



Use of ASPIRE as an effective tool for ensuring sustainability in developing countries

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Abstract

Arup has been working with Bridges to Prosperity (B2P) since 2010. B2P envisions a world where poverty caused by rural isolation no longer exists. This is achieved through the construction of footbridges over impassable rivers, providing access to healthcare, education, markets, and other pieces of vital infrastructure.

Whilst building a bridge in 2013 in Rwanda, the project team identified the need to evaluate the sustainability of the project. A new aim to integrate sustainability assessments into BridgeTOOL was considered and ASPIRE was identified as the tool to be used to identify sustainability gaps and to maximise the positive impacts of a project. ASPIRE was then used on the design and construction of the 46m span Ciricito Bridge in Panama with the data collected while on site and from wider information gathered from B2P.

This paper aims to highlight how approaching a project in a developing country from a sustainability point of view helps to understand the bigger picture and improve delivery and impact.

Keywords: Sustainability, bridge, B2P, Bridges to Prosperity, ASPIRE, developing country, community engagement, design and construction, environment.

1 Introduction

Arup has collaborated with US-based charity Bridges to Prosperity (B2P) since 2010.

B2P's vision is that of a world "where poverty caused by rural isolation no longer exists". Their programs provide access to healthcare, education and markets by teaching communities how to

build footbridges over impassable rivers, in partnership with organizations and professionals.

B2P have already built over 100 bridges and their target is to build 100 bridges per year.

2 ARUP's involvement

To aid design efficiency for these projects, Arup volunteered to support B2P in the creation of a design tool that would simplify the design of