

Vietnam's Breakthrough Strategy for Artificial Intelligence Economy

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Prime Minister Nguyen Xuan Phuc has an aspiration to utilize Artificial Intelligence (AI) to build a civilized and prosperous Vietnam, taking this great opportunity for Vietnam to become a pioneer. Under the direction of Prime Minister Nguyen Xuan Phuc, Minister of Ministry of Planning and Investment (MPI) Nguyen Chi Dung led a delegation of MPI's leaders to study in the United States, and on April 23, 2018, the delegation worked with the Michael Dukakis Institute for Leadership and Innovation (MDI) and the Boston Global Forum (BGF) to discuss and propose MDI to advise the development of an AI economic strategy for Vietnam. In response to the aspirations of the Government of Vietnam, MDI carried out the research and prepare report a report by Prof. Jason Furman - Harvard University, Chairman of the Council of Economic Advisers of President Barack Obama, who chaired the drafting of the AI Strategy for the US Government, and Mr. Nguyen Anh Tuan - Director of MDI, with the support of Governor Michael Dukakis - Chairman of MDI, Prof. Thomas Patterson - Harvard University and Prof. Nazli Choucri - Massachusetts Institute of Technology (MIT).

We assume that the aspiration of the Prime Minister, and the proposal of MPI is to develop a special breakthrough strategy for Vietnam to rise to go along with advanced countries in terms of AI economy.

Current characteristics and situation:

❖ *Advantages:*

- Vietnam's 30-year innovation experiences is the foundation and belief for Vietnam to become an civilized and advanced country in the AI Age.
- The Vietnamese people have a high aspiration on a wealthy and civilized country, and to become a leader in Southeast Asia; the young population of Vietnam is well-educated.
- Prime Minister Nguyen Xuan Phuc is sincere, has the aspiration and enthusiasm to develop a civilized, wealthy and powerful Vietnam; the Prime Minister listens to people's voices, is close to the people and has enthusiasm to gather the intellectual elites around him.
- Peculiarities of the Vietnamese nation, making them become a strength: The Vietnamese are addicted to learn new things, to learn new things quickly, have a high spirit of national independence, be rich in emotions and humanity, which can be turned into a strength for the economic developments in the AI Age.

❖ *Major disadvantages curbing the development of AI:*

- There is a lack of leading AI experts, AI economic strategy-makers in Vietnam.

- The business environment in Vietnam is not good.
- The people are unequal to get access to resources and opportunities.
- State-owned enterprises have a large share of national resources but have low efficiency. Only a few enterprises are successful, while many enterprises are inefficient.
- Decision-making mechanism is complicated and slow, lacks personal responsibility, etc.
- There is quite serious jealousy or disparagement of the Vietnamese.
- There is no standard on civilized and healthy values respected in Vietnam society which is expressed through the media and through the debate on social network.

Based on that assumption, these are the main features we recommend to Vietnamese leaders in this report. We know that it will be difficult to do with the current social status, but if Vietnam achieves its goal of becoming an advanced AI country, it must overcome these obstacles.

1. Goals

- ❖ *Become an advanced country in the AI Age:*
 - Be advanced in AI applications in national governance, and be a new paradigm for the world to refer.
 - Be advanced in cooperation, gathering international resources, socio-economic development in the AI Age.
 - Be advanced in the development of the AI Age culture, the cultural symbol of the AI Age: A culture that promotes the fine tradition of mankind in a new society where human and the robots, AI citizens live together, respect and support each other with the interference of the great cultures in the world in which the East-West interference plays an important role.
- ❖ *Become a leader in the Southeast Asia with AI, by AI, for AI:*
 - Be a pioneer in the smart decision-making system, using and allocating national resources.
 - Be a pioneer in the AI application to automation, making public services healthy and in all areas of the economy and society.
 - Be a pioneer in the corporate governance, and state management AI application to corporates, tax management.
 - Be a pioneer in the capacity development AI application, establishing the mind of Vietnamese citizens in the AI Age.
 - Become a country with AI products, services and brands provided to Vietnam and the world that are owned by Vietnam.

2. Strategies

Vietnam is a country the AI of which is lagged behind compared to civilized and advanced countries. To achieve the above goals, Vietnam needs to have a special and distinctive breakthrough strategy so that Vietnam can move forward to go along with the civilized and advanced countries in AI economy. The special and distinctive strategy has main features as follows:

Developing a country with a comprehensive AI application in the administration, management and development of the country, presenting a model on the use of AI for peace, security and prosperity of mankind; thereby setting up norms on an AI society.

Vietnam was protected and supported by human conscience during the war. To date, Vietnam has established a position supported by the intellectual elite and dignity of humanity that will be together with Vietnam to develop an AI society model for peace, security, happiness and prosperity of mankind. Of the figure, **the breakthrough is that Vietnam has pioneered the development of the AI-Government and the AI Age Culture. The basic principles of the AI-Government were developed by MDI in June 2018.**

Is it feasible?

At first sight, it is unlikely that it will be feasible, but in Vietnam, there are units pioneering new technology issues from a low starting point, in a difficult environment and challenging conditions, no investment, not being a technology center, lacks of human resources, etc. For example, the experience in developing Teltic, an Informatics Center and VietNet, an Information Highway in Khanh Hoa Post Office in the 1994 - 1997 period is a precious asset for Vietnam to be confident today. The experiences in developing BGF and MDI, AI World Society (AIWS), with pioneering innovations, the ability to gather the intellectual elites, etc. are a very good foundation for Vietnam to develop a pioneering breakthrough strategy.

2.1. The breakthrough strategies

Selecting strategic breakthrough products: **the AI-Government and the AI Age Culture.**

❖ Breakthrough strategy selecting elite leaders

Selecting the people who have ideas, have capability of operation, leadership and creativity for solutions, and are able to gather elite resources from the best intelligence centers to make the strategic goals come true.

❖ Breakthrough strategy in terms of mechanism

There is a special working mechanism in which the decision-making is allowed, all assessments are carried out through the results and goals registered, the procedures and processes are allowed to omit, etc. all are bound by the results.

❖ **Breakthrough strategy attracting leading intellectual elites**

Establish the Vietnam AI Guidance Council including strategists, policy makers, business leaders, and leading AI innovators, attracting the world's leading AI elites especially those from Boston, Silicon Valley, etc. along with leading figures of AI in Vietnam.

❖ **Breakthrough strategy in terms of organization, arousing all resources in society**

- Facilitate private businesses to be equally involved. Develop the AI development projects providing that there are solutions, ideas, intellectual resources and experts. Emphasize the assessment of companies and organizations through intellectual resources rather than the problem of financial capital and properties.
- What is intellectual resource? Be a team of experts, a creative team; be creative values created for society; be ideas and solutions to solve problems and implementation; be the ability to gather a team of the world's leading innovators, experts, especially those from the G7 countries, OECD countries. Thus, the government has incentive, support policies for companies with the intellectual resource.

Connect with the world's leading AI centers, applying the intelligence-sharing economic model to strategic breakthrough products that are the AI-Government and the AI Age Culture

2.2. ***Focuses of the strategy***

- Developing the AI-Government:

Based on successful E-government development lessons of Estonia: From being a small country, having a later starting point, and not being a technologically advanced country, this country has become a country with E-government learnt by many countries including advanced and civilized countries.

Vietnam now has aspirations to go straight into modernity, pioneering the development of the AI-government, the AI-state in which:

- Develop the National Decision Making and Data Center (NDMD).
- Build AI universities, AI schools.
- Build AI hospitals.
- Develop AI legal services and public services.
- Optimize public transportation with AI.
- Create a breakthrough for the product quality, develop the brand for Vietnam's "clean and high-quality" agricultural and aquaculture products with AI.
- Create a breakthrough for Vietnam's tourism with AI.

- Developing a new state governance system in the AI Age and a new world peace and security in the AI Age (AI International Court, actively introducing AI control initiatives to ensure safety and security for mankind the AI Age).
- Developing the AI Age Culture, a culture that inherits the fine values of mankind and with the presence of AI citizens, Vietnam creates an innovation culture, encouraging and honoring the creativity as the highest values in society.
- Attracting the elite intellectual resources from Boston, at leading universities such as Harvard, MIT, Brown, Tuft, etc. to together develop the AI-Government and the AI Age Culture. These products belong to Vietnam, Vietnam owns more than 50% of the product value but the chief engineers are the elites from Boston.
- Mobilizing global financial resources for the AI-Government and AI Age Culture projects such as the World Bank, funds and large corporations in the United States.
- Making communication to create aspirations and efforts of all Vietnamese people to build the AI-Government, the AI Age Culture, creating the image of Vietnam that pioneers the development of the AI-Government, the AI Age Culture to the world.
- Developing a smart learning society that is accessible and knowledgeable, capable of problem solving and creativity, etc. in the fastest way, especially for the people in the remote area through the Internet and smartphone.

3. Solutions

❖ Solution to build the AI-Government

Establish the AI-Government Special Group, under the direct guidance of Prime Minister Nguyen Xuan Phuc. This is the Special Group implementing the AI-Government Project who has committed achievements over time, and enjoys a special mechanism in which it has the right to take the initiative in action and is not restricted in the administrative mechanism. The group's leader is responsible for the results, transparently disclosing all activities and results but is entitled to self-make decision. This group will direct the construction of the AI Innovation Zone.

Immediately promulgate a strict regulation on the protection of intellectual property rights, considering those who steal ideas, products and technology as serious criminals and they will be seriously punished in the society.

If we need an initial step of testing process, we can choose a information technology corporation, a ministry, a province, or a city to try.

❖ Solution to build the AI Age Culture

Create an AI Age Cultural Area and AI Times Square that will be the place to keep and introduce the world elites who pioneered the political, cultural and technological development of the AI Age and their achievements.

Build an AI Age Cultural Area in Vietnam's special cities such as Nha Trang, Hoi An, Da Lat, Ha Long, etc.

In the AI Age Cultural Area, create position and attract the attention of the world by building the Memorial House of Michael Dukakis where Michael Dukakis's souvenirs are kept, the Memorial House of President Vaira Vike-Freiberga - President of The World Leadership Alliance-Club de Madrid - along with the world advanced leaders who have contributions to the new technology, to the AI development and AI innovators of the world.

❖ **Solution to attract the world's elite intellectual resources**

The Government of Vietnam calls for the support and help of MDI to attract the intellectual elites from Boston (in terms of politics, culture, AI technology, AI economy). The Government of Vietnam creates an environment for the elites to associate with Vietnam so that Vietnam could absorb the creative ideas and advanced technology of the age.

MDI will be a bridge between Boston and Vietnam: MDI will support and select two major AI events in Boston, namely the AI Conference and Expo (held in every early December) and the AIWS Festival (held in every late April) for Vietnam to join to create its prestige and voice, and then connect these events held in Vietnam, in the AI Age Cultural Area in Vietnam.

❖ **Financial solution, calling for funding**

Organize a group calling for funding in which the group works under the direction of Prime Minister Nguyen Xuan Phuc. Organizations that the group can call for funding to develop the AI-Government and the AI Age Cultural Area include the World Bank, funds in the United States and major corporations of the United States.

❖ **Solution to develop strategic products**

- Select a private company or joint stock company with a good capacity to participate in the implementation of the AI-Government project whose inaugural work is to develop the **National Decision Making and Data Center** that is *the brain, supporting the decision-making and administration of the country*. It is the AI-Government Project that will create a good foundation for the company, thereby creating a global brand product for the AI society development: AI-government, AI school, AI hospital, AI law office and AI court. Given the demand from the domestic market, it will develop globally and has a steady foundation, the Vietnamese market. Select the company on the basis of the requirements and enough capacities to assess the capabilities of the selected company, invite leading experts from Boston to be the project's chief engineer.
- Formula for the development of products and services: Vietnam states its demand that Vietnam, being the Employer, will invite a creative director, a chief engineer from Boston, some algorithm experts from Boston, a development, operation and application team of Vietnam to reach out to the world by the creation of prestige and foothold in the

US market through MDI and BGF, thereby becoming global brands, providing services to the global.

- New approach: Smart data, smart algorithms, idea learning, learning to think, based on the Probability Theory and Mathematical Statistics to reduce the massive data usage. Have a close relationship with the leading AI algorithm experts from MIT and Boston area to apply the most advanced AI algorithm achievements to the AI-government development.
- This system should be applied with the blockchain technology and advanced technologies to ensure the security of the NDMD.

❖ **Solution to take advantage of being China's neighbor and ASEAN's Leader**

Vietnam is a pedal for accessing the market in 15 provinces from Yangtze River, Shanghai to the South that has about 850 million people and is China's most developed region as well as is a pedal for accessing the Southeast Asian market.

Therefore, Vietnam needs to negotiate with China to open the market for Vietnam. Viet Nam proactively creates its position as a pedal for the advanced countries to access the Chinese market by creating attractive environments for American, Japanese, German, British, Canadian and Australian companies to pilotly implement AI products, services, robots in Vietnam, and from Vietnam, a pedal, they will access the market from Shanghai to the Southern area of Yangtze River, China. Based on this, Vietnam creates its position as ASEAN's locomotive so that the world leading companies in terms of Artificial Intelligence, automation, robots, etc. consider Vietnam as a pedal for them to access the ASEAN market.

Vietnam should proactively create the environment, proactively introduce, attract and convince US companies, and proactively create brand, reputation for this position.

The above are the main features of the breakthrough strategy for AI economy and specific solutions, measures for Vietnam: ***Becoming an pioneer in building the AI-Government and the AI Age Culture owned by the Government of Vietnam, attracting intellectual elites in the Boston area, attracting fundings from the World Bank and the United States, establishing a leading country in automatic governance by AI, then building an AI Innovation Zone which has the ability to provide advanced products and services for Vietnam and international markets, helping Vietnam to become one of the advanced and leading countries in AI.*** It is hoped that the Government of Vietnam will find here useful suggestions and recommendations for the development of Vietnam's AI economy, making Vietnam move forward to go with the civilized and advanced countries in the field of AI./.