

Assessing Financial Sustainability of Community Network Project through e3value Modelling and Simulation

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Abstract— Many efforts had been done to make ICTs available in rural area to increase their incomes and productivities. For example, a community ecommerce is introduced to promote community handicraft and income generation; other projects like deploying VSAT to improve the internet connectivity at rural area. Although the project is developed, it is facing a challenge like how to sustain the ICT4D projects? This paper presents the study of financial sustainability of community network project through e3value modelling and simulation. Financial sustainability is one of the important factor for community projects. As a NGO or researcher that is trying to help the community, is it possible for us to access the feasibility of any projects for communities so that a realistic suggestion or proposal can be planned? To sustain the community commerce, it cannot be denied that a well planning and measurement on financial sustainability of the projects is required. Hence, we believe that e3value can be used as a tool to measure the financial sustainability of community network projects. With the use of 3value model, it can serve as a reference for various parties in resolving the financial sustainability issue.

Keywords— ICT4D; e3value; community network project; financial sustainability.

I. INTRODUCTION

ICT4D refers to the application of information and communication technologies toward social, economic, and political development, with a particular emphasis on helping poor and communities. To date, lots of ICT4D projects have been introduced to bridge the digital gaps between rural and urban area of Sarawak. Although lots of ICT4D projects are deployed, it is still suffering from sustainability. Sustainability refers to support, maintenance, to keep something in perpetuation, to avoid failure, to keep alive or regenerate. Furthermore, it known as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

From the review, there are five dimension of sustainability, which are economic, social, institutional, technological and environmental [1]. Financial sustainability refers to the financial aspect of projects; social sustainability refers to the acceptance and adoption of technology among community; technological sustainability refers to the robustness, reliability of hardware and software due to rapid changes of the technology; environmental sustainability

refers to ecological impact during the development and deployment of projects. To access the sustainability of projects, framework, methods have been introduced.

Several works have been introduced to propose framework, methods to assess or study the sustainability of ICT4D projects. However, the existing works are still suffering from a systematic and comprehensive manner to evaluate various sustainability dimension of ICT4D projects. Hence, this led to the failure of most ICT4D projects [2]. Work has been done to study the financial sustainability of ICT4D projects through e3value [3]. Continue from the success of the financial sustainability study, this paper introduces the study of community network projects through e3value modelling and simulation.

As described in [2] there have many issues widely encountered to impede the deployment of ICT4D project. High rates of failure are reported for ICT4D project although the project gets many investments from stakeholder. The failure of ICT4D project is caused by un-needed ICT project or un-suitable technology to rural community. To reduce the failures rate of ICT4D projects, financial sustainability assessment of rural connectivity project needs to be