ANNEX A

FACTSHEET ON SKILLS FRAMEWORK FOR PUBLIC TRANSPORT

About Skills Framework for Public Transport

1. The Skills Framework for Public Transport is an integral component of the Land Transport Industry Transformation Map (LT ITM). It supports the manpower strategies by identifying pivotal jobs in the public transport sector, outlining possible career pathways for talent attraction and retention, as well as articulating existing and emerging skills to support the growth and transformation of the sector.

2. The Skills Framework for Public Transport is jointly developed by SkillsFuture Singapore (SSG), Workforce Singapore (WSG), and the Land Transport Authority (LTA), together with the involvement of Public Transport Operators (PTOs), education and training providers, and the National Transport Workers' Union (NTWU). It provides information on the sector, career pathways, occupations/job roles, skills and competencies and training programmes.

Who is it for?

3. The target groups for Skills Framework for Public Transport are as follows:

- **Individuals** who wish to join or progress within the public transport sector will be able to assess their career interest, identify relevant training programmes to upgrade their skills, and prepare for their desired jobs;

- **Employers** will be able to recognise these skills and invest in training their employees for career development and skills upgrading;

- **Education and training providers** can gain insights on sector trends, existing and emerging skills that are in demand, and design programmes to address the sector needs accordingly; and

- **Government, unions and professional bodies** will be able to analyse skills gaps and design appropriate SkillsFuture initiatives to upgrade the manpower capability and professionalise the sector.

Key components of the Skills Framework

4. The Skills Framework for Public Transport contains information on the sector, career pathways, occupations/job roles, skills and competencies, and training programmes*. The key components include:

- Sector information – provides information on key statistics, trends and workforce profiles in the sector;

- Career pathways – depicts the pathways for vertical and lateral progression for advancement and growth. Two (2) sub-sectors, namely the (i) Bus and (ii) Rail sub-sectors, 4 tracks, and 15 sub-tracks covering 87 job roles have been identified:

- Bus Sub-sector
  - Bus Operations
    1. Bus Service Route Operations
    2. Bus Interchange Management
    3. Bus Depot Management
    4. Bus Operations Control Management
  - Bus Fleet Engineering
    5. Bus Workshop
    6. Bus Engineering

- Rail Sub-sector
  - Rail Engineering
    7. Rolling Stock
    8. Engineering Train
    9. Permanent Way and Civil Structure
    10. Power
    11. Mechanical and Electrical
    12. Signal and Communications
    13. Automatic Fare Collection
  - Rail Operations
    14. Rail Operations Control Management
    15. Station and Train Management

- Occupations and job roles – covers a total of 114 existing and emerging technical skills and competencies, 18 generic skills and competencies, and their respective descriptions. Some of the emerging skill areas identified include bus and rail asset management, cyber security, data analytics, digitisation, predictive maintenance, robotics and automation; and

- Training programmes* for skills upgrading and mastery – provides information on training programmes, which will help aspiring individuals and in-service employees acquire skills necessary for various jobs.

**The training programmes for the Skills Framework for Public Transport will be made available at www.skillsfuture.sg/skills-framework/public-transport*

SKILLS FRAMEWORK FOR PUBLIC TRANSPORT: DESCRIPTION OF TRACKS/SUB-TRACKS

Bus Operations The Bus Operations track focuses on ensuring the smooth running of bus services and the efficient management of operations in the bus interchanges, bus depots and the Bus Operations and Control Centre.		
1.	**Bus Service Route Operations**	The Bus Service Route Operations functional track involves the provision of public bus services on predetermined service routes and timed schedules. Bus Captains operate the service routes to provide safe, comfortable, and reliable public bus services to commuters.
2.	**Bus Interchange Management**	The Bus Interchange Management functional track involves the management and efficient operation of the bus interchange and bus services, ensuring timely departure of bus services and providing customer service to commuters.
3.	**Bus Depot Management**	The Bus Depot Management functional track involves the smooth operation of the bus depot and its premises, including bus service dispatch, garaging, and safe movement of buses in the depot.
4.	**Bus Operations Control Management**	The Bus Operations Control Management functional track involves regulating of daily bus services, monitoring real-time bus operations and coordinating with bus interchanges and depots to ensure bus service reliability.

Bus Fleet Engineering The Bus Fleet Engineering track focuses on the management and maintenance of bus fleet, and the operations of the bus maintenance workshop and equipment.		
5.	**Bus Workshop**	The Bus Workshop functional track involves the maintenance of the bus fleet including the automotive components such as the electrical and electronics systems, engine, as well as the maintenance and repair regime, bus workshop operations, and on-the-road recovery of buses.
6.	**Bus Engineering**	The Bus Engineering functional track involves the maintenance management of the bus fleet and in-depth analysis of fleet-wide engineering data to enhance the serviceability and reliability of the bus fleet.

Rail Engineering The Rail Engineering track involves the maintenance of the rail assets and upholding maintenance standards to provide safe and reliable rail services for commuters. There are seven Rail Engineering functional tracks in the Skills Framework for Public Transport		
7.	**Rolling Stock**	The Rolling Stock functional track involves the maintenance of train cars, its sub-systems and components, and the engineering works to monitor, analyse and improve the reliability of the trains.
8.	**Engineering Train**	The Engineering Train functional track involves the deployment of specialised railway vehicles to perform measurement and alignment of rail tracks, profiling of rails, inspection of viaducts, cleaning of tunnels, and the maintenance of specialised railway vehicles.
9.	**Permanent Way and Civil Structure**	The Permanent Way and Civil Structure functional track involves the inspection, repair and maintenance of rail tracks, tunnels, viaducts, buildings within the railway network and reserves, and the engineering work to monitor, analyse and improve the reliability of the track work and infrastructure.
10.	**Power**	The Power functional track involves the maintenance of high voltage and low voltage systems that power the movement of trains and operations of the rail network, and the engineering work to monitor, analyse and improve the reliability of the power system.
11.	**Mechanical and Electrical**	The Mechanical and Electrical functional track involves the maintenance of mechanical and electrical systems within the rail network, such as lifts, escalators, station air-conditioning and ventilation systems, fire protection systems, and engineering work to monitor, analyse and improve the reliability of Mechanical and Electrical systems.
12.	**Signal and Communications**	The Signal and Communications functional track involves the maintenance systems that regulates and controls the safe movement and frequency of trains, transmits voice, data and video required for operations, and engineering work to monitor, analyse and improve the reliability of the these systems.
13.	**Automatic Fare Collection (AFC)**	The AFC functional track involve the maintenance, testing and configuration of AFC systems such as train ticket sales devices, gantry gates, and AFC auxiliary systems.

Rail Operations The Rail Operations track involves the daily operations of the rail services and network.		
14.	**Rail Operations Control Management**	The Rail Operations Control Management functional track involves regulating daily train services, coordinating real-time rail operations, managing and responding to incidents, and providing train service information to commuters.
15.	**Station and Train Operations**	The Station and Train Operations functional track involves the daily management and efficient operation of train stations and train services. These include train driving, passenger service, operating station equipment, crowd control, and ensuring the safety of commuters.