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Developing Digital Skills of Government Personnel for Digital Government Transformation

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Abstracts

Background and Aim: The problematic state of the public sector The work of the public sector in the past was different from the present due to continuous reforms. However, the public sector has not been able to develop at a level that can keep pace with technological and social changes. Thus, this paper aims to analyze the Developing Digital Skills of Government Personnel for Digital.

Materials and Methods: In this study, the author used the method of studying and analyzing the document and presented the following study issues; (1) the development of artificial intelligence, (2) the preparation of a national artificial intelligence action plan, (3) the preparation of the government sector in the application of artificial intelligence, (4) the development of digital skills of government personnel, and (5) Digital competency development goals for government personnel.

Results: Facing the crisis of the spread of the COVID-19 virus, society has entered a new normal era, along with the direction of technology changes into Cloud Computing, Big Data Analytics, AI, Encryption, Cyber Security, IOTs, Connectivity to various devices. The rise of content, image, and sound production processes, e-commerce, and digital commerce is causing government organizations to rapidly adapt to Digital Transformation to move towards Thailand 4.0 and support new changes.

Conclusion: Therefore, modern management is critical to developing digital skills for government personnel to move towards more online services, including; Basic skills, intermediate skills, and advanced skills to develop ways of working to be convenient and fast, able to facilitate and serve people more efficiently.

Keywords: Development; Digital Skills; Government Personnel; Digital Government

Introduction

The world has changed rapidly from the analog era to the digital era and the robotic era, thus making digital technology influence the lives and work of civil servants, which is the core of the country's development. Therefore, it must be adapted to the changing context to prevent culture shock. Due to the technology change and to prevent risks that may arise from improper use of technology, such as loss of privacy, life and property security, data theft, and cyber-attacks. Digital literacy, or the skills to understand and use digital technology, is a foundational digital skill that will be a key enabler for public servants in working, communicating, and collaborating with others in a "Work Less But Get More Impact" manner. And these help government agencies value co-creation and operational value for economies of scale as they move towards Thailand 4.0. It is also a tool to help civil servants learn and develop themselves to obtain good job opportunities and advance in their careers (Office of the Civil Service Commission, 2021).

The government has the policy to reform Thailand into a country that is stable, prosperous, and sustainable to transform the country into an era that drives the economy with digital technology and innovation according to the Thailand 4.0 policy by establishing a 20-year national strategy (2017-2036) to set a vision and create continuity in national reform. This strategy is consistent with the 12th National Economic and Social Development Plan and a digital development plan for the economy and society that wants to use digital technology to reform the national administration system for efficiency, modernity, transparency, and consideration for the people. This will affect the overall picture of the country, both in terms of the economy, that is, increasing the country's competitiveness, and in terms of the society that creates well-being for the people (Digital Government Development Agency (Public Organisation. 2019).

Please add one paragraph to explain the statistics of some of the digital governments of Thailand and the trend from the past to the present. The problematic state of the public sector and the work of the

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public sector in the past were different from the present due to continuous reforms. However, the government sector is still unable to develop at a level that can keep pace with technological and social changes. The important problems in the government sector that are still waiting to be solved are people's lack of confidence in the government sector, In particular, public services are disregarded for the common interests of the public, their administrations are complex, their administrations are not transparent, and their large and complex government structures are inefficient which causes the roles and responsibilities of each department to overlap with multiple levels of the chain of command, causing inefficiency and unnecessary waste of resources, centralizing power at a central or central agency, causing people in the region and local areas to be unable to obtain the service thoroughly or it is necessary to obtain services from the central, lack of integration and coordination not only results in people wasting time in contacting multiple agencies, to request a service for one subject only. But also results in the government sector not being able to clearly inspect and measure performance as well. The work culture is still attached to the law and regulations, resulting in a lack of flexibility and service consciousness (Digital Government Development Agency (Public Organization. 2019).

However, regarding the organizations' needs for knowledge and skills of artificial intelligence in communication, the results indicated that there were 3 major points: 1) the basic knowledge need in artificial intelligence; 2) the data management need; and 3) the need of knowledge and skills of artificial intelligence in communication, especially in terms of thinking. Thus, organizations/institutes should develop courses for educating and improving their employees' skills of artificial intelligence in communication (Chaisuwan, B., Kuldilok, P., & Sakuna, C., 2021). Artificial Intelligence(AI) is one of the key technologies that is currently popular and is expected to be widely used in the future. This technology has made many aspects of human life easier. It also enhances the capacity of industries, especially telecommunication, banking, medical and healthcare, and various manufacturing industries that use high technology and repetitive manual work. Artificial intelligence also plays an important role in safety and ergonomics, being the leading resource to help prevent injury by using big personal data to assess and advise on employee behavior and make use of it to train employees in specific, individualized ways more effectively (Lertvisutthipaiboon, S., 2021). In addition, the problem was expected in the future the likelihood that AI will be used in evangelism will become even more necessary. Just waiting for the opportunity opened mind and acceptance from the Sacrament needed to look for benefits rather than appearance. It will be able to bring about the path of the elite as well (Phrakhrusuthivorayan, 2021).

Therefore, in the context of global changes and national development directions, such as "bureaucrats and government personnel", which are regarded as the main mechanism driving the country, it is important to prepare and adapt to keep up with changes and adjustments in the government context, to be used as a guideline to promote and support civil servants and government personnel to adapt to keep pace with changes in technology, to be ready to perform expected roles and behaviors in the context of a transformative public sector, and to be able to make the most of digital technology. And has approved "digital literacy skills" as one of the digital skills that all civil servants and government personnel should develop.

Objective

This paper aims to analyze the developing digital skills of government personnel for digital government transformation.

Methodology

In this study, the author used the method of studying and analyzing the document and presented the following study issues: the development of artificial intelligence, the preparation of a national artificial intelligence action plan, the readiness of the government sector in the application of artificial intelligence, the development of digital skills of government personnel, and the goal of developing digital competencies for government personnel. The author should explain the data collection, and the data analysis as following the document research.

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Development of artificial intelligence (AI)

AI stands for Artificial Intelligence, with the Thai language using the word artificial intelligence (Office of the Royal Society. 2018) It refers to the processing systems of computers, robots, machines, or various electronic devices that have analytical depth similar to human intelligence and can produce actionable results. The learning process of AI, unlike human learning, is the process of remembering, comprehending, responding to language, making decisions, and solving problems based on large amounts of repetitive information. Optimizing and optimizing the use of AI requires analysis and selection under the purpose of use, taking into account the information used as a predictive base, and maintaining the AI by tracking and Always checking the mechanism of the AI to be effective. including the need for new data to be compiled into a large database for continuous analysis and processing, to develop AI to be smarter and able to accurately predict various behaviors that will be used in the policy decision-making process.

Machine Learning is defined as machine learning as the brain of AI, which is a very important part of creating intelligence. The mechanism of AI relies on Machine Learning, which consists of an algorithm or a series of step-by-step instructions or conditions that allow computers, robots, machines, or other electronic devices to learn by themselves, The use of existing big data (Big Data) is processed into various data sets, which machine learning can be divided into 2 forms: (Electronic Transactions Development Agency, 2021).

1. Machine-controlled human learning learns and predicts with the help of data scientists, such as classifying or prioritizing activities in departments that are conditioned by urgency, importance, mission, etc.

2. Unmanned Learning Machines learn and make predictions by automatically discriminating and forming patterns from the received data. The more predictive the machine is, the more powerful it is in Deep learning (Deep Learning) only more. This is because deep learning consists of algorithms that are characterized by a virtual neural network similar to the functioning of the human brain's nervous system. These networks have neurons connected to form a neural network that communicates with each other, thus continuously learning and understanding large, complex, and diverse data, such as the diagnosis of the patient's personal information, whether it is weight, height, blood sugar or lipid values, ultrasound images or X-ray images. Then, the patient's data can be processed and compared with the database to find various abnormalities.

Big Data, or Thai, is defined as both macro data and big data, which most people are more familiar with using the word big data. Big Data refers to data sets that are large (Volume) and are constantly growing and changing (Velocity). It can be structured, unstructured or semi-structured data such as text, numbers, emails, and images. At present, various agencies, both government and private sectors, focus on using Big Data to analyze insights that benefit agencies in many ways. These include supporting more accurate decision-making processes, improving service quality, predicting potential risks, and improving operational efficiency.

Nowadays, AI and Machine Learning are widely used in almost every industry, especially in the business sector where AI can be used widely and prominently. Because AI can meet both business and consumer needs, which can be used more and more easily. Examples of using AI in the business sector are: (Electronic Transactions Development Agency, 2021);

1. Search Engine Using face recognition, voice recognition, and Natural Language Processing (NLP) technologies, human language understanding techniques are used to help search results be more efficient and satisfying. more personal behavior

2. Smart Home, controlling home devices with voice commands

3. Health Care Using a processing system or data set called Deep Learning that Machine Learning uses to work, it is possible to interact with patients and help diagnose diseases like a physician and can also act as a medical assistant and counselor.

4. Entertainment Netflix is used to support movie or series recommendations based on past user viewing data.

5. Marketing by accessing big data and then analyzing and valuing each customer for effective customer relations or advertising.

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6. Detect fraud by analyzing patterns of fraudulent behavioral information to prevent such problems that may occur.

7. Financial institutions can examine financial statements and payment risks of establishments applying for credit, and

8. Other automated operations such as driverless cars

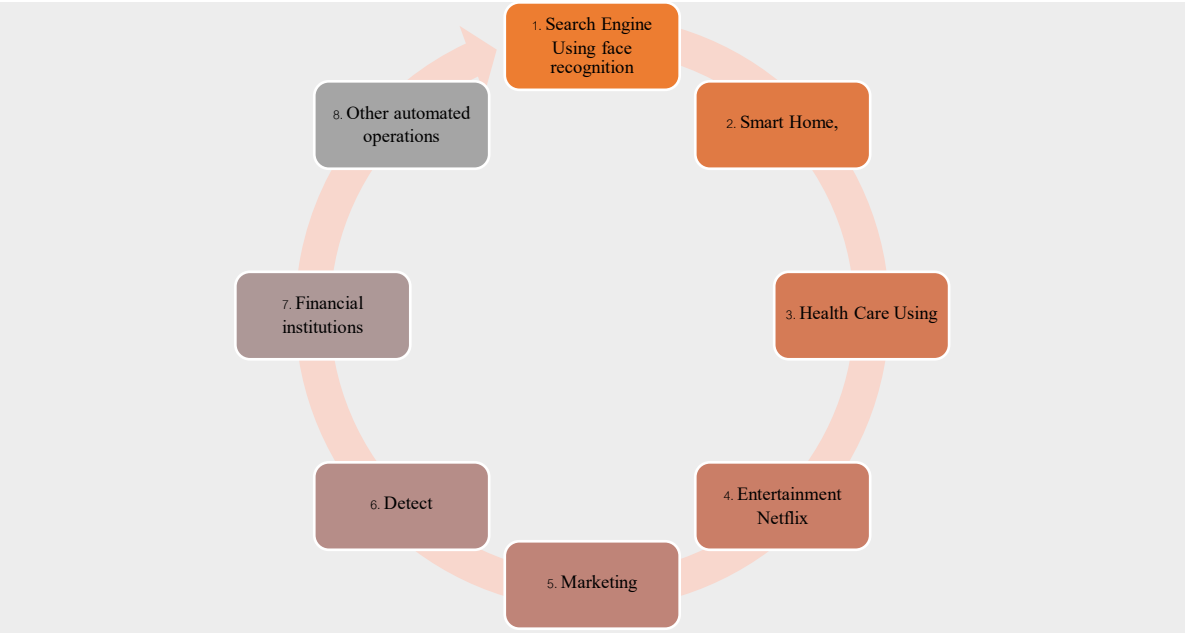

Figure 1: AI in the business sector

Preparation of a 6-year National Artificial Intelligence Action Plan for Thailand Development (2022–2027)

26 July 2022, the 30/2022 Cabinet Meeting (Cabinet) at the Government House Has the resolution to approve (draft) the National Artificial Intelligence Action Plan for Thailand Development, 6 years (2022-2027) under the vision "Thailand has established a complete and integrated ecosystem to promote the development and application of artificial intelligence technology with higher efficiency and lead to enhancing the economy and the quality of life of the people by the year 2027." (National Electronics and Computer Technology Center, 2020)

The AI action plan has three main objectives: 1) building people and technology, 2) building economic growth, and 3) creating social and environmental impact, driven by 5 strategies and 15 programs: (National Artificial Intelligence Action Plan for Thailand Development, 6 years (2022-2027)

1. Strategy 1 Prepare the country in social, ethical, legal, and regulatory areas for the application of artificial intelligence.

2. Strategy 2 Development of artificial intelligence infrastructure and support systems for sustainable development.

3. Strategy 3 Increasing personnel potential and developing education in artificial intelligence.

4. Strategy 4 Technology and innovation development to support artificial intelligence technology.

5. Strategy 5: Promoting the application of technology and artificial intelligence systems in the public and private sectors.

At the end of the implementation of the Action Plan in the year 2027, there will be an overall benefit to the country, namely, there will be an increase in the value of employment and job creation in the country's economy. As more and more human resources can upskill and develop new skills in digital and artificial intelligence to support new careers and work in the country, the gross domestic product is on the rise. As the value of products and services in the country has increased due to the application of

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artificial intelligence. Including people in the country has reduced inequality in terms of economy, society, education, and access to health services because they can access government services equally, thoroughly, and fairly through the keys to success in all 9 areas: (National Artificial Intelligence Action Plan for Thailand Development, 6 years (2022-2027)

1. People no less than 600,00 people - times aware of artificial intelligence.
2. At least one law/rule/regulation related to artificial intelligence has been promulgated.
3. Upgrade the Thai government's artificial intelligence readiness index to no less than 50th in the world.
4. Investment in digital infrastructure to support artificial intelligence work in the public and private sectors increases by 10 percent per year.
5. The country's artificial intelligence personnel have increased by no less than 30,000 people.
6. Strength in artificial intelligence technology has been increased by at least 100 prototypes of research, development, and innovation in artificial intelligence.
7. Research, development, and innovation in artificial intelligence are widely used and can help create an impact in the business and social sectors of at least 48 billion baht in 2027.
8. The number of agencies using artificial intelligence innovation in government, the business sector, and new entrepreneurs has increased by 10 percent per year or not less than 600 cases in 6 years.
9. The country's artificial intelligence competitiveness has increased with an increase in artificial intelligence market value of at least 60 billion baht in 2027.

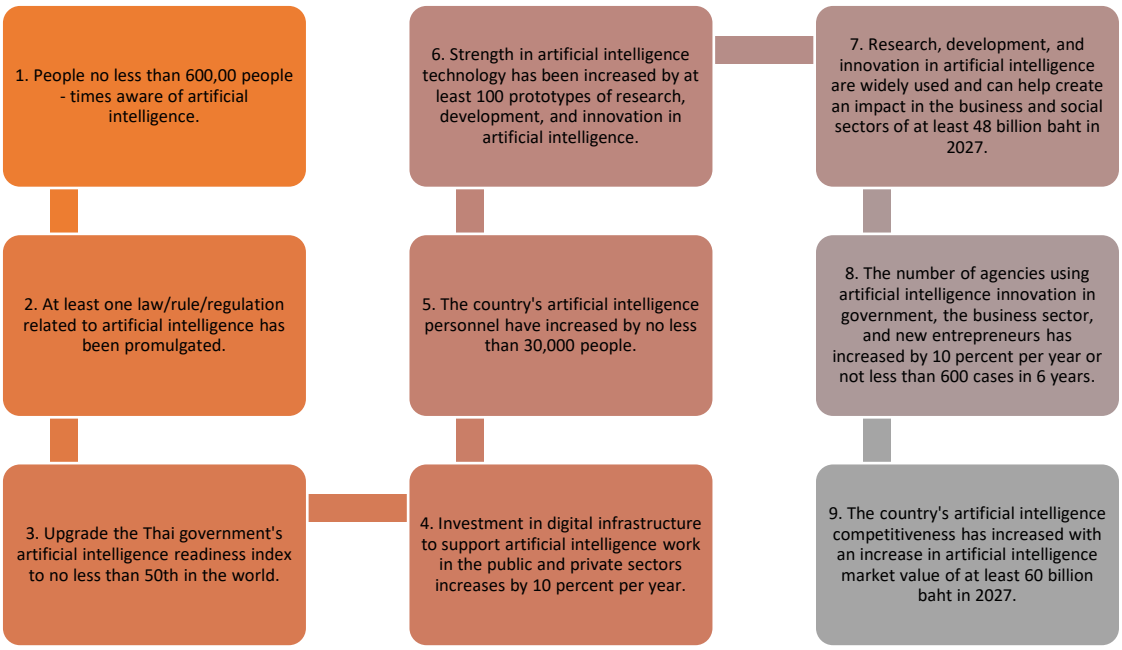

Figure 2: keys to success in all 9 areas

Preparing the government for the application of artificial intelligence (AI) around the world

Today, governments around the world are increasingly focusing on the use of AI in governmental missions, such as using AI to develop new drugs and treatments and to geo-track people requesting government assistance. To provide timely assistance from the increasingly clear trend of using AI in the public sector.

Oxford Insights and the International Research Development Centre (IDRC) (2020) A study of AI readiness of governments of 172 countries around the world consisted of 33 indicators under 10 readiness dimensions: Vision, Governance and Ethics, Digital Capacity, adaptability, Size, Innovation Capacity, Human Capital, Infrastructure, Data Availability, and Data Representativeness. A recent

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2020 study found that the top 5 countries with the most AI readiness in government are the United States, the United Kingdom, Finland, Germany, and Sweden (index values of 85.48, 81.12, 79.24, 78.97, and 78.77 respectively). And Western Europe has a very high level of AI readiness for government use.

Thailand was ranked 60th with an index of 48.16, above the global average of 44.25. Most governments are still in the early stages of adopting AI in public services. The regions with the lowest average scores were sub-Saharan Africa, Latin America, the Caribbean, and Central and South Asia. In other words, the greater the difference between governments in AI readiness scores leads to greater economic inequality. It also affects people in terms of poor quality of public services. Therefore, the government should focus on preparing AI to increase competitiveness and support the country's development to cover all dimensions as well as to deliver quality public services to all people.

However, the preparation to drive government agencies with artificial intelligence (AI) consists of 3 approaches as follows.

1. Leaders or senior executives of the agency must act as agents to lead changes in the use of AI in the development of the agency, In particular, setting strategic priorities to make the agency have a clear plan and guidelines, invest in AI technology and apply it creatively so that the agency can develop new services with higher quality. In addition, agency leaders must encourage personnel at all levels and functions to adapt to keep up with the AI technology used in their operations.

2. Cultivate the concept of AI development in the organization by promoting and encouraging personnel to have higher technological skills in 2 characteristics as follows.

2.1 Science to be used to extract knowledge from various forms of organized and unorganized data, involving data mining, deep learning, and big data, and

2.2 Soft Skills include Innovation, Change Management, and Workforce Collaboration. This may develop a skill set to empower talent by bringing new technologies to support human progress, but not replacing all human beings with technology.

3. Develop a systematic approach to managing all AI-related data and tools to oversee, direct and monitor accountability to drive the agency forward. This includes the development of processes and procedures to implement AI technology. In addition, government officials must consider the ethical framework related to the protection of citizens' personal information, with practices that avoid personal bias and operate according to regulations to build public trust.

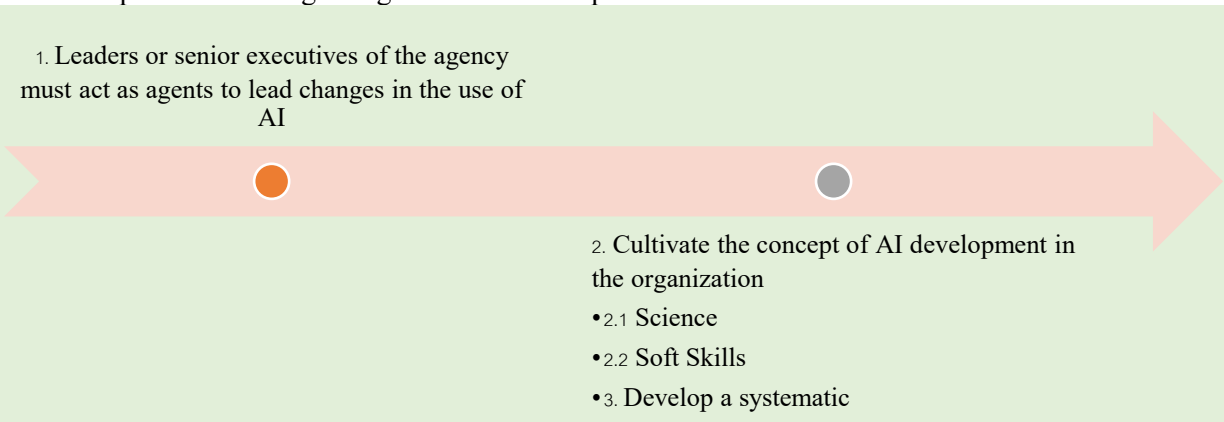

Figure 3 the preparation to drive government agencies with artificial intelligence (AI)

Development of digital skills of government personnel

Digital literacy, or skills to understand and use digital technology, is a foundational digital skill that will be a key enabler in working, communicating, and collaborating with others in a “Work Less But Get More Impact” manner and (Value Co-Creation) and Economy of Scale for moving towards Thailand 4.0. It is also a tool to help personnel learn and develop themselves to obtain good job opportunities and grow in their careers (Learn and Growth), consisting of (Anutarakul, S., 2021)

At present, the world has changed rapidly from the analog era to the digital era and the robotic era, thus making digital technology influence the way of life and government work. Which is the core

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of the country's development, so it has to adapt to the context of change to prevent Culture Shock. Due to the change in technology and to prevent risks that may arise from improper use of technology such as loss of privacy, safety of life and property, data theft, cyber-attack, etc.

Understanding and using digital technology refers to the skills to use today's digital devices and technologies, such as computers, phones, tablets, computer programs, and online media to make the most of communication, work, and collaboration, or used to develop work processes or work systems in the organization to be modern and efficient, can be divided into 4 important parts, which are as follows:

1. Use refers to the technical fluency required to use computers and the Internet. The skills and abilities associated with the word "use" cover basic techniques to the use of computer programs, such as word processors (Word Processor), web browsers (Web Browser), and e-mail. And other communication tools to more advanced techniques for accessing and using knowledge, such as programs that help search information or search engines (Search Engine) and online databases, including emerging technologies such as Cloud Computing.

2. Understand is a set of skills that help learners understand the context and assess digital media so they can make informed decisions about what is done and encountered online, It is an important and necessary skill to start teaching children as soon as they go online. Understanding also includes recognizing how networking technologies affect learners' behavior and outlook. how it affects their beliefs and feelings about the world around them, understanding also prepares learners for a knowledge-based economy where learners develop information management skills to find, evaluate, and use information effectively to communicate, coordinate, collaborate, and solve problems.

3. Create is the ability to produce content and communicate effectively through a variety of digital media tools, creating with digital media is more than just knowing how to use a word processor or writing an email. But it also includes the ability to adapt what learners create for different contexts and audiences and the ability to create and communicate using Rich media such as images, video, and audio, as well as the ability to contribute effectively and responsibly to Web 2.0 such as blogs, image and video sharing, and other forms of Social Media.

4. Access is accessing and utilizing digital technology and information as the foundation for developing economic growth. Students need to understand the Internet and access to the Internet through various channels. Including the pros and cons of each channel so that Search Engine Fever can find the desired information from the Internet efficiently. It is also necessary to understand different types of digital media and how to apply them to today's work environment.

"Digital literacy" is a variety of interrelated skills that fall under Media literacy, Technology literacy, Information literacy, Visual Literacy, Communication Literacy, and Social Literacy.

In the future, digital learning content will take over and the role of conventional textbooks will become documentation in the theory-based course content because the content rarely changes. But for course, content that can change all the time, such as computer and science content, digital learning content will replace it because it can be easily edited. In addition, the process of producing books in general takes a long time. Digital learning content will allow people who are interested in various content to know that content without having to attend an educational institution. The future of digital learning content depends not only on readers but also on the development and invention of new formats to make reading more convenient and content more interesting. In addition, digital learning content will cause changes in the print market, such as newspapers, periodicals, magazines, etc. will be produced in a more digital format in the future (Anutarakul, S., 2021). The skills to understand and use digital technology in 9 areas are as follows: (1) Computer use, (2) Internet use, (3) Use for security purposes, (4) Using a word processor, (5) Using a spreadsheet program, (6) Using a presentation program, (7) Use of digital media creation programs, (8) Online Collaboration, and (9) Using digital for security and safety.

However, the International Telecommunication Union (ITU) has defined Digital Skills into 3 levels as follows (Anutarakul, S., 2021).

1. Basic Skills is a simple use of digital technology that can perform basic hardware tasks such as using a keyboard, using a touch-screen, etc. Get to know software such as word processing (Word Processing), file management, on-screen data, mobile privacy settings, as well as basic online usage. Such as email, searching (Search), or filling out online forms, having basic digital skills is sufficient for

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daily life, and one can contact and access digital services, whether electronic services Government agencies, online trading, or electronic financial services.

2. Intermediate Skills Those who can use digital technology effectively know how to use technology. Including evaluating the ability of technology to be used in work appropriately, can use software to design various publications, able to arrange images and text to be beautiful (Desktop Publishing), those who have the skills at this stage will be able to work on In graphic design (Digital Graphic Design) or marketing through digital media (Digital Marketing), etc.

3. Advanced Skills are skills that belong to information technology professionals such as programmers and system administrators. In the future, there will be many jobs that will require people with advanced digital skills such as Artificial Intelligence (AI), Big Data, coding, and Cybersecurity. Internet of Things (IoT) and mobile application development, etc.

The skills to understand and use digital technology in 9 areas are as follows:	Digital Skills into 3 levels
• (1) Computer use, • (2) Internet use, • (3) Use for security purposes, • (4) Using a word processor, • (5) Using a spreadsheet program, • (6) Using a presentation program, • (7) Use of digital media creation programs, • (8) Online Collaboration, • (9) Using digital for security and safety	• 1. Basic Skills • 2. Intermediate Skills • 3. Advanced Skills

Figure 4 Development of digital skills of government personnel

Digital competency development goals for government personnel

Digital Government Development Agency (Public Organization) (2021) Said that developing digital competencies for civil servants and government personnel is a collaboration between 3 agencies, the Professional Qualifications Institute (Public Organization), Office of the Civil Service Commission (OCSC), and the Electronic Government Agency (Public Organization) (USSR) to create. Learning in various dimensions, to support the mission of preparing civil servants and government personnel to enter the TDGA digital skills curriculum standards. To support the transformation of the public sector into a digital government, the government aims to develop manpower in government agencies to have digital skills, by encouraging government officials and government personnel to develop digital competency skills in 5 dimensions, learning in 7 skill groups, digital skills, entering the standard framework of the TDGA digital skills curriculum for government officials and government personnel by developing skills Digital categorizes digital competency skill groups as follows:

The first dimension is knowing and using technology, consisting of 1 skill group, which is the Digital Literacy Skill Set.

The 2nd dimension understands policies, laws, and standards, consisting of 1 skill set, namely the Digital Governance and Compliance Skill Set (Digital Governance, Standard and Compliance Skill Set).

The 3rd dimension, using digital for application and development, consists of 2 skill groups: digital technology skill set to enhance organizational potential (Digital Technology Skill Set), and process design and digital services skill group for improving the quality of government work (Digital Process and Service Design Skill Set).

The fourth dimension, using digital to plan, manage and lead organizations, consists of two skill sets: Project and Strategic Management Skill Set and Digital Leadership Skill Set.

The fifth dimension, using digital to drive change and creativity, consists of 1 skill group, namely the Digital Transformation Skill Set.

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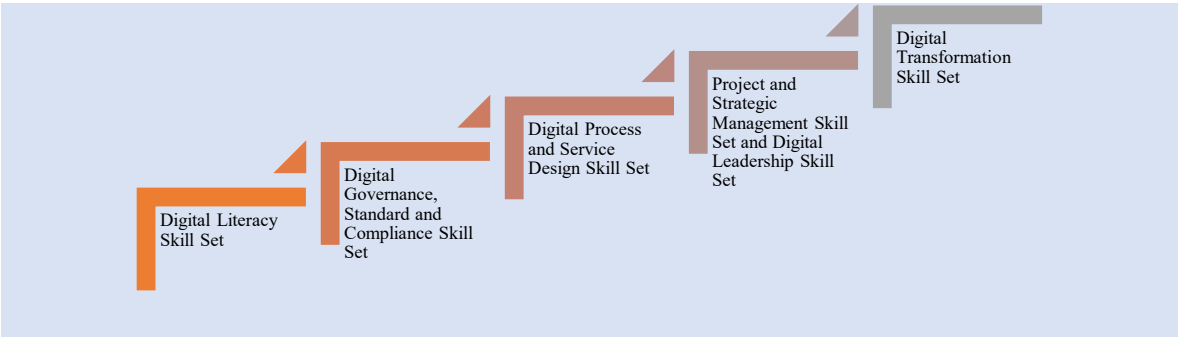

Figure 5 Digital competency development goals for government personnel

Benefits that the government will receive from using AI

Electronic Transactions Development Agency (2021) said that the benefits that the government will receive from using AI are as follows.

1. Increase work efficiency, a new approach to government management, which is a current government management approach, taking into account the use of digital technology to increase the efficiency of government work if the government sector can replace AI Working and providing government services will help create a change for government work in a better way. If using AI, it can increase the efficiency of the government in many ways as follows.

1.1 Providing quality public services Because AI can respond quickly, process accurately, and can operate at any time, so are public services that process and provide services with AI., Therefore, able to provide fast service anywhere and anytime, as well as AI to increase work accuracy and reduce work errors as well.

1.2 Help solve redundant problems in work and reduce centralized management (Centralized) of government agencies, such as consideration of approval in sequence, redundant considerations of agencies that have the authority to consider many agencies, etc. The adoption of AI will increase the autonomy and service of regional government service points and local government agencies, It will help to analyze, consider and make decisions in the same way as the central government agencies, resulting in overall work taking less time. Therefore, work and services are more efficient.

1.3 Setting standards for the work of the public sector At present, the work and services of the public sector still require the judgment of the competent authorities in their respective matters. This causes the creation of unequal standards in providing services. The reason may be due to different experiences and maturity, resulting in different decision-making for staff. Therefore, using AI can help create standards for the work and services of the government sector efficiently.

1.4 Performance and service performance can be measured objectively and precisely because AI-powered work is based on digital data, so all work and service data are stored (Log File). This will allow for easy monitoring and evaluation of each aspect based on factual data and will increase the transparency of the work of the entire state. The aforementioned data can also be used to analyze people's service satisfaction levels easily and accurately without having to rely on multi-step questionnaires like in the past.

1.5 Helps to solve problems in working and providing government services at the point because AI will gradually learn and create experiences in analyzing and making decisions from working data from government agencies and public service requests. As AI learns more, it will be able to analyze and make accurate decisions that meet the needs of both service providers and service users. It can also solve government resource service problems more efficiently. For example, government personnel management can design personal development to meet the objectives and needs of personnel, efficient inventory management, warnings to order goods when there is a small amount of inventory, etc.

1.6 Help solve problems Help solve corruption problems in the public sector The use of AI for government work is beneficial to increase work efficiency, As mentioned above, it would affect the work of the public sector in its original form with a human-based working system as well as affecting the credibility and confidence in the work of the entire government system, which is good for the current

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government corruption problem because government work will have good standards and can be audited throughout the process.

2. Reduce the use of resources, resources in this meaning are close to the meaning of production resources in economics. If analyzing the only government resources that can reduce the use of resources are labor, budget, and time-saving. AI can cause reductions in the use of government resources as follows;

2.1 Reduce the use of government manpower because AI can quickly perform tasks with clear processes due to efficient processing, and can work at any time, even when humans are resting, which matches the public service trend of the state that aims to provide services to citizens anytime, anywhere.

2.2 Reduce the budget for using AI for the first time There will be a lot of investment and budget in developing technology that is suitable for government work. Implementing AI requires investment in three main areas: investment in hardware, investment in software, and investment in providing knowledge to AI. Because AI needs to learn human data to form accurate decision-making models.

2.3 Reduce time spent on work If you have to perform the same steps repeatedly, it can be hard to deny that human work is less efficient than machine work like AI.
Because the machine is not tired, not tired, and rest time is not required, errors caused by such factors are less likely to occur. Once again, the machine can still work, which will increase the efficiency of the government's work according to the expectations of the people as well.

3. Productivity. Productivity is the efficiency of production that produces output of higher quality or value. Accenture estimates that by 2035 AI will increase labor productivity (AI) by 11% for Spain, and 37% for Sweden. The difference in numbers between the two countries depends on their ability to bring technology and innovation into their respective economies. Therefore, increasing the productivity of the public sector means enhancing the work of the public sector, both reducing the time spent working and providing transparent services according to the needs of the people. The same applies to the work and service of the private sector when compared to the use of conventional service resources and the development of services using AI. It can be seen that in the same period, the service using AI requires fewer people, but can provide more services to the people who receive the service.

4. Improve the quality of life In addition to the public sector benefiting from working efficiently, reducing resources, and increasing productivity for public sector work as mentioned above. AI also affects people's satisfaction with government work and services because people are the direct recipients of government services and welfare.
In this article, it emphasizes the quality of life of government personnel and the public as follows:

4.1 The quality of life of government personnel is improved. Government work and services need to be provided in all areas thoroughly without exception, even in areas with risks or dangers from work, For example, areas with high pollution spread in industrial areas, areas that are at risk of being attacked, the risk of developing office syndrome among government personnel working in offices, etc. In such cases, AI can efficiently perform and provide services instead of government personnel.

4.2 People's quality of life is improved as a result of the government's use of AI in providing public services to the public, allowing people to access services anywhere, anytime. People do not need to travel to risky areas or spend time traveling or waiting in line for services, possibly having to leave work or having to leave children or the elderly at home.

Anutarakul, S., (2021) explained that the benefits of developing digital skills for government personnel are as follows: (1) Work faster, reduce errors, and have more confidence in work. (2) Be proud of the work that can be created by yourself. (3) Be able to solve problems that occur in work more efficiently. (4) Able to identify alternatives and make decisions more effectively. (5) Be able to manage work and time better and help create a work-life balance. (6) Have the right tools to help you learn and grow. (7) Benefits for government agencies and government agencies. (8) The organization is recognized as modern, open, and established, which will help attract and retain high-potential young people to work with the organization. (9) The agency gains more confidence and trust from the public and service users. (10) People in the organization can use the potential to work at high-value (High-Value jobs) more. (11) Organizational workflows and communications are more streamlined, more streamlined, and more efficient. And (12) The agency can save resources (budget and manpower) in operating more.

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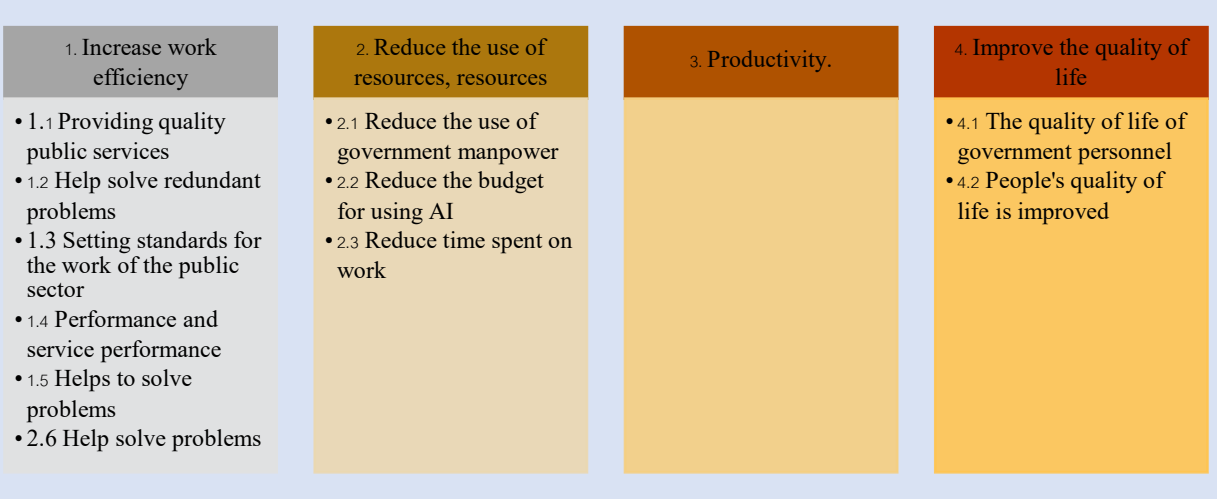

Figure 6 Benefits that the government will receive from using AI

Conclusion

Transforming into a digital government requires personnel with knowledge and application of modern technology systems such as artificial intelligence innovation. The government must change the technology to be modern (SmartOffice) and choose the right technology to create and design the intelligent system for the agency (Automated Public Service). As well as being able to take care and maintain the system to be stable, safe, and stable under the changing technology, which will create a change in the form of operations or government services to a digital system that can meet the needs of service recipients in a variety of formats and channels, as well as systematically creating a link between government agencies and between the government and the people. And being a government that is open to public participation will lead to reducing unnecessary resources to improve the quality of life of people in other areas comprehensively.

Recommendation

Recommendation for the policy of Thai government agency.

The use of AI in government administration is not just about having technology for general use in the office or for defensive planning as in the past. But governments can use AI for proactive management by analyzing big data on citizen behavior. To know the trends of the issues and needs of society, after which it is used as a model that prioritizes social issues under the power of each government agency to lead to The part of laying out the guidelines for providing services to the public clearly and answering questions conveniently and quickly. Including being more efficient and effective such as the provision of social welfare benefits in medical treatment and security care. For example, governments can use AI and Machine Learning to manage the security of public and public utilities.

Recommendation for the implementation of the Thai government agency. Government agencies can prepare for the adoption of AI as follows:

1. Strategy or strategy: AI is a transformative technology that will change the direction and greatly increase the capabilities of the organization. Therefore, government agencies must clearly define the vision and goals that are in line with the main mission of their agency, and then determine strategies that will aim to use AI in any operation to achieve the goals.

2. Personnel: Organizations must recruit people with AI technology skills to join the workforce, and at the same time, organizations must encourage existing personnel to enhance their AI technology skills. This could include a combination of human and AI collaboration processes to discover and shape new agency capabilities, as well as listening and sharing knowledge about effective communication, and change management with the stakeholders of the agency as well

3. Process: Consider how the agency has established or redesigned its control and governance processes to successfully implement AI in its operations.

4. Information: Organizations must have big data (BigData) that has been continuously collected from the past to the present to be used for AI processing because accurate data analysis results depend on the quality of the information that the agency has in terms of quantity and completeness of the content. Including agencies must have quality data management and data storage systems that meet

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safety engineering standards, to have access to a large number of people's private databases, there must be certain conditions or rules to prevent data leakage.

5. Technologies and platforms that support AI operations: Agencies must procure and develop technologies and platforms to work seamlessly together, especially the ability to support the interconnected and continuous processing of large data over a long time.

6. Ethics: The agency must create a mechanism to understand to personnel and the public that there will be a transparent system for promoting and protecting privacy, including importing data for processing without bias.

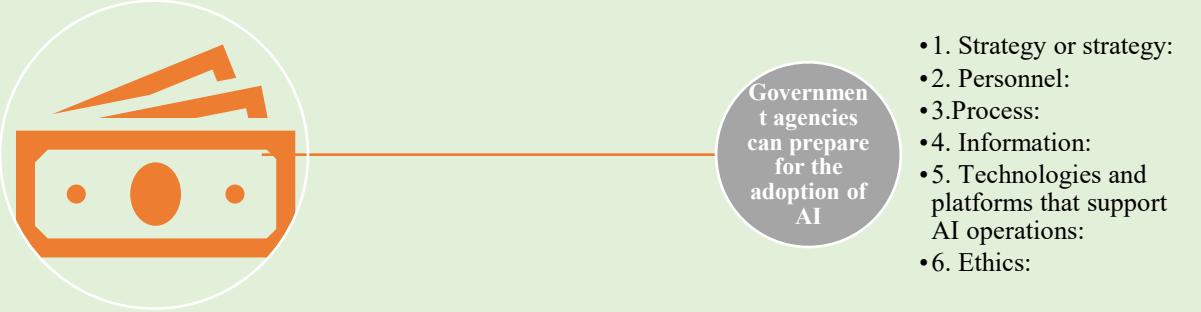

Figure 7: Government agencies can prepare for the adoption of AI

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