



### e-Practitioner digital skills in software development

There are various categories and levels of digital skills (e-skills). The Post-Graduate Diploma in Information Technology (Software Development) programme is an example. [Read more on p4](#)



### Presenting on the e-skills agenda at the EC ICT Summit

The Eastern Cape e-Skills CoLab and the NEMISA CEO attended the 11th Eastern Cape ICT Summit, held from 4 -5 Nov 2015. [Read more on p5](#)



### KZN e-Skills CoLab partners in Durban AgriHack Challenge

The Durban AgriHack Challenge, a hackathon, was run from 28 November to 3 December 2015. It's aimed at promoting innovation and entrepreneurship in agriculture. [Read more on p8](#)



### MAD Challenge enhances mobile app development e-skills for SA

The 2015 Mobile Application Development (MAD) Challenge introduces secondary school learners to mobile app development. [Read more on p11](#)

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### NEMISA alumni work on SA's first animated sitcom

'Systraat' is South Africa's first animated sitcom. The SABC is premiering it on YouTube before airing it on television. [Read more on p13](#)



### Creative new media skills for work opportunities

Creative new media means the new creative fields that have come about from technology. NEMISA has conducted a number of training interventions around this. [Read more on p13](#)



### Meet Dickson Mtsweni, Specialist Producer: Imaging and Sound

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Understanding e-skills

Understanding types of e-skills (digital skills) and digital users

There are many levels of digital skills (e-skills) and types of users. It can be confusing. This article looks at some of the questions around understanding digital skills. It also looks at what we can do to make it easier for South Africa to understand the range of e-skills needed so that people can be trained effectively.



**What is ICT?**

ICT stands for information and communication technology.

**What is an e-skill (digital skills)?**

An e-skill is more than knowing the basics of how to use a computer (computer literacy). While it's essential to be computer literate, the important question is: what can you do with that? **An e-skill means being able to use technology to add benefit to your life – to actively take part in the world and move ahead.**

**Q What does it mean that there are different types of digital users?**

As part of the South African e-skills agenda, different types of digital users have been defined. **The different categories show how different groups use digital skills (e-skills).**

<p><b>Non e-literate communities (people who are not savvy with technology)</b></p> <p>and</p> <p><b>e-Users</b></p>	<p>These are people that need e-skills to do their jobs. This doesn't mean people who are responsible for ICT, like the technicians who look after your computer at work.</p>
<p><b>e-Practitioners</b></p>	<p>These are people whose job it is to work with ICT, such as developing solutions. There are hundreds of jobs that fall into this category. These include programmers, mobile app developers, website developers and database administrators. What's interesting is that more of these types of jobs are created every day as ICT advances.</p>
<p><b>e-Leaders</b></p>	<p>These are people who use technology to develop their organisations. They are using ICT as a tool. This group includes CEOs and CIOs. (The CIO, or Chief Information Officer, looks at the technology needs for the business.)</p>

<p><b>Entrepreneurs</b></p>	<p>Entrepreneurs are an important part of our economy and key to making it grow. It's essential they have the e-skills needed to run their businesses successfully, whether these are very small businesses or larger. Entrepreneurs need to know how to use budgeting programmes, stock control programmes, how to market etc.</p>
<p><b>Government</b></p>	<p>South Africa needs to have more efficient government services. This can be done using technology (ICT). For example, many of the government services can be provided through the internet, such as submitting tax information online (SARS services) and paying municipal services online. It's essential that people who work in government have the e-skills for effective service delivery.</p>
<p><b>The public</b></p>	<p>At the same time, citizens need to have the necessary digital skills to be able to use the online services provided by Government. Digital skills (e-skills) are also necessary for normal life situations such as: paying bills, communicating with people, finding and sharing information, finding places, buying and selling products (and many more). South Africa is considered to be 'mobile first' which means that many people use their mobile devices (such as cellphones and tablets) for these functions.</p>

**Q So we know that there isn't just one type of digital user (user of technology). What does this mean in terms of digital skills? Are there different types of digital skills?**

Let's start at ground level – the users that are called non e-literate communities. These are people who are not savvy with technology. However, life has become increasingly digital. When we think of digital skills for this group, it's important to look at these skills as **basic life skills that people need to be part of the digital world.**

Not having these skills means that people will increasingly be excluded from society (social exclusion). Basic life skills can include using devices (such as cellphones, tablets and computers) to get information from the internet, to pay bills, to do banking, to buy pre-paid electricity, to communicate with friends and family, and many more.

**There are other types of digital skills beyond basic life skills.** There are e-skills people need to do their jobs, such as being able to use email. Sometimes the jobs are very specific or focus on a certain direction. An example is government. Those working in government need to be able to provide efficient services, particularly through ICT. There are also technical e-skills like being able to code to create programmes.

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**Article continued: Understanding types of e-skills (digital skills) and digital users**

**Q What role do digital skills (e-skills) play when it comes to employment? Who needs digital skills?**

When people think of digital skills (e-skills), they often think of high-level digital skills like writing code. But digital skills play a much bigger role in terms of being employment ready with skills needed by the job market.

Because ICT and software is part of all the sectors in business, the ability to use ICTs or digital technology has become a basic requirement in the job market. Think of spreadsheets and word processing or using “programs for medical billing and running computerized drill presses”. This point was noted in the report, ‘Crunched by the Numbers: The Digital Skills Gap in the Workforce’ March 2015. It was released by Burning Glass Technologies, a US-based company that gives job market analytics.

The report notes that entire occupations have shifted and become more digitally intensive. Digital skills are now required “within Office and Administrative Support, Business and Financial Operations, and Management. The Sales and Related, as well as Health Care Practitioners and Technical occupation families, are not far behind”. These also include positions like retail supervisors and store managers. The research shows that entire sectors now have “no place for workers who do not at least have the basic digital skills to undertake tasks like word processing and maintaining spreadsheets”.

In the report, some of the needed digital skills have been clustered:

- **Productivity Software Skills** – “such as Microsoft Excel or Microsoft Word, or enterprise resource management software like Oracle or SAP”
- **Advanced Digital Skills** – “such as customer relationship management (CRM) software and higher-end computer networking skills, are required in many middle-skill occupations”. The report provides examples such as a graphic designer who also “needs to be competent in specific products like Adobe’s Photoshop and InDesign” and a sales representative who “also need to understand a CRM program like Salesforce or SAP”. (See table alongside.)
- **Occupationally Specific Digital Skills** – “such as health technology and computer-controlled machines, are required in specific technical occupations. For many machinist positions, for example, the ability to physically operate machine tools isn’t as important as the ability to guide the robots that operate the tools”. (See table alongside.)

**Q Understanding the different types of digital skills and users is complicated. Can we make it simpler?**

There is no question that it is complicated when looking at what digital skills are needed, for whom, within what industries and so on. This is why a Digital Skills Framework is

essential for South Africa. It’s about making the complexity clear and ensuring that everyone has a common understanding of what e-skills (digital skills) mean and what types of learning initiatives need to be conducted to ensure that people develop the appropriate e-skills that are relevant for their job and life world.

“As part of developing the Digital Skills Framework, the different sectors need to have discussions and plan in terms of identifying the required digital skills for the future,” says Dr Craffert. “This is the change process that must happen across all sectors. It is part of the process of training e-skills to develop the human capacity in South Africa. The Digital Skills Framework is a conversation and process that NEMISA and its Colabs need to navigate with stakeholders.” 😊

Occupationally Specific Digital Skills	Top Occupations			Top Skills
<b>Health Care Technology</b>	Registered Nurses	Medical Laboratory Technician	Radiology Technician	<ul style="list-style-type: none"> <li>• Advanced Cardiac Life Support (ACLS)</li> <li>• Critical Care</li> <li>• Vital Signs Measurement</li> </ul>
<b>Health Information Technology</b>	Medical Secretary	Medical Coder	Health Information Technician	<ul style="list-style-type: none"> <li>• Medical Billing and Coding</li> <li>• Health Information Management</li> <li>• Health Information Exchange (HIE) Technology</li> </ul>
<b>Machining Technology</b>	Machinist	Mechanical / Electrical Engineering Technician	CNC Operator	<ul style="list-style-type: none"> <li>• AutoCAD</li> <li>• Computer Numerical Control (CNC)</li> <li>• Computer Aided Manufacturing (CAM)</li> </ul>
Advanced Digital Skills	Top Occupations			Top Skills
<b>Customer Relationship Management</b>	Sales Representative	Sales Manager	Account Manager / Representative	<ul style="list-style-type: none"> <li>• Salesforce CRM</li> <li>• SAP CRM</li> <li>• Siebel CRM</li> </ul>
<b>Computer &amp; Network Support</b>	Computer Support Specialist	Network / Systems Administrator	Network / Systems Support Specialist	<ul style="list-style-type: none"> <li>• SQL</li> <li>• Linux</li> <li>• Cisco</li> </ul>
<b>Digital Media &amp; Design</b>	Graphic Designer / Desktop Publisher	Marketing Coordinator / Assistant	Multimedia Designer	<ul style="list-style-type: none"> <li>• Adobe Photoshop</li> <li>• Adobe Acrobat</li> <li>• InDesign</li> </ul>
<b>Social Media Tools &amp; Search Engine Analysis</b>	Recruiter	Graphic Designer / Desktop Publisher	Search Engine Optimization Specialist	<ul style="list-style-type: none"> <li>• Social Media Platforms</li> <li>• Blogging</li> <li>• Google Analytics</li> </ul>

Graphs from “Crunched by the Numbers: The Digital Skills Gap in the Workforce’ March 2015 from Burning Glass Technologies.

**Training**

## Building micro business capacity through partnerships for e-skills, e-literacy and infrastructure

**National e-literacy roll-out**

The Northern Cape/Southern Gauteng (NC/SG) e-Skills CoLab is coordinating the national rollout of e-literacy training. e-Literacy training has been conducted around South Africa and this includes the training of facilitators. "For a national rollout to be scalable, it is essential to have partnerships. It is also a requirement to train trainers," says Antoinette Lombard, Director of the NC/SG e-Skills CoLab.

**What is e-literacy?**

e-Literacy or digital literacy is the starting point for knowing how to use digital technology effectively. e-Literacy is more than knowing how to use a computer. It means being able to use technology in all areas of life and work.

**Facilitator training**

Four facilitators have been trained at the Nama eSkills Centre in NababEEP, Namaqualand. The course ran for four months with assessment on 14 November 2015. The NC/SG e-Skills CoLab, based at the Vaal University of Technology (VUT), has partnered with Nama eSkills Centre. The intention is to train thousands of low skilled and unemployed youth in the Northern Cape Province. The Nama eSkills Centre is earmarked for the western regions of the Northern Cape, which include Springbok in Namaqualand.

"This computerised courseware works to the advantage of the learner. The facilitator's work involves an initial presentation and then standing by to assist learners," explains Tarryn Thomas, one of the new facilitators.

**e-Literacy course useful for rural based e-skills centres**

According to James Jonas, the owner of the rural-based ICT small business Nama eSkills Centre, the exams were an

important milestone. "Previous attempts to facilitate end user computing skills training has been lecture-based. However, the current courseware is an automated and self-paced application promoting learner-control," says Mr Jonas.



*e-Literacy training facilitators with Antoinette Lombard, Director of the NC/SG e-Skills CoLab.*

This emerging ICT business has had to overcome significant business challenges. These include eviction from a rented premise and a lack of training contracts from industry to a lack internet access. Furthermore, previous training models have been expensive. The automated e-literacy course is a low-cost model, suitable for rural applications.

**Part of e-skills agenda is to make e-skills available in deep rural communities**

"We commend James' persistent entrepreneurial effort to keep his centre afloat. Part of the NEMISA/INeSI agenda is to build the capacity of such micro ventures, making ICT and e-skills accessible in deep rural communities like Namaqualand," says Ms Lombard.

The CoLab technical team downloaded the e-literacy course- and exam-ware on the centre's server. This allowed Mr Jonas to conduct the exam offline due to low connectivity. Short-term plans for the Nama eSkills Centre are to acquire a wireless network and to shift the training base to Springbok. VUT and the NC/SG e-Skills CoLab are currently in talks with a variety of ICT stakeholders to take the Nama eSkills Centre to the next level. Stakeholders include the Department of Science and Technology and the Department of Economic Development. 😊

**Training**

## Update on NC/SG e-Skills CoLab e-literacy training of VUT service workers

The Northern Cape/Southern Gauteng (NC/SG) e-Skills CoLab has been conducting e-literacy training for 50 service workers from the Vaal University of Technology (VUT). (VUT is a partner in the initiative.) This is part of the e-skills training of 10 million citizens as outlined in South Africa's National Development Plan.

**VUT service workers complete exams successfully**

A small group of the service workers volunteered to write their e-literacy exams early on 19 November 2015 and then

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*VUT 2015 group 1 service workers in training.*

### Article continued: Update on NC/SG e-Skills CoLab e-literacy training of VUT service workers

on 3 December 2015. The course is a 75-hour interactive training programme with five modules. This initiative has added a formal assessment component, with successful delegates receiving a VUT Short Learning Programme certificate.

"Overall the students performed very well. The rest of the



VUT 2015 group 1 service workers in training.

students will complete their assessment in January 2016," says Antoinette Lombard, Director of the NC/SG e-Skills CoLab.

#### Delegates give positive feedback

Delegate feedback shows that the students are excited about the course. Following are some comments from delegates:

- Penny Nchabeleng: "The course is very good and helpful to people like us – those who never knew the computer before. By the end of the course, I want to achieve my certificate. I then want to learn more about the computer so that I can apply for a better position at VUT."
- Petrus Molotsi: "The class is 100%. I didn't have any experience about the computer before. It has opened my eyes. The programme is good, but learning about the theory of the computer is a little difficult – like learning about the networks and data. This is the first time using a computer, because there was no computer during my school days. Now I want to learn further."
- Ernest Mudau: "I did End User Computing before but I've learned a lot from this programme. It's a good course. There was a lot of information that I didn't know on using the computer. At least I can now use the computer to type faster, know how to store and retrieve information, and how to go to the internet. I'm busy passing all my quizzes, so I'm enjoying it." 😊

## Training

### e-Practitioner digital skills in software development

Because technology is now a part of daily life and work, it has become necessary to have digital skills (e-skills). These digital skills range from basic life skills to operate within a world run by ICT to e-users, e-practitioners and more. There are various categories and levels of digital skills.

The Post-Graduate Diploma in Information Technology (Software Development) programme is an example of training in e-practitioner skills. e-Practitioners are people whose job it is to work with ICT, such as developing solutions. These include programmers, mobile app developers, website developers and database administrators. The Post-Graduate Diploma in Software Development is a yearly initiative and has been running since 2012.

**Aim:** The aim of the Post-Graduate Diploma in Software Development programme is to re-skill unemployed or mis-employed graduates as software developers to be redeployed into the market. This programme has been specifically designed to cater for South Africa's need for

developers and the government policy direction of scarce ICT skills and increasing employment. The programme also takes stakeholders' needs – potential employers, such as business – into account. The pool of software developers is a sought-after skill base and must be grown to fill industry's need.

**Delegates:** Sixteen graduates were chosen for this year's programme. Although the programme can accommodate a maximum of 40 participants, the selection process is stringent and is administered as an eight-hour selection workshop. It also includes an interview process so that students are fully aware of the intensive process.

Entry requirements consist of a minimum of any non-IT related bachelor's degree and that the applicant had been unemployed for a minimum of six months (or mis-employed) and is under 30 years of age. This year's intake did have nine participants who had studied something IT-related at an undergraduate level.

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### Article continued: e-Practitioner digital skills in software development

**Content:** The diploma programme involves 24 weeks of academic training and then six months (or longer) interning with partner companies. The process begins with a two-week boot camp to prepare students for the programme and to determine whether they have what it takes to complete the process. Those that stay have a very high success rate of being employed after the course – an almost 100% success rate.

The academic training is immersive, five days a week for eight hours each day. Students sit at terminals and write code in much the same way as they would be expected to do by their future employers. An individual software development project is part of the assessment framework.

Learners are taught mark-up languages, C/C++ language, object-oriented programming and web applications using the Java and PHP Web technologies (including relational databases and SQL), and mobile applications. There is also a six-month or longer internship at a software development company.

**Assessment projects:** Students have to complete an assessment project in addition to theoretical training and the internship. There is a deliberate focus on mobile technologies to ensure that students are industry ready. Some of the projects that the students worked on fall within the category of social innovation – aimed at addressing local socio-economic problems. Examples of three social

innovation projects are:

- Solving students transport problems through a mobile app
- Helping entrepreneurs or SMMEs to improve their business with a mobile app
- Enhancing community leadership with mobile apps

**Partnership:** The Post-Graduate Diploma in Software Development is a partnership between CapaCiti (the tech skills development placement division of Citi – The Cape Innovation and Technology Initiative (Citi)), the Western Cape e-Skills CoLab and the Department of Information Systems at the University of the Western Cape. 😊



Students at the 2015 Post-Graduate Diploma in Information Technology.



Promoting e-skills

Presenting on the e-skills agenda at the Eastern Cape ICT Summit

The Eastern Cape (EC) e-Skills CoLab attended the 11th Eastern Cape ICT Summit, held from 4-5 Nov 2015 at the International Convention Centre, East London. The theme for the summit was 'e-Health, Digital Life and Internet of Things'.

This annual event aims to develop business opportunities through matchmaking sessions, as well as create a platform to discuss topical issues. It is hosted by Imbizo events and the Black IT Forum. The 2015 summit was attended by over 300 delegates from government, industry, education and civil society.



#### What is an information or knowledge society?

This describes a society based on creating, distributing and using information and knowledge. It is a society with an economy where the use of information and knowledge becomes one of the most significant economic and cultural activities.

#### EC CoLab and NEMISA CEO present on e-skills agenda

The EC e-Skills CoLab participated in a breakaway session titled 'Bringing Marginalised Communities into the Knowledge Economy'. The NEMISA CEO, Dr Tshidzumba, and the EC e-Skills CoLab Coordinator, Ms Lorna van der Merwe, showed the aims and purpose of programmes within NEMISA/Ikamva National e-Skills Institute (INeSI). These are designed to increase the human resource capacity within the e-skills base in the country.

Opportunities will be provided to communities, especially unemployed youth, to engage with technology in the new knowledge and information society. This is being done through collaboration, training, research, local content development and aggregation (combined effort and collaboration). NEMISA/INeSI's programmes are strongly aligned to the Digital Opportunity pillar of the SA Connect Broadband policy.

#### Investing in ICT aligns to economic growth

The summit was opened by the Deputy Minister of

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### Article continued: Presenting on the e-skills agenda at the Eastern Cape ICT Summit

Communications, the Hon Stella Ndabeni-Abrahams. She spoke about the need for collaboration – between national government, local and provincial government, business, education and others – to achieve the goals of the Medium Term Strategic Framework (MTSF) and the National Development Plan (NDP).



*Delegates at the Eastern Cape ICT Summit.*



#### What is Digital Opportunity?

Digital Opportunity is one of the pillars of South Africa's broadband policy, South Africa Connect. It looks at the opportunities when broadband is available. (Broadband is fast always-on internet access.) Digital Opportunity focuses on how to make sure people, organisations and businesses make use of the opportunities.

The Deputy Minister noted that, through the use of technology, South Africa can provide socio-economic development and job opportunities. She stated that a "country that does not invest in ICT does not have the ambition of growing the economy".

Other notable speeches included the State Information Technology Agency (SITA) CEO, Dr Setumo Mohapi, and members of the Cortex Hub. The Cortex Hub is a two-

year technology incubation and personal development programme under the Chairmanship of Prof Andile Ngcaba. It aims to give young entrepreneurs the necessary skills to develop software products and services in order to establish their own businesses.

#### Focus on e-health

"Mr Baphelele Mhlaba from ECSECC led an informative panel discussion on 'The role of ICT in delivering quality public health care in South Africa'," says Ms van der Merwe. The panel involved representatives from Vodacom, Neotel, and the EC Department of Health.

The guest speaker at the Women in ICT breakfast was Ms Ann Kleynhans, CEO of CEOS Technologies and a multi-award winner. "She spoke about her journey in the ICT sector and her vision to work with partners to bring access to e-health to rural areas, starting in the Eastern Cape," says Ms van der Merwe. 😊



### Contact NEMISA

The National Electronic Media Institute of South Africa (NEMISA) can be contacted at the following:

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### The provincial e-skills CoLabs

The provincial e-skills CoLabs are based at universities. Each has a focus on a specific area in e-skills:

- Western Cape e-Skills CoLab: e-Inclusion and Social Innovation, based at the University of the Western Cape
- KwaZulu-Natal e-Skills CoLab: e-Enablement for Effective Service Delivery, based at Durban University of Technology
- Eastern Cape e-Skills CoLab: ICT for Rural Development, based at Walter Sisulu University
- Gauteng e-Skills CoLab: Creative New Media Industries, based at the National Electronic Media Institute of South Africa (NEMISA)
- Limpopo CoLab: Connected Health, based at the University of Limpopo
- Southern Gauteng/Northern Cape CoLab: e-Literacy and e-Business (knowledge economy and e-social astuteness), based at the Vaal University of Technology



## NEMISA profile

## Meet Senku Johannes Segoapa, Animation SA student rep



Senku Johannes Segoapa is currently a third-year Animation student at NEMISA. He will be NEMISA's student rep on Animation SA. We asked him questions to find out more.

#### Q Why choose to study Animation?

I was inspired by animation series such as 'The Ugly Duckling' and 'Peter Pan'. I became curious about how one could give life to such appealing characters.

#### Q Tell us about your Animation course at NEMISA.

It's a three-year course that involves life drawing, computer animation, 2D animation, 3D character animation, animation effects, animation design, story boarding, script development, creative problem solving, film studies history of art and art of SA. And that's just to mention a few of the subjects.

Animation is broad and being at NEMISA is a blessing. I wish that other upcoming artists could have the same opportunity. NEMISA gave me the chance to learn the entire production pipeline of visual communication, including film from pre-production to post production. We also learn the business side of the industry. So basically it gives you everything you need to survive as an artist. All you need to do after this course is to be organised and make good choices with your animation skills on how you're going to make a living and create jobs using the talents and skills that you acquired through this programme.

#### Q What is challenging about studying Animation?

You definitely sleep less and party more in front of your PC or animation light table :) It's a lot of work, so staying up long hours is the greatest challenge. Sometimes you think that you're working and everything is going great... to realise, after falling off your chair because you passed out, that all the work you completed was just in your dreams. But that's

the fun part of it, especially when you're around your 'crazy' animation mates.

#### Q What would you say to others who want to do the course?

Animation is fun. You actually enjoy your life more after all those sleepless nights and they become habit anyway. Animation lets you put anything from your imagination onto paper, process it through a PC and finally share it with the world. With me, it all began with some scribbles on my maths book in primary school.

#### Q What does it mean to be Animation SA student rep?

It means a lot to me. It's an opportunity and I need to use it wisely to take my work and skills to the next level. I think I was chosen because I do my best at any given opportunity – even with a lot of distractions. Perhaps with that knowledge I can help people in one way or another.

#### Q What are your future plans?

I want to open a studio that focuses on visual communications and design. 😊

#### What is Animation SA?

Animation South Africa is a non-profit organisation mandated by industry to develop, promote and represent South African animation. The organisation focuses on the growth and evolution of SA's animation industry by:

- Creating new business opportunities through identifying and coordinating export missions to key markets
- Conducting and participating in global market research
- Creating knowledge-sharing opportunities to upskill animation professionals
- Helping bring studios and their original properties to market-readiness
- Consulting with government on policy and strategy, building the framework that will enable the animation industry to thrive

Senku Johannes Segoapa, NEMISA's student rep on Animation SA, explains it as follows: "Animation SA is also a networking group that unites and supports artists all over the country. It's a great platform to share ideas and visions, and meet new and experienced artists. It's also a great place to meet people who won't look at you weirdly when you start making animation sound effects and actions as you try and explain something :)"



## NEMISA update

### Radio announcements for the Commission for Gender Equality

The Commission for Gender Equality (CGE) appointed the NEMISA Production Department to create radio public service announcements (PSAs) for the 16 Days of Activism for No Violence against Women and Children. This national campaign runs from 25 November to 10 December 2015.



Medical Research Council interview – part of the documentary for the Commission for Gender Equality.

Last year, the CGE also commissioned NEMISA to create PSAs for the 16 Days campaign, a PSA for #bringbackourgirls and radio spots on advocacy around human rights.

## NEMISA creates media announcements and documentary for the 16 Days of Activism

“Because the CGE wanted the human rights PSAs in the 11 different official languages, we used NEMISA staff,” says Thabang Phetla, Manager: Productions at NEMISA. “These will play on SABC radio, like SAfm.”

### Documentary for 16 Days of Activism 2015

NEMISA has also created a three-part documentary for CGE for the 16 Days of Activism 2015. It will play on community TV towards the end of the campaign. TV stations include Soweto TV, CTV, Fresh TV, KZN TV, Cape TV, Gauteng TV and Tshwane TV. The documentary will be screened across the different broadcasters during 9-11 December 2015 period.

“Two years ago, CGE did their own hand-held video documentary on a woman who was being abused by her boyfriend. The current documentary is a follow-up on her story. We took the initial video documentary and added a 24-minute episode looking at what happened afterwards. The third 24-minute episode is a current overview on gender-based violence,” says Mr Phetla.

The third episode involves interviews with various spokespeople from NGOs and government entities. These include Lifeline, People Opposing Women Abuse (POWA), Sonke Gender Justice, the Department of Social Services, the Department of Justice, and the South African Police Services. 😊



## Training

## KZN e-Skills CoLab partners in Durban AgriHack Challenge

The Durban AgriHack Challenge, a hackathon, was run from 28 November to 3 December 2015. It is a partnership between the international Technical Centre for Agricultural and Rural Cooperation (CTA), the Durban University of Technology (DUT) and the KZN e-Skills CoLab. Other collaborators included Geekulcha, Global Open Data for Agriculture and Nutrition (GODAN) and CGIAR Research Programme on Climate Change, Agriculture and Food Security (CCFAS).

### Youth innovation and entrepreneurship in agriculture

This event was aimed at promoting innovation and entrepreneurship in agriculture among young people with a keen interest in ICT. It was organised as part of the Global Forum on Innovations in Agriculture in Africa Conference (GFIA Africa). Two of these AgriHack talent initiatives have already been successfully implemented, such as in the Caribbean.

Dr Surendra (Colin) Thakur, the KZN e-Skills CoLab Director, says that hackathons have the potential to provide experiential learning. A hackathon is an event where a large



Students and facilitators at the Durban AgriHack Challenge.

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### Article continued: KZN e-Skills CoLab partners in Durban AgriHack Challenge

number of people code intensively over a short period of time. These people include programmers and others involved in software and hardware development.

The AgriHack programme involved a series of activities with the focus on a software coding competition. It was then followed by an incubation process for capacity building on ICT entrepreneurship in the agricultural sector.

#### Developing a mobile app or platform to address social innovation within agriculture

The aim in this event was to create a mobile app or platform that addressed social innovation within agriculture. The competition was initially formatted for 10 teams. Because over 45 team applications were submitted, the number of teams was increased to 12. Each team could consist of up to four members.



#### What is a mobile app?

A mobile application (mobile app) is a computer programme that runs on mobile devices such as smartphones and tablet computers.

#### What is social innovation?

Social innovation is about new ideas (such as products and services) that meet social needs ie they are for the good of society.

The mobile app categories were:

- **Category 1:** climate change – an app or platform on fighting climate change, using available climate change open data (in particular data put together by the CGIAR Research Program on CCAFS). The winning team receives a cash prize of 4000 Euros. In addition, the team may be granted, after the hackathon, consultancy fees between 5000 and 10 000 Euros to finalise the product. CTA and CCAFS will partner to ensure the use and maintenance of the application once it's finalised. The developed app will be free for any agricultural or climate change stakeholder to use.
- **Category 2:** start-up category – an app or platform on an agricultural issue important for the South African economy. The winning team receives 6000 Euros. In addition, the team are granted at least six months of incubation to improve the application, as well as promotional opportunities from CTA and its partners.

The team retains the full intellectual property right of the application and can market it.

- **Category 3:** the Agricultural Magazine – an app for the free international agricultural magazine SPORE (<http://spore.cta.int/en/>) produced and distributed by CTA. The winning team receives a cash prize of 4000 Euros. In addition they may be granted, after the hackathon, a consultancy fee between 5000 and 10 000 Euros, to finalise the product. The app developed will be a free app that delivers agricultural information to all stakeholders. This magazine is currently read by thousands of global stakeholders, including government officials, academia, farmers and agricultural cooperatives, and agro-dealers. The app becomes CTA's property after the consultancy. The prototypes developed by non-winning teams remain their properties.

#### Three-day programme included information presentations and two-tiered judging process

Part of the programme involved presentations on the following:

- Mobile hybrid app development
- The Climate Change Open Data available for the hackathon from the CGIAR Research Programme
- Social innovation and entrepreneurship in Africa
- Agriculture and climate: key issues and opportunities for ICT4Ag developers and entrepreneurs
- Looking for ICT4Ag effective business models and funding sources
- How to effectively pitch your business to a potential partner and investor

A panel of international and South African judges (including experts in agriculture, ICT and business development)

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#### Talent mentors and experts

- Dr Theo de Jager, President of SACAU and President of PAFO
- John Kieti, Researcher, University of Nairobi
- Pape Samb, Chairman and CEO at Global Youth Innovation Network (GYIN)
- Carlos Eduardo Navarro Racines, Scientific Support, International Centre for Tropical Agriculture Colombia (CIAT)
- Karim Sy, Founder and Chief Catalyst, JOKKOLABS
- Derrick Kotze, CEO, mLab Southern Africa

**Article continued: KZN e-Skills CoLab partners in Durban AgriHack Challenge**

evaluated the prototypes. There were two phases: a prototype assessment and a business pitch assessment. The programme also included information on the other ICT4Ag sessions organised by CTA at the GFIA Africa.

**Winners of Durban AgriHack Challenge**

<b>Climate change category</b>	
Students from the Centre for Geoinformation Science (CGIS): Victoria Justine Rautenbach, Sean Cullen and Nadia Oosthuizen	<b>Prototype developed: Temo le Boso.</b> The platform (website and app) aims to be a decision-making tool for farmers when choosing what crop type to potentially plant in their area under future climatic conditions.
Rewards: 4000 Euros plus consulting opportunity to fully build the services.	For their prototype, they used open data from many sources, notably those of the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), a partner of the activity.
<b>Start-up category</b>	
Diepsloot Kasi Hive team (Linda Sibeko, Jacob Simelane and Johannes Swalo Nkale)	<b>Prototype: An app than can link up vegetable growers with their targeted market.</b> The app will enable vegetable growers to interact with the market and inform people about their produce. This will be done in such a way that it increases their knowledge of where their produce is needed and improves access to market. They target their local community for their services.
Rewards: 6000 Euros plus incubation	
<b>Spore Magazine category</b>	
Layyers team (Jose Kabeya, Peter Seme Silwimba and Thamsanqa Mahlaola)	<b>Prototype developed: This is a mobile app that will enable users to read content published on the Spore agricultural magazine online platform</b> and provides a space for readers to interact and discuss the articles.
Rewards: 4000 Euros plus consulting opportunity to build the final app.	
<b>Special GODAN Prize (Best use of open data)</b>	
The Global Open Data for Agriculture and Nutrition (GODAN) rewards the innovation that made best use of open data.	
MobiElectro team (Mpfumeri Errence Baloyi and Solly Sifiso Cossa)	<b>Prototype: This platform harness cloud computing and the internet of things to improve water management on farms.</b> It is a two-tiered platform composed of an electronic circuit (sensors) that monitors water level on farms and sends the information to an app through the cloud. In return, the app allows farmers to control their irrigation systems and manage field watering remotely. 😊
Rewards: 3000 Euros cash plus 2000 Euros of material.	



Climate change winners



Start up winners



Spore Magazine winners



GODAN prize winners

**Web 2.0 and Social Media at the GFIA Africa conference**

The Global Forum for Innovations in Africa conference (GFIA Africa) ran from 1-2 December 2015 in Durban. The conference looked at the two major challenges: how to deliver higher yields to feed a rapidly growing population and how to adapt to climate change within a sustainable framework. It included a conference, exhibition, networking events and side events among other things.

One of the side events was the Web 2.0 and Social Media Taster Sessions organised by the KZN e-Skills CoLab, Durban University of Technology and international Technical Centre for Agricultural and Rural Cooperation (CTA).

Director of the KZN e-Skills CoLab, Dr Surendra (Colin) Thakur was also one of the facilitators. Topics included:

- Access to information: Advance Online Search and Alerts
- Holding Conversations over the Internet
- Social Media for Business: Facebook and Linked In
- Yes we can all get along: Online Netiquette



## MAD Challenge enhances mobile app development e-skills for SA



NEMISA's CFO Moira Malakalaka congratulating Raymond de Vos who was part of the first prize winning team.

In collaboration with the University of Pretoria (UP), NEMISA's Gauteng e-Skills CoLab ran the 2015 Mobile Application Development (MAD) Challenge. This is the third time this initiative has been run.

### Introducing secondary school learners to mobile app development

The MAD Challenge is aimed at introducing secondary school learners (grade 9 and 12) to the world of mobile application development. Learners then create original mobile apps within 10 weeks. It forms part of a national initiative to develop local talent to fill the skills needs and requirements of the ICT market.

The initiative began during April 2015, with mobile apps submitted during July 2015. This period included sessions for the development of design thinking and e-entrepreneurial skills, as well as core technical Java proficiency.

### MAD Challenge Prize Giving

A MAD Challenge Prize Giving was held on 28 August 2015 at UP. The start of the initiative saw 97 learners participating. By the final presentation of the different mobile apps, 36 learners had submitted 18 android apps. This follows a similar trend from previous years. The apps were evaluated according to:

- The app idea

- Usability and user experience
- Correctness
- Functional completeness
- General impression

### Winners

**First Prize: Adlert!** by Raymond de Vos and Ockert Marais (Hoërskool Wonderboom). Adlert! Is built for people who hunt bargains down on advertisement sites all over South Africa. The user gets push notifications within seconds and can connect to the advertiser online.

**Second Prize: R-Booker** by Thomas Marshall, Christiaan Wagner and Edwin Viljoen (Hoërskool Menlopark). R-Booker allows the user to make reservations at restaurants from their phone and to see the menus.

**Third Prize: CubePass** by Kobus van Schoor (Hoërskool Garsfontein). CubePass is an open source, offline and easy-to-use password manager. 😊

## KZN learners introduced to computer science and coding

As part of a Durban University of Technology (DUT) open day for principals and counsellors from surrounding secondary schools in KZN, 10 schools were offered an introductory IT software course for grade 10 pupils. The course is called 'One Hour of Code' and was sponsored by the KZN e-Skills CoLab, the DUT IT department and Code.org. This course ran in the first week of December 2015. It is a one-hour introduction to computer science, designed to demystify code and show that anybody can learn the basics. (See <https://hourofcode.com/za>)

## Graduation for wholesale and retail sector skill course

**The course:** A one-year course for members within the wholesale and retail sector. The NQF level 2 qualification was targeted at 130 learners from various retail stores. The KZN e-Skills CoLab, based at Durban University of Technology (DUT) had two sites of delivery for this course, Durban and Pietermaritzburg. The training ended 30 April 2015.

**The partnership:** The NEMISA KZN e-Skills CoLab partnered with W&R SETA, DUT, Mathashana Further Education and Training (FET) College, Esayidi FET College, and Majuba FET College. (W&R SETA is the sector education training authority – SETA – for the wholesale and retail sector.)

**Course aim:** The qualification gives learners a basic understanding of the wholesale and retail sector.

**Graduation:** On 21 October 2015, a graduation ceremony for these learners was held at DUT. A 100 of the KZN e-Skills CoLab learners graduated and an additional 250 learners from the FET colleges also graduated.



# 2D Anim-ation



## 2D Animation: 18 month programme

We offer an eighteen month programme that is based on both traditional and digital animation and is designed to cover the entire value chain of animation production (from conception, to production and editing). Aimed at preparing learners for the competitive market place of animation and digital graphics production, the course equips learners with key skills of interpretation, visualization, conceptualization, production and technical application of Animation projects.

**Entrance Requirements:** Matric/Grade 12/NQF Level 4 Related Qualification Mathematics & English at NQF Level 4, Entrance Exam, and Visual Portfolio.

**Application Deadline:** January 29, 2016 **Commencement Date:** February 15, 2016

**Annual Course Fee:** R38,000.00 **Registration Fee:** R3,800.00 (Payable upon acceptance in January) **Remaining Balance:** R34,200.00 (Payable over 10 months)

Moving towards  **iNeSI**  
Ikamva National eSkills Institute

Applications available from [www.nemisa.co.za](http://www.nemisa.co.za); or contacts us for more info Mary Moleke (011) 644 4834 [MaryM@nemisa.co.za](mailto:MaryM@nemisa.co.za); or Lungile Xulu (011) 644 4801 [LungileX@nemisa.co.za](mailto:LungileX@nemisa.co.za) or message us on Facebook <https://www.facebook.com/iNesi.Official>.

# Graphic De-sign foundation



## Graphic Design Foundation: 12 month programme

We offer a one year programme that serves as a foundation for both Graphic Design and Animation. The course exposes learners to theoretical, practical and technological components of Graphic Design and Animation production. Aimed at preparing learners for further education and training in the Fields of Animation and Graphic Design, the course equips learners with key skills of conceptualization, and visual communication. Learners are further exposed to: writing for multimedia, digital storytelling, and art direction.

**Entrance Requirements:** Matric/Grade 12/NQF Level 4 Related Qualification Mathematics & English at NQF Level 4, Entrance Exam, and Visual Portfolio.

**Application Deadline:** January 29, 2016 **Commencement Date:** February 15, 2016

**Annual Course Fee:** R28,005.12 **Registration Fee:** R2,800.51 (Payable upon acceptance in January) **Remaining Balance:** R25,204.61 (Payable over 10 months)

Moving towards  **iNeSI**  
Ikamva National eSkills Institute

Applications available from [www.nemisa.co.za](http://www.nemisa.co.za); or contacts us for more info Mary Moleke (011) 644 4834 [MaryM@nemisa.co.za](mailto:MaryM@nemisa.co.za); or Lungile Xulu (011) 644 4801 [LungileX@nemisa.co.za](mailto:LungileX@nemisa.co.za) or message us on Facebook <https://www.facebook.com/iNesi.Official>.



## NEMISA update

'Systraat' is South Africa's first animated sitcom – South African TV history in the making. It's in Afrikaans and shows the exploits of the Kotze family. Another first is that the SABC will premiere on YouTube before airing it on television. (A new episode is uploaded on Tuesday evenings on SABC



Some of the 'Systraat' animation team in their office.



## Training

ICT and digital skills have become part of the basic tools needed for most work. This includes the media sector which now forms part of creative new media.

With the global digital revolution, creating content and media for the internet is now within reach of people with basic tools, such as smart phones. This can be the start of formal work within creative new media. While the availability of tools is becoming democratised and open to everyone, people still need further e-skills training for the workplace.

Creative new media is seen as an area of economic development through entrepreneurship and job creation, among other things.

### Gauteng Television Recognition of Prior Learning (RPL) workshop

**Training:** NEMISA ran the Gauteng Television Recognition of Prior Learning (RPL) workshop. The aim was to upgrade Film and TV students who studied at NEMISA in 2007, 2008 and 2009. The purpose of the RPL Programme was to top up their studies so they could receive the FET Certificate in Film and Television Production Operations (SAQA ID 61450). SAQA stands for South African Qualifications Authority. Some candidates are already working in different companies.

**Course:** The initiative was run in three stages. First participants were invited to the Briefing Session on 3 October 2015. Then a workshop followed from 26-30 October 2015 at NEMISA Campus, Parktown. Following that there was three weeks of distance learning. The third stage took place on 23 November 2015 when participants submitted their Portfolios of Evidence for marking, moderation and evaluation.

## NEMISA alumni work on SA's first animated sitcom

3's YouTube channel. Google SABC3 SYSTRAAT YOUTUBE to view.)

The animation is being developed for the SABC by a young team at Stemmburg Television. Their target has been to complete 30 seconds of animation each day, giving you an idea of how long it takes to create animation.

The team is led by Andile Radebe (animatics) and Carl Stemmet (editing). Part of the key animators team are NEMISA alumni, Sibusiso Mndaweni and Xolile Ngwenya. Thabiso Motsoeneng is also a NEMISA alumnus and he is part of the compositing and clean-up team.

There will be 13 24-minute episodes. See [www.systraat.co.za](http://www.systraat.co.za) for more info. 😊

## Creative new media skills for work opportunities

### What is creative new media?

The creative industries include everything from craft, art and design to architecture, film and music. Creative new media means the new creative fields that have come about from technology.



### Gauteng Learnership 2015 in Film and Television Production Operations

**Training and qualification:** The 2015 Gauteng Learnership involved a workplace and unit standard-based programme. This is a SAQA ID 61450 Level 4 certificate. It is called the FET Certificate in Film and Television Production Operations. (FET means Further Education and Training.)

The learnership is structured so that the 19 students produce audiovisual productions in teams. These teams are composed of a director, producer, camera operator, sound operator, editor, scriptwriter, researcher and set-designer.

**Workplace providers:** The programme ran for 12 months with the three following workplace providers: Soweto TV, Rock Studios and Media, and Bozza Media.

**MICT SETA partnership:** MICT SETA sponsored the programme and each learner receives a R1 500 monthly stipend paid by NEMISA.

**Evaluation and awards:** When the workplace programme at the training provider ended, MICT SETA conducted a

 to next page

### Article continued: Creative new media skills for work opportunities

face-to-face evaluation with the learners. This took place at NEMISA, Parktown, on the 13 November 2015. Concurrently, NEMISA also conducted awards for the students. The learners will continue at their workplaces and NEMISA will pay the stipend until January 2016.



Students from Gauteng Learnership 2015 in Film and Television Production Operations.

#### Team awards

- Best Mobile TV Series: Vice/Versa, Uncut Productions (Nkosazana Sithole, Dillon Feris, Mfundo Mbatha and Rethabisetwe Majodina)
- Best Magazine Show: Xposed, The Guys + One Lady Production (Lesley-Ann Julius, Monwabisi E Nkese, Dillon Feris, Hlokomelo L Mabogale, Kyle Pienaar and Mulalo Matshinge)
- Crew of the Year: Black Diamond Productions, (Neo Makgothe, Mfundo Mbatha and Mkosazana Sithole)
- Producer of the Year 2015: Hlokomelo L Mabogale for Xposed
- Director of the Year 2015: Nkosazana Sithole for Gradual Progression
- Camera Operator of the Year 2015: Mulalo Matshinge for Xposed
- Editor of the Year 2015: Kyle Pienaar for Xposed
- Sound Designer Of The Year 2015: Mfundo Mbatha for Vice/Versa
- Most Improved (this award displays commitment and dedication despite circumstance and adversary): Dillan Julius
- Most Promising: Neo Makgothe

#### KZN Film Commission Skills Programme

**Course:** NEMISA ran the KZN Film Commission Skills Programme from 28 April 2015 to 11 September 2015. The cohort of 50 delegates was divided into two streams: Field Production and Post Production. The two streams worked

together towards an integrative assessment. This meant one learner from Production and one learner from Post Production worked in a team.

Each stream received training in their respective activities:

- Field Production: camera and sound
- Post Production: editing, sound editing and grading

Ultimately each learner walked away having made a one-minute short film. The initiative is a skills programme with various unit standards that can be used towards a formal qualification.

**Delegates:** Delegates were people who had started making their own films and videos at home, but needed formal training. The programme took these learners from amateur to professional level. Learners were chosen by the KZN Film Commission.

**Partners:** The skills programme was sponsored by the KZN Film Commission. The training took place in Durban at the Durban University of Technology.



Students from KZN Film Commission Skills Programme.

#### Skills Programme in Film and TV Production for ECDC

**Course:** NEMISA ran a Skills Programme in Film and TV Production from 30 March 2015 to 24 July 2015 in the Eastern Cape. Delegates learnt the basics of single camera production, covering a range of topics from Scriptwriting, Producing and Pitching to Camera Operation and Editing. The goal was to create a 10-minute narrative short film. The skills programme is made up of unit standards that can be used towards a level 4 course in film and television production

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### Article continued: Creative new media skills for work opportunities

**Delegates:** The delegates were chosen by the Eastern Cape Development Corporation (ECDC) Content Hub Selection Panel. There were 50 participants who all completed the skills programme.

**Partners:** ECDC sponsored and hosted the programme. The course took place at the ECDC Content Hub in East London, Eastern Cape.



*Students from Eastern Cape Learnership 2015 in Film and Television Production Operations.*

### Eastern Cape Learnership 2016 in Film and Television Production Operations

**Course:** NEMISA is running another learnership programme. This is for the SAQA ID 61450 Level 4 certificate: FET Certificate in Film and Television Production Operations. A learnership programme involves students working at one of the work places that partners with NEMISA, and then the learners also attend workshops/classes with NEMISA film and television lecturers.

**Delegates:** The 20 students were chosen by the partner work places based in the Eastern Cape.

**Partners:** NEMISA has partnered with Eastern Cape Information Technology Initiative (ECITI). ECITI is a non-profit company established by the ECDC. It facilitates sustainable development for small, micro and medium enterprises (SMMEs) in ICT and film sectors in the Eastern Cape.

**Course content:** The programme began on 12 October 2015 and continues until 23 September 2016. Orientation Week took place from 12-16 October 2015 in Gauteng. The rest of the course will be conducted in the Eastern Cape at ECITI, eMonti Science and Technology Park, East London. After orientation, learners will go through basic training in single camera production. This covers areas such as Producing, Script writing, Pitching, Camera operation, Editing and Set Etiquette. 😊



**NEMISA alumni profile**

**Meet Dickson Mtsweni, Specialist Producer: Imaging and Sound**

Dickson Tebogo Mtsweni is the Specialist Producer: Imaging and Sound for iKwekwezi FM. This is an SABC isiNdebele language radio station based in Pretoria and it has 1.8 million listeners. After working as a Technical Producer at the SABC's technology division: Radio Broadcast Facilities in Port Elizabeth and then in Pretoria, Dickson joined iKwekwezi FM at the beginning of November 2015. He is an alumnus of NEMISA, completing his studies in 2007.

As a person who describes himself as optimistic, opinionated and an ambivert, we decided to find out more about Mr Mtsweni. (By the way, an ambivert is a person who is equally extrovert and introvert.)

#### Q So what does it mean to be a Specialist Producer: Imaging and Sound?

My role, from a holistic point of view, is to make sure that I brand the radio station sonically. I'm responsible for the

 to next page



### Article continued: Meet Dickson Mtsweni, Specialist Producer: Imaging and Sound

overall sound presentation. I have to ensure a high quality on-air station production, that all the on-air promotional material is on point and easily identifiable by the listeners.

I also work very closely with content producers, marketing and broadcast facilities sound engineers to make sure that all on-air station production is uniform across all shows. My job includes ensuring that station imaging, sweeps, promos, highlights, adverts etc are recorded and available for scheduling. I provide training to on-air personalities, monitor the technical quality, and advise on aspects of quality control. This is to ensure the quality of broadcasts. And that's just some of what I do.

#### Q Tell us about the highs and lows with your job?

Every day is different and I enjoy not knowing what I'll be faced with at the office. It might seem like a cliché but I believe when you really enjoy what you do, you no longer see it as 'work'. You don't even notice the challenges as negatives.

#### Q What did you study at NEMISA and why?

I first studied Travel and Tourism elsewhere but then the radio bug took over. I just love radio and anything that has to do with broadcasting so I studied Radio Production at NEMISA.

#### Q What are your future plans?

My parents have always said, "Nothing but death should stop you from studying further." Part of my future plans is to continue studying – I'm studying Public Relations through Damelin currently. I also plan to climb the corporate ladder and be the best dad I can be to my two year old, Clothando.

#### Q What would you say to people who want to enter your field?

If you love travelling, then this is a great job for you. You don't spend most of your time in the office. But mainly you need to love radio – love anything that has to do with sound. Live, breath and eat radio :) 😊



### Promoting e-skills

## e-Skills and ICT for South Africa's aerotropolis development

Dr Surendra (Colin) Thakur of the KZN e-Skills CoLab moderated and participated in the breakaway session on ICT with senior ICT executives and Chief Information Officers (CIO) at the Aerotropolis Industrial Cluster Development and Investment Conference. The event ran from 16-18 November 2015.

The conference was hosted by the City of Ekurhuleni and the focus was to reveal the future plans of the Gauteng City Region Aerotropolis. It also looked at investment and development opportunities, and profiled the infrastructure within the Aerotropolis core development area.

The ICT session, held on 18 November 2015, included representatives from:

- Airport Company of South Africa (ACSA) CIO, Mr Sello Mmakau
- EMM CIO, Mr Kiruben Pillay
- Department of Science and Technology Chief Director, Mr Isaac Maredi
- International Data Corporation Associate Vice President, Mr Mark Walker
- Microsoft Chief Technical Officer, Mr Warren Hero

The session investigated ICT as a sector and its role in innovation and enterprise development. A particular focus was on ICT's role as an enabler to developing the Aerotropolis economic zone. 😊

### About the Aerotropolis Industrial Cluster Development and Investment

The City of Ekurhuleni, the Gauteng Provincial Government and Airports Company South Africa have embarked on the development of the Ekurhuleni Aerotropolis. The aim is to reposition and enhance what Gauteng City region can offer, in particular the first aerotropolis on the African continent. This aerotropolis will use the presence of OR Tambo International Airport as a catalyst for economic development.

### e-Skills as part of Institutional Research Day

The Durban University of Technology held a mini-conference as part of Institutional Research Day on 26 November 2015. As part of the opening speeches, Dr Surendra (Colin) Thakur, Director of the KZN e-Skills CoLab gave an address.



## Promoting e-skills

The University of the Western Cape's Faculty of Economic and Management Sciences and the NEMISA Western Cape e-Skills CoLab ran a 'Thought Leadership Series on the Digital Economy' on 13 November 2015. The topic was 'Why Africa business has to go mobile? Is mobility the key to Digital Transformation?'. The Thought Leadership Series provides a shared platform between academia and business. It is a space to discuss, explore, learn and research matters relating to the digital economy.

The presentation was given by Mr Kristofer Kimbler, Business Development Executive, IBM MEA, Telco Enterprise Mobility & M2M Solutions. Following are some of the points from his presentation:

- **The digital economy is changing the way business is done.** Take Airbnb as an example. It's the world's largest accommodation provider but it owns no real estate. Digital innovation is transforming how we invest, create, source or operate new products and services.
- **Mobile is transforming Africa.** Mobility is one of the main drivers of economic growth in Africa. According to the World Bank, the 10% growth in mobile penetration increases African GDP by 0.8%.
- **Digital transformation in Africa is driven by mobile (smartphones and other mobile technology) and enabled by connectivity.** For example, mobile can assist with the digital inclusion of unconnected populations and the financial inclusion of unbanked populations. According to the 2014 GSMA report 'Mobile Global Economy, Sub-Saharan Africa', in 2013 there were 311 million unique mobile subscribers in sub-Saharan Africa – a 35% penetration rate. The prediction is that there will be a 49% penetration rate by 2020. (This is equal to 504 million unique mobile subscribers.)



*Delegates at the 'Thought Leadership Series on the Digital Economy' on 13 November 2015.*

- In part, **South Africa's relatively low level of digital readiness can be attributed to challenges with access and affordability of broadband internet, as well as the shortage of skills and lack of appropriate skills.**
- **Digital intelligence meets digital economy: the Cognitive Era.** Data flows from every device, yet a great deal of this data is unstructured and of limited use. Cognitive systems are a way of using this data. They can understand the world through sensing and interaction, reason using hypotheses and arguments, and learn from experts and through data. IBM Watson is an example of cognitive technology. It draws on five distinct fields of study: Big Data and Analytics, Artificial Intelligence, Cognitive Experience, Cognitive Knowledge, and Computing Infrastructure. Cognitive products and services can sense, reason and learn so they can adapt and develop new capabilities. 😊

## NEMISA attends KZN Youth ICT Career Exhibition

From 13-14 November, NEMISA exhibited at the Youth ICT Career Exhibition in the Jozini Local Municipality. The theme was 'Youth Moving South Africa Forward: Rural Youth ICT Skills for Economic Inclusion'. The event was a partnership between the Office of the Deputy Minister of the Department of Telecommunications and Postal Services, Professor Hlengiwe Mkhize, the KZN Department of Economic Development and the Jozini Local Municipality. Jozini Local Municipality is located within a rural area in northern KwaZulu-Natal.

The event had the following aims:

- To make the youth, employed and unemployed, aware of opportunities in the ICT sector

- To showcase opportunities from various ICT companies
- To encourage and enforce smart partnerships that ensure the inclusion of youth in formal economic sectors
- To promote youth ICT skills development
- To encourage ICT innovation and entrepreneurship

