1. **Statement**
   The Queensland Health approach to ICT testing contributes to improving quality outcomes over the full asset lifecycle of ICT and supports the Queensland Health vision, strategic planning activities, and performance objectives.

2. **Purpose**
   The purpose of this policy is to ensure that:
   - Queensland Health implements quality ICT products and/or services that are tested efficiently and effectively as standard practice.
   - Queensland Health business operations are not negatively impacted by the implementation of new or changed ICT products and/or services.

3. **Scope**
   This policy applies to all employees, contractors and consultants within the Department of Health divisions and commercialised business units.
   This policy covers the implementation of new or changing ICT products and/or services.

4. **Principles**
   - **Do not overlook**: Testing is integral to quality management in project and service lifecycles.
   - **Context appropriate**: Testing is dynamic, iterative and responsive to context.
   - **Risk-based**: Risk-based testing should occur where appropriate as part of the overall approach to ICT testing.
   - **Communicated**: Testing is communicated to relevant stakeholders in a timely manner.
   - **Traceability**: Testing is able to demonstrate traceability to test coverage objectives (e.g. Risks and/or requirements).
   - **Continuous improvement**: Testing processes are subject to continuous improvement.
   - **Auditability**: Testing is auditable.

5. **Requirements**
   5.1 Testing shall commence early in the project and service lifecycles and shall contribute to quality across the full lifecycle.
   5.2 Queensland Health’s processes that support implementation of ICT products and/or services shall trust and rely upon testing to inform decisions.
   5.3 Testing of ICT products and/or services shall be structured, managed, performed and documented appropriately depending on contextual attributes, which may include:
       - Health software safety classification
       - Statutory obligations including statutory reporting
• Contractual obligations
• Identified product risks
• Customer priorities (e.g. Service criticality, Prioritised requirements, Quality ambition, Schedule and cost)

These attributes shall be actively monitored and if they change the testing shall vary accordingly.

5.4 Information about testing that is relevant and appropriate to each stakeholder or stakeholder group shall be communicated in a timely manner. (E.g. business and clinical engagement.)

5.5 Requirements-based testing shall demonstrate traceability to consistent and valid requirements that have been endorsed by the appropriate business owner (or delegate).

5.6 Risk-based testing shall demonstrate traceability to risks documented in accordance with the Department of Health or Health System risk management framework.

5.7 Continual process improvement shall be applied to the planning, design, execution and management of testing. Appropriate metrics shall be captured to inform the improvement process.

5.8 Testing records shall exist for all testing and shall be retained and available for audit purposes in accordance with the Department of Health or Hospital and Health Service recordkeeping policy.

6. Legislation
• Hospital and Health Boards Act 2011
• Public Records Act 2002
• Financial Accountability Act 2009

7. Supporting documents
• ICT Testing Guideline
• Software Testing (ISO/IEC/IEEE 29119)
• Standard for Software Reviews and Audits (IEEE 1028)
• Health Informatics – Guidance on standards for enabling safety in health software (ISO/TR 17791:2013)
• Medical Devices - Application of risk management to medical devices (ISO 14971)
• Medical device software – Software life cycle processes (IEC 62304)

8. Definitions

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<tr>
<th>Term</th>
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<tr>
<td>ICT</td>
<td>Information and Communication Technology</td>
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<td>ICT products and/or services</td>
<td>ICT products and/or services generally cover all types of technology (data, voice, video, etc.) and associated resources, which relate to the capture, storage, retrieval, transfer, communication or dissemination of information through the use of electronic media. All resources required for the implementation of ICT are encompassed, namely equipment, software, facilities and services, including telecommunications products and services that carry voice and/or data. (Source: QGCIO Glossary)</td>
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<td>Term</td>
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<td>Health software</td>
<td>Software used in the health sector that can have an impact on the health and healthcare of a subject of care. (Source: ISO/TR 17791:2013)</td>
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<td>Hospital and Health Service (HHS)</td>
<td>A Hospital and Health Service established under Section 17 of the Hospital and Health Boards Act 2011.</td>
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<tr>
<td>Queensland Health</td>
<td>Queensland Health comprises the Department of Health and sixteen independent Hospital and Health Services (HHSs). Queensland Health refers to the public healthcare sector, incorporating the Department of Health and HHSs.</td>
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<td>Health software safety classification</td>
<td>A classification which may be assigned to health software under the international standard IEC 62304 – Medical device software – Software life cycle processes. A software safety class (A, B, or C) may be assigned according to the possible effects on the patient, operator, or other people resulting from a hazard to which the software system can contribute.</td>
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**Version Control**

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<td>23 January 2017</td>
<td>Approved CE eHealth Queensland</td>
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