

Positive Social Impact

increasing STEM literacy where Petrosains PlaySmart™ played its role in extending the immersive STEM learning experience to the community.

Petrosains PlaySmart™ also offers the Maker Studio, a space for hands-on and creative activities to encourage the public to design, experiment, build and invent as they engage in Science, Technology, Engineering, Arts and Mathematics (STEAM) through coding, design thinking, prototyping and robotics.

- Petrosains PlaySmart™ was able to reach out to more than **269,000** visitors physically via its centres in Johor, Pahang, Sabah and Sarawak. Outreach programmes with local communities were held consistently through collaboration with the respective State Government and PETRONAS Regional Offices.
- Petrosains accelerated STEM learning through its Visit to School and invitation programmes, allowing for interaction with students, community and general public outside of its physical facilities while also providing STEM learning opportunities. These initiatives generated **12,707** reach in 2022.
- Petrosains PlaySmart™ is also positioned as a credible solution partner through the Inspire Together Programme, which allowed for a wider range of **20,000** reach in the communities, providing access to STEM learning and experiences to underprivileged groups.

Petrosains PlaySmart™'s extension, the Maker Studio is currently available at Petrosains' main centre in Kuala Lumpur and Petrosains PlaySmart™ in Johor, Sabah and Sarawak, with the Maker Studio Tanjung Aru, Sabah operations officially handed over to the Sabah State Library in 2022.

iii. Petrosains RBTX Challenge

The Petrosains RBTX Challenge is another effort to boost interest in STEM, allowing robotics enthusiasts to compete with their robotic creations in an open-source software

environment. The Sports and Arts Education Division, Ministry of Education, Malaysia, endorses the challenge as it aims to democratise STEM learning by providing participants, regardless of backgrounds, with unlimited open-source coding software and a diverse range of robotics equipment. Since its inception in 2018, it has attracted more than 7,000 participants of all ages.

In 2022, the programme continued to create value for Petrosains and its beneficiaries not just through traditional financial measures but also by bringing intangible value to communities, our brand image and through the creation of new innovations guided by the Malaysia Education Blueprint 2030, National Fourth Industrial Revolution (4IR) Policy thrusts, PETRONAS Education Framework, Four Sustainability Lenses, and Petrosains Strategic Framework - Progress.30.

Besides supporting the vision and aspirations of the Malaysia Education Blueprint through mastering higher order thinking skills and the ability to innovate, the challenge is also tailored to provide school students with basic designing, coding and sensor training in robotic development.

Petrosains RBTX Challenge 2022 contributed to the increased value in STEM learning for robotics enthusiasts through partnership with professional advisors from academic institutions and industry players. To prepare interested participants for the signature robotics competition, Petrosains' working team travelled across Malaysia months ahead of the competition to conduct workshops, mainly in areas such as basic designing, coding and sensor training.

- Reached out and provided training for **2,334** young people.
- Attracted 28 international teams involving **77** participants from Indonesia, Tunisia and the United States of America (USA).
- A total of **1,035** teams participated, with over **3,000** taking part in the competition and **243** teams advancing to the Grand Finals in Kuala Lumpur.