African Leaders Day

Official Government & Civil Society Leaders Breakfast

Innovation Africa 2018
Africa's Official Ministerial Summit

Rural Connectivity of Schools in Africa – A Cost Effective Solution (with Q & A)

eLearning Solutions
Mainstreaming 21st Century Learning

Innovation Africa 2018
Africa's Official Ministerial Summit

Itai Masimirembwa

CEO

eLearning Solutions, Zimbabwe

eLearning Solutions

Mainstreaming 21st Century Learning

Rural Connectivity of Schools

A Cost Effective Solution

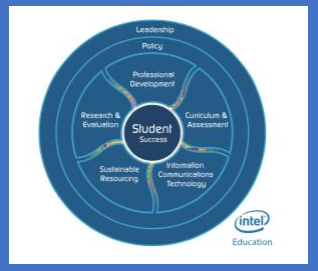
Itai Masimirembwa

Imagine the possibility of having **Unlimited Broadband** for

your whole school at **less than $2 per day!**

Yes, Now You Can!

OUR APPROACH



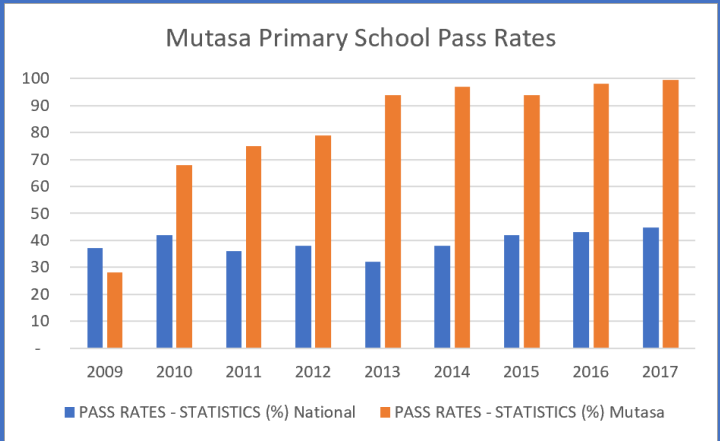
Education Transformation

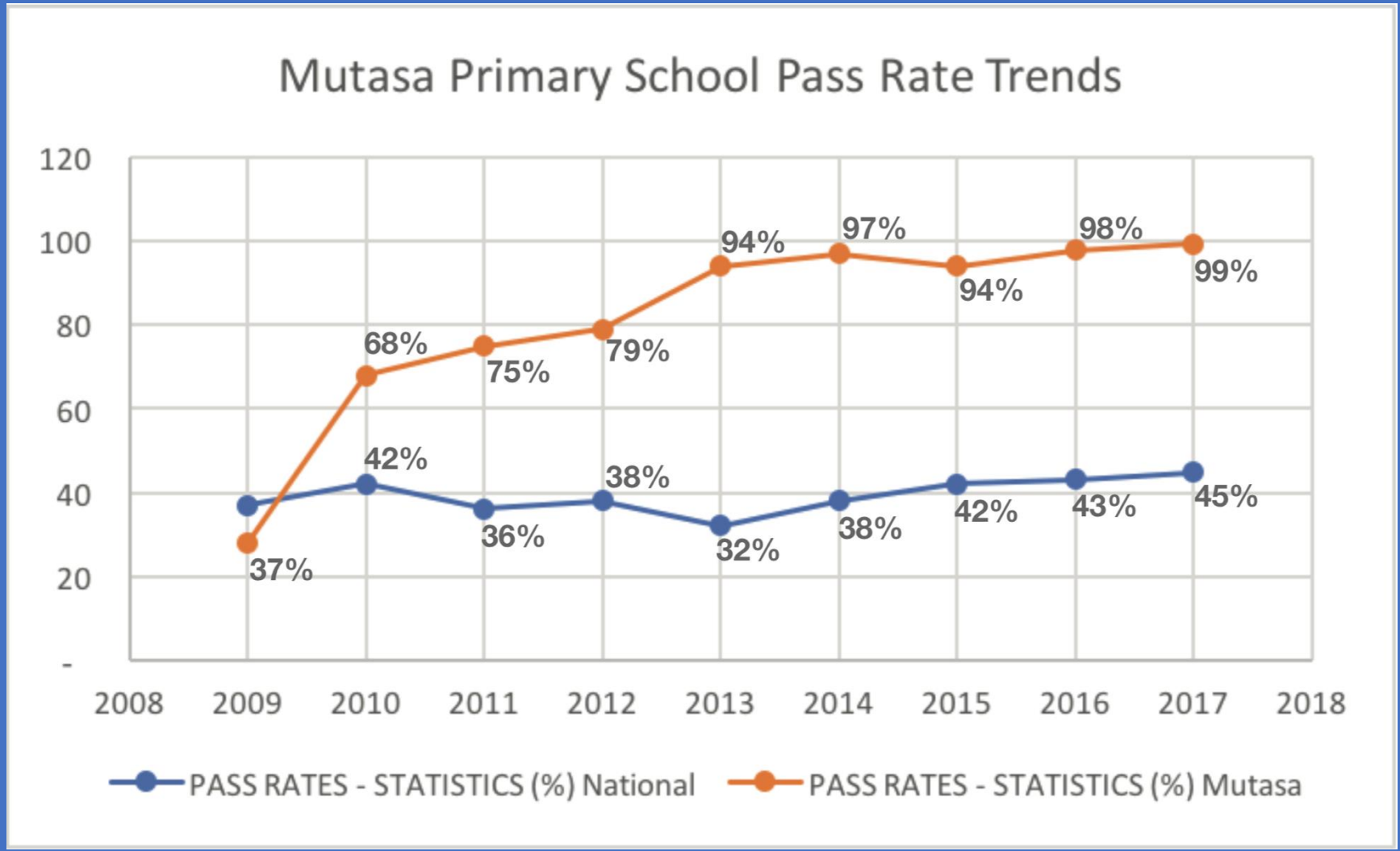
Content Aggregation, Licensing & Development

Digital Pedagogy & Professional Development

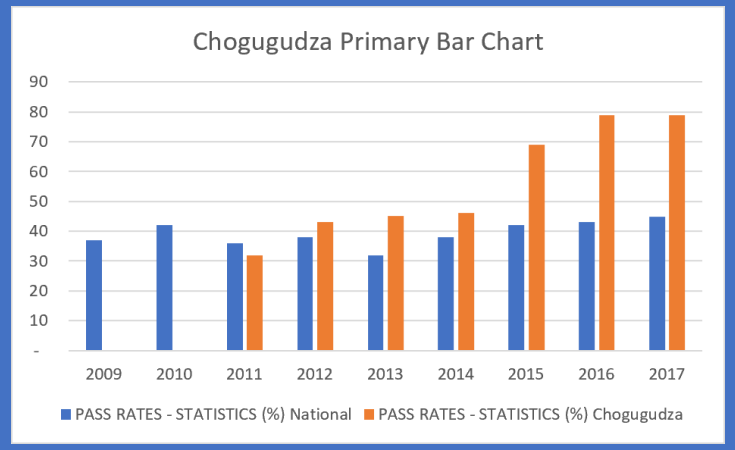
ICT Infrastructure & Facilities

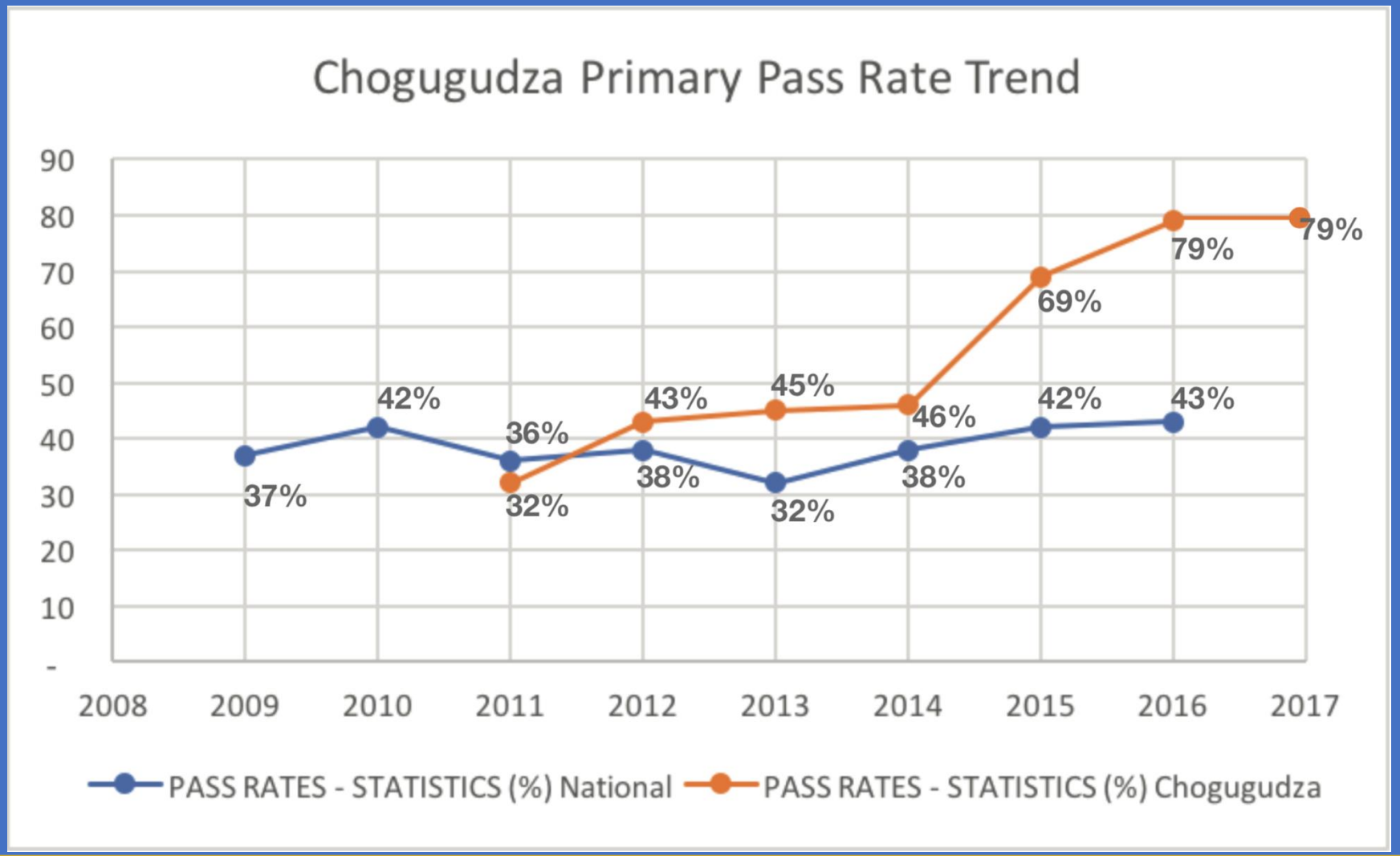
Case Study: Mutasa Primary School





Case Study: Chogugudza Primary School





Education challenge: Equitable access to quality education

Distribution of Curriculum Content

Provision of Professional Development

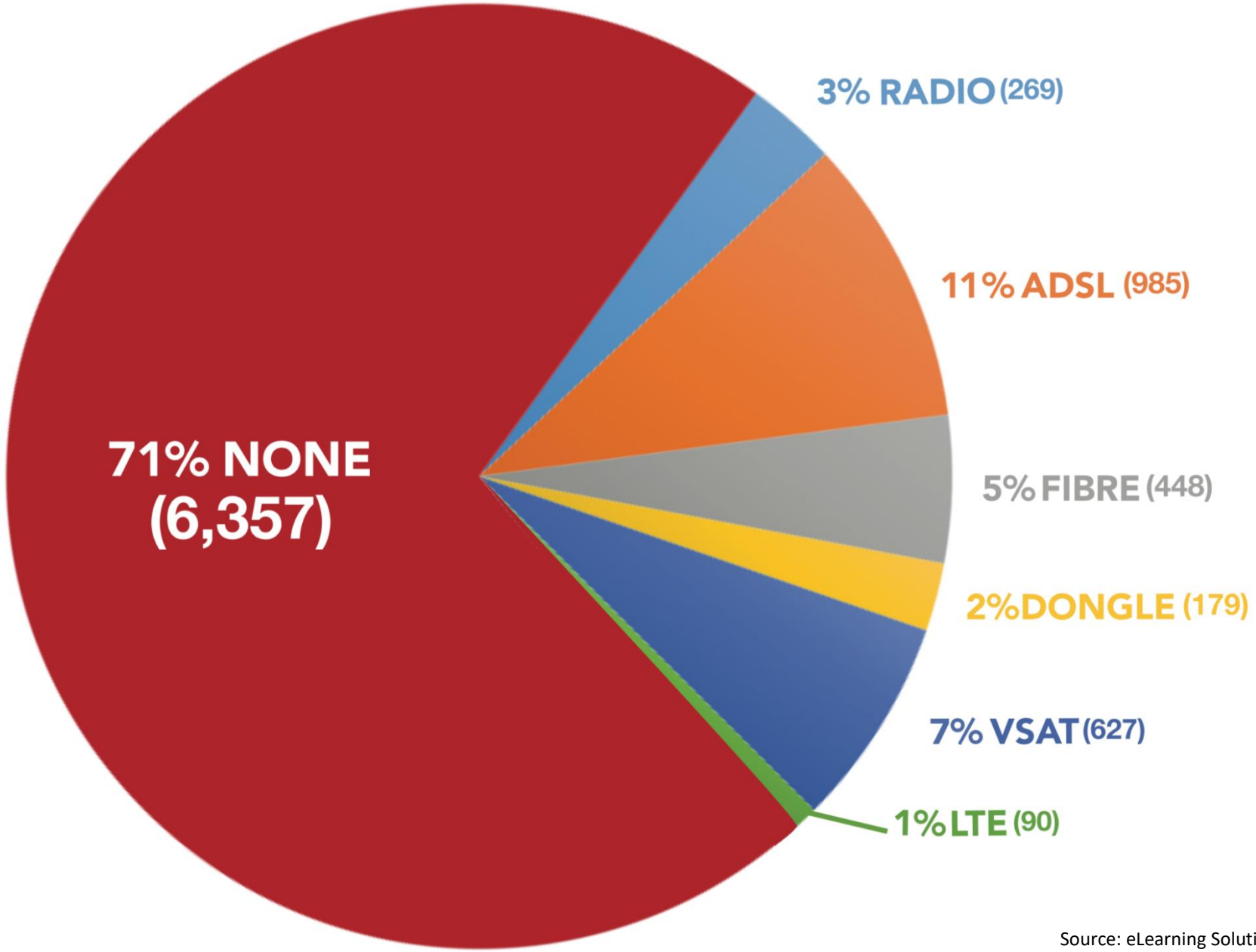
Productivity Tools for Education

Management Information Systems – Data Driven Management

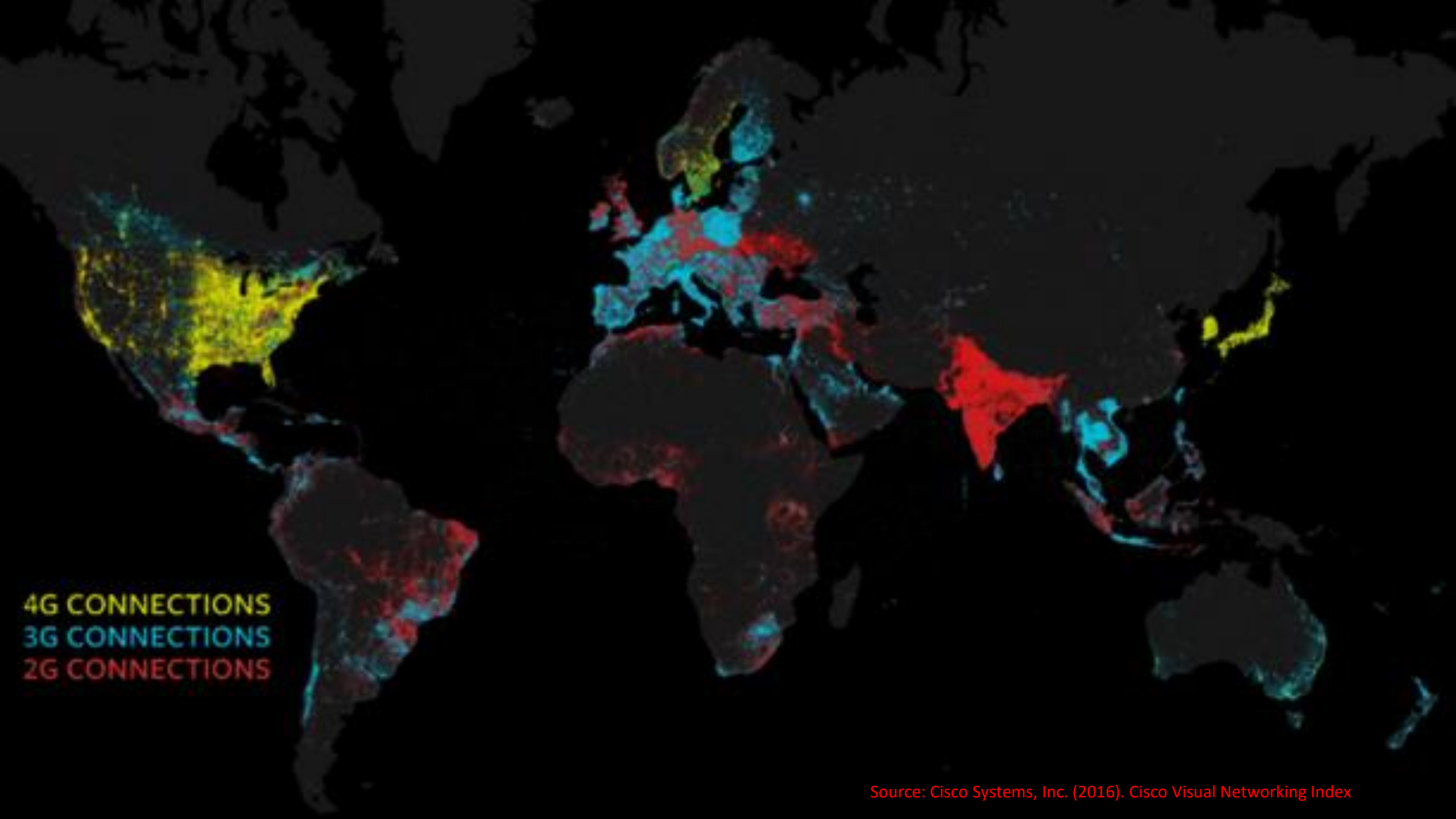
For Just
$2.00

Case Study: Zimbabwe Schools Connectivity Statistics

8953 Schools

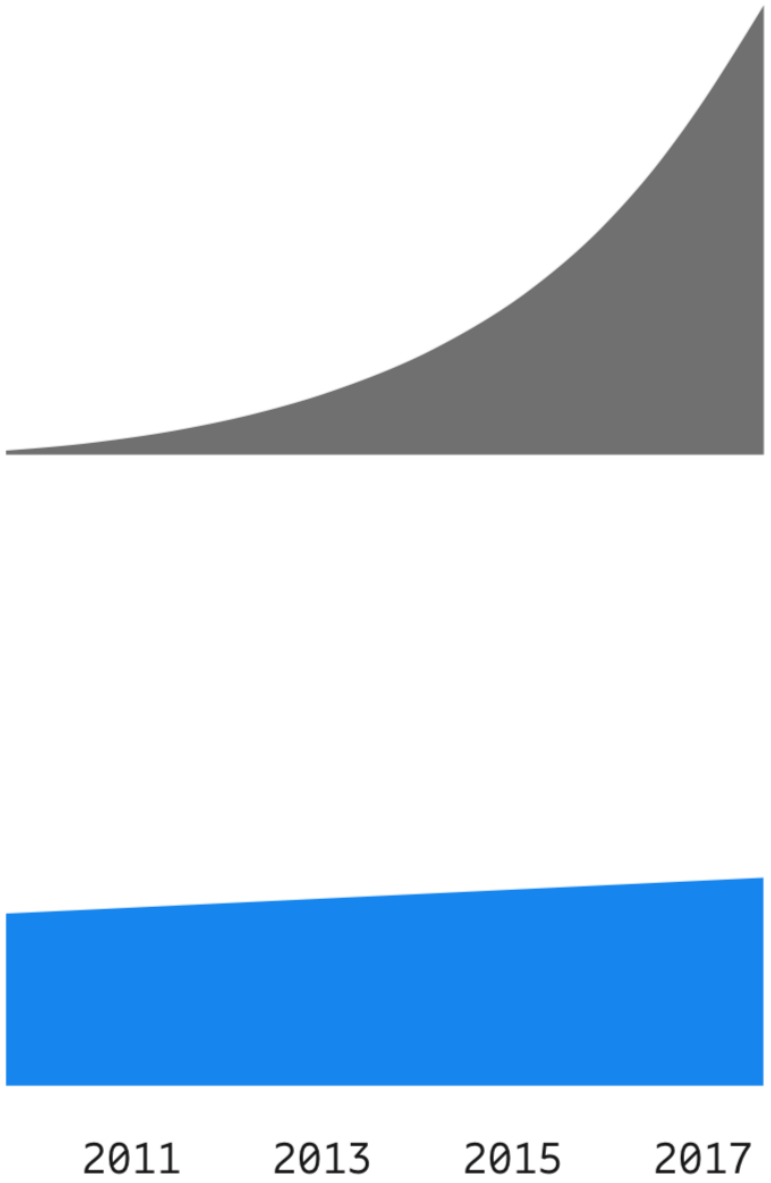


Source: eLearning Solutions Survey 2018



Source: Cisco Systems, Inc. (2016). Cisco Visual Networking Index

Service providers face a tough environment. Demand grows fast while revenues are flat.



Mobile data, EB[1]

+74%

Year-on-Year, 2010-2017

CSP[2] revenues[3]

+2.6%

Year-on-Year, 2010-2017

[1] Ericsson Mobility Report
[2] Communication Service Provider
[3] Ericsson analysis based on IDC, constant currencies

Connectivity Options

~~i. Mobile~~

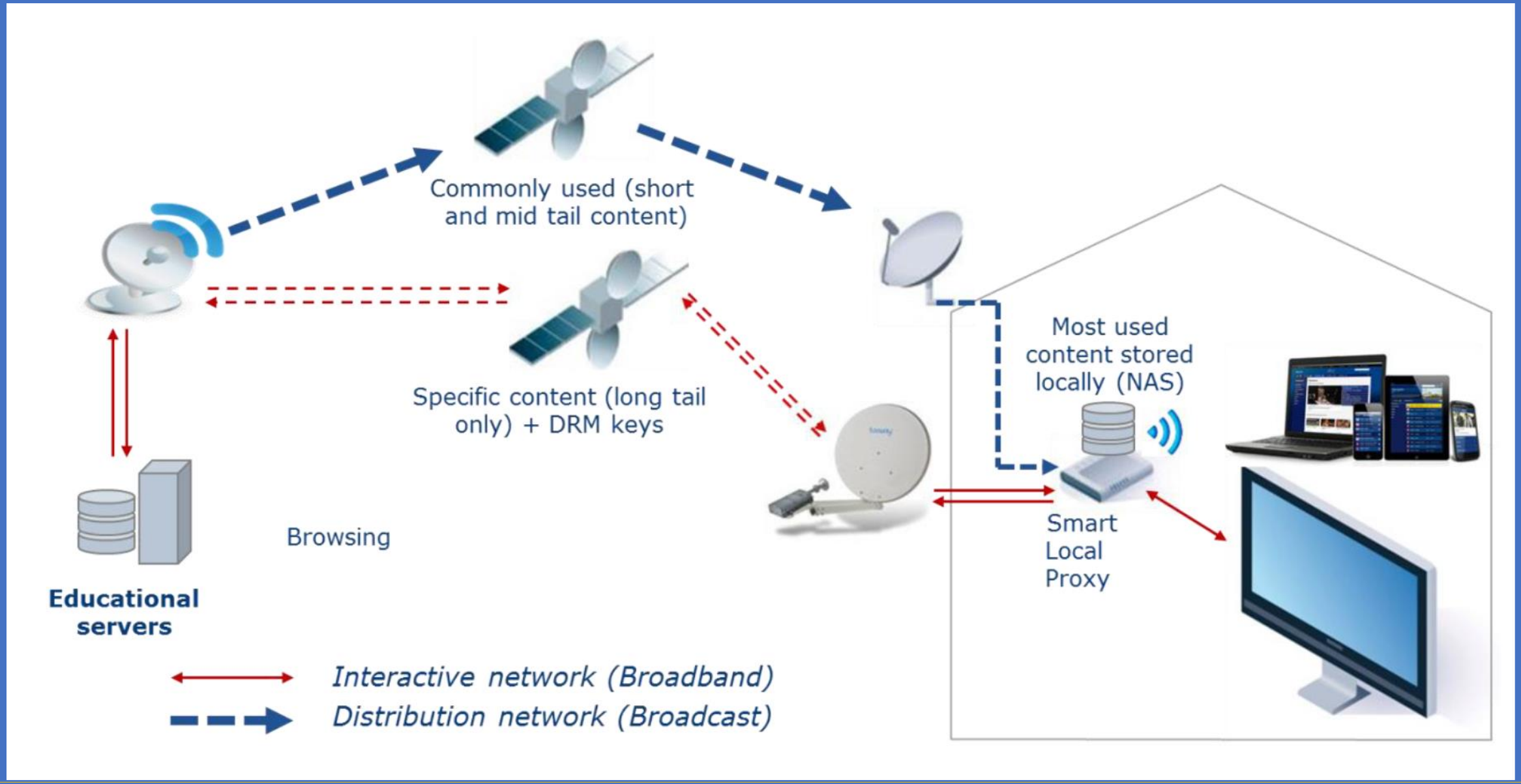
~~ii. Fibre~~

~~iii. Terrestrial (UHF & Microwave Relays)~~

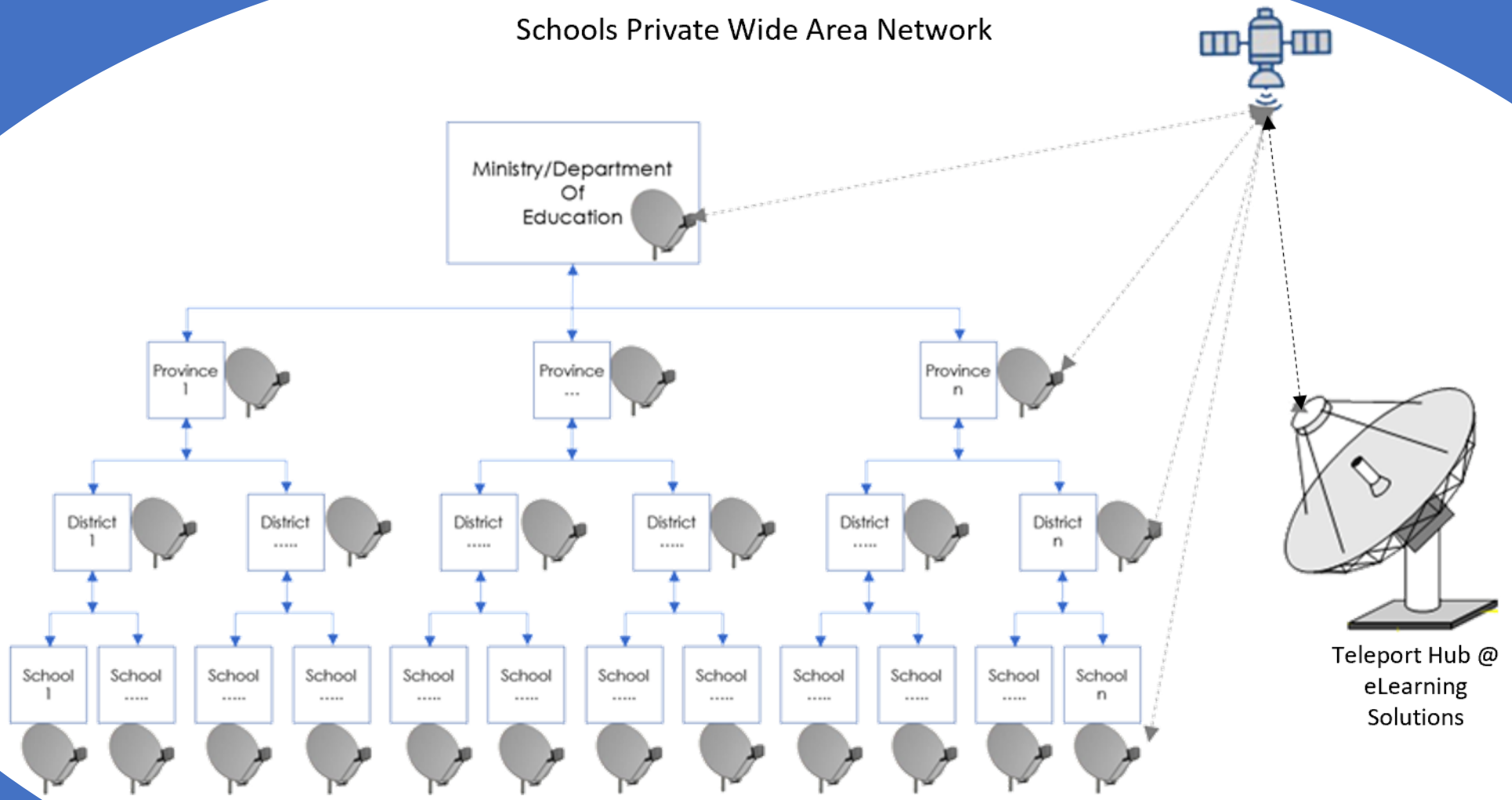
~~iv. Copper~~

v. VSat

Hybrid broadcast-broadband satellite system for schools



Schools Private Wide Area Network



Ubiquitous Access to Broadband

Challenges

i. High bandwidth costs

ii. Interoperability and interactivity

Solutions

i. Hybrid Configuration (Multicasting & Unicasting)

ii. IRMS (Internet Relay Media Server)

Typical cost per leased transponder (36 MHz)		1.5 M€ / year
Bit rate per transponder (27.5 MSps[25], 8-PSK 2/3)		53 Mbps
Cost per GB		7.18 €
One hour of HD content at 6 Mbps (MPEG-4/AVC)		2.7 GB
Cost per hour of HD content	Overall	19.38 €
	Per school, assuming delivery to 1000 schools	**1.94 cents**
One hour of UHD content at 15Mbps (HEVC)		6.75 GB
Cost per hour of UHD content	Overall	48.46 €
	Per school, assuming delivery to 1000 schools	**4.84 cents**

Table 5: Example of cost for the delivery of high-quality content to schools using broadcast satellite.

EU Report: Satellite Broadband for schools: Feasibility study, 2017

For Just
$2.00