



MEDIA RELEASE

STRONGER BUSINESSES AND BETTER JOBS FOR THE ENVIRONMENTAL SERVICES INDUSTRY

About 30,000 individuals to benefit from higher value-added jobs through upskilling and technology adoption by companies

Singapore, 11 December 2017 – Minister for the Environment and Water Resources, Mr Masagos Zulkifli, launched the Environmental Services Industry Transformation Map (ES ITM) today, unveiling the strategies and initiatives to ensure a vibrant, sustainable and professional industry that will provide services and solutions to help achieve our Zero Waste vision and a clean and liveable Singapore.

2 More than 78,000 professionals and 1,700 companies in the cleaning and waste management sectors keep Singapore clean and liveable every day. As demand for environmental services continues to rise, increasing manpower to meet the service demand is not sustainable given our manpower constraints. Transforming the industry is thus necessary to improve productivity, promote growth and create better jobs for these sectors.

3 The ES ITM is one of the four ITMs under the Built Environment cluster, which also includes the construction, real estate and security sectors. The National Environment Agency

(NEA) has worked with various Government agencies, industry, unions and other stakeholders to develop 33 initiatives across 12 strategies to transform the ES industry. These strategies and initiatives are aimed at: (i) driving innovation and wider technology adoption; (ii) upskilling the workforce to take on better jobs; (iii) improving productivity through better procurement practices, and (iv) capturing value overseas. With the implementation of these strategies and initiatives, by 2025, about 30,000 individuals in the environmental services industry can benefit from higher value-added jobs through upskilling and technology adoption by companies. For the full list of strategies and initiatives, refer to **Annex A**.

4 Speaking at the ITM launch, Minister for the Environment and Water Resources, Mr Masagos Zulkifli said, “In sustaining a clean and liveable environment, Singapore is also working towards the vision of being a Zero Waste nation – where waste is re-defined and innovative technologies would be deployed in waste reduction, separation, recycling and treatment to enable us to close the waste loop. The ES ITM will provide many opportunities for technology collaboration and adaptation across the cleaning and waste management sectors. Jobs will be enhanced as the future of delivering services via system-level infrastructure, such as Pneumatic Waste Conveyance Systems and autonomous machines, calls for new skillsets. Service buyers will also need to play their part by adopting outcomebased contracting which enables wider technology adoption to improve productivity in the cleaning sector. The shift in industry procurement practices will support more manpowerefficient work processes.”

- 5 As part of the launch event, NEA signed Letters of Intent (LOI) with seven INCUBATE partners. **I**nnovating and **C**urating **B**etter **A**utomation and **T**echnologies for **E**nvironmental Services (INCUBATE) embodies the partnership between the technology providers and service providers, premises owners, and the Government, to collectively innovate and curate better technologies, solutions and innovations for the environmental services industry. For more information on INCUBATE, refer to **Annex B**.
- 6 The Skills Framework for Environmental Services was also launched today. It was jointly developed by SkillsFuture Singapore (SSG), Workforce Singapore (WSG) and NEA, employers, industry associations, unions, and education and training institutions, in support of the Jobs and Skills pillar in the ES ITM. The framework covers five career tracks involving 24 key job roles. The five tracks are Cleaning Operations, Waste Collection, Material Recovery, Treatment and Disposal, and Environment, Health and Safety. The Skills Framework provides key information about the industry and identifies 46 existing and emerging technical skills and competencies and 18 generic skills and competencies. It is a reference document for individuals who wish to upgrade their skills and prepare themselves for better jobs in the Environmental Services industry, for employers to recognise the necessary skills and train their employees for career development and skills upgrading, and for education and training institutions to design programmes to address the sector needs in response to emerging skills and competencies such as Data and Statistical Analytics, Automation Research and Implementation and Robotics and Automation Application. **Annex C** contains more information on the Skills Framework.
- 7 As service buyers play a key role in the transformation journey, the ES ITM will also push for wider adoption of outcome-based contracting to improve productivity in the cleaning sector. NEA has worked with the Ministry of Finance and other industry stakeholders to develop a Guide on Specifications for Outcome-based Cleaning Contract. Training workshops and learning journeys will be rolled out to service buyers and providers to help them make the shift in industry procurement practices. For more information on the Guide, refer to **Annex D**.
- 8 The transformation efforts of the ES ITM will ensure that the industry remains competitive and attractive. Businesses, including service providers, technology providers and service buyers, can look forward to opportunities for technology collaboration and adaptation, and optimise allocation of resources through the use of innovative solutions and data analytics. The workforce can also look forward to better jobs, as the use of technology and automation will help to reduce routine and laborious tasks, allowing them to focus on other areas of work such as operating machinery or using data analytics to enable better service delivery. One of our INCUBATE partners, the Changi Airport Group (CAG), has been using technology, automation and data analytics in their cleaning and waste management operations. Refer to **Annex E** for a list of facilities at Changi Airport Terminal 3.
- 9 To encourage greater use of technology and automation to increase the overall productivity, funding schemes that facilitate the development and deployment of innovative

and smart technologies are available. The Government will also be introducing various funding schemes that are open to researchers and industry players to encourage greater use of technology and automation to improve productivity. For more information on the support for such efforts, refer to **Annex F**.

10 NEA will also continue to work with key association partners, such as the Waste Management & Recycling Association of Singapore (WMRAS) and the Environmental Management Association of Singapore (EMAS), to encourage industry-level collaboration and support the transformation of the environmental services sector. At the same time, NEA will work with SPRING Singapore and IE Singapore to enhance enterprise capabilities, and drive the adoption of internationally-benchmarked standards, to help more companies capture overseas market opportunities.

11 Members of the public can play their part to care for the environment by practising the 3Rs (reduce, reuse and recycle), binning their litter and cleaning up after themselves. With the collective effort of all stakeholders and the general public, we can transform the environmental services industry into a vibrant, sustainable and professional one, providing services and solutions to help achieve our Zero Waste vision and a clean and liveable Singapore.

-End-

For media queries, please contact:

Hazel Wee (Ms)

Corporate Communications
National Environment Agency
Tel: 6731 9737 / 9877 3074
Email: hazel_wee@nea.gov.sg

Jason Evans Tan (Mr)

Corporate Communications
National Environment Agency
Tel: 6731 9099 / 9844 6294
Email: Jason_Evans_TAN@nea.gov.sg

About National Environment Agency

Formed on 1 July 2002, the National Environment Agency (NEA) is the leading public organisation responsible for improving and sustaining a clean and green environment in Singapore. The NEA develops and spearheads environmental initiatives and programmes through its partnership with the People, Public and Private sectors. It is committed to motivating every individual to take up environmental ownership and to care for the environment as a way of life.

By protecting Singapore's environment from pollution, maintaining a high level of public health and providing timely meteorological information, the NEA endeavours to ensure sustainable development and a quality living environment for present and future generations.