

**SKILLS FRAMEWORK FOR PUBLIC TRANSPORT
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE**

TSC Category	Rail Operations					
TSC	Rail Operations Control Management					
TSC Description	Manage rail operations and control to achieve and enhance rail service continuity and reliability					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		PTP-ROP-2002-1.1	PTP-ROP-3002-1.1	PTP-ROP-4002-1.1	PTP-ROP-5002-1.1	PTP-ROP-6002-1.1
		Disseminate real-time train service information and broadcast service announcements	Regulate train service and operations to meet rail service requirements	Manage train service performance to enhance rail service standards and continuity	Manage the overall Operations and Control Centre (OCC) operations to achieve and enhance rail operations and service continuity	Direct changes in policies and organisational procedures to optimise Operations and Control Centre (OCC) work processes and activities
Knowledge		<ul style="list-style-type: none"> • Operation Control Centre (OCC) Standard Operating Procedures (SOPs) • Train service schedules • Types, functions and operation procedures of Integrated Supervisory Control Systems (ISCS) • Organisational operational procedures for handling degraded services and operations • Communication procedures and methods of service information dissemination • Reporting procedures for OCC systems and equipment defects • SOPs for OCC premises access control • Rapid Transit System (RTS) Act 	<ul style="list-style-type: none"> • Regulatory and organisational requirement • Operation Control Centre (OCC) Standard Operating Procedures (SOPs) for train service standards • Communication procedures and channels with internal and external stakeholders • Performance and safety standards of train services • Organisational safety procedures • Functions and operating procedures of Integrated Supervisory Control Systems (ISCS) • Features, functions and configuration of train timetable scheduling systems • Organisational SOPs for controlling (manual override and/or train operator control) driverless train movement in the mainline and within the depot 	<ul style="list-style-type: none"> • Regulatory and organisational requirement for train service standards • Rail service reliability framework • Functions and operating procedures of Integrated Supervisory Control Systems (ISCS) and Generic Work Stations (GWS) • Operation Control Centre (OCC) Standard Operating Procedures (SOPs) • Communication procedures and channels with train, station staff and external agencies • Techniques and tools to evaluate variances in train services performance indicators • Techniques and tools to evaluate variances in performance and safety of train services • Techniques and tools to collate train service and operational information from different sources 	<ul style="list-style-type: none"> • Regulatory and organisational requirement for train service standards • Rail service reliability framework • OCC Standard Operating Procedures (SOPs) • Methods to develop organisational performance standards • Key Performance Indicators (KPIs) for rail OCC • Methodologies of continuous quality improvement • Objectives and methods of operations audits and reviews 	<ul style="list-style-type: none"> • Strategies for train service operations and control excellence • Industry best practices in OCC work processes and activities • Rail service reliability strategies • Key Performance Indicators (KPIs) for rail operations and control • Industry development impacting the conduct of rail operations and control operations

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			<ul style="list-style-type: none"> • Types of trains and its operational capabilities and limitations • Principles and types of rail signalling • Methods for train detection, train protection and train routing • Types of train deployment and service documentation requirements • Rapid Transit System (RTS) Act 	<ul style="list-style-type: none"> • Types of reports and documentation requirement for OCC • Methods to develop organisational operating procedures • Objectives and methods of operations audits 		
Abilities		<ul style="list-style-type: none"> • Interpret real-time train operation information from ISCS monitoring systems • Coordinate with train and station staff to handle rail incidents and/or service disruptions • Disseminate real-time train service information through public announcement systems and displays on trains and/or at stations • Select appropriate pre-programmed public announcement messages and/or service information according to service requirement • Broadcast ad-hoc service announcement through public announcement systems and displays on trains and/or at stations • Provide administrative and operational support for the day-to-day OCC operations • Report OCC systems and equipment faults and defects 	<ul style="list-style-type: none"> • Operate and monitor ISCS and train control systems • Interpret real-time train operation information from ISCS to regulate train services in accordance to service schedules and standards in compliance with regulatory requirements • Control train movements on mainline tracks and/or within train depot • Carry out organisational safety procedures to ensure safety in mainline • Perform the control of signalling system operations in mainline • Handle degraded train services and operations due to technical faults or rail incidents • Support coordination of rail incidents management • Document train deployment activities • Analyse train deployment activities 	<ul style="list-style-type: none"> • Supervise and direct service control operations and performance within the operation and control environment • Monitor operational control activities via Generic Work Station (GWS) • Facilitate the communication of deviation in service performance to the organisation • Evaluate variances in train services performance indicators • Evaluate reports on performance and safety of train services to improve train service regulation approach • Synthesise information from charts, drawings, maps, schedules, real-time positional information and historical information to aid achievement of quality service standards • Develop train service and performance reports 	<ul style="list-style-type: none"> • Develop and implement OCC workflow procedures to improve operational efficiency and rail service enhancement • Devise organisational performance standards by analysing performance data for train services • Drive continuous quality improvement initiatives to achieve quality service standards • Develop service enhancement plans • Review operations and service audit outcomes 	<ul style="list-style-type: none"> • Formulate train service operations and control strategies • Guide OCC operations to meet service excellence goals • Anticipate future requirements of OCC operations • Appraise the performance standards of train services operations and control • Endorse KPIs devised for rail operations and control • Synergise OCC operations procedures across the rail network under the organisation's purview

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		<ul style="list-style-type: none"> • Report abnormalities of OCC incidents • Support access control of internal and external stakeholders and/or service providers to restricted access areas of the OCC 	<ul style="list-style-type: none"> • Recommend improvements to train service schedules and timetables 	<ul style="list-style-type: none"> • Develop Work Instructions (WI) and Rules and Procedures (R&P) • Conduct operations and service audits 		
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