Laboratory Accreditation

Formal recognition by an authoritative body that a laboratory is competent to carry out specific tests and calibrations

Topics to cover

- Benefits of laboratory accreditation
- International structure of laboratory accreditation and mutual recognition arrangements (MRAs)
- Laboratory accreditation procedure and criteria

How accreditation can help

Benefits to laboratories

- Third party recognition of competence
- Data acceptable in other economies
  - Mutual Recognition Arrangement (MRA) between accreditation bodies
  - Mutual Recognition Arrangement (MRA) between regulators
- Enhanced Self confidence

How accreditation can help (cont'd)

Benefits to laboratory users

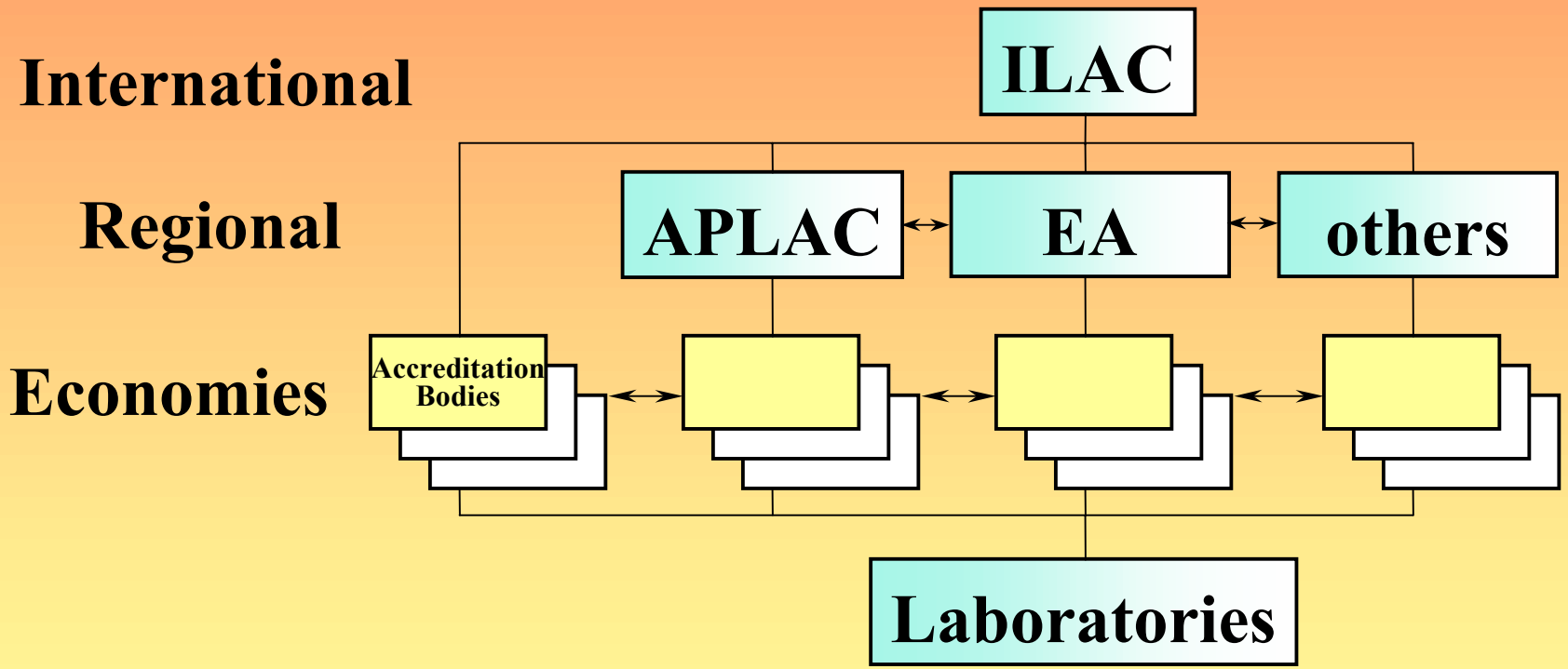
- Identification of competent laboratories
- Enhanced acceptance of laboratory data
- Reduced need for re-testing
- Enhanced reliability of test results

How accreditation can help (cont'd)

Benefits to regulators

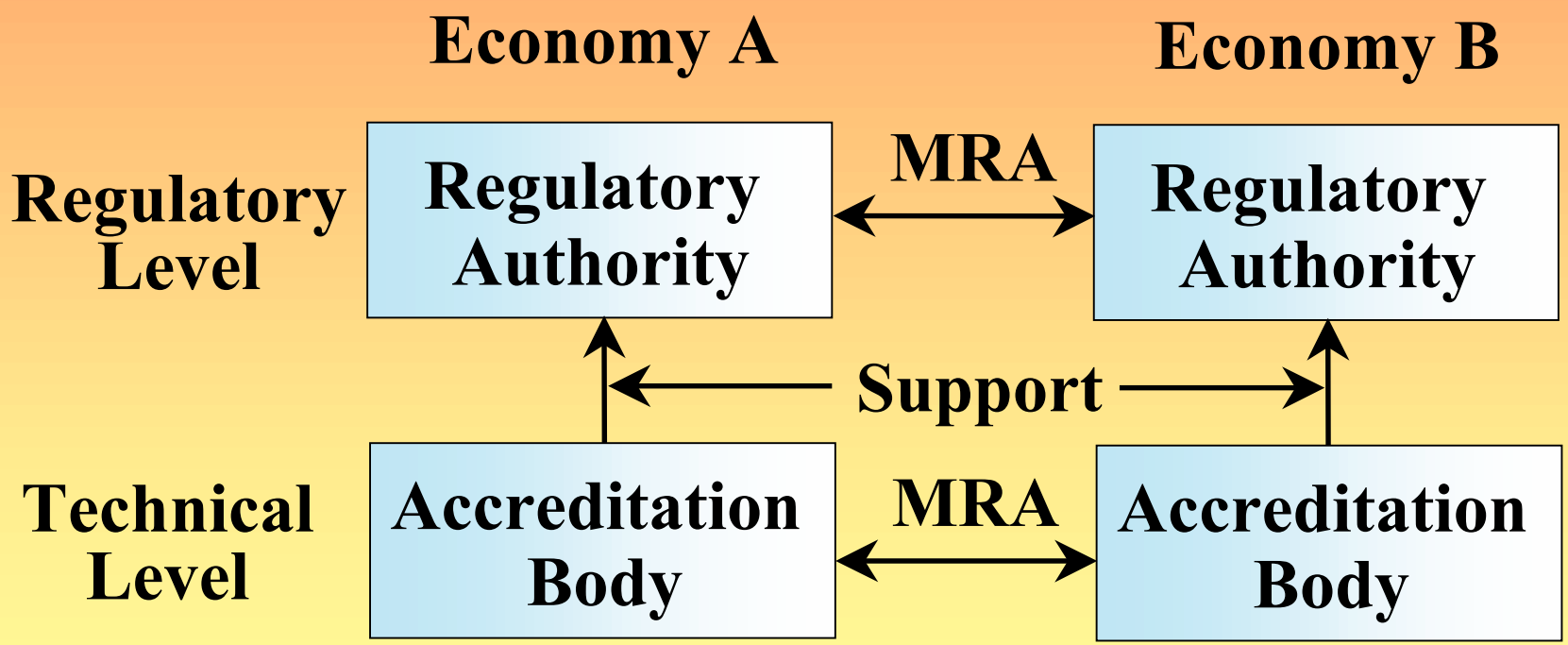
- Reliable test results
- Simplified administration procedure and reduced cost
- Enhanced transparency
- Unified standard for acceptance
- Ready technical infrastructure to support legislation

International Laboratory Accreditation Structure



ILAC International Laboratory Accreditation Co-operation
EA European Co-operation for Accreditation
APLAC Asia-Pacific Laboratory Accreditation Co-operation

Mutual Recognition



MRA Procedure

- Rigorous on-site evaluation
- Regular re-evaluations
- Monitoring of changes

ILAC MRA Members

A2LA of USA	BKO/OBE of Belgium	CAI of Czech Republic	CNACL of PRC	CNLA of Chinses Taipei	COFRAC of France
DACH of Germany	DANAK of Denmark	DAP of Germany	DATech of Germany	FINAS of Finland	IANZ of New Zealand
DKD of Germany	ICBO of USA	INMETRO of Brazil	JAB of Japan	JCSS of Japan	JNLA of Japan
KOLAS of Korea	NA of Norway	NAB of Ireland	NABL of India	NATA of Australia	NVLAP of USA
RvA of Netherlands	SAC-SINGLAS of Singapore	SAS of Switzerland	SCC of Canada	SWEDAC of Sweden	UKAS of United Kingdom
SANAS of South Africa	VILAS/Stameq of Vietnam				

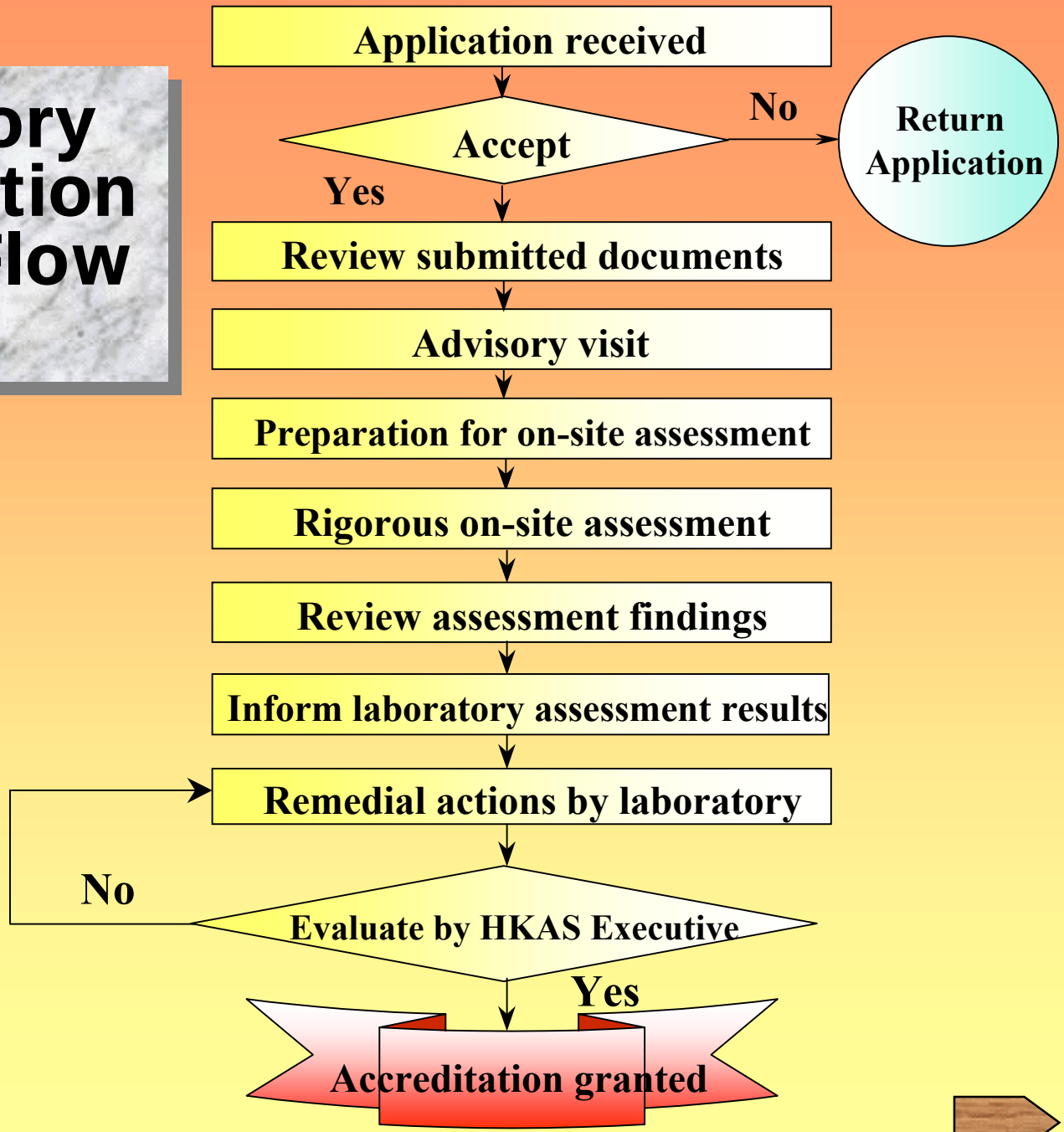
Hong Kong Accreditation Service (HKAS)

- Operated by The Government of the Hong Kong Special Administrative Region of China
- Accredits
  - Laboratories (Hong Kong Laboratory Accreditation Scheme – **HOKLAS**)
  - Certification Bodies (Hong Kong Certification Body Accreditation Scheme – **HKCAS**)
  - Inspection Bodies (Hong Kong Inspection Body Accreditation Scheme – **HKIAS**)
  - Hong Kong organisations

Rules Governing Laboratory Accreditation Body Operation

- **ISO/IEC Guide 58**
  - Impartiality, integrity and confidentiality
  - Operate under a quality system
  - Documentation of criteria
  - Trained and qualified assessors
- **MRA requirements**
  - MR-001 (APLAC) ; P-1 (ILAC)
  - Traceability Policy
  - Proficiency testing requirement

Laboratory Accreditation Process Flow Chart



Report bearing Accreditation Mark

ABC

ABC Limited

HKLAS XXX

TEST REPORT

Client:
Innovation & Technology
Commission
36/F., Immigration Tower
7 Gloucester Road
Hong Kong

Test Report No. : ABC/001/96
Date of Issue : 14 April 1998
Page 1 of 3 pages
Sample Received : 1 April 1998
Date Tested : 2 April 1998

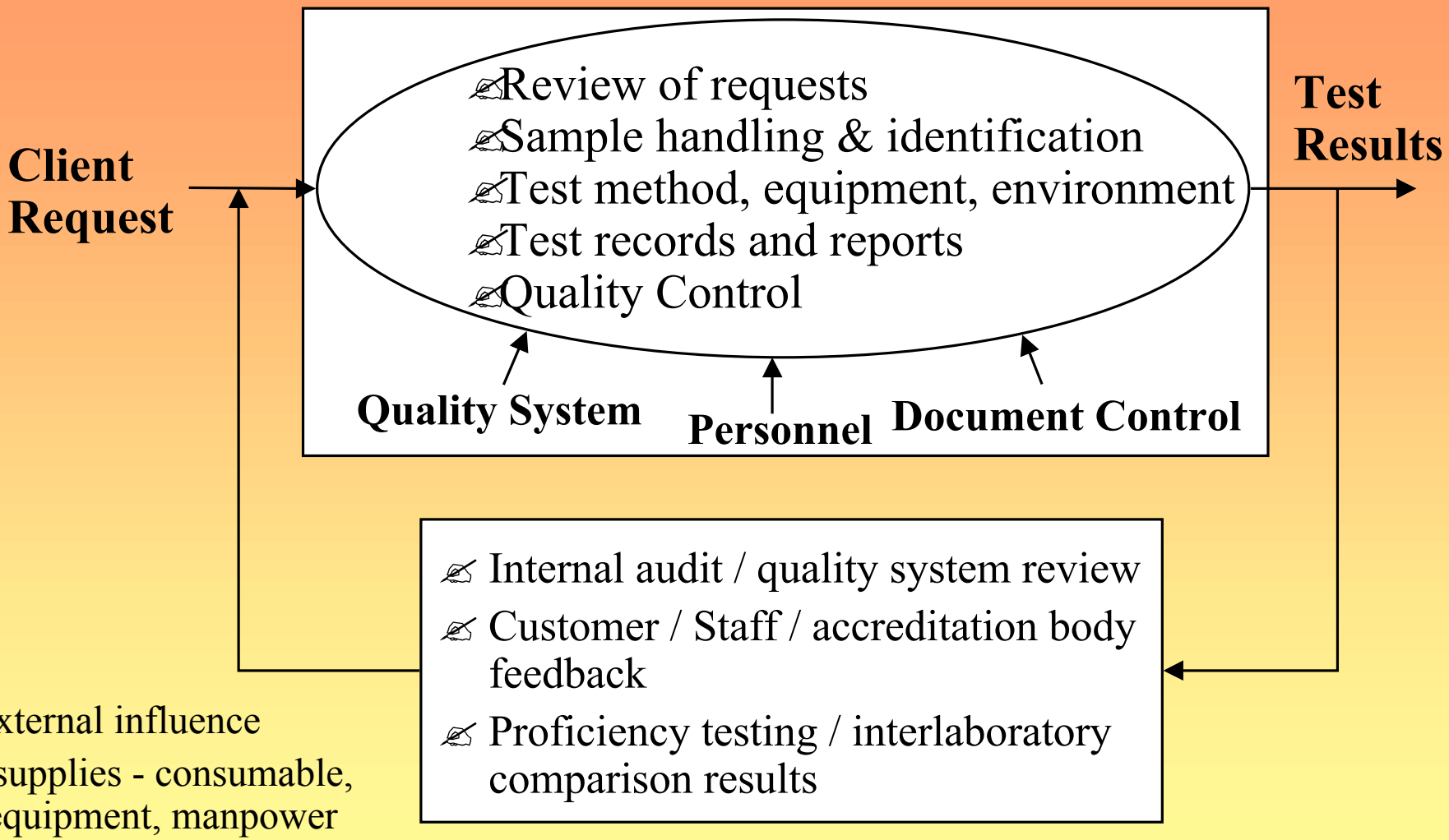
Accreditation Requirements

- **Comply with :**
  - **Accreditation Regulations**
    - ✍ obligations, conduct, accreditation mark
    - ✍ pay fees (application fee, assessment fee, subscription fee)
  - **Accreditation Criteria**
    - ✍ ISO/IEC 17025

Structure of ISO/IEC 17025

- Management requirements
  - organisation and management, quality system, document control, job review, subcontracting, supplies, services to client, complaints, control of non-conforming work, corrective and preventive actions, records, audits and reviews
- Technical requirements
  - Personnel, accommodation and environment, test and calibration methods, equipment, traceability, sampling, handling of items, quality assurance, reporting results

Model of Laboratory Operation



- External influence
  - supplies - consumable, equipment, manpower
  - standards / regulations
  - accreditation requirements

APLAC Proficiency Testing Requirement

- One proficiency testing activity prior to gaining accreditation
- One proficiency testing activity for each major field at least every four years

APLAC Measurement Traceability Policy

- To SI units of measurement
- Calibration laboratories
  - traceability directly from a national metrology institute (NMI) or an accredited laboratory
- Testing laboratories
  - As for calibration laboratories, certified reference material, mutual consent standard, traceability through inter-laboratory comparison
- Laboratories only certified to ISO 9001, 9002 or 9003 are not acceptable

Accreditation Experience - Energy performance laboratories

Quality System

- Discrepancy between documented system and practice
- document control
  - In-house documents, e.g. test and operation procedures, forms
  - External documents, e.g. standards

Accreditation Experience - Energy performance laboratories (cont'd)

Technical

- Suitability of equipment
  - nozzle size for measuring air flow, flux integrating sphere
- Measurement Traceability
  - standard lamp calibration, wet/dry bulb thermometer
- Uncertainty evaluation
- Validation of computer programmes

Further Information

1) Asia Pacific Laboratory Accreditation Cooperation (APLAC)

   www.ianz.govt.nz/aplac/

2) International Laboratory Accreditation Cooperation (ILAC)

   www.ilac.org

3) European Cooperation for Accreditation

   www.european-accreditation.org

END

- Thank You -