National Quality Infrastructure Development and Application in the Context of Digitalization

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State Administration for Market Regulation, China
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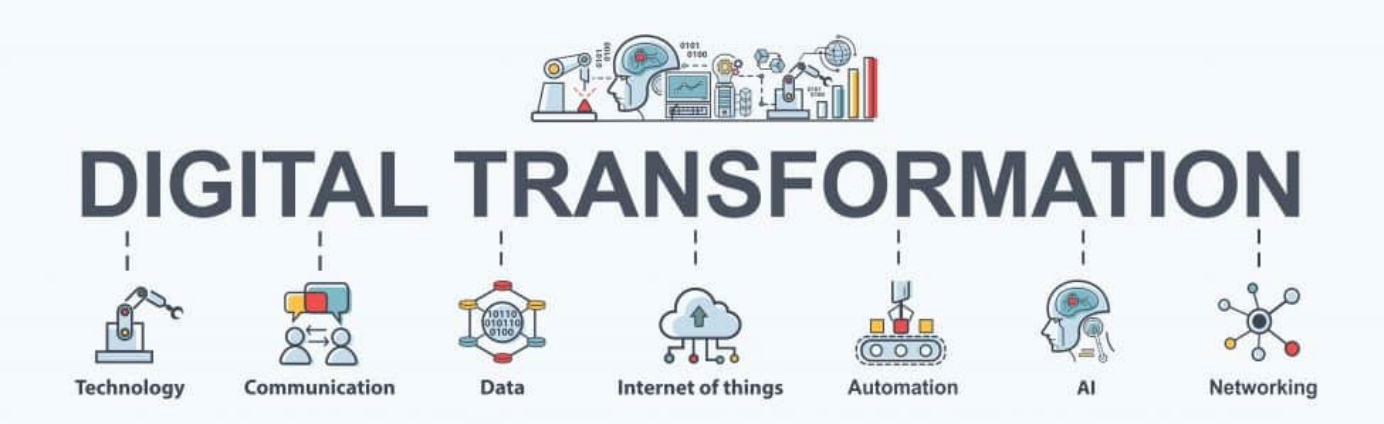
01 Digital Transformation and Quality Infrastructure

Digital Transformation Profoundly Affects Economic and Social Development



- The digitilization of industries is advancing at a high speed.
- The interests of countries are more closely connected.

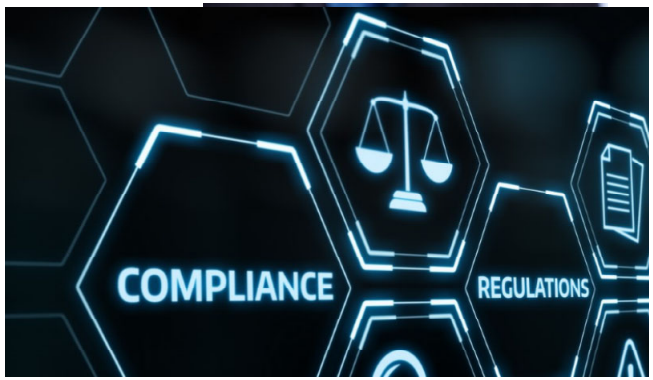
In 2020, the size of the digital economy in developed countries has reached $24.4 trillion, ***about three times*** that of developing countries.

The "digital divide" may bring new inequalities, and digitalization brings new challenges for global governance.

01 POLICIES SUPPORTING QUALITY DEVELOPMENT

Digital Transformation Puts New Demands on Government Regulation

In the digital era, important changes in industrial organization and business models have brought about a series of cross-cutting issues that integrate the regulations of competition, finance, platform, and quality, etc.



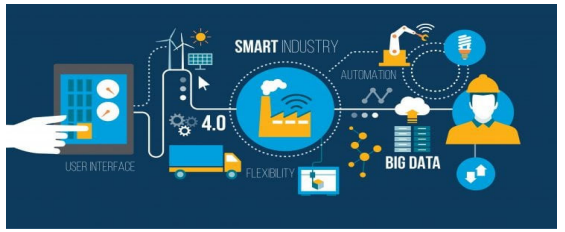
Online shopping and cross-border e-commerce make the traditional consumer experience history, and the existing conformity assessment system is not enough to deliver quality signals to consumers, and how to let the disadvantaged groups share the "digital life" is a new issue for the government.

01 POLICIES SUPPORTING QUALITY DEVELOPMENT

Digital Transformation Requires Iterative Upgrading of Quality Infrastructure

Machine readable standards

IoT

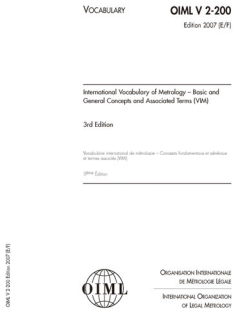


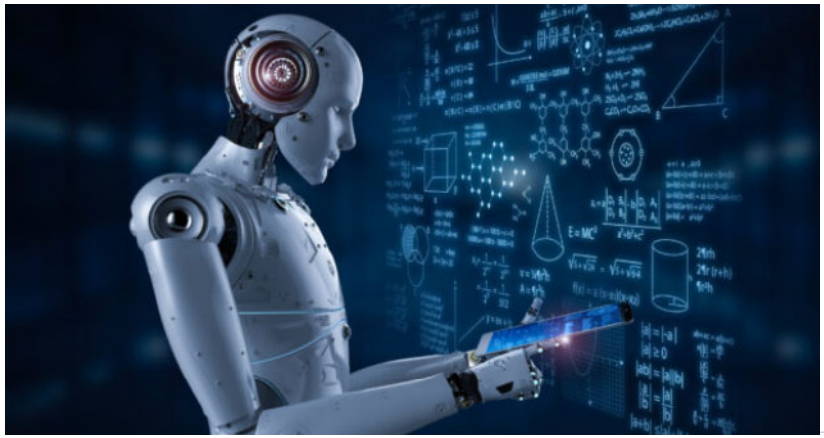
Smart manufacturing

There is an urgent need to ***innovate and upgrade the quality infrastructure*** to provide the fundamental technical rules, technical language, and technical infrastructure in the context of digitalization, and to assist in opening the evolutionary path of scientific and technological innovation, quality infrastructure, and industrial change.

02 China's Practice

Progress in the Digital Transformation of Metrology

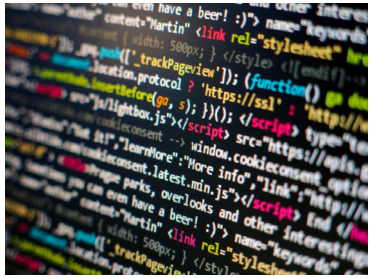




- China is deeply involved in the work related to the CIPM Task Group on the Digital System of Units (D-SI) and is committed to converting existing internationally recognized metrology guidance documents into machine-readable formats.
- China has established the National Metrology Scientific Data Center, and started to cultivate several metrological data construction and application bases in the fields of life and health, equipment manufacturing, food safety, environmental monitoring, climate change.

02 China's Practice

Progress in the Digital Transformation of Standards



			机器功能实现	机器功能局限
阶段 1	纸质文本			• 机器交互的可能性为零
阶段 2	开放数据格式	• 屏幕阅读及检索	• 基础检索 • 在线预览	• 机器交互的可能性很低
阶段 3	机器可读文档	• 结构化的标准内容 • 内容可通过软件进行处理	• 简单标记 • 简单检索 • 文档结构化 • 文档能够被软件简单解析	• 机器无法理解检索到的结果与内容
阶段 4	机器可读内容	• 内容语义化以供选择性的访问 • 按照需求获取标准内容	• 标记的语义描述 • 对已定义要素的高级检索 • 对公式、图表和代码的自动查找与处理	• 本体无法理解上下文的逻辑关系
阶段 5	机器可交互内容	• 要素内容及关系的信息建模 • 自学习以改善内容处理及访问方式 • 价值链中无中断的数据流 • 自动问答与智能内容推送	• 标记要素关系的本体构建 • 标准化文件的自动生成 • 机器对内容的自动识别与操作	

China has started to appoint experts to participate in the digital transformation strategy of ISO/IEC and other international standardization organizations as well as the research work of machine-readable standards to better integrate into the global wave of digitalization of standards.

02 China's Practice

Progress in the Digital Transformation of Conformity Assessment

国家市场监督管理总局
State Administration for Market Regulation

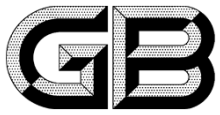
中华人民共和国海关总署
GENERAL ADMINISTRATION OF CUSTOMS, P. R.CHINA

- SAMR and the General Administration of Customs have jointly established the **"3C Certification Import Regulation Online Verification Platform"** to achieve automatic comparison and verification of enterprise customs declarations.
- SAMR provided digital verification interfaces to major e-commerce platforms to automatically compare and verify the validity of 3C certificates for daily consumer goods sold online.
- SAMR also built an **"Inspection and Testing Report Number Query Platform"** to provide consumers with free information retrieval and query services.

02 China's Practice

Promotion of Quality Infrastructure "One-Stop Service"

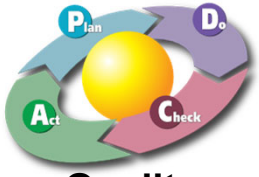
Metrology



Standard

Certification and Accreditation

Inspection and Testing



Quality Management

China implemented digital technology to achieve the integration of quality infrastructure applications.

- Promoting 391 cities to carry out "one-stop" quality infrastructure services.
- "One-stop + big data" quality service platform, "NQI + service cloud platform" and other online platforms can consult online, place orders online, and print results online.

02 China's Practice

Strengthening Market Regulation in the Field of Digitalization

- Chinese government encourages enterprises to use remote upgrade technology (OTA) to strengthen and improve after-sales service, while strengthening compliance supervision.
- In the past two years, SAMR has **received 636 OTA upgrade reports** from enterprises, involving **more than 50.7 million vehicles.** SAMR has guided enterprises to implement 10 recalls using OTA.

02 China's Practice

Strengthening Market Regulation in the Field of Digitalization

SAMR is developing the " Automotive Quality and Safety Regulatory Sandbox System".
For new technologies, auto enterprises will take the initiative to disclose test plans, test results, and self-safety assessment reports during the sandbox supervision period, and accept government supervision and public oversight.

In the field of e-commerce, SAMR organized top e-commerce platforms to carry out consumer product recalls and safety commitment activities to ensure the safety of products sold online and protect the legitimate rights and interests of consumers.

03 Thoughts and Suggestions

1. How to strengthen market regulation in the digital era to protect personal safety, health, environmental protection, and data security, while reducing trade barriers?

2. How to solve the new legal issues brought by digitalization, including the challenges brought by IoT to traditional regulation such as standards and compliance certification, and how to define product liability?

03 Thoughts and Suggestions

3 Develop guidelines for the application of National Quality Infrastructure regulation in the context of digitalization.

Build a global IoT product safety framework system to improve the real-time and flexibility of government regulation and facilitate commodity trade.

THANK YOU FOR LISTENING!

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