GOVERNMENT OF THE VIRGIN ISLANDS
Premier's Office

VIRGIN ISLANDS RECOVERY AND DEVELOPMENT AGENCY

Bregado Flax: Internal Walls

Evaluating Value for Money

Project Number: EDU.01.25.145

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Bregado Flax: Internal Walls

Value for Money (VfM) Report, November 2021

Introduction

One of the core roles of the Recovery and Development Agency (RDA) is ensuring Value for Money (VfM) in the delivery of programmes and projects aimed toward recovery and development of the Virgin Islands. Section 5(2)(c) and (d) of the Virgin Islands Recovery and Development Regulations outline the value for money mandate of the RDA, specifying that:

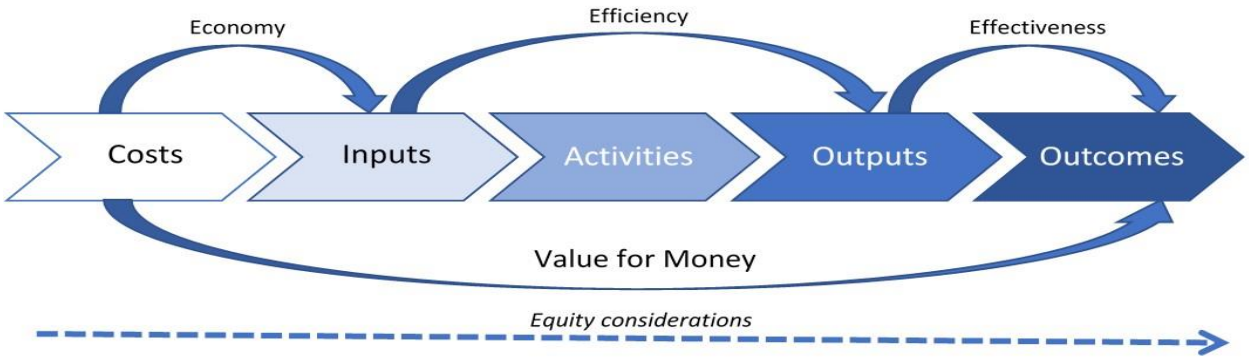
> The Agency shall be responsible for implementing the Government's Recovery and Development Plan in partnership with the Ministries and in so doing shall:
>
> (c) deliver the intended benefits; [and]
>
> (d) ensure that each project represents value for money.

To this end, the RDA has developed this Value for Money Framework and Methodology, which uses specific criteria to assess projects' Value for Money and assigns an overall VfM score for each project.

The VfM score is made up of eight indicators (listed in Table 1) within the four outlined areas of Value for Money, namely Economy, Efficiency, Effectiveness and Equity.

Table 1: Value for Money Areas within the 4Es

VALUE FOR MONEY AREA	
Economy	Economy
Efficiency	Output Cost, Output Time, Schedule
Effectiveness	Output Effectiveness, Outcome Effectiveness, Quality
Equity	Equity



The following sections of this report assess the overall Value for Money of the Virgin Gorda Baths project using the methodology outlined in the RDA's VfM Framework Guidelines for Economy, Efficiency, Effectiveness and Equity.

Overview of Overall VfM Score (50 out of max 100 points)

The Bregado Flax Junior School on Virgin Gorda was severely damaged in the 2017 hurricanes. The structures were rendered mostly unusable. In order to continue providing educational services after the storms, a temporary structure was established in the courtyard between the primary and secondary schools.

The temporary structure, having been in place for nearly eighteen (18) months as this project began, was unsuitable in its then-condition. It was noisy and had no separate classroom workspaces. The canvas of the structure had several leaks, and there was no way to cool the interior space. In addition, a termite infestation was destroying the floor of the temporary building and the only power available was provided by extensions from the main building, creating an unsafe environment, especially for a school. Additionally, the room occupied by the Bregado Flax Junior School within the main existing building structure was leaking.

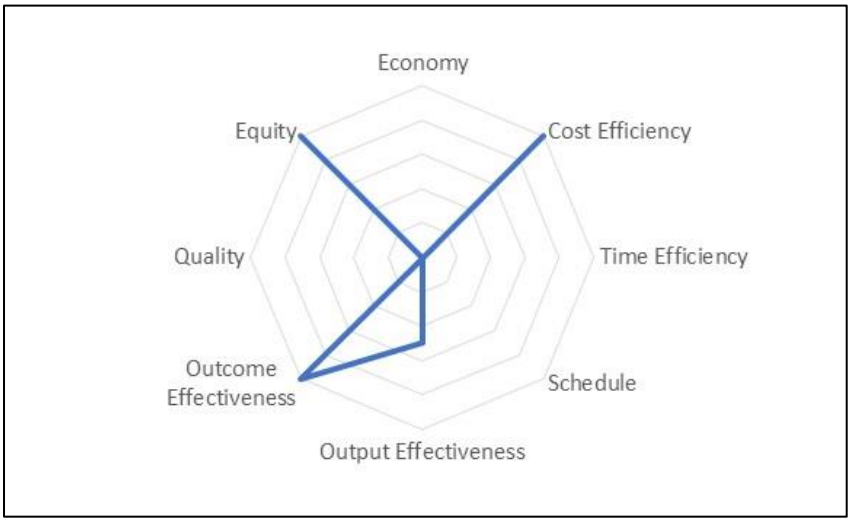
It was determined that improvements to the temporary classrooms would benefit the school by creating conditions more conducive to learning for teachers and students alike. The project aimed to improve the classroom space by making it quieter, cooler, and safer for students, teachers and staff of the school. The Statement of Requirement (SoR) for the project was signed on 24 July 2019, marking the start of the project, and the project was completed on 27 May 2020.

The project finished within the benchmark used for construction cost per square foot and contributed to a broader outcome, thus performing well in terms of Cost Efficiency, and Outcome Effectiveness. It was also able to partially achieve its targeted outputs, hence a partial score for Output Effectiveness. Project costs were, however, well over the original project budget; the project was not completed within expected schedule and time benchmarks; and there were significant quality concerns, meaning that no points were awarded for Economy, Time Efficiency, Schedule or Quality assessments.

Bregado Flax Internal Walls – VfM Scoring			
Economy	Economy	0/10	0/10
Efficiency	Cost Efficiency	20/20	20/40
	Time Efficiency	0/10	
	Schedule	0/10	
Effectiveness	Output Effectiveness	10/20	25/45
	Outcome Effectiveness	15/15	
	Quality	0/10	
Equity	Equity Goals	5/5	5/5
Overall VfM Score			**50/100**

The overall VfM score was therefore 50 out of a total possible 100 points based on an evaluation of the project's Economy, Efficiency, Effectiveness and Equity, using the RDA's established VfM Framework.

Figure 1: Overall Value for Money Scoring – Radar Chart



The overall Value for Money Scoring Chart (Figure 1) demonstrates the excellent scores received for Cost Efficiency, Outcome Effectiveness and Equity. Output Effectiveness received a middling score, while no points were awarded for Economy, Time Efficiency, Schedule, or Quality. The following sections detail the reasons for the specific scores assigned for each element of the assessment.

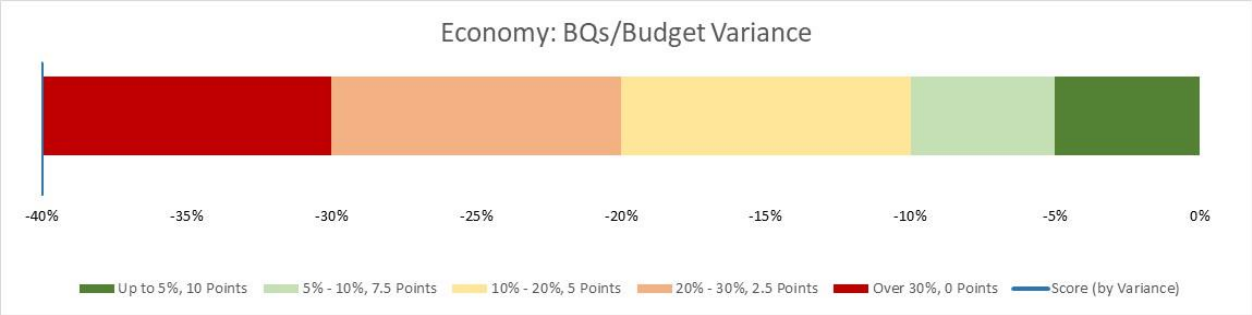
Economy (0 out of max 10 points)

The economy of the BFJS Internal Walls project is assessed based on the original budget for the project. This project was initially budgeted at $50,000 within the Phase One Programme.

The total spend to date as at the end of January 2020 was $178,049 which is approximately 256% above the initial budget. This indicates that this project was executed well above the variance range used for scoring of the project's economy, and as such, the project has not been assigned any points in terms of economy (Table 2).

Table 2: Assessment of Economy

ECONOMY ASSESSMENT: 0/10 POINTS	
Original Budget	$50,000
Actual Spend	$178,049
Variance ($)	($128,049)
Variance (%)	(256%)
ECONOMY SCORE	**0**



Efficiency (20 out of max 40 points)

The efficiency of an intervention considers Output Cost (Cost Efficiency), Output Time (Time Efficiency) and Schedule.

Benchmarks Used

In calculating VfM Scores for both Cost and Time Efficiency, consideration has been given to performance against relevant benchmarks established for the production of specific outputs. Giving a background of the benchmarks used, and why, provides the necessary context for comparisons made.

In the case of the BFJS Internal Walls project, the following benchmarks for cost and time have been used to assess cost and time efficiency.

Type	Benchmark	Sources	Considerations
Cost	$150 per square foot enhanced	BCQS 2018-2019 Market Trend Report, p.10: https://bcqs.com/wp-content/uploads/2019/09/bcqs-construction-market-report-2019.pdf	Lower end of indicative construction cost for one to three storey shell building used; Should be noted that rather than construction, this project involved erection of walls and refurbishment of existing structure.
Time	23 days for enhancement of each room (classroom/ office)	Total number of planned project days (adjusted for lockdown period) divided by planned number of rooms enhanced – 163/7	Given difficulty in acquiring a relevant benchmark for time taken to enhance rooms, planned outputs divided by planned project days has been used as a proxy benchmark.

Cost Benchmark

The benchmark used for cost efficiency has been sourced from the BCQS 2018-2019 Market Trend Report for the construction cost of a one to three storey shell building of $150 per square foot, at the low end. The low end has been used given that this project did not involve full construction or reconstruction of a building, but rather involved enhancing a tent space by erecting internal walls and refurbishing one room in an existing structure.

Time Benchmark

The time benchmark used was determined based on the planned outputs (rooms – classrooms and offices - enhanced) divided by the planned project days. This methodology for determining a time benchmark has been used routinely where an external benchmark is unobtainable or impractical to determine.

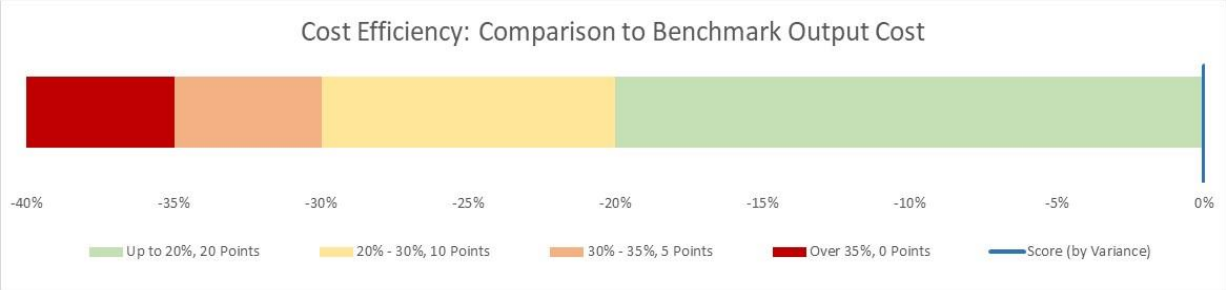
Cost Efficiency

For cost efficiency, the cost per square foot enhanced of $134.13 was within the benchmark cost of $150, sourced from the BCQS 2018-2019 Market Trend Report, thus full marks were assigned for Cost Efficiency.

In terms of limitations of the benchmark used, it should be noted that the project did not involve full construction or reconstruction, but rather involved addition of internal walls to the tent, and renovation of a classroom.

Table 3: Cost Efficiency Assessment

COST EFFICIENCY ASSESSMENT: 20/20 POINTS	
Output Unit Cost	$134.13 per square foot enhanced
Benchmark Output Unit Cost	$150 per square foot enhanced
Variance ($)	$15.87
Variance (%)	11%
COST EFFICIENCY SCORE	**20**



Time Efficiency and Schedule

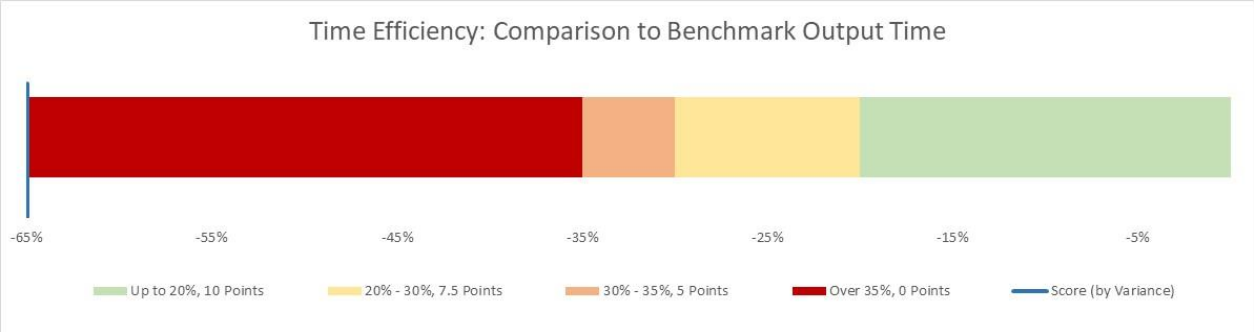
The Statement of Requirement for the project was signed on 24 July 2019, which is used as the project start date for assessment of time efficiency and schedule. The project was originally planned to be completed on 3 January 2020, which is thus equal to 163 planned project days.

The project was actually finally completed on 27 May 2020, equating to a total of 308 actual project days. The Government of the Virgin Islands instituted a Territory-wide lockdown period of approximately twenty-eight (28) days in March and April 2020, during which construction sites were banned from functioning. Adjusting for this lockdown period, the adjusted total project days was actually 280 days.

For time efficiency, the number of days to install each classroom was used. Based on the expected outputs to be produced within the expected schedule, it was assumed it would take an average of 23 days to install each classroom. In reality however, based on the actual outputs produced and the actual schedule (adjusted for the lockdown period), it took an average of 56 days to install each classroom, well over the benchmark timeline used.

Table 4: Time Efficiency Assessment

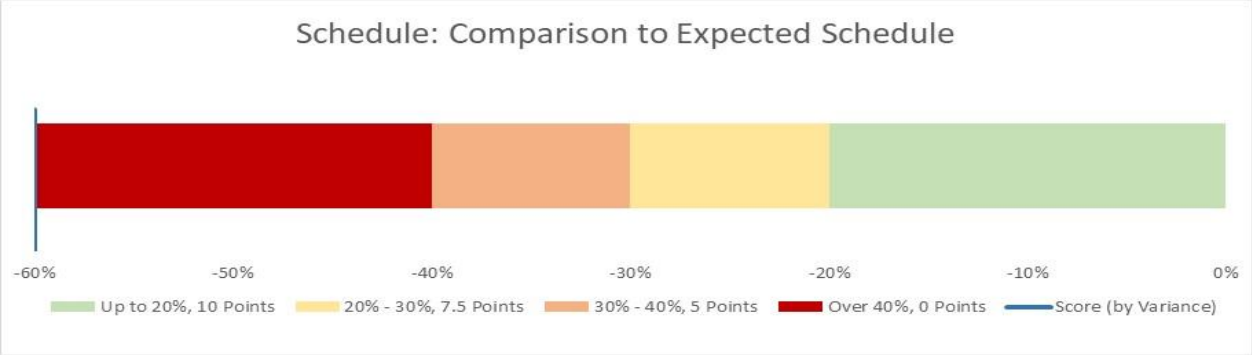
TIME EFFICIENCY ASSESSMENT: 0/10 POINTS	
Output Unit Time	62 average days to install each classroom
Adjusted Output Unit Time	*56 average days to install each classroom*
Benchmark Output Unit Time	23 average days to install each classroom
Variance (Days)	-39 days
Adjusted Variance (Days)	*-33 days*
Variance (%)	-170%
Adjusted Variance (%)	*-140%*
TIME EFFICIENCY SCORE	**0**



Given that the actual number of project days at 308 days is 145 days or 89% more than the planned number of project days of 163, no points were assigned for the schedule assessment. When adjusted for the lockdown period, the actual project days (280 days) was still 117 days or 72% more than the planned project days, resulting in no points assigned for the schedule assessment.

Table 5: Schedule Assessment

SCHEDULE ASSESSMENT: 0/10 POINTS	
Planned Project Days	163 days
Actual Project Days	308 days
Adjusted Actual Project Days	*280 days*
Variance (Days)	-145 days
Adjusted Variance (Days)	*-117 days*
Variance (%)	-89%
Adjusted Variance (%)	*-72%*
SCHEDULE SCORE	**0**



Effectiveness (25 out of max 35 points)

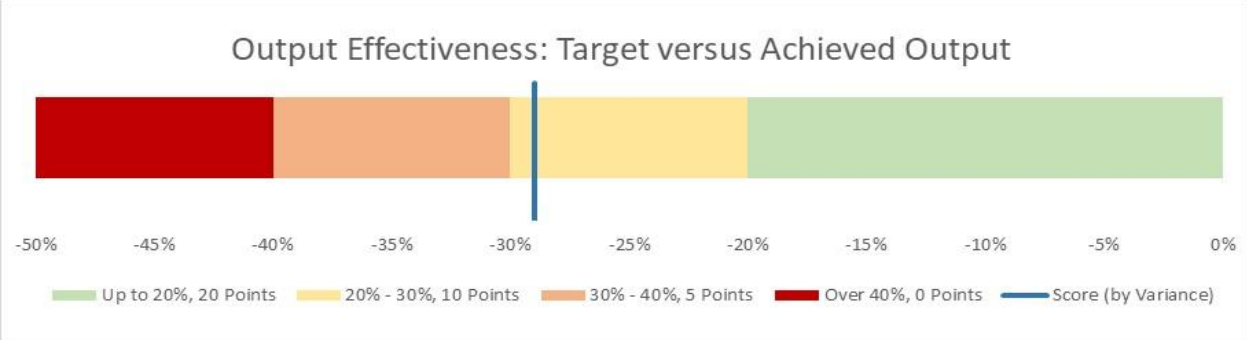
Output Effectiveness

Output effectiveness is a measure which compares targeted output indicators to achieved output indicators. Based on the Monitoring and Evaluation (M&E) Results Framework, the project aimed to construct/renovate a total of seven (7) classrooms. At project completion, three (3) classrooms were built in the tent, one (1) permanent classroom was repaired, and one (1) office was built in the tent. In this way, five (5) classrooms/offices were installed/repaired through the project, rather than the targeted seven (7).

With the variance percentage of 29%, therefore, the project has been assigned a score of 10 out of 20 points (Table 6) for Output Effectiveness.

Table 6: Target versus Achieved Output

OUTPUT EFFECTIVENESS ASSESSMENT: 10/20	
Targeted Outputs	7 classrooms/offices installed or repaired
Achieved Outputs	5 classrooms/offices installed or repaired
Variance (Classrooms)	-2
Variance (%)	-29%
OUTPUT EFFECTIVENESS SCORE	**10**



Outcome Effectiveness

In terms of outcome effectiveness, the change relationship between the observed output and outcome has been used as a simple measure of outcome effectiveness.

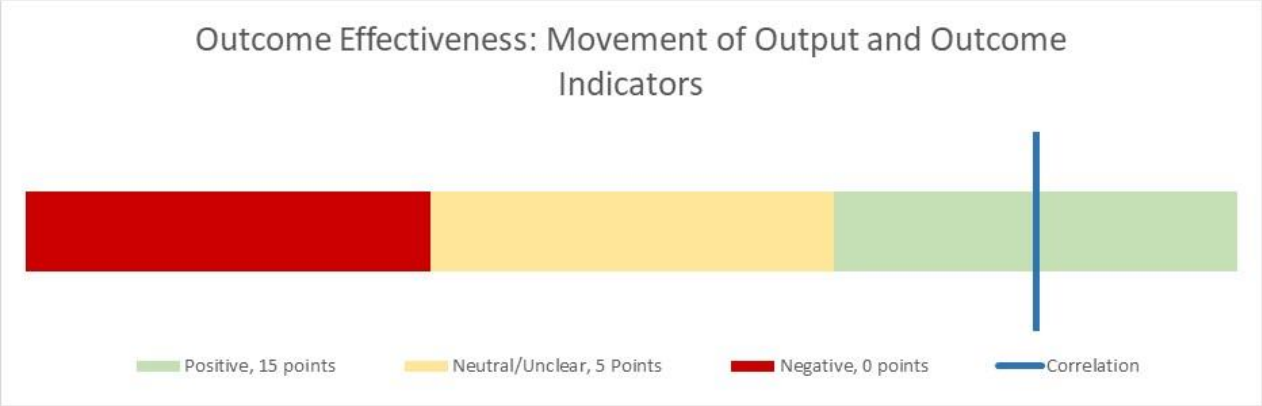
There is a direct relationship between the classrooms and offices being repaired or installed and the outcome: "*Proportion of students in schools fully repaired and equipped with modern facilities to meet education needs*".

From January 2019 to January 2020, the proportion of students in schools repaired and equipped with modern facilities moved from 7.4% of students to 61.2%, representing a difference of 53.8 percentage points, based on statistics from the Ministry of Education, Culture, Youth Affairs, Fishing and Agriculture.

The relationship between output and outcome results has thus been deemed a positive correlation, and a full 15 points has been assigned for outcome effectiveness.

Table 7: Relationship between Outputs and Outcomes

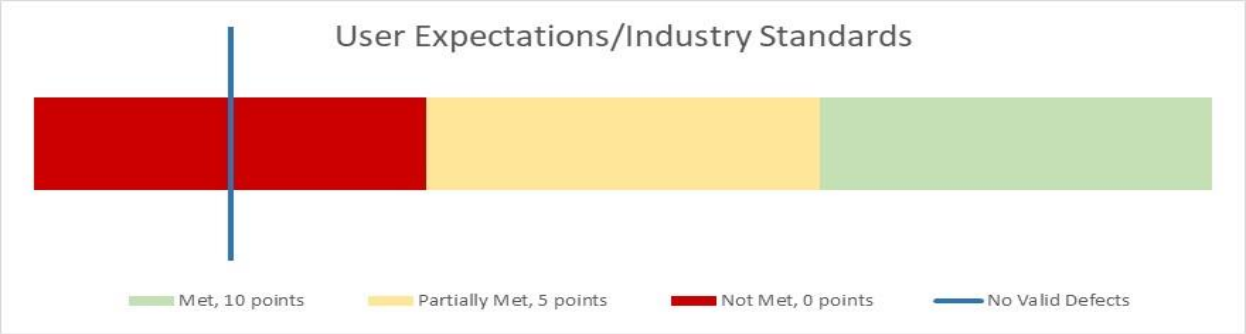
OUTCOME EFFECTIVENESS ASSESSMENT: 15/15	
Output Change: square feet installed	+1,327 square feet
Baseline Outcome – Proportion of students in repaired schools - January 2019	7.4%
Actual Outcome – Proportion of students in repaired schools - January 2020	61.2%
Outcome Change: proportion of students in repaired and equipped facilities	+53.8 percentage points
Assessment of Change Relationship	Positive correlation
OUTCOME EFFECTIVENESS SCORE	**15**



Quality

While the project was completed within an acceptable cost benchmark, a design flaw was brought to the attention of the project management team after the project was originally completed. Specifically, due to fire safety regulations, it was determined that a secondary means of exit from the tent was required but had not been part of the original design for the tent modifications. This required extension of the project schedule as well as additional cost outlays. Because of this critical design flaw, and its impact on the output produced, no points have been assigned to this project for quality.

QUALITY: 0/10	
Comparison to Industry Standards	Below
Quality Assessment	Not Met
QUALITY SCORE	**0**



Equity (5 out of max 5 points)

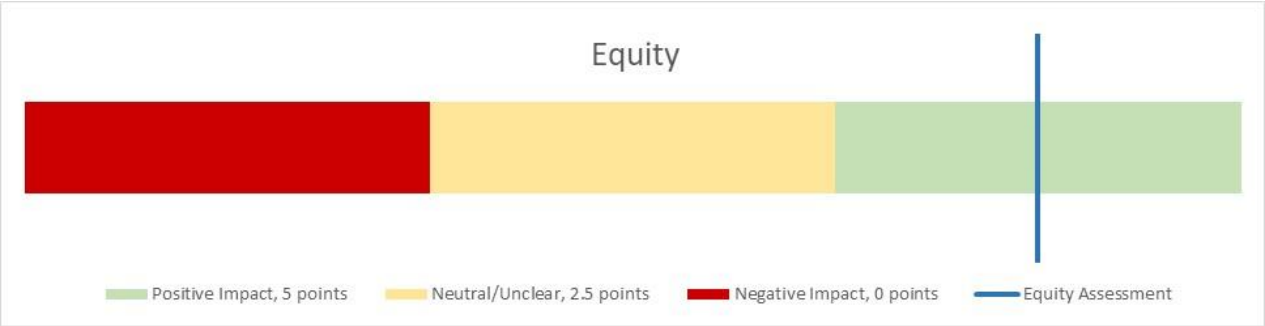
In this case, the equity measurement evaluates whether the specific equity goal of equal use by users or beneficiaries by gender has been achieved.

Given that the outcome data collected evidences that the change in the proportion of students in repaired schools moved by 53.9 percentage points (from 7.6% to 61.5%) for male students, and by 53.6 percentage points (from 7.2% to 60.8%) for female students, this indicates generally equal level of impact of the improvements for students.

Specifically, for the Bregado Flax Education Centre, an equal number of boys and girls (69 each) were enrolled in the school following completion of the project (May 2020).

Improvement for students	Number
Number of students, by gender, in improved school settings (Male)[1]	69
Number of students, by gender, in improved school settings (Female)[1]	69

Both male and female students, as well as teachers, have benefitted from the installation of internal walls and repairs to the school, and thus this project has been assigned a full equity score of 5 points.



[1] Data on students in improved school settings from Ministry of Education, Culture, Youth Affairs, Agriculture and Fisheries, 2020.

Lessons Identified

Given that the conclusion of this project was confronted by an inability to turn the project over due to breach of fire safety requirements, the primary lesson identified through execution of this project has been the need to ensure that all regulatory requirements and approvals are met and obtained from initial conception of a project through to completion and handover.

It is critical that the RDA's project planning, design and implementation processes demonstrate compliance with building regulations across all relevant aspects including environmental concerns, fire safety, and building quality. To this end, greater attention will be placed on closely reviewing project designs at an early stage to ensure holistic compliance. This, in conjunction with the RDA's implementation of more thorough planning, consultation and review processes, is expected to improve the quality of outputs going forward in better meeting the requirements and expectations of relevant stakeholders.

Conclusions

The scoring methodology of the RDA's VfM Framework has been used in assessing Value for Money and assigning a VfM Score to the Bregado Flax Junior School (BFJS) Internal Walls project.

Given that this project was not completed within budget or schedule expectations, but was built within the cost benchmark used, partially achieved its targeted outputs, and contributed to a broader outcome, the project was assigned a total of 50 out of a maximum 100 points.

The importance of keeping accurate, up-to-date, readily accessible information on project budgets, schedules, spending and results is continuously underlined in the process of conducting VfM assessments. The Monitoring and Evaluation Team continues to play an important role in reviewing the quality of this information, and collating data for calculation of projects' VfM scores.