

Jobs Transformation Map for Waste Management and Cleaning Sectors

To support employers in their job transformation efforts, Workforce Singapore (WSG) has worked with NEA and the industry to develop the Jobs Transformation Map (JTM) for the waste management and cleaning sectors, to provide detailed insights on the impact of technology and automation on the industry and workforce. *(Refer to infographics on page 8 for more information.)*

- It identified the key technologies that are driving change, the impact on individual job roles, as well as pathways and recommendations for employers to transform jobs and for workers to acquire requisite skills, as existing roles evolve, and new job roles emerge.
- The JTM will serve as a useful compass for employers, especially for small and medium-sized enterprises (SMEs), Trade Associations and workers to prepare themselves for the future of work as technology becomes more pervasive.
- The JTM for waste management and cleaning sectors analysed information on manpower profile, skills and training, career and wage progression, and human resource practices of the two sectors, and developed recommendations to accelerate job transformation.
- With this, NEA developed broad strategies to future-proof the workforce, namely developing the local talent pipeline to take on quality jobs, and job redesign. These have been incorporated into the Jobs and Skills strategies of the Environmental Services Industry Transformation Map (ES ITM) 2025.

KEY TRENDS IMPACTING THE ENVIRONMENTAL SERVICES INDUSTRY & WORKFORCE



Accelerated technology adoption

- Improved operational efficiency



Increase in service demand

- To meet new business needs and higher customer expectations
- More interest in sustainability and stricter hygiene standards



Increased competition for talents

- To cultivate an innovative and manpower-lean workforce

Jobs Transformation Map for Environmental Services Industry



IMPACTED JOB ROLES IN THE ENVIRONMENTAL SERVICES INDUSTRY

General Cleaner and Waste Collection Crew



Key job scope

- Increased use of digital tools, robotics and automation
- Increased communication with customer, including troubleshooting operational issues

Skill sets required

- Communication
- Problem Solving
- Robotics and Automation
- Internet of Things

Waste Recycling Sorter



Key job scope

- Increased use of digital tools, robotics and automation

Skill sets required

- Communication
- Problem Solving
- Robotics and Automation
- Internet of Things

Jobs Transformation Map for Environmental Services Industry

EMERGING JOB ROLES IN THE ENVIRONMENTAL SERVICES INDUSTRY

Integrated Facilities Management Specialist



Key job scope

- Responsible for managing environmental services contracts, projects, and delivering high-quality services in the areas of Cleaning, Waste Management, and Pest Management

Skill sets required

- Contract Management
- Facilities Management
- Stakeholder Management

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EMERGING JOB ROLES IN THE ENVIRONMENTAL SERVICES INDUSTRY

Data Analyst



Key job scope

- Analyse and consolidate data and create data sets to support sound decision making
- Understand drivers, impacts on key influences on business dynamics and productivity
- Translate data into actionable insights for the stakeholders

Skill sets required

- Data Cleaning and Preparation
- Data Analysis and Exploration
- Statistical Knowledge
- Creating Data Visualisations

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EMERGING JOB ROLES IN THE ENVIRONMENTAL SERVICES INDUSTRY

Sustainability Specialist



Key job scope

- Monitoring and evaluating the effectiveness of sustainability programs, and when needed, recommending changes to close strategic gaps
- Assist with the creation and development of an organisation's short- and long-term sustainability strategies

Skill sets required

- Sustainability Reporting
- Environmental Sustainability Management
- Environmental Management Systems

Jobs Transformation Map for Environmental Services Industry

FUTURE-PROOFING THE ENVIRONMENTAL SERVICES (ES) WORKFORCE



Develop Local Talent Pipeline to Take on Quality Jobs

- NEA Industry Scholarship



Reskilling of In-employment Staff and Facilitating Hiring of Mid-Career Talent Pool through Career Conversion Programmes (CCP)

- CCP for Environmental Services Specialists
- CCP for Sustainability Professionals
- CCP for Professional Executives



Job Redesign Initiatives for the ES Industry

- Support for Job Redesign under Productivity Solutions Grant (PSG-JR) – ES Job Redesign Consultancy Package
- 4D Job Redesign Framework – Redesigning Jobs for the ES Industry Masterclass and digital self-help guide

Jobs Transformation Map for Environmental Services Industry