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Ms Mymoena Ismail has a long history with developing e-skills human capacity in South Africa.

From 2010, she was Chief Director at the then-named Department of Communications' e-Skills Institute. Her work included being part of the team that designed and implemented a national model for the development of e-skills human capacity in the country and to improve the country’s World Economic Forum (WEF) rankings.

The model focused on a national approach (across government, business, education and civil society). This is in order to develop South Africa’s e-skills, e-readiness and e-astuteness capacity to deliver more equitable prosperity and global competitiveness.

The work of the e-Skills Institute resulted in the concept launch of the Ikamva National e-Skills Institute (INeSI) in February 2014. This is the first national catalytic organisation in South Africa. The model was endorsed by the ITU (United Nation’s International Telecommunications Union) and recommended to 55 countries.

INeSI is responsible for the development of e-skills human capacity in South Africa. The distributed model of INeSI was designed to impact against the National Development Plan, SA Connect and Outcome 5 of the Medium-Term Strategic Framework (MTSF).

Ms Ismail’s work included a leadership role for:
- The establishment of 6 provincial collaborative e-skills knowledge production and coordination CoLabs. These are positioned across the country in association with higher education institutions. They provide a delivery structure for an integrated, coordinated and locally-driven (vertical and horizontal) approach to capacitate an inclusive developmental state.
- The establishment of a national Research Network for e-skills (ResNes).
- The establishment of alignment and engagement with relevant international bodies at the planning and delivery levels. These include the United Nations Development Programme (UNDP) and United Nations Educational, Scientific and Cultural Organization (UNESCO).
- Multi-stakeholder collaboration with the national curriculum development and training working group. This is for developing a number of short courses, undergraduate and post graduate courses, and open and distance courses relevant to e-skills needs within the context of a developmental state.

In 2015, she was CEO at the Cape Digital Foundation. This is a not-for-profit and non-governmental agency that focuses on capitalising the development of digital infrastructure (broadband) as a means to bring about a connect economy.

“e-Skills efforts in South Africa need to be realigned. There needs to be a clearly defined alignment to ‘impact’ within the context of the National Development Plan (NDP-2030),

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.
MTSF and the Millennium Development Goals,” explains Ms Ismail.

She notes that South Africa needs to be positioned as a continental leader in e-skills development for strategic impact in the context of a developmental state.

Ms Ismail has a MCom Information Systems (University of the Western Cape) and is currently working towards her PhD.

The Institute’s alignment to SA’s broadband plan

The country’s broadband plan, SA Connect, outlines four pillars:

• **Digital Readiness**: Policies and regulations to make the country ready for broadband.
• **Digital Development**: Developing the broadband network and prioritising free public wi-fi networks to schools and clinics. The latter will provide points of connection for citizens to access e-government and other services ie to develop active citizenry.
• **Digital Future**: Focusing on making broadband affordable and easy to access.
• **Digital Opportunity**: The opportunities that exist because of broadband ie how to make sure people, organisations, education, businesses and government make use of the opportunities.

The broadband plan recognises that infrastructure fulfils the supply side of the broadband ecosystem but that it’s as essential to have a demand for broadband. Hence the Digital Opportunity pillar which has an emphasis on e-skills development.

The work of The Institute (NEMISA changing to INeSI) and its CoLabs is strongly aligned to SA Connect. The Institute focuses on human capacity development in e-skills, from e-literacy to high-level ICT practitioners and ICT thought leaders.
“The National Development Plan aims to eliminate poverty and reduce inequality by 2030. South Africa can realise these goals by drawing on the energies of its people, growing an inclusive economy, building capabilities, enhancing the capacity of the state, and promoting leadership and partnerships throughout society.” This quote from the National Development Plan (NDP) highlights reducing inequality as one of its core aims, as well as the steps needed to realise this goal.

There is clear alignment with the work of The Institute (NEMISA changing to INeSI). The Institute aims to develop South Africans capabilities in e-skills (digital skills) so that wealth inequality is reduced, there is economic development, and for South Africa to be globally competitive. This is done through multi-stakeholder collaboration.

Promoting gender equality within ICT

Reducing inequality includes reducing gender inequality. Both the Minister and Deputy Minister of the Department of Telecommunications and Postal Services (DTPS) have noted the importance of promoting gender equality within ICT. Following are some examples.

- At the 2016 African Internet Governance Forum, Minister Dr Siyabonga Cwele spoke about a robust and inclusive internet as core to achieving the African Union’s Agenda 2063. One of the Agenda’s aims is to ensure gender equality.
- DTPS Deputy Minister, Prof Hlengiwe Mkhize, gave an address at the 2016 Sub Saharan Africa Regional Summit in Barcelona. She looked at the role of ICTs around three of the Sustainable Development Goals (SDGS), one being gender equality. She noted that South Africa sees “ICTs as a tool for the promotion of gender equality, women’s right and the empowerment of women”.

Internet use and gender


When considering gender, ONE reports that one-third fewer women in developing countries are connected to the internet than men. The study also predicts that this gender gap in developing countries is set to widen. (ONE is a campaigning and advocacy organisation focused on ending extreme poverty and preventable disease, particularly in Africa.) The 2016 report can be found at www.one.org/africa/policy/making-the-connection/.

The gender digital divide and the lack of access and skills around the internet have a significant impact on the economy. According to McKinsey & Company’s report ‘Internet matters: The Net’s sweeping impact on growth, jobs, and prosperity’, internet technology is responsible for more than 20% of Gross Domestic Product (GDP) growth in developed economies (www.mckinsey.com/industries/high-tech/our-insights/internet-matters). It is clear that there should be a great deal of focus within these areas.

Intel’s ‘She Will Connect’ initiative

The 2016 ONE report notes that women invest the bulk of money they earn back into their families – 90% of income compared to 35% invested by men. It’s also shown that increasing women’s access to the internet by 10% can impact a country’s GDP by as much as 1%.

The Intel ‘She Will Connect’ initiative aims to skill 5 million African women between the ages of 15 and 25 to enable them to access the internet for opportunities around empowerment, education and inclusion. The focus on women is seen to have a far-reaching impact – not only on the lives of the women but their children, their families, their communities and their countries.
e-Skills and the broadband plan
South Africa is currently developing a national broadband network for people to access high-speed Internet. This is part of SA Connect, the broadband policy, which looks at developing broadband supply and demand.

While infrastructure provision is essential, the demand side – the ability to use the infrastructure and see the benefits it can provide – is as critical. The demand side is outlined in one of the policy’s four pillars: Digital Opportunity. Developing e-skills (digital skills) is part of this pillar.

The Limpopo e-Skills CoLab and ‘She Will Connect’
The Limpopo e-Skills CoLab: Connected Health, based at the University of Limpopo, is part of Intel’s ‘She Will Connect’ initiative in Africa. "To date nearly 500 young women, mostly from rural communities, have participated in this initiative, facilitated by the Limpopo CoLab," says Dr Farivar Rahimi, the CoLab Director.

This is part of The Institute’s larger effort of e-skilling the nation. This particular learning initiative empowers unemployed youth for employment readiness. While the CoLab’s focus area is Connected Health (e-health), it also drives (with the other CoLabs) human capacity development in e-literacy. "We are currently developing a patient management system and training health workers, but the most fundamental issue for South Africa is e-literacy," says Dr Rahimi.

e-Skills programme at University of Limpopo: Dr Rahimi says that more than 400 young women are participating in ‘She Will Connect’ from 21 November to 9 December 2016.

Delegate profile: “Participants are usually drawn from the university student population (about 30% of participants) and from young woman from the communities surrounding the University of Limpopo who are either still at school or who are unemployed (about 70% of participants),” says Mr Andrew Sholtz, Limpopo e-Skills CoLab Stakeholder Coordinator.

Impact study: The Limpopo CoLab is working with Intel to develop a study to measure the impact of ‘She Will Connect’ participation on young women. Intel has appointed a German company, Comperis GmbH – Institute for Psychological Market Research, for this work. The company has interacted with the Limpopo CoLab to assist with the development of measurement tools.

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

- Western Cape e-Skills CoLab: e-Inclusion and Social Innovation, based at the University of the Western Cape
- KwaZulu-Natal e-Skills CoLab: e-Enablement for Effective Service Delivery, based at Durban University of Technology
- Eastern Cape e-Skills CoLab: ICT for Rural Development, based at Walter Sisulu University
- Gauteng e-Skills CoLab: Creative New Media Industries, based at the National Electronic Media Institute of South Africa (NEMISA)
- Limpopo e-Skills CoLab: Connected Health, based at the University of Limpopo
- Northern Cape/Southern Gauteng e-Skills 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 the North-West University
The Institute (NEMISA changing to INeSI) has developed a multi-stakeholder collaborative platform. To e-skill South Africa, many stakeholders (across government, business, education and civil society) are needed. The aim of the collaborative platform is to align stakeholders to reduce duplication and increase impact.

The platform works on a national, provincial and local level so that stakeholders can develop initiatives and interventions at any level.

For greater impact, The Institute’s multi-stakeholder collaborative platform needs to increase the number of stakeholders in the aligned network. Consequently, it is important to promote The Institute, its CoLabs and the work being done.

**Eastern Cape CoLab at the Eastern Cape ICT Summit**

The Eastern Cape e-Skills CoLab: ICT for Rural Development promoted various CoLab activities at the 12th annual Eastern Cape ICT Summit. The event was held in East London from 22 to 23 November 2016.

The theme was ‘A Connected Digital Africa’. Topics included:

- Road to 5G
- An African knowledge-based society
- Creative digital development in media
- Cloud and cyber security
- Smart Cities, Internet of Things, Machine-2-Machine, 5G

**About the 12th annual Eastern Cape ICT Summit**

The event is a space for business development opportunities through matchmaking sessions, as well as a platform to discuss topical ICT issues, trends and innovative ideas within the public and private sector.

The audience includes representatives from government (including municipalities), business, education and civil society.
Article continued: Promoting the multi-stakeholder collaborative platform for e-skills impact

- 4th Industrial Revolution: recycling and technology
- e-Health reloaded
- e-Learning – role of ICT in changing classrooms
- Agriculture and technology

Presenters included Dr Andile Ngcaba (Chairman of Convergence Partners), Mr Lurnko Mtimde (CEO of USAASA), Mr Pandalani Munyai (CTO of SITA), Ms Puleng Kwele (CEO of Broadband InfraCo), Mr Vuyani Jirana (Chief Officer of Vodacom Business), and Mr Brian Herlihy (CEO of Black Rhino Group).

The Acting CoLab Coordinator, Ms Lorna van der Merwe, gave a presentation on the EC CoLab’s digital skills training for teachers. This initiative is being run in collaboration with the provincial Department of Basic Education. She was also interviewed by Bay TV on the topic.

The EC e-Skills CoLab had an exhibition stand at the event. "It was visited by many interested conference delegates," said Ms van der Merwe. "The summit was a vibrant invigorating event attended by over 400 delegates. It provided an opportunity to showcase the work of the e-Skills CoLab and engage with representatives from government, business, education and civil society. We were especially motivated by the number of young people visiting our stand to find out more about the work of the CoLab."

KZN e-Skills CoLab promoting The Institute’s work at ICACCE 2016

The KwaZulu-Natal e-Skills CoLab: e-Enablement for Effective Service Delivery was part of the Technical Program Committee for the third International Conference on Advances in Computing, Communication and Engineering (ICACCE 2016). The event ran from 28-29 November 2016. The CoLab also provided logistical and administrative support for this event.

“This is an IEEE initiative – a very prestigious event in the ICT sector. It provides a platform for ICT engagement and the CoLab used this to network and promote the work of The Institute (NEMISA changing to iNeSI) and the KZN CoLab,” said Dr Surendra Thakur, Director of the KZN e-Skills CoLab. “Furthermore, these high-level conferences are an important part of developing e-skills.” IEEE is the Institute of Electrical and Electronics Engineers.

The annual conference creates a forum for researchers and engineers, in both academia and industry, to exchange the latest innovations and research advancements in innovative computing, communication and engineering.
The rollout of broadband across the country provides the platform for numerous activities that will contribute to socio-economic development. Broadband is high-speed internet. Access to broadband, enabled by the appropriate e-skills (digital skills), opens up a digital world that has an impact on the way individuals, communities, business, education, civil society and the government operate.

This is outlined in the country’s broadband plan, SA Connect – from creating infrastructure that, for example, allows citizens to access e-government services, to creating a demand for broadband, with a strong emphasis on developing e-skills. The latter is outlined in the Digital Opportunity pillar.

The development of e-skills includes, among others, user skills (e-literacy), e-skills for entrepreneurs, e-health skills (connected health), and e-skills in learning curricula.

Digital Opportunity and Creative New Media skills
Another important area in the Digital opportunity pillar is providing a framework for creating local and relevant content and applications that people want to use. It is here that e-skills for Creative New Media are of particular importance.

The Gauteng e-Skills CoLab: Creative New Media Industries is currently training youth in film and television production (Creative New Media e-skills). Growing this e-skills base and developing people’s capabilities leads to increased employment readiness, as well as opportunities for self-employment through freelance.

The aim of developing e-skills is to have an impact on the South African economy through increased equitable prosperity and through further embedding technology into people’s lives. This type of initiative is also aligned to the National Development Plan’s aim for South Africa to be a dynamic and connected information society by 2030.

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

SABC learnership programme
The Gauteng e-Skills CoLab has partnered with the SABC to train 100 candidates in five provinces. This is for the Level 5 National Certificate: Film and TV Production. This SABC learnership involves 20 delegates per province, namely, Eastern Cape, Gauteng, KwaZulu-Natal, Free State and North West. The Gauteng CoLab is conducting the training implementation.

Bridging course: Because the candidates had little or no previous experience in the field, the learnership began with a bridging course. “This involves choosing electives from the Level 4 National Certificate: Film and TV Production,” says Mr Doc Fick, Head of Broadcasting at the Gauteng e-Skills CoLab. Electives include: camera operation, lighting, sound recording and visual editing.

The bridging course has begun in all of the designated provinces:
- The Gauteng learnership ran from 3-28 October 2016
- The Free State learnership ran from 10 October to 4 November 2016.
- The Eastern Cape learnership started on 17 October 2016 and is in progress.
- The North West and KwaZulu-Natal learnerships began on 14 October 2016 and are in progress.

Assessments: For candidates to graduate the bridging course, they need to have compiled a digital portfolio of evidence. These portfolios are then assessed.

The Level 5 National Certificate: The next step is for the candidates in the various provinces to start the Level 5
Developing Creative New Media e-skills for equitable prosperity and economic growth

learnerships. Gauteng has already started the process. Mr Fick says that the estimated date of completion is September 2017.

Delegate profile: The targeted audience is predominantly marginalised and unemployed youth.

Course content: The Level 5 National Certificate: Film and TV Production focuses on specialist competence in areas related to film and television production. These include camera, lighting, vision control, vision mixing, editing, recording, sound and captioning competence, with an elective component. The qualification addresses competence for studio and outside broadcasts, film and television production, and single and multi-camera productions.

Aim: The aim of these learnerships is to address the skills disparity in Creative New Media and to open up employment opportunities. “We want to develop e-skills so that candidates are employment ready or so that they can start their own freelance operation,” says Mr Fick. Potential career paths include:

- Camera operators
- Editors
- Sound producers and boom operators
- Script writers
- Production coordinators
- Assistant production managers
- Content writers
- Insert producers

Gauteng delegates working on their Level 5 National Certificate: Film and TV Production.
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.

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 Mymoena Ismail at mymoena@nemisa.co.za.

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 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 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).

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)
Article continued: Information on The Institute

The Institute aims:
- to position South Africa for global competitiveness
- to provide the base for increasing equitable prosperity in our society
- to grow the human resource e-skills base for SA
- to embed technology into people’s lives

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

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<td>Pillar 2: Active citizenry</td>
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<td>Pillar 3: Inclusive economy</td>
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<td>Pillar 4: Build capabilities</td>
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<td>Pillar 5: A capable developmental state</td>
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<td>Pillar 6: Leadership throughout society to work together to solve problems</td>
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The Institute’s 5 primary focus areas

Knowledge for innovation (research)

- e-Astuteness (teaching and learning)
- Multi-stakeholder collaboration
- Innovation
- Aggregation (monitoring and evaluation framework)
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.

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<th>Term</th>
<th>Definition</th>
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| **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 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.

- **In your culture and community**
- **When you learn**
- **In your personal life**
- **In your work and business**

**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

Government/South Africa

Civil society

Business

Global developmental partners

Kenya

Rwanda