate, analyse and present data to various stakeholders. With data collected by the various field devices, the collected information is further analysed and trended on historical records.

Hotel Guestroom Control System (RCU)
Our products allow hotel owners to provide guests with the convenience of in-room multiple devices operation via an automated interface that controls lighting, temperature, draperies and audio/video systems, delivering total guest satisfaction and enhancing customer service quality.

Home Automation System
It enables optimum access and control of home equipment, such as audio visual equipment, household appliances, security systems, computers and communication equipment. Even users with no technical background can monitor and control their equipment, hassle free.

Lighting Control System
ATAL offers lighting control solutions for applications, including intelligent wireless systems, dimming effects, scene settings and lighting zone controls.
Experienced ATAL engineers provide seamless integration of multiple security and ELV systems and ensure efficient facility management, while maintaining high levels of safety throughout premises. In fact, we are approved by the HKSAR Government as a specialist contractor enabling to manage ELV projects - from design to implementation and maintenance.

ATAL is the Approved Supplier of Materials and Specialist Contractor for Public Works in Hong Kong in:
- Video Electronics Installation
- Audio Electronics Installation
- Burglar Alarm and Security Installation
- Broadcast Reception Installation
- Radio Electronics Installation
- Video Surveillance System (CCTV)
- Bluetooth Access Control
- Security Access Control System
- Visitor Management System
- Perimeter Security
- Door Entry System
- Audio & Visual System (AV)
- Public Address System
- Carpark Control System
- SMATV / CABD
- Wireless Lock System

We offer one of the best video surveillance systems in the industry in terms of flexibility and user-friendliness. Our system enables seamless transfer of video and control signals between operator terminals and camera stations.

Our intelligent mobile system can transform your mobile device into an access card using Bluetooth® wireless technology. We provide customisation for each individual requirement with our experience and knowledge across key market sectors.

Our access control and security management system allows facilities egress and ingress of authorised personnel and materials. Our systems can be seamlessly integrated or interfaced with BMS, video surveillance system, public address system, carpark control system and facility booking system.

Our visitor management module is a highly configurable, secure and easy-to-use solution that improves the overall security level and guest experience.

We offer a wide range of perimeter security technologies including electric fencing, disturbance sensors and tension sensors.

We offer a variety of stylishly designed door entry products including keypads, readers, video door phones and intercoms which are designed for efficiency and security.

Our systems are flexible and easy to operate. Our user-friendly configuration software, specific functions such as audio programmes and emergency announcements can be easily programmed and revised by non-technical personnel.

Our carpark control systems enable real-time monitoring and vehicular access control management. It supports most of the card readers available in the market and can be seamlessly integrated with central security systems.

Our SMATV systems allow the distribution of satellite television programs to all users within a building. SMATV / CABD system can share resources among multiple users.

With the application of wireless sensor networks, real-time communication and data exchange are available across all connected devices through mobile apps, access cards and other devices.

ATAL provides a one-stop AV network solution comprising advanced AV services and our sophisticated network infrastructure.
We provide world-class air-conditioning systems that meet the needs of dynamic organisations by creating comfortable working environments in an eco-friendly way.

**Cooling Tower / Closed Type Cooler**
We offer customers both open and closed-circuit type cooling towers in the form of induced or forced draft. Hundreds of models are available for different applications.

**Pump System**
We carry a full range of pumps and pump systems for heating, air-conditioning, cooling, water supply and sewage disposal with a high level of performance, flexibility, reliability and energy efficiency.

**VAV and CAV System**
By combining our DDC control technology and air terminal units, ATAL provides you with a one-stop shop solution to meet your VAV & CAV requirements.

**Automatic Tube Cleaning System**
Our automatic tube cleaning system is designed with energy-saving sponge balls circulating repeatedly through the chiller condenser tubes to prevent any contamination and enhance energy efficiency.

**Variable Refrigerant Flow System (VRF)**
We provide a complete line of VRF systems, including both horizontal and vertical discharge types. Our full range of indoor units includes slim air duct units and fresh air units.

**Screw / Centrifugal / Oil-free Chiller**
We carry a range of green air-conditioning systems, covering screw, centrifugal, absorption, air-cooled chillers and more.

**Desiccant Dehumidification System**
We provide a wide range of desiccant dehumidification systems, a more energy efficient method of humidity control compared to traditional cooling and re-heating methods.

**Pressure Independent Balancing Control Valves (PIBCV)**
The valves deliver precise hydronic balancing and high controllability to meet the desired room temperature for maximum comfort in cooling and heating systems.

**Heat Pump / Heat Recovery System**
We provide a full range of green air-conditioning systems including screw, centrifugal, absorption, and air-cooled chillers, as well as water-cooled heat pumps, heat pump chillers, heat recovery systems, heat pumps and heat recovery chillers.

**Venturi & PPS Fast Response Air Valve**
The scalable system is designed to regulate and monitor individual fume cupboards and clean rooms to ventilate an entire laboratory building.

**Heat Pump / Heat Recovery System**
We provide a full range of green air-conditioning systems including screw, centrifugal, absorption, and air-cooled chillers, as well as water-cooled heat pumps, heat pump chillers, heat recovery systems, heat pumps and heat recovery chillers.

**Filtration System**
We provide a full range of products including centrifugal, disc and media filtration to protect your cooling water against contamination, suspended solids, and even legionnaire’s disease.

**Variable Speed Drive (VSD)**
We provide a wide range of VSDs from demand control ventilation for PAU / AHUs to variable flow control for chilled water pumps and condensing water pumps.

**EC Plug Fan**
The upgrade from AC to EC plug fans does not only enhance energy savings, but simplify installation processes at the same time. The compact design of EC fans enables easy retrofitting with a plug and play approach. Also, the highly-efficient motor ensures smooth operation with reduced noise.

**VAV and CAV System**
By combining our DDC control technology and air terminal units, ATAL provides you with a one-stop shop solution to meet your VAV & CAV requirements.

**HVAC Control**
We offer a complete line of HVAC control products including control valves and actuators, temperature sensors, humidity sensors, dew point sensors, flow meters and energy meters.

**Desiccant Dehumidification System**
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ATAL has played a key role in developing Hong Kong’s magnificent skyline, through the installation of façade lighting and LED systems for major landmarks in the city. Our lighting specialists collaborate with leading manufacturers to select the most advanced products that can deliver optimum illumination after deployment.

**LED Façade Lighting**
Our LED Façade Lighting highlights buildings and stands out for branding and other purposes. Applications include commercial buildings, shopping malls, hotels, architectural structures, casinos, stadiums, residential buildings, exhibition halls, art galleries and entertainment centres.

**Flexible LED Display**
Flexible LED modules can be easily fit into any building architecture of varying curvature, including concave, convex, or twisting curvature in both vertical and horizontal directions.

**Transparent LED Display**
Transparent glass display is the perfect solution to engage viewers by delivering dynamic messaging on glass surfaces. The sleek design of our display goes well with any style of indoor decoration.

**DMX Lighting Control**
DMX lighting control can be used in a variety of applications which allow the users to have complete control of their LED lighting.

**LED Outdoor Display**
Our outdoor LED display systems incorporates high quality LED chips, offering ultra-high resolution, large viewing angles and superior performance.

**LED Signage**
We offer customised design and fabricate LED signs in a variety of shapes, colours, and sizes which are suitable for both interior and exterior applications with stunning visual effect.

**Landscape Lighting**
Our landscape lighting improves the quality of urban environments with products designed to revalue, with discretion, the beauty of a street, a building or a square. The fittings are highly resistant to the penetration of solids and liquids and comply with international standards.
We have earned a reputation for tailoring our renewable energy solutions to suit environments with limited space. The benefits for our customers are clean energy, reduction in power consumption and cost.

**Solar PV System**
Our PV system maximises power generation for commercial, residential and large-scale facilities. Our inverter combines high-yield power electronics enabling a steady, high level efficiency across all levels of power loads. We provide our customers with a one-stop service for the Feed-in Tariff (FiT) scheme from system design, filing applications, installation, T&C to maintenance.

**Renewable Energy Lamp Post**
ATAL contributes to a greener world with a line of photo-voltaic (PV) lamp posts, wind turbine lamp posts and solar-wind hybrid lamp posts.

**Solar Pavement**
The non-slip glass surface walkable PV floor can integrate solar energy into buildings. The walkable PV-integrated flooring solution can be equally incorporated with different architectural designs. The system comes in a wide range of colours and configurations for selection.

**Wind Turbine System**
These state-of-the-art, eco-friendly systems combine vertical and horizontal axis wind turbines that convert wind energy to electricity.

**Solar Thermal System**
We offer an extremely high collector efficiency solar thermal system with payback period of less than 10 years.

**Building Integrated PV System (BIPV)**
By using BIPV systems, buildings can make use of clean, free electricity from the sun while enjoying the same thermal performance as conventional glass. The result is that building energy efficiency will be dramatically improved while O&M costs and carbon footprint significantly reduced.

**Solar Cooling System**
Our systems are able to generate solar cooling for any type of building. The unit’s core has no moving parts and no chlorofluorocarbons (CFCs)/ hydrochlorofluorocarbons (HCFCs), resulting in low maintenance cost and environmentally friendly features.

**Solar Thermal System**
We offer an extremely high collector efficiency solar thermal system with payback period of less than 10 years.
We are specialised in electrical and mechanical equipment for water management applications. A wide range of selections are available in various materials, types and styles, each with their own individual functions and benefits for easy installation. Our in-house technical experts provide support to help you through from initial planning to commissioning, operation and maintenance and beyond.

**Ductile Iron / Stainless Steel Pipes & Fittings**
- Ductile iron / stainless steel pipes and fittings provide long-term efficiency and protection for diverse water and wastewater applications.

**Polyethylene (PE) / Epoxy Coated Cast Iron Pipes & Fittings**
- Our pipes for water and sewer management are manufactured for excellent performance and durability. Highly resistant to corrosion and weather, their light weight and flexibility make it easy for installation, eliminating the need for fittings arising from directional changes.

**Valves**
- We provide a wide range of valves that shut off, regulate, prevent, relieve, direct or control the flow of fluids by opening, closing, or partially obstructing various passage ways.

**Strainers**
- We provide strainers for all types of piping systems to protect piping equipment by removing debris from the liquid that flows through pipelines.

**Fans**
- Our varied range of high safety fans, including air-conditioning and smoke ventilation, for industrial and commercial use can help maintain comfortable environment in a number of ways.

**Environmental Systems**
- We purify and treat water sources with sustainable technologies.

**Penstocks / Stop Logs**
- Stop Logs are designed for open channel installations in waste treatment plants, irrigation systems, hydraulic works and hydro-electric power plants.

**UV Disinfection Systems**
- Our UV solution is customised for disinfection of drinking water, process water, and other high UV transmittance liquids. UV water treatment eliminates the risks associated with on-site storage and handling of hazardous chemicals, keeping your treatment plant protected from accidental leaks.

**Floodgates**
- An effective flood protection barrier with simple and robust design is necessary for businesses to protect their properties from being damaged by floodwaters.

**Pumps**
- We provide reliable and high quality water and wastewater pump systems for domestic, municipal, constructional and industrial applications.

**Environmental Systems**
- We purify and treat water sources with sustainable technologies.
The e-Channel is an automated border control system built to enhance the efficiency of immigration processes for passengers and vehicles. The system incorporates various technologies to enable transformation of the immigration procedure from traditional manned clearance counters into self-service immigration clearance. By leveraging the smart identity card and biometric verification technologies, the e-Channel system comes with a wide range of pre-installed features such as fingerprint scanning, optical character recognition and radio-frequency identification, streamlining the clearance procedure and enhancing the handling capacity.

**Scope of work related to ICBT**

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<td>Guangzhou-Shenzhen-Hong Kong Express Rail Link - Hong Kong Section</td>
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<td>Shenzhen Bay</td>
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<td>Kai Tak Cruise Terminal</td>
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|               | Border Control Points with Automated Vehicle Clearance System  |
|               | Lantau-Hung Yuen Wan                                            |
|               | Hong Kong-Zhuhai-Macao Bridge                                   |
|               | Lok Ma Chau                                                     |
|               | Shenzhen Bay                                                    |
|               | Man Kam To                                                      |
|               | Sha Tau Kok                                                     |
The world’s longest sea-crossing bridge-cum-tunnel, Hong Kong-Zhuhai-Macao Bridge (HZMB) is a spectacular structure that links Hong Kong, Zhuhai and Macao. Comprising the 12.4km Hong Kong Link Road, the 29.6km Main Bridge and the 13.4km Zhuhai Link Road, it puts major cities in the Pearl River Delta within a three-hour commute of Hong Kong.

ATAL’s HZMB contracts covered the provision of water supply facilities, sewage treatment facilities, lifts, integrated building services solutions, and e-Channels for vehicle and passenger clearance. All works took place at the 130-hectare Hong Kong Boundary Crossing Facilities (HKBCF) - an impressive array of buildings and transport facilities on an artificial island to the northeast of the Hong Kong International Airport.

**Scope of work related to ICBT**

- **ICT Solutions**
  - Automated Vehicle Clearance System
  - Automatic Vehicle Clearance and Support System (AVCSS)
  - Hardware and software development of real-time control, surveillance and clearance system, vehicle tracking system (VTS) and vehicle information display system (VIDS).

- **Intelligent Control & Automation Solutions**
  - Building Management System (BMS)
  - Supervisory Control and Data Acquisition System (SCADA)

- **Security & ELV Solutions**
  - 1,000 CCTVs at the vehicle kiosks
Hong Kong Convention and Exhibition Centre (HKCEC)

The Hong Kong Convention and Exhibition Centre (HKCEC) is located in Wan Chai, built along the renowned Victoria Harbour. HKCEC consists of three major components which are Phase 1, Phase 2 (New Wing) and the Atrium Link, offering a total GFA of 306,000 square metres. Hundreds of world congresses, local conferences, meetings, and seminars are held annually at the HKCEC. HKCEC has become one of the world’s most impressive meeting and exhibition venues.
Hong Kong Science Park (HKSTP)

Hong Kong Science Park is a three-phased project occupying a total area of 22 hectares located in Shatin. With 21 state-of-the-art buildings and over 3.5 million square feet of floor area, Hong Kong Science Park is a living laboratory where innovative technologies are tested and applied. It is also piloted as a smart region to further Hong Kong’s Smart City vision.

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<td>Solar PV System</td>
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<td>Solar Cooling System</td>
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The International Finance Centre (ifc) is a premier integrated commercial development on the waterfront of Hong Kong’s Central District. A prominent landmark on Hong Kong Island, ifc consists of two office skyscrapers, the ifc mall, and a 55-storey luxury hotel. Standing 88 floors tall and measuring 420 metres, Two ifc is the second tallest building in Hong Kong with a GFA of 2 million square feet. The ifc mall, with a GFA of 800,000 square feet, houses more than 200 international premium brands and Michelin-awarded restaurants, making it an iconic destination for shopping, dining and entertainment in Hong Kong.
One Taikoo Place

Located in the heart of Taikoo Place, One Taikoo Place is the first of two new triple Grade-A office towers in the HK$15-billion Taikoo Place redevelopment project of Swire Properties. The 48-floor One Taikoo Place, spanning a total GFA of 1 million square feet, has been constructed according to the highest standards of building sustainability, and has received a multitude of recognitions and awards, including BEAM Plus Provisional Platinum and LEED Pre-certification Platinum.

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| **ICT Solutions** | IT Structure Cabling (for Security & ELV System)  
Network System (for Security & ELV System) |
| **IoT Solutions** | Smart Building Platform  
LoRaWAN Network Infrastructure  
IoT Sensors |
| **Energy Optimisation Solutions** | Chiller Plant Energy Management Platform |
| **Intelligent Control & Automation Solutions** | Building Management System (BMS)  
Lighting Control System |
| **Security & ELV Solutions** | CCTV System  
Security and Access Control  
Walkie-Talkie System  
Watchman Tour System  
CABD  
Carpark Control System |
| **Air Conditioning Solutions** | VAV Box  
Automatic Tube Cleaning System |
| **Renewable Energy Solutions** | Solar PV System |
Victoria Dockside, formerly known as New World Centre, is situated on the iconic Victoria Harbour in Tsim Sha Tsui. At 3 million square feet, this mixed-use tower comprises Grade A offices, a luxury hotel, residences and a shopping mall, and is considered one of the largest scale redevelopment projects in recent years.

### Signature Projects

<table>
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<th>Project</th>
<th>Description</th>
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<tr>
<td>K11 ATELIER</td>
<td>Solar PV System Integrated with BIPV System, Renewable Energy Solutions, Renewable Energy Solutions, Air Conditioning Solutions, VAV Box, Air-cooled Chiller</td>
</tr>
</tbody>
</table>

### Scope of work related to ICBT

<table>
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<th>Category</th>
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<td>ICT Solutions</td>
<td>IT Structure Cabling (for Security &amp; ELV System), Network System (for Security &amp; ELV System)</td>
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<tr>
<td>Air Conditioning Solutions</td>
<td>Solar PV System Integrated with BIPV System, Renewable Energy Solutions, Renewable Energy Solutions, Air Conditioning Solutions, VAV Box, Air-cooled Chiller</td>
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</tbody>
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Victoria Dockside, formerly known as New World Centre, is situated on the iconic Victoria Harbour in Tsim Sha Tsui. At 3 million square feet, this mixed-use tower comprises Grade A offices, a luxury hotel, residences and a shopping mall, and is considered one of the largest scale redevelopment projects in recent years.
One Island East
Taikoo Place, Quarry Bay
- BMS
- Smart Building Platform
- LoRaWAN Network Infrastructure
- IoT Sensors
- CCTV System
- Security and Access Control System
- IP PABX System
- VAV Box
- Automatic Tube Cleaning System

Oxford House
Taikoo Place, Quarry Bay
- BMS
- Smart Building Platform
- LoRaWAN Network Infrastructure
- IoT Sensors
- CABD
- CCTV System
- Security System
- Intercommunication System
- Lift Access Control System
- Public Address System
- Watchman Tour System
- VAV Box
- Automatic Tube Cleaning System

Lincoln House
Taikoo Place, Quarry Bay
- BMS
- Smart Building Platform
- LoRaWAN Network Infrastructure
- IoT Sensors
- CCTV System
- Intercommunication System
- Lift Access Control System
- Public Address System
- Security System
- Watchman Tour System
- VAV Box
- Automatic Tube Cleaning System

Hong Kong Baptist University
Kowloon Tong
- BMS
- Automatic Tube Cleaning System
- Chiller and Heat Pump

Hong Kong Institute of Vocational Education
Taiping Yi
- BMS
- Wind Turbine
- Solar PV System

Hang Seng University of Hong Kong
Sha Tin
- BMS
- IT Structure Cabling (for Security & ELV)
- Network System (for Security & ELV)
- Audio & Visual System
- CABD
- Information Display
- CCTV System
- Public Address System
- Walkie-Talkie System
- Watchman Tour System
- VAV Box
- Cooling Tower
- Solar PV System

Lee Garden Three
Causeway Bay
- BMS
- IT Structure Cabling
- Network System
- Wired and Wireless Data Network System
- IP PABX System
- CCTV System
- Access Control System
- Lift Access Control System
- Public Address System
- Walkie-Talkie System
- VAV Box
- Automatic Tube Cleaning System
- Façade Lighting System

28 Hennessy Road
Wan Chai
- Chiller Plant Energy Management Platform
- BMS
- IT Structure Cabling (for Security & ELV)
- Network System (for Security & ELV)
- CCTV System
- Security and Access Control System
- Public Address System
- Walkie-Talkie System
- VAV Box
- Façade Cleaning System
- Automatic Tube Cleaning System

Bank of China Tower
Central
- Chiller Plant Energy Management Platform
- BMS
- Lighting Control System
- Lift/Lift Lobbies
- CCTV System
- Security System
- Watchman Tour System
- VAV Box
- Automatic Tube Cleaning System

Keltt School
Kowloon Bay
- BMS
- Lighting Control System
- Chiller

Shrewsbury International School
Repulse Bay & Tai Tam
- BMS
- Solar & Wind Powered Street Lamps

EMSD Headquarters
Kowloon Tong
- BMS
- Audio & Visual System
- Lighting Control System
- Security & ELV System
- Automatic Tube Cleaning System
- VAV Box
- PIBCV

Ko Shan Theatre
To Kwa Wan
- Automatic Tube Cleaning System
- Chiller with Plume Abatement Cells

Tuen Mun Hospital and NTW Hospital Clusters
New Territories (West)
- Centralised Control Centre
- Management System (C-CCMS)
- Automatic Tube Cleaning System
Proven Track Records

• BMS
• Access Control System
• PIBCV

Hong Kong Sanatorium & Hospital, HKSH Eastern Medical Centre
Happy Valley, Shau Kei Wan
• BMS
• Access Control System
• PIBCV

Hong Kong Baptist Hospital
Kowloon Tong
• Lab Control System (Venturi & PPS Fast Response Air Valve)

Ritz-Carlton Hotel & JW Marriott Hotel
Galaxy, Macau
• Hotel Guestroom Control System
• Lighting Control System

Queen Mary Hospital
Pok Fu Lam
• IT Structure Cabling (for Security & ELV)
• Network System (for Security & ELV)
• Audio & Visual System

Four Seasons Hong Kong
Central
• BMS
• Audio & Visual System

The Upper House
Pacific Place, Admiralty
• BMS
• Audio & Visual System

Pacific Place Apartments
Pacific Place, Admiralty
• BMS
• Audio & Visual System

HAECO Base Maintenance Facility
Lantau Island
• BMS

HAECO Component Overhaul
Tseung Kwan O
• BMS

EAST Residences
Quarry Bay
• BMS
• IT Structure Cabling (for Security & ELV)
• Network System (for Security & ELV)
• Audio & Visual System

Sheraton & Four Points Hotel
Tung Chung
• CABD
• Carpark Control System

City of Dreams
Cotai, Macau
• BMS
• Access Control System

Guangzhou-Shenzhen-Hong Kong Express Rail Link (RRL) - Hong Kong Section
West Kowloon
• Automated Passenger Clearance System
• Construction Workers Management System
• Helmet-mounted RFID Technology

Maxim’s Food Production Centre
Tai Po
• VSD Centrifugal Water-cooled Chiller with Hot Gas By-pass

The Upper House
Pacific Place, Admiralty
• BMS
• Door Phone System

Pacific Place Apartments
Pacific Place, Admiralty
• BMS
• Door Phone System

HAECO Component Overhaul
Tseung Kwan O
• BMS

Maxim’s Food Production Centre
Tai Po
• BMS
• Door Phone System

Ritz-Carlton Hotel & JW Marriott Hotel
Galaxy, Macau
• Hotel Guestroom Control System
• Lighting Control System

HAECO Base Maintenance Facility
Lantau Island
• BMS

HAECO Component Overhaul
Tseung Kwan O
• BMS

KMB Lai Chi Kok Depot
Lai Chi Kok
• BMS

Nin Jiom Medicine Manufactory
Yuen Long
• BMS

KMB Lai Chi Kok Depot
Lai Chi Kok
• BMS

City of Dreams
Cotai, Macau
• CCTV System

Guangzhou-Shenzhen-Hong Kong Express Rail Link (RRL) - Hong Kong Section
West Kowloon
• CCTV System

HAECO Base Maintenance Facility
Lantau Island
• CCTV System

KMB Lai Chi Kok Depot
Lai Chi Kok
• CCTV System

Nin Jiom Medicine Manufactory
Yuen Long
• CCTV System

City of Dreams
Cotai, Macau
• Security and Access Control System

HAECO Component Overhaul
Tseung Kwan O
• Security and Access Control System

KMB Lai Chi Kok Depot
Lai Chi Kok
• Security and Access Control System

Nin Jiom Medicine Manufactory
Yuen Long
• Security and Access Control System

City of Dreams
Cotai, Macau
• Watchman Tour System

HAECO Component Overhaul
Tseung Kwan O
• Watchman Tour System

KMB Lai Chi Kok Depot
Lai Chi Kok
• Watchman Tour System

Nin Jiom Medicine Manufactory
Yuen Long
• Watchman Tour System

City of Dreams
Cotai, Macau
• IT Structure Cabling

HAECO Component Overhaul
Tseung Kwan O
• IT Structure Cabling

KMB Lai Chi Kok Depot
Lai Chi Kok
• IT Structure Cabling

Nin Jiom Medicine Manufactory
Yuen Long
• IT Structure Cabling

City of Dreams
Cotai, Macau
• Network System (for Security & ELV)

HAECO Component Overhaul
Tseung Kwan O
• Network System (for Security & ELV)

KMB Lai Chi Kok Depot
Lai Chi Kok
• Network System (for Security & ELV)

Nin Jiom Medicine Manufactory
Yuen Long
• Network System (for Security & ELV)

City of Dreams
Cotai, Macau
• Security and Access Control System

HAECO Component Overhaul
Tseung Kwan O
• Security and Access Control System

KMB Lai Chi Kok Depot
Lai Chi Kok
• Security and Access Control System

Nin Jiom Medicine Manufactory
Yuen Long
• Security and Access Control System

City of Dreams
Cotai, Macau
• Walkie-Talkie System

HAECO Component Overhaul
Tseung Kwan O
• Walkie-Talkie System

KMB Lai Chi Kok Depot
Lai Chi Kok
• Walkie-Talkie System

Nin Jiom Medicine Manufactory
Yuen Long
• Walkie-Talkie System

City of Dreams
Cotai, Macau
• CCTV System

HAECO Component Overhaul
Tseung Kwan O
• CCTV System

KMB Lai Chi Kok Depot
Lai Chi Kok
• CCTV System

Nin Jiom Medicine Manufactory
Yuen Long
• CCTV System

City of Dreams
Cotai, Macau
• PABX

HAECO Component Overhaul
Tseung Kwan O
• PABX

KMB Lai Chi Kok Depot
Lai Chi Kok
• PABX

Nin Jiom Medicine Manufactory
Yuen Long
• PABX

City of Dreams
Cotai, Macau
• Information Display

HAECO Component Overhaul
Tseung Kwan O
• Information Display

KMB Lai Chi Kok Depot
Lai Chi Kok
• Information Display

Nin Jiom Medicine Manufactory
Yuen Long
• Information Display

City of Dreams
Cotai, Macau
• BMS

HAECO Component Overhaul
Tseung Kwan O
• BMS

KMB Lai Chi Kok Depot
Lai Chi Kok
• BMS

Nin Jiom Medicine Manufactory
Yuen Long
• BMS

City of Dreams
Cotai, Macau
• Access Control System

HAECO Component Overhaul
Tseung Kwan O
• Access Control System

KMB Lai Chi Kok Depot
Lai Chi Kok
• Access Control System

Nin Jiom Medicine Manufactory
Yuen Long
• Access Control System

City of Dreams
Cotai, Macau
• CCTV System

HAECO Component Overhaul
Tseung Kwan O
• CCTV System

KMB Lai Chi Kok Depot
Lai Chi Kok
• CCTV System

Nin Jiom Medicine Manufactory
Yuen Long
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City of Dreams
Cotai, Macau
• Security and Access Control System

HAECO Component Overhaul
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City of Dreams
Cotai, Macau
• Walkie-Talkie System

HAECO Component Overhaul
Tseung Kwan O
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KMB Lai Chi Kok Depot
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Nin Jiom Medicine Manufactory
Yuen Long
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City of Dreams
Cotai, Macau
• CCTV System

HAECO Component Overhaul
Tseung Kwan O
• CCTV System

KMB Lai Chi Kok Depot
Lai Chi Kok
• CCTV System

Nin Jiom Medicine Manufactory
Yuen Long
• CCTV System

City of Dreams
Cotai, Macau
• PABX

HAECO Component Overhaul
Tseung Kwan O
• PABX

KMB Lai Chi Kok Depot
Lai Chi Kok
• PABX

Nin Jiom Medicine Manufactory
Yuen Long
• PABX

City of Dreams
Cotai, Macau
• Information Display

HAECO Component Overhaul
Tseung Kwan O
• Information Display

KMB Lai Chi Kok Depot
Lai Chi Kok
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Nin Jiom Medicine Manufactory
Yuen Long
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City of Dreams
Cotai, Macau
• Security and Access Control System

HAECO Component Overhaul
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KMB Lai Chi Kok Depot
Lai Chi Kok
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Nin Jiom Medicine Manufactory
Yuen Long
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City of Dreams
Cotai, Macau
• Walkie-Talkie System

HAECO Component Overhaul
Tseung Kwan O
• Walkie-Talkie System

KMB Lai Chi Kok Depot
Lai Chi Kok
• Walkie-Talkie System

Nin Jiom Medicine Manufactory
Yuen Long
• Walkie-Talkie System

Maxim’s Food Production Centre
Tai Po
• VSD Centrifugal Water-cooled Chiller with Hot Gas By-pass

Queen Mary Hospital
Pok Fu Lam
• IT Structure Cabling (for Security & ELV)
• Network System (for Security & ELV)
• Audio & Visual System

Four Seasons Hong Kong
Central
• BMS
• Audio & Visual System

The Upper House
Pacific Place, Admiralty
• BMS
• Audio & Visual System

Pacific Place Apartments
Pacific Place, Admiralty
• BMS
• Audio & Visual System

HAECO Base Maintenance Facility
Lantau Island
• BMS

HAECO Component Overhaul
Tseung Kwan O
• BMS

EAST Residences
Quarry Bay
• BMS
• IT Structure Cabling (for Security & ELV)
• Network System (for Security & ELV)
• Audio & Visual System

Sheraton & Four Points Hotel
Tung Chung
• CABD
• Carpark Control System

City of Dreams
Cotai, Macau
• Cooling Towers
Opus Hong Kong
Victoria Peak
Residential Buildings
• BMS
• IT Structure Cabling
• Network System
• Wired & Wireless Data Network System
• CABD
• Carpark Control System
• Home Automation System
• Home Security System
• CCTV System
• Intercommunication System
• Lighting Control System
• Public Address System
• Security and Access Control System
• Walkie-Talkie System
• Security and Access Control System
• Security and Access Control System
• Security and Access Control System
• Watchman Tour System

Upper West
Tai Kok Tsui
Residential Buildings
• BMS
• IT Structure Cabling
• Network System
• Wired & Wireless Data Network System
• CABD
• CCTV System
• Security and Access Control System
• Public Address System
• Walkie-Talkie System
• Public Address System
• Security and Access Control System
• Watchman Tour System

Cadogan
Kennedy Town
Residential Buildings
• BMS
• IT Structure Cabling
• Network System
• Wired & Wireless Data Network System
• Audio and Visual System
• CABD
• Home Automation System
• CCTV System
• Information Display
• Public Address System
• Security and Access Control System

Peak Tower
The Peak
Retail
• BMS
• CCTV System
• Lift Access Control System
• Security System
• Watchman Tour System

Citygate - Citygate Outlets & The Silveri Hong Kong - MGallery
Tung Chung
Residential Buildings
• BMS
• Dehumidification System
• Automatic Tube Cleaning System

Residence Bel-Air
Cyberport, Pok Fu Lam
Residential Buildings
• BMS
• EC Plug Fan
• Power Management System

Tuen Mun Pillar Point Sewage Treatment Plant
Tuen Mun
Infrastructure & Utilities
• Solar PV System

Hongkong Electric Tower
Ap Lei Chau
Residential Buildings
• BMS
• EC Plug Fan
• BMS
• Power Management System

Hong Kong Electric Tower Lamma Power Plant
Lamma Island
Infrastructure & Utilities
• Perimeter Intruder Detection System

The Arch
Kowloon Station
Retail
• BMS
• Automatic Tube Cleaning System

Festival City
Tai Wai
Residential Buildings
• BMS
• Automatic Tube Cleaning System

Skypark - The Forest
Mongkok
Retail
• BMS
• Automatic Tube Cleaning System
• Cooling Tower
• Outdoor LED Display & Signage

Dunbar Place
Ho Man Tin
Residential Buildings
• BMS
• IT Structure Cabling
• Network System
• Wired & Wireless Data Network System
• CABD
• Carpark Control System
• CCTV System
• Intercommunication System
• Lighting Control System
• Public Address System
• Security and Access Control System
• Walkie-Talkie System

Citywalk & Citywalk 2
Tuen Wan
Retail
• BMS
• LED Wall

Elements
Kowloon Station
Retail
• BMS
• Dehumidification System

agm
Kwun Tong
Retail
• BMS
• Automatic Tube Cleaning System