

**SUNWAY CONSTRUCTION:
BUILDING EXCELLENCE THROUGH PEOPLE, KNOWLEDGE AND TECHNOLOGY**

SUNWAY™

SUNWAY CONSTRUCTION GROUP BERHAD

ABOUT THE COMPANY

From simple road paving and other civil jobs to building highly critical and complicated mega projects, Sunway Construction has indeed come a long way. Sunway Construction made its humble beginning in 1981, known as Sungei Way Quarry and Construction Sdn Bhd. Located at a shoplot in Petaling Jaya New Town; the young company's first few steps were not different from most other startups, which was beginning small. Reflecting on the early years of its establishment, Sunway Construction was a small contractor taking on infrastructure projects for Perbadanan Kemajuan Negeri Selangor (PKNS).

One of the earliest and challenging projects undertaken by the company was in the 1980s, which was to complete the abandoned Langkawi Jetty project for the Ministry of Works. Sunway Construction managed to complete the project successfully in 90 days, in time for the Commonwealth Heads of Government Meeting. Sunway Construction had done the near-impossible and caught the public eye. That boosted its learning curve and strengthened the company's reputation.

With an impressive portfolio through its early civil engineering and infrastructure projects, Sunway Construction continued getting jobs that were intense in terms of quantity and complexity. The company expanded to the construction of residential and commercial buildings. In its early years of operation, it was also a key player in building the Bandar Sunway township, which is today well known for its concept of integrated resort living in a city and has received many accolades.

Since then, Sunway Construction has completed numerous internationally recognized landmarks and structures of national significance in Malaysia. Some of the well-known completed projects are the Kajang SILK Highway, government buildings in Putrajaya, the Kuala Lumpur Convention Centre, the Pinewood Iskandar Malaysia Studies and the Legoland Malaysia Theme Park in Johor Bahru.

From its steady growth and experience gained in Malaysia, Sunway Construction's journey to excellence has progressed to undertake challenges beyond the national borders. The company has ventured into and successfully completed projects in Taiwan, India, Trinidad and Tobago, Singapore and the Middle East. Some of the completed megaprojects are the 7 Highways in India for the National Highways Authority of India and Rihan Heights in Abu Dhabi. Sunway Construction evolved from a subcontractor to an internationally recognized and respected full-service construction conglomerate.

Today with a global presence in more than 5 countries, Sunway Construction is a leader in turnkey building and infrastructure projects in Malaysia. With a vision of becoming the region's leading property construction group, the company has been constantly innovating to deliver value, build synergistic and sustainable relationships and achieve the highest standards of quality and excellence.

Managing a company from a small to an international level is not a cakewalk as many challenges related to scaling lead many businesses to failure. To be on top of the competition, a company must be on top of the industry best practices. This article focuses on Sunway Construction's best practices in two criteria of a business excellence framework. The first one is the management of information and knowledge and the second one is the work process, process management and improvement. These two excellence indicators are among the key influential factors for Sunway Construction's organizational excellence.

ACHIEVING A PAVED ROAD OF EXCELLENCE

After more than 30 years in existence, Sunway Construction continues to demonstrate superior results in the key areas of business excellence indicators. In 2014, Sunway Construction achieved its highest turnover to date of RM1.9 billion. Among its ongoing projects are the Klang Valley MRT package V4 (RM1.17 billion), Bus Rapid Transit – Sunway line (RM450 million), KLCC North East Car Park – Phase 1 & 2 (RM304 million and RM222 million), and Urban Wellness Development in Johor Bahru (RM283 million).

Under its senior leadership and with employees' continuous efforts, Sunway Construction has been able to maintain a good compound annual growth rate (CAGR). In terms of market share, the company marked its position in the top three in turnover and profit before tax (PBT) in 2014. Sunway Construction continuously shows an improvement trend in marketplace performance; for example in 2014, the company entered new markets including projects for light rail transit (LRT), bus rapid transit (BRT) and mass rapid transit (MRT).

Beyond financial performance, excellent results are also evident in the employee indicators. Sunway Construction has shown improvement trends in employee satisfaction, involvement and training. Sunway Machinery Training Academy, accredited by the Department of Skills Development or Jabatan Pembangunan Kemahiran (JPK) in Malaysia's Ministry of Human Resources, has been providing Malaysia Skills Certificate technical training to heavy construction machinery operators and mechanics.

Meanwhile, initiatives like the Sunway Managerial Advancement for Recruited Talents (SMART) and Project Manager Development programme have continuously groomed and developed leaders in the company through a structured approach within the organization.



Above: Kwan Foh Wai, Senior Managing Director of Sunway Construction Sdn Bhd received the MITI Industry Excellence Award 2014 on behalf of Sunway Construction.

Sunway Construction is also the first Malaysian construction company to implement the concept of “kaizen” or continuous improvement, in an enterprise-wide scale. In 2014, 180 staffs were involved and presented at the KAIZEN Conference, which was organized at the end of the year. Key areas of results are continual improvements in exposure to learning and development of staff, lower staff turnover rate and higher talent retention rate compared to the industry standard.

“Construction industry is known for its 3Ds: difficult, dangerous and dirty. We must have work system processes that are effective and efficient,” said Mr Kwan Foh Wai, Senior Managing Director of Sunway Construction Sdn Bhd. Key operational performance at Sunway Construction are evident through its improvement trends and meeting its targets in key business and support processes indicators. Safety, health and environmental best management practices are being implemented at each site, which is one of the criteria in its’ Sunway Safety Management System (SSMS) Awards.

The CIDB (Construction Industry Development Board) QCLASSIC assessment results for the Pinnacle Project was 87%, scored as the highest in the office category for 2014. This has set a benchmark for excellence to its competitors. Sunway Construction’s capabilities have been recognized with both national and international award-winning accreditation, such as SIRIM Quality Award 2013, the MCIEA Builder of the Year Award 2013, MCIEA CEO of the Year Award 2013, MATRADE Export Excellence Award (Services) 2010 and the MITI Industry Excellence Award 2014.

MANAGEMENT OF INFORMATION AND KNOWLEDGE IN CONSTRUCTION INDUSTRY

The fragmentation of the construction process, augmented specialization and involvement of many interested parties calls for a shared format of creating, converting and exchanging knowledge. Employees in charge of work at the sites and others engaged in the practicalities of construction projects need sufficient knowledge to carry out their work properly. Employees at all levels need to continuously update their working knowledge to keep abreast of the latest technologies.

“When new methods and materials are developed, new knowledge is needed. As such, employees should be provided with relevant information and be motivated to learn and generate such knowledge themselves. Workers in a construction company need a deep knowledge,” emphasized Kwan. Realizing this, Sunway Construction has always believed and invested in technology, especially in the area of information and communication technology (ICT).

At this juncture, Sunway Construction is a pioneer among its peers when it comes to adopting computerized systems in its business. From its inception, the company has implemented basic computing facilities that have since evolved into client-server computing with an enterprise-based system. Example of the systems includes ERP, Lotus Notes, intranet, and e-Document Management System (eDMS).

“Our innovation in ICT is a journey. We have started early as we know it will assist our business operation and highlight risk management. If we want to grow our business, we need to make use of ICT. In the 1990’s, we started our ERP journey to overcome the business challenges of data capture at the source and on time. It has resulted in better project cost management,” said Kwan.

At Sunway Construction, critical information and knowledge relevant to the business performance key processes are captured, shared and applied companywide to sustain the organizational value and competitive advantage. Staff at all levels, ranging from top management, department heads, project managers relevant project and supporting staff, are enabled to identify and share critical information and knowledge affecting day-to-day decision making and improving performance. This valuable information is kept captured and shared at the respective departments’ eDMS and team rooms (Info Net).



Sunway Construction embarked on eDMS in 2008. It is a web-based system that enables employees to capture all documents in different modules such as correspondence, minutes of meeting, reports, drawing register, request for information, transmittal note, photo gallery, companies and many more. Consistent with what is required in the business excellence practices, the objectives of the system are to standardize, centralize and consolidate all the project data into a single platform for easier retrieval, searching and maintenance. Sunway Construction has been successfully in using it as a platform to share knowledge across the organization.

Resulting from the use of eDMS, Sunway Construction has been able to ensure the timeliness and availability of information to employees, suppliers, partners and customers. Regular internal assessments are conducted to ensure the information and knowledge are accurate, reliable, up-to-date and relevant in the company key processes.

Meanwhile, the security and confidentiality of the data are controlled through the defined accessibility. Apart from the use of the system, another best practice at Sunway Construction is that data and information are regularly collected (manually or through the e-system) and analysed. The findings of the analysis are tabled in the relevant meetings and improvement plans are then initiated. These have, according to Kwan, contributed to the realisation of managing projects within the cost, time, quality, and safety parameters.

INTEGRATION OF TECHNOLOGY, PROCESSES AND PEOPLE FOR EXCELLENT RESULTS

Having proper documentation and control of what is actually done on the construction site and of how it is done is fundamental in the construction industry. Equally, no matter how talented and motivated people are, a company cannot gain competitive advantage with faulty processes. Flaws and errors in construction work can account for significant total production costs. Substantial working time needs to be spent on correcting errors and reworking what has been done or planned.

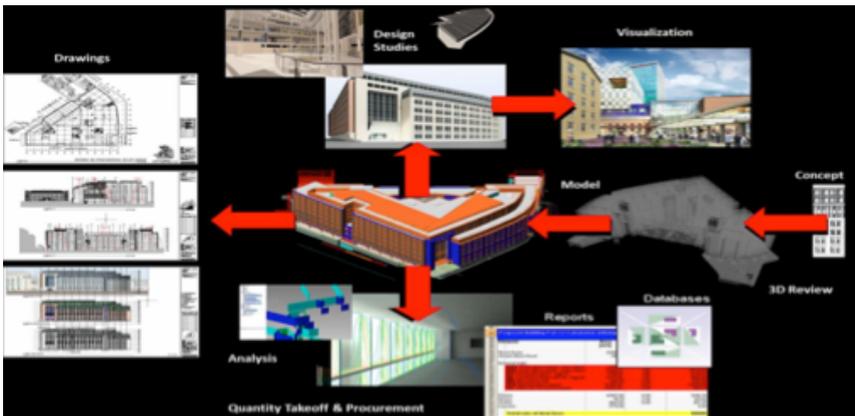
“Project management means you need to manage your project within cost, time, quality, and safety parameters. Technology has definitely transformed our processes through making them faster, efficient and productive,” said Kwan. He added that through the utilization of technology, reports on the procurement processes, tender management process, corrective action request process and monthly progress can be generated in real time.

At Sunway Construction, the extensive use of ICT as an enabling tool has enhanced collaboration and provided a platform for synergistic efficiency. “We have used and customized our ERP system to the extent that it is now more applicable to the Malaysian construction Industry. Now we even market our ERP to our fellow contractor companies in a joint venture project. That is how we add value to each other,” added Kwan.

In any new project, the Design and Technical Department will work closely with the client, project teams, the relevant consultants and suppliers to incorporate the new technology and knowledge in the design during the technical meetings. When necessary, product briefings will be conducted by the suppliers or manufacturers of the new technology and knowledge. Core to the construction field, Sunway Construction has invested heavily in the latest technologically advanced equipment and state-of-the-art technology.

Sunway Construction is a pioneer in the field of Virtual Design and Construction (VDC) in Malaysia, or more commonly known as Building Information Modelling (BIM). The company has been utilizing BIM in all phases, from pre-construction through operations and maintenance.

BIM enables integration of design, scheduling, estimation and fabrication processes with various chains in the project management. “It helps to quickly synchronize the work processes, especially when changes are required by other parties. The application of this system greatly enhances efficiency and productivity and results in optimal costs, resources and project durations,” said Kwan.



Above: Snapshot of Building Information Modelling System

The company's integrated project delivery covers a complete construction life cycle, from pre-construction through the use of BIM design to project budgeting, contract management, purchasing procurement, project management and project control. Adding to that, Sunway Construction incorporates 5D simulation for business scenario simulation and project execution strategy. In terms of business excellence parameters, this is the manifestation of how the organisation incorporates customers and market requirements in new products and service design, as well as evaluates and improves the innovation and design processes.

Excellent project performance is impossible to achieve solely with the technology and robust processes without integration with the strength of people. According to Kwan, Sunway Construction's success is built on the foundation of the combined expertise, commitment and passion of the people, as "One Team With One Vision."

Best practices at the company are visible through involving employees in various teamwork and quality improvement activities. Such activities are through Kaizen Teams and projects, Sunway Quality Merit System (SQMS), best performer awards on SSMS and SQMS and the cross learning programme through interexchange project site visits.

According to Kwan, through continuous investment and nurturing of human capital, staff are able to learn and grow with the company. The talent and development programme, systematic process of skill and competency identification, and improvement learning and development programmes have contributed to the desire of every staff member to take on tasks given to them with a high level of ownership. Employees have given their 100% commitment to the company's growth and expansion plan.

As a result, Sunway Construction has been able to deliver high quality design and build projects on time, within budget and meeting the customers' expectations. No matter where a project is located, the company ensures the same high level of product quality is delivered. By successfully applying its credo both domestically and internationally, Sunway Construction is poised for greater growth through the globalisation of its services.

BLAZING THE TRAIL INTO THE FUTURE

In its three decade history, Sunway Construction has faced and overcome various challenges to be stronger and bigger in reputation. When recognizing the international forces, change is inevitable. Sunway Construction seeks to maintain and grow and continuously challenge its own limits while being sustainable. As the company begins its fourth decade of operation, the future is definitely going to be technology-driven, judging from the success of the company's home-grown knowhow. Virtual Design & Construction (VDC) will play a huge part both in securing bigger projects and in trailblazing the way to more effective construction.

“Relationship building is what we want to focus on in the future because we want to offer beyond excellent service. We want to transform our company into a knowledge-based company offering solutions. We want to provide a total solution and be customer centric,” said Kwan. Sunway Construction believes that with strong passion, the company will continue to build on its excellence for many years to come.