

**SKILLS FRAMEWORK FOR AIR TRANSPORT
TECHNICAL SKILLS & COMPETENCIES (TSC) REFERENCE DOCUMENT**

TSC Category	Airport Engineering					
TSC	Airport Infrastructure and Facilities Maintenance and Design					
TSC Description	Maintain and enhance airport infrastructure and facilities to meet operational and service standards of the airports					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		ATP-APE-2003-1.1	ATP-APE-3003-1.1	ATP-APE-4003-1.1	ATP-APE-5003-1.1	ATP-APE-6003-1.1
		Inspect airport infrastructure and facilities with reference to established performance standards	Administer maintenance operations to ensure airport infrastructure and facilities are operating in accordance to established performance standards	Analyse performance of airport infrastructure and facilities and recommend corrective measures	Devise and develop maintenance strategies for airport infrastructure and facilities to attain optimal performance	Drive strategic plans to elevate airport infrastructure and facilities to uphold the future vision of the airports
Knowledge		<ul style="list-style-type: none"> Types of airport infrastructure and facilities Operational and service standards for airport infrastructure and facilities Routine maintenance procedures of the organisation Data mining techniques to measure the performance standards of airport infrastructure and facilities Local and international guidelines such as Singapore Code of Practice on Buildable Design 	<ul style="list-style-type: none"> Principles of maintenance of airport infrastructure and facilities Operational and service standards for airport infrastructure and facilities Routine maintenance procedures of the organisation Data mining techniques to measure the performance standards of airport infrastructure and facilities Energy and water management and conservation strategies Local and international guidelines such as Singapore Code of Practice on Buildable Design 	<ul style="list-style-type: none"> Factors to consider in the design and construction of airport infrastructure and facilities Data extraction techniques to measure operational and service standards of airport infrastructure and facilities Airport master plans Benchmarks for airport infrastructure and maintenance Energy and water management and conservation strategies Airports Council International (ACI) Airport Service Quality (ASQ) benchmarking programme Local and international guidelines such as Singapore Code of Practice on Buildable Design 	<ul style="list-style-type: none"> Airport master plans and utility plans International trends and advancements in construction and maintenance of airport infrastructure and facilities Energy and water management and conservation strategies Airports Council International (ACI) Airport Service Quality (ASQ) benchmarking programme Local and international guidelines such as Singapore Code of Practice on Buildable Design 	<ul style="list-style-type: none"> Airport master plans and utility plans Strategic planning parameters in airport master planning Business strategies of international airports International trends and advancements in construction and maintenance of airport infrastructure and facilities Impact of new technologies on airport infrastructure and facilities Airports Council International (ACI) Airport Service Quality (ASQ) benchmarking programme Local and international guidelines such as Singapore Code of Practice on Buildable Design

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<p>Abilities</p>		<ul style="list-style-type: none"> • Measure the performance of airport infrastructure and facilities with reference to operational and service standards • Document findings from inspections according to requirements in operational logbooks • Prepare reports to summarise findings from inspections of airport infrastructure and facilities • Coordinate with external contractors to carry out maintenance works on airport infrastructure and facilities 	<ul style="list-style-type: none"> • Review reports to identify faults in airport infrastructure and facilities • Examine the impact of faults in airport infrastructure and facilities on airport operations • Determine preventative or additional maintenance needs to minimise incidences of faults in airport infrastructure and facilities • Recommend remedial actions to repair faults in airport infrastructure and facilities • Assess the quality of maintenance work done by external contractors and provide feedback 	<ul style="list-style-type: none"> • Analyse performance data to analyse quality of airport infrastructure and facilities • Propose strategies to mitigate the impact of faults in airport infrastructure and facilities on airport operations • Recommend design enhancements to airport infrastructure and facilities 	<ul style="list-style-type: none"> • Evaluate the overall serviceability of airport infrastructure and facilities • Evaluate the effectiveness of maintenance works in accordance with planned objectives • Develop plans to raise the overall efficiency and effectiveness of airport infrastructure and facilities • Integrate best practices to enhance the operational and service standards of airport infrastructure and facilities 	<ul style="list-style-type: none"> • Determine infrastructure and facility needs based on the airports' future business strategies • Lead strategic plans for the upgrade and acquisition of airport infrastructure and facilities • Lead research on potential technologies that can be deployed to revamp airport infrastructure and facilities • Quantify cost and impact of implementing new technologies to enhance airport infrastructure and facilities
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