

**SKILLS FRAMEWORK FOR MEDIA  
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

<b>TSC Category</b>	Media Technology and Operations					
<b>TSC Title</b>	Broadcast Infrastructure Maintenance					
<b>TSC Description</b>	Maintain broadcast systems, equipment and other infrastructure to ensure continuity and efficiency of broadcast operations					
<b>TSC Proficiency Description</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>	<b>Level 6</b>
	<b>MED-MPN-1013-1.1</b>	<b>MED-MPN-2013-1.1</b>	<b>MED-MPN-3013-1.1</b>	<b>MED-MPN-4013-1.1</b>	<b>MED-MPN-5013-1.1</b>	
	Support broadcast infrastructure maintenance processes by dismantling and re-assembling equipment and maintaining records of maintenance and repair	Perform basic troubleshooting, maintenance and repair of broadcast systems and equipment	Execute maintenance processes to maintain the continuity and quality of broadcast operations	Lead the planning, execution and optimisation of maintenance processes to ensure quality and continuity of broadcast operations	Evaluate and improve performance of broadcast infrastructure maintenance to enhance the efficiency and effectiveness of broadcast operations	
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>Tools and test equipment used in maintenance and repair of broadcast systems and equipment</li> <li>Layout and architecture of specific broadcast equipment and systems</li> <li>Technical designs</li> <li>Process for dismantling and re-assembling broadcast equipment and systems</li> <li>Functional parameters of broadcast systems and equipment</li> <li>Fundamentals of maintenance processes</li> <li>Relevant workplace safety and health regulations and guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance principles and processes and the different types of maintenance procedures such as preventive, corrective and emergency repair</li> <li>Maintenance characteristics critical to broadcast equipment or systems</li> <li>Tools and test equipment used in maintenance and repair of broadcast systems and equipment</li> <li>Service Level Agreements with internal users of the broadcast equipment and systems</li> <li>Terminology for technical design and manufacturer's instructions for broadcast equipment and systems</li> </ul>	<ul style="list-style-type: none"> <li>Importance of broadcast continuity and minimising downtime</li> <li>Broadcast processes and systems</li> <li>Steps involved in corrective maintenance</li> <li>Architecture of in-house broadcast equipment and systems</li> <li>Functionalities and capabilities of in-house broadcast equipment and systems</li> <li>Principles of design, architecture, development and maintenance of networks</li> <li>Factors that may affect the type of maintenance required and its frequency</li> <li>Techniques to achieve efficiency in maintenance operations</li> </ul>	<ul style="list-style-type: none"> <li>Purpose, benefits, limitations and risks of the different equipment and software required for broadcast systems</li> <li>Standard performance indicators for maintenance processes</li> <li>Factors affecting decisions about ongoing maintenance versus replacement, including cost, downtime, reliability</li> <li>Measures to evaluate the effectiveness of maintenance</li> <li>Optimisation of maintenance processes</li> <li>Best practices in maintenance quality and standards</li> <li>Best practices in workplace safety and health</li> </ul>	<ul style="list-style-type: none"> <li>Capabilities and limitations of in-house broadcast infrastructure</li> <li>Industry standards and upcoming technologies and infrastructure for broadcast operations</li> <li>Best practices in maintenance quality and standards</li> <li>Best practices in workplace safety and health</li> </ul>	

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		<ul style="list-style-type: none"> <li>• Specific safety precautions to be taken when working with broadcast equipment, software and systems</li> <li>• Approaches to minimise downtime associated with maintenance</li> <li>• Relevant workplace safety and health regulations and guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• Workplace safety and health requirements for broadcast processes</li> </ul>			
<b>Abilities</b>	<ul style="list-style-type: none"> <li>• Obtain accurate details and specifications of systems and equipment to be maintained</li> <li>• Interpret technical design, equipment layout and architecture</li> <li>• Support broadcast maintenance and repair processes by dismantling and re-assembling equipment before and after the processes</li> <li>• Support in basic analysis of faulty broadcast systems and equipment by testing and providing functional parameters of broadcast infrastructure</li> <li>• Maintain records of corrective and preventive maintenance as well as repairs and replacements, as per established conventions and standards</li> </ul>	<ul style="list-style-type: none"> <li>• Communicate with operations teams to ensure availability of equipment for preventive maintenance</li> <li>• Conduct preventive maintenance tasks in accordance with the maintenance plans</li> <li>• Record maintenance requirements in appropriate information systems</li> <li>• Conduct basic analysis to identify faults in malfunctioning systems and equipment</li> <li>• Perform repairs on damaged or malfunctioning equipment to restore functionalities</li> <li>• Communicate requirements for replacement of equipment or components for approval</li> <li>• Liaise with vendors for procurement of parts for repair of broadcast equipment and systems</li> </ul>	<ul style="list-style-type: none"> <li>• Assess critical maintenance characteristics of broadcast equipment and systems using design information and manufacturer's instructions</li> <li>• Identify changes required to Standard Operating Procedures (SOPs) for usage of broadcast systems to achieve maintenance requirements</li> <li>• Supervise preventive maintenance for broadcast systems as per maintenance schedule</li> <li>• Analyse system faults and breakdowns to identify causes of failure</li> <li>• Determine course of action for corrective maintenance to minimise downtime and impact on broadcast operations</li> <li>• Allocate available resources to make sure maintenance is carried out efficiently</li> </ul>	<ul style="list-style-type: none"> <li>• Establish goals and objectives for maintenance operations</li> <li>• Define maintenance requirements in compliance with established guidelines and external standards for equipment performance and maintenance</li> <li>• Develop periodic maintenance plan for broadcast maintenance</li> <li>• Allocate roles and responsibilities for broadcast infrastructure maintenance operations</li> <li>• Resolve complex engineering or other problems in broadcast equipment and systems</li> <li>• Evaluate maintenance performance to identify opportunities to improve maintenance processes</li> <li>• Optimise maintenance processes to improve efficiency and resource utilisation</li> <li>• Establish service agreements with</li> </ul>	<ul style="list-style-type: none"> <li>• Establish quality standards and criteria of maintenance appropriate for in-house broadcast systems and equipment</li> <li>• Oversee the establishment of internal and external maintenance Service Level Agreements with the users of broadcast systems and equipment and external vendors</li> <li>• Evaluate maintenance performance and broadcast systems and equipment performance</li> <li>• Oversee the optimisation of maintenance processes to increase efficiency and effectiveness of maintenance</li> <li>• Strategise the de-commissioning of systems and infrastructure based on technical evaluation and broadcast requirements</li> </ul>	

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		<ul style="list-style-type: none"> <li>Perform full functionality testing before handover of equipment for operations</li> </ul>	<ul style="list-style-type: none"> <li>Liaise with external vendors for equipment repair</li> <li>Identify scope for optimisation of maintenance processes to improve efficiency and effectiveness of maintenance</li> </ul>	<ul style="list-style-type: none"> <li>external vendors for equipment which cannot be maintained by the organisation presently</li> <li>Develop rigorous documentation processes to drive discipline in the documentation of maintenance execution</li> </ul>		
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