

Abilities and the Audit System of
Testing Laboratories:
Taking Telecommunication Testing
Laboratories for example

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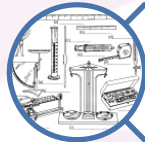


- 2016 Tokyo Marathon Runner
- Chief, Electric and Optical TAF
- Chair, APEC TEL MRA Task Force (2013-2015)
- Chinese Taipei(Taiwan) Delegate, APEC TEL MRA(2007-2015)
- APLAC representative, APEC SCSC JRAC EE MRA (2015~)
- Provisional Evaluator, APLAC
- In charge of:
 - CABs Accreditation in electrical and optical field
 - Domestic and oversea governments/regulators liaison
 - Specific Certification schemes in ICT industry:
BSMI/NCC/Telecommunications/Information Security /Mobile App
 - Specific Certification schemes for New Energy/Efficiency: BoE/Electric utility/LED/photovoltaic/wind turbine/US EPA/US DoE
 - Taiwan-China Cross strait mutual recognition talk for E&O Labs, Taiwan-China proficiency test

Overview



Conformity Assessment Models Worldwide



Competence of Testing Labs!



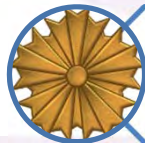
How AB audit/accredit ?



Present Competence: USA-Taiwan MRA/ FCC CFR change

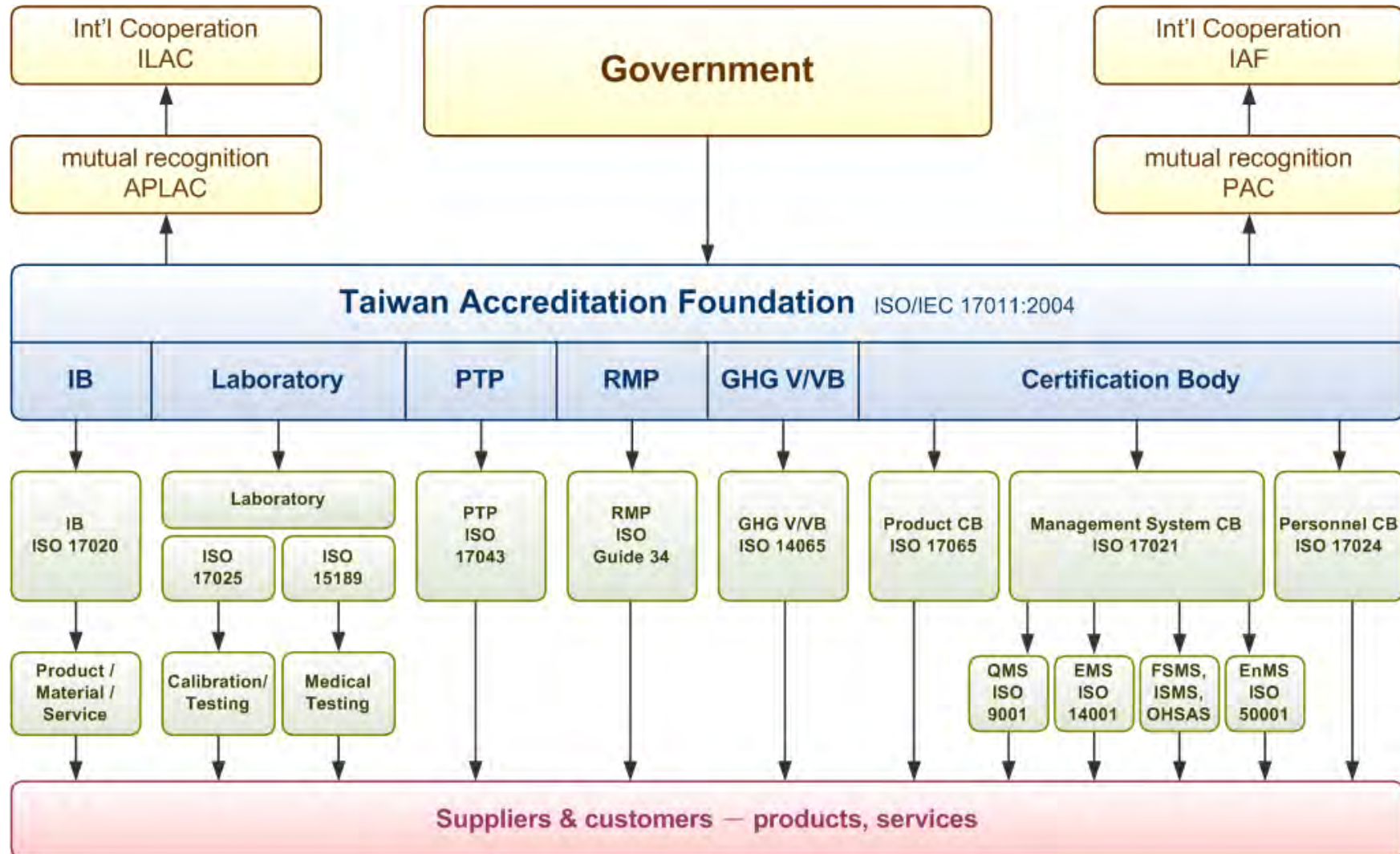


New field: Mobile App IS scheme in Taiwan



Monitoring, Limitation and next step

Conformity Assessment Structure



The technical infrastructure of Conformity Assessment

Government;
Buyers; Trade
alliance/groups

Conformity Assessment Scheme Owner defines the requirement:

No Second and Third-Party Assessment

Market

100% trust the supplier!!

1st-Party Assessment

Supplier's own
QA scheme

Metrology

Mass production

Testing/
SDoC

Product

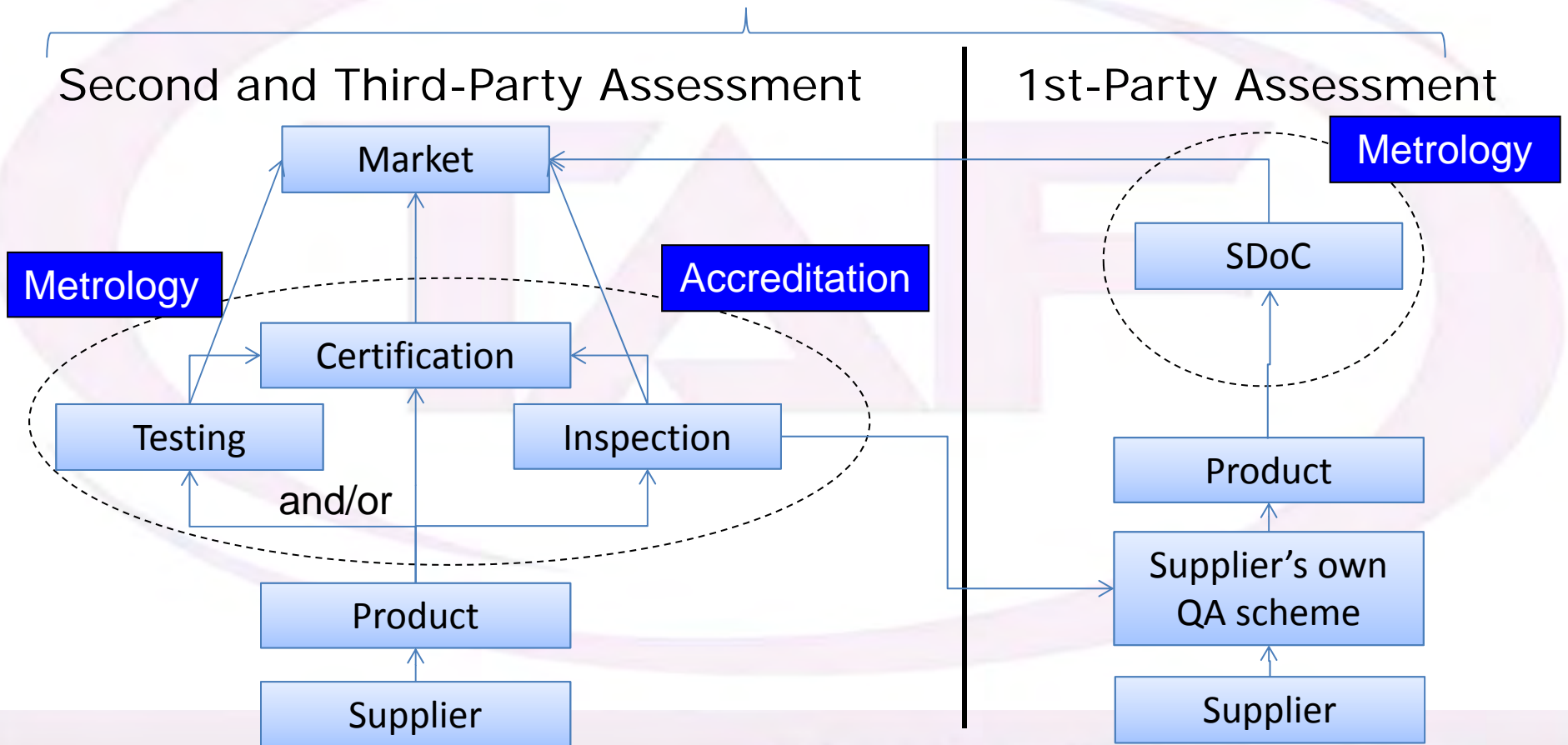
Supplier

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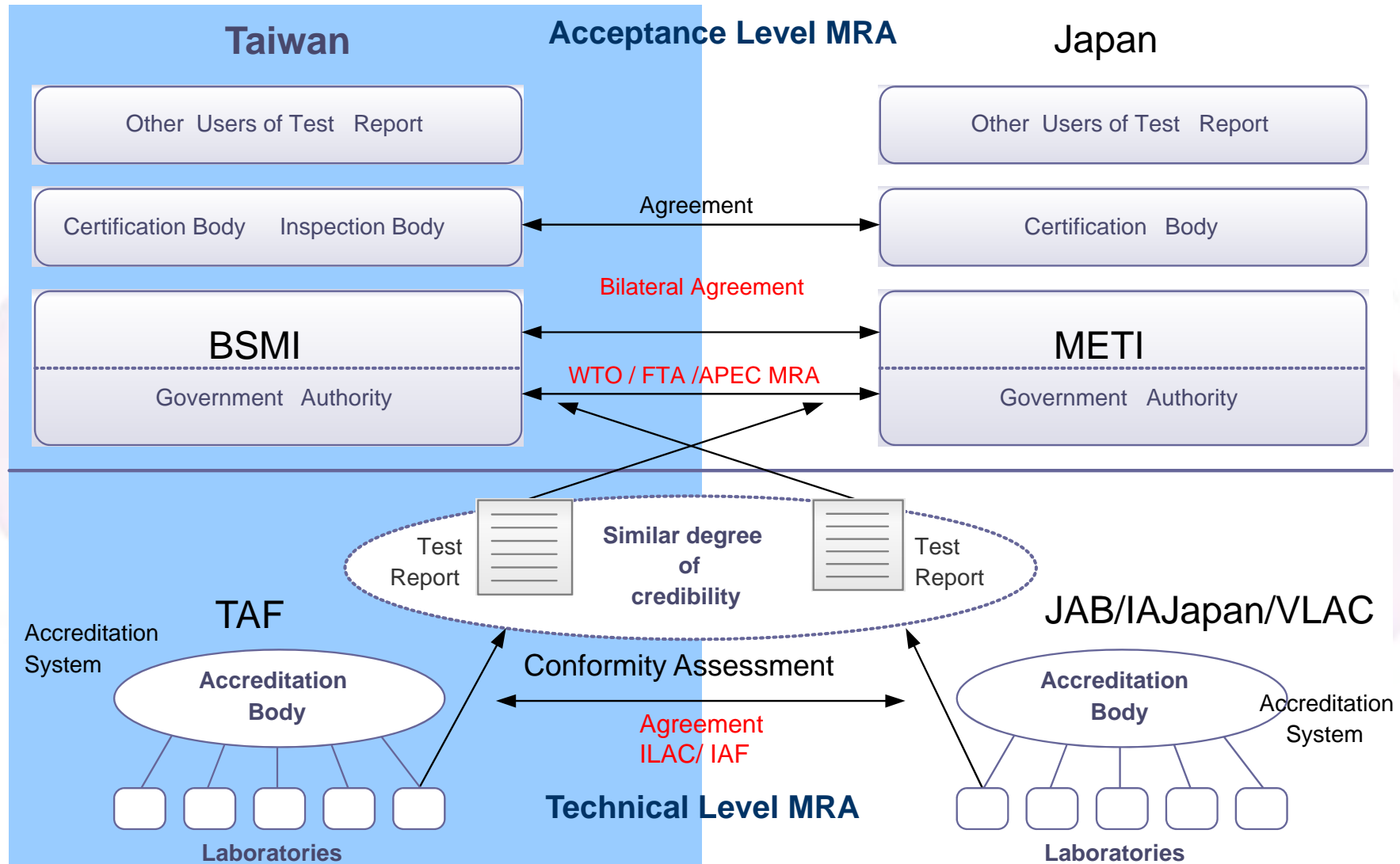
The technical infrastructure of Conformity Assessment

Government;
Buyers; Trade
alliance/groups

Conformity Assessment Scheme Owner defines the requirement:



G-to-G MRA and Technical level MRA

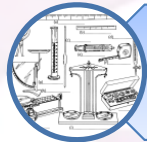


A capable Lab may NOT be recognized/allowed/licensed to test in some specific field!!

Overview



Conformity Assessment Models Worldwide



Competence of Testing Labs!



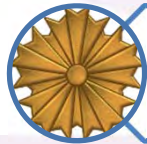
How AB audit/accredit ?



Present Competence: USA-Taiwan MRA/ FCC CFR change



New field: Mobile App IS scheme in Taiwan



Monitoring, Limitation and next step

What is a good testing Lab?

ISO/IEC 17025 : **Continuously** provide **correct** testing services.

• Management Requirements

- Organization
- Management system
- Document control
- Review of contracts
- Subcontracting
- Supplies
- Service to the customer
- Complaints
- Control of nonconforming works
- Improvement
- Corrective action
- Preventive action
- Control of records
- Internal audits/Management reviews

good
operation
system!!

• Technical Requirement

- **Personnel**
- **Environmental Conditions**
- **Test method(Uncertainty)**
- **Equipment**
- Traceability
- Handling test items
- Quality Assurance
- Reports

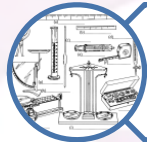
good
technical
knowledge!!

Ha, where is integrity?

Overview



Conformity Assessment Models Worldwide



Competence of Testing Labs!



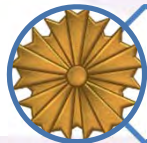
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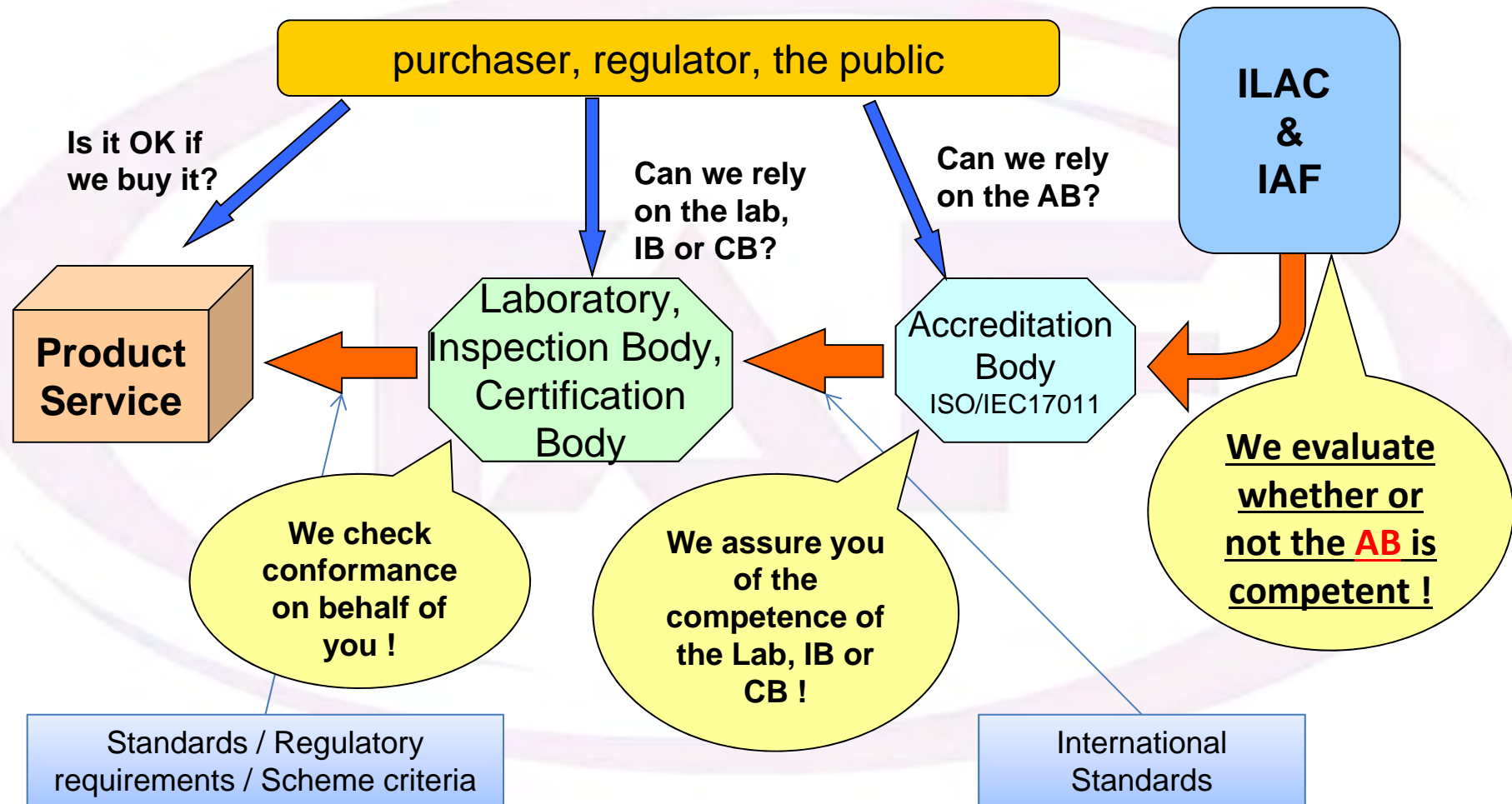


New field: Mobile App IS scheme in Taiwan



Monitoring, Limitation and next step

Accredited Conformity Assessment



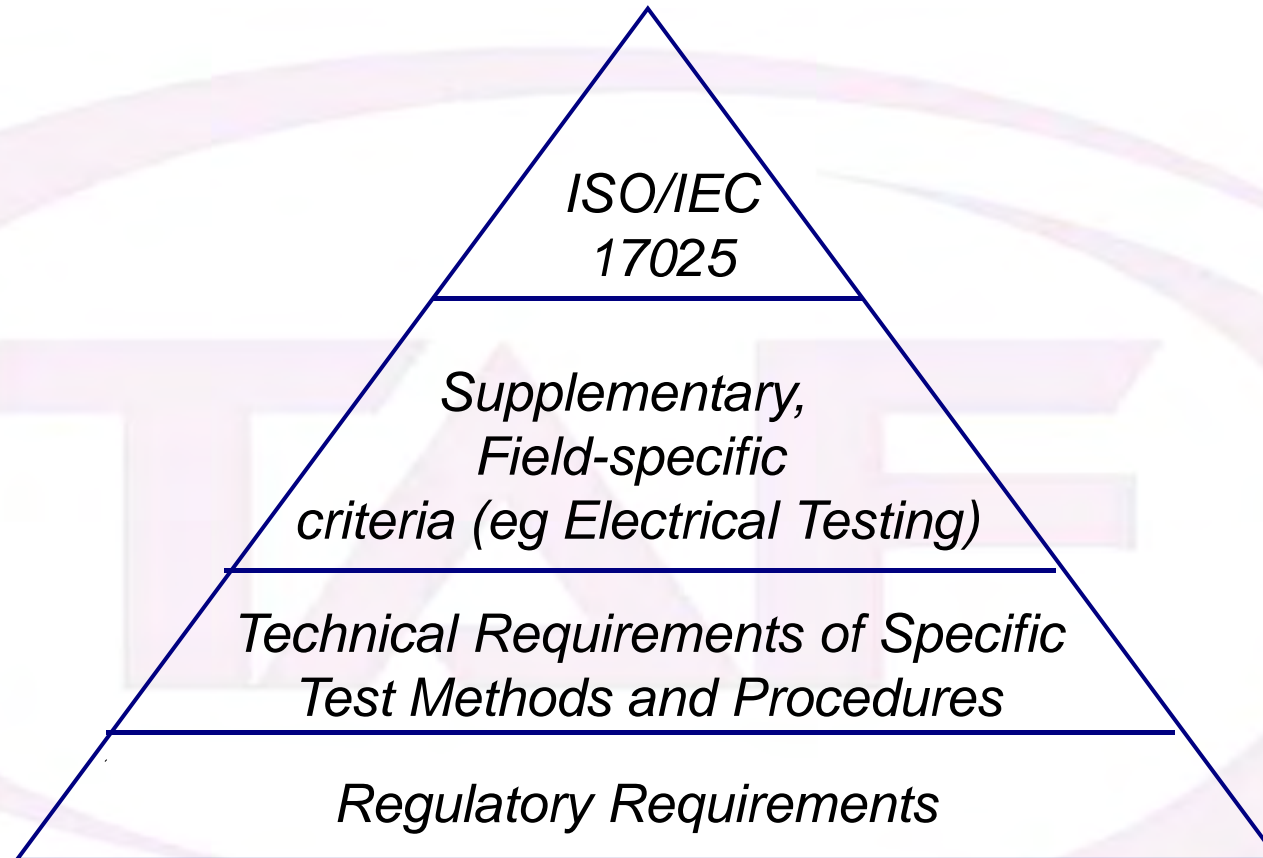
Accreditation

- Demonstrated competence
 - Specific tests
 - Defined measurements
 - Types of calibrations
 - Particular testing techniques
 - Specific types of inspections
 - Specific types of reference materials
- Technical competence
- Integrity
- Transparency
- Fairness
- Scope of accreditation
 - products; types of test parameters types of inspections; matrices
 - measurement techniques, range, accuracy
 - test specification; test method

ISO/IEC 17011: 2004

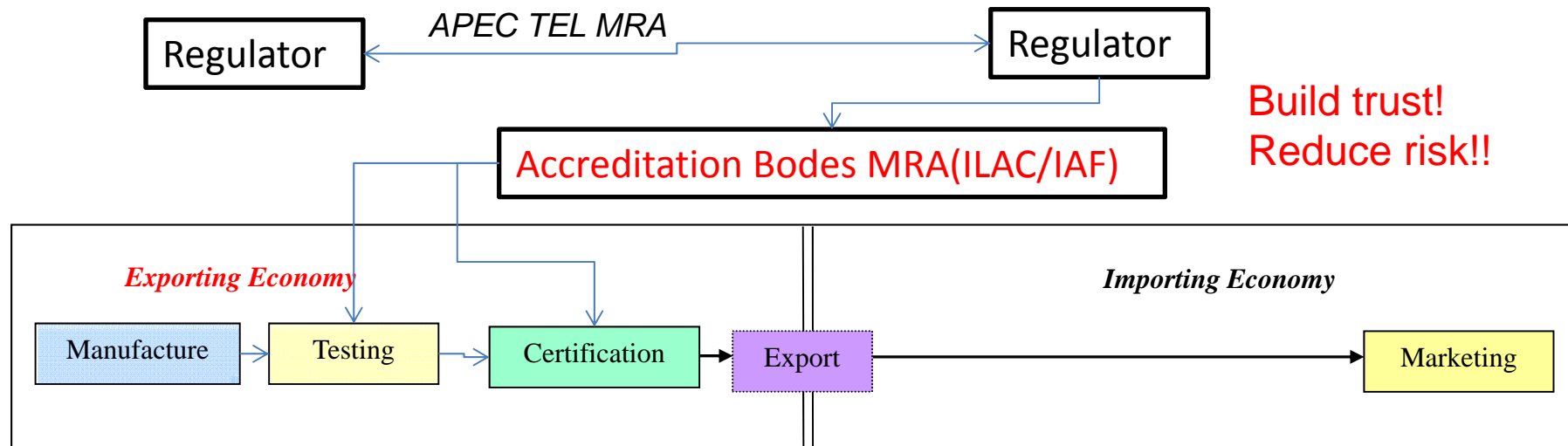
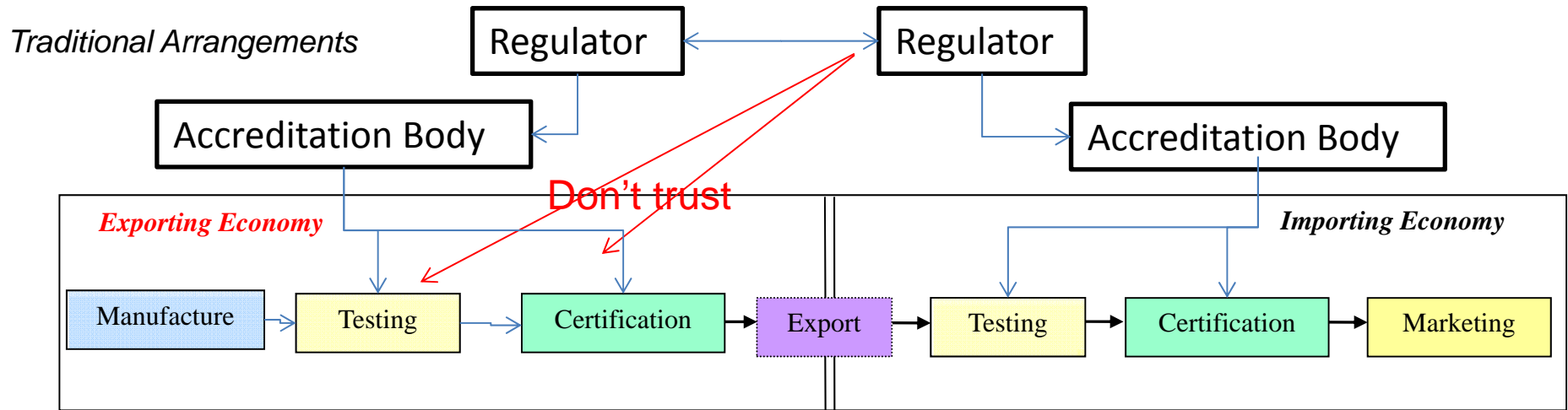
- Structure
- Impartiality
- Management
 - Management system
 - Document control
 - Records
 - Nonconformities and corrective actions
 - Preventive actions
 - Internal audits/Management reviews
 - Complaints
- Human resources
 - Personnel
 - Monitoring
- Accreditation process
 - Criteria
 - Application
 - Resource review
 - Subcontracting
 - Preparation
 - Document and record review
 - On-site assessment
 - Analysis of findings and assessment report
 - Decision-making and granting
 - Appeals
 - Reassessment and surveillance
 - Extending accreditation
 - Suspending, withdrawing or reducing
 - CAB records
 - Proficiency testing
- Responsibilities

Hierarchy of Criteria



- 1 General technical competence and systems compliance criteria**
- 2 Additional field-specific criteria, eg for emc testing laboratories**
- 3 Additional test, calibration, inspection method criteria**
- 4 Additional, regulator-specific criteria (eg reporting formats, labelling etc)**

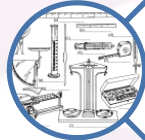
Reliable Accreditation system create Trust



Overview



Conformity Assessment Models Worldwide



Define the capabilities of Testing Labs!



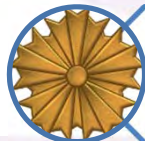
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Monitoring, Limitation and next step

USA-Taiwan MRA

USA

RA(FCC):
regulatory & recognition

DA(NIST):
designation

AB: accreditation
NVLAP/A2LA etc.

CAB: testing &
certification

Taiwan (Chinese Taipei)

RA/DA (NCC)
R&TTE products

RA/DA(BSMI)
Consumer products

regulatory, designation & recognition

AB(TAF): accreditation

CAB: testing &
certification

RA -- Regulatory Authority

DA -- Designating Authority

AB -- Accrediting Body

CAB -- Conformity Assessment Body

USA-Taiwan MRA is under APEC TEL MRA Phase I

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Actions after FCC R&O(14-208) change

Actions	Date
Report about FCC R&O(14-208) on TAF Newsletters Vol. 17	2015/4/27
The meeting held for Lab head to announce following requirement in response to FCC R&O(14-208)	2015/7/14
The working group held for senior lead assessors in EMC/Telecom field, The changes in updated FCC checklist related to FCC 14-208	2015/7/31
The On-job training taken place for all assessors, including site validation requirements for ANSI C63.4& ANSI C63.10 in updated FCC checklist	2015/8/22
Attending APEC TEL 52/ TCB Council meeting @Baltimore	2015/10/19 2015/10/28
The FCC checklist and technical requirement training for all EMC/RF assessors	2016/01/23
The FCC technical requirement training for all EMC/RF lab heads and signatories	2016/01/26

Working Group: FCC accreditation scope and technical requirement



The working groups for accreditation requirement of FCC R&O/
ANSI's testing and site validation methods on 2015/7/31

Meeting: Lab head, TAF, BSMI and NCC



The meeting addressed the accreditation requirement and designation procedure in response to FCC R&O(14-208) on 2015/7/14

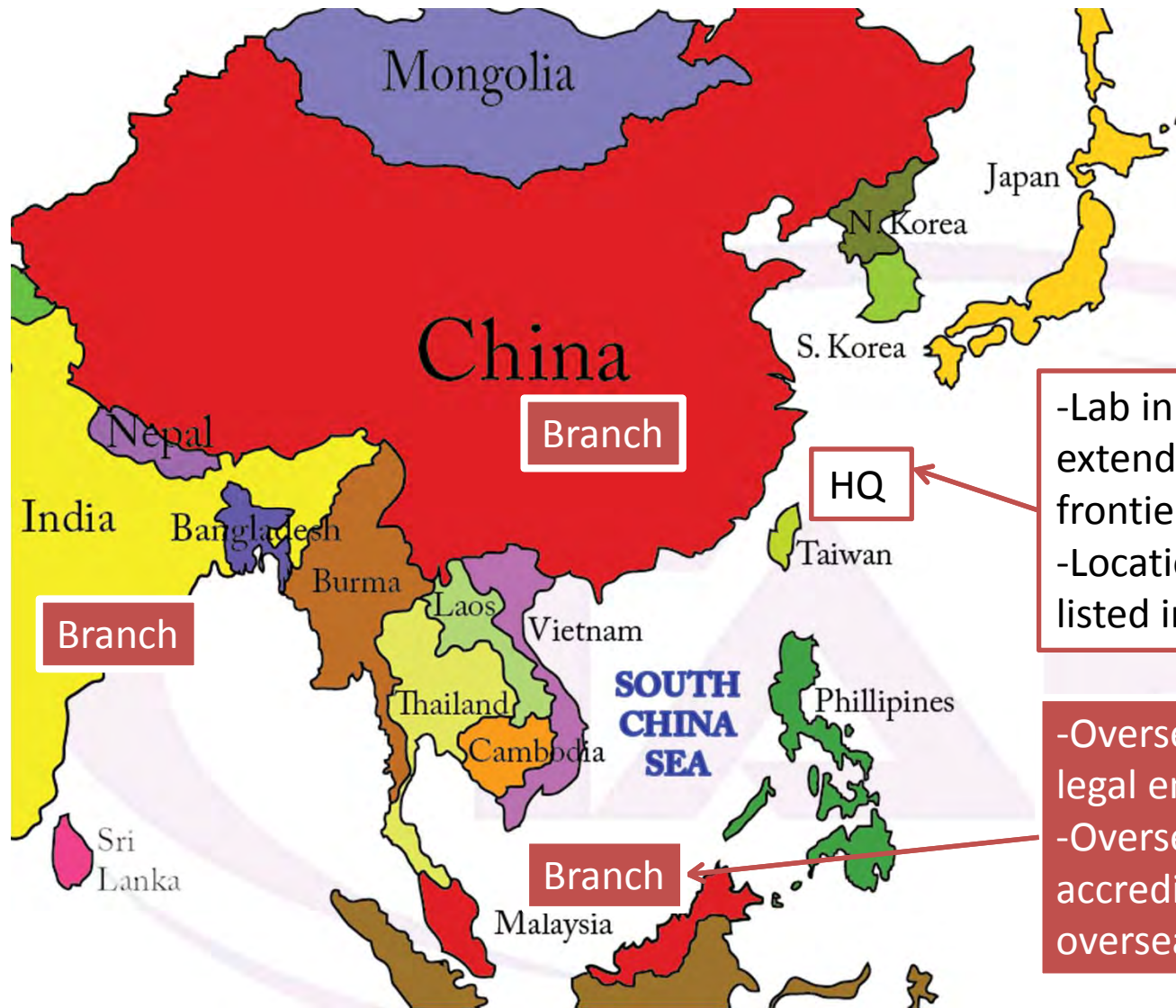
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Training: to TAF's assessors for the conclusions in WG



The On-job training for assessors on 2015/8/22

TAF 's official announcement!



-Lab in Taiwan can NOT extend their test site across frontiers.
-Locations of extended test sites are listed in accreditation certificate

-Oversea branch must be the legal entity in that country.
-Oversea branch can apply for TAF accreditation as an individual oversea lab.

- The EUT shall be tested and report shall be issued in the countries they registered.
- Although the oversea branch is accredited by TAF, they wont be recognized by USA

Monitoring/Surveillance by TAF

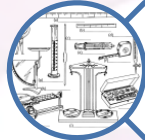
- TAF-ILAC symbol is required in each FCC test report.
- Annual surveillance assessment for:
 - Records of review of requests and contract
 - Records of handling test items
 - Check records of issued FCC/IC test reports
 - Consistence of raw data and results in test reports
 - Records of outsourcing
 - Maintain the competence of testing continuously
- Survey the number of issued FCC test reports/yr
- TAF assessors will make an announcement about the integrity, FCC's requirement and TAF's channel of complaint to the staff of Labs during the opening meeting of on-site assessment.



Overview



Conformity Assessment Models Worldwide



Define the capabilities of Testing Labs!



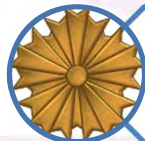
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Monitoring, Limitation and next step

Mobile App Vetting scheme

Regulator: Industrial development Bureau

Scheme management
Committee

Development of Technical regulations

Promotion

App Mark management

App testing/vetting laboratory management

Consultation

TAF

Accreditation

3rd party App
testing/vetting laboratories

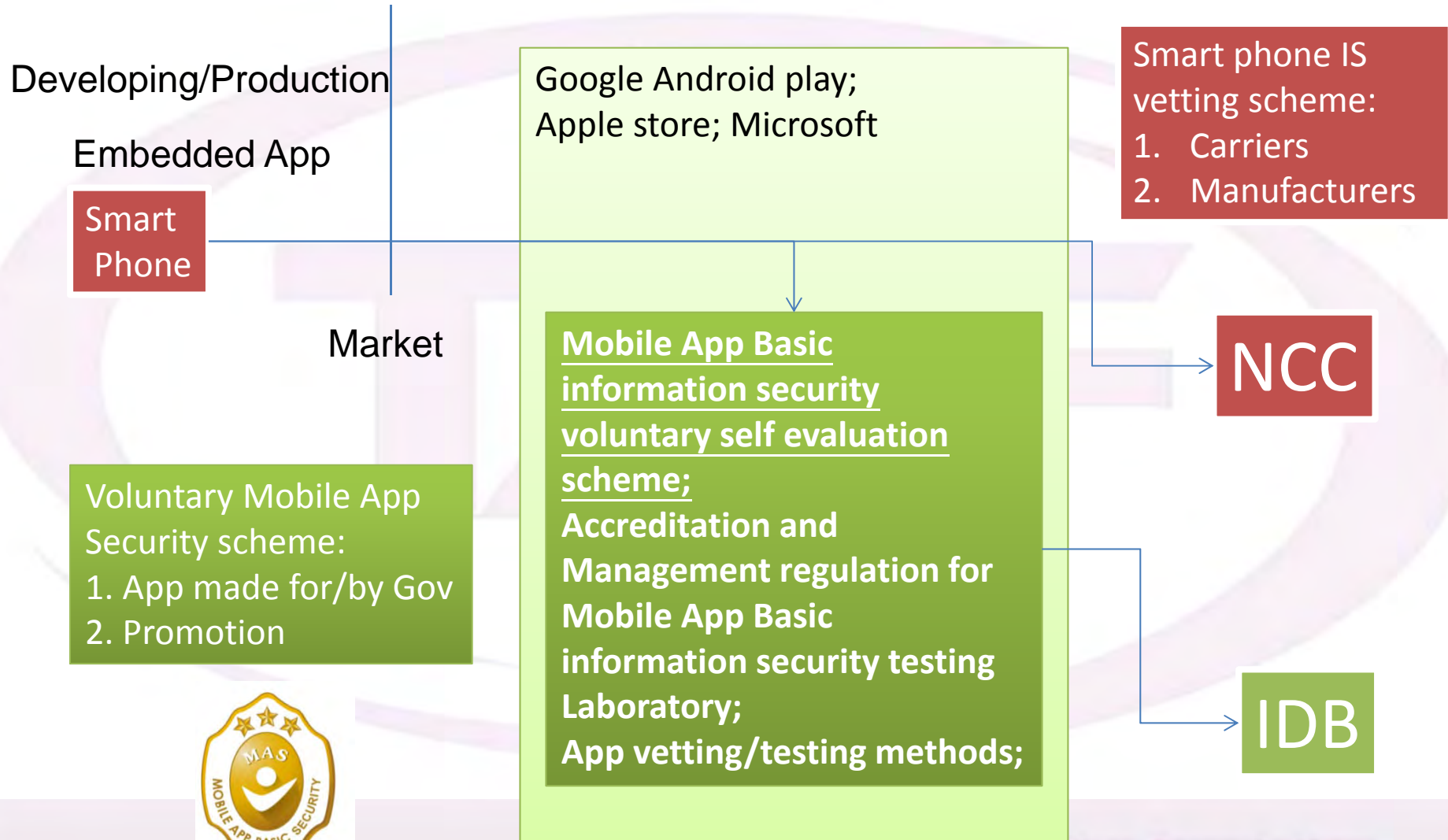
App
Developer

App
Developer

App
Developer

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Mobile App regulators in Taiwan



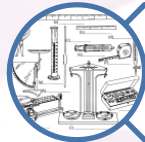
How to extend App Lab accreditation service?

- Planning status
 - Potential applicants [around 10 App vetting labs]
 - Suitability of extension [Government mission]
 - Resources and competence review[Supports from NCC/IDB/App industry]
 - Development Timeline and Method [Accreditation]
 - Recruiting technical experts [App experts/IS assessors]
- Documentation and Training Status
 - Accreditation program/internal and external training
- Announcing accreditation service
 - 2016/01/01

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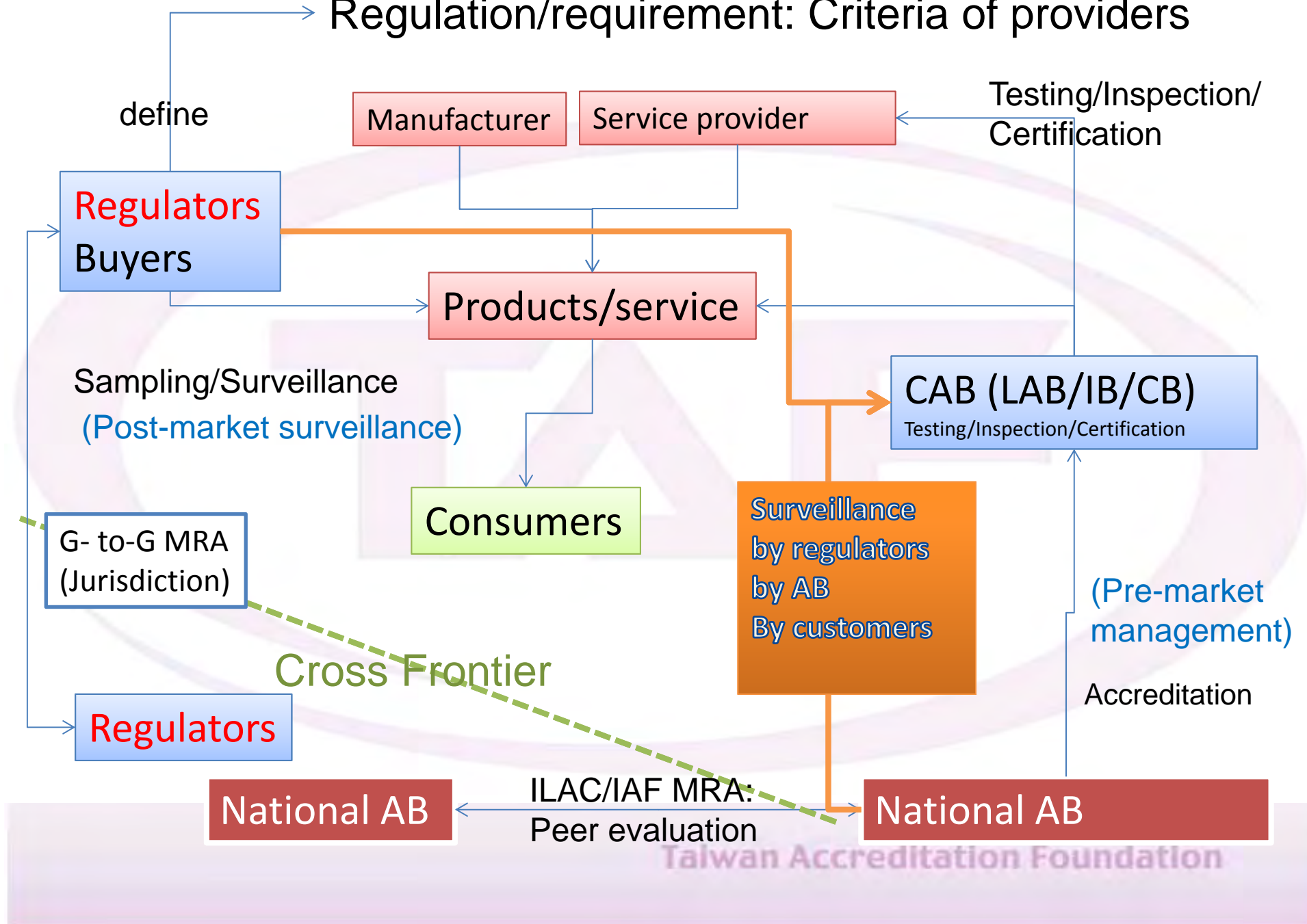


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Monitoring, Limitation and Next step

Regulation/requirement: Criteria of providers



THANK YOU FOR YOUR ATTENTION!

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