

PRESIDENT'S SCIENCE AND TECHNOLOGY MEDAL 2023

Mr. Quek Gim Pew

Senior Research & Development Consultant
Ministry of Defence

"For his pivotal role in developing Singapore's research ecosystem in critical areas including defence capabilities, space technology, advancing quantum engineering, artificial intelligence and high-performance computing."

Mr. Quek Gim Pew has made significant impact on the scientific and technological progress of Singapore, particularly in the development of advanced defence technologies and systems for the Singapore Armed Forces and advancement of Singapore's RIE ecosystem in critical areas including space technology, quantum engineering, artificial intelligence and high-performance computing.

Throughout his career, Mr. Quek has been guided by his belief and commitment to harness science and technology to serve national needs and contribute to Singapore's continued success.

During his 40 years with the Ministry of Defence, Mr. Quek drove the masterplanning of defence R&D, development of strategic capabilities, strengthening of partnership with international defence organisations and promotion of STEM to build the pipeline for defence scientists and engineers.

In his 12-year tenure as CEO DSO National Laboratories, he led the organization through a period of significant growth and transformation. His leadership was instrumental to bringing DSO to the forefront of various emerging technologies. He strengthened ops-tech thinking, deepened engineers' and scientists' understanding of the operational needs of the SAF and created an environment where innovative solutions to address those needs flourished.

As CEO, he also established rigorous quality and management systems to ensure the timely delivery of operational capabilities that meet strict performance targets.

As Chief Defence Scientist, Mr. Quek had a major influence in the development of game-changing concepts and disruptive technologies for the SAF. He was a strong advocate for partnership and established collaborative programs between MINDEF and the local RIE ecosystem, strengthening the synergy between the two communities.

As Chairman of the Center for Quantum Technologies (CQT), Mr. Quek recognized the urgency to restructure the country's approach to quantum research. He shifted the country's primary focus on fundamental research to a nationwide initiative that also harnesses quantum technology to support economic and national imperatives. This includes building sovereign capabilities in quantum computing and elevating the local ecosystem to exploit quantum technology to strengthen our competitive edge. He continues on this effort in his current capacity as co-chair of the National Quantum Strategy Steering Committee.

As Deputy Chairman of the Office for Space Technology and Industry (OSTIn), Mr. Quek has been instrumental in advancing Singapore's space capabilities to meet the nation's needs, secure our access to space and space technologies, maximise economic value capture, and enhance our strategic relevance. Today, the local industry and universities have built and launched more than 20 satellites, including the latest TeLEOS-2 which launched recently in April 2023. An additional 15 satellites are in the pipeline. These satellites support a range of missions from scientific experiments to earth observations to communications.

With his extensive experience in R&D management and capability development, Mr. Quek continues to contribute to various national RIE programs. Being a consensus builder and a strong believer in collaboration with a strong network, he helps to harness synergy across organisations and across RIE domains to enhance the deliverables and outcomes in these programs. The programs that Mr Quek is currently active in include chairmanship of the National Supercomputing Center, the Singapore Advanced Research and Education Network (SingAREN)-Lightwave Internet Exchange (SLIX), and AISG Scientific Committee. He also sits on various Boards, Management and Advisory Committees, including the CREATE Scientific Advisory Board, Agency for Science, Technology and Research (A*STAR) Board, Technology Center for Offshore and Marine, Singapore (TCOMS) Board, and Aviation Transformation Program (ATP) Advisory Committee.

Mr. Quek's dedication to building a strong talent pipeline for STEM has been unwavering. While in DSO, he led initiatives to encourage senior staff to engage and mentor students through the Young Defence Scientist Programme. He initiated a series of competitions – under the 'Amazing' umbrella – that provide learning opportunities through hands-on activities and friendly competitions. As Deputy Chair of OSTIn, he continues to push for broad outreach and deep engagement of students through the Integrated Space Programme, where students are exposed to space science, engineering and missions. Selected students will also have a chance to design and build cubesats that will be launched.