Digital Sustainability: What Is It About?
ความยั่งยืนทางดิจิทัล: คืออะไร?

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Abstract

Digital sustainability is something that is, actually, not much novice. Understanding in staying digitally sustainable is critical and undervalued. The targets of this study were, hence, to understand a definition of digital sustainability and its components and to suggest a matrix to evaluate digital sustainability. Documentary research was conducted. The study categorised and explained the meaning of digital sustainability and its components through an input-process-output systematic process. In greater details, whether or not the output, i.e. adaptation, consumer experience, building of collaboration with internal and external stakeholders, planet preservation, and economic growth could be reached, it came from relationships between people and organisations/brands/companies in the understanding and mindset of technology usage for creating value-added innovation. Basing upon the evaluation criteria, i.e. degree of quantity and quality of the organisation's infrastructure and of value created and shared, there were four types in a matrix of digital sustainability, i.e. the emperor, the impractical, the insightful, and the challenger. The practical contributions and suggestions are to help companies and brands speed up their adaptation and seeking for a new height, opportunity.

Keywords: digital sustainability, definition, a matrix of digital sustainability, shared value

Introduction

Sustainability is talked and thought of worldwide. A public launch by the United Nations in the 17 Sustainable Development Goals including no poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and

infrastructure, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace, justice and strong institutions, and partnerships for the goals (United Nations, n.d.) can be reasoned. Nonetheless, its concrete practice was as not many as talks and thinks. Its understanding is, likewise, differently, ranging from one culture to another. Its understanding with creating shared value (CSV) and corporate social responsibility (CSR) is, furthermore, in a mess. Comparing between sustainability, CSV, and CSR, please see the direct quotations shown below:

> "If you give someone a fish – that's charity, but teach them how to fish – that's sustainability" (Webb, 2016, citing Ian Walker, Director, Corporate Citizenship at J&J.

> '*We believe that CSR is a different – if overlapping – concept from creating shared value.* Corporate social responsibility is widely perceived as a cost center, not a profit center. In contrast, shared value creation is about new business opportunities that create new markets, improve profitability and strengthen competitive positioning. *CSR is about responsibility; CSV is about creating value*' (Kramer, 2011).

Sustainability and CSV share the similarity in a long-term, ever-lasting relationship and outcomes and that can be both tangible and, more preferably, intangible values. In contrast, CSR is something and somehow like a charity or money. By adapting Porter and Kramer's (2011) and Kramer and Pfitzer's (2011) studies, Lapina, Borkus, and Starineca (2012) give more specific explanations on comparisons between CSR and CSV in value, focus, profits, agenda, and financing. In terms value, furthermore, CSR is about ethics, i.e. focusing on making good things whereas CSV is about economic and social values gained after cost deduction. Giving to others and community are highlighted in CSR while finding out partners for creating values shared by people and community, in the sight of CSV. CSV, moreover, helps a company/brand's economic growth and revenue increase, but this is not thought in the view of CSR persons. CSR is, additionally outside-in perspective while it is the other way round for CSV, i.e. inside-out perspective. Last but not least, the company/brand includes CSV as its budget allocation whereas budget is given specifically for CSR and that is not much.

The ultimate goals of sustainability and CSV are to create a competitive advantage, to seek a new height, and generate a higher sale and revenue.

In consistent with the United Nations addressed above, the shared values can be presented in the forms of energy efficiency, environmental improvement, education, workforce skills, health, worker safety, affordable housing, community economic development, and water use (Porter, 2014).

Currently, digital sustainability is something that is, actually, not much novice. Understanding in it is restricted and not much appreciated. The study of Mezher, Noamani, Abdul-Malak, & Maddah (2011) has confirmed that (Arab) people are struggling with and lacking knowledge about digital sustainability.

The Korn Ferry (2017), a worldwide consulting company on organizational and human resource management proposed five jigsaws of digital preservation. One of the important pieces highlighted the agreed understanding of digital sustainability.

Objectives of the Study

The targets of the study were:

1) To understand a definition of digital sustainability and its components
2) To suggest a matrix to evaluate digital sustainability

Research Scope

This study was a pilot study employing only six definitions provided by well-known, experienced scholars and professionals in the field of digital sustainability. Also a matrix of digital sustainability needed to be validated in the future for effective and efficient use. This study was giving this proposed digital sustainability matrix for a purpose of a practical platform for companies and brands.

Methodology

Documentary research was employed. The definitions taken and scrutinised came from articles, newspapers, and professional reports being used as a unit of analysis.

Results

This section was divided into two parts, i.e. (1) the definition of digital sustainability and its components and (2) a matrix of digital sustainability.

The definition of digital sustainability and its components

Analysing from the documents, in this first part, we shall draw a diagram explaining the definition of digital sustainability and its components and showing in as seen an input-process-output systematic process to answer the first question. After this section, a suggestion on a matrix of digital sustainability was exhibited.

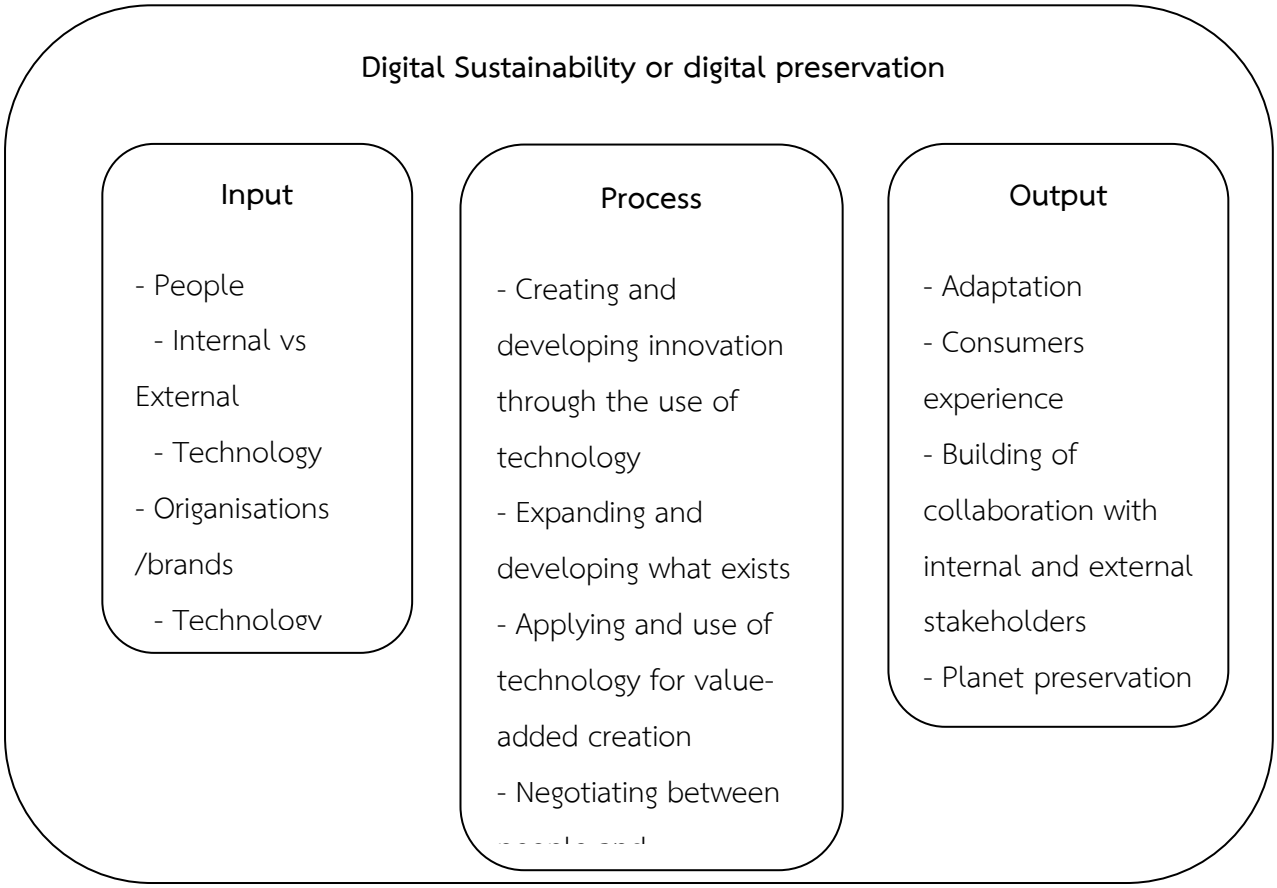

Figure 1: A diagram of an input-process-output systematic process

As pictured above, digital sustainability was a systematic process consisting of input, process, and output. As for input, people and organisations were interrelated and interchangeable factors. Failure in being digitally sustainable could emerge if both internal people, especially employees and external ones, i.e. consumers and communities were out of sight and were lacking of mindset and understanding in sustainability and technology and/or innovation as well as of cooperation with organisations and brands. For the organisations and brands side, they not only raised their employees' mindset and understanding in digital preservation, but they also had to encourage their employees to generate and create added-value innovation and artefacts (both existing and new one)

through the use of technology. And that budget available was of high demand. Such innovation developed and created should be agreed and engaged by as well as given benefits to consumers so that relationships could last sustainably. In details, the input variables were composed of *people* both internal and external and knowledge and mindset in technology usage and *organisations/brands/companies* that should invest in technology and money. In the process of digital sustainability, it was about creating, developing, and expanding value-added innovation by applying and using technology. At the same time, it was important for organizations/brands/companies to negotiate with internal and external stakeholders.

The ultimate goals of having digital preservation, from micro to macro-economic were to compete with others and survive in ever-changing, different contexts. To create consumers experience was the second outcome of being digitally sustainable. Currently, consumers were more likely to consume environmentally friendly products and/or services and brands. Furthermore, it helped the development and improvement in community and society and that could drive a good collaboration and relationships between internal and external stakeholders. Unavoidably and fourthly, through the use of digital innovation and artifacts, communities and society stayed sustainably green and preserved. Last but not least, as having the hand of technology, cost was reduced and products and/or services were more effective. And that could create economic growth for business itself and a country as a whole.

A matrix to evaluate digital sustainability

Following to the analysis of the definitions of the digital sustainability and its components, there were two main factors, i.e. infrastructure and innovation, we shall later draw a matrix to evaluate such digital sustainability as exhibited in Figure 2.

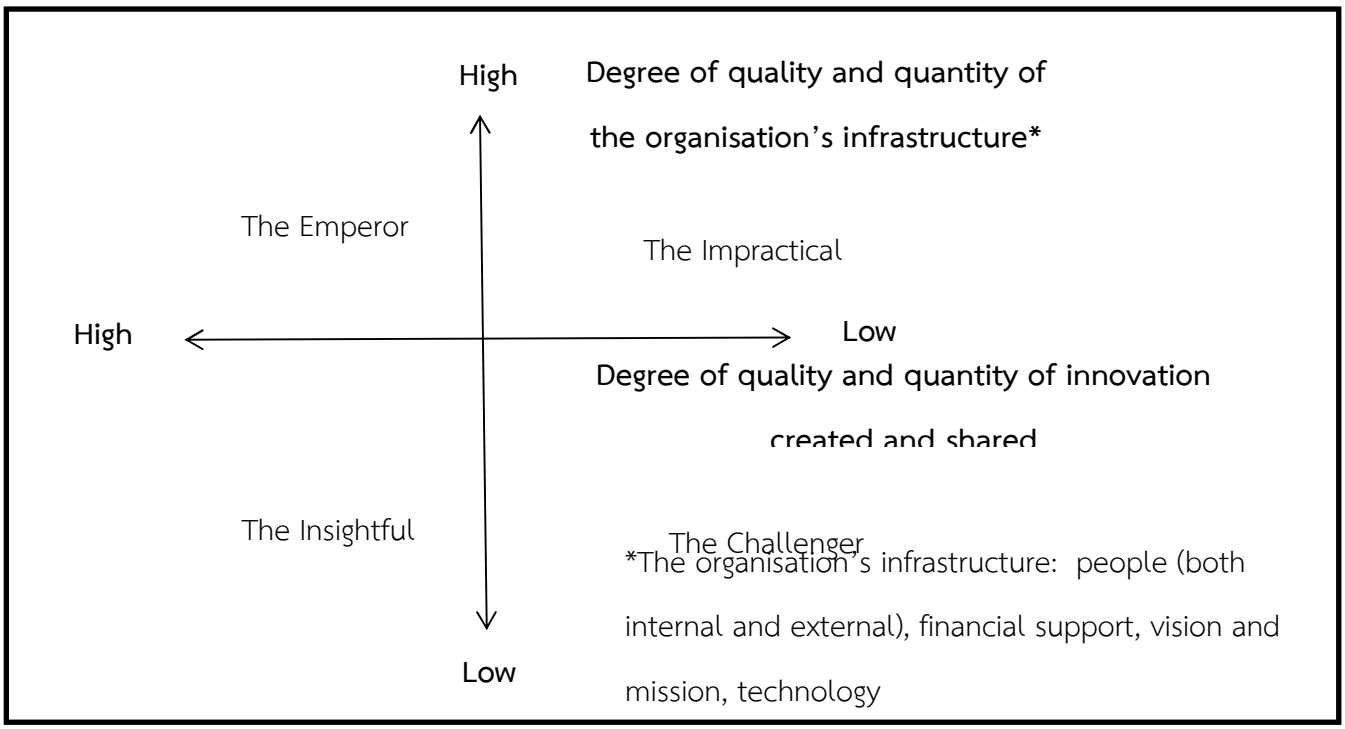

Figure 2: A matrix to evaluate digital sustainability

From the matrix to evaluate digital sustainability, based upon the degree of quality and quantity of the organisation's infrastructure and that of innovation created and shared, we could divide the organisation's digital preservation into four types, i.e. 1) the emperor, 2) the impractical, 3) the insightful, and 4) the challenger. Their details would be elaborated below.

1) The Emperor: The organisations were fully equipped with high potential and competent infrastructure including responsible, understandable, skilled, trained, and shared-mindset internal and external stakeholders, integral financial support, goal-oriented, respectful vision and mission on digital sustainability, and sufficient and potential technology. A high degree of quality and quantity of innovation created and shared could be the expected result.

2) The Impractical: The organisations were rich of those who were highly skilled and trained people and were surrounded by good infrastructure. Unfortunately, their innovation created and shared were limited and, possibly, ineffective.

3) The Insightful: Although the organisation was limited with quantity and quality of the infrastructure, they loved and paid their wholeheartedly respect to the organisation.

Hence, they had pushed their insightful attempt and hard working on developing and creating innovation.

4) The Challenger: This type could not be perceived as having a trouble. However, they had to push their attempt and invest more on such infrastructure for the purpose of creating shared innovation.

Discussion and conclusion

The targets of this study were to understand a definition of digital sustainability and its components and to suggest a matrix to evaluate digital sustainability. Analysing the meaning of digital sustainability taken from various sources of academic and professional sources was done.

In terms of the first research question, the study categorised and explained the meaning of digital sustainability and its components through an input-process-output systematic process. In greater details, whether or not the output, i.e. adaptation, consumer experience, building of collaboration with internal and external stakeholders, planet preservation, and economic growth could be reached, it came from the organisation's infrastructure and relationships between people and organisations/brands/companies in the understanding and mindset of technology usage for creating value-added innovation. In other words, success or failure on digital preservation predominantly depended upon people, coming from both inside and outside. This was agreed by the five pieces of digital preservation, given by Korn Ferry (2017) and Swift (2017). A good example was provided by the study of HolmstrÖm et al. (2017) when they were using direct digital manufacturing or, shortly, DDM for improving products and supply chain so that staying sustainable could be achieved.

As for the second research question, basing upon the evaluation criteria, degree of quantity and quality of the organisation's infrastructure and of valued innovation created and shared, there were four types in a matrix of digital sustainability, i.e. the emperor, the impractical, the insightful, and the challenger. The emperor and the challenger were as if an opponent. While the emperor organisations were not struggling with any internal and external infrastructure, the challenger's infrastructure was being limited. We would suggest more investment on people, money, and technology for the betterment on innovation that could respond to and shared with consumer's needs and wants

Nonetheless, Szadeczky (2010) placed a warning on what the organisations should be aware of, especially data safety and security.

The practical contributions and suggestions are to help companies and brands speed up their adaptation and seeking for a new height, opportunity and strategy for more benefits and economic growth as a whole.

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