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Department
Communications
REPUBLIC OF SOUTH AFRICA

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
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THE GAUTENG e-SKILLS KNOWLEDGE PRODUCTION AND COORDINATION HUB AT THE UNIVERSITY OF PRETORIA

Market Analysis of e-Skills activities in the Gauteng Province

compiled by

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[12 November2011]

This Market Analysis report presents the feedback obtained from Gauteng province across the government, education and the private sector as part of the scoping phase outlined in the Memorandum of Agreement between the University of Pretoria and the e-Skills Institute of the Department of Communications. This document is submitted to the e-Skills Institute of the Department of Communications while still in a draft proposal form. A number of clearances from various levels at the University of Pretoria are yet to be obtained.

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1. Introduction

On 06 November 2009, the Department of Communications (DoC) signed a Memorandum of Understanding (MoU) with the University of Pretoria (UP) towards establishing a relationship between the e-Skills Institute of the Department of Communications (e-SI) and the University in the interest of e-Skills development. The purpose of the e-SI is to address the calamitous situation South Africa finds itself in with regard to developing suitable skills for it to sustain equitable prosperity and global competitiveness in the information society and knowledge economies.

After the e-SI summit of South Africa in July 2010 the e-SI signed a Memorandum of Agreement (MoA) with the University to establish a Knowledge Production and Coordination Hub on 23 February 2011. The MoA provides Terms and Reference for the Scoping Phase for the establishment of the Hub, inviting the University to propose how to establish and operationalise the Hub.

The scoping phase requires the University to conduct a market analysis of existing e-Skills activities in the Gauteng Province. This report presents the initial feedback obtained from Gauteng across the government, education and the private sector.

1.1. High level Executive summary

- e-Business, e-Literacy, and e-User courses are the most popular courses among the various training programmes and training projects offered

- e-Practitioner courses are receiving only moderate attention from the training providers who responded

- e-Government, e-Participation and e-Democracy offerings are almost non-existent

- It appears that many providers are prioritising e-Business, e-Literacy, and e-User skills as demanded by the market; This may be indicative of the prescriptive practices that organisations need to adopt for staff training

- Many of the courses offered tend to have a short term focus suggesting missed opportunities for lifelong learning and narrowly designed course offerings

- Courses offered in the various skill categories do not vary greatly and tend to be specialised vendor specific training

- Training providers appear to be guided by the needs of employers and ICT vendors rather than social needs

2. Methods and procedures

In order to achieve a fully comprehensive and balanced market analysis, UP commissioned and co-operated with an independent research company Consulta Research (Appendix B: Feasibility matrix in choosing Market Research partner). A formal letter of authorisation (Appendix A: Letter of authorisation) was issued from the University of Pretoria, copied to the e-SI and DoC to authenticate the survey. In consultation with Consulta Research, a 7 question survey instrument was established and used to collect data between May and June 2011 for the high-level analysis of e-Skills activities in Gauteng (Appendix C).

89 organisations participated in the survey providing a substantive base of data to analyse. The survey included a wide range of organisational representatives from CEOs, HR professionals to training managers.

2.1.Market research strategy

Since the task at hand was to <u>understand at a high level</u> the existing e-Skills activities in Gauteng, a quantitative approach was adopted which assumes that there exists an objective reality that can be described by measurable properties (Table 1) that are independent of the observers instruments. The measurable properties were adopted from areas of impact identified in the National e-Skills plan of Action (NeSPA, 2011 pg 78).

Two additional measurable properties were included to understand the number of branches in Gauteng, and the type of e-Skills training being offered; projects and programmes. The difference between a programme and a project is that a programme is long-term while a project is short-term.

Table 1: e-Skills Measurable Areas of Impact

e-Skills terminology	Description	More common terminology
e-Literacy	Skills aimed at employment readiness with emphasis on ICT literacy, particularly targeting unemployed and unskilled youth and rural society (including starting own small business).	e-Literacy, Computer Literacy, ICDL
e-Participation	Skills that focus on enhancing citizen interactive engagement (primarily using ICT) with communities, local, provincial and national governance processes to increase participation, self-reliance and equity.	e-Participation
e-Democracy Skills	E-Democracy is an extension of e-Participation with the unique ability to cast votes	e-Democracy Skills
e-Government /Governance Skills	Skills that focus on increasing efficiency and productivity interactive bimodal approaches to service delivery of governments and its agencies across all ICT platforms including new cell phone technology, community radio, and the like	e-Government /Governance Skills

e-Business / e-Entrepreneur Skills	Skills that are aimed at increasing organizational efficiency and productivity	e-Business Skill
e-User Skills	Skills aimed at increasing self-reliance, participation and community support in a socio-economic setting to build social cohesion in ways that can better build local solutions to societal matters such as crime, health, education and the like. These skills would be supported by Internet-based groups and the community could be taught how to access other services via the Internet.	e-User Skills
e-Practitioner skills	Skills which are specialised and designed to create a person who is proficient in Computer Science and Information and Communications Technology related areas	e-Practitioner skills, ICT expert, ICT specialist.

2.2 Data sources

The data sources were from the following:

1. Education

   a. Department of Higher Education (National Universities)

   b. UMALUSI (public FET colleges)

2. Government - GCIS database

   a. National, provincial and local

   b. Thusong Service Centres

   c. State Owned Enterprises

3. Business sector (private providers)

   a. Magazine articles

   b. ISETT SETA database of accredited ICT training providers

4. Civil Society

   a. SANGONeT a renown NGO that advocates for the use of ICT amongst NGOs

2.2. Data collection strategy

The survey was carried out telephonically and using a web-based interface. A representative of Consulta Research contacted each of the respondents at least twice guided by a set of pre-defined questions. No incentives were offered.
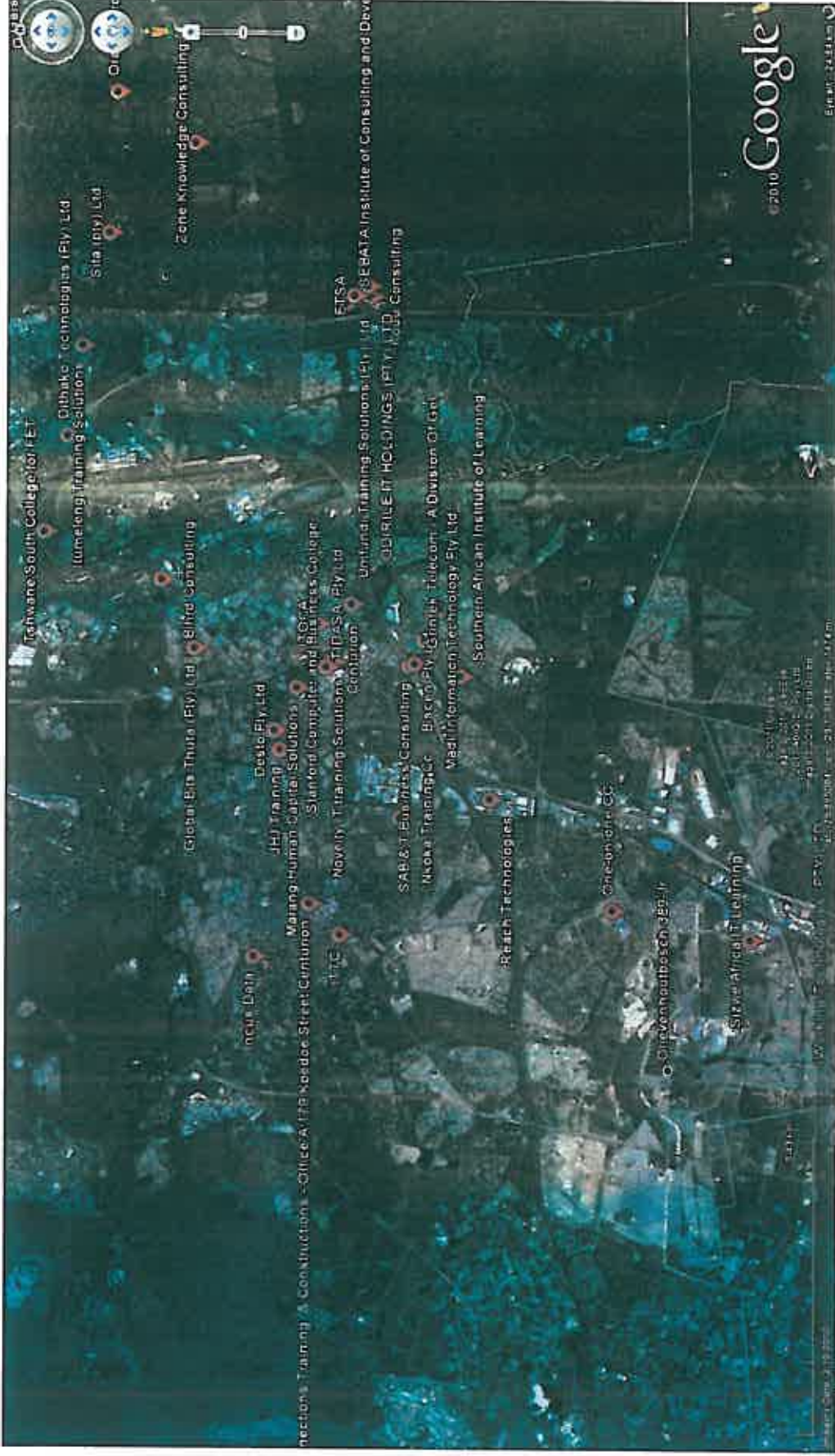
2.3.Geographic mapping of all the data sources (interactive on Google Earth)

2.3.1. Johannesburg
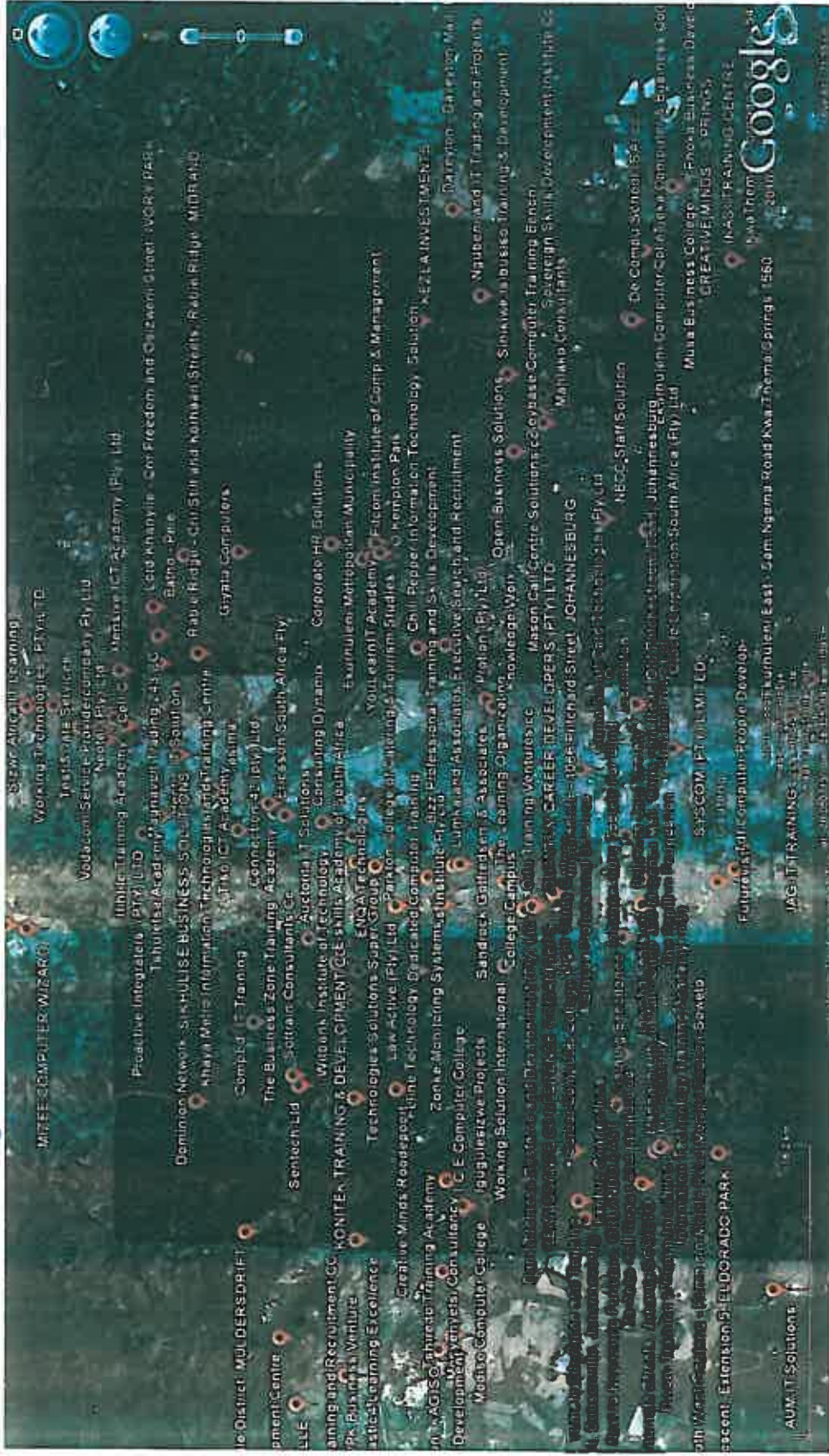
Gauteng e-Skills Hub Market Analysis 2011-001

2.3.2. Midrand

Gauteng e-Skills Hub Market Analysis 2011-001

2.3.3. Pretoria

3. Facts and details

3.1 Response rate

Overall, the response rate was 5.4% (Figure 1) which is not untypical of large market research surveys.

1. Web based survey for every 45 invitations sent only 1 person completed the survey.

2. Telephonic interviews (no e mail) for every 15 respondents phoned only 1 person agreed to participate and completed the interview.

3. Telephonic interviews (Web booster) for every 55 respondents phoned only 1 person agreed to participate completed the interview.

| Platform	Description	List Loaded	Sample Realised	Average Hitrate (1 to ...)
Web-based	All respondents with valid e-mail addresses were sent an invitation to complete the survey online.	631	14	45
Telephonic	All respondents who did not have e-mail addresses (the majority being private providers) were contacted telephonically to do the interview.	508	68	15
Telephonic (Web booster)	All respondents who received an e-mail invitation but did not complete the survey, were contacted telephonically.	521	7	55
Total		1660	89	

Figure 1: Response rates

### 3.2 Quick overview of results

Table 2 below contains charts that show a brief summary of the results:

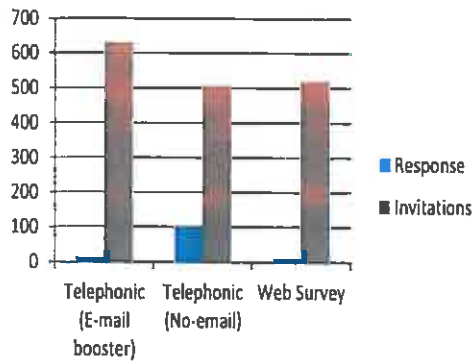1. 72% of respondents indicated that they have branches in Gauteng.

2. Of the respondents who have branches in Gauteng

   a. 41% offer e Skill programmes and

   b. 59% offer e Skill projects.

3. The second chart shows the percentage of each e Skill programme/project category provided
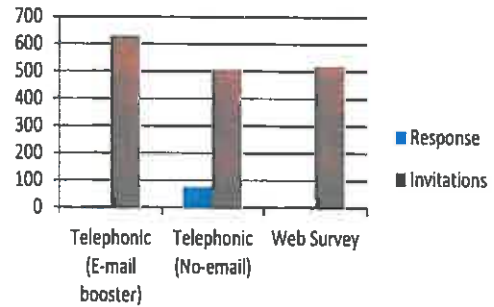
Table 2: Brief results

On which of the following eSkills do you offer training?

Do you have any branches in Gauteng?
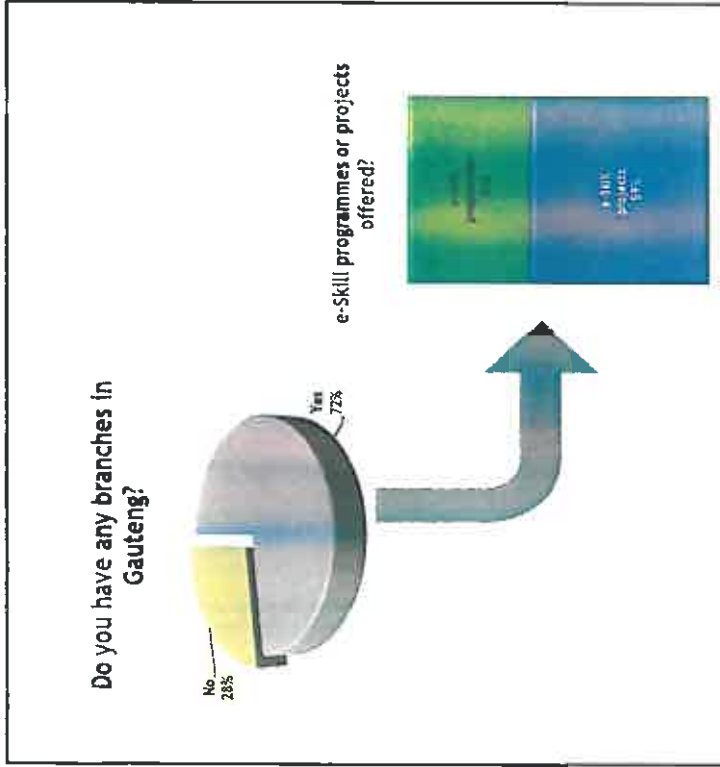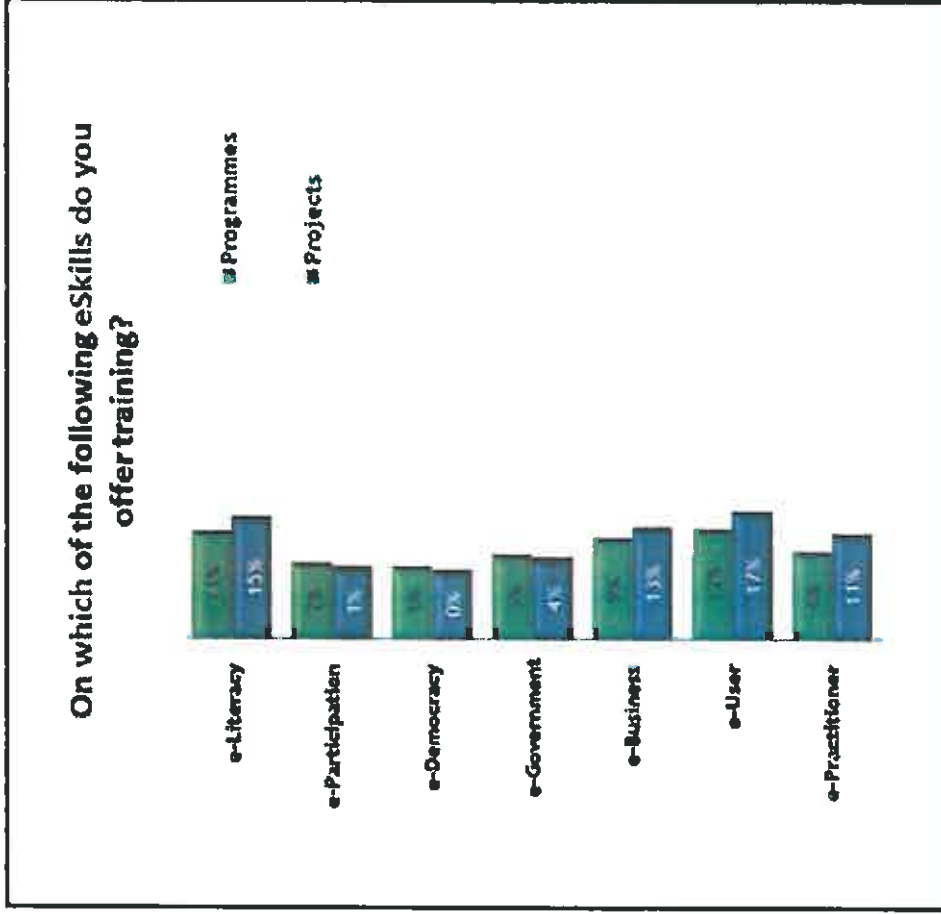
3.3 Results

3.3.1 Survey approaches and response rate

	Response	Invitations	Response rate
Telephonic (E-mail booster)	15	631	2%
Telephonic (No-email)	96	508	19%
Web Survey	12	521	2%

*n=123 (overall)

Survey Approach	Response	Invitations	Response rate*
Telephonic (E-mail booster)	5	631	1%
Telephonic (No-email)	77	508	15%
Web Survey	7	521	1%

*n=89 (Gauteng only)

Figure 2: Survey approaches and response rates

The response rate compared to the invitations shows the low level of comfort with web-based survey and email tools. This is an indicator of the great need to promote e-User skills in Gauteng.

3.3.2 Participant characteristics

Branches	Number
Missing Response	2
1 Branch	70
2 Branches	9
3 Branches	5
4 Branches	1
6 Branches	1
27 Branches	1
	89

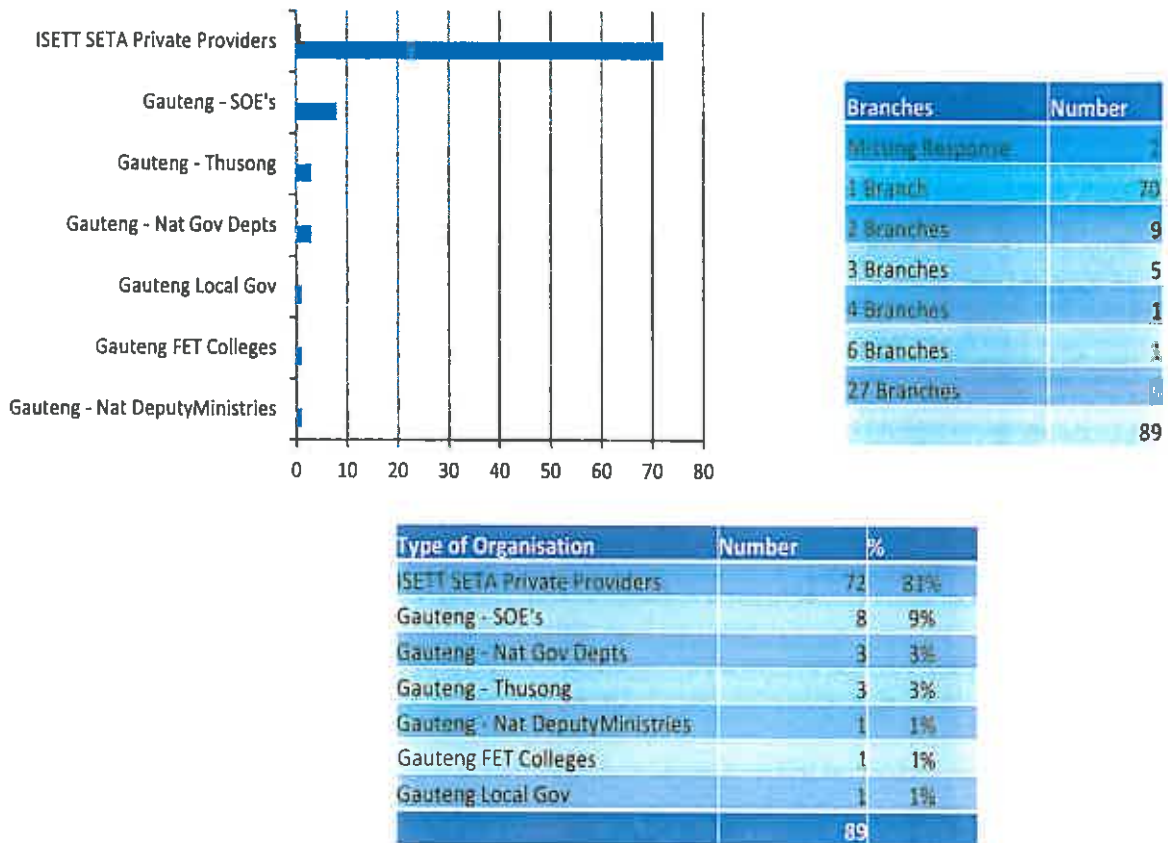| Type of Organisation	Number	%
ISETT SETA Private Providers	72	81%
Gauteng - SOE's	8	9%
Gauteng - Nat Gov Depts	3	3%
Gauteng - Thusong	3	3%
Gauteng - Nat DeputyMinistries	1	1%
Gauteng FET Colleges	1	1%
Gauteng Local Gov	1	1%
	89	

Figure 3: Participant characteristics

ISETT SETA private providers are clearly more open to collaboration with government for e-Skill projects. They are followed by State Owned Enterprises and the community Thusong Service Centres.

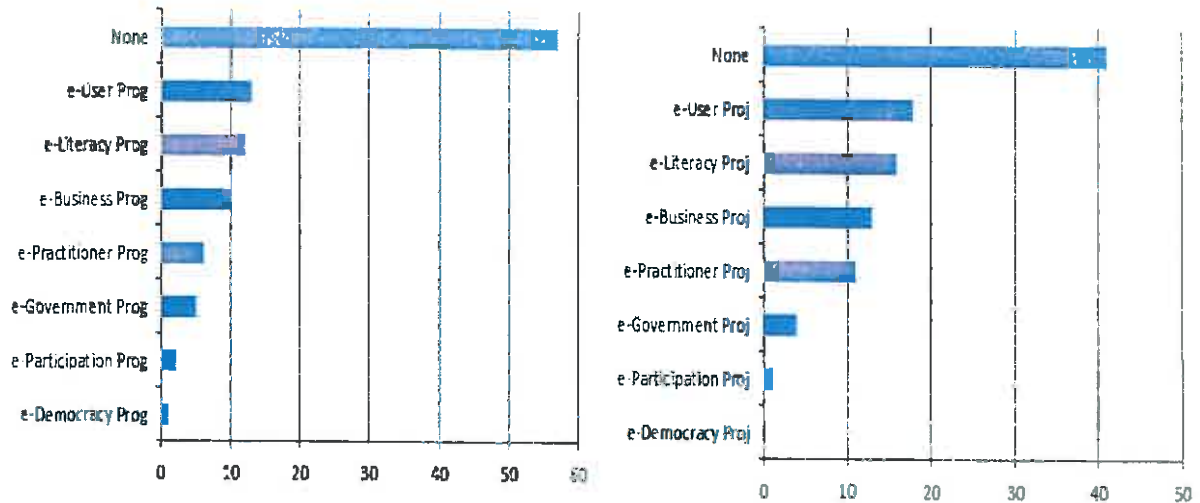### 3.3.3 Types of Programmes and Projects Offered

Figure 4: Types of programmes (left) and projects (right) overall

In terms of numbers based on the responses, it would appear that e-User type programmes are more common in Gauteng. This is followed by e-Literacy and e-Business type of programmes. The least are e-Democracy.
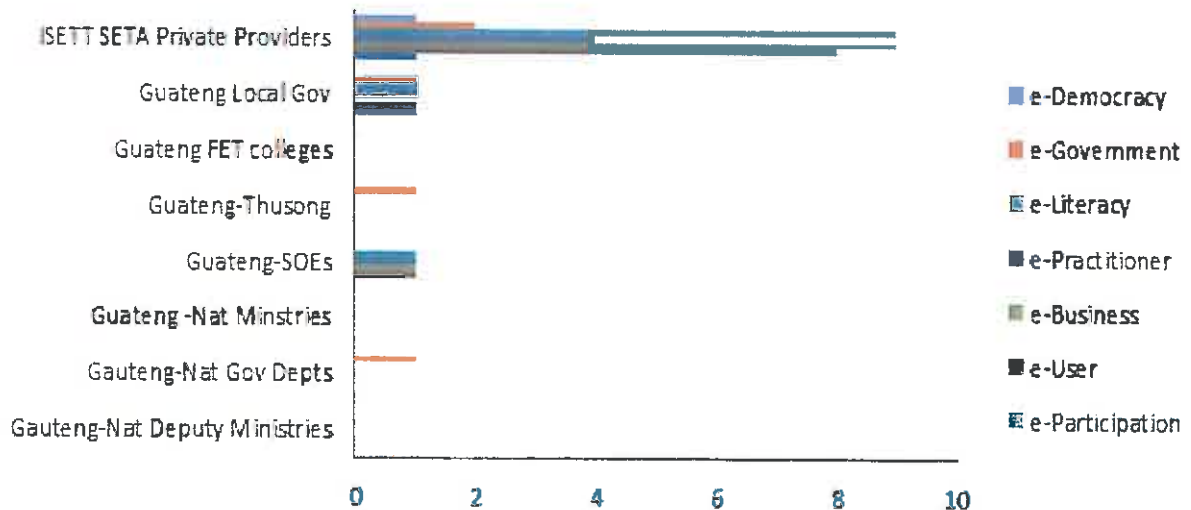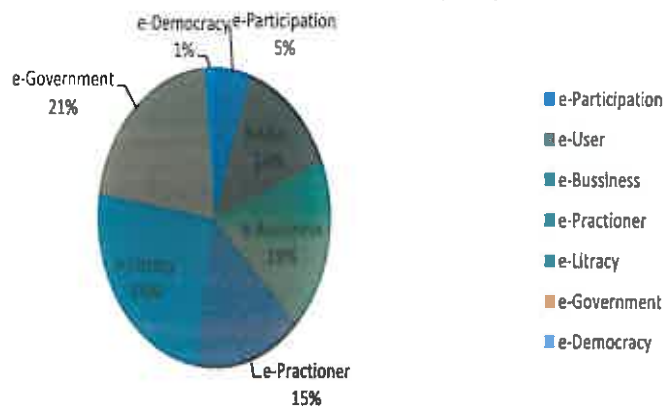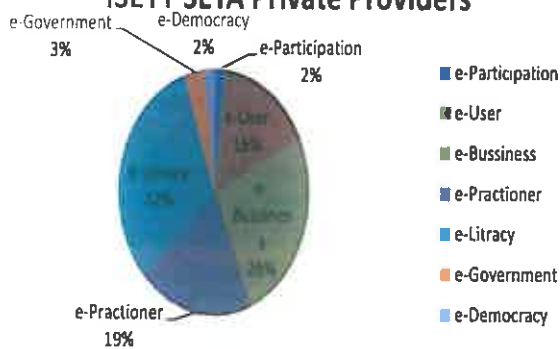

Figure 5: Types of programmes offered by sector

Nature of programmes offered per year

Nature of programmes offered by ISETT SETA Private Providers

Nature of programmes offered by Guateng Local Government
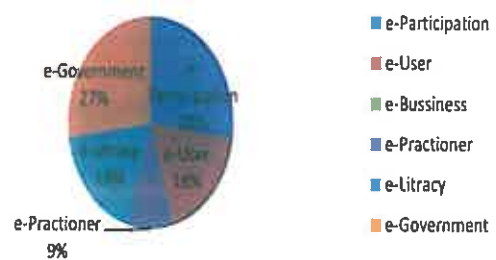
Figure 6: Nature of programmes offers by key sectors

According to the sectors that were surveyed, the ISETT SETA private providers offer the greatest amount of training.

3.3.4   Programmes based on sectors
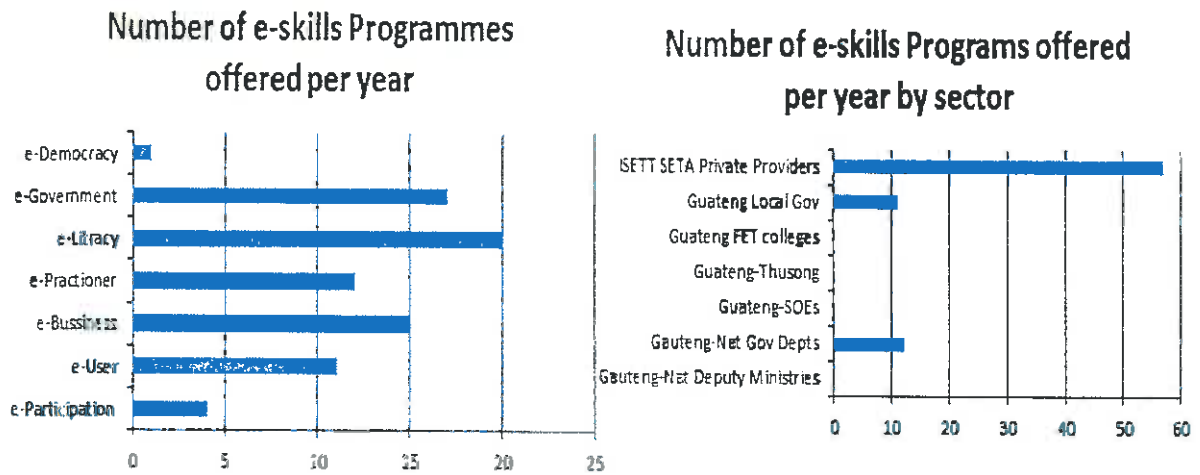
Figure 7: Programmes offered per year (left) by sector (right)

It is quite clear that each of the sectors has its own name for what may be regarded as e-Skills programmes and projects (Table 3: e-SI type programmes offered by sector and Table 4). It is also possible that many used the opportunity to market some of their products rather than provide information about them. It shows the need to standardise on names of course in e-SI.

Table 3: e-SI type programmes offered by sector

|	e-Literacy	e-User	e-Business	e-Practitioner	e-Participant	e-Government	e-Democracy
SSETA'S SETA	• Microsoft office from basic to advance • Fundamental computer literacy and N.U • Internet programmes • Professional receptionist courses, call centre, core unit standards information for communication technology • Security training, new venture creation and early childhood developing programmes. • VKC	• Business Administration • Human resources • Secretarial and traffic management • End-user computing and programing • ICT national certificate on end-user, cane furniture making • International computer driving licence • New venture creation and IT end-user • NQF level 3,4 and 5 technical programmes • Retail software that are developed for our customers which includes, Agri, Cash build, Vodacom, Virgin mobile, Engen, Total, BP, Sasol	• Computer & Business engineering studies, ERP systems, software development, Financial management, Microsoft office on transport skills • New venture creation in training for people in business and internal audits New venture creation on entrepreneurship programme • System support, technical support, skills development, system development and end-user ETD programmes • Website Design	• E-learning and E-health • ODETD new venture creation • Programming, system support, Software development and Java	• IT technical support	• Environmental administration and democracy in Africa • We offer what the ends wants, supply in Architecture and Enterprise	• E-Democracy
Local Government	• "Gauteng Online Schools Programme (GoL) • Gauteng Broadband Programme (G-Link)"	• GoL including the Educational Technologist and school IT support staff, G-link		• The e-Government Monitoring and evaluation framework with the Link centre at WITS, Educational Technologists in GoL	• GoL, kiosk rollout, Gauteng Broadband Programme	• Gauteng Portal, applications and services, the application image in GoL, and services intended for G-Link	•
SOE	• Microsoft Training	• Microsoft, SAP, Portal	• Microsoft Training	• Microsoft, SAP Portal			•

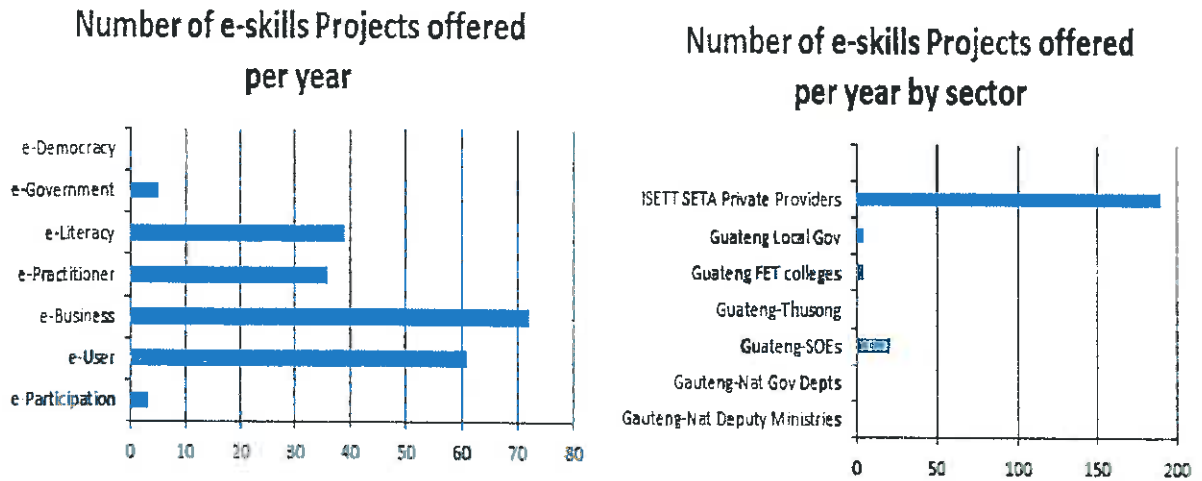### 3.3.5 Projects based on sectors

Figure 8: Projects offered per year (left) by sector (right)

Table 4: e-SI type projects offered by sector

	e-Literacy	e-User	e-Business	e-Practitioner	e-Participant	e-Government	e-Democracy
SSETT SETA	• Basic computer literacy skills, E-mail, Internet • English and maths • Fundamentals of Microsoft Office, internet and basic touch typing • IT and user • Life skills and mathematics • Microsoft Office from Basic to advance • End-user computing systems support • Same as the programmes above • They are the same but over a shorter period • Computer e-literacy projects all of them short term	• Assess and moderate • Basic programmes, quick books, E-mail and internet training • Computer skills, Internet, Outlook and data recovery • Business administration • End user computing • extension IT coding and tutorial, Negotiation skills, project management skills, coaching, mentoring skills and supervision skills • Office computing and call centre training, Office, Word, Excel and networking and programming • IT skills development projects • The same as the e-User programmes but over a shorter period	• Have computer training, Microsoft Office (Word, Excel, Access, PowerPoint, Internet and World Wide Web and other advanced training • Entrepreneurship to finance management skills, marketing skills, business training skills, business and operation management skills • Health and safety • Mentorship and coaching • Softskills, Book keepers • Team transport and supply chain management • CML short courses • coaching, leadership coaching and mentoring • We do a presentation of web development	• Complete systems practitioner programme • e-Learning and e-Health • End user computing facility training and education, moderation training • Microsoft programmes, pdue methodology, Programming, system support A-, N+, IT, accounting, graphic designing, web designing, network and computerised booking keep cashier and computerised cashier	• Project management, HR and management assistance	• Finance and administration sustainable programmes, Leadership, environment again, governance, financial management audits, management project management and, Human resource development, Municipal government programmes legislation	
Local Government	• GoL introductory and Advanced training	• GoL Educational Technologists and school IT Support staff					
SOE			• Soft skills training and MS Office • Microsoft applications, library and archival management systems, etc				

Gauteng e-Skills Hub Market Analysis 2011-001

- Plumbing, welding and engineering and Automotive Computer courses

3.4   Data challenges

1. Cleaning and combining the lists and getting them in the right format

    a. Many duplicates in terms of names and contact numbers

    b. No unique identifiers on contacts

    c. In some instances 1 person/name fulfilled 2 or 3 roles

2. Some names on the list were not contactable:

    a. The President

    b. Deputy President

    c. Ministers

3. Many email addresses were generic addresses (i.e. info@......)

    a. Such email addresses do not usually reach the correct person

4   Discussion and analysis of facts and details

a. 72 (81%) of the organisations participated were ISETT SETA providers. Majority of the providers (80%) who responded had one branch in Gauteng. The findings in the study are therefore more applicable to smaller ISETT SETA providers.

b. Almost less than half of the respondents (n=89) offer e-skills offerings that are less than a year. Of those who offer short-term e-skill offerings, a majority appear to focus on e-User, e-Literacy and e-Business courses.

c. Only 37% of the respondents reported offering courses within an e-skill programme i.e. courses with a duration longer than a year. Respondents reported a similar focus to their e-skill projects i.e. a focus on e-User, e-Literacy and e-Business courses.

d. Not surprisingly, the frequency of courses shares a similar pattern. However e-business courses are scheduled more frequently than e-literacy and e-user courses. Perhaps this is not surprising since courses with higher demand are typically stimulated by the needs of employers.

e. Respondents reported lower offerings and frequency for skills related to e-participation and e-government. It appears that these broader civic engagement goals may lack the sponsors as claimed by business or organisational related e-skill courses. First, this may also be a function of training providers not being aware of the demand for courses seeking to achieve broader e-skill goals. Second, this may also be a function of training providers with limited skilled resources

focusing on courses that command greater market demand. Third, the demand for specialised courses may be a reflection of vendor influences in setting the e-skills agenda.

f.   Respondents were asked to describe their short term as well as long term offerings. Content analysis suggests that both e-skill programmes and projects tend to focus on offering similar courses. Vendor specific courses are understandably popular. Many respondents offer courses on Microsoft applications as part of the different e-skill category offerings in e-literacy, e-user and e-business.

g.   E-Business skills are functionally specific.

h.   E-Practitioner skills are also very functionally specific. E-Practitioner skills can include training on Enterprise Resource Planning (ERP) packages such as SAP for business users on the one hand and specialised software programming training using object-oriented languages such as Java for more technically oriented practitioners, on the other.

i.   While respondents reported limited offerings around e-participation and e-government, one respondent offered training on the Gauteng portal, applications and services. Similarly, another respondent mentioned offering courses on e-learning and e-health.

5   Recommendations

a.   The survey approach was useful in providing general e-skill trends in the Gauteng region. The current exploratory research is more indicative of trends among ISETT SETA training providers. The gap analysis should aim at obtaining information more evenly from other training providers, government, business and civil society.

b.   Despite the use of the interview guide and fully briefed interviewers, the study was vulnerable to different interpretations of the different e-skill categories. Potential overlaps among the different categories may have been unavoidable. Future e-SI research should aim at developing more concise operational definitions for the different e-skill categories to minimise ambiguity in future quantitative studies.

c.   Qualitative research could provide richer insights into the specifics of the course offerings and challenges facing training providers. For instance it is not clear to what extent the training covers the business content relevant to the use of a Microsoft application (e.g. prepare a budget in excel).

d.   The overall response rate of 5% is comparable with other survey studies that do not use incentives to draw responses. Despite its limitations, the telephonic approach offers the most cost effective and speediest approach to collect data.

e. Using desk research approaches, secondary data from authorised sources can be used to complement this survey research, to develop a more complete picture of the e-skill training trends.

f. The content analysis suggests that in certain e-skill categories, current offerings may be narrowly focused. Future research should consider benchmarking these courses to international offerings.

6 Conclusions

While e-Business, e-Literacy, and e-User courses are the most popular among the various training programmes and training projects offered, e-Practitioner courses are receiving only moderate attention from the training providers who responded, and e-Government and e-Participation offerings are almost non-existent.

Many of the courses offered tend to have a short term focus suggesting missed opportunities for continuous education and narrowly designed vendor specific course offerings omitting complementary skills associated with ICT use.

Training providers that are mainly guided by ICT vendors and are as such unaware of vendor agnostic e-skills training typically associated with e-Government, e-Participation and e-Democracy skills. While it is critical that the Hub maintains its focus on the needs of employing organisations, the Gauteng e-Skills Hub may want to promote the production of courses aimed at broader civic engagement.

The e-SI taxonomy of offerings with concrete categories simplifies the prioritising and focus given to courses. For instance if e-Entrepreneurship is a specific type of e-business course, identifying such courses at the appropriate level of detail can provide visibility and focus to stakeholders who need to prioritise and expend resources in the development of e-skill initiatives.

Appendices

Appendix A: Letter of authorisation

March 2011

Director General (DG)
Government Departments

Chief Executive Officer & Managing Director
Government Owned Companies

Chief Executive Officer, Rector & Vice-Principal
Sector Education & Training Authorities

Chief Executive Officer & Managing Director
Business and Civil Society

Dear Sir / Madam,

NATIONAL BASELINE STUDY ON THE EXISTING E-SKILLS ACTIVITIES IN GAUTENG
PROVINCE

On 06 November 2009, the Department of Communications signed a Memorandum of Understanding (MoU) with the University of Pretoria towards establishing a relationship between the e-Skills Institute of the Department of Communications (eSI) and the University in the interest of e-skills development. The purpose of the eSI is to address the calamitous situation South Africa finds itself in with regard to developing suitable skills for it to sustain equitable prosperity and global competitiveness in the information society and knowledge economies.

After the eSI summit of South Africa in July 2010 the eSI signed a Memorandum of Agreement (MoA) with the University to establish a Knowledge Production and Coordination Hub on 23 February 2011. The MoA provides Terms and Reference for the Scoping Phase for the establishment of the Hub, inviting the University to propose how to establish and operationalise the Hub. The scoping phase requires the University to conduct a market analysis of existing e-skills activities in the Gauteng Province.

In order to achieve a fully comprehensive and balanced market analysis, you are requested to co-operate with the commissioned independent research experts from the **University of Pretoria –** **Consulta Research** in affording them access to the responsible divisions that would be able to supply the required information. A representative of Consulta Research will contact you in due course to setup the required appointments. Information on the following elements of the Market Analysis would be required:

The names of programmes and projects you have which offer the following e-skill activity type of trainings:

e-Literacy: Skills aimed at employment readiness with emphasis on ICT literacy, particularly targeting unemployed and unskilled youth and rural society (including starting own small business).

e-Participation: Skills that focus on enhancing citizen interactive engagement (primarily using ICT) with communities, local, provincial and national governance processes to increase participation, self-reliance and equity.

<u>e-Democracy</u>: E-Democracy is an extension of e-Participation with the unique ability to cast votes

<u>e-Government/Governance</u>: Skills that focus on increasing efficiency and productivity interactive bimodal approaches to service delivery of governments and its agencies across all ICT platforms including new cell phone technology, community radio, and the like

<u>e-Business</u>: Skills that are aimed at increasing organizational efficiency and productivity

<u>e-User</u>: Skills aimed at increasing self-reliance, participation and community support in a socio-economic setting to build social cohesion in ways that can better build local solutions to societal matters such as crime, health, education and the like. These skills would be supported by Internet-based groups and the community could be taught how to access other services via the Internet.

<u>e-Practitioner</u>: Skills which are specialised and designed to create a person who is proficient in Computer Science and Information and Communications Technology related areas

Related to the above e-skill activities, the <u>number of projects and/or programmes</u> you have
The difference between a programme and a project is that a programme is long-term while a project is short-term.

Related to the above e-skill activities, the number of <u>branches you have in Gauteng</u>

It is important to note that for the Department of Communications to receive a report which is balanced and comprehensive; your inputs are as crucial and important. We therefore urge you to please take this matter as urgent and highly important.

Thank you in advance for your willingness to participate in this study of national importance.

Yours sincerely

Prof. Cheryl de la Rey
Vice-Chancellor and Principal | University of Pretoria

cc
Dr. Harold Wesso
AG Director General | Department of Communications
AG Chief Executive Officer | e-Skills Institute

Enquiries from Department of Communication:
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Enquiries from University of Pretoria:
Prof. Carina de Villiers, Tel: 012 12 420 3085, Email: carina.devilliers@up.ac.za
Room 5-78 | Information Technology Building | University of Pretoria | Hatfield | Pretoria

Appendix B: Feasibility matrix in choosing Market Research partner

Feasibility criteria	Weight	Market Research Partner		
		BMI Tech	Consulta	Ask Afrika
Data - use primary data (data collected through direct contact with respondents). Often more expensive	40%	0.00	1.00	Declined
Data - use secondary data (data which already exists). Often less expensive	20%	1.00	0.00	Declined
Cost to implement market research	30%	0.50	0.00	Declined
Potential for long-term partnership: 1. Willingness to go extra mile 2. Have established research history	10%	1.00	1.00	Declined
Ranking	100%	45%	50%	

Remarks on measurement values
1 = YES OR HIGH
0.5 = PARTIAL, AVERAGE
0 = NO, LOW
For cost:
Less than R50,000 = 1
Between R50,000-R100,000 = 0.5
Over R100,000 = 0