<table>
<thead>
<tr>
<th>TSC Category</th>
<th>Rail Operations</th>
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**TSC Description**
Manage rail operations and control to achieve and enhance rail service continuity and reliability

<table>
<thead>
<tr>
<th>TSC Proficiency Description</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Level 6</th>
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<tbody>
<tr>
<td></td>
<td>PTP-ROP-2002-1.1</td>
<td>PTP-ROP-3002-1.1</td>
<td>PTP-ROP-4002-1.1</td>
<td>PTP-ROP-5002-1.1</td>
<td>PTP-ROP-6002-1.1</td>
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<td>Disseminate real-time train service information and broadcast service announcements</td>
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<td>Regulate train service and operations to meet rail service requirements</td>
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<td>Manage train service performance to enhance rail service standards and continuity</td>
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<td>Manage the overall Operations and Control Centre (OCC) operations to achieve and enhance rail operations and service continuity</td>
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<td>Direct changes in policies and organisational procedures to optimise Operations and Control Centre (OCC) work processes and activities</td>
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**Knowledge**

- 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
- Regulatory and organisational requirement for train service standards
- 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) 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
- Technical 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
- 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
- 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
- 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
<table>
<thead>
<tr>
<th>Abilities</th>
<th>Technical Skills and Competencies (TSC) Reference</th>
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| • Interpret real-time train operation information from ISCS monitoring systems | • 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  
  • Types of reports and documentation requirement for OCC  
  • Methods to develop organisational operating procedures  
  • Objectives and methods of operations audits |
| • Coordinate with train and station staff to handle rail incidents and/or service disruptions | • 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  
  • 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  
  • 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  
  • Support coordination of rail incidents management  |
| • Disseminate real-time train service information 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  
  • Devise organisational performance standards by analysing performance data for train services  
  • 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 |
| • 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  
  • 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  
  • Develop train service and performance reports  
  • 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  
  • Support coordination of rail incidents management  
  • Provide administrative and operational support for the day-to-day OCC operations  
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| • Broadcast ad-hoc service announcement through public announcement systems and displays on trains and/or at stations | • Devise organisational performance standards by analysing performance data for train services  
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  • Endorse KPIs devised for rail operations and control  
  • Synergise OCC operations procedures across the rail network under the organisation’s purview |
| • Provide administrative and operational support for the day-to-day OCC operations | • 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 |
| • Report abnormalities of OCC incidents  
  • Support access control of internal and external stakeholders and/or service providers to restricted access areas of the OCC | • Recommend improvements to train service schedules and timetables | • Develop Work Instructions (WI) and Rules and Procedures (R&P)  
  • Conduct operations and service audits |