UNITED NATIONS
UNIVERSITY

Campus Computing Centre
An Overview

About C3

The Campus Computing Centre is an innovative and client-focused department, responsible for the management of the university's ICT infrastructure and provides services and applications to support the academic and business needs.
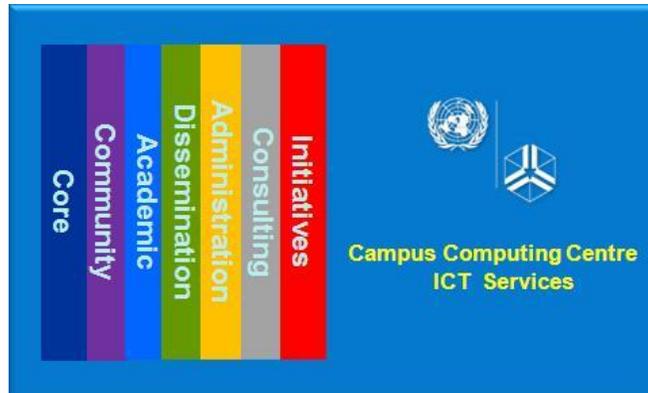
C3 Vision

Our vision is that ICT should permeate everything we seek to do at UNU as an essential and invisible tool that is always available and seamlessly integrated into our activities – to address the global pressing problems of our time.

To realize our vision our work focuses on the following strategic themes:

- Global Office: Develop and promote a user-friendly and uniform user-centric computing environment across the university;
- Global Team: Strengthen the overall ICT capacity by aggregating the individual ICT units into a 24/7 global team;
- Innovation: Adapt and transform new concepts and technologies; generate and incubate our own breakthrough ideas that will lead to new services and position ourselves as the ICT powerhouse for the university;
- Communication: Raise awareness of the ICT services and their benefits, and engage users in the design and development of new services;
- Partnership Building: Promote collaborative excellence by working with other departments throughout the university to ensure that the users can take full advantage of the most adequate and effective ICT tools needed for their work;
- Knowledge Creation and Diffusion: Foster a knowledge intensive environment for harnessing and leveraging our intellectual assets and competence throughout the knowledge evolution cycle to enable ICT led transformation within UNU and outside UNU, and increase UNU's sustainable competitive advantage.

C3 Mission

The Campus Computing Centre (C3) serves as a change agent for leveraging innovative and effective information resources and technology to enable and advance the vision, mission and strategic directions of the university.

We are committed to serving the needs of the university community and ensuring that the users can make the maximum and appropriate use of the computing environment in their diverse range of activities, including teaching, research, outreach and support.

Our work is guided by the following principles:

- Commitment to excellence in service to the university
- Commitment to a highly ethical and an accountable culture in C3
- Commitment to building strong collaborative ties with other departments of the university
- Commitment to innovate and contribute to the advancement of ICT
- Commitment to responsible management of the ICT resources and budget
- Commitment to knowledge sharing and staff career development

Functions

The Campus Computing Centre (C3) oversees the conceptualization and development of the ICT strategic plan, provides overall management and operational support of the information infrastructure, and contributes to the advancement of ICT in support of the strategic directions of the university.

Key Initiatives

Global Office

The Internet revolution is fueling transformative changes in all strata of society at an unprecedented pace. The traditional brick and mortar model of computing is being succeeded by a model that is increasingly supported by the view that the Internet is the computer where computing occurs outside the organization.

The university needs an institutional strategy to harness the connective power of the superhighway that will allow the Headquarters and its geographically dispersed offices to deliver as one. Standardization and harmonization of business processes and technical systems is an important step toward a consistent computing platform and interface across UNU.

Data Centre

The continued expansion of United Nations University and the Global Office Initiative depend critically on the performance and availability of our data centre.

The lifeline services, such as the core messaging and business applications, and the network fabric and information infrastructure through which the digital content is pushed and pulled is complex, but most invisible when it is working. In order to sustain the digital transformation, it must be continually improved to meet new demands and keep pace with new technologies.

The Internet has spawned a new wave where shared applications can reside outside the enterprise network. The traffic moving across WANs and the level of dependency on data centre continue to rise. Hence, it is vital that the critical layers of the network fabric of our data centre, from routers to firewalls to switches are fault-tolerant and fast.

Virtualization

Advances in virtualization are blurring the line between software and hardware much like the

Web.N revolution that is trying to bring the entire desktop experience to the cloud and beyond. This approaching perfect illusion is at the heart of this enabling technology. The technology is still evolving and we expect to see virtualization to extend to many pivotal areas of the ICT infrastructure (network, server, storage, system, etc).

The fact that software is more flexible and (trans)portable than hardware, virtualization takes the design and management of the data centre to the next level. For example, we can run multiple virtual machines on a single physical server and dynamically provision resources to the virtual machines as application requirements change. It is also possible to move virtual machines and applications across servers based on network and workload conditions without any noticeable downtime to the end users.

Not only does virtualization help us utilize hardware more efficiently, it is also a great approach to reduce the power requirements of our data centre; simplify deployment and management; achieve high availability and business continuity and minimize downtime. Beyond the common uses, we are also looking at new ways to reap the benefits of virtualization in the context of the Global Office Initiative.

Thin Client Computing

Thin clients are fanless appliances with no hard drive. All features typically found on the desktop PC, including applications, sensitive data, memory, etc., are stored back in the data centre. The proposed move to thin clients will drastically cut deployment costs in comparison to a traditional PC environment. Couple this with 'Green ICT' benefits (it is well documented that thin clients use anywhere from 8–10 watts of power compared to the 100–150 watts of a typical PC) and it is easy to see why we are eager to adopt this technology.

With ICT services and resources being server based, there is great potential for your PC environment to follow you to whichever UNU office location you visit. We are very excited about the recent and ongoing developments in this area of computing. In our first proper test of this model, we will be provisioning the International Courses 2010 using thin client computing technology. We hope to document this experience in the knowledge sharing section of our site early next year.

Enterprise Resource Planning (ERP)

An ERP system being used by 5 UN agencies (UNDP, UNFPA, UNOPS and UNIFEM) was adopted by UNU and went live in the early part of 2009.   It is expensive to customize an ERP system and in the case when the platform is shared like ours, extensive coordination and negotiation efforts are required to reach consensus on changes.

Recognizing that it is not always possible to tailor the system to meet our changing business requirements, our focus gravitates toward extending the ERP system by creating external applications that have direct access to the data warehouse.

Cloud Computing

In this age of choices not only can anybody buy applications, but also compute power outside the organization. UNU is a customer of the public cloud architecture and C3 is constantly exploring suitable best value options to meet our changing needs.

Cloud computing is quickly becoming the shortest path to implementing systems and processes. We have started to see a shift of the role of the ICT departments as service providers to integrators and consultants. As access to the "public cloud" continues to proliferate in an organization, we must be aware of the danger of digital silos that this new form of utility computing can create. At a time when everybody is flocking to the cloud, it is critical to recognize that users' needs are not unique and the ICT department can play a central role to coordinate and standardize the cloud applications.