



YOUNG ENGINEERS FIND GROWTH WITH KVMRT

EXPOSURE: Career paths shoot straight up following stint in underground projects where mentoring aspects are a top priority

Yusni Shahadan (third from left) briefing engineers and site workers on the work at the Merdeka Station KVMRT underground site.



Pavarit Wetsandrom (right) with a tunnel crew, Mohd Azmil Mahtar inspecting the Variable Density Tunnel Boring Machine components at the Tunnel Boring Machine Refurbishment Plant in Perak.



Yusni Shahadan (right) explaining to the young engineers on the work progress at the Merdeka Station KVMRT underground site.



Anazari Mohd Hassan at work at the tunnel using high-end survey equipment.



The cutterhead, part of the Variable Density Tunnel Boring Machine's components were lowered down to the shaft with extreme precision to ensure it fits to its other components

KUALA LUMPUR

As opposed to building above ground, constructing infrastructure below the surface is highly complex and requires a different breed of engineer.

In this regard, engineers and technical personnel, regardless of their seniority, find their career paths on an upward trend after exposure to tunnelling and underground worksites, the reason being obvious - the rich and unique experience gained.

The KVMRT UG Package involves the construction of 7.5km twin tunnels and seven underground stations. Although work for a rail-related project is, in itself, considered highly specialised, working to construct the facility underground is considerably more challenging.

Engineers with varied specialisations, both at entry level and experienced, agree that the exposure and experience in such construction moved them up several notches in marketability.

A SYSTEMATIC APPROACH TO NURTURING TALENT

MMC-Gamuda deputy project director Ubull Din Om says developing young people to take on future jobs and heavier responsibilities have become a key result area for management to develop.

"This is because everyone starts



UBULL DIN OM...developing young people to take on future jobs and heavier responsibilities.

building without worrying about the future manpower needs. When we started tunnelling works for the SMART tunnel in 2003, we knew that developing people would take time, so we set forth on a journey of which we are seeing the fruits now, without depending on outsourced skills," Ubull said.

It is because of this long-term vision that facilities have been set up, such as the Tunnelling Training Academy and the TBM Refurbishment plant, where locals are trained by seniors, ensuring a steady and reliable supply of engineers and skilled workers for niche areas, such as tunnelling.

"We have a tried-and-tested approach to developing people. We first recruit and start training them, after which they are assigned to jobs where further on-site training is provided under the scrutiny of a senior or mentor. The recruits also undertake various jobs on a rotational basis at different sites so that young engineers can go through the mill before settling into a work area they enjoy.

"On reaching a certain level of seniority, experienced engineers and technical experts become mentors and the cycle continues," said Ubull.

Three people who have been through the journey with MMC-Gamuda share their story with us.

CHALLENGING, BUT FULFILLING WORK

YUSNI Shahadan, 49, who has worked mostly on highway and water treatment plants projects, decided to try something different and became a construction manager three years ago at the KVMRT Underground station site.

He was assigned to Merdeka Station, one of the seven underground stations along the Sungai Buloh-Kajang Line.

"Initially, I was drained having to cope with the intricacies of working below ground. Adding to this was the fact that I was working in a sensitive neighbourhood," he said.

Merdeka Station, which was being built in Kenny Hills, didn't make

The world's first Variable Density Tunnel Boring Machine (VD TBM) mining through the ground at Cochrane underground MRT station after it was officially launched by the Prime Minister, Datuk Seri Najib Tun Razak on May 30, 2013. MMC Gamuda KVMRT (T) Sdn Bhd was awarded the International Tunnelling and Underground Space Awards 2014: Technical Innovation of the Year Category for the VD TBM.



ABOUT MMC GAMUDA KVMRT

MMC Gamuda KVMRT (T) Sdn Bhd is the Work Package Contractor for KVMRT Sungai Buloh-Kajang Line underground works. The design and build contract covers the construction of 7.5km twin-bored tunnels, seven underground stations and other associated structures and facilities.

from the rank and file and is now an assistant manager in the Survey Department. After four years working in tunnels, he has a message to convey to youngsters out there.

"Do not shun or fear the unknown. All one needs is patience and commitment. Then learning becomes a breeze," said Anazari, who added that a university degree was not a prerequisite for a career in the technical field.

Anazari said he has gained tremendous experience working in tunnels for the past four years, learning, among other things, software related skills, handling automation works, high-end survey equipment and scanners.

However, it was learning to manage the tunnel-guiding system that superseded them all.

"I was trained for three years to manage the tunnel-guiding system and now, I am ready to take on the highly challenging task of handling the TBM, all by myself."

Anazari said to keep the culture of developing young people going, he has five young surveyors under him who are well on their way to becoming proficient in using the best technology for tunnelling surveys.

DISCOVERING A DEEP-ROOTED PASSION

YOUNG tunnel engineer Pavarit Wetsandrom, 25, a Malaysia Multimedia University graduate from Kelantan, began his stint at MMC-Gamuda JV at the thick of things. There were several tunnel-boring machines crawling under the city centre at the time, and he has been on a rather zealous journey of discovery since.

Pavarit, like any typical

things any easier.

"The station was to be built from the bottom-up and this required massive strutting works to support excavation. These procedures were completely new to me.

"I have, to-date, managed excavation of the station vertically down to 32 m, 130k cubic metres of earth have been dug out, 5,000 tonnes of steel struts installed and 10,000 cubic metres of concrete cast for the five levels at the station," Yusni said.

His pride and confidence were evident as he spoke and there were outward expressions of his accomplishments as he heaved a sigh of relief when talking about his future.

"The challenge turned into excitement and has contributed to meeting my self-imposed goals." On what made his last three years

the most exciting of his engineering career, he said he became increasingly involved in training younger engineers and found fulfillment in seeing them achieve their goals.

"It is time to give back. MMC-Gamuda has a methodical approach to developing young people and I am proud to be part of this initiative where we train engineers who come in with zero experience and knowledge on tunnelling and underground works.

"While I am being groomed to take on bigger roles and projects, I, in turn, simultaneously mentor engineers under me. It is not rocket science but this is not quite adopted at other projects."

RIISING THROUGH THE RANK AND FILE

ANAZARI Mohd Hassan, 39, rose

20-something, describes work as "happening". He particularly loves the unpredictability of tunnelling works.

"No two days are alike. Just when you think the machine is doing great, something happens and we have a downtime. For a brief period, Pavarit was put in charge of supplies for the TBM, and this was again like sitting on a time bomb as supplies need to keep coming in for the TBM to run 24/7.

"The downtime for a TBM can result in big financial losses."

It has been two years now and Pavarit said he owed much of his capabilities to his seniors, who gave him the opportunity to learn and grow in a highly specialised area.

Pavarit hopes to be a plant manager in five years, and that would be no mean feat, considering the strides he has made.

"With my experience managing a slurry treatment plant, I can confidently accept similar jobs across industries and I have moved up the salary value chain, for sure."