



A technician working in a clean room at GlobalFoundries' semiconductor fabrication facility in Singapore. The semiconductor industry is a key contributor to the manufacturing landscape here, with large projects from companies in the sector among the \$11.8 billion in fixed asset investments the Republic attracted last year. PHOTO: BLOOMBERG

Manufacturing sectors are global leaders in digital transformation

Semiconductor, electronic and pharmaceutical manufacturers early adopters of advanced tech

Choo Yun Ting
Business Correspondent

Manufacturers in the semiconductor, electronic and pharmaceutical industries are at the forefront of digital transformation globally, with companies in these sectors being early adopters of advanced manufacturing concepts, technologies and applications.

This was among the key findings in the second edition of the Manufacturing Transformation Insights Report, which was launched by the Singapore Economic Development Board (EDB) and World Economic Forum (WEF) yesterday.

The report, which is the outcome of an 18-month partnership between EDB and WEF, is based on data from nearly 600 manufacturing companies in 30 countries that underwent the Smart Industry Readiness Index (SIRI) assessment.

The index was created by EDB in partnership with leading technology companies, consultancy firms and other experts in 2017, and is the world's first independent digital maturity assessment for manufacturing companies.

Mr Francisco Betti, head of the Shaping the Future of Advanced Manufacturing and Value Chains Platform at WEF, said it is not a surprise that semiconductor, electronic and pharmaceutical manufacturers are leaders in Industry 4.0 transformation efforts.



Workers in Racer Technology's manufacturing department. Pharmaceutical manufacturers are leaders in Industry 4.0 transformation efforts. ST FILE PHOTO

This is especially given the efforts and investments they have made in digital transformation to cope with the increased demand and disruptions the world has faced in recent years, he told The Straits Times.

The report highlighted that a high level of diversity exists across various manufacturing sectors, and more tailored approaches are required to better support industry transformation.

Another key finding was that manufacturers should put more emphasis on refreshing and broadening their strategies for digitalisation and workforce retraining.

"The future of manufacturing is not about technology, but it's about technology and people. Unless you are able to bring your people on board, it will be extremely hard to deploy new use cases and

enable a successful digital transformation strategy," said Mr Betti, who is also an executive committee member of WEF.

WEF managing director Jeremy Jurgens noted that the Global SIRI Initiative is one of the forum's fastest-growing initiatives, having scaled internationally over the last 18 months.

The first edition of the report, released in 2019, was based on data from 200 manufacturing companies in Singapore. Manufacturers in the semiconductor and pharmaceutical industries were found to be leaders in the adoption of Industry 4.0 initiatives in the Republic.

The semiconductor, electronic and pharmaceutical industries are key contributors to Singapore's overall manufacturing landscape.

Large manufacturing projects from semiconductor companies were among the \$11.8 billion in fixed asset investments that the Republic attracted last year.

EDB chairman Beh Swan Gin said the agency's partnership with WEF has established SIRI as an independent and international benchmark to accelerate the pace of transformation for the manufacturing sector around the world.

"The insights and real-life case studies... in this report will provide public- and private-sector stakeholders with the ability to develop tailored interventions and uncover new opportunities that digital transformation can offer," he said.

A spokesman for EDB said the insights from the report will support the manufacturing community here in several ways. They include helping manufacturers develop and strengthen their transformation strategies; bolstering the efforts of tech and advisory companies to catalyse digital transformation among manufacturers; and informing sectoral planning and industrial development efforts by governments and industry associations.

A non-governmental, not-for-profit organisation, International Centre for Industrial Transformation, was set up in May last year to support the international scaling-up of the SIRI initiative. The centre will work with public- and private-sector manufacturing-related organisations to catalyse and support industrial transformation across geographies and industries.

NEW OPPORTUNITIES

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MR BEH SWAN GIN, chairman of the Singapore Economic Development Board, on the findings of the second edition of the Manufacturing Transformation Insights Report.