

**FOLLOW-UP AUDIT REPORT  
AUDITOR GENERAL OF JAMAICA**

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**e-Learning Jamaica Company Limited**

**TABLETS IN SCHOOLS (TIS)**

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**Follow-up Audit Report**

Prepared by:  
The Auditor General's Department, Jamaica  
May 2016

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This report was prepared by the Auditor General's Department of Jamaica for presentation to the Board and Management of E-Ljam Co. Ltd and the Permanent Secretary of the Ministry of Science Energy and Technology.



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## Executive Summary

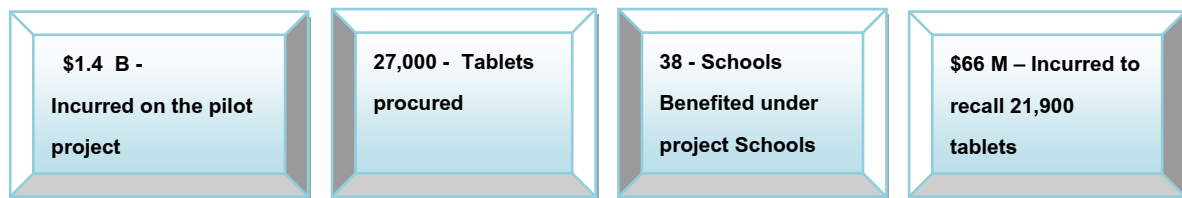
The e-Learning Jamaica Company Ltd. was established as an Agency under the Ministry of Science, Technology, Energy and Mining. e-Learning manages two major projects namely: the e-Learning High School Project and the Tablets in Schools (TIS). These projects represent special interventions of the Government of Jamaica in partnership with the Ministry of Education and other stakeholders to improve the quality of education through information and communication technologies.

The e-Learning project commenced activities for the Tablets in Schools Pilot Project in April 2013. Under the Pilot Project approximately 25,000 tablets were slated to be provided to students and teachers in 38 pre-primary, primary and secondary schools island wide. The Project was expected to provide other e-learning technologies, internet connectivity, relevant e-content, and the training of teachers, instructors and facilitators at the various access points in the surrounding neighborhood of the selected schools. The Project is consistent with the Government's Vision 2030 - National Development Plan Outcome number two- World Class Education and Training.

A follow-up audit was conducted to assess how effective e-Learning implemented the Tablets in Schools (TIS) Pilot project and whether there was proper oversight.

Since our audit in 2014, we identified some areas of good practice where no new issue was raised. However, the areas highlighted in paragraph 2 to 3 of the key findings require improvement.

### Facts



### Key Findings

- 1. Positive steps taken by e-Learning to manage the TIS pilot project.** Since our last audit in 2013/14, we found that e-Learning has taken steps to improve the management of the TIS pilot project. To avoid the challenges faced by countries which attempted similar projects, e-Learning established a steering committee with responsibility for the oversight of the project along with sub-committees and working groups. In addition, e-Learning held ongoing public education programmes, provided training for teachers and engaged other stakeholder groups.
- 2. Weaknesses in some areas of project management may affect the successful rollout of project.**
  - (i) Inadequate assessment cost e-Learning \$66 million for recalling and reconstituting tablets.**

Our follow-up review disclosed that e-Learning did not adequately assess the needs of the TIS and the risks associated with its use prior to acquisition and distribution of the tablets. As a result, e-Learning spent \$66 million to recall 21,900 of the 23,732 tablets that were

distributed in order to reconstitute them with upgraded device management system, include emails, provide replacement, new content and to carry out repairs.

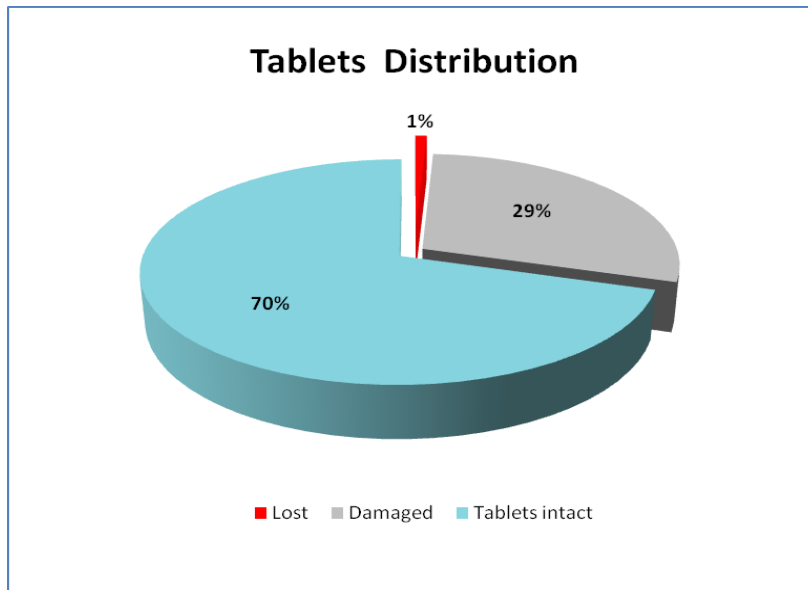
**(ii) Delays in deliverables impede the TIS implementation process.**

We noted that only five (28%) of the 18 deliverables identified in the TIS Pilot project document, were completed in the stipulated timeframe. Our review revealed that some activities were delayed for periods ranging from 31 to 579 days. Also, the Universal Service Fund (USF) having spent US\$57,200 and J\$45 million, did not deliver stable internet connectivity to the project. Consequently, this contributed to the pilot project being extended for another academic year to July 2016. USF indicated that it experienced challenges in providing adequate internet and whilst initial bandwidth at each school had been increased, it remained inadequate. USF has since installed a Cache Box in one High School that must be assessed for adequacy before being introduced to other schools.

Consequent on these delays, the requisite quarterly and final evaluations that should have been carried out during the life of the project were not undertaken. Instead, e-Learning undertook a Situation Analysis that was completed in March 2016. e-Learning's failure to conduct the planned evaluations may have prevented the Company from assessing which of the risks materialised and then to implement mitigating strategies to bring the Project back on track or minimize the ripple effect that the delay would have had on other aspects of the Project. The inability of e-Learning to deliver the pilot project within the planned time forced the Company to extend the Project for another academic year for which retroactive approval was obtained from Cabinet along with an additional \$397.98 million for completion.

- 3. e-Learning was not stringent in its effort to protect the \$939 million worth of tablets and accessories.** Despite spending \$939 million to procure tablets and accessories for the TIS project, we noted that e-Learning was not stringent in its effort to hold negligent beneficiaries accountable for damaged or lost tablets. We found no evidence that e-Learning conducted investigations to determine whether negligence played a role in the loss of 200 tablets and damage to another 6,862 tablets (**Chart 1**), which is estimated to cost GoJ US\$257,140.36 and J\$7.7 million. This is contrary to the e-Learning's Pledge Form agreement with parents and students, stating that the student or parent would be responsible for any damage or loss caused by neglect or abuse. We also noted that e-Learning did not report the loss of the tablets to the Financial Secretary and the Auditor General in accordance with the Financial Regulations. e-Learning's failure to investigate and report on the loss/damaged tablets undermines the accountability process and the opportunity to determine the cause and implement remedial actions may have been missed.

Chart 1 Tablets Distributed



### Recommendations

**To improve the efficiency and effectiveness of the management of projects, e-Learning should consider adopting the following recommendations:**

1. e-Learning should immediately assess the status of the Pilot project and implement strategies to mitigate future challenges. They should also move quickly to implement robust internal controls that would improve their monitoring and evaluation systems to ensure that deliverables are achieved.
2. e-Learning should develop and implement clear guidelines over the safeguard of the tablets. Additionally, e-Learning should, without further delay, report the lost tablets in keeping with the Financial Regulations as well as investigate and take remedial action to recover losses related to lost and damaged devices.

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## **Part One**

### **Introduction**

#### **Aim of TIS Project**

To contribute to the creation of an educated and knowledge-based society that is globally competitive.

#### **Objectives of the TIS**

**1.1** The main objectives of the TIS project are:

- i. provide children in the selected educational institutions with appropriate tablets, based on agreed guidelines for e-learning devices;
- ii. provide learners at Libraries, Community Access Points , Jamaica Foundation for Life Long Learning, state homes and other learning centres in the neighbourhood of the selected schools with access to relevant e-Learning content;
- iii. provide technical and implementation support to the schools and access points; and
- iv. educate the school community in the use and importance of the tablets and other technologies to job creation and community economic development.

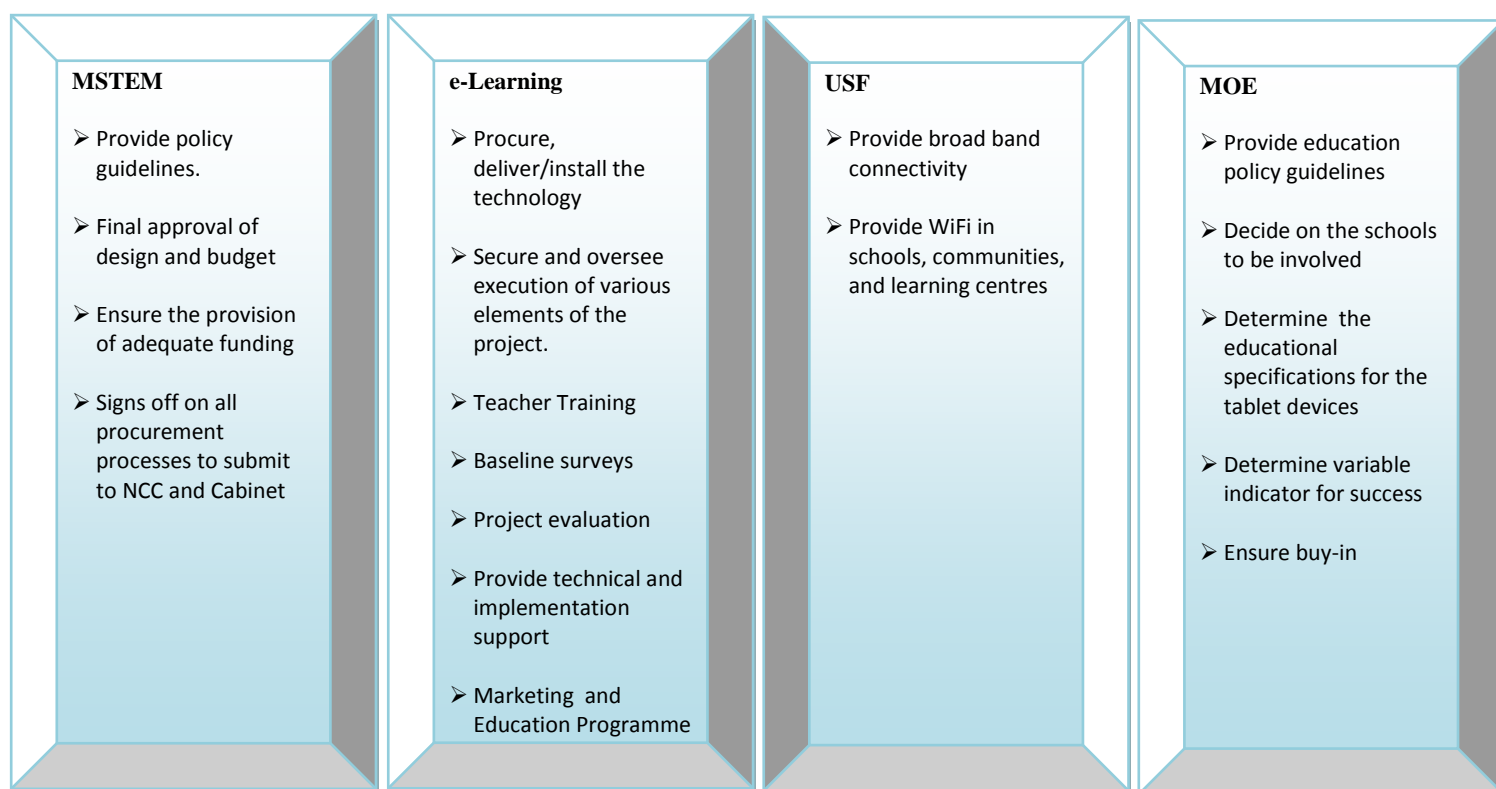
#### **Role and Function of e-Learning Co. Ltd.**

The e-Learning Jamaica Company Limited (e-ljam) was established in March 2005 as a limited liability company, an agency under the Ministry of Science Technology Energy and Mining. The role and function of e-Learning are to:

- implement e-Learning project in collaboration with the Ministry of Education (MOE);
- promote the integration and infusion of technology in the education system; and
- act as the implementation arm for approved interventions funded through the Universal Access Fund established under the Telecommunications Act 2000.

e-Learning is managed by a Board of Directors appointed by the portfolio Minister. The Company moved to various Ministries along with the telecommunications portfolio and was transferred to the Ministry of Education (MOE) for nine months during 2011. It was relocated to the Ministry of Science, Technology, Energy and Mining (MSTEM) in January 2012. Managing the High Schools project was the core function of e-Learning Company Ltd until March 2013 when MSTEM requested the Company to implement a pilot project for Tablets in Schools (TIS). Under this pilot Project, approximately 25,000 tablets were to be provided to students and teachers in 38 pre-primary, primary, all age, junior high and high schools island wide.

## Roles and Responsibilities under the TIS



## How is the Project funded

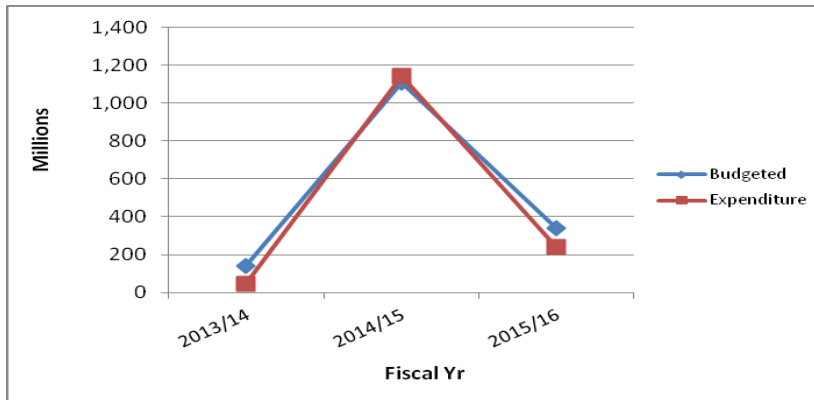
**1.2** Cabinet approved \$1.798 billion for the TIS project for April 2013 to July 2016. The Estimates of Expenditure also allocated a total of \$700 million for the 2015/16 fiscal year. This was to be funded from the Universal Service Fund (USF). As at December 2015, e-Learning spent JA\$ 1.429 billion received from the USF covering the financial years 2013/14 to 2015/16. **(Figure 1)**. Expenditure for the period was within the revised budget of \$1.59 billion presented by e-Learning. In addition, as at December 2015, the USF spent JA\$45,058,355.27 and US\$57,200 on internet connection for schools in the pilot project.

**Figure 1** Summary of Project Funding and Expenditure ('000)

Financial Year	Budgeted e-Learning (JA\$) (\$ '000)	e-Learning Direct Expenditure (JA\$) (\$ '000)	USF Direct Expenditure (JA\$) (\$'000)	USF Direct Expenditure (US\$)
<b>2013/2014</b>	142,581	44,649	Nil	Nil
<b>2014/2015</b>	1,107,419	1,143,146	Nil	25,025
<b>2015/2016</b>	338,000	241,183	45,058	32,175
<b>TOTAL</b>	<b>1,588,000</b>	<b>1,428,978</b>	<b>45,058</b>	<b>57,200</b>

Source: Income and Expenditure report from e-Learning and USF

**Figure 1.1 - e-Learning Budgeted Expenditure vs Actual**



**Tablets to be supplied**

1.3 e-Learning received Cabinet approval to purchase a total of 27, 000 tablets. **Figure 2** represents the total amount of tablets to be supplied under the TIS project from each supplier.

**Figure 2 Number of Tablets to be procured for the TIS project**

Supplier	# of Tablets	Cost (US\$)
Supplier 1	10, 500	2,034,162.00
Supplier 2	5, 500	1,895,653.52
Supplier 3	5, 500	1,999,175.00
Supplier 4	5, 500	1,479,291.85
<b>Total</b>	<b>27, 000</b>	<b>7,408,282.37</b>

Source: Extract of letter dated March 10, 2014 from the Ministry of Science Technology and Mining

**The focus of our audit**

- 1.4 In our audit, we sought to determine whether:
- there was proper oversight of the TIS Project; and
  - there was an effective monitoring and evaluation system in place.

**Audit Scope and Methodology**

1.5 This follow-up audit focused on the period 2014/15 to 2015/16. We also considered relevant information outside the audit period. The audit was planned and conducted in accordance with INTOSAI performance audit standards. The planning process involved gaining a thorough understanding of the operations of e-Learning. Our assessment is based on the review of internal and external documents, interviews with staff and analysis of data provided by e-Learning.

- 1.6** Our review of the TIS focused on Expenditure, Project Deliverables, and the Governance mechanisms.

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## Part Two

### Oversight of the Tablets in Schools Project

In this Part of the report, we evaluated the progress of the Tablets in Schools (TIS) Pilot Project.

#### **e-Learning has taken steps to manage the TIS project**

- 2.1 As noted in the AuGD's 2014 audit report, e-Learning conducted research of countries that sought to implement similar projects. Based on the findings from the research, none of the countries successfully implemented the projects. e-Learning asserted that a major contributor to the perceived failure in other countries was the lack of buy-in from all stakeholders. We sought to determine how e-Learning planned to avoid the challenges of the other countries. We found that e-Learning established a steering committee with responsibility for the oversight of the project along with sub-committees and working groups. e-Learning also held ongoing public education programmes, provided training for teachers among other strategies.
- 2.2 e-Learning engaged Shortwood Teacher's College to conduct a "Needs Assessment Research for Primary Teachers" in 2013. The assessment examined technology integration within the current primary school curriculum. e-Learning informed us that the report concluded that using computer technologies in facilitating students learning will likely stimulate their interest and cater to their learning style/preference. Our review of said report revealed that whilst this was so, it was also recommended from then, that among other things, the technological devices must be reliable and equipped with the application/software that will support the teaching of content, skills and values and attitudes outlined in the early childhood and primary level curricula. The report also recommended that schools/classrooms should be equipped with adequate and reliable internet connectivity.
- 2.3 Despite the positive steps taken by e-Learning since our last audit, there are weaknesses as identified in the ensuing paragraphs that may affect the successful rollout of the project.

#### **\$1.4 billion already spent on pilot project without feasibility study**

- 2.4 Project management involves critical components such as planning, implementation, monitoring and evaluation. We found that the e-Learning commenced the pilot project without conducting a feasibility study, notwithstanding the significant expenditure of \$1.4 billion. A feasibility study would test the viability of the project, identify the needs of the project and outline the potential areas of risks and the possible implications. e-Learning advised us that the pilot project would perform the functions of testing the viability of the project and outline the potential risk, and that the lessons learnt will assist in determining how these would be managed in the roll-out to the other schools. It is our view however, that a more informed approach should have been adopted considering the significant investment of \$1.4 billion, despite the project only being a pilot.

**Inadequate assessment cost e-Learning \$66 million for recalling and reconstituting tablets**

- 2.5 e-Learning completed distribution of 23,732 tablets to students and teachers in March 2014. However, in 2015, e-Learning took a decision to recall the tablets. Our review of the Board Minutes of June 2015 showed that the tablets were being recalled due to challenges including: breaches of tablet device management system, inadequate internet connectivity, inability to undertake formative and summative evaluation and the late commencement of tablet distribution. Consequently, the tablets had to be recalled in order to carry out repairs, reconstitution with upgraded device management system, inclusion of emails, replacement and new content for new grade levels. The minutes also indicated that the tablets were to be re-distributed by mid August 2015. As at October 2015, e-Learning had spent \$66 million to recall 21,300 of the tablets as shown in **Figure 2** below.

**Figure 3** Breakdown of Tablet recollection cost

Cost Classification	Description	Recall cost
<b>Collection and Delivery</b>	Staffing and transportation costs to collect from and delivery to the 38 schools in 40 locations	JA\$20,600,000
<b>Administration</b>	61 content loading assistants stationed at 4 locations for 3 months at JA\$3500 per day, transportation of tablets between facilities, misc items such as boxes, media cards, printing, meetings, food, cleaning items etc.	JA\$16,700,000
<b>Accommodation</b>	320 person nights to supervise content installation and collection and distribution at US\$150 per night	JA\$3,000,000
<b>Implementation Assistants (IA)</b>	One IA per location for 9 months at JA\$2,500 per day	JA\$2,700,000
<b>Vendor related expenses</b>	Small amount of collection, rent for storage and working space, insurance, re-provisioning of tablets for new students.	JA\$23,000,000
<b>Tablet recall expenses</b>		<b>JA\$66,000,000</b>

Source: e-Learning cost breakdown

- 2.6 Of the remaining 2,332 tablets not collected, e-Learning informed us in January 2016, that “600 had been collected and that the Ministry of Education and the schools advised them that they are in the process of collecting the remainder.”

**Delays in deliverables impede the TIS implementation process**

- 2.7 The TIS pilot project document identified 18 deliverables that should have been accomplished for the successful delivery of the pilot project within the stipulated timeframe. Our review of the status of the deliverables revealed that five activities were completed within the stipulated timeframe while delays/slippages ranging from 31 to 579 days were observed. For example, the educational resources which include the identification of “Apps” and content for preloading that should have been provided by March 2014, was approved by the Ministry of Education (MOE) in August 2014. We also observed from the Status report that delays in the procurement approval process resulted in the contracts not being signed in a timely manner to allow for the tablets to be delivered in the stated time.
- 2.8 The delays in implementing the pilot project also impacted the evaluations that should have been carried out during the life of the project. The Project Document indicated that quarterly

and final evaluations of the project should have taken place between December 2013 and July 2014. However, the status report indicated that only a Situational Analysis was done, and the final report submitted in March 2016. Further, e-Learning's failure to conduct the planned evaluations may have prevented the Company from assessing which of the risks had materialised and then to implement mitigating strategies to bring the Project back on track or minimize the ripple effect that the delay would have had on other aspects of the Project. Consequent on these factors was the inability of e-Learning to deliver the pilot project within the planned time and retroactive approval was sought from Cabinet for time extension of 365 days. Cabinet in January 2016, approved an additional \$397.98 million for the continuation of the TIS project in 38 schools for the full academic year September 2015 to July 2016.

### **Delay in providing internet connectivity contributed to the extension of the project**

- 2.9** We noted that the Universal Service Fund (USF) was responsible for providing broad band as well as hot spots for Wi-Fi connectivity to all schools in the pilot project and also to designated learning centers in the surrounding areas. However, significant delays in providing internet connectivity was cited as a major factor contributing to the extension of the project. We gleaned from the Project Monitoring Report of October 2015, that all 38 schools, had complaints about inadequate internet and WiFi connectivity, although USF had advised that all schools had connectivity. USF indicated that it experienced challenges in providing adequate internet and whilst initial bandwidth at each school had been increased, it remained inadequate. As at December 2015, USF had spent JA \$45.06 million and US\$57 thousand on internet connectivity. Further, we noted that as at February 2016, the USF had provided one Cache Box in a High School; however, it needed to be examined for adequacy. USF also advised that requests had been made to procure additional units for deployment at the other schools. The Cache Box, it noted, was to provide a more feasible solution to the issues faced.

### **e-Learning was not robust in its effort to protect the \$939 million worth of tablets acquired**

- 2.10** Despite spending \$939 million to procure tablets and accessories for the pilot project, we found that e-Learning was not robust in its efforts to secure the assets. We noted that in collaboration with the Ministry of Education, e-Learning required parents and students to sign a Pledge Form regarding the use and care of the tablets. This Pledge Form included among other things that parents are required to cover the cost of replacing damaged and/or lost accessories to the tablets. The Pledge Form also advised parents that 'questionable damage may not be covered under the warranty conditions or the protection insurance coverage provided'. Further, based on the Pledge Form, the students would be responsible for any damage or loss caused by neglect or abuse, the cost of which would be borne by the parent(s).
- 2.11** e-Learning reported that as at April 2016, of a total of 200 tablets that had been reported missing, 95 tablets were recovered. The records also revealed that 6,862 or 29 per cent of the number of tablets distributed were reported damaged as at April 21, 2016. Despite the magnitude of the expenditure to acquire the tablets and the guidelines of the Pledge Form, e-Learning advised us that they intended to repair the tablets without submitting any evidence that an investigation was conducted to determine whether negligence played a role



in the loss or damage of the tablets. e-Learning obtained proforma invoices from two of the four contractors reflecting repairs totaling US\$257,140.36 and JA\$7.7 million. **(Figure 4)**. Consequently, e-Learning not only breached its own agreement but will also incur repair costs that could likely have been covered by the parents if the requisite investigations were done. Further, e-Learning Jamaica failed to report the loss of tablets to the Financial Secretary and the Auditor General in accordance with the Financial Regulations.

**Figure 4** Number of Tablets Damaged and Cost to Repair Tablets

Contractor	# of tablets damaged	Proforma Invoice for repair	Remarks
<b>Company 1</b>	2,567		Repair cost is built in the supplier's contract
<b>Company 2</b>	2,281	JA\$7,695,483.23	
<b>Company 3</b>	573	US\$44,933.36	
<b>Company 4</b>	1,441	US\$212,207.00	
	<b>6,862</b>		

Source: AuGD compilation of e-Ljam's data provided as per Proforma invoices

**Chart 1: Planned Timelines vs Actual for TIS Project**

