NEMISA intends to benefit the total SA population by harnessing ICT for equitable prosperity and global competitiveness. It leads in the creation of key e-skills development strategies, solutions and practices within SA.

It is a national catalyst, collaborator, facilitator and responsive change agent in the development of SA – within the context of national goals and within a worldwide evolving information and knowledge-based environment.

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The third S-Direct Seminar took place at the University of the Western Cape on 7 March 2018. The theme was ‘The Data-Driven Economy: Implications for Developing Societies, Cities and Citizens’.

The partners: The S-Direct seminar is an initiative of the International Joint Research Group (IJRG). The IJRG combines the expertise of imec-SMIT (Vrije Universiteit Brussel), University of Gent, University of the Western Cape (UWC) and its extended partnership, and the e-Inclusion and Social Innovation e-Skills CoLab (based at UWC).

The aim: The seminar was aimed at sharing methodologies, experiences, and learning about how social digital innovation and skills development interventions can stimulate social and digital inclusion in disadvantaged communities.

Delegates: The interactive seminar was attended by high-level key role players within the South African national government, provincial governments and local governments, as well as digital inclusion intermediaries, business leaders and academics.

About the event: There were a number of presentations as well as discussions. These included the following:

• Prof Leo van Leo van Audenhove, (imec-SMIT, Vrije Universiteit Brussel) delivered a keynote on ‘Data Literacy – life skill for the data driven economy?’ See the video (www.wcapecolab.org/single-post/2018/03/23/leo-van-audenhove-discusses-media-and-data-literacy-at-the-3rd-S-Direct-Seminar-2018), as well as his presentation (https://docs.wixstatic.com/ugd/c4b8e8_g83269e8117041309a63e0182dbf7848.pdf).

• Dr Ilse Marien (imec-SMIT, Vrije Universiteit Brussel) discussed challenges and solutions in data literacy & data-driven societies based on her experiences in both the European and South African contexts. See the presentation (https://docs.wixstatic.com/ugd/c4b8e8_c62c942b1b0042899b28ebed26551df4.pdf).

• Against the background of current rapid global growth of artificial intelligence projects, Wouter Gevaert, (New Media and Communication Technologies, Howest, Belgium) delivered a view into the current and future realities of artificial intelligence applications. See the presentation (https://docs.wixstatic.com/ugd/c4b8e8_c6fcb1ca74d1436aa69b91a74b58b81b.pdf).

• Within the context of the Smart Cities discourse in South Africa, Dr Johan Breytenbach (UWC) and Wouter Grove (UWC) discussed design-led approaches to making communities smarter using data. See the presentation (www.dropbox.com/s/gab0dcrt72412hdUsing data for smarter communities-WGrove J Breytenbach.pdf?dl=0).

• There was a look at innovative approaches to using data for determining the socio-economic impact of community interventions. This was delivered by Arthur Wade Anderson (Africa’s Got Game), founding member of a rapidly expanding social enterprise with an international footprint.

• A further question tackled at this seminar was ‘What are the questions that we as researchers and practitioners should focus on to unlock the value of the data-driven economy?’ An interactive panel discussion was chaired by Prof Kobus Visser (Office of the DVC: Academic, UWC). Panellists were Prof Leo van Audenhove, imec-SMIT, Vrije Universiteit Brussel, Belgium; Wouter Gevaert, Howest, Belgium; Olivia Dyers, Director: Digital Leadership, DEDAT (WCG), and Dr Mmaki Jantjies, HoD: Department of Information Systems, UWC.

What is an e-skill (digital skills)? An e-skill is more than knowing the basics of how to use a computer (computer literacy). An e-skill means being able to use technology effectively to add benefit to your life – to actively take part in the world and move ahead.

Creating discussions on e-skills within the data-driven economy

Third S-Direct Seminar in the Western Cape

(From left to right) Third S-Direct Seminar 2018 keynote speakers: Arthur Wade Anderson, Dr Leona Craffert, Prof Leo van Audenhove, Wouter Grove, Wouter Gevaert, Olivia Dyers, Dr Ilse Marien, Dr Johan Breytenbach
Artificial intelligence (AI) has emerged as one of the most disruptive technologies of our times. In combination with the Internet of Things (IoT), it is fuelling the 4th Industrial Revolution. Some people even call it ‘the new electricity’. It is clear that AI will have an enormous impact on businesses, society, and politics. It will, undoubtedly, transform the way we live and work.

On 8 March 2018, S-Direct presented a technical workshop on AI, machine learning and neural networks. S-Direct is an initiative of the International Joint Research Group (IJRG), combining the expertise of imec-Smit (Vrije Universiteit Brussel), University of Gent, University of the Western Cape (UWC) and its extended partnership, and the e-Inclusion and Social Innovation e-Skills CoLab (based at UWC).

The workshop was interactive and practical where delegates learned how to use machine learning to tackle real-world challenges. The workshop was presented by Wouter Gevaert, a senior lecturer at Howest University College West Flanders-Belgium, part of the University of Gent Association.

The seminar was well attended by university students (especially from UWC’s Post-Graduate Diploma in Data Analytics), as well as industry. The feedback was that this workshop was very relevant.

The provincial e-Skills CoLabs

The provincial e-Skills CoLabs are based at universities. Each leads in a specific area in e-skills:
- e-Inclusion and Social Innovation e-Skills CoLab, based at the University of the Western Cape
- e-Enablement for Effective Service Delivery e-Skills CoLab, based at Durban University of Technology
- ICT for Rural Development e-Skills CoLab, based at Walter Sisulu University
- Creative New Media Industries in-house training based at the National Electronic Media Institute of South Africa (NEMISA) central office, Gauteng
- Connected Health e-Skills CoLab, based at the University of Limpopo
- Knowledge-based Economy and e-Social Astuteness (e-Literacy) e-Skills CoLab, based at the Vaal University of Technology
- e-Agro-Tourism e-Skills CoLab, based at the North-West University
Telecommunications and Postal Services calls for written comments on iNeSI Bill

The Portfolio Committee on Telecommunications and Postal Services has called on interested organisations and members of the public to submit written comments on the Ikamva National e-Skills Institute (iNeSI) Bill [B10-2018], by no later than 12 June 2018.

The Bill was published on 20 April 2018 in Government Gazette number 41581.

The Chairperson of the committee, Mr Jabu Mahlangu, said that among other things, the Bill will integrate the department’s three e-skills development-related components, namely the National Electronic Media Institute of South Africa (NEMISA), the e-Skills Institute (e-Si) and the Institute for Space and Software Applications (SSP).

"Most importantly, it will provide for the establishment of iNeSI as a juristic person, its objects and functions, appointment of the board members and their composition," Mr Mahlangu said.

The Act envisages that the institute collaborates with relevant post-school education and training institutions (that offer digital skills and multimedia programmes) to maximise the use of existing infrastructure and resources.

Upon receipt of written comments, the committee will deliberate and arrange for oral submissions, in order to gain further clarity.

Written submissions and enquiries should be directed to:
- Ms Hajiera Salie, 3rd Floor, Office 3/072, 90 Plein Street, Cape Town, 8001
- Emailed to hsalie@parliament.gov.za
- Cell number 061 472 9191
- Faxed to 086 607 8917

Issued by Parliamentary Communication Services on behalf of the Chairperson of the Portfolio Committee on Telecommunications and Postal Services, Mr Jabu Mahlangu. For media enquiries or interviews with the Chairperson, please contact committee’s Media Officer:

Mr Justice Molafo
Tel: 021 403 8444
Cell: 081 424 7481
Email: jmolafo@parliament.gov.za

To download the bill go to: https://www.dtps.gov.za/index.php?option=com_phocadownload&view=category&id=2:legislation&Itemid=142#
Stimulating rural development through e-skills

The ICT for Rural Development e-Skills CoLab has continued its partnership with the provincial Department of Education (DoE) to roll-out the eSkills4All e-literacy course in the province. The e-Skills CoLab is based at Walter Sisulu University, Eastern Cape. The course is accredited by Vaal University of Technology. It is also accredited by the South African Council of Educators (SACE) and is worth 35 professional development points.

In the latest rollout (that was planned with the Directorate responsible for Teacher Development, provincial DoE), nearly 200 principals and teachers were trained in Mthatha, East London, Mdantsane and Port Elizabeth. The training occurred between January and March 2018.

The aim of the rollout:
• Transform administration, learning, and teaching through ICTs
• Develop ICT-competent administrators and teachers
• Produce ICT-capable learners

This is aligned with national development policies and in support of provincial initiatives, such as the rollout of laptops to principals and teachers. It also complements the rollout by the Department of Telecommunications and Postal Services (DTPS) and USAASA of computers and broadband connectivity – through the SA Connect policy – in which the major beneficiaries in the initial phases have been schools.

Partnering with USAASA: In the training carried out at the Teacher Development Institute at Trinsett in Mthatha, the CoLab collaborated with USAASA by arranging for the inclusion of teachers from schools that have benefited directly from USAASA initiatives in the OR Tambo District. Ten teachers each (from the Efata School for the Blind, Tsolo Special School) were included.

The focus is on equipping schools and teachers to use the emerging technology and connectivity. “By actively supporting the development of digital skills competencies and digital awareness of the educators, the CoLab is also hoping to contribute to improving the Eastern Cape matric results,” explains Ms Lorna van der Merwe, Acting Coordinator of the e-Skills CoLab.

Partnerships in the current model: In the current implementation model, the CoLab provides access to the courseware, online testing system and certification, while the Department of Education provides the facilities and facilitators – all of whom were previously trained by the e-Skills CoLab.

Going forward: The proposed plan for 2018/19 is for the training to be rolled out to principals and foundation phase teachers in 16 venues throughout the province. Empowering school staff and pupils with digital skills (e-skills) is seen as part of the solution to stimulating rural development. Digital technologies have the potential to further develop rural economies where they are included in mainstream and global economic activities.

Response to e-skills intervention: In post-training evaluations, 100% of the participants indicated that attending the training was extremely valuable. Following are some of the comments:
• “The course made me feel great as I now have a better understanding of the terminology used.”
• “(Course) removed me from the traditional way of doing things... time saving... quick sharing of information...
international communication while sitting at home/ workplace.”
• “Now I can do my presentations with confidence and help others too to try technology without fear.”
• “I would love all educators to be afforded the opportunity to attend.”
• “Course made me want to sensitise the importance of technology in my community.”
• “Has made me more interested in computers and I want to study further.”
• “I am able to perform my job better and do not need to depend on other people.”

“The e-Skills CoLab is very excited about the enthusiastic response to these initiatives,” says Ms van der Merwe. “We are grateful for the opportunity to work collaboratively with the provincial department to develop this relationship to benefit administrators, teachers and learners at all of our schools.”

Training Eastern Cape principals and teachers in the eSkills4All e-literacy course.

About the e-skills research colloquium 2018/2019
• As part of the national e-Skills Summit 2018, the Digital Re-Imagination Colloquium was held on 13 March 2018. The theme was ‘Preparing South Africa for a Digital Future through e-Skills’. There were 11 extended abstracts submitted to the Colloquium and these will be published as an e-book (with an ISBN number). It will be available via the NEMISA website.
• Knowledge for Innovation Colloquium 2019: Note these essential e-skills research activities will continue next year.
Small, medium and micro enterprises (SMMEs) are seen to be crucial for economic development in South Africa.

In line with the National Development Plan and other key government policies, NEMISA and the provincial e-Skills CoLabs focus on creating e-skills (digital skills) capacity in SMMEs. e-Skills for SMMEs are vital if these small businesses are to engage with the digital economy.

Ongoing rollout of ‘Start Your Business’ course in KZN

The e-Enablement for Effective Service Delivery e-Skills CoLab continues to roll out the ‘Start Your Business’ Training. The e-Skills CoLab is based at Durban University of Technology (DUT). These e-skills training interventions are a partnership with the e-Skills CoLab, DUT, and the relevant municipality.

The programme aims to equip delegates with skills to start and run their own businesses. There is a strong emphasis on creative entrepreneurship.

The focus is on marginalised people. It includes those living in rural areas, in particular the youth, women, people with disabilities, and the unemployed. The 5-day training course includes the fundamentals of entrepreneurship and SMMEs. Digital skills are integrated into the course.

Nquthu Local Municipality: Training took place from 16-20 April 2018 through Sivuno Consulting. The training was mainly conducted in isiZulu and drew examples from familiar situations. There was an average of 40 delegates. The participants ranged in age from early twenties to late 50s. Their business ideas and businesses included poultry, woodwork, trading, sewing, catering, hairdressing, and baking. They come from an area that is largely rural, with high levels of unemployment. The main agricultural activity is sheep rearing, which is a major form source of rural household livelihood. There is also informal trading within the small town and in outlying areas.

There was close co-operation between the KZN EDTEA regional Local Economic Development Officer and the Nquthu Local Municipality Local Economic Development Unit. (EDTEA stands for ‘Economic Development, Tourism and Environmental Affairs’.) Engagement included developing the local catering base. The Nquthu LED office also provided

What is the Digital Economy?
This refers to an economy based on digital technologies. It is also increasingly seen as conducting business through markets based on the internet. The digital economy is not limited to traditional business models, time or location.

Delegates at the Nquthu Local Municipality training.
About the course:

Following are some of the topics for the e-skills and creative new media course.
• Word Processing (MS Word)
• Presentations (MS PowerPoint)
• Using visual communication techniques to represent a concept
• Conceptualising and planning a design

The focus was on SMMEs. The aim was for delegates to be able to explore visual communication techniques, have critical discussions, present concepts, and produce presentations. The delegates were given theoretical and practical lectures.

There were specific outputs, such as designing logos, a magazine layout and a brochure. The course included a photography excursion.

In general, feedback from the evaluation forms was very positive.

NEMISA updates

• NEMISA welcomes the new Chief Financial Officer, Mr Thilivhali Ramawa. He started on 3 May 2018.
• NEMISA also welcomes Ms Sibukele Gumbo. She is the new CoLab Director at the ICT for Rural Development e-Skills CoLab, based at Walter Sisulu University.
Multi-stakeholder collaboration is a primary programme of NEMISA and the provincial CoLabs, where the focus is on achieving maximum impact through partnerships. Collaboration is crucial to achieving the other goals and programmes: e-astuteness development (teaching and learning), knowledge for innovation (research), and aggregation (monitoring and evaluation framework). Multi-stakeholder collaboration for increased impact is also essential for NEMISA to steer e-skills stakeholders towards achieving the NDP goals of having an e-literate society by 2030.

One of the key partnerships is with TVET colleges. (TVET colleges focus on vocational or occupational courses. TVET stands for Technical Vocational Education and Training.) These institutions will play a crucial role in bringing the digital skills revolution to rural communities. The e-skills collaboration also brings benefit to the TVET colleges, such as increasing visibility in communities. Furthermore, by capacitating former graduates and unemployed youth with digital skills, there is stimulation of local economic development for municipalities and SMMEs.

Walter Sisulu University has a Memorandum of Understanding with the TVET colleges in the province and the CoLab has had a working relationship with King Sabatha Dalindyebo (KSD) TVET College since 2012.

King Sabatha Dalindyebo TVET College Mthatha e-literacy graduation

On 8 May 2018, the ICT for Rural Development e-Skills CoLab held an e-literacy graduation ceremony in Mthatha. The e-Skills CoLab is based at Walter Sisulu University (WSU), Eastern Cape. There were 60 youth graduates from the eSkills4All training, which was conducted by KSD TVET College at their Mthatha campus in partnership with the e-Skills CoLab.

The participants were drawn by the college from databases of unemployed students and youth in the KSD municipal district. The training ran from January to March 2018. There was a 100% pass rate.

About the event: The ceremony was opened by WSU Mthatha Campus Rector, Prof Jadezweni. Other speakers and guests included:

- NEMISA Interim CEO, Mr Phukubje
- KSD TVET College Vice Principal: Planning, Research and Institutional Development, Dr Ndamase
- KSD TVET College Business Skills Manager, Mr Ngwadla
- The ICT for Rural Development e-Skills CoLab e-Skills CoLab Acting Coordinator, Ms van der Merwe, and new CoLab Director, Ms Gumbo
- The e-Literacy e-Skills CoLab Director, Ms Lombard

News and e-skills updates

- 56% of users clicked a phishing URL that they received on their mobile devices. This bypassed existing layers of phishing defence. Those mobile users that clicked on a phishing URL did so an average of six times a year. Findings come from a report, ‘Mobile phishing 2018: Myths and facts facing every modern enterprise today’, published by mobile security company Lookout. (www.itweb.co.za/content/znkIqvzbDW9v4Ymz)
- As reported in the Allianz Risk Barometer 2018, 51% of 1 911 risk experts in 80 countries indicated that cyber incidents (including cyber crime, IT failure, and data breaches) are their top concern. (www.itweb.co.za/content/WnpNgM2A2mP7VIGG)

What is phishing? This is when fraudsters try to steal your personal information. They send out e-mails or mobile messages that seem to come from legitimate sources. The e-mail or mobile message asks you to update or validate information by clicking a link. It usually involves entering your username and password. It may involve collecting more information.
About NEMISA

Unite around a common pillar to fight poverty and inequality, active citizenry, an inclusive economy, building capabilities, a capable developmental state and leadership working together to solve problems.

NEMISA is a globally-recognised collaborative model that allows stakeholders to sustainably meet South Africa’s e-skilling objectives.

NEMISA is a national catalyst, facilitator and responsive change agent in the development of SA, within the globally evolving information and knowledge-based environment, by leading the creation of key e-skills development strategy, solutions, practices and implementation, to benefit the total population.

Alignment to government policy: The above objectives are aligned to the new broadband policy, South Africa Connect, and the National Development Plan 2030, among other national and international goals.

Multi-stakeholder collaborative platform: NEMISA provides a formal multi-stakeholder collaborative platform that aligns all stakeholders (business, government, civil society and education) with a common vision. This common vision ensures that e-skills initiatives are coordinated within a national framework, reducing duplication and increasing impact.

Join NEMISA’s network
As a national catalyst for the development of e-skills in South Africa, NEMISA calls on e-skills stakeholders to become involved in the integrated approach to e-skills development through our multi-stakeholder collaborative network.

Contacting NEMISA
For more information, contact info@nemisa.co.za.

Multi-stakeholder collaborative network

Ensuring global, national and local innovation is channelled into the e-skills agenda for national impact.

Five focus areas: NEMISA primarily focuses on five components.
- Knowledge for innovation (research)
- e-Astuteness (teaching and learning)
- Multi-stakeholder collaboration
- Innovation
- Aggregation (monitoring and evaluation framework)

Providing national, provincial and community level access:
Through collaborative partnerships, NEMISA is organised on a national level, a provincial level and a local community level. NEMISA’s central office coordinates nationally and globally.

The e-skills knowledge production and coordination CoLabs (e-skills CoLabs): These are situated at universities, with one in each province. There are currently 7 e-skills CoLabs:
- e-Inclusion and Social Innovation CoLab, based at the University of the Western Cape
- e-Enablement for Effective Service Delivery CoLab, based at Durban University of Technology
- ICT for Rural Development CoLab, based at Walter Sisulu University
- Creative New Media Industries CoLab, based at the National Electronic Media Institute of South Africa (NEMISA)
- Connected Health CoLab, based at the University of Limpopo
- e-Literacy and e-Business (knowledge economy and e-social astuteness) CoLab, based at the Vaal University of Technology
- e-Agro-Tourism CoLab, based at the North-West University

There will ultimately be nine e-skills CoLabs correlating to the nine South African provinces.

The e-skills CoLabs provide knowledge spaces for collaboration at a provincial level.
Article continued: About NEMISA

Smart community knowledge production centre (smart centre): These allow for interaction and coordination at a local community level. NEMISA's smart centre network is currently being developed across the country.

NEMISA’s national research network is a multi-stakeholder collaborative network that focuses on knowledge for innovation (research).

NDP Priority Areas supported by NeSPA 2013

| Pillar 1 | Unite around a common pillar to fight poverty and inequality |
| Pillar 2 | Active citizenry |
| Pillar 3 | Inclusive economy |
| Pillar 4 | Build capabilities |
| Pillar 5 | A capable developmental state |
| Pillar 6 | Leadership throughout society to work together to solve problems |

Wide-ranging opportunities for business: NEMISA’s positioning and organisational model provides numerous opportunities for businesses to engage effectively within the e-skills space:

- There is high-level government engagement. This is integral to developing the e-skills agenda and ensuring that national and provincial policies, as well as all stakeholder decisions, reflect a common goal.
- Business corporate social investment (CSI) has an elevated impact that is aligned with national priorities. The elevated impact and the high-level government engagement allow businesses to position their individual CSI initiatives prominently to their stakeholder base, including the media.
- Businesses are given the opportunity to showcase their talents nationally, provincially and locally.
- Because of the inclusive national priority alignment within the NEMISA’s multi-stakeholder collaborative network, businesses are able to position their work within a local context and a developing country framework.
- The link that NEMISA has with universities through its Colabs and research network means that business can also align new approaches using the benefits of an academic environment and a research function.

- Most importantly, NEMISA provides an environment where CSI is part of a model where stakeholders work together – ‘doing with’ and not ‘doing for’. 
### Taxonomy for e-skills

An e-skills taxonomy is more than just definitions. The e-skills agenda requires a shift in thinking with outcomes such as changes in policy. The terms used are part of creating the environment for this shift. Following are definitions for some of the words that form part of the e-skills taxonomy.

| **e-Astuteness** | The capacity to continuously appropriate the technology into personal work, education, business, social and family contexts for both personal and collective benefit.

e-Astuteness is defined as a knowledgeable capacity, based on personal and interpersonal skills, that involves:

- Understanding people and situations
- Building alignment and alliances
- An acute understanding of strategic direction
- Applying strategic behaviour

e-Astuteness allows individuals to take personal advantage of ICT in social or economic situations, through the appropriate e-skills. (Building social connections is an example of a social situation and obtaining a job or starting a business is an example of an economic situation.)

e-Astuteness does not necessarily depend on formal education or high levels of literacy. |
| **e-Literacy** | e-Literacy (digital literacy) is the ability of individuals to use digital tools and facilities to perform tasks, to solve problems, to communicate, to manage information, to collaborate, to create and share content and to build knowledge, in all areas of everyday life and for work. |
| **e-Skills** | The ability to use and develop ICTs within the context of an emerging South African information society and global knowledge economy, and associated competencies that enable individuals to actively participate in a world in which ICT is a requirement for advancement in government, business, education and society in general. |
| **e-Social Astuteness** | e-Social Astuteness is defined as the use of ICT and e-skills for more astute ways of people interacting with others, which include:

- Social interactions
- A level of awareness and understanding of diverse social situations
- The various alternatives open to them for response

e-Astuteness focuses on individual benefit whereas e-social astuteness focuses on interacting with others for group benefit. |

### What is an e-skill?

An e-skill means being able to use technology so you can actively participate in the world and move ahead.

![Diagram of e-skills in personal work, education, business, social and family contexts](diagram)

#### Official South African definition (from the National e-Skills Plan of Action)

The ability to use and develop ICTs within the context of an emerging South African information society and global knowledge economy, and associated competencies that enable individuals to actively participate in the world in which ICT is a requirement for advancement in government, business, education and society in general.