Logistics Industry in Singapore
The World Bank ranked Singapore as the No. 1 Logistics Hub amongst 155 countries globally in the 2012 Logistics Performance Index. Its strategic location in the heart of South-East Asia, the position of the port of Singapore as a hub in global trade, as well as the knowledge and expertise in international shipping and transportation, all contribute to this position.

In 2010, there were more than 7000 logistics companies in Singapore, employing over 180,000 people (which is around 9% of the total workforce), and the industry contributed 9% to Singapore's GDP. With a throughput of 29.37 million TEU's, Singapore was the second largest container port in 2011. Singapore's seaport is linked to 600 ports in 123 countries via 200 shipping lines. Besides, Singapore's Changi airport is served by over 4500 flights connecting to 200 cities in 60 countries, and ranked 10th worldwide in terms of cargo handled, with 2.09 million tons in 2011. Singapore has become the preferred logistics and supply chain management hub for leading players across industries such as aerospace, biomedical science, electronics and telecommunications. Today, 21 of the world's top 25 third-party logistics providers are based in Singapore. They include companies like Agility, DHL, FedEx, TNT, UPS, Nippon Express, NYK Logistics and Toll Logistics. And with an expansive base of leading global logistics players, world-class infrastructure and excellent global connectivity, Singapore is the preferred logistics and supply chain management hub for leading manufacturers across industries, which include Avaya, Diageo, Dell, Hewlett Packard, Infineon, LVMH, Novartis, ON Semiconductor, Panasonic, and Siemens Medical Instruments.

Singapore has also been recognized to have highly efficient customs and business-friendly import/export procedures providing companies greater efficiencies in obtaining clearance/documentation/permits for their goods. Efficiencies in information management are evidenced through platforms such as TradeNet, an electronic national single window that provides a one-stop platform simplifying all documentation, saving time, costs and improving efficiency. TradeNet allows traders and freight forwarders to apply for and receive trade permits from 35 controlling agencies for the purpose of import, export and transshipment of goods.

Government's position towards the logistics industry
In its last strategic economic plan, the Singapore government expressed the aim grow its GDP by 3 to 5 percent per year for the coming 5 years. Some of the constraints on reaching these goals include the fact that the country has practically reached full employment and limits have been set on the foreign worker population, and Singapore has also practically reached the limits of sea-front land and sea space. Therefore, in order to continue to grow at relatively high rates, it is necessary to reorganize the way human and physical resources are managed, meaning that there is a strong focus on developing a knowledge-intensive economy, whereby upgrading of skills, innovation and productivity are key focus areas.

Singapore's position as a leading logistics and transportation hub is seen as a critical enabler to its successes in manufacturing, trading and other services sectors. Its logistics industry is well poised to capture the growth opportunities in Asia, especially South East Asia. The outlook for the industry globally, and in particular for the Asia Pacific region, remains strong, driven by the growing logistics outsourcing market. To strengthen its position as distinctive global city and leading global-Asia financial and business hub, Singapore plans to enhance its connectivity to harness the new patterns of trade flows, and to seamlessly integrate physical trade with related services such as trade finance, risk management, supply chain management, certification and distribution. It also aims to strengthen sophisticated capabilities like price discovery and central clearing.

Earlier this year, the Singapore Economic Development Board (EDB) and SPRING Singapore in consultation with companies, partner agencies and industry associations launched the “Logistics and Transportation Productivity Roadmap”. This $42-million roadmap points out that the logistics firms should raise productivity by deepening their supply chain management expertise, and focuses on two key areas and would increase the value-added (VA) per worker in select segments of the logistics and transportation industry by about 30% to S$130,000 by 2015. These areas are: 1) Enhancing Supply
Chain Management Expertise and 2) Enhancing Innovation and Efficiency at Enterprise and Industry Levels.

As a result, programs and initiatives have been set up by EDB, Spring and industry associations such as the Singapore Logistics Association (SLA), and the Container Depot Association, such as a productivity toolkit, an industry branding campaign, and different training schemes. Besides, EDB focuses on attracting more leading SCM activities from industry players to facilitate knowledge transfer of global best practices and know-how to Singapore. And to enhance innovation and improve efficiency, a Centre of Innovation for Supply Chain Management (COI-SCM), will be officially launched later this year.

Events in Singapore for the Logistics and Supply chain Industry

- Logicem Asia, June 2012
- Eye for Transport Hi-tech and Electronics Supply Chain Summit, September 18 – 19, 2012
- Reverse Logistics Association, Conference and Expo, September 24 – 26, 2012
- SCM Logistics World, October 16 – 18, 2012
- TAPA Asia Supply Chain Security Conference, November 7 – 9, 2012
  [http://sclasiasummit.com/?mc=mp](http://sclasiasummit.com/?mc=mp)
- LTA-UITP Singapore International transport Congress and Exhibition (SITCE 2013), October 7 – 10, 2013,

1) What are the knowledge institutes on logistics and supply chain management and what are their research agendas?

*The Logistics Institute – Asia Pacific.* Asia's leading think tank jointly set up by National University of Singapore (NUS) and Georgia Institute of technology is based in Singapore and has established close links with the industry. The institute is spearheading research in logistics and supply chain management education by leveraging on Singapore’s unique position, which offers both Eastern and Western industry perspectives. The research program will focus on the field of logistics and supply chain in general, and in particular on the following areas:

- Air Cargo & Air Transport (includes design-and-layout of airport)
- Sea Transportation Issues - Sea Cargo
- Supply Chain Modeling and Optimization
- Revenue Management for Logistics
- IT infrastructure and Decision Support Systems for Logistics
- Warehousing
- Performance measures and measurements for Logistics
- Transportation for Logistics
- Security for Logistics
- Quality in Logistics
- E-Commerce
- Chemical Logistics

*The Maritime Institute at NTU (MI@NTU)* is a focal point for maritime R&D and education, including executive training. It will champion maritime science and technology development, leveraging NTU’s established interdisciplinary strengths in this broad field. As one of the institute’s goals is to support the
needs of industry and government, it will work closely with the local maritime sector and national agencies. Research agenda in the field of Maritime Logistics and Operations:

- Decision support systems for port and ship operations
- Capability optimization in maritime operations
- Visualization for maritime operations
- Information technology and operations management

The Maritime Research Centre at NTU is a national and regional research centre with major research activities in hydrodynamics, marine and offshore engineering, shipping business and logistics. It is a vibrant hub of activity with marine and offshore organizations and the maritime community, and hosts courses, R&D programs, and projects, as well as seminars and conferences on relevant subject areas. The Institute for Infocomm Research (I²R) is a member of the Agency for Science, Technology and Research (A*STAR) family, and performs R&D in information, communications and media (ICM) technologies to develop holistic solutions across the ICM value chain. Research capabilities are in information technology, wireless and optical communication networks, interactive and digital media, signal processing and computing. Research programs related to logistics and supply chain management include: the Intelligent Transport Systems or ITS program.

The Planning and Operations Management (POM) group within the Singapore Institute of Manufacturing Technology (SIMTech) focuses on planning & decision support and virtual enterprise technologies to provide industries with the effective means to collaboratively manage their business activities throughout the supply chain and also to seamlessly integrate manufacturing operations with suppliers and customers in the supply chains. These technologies leverage on the Internet and communication technologies, combined with operations research to create solutions that are targeted at today's fast and dynamic business environment.

The Singapore Maritime Institute (SMI) is a joint effort by MPA, the Agency for Science, Technology and Research (A*STAR) and the Economic Development Board (EDB) in partnership with local Institutes of Higher Learning (IHLs) and aims to develop strategies and programs related to the academic, policy and R&D aspects of the maritime industry. Key focus areas of the SMI include sectors such as shipping, port and maritime services, as well as offshore and marine engineering.

2) What are particular public private initiatives in innovation in logistics and supply chain management?

TradeXchange is an IT project initiated by Singapore Customs, Economic Development Board and Infocomm Development Authority of Singapore, and is the first IT project in Singapore to be implemented as a Public Private Partnership (PPP), together with Crimson Logic. TradeXchange provides a neutral and secure platform that enables seamless exchange of information within the supply chain and logistics community. This multi-party collaboration platform provides greater operational efficiencies and clearer visibility to businesses across the supply chain.

There are other innovation projects in the industry, such as Infocomm@airport and Infocomm@seaport, however, these are not set up as PPP projects, but are government driven.

3) Are there particular challenges in bringing innovation to market, in putting innovative concepts in practice?

The Singapore government is well organized, has clear goals and ambitions, and makes funds available to reach those goals. Also in the field of logistics and supply chain, the government has a clear ambition to upgrade the expertise and added value of the industry in Singapore, in order to maintain its strong position in as a hub for global and regional trade.

One of the challenges is that Singapore is a relatively small country, with a relatively small number of homegrown MNC’s that have the scale to be innovation drivers in logistics and supply chain
management. Therefore a lot of the innovations are driven by the government institutes, and are therefore relatively easy to bring to market. And much of the research done by The Logistics Institute – Asia Pacific, is done in co-operation with foreign MNC's.

4) Are there development plans in infrastructure, logistics, port management, supply chain training, where Dutch knowledge and knowhow could be deployed, developed or enhanced e.g. with specific planning or training challenges?

The Next Generation Container Port (NGCP) Challenge aims to raise awareness of the research and development needs and foster innovation within the maritime industry. The Challenge also seeks to encourage greater partnerships between industry and academia to invent new concepts and ideas for the maritime sector. This competition will challenge international participants to think beyond existing conventions and submit radical new proposals to plan, design and operate a future container port. The NL Embassy has already shared the information about this challenge with the relevant players in the Netherlands.

Many of the research topics within the Logistics Institute overlap with the topics within the Top sector logistics, and the institute is very keen to co-operate more with Dutch knowledge institutes and universities on some of those topics.

Besides, in order to raise productivity and enhance efficiency in the industry, Spring Singapore is organizing a logistics mission for local logistics companies to the Netherlands, where these companies can learn from initiatives in this field in the Netherlands.