collaboration for impact e-skills news

e-skilling the nation **16**

newsletter, edition 16, 2017

Catalytic thought leadership: Developing taxonomies for e-skills
Stakeholders need to understand exactly what is meant by an e-skill (digital skill), as well as the different types of e-skills . Read more on p1

International cooperation on best practices in e-skills, communications and media
South African government, along with its partners, meets the Russian Federation delegation. Read more on p7

Growing opportunities in the broadcast sector through e-skills
The Institute provides learnerships in film and TV for unemployed youth as part of larger SABC e-skills development programme. Read more on p9

Creative New Media learning pathways
The learning pathways for Creative New Media learnership in the SABC e-skills development programme. Read more on p12

Contents

p1 **Catalytic thought leadership: Developing taxonomies for e-skills**
The e-Skills Framework Workshop

p4 **The provincial e-skills CoLabs**

p4 **Contact The Institute**

p5 **Digital Literacy Framework**

p6 **Digital Skills Framework One**

p7 **International cooperation on best practices in e-skills, communications and media**
South African government meets the Russian Federation delegation

p8 **Catalytic thought leadership: Moving Africa towards a digital continent**
e-Enablement for Effective Service Delivery CoLab's research on e-voting to be distributed at Nigeria's The Electoral Institute Annual Talk 2017

p9 **Further research updates (knowledge for innovation) – the Connected Health CoLab**

p9 **Growing opportunities in the broadcast sector through e-skills**
The Institute learnerships as part of SABC e-skills development programme

p12 **Creative New Media learning pathways**

NEMISA NPC changing to iNeSI Ikamva National eSkills Institute

www.nemisa.co.za
www.inesi.org.za

WSU Walter Sisulu University · DUT Durban University of Technology · North-West University Yunibesiti ya Bokone-Bophirima Noordwes-Universiteit · VUT · University of the Western Cape · University of Limpopo

The Institute (NEMISA changing to the iNeSI) 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.

collaboration for impact e-skills news

e-skilling the nation **16**

newsletter, edition 16, 2017

Developing e-skills and e-astuteness in the Northern Cape
e-Literacy and other skills programmes for unemployed youth in disadvantaged communities. Read more on p13

Western Cape MediaTech Project Graduation – developing sector user and entrepreneurship e-skills
Update on the programme. Read more on p15

Launch of Africa's first interdisciplinary Data Analytics and Business Intelligence Postgraduate Diploma
Update on the programme. Read more on p15

Investigating global partnerships for innovative e-learning - University of Ontario, the e-Enablement for Effective Service Delivery e-Skills CoLab and the Durban University of Technology
Read more on p17

Contents (continued)

p13 **Developing e-skills and e-astuteness in the Northern Cape**
e-Literacy and e-Business CoLab partners with SEED+ Kaxu Solar One for community learning interventions around e-literacy

p15 **Updates on e-skills interventions**
- Western Cape MediaTech Project Graduation – developing sector user and entrepreneurship e-skills

p15
- Launch of Africa's first interdisciplinary Data Analytics and Business Intelligence Postgraduate Diploma

p16
- Investigating global partnerships for innovative e-learning - University of Ontario, the e-Enablement for Effective Service Delivery CoLab and the Durban University of Technology

p17 **Trends in e-skills and the e-skills environment**

p18 **About the Institute**

p20 **Taxonomy for e-skills**

p21 **Partners in the Institute's multi-stakeholder collaboration**

NEMISA NPC changing to iNeSI Ikamva National eSkills Institute

www.nemisa.co.za
www.inesi.org.za

The Institute (NEMISA changing to the iNeSI) 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.

collaboration for impact e-skills news

e-skilling the nation
www.nemisa.co.za
www.inesi.org.za

Edition 16, 2017

e-skills knowledge for innovation (research)

Catalytic thought leadership: Developing taxonomies for e-skills

The e-Skills Framework Workshop hosted by the e-Inclusion and Social Innovation CoLab

e-Skills (digital skills) have become a part of everyday life – in all areas of work, life and social contexts. It is the consequence of a world that is filled with technology (ICT). Technology is involved even when doing basic tasks, such as communicating with friends or banking. So it is important that people have the know-how to use the technology effectively. These are called e-skills.

e-Skills within national strategies
The development of e-skills is part of various policies, strategies and plans that aim to drive South Africa's inclusion and continued participation in the global digital economy. For example, developing e-skills is a key part of South Africa's broadband plan, SA Connect. It is seen as essential in the ecosystem that supports broadband, where both demand for and supply of broadband, services and infrastructure is needed.

Another example is the National Integrated ICT Policy White Paper released in September 2016. e-Skills are positioned as fundamental to grow South Africa's ICT sector and to create an inclusive digital economy and society.

Delegates from the workshop on the 'First Validation of the Digital Skills Framework'.

What is taxonomy? Taxonomy is creating a plan or structure where things are classified (named) into ordered categories.

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.**

What is ICT? ICT stands for information and communication technology.

Dedicated focus on digital skills development
These national strategies lay the foundation for a dedicated focus on digital skills development. This includes skilling, upskilling and re-skilling across the spectrum – from the average citizen to the specialist in the academic, business or government sector.

A shared understanding of e-skills and e-literacy
Currently, e-skills (digital skills) can mean different things to different people. As South Africa works towards a digitally literate society, a shared understanding of e-skills and e-literacy (digital literacy) is needed. Developing a framework helps with, for example:

- Developing specific interventions for targeted sectors
- Developing learning pathways
- e-Inclusion across sectors
- Providing a basis for assessing progress

Developing a comprehensive digital skills framework
Stakeholders need to understand exactly what is meant by an e-skill (digital skill). They also need to understand and investigate the different types of e-skills – e-skills don't just mean e-literacy. Technology operates at various levels in the many areas of human activity and, consequently, so do e-skills.

South Africa, through the Institute (NEMISA changing to iNeSI), is in the process of developing a comprehensive framework that accommodates a range of digital skills. These include:

- Digital skills needed for activities in everyday life
- Digital skills needed in the world of work
- Digital skills in different professions, of a general and basic kind to highly specialised
- Digital skills needed to use digital devices
- Digital skills needed to develop the code that makes

→

NEMISA changing to iNeSI

collaboration for impact e-skills news

e-skilling the nation
www.nemisa.co.za
www.inesi.org.za
Edition 16, 2017

these devices work ie e-skills for the ICT sector specifically

First validation of the Digital Skills Framework

The e-Inclusion and Social Innovation CoLab, based at the University of the Western Cape (UWC), held a one-day workshop on 15 February 2017. The focus was the 'First Validation of the Digital Skills Framework'.

Over the past few years, a first version of a South African digital skills framework has been developed by the Institute (NEMISA changing to iNeSI), in partnership with the University of the Western Cape. "It is internationally comparable, yet locally relevant," says Dr Leona Craffert, CoLab Director. "The framework and components that fall within it are seen as works in progress."

Currently, the digital skills framework involves two parts:

- A comprehensive digital skills framework (called 'Digital Skills Framework One' – DSF One). It is an overarching framework that spans the whole domain of digital skills and frames the different digital skills areas so that their relationships are logical and understandable. In addition, this framework accommodates a number of other more specific digital skills frameworks.
- A digital literacy framework (DLF) which looks at general digital literacy within the world of digital devices and their use in all areas of life, learning and work in South Africa.

International expert facilitator: The validation process was facilitated by Dr Ilse Marien, senior researcher from imec-SMIT, Free University of Brussels. "Dr Marien has a substantial track record in skills development and validation processes," says Dr Craffert.

Participants: Participants included active stakeholders within digital skills development, ranging across government, education, civil society and business. There were representatives from UWC, the University of Cape Town, Cape College, International Computer Driving Licence (ICDL), Western Cape government Broadband and Skills Forum, i-CAN centre (Genesis), Western Cape government's Cape Access, e-centres, NGOs and business. There were also representatives from the Institute's other provincial e-Skills CoLabs.

Workshop focus: The workshop looked at 'Digital Skills Framework One'. This is an overview of the different sets of digital skills and a starting point of discussions on where other areas of digital skills fit.

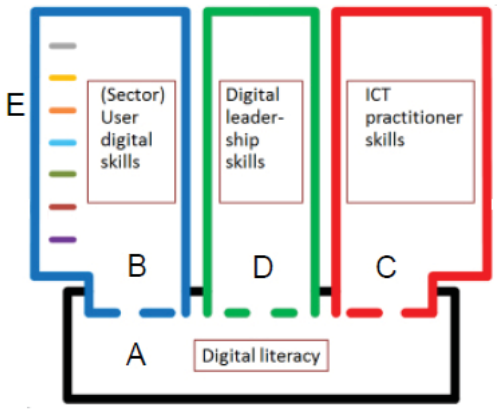
Outcomes: 'Digital Skills Framework One' is currently being completed. It is a guide to understanding the different types of digital skills, as well as discussions on a broader range of issues related to digital skills and the changing world of work. It will be available soon as open source text. Participants agreed that the framework can be used as a tool to facilitate discourse and intervention regarding digital skills development across sectors. It will enable the various sectors to take responsibility for developing their own digital skills profiles.

Concepts from the Digital Skills Framework

Basic digital skills types	
digital literacy (or e-literacy)	This involves more than the very basic level of digital skills and includes media and information literacy. It's the ability to have purposeful and meaningful objectives using those basic digital skills.
(sector) user skills	These can be general, sector-specific or profession-specific. These e-skills move beyond digital literacy, the outcome being that people perform the job or profession in a better or more efficient way.
ICT practitioner skills (also called 'ICT professional skills')	These are e-skills for developing and implementing technologies ie professions in the ICT field. The outcome of the e-skills is an ICT object or result, such as a programme, application, service, functionality. It also includes spectrum management.
e-leadership / digital leadership skills	e-Leadership skills are the capabilities needed to exploit opportunities provided by ICT, notably the internet, digital devices and the new media.

→

Article continued: Developing taxonomies for e-skills (concepts from the Digital Skills Framework)



Summary of the Digital Skills Framework

About digital literacy (e-literacy)
A Digital Literacy Framework (DLF) has been developed to explain what it means to be e-literate or digitally literate. Digital literacy generally means the basic knowledge and skills relating to the use of computers and other digital devices. It's used in a similar way to describing 'literacy' ie being able to read, write and use maths.

In the South African DLF, digital literacy is defined as: "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."

The digital literacy definition includes the following categories
- Communicating
- Handling information
- Transacting
- Problem-solving
- Work and learning
- Creating content
- Personal life, home and family

It is the basic level of purposeful and meaningful use of digital devices and the internet. However, it doesn't include formal office activities. A 'user skill' is the term for a more formal level of work, for example, working with spreadsheets.

Each of these categories can be expanded to show more competencies/capabilities. There are core digital skills (e-skills) in each of these categories but also e-skills that not everyone needs.

See page 5 for the Digital Literacy Framework (basic digital skills).

(Sector) user digital skills – general
The user digital skills are more advanced than the basic actions included in digital literacy. For example, word processing is implied at a basic level in 'digital literacy'. It is included as a more comprehensive and complex-level user skill. Within high-complexity user skills, word processing is tightly integrated with other components.

A number of user digital skills have formed the core of user skills training, depending on the work context:
- Word processing
- Spreadsheets
- Presentation
- Web browsing and information search
- Communication, e-mail, etc
- Data sets and uses and knowledge flows
- Project management

These are general digital skills that apply to a large number of sectors of formal work and professions.

New generation user digital skills
Examples include:
- Safety, security, privacy, backups, etc
- Understanding and using the Cloud
- Proficiency in social media
- Netiquette and ethics
- Collaboration in the digital context
- Digital commerce, banking, money flows, etc
- New types of connectivity (eg the 'internet of things')

(Sector) user digital skills – specific sectors
The digital skills that are relevant to specific sectors build on the generic user skills. For example, specialised financial tools skills build on a general knowledge of spreadsheets – e-skills relevant to the financial sector.

The sector user digital skills can only be identified by people who understand the sector and tools used in that sector. Sector digital skills consist of a particular selection of generic digital skills (at specific levels) together with sector-specific or profession-specific skills.

→

Article continued: Developing taxonomies for e-skills (Concepts from the Digital Skills Framework)

ICT practitioner skills
ICT practitioner skills are the skills/capabilities needed for ICT systems, such as:

- Researching, innovating, developing and designing, managing
- Producing, consulting, marketing and selling
- Integrating, installing and administrating
- Maintaining, supporting and service

This category includes technical specialists and technologists, as well as various kinds of support staff, consultants, and providers in the ICT space (such as those involved in broadband projects).

Within ICT operations and practitioner skills, professional bodies have actively maintained an updated logical structure of e-skills. This includes learning and training, upskilling, and certification and accreditation.

e-Leadership (digital leadership) skills
e-Leadership skills are strategic and related to innovation management skills, rather than technology-management skills (part of ICT practitioner skills).

e-Leadership is a relatively new perspective on leadership and digital skills. There are currently various definitions. The Digital Skills Framework suggests the following interim definition: "The capabilities needed to exploit opportunities provided by ICT, notably the internet, digital devices and the new media to:

- Ensure more efficient and effective performance of different types of organisations
- Explore possibilities for new ways of conducting business and organisational processes
- Establish new businesses, organisations, platforms, applications or interventions
- Accomplish goals that rely on ICT through the direction of human resources and uses of ICT
- Effect innovation (including social innovation) through digital means

While e-leadership is part of businesses of all sizes, it is especially important within SMMEs where e-leadership digital skills can make a significant difference. ☑

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:

- **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

Contact The Institute

The Institute (NEMISA changing to iNeSI) can be contacted at the following:

- *info@nemisa.co.za*
- 011 417 5100 / 011 484 0583
- PO Box 545 Auckland Park, Johannesburg, 2006
- South Building Waterview Corner, 2 Oppenheimer Ave, Bruma Lake Office Park, Bruma 2026

Digital Skills Framework One – *Digital literacy framework* (Basic digital skills)

Categories	Communicating	Handling information	Transacting	Problem-solving	Work & learning	Creating (content, etc.)	Personal life, home & family
Description	Communicating, interacting, collaborating, sharing and connecting with others	Finding, managing, evaluating and storing digital information and content	Purchasing and selling goods and services, organising your finances and using digital government services	Solving problems and finding solutions using digital tools, thereby increasing independence and confidence	Using digital tools for work purposes and for learning through digital tools and resources	Creating basic digital content in order to engage with individuals, digital communities and organsation	Using digital tools in your personal life, for lifestyle purposes and in family and home settings
Actions for individuals	• Keeping in touch using digital devices • Sharing information and content (e.g. photos and videos) • Communicating with organisations about their products and services • Collaborating through digital channels • Engaging in online citizenship • Setting up contacts (personal use, and for digital networks of friends, clients, etc.) • Netiquette and ethical use of information • Managing digital presence and identity	• Using a search engine to find information • Demonstrating knowledge of which websites to target/ search for specific sources of information or services, and the ability to work with these web sources (a.o. Wikipedia) • Reading, viewing on digital devices • Evaluating information sources on the web • Bookmarking useful websites and services • Storing/saving data on a device or in the cloud (e.g. Dropbox) • Moving things around on computers and saving them (files, folders, records, favourites) • Making backups and a back-up plan • Using the basic functionalities of mobile devices • Making and managing digital lists of various kinds (a.o. "to-do" lists) • Finding places and working with digital maps • Printing information as suitable to purpose • Setting up news feeds	• Understanding what wifi is, how to get access to it and how to make use of it • Obtaining and loading airtime and data on mobile devices • Managing effective use of data on mobile devices • Transferring money/ making payments • Doing online banking • Buying and selling online • Using apps to obtain transport • Managing budgets & recording expenses • Identifying best travel options and booking travel online as appropriate to you and people whom you are advising or helping • Selecting devices and services (initial and upgrading) • Setting up and maintaining a website	• Solving problems encountered in connection with your devices or the use of them • Breaking up non-trivial challenges into separate stages or actions in order to solve them by using digital tools • Showing understanding of which device or programme/ app to use for which purpose, or for solving problems • Identifying core digital apps, obtaining them, and using them • Demonstrating transfer of skills/ capabilities from one context or application to another • Innovating and creatively using technology • Being able to explain digital device use to others	• Applying all the actions in the other categories for work purposes, either in the organisation/ business for which you work or in your own business • Working from home or on the move • Using digital devices to improve your work performance • Learning through your digital devices • Demonstrating knowledge of which websites to target for learning materials in general, for your work, or for learning purposes in the family • Using technologies and media for team work, collaborative processes and co-creation of resources, knowledge and content	• Creating different kinds of content (a text/document, a photo or video, a social media post, feedback, a text, a poster, a spreadsheet, multimedia) • Using text tools (e.g. spelling checkers, dictionaries) • Integrating and re-elaborating content (modifying, refining and coing mash-ups) • Showing understancing how copyright and licences work and how they apply to information and content • Doing digital storytelling or facilitating groups to do digital storytelling	(in addition to skills in previous six categories, many of which are directly relevant here) • Using other basic functionalities of mobile devices • Obtaining and playing music and videos • Finding and managing health information for the family (*also* under Handling information) • Sharing resources at home/family level (both cabled and wireless; networks) • Gaming (finding gaming apps [entertainment] and using them) • Helping children to develop personal skills using devices and online resources • Assisting/supporting children with school-learning related matters (a.o. preventing plagiarism) • Understanding and mitigating cyber-bullying • Using digital devices to extend your mental/ cognitive capabilities

Categories	Communicating	Handling information	Transacting	Problem-solving	Work & learning	Creating (content, etc.)	Personal life, home & family
Description	Communicating, interacting, collaborating, sharing and connecting with others	Finding, managing, evaluating and storing digital information and content	Purchasing and selling goods and services, organising your finances and using digital government services	Solving problems and finding solutions using digital tools, thereby increasing independence and confidence	Using digital tools for work purposes and for learning through digital tools and resources	Creating basic digital content in order to engage with individuals, digital communities and organisation	Using digital tools in your personal life, for lifestyle purposes and in family and home settings
Safety	• Understanding how to manage your online identities • Protecting yourself from scams • Using the right security settings • Protecting your consumer data	• Assessing the accuracy of sources of information • Using security tools when browsing • Regularly updating software, and updating and running virus-checking software • Managing parental controls	• Using secure websites for financial transactions • Protecting your personal data • Respecting the privacy of others	• Using accurate sources of support • Avoiding malicious websites, scams and pop-up windows	• As in other categories	• Being aware of copyright law and acting accordingly • Protecting your personal data • Respecting the privacy of others	• Ensuring that all members of the family understand the importance of safety/ security regarding digital devices (as in categories 1-6) • Setting up parental controls, content filters and safeguards (for children)
Actions for organisations (incl. business)	• Developing and maintaining customer and client relationships • Using social media to promote your business and connect with new customers • Improving your customer service by providing accessible product information and answers to frequently asked questions	• Storing digital information on products/ services, customers and suppliers • Finding information about competitors or growth/marketing opportunities • Searching for new suppliers or to find the best deals • Working with digital information systems as relating to the sector/company or the ecosystem within which the company functions • Understanding who uses your website	• Marketing your business/organisation or your products/ services • Maximising your selling potential through a website or Facebook page, or other social media • Getting online the necessary documents, etc. relating to your business and fulfilling requirements • Managing invoices and accounts • Receiving payments or donations • Protecting yourself from fraud or scams	• Saving on business travel and be more efficient by using digital means of communication (e.g. Skype) • Understanding which products and services work based on online feedback • Obtaining and Interpreting simple analytics to improve website performance • Getting solutions to problems from safe and accurate sources	• Promoting the use of digital devices in your organisation • Enabling learning opportunities for your employees/colleagues	• Creating an informational or e-commerce website or page • Creating content (pictures, text) to promote your organisation and reach customers • Using social media to create communities to engage with customers • Creating resources to improve employee skill levels	• Understanding how to manage in your organisation the work-life balance of employees (re digital devices and applications)

Developed in the CoLab for eInclusion and Social Innovation, University of the Western Cape (UWC), as one component of "Digital Skills Framework One". 2016. Version 1.2

(Contact: wclaassen@uwc.ac.za)

Notes on the Digital Literacy materials and the use of it:

- This document provides information at at a "top" level within each category; documentation is available on actions and detail at a "deeper" and more specific level.
- In learning or intervention programmes the actions in this document can be stratified or "packaged" according to three levels of difficulty, namely "basic", "intermediary", "advanced", or any combination of these.

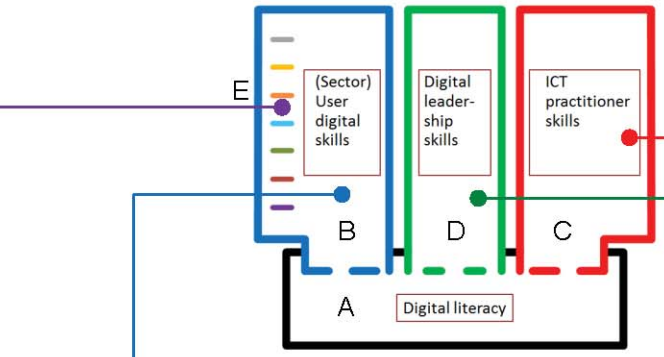
Credits:

- Use was made of the concept, and partly of the content (occasionally also the phrasing), of the Go ON UK "Basic Digital Skills Framework". Categories and content were developed through a local process of synthesis from an earlier analytical and collections process re a wide range of actions and life-settings for which digital tools can be used, informed also by a "mobile first" and "mobile only" context.
- Colleagues from the CoLab for eInclusion and Social Innovation, UWC, made valuable inputs to the process of developing the Framework and this set of materials re digital literacy

Digital Skills Framework One

UNIVERSITY of the WESTERN CAPE

Developed in the CoLab for eInclusion and Social Innovation, University of the Western Cape (UWC) May 2016 Vs. 1.1 © (wclaassen@uwc.ac.za)

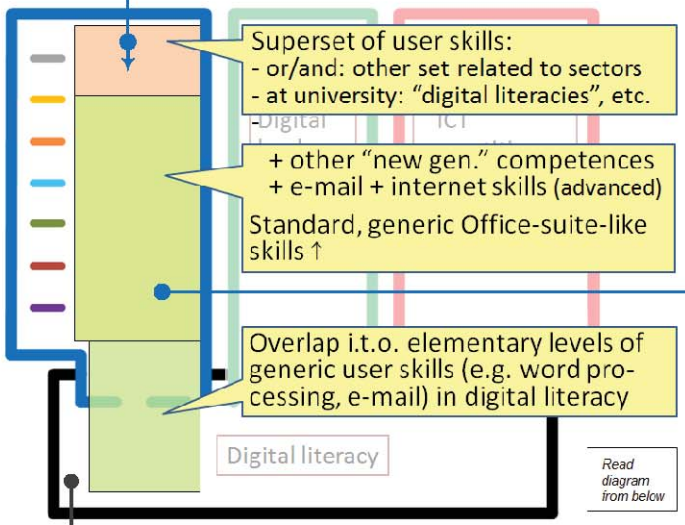


E. Sector user skills

The digital skills for work in a specific sector, type of organisation or profession. The skills sets must be worked out for each sector or profession.

Example:- new media:

1. Show understanding of the characteristics of the new media, convergence, etc.
2. Show understanding of digital formats, multi-platform requirements and copyright
3. Show mastery of key apps/suites in addition to the applicable general user skills
4. Demonstrate capabilities w.r.t. implementing advanced digital app combinations for handling multiple media sources
5. Demonstrate creative use of ICTs in the new media space (a.o. from concepts to visual and audio expressions).



B. User skills

Skills re the following:

1. Word processing
2. Spreadsheets
3. Presentation
4. Web browsing and informa-tion search
5. Communication (e-mail, etc.)
6. Data sets and knowledge flows
7. Project management (if appl.)
8. New era competences (e.g.):
   a) Social media (proficiency)
   b) Cloud (understanding and usage)
   c) Safety, security, privacy, backups, etc.
   d) Netiquette and ethics (at organisational level)
   e) Collaboration in the digital context.

D. e-Leadership skills

"The capabilities needed to exploit opportunities provided by ICT, notably the Internet, digital devices and the new media,

* to ensure more efficient and effective performance of different types of organisations,
* to explore possibilities for new ways of conducting business and organisational processes,
* to establish new businesses, organisations, platforms, applica-tions or interventions, and
* to effect innovation (incl. social innovation) through digital means."

(adapted from T. Hüsing et al., *e-Leader-ship: e-Skills for Competitiveness and Innovation*. 2013)

A. Digital literacy

Categories of actions for individuals relating to life and work:

1. Communicating
2. Handling information
3. Transacting
4. Problem-solving
5. Work & learning
6. Creating content
7. Personal life, home & family

(A separate set of actions relating to organisations is available. Also: a list of actions relating to safety in all categories.)

2. *Handling information*:

a) Using a search engine to find information
b) Demonstrating knowledge of which websites to target/search for specific sources of information or services, and the ability to work with these web sources
c) Reading, viewing on digital devices
d) Evaluating information sources on the web
e) Bookmarking useful websites and services
f) Storing/saving data on a device or in the cloud (e.g. Dropbox)
g) Moving things around on computers and saving them (files, folders, records, favourites)
h) Making backups and managing a back-up plan
i) Using the basic functionalities of mobile devices
j) Making and managing digital lists of various kinds
k) Finding places and working with digital maps
l) Printing information as suitable to purpose
m) Setting up news feeds.

C. Development and implementation:- Systems development:

- Systems development management
- Data analysis
- Systems design
- Network design
- Database design
- Programming/software development
- Animation development
- Safety engineering
- Sustainability engineering
- Information content authoring
- Testing

(Detail of one of the categories in SFIA 6.)

C. ICT Practitioner skills

SFIA is the most widely accepted framework for ICT practitioner skills.

SFIA 6

(Skills Framework for the Information Age)

		1. Follow	2. Assist	3. Apply	4. Enable	5. Ensure, advise	6. Initiate, influence	7. Set strategy, inspire, mobilise
A	Strategy and architecture							
B	Change and transformation							
C	Development and implementation							
D	Delivery and operation							
E	Skills and quality							
F	Relationships and engagement							

e-skills international collaboration

International cooperation on best practices in e-skills, communications and media

South African government, along with its partners, meets the Russian Federation delegation

Communications Minister, Faith Muthambi, welcoming the Russian Federation delegation. Pictured here is the Deputy Minister of Telecom and Mass Communications, Alexey Volin.

The multi-stakeholder collaborative network is fundamental to the internationally-recognised model of the Institute (NEMISA changing to iNeSI). Collaboration between government, business, education, organised labour, civil society and global development partners is critical to developing e-skills and e-astuteness in South Africa.

Partnerships develop greater impact and are of mutual benefit. In the global space, partnerships or cooperation open up discussions around e-skills best practices and exchanges, among other things

The Institute meets Russian Federation delegation

The Institute was part of the South African delegation that met with the Russian Federation delegation on 6 March 2017. Representatives from the Russian delegation were on a three-day working visit. Besides the Institute, other South African representatives included TV and communication companies. e-Skills development was part of the discussions.

Communications Minister, Faith Muthambi, spoke at the welcome to the Russian Federation delegation. The delegation included:

- The Deputy Minister of Telecom and Mass Communications, Alexey Volin
- The Head of International Projects of the Sputnik News Agency, Vasily Pushkov
- The Deputy Director of the Department of External Affairs representing the Tass News Agency, Natalya Alexandrovna Menshikova

Minister Faith Muthambi said that the two governments have made major progress with formal relations, yet people-to-people exposure and contact remain low: "We need to tell the stories that will also reach the ordinary men and women in our respective countries, so that they should understand the significance of our bilateral and economic relations."

Exchanging best practices in communications and media

Cooperation with the Russian Federation has been created to exchange best practices in communications and media. Minister Muthambi noted that enhancing shared communication efforts will promote valuable trade and investment, as well as exchanging technology skills.

Focus on digital migration and content

A specific target is the exchange of best practice in digital migration. South Africa is currently migrating from analogue to digital broadcasting. The Russian Federation is also in the transitional period of switching off analogue transmitters and creating space for digital television.

Russian Deputy Minister of Telecom and Mass Communications, Alexey Volin, noted that another cooperation focus should be using new forms to spread content nationally and globally. He said in the near future the main traffic in the communications networks will be from data.

Minister Volin spoke about mutually-beneficial cooperation in movie production and distribution of movie and TV content.

The two countries' news agencies, Sputnik news agency and SAnews are expected to sign a Memorandum of Understanding. Further agreements are also in the pipeline.

History of SA-Russia bilateral relations

South Africa has strong bilateral relations with Russia. This year, the two countries celebrate 25 years of diplomatic relations. South Africa is the biggest trading partner of Russia on the African continent, particularly in mining, energy, agriculture, communications, and science and technology. ☑

e-skills knowledge for innovation (research)

Catalytic thought leadership: Moving Africa towards a digital continent

e-Enablement for Effective Service Delivery CoLab's research on e-voting to be distributed at Nigeria's The Electoral Institute Annual Talk 2017

The National Development Plan (NDP) sets out targets for creating an "inclusive and prosperous society". With the NDP as its guide, the National Integrated ICT Policy White Paper notes that ICTs "can play a key role in facilitating all the objectives of the NDP". The White Paper outlines interventions to develop ICTs in South Africa and to create a participative digital society.

The development of e-skills (digital skills) is seen as a fundamental part of the mix for these interventions. For technology to be effective, users need to have the capability to use the technologies effectively and astutely.

The Institute (NEMISA changing to iNeSI) provides a national integrated e-skills development framework for sustainable socio-economic development in South Africa. Its vision, in line with the NDP and the White Paper, is for South Africa to be an e-skilled society by 2030.

Research is integral to the Institute's work

Part of the Institute's role is to conduct research (knowledge for innovation) to assist in South Africa's development of the ICT sector and to move South Africa towards an information and knowledge society.

One of the core research areas is embedding e-skills and e-astuteness – understanding how e-skills can be used effectively within a South African context and new ways to embed ICT into people's lives for socio-economic benefit.

Research findings are fed back into developing-skills and e-astuteness in the country. This includes providing the data for evidence-based decision making. The research findings are also part of the catalytic thought leadership role that the Institute plays, Research is part of the Institute's work around knowledge dissemination and providing data to e-leaders.

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.

Thought leadership on e-voting on the African continent

Dr Surendra Thakur, Director of the e-Enablement for Effective Service Delivery CoLab, delivered the 12th Public Lecture for The Electoral Institute (TEI), Nigeria, on 23 March 2016. The topic was 'ICT and Electronic Voting: Issues and Challenges'. The audience comprised key stakeholders.

Dr Thakur was invited as a guest of TEI and the Independent National Electoral Commission. The event was co-hosted by the Nigerian Communications Commission. Further to this, the TEI will be distributing 50 000 copies of the monogram at their annual talk in 2017.

THE ELECTORAL INSTITUTE

Research abstract: ICT and Electronic voting: Issues and challenges

The paper examines ICT and its role in voting administration in elections. It considers, in particular, the issues around implementing and administering electronic voting (e-voting). This is an electronic method of vote capturing and counting with a perceived ease of deployment, more frequent deployment and use and accuracy.

The research provides a historical overview of the evolution of voting administration, as well as its strengths, opportunities, weaknesses and associated threats.

The adoption patterns of countries that use e-voting is presented and analysed. The trend shows 13 countries have formally adopted poll-site e-voting in a legally binding format, 5 countries used remote site internet voting, 5 countries piloted e-voting, and 20 countries experimented with e-voting in a limited legal context.

In the opposite direction, 6 countries have abandoned e-voting for technical reasons.

The case study of India shows how the world's seventh largest geographic country (with a population of 1.2 billion) adopted e-voting with arguable success. India reduced the election period from several months to several weeks, while saving about 12 000 tonnes of paper per election. From this and other successes, conclusions can be drawn that democratic countries should begin, at least, with trials to

→

Article continued: Catalytic thought leadership: Moving Africa towards a digital continent

gain contextual information about e-voting.

The paper also provides a possible road map and guidelines for evaluating implementation success as well as building trust and retaining stakeholder trust.

e-Voting - did you know?

- Namibia is the first country in Africa to implement e-voting (2014).
- There are 13 countries using e-voting: Belgium, Brazil, France, India, Japan, Kazakhstan, Russia, United States of America, United Arab Emirates, Philippines, Paraguay, Venezuela and Namibia.
- There are also at least 24 countries in non-binding trials or binding pilots for e-voting.
- e-Voting offers the following strengths and opportunities:
    - Fast, accurate, unemotional count
    - Multilingualism
    - Intuitiveness for the elderly (larger fonts and audio) and familiarity for the youth
    - Avoids long ballot papers which confuse or intimidate
    - Increases range of voting options
    - All but eliminates vote selling
    - Removes human error in the electoral custody chain from counting through collating to tabulation
    - Eliminates overvotes and undervotes which should reduce spoilt ballots
    - Possible regional sharing of equipment
- e-Voting offers the following weaknesses and threats:
    - Very high initial capital cost
    - The need for technical experts who may not be national residents
    - Recounts difficult and not transparent to an average voter
    - Possible hidden manipulation of software
    - Lack of consistent certification methods for machines
    - Transparency and closed systems
    - Demanding poll-site requirements
    - More points of failure
    - Recounts become difficult
    - Standby maintenance and support
    - Trivialises democracy to a point-and-click operation
- i-Voting is the next generation of administering voting. It can be defined as "an election system that uses encryption to allow a voter to transmit her secure and secret ballot over the internet." ☑

Further research updates (knowledge for innovation) – the Connected Health CoLab

The Connected Health CoLab, based at the University of Limpopo, is embarking on collaborative research with the University of Limpopo's School of Health Sciences and the School of Education. The focus will be on measuring and documenting the impact that CoLab activities are having in both the health and education spheres.

e-skills development for e-astuteness

Growing opportunities in the broadcast sector through e-skills

The Institute provides learnerships in film and TV for unemployed youth as part of larger SABC e-skills development programme

Learners at the SABC e-skills development programme.

The Institute (NEMISA changing to iNeSI) is a catalyst for a developing e-skills in South Africa. Particular emphasis is given to active involvement in business and in the economy by black people, SMMEs, women and youth. This emphasis on active economic involvement by marginalised groups was the main theme in the 2017 State of the Nation Address (9 February 2017) through the call for radical socio-economic transformation.

→

Article continued: Growing opportunities in the broadcast sector through e-skills

National policies for socio-economic inclusion
The drive for inclusion is echoed in the National Integrated ICT Policy White Paper. It introduces a range of interventions to ensure that everyone in South Africa, regardless of who they are, where they live, or their socio-economic status, can improve the quality of their lives through accessing the benefits of participating in the digital society.

e-Skills and e-astuteness fundamental
The main purpose of the White Paper is to unlock the potential of ICTs to eliminate poverty and reduce inequality in South Africa by 2030. Developing e-astuteness and digital literacy is considered fundamental in achieving this goal.

For the Institute to fulfil its mandate to develop e-skills and e-astuteness on a mass scale in South Africa, the organisation must work in partnership with e-skills stakeholders. Stakeholders include government, business, education, organised labour and civil society and global development partners

What is e-astuteness? e-Astuteness is the capacity to continuously appropriate technology into personal work, education, business, and social and family contexts for both personal and collective benefit.

e-Astuteness allows individuals to take personal advantage of ICT in social or economic situations, through the appropriate e-skills. It does not necessarily depend on formal education or high levels of literacy. **e-Astuteness is about 'being astute' with technology tools in all areas of life.**

Learners at the SABC e-skills development programme.

Common vision through collaboration
The Institute provides a national integrated e-skills development framework. It creates a common vision through its multi-stakeholder collaborative platform. This provides, among other things:

- A platform for stakeholders to engage with e-skills interventions of mutual benefit
- Coordination for impact and massification, reducing duplication, filling gaps and maximising the use of infrastructure and resources
- National, provincial and community level access through the Institute's distributive model where CoLabs are positioned in the provinces
- Alignment to government e-skills policies and plans

Because e-skills massification will only be reached through partnerships and multi-stakeholder collaboration, the institute focuses on developing new partnerships. An example is the partnership with the SABC.

Collaboration with the SABC – learnerships

The Institute is collaborating with the national public broadcaster, the South African Broadcast Association (SABC). This is a three-year project to build human

→

Article continued: Growing opportunities in the broadcast sector through e-skills

resources in film and TV (creative new media industry).

The Institute is providing e-skills development through learnerships in the National Certificate in Film and Television Production (SAQA 58394).

The complete project involves:

- Statement of Results of 44 credits from Bridging Course (NQF level 4 electives) – conducted by the Institute
- National Certificate in Film and Television Production learnership (NQF L5 full qualification - SAQA 58394) – conducted by the Institute
- SABC New Venture Creation Certificate (business component)
- e-literacy as part of the SABC orientation programme

About SABC's WALIS programme: The learnership is part of SABC's larger strategy of learning and development, the WALIS programme. WALIS means 'Work Integrated Learning, Apprenticeships, Learnerships, Internships and Skills'. SABC, through its Learning and Development unit, aims to stimulate and support projects which accelerate socio-economic development. These projects help young South African to acquire production and content development skills, along with business components. This enables candidates to be work ready or sufficiently equipped for a freelance or start-up business.

Aim and context of the SABC project: The aim is to build more technical skills in the broadcast sector, particularly among marginalised youth. The Draft Community Broadcast Scheme document of 1 July 2015 (Government Gazette 676 of 2015) identified that more training was needed in this area. Furthermore, South Africa's digital migration will open up more channels for content, and skills are needed to develop this content. (The digital migration refers to the process of planning and implementing migration from analogue to digital broadcasting.)

Target group: The target group of candidates is 100 unemployed youth from 5 provinces: Gauteng, KwaZulu-Natal, Eastern Cape, Free State, and the North West.

About the partners and their roles: The SABC Learning and Development unit manages the overall project and funding. It also recruited learners, provides learner stipends, and provided some of the venues. The Institute is the designated training provider for the learnership and bridging course. This includes providing certification and some of the venues.

Job creation and SMME development: As part of the learnership, the Institute is also using freelance facilitators to add to internal capacity. This includes Bolobathaba (Pty)

→

Learners at the SABC e-skills development programme.

Article continued: Growing opportunities in the broadcast sector through e-skills

Ltd in the Free State, founded by a NEMISA alumnus, Molatelo Mainetje.

When is this happening? The bridging course started in October 2016 in the 5 provinces. The learnership programme (SAQA ID 58394) had the following start dates in the provinces:

- Gauteng on 28 November 2016
- Free State on 9 January 2017
- Eastern Cape on 23 January 2017
- North West on 26 January 2017
- KwaZulu-Natal on 9 January 2017

All the learnerships will end in August 2017. ☑

Learners at the SABC e-skills development programme.

collaboration for impact e-skills news

e-skilling the nation
www.nemisa.co.za
www.inesi.org.za

Edition 16, 2017

Developing e-skills and e-astuteness in the Northern Cape

e-Literacy and e-Business CoLab partners with SEED+ Kaxu Solar One for community learning interventions around e-literacy

The Institute (NEMISA changing to iNeSI) has a vision aligned to the National Development Plan – for South Africa to be an e-skilled society by 2030.

e-Astuteness – being astute with technology

The development of e-skills and e-astuteness in South Africa is at the core of the Institute's mandate. e-Skills (digital skills) are about knowing how to use technology to add benefit to life – to use e-skills so you can actively take part in the world. But then what is e-astuteness?

The Cambridge Dictionary defines 'astute' as "being able to understand a situation quickly and see how to take advantage of it". Examples include: "an astute investor", "her astute handling of the situation", and "an astute observer of human behaviour".

e-Astuteness is being astute with technology. It's about using technology for your advantage and your community's advantage in work, education, business, and social and family contexts. It's about individuals taking personal advantage of ICT in social or economic situations, using the appropriate e-skills. (e-Astuteness does not necessarily depend on formal education or high levels of literacy.)

e-Skills and e-astuteness in national policy

The ability to learn e-skills and to develop e-astuteness is seen as fundamental to South Africa's vision of using ICT to develop citizens and to create an information and knowledge society.

SA Connect, the broadband plan, positions e-skills and e-astuteness as part of Digital Opportunity. People need to know how to use broadband effectively for the broadband ecosystem to be successful.

The National Integrated ICT Policy White Paper includes the development of e-skills and e-astuteness as a prerequisite to the proposed interventions. ICT, e-skills and e-astuteness is also key to radical economic transformation, a policy driver outlined in the State of the Nation Address 2017. For there to be inclusion, socio-economic development and radical economic transformation (especially of black people, women, entrepreneurs and unemployed youth), ICT, e-skills and e-astuteness are needed.

Through its multi-stakeholder collaborative network, the Institute and its provincial e-skills CoLabs are involved in e-skills interventions throughout South Africa.

Youth and community development project partnership with Seed+ Kaxu Solar One

The e-Literacy and e-Business (Knowledge Economy and e-Social Astuteness) CoLab has been running e-literacy and other skills programmes for unemployed youth in disadvantaged communities. The learning intervention in Pofadder is a partnership with Atlantica Yield, a solar power company and the majority stakeholder in Kaxu Solar One, a commercial solar plant.

→

Delegates graduating at the smart centre in Pofadder.

Article continued: Developing e-skills and e-astuteness in the Northern Cape

Kaxu Solar One has a social development division called SEED+, which focuses on giving back to the community through empowerment.

Project aim: The aim is to equip unemployed youth in targeted disadvantaged communities with e-literacy skills (digital literacy), proficiency development in English, skills in finding jobs, and entrepreneurship skills.

Target group: The delegates were 60 unemployed youth comprising 15 learners from four communities, namely Pofadder, Pella, Onseepkans and Witbank. These communities fall into the Namakwa District of the Northern Cape, also known as Little Namaqualand.

Dates: The learning intervention ran from June 2016 to November 2016. SEED+ Kaxu Solar One sponsored transport to take learners to the Pofadder e-centre.

About the Pofadder smart centre: The CoLab assisted in setting up a new centre in Pofadder. This was part of the partnership with Atlantica Yield (SEED+ Kaxu Solar 1) who sponsored the facility. The smart centre has 30 laptops, with a server and internet access. A Centre Manager was appointed and then trained by the CoLab in the various courses. The CoLab also assisted in the interview process. "The SEED+ Kaxu Solar One Skills Centre an example of how smart centres can work," says Ms Antoinette Lombard, CoLab Director.

Project content: The e-Literacy and e-Business CoLab ran four courses.

- eSkills4All is an online learning programme that covers digital literacy (e-literacy). It was created in South Africa for South Africans.

Position of communities that took part in the youth and community development project, Seed+ Kaxu Solar One

About Kaxu Solar One
Kaxu Solar One is a commercial solar plant located close to Pofadder, Northern Cape province. It is 51% owned by Atlantica Yield, with the rest owned by the Industrial Development Corporation (IDC) and the Kaxu Community Trust.

"This development has had a radical impact on the community, increasing the population, employment and investment," says Ms Antoinette Lombard, Director of the e-Literacy and e-Business CoLab.

- English Word Power is an e-learning programme for developing proficiency in the English language.
- Goal2Work is an instructor-led training programme aimed at providing the learner with a 'toolkit' for the recruiting process.
- Introduction to Entrepreneurship is a programme to build entrepreneurship skills. It involves delegates developing basic business plans in groups and then presenting these to 'judges'.

English Word Power, Goal2Work and Introduction to Entrepreneurship all involve digital literacy (e-skills) as basic skills needed to take part in the courses.

Monitoring and evaluation: The initial questionnaires have been completed and analysis is in progress. Interviews with focus groups are scheduled for March 2017 to determine the project's impact. The basic business plans that were developed in the Introduction to Entrepreneurship course will now go through a mentoring and coaching programme in 2017. "This is to check viability and to get the plans to a level where delegates can access funding," says Ms Lombard.

Graduation and certification: The delegates graduated on 9 December 2016 at the Pofadder e-centre. They received a certificate of competence for e-literacy, Goal2Work and Basic Entrepreneurship.

Future: The project is expanding in 2017 to include 30 learners from each community, totalling 120 new delegates. The courses will now take place in the communities, rather than travelling to Pofadder. ☑

Western Cape MediaTech Project Graduation – developing sector user and entrepreneurship e-skills

The MediaTech Graduation Ceremony took place on 2 February 2017 at Khayelitsha Barn. The event was attended by all 89 participants of the MediaTech Project. The participants received certificates of attendance. The e-skills intervention is now called 'Mobile skills for business enablement'. The CoLab team and business partners are in the process of submitting the course for accreditation.

The afternoon programme included three MediaTech participants presenting on how they have included new skills and mobile technology into their businesses. The guest speaker was Sizwe Nzima, a local entrepreneur from Khayelitsha.

ThundaFund, which facilitates crowd sourcing, presented on how to use crowd sourcing for business purposes. During the training intervention, participants referred to the need for funding to continue with their businesses and the need for local role models as support. A networking session followed.

About the MediaTech Project

The MediaTech Project uses a Living Labs approach (real-life creation, development and testing) to explore current ICT business practices in very small to medium-size entrepreneur businesses. The aim is to improve their entrepreneurial businesses by increasing the use of ICTs, in particular mobile technology. The MediaTech Project is a collaborative initiative between:

- The Bandwidth Barn in Khayelitsha, a social enterprise
- The e-Inclusion and Social Innovation e-Skills CoLab, based at the university of the Western Cape (UWC)
- UWC
- Digital Inclusion
- It also forms part of the FutureMakers programme, funded by Telkom and managed by Enterprise Room.

The initiative was piloted in 2015 and then the course ran from September 2016 to January 2017. The MediaTech project highlights the importance of small, medium and micro businesses (SMMEs) as active participants in the digital economy.

→

High school learners at the Western Cape mobile app development course.

Launch of Africa's first interdisciplinary Data Analytics and Business Intelligence Postgraduate Diploma

The launch of the first cohort in the Post-Graduate Diploma in Data Analytics and Business Intelligence occurred on 3 February 2017. The event took place at the University of the Western Cape (UWC) campus.

"The UWC Economic and Management Sciences faculty and the e-Inclusion and Social Innovation e-Skills CoLab, with business partners, have been working for more than 18 months to get this programme up and running," says Dr Leona Craffert, CoLab Director. "It is a first in Africa."

The CoLab is based at UWC.

Significant interest in the diploma

More than 120 applicants applied, with applications coming from within and outside South Africa's borders. "Approximately 53 people were selected, as they adhered to the set criteria," says Dr Craffert.

The focus of the programme is on skilling, re-skilling and upskilling. It follows a blended approach to enable employed people to also participate.

Bursaries sponsored by industry

Industry made bursaries available to students and 6 applicants qualified. Bursaries include full sponsorship and an 18-month paid internship. Dr Craffert

→

Article continued: Updates on e-skills interventions

says that this is an excellent example of what can be achieved when business and the academia collaborate.

Timelines
The diploma starts on 3 February 2017 and runs until July 2018. The 10 months – until November 2017 – comprises coursework on campus. From December 2017 to July 2018, students have internships in companies while working on the diploma research projects.

About the Post-Graduate Diploma in Data Analytics and Business Intelligence
An interdisciplinary curriculum of analytical and qualitative studies incorporates the disciplines of business management, information systems, statistics and computer science. This is followed by an internship where candidates must show an ability to solve complex problems. The course combines online learning with intensive face-to-face or classroom blocks on campus. It is being offered at UWC.

Admission requirements include a Bachelor degree with an average of 55% for exit modules in Information Systems, Business Management, Computer Science or Statistics, or a bachelor degree (or equivalent) with 2 years relevant working experience. Currently, this is a full-time course that runs over 18 months.

Upon successful completion, students can enrol for Masters' Programmes in the areas of Information Systems and Business Management, subject to Departmental and Faculty approval. Students will be limited in the themes in which they can do Master's research, based on prior knowledge.

For more information, contact Bronwen Geyer at *bgeyer@uwc.ac.za*

Collaboration between industry and academia
Industry partners involved in the design of the Post-Graduate Diploma in Data Analytics and Business Intelligence include:
- Capitec Bank
- Business Process Enabling South Africa
- Pivotal Analytics
- DataProphet
- Nimble Group
- Compuscan.

Why is the course needed?
Globally, businesses have access to all kinds of data, including Big Data. There needs to be specialised data analysis to provide insight around the challenges and opportunities. Data analysis is seen as the gateway to new development. However, in Africa, businesses have identified a lack of talent in this area.

Data analytics allows for faster and better decision making. Big Data analytics can identify new opportunities and improve efficiencies. It is only within the recent past that organisations have realised that they can productively use the volumes of information they have access to (Big Data) to develop trends and insights.

(L to R) Delegates at the launch of the Data Analytics and Business Intelligence Postgraduate Diploma, Gareth Pritchard (BPeSA), and Jacobus Eksteen (Compuscan)

Investigating global partnerships for innovative e-learning - University of Ontario, the e-Enablement for Effective Service Delivery CoLab and the Durban University of Technology

The e-Enablement for Effective Service Delivery CoLab hosted an e-learning engagement session in partnership with Durban University of Technology (DUT). The CoLab is based at DUT. The event took place on 23 February 2017.

The focus was on exploring e-skills and looking at e-learning options. It was attended by 27 people, with representatives from DUT, University of KwaZulu-Natal, and the Culture, Art, Tourism, Hospitality, and Sport Sector Education and Training Authority (CATHSSETA).

Article continued: Updates on e-skills interventions

Dr Surendra Thakur, CoLab Director, spoke about the Institute (NEMISA changing to iNeSI), the e-Skills CoLab and its work. The guest speaker, Rosalina Chai from Gnowbe, was hosted by collaboration partner, the University of Ontario. The Canadian university was represented by Prof Rob Elkington, Adjunct Professor FBIT and EDUC: University of Ontario's Institute of Technology (UOIT).

Investigating micro-learning
Ms Chai and Prof Elkington spoke on Gnowbe, a mobile app. The presentation looked at how the modern learner's expectations have changed. On-the-go, always-on learners expect engaging multimedia content that is delivered in bite-sized portions over longer time intervals. Content needs to be available immediately, anywhere and anytime.

Gnowbe is a mobile first, web-enabled, interactive micro-learning application. The focus is on bite-sized content, intuitive and multi-sensorial learning, and peer-to-peer interactivity (social and collaborative).

e-Learning for South Africa
The University of Ontario, the e-Enablement for Effective Service Delivery CoLab and DUT are investigating collaboratively-run e-learning courses. This is a follow up from a live-streamed international lecture by Dr Thakur on 4 July 2016. The aim of the lecture was to challenge the postgraduate students to come up with solutions to typical South African problems regarding learning and knowledge systems. The audience comprised post-graduate students were from UOIT. ☑

What is micro-learning? Micro-learning refers short, focused learning nuggets, designed to meet a specific learning outcome. Often using rich media formats, micro-learning provides just-in-time training. It follows the framework of ease of access, ease of learning and ease of sharing.

Trends in e-skills and the e-skills environment

- **The United Nations Broadband Commission for Sustainable Development was set up to respond to the Millennium Development Goals and the UN's Sustainable Development Goals. Its aim is to boost the importance of broadband on the international policy agenda, and expand broadband access in every country as key to accelerating progress towards targets.** Targets have been created to ensure populations fully participate in tomorrow's emerging knowledge societies. These targets cover broadband policy, affordability uptake, and gender equality to broadband access.
    - The Commission has an e-newsletter. For the latest edition, go to *http://bbnewsletter.itu.int/newsletter-issue-no-6-2017/*.
    - To subscribe, go to *http://bbnewsletter.itu.int/*
- PayPal, in partnership with Ipsos, released a global summary report, 'PayPal Cross-Border Consumer Research 2016'. **Research was conducted across 32 markets globally, including South Africa, to examine how and why people shop online and across borders.** Insights include: Shoppers in Africa are most likely to see data security as a barrier to shopping online in their own country. For more information, see:
    - *www.paypalobjects.com/digitalassets/c/website/marketing/global/shared/global/media-resources/documents/passport-citation.pdf*
    - *www.techcentral.co.za/big-growth-in-online-shopping-in-sa/71943/*
- **Business innovation is driving ICT decentralisation – the management of technology is shifting away from IT to other departments. This is contrast to previous models where an organisation's ICT department was the central resource for technology.** "IT hired the experts, set the standards, and supported business users. Today that model is shifting, across the globe and across industries… IT and business leaders agree that the use of technology has become increasingly decentralized over the past three years". This is part of the research commissioned by VMware and conducted by the Economist Intelligence Unit and Vanson Bourne. For more information, see *www.vmware.com/radius/research-shows-it-decentralization-disrupting-businesses/*.

About the Institute

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

The Institute (NEMISA changing to iNeSI) is a globally-recognised collaborative model that allows stakeholders to sustainably meet South Africa's e-skilling objectives.

The Institute 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: These 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: The Institute 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.

multi-stakeholder collaborative network

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

Five focus areas: The Institute 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: The Institute is organised on a national level, a provincial level and a local community level. The Institute's central office coordinates nationally and globally.

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

Contacting The Institute
For more information, contact *info@nemisa.co.za*.

The e-skills knowledge production and coordination CoLabs (e-skills CoLabs): These are situated at universities, with one in each province. There are currently six e-skills CoLabs:

- Western Cape e-Skills CoLab: e-Inclusion and Social Innovation, based at the University of the Western Cape
- KZN e-Skills CoLab: e-Enablement for Effective Service Delivery, based at the 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 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
- North West e-Skills CoLab: e-Agro-tourism, based at 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.

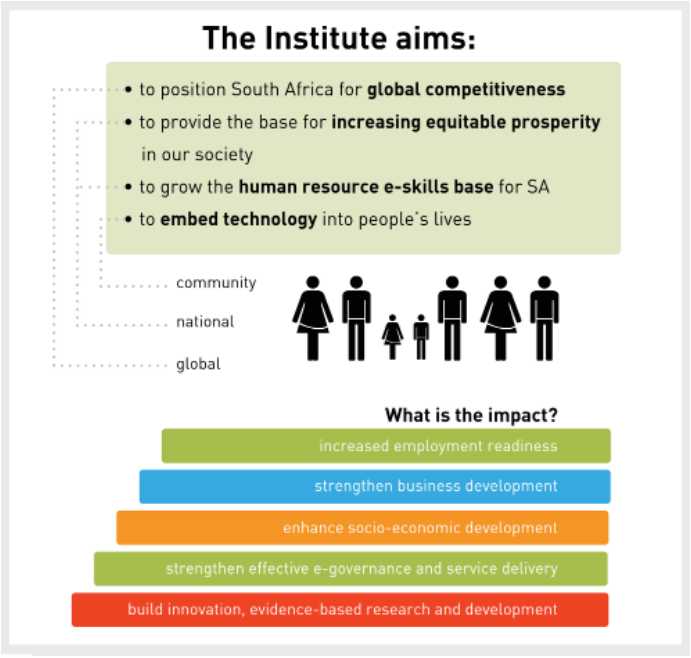
→

Article continued: Information on The Institute

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

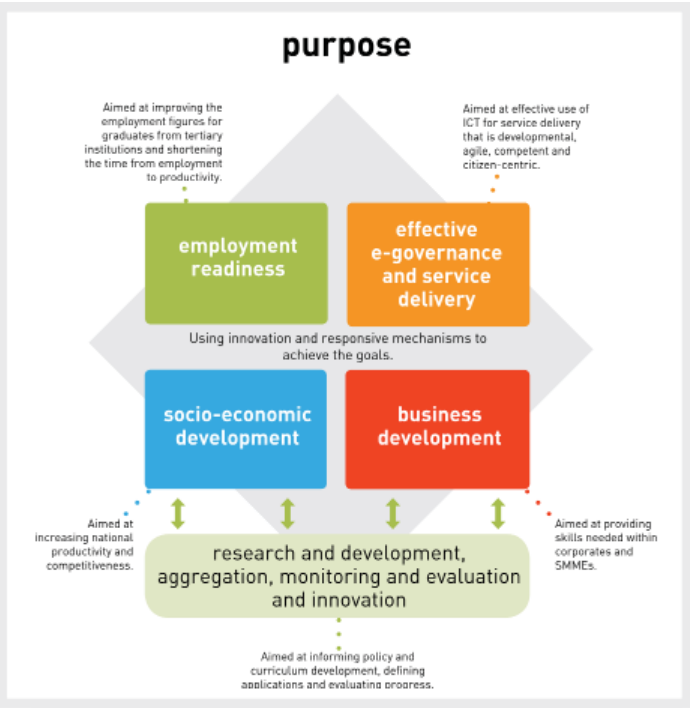
The Institute's national Research Network for e-Skills (ResNeS) is a multi-stakeholder collaborative network that focuses on knowledge for innovation (research).

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: The Institute'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 Institute's multi-stakeholder collaborative network, businesses are able to position their work within a local context and a developing country framework.
- The link that The Institute has with universities through its CoLabs and ResNeS means that business can also align new approaches using the benefits of an academic environment and a research function.



- Most importantly, the Institute 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 (digital 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.

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.

Partners in the Institute's multi-stakeholder collaboration

Education

WSU Walter Sisulu University

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

DUT DURBAN UNIVERSITY OF TECHNOLOGY

VUT
Your world to a better future

UNIVERSITY OF LIMPOPO

UNIVERSITY of the WESTERN CAPE

NORTH-WEST UNIVERSITY
YUNIBESITI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT

Government/South Africa

the doc
Department:
Communications
REPUBLIC OF SOUTH AFRICA

higher education & training
Department:
Higher Education and Training
REBUBLIC OF SOUTH AFRICA

Civil society

telecentre.org

ICDL

SAQA

eidos

SALGA
South African Local Government Association

dot digital opportunity trust

Business

RIM

CISCO

IBM

Telkom

CORE GROUP

Authorised Distributor

kagisoactiv

Neotel

Global developmental partners

UNDP

ITU

Kenya

Rwanda