



Innovation Clusters – a National Strategy to Build Technology Capabilities in Singapore

Pauline Tay

Innovation and Enterprise Division, National Research Foundation (NRF), Singapore

To face the challenges of a constantly evolving global landscape, it is necessary for countries to continually innovate to remain relevant and competitive. Particularly in Singapore, where land and natural resources are scarce, the need to innovate, create and build new capabilities becomes even more important.

In Singapore, we have Innovation Clusters and Challenges to address some of the growing technological and developmental needs of our society. The Innovation Cluster Programme encourages technology organisations and economic agencies to work with industry to form innovation clusters of strategic importance. It seeks to strengthen partnerships across companies, universities, research institutes and government to bring ideas quickly to market, raise productivity, create jobs and grow industry sectors. Each innovation cluster is jointly led by an economic and technology agency. The economic agency identifies market opportunities for growing the cluster while the technology agency strengthens translational competencies and activities of organisations within each cluster. Cluster development plans encompass funding for collaborative projects, shared infrastructure, capacity building and bridging gaps in the value chain. Focus areas for Innovation Clusters should drive the translation of research outcomes in sectors such as Advanced Manufacturing and Engineering, Health and Biomedical Sciences, Services and Digital Economy and Urban Solutions and Sustainability.

The National Innovation Challenge (NIC) is Singapore's answer to large and complex problems facing the country. The NIC seeks to harness Singapore's formidable multi-disciplinary research capabilities to develop practical, impactful solutions to national challenges in such areas as energy resilience, environmental sustainability and urban systems. In addition to improving the lives of Singaporeans, these solutions also carry the potential of commercial spin-offs, both at home and abroad. Singapore is committed to global efforts to combat climate changes, hence we are dedicated to developing cost-competitive energy



solutions within the next 20 years to improve Singapore's energy efficiency, reduce its carbon emissions and broaden its energy options. Under the Energy NIC, key agencies will embark on the development of technology roadmaps in areas such as smart grids, carbon capture, energy storage and utilisation, green buildings and renewables. The vision of the Land and Liveability National Innovation Challenge (L2NIC) is to support an economically vibrant, highly-liveable and resilient city of the future with land capacity for sustained growth. L2NIC is a multi-agency effort that recognises land as a precious resource to Singapore, and seeks to leverage on R&D to develop innovative technological solutions to increase Singapore's land capacity for our long term development needs and provide options for future generations.