



China's Certification System for ICT Equipment

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2018-9

Course Objectives



1

Introduce China's certification system for ICT equipment

2

Provide reference for implementation of ITU C&I project

Agenda



- 1 **Overview of China's ICT product regulation pattern**
- 2 Introduction of product certification system
- 3 Effects of product certification system
- 4 TLC Product Certification

Several Concepts



Conformity assessment, also known as compliance assessment, is any activity to determine, directly or indirectly, that a process, product, or service meets relevant technical standards and fulfills relevant requirements [1].

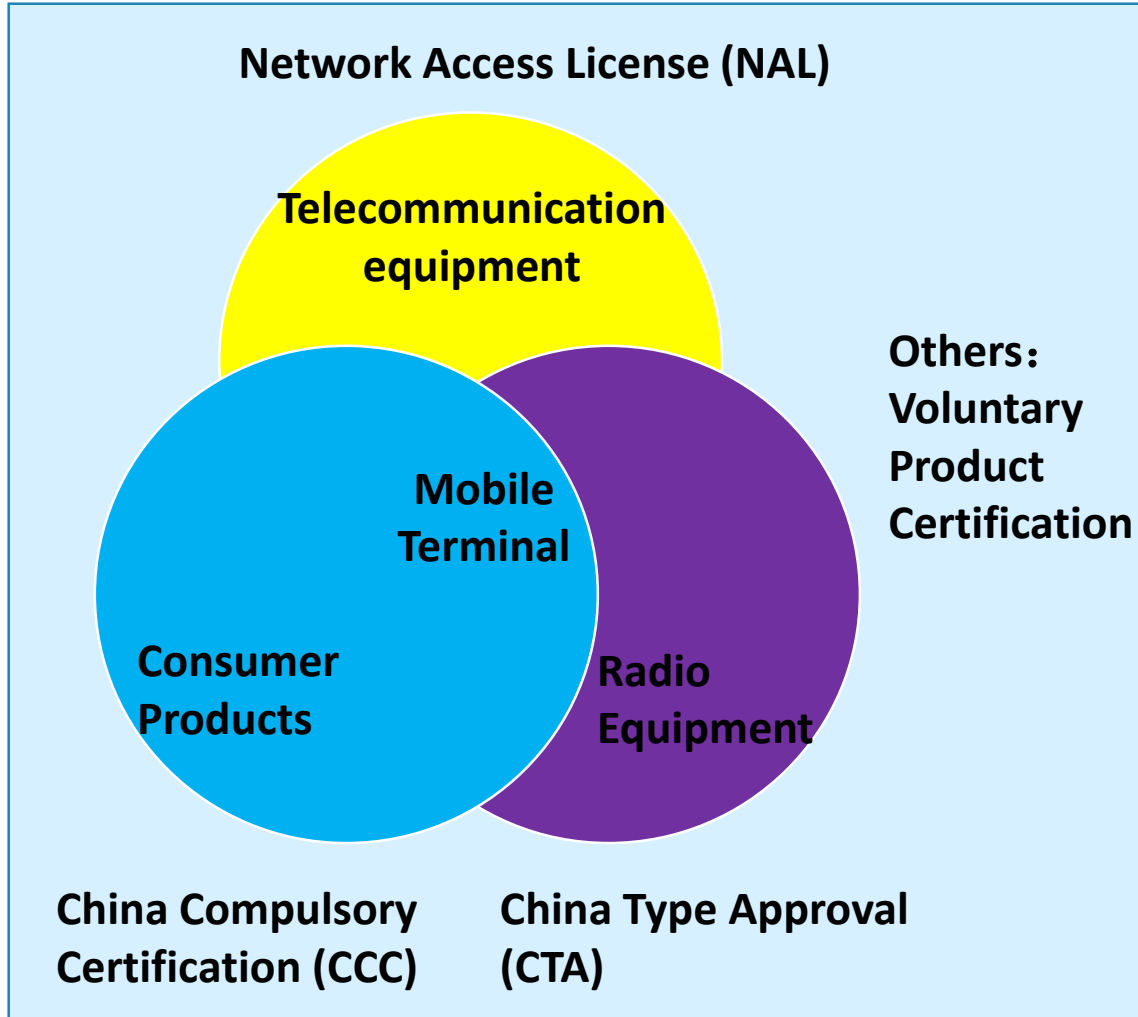
Certification is defined as a third-party attestation related to products, processes, systems or persons.[2]

Accreditation is defined as a third-party attestation related to a conformity assessment body conveying formal demonstration of its competence to carry out specific conformity assessment tasks. [2]

[1] ISO/IEC Guide 2:2004 Standardization and related activities -- General vocabulary

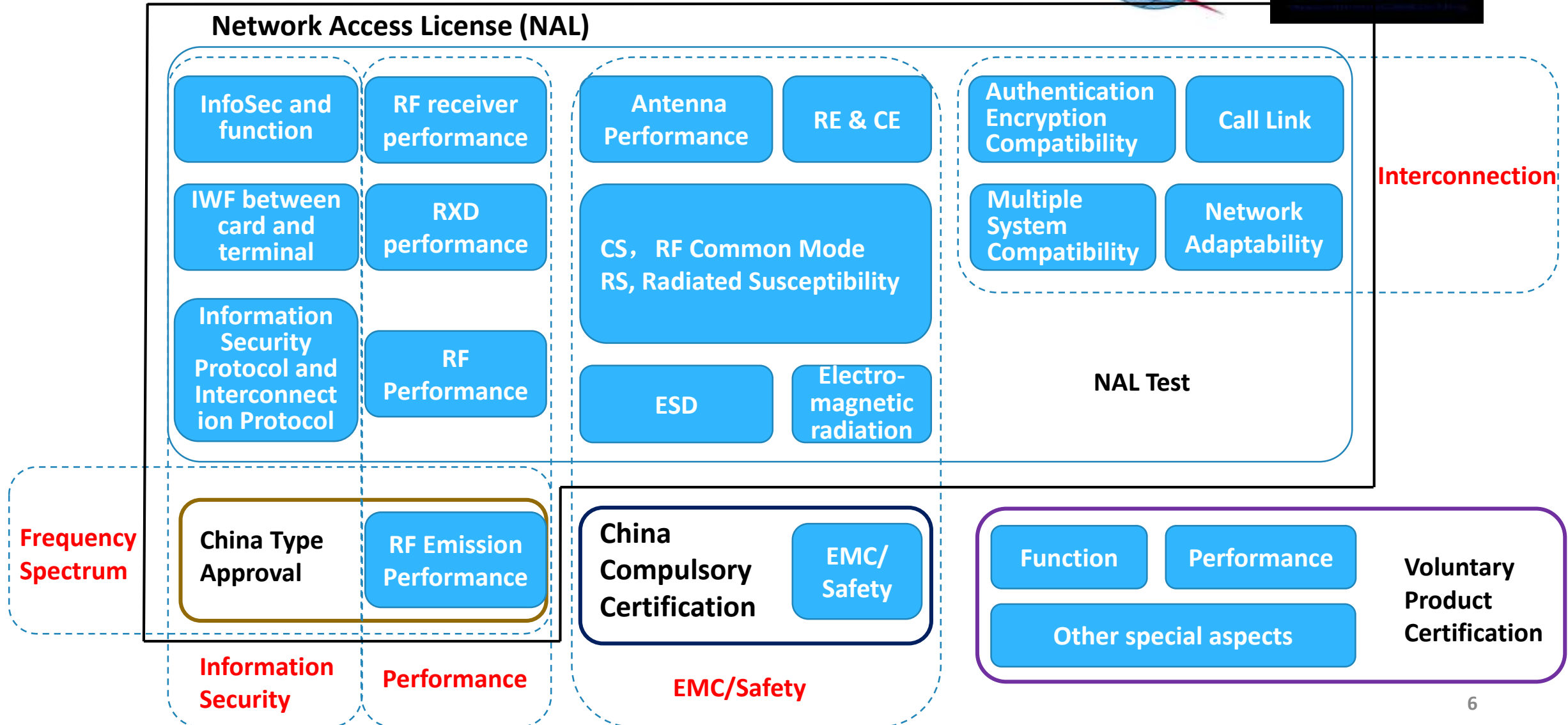
[2] ISO/IEC 17000:2004 Conformity assessment – Vocabulary and general principles

Overview of ICT Product Regulation Patterns

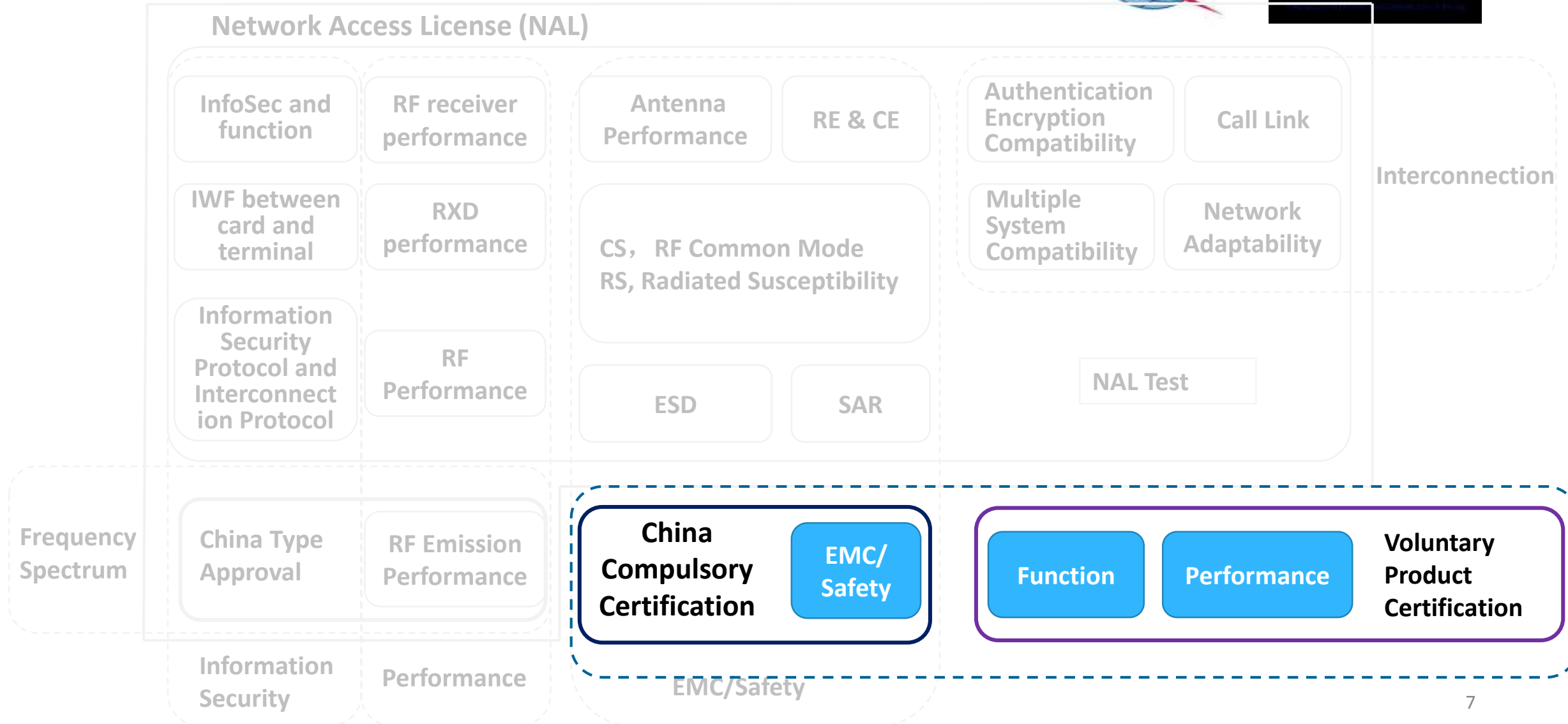


Regulation Pattern	Regulation Scope
China Compulsory Certification (CCC)	Telecommunications terminal equipment, Audio-video equipment, Information technology equipment
Voluntary Product Certification (e.g. TLC, CQC)	Cable, optical cable, power supply, air conditioner, storage battery, distributing frame, etc.
Network Access License (NAL)	Telecommunications terminal equipment, wireless communication equipment and equipment used in network interconnection
China Type Approval (CTA)	Radio Equipment
Others	China RoHS; China Environmental Labeling; Network security; Green Labeling, etc.

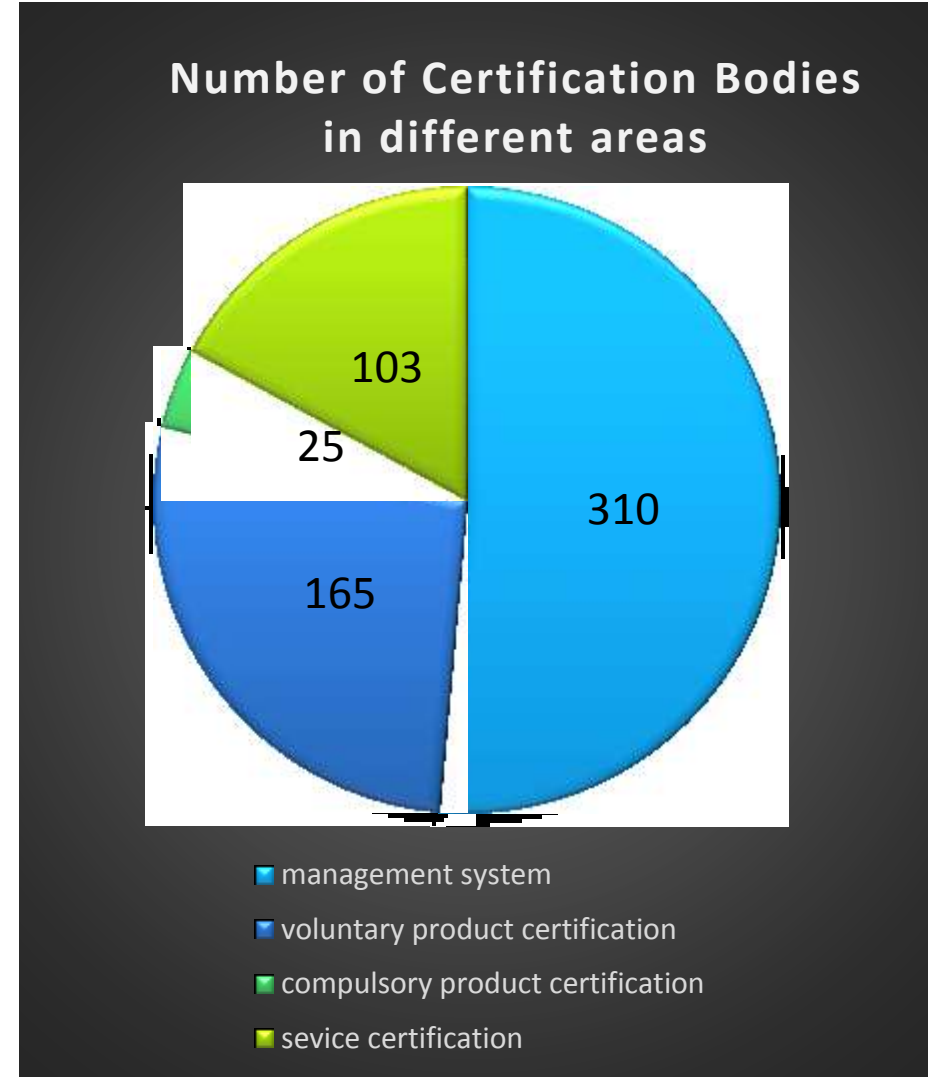
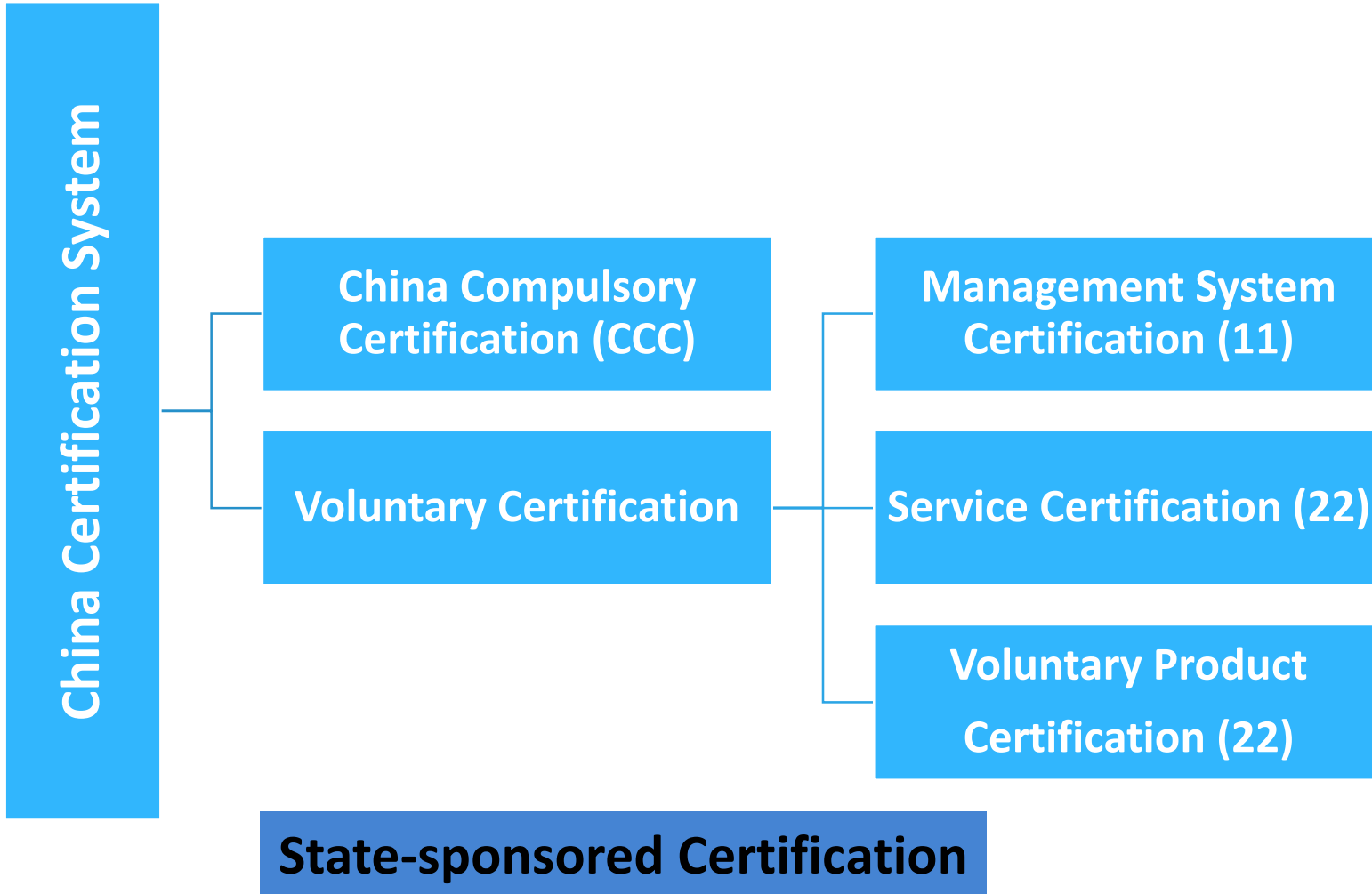
Focus of Different Regulation Patterns



Focus of Different Regulation Patterns



Category and Field of Certification



Agenda



- 1 Overview of China's ICT product regulation pattern
- 2 **Introduction of product certification system**
- 3 Effects of product certification system
- 4 TLC Product Certification

History of Product Certification System in China



CCIB Mark



CCEE Mark



CCC Mark

Development of CCC

Until Apr. 30, 2003

From May 1, 2002, CCC established

2002

2003

Development of Voluntary Product Certification

Voluntary product certification system initially established

Gradually improved

Reasons for Implementing Product Certification System:

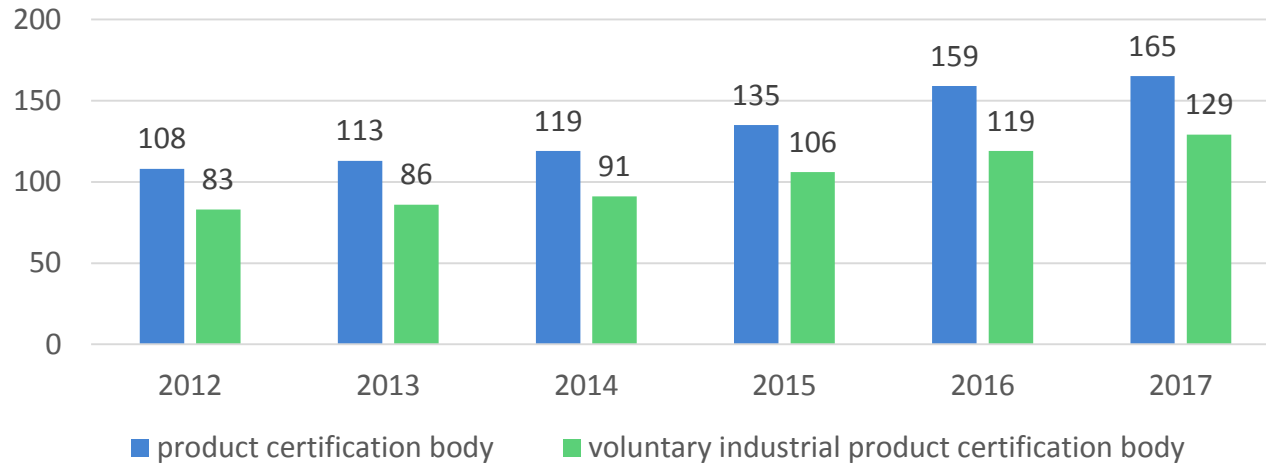
- Carry out commitment of accession of China to WTO;
- Improve market economy and trade, so as to adapt to market economy requirements;
- Regularize interior management, and optimize China's product certification system;
- Similar to product certification systems in other countries, provide convenience for mutual recognition;

Regulations of the P.R. China on Certification and Accreditation, issued in 2003, 9

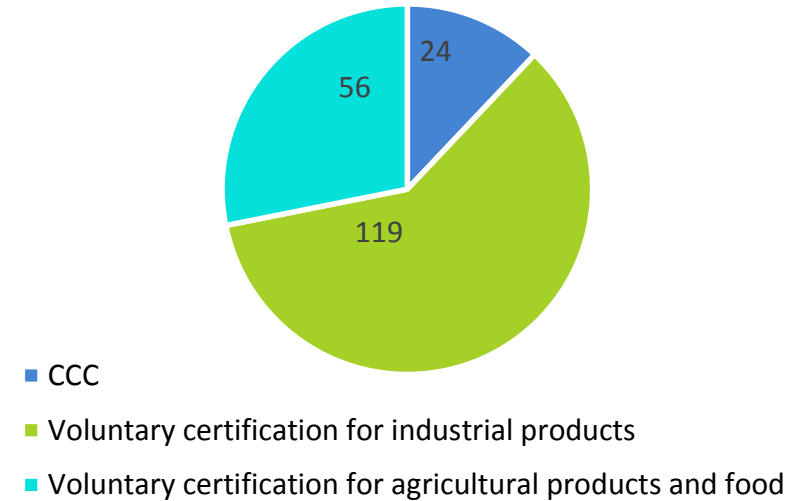
Development of Product Certification System



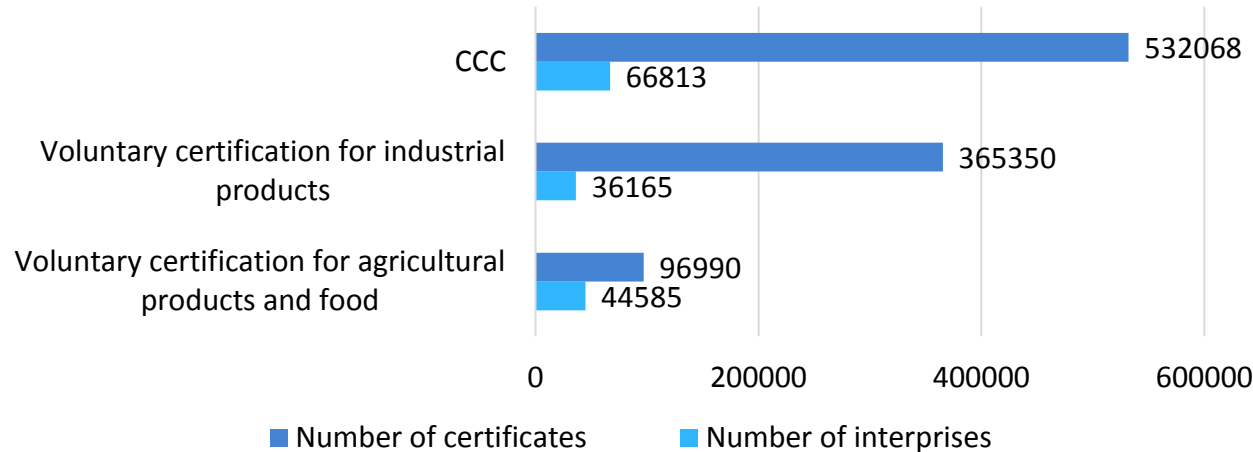
Number of product CBs in the past six years



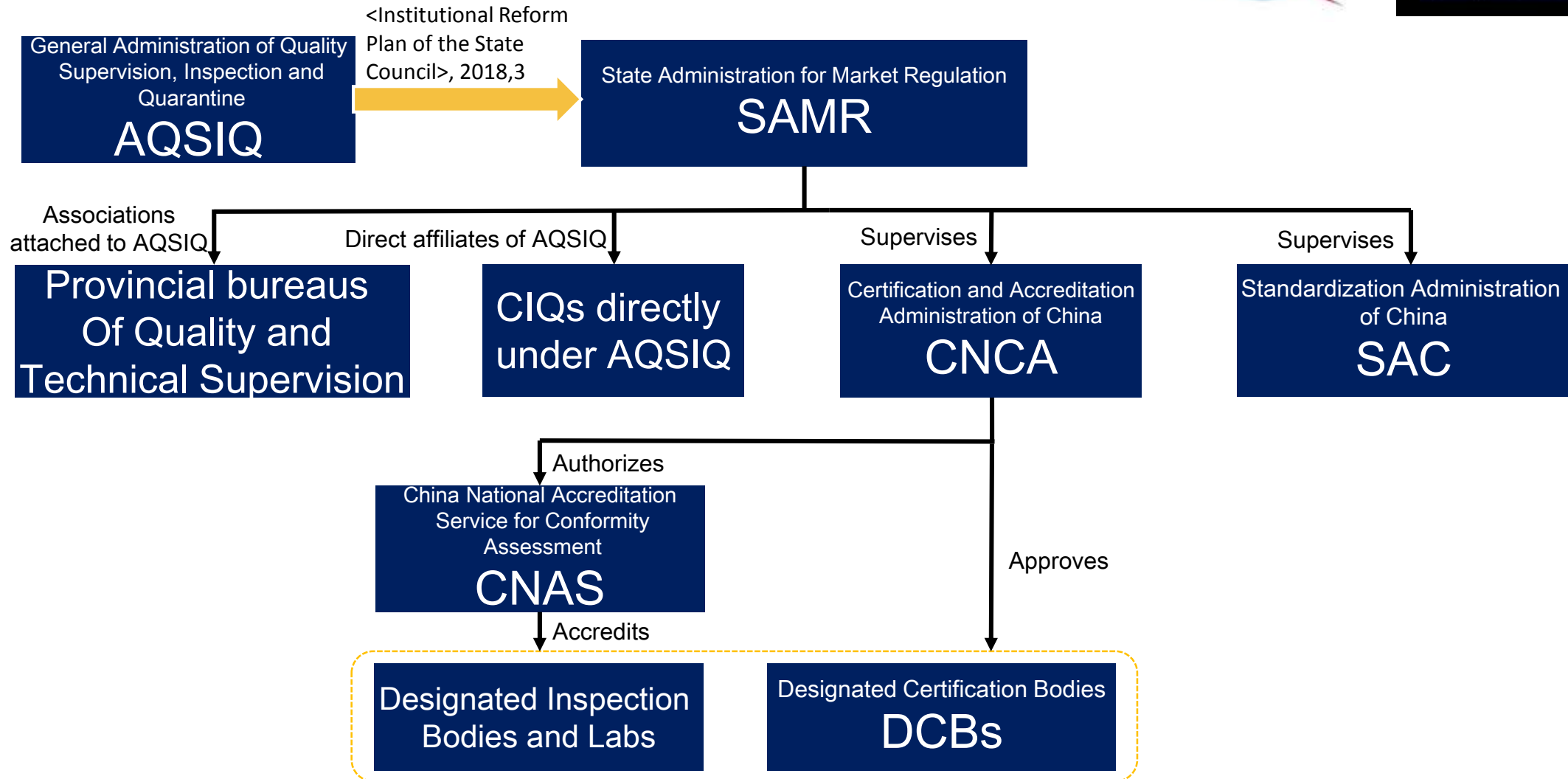
Number of Product CBs



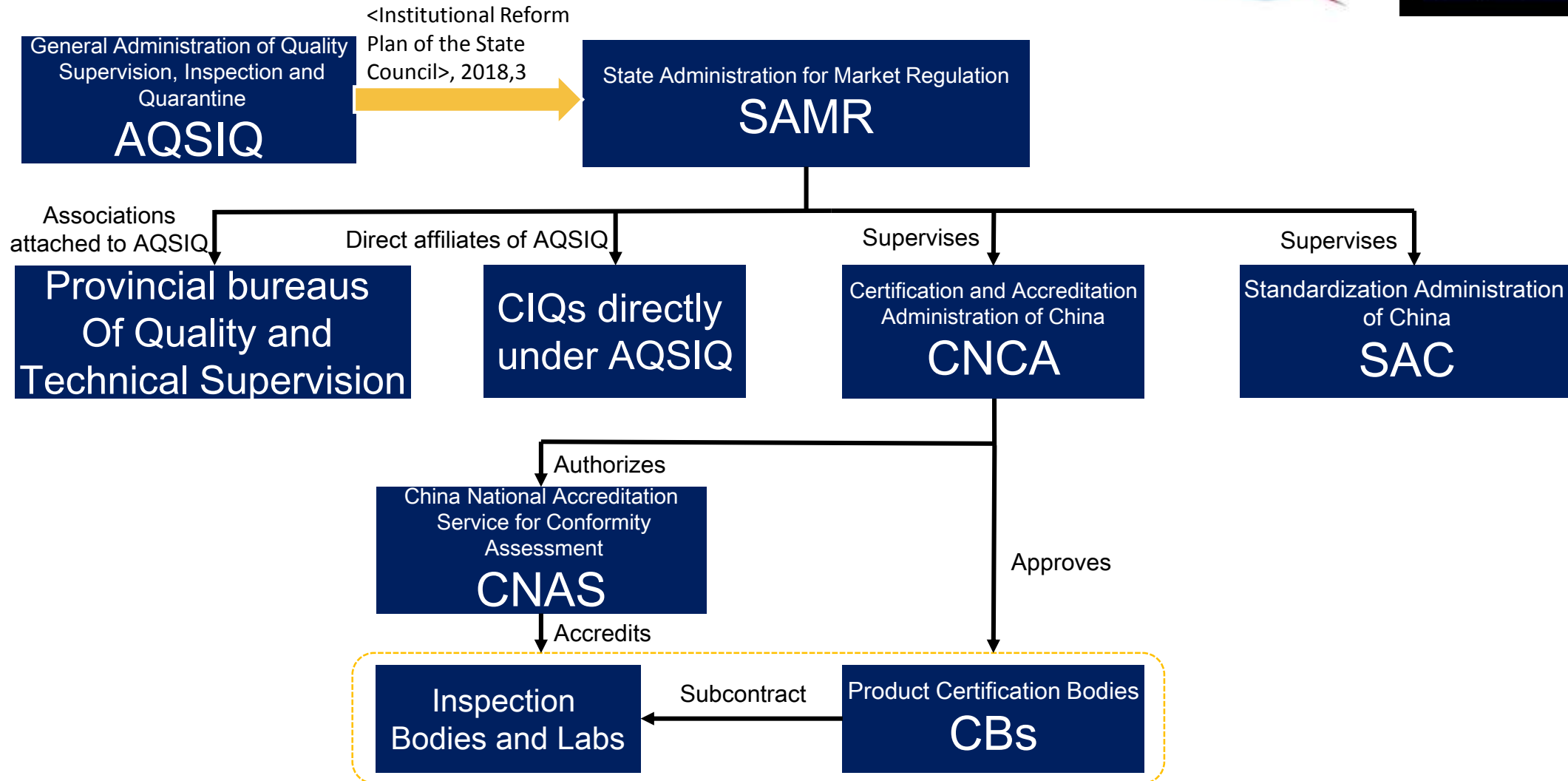
Distribution of product certificates of different areas



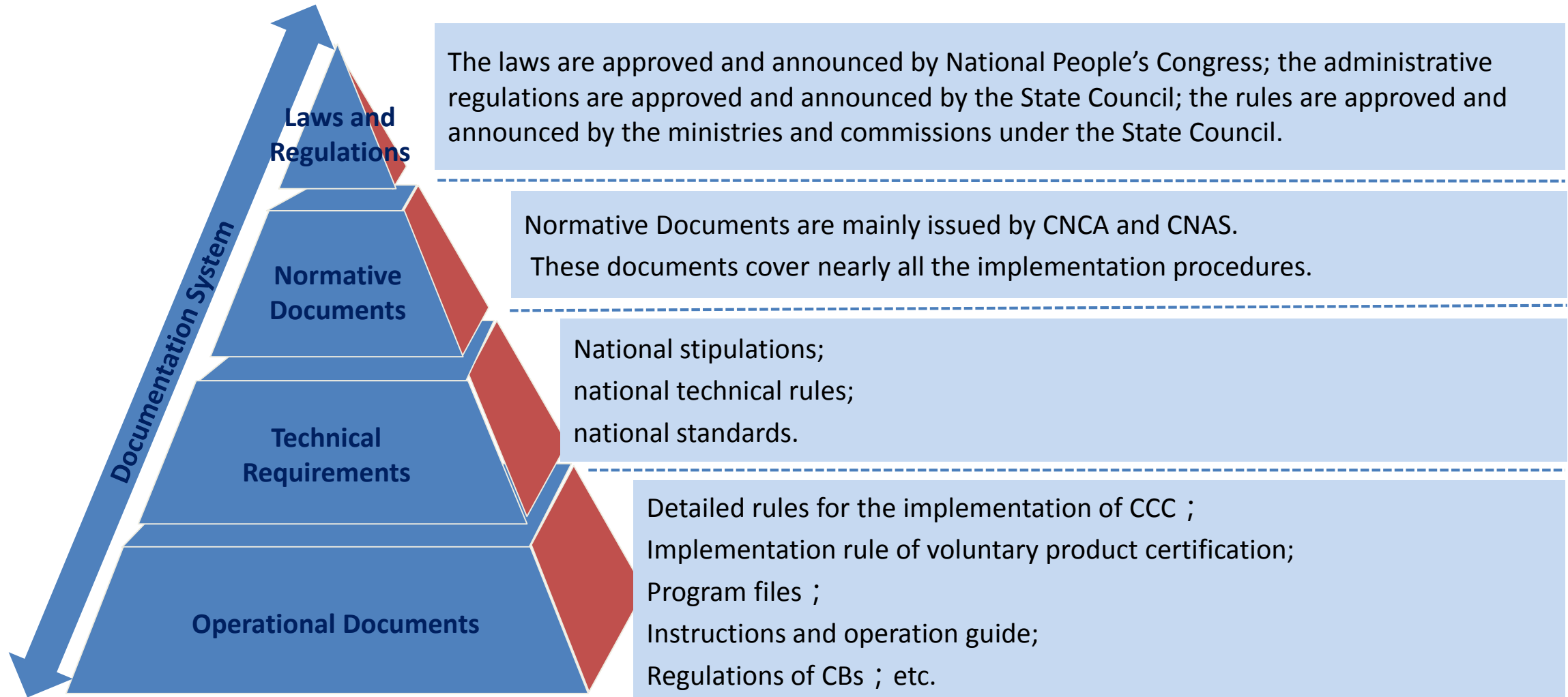
Regulatory Framework of Compulsory Product Certification



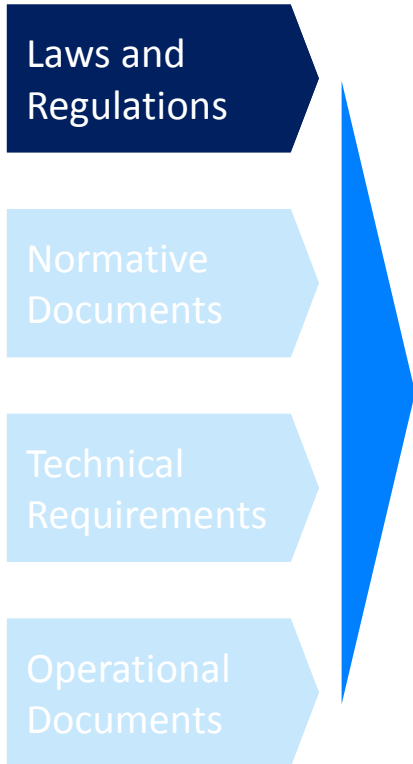
Regulatory Framework of Voluntary Product Certification



Documentation System



Documentation System



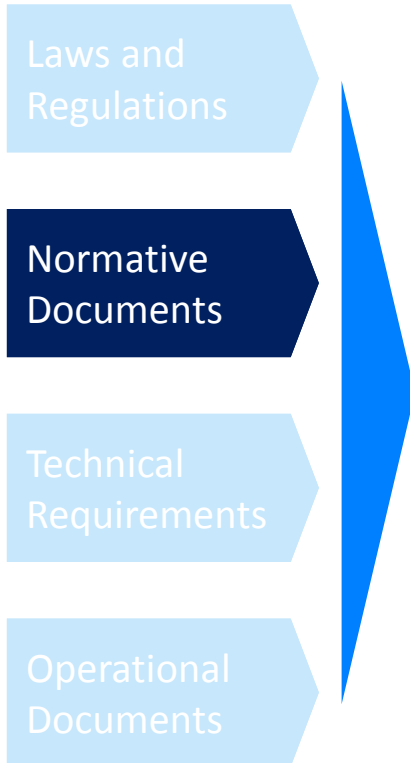
General:

- Standardization Law of P. R. China
Including the classification、 nature and implementation methods of standards.
- Product Quality Law of P. R. China
Certification system, supervision system; responsibility and penalties of CBs, local organizations, producers and distributors.
- Law of P. R. China on Import and Export Commodity Inspection
Import safety quality licensing system.
- Regulations for The Implementation of the Standardization Law of P. R. China
- Regulations of the P.R. China on Certification and Accreditation etc.

For CCC:

- Provisions on the Administration of Compulsory Product Certification, AQSIQ Decree (2009) No.117
- Administrative Measures on Entry Verification of Civil Commodities subject to Import Licensing System , AQSIQ Decree (2001) No.6 etc.

Documentation System



CNCA: (mainly for CCC)

- Regulations for Compulsory Product Certification Mark , Notice No.1 (2001) of CNCA
- Catalogue description and definition of Compulsory Product Certification, Notice No.45 (2014) of CNCA
- Regulations on Designation of Certification Bodies, Inspection Bodies and Testing Laboratories for Compulsory Product Certification
- Implementation Rules for Compulsory Product Certification
- etc.

CNAS:

- Accreditation criteria for CB/Inspection Bodies and Labs;
- Rules for the Accreditation of CB/Inspection Bodies and Labs;
- Guidelines for the Accreditation of CB/Inspection Bodies and Labs;
- Illustration for the Accreditation of CB/Inspection Bodies and Labs.

Documentation System



Laws and Regulations

Normative Documents

Technical Requirements

Operational Documents

For CCC:

- Mandatory requirements set in national mandatory standards or national technical rules;

For Voluntary Product Certification

- National standard;
- Industry standard;
- Technical specification for product certification;
- International standard;
- Group standard.

Documentation System



Laws and Regulations

Normative Documents

Technical Requirements

Operational Documents

General:

- Program files set by CBs for product certification;
- Public document;
- Forms;
- Regulations of CBs; etc.

For CCC:

- Detailed rules for the implementation of CCC based on normative documents issued by CNCA;

For Voluntary Product Certification:

- Implementation rules issued by CBs;
- Certification scheme; etc.

Supervision of CCC System



Access Condition

- Legitimate basis: <Regulations on compulsory Product Certification Administration>, etc.
- Designated certification body, designated testing body
- Unified catalogue , unified implementation rules

Special Supervision

- Frequency: once a year
- Object: designated certification body and designated testing body or labs
- Mode: office inspection, inspection of certified enterprise, spot check of certification file or inspection report, professional ability examination of approved persons

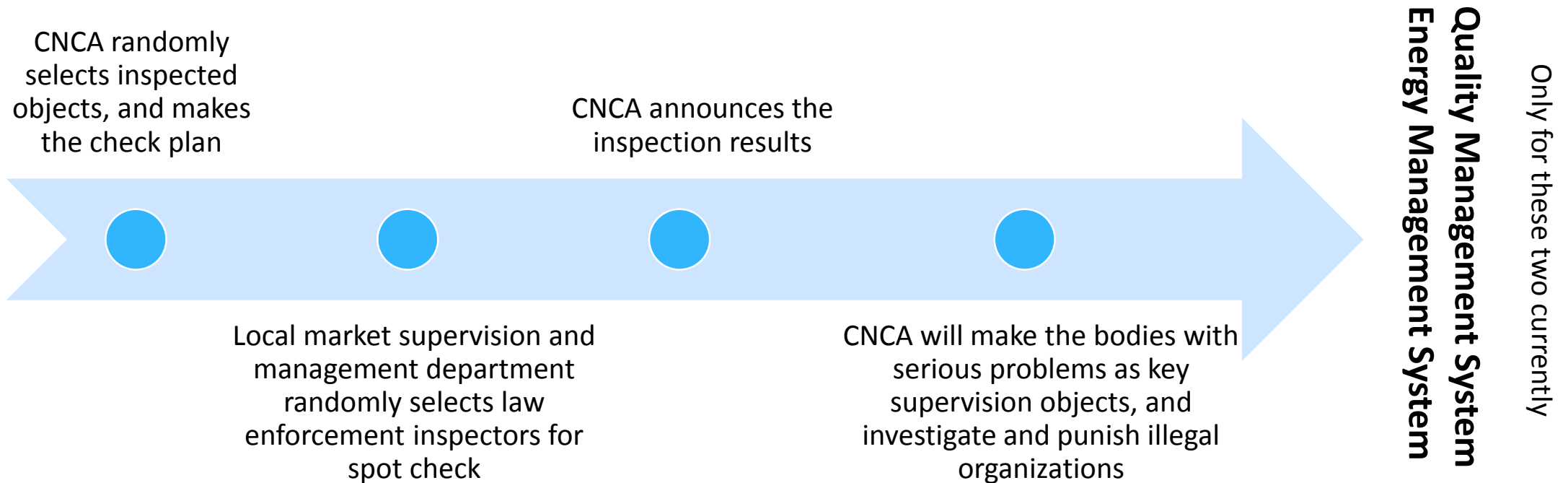
Market Spot Check

- Frequency: multiple batches
- Object: certified enterprises of CCC
- Mode: State spot check supervision, local special law enforcement spot check for CCC certification

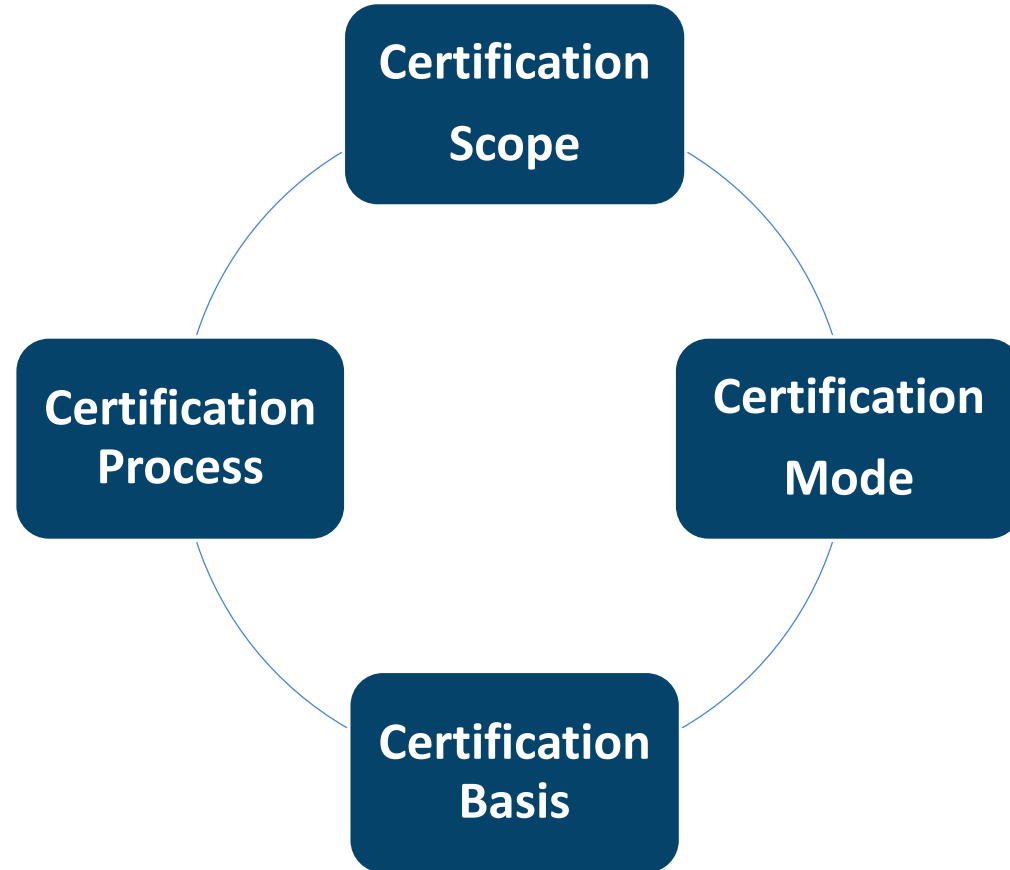
Supervision of Voluntary Certification



- ✓ In August 2015, General Office of State Council issued the notice about promotion of random spot check and standardization of in-incident supervision and after-incident supervision.
- ✓ “Double random-one disclosure” regulatory mode: random selection of inspected objects, random selection of law enforcement inspectors, and timely disclosure of supervision information.



Key Factors for Implementation



Key Factors for Implementation

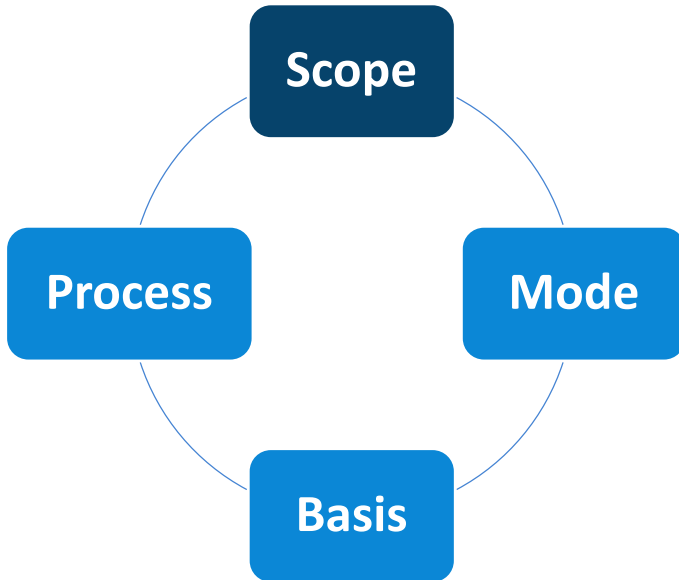


The first catalogue of products subject to CCC (2001)

19 categories , 132 items

Catalogue description and definition (up to 2017.12)

21 categories , 164 items



Total 21 categories , 164 items:


■ Cover more than 10 sectors related to human life and health that may affect national economy

ICT area:

■ Telecommunications terminal equipment, Audio-video equipment, Information technology equipment

Compulsory Product Certification

e.g.



Category	Number of Products
Cable	78
Distribution	44
Power Supply	30
Battery	8
Air conditioner	6
Surge Protection	5
Wireless/Optical Module/RFID, etc.	27

Voluntary Product Certification

Guidelines for Product Certification Schemes

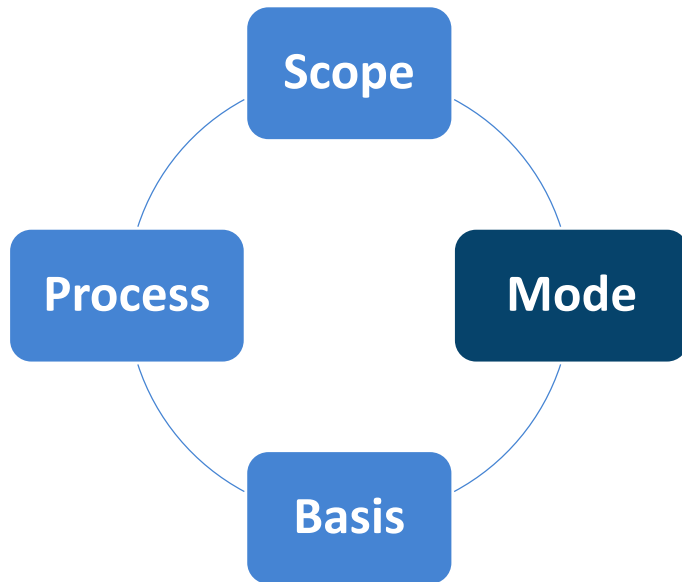


Conformity assessment functions and activities within product certification schemes

Types of product certification schemes

		Types of product certification schemes								
I	Selection, including planning and preparation activities, specification requirements	X	X	X	X	X	X	X	X	X
[Redacted]										
III	Review	X	X	X	X	X	X	X	X	X
[Redacted]										
Attestation, licensing										
[Redacted]										
V	b) Granting the right to use certificates or other statements of conformity	X	X	X	X	X	X	X	X	X
[Redacted]										
	d) Granting the right to use marks of conformity is based on surveillance or certification of a batch		X	X	X	X	X	X	X	
[Redacted]										
	a) Testing or inspection of samples from the open market				X		X	X		
[Redacted]										
	c) Assessment of the production, the delivery of the service or the operation of the process						X	X	X	X
[Redacted]										

Key Factors for Implementation



For Voluntary product certification, mainly (it depends on CBs):

- Type Testing + Initial factory inspection + Follow-up inspection

For Compulsory Product Certification:

- Based on implementation rule “classification management of producers, selection and determination of Certification Mode”

- Certification Elements mainly include: Type testing; Testing or inspection of samples taken from the factories; Assessment of manufacturers’ quality assurance system and consistency of products; Testing or inspection of samples taken from the market; Follow-up inspection on certified products; Design verification

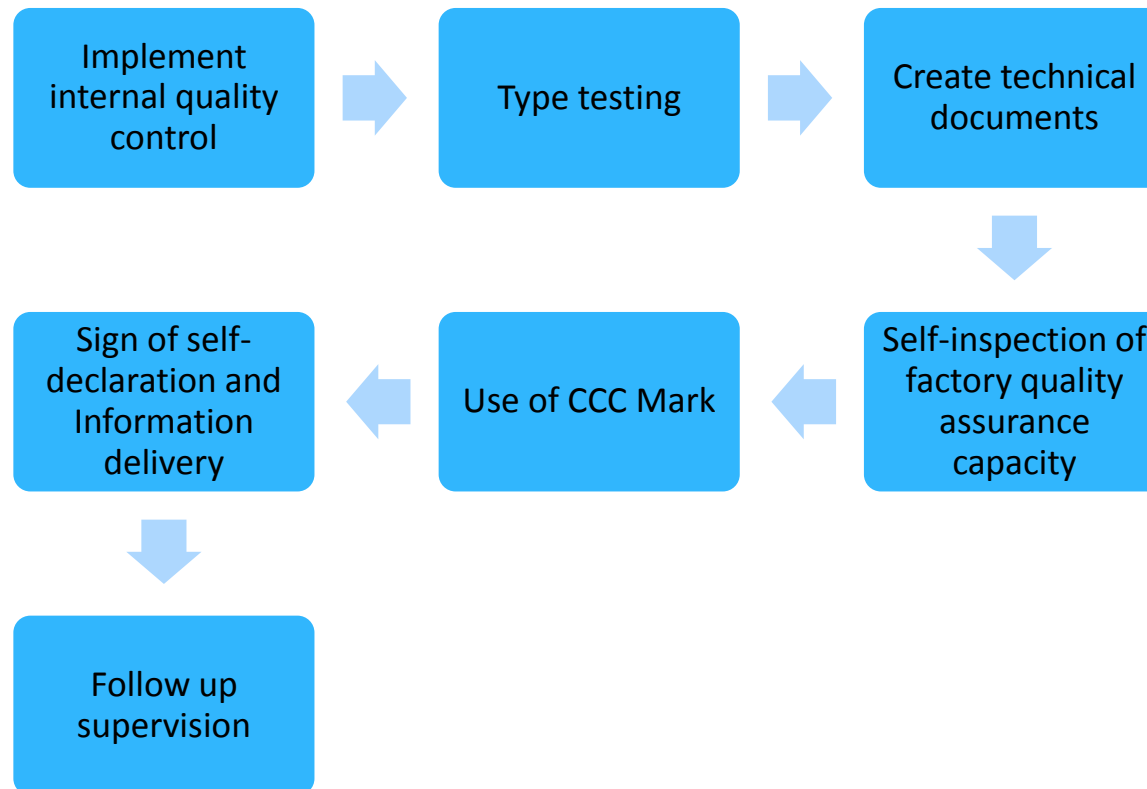
- Selection of certification mode: Determine the Basic Certification Mode based on risk grade、 operability and economy; CBs implement classified management for manufacturing enterprises; CBs choose the suitable certification mode based on the classification through adding one or more Certification Elements.

- e.g. Type Testing + Follow-up inspection; or Initial factory inspection + Type Testing + Follow-up inspection (Surveillance)

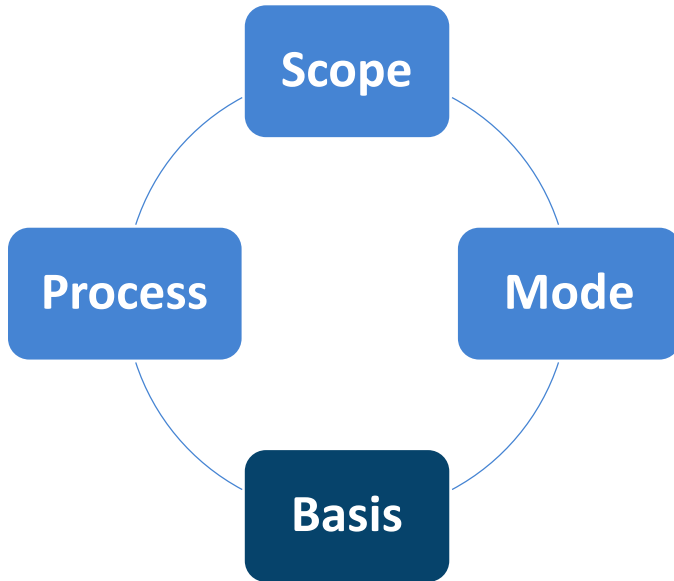


Tips: Self Declaration of Conformity in CCC

- ✓ In June 2018, State Administration for Market Regulation and CNCA jointly issued the notice about adjustment and reformation of CCC certification catalogue and specific implementation rules.
- Some products removed from the CCC certification catalogue;
- Some products could adopt self declaration of conformity, such as Audio-video equipment, Information technology equipment.



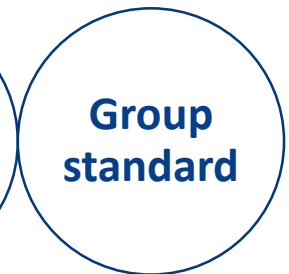
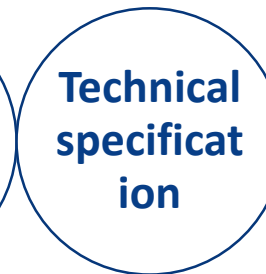
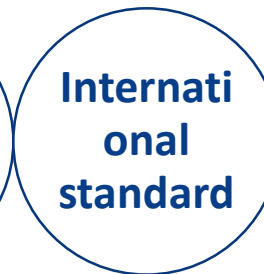
Key Factors for Implementation



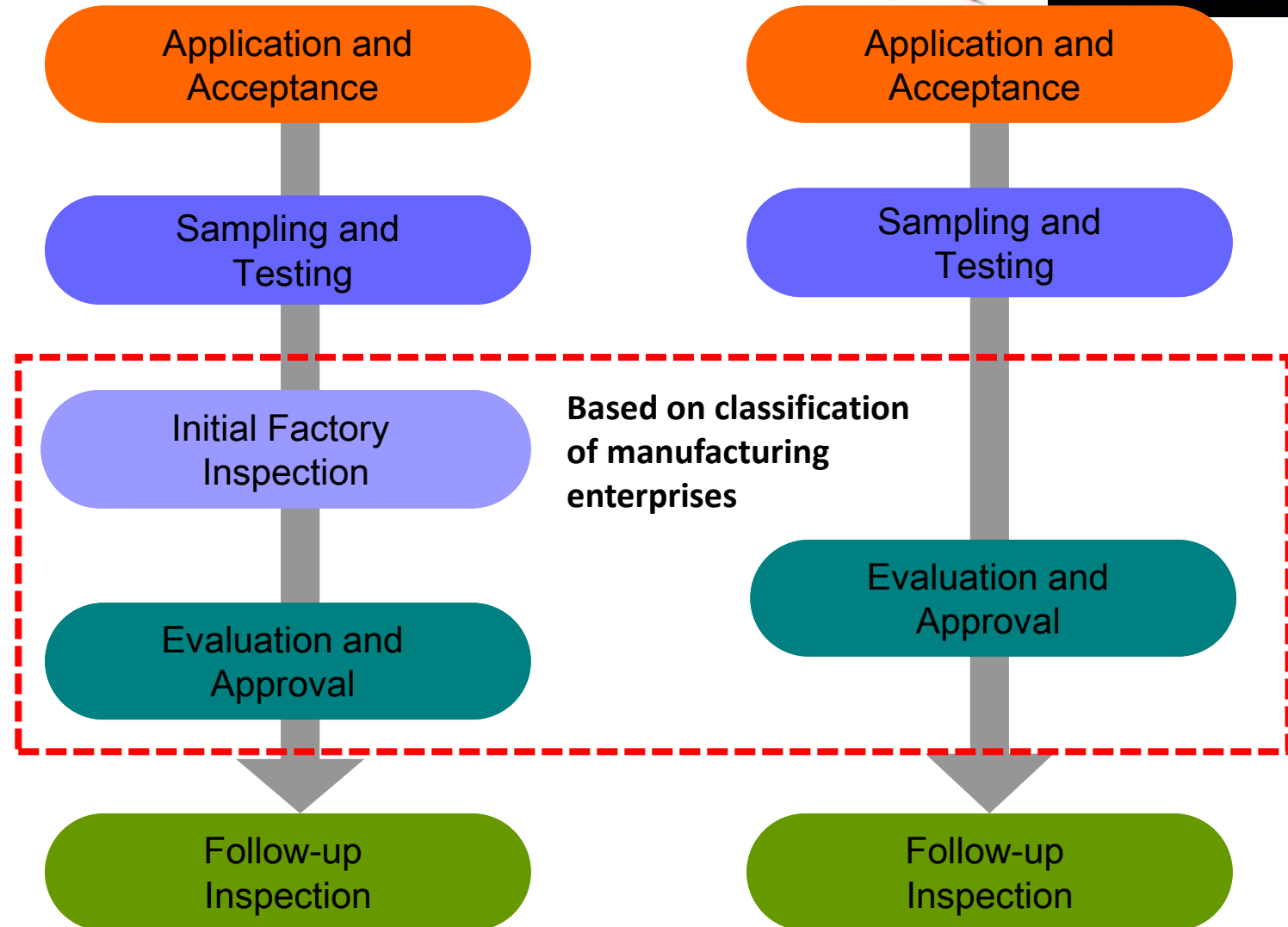
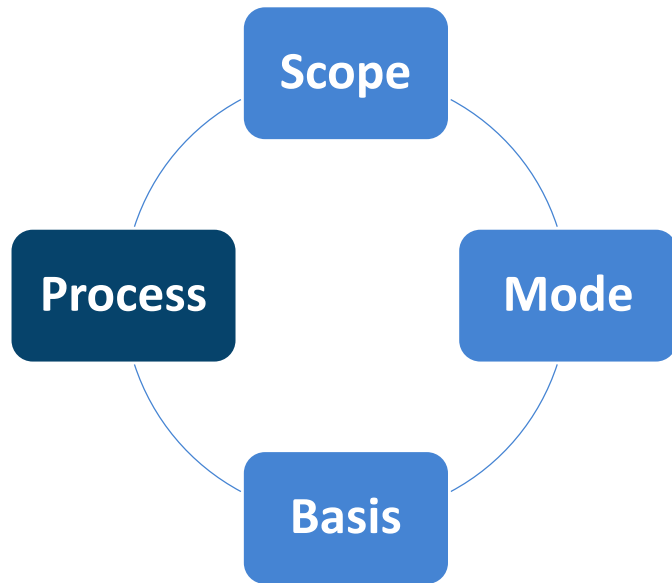
Compulsory Product
Certification



Voluntary Product
Certification

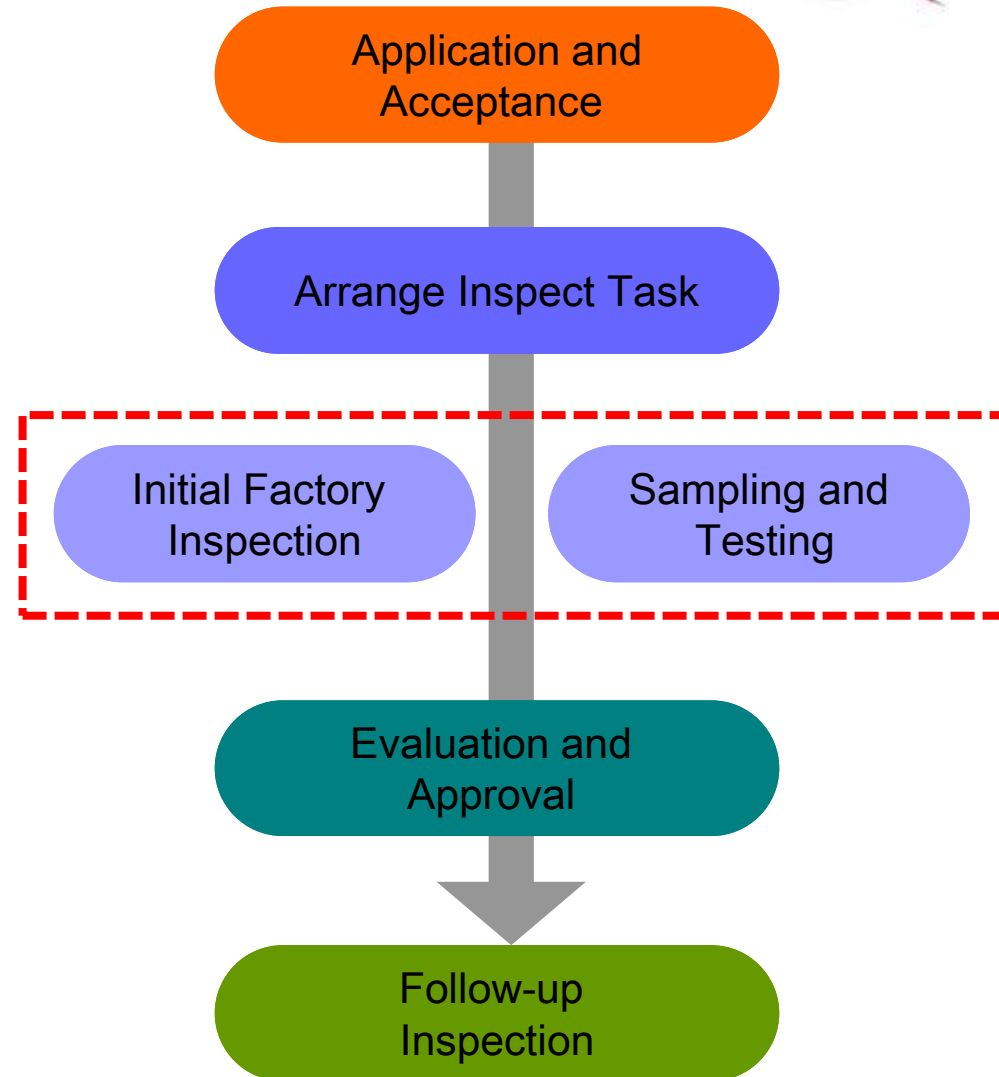
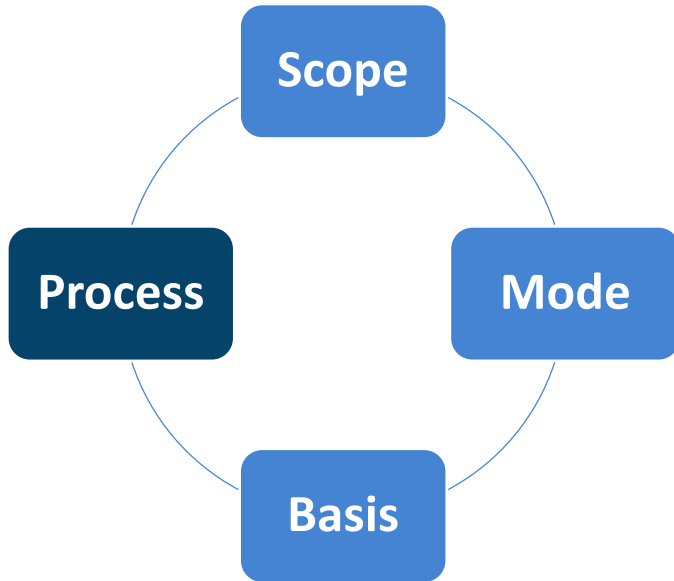


Key Factors for Implementation



Compulsory Product Certification

Key Factors for Implementation



Voluntary Product Certification

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Initiatives of Product Certification



- An internationally adopted measure to regulate economy and promote development
- A reliable method of organizations to enhance management level, guarantee product quality and improve competitiveness
- A strategic choice of the nation to guarantee product safety, regulate market, guide consumers, protect environment, protect human life and health, and to promote international trade
- China implements Compulsory Product Certification in accordance with relevant laws and regulations for the purpose of protection of state security, prevention of deceptive practices, and protection of human life or safety, animal or plant life or health, and the environment.
- China promotes voluntary certification to guide consumers, improve enterprises' competitiveness, their products' performance and their capability to maintain compliance.

Effects and Advantages



- **Certification results are widely recognized and adopted by various social sectors**
- ✓ Many laws and regulations have stipulations related to certification and accreditation.
- ✓ The government agencies are adopting more and more certification and results in their efforts of transforming government functions.
- ✓ Products passing energy-saving and environmental protection certification are given priority in government procurement.
- ✓ More enterprises and consumers purchase goods according to conformity assessment results or quality, safety marks.
- ✓ Compulsory product certification could protect safety of human being as well as national security.

Effects and Advantages



- **Product, service quality and management level have been enhanced through certification**
 - ✓ The average rate of product quality above standard in certified enterprises is more than 92%, and in un-certified ones is less than 80%.
 - ✓ More than 95% of surveyed enterprises believe that certification could improve the customer satisfaction and enhance product quality, while nearly 90% think certification could enhance the brand.
- **To certain extent, certification have been promoting the national economic and social development.**
 - ✓ According to the statistics, certification and accreditation have contributed to Chinese economic growth with certain pulling rate.

Agenda

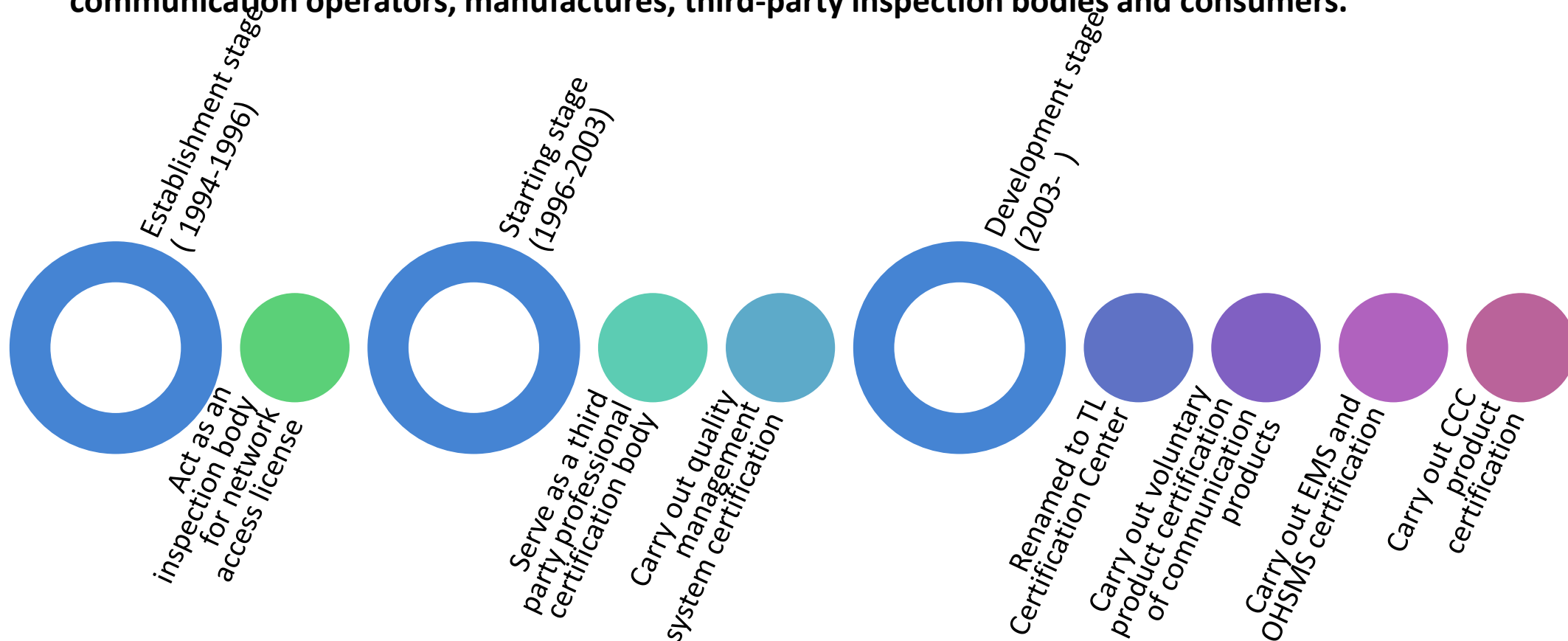


- 1 Overview of China's ICT product regulation pattern
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- 4 **TLC Product Certification**

Introduction of TLC



TL Certification Center (TLC for short), is a department under CAICT, and it's a professional certification body with product certification and management system certification ability. TLC mainly focus on quality management, promotion of ICT industry, and try to promote harmonious development of government, communication operators, manufactures, third-party inspection bodies and consumers.



Four Development Stages

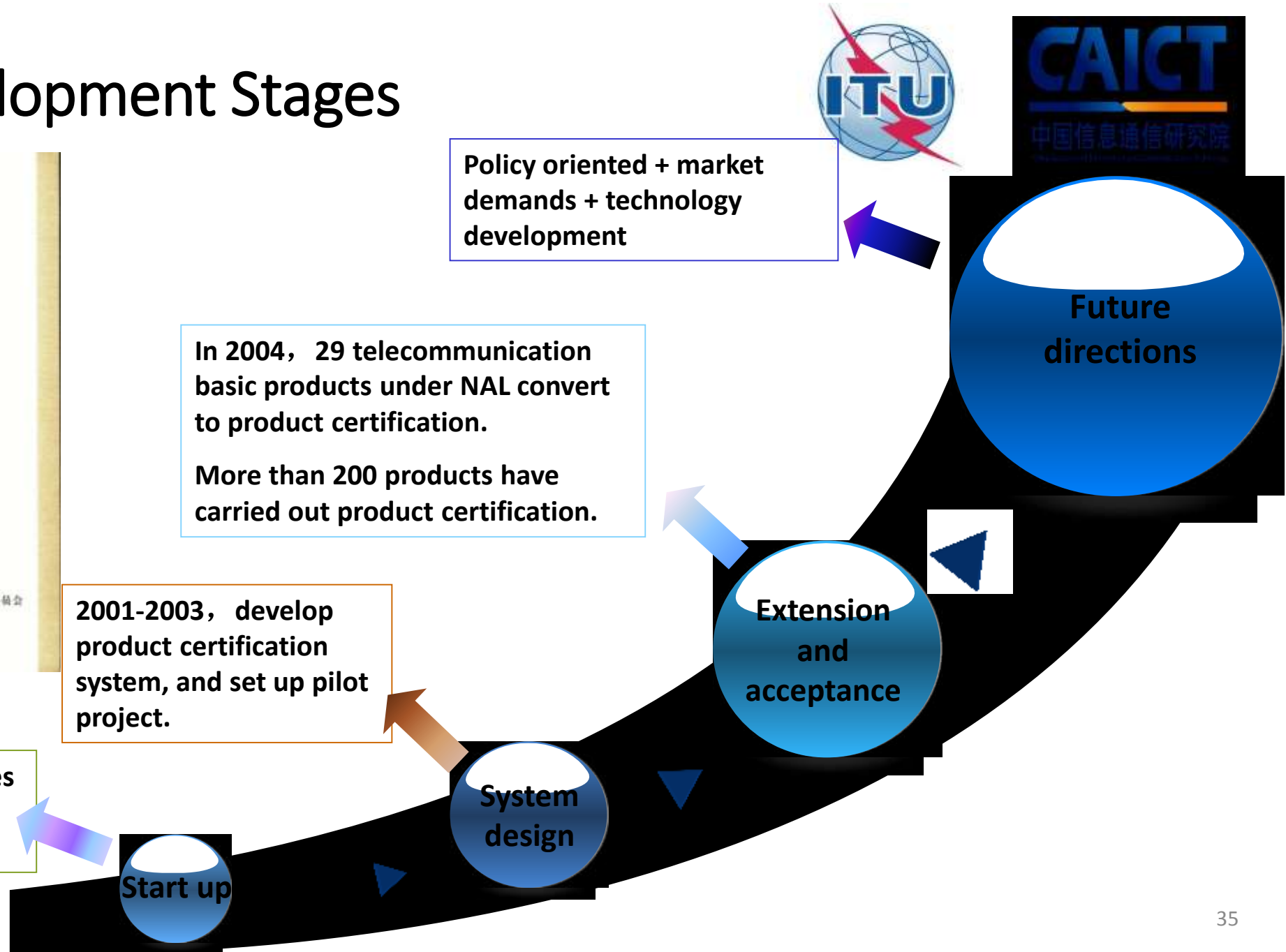


In 2000, opportunities arising from policy changes.

2001-2003, develop product certification system, and set up pilot project.

In 2004, 29 telecommunication basic products under NAL convert to product certification.
More than 200 products have carried out product certification.

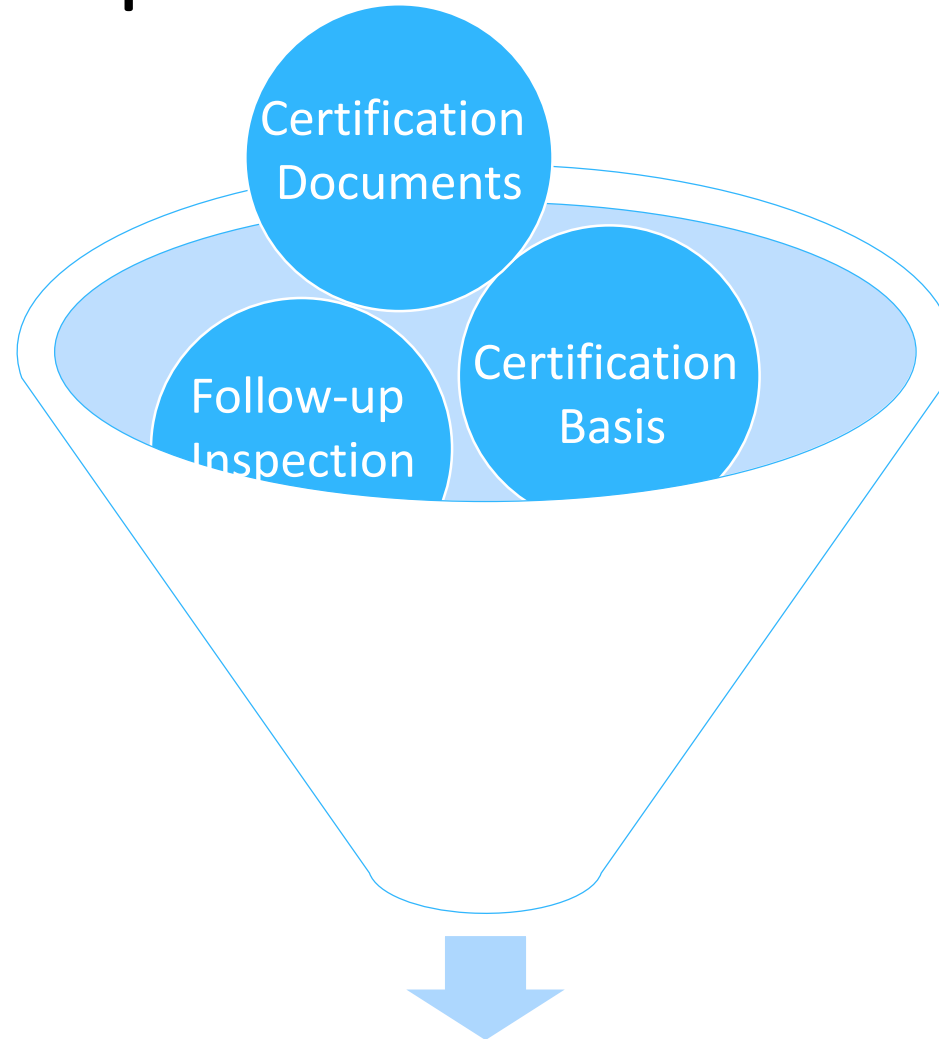
Policy oriented + market demands + technology development



Extension and Acceptance



Reflect information of products' key components and test items



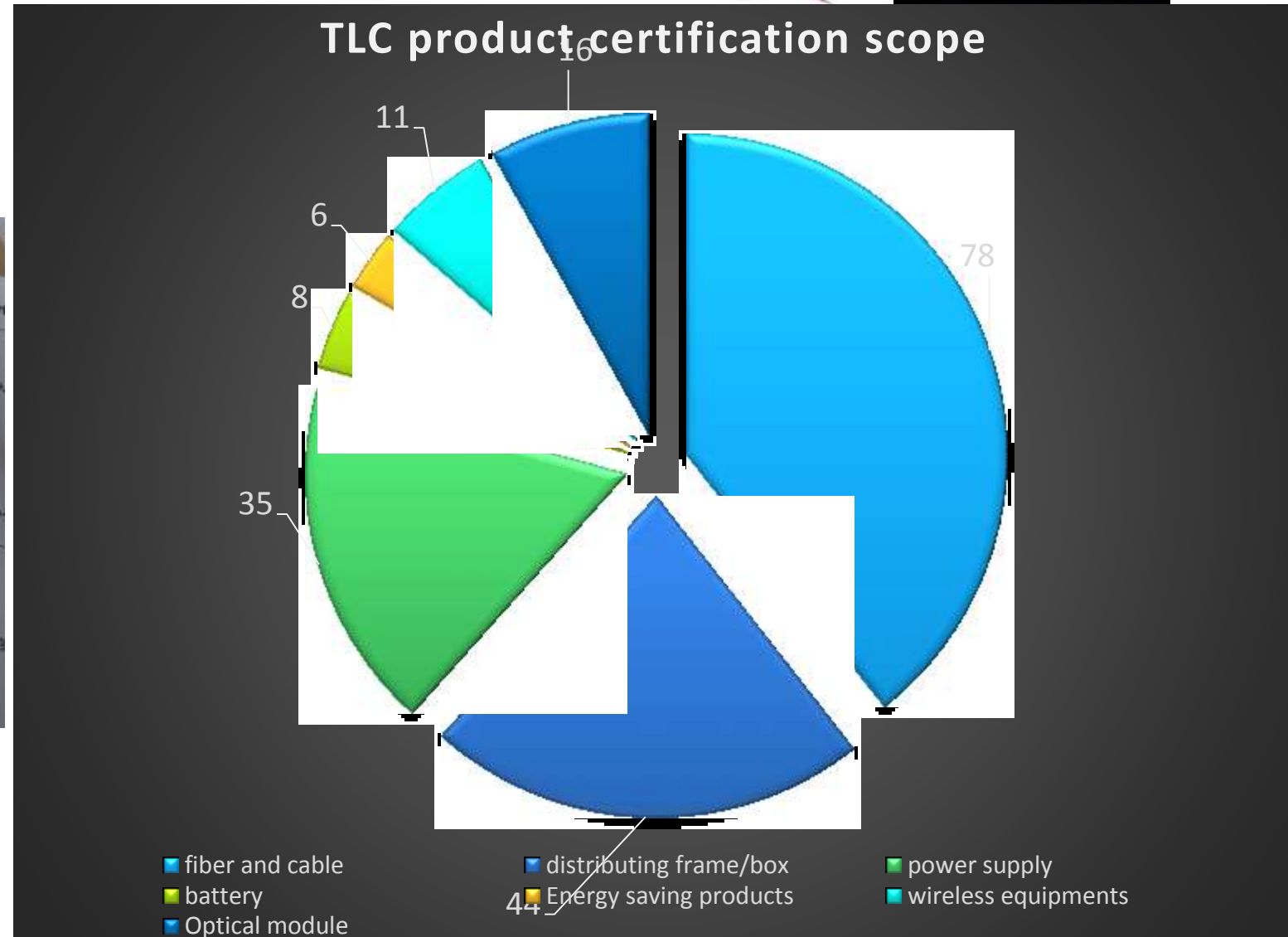
National standard;
Industry standard;
International standard
Technical specification for product certification

Follow-up inspection:
factory inspection + testing;
Or factory inspection + enhanced designated field testing

Unified testing report format;
Unified testing requirements and methods

Show diversity in unity, and seek unity in diversity.

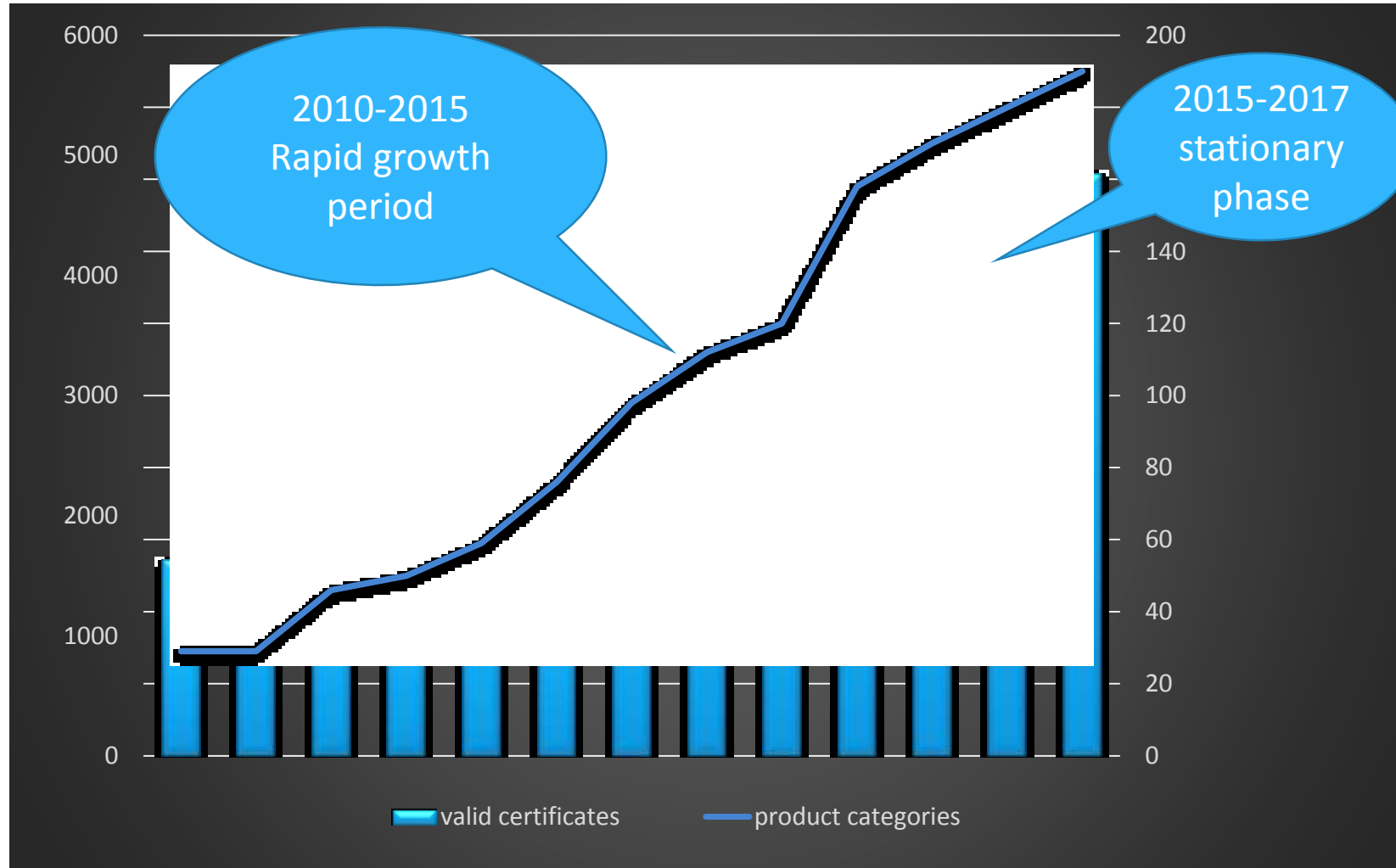
Extension and Acceptance



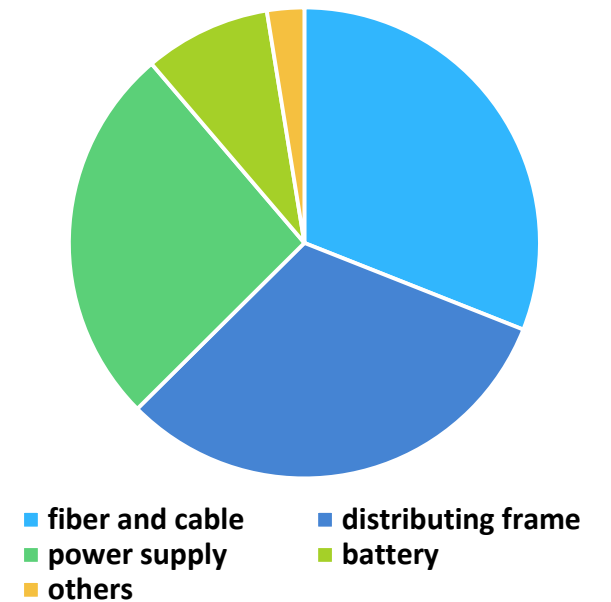
Extension and Acceptance



Certificate issuance of TLC voluntary product certification
(2005-2017)



Valid Certificates (2017)



Extension and Acceptance



Set up communication industry platform, jointly planning to improve the quality of communication products.



Transfer trust, serve the industry, and promote to rise the quality entry threshold.



Support the government, promote the popularization of standards, and promote the conservation of social resources.



In 2012, TLC established certification technical committee.

Serve as part of administrative supervision, with results accepted by competent departments.

Cooperate research on supplier quality management with communication operators.

Training for certification technical leaders from excellent enterprises.

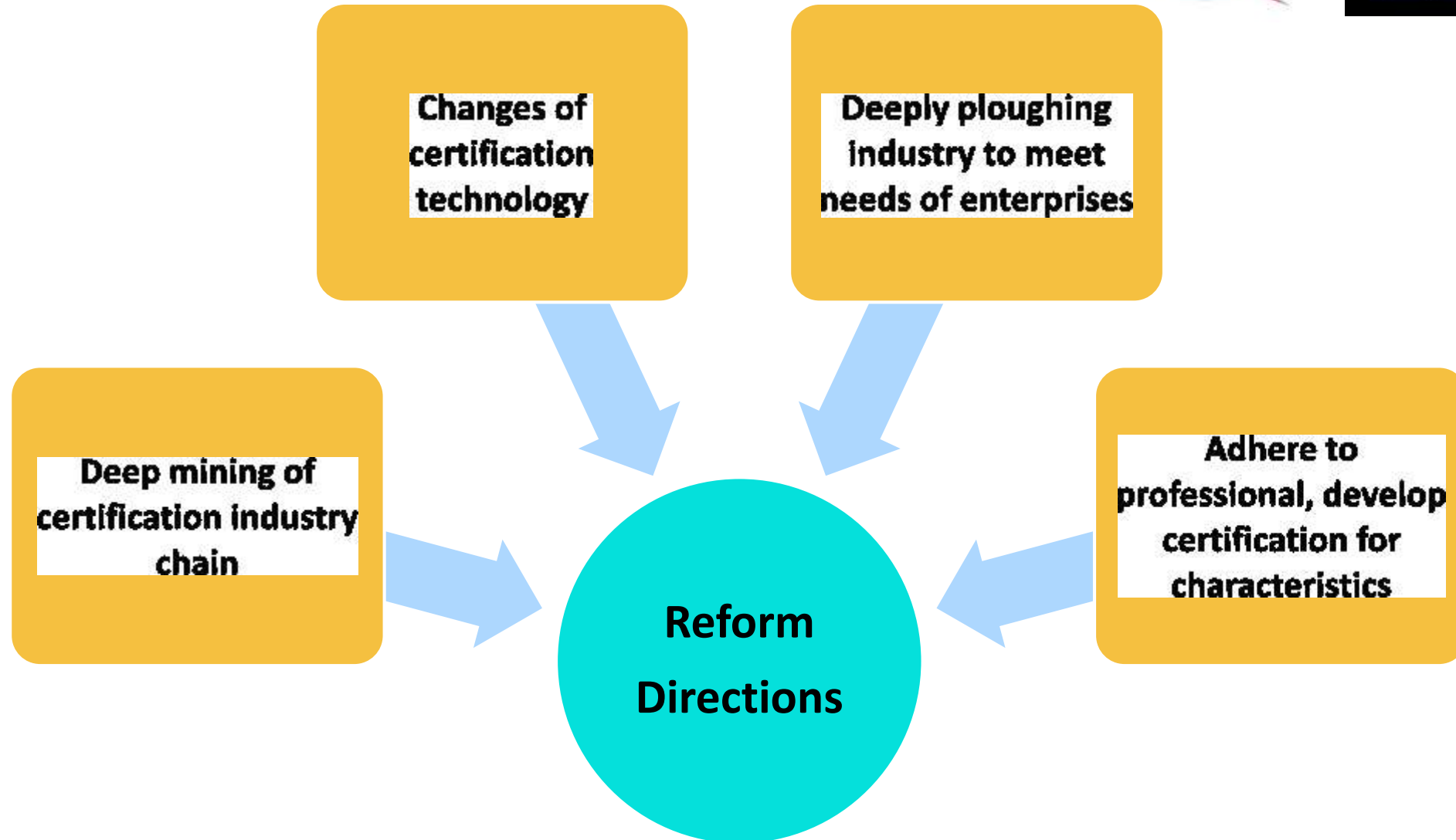
Promotion meeting of the new version standard for mobile phone charger.

Carry out NAL to-Product Certification sessions at Wu Jiang, Shanghai and etc.

TLC certificates regarded as one basic condition of major telecom operators' bidding.

Others accept hospitals, finance transportation, radio & TV, and government's bidding.

Future Directions



Abbreviation Index



CB: Certification Body

CCC: China Compulsory Certification

CCEE: China Commission for Conformity Certification of Electrical Equipment

CCIB: China Import and Export Commodity Inspection Bureau

CIQ: China Inspection and Quarantine

CNCA: Certification and Accreditation Administration of the People's Republic of China

CNAS: China National Accreditation Service for Conformity Assessment

CPC: Compulsory Product Certification

CS: Conducted Susceptibility

CTA: China Type Approval

C&I: Conformity and Interoperability

DCB: Designated Certification Body

EMC: Electro Magnetic Compatibility

ESD: Electro-Static Discharge

Abbreviation Index



ICT: Information and Communication Technology

IEC: International Electro-technical Commission

IECEE: The IEC System for Conformity Testing and Certification of Electrical Equipment

ISO: International Organization for Standards

IWF: Inter-Working Function

NAL: Network Access License

RE & CE: Radiated Emission & Conducted Emission

RF: Radio Frequency

RS: Radiated Susceptibility

RXD: Receive Data

SAC: Standardization Administration of China

SAR: Specific Absorption Ratio

WTO: World Trade Organization

Trainer information



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**Thank You for
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