What is the contribution of infrastructure to service delivery? Methodological challenges faced during an evaluation of Law and Justice built infrastructure in Papua New Guinea

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Conference Theme: Case Studies

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Objective of evaluation

» PNG-Australia Law and Justice Partnership (GoPNG-GoA)
» AusAID funded evaluation
» The focus of the evaluation was to provide an understanding of how investments in infrastructure had contributed to service delivery
» Traditionally, the provision of infrastructure is seen as an enabler rather than contributing more broadly to the quality of service provided
» This evaluation challenged this understanding by testing relationships between the quality of infrastructure and service delivery
QUANTITATIVE data collection

QUALITATIVE data collection

Evaluation design followed a ‘Convergent Parallel Mixed Methods Design’

The team

- The evaluation was conducted by a multi-disciplinary team – two engineers, three social scientists, a procurement consultant and an architect.
- It involved collection of both qualitative and quantitative data by the infrastructure specialist.
- It included in-depth interviews with service providers and users at the facility level.
- It included a review of procurement and planning documents by procurement specialist.
Fieldwork

» There were a total of 6 different Law and Justice agencies surveyed: Police, Correctional Services (prisons), Office of the Public Solicitor, Department of Justice and Attorney General, District courts, and National courts

» Visited 6 provinces and 34 Sites

» Approx. 40% of sites visited (investment between 2003-2012) and more than 300 interviews collected
The methodological challenge was to coherently integrate these different data sets and points of view.
The three perspectives were collected with the intention of integrating the range of information in order to answer 4 evaluation criteria – effectiveness, efficiency, sustainability and impact – as well as the overarching evaluation question regarding the contribution of infrastructure to service delivery.

The challenge was how to compare different sources and build on the validity of the data collected.

A comprehensive assessment of each piece of infrastructure was developed to ascertain how infrastructure development had contributed to increased access to law and justice and improved service delivery.
From multiple service delivery paths (1)

To a linear model of service delivery (2)

To a model that separates various parts required for the delivery to take place (3)
Data assessment had to be processed in such a way that moved from a linear understanding of service delivery (1)
Managing complexity to a more detailed understanding of various components and institutional layers of the service delivery process (2)
Data analysis

» A singular criteria and rating scale were developed to assess all different types of data

» Then in-depth interviews were coded using Nvivo* and its different qualitative data research tools to further interrogate the data

» The team developed a ‘service delivery model’ that linked infrastructure development with different aspects of service delivery, such as staffing, basic utilities and customer satisfaction

*Nvivo is a qualitative data analysis software. For more information visit www.nvivo10.com
The model maps the complex relationships between infrastructure and improved service delivery.
Range of tools used

Results of the overall data consolidation and analysis process were presented in a range of ways to explore different aspects of the evaluation, including:

- Tables summarising infrastructure condition, functionality, fit for purpose, service provision and effectiveness
- Tables on procurement processes
- Graphs exploring the relationships between infrastructure and service delivery
- Word maps illustrating the perceptions of people with respect to a particular word/theme
- Maps illustrating locations of law and justice infrastructure, and
- A tree map illustrating inter-relationships of infrastructure and service delivery
The results

- The results of the rating process provided a basis for the findings of the evaluation
- Detailed sets of spread sheets with rankings of the different criteria
- Series of graphs illustrating the condition of the infrastructure, its appropriateness (fit for purpose), perceptions of quality, effectiveness and service delivery
- Diagrammatic representation of the multiple factors which impact service delivery, including infrastructure
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