



*Republic of the Philippines*  
**Department of Environment and Natural Resources**  
Visayas Avenue, Diliman, Quezon City  
Tel. Nos. (632) 929-66-26 to 29 • (632) 929-62-52  
Website: <http://www.denr.gov.ph> / E-mail: [web@denr.gov.ph](mailto:web@denr.gov.ph)

**MEMORANDUM**

FOR : The Directors  
Biodiversity Management Bureau  
Ecosystems Research and Development Bureau  
Environmental Management Bureau  
Forest Management Bureau  
Land Management Bureau  
Mines and Geosciences Bureau

FROM : The OIC Director, Policy and Planning Service

SUBJECT : **REQUEST FOR COMMENTS/INPUTS ON HOUSE BILL  
NOS. 6874,6787,7049, AND 7153**

DATE : **10 FEB 2021**

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This has reference to the letter from Committee Secretary Glenndale J. Cornelio, House of Representatives Committee on Economic Affairs, requesting comments or inputs on the following measures:

1. House Bill No. 6874, entitled "An Act Providing for a Comprehensive Policy to Accelerate and Harness the Digital Revolution to Foster Inclusive Economic Growth, Sustainable Development and Participatory Governance", authored by Hon. Francisco "Kiko" B. Benitez, Ph.D.
2. House Bill Nos. 6787, 7049, and 7153, all entitled "An Act providing for a National Digital Transformation Policy and for Other Purposes", authored by Hon. Kristine Alexie B. Tutor, Frederick W. Siao, and Alfred D. Vargas, respectively.

In line with this, may we request for your comments/inputs on the said measure on **or before 16 February 2021** through email at [psddivision@gmail.com](mailto:psddivision@gmail.com).

Attached is the copy of the document for your reference.

For your preferential and appropriate action, please.

  
**MELINDA C. CAPISTRANO**



SRepublic of the Philippines  
House of Representatives  
**COMMITTEE ON ECONOMIC AFFAIRS**

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CTSS-1, Committee Affairs Department  
Ramon V. Mitra Bldg., House of Representatives, Constitution Hills, Quezon City  
Tel. Nos. (Direct) 951-3006/931-5361  
(Trunk Line) 931-5001 loc. 7141

22 January 2021

**SECRETARY ROY A. CIMATU**

Department of Environment and Natural Resources  
DENR Bldg., Visayas Avenue  
Diliman, Quezon City

Dear Secretary Cimatú:

This is with reference to our letter dated 11 September 2020 requesting your official position on the following measures referred to the Committee on Economic Affairs, jointly with the Committee on Information and Communications Technology, to wit:

- 1) House Bill 6874, entitled "AN ACT PROVIDING FOR A COMPREHENSIVE POLICY TO ACCELERATE AND HARNESS THE DIGITAL REVOLUTION TO FOSTER INCLUSIVE ECONOMIC GROWTH, SUSTAINABLE DEVELOPMENT AND PARTICIPATORY GOVERNANCE", authored by Hon. Francisco "Kiko" B. Benitez, Ph.D.;
- 2) House Bills 6787, 7049, and 7153, all entitled "AN ACT PROVIDING FOR A NATIONAL DIGITAL TRANSFORMATION POLICY AND FOR OTHER PURPOSES", authored by Hon. Kristine Alexie B. Tutor, Frederick W. Siao, and Alfred D. Vargás, respectively.

We have again attached copies of the bills for your reference.

We shall appreciate the submission of your official position paper on or before 30 January 2021.

Thank you very much.

Very truly yours,

For the Chairperson:  
**HON. TEODORICO T. HARESCO, JR.**

  
**GLENDALÉ J. CORNELIO**  
OIC - Committee Secretary

REPUBLIC OF THE PHILIPPINES  
HOUSE OF REPRESENTATIVES  
Quezon City

EIGHTEENTH CONGRESS  
First Regular Session

House Bill No. 6787



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Introduced by HON. KRISTINE ALEXIE B. TUTOR  
Third District, Bohol

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EXPLANATORY NOTE

In recent years, the Philippines has been recognized as one of the top internet users in the world, with Filipinos averaging 10 hours and two minutes of screen time every day.<sup>1</sup> The Digital 2019 report of social media firms Hootsuite and We Are Social showed that Filipinos spent an average of four hours and 12 minutes on social media platforms, almost double of the global average of two hours and 16 minutes.<sup>2</sup>

And with more mobile subscriptions than there are people in the country—109.2 for every 100 inhabitants, according to the *Measuring the Information Society Report 2017* of the International Telecommunications Union (ITU)—the foundations are there for the Philippines to blossom into a truly digital society. But just as the experience with the COVID-19 outbreak and the subsequent Luzon-wide enhanced community quarantine has demonstrated, several gaps and institutional deficiencies persist—underscoring the need for a comprehensive digital transformation policy to be rolled out and implemented, one that is especially focused on digital skills and competencies.

Leveraging on the Filipinos' interest and presence in the digital space and in order to foster digital competency in support of the country's economic and social development goals, this bill seeks to create a national framework for digital competency with focus on information and data literacy, communication and collaboration, digital content creation, safety and problem solving. The proposed digital competency framework is patterned after the European Commission's DigComp 2.0<sup>3</sup>, which identified the five key components of digital competence.

Among the key provisions in the bill is the adoption of information and communication technology (ICT) competency for teachers, since building digital competency should encompass all forms of learning. The proposed provisions were adapted from the 2011 United Nations Educational, Scientific and Cultural Organization (UNESCO) ICT Competency for Teachers, aimed at helping countries develop comprehensive national teacher ICT competency policies and standards and integrate these in overarching ICT in

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<sup>1</sup> <https://www.theguardian.com/technology/2019/feb/01/world-internet-usage-index-philippines-10-hours-a-day>

<sup>2</sup> <https://www.philstar.com/business/technology/2019/01/31/1889736/filipinos-are-worlds-heaviest-internet-users-2018-report-says>

<sup>3</sup> <https://milunesco.unaoc.org/mil-resources/digital-competence-framework-for-citizens/>

education plans.<sup>4</sup> A 2019 United Nations Conference on Trade and Development (UNCTAD) Report highlights that traditional teaching curricula and training programs contribute to the enhancement of digital skills and at the same time, digital technologies facilitates learning by providing education access to those who might not be able to benefit from formal education.<sup>5</sup>

The bill also seeks to establish and institutionalize a national digital transformation strategy, and a national digital skills development strategy to ensure that every citizen is given the opportunity to understand ICT and develop the necessary skills and ability to apply ICT in their everyday lives.

Finally, the bill also creates the National Digital Transformation Council who will oversee policy formulation for the national digital competency framework and facilitate the development and implementation of the proposed strategies under the bill.

This measure falls under our broad effort towards the formulation and sustained implementation of a “Tatak Pinoy” industrialization campaign and policy that helps Filipino enterprises move up the value chain, Filipino entrepreneurs to produce better quality products, and Filipino professionals to render world-class services.

In view of the foregoing, the passage of this bill is earnestly sought.



HON. KRISTINE/ALEXIE B. TUTOR

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<sup>4</sup> <https://en.unesco.org/themes/ict-education/competency-framework-teachers>

<sup>5</sup> [https://unctad.org/en/PublicationsLibrary/dl1stict2019d3\\_en.pdf](https://unctad.org/en/PublicationsLibrary/dl1stict2019d3_en.pdf)

REPUBLIC OF THE PHILIPPINES  
HOUSE OF REPRESENTATIVES  
Quezon City

EIGHTEENTH CONGRESS  
First Regular Session

6787  
House Bill No. \_\_\_\_\_

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Introduced by HON. KRISTINE ALEXIE B. TUTOR  
Third District, Bohol

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AN ACT  
PROVIDING FOR A NATIONAL DIGITAL TRANSFORMATION POLICY AND  
FOR OTHER PURPOSES

*Be it enacted by the Senate and the House of Representatives of the Philippines in  
Congress assembled:*

1 TITLE I

2 STATE POLICIES AND BASIC PRINCIPLES

3 CHAPTER I

4 State Policies

5  
6 SECTION 1. *Short Title.* – This Act shall be known as the “*National Digital*  
7 *Transformation Act*”.

8  
9 SEC. 2. *Declaration of State Policy.* – It is hereby declared policy of the State to  
10 integrate digital technology into all areas of government that will greatly improve Philippine  
11 governance, socio-economic development and services to people. Consequently, the State  
12 shall create a plan that shall transform the government into a digital platform providing  
13 transparent and accountable governance, efficient operations, direct citizen engagement, and  
14 innovation.

15 CHAPTER II

16 Definitions of Terms

17 SEC. 3. *Definition of Terms.* – The following terms as used in this Act shall mean:

- 18 (a) “*21st century skills*” refer to skills that are required by new jobs such as critical  
19 thinking, problem solving, good communication, collaboration, information and  
20 technology literacy, flexibility and adaptability, innovativeness and creativity.

- 1 (b) *"Automatic and Artificial Intelligence"* refers to combining technology such as  
2 Robotics Process Automation or RPA, Artificial intelligence (AI) and machine  
3 learning;
- 4 (c) *"Big Data and Analytics"* refers to data discovery process using techniques and  
5 tools like mining useful information or insights from huge sets of data either  
6 structure or unstructured. This is enabled through exponential increase in both  
7 computing power and storage capacity;
- 8 (d) *"Cloud Computing"* refers to the delivery of IT services hosted over the  
9 internet to transform compute resources into a utility;
- 10 (e) *"Data"* refers to a sequence of one or more symbols given meaning by specific  
11 act(s) of interpretation. Data can be analysed or used in an effort to gain  
12 knowledge or make decisions. Digital data is represented using the binary  
13 number system of ones (1) and zeros (0) as opposed to its analogue  
14 representation;
- 15 (f) *"Digital Competence"* refers to the confident, critical, creative, relevant and  
16 responsible use of, and engagement with, digital technologies for learning or  
17 education, for work or occupation, and for participation in society;
- 18 (g) *"Digital content"* refers to any type of content that exists in the form of digital  
19 data that are encoded in a machine-readable format, and can be created, viewed,  
20 distributed, modified and stored using computers and digital technologies, e.g.  
21 the internet. The content can be either free or pay content such as web pages and  
22 websites, social media, data and databases, digital audio, such as mp3s, and e-  
23 books, digital imagery, digital video, video games, computer programmes and  
24 software.
- 25 (h) *"Digital entrepreneurship"* refers to combining traditional entrepreneurship  
26 with new digital technologies, thus creating digital enterprises which are  
27 characterized by a high intensity of utilization of novel digital technologies,  
28 particularly social media, big data analytics, mobile and cloud solutions to  
29 improve business operations, invent new business models, sharpen business  
30 intelligence, and engage with customers and stakeholders;
- 31 (i) *"Digital services"* refer to public or private services that can be delivered  
32 through digital communication, such as Internet, mobile phone network that

- 1 might include delivery of digital information, data or content or transactional  
2 services;
- 3 (j) *"Digital skills"* refer to range of abilities, from basic to more advanced,  
4 encompassing a combination of behaviors, expertise, know-how, work habits,  
5 character traits, dispositions and critical understandings on the use of digital  
6 devices, communication applications, and networks to access and manage  
7 information;
- 8 (k) *"Digital technology"* refers to any product that can be used to create, view,  
9 distribute, modify, store, retrieve, transmit and receive information  
10 electronically in a digital form such as personal computers and devices like  
11 desktop, laptop, netbook, tablet computer, smart phones, PDA with mobile  
12 phone facilities, games consoles, media players, e-book readers, as well as  
13 digital television, and robots;
- 14 (l) *"Digital tools"* refer to technologies used for a given purpose or for carrying out  
15 a particular function of information processing, communication, content  
16 creation, safety or problem solving;
- 17 (m) *"Digital Transformation"* refers to the total and overall societal effect of  
18 digitalization;
- 19 (n) *"Digitization"* refers to the technical conversion from traditional to digital;
- 20 (o) *"Innovation"* refers to the creation of new ideas using new or existing  
21 technologies that results in the development of new or improved products,  
22 processes, or services, which are then spread or transferred across the market;
- 23 (p) *"Internet of Things (IoT)"* refers to everyday devices connected to the internet  
24 through sensors and computing power to monitor and manage actions, offering  
25 users greater influence over their environment;
- 26 (q) *"Social inclusion"* refers to the process of improving the terms for individuals  
27 and groups to take part in society (World Bank). Social inclusion aims to  
28 empower poor and marginalized people to take advantage of burgeoning global  
29 opportunities. It ensures that people have a voice in decisions which affect their  
30 lives and that they enjoy equal access to markets, services and political, social  
31 and physical spaces;
- 32 (r) *"Well-being"* is related to the World Health Organization definition of good  
33 health as a state of complete physical, social and mental well-being, and not

1 merely the absence of disease or infirmity. Social well-being refers to the sense  
2 of involvement with others and with the communities such as access and use of  
3 social capital, social trust, social connectedness and social networks;

4  
5 **TITLE II**  
6 **DIGITAL COMPETENCE FRAMEWORK FOR CITIZENS**  
7 **CHAPTER I**  
8 **Functions**  
9

10 **SEC. 4. *Digital Competence Framework for Citizens.*** – A Digital Competence  
11 Framework for Citizens is hereby created. It shall serve as a tool to improve the digital  
12 competence of citizens and a guide in the formulation of policies that support digital  
13 competence building. The framework shall include education and training initiatives to  
14 improve the digital competence of various specific target groups.

15 The essential knowledge, skills, and attitudes that comprise digital competence are,  
16 generally classified as follows:

17 (a) *Information and Data Literacy.* – The ability to articulate information needs, to  
18 locate and retrieve digital data, information and content, to judge the relevance of the source  
19 and its content and to store, manage, and organize digital data, information and content. The  
20 skills are as follows:

- 21 1. Browsing, searching and filtering data, information, and digital content
- 22 2. Evaluating data, information, and digital content
- 23 3. Managing data, information, and digital content

24 (b) *Communication and collaboration.* – The ability to interact, communicate and  
25 collaborate through digital technologies while being aware of cultural and generational  
26 diversity, to participate in society through public and private digital services and participatory  
27 citizenship and to manage one's digital identity and reputation. The skills are as follows:

- 28 1. Interacting through digital technologies
- 29 2. Sharing through digital technologies
- 30 3. Engaging in citizenship through digital technologies
- 31 4. Collaborating through digital technologies
- 32 5. Netiquette
- 33 6. Managing digital identity



1 (c) *Digital Content Creation*. – The ability to create and edit digital content, to  
2 improve and integrate information and content into an existing body of knowledge while  
3 understanding how copyright and licenses are to be applied, and to know how to give  
4 understandable instructions for a computer system. The skills are as follows:

- 5 1. Developing digital content
- 6 2. Integrating and re-elaborating digital content
- 7 3. Copyright and licenses
- 8 4. Programming

9 (d) *Safety*. – The ability to protect devices, content, personal data and privacy in digital  
10 environments, to protect physical and psychological health, and to be aware of digital  
11 technologies for social well-being and social inclusion, as well as to be aware of the  
12 environmental impact of digital technologies and their use. The skills are as follows:

- 13 1. Protecting devices
- 14 2. Protecting personal data and privacy
- 15 3. Protecting health and well-being
- 16 4. Protecting the environment

17 (e) *Problem Solving*. – The ability to identify needs and problems, and to resolve  
18 conceptual problems and problem situations in digital environments, to use digital tools to  
19 innovate processes and products and to be updated with the digital evolution. The skills are as  
20 follows:

- 21 1. Solving technical problems
- 22 2. Identifying needs & technological responses
- 23 3. Creatively using digital technologies
- 24 4. Identifying digital competence gaps

25 The Department of Information and Communications Technology (DICT) and the  
26 Department of Education (DepEd) in collaboration with the Commission on Higher  
27 Education (CHED), and the Technical Education and Skills Development Authority  
28 (TESDA) shall design and develop an instrument to measure and certify citizens' digital  
29 competence based on the framework. These agencies shall consult experts in the field of  
30 various technologies necessary for digital transformation, such as but not limited to cloud  
31 computing, automatic and artificial intelligence, robotics, big data and other disruptive  
32 technologies.

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## CHAPTER II

### ICT Competency Framework For Teachers

**SEC. 5. *ICT Competency Framework for Teachers.*** – An ICT-Competence Framework for Teachers is hereby created. This shall be used to outline the competencies that teachers, educators, and trainers need in order to integrate Information and Communication Technologies (ICTs) into their professional practice.

The framework shall be used to compare the teachers' competencies in different regions, provinces, cities, and municipalities in order to analyze and develop educational programs and training courses for teacher professional development at national or regional level.

The required competencies are defined as the intersections of the three approaches to teaching, as follows:

(a) **Technology literacy approach** shall enable students to use ICT in order to learn more efficiently and increase the extent to which new technology is used by students, citizens and the workforce by incorporating technology skill into the school curriculum. The goal of the technology literacy approach is to enable learners, citizens, and the workforce to use ICT to support social development and improve economic productivity.

(b) **Knowledge deepening approach** shall enable students to acquire in-depth knowledge of their school subjects and apply it to complex, real-world problems; and increase the ability of students, citizens, and the workforce to use knowledge to add value to society and the economy by applying it to solve complex, real-world problems. The aim of the knowledge deepening approach is to increase the ability of students, citizens, and the workforce to add value to society and to the economy by applying the knowledge gained in school subjects to solve complex, high priority problems encountered in real world situations of work, society and in life generally.

(c) **Knowledge creation approach** shall enable students, citizens and the workforce they become, to create the new knowledge required for more harmonious, fulfilling and prosperous societies; and increase the ability of students, citizens, and the workforce to innovate, produce new knowledge, and benefit from this new knowledge. The aim of the knowledge creation approach is to increase productivity by creating students, citizens, and a workforce that is continually

1 engaged in, and benefits from, knowledge creation, innovation and life-long  
2 learning. The six aspects of a teacher's work, under the framework are as follows:

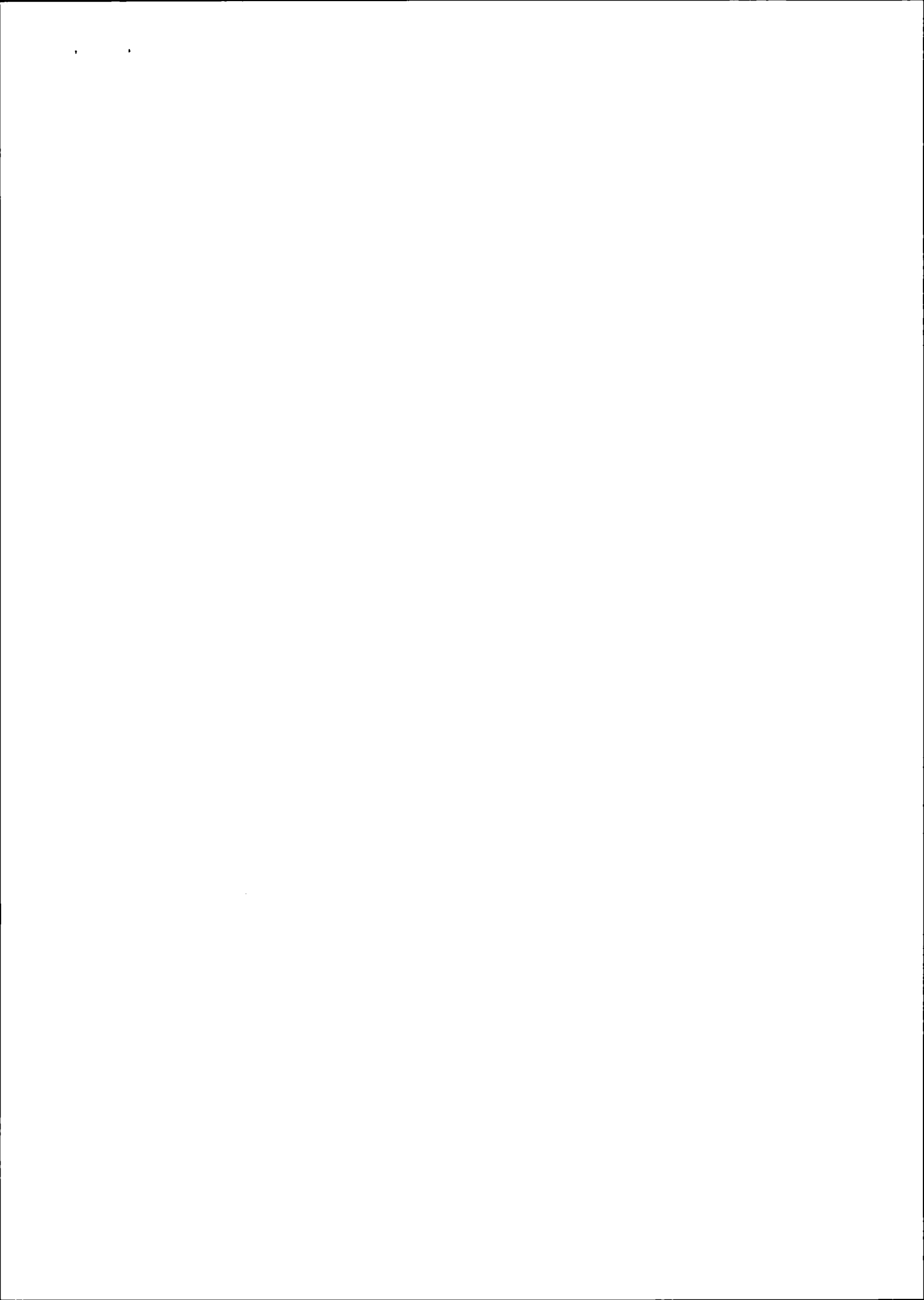
- 3 1. Understanding ICT in education
- 4 2. Curriculum assessment
- 5 3. Pedagogy
- 6 4. ICT
- 7 5. Organization and administration
- 8 6. Teacher professional learning

9 The modular structure of learning shall be encouraged. Teacher-education institutions  
10 and providers of professional learning shall design offerings that address and is aligned to the  
11 overall goals and rationale of the Framework.

12  
13 **PART III**  
14 **NATIONAL DIGITAL SKILLS STRATEGY**  
15 **CHAPTER I**  
16 **Definitions**

17 **SEC. 6. *National Digital Transformation Strategy.*** – A National Digital  
18 Transformation Strategy shall be created. The Strategy shall ensure that every citizen shall  
19 have the opportunity to understand ICT and develop skills and ability to apply the ICT in  
20 their work, vocation, business, and life in society. The Strategy shall include, but not limited  
21 to:

- 22 (a) *Affordable and clean energy and growth*, which includes plans and programs to  
23 ensure competitive costs as well as lower adverse impact to the environment;
- 24 (b) *Digital inclusion*, which includes plans and programs to spread growth across  
25 the country, and identify potential areas for various industries to unlock growth,  
26 increase skill levels, or promote local innovation;
- 27 (c) *Infrastructure*, which includes concrete plans and strategies to develop and  
28 upgrade performance on digital, energy, and transport infrastructure, to  
29 effectively align central government infrastructure investment with local growth  
30 priorities;
- 31 (d) *Institutional framework*, which includes strategies and directions to establish or  
32 improve existing institutions such as innovation councils, local educational  
33 institutions, trade associations or financial networks;



- 1 (e) *Procurement policy*, which includes concrete and specific plans in the  
2 government procurement in order to drive innovation and enable the  
3 development of effective, efficient and transparent supply chains across the  
4 country;
- 5 (f) *Science, research, and innovation*, which include concrete set of plans and  
6 strategies to ensure a knowledge economy, create and commercialize intellectual  
7 property that will promote and enhance the global brand of the Philippines;
- 8 (g) *Sectoral engagement*, which includes plans, policies and strategies programs to  
9 enhance areas of competitive advantage, and help new sectors to grown;
- 10 (h) *Skills*, which include concrete plans and strategies to ensure that the Filipino  
11 workforce is equipped with the relevant and necessary 21<sup>st</sup> century skills for  
12 them to thrive in a modern economy and build learning organizations and  
13 systems to benefit the everyone especially those who are not able to attend or  
14 complete formal education, and enhance science, technology, engineering, and  
15 math (STEM) skills and numeracy, and raising skill levels especially in  
16 underprivileged areas;
- 17 (i) *Trade and inward investment* which includes plans and strategies to boost  
18 productivity and growth across the economy by increasing competition and  
19 helping to bring innovation and new ideas, systems and processes; and
- 20 (j) *Supporting businesses to start and grow*, where we the government must ensure  
21 that businesses across the country can access the finance and management skills  
22 they need to grow; and create the conditions to enable firms to invest for the  
23 long term.
- 24

25 **SEC. 7. Digital Inclusion.** – The DICT shall enable all citizens, irrespective of age,  
26 gender, physical ability, ethnicity, health conditions, or socio-economic status to access the  
27 opportunities of the internet. Citizens, businesses and public services must take full advantage  
28 of the transformational benefits of the digital revolution. The Department must identify the  
29 root causes of digital exclusion in all sectors and regions for the purpose of increase their  
30 digital competence.

31 The DICT shall identify and develop the full range of digital skills that individuals  
32 and companies across the country need to address the requirements of a digital economy and  
33 instill measures and programs for citizens to continuously up-skill and re-skill throughout  
34 their working lives.

1 It shall also develop a strong collaboration between the public, private, and  
2 educational sector to address the digital skills gap in a coherent and holistic way.

3  
4 **SEC. 8. *Digital Libraries and Learning Hubs.*** - The DICT and the National Library  
5 of the Philippines shall enhance and promote the role of libraries in improving digital  
6 communication, increasing citizen's digital footprint, promoting digital inclusion and  
7 transform these libraries as providers of digital access, training and support for local  
8 communities.

9  
10 **SEC. 9. *Digital Entrepreneurship.*** - The Department of Trade and Industry (DTI) and  
11 the DICT shall strongly promote the digitization of businesses according to their own specific  
12 digital needs, mainly focused on these four core digital activities, namely maintaining a web  
13 presence, selling online, using the cloud, and digitizing back-office functions such as payroll  
14 and human resource management, in order to become or remain competitive. The DTI shall  
15 ensure that entrepreneurs undertake the certification under the digital competence framework  
16 for citizens to identify areas the need training and intervention.

17  
18 **SEC. 10. *Digital Civil Service.*** - To ensure the highest standards of public service,  
19 the DICT and the Civil Service Commission shall identify and consolidate all the skills and  
20 competencies of public employees in the career service and recommend and cause the  
21 conduct of digital skills training under an annual digital skills mapping activity. All public  
22 employees shall be covered under a mandatory basis of certification under the digital  
23 competence framework for citizens to identify areas the need training and intervention.

## 24 25 **CHAPTER II**

### 26 **National Digital Skills Development Strategy**

27  
28 **SEC. 11. *National Digital Skills Development Strategy.*** - The State shall create  
29 digital skills development strategy that will:

30 (a) Identify the digital skills development goals for:

- 31 1. Primary education
- 32 2. Secondary education
- 33 3. Tertiary education, for students, and digital technology development and design  
34 experts

- 1 4. Work-related digital skills training programs for out-of-school youth, including
- 2 for freelancers and part-time workers;
- 3 5. Work-related digital skills training programs for adults requiring re-skilling;
- 4 6. Skills for life in the digital economy for all citizens;
- 5 7. Training programs both for life and work for under-represented populations;
- 6 8. Develop or plan for a digital entrepreneurship skills strategy.
- 7 (d) Inventory existing policies, plans and programs that support the development of
- 8 digital skills and analyze how they can be used to support the goals of the digital
- 9 skills strategy
- 10 (e) Benchmark the goals against existing frameworks or countries with similar goals
- 11 as well as identify the existing priorities and challenges in meeting the above
- 12 goals as well as identify promising solutions for providing digital skills that
- 13 address the common challenges
- 14 (f) Identify current and future trends in relation to demographic trends, technological
- 15 changes, business trends, trade, industrial policies, and the shift to a greener,
- 16 digital and knowledge-based economy
- 17 (g) Identify available training programs, curriculum and providers that can be
- 18 leveraged to meet the strategy's goals and develop new curricula where necessary
- 19 as well as identify gaps in training programs and curricula – and identify providers
- 20 and strategies that will help fill them.
- 21 (h) Identify and recommend new policies and programs that are needed and conduct
- 22 advocacy both using the existing policies and to build support for new policies.

### 24 CHAPTER III

#### 25 Digital Jobs

26  
27 **SEC. 12. *Digital Jobs.*** - The DICT in coordination with Department of Labor  
28 (DOLE) and other concerned agencies shall provide jobs which are in line with freelancing,  
29 virtual work, homebased digital activities, and the like.

### 30 CHAPTER VII

#### 31 National Digital Transformation Council

32 **SEC. 13. *National Digital Transformation Council.*** – The National Digital  
33 Transformation Council is hereby created to ensure the effective implementation of this Act.





1           **SEC. 18. Appropriations.** – The amount necessary for the effective implementation of  
2 the provisions of this Act shall be included in the General Appropriations Act for the year  
3 following the approval of this Act.

4  
5           **SEC. 19. Repealing Clause.** – All other laws, decrees, executive orders and rules and  
6 regulations contrary to or inconsistent with the provisions of this Act are hereby repealed or  
7 modified accordingly.

8  
9           **SEC. 20. Separability Clause** – If any provision of this Act is held invalid or  
10 unconstitutional, the same shall not affect the validity and effectivity of the other provisions  
11 hereof.

12  
13           **SEC. 21. Effectivity** – This Act shall take effect fifteen (15) days after its publication  
14 in the *Official Gazette* or in any newspaper of general circulation.

*Approved,*

REPUBLIC OF THE PHILIPPINES  
HOUSE OF REPRESENTATIVES  
Quezon City

EIGHTEENTH CONGRESS  
First Regular Session

House Bill No. 6787



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Introduced by HON. KRISTINE ALEXIE B. TUTOR  
Third District, Bohol

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EXPLANATORY NOTE

In recent years, the Philippines has been recognized as one of the top internet users in the world, with Filipinos averaging 10 hours and two minutes of screen time every day.<sup>1</sup> The Digital 2019 report of social media firms Hootsuite and We Are Social showed that Filipinos spent an average of four hours and 12 minutes on social media platforms, almost double of the global average of two hours and 16 minutes.<sup>2</sup>

And with more mobile subscriptions than there are people in the country—109.2 for every 100 inhabitants, according to the *Measuring the Information Society Report 2017* of the International Telecommunications Union (ITU)—the foundations are there for the Philippines to blossom into a truly digital society. But just as the experience with the COVID-19 outbreak and the subsequent Luzon-wide enhanced community quarantine has demonstrated, several gaps and institutional deficiencies persist—underscoring the need for a comprehensive digital transformation policy to be rolled out and implemented, one that is especially focused on digital skills and competencies.

Leveraging on the Filipinos' interest and presence in the digital space and in order to foster digital competency in support of the country's economic and social development goals, this bill seeks to create a national framework for digital competency with focus on information and data literacy, communication and collaboration, digital content creation, safety and problem solving. The proposed digital competency framework is patterned after the European Commission's DigComp 2.0<sup>3</sup>, which identified the five key components of digital competence.

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<sup>1</sup> <https://www.theguardian.com/technology/2019/feb/01/world-internet-usage-index-philippines-10-hours-a-day>

<sup>2</sup> <https://www.philstar.com/business/technology/2019/01/31/1889736/filipinos-are-worlds-heaviest-internet-users-2018-report-says>

<sup>3</sup> <https://milunesco.unaoc.org/mil-resources/digital-competence-framework-for-citizens/>


education plans.<sup>4</sup> A 2019 United Nations Conference on Trade and Development (UNCTAD) Report highlights that traditional teaching curricula and training programs contribute to the enhancement of digital skills and at the same time, digital technologies facilitates learning by providing education access to those who might not be able to benefit from formal education.<sup>5</sup>

The bill also seeks to establish and institutionalize a national digital transformation strategy, and a national digital skills development strategy to ensure that every citizen is given the opportunity to understand ICT and develop the necessary skills and ability to apply ICT in their everyday lives.

Finally, the bill also creates the National Digital Transformation Council who will oversee policy formulation for the national digital competency framework and facilitate the development and implementation of the proposed strategies under the bill.

This measure falls under our broad effort towards the formulation and sustained implementation of a “Tatak Pinoy” industrialization campaign and policy that helps Filipino enterprises move up the value chain, Filipino entrepreneurs to produce better quality products, and Filipino professionals to render world-class services.

In view of the foregoing, the passage of this bill is earnestly sought.



HON. KRISTINE/ALEXIE B. TUTOR

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<sup>4</sup> <https://en.unesco.org/themes/ict-education/competency-framework-teachers>

<sup>5</sup> [https://unctad.org/en/PublicationsLibrary/dtlstict2019d3\\_en.pdf](https://unctad.org/en/PublicationsLibrary/dtlstict2019d3_en.pdf)

REPUBLIC OF THE PHILIPPINES  
HOUSE OF REPRESENTATIVES  
Quezon City

EIGHTEENTH CONGRESS  
First Regular Session  
6787  
House Bill No. \_\_\_\_\_

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Introduced by HON. KRISTINE ALEXIE B. TUTOR  
Third District, Bohol

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AN ACT  
PROVIDING FOR A NATIONAL DIGITAL TRANSFORMATION POLICY AND  
FOR OTHER PURPOSES

*Be it enacted by the Senate and the House of Representatives of the Philippines in  
Congress assembled:*

1 TITLE I

2 STATE POLICIES AND BASIC PRINCIPLES

3 CHAPTER I

4 State Policies

5  
6 SECTION 1. *Short Title.* – This Act shall be known as the “*National Digital*  
7 *Transformation Act*”.

8  
9 SEC. 2. *Declaration of State Policy.* – It is hereby declared policy of the State to  
10 integrate digital technology into all areas of government that will greatly improve Philippine  
11 governance, socio-economic development and services to people. Consequently, the State  
12 shall create a plan that shall transform the government into a digital platform providing  
13 transparent and accountable governance, efficient operations, direct citizen engagement, and  
14 innovation.

15 CHAPTER II

16 Definitions of Terms

17 SEC. 3. *Definition of Terms.* – The following terms as used in this Act shall mean:

- 18 (a) “*21st century skills*” refer to skills that are required by new jobs such as critical  
19 thinking, problem solving, good communication, collaboration, information and  
20 technology literacy, flexibility and adaptability, innovativeness and creativity.

- 1 (b) *"Automatic and Artificial Intelligence"* refers to combining technology such as  
2 Robotics Process Automation or RPA, Artificial intelligence (AI) and machine  
3 learning;
- 4 (c) *"Big Data and Analytics"* refers to data discovery process using techniques and  
5 tools like mining useful information or insights from huge sets of data either  
6 structure or unstructured. This is enabled through exponential increase in both  
7 computing power and storage capacity;
- 8 (d) *"Cloud Computing"* refers to the delivery of IT services hosted over the  
9 internet to transform compute resources into a utility;
- 10 (e) *"Data"* refers to a sequence of one or more symbols given meaning by specific  
11 act(s) of interpretation. Data can be analysed or used in an effort to gain  
12 knowledge or make decisions. Digital data is represented using the binary  
13 number system of ones (1) and zeros (0) as opposed to its analogue  
14 representation;
- 15 (f) *"Digital Competence"* refers to the confident, critical, creative, relevant and  
16 responsible use of, and engagement with, digital technologies for learning or  
17 education, for work or occupation, and for participation in society;
- 18 (g) *"Digital content"* refers to any type of content that exists in the form of digital  
19 data that are encoded in a machine-readable format, and can be created, viewed,  
20 distributed, modified and stored using computers and digital technologies, e.g.  
21 the internet. The content can be either free or pay content such as web pages and  
22 websites, social media, data and databases, digital audio, such as mp3s, and e-  
23 books, digital imagery, digital video, video games, computer programmes and  
24 software.
- 25 (h) *"Digital entrepreneurship"* refers to combining traditional entrepreneurship  
26 with new digital technologies, thus creating digital enterprises which are  
27 characterized by a high intensity of utilization of novel digital technologies,  
28 particularly social media, big data analytics, mobile and cloud solutions to  
29 improve business operations, invent new business models, sharpen business  
30 intelligence, and engage with customers and stakeholders;
- 31 (i) *"Digital services"* refer to public or private services that can be delivered  
32 through digital communication, such as Internet, mobile phone network that

- 1 might include delivery of digital information, data or content or transactional  
2 services;
- 3 (j) *"Digital skills"* refer to range of abilities, from basic to more advanced,  
4 encompassing a combination of behaviors, expertise, know-how, work habits,  
5 character traits, dispositions and critical understandings on the use of digital  
6 devices, communication applications, and networks to access and manage  
7 information;
- 8 (k) *"Digital technology"* refers to any product that can be used to create, view,  
9 distribute, modify, store, retrieve, transmit and receive information  
10 electronically in a digital form such as personal computers and devices like  
11 desktop, laptop, netbook, tablet computer, smart phones, PDA with mobile  
12 phone facilities, games consoles, media players, e-book readers, as well as  
13 digital television, and robots;
- 14 (l) *"Digital tools"* refer to technologies used for a given purpose or for carrying out  
15 a particular function of information processing, communication, content  
16 creation, safety or problem solving;
- 17 (m) *"Digital Transformation"* refers to the total and overall societal effect of  
18 digitalization;
- 19 (n) *"Digitization"* refers to the technical conversion from traditional to digital;
- 20 (o) *"Innovation"* refers to the creation of new ideas using new or existing  
21 technologies that results in the development of new or improved products,  
22 processes, or services, which are then spread or transferred across the market;
- 23 (p) *"Internet of Things (IoT)"* refers to everyday devices connected to the internet  
24 through sensors and computing power to monitor and manage actions, offering  
25 users greater influence over their environment;
- 26 (q) *"Social inclusion"* refers to the process of improving the terms for individuals  
27 and groups to take part in society (World Bank). Social inclusion aims to  
28 empower poor and marginalized people to take advantage of burgeoning global  
29 opportunities. It ensures that people have a voice in decisions which affect their  
30 lives and that they enjoy equal access to markets, services and political, social  
31 and physical spaces;
- 32 (r) *"Well-being"* is related to the World Health Organization definition of good  
33 health as a state of complete physical, social and mental well-being, and not

1 merely the absence of disease or infirmity. Social well-being refers to the sense  
2 of involvement with others and with the communities such as access and use of  
3 social capital, social trust, social connectedness and social networks;

4  
5 **TITLE II**

6 **DIGITAL COMPETENCE FRAMEWORK FOR CITIZENS**

7 **CHAPTER I**

8 **Functions**

9  
10 **SEC. 4. *Digital Competence Framework for Citizens.*** – A Digital Competence  
11 Framework for Citizens is hereby created. It shall serve as a tool to improve the digital  
12 competence of citizens and a guide in the formulation of policies that support digital  
13 competence building. The framework shall include education and training initiatives to  
14 improve the digital competence of various specific target groups.

15 The essential knowledge, skills, and attitudes that comprise digital competence are,  
16 generally classified as follows:

17 (a) *Information and Data Literacy.* – The ability to articulate information needs, to  
18 locate and retrieve digital data, information and content, to judge the relevance of the source  
19 and its content and to store, manage, and organize digital data, information and content. The  
20 skills are as follows:

- 21 1. Browsing, searching and filtering data, information, and digital content
- 22 2. Evaluating data, information, and digital content
- 23 3. Managing data, information, and digital content

24 (b) *Communication and collaboration.* – The ability to interact, communicate and  
25 collaborate through digital technologies while being aware of cultural and generational  
26 diversity, to participate in society through public and private digital services and participatory  
27 citizenship and to manage one's digital identity and reputation. The skills are as follows:

- 28 1. Interacting through digital technologies
- 29 2. Sharing through digital technologies
- 30 3. Engaging in citizenship through digital technologies
- 31 4. Collaborating through digital technologies
- 32 5. Netiquette
- 33 6. Managing digital identity

1           (c) *Digital Content Creation*. – The ability to create and edit digital content, to  
2 improve and integrate information and content into an existing body of knowledge while  
3 understanding how copyright and licenses are to be applied, and to know how to give  
4 understandable instructions for a computer system. The skills are as follows:

- 5           1. Developing digital content
- 6           2. Integrating and re-elaborating digital content
- 7           3. Copyright and licenses
- 8           4. Programming

9           (d) *Safety*. – The ability to protect devices, content, personal data and privacy in digital  
10 environments, to protect physical and psychological health, and to be aware of digital  
11 technologies for social well-being and social inclusion, as well as to be aware of the  
12 environmental impact of digital technologies and their use. The skills are as follows:

- 13           1. Protecting devices
- 14           2. Protecting personal data and privacy
- 15           3. Protecting health and well-being
- 16           4. Protecting the environment

17           (e) *Problem Solving*. – The ability to identify needs and problems, and to resolve  
18 conceptual problems and problem situations in digital environments, to use digital tools to  
19 innovate processes and products and to be updated with the digital evolution. The skills are as  
20 follows:

- 21           1. Solving technical problems
- 22           2. Identifying needs & technological responses
- 23           3. Creatively using digital technologies
- 24           4. Identifying digital competence gaps

25           The Department of Information and Communications Technology (DICT) and the  
26 Department of Education (DepEd) in collaboration with the Commission on Higher  
27 Education (CHED), and the Technical Education and Skills Development Authority  
28 (TESDA) shall design and develop an instrument to measure and certify citizens' digital  
29 competence based on the framework. These agencies shall consult experts in the field of  
30 various technologies necessary for digital transformation, such as but not limited to cloud  
31 computing, automatic and artificial intelligence, robotics, big data and other disruptive  
32 technologies.

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## CHAPTER II

### ICT Competency Framework For Teachers

**SEC. 5. *ICT Competency Framework for Teachers.*** – An ICT-Competence Framework for Teachers is hereby created. This shall be used to outline the competencies that teachers, educators, and trainers need in order to integrate Information and Communication Technologies (ICTs) into their professional practice.

The framework shall be used to compare the teachers' competencies in different regions, provinces, cities, and municipalities in order to analyze and develop educational programs and training courses for teacher professional development at national or regional level.

The required competencies are defined as the intersections of the three approaches to teaching, as follows:

- (a) **Technology literacy approach** shall enable students to use ICT in order to learn more efficiently and increase the extent to which new technology is used by students, citizens and the workforce by incorporating technology skill into the school curriculum. The goal of the technology literacy approach is to enable learners, citizens, and the workforce to use ICT to support social development and improve economic productivity.
- (b) **Knowledge deepening approach** shall enable students to acquire in-depth knowledge of their school subjects and apply it to complex, real-world problems; and increase the ability of students, citizens, and the workforce to use knowledge to add value to society and the economy by applying it to solve complex, real-world problems. The aim of the knowledge deepening approach is to increase the ability of students, citizens, and the workforce to add value to society and to the economy by applying the knowledge gained in school subjects to solve complex, high priority problems encountered in real world situations of work, society and in life generally.
- (c) **Knowledge creation approach** shall enable students, citizens and the workforce they become, to create the new knowledge required for more harmonious, fulfilling and prosperous societies; and increase the ability of students, citizens, and the workforce to innovate, produce new knowledge, and benefit from this new knowledge. The aim of the knowledge creation approach is to increase productivity by creating students, citizens, and a workforce that is continually

1 engaged in, and benefits from, knowledge creation, innovation and life-long  
2 learning. The six aspects of a teacher's work, under the framework are as follows:

- 3 1. Understanding ICT in education
- 4 2. Curriculum assessment
- 5 3. Pedagogy
- 6 4. ICT
- 7 5. Organization and administration
- 8 6. Teacher professional learning

9 The modular structure of learning shall be encouraged. Teacher-education institutions  
10 and providers of professional learning shall design offerings that address and is aligned to the  
11 overall goals and rationale of the Framework.

### 13 PART III

## 14 NATIONAL DIGITAL SKILLS STRATEGY

### 15 CHAPTER I

#### 16 Definitions

17 **SEC. 6. *National Digital Transformation Strategy.*** – A National Digital  
18 Transformation Strategy shall be created. The Strategy shall ensure that every citizen shall  
19 have the opportunity to understand ICT and develop skills and ability to apply the ICT in  
20 their work, vocation, business, and life in society. The Strategy shall include, but not limited  
21 to:

- 22 (a) *Affordable and clean energy and growth*, which includes plans and programs to  
23 ensure competitive costs as well as lower adverse impact to the environment;
- 24 (b) *Digital inclusion*, which includes plans and programs to spread growth across  
25 the country, and identify potential areas for various industries to unlock growth,  
26 increase skill levels, or promote local innovation;
- 27 (c) *Infrastructure*, which includes concrete plans and strategies to develop and  
28 upgrade performance on digital, energy, and transport infrastructure, to  
29 effectively align central government infrastructure investment with local growth  
30 priorities;
- 31 (d) *Institutional framework*, which includes strategies and directions to establish or  
32 improve existing institutions such as innovation councils, local educational  
33 institutions, trade associations or financial networks;

- 1 (e) *Procurement policy, which includes* concrete and specific plans in the  
2 government procurement in order to drive innovation and enable the  
3 development of effective, efficient and transparent supply chains across the  
4 country;
- 5 (f) *Science, research, and innovation*, which include concrete set of plans and  
6 strategies to ensure a knowledge economy, create and commercialize intellectual  
7 property that will promote and enhance the global brand of the Philippines;
- 8 (g) *Sectoral engagement*, which includes plans, policies and strategies programs to  
9 enhance areas of competitive advantage, and help new sectors to grown;
- 10 (h) *Skills*, which include concrete plans and strategies to ensure that the Filipino  
11 workforce is equipped with the relevant and necessary 21<sup>st</sup> century skills for  
12 them to thrive in a modern economy and build learning organizations and  
13 systems to benefit the everyone especially those who are not able to attend or  
14 complete formal education, and enhance science, technology, engineering, and  
15 math (STEM) skills and numeracy, and raising skill levels especially in  
16 underprivileged areas;
- 17 (i) *Trade and inward investment* which includes plans and strategies to boost  
18 productivity and growth across the economy by increasing competition and  
19 helping to bring innovation and new ideas, systems and processes; and
- 20 (j) *Supporting businesses to start and grow*, where we the government must ensure  
21 that businesses across the country can access the finance and management skills  
22 they need to grow; and create the conditions to enable firms to invest for the  
23 long term.
- 24

25 **SEC. 7. Digital Inclusion.** – The DICT shall enable all citizens, irrespective of age,  
26 gender, physical ability, ethnicity, health conditions, or socio-economic status to access the  
27 opportunities of the internet. Citizens, businesses and public services must take full advantage  
28 of the transformational benefits of the digital revolution. The Department must identify the  
29 root causes of digital exclusion in all sectors and regions for the purpose of increase their  
30 digital competence.

31 The DICT shall identify and develop the full range of digital skills that individuals  
32 and companies across the country need to address the requirements of a digital economy and  
33 instill measures and programs for citizens to continuously up-skill and re-skill throughout  
34 their working lives.

1 It shall also develop a strong collaboration between the public, private, and  
2 educational sector to address the digital skills gap in a coherent and holistic way.

3  
4 **SEC. 8. *Digital Libraries and Learning Hubs.*** - The DICT and the National Library  
5 of the Philippines shall enhance and promote the role of libraries in improving digital  
6 communication, increasing citizen's digital footprint, promoting digital inclusion and  
7 transform these libraries as providers of digital access, training and support for local  
8 communities.

9  
10 **SEC. 9. *Digital Entrepreneurship.*** - The Department of Trade and Industry (DTI) and  
11 the DICT shall strongly promote the digitization of businesses according to their own specific  
12 digital needs, mainly focused on these four core digital activities, namely maintaining a web  
13 presence, selling online, using the cloud, and digitizing back-office functions such as payroll  
14 and human resource management, in order to become or remain competitive. The DTI shall  
15 ensure that entrepreneurs undertake the certification under the digital competence framework  
16 for citizens to identify areas the need training and intervention.

17  
18 **SEC. 10. *Digital Civil Service.*** - To ensure the highest standards of public service,  
19 the DICT and the Civil Service Commission shall identify and consolidate all the skills and  
20 competencies of public employees in the career service and recommend and cause the  
21 conduct of digital skills training under an annual digital skills mapping activity. All public  
22 employees shall be covered under a mandatory basis of certification under the digital  
23 competence framework for citizens to identify areas the need training and intervention.

## 24 25 **CHAPTER II**

### 26 **National Digital Skills Development Strategy**

27  
28 **SEC. 11. *National Digital Skills Development Strategy.*** - The State shall create  
29 digital skills development strategy that will:

30 (a) Identify the digital skills development goals for:

- 31 1. Primary education
- 32 2. Secondary education
- 33 3. Tertiary education, for students, and digital technology development and design  
34 experts

- 1 4. Work-related digital skills training programs for out-of-school youth, including
- 2 for freelancers and part-time workers;
- 3 5. Work-related digital skills training programs for adults requiring re-skilling;
- 4 6. Skills for life in the digital economy for all citizens;
- 5 7. Training programs both for life and work for under-represented populations;
- 6 8. Develop or plan for a digital entrepreneurship skills strategy.
- 7 (d) Inventory existing policies, plans and programs that support the development of
- 8 digital skills and analyze how they can be used to support the goals of the digital
- 9 skills strategy
- 10 (e) Benchmark the goals against existing frameworks or countries with similar goals
- 11 as well as identify the existing priorities and challenges in meeting the above
- 12 goals as well as identify promising solutions for providing digital skills that
- 13 address the common challenges
- 14 (f) Identify current and future trends in relation to demographic trends, technological
- 15 changes, business trends, trade, industrial policies, and the shift to a greener,
- 16 digital and knowledge-based economy
- 17 (g) Identify available training programs, curriculum and providers that can be
- 18 leveraged to meet the strategy's goals and develop new curricula where necessary
- 19 as well as identify gaps in training programs and curricula – and identify providers
- 20 and strategies that will help fill them.
- 21 (h) Identify and recommend new policies and programs that are needed and conduct
- 22 advocacy both using the existing policies and to build support for new policies.
- 23

### 24 CHAPTER III

#### 25 Digital Jobs

26  
27 **SEC. 12. *Digital Jobs.*** - The DICT in coordination with Department of Labor  
28 (DOLE) and other concerned agencies shall provide jobs which are in line with freelancing,  
29 virtual work, homebased digital activities, and the like.

### 30 CHAPTER VII

#### 31 National Digital Transformation Council

32 **SEC. 13. *National Digital Transformation Council.*** – The National Digital  
33 Transformation Council is hereby created to ensure the effective implementation of this Act.



1           **SEC. 18. Appropriations.** – The amount necessary for the effective implementation of  
2 the provisions of this Act shall be included in the General Appropriations Act for the year  
3 following the approval of this Act.

4  
5           **SEC. 19. Repealing Clause.** – All other laws, decrees, executive orders and rules and  
6 regulations contrary to or inconsistent with the provisions of this Act are hereby repealed or  
7 modified accordingly.

8  
9           **SEC. 20. Separability Clause** – If any provision of this Act is held invalid or  
10 unconstitutional, the same shall not affect the validity and effectivity of the other provisions  
11 hereof.

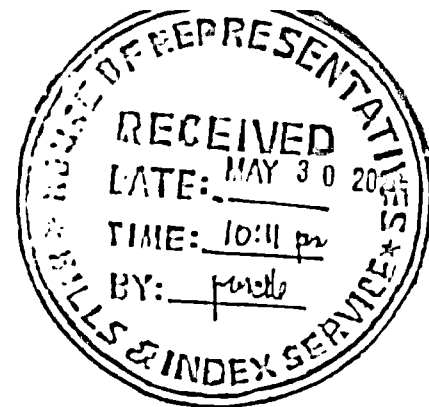
12  
13           **SEC. 21. Effectivity** – This Act shall take effect fifteen (15) days after its publication  
14 in the *Official Gazette* or in any newspaper of general circulation.

*Approved,*

Republic of the Philippines  
HOUSE OF REPRESENTATIVES  
Quezon City

EIGHTEENTH CONGRESS  
First Regular Session

HOUSE BILL NO. 6874



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Introduced by REP. FRANCISCO "KIKO" B. BENITEZ, Ph.D.

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### EXPLANATORY NOTE

We are on the cusp of the Fourth Industrial Revolution. Great advances in science and technology are increasingly blurring the boundaries of the digital, physical and biological worlds, with enormous impact on the creation of economic value and on social relations. It draws endless possibilities and we are only beginning to fully comprehend the breadth and depth of how it will transform our way of life.

GPS navigation software that directs you to less congested roads. Autonomous robots and voice-activated virtual assistants powered by artificial intelligence. Immersive consumer experience through virtual or augmented reality technologies. Automated irrigation systems facilitated by sensors and solar power. Decentralized digital currency systems supported by blockchain technology. Tissue engineering enabled by 3D printing. Science fiction is fast becoming our reality. And these are only the tip of the iceberg.

The fundamental changes driven by emerging technologies present both opportunities and challenges to Filipinos. The use of new technologies can increase production and enhance consumer experience. A 2017 Microsoft study estimates that digital transformation will contribute \$8 billion to or around 40 percent of the Philippines' GDP by 2021.<sup>1</sup> Another Microsoft survey finds 86 percent of business leaders believe that digital transformation will enable future growth and that data analytics can lead to new revenue streams.<sup>2</sup>

#### Digital-creative economy nexus

Creative industries, for example, stand to benefit from digital transformation. Digital technologies are enabling new forms of artistic and creative expression, opening new distribution pathways, broadening audiences and markets for creative content, and affecting consumption patterns. The United Nations Conference in Trade and Development calls creative industries as "a powerful, growing economic force" as "it intersects with the digital and sharing economy, e-commerce."<sup>3</sup>

In the Philippines, export of creative goods and services are valued at \$915.45 million in 2014, an 18 percent increase from \$775.83 million in 2005, mainly driven by fashion, interior design, toys and jewelry products.<sup>4</sup>

<sup>1</sup> Microsoft Asia. (2017). *Unlocking the Economic Impact of Digital Transformation*. Retrieved from <https://news.microsoft.com/en-ph/2018/02/14/digital-transformation-contribute-us-8-billion-philippines-gdp-2021/>

<sup>2</sup> Microsoft Asia. (2017). *Microsoft Asia Digital Transformation Survey*. Retrieved from <https://news.microsoft.com/en-ph/2017/02/27/86-of-business-leaders-in-philippines-believe-they-need-to-be-a-digital-business-to-succeed-microsoft-study/>

<sup>3</sup> UN Conference on Trade and Development. (2018). *Creative Economy Outlook*.

<sup>4</sup> Ibid.



The National Economic and Development Authority, in its 2018 Socioeconomic Report, admits “there is a need to consolidate all creative industry players, create opportunities, and develop a pool of creative talent and experts for a more inclusive creative economy.”

The Technical Education and Skills Development Authority already provides programs to develop technical skills that are relevant to occupations in the creative economy. However, the challenge really is mainstreaming digital competencies in all technical and vocational education and training programs as TESDA recognizes “the increased integration of ICTs in almost every industry.”<sup>5</sup>

### Reskilling revolution

Indeed, the digital transformation of production processes and services across industries require new skillsets. Automation and augmentation of production and service delivery could potentially displace workers without the necessary skills. In a study of G20 economies, the World Economic Forum estimates that 75 million current job roles may be displaced by the shift in the division of labor between humans, machines and algorithms. But on the other hand, 133 million new jobs, such as data analysts, software developers, and e-commerce and social media specialists, may emerge.<sup>6</sup>

While digital transformation of businesses in the Philippines is only starting to take off, with only 32 percent of business leaders having a full digital transformation strategy<sup>7</sup>, it is crucial that the Government facilitates the reskilling of the Filipino workforce so they can adapt to the demands of a digital economy.

A parallel reskilling revolution is necessary to harness the benefits of the Fourth Industrial Revolution. And workers are already clamoring for more investments in digital skills development. A 2017 Microsoft study finds 47 percent of workers expect leaders to close the digital skills gap.<sup>8</sup>

A reskilling revolution calls for the development not only of technical skills to operate or design new technologies but also of human skills such as critical thinking, creativity, originality and initiative, complex problem-solving, flexibility, and emotional intelligence.<sup>9</sup> The development of these competencies must be integrated in our education systems guided by a standards-based framework. This bill references the UNESCO Global Framework of Reference on Digital Literacy Skills, UNESCO Digital Kids Asia Pacific Framework for Education and the Digital Skills Toolkit of the International Telecommunications Union to guide the formulation of standard learning outcomes across different modalities of learning.

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<sup>5</sup> TESDA. (2019). *Pagkamatikha: The Philippine Creative Industries in the TVET Perspective* (Labor Intelligence Report 5/2019).

<sup>6</sup> World Economic Forum. (2018). *Future of Jobs Report*. Retrieved from <https://www.weforum.org/agenda/2018/09/future-of-jobs-2018-things-to-know/>

<sup>7</sup> Microsoft Asia. (2017). *Microsoft Asia Digital Transformation Survey*. Retrieved from <https://news.microsoft.com/en-ph/2017/02/27/86-of-business-leaders-in-philippines-believe-they-need-to-be-a-digital-business-to-succeed-microsoft-study/>

<sup>8</sup> Microsoft Asia. (2017). *Microsoft Asia Workplace 2020 Study*. Retrieved from [https://news.microsoft.com/en-ph/2017/10/12/new-culture-work-ph-needed-succeed-digital-transformation/#\\_ftn1](https://news.microsoft.com/en-ph/2017/10/12/new-culture-work-ph-needed-succeed-digital-transformation/#_ftn1)

<sup>9</sup> World Economic Forum. (2018). *5 things to know about the future of jobs*. Retrieved from <https://www.weforum.org/agenda/2018/09/future-of-jobs-2018-things-to-know/>

This bill also proposes a competency framework for teachers and trainers as part of continuing professional development. They must harness digital technologies to augment or enhance learning activities. For this purpose, we should adopt the UNESCO ICT Competency Framework for Teachers.

### Smart governance

Needless to say, the scale of digital transformation of local economies and learning environments rests in the level of commitment and performance of the Government to build backbone ICT infrastructure to increase access to fast and affordable Internet. In this aspect we are lagging.

The Philippines ranked 63<sup>rd</sup> out of 100 countries in the 2020 Inclusive Internet Index which assesses Internet availability, affordability, relevance and readiness. “The Philippines is among Asia’s weaker countries in advancing internet inclusion, ranking 19th out of 26 nations in the region. Affordability levels of smartphones and mobile data are low in the global context, and mobile users are burdened by relatively slow download and upload speeds,” the Index said.<sup>10</sup>

The UN Broadband Commission for Sustainable Development has set ambitious targets for 2025, which includes:

1. By 2025, Broadband Internet user penetration should reach 65% in developing countries;
2. By 2025, entry-level broadband services should be made affordable in developing countries at less than 2% of monthly Gross National Income (GNI) per capita;
3. By 2025, 60% of youth and adults should have achieved at least a minimum level of proficiency in sustainable digital skills; and,
4. By 2025, overcome unconnectedness of Micro-, Small- and Medium-sized Enterprises (MSMEs) by 50%, by sector.

Achieving these will require a whole-of-government approach. Historically, ICT policies and programs have been developed in silos. It is imperative that government agencies complement each other and operate under a single framework. For this purpose, this bill aims to establish a coordinating body to ensure cohesiveness of government policy to accelerate and harness the digital revolution to transform Philippine cities into smart cities. The bill empowers the National Digital Council to formulate strategies for skills development, digital-creative economy development and smart city development, as well as for backbone ICT infrastructure development.

A smart city represents the totality of digital transformation for the benefit of the people. The bill adopts the smart city framework developed by Dr. Rudolf Giffinger and his team in the Vienna University of Technology, which highlights collaboration and innovation among government, business, academia and citizens. A smart city leverages new technologies to drive sustainable solutions to urban problems, such as poverty, traffic congestion, pollution, and criminality.

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<sup>10</sup> Flores, Helen. (2020, March 3). Philippines ranks 63<sup>rd</sup> in Inclusive internet index. *Philippine Star*. Retrieved from <https://www.philstar.com/headlines/2020/03/03/1997646/philippines-ranks-63rd-inclusive-internet-index>

## Digital transformation for “new normal”

The COVID-19 pandemic has exposed economic and social inequalities, particularly in urban areas, that make populations vulnerable. Lockdowns have put economies in coma; businesses, particularly, MSMEs are forced to lay off workers or cut wages to survive. Unemployment threatens to sink families into extreme poverty. School shutdowns have interrupted learning. Digital transformation is the solution.

Enterprises can leverage digital technology to reach and engage customers and clients, and can improvise processes to drive productivity. Digital technology can enable flexible or distance learning.

But how can the Philippines harness the benefits of digital transformation if we do not address the digital divide?

We must accelerate the digital revolution to foster economic resilience and competitiveness but also, more crucially, social equity. The Government should be in the frontlines of building not only a smart future but a future where no one is left behind.

Our Constitution heralds the role of technological innovation to promote national development. We need to rise up to the challenge and help our people develop the necessary skills and innovate to adapt, compete and flourish in a brave new world.

In view of the foregoing, the immediate approval of this bill is earnestly sought.

  
FRANCISCO “KIKO” B. BENITEZ, Ph.D.

Republic of the Philippines  
**HOUSE OF REPRESENTATIVES**  
Quezon City

**EIGHTEENTH CONGRESS**  
First Regular Session

**HOUSE BILL NO. 6874**

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Introduced by **REP. FRANCISCO "KIKO" B. BENITEZ, Ph.D.**

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**AN ACT**  
**PROVIDING FOR A COMPREHENSIVE POLICY TO ACCELERATE AND HARNESS THE DIGITAL REVOLUTION TO FOSTER INCLUSIVE ECONOMIC GROWTH, SUSTAINABLE DEVELOPMENT AND PARTICIPATORY GOVERNANCE**

**ARTICLE I**  
**STATE POLICIES AND OBJECTIVES**

**SECTION 1.** *Short Title.* – This Act shall be known as the “Digital Philippines Act”.

**SEC. 2.** *Declaration of State Policy.* The State recognizes the critical role of science, technology and innovation in fostering inclusive and sustainable economic growth, and human development. The State shall take appropriate steps to enable all citizens, regardless of age, sex, gender, income class, ethnicity, language, religion, or ability, to access and use information and communication technologies (ICT), and acquire knowledge, skills and values to adapt to the demands of a knowledge economy and digital society.

The State shall accelerate and harness advance digital technologies and ICT-enabled innovations to maximize the benefits and address the challenges of the Fourth Industrial Revolution. The State shall build an enabling ICT ecosystem to reengineer production and management systems towards sustainability, enhance production, generate employment, and facilitate interaction between producers and consumers. The State shall promote digital transformation at all levels of government to streamline and speed up the delivery of government services.

**SEC. 3.** *Objectives.* This Act aims to:

- a) Recognize the significant contribution and vast potential of digital innovation and creative industries to drive economic growth, and enrich our human and cultural capital;
- b) Provide a strategic vision, and comprehensive and cohesive framework to guide anticipatory planning and investment programming to support digital innovation and transformation;
- c) Adopt a whole-of-government approach in promoting digital innovation and transformation in business and government;

- d) Rationalize ICT-enhanced and ICT sector-specific interventions to prevent duplication and ensure complementarity of services, and improve efficiency in its delivery;
- e) Stimulate growth and enhance competitiveness and resilience of service and creative industries by promoting digitization of products and services;
- f) Establish a framework for development of digital skills of all learners in diverse settings and throughout life; and,
- g) Provide the backbone infrastructure to bridge the digital divide and enable and support ICT innovation and digital inclusion.

**SEC. 4. *Definition of Terms.*** As used in this Act:

- a) Digital transformation refers to the strategic adoption of digital technologies to improve processes and productivity, deliver better learning, customer and employee experiences, manage business risk, and control costs;
- b) Digital inclusion refers to the ability of individuals and groups to access and use information and communication technologies. Digital inclusion encompasses not only access to the Internet but also the availability of hardware and software; relevant content and services; and training for the digital literacy skills required for effective use of information and communication technologies;
- c) Digital citizenship refers to the ability to find, access, use and create information effectively; engage with other users and with content in an active, critical, sensitive and ethical manner; and navigate the online and ICT environment safely and responsibly, being aware of one's own rights;
- d) Digital literacy refers to the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies for employment, decent jobs and entrepreneurship. It includes competencies that are variously referred to as computer literacy, ICT literacy, information literacy and media literacy;
- e) Creative industries refer to the cycles of creation, production, promotion, distribution and/or commercialization of goods, services and activities that use creativity, cultural and intellectual capital as primary inputs. They constitute a set of activities, focused on but not limited to arts, potentially generating revenues from trade and intellectual property rights. They comprise tangible products and intangible intellectual or artistic services with creative content, economic value and market objectives. Creative industries are:
  - 1) Music and Performing Arts
  - 2) Film, Television, Radio and Photography
  - 3) Advertising and Marketing
  - 4) Software Development, Animation and Game Development
  - 5) Writing, Publishing and Print Media,
  - 6) Museums, Galleries and Libraries,
  - 7) Heritage Crafts and Activities, including Gastronomy,
  - 8) Architecture and Interior Design, and,

## 9) Visual Arts, and Product, Graphic and Fashion Design.

- f) Decent work refers to work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration;
- g) Informal learning refers to forms of learning that are intentional or deliberate but are not institutionalized. They are less organized and structured than either formal or non-formal education. Informal learning may include learning activities that occur in the family, in the work place, in the local community, and in daily life, on a self-directed, family-directed or socially-directed basis;
- h) Non-formal education refers to education that is institutionalized, intentional and planned by an education provider. The defining characteristic of non-formal education is that it is an addition, alternative and/or a complement to formal education within the process of the lifelong learning of individuals. It caters for people of all ages, but does not necessarily apply a continuous pathway-structure; it may be short in duration and/or low intensity, and it is typically provided in the form of short courses, workshops or seminars. Non-formal education can cover programs contributing to adult and youth literacy and education for out-of-school children, as well as programs on life skills, work skills, and social or cultural development;
- i) Reskilling refers to learning new sets of competencies to transition to a completely new role;
- j) Upskilling refers to learning new competencies to stay in current role, due to the change in skills required, or adding certain competencies for career progression;
- k) Occupational mobility refers to the ease at which a worker can leave one job for another in a different field;
- l) Flexible learning refers to a set of educational approaches and systems concerned with providing learners with increased choice, convenience, and personalization to suit their needs. In particular, flexible learning provides educational choices about where, when, and how learning occurs, by using a range of digital and non-digital technologies to support the teaching and learning process;
- m) Learner-centered pedagogy refers to a pedagogical approach that generally draws on learning theories suggesting learners should play an active role in the learning process. Students therefore use prior knowledge and new experiences to create knowledge. The teacher facilitates this process, but also creates and structures the conditions for learning;
- n) Open educational resources (OER) refer to any educational resources (including curriculum maps, course materials, textbooks, streaming videos, multimedia applications, podcasts, and any other materials that have been designed for use in teaching and learning) that are openly available for use by teachers and students, without an accompanying need to pay royalties or license fees. An OER is an educational resource that incorporates a license that facilitates reuse, and potentially

adaptation, without requiring that permission first be requested from the copyright holder; and,

- o) Community learning center is a physical learning space that promotes human development by providing opportunities for lifelong learning to all people in the local community. CLCs support empowerment, social transformation and improvement of the quality of life of the people. The main functions of CLCs are to provide: i) access to digital technologies, ii) education and training, iii) community information and resource services, iv) community development activities, and v) co-ordination and networking, to promote human development and lifelong learning.

## ARTICLE II NATIONAL DIGITAL COUNCIL

**SEC. 5. *National Digital Council.*** There is hereby created a National Digital Council, under the administrative supervision of the Office of the President, to formulate strategies and coordinate government policies and programs to foster digital inclusion and maximize the economic and social benefits of digital and data-driven technologies to promote robust economic growth and resilience, sustainable development, and participatory governance.

**SEC. 6. *Composition.*** The National Digital Council, hereinafter referred to as the Council, shall be composed of a Chairperson, with the rank of Secretary, appointed by the President of the Philippines, and the following:

- a) Secretary of the Department of Information and Communication Technology, as Vice Chairperson;
- b) Secretary of the National Economic and Development Authority;
- c) Secretary of the Department of Finance;
- d) Secretary of the Department of Trade and Industry;
- e) Secretary of the Department of Labor and Employment;
- f) Secretary of the Department of Education;
- g) Secretary of the Department of Science and Technology;
- h) Secretary of the Department of Agriculture;
- i) Secretary of the Interior and Local Government;
- j) Chairperson of the Commission on Higher Education;
- k) Director General of the Technical Education and Skills Development Authority;
- l) Chairperson of the National Commission for Culture and the Arts;
- m) five (5) private sector representatives.

The Chairperson and the five (5) private sector representatives, who shall be appointed by the President, shall be citizens and residents of the Philippines, of proven competence, integrity, probity and independence. They must have distinguished themselves in government, the private sector or the academe in any of the following fields: computer science, engineering, mathematics, economics, business and industry, and education.

Department Secretaries may designate an Undersecretary, whose portfolio covers promotion of innovation and human capital development, as his/her representative, who shall sit in a permanent capacity, and their acts shall be considered the acts of their principals.

**SEC. 7. *Powers and Functions of the Council.*** – The Council shall exercise the following powers and functions:

- a) Formulate five-year and ten-year digital inclusion plans and strategies to accelerate and harness advances in digital technology to increase competitiveness of service and creative industries, and micro, small and medium enterprises (MSMEs), and Filipino workforce in a global and digital economy, promote sustainable production, enhance value creation, improve efficiencies in value chains, optimize business processes and choices, and build long-term dynamism and resilience against future shocks and crises;
- b) Identify and recommend innovative service and creative industries to the Board of Investments and Fiscal Incentives Review Board for the grant of performance-based and time-bound tax and duty incentives and deductions;
- c) Harmonize and rationalize policies and programs for the promotion of digital innovation in business and government, and development of digital competencies of workers, teachers and learners under a standards-based framework;
- d) Ensure the affordability and sustainability of digital skills development programs;
- e) Advise the President with respect to policies and programs to catalyze digital transformation of enterprises, education systems and government service;
- f) Strengthen international linkages and partnerships to share best practices in accelerating digital innovation and transformation;
- g) Call upon or mobilize any department, bureau, office, agency, or instrumentality of the government, including government-owned and -controlled corporations and local government units, to extend full support towards the attainment of the objectives of this Act;
- h) Create ad hoc committees or technical working groups consisting of relevant national government agencies and stakeholders that address specific concerns relative to the implementation of this Act;
- i) Monitor the implementation of policies and programs and performance of implementing agencies vis-à-vis standards and targets set forth in this Act; and,
- j) Perform other tasks that the President may direct.

**SEC. 8. *Secretariat.*** A Secretariat is hereby created as a separate unit of the Presidential Management Staff to provide technical, administrative and operation support to the Council. The Secretariat shall be headed by an Executive Director appointed by the President. The Executive Director shall have the same qualifications as the Chairperson and the private sector representatives.

### **ARTICLE III NATIONAL DIGITAL SKILLS DEVELOPMENT STRATEGY**



**SEC. 9. *National Digital Skills Development Strategy.*** The Council shall formulate a National Digital Skills Development Strategy, hereinafter referred to as NDS, to provide long-term vision and direction to promote digital citizenship and ensure that all persons understand and can take advantage of the educational, economic and social opportunities and benefits of advanced information and communication technologies. The NDS shall:

- a) Identify and analyze current and emerging trends and changes in technology, trade, consumption, demography and health that impact labor markets;
- b) Define the skills or competencies necessary to adapt, compete and flourish in a knowledge-based and digital economy and society, including but not limited to the competencies identified under Section 6 of this Act;
- c) Determine gaps in existing policies, plans, programs and curricula to promote and support ICT innovation and digital transformation;
- d) Establish goals for digital skills development in basic education, tertiary education, technical and vocational education and training (TVET), and non-formal education for out-of-school children and youth, and adults, and open opportunities for digital skills development through informal learning;
- e) Create a framework for the development of digital competencies of teachers and trainers, guided by the principles of continuing professional development and lifelong learning;
- f) Provide for opportunities for the upskilling or reskilling of workers to build occupational mobility and enable transition from jobs that require manual or physical labor, administrative and management skills to work in industries that require technical skills to use, operate and manage automated or digital technology-augmented systems through lifelong learning;
- g) Establish goals for the development of skills for digital entrepreneurship and lifelong learning;
- h) Provide for a framework of recognition, validation and accreditation of digital competencies obtained through non-formal or informal learning;
- i) Establish a framework for job placement to help graduates of digital skills education and training programs find decent work;
- j) Identify benchmarks, targets and indicators for the level of proficiency in digital skills of key cohorts, adopt best practices in digital transformation in other countries, and provide for its periodic monitoring and review; and,
- k) Provide for mechanisms for collaboration between the government and the private sector to broaden access to and ensure the affordability and sustainability of digital skills development programs.

**SEC. 10. *Digital literacy framework.*** The Department of Education, Commission on Higher Education, Technical Education and Skills Development Authority and other

government agencies implementing sector-specific, non-formal skills development programs shall integrate in the curricula and design of the K-12, the Alternative Learning System (ALS), general education programs of higher education institutions, TVET and other training programs, and develop, in consultation with the private sector, modules on the following competence areas:

- a) ICT literacy – to identify, use, operate and manage ICT hardware and software;
- b) Information and data literacy – to search, retrieve, navigate, analyze, interpret, critically evaluate, organize, store, manage and utilize data, information and digital content effectively to make informed decisions;
- c) Communication and collaboration – to be able, using digital technology, to interact, communicate, share and co-create content, and collaborate with people; to participate in social activities; to recognize, seek out and act on opportunities for social influence; and to demonstrate and adapt netiquette or ethical and courteous behavior, and navigate and bridge cultural and generational divides in digital environments;
- d) Creativity, innovation and problem-solving – to represent and express one’s identity; create, edit and curate digital content in different formats; to modify, improve, elaborate and integrate data, information and content into an existing body of knowledge; understand how copyright and licenses apply to data, information and content; to identify, assess and troubleshoot technical problems when operating digital devices and navigating digital environments; to develop computational thinking and be able to understand and break down a complex problem into logical and sequential components, and present, create and design solutions transmutable into human and/or computer systems; to be able to code and/or design and develop computer programs; to identify, evaluate, select and use digital tools to solve technical, conceptual and real-world problems, create new bodies of knowledge, and innovate processes and products;
- e) Digital safety and cyber-security – to protect devices, content, personal data, privacy, reputation, and physical and mental health in digital environments; to be able to use and share personally identifiable information protected by safety and security measures; to understand risks and threats in digital environments; to know and understand legal rights and obligations, and privacy policies within global and local contexts;
- f) Career-related competencies – to identify, assess and understand where one’s own digital skills need to be improved or updated, and recognize, seek out and act on opportunities for self-development or self-improvement to meet the demands of a digital economy; to operate specialized digital technologies and to understand, analyze and evaluate specialized data, information and digital content for a particular field; and,
- g) Digital emotional intelligence – to recognize, navigate and express emotions in digital environments, which require self-awareness, self-regulation, self-motivation, respect for diversity, conflict management and empathy.

**SEC. 11.** *Digital competency framework for teachers and trainers.* The Department of Education, Commission on Higher Education, Technical Education and Skills Development Authority and other government agencies implementing sector-specific, non-formal skills

development programs shall formulate a uniform framework to upskill teachers and trainers to utilize digital technologies to enable innovative pedagogies and enhance learning environments. Aforesaid agencies shall develop effective and appropriate modules to develop the following proficiencies of teachers and trainers:

- a) Knowledge acquisition – to develop basic digital literacy and digital citizenship skills, and to select and use appropriate instructional software to complement curriculum objectives, assessment approaches, and a variety of teaching methods;
- b) Knowledge deepening –to utilize digital technologies, such as visualization, simulation and data analytics tools, to structure and facilitate dynamic, collaborative and student-centered activities to understand concepts and relationships in real-world situations, and apply the same to create solutions; and,
- c) Knowledge creation – to strengthen self-awareness and self-improvement to contribute to knowledge society, and to design ICT-enabled or -enhanced activities to engage students in knowledge creation and innovation through complex problem-solving, communication, collaboration, experimentation, critical thinking and creative expression.

Implementing agencies shall develop diagnostic tools to evaluate the digital competencies of teachers and trainers. The recognition, validation and accreditation of digital competencies shall be integrated into the Philippine Qualifications Framework for continuing professional development as provided in Republic Act No. 10697.

**SEC. 12. *Alternative modes of learning delivery.*** Implementing agencies of digital skills development programs shall take advantage of flexible learning methodologies and learner-centered pedagogies, and make available open educational resources to increase access to digital skills development modules.

**SEC. 13. *Private sector participation in digital skills development.*** The State shall encourage employers to provide, where necessary, their employees access to educational and training opportunities to develop digital literacy skills. An employer may develop, in consultation with their employees and consistent with the digital skills framework provided in Sec. 10 of this Act, and implement in-house training programs for their employees, or may enroll their employees in digital skills development programs of accredited private training providers, at no cost to the employee.

Workers may enroll in a private skills development program of their choice to complement the education and training provided for by their employers. The Council shall formulate a voucher subsidy program for all eligible workers to defray the cost of fees charged by the private training provider.

For this purposes, the Council shall establish a uniform system of registration and accreditation of private training providers, and regulation of the imposition and collection of training fees to ensure the reasonableness and appropriateness of the same.

**SEC. 14. *Community learning centers.*** There shall be established at least one (1) community learning center (CLC) in every municipality and city in the Philippines which shall make available digital devices equipped with appropriate software and stable Internet

connection to provide people access online resources and content, and enable them to develop skills and create new content or knowledge; *Provided*, That additional learning centers shall be established such that there is one learning center per 50,000 persons in every city and every municipality with a population of more than 100,000 persons; *Provided, further*, That existing CLCs, and public libraries and reading centers, constructed pursuant to Republic Act No. 7743, shall be upgraded; *Provided, finally*, That the CLC shall be constructed in geographically equitable and accessible locations, and in compliance with relevant building standards and specifications, including the requirements to support or enhance the mobility of persons with disability and senior citizens.

The Council, through its Secretariat and relevant Member Agencies, shall undertake the construction, repair and rehabilitation of community learning centers, and the installation and configuration of ICT hardware and software therein; *Provided*, That local government units shall provide the site for CLCs and shall undertake its operation and maintenance. Local government units may allocate such funds necessary for the operation and maintenance of CLCs from the Special Education Fund, upon approval and authorization of the Local School Board.

**SEC. 15. *Recognition, validation and accreditation of competencies.*** Pursuant to Sec. 8 (g) of this Act, the Council shall formulate guidelines for recognition, validation and accreditation of competencies and learning outcomes obtained in non-formal and informal digital skills development programs. Inasmuch as Republic Act No. 10647 provides for a ladderized education system that enables transition and progression of students between TVET and higher education, the Council shall develop equivalencies for the competencies and outcomes of sector-specific non-formal skills development programs and informal learning, and integrate the same in the Philippine Qualifications Framework.

**SEC. 16. *Education to employment.*** Digital skills development programs shall include a presentation of pathways for students after graduation from the program. Providers of digital skills training shall formulate and implement job placement programs to assist graduates find decent work, and enable viable and desirable job transition. For this purpose, the Council shall strengthen academe-industry linkages.

#### **ARTICLE IV PHILIPPINE DIGITAL ECONOMY STRATEGY**

**SEC. 17. *Philippine Digital Economy Strategy.*** The Council shall formulate the Philippine Digital Economy Strategy, hereinafter referred to as PDES, to accelerate and harness digital innovation to transform major industries and enhance their competitiveness and resilience. The PDES shall:

- a) Identify, measure and analyze current and emerging trends and changes in technology, culture, trade, demography, health and climate that impact consumption, supply chains, and labor markets;
- b) Determine the physical, technical and investment requirements to increase access of the population to affordable and high-speed Internet and ensure the equitable geographic distribution of backbone ICT infrastructure;

- c) Provide a framework for the utilization of digital technologies, such as but not limited to robotics, artificial intelligence, Internet of Things and interoperable systems, cloud computing, data analytics, three-dimensional printing, and digital payment systems, by businesses to augment or automate business analytics, production, content creation, marketing, trade and financial services;
- d) Determine the need for upskilling and reskilling of current and future workforce to enable job transition and occupational mobility;
- e) Promote innovative and flexible business models that utilize digital technologies for personalization and interactive tactics, such as immersive consumer experience and user-generated content, to penetrate markets;
- f) Consolidate and streamline registration and regulatory structures and procedures, and rationalize the grant of assistance and incentives to MSMEs, the business processing outsourcing sector, creative industries, startups and agro-enterprises, as provided by various laws, to minimize redundancies;
- g) Identify a multidisciplinary research and development to support and sustain digital innovation; and,
- h) Establish benchmarks, targets and indicators to guide periodic monitoring, review and updating.

**SEC. 18.** *Digital-creative economy nexus.* The National Commission for Culture and the Arts and its attached agencies, the Design Center, the Film Development Council of the Philippines, Movie and Television Review and Classification Board, Optical Media Board, and the National Book Development Board shall establish, as a component of the National Digital Economy Strategy, programs that will leverage digital technologies to enable innovative content creation stimulate growth of creative industries, and promote Filipino talent and creative products, with distinctive design that represents our rich cultural heritage and identity, in domestic and international markets.

**SEC. 19.** *Integrated Performance and Incentive Framework.* The Council shall establish and recommend uniform criteria to the Board of Investments and Fiscal Incentives Review Board for the evaluation of qualification of businesses utilizing digital technology to avail tax and duty incentives and deductions, as provided for in various laws, such as but not limited to Republic Act No. 6977, as amended by Republic Act No. 9501, or the "Magna Carta for Micro, Small and Medium Enterprises", Republic Act No. 11321, or the "Sagip Saka Act"; and Republic Act No. 11337, or the "Innovative Startup Act".

Nothing in this Act shall be interpreted or construed to diminish or limit, in whatever manner, the incentives granted or provided under aforesaid laws, and existing orders, issuances and regulations.

## ARTICLE V DIGITAL INFRASTRUCTURE

**SEC. 20. *Backbone ICT infrastructure.*** The Department of Information and Communication Technology shall accelerate the construction of backbone ICT infrastructure to enable widest broadband penetration.

For this purpose, the DICT shall ensure the full implementation of Republic Act No. 10929, otherwise known as the Free Internet Access in Public Spaces Act, within five (5) years since the approval of this Act.

## **ARTICLE VI SMART CITIES**

**SEC. 21. *Smart cities.*** The Council, the Department of Human Settlements and Urban Development, the Department of Environment and Natural Resources, Department of Transportation and other concerned agencies shall formulate a Smart Cities Framework to guide municipalities and cities in developing policies, plans and programs towards digital inclusion and transformation urban development. The Smart Cities Framework shall conform with the following principles:

- a) Smart Economy – utilization of digital technology and innovative business models; the development of digital skills of the workforce; and the adoption of sustainable production systems to enhance efficiency and competitiveness;
- b) Smart People – promotion of lifelong learning, digital inclusion, creativity and innovation; development of knowledge, skills and values to adapt, compete and flourish in a digital economy and society, to enable job transition, occupational mobility, innovation, and digital entrepreneurship;
- c) Smart Governance – utilization of new technologies and methodologies, such as crowdsourcing, to strengthen connections and interactions between the local government and citizens, businesses, and civil society;
- d) Smart Mobility – promotion of new and multiple sustainable modes of transportation, including mass transportation, such as electric vehicles, autonomous vehicles, bicycling, and carpooling, to enable affordable, efficient and safe mobility for all;
- e) Smart Environment – utilization of innovative technology to manage and monitor waste production, pollution, and carbon emission, promote energy efficiency and accelerate local energy transition; and, utilization of data analytics for planning and management of built and natural environments to improve efficiency, minimize environment impact and build resilience; and,
- f) Smart living – increasing access of all citizens to electronic services, digital platforms and ecosystems to promote digital inclusion, strengthen civic engagement and social cohesion, and expanding access to ICT-enabled and -enhanced healthcare systems.

## **ARTICLE VII SMART GOVERNANCE STRATEGY**

**SEC. 22. *Smart Governance Strategy.*** The Council and the Anti-Red Tape Authority shall develop a Smart Governance Strategy, hereinafter referred to as SGS, to guide the phased

transition of processes and procedures towards full automation and enhanced interoperability to eliminate bureaucratic red tape, improve efficiency of government services, support planning and decision-making, promote transparency and strengthen citizen engagement and participation, as provided for in Republic Act No. 9485, as amended by Republic Act No. 11032.

The SGS shall provide for a framework to rationalize the structure of all departments, bureaus, offices, agencies, or instrumentalities of the government, including government-owned and -controlled corporations, state universities and colleges, and local government units, to abolish positions that will be rendered redundant by automation; Provided, That the Legislature, Judiciary and constitutional commissions may, on a voluntary basis, apply the parameters contained therein; Provided, further, That the SGS shall identify the skills or competencies necessary to adapt to digital transformation of government services; Provided, finally, That reskilling and upskilling programs shall be established for government employees.

The SGS shall also identify standards, targets and indicators to guide the gradual digital transformation of the bureaucracy.

**SEC. 23. *Government information systems.*** All concerned agencies shall within two (2) years establish the information systems and data registries on health, agriculture, business enterprises and other relevant demographic, economic and social statistics as provided in various laws, such as but not limited to UHC, AFMA, Sagip Saka, SMSE, and shall regularly update the same to enable access to public information, and promote transparency, accountability and participatory governance.

## **ARTICLE VIII FINANCING**

**SEC. 24. *Public-private partnership.*** The Council shall develop policies to promote and encourage partnerships between the government and private sectors or non-government organizations for the implementation of this Act, subject to existing rules and regulations on public-private partnerships.

**SEC. 25. *Appropriations.*** The amount of one hundred million pesos (100,000,000.00) as initial funding for the Council to be charged against the unexpended Contingency Fund of the Office of the President is hereby appropriated. Thereafter, the amount needed for the implementation of this Act shall be included in the annual General Appropriations Act.

## **ARTICLE IX MONITORING AND OVERSIGHT**

**SEC. 26. *Implementing rules and regulations.*** The Council shall issue the implementing rules and regulations within sixty (60) days from the effectivity of this Act.

**SEC. 27. *Congressional oversight.*** The Council shall, on the first Monday of July every year, submit a report to Congress of the achievement of objectives and targets of this Act.

For this purpose, there is hereby created a Congressional Oversight Committee. The Committee shall be composed of five (5) Senators and five (5) Representatives to be appointed by the

Senate President and the Speaker of the House of Representatives, respectively. The Minority shall be entitled to pro rata representation.

**SEC. 28. *Sunset review.*** Within five (5) years after the effectivity of this Act, or as the need arises, the Congressional Oversight Committee shall conduct a sunset review. For purposes of this Act, the term "sunset review" shall mean a systematic evaluation by the Congressional Oversight Committee of the accomplishments and impact of this Act, as well as the performance and organizational structure of its implementing agencies, for purposes of determining remedial legislation.

## ARTICLE X FINAL PROVISIONS

**SEC. 29. *Repealing Clause.*** All other laws, decrees, executive orders and rules and regulations contrary to or inconsistent with the provisions of this Act are hereby repealed or modified accordingly.

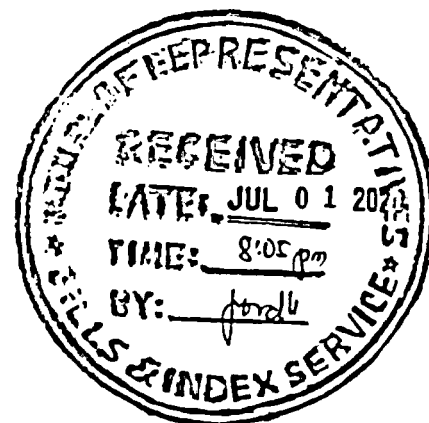
**SEC. 30. *Separability Clause.*** If any provision of this Act is held invalid or unconstitutional, the same shall not affect the validity and effectivity of the other provisions hereof.

**SEC. 31. *Effectivity.*** This Act shall take effect fifteen (15) days after its publication in the *Official Gazette* or in any newspaper of general circulation.

Approved,



Republic of the Philippines  
**HOUSE OF REPRESENTATIVES**  
Quezon City, Metro Manila



**EIGHTEENTH CONGRESS**  
Second Regular Session

House Bill No. 7049

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Introduced by Representative FREDERICK W. SIAO

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**AN ACT**  
**PROVIDING FOR A NATIONAL DIGITAL TRANSFORMATION POLICY AND**  
**FOR OTHER PURPOSES**

EXPLANATORY NOTE

In recent years, the Philippines has been recognized as one of the top internet users in the world, with Filipinos averaging 10 hours and two minutes of screen time every day.<sup>1</sup> The Digital 2019 report of social media firms Hootsuite and We Are Social showed that Filipinos spent an average of four hours and 12 minutes on social media platforms, almost double of the global average of two hours and 16 minutes.<sup>2</sup>

And with more mobile subscriptions than there are people in the country—109.2 for every 100 inhabitants, according to the *Measuring the Information Society Report 2017* of the International Telecommunications Union (ITU)—the foundations are there for the Philippines to blossom into a truly digital society. But just as the experience with the COVID-19 outbreak and the subsequent Luzon-wide enhanced community quarantine has demonstrated, several gaps and institutional deficiencies persist—underscoring the need for a comprehensive digital transformation policy to be rolled out and implemented, one that is especially focused on digital skills and competencies.

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<sup>1</sup> <https://www.theguardian.com/technology/2019/feb/01/world-internet-usage-index-philippines-10-hours-a-day>

<sup>2</sup> <https://www.philstar.com/business/technology/2019/01/31/1889736/filipinos-are-worlds-heaviest-internet-users-2018-report-says>

Leveraging on the Filipinos' interest and presence in the digital space and in order to foster digital competency in support of the country's economic and social development goals, this bill seeks to create a national framework for digital competency with focus on information and data literacy, communication and collaboration, digital content creation, safety and problem solving. The proposed digital competency framework is patterned after the European Commission's DigComp 2.0<sup>3</sup>, which identified the five key components of digital competence.

Among the key provisions in the bill is the adoption of information and communication technology (ICT) competency for teachers, since building digital competency should encompass all forms of learning. The proposed provisions were adapted from the 2011 United Nations Educational, Scientific and Cultural Organization (UNESCO) ICT Competency for Teachers, aimed at helping countries develop comprehensive national teacher ICT competency policies and standards and integrate these in overarching ICT in education plans.<sup>4</sup> A 2019 United Nations Conference on Trade and Development (UNCTAD) Report highlights that traditional teaching curricula and training programs contribute to the enhancement of digital skills and at the same time, digital technologies facilitates learning by providing education access to those who might not be able to benefit from formal education.<sup>5</sup>

The bill also seeks to establish and institutionalize a national digital transformation strategy, and a national digital skills development strategy to ensure that every citizen is given the opportunity to understand ICT and develop the necessary skills and ability to apply ICT in their everyday lives.

Finally, the bill also creates the National Digital Transformation Council who will oversee policy formulation for the national digital competency framework and facilitate the development and implementation of the proposed strategies under the bill.

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<sup>3</sup> <https://milunesco.unaoc.org/mil-resources/digital-competence-framework-for-citizens/>

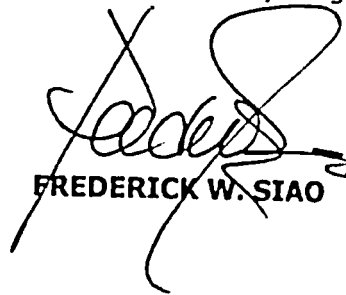
<sup>4</sup> <https://en.unesco.org/themes/ict-education/competency-framework-teachers>

<sup>5</sup> [https://unctad.org/en/PublicationsLibrary/dtlstict2019d3\\_en.pdf](https://unctad.org/en/PublicationsLibrary/dtlstict2019d3_en.pdf)

This measure falls under our broad effort towards the formulation and sustained implementation of a "Tatak Pinoy" industrialization campaign and policy that helps Filipino enterprises move up the value chain, Filipino entrepreneurs to produce better quality products, and Filipino professionals to render world-class services.

This bill was originally filed by Senator Sonny Angara as Senate Bill No. 1470 and will serve as the House version.

In view of the foregoing, the passage of this bill is earnestly sought.



FREDERICK W. SIAO

Republic of the Philippines  
**HOUSE OF REPRESENTATIVES**  
Quezon City, Metro Manila

**EIGHTEENTH CONGRESS**  
Second Regular Session

House Bill No. 7049

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Introduced by Representative FREDERICK W. SIAO

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**AN ACT**  
**PROVIDING FOR A NATIONAL DIGITAL TRANSFORMATION POLICY AND**  
**FOR OTHER PURPOSES**

*Be it enacted by the Senate and the House of Representatives of the Philippines in Congress assembled:*

**TITLE I**

**STATE POLICIES AND BASIC PRINCIPLES**

**CHAPTER I**

**State Policies**

**SECTION 1.** *Short Title.* – This Act shall be known as the "*National Digital Transformation Act*".

**SEC. 2.** *Declaration of State Policy.* – It is hereby declared policy of the State to integrate digital technology into all areas of government that will greatly improve Philippine governance, socio-economic development and services to people. Consequently, the State shall create a plan that shall transform the government into a digital platform providing transparent and accountable governance, efficient operations, direct citizen engagement, and innovation.

**CHAPTER II**

**Definitions of Terms**

**SEC. 3.** *Definition of Terms.* – The following terms as used in this Act shall mean:

- (a) "*21st century skills*" refer to skills that are required by new jobs such as critical thinking, problem solving, good communication, collaboration,

1 information and technology literacy, flexibility and adaptability,  
2 innovativeness and creativity.

3 (b) "*Automatic and Artificial Intelligence*" refers to combining technology  
4 such as Robotics Process Automation or RPA, Artificial intelligence (AI)  
5 and machine learning;

6 (c) "*Big Data and Analytics*" refers to data discovery process using  
7 techniques and tools like mining useful information or insights from  
8 huge sets of data either structure or unstructured. This is enabled  
9 through exponential increase in both computing power and storage  
10 capacity;

11 (d) "*Cloud Computing*" refers to the delivery of IT services hosted over the  
12 internet to transform compute resources into a utility;

13 (e) "*Data*" refers to a sequence of one or more symbols given meaning by  
14 specific act(s) of interpretation. Data can be analysed or used in an  
15 effort to gain knowledge or make decisions. Digital data is represented  
16 using the binary number system of ones (1) and zeros (0) as opposed to  
17 its analogue representation;

18 (f) "*Digital Competence*" refers to the confident, critical, creative, relevant  
19 and responsible use of, and engagement with, digital technologies for  
20 learning or education, for work or occupation, and for participation in  
21 society;

22 (g) "*Digital content*" refers to any type of content that exists in the form of  
23 digital data that are encoded in a machine-readable format, and can be  
24 created, viewed, distributed, modified and stored using computers and  
25 digital technologies, e.g. the internet. The content can be either free or  
26 pay content such as web pages and websites, social media, data and  
27 databases, digital audio, such as mp3s, and e-books, digital imagery,  
28 digital video, video games, computer programmes and software.

29 (h) "*Digital entrepreneurship*" refers to combining traditional  
30 entrepreneurship with new digital technologies, thus creating digital  
31 enterprises which are characterized by a high intensity of utilization of  
32 novel digital technologies, particularly social media, big data analytics,

- 1 mobile and cloud solutions to improve business operations, invent new  
2 business models, sharpen business intelligence, and engage with  
3 customers and stakeholders;
- 4 (i) "*Digital services*" refer to public or private services that can be delivered  
5 through digital communication, such as Internet, mobile phone network  
6 that might include delivery of digital information, data or content or  
7 transactional services;
- 8 (j) "*Digital skills*" refer to range of abilities, from basic to more advanced,  
9 encompassing a combination of behaviors, expertise, know-how, work  
10 habits, character traits, dispositions and critical understandings on the  
11 use of digital devices, communication applications, and networks to  
12 access and manage information;
- 13 (k) "*Digital technology*" refers to any product that can be used to create,  
14 view, distribute, modify, store, retrieve, transmit and receive information  
15 electronically in a digital form such as personal computers and devices  
16 like desktop, laptop, netbook, tablet computer, smart phones, PDA with  
17 mobile phone facilities, games consoles, media players, e-book readers,  
18 as well as digital television, and robots;
- 19 (l) "*Digital tools*" refer to technologies used for a given purpose or for  
20 carrying out a particular function of information processing,  
21 communication, content creation, safety or problem solving;
- 22 (m) "*Digital Transformation*" refers to the total and overall societal effect of  
23 digitalization;
- 24 (n) "*Digitization*" refers to the technical conversion from traditional to  
25 digital;
- 26 (o) "*Innovation*" refers to the creation of new ideas using new or existing  
27 technologies that results in the development of new or improved  
28 products, processes, or services, which are then spread or transferred  
29 across the market;
- 30 (p) "*Internet of Things (IoT)*" refers to everyday devices connected to the  
31 internet through sensors and computing power to monitor and manage  
32 actions, offering users greater influence over their environment;

1 (q) "*Social inclusion*" refers to the process of improving the terms for  
2 individuals and groups to take part in society (World Bank). Social  
3 inclusion aims to empower poor and marginalized people to take  
4 advantage of burgeoning global opportunities. It ensures that people  
5 have a voice in decisions which affect their lives and that they enjoy  
6 equal access to markets, services and political, social and physical  
7 spaces;

8 (r) "*Well-being*" is related to the World Health Organization definition of  
9 good health as a state of complete physical, social and mental well-  
10 being, and not merely the absence of disease or infirmity. Social well-  
11 being refers to the sense of involvement with others and with the  
12 communities such as access and use of social capital, social trust, social  
13 connectedness and social networks;

## 14 TITLE II

### 15 DIGITAL COMPETENCE FRAMEWORK FOR CITIZENS

#### 16 CHAPTER I

#### 17 Functions

18 **SEC. 4.** *Digital Competence Framework for Citizens.* – A Digital Competence  
19 Framework for Citizens is hereby created. It shall serve as a tool to improve the  
20 digital competence of citizens and a guide in the formulation of policies that support  
21 digital competence building. The framework shall include education and training  
22 initiatives to improve the digital competence of various specific target groups.

23 The essential knowledge, skills, and attitudes that comprise digital  
24 competence are, generally classified as follows:

25 (a) *Information and Data Literacy.* – The ability to articulate information  
26 needs, to locate and retrieve digital data, information and content, to judge the  
27 relevance of the source and its content and to store, manage, and organize digital  
28 data, information and content. The skills are as follows:

- 29 1. Browsing, searching and filtering data, information, and digital content
- 30 2. Evaluating data, information, and digital content
- 31 3. Managing data, information, and digital content

1 (b) *Communication and collaboration.* – The ability to interact, communicate  
2 and collaborate through digital technologies while being aware of cultural and  
3 generational diversity, to participate in society through public and private digital  
4 services and participatory citizenship and to manage one’s digital identity and  
5 reputation. The skills are as follows:

- 6 1. Interacting through digital technologies
- 7 2. Sharing through digital technologies
- 8 3. Engaging in citizenship through digital technologies
- 9 4. Collaborating through digital technologies
- 10 5. Netiquette
- 11 6. Managing digital identity

12 (c) *Digital Content Creation.* – The ability to create and edit digital content, to  
13 improve and integrate information and content into an existing body of knowledge  
14 while understanding how copyright and licenses are to be applied, and to know how  
15 to give understandable instructions for a computer system. The skills are as follows:

- 16 1. Developing digital content
- 17 2. Integrating and re-elaborating digital content
- 18 3. Copyright and licenses
- 19 4. Programming

20 (d) *Safety.* – The ability to protect devices, content, personal data and privacy  
21 in digital environments, to protect physical and psychological health, and to be  
22 aware of digital technologies for social well-being and social inclusion, as well as to  
23 be aware of the environmental impact of digital technologies and their use. The skills  
24 are as follows:

- 25 1. Protecting devices
- 26 2. Protecting personal data and privacy
- 27 3. Protecting health and well-being
- 28 4. Protecting the environment

29 (e) *Problem Solving.* – The ability to identify needs and problems, and to  
30 resolve conceptual problems and problem situations in digital environments, to use  
31 digital tools to innovate processes and products and to be updated with the digital  
32 evolution. The skills are as follows:



- 1 1. Solving technical problems
- 2 2. Identifying needs & technological responses
- 3 3. Creatively using digital technologies
- 4 4. Identifying digital competence gaps

5 The Department of Information and Communications Technology (DICT) and  
6 the Department of Education (DepEd) in collaboration with the Commission on  
7 Higher Education (CHED), and the Technical Education and Skills Development  
8 Authority (TESDA) shall design and develop an instrument to measure and certify  
9 citizens' digital competence based on the framework. These agencies shall consult  
10 experts in the field of various technologies necessary for digital transformation, such  
11 as but not limited to cloud computing, automatic and artificial intelligence, robotics,  
12 big data and other disruptive technologies.

## 13 CHAPTER II

### 14 ICT Competency Framework For Teachers

15 **SEC. 5.** *ICT Competency Framework for Teachers.* – An ICT-Competence  
16 Framework for Teachers is hereby created. This shall be used to outline the  
17 competencies that teachers, educators, and trainers need in order to integrate  
18 Information and Communication Technologies (ICTs) into their professional practice.

19 The framework shall be used to compare the teachers' competencies in  
20 different regions, provinces, cities, and municipalities in order to analyze and  
21 develop educational programs and training courses for teacher professional  
22 development at national or regional level.

23 The required competencies are defined as the intersections of the three  
24 approaches to teaching, as follows:

25 (a) **Technology literacy approach** shall enable students to use ICT in order  
26 to learn more efficiently and increase the extent to which new technology  
27 is used by students, citizens and the workforce by incorporating  
28 technology skill into the school curriculum. The goal of the technology  
29 literacy approach is to enable learners, citizens, and the workforce to use  
30 ICT to support social development and improve economic productivity.

31 (b) **Knowledge deepening approach** shall enable students to acquire in-  
32 depth knowledge of their school subjects and apply it to complex, real-

1 world problems; and increase the ability of students, citizens, and the  
2 workforce to use knowledge to add value to society and the economy by  
3 applying it to solve complex, real-world problems. The aim of the  
4 knowledge deepening approach is to increase the ability of students,  
5 citizens, and the workforce to add value to society and to the economy by  
6 applying the knowledge gained in school subjects to solve complex, high  
7 priority problems encountered in real world situations of work, society and  
8 in life generally.

9 (c) **Knowledge creation approach** shall enable students, citizens and the  
10 workforce they become, to create the new knowledge required for more  
11 harmonious, fulfilling and prosperous societies; and increase the ability of  
12 students, citizens, and the workforce to innovate, produce new  
13 knowledge, and benefit from this new knowledge. The aim of the  
14 knowledge creation approach is to increase productivity by creating  
15 students, citizens, and a workforce that is continually engaged in, and  
16 benefits from, knowledge creation, innovation and life-long learning. The  
17 six aspects of a teacher's work, under the framework are as follows:

- 18 1. Understanding ICT in education
- 19 2. Curriculum assessment
- 20 3. Pedagogy
- 21 4. ICT
- 22 5. Organization and administration
- 23 6. Teacher professional learning

24 The modular structure of learning shall be encouraged. Teacher-education  
25 institutions and providers of professional learning shall design offerings that address  
26 and is aligned to the overall goals and rationale of the Framework.

### 27 **PART III**

## 28 **NATIONAL DIGITAL SKILLS STRATEGY**

### 29 **CHAPTER I**

#### 30 **Definitions**

31 **SEC. 6. *National Digital Transformation Strategy.*** – A National Digital  
32 Transformation Strategy shall be created. The Strategy shall ensure that every

1 citizen shall have the opportunity to understand ICT and develop skills and ability to  
2 apply the ICT in their work, vocation, business, and life in society. The Strategy shall  
3 include, but not limited to:

- 4 (a) *Affordable and clean energy and growth*, which includes plans and  
5 programs to ensure competitive costs as well as lower adverse impact to  
6 the environment;
- 7 (b) *Digital inclusion*, which includes plans and programs to spread growth  
8 across the country, and identify potential areas for various industries to  
9 unlock growth, increase skill levels, or promote local innovation;
- 10 (c) *Infrastructure*, which includes concrete plans and strategies to develop  
11 and upgrade performance on digital, energy, and transport  
12 infrastructure, to effectively align central government infrastructure  
13 investment with local growth priorities;
- 14 (d) *Institutional framework*, which includes strategies and directions to  
15 establish or improve existing institutions such as innovation councils,  
16 local educational institutions, trade associations or financial networks;
- 17 (e) *Procurement policy*, which includes concrete and specific plans in the  
18 government procurement in order to drive innovation and enable the  
19 development of effective, efficient and transparent supply chains across  
20 the country;
- 21 (f) *Science, research, and innovation*, which include concrete set of plans  
22 and strategies to ensure a knowledge economy, create and  
23 commercialize intellectual property that will promote and enhance the  
24 global brand of the Philippines;
- 25 (g) *Sectoral engagement*, which includes plans, policies and strategies  
26 programs to enhance areas of competitive advantage, and help new  
27 sectors to grown;
- 28 (h) *Skills*, which include concrete plans and strategies to ensure that the  
29 Filipino workforce is equipped with the relevant and necessary 21<sup>st</sup>  
30 century skills for them to thrive in a modern economy and build learning  
31 organizations and systems to benefit the everyone especially those who  
32 are not able to attend or complete formal education, and enhance

1 science, technology, engineering, and math (STEM) skills and numeracy,  
2 and raising skill levels especially in underprivileged areas;

3 (i) *Trade and inward investment* which includes plans and strategies to  
4 boost productivity and growth across the economy by increasing  
5 competition and helping to bring innovation and new ideas, systems and  
6 processes; and

7 (j) *Supporting businesses to start and grow*, where we the government  
8 must ensure that businesses across the country can access the finance  
9 and management skills they need to grow; and create the conditions to  
10 enable firms to invest for the long term.

11 **SEC. 7. *Digital Inclusion.*** – The DICT shall enable all citizens, irrespective of  
12 age, gender, physical ability, ethnicity, health conditions, or socio-economic status to  
13 access the opportunities of the internet. Citizens, businesses and public services  
14 must take full advantage of the transformational benefits of the digital revolution.  
15 The Department must identify the root causes of digital exclusion in all sectors and  
16 regions for the purpose of increase their digital competence.

17 The DICT shall identify and develop the full range of digital skills that  
18 individuals and companies across the country need to address the requirements of a  
19 digital economy and instill measures and programs for citizens to continuously up-  
20 skill and re-skill throughout their working lives.

21 It shall also develop a strong collaboration between the public, private, and  
22 educational sector to address the digital skills gap in a coherent and holistic way.

23 **SEC. 8. *Digital Libraries and Learning Hubs.*** - The DICT and the National  
24 Library of the Philippines shall enhance and promote the role of libraries in improving  
25 digital communication, increasing citizen’s digital footprint, promoting digital  
26 inclusion and transform these libraries as providers of digital access, training and  
27 support for local communities.

28 **SEC. 9. *Digital Entrepreneurship.*** – The Department of Trade and Industry  
29 (DTI) and the DICT shall strongly promote the digitization of businesses according to  
30 their own specific digital needs, mainly focused on these four core digital activities,  
31 namely maintaining a web presence, selling online, using the cloud, and digitizing  
32 back-office functions such as payroll and human resource management, in order to

1 become or remain competitive. The DTI shall ensure that entrepreneurs undertake  
2 the certification under the digital competence framework for citizens to identify areas  
3 the need training and intervention.

4 **SEC. 10. *Digital Civil Service.*** – To ensure the highest standards of public  
5 service, the DICT and the Civil Service Commission shall identify and consolidate all  
6 the skills and competencies of public employees in the career service and  
7 recommend and cause the conduct of digital skills training under an annual digital  
8 skills mapping activity. All public employees shall be covered under a mandatory  
9 basis of certification under the digital competence framework for citizens to identify  
10 areas the need training and intervention.

## 11 **CHAPTER II**

### 12 **National Digital Skills Development Strategy**

13 **SEC. 11. *National Digital Skills Development Strategy.*** – The State shall  
14 create digital skills development strategy that will:

15 (a) Identify the digital skills development goals for:

- 16 1. Primary education
- 17 2. Secondary education
- 18 3. Tertiary education, for students, and digital technology development and  
19 design experts
- 20 4. Work-related digital skills training programs for out-of-school youth,  
21 including for freelancers and part-time workers;
- 22 5. Work-related digital skills training programs for adults requiring re-skilling;
- 23 6. Skills for life in the digital economy for all citizens;
- 24 7. Training programs both for life and work for under-represented  
25 populations;
- 26 8. Develop or plan for a digital entrepreneurship skills strategy.

27 (d) Inventory existing policies, plans and programs that support the  
28 development of digital skills and analyze how they can be used to support  
29 the goals of the digital skills strategy

30 (e) Benchmark the goals against existing frameworks or countries with similar  
31 goals as well as identify the existing priorities and challenges in meeting

1 the above goals as well as identify promising solutions for providing digital  
2 skills that address the common challenges

3 (f) Identify current and future trends in relation to demographic trends,  
4 technological changes, business trends, trade, industrial policies, and the  
5 shift to a greener, digital and knowledge-based economy

6 (g) Identify available training programs, curriculum and providers that can be  
7 leveraged to meet the strategy's goals and develop new curricula where  
8 necessary as well as identify gaps in training programs and curricula – and  
9 identify providers and strategies that will help fill them.

10 (h) Identify and recommend new policies and programs that are needed and  
11 conduct advocacy both using the existing policies and to build support for  
12 new policies.

### 13 **CHAPTER III**

#### 14 **Digital Jobs**

15 **SEC. 12. *Digital Jobs.*** - The DICT in coordination with Department of Labor  
16 (DOLE) and other concerned agencies shall provide jobs which are in line with  
17 freelancing, virtual work, homebased digital activities, and the like.

### 18 **CHAPTER VII**

#### 19 **National Digital Transformation Council**

20 **SEC. 13. *National Digital Transformation Council.*** – The National Digital  
21 Transformation Council is hereby created to ensure the effective implementation of  
22 this Act.

23 **SEC. 14. *Composition of the Council.*** – The Council shall be composed of:

24 (a) DICT

25 (b) Department of Science and Technology (DOST)

26 (c) DTI

27 (d) DOLE

28 (e) DEPED

29 (f) CHED

30 (g) TESDA

1 (h) At least ten (10) members coming from the private sector that is involved  
2 in digital skills development, digital industries and jobs, or digital systems  
3 and products.

4 **SEC. 15. *Functions of the Council.*** – The following are the functions of the  
5 Council:

6 (a) Take the lead in the formulation and implementation of specific rules for  
7 the National Digital Competence Framework for Citizens;

8 (b) Oversee the development and implement the National Digital  
9 Transformation Strategy, the ICT Teachers Competency Framework, and  
10 National Digital Skills Development Strategy;

11 (c) Recommend, propose or endorse any measure related to the above  
12 functions to concerned line agencies for purposes of administrative  
13 concerns, to the private sectors, schools or other business entities for  
14 policy guidance, and to Congress for policy purposes

15 (d) Provide a report to Congress and to the Office of the President on the  
16 progress of the implementation of this Act

17 **SEC. 16. *Council Secretariat.*** – The DICT shall provide secretariat support to the  
18 Council.

#### 19 **TITLE IV**

#### 20 **COMMON PROVISIONS**

21 **SEC. 17. *Implementing Rules and Regulations.*** – Within sixty (60) days from  
22 the effectivity of this Act, the DOLE and DICT together with relevant stakeholders  
23 shall promulgate the necessary implementing rules and regulations (IRR) of this Act.

24 **SEC. 18. *Appropriations.*** – The amount necessary for the effective  
25 implementation of the provisions of this Act shall be included in the General  
26 Appropriations Act for the year following the approval of this Act.

27 **SEC. 19. *Repealing Clause.*** – All other laws, decrees, executive orders and  
28 rules and regulations contrary to or inconsistent with the provisions of this Act are  
29 hereby repealed or modified accordingly.

30 **SEC. 20. *Separability Clause*** – If any provision of this Act is held invalid or  
31 unconstitutional, the same shall not affect the validity and effectivity of the other  
32 provisions hereof.

1           **SEC. 21. Effectivity** – This Act shall take effect fifteen (15) days after its  
2 publication in the *Official Gazette* or in any newspaper of general circulation.

*Approved,*