

BIM Subsidiary

Finding the truths about 'Indochine Engineering'



What is Indochine Engineering?

Indochine Engineering is a Singapore-based group of companies who provide facility and structural design services using BIM. It has subsidiaries in Vietnam and Australia, with approximately 130 engineers based in the former. The company group provides advanced services in BIM primarily in the Asia-Oceania region.



Background and objectives of acquiring shares of Indochine Engineering

In order to encourage the application of BIM in construction, we launched 'BIM Promotion Department' (department name at the time) in 2017 but then faced shortage of BIM engineers. In the meantime, having expanded its business primarily in Vietnam, known as a leading BIM country, Indochine Engineering was seeking further growth by delivering its BIM-based design services to various regions and clients.

Under such background, we executed the share acquisition in July 2020 in order to gain access to a large force of engineers with advanced BIM skills. Indochine Engineering agreed to the deal with the aim of winning more contracts in Japan and Southeast Asian countries we operate in.

Our long-term management plan 'To Zero, From Zero' places an emphasis on 'digital technology' as the source of our competitive advantage. Our DX strategy is to build a BIM/CIM based platform and promote the digital transformation of our construction business at an overwhelming speed to outstrip our competitors. (From the long-term business plan To Zero, From Zero', page 9)

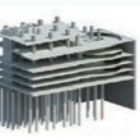
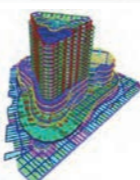
We will be accelerating this movement through the collaboration with Indochine Engineering and aim to become the top leader of the industry.



Achievements through collaborations to date

We have been carrying out facility design and structural design works using BIM for awarded projects both domestically and internationally. To date, we have delivered 22 facility design and 20 structural design projects.

To enhance technical exchange and collaboration, three engineers from the Vietnam office received trainings in the Facility Design Department and Structural Design Department at our Shibuya Head Office from May to early August 2022.



From the left: Mr. Doan (hygiene facility design), Mr. Hoang (air conditioning facility design), Mr. Tuan (structural design)



We asked Mr. Carl Gay, General Director of Indochine Engineering

Limited to share his thoughts upon joining the TOKYU CONSTRUCTION Group.

Carl Gay

Carl Gay is our General Director, and is well known throughout the industry in Vietnam. Carl has over 30 years professional engineering experience, including 20 years in Vietnam, and holds a bachelor degree in mechanical engineering from the University of Queensland, Australia, and a masters in business management from APESMA/Deakin University, Australia



Communication and teamwork bring a new breeze.

'We are honored to join the Tokyu group and excited to explore new markets together' said Mr. Carl, who believes TOKYU CONSTRUCTION Group's Three Deliverable Values are well aligned with their own strategies.

Decarbonization and Zero Waste, the first two values proposed in TOKYU CONSTRUCTION Group's VISION2030, translate into sustainability and efficiency - exactly what Indochine is focusing on. Mr. Carl sees the great potential for Indochine to contribute to these two areas by leveraging its expertise in BIM (Building Information Modeling) and DX (Digital transformation). In particular, there are many opportunities to integrate design BIM with construction BIM to further strengthen the entire TOKYU CONSTRUCTION Group as one team. According to his observations, TOKYU CONSTRUCTION group is doing a better job in terms of introducing BIM and DX on the construction side, while there is plenty of room to catch up on the design side. This is why Indochine turned out as the perfect match, in terms of its highly advanced capabilities in structural and facility design.

Another trendy benefit of DX is enabling remote work, given the ongoing impact of the COVID-19 pandemic worldwide. As Mr. Carl has found, traditionally the Japanese workplace culture tends to be reluctant toward flexible workstyles. However, through first-hand experience interacting and working together with Japanese colleagues, he also felt the deep connections between people. 'People is always the key and DX serves as a very effective tool to help our people work together as a team', said Mr. Carl.

The third Deliverable Values of TOKYU CONSTRUCTION Group is Disaster Prevention and Mitigation, and Indochine has been implementing a similar concept which they refer to as 'resilience'. For example, every one of

their building projects in Vietnam has generators, water treatment equipment, and other facilities to be resilient in the surrounding environment. During his trip to Japanese cities, Mr. Carl was impressed by the large number of 'modern' buildings, in terms of the state-of-the-art construction technologies adopted to achieve many of their useful functions and attractive features. These competitive advantages of major Japanese construction companies like the TOKYU CONSTRUCTION Group would prove valuable in Southeast Asia, especially when combined with Indochine's local presence and BIM / DX capabilities.

'We chose the TOKYU CONSTRUCTION Group for two reasons: first, our values and strategies are well aligned; second, not only does TOKYU CONSTRUCTION have a genuine interest in Southeast Asia but they also intend to take actions in the field to explore these markets and expand their businesses to countries like Viet Nam'. Going forward, Mr. Carl expects to see Indochine assisting TOKYU CONSTRUCTION Group in terms of winning local projects in these locations, as well as accelerating digital transformation and further implementing BIM in both design and construction.

While recognizing that these objectives take time to achieve, Mr. Carl emphasizes that communication and teamwork are the most important keywords and the fastest way to success. This is based on his unique experience of traveling around the world at a young age and doing business in Viet Nam for 23 years. There is no doubt that Mr. Carl and Indochine Engineering Limited are valuable assets of TOKYU CONSTRUCTION Group, and we can't wait to learn their new stories of success!