



Giant Barb

This planet is ours

TWIN TRANSITION

SYNERGIZING GREEN AND DIGITAL FOR SUSTAINABLE DEVELOPMENT



APRIL-2025



**Twin
Transition**



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I. TWIN TRANSITION

Green transition and **Digital transition** are two increasingly prominent and vital trends for the sustainable development of nations and businesses—especially in the context of globalization and rapid technological progress.

The term “**Twin transition**” refers to a development pathway in which digital technologies support sustainable solutions, while green transition sets new standards and expectations for digital systems. This synergy plays a decisive role in shaping the future of enterprises, industries, and society at large.

Twin transition (“Digital and Green”) is the integrated process of two major shifts: digital and green transformation, aimed at achieving the Sustainable Development Goals (SDGs) across businesses, governments, and global society.

Twin transition is not merely a trend but an essential strategy for sustainable economic development. The intersection of the green and digital transitions creates a synergistic effect that supports the benefits of both. Digital transition modernizes the economy and provides powerful tools to accelerate green growth, while green transition promotes the adoption of responsible, sustainable digital practices.

At the **2024 Digital and Green Transition Summit** (held on May 28, 2024, in Hanoi), **Minister of Information and Communications Nguyen Manh Hung** affirmed:

“Digital transition and green transition are twin entities. A country that wants to develop rapidly must undergo digital transition, and to develop sustainably, it must undergo green transition. These two transitions are the path to ensuring rapid and sustainable development for the nation.”



→ This statement reflects the government's consistent viewpoint: **Digital and green transitions are not separate but must be implemented simultaneously, supporting each other.**





I. TWIN TRANSITION

Benefits of Twin Transition for Businesses



Automation and the use of renewable energy help reduce operating costs and energy bills, while also lowering environmental compliance expenses.



Digital transition fosters the development of new products/services and enhances customer experience. Green transition encourages innovation in sustainable production.



Businesses demonstrate a commitment to sustainable development, building trust with customers and partners through environmentally friendly products and services.

I.1. Digital Transition



Digital Transition: Focuses on the application of digital technology to change operational methods, management practices, and service delivery, thereby enhancing the efficiency and competitiveness of businesses. Through technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), Big Data, and cloud computing, it is considered a driving force that helps businesses rapidly adapt to market changes and consumer demands.



- **Artificial Intelligence (AI):** Enables intelligent automation, data analysis, and predictive insights (e.g., predictive maintenance, optimized energy management).
- **Cloud Computing:** Shifts data storage and processing to scalable and accessible cloud platforms (e.g., facilitating remote work, supply chain tracking).
- **Automation:** Deployment of software-based and robotic systems to enhance efficiency and streamline tasks (e.g., precision agriculture, paperless operations).





Distinguishing between Digital Transition and Digitization

Factor	Digital Transition	Digitization
Objective	Improve processes, business models, and create new value through digital technology	Convert data and information from physical to digital formats
Scope	Comprehensive and continuous	Limited, task-specific
Involved Components	Technology, people, processes, culture	Technology, data
Impact	Affects organizational structure, business strategy, and customer relationships	Affects how data is stored and accessed
Applications	Cloud computing, AI, IoT, Blockchain, Big Data, etc.	Document scanning, photography, digital data storage, etc.

Source: [pace.edu](https://www.pace.edu)

Digital transition and digitization are not entirely separate concepts. Digitization is a part of digital transition, providing the necessary foundation for comprehensive transformation.



**Key factors when Implementing Digital Transition****Data:**

Data is a core asset in digital transition, but many businesses have not fully leveraged it. Building a centralized data management and analysis system (such as CRM) helps to effectively exploit data, personalize experiences, and make accurate decisions.

**Technology:**

Technology needs to be selected and adjusted flexibly according to business and market needs. Understanding and integrating new technologies such as AI, IoT, AR, Big Data, etc., helps create competitive advantages and new business models.

**Processes in Digital Transition:**

An effective digital transition process needs to ensure close coordination between departments through a common data platform, automate repetitive tasks, and personalize customer experiences to increase operational efficiency.

**Human Factors:**

People are at the center of digital transition; success depends on leadership capacity, professional skills, and the adaptability of the workforce within the organization.



The Digital Transition process in organizations

STEP 1.

Analyze the current situation and needs:

Organizations need to comprehensively review their current scale, processes, and performance to identify strengths, weaknesses, and opportunities for improvement using digital technology.

STEP 2.

Assess readiness levels:

Determining the readiness of resources, data, and systems is a prerequisite for building a feasible and appropriate digital transition roadmap.

STEP 3.

Human resources:

People are at the heart of digital transition. Businesses need to assess the readiness of their workforce, enhance digital awareness and skills, starting from leadership and spreading throughout the organization.

STEP 4.

Data

Data must be reviewed, digitized, and clearly categorized to serve operations, analysis, and decision-making. A complete and accurate data system is the foundation for success in digital transformation.

STEP 5.

Select appropriate technology:

The organization needs to clearly define its needs to select appropriate technologies that meet current operational requirements and aim for long-term growth. The implementation process requires close interaction between the provider and the user.

STEP 6.

Commitment and Digital Transition culture:

Commitment from leadership and the consensus of the entire organization are prerequisites. A clear action plan, effective feedback mechanisms, and internal communication strategies are needed to build a culture of innovation and flexible adaptation.



I.2. Green Transition



Green Transition

Green Transition: The process of change aimed at a sustainable development model, minimizing negative impacts on the environment, and using natural resources efficiently. Accordingly, it requires businesses to meet ESG and CSR standards, aiming for carbon neutrality to achieve Net-Zero emissions, and applying the circular economy, thereby maintaining long-term development in a world facing climate crisis and resource depletion.



Examples of Green Transition

- **Renewable Energy:** Shifting to sources like solar, wind, and geothermal power to reduce dependence on fossil fuels.
- **Efficiency:** Optimizing processes and technologies to reduce energy consumption and resource waste.
- **Sustainable Product Design:** Creating products built for durability, reparability, and recyclability to minimize their environmental footprint.



Key Factors when implementing Green Transition

- **Change management - Mastering the greening journey:** Green transition is a long-term process that requires organizations not only to plan clearly but also to manage change proactively. Change is not an obstacle but an opportunity to restructure systems, processes, and culture towards sustainability. Good management helps minimize internal resistance, create motivation, and build consensus throughout the organization.
- **Technology investment - The foundation for greening processes:** Technology is a pillar that helps organizations optimize resources, reduce emissions, and make environmental activities transparent. Investing in green technologies such as renewable energy, smart monitoring systems, and energy-saving automation helps businesses modernize infrastructure while creating long-term competitive advantages.
- **Corporate culture - The heart of Green Transition:** Green transition is impossible without a sustainable cultural foundation. Integrating environmental values into business philosophy, organizational behavior, and development orientation will create a distinct green identity. Leadership needs to be at the forefront of promoting green thinking, inspiring and equipping the entire team with sustainable knowledge, thereby spreading the green spirit to every specific action.



Promoting Green Transition in businesses

For the green transition process to proceed smoothly and yield sustainable results, businesses need to redefine their strategies, measure practical value, and foster an internal green culture. Below are three fundamental elements:



1/ Building a Sustainable Strategy: Green transition cannot be a temporary reaction but must be part of a long-term strategy. Businesses need to build a concise but clear sustainable strategy that answers three core questions:

- Why is green transition necessary?
- How will it be implemented?
- Who will be affected, and what is the long-term value?

→ This process requires reassessing the current business model, identifying opportunities to create social and environmental value, and shifting focus from short-term shareholder benefits to sustainable relationships with all stakeholders.

2/ Embracing business value: Measuring and demonstrating the impact of green transition efforts is a prerequisite for internal and external persuasion. Businesses need to deploy ESG data tracking – measurement – analysis systems to clarify the links between green transition and business performance:

- How is the brand strengthened?
- Are operating costs reduced?
- How are sales, market share, and customer loyalty changing?

3/ Integrating sustainability into corporate culture – Change from Within: A sustainable strategy will only be effective if it is internalized into the corporate culture. This requires a shift in mindset from leadership to each individual, especially the employees – those who directly shape and maintain the organizational culture.

--> Training on sustainable thinking and knowledge, encouraging green behavior, and integrating environmental goals into performance evaluation indicators are ways to "green" the culture. When sustainability becomes part of the corporate identity, green transition is no longer a task but a driving force for development.

II. VIETNAM'S POLICY LANDSCAPE

Recognizing the significance of the twin transition – encompassing digital transition for rapid development and green transition for sustainable growth – the Government of Vietnam has issued a series of strategies, action programs, and legal normative documents to establish a policy foundation for both processes. Key policies are outlined below:

Sector	Number/ Decision	Date of issuance	Policy name	Main content
Digital Transition	Decision 749/QĐ-TTg	03/06/2020	National Digital Transformation Program to 2025, with a vision to 2030	Develop digital government, digital economy, digital society, and enhance national digital capacity.
	Decision 06/QĐ-TTg	06/01/2022	Project on Development of Population Data, Electronic Identification and Authentication	Orientations for developing national data infrastructure, a foundation for digital government.
	Decision 2289/QĐ-TTg	31/12/2020	National Strategy on the Fourth Industrial Revolution	Promote the application of new technologies, develop smart manufacturing, and smart cities.
Green Transition	Decision 1658/QĐ-TTg	01/10/2021	National Strategy on Climate Change for the period 2021–2030, with a vision to 2050	Low-carbon growth, sustainable development, integration of economy and environment
	Decision 896/QĐ-TTg	26/07/2022	National Strategy on Climate Change for the period 2021–2030, vision to 2050	Aim to minimize the impacts of climate change, enhance resilience, and promote green development.
	Prime Minister's Statement	11/2021 (Glasgow)	Net Zero Commitment at COP26	Commitment to achieve net-zero emissions by 2050, attract climate finance investment.
	Decision 450/QĐ-TTg	13/04/2022	National Strategy on Environmental Protection to 2030, vision to 2050	Strengthen resource management, reduce pollution, and improve environmental quality

III. GLOBAL PRACTICES IN TWIN TRANSITION IMPLEMENTATION

Sector	Digital Technology Application	Green Objective	Typical Examples
Smart Grids	IoT, sensors, AI, Big Data	Optimize energy use, integrate renewable energy	USA, Germany, Japan's Smart Grid deployments
Industrial Automation	Robots, AI, IoT, Big Data	Increase production efficiency, reduce emissions & waste	Siemens, General Electric
Smart Buildings	IoT, automated systems, sensors, control	Reduce energy consumption, carbon emissions, use solar energy	Singapore, Tokyo, New York
Material Manufacturing	3D printing, AI, automated robots, smart management systems	Recycled materials, clean production, waste reduction	Nike, Patagonia
Financial Industry	FinTech, Blockchain, AI, Big Data	Green finance, sustainable investment	Trái phiếu xanh, quỹ đầu tư bền vững (EU, Mỹ)
Smart Cities	Smart urban management systems, real-time data	Clean transport, green infrastructure, renewable energy	Copenhagen, Amsterdam, Singapore
Remote Work	Cloud computing, online conferencing, digital project management	Reduce travel demand, save office energy	Google, Microsoft
Technology Waste Management	AI, IoT waste monitoring, recycling tech	Recycle components, reduce e-waste	Apple, global EPR initiatives



IV. CHALLENGES FOR BUSINESSES IN IMPLEMENTING TWIN TRANSITION

The primary challenges in implementing the twin transition include technological and infrastructural hurdles, policy and legal complexities, and human and cultural factors.

01 Supportive policies from the government and regulatory bodies

Play a vital role in encouraging enterprises to undertake the twin transition. If investment incentives and support programs for green economic development are lacking or not sufficiently detailed, businesses may face difficulties in complying with regulations in different markets and capitalizing on sustainable development opportunities.

02 Technological and infrastructural challenges

Technological and infrastructural challenges necessitate significant investment in advanced technologies for enterprises undergoing digital transition. On the green transition front, building renewable energy infrastructure such as solar and wind power, as well as resource recycling systems, also requires substantial capital expenditure. Furthermore, businesses must confront challenges related to optimizing production processes and management to achieve energy efficiency and carbon emission reduction targets.

03 Human and cultural factors

Promoting new initiatives, applying digital technologies, and adopting green standards require employees to possess skills, creative thinking, and adaptability to change. However, many businesses still lack a workforce with adequate digital technology and sustainable management expertise. Retraining the workforce to adapt to new technologies and production processes also demands time and resources.

V. THE FUTURE AHEAD

Vietnam is progressively building and developing both its green and digital economies, integrating into global trends at a rapid pace. National commitments to sustainable development and environmental protection are driving the transformation of the green economy, while the digital economy is changing business practices and creating new opportunities in sectors such as financial technology, e-commerce, and educational technology.

To leverage and lead in this trend, businesses need to develop clear strategies, focusing on investing in enhancing workforce capabilities, adopting new technologies, and developing environmentally friendly products and services. The twin transition, with the combination of digital technology and green solutions, will be a decisive factor in helping businesses not only overcome challenges but also exploit potential opportunities in a competitive market.

By embracing these trends, businesses will not only contribute to the sustainable development of the economy but also enhance their position in a challenging yet dynamic market like Vietnam. Implementing the twin transition is not just an opportunity but a survival strategy, enabling businesses to achieve long-term success in the future.



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*Together, we can make a difference that transcends boundaries
and leaves a positive legacy for generations to come.*

Giant Barb is a pioneer in the field of **Carbon Finance in Vietnam**, offering comprehensive services such as **Greenhouse Gas Inventory**, **ESG Reporting**, and **Carbon Credit Market** solutions to both domestic and international enterprises.

With the motto "**Towards a low carbon society**", **Giant Barb** connects individuals, investors, businesses, and governments together to build green projects aimed at carbon neutrality, contributing to global efforts in combating climate change.



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