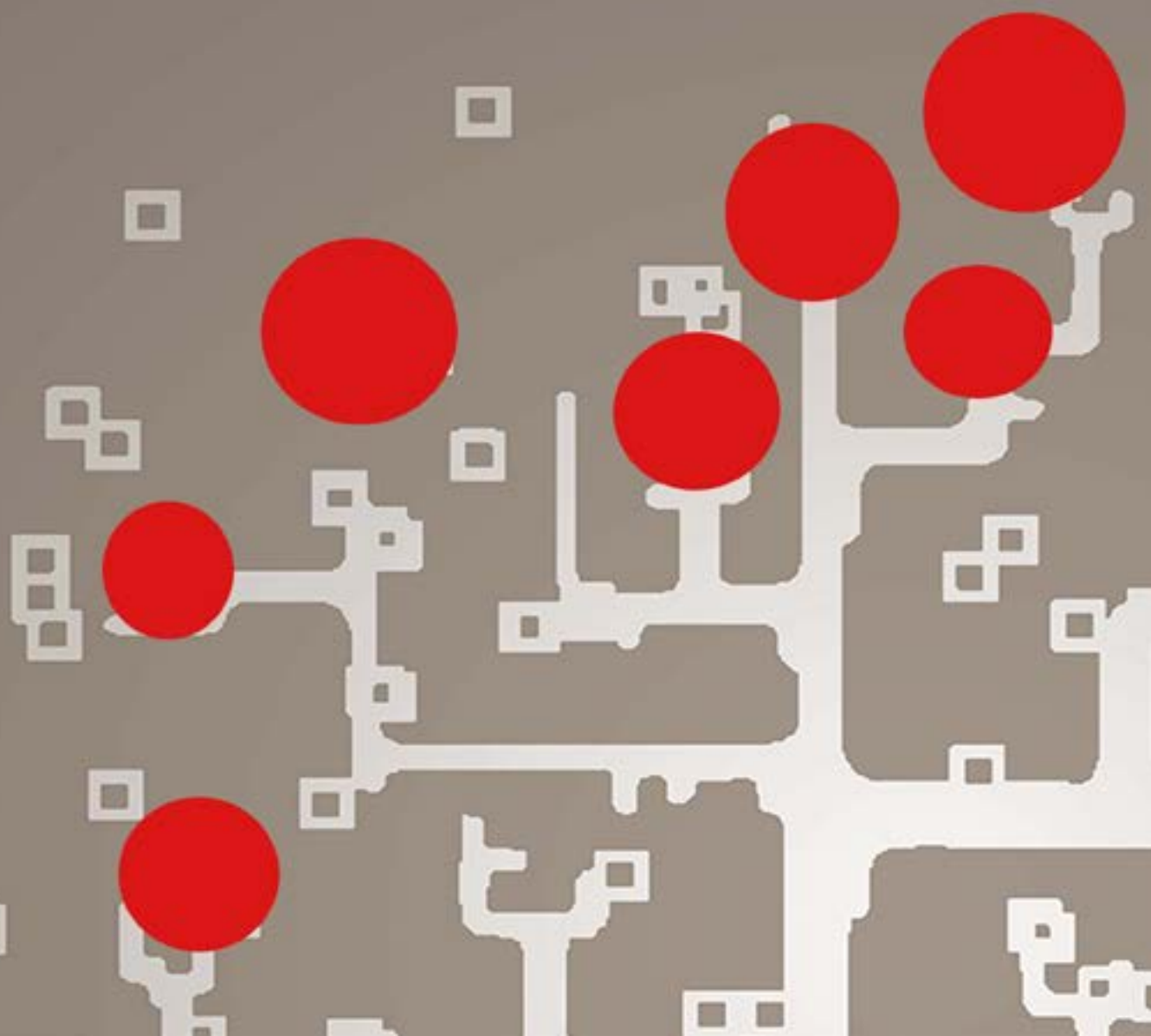


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February 2016 Edition



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## Editorial Team

Ms Chandré Botha  
Ms Geraldine Gerhards

## Website

[www.nwu.ac.za/ithome](http://www.nwu.ac.za/ithome)

## Feedback

Talk2IT@nwu.ac.za

# Preface

Every year speeds by, and 2016 is no exception. A new year brings new opportunities as well as new challenges. Read about "What 2016 has brought so far".

We introduce three of our IT team members, Wilhelm, Sanjuka and Chuku.

Congratulations to Jan Erasmus (MBA), Johan Badenhorst (BSc Information Technology), as well as Riaan Marx (JBoss Administrator) for completing their studies.

Other IT team members are working towards their qualifications. They are Liaan Fourie (Hons BSc Computer Science and Information systems), Pieter Labuschagne (M Computer Science), Bheki Sed-

ibe and Sonic Raleababa (A+), Gerhard Goossens (NDip Information Technology), Claire Buckle and Geoffrey Claase (NDip Information Technology), Marco Pires (Advance Project Management), Ashwin Adams (Project Management), and John Molefe (CCNA).

This newsletter features numerous articles on systems IT has developed for different stakeholders. The process IT utilizes is also explained in the "Let's be Agile" article. Also read on how requesting a new system from IT is much like building a house.

We've included a few tips for traveling as well as on IT Security.

Happy reading!



Mr Jan Erasmus



Mr Johan Badenhorst



Mr Riaan Marx

# What 2016 has brought so far...

## “Easy Internet access

Finally... one less username and password to enter!

A change to the IT infrastructure has made it possible to access the Internet via the NWU network without a username and password.

For more information visit [www.nwu.ac.za/it/sc/internet](http://www.nwu.ac.za/it/sc/internet).

## “Make yourself @ home with eduroam

Will you be traveling soon, possibly to a participating *eduroam* institution? Connect to the NWU-network as if on an NWU campus.

See the “Traveling anywhere soon?” article on page 26 for more information.

## “The Rand to Dollar exchange rate

Due to the Rand/Dollar exchange rate it is not possible for IT to renew the NWU Lynda.com and Gartner license for 2016.

## “Gmail for students

From 2016 all other registered students of the NWU are assigned an NWU Gmail email address.

The format of the NWU Gmail email address is studentnumber@student.g.nwu.ac.za (e.g. 12345678@student.g.nwu.ac.za).

The NWU Gmail email address is only active as long as the student is affiliated with the NWU and provides a student access to the Google suite of applications (unlimited mail and cloud storage as well as other Google apps).

Students may use Google’s Takeout option to access and download their Google data—whether to import it to another service or just to create a copy. Watch the video (<https://youtu.be/TL8PkAnE5Qw>) to find out how to export via a Google account with Takeout.

## “Bigger mailboxes for staff

Wishes come true... staff were happy to be informed that the capacity of their GroupWise mailboxes have increased to 1GB as of 1 February 2016.

# Wilhelm van Belkum – IT Director: Operations & Infrastructure

“I feel like a proud parent... the parent of one of the biggest continuous networks in South Africa.” Wilhelm van Belkum, director of Operations and Infrastructure, joined the University when IT and networking were still in their infancy. He watched the environment grow as he helped build it into one of the top IT departments in the country. The next step? “Helping IT strategise and reposition itself in terms of eResearch support and partnering.”

## Following his educational path

Wilhelm matriculated in East London and studied engineering at Stellenbosch (“I had a knack for science, mathematics and technology”). His career kicked off in 1991, when the Potchefstroom Campus of the NWU was still the PU for CHE. “They were looking for a network engineer and I was looking for a job; it was a match made in heaven.”

*What professional experiences have best prepared you for this position?*

I started as Junior Network Engineer in 1991 and learned the ropes as I passed through the different levels over the subsequent 25 years.

*What are your career goals?*

To keep improving and to position the NWU as a leader in the innovative use of IT in Higher Education.

*How do you deal with deadlines and stress?*

By planning properly, working smart and depending on a highly-motivated team. If all else fails I still have coffee, cigarettes and more than 12 working hours in a day.

## More about yourself...

I am married to a beautiful and loving wife and have two children: a daughter (15) and son (7). Our extended family consists of 3 dogs, 1 cat, 1 mouse and a goldfish. One dog has only 1 eye and another one has 3 legs. So maybe I have two and a half dogs...

*What are your hobbies?*

Computers, watching documentaries, and relaxing at home with my family.

*What do you like to watch or listen to?*

Movies: Forest Gump.

Music: Rodriguez, U2, Beautiful South, UB40, Satie, Gregorian

*What makes you sad?*

The Rand to Dollar exchange rate.

## Your vision for the job

To continue providing quality IT in terms of our role in the University’s new strategy and unitary structure.

## How do you see your future here at the University?

I will continue to help making IT@NWU an innovator in the new teaching and learning environment and partner with the research community to help drive eResearch at the NWU and in the country. Also, I will maintain and improve on operational excellence and IT support in general.



Photo: Mr Wilhelm van Belkum

# Sanjuka Makhan – newly appointed Service Desk Manager at Vaal Triangle Campus



Photo: Ms Matshidiso Poee

**M**s Sanjuka Makham is a lady with a clear vision: to position the IT department as the best department on campus: "The service desk is the face of the department and I will ensure that we are approachable, accessible, professional and up-to-date with current trends in technology. I want us to continue earning respect for outstanding delivery of customer service excellence to all end-users". She claims that she has always had a passion for computers as well as engaging with people: "... in other words, to be an enabler in the enhancement of support levels and customer service excellence is very rewarding."

*"I really enjoy helping and empowering others and this position allows me to do so."*

## Educational path

After matriculating, Sanjuka obtained her BTech Information Technology qualification after four years of full-time study at the Durban University of Technology. After securing employment, she continued her studies on a part-time basis and received her BTech degree in Business Administration. She also attended many short courses, one of which was in E-learning.

Not one to waste momentum, she is keen to complete an MBA at the Vaal Triangle Campus over the next few years.

She enjoys training and would like to explore the possibility of lecturing: "I find fulfilment in imparting knowledge to others".

## Decision to work at Vaal Campus

"After relocating from sunny Durban to Gauteng, it was either the hustle and bustle of the big city life of Johannesburg or the beautiful Vaal. I chose the latter. I certainly am enjoying the serenity of this location. Being amongst the birdlife and wildlife always thrills me".

## What has prepared you for this position?

"At eThekweni Municipality my role was that of End-User Support Controller for the Water & Sanitation unit. IT customer services and management of the service desk fell under my leadership. It was a stressful environment and the dynamics of ultimately providing the technology that enables the delivery of an essential service to the community inspired me to give of my best. The high-pressure environment prepared me for assisting the already very competent and dedicated IT Team here at Vaal Campus to take service delivery to even greater heights.

Prior to that, I worked as an IT practitioner at the Durban University of Technology. I spent most of my career at the DUT, thus attaining a strong background in the complexities of IT in a tertiary environment.

On a personal level, I really enjoy helping and empowering others and this position allows me to do so."

## Handling deadlines and stress

"Generally, I am not one to panic or stress easily," Sanjuka admits. She tries to structure her schedule

in such a way that it enables her to achieve her objectives within the time set. She confesses that she is also able to work all night if she has to, and has done so on many occasions in the past.

## Entertainment and skills

Sanjuka enjoys baking, "so watch out Great British Bake-off!" she remarks with a chuckle.

Over and above this, she loves to host dinner parties at her home for family and friends. "It must be my cooking and baking skills that draw the crowds", she teases with a smile.

## Happiest and saddest moments:

"My happiest moment was when my nephews were born. I travel to Durban often so that I can spend time with Aarav (22 months old) and Sonav (6 months old). What saddens me is seeing people in poverty-stricken situations..."

## Sharing her hobbies and interests

"I love travelling and exploring new places. I have visited thirteen countries thus far with India being my favourite. It's the shopping that draws me back all the time."

She enjoys reading newspapers to keep abreast of current affairs. Sanjuka also frequents the cinema and likes watching TV: "At the moment, my favourite series is Big Bang Theory".

Her garden is another source of joy and she loves spending time tending to her plants and flowers.

## Insightful quotes

"Travelling is the only thing you can buy that makes you richer".

# Chuku Taole

## Mr Personality

**M**r Chuku Taole, IT Consultant at the Vaal Triangle Campus of the NWU, was nominated for Mr Personality at the end of 2015.

Chuku says modestly: "Maybe they saw what I was doing and they liked it... So maybe that is how I got nominated."

According to Chuku you don't really get told why you are nominated. It all comes as a big surprise. Then, he says with a smile, "you vote for yourself and hopefully the rest will vote for you."

The competition works as follows:

1. On request of Ms Elbe Steyn (Campus Registrar at VTC), Ms Aldine Oosthuizen (IT Manager, Vaal Triangle Campus) sends out an email requesting nominations.
2. The list of nominees is circulated with a ballot. Afterwards a ballot is circulated requesting a vote for the nominees. Next to the name of each nominee are motivations that explain why he was nominated.

### Calculating the score

Aldine uses an Excel spreadsheet to capture the information and to determine the winner.

*"Piet Ntema: One person who takes his work serious and always striving to complete his tasks with satisfaction on the face of the person he is helping. Always on time to solve problems brought to him. He is patient and friendly."*

### Announcing the winner

Chuku explains that the winner was announced during the Rector's year-end function. His prize consisted of a Makro voucher and a certificate declaring his title.

Where you treated like a celebrity after the competition? He says that he was "kinda treated like a celeb..." but most people just congratulated him.

### Background

Chuku is from Lesotho but grew up in the Vaal. He has family in Lesotho as well as in Vaal.

### Childhood values

He was a "quiet" and "obedient" child. In his upbringing he was taught that one must have respect for oneself in order to respect others. He still, up to this date exercise this belief in his daily activities.



Photo: Mr Chuku Taole's award

### Education

Chuku originally applied for BEd, but then changed to BSc It because he has always loved computers. Now he also offers training in computers, which satisfies his "BEd side", as he puts it.

### What does the BSc graduate do on a daily basis?

Since he is an IT consultant, much of Chuku's day is spent assisting with audio-visual equipment in lecture rooms, lecture-capturing, and helping out at the IT front desk. To ensure systematic and diligent resolution of issues, users are requested to log an IT-HELP ticket for every problem. He admits that he sometimes "skips the queue", but only when lecturers are in the middle of a lecture and need help right away.

### Personal level

Chuku calls himself a sports fan, but then lists his interests in order of preference: sports, movies (action or psychological thrillers, romantic comedies, comedies, Discovery Channel documentaries), and Deep House music. With his roots in Lesotho, some traditional favourites also feature in his playlist.

### Favourite hobby?

He loves nature and exploring and goes camping whenever he has the time.

### How did the title affect your social life?

Chuku smilingly admits that his love life has remained unchanged, as he is "already taken". Feet still firmly on the ground, he had a braai with his family to celebrate his title.

### Any words of wisdom?

"I am not a philosopher, but I can say that you should love what you do and do it with passion. If you love what you do you will not be bound by the clock, you will enjoy what you do. Empower people through knowledge and transfer it to those who need it the most."

*"Zama Mabusa: Chuku is a hard working colleague, and always willing to assist even outside of his working hours."*



Photo: Mr Chuku Taole

# NWU Researchers learn about Tools for Reproducible Research

email: [eresearch@nwu.ac.za](mailto:eresearch@nwu.ac.za)  
twitter: [@NWU\\_eResearch](https://twitter.com/NWU_eResearch)

Written by Anelda van der Walt

Python, R, command-line interface, shell, terminal, function, package. These are a few examples of the vocabulary researchers and students were recently exposed to during a two-day Software Carpentry workshop at the NWU.

## Software Carpentry

The [Software Carpentry Foundation](http://www.swcarpentry.org) is an international volunteer, non-profit organisation that aims to teach researchers to “do more in less time” when it comes to the computational side of their projects. Lesson material is developed collaboratively and is freely available and published under the [Creative Commons](https://creativecommons.org/licenses/by/4.0/) license. The lessons were recently published in [Zenodo](https://zenodo.org/) and had 158 contributors from across the globe.

The Software Carpentry community has recently taught their 16 000th learner and have offered more than 500 workshops across six continents. Over the past two years, eight workshops have been run in South Africa, of which six took place within the last 12 months. The most recent workshop was co-hosted by the eResearch Initiative, [IT@NWU](https://www.it@nwu.ac.za) and the [NWU Faculty of Engineering](https://www.nwu.ac.za/faculty-of-engineering) and took place on 5 & 6 November 2015 in Potchefstroom.

We were fortunate to have three excellent South African-based instructors available for the event:

- Bertie Seyffert - PhD student in Astrophysics, NWU
- Maia Lesosky - Biostatistician, UCT
- Peter van Heusden - Bioinformatician, UWC

## Participants

One of the most unexpected aspects of the workshop for those unfamiliar with Software Carpentry was that participants came from such a wide range of research backgrounds. Nine faculties were represented across all three campuses including the social, natural, medical and physical sciences, engineering, and IT. The eResearch Initiative made accommodation sponsorships available for seven researchers from the Mafikeng and Vaal Triangle campuses to allow for broader participation.

## Popularity of workshops

The popularity of Software Carpentry workshops can be attributed to a range of properties. The most notable one may be the live coding by participants as well as the instructor for the duration of the workshop. Learners bring their own laptops with pre-installed (free) software and type along as the instructor is working through the lesson material. Helpers with slightly more experience than participants circulate through the room to assist in real-time when learners struggle with specific problems.

## Sticky notes

A sticky note system is implemented to indicate to the helpers and instructor when the class is falling behind or when they're ready to move on. The sticky note is displayed on the laptop “lid” to indicate the following:

- blue: participant is busy working on a challenge
- green: participant has completed the challenge
- red: participant needs help

Bertie introduced learners to the [Bash shell](http://www.gnu.org/software/bash/) in a joint session on the first morning. They learnt some basic commands on the command line in preparation for creating scripts that can automate repetitive analyses through the use of for-loops. Each participant brought their own laptops with pre-installed software as detailed on the [course website](http://www.swcarpentry.org). This allowed researchers and students to return to their offices with the course environment still fully functional on their own computers for future use. Although a pre-course software clinic was offered to assist with installations, some problems did crop up during the workshop and were addressed by our IT Helpdesk support staff, helpers and fellow learners.

After lunch on day one the workshop broke up into two sessions: one focussing on the use of R (taught by Maia), and the other on Python (Peter). Our helpers – Andreas Alberts (Engineering), Mari van Reenen (Statistics), and co-organiser Melvin Ferreira (Engineering) did a great job of assisting when learners got stuck.

The workshop ended on the second day with Bertie showing a very advanced example of integrating what was taught in the Shell, Python, and R lessons respectively, followed by a demonstration of version control with git and GitHub.

## Feedback

Feedback from participants after the workshop included comments such as:

- “I learned new stuff such as how R works. I have never heard of R before this workshop”
- “Sticky notes were awesome”
- “I have learnt a lot in very little time”
- “The instructors were well-prepared and there were always enough helpers to assist me with any problems I encountered. The workshop provided a nice introductory exposure to research-related software and how to accomplish certain tasks easier.”

- “I learned a lot!! I never thought I would be able to understand and use command-line software with my data, but indeed I can! I wouldn't mind attending an extended/follow-up course. :)”

We are grateful for research directors and supervisors who provided the financial support so their students and staff could participate in the workshop.

We're already planning our next workshop that will focus on computational tools for Digital Humanities, and are exploring opportunities to train more Software Carpentry-accredited instructors.

Please let us know if you have any questions about Software Carpentry events at NWU, would like to participate in upcoming workshops, or if you are interested in becoming part of this wonderful international community by being trained as an instructor.



# NWU supports researchers through Africa Research Cloud

The increase in demand for meeting and managing big data requirements poses big challenges with regard to ICT resources. This is especially true for big data projects such as the Square Kilometre Array (SKA) and the MeerKAT radio telescope.

## Memorandum of Understanding

To address this challenge the North-West University (NWU) and the University of Cape Town (UCT) recently signed a Memorandum of Understanding (MoU) that will support researchers through the Africa Research Cloud (ARC).

The MoU commits the NWU and UCT to co-operating and providing the necessary resources for



Photo: The ARC team: Front: Pieter Enslin, NWU Enterprise Architect; Dale Peters, UCT Interim Director of eResearch; Sakkie Janse van Rensburg, UCT Executive Director of IT. Middle: Anelda van der Walt, NWU eResearch Consultant; Boeta Pretorius, NWU Chief Director IT; Wilhelm van Belkum, NWU Director – Operations and Infrastructure. Back: Eben van Zyl NWU Architect, Stefan Coetzee, UCT Senior Technical Specialist, Andre le Roux, UCT Director Technical Support Services.

the design, build, maintenance and support of the ARC, which is based on the Openstack and Ubuntu free and open-source software platforms for cloud computing.

## ARC

The ARC combines distributed data storage, computing resources and other cyber infrastructure and skills development into a network platform for different research disciplines like Digital Humanities, Bio-informatics, and Data-intensive Radio Astronomy.

A first high-level meeting between the two Universities was held in Potchefstroom on 8 February 2016. Important issues like governance and funding were discussed. Although the technical challenges are huge, we have a highly competent team between the two Universities and we are sure that we will have the proof-of-concept phase finished by March and be in full production by mid-2016.



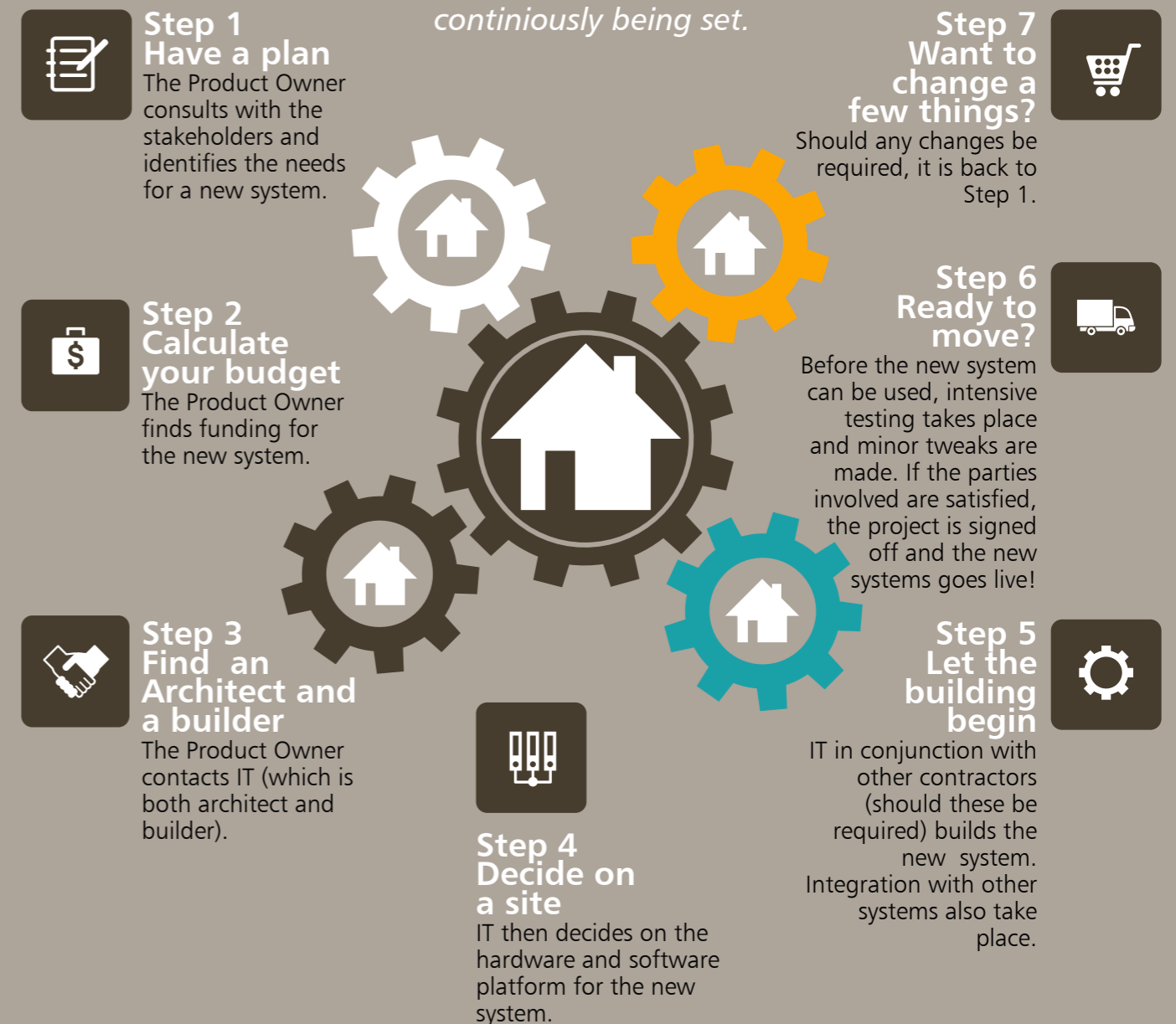
Photo: NWU Chief IT Director Boeta Pretorius and Sakkie Janse van Rensburg, executive director for ICT at UCT at the signing of an MoU on the Africa Research Cloud.

# Building a house with the help of IT

“ Any change or new request must be addressed to the Product Owner.

“ Requesting a new system from IT is much like building a house. The only difference is that the roleplayers have different names.

“ There are numerous "houses" being built at the same time... priorities are continuously being set.



# NWU academic advisor wins Turnitin Global Innovator Award

**M**s Matshidiso Poee, an academic development advisor and academic computing specialist from the Mafikeng Campus of the North-West University (NWU) has been selected as the overall winner of Turnitin Global Innovator Award for Africa and the Middle East. She explains: "I entered the competition around May 2015. Towards the end of June I was informed that it was open for US residents only. I later received an invitation to take part in the global competition".

## Working History

Tshidi began using Turnitin in 2008. The focus was mainly on master's dissertations and doctoral submissions to counteract the high levels of similarities. Her mission was to educate lecturers and students on the use of Turnitin, showing them an acceptable standard of similarity when interpreting the report.

"The campus rector saw the need for lecturers to be trained on Turnitin. I was overwhelmed with requests. The Vice Rector of Quality Assurance and Research assisted me in getting lecturers on board. I managed to train more or less 50 lecturers and supervisors, eight admin officers... I wrote the guidelines which I shared with management."

## What can you do as a student to prevent red flags coming up?

Her advice is as follows: "As a student or a writer, I have to sit and tone the author's voice down by using techniques such as paraphrasing, original sources and ideas from the article. This is helpful in contextualising one's own writing. Turnitin enables us to do so. Another thought to keep in mind is that the lecturer's writing style or the supervisor's influences are reflected in the student's writing. One should take this into consideration when interpreting the report", she concludes.

## Advice for lecturers when using Turnitin

- Overall similarity index does not determine plagiarism

- Each and every Turnitin report has to be interpreted on its own merit
- If a lecturer wants to cap plagiarism they have to be actively involved with their students by using eFundi. They have to assign engaging activities and provide the students with ample time.
- When creating assignments lecturers must remember to set the duration time to 30 days; this will allow for 3 – 4 re-submissions. It will also enable the students to review their Turnitin reports, make corrections, and resubmit at any time until the due date.
- During the period when the assignment is still open, Turnitin will overwrite the prior submission as long as there is no technical error. Otherwise the lecturer must return the students' work so that they can re-submit it.
- Create assignments for every stage of the proposal. In other words, create separate assignments for Chapter 1, Chapter 2, and so on.
- Lecturers and supervisors have the opportunity to exclude students' previous submissions, upon which the system will generate new reports. This can also be done up to the last date of submission.

## Added benefit

"All students of the NWU or even worldwide are prone to criminal activities, viruses on their flash drives, or losing their only copies of electronic documents, leaving them without a backup. By submitting assignments online via eFundi, we are creating a backup for both student and supervisor. We are also alleviating the stress of unforeseen circumstances arising towards the end.

## Turnitin features

GradeMark: This allows an instructor to edit and grade student papers online.

PeerMark: This Turnitin tool is used when distributing student work for peer review. The assignment tool in eFundi also has a Peer Review option.

- Originality check – we have the assessment

*"Turnitin is not a toaster"*



Photo: Ms Matshidiso Poee

tab where we can do assessment and grade marks. In other words, lecturers can mark the assignment online and award the mark in the gradebook. Students will be able to see their grades on their reports. This feature saves paper and allows for online marking. The comments function enables the lecturer to show the student the correlation between the comments and their marks.

- Peer marking is available. According to this article [http://my.ucla.edu/turnitin/PeerMark\\_manual.pdf](http://my.ucla.edu/turnitin/PeerMark_manual.pdf) - "Instructors can create and manage PeerMark assignments. Students can read, review, and evaluate one or many papers submitted by their classmates". In her 13 years of working at NWU she has managed to accomplish the following:

- "I am a gold smart exemplary educator member"
- Member of Sakai South Africa super-user group
- She has been supporting eFundi since it was implemented on the Mafikeng Campus

(At the time of the interview Tshidi said that she was leaving the NWU's service to pursue a career in Academic Development)

## What are potential stumbling blocks?

- My biggest stumbling block with regards to Turnitin was that our Academic Calendar is not synchronised with the USA or UK calendars. Normally Turnitin will write a new script around July/August; for us, this falls in the middle of the year... by that time there will be numerous API errors.
- Possible attacks on Turnitin cloud services by hackers, causing service disruptions.

## Caution

She cautions: "Please remember that Turnitin is not a toaster... You put in your toast and after 2 seconds you get your report. It does not work like that..."



# Community Engagement system... a first for the NWU

For the first time in the history of the NWU, Community Engagement (CE) has a system to capture all community project information across campuses. What makes this system unique is that it is linked to the NWU's fundraising system.

Interestingly enough the NWU has no separate strategic document for CE. The reason is that CE must be integrated into the core business of the NWU, which is teaching-learning and research.

Beatrix Bouwman, Institutional Director of CE, explains how difficult it was to keep track of community projects in the past. Because of the old structures and lines of reporting, information regarding community projects were kept in different places, which made it extremely difficult, if not almost impossible, to report on all CE activities.

Each year the NWU has to report to the Department of Higher Education on the socio-economic impact of its community projects. An additional challenge is that the impact of CE is complicated to quantify; it is not about outputs, but about behavioural change, quality of life and standard of living – all longitudinal measurements.

2015 was marked by a new policy aiming to integrate CE projects across campuses. Currently, 385 projects have been counted and are ready for entry into the new system.

## Fundraising

The link to the fundraising system makes it possible for fundraisers to see what projects are currently running and who the donors are. Should a donor express a wish to fund a project, the fundraiser can

readily access the system and link the donor to a possible candidate, after which a proposal can be submitted.

Beatrix and her team can now follow up with recipients of funds to ensure that the necessary information is communicated back to the donor. This was one of the concerns of donors in the past, for they were not always kept informed in terms of how their money was spent.

## Benefits of the system

- Project themes can now be linked to teaching-learning and research.
- With reporting, project information is now readily available.
- With the fundraising link, CE can now function more proactively than reactively.
- Customer relations with the donors will improve.
- Expertise on the different campuses will be identified and can be aligned with strategic planning at a higher level.
- Management can easily access information.

## The system and team

The system assists the users in tracking their project teams, funding, as well as all their documentation per project. This enables them to govern the project according to need. The system also provides the

users with the functionality of keeping all their project documentation (including and not limited to photos) together in one place.

The CE system was developed on a web-based .net framework by Kidz Africa in conjunction with Paul Grobler, System Analyst from IT Business System Development and Support, and Celest du Preez, Manager Data and Systems from PC Marketing and Communications.

The endeavour started in March 2015 and was completed in October 2015.

## What next?

Beatrix is very excited about the CE System developed by IT. Currently the system is in a test phase where a sample of the projects is entered to determine whether there is any project information not accommodated by the system. This exercise will also indicate whether the information on each project is complete. Minor tweaks will be made to address any gaps.

Faculty representatives will be trained at the end of February 2016, upon which they will be responsible for their faculty's CE project information.

The plan is to have the first reports available in April 2016.



# A new look and feel for the NWU web

After months of consultation, deliberation, and plain hard work, the NWU web site is wearing a brand-new jacket! The new look is based on world trends and evolved through the following processes:

- An expert in the field of online design, Eva Csernyanzsky, Founder & Director at Alchemy360, advised the Institutional Web Office on ideas as to arrange existing content into a more user-friendly design to better aid users with navigation.
- Graphikos designed a fresh look that caused minimal disturbance to page content.
- Moira Muller, Website Specialist from the Institutional Web Office, coordinated the project.
- Ronel Roscher, Data Analyst from the Institutional Web Office, together with Géna Thompson, Senior Consultant from IT Academic and Office Solutions, built the new theme and implemented the design.
- Role-players from all campuses (including colleagues from all the campus marketing and communications departments, the library and School of Communication Studies) worked closely together to finalise the content on the new homepage.

The new look was formally approved at a meeting of the Branding, Marketing and Communication Committee on 11 September 2015 and went live in October 2015. The change was received well by stakeholders and the implementation transpired quite smoothly.

## What changed?

- The NWU homepage ([www.nwu.ac.za](http://www.nwu.ac.za)) got a completely different look.
- The header (with the NWU logo) and footer were changed on all pages to give the entire website a new look and feel.
- The new design contains more images and image sliders and less text.

## What didn't change?

Web content stayed the same for the most part.

## The effect on web publishers

This was a perfect opportunity to do some "spring cleaning". Web publishers were asked to go through their content and remove old information, photos and documents.

## Behind the scenes

Drupal is the content management software used to create the NWU web pages. In December 2013, with the assistance of the NWU Drupal consultants, Drupal was upgraded from version 6 to version 7.

The upgrade allowed implementation of the so-called "Aegir" strategy. Basing [www.nwu.ac.za](http://www.nwu.ac.za) on an Aegir platform allows our Drupal-based website to have multiple so-called "subsites" within one NWU framework. This means improved Search Engine Optimisation (SEO), better data analytics and content management, easier upgrades, back-ups and installations, and faster download times, as well as improved usability. The Unit for Open Distance Learning, NWU News and the Intranet are examples of such subsites already in use.



Photo: NWU Web layout after the merger in 2006

“Role-players from all campuses worked closely together to finalise the content on the new homepage.”

Géna commented that “the new functionality in Drupal 7 afforded us the opportunity to implement a contemporary and much more exciting look and feel that is in line with current trends in web design. We started to implement the new theme on an existing Drupal NWU Omega theme (which is used on [www.nwu.ac.za](http://www.nwu.ac.za), [news.nwu.ac.za](http://news.nwu.ac.za) and [distance.nwu.ac.za](http://distance.nwu.ac.za)). By adapting the current Omega theme to incorporate the new look and feel for these three sites we managed to limit the influence of the change on the more than 18,000 existing pages on the NWU web.”

## New Bootstrap theme

The opportunity was further utilized to create a fresh NWU Bootstrap theme (defines the themes for buttons, dropdown menus, navigation bars, progress bars, and panels) for new subsites. The NWU Bootstrap theme is incredibly versatile and allows publishers to do a lot of additional styling on their respective pages.

Layout of pages is also greatly simplified since it is possible to use existing divisions in the styling rather than tables for the layout of a web page. Pages that use the Bootstrap divisions rather than tables for layout is completely responsive (mobile-friendly), which is very important for SEO but also in general since more and more people access web pages on their mobile phones. The newly launched [library.nwu.ac.za](http://library.nwu.ac.za) is one such a subsite that uses the NWU Bootstrap theme.

In light of this, the Institutional Web Office also hopes to give each faculty their very own subsite in the near future.



Photo: The new look of the NWU Web 2016

# Registration 2016

IT Business Systems is committed to continuous business process and service improvement: upgrading the VSS architecture and keeping up to date with industry technology standards formed part of this drive.

The technical upgrade took place from July to September 2015. It was important to start early in order to be on time for the 2016 registration. No functional changes were made to VSS itself, only hard-core changes to the architecture (moving from an Oracle to a JBoss platform and upgrading Java from 32 to 64-bit). The upgrade increased system performance, improved the deployment of enhancements and the monitoring and assessment capabilities of the environment, addressed various technical challenges from the past, and increased the options of integration with new technologies.

The 25 VSS components were adjusted one by one, starting with the core. Just as working on the tracks affects the running of the train, various challenges, user frustrations and expectations had to be managed during the course of the upgrade.

Fortunately the problems were resolved on time and registration 2016 went ahead without any IT hiccups. Records were broken with even more registrations processed per day than in previous years. The maximum number of web registrations grew from 1,312 per day in 2015 to 2,607 per day in 2016.



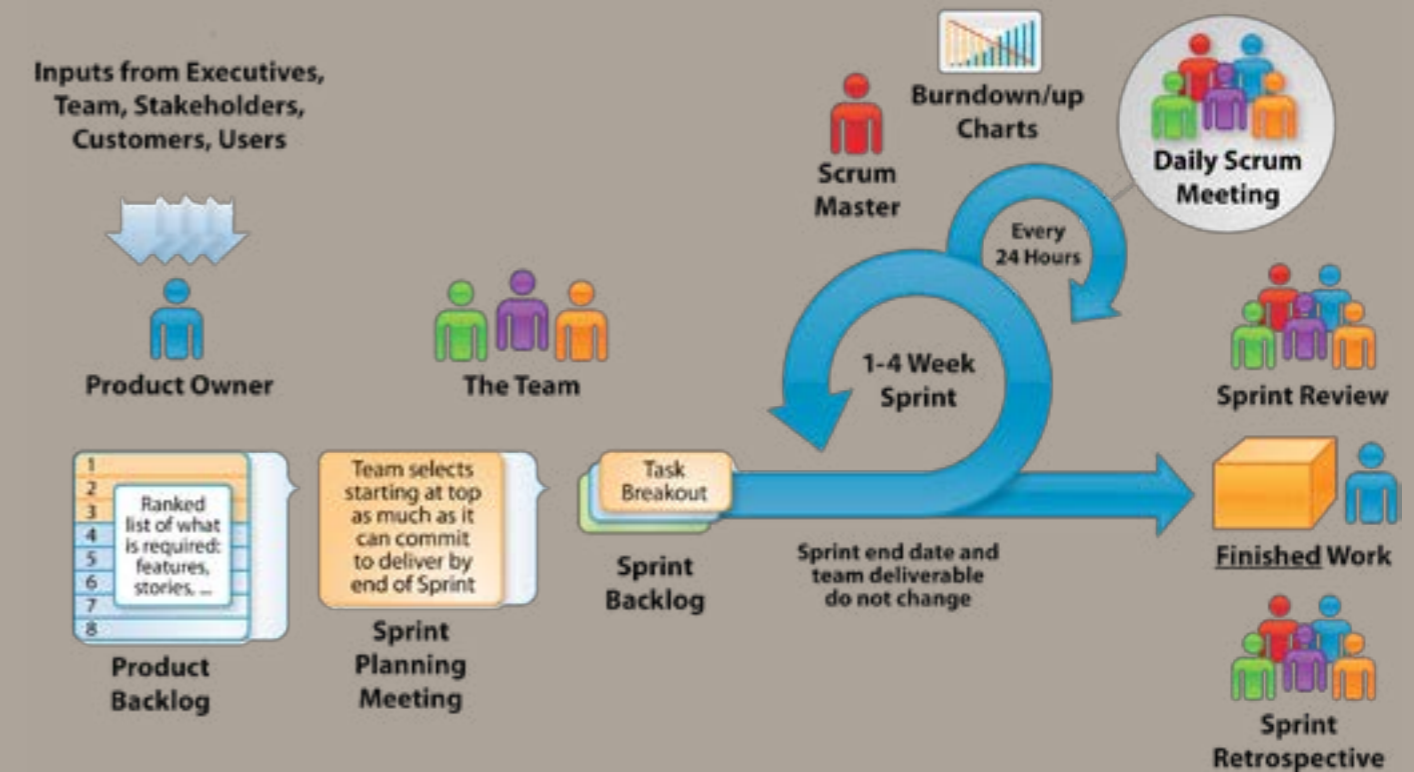
This huge endeavour would not have been possible without the dedication of the different role-players:

- The IM VSS SAS office who was responsible for the extensive testing and end-user support – Corlia de Beer, Rina Scott, Sanet van der Merwe, Marieta Olivier du Preez, Bophelo Hobe, and Jaco-Phillip Ellis.
- IM IT Operations and Infrastructure who was responsible for the set-up and monitoring of the infrastructure and execution of the deployments – Ian Conradie, Martin Venter, and Thabo Molambo.
- IM IT Business System Development and Support: Dassie Janse van Vuuren and Bashir Ahmed who co-ordinated, tested and stress-tested the process and environment.
- IM IT Architecture and Middleware: Eben van Zyl and Rayno Lindeque for setting up the architecture and SOA integration and testing.
- OpenCollab for the system development changes

## What's next?

Electronic forms with workflow and the ability to add supporting documents to various processes should lead to even more features of VSS. We can look forward to using less paper due to improved digital optimization.

# Let's be Agile



The software development methodology IT follows is Agile and Scrum is a specific methodology within Agile.

Agile is a development methodology whereby the full development cycle takes place for a smaller piece of functionality in a controlled, shorter space of time. Business is part of the development process and a close partnership between IT and business develops. Collaboration takes place and business and IT have an improved understanding of each other.

## Why IT uses Agile as development methodology?

- It makes sense to get a potential workable piece of functionality out quicker rather than waiting months for progress to become visible.
- Improved quality of deliverables
- Improved approach to change (changes are expected)
- Provision of better estimates in less time
- Improved control of project schedule and state
- Accelerated focus on training and quicker feedback from demo sessions to end users. The users are part of the process and training takes place voluntarily.

Source: [www.scrumalliance.org](http://www.scrumalliance.org)

## How Scrum works

1. A product owner creates a prioritised wish-list called a product backlog with specific functionalities.
2. During sprint planning, the team pulls a small chunk from the top of that wish-list, a sprint backlog, and decides how to implement those pieces.
3. The team has a certain amount of time — a sprint (usually two to four weeks) — to complete its work, but it meets each day to assess its progress (daily Scrum).
4. Along the way, the Scrum Master keeps the team focused on its goal.
5. At the end of the sprint, the work should be potentially shippable: ready to hand to a customer, put on a store shelf, or show to a stakeholder.
6. The sprint ends with a sprint review and retrospective.
7. As the next sprint begins, the team chooses another chunk of the product backlog and resumes working.

“With Agile we can deliver quality workable software sooner and make more customers happy. Because they are part of the development process it is easier to make changes on demand!”

# eFundi Move

Compiled by: Elsabe Botha, Business Development Manager, OPENCOLLAB  
<http://www.itwebafrica.com/companynews/782-opencollab/235898-efundi-move-taking-the-lms-offline>

Since 2007, the North-West University (NWU) in South Africa has worked towards a solution to address the hindrances of using an online Learning Management System in an environment where power outages, the lack of internet availability and expensive data costs remain insurmountable challenges.

Sakai SOLO, an off-line learning product dependent on a flash disk, was introduced to the Sakai community at the Sakai conference in Paris, France in 2008 and in 2009 feedback was given after the successful launch of the product to a small target group of students at the NWU. OPENCOLLAB, the Apereo commercial partner in Africa, developed SOLO to meet the requirements of the NWU, however this project had to be discontinued in 2011 when all support for Google Gears was suspended by Google.

Since the idiom of the day was mobile apps and the flash disk was slowly becoming old technology, the decision was taken in 2014 to develop a hybrid e-learning solution for the online / offline availability of resources to allow students, even in offline mode, to utilise resources effectively using multiple devices, including mobile.

The first step was to develop an export function for the NWU's Sakai instance (eFundi), whereby Lessons could be exported in EPUB 3 format.

Secondly, the eFundi Move app was developed to allow a student access to content online when he / she has access to the Internet. The synchronisation of content is streamlined to enable offline access to the same content later on. The current Sakai functionalities that are available offline are Resources, Scheduling and Announcements. When an announcement is posted on the parent online LMS, a notification similar to a WhatsApp notification is sent to the mobile device. The app is currently available in the Google and Apple app stores and a desktop version for Mac and Windows is already in production. The Windows mobile version will be available soon.

According to Martilene Orffer, Managing Director of OPENCOLLAB, Synthesis contributes

to OPENCOLLAB's vision of affording students a much richer and seamless teaching and learning experience in an environment where access to the Internet remains challenging.

eFundi Move has been in production at the North-West University since January 2016. Demonstrations to lecturers have been held and the spontaneous take-up amongst students have been exceptional - more than 1000 downloads from the Google Play Store until the middle of February. Active marketing only commenced on the 22nd of February and a marketing campaign is underway to make this available to additional groups of students and lecturers in the second semester of 2016.

eFundi Move does not solve all the challenges with regards to pervasive online learning, but provides a solution for the next group of students who have intermittent access to the Internet.

Acknowledgements: ITC and Academic Support departments: North-West University

Contact OPENCOLLAB at [info@opencollab.co.za](mailto:info@opencollab.co.za) for more information about the Synthesis synchronisation engine and offline learning with Moodle and Sakai.



# IT Security

We are all familiar with viruses, but have you ever heard of phishing, identity theft or ransomware? These are all terms used to describe issues related to IT Security.

Today we not only have our physical safety, but our cyber safety to worry about. You may think it is safe to access your email in the safety of your own home, but there are so many things to be aware of. Here are some basic rules when working on your pc:

- Do not leave your PC unattended. Lock the screen, even when leaving your office for only a short while.
- Be careful with your password(s). Don't leave them lying around. Treat them like keys – if you suspect that someone has had access to them, change the whole lot.
- If you are unsure about an email - do not open it. The same is true for links in emails. Hackers have clever ways of tricking you into opening an email

infected with a virus.

- Make sure your antivirus software is up to date and run regular scans to ensure that your PC has not been compromised.
- Check your GroupWise signatures from time to time. "Send an email to yourself and add your signature to make sure that there are no malicious links attached".
- Be careful of the "extras" (like toolbars, search engines, etc.) when installing programs. Do not merely keep clicking on NEXT without making sure what you are installing.
- Last but not least – backup your data.

IT is in the process of compiling information on IT Security. Read more on our IT Security website ([www.nwu.ac.za/it/security](http://www.nwu.ac.za/it/security)) in "Guard your privacy when offline or traveling", "Don't get hooked", and "Guard your privacy online", or click on the IT Security link or on IT Home page. More IT Security topics to be added soon.



# IT Walk-in service on the Potchefstroom campus

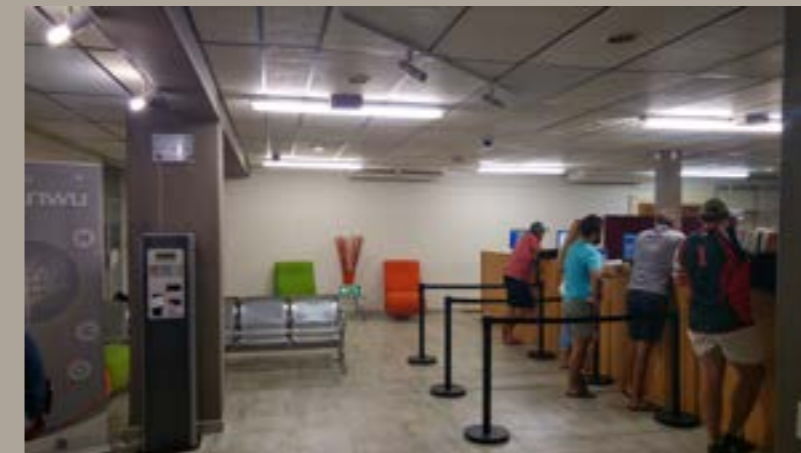
“ The Student IT Walk-in Service on the Potchefstroom Campus, located in building F20, has been operating since January 2012. The Walk-in was established to provide a high quality IT service to the students of the Potchefstroom Campus.



“ The Student Walk-in now boasts with a new-look entrance and reception area.



“ From 2012 to 2015 a total of 34,809 work logs have been completed by the Walk-in staff.



“ Staff and students are welcome to bring their mobile devices for Wi-Fi setup or drop off their office PC for IT support. IT will be glad to be of assistance with any IT-related queries.

“ There has always been a need for a Staff Walk-in Service. In November 2015 planning and upgrading to the Student Walk-in service area took place to make space for a Staff Walk-in Service.



“ As from the end of February 2016 staff can access the Walk-in Service from the street entrance.



# Traveling anywhere soon?

In order to make your traveling experience a positive one, take note of the following tips. Please test the different options before traveling.

## Passwords

Your password expires every 90 days. This is the password you use in conjunction with your NWU# to gain access to the majority of IT services.

IT suggests you change your password before traveling to ensure that your password doesn't expire while traveling. However, should your password expire while traveling, go to [efundi.nwu.ac.za](http://efundi.nwu.ac.za) and click on the Reset Passwords link. Students and Guests can obtain a new password if they have forgotten their old one. Staff and Students can change their current password (note that the old password must be provided).

For more information on passwords visit [www.nwu.ac.za/it/sc/password-management](http://www.nwu.ac.za/it/sc/password-management).

## VPN

"A virtual private network (VPN) extends a private network across a public network, such as the Internet. It enables users to send and receive data across shared or public networks as if their computing devices were directly connected to the private network, and thus benefit from the functionality, security and management policies of the private network. A VPN is created by establishing a virtual point-to-point connection through the use of dedicated connections, virtual tunnelling protocols, or traffic encryption. Source: [https://en.wikipedia.org/wiki/Virtual\\_private\\_network](https://en.wikipedia.org/wiki/Virtual_private_network).

Our VPN service enables the user to access the NWU network when off-campus exactly as they would when on campus with access to all services, including those services behind the NWU firewall (e.g. KFS). Staff and Postgraduate Students can make use of this service. For more information, visit [www.nwu.ac.za/it/sc/vpn](http://www.nwu.ac.za/it/sc/vpn).

Please arrange the necessary permissions and software installation before traveling.

## Wi-Fi

To protect your privacy, do not conduct personal transactions on Wi-Fi hotspots or public computers that request sensitive information such as bank account information, home address or your ID number. Wait to conduct these transactions on secure connections such as eduroam.



## Backups

Prepare for the worst, and hope for the best. Assume that your laptop/device will get lost or be stolen. With this picture in mind ensure that you have made backups of your data.

The best scenario would be to travel with a "clean" laptop/device that doesn't contain any personal information.

## eduroam

"eduroam (education roaming) is the secure, world-wide roaming access service developed for the international research and education community. eduroam allows the user from participating institutions to obtain Internet connectivity when visiting other participating institutions by signing on with their institution's credentials." source: [www.eduroam.org](http://www.eduroam.org).

Watch the video (<https://youtu.be/TVCmcMZS3uA>) that explains how eduroam works.

Please test your eduroam connection before traveling by downloading and running the .exe found at [www.nwu.ac.za/it/sc/eduroam](http://www.nwu.ac.za/it/sc/eduroam).

## GroupWise

**On your mobile device:** This service enables staff to access GroupWise through a mobile device. Users of this service should consider turning the sync off while traveling for syncing can incur high mobile fees when traveling. For more information visit [www.nwu.ac.za/it/sc/mobile-email-calendaring](http://www.nwu.ac.za/it/sc/mobile-email-calendaring).

**Through webmail:** Rather access your GroupWise through the GroupWise webmail functionality found at the bottom of the web page [www.nwu.ac.za](http://www.nwu.ac.za); or through the webmail client on your desktop.

**Via the client:** The GroupWise client can also be used. The Online Address should be set as [ngwnameserver.nwu.ac.za](http://ngwnameserver.nwu.ac.za) or [143.160.36.94](http://143.160.36.94) and the Port as 1677.



**Caching:** Caching mode allows you to work off-line. Your emails will sync when you choose to go online. Caching mode can be set by setting a Caching mailbox path.



For more information visit [www.nwu.ac.za/it/sc/email-calendaring](http://www.nwu.ac.za/it/sc/email-calendaring).

# What do undergraduates think of IT at the NWU?

In order to answer this question the NWU, for the first time in history, will participate in the EDUCAUSE Centre for Analysis and Research (ECAR) Students and Information Technology Study of 2016.

This study is based on an annual survey that helps higher education institutions assess student's expectations and experiences of technology. Any higher education institution may participate, and there is no fee.

The 2015 ECAR Student Study collaborated with 161 institutions to collect responses from 50,274 undergraduate students across 11 countries about their technology experiences.

## Enhance Decision-Making with ECAR Research

Colleges and universities use ECAR research and analysis to improve their IT service delivery by means of user data and technology trends and practices. ECAR is committed to a transparent and responsive process in developing our research agenda.

This longitudinal research can benchmark university consumer perceptions and catalyse conversations among IT professionals about how to better serve their constituents; among institutional leaders about how to articulate their technology needs and expectations.

Institutions use these insights to:

- Improve IT services
- Increase technology-enabled productivity
- Prioritize strategic contributions of information technology to higher education
- Plan for technology shifts among the various constituencies of the academic community
- Become more technologically competitive among peer institutions, and find out what it might take to compete at the next level

## NWU's participation in the survey

The online survey will launch on 1 March 2016 and will be available via

a link available on the eFundi home page. The closing date is set for 15 April 2016 and one lucky participant will win a gift voucher from takealot.com worth R5 000.

The survey results will be published in a future IT Magazine.

## About EDUCAUSE

EDUCAUSE is a non-profit association and the foremost community of IT leaders and professionals committed to advancing higher education.

EDUCAUSE helps those who lead, manage, and use information technology to shape strategic IT decisions at every level within higher education.



The poster features a stylized illustration of a person with red hair and a headset, sitting at a desk with a laptop. The person's legs are raised in the air, and they are surrounded by various icons representing technology and education, such as a smartphone, a target, a graduation cap, and a book. The text 'EDUCAUSE 2016 STUDENT SURVEY' is written in a large, curved font at the top. Below the illustration, the text reads: 'What is your technology experience on campus? Take part in this survey and you could win a R5 000 takealot.com gift voucher. Visit the eFundi front page for the link to the survey.' The date '1 March to 15 April' is written in a curved font on the right side. At the bottom right, the North-West University logo is displayed, along with the tagline 'It all starts here'.