Key Terms and Reflection

AiCE Africanism & Pan-African Studies — Bringing the lesson together

Key Terms and Concepts

Term	Definition
Undersea Cable	Physical cables on the ocean floor carrying approximately 97% of all international internet traffic — the actual physical infrastructure of the global internet.
Data Centre	A building containing servers, networking equipment, and power infrastructure that stores and processes digital data — where websites, apps, and databases actually run.
Sovereign Cloud	Cloud computing infrastructure owned and operated under the legal jurisdiction of the country or region it serves, as opposed to foreign-owned cloud platforms.
PAPSS	Pan-African Payment and Settlement System, launched 2022, enabling African businesses to pay each other in local currencies without routing through US dollars or foreign correspondent banks.
Digital Identity	A government-issued, machine-readable digital credential enabling citizens to prove who they are for online and in-person services.
Internet Exchange Point (IXP)	A physical infrastructure hub where different internet networks exchange traffic — African IXPs keep African internet traffic on the continent rather than routing it via Europe.
Off-Grid Solar	Solar energy systems not connected to the national electricity grid, providing power to rural and underserved communities.
Correspondent Banking	The system by which international payments are routed through banks in financial centres like New York or London — the current mechanism for most African cross-border payments.

Term	Definition
2Africa Cable	The world's longest undersea cable (45,000km), encircling Africa, funded partly by Meta, connecting 33 African countries.
Digital Infrastructure Sovereignty	The principle that a nation or continent's critical digital infrastructure should be owned, controlled, and governed by entities accountable to its citizens.

Think It Through

These questions have no single correct answer. Argue from evidence, and write down your reasoning even if you have no one to discuss it with.

- This lesson series argues foreign ownership of undersea cables creates a sovereignty problem analogous to foreign ownership of mines and agricultural land. Do you find this analogy convincing? What differences between physical resource ownership and digital infrastructure ownership might the analogy miss?
- PAPSS has the potential to transform intra-African commerce by eliminating foreign currency costs. What are the main obstacles to its full implementation across all 54 AfCFTA member states? Which is hardest to overcome?
- Digital identity systems can both empower citizens and enable surveillance. What specific design features would you require of an African digital identity system to maximise empowerment while minimising surveillance risk?
- Africa has the opportunity to leapfrog fossil fuel energy infrastructure. What specific policy interventions would African governments need to implement to make this energy leapfrog happen at scale?
- Design a governance and ownership structure for a proposed African-owned undersea cable network. Who should own it? How should it be financed? Who should govern it?

Go Deeper

- Infrastructure Audit: Research the digital infrastructure situation of any one African country — mobile coverage, internet speeds, data costs, electricity access, data centre capacity, and digital identity system. Write a 1,000-word assessment identifying the three highest-priority investments.
- PAPSS Deep Dive: Research the current state of PAPSS implementation. How many countries have joined? What volumes is it processing? What barriers remain? Write a progress report.
- Power and Digital Access: Research the relationship between electricity access and digital access in any African country. What solar and off-grid solutions are being deployed to bridge the gap?
- Cable Ownership Map: Research the ownership structure of three undersea cables serving Africa. Who owns each, and what are the terms of access for African governments and businesses?

Key Takeaways

Digital infrastructure is the foundation on which Africa's entire digital future rests — and that foundation has critical gaps and critical sovereignty vulnerabilities. The five layers of African digital infrastructure — power, connectivity, data centres, payment systems, and digital identity — are each partially built and partially foreign-owned, creating both a development gap and a sovereignty problem.

The undersea cables that carry Africa's international internet traffic are predominantly owned by foreign corporations. The data centres that store African digital data are concentrated in five cities and mostly operated by foreign cloud providers. The payment infrastructure connecting African countries routes through foreign correspondent banks and foreign currencies. Five hundred million Africans lack any form of official digital identity. And 600 million Africans lack reliable electricity — the foundation without which nothing else is possible.

The solutions are available: African-owned cable infrastructure, renewable energy for digital systems, sovereign cloud, PAPSS full implementation, universal digital identity with privacy protection, and African internet exchange points that keep African traffic on

the continent. What is required is the continental political will and the coordinated investment to build the digital foundations that African sovereignty requires.

> *"The Africa that controls its own infrastructure controls its own destiny. The Africa that rents its infrastructure from others has outsourced its future. This generation must decide which Africa it wants to build."*
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> **— Adesina Olagunju, Founder, AiCE**