

Robot Standards and Quality Infrastructure

International Workshop on Use of Robotic
Technologies at Nuclear Facilities

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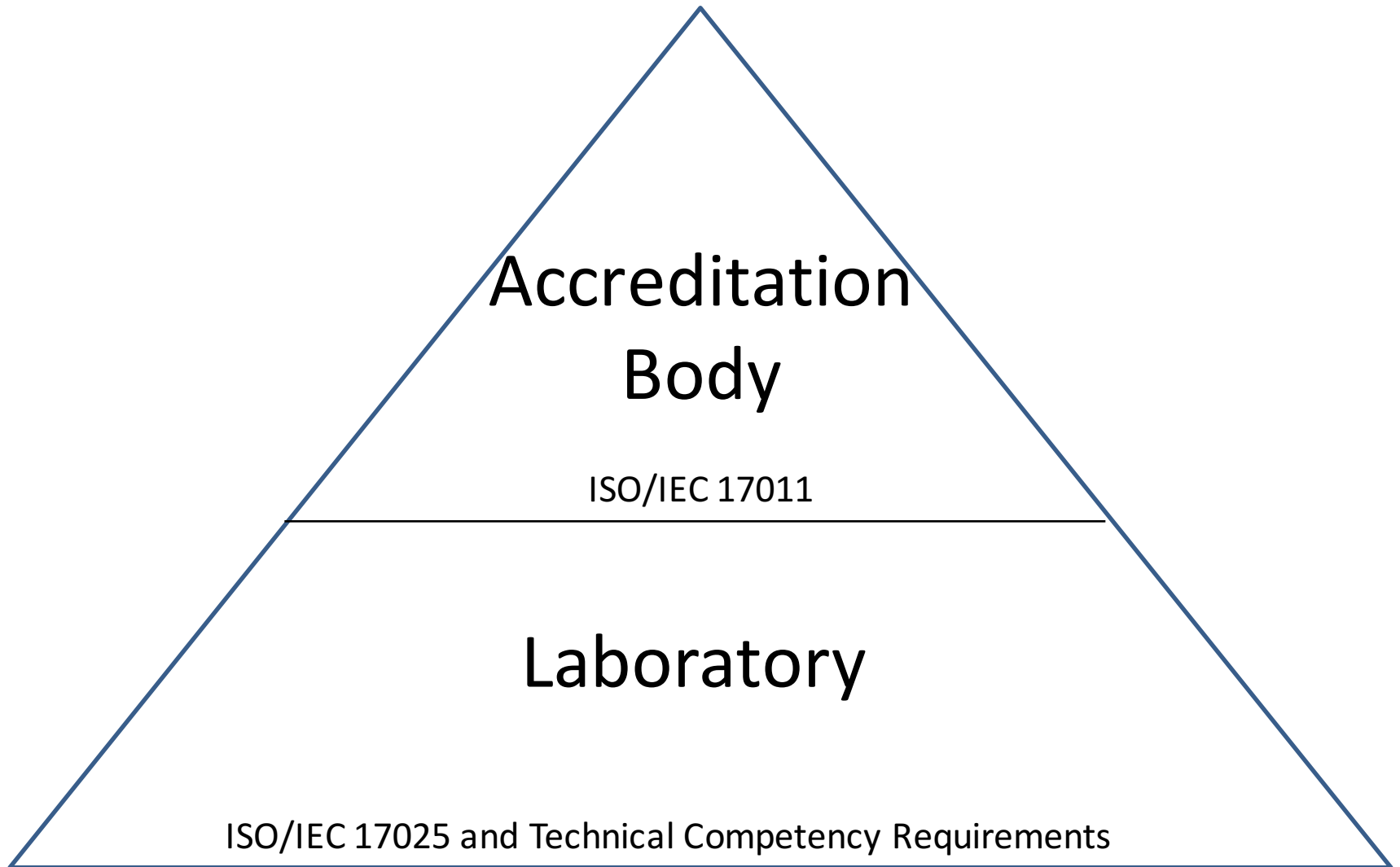
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Discussion Topics

- Laboratory Accreditation
- Inter-Test Facility Comparison
- Personnel Competence

Laboratory Accreditation Hierarchy



ISO/IEC 17025

Management System Requirements

- 4.1 Organization
- 4.2 Management system
- 4.3 Document control
- 4.4 Review of requests, tenders and contracts
- 4.5 Subcontracting of tests and calibrations
- 4.6 Purchasing services and supplies
- 4.7 Service to the customer
- 4.8 Complaints
- 4.9 Control of nonconforming testing and/or calibration work
- 4.10 Improvement
- 4.11 Corrective action
- 4.12 Preventive action
- 4.13 Control of records
- 4.14 Internal audits
- 4.15 Management reviews

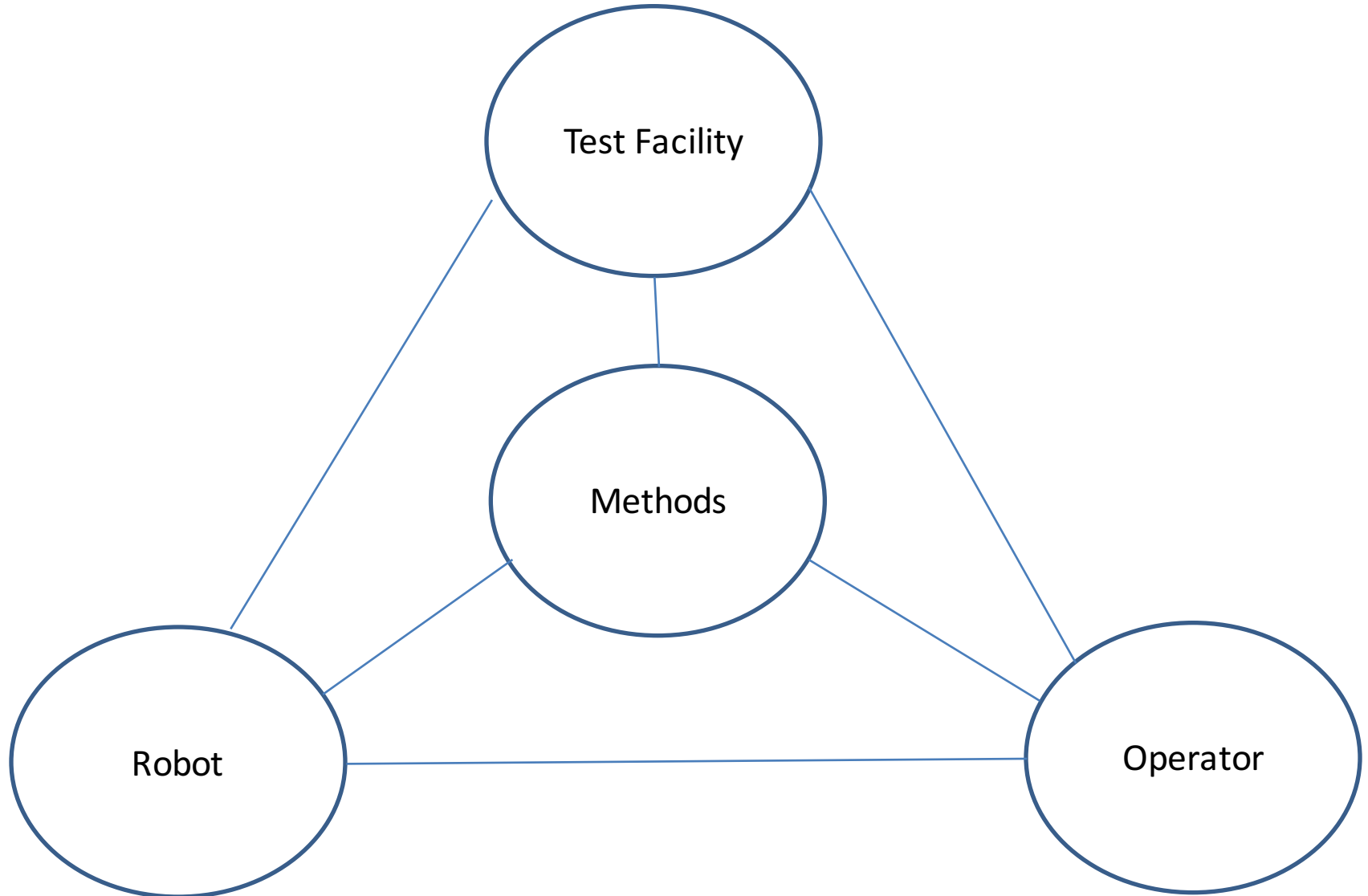
Technical Requirements

- 5.1 General
- 5.2 Personnel
- 5.3 Accommodation and environment
- 5.4 Test and calibration methods and method validation
- 5.5 Equipment
- 5.6 Measurement traceability
- 5.7 Sampling
- 5.8 Handling of test and calibration items
- 5.9 Assuring the quality of test and calibration results
- 5.10 Reporting the results

Accreditation Process

- Documentary review of management system
- Onsite assessment of implementation
- Formal attestation of conformity
 - ISO/IEC 17025
 - Technical Competence for Scope
- Periodic reassessment

Inter-Test Facility Comparison



Standards for Personnel Competence

- ISO/IEC 17024 Conformity assessment - General requirements for bodies operating certification of persons
- ASTM E2659-09 Standard Practice for Certificate Programs
- ICE 1100 Standard for Assessment-Based Certificate Programs

Summary

- Laboratory Accreditation
- Inter-Test Facility Comparison
- Personnel Competence

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