

Hefmania

Volume 4, issue 1, 2010

Content

- 1. *The president*
- 2. *New executive*
- 3. *2009 Conference review*
- 4-5 *UCT chiller upgrade*
- 6 *CFL's and recycling*
- 7 *What if a CFL breaks?*
- 8-11 *Scholarship review*
- 12-13 *News*

Mission statement

To develop and maintain high quality standards in the management, maintenance, operation, planning, utilization and development of the physical infrastructure of higher education institution campuses

To promote professional ideals and standards that would assure the best academic environment and to engage in such other related activities as may be desirable or required to fulfil the objectives of the HEFMA organization.

To provide the best professional service to Higher Education through constant education, information and resource creation.

WORD FROM THE HEFMA PRESIDENT



Being elected as President of HEFMA is a prestigious position. It represents the confidence of a large number of tertiary institutions hold in my ability to take HEFMA to a higher level. Members of HEFMA collectively spend billions of taxpayers' Rands on maintenance and new projects. It is therefore important that they are at the cutting edge of technology.

My objectives during the presidential year are as follows:

Improvement of the recognition of HEFMA in the hierarchy of higher education. We will continue our efforts to have the importance of FM recognised through the Vice Chancellors' Forums. We will also assist our Southern African members in this respect.

Membership retention and growth. The more members we have, the bigger will be the knowledge base that will be shared with members.

Growth and expansion of the annual benchmarking exercise. This allows members to compare their institutions to others to find out how effective their institutions are.

Continual liaison with our overseas partners. This will open up avenues for dialog on a vast array of subjects beneficial to our industry.

To increase our business partnership membership. This will bring competitive pricing and sponsorship opportunities while it offers marketing opportunities to businesses.

Continual communication with our members. It is important that the executive is aware of the needs of the membership. I plan to write a Presidents Forum in the Hefmania editions that will be published during the course of 2010.

I trust that all our members will have a wonderful 2010

Les Reynolds – HEFMA President

Hefmania

Hefmania is the quarterly newsletter of the Higher Education Facilities Management Association of Southern Africa (HEFMA). The newsletter is distributed in the middle of every quarter.

Editorial team

Les Reynolds Hefma President	Andre Theys Hefma Executive member for Information Services	Guy Oldenkotte
l.m.reynolds@ru.ac.za Tel.: 046 604 8125	Andre.Theys@uct.ac.za Tel.: 021 650 3834	hefma@gobetter.co.za Tel.: 072 437 6246

We encourage HEFMA members to share their stories. Please send us your contributions!



Les Reynolds
President



Marcel Theron
Past-President



Cedric Achilles
Secretary



Stuart Blignaut
Treasurer



Andre Theys
Information Services

New executive

By Guy Oldenkotte

HEFMA elected a new executive during the AGM they held in Grahamstown.

Les Reynolds was elected the new President as Marcel Theron's stint officially came to an end. Les is Director Estate Division at Rhodes University. Marcel is now the Past President and will support the new executive in finding its feet. Also new on the Executive is Andre Theys of the University of Cape Town. Andre is the Head: Engineering Services UCT Properties and Services Department. HEFMA would also like to thank Malan

Oosthuizen of Stellenbosch University and James Kwenani of the University of Namibia for their contributions during their tenure. For those who can't remember, HEFMA's ambitions are reflected in its logo, a red square to resemble the red facebrick stones of which most universities are made, the yellow triangle representing the triangular stone that completes the arch one will find at every University and which keeps the structure together, and the two lines resembling the two latitudinal lines you will find in Africa; Equator and Capricorn. •

Unit to assist staff in distress

By UKZN

Staff members at UKZN overwhelmed by personal or workplace problems can now turn to the newly established Employee Assistance and Wellness Unit for assistance.

The Division of Human Resources and Equity set up the Unit recently in an endeavour to foster an enabling and happy work environment and so ensure the optimal performance of staff. Managed by Ms Eleanor Langley with the assistance of Ms PSG Kutu Hlongwane, an Employee Assistance and Wellness Officer, the Unit is set to introduce a range of programmes to assist UKZN staff resolve personal problems and maintain good personal health. The Unit, based at the Howard College campus, will extend its services to staff across all campuses; however, present space constraints have not permitted on-site visits to the Edgewood campus and the Nelson R Mandela School of Medicine. The team travels to the Westville campus on Tuesdays and to the Pietermaritzburg campus on Thursdays. Initially, the Unit will provide individual counselling and referral to staff seeking assistance on various issues including job pressures; marital conflict; family issues; personal relationships; drug or alcohol abuse; legal or financial problems; aging; retirement; illness; computer addiction; depression; gambling addiction; elder care and stress management.

In its effort to promote Employee Wellness, the Unit plans to introduce education and training sessions designed to address identified problem areas.

Over the next few months, the Unit will draw up a formal programme for 2010 based on a "needs analysis" stemming from consultation with staff members and management.

Ms Reena Budree, Executive Director: Human Resources and Equity, said the Division long ago recognised the importance of maintaining a work-life balance through Employee Assistance and Wellness programmes at the university.

"Maintaining a work-life balance is critical for emotional, physical, intellectual, social and spiritual health. Staff need to be aware of the impact of work on their health, family and home and vice-versa. Often employees feel overwhelmed by their responsibilities, resulting in poor health, financial and lifestyle choices," said Ms Budree.

According to Ms Budree, the current economic climate has the potential to result in increased stress levels due to financial and work pressures. Staff who are not coping should seek assistance as soon as possible, said Ms Budree.

Describing the Unit's inception as a milestone for the Division of Human Resources and Equity, Ms Budree said she hoped it would contribute significantly to branding UKZN as an employer of choice. •

2009 HEFMA Conference review

By Les Reynolds

The 2009 HEFMA Conference was held from 19 to 23 October in Grahamstown.

Organisers of Rhodes University welcomed over 70 delegates representing most universities that are members of HEFMA.

Planning and organizing a large conference is no easy task. It is basically the coming together of literally hundreds of different activities that make a conference work. I had a wonderful team that supported me in the planning of the conference, from organizing accommodation and transport to recording the proceedings. The conference was held at the Graham Hotel. Conferences are normally held at Rhodes University, but the HEFMA Conference fell into the last term of lecturing. Staff and management of the hotel were therefore a great help with both the organizing of the conference itself and arranging the accommodation and meals. The venue at the hotel was ideal for our needs and I am sure the delegates were comfortable. The food provided was also of a high standard. The 73 delegates who attended were accommodated at the hotel and various B&B's in town. I am not aware of any complaints, so I assume that everyone was happy with the arrangements made.

Interesting presentations

The content of the speakers' presentations was of a high standard and the organizers were grateful for the time and trouble that these people had taken to make the conference a success. Opening keynote speaker was Dr Saleem Badat the Vice-Chancellor of Rhodes University. His presentation addressed the national funding of infrastructure at South African Universities. This was a thought provoking and insightful presentation as it emphasized the need for recognition of facilities management at universities across Southern Africa. Various other presentations covered aspects ranging from electricity saving to green house gases and sustainable maintenance technology. Our overseas delegates also gave interesting presentations on their particular problems and the solutions that they employ.

Challenging finances

Being in the Eastern Cape, and specifically Grahamstown, the organising team faced a challenge to raise sufficient sponsorship and it took the organising team some serious work to generate enough funding.

I would like to thank all the sponsors for their contributions and their support which were much appreciated. Unfortunately, we were faced with some costs that escalated, leaving the organisers with only a small profit. I have been told that conferences in the larger cities and centres make large profits from sponsorships and exhibitors, which enables them to fund the incumbent President's travel overseas to attend conferences that are organised by our partner organisations in the UK, US and Australasia. This President will, unfortunately, have to hike overseas.

Overseas interest

We were privileged to welcome three delegates from abroad: Patrick Finch Bursar and Director of Estates at Bristol University represented AUDE; Barry McKay, Vice-President of TEFMA in New Zealand and Bill Elvey, Director of Facilities at the University of Texas in Dallas on behalf of APPA. These colleagues enjoyed the conference and especially the Eastern Cape hospitality.

Bill and Barry were accompanied by their partners, who also enjoyed the program that we set up for them. The socials in the evenings were great fun, especially the game farm pootjie evening. The final Gala dinner event was also enjoyed by all and I believe it was a great success.

Unisa in 2010

Organizing the conference was an enormous amount of work but once again thanks to a wonderful team, I am happy to say that it was a great success.

The 2010 event will be organised by Unisa in Pretoria. I would like to wish Okkie Lombard and his organising team well with their preparations. He can rest assured that, where necessary, the organising team from Rhodes University will be more than happy to assist where they can. •



Maintenance upgrade can save energy

By Andre Theys

The University of Cape Town recently had two chiller plants upgraded at its Kramer Law Building in a bid to reduce energy consumption at the building.

As per the American Society of Heating, Refrigerating and Air Conditioning Engineers' (ASHRAE) benchmarks, targeting a building's lighting and air conditioning installations can reduce its energy consumption between 20% and 30%. As part of its 'Green Campus Initiative', the University's Properties and Services Department have targeted these two focus areas.

Kramer Law Building

While the university is investigating various models of funding for the energy saving projects, one approach is via the maintenance division within Properties and Services which carries out lighting retrofits, air conditioning and chiller plant refurbishments or upgrades. The Kramer Law Building is a 16,789 m² multi-storey, multipurpose building of face brick construction housing the Law Faculty. The building was completed in 1985 and is located on the middle campus of the university, below Cape Town's M3 highway. The building is only partially air conditioned and its plant consisted of two packaged water cooled chillers and a calorifier heating system to chill and heat two separate water systems that are circulated through air handling plants to cool or heat spaces. These plants are equipped with modulating air dampers to utilise 'free cooling' when ambient temperatures allow.

Time for replacement

The original chiller plant consisted of 2 Daikin® UW100EGSYE water cooled packaged chillers, with a total cooling capacity of 610 kW. These chillers were independently coupled to 2 BAC® Model VXT75CR cooling towers. The chiller plant had been running well and had been reasonably maintained since inception. However, the shell and tube evaporator and condenser had been refurbished and while the reciprocating compressors were 'bulletproof', the

solenoids and ancillaries were beginning to fail regularly. Also, as the cooling towers were built-in, it was not possible to completely refurbish the towers and patching/fixes was no longer feasible. The increasing maintenance costs coupled with the energy saving drive prompted the Properties and Services department to completely upgrade the chiller plant towards the end of 2008.

New technology

Given advances in compressor technology, new chillers have a higher Coefficients of Performance, C.O.P's than older chillers. Coefficient of performance or performance ratio is the full load measure of a chiller and is the ratio of cooling capacity over electrical power input. Put another way, it is a measure of how much kilowatts of cooling capacity you get out for every kilo watt of energy put in when the chiller is fully loaded. This term has now been eclipsed in international markets by the energy efficiency ratio (EER). Further measure to compare similar chillers' unloading performance now in use is the European seasonal energy efficiency ratio, (ESEER) and the American Air Conditioning, Heating and Refrigeration Institute's (AHRI) integrated part load value (IPLV). The last two performance measures now compare the unloading characteristics and part load performance of a single chiller of a similar type across a full spectrum of loadings and seasonal cycles.

Two replacements considered

Within this context, the university considered two different replacement chillers from the same supplier who delivered the existing system. Chillers were to have screw compressors, shell and tube heat exchangers and high part load efficiencies, viz. IPLV and ESEER. The original chiller had a COP of 4.0, while the new offerings had COP's ranging from 4.2 to as high as 5.0. Chiller suppliers were asked to submit selections/offers and on the basis of full performance (COP), part load performance (IPLV and ESEER), cost (Rands/kilowatt capacity) and manufacturer support, the offering from Carrier® was eventually selected.

“As the cooling towers were built-in, it was not possible to completely refurbish the towers”



Water cooled screw compressor liquid chillers

Thus in March 2008, the University ordered 2 off Carrier® 30HXC90 water cooled screw compressor liquid chillers to replace the existing plant. The new chillers were to provide a total of 626 kW cooling capacity. This chiller was also chosen because it has 2 off twin screw rotor compressors and two independent refrigeration circuits, allowing the chiller to still perform at 50% capacity in the event of a compressor malfunction. It is also a tried and tested machine, as the university has 6 differing capacity variants of this model installed, all operating satisfactorily.

Condenser water temperature control

The new chillers also allowed us to garner further energy efficiencies as a three way control valve was installed in the condenser water flow loop. The control valves are controlled by the chiller's internal controls and allow regulation of the condenser water temperature to a much finer degree, optimally based on compressor loading. This was an improvement over the previous installation that only controlled condenser water temperature through ON/OFF fan control.

Plant room restrictions

In addition to the chiller replacements, the existing cooling towers were also replaced. As the original cooling towers were assembled and installed during initial building construction, selection of new cooling towers was restricted as the plant room space was limited and not configured very practically. Thus prospective cooling tower manufacturers/suppliers were invited to the

Kramer Law Building, handed the heat rejection specifications and asked to propose a solution.

Forced draft cooling towers

From the proposals submitted, the University chose the Evapco® model LSTA 4-91 forced draft cooling towers. The reason for this selection was the configuration and its ability to be assembled in the existing plant rooms. The replacement cooling towers were supplied with oversized motors and additional coal tar epoxy anti-corrosion treatment. The towers were delivered to site, disassembled, all parts carried up the escape stairwell and then reassembled in the plant room. The cooling tower plant rooms are situated at roof level, while the chillers are installed in the basement.

Installation in phases

The new chiller and cooling tower combinations were installed in phases so that the building was not without a chilled water supply. The first installation was commissioned and operational in August 2009 with the second installation commissioned and operational at end October 2009. While unable to predict actual energy cost savings without a full hour by hour analysis or energy modeling exercise, anecdotal evidence suggests the new installation could achieve savings of between 55,000 and 60,000 kWhrs per annum. This is, however, a cautionary projection based on an extrapolation of the replacement's weighted part load figures. •

“The new chillers allowed us to garner further energy efficiencies as a three way control valve was installed”

CFL's and recycling

By Guy Oldenkotte

Governments around the world are pushing for the replacement of traditional incandescent light bulbs by energy-efficient compact fluorescent lamps by passing legislation that, in many instances, make replacement compulsory. Nevertheless many 'weird' stories are doing the rounds that stop many from embracing the solution.



Governments push hard for the replacement as CFLs consume up to 80% less electricity than traditional incandescent light bulbs. They should also last eight to 15 times longer, which sharply reduces the consumption and expense of electricity for lighting. But very often power utility Eskom is contacted with the following questions:

Do CFLs give off hazardous amounts of ultraviolet (UV) light?

UV light rays emitted by the sun cause tanning, with overexposure responsible for sunburn and skin damage. Although CFLs give off slightly more UV than incandescent lamps, the amount is minimal and extremely unlikely to cause sunburn, or even tanning.

Can CFLs cause epileptic or other types of seizures?

Approximately 3% to 5% of people with epilepsy are prone to seizures induced by light flicker. Known triggers include TV, strobe lights and light reflecting on moving objects. The frequency of flicker that induces seizures differs from person to person, but is typically in the range of five to 30 flashes per second (Hz). Earlier fluorescent lamps flickered at about 50Hz, but current CFLs cycle at 23 000Hz, which virtually eliminates the triggering risk.

Can CFLs irritate people with light-sensitive skin i.e. Lupus sufferers?

Sufferers of the rare Systemic Lupus Erythematosus (Lupus) condition are sensitive to the UV rays contained in sunlight. A 1993 study found that UV exposure from sitting under typical office fluorescent lights for eight continuous hours is equivalent to just over one minute of sun exposure. Modern CFLs give off far less UV than the 1990s linear fluorescent tubes. If necessary,

the risk to Lupus sufferers can be eliminated by fitting standard acrylic light covers or diffusers to filter out the UV rays.

Can people who suffer from migraines use compact fluorescent lamps (CFLs)?

Migraine sufferers comprise up to 15% of the population and their migraines are brought on by various causes, such as: stress, food types, noises, exercise and lack of sleep. If light is suspected as the triggering event, the primary cause is likely to be glare or substandard lighting design. The 23 000Hz flicker rate of the modern CFL has proved to be undetectable by the human brain. In 2008 the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR) concluded that there was no health impact of energy-saver lamps on consumers. SCENIHR experts reviewed scientific data related to flicker, electromagnetic fields (EMF), UV and blue light radiation. No evidence was found that would indicate that either EMF or flicker from energy saver lamps posed a risk for consumers, including people with light sensitivity diseases.

Can people get mercury poisoning from compact fluorescent lamps (CFLs)?

In many CFL lamps, this small amount of mercury is an amalgam which will not vaporize at room temperatures. Typically, a CFL contains about five milligrams of mercury, about one-fifth of the mercury found in a watch battery (25 milligrams), and at least 100 times less than the mercury present in standard household thermometers (500 milligrams) and the silver-coloured fillings in teeth (500 milligrams). Five cans of tuna will typically contain the same amount of mercury found in a CFL. In any event, almost all of its mercury will burn up during the lifespan of a CFL. Little of the mercury remains in its most toxic form as most of it is converted and absorbed into the lamp components. •

HEFMA would like to thank Eskom for making this information available and for granting permission for reproduction in Hefmania.

What if a CFL breaks?

By Guy Oldenkotte

A fear that is echoed very often is the fear of, what is believed, to be dangerous mercury, a 'fear' that is based on a wrong assumption, says The Illumination Engineering Society of South Africa.

The Illumination Engineering Society of South Africa (IESSA) issued a press release in July 2009 (following e-mails that were doing rounds) to 'warn' consumers of so-called dangers of CFL's. The IESSA stated that 'energy saver lamps are safe to use at home and at businesses'. They admitted that a small amount of mercury vapour could be released when breaking an energy saver lamp, but that it is 'unlikely that it will threaten somebody's health as mercury of a broken lamp only poses a real danger when it exceeds the concentration that is allowed for workers in the industry who are exposed to higher levels of mercury during an 8-hour day on a continuous basis'. According to IESSA, this would mean that only when several lamps are broken every day in a closed environment, and if people are exposed to all of the mercury at once, could there be a concern to one's health which would have to be assessed.

A possible 'danger' of mercury vapour exposure can be minimized even further by proper ventilation and cleanup. If an energy saver lamp or any other type of fluorescent lamp breaks, the IESSA advises taking the following steps:

- Don't panic and do not start running
- Leave the room and ventilate for 15-20 minutes by opening a window
- On hard surfaces, carefully scoop up the fragments and powder using stiff plastic or cardboard and place them in a canning jar or in a sealed plastic bag. Use sticky tape to pick up any remaining small glass fragments and powder. Wipe the area clean with damp paper towels or disposable wet wipes and place these in the jar or bag.
- On carpeted areas, using protective gloves, pick up the glass fragments and put them



in a jar or bag. Again, use sticky tape to pick up the remaining bits and powder. If vacuuming is needed after all visible materials are removed, vacuum the area where the lamp was broken and dispose of the vacuum bag in a sealed bag.

What should I do with broken CFL's?

Broken lamps have to be treated as hazardous waste and will, as such, have to be presented to the waste collection company. As it is unlikely that many lamps will break on a regular basis, despite the many lights used at universities, the following removal options can be considered:

- Deliver lamps to any of the retailers offering a take-back service for CFLs. Currently Woolworths and Pick and Pay offer this service free of charge.
- Deliver used lamps to existing electronic waste (eWaste) disposal sites and services. You can locate your closest site by logging onto the EWASA website at <http://www.e-waste.org.za> or contact eWASA on 082 478 7075.
- Store CFLs in a safe place, in a non breakable container or plastic bag to contain the bulb in the event of a breakage that might occur until infrastructure is in place for the safe disposal of CFLs in your area.
- Some municipalities provide an annual or periodic hazardous waste collection day or event. Typically, CFLs along with any other household hazardous waste such as batteries, oil-based paint or motor oil can be disposed of on these collection days. Check with your local authority whether these are available in your area. •

"A broken lamp only poses a real danger when it exceeds the concentration that is allowed for workers in the industry who are exposed to higher levels of mercury"

Review Australia visit

By Phillip Nel

As the third member of HEFMA to benefit from the Davis Langdon HEFMA scholarship made available by TEFMA, Phillip Nel, Director: Facilities Management at the University of Pretoria, went 'down under' to learn from the approaches by universities in Australia and New Zealand.



Based on personal deliberations with representatives of TEFMA, AUDE and APPA who visited HEFMA Conferences in RSA, it was clear that South African institutions have much to gain from applying some of the knowledge and systems developed at other universities. But my visit to universities in Australia and in New Zealand exceeded all expectations. Being responsible for probably the most diverse estate in Southern Africa, I decided to study the *broader approach to managing* the estates, facilities and infrastructure. I therefore report only on the lasting experiences from the visit.

The Australian University Scenario

There are thirty seven universities in Australia. Most of these are clustered in the capital cities, with some located in regional areas. The student numbers vary considerably, from small institutions of around 5000 students to the very large of about 40,000 students. Of these, eight are known as the big eight. These are the Universities of Sydney, New South Wales, Melbourne, Adelaide, Tasmania, Western Australia and Queensland and Monash University. They are the older universities, comprehensive in their disciplinary coverage, research-intensive and sometimes known as the "sandstone" universities because of their primary building material. They can be compared with the "ivy league" institutions of North America. A relatively large second group is formed by the technical universities, while the country only has two private universities. All universities are primarily funded by the Federal government, although some funding does come from the state government. Many universities are covered by state legislation. Organisation structures generally support the challenges of sustainability and maintaining ever ageing facilities with limited maintenance and refurbishment budgets. Functions like Energy, Heritage, Spatial Development and



Sustainability are directed by seasoned professionals, whilst there are more professionally qualified staff specialising in different aspects of Estate and Facilities Management, e.g. space utilisation, master planning, quality systems, district cooling, cogeneration, water management, business continuity and measuring of key performance indicators for service delivery.

Sustainability

Most universities have a comprehensive network of electricity and water metering that provides real time consumption and demand data, whilst all universities have action plans for improving the efficient use of energy and resources. "Waste to landfill" and "carbon footprint" are metrics well known by staff and students. Students are well informed about these issues and demand aggressive approaches and responsible leadership on managing the challenges to the extent that one university has set a goal to become carbon neutral by procuring carbon credits to fill the gap.

Information Management

Managing the estate assets at a large university is a daunting task that requires comprehensive, integrated data and management systems. South African universities utilise various systems, with ITS making a local attempt to customise a solution that integrates the financial and space elements as required for HEMIS (Higher Education Management Information System) requirements. Australian universities also apply various approaches and, in general, the systems for project management, space planning, helpdesk and job request processing are free-standing from the enterprise system for financial accounting and student administration. This requires complex integration structures to ensure seamless system operation. PeopleSoft, SAP and in-house developed systems are often used in combination with Maximo, BEIMS, inCITE and Archibus. The University of New South Wales has opted for Tririga, a system also used in sections of NASA and the Pentagon. In some institutions job requests are processed on

in-house systems of the maintenance service providers; but, as a rule, service level agreements and automatic escalation to higher levels of management are not built in. Insufficient granularity of the financial system is quoted as the main reason for utilising specialised Facilities Management Systems and some institutions claim the integration is completely transparent to the average user. Syllabus Plus seems to be popular for the scheduling of time tables or venue bookings. Institutions with a high degree of outsourcing report an increasing problem with recruiting suitable operatives and managers for the maintenance, repair and project functions, as the in-house supply line has effectively been eliminated. On the other hand, universities that haven't outsourced report concerns regarding the productivity and effectiveness of an ageing workforce.

In at least one university, the maintenance budget is stretched effectively by recognising that not all areas and facilities on campus are exposed to the same level of utilisation and wear-and-tear. The areas are thus ranked on a 5-point scale, with different levels for response times and condition standards. In many instances, cleaning is performed over-night, with increased frequency of services during the day only for very high use areas.

Master planning and construction

Most universities are busy executing significant building programmes and all seem to have either an iconic architectural building or a benchmark sustainability project in construction. This is an area where South Africa has much to learn. All of the universities have developed very good working relations and business processes with the local government. The urban development frameworks and master plans are fully underwritten by the municipalities. As many of these universities are located close to the centre of large cities, the master planning provides significant challenges. One example is the large expansion at Sydney University of Technology (UTS), or the fact that it is expected that the population of Perth will double by 2050. Condition Assessments are conducted regularly in order to quantify and prioritise refurbishment activities. These results are also applied in justifying requests for financing from the

Education Infrastructure Fund. The 3rd dimension of long range planning involves sustainability contained in an Ecological Sustainable Development master plan.

On Campus Businesses+Commercial Centres

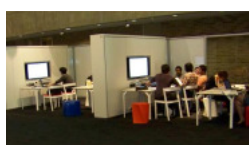
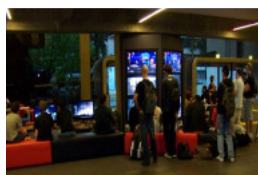
Students at Australian universities have access to comprehensive commercial facilities on site, which includes banks, copy centres, hairdressers, restaurants, etc. These are often run by the Student Unions, but since membership has become voluntary and the business models have become more complex, the universities tend to be more directly in control.

Selection and appointment of consultants

The application of statutory fees for professionals has been discontinued in Australia. Fees have thus become a negotiation item and opened the way for different approaches to the appointment of construction consultants. Total fees average around 12% of construction cost, but can be as low as 10% on larger projects. Whilst competitions are still held for iconic projects, the standard procedure has become more direct. Step one would be to announce the planned project requirement and invite qualified and interested consultants (especially architectural companies) to register their expression of interest, including a comprehensive profile of the practice and a brief justification of why they would be a good organisation to design and execute the project. The university then evaluates the paper presentation of the interested parties, applying a previously identified set of criteria. The criteria should preferably be published with the request for information to enable the interested parties to respond fully to the enquiry. The short listed agencies would receive a request for price briefing document, with a clear user requirement specification, explanation of the constraints and an indication of the available budget. For an AUD100m project, the briefing document would be approximately 30 pages long. The selected companies then need to respond with a detailed offer containing a fixed lump sum quotation per phase of the project. The university will then perform a final selection and negotiate the final fee with the successful professional team.

“In many instances, cleaning is performed over-night, with increased frequency of services during the day only for very high use areas”

The final criteria vary between institutions. Based on experiences with project competitions, the University of Pretoria has also decided to similar process for the selection process of professional teams for medium sized projects. The list of criteria, with some explanatory notes, follows:



Criteria	Intention / Motivation
Recent projects with UP	Rotate the work, i.e. give preference to firms who haven't worked on a UP project recently
Experience of project type	Recognise specialisation in types of structures
Available capacity	When can a good team work on the project
Location	A short distance between office and UP sites is desirable
BBBEE	UP fully supports BBBEE in all Facilities Management contracts
Registration	Only professionals considered
Alumni?	UP has good schools for engineering, IT and the built environment
Architectural competence	Recognise prior achievements / Demonstrated capability
UP experience with firm	Opportunity to regain points lost in point 1 above.
Multi-discipline project management	Ability to function within and control complex projects
Proposal - Scope and costs	Overall understanding of UP's needs and credibility of proposal

Business Systems

Dating back to 2003, many universities have, or have at some time attempted to have systems for space accounting. Some have given up, as the general reaction was not for large users to really be more conservative in defining their space requirements. In general, the charge out rates are not based on commercial considerations. It is more normal to find a financial balancing act, where the

maintenance and operations budgets are divided between the users at a break-even recovery rate. The faculty budgets are simply increased by a contra line item to balance the books and spread on a straight line basis across the number of accounting periods. Charge-out systems for multi-use facilities, e.g. lecture halls and conference venues open many new debates. All agree that the ideal system will match the need in terms of number of attendees with a venue of the same size and will charge a fixed rate per actual number of seats occupied per time period, e.g. hour. In practice, this is very difficult to control and the trend is towards fixed rates per venue based on the number of seats, irrespective of how many persons attend. The most important argument against this approach is having to pay for a larger venue because suitable smaller rooms are not available. Due to these difficulties, some institutions include the lecture hall costs in the overall budget and recover it through the fixed space charge-out rates. The table gives an indication of fixed rates per lecture period charged at one university. [Class A represents high technology venues]

No. seats	Class A Rate	Class B Rate
25	AUD 80	AUD 35
250	AUD 110	AUD 50
400	AUD 165	AUD 60

The Go8 has decided to develop more sophisticated activity based costing systems. The motivation for this decision is contained in a Go8 press release on 9 March 2009. "The Group of Eight warmly welcomes a major breakthrough in the funding of university research, with the announcement today that the Rudd Government will move to funding the actual costs of research." Group of Eight Vice-Chancellors have committed to rigorous and transparent activity-based costing, regular benchmarking of facilities management and public reporting on the usage of funding for the direct and on the usage of funding for the direct and indirect costs of research." "This breakthrough will help to arrest the run-down in university infrastructure, improve the quality of research and education

facilities and enable Australian universities and researchers to participate in international research collaboration initiatives."

"We understand that the Government is facing immediate fiscal capacity limits, but we greatly appreciate the commitment at this stage to progressively address the gap in funding for the indirect costs of research."

Communication and Marketing

The Facilities departments at Australian universities are committing competent resources to communicate with the various campus stakeholders. Most employ a specialist communications coordinator who answers queries, but more importantly sniffs out all the newsworthy developments and writes releases, not only for the Facilities website, but also for various university and trade publications. Other useful information, e.g. policies, strategies, planning documents, manuals and standard operating procedures are all published on-line. These are valuable reference sources and provide open access.

On site signage and roadmaps form an important dimension of marketing the university campus and marketing is applied very effectively on Australian campuses.

Student areas

Walking through student study areas was a most enlightening experience. Interior architects and landscapers provide astonishing solutions to satisfy the needs of students when they are not engaged in formal learning activities. I have decided to show examples from UTS for the following reasons:

- UTS is situated in the CBD of Sydney and was always considered as a real walk-on walk-off campus.
- The UTS leadership set an objective to create a "sticky campus", i.e. it must be difficult for the student to get away from campus.
- On a Friday afternoon most seats in computer laboratories, study zones, collaboration areas and recreation spaces were still occupied.
- Many of the senior staff members were visible.

International cooperation

Unfortunately Cedric Achilles, HEFMA secretary, had to cancel his visit at the last

minute and it became my privilege to represent HEFMA at the TEMC conference. Again I was impressed by the genuine and hearty cooperation between the four associated organisations, i.e. TEFMA (Australia), APPA(USA), AUDE (UK) and HEFMA (RSA). The communication is open and the others do their utmost to support South Africa, which is lagging in many areas of development in facilities management.

Directors of F M in South Africa

The Go8 has many standing committees, including Directors of Facilities. In South Africa, the higher education landscape comprises the following role players:

There are close to 100 private and public Higher Education Institutions (HEIs). The 23 public HEIs are referred to in informal groupings, e.g. Universities of Technology, Comprehensive Universities, etc.

Then there are Science Councils, National facilities, the Dept of Higher Education and Training, the Department of Basic Education, the Dept of Science & Technology, the Council on Higher Education (CHE), Higher Education South Africa (HESA), the National Advisory Council on Innovation (NACI) and the National Research Foundation (NRF).

One of the disturbing statistics noticeable at the HEFMA 2009 conference is that only 17 of the public HEIs in South Africa are members of HEFMA. Of these, only 11 of the Directors [Head of department] attended the conference and they did not all rate the conference as a worthwhile event. The question that should be answered is whether there is justification for South Africa to also have a Group of Eight equivalent and for the Directors of Facilities of the RSA Go8 to establish their own committee. This subject could be the subject of further research.

Concluding remark

This fast-track visit to 11 universities in Australia (and 4 in the UK) provided an enormous amount of detailed information and a wealth of new insights that cannot be captured in one short report. There is also no platform for open debate about these issues between the directors of estates and facilities and there must be much that we can learn from one another. I am prepared to participate in any such debates. •

"Walking through student study areas was a most enlightening experience"

Fear for Swine flu affects Egyptian universities



Egyptian universities have started the new academic year by using distance learning in an effort to prevent the spread of the swine flu virus on their campuses.

Television and the internet were used extensively to broadcast lectures to students in many of the country's 35 public and private universities. Egypt has reported nearly 2000 swine flu cases and two deaths since April 2009. The authorities have culled the country's 35,000 pigs amid fears that the virus will spread in crowded places, such as lecture halls and cinema houses.

The start of the new academic year was already postponed from 6 September to 3 October to allow schools and universities to better prepare to keep swine flu at bay.

"Attendance will be cancelled for irregular students," said Ashraf Hatem, a representative of Egyptian universities on an ad-hoc committee for the prevention of swine flu.

The decision had been taken to protect the large numbers of 'irregular' students - students who score low grades in the school-

leaving examinations but are allowed to attend classes in certain institutions in return for unusually high fees.

If 'irregular' students perform well in the first year at university, they are allowed to continue as 'regular' students.

These schools usually accommodate the largest numbers of students in state-owned universities - up to 3,000 students per class.

"As part of our efforts to cut class density, Cairo University has embraced several alternatives, including broadcasting lectures on the two satellite TV channels owned by the university," said Adel Zayed, Vice-president of Egypt's largest public university.

Atef Al Awam, Vice-president of Ain Shams University, Egypt's second largest public university, said: "Some lectures will be recorded and relayed on the student union's radio and the internet. This is one of the measures to be taken by the university to prevent the spread of swine flu among its students."•

Merger in Namibia

Namibia's four national Colleges of Education will soon be merged into the Faculty of Education of the University of Namibia. The merger is expected following a recent Cabinet resolution to this effect. The four national Colleges of Education to merge are the Windhoek, Ongwediva, Rundu and Caprivi Colleges of Education.

"The Office of the Vice Chancellor received a letter from the Permanent Secretary of the Ministry of Education, Mr I V Ankama, informing the University of Namibia formally about a Cabinet Action Letter to their Ministry regarding Cabinet Decision No.

18/29/09/09/011 approving the full merger of the colleges with UNAM's Faculty of Education, effective from 1 April 2010," the Pro-Vice Chancellor: Academic Affairs & Research Prof. Osmund Mwandemele of UNAM confirmed.

In an interview with one of the daily newspapers, the Rector of the Windhoek College of Education Ms Emma Kirchner was very supportive of the merger, indicating that it has been a process to which the colleges were party. "Although I am confident that we

will stay a teacher education campus, our name might change. The way we are governed will change. We have lobbied for better articulation and entry requirements, better working conditions, better financing and a better management system for years now," Kirchner said.

The University and the Ministry of Education has constituted a joint committee to facilitate the merger process. Accordingly, a number of sub-committees have also been put in place to look at specific areas such as academic activities, infrastructure, human resources and student welfare.

Effective 1 April 2008, the university successfully integrated the Neudamm and Ogongo Colleges of Agriculture into its Faculty of Agriculture and Natural Resources. With the merger of the four national Colleges of Education the University of Namibia will become the single largest broad-based university system in the entire SADC region. The university is currently ranked amongst the top 26 universities in Africa and is the leading institution of higher education in Namibia. •



Government concerned at internal efficiency

Basic Education Minister, Angie Motshekga, says government is concerned about the internal efficiency of universities and the relatively low success and high dropout rates of students.

Speaking at the Human Development cluster briefing in Cape Town, the minister said government was therefore allocating special funds to institutions to help them to improve their success and graduation rates.

She said it was in the interest of national social and economic development to raise the graduate totals.

"All higher education institutions were requested to confirm and provide the necessary data and information for the determination of system wide and institutional specific enrolment and graduate output targets for the period 2011 to 2013," she said, adding that the data had been analysed during their last quarter of 2009.

A report, providing an essential guide for government to assist a greater number of poor but capable students to enter the higher education system and complete their studies, was due to be submitted in December 2009.

This report was compiled by the Ministerial Committee reviewing the efficacy of the National Student Financial Aid Scheme (NSFAS). The report will be released for public

comment before implementation of the recommendations. Further to this the minister said government was also committed to increasing the number of young people and adults accessing continuing education at technical and vocational centres, in a way that supported an inclusive growth path.

"In order to achieve this, government has invested R1.9 billion over the last three years in the Further Education and Training (FET) College subsystem and we are now taking steps to enhance access to these institutions and the quality of courses they provide," she said. Motshekga said that the department would consolidate the institutional base for FET colleges in partnership with the skills development system and improve responsiveness to the needs of the economy. Also, programme offerings will be expanded, training partnerships with industry will be funded through SETAs, partnerships with employers will be established and a work-placement programme for graduates of FET colleges will be set up.

The minister added that government had intensified efforts in order to deliver an improved higher education and training system that provided a diverse range of learning opportunities for youth and adults. •

"government is concerned about the internal efficiency of universities and the relatively low success and high dropout rates of students"

NC and Mpumalanga considered for universities

Minister for Higher Education and Training, Dr Blade Nzimande, has been tasked with looking into establishing universities in the Northern Cape and Mpumalanga provinces.

Chairperson of Parliament's Portfolio Committee on Higher Education and Training, Marius Fransman, said that while South Africa had 23 universities in the country, these two provinces did not have any since the new dispensation had created new provincial borders. "Nzimande, together with his new department has been tasked to look at the matter. He has already responded positively to broaden the base of education and the Portfolio Committee aims to start working on this matter," Fransman said.

He said the provincial education departments and other stake holders would be engaged to explore the skills needs and how best to phase in a university for each province. "We need to establish how many students at present have

to use facilities in other provinces and how many potential candidates will study in their own provinces once universities have been established there. Fransman also said that "we need an indication of the number of students at present using distance learning, we want an idea of which courses, chairs or faculties are needed in these rural provinces and which ones will be of priority should universities be incrementally developed." He added that, with the establishment of a new department, it had become a priority for the committee as part of its oversight role, to revisit this long outstanding issue of no universities in two provinces and to investigate it once more.

"We see it as part of President Jacob Zuma's call to capacitate provinces to meet the needs of rural areas," the Chairperson of Parliament's Portfolio Committee on Higher Education and Training said. •





New bus shelters for UCT shuttle

Students at UCT will have new sheltered bays at the Jammie Shuttle terminus at their disposal from the start of this school year. The Jammie Shuttle connects the Tugwell and the Graca Machel residences in Cape Town. The R 500 000-project was started in late November and was completed in January.

Nine new sheltered bays were erected. The project involved the excavations, the installation of concrete footings and re-modelling of the area to allow for easy pedestrian circulation. According to Gloria Robinson, project manager for the Properties & Services Department of UCT, the existing bus shelter could no

longer handle the number of staff and students that use the shuttle during peak hours. In conjunction with the city's town planners, who developed the overall precinct plan, it was decided that the existing bus shelter design was to be kept as branding for the Jammie Shuttle services. •

MOI University ISO 9001:2008 certified

On 9 December 2009, Moi University in Kenya received its ISO 9001:2008 certification. The idea of adopting ISO 9001:2008 Quality Management Systems was brought into focus during the preparation of the University's 2005-2015 Strategic Plan. The University's Strategic Issue number 7 in the Strategic Plan concerning Quality Management envisions the

creation, development and implementation of a quality management system that helps in the achievement of the University's mission, vision and objectives. From September 2007 to April 2009, the University engaged officers from Kenya Bureau of Standards (KEBS) to carry out rigorous training of staff on the ISO 9001:2008 quality management system up to .

The trainings was conducted for members of Senior Management, Deans and Directors, Heads of Academic and Administrative Divisions, and all other cadres of university staff. In the intervening period, several awareness campaigns targeting all staff were done continuously. Management Representative and ISO Champions were also appointed. •

UB call for papers for maintenance conference

The University of Botswana invites interested parties to submit papers, keynote addresses or poster sessions on 'Maintenance of Engineering Infrastructure in Developing Countries'. The university will organise a conference from 27 to 29 July. The objective of the Conference is to bring together professionals, researchers, policy makers and industria-

lists engaged in the provision, maintenance, services and repairs of various infrastructures to share knowledge, experiences, practical examples and sustainable practices on the Conference theme. It is envisioned that the conference will further foster links and networks between public and private practitioners and academia on maintenance issues and that it

will create opportunities for collaboration in sustainable development of projects and services. Maintenance is not usually given sufficient prominence during design, construction and delivery of projects. Facility reliability and down time have been unsatisfactory and the situation now provides practitioners, academics and policy makers with fresh opportunities for collaboration to improve the practice. Effective maintenance practice must be planned and introduced pragmatically. •

UJ staff to name new building

The University of Johannesburg has invited stakeholders to suggest a name for the new administration building that was recently completed at its Kingsway Campus.

Deadline for submission is 19 January 2010. The Kingsway Campus is the University's main campus, with 66 lecture halls providing 7,787 seats in total. •

For more information: www.ub.bw/events



Green building for expansion East London

The new R56-million building at the East London Campus of the Fort Hare University will incorporate features to conserve energy, the use of alternative energy sources and rainwater harvesting. The project includes the construction of a double volume parking area, double-storey lecture theatre blocks and a four-storey teaching block. According to Grinaker-LTA Building Cape Director Greg Bradford, a weather station has been installed to perform ongoing monitoring of the building during and after construction. The data will be analysed to ascertain the building's performance relative to the theoretical model. The Fort Hare University has made provision in the design for wind-driven turbines to supplement grid power supply. Rainwater will be collected in tanks on site. The water will be filtered and pumped to a header tank in the roof space of the building, from where it will gravity-feed bathrooms, kitchens and irrigation for the vertically-planted facade. The new building

will make use of natural ventilation. The southern side facade will draw cool air inside. Specially designed pre-cast concrete ventilated access floors allow the cool air to enter the room through floor-mounted diffusers. As the air is then heated in the room and rises, it is drawn out through a continuous horizontal slot on the north facade. The north facades of the building will be ventilated facades, using hollow 'trombe wall' sections. As the sun heats these sections, the rising air within will pull cooler air behind it, leading to displacement ventilation. The aerodynamic design of the building enables the roof structure to contribute to cooling by pulling warm air up through the sections. To monitor the success of all the design employed to make the building sustainable and environmentally appropriate, the Council for Scientific and Industrial Research has been commissioned to carry out Computer Fluid Dynamic (CFD) modelling. •

Space reduction

How to reduce space and increase production in an office environment. ■

11 December 2009

Performance measurement in FM

A paper by Kolosa Madikizela, lecturer on FM matters at UJ • 10 November 2009

People more honest thanks to lemon scent

A clean environment will make people more generous • 30 October 2009

These, and many more articles appeared in the (international) news recently. Read them at: www.gobetter.co.za

Calendar

School Management Conference

4-5 March
Sandton Convention Centre
Johannesburg
Conference on all top concerns and priorities.

International Conference on Maintenance of Engineering Infrastructure in Developing Countries

27 – 29 July
University of Botswana
Gaborone

You will find more events in the calendar of;

www.gobetter.co.za

Wits to open new campus in NW province

Wits University has received R9 million to set up a medical education campus in the North West province. The grant was awarded to Wits by Atlantic Philanthropies.

The new campus is supposed to train more rural-based healthcare workers as there is a dire shortage. About 60 students are to be enrolled for a Bachelor of Clinical Medical Practice degree at the campus over the next three years. The campus will be piloted within the Lehurutshe-Zeerust Hospital Complex in the remote north-eastern part of the province. It is hoped that, over time, the model will also be implemented in the other districts of the North West province. Currently there are only 11 public sector

doctors per 100 000 people in the provinces. This is in stark contrast to the 30:100 000 ratio in more urbanised provinces, such as Gauteng and the Western Cape.

While the North West medical education campus will initially focus on training clinical associates, it will provide an impetus for further development and training of medical students, family physicians, nurses and other healthcare professionals in the province. The provincial health department has thrown its weight behind the initiative and has already created posts for future clinical associates in its staffing structure. It's also making bursaries available for prospective local students who complete their training in North West. •

Protesters trash University of Zululand

Security at the University of Zululand has been beefed up and more police deployed following student protests.

The protestors burned and trashed parts of the University during clashes in October 2009. The university has been tense since a student election on 5 October, in which a political opposition-supporting student group was penalised for failing to meet the deadline to

submit a list of candidates. The mayhem lasted several days and left a trail of destruction all over the university. The premises damaged included offices used by the student representative councils, sports departments, the dean of students' offices, the library, the chapel and a lecture hall. Two cases of arson and public violence are currently being investigated. •

Next issue

May 2010						
Su	Mo	Tu	We	Th	Fr	Sa
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5