

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

<b>TSC Category</b>	Manufacturing and Operations					
<b>TSC</b>	Metrology Management					
<b>TSC Description</b>	Manage metrology techniques for process performance measurement as well as develop metrology recipes for process optimisation					
<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>PRE-OPR-3006-1.1</b>	<b>PRE-OPR-4006-1.1</b>	<b>PRE-OPR-5006-1.1</b>	
			Analyse and select appropriate metrology techniques for process parameters measurement	Review measurement performance and perform troubleshooting on abnormalities	Develop new metrology techniques to optimise process performance	
<b>Knowledge</b>			<ul style="list-style-type: none"> <li>• Tool functions</li> <li>• Measurement techniques</li> <li>• Process parameters</li> </ul>	<ul style="list-style-type: none"> <li>• Tool operation and safety requirements</li> <li>• Recipe parameters</li> <li>• Recipe handling procedures</li> <li>• Recipe qualification procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Measurement robustness</li> <li>• Problem solving techniques</li> </ul>	
<b>Abilities</b>			<ul style="list-style-type: none"> <li>• Identify tools' functions and purposes in manufacturing processes</li> <li>• Relate manufacturing process needs with the identified tools' functions</li> <li>• Select appropriate metrology techniques, based on the principles of metrology</li> <li>• Verify correct metrology techniques are selected</li> <li>• Determine follow-up actions required</li> </ul>	<ul style="list-style-type: none"> <li>• Identify metrology recipes used to perform measurements</li> <li>• Manage metrology recipes</li> <li>• Verify measurement performance</li> <li>• Troubleshoot any abnormalities detected</li> <li>• Determine follow-up actions required</li> </ul>	<ul style="list-style-type: none"> <li>• Determine the metrology requirements for manufacturing processes</li> <li>• Determine the appropriate measurement methodologies to meet the process requirements</li> <li>• Define project scopes of work and the number of hours, as defined by the supervisor, based on business requirements</li> <li>• Develop metrology improvements</li> <li>• Evaluate project effectiveness</li> <li>• Recommend follow up actions</li> </ul>	