

UNDERPINNING & SUPPORTING SINGAPORE'S INDUSTRY SECTORS

The top 3 sectors that contributed to the total manufacturing GDP are:



ELECTRONICS:

- 60% contributed by semiconductor sector
- 14 Si wafer fabs including world's top 3
- 20 semiconductor assembly and testing operations; 3 of top 6
- 15 of the world top 25 fabless semiconductor companies
- World's top 3 HDD companies; >40% of world disk media

- Home to **14** silicon wafer fabrication plants, **20** semiconductor assembly & test centre
- More than **30** global medical technology firms, investing in more than **50** plants
- **70%** of global market share for jack-up rigs & conversion of Floating Production Storage Offloading units



BIOMEDICAL:

- World's 4th best healthcare infrastructure
- 30 top medical technology companies; Regional headquarter to world top 10 medical technology companies
- > 30 world leading biomedical companies
- Global market shares: 50% of thermal cyclers, 70% of DNA microarrays



TRANSPORT ENGINEERING:

- NO. 1 center in Asia for aerospace maintenance, repair and overhaul
- Largest Asia Pacific location for Oil and Gas; one of world top 3 export refinery center.
- Busiest bunkering port in the world – 43M tonnes and US\$29b
- 70% global market share of jack-up rigs of deep sea oil exploration



Source: EDB

The usefulness of CIPM MRA

Singapore is host to multi-national companies (MNC) from wide-ranging industries. Singapore's strategic location offers MNCs enhanced market access in terms of physical connectivity and also through an extensive network of International Agreements. In fact, 44 per cent of companies have substantial APAC headquarters located in Singapore. Emerging Asian MNCs that are starting to make their mark globally are also using Singapore as a springboard for growth.

Among the wide-ranging needs, Singapore's sophisticated base of MNCs and local enterprises demand quality, reliable and credible instrumentation, calibration and testing services. These demands have also driven the growth in accreditation and conformance assessment activities to attest the quality system and metrology capabilities of the providers.

On top of the many quality control and measurement labs in the companies, there are about 300 laboratories in Singapore accredited under the Singapore Accreditation Council Singapore Laboratory Accreditation Scheme (SAC-SINGLAS), and about 70 of them are calibration laboratories. The SAC's has required the traceability of measurement for these accredited laboratories to be link to NMIs with CIPM MRA.

NMC, as the national measurement institute of Singapore, often receive requests from users to clarify the CIPM MRA with regards to traceability of measurement, quality system and equivalence of measurements. The motivations for their requests are usually for their own quality control purpose, to meet regulatory or audit requirements, or for their customers.

Since 2012, NMC has received more than 250 of such requests and has issued letters to state NMC's participation in the CIPM MRA. Of these requests, 30 % were from local companies, 56% were from multi-national companies, and 14% were from overseas companies.

Among these companies, 22% were in the electronics and semiconductor sector, 15% were in aerospace sector, 14% were from biomedical sector, 13% were from calibration and testing sector, and 7% were from precision engineering sector.