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# Challenges and Solutions in Measuring and Evaluating the Effectiveness of Vietnam's Digital Transformation Process

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**A B S T R A C T**

The paper discusses the challenges and solutions to measuring and evaluating the effectiveness of digital transformation in Vietnam. The author notes that while Vietnam has made significant progress in implementing digital transformation, measuring and evaluating its effectiveness remains difficult. The paper points out that measuring and evaluating the effectiveness of digital transformation requires clear and uniform criteria to ensure objectivity and transparency. The author proposes several solutions, including investing in measurement and data analysis systems, creating a comprehensive measurement and evaluation system, training and improving the capacity of employees, establishing a system for defining and standardizing KPI indicators, and strengthening cooperation with reliable partners. The paper concludes that measuring and evaluating the effectiveness of digital transformation is critical to assessing the country's progress and the various fields involved in the digital transformation process.

**Keywords:** Key performance indicators, digital transformation process, challenges and solutions

## 1. INTRODUCTION

The paper "Measurement and evaluation indicators of the efficiency of the digital transformation process in Vietnam" focuses on measuring and evaluating the effectiveness of the digital transformation process in Vietnam. The article introduces KPI indicators applied in various fields related to digital transformation in Vietnam. The authors recommend that each business in Vietnam can refer to the 10 KPI indicators listed in Table 1 to evaluate the effectiveness of the digital transformation process.

From important KPI indicators used to evaluate the effectiveness of the digital transformation process in Vietnam, the paper will present in detail the challenges and solutions to overcome these challenges in measuring and evaluating the effectiveness of the digital transformation process in Vietnam.

**Table 1. Commonly used KPIs for measuring and evaluating the effectiveness of digital transformation processes in Vietnam**

| ORDER | KPI INDEX | DESCRIPTION |
|---|---|---|
| 1 | Online sales growth rate | $KPI1 = [(OSCP - OSPP)/OSPP].100$ |
| 2 | Conversion rate from online to offline customers | $KPI2 = (Npurchase / Nvisit).100$ |
| 3 | Reliability of digital systems | - Uptime ratio<br>- Mean time to resolution<br>- Error rate<br>- Success rate |
| 4 | The speed of response and customer service on digital platforms (hours/request) | $KPI4 = TGPH / SLYC$ |
| 5 | The number of new and loyal customers | - Number of new customers<br>- Number of loyal customers |
| 6 | The costs of operating a digital system | - Initial investment costs<br>- Maintenance costs<br>- Upgrade costs |
| 7 | Customer service costs | Costs of renting servers, website maintenance and updates, creating and managing online communication channels, and hiring online customer support staff |
| 8 | The cost-to-profit ratio | $KPI8 = (CP / LN).100$ |
| 9 | The proportion of staff trained in digital skills | $KPI9 = (NVĐT / NV) . 100$ |
| 10 | The customer satisfaction | $KPI10 = (SNHL / SNKS) . 100$ |

## 2. CHALLENGES IN MEASURING AND EVALUATING THE EFFECTIVENESS OF VIETNAM'S DIGITAL TRANSFORMATION PROCESS

Although measuring and evaluating the effectiveness of the digital transformation process is crucial, it poses many challenges for businesses in Vietnam. Below are some of the challenges in measuring and evaluating the effectiveness of the digital transformation process in Vietnam:

*Lack of a specialized team:* Evaluating the effectiveness of digital transformation requires the participation of a specialized team. However, currently in Vietnam, the number of experts with sufficient digital skills is still limited.

*Lack of measurement and data analysis capacity:* To measure and evaluate the effectiveness of digital transformation, businesses need to have the capacity to analyze data to identify appropriate indicators. However, in Vietnam, the data analysis capacity of businesses is still limited.

*Diversifying KPI Index:* Measuring the effectiveness of digital transformation is not just about counting the number of new customers or revenue growth. Businesses need to diversify their KPI index to fully and accurately measure the effectiveness of digital transformation.

*The accuracy of data:* Data is an important factor in measuring the effectiveness of digital transformation. However, many businesses in Vietnam are using inaccurate or outdated data, which will affect the results of measuring and evaluating the effectiveness of digital transformation.

*Measurement and evaluation costs:* The cost of measuring and evaluating the effectiveness of digital transformation can be very high, especially for small and medium-sized enterprises.

*Different levels of digital transformation among industries and businesses:* The level of digital transformation can vary between industries and businesses due to many factors. Some industries with high competitiveness and early adoption of digital technologies may have a higher level of digital transformation. Larger businesses typically have more budget and resources to invest in digital transformation than smaller ones. Additionally, the proactiveness and commitment of a business are also important factors, as a business may have a high investment budget but not actually prioritize digital transformation. Businesses may also face their own unique challenges in digital transformation, such as information security issues, a lack of a digitally skilled workforce, or difficulties in changing work processes.

*Shortage of a digitally skilled workforce:* To effectively implement a digital transformation process, businesses need a team of employees with sufficient skills and knowledge of digital technology. This is a common issue not only in Vietnam but around the world, as digital technology develops rapidly and constantly demands new skills from the workforce. However, in Vietnam, this issue is becoming more serious due to the education and training levels not yet meeting the demands of the market. Finding and hiring a team of high-quality digital-skilled employees is not easy, especially for small and medium-sized businesses. In addition, training and enhancing the capacity of employees also require a significant amount of time and financial resources. Therefore, ensuring that the workforce has enough digital skills to implement the digital transformation process is a major challenge for businesses in Vietnam.

In summary, each business in Vietnam will encounter several challenges when evaluating the effectiveness of the digital transformation process, as listed in Table 2.

**Table 2. Challenges in measuring and evaluating the effectiveness**

**of the digital transformation process in Vietnam**

| ORDER | CHALLENGES |
|---|---|
| 1 | Lack of a specialized team |
| 2 | Lack of measurement and data analysis capacity |
| 3 | Diversifying KPI Index |
| 4 | The accuracy of data |
| 5 | Measurement and evaluation costs |
| 6 | Different levels of digital transformation among industries and businesses |
| 7 | Shortage of a digitally skilled workforce |

## 3. SOLUTIONS IN MEASURING AND EVALUATING THE EFFECTIVENESS OF VIETNAM'S DIGITAL TRANSFORMATION PROCESS

To overcome the challenges in measuring and evaluating the effectiveness of the digital transformation process in Vietnam, there are some proposed solutions as follows:

*Defining appropriate KPIs:* As each business has its own characteristics and business objectives, identifying suitable KPIs is crucial. Businesses should research and apply common KPIs, then customize and adjust them accordingly.

*Using data analysis tools:* Data analysis tools such as Google Analytics, customer relationship management (CRM) platforms, etc. can help businesses measure and evaluate the effectiveness of their digital transformation process accurately and quickly.

*Investing in a measurement and data analytics system:* An effective measurement and data analytics system is necessary to measure and evaluate the effectiveness of the digital transformation process. Companies should invest in these tools and systems to ensure efficiency and accuracy in the evaluation process. Technologies such as artificial intelligence, machine learning, and big data can make data collection, analysis, and evaluation easier and more effective.

*Creating an innovative work environment:* An innovative work environment that encourages creativity and adapts to new technologies can help businesses progress faster in the digital transformation process.

*Training and enhancing the skills of employees in measuring and evaluating digital transformation effectiveness:* In order to measure and evaluate the effectiveness of digital transformation, employees need to be trained in digital skills, new technologies, and how to use data measurement and analysis tools and systems. This will help employees understand KPIs and how to apply them to their daily work.

*Collaborate with reliable partners:* Lastly, businesses need to collaborate with reliable partners in measuring and evaluating the effectiveness of their digital transformation process. These partners may include consulting firms, technology providers, or independent experts. This collaboration will help businesses gain an overall understanding of the effectiveness of their digital transformation process and provide the best solutions to address any challenges.

*Develop a comprehensive plan and schedule for the digital transformation process, including a plan for measuring and evaluating its effectiveness:* This plan should be implemented from the beginning and regularly evaluated to ensure the accuracy and effectiveness of the digital transformation process. Additionally, provide complete information and guidance to relevant departments so that they can understand the plan and carry it out correctly.

In summary, to overcome challenges in measuring and evaluating the effectiveness of digital transformation processes in Vietnam, Vietnamese businesses can refer to some of the solutions listed in Table 3 as follows:

**Table 3. Solutions to overcome challenges in measuring and evaluating the effectiveness of digital transformation processes in Vietnam**

| ORDER | CHALLENGES |
|---|---|
| 1 | Defining appropriate KPIs |
| 2 | Using data analysis tools |
| 3 | Investing in a measurement and data analytics system |
| 4 | Creating an innovative work environment |
| 5 | Training and enhancing the skills of employees in measuring and evaluating digital transformation effectiveness |
| 6 | Collaborate with reliable partners |
| 7 | Develop a comprehensive plan and schedule for the digital transformation process, including a plan for measuring and evaluating its effectiveness |

## 4. CONCLUSION

The paper emphasizes the importance of measuring and evaluating the effectiveness of the digital transformation process in Vietnam. It lists important KPI indicators used to assess the effectiveness of the digital transformation process in Vietnam. The author also analyzes the challenges in measuring and evaluating the effectiveness of the digital transformation process in Vietnam, including a lack of personnel with data analysis and measurement skills, difficulties in data collection and processing, and others. The paper suggests some solutions to overcome these challenges, including investing in measurement and data analysis systems, creating a comprehensive measurement and evaluation system, training and enhancing employee skills, establishing a system to define and standardize KPI indicators, and enhancing collaboration with reliable partners. Thus, measuring and evaluating the effectiveness of the digital transformation is crucial for assessing the progress of the country and its sectors in the digital transformation process.

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