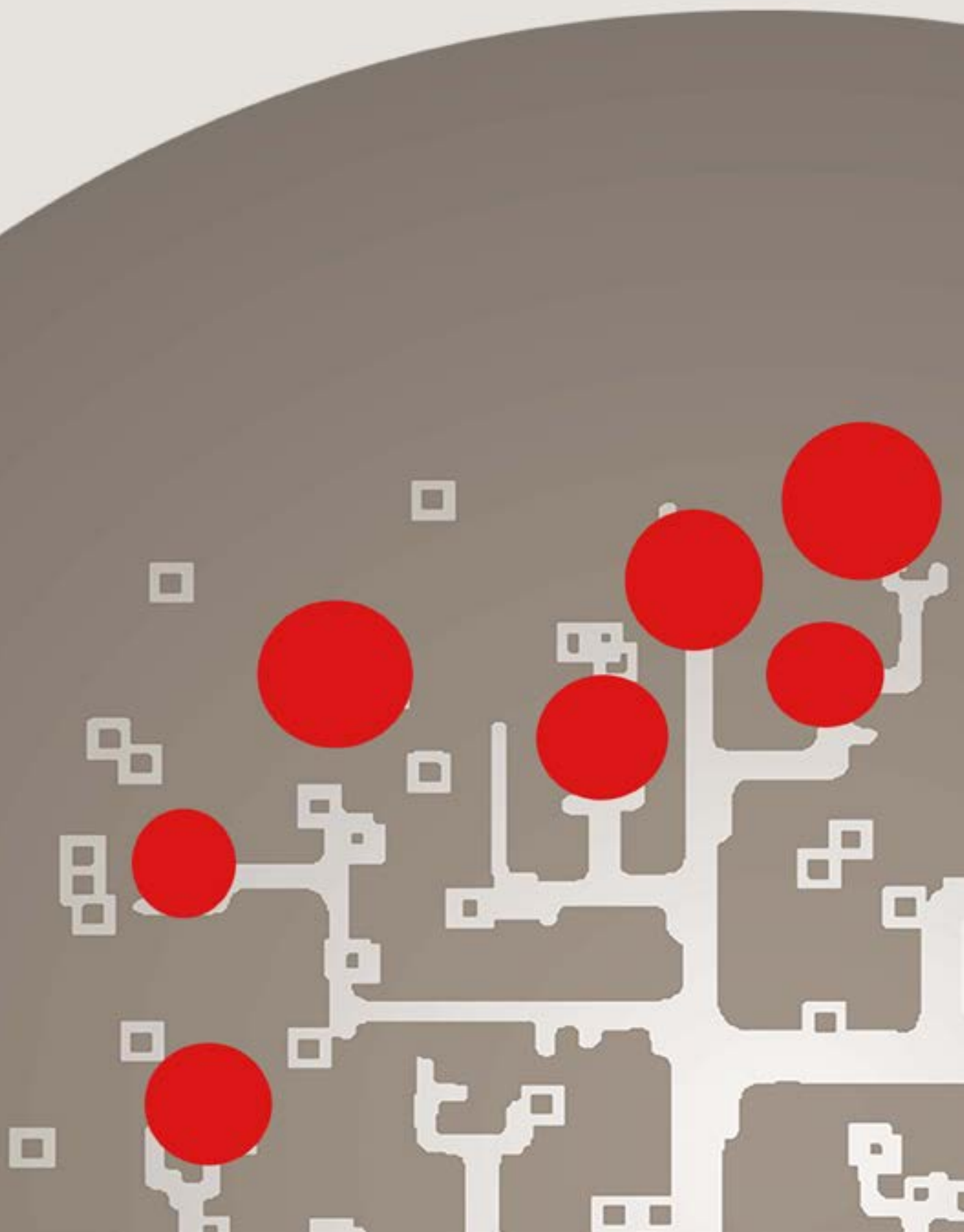


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Delivering the IT Promise



NORTH-WEST UNIVERSITY[®]
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT

October 2015 Edition





We are one family

The entrance to IT on the 3rd floor in Building D1 of the Institutional Office has undergone a face-lift. What you will see is a tree with photographs (from all campuses) of the IT team and in the lower, right-hand corner the wording, "IT @ NWU Delivering the IT promise".

The tree signifies unity as the IT team has one vision.

The photos are random and not grouped

according to campus. This symbolises the fact that everyone has an equal role in realising the vision of IT. Each member of the team is just as important as the next.

The promise refers to the different factors but foremost to: values, vision, new focus and strategy.

The IT Team has embraced this new image.

Preface

The proportion of IT resources dedicated to Research has in the past been significantly lower than what was available for teaching and learning, shared services and business systems. As part of IT's promise to add more value to Research, several exciting eResearch initiatives featured in this edition has been launched.

This newsletter also features a wide range of other interesting articles.

Academics such as Ms Heleen Coetzee, a lecturer at Mathematics for Education, has shown through the innovative application of the video conference service at the Potchefstroom campus, how IT has become an integral part of the business and deliver value to NWU.

Read about the FREE Office 365 software for students and the planned enhancements to the Postgraduate Student Management System to improve services.

Learn how to best protect your password from "attack" and finally, meet some of the IT employees and get to know what keeps them busy when they are not at work.

Happy reading!

Claudia Pietersen
IT Director, Mafikeng Campus

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Meet Vaal Triangle's IT Manager

Meet Mrs Aldine Oosthuizen, IT Manager at the Vaal Triangle Campus, as she allows us a peek into her life's journey...

Aldine states that her journey started many years ago "when, as a young statistics lecturer, I was appointed to manage the IT on this campus. It was still in the days of the mainframe and Computer Services (as the department was known) did not have a very good reputation, mainly due to the fact that we were heavily dependent on Telkom data lines. I am still wondering whether I was appointed to get rid of one of the biggest complainers... as I was busy with my research and was only allowed to use the mainframe after 02:00 at night. Every second night the effort was unsuccessful due to the lines being disconnected."

She mentioned that, as the years passed, the first Ethernet network at the University was installed on the Vaal Triangle campus for Electrical Engineering: "We had to adapt and change direction continuously." However, it "was quite exciting for me as every new era poses new challenges. And now, a section that way back consisted of only one full-time and two part-time employees had grown to a 15-man group."

To her amazement, she mentioned: "At the beginning of 1991 I had no idea where this journey would lead me. Not even how many different technologies I would have to work with, including supporting it amongst our users."

"Tallying" is not always easy

Aldine came up with the following formula to quantify her best experiences: $(\bar{x} = \sum \frac{x_i}{N})$

She explains the outcome as follows: "Changing from Statistics to IT was a good experience, yes, but it was a long time ago and so many good things happened afterwards that I think it will be unfair to say that this was the best."

Motivated to give more

Her motivation is derived from her problem-solving approach to life. As she puts it: "I love it when everything comes together in order to solve a problem or difficult situation. In other words, the experience when one realises that this is a job well done."

"*I like all music genres, even heavy metal at times, but I am not that fond of exercising. So I do my exercising without music.*"



Ms Aldine Oosthuizen

2014-2015: Accomplishments and Focus

"2015 was a very difficult year for the Vaal Triangle's IT section, due to a number of reasons. Despite all the difficulties we did quite well as our users still greet us whenever they see us. We managed to improve our services, even though we had some resignations which took a long time to fill."

One of our accomplishments is the IT training we started for the first-year students – especially for those who have never encountered IT before. They arrive on campus and suddenly they are expected to deal with all this technology. The training started off small, but it is growing and we plan to increase it exponentially in 2016.

Each new year brings new technologies, which brings new challenges, which forces each one of us to grow smarter."

What brings a smile

"My grandchildren. At work, when one of my team members performs way above his own expectations."

Food for thought

"Live... Life is fun. We take life too seriously. We should plan to have more fun, even at work. And as you go about life... all you youngsters out there – don't dwell on the past, do not worry about the future, but live TODAY and fill it with as much fun as possible."

Rethinking Teaching & Learning

The conference on Excellence in Teaching and Innovative use of Technology (ETIT) will be held for the 9th time this year (2015). The conference is hosted by Academic Support Services and aims to enhance the quality of teaching and learning at the Potchefstroom Campus of the NWU. Similar events are held at the other campuses as well each year.

The first event was held in 2007 (no conference was held in 2008/9) and started as a show and tell event where lecturers could showcase the way they had implemented the newly adopted Learning Management System (eFundi). Since then the conference has evolved and now not only focuses on the integration of technology into teaching and learning strategies but also includes presentations from participants in the ITEA awards.

As the conference evolved, other units of Academic Support Services also became involved in organising the event. IT has always been an active partner and helped to organise live presentations from the United States in the past. Attendance of the conference fluctuate around 85 academic staff per year – a number we would like to increase as the aim of the conference is to allow staff to learn from each other.

Aim of the conference

The original aim of the conference was to encourage academic staff to integrate technology (eFundi in particular) into their teaching strategies by creating an opportunity for staff to showcase their utilisation of technology. The conference still functions as a show and tell event for lecturers that have sampled new technologies but the aim was expanded to include new teaching strategies and practices as well. Colleagues of these early adopters and

forerunners can see examples and best practices of these technologies, strategies and practises. By creating this opportunity for lecturers to learn from one another we aim to further enhance the quality of T&L at the NWU.

Looking back

During 2006 the university made a decision to phase out the previous LMS (Varsite) and implemented eFundi. The conference was then organised by the Information Technology in Education (ITE) unit of Academic Support Services as part of a strategy to encourage lecturers to make use of eFundi. At the time there were around 25 lecturers who took the bold decision to use eFundi. By 2014 more than 80% of the academic staff of the Potchefstroom Campus, and 100% of all students were active participants in at least one learning community (site) on eFundi. Many lecturers reported that they had tried some of the ideas they got from colleagues at the conference; some even presented at a subsequent ETIT conference, reporting on what they had implemented. By attending the conference lecturers become part of a community of practice that supports them in their efforts to always improve on the way that they teach.

ETIT 2015

In 2014 the conference became themed. In light of the emphasis on blended learning and the rethinking of the traditional role of the study guide (and what it should look like in electronic format) the theme for 2015 is: Rethinking Teaching and Learning. We encourage all academic staff from the Potchefstroom Campus to attend the upcoming conference on 9 – 11 November 2015 in the Senate hall (Building F1). If you would like to present or just attend, please visit <http://uoit2015.wix.com/conference1>

UOIT ETIT
KONFERENSIE
CONFERENCE
9-11 NOV 2015

ONDERRIG EN LEER:
HERBESIN
RETHINKING
TEACHING AND LEARNING

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NWU ventures deeper into space

Watch this space and see how the North-West University (NWU) is boldly taking data science in South Africa to the next level. Through a new partnership with two other universities, the NWU will help bolster the Square Kilometre Array (SKA) project and strengthen inter-university cooperation.

The main aim of the project is to make South African data science more globally competitive.

Ms Naledi Pandor, Minister of Science and Technology, officially launched the Inter-University Institute for Data-Intensive Astronomy (IDIA) on 3 September at the South African Astronomical Observatory in Cape Town.

The IDIA will bring together expertise from the NWU, University of Cape Town and the University of the Western Cape. The R50 million, five-year partnership will partner researchers in various fields such as computer science, statistics and eResearch technologies. It will create data science capacity that

will enhance, among others, the MeerKAT SKA precursor projects and the SKA key science.

The IDIA will address the big data challenge that the SKA poses as it will be instrumental in processing and generating data for the SKA. According to researchers, it would take two million years to play back the data generated in one day by the SKA on an iPod. Data will thus account for much of the total project's costs, which can run into billions of Euros.

Dr Bernie Fanaroff, director of SKA South Africa, said big data is the new socio-economic industry that will dominate the next few decades. "We do not want to be in a position where we send out data and other countries' people writes the academic articles. It has to be done here and the Nobel Prizes need to be won here."

The IDIA will be under the leadership of its founding director, Prof Russ Taylor of the University of Cape Town. Prof Taylor currently holds a joint UCT and University of the Western Cape SKA Research Chair.

Ms Pandor said during the launch that the IDIA's SKA-driven Data-Intensive and Research and Training Programme is expected to drive innovation in big data solutions that will have an impact beyond astronomy.

* The SKA is considered to be the biggest scientific project in history. It entails the construction of the world's largest radio telescope, with over one square kilometre of collecting area. It will help astronomers to answer some of the most pressing questions about the origin and evolution of the universe, and the NWU is proud to be part of this.

(Published at <http://news.nwu.ac.za/nwu-ventures-deeper-space>)

Mr Boeta Pretorius, Chief IT Director had the following to add. NWU is also a key player in the establishment of the Africa Research Cloud (ARC) that will enable the activities of the IDIA. The ARC will support researchers from all domains at any place to have access to a full suite of digitally enabled data and analytical resources, relevant to their domain of research.

To be able to make services accessible to all (universities and research institutions) a Federations is necessary. NWU is also involved in establishing the South African Federated Identity for Research and Education (SAFIRE).

The current partners in the ARC include UCT, NWU, UWC, Cambridge, SKA and UP. Tier1 services such as the CHPC and DIRISA could be accessible through the ARC in future. Mentionable partners also include Mark Shuttleworth (canonical) and Dell.

Delivering the IT Promise

NWU eResearch: The Power of Partnerships

(Written by Anelda van der Walt)

In July 2015 the NWU officially commenced with an eResearch drive that will ultimately help to align research support units and researchers across all disciplines to embrace the power of the digital world in the 21st century.

The NWU eResearch Initiative was launched with a two-month awareness campaign across the Mafikeng, Potchefstroom, and Vaal Triangle Campuses. Engagements with institutional management, library services, information technology, research directors, researchers, and postdoctoral research fellows were top priority.

On 1 October the first quarterly NWU eResearch workshop took place. The quarterly workshops form part of the eResearch strategy and provide opportunities for stakeholders to improve their knowledge and share their progress as well as challenges. During the workshops the daunting task of keeping abreast of developments in research-related technology and methodology is addressed by invited talks from experts in one of the relevant areas.

Melissa Badenhorst from Worldwide Information Services (WWIS) spoke at the first eResearch workshop and demonstrated the research tracking capabilities within InCitesTM, a research analytics tool from Thomson Reuters. The demo was insightful and lead to a lively discussion about

how the tool, which the NWU already has a license for, could be used by researchers and research administrators to benchmark research activities within the university.

The next item on the agenda was an update from Library Services (Mafikeng, Potchefstroom, and Vaal Triangle Campuses), the Research Support Office, and Information Technology about their current standing and future vision for embracing technology to enhance research. The workshop provided a great opportunity to learn about ongoing initiatives in the various areas and also to plan collaborative actions for the next few months.

The next workshop is planned for early December and will focus specifically on Research Data Management.

To contact us, please email eresearch@nwu.ac.za or follow us on Twitter @NWU_eResearch.



From left Prof Frik van Niekerk, Deputy Vice-Rector (DVC): Research, Innovation and Technology (NWU); Mr Anthony Beitz, eResearch Consultant (UCT); Prof Russ Taylor, Director of IDIA; Prof Danie Visser, DVC (UCT); Mr Boeta Pretorius, Chief IT Director (NWU); Ms Anelda van der Walt, eResearch Consultant (NWU); Mr Pieter Enslin, Enterprise Architech (NWU); Mr Sakkie van Rensburg, Executive Director of ICT (UCT); Mr Wilhelm van Belkum, IT Director (NWU)



Delivering the IT Promise

eResearch is...

- Collecting
- Computing
- Comprehending
- Collaborating
- Communicating
- Customising
- Capacitating



HPC the Researcher's Super Tool

High Performance Computing (HPC) can be described as the Ferrari of the computing world due to its power, elegance and speed. According to Dr Happy Sithole, Director: CHPC (Centre for High Performance Computing), "Supercomputers help us solve problems today instead of tomorrow. Their ability to perform computations very rapidly and handle extremely large volumes of data effectively makes them invaluable for research projects where large volumes of data must be processed."

With a view to enabling and empowering academics, IT has successfully provided researchers of the School of Mechanical and Nuclear Engineering the opportunity to simulate and model nuclear systems by means of the central HPC cluster.

A bit of history

Before 2012 these simulations were performed on workstations. According to Prof Jat du Toit, Acting Chair of Nuclear Engineering, the HPC was first used by a student around 2012-2013. Although the HPC was already available at the time, it was under-utilised.

However, as the scale of simulations to be tested

increased, it became clear that something with a larger processing capacity would be required.

Dr Vishnu Naicker, senior lecturer in Nuclear Engineering, successfully employed HPC, as the results of his students' dissertations depended greatly on the calculations.

Overall focus

Prof Jat states that the HPC has enabled students to reach the outcomes they desired, but not without posing some challenges along the way. There were issues with:

- Upgrading
- Availability
- Licencing

On the positive, the shift in focus towards the end user is "a fresh breeze", which, according to Prof Jat, will contribute a lot towards supporting and promoting research.

What we noted

Prof Jat states that "we should build on what we have learnt so far..." Code compatibility – in other words cross-linking between Linux and Windows.

Keep in mind

1. Not all research need to be done on HPC; for some types of questions it would be equivalent to "shooting sparrows with a cannon...", claims Prof Jat.
2. Verify to see if your requirements will be effectively accommodated on the HPC. Dr Naicker states that a compatibility check is an integral part not to be overlooked.

Thorough planning is important. If possible, calculations should be spread evenly throughout the year; this will prevent a bottleneck situation that frequently occurs during the holiday times.

Did you know – HPC can create art

South Africa's first full-length animated movie by Character Matters, called "The Lion of Judah", was released in September 2010. The CHPC facilities were used to create this movie.

The Oscar-nominated movie Interstellar turned science fiction into science. The journal Classical and Quantum Gravity, published on 13 February 2015, describes how this innovative computer code led scientists to new discoveries... [read more](#).

Marketing for Prospective Students

Andrew Wallis (professional videographer & video editor) shot a professional marketing video for prospective students. In the footage, the HPC is highlighted in the "cross-over scene", to provide a switch between scenes in the marketing video. The video can be viewed at <https://www.youtube.com/watch?v=k3LaFEADABs&feature=youtu.be>

Cheese and Wine

The video launch will be commemorated with a Cheese and Wine event towards the end of the year.



From left Marina du Toit – PhD student, Nuclear Engineering; Dr Vishnu Naicker and Portia Nyalunga – MSc student, Nuclear Engineering.



Left Mr Andrew Wallis. Right Mr Koos Brits showing the students of Mechanical and Nuclear Engineering the internal components of a blade server. This is a part of the HPC that processes calculations.

Buckle up with Connect@NWU for the shortest trip between campuses

Connect@NWU has successfully replaced the old Tandberg video conference solution at the university. For a rear mirror view of this journey we spoke to Gawie le Roux, Senior IT Consultant, and service owner of Connect@NWU.

Where it all started

Back in 2011, Adobe Connect was identified and implemented as a software-based web conference solution to replace the aging Tandberg system and to open up video conferencing to all employees.

On user level, Adobe Connect offers the ability to participate in web meetings from anywhere, with the only requirement being an internet-connected workstation with a microphone, speaker and camera (nowadays built into most notebooks and all-in-one workstations). It also allows sharing of documents and presentations from a participant's desktop and meetings can be recorded. On organisation level, Adobe Connect is a scalable and flexible solution offering entry-level to high-level quality of service and multiple uses. It also offers freedom of choice when it comes to peripheral hardware,

allowing more sustainable installations in terms of cost and supportability.

Despite the obvious advantages of Adobe Connect, there are some obstacles preventing users the full benefit of the solution. In most cases these issues relate to the peripheral equipment (i.e. microphones and web cameras) that is used with Adobe Connect and users' lack of technical know-how in terms of the software. (At this point Gawie is quick to suggest that desktop users make use of earphones and run the audio-setup wizard when joining a meeting. He also suggests that new users attend the training offered by IT on each campus.)

Driven by a request from the Vice-Chancellor to reduce travelling between campuses, Attie Juyn, our previous IT Chief Director, submitted a proposal in 2014 to the Institutional Management for an eCommunication project to decommission Tandberg and equip Connect@NWU venues across the university. The proposal was approved and R 500 000 was granted for the project budget.

A project team was assembled by IT, which included internal domain

specialists (including audio-visual, electrical infrastructure, secretariat services and IT empowerment) and campus representatives (representing venue owners, venue coordinators and meeting facilitators).

Gawie says: "The challenge was daunting as the Tandberg system had a good track record with well-established use and support processes. There were also questions raised about Adobe Connect's capability as a worthy replacement and the Logitech equipment was frowned upon by some opinion leaders."

However, by the end of 2014 a total of five meeting venues were equipped and since the start of 2015 another seven meeting venues have been equipped. Currently there are three equipped venues at the Institutional Office, two on the Mafikeng Campus, four on the Potchefstroom Campus, and two on the Vaal Triangle Campus. The service is well used and since January a total of 164 hosts used 345 distinct virtual meeting rooms for a total duration of 6 028 hours. During this period, the virtual meeting room associated with Room 134

at the Institutional Office (one of the frequently used venues) hosted 135 unique sessions, with an average meeting duration of 1 hour and 57 minutes, totalling more than 270 hours.

Successes

The choice of the Logitech CC3000e ConferenceCam has proven to be a good one. It is a cost effective solution that delivers acceptable quality in small to medium-sized venues. Due to the success achieved with this solution, many other schools and departments have since equipped offices and venues with the Logitech CC3000e ConferenceCam.

Another positive result is the fact that most software-based video conference products can be used in the new Connect@NWU venues. Apart from Adobe Connect, the venues can also cater for Skype for Business, Google Hangouts, Vidyo, Zoom, Blackboard, and others.

Lasting partnerships

Apart from delivering equipped venues, the eCommunication project resulted in lasting partnerships. Through time spent investigating venues and testing possible solutions, good work relationships were fostered. Gawie appreciates the positive attitude and collaboration from other support departments, including Teaching & Learning Media Coordination (Academic Support), Electronic and Electrical Services, Physical Infrastructure and Planning, the Unit for Open & Distance Learning and IT on the different campuses.

Marius de Beer, head of Media Support Services, and his team have been instrumental in equipping venues with the Logitech CC3000e ConferenceCam solution, not only on the Potchefstroom campus, but also at Mafikeng and Vaal

Triangle. And so cemented a partnership with IT that started when Marius did the original video conference installations of the old Tandberg venues.

Challenges

"We have been able to get the technology, including hardware and software, working well. But the people and process aspects have been challenging. User empowerment and training requires attention on two levels: end-users and support staff need to be continuously empowered with the necessary skills and knowledge to use and support the solution optimally. And I don't think we have gotten that right yet", states Gawie.

With a project like this it is critical to engage the role-players and stakeholders on a constant basis. This proved to be a constant challenge. "Trying to balance stakeholder interaction while trying to make the technology work and keeping everyone satisfied is not easy", admits Gawie.

Lessons learned

Gawie says: "We faced a steep learning curve in terms of sound and finding the best configuration to yield usable sound on Adobe Connect. As soon as you link any sound device, such as a microphone or mixer, to a computer you have many settings to consider, from the operating system settings to the device settings. Between these you have to find the sweet spot."

Through trial and error it became apparent that USB sound equipment (for easy linking with a computer) that includes auto-echo cancellation (AEC) works best for software-based video conference products such as Adobe Connect.

"Another important lesson learned from this journey is to

always consult the end-user and consider their needs and requirements from the start", notes Gawie. A few of the venue installations proved to be intricate because approval of the exact details of the installations were not obtained from the beginning.

The way forward

The project planning originally included large venues as well. This still needs to be taken further, so in a subsequent phase of the project the focus is on finding suitable sound and video equipment for larger-sized venues. And, of course, user empowerment through training and support processes must be driven as a continuous priority.

"The need for web-based video conference solutions are growing by the day and it is good to see that other local tertiary education institutions are also growing in this direction. I am very excited about SANREN's new Vidyo service that was recently launched for their affiliated universities and I think that Skype for Business need our further investigation", concludes Gawie.

So, put yourself in the driver's seat with Connect@NWU. Go to <http://www.nwu.ac.za/it/connect-nwu> or contact your local IT Service Desk to get started.



Mr Gawie le Roux

Connect @ NWU relief for “big” class loads

Thinking innovatively might sometimes be helpful in overcoming one’s daily challenges as a lecturer. Ms Heleen Coetzee, lecturer, Mathematics for Education, explains.

Her subjects of expertise for the second semester are MATE 321 (Mathematics for Education: Linear Algebra) for a relatively small group of 3rd year students and MATF 221 (Basic Arithmetic and Statistics for the Education practice) for a group of 340 students.

She states that her motivation in life derives from the fact that she is a born teacher. With this said, she is put to the test on a regular basis, as no technology or media can replace a real-time interactive contact session. Still, when your class consists of quite a large group and you only see them for a few lecture periods, certain technologies can help to redeem the situation.

How it is conducted

This “MATF 221-Big Class” is divided into two groups, using the library’s computer labs Bib309A and Bib309B. The actual Excel practical lecture takes place in Bib309A. Using Connect@NWU (NWU web collaboration and videoconferencing system) the actual lesson in 309A is video broadcast to the lab next door (Bib309B). The 309B class is facilitated by fellow lecturer, Mr Rudi van de Venter, lecturer, Mathematics for Education, as well as student assistants.

For her other subject, MATE 321 (a smaller group), Heleen uses AVER (Software installed by Teaching Learning Media Support Services) to make video and audio recordings of the lecture. In this session she also uses Geometer’s Sketchpad (mathematics visualization software). It enriches the students’ learning experience and equips them with the ability to create their own teaching materials. Furthermore, the subject outcomes require that the students simulate reality and perform mathematical

modelling, which make these tools ideal counterparts to a live lecturer.

All these recordings (including additional ones on Gaussian elimination) are placed on eFundi for on-campus students as well as off-campus SBET students to be revisited.

The strategies described above are a good way to supplement a situation that involves large numbers of students, all of whom are not physically on campus, and limited contact periods.

Positive remarks

Connect@NWU is very helpful and convenient when dealing with large groups, especially when conducting practical lessons.

Interactivity is possible, since students are allowed to stop if they fall behind or request that a certain procedure be repeated. (My colleague, Mr Rudi van de Venter, was very helpful in this regard).

Things to consider

- Check microphone and remember to take extra batteries before starting with the lecture.
- Arrive at least 10 minutes before the actual starting time to log in and connect the rooms.
- Ensure that students arrive on time.
- Request that the turnstiles are unlocked, since 170 students cannot pass through the gates quickly enough.
- Stop the class at least 10 minutes before the end of the period to give students time to save their work and reach their next class in time.

Technology is not a “one size fits all”; carefully examine your situation to make an informed decision.

Future plans

Heleen explains that she very successfully used AVER (Audio-visual system), Geometer’s Sketchpad (Dynamic Geometry® mathematics visualization software) and the document camera in the computer room of Building C5 room G11. As mentioned earlier, the video output file was uploaded onto eFundi where students would be able to view it again in their own time.

She has since been assigned a different lab, so she has not been able to utilize the same resources in the same manner. With regard to the general ease of use of integrated technological media she notes: “On occasion it can become quite a nifty trick to toggle between the different computer screens and the document camera – we actually need more than one screen.”



Ms Heleen Coetzee with her husband, Rev Peet Coetzee.



Mr Rudi van Deventer



Media Support Services on the Potchefstroom Campus

Mr Marius de Beer, head of Media Support Services on the Potchefstroom Campus claims that "Technology is one of the many ways to convey information. People are always looking for newer, better methods and for this reason, students need to be exposed to it in order to enhance the learning process." Marius's colleague, Mr Barend Nel, senior technician, adds to this by saying, "making a difference means to contribute to the greater good by which students and staff can be empowered by informing them about the latest technologies." Marius and Barend both state that their motivation is based on the fact that they enjoy being of service to others, have a passion for education, and admit that it is fun to be part of the positive end result. Barend claims that "the decision to use certain technologies relies heavily on research and the needs of the students and lecturers."

Responsibilities

Media Support Services provide the following services:

- Training to lecturers and students with regards to audio-visual equipment and introduction of new technologies.
- Upgrading of lecture venues.
- Planning, installation and supporting of video conferencing equipment.
- Technical support at formal campus functions held after hours.

The partners

In performing their tasks Media Support Services relies on the help of different partners.

- Information Technology who supplies network points and supports the computers in the lecture rooms as well as the video-conferencing functionality.

- Electronic and Electrical Services for installing and maintaining the access control, sound and alarm systems.
- Physical Infrastructure and Planning for the planning and managing of projects.
- External Contractors for supplying audio-visual equipment as well as demonstrating new technologies.

Looking back

Equipping the lecture rooms began in 1990. The overall focus was twofold:

1. To equip the lecture rooms with standard audio-visual (AV) equipment such as data projectors and screens, computer lecterns, document cameras, and sound systems.
2. To equip the seminar venues with standard equipment which included LED TVs/data projectors, computer cabinets with computers, video conferencing system, and WePresent (WePresent is a professional wireless presentation system that allows up to 64 users to collaborate and give a wireless interactive presentation from their Windows/Mac computer, smartphone or tablet. www.wepresentwifi.com/)

Marius explains that "the development of technology in education over the past 10 years happened very quickly. It is in the best interests of the NWU to keep up with current trends, both nationally and internationally."

This new boom in technology affected audio-visual technology and that paved the way for the use of iPads and document cameras in the lecture rooms.

Future plans

The aim will be to align the educational and support processes in such a manner to increase its user-friendliness.



Mr Marius de Beer

Word of advice

"Prevention is better than cure". Do proper planning and test all equipment before using the lecture rooms or seminar venues.

Training is provided twice a week, and people are welcome to voice their problems and opinions during these sessions. For any training enquiries, contact Ms René Erasmus, administration officer, at 018 299 1864 or send an email to BASMEDIA@nwu.ac.za.



Mr Barend Nel

Innovators@work: bridging the pedagogical gap...

The purpose of the Innovators@Work is to provide lecturers with an opportunity to investigate and research the use of technology in their own teaching-learning praxis in a scientific manner in order to improve the integration of technology in teaching and learning, expand research on technology integration and deliver research outputs.

According to Mr Juan Steyn, Digital Learning and Facilities manager at the School of Languages on the Potchefstroom Campus, there was no "simulation" software for South African students to practice their French oral skills with. This dilemma led to a unique solution named Papotons.

Papotons was developed to address the pedagogical challenges that Ms Carina Grobler, lecturer in French at the School of Languages on the Potchefstroom Campus, was experiencing: "The software development was mainly to better students' verbal abilities."

According to Juan the idea had originated in 2013, but the actual work only began in 2014. Apart from Juan and Carina, other role-players were staff from Academic Support Services on campus and the members of the Innovators@Work initiative on the Potchefstroom Campus.

How does it work?

What makes it so adaptable is that it can be used in conjunction with eFundi on campus computers as well as private computers off campus.



The lecturer uploads the Assignment Package (the audio the student must work from). This audio file can also be uploaded into eFundi's resources for later use.

The following options should be included:

1. Papotons Student
This is the second part of the Papotons program. Students will use this part to complete the assignment. Afterwards, a document will be generated that may also be uploaded in to eFundi.
2. Papotons Feedback
This is the last part of the program where the lecturer gives



Ms Carina Grobler



Mr Juan Steyn

feedback to the students. The students then receive a CSV file as well as a sound file which includes all the feedback.

The entire program tracks metadata (It provides information about an item's content). Tracking helps to define how many times the student has recorded him/herself. This information may be used by the lecturer for his/her own analyses and certain aspects of learner analytics.

Student benefit

Carina notes that "the software was developed mainly to better student's verbal ability." Students can practice their French without having to worry about making mistakes, as they can repeat the process until they are happy with the results. The possibilities this technology offers in terms of teaching-learning and research is quite exciting.

Prospective users

Juan and Carina agree that one should start small and scaffold your process; don't use everything that you have at your disposal. Just take what you need from your context. Also talk to your colleagues about possibilities and the challenges you are facing. A fresh take on matters may be the solution you were looking for.

Wise words

"Don't be afraid to dabble in new adventures. Nothing is going to explode", Carina smiles. "Learn from fellow colleagues and share experiences. Explore new technologies and their ability to support education. In the end, it becomes part of your teaching methods."



Postgraduate Student Management System

“The first phase of the Postgraduate Student Management System (PGSMS) has been completed and the second phase is in process”, says Gert Meiring, senior Business Analyst of Business Systems.

Gert has been working at the NWU for the past seven years and he describes his work in a single sentence: “I gather business needs by asking questions and communicate them to the technical team”.

The goal

Being a firm believer of continuous improvement and in doing so, making another person’s job a bit easier, Gert describes the goal of the PGSMS project as, “improving the VSS (Varsité Student System) by catering for all the postgraduate requirements”. One doesn’t realize how many tasks used to be performed by hand. The PGSMS now includes additional fields and has grouped other fields for better functionality and ease of use.

Instead of creating a separate system, the PGSMS was incorporated into VSS. Users who were already familiar with the look and feel could easily adapt to the new functionality without learning a new system.

The team

As part of the requirement specification, team members were

chosen to represent all campuses including the Institutional Office. Numerous sessions were held to gather all the requirements. Gert emphasises that these members were key to the success of the project. Other parties include the SAS office, Open Collab contractors and a few of Gert’s colleagues from Business Systems.

What was gained?

Before the PGSMS project, VSS didn’t cater for all the postgraduate requirements, for example – not all the required fields could be captured, all the required functionalities that supported specific postgraduate processes were not available, and reporting was insufficient.

Attention was given to all the requirements during the planning phase of the project.

A phased approach was used to apply the different improvements to VSS. This implied that new functionality was made available on a two-weekly basis. After every two weeks users would see new functions on their screens. By using this approach the users could enjoy the benefits of the project right from the start instead of waiting until the project phase had been completed.

What next for PGSMS?

The second phase of the project has started. This phase will entail the development of electronic document workflow where postgraduates will be able to submit and track all their requests

online, e.g. notice of submission and title registration, to name two.

Parallel with this development, Business Systems will also start with the “loading of electronic document” functionality. This will enable ID documents, academic results, grade certificates, etc. to be uploaded on to PGSMS to form part of the postgraduate information.

All of these functionalities are made possible by the completion of this first phase.

The benefits of the second phase include:

- Availability of more detail regarding postgraduate progress and study. The PGSMS will be able to

show how far a student has progressed with his/her research. This will help with reporting to the Vice-Chancellor.

- Accessibility to other users such as the Research Division, which in turn will take responsibility for capturing the research titles.

The study guidance application (interaction between the student and the university) where postgraduates will be able to track their studies, schedules, and communications online, is in the pipeline for a next phase of the project.

Numerous users from various departments, like the administration office, faculties and schools, will benefit from the PGSMS.

Marietjie Ackerman (Potchefstroom Campus) and Amanda Smith (Vaal Triangle Campus) are both Co-ordinators in the Higher Degrees Office of Academic Administration and had the following to say about the benefits of the PGSMS.

1. Data-capturing of postgraduate information is faster due to a more user-friendly environment.
2. Postgraduate information is now grouped together and thus more readily available.
3. Titles of dissertations that contain special characters can now accurately be captured for the PGSMS now caters for special symbols.
4. Additional fields allow for new features. For example “notice of submission” of each postgraduate can now be captured, enabling a report of “possible graduates” to be generated. In the past, these lists had to be maintained by hand.
5. Reporting is more extensive and easy to use. Outstanding applications of students who have neglected to register are effortlessly extracted. The School and Research directors are now readily kept up to date regarding their students – no more time is wasted with manual reports.

The heart behind Naledi Kicks Football

The founder of Naledi Kicks Football, Jéan Raath, describes what he does as being like a 4-year old again – constantly asking ‘why?’. Jéan and his assistant coach are in the process of establishing a development and mentorship football programme that will serve the local community of Ikageng (in Potchefstroom). Quality football coaching will also serve the purpose of identifying promising talent; these players are then guided to realising the programmes’s motto of “Dream big and work hard!”. Their mandate is to nurture skilful and confident footballers who will develop into well-rounded and hard-working individuals.

Jean’s career...

He is currently employed as a Business Analyst at the IT Business Systems division. He serves as a bridge builder or interpreter between business and technology and is tasked with the following: To –

- ensure IT solution delivery
- address actual business needs
- add value to NWU as a whole

His motto...

Being motivated and productive and doing something of value, that is his conclusion: “If you think about it, we keep waking up to it – this day, today – so it must be important.”

On asking Jean what is important to him in life, he

answers: “Oh, the list is quite long. If I have to put it in little quantifiable boxes, I care about people, what I do and the way I do it.”

Jean strives to make a difference and he draws his inspiration from the views of Donald Miller. Miller believes that everyone has a story to tell and that every story matters – more than we will ever know.

“Thus, the point of life”, according to Jean, “is if what we choose to do with our lives doesn’t make a good story then probably it won’t make a life meaningful either. I want to make a difference because I want to be able to tell a meaningful story.”

What makes me happy...

“Travelling, good food and honest conversation. My wife and I are firm believers in second chances, and that love conquers all...”

More about the football...

Jean is obsessed with football and has been involved with an organisation called Ambassador’s Football (AF). AF ministers through football and has offices across the globe where Jean did voluntary work at various levels for the best part of eight years. Jean has just returned from Europe after a 3-week coaching trip for youth football in the UK and The Netherlands.

He states that: “Football always had a special place



Top left Jéan in Ede, Netherlands. Bottom left and right Jéan with the children of Naledi Kicks.

in my heart, it has the power to overcome social and ethnic boundaries/division which can serve as a powerful vehicle for change.”

In his travels he sees a chance to engage with other football players. The reason for this is, Jean says: “You always come across people who play or love the game. I also try to help out with advice and consultation in community football whenever there is a possibility.”

How can this initiative benefit other children?

Jean chuckles as he answers the question: “That answer would need a newsletter of its own!” However, in short, he believes in youth sports coaching and using the guidance of role models and trustworthy people to set an example.

“In this way kids can learn through play while being guided by a coach-educator. A large part of our programme is also aimed at teaching informal life skills. The approach is believed to lay a solid foundation for the adults these kids will become one day.”

Challenges and accomplishments

It was an enormous challenge to establish the programme curriculum and to obtain the buy-in from the community. A lot of time and energy was devoted towards structure, administration and

running of the programme. The construction and completion of the five-a-side football setup and pitches were a huge success, as was clear from the positive response and attitude of the 32 kids currently in the programme. “That made every setback worth it”, says Jean.

Currently their biggest challenge is funding. The kids need football boots; most of them are playing barefoot or in their school shoes, which isn’t ideal. They have already received support from the US Rotary in the form of funds to help with field irrigation and infrastructure needs.

How to get involved

Naledi Kicks operates under a registered Non-Profit Organization (NPO) – Mosaic SA. They are financially dependent on the financial support of like-minded individuals and companies who are willing to help develop and sustain their dream.

To see more, visit the website on naledikicks.org. Click “Get in Touch” to send the team an email or, alternatively, send your email to info@naledikicks.org.

Future plans...

“Getting their coaches mentorship and training programme up and running and establishing a social five-a-side league in the community in order to get locals involved and allow them to have some fun!”

Passwords under attack

Hackers use different methods to try and get hold of your password. Brute force attack and Phishing are two examples.

Brute force attack

“Unlike hacks that focus on vulnerabilities in software, a brute force attack aims at being the simplest kind of method to gain access to a site: it tries usernames and passwords, over and over again, until it gets in. Often deemed 'inelegant', they can be very successful when people use passwords like '123456' and usernames like 'admin'". (https://codex.wordpress.org/Brute_Force_Attacks)

A brute force attack will cause excessive use and bandwidth consumption that in turn will be picked up by the network monitoring processes of the NWU. Bottom line – how you choose your password will determine how safe you are from a brute force attack.

Email (Phishing)

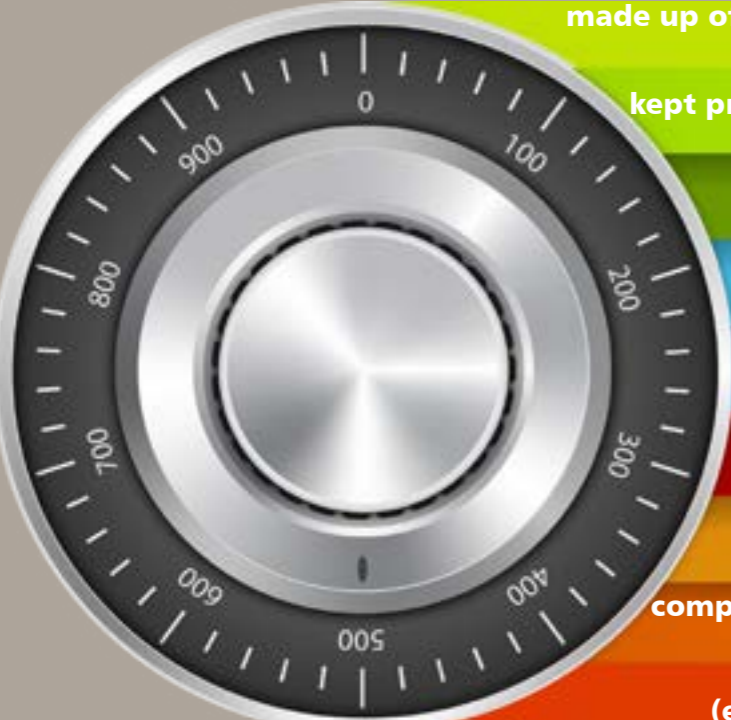
“Phishing is an e-mail fraud method in which the perpetrator sends out legitimate-looking email in an attempt to gather personal and financial information from recipients. Typically, the messages appear to come from well-known and trustworthy Web sites. A phishing expedition, like the fishing expedition it's named for, is a speculative venture: the phisher puts the lure hoping to fool at least a few of the prey that encounter the bait.” (<http://searchsecurity.techtarget.com/definition/phishing>)

How to play it safe

Take extra care when choosing your password. Your password determines how safe you are on the Internet.

Make use of a passphrase (e.g. +bullybeefwithcheese2), for passphrases are difficult to guess, but easy to remember. There are other ways too – do some research of your own – the more unique the password, the better the security.

When choosing a password...



made up of capitals, lowercase, special characters, numbers and symbols	✓
kept private – only you should know what it is	✓
unique and original	✓
easily remembered	✓
long enough	✓
written down or found in any dictionary	✗
able to be guessed by programs in less than a week	✗
compiled of well-known facts about yourself such as the names of your children	✗
repetitions of the keyboard keys (e.g. qwerty, 12345, !@#, to name a few)	✗

Software downloads for staff

IT has launched a webpage from which to download legal software available to all staff. The software webpage is available on the University's intranet through a browser.

Staff have to enter their NWU personnel number and network password to download and install the available software. There is no need to log into the Novell network.

IT invites staff to collaborate and contribute to this webpage. Unfortunately, IT does not have all the specialised skills and/or licences to support

the diverse software requirements of all NWU employees. If you are a specialist in a specific field, for example Macintosh or scientific software, and you need to distribute software; this is the ideal way of doing so.

Bear in mind that all NWU employees have access to the Intranet, thus the software must be legal. A program owner can contact Gerda Schilling to contribute to this webpage.

The link to the Software Download page can be found on IT's home page under "Staff".

IT Projects@NWU

Welcome to IT's project site* (it-project.nwu.ac.za) where anyone can access the current IT project portfolio.

The projects are ranked in the categories:

- Active
- Completed
- Requested

Projects are further depicted in terms of the progress, start date as well as the planned end date. The project description and documentation can be accessed by clicking on the project name.

Transparency is important to us, and we invite all IT users to take a view of our world. Should you have any queries regarding any of IT's projects, please contact Yvette.Labuschagne@nwu.ac.za

*The recommended web browser to access the site is Firefox



What is CAS?

“Central Authentication Service (CAS) is a single sign-on protocol for the web. Its purpose is to permit a user to access multiple applications while providing their credentials only once. It also allows web applications to authenticate users without gaining access to a user's security credentials, such as a password.” (https://en.wikipedia.org/wiki/Central_Authentication_Service).

At the NWU we use CAS as authentication method

for our systems. A user's credentials are their NWU number and network password.

With CAS your password is safe because it is only sent to one application, namely CAS, and no external party can read the password.

CAS has built-in security against all methods of hacking and is monitored at the NWU for any possible irregularities.

Office 365 ProPlus free for all NWU students

Starting October 2015, students of the NWU are eligible to download Office 365 ProPlus for free. Students can enjoy a full, installed Office experience across PCs, Macs, Windows tablets and iPad® and Android™ tablets, and most mobile devices. Each user can install Office on 5 PCs or Macs, 5 tablets/phones.

Students sign-in with NWU#@student365.msfd.nwu.ac.za (e.g. 12345678@student365.msfd.nwu.ac.za) and the password is their Network password (the same one used for eFundi).

Prerequisites

- You must have an active NWU#. When students graduate, their Office 365 ProPlus subscription through the NWU ends upon graduation. Graduated students may then enrol into other consumer or commercial offers available.
- You have to connect to the Internet once every 90 days to verify that you are still eligible for the program. If you don't, your subscription will expire.

Benefits

- It is free.
- You will always have the latest versions of the Office programs.



Visit <http://www.nwu.ac.za/it/office365> for more information.

8 Signs the computer probably has a Virus

		You seem to have suddenly lost the icons on the desktop and/or all other programs files in your folders	
You have major problems trying to install or download any software			You have major problems trying to install or download any software
Your antivirus security program and/or firewall is suddenly disabled	You can't access your computer's disk drives	You are suddenly unable to print	You start seeing pop-up advertisement windows at unexpected (random) times.
The system reboots, freezes up, or crashes for no reason			The computer is really slow. Nothing responds when you click on an icon and/or your software applications do not work correctly anymore

<http://www.ibnlive.com/news/india/10-signs-your-computer-has-a-virus-693448.html>

Our 7 IT strategies

1

STAFFING



Implement an agile staffing strategy that will improve the IT value proposition (aligned to the NWU success model) and have a balanced approach to the core activities of the University.

5

CYBER



INFRASTRUCTURE

Improve the provisioning of ample and appropriate computing capacity, storage for large data, broad and ubiquitous connectivity, and specialised and IT-integrated capturing and analytical instruments.

2

RESEARCH



Add real value to research activities by implementing an eResearch strategy with all the necessary stakeholders (Research DVC, Research Office, IT, Library, Research groupings).

6

SUPPORT



MODEL

Improve the IT support model to provide differentiated support and enable self-support while facilitating freedom of choice. Strive for operational excellence.

3

LEARNING &



TEACHING

Position IT as a key enabler in the operationalisation of the University's Learning and Teaching Strategy.

7

CONTINUOUS



IMPROVEMENT

Continuously improve the current IT services to ensure higher availability and reliability thereby increasing productivity and user satisfaction.

4

STAKEHOLDER



ENGAGEMENT

Engage with different stakeholder groups, building mutual trust and understanding to ultimately become strategic partners. Openness and transparency will be key in this strategy.

