The Global Network University

New York University New York       New York University Abu Dhabi
Today’s Agenda

GNU Vision & Principles

Layer 1  Connecting the GNU Community  Jeanne Smith

Layer 2  Connecting the GNU to Its Content  Paul Horn

  Global Curriculum & the Power of Integrated Student Systems  Carol Mandel

  Global Academic Collaboration

Layer 3  Connecting People to Services  Ben Maddox

  Financial Model Overview & Benchmarking  Tom Delaney/Jeanne Smith

Next Steps

Discussion
Vision

Establish a secure, dynamic, seamless technological infrastructure that will:

- Have NYUAD join NYUNY as one of the twin foundational pillars of the Global Network University (GNU)
- Establish organic linkages via faculty and student mobility, sharing of curriculum, research, communication
- Enable full complement of NYU international study sites across five continents
Guiding Principles

- Robust technological infrastructure is required to enable seamless mobility of faculty, student, research, teaching and learning between branch campuses (New York & Abu Dhabi) and across international study sites.

- Organic linkages attained by partnering resources at both “hub” branch campuses (New York & Abu Dhabi) and deploying a shared services approach for academic and administrative applications across all sites in the GNU.

- Formulate highest quality service models to train, assist and support global network service model.

- Financial modeling Principles :
  
  - Each “hub” responsible for all of its own dedicated network costs (New York for its own, Abu Dhabi for its own projected costs)
  
  - All other GNU costs, shared application and services costs shared by New York and Abu Dhabi with the exception of projected sinking fund requirements.
Work Plan in Three Layers

I. Connect the GNU Community

II. Connect the GNU Community to Its Content

III. Create a “Sun Never Sets” Service Model
Layer I  Connect the GNU Community

- Build meshed network to establish foundational pillars in New York and Abu Dhabi, plus 2 additional existing global sites – one east and one west of NYUAD.
- Videoconferencing, shared applications and foundation for next-generation systems
Layer I  A Meshed Network

- The fully-envisioned GNU network will deploy a world-class, fully-meshed network – a vast improvement in performance, capacity and security relative to a typical commodity internet-based system where all site traffic flows through NYU/NY in a “hub and spoke” fashion.

- Enables extreme reliability, and multiple redundant paths that negate “weakest link” vulnerabilities.

- This sophisticated, meshed network environment will deliver connectivity of such high quality that no matter where students, professors, or researchers sit, they will be able to instantly communicate with each other and access the GNU’s vast resources of people, publications, and curriculum.

- The ‘plumbing’ that will enable the services which will, in turn, facilitate teaching, research and learning.
Layer I  Upgrading A “Hub and Spoke” Network

NYU Network Today
Layer I  A Meshed Network

GNU Meshed Network
Layer I  Videoconferencing

- The global curricula of the GNU demands new and sophisticated collaboration space to support the delivery of its global content.

- Videoconferencing, in concert with technology components such as “smart” classroom devices and collaborative software, will expand and enhance the education of students by making it possible for them to attend lectures offered on any campus or in virtual joint seminar rooms.

- Consistent classroom/teaching technology will enhance access to global faculty and ensure a familiar user experience in all sites. Students will enjoy sustained access to professors when they transition to another campus.

- High Definition Videoconferencing will eliminate barriers to teaching, learning and research by simulating the physical presence of participants in a way that creates the impression that they are in the room, producing a more tight-knit community.
Layer I  Shared Applications

- The Shared Applications are the ‘software doorways’ through which faculty, students, researchers, and staff are able to work with one another and share academic content and administrative data of the university in a way that is secure, fluid, and without physical limitations.

  - **Who Are You?** → Identity Management provides a seamless way to authenticate users and present them with the information that is personalized for them.

  - **What Do You Need?** → The Mobility Hub aggregates all of the administrative and academic resources at the “back end” of the system in user-aware, location-aware manner.

  - **How Do You Want to View It?** → The GNU Portal presents the user-aware and location-aware information above in a personalized manner, creating a “have it your way” experience for GNU community members.
Layer I  Foundation For Next-Generation Systems

- We will also begin the introduction and integration of the next-generation Administrative Applications. These applications, when fully-enabled in Layer 3, will enable us to stand among the great globally-run organizations as the first true global research university. In Layer 1, the early stages of a new Student Information System will be introduced.

- In addition to administrative applications in Layer 1, we are also starting to layer in the foundation of next-generation of Academic Applications which Hilary Ballon, Associate Vice Chancellor, NYUAD and Carol Mandel, Dean of NYU Libraries, will discuss.
Layer II Connect the GNU Community to its Content

Hilary Ballon

- **Link remaining global sites** to enable mobility, research, scholarly and curriculum sharing across all 13 NYU sites
- Implement **Integrated Student Information System** across the GNU sites
- Support **Global Curriculum** and Programmatic Development

Carol Mandel

- Integrate **Digital Library**
- Launch **Academic Collaboratory**
- **Integrating the Learning Management System** with core academic resources
Layer II    Link Remaining Global Sites

- Link remaining global sites to enable mobility, research, scholarly and curriculum sharing across all 13 NYU sites
Layer II Integrated Student Systems

- A Student Information System is at the heart of a University’s business

- All components of the Student Information System are now fully-integrated to manage aspects of student’s administrative life cycle on a global basis, including:
  - Admissions
  - Differences in Academic Calendars across locations
  - Financial Aid
  - Course management – Adding, dropping, registering for courses
  - Course Evaluation
  - Grades & transcripts
  - Billing
Layer II Support Global Curriculum: A Case Study

- Support Global Curriculum and Programmatic Development
  - A Case Study: Enabling A Course Taught in Multiple Locations
Layer II Connect the GNU Community to its Content

- Integrate Digital Library

- Launch Scholar’s Portal & Academic Collaboratory

- Integrating the Learning Management System with core academic resources
Layer II – Digital Library Infrastructure

- NYU's vast, and ever expanding, collections of electronic library resources are assembled and/or created from many sources. The Digital Library is the infrastructure to support and deliver those collections rapidly and smoothly across the GNU.

- Infrastructure includes high density data storage, content management systems, and a network of servers.

- NYU has been building an infrastructure for NYUNY, but a new generation of this infrastructure will be needed for global expansion and global use of increasing amounts of multimedia content.
Layer II – Learning Management System

- To sustain globally the quality of teaching and the learning experience at NYU, the GNU requires a Learning Management System (LMS) that seamlessly interconnects with the Digital Library and the Academic Collaboratory within the full range of learning environments that NYUAD, and all of NYU, will provide.

- The LMS will enable students' shared engagement with content they are studying, in all media and with all modes of interaction.

- Course content will follow a teacher across the network, no matter where the classroom or the content is located. The LMS will enable professors to update course content dynamically in multiple locations and with multiple sources.

- The LMS will be a gateway to tools for multimedia capture, annotation, streaming and podcasting. Individual lectures, course curricula and content, and students’ work can be shared, saved, reused and repurposed.
Layer III  Create a “Sun Never Sets” Service Model


Paris > Prague > Shanghai > Singapore > Tel Aviv
Layer III Create a “Sun Never Sets” Service Model

- Establish fully optimized service desk capabilities

- Upgrades to administrative applications needed to manage multi-point international operations with world-class efficiency
  - Integrated financial reporting and research grant management tools
  - Integrated human resource management system
  - Upgrades for data warehouse and business functionality applications
Layer III - Create a “Sun Never Sets” Service Model

Service Without Boundaries

- 5 Continents
- 7 Time Zones
- 13 Locations
- 10 Currencies

The Global Service Desk leverages industry best practices and will provide concierge service to address any and all user questions with a caring voice, and knowledge of a user’s location, device status, and other circumstances, allowing them to immediately focus on solving the user’s problem.

- Pragmatic, operational, easy to use, flexible services
- The GNU Service Desk will be open 24/7. This organization will “follow the sun,” offering support, training and on-site assistance as needed by GNU members at any time.
Layer III - World-Class Global Operation

- In this Layer, all of the **key administrative systems** (finance, student information, human resources) will exist on a single technology version, positioning us to aggregate and derive knowledge from our collective global processes.

- Following the best practices of global organizations, data warehouse and business intelligence application implementations will enable the reporting and analysis required to support the GNU.

- The data warehouse and reporting analytics functionality will flatten the organization and allow authorized members of the GNU to perform statistical analysis in a transparent and agile manner.

- **New Grants Management Tools** respond to NYUAD’s goal to establish a viable, functioning research program in Abu Dhabi.
  - Time & Tracking for Sponsored Research
  - Auditable tracking mechanism for our Principle Investigators & Researchers

- For example, normalized value metrics for faculty could be developed around the areas of teaching, publishing and research grants production. Such metrics could be applied to faculty performance evaluations across the GNU.

- The data could be “sliced and diced” by discipline, location, tenure track, and any other way that provides insight into the GNU for future strategic planning.
Financial Model

- Financial modeling Principles:
  - Each “hub” responsible for all of its own **dedicated network** costs (New York for its own, Abu Dhabi for its own projected costs)
  - All other GNU costs, **shared application and services** costs shared by New York and Abu Dhabi with the exception of projected sinking fund requirements.

- Reviewed the 3 Major Financial Streams
  - 5 Year Non Recurring Capital Costs
  - Operating Costs
  - Capital Refresh Fund
Benchmarking

- As we worked on the IT Blueprint required to realize our GNU Vision, our Institutional Research Group worked in parallel to benchmark various classes of schools to serve as a sanity check for our financial model and to uncover the disparities which would help us to focus our value engineering efforts.

- We employed 2007 Educause Survey Data, research from IBM Global Services, and global public company financials. We tried to benchmark financials and service levels for the following types of companies:
  - Small American universities
  - Small UAE universities
  - Large American multi-campus universities
  - Large Global Companies

- NYUAD will partner with us over the next several weeks to refine our research and to continue to explore our approach in creating the first true global research university.
Next Steps

- Engaged IBM to provide NYUAD with clear work plan for implementation of select requirements from Layer I necessary by September 2010.

- Feedback from NYUAD FAC and EAA regarding areas of value engineering possible using regional IT specialists/resources
  - Working Sessions On Financial Plan and Benchmarking (late February – early March)
  - Additional due diligence material as required by the NYUAD FAC (late February – early March)

- Sequence of meetings/work plan requirements for preliminary review of Global IT Plan by NYUAD Board in March with intent of seeking funding approval in May 2009 meeting