

# Surmounting ICT challenges in HEI's through Collaboration

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# What Is Collaboration?

- A process where 2 or more entities work together to achieve a common objective
- Allows for better utilisation of finite resources
- Sharing of knowledge and building consensus are key components
- Leads to improved quality of intended objectives, results or products
- Open Source software development has collaboration as root of its philosophy and the heart of its success

# Collaboration Among HEI's

- HEI's in Nigeria can use collaboration efforts to achieve numerous ICT goals
- Collaboration helps overcome financial, technical and human resource constraints
- Improves the case for external help and resources
- Successful ICT Collaboration projects among African and Nigerian HEI's exist – Forum, AVOIR, Bandwidth Consortium,

# Some Challenges ...

- Many HEI's do not have sufficient Internet bandwidth and lack adequate information systems
- Limited resources prohibit many HEI's from acquiring required bandwidth and/or developing systems
- Commercial applications introduced to fill information systems gap are limited in functionality
- “Portal” vendors have too much control of application and databases and HEI's need to own and have full access to their data
- Collaboration with other HEIs is a way forward

# ...Challenges Faced By HEI's

- Individual Institutions that have built their own systems are still constrained by
  - Limited scope of functionality available
  - Resources for support (internal and external)
  - Maintenance and overall sustainability of applications
  - Ensuring applications are upgraded and aligned with changes in technologies
- Collaboration to improve existing systems is an option

# Collaboration For Bandwidth

- Model already exists – Partnership Bandwidth Consortium
  - Sponsored by 4 U.S. Foundations
  - Managed by AVU Kenya
  - Based on Satellite Internet Connectivity
  - Members include founding Forum Institutions
- Bandwidth purchased at much reduced prices as a result of the collaboration

# ..Collaboration For Bandwidth

- Similar collaboration on local level possible and necessary.
- Local consortium in addition to cost and bandwidth availability benefits will also;
  - Allow for development of more effective support and capacity building mechanisms
  - Accelerate connectivity to emerging telecom fibre networks as stakeholders - ngREN
  - Simplify strategic planning and discourage national policies inimical to ICT development of HEI's

# Collaboration for Software Development...

- Define a system that caters for the needs of all stakeholders in HEI's and covers:
  - Administrative Processes
  - Student Registration, Fee Payment etc
  - Staff Resourcing and Finances
  - Academic Processes (library holding, e-learning)
  - Research
- Stakeholders include student, staff, parents and sponsors

# ..Collaboration for Software Development

- Need to define the functional requirements of a system that caters for all aspects of HEI administration
- System needs to cater for all stakeholders including students, staff, parents (sponsors)
- Systems must be generic so all Institutions have the opportunity to use it
- A process needs to be established that allows all institutions to contribute to the functional requirements, development and testing of such a system

# ..Collaboration on Software Development

- Success of application development is best achieved through collaboration
- A consortium of HEI's contribute to all phases of the application development cycle
- Private sector contribution can enrich collaboration efforts and augment any resource deficiencies
- Inputs from a wide range of HEI's will lead to better defined functional requirements
- Open source development philosophy and tools can guide the process

# Collaboration Benefits

- Leverage existing capacity & knowledge in software application development
  - Institutions that have some systems in place can contribute their code and expertise
  - Less technically adept institutions can contribute to functional requirements and quality assurance testing
- Knowledge transfer & increased capacity in software application development
- Collaboration efforts are more attractive to prospective funders

# Collaboration Objectives

- Development of a generic system wholly owned and used by Nigerian HEI's
- Development of a support & maintenance infrastructure for the develop system
- The developed system contributes to the development of Nigerian Research & Education Network (NREN)
- Encourage all types of HEI's to contribute to the development
  - Universities, Polytechnics, Colleges of Education etc.

# Education Enterprise Resource Planning System

- Initiated by Ahmed Chafe, Director MIS, UDUSok
- EduERP - Education Enterprise Resource Planning System
  - Multi-Institutional, leverage available code and adopt open source development methodologies
  - Develop a generic system that can be used by all HEIs in Nigeria and beyond with StepB funding.
  - Transfer knowledge and build capacity in professional software development.
  - Develop a support and maintenance infrastructure for the EduERP

# Modules

- Modules to automate student, staff and other university administration process and subsystems that are an integral part of activities in higher education institutions
  - Student Information System
  - Electronic Payment System
  - Web Portal
  - Learning Management System
  - Library Management System
  - Human Resource Management System
  - Financial Management System

# Moving forward

- Bandwidth Consortium Mailing List – Recently started to explore options which provide lower priced bandwidth for HEI's
  - <http://forum.org.ng/mailman/listinfo/bandwidth>
- EduERP Mailing List exists for Institutions interested in collaboration project to discuss issues surrounding collaborating to develop EduERP
  - <http://forum.org.ng/mailman/listinfo/eduerp>
  - <http://abuja.forum.org.ng/mailman/private/eduerp/>

# Thank You

Questions ?