

# **Development Plan for Informatization of Accounting Sector in China (2021 - 2025)**

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*The Development Plan for Informatization of Accounting Sector in China (2021 - 2025)* (hereinafter referred to as the “Plan”) is formulated to implement the decisions and deployment of the Central Government on the network and informatization and carry out the Strategy of Informatization of the Chinese Institute of Certified Public Accountants (hereinafter referred to as the “CICPA”). It will play a leading role in guiding the accounting sector to advance informatization, boost the digital transformation and achieve development with a focus on quality improvement.

## **I Development and status**

### **(1) Informatization has made new progress.**

Since the Strategy of Informatization was launched, the CICPA has played a strategic leading role and published *Overall Plan for Informatization of Chinese Accounting Sector, Development Plan for Informatization of Accounting Sector in China (2016 - 2020)* and supporting documents, which have effectively guided the informatization of the whole accounting sector. During the 13th National Five-Year Plan period, the institutes of CPAs at all levels and accounting firms (hereinafter referred to as “firms”) have worked effectively in an innovative and pioneering way, and made remarkable achievements in informatization.

**Informatization infrastructure has been further enhanced, facilitating informatization to play a significantly improved supporting role.**

A uniform framework for the collaborative office automation system (hereinafter referred to as “OA system”) has been developed, laying a good foundation for documents exchange and data sharing among the institutes of CPAs at all levels. Following an evaluation of the existing functions and technologies of the Profession Management Information System, the CICPA has put forward the optimized technical solutions for transformation and upgrading. A number of firms, in accordance with their own business development objectives, have optimized their informatization framework and progressively integrated various internal information systems. Data governance is gaining greater momentums with practical explorations being initiated for the management of data asset and elimination of data isolated islands.

**Informatization of profession management and service has been further enhanced with functions and processes being obviously optimized.**

The portal websites of the CICPA and the local institutes of CPAs (hereinafter referred to as the “local institutes”) have become the window of publicity. The sub systems of the Profession Management Information System (phase 2), including CPA exams, member registrations, CPD and quality assurance, as well as financial management of the whole accounting sector, have been optimized and informatized year by year. In particular, the entire CPA exam management process, from registration, eligibility verification, registration fee payment, taking exams through to score enquiry, can be completed online. Based on the uniform framework, the CICPA and 23 local institutes have basically constructed the collaborative OA system. The Profession Management Information System has met the requirements for the Multi-Level Protection Scheme (hereinafter referred to as “MLPS”) Level 3, and safeguarded the security of data and operation of systems.

**The informatization of firms has been steadily advanced with new progress being made in**

**certain fields.**

In China, 42% of firms have developed the audit practice systems to various extents. In particular, 92.1% of big firms have adopted such systems. The informatization of firms in the internal management and engagement management fields has been steadily pushed forward with 75.6% of big firms adopting information systems in these two fields. For highly repetitive and highly frequent audit engagements, some firms have constructed data sharing centers with differentiated functions to improve the efficiency of the audit practice. The information service systems, including the databases housing the laws and regulations and the economic data, have continued to be optimized. Some big firms have already utilized frontier information technologies (hereinafter referred to as the “IT”), such as big data, artificial intelligence, cloud computing and block-chain, to explore the application of robot process automation and the observation of physical inventory counting with drones. All of these efforts have led to new progress in informatization.

## **(2) New circumstances faced by informatization**

### **Digital transformation is surging forward.**

At present, the world is undergoing major changes unprecedented in a century, and a new round of technological revolution and industrial transformation, represented by IT, is gaining greater momentums. The in-depth integration of such IT as the internet, big data and artificial intelligence with various sectors will create growth drivers for emerging industries of strategic importance, which have different characteristics, complementary advantages and a reasonable structure. Digital transformation has become the fundamental driver for economic and social development. In China, it is a major trend to accelerate digital development, develop a digital industry and transform traditional industries with digital technologies, drive in-depth integration of the digital economy with the real economy, and speed up the digitalization of service industries during the 14th

National Five-Year Plan period and beyond.

### **Digital transformation has been driven with IT.**

Along with the in-depth development of the digital transformation in the economic and social fields, a digital industry has developed steadily, bringing both opportunities for expanding non-audit services and challenges from external competitions in the new era. Therefore, the accounting sector is required to keep pace with the times and shore up the weaknesses in informatization. Further, with the innovative ideas, methods, techniques and tools, it needs to leverage IT to advance its digital transformation and realize new development objectives of professionalization, standardization, digitalization, brand-building and internationalization, so as to satisfy the development of the digital economy in China.

### **Problems encountered in informatization**

While making new progress in informatization, the accounting sector faces some prominent problems that need urgently to be solved, especially the incompatibility of its own progress in informatization with the national strategy of building China's strengths in cyberspace, which are characterized by the unbalanced progress between big firms and small and medium-sized practices (hereinafter referred to as "SMP") as they present a serious polarization in informatization and a big gap in popularization of informatized systems in the audit practice and internal management fields; by the insufficient progress in informatization as some firms lag behind their clients and cannot satisfy the needs of audit practice; and by the insufficient awareness of informatization and inadequate internal drivers for innovations of firms, such as insufficient investments, insufficient training of specialists, insufficient application of frontier IT and insufficient development and utilization of data resources.

## **II Overall requirements**

### **(3) Guiding philosophies**

The national strategies, such as promoting informatization in China, building China's strengths in cyberspace and building a digital China, should be fully implemented. By tightly adhering to the theme of serving national construction and the priority of integrity-building, the accounting sector should comprehensively promote the overall plan for informatization of the firms, of the profession management and service as well as of the OA system at institutes of CPAs at all levels (hereinafter referred to as the "overall plan for informatization"), and advance the comprehensive strategy of standardized, digitalized, internet-based and intelligent development (hereinafter referred to as the "comprehensive strategy"). New development philosophy should be firmly implemented. With the innovation and integration as the fundamental driving force and the empowerment for development with a focus on quality improvement as the fundamental objective, the accounting sector should ensure coordination in pursuing progress in development and upholding security, accelerate the overall plan for informatization, and leapfrog informatization to the leading level in the world.

### **(4) Basic principles**

#### **--Insisting on being connected to the national strategy of building China's strength in cyberspace**

The strategy clearly defines the directional, fundamental and strategic issues from a holistic perspective, and makes strategic arrangements for network and informatization at present and in the future. It will guide the accounting sector to master the direction of and the law governing informatization, so it should be the fundamental principle to be abided by in the new era.

**--Insisting on serving the development with a focus on quality improvement**

Informatization should fully integrate the expectations of the whole accounting sector, the advice of members, the opinions of experts and the practice experience, so as to support both the digital transformation and the development with a focus on quality improvement.

**--Insisting on both cyber-security and development**

The accounting sector should focus on both cyber-security and informatization. Guided by the policy of proactive utilization, scientific development, management in accordance with the law and guarantee of security, the accounting sector should strengthen internet infrastructure and its interconnectivity, establish and improve a guarantee system for cyber-security, and enhance its cyber-security protection capability.

**--Insisting on innovation and integration**

The accounting sector should accurately grasp new IT trends to promote innovation-driven development and explore the way of integrating IT into its development in an in-depth way, so as to achieve integration in technology, engagement and industrialization, and advance informatization in an integrated, open and inclusive manner.

**--Insisting on problem-oriented principle**

Based on practical demands, the accounting sector should analyze the obstacles for the informatization of firms, focus on key points in the informatization of profession management and service, and put forward targeted solutions for various problems in different fields.

## **(5) Major objectives**

By 2035, digital technologies will be widely applied in the accounting sector, greatly boosting the development with a focus on quality improvement; the digital services will start to take shape and become new business models; the standardized, digitalized, internet-based and intelligent development will be greatly improved to achieve the objectives of digital transformation and of building the strengths of institutes of CPAs at all levels in cyberspace.

By 2025, with the objective of building the strengths of institutes of CPAs at all levels in cyberspace, in consideration of the IT development trends and practical demands of the accounting sector, centering on the overall plan for informatization and the comprehensive strategy, the “3456” informatization project, meaning three fundamental tasks for informatization, four tasks for data application, five tasks for informatization of profession management and service as well as of the collaborative OA system at institutes of CPAs at all levels and six tasks for informatization of firms, will be advanced to achieve the following objectives.

### **--Informatization infrastructure will reach a new high level.**

New achievements will be made in developing the data standard system and safeguarding cyber-security. Among others, the advanced technical framework will continue to be enhanced to improve the technology content.

### **--Data analysis and application capability will be further enhanced.**

Data governance mechanism will be gradually improved with remarkable progress being made in data resource collections, more data-based products and services being developed and provided by the firms, and significantly improved application capabilities of big data analysis, so as to enhance

its capabilities of serving national social and economic development.

**--New progress will be made in informatization of profession management and service as well as of collaborative OA system at institutes of CPAs at all levels.**

The profession management and service and its operational quality will continue to be optimized.

The collaborative OA system at institutes of CPAs at all levels will be built up with significantly strengthened management efficiency and knowledge sharing capabilities. The integrity information monitoring system will be further enhanced. The interconnectivity among information systems at all levels and in all categories will be greatly improved.

**--New breakthroughs will be made in informatization of firms.**

Big firms will upgrade their information systems in an intelligent and orderly way, while SMPs will make more efforts to popularize informatization products in audit practice and internal management fields. Digitalization of external information procedures will be advanced. The firms will improve audit quality and efficiency through informatization.

### **III Speeding up research on and construction of informatization infrastructure**

The accounting sector should continue the research on and construction of technical framework, data standards and cyber-security, so as to enhance the underlying informatization infrastructure and its standardization.

#### **(6) Constructing an advanced technical framework for information systems**

Centering on the high concurrency, high availability, high performance and advanced nature of information systems, in consideration of the development trends of cloud computing and mobile



internet, and on basis of business logic and applicable scenarios, the institutes of CPAs at all levels and firms must choose the safe, stable and advanced technical framework when constructing information systems. The interfaces need to be designed to meet the flexibility, light-weight and high expandability requirements, so as to ensure compatibility and interconnectivity among information systems.

#### **(7) Promoting to construct a data standard system**

Centering on the fields of audit data collection, electronic audit reports, profession management and service data, electronic signatures and seals and electronic certificates and licenses, in accordance with the principle of succession, development and innovation, those in urgent needs should be firstly developed with subsequent development of a scientific and applicable system of data standards step by step, so as to satisfy the demands for data sharing, data exchange and data analysis, and bring the role of data as the productive factor into full play. The CICPA has established the Leading Group on Standardization of Social Organizations to develop and revise the Standards of Social Organizations at the CICPA level. It will improve the top-level design of the system of data standards, and promote to establish the framework of audit data standards for firms.

#### **(8) Strengthening cyber-security construction**

Firms must implement the *Cyber-security Law of the People's Republic of China*, and raise the cyber-security awareness. With reference to the zero-trust security framework, and centering on systems security, data security and terminal security, firms need to improve their cyber-security systems and specifications, establish cyber-security monitoring systems and adopt information products with independent intellectual property rights, so as to guarantee the security of

accounting and audit documentation and data. They should establish informatized emergency management mechanisms to ensure data security and business continuity. Moreover, they must implement the MLPS for cyber-security and conduct relevant evaluations, so as to strengthen cyber-security protection capabilities and guarantee the security of their application systems and data assets.

#### **IV Improve supporting and service capabilities of data in a comprehensive way**

The accounting sector should strengthen data governance to improve data quality, promote data resource integration and sharing, and gradually enhance data mining and application capabilities, so as to promote its own digital transformation and development.

##### **(9) Constructing a knowledge library**

According to the national policies of sharing information on government services, the governmental data resources in fiscal, banking, industrial and commercial registration and administration, taxation and public security fields, which are necessary for firms to conduct audit engagements and for institutes of CPAs at all levels to perform the profession management and service, need to be coordinated for data sharing, so as to promote data as the productive factor to play its role as an innovative development engine. The well-established database products in the market, including those databases housing laws and regulations, the economic data and the industrial and commercial data, should be actively adopted. Firms are pushed to explore to construct their own audit knowledge database. All of these databases should be integrated to establish a systemic knowledge library to provide information support for CPAs to practice.

##### **(10) Constructing a data center**

Based on the interconnectivity among information systems at all levels and in all categories, centering on the Profession Management Information System, data sharing between institutes of CPAs at all levels and firms will be explored. Further, in accordance with relevant laws and regulations, a data center, which integrates profession management and service data, the practice and management data of firms, the internal management data at institutes of CPAs at all levels and the above-mentioned knowledge library, will be gradually constructed, so as to support the functions of statistical analysis, evaluation and judgment, forecasts and warning and intelligent decision-making, as well as to lay the foundation for deepening the application of big data analysis.

#### **(11) Deepening application of big data analysis**

Firms are required to deepen the application of big data analysis in the processes of engagement acceptance, risk assessments, test of control, substantive procedures and audit reporting, which will support intelligent decision-making about client acceptance and maintenance, fraud analysis and content reviews. By accumulating experience in the process of analyzing financial and business data of clients, firms need to deepen big data applications in audit practice, flexibly adopt data analysis tools or develop such tools on their own, and expand data-based products and services, so as to enhance the capabilities of detecting financial frauds; institutes of CPAs at all levels need to strengthen the capabilities of data mining, data analysis and data application, so as to enhance their profession management and service and decision-making capabilities, and serve the analysis and forecasts of national macroeconomic performance.

#### **(12) Promoting data governance**

Data asset management and application mechanisms should be established. Targeting data

collection, data management, data security and data application, the systems and specifications need to be developed to promote the integration, application and sharing of data resources, guarantee data security, enhance data quality and strengthen data application efficiency, so as to give full play to the role of data assets in promoting the overall informatization and data application within firms. Firms need to develop consistent data collection and management procedures, so as to strengthen management of metadata, master data, data quality and data lifecycle, and enhance their data security and compliance.

## **V Promoting informatization of profession management and service as well as of collaborative OA system at institutes of CPAs at all levels in an in-depth way**

Informatization of profession management and service as well as of the collaborative OA system at institutes of CPAs at all levels is an essential part of informatization. By optimizing the Profession Management Information System and improving its supporting systems, the efficiency of the integrity information monitoring system will be further improved to enhance the interconnectivity and form an internet-enabled eco-system among information systems at all levels and in all categories.

### **(13) Optimizing Profession Management Information System**

With member management and service as the core, the service processes need to be reengineered to enhance the functions of the System and expand service areas. The System is required to be optimized, so as to enhance functions such as CPA exam management, member registration, CPD, quality assurance and financial management of the whole accounting sector. In particular, key functions, such as unified coding for audit reports, comprehensive evaluation and member qualification inspections, must be prioritized. The CICPA will lead the efforts to construct and

apply the System with latest applicable technical framework, so as to improve the coordination and service capabilities between the CICPA and the local institutes, implement whole-process online services which are standardized and refined in differentiated scenarios, and fully expand and optimize profession management and service, as well as promote internet-based management, informatized services and standardized procedures.

#### **(14) Improving integrity information monitoring system**

The integrity information monitoring system should be improved to optimize the “all-round recording, real-time monitoring and effective disclosure” functions and enrich the information on the practice capabilities, practice quality and integrity of members, so as to strengthen integrity-building and promote the firms to develop into more competitive and world-class firms or SMPs offering specialized services. The CPA practice monitoring system will be promoted, which will serve as the platform to support the emergency response mechanism for major public opinions and address such problems as financial frauds, audit failures and major audit risk warnings in an overall way. Efforts should be made to implement the *Guidance of the State Council on Accelerating to Construct a Social Credit System and Establishing New-type Credit-based Supervision System*, and coordinate the integrity information monitoring system and the CPA practice monitoring system to form a social supervision mechanism in the accounting sector, which should be integrated into the national social credit system.

#### **(15) Building up the collaborative OA system at institutes of CPAs at all levels**

On basis of the uniform framework of the collaborative OA system among institutes of CPAs at all levels, the last batch of local institutes should accelerate to construct the system. The processes and functions of the built-up collaborative OA system, with enhanced internal management

efficiency and decision-making efficiency, will be further optimized for online service and approval functions. Data interfaces in the collaborative OA system need to be constructed to enable the document exchanges and communications among institutes of CPAs at all levels. The CICPA will lead the efforts to construct the collaborative OA system, while institutes of CPAs at all levels will be responsible for constructing their own parts.

**(16) Promoting interconnectivity among information systems at all levels and in all categories**

The CICPA will actively promote the interconnectivity of the Profession Management Information System with relevant systems, including the collaborative OA system at institutes of CPAs at all levels, information systems of firms, Accountant and CPA of China and accounting practice inspection system of the Ministry of Finance, so as to realize data sharing among these systems, construct an integrated management platform for regulation information, and strengthen financial and accounting supervision through big data and informatized methods. Data sharing with the “Internet Plus Regulation” and “Credit China” mechanisms of the State Council will be facilitated in an orderly way.

**(17) Improving informatization-related rules**

The CICPA needs to communicate with authorities and regulators to revise and improve registration and regulation-related laws, improve the acceptability of electronic evidence, electronic signatures and electronic working papers issued by firms, and expand the specialist fields from which partners can be selected and promoted. It will research the impacts of digitalization on the practice environment and practice methods of CPAs, so as to develop and improve relevant standards and rules to meet the new requirements under the digitalized practice

environment and solve new problems arising from the digitalized environment. Further, it will also research how to use IT to empower the accounting sector, revise the technical guidelines for audit on information systems, research the application of data analysis in audit practice, develop specific guidelines for audit in such emerging fields as internet companies, and revise the requirements on the professional competence and independence under the informatized practice environment.

## **VI Vigorously strengthening informatization of firms**

The informatization of firms is a key link. In accordance with the concept of overall coordination and classified guidance, centering on the internal governance, quality management and audit practice of firms, the informatization should be popularized at SMPs and intelligent upgrading should be conducted at big firms in an orderly way.

### **(18) Upgrading audit systems at big firms**

Centering on audit processes of data collection, preparation of working papers, risk assessments, audit strategies, audit plans, audit sampling, audit tests and reviews of audit reports, the big firms need to apply frontier IT (big data, artificial intelligence, cloud computing and block-chain) to construct intelligent platforms covering the whole audit practice process and develop supporting tools, which will pave the way for remote audit, audit with big data and intelligent audit. Efforts should be made to develop the practice quality monitoring and risk alerting functions, explore real-time audit and continuous audit on clients, and conduct quality management before, during and after audit.

### **(19) Constructing an integrated comprehensive management system between headquarters and branches of firms**

Firms need to construct comprehensive and integrated management systems in the engagement management and office management fields at headquarters and branches, so as to enable the integrated management of headquarters and branches in the fields of engagement acceptance and implementation, market and clients, contract management, technical standards and risk controls, independence management, human resources, training management, performance management, financial management and asset management. On this basis, substantive integration in HR, financial, engagement, technical standards and information fields between the headquarters and branches will be achieved, by which firms could further strengthen internal governance mechanisms and enhance the internal governance capabilities.

#### **(20) Popularizing informatization products at SMPs**

SMPs need to, based on their specialties, popularize informatization products in the audit practice and internal management fields, so as to improve their capabilities of delivering professional services in the informatized environment. They need to establish an audit system, which covers the audit practice, project management, client management, review management, file management and follow-up management fields, and develop supporting tools for observation of physical inventory counting, account checks and audit reviews. In order to strengthen coordination of human, financial and material resources and achieve long-distance office, mobile office and instant office, they also need to construct an internal management system with the functions of accounting and finance, HR, CPD, asset management and administration support.

#### **(21) Realizing digitalization of external information procedure**

In accordance with *Guiding Opinions of Ministry of Finance on Digitalization of External Information*, the CICPA needs to pool resources to research and promote the digitalization of the



external information procedure and support the construction of third-party external information platforms, so as to improve audit quality. According to their own demands, firms will speed up the independent research and development of the centralized external information systems or directly purchase such systems. Such systems must follow the requirements in *Notice on Advancing Regulation on Bank Confirmation Procedure* and its supporting guidelines, and have the functions of preparing, sending and receiving, statistically analyzing and managing letters of external information. They should be connected to the third-party platforms in a safe and reliable way to improve the quality and efficiency of the external information. The third-party platforms need to be implemented and maintained in accordance with the principles of “security and controllability, upholding of public interest, standardization and regularization, and openness and compatibility”. Further, they should be put into trial operations before being gradually promoted in the accounting sector.

## **(22) Exploring and researching integration and application of modern IT**

Firms are required to thoroughly explore and research the integration and application of modern IT in the accounting sector, including big data, artificial intelligence, mobile internet, cloud computing, block-chain and the internet of things. On this basis, they need to re-engineer the original business structure, operation models and management processes, and foster new technologies, new products, new business forms and new business models. The role of spillover effects of informatization within firms should be given full play to provide governments and enterprises with digital products, such as big data-driven industry analysis reports, financial robots, digital finance and taxation control. Cloud computing has realized on-demand supply of IT services, so the safe and feasible cloud computing solutions need to be explored and researched in accordance with relevant national requirements of promoting the development of cloud

computing.

### **(23) Diversifying paths to informatization**

According to their own practice requirements, firms will take the initiative to independently develop safe and reliable audit and internal management systems or procure such systems in the market. Institutes of CPAs at all levels are required to play the strategic leading and policy guiding role to obtain national policy support, take various measures to diversify the paths to informatization and improve the incentive mechanisms for firms, especially for the informatization of those firms in central and western regions and economically underdeveloped regions in China. Targeting close supply-demand relations between firms and software service providers, institutes of CPAs at all levels will organize experts in and outside the accounting sector to utilize their professional knowledge to guide the research and development of relevant software products in the market. A joint procurement mechanism will be explored, especially in the manner of cloud service. A technology platform needs to be constructed to share the IT products and achievements.

## **VII Safeguard measures**

### **(24) Strengthening organizational leadership**

The Profession IT System Construction Committee and the Leading Group on Information Security should exercise their coordinative, leading and technically guiding roles to establish a working mechanism characterized by scientific decision-making, efficient operation and clarified responsibilities, so as to conduct in-depth research on the law governing informatization. The subject responsibilities of the CICPA, local institutes and firms should be clarified and role of the firms as major players should be brought into full play, so as to advance the key tasks for

informatization in an all-round way. Policy coordination and interactions should be strengthened to jointly advance informatization.

#### **(25) Accelerating talent training**

Based on the digital transformation and the new data-based business models, the accounting sector should improve the informatization-oriented talent training mechanism to optimize and improve institutional arrangements in the fields of CPA exam content setting, CPD, joint talent training programs with universities, and high-caliber talent training programs. The medium and long-term planning for comprehensive informatization-oriented talent training and relevant career development training should be well defined, the role of high-caliber informatization-oriented talents should be brought into full play, and the informatization-oriented talent pool at the CICPA and local institutes should be enhanced, so as to expand the informatization-oriented CPA team.

#### **(26) Emphasizing evaluation on implementation of the Plan**

In accordance with the Plan, the institutes of CPAs at all levels and firms should make their own plans and guidelines, break down tasks, clarify work schedules and make clear responsibilities. Efforts should be made to monitor the implementation of the Plan and conduct performance evaluations to guide the informatization. Greater weights will be given to the informatization of firms in the Comprehensive Evaluation of Accounting Firms with a scientific and effective evaluation system for informatization so that the tasks in the Plan could be implemented effectively.

#### **(27) Enhancing publicity and guidance**

Such channels as websites, official accounts in WeChat, CICPA Magazine, relevant trainings and

meetings should be fully used, so as to enhance the publicity of the decisions and deployment of the Central Government on network and informatization, the strategic plan for the informatization of the accounting sector as well as the development status and achievements. Learning and exchange platforms should be established to regularly share advanced technologies, implementation cases, well-established products and innovative measures at home and abroad, as well as to promote the meritorious models. The communication channels should be expanded to realize multi-party interactions in and outside the accounting sector, so as to enhance public recognition and create a positive atmosphere.

(The CICPA organized translation of the Plan into English. The Chinese text is the official version and this English text is for reference only)