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WORKSHOPS AND CONFERENCE
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Digitalizing Somalia's Higher Education Institutions: A Case Study of Jamhuriya University

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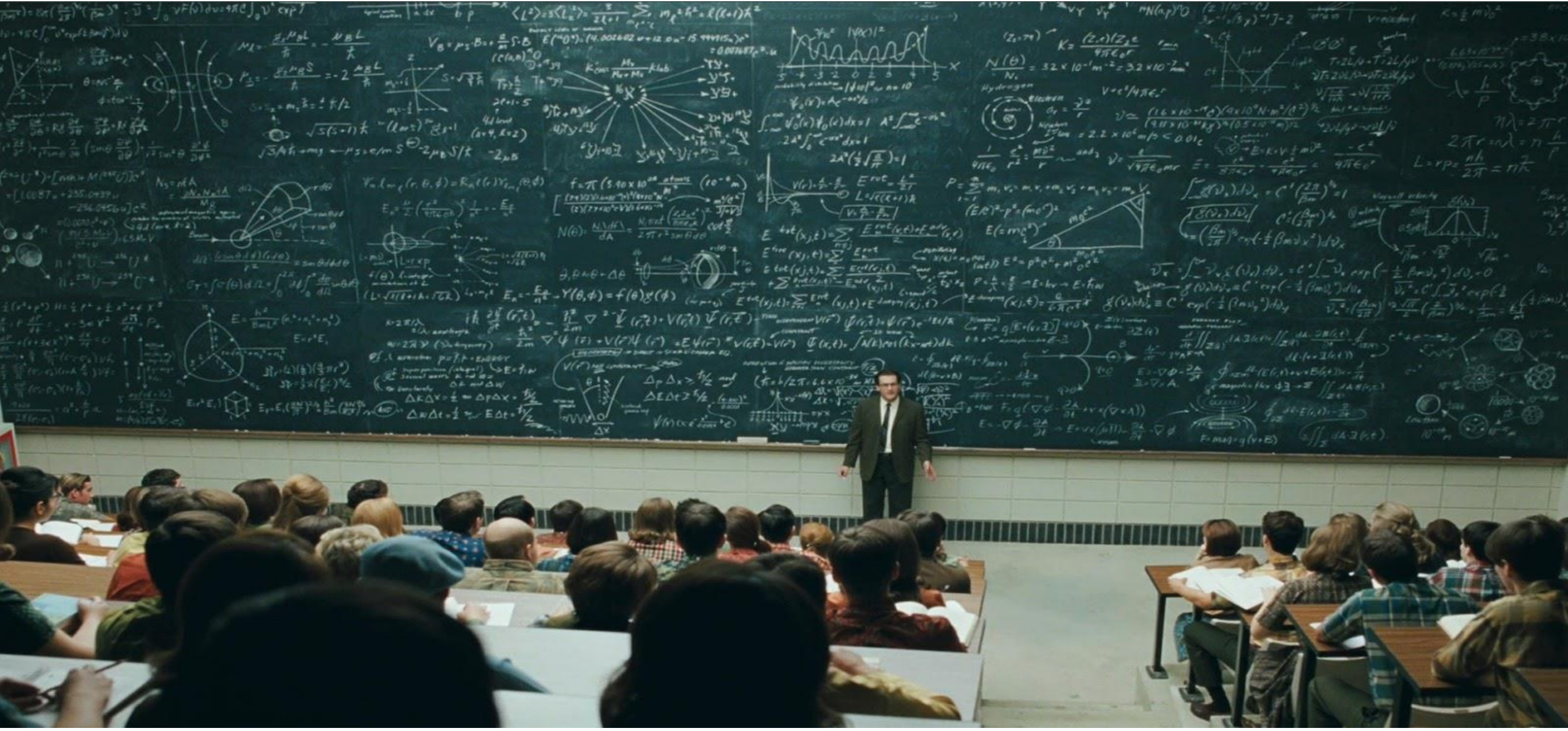

Source: http://www.personal.psu.edu/users/a/j/ajj5333/Extended%20Essay.htm

Source: https://onlinedegrees.sandiego.edu/remote-teaching-resources-2/

Source: https://neconnected.co.uk/learning-in-the-digital-age/

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Source: https://start.docuware.com/blog/document-management/6-paper-based-processes-killing-your-productivity

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Source: https://globalriskcommunity.com/profiles/blogs/technology-in-the-pandemic-recreate-the-office-or-repurpose-it

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Universities Have to Adapt

The most important drivers of university change

Students Are Going Digital

Students are migrating to a digital world dominated by online access to knowledge

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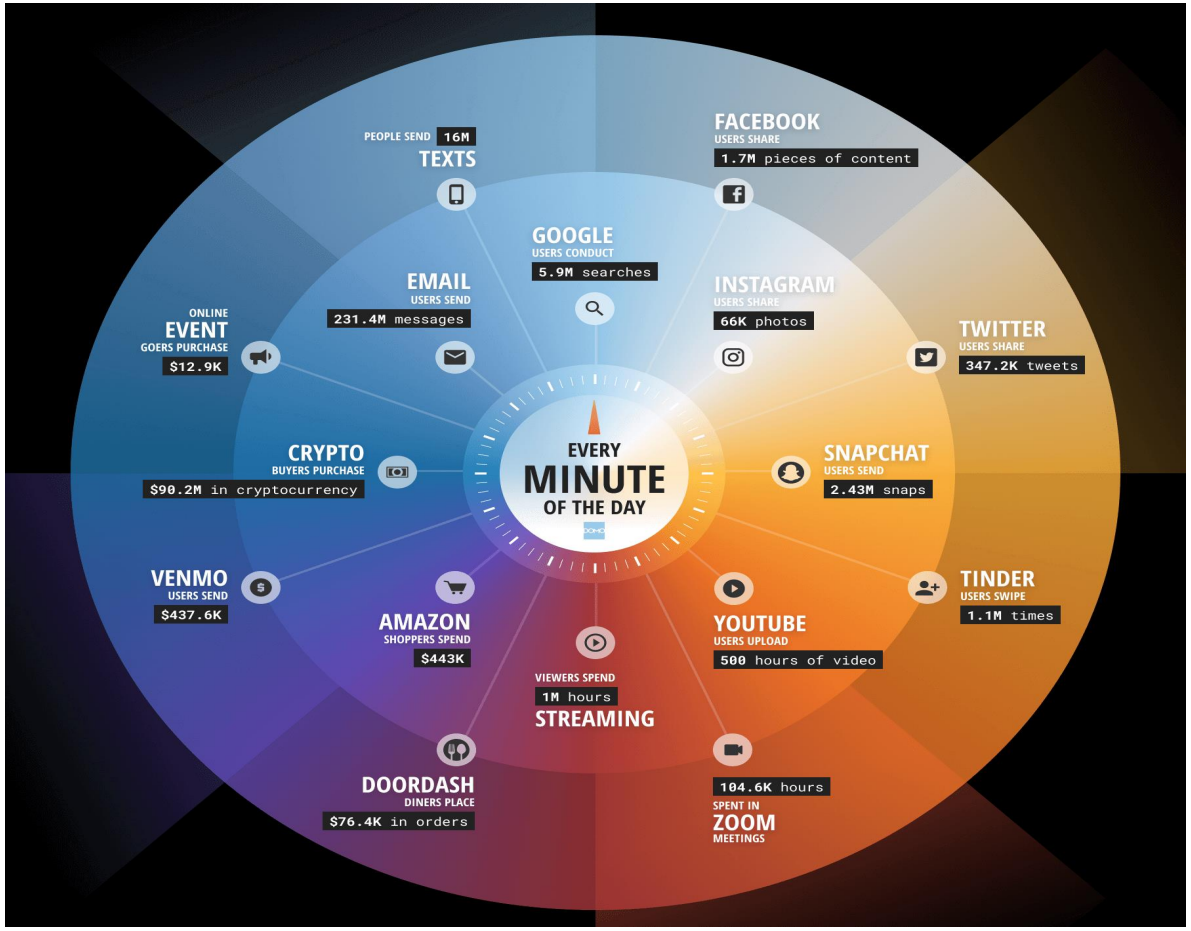
Information Abundance

Decades ago the largest collection of Info. would always be found in the library



But now we live in a world where information is abundant and easily available online

Major Technological Changes

The pace of technological change is accelerating

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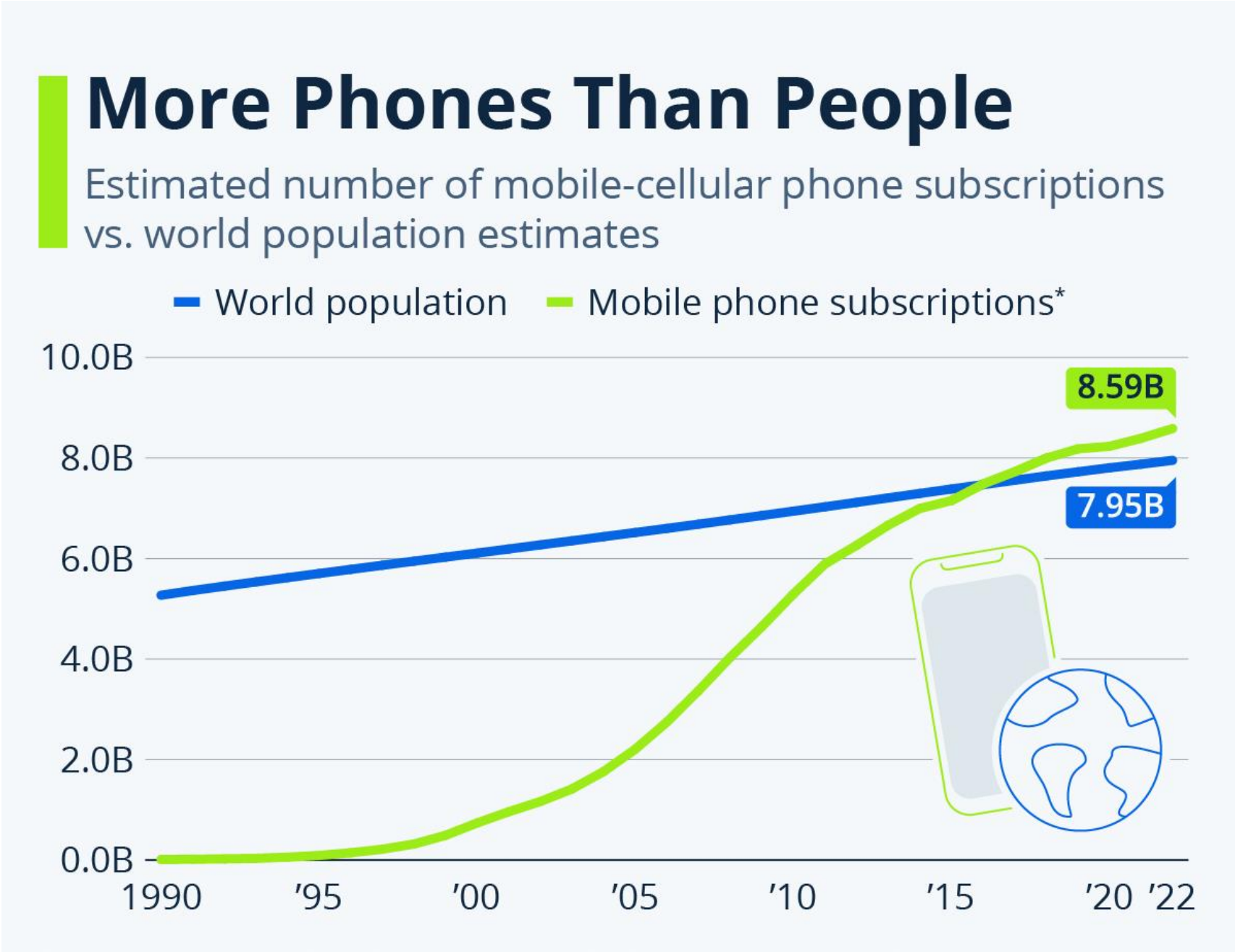
Exponential Growth of Mobile

- **The number of mobile devices exceed the world's population**
  - 6 - 8 connected devices per person

Exponential Growth of Mobile



Source: ITU, World Bank, UN Population Division

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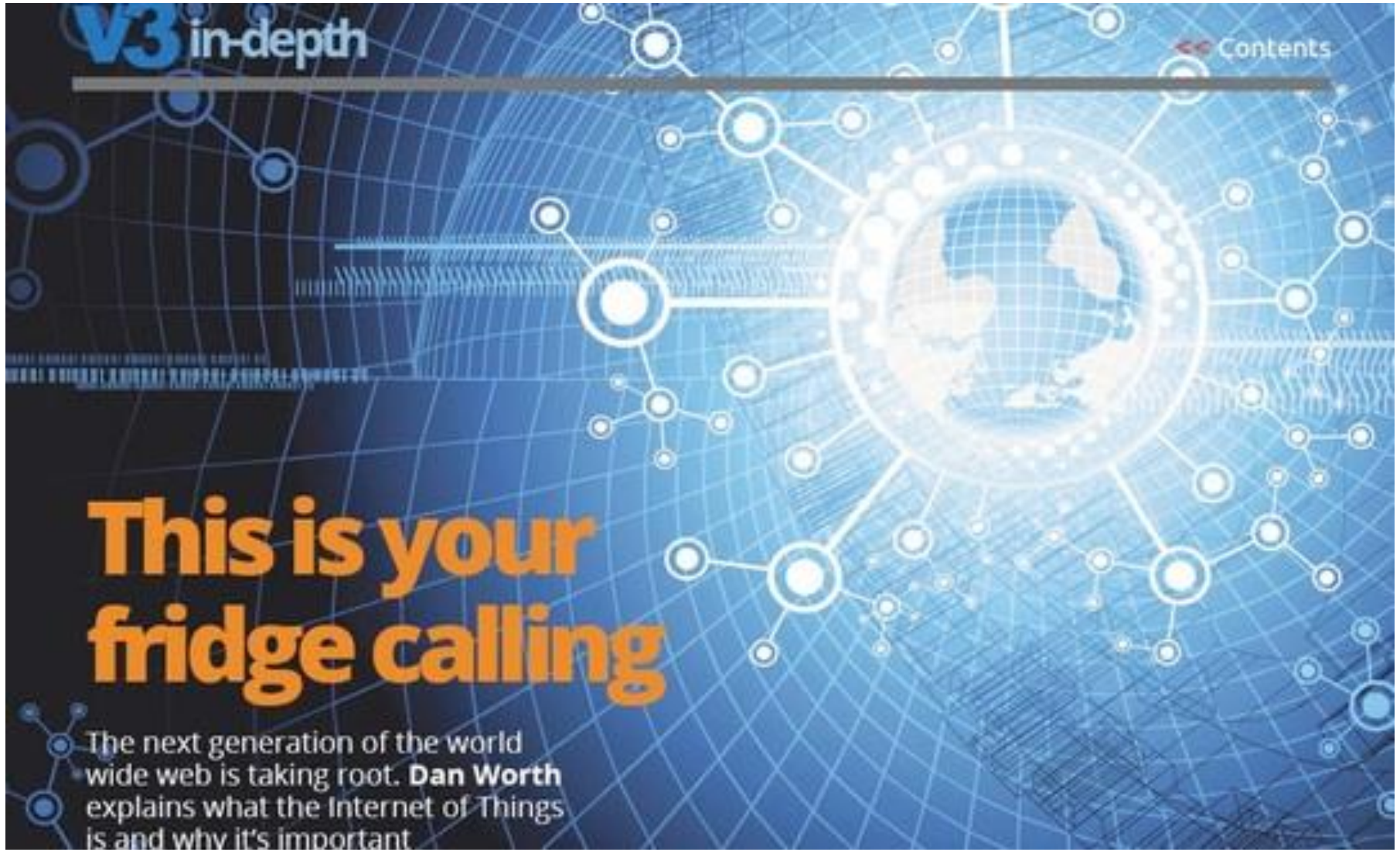
The Internet of Things -IoT



Network of connected objects that link the physical world with the world of information

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Smart Universities

- Network Connectivity
- Remote & Visual management
- Status Monitoring
- Space Utilization
- Digital Notifications
- Tracking, and alerts

Kuva 1. Internet of Things. Lähde: Huffington Post

Smart Universities

- Connected devices are generating data on student learning and activity, informing the direction of content delivery and university planning.
- **IoT** has the potential to **help universities:**
  - Reduce costs
  - Use student data more efficiently

Kuva 1. Internet of Things. Lähde: Huffington Post

Smart Campus

E-Learning

Always-on connectivity

Advanced Cyber-Security

Data-driven

Safe Environment

Academic Credibility

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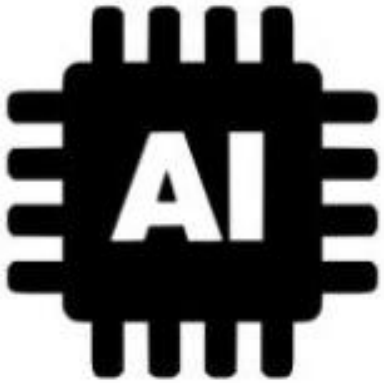
Technologies that support Smart Campus



Smart University

- For the purpose of this presentation:
  - "A university which enhances the education, research, and work processes and experiences of stakeholders by incorporating digital, innovative, internet-based technologies for the betterment of the users of its services."

Smart University

- ✓Network Infrastructure & Connectivity
- ✓Student Admissions & Student Portals
- ✓Staff Recruitment & Staff Portals
- ✓Exams & Results Management System
- ✓Distance Learning (E-learning)
- ✓ Financial Administration
- ✓Research Management & Dissemination
- ✓University Online Library Services
- ✓ and such similar

Key Drivers of University Digitalization

- Transformative and Visionary leadership (Leadership Commitment)
- Hard work, Teamwork, and Results Focus
- Staff by-in and Supportive Managers: Deputies, Deans and HoDs
- Partnerships and Collaborations
- Government Support

The Role of University Leadership

- **ICT Policy:**
  - Formulate an ICT Policy and Guidelines with the aim of guiding the identification, promotion and appropriate utilization of ICT at your university
  - The ICT Policy should aim at ensuring that ICT applications are integrated into the planning and implementation of the University Vision, Mission, and Core Values that usually aims to improve the quality of its activities

The Role of University Leadership

- **ICT Strategy:**
  - An ICT strategy is a document created as part of your university's strategic and ICT investment planning.
  - It roadmaps the dream, establishes route markers, and describes milestones.

The Role of University Leadership

- **ICT Budget:**
  - Allocating monetary resources to various IT programs
    - Staffing
    - Hardware purchase / leases
    - Software purchases / subscriptions / development
    - Network Infrastructure development
    - Connectivity
    - Fixed-duration projects (Fiber optics networks, CCTV Network, Biometrics, Access control systems, etc.)

A “Smart University” is not a destination. It is rather a continuation of the journey of progress of universities’ role to serve humanity”

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The Journey to a Smart University

- The Plan
- The Hardware
- The Software
- The Human

The Hardware

- A university requires a lot of IT tools (computers and related devices).
- Keep an eye to industry standards, but don't lose sight of your capabilities – policy, plans, budgets, human resource.
- Scalability. Keep your hardware current and scalable
- Harnessing HaaS (Hardware as a Service)
  - Consider leasing to purchase, especially high end and expensive equipment.

The Software

- Proprietary versus Open Source versus locally developed software.
- Whatever software you throw about will need the required intelligence to “talk” to your system, and possibly to each other
- Consider SaaS in some cases.

The Human

- The Human component of your university system refers to the individual that makes hardware and software components productive.
- It is the most challenging and most unpredictable component in a Smart University System.
- They include:
  - **The Management:** Win them over
  - **The Dream Team:** Developers, Appreciate their hard work
  - **The Power Users:** Commend, Potential for the success of the journey
  - **The Early Adapters:** Encourage

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The Case Of JUST

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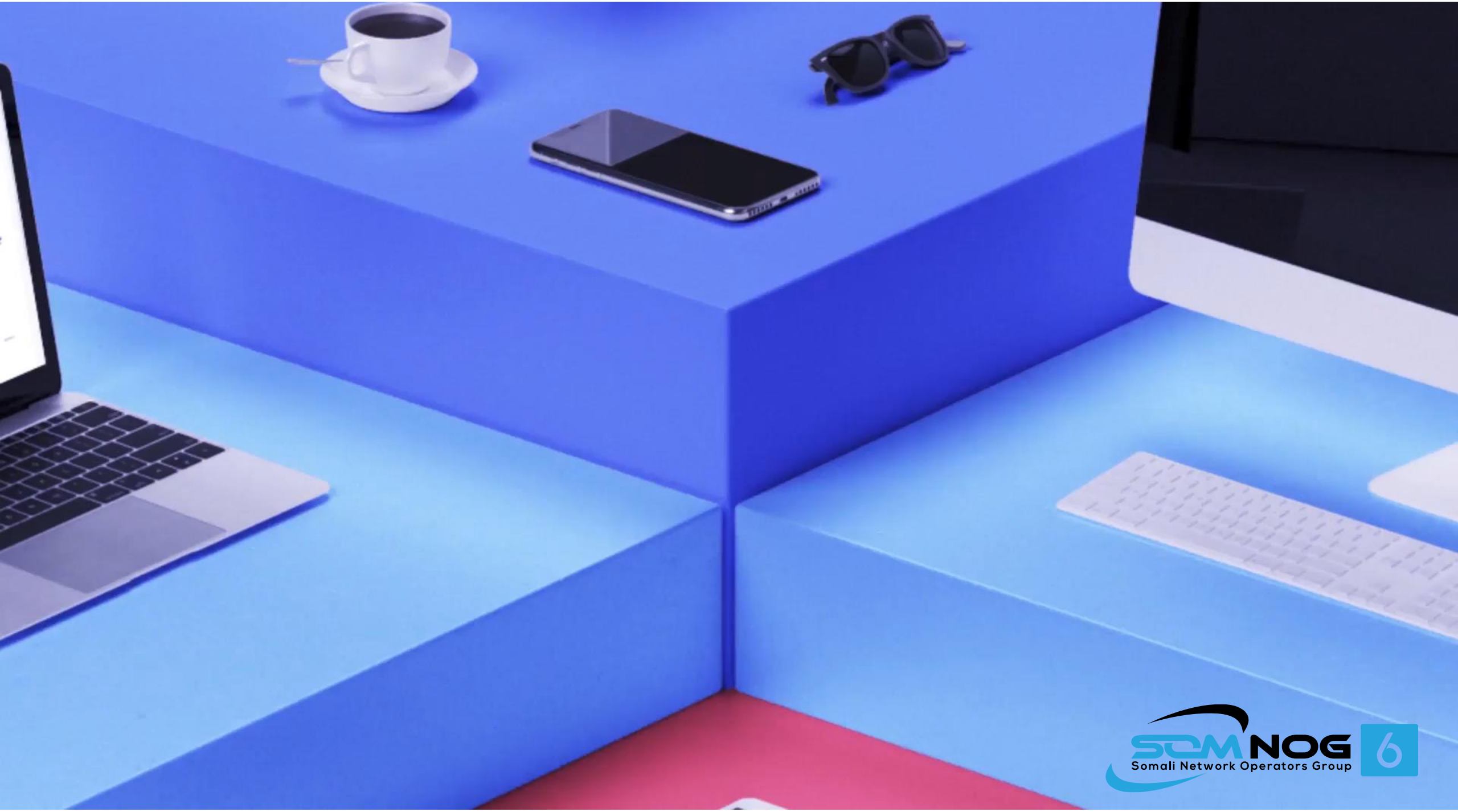
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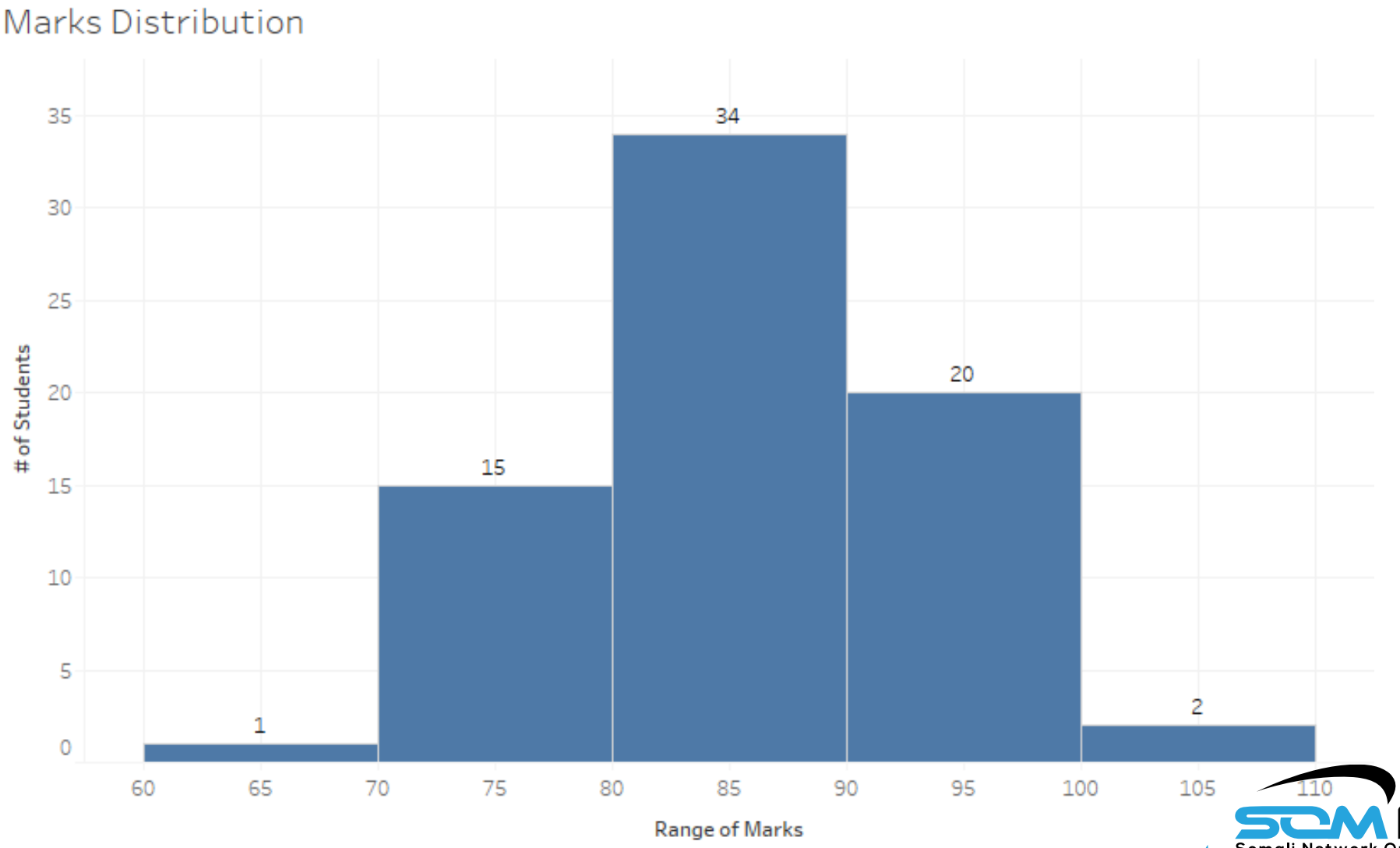
Data Visualization Tools



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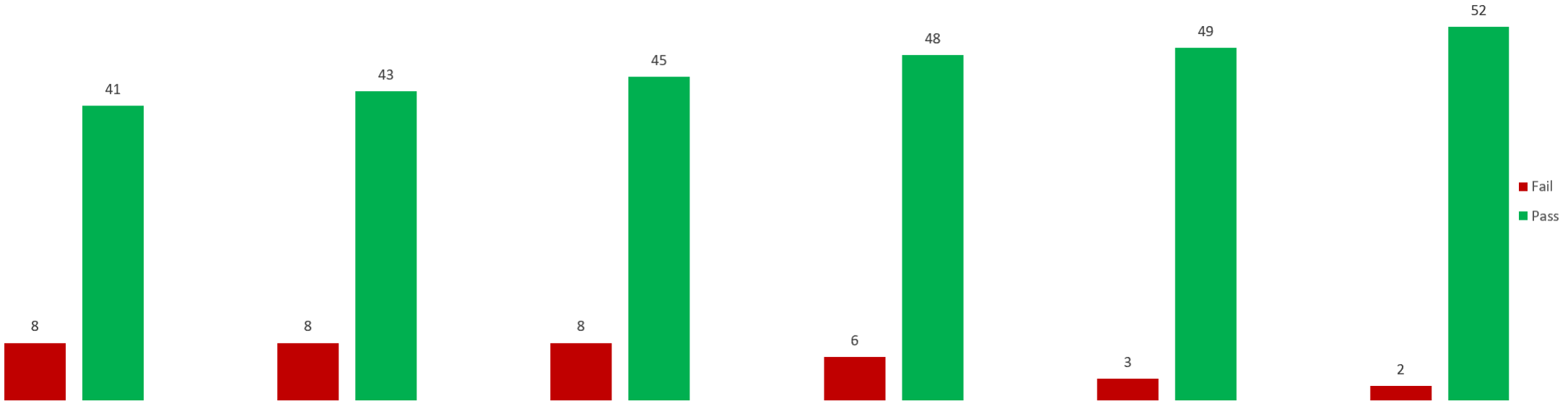

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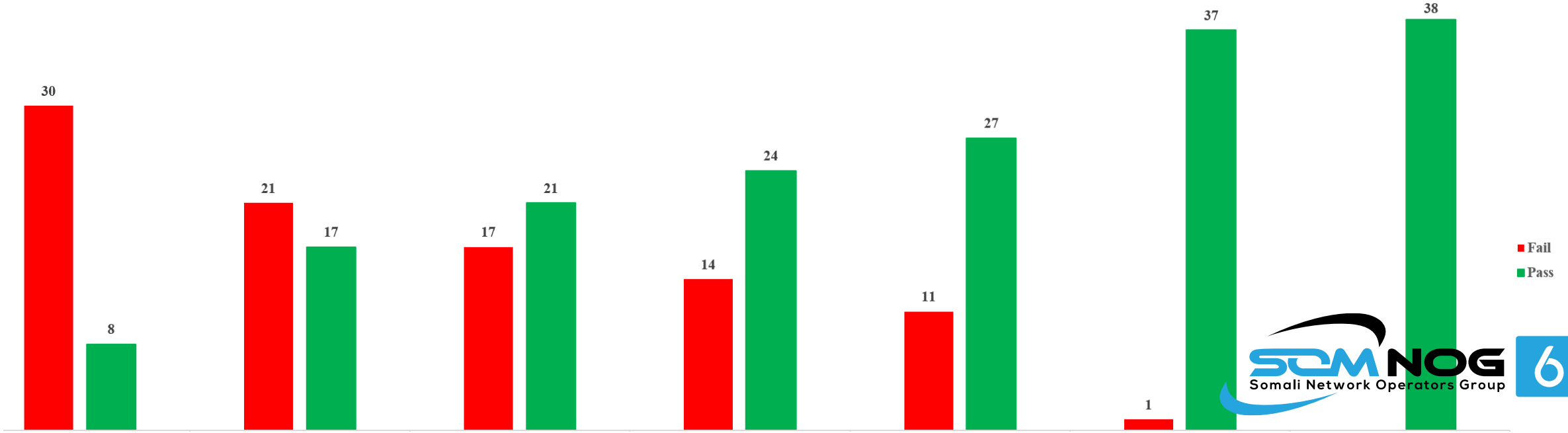
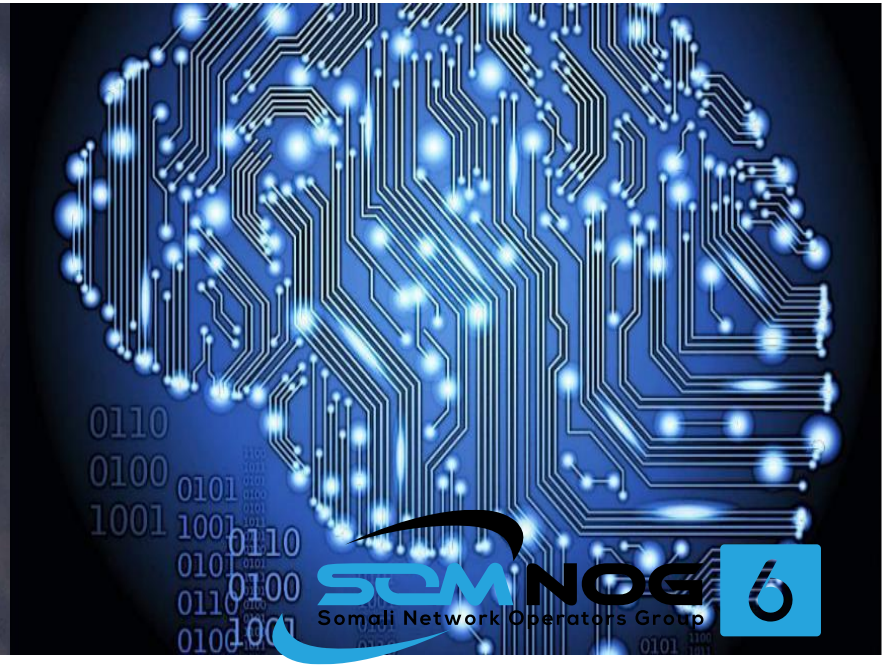


If we want to prepare our students for the future, ICT should be a central part of our strategy and transformation



“It is not the strongest of the species that survives, nor the most intelligent, but the one that is most adaptable to change.”

Charles Darwin

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Thank you!

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