Faculty of Economic and Management Sciences

Department of Information Systems

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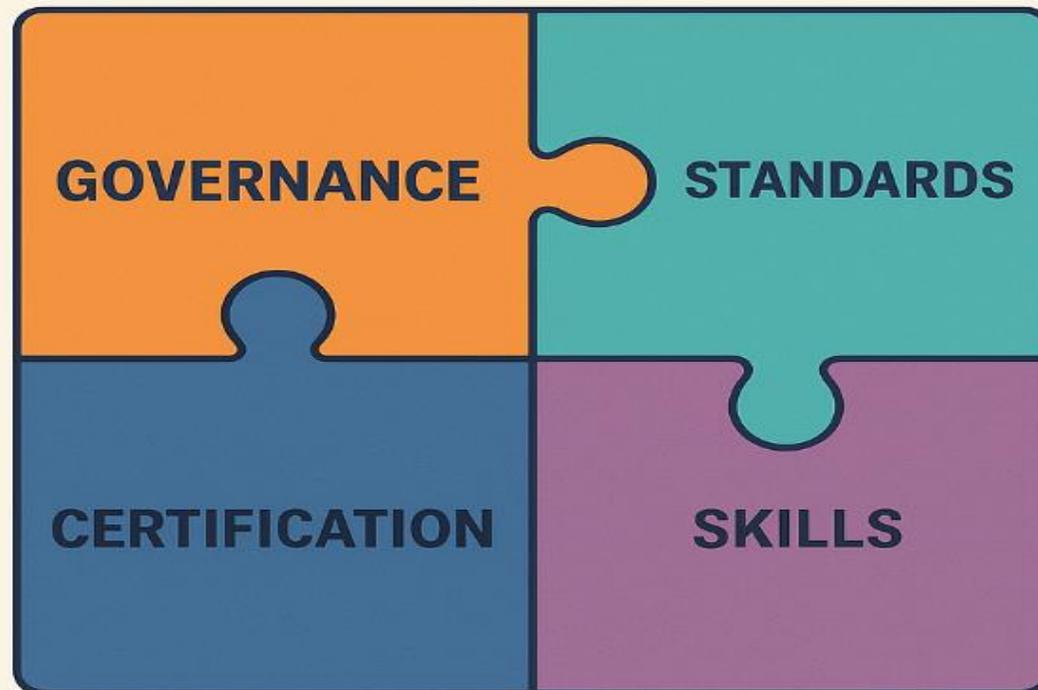**ojokonya@uwc.ac.za**

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FROM HOPE TO ACTION THROUGH KNOWLEDGE.

Outline

Introduction

- Organisational digital transformation is rarely a technical failure. More often, it is a systemic failure, resulting from weak governance structures, the absence of standards, inadequate certification frameworks, and persistent digital skills shortages (OECD, 2020).

- **Governance gaps** lead to fragmented decision-making and siloed systems.

- **Standards gaps** prevent interoperability, making "one citizen, one data" journeys impossible.

- **Certification gaps** undermine trust in vendor solutions and security claims.

- **Skills gaps** leave the public sector unable to sustain, secure, and innovate within digital platforms (World Bank, 2021).

- By examining these root causes, we are better equipped to move beyond symptomatic fixes and work toward systemic solutions.
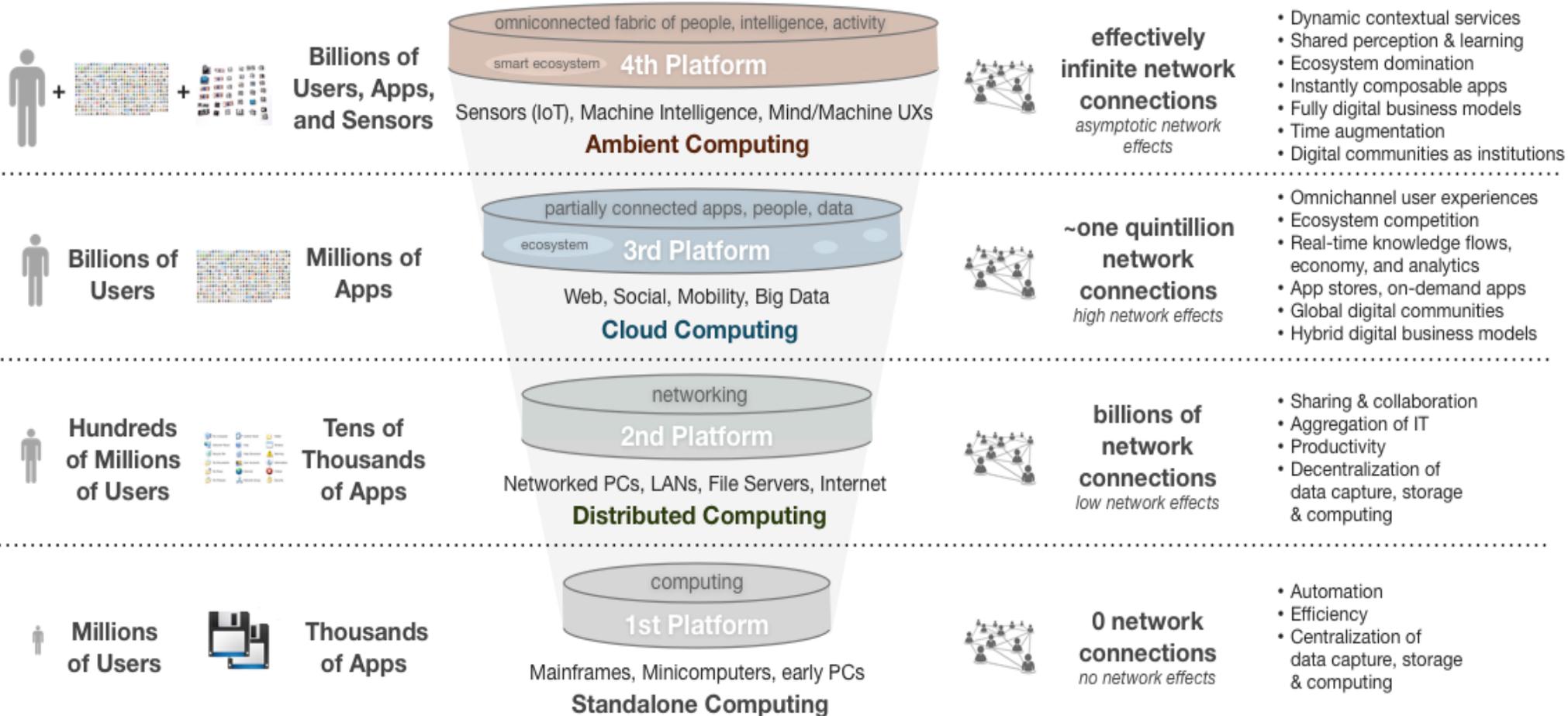
Platforms Era

The Rise of the 4th Platform: A Fabric of Community, Data, Devices, & Intelligence

Billions of Users, Apps, and Sensors

omniconnected fabric of people, intelligence, activity

smart ecosystem **4th Platform**

Sensors (IoT), Machine Intelligence, Mind/Machine UXs

Ambient Computing

effectively infinite network connections
asymptotic network effects

- Dynamic contextual services
- Shared perception & learning
- Ecosystem domination
- Instantly composable apps
- Fully digital business models
- Time augmentation
- Digital communities as institutions

Billions of Users — **Millions of Apps**

partially connected apps, people, data

ecosystem **3rd Platform**

Web, Social, Mobility, Big Data

Cloud Computing

~one quintillion network connections
high network effects

- Omnichannel user experiences
- Ecosystem competition
- Real-time knowledge flows, economy, and analytics
- App stores, on-demand apps
- Global digital communities
- Hybrid digital business models

Hundreds of Millions of Users — **Tens of Thousands of Apps**

networking

2nd Platform

Networked PCs, LANs, File Servers, Internet

Distributed Computing

billions of network connections
low network effects

- Sharing & collaboration
- Aggregation of IT
- Productivity
- Decentralization of data capture, storage & computing

Millions of Users — **Thousands of Apps**

computing

1st Platform

Mainframes, Minicomputers, early PCs

Standalone Computing

0 network connections
no network effects

- Automation
- Efficiency
- Centralization of data capture, storage & computing

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FROM HOPE TO ACTION THROUGH KNOWLEDGE.

Importance of Governance

- Looking at the **"why"** behind the **"what" and "how"** of the digital transformation.

- *"One Data, One Citizen, One Citizen Service Journey,"* depends on seamless integration. Why integration is so difficult because of fragmented governance and siloed services.

- By surfacing these issues, we reinforce the necessity of data interoperability, strategic planning, and above all, capacity building in digital skills (UNDP, 2022).

- The technology adoption, data management, and service delivery build directly on this foundation.

Importance of Governance

- **Governance gaps** create unmanaged "shadow IT" and inconsistent accountability.

- **Absence of standards** undermines consistent security protocols, making data exchange across agencies risky (ENISA, 2022).

- **Lack of certification** weakens trust in vendor claims and prevents procurement teams from knowing which solutions are truly secure.

- **Skills shortages** mean governments cannot detect, manage, or respond to threats effectively.

- In other words, cybersecurity is not only about firewalls or software. It is a systemic challenge tied to governance, standards, and capacity.

Governance Gaps

- Government digital failures often stem from fragmented decision-making structures rather than technology itself.

- Without clear governance, agencies build in silos, leading to duplication, inefficiency, and data fragmentation (OECD, 2020).

- Good governance means setting shared rules, accountability frameworks, and whole-of-government leadership in digital transformation.

- Strong governance ensures platforms work across agencies, enabling the *"One Citizen Service Journey."*

Standards Gaps

- The absence of common standards prevents systems from talking to each other.

- This leads to "data islands," incompatible systems, and costly integration projects (World Bank, 2021).

- Standards are also vital for cybersecurity protocols, ensuring data is exchanged securely between departments (ENISA, 2022).

- Without agreed technical and data standards, digital transformation remains fragmented and insecure.

Certification Gaps

- Many vendors claim their products are "secure" or "compliant," but without independent certification, governments cannot verify these claims.

- Certification frameworks (like digital trust labels or verified procurement standards) create confidence and accountability in digital solutions.

- In their absence, governments risk adopting shadow IT and unvetted tools.

- Certification builds trust, reduces risk, and ensures taxpayer money goes to credible solutions.

Skills Gaps

- Digital transformation is not only about buying systems, it requires people with the right skills to manage, maintain, and secure them.

- The public sector often lacks expertise in data governance, cybersecurity, and digital service design (UNDP, 2022).

- Skills development is both a capacity challenge and an equity issue, as governments compete with the private sector for talent.

- Without investment in digital skills, governments cannot sustainably secure or innovate their platforms.

Summary

- "Does IT Matter" (Carr, 2003). Carr (2003) argues that Information Technology (IT) has lost its ability to provide a competitive advantage to businesses because it has become a widely available commodity.

- Digital transformation is not just a technical project, but also a governance project, a standards project, a certification project, and, above all, a people project.

- Role of IT Advisory Boards at Universities

- Role of professional boards (ITPSA, ACM, AIS, IEE)