SEAGATE TECHNOLOGY (THAILAND) LTD.

A global leader in data storage systems

Background

The electronics industry is a core element of the Thai manufacturing sector's financial success. In 2016, Thailand's export value in the electronics industry alone was worth US\$30.97 billion. Data storage units, in particular hard disk drives (HDDs), have been one of the biggest contributors to this revenue, with an export value of \$369.22 billion (US\$10.53 billion) in 2016, making Thailand the second largest producer and exporter of HDDs globally. Seagate is one of the largest global manufacturers of HDDs, and has been established in Thailand since 1988. Seagate currently has about 16,000 employees in Thailand. In 2016, the Seagate Thailand registered export sales of US\$3.25 billion.

Why Thailand

When asked why they chose Thailand for their manufacturing base, Mr. Jeff Nygaard, Senior Vice President of Global Operations at Seagate Technology stated "Seagate continues to invest in Thailand for three reasons - it has strong teams, both technical and operating, Asia is a high-growth market for data storage, and the cost structure for professionals, both engineers and technicians, is still good."

Vision for the Future

In 2015, Seagate announced it planned to invest an additional \$15.3 billion (US\$470 million) in Thailand over the following five years to expand capacity at its facility in Korat by 49 percent (which is already Seagate's largest hard drive facility), while adding about 2,500 jobs. Although solid state storage devices continue to evolve and improve in price and performance, HDDs continue to evolve in capacity and performance as well, which helps to keep their economic advantage over other media in place. The demand from cloud based data centers for ever increasing storage capacities continue to drive innovation in HDD technology, such as heat assisted

magnetic recording (HAMR), which Seagate is preparing to release commercially within the next two years. In addition to the big data centers, demand for storage is also being driven by multiple factors, such as the Internet-of-Things, enterprise storage, user-generated content, and personal media libraries. Seagate has collaborated closely with local universities in R&D activities. Since 2003, the company has launched engineering hubs with Khon Kaen University (KKU), Suranaree University of Technology (SUT), and King Mongkut Institute of Technology - Latkrabang (KMITL). Many graduates from these universities have been subsequently recruited by Seagate.

"Thailand is in a great location with good logistics to access other countries in Asia, especially China and India, as well as the rest of the world.""

Mr. Jeff Nygaard Senior Vice President, Global Operations of Seagate Technology

Supporting Policies from the Government

For decades, the government of Thailand has supported the growth and development of the electronics industry. Currently, they have many large infrastructure improvements under way which will enable the Kingdom to maintain its leadership position in the industry while enhancing its ability to flourish as a global center for electronics development. Included in the \$895.8 billion (US\$25.2 billion) action plan for 2017 are 36 major infrastructure projects covering rail, roadways, air transport and seaport expansions, which will further interconnect all regions of Thailand, as well as enhancing connections to neighboring countries. There are also several multilateral and bilateral free trade agreements in place to enable companies to easily do business across international borders, such as the ASEAN Free Trade Agreement (AFTA) and the Thailand - Australia Free Trade Agreement (TAFTA). The Thai government continues to work towards negotiating additional free trade agreements that will make the Kingdom even more attractive as a major destination for global multinational enterprises looking to capitalize on the country's memberships in these free trade partnerships.

Attractive BOI Incentives

The Thailand Board of Investment (BOI) offers a wide range of tax and non-tax incentives for projects that meet national development objectives.

Tax-based incentives include an exemption or reduction of import duties on machinery and raw materials, as well as corporate income tax exemptions of up to eight years. Non-tax incentives include permission to bring in expatriates, own land and take or remit foreign currency abroad.

Recognizing the importance of the electronics sector, tax incentives are granted to approved projects in numerous activities, including electronics design such as microelectronics design and embedded system design; electronic products and parts using advanced technology for example telecommunication equipment; electronic parts for medical devices/automotive/industrial works, hard disk drives, and solidstate drives; materials for microelectronics such as wafers and materials based on thin-film technology; and advanced technology electrical appliances, i.e. the Internet of Things. In addition, the government's cluster policy has encouraged companies with related activities to physically locate together by providing them additional tax incentives and other support, thus facilitating joint R&D activities, improving supply chain logistics, and creating opportunities for other cooperative ventures.

Recently, to encourage investment in knowledge based activities, the Board of Investment (BOI) established the Strategic Talent Center (STC) in order to provide the services of qualified and highly skilled human resources to the private sector. This service serves to identify available specialists or researchers in the fields of science and technology to further support the private sector in conducting R&D and innovation activities. It also aims to help qualifying specialists for companies who wish to bring in foreign experts when there are shortages of specialists in particular fields.

Additional information about specific activities relating to the electronics industry can be found by clicking <u>here</u> or contacting the BOI's Investment Promotion Division 4.