



Seminar 'Robots to Strengthen our Workforce'

News update | 21 November 2017 | Astrid Seegers & Dana van der Zee

On the 31st of October, the Holland Innovation Network of the Netherlands Embassy in Singapore organised the seminar 'Robots to Strengthen our Workforce'. During the seminar, three Singaporean government agencies, National Environment Agency, Civil Aviation Authority Singapore, Building and Construction Authority and the Centre for Healthcare Assistive & Robotics Technology presented their technology needs and roadmaps in the field of automation and robotics. The goal of the event was to identify opportunities for collaboration between Singaporean and Dutch companies and knowledge institutes.

National Robotics Programme

As a Smart Nation, Singapore is looking for technologies to improve productivity, sustainability and liveability. Robotic solutions are identified to be the answer to societal challenges, such as Singapore's ageing population and a labour crunch. In 2015, the Singaporean government launched a 450 million-Singapore dollar (297 million Euros) initiative, called National Robotics Programme (NRP).

The Economic Development Board (EDB) and SPRING Singapore coordinate the development and adoption of robotics in the private sector. The National Robotics Research and Development Programme Office (NR2PO) is responsible for the development and adoption of robotic solutions by the public sector and the development of research capabilities.

During the seminar 'Robots to Strengthen our Workforce', three Singaporean government agencies, National Environment Agency, Civil Aviation Authority Singapore, Building and Construction Authority and the Centre for Healthcare Assistive & Robotics Technology presented their roadmaps and technology needs in the field of robotics during a roundtable discussion.

Healthcare

One of the roundtables was hosted by the Centre for Healthcare Assistive & Robotics Technology (CHART). CHART is a platform that enables healthcare professionals to work closely with industry, academia and research institutions to co-develop and testbed impactful healthcare solutions. CHART is looking for solutions to improve productivity in healthcare such as optimising healthcare workforce with automation and using robotic technologies to deliver high quality treatment. Furthermore, CHART supports independent living and care at home initiatives.

Cleaning and Waste Management

The National Environment Agency (NEA) hosted a table on robotic solutions in the field of cleaning and waste management. NEA is responsible for improving and sustaining a clean and green environment in Singapore. Cleaning works are very labour intensive and NEA is looking for ways to robotise at least parts of the daily tasks within the three subsectors: conservatory (cleaning of streets), indoor (e.g. cleaning in shopping malls) and food and beverages establishments (F&B). Within the section of waste collection, NEA is looking into Artificial Intelligence (AI) and deep learning to robotise waste segments like sorting of plastics and paper.

Building and Construction

The Building and Construction Authority (BCA) in Singapore is looking into opportunities for robotics in the fabrication of materials and inspection and maintenance of buildings. BCA is an agency under the Ministry of National Development, championing the development of an excellent built environment for Singapore. BCA is involved in the development of Integrated Construction and Prefabrication Hubs (ICPHs). ICPHs are facilities that can produce, precast and prefab components in a factory setting. In line with this, BCA supports Design for Manufacturing and Assembly (DfMA) technologies which involve an integration of prefab technologies into building's design. BCA intends to enhance DfMA technologies and ICPH capabilities with advanced robotic solutions to improve the efficiency in the production and create a better quality automation.

Unmanned Aircraft Systems

The Civil Aviation Authority of Singapore (CAAS) hosted a roundtable discussion on the use of Unmanned Aircraft Systems (UAS). CAAS' mission is to grow a safe, vibrant air hub and civil aviation system, making a key contribution to Singapore's success. The use of UAS will support Singapore's Smart Nation Vision to enable beneficial and innovative uses in Singapore. During the roundtable session, the usage of drones in densely populated areas and the establishment of areas for drone testing were discussed. CAAS showed a strong interest for further development of system capabilities in support of innovative UAS user cases in collaboration with industry partners. All participants agreed that international and regional platforms will play an important part in facilitating inter-operability across all countries.



Plenary session on the National Robotics Programme by EDB and NR2PO and introduction of the Dutch robotic landscape by Holland Robotics

Opportunities for Collaboration

The National Robotics Programme offers support to develop robotic solutions in Singapore. With the upcoming calls for proposal in the fields of healthcare, cleaning and waste management, building and construction, and unmanned aircraft systems, specific technology demands are addressed by the governmental agencies. The Singaporean government is looking for partners from both government and industries to address the challenges Singapore is facing. The seminar increased the awareness of ongoing projects in robotics in the Netherlands, highlighted commonalities in technology needs and offered a first introduction for possible future partnerships. There are also opportunities for projects where governmental agencies in Singapore and the Netherlands identify similarities in their technology needs and coordinate joint projects.

Holland Innovation Network in Singapore

More information? Contact the Holland Innovation Network at the Embassy of the Kingdom of the Netherlands in Singapore via sin-ia@minbuza.nl.

Sources

- <https://www.caas.gov.sg/public-passengers/unmanned-aircraft-systems>
- <https://www.caas.gov.sg/UAS-CFP>
- https://www.moh.gov.sg/content/moh_web/home/pressRoom/pressRoomItemRelease/2017/healthcare-industry-transformation-map-for-a-future-ready-health.html
- <https://www.mti.gov.sg/MTIInsights/SiteAssets/Pages/ITM/Images/Fact%20sheet%20on%20Industry%20Transformation%20Maps%20-%20revised%20as%20of%2031%20Mar%202017.pdf>
- <https://www.theguardian.com/technology/2017/oct/18/world-first-3d-printed-bridge-cyclists-netherlands>
- <https://www.bca.gov.sg/citm/>
- <https://www.mti.gov.sg/MTIInsights/SiteAssets/Pages/ITM/Images/Annex%20A%20-%20Factsheet%20on%20the%20Air%20Transport%20ITM.pdf>