



# ICT INVESTMENT IN SCHOOLS PRESENTATION

EASTERN CAPE DEPARTMENT OF  
EDUCATION

**16 JULY 2020**

# OVERVIEW

Where were we?

Initial interventions

Lessons learnt and challenges encountered

Current interventions

The future



# INTRODUCTION

- The Department has invested immensely on ICT infrastructure over the recent past.
- The return on ICT investment has yielded positive outcomes for the Department. This is evidenced by the upward trajectory on learning outcome improvements for all grades, particularly grade 12 results.



- These were achieved through partnering with a industry leaders in the ICT space.
- The advent of the novel corona virus disease (COVID19) outbreak, that took the entire world by surprise, was a real test of the ICT investment in the Department.
- When the South African President Cyril Ramaphosa ordered the closure of schools on the 15<sup>th</sup> of March 2020 across the country, this led to unprecedented disruption of schooling and curriculum delivery.
- It further ensured business continuity in some of the key and strategic areas of the Department, e.g. Curriculum delivery through live streaming, Communication & Customer Care, etc.



# PROBLEM STATEMENT

- The Department wants to build on these improvements and add another layer of ICT investment.
- The shrinking government fiscus evidenced by year-on-year budget cuts, is the major threat to continued ICT investment.
- It is for this reason that the Department wants to partner with likeminded social and business partners to innovatively deliver and enable access to quality education for all children of the Eastern Cape.
- However, ECDoE is facing other systematic and historical challenges which include:
  - ❑ Low qualified teacher-to-pupil ratio
  - ❑ Sparsely located schools that lead to pupils walking long distances
  - ❑ Inadequate educational infrastructure
  - ❑ Lack of resources and equipment in schools
  - ❑ Lack of access to relevant content
  - ❑ Distorted ICT solutions and systems



# EDUCATOR MOBILE DEVICES ROLLOUT



FOUNDATION  
PHASE



SASAMS



INTERSEN  
PHASE



FET  
PHASE



# TOTAL INVESTMENT VALUE ON EDUCATOR MOBILE DEVICES



# CHALLENGES ENCOUNTERED

- The mass deployment of mobile devices as working tools to all Eastern Cape educators was the biggest ICT project and investment that the Department has ever embarked on.
- Prior and post the distribution of mobile devices, environmental analysis was conducted to ascertain the readiness and the impact of the roll out of mobile devices as tools of trade in education.
- The environmental analysis was conducted by means of stakeholder engagements to understand concerns regarding ICT integration in the Education.
- The following summarises key lessons learnt in the mass deployment of mobile devices to schools:
  1. Exclusion of district officials and other key units from the distribution of mobile devices
  2. Direct distribution of devices to school principals caused frictions in schools
  3. Lack of safety measures & insurance of the devices left the recipients of mobile devices vulnerable
  4. Clear process for transfer of ownership of the mobile device for recipients who are leaving the system
  5. Technical network and software challenges remain unresolved



# SOLUTION STATEMENT

- Prevailing circumstances of the rapidly changing world, and shrinking national fiscus, necessitate that the Department re-evaluates its business processes.
- Innovation, synchronisation of processes, best value for money, social partnering and development are the key drivers for a departmental ICT solution package.
- Data has been identified as the key and major cost driver in the cost of ICT in the Department.
- An all encompassing, holistic ICT solution to service different clients of the Department is the best solution.
- A cost benefit analysis of current ICT contracts was been conducted.
- A comparative analysis of lease vs outright purchase was evaluated.



# COMPARATIVE ANALYSIS LEASING VS OUTRIGHT PURCHASE

## LEASE PROCUREMENT

## OUTRIGHT PURCHASE PROCUREMENT

### Financial considerations

- Leasing requires less initial capital.
- Instead of financing with a large down payment, leasing requires a minimal deposit and low monthly payments designed around your needs and budget.

- Higher initial expenditure.
- Ties capital due to high amount of down payment required.
- No diversification of the budget to fund other programs.

### Avoid Additional Costs

- Leased machinery covers extra expenses like installation, delivery, operational and maintenance costs.

- An outright purchase of the equipment can also include extra expenses like installation and delivery, however, operational and maintenance costs are often excluded.

### Technology obsolescence considerations

- Technology assets typically have a short life span and they sometimes stop working at their optimal potential and with little or no resale value at the end of their useful life.

- Usually Departments get stuck with old poor performing equipment.
- ICT machinery and technology evolve quickly, older equipment quickly becomes out-of-date and obsolete

### Risk transfer

- The Department enjoys the benefits and use of assets, and transfers risks associated with owning the assets to the lessor.

- With the outright procurement, the risks and benefits get transferred to the Department, i.e. faulty equipment becomes the responsibility of the Department.



# KEY CONSIDERATIONS BY THE DEPARTMENT FOR PARTICIPATING ON THE LEASE CONTRACT

## Financial viability

- The impact of budget cuts and shrinking budget allocations.
- Convenient and feasible due to flexibility and staggered monthly payments.
- The impact of COVID-19 virus has put an added financial pressure on the department.

## Cost of data

- Data is the key and major cost driver in the cost of ICT.
- Attractive data packages comparative to market prices and other data contracts in the Department.
- This is especially an important cost to consider as the Covid-19 situation has forced the Department and all organisations to conduct business online.
- The Department has initiated discussions with other network providers to revise and renegotiate data prices on existing contracts.



# KEY CONSIDERATIONS BY THE DEPARTMENT FOR PARTICIPATING ON THE LEASE CONTRACT

## Risks and benefits

- Access to state-of-the-art high-tech ICT equipment.
- Transfer of risks associated with ownership of same to the lessor.
- Access to highly skilled ICT personnel.
- Upgrades to new technologically advanced equipment every three years for as long as the contract is valid.

## Maintenance and support

- The Department does not have the required capacity and requisite skills to maintain and support technical and specialised ICT equipment.
- The available departmental organogram does not cater for additional IT and Asset Management posts to manage and support deployment of ICT related assets at schools.
- Technical support and maintenance costs savings.



# KEY CONSIDERATIONS BY THE DEPARTMENT FOR PARTICIPATING ON THE LEASE CONTRACT

**Indirect costs which include maintenance, management, operational, disposal, replacement (on lost assets) and depreciation costs**

The following are other costs related to ownership of ICT assets:

- Depreciation costs.
- High replacement and disposal costs for lost and obsolete ICT equipment and parts.
- Repair costs for faulty, malfunctioning, ICT equipment and parts.
- The list of malfunctioning and faulty devices is growing as the devices are aging and becoming outdated. This is an unsustainable cost for the Department and a major disadvantage for outright purchase.
- Additional to the costs mentioned above, the following are costs associated with owning and managing ICT equipment:
  - ✓ Travelling and accommodation costs to attend to faulty or malfunctioning equipment
  - ✓ S&T costs for claims on the above
  - ✓ Training costs for departmental staff on use of complex ICT equipment
  - ✓ Costs related with communicating with the users of the devices, e.g. airtime, data, etc.



# KEY CONSIDERATIONS BY THE DEPARTMENT FOR PARTICIPATING ON THE LEASE CONTRACT

## eLearning benefits

- Enabled the Department to respond swiftly and promptly with minimal disruption to delivery of curriculum content to learners.
- Enabled the Department to fast track the catchup program for Grade 12 learners.

Other advantages of e-learning include but not limited to the following:

- Convenience and flexibility, the curriculum content and resources are available from anywhere and at any time.
- Learners will have 24/7 access to different educational content and resources at any time and from anywhere.
- The recorded lessons provided for audio and video learning can be rewind, watched, and heard again, if a learner did not understand the topic first time around.
- Online learning promotes active and independent learning.
- Through discussion boards and chats, learners will be able to interact with other learners and teachers online for further enrichment.
- eLearning also enables teaching and learning to take place without exposing teachers and learners to the effects of the corona virus.



# LEARNERS MOBILE DEVICES PACKAGE

The ECDoE has thus partnered with MTN and Sizwe Africa IT Group to roll out ICT solution comprising of the following components:

- 13 Turnkey Interactive and Virtual eLearning studios with Sizwe Live Video Streaming Solution (video compression).
- 72 000 3GB Reverse URL billed access to the eLearning broadcasting centres for learners and 1GB internet access for learners over a period of 3 years
- 55 000 eLearning handheld devices targeted at the disadvantaged learners in Quintile 1, 2 and 3
- Zero rated access to the e-learning platform of the Siyavula Foundation.
- 55 000 2GB package to educators to provide connectivity for educators of ECDoE over a 3 year period.
- 55 000 2Enable Application licenses (curriculum app) to be preloaded all devices.
- 55 000 KnoxGuard security App installation (security app), a cloud-based service that allows remote control and lock Samsung devices to reduce risk of loss
- 55 000 screen protector and rubberised pouche.
- Project Management, Distribution and Change Management



# PARTICIPATION & LEGAL FRAMEWORK



# SCM REGULATIONS

SCM in the Country is guided by five (5) legislative requirements:

- Section 217 of the Constitution
- The PFMA Act of 1999
- National Treasury Regulations (NTRs)
- The Preferential Procurement Policy Framework Act of 1999 and its regulations of 2000, which has been reviewed – Preferential Procurement Regulations (PPR) of 2000
- National Treasury Instruction Notes



# PARTICIPATION IN THE DEPARTMENT OF ECONOMIC DEVELOPMENT AFFAIRS AND TOURISM (DEDEAT) CONTRACT

- The approved SCM policy of the Department adopted a Sourcing Strategy to have term contracts in place **on an as and when basis** by considering the legislative framework in the following manner:
  - National RT contracts
  - Participate in contracts from other organs of State i.e. NTR16A6
  - PT transversal contracts
  - Departmental term contracts
- Legislation invoked for participation in the DEDEAT contract is NTR16A6.
- Legislation gives authority to the Accounting Officer/s or Accounting Authority to, on behalf of the Department, constitutional institution or public entity, participate in any contract arranged by means of a competitive process by any other organ of state, subject to the written approval of such organ of state.
- Its states further that participation can only be approved where the goods/or services being procured are of an identical specification, the participants subscribe to the same contractual conditions and it cannot exceed the expiry date of the contract.



# PROCESS FOLLOWED TO PARTICIPATE ON THE DEDEAT CONTRACT

- **19 June 2019** – Provincial Treasury (IBAC) approved DEDEAT tender
- **12 August 2019** – ECDoE writes to DEDEAT requesting participation on the contract
- **23 October 2019** - Approval granted by DEDEAT and provided the following supporting documents to ECDoE:
  - ✓ Copy of award letter to Sizwe IT Group
  - ✓ Copy of rental agreement
  - ✓ Leased versus Buy – cost benefit analysis
  - ✓ Service Level Agreement between Sizwe IT Group and DEDEAT
- **13 December 2019** - ECDoE request concurrence /approval from Provincial Treasury (NB: Not a legislative requirement).
- **16 January 2020** – Provincial Treasury responds to ECDoE with concerns.
- **28 January 2020** - ECDoE responded to Provincial Treasury addressing concerns raised.
- **25 March 2020** - Provincial Treasury grants approval to participate with certain conditions.
- **01 April 2020** - ECDoE responds to PT addressing the concerns with the involvement of DEDEAT.
- **16 & 22 April 2020** – Emails to PT requesting formal response on concerns addressed.
- **02 April 2020** - Letter of award issued out to Sizwe IT Group.
- **06 April 2020** - Acceptance of letter of award received from Sizwe IT Group.



# FINANCIAL IMPLICATIONS



# VIRTUAL CLASSROOMS OUTRIGHT PURCHASE VS LEASE

ITEM DESCRIPTION	TECHNICAL SPECIFICATIONS	QTY	OUTRIGHT PURCHASE VS LEASE PURCHASE						
			OUTRIGHT PURCHASE			RENTAL OVER 36 MONTHS			
			UNIT PRICE	TOTAL	UNIT PRICE	TOTAL			
BROADCASTING STUDIOS									
1 Interactive LED Touch All in One PC (with stands)	AIO-S86 (86inch)	13	R 224,560.70	R 2,919,289.10	R 3,875,271.24	R 139,509,764.64			
	AIO-S65 (86inch)	13	R 113,074.00	R 1,469,962.00					
2 Cameras									
	SV-B4C110	13	R 83,021.90	R 1,079,284.70					
	SV-E4C2100	22	R 16,188.90	R 356,155.80					
	Drift Ghost 4K	13	R 11,676.60	R 151,795.80					
	VHD-V800 Auto-Tracking	13	R 53,220.70	R 691,869.10					
	SV-HD120KIP (IP Out)	22	R 31,133.70	R 684,941.40					
	Canon XF400 Professional 4K Camcorder	13	R 77,714.00	R 1,010,282.00					
3 Streaming and Mixing Equipment									
	S777 (3*HDMI) + (4*SDI)	13	R 228,313.80	R 2,968,079.40					
	RSX2 (2*HDMI)	13	R 62,268.70	R 809,493.10					
	SX5-4 (4*SDI)	13	R 103,779.00	R 1,349,127.00					
	Roland V-60HD Video Mixer Switcher	13	R 121,539.60	R 1,580,014.80					
4 PTZ Controlling	SV-JK101KB	22	R 7,473.70	R 164,421.40					
5 Streaming Sound	SV-ODM02 Suspended Ceiling Mic.	65	R 10,377.90	R 674,563.50					
6 Tripods and brackets	Slik Pro 500HD mkII Tripod	52	R 8,104.20	R 421,418.40					
7 Studio Lights	Lowel TO GO 97 Studio Light Kit	22	R 16,898.70	R 371,771.40					
8 Cabinets									
	Apollo STD Cabinet AP6842.GLA.B	13	R 11,321.70	R 147,182.10					
	Lestech 6u Mounting Wall Cabinet	13	R 3,621.80	R 47,083.40					
9 Network and Wi-Fi									
	Router	13	R 2,861.30	R 37,196.90					
	24 Port Switch	13	R 2,527.20	R 32,853.60					
	24 Port Patch Panel	13	R 2,223.00	R 28,899.00					
	16 Port Switch	13	R 1,582.10	R 20,567.30					
	16 Port Patch Panel	13	R 1,580.80	R 20,550.40					
	5G Wi-Fi Access Point	13	R 8,973.90	R 116,660.70					
	UPS	13	R 4,056.00	R 52,728.00					
	Sundries	13	R 5,200.00	R 67,600.00					
10 Studio Sound									
	Mixer	13	R 16,744.00	R 217,672.00					
	Main Speakers (Pair)	13	R 9,486.10	R 123,319.30					
	Monitor Speakers (Pair)	13	R 6,838.00	R 88,894.00					
	Talk-back Microphone System	13	R 10,237.50	R 133,087.50					
	Cordless Microphone	22	R 9,334.00	R 205,348.00					
	Headphone Set	22	R 3,770.00	R 82,940.00					
	Sundries	13	R 5,850.00	R 76,050.00					
11 MTN Sim		72000	R 48.45	R 125,582,400.00					
Intallaction Cost		13	R 6,608.75	R 85,913.75					
Insurance at 6.5%	6.5%			R 3,412,706.46					
Maintenance over 36 months		36	R 82,551.00	R 2,971,836.00					
<b>Sub Total</b>				<b>R 150,253,957.31</b>			<b>R 139,509,764.64</b>		
<b>Vat @ 15%</b>				R 22,538,093.60			R 20,926,464.70		
<b>Total</b>				<b>R 172,792,050.91</b>			<b>R 160,436,229.34</b>		
<b>Credit</b>				R -			R 27,000,000.00		
<b>Grand Total</b>				<b>R 172,792,050.91</b>			<b>R 133,436,229.34</b>		

# ELEARNING DEVICES OUTRIGHT PURCHASE VS LEASE

		OUTRIGHT PURCHASE VS LEASE PURCHASE			
ITEM DESCRIPTION		OUTRIGHT PURCHASE		RENTAL OVER 36 MONTHS	
	QTY	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL
<b>TABLETS</b>				R 9,779,033.82	R 352,045,217.52
1	Samsung 32GB Galaxy Tab 8" LTE Tablet	R 3,499.00	R 192,445,000.00		R -
	Kickstand Case	R 328.00	R 18,040,000.00		R -
	Samsung Knox	R 108.00	R 5,940,000.00		
	Engraving	R 11.99	R 659,450.00		R -
	Enable App	R 72.90	R 4,009,500.00		R -
	Set Up Cost	R 44.85	R 2,466,750.00		R -
	MTN Sim	R 48.45	R 95,931,000.00		R -
	On site Delivery	R 236.51	R 13,008,050.00		R -
	Maintanance over 36 months plus managing 12 c	R 15.97	R 31,620,600.00		R -
			R -		R -
<b>Sub Total</b>			R 364,120,350.00		R 352,045,217.52
<b>Vat @ 15%</b>			R 54,618,052.50		R 52,806,782.63
<b>Grand Total</b>			<b>R 418,738,402.50</b>		<b>R 404,852,000.15</b>



# FINANCIAL SAVINGS

- Direct savings to be realized from the lease contract is R53 242 223.92

#	ITEM	TOTAL COST OF OUTRIGHT PURCHASE	TOTAL COST OF LEASING	DIFFERENCE
1.	Table 1: Virtual Classrooms	R 172,792,050.91	R 133,436,229.34	R 39,355,821.57
2.	Table 2: eLearning Devices (Tablets)	R 418,738,402.50	R 404,852,000.15	R 13,886,402.35
	<b>Total Cost</b>	<b>R 591 530 453.40</b>	<b>R 538 288 229.50</b>	<b>R 53,242,223.92</b>

- The Department believes participating on the contract “ASSET FINANCE SOLUTION OF MOVEABLE ASSETS” BID NO PP09-18/19-22” awarded by the Department of Economic Development, Environmental Affairs and Tourism to Sizwe Africa IT Group was the most appropriate decision.
- It is the best value for money.
- All processes were followed.
- The Department will also save on innumerable indirect costs and expenses.



# ELEARNING DEVICE ROLLOUT PROGRESS AS AT 10 JULY 2020

DISTRICT	TOTAL NUMBER OF LEARNERS	NUMBER DELIVERED	NUMBER OF SCHOOLS OUTSTANDING	REASON FOR NON-DELIVERY
Alfred Nzo East	4784	4326	01	School closed due to COVID-19
Alfred Nzo West	8638	7027	01	School closed due to COVID-19
OR Tambo Coastal	9237	6302	09 01	Schools with COVID-19 School with protest action
OR Tambo Inland	8039	4755	24	Schools with COVID-19

- Distribution commenced in June 2020
- Currently distribution taking place in Joe Gqabi, Sara Baartman and Nelson Mandela Bay.
- Outstanding districts, Amathole West, Buffalo City, Amathole East, Chris Hani West and Chris Hani East.
- Targeted completion date for Phase 1 is 31 July 2020.





**thank you**

