

BOLSTERING THE PRODUCTIVITY OF THE CHEMICAL INDUSTRY THROUGH DATA INTEGRATION

The Chemicals and Chemical (C&C) Products industry recorded a massive bounce in productivity growth from –4.0 per cent in 2020 to 10.1 per cent in 2021. Before 2021, the industry's productivity performance had been constantly on a downward trend since 2017. Malaysia's chemical industry gained from the rising demand for C&C products due to the impact of the COVID-19 pandemic. The industry's productivity level increased from RM276,827 in 2020 to RM304,665 in 2021. Its productivity was reflected in value-added growth, which improved tremendously from -5.8 per cent to 9.8 per cent.

The expansion of the C&C industry in Malaysia necessitates the subsector to strengthen its industry structure. Safety and security are the pertinent elements in the industry as players are managing dangerous goods. Transportation of C&C products is among the biggest concerns among the industry players due to its adverse impacts should accidents occur.

Every day, 18 road deaths are reported. According to the data published by the Ministry of Transport (MOT), the number of road accidents in Malaysia increased from 414,421 in 2010 to 567,516 in 2019. 17 per cent of the casualties were contributed by heavy vehicles. In transporting the C&C products, the rippling effects of road accidents compounded as it involves dangerous cargoes and substances and the loss of chemical containment. The safety and security in transporting the C&C products in Malaysia is an emerging concern.

Under the purview of Malaysia Productivity Corporation (MPC), the Chemicals and Chemical Products Productivity Nexus (CPN) commences the initiative to improve the safety and security in transporting the C&C products. The aim is to enhance the productivity and competitiveness of the industry as any safety and security issues can impact the operation, leading to higher costs of doing business and the use of resources.

Fragmented governance and lack of data connectivity between the chemical industry and the relevant government agencies are among the root causes affecting safety and security in transporting the C&C products. Current data acquisition is manual, inefficient, and time-consuming, and the lack of data connectivity between regulators and industry creates a challenge in achieving full regulatory compliance. The industry players do not have access to regulators' records on drivers and vehicles. For example, records on blacklisted drivers and vehicles, outstanding summons, invalid licences, drug offenders, criminal involvement, and habitual traffic offenders are not accessible to the industry players in hiring drivers and vehicles to transport goods. Unverified information and lack of data expose the industry to the risk of hiring non-compliant drivers and deploying unfit vehicles.

With full support from MPC and in collaboration with the C&C products industry players and relevant government bodies, CPN started the Malaysia Transport Database Exchange (MyTDX) project to integrate data from various regulating agencies and the chemical industry for easy access. MyTDX is designed to facilitate data sharing through a safe data depository system.

Implementing MyTDX will increase the industry's regulatory compliance through self-regulation and improve business productivity and profitability. More importantly, MyTDX can save lives.

At the micro-level, MyTDX can assist the industry in optimising operations and managing safety and security issues in chemical transportation. It addresses safety and security concerns, manages the dependency on third-party transport service providers with poor control and management over their drivers and vehicles, and controls the unauthorised and unqualified chemical transporters. The implementation of the project is expected to manage better and control the industrial transportation of chemicals and chemical products on Malaysia's roads.

The delivery of the project comprises the development of an IT interface platform. MyTDX aims to upscale the industry's e-Roads platform to optimise performance, enhance safety, and improve the operational sustainability of the road transport operations in Malaysia. Execution of the project involves multiparty collaboration from the public and private sectors. The pilot run involves data collection on personnel details, including medical information, submission of critical documents, and GPS-enabled interface. MyTDX is a national vision towards the industry's self-regulated compliance in the transportation of chemicals in the country.

Implementing MyTDX can minimise risks due to high-risk cargoes and road hazards and allow only knowledgeable hauliers, competent drivers, and fit-for-purpose approved vehicles to haul dangerous cargoes. Currently, related data such as licenses, road tax, and inspections are updated manually into the database. MyTDX is expected to increase efficiency and reduce errors due to minimised manual intervention. Full implementation of MyTDX is expected to bring the following benefits:

- (i) A national assurance mechanism with features of automation/efficiency, transparency, fraud prevention, data verification, and assurance that only fit-for-purpose drivers and approved vehicles are deployed;
- (ii) Shared national real-time value addition;
- (iii) One-stop national portal for industry subscribers to verify the status of drivers and vehicles;
- (iv) Industry self-regulates without over-depending on authorities;
- (v) Effective monitoring by the government of the industry; and
- (vi) A high return-of-investment project that increases productivity, safety, and security.

The regulatory experimentation to develop MyTDX was presented and approved at the Special Taskforce to Facilitate Business (PEMUDAH)'s meeting on 16 March 2022. Before that, the Economic Action Council (EAC) Meeting on 24 November 2021, chaired by YAB Prime Minister, agreed for all ministries, government agencies, state governments and local authorities to participate in regulatory experimentation to improve the ease of doing business and enhance Malaysia's business ecosystem.