COFISA
Cooperation Framework on Innovation Systems between Finland & South Africa

SAKAZA
CONSULTING (PTY) LTD

2nd GAUTENG Foresight Workshop
Draft Report

GREEN HEALTHY COMMUNITIES	**VIRTUAL AUTOMATED GOVERNMENT**	**KNOWLEDGE BASED ECONOMY**

Eskom Conference Centre
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1. Introduction

Foresighting refers to methods and techniques used to develop viable and sustainable futures for communities. The strength of foresighting over short term development strategies is in its proactive development approach towards desired futures. It is a departure from short term incremental planning, which typically focuses on *how to* solve present problems. Foresighting on the other hand focuses on what *can be* and then directing efforts towards systematically developing the desired futures.

2. Purpose

The second Foresight workshop, held at the Eskom Conference Centre, Midrand, was the second in a planned series of three workshops intended to investigate realistic and implementable futures in the context of the development of regional systems of innovation in Gauteng province. The purpose of the workshop was to further develop the thematic areas produced in the first workshop.

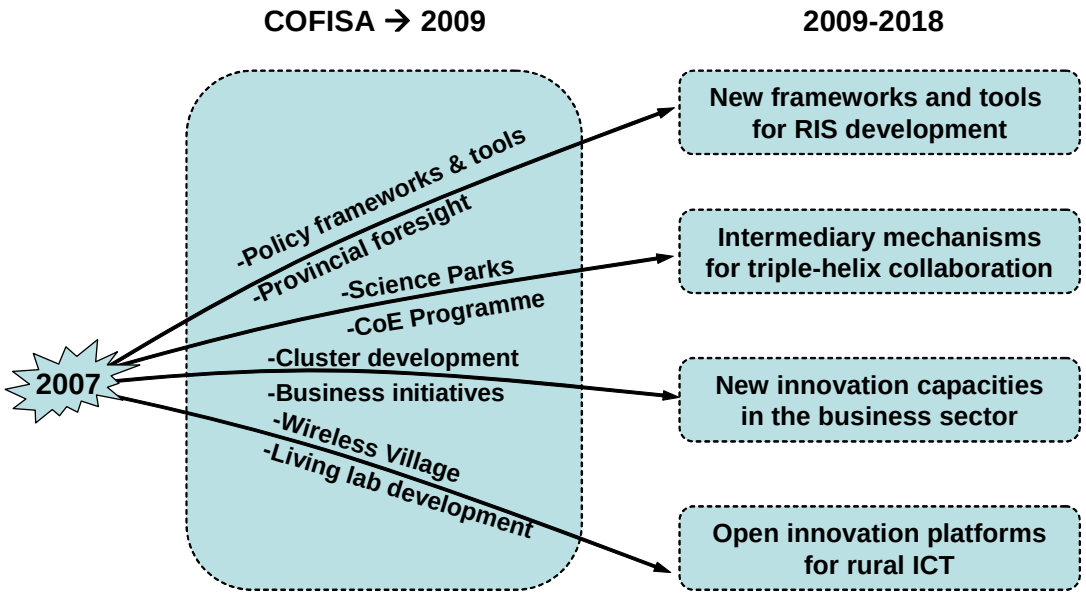
As in the first workshop, the participants were employed to use 3 specific foresighting techniques; i) the futures wheel, ii) the futures table, and iii) story writing to describe the chosen future issue. The second workshop focused on the following themes to create desired futures (green elephants);

Theme 1: Green Healthy Communities;
Theme 2: Virtual Automated Government.
Theme 3: Knowledge Based Economy;

3. Preliminary Inputs to the Foresight Workshop

In welcoming the participants, Mrs. Nirvashnee Seetal, the COFISA National Coordinator provided an **overview of the aims and objectives of the COFISA programme,** which is summarised here:

> COFISA is a programme that has been developed jointly by the Governments of SA, through the Department of Science and Technology, and Finland, through the Embassy of Finland in Pretoria. Its objective is to contribute to the enhanced effectiveness of the national system of innovation contributing to economic growth and poverty alleviation. COFISA's three pilot provinces are Gauteng, Eastern Cape and Western Cape.
>
> The figure below illustrates four key areas of innovation system development, grouping together key COFISA activities into four strategically important lines of action focusing on building structures and competences at the Provincial level. These form the basic building blocks of the COFISA contribution to SANSI development and link the Project to the national 10-year plan.



New frameworks and tools for regional innovation system development:

The concept of a regional innovation system or policies related to its development is relatively new in South Africa. Yet, it is widely accepted that complementing a national innovation policy with a strong regional development focus has been successful in many countries in developing regional capacities to benefit from national or supra-national flows of resources.

National innovation policy must find concrete manifestations at the regional or local level. Furthermore, innovation processes occur between a large number of actors, such as companies, R&D organisations and the public sector. Regional innovation policy should exist to provide platforms for cooperation between these different actors.

In addressing the SANSI criticism that "there appears to be fairly weak integration between national level policy and organisations and innovation-related policy and support measures at provincial and local level "[1] the following mechanisms will be used:

- Creating structures and competences in the Provinces for regional innovation-based economic development strategies (targets, instruments, capabilities, policy coordination, priorities, etc.)
- Developing capacity within the DST Local Innovation Unit for regional innovation policy development, resulting in an action plan and a national framework for RSI development
- Regional foresight work as a tool for supporting planning, building strategic vision on regional innovation and creating collaboration in the triple helix.

Intermediary mechanisms for triple-helix collaboration:

The triple helix model postulates that collaboration among private, academic and public institutions is key for the promotion of innovation in a knowledge-based economy. Innovation intermediaries are entities providing infrastructure and services to undertakings involved in innovative activities. These almost universally include Science Parks and in specific cases programmes such as the Centres of

Expertise (CoE) programme in Finland. Collaboration between the triple-helix players has to be actively promoted and resourced. Key actions by COFISA in this area include:

- Development of science parks as innovation-enabling mechanisms (networking, interactive learning, IP management, venture capital, etc).
- Capacitating the DST in coordinating science park development in South Africa. This learning will be disseminated widely, and could also form the basis of a "Science Park Strategy" for the country.
- Launching the CoE programme in Tshwane for piloting triple helix collaboration and promoting innovation in specific sectors. The programme, coordinated by the Innovation Hub, will provide input into the national Centre of Competence implementation.

New innovation capacities in the business sector:

A specific characteristic of the innovation environment in South Africa is the relatively modest involvement of the private sector in innovative activities. This is especially true of the SMME sector, whereas large companies are often well-resourced to carry out R&D and to innovate. The role of innovation in strategic business plans needs to be highlighted and the SMME sector needs to be drawn into collaborative settings with other innovation players.

- Cluster development activities in the pilot provinces, e.g. development of the South African Maritime Cluster (Oil & Gas and Ship Repair) with respect to innovation networks and sectoral system of innovation.
- Awareness-raising and capacity building on foresight and strategic innovation in business development.

Open innovation platforms for rural ICT:

ICT-based rural development and rural innovation are currently carried out within individually funded project settings, resulting in challenges in terms of the sustainability of the models, practices, products or services. New platforms for open, user-centric innovation, testing and piloting of solutions and sharing of resources are needed.

- The Village Connection project in Dwesa in partnership with the Meraka Institute, Eastern Cape Universities and Nokia Siemens Networks aims to build cross-sectoral collaboration in rural connectivity and ICT applications and to launch a “Living Laboratory” in the Eastern Cape.
- Building national-level coordination in developing rural living labs, in close cooperation with DST ICT Unit and other living lab initiatives.

Mphathi Nyewe, the Gauteng COFISA Foresight Coordinator, next gave a presentation on the **status of the Gauteng COFISA Foresight Initiative**. He described the processes used in the first workshop, which were to be repeated in the second workshop, but on new subject areas. He highlighted the processes that led to the selection of the three themes forming the new subject areas. The presentation also placed the 2nd workshop within the full COFISA Foresight process, and its intended outcomes.

Next, Dr. Bob Day, the principal South African foresight consultant, gave an **overview of the three themes produced in the first Gauteng Foresight Workshop**, which would guide the proceedings of the second workshop:

The delegates were reminded of the main points that emerged from the Gauteng Baseline Data study as presented in the 1st workshop. This presentation is available on the COFISA web site (www.cofisa.org.za).

A brief overview was given of some important generic factors that ran across the outputs of (almost) all the Gauteng working groups. In particular, the *common values* included: environmental sustainability – emphasis on "clean energy"; improved quality of life - mutual respect for and between all; **dramatic** improvement in learning opportunities for all; and world class infrastructure, especially ICT-KM, transportation, and power. Also, some *common obstacles* were identified, including: crime, corruption – lack of transparency and accountability; and lack of capacity and skills – across sectors at many levels.

However, the bulk of the presentation dealt with a discussion of the three main themes based on the outputs of the 1st Gauteng workshop, and which would be the focus of the activities of the working groups for the remainder of the 2nd workshop. For each theme, the main characteristics identified in the 1st workshop were listed, followed by some important issues if the 2050 scenarios are to be realised.

Theme 1: Healthy Green Communities:

- Sustainable economic growth with environmental focus and protection
- Minimised unemployment, pollution and mortality rates
- Alternative, renewable energy; balanced management of energy, water and other resources
- Responsive and responsible government
- Innovative banking and trade technology

BUT:

- Vested interests (local, national)
- Unfairness of global finance system, eg current WTO stance
- How to overcome widespread lack of capacity and skills?
- Start small and grow, or big-bang approach?

Theme 2: Virtual (automated) System of Government:

- Effective, responsive and seamless shared services for all (CRP)
- Smart systems, quick turn-around time, internationally benchmarked
- Crime eradicated
- Focus on integrated transport system, education and the environment
- Economy thriving on SMEs

BUT:

- Lack of leadership – "knowledge-resistant" mindsets
- Lack of management skills
- Technology usually favours the elite: how is equity reached and maintained?

Theme 3: Knowledge Economy (free ICT-KM Infrastructure):

- Knowledge based, dynamic, innovative society and economy
- Clever, connected working people (free ICT-KM infrastructure)
- Focus on ideal, innovative learning mechanism(s) – for all?
- Healthy, well-planned, efficient infrastructure
- Wide range of ICT-KM products (indigenous)

BUT:

- Growing gap between "haves and have-nots"
- ICTs and KM: tools for the elite, or mechanisms for opportunities for all?

- What mechanisms for urban-rural balance? Who will drive, and when?

Mphathi Nyewe and Dr Day co-facilitated the COFISA workshop, assisted by several other COFISA team members. The agenda is provided in Annex 1.

Thirty three participants attended the workshop (see Annex 3), and were pre-selected and placed in groups according to their expertise and preferences. The high number of delegates in attendance caused the facilitators to select two groups for each of the three themes, resulting in the following six groups (see Annex 2):

	THEME	**CODE**
Group 1	Green Healthy Communities	GHC 1
Group 2	Green Healthy Communities	GHC 2
Group 3	Virtual Automated Government	VAG 1
Group 4	Virtual Automated Government	VAG 2
Group 5	Knowledge Based Economy	KBE 1
Group 6	Knowledge Based Economy	KBE 2

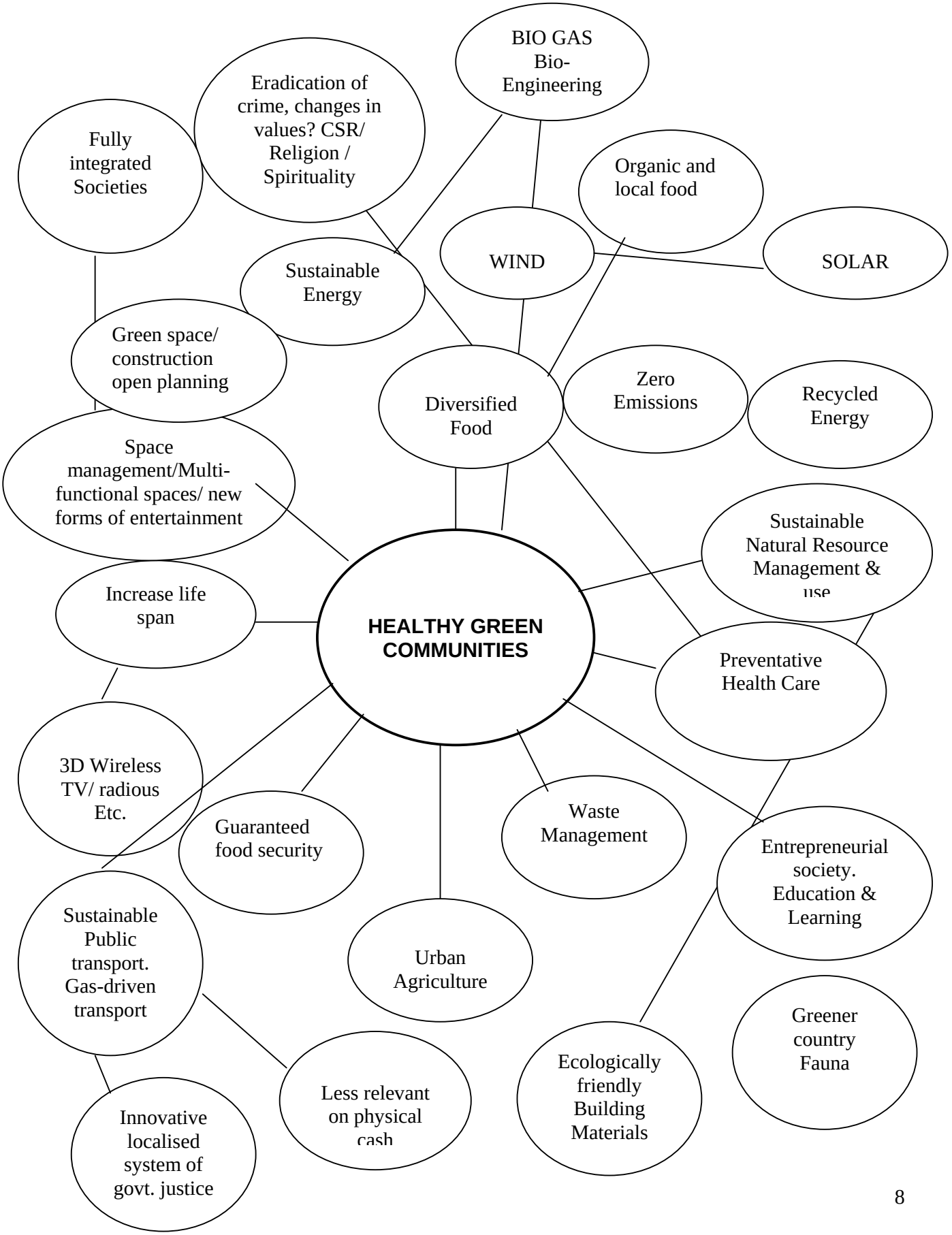
In short, each group developed a 2050 futures wheel which was then used to identify 3 important issues (green elephants) central to their shared vision of the future. A single focused theme was chosen from these three issues using a voting process in which each participant had 3 votes to prioritise the focus areas.

This theme was then analysed and broken down using the ACTVOD Futures table for a more focused discussion of *what* issues mattered. Two to three scenarios were then developed using this table. Finally, the groups wrote a story based on their chosen scenario to illustrate the salient features of their vision for 2050.

4. Outputs based on the three chosen Gauteng Themes

The following sections present the outcomes of the deliberations of the 6 groups.

4.1 Futures Wheel: Group 1 - Green Healthy Communities



4.2 ACTVOD Table: Group 1 - Green Healthy Communities

THEME:	SUSTAINABLE ENERGY
ACTORS	Schools; churches; religious institutions; NGOs/CBOs; research institutions; government; parastatals; companies; communities; individuals; media.
CUSTOMERS/ BENEFIFICIARIES	Everybody and all creatures, animate and inanimate; new smmes; next generation
TARGETS	Carbon neutral; zero-emission society; endless energy; healthier communities; increased life span; greener society; sustainable natural resources use and management; zero-waste /pollution.
PRODUCTS/ SERVICES/ ACTIONS	Research development; implementation of diverse energy alternatives; educational behaviour change; green design planning; recycled materials; new local food production; sustainable transport.
VALUES	Transparency; new way of life; less reliance on physical cash; new respect for creation i.e: the universe and all in it accountability; spirituality; CSR - Corporate Social Responsibility; 'ubuntu' 'kaelo'
DRIVERS	Government; NGOs/CBOs, communities; individuals; smmes; media, schools, scientists, researchers, policies, catastrophies; crises; disasters; international/local environmentalists
OBSTACLES	Complacency, mindset change; government and society in general; knowledge about interconnectedness of life; potential repercussions; health etc. from research; implementation; intelligence resource; extinction; endangerment of some animal species.

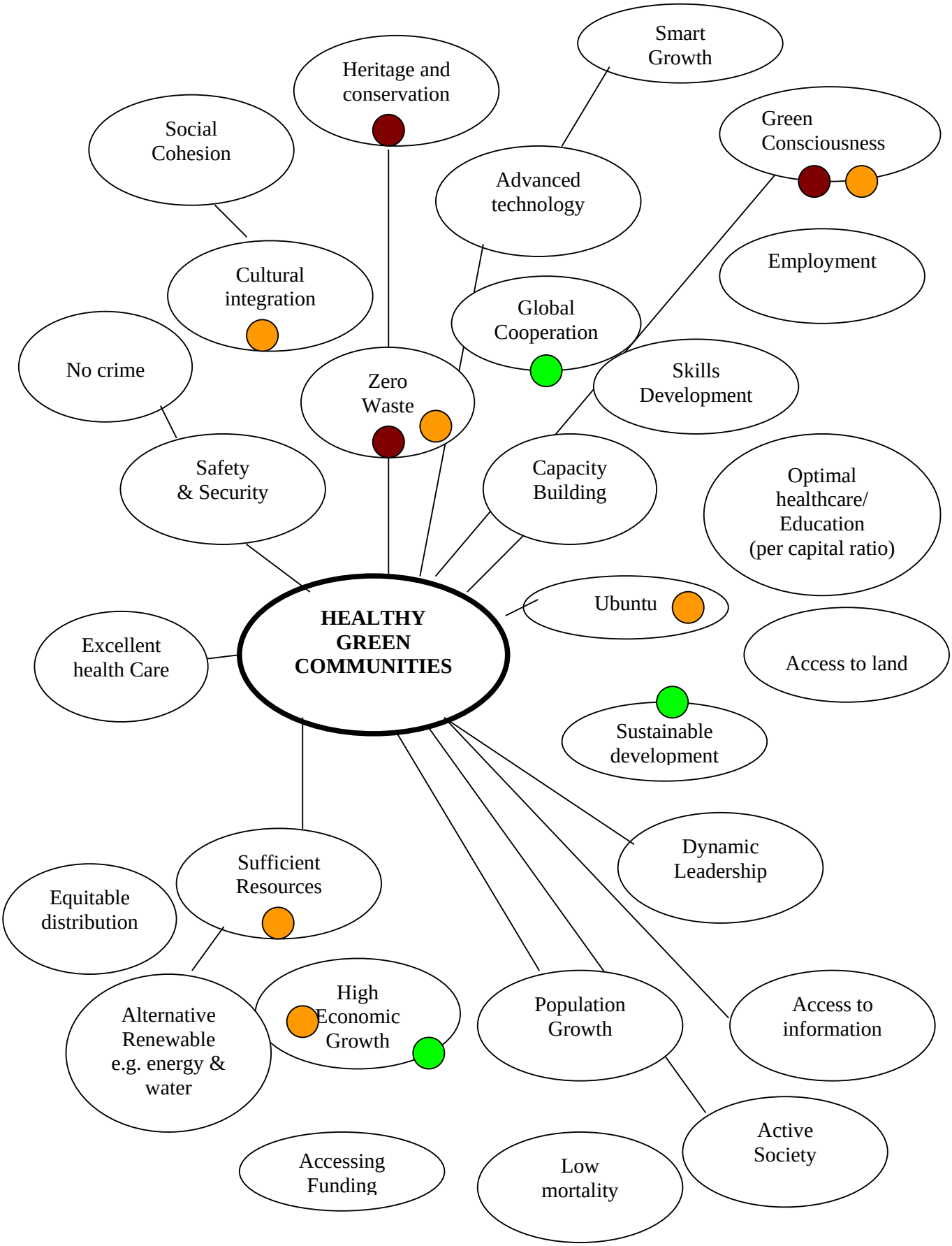
4.3 STORY: Group 1 - Green Healthy Communities

FEED THE FAMILY – FEED THE NATION

The flagship small town of Ubuntu in Gauteng is inhabited by 150 000 people, mostly subsistence farmers and cotton producers. It is renowned for its high quality organic cotton and wheat. The town's method of wheat production has dramatically changed in the past decades from mechanical farming operated by manual equipment, which often emitted lots of polluting gases into the atmosphere, to the use of bio-gas or solar powered engines for power. Ubuntu has successfully controlled pest-evasion through the use of harmless, environmentally-friendly aerosols produced from biofuels. Today, the children of Ubuntu can boast good health because their foods are free of dangerous chemicals. Ubuntu farmers irrigate their farms from a hydro-powered dam, whose water is recycled locally and biologically treated to make it safe for consumption. Also rainwater is collected and recycled for use making the town self-sufficient in water-supplies.

Lulu is one of the Ubuntas. She is a community worker, who has been facilitating the development of home gardening in Ubuntu, empowering people to use their back-yards for maize production and helping them to recycle their garden waste for fertilizers. Because of the increased yield of vegetables in the town, she is now teaching the families to preserve their produce through solar-preservation and other means. As a result of this, the families are able to exchange their produce and preserves at the very popular local food bartering markets with other families. Lulu's knowledge is mostly a result of her studies at the Ubuntu e-learning centre. Recently she has been learning about new agricultural practices, including for instance revolutionary hydroponic farming methods, and traveling by train to teach in the neighboring towns. Lulu has been a role-model in her community. She lives in a green (environmentally sustainable) house and usually wears organic cotton clothes produced in Ubuntu.

4.4 Futures Wheel: Group 2 - Green Healthy Communities



4.5 ACTVOD Table: Group 2 - Green Healthy Communities

THEME:	GREEN CONSCIOUSNESS IN 2050
ACTORS	Communities, research and development institutions, families, legislature, educators, implementers eg. Government, private sector, enforcement and monitoring agencies.
CUSTOMERS/ BENEFIFICIARIES	Individual consumers, communities.
TARGETS	100% awareness, individual household use at 20% of electricity and water cwf 2005 levels. Zero waste to landfill. Waste to energy ,Pollution free, 80% Public Transport usage.
PRODUCTS/ SERVICES/ ACTIONS	Novel waste recycling, products & technologies e.g. edible packaging, biofuels, regular perception surveys, campaigning/advocacy. Green design. Drinkable sea water.
VALUES	Responsible, accountability
DRIVERS	Alternative energy technologies, environmentally sound mining. Cost of not acting, impending disaster, green penalties.
OBSTACLES	Cost, skills, awareness, knowledge

4.6 STORY: Group 2 - Green Healthy Communities

GREEN CONSCIOUSNESS

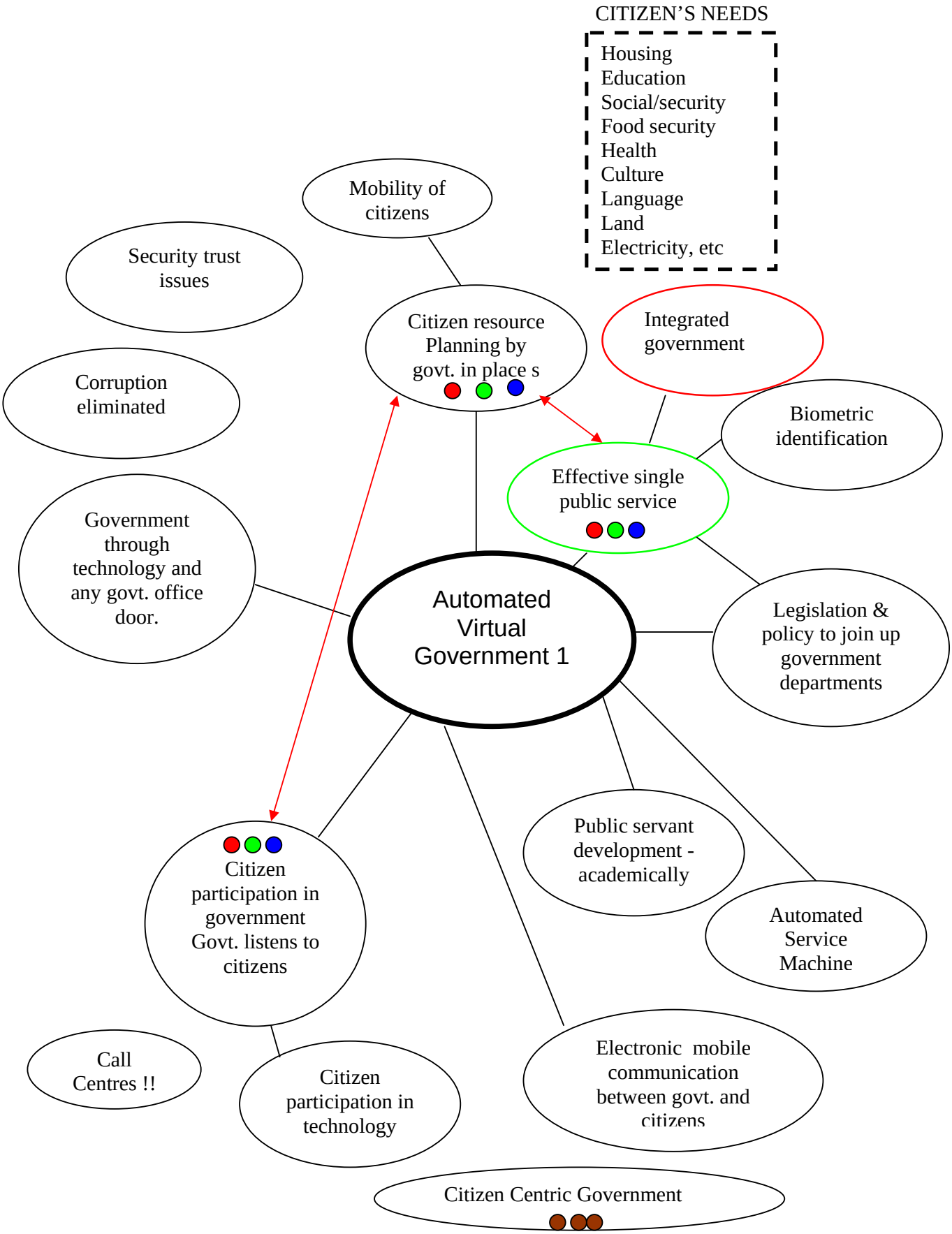
Vusi awakes on his 120th birthday and watches a clear sunrise through crisp air. He sits down to his organic breakfast using edible utensils. He polishes off highly nutritious food and goes to his media room which is powered from his solar panel and waste-to-energy household generator. He decides to catch the transporter which runs off fuel cells and is so much cheaper and safer than the taxi he had to catch when he was still working.

He is going to meet his great grand children at Zoo Lake where they are enjoying playtime in the innovative park which helps them understand how to look after the planet. He tires of the children's antics and returns to Alex getting off the transporter to walk past tall trees, along clean pavements, breathing the fresh air and reminiscing about today's energy self-sufficient homes compared with the shacks of the past era.

He feels safe and content as he strolls in to the meeting of elders at the centenary club where they sit on the deck of recycled wood overlooking a pristine Juskei River. The elders are discussing how grateful they are that, because of the clean environment, healthy technologies and excellent health care, they are alive and able to enjoy this beautiful clean country.

They think back to 2015 when, thanks to a forward thinking government and society pulling together, the country recovered from a water and energy crisis. The discussion drifts to exciting new products the men and women are reading about, such as waterless washers, transporters that bounce like kangaroos, organic joints, and rechargeable energy blankets.

4.7 Futures Wheel: Group 3 - Virtual Automated Government



4.8 ACTVOD Table: Group 3 – Virtual Automated Government

THEME	UBIQUITOUS COMMUNICATION INFRASTRUCTURE, CITIZEN CENTRIC GOVERNMENT
ACTORS	Public servants (in government departments) Private Sector, disabled, labour, academia, citizens and civil society, service providers, security agencies
CUSTOMERS/BENEFIFICIARIES	Citizens; business sector; government departments, foreign investors.
TARGETS	Building skills capacity, public service academy. Free communication infrastructure, business sector as change agent, innovative public and business sector; access to financial resources; appropriate content; appropriate social systems.
PRODUCTS/SERVICES/ACTIONS	Personal technological devices – microchip; public technology devices-automated service machine; personalised service; bio-metric identification mobile technology; walk-in centres; multilingual devices
VALUES	Courtesy; service oriented; respect for humanity; proactive public servants and servants and citizens; cultural diversity.
DRIVERS	Ubiquitous communication infrastructure; relevant ICT applications, policies and legislations
OBSTACLES	Digital divide; lack of infrastructure; lack of access in remote areas leads to immigration to Gauteng Province. Security.

4.9 STORY: Group 3 – Virtual Automated Government

UBIQUITOUS COMMUNICATION INFRASTRUCTURE
CITIZEN CENTRIC GOVERNMENT

Amazing! In 2008 my grandmother, who lived in Mpumalanga at the foot of the mountain, had no experience of using modern technologies – no telephone lines, no water supply and no electricity. To go to the hospital she used very scarce public transport that she had to walk over a kilometer to access. The transport to town for her social security grant from government was a tiring effort because of the bad road infrastructure.

She did not believe in banks. She refused to allow her grandchild to open a bank account for her. The Government still paid the social grants in cash to some people who did not have bank accounts. Her small social grant, however, created an opportunity for her children and her grandchildren.

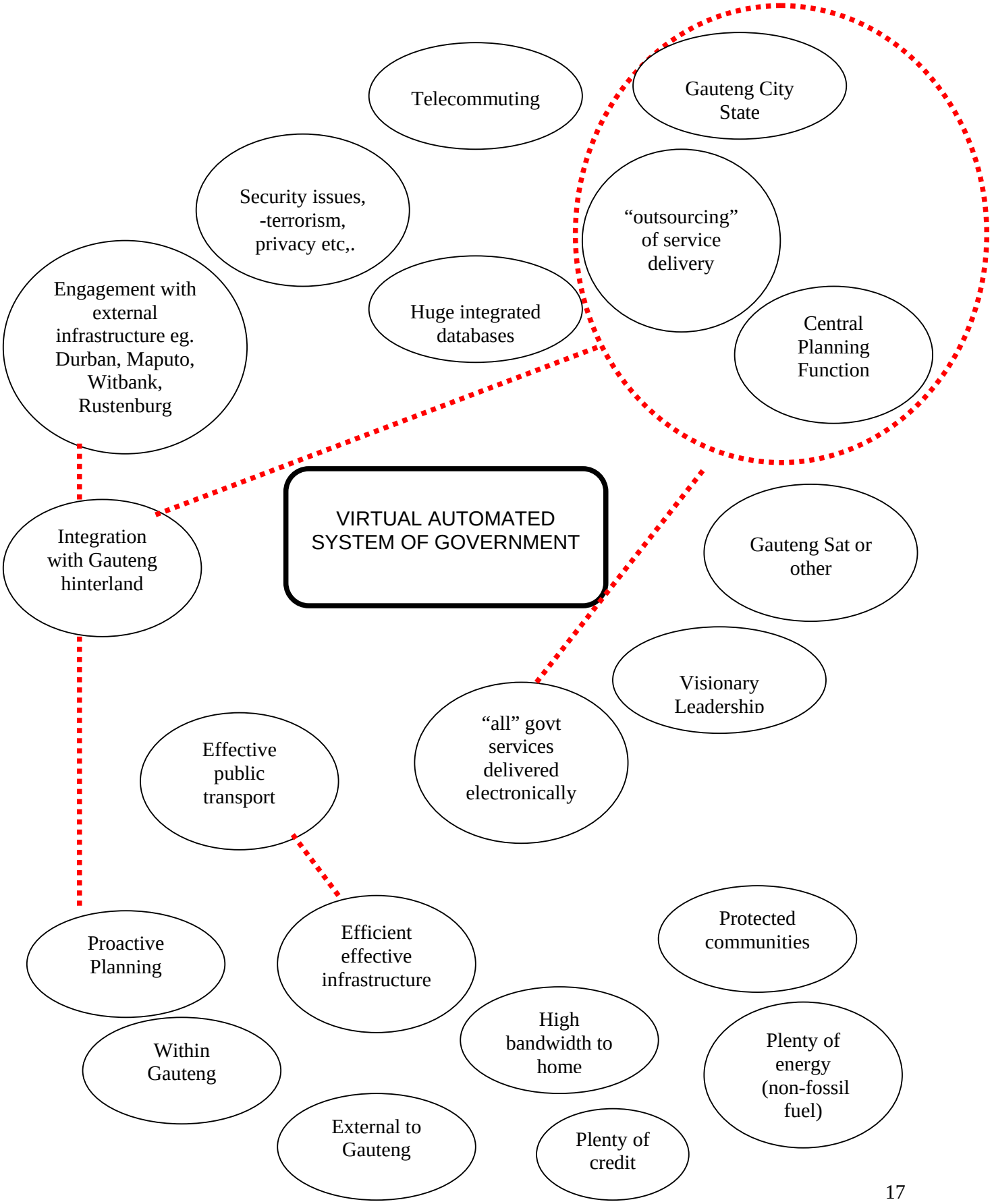
Now in 2050, her grandchildren and great grandchildren have become: technicians for microchip companies: civil servants that have written policies that have created the environment for ubiquitous communications; and her first born won an award for developing biometrics that use the communications networks to deliver social and economic services. They are driving eco-friendly cars, mines have fizzled out, and tourism has become the most vibrant economic sector.

Gauteng province is a leader in communications infrastructure and more and more people are coming to the province to learn how the economy was transformed. The great grandchildren have contributed to the building of this infrastructure which has helped the province bridge the digital divide. Thanks to grandmother's children we have now overcome the lack of infrastructure in our provinces, making us the most advanced location for communication infrastructure.

Potholes are dealt with speedily, IDs are issued with speed, people have access to their health records anywhere in the world. Voting is done virtually on a regular basis. The breakthroughs by Gauteng R&D in bio-metric security have placed us as global leaders in security.

Provincial boarders have fallen away and the beautiful province of Mpumalanga is now the environment for the government's development of applications and content for personalised services to the citizens.

4.10 Futures Wheel: Group 4 - Virtual Automated Government



4.11 ACTVOD Table: Group 4 – Virtual Automated Government

THEME: "LITE" GOVERNMENT FOCUSSED ON POLICY, STRATEGY AND OUTSOURCED DELIVERY	
ACTORS	All provincial and local authorities, national government, surrounding municipalities, other provinces, private sector. Banking sector, civil society, utilities (electricity and telecoms)
CUSTOMERS/ BENEFICIARIES	Residents, private sector, rest of South Africa.
TARGETS	Enabling legislation, joint planning for metros and other municipalities, privatise eg. bus services, waste management with subsidies. SMME and business friendly environment, holistic skills development
PRODUCTS/ SERVICES/ ACTIONS	Centralised, integrated planning, good policies, legal frameworks (stable and flexible), good effective processes, multi-access to government services, investing in social programmes (to build social impact)
VALUES	Safe environment
DRIVERS	Poor service delivery, business oriented service delivery, empathetic, responsive government, shared vision, safe environment
OBSTACLES	Vested interests, lack of skills, disparities, lack of visionaries, smart entrepreneurial criminals.

4.12 STORY: Group 4 – Virtual Automated Government

"LITE" GOVERNMENT, FOCUSED ON POLICY, STRATEGY AND OUTSOURCED SERVICE DELIVERY.

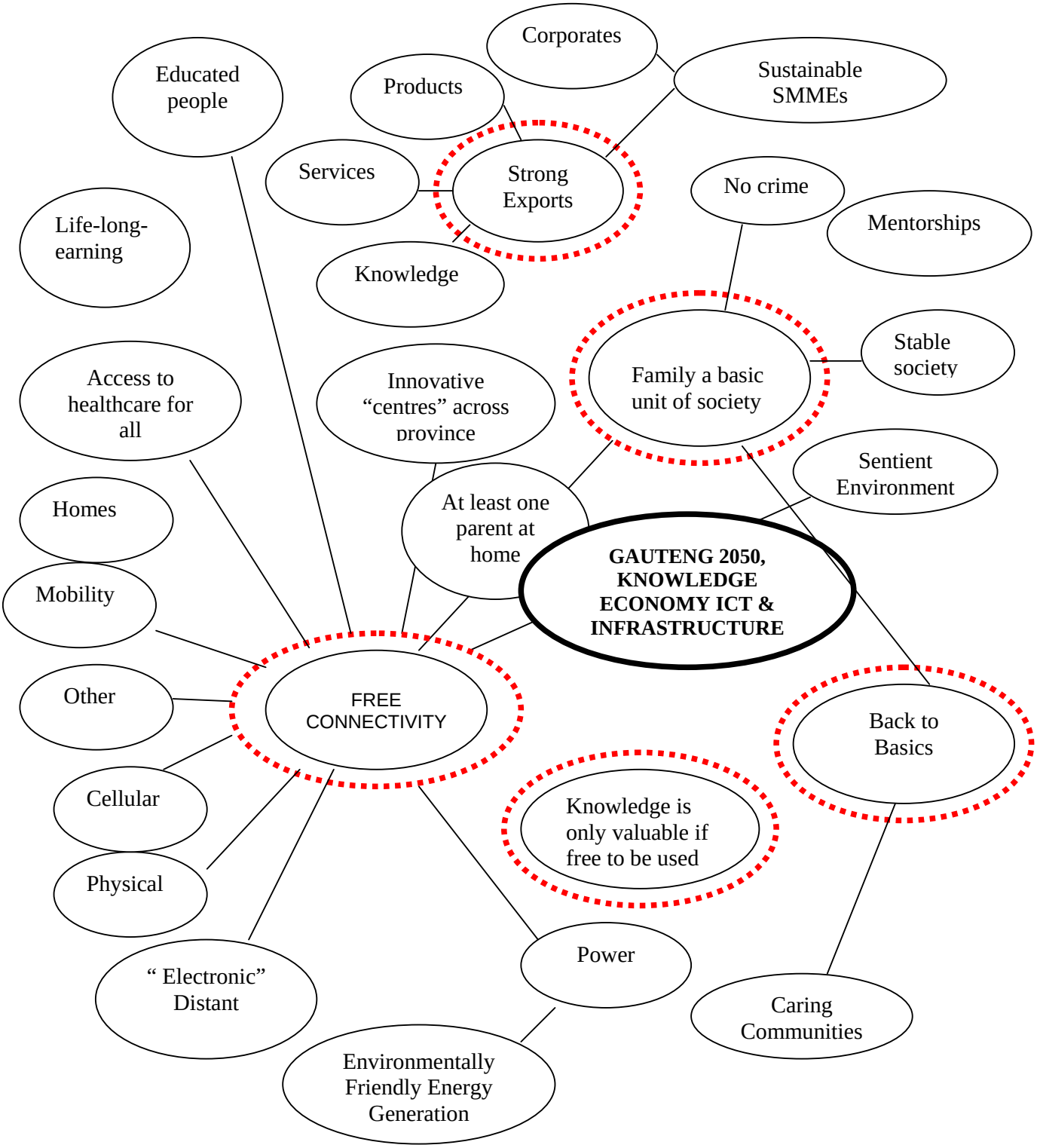
Thalita is a highly-qualified water technologist, trained in accordance with the DoL's workplace learning assessment to NQF level 7. She works for one of the water distribution utilities in Gauteng, and is responsible for the northern region of Gauteng, although she lives in Sebokeng. She mostly telecommutes, typically 4 days a week, and one day a week she commutes to her head office in Tshwane, via integrated, privatised transport services, including a local bus and a high-speed train service, a journey that takes 45 minutes in total, compared to the 2.5 hours that her father used to take. Like most people, she has an implanted microchip that uniquely identifies her when she enters and exits the transport system, which then bills her account accordingly.

The reason for her once-a-week comute is to undergo continuous training in her field, as well as, in her capacity as a water technology expert, acting as a trainer for more junior staff.

Thalita's home office contains a workstation that, amongst other things, accesses the monitoring system of the water supply network for the 20 x 20 km area she is responsible for, encompassing 20 000 households and 1500 businesses (including SMEs). She monitors water quality, pressure, flow, leakages, and utilisation patterns, all presented in a user-friendly way based on a geographic knowledge system. The water supply network has approximately 4000 fixed sensors and 200 mobile robotic sensors with repair capabilities, which Thalita can deploy as required. When a potential fault condition on the water network is reported, it is either dealt with automatically by the system, or when necessary, Thalita initiates repair action. In the very unusual event of a service affecting condition, Thalita can isolate that part of the distribution network from her workstation at home, and notify all affected cutomers, using the latest communication mechanisms. She also initiates a rebate for all customers affected by the disrupted service.

Thalita is very enthusiastic about being part of such a business-oriented service delivery company, and is fascinated by the stories that her grandfather has to tell about congested highways, power outages, highjackings, as well as (when phoning in with a service fault) being placed on hold for 35 minutes by the municipality, being told repeatedly that "all operators are busy - please hold as your call is important to us", before being cut off. Her company is an example of many business-oriented service delivery companies that include waste management, electricity, health, public transport, tele-communications, parks and recreation facilities, social services, etc. This approach to government service delivery has allowed "lite" government to focus attention on policies and strategies, as well as services such as law enforcement.

4.13 Futures Wheel: Group 5 - Knowledge Based Economy



4.14 ACTVOD TABLE: Group 5 - Knowledge Based Economy

THEME:	FREE PHYSICAL AND ELECTRONIC CONNECTIVITY
ACTORS	Government; Technology providers; Private Enterprises; Municipalities; International Investment and Assistance; Local communities
CUSTOMERS/ BENEFICIARIES	Everyone living in Gauteng; South Africa and Southern Africa (Africa)
TARGETS	**Free ICT infrastructure to basic level (bandwidth not an issue*)**; Open source rules!!; free public access portals (e.g. digital doorways in public places); local is lekker (where economically feasible); instill innovation thinking from pre-school; more managerial, technological; entrepreneurial and life skills training at schools; virtual classrooms; free education; accessibility to 24/7 education; customized transparent human-computer interface makes language differences irrelevant.
PRODUCTS/ SERVICES/ ACTIONS	Sustainable and maintained skills transfer; virtual classrooms; re-use of existing community centres; intelligent inter-linked devices; world-class knowledge and service hub; produce/research innovative products for use and export (local R&D for local issues). Customised "transparent" human computer interface makes language differences irrelevant.
VALUES	Sense of ownership and responsibility of the infrastructure by the community; no expectation of handouts, ubuntu; strong work ethic with good work/life balance; self-development highly valued
DRIVERS	Appropriate skills; Education (basic); policies
OBSTACLES	Lack of engineering and science skills; Policy on immigration (Home Affairs); poor maths and science pass rates at school; literacy

4.15 STORY: Group 5 - Knowledge Based Economy

Free Physical And Electronic Connectivity
(BANDWIDTH NOT AN ISSUE)

It's Friday, 25 March 2050, and Sasha is woken by the gentle sounds of the house robot bringing her a perfect cup of coffee. The robot is linked into the global connectivity system (GCS) which allows it to download all recipes to prepare individualistic meals for the family. In the background, Sasha's two children are reviewing their lesson schedule. 6 year old Jordan is busy putting the finishing touches to her science school project given to her by her mentor, the CEO of the SA Space Agency. 4-year old Pat is also happily playing a 3D holographic chess game with Yin in China.

Sasha, still in her pyjamas, links into her morning meeting online, after selecting a virtual business suit, and commences negotiations with seven countries vying for South Africa's knowledge expertise in the area of water purification and recycling. She glances over at the virtual monitoring system (VMS) which signals that the Magno-Trans is en-route, scheduled to arrive within 5 minutes. Her husband, Vusi, an integration systems engineer, will leave for work on that Magno-Trans.

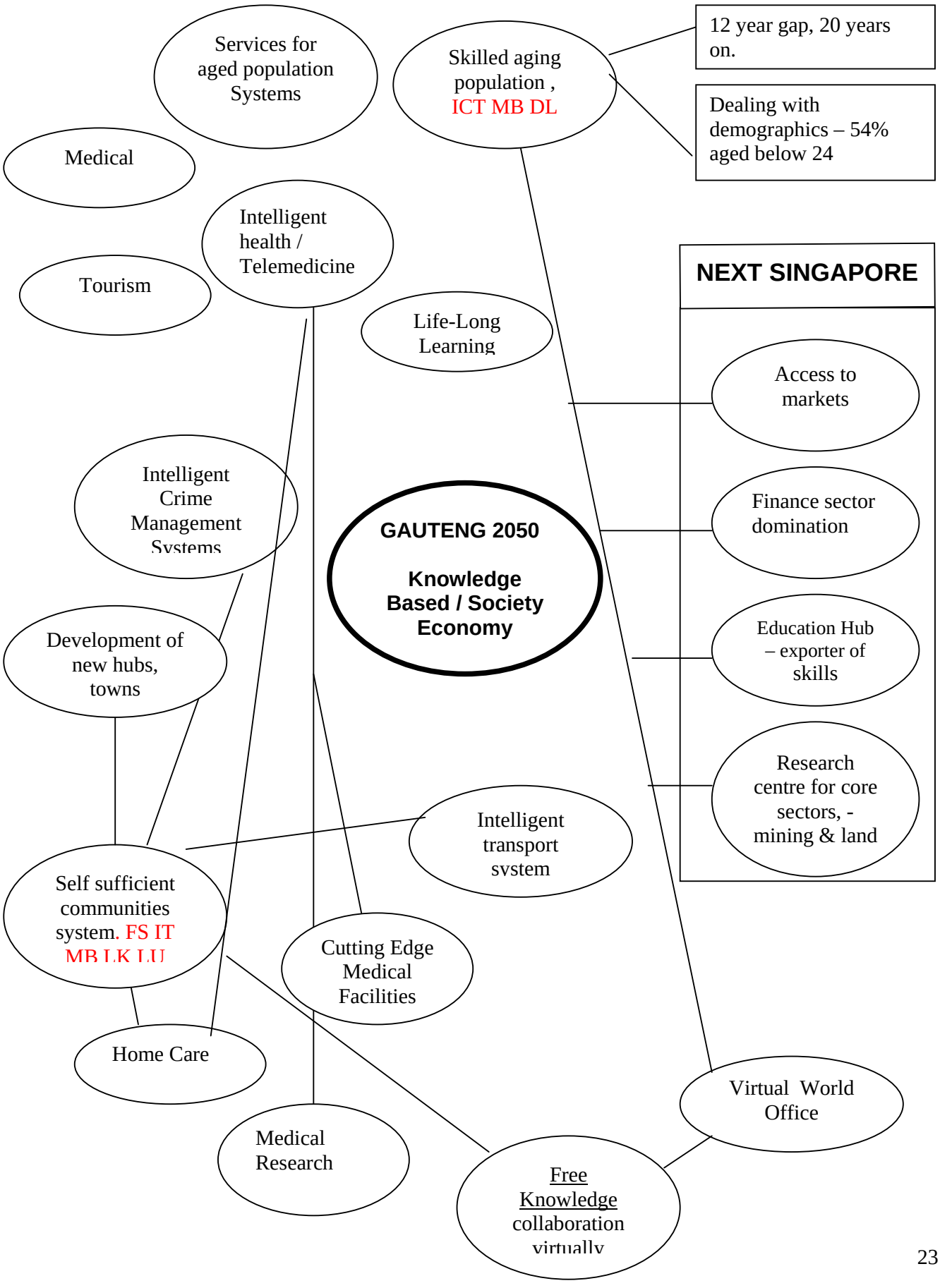
The VMS also tracks Pat and Jordan's walk to their community centre where they will download their lesson plans from the GCS in their virtual classroom. As the children walk through the "green-lung" (man-made atmospheric cleanser) their personal GCS devices download vital data on the fauna and flora they see along the way, for use during their lessons. Their new sighting of the quagga foal uploads to the GCS.

The children's history lesson is an immersion experience where they visit the great Sphinx and walk through the pyramids with Feroz, their Egyptian teacher. In similar style their language lesson is given by their German teacher whilst visiting the BMW plant in Munich. The visit sharpens their German language skills and their technical skills.

Vusi returns from a celebratory project close-out where the latest open source health monitoring system was launched. The product is already in demand internationally. Once home, Vusi, Sasha and the children electronically book their tickets for the athletics tournament where both abled and disabled athletes compete on equal ground. At the stadium their biodata is recognized by the Citizen Monitoring System (CMS) which debits their accounts for the ticket. Their personal GCS devices recognize friends and family who are also at the stadium and confirm whether they would like to be seated near them.

After the match the family celebrates Vusi's good news by going into the city centre which is alive with activity 24/7. The adults relax at a restaurant whilst the kids play freely in the park.

4.16 Futures Wheel: Group 6 - Knowledge Based Economy



4.17 ACTVOD Table: Group 6 – Knowledge Based Economy

THEME	SELF SUFFICIENT COMMUNITIES GAUTENG, HOME OF HAPPY PEOPLE
ACTORS	Public Administration, (Town planning, built professionals, ICT service providers, Financial Institutions, SMMEs, Academia, communities (participating and implementing), CBOs/NGOs, organised labour, big business (implementing), international companies, retired professionals, government facilitating
CUSTOMERS/ BENEFIFICIARIES	Citizens of Gauteng Province, Eskom, Current providers of infrastructure (Rand Water), SMMES, environment, fiscus
TARGETS	A Province that is regionally and globally competitive, environmentally friendly and attracts knowledge workers, happy people.
PRODUCTS/ SERVICES/ ACTIONS	Quality of life, smmes, social capital, less crime, integrated policy making, virtual office, virtual schools, self-employment opportunities.
VALUES	Contentment, selflessness, care, creativity, respect, cultural diversity, social inclusion & cohesion
DRIVERS	Urban-urban divide, over population, transportation problems, prevention of social exclusion, climate change, ICT, Resources-(energy, water, food). Demographics (aging)
OBSTACLES	Home Affairs, xenophobia, short-term interests, lack of existing models, cost (water, energy), incentives, (water, energy), Political will.

4.18 STORY: Group 6 - Knowledge Based Economy

SELF SUFFICIENT COMMUNITIES - GAUTENG, HOME OF HAPPY PEOPLE

David (36, specialist artisan) wakes up to a beautiful sunny day in Gauteng. He brushes his teeth and walks to the local café where he meets up with his friends. Over freshly brewed coffee and home-baked croissants they share some challenges and ideas. Suzan (85, retired Eskom technician) raises her concerns about water scarcity in Gauteng. Despite re-use of water (bio-filters) and catchments of rainwater, there are still major concerns about the availability of drinking water for future generations. Zandile (52, social anthropologist) said she will pose the question to one of the virtual communities she belongs to. It's a community focusing on scarce resources connected to her knowledge network consisting of people from government, academia, research institutions and businesses (sustainable development unit in Stellenbosch).

Themba (23, tourist guide) is very excited about attending an international conference hosted by Gauteng Urban Observatory. People from all over the world are coming to learn from South Africa how to implement and sustain self-sufficient, sustainable communities. David mentions some of the key characteristics (which are not so obvious to this group, because they are used to living this way):

- Intelligent transport systems
- Sustainable use and re-use of water
- Alternative energy sources (gone are the days of expensive, inefficient solar panels)
- Intelligent medical care that is mostly home-based
- Design of space and place by taking into account the need for relaxation, green spaces and old people

David, who is part of the locally but globally connected network, is a self-employed skilled artisan. He is representative of the well established thriving SMMEs that are providing employment opportunities.

As Suzan walks home she reflects on how things have changed, how South Africa has managed to overcome short-term thinking (profits at the expense of sustainability) through a very sharp change in political direction and will. As a result of the Eskom energy crisis, government realised how important longer term thinking is.

Themba gets on a bus to go to a meeting in town. He chuckles to himself when he sees a billboard advertising the latest BMW zet-23, and can't help wondering: why on earth would anybody want a car?

Zandile and David decide to stay a bit longer to work on her project, researching how we were able to move from an asymmetrical to an inclusive, cohesive society. Zandile is keen to meet Prof. Richard F (94, a retired Prof. from MIT) to discuss the links between her research and the "creative class" concept. She believes that the combination of diversity, quality of life and happy citizens in self-sufficient communities with the ability to collaborate using ICT found in South Africa provides the perfect example of the creative class.

5. Valuated futures themes in futures wheels

Valuated Futures Themes in Futures Wheels: Gauteng in the year 2050		
GROUP ONE - GHC	**GROUP TWO - GHC**	**GROUP THREE - VAG**
• Research development; Implementation of diverse energy alternatives; • Educational behavior change; • Green design planning • Recycled materials; New local food production; Sustainable transport.	• 100% awareness, individual household use at 20% of electricity and water compared to 2005 levels. Zero waste to landfill. Waste to energy • Pollution free, 80% Public Transport usage. • Novel waste recycling, products & technologies e.g. edible packaging, biofuels, Regular perception surveys, campaigning/advocacy. Green design. Drinkable sea water	• Public service academy. Free communication infrastructure, business sector as change agent, innovative public and business sector; access to financial resources; appropriate content; appropriate social systems. • Microchip; public technology devices-automated service machine; personalised service; bio-metric identification mobile technology.
Top Three Issues: • Diverse energy alternatives; • Recycled materials • Sustainable transport.	**Top Three Issues:** • Households use at 20% of electricity and water compared with 2005 levels • Drinkable sea water • Zero waste to landfill	**Top Three Issues:** • Free communication infrastructure • Public technology automated services • Bio-metric identification mobile technology.
Focused Substance Area: **SUSTAINABLE ENERGY**	**Focused Substance Area:** **GREEN CONSCIOUSNESS**	**Focused Substance Area** **UBIQUITOUS COMMUNICATION INFRASTRUCTURE**

Valuated Futures Themes in Futures Wheels: Gauteng in the year 2050		
GROUP FOUR - VAG	**GROUP FIVE - KBE**	**GROUP SIX - KBE**
• Enabling legislation, • Joint planning for metros and other municipalities, • Privatised services, eg. bus services, waste management with subsidies. • SMME and business friendly environment, • Holistic skills development • Centralised, Integrated planning, good policies, • Stable and flexible legal frameworks, • Good effective processes, • Multi-access to government services, • Investment in social programmes	• Free ICT infrastructure to basic level • Open source rules!!; Free public access portals, • Instill innovation thinking from pre-school; • more managerial, technological; • Entrepreneurial and life skills training at schools; virtual classrooms; free education; • Accessibility to 24/7 education; • Customized transparent human-computer interface makes language differences irrelevant.	• Improved quality of life, Social capital, Less crime, • Integrated policymaking, Virtual office, virtual schools, • Self-employment opportunities. • Cutting Edge • Medical Facilities • Intelligent Crime Management Systems • Intelligent health / Telemedicine
Top Three Issues: • Centralised, Integrated planning, good policies • Privatised government services • Holistic skills development	**Top Three Issues:** • Free ICT infrastructure to basic level • Instill innovation thinking from pre-school • Virtual classrooms; free education;	**Top Three Issues:** • Integrated policy making • Cutting Edge Medical Facilities • Intelligent Crime Management Systems
Focused Substance Area: **"LITE" GOVERNMENT, FOCUSED ON POLICY, STRATEGY AND OUTSOURCED SERVICE**	**Focused Substance Area:** **FREE PHYSICAL AND ELECTRONIC CONNECTIVITY**	**Focused Substance Area** **SELF SUFFICIENT COMMUNITIES SYSTEM**

Annex 1. Agenda for the 2nd COFISA GAUTENG Foresight Workshop

SAKAZA
CONSULTING (PTY) LTD

Opening Plenary Session (~1 hour – 09h00-10h00):

- Welcome and Introductions
- Overview of outcomes of First GAUTENG Workshop
- Inputs on the 3 GAUTENG Themes
- Selection of working groups (at least one group per Theme) for rest of workshop

First Group Session (~75 mins – 10h00-11h15):

- Working group development of 2050 futures wheel
- Working group election of the 3 most important issues in their wheel

Tea break (15 mins ONLY)

Second Group Session (~1.5 hours – 11h30-13h00):

- Working group development of ACTVOD table
- Working group selection of at least three "vertical scenarios"

Lunch break (45 mins ONLY)

Third Group Session (~75 mins – 13h45-15h00):

- Working group creation of a story, based on their preferred "vertical scenarios"
- The story will include both the vision (the "What?") of the 2050 future and "How?" to get there from the present situation

Tea break (30 mins)

Final Plenary Session (~1+ hour – 15h30-16h30):

- Each working group will report back *summaries* of their stories (10 mins/group, max.)
- Overview of next stage of process
- Wind-up and thanks

Annex 2. Breakdown of the 6 groups and their themes

2nd GAUTENG COFISA WORKSHOP

GREEN HEALTHY COMMUNITIES	KNOWLEDGE BASED ECONOMY	VIRTUAL AUTOMATED GOVERNMENT
GHC 1	**KBE 1**	**VAG 1**
Mmathe Kgarimetsa-Phiri	Jayshree Naidoo	Dumisani Mphalala
Dr. Delia Nzweku	Prof. A.P. Melck	Nomaswazi Nkosi
Jueness Park	Gavin Mackrill	Rodwyn Grewan
Linda Ngambu	Henra Meyer	Thembinkosi Semwayo
Aki Enkenberg	Nirvashnee Seetal	
	Nicki Koorbanally	
GHC 2	**KBE 2**	**VAG 2**
Jan Erasmus	Fayaaz Sacoor	Peter Greenwood
Ela Romanowska	Mohamed Bhyat	Laurence Cloete
Arthur Ncube	Itha Taljaard	Prof. Rex van Olst
Julie Clark	David Lefutso	Prof. Gerhard von Groenewaldt
Thokozile Mandyu	Lauri Kuukasjarvi	

Annex 3. Workshop Participants

REGISTER OF ATTENDEES 2ND GAUTENG COFISA FORESIGHT WORKSHOP				
FULL NAMES	**ORGANIZATION**	**EMAIL**	**TELEPHONE**	**CELLPHONE**
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