

A Smart University Administration: Harnessing ICT to Enhance University Business Processes

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The Need

“...Imparting awareness among top institutional leaders and policy makers of the importance of ICT to universities in the region as catalysts of higher education innovation”

UbuntuNet Alliance, SARUA, & IUCEA
November 2018

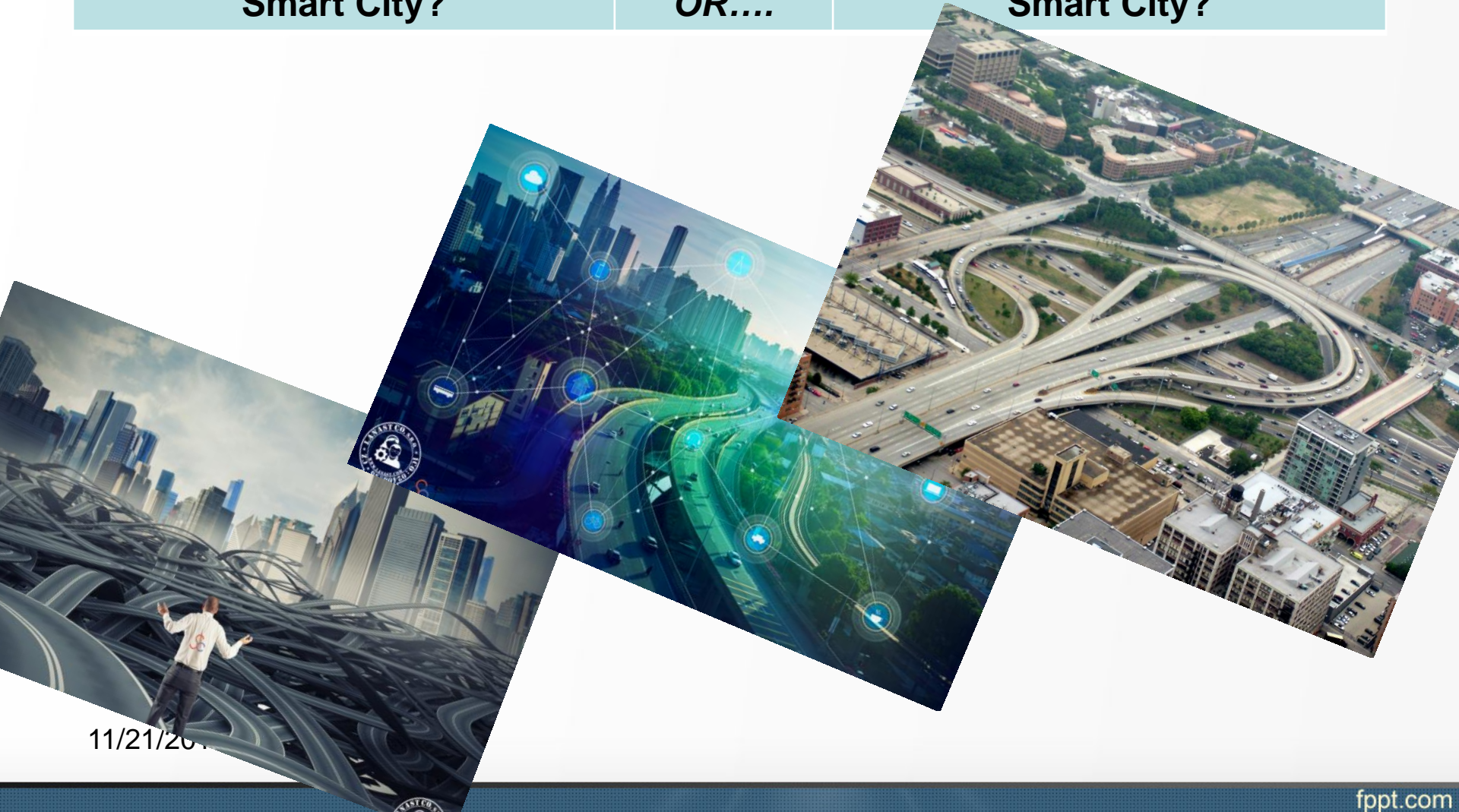
The Problem: a Smart University

How Smart is Smart?

Smart City?

OR....

Smart City?



11/21/2014

How Smart is Smart IT??

Smart ICT?

OR....

Smart ICT?

The screenshot shows a web browser with multiple tabs. The active tab is 'https://kelms.kyu.ac.ug'. The browser's developer tools are open, displaying the HTML and CSS of the page. The HTML shows a header with a logo, a main content area with a banner, and a sidebar with navigation links. The CSS shows various styles for the page elements, including colors and fonts.

Browser Tabs: New Tab, TA Facility - Re..., How Can We R..., VC ICT Forum (...), Google Image (...), Yahoo, smart ICT - Go..., Kyambogo Uni..., Ekampus Learn...

Address Bar: https://kelms.kyu.ac.ug

Page Content:
Kelms Banner
KELMS -Kyambogo University E-Learning Management System
★ ONLINE LEARNING FROM KYAMBOGO UNIVERSITY
★ ONLINE LEARN COURSES
★ KYU COMMUNITY

Developer Tools:
Elements: <!doctype html>, <html dir="ltr" lang="en" xml:lang="en" class="no-js yui3-js-enabled">, <head>...</head>, <body id="page-site-index" class="format-site course path-site safari dir="ltr" lang="en" yui-skin-sam yui3-skin-sam kelms-kyu-ac-ug pagelayout-frontpage course-1 context-2 notloggedin desktopdevice pagewidthnormal categoryicons floatingsubmit has-region-side-pre used-region-side-pre has-region-footer-left empty-region-footer-left has-region-footer-middle empty-region-footer-middle has-region-footer-right empty-region-footer-right has-region-hidden-dock empty-region-hidden-dock has-region-page-top empty-region-page-top side-pre-only jsenabled">...</body>
Styles: element.style { .dir-ltr, styles_debug_ph_l&type=theme:2 .dir-rtl .mdl-right, .mdl-left { text-align: left; } body { styles_debug_ph_l&type=theme:8 scrollbar-face-color: #808080; scrollbar-highlight-color: #ffffff; scrollbar-3dlight-color: #ffffff; scrollbar-darkshadow-color: #808080; scrollbar-track-color: #ffffff; scrollbar-arrow-color: #217a94; } body { styles_debug_ph_ype=theme:1506 color: #217a94; font-family: "Verdana"; background-image: none; background-attachment: fixed; background-repeat: no-repeat; background-size: cover; } @media (max-width: 767px) body { styles_debug_ph_&type=theme:10 font-size: 12px!important; font-weight: 500; line-height: 16px; } body { styles_debug_ph_&type=theme:10 line-height: 20px; text-shadow: none; font-size: 14px; font-weight: 400; background-color: rgba(255,255,255,.6); background-size: cover; margin: 0; padding: 0; } @media (max-width: 979px) body { styles_debug_ph_&type=theme:10 padding-top: 0; } #page-site-index

Smart ICT?

OR....

Smart ICT?



11/21/2018

What constitutes a “Smart University”?

- ❑ For the purpose of this presentation, we shall refer to a Smart University as:

“A **university** which enhances the education, research, and work processes and experiences of stakeholders by incorporating digital, innovative, internet-based, and internet-based technologies for the betterment of the users of its services.”

- ❑ Indirectly referenced on the Kyambogo University System (e-Kampus/AIMS) that is designed to automate the entire university Business Process
- ❑ The e-Kampus/AIMS is a system that currently controls Staff Recruitment, Staff Portals, Student Admissions, Student Portals, Results Management System and entire transition to completion, KELMS, Distance Learning, Financial Administration, University Online Library Services, and such similar.

The Smart University Dream ...

Dream:

- Big
- Deep
- Jump into the Deep End
- but also Plan Meticulously

Why?How?What?Which?Whom?.....

The Role of the Administration in a Smart University

□ 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 the Administration in a Smart University ...

□ ICT Strategy: Strategic Plan

- ❖ 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 the Administration in a Smart University ...

□ University ICT Budget

- ❖ Allocating monetary resources to various IT programs
- ❖ Ranges from recurring expenses like **hardware purchase or leases, software purchase leases, network development, staffing and connectivity** to expenses dedicated to a fixed-duration project such as **establishment of a Fiber Optics Network, CCTV Network, Biometrics Access Control Systems, Attendance Systems, and such similar**
- ❖ ICT budgets should be the numeric manifestation of your IT strategy that's well communicated and understood by your peers
- ❖ When done right, budgets should merely affirm what has already been understood and should get approved with minimal pushback.

Before, during, after the journey to a Smart University

□ Building it like a jigsaw puzzle. Benchmark.

- ❖ Identify the need, define the problem
- ❖ Dream, visualise, plan
- ❖ Document
- ❖ Implement, manage
- ❖ Re-Dream, re-engineer

*The Plan The Hardware, The Software,
and the Humanware*

The Hardware

□ The Hardware

- ❖ A university requires a lot of IT tools. These are physical aspects of computers and related devices
- ❖ Keep an eye to industry standards, but don't lose sight of your capabilities – policy, plans, budgets, human resource
- ❖ Pay attention to National Procurement Laws, but if necessary, circumvent “unfriendly provisions” within the law
- ❖ 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

□ The Software:

- ❖ This is a general term for the various kinds of programs used to operate computers and related devices
- ❖ Whatever software you throw about will need the required intelligence to “talk” to your system, and possibly to each other
- ❖ Proprietary versus Open Source versus locally developed software
- ❖ Your needs will determine the kind of software you will bring on-board.
- ❖ Play safe, and consider SaaS.

The Humanware

- ❑ The Humanware component of your university system refers to the persons that uses the computer
- ❑ More specifically, it is about the individual that makes hardware and software components productive
- ❑ It is the most challenging, ubiquitous and most unpredictable component in a Smart University System. A duck will always quack like a duck. One goat will equally bleat like the other. But us humans? Everyone of us is a species unto itself. So, beware of the following....

The Humanware

- ❑ **Management** – First task is to win them over. This includes the University Council, the Top Management (yourself), the University Senate, the Principals, Deans of Faculties, Schools, otherwise it will be a lost cause.
- ❑ **The Dream Team** – Developers/ Back End/Front End (Recruit, Train, Motivate, Facilitate, Retrain). Appreciate the proverbial 10,000 hours input from each. Don't pay them peanuts!!
- ❑ **The Power Users** – Endear. They can do or undo your success.
- ❑ **The Early Adopters** – Encourage. For the extra millage.
- ❑ **The Conformists** – Enable.
- ❑ **The Go-Slows** – Never ignore. Try win-win, but care is advised.
- ❑ **The Disgruntled** – Explain, involve. Avoid negative energies.
- ❑ **The Nay-Sayers** – Be firm, but respectful. Use controlled inclusivity.

Jump into the deep end

At Kyambogo University, we did it, so you too can “did it”.

[a bit of what we did](#)

All credits provided and acknowledged in the written literature

Thank You All

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