THE PRIME MINISTER

SOCIALIST REPUBLIC OF VIETNAM

Independence - Freedom - Happiness

No. 749/QD-TTg

Hanoi, June 03, 2020

DECISION

INTRODUCING PROGRAM FOR NATIONAL DIGITAL TRANSFORMATION BY 2025 WITH ORIENTATIONS TOWARDS 2030

THE PRIME MINISTER

Pursuant to the Law on Government Organization dated June 19, 2015;

Pursuant to the Government's Resolution No. 01/NQ-CP dated January 01, 2019 on main tasks and solutions for plan for socio-economic development and state budget estimate of 2019;

Pursuant to the Politburo's Resolution No. 52-NQ/TW dated September 27, 2019 on a number of guidelines and policies for active participation in the fourth industrial revolution;

Pursuant to the Government's Resolution No. 50/NQ-CP dated April 17, 2020 introducing Government's action program on Politburo's Resolution No. 52-NQ/TW dated September 27, 2019 on a number of guidelines and policies for active participation in the fourth industrial revolution;

At the request of the Minister of Information and Communications,

HEREBY DECIDES:

Article 1. The program for national digital transformation by 2025 with orientations towards 2030 (hereinafter referred to as "the Program"), with the following main contents, is approved:

I. VISION BY 2030

Vietnam becomes a prosperous digital country that pioneers trying out new technologies and models; has completed fundamental and comprehensive reforms in Governmental operation, economic activities of enterprises and the way people live and work, and has established a safe, civilized and widespread digital environment.

II. BASIC OBJECTIVES

The dual objectives of the Program, with the following main targets, are to develop a digital Government, digital economy and digital society and to establish Vietnamese digital technology enterprises capable of going global:

1. Basic targets by 2025

a) Development of the digital Government with enhanced efficiency and performance

- 80% of level 4 online public services are available on multiple devices, including mobile phones;

- 90% of ministerial- and provincial-level work dossiers; 80% of district-level work dossiers and 60% of commune-level work dossiers can be processed by electronic means (excluding work dossiers concerning state secrets);

- 100% of reports and socio-economic statistical indicators serving operation of the Government and the Prime Minister are digitally connected, integrated and shared on the reporting system of the Government;

- 100% of national databases upon which the e-Government is developed, including national databases concerning residential matters, land, business registration, finance and insurance, are completed and connected and shared nationwide; data of state agencies is gradually published for timely public service provision, one-time declaration - lifetime use and socio-economic development;

- 50% of inspections by state agencies are carried out via electronic means and information systems of supervisory authorities;

- Vietnam is ranked in the top 70 on the E-Government Development Index (EGDI).

b) Digital economy development and enhancement of the economy's competitiveness

- Digital economy accounts for 20% of GDP;

- Digital economy forms at least 10% of each sector;

- Annual productivity increases by at least 7%;

- Vietnam is ranked in the top 50 on the ICT Development Index (IDI);

- Vietnam is ranked in the top 50 on the Global Competitiveness Index (GCI);

- Vietnam is ranked in the top 35 on the Global Innovation Index (GII).

c) Digital society development and digital divide bridging

- Fiber optic internet infrastructure covers more than 80% of households and 100% of communes;

- 4G/5G service and smart phones are available nationwide;

- More than 50% of the population have a digital checking account;

- Vietnam is ranked in the top 40 on the Global Cybersecurity Index (GCI).

2. Basic targets by 2030

a) Development of the digital Government with enhanced efficiency and performance

- 100% of level 4 online public services are available on multiple devices, including mobile phones;

- 100% of ministerial- and provincial-level work dossiers; 90% of district-level work dossiers and 70% of commune-level work dossiers can be processed by electronic means (excluding work dossiers concerning state secrets);

- Data platforms of key sectors are established based on data of state agencies and Internet of Things (IoT) infrastructure and widely connected with and shared between state agencies, reducing administrative procedures by 30%; data is publicly shared with organizations and enterprises, and data-based innovative services of service to people and enterprises increase by 30%;

- 70% of inspections by state agencies are carried out via electronic means and information systems of supervisory authorities;

- Vietnam is ranked in the top 50 on the E-Government Development Index (EGDI).

b) Digital economy development and enhancement of the economy’s competitiveness

- Digital economy accounts for 30% of GDP;

- Digital economy forms at least 20% of each sector;

- Annual productivity increases by at least 8%;

- Vietnam is ranked in the top 30 on the ICT Development Index (IDI);

- Vietnam is ranked in the top 30 on the Global Competitiveness Index (GCI);

- Vietnam is ranked in the top 30 on the Global Innovation Index (GII).

c) Digital society development and digital divide bridging

- Fiber optic internet is available nationwide;

- 5G service is available nationwide;

- More than 80% of the population have a digital checking account;

- Vietnam is ranked in the top 30 on the Global Cybersecurity Index (GCI).

III. VIEWPOINTS

1. Perception is the decisive factor in digital transformation

Digital transformation begins with a change of perception. A regulatory body or an organization can start digital transformation immediately by using its available technical system and resources to digitalize all of its information assets and relationships and restructure its business processes and organizational structure.

Each regulatory body and organization and the whole country need to seize all opportunities to develop the e-Government, digital economy and digital society, in which, early roadmap determination and facilitation of digital transformation in each sector and locality are of utmost importance and are the chance for sectorial and local development and raising our country's ranking. Pioneering means it is easier to attract resources. Stalling and letting digital transformation become a popular trend mean scarce resources, fewer opportunities and missing the chance for development.

2. People are the center of digital transformation

Smart phones are people's main tool in the digital world. Digital culture fostering goes hand in hand with protection of human's basic moral values and culture and national sovereignty. Digital transformation is a method to achieve sustainable development goals of the United Nations.

Digital transformation must be prioritized for the areas that impact the society, are related to people's daily life, and can bring about perception change most quickly, guarantee efficiency and save costs such as healthcare, education, finance - banking, agriculture, transport and logistics, energy, natural resources and the environment, and industrial manufacturing.

3. Institutions and technology are the drivers of digital transformation

Institutions should be one step ahead where possible. The Government shall formulate institutions and policies to readily accept and try out the new in a controlled manner; foster a culture of accepting and trying out the new; carry out and evaluate pilot implementation before large-scale implementation; and promote development of innovative sectors. The Government shall accelerate e-Government development with an aim towards a digital government.

Vietnam's digital technology enterprises shall be the main force behind digital transformation solution provision and consultancy and service, platform and infrastructure development; go

from application to products and services to mastering some core technologies and expanding globally.

4. Digital platform development is the breakthrough solution to digital transformation facilitation, cost reduction and efficiency enhancement.

International cooperation is an important solution to digital transformation, especially facilitation of digital transformation in the society, which in turn creates the driving force for digital transformation in state agencies. Vietnam's enterprises and organizations shall cooperate with large technology enterprises around the world in researching, developing, transferring and pioneering application of new technologies and new models in Vietnam.

5. Cyber security and safety are the key to successful and sustainable digital transformation and an inseparable part of digital transformation. Cyber security and safety in all information technology projects, information systems, software, products and equipment must be ensured right from the design stage.

6. The participation of the whole political system, synchronized actions at all levels and participation of all citizens are the success factors for digital transformation. There shall be a harmonious combination between centralization and decentralization in action with a common regulatory body, in which:

a) The Program is a dynamic, open and encompassing program that provides the foundation and bases for formulation of socio-economic development plans and programs;

b) Ministries, local governments, organizations and enterprises must regard national digital transformation as a crucial mission in their directions and formulate schemes, programs, strategies and plans that incorporate digital transformation into their operations based on their respective situations. Digital transformation must be directed, supervised and evaluated on an annual, mid-tenure and 05-year basis.

IV. TASKS AND SOLUTIONS PROVIDING FOUNDATION FOR DIGITAL TRANSFORMATION

1. Perception change

Change and spread the perception towards the mission, necessity and urgency of digital transformation in the society from a group of pioneering organizations and individuals to the community via highly persuasive and exemplary success stories. To be specific:

a) Heads of regulatory bodies, organizations and managing bodies of sectors and administrative divisions shall take direct responsibility for digital transformation in the bodies under their management; organize dissemination of the Communist Party's guidelines, and improve perception of Party Executive Committees at all levels, governments, citizens and enterprises towards the necessity and urgency of digital transformation. Connect digital transformation objectives and tasks with resolutions, strategies, action programs, objectives and tasks

concerning socio-economic development and assurance of national defense and security of ministries.

Heads of regulatory bodies, organizations and enterprises shall make a commitment to reform, allow experimentation with new things and application of new technologies for sustainable development, connect different types of ownership in the form of circular economy; and promote innovative sectors in their regulatory bodies, organizations and enterprises;

b) Maintain efficient operation of Vietnam Digital Transformation Alliance by gathering Vietnam's leading technology enterprises to inspire and change the perception of the whole society towards digital transformation, pioneer digital transformation and provide infrastructure, platforms and services that facilitate digital transformation in other organizations and enterprises of Vietnam.

Enhance cooperation in digital transformation between state agencies and organizations and enterprises; and between information technology associations and other specialized associations to popularize digital transformation;

c) Develop a common identity design for activities of the Program. Build country images and brands concerning digital transformation, digital technologies, reform and innovative sectors.

Run mass media information sections. Share success stories and honor exemplary successes in digital transformation;

d) Each local government shall proactively select a commune/ward to pilot equipping people with basic digital skills, including internet access and use, emails, e-commerce, electronic payment, online public services and personal information security.

2. Institution formulation

Formulate institutions towards encouragement for and willingness to accept digital business models, services, solutions and products, promotion of new managing methods for new relationships. To be specific:

a) Be willing to try out digital business models, services, solutions and products when lacking clear and adequate legal regulations in connection with completion of legal corridors.

Formulate regulatory sandboxes for development of, experiment in and application of digital business models, services, solutions and products in Vietnam, which shall specify the place and time of experiment, so as to encourage reform and innovation;

b) Review and propose amendments to specialized legislative documents to regulate new relationships arising during the digital transformation process and encourage reform and innovation;

c) Review and propose amendments to legislative documents on business, investment, commerce, intellectual property, innovative entrepreneurship and enterprises to facilitate national digital transformation and development of new business models, services and products based on digital technologies, the Internet and cyberspace;

d) Research and propose amendments to legislative documents on information technology and communications (Law on E-Transactions, Law on Information Technology, Law on Telecommunications, etc.) to ensure state investments and mobilize resources from enterprises and the society for digital transformation in a manner that encourages all organizations and individuals to invest in or sponsor digital transformation; brings about amendments to regulations on technological and scientific development funds of enterprises regarding digital transformation by enterprises;

dd) Research policies and provide specific regulations on taxes and fees to encourage people and enterprises to use/provide digital services;

e) Review and propose amendments to legislative documents on civil and criminal matters and specialized laws in a manner that increases fines and penalties for e-transaction fraud and misuse or illegal use of private or personal information on the Internet for users to feel rest assured when conducting e-transactions.

3. Digital infrastructure development

Develop digital infrastructure to meet surging demand for data processing and connection with functions in terms of network monitoring reaching each node, and cyber safety and security integrated from the design and building stages. To be specific:

a) Build and develop nationwide high quality broadband infrastructure, starting from large cities, hi-tech zones, information technology parks, industrial parks, export-processing zones, innovation/development/research centers, state agencies, schools and hospitals;

b) Replan frequency bands, develop 5G service infrastructure; upgrade 4G service; promptly commercialize 5G service; adopt solutions to nationwide smart phone availability; formulate regulations on and roadmaps to 4G/5G service integration into smart phones and IoT devices manufactured and imported for domestic use;

c) Expand domestic Internet connectivity via peer-to-peer connections, connections to Internet exchange points (IXP) and connections to Vietnam National Internet eXchange (VNIX). Expand regional and global Internet connectivity, especially submarine fiber optic cable development, for Vietnam to become a regional connection center. Convert all Vietnamese addresses to Ipv6 addresses. Use Vietnam's country code top-level domain (.vn) for online services of state agencies, online newspapers, news aggregator websites, education, healthcare and e-commerce of Vietnam;

d) Develop IoT infrastructure; formulate roadmaps and integrate sensors into and apply digital technologies in essential infrastructure such as transport, energy, electricity, water and urban

infrastructure to partially form the digital infrastructure. All urban/transport infrastructure and essential infrastructure investment projects must research, analyze and consider adding IoT connections and application, sensor integration and digital technology application. IoT infrastructure development must be efficient, improve shared infrastructure and avoid investment overlap.

4. Digital platform development

Digital platform development enables digital transformation to take place naturally, generates new values and brings significant benefits to the society. Cyber safety and security functions shall be integrated into digital platforms from the design and building stages. Focus of development of the following digital platforms:

a) Develop the national electronic authentication and identification system and electronic authentication and identity exchange platforms in a practical and efficient manner that utilizes and inherits available systems and platforms to enable easy, simple and convenient e-transactions between people and state agencies and other civil e-transactions. Support and facilitate cooperation between some large telecommunications, finance, banking and social insurance enterprises and organizations in provision of electronic authentication and identification services;

b) Develop electronic payment systems that allow telecommunications enterprises to provide electronic non-bank payment services (Mobile Money) so as to promote access to electronic payment services to all people;

c) Develop and master cloud computing technologies with different cloud deployment models (public cloud, private cloud and hybrid cloud) and types of services offered by cloud computing to support digital transformation in state agencies and the society;

d) Compile list of possible multi-sectorial digital platforms for some sectors such as e-commerce, agriculture, tourism, healthcare, education, transport, construction, natural resources and the environment, online learning, digital contents, enterprise accounting and financial services, urban affairs and digital banking and provide incentive policies that encourage Vietnam's digital technology enterprises to invest in these systems.

5. Trust building and cyber safety and security assurance

Build trust in the digital transformation process and digital operations by fostering a digital culture and protecting basic moral values, ensure cyber safety and security and protect personal data. To be specific:

a) Research and consult international experience in formulation of codes of conduct, building trust in the digital environment, and fostering a digital culture in connection with protecting basic moral values of humankind and Vietnam's traditions;

b) Provide cooperation and dialogue mechanisms for resolution of arising issues; mechanisms for cooperation between the State and professional associations and enterprises in policy formulation and implementation;

c) Develop and launch a system for determination, detection and timely handling and removal of information in cyberspace that violates against the law. Request organizations and enterprises providing digital platforms and infrastructure to ensure that information is reliable, safe and appropriate, develop network, infrastructure and platform systems in connection with cyber safety and security assurance, and be capable of self-screening and -detecting attacks and basic protection;

d) Develop and implement a digital reliability rating system to assess and publish safety and reliability levels of information systems of organizations and enterprises providing online services;

dd) Promote insurance for digital transformation, cyber safety and security and e-transactions;

e) Develop and launch a system for risk monitoring and early warning and coordinating response to cyber safety and security breaches for regulatory bodies and organizations in Vietnam to protect legitimate rights of both users and service providers from risks and upon incidents.

6. International cooperation, and research, development and innovation in the digital environment

Attract talents and cooperate with large organizations and enterprises around the world for research, development and innovation purposes. To be specific:

a) Formulate specific action programs for new technology research, transfer and deployment in Vietnam, connect the knowledge chain from research and development to commerce and increase public investments in technology projects;

b) Research and establish test areas for technology enterprises based on international advanced models to pioneer testing the latest models and technologies around the world;

c) Prioritize research on some core technologies that Vietnam can promptly grasp and utilize to achieve great breakthroughs such as artificial intelligence (AI), blockchains and virtual reality/augmented reality (VR/VA). Give vigorous incentive and support for startup development and encourage large and traditional enterprises to lead the application of these technologies in manufacturing and commercial activities.

Build computing systems capable of data processing and analyzing, encourage the community to participate, and permit organizations and enterprises to co-provide and -develop AI-based innovative product ecosystems;

d) Proactively cooperate with other countries in managing common resources in the digital environment and cyberspace; participate in international organizations and take charge in implementing some ideas for digital transformation.

V. SOME TASKS AND SOLUTIONS CONCERNING DIGITAL GOVERNMENT DEVELOPMENT

Digitally transform operations of state agencies, develop the e-Government and strive for the digital Government with a focus on centralized and continuous development of digital infrastructure of service to state agencies; create open data that is easy to access and use, enhance transparency, prevent corruption, promote digital services; provide fast, accurate and paper-less level 4 online public services via smart phones for people and enterprises to have the best service experience with reduced costs; and raise Vietnam's ranking on the E-Government Development Index.

1. Develop digital government infrastructure of service to state agencies based on the strengths of specialized data transmission networks, the Internet and data centers of state agencies to provide continuous connection between 4 administrative levels, use Vietnam-mastered cyber safety and security technologies and encryption mechanisms in a safe and secured manner.

Restructure information technology infrastructure of ministries and local governments, convert information technology infrastructure to digital infrastructure that applies cloud computing to connect and manage resources and data of state agencies in a safe, flexible, stable and effective manner.

2. Boost e-Government development projects, schemes, plans, programs and resolutions. Accelerate establishment of national and specialized sectorial databases of service to state management and assist enterprises in their development. Prioritize residential, land and healthcare databases.

3. Develop and integrate the national data portal (data.gov.vn) with the digital Vietnamese knowledge system, provide open data, provide status of and roadmaps to data production in state agencies, levels of sharing and use of data and information necessary for connection; evaluate and publicly rank data development levels of ministries and local governments. Develop the national data sharing and integration platform, and connect national databases and databases of ministries and local governments to connect and share information and data.

4. Complete and connect the reporting system of the Government with reporting systems of ministries and local governments to integrate and share digital data serving operation of the Government, the Prime Minister and governments at all levels in real time.

5. Apply the latest technologies in social media, simple and convenient public administrative service and information provision via mobile phones, big data analytics, AI and VR/VA to digitally transform operations of state agencies in a comprehensive manner and bring users the best and friendliest experience.

6. Complete and connect the national public service portal with public service portals and electronic single-window information systems of ministries and local governments to provide level 4 online public services; raise the level of all online public services to levels 3 and 4.

Carry out administrative procedures by electronic means and digitalize administrative procedure results according to regulations in the Government's Decree No.45/2020/ND-CP dated April 08, 2020.

7. Standardize and digitalize business processes for handling applications by electronic means, forms and reports; increase sending and receiving digitally signed electronic reports and documents between state agencies, socio-political organizations and enterprises; digitalize dossiers and retain electronic work dossiers of state agencies as regulated.

8. Carry out pilot implementation of some services provided on smart city platforms and smart city operation and supervision centers; choose exemplary cities of provinces and central-affiliated cities for such pilot implementation, connecting development of smart city services with electronic local governments, sustainable development through the circular economy. Adopt successfully implemented models on a large scale.

9. Formulate programs raising awareness towards digital transformation and providing skills for digital transformation and digital Government development for officials, public employees and workers of state agencies.

VI. SOME TASKS AND SOLUTIONS CONCERNING DIGITAL ECONOMY DEVELOPMENT

Promote the digital economy with a focus on development of digital technology enterprises, shifting from information technology product assembly and processing to production of industry 4.0 and digital technology products, digital content development, innovative sectors, platform economy, sharing economy, e-commerce and smart manufacturing. Boost digital transformation in enterprises to enhance competitiveness of enterprises and the whole economy.

1. Develop the following 04 digital technology enterprise models:

a) Large business and service enterprises and conglomerates shifting from socio-economic sectors to digital technology and core technology research and investment;

b) Information technology enterprises the brands of which are recognized and which undertake missions of pioneering digital technology mastering, development and research and proactive manufacturing;

c) Startups applying digital technology in development of new socio-economic products and services;

d) Startups innovative in terms of digital technology.

2. Shift from product assembly and processing to manufacturing of “Made in Vietnam” products, which are created, designed and manufactured in Vietnam.

Research, develop and master technologies, and produce digital devices such as smart phones, smart televisions, tablets, IoT devices, etc. to meet societal demand and satisfy technical regulations and standards concerning cyber safety and security.

3. Develop digital contents, digital communications products and digital advertisements. Promote diverse and appealing digital content ecosystem and innovative sectors. Ministries and local governments shall participate in innovative sector promotion.

Implement technical and non-technical measures to improve management of global digital platforms operating cross-border in Vietnam, creating a fair and equal competitive environment for Vietnam’s digital content enterprises.

4. Formulate and launch schemes for support for small and medium enterprises, enterprises involved in traditional business lines and enterprises shifting from manufacturing to provision of products and services on digital platforms and smart manufacturing; gradual enterprise restructuring and enhancement of internal resources of enterprises.

5. E-commerce promotion

a) Build a healthy, competitive and sustainable e-commerce market with support for widespread application of e-commerce in enterprises and the community;

b) Develop e-commerce platforms not only via consumers but also via value chains. Large manufacturers, small and medium distributors, wholesalers, retail channels and e-commerce companies shall together form the supply chain;

c) Build more service and infrastructure systems to support e-commerce development.

VII. SOME TASKS AND SOLUTIONS CONCERNING DIGITAL SOCIETY DEVELOPMENT

Facilitate digital transformation in the society with a focus on skill transformation and provision of massive open online courses (MOOCs) of large enterprises and organizations around the world to equip and enhance digital transformation and digital technology knowledge and skills, fostering a digital culture. Prepare the digital transformation workforce to build a digital society and leave no one behind.

1. Select and train at least 1000 digital transformation experts for sectors and localities. These experts shall then train relevant officials of their supervisory bodies and become the leading force of the national digital transformation process.

2. Provide digital transformation management and leadership skills training and refresher courses for heads of regulatory bodies and organizations and executive directors of enterprises.

3. Annually provide information technology engineer and undergraduate programs. Revise graduate, undergraduate and vocational training programs connected with digital technology such as AI, data science, big data, cloud computing, IoT, VR/AR, blockchains and 3D printing.

4. Adopt the educational approach that integrates science - technology - engineering - mathematics and arts, business, enterprise (STEAM/STEAM/STEAME education), English and information technology skills while ensuring information safety at all educational levels. Provide vocational guidance for students to possess the skills necessary for the digital environment.

5. Provide training and refresher courses on digital skills for workers in industrial parks and export-processing zones. Provide pilot training and refresher courses on digital technology at least 1 hour/week for workers in Thai Nguyen, Quang Nam and Binh Duong before expanding nationwide.

6. Provide MOOCs for all people to promote access to education via digital technology and to equip and enhance digital skills. Organize more online exams; recognize online learning certificates; build teaching and learning material sharing platforms; develop enterprises providing educational technologies, striving for individualized training.

7. Evaluate the impacts of digital technology on the society to produce solutions for proactive reduction of harm caused by digital technology; promulgate codes of conduct in the digital environment for enterprises and people; establish help centers for people affected by digital technology.

VIII. SOME PRIORITIZED DIGITAL TRANSFORMATIONS

Digital transformation in some sectors need to be prioritized with a focus on idea implementation to connect sectors and provide a completely new and different experience, bringing value to people, enterprises and the society.

1. Digital transformation in healthcare

Develop telemedicine platforms to provide remote medical services to people, reduce in-patient visits, prevent mass gatherings and reduce risks of cross-infection; ensure that 100% of healthcare establishments have a telemedicine unit; facilitate digital transformation in the healthcare sector.

Gradually develop prophylaxis and healthcare systems based on digital technology; apply digital technology in healthcare establishments comprehensively to facilitate administrative reform, reduce in-patient visits, improve quality of medical services, use electronic medical records and strive to eliminate physical medical records, pay hospital fees and establish smart hospitals; build smart healthcare management platforms based on digital technology, integrate information and data, and develop the national healthcare database.

Try out the “one private doctor for each citizen” idea with the aim of creating a digital personal health dossier for each citizen based on which the doctor will give advice and provide care for

the citizen as a private doctor would, forming a complete digital healthcare system from primary healthcare and prophylaxis to treatment.

Create a legal corridor to provide telemedicine and electronic medical prescriptions for people, ensuring that people can see a doctor quickly and productively and costs and patient transport time are reduced.

2. Digital transformation in education

Develop platforms supporting remote learning and teaching, thoroughly apply digital technology to management, teaching and learning activities; digitalize materials and textbooks; establish platforms for direct and online sharing of teaching and learning resources. Develop educational technologies in the direction of individualized training.

100% of educational institutions shall launch remote learning and teaching activities, in which, at least 20% of the curriculum shall be taught online experimentally. Apply digital technology to give homework and check students' preparation before coming to class.

3. Digital transformation in the financial - banking sector

Develop electronic finance and establish a modern and sustainable digital finance platform. Apply digital technology to all aspects of taxation, customs, treasury and securities.

Digitally transform commercial banks to provide digital banking services in a manner that diversifies distribution channels, reforms and automates processes, promotes cooperation with fintech companies and payment intermediaries in forming a financial - banking service ecosystem to facilitate national financial inclusion and bring financial - banking services closer to those living in remote and isolated areas without access or service from banks based on technological innovations such as mobile payment and peer-to-peer lending.

Support access to loans through credit scoring solutions with reliable scoring models and client databases.

4. Digital transformation in agriculture

Promote hi-tech agriculture with a focus on smart agriculture, precision agriculture and increasing the share of digital agriculture in the economy.

Agriculture must be digitally transformed based on data platforms. Focus on development of large agricultural information systems such as those of land, crops, livestock and aquatic products. Establish aerial and terrestrial integrated monitoring and observation networks of service to agricultural activities. Boost provision of information on the environment, weather and land quality for farmers to improve crop quality and yield, and share agricultural equipment via digital platforms.

Apply digital technology to automate business operations; manage and supervise product supply chains and origin, ensuring timeliness, transparency, accuracy and food hygiene and safety. Consider trying out the “every farmer is a trader, every cooperative is a digital enterprise" idea with the aim of encouraging farmers to apply digital technology to agricultural product production, provision, distribution and prediction (price, seasons, etc.), providing training in such application and promoting development of e-commerce in agriculture.

Robustly digitalize management operations to promptly provide agricultural development policies and directions based on market warnings and predictions and planning management.

5. Digital transformation in transport and logistics

Develop smart traffic systems with a focus on urban traffic systems, expressways and national routes. Transform logistics infrastructure (such as seaports, inland ports, airports, railways, warehouses, etc.)

Develop platforms connecting goods owners, carriers and clients to establish a single-window system that allows goods owners to select the optimal freight vehicles, yards and warehouses as well as supporting the packaging process and submission and handling of relevant administrative documents.

Transform management of traffic infrastructure, commercial vehicles, management of vehicle operators, permit digital traffic infrastructure management, vehicle registration and management via digital dossiers, and digital vehicle driving license issuance and management.

6. Digital transformation in the energy sector

Digitally transform the energy sector with priority given to the electrical power industry and network optimization and automation for efficient power provision.

Connect digital electricity meters to improve speed and accuracy of bills, identify power grid problems faster, support users in saving power and detect electrical energy loss.

7. Digital transformation in the natural resources and environment sector

Develop large and comprehensive databases and information systems (e.g., national land database; databases of other areas (national geographic data; natural resources and environment monitoring; biodiversity; waste sources; remote sensing; seas and islands; climate change; meteorology - hydrography; geology - minerals; etc.) to manage the natural resources and environment sector effectively; create a national digital map to provide a basis for promotion of services supporting socio-economic development; adopt smart solutions for monitoring, supervision, management and handling of environmental emergencies and early warning of acts of god.

8. Digital transformation in industrial manufacturing

Digital transformation in industrial manufacturing shall focus on development of the following pillars: smart strategies and organizational structure, building smart factories, smart operation, development of smart products and data-related services, and enhancement of worker's digital skills.

IX. FUNDING

1. The Program shall be funded by state budget; investments from enterprises, the private sector and the community and other legal funding sources.

Ministries and local governments shall prioritize funding for digital transformation intra vires.

2. Prioritize state funding for activities supporting perception change, institution formulation, digital infrastructure development, digital platform development, trust building, cyber safety and security assurance, international cooperation, research, development and innovation in the digital environment, and skill transformation in the digital environment and other tasks and projects of the Program in charge by state agencies.

3. For units with retained funding per regulations (excluded from budget balance), they shall fund the Program in accordance with regulations of the Law on Public Investment and specialized laws.

X. INDEX

1. Consult the international community and formulate and regularly update the digital transformation index, which includes indicators for digital Government, digital economy and digital society of the whole country and of each sector and local government that are inherited and developed based on the E-Government Development index.

2. Formulate and incorporate criteria for digital transformation assessment into the provincial-level competitiveness index (PCI Index), public administration reform index (PAR Index) and information technology and communications index ((ICT Index), and information technology application index.

3. Publish assessment results annually to monitor, expedite and revise the Program.

XI. LAUNCHING MECHANISM

1. National Committee on e-Government shall conduct research and propose to the Government and the Prime Minister guidelines, strategies, mechanisms and policies providing the legal environment for digital transformation and the digital Government, digital economy and digital society; and expedite and cooperate in launching the Program.

2. Steering Committees for e-Government/digital government development of ministries, ministerial-level agencies, Governmental agencies and People's Committees of provinces and

central-affiliated cities shall expedite and cooperate in digital transformation activities in their respective ministries and local governments.

3. During Program launching, if there is any necessary change that is within the competence of the Prime Minister, the Ministry of Information and Communications shall give advice on and propose such change to the Prime Minister for consideration and decision.

If there is any necessary change that is within the competence of a ministry or local government, the standing body of the Steering Committee for e-Government/digital government development shall give advice on and propose such change to the competent authority for consideration and decision.

Article 2. Implementation

1. Ministries, ministerial-level agencies, Governmental agencies and People's Committees of provinces and central-affiliated cities shall:

a) Take charge in performing the tasks and adopting the solutions stated in Points a and d Clause 1 Section IV; Points b, c and e Clause 2 Section IV; Points a, c and d Clause 3 Section IV; Point d Clause 4 Section IV; Point b Clause 5 Section IV; Points a, b and d Clause 6 Section IV; Sections V, VI, VII, VIII and X of Article 1 of this Decision intra vires. Depending on the situation of each ministry and local government, formulate schemes, programs, strategies and plans for digital transformation in their operations in connection with information technology application, development of electronic Government and local governments, and experimental development of smart city services;

b) Formulate and promulgate list of prioritized digital transformation ideas for 2020 - 2021; request funding from and submit explanatory reports on tasks, schemes and projects to competent authorities for approval and implementation in 2020.

Criteria for selection of prioritized ideas: an idea may be selected if it is suitable for a sectorial or local government development strategy; enhances productivity/socio-economic effects or helps serve people and enterprises better; produces detailed results early; and has widespread effect;

c) Submit annual reports on implementation of the Program to the Ministry of Information and Communications before December 15 for consolidation and reporting to the Prime Minister. Data collection period shall start from December 15 of the year preceding the reporting year to December 14 of the reporting year.

2. Ministry of Information and Communications shall:

a) Take charge in launching the Program; take charge in performing the tasks and adopting the solutions stated in Points b and c Clause 1; Points a and d Clause 2; Points b, c and d Clause 3; Points a, b, c and d Clause 4; Points a, b, c, d and e Clause 5 and Clause 6 of Section IV; Section V; Clauses 1, 2, 3 and 4 of Section VI; Clauses 1, 2 and 6 of Section VII; Section X and Section XI of Article 1 of this Decision.

Annually provide guidelines, expedite, inspect and supervise; give opinions on specialized contents of schemes, projects and tasks of the Program; compile information and data on the implementation process and results of the Program; submit annual reports, which shall include proposed amendments to the Program (if necessary), to the Prime Minister;

b) Consolidate annual reports on implementation of the Program of ministries and local governments;

c) Formulate data management strategies and policies and database and data development plans to ensure connectivity and sharing; establish the national digital identity framework;

d) Research and propose mechanisms and policies for promotion of competition in the telecommunications sector to develop digital infrastructure;

dd) Research, review and amend or propose amendments to technical regulations and standards and economic-technical standards concerning digital technology application and development and new relationships arising during the digital transformation process;

e) Research and develop Vpostcode to support socio-economic development.

3. Office of the Government shall:

Perform the tasks and adopt the solutions stated in Clauses 4, 6 and 7 Section V of Article 1 of this Decision intra vires.

4. State Bank of Vietnam shall:

a) Perform the tasks and adopt the solutions stated in Clause 3 Section VIII of Article 1 of this Decision intra vires;

b) Promulgate policies and mechanisms regarding convenient credit access for digital technology enterprises and enterprises undergoing digital transformation. Research, propose and launch incentive credit programs (programs for demand for investment stimulation, concessional loans) for digital technology enterprises to support key digital transformation products and enterprises undergoing digital transformation;

c) Organize annual conferences to connect banks with enterprises undergoing digital transformation;

d) Direct commercial banks to regularly and closely cooperate with provincial governments in launching credit policies and programs to facilitate digital transformation.

5. Ministry of Planning and Investment shall:

a) Research, formulate and promulgate statistical indicators for the digital economy; develop new data collection methods to measure the effects of digital transformation on the socio-economic situation and the people; and publish the results periodically;

b) Balance and allocate capital for investment in development according to regulations of the Law on Public Investment to perform the Program's projects;

c) Research and amend regulations of laws on enterprises, investment and business to enable new digital-based business activities and models while promptly detecting and preventing negative effects on the society and economy, creating a business environment that is fair for both new and traditional business models;

d) Further attract and utilize resources from other countries and international partners for technology transfer, innovation, entrepreneurship, application and research;

dd) Take charge in developing and implementing programs for digital transformation in business registration for cooperatives and household businesses;

e) Cooperate with the Ministry of Information and Communications and other relevant ministries in performing the tasks of supporting small and medium enterprises in digital transformation and incorporating digital transformation support tasks into support programs and schemes for small and medium enterprises for 2021 - 2025.

6. Ministry of Finance shall:

a) Take charge in performing the tasks and adopting the solutions stated in Point dd Clause 2 and Point dd Clause 5 Section IV; Clause 3 Section VIII of Article 1 of this Decision intra vires;

b) Allocate funding for recurrent expenditures according to regulations of the Law on State Budget to fulfill the Program's tasks.

7. Ministry of Science and Technology shall:

a) Take charge in performing the tasks and adopt the solutions stated in Points c and d Clause 2 Section IV; Points a, b and c Clause 6 Section IV of Article 1 of this Decision intra vires;

b) Research and amend or propose amendments to intellectual property enforcement and legal systems as appropriate to actual digital technology development and application situation, international practices and Vietnam's current situation;

c) Prioritize scientific and technological tasks concerning digital transformation, and focus on tasks with reciprocal funding from enterprises.

8. Ministry of Education and Training shall:

a) Take charge in performing the tasks and adopting the solutions stated in Clauses 3 and 4 Section VII; and Clause 2 Section VIII of Article 1 of this Decision intra vires;

b) Take charge and cooperate with the Ministry of Labor - War Invalids and Social Affairs in revising undergraduate and vocational digital technology programs;

c) Create codes of new academic disciplines and update professional workforce training programs of universities, colleges and vocational schools that involve digital technology and data such as artificial intelligence, data science, cloud computing, IoT, blockchains and big data;

d) Build training and research centers for artificial intelligence and relevant digital technologies to train workforce for digital transformation.

9. Ministry of Labor - War Invalids and Social Affairs shall:

a) Take charge in performing the tasks and adopting the solutions stated in Clause 7 Section VII of Article 1 of this Decision intra vires;

b) Take charge in cooperating with the Ministry of Information and Communications and Ministry of Education and Training in developing training programs that equip workers with new labor skills;

c) Research and evaluate social impacts of digital technology; seek solutions facilitating development of private support centers for people affected by digital technology.

10. Ministry of Justice shall:

Take charge and cooperate with the Ministry of Public Security and relevant ministries in performing the tasks and adopting the solutions stated in Point e Clause 2 Section IV of Article 1 of this Decision intra vires.

11. Ministry of Health shall:

Take charge in performing the tasks and adopting the solutions stated in Clause 1 Section VIII of Article 1 of this Decision intra vires.

12. Ministry of Agriculture and Rural Development shall:

Take charge in performing the tasks and adopting the solutions stated in Clause 4 Section VIII of Article 1 of this Decision intra vires.

13. Ministry of Transport shall:

Take charge in performing the tasks and adopting the solutions stated in Clause 5 Section VIII of Article 1 of this Decision intra vires.

14. Ministry of Industry and Trade shall:

Take charge in performing the tasks and adopting the solutions stated in Clause 5 Section VI; and Clauses 6 and 8 Section VIII of Article 1 of this Decision intra vires.

15. Ministry of Natural Resources and Environment shall:

Take charge in performing the tasks and adopting the solutions stated in Clause 7 Section VIII of Article 1 of this Decision intra vires.

16. Ministry of Home Affairs shall:

Take charge in incorporating criteria for digital transformation assessment into the public administrative reform (PAR) index.

17. Vietnam Television, Voice of Vietnam, Vietnam News Agency, Nhan Dan Newspaper and press agencies shall:

Change societal perception on digital transformation via communications channels, special pages and segments of television and radio programs.

18. Vietnam Chamber of Commerce and Industry and associations shall:

a) Formulate and incorporate digital transformation assessment criteria into the provincial-level competitiveness index (PCI);

b) Develop training programs that support small and medium enterprises in digital transformation and business analysis; cooperate with the Ministry of Information and Communications in formulating and launching a scheme for support in digital transformation for small and medium enterprises;

c) Raise awareness and educate on digital transformation for the whole society;

d) Offer opinions and criticisms for state guidelines, policies and laws concerning digital transformation; carry out digital transformation evaluation and ranking; organize digital transformation seminars, forums and dialogues.

19. Telecommunications enterprises shall:

a) Act as the core force for the tasks and solutions of this Program that provide the basis for digital transformation and development of the digital Government, digital economy and digital society;

b) Digitally transform their operations, develop digital infrastructure and digital platforms, master core technologies and ensure cyber safety and security in a proactive manner.

20. Digital technology enterprises shall:

a) Formulate implementation plans, objectives and programs, allocate funding and mobilize financial resources, and digitally transform their enterprises;

b) Participate or take charge in fulfilling relevant tasks such as digital infrastructure and digital platform development, database establishment, and provision of products and services supporting digital transformation.

21. Enterprises undergoing digital transformation shall:

Proactively prepare for and start their digital transformation process based on the orientations provided for by the Program to enhance their performance and competitiveness.

22. Responsibilities of the community:

Residential communities, residential groups, households, organizations and individuals shall proactively and actively improve their digital technology application skills and raise their awareness towards digital transformation.

Article 3. This Decision takes effect from the date on which it is signed.

Ministers, heads of ministerial-level agencies, heads of Governmental agencies, chairpersons of People's Committees of provinces and central-affiliated cities and relevant organizations and units shall implement this Decision./.

THE PRIME MINISTER

Nguyen Xuan Phuc