

SomaliREN Annual Meeting

University Leaders Retreat

The Road to the Smart University

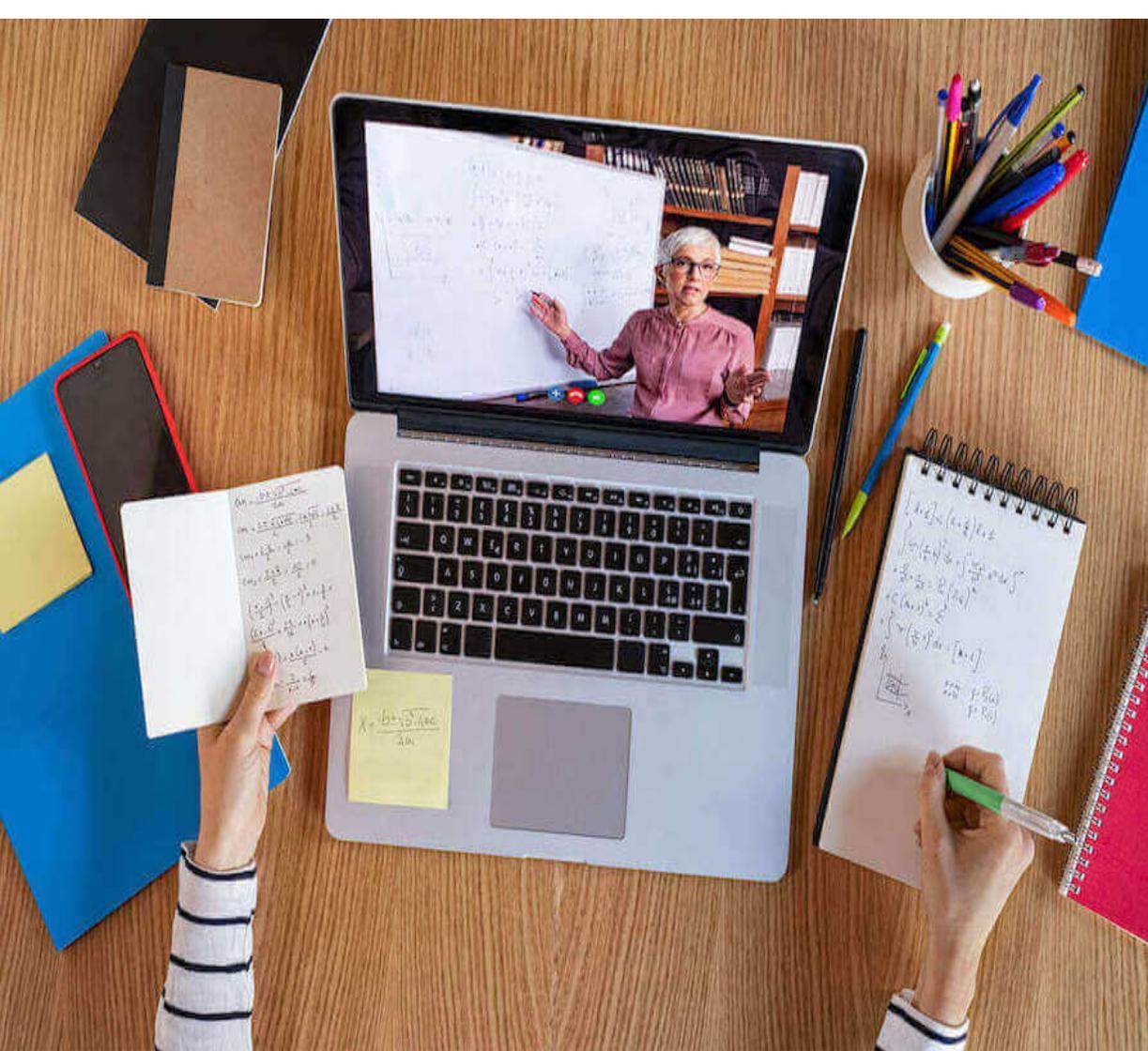
08- 09, July, 2021

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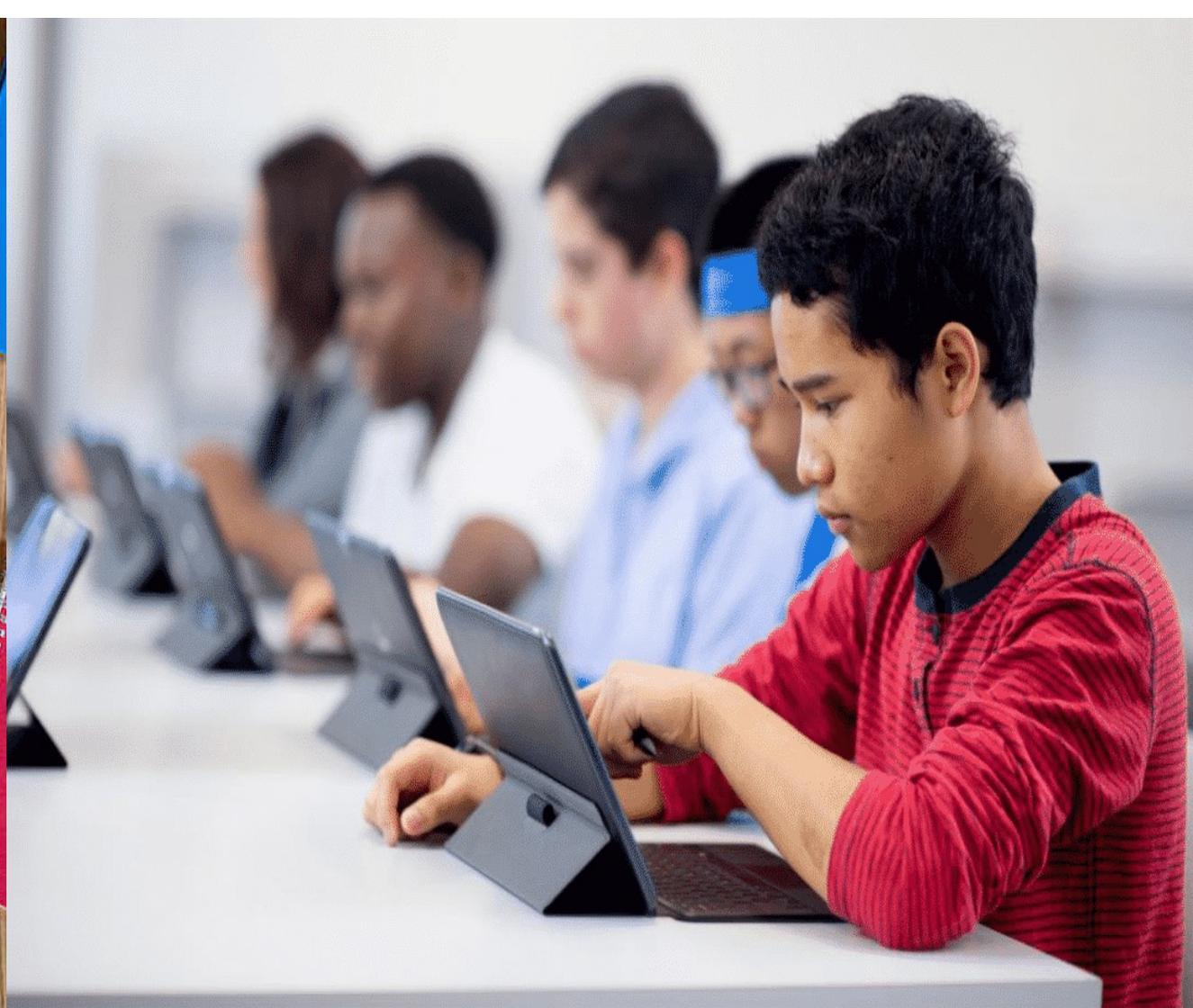
Mohamed Ahmed Mohamud

President

Jamhuriya University of Science & Technology (JUST)



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



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



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



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

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

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

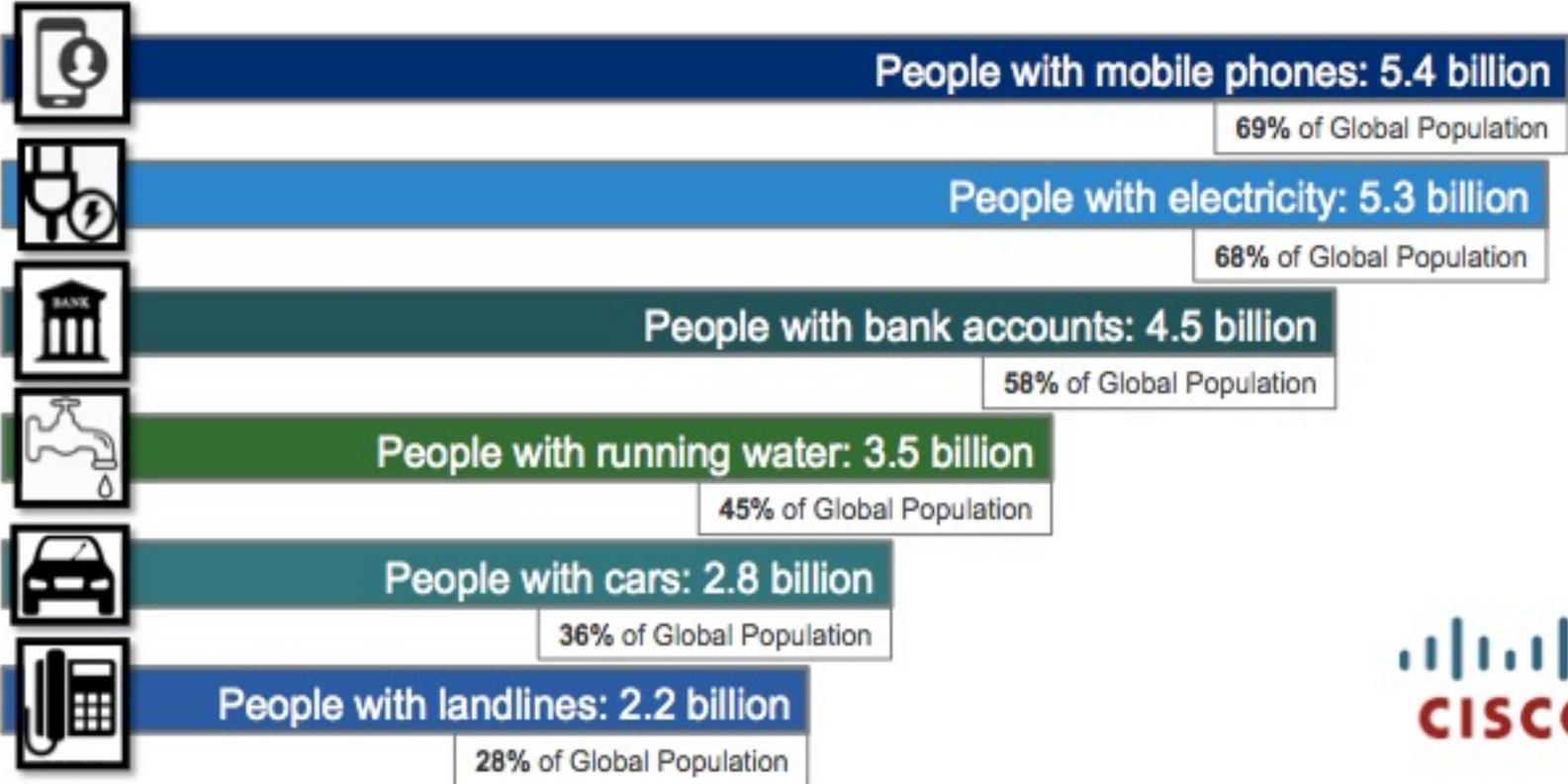
Exponential Growth of **Mobile**

- The number of mobile devices exceed the world's population
 - **50 billion** connected devices by 2020
 - 6 - 8 connected devices per person (2020)

Exponential Growth of Mobile

Mobile Growth Continues Through 2020

By 2020, more people will have mobile phones than electricity at home



The Internet of Things -IoT



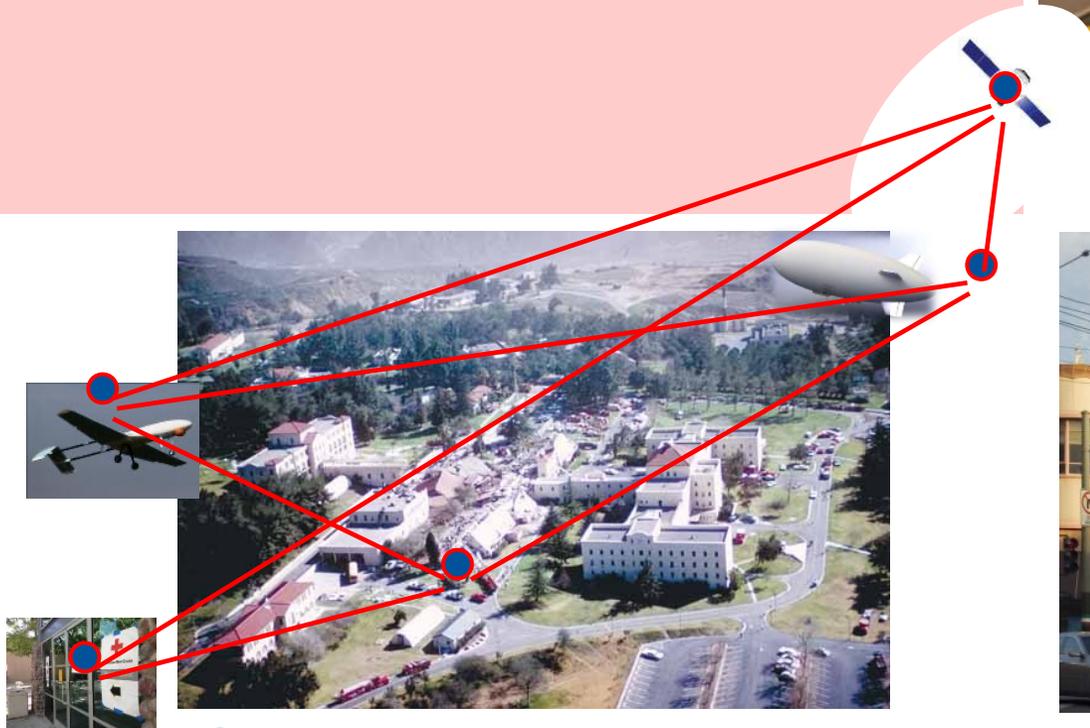
Network of **connected objects** that link the physical world with the world of information

The IoT: When objects **anticipate** and **negotiate**

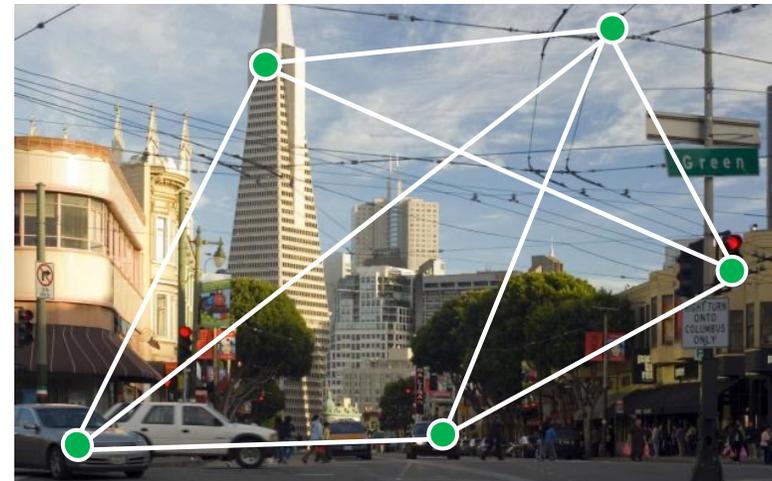
- Billions of devices on the Internet.
- Smart phones/ watches, wearable devices (Smart People), “Smart Homes and Grid” and “Ubiquitous Cities”, Robotics, remote sensing



Smart Public Health Clinics

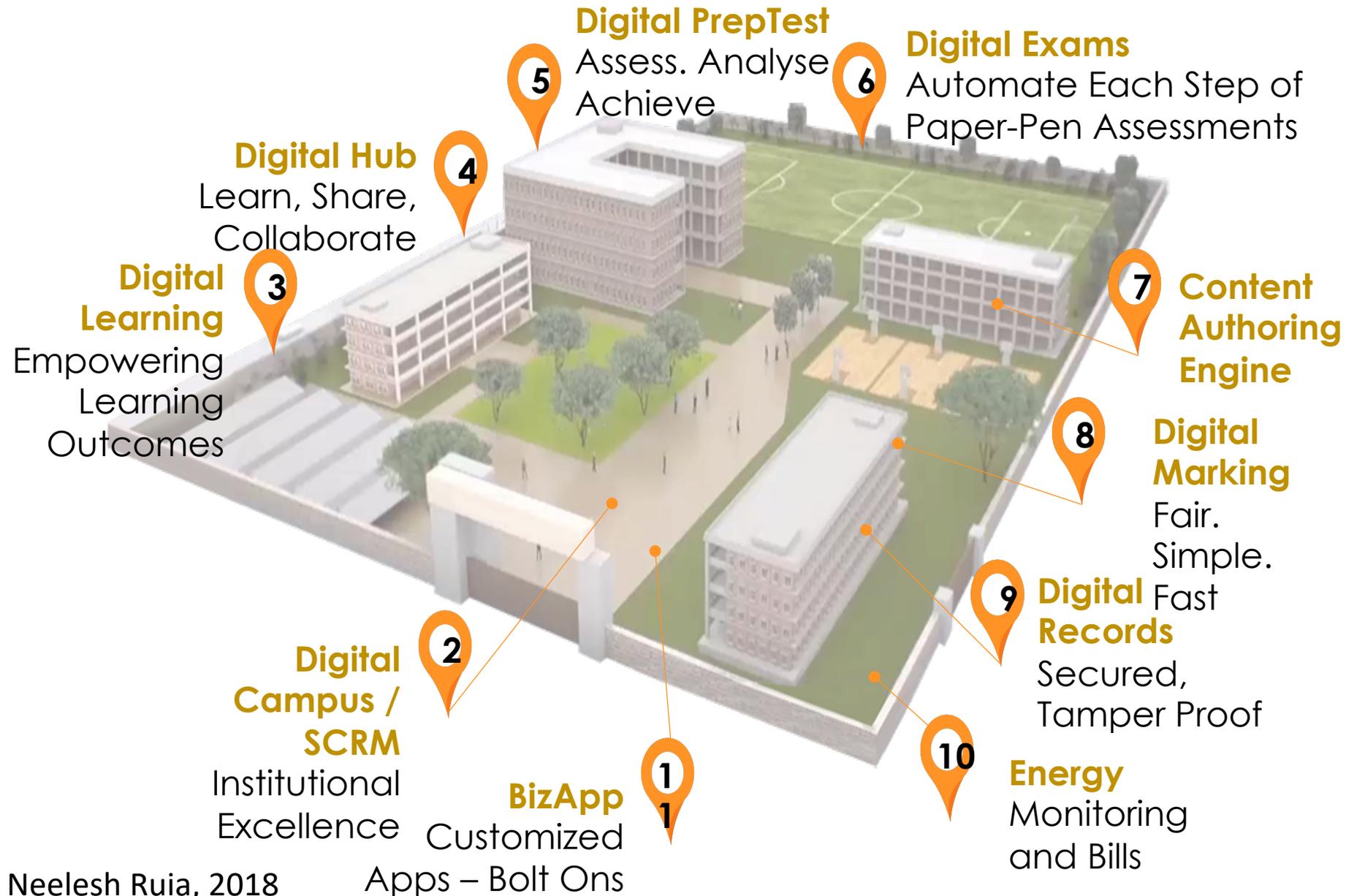


Smart Emergency Response



Smart Cities

...and of course **Smart Universities**



Smart Campus



E-Learning



**Always-on
connectivity**



**Advanced
Cyber-Security**



Data-driven

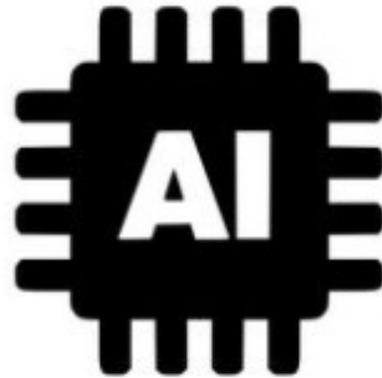


**Safe
Environment**



**Academic
Credibility**

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 Smart University

- Transformative and Visionary leadership(**Leadership Commitment**)
- Hard work, Team work, and Results Focus
- Staff buy-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 / leases
 - 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”

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.

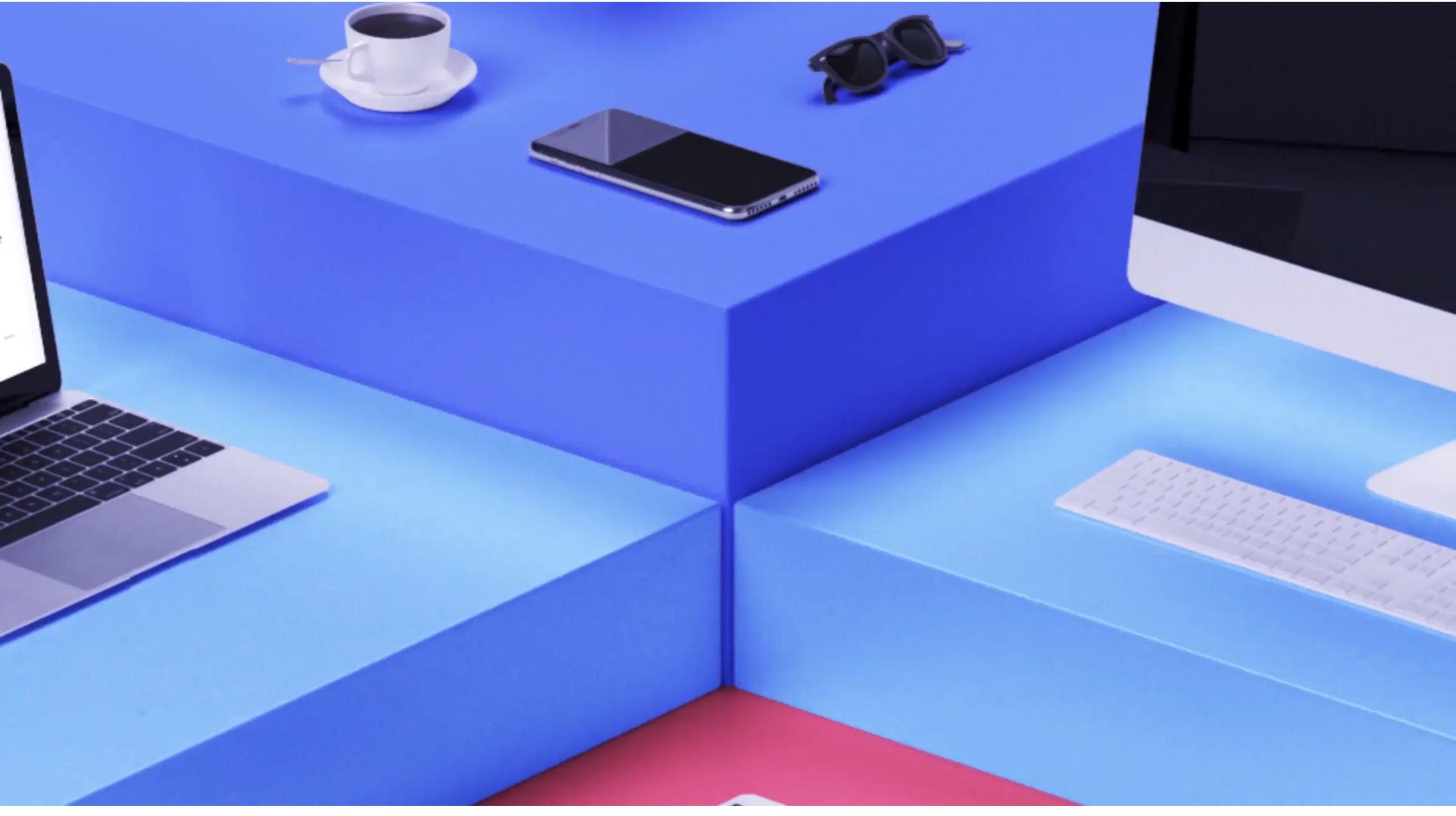
The Software

- 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.

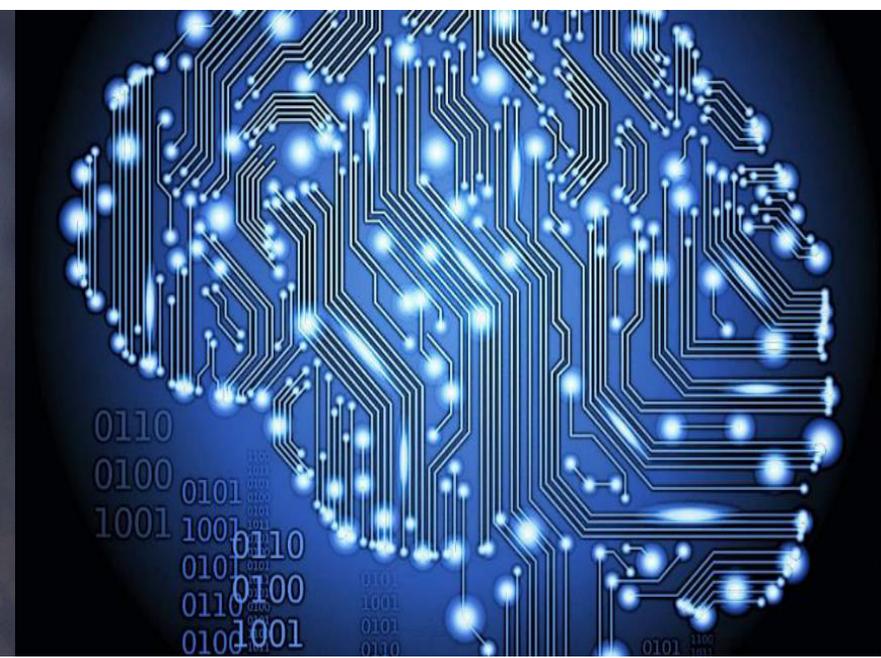
The Human

- 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

The Case of JUST



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

References

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Thank you