## SKILLS FRAMEWORK FOR PUBLIC TRANSPORT

### TECHNOICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT

**TSC Category:** Technology Management  
**TSC:** Internet of Things Application

### TSC Description
Implement Internet of Things (IoT) technologies to drive efficiency and effectiveness of operations

<table>
<thead>
<tr>
<th>TSC Proficiency Description</th>
<th>Level 1</th>
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<th>Level 6</th>
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<td>PTP-TEM-2002-1.1</td>
<td>PTP-TEM-3002-1.1</td>
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<tr>
<td>Adopt Internet of Things (IoT) technologies and provide troubleshooting support</td>
<td>Execute Internet of Things (IoT) technology projects to enhance work processes and operations</td>
<td>Manage the implementation of Internet of Things (IoT) technologies for the organisation</td>
<td>Formulate strategies for the application of Internet of Things (IoT) technologies to drive operational efficiency and effectiveness</td>
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### Knowledge
- Concept of Internet of Things (IoT)  
- Types and functionalities of IoT devices  
- Types of wireless communication technologies  
- Concept of cybersecurity

- Concept of Internet of Things (IoT)  
- Types and functionalities of IoT devices  
- Types of circuits and sensors within devices  
- Types of wireless communication technologies  
- Data analytics techniques  
- Concept of cybersecurity

- Concept of Internet of Things (IoT)  
- Types and functionalities of IoT devices  
- Concept of ubiquitous computing and connectivity  
- Types of wireless communication technologies  
- Data collection, modelling and analysis techniques  
- Concept of cybersecurity  
- Data visualisation and business intelligence tools

- Concept of Internet of Things (IoT)  
- Types and functionalities of IoT devices  
- Concept of ubiquitous computing and connectivity  
- Automation technologies and applications  
- Data collection, modelling and analysis techniques  
- Concept of cybersecurity  
- Data visualisation and business intelligence tools  
- Principles of successful IoT strategies

### Abilities
- Conduct work activities using IoT technologies  
- Perform testing to verify the optimal functioning of IoT technologies  
- Provide troubleshooting support to end-users

- Conduct briefings on the uses and functions of IoT technologies adopted by the organisation  
- Review IoT testing results and identify areas for improvement  
- Integrate information from multiple data sources

- Develop novel ideas to enhance business operations by leveraging on IoT technologies  
- Collaborate with stakeholders for the development of IoT applications  
- Develop implementation approaches and schedules for IoT projects

- Initiate research on the application of IoT in business operations  
- Develop strategies for application of IoT to transform business operations  
- Conceptualise the technology infrastructure required for IoT implementation  
- Create IoT solutions and develop business cases

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Page 1 of 2
| • Review data to produce insights of business value | • Develop risk management approaches in relation to cybersecurity risks | • Oversee integration projects which combine data from disparate devices, processes and applications | • Review and monitor success of IoT implementation using key performance metrics | • Advise others on cybersecurity risks related to IoT strategies and mitigation measures | • Develop insights from strategic analysis of IoT data to enhance efficiency and service delivery |