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# Leveraging Technopreneurship and Office and Information Management Programme for Sustainable Development in The Digital Economy

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**ABSTRACT**

This paper explores the extent to which technopreneurship with office and information management (OIM) practices can inclusively enhance economic growth and social responsibility. There is a mutual relationship between digital development and entrepreneurship, which, if utilized, can spur a nation into high level of prosperity. Combining information management, technology and entrepreneur with office management will heighten the level of productivity and innovation from employees, hence enabling organizations to contribute their quota to sustainable national development. This paper recognizes the critical need for integrating technopreneurship into office and information management programme in the economic landscape in order to enhance national development. It dives into the concept of technopreneurship in context of digital economy, role of technopreneurship in driving innovation in digital economy, technologies used in office and information management, and challenges and prospects of leveraging technopreneurial culture for sustainability. By utilizing new technologies with efficient information management put in place and imbibing technopreneurial culture, organizations will be able to contribute immensely to sustainable national development. The paper recommends among others that: Government intervention should be comprehensively analysed and carefully designed to focus on developing technologies; The management of institutions should equip the laboratories and make them to be accessible to students for constant practice on technological tools to acquire the required skills for both technopreneurship and digital economy; Individual office and information management students must be prepared for ongoing learning and upskilling that can enhance self-reliance after graduation from school.



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## 1. INTRODUCTION

The 21st century is known for rapid technological explosion speeding up the pace of global economy. Technopreneurship and office and information management programme play a critical role in utilizing the opportunity of digital economy to promote sustainable national development. It involves the use of technologies to develop new and diverse business opportunities hence, making it a key promoter of societal growth in the new digital landscape. Organization can enhance productivity and gain competitive advantage through integration of technologies into entrepreneurial culture of her systems. According to [1], in the 21st century, the frequent evolution of technology has redefined the boundaries of innovation and turning it to pivotal of new entrepreneurial ventures. However, the fast move of change brought by technologies has enable technopreneurship to serve as a propeller of economic growth [2].

Nigeria with over 230 million populations is recognized as one of the most populous nations in the Africa, the median age is 18.1 years while 58% of the entire population ascribed to the people whose age fall under 30 years [3], [4]. In regards to this index, Nigeria has been rated as one of the largest demographics of youth in the world hence, estimated to become the third-most-populous nation in the world in the nearest future. This largest sect of the population is notably identified with high level of unemployment. Therefore, for the past many years' economic development and job creation for the youths has been the main concern of the Nigeria government as it is obvious that the future of any nation depends solely on the type of youths it produces. Technoprenership has been a solution to this social menace as it continues to gain wider scope among the young people and the graduates. That shows that the future economic development, sustainability, and social progress of the nation will be brightened with technopreneurship platforms. Therefore, it is not a gainsaying that the role of technopreneurship in the nation economy cannot be overemphasized as it creates job, heightens level of productivity and sell high quality of innovation.

Office and information management programme is known to be a fulcrum of technology hence they both serve as Siamese twins to each other. Integration of technology into office and information management programme is a critical issue for any nation yawning for sustainable growth. This allows organization utilize emerging technology to harness digital economy and align operational practice with the organizational goals. This means that digitalization of business operations will influence many areas of business and society at large. To achieve a high degree of success in technopreneurship, it calls for appreciable application of emerging technologies and appreciable education that can promote and make it workable. Having the required fundamental digital training for technopreneurship will promote digital economy that can enhance national development. Better still, OIM programme holds the grip of such education and training needed by technopreneurship to thrive as an integral part of digital economy. Nonetheless, OIM programme is faced with many challenges that hinder it from delivering maximally such as limited involvement in new technologies, inadequate ICT tools and qualified OIM personnel, market management and government role. This paper looks into the interaction of technopreneurship with office and information management in digital economy with the intent of exploring it for sustainable national development to enhance efficiency and competence that drive innovation in the country.

## 2. LITERATURE REVIEW

### *2.1 Concept of Technopreneurship*

For a nation to become developed and thrive in this ever-evolving technological era, it has been noted that inculcating technologies into entrepreneurship is a critical factor and

this is because entrepreneurship takes a lion share among the factors responsible for national development. Technopreneurship is the process of combining entrepreneurial skills with technology to create new businesses. Technopreneurship is the advancement involved in delivering an innovative hi-tech product or innovatively utilize hi-tech to make its products available to the consumer. Different concepts have been used to describe technopreneurship by various authors. [5] defined technopreneurship as a process and formation of a new business that involves technology whereby innovation is used to translate such technology into successful products and services. [6] asserted that Technopreneurship is a combination of technological and entrepreneurial skill sets in the field of business. It is an organizational creativity to utilize technological innovation developed by academic scientists by means of university-industry partnerships to solve identified corporate problems and establish necessary solutions to satisfy the demand of global market [7], [8]. Technopreneurship is the way of harnessing new business opportunity by using some technological facilities to exploit the same opportunities. A technopreneur uses technology as driven factor to transform resources into goods and services by creating a conducive business environment for industrial growth. IT, electronics, biotechnology and high-tech services as some of the technology-based entrepreneurships are typical examples of technology-based entrepreneurship [9].

### 2.2 *Technopreneurship in Digital Economy*

Technopreneurship is one of the most critical factors in the present day of high technological explosion. Technopreneurship drives a competitive advantage from direct or indirect use of technology hence, it is able to offer the fastest delivery of both products and services anywhere at any time in the world. Technopreneur aligns technology with entrepreneurship and thus has become a critical factor in the new economy to drive innovation and organizational productivity. [10] emphasized that technopreneurship has played prominent role to push and drive technology to change business narrative to enhance performance efficiency in order to promote sustainable development. Technopreneurship is a key driving force in the digital economy. It commands economic growth, innovation, employment creation due to utilization of digital apparatus to create new products and services consequently ameliorating limitation in infrastructures.

### 2.3 *Role of Technopreneurship in Driving Innovation in Digital Economy*

The online technology-based business is one of the numerous ways by which internet could be used. This makes the business accessible anywhere in the world hence attracts high patronage and this could make such a business to attain competitive edge which in turn promotes economic growth. The technopreneurs are able to promote the products and services in a wide scope with low cost and this provide consumer easy accessibility to such business. Technopreneurship commercializes Research Process in the digital economy resultantly providing gainful jobs for the youth. People are employed in 100 million with ICT goods and services. In a bid to use technology to create new business or converting the existing one, technopreneurs yearn for active and enabling environment which accommodate constant innovation and adaptation to the dynamic needs of market. Consequently, economic development, better quality of live, global connectivity is achieved. Thus, reveals that technopreneurship bring up mindset of development and agility that permeate the entire digital economy, driving progress and creating a more dynamic and connected world.

### *2.4 Office and Information Management Programme in Digital Economy*

Digital economy is really redefining office and information management programme with much emphasis laid on innovation, entrepreneurial thought and technological integration. Digital economy utilizes emerging technology to create, adapt, and advertise consumer products and services on the basis of business transaction [11]. It is built on the internet which enable global transfer of data in a jiffy through the connection of numerous technologies [5]. Digital economy offers new career opportunities, encourages innovation and efficiency and heightens organizational productivity. OIM programme is very indispensable in the digital economy as this promotes efficiency and competitiveness. Students of OIM are expected to acquire knowledge, skills and competencies that equip them for self-reliance, thereby ultimately supporting decision making and contributing to sustainable growth.

[12] emphasized on the importance of integrating digital technologies such as data analytics, Artificial Intelligence and cloud computing into activities of office for better organizational performance. Based on this, OIM programme produces basic knowledge required by technopreneurs to harness digital business in this era of information driven. The OIM programme is ICT compliant and ICT industry stands at the centre stage of digital economy making the performance realistic and reliable. [13] reiterated the three main components of digital economy as e-business, e-infrastructure and e-suppliers which call for using a computer which is the basic digital skills that an individual must acquire. OIM also provides technological infrastructure, digital literacy skills and strategic guidance necessary to manage information, automate processes, and adapt to evolving technologies. Manage the office or be self-reliant in this era characterized by involving technologies, an office and information management professional must be ICT compliant to enable it nurture its infant Technopreneurship for the digital economy. However, there are numerous ways by which office and information management programme supports digital economy via technopreneurship:

a. **Strategic Information Management Skills:** OIM provides structure and process by which information is gathered, organized, stored and used [14]. This enables the technopreneur to understand the customer's needs, market trends and competitors' actions.
b. **Digital Proficiency:** OIM utilizes technologies such as digital tools, computer applications and software. Technopreneurs can leverage these in the digital business landscape for efficient productivity.
c. **Competitive Advantage:** Emerging technology as redefined business landscape hence makes business to be dynamic. Technopreneurship can easily adapt to change that may emanate from market and customer behaviour which is very fundamental to maintaining competitive advantage.
d. **Administrative and Organizational Efficiency:** OIM programme equips individual with administrative skills and ability to automate tasks on daily basis and maintain efficient workflows in organizations. This tends to increase efficiency and productivity in digital business venture.
e. **Information Security:** Information management through Information Security Management System (ISMS) provides information security to technopreneur in the digital economy. Information management systems provide access control, safeguards cloud coverage and

network. It also ensures that technopreneur complies with legal requirements to integrity and confidentiality of data in the ever increasingly complex digital landscape.

### 2.5 *Connection among Education, Technopreneurship and Sustainable National Development in Digital Economy*

The relationship that exists among education, technopreneurship and sustainable national development is so mutual and fundamental. Education is a foundation for technopreneurship because it provides the basic digital skills and knowledge required for innovation. With technolopreneurship, innovation is turned to technologically proficient businesses (e.g E-commerce, FinTech) which serves as fulcrum of economic activity that enhances the sustainable national development. On this note, education particularly entrepreneurial and technological education) provides skilled technopreneurs through digital literacy, STEM and vocational training. Digital literacy enhances technology-driven skills such as AI, IoT, blockchain, coding, data analysis, digital marketing which empower individual to participate in digital economy, bridging the digital divide by the reason of digital literacy, long-term sustainability in digital driven-economy hence fostering sustainable national development.

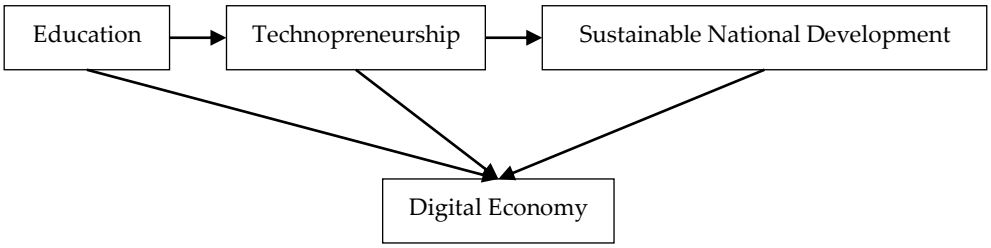


Figure 1. Interconnected Components for Achieving Sustainable National Development
Source: Authors' Personal Research Contribution (2026)

### 2.6 *Digital Tools in Enhancing Office and Information Management for Sustainable Development*

Digital technologies are increasingly transforming economic activities around the world by reducing costs of collecting, storing and processing data, and greatly enhanced computing power (UNCTAD, 2017). Consequently, digital economy requires tools to transact business. However, an increased number of technologies such as Artificial Intelligence, Internet of Things, Blockchain, virtual platforms are expected to take digital economy into hype in the nearest future. Technopreneurship as a process of organizational creativity is a way of using innovation to uncover corporate problem and proffering solution to the problem to satisfy the needs of dynamic global market [15]. Therefore, since technopreneurship is a substantial part of national trend, which call for improved basic education, skills and competency in digital tools and technologies, office and information management as a course domiciled with technologies needs to acquire strong skills and competencies in technologies as follows:

**a. Artificial Intelligence**

AI enhances the global effort to foster economic development and at the same time sustainably unveil the effect of digital economy on societies, the environment, and systems of governance. AI enables the secretaries who are office and information managers to set up appointments and meetings, reschedule appointments and send reminders. Similarly, repetitive tasks, data management and improved communication, document

preparation and management, email management and prioritization can be enhanced through AI tools. AI-powered products like Google Assistant, Alexa on Amazon and Siri on Apple are virtual assistants which can perform different administrative tasks in an office setting such as organizing meeting, keeping and monitoring of appointments [16].

**b. Document Management System**

AI driven tools like Adobe Sign, DocuSign are used to automate the process of filing and signing of documents. These tools are useful to complement the skills of an office manager and thereby enable them to focus on actualizing more valuable tasks. Since nearly every modern-day office is migrating to paperless document management, this software has been so needful. Therefore, document management systems enhance office work through centralized and secure storage, streamlined document retrieval, improved collaboration, automated workflows and reduced costs associated with paper, printing and physical space for storage

**c. Project Management Systems**

Project management systems enhance office and information management efficiency in communication, task and data management. Office managers can collaborate with others, organize files, record minutes and manage project timelines. Project management systems improves communication and efficiency in organization by automating task management, centralizing document control and streamline scheduling which result to better project management. Project management systems enable office managers to handle multiple tasks more efficiently.

**d. Cloud-based Platforms**

Cloud computing is a process by which employee performs computer tasks by using services that are completely on wireless technology or via the web hence, it relies on sharing a pool of physical and virtual resources through this means instead of exploring traditional software and hardware. Due to the dynamic nature of business today, every organization yearns for a cloud business application to improve productivity as this will pave way for competitive advantage. Office and information manager can use this application to enhance collaboration, automate update of both documents and information. The application can enhance teamwork, access from any location, sharing of documents, improved data backup and recovery, streamlined records management, and improved communication. In support of this assertion, [16], [17] affirmed that office managers can use cloud-based tools to actualize tasks from any location which enables them on the job performance even when there is any disruption or any phenomenon like COVID 19 pandemic.

**e. Digital Video Conferencing Software**

Video conferencing software is the technology enhancing real-time collaboration and communication within the organization at any location and equally improving productivity and efficiency of employees [18]. The digital tools like Google Meet, Zoom and Microsoft Teams have become indispensable in the modern offices because they foster video conversations, accommodate variety of meetings, huge webinars and conferences. Consequently, office and information managers performance are enhancing via video

conferencing by fostering improved communication efficiency, collaboration among teams, quicker access decision-making, greater sense of connection among colleagues of different and distant location. This consequently enhances increased productivity and promote accomplishment of large variety of digitally facilitated tasks.

## 3. METHODOLOGY

This paper adopts a conceptual desk-research design using a narrative literature review to explain the relationship among technopreneurship, the digital economy, and Office and Information Management (OIM) competencies in advancing sustainable national development.

### *3.1 Research Design*

The study is conceptual and integrative in nature. It does not collect primary survey, interview, or experimental data; rather, it synthesizes established theories, empirical insights, and policy-oriented arguments from prior studies to develop a coherent explanation of how technology-driven entrepreneurship can be strengthened through OIM capabilities in a developing-economy context.

### *3.2 Data Sources and Search Strategy*

Relevant secondary sources were identified from peer-reviewed journal articles, conference proceedings, scholarly books, and reputable institutional or policy reports. Searches were guided by combinations of keywords such as technopreneurship, digital economy, innovation, entrepreneurship education, office and information management, digital tools, sustainability, and sustainable development, with attention to literature discussing Nigeria or comparable contexts where applicable.

### *3.3 Selection and Screening Criteria*

Sources were included when they (i) defined or theorized technopreneurship and its role in innovation-driven economies, (ii) discussed OIM competencies and digitally enabled office practices, (iii) examined digital tools that strengthen information governance, administrative efficiency, and organizational resilience, or (iv) linked entrepreneurship, education, and digitalization to sustainability or national development outcomes. Sources that were non-relevant, purely anecdotal, or methodologically unclear were excluded to maintain conceptual consistency.

### *3.4 Data Extraction and Thematic Synthesis*

Key arguments were extracted and organized through thematic synthesis. The literature was coded into thematic categories aligned with the structure of the paper: the concept and scope of technopreneurship; technopreneurship in the digital economy; innovation-driving roles; OIM programme contributions; education-technopreneurship-sustainability connections; digital tools supporting OIM; prospects for sustainable development; constraints and risks; and government responsibilities. The resulting themes were used to inform the conceptual framework and the subsequent discussion.

### *3.5 Trustworthiness of the Synthesis*

To strengthen credibility, the synthesis prioritizes convergent arguments across multiple sources and contrasts viewpoints where the literature indicates tensions, particularly between opportunities and persistent constraints such as digital divide and cybersecurity risks. The conclusions are therefore presented as conceptually grounded implications rather than statistical generalizations.

## 4. RESULTS AND DISCUSSION

Building on the conceptual review above, this section synthesizes and interprets the key arguments on how technopreneurship and Office and Information Management (OIM) can

contribute to sustainable national development in the digital economy, while outlining prospects, constraints, and policy implications.

### *4.1 Technopreneurship for Sustainable National Development*

Technopreneurship is a very substantial part of broader economic landscape. It enhances innovation, improves productivity, drives competitive advantage together with improved skills and talents [19]. The resultant effect brings about increased trade at low costs which have positive ripple effects on national economic growth. Technopreneurship leverages technology and innovation to create socially responsible solutions that foster economic growth, create jobs, and address challenges like climate change and poverty. Consequently, technopreneurship has directly supported Strategic Development Goals (SDGs) through development of new technologies and business model, build strong infrastructure and empower communities. Technopreneurship has also contributed immensely to sustainable national development outcomes by driving innovation and strong business infrastructure nationwide. It creates new business and employment opportunities which help to alleviate poverty in the society. Technopreneurship can as well generate new products and services for consumption and production hence spurring decent work and economic growth. Assimilating technology encourages collaboration and exchange of knowledge in addressing and proffering solution to social and environmental issues such as climate change, pollution and food waste. In addition, where technopreneurship is successful, further investment and development is certain to speed up progress towards the sustainable national development goals.

### *4.2 Prospects Available in Technopreneurship and OIM for Sustainable Development*

a. **Economic Growth and Job Creation:** The ability of technopreneurship to create jobs for young people has reduced a substantial fraction of societal problem. Technopreneurship has been able to relieve the government of high rate of unemployment among the youth. From the required skills and competencies acquired from the OIM programme, the graduates are able to explore the opportunity of new technologies such as internet, AI and other technological tools to create job for themselves. Hence, technopreneurship and OIM play a pivotal role in creating jobs, enabling innovation and attracting foreign investment therefore, boosting the economy of the country.

b. **Sustainable Solution for Societal Problems:** Technopreneurship and OIM uses cutting-edge technologies to create innovative, lasting solutions to environmental challenges and address complex societal needs. Technopreneurship foster societal well-being and sustainable economic growth by developing new market practices. Global challenges can be addressed through innovative business models.

c. **Global Competitiveness:** Due to uniqueness of SMEs it not out of point to say that they have inherent capabilities to undertake technological innovations successfully across specialized field and economy. Nations that have a well-trained workforce in ICT skills are emerge highly visible in technopreneurship hence they are better positioned in the global digital economy competition. Moreover, technology-literates contribute immensely to the development of technology ecosystems thereby attract foreign investment, and

enhance a country's overall economic competitiveness (Jose and Kushwaha, 2024).

d. **Improved Government and Service Delivery:** Technopreneurship promote innovative environment by creating solutions to many societal issues like mobile apps, e-government and data analytics systems leading to more citizen-centric public services. Technopreneurship improves policy implementation by enabling policy maker to analyse large amount of data, helps in collaboration between government and Information Technology service provider to collaborate in addressing innovative challenges.

e. **Digital Inclusion and Education:** Technopreneurship and OIM foster personalized learning that makes entrepreneurship training more effective. This foster gathering of a large number of digitally skilled and talented individuals who can innovate to aid economic growth. Technopreneurship provides larger markets for technological based products and services through access to global network and collaboration and innovation.

### *4.3 Challenges in Leveraging Technopreneurship and OIM for Sustainability*

There have been many opportunities that accompany technology-based entrepreneurship in transforming the economy of a nation such as using technologies to streamline supply chains, cut costs, and market goods and services globally (UNCTAD, 2017). Nonetheless, certain factors stand as barriers to full actualization of these.

a. **Limited Involvement in New Technologies:** The existence of digital divide signifies the difference between those who easily access technology and those who do not. This has limited the participation and success of potential technorepreneurs and the OIM graduates from marginalized groups in the digital economy. Thus, they should have contributed tangibly through their knowledge to the economic growth of the nation.

b. **Access to Finance:** Ability to adequately access finance for funding technological based entrepreneurship has been a major challenge to the technopreneurs in Nigeria. Potential and young technoprepreneurs usually face difficulty to access fund when trying to set up their businesses. The high interests charged by many financial institutions on business loans are not affordable by aspiring technopreneurs [20].

c. **Inadequate ICT Tools and Qualified Personnel for OIM Programme:** The functionality and success of technopreneurship depends solely on availability of required tools and facilities. In many tertiary institutions of Nigeria, OIM programme as a fundamental training ground for potential technopreneurs experiences dearth of required ICT tools to enhance the fundamental training needed for potential technopreneurs. This prevents access to new technologies which stands as barrier to the development of essential skills and competencies needed for advancing the prospect of technopreneurship to national sustainability. Besides, many lecturers of OIM programme are deficient in knowledge and competency to operate the required ICT tools to be able to effectively groom students to acquire and master the skills needed [13].

d. **Management of Market:** Business is known for competition because new entrepreneurs strive to enter market while the existing ones also devise strategies to maintain competitive edge. The ever-changing taste of consumers usually determines the

sustainability of any business. One of the great challenges faced by techonopreneurs is ability to manage market shift to ensure that their business models satisfy the current trend in the market for sustainability purpose rather than just focusing on profit.

e. **Government Role:** Government roles in supporting technopreneurship are not very supportive. According to [6], the current regulatory frameworks usually find it hard to align with rapid emerging technologies consequently causing a setback for innovation. The governments basically promote technopreneurship by injecting risk capital; which is not enough to motivate desiring results hence, massive interventions may cause over dependency of technopreneurship to government supports, which can retard the business growth in the long term. Moreover, there is no appreciation for research innovation which implies that less investment would result to less development breakthrough in products [6].

f. **Cybersecurity:** Cyber security is a critical challenge that technology-based entrepreneurs face in this increasingly evolving digital age. Digitalization is prone to cyber-attacks, data privacy is becoming riskier and more complex due to over reliance on technologies hence, hindering progress towards sustainable development goals.

### *4.4 The Responsibility of Government in Addressing Technopreneurship Challenges*

There are various ways by which government can support the sustainability of technopreneurship in the country. Policies that provide enabling environment for technopreneurship to thrive can be enacted. [21] opined that such policies like tax incentives and exemptions reduced regulatory compliance costs, De-risking investments and simplified business registration and licensing reduce the risks associated with starting a business and serve as a foundation for economic development, innovation and job creation. Government intervention is always designed to focus on developing technologies which are fundamental to the need of the would-be technopreneurs. For instance, Nigeria government launched an Investment in Digital and Creative Enterprise (iDICE) program on March 14, 2023 at the State House in Abuja. The aim was to promote investment in technology-enabled startup for micro, small and medium-sized enterprises (MSMEs). With this, employability of young Nigeria in digital economy would be enhanced and innovation fostered. Besides the iDICE, other notable Nigeria government initiatives are Nigeria Startup Act 2022, 3 million Technical Talent (3MTT) Program, National Information Technology Development Agency (NITDA), and iHatch programmes. All these have helped technopreneurship tremendously in Nigeria. In addition, there has been a lot of financial supports and initiatives from government to aid entrepreneurship such as Grants, Tax giving, R&D tax credits, tax holidays, establishing dedicated technology-startups and focused ventures capital funds. All these serve as encouragements for young willing entrepreneurship.

## 5. CONCLUSION

Integrating technopreneurship and OIM into digital economy plays a substantial role in promoting sustainability of a nation. Technopreneurship through innovation are redefining businesses and creating encompassing economic opportunities. On the other hand, OIM ensures that technology facilities are strategically aligned with sustainability goals. Both of them form synergy that speeds up transformation of

digital apparatus, address critical issues like technological, social, governmental and economic challenges. Despite the challenges, there is a lot of prospects in technopreneurship and OIM programme such as Economic Growth and Job Creation, Sustainable Solution for Societal Problems, Digital Inclusion and Education among others which make technopreneurship and OIM viable enablers of sustainable future economic growth.

## Suggestions

1. Government intervention should be comprehensively analyzed and carefully designed to focus on developing technologies that are relevant to the needs of potential users, technically reliable, and economically competitive.
2. The management of institutions should equip the laboratories and make them to be accessible to students for constant practice on technological tools to acquire the required skills for both technopreneurship and digital economy.
3. Individual office and information management students must be prepared for ongoing learning and upskilling that can enhance self-reliance after graduation from school.
4. Government should implement digital infrastructure and supportive policies that could bridge the technological gap and promote equitable development.
5. Government and institution should prioritize acquisition of digital resources as well as innovative research and development.
6. Businesses must adopt OIM framework that aligns technology investments with long-term sustainability.

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