

PRESIDENT'S SCIENCE & TECHNOLOGY MEDAL 2026

LEE CHUAN SENG

Chairman, Committee of Government Scientific Advisors

“For his contributions to strengthening Singapore’s science, technology and engineering ecosystem through the integration of policy, engineering and environmental science across government, industry and academia, while building enduring national engineering capabilities and implementing system-of-systems approaches, which advances cross-agency coordination to address complex national challenges.”

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Er. Lee Chuan Seng is recognised for his distinguished, sustained and exceptional contributions to Singapore through the promotion and management of science and technology, and for pioneering a “system-of-systems” approach that has transformed national planning, resource optimisation, and cross-sector innovation.

At the heart of Er. Lee’s contributions is his ability to integrate complex systems—across land use, energy, water, and infrastructure—into coherent, high-impact national strategies. As the conceptual architect of the System of Systems Synergies and Optimisation (SoS-SO) workstream, he led Whole-of-Government efforts to move Singapore beyond siloed planning towards coordinated, system-level optimisation. This approach enabled deep-dive feasibility studies that translated into major national initiatives, including underground cavern development, renewable energy integration, and climate resilience solutions.

Er. Lee played a central role in shaping Singapore’s Research, Innovation and Enterprise (RIE) strategies. As Chairman of the Urban Solutions and Sustainability Technical Advisory Workgroup, he drove the development of the USS RIE2025 Masterplan, aligning agencies around shared priorities such as climate adaptation and research translation. This marked a decisive shift towards integrated planning and unlocked significant national investment in urban sustainability research. As Chairman of the Committee of Government Scientific Advisors, he further strengthened Whole-of-Government scientific advisory capabilities, guiding major RIE programmes, white-space initiatives, and cross-ministry policy deliberations.

A hallmark of Er. Lee’s impact is his ability to translate scientific and engineering innovation into real-world infrastructure solutions. He championed the development of underground space as a strategic resource, advancing initiatives such as the Gali Batu Caverns Feasibility Study and the Underground New Space Master Plan. Through his leadership, Singapore is compiling and integrating foundational capabilities in subterranean engineering and planning, to position itself as a global reference case for land-scarce cities.

In parallel, Er. Lee has driven transformative advances in sustainable infrastructure and energy systems. He spearheaded cross-agency efforts to study the deployment of solar canopies across

Singapore's built environment and conceptualised large-scale solar integration in Singapore, unlocking new pathways for renewable energy generation despite land constraints. His work on embedded battery energy storage systems will enhance grid resilience and enable scalable renewable deployment in dense urban settings. Collectively, these efforts strengthen Singapore's energy security and support its transition to a low-carbon future.

Er. Lee's contributions to sustainability extend to shaping Singapore's green building ecosystem. As long-standing Chairman of the Building and Construction Authority Green Mark Advisory Committee and Founding President of the Singapore Green Building Council, he led the development and continuous advancement of Green Mark standards, embedding sustainability principles into national building practices. This work has catalysed industry-wide adoption of energy-efficient and environmentally sustainable design, positioning Singapore as a regional and global leader in green building and sustainable urban development.

Er. Lee has also advanced Singapore's zero waste/circular economy ambitions through pioneering innovations such as Cement-Treated Mixed Materials (CT-MM), which transforms waste residues from the Semakau Landfill into viable reclamation material. This breakthrough integrates waste management, land reclamation, and resource optimisation, offering a globally replicable model for sustainable development while enhancing national resource resilience.

Beyond infrastructure and technology, Er. Lee has made significant contributions to capability building and ecosystem development. He fostered strong partnerships across government, industry, and academia, catalysing new research collaborations and nurturing specialised expertise in areas such as underground engineering and sustainable urban systems. His leadership in establishing platforms for data sharing, technical standards, and cross-agency coordination has strengthened Singapore's overall S&T ecosystem and maximised the value of public R&D investments.

Er. Lee's influence extends to critical national infrastructure, where his strategic guidance has enhanced the resilience and performance of major programmes such as Changi Airport developments. His leadership in environmental sustainability—including advancing carbon accounting through the Singapore Business Federation's Singapore Emission Factors Registry—has further reinforced Singapore's position as a trusted global leader in sustainability and innovation.

Internationally, Er. Lee's work has elevated Singapore's standing as a leading hub for integrated urban solutions, sustainable infrastructure, and system-level innovation. His contributions demonstrate how a small, land-scarce nation can leverage science and technology to overcome structural constraints and achieve long-term resilience and competitiveness.

Through visionary leadership, deep engineering expertise, and an unwavering commitment to systems thinking, Er. Lee Chuan Seng has fundamentally strengthened Singapore's science and technology ecosystem and positioned the nation as a global exemplar of integrated, sustainable development.