Report from the

Go Open Source Task Team Conference

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Background to the Declaration and Strategy

This document was originally prepared as background information for the Go Open Source Task Team Conference. This Conference took place in Johannesburg South Africa on August 22-23 2005. The original text has been modified to include comments received by participants, as well as an updated Strategy and final Conference Declaration that was unanimously supported by all delegates.

Purpose of this Document

With the South African Government policy on free and open source software (FOSS) and open content (OC) still widely unknown within Government and within South Africa, a strategy is needed to move from the policy phase to the implementation phase if the policy goals are to be realised. Government has acknowledged that it will benefit from the participation of many stakeholders from across the various sectors of society in developing an open source strategy, as:

- Many of the policy goals are developmental in nature and cannot be reached by Government acting alone
- Much of the critical expertise required to formulate an appropriate strategy currently lies outside Government
- Much of the capacity to implement the strategy lies with these same experts and partners, so their involvement in developing the strategy not only strengthens it, but enhances the likelihood of successful implementation
- Government is a major purchaser of ICT products and services, and as FOSS becomes a significant component of its procurement this will alter the *demand* in the market, as well as altering *supply* over the medium to long term. Such shifts in the market will want to be understood and anticipated by many stakeholders.

For these reasons, the **Go Open Source Task Team Conference** was organised to assist in the development of a National Open Source Strategy and, as a multi-stakeholder group with significant depth and breadth of experience and expertise in the range of relevant issues, to issue a supporting Conference Declaration.

This document includes a final Strategy and Declaration, both of which were workshopped and amended during the conference. The final consensus Declaration was issued at the close of the conference.

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Conference Declaration

Declaration on the South African National Strategy on free and open source software and open content ("National Open Source Strategy")

1. We, the delegates assembled in Johannesburg from 22-23 August 2005 for the Go Open Source Conference on the National Open Source Strategy, declare our common desire and commitment to the strategic use of information and communications technologies in order to further socio-economic development and affirm the central place that free and open source software and open content (FOSS/OC) have in realising this goal.
2. We recognise that FOSS/OC include both technological and environmental elements that are characterised by accessibility, collaboration, interoperability, open standards, transparency, customisability, contribution, and open licensing and that FOSS/OC involve those who use, modify, enhance and create such technology and content.
3. We recognise that the South African national strategic objectives for socio-economic development are to improve competitiveness, support local innovation and investment, broaden BEE participation in the economy, build a better world, improve the reach and efficiency of government service delivery and in doing so reduce poverty and redress imbalances of the past.
4. We affirm that FOSS/OC help achieve these objectives by contributing to socio-economic development nationally, regionally and internationally in significant ways that other technologies and forms of content do not.
5. We conclude that it is strongly in the interest of all spheres of Government to adopt, support, develop and promote the use of FOSS/OC and its underlying principles

POLICY

6. The foundation of policy is for government to implement FOSS/OC unless proprietary software is demonstrated to be significantly superior. Whenever the advantages of FOSS/OC and proprietary software are comparable FOSS/OC must be implemented when choosing a software solution for a new project. Current proprietary software must be migrated to FOSS/OC whenever comparable software exists. When FOSS is not implemented, then reasons must be provided in order to justify the implementation of proprietary software. All new software developed using Government resources must be based on open standards; adhere to FOSS principles, and licensed using a FOSS license where possible.
7. An environment supportive of FOSS/OC must be created, ensuring that existing legislation on copyright, patents, trademarks, etc., do not present barriers to FOSS/OC utilisation. This must be done by developing awareness, capacity, knowledge and understanding nationally and within Government; developing broad FOSS/OC Research and Development initiatives; enforcing and giving preference to the use of FOSS and application of FOSS/OC principles in planning and procurement processes; creating opportunities for use of FOSS/OC. Creation of such an environment will require partnerships with relevant sectors of society.
8. Government should utilise the opportunities presented by the open and collaborative culture associated with FOSS/OC to promote access to information by citizens, by driving

and embracing enhanced service delivery through electronic channels.

9. All content produced by Government or using public resources must be open content, unless analysis on specific content shows that proprietary licensing or confidentiality is substantially beneficial. Open content and open standards will be encouraged generally within South Africa.

WE RECOMMEND

10. That national Cabinet formally adopt this policy on FOSS/OC within six months.
11. That national Cabinet mandate an appropriate multi-stakeholder entity to implement the National Open Source Strategy within twelve months.
12. The development of a FOSS/OC scorecard that will be used to evaluate progress of individual departments or clusters toward implementing this policy.
13. That relationships with regional and continental African organisations should be given special attention, including NEPAD's e-Africa Commission and information society Partnership for Africa's Development (ISPAD), and SADC, among others, in order to share the benefits of the National Open Source Strategy and for alignment with other ICT-related African development strategies. Similar attention should be given to IBSA collaboration.

IN CONCLUSION

14. As the policy, strategy legislative processes and their implementation move forward and in anticipation of their completion, we are committed to the implementation of FOSS/OC projects and open standards in our own organisations and areas of activity, and to helping address the many challenges that will be faced as the National Open Source Strategy is pursued.
15. As a multi-stakeholder conference with delegates from all spheres of government and across all government departments, from private sector companies, from civil society, and as private individuals with specific expertise in the area of FOSS/OC we urge the recommendations in this Declaration be carried forward.

Participating Organisations

Private sector

Accenture, Canonical Ltd, Computers 4 Kids, Dipalo School of ICT, Hewlett-Packard, IBM, IMPI Linux, Junior Chamber International, Magna FS, Mohwiti Technology - Innovation Hub, Obsidian, Olamandla (Pty) Ltd, Procentrica Africa, Radian, Redscreen, Sasol, Silverline Consulting, SLR Consulting, Target Training & Technologies, T- Systems.

Public sector

Akani Retirement Fund, Cosatu, CSIR / The Meraka Institute, E-schools Network, NAFCOC, NAFCOC Youth Chamber, Netday, OSISA, SA Post Office, SA Revenue Services, SchoolNet Namibia, SITA, The Shuttleworth Foundation (TSF), Training Trade Unions, Translate.Org, Ubuntu Education Fund.

Government

The Office of the President, National Department of Arts and Culture, National Department of Communications, National Department of Correctional Services, National Department of Education, National Department of Government Communications and Information Services, National Department of Local & Provincial Government, National Department of Public Enterprise, National Department of Public Service and Administration, National Department of Science and Technology, National Department of Trade & Industry, National Department of Water Affairs & Forestry, The Presidential National Commission on information society and Development, Centre For e-Innovation (Provincial Government of the Western Cape), City of Johannesburg, Gauteng Office of the Premier, Gauteng Province (Sport, Public Works and Transport), North West Provincial Government, Eastern Cape Education Department, free State Education Department, Gauteng Education Department, KwaZulu-Natal Education Department, Mpumalanga Education Department, Northern Cape Education Department, North-West Education Department.

Academia

Eastern Cape Technikon, Rhodes University, UNISA, University of Cape Town, University of Western Cape.

The South African view on Open Source

Over the course of the four years spent developing the national free and open source software and open content (FOSS/OC)[1], not only has FOSS been recognised widely as a viable choice strictly on technical merits, but it has also been recognised around the world that FOSS is inherently different in its potential to have broader beneficial effects, particularly for developing nations, including South African society.

What makes open source different

In recent years a wide range of organisations across the world have started to make use of 'open' ICTs in the form of free and open source software and open content. These differ from proprietary information and communications technologies and proprietary content, and do so in significant ways. The different licenses that are used to issue FOSS/OC permit the software or content to be used in various ways, but in general one or more of the following apply:

- They are developed through a process of public collaboration
- They are available for use by anyone at no or little financial cost
- Their use does not require paying licensing fees or adhering to restrictive licensing conditions. Making copies and sharing them with others is encouraged
- Access is allowed – even encouraged - to the inner workings of the technology or content (e.g., the source code or the complete electronic text) in question, which allows for modification, customisation and further improvement
- Redistribution of the modified customised or improved technology or content is both permitted and encouraged

The characteristics of free and open source software and open content

These differences give rise to the following chracteristics of FOSS/OC, which have technological benefits in their own right. These characteristics are:

FOSS/OC technologies and open content are generally **accessible** in multiple ways, including download using the internet from web sites, or IT companies specialising in supporting and customising open source software. No licensing costs are incurred. Further, *redistribution* by individual users is encouraged. In contrast, proprietary technologies and content are only available from specific vendors who limit the use and distribution of their products by licensing and charging fees for use whilst specifically prohibiting redistribution.

Transparency means that a product or system is 'open', which means its workings are exposed to the public and can potentially be modified or improved by anyone. The alternative, which is a system whose workings are closed to the public, and modifiable by the owner only, is a proprietary[2] product or system.

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[1] The open source Definition is at http://www.opensource.org/docs/definition_plain.html. A commentary on the document by its creator is at http://perens.com/OSD.html

[2] The term "proprietary" means "privately owned and controlled". Wikipedia, http://en.wikipedia.org/wiki/Proprietary

Open content - coined by analogy with open source - describes any kind of creative work (e.g., text, pictures, audio, video, etc.) that is published under an open license and format that explicitly allows the copying of the information (e.g. GNU free Documentation License[3], is used by Wikipedia where this definition was developed). A number of variations on open content licenses are in common use, and the term 'open content' typically refers to the general principles of copying, re-use, and redistribution without charge, even though there may be other provisos (e.g., attribution of authorship).

Open standards are created by standards-setting organizations including consortia like the Internet Engineering Task Force (IETF), World Wide Web Consortium (W3C), and the Organization for the Advancement of Structured Information Standards (OASIS), and formal standards bodies such as the American National Standards Institute (ANSI) and the International Organization for Standardization (ISO). For these organizations, openness allows any interested party to contribute to proposals and thereby makes it possible to base decisions on a near consensus. Users often emphasize access to documentation and free usage as key features of open standards. Care is needed by these bodies when developing open standards to ensure that they do not build upon or reference a closed proprietary standard. When this happens, the resulting standard is not open.

A standard is 'open' when:

- It cannot be controlled by any single person or entity with any vested interests
- It evolved and is managed in a transparent process open to all parties
- It is platform independent, vendor neutral and usable for multiple implementations
- Openly published
- Available royalty free or at minimal cost, with any other restrictions offered on reasonable and non-descriminatory terms
- Approved through due process by rough consensus among participants

Open standards make interoperability possible.

Interoperability describes the capability of different programs to read and write the same file formats and utilise the same protocols. Two systems can be interoperable if the owners of those systems agree to share file formats and protocols. Those that observe *open standards* will automatically be interoperable. The result is the abilkty to effeceintly transfer and use informaiton unifromly across organisations or socities.

Interoperability does not, however, imply that systems are simply open to one another, without security, privacy or business rules that govern their interaction. Interoperability provides the potential for whatever level of information exchange between systems might be appropriate and desirable. The decisions as to whether, when and to what extent to do so remain strategic and management decisions.

Customisability means that open source software code and technology specifications can be altered and modified to meet the specific needs of users. Whilst specific instances of many software applications can be customised by the user by selecting from a menu of options,

[3] The GNU free Documentation License (GFDL) is a copyleft license for free content, designed by the free Software Foundation (FSF) for the GNU project. The official text of version 1.2 of the license text can be found at http://www.gnu.org/copyleft/fdl.html

FOSS/OC applications can be modified and redistributed in their modified form. This flexibility especially promotes the creation of locally relevant applications and content, especially with regard to language.

The principle of **contribution** underpins the FOSS/OC development method which ususlly takes place through collaborative (voluntary[4]) effort.[5] The requirement to contibute improvements to the community of users and developers is often a part of the license conditions.

Open licencing - in general, users do not own software; rather they obtain a license to use it. The licence defines the terms and conditions for use of the software. Intellectual property rights (IPR) have ensured that in all cases the user must accept the terms and conditions of the licence before use, whether explicitly by clicking acceptance or implicitly by breaking a seal on the box.

Proprietary software is generally protected by copyright. In some jurisdictions (notably USA and Japan) software may also be protected by patents and then licensed for a fee on a commercial basis, which imposes conditions that limit the the use of the software; importantly, the source code is kept secret. Proprietary content, by analogy, is protected by copyright law which limits the use of the content, and similarly may be licensed for a fee on a commercial basis.

Usually, FOSS/OC is not 'unlicensed' but is rather specifically licensed to allow and encourage wider use, broader distribution and further modification. A number of well-established open licensing conventions exist to facilitate this. Similarly open content is protected by copyright law, but the law is used to lift some or all restrictions of the use of the content.[6]

Open licensing therefore allows and encourages accessibility, transparency, interoperability, customisation and contribution.

Elements of FOSS information systems

As is evident, 'open source software' is a broad term that encompases a range of software types that are used by different people in different ways. It is easier to understanding how FOSS is used if these types are explained. This framework covers nine elements of information systems – five associated with software solutions plus four associated with an enabling environment.

The following five primary elements of **software solutions** pertain to open source software are:

- Programming Languages, and application development environments includes computer languages and associated development tools used to develop software. Open source programming languages and application development environments are not proprietary,

[4] Like the many individuals that volunteer to work on open source software projects, there are also a number of non-profit and various commercial organisations that volunteer to participate.

[5] Commercial mass-market software is a relatively modern phenomenon. Until about 1980 almost all software was created by hobbyists and distributed freely. With the commercialisation of software came the notion that the source code needed to be kept secret in order that the software could not easily be modified and passed off as another's work.

[6] For example, in South Africa various content licenses defined by Creative Commons are increasingly used. See www.creativecommons.org

privately owned or controlled. An example of a language is Python, while Zope is considered an object-oriented application development environment.

- Operating Systems are the foundation of an information system. They enable applications to interface with hardware. Operating systems are required for all hardware including mobile phones, ATMs, personal digital assistants, workstations and servers. Open source examples include BSD-style operating systems such as freeBSD and OpenBSD, and Linux-based variants such as Ubuntu, Knoppix, Red Hat, etc.
- Databases are common to many or most applications and used as a means to store complex and relational data. Examples of most commonly used open source databases include mySQL and PostgreSQL.
- Applications, Components and Systems, are open source software programs themselves, their constituent components (both as part of a particular application and as separate sections of code), and integrated or interoperating open source applications. These will commonly be built using open source programming languages and require an operating system as well as a database. An example is a Hospital Information System or Patient Record System.
- Generic software tools are the programs used in most workstation environments. This includes word processing, spreadsheets, presentation and more recently email and web browsing. Current examples include the OpenOffice.org office productivity software and the Mozilla suite of Firefox web browser, Thunderbird email and Sunbird calendar and scheduling software. As the information society evolves more applications will become generic. With the convergence of communications and information technology, the next major generic application is expected to be telephony.

Four primary elements of an **enabling environment** suport the use of FOSS and the creation of open content:

- Community, which includes individuals and organisations participating in the use, creation, management, modification or enhancement of open source software, as well as the guidelines and standards for engaging in those activities, including the channels, resources and content that make the community possible and functional; that is, the open source community and what makes it work effectively. Internet access and email access are pre-requisites for an OSS community.
- Legal, Intellectual property rights and Governance, which are internal and external rules by which role players manage their use of open source software or participation in the open source community, as well as the rules that govern their relationships with one another that pertain to open source software
- Information Interoperability, which includes standards and policies pertaining to interconnectivity, networking, authentication, data integration, and information access in a manner consistent with open standards.
- Content Structure, which includes standards and policies pertaining to data schema and information presentation in a manner consistent with open standards

Levels of Commitment

Not every user of FOSS/OC makes uuse of them in the same way; four levels of ‘commitment’ to open source software and open standards can be identified:

- Use, which involves the use of any of the open source primary elements listed above, as they are downloaded and installed. For example, few users of OpenOffice make any effort to understand or change its source code
- Modify, which involves customisation or alteration of an open source element for the specific purposes of the user, without intention or effort to share or redistribute the element to the open source community. Many open source developers make use of FOSS langauges, operating systems, databases, applications and tools to put together customised solutions for their clients on a professional basis
- Enhance, which involves modifying an element in a way that contributes to the enhancement of that element for the open source community or as part of a contribution to a registered open source development project. Enhancements to the source code of FOSS langauges, operating systems, databases, applications and tools that are improvments or may be useful to others may be made by developers in the couse of customising or integrating elements for a client, or may be the intent of a developer to improve a piece of software through his/her own insight and skill. Either way, other users benefit
- Create, which involves initiating, registering and supporting an open source development project for the open source community. This measn starting something new – though ususally by building on and incorporating existing elements. A new project could either be an effort to create a new language or tool, for example, or an effort to incorporate FOSS langauges, operating systems, databases, applications and tools together to build a new specific solution through collaboration such as new management system for clincs or schools

Direct benefits of FOSS/OC

Today, many industry leaders acknowledge that FOSS/OC is a viable choice, "both on the desk-top and in the back-end".[7]

These typically focus of cost, security and similar issues. Even so, when objective technical and financial analyses are conducted to calculate total cost of ownership, return on investment, technical performance levels and other measures, FOSS/OC typically proves highly competitive and frequently superior across many categories of ICT.[8]

This is not to say that FOSS/OC solutions are available or appropriate in every situation or for every user.[9] FOSS/OC can have apparent disadvantages – not least that its use may require significant technical expertise, and that accountable support of the kind that is usually associated with proprietary software may be unavailable. Many of the benefits of wide ICT adoption have come about as a result of the *de facto* interoperability of documents and files produced by ubiquitous Microsoft applications. And there is an argument that intellectual property rights protecting proprietary software drives innovation by allowing developers to seek an economic return for their efforts – which, if true, mitigates against the promotion of FOSS/OC as a development tactic.

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[7] Brett Haggard "The top ten reasons why government should adopt open source" Electronic Government, Vol1 Issue 10 2005, p14

[8] See, for example "open source software: Perspectives for Development", Dravis P World Bank, 2003

[9] This analysis drawn from Attar A et al "Framework to assist donors in endeavours to support free and open source software ('FOSS') in the developing world" CSIR October 2004

These apparent disadvantages are becoming less defendable: as items of FOSS software mature they generally become easier to use without technical knowledge, local firms as well as the wider user and developer community offer support, and interoperability between applications has obvious advantages over *de facto* interoperability though majority use of a single application. Alternative business models have arisen that still allow contributors to profit from their efforts without charging for the software itself, and several commercial IT vendors have professional teams contributing to open source development projects. In drawing together these arguments, various government sponsored investigations and reports have identified the following relative advantages and benefits of the wider use of FOSS/OC over and against proprietary software:[10]

1. Freedoms to probe, modify, learn from and customise software to suit particular needs. From a government perspective, this has four consequent benefits:
    - Ensuing free access to public data by citizens (who are not forced to first invest in a proprietary software application in order to do so). This can only be guaranteed through the use of open content standards, which is best done through the use of compatible open source software
    - Guaranteeing the permanence of public data, by ensuring that the usability and maintenance of the software does not depend on the goodwill of suppliers, or the monopoly conditions imposed by them. To do this the State needs to use systems whose development can be guaranteed due to the availability of the source code
    - Security of public and state information, by virtue of the fact that source code of the applications which allow public and state information to be stored and exchanged can be inspected by citizens, the state and independent experts. This transparency gives confidence that the code is free of critical bugs or potential security flaws. Several documents liken this to the benefits in the academic and research world of peer review
    - The ability to customise FOSS/OC makes it particularly appropriate in countries – such as South Africa – with a large number of local languages and dialects, into which applications can be translated
2. The facilitation of interoperability between systems, allowing them to readily exchange data. FOSS/OC generally conforms to and respects existing standards, and through its use reinforces them.
3. Improved reliability, and less vulnerability to viruses (this is related to the security issue

[10] Adapted from Levin, Alan *et al;* and derived from Thomas E Pogue, Adi Attar, Bob Day, Nhlanhla Mabaso, Sibusiso Sibisi and others. "Open Software & open standards in South Africa. A Critical Issue for Addressing the Digital Divide", National Advisory Council on Innovation Open Software Working Group (NACI), Version 2.3, November 2003; OSS Working Group. "Using open source software in the South African government." Government IT Officers Council, Version 3.3, 16 January 2003. <http://www.oss.gov.za/docs/OSS_Strategy_v3.pdf> (15 November 2003); "Handbook on Minimum Information Interoperability Standards (MIOS)", *Department of Public Service and Administration,* 16 April 2002, <http://www.dpsa.gov.za/e-gov/2002docs/MIOS-Handbook16April'02.pdf (10 November 2003); "MIOS Implementation Initiative". Department of Public Service and Administration. 25 May 2002. <http://www.dpsa.gov.za/e-gov/2002docs/ImplementationSupportMIOS.pdf>; Blume, Roy, Natalie Bryden, Brian Neilson and Mark Rotter. "Designing and managing a framework for assessing results of use to OSS in South Africa: Phase 1." BMI TechKnowledge Group report, No. BMI-T No. SITA2003A, May 2003.

described under the third sub-bullet above).

4. The absence of a requirement to pay license fees to the originators, as is almost always the case with proprietary software – usually to foreign corporations. This reduces cost (not least by removing the need for policing), and decreases dependency on imported technology and skills.
5. The ability to make productive use of older – yet still functionally adequate - hardware, without the continual pressure to upgrade, with associated capital, licensing and training costs. This is also referred to as the benefit of "non-obsolescence".
6. The potential for a local ICT development industry to flourish, with associated societal benefits.

Developmental benefits of FOSS/OC

The benefits FOSS/OC and standards are not just the *relative* benefits of FOSS/OC when compared with their proprietary alternatives, as outlined above. The characteristics of FOSS/OC and standards mean that their use also has benefits beyond the technical and financial, including important broader social and economic benefits that are not conveyed by the use of conventional proprietary ICTs. These socio-economic benefits are an important consideration when evaluating the proper place of FOSS/OC in the developing world.

The social and economic benefits of wider use of open souce software and open technologies are, in summary:[11]

1. **Open source supports the local IT industry and digital self-sufficiency**: FOSS/OC supports ICT spending with local companies, keeping that money 'onshore' and thereby encouraging a valued, employable skills base to flourish domestically, which in turn keeps educated and skilled workers at home and encourages other educated and skilled workers to immigrate, drawing in talent.
2. **Open source supports entrepreneurship and business formation**: FOSS/OC, by recognising participation in software development at the level of the individual and not the corporation, and by shifting the value capture within the ICT industries from proprietary software development or packaged software sales to customisation and integration of existing FOSS/OC, also furthers the success of small, medium and micro-enterprises (SMMEs), which can create opportunities for entrepreneurial success of SMMEs, and drive job creation as well as grassroots economic empowerment.
3. **Open source supports innovation, local solutions and learning**: FOSS/OC encourages hands-on, self-directed and experimental learning of 'primary source' material (i.e., source code) with peer-based support mechanisms for guidance and feedback, an empowering way of learning that is particularly important in an information society.[12] And the result is

[11] Levin, Alan *et al* 'Open source software and the information society: Policy and Strategy Recommendations to the Presidential National Commission of the Republic of South Africa', Pretoria: Presidential National Commission, 5 January 2004. Other publications list similar benefits, worded or grouped with slight variations, for example see Wong, Kenneth 'free/open source software: Government Policy', New Delhi:United Nations Development Programme – Asia Pacific Development information Programme, 2004, or Brett Haggard "The top ten reasons why government should adopt open source" Electronic Government, Vol1 Issue 10 2005.

[12] An 'information society' is one which the creation, distribution and manipulation of information has become a significant economic and cultural activity. The 'knowledge economy' is its economic counterpart wherby wealth

software solutions and content that are particularly suited to local needs.

4. **Open source promotes collaboration and open standards**: FOSS/OC also provides, encourages and self-regulates a set of rigorous and broadly applicable standards and mechanisms for collaboration, quality assurance and distribution of ICT product (i.e., software), an empowering and team-oriented way of producing products, particularly well suited for the products highly valued in a knowledge economy, and proven across a range of industry sectors.[13]
5. **Open source supports local content creation and consumption**: Existing FOSS/OC can readily be adapted for local languages, reducing barriers to access and to the mastery of skills while helping eliminate the marginalisation of those from cultures not ordinarily possessing a high level of fluency in one of the world's major languages.[14]
6. **Open source reduces vendor dependence and lock-in**: Each of these five benefits above also help counter a psychology of dependence on developed countries and corporations to provide the innovations and solutions to problems faced domestically, even as FOSS/OC helps reduce that dependence in practical terms.
7. **Open source allows market entry for firms that would otherwise be unable to withstand corporate competition:** Supporting the collaborative and communal culture of FOSS/OC development also helps to balance the bare-knuckled culture of market competition in the ICT industries, supporting both social and economic upliftment.
8. **Open source raises the profile of South Africa in the global economy, and narrows the digital divide**: Participating in the FOSS/OC community raises the profile of the developing world, helps to demonstrate its capabilities and its desirability as a progressive, technologically literate and knowledge-savvy nation, and provides a greater degree of participation in and access to the global 'quick response' teams addressing criminal hacker and virus threats. Ultimately this participation should lead to peer based relations, thus narrowing the digital divide.
9. **Open source puts user needs first**: FOSS/OC shifts the competitive advantage among ICT companies to value creation for the customer, removing recurring revenue streams such as licensing upgrades and ancillary software purchases (e.g., for interoperability within a proprietary operating system or application suite) that benefit firms having longevity in an industry and that subsidise those existing firms to the disadvantage of SMMEs and start-ups who cannot compete on equal footing. The latter situation promotes a lock-in of economic winners in a global industry, thereby reducing market competitiveness as well as global economic transformation.
10. **Open source promotes transparency and accountable government**: The nature of open technologies can help move forward a culture of openness and transparency in government as well as society, promoting public access to government by facilitating information sharing and interoperability of ICT systems among stakeholders, and enabling government to be accountable to the people without instead being beholden to the proprietary software

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is created through the economic exploitation of knowledge.

[13] For examples, see ThinkCycle www.thinkcycle.com, Creative Commons www.creativecommons.org, Cambia (Center for the Application of Molecular Biology to International Agriculture) www.cambia.org, Wikipedia www.wikipedia.org, and Public Library of Science www.plos.org.

[14] See, for example, www.translate.org.za

and standards of a private corporation.

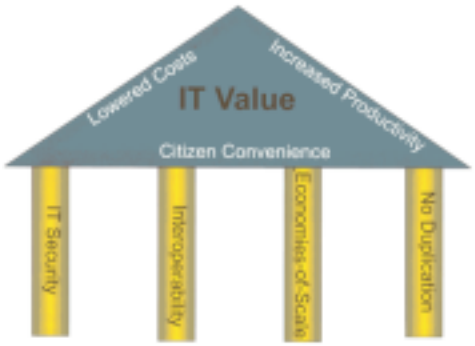
These benefits start to be felt once the use of FOSS/OC has reached a critical mass or a tipping point within the nation. Government, as the largest user and purchaser of ICT, can play the key role in bringing South Africa to that tipping point.

OSS supports South African developmental goals

Because of these developmental benefits, the adoption, support and promotion of FOSS/OC helps support the government's developmental goals in ways that conventional proprietary ICTs cannot. These developmental goals, the national strategic socio-economic development objectives, are listed below, followed by a brief description of how FOSS/OC supports it:

Goal 1: Improve the efficiency and reach of government service delivery

The 'e-Government House of Value' recognises the ability of ICTs to enable the following:



- The lowering costs through workflow automation and improved communication;
- Increasing productivity by cutting the cost of administration and channeling more benefits to citizens and businesses – especially those in most need; and
- Improving the convenience of access to services by citizens and businesses

The supporting pillars of IT security, interoperability, delivering economies of scale and avoiding un-necessary duplication are better served by the preferential use of FOSS/OC.

Goal 2: Improve national competitiveness

A vibrant and innovative ICT industry is a necessary requirement for a modern, competitive knowledge based economy. The local ICT industry must be encouraged to develop the skills and competence to develop locally relevant applications and solutions – rather than just supply and support products developed by overseas corporations. Mandating the wider use of FOSS/OC will have this direct effect.

Goal 3: Support local innovation and investment

Local innovation cannot happen in an environment where ICT firms are simply resellers of proprietary software or where users cannot customize and build on existing technologies to better suit them to local conditions and needs. Support for FOSS/OC by government will have ripple effects throughout the economy that will result in more opportunities for innovative products, and investment in developing and promoting them in new market segments and expanding markets in southern Africa and beyond. Additionally, local content and local languages will stimulate local economic as well as social (e.g., cultural, artistic) activity.

Goal 4: Broaden BEE participation in the economy

Opportunities to customize, supply and support FOSS/OC are open to smaller companies, who may often in fact have advantages over larger corporates or branches of multinationals. As the level of development skills improves, black owned and managed firms will find it easier to enter markets or create new ones, thus injecting BEE equity into the ICT industry and broadening participation in the economy.

Goal 5: Build a better world

Government and other organisations need to make use of ICTs anyway; making preferential use of FOSS/OC will expand and strengthen the local economy by keeping spending at home and building skills and capacity. The ripple effects on investment and job creation into increased demand in other sectors of the economy will contribute towards building a better life for all in South Africa, and allowing African technology and firms to better compete in the region and the world. Additionally, the culture of 'open' communities and the collaborative models they engender are resonant with South African and African societal values and traditions. To encourage them to flourish internationally is to help the world better understand us.

Conclusion

The pursuit of the national strategic socio-economic development objectives by the normal functioning of Government departments, agencies and partners could be supported by the use of any appropriate technology, in that ICTs can help improve efficiency and service delivery. If considered on strictly technical grounds, open source software and standards may have a relative advantage over conventional proprietary ICTs in any given instance. However, given the developmental benefits of FOSS/OC, its use is generally preferred unless there are specific and significant reasons why not.

National FOSS/OC Policy

The national policy on free and open source software and open content has developed over a number of years. Input has come from primary and secondary research, experts within and outside Government as well as internationally, consultation over several years with a wide range of stakeholders in various forums, and publication and circulation of several drafts with comments from the public. Over the last two years, the primary facilitators of the policy development have been the Government IT Officer's Council (GITOC) under DPSA's guidance as a body of Government ICT experts, and by a Presidential National Commission which gave direction to a diverse team of experts from outside government to consider broader information society factors and develop any appropriate enhancements to the GITOC FOSS/OC policy.

The four components of the policy as stated below were workshopped and debated during the Conference, having been drawn from a synthesis of the GITOC FOSS/OC policy, revised in June 2005, and the PNC OSS policy, completed in January 2004.

Go Open Source Task Team Conference Recommended Policy:

1. The foundation of policy is for government to:
    a) Implement FOSS unless proprietary software is demonstrated to be significantly superior. Whenever the advantages of FOSS and proprietary software are comparable FOSS must be implemented when choosing a software solution for a new project. When FOSS is not implemented, then reasons must be provided in order to justify the implementation of proprietary software.
    b) Migrate current proprietary software to FOSS whenever comparable software exists.
    c) Develop all new software, based on open standards, adhering to FOSS principles, and licensed using a FOSS license where possible.
    d) Ensure all Government content or content developed using public resources is made open content, unless analysis on specific content shows that proprietary licensing or confidentiality is substantially beneficial.
    e) Generally encourage open content and open standards within South Africa.
2. An environment supportive of FOSS/OC must be created, ensuring that existing legislation on copyright, patents, trademarks, etc., do not present barriers to FOSS/OC adoption and utilisation. This must be done by developing awareness, capacity, knowledge and understanding nationally and within Government; developing broad FOSS/OC Research and Development initiatives; enforcing and giving preference to the use of FOSS and application of FOSS/OC principles in planning and procurement processes; creating opportunities for use of FOSS/OC. Creation of such an environment will require partnerships with relevant sectors of society.[15]
3. Government should promote and take advantage of the opportunities presented by the wider use of FOSS/OC, and the open and collaborative culture associated with the development and sharing of FOSS/OC. The use of FOSS/OC will encourage a culture of collaboration, openness and transparency by government, the public sector, academia and the private sector. Within government and the public sector this will promote access to

[15] Creating such an environment has been termed "creating an open ICT ecosystem". See Jeff Kaplin *et al* 'Roadmap for Open ICT Ecosystems' Berkman Centre, September 2005; available at http://cyber.law.harvard.edu/epolicy/home

information, and drive better service delivery to citizens and businesses. Within academia this will encourage local and international collaboration and learning, leading to more opportunities for innovation and thought leadership. The private sector will have the opportunity to become more competitive globally, as well as support the local ICT industry through demand for skills. The ICT industry itself will become involved through collaboration with projects from around the world, and will have the opportunity to become an innovative producer of software, rather than a passive consumer.

4. Government must champion FOSS/OC in the international arena in order to improve its position of global competitiveness. By taking a leadership role in the use of FOSS/OC through communicating, collaborating and sharing FOSS/OC with other countries, our capabilities and infrastructure is more likely to become world class. Through this leadership role we expect benefits not only for South Africa, but also that the impact will be felt across the whole African continent.

The South African policy is progressive but by no means radical, considered by the UNDP to 'give preference' to FOSS/OC. A more radical policy would mandate FOSS/OC in all cases for Government, and a more conservative policy would simply recognise the viability of FOSS/OC as an option for Government. Because of its maturity and the relatively open process of its development, South Africa's policy is increasingly well known and well regarded within the FOSS/OC community as well as among NGO's and development institutions.[16]

Given this policy, the next step is to finalise a sound strategy, supported by the resources and commitment to implement it.

[16]For example, it has been referenced by the UNDP and the International Open Source Network in their e-Primer on FOSS Government Policy.

National FOSS/OC Strategy

The strategy outlined below was workshopped and debated during the Conference. It builds on a previous draft strategy from the Presidential National Commission in 2004, which built on a GITOC strategy developed in 2003.

The strategy falls into three phases – initiation, enhancement, and mature – with the first two estimated to require a three-year time frame for implementation.

Implementation will require a robust programme of projects. Some projects are included as implementation examples.[17] This programme will need to be further developed and refined, prioritised, matched against resources and then implemented with appropriate oversight and accountability. The task of further developing the programme of projects will fall to an appropriately mandated body charged with finalising and implementing this strategy.[18]

Recommended Strategy	***Implementation Examples***
INITIATION PHASE (6 – 18 months)	
1. Disseminate information within Government a.) All government departments must be included in general learning, content development, consultations and communications functions. People outside the ICT environment must be included in briefings, especially communications and procurement staff. Senior management should be aware of the strategic and developmental benefits of using FOSS/OC. b.) The link between the MIOS, open content and FOSS must be explained and established through involvement of different spheres of government, communications and human resource development.	Create and conduct a robust programme of: • briefing sessions • information publication through appropriate media • OSS website updates, expansion and maintenance • presentations to relevant interest groups.
2. Initiate trial use and development a.) Encourage use of FOSS, including modification and customisation. b.) Promote development of enhancements to software via the FOSS collaborative model. c.) Establish FOSS/OC awards of a significant nature to recognize innovative use. d.) Assess delivery of SITA against FOSS budgetary commitments (R18m for 2004) and extent to which SITA has met its commitments.	Encourage and specially fund pilot projects across Government. Establish annual 'FOSS in Government' and 'National FOSS' awards. Audit SITA and other appropriate entities on their use and delivery of FOSS/OC solutions. Provide a service to government, citizens and businesses that seeks, identifies and creates useful open content.

[17] These examples implementation projects are taken from several of the input documents published by GITOC, SITA, DPSA and others.

[18] The implementation of this strategy presents a number of challenges which were raised during the Conference, ranging from financial to cultural issues, but which fall outside of the scope of the current document.

Recommended Strategy	*Implementation Examples*
3. Establish a global position and maintain strategic partnerships a) Engage with other countries to establish relationships for collaboration on special projects. b) As Government, seek partnerships with all sectors in South Africa, with the rest of Africa and the world, for promoting development, implementation and support of FOSS/OC. c) Assign structures and frameworks for governing partnerships and responsibilities. Transparency is essential to drive greater accountability.	Establish working collaborations with other countries on strategic FOSS/OC projects. Establish a multi-stakeholder association for the development of FOSS/OC in SA.
4. Consult with partners and stakeholders a.) Create multiple opportunities to consult with users, developers and researchers at all levels. Academics and ICT practitioners must be convinced to become involved. b.) Establish an OSS forum to involve all stakeholders, without duplicating functions of Linux User Groups (LUGs) or the Internet Society.	Establish or support and participate in an FOSS stakeholder forum; ensure efforts across government are not duplicated.
5. Establish and execute a supporting research programme a.) Establish a research agenda based on the following objectives: • Develop a consistent picture of the needs and expectations of Government with regard to FOSS/OC • Develop policies and legislation relevant to the use of FOSS/OC in Government • Develop research and evaluation instruments to assist decision makers in the identification and evaluation of opportunities and areas for the appropriate use of FOSS/OC • Develop a definition of the roles of the various sections of Government in the area of FOSS/OC, including the roles of SITA and ITAC • Identify new opportunities and identify novel pilot applications for the use of FOSS/OC in Government • Define a clear longer-term research agenda to support the FOSS/OC strategy. b.) Research should prioritise E-government and migration to FOSS/OC with less emphasis on sophisticated applications development.	Commission ongoing short research papers e.g. ICT systems use in government with a view to migrate to FOSS, FOSS for development, FOSS related national policy analysis and others as required (e.g., software patents). Establish an incentive program for well-documented FOSS pilot projects that are of wider application and use. Include and document total cost of ownership assessments. Ensure robust FOSS/OC legislation is passed (stand-alone or component of the emerging national ICT or e-strategy).

Recommended Strategy	*Implementation Examples*
6. Consolidate support capacity Ensure proper mobilising of existing FOSS/OC support capacity, plan further expansion and build the necessary capacity where successful implementations can be replicated. Include governing bodies of key stakeholders, universities, education organisations and labour in this process, with areas of responsibility to be agreed upon.	Develop, maintain and publish a database of FOSS and related services suppliers. Consider various FOSS certification or credentialing options for suppliers. Provide financial support for local FOSS programmers to contribute to FOSS creation
7. Include FOSS/OC utilisation in short and medium-term plans a.) Audit ICT plans of national and provincial Government departments for clear plans to convert to FOSS/OC. b.) Secure and assign resources to manage and monitor the ICT plans. c.) Solicit critical responses to these plans and report achievements against plans to the community.	Perform and publish on an ongoing basis rigorous audits of departmental ICT plans [as per current (since Nov 2003) public service legislation]. Establish a FOSS/OC scorecard and departmental champions to monitor departmental achievements and success stories.
8. Level playing fields a.) Avoid any bias against FOSS solutions in Government procurement procedures by: • Developing procedures and standards to ensure that tenders and contracts are free of any specifications that unjustifiably discriminate against FOSS (tenders should be technology neutral; guidelines should explain preference for FOSS unless alternatives can be shown to be significantly better) • Developing an FOSS procurement communication strategy to remove any biased mindset that may exist among relevant users and decision makers • Training tender evaluation teams and equip them to deal with the relevant FOSS and PS options fairly; • Establishing an external oversight committee made up of individuals (from all key stakeholder groups). b.) Wherever possible, avoid acquisition of hardware that does not support FOSS. c.) Procurement reporting must demonstrate progress against OSS growth targets.	Commission research on sources, extent, and effects of bias in procurement of software. Develop and implement a communications strategy for neutralizing bias in procurement of ICTs. Develop and maintain a database of service providers of FOSS and open standards systems and related services. Enhance procurement processes to align with FOSS/OC policy and support FOSS/OC strategy.
9. Develop and execute a supporting communications strategy	Establish and implement communications strategy for

Recommended Strategy	*Implementation Examples*
a.) Develop a comprehensive FOSS/OC communication strategy that will ensure optimal knowledge and understanding of, and commitment to FOSS/OC. Target government at the political level, departmental management, IT professionals and computer users in general as well as civil society and private sector. b.) Regularly assess awareness and understanding among stakeholders. c.) Establish common communication standards through implementation of the MIOS and establishment of metadata frameworks (e-GMF) and standards (e-GMS).	promoting the use of FOSS/OC in government.
10. Establish and nurture a legislative environment that supports the development and use of FOSS/OC as envisaged in this strategy. a) Empower CIPRO to enforce existing exclusion of software patents under the 1978 Patents Act. b) Review all processes and legislation relating to copyright, patents, trademarks, etc, to ensure that they do not create barriers to the implementation of this strategy. c) Initiate a process to amend the Copyright Act and any other relevant Acts, so as to facilitate open content in government.	1. Establish clear guidelines for the interpretation of Software in the 1978 Patents Act. 2. Review patents, copyright, trademark law and scan other legislation for areas of potential synergy or challenge. 3. Engage with all relevant parties involved with multilateral and bilateral trade negotiations that may impact upon the implementation of this strategy. 4.Enhance copyright, patents, trademarks legislation and regulations.
ENHANCEMENT PHASE (1 to 3 years)	
11. Implement projects defined during the previous phase a.) Implement, assess and extend or modify the projects developed during the introductory phase. b.) Develop systems and procedures needed during the *mature phase*.	Commission a review to assess completed and ongoing FOSS/OC strategy projects.
12. Standardise software selection processes Develop and implement a software selection process that more strongly favours FOSS, building on increased support and development capacity as well as management experience and research data around FOSS/OC.	Commission the development of a revised software selection process for SITA and government departments.
13. Ensure best practice software development processes	Establish a software registry for government.

Recommended Strategy	*Implementation Examples*
a.) Assist all government institutions with software development plans to ensure the advantages of using the FOSS/OC model and using FOSS/OC platforms are considered, justifying any selection of PS over FOSS. b.) Audit application and systems development plans and tenders to insure adherence to the MIOS (for minimum interoperability) and proven open standards.	Co-ordinate ICT plans with software registry using audits, reviews and analysis of departmental use of systems. Promote the development of an enterprise architecture that spans all national and provincial government departments.
14. Aggressively pursue FOSS/OC capacity development a.) Develop capacity within Government with a certain minimum level of training for all prospective users across all Departments at all levels, with more intensive and specialised training for 'champions' and 'experts' in every Department. Expert skills will be prioritised in service provider organisations such as SITA b.) Balance skills development through formal training with real OSS use wherever possible. c.) Focus ICT capacity development on open systems, interoperability, policy and software engineering principles. d.) Initiate transversal projects that include a number of different government organisations from different spheres. e.) Establish generic principles on the appropriate use of ICT.	Establish an incentive programme for OSS champions in government, to include communication on the training opportunities. Engage Higher Education Institutions in a strategic planning process on FOSS/OC skills and education Implement a roadshow for HR and training providers to government communicating the importance of training on non-proprietary technologies. Produce and distribute training content for OSS and accredited training service providers.
MATURE PHASE (3+ years)	
15. Standardise and monitor content gateways Ensure that government content gateways conform to agreed open standards.	Establish a monitoring and reporting body for interoperability and standards; regularly publish reports and degrees of compliance.
16. Sustain and enhance systems and procedures on an ongoing basis a.) Persist with communication to maintain general confidence in the viability of FOSS/OC solutions. b.) Maintain clusters and networks of support among stakeholders. c.) Contribute to promotion of OSS development and use on the continent. d.) Resources and plans must be in place to plan for the	To be considered in the light of parallel developments and experience.

Recommended Strategy	*Implementation Examples*
next wave of new technologies, (e.g., around convergence).	
17. Seek to expand and deepen levels of implementation A broad base of open source software will be used across government, and other industries as measured in regular intervals against updated targets. Regularly audit ICT assets, services and business processes to identify remaining silo'ed systems, inhibitors to interoperability, and continued use of proprietary standards.	To be considered in the light of parallel developments and experience.

Top Short-Term Projects

The conference delegates self-selected into five different working groups to consider FOSS/OC projects to which they and their organisations could contribute in the immediate and short term. These projects were identified from delegate knowledge of existing FOSS/OC projects being planned or underway, and from a review of international best practice in government-led projects using FOSS/OC. A database of these best practice projects was established on a wiki[19] at http://wiki.go-opensource.org/taskforce/

The working groups were the following:

- Science and Technology
- Trade and Finance
- Administration
- Education
- Infrastructure

The projects identified were the following:

Working Group	*Project Name*
Science and Technology	Open Source Science Web Site
	Free Knowledge Communities
	Online publication of universities' thesis documents
	Collaboration on the development of FOSS research tools and platforms
Trade and Finance	Taxpayer XML schemas
	Intellectual Property Rights
	FOSS/OC Competency Centre
	Major transversal ICT project information sharing
	Rural agriculture information dissemination
Administration	PABX replacement and installation
	Document Management Systems
	FOSS File Servers
	FOSS on the desktop
	GIS viewer
Education	South African living archive

[19] A wiki is a web application that allows users to add content, as on an Internet forum, but also allows anyone to edit the content. The term Wiki also refers to the collaborative software used to create such a website (see Wiki software).

	Linking FOSS/OC education projects to existing FOSS/OC developers
Infrastructure	Preloaded open source solution for small business
	Integrated Case Management System (Correctional services)
	Production of learning materials in different languages
	Water demonstration projects
	Civic Network for Service Delivery to Citizens

More detailed listings of projects follow.

Science and Technology

Chair: Jill Matshana, SITA

Facilitator: Mark Neville

Project 1	Science and Technology
Name	Open Source Science Web Site
Objective	Raise awareness of the availability and benefits of FOSS tools and open content specifically within the scientific community for scientific research, peer review and knowledge sharing needs
Strategic objectives supported	Disseminate information within Government; Initiate trial use and development; Consult with partners and stakeholders; Establish and execute a supporting research programme; Develop and execute a supporting communications strategy.
Activities	Research and create a catalogue (wiki) of FOSS/OC science resources useful to/ used in South Africa > what they are > what their benefits are Write up local case studies / success stories and contacts about who is using these in South Africa and how to contact them, plus local monitoring and evaluation of local activities Create a broad user group of scientists and science & technology educators using FOSS/OC in South Africa > link to similar technology specific user groups elsewhere Possible partners: - GoOpen Source - Vendors - Open Source Competency Centre – Cape Town - LUGs, schools OS projects, success stories e.g. SARS - FLOSS World - IDRC - SITA - Meraka Institute

	- UNDP OS Centre May lead to new projects being identified (to participate in or to initiate)
Champion	Kim Tucker, Meraka Institute (CSIR)

Project 2	Science and Technology
Name	Free Knowledge Communities
Objective	To "stimulate, facilitate, and catalyse the growth of communities of shared knowledge to feed innovation systems, and enable a wiser networked society" This is an existing early-stage project of the Meraka Institute supported by the Department of Science & Technology, OSISA and the embassy of Finland. The goal of the project in this context is to promote a culture of collaboration and sharing among scientists, researchers and students in South Africa.
Strategic objectives supported	Initiate trial use and development; Establish a global position and maintain strategic partnerships; Consult with partners and stakeholders; Include FOSS/OC utilisation in short and medium-term plans.
Activities	Support the free Knowledge Communities project Insure inclusion of the local scientific community in the project Promote the development and sharing of research activities, findings and learning materials specifically within the scientific community
Champion	Kim Tucker, Meraka Institute (CSIR)

Project 3	Science and Technology
Name	Online publication of universities' thesis documents
Objective	To help promote a culture of collaboration and sharing among scientists, researchers and students in South Africa. This specific project is already underway at the University of Cape Town.
Strategic objectives supported	Include FOSS/OC utilisation in short and medium-term plans; Implement defined projects; Aggressively pursue FOSS/OC capacity development.
Activities	Support the existing project, especially with regard to: - researching and clarifying licensing issues - cataloging material for search Seek to expand this project to all other degree-awarding tertiary education institutions.
Champion	Ken McGregor, UCT (to be confirmed)

Project 4	Science and Technology
Name	Collaboration on the development of FOSS research tools and platforms

Objective	To identify and support FOSS projects in South Africa that are developing FOSS tools for use in scientific enquiry.
Strategic objectives supported	Initiate trial use and development; Consult with partners and stakeholders; Establish and execute a supporting research programme; Consolidate support capacity; Include FOSS/OC utilisation in short and medium-term plans; Ensure best practice software development process.
Activities	Support existing efforts currently underway at individual universities in South Africa by developing broader collaboration in the following areas: Parallel processing and grid computing Computational modeling – specific simulations or models could be run using the combined computational power of a grid or network or computers Introduce researchers and students to the specific, practical possibilities and benefits of FOSS platforms and applications through the resulting applications that support a wide range of specific research activities
Champion	To be confirmed

Trade and Finance

Chair: Potlaki Maine, SARS

Facilitator: Kurt Ackermann

Project 1	Trade and Finance
Name	Taxpayer XML schemas
Objective	To develop open standards XML schemas for high-volume tax payers (initially large importers/exporters) to enable improved information exchange
Strategic objectives supported	Initiate trial use and development; Include FOSS/OC utilisation in short and medium-term plans; Level playing fields; Implement defined projects.
Activities	Collaborate with Denmark, UK, other nations with existing XML schemas to understand the process and results of their work Link with current SARS initiative on XML schemas to facilitate open standards Engage major partners in the project (e.g., BMW, other major importers/exporters)
Champion	Potlaki Maine, SARS (to be confirmed)

Project 2	Trade and Finance
Name	Intellectual Property Rights
Objective	Establish IPR in SA conducive to FOSS/OC adoption and development
Strategic objectives supported	Disseminate information within Government; Consult with partners and stakeholders; Level playing fields; Establish and nurture a legislative environment that supports the development and use of FOSS/OC; Implement

	defined projects.
Activities	Collaborate with GITOC and other parties engaging CIPRO on recent and pending IPR decisions Establish or support a multi-stakeholder forum on FOSS/OC and IPR in SA Analyse and quantify where possible the potential effects of existing IPR environment on the implementation of FOSS/OC Raise the profile and levels of awareness regarding the need for IPR change in SA
Champion	To be confirmed

Project 3	Trade and Finance
Name	FOSS/OC Competency Centre
Objective	Consolidate Government FOSS/OC activities in a single, empowered entity
Strategic objectives supported	Disseminate information within Government; Initiate trial use and development; Establish and execute a supporting research programme; Consolidate support capacity; Include FOSS/OC utilisation in short and medium-term plans; Ensure best practice software development process; Aggressively pursue FOSS/OC capacity development.
Activities	Define the functions and services associated with a FOSS/OC competency centre Define the risks and benefits associated with establishing a FOSS/OC competency centre as a single, consolidated entity versus the status quo Develop and propose scenarios for establishment or improvement of the status quo Facilitate consideration of scenarios by stakeholders and formulate a recommended way forward Lobby for establishment/improvement and support the establishment/improvement process Link in with Malaysian OSS Competency Centre for knowledge sharing
Champion	To be confirmed

Project 4	Trade and Finance
Name	Major transversal ICT project information sharing
Objective	Increase awareness and learning from the major government transversal ICT projects and encourage them to shift to FOSS/OC
Strategic objectives supported	Disseminate information within Government; Initiate trial use and development; Consult with partners and stakeholders; Include FOSS/OC utilisation in short and medium-term plans; Develop and execute a supporting communications strategy; Implement defined projects; Standardise the software selection process; Ensure best practice software development process.
Activities	Analyse HANIS and IFMS with respect to FOSS/OC and effects they will have on future FOSS/OC projects, and publish the findings Consolidate and distribute learning from HANIS and IFMS across government to

	develop skills and speed future/existing planning processes for other major ICT projects, including recommendations on how to apply open standards and FOSS/OC principles in those projects.
Champion	To be confirmed

Project 5	Trade and Finance
Name	Rural agriculture information dissemination
Objective	Increase information availability to rural farmers via cell phones and SMS
Strategic objectives supported	Initiate trial use and development; Include FOSS/OC utilisation in short and medium-term plans.
Activities	Link with Open Academy for Agriculture in the Philippines to learn about their FOSS technology and overall processes to assess implementation of an information sharing network via SMS to rural farmers across SA (e.g., farmers' SMS-based contact centre, seed inventory system, etc.) Identify benefits and risks to implementation of such a system Identify and define a demonstration project in SA Explore links to biotech IPR initiatives, national natural resource database initiatives and other agriculture/natural resource projects looking to educate farmers and distribute information
Champion	To be confirmed

Additional Projects for Consideration:

Emulation of Singapore's registration of business online. Current SA backlog for registration of cc's could be automated and a service delivery improvement provided.

Common patient management information systems (with content standards, interoperable systems) across clinics and hospitals, also among provinces and local municipalities.

Legislation management system in Brazil – www.interlegis.gov.br – used nationally, provincially, and locally. Worth assessing for a similar implementation in SA.

Government donation of computers to schools sometimes not allowed because of the risk of classified information being on the hard drives (e.g., SARS – privacy; presidency – classified information, etc.). Need process to completely erase and certify the drives. Participation from security agency needed

Establish a SADC financial management working group for collaboration; anticipate sharing systems over time with regional partners. Ministerial level of support.

Administration

Chair: Envir Fraser, Meraka Institute

Facilitator: Alan Levin

Project 1	Administration

Name	PABX new and replacement installation
Objective	To install and/or upgrade functionality of targeted switchboards and call centres while reducing operating expenses
Strategic objectives supported	Disseminate information within Government; Initiate trial use and development; Include FOSS/OC utilisation in short and medium-term plans; Implement defined projects.
Activities	Install the FOSS application Asterisk in targeted departments or clusters to replace current expensive PABX systems with limited functionality. This will include the Department of Public Enterprises implementation in Bushbuck Ridge and a department in the Gauteng Province/City of Johannesburg Evaluate and recommend future enhancements based on currently available functionality above and beyond what current PABX systems provide, such as Gateway integration/IVR and SMS integration
Champion	Rendani Musetha, Department of Public Enterprises Douglas Cohen, Gauteng Province and City of Johannesburg

Project 2	Administration
Name	Document Management Systems
Objective	To assist the Department of Science and Technology (DST) with coordination of document management system (DMS) implementations taking place across government at all levels
Strategic objectives supported	Disseminate information within Government; Initiate trial use and development; Include FOSS/OC utilisation in short and medium-term plans; Level playing fields; Standardise the software selection process; Ensure best practice software development process.
Activities	Communicate information about Knowledgetree (FOSS alternative to Lifelink) across government to raise awareness Assist DST in developing specifications and implementation guidelines for DMS Develop a support network for DMS projects in government Identify and help develop change management processes and tools for DMS projects
Champion	Kayode, Centre for e-Innovation, PGWC

Project 3	Administration
Name	FOSS File Servers
Objective	To encourage and support FOSS file server implementation across government at all levels as an easy FOSS project for departments not yet working with FOSS/OC
Strategic objectives supported	Disseminate information within Government; Initiate trial use and development; Implement defined projects; Standardise the software selection process; Ensure best practice software development process; Standardise and monitor content gateways.

Activities	Communicate information about FOSS file servers and existing successful implementations across government to raise awareness Coordinate development of specifications and implementation guidelines for FOSS file servers drawing on existing experience and international best practice Develop a support network for FOSS file server projects in government Identify and help develop change management processes and tools for FOSS file server projects
Champion	Pule More, Gauteng Premier's Office

Project 4	Administration
Name	FOSS on the desktop
Objective	To encourage and support FOSS implementation on the desktop through use of generic software tools by end users
Strategic objectives supported	Disseminate information within Government; Initiate trial use and development; Level playing fields; Develop and execute a supporting communications strategy; Implement defined projects.
Activities	Develop best practice guidelines for introducing FOSS generic software tools (word processing, presentation software, spreadsheets, internet browser, etc.) to the existing desktop environments of end users Install these tools on targeted desktops
Champion	Jill Matshana, SITA (supported by Patti Tlagadi, DPSA)

Project 5	Administration
Name	GIS viewer
Objective	To use FOSS for GIS
Strategic objectives supported	Disseminate information within Government; Initiate trial use and development; Include FOSS/OC utilisation in short and medium-term plans; Standardise and monitor content gateways.
Activities	Install FOSS tools and adapt processes for non-core and interested parties to obtain access to GIS repositories/data (e.g., Grass FOSS GIS viewer) Establish a FOSS/OC GIS repository with free public access
Champion	Kim Tucker, Meraka (supported by Nhlanhla Mabaso, Meraka)

Additional Projects for Consideration:

Gateway Portal - tenders and jobs, e-procurement, Policy Development, Generic Software Tools, GEO content standards and MIOS v2, Content licensing and publishing, Mail server, networking and firewalls.

Education

Chair: Arno Webb, Department of Arts and Culture

Facilitator: Rael Lissoos

Project 1	Education and Health
Name	South African living archive
Objective	To create an open content repository (a living archive) of multimedia content, while increasing familiarity with open content
Strategic objectives supported	Initiate trial use and development; Include FOSS/OC utilisation in short and medium-term plans.
Activities	Linking in with FOSS/OC education projects, learners will be identified in appropriate regions to create new multimedia content (i.e., video and audio) structured around Local Language and Heritage. Guidance, tools and support will be provided. Collaboration with the BBC creative archive and the Brazilian 'Points of Culture' project will be established An environmental scan needs to be done on what content is already available. Creative Commons, HP and others will support this project.
Champion	Heather Ford, Creative Commons (to be confirmed)

Project 2	Education and Health
Name	Linking FOSS/OC education projects to existing FOSS/OC developers
Objective	To use existing developer resources in education more effectively
Strategic objectives supported	Disseminate information within Government; Initiate trial use and development; Consult with partners and stakeholders; Establish and execute a supporting research programme; Consolidate support capacity; Include FOSS/OC utilisation in short and medium-term plans; Ensure best practice software development process; Aggressively pursue FOSS/OC capacity development.
Activities	Linking in with African Virtual Open Initiatives and Resources (AVOIR) project and computer science departments in other South African higher education institutions where existing software development capacity is available, a database of available capacity will be maintained and shared with FOSS/OC education projects Can be linked to the Education project on open content.
Champion	Prof. Derek Keats, UWC (to be confirmed)

Additional Projects for Consideration:

Set up a scorecard to grade education sites for OSS accessibility and compliance.

Integrate and introduce FOSS/OC into the C.A.T. course (an ICT computer literacy training course that is being introduced to Grade 12 Students as part of the curriculum.)

Infrastructure

Chair: Hassen Lorgat, Sangoco

Facilitator: Tina James, Trigrammic

Project 1	Infrastructure
Name	Preloaded open source solution for small business
Objective	To help small business reduce costs, use ICTs effectively and spread the benefits of FOSS/OC
Strategic objectives supported	Initiate trial use and development; Include FOSS/OC utilisation in short and medium-term plans; Level playing fields; Implement defined projects; Standardise the software selection process.
Activities	Develop requirements for FOSS small business solution, including establishment, management, and operation of business Develop and package solution, drawing on existing FOSS/OC packages in Singapore and Brazil Identify and prioritise ways for cutting red tape in processes, e.g., registering online, trying to mediate different departments (CIPRO, SARS, RSCs) Establish a virtual one-stop shop to support ongoing activities with CSIR, Department of Trade and Industry and Department of Science and Technology Link with partners to provide and distribute refurbished and low-cost computers, pre-loaded.
Champion	To be confirmed

Project 2	Infrastructure
Name	Integrated Case Management System (Correctional services)
Objective	To help reduce inefficiencies in correctional services and justice system
Strategic objectives supported	Initiate trial use and development; Include FOSS/OC utilisation in short and medium-term plans; Level playing fields; Implement defined projects; Ensure best practice software development process; Standardise and monitor content gateways.
Activities	Analyse existing New South Wales FOSS system and map against SA needs and existing infrastructure Develop implementation plan for demonstration project on managing docket flows, including digital signature integration Work with Correctional Services and partners (South African Police Services, Justice, others) to implement demonstration project
Champion	To be confirmed

Project 3	Infrastructure
Name	Production of learning materials in different languages
Objective	To increase availability of first language learning materials in SA schools
Strategic objectives	Disseminate information within Government; Initiate trial use and development; Consult with partners and stakeholders; Include FOSS/OC utilisation in short and

supported	medium-term plans; Level playing fields; Implement defined projects.
Activities	Partner with ACCESS (Soros / OSISA) for learning support materials for schools, particularly textbooks Develop shared materials and then advertise availability Make available under appropriate Creative Commons licenses Collaborate with India's 'Lindia' school project on processes and lessons learned, as well as adapting their tools to a SA environment Link to South African AIMS project (mathematics education)
Champion	To be confirmed

Project 4	Infrastructure
Name	Water resources - demonstration projects
Objective	To assist with the management of water resources using FOSS/OC
Strategic objectives supported	Disseminate information within Government; Initiate trial use and development; Include FOSS/OC utilisation in short and medium-term plans; Implement defined projects; Standardise the software selection process; Ensure best practice software development process.
Activities	National Government: Develop Water Quality Databases to show that FOSS/OC can be used in this environment effectively. Collaboration with National Resources database in SE Asia / Agricultural bank of China Look at various options for developing GIS-based water quality systems Local Government: Water leakage detection systems E.g. City of Joburg – 80% of water use is due to water loss
Champion	To be confirmed

Project 5	Infrastructure
Name	Civic Network for Service Delivery to Citizens
Objective	To provide information to the public for informed democratic participation
Strategic objectives supported	Initiate trial use and development; Consult with partners and stakeholders; Develop and execute a supporting communications strategy; Establish and nurture a legislative environment that supports the development and use of FOSS/OC.
Activities	Partner with Cremona public information access project for OSS tools and implementation assistance Identify civil society partners and content providers (e.g., NGOs, SALGA, DPLG, IEC) Identify types of information to be prioritised and provided (e.g. local economic information for voting districts / number of children in schools / unemployment figures / political candidate information prior / during local government elections, how to lobby local councillors / key local deliverables for candidates –

	will allow more transparency in terms of delivery, etc.) Implement system on a demonstration basis
Champion	To be confirmed

Additional Projects for Consideration:

2010 FIFA Soccer World Cup opportunities

- FOSS/OC solutions as part of major new transport solutions
- Renovate and rehabilitate social services
- FIFA's transport logistics / crowd control / traffic flow management in FOSS/OC
- Evaluate technologies from Cricket World Cup – look at what is available in FOSS
- Need to approach the portfolio group on sport