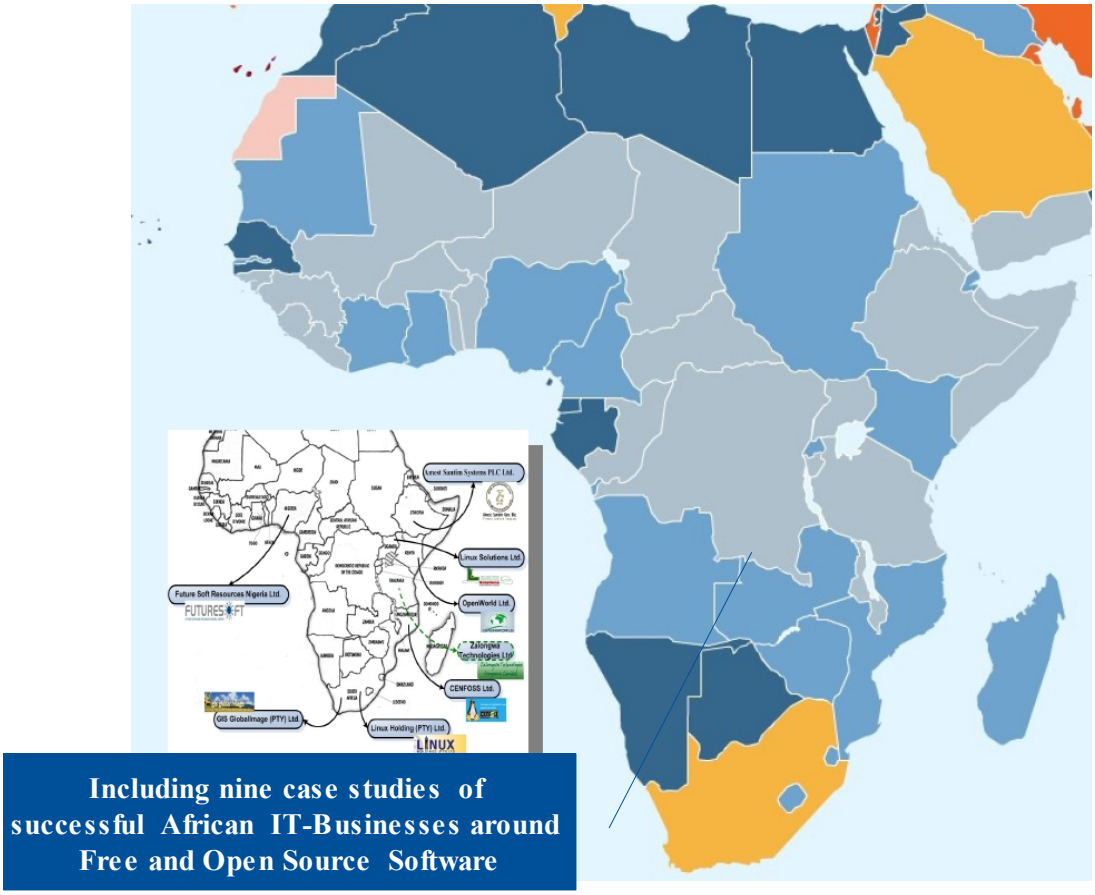
ict@innovation

Creating Business and Learning Opportunities with Free and Open Source Software in Africa

# ict@innovation: Free your IT-Business in Africa!

## Advanced Training Material on African Free and Open Source Software (FOSS) Business Models for IT-SMEs




**Including nine case studies of successful African IT-Businesses around Free and Open Source Software**

http://www.ict-innovation.fossfa.net

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On behalf of

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## Publisher

InWEnt – Internationale Weiterbildung und Entwicklung gGmbH
Capacity Building International, Germany
Friedrich-Ebert-Allee 40
53113 Bonn, Germany
Phone +49 228 4460-0
Fax +49 228 4460-1766

Division 4.04, Business Development and Infrastructure
Friedrich-Ebert-Allee 40
53113 Bonn, Germany
Phone +49 228 4460 1382
Fax +49 228 4460 2382

FOSSFA - Free Software and Open Source Foundation for Africa
with its Secretariat hosted at
Advanced Information Technology Institute (AITI) of the
The Ghana-India Kofi Annan Centre of Excellence in ICT
PMB, State House, Accra, Ghana
secretariat@fossfa.net
Phone +233 (244) 954 413


## For more information, please contact:


ict@innovation contact Africa:
**George G. Nyambuya**
Phone +27 (0)12 423 6313
Fax +27 (0)12 342 8594
Fax-Email: +27 (0) 866 280 917
Email: george.nyambuya@inwent.co.za

ict@innovation contacts Europe:
**Petra Hagemann & Balthas Seibold**
Phone +49 228 4460 1382
Fax +49 228 4460 2382
Email: petra.hagemann@inwent.org



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## Introduction by FOSSFA and InWEnt

"How can I build a sustainable business around Free and Open Source Software in Africa?" - In order to answer this frequently asked question by young African IT-business owners, InWEnt and FOSSFA are pleased to present "ict@innovation: Free your IT-Business in Africa! - a set of Advanced Training Material on African Free and Open Source Software (FOSS) Business Models for IT-SMEs". The open training material is part of the initiative ict@innovation, a partnership of FOSSFA (Free Software and Open Source Foundation for Africa) and InWEnt - Capacity Building International of Germany, funded by the German Federal Ministry for Economic Cooperation and Development (BMZ). The ict@innovation programme builds capacities in African small and medium ICT enterprises to make a business with Free and Open Source Software (FOSS). In this context, the Advanced Training Material on African FOSS Business Models for IT-SMEs is an important milestone in the endeavour to harness the potential of Free and Open Source Software (FOSS) to drive innovation, add local value and create sustainable and affordable ICT solutions in Africa. The material arises from another milestone of ict@innovation: the successful development of a training-of-trainer programme on the topic of African FOSS business models in 10 countries in Southern and East Africa.

The material has been collaboratively developed by FOSS experts from Africa and Europe for use as training material for experts and executive staff from IT businesses in Africa, ICT-associations, their member organisations, ICT-training institutions as well as universities and their trainers.

Eight in depth case studies of African IT-businesses and organizations who make business around FOSS form the core of the training material – and provide numerous business models suited to the African context such as Software Selection, Software Installation, FOSS Training, Maintenance and Support, Software / Systems Migration, Consultancy, Software Localization and Internalization, FOSS Customization as well as Technical / Legal Certification.

We would like to thank the team of editors, authors and trainers, who have been active in shaping and updating the modules of the course. We particularly thank our training partners, the United Nations University, Maastricht Economic and social Research and Training centre on Innovation and Technology (UNU-Merit) with Dr. Sulayman K. Sowe as the main facilitator and editor of the training material and the Ghana-India Kofi Annan Centre of Excellence in ICT (AITI-KACE) with lead trainers Kofi Kwarko, Frederick Yeboah and Shirley Akasreku, the Content Creation Community (3C Group) consisting of over 15 African FOSS experts as well as Mr George Nyambuya, overall Africa manager of ict@innovation.

We would like to express our gratitude to: [Overall editors, curriculum developers, public relations: Sulayman K. Sowe, Karsten Gerloff (The Netherlands), Petra Hagemann, Jin Soo Kim, Balthas Seibold (Germany), Geraldine De Bastion, Andrea Götzke (Germany), George Nyambuya (South Africa)] [content contributors, authors and co-editors : Yese Bwalya (Zambia), Clara Alice Chirwa (Malawi), Alex Gakuru (Kenya), Derek Lakudzala (Malawi), James Wire Lunghabo (Uganda), Nhlanhla Mabaso, Arnold Pietersen (South Africa), Joseph Sevilla (Kenya), Celso Timana (Mozambique)] [content contributor and co-editors (volunteers): Samer Azmy (Egypt), Nico Elema (South Africa), Thomas Jonas, Foibe Kalipi (Namibia), Timothy Kasolo (Zambia), Faye Macheke (South Africa), Glenn McKnight (Canada), Irene Fernandez Monsalve (Spain), Paschalia Ndungwa Ouma (Uganda), Frank Tilugulilwa (Tanzania)] [lead training/ facilitation team for Training-of-Trainers on the ict@innovation FOSS Business Models Training: Shirley Akasreku, Kofi Kwarko, Frederick Yeboah (Ghana)] [ Resource persons, Advice: John 'Maddog' Hall (USA), Arjan de Jager, Rishab A. Ghosh (The Netherlands), Francois Letellier (France), Nnenna Nwakanma (Cote d'Ivoire), Kim Tucker (Switzerland), Victor van Reijswoud (Papua New Guinea), Philipp Schmidt, Thilo Thormeyer (South Africa) ] [ Managers of business models component of ict@innovation, training partners and training material facilitaters: Karsten Gerloff (Germany), Andreas Meiszner (Portugal), Sulayman K Sowe (The Netherlands), Gregor Bierhals (The Netherlands)]

Furthermore, we would like to thank the contributors to the case studies in Module 2. Dorcas Muthoni, Managing Director of OpenWorld Ltd (Kenya); Nico Elema, Managing Director of GIS Global Image (PTY) Ltd (South Africa); Nkem Uwaje.Managing, Managing Director of Future Software Resources Ltd.(Nigeria); Kin Le Roux, Managing Director of Linux Holdings (South Africa); Wire James Lunghabo, Managing Director of Linux Solutions (Uganda); Nahom Tamerat, Managing Director of Amest Santim Systems plc (Ethiopia); Celso D. Timana, Managing Director of CENFOSS (Mozambique), and Dr. Juma Lungo of Zalongwa Technologies Limited (Tanzania). The case studies were designed, conducted, and compiled by Sulayman K. Sowe (UNU-MERIT, Netherlands).

We do hope that these case studies of successful African businesses will serve as inspiration and motivation for a new wave of ICT-driven innovations made in Africa and contribute to the growth of African ICT industries through spreading FOSS business models for enterprises in Africa.

Over and beyond this publication, InWEnt and FOSSFA, with support from BMZ, are working towards, and looking forward to more deployment of ICT businesses in Africa; African enterprises that will support this continent in achieving its set Millennium Development Goals.

Nnenna Nwakanma, CEO, NNENNA.ORG, FOSSFA Council Chair,

Balthas Seibold for the it@inwent Team, Senior Project Manager, InWEnt

## About the material "ict@innovation: Free your IT-Business in Africa!"

"Free your IT-Business in Africa! - Advanced Training Material on African Free and Open Source Software (FOSS) Business Models for IT-SMEs" supports the building of knowledge and capacities in African small and medium ICT enterprises to make a business with Free and Open Source Software (FOSS). It aims to contribute to the growth of African ICT industries through spreading FOSS business models for enterprises in Africa.

Eight indepth case studies of African IT-businesses and organizations who successfully make a business around FOSS give concrete avenues for FOSS business models that work in Africa and are condensed in an African taxonomy of FOSS Business Models. The material has been collaboratively developed by FOSS experts from Africa and Europe for use as training material for experts and executive staff from IT businesses in Africa, ICT-associations, their member organisations, ICT-training institutions as well as universities and their trainers.

The Advanced African FOSS Business Models syllabus consists of 6 modules, spread along three thematic parts. The first part - *African FOSS Business Models* - introduces basic FOSS concepts and provides practical case studies across the African continent. Two modules are covered in this part of the syllabus; (i) Module 1: Introduction to Emerging FOSS Business Models and (ii) Module 2: African Business Models: Case Studies – including an African taxonomy of business models such as Software Selection, Software Installation, FOSS Training, Maintenance and Support, Software / Systems Migration, Consultancy, Software Localization and Internalization, FOSS Customization as well as Technical / Legal Certification.

The second part - *Knowledge and Skills for FOSS Entrepreneurs* - brings into focus FOSS communication and business skills which are deemed vital for businesses and may contribute immensely in help young entrepreneurs leverage FOSS to gain a competitive advantage. Innovative and cost effective tools and techniques, community building and networking, and FOSS strategies which are vital for starting and sustaining a viable FOSS business in Africa are also covered in this part of the syllabus.

Three modules are covered in part two; (i) Module 3: Communicating FOSS, (ii) Module 4: Introduction to General Business Skills, and (iii) Module 5: FOSS Specific Business Knowledge and Skills.

Part three of the training material - FOSS Training as a Business – consists of one module which aims to foster understanding of some of the requirements for becoming an FOSS trainer, and identifying the opportunities that exist for FOSS training as a business in African as well as a global look at Linux training worldwide.

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For more information on the material, see below and http://www.ict-innovation.fossfa.net.

# Table of Contents – Overview

**ict@innovation: Free your IT-Business in Africa! Advanced Training Material on African Free and Open Source Software (FOSS) Business Models for IT-SMEs**

## 1) Handbook & Trainers Manual



## 2) Final Test for Assessment of learning outcomes

## 3) Background Information on all Partners

## 4) Background information on the programme ict@innovation

## Overview of types of advanced training material available

The following table provides you with an overview of what range of open material is available. This set of material is particularly suitable for use in Training-of-Trainers settings and the development of advanced courses within ICT-associations, their member organisations, ICT-training institutions as well as universities. If you require additional information, including on additional services such as making use of the Pool of African ict@innovation experts & trainers or options to include e-learning components in a course setting based on the material below, please contact or further information: **George Nyambuya:** george.nyambuya@inwent.co.za.

| Full set of training material (Module 1-6): ict@innovation: Free your IT-Business in Africa! Advanced Training Material on African "Free and Open Source Software" (FOSS) Business Models for IT-SMEs | |
|---|---|
| **Handbook & Trainers Manual**<br>(Introduction, Overall Learning Objectives, Sessions and Timetable, Delivery method, Duration, Background Information on main content, including African case studies and facilitation tools such as assignments, exercises, lead questions for discussions, assessments, case studies) | Download<br>ICT-INNOVATION _HANDBOOK.pdf<br>ICT-INNOVATION_ HANDBOOK.odt |
| **Model Presentations for Trainers / Facilitators**<br>(Slide show material for main contents of Module 1-6) | Download_modelpresentation.zip_all_pdfs |
| **Final Test for Assessment**<br>(Online-Test) | Tests_Modules.pdf<br>Tests_Modules.odt<br>Link to online-version of test |
| **Evaluation forms**<br>(Full set of evaluation forms to assess training, overall and per module 1-6) | Download<br>Evaluation 1-6 pdf<br>Evaluation 1-6 odt |
| **Pool of African ict@innovation experts & trainers**<br>(Contact to Africa-based trainers and experts, who have training experience with the course) | http://www.ict-innovation.fossfa.net/wiki/public-wiki/course-advanced-african-foss-business-models/FBMTrainers |
| **Collection of completed exercises / assignments**<br>(based on four training-of-Trainers courses, please upload your own material) | Tests_Modules.pdf<br>Tests_Modules.odt |
| **Pool of derived training material**:<br>(for more information on how you can contribute to improve the training material and how to correctly acknowledge this set of material as source, see here: http://www.ict-innovation.fossfa.net/wiki/national-training-courses ) | Only available online at http://www.ict-innovation.fossfa.net/wiki/national-training-courses |
| Full set of all downloads as a zip-File | Full set of ALL downloads.zip |

All material available for download is available at: http://www.ict-innovation.fossfa.net/node/4252
Further download of the different modules is also available http://www.ict-innovation.fossfa.net/node/4252
For more information, see http://www.ict-innovation.fossfa.net

## Pool of +80 African ict@innovation expert trainers

*Full pool of Trainers:* For a full overview of the pool of more than 80 African *ict@innovation* expert trainers from 10 countries, who have been qualified in facilitating the course "*ict@innovation*: Free your IT-Business in Africa", please check online at http://www.ict-innovation.fossfa.net/wiki/public-wiki/course-advanced-african-foss-business-models/FBMTrainers.

*Lead Facilitators*: The following Africa-based trainers and experts have acquired additional training experience as lead facilitators of the Training-of-Trainers programme of *ict@innovation*. In the digital version of this document, just click on the names to get in touch with the persons through the *ict@innovation* web community.

| | **Module** | **Africa-based Trainers / Experts** |
|---|---|---|
| **Module 1** | Introduction to Emerging FLOSS Business Models | James Njenga, Frederick Yeboah, Shirley Akasreku, Kofi Kwarko **More Trainers per country in full Pool of Trainers** |
| **Module 2** | African Business Models: Case Studies | Celso Timana, Sulayman K. Sowe, Shirley Akasreku, Frederick Yeboah, Kofi Kwarko **More Trainers per country in full Pool of Trainers** |
| **Module 3** | Communicating FLOSS | Yese Bwalya, Frederick Yeboah, Kofi Kwarko **More Trainers per country in full Pool of Trainers** |
| **Module 4** | Introduction to General Business Skills | Derek Lakudzala, Arnold Pietersen, Frederick Yeboah, Shirley Akasreku, Kofi Kwarko **More Trainers per country in full Pool of Trainers** |
| **Module 5** | FLOSS Specific Business Knowledge and Skills | Arnold Pietersen, Derek Lakudzala, Frederick Yeboah, Kofi Kwarko, Shirley Akasreku **More Trainers per country in full Pool of Trainers** |
| **Module 6** | FLOSS Training | Arnold Pietersen, Celso Timana, Paschalia Ouma, Shirley Akasreku, Frederick Yeboah, Kofi Kwarko **More Trainers per country in full Pool of Trainers** |

# Open Licencing and Disclaimer

In the spirit of sharing and mutual capacity-building, this series of advanced training material is released under a Creative Commons Attribution-Share Alike licence. We are therefore looking forward to seeing further distribution, remixing and updating of the courses. You can download the files (odt and pdf) of the advanced training material at www.ict-innovation.fossfa.net/node/4252

We are eager to learn about your experiences and stories around the material and wish you a good and efficient learning experience.

The licence and copyright is as follows: License: Creative Commons Attribution-Share Alike 3.0 Germany

## Who built this material - or "the African Content Creation Community"

The material owes its origin and continuous evolution to the unwavering commitments of dedicated FOSS experts in the area of business, management, education and training, law, media and communication and FOSS advocates. In particular, the ICT@Innovation program of InWEnt & FOSSFA would like to thank the “Content Creation Community“ or 3C for leveraging regional best practices and compiling examples of business models and marketing related skills in the field of FOSS in Africa.

In December, 2008 a call for "Co-editors for materials on FOSS Business Models in Africa" was launched as a first step to develop and implement the high level training program on Advanced African FOSS Business Models for ICT-based companies. In response, nine co-editors were contracted, who were joined by nine other volunteers. Furthermore, the 3C group is blessed with a team of resource persons and reviewers who offered their support and expert advise throughout the development phase of the syllabus. The creation of the Advanced African FOSS Business training material has been facilitated by Sulayman K. Sowe of UNU-MERIT. The following lists provides you with an overview of all contributors to the material – to contact them, click on the names (for digital versions of this document) or check the online list at: http://www.ict-innovation.fossfa.net/wiki/public-wiki/african-foss-business/training-material-content-creation. More information on all the contributors is online at : http://www.ict-innovation.fossfa.net/ search/ user_advanced --> Use the search function to find the profile.

| Name | Country | City | Role in 3C |
|---|---|---|---|
| Alex Gakuru | Kenya | Nairobi | Content contributor and co-editor |
| Andrea Götzke | Germany | Berlin | Curriculum creation coordination ict@innovation program |
| Arjan de Jager | Netherlands | Utrecht | ® Resource person |
| Arnold Pietersen | South Africa | Johannesburg | Content contributor and co-editor |
| Balthas Seibold | Germany | Bonn | Overall editor, curriculum creation, InWent ict@innovation program |
| Celso Timana | Mozambique | Maputo | Content contributor and co-editor |
| Clara Alice Chirwa | Malawi | Blantyre | Content contributor and co-editor |
| Derek Lakudzala | Malawi | Limbe | Content contributor and co-editor |
| Faye Macheke | South Africa | Cape Town | Content contributor and co-editor (volunteer) |
| Foibe Kalipi | Rwanda | Butare | Content contributor and co-editor (volunteer) |
| Francois Letellier | France | Grenoble | ® Resource person |
| Frank Tilugulilwa | Tanzania | Dar es Slaam | Content contributor and co-editor (volunteer) |
| Frederick Yeboah | Ghana | Accra | lead training/ facilitation team for Training-of-Trainers on the ict@innovation FOSS Business Models Training |
| George Nyambuya | South Africa | Johannesburg | Curriculum creation coordination ict@innovation program |
| Geraldine Debastion | Germany | Bonn | Curriculum creation coordination ict@innovation program |
| Gregor Bierhals | Netherlands | Maastricht | Resource person (UNU-MERIT) |
| Glenn McKnight | Canada | Oshawa | Resource person |
| Irene Fernandez Monsalve | Spain | Madrid | Content contributor and co-editor (volunteer) |
| Nhlanhla Mabaso | South Africa | Johannesburg | Content contributor and co-editor |
| Joseph Sevilla | Kenya | Nairobi | Content contributor and co-editor |
| James Wire Lunghabo | Uganda | Kampala | Content contributor and co-editor |
| Kim Tucker | South Africa | Pretoria | ® Resource person |

| | | | |
|---|---|---|---|
| Karsten Gerloff / Andreas Meiszner | Netherlands | Maastricht | Pillar A management (UNU-MERIT) |
| Kofi Kwarko | Ghana | Accra | lead training/ facilitation team for Training-of-Trainers on the ict@innovation FOSS Business Models Training |
| Nico Elema | South Africa | Cape Town | Content contributor and co-editor (volunteer) |
| Paschalia Ndungwa Ouma | Uganda | Kampala | Content contributor and co-editor (volunteer) |
| Petra Hagemann | Germany | Bonn | Overall editor, curriculum creation, InWent ict@innovation program |
| Philipp Schmidt | South Africa | Cape Town | ® Resource person |
| Rishab A. Ghosh | Netherlands | Maastricht | ® Resource person |
| Samer Azmy | Egypy | Cairo | Content contributor and co-editor (volunteer) |
| Shirley Akasreku | Ghana | Accra | lead training/ facilitation team for Training-of-Trainers on the ict@innovation FOSS Business Models Training |
| Sulayman K Sowe | Netherlands | Maastricht | Facilitator, lead editor, curriculum creation |
| Thomas Jonas | Namibia | Windhoek | Content contributor and co-editor (volunteer) |
| Timothy Kasolo | Zambia | Lusaka | Content contributor and co-editor (volunteer) |
| Victor van Reijswoud | Netherlands | Utrecht | ® Resource person |
| Yese Bwalya | Zambia | Lusaka | Content contributor and co-editor |

**Case Studies (Module 2) contributors**

- [Module 2.1] Dorcas Muthoni, Managing Director of Open World LTD (kenya): http://www.openworld.co.ke
- [Module 2.2] Nico Elema, Managing Director of GIS Global Image (PTY) Ltd. (South Africa): http://www.globalimage.co.za/
- [Module 2.3] Nkem Uwaje.Managing, Managing Director of Future Software Resources Nigeria Ltd. (Nigeria): http://www.futuresoft-ng.com/
- [Module 2.4] Kin Le Roux, Managing Director of Linux Holding (Pty) Ltd. (South Africa): http://www.linuxholdings.co.za/
- [Module 2.5] Wire James Lunghabo, Managing Director of Linux Solutions Ltd. (Uganda): http://www.linuxsolutions.co.ug
- [Module 2.6] Nahom Tamerat Endale, Managing Director of Amest Santim Systems PLC Ltd. (Ethiopia): http://www.amestsantim.com
- [Module 2.7] Celso D. Timana, Managing of CENFOSS Ltd. (Mozambique): http://www.cenfoss.co.mz/
- [Module 2.8] Dr. Juma Lungo of Zalongwa Technologies Limited (Tanzania): http://www.zalongwa.com/

The case studies were designed, conducted, and compiled by Sulayman K. Sowe (UNU-MERIT, Netherlands).

**Main contributors per module:**

| | |
|---|---|
| **Module 1** | Sulayman K. Sowe (**Facilitator**), Nhlanhla Mabaso, Frank Tilugulilwa, Irene Fernández Monsalve, Samer Azmy, Kim Tucker, Glenn McKnight, Derek Lakudzala |
| **Module 2** | Sulayman K. Sowe (**Facilitator**), Celso Timana, Nico Elema, Kim Tucker, Glenn McKnight, Irene Fernández Monsalve |
| **Module 3** | Sulayman K. Sowe (**Facilitator**), Yese Bwalya, Clara Chirwa, Samer Azmy, Glenn McKnight, Irene Fernández Monsalve, Nico Elema, Frank Tilugulilwa, Paschalia Ndungwa Ouma, Derek Lakudzala |
| **Module 4** | Sulayman K. Sowe (**Facilitator**), Arnold Pietersen, James Wire Lunghabo, Foibe Kalipi, Kim Tucker, Glenn McKnight, Derek Lakudzala, Alex Gakuru |
| **Module 5** | Sulayman K. Sowe (**Facilitator**), Foibe Kalipi, Thomas Jonas, Glenn McKnight, Nico Elema, Derek Lakudzala, Alex Gakuru |
| **Module 6** | Sulayman K. Sowe (**Facilitator**), Arnold Pietersen, Glenn McKnight, Paschalia Ndungwa Ouma, Derek Lakudzala |

More information on all the contributors is online at :
http://www.ict-innovation.fossfa.net/search/user_advanced
--> Use the search function to find the profile.

## About ict@innovation - Creating Business and Learning Opportunities with Free and Open Source Software in Africa

The ict@innovation programme builds capacities in African small and medium ICT enterprises to make a business with Free and Open Source Software (FOSS). ict@innovation aims to encourage the growth of African ICT industries, particularly in Southern and East Africa, through three main actions: spreading FOSS business models for enterprises in Africa, fostering FOSS certification and supporting innovative local FOSS applications for social and economic development. ict@innovation is a partnership of FOSSFA (Free Software and Open Source Foundation for Africa) and InWEnt - Capacity Building International (Germany).
Funding partners are the German Ministry Federal Ministry for Economic Cooperation and Development (BMZ) and the Open Society Initiative for Southern Africa (OSISA). The programme focuses on Free and Open Source Software (FOSS) as a key technology to drive innovation, add local value and create sustainable and affordable ICT-solutions. ict@innovation aims to enhance regional networking and to strengthen consulting capacities of regional and national ICT associations and training institutions as well as of other relevant change agents. For more information see last pages of this document and http://www.ict-innovation.fossfa.net

**Implementing Partners:**

FOSSFA
The Free Software and Open Source Foundation for Africa

inWent
Capacity Building International
Germany

**In cooperation with the training partners:**

atti Advanced Information Technology Institute

UNITED NATIONS UNIVERSITY
UNU-MERIT

**Funding Partners:**

Federal Ministry for Economic Cooperation and Development

OSISA
Open Society Initiative for Southern Africa

# Advanced African FOSS Business Models Training Material

# MODULE 1: INTRODUCTION TO EMERGING FOSS BUSINESS MODELS

## Introduction

This module sets the scene for “The African FOSS Business Models for ICT-based SMEs” by providing a basic introduction to the phenomenon that has come to be known as Free and Open Source Software or FOSS. The concept of FOSS is becoming more mainstream to the public and we are seeing increased business adoption which is generating higher levels of revenue. FOSS is no longer a marginal concept but rather it has become good business. This module sets the scene for exploring various FOSS concepts ranging from terms and definitions, the organizational structures of projects and communities, to the global business impact of FOSS which could form the basis for understanding and constructing business models within the African context.

## Learning Objectives

1. Gain a basic understanding of FOSS.
2. Understand and appreciate how FOSS projects and communities work
3. Develop confidence in their ability to run FOSS business.
4. Understand the changing nature of FOSS business.
5. Understand the types of existing and emerging FOSS business models.
6. Be able to identify the potential local markets for FOSS business.
7. Gain knowledge of the leading online resources to keep current in the FOSS eco-space.
8. Identify the FOSS licensing models

# Authors and Trainers:

### Pool of African ict@innovation expert trainers

| | Name Module | Name |
|---|---|---|
| **Module 1** | Introduction to Emerging: FLOSS Business Models | James Njenga,<br>Fred Jeboah,<br>Shirley Akasreku<br>More Trainers per country in full Pool of Trainers http://www.ict-innovation.fossfa.net/wiki/public-wiki/course-advanced-african-foss-business-models/FBMTrainers |

### Main contributors

| | |
|---|---|
| **Module 1** | Sulayman K. Sowe,Nhlanhla Mabaso,Frank Tilugulilwa,Irene Fernández Monsalve,Samer Azmy,Kim Tucker,Glenn McKnight |

Additional material for **Module 1: Introduction to Emerging FLOSS Business Models** (presentations, tests, evaluation forms, pool of trainers, derived material) is available online at: http://www.ict-innovation.fossfa.net/node/4252

### Sessions and Timetable

The entire content in this Module is estimated to be delivered in 1 day, with some variations within the modules. For instructional purpose, the content of this Module can be delivered as proposed in the summarized table below.

| Time | Session |
|---|---|
| 9:00 – 10:30 | • Introduction to Module 1<br>• General FOSS Concepts |
| 10:30 - 10:45 | Coffee Break |
| 10:45 - 12:15 | • FOSS Business Globally<br>• Evolution of FOSS Communities and Software Markets |
| 12:15- 13:30 | Lunch |
| 13:30 - 15:00 | • Evolution of FOSS Communities and Software Markets-Contd<br>• Multimedia listening comprehension<br>• Leading FOSS resources for keeping current on the FLOSS eco-space |
| 15:00 – 15:15 | Coffee Break |
| 15:15 - 17:00 | • FOSS Licence<br>• End of Module Evaluation |

## Module 1.1 General FOSS Concepts

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### Duration:

1:15hrs

### Delivery method:

For instructional purpose, it is advised that trainers/lectures use “focus group discussion” as a major means of delivering this module. In addition lectures, presentations, and exercises are also suitable method of delivery for this module.

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### Introduction

Despite the widespread adoption and utilization of Free and Open Source Software (FOSS) in all sectors of life including education, software engineering and IT sectors, public administrations, and within business circles, there still remain widely held concepts or misconceptions of what FOSS is and what constitutes Open Source Software. The misconceptions, to a large extend, have hindered the adoption and have made it difficult for businesses to explain to customers the software and services they are 'selling' or offering is of good quality and may stand at par or even better than proprietary software. There are also confusions with regards to the terminology when different individuals and researchers use the same term to refer to the same concept. Thus, this module draws on existing research literature and narratives from websites and blogs as well as

expert experience to offer prospective FOSS business entrepreneur a glimpse of what FOSS is and is not. Unearthing the misconceptions surrounding FOSS is crucial if one is to set up a business and train individuals on how to set-up a FOSS-based business.

The general concept behind Free/Libre and Open Source Software (FOSS) is that of improving the quality of access to computer programs. This includes providing a license that reduces limitations for the developer/user and also making the source code (human readable code) of software accessible to anyone who wants to obtain it. Binaries or executable (machine readable code) are also made available via the Internet and can be "freely" downloaded and used.

This means that FOSS can be shared, it can be studied, and it can be modified and adapted by anyone with the appropriate skills. However, this does not mean that FOSS has no owners. FOSS is protected by exactly the same copyright legislation that limits the possibilities of use of proprietary software. However, through FOSS's use licenses, the rights to use, share, study and modify the software are granted. An example of a free software license is the Gnu General Public License (GPL) that, on top of granting those freedoms, obliges any derivative works produced to keep the same license, and thus remain free.

### 1.1.1 Concepts and Terminology

In the literature, many terms are in use to describe the FOSS phenomenon. Notably, Free Software (FS), a term used by the Free Software Foundation (FSF) and Open Source Software (OSS) used by the Open Source Initiative (OSI).

The FSF approach emphasizes the philosophical/Ethical/Political argument around freedom. The FSF puts it thus:

"***Free software is software that gives you the user the freedom to share, study and modify it. We call this free software because the user is free."***

This idea is well captured in an article entitled "aligning the ideals of free software and free knowledge with the South African Freedom Charter" (Jolliffe R.M. 2006). The OSI approach is based largely on technical merit and business arguments around the speed of development, marketing and innovation. OSI puts it thus:

"***Open source is a development method for software that harnesses the power of distributed peer review and transparency of process. The promise of open source is better quality, higher reliability, more flexibility, lower cost, and an end to predatory vendor lock-in."***

In addition, other commonly used terms are Free and Open Source Software (FOSS) that tries to unify both the FSF and the OSI points of view, and Libre Software (LS), which tries to undo the ambiguity of the term "free". Henceforth, the terms Free/Libre/Open Source Software or FOSS and FOSS are accepted in this document to refer to users' freedom to use, modify, distribute, or even sell the software with little obligations as in *proprietary* or closed source software.

Sometimes proprietary-off-the-shelf (POTS) and commercial-off-the-shelf (COTS) are used to describe software agreements which restrict the use, modification, and redistribution without prior consent of the supplier.

### 1.1.2 Exploring the meaning of "free"

Doesn't "free" mean that I do not have to pay for the software?
No. The word "free" has two meanings in the English language.

- The "free" in "free beer", which refers to zero cost.
- The "free" in "free speech" and "free market", which refers to freedom.

The free in free software refers to the freedoms that we've talked about above that people have. There's nothing in the definition of free software that says that you cannot sell it to someone for a price. Indeed, there are companies whose entire business model is centered on collecting, compiling and selling free software. However, since someone to whom free software is licensed is free to sell or give it away in turn, you can easily download the software (and legally) from the Internet or other forges such as Sourceforge.net

As expressed by the “FOSS Concept Booklet[1]“, when you hear of "free software", think of liberty, freedom, or even "free enterprise".

***Well, what's not "free" about other kinds of software?***

A lot of non-free software in the world today is not sold. From complex operating systems to tiny games or screen savers, the end users of the software have a license to use it under conditions laid out in an End User License Agreement (EULA). This agreement lists out the conditions under which the user can use the software -often restrictions are imposed on the use to which the software can be put. In almost all cases, users are explicitly prohibited from "taking the software apart" to study how it works, cannot modify or improve it, are only allowed to make a single copy of the software (for backup purposes) and are strictly prohibited from giving copies to other people.

**Tip! Get more information from the FOSS concept booklet**

http://en.wikibooks.org/wiki/FOSS_Concept_Booklet

### 1.1.3 The Linux story

It is important to note that FOSS development did not begin with the inception of the Linux operating system, in 1991. Rather, the concept existed since the formation of SHARE - a working group set up to coordinate the programming work of the IBM 701. Furthermore, research and development (R&D) institutions such as university establishments always cherish the free sharing of knowledge and resource with colleagues. What brought Linux into prominence and made it possible can be attributed to four main factors:

- The **GNU General Public License** (GNU GPL) allowed Linus Torvalds to use large chunk of the GNU system's code and modify it to run as a full functional operating system on his home PC. The GPL means that his operating system (Linux) is free for others to use, copy, modify, and distribute.
- Torvalds had **access to the Internet** so that he could communicate and collaborate (via open source content management systems (CMS) - CVS) with others interested in his project.
- **Minimal resources**. The Linux operating system was meant to run on computers with low resources or computing power. This means that it was within the reach of many other people to run and test the system. Had the Linux OS required supercomputing power, only few may have been involved in testing and improving the system.

[1] http://en.wikibooks.org/wiki/FOSS_Concept_Booklet

- **Good management**. Linus Torvald is well known for his software project management wittiness, earning him the name of benevolent dictator. He started developing the GNU Linux operating system and managed his work in such an open and collaborative manner that encouraged others to get involved in the effort for free. People joined the development on meritocracy bases, only judged by the quality of contribution and commitment to advance and evolve the Linux kernel for all others.

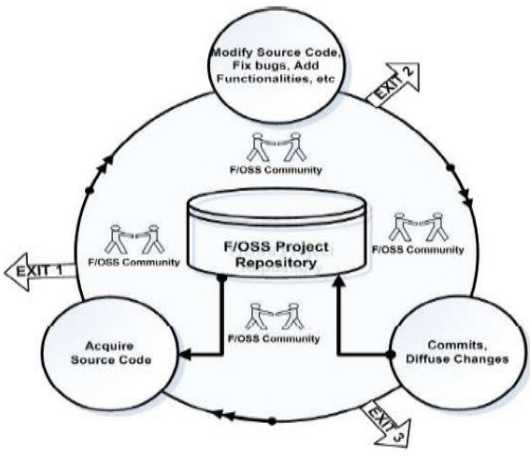
### 1.1.4 The Open Source Software development model: The Cathedral vs Bazaar

FOSS has fundamentally changed the way software is being developed, distributed, marketed, maintained, and supported (Sowe, et. al. 2007). For the first time, the Bazaar model provides software engineers an alternative to the Cathedral model or traditional way of developing closed source software. The Cathedral as opposed to the Bazaar model (Raymond, 1999) characterizes traditional software development. According to the Cathedral model, software development takes place in a centralized way, with well defined roles for each software development phase (from requirements analysis, design, implementation to testing and maintenance).
In the bazaar model, roles are not clearly defined and often software users are treated as co-developers. In FOSS, the software is usually released early and more frequently than in closed source software. As evidence of its efficacy, or the lack of it as demonstrated by a large number of 'unsuccessful' FOSS projects littered in many forges (eg. Sourceforge.net). The Bazaar model has produced a number of successful applications in the area of operating systems (GNU/Linux), sometimes described as distributions or distros (Ubuntu, Debian), emailing and web services (Sendmail, Apache, SeaMonkey), databases (MySQL, PostgreSQL), Instant Messaging (Kopete, Pidgin), Desktops environment (GNOME, KDE), Worldprocessing (KOffice, OpenOffice suite), etc. The Bazaar model of developing FOSS facilitates the creation, diffusion, and transformation of software knowledge at a rate unprecedented in the history of software development.

### 1.1.5 Characteristics of the FOSS development process

When a developer modifies open source software, she can either choose to keep changes made private or return them to the FOSS community so that everyone can benefit from her derived work. And from the business point of view, when a company posts back it's modification that could be used as a reference experience and in-direct unpaid marketing for a company, business or individual. When you post the modification they may be included in future releases which reduces the cost of maintenance and innovation. The cyclic nature of software source code acquisition, modification, distribution, and reacquisition is an important aspect of the FOSS development process. The figure below shows typical FOSS development (coding) activities with possible exits from the cycle.

Developers with access to the project's source code repository checkout code from the project repository to begin the software development activity. Some just acquire the source code and no longer take part in project activity (**Exit 1**). Many others continue the development process by modifying code, bug fixing and adding new functionalities. Developers dissatisfied with a project's development, or how it is managed and coordinated may exit the cycle with the modified code to



start their own "mutant" version of the project in what is called forking (**Exit 2**). Fork is a competing project based on a version of the existing project's source code. Because of the open and easy access to the source code, every FOSS project is susceptible to forking. Cynical as it my sound, forking is healthy in FOSS as it may promote competition, and may even produce a superior software than the predecessor. The prospects for expert software developers and novice users to understand the code, software development process and communities are now great.

### 1.1.6 The debate: FOSS vs. Closed Source Software

The following table summarizes some of the characteristics of FOSS, giving the business view of Closed-Source Software versus F/OSS.

| Closed-Source Software | FOSS |
|---|---|
| Buy, don't build or code | Access code, 'Free' download, and reuse |
| Vendor lock-in | Freedom to modify, customize code (if you can) or contract someone else |
| Lack customized features for some customers | Everyone can customize software according to his/her own needs |
| Deployed in limited languages | Can be localized in many languages |
| Motivation: Extrinsic, financial gains | Extrinsic and intrinsic |
| Generate and keep knowledge for competitive advantage | Generate and share knowledge for common good |
| Support provided to licence holders and on first-come-first serve basis. Third-party support, driver download, software updates is also provided on websites. | Support can be obtained by anyone from project forums, mailing lists, etc. And can be bought from commercial vendors, distributors, or consultancy firms. |
| Difficulty in compliance with other software due to copyright restrictions. | Ease of compliance with other *copyleft* community-maintained FOSS (*universe*) and software restricted by legal issues *(multiverse).* |

### 1.1.7 Some Myths about FOSS

As FOSS becomes more mainstream, transcending technological and geographical barriers so are the myths surrounding the FOSS concept and methodology. To many, it is incomprehensible how geographically distributed individuals can collaboratively and amicably produce or create goods and services in the form of software that is comparable or even better than the Commercial-Off-

the- Self (COTS) proprietary software they are so accustom to. More enshrined in the myths of FOSS is how one can make money or generate revenue from something that is free. Further information on the ten commonly referred to myths in FOSS are available in O'reilly (1999). The table below summarizes some myths and facts about FOSS.

| **Myth** | **Fact** |
|---|---|
| It's a Linux vs Windows thing | Over 400,000 FOSS projects (18,000 mature) in all fields of IT |
| FOSS is not reliable or supported | Major FOSS solutions more reliable than proprietary counterparts; professional support available for FOSS |
| Big companies don't use FOSS | About 90% of Fortune 1000 companies deploy FOSS; IBM, Sun, HP, Oracle... promote FOSS |
| FOSS is hostile to "intellectual property" | FOSS licenses are based on the copyright law |
| There is no money to be made on FOSS | HP: $2.5B in 2003; RedHat: $400M in 2006 |
| The FOSS movement is unfair and unsustainable, because programmers don't get paid for their efforts | >50% FOSS developers are paid, other are volunteer and contribute for personal motivations |
| If I start a FOSS project, plenty of developers will start working for me for nothing | Community growth requires significant investment |
| FOSS is a programmer thing, users and decision-makers should not worry about it | FOSS spearheads a new innovation model that all should know about |
| FOSS is always playing catch-up with the commercial world, where all innovation comes from | The percentage of innovative projects (12%) is roughly the same in FOSS and proprietary software |

### 1.1.8 Examples of FOSS Software

The tables below provide some common examples of FOSS Software

a) List of FOSS Software that runs on Microsoft Windows, Gnu/Linux and, in some cases, Apple Max, Unix and BSD operating systems

- Productivity based applications
    - Wordprocessing - Open Office - http://www.openoffice.org/
    - Publishing - Scribus - http://www.scribus.net/
    - PDF Creator - Pdfcreator - http://www.pdfforge.org/products/pdfcreator
    - Mail Client - Evolution – http://projects.gnome.org/evolution
    - Document management systems - http://www.knowledgetree.com/community-download
    - Mind map - Freemind - http://freemind.sourceforge.net/wiki/index.php/Main_Page
    - Compression - 7Zip - http://www.7-zip.org/
    - Text editor - Notepat++, http://notepad-plus.sourceforge.net/uk/site.htm
    - Financial - GnuCash - http://www.gnucash.org/
    - Project management - OpenWorkBench - http://www.openworkbench.org/
- Internet Based applications

    - FTP - FileZilla - http://filezilla-project.org/
    - Remote connection - Vinagre - http://projects.gnome.org/vinagre/
- Web development
    - LAMP Stack - EasyPHP - http://www.easyphp.org
    - General purpose IDE platform - Eclipse - http://www.eclipse.org/
    - Web application development IDE - MonoDev - http://monodevelop.com/Main_Page
- Multimedia and others
- Image Editing - GIMP - http://www.gimp.org/
- Audio Editor - Audacity - http://audacity.sourceforge.net/
- CD Creator/Burner - Infra recorder- http://infrarecorder.org/
- Image Viewer - http://imgv.sourceforge.net/
- Video Editing - Kdenlive - http://kdenlive.org
- Systems
- Ghost - Ghost - http://www.fogproject.org/
- Animal Care
- Animal shelter manager - Animal Shelter Manager - http://sheltermanager.sourceforge.net

b) List of Web Based FOSS Software

| Category | Application Name | Web Site |
|---|---|---|
| Blogging | WordPress | http://wordpress.org/ |
| CMS (Content Management System) | Joomla | http://www.joomla.org/ |
| Shopping Cart | Magento | http://www.magentocommerce.com/ |
| Forum | phpBB | http://www.phpbb.com/ |
| SMS Gateway | Kannel | http://www.kannel.org/overview.shtml |
| Photo Gallery | Gallery | http://gallery.menalto.com/ |
| CRM (Customer Relation Manager) | Vtiger | http://www.vtiger.com/ |
| Document Management System | KnowledgeTree | http://www.knowledgetree.com/ |
| Work Flow | CuteFlow | http://www.cuteflow.org/ |
| Network Monitoring | NAGIOS | http://www.nagios.org/ |
| NAS (Network Attached Storage) | FREENAS | http://www.freenas.org/ |
| Human Resource Management | Orange HRM | http://www.orangehrm.com/ |
| Call Centre | SIT | http://sitracker.org/ |
| Server Management | Webmin | http://webmin.com |

## Module 1.1: ASSESSMENT

- Discussion 1: Discuss and list down as many words or phrases as possible which will best describe the concept of FOSS in your local language.
- Discussion 2: Discuss and list down as many obstacles to the use of FOSS in your business organization.
- Discussion 3: Discuss the concept of Forking in Open Source Software development.
- Do you think forking is a healthy practice?
- Get a participant to volunteer to tell a story of the evolution and structural organization of ONE Open Source project or community (For example, FreeBSD, MySQL, Apache, Ubuntu).
- Debate: Form 2 groups to debate the topic “FOSS vs Closed Source Software”, stressing on the business implications.
- Brain Storming: Divide the participants into small groups of 3-5 individuals. Each group should convince the other how FOSS can benefit them and why they should or should not use FOSS in their business.
- Story telling: Get a participant to volunteer to tell a story of the evolution and structural organization of ONE Open Source project or community (For example, FreeBSD, MySQL, Apache, Ubuntu).
- Assignment 1: Write a summary report of 150-350 words detailing the history of ONE open source project. Specifically, point out the successes and possible areas where the project might fail.
- Assignment 2: List down the names of 3 organizations and 5 companies using FOSS in your country.
- Assignment 3: List 5 commercial-off-the-shelf (COTS) software and their near FOSS equivalents
- Assignment 4: Write a summary report of 150-350 words detailing the history of ONE open source project. Specifically, point out successful aspects and indicate possible areas where the project might fail.
- Self-Assessment for students: State whether the following statements are true or false:
    1. FOSS doesn't cost anything (True / False)
    2. OSI stands for Ontario Swine Improvement (True / False)
    3. Free Software and Linux are the same thing (True / False)
    4. FOSS applications can be used on Windows (True / False)
    5. FOSS can help reduce vendor lock-in (True / False)

# Module 1.2 FOSS Business Globally

## Duration:

1:15hrs

## Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures, punctuated with short debates as a major means of delivering this module. In addition presentations and exercises are also suitable method of delivery for this module.

## Introduction

The global recession that started in 2008 has provided an opportunity for people to be more careful about their ICT strategies. FOSS is key component in the development of these strategies. It provides an opportunity for organisations, for instance, to shield themselves from risks related to dependence on companies that may be on the verge of collapse. These challenges are more urgent for developing countries. FOSS presents an opportunity to address the challenges with greater speed and agility. The response to the 2004 Tsunami in Asia through the creation of the Sahana Free and Open Source Disaster Management System is an example of the type of agility referred to above.

Apart from the global recession, developing countries also have a number of priorities where FOSS has already contributed positively. These include the promotion of access to knowledge, aligning societal freedom with various 'digital' freedoms, increasing ICT uptake for both genders, ICT curricular expansions and relevance, etc.

FOSS, by its nature, helps reduce restrictions to innovation freedom. However, in light of the economic challenges, it is important to address the opportunities around costs. Having developed, basic understanding of concepts, this module looks at the global economic impact of FOSS by looking at the status of the software industry, how FOSS has prompted the emergence of 'new' business models and what effect such new models will have on total cost of ownership and return of investments. How this global trend has been applied in emerging markets in BRIC countries is also addressed.

### 1.2.1 The software industry and FOSS

Many misconceptions about the nature of the software industry exist. It is common to think that most of the software written is paid for through sale of the package. However the real picture is quite different. Most software is written in-house, under contract, and is never commercialized and sold. On the other hand, most companies that do sell packaged software also obtain a proportion of their revenue from service provision.

FOSS-based businesses present, in this respect, a competitive advantage, being able to offer service provision at lower costs, due to the elimination of license fees. This has lead major players like Sun and IBM to embrace FOSS business strategies, but more importantly, it opens the doors for the creation of small FOSS enterprises.

The lowering of costs, together with the possibilities of open access to knowledge and skills that come with FOSS are key aspects of the creation of small enterprises, which can harness the full power of technology thanks to the availability of the tools, and the possibility to develop the needed skills. In this respect, ***the value that comes from FOSS*** can derive from several different areas:

- **Selection/Integration**: choosing from the myriad of possible FOSS applications and integrating them into a functional platform.
- **Basic substitution/migration**: the use of FOSS in the IT infrastructure, frequently in substitution of proprietary software.
- **New deployment**: the introduction of FOSS for a new project internal to the company (adoption).
- **Selling services** based on a FOSS Project. Service here can start from support, customization, localization or training.
- **Selling products** that contain FOSS as a significant component

But let's take a closer look at how companies are using these revenue-generating opportunities to create and fine tune specific business models. Although the provision of services is part of almost every FOSS-based business model, we can first distinguish amongst two great categories of enterprises according to what services are being offered: horizontal services firms, and vertical specialists.

### Horizontal services firms:

Software services firms will often offer services over a wide range of software packages or applications, sometimes specializing on a particular kind of service (such as training, for example). In this respect, they implement a horizontal specialization strategy as shown in the table below.

| Service type | Package 1 | Package 2 | Package 3 | Package n |
|---|---|---|---|---|
| Development | | | | |
| Installation | **X** | **X** | **X** | **X** |
| Integration | **X** | **X** | **X** | **X** |
| Maintenance and Support | **X** | **X** | **X** | **X** |
| Training | | | | |
| Certification | | | | |
| Migration | | | | |

Small corporate clients will often look for this kind of service provider, to take care of their whole IT infrastructure. These kinds of models don't usually contribute with large amounts of code to FOSS projects, although they may get involved in other mundane activities such as bug report and fixing, documentation development, etc.
The range of business models in this category is huge, with the possibility of specialization on certain services, particular kinds of application or technology, on selection of target markets and geographic location, etc. But we can name two for their special relevance:

**Platform distributors:** Well-known enterprises such as Red Hat Inc. or Canonical Ltd. base their business model on the selection and integration of FOSS packages to generate fully functional distributions. Revenue mainly comes from services related to the platforms.

**Ethics-based SMEs:** Some SMEs adopting FOSS as their main business strategy do so because of FOSS political and ethic implications, and not only for business or technical reasons. This approach often impregnates other areas of their enterprise, such as decision making and labour relations with employees. However, this approach can also have entrepreneurial rewards, serving as key business differentiators, and helping gain clients for whom this approach may be important, such as NGO's or grassroots organizations. A good and consolidated example of this model is the French SME Easter-Eggs. Further information about is available at the company's website [in French]

## Vertical or Specialists firms:

These are companies that are actually developing applications (often no more than a couple of related packages), and releasing them under a free license. One of their revenue streams usually comes from offering services related to the package they develop, from installation, integration and support, to training and certification.

| | Package 1 | Package 2 | Package 3 | Package n |
|---|---|---|---|---|
| Development | | **X** | | |
| Installation | | **X** | | |
| Integration | | **X** | | |
| Certification | | **X** | | |
| Training | | **X** | | |
| Maintenance and Support | | **X** | | |
| Migration | | **X** | | |

The choice of a free license for a product is a good strategy towards promoting and encouraging its adoption, but it opens the gate for competitors to offer the same kind of service around the application. However, being the developer, and thus possessing the best knowledge on code-base and their product can bring about a competitive advantage through prestige and reliability. Software companies in this category can be further classified as follows:

- **Pure FOSS based on bounties and donations**: Many FOSS projects obtain some financing through donations. If the product is good, and users can appreciate the effort behind a particular project, they might be ready to make small donations for its funding. If the project has enough users, these donations can reach considerable amounts. With bounties, the developing company can associate prices to certain functionalities to be developed. Users, or clients, may offer to pay a certain amount for the development of that particular functionality, until the "price" initially set up by the company is reached. In this model, just as FOSS is collaboratively developed, FOSS is also collaboratively paid for.

- **Mixed FOSS/Proprietary without Dual licenses:** This model can also be described as free core dressed with proprietary accessories. In this model, although the core of the business application is free, the company sells other versions of the product, with more functionality under proprietary license. To implement this model, the license must be a permissive one (e.g. the Mozilla Public License (MPL), FreeBSD license), in order to allow the creation of derivative closed software. The strategy here tries to combine the benefits of an open source strategy (wider, faster adoption, as well harnessing external collaboration), while still obtaining revenues directly with a proprietary model. However, it runs the risk of forking (discussed in Sub-module 1.1.5), with the community developing the missing functionality. Along the way, the company may also loose the sympathy and subsequent disengagement of other FOSS developers and users from the software or project. Examples of companies following this model are Sendmail, SourceFire and XenSource/Citrix.

More examples of businesses of each category, and a quantitative analysis of FOSS business models can be found in Daffara, C. (2007). Lastly, it is important to note that in a more indirect way, FOSS creates several business opportunities in other areas. From the selling of hardware with FOSS components installed, to editors specializing in FOSS documentation (such as O'Reilly Media), or merchandising companies (such as ThinkGeek).

### 1.2.2 'New' Business Models

As technology evolves we are seeing new forms of FOSS business models. Some new business opportunity variants include: Software as a Service, commonly known as SaaS, Green IT, FOSS as an enabler of the Business Ecosystem and Open Cloud Computing. It is claimed that FOSS is cheaper to implement, with less constraint from a traditional vendor. Thus, this may help in introducing products in a reduced time to market which will be a strategic point of view when the creation of new markets, adoption of different business models is considered. To be sustainable, a company must adopt a business model that provides a way to turn the FOSS adoption into lower TCO or increased revenues, and must also take into account the fact that at least a part of the participant community may be out of control of the company (as it commonly happens in large scale FOSS projects, most contributors are not working for a single company). The term "Total Cost of Ownership" (TCO) is sometimes used to help us to know the exact cost of any applied solution from all points of view including hidden costs, deployment, training etc. FOSS can be used to reduce TCO. FOSS is one of the best ways of getting ROI as the software core and most of the functionality are already there and implemented mostly you may need some extra features or localization to your market.
Furthermore, the attractive nature of FOSS (e.g. low cost, easy access, inexpensive license terms, freedom from vendor lock-in, etc) has prompted many established firms and institutions to consider migrating to FOSS. One very important factor businesses must consider when migrating in part or as a whole to FOSS is that migration must be done gradually and not in a big bang. In that sense, migration can be seen as a qualitative process rather than quantitative one. For example, a company may use the same old proprietary Operating System but utilize FOSS Productivity suite (Word Processor, Presentation tool, SpreadSheet and a Database solution) and give proper training for this new FOSS productivity suite. After this migration step becomes autonomous enough, the company or business can start migrating another block and so on. This model is a kind of best practice for already established customer or business. However, in the case of a just-established or a New Business, the company can deploy any kind of software solution, gauging

market response, leveraging other various open source communities and stakeholders along the way.

### 1.2.3 FOSS Business in developing and BRIC countries

**The water and water and water parable:**

> Some years ago a group of mothers in East Africa were made to believe that it would be better for them to use formula instead of breast feeding their children. Samples of formula were distributed at no cost. Unfortunately, those promoting this practice had not taken into account that many of the mothers had limited access to clean running water. Very soon, a number of mothers were completely dependent on the formula and were unable to produce milk anymore. This and the continued usage of inadequately sterile water and water containers had a tragic result.

The parable above illustrates the importance of understanding the context within the developing world. While breast feeding can be regarded as 'global best practice', its promotion has greater significance within the developing world especially during times of economic hardship. The same can be said of FOSS. This section highlights some of the factors or cases that demonstrate the special significance of FOSS in the developing world.

**The Peruvian Case:**

> In 2002, the Peruvian government started earnestly looking into creating FOSS friendly legislation. There was initial resistance to this initiative from some company that was not ready to provide solutions without putting some of its licensing impediments. In the ensuing debate, the Peruvian government made it clear that it had its constitutional responsibility of ensuring unfettered citizen access to information necessitated this. A lot has happened since, including the 2005 signing of a Bill in which explicitly acknowledgment of the role of FOSS.

**The Vietnamese Case:**

> Interestingly, around the same time (2002) the government of Vietnam had been identified as being among the top 10 countries with high rates of 'illegally obtained' software. To be 'legal' within a proprietary paradigm, Vietnam would have had to spend twice the amount produced by its GDP. This was one of the factors that pushed the Vietnamese government to consider FOSS.

A number of other developing countries have made a move towards FOSS either in the policy space and/or through implementation of various solutions. These include Brazil, South Africa (www.oss.gov.za) and Malaysia on the policy front. In addition to policy moves, a number of developing countries have also seen a lot of actual development of applications and the creation of other flavours of GNU/Linux for instance. These include the following:

- translate.org which facilitated the rapid translation of a number of FOSS tools into various languages across the developing world.

- the creation of Chisimba, a development framework at one of the South African Universities, (Chishewa word meaning framework).
- the development of various distributions Impi, Ubuntu, Kongoni (South Africa); Mandriva (Brazil, based on Mandrake); Red Flag (PR China).

A lot of work has been done by various scholars on this area. It has now begun to find expression in FOSS. Examples include: Yochai Benkler (commons based peer production), Lawrence Lessig (Free Culture), Ngugi Wa Thiongo (Decolonising the mind).

## Module 1.2: ASSESSMENT

- **Debate:** Participants should form 2 or more groups to debate for and against the motion; "***FOSS empowerment of IT Entrepreneurship in global recession"***
- **Assignment:** List and describe **6** values that come from FOSS. For each, describe a company or FOSS project where these values are being realized.
- **Exercise:** List two firms in your country which can be described as (i) Horizontal services firms (ii) Vertical services firms, (iii) Based on the products or services of each firm, guess the FOSS license the company might be using and give reasons
- **Case studies:** Write a case study, 250-400 words, describing a case of FOSS adoption in the developing world
- **Legislative Study:** Write a letter to your local councilor or parliament arguing for government's adoption or consideration of a FOSS strategy for your country

# Module 1.3 Evolution of FOSS Communities and Software Markets

## Duration:

1:00hrs

## Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures, punctuated with short debates as a major means of delivering this module. In addition presentations and exercises are also suitable method of delivery for this module.

## Introduction

In recent years, FOSS has emerged as a key aspect in new business models, as well as in well-established multinational companies, such as Sun Microsystems or IBM. Without a doubt, FOSS is managing to jump the gap from technology enthusiasts to large majorities and corporate environments.
On the other hand, FOSS is also emerging as a strong incentive to business creation, with an increase in venture capital investment in the tune of millions of USA dollars. Larry Augustin (2007) projected that FOSS related business alone generated $149 million in 2004, distributed amongst 20 new businesses, to $475 million in 2006, distributed amongst 48 enterprises. Driving this FOSS aided revenue stream is a dedicated group of, mostly, volunteers in various FOSS project and communities. This module explores the co-evolution of FOSS communities and software markets to offer a synergistic outlook into emerging and sustainable FOSS enterprise which is responsive to the needs of the African FOSS business market. However, one is tempted to ask; ***how is FOSS thus changing traditional software markets***? To answer this question, it is important first to think about the rules that have been governing software markets so far.

## 1.3.1 Costs of production, copy, and distribution

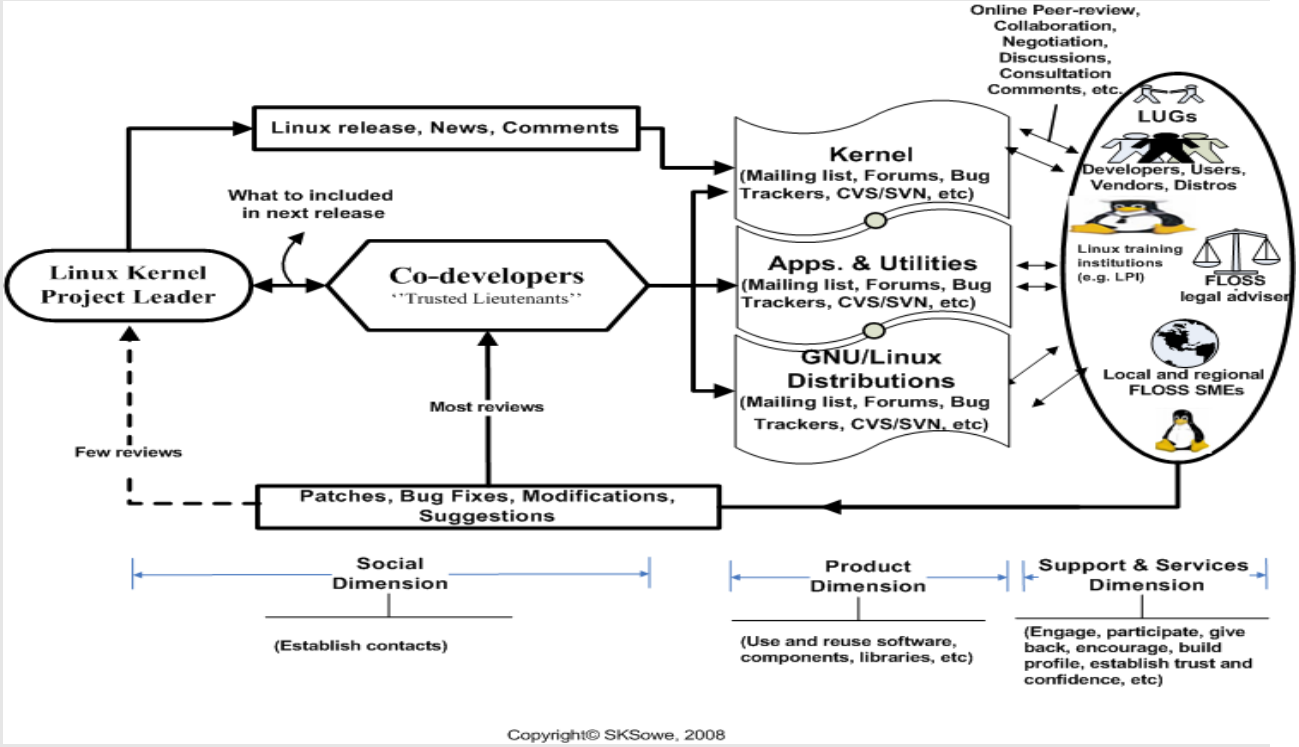
Developing a particular software solution requires a high initial investment, as well as a high potential risk. Until the final product is developed, there is no possibility of revenue generation, and no certainty that the product will be successful. In traditional "shrink-wrapped software" business models, this has meant that a huge amount of resources go into marketing, publicity, and distribution, in order to sell enough copies to recuperate the initial investment.

## Part 1: How does FOSS change this?

***The existence of development communities can lower the cost of development, but they can potentially also lower the risks. Having input from other developing parties, as well as a huge base of potential testers for early versions can help ensure that the software answers correctly to user's needs. Further, it gives you the chance to build on and use other libraries, instead of starting from scratch or re-inventing the wheel. Initial investment will not be recovered through selling copies, however other related revenues will depend on product adoption. In this respect, distribution and communication costs***

***can greatly be reduced in a FOSS model, since the free availability of the product can act as the best promotion strategy.***

***The figure below depicts how FOSS communities (for example the Linux kernel) and business enterprises may collaboratively co-exist to create a conducive business climate.***




## 1.3.2 Network effects and incompatibility

We talk of network effects when the value of a particular product for a given user is larger if many other people also use it.

Mass deployment of a product gives it more value. For example, we can talk of direct network effects regarding e-mail technology. If very few people have e-mail accounts, it is not a very useful technology. However, the more people that use e-mail, the more important it will be to have an account.

Traditional software vendors have used this phenomenon to their advantage by implementing incompatibility policies. Through this kind of strategy, a first comer to a particular field, by gaining a large enough initial user base, can make it very hard for competitors to penetrate, since the only useful product brand will be the one most people use. Software markets are also affected by indirect network effects, related to the existence of complementary products. For example, an operating system will be more useful if there is a wide range of applications that can be installed on it. An ecosystem of applications will only emerge if there is a large enough base of users.

If to this we add the costs of change inherent to software migrations, and the reluctance most users will present to abandoning a well known solution, we arrive at a "winner takes it all" scenario, in which gaining a large enough user base is crucial when penetrating in a new market, and competing with widely adopted products is virtually impossible.

## Part 2: How does FOSS change this?

***In a well-established market, the only possibility of competing against the proprietary dominant product might be to use a FOSS strategy. An alternative product, free of charge, has the potential of attracting lower-end of the market, or previous non-consumption segments, and thus gathering enough users to tilt network effects on its favour. In this respect, FOSS can be considered a disruptive innovation with the potential of challenging firmly established products and firms. For example, this mechanism lies at the root of OpenOffice.org penetration strategies, and possibilities of success.***

On the other hand, FOSS development and the promotion of standard formats and protocols, makes it increasingly easy to harness network effects through compatibility for many software developer.

## Module 1.3: ASSESSMENT

- **Exercise 1:** Using the diagram on the Linux Kernel community, describe how a company can benefit from the community of a given FOSS project.
- **Exercise 2:** Name any Linux User Group (LUG) in your area. How do you think FOSS-based businesses in your country can benefit from and support LUGs?
- **Self-Assessment for students:** State whether the following statements are true or false:

(a)In a "POTS" business model, a large proportion of resources must go to marketing, publicity, and distribution (True / False)

(b)In a FOSS business model, a large proportion of resources must go to marketing, publicity, and distribution (True / False)

(c)Network effects refer to the potential internet provides for communication and participation (True / False)

(d)FOSS can be a useful strategy when competing with a well-established and widely adopted software product (True / False)

# Module 1.4 FOSS Licensing Models

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### Duration:

1:00hrs

### Delivery method:

For instructional purpose, it is advised that trainers/lectures use a combination of lectures and discussion sessions as a major means of delivering this module.

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### Introduction

There is a wide range of licensing models, in proprietary or free and open source environment. The information in this section is focused on free and open source model licensing, on three types of licenses and the difference between them.

### 1.4.1 General description of common licenses

Since this applies to all other authors of software as well, it means that any piece of software is originally proprietary, meaning that no one but the original author (or, if the author has sold the rights of use and distribution to someone else, the copyright holder) has legal control over how it is used and distributed.

This also means that the users of those programs do not enjoy any freedom in relation to the software. Without the express permission of the copyright holder, they may not redistribute the program, or change it and adapt it to their needs.

Yet the power to change an existing program and adapt it to one's own needs is the keystone of the ideas behind FOSS. Richard Stallman, founder of the GNU project and the Free Software Foundation, has defined four basic freedoms that a program must provide users with if it is to be called “free”:

1. The freedom to run the program, for any purpose (freedom 0).
2. The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this.
3. The freedom to redistribute copies so you can help your neighbor (freedom 2).
4. The freedom to improve the program, and release your improvements (and modified versions in general) to the public, so that the whole community benefits (freedom 3). Access to the source code is a precondition for this.

As the rapid global growth of FOSS has shown, these freedoms are clearly desirable. So how does one move a piece of software from its original, proprietary state into FOSS?

This is accomplished with a license. Wikipedia summarily describes a license as follows:

The verb **license** or **grant license** means to give permission. The noun license (**license** in British spelling) refers to that permission as well as to the document memorializing that permission.

License may be granted by a party ("licensor") to another party ("licensee") as an element of an agreement between those parties. A shorthand definition of a license is "a promise (by the licensor) not to sue (the licensee)."

A license is thus a document which the copyright holder issues to the user, and which determines what the user is allowed to do with the software program in question.

In the world of proprietary software, this license is usually called an “End User License Agreement” (EULA), and often carries far-ranging restrictions on the use of the program, which exist in addition to those imposed by copyright law.

### 1.4.2 Licenses as the key to FOSS

FOSS uses licenses differently. Here, they are a means to free the user of the program from the restrictions not only of an End User License Agreement, but also from those which copyright law imposes by default.

The basic process for releasing a program as FOSS is as follows:

- You write a piece of software. This automatically makes you the copyright holder, giving you far-ranging powers to decide how that piece of software can be distributed.
- You assert your copyright by adding a copyright notice to the software, showing the copyright symbol, your name and the year of creation or publication (“© John Miller 2009”).
- With your power to decide about the distribution of the program, you decide that you want to distribute it as FOSS. This means that your program will give all its users the four freedoms listed above.
- You select a FOSS license that suits your needs, and integrate it into the source files of your program, as well as adding a file with the license text (usually called license.txt).
- You distribute your program, either gratis or for a fee.

From this process, it becomes clear that FOSS uses the license as a trick to get around the restrictions which copyright law normally imposes on the user. After asserting your copyright on the program, you use this right to decide that your software should give the user certain freedoms beyond those afforded by copyright law. You also abstain from imposing an intrusive EULA on your users.

The license gives the users of your program legal certainty that they enjoy those freedoms, and that you will not take legal steps to deprive them of those freedoms.

Whether a program is FOSS or not is determined by the license under which it is distributed. If that license provides users with the four freedoms listed above, then the program is FOSS. If not, it is non-free (or proprietary).

Note that releasing a piece of software as FOSS does *not* mean that you relinquish all your rights over it. There is a growing number of court cases in which the copyright holder of a FOSS program has sued a company for copyright infringement, after that company had built the FOSS program into products without complying with the license, e.g. by not providing source code to the buyers of the product.

### 1.4.3 Basic types of FOSS licenses

All free software licenses must grant people all the freedoms discussed above. However, unless the applications' licenses are compatible, combining programs by mixing source code or directly linking binaries is problematic, because of license technicalities. Programs indirectly connected together may avoid this problem.

**FOSS licenses can be categorised as belonging to one of the following types:**

- Public domain software - the copyright has expired, the work was not copyrighted or the author has abandoned the copyright. Since public-domain software lacks copyright protection, it may be freely incorporated into any work, whether proprietary or free.
- Permissive licenses, also called BSD-style because they are applied to much of the software distributed with the BSD operating systems. The author retains copyright solely to disclaim warranty and require proper attribution of modified works, but permits redistribution and modification in *any* work, even proprietary ones.
- Copyleft licenses, the GNU General Public License being the most prominent. The author retains copyright and permits redistribution and modification provided all such redistribution is licensed under the same license. Additions and modifications by others must also be licensed under the same 'copyleft' license whenever they are distributed with part of the original licensed product. The Open Source Initiative (OSI) , http://www.opensource.org/licenses, which acts as an FOSS advocating body for the FOSS community also maintains and updated different types of FOSS licenses, listed by by name and category.

### 1.4.4 Dual License

Dual licenses can both mitigate license interoperability issues (such as GPLv2 vs. GPLv3), while also providing the foundation for FOSS business models where commercial use of the code generates revenue.
In such dual-licensing scenarios, different terms are granted based on how the resulting code will be distributed. For new code which will be distributed under GPL or open source licenses, a corresponding GPL or open source license is granted. But for commercial vendors who distribute the licensed code with their proprietary products, and do not license and distribute their own source code under the GPL, a commercial license is granted, and usually associated with licensing fees or other revenue sharing. The MySQL database platform has a good example of dual licensing on their license page at http://www.mysql.com/about/legal/licensing/.
While best practices for FOSS licensing are hard to generalize, the following assertions are safe to make:

- The GPL still represents the highest ideals of FOSS licensing, and should be considered in any licensing decisions. However factors including dependent code licenses, partnering agreements, target markets, business models and institutional constraints may prevent GPL from being the best choice. On the other hand, GPL licensing provides a “moral high ground” in FOSS distribution, and saves projects from having to explain and defend why they opted for “less free” licensing.
- Dual or multiple license approaches should also be considered when looking to increase uptake and adoption of FOSS projects. While such licensing models have the effect of “watering down” pure GPL offerings, they provide flexibility to those who otherwise might

not be able to incorporate the available code. FOSS License Exceptions such as those mentioned above also alleviate code interoperability blockages.

In any case, creating a new FOSS license should only be considered as a very last resort. While unique institutional and legal requirements such as those associated with the OpenMRS project can mandate a specialized license, new licenses only clutter the landscape. All efforts should be made to not only use an existing license, but to use one which is in broad distribution, so as to maximize the re usability of the licensed code.

### 1.4.5 Resources for FOSS licenses

- http://www.gnu.org/philosophy/free-sw.html*. Other definitions – such as the Open Source Definition*
- *(*http://www.opensource.org/docs/definition.php*) expand on this original source.*
- http://en.wikipedia.org/wiki/License*, Jan 22, 2009.*
- *This section reproduced from* http://en.wikipedia.org/wiki/Free_software*, Jan 23, 2009*

### Module 1.4: ASSESSMENT

•**Exercise 1:** Debate and answer the following questions
•What is a software license?
•What are the differences between the licenses for proprietary software and free and open source software?
•Which are the free software licenses in this module?
•Beside the licenses in this module search and list two more FOSS licenses
•What do you understand with dual license?
•Find and discuss at least 1 (one) example of a dual-licensed FOSS solution.

# Module 1.5 FOSS resources for keeping current on the FOSS eco-Space

## Duration:

0:30hrs

## Delivery method:

For instructional purpose, it is advised that trainers/lectures use a combination of discussion sessions and Internet-based search as a major means of delivering this module. In addition, this module can serve as a take-home assignment where participants can write down a list of resources and present them to the following day for further discussion.

## Introduction

The FOSS development, communities, and the way of doing businesses in FOSS are highly dependent on the Internet infrastructure. Networking with globally distributed communities of developers and users is essential for the success of businesses in the FOSS cyber-space. However, despite the benefits the Internet brings to businesses (proximity to customers, improved and timely service delivery, access to global audience and pool of potential customers), it has become apparent that there is a problem of information overload, the cost in terms of time of shifting and searching for relevant information. This module aims to ameliorate this problem by providing some resources which may help FOSS businesses locate the appropriate portals, communities, applications, and associations which may serve as vital links to their business. The dynamics of the internet informs us that such resources can be outdated few moments after they have been discovered, therefore, companies are advised to use the resources provided in this module as a starting point only.

## 1.5.1 News, interviews and conferences on FOSS and business

- Slashdot: Technology related news http://slashdot.org/
- Free Software Magazine http://www.freesoftwaremagazine.com/
- Tectonic http://www.tectonic.co.za/
- O'Reilly Conferences http://conferences.oreillynet.com/
- The 451 group. 451 caos theory: A blog for the enterprise open source community http://blogs.the451group.com/opensource/
- Galopini, R. Commercial open source software http://robertogaloppini.net/
- Open Business Models http://www.openbusiness.cc
- Oswalder, A. Business model design and innovation blog http://business-model-design.blogspot.com/
- Open Source Business Conference (OSBC). https://www.eiseverywhere.com/ehome/index.php?eventid=7578& , available: 01/20/10
- Init marketing tv (Interviews on Open Source marketing) http://www.initmarketing.com

### 1.5.2 Finding and selecting applications

- Freshmeat http://freshmeat.net/
- Sourceforge http://sourceforge.net/
- Osalt: Open source alternatives to commercial software http://www.osalt.com/

### 1.5.3 FOSS related networks/institutions

- Free Software and Open Source Foundation for Africa (FOSSFA) http://www.fossfa.net/
- Linuxchix http://www.linuxchix.org/
- Free Software Foundation (FSF) http://www.fsf.org/
- Open Source Initative http://www.opensource.org/
- The African Commons Project http://www.africancommons.org/
- Creative Commons http://creativecommons.org/
- Software Freedom Day http://www.softwarefreedomday.org/
- Document Freedom Day http://www.documentfreedom.org/
- No Software Patents http://www.nosoftwarepatents.com/
- Linux User Groups http://www.linux.org/groups/

### Module 1.5: ASSESSMENT

- **Exercise 1:** Write a short review comparing two resources in each sub-module. Clearly state which type of resource is most suitable for advancing FOSS business in your country?
- **Exercise 2:** State factors which inhibit the use of each resource in each sub-module in your country
- **Exercise 3:** Give examples and suggest 3 - 4 other categories which can be added as FOSS resources for businesses in Africa
- ……
- ……
- ……
- ……

# Module 1.6 Multimedia

## Duration:

0:30hrs

## Delivery method:

For instructional purpose, it is advised that trainers/lectures use the “Reflection” session to gather participants and select 1 or 2 multimedia videos for participants to watch and discuss. Alternatively, the Instructor can use the tea/coffee/lunch breaks to leave the videos running and use a projector to project the streaming on a large screen.

## Introduction

This module is a collection of multimedia contents freely available on the Internet or made by dedicated FOSS advocates.

## The codebreakers series

Basic concept of piracy, Richard Stallman and Software Freedom, the origin of the Linux kernel, what people in the USA think of FOSS? Listen to vedio links (Valid is of 13.04.10)

- http://video.google.com/videoplay?docid=578348807380292081
- http://uk.video.yahoo.com/watch/1434446/4928745

Mark Shuttleworth talks about UDS, how the new teams at Canonical will work, the impact of changes to the way Ubuntu is developed. More in this YouTube vedio:
http://www.youtube.com/watch?v=DqsYje05JLs
Live Meetings/talks on FLOSS, Education and Teaching in Internet-based environment, 2007. For selected videoconferences visit the flossccom project at

(https://wiki.ubuntu.com/flosscom/talks)

## Listening Comprehension

(a)**Listening comprehension:** Allow participants to listen to 1 video for 20-30 minutes. Participants can then submit half-one page summary of the video content
(b)**Debate:** Divide the class into 2-3 groups and let them debate a selected video theme.
(c)**Documentary**: Participants should make a documentary video exploring what people (teachers, students, business people, politicians, etc) know about and think FOSS is and how it can benefit the ICT sector of their country

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## Assignments and Answers

### TASK

List down the names of 10 organizations/companies using FLOSS in your country.

Also provide their website addresses and the names of the FLOSS products they are using.

Some examples from participants:

**Kenya:**

1. Strathmore University - www.strathmore.edu
Product/s:Linux, Moodle, also using rsmart Kuali Financial systems

2. Alliance Technologies - www.at.co.ke
Product: Open Source Software Solutions and supplies an ERP, Alfresco for Document Management

3. Linux Solutions – www.linuxsolutions.fr
Product: using GNU/Linux for Mail Server Installations

4. Camara - www.camara.ie
Product: Linux(Camarabuntu),Moodle and using Linux Edubuntu

5. Adept Systems - www.adeptsys.biz
Product: LINUX - MIFOS – Microfinance Information Management System released under Apache v2.0 public license

6. Government Information Technology Services – www.treasury.go.ke
Products: Various FOSS Solutions in Government including Joomla, Collaboration Software and Linux Servers for mail.

7. Open World - www.openworld.co.ke
Product: Linux, Apache, MySQL, and Perl,Python/PHP and offer FOSS training to Clients

8. Institute of Software Technologies - www.isteducation.com
Product/s:Linux, Solaris, Java, MySQL(Training)

9. Mumias Sugar Company - www.mumias-sugar.com
Product: Linux (Server side)

10. Magadi Soda Company - www.magadisoda.co.ke
Product: Linux (Server side)

| Name of institution | Product Used | Website |
|---|---|---|
| Kenya Coast Polytechnic | Website made in Joomla | Kenyacoastpoly.ac.ke |
| Strathmore University | Training in various FOSS | strathmore.edu |

| | | |
|---|---|---|
| | products<br>Campus Management system<br>E learning System | |
| Catholic University | Campus Management System | Cuea.edu |
| Mombasa Technical Training Institute | Learning Management System (modified Moodle) (In trial mode) | Kenyacoastpoly.ac.ke |
| Kaloleni Redeemed Gospel Church primary school | Laboratory computers on Linux Susse | N/A |
| K24 broadcasting station | Laboratory computers on Linux Susse | K24.co.ke |
| Kenya Television Network | Using Linux OS | Ktnkenya.tv |
| openworld | IT solutions based on FOSS | Openworld.co.ke |
| Braeburn schools | Elearning system (Moodle) | Elearning.braeburn.ac.ke |
| Daystar university | Elearning system (Moodle) | Elearning. Daystar.ac.ke |
| University of Nairobi | Elearning system (Moodle) | Elarning.UONBI.ac.ke |
| Kenya Network Information Center | FOSS usage and Advocacy | Kenic.or.ke |

**South Africa:**

| ORGANISATION | WEBSITE ADDRESS | FLOSS PRODUCTS USED |
|---|---|---|
| Molemi NGS | www.molemings.co.za | Ubuntu, OpenOffice, |
| FNB | www.fnb.co.za | Linux, Xoops, Jasper Reports |
| Sanlam | www.sanlam.co.za | Open Unix |
| CECS | www.cecs.org | OpenWorkbench, OpenOffice, TurboCash, Joomla |
| Sun Microsystems | http://za.sun.com/ | Solaris OS, but also provides links to other FLOSS products for example, Netbeans, OpenOffice, GlassFish etc |
| Gijima ST | www.gijima.com | Not specific but offer systems intergration including Open Source to clients |

| | | |
|---|---|---|
| Department of Science and Technology | www.dst.gov.za/ | Plone CMS |
| Monash South Africa | www.monash.ac.za | Linux |
| SystemicLogic | www.systemiclogic.co.za | Linux SUSE, OpenOffice, Xoops, WordPress |
| Council for Scientific and Industrial Research | www.csir.co.za/ | OpenOffice |

**Uganda:**

| No | Organization | Website | FLOSS Products used |
|---|---|---|---|
| 1 | Parliament | www.parliament.go.ug | Linux, OpenOffice |
| 2 | Ministry of Water and Environment | www.mwe.go.ug/ | Linux, OpenOffice |
| 3 | Ministry of Lands,Housing & Urban Development | http://www.mlhud.go.ug | Linux, OpenOffice |
| 4 | Ministry of Tourism, Trade and Industry | http://www.mtti.go.ug/ | Linux, OpenOffice, |
| 5 | Civil Aviation Authority | www.caa.co.ug | Linux, OpenOffice |
| 6 | Uganda Carbon Bureau | www.ugandacarbon.org/ | Linux, OpenOffice |
| 7 | Makerere University | www.mak.ac.ug | Linux, OpenOffice, MySQL |
| 8 | Uganda Martyrs University | http://www.fiuc.org/umu | Linux, OpenOffice, Oracle |
| 9 | Diamond ICT | http://diamondict.com/ | Linux, OpenOffice, IPCop Server,<br>Mozilla Firefox, Mozilla Thunderbird |
| 10 | East African Center for Open Source Software | www.eacoss.org | Linux, OpenOffice, Joomla! |

**Tanzania**

| | | Website | Products |
|---|---|---|---|
| 1 | Arusha Node Marie/AFAM Ltd | www.habari.co.tz | Fedora/Redhat, FreeBSD and Ubuntu |
| 2 | ITFARM | www.itfarm.co.tz | SquirrelMail |
| 3 | Zalongwa | Zalongwa.com | Ubuntu Desktop, V-tiger, OpenOffice |
| 4 | Vodacom Tanzania Limited | www.vodacom.co.tz | MySQL |
| 5 | Hubert Kairuki Hospital | http://www.hkmu.ac.t | Care2X |

| | | | |
|---|---|---|---|
| | (Mikocheni) | z | |
| 6 | St. John's University - Dodoma | http://www.sjuat.ac.tz/ | Edubuntu |
| 7 | The Parliament of Tanzania | www.bunge.go.tz | SquirrelMail, Centos OS |
| 8 | DataVision | www.datavision.co.tz | SquirrelMail, MySQL, PHP |
| 9 | Tri Labs | www.trilabs.co.tz | Ubuntu, PHP |
| 10 | University Computing Center Ltd | www.ucc.co.tz | Ubuntu Server (OS), SquirrelMail, MySQL Database, Thunderbird, OpenOffice, PHP, Care2x |

| No. | Organizations/Companies | Website Address | FLOSS products used |
|---|---|---|---|
| 1 | Tanzania Commission for Universities (TCU) | http://www.tcu.go.tz/ | MySQL |
| 2 | University of Dar es Salaam (UDSM) | http://www.udsm.ac.tz | 1. KiLiNuX - is an exclusive open source software project which translates OSS products like Linux into local Kiswahili language<br>2. UDSM uses FOSS based software to manage its student records known as ZALONGWA |
| 3 | National Council of Technical Education (NACTE) | http://www.nacte.go.tz | open Source database management system, MySQL |
| 4 | National Examination Council of Tanzania (NECTA) | http://www.necta.go.tz | NECTA is investing in Linux Servers and has already trained its systems administrator on working with LAMP (Linux, Apache, MySQL, and PHP) systems |
| 5 | Bank of Tanzania (BoT) | http://www.bot.go.tz | Linux |
| 6 | Geodata Consultants Limited | http://geodata.co.tz | MySQL |
| 7 | Simba Technology Ltd | www.simbatechnology.co.tz | Open Text, Java, PHP, Apache |
| 8 | Computertech solutions (T) Ltd. | www.cts.co.tz | Web hosting, Servers |
| 9 | SCI (Tanzania) Ltd | www.scitz.com | Accounting, Human Resource & payroll software, Time & Attendance Solutions, Hotel & |

| | | | |
|---|---|---|---|
| | | | Restaurant Software using Linux |
| 10 | College of Business Education (CBE) | www.cbe.ac.tz | Apache (Server), redhat, Mozilla firefox, openoffice.org |

**Ethiopia:**

| № | Name of Organization | FLOSS Product being used | Address |
|---|---|---|---|
| 1 | St. Mary's University College | Ubuntu, Fedora, JCreator, Eclipse, Mozilla Firefox, Vertrigo Server, Apache, MySQL, eMule | www.smuc.edu.et |
| 2 | eVentive LLC | Java, Eclipse, MySQL, Postgresql, Oracle 10g, Vertrigo Server | www.eventivellc.com |
| 3 | Hebesha PLC | Joomla, Apache, MySQL, Ubuntu | www.habesha.com |
| 4 | Development Bank of Ethiopian | Zimbra, Orange HRM, Greenstone, Koha, Joomla, Wireshark, Azurus/Avu, Adaptive Planning Express | www.dbe.com.et |
| 5 | Ethiopian Ministry of Finance & Economic Dev't | Ibex financial management system | www.mofed.gov.et |
| 6 | Addis Ababa University | Greenstone, Zimbra, JCreator, Eclipse, Vertrigo Server, Koha, MySQL, Apache | www.aau.edu.et |
| 7 | OraTech Consulting | Joomla, Eclipse, Wireshark, Koha, Ubuntu, Vertrigo Server, MySQL | http://www.oratech-consulting.com/ |
| 8 | Hilcoe School of Computer Science | Joomla, JCreator, MySQL, Apache, Vertrigo, Eclipse, Moodle | www.hilcoe.edu.et |
| 9 | Taby Engineering | Moodle, Ubuntu, Joomla | www.tabyengineering.com |
| 10 | ILRI | Moodle | www.ilri.org |

## TESTS Module 1

**Question 1 : TCO refers to how much it costs to buy a software product**

(a) True
(b) False

**Question 2 : Money cannot be made with FLOSS**

(a) True
(b) False

**Question 3 : The FSF defines free software as software which gives the user freedom to**

(a) distribute or share
(b) study
(c) modify
(d) All of the above

**Question 4 : All of the following are examples of free software except …**

(a) Firefox
(b) Qt
(c) MySql
(d) Adobe CS2

**Question 5 : OSI stands for …**

(a) Open Source Interconnectivity
(b) Ontario Swine Improvement
(c) Open System Initiative
(d) Open Source Initiative

**Question 6 : FLOSS doesn't cost a thing**

(a) True
(b) False

**Question 7 : In a FLOSS business model, a large proportion of resources must go to marketing, publicity and distribution**

(a) True
(b) False

**Question 8 : Select the odd item**

(a) Linux
(b) MySql
(c) Python

**Question 9 : List 5 free software licenses you knowand for each license name 1 software that uses it.**

**Question 10 : FLOSS cannot be modified or distributed**

(a) True
(b) False

**Question 11 : List the 3 main categories of FLOSS licenses**

**Question 12 : In a POTS business model, a large proportion of resources must go to marketing, publicity, and distribution**

(c) True
(d) False

**Question 13 : FLOSS stands for...**

(a) Free/Linux and Open Source Software
(b) Free/Libre and Open Source Software
(c) Free/Linux and Opened Source System
(d) Free and Open Source System

**Question 14 : List 5 developing countries that implement FLOSS or have a FLOSS policy**

**Question 15 : Name 5 FLOSS related networks you know**

**Question 16 : All of the following are associated with the OSI except**

(a) Richard Stallman
(b) Eric Raymond
(c) Bruce Perens
(d) Steve Jobs

**Question 17 : FLOSS development began with the inception of the Linux Operating System**

(a) True
(b) False

**Question 18 : List 2 sites where one can obtain FLOSS resources for businesses in Africa**

**Question 19 : Network effects refer to the potential internet provides for communication and participation**

(a) True
(b) False

**Question 20 : Outline the process of releasing a software as FLOSS.**

**Question 21 : What is forking in FLOSS development?**

**Question 22 : Which of the following software development models is used by FLOSS?**

(a) Bazaar model
(b) Cathedral model

**Question 23 : FLOSS represents an opportunity for the empowerment of developing countries**

(a) True
(b) False

**Question 24 : FLOSS can help reduce vendor lock-in**

(a) True
(b) False

**Question 25 : FLOSS applications can be used on Windows**

(a) True
(b) False

**Question 26 : The software development industry is dominated by the POTS and COTS business model**

(a) True
(b) False

**Question 27 : List 5 developed countries that implement FLOSS or have a FLOSS policy**

**Question 28 : 1.FLOSS development process includes**

(i).source code acquisition
(ii).source code modification
(iii).source code distribution
(iv).source code reacquisition

(a) (i) and (ii) only
(b) (ii) and (iii) only
(c) (i) , (ii) and (iii) only
(d) (i) , (ii) , (iii) and (iv) only

**Question 29 : What is a horizontal services firm? Give an example**

**Question 30 : What are the differences between the licenses for proprietary software and free and open source software?**

**Question 31 : List 5 values that can be derived from FLOSS.**

**Question 32 : FLOSS is hostile to intellectual property**

(a) True
(b) False

**Question 33 : FLOSS is hardly used in a business context**

(a) True
(b) False

**Question 34 : Free Software and Linux are the same thing**

(a) True
(b) False

**Question 35 : Proprietary software and closed source software are the same thing**

(a) True
(b) False

**Question 36 : FSF Stands for …**

(a) Free Source Foundation
(b) Free Software Foundation
(c) Free System Foundation

**Question 37 : All of the following are examples of open source projects or communities except**

(a) FreeBSD
(b) Apache
(c) Ubuntu
(d) IIS

**Question 38 : What is a vertical services firm? Give an example**

**Question 39 : Who initiated the GNU project?**

(a) Linus Torvalds
(b) Richard Stallman
(c) Steve Jobs

**Question 40 : Which of the following is an example of a vertical services firm?**

(a) Redhat Inc
(b) Apache
(c) Canonical Ltd

**Question 41 : What is a software license?**

**Question 42 : Richard Stallman is best known for...**

(c) beginning the Open Source Initiative
(d) developing the Linux Kernel
(e) founding the Free Software Foundation
(f) developing MySql

**Question 43 : Mention 5 myths about making money with FLOSS and state facts that counter these myths**

**Question 44 : List 5 sites where one can obtain FLOSS resources**

**Question 45 : According to Eric Raymond, the Bazaar model produces …**

(a) quicker bug fixes
(b) less efficient software
(c) does not make a difference

**Question 46 : Freewares are examples of Free Software**

(a) True
(b) False

**Question 47 : FLOSS can be a useful strategy when competing with a well-established and widely adopted software product**

(a) True
(b) False

**Question 48 : What do you understand by dual licensing? Give one example.**

**Question 49 : All of the following are examples of open source software licenses except**

(a) MIT License
(b) Berkeley Software Distribution License
(c) End User License Agreement
(d) Apache Software License

**Question 50 : Who is Linus Torvalds?**

(a) He began the Open Source Initiative
(b) Developed the linux Kernel
(c) He began the Free Software Foundation
(d) He developed MySql

## FOSS/FLOSS TEST

1. Which statement describes FOSS/FLOSS?

❑ FOSS applications are not owned by anyone

❑ FOSS has the freedom to use, understand, modify and distribute software

❑ FOSS is anti-copyright

❑ FOSS is just a software or a software development method.

2. Copyright was invented to protect the rights of content creators; this concept, in contrast, was invented to protect the rights of users. What is it?

❏ It is the ownership of an intellectual property within the limits prescribed by a particular nation's or international law.

❏ It is the idea and the specific stipulation when distributing software that the user will be able to copy it freely, examine and modify the source code, and redistribute the software to others (free or priced) as long as the redistributed software is also passed along with the copyleft stipulation.

3. What is freeware?

❏ It is programming that is offered at no cost and the developed software (which may be in public domain) may also be copyrighted

❏ It is software that can be freely used, modified, and redistributed with only one restriction: any redistributed version of the software must be distributed with the original terms of free use, modification, and distribution

4. All free software is freeware and all freeware is free software.

❏ True

❏ False

5. Proprietary software is

❏ Low cost, Open standards that facilitate integration with other systems and it is easily customizable.

❏ Costly, and has closed standards that hinder further development.

6. FOSS/FLOSS is for

❏ Programmers/Geeks in their bedroom

❏ Everyone including multinationals

❏ Students studying computer science

7. Which statement is False

❏ The total cost of ownership of FOSS is greater than for corresponding closed source software

❏ For most commodity software people do not pay for support, they just pay a license and use it

9. Which benefit/limitation applies to Open standards?

❑ Inefficient use of existing resources

❑ Lack Flexibility

❑ Fewer options and thus less opportunities to optimise

❑ Lower and managable risk

10. There are sufficient Open-Source alternatives to proprietary software suites/applications

❑ True

❑ False

11. Which statement is false about Open source software

❑ License Must Not Be Specific to a Product

❑ License Must Not Restrict Other Software

❑ License Must Be Technology-Neutral

❑ License Must discriminate against some person or group of persons.

12. Who supports Open Source?

❑ Microsoft

❑ HP – Hewlett-Packard

❑ Universities

❑ Dell

❑ All of the above

13. Which Statement is false

❑ Open-source licences are legally valid

❑ Open-source licences are a waiver of rights

❑ Open-source licenced products can be sold by anyone

14. What is Network effects?

❑ The phenomenon that describes how Products in a network increase in value to users as the number of users decreases

❑ The phenomenon that describes how Products in a network increase in value to users as the number of users increases

❑ The phenomenon that describes how Products in a network decrease in value to users as the number of users increases

15. What is the most important advantage in the use of open source to users?

❑ Lower total cost of ownership

❑ Reduced dependence on software vendors

❑ Easier to customize

❑ Higher level of security

❑ Do not see a significant advantage

16. How do open-source models work?

❑ Rapid evolutionary process

❑ Closed model

17. Which statement is valid in the long term?

❑ Open Source may have a niche, but proprietary commercial products will continue to rule

❑ Customers will never trust something that is free

❑ Open Source may release value, but it doesn't create value

❑ Open Source development involves effort, so there has to be payment for that effort

18. There are various types of transactions between parties: win-win, win-lose, lose-lose (Lose-lose transactions should never occur under conditions of rational decision-making) and Win Neutral. Win-lose transactions occur when the winning party is stronger than the other and can force a transaction through. Win-neutral transactions can and do occur quite frequently. Everyday examples include someone asking for directions, or asking for change. Here, the person asking certainly gains something from the transaction, but the other party neither gains nor loses from it. Therefore, the transaction can still take place. All other transactions are willingly entered into by two parties and are win-win. Which transaction best represents Open Source Communities/Development?

❑ Win-Win

❑ Win-Loose

❑ Loose-Loose

❑ Win-Neutral

19. What is the main motivation of the developers/programmers of open source software?

❑ Economic Gain

❑ To solve a problem they are facing - to "scratch their personal itch"

20. In economics, we have two concepts, -- competing products and substitutes. Competing products are other brands in the same category. Substitutes are products in another category that perform much the same function. It's more difficult to switch to a substitute than to a competing product, but it can be done when there are compelling reasons. Therefore, in light of open source vs. proprietary/ commercial software, open source is a

❑ Competitor

❑ Substitute

21. It is possible to make money off Open Source

❑ True

❑ False

21. Who is termed "father of the GNU Project"

❑ Andrew S. Tanenbaum

❑ Richard Stallman

❑ Linus Torvalds

❑ Bill Gates

22. The first version of Linux was released in?

❑ 1990

❑ 1991

❑ 1992

❑ 1993

23. Open source software development

❑ Increaces the research and development expense of the publicly traded companies that make use of it

❑ Reduces the research and development expense of the publicly traded companies that make use of it

24. Which among these software applications is not "free" open source

❑ Java Enterprise Edition (JEE)

❑ MySQL database

❑ Ruby, PHP, Python and Perl

❑ Redhat Enterprise Linux

25. Which method is least suitable for Open source software development

❑ Agile method Extreme Programming

❑ Internet-Speed Development model

❑ The Waterfall model

26. Which is not a suitable method to keep track(record) of the status of various issues in the development of open source software

❑ A bug tracker

❑ A simple text file

27. Who solves bugs/errors in open source software

❑ Users

❑ Developers
❑ Both

28. Bugs, security flaws, and other errors appear in even the most trusted (proprietary) programs.

❑ True

❑ False

29. Which list does not contain proprietary software

❏ Thunderbird,MathWorks MATLAB, Moodle

❏ Adobe Illustrator, Audacity, Media Wiki

❏ eXe, Blackboard, AutoCAD

❏ Archimedes, qBitorrent, Apache

30. The most expensive buyin of an open source software company to date (2009) by a large corporation such as Nokia/Oracle/Apple/Redhat is worth

❏ $5 billion

❏ $350 million

❏ $1 billion

❏ $153 million

31. There is no open source community in Africa with most developers in Africa geared towards the problems facing the African context

❏ True

❏ False

32. Most Universities in Africa use open source software

❏ True

❏ False

33. Most Government institutions in Africa use open source software

❏ True

❏ False

34. GPL compatible free software license is

❏ A permissive non-copyleft free software license

❏ A free software license, and a copyleft license

❏ A free software license, and a copyright license

35. Microsoft doesn't make free software.

❑ True

❑ False

36. Nokia smart phones now run on open source operating system

❑ True

❑ False

37. Which among the following is a Linux User Group?

❑ Egyptian GNU/Linux User Group

❑ Gauteng Linux Users' Group

❑ Linux Professional Association of Kenya

❑ The Informal Linux Group

❑ All of the above

38. Free and open-source software are not "a useful and significant tool for the developing countries", and do not have the potential to help democratization and finding solutions to the most pressing problems faced by the populations of developing countries

❑ True

❑ False

39. FLOSS has a complementary and reciprocal relationship to education. One needs an educated section of the population to fulfill the full potential of FLOSS, and at the same time FLOSS helps, enhances and complements education by providing tools to promote education

❑ True

❑ False

40. "despite being extremely cost-effective and of competitive quality, FLOSS still is kept out because companies with enough cash can buy off decision-makers"

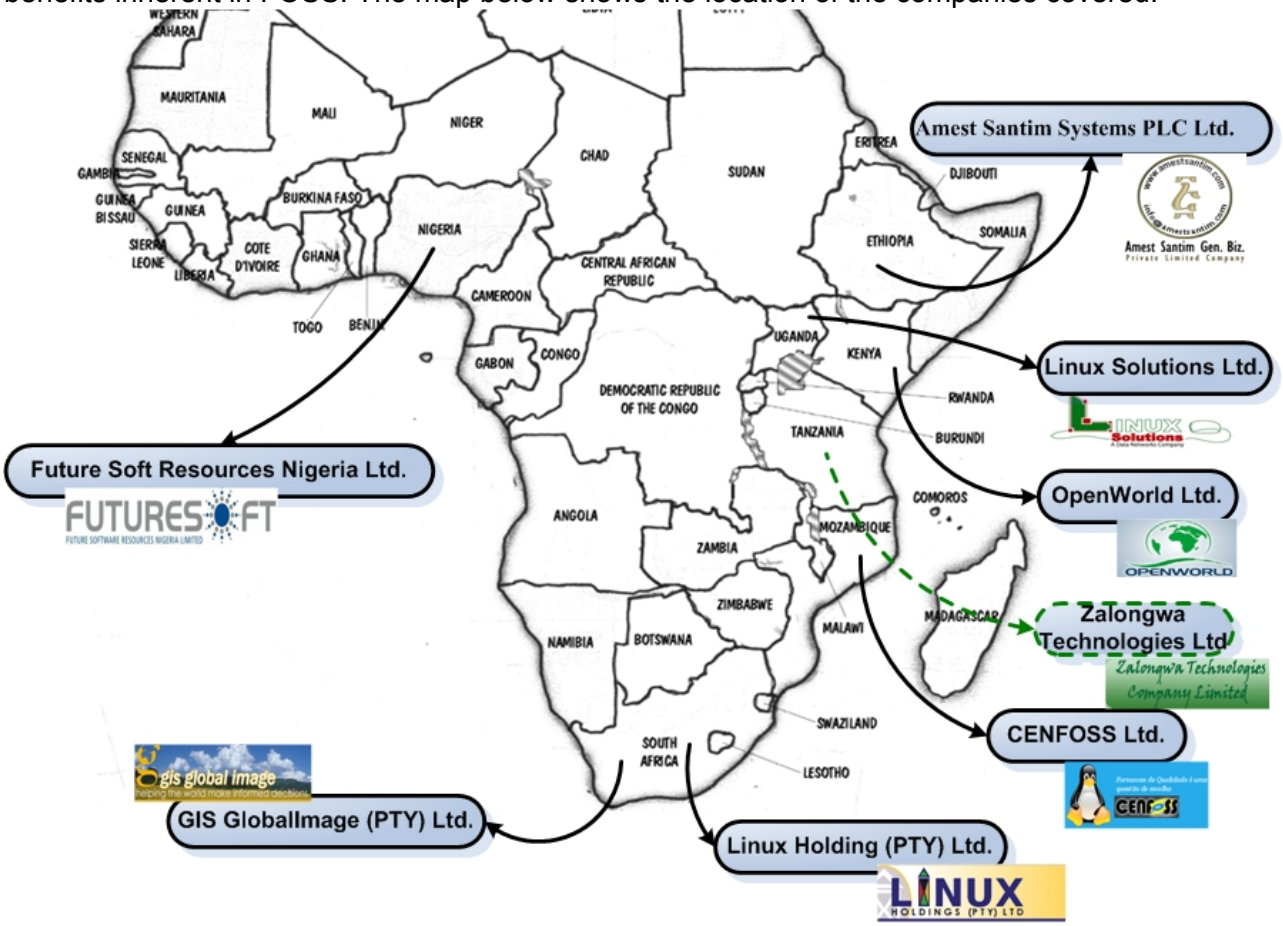
❑ True

❑ False

# MODULE 2: AFRICAN FOSS BUSINESS MODELS: CASE STUDIES

## Introduction

As FOSS becomes more mainstream the variant business models will encompass a business service that is a combination of FOSS and Commercial offerings. This module provides case studies to demonstrate how companies in eight African countries are already profiting from the benefits inherent in FOSS. The map below shows the location of the companies covered.




The case studies give practical advice based on reported experiences of a cross-section of FOSS business enterprises. Furthermore, the studies show that FOSS business models in Africa employ some innovative strategies and do business by combining FOSS products with proprietary software. The knowledge gain and practical exercises at the end of the module are meant to have a “Yes I can do it” effect. Common trends and practical experiences from the case studies are put together to generate a taxonomy of FOSS business models [Module 2.8] which are applicable in the African context.The case studies are also intended to act as a spring board to further understand what communication and business skills and strategies [Modules 3 - 5] we need to develop in order to build a successful FOSS business in Africa. The structured manner of the case studies may serve as a compendium of assignments for FOSS trainers [Module 6].

### Learning Objectives

1. To understand the various services and solutions offered by ICT-Based SMEs in Africa.
2. To know the types of FOSS clientele and how their issues can be addressed in the Africa context.
3. To see the advantages and challenges FOSS can present to clients and start-up businesses.
4. To understand barriers of entry into FOSS business in Africa.
5. To know some profitable service sectors.
6. To understand the importance of networking with FOSS strategic partners and communities.
7. To understand what the FOSS business risks are and how to mitigate them.
8. To identify African companies using FOSS business models in their business.

## Authors and Trainers:

### Pool of African ict@innovation expert trainers

| | Name Module | Name |
|---|---|---|
| **Module 2** | African Business Models: Case Studies | Celso Timana,<br>Sulayman K. Sowe,<br>Shirley Akasreku<br>**More Trainers per country in full Pool of Trainers**<br>http://www.ict-innovation.fossfa.net/wiki/public-wiki/course-advanced-african-foss-business-models/FBMTrainers |

### Main contributors

| | |
|---|---|
| **Module 2** | Sulayman K. Sowe (**Facilitator**), Celso Timana, Nico Elema, Kim Tucker, Glenn McKnight, Irene Fernández Monsalve |

Additional material for **Module 2: AFRICAN FOSS BUSINESS MODELS: CASE STUDIES** (presentations, tests, evaluation forms, pool of trainers, derived material) is available online at: http://www.ict-innovation.fossfa.net/node/4252

### Sessions and Timetable

The entire content in this module is estimated to be delivered in 2 days, with some variations within the modules. For instructional purpose, the content of this module can be delivered using a combination of lectures and discussion sessions. It is advised that trainers/lecturers should first revise the questions and exercises presented at the end of “Module 2.8”.

| Time | Session |
|---|---|

| | |
|---|---|
| 9:00 – 10:30 | • Introduction to Case Studies |
| 10:30 - 10:45 | Coffee Break |
| 10:45 - 12:15 | • Review of Case Studies |
| 12:15- 13:30 | Lunch |
| 13:30 - 15:00 | • Round table discussion<br>• Taxonomy of FLOSS Business |
| 15:00 - 15:15 | Coffee Break |
| 15:15 - 17:00 | • EXISTING FOSS POLICIES<br>• End of Module Evaluation |

## Module 2.1 The OpenWorld Ltd Experience

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**Duration:**

1:15hrs

**Outlook:**


**Registered Name:** OPENWORLD LTD

**Founded:** 2004

**Staff Strength:** 7

**Country:** Kenya

**Website:** http://www.openworld.co.ke/

**Type of business:** FOSS development and Training

### 2.1.1 Synopses

OPENWORLD LTD is community-centric company, which offers a wide range of professional and technical services using exclusively open source technologies. The company's vision is to be a market leader in the provision and support of open source to various public and private enterprises, government and SMEs in Kenya and across the wider East African region. The company was founded in 2004 and currently employs 7 people.

### 2.1.2 Introduction

OPENWORLD LTD started from the owner's savings and prior investments. The company's capital base has grown over time through revenue generated from consultancy, open source software solutions development and sales, and training in various open source courses. Any profits realized are re-injected into the company to spin innovation, improve development and delivery of services to clients. OpenWorld's strategic move was to start small, encourage partnerships and outsource

non-core services related to some aspects of the company's operations. By adopting a service-model for the company, capital expenditure was brought down as well.
OpenWorld's survival and an attempt to gain a competitive advantage in doing business around open source software reflect the realities of the local market in Kenya. Some of these challenges come the way of any company, be it open source or proprietary. Building a client base has meant thinking out of the box and going beyond traditional practices of “waiting for customers to come to you”.
On the infrastructure, the company had to bid to get its current office space. In getting necessary registration and company documents, contracting a law firm and an accountant to assist with the processes was a must for OpenWorld Ltd.
Hiring employees also has meant defining the company culture from scratch as well as training people and inculcating the company's vision of open source and openness.

### 2.1.3 FOSS Business Focus

By offering open source training to their clients, conducting regular workshops, taking part in invited talks, etc. the company's representatives managed to inform other companies and executives who were not familiar with open source about the benefits of switching to open source. In the event, they are also able to advertise the services and products they offer.

### 2.1.4 Services

OpenWorld offers various service to its clientèle in the following categories: Consultancy, Training, Product development and Support. The latter three (described by the company directors as Trainings, Systems and Applications) bring in roughly equal shares of revenue for OpenWorld Ltd.
The company deploys and supports over 11 corporate solutions, ranging from servers (mail, list, file, print, database, etc.) to Firewalls and Intrusion Detection Systems and web hosting. For all its solutions, OpenWorld adopts open source software and the open source model. Most of the applications are web-based and are built on the LAMP stack (Linux, Apache, MySQL, and Perl, Python or PHP) or the Zope application Server framework. The company's platform infrastructure is always based on UNIX or Linux. But to serve the needs of their clients, OpenWorld Ltd strategy is to go for integrated services as most of their clients are looking for total solutions or one-stop-shops.
The company's products and services are marketed through direct sales, advertising in local media, referrals from other clients, awareness campaigns, and training and through local events (e.g. ITC fairs).

### 2.1.5 Lessons learned

There might be other companies in and outside Kenya who may be offering the same services and products as OpenWorld. However, what has worked well for the company over the years, as the company director puts it, is “Trying the untested, and always be ready to do things differently in terms of responding to client requests".

### 2.1.6 Conclusion

One thing the company is passionate about and would like to do in the distant future is localization of its products. The managing director commented that “*OPENWORLD is not working on any localization for now. I will not rule it out in the future but it's not an activity within our immediate*

*plans. However, I am passionate about localizing in my local language and if time allows, I may engage in such an activity at my own time*".

## Module 2.2 The case of GIS Global Image Ltd.

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**Duration:**

1:15hrs

**Outlook:**


**Registered Name:** GIS Global Image (PTY) Ltd.

**Founded:** 2000

**Staff Strength:** 17

**Country:** South Africa

**Website:** http://www.globalimage.co.za/

**Type of business:** FOSS GIS products sales and support services

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### 2.2.1 Synopsis

GIS Global Image (PTY) Ltd is a South African based company, specializing in Geographical Information Systems (GIS). Essentially a GIS makes use of software to display database data on a map, which can help decision makers. The company focuses on clients needs and uses the most applicable software to address those needs. To achieve this, GIS Global Image adopts a hybrid model - providing software solutions and services around both open source and proprietary software. GIS Global Image renders services relating to GIS consulting; this involves system design and implementation, data capture and analysis, training workshops and capacity building. The company has two branches in South Africa: Pretoria and Stellenbosch and currently employs 17 staff, including 5 directors. This network is expanded through strategic partnerships in South and East Africa.

### 2.2.2 Introduction

GIS Global Image (PTY) Ltd resulted from the merger of two companies (Urban Dynamics GIS and Plandata) in 2000, giving it the advantage of an established and existing client base and infrastructure. From its inception, GIS Global Image has been focusing on rendering services related to system design and implementation; data capture and analysis; training workshops and capacity building. These systems are typically based on Internet and Intranet platforms, making the information available to a wide user-base in organisations.

Traditionally, the services are rendered to private- and public organizations, who aim to present their organisational data on geospatial (map)-based information systems. These clients include all levels of Government (National; Provincial and Local Government); Para-statal which include the Electricity Supply Commission of South Africa (ESKOM); The Council for Scientific and Industrial Research (CSIR) and various private companies implementing these mapping applications in order to make informed decisions.
GIS Global Image further engages in strategic partnerships with other companies and educational institutions. These partnerships enhance capacity in order to deliver services to clients. Examples include the strategic partnership with Arican eDevelopment Resource Center (AeRC) which is based in Nairobi, Kenya, to facilitate practical GIS workshops and to provide GIS training. In the same region, GIS Global Image also has an agreement with Organizational Management Systems (OMS), also based in Nairobi, Kenya, to implement Geographical Systems in the East African region. Other partnerships include Maluleke, Luthuli & Associates, and a development planning company in South Africa, who also has shareholding within GIS Global Image.

### 2.2.3 FOSS Business focus

#### 2.2.3.1 Products and services

The primary business activity of Global Image offers a variety of Geographical Information Systems or GIS products and services to enable Local Authorities or municipalities to access and process information from GIS data.
What has worked well for GIS Global Image over the years is the use of open source tools to do training with its clients. The company often conducts 1-3 days training workshops in which they teach practical GIS skills. Participants, who may be potential clients, also learn how to use the company's open source flagship products such as Papyrus. The workshops are open to all but participants are charged fees which pay for the printing of training material; food and beverages; venue and hardware hire; instructor fee.
The Papyrus product, which is based on open source components, can be used to integrate information from various sectors within a Local Government department or district. The GIS mapping component of Papyrus is distributed as free software under the GPL license.
The GIS@School product is (currently) proprietary software as this is the software used by some schools. The company is planning to use MapWindow GIS or Quantum GIS – both open source GIS Software package - as the mapping software.

#### 2.2.3.2 Advantages gained through FOSS

How is GIS Global Image Ltd. benefiting from open source software? The company develops its own software, which is provided as “Free for download Software”, although they retained the source code, and would customise the software according to the demand. The company does **more customizing** than developing new GIS software. However, software customization of most of the company's products does not involve changing the core of the software, but just the GUI to meet clients’ needs.
The company software developers are not directly involved in any one open source project, but if they customize the software they use, the company takes it upon itself to provide the customized software back to the community, as per licence agreement. As the company director puts it, the benefit of open source software is to give the company “*access to software being developed and maintained by a larger developer community*”. Thus, open source acts as a catalyst to **lower**

**software development and maintenance costs** for a relatively small business like GIS Global Image.

GIS Global Image markets its products and services using the Internet, by word-of-mouth, articles in local publications, through workshops and training. The company also employs another strategy – **marketing through tenders**. GIS Global Image has to tender for many of their services, where they use their products. This means that the company accesses tender requests, and in tendering, they are able to present or market their products.

### 2.2.3.3 Challenges in doing FOSS business

Despite benefiting from an existing infrastructure and client base, the GIS Global Image experience has a lot to teach software SMEs doing business in open source software and operating in South Africa. The company's experience report can be categorized as follows:

- Financing: Many financial institutions are reluctant to finance SMEs. South Africa implemented the Financial Intelligence Centres Act in 2001. One of the aims of the act is to stop money laundering but at the same time placing restrictions on the provision of credit to businesses. GIS Global Image's possible solution in this climate is to finance activities through their own resources, but this may also place strains on cash-flow. Another possible solution could be **entering into partnerships** so that a company is able to share resources to develop applications, and thus **sharing in the risks.**
- Personnel: GIS Global Image has experienced that it is sometimes difficult to **retain top staff**, especially in markets where service sectors and companies are competing for qualified, and mostly scarce, staff. GIS Global Image implements performance **appraisal system** to help it retain its staff.
- Service Offering: Working with Government departments, implementing GIS solutions based on open source is often difficult, as clients are sometimes skeptical as they only know proprietary solutions such as ESRI ArcGIS. Often, some do, however, acknowledge that license **fees are prohibitively expensive**, which provide the opportunities for open source-based solutions. In this regard, the GIS Global Image position appears more advantageous.
- Do not focus on the solution alone, but also *educate your clients*. Educating the client is more than just training or delivering/displaying documentation, but education in what the open source concept is all about. For example, GIS Global Image shows that some of their clients in local government departments do not realise that South Africa adopted an open source strategy in 2007. By informing the local government departments about this, the company educates its clients as they attempt to promote their products and services.

### 2.2.3.4 Key factors for successfully using FOSS

GIS Global Image's experience in building business around open source software in Africa in general and South Africa in particular serves as a useful advice:

- In Africa in general, there is an issue of access. In most countries Internet access is often quite limited, if available and it is often slow and only available in selected areas like Internet Cafés, Tele-centers or hotels. However, as Africa moves towards and is posit to compete in the digital age, many governments, telecommunication companies, some projects (e.g. AfriNic) are trying to address this issue. The GIS Global Image experience finds out that "*people might not have access to a PC or the Internet, but they do have mobile devises* (phones, PDAs, etc.)". This is where the managing director, Nico Elema,

thinks the "*market lies in providing applications to access information though these mobile devices*".

- Build a personal as well as professional business on-line and on the World Wide Web using social software. A professional personal profile can be build through social networks such LinkedIn (www.linkedin.com) and a business can be promoted though a company website, RSS feeds, staff blogs, etc.
- Get involved in open source software projects and discussions on mailing lists, forums, conferences, etc. GIS Global Image experience is that not all who are software developers can contribute to the software code, but many can get to know software and systems so well through constant use and self-learning. Such people can provide training and support in the software. This will create the market for the open source software, which can lead to better software development. If you are able to contribute in open source discussions and build a online profile which indicates that you are an expert at either coding, training or support, you might have a better chance in getting involved in projects, and expand your business and client base.
- Clients do not always care about the software being used, but about the solution, and that it is able to meet their needs. Often discussions focus too much on technicalities, and not on the solution.
- Africa is extremely diverse in terms of culture. What works in other areas of the world, might not work as a carbon-copy in Africa. Local knowledge and experience is thus of essence, in order to understand the market.

In South Africa in general, all of the above will obviously be applicable. Building solutions that are Internet-based will provide access to many, but again, GIS Global Image experience believes that the future may lie in mobile technologies. South Africa is seen by many as a leader in open source as indicated by the adoption of open source software strategy by the South African parliament. Commenting on GIS Global Image's experience, the managing director conjectures, any business or individual doing business in open source in South Africa should use this government initiative as a leverage, especially if they are doing business with Government.

### 2.2.4 Revenue generation model

The bulk of the company revenue comes from sales and support services of its flagship product, Papyrus Spatial MIS, with GIS Services (e.g. Consultancy) coming next. Currently, little revenue is being generated through workshops and training where GIS software is being used, but it is foreseen that this component would expand in future.

### 2.2.5 Networking

One of the corner stones of the business is built upon client relations and networks. Being in a position where clients trust a service provider to deliver and address user needs, is a valued asset to the organization. Building relations with customers where they are in a position to do word-of-mouth marketing is one of the most valuable marketing methods.
In order to sustain this networking relationship, existing clients have preferential access to new modules and software announcements. Existing clients also have preferential rates when GIS workshops are presented, which they want to attend.

### 2.2.6 Lessons learned

In a market where there are predominant proprietary software vendor (ESRI ArcGIS Software) individual needs need to be assessed to determine if that specific organisation is ready to be “converted” to FOSS GIS solutions. Often the answer lies in implementing hybrid solution where elements of proprietary software and FOSS are employed, which also provides benefits to the organisations. FOSS GIS are more easily introduced where users do not have prior GIS software experience, and do not really care about the technology, but about the solution that can be provided though the software.

## Module 2.3 Revitalizing software resources through FOSS

### Duration:

1:15hrs

### Outlook:


**Registered Name:** Future Software Resources Nigeria Ltd.

**Founded:** 1998

**Staff Strength:** 5

**Country:** Nigeria

**Website:** http://www.futuresoft-ng.com/

**Type of business:** FOSS Business solutions

### 2.3.1 Synopsis

Future Software Resources Nigeria Ltd. is a new turnkey web-solution provider in Nigeria operating in partnership with DigiRev LLC (USA) and Paperless Staffroom Ltd. (UK). The company was founded in 1998, but remained inactive until the beginning of 2008 when the management fully re-branded and shifted the company's focus to web-design, web-hosting and creating software solutions that are based mainly on open source software. Currently FutureSoft has 5 full-time employees. Consultants and software developers also work with the company on contract basis.

### 2.3.2 Introduction

The mission of Future Software Resources Nigeria Ltd. is to provide a range of services that allow small, middle-size and large businesses, as well as individuals to host their websites on the World Wide Web. The company provides services related to domain name registration, development and hosting of websites, development and maintenance of e-commerce and web-applications.

The fundamental experience of FutureSoft is to try to **keep costs** at a minimum by **reusing** open source components and outsourcing essential development activities. The company had a favourable start by not going for bank loans and was privileged to have a rent free office space.

Company registration procedures were not hard. However, the managing director advised that 'the best thing to do is go through a law firm'.

In its years of operations, major problems encountered by the company were related to finding skilled work force that is willing to work for a low salary. According to the managing director, the company's solution to this problem is to **outsource** most of their work to India, where the company has found highly skilled developers, who are willing to work at very low rates.

### 2.3.3 FOSS Business Focus

The company's strategy was to reduce the main **start-up costs** to building the website, designing and printing their own business cards, letterhead, invoices, and receipts.

What has worked well for Future Software Resources Nigeria Ltd.? Looking at other companies in and outside Nigeria offering similar services, the company is positioned to compete and benefit from open source software products and services because, as the manager puts it, “we're keeping deadlines and delivering quality products and services“. The company not only relies on its IT and staff competencies, but also **work with consultants** who are able to deliver complete working packages or solutions on time which the clients need; from copy writing to developing conventional and online marketing strategies, graphical designs, content development etc.

### 2.3.4 Networking

Having experienced the building of business around open source software in Africa in general, and Nigeria in particular, Future Software Resources Nigeria Ltd. advises SMEs doing business around open source software to consider the following:

- Identify the wants and needs of the target market. Market research is the key. It makes no sense developing a solution that nobody needs.
- Localize the solution in order to make it work for the target market. **Localization** can stretch from content to actual functionalities. With proper planning, the company sees open source software as a great **means of wealth generation**.
- Ensure that the capabilities of the software are tried and tested before deploying it to a potential customer. Research on various types of software that do the same thing is very important. Engage in and understand the open source project whose software you are customizing, distributing, or localizing.

### 2.3.5 Revenue generation model

Among the company's products and services, business solutions are generating the most revenue. However, the company plans to launch a series of educational solutions in near future, which they hope will be able to match, if not exceed, the revenue stream currently being generated by the business solutions. The company is also working on creating a strong brand, a range of products, as well as bigger staff strength.

### 2.3.6 Lessons learned

**Involvement with open source projects and communities:** Future Software Resources Nigeria Ltd. realized that in order to venture into the open source software business, a company needs to have an individual with vast experience and a good track record in participating in open source projects and communities. The company has an open source expert who has done a lot of research on open source projects before joining the company and is responsible for testing various open source solutions and finding, according to the managing director, “*the best working models for our clients in the African market*”. The company also vets developers to whom it outsources

solutions development to make sure that those developers have a good track record of involvement with open source projects and communities.

### 2.3.7 Conclusion

The company also shares its customization efforts with the communities and developers who want to implement similar customizations. As a goodwill gesture, Future Software Resources Nigeria Ltd. also donates part of its profit to some open source projects and communities, whose identity the company wishes to keep private. What is now missing from the company's open sources arsenal is a comprehensive open source policy. In this regard, the managing director commented that"We are currently working on putting together an official open source policy".

## Module 2.4 Training Linux Users in South Africa

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### Duration:

1:15hrs

### Outlook:


**Registered Name:** Linux Holding (Pty) Ltd.

**Founded:** 2003

**Staff Strength:** 9

**Country:** South Africa

**Website:**http://www.linuxholdings.co.za/

**Type of business:** Linux Training

### 2.4.1 Synopsis

Linux Holdings is a South African based company focusing mainly on developing and administering Linux courses for interested individuals and open source companies in South Africa and its environs. Founded in 2003 and having staff strength of 9, Linux Holdings aims to be a leader in the open source education environment.

### 2.4.2 Introduction

The core staff of Linux Holdings Ltd consists of instructors who frequently use survey results from their customers to determining the training needs of the open source software market. They design training programs and produce materials which are tailor-made for the company's clients. As a curriculum venture, the managing director summarized the company profile as consisting of staff with a collective experience in curriculum design and training. The company develops its own training material which has greatly contributed to the "success of our students", commented the director. For Linux Holdings, the motivation for going into Linux training as a major business coincides with the director's motivation, interest, and experience in open source;

"*It was a field* [open source] *I liked and know. It is pointless doing business in a field you dislike or don't care for. Part of business is to enjoy what you do and you are passionate about. That way your chance on success increases".*

### 2.4.3 FOSS Business focus

Linux Holdings is the result of incorporating expertise and experience at various levels. The core focus of business is the provision of Linux-based training. The company is also offering other open source services in marketing, servers hosting and software development.
In its years of operation, Linux Holdings learned a lot in terms of getting start-up capital, getting loans to finance business initiatives in South Africa, building a client base, hiring employees, finding office space, getting company documents, etc. The following points highlight Linux Holdings experience;

- A proper strategic plan in place which has the capacity to expand and accommodate unexpected changes in market conditions. Have a 3 year and 5 year plan in place along with shorter period plans.
- Set realistic and attainable goals. Start small and then concentrate on orderly expansion of capital.
- Before starting business, find out what is needed and wanted in the target industry or market. Speak to people, do surveys and learn what your potential competitors are doing. Then take what is needed and wanted and deliver that as product.
- Be knowledgeable in the industry you are going to do business in and know the laws governing business in the country. Many problems experienced in business is due to lack of prior knowledge of the laws governing a particular business area. Furthermore, the company director summarized how lack of prior knowledge can lead to business failures thus; "financial problems stem from not having financial planning understanding. Not knowing your product is the reason of having products that people do not want. Not understanding quality control, marketing and PR creates problems in those areas".

Taking these experiences into consideration, the Director of Linux Holdings advise for someone building business around open source software in Africa in general, and South Africa in particular is

- the need to understand the laws of the country regarding business,
- work with open source and learn what benefits it offers,
- Look at what your potential competitors are doing, learn from them and start thinking in terms of what other services the market needs.
- If you are able to offer services of higher quality than your competitors, then you are in business. "Quality is always the most important part of a business", said Kin Le Roux, general manager of Linux Holdings.

### 2.4.4 Revenue generation model

Training accounts for about 80% of the revenue. Linux Holdings face a unique challenge in training a generation of Linux Users in South Africa. The association of the word "free" with free and open source software makes some customers think that training in open source software should be free as well or at least, very cheap. Linux Holdings commented that this way of thinking disregards the

cost and resources (human and material) the training company endures, which can be the same or sometimes higher than other computer training courses offered by none open source companies. Linux Holdings have firm policy on getting paid before delivering services or before students register and complete their courses. "*The financial department in Linux Holdings aggressively (not rudely or threatening) keeps the back log as low as possible*", commented the managing director. The marketing department, on the other hand, is responsible for creating and improving training material for Linux Holdings. All training is done in English. The company has approximately 20 students per enrollment in its academic program. Corporate training has about 5-8 students per course. All students must be made fully aware before training starts that they pay before the 5th of the month else they will not be allowed back in the course room.

### 2.4.5 Networking

The company has a unique way of marketing. By means of surveys, the marketing department finds out what is needed and wanted and then from the results, the company creates that need. Sometimes this is done via the company's web site and by phoning current customers.

## Module 2.5 The Linux Solutions Experience

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**Duration:**

1:15hrs

**Outlook:**

**Registered Name:** Linux Solutions Ltd.

**Founded:** 2000

**Staff Strength:** 10

**Country:** Uganda

**Website:** http:www.linuxsolutions.co.ug

**Type of business:** Software and Hardware sales

### 2.5.1 Synopsis

Linux Solutions was founded in 2000 and currently employs 10 people. The company started off as a pure open source company but due to the nature of the software market in Uganda, where clients are accustomed to proprietary software, Linux Solutions sees it fit to integrate other services and products as a means of staying relevant and industry survival. The company offers a wide range of services and products including technical support, consultancy, software deployment, IT hardware supply, and networking.

### 2.5.2 Introduction

Linux Solutions Ltd has been involved in promoting and doing business in open source software for over eight years. The company's motivation for going into open source as a major business falls under three main pillars:

- To provide a service with the aim of encouraging the adoption of open source software in Uganda.
- To prove to the business world that open source works and is good for them.
- To carve out a niche that would give the company a competitive advantage.

Asked how far Linux Solutions have gone in realizing the above motives, the managing director commented; "*We have registered success in all of them. As of 2008, there are over 15 companies offering Linux services in the Ugandan FOSS market. Many businesses have opted for Open Source at the server level and Uganda is one country that has such a high concentration of server based computing relying on open source. Today, support for open source is as easy to come by as Windows. There is a Linux User Group with over 300 local Ugandan members most of whom are engaged in open source work*."

### 2.5.3 FOSS Business focus

Because of its long experience and involvement in open source software in Uganda, Linux Solutions has encountered a number of problems and have employed some strategies to deal with those problems. The company has identified the following as possible obstacles to doing business around open source software in Uganda:

- Getting company start-up capital and financing new projects or business initiatives.
- International product procurement.
- Payroll management and book keeping.
- Human resource management and retention.
- Poor payment habits by clients.
- Qualification for government contracts.

In dealing with some of these problems, Linux Solutions had to start as a small company with few individuals and with the little money and resources at their disposal. Gradually the company relied on incoming revenue to grow the business.

Although government contracts are lucrative, Linux Solutions prefers **private sector clients** as opposed to government contractors. This move may be due to the fact that private sector clients are often smaller institutions, more clearly focused on their needs, less bureaucratic, and often pay their customers faster than government departments.

Linux Solutions employs a full-time accountant and contracts an external financial consultant to help guide the accounting and financial matters of the company.

In dealing with its customers, Linux Solutions sets up strictly enforced payment terms which are discussed with clients before entering into any form of agreement.

Compete or cooperate: Founded in 2000 when no, if any, company was contemplating doing business around open source software in Uganda, Linux Solutions Ltd may be described as the 'grand dad' of all open source companies in Uganda. When new players or open source based SMEs come into the marked scene, Linux Solutions extends its helping hands, simplifying and explaining to newcomers how to deal with potential customers. On its own part, the company educates its clients as much as possible about the software it deploys and supports. This approach, according to the managing director, "*makes them [customers] value us more*". Other aspects which have worked well for the company in its business venture are always being

available to offer support when needed. The company puts a lot of effort in ensuring that it is excellent at **promptness of service delivery**.
The company did localise the Firefox web browser a while back as a *pro bono* activity. However, the company is no longer involved in any software localization because, as the manager put it, there is "*no money to be made*".
Linux Solution markets its products and services through direct marketing, focus group marketing, classified sections of the print media, its own website, by email to some known agents and interest groups, and through product launches where the public is invited to watch demos.
Linux Solution's business plans for the next few years aim at improving its competitive standing and embodies the following:

- Improve on customer service management.
- Have a highly skilled technical workforce that also has sales and customer service skills.
- Improve on the company's branding.
- Adjust marketing to suit the kind of clients the company is targeting.
- Reach out to people's needs and reduce the emphasis on technology in communicating with customers.

### 2.5.4 Services

As part of its core business, Linux Solutions supplies and supports technologies provided by www.ncomputing.com, www.inveneo.org, and antivirus software from www.kaspersky.com
All the services (Technical Support, Consultancy, Software Deployment, IT Hardware Supply, and Networking) of Linux Solutions are a mixture of open source and proprietary software. This is because a number of the company's clients request services on both open source and proprietary software. Among the services, software deployment and IT hardware supply generate more revenue for Linux Solutions. In the company's context, software deployment means selling anti-virus and anti-spam software, setting up Firewall/Mail/File/DNS/Proxy servers (on Linux) among others.
Linux Solutions does more customizing of existing open source solutions than developing new ones. Some open source software the company has customized for its clients includes Squid, Webmail (SquirrelMail), Webmin, OpenVPN, e.t.c. Software customization is not usually at the code level. The company has three experienced open source developers who mainly tweak interfaces and deployment options to get certain work done for their customers. Any enhancements or modifications the company makes on open source software are shared on the various product mailing lists.

### 2.5.5 Lessons learned

Following this experience, Linux Solutions' advise to someone building business around open source software in Africa in general and Uganda in particular is to avoid specializing in only one service sector or product. For example, starting a business in which one will sell computers with pre-installed Ubuntu, or opening a training center to teach Linux courses. According to the managing director, there is a need to diversify so as to ensure that as one revenue source dwindles in one service sector, another probably keeps you afloat. In this market, SMEs need to have some other services or products that complement their open source focused opportunity in order to survive.

# Module 2.6 The Amest Santim Systems PLC Experience

**Duration:**

1:15hrs

**Outlook:**


**Registered Name:** Amest Santim Systems PLC Ltd.

**Founded:** 2005

**Staff Strength:** 5

**Country:** Ethiopia

**Website:** http://www.amestsantim.com

**Type of business:** FOSS training, software development, web hosting.

## 2.6.1 Synopsis

Amest Santim Systems plc is an Ethiopian based software development and web hosting company providing a host of services including domain name registration, networking, maintenance, IT consulting, outsourcing, etc. The company currently has five, full-time staff and realizes 90% of it's revenue from web development, 7% web hosting and 3% other services.

## 2.6.2 Introduction

In 2005, two Ethiopian IT specialists armed with a starting capital of about US$ 200 and few home based PCs came together to form Amest Santim Systems plc. For its founders, the biggest **motivation** for going into the open source business is the “not re-inventing the wheel” idea. Most of the open source tools the founders needed for software and website development are freely available for download, use and modification. The managing director, Nahom Tamerat Endale, commented that, these tools “can be completely trusted”. The open source geek culture in many cases drives business to focus on improving existing tools and software instead of starting new projects. But for Amest Santim Systems plc., the “not re-inventing the wheel” idea has added advantages for the company; “*so in the end, the effort you need to put in to that project would be 1/10 of what you would have to give if you were to make* [the tool] *yourself and therefore, we choose* [open source tools] *whenever it’s applicable*”.
Ethiopia is one of the countries endowed with private colleges and the government has also increased the number of its universities almost ten fold, and as a result, there are plenty of IT certificated graduates. However, Amest Santim Systems experience in the skill labour market revealed that only a very tiny fraction of the graduates are qualified (or promising) enough to work in IT and, especially in open source. “*The few that one can find with great trouble know what they are worth and will not stay with one company for long, always looking for the better deal…. Or they themselves end up in the private sector by opening up their own shop…*”

The two founders of Amest Santim Systems approach to startup capital was to sort of make the business pay for it self. Originally, the two, now the general managing director and the other the technical manager, both used their computers to work on projects right out of their own homes. After the first six months, they took the money earned during that period and rented and furnished what is currently the office complex of the company. Furthermore, the two founders also brought in their own home computers. A year later, again with the earned money; they bought more computers and hired new employees and so on. Reflecting on this experience, the general manager gave this account ... “So we can say that we started with pretty much nothing. In fact the exact figure was 2000 ETB (approximately US$ 200) for license processing and other costs that we had when we launched the business”.

### 2.6.3 FOSS Business focus

The managing director of Amest Santim Systems plc. **advise** to someone building business around open source software in Africa in general, and Ethiopia in particular is that;

- Make your products and services affordable.
- Make sure that whatever you are proposing does fit the purpose and that the client is really going to use it.
- Customize as much of the software as you can, involving your customers in the process.
- Be honest about your produce, what it can do and what it can’t do. Don’t promise what you can’t deliver or what the software can’t do.
- Don’t always try to sell customers software that you’ve gotten for free even when you have customized it… be creative in finding ways to earn your keep. Try to earn revenue from maintenance of the software, feature addition.
- Be creative! Be flexible!

### 2.6.4 Lesson learned

Amest Santim Systems plc. has learnt from other companies doing other businesses in Ethiopian and the environs, overcome some unique challenges associated with doing business in open source and see its revenue soar amidst the current economic downturns. There is a lot to be learnt from the company's strategies in attracting and building a sustainable clientele, hiring competent staff, harnessing one's own income as a start-up capital.

#### 2.6.4.1 Entry barriers

The company encountered a wide variety of challenges and problems. First and foremost is the “building a client base” challenge. Already there were a couple of well known and established IT firms in Ethiopia when the company was started in 2005. These companies had done work for many of the big clients (such as government offices and NGOs) and therefore they already had leeway with them. Thus, any newcomer may have to overcome huge challenges and compete with the established business environment. But Amest Santim Systems persevered, studied the IT market and came up with some possible solutions:

- reduce the price of their products and services and even in one instance, the company do the job for free,
- boldly participate in public bids for projects, presenting the company professionally (which is something most others seem not to be able to do…) etc.

Once the company had done a couple of prestigious projects, clients began to come to Amest Santim Systems plc. instead of the company soliciting work from clients.

Another problem the company faced was (and to a large extent, still is) the unavailability of skilled (workable) man power.

### 2.6.5 Conclusion

Even though Amest Santim Systems plc may have followed these advises in its operation and in dealing with customers, doing business is not without its difficulties, especially in attracting customers, training, hiring staff, getting paid for the services the company offers.

## Module 2.7 CENFOSS - Using FOSS for Business

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**Duration:**

1:15hrs

**Outlook:**


**Registered Name:** CENFOSS Ltd.

**Founded:** 2006

**Staff Strength:** 12

**Country:** Mozambique

**Website:** http://www.cenfoss.co.mz/

**Type of business:** FOSS training, software development, web hosting.

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### 2.7.1 Introduction

CENFOSS – CENTRO DE FORMACAO EM OPEN SOURCE SOFTWARE was established in 2006 in Maputo as the first official known Free and Open Source Software Training Centre in Mozambique. By the mid of 2007 the company started to provide services in the area of Web Hosting, Web Design and FOSS Consultancy. The CENFOSS idea started after the Mozambique Workshop, in 2006. Free and Open Source in Mozambique wasn't something new. But until the date, none of the training centres, schools or universities was looking at FOSS as a business for training and services. “Me, Celso, among with another alumni from InWent, Ricardo Mario Taca, we decided to create training materials for the lessons. But a place and hardware equipment was necessary to conduct the lessons. At that point none of us, the alumni, had money enough to start it. “

CENFOSS was registered with 4 partners, Celso Timana, Eduardo Timana, Ana Soares and Olga Reina, having only one partner with experience in FOSS. The rest of the partners had given the logistical support to CENFOSS. We started FOSS lessons with two trainers, one at full time and another as part-time. From September 2006 until February 2007 CENFOSS had 3 employees. Now, two of the founders have left CENFOSS to enable more two to join: Orvalho Augusto and Rui Reina. And Since then the numbers of staff has increased to 12 employees which:

- Two are CENFOSS partners

- Three secretary's with switched schedules
- Five technicians
- Two office assistants

Since we have more than 10 employees in Mozambique this means that we are a Medium Company.

### 2.7.2 What services or software solutions are being offered?

One of the main requests that we have in our services has been mail server configuration. Nowadays, more companies, small and medium sized, are increasingly aware of the benefits of having their brand our services as domain. Without using FOSS as our main tool it wouldn't be possible to achieve our goals. We also provide network monitoring to companies that desire to control their network for bandwidth consumption. Our solution using free and open sources are:

- **Mailserver** - mailrelay/filtering, and webmail (Clamav, Amavis, Postfix, SpamAssassin, Dovecot, Squirrelmail and Zimbra)
- **Web Proxy** – Squid
- **Database modeling** – MySQL, PostgreSQL
- **WebServer** – Apache, lighttpd
- **Content Management System** – Joomla, Drupal
- **Statistical Consulting**
- **Aplications Design** – Using programming languages such as:
    - Python
    - Java
    - PHP5
    - Perl

Beside the TCO advantages, we have the opportunity to show to our customers that it is possible doing business and having a business using the FOSS model. Our service gave us opportunity to collaborate more with other communities around FOSS.

### 2.7.3 Link with other companies, agencies, NGO, government

CENFOSS has cooperation and contracts with several institutions, from government to private and NGO.

- **CodeWeavers –** Is a company based in USA which develops **Wine** open source tool for interoperability between Windows and Linux and **CrossOver Linux** – commercial open source tool with the same purpose as Wine. CENFOSS is a CodeWeavers client.
- **Ministry of Foreign Affair** – CENFOSS has implemented and maintain the mail server from this ministry.
- **University Eduardo Mondlane**, **Branch of Mathematics and Informatics** - CENFOSS has a partnership with this University for training teachers. Until now we had one workshop over Free and Open Source conducted with 60 students in 2008.
- **SOCREMO – Bank of Micro finances –** currently CENFOSS supports GNU/Linux on SOCREMO with a one year support contract. The work involves more than 150 computers to support and 3 servers also running GNU/Linux.

- **CEDE, AMODE, RRD, ZE Servicos** - CENFOSS provides hosting of web and e-mail services for those companies and organization.

### 2.7.4 Who are the intended customers?

CENFOSS customers are categorized according to the services we offer. Universities students are those who most require our training services. At the beginning of 2008 we started to do consultancy for Free and Open Source Software. Since then we have been supporting from telecommunication companies, private banks and government institutions. The table below summarizes our current customers;

| Service Offered by CENFOSS | Customers | Type & Service of the Company | Size of the Company |
|---|---|---|---|
| MySQL and Unix/FreeBSD Training | VODACOM Mozambique | Private GSM provider | Large Enterprise |
| Training and Implementation of FOSS technologies for National Domain Name Servers | Telecommunication of Mozambique (TDM) | Public institution for landlines communication and ISP | Large Enterprise |
| Linux training and mail server configuration | Ministry of Foreign Affairs | Government Institution | - |
| CMS training | Interior Ministry | Government Institution | - |
| Linux Training | Ministry of Commerce | Government Institution | - |
| MySQL training | Commercial Bank of Investments – BCI | Private Bank | Large Enterprise |
| Linux Support, training | SOCREMO | Private Bank | Large |
| Linux Training | GSTELECOM | Private ISP | Large |
| Linux Training | TROPICAL | Private ISP | Medium |
| Linux Training | PANINTRA | Private ISP | Medium |
| Web & email Hosting | CEDE | NGO | Medium |
| Web & email Hosting | AMODE | NGO | Medium |
| Web & email Hosting | RRD | Design Company | Small |
| Web & email Hosting | National Institute for Navigation | Public Institution | Large |
| Web & email Hosting | Ze Servicos | Private Firm | Small |

### 2.7.5 Lessons learned

After working almost three years with FOSS we have enough experience acquired along the time. We have seen situations where FOSS alone is not the solution. Since we support lots of companies doing business and using FOSS, we will continue to accumulate experience and are better positioned to advise individuals, businesses and organizations on which technology to use where in their business and when to use that technology.

### 2.7.6 Conclusion

CENFOSS has established itself in the market as FOSS training and solution provider. Until now we are the only training center fully dedicated to FOSS in Mozambique. This does give us and advantages over newcomers who may also be our potential competitors. Continuing with a rigorous marketing campaign, building strong ties with older customers as well as new customer are some of our goals in the coming years.

## Module 2.8 FOSS Business Potentials: From Academic to Business

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### Duration:

1:15hrs

### Outlook:

**Registered Name:** Zalongwa Technologies Limited

**Founded:** 2006

**Staff Strength:** 8

**Country:** Tanzania

**Website:** http://www.zalongwa.com/

**Type of business:** Software development, web hosting.

### 2.8.1 Introduction

In this series of African case studies, Zalongwa Technologies Limited from Tanzania demonstrates how a template designed for the case studies in this module can be completed. The template acts as a means to gather information about FOSS business practices. It captures an overview or outlook of the company, revenue generation model, services offered and some innovative practices. This case study is replicated here as it was completed by the company. The template was completed and submitted by Dr. Jumo Lungo (CEO of Zalongwa) and Sophia Kivina (secretary of Zalongwa). Zalongwa Technologies Ltd, P. O. Box 70893, Dar-es-Salaam. Tel.: +255 222 181 138; Mob.: +255 784 313 200. Faru/Swahili St. Plot No. 39, Block N, Kariakoo

### 2.8.1 Historical Perspective of Zalongwa

Zalongwa Technologies is a Limited Company incorporated under the Companies Act, 2002 with the Certificate of Incorporation No. (CIN): 57002 and Tax Identification No. (TIN): 104-824-986. Zalongwa Technologies Directors are Tanzanian Information Technology (IT) professionals with long experience in Information Communication Technology (ICT) industries. The company is proud of having IT professionals with a wide knowledge and experience in this field of Information and Communication Technology (ICT). The company is an equal opportunity employer committed to the development of human resources in Tanzania while focusing on capacity building and technology transfer from the developed world with a focus on Open Source Software solutions.

The majority of Company staff worked with reputable companies in ICT industries and has higher degrees in ICT related professions thus utilizing their talents to focus on quality hence, winning company's client's utmost expectations. On-the-job training of young programmers, website designers, database administrators, customer care specialists and networking professionals who are fresh from colleges in Tanzania is an important feature of the company's work. Zalongwa Technologies is delivering full service web site development, web design, software programming, database solution, e-business solutions, multimedia, custom Internet web applications development and ready made web site packages for small sites. Our main business is the computerisation of Student Academic Register Information System (SARIS) and Healthcare Information Systems (HIS).

### 2.8.2 Company Mission

To become a model of a leading IT Company in East and Central Africa through utilization of Free and Open Source Software Technologies. The company targets public sector systems but is not limited to private sectors as well.
Zalongwa Technologies is a Limited Company incorporated under the Companies Act, 2002 with the Certificate of Incorporation No. (CIN): 57002 and Tax Identification No. (TIN): 104-824-986. Zalongwa Technologies Directors are Tanzanian Information Technology (IT) professionals with long experience in Information Communication Technology (ICT) industries. The company is proud of having IT professionals with a wide knowledge and experience in this field of Information and Communication Technology (ICT). The company is an equal opportunity employer committed to the development of human resources in Tanzania while focusing on capacity building and technology transfer from the developed world with a focus on Open Source Software solutions. The majority of Company staff worked with reputable companies in ICT industries and has higher degrees in ICT related professions thus utilizing their talents to focus on quality hence, winning company's client's utmost expectations. On-the-job training of young programmers, website designers, database administrators, customer care specialists and networking professionals who are fresh from colleges in Tanzania is an important feature of the company's work. Zalongwa Technologies is delivering full service web site development, web design, software programming, database solution, e-business solutions, multimedia, custom Internet web applications development and ready made web site packages for small sites. Our main business is the computerisation of Student Academic Register Information System (SARIS) and Healthcare Information Systems (HIS).

#### 2.8.3 The Zalongwa Case Study

| | |
|---|---|
| •**Company Name**:Zalongwa Technologies Limited<br>•**Country**:Tanzania<br>•**Year Founded**: 2006<br>•**Website**: www.zalongwa.com<br>•**Services offered**: Software development, website hosting, training and consultancy | |
| **Section 1:** | **Q1. When was you company founded and how many people are** |

| | | |
|---|---|---|
| | **Outlook and Experience report** | **employed by your company?**<br>Zalongwa Technologies was established on 12th July 2006. Currently the company has 8 staff.<br><br>**Q2**. In your years of operation, what problems (e.g. getting start-up capital, getting loans to finance some aspects your activities, building a client base, hiring employees, finding office space, getting company documents, etc.) have you encountered? AND possible solution<br>**Problems encountered are :**<br>•Getting company start-up capital and financing new projects or business initiatives.<br>•Human resource management and retention.<br>•Poor payment habits of clients.<br>**Solutions:**<br>Directors injected capital from their own sources, one more partners invited who also injected capital. Employees treated as partners so that even if they leave, they can still be contacted to help finish up a project.<br><br>**Q3. Looking at other companies (in and outside your country) who may be offering similar services as you do, what would you say works well for your company?**<br>First of all since our customers are academic institutions, graduating students have seen and used our software at colleges. This made most students to have interest to work with us. The company is proud of having Directors who are Tanzanian Information Technology (IT) professionals with long experience in Information and Communication Technology (ICT) industries and Open source Software in particular<br>.<br>**Q4. What is your advise for someone building business around open source software in Africa in general, and your country in particular?**<br>•Be honest about your products, what it can do and what it can't do. Don't promise what you can't deliver or what the software can't do.<br>•Customize as much of the software as you can, involving your customers in the process. |
| **Section 2:** | **Revenue generation** | **Q5. Which services (e.g. training, marketing, technical support, hosting and software development, consultancy, etc.) is your company offering.**<br>Service offered by the Company include web site development, web design, software programming, database solution, e-business solutions,<br>multimedia, custom Internet web applications development and ready made<br>web site packages. Free and Open Source Software training, IT consulting |

| | |
|---|---|
| | **Q6. Which of the services in Q5 is generating more income for your company?**<br>Software development generates more income.<br><br>**Q7. What is the annual turnover for each of the service sectors?**<br>75% software development and Free and Open source software, 20% web hosting, 5% other services.<br><br>**Q8. What are some of the difficulties, if any, you face in getting paid for the services you offer?**<br>Most customers delay on paying us on time and we have to make follow ups for payments which cost a lot of time. |
| **Section 3: Service line and FLOSS motivation** | **Q9. What is the motivation for going into open source as a major business?**<br>•To distinguish our self with other proprietary well established IT companies.<br>•Easy development through adopting ready and matured FOSS software. This results into less cost in terms of money and time.<br>•To sustain our flagship software, which is a student academic register information system. We wanted to share support and development overheads with other people who can make money by supporting the software.<br>•Encompass ideas of different developers<br>**Q10. Are you developing new products (software and/or training materials) or customizing existing open source solutions (bespoke software) to fit your customers' needs?**<br>We develop new products like Student Academic Register Information System (SARIS), Members Register Information System (MeRIS), and Insurance Register Information System (IRIS). and we customize open source solutions like vtiger CRM,orange HRM,Joomla and Weberp.<br><br>**Q11. What are some of the strategies you use to market your products and services?**<br>Advertisements,participating in science and technology exhibitions and through word of mouth.<br><br>**Q12. Who are your most prolific customers and the types of services they request most?**<br>Most prolific customers are Universities and they request Student Academic Register Information System (SARIS). Since SARIS is a web based system, we sell to them Hosting, Website development and sometime consultancy services.<br><br>**Q13. Are you localizing (translating into local languages) some of** |

| | |
|---|---|
| | **your products?**<br>Yes we have vtiger CRM translated into Kiswahili.<br><br>**Q14. How would you describe your company, "pure open source company" developing, distributing and providing services around open source software or a "hybrid company" developing, distributing and providing services around both open source software and proprietary software.**<br>Pure open source company.<br><br>**Q15. What are some of your business plans for the next few years to improve the competitive standing of your company?**<br>•Have a highly skilled technical workforce that also has sales and customer service skills.<br>•Improve on the company's branding.<br>•Improve on customer service management. |

**Modules 2.1 – 2.8 ASSESSMENT**

**Exercise:** Use at least 8 Case Studies to complete the table below:

| Case Study | Industry type | Services offered | Challenges | What should have been done differently by this company |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5<br>6<br>7<br>8 | | | | |

(a)**Role play:** Participants should volunteer to take the following roles – Manager, Client. Chose a Case study and act these roles.
(b)**Discussion:** Discuss and list down as many obstacles as possible to the use of FOSS in your business organization.
(c)**Assignment/Interview:** Use the template below to interview a FOSS-based company in your country.

| | |
|---|---|
| Company Name:..... Country:..... Year Founded..... Website:..... Services offered:..... | |
| **Section 1:** | **Q1**. When was you company founded and how many people are |

| | |
|---|---|
| **Outlook and Experience report** | employed by your company?<br>**Q2**. In your years of operation, what problems (e.g. getting start-up capital, getting loans to finance some aspects your activities, building a client base, hiring employees, finding office space, getting company documents, etc.) have you encountered? AND possible solutions<br>**Q3.** Looking at other companies (in and outside your country) who may be offering similar services as you do, what would you say works well for your company?<br>**Q4.** What is your advise for someone building business around open source software in Africa in general, and your country in particular? |
| **Section 2:**<br>**Revenue generation** | **Q5**. Which services (e.g. training, marketing, technical support, hosting and software development, consultancy, etc.) is your company offering<br>**Q6**. Which of the services in **Q5** is generating more income for your company?<br>**Q7.** What is the annual turnover for each of the service sectors?<br>**Q8**. What are some of the difficulties, if any, you face in getting paid for the services you offer? |
| **Section 3:**<br>**Service line and FOSS motivation** | **Q9**. What is the motivation for going into open source as a major business?<br>**Q10**. Are you developing new products (software and/or training materials) or customizing existing open source solutions (bespoke software) to fit your customers' needs?<br>**Q11**. What are some of the strategies you use to market your products and services?<br>**Q12.** Who are your most prolific customers and the types of services they request most?<br>**Q13.** Are you localizing (translating into local languages) some of your products?<br>**Q14**. How would you describe your company, "**pure open source company**" developing, distributing and providing services around open source software or a "**hybrid company**" developing, distributing and providing services around both open source software and proprietary software?<br>**Q15**. What are some of your business plans for the next few years to improve the competitive standing of your company? |

# Module 2.9 Taxonomy of FOSS Business Models

**Duration:**

1:30hrs

**Delivery method:**

For instructional purpose, it is advised that trainers/lectures use lectures and debates as a major means of delivering this module. In addition, presentations and exercises are also suitable method of delivery for this module.

### 2.9.1 Introduction to FOSS Business Models

FOSS offers opportunities for a wide range of business models. Each model deriving value from the freedom businesses and individuals have in using, modifying, sharing and redistributing legal copies of the software. One element common to all FOSS business models is that more profit is made around services instead of sales of already developed software products. At the level of service-based business models there is actually little or no significant difference between FOSS business models and proprietary business models. A proprietary software oriented company may give the same quality maintenance services to a client as that provided by an FOSS company. The main difference lies

- in the way the company generates revenues,
- how customers benefit from the company's products and services. FOSS provides access to the source code and the right to modify it, proprietary software does not, and
- the cost model employed

There are also some differences regarding the core capabilities needed to run the business model. FOSS business models require FOSS skills and (at least some) interaction with the community. But there are no necessary differences between FOSS and proprietary business models regarding the partner network, the markets / customers, the distribution channels, the relationship to customers and the management of these relationships.

The fact that the source code of FOSS is open while the source code of proprietary software is closed does not matter if the FOSS client does not want or is not able to check or modify the code. The main business advantages of FOSS are not so much on the demand side but on the supply side. A proprietary vendor is limited to mostly few or one type of software provider or developer. FOSS is usually provided by a much larger community of developers and testers, or vendors. This community provides a powerful test bed and developer pool that allows FOSS businesses to interact with this community in a meaningful way to shorten development cycles and time needed for customizing software to clients' needs. To interact with the community in such a meaningful way is however bound to two fundamental conditions:

1. The community supporting a company's FOSS services must be large enough, and it should also show some degree of professionalism, such as the capacity to stick to schedules or the existence of key players in the community that can be contacted to change the software, fix bugs, to organize work within the community, etc. The most

essential company-community dynamics is that the company must consider itself as being part of the community, and reciprocally, the community must see the company as responsive to their needs and aspirations.

2. The second point is crucial when FOSS businesses in many developing countries are considered. Evidently, a company selling services on top of FOSS products will be able to get more and better support from the community if it continuously interacts with the community, participates in communications and events, maybe sponsors some events, sends bug reports or patches to the community, etc. A successful FOSS company MUST NOT just download the software from a project's website or forge but MUST remain visible to the project's community in anyway it can. The most extreme form of cutting the company off from the potentials provided by community support is to create a fork of the community software, as forks are usually not welcome by many FOSS communities (See module 1.1).

In Europe and North America businesses have all opportunities ranging from full FOSS collaboration to forks. Forking a project might be a useful strategy for a company if, for instance, the community does not support functionalities the company wants to be integrated in the software, or if the release schedule does not fit in the company's plans. The disadvantage of forking a project – which may lead to the loss of community support – is less pronounced in niche markets (where communities are small anyway) or in communities that are large enough to split and to provide support for the original FOSS solution as well as for the fork.

However, in many developing countries businesses face a very limited choice of opportunities. Because the communities are often very small, businesses have difficulties to find effective local community support. The situation of FOSS businesses in many developing countries can be compared to a company in an unintended fork situation, they rely on their own capacities to understand and modify the code, to find and fix bugs, to adapt the software to customer needs and so on. As a result, while FOSS enables firms in Europe and North America to use the community in order to save software development and deployment time, firms in developing countries often do not have these opportunities.

### 2.9.2 Taxonomy of FOSS Business Models

Taxonomy is systematic way of naming and organizing content into groups that share similar characteristics. In classifying African FOSS business models, a faceted topology is considered. A faceted taxonomy is a star-like structure with each node in the star being associated or linked with the item in the center of the star. For example; Apache being the center of a star with each node or sub-project (HTTP Server, Ant, Harmony, Jakarta, Tomcat, etc.) representing one of it's over 70 projects. In the FOSS business models taxonomy represented in the figure 2.8.1 below, the four essential FOSS freedoms (see module 1) and business value are at the center of the star. Protruding from the center are nodes or business models which are found to be in operation in the case studies.

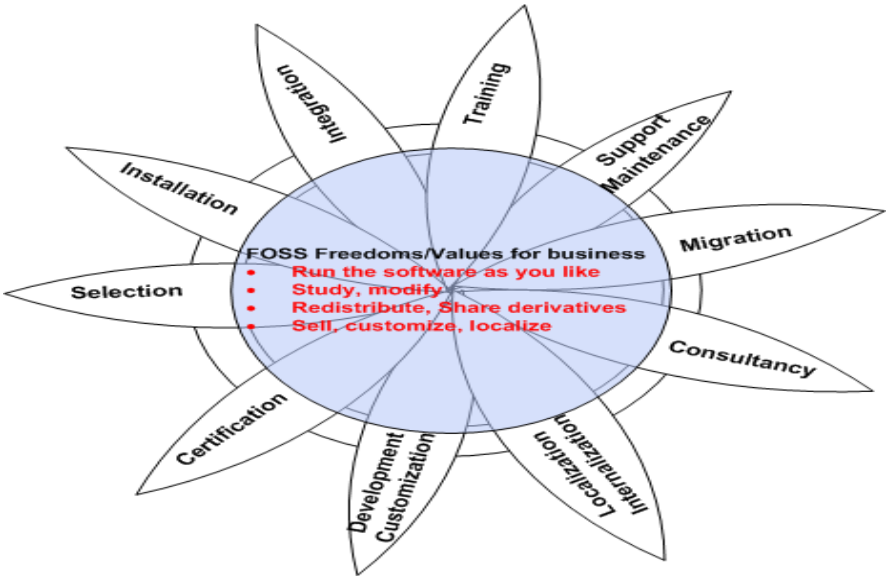


*Figure 2.9.1: Faceted Taxonomy of African FOSS Business Models*

Table 2.9.1 below summarizes business models captured in the case studies. In the table, the following legend is adopted: SSL = Software Selection, INS= Software Installation, INT= Software Integration, STR= FOSS Training, MAS= Maintenance and Support, MIG= Software / Systems Migration, CON = Consultancy, LOI = Software Localization and/or Internalization, DEV = FOSS Development and Customization CET = Technical / Legal Certification.

*Table 2.9.1: African FOSS Business Models captured in Case Studies.*

| Module | Company | Business model in use | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SSI | INS | INT | STR | MAS | MIG | CON | LOI | DEV | CET |
| 2.1 | OpenWorld | Yes | Yes | NA | Yes | Yes | NA | Yes | NA | NA | NA |
| 2.2 | Global Image Ltd | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | NA |
| 2.3 | Future Software Resources Ltd | Yes | Yes | NA | Yes | Yes | NA | Yes | NA | Yes | NA |
| 2.4 | Linux Holdings | NA | Yes | NA | Yes | Yes | NA | Yes | NA | NA | NA |
| 2.5 | Linux Solutions | NA | Yes | NA | Yes | Yes | NA | Yes | NA | NA | NA |
| 2.6 | Amest Santim Systems PLC | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | NA |
| 2.7 | CENFOSS | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | NA |
| 2.8 | Zalongwa Technologies Ltd | Yes | Yes | NA | Yes | Yes | NA | Yes | Yes | Yes | NA |

#### 2.9.2.1 Software Selection

Revenue is made in the software selection business model by charging services associated with helping customers select the most appropriate FOSS application for a given task. Daffara, C. (2007) highlighted that software selection is really a multi-step phase, starting from the identified needs and knowledge of the software market to the selection of packages that minimize the amount of code that needs to be developed. There is ever increasing proliferation of FOSS and often more than one type of software is available to perform the same task. For example; both OpenOffice and KOffice are suitable word processing suits.
A company wanting to offer this kind of service may need substantial investment, in terms of knowledge of the different packages and tools available, forges and projects offering the software solution, communities behind the software, security issues, and be able to evaluate the selected software against international standards such as the ISO 9126 - reliability, functionality, maintainability, portability, usability, and efficiency. Furthermore, argued Daffara, C. (2007), most projects do not have an explicit “marketing mechanism”, which spreads information on features and capabilities on a software package like commercial software firms. This means that companies that want to offer software selection consulting services must dedicate a certain effort just to monitoring web sites and mailing lists, and extract from there information on new versions or new packages. All, but two of the companies from the case studies are adopting this business model.

#### 2.9.2.2 Installation

One of the most common FOSS businesses is to offer to install FOSS for customers who do not possess sufficient skills in the installation and maintenance of FOSS solutions. With GNU/Linux operating systems in particular, there are lofts of different interactive and non-interactive package installers in use which makes software installation and upgrading much easier. Package management systems (eg. *dpkg* for Debian / Ubuntu or *deb* packages; RPK for RedHat/Suse *rpm* packages) and installers (e.g. Synaptic with APT) are used to install, remove and obtain software information. While money can be made by installing software, care should be taken that companies do not charge much for this service. Rather, software installation should be seen as “gift” service and the company should FOSS installation as a means to cultivate a critical mass of customers for future activities such as the maintenance of the installed software or the training of clients in the use of the software. All the companies studied are adopting this business model, with some variations.

#### 2.9.2.3 Integration

The business model behind FOSS integration involves charging customers who want certain components to be integrated into their (new or existing) systems. In order to be involved in this type of business, companies need to have the expertise and skills needed to understanding how a particular solution or software works as a unified system. Complex software systems are mad up of many small bits and pieces or components. Often components need to be added or remove so that the software system operates in the way the customer wants it. Daffara, C. (2007) pointed out that software integration businesses may need to adopt a two-step approach to this type of business. Developing and mapping “specific configuration step necessary to “fit” an open source component in an existing structure and to the custom development necessary to add the missing functionalities or correcting the incompatibilities”. Thus, software integration as a business requires a lot of technical and software competence; although there are Enterprise Application Integration

(EAI) tools such as openadaptor. In the case studies, only three companies are involved in the software integration business.

#### 2.9.2.4 Training

FOSS training as a business is the most common business model in Africa and is captured in 100% of the cases studied). FOSS training has a success factor due to the nature of the FOSS phenomenon, development process, and community dynamics. The FOSS phenomenon is a relatively new concept, warranting substantial investment in training people on FOSS basics. FOSS projects in general have poor documentation and even where documents are available, the style of presentation and content is often very difficult to understand form a non-technical or novice perspectives. Software help is always available in forums and mailing lists. However, many users, especially in Africa, do not have the experience to participate in FOSS forums and mailing lists. This makes it difficult to obtain help from FOSS projects. Active participation also requires Internet access and good connection, which has remained a potential barrier for full participation in FOSS projects activities. These FOSS barriers have turned out to be good avenues to establish and conduct FOSS training. The FOSS training business training can take many forms (see module 6), ranging from training for certification to training customers in the use of FOSS solutions. Daffara (2007) concords that companies installing or supplying an FOSS solution also need to train the customer alongside. Training is usually personnel-intensive, and requires some effort for the creation of the initial training material to be used during the courses. A good estimate of work needed is that it is necessary to invest around 3 to 8 hours of course material preparation for each hour of training delivered.

#### 2.9.2.5 Maintenance and Support

Software is like a car with open hood (as in FOSS) or welded hood (as in proprietary software) and needs to be maintained. Users need frequent support when the software malfunctions or performs as unexpected. Daffara (2007) offered a comprehensive narrative on the maintenance and support business model by highlighting that in most complex systems there is a continuous need for support and maintenance, both for feature enhancements and for the adaptation of the system to the changing IT environment. Support contracts usually are time-based and level-based. Levels are commonly three (corresponding to “bronze”, “silver” and “gold” support services), with varying degree of guaranteed service.

The support model is used by many companies that turned a commercial package (not completely successful in the commercial market or unable to completely fulfill its market potential) into an open source one; the underlying idea is that the authors of the code are supposed to be the most qualified experts for support it. The first famous example of this model was the Zope application server, with many others in active existence (for example, the computer aided design OpenCascade toolkit, Compiere, Alfresco and many others). It is interesting to notice that contributions from the outside are usually received from outside participants even in the case of very specific application areas, like for OpenCascade. All the companies in the case studies provide support and maintenance for their customers.

#### 2.9.2.6 Software Migration

Similar to integration services, migration is based on the deep knowledge of both the starting and end IT environment. Most migration services are based on software packages that help in automating the migration (for example of user configurations), or on pre-configured “packages” of

OSS that provides complete substitutes of proprietary environments. Examples may be mail/groupware systems or desktop operating system replacements. Migration services usually require a specific integration step in addition to the base migration, and for some large scale effort may require coordination among different companies, offering coordinated service (for example, one specialized in porting custom code, one in migrating mail services, etc.). The Case Study below shows software migration of Department of Computer Science and Information Systems (CSIS). Uganda Matyrs University.

**Migration Case study: Department of Computer Science and Information Systems (CSIS). Uganda Matyrs University**

Free and Open Source Software at UMU

Uganda Martyrs University, Nkozi is the first organization in Africa to adopt a Free and Open Source Software policy. This was done through research from the department of Computer Science and Information Systems and in very close collaboration with the ICT department. Rising licensing costs, improvement of ICT capacity development and the belief that software should be available for all people, made the university decide to make Free and Open Source Software the standard at the university. This means that the university uses software that is available free of charge and that can be copied without compromising copyright laws.
At present most of the university has been migrated to Linux (SuSE), OpenOffice, Mozilla and other free and open alternatives for expensive software without compromising of the functionality and compatibility with other computer users. The university recently received praise and an award from the Uganda Communications Commission for it's outstanding contribution to the ICT capacity development in Uganda. For more information visit: http://www.fiuc.org/umu/index.php/general-faculties/cs-is (available 8th Sept., 2009.)

### 2.9.2.7 Consultancy

FOSS based consultancy services is one of the most common business practice documented in the case studies. However, most of the companies utilizing this business model are doing more consultancies in the proprietary software domain. In the FOSS world, FOSS developers who want to be independent start a consultancy business. This business model is seen as a means to make a living and become independent but at the same time keeping an eye on what goes on in the FOSS world. Consultancy business takes many forms; ranging from domain name registration, web design and hosting, installation and configuration of learning management systems, to server maintenance and the supply of hardware with Linux (mostly Ubuntu) installed. Thus, FOSS consultancy is rarely a standalone business, but rather operates in juxtaposition with other business activities. This being the case, it is important to bear in mind the following tips:

- What are your competitors doing?
- How much are they charging for services similar to what you are offering?
- Consider sub-contracting services
- Get marketing and business skills
- Understand the legal aspects of doing business in your area.

### 2.9.2.8 Localization and Internalization

Localization of a piece of software is the process of modifying or changing specific parts of the software (e.g. adding a company logo) so that it meets the needs of local markets or customers'

requirements. Localization enables software users to interact and identify themselves with the software in a language and culture which is native to them. Localization is more than just an FOSS business practice, it is philosophical and patriotic. Properly done, it gives the users the feeling of ownership and control over the software and business. Internalization is the process developing or modifying a piece of software so that it meets the needs of different locales or language requirements. Software internalization has wider implications and much broader than localization. Most often the terms localization and internationalization are used interchangeably. According to World Wide Web Consortium or W3C, internalization entails:

1. Designing and developing in a way that removes barriers to localization or international deployment. This includes such things as enabling the use of Unicode, or ensuring the proper handling of legacy character encodings where appropriate, taking care over the concatenation of strings, avoiding dependence in code of user-interface string values, etc.
2. Providing support for features that may not be used until localization occurs. For example, adding markup in your DTD to support bidirectional text, or for identifying language. Or adding to CSS support for vertical text or other non-Latin typographic features.
3. Enabling code to support local, regional, language, or culturally related preferences. Typically this involves incorporating predefined localization data and features derived from existing libraries or user preferences. Examples include date and time formats, local calendars, number formats and numeral systems, sorting and presentation of lists, handling of personal names and forms of address, etc.
4. Separating localizable elements from source code or content, such that localized alternatives can be loaded or selected based on the user's international preferences as needed.

As a viable FOSS business model, the case studies demonstrate that it only makes business sense to internationalize software if there is market for it. It makes little business sense for an FOSS company in the Gambia, for example, to spend considerable time and effort in translating Mozilla Firefox to the Fula language when the official language and majority of the business community speaks English. However, localization is a big business throughout Africa. Customers want to have ownership and want their logos on their product and they feel much better if they can click in Swahili *Anza* (Start) or *kufungua faili* (Open File). However, many users would rather welcome "This program has stopped responding" than the Swahili equivalence "*kuacha kukabiliana*". This shows the sensitive nature of localizing software and companies should take great care, know the ethics of their business milieu and consult with customers before engaging in any localization business activities.

- Resources and tools for localization of FOSS is available at: http://www.iosn.net/l10n
- Sasikumar, M., Aparan, R., Naveen, K., Rajendra, M. (2005). Free/Open Source Software. Guide to Localisation. International Open Source Network. Centre for Development of Advanced Computing, CDAC Kharghar Mumbai, Maharashtra 400614. Available at: http://www.iosn.net/l10n/l10n-howto-toolkit/guide.pdf

### 2.9.2.9 Software Development and Customization

The FOSS development paradigm leverages the internet and a community of volunteers to develop, customize and deploy software of high quality within a shorter development cycle. The software is assumed to be better in quality, responding to different customer demands overtime. Innovation in happens because X individual or company with competent skills downloads the

source code and customizes the software according to (customer) needs. The software is then released with the 'improvements' to the customer or community via the project website or through a software forge (e.g. SourceForge, Gforge, Freshmeat, etc). However, for most small businesses fine-tuning software or applications functionalities according customers' needs is limited to "development – via- customization". In this process, a company does not work with or change the core of the software, but just customizes the graphical user interface (GUI) to meet client's need. In some cases, a company with expert software development staff can develop their own software and release it as "Free for download software". Customers can download and use the software *as is* or pay the company for further customization. However, customizing FOSS does not always give an FOSS SME autonomous freedom. For example, if a company or individual uses Zimbra collaboration Suite Open Source edition license, and have modified the software, the company is required to use the Zimbra Inside logo on the web client interface.

#### 2.9.2.10 Certification

Daffara (2007) discussed technical suitability and legal certification is viable FOSS business models. He went on to argue that technical suitability certifications is mostly done by integrators and external consultants, and may come in two shapes: certification of adherence to an international standard (for example security or quality standards) and certification of suitability for a specific environment. In a sense, in both cases the integrator provides an insurance that the software package complies with a specified set of rules, and is legally liable for such compliance. Limited scope certifications, like security assurances, are quite within scope of SMEs, while large scale quality assurance of components is quite difficult to attain if the open source project itself does not have an in-place explicit mechanism for project management. Most Linux distributors perform this suitability test in a very simple way, by selecting the most plausible candidate version of a source code package depending on the distribution target (for example, in so called "enterprise edition" distribution only stable versions are used, while for "bleeding edge" distributions the latest unstable version is selected).
Legal certification, according to Daffara (2007) is a relatively recent model, which emerged from the perceived problems of mixing code from multiple licenses, and from several lawsuits. Legal certification is related to the following areas: correct use of OSS and commercial licenses, patent certification, other intellectual property certification. The first area is related to the mixing and correct use of components, which may have different licenses and different restrictions. While more than 70% of the open source code is actually released under the GPL, more than 50 other licenses exist, and some fundamental components are released under a non-GPL license (the Apache foundation software, Mozilla/Firefox or the Eclipse integrated development environment).
When using and integrating many different components, it is fundamental to be able to verify that all code is properly used and accounted for. This is really a task that requires legal capabilities, more than technical ones, and for this reason is perceived by the FOSS community to be a "tangential" model.

Due to the inherent nature of technical suitability and certification, non of the companies in the case studies reported generating revenue from business activities in this area. However, the African FOSS business market shows promising signs in these areas.

### 2.9.2.11 Other Business Models

Some new and hard-to-categorized “African FOSS Business Models” emerged, which participants believe to have huge business potentials.

1. In the area of FOSS packaging
    - FOSSCDs (www.fosscds.co.za) forge business.
    - Pack schema....vs freedom toasters, opencafe concept.
2. In the area of FOSS marketing

- Build a FOSS repository of goods and services
- FOSS companies can use and benefit from incubator
- Others assorted business models
- Provide FOSS documentation
- FOSS Strategic management,
- Policy advise, legacy issues for start-up companies
- Specializing of FOSS for Mobile devices
- Data archiving, storage
- Data processing
- Accounting, survey, tax and census data analysis

### 2.9.2.12 Status of FOSS Policies in South- and East Africa

The table below shows the status of open source policies captured in the South and East African region. Note, apart from South Africa and Kenya, no known FOSS policy exist even though FOSS businesses are thriving in these countries. How did that manage to do this? what are future implications for operating FOSS business without policy backing? what should come first, establish a policy and encourage business practices around it or use existing business environments to build policies to help protect those businesses and make the uptake of new ones much easier?

| Country | Government FOSS Policy |
|---|---|
| Rwanda | Unknown |
| Burundi | Unknown |
| Kenya | Although an official FOSS Policy has not been adopted by the Kenyan Government, Acts related to procurement have been amended to ensure that FOSS solutions are not excluded from tenders.<br>There is also a growning awareness of FOSS, and support by certain MP's |
| Uganda | Unknown |
| Tanzania | Unknown |
| Mozambique | Unknown |
| Malawi | Unknown |
| Botswana | Unknown |
| Zimbabwe | Unknown |

| | |
|---|---|
| South Africa | Yes. The South African Government officially approved a FOSS policy in February 2007. Subsequently, the Minimumum Interoperability Standards (MIOS) for Government has been published. For more information: http://www.gossrc.org/geographical/africa/south-africa-1 |
| Namibia | Unknown |
| Lesotho | Unknown |
| Swaziland | Unknown |

## Module 2.9: ASSESSMENT

(a)**Exercise:** Use available resources (internet, contacts, local news, etc) to update and fill out the 'unknown' information in the table in module 2.8.2. Provide the same information for countries you may know and are not listed in the table
(b)**Discussion 1:** Using your knowledge of the respective countries in Africa, Do you think the companies in the Case Studies are addressing the market demands for each of their industries?
(c)**Discussion 2:** Do you think the fact that there are / are not FOSS policies in place are a major stumbling block for these companies?
(d)**Discussion 3:** What more do you think the companies can do better in the countries where FOSS policies are not in place?

## Assignments and Answers

### TASK

Use the template below to interview a FLOSS-based company in your country.

Some examples from participants

| | |
|---|---|
| Company Name:.Mount Batten..... Country:Uganda..... Year Founded.2005..... Website:. ... Services offered: Software customization & Website hosting..... | |
| **Section 1:**<br>**Outlook and Experience report** | **Q1**. When was you company founded and how many people are employed by your company?<br><br>This company was founded in 2005, by one person with the support of another and a pool of consultants who were willing to make time when work was available.<br><br>**Q2**. In your years of operation, what problems (e.g. getting start-up capital, getting loans to finance some aspects your activities, building a client base, hiring employees, finding office space, getting company documents, etc.) have you encountered? AND possible solutions<br><br>We worked from a home living room and did not consider looking for capital because we knew we would not qualify.<br><br>**Q3.** Looking at other companies (in and outside your country) who may be offering similar services as you do, what would you say works well for your company?<br><br>We customize and continue to support the client until they are fully comfortable sometimes this takes a year and more, our pricing is also competitive and our overheads are very low.<br><br>**Q4.** What is your advise for someone building business around open source software in Africa in general, and your country in particular?<br><br>They should ensure they start at a very low cost because income is not made instantly, it may have to be spread over time and several clients. The financial institutions are also not interested in financing this area. Lastly it requires a lot of technical skills. |
| **Section 2:**<br>**Revenue generation** | **Q5**. Which services (e.g. training, marketing, technical support, hosting and software development, consultancy, etc.) is your company offering<br><br>Software customization including<br>- website<br>- Client management<br>- Maps<br>- Other database applications<br>- Hosting websites, mail and databases |

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| | **Q6**. Which of the services in **Q5** is generating more income for your company?<br><br>- hosting<br>- website development & training<br><br>**Q7.** What is the annual turnover for each of the service sectors?<br><br>200,000 to 250,000 USD<br><br>**Q8**. What are some of the difficulties, if any, you face in getting paid for the services you offer?<br><br>Our services are least important in this part of the world (Africa) |
| **Section 3: Service line and FLOSS motivation** | **Q9**. What is the motivation for going into open source as a major business?<br><br>I like being able to customize software and making additions that suit my needs, and being in control of providing what the client needs.<br><br>**Q10**. Are you developing new products (software and/or training materials) or customizing existing open source solutions (bespoke software) to fit your customers' needs?<br><br>Yes cafe management software<br><br>**Q11**. What are some of the strategies you use to market your products and services?<br><br>Client recommendations and referals<br><br>**Q12.** Who are your most prolific customers and the types of services they request most?<br><br>Private medium size organizations, schools and civil society organizations asking for websites, database applications & records management.<br><br>**Q13.** Are you localizing (translating into local languages) some of your products?<br><br>Yes mostly web brousers<br><br>**Q14**. How would you describe your company, "**pure open source company**" developing, distributing and providing services around open source software or a "**hybrid company**" developing, distributing and providing services around both open source software and proprietary software?<br><br>Purely open source – I am an open source software advocate<br><br>**Q15**. What are some of your business plans for the next few years to improve the competitive standing of your company?<br><br>I will not be able to tell you that now. |

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| Company Name:.Linux Solutions..Ltd..... Country:...Uganda.....<br>Year Founded.....2000..... Website:..www.linuxsolutins.co.ug.....<br>Services offered:..SOFTWARE AND HARDWARE SALES..... | |
| Section 1:<br>Outlook and Experience report | Q1. When was you company founded and how many people are employed by your company?<br><br>It was founded in 2000 and employs 10 people<br><br>Q2. In your years of operation, what problems (e.g. getting start-up capital, getting loans to finance some aspects your activities, building a client base, hiring employees, finding office space, getting company documents, etc.) have you encountered? AND possible solutions<br><br>1. . Getting start up capital: The company had to rely on revenue generated. Linux solutions started small and used little savings as a start up capital with an intention of generating the revenue from services and capitalize the company. Its start with few employees and for market purposes, it relies on private sector (business people) who come up through net working and talking to them one by one. Basically unlike other business where you find a leveled market with open source it has to be build.<br>(a)Building a client base with open source only. i.e sticking to the vision could not work in a country where proprietary software is dominating. This called for flexibility by providing both software's and clients migrated at slow pace after realizing the benefits.<br>(b)Hiring employees full time was not easy so it had to contact external consultants when needed.<br>Q3. Looking at other companies (in and outside your country) who may be offering similar services as you do, what would you say works well for your company?<br><br>Offering quick support and being able to address customer's needs as they arise.<br><br>Q4. What is your advise for someone building business around open source software in Africa in general, and your country in particular?<br><br>I would advise to Diversify |
| Section 2:<br>Revenue generation | Q5. Which services (e.g. training, marketing, technical support, hosting and software development, consultancy, etc.) is your company offering<br><br>Software development, Technical support, training, consultancy and marketing.<br><br>Q6. Which of the services in Q5 is generating more income for your company?<br><br>SOFTWARE DEVELOPMENT. |

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| | Q7. What is the annual turnover for each of the service sectors?<br><br>Aproximently $2,500<br><br>Q8. What are some of the difficulties, if any, you face in getting paid for the services you offer?<br><br>Payments for services are poor one has to devise a mechanism of getting advance payment at the time of entering a contract. |
| Section 3:<br>Service line and FLOSS motivation | Q9. What is the motivation for going into open source as a major business?<br><br>Customization, affordability of the software and stability.<br><br>Q10. Are you developing new products (software and/or training materials) or customizing existing open source solutions (bespoke software) to fit your customers' needs?<br><br>Yes CUSTOMIZING AND TRAINING.<br>Q11. What are some of the strategies you use to market your products and services?<br><br>networking, talking to clients one on one, participating in workshops<br>Q12. Who are your most prolific customers and the types of services they request most?<br><br>SMEs, Universities for education purposes. Many customers request for support.<br><br>Q13. Are you localizing (translating into local languages) some of your products?<br><br>Not really we started but never took off as expected.<br><br>Q14. How would you describe your company, "pure open source company" developing, distributing and providing services around open source software or a "hybrid company" developing, distributing and providing services around both open source software and proprietary software?<br><br>HYBRID COMPANY.<br><br>Q15. What are some of your business plans for the next few years to improve the competitive standing of your company?<br><br>EMPLOYEE SKILLED TECHNICAL WORKFORCE, IMPROVE ON BRANDING, CATER FOR CUSTOMER NEEDS AND MEANS OF STATSFYING THEM. |

| Company Name:...**Joseph Neusu** ..... Country:.....<br>Year Founded..... Website:.....<br>Services offered:..... | |
|---|---|
| Section 1:<br>Outlook and Experience report | Q1. When was you company founded and how many people are employed by your company?<br><br>The company began in July 2001. I started as a sole consultant providing application<br>development services using open source components to build bespoke solutions to my<br>customers' needs. Over the next 8 years the company slowly grew to the point where we now employ 10 people.<br><br>Q2. In your years of operation, what problems (e.g. getting start-up capital, getting loans to finance some aspects your activities, building a client base, hiring employees, finding office space, getting company documents, etc.) have you encountered? AND possible solutions<br><br>This is question one could write a book on! I will try and briefly give an overview of<br>what I believe to be the most important lessons. The lessons can be divided into two<br>parts,<br>● general bussiness lessons and,<br>● technical lessons.<br>In certain respects, the business lessons are not particular to an open source based<br>company but rather more general. One should always ensure that you have contracts in place for any work undertaken and one should set-up internal processes for revenue<br>collection, including setting up processes for collecting bad debt, account payments and customer query resolution. There are tons of open source solutions out there for these problems, so one can actually build their business systems using the very products for which they will sell services to other companies!<br>Besides putting general business systems in place, just as customers are careful in<br>selecting their suppliers, a business should be careful in selecting its customers. Not all customers or potential customers are equal and you need to ensure your limited<br>resources are spent on those leads and customers who are more likely to be with you in the long-term. In many cases, the most demanding customers are also those who are always trying to knock down your fees. It is best to define an exit strategy with these customers which enables one to leave without any break-down in the relationship.<br>When it comes to raising capital, one faces the challenges that any small businesses<br>faces. Typically access to finance, even those aimed at SMEs, is difficult because one<br>needs to find the time and understand the processes behind raising capital. More often<br>than not, you, as the founder of the company, do not have time for this |

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| | because you are busy with customers carrying out work to bring in money. Ideally, one should start a company with several partners and some money already in the bank so that you can have time to concentrate on the “bigger picture” issues, but for most small or micro companies starting out, you don't have this luxury. Ideally, I think, one should find someone who knows how the process for accessing capital, from government or commercial institutions work to expediate the process.<br>As a company grows so you need to access more resources. There are three options:<br>● Find partners,<br>● Use consultants,<br>● Employ people<br>Partners would be the best to use initially because you share the risk and rewards with<br>them. Structuring partnerships is difficult however because, in most cases, it is about<br>“sweat equity” being put into the business and this can be a subjective measure and<br>when time are tight decining how to split the revenue coming into the business can be a source of tension. I think partnerships work best when there is an already established client base and you are looking to merge with another consultant who has a similarly sized client base and revenue. I.e you are already established somewhat.<br>When it comes to consultants and employees, the main issue is to find people who are<br>competent and reliable because ultimately it is your company that is at risk and not them.This can be a difficult task for a small business as you have to compete with larger corporates. The only advice I can give is to employ good people and learn that its better to act swiftly when you made a wrong decision to employ someone, else you end up carring the extra work and cost yourself.<br><br>Q3. Looking at other companies (in and outside your country) who may be offering similar services as you do, what would you say works well for your company?<br><br>Our advantage over other companies is the breadth of services we provide and our<br>knowledge about niche applications and solutions such as Asterisk PBX.<br><br>Q4. What is your advise for someone building business around open source software in Africa in general, and your country in particular?<br><br>The biggest challenge in Africa is the shortage of skills in IT in general and open<br>source in particular. In addition there is the need to inform the public and business about open source and its solutions. |
| Section 2:<br>Revenue generation | Q5. Which services (e.g. training, marketing, technical support, hosting and software development, consultancy, etc.) is your company offering<br><br>We build our service offering on our general linux admin and application development skills. |

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| | ● Web Hosting,<br>● Firewalls,<br>● Mail Servers,<br>● Asterisk IP-PBX,<br>● Bespoke application development in Java and PHP<br><br>Q6. Which of the services in Q5 is generating more income for your company?<br><br>The best approach is to get a balance between annuity income services, such as<br>hosting and support contracts and once off work such as bespoke system development. Currently we are shifting away from one-off project fees to more SLA based annuity income.<br><br>Q7. What is the annual turnover for each of the service sectors?<br><br>I do not wish to disclose this information<br><br>Q8. What are some of the difficulties, if any, you face in getting paid for the services you offer?<br><br>This question relates to general business praticse and to open source in particular.<br>In general, one should minimise one risk when taking on a new client by getting them to sign contracts and some form of deposit up front. The risk in dealing with customer you already know is much less! You need to develop a "6th sense" when dealing with new customers as to whether you think it is a good idea to go into business with them. If you can afford it you can also implement credit checks to vet clients.<br>When it comes to open source, you occasionally get customers that come to you looking for an open source solution who think open source means "free as in free beer". It is best to avoid these customers. It is easy to identify these customers as they always expect the work to be done for ridicoulsly low fees. |
| Section 3:<br>Service line and FLOSS motivation | Q9. What is the motivation for going into open source as a major business?<br><br>I think most people who get involved in open source business have a duality to their<br>motivation, which is inherent in open source software. The first is the compelling<br>business value in open source software but there is also the develomental, empowerment side of FLOSS. The difficult trick is to try and keep these two competing tencdencies balanced.<br><br>Q10. Are you developing new products (software and/or training materials) or customizing existing open source solutions (bespoke software) to fit your customers' needs?<br><br>We develop new products and customise existing one. We describe our company as<br>an "open source solutions integrator or development company. |

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| | Q11. What are some of the strategies you use to market your products and services?<br><br>Marketing is very important but can be very expensive as well. We make heavy use<br>of search engine opitmisation and online marketing srtategies, such as blogs and social media to get our marketing done.<br><br>Q12. Who are your most prolific customers and the types of services they request most?<br><br>We have developed a reputation for our Asterisk, firewall and application development skills.<br><br>Q13. Are you localizing (translating into local languages) some of your products?<br><br>Not at this point. Luckily most of the solutions already have great international support.<br><br>Q14. How would you describe your company, "pure open source company" developing, distributing and providing services around open source software or a “hybrid company” developing, distributing and providing services around both open source software and proprietary software?<br><br>Our company is more of a “pure open source company”. This may change depending on the need to bring in more revenue and if it looks like some proprietary<br>offering will help us achieve that. Even then, however, this will just be a way to get<br>money to finance the open source activities because this is what we enjoy the most.<br><br>Q15. What are some of your business plans for the next few years to improve the competitive standing of your company?<br><br>We need to find more skilled and reliable people and to consolidate our service and<br>product offerings. We have been doing this for the last year. |

# TEST Module 2

**Question 1 : What is the businesses focus of the company?**

(a) Training
(b) Open source training to their clients, conducting regular workshops
(c) Open Source Software advocacy

**Question 2 : Most of the web based applications are based in?**

(a) SAJO - Sun Microsystem, Apache, Java and Oracle
(b) LAMP - Linux Apache MySQL PHP
(c) LNMP – Linux Ngix MySQL Perl

Question 3 : Which services Open World LTD provides?

(a) Servers (mail, list,file, print, database, etc.) to Firewalls and Intrusion Detection Systems and web hosting.
(b) Training only
(c) Training and Web development

**Question 4 : What is the company vision?**

(a) Is to have 120 new clients per month
(b) Is to be a market leader in the provision and support of open source
(c) Localization of their products

**Question 5 : Which is the intended goal of the company for the future?**

(a) Implementing support on Linux/Unix servers
(b) Localization of the their products
(c) Adoption of a training certification

**Question 6 : Which is the company specialization?**

(a) Geological Information Survey (GIS)
(b) Geographical Information Systems (GIS)
(c) Geographical Mapping Standards

**Question 7 : The company partnership are based on:**

(a)South Africa only
(b)Europe and South Africa
(c)South Africa and Kenya
(d)Across Southern Africa

**Question 8 : Which open Source softwares the company is planning to use?**

(a) MapWindow GIS or Quantum GIS
(b) Quantum Solace
(c) Mapping & Chart
(d) OpenGIS

**Question 9 : Point two challenges for GIS Global System in doing FLOSS businesses**

**Question 10 : Point two key factors for successfully using FLOSS**

**Question 11 : How GIS Global Image markets its products and services**

(a) Using the internet, by word-of-mouth, articles in local publications, through workshops and training
(b) Only using Internet
(c) Fiers distribution at universities

**Question 12 : Workshops and Trainings represent half of the company revenues**

(a) True
(b) False

**Question 13 : Which benefits the existing clients of the company have?**

(a) Discounts on the company products
(b) At the end of the year the clients company get a free update of their products
(c) Access to new modules and software announcements and also have preferential rates when GIS workshops are presented

**Question 14 : What is the company fundamental experience by using Open Source Software components**

(a) Keep costing at minimum
(b) Using the source code for modifications
(c) Using the source code for modifications, correcting bugs and send back to the community

**Question 15 : The company relies on:**

(a) Their own I.T .staff and consultants who are able to deliver the solutions
(b) Only their own I.T. staff
(c) Only hired I.T. staff

**Question 16 : What Futuresoft does as a goodwill gesture?**

(a) Create websites for SME free of charges
(b) Donate money to Open Source Software projects and communities
(c) Send back modifications of a source code to the community

**Question 17 : The major problems encountered by the company was?**

(a) Finding Free and Open Source Software that fit for their businesses
(b) Skilled work force that is willing to work for a low salary
(c) Establishment to work
(d) Finding clients for their products

**Question 18 : What was the solution for the problem?**

(a) Having part-time staff
(b) Is to outsource most of their work to India
(c) Increase the price of the services to pay the developers

**Question 19 : What Futuresoft did in order to venture into the open source software business?**

(a) They rely on Internet research in specific websites
(b) The company has an open source expert who has done a lot of research on open source projects
(c) They redesign already know Open Source Software businesses to satisfy their needs

**Question 20 : As part of the Revenue model the company is is also working on?**

(a) Creating a strong brand, a range of products, as well as bigger staff strength.
(b) Develop and finding solution internally, not outsourcing.
(c) Selling Hardware

**Question 21 : The main focus of Linux Holding is**

(a) FLOSS support for large corporations
(b) FLOSS advocacy across the country
(c) Developing and administering Linux Courses

**Question 22 : Beside training what Linux Holding does?**

(a) Server hosting
(b) Web development and Web Hosting
(c) Free and Open Source Software advocacy

**Question 23 : How Linux Holding does the survey of the market?**

(a) Distributing fliers
(b) Publishing their services on Radio and TV
(c) Via the company's web site and by phoning current customers
(d) Advertising on Magazines and Newspaper

**Question 24 : Which firm policy the company do regarding the payment of their services?**

(a) Getting paid before delivering services
(b) Participants which didn't pay the sue on the law court
(c) At least one for a class is a pro bono participant

**Question 25 : Linux Solutions is doing Open Source Software business for over:**

(a) 9 years
(b) 5 years
(c) 15 years
(d) 8 years

**Question 26 : Which are the main pillars of Linux Solutions?**

**Question 27 : Why Linux Holdings prefer Private Sectors?**

(a) Because there's no corruption
(b) More clearly focused on their needs, less bureaucratic, and often pay their customers faster than government departments.
(c) Is easier for Linux Solutions to work with small groups

**Question 28 : What Linux Solutions do with the newer companies offerings Open Source Software?**

(a) Implement FUD1 on them so they will give up implementing FOSS.
(b) 1Fear Uncertainty and Doubt
(c) Linux Solutions extends its helping hands, simplifying and explaining to newcomers how to deal with potential customers.
(d) Give they Open Source Software materials for them to start

**Question 29 : Which of the following choices is not an obstacle for Linux Solutions?**

(a) Big contracts with NGO
(b) Qualifications for Government contracts
(c) Open Source Software is not suitable for Uganda government
(d) Poor payment habits by clients

**Question 30 : Which pro bono activity they did**

(a) They offer used computers to schools
(b) They did localization of Firefox web browser
(c) They work for the government without charging in order to show the advantages of Free and Open Source Software

**Question 31 : According to the managing director of Linux Solutions:**

(a) A FLOSS company must focus only at FOSS
(b) The easy way to spread FLOSS is by selling pre installed Linux distro on PC's
(c) There is a need to diversify so as to ensure that as one revenue source dwindles in one service sector, another probably keeps you afloat

**Question 32 : Which of the following services Amest Santin System provides?**

(a)Training and Consultancy
(b)FLOSS support for servers
(c)Software development and web hosting

**Question 33 : Which was the solution to overcame the entry barriers?**

(a) Boldly participate in public bids for projects, presenting the company professionally
(b) Providing services free of charge
(c) Sending letters to decision makers explaining the benefits on FLOSS

**Question 34 : One of the Amaset Santim System businesses focus is;**

(a) Receive work even if there's no time-frame to do it.
(b) Be honest about your produce
(c) Demonstrate a large variety of web solutions to the client in order to exhibit expertise
(d) Make products available for those who can afford

**Question 35 : The company revenue is:**

(a) 70% hosting, 10% development, 20% other services
(b) 90% development and the remaining 20% is from other services
(c) 90% of it's revenue from web development, 7% web hosting and 3% other services

**Question 36 : Which of the companies have links with CENFOSS**

(a) Red Hat Enterprise
(b) Codeweavers
(c) Google Inc.
(d) SAP

**Question 37 : From September 2006 until February 2007 CENFOSS how many employees CENFOSS had?**

(a) 4 employess
(b) 3 employess
(c) 10 employess
(d) 7 employess

**Question 38 : Which is the advantage that CENFOSS has over newcomers on FLOSS Businesses?**

(a) CENFOSS has already conquest the market on FLOSS Businesses
(b) Because there are the only training center dedicated to FLOSS
(c) Newcomers needs CENFOSS permission to operate

**Question 39 : Which of the following Government ministries is not a CENFOSS customer?**

(a) Ministry of Health
(b) Ministry of Environment
(c) Ministry of the Interior
(d) Ministry of Social Affairs

**Question 40 : Which CENFOSS customer has more than 150 computers running a Linux distro?**

(a) RRD
(b) Vodacom
(c) SOCREMO
(d) AMODE

## Open World LTD

1 What is the businesses focus of the Open World LTD?

(a) Training
(b) Open source training to their clients, conducting regular workshops
(c) Open Source Software advocacy

**2 Most of the web based applications are based in?**

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(c) Localization of their products

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## GIS Global Image

**6 Which is the company specialization?**

(a) Geological Information Survey (GIS)
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(c) South Africa and Kenya
(d) Across Southern Africa

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(d) OpenGIS

**9 Point two challenges for GIS Global System in doing FLOSS businesses**

9.1
9.2

**10 Point two key factors for successfully using FLOSS**

10.1
10.2

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# Futuresoft

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## Linux Solutions

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(c) There is a need to diversify so as to ensure that as one revenue source dwindles in one service sector, another probably keeps you afloat

## Amest Santim Systems PLC

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(a) Receive work even if there's no time-frame to do it.
(b) Be honest about your produce
(c) Demonstrate a large variety of web solutions to the client in order to exhibit expertise
(d) Make products available for those who can afford

**35 The company revenue is:**

(a) 70% hosting, 10% development, 20% other services
(b) 90% development and the remaining 20% is from other services
(c) 90% of it's revenue from web development, 7% web hosting and 3% other services

## CENFOSS

**36 Which of the companies have links with CENFOSS**

(a) Red Hat Enterprise
(b) Codeweavers
(c) Google Inc.
(d) SAP

**37 From September 2006 until February 2007 CENFOSS how many employees CENFOSS had?**

(a) 4 employess
(b) 3 employess
(c) 10 employess
(d) 7 employess

**38 Which is the advantage that CENFOSS has over newcomers on FLOSS Businesses?**

(a) CENFOSS has already conquest the market on FLOSS Businesses
(b) Because there are the only training center dedicated to FLOSS
(c) Newcomers needs CENFOSS permission to operate

**39 Which of the following Government ministries is not a CENFOSS customer?**

(a) Ministry of Health
(b) Ministry of Environment
(c) Ministry of the Interior
(d) Ministry of Social Affairs

**40 Which CENFOSS customer has more than 150 computers running a Linux distro?**

(a) RRD
(b) Vodacom
(c) SOCREMO
(d) AMODE

# MODULE 3: COMMUNICATING FOSS

## Introduction

Communicating FOSS is one of the most important components of a viable FOSS Business model since it relies on innovative and cost effective techniques and methodologies one should employ to grasp public attention and potential customers.
In business, the link between demand and awareness is a well recognized and established relationship. With regard to FOSS, lack of awareness, absence of a favorable policy environment, and inability to create and retain new markets accounts for some of the key barriers for those wishing to engage in FOSS business.
A key strategy therefore, is for both the new and old FOSS businesses to engage policy makers in efforts intended to create an enabling business environment for FOSS related business. This could be achieved through a number of concerted and coordinated actions such as advocating for appropriate policies and regulations. Equally important is the need to continuously undertake activities to raise public awareness through use of cost effective media campaigns.
This module therefore aims to assist SME gain the necessary knowledge and skills to successfully undertake these important business tasks. However, in order to achieve this aim, its important that the reader grasp some basic FOSS concepts (for example; how FOSS projects and communities work) discussed in Module 1, and gain some insights into how FOSS businesses work in the Africa context as demonstrated by the case studies in Module 2. Participants can combine the FOSS communication skills and techniques in this module with their business skills [Module 4] and specific FOSS business knowledge in Module 5 to better conduct FOSS training [Module 6] or setup their own FOSS business.

## Learning Objectives

1. Understand the core benefits of FOSS migration for existing businesses and government
2. Understand the importance of a coordinated FOSS marketing plan
3. Appreciate the significance of PR in raising public awareness
4. Learn how to use cost effective media campaigns

## Authors and Trainers

### Pool of African ict@innovation expert trainers

| | | |
|---|---|---|
| **Module 3** | Communicating FLOSS | Yese Bwalya,<br>Fred Yeboah<br>**More Trainers per country in full Pool of Trainers**<br>http://www.ict-innovation.fossfa.net/wiki/public-wiki/course-advanced-african-foss-business-models/FBMTrainers |

### Main Contributors

| | |
|---|---|
| **Module 3** | Sulayman K. Sowe,Yese Bwalya,Clara Chirwa,Samer Azmy,Glenn McKnight,Irene Fernández Monsalve,Nico Elema,Frank Tilugulilwa |

Additional material for **Module 3: COMMUNICATING FOSS** (presentations, tests, evaluation forms, pool of trainers, derived material) is available online at:
**http://www.ict-innovation.fossfa.net/node/4252**

### Sessions and Timetable

The entire content in this module is estimated to be delivered in 1 day, with some variations within the modules. For instructional purpose, the content of this module can be delivered as proposed in the summarized table below.

| Time | Session |
|---|---|
| 9:00 – 10:30 | • FOSS Public Relation<br>• Advocacy Strategies |
| 10:30 - 10:45 | Coffee Break |
| 10:45 - 12:15 | • Advocating FOSS |
| 12:15- 13:30 | Lunch |
| 13:30 - 15:00 | • Online Advocacy tools |
| 15:00 - 15:15 | Coffee Break |
| 15:15 - 17:00 | • Creating a FOSS market and brand in Africa<br>• End of Module Evaluation |

## Module 3.1 Public Relation and Advocacy Strategies

### Duration:

1:00hrs

### Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures, role play and group and individual exercises as a major means of delivering this module.

### Introduction

The Terms "Public Relations" and "Media Relations" are often used interchangeably; however, doing so is incorrect. The definition of media relations is somewhat narrower. Media relations refer to the relationship that a company or organization develops with journalists, while public relations extend that relationship beyond the media to the general public.

> **Public Relations:** *Public relations (PR) refer to the practice of managing the flow of information between an organization and its publics.*

PR may consist of a variety of activities engaged in by organizations or celebrities that are intended to promote a positive relationship or image with their customers and prospective

customers (members of the public). Communications is often in the form of news distributed in a non-personal form which may include newspaper, magazine, radio, television, Internet or other forms of media for which the sponsoring organization does not pay a fee.

> **Media Relations:** *is the act of involvement with various media for the purpose of informing the public of an organization's mission, policies and practices in a positive, consistent and credible manner.*

Typically, media relations involve coordinating directly with the people responsible for producing the news and features in the mass media. The goal of media relations is to maximize positive coverage in the mass media without paying for it directly through advertising.

Dealing with the media presents unique challenges in that the news media cannot be controlled - they have ultimate control over whether news angles pitched to them are of interest to them or their audiences. Because of this, ongoing facilitation of communication and relationships between an organization and the news media is vital. Working with the media on behalf of an organization allows for awareness of the entity to be raised as well as the ability to create an impact with a chosen audience. It allows access to both large and small target audiences and helps build public support and mobilizing public opinion for an organization. This is all done through a wide range of media and can be used to encourage two-way communication between potential customers and companies.
Although most organizations know the importance of PR its benefits, unfortunately are not so well understood. Public relations if done right can reach a large audience without the expensive cost of traditional advertising and marketing.
A few of the significant public relations benefits include:

- Economical way to reach your target audience in masses
- Stimulates awareness of, and the demand for your company's products or services
- Strengthens your company image and perception
- Paints the picture of a company that is active and innovative
- Creates more credibility that traditional advertising
- Creates an advantage of your competitors that are not utilizing PR effectively
- Increase search engine visibility and organic results

It is a proven fact that public relations carry a higher credibility factor.
Therefore by using media relations effectively, SMEs can enhance the reputation of their respective organizations while establishing good working relationships with journalists that will serve them well in future endeavors.

### 3.1.1 Getting the best out of your PR efforts

Ever wondered why your competitors keep cropping up in coverage - whether it be national dailies, on big-time TV broadcasts or even in local business magazines - while your organizations relegated to the back of the trades? Here is why.
There are two essential approaches to media placement; one is to persuade reporters that your organization has news worth reporting - this approach is deliberate and release driven; the other is to persuade reporters that there are individuals within your organization who - because of their industry perspective or some form of expertise - are worth interviewing - this approach is opportunistic and pitch driven.

Of course for a small business or even for individuals managing their own PR Campaign that may seem impossible but just do not ignore all the great opportunity to get free coverage. And here are examples of some great opportunities for you;

**Press Kit** : Your press kit, or media kit, is an invaluable tool you can use to promote your company. From trade shows to product launches. Typically a press kit may contain Company info, a quote sheet from those involved with the product launch and development. High resolution images of the product. Your PR person's business card

**Use your Bog**: Your organization or employee blog is an excellent way to keep you visible to your customers. Try and make your blog a regular part of your public relations campaign effort. It has potential of giving you exposure to customers, journalists and it even provides you advertising opportunities.

**Organize Media Events**: PR is more than blitzing the media with your press releases. Organizing media events is an exciting way to get multiple media outlets to come to you and give you free exposure. Be creative when coming up with ideas. Just because you have a news conference doesn't mean the media will show up.

A groundbreaking ceremony with a local celebrity or other prominent business figure to address the crowd increases your chances of getting publicity over the same event with just you and your employees giving out free software CDs.

So if you planning to 'take on' the media and need some useful tips here are some of them.

| Effective PR Tips |
| --- |
| (a)*Play reporter*. "Forget for a moment your own organization's objectives, and read the world as a reporter would. "Given your beat and the readers you must satisfy, what topics are of interest? What angles do you find fresh and provocative? With which sources - with what expertise - do you want to be in touch with?"<br>(b)*Matchmaking*: Having performed that analysis, play the role of matchmaker. Ask yourself, 'Which individuals within my organization or my clientele can satisfy these reporter needs? And what presentations will be most persuasive?<br>(c)*Identify ideas for the masses vs. tailored pitches*. When you write a press release, you're packaging ideas for reporters in masses, but when you write a pitch, you're tailoring an idea for a single reporter. You're saying 'I think you'll be interested in this person because' - and you have a good reason for thinking so because you've done your homework.<br>- ie. you've read your own FOSS Article, or you've previewed your product/service demos, and you know what works and what doesn't. You've also researched the reporter's work, and you're familiar with his or her recent reporting and attitude towards FOSS.<br>(d)*Adopt a long-term perspective*. In all of your relationships with reporters, adopt a long-term perspective. An interesting and well crafted pitch may not be taken up by a reporter this time around – don't be too frustrated, try and remain confident your next pitch will be read. This helps cultivate your standing as a reliable source.<br>(e)*Carry out an Expert Audit.* You can be a reliable source only if you have a thorough knowledge of your organization and have identified everyone who can be helpful to reporters and how. Sit down with colleagues or clients and identify who can talk effectively about what.<br>(f)*Develop platforms for spokespeople*. By profiling your spokesperson(s) on your Web sites or other promotional materials you provide easy accessibility to these experts. If you have an expert who can speak on a 'hot topic' e.g. Software Piracy, that is currently in the news consider sending out a media advisory alerting reporters to the availability of your spokesperson, and his or her position on the topic," he suggests. |
| More information on useful tips can be found at:<br>http://smr.newswire.ca/media/pdfs/whitepaper.pdf , Accessed on 30.08.09<br>http://www.fundraising123.org/article/steps-turning-your-organization-heavily-quoted-source |

### 3.1.2 Media strategies

While PR is more likely to generate a higher level of customer trust than normal paid advertising, the downside however, is the lack of access to the regular media channels which limit the number of free PR pieces. This could be a big hindrance to Small and Medium Business Enterprises. Alternatively, however, careful selection and use of strategies below could yield desired results.

### 3.1.3 International and National Events

International and National Events such as World Telecommunications days, when world and national attention is drawn on ICT sector, and both world and national leaders affirm and reaffirm their commitments to the developing and use of ICT, are arguably the most effective forum to petition world and national leaders to focus on challenges faced by players in ICT. Therefore keeping a tab on such events and learning how they are organized could give you better understanding of how best your organization can participate and be represented.

### 3.1.4 ICT Conferences

An important avenue for presenting your messages to the public or large interest groups is through large conferences. Over the years conferences have become major networking, marketing and promotion events. Conferences organizers today often provide space for participants, interest groups, or indeed members of public to showcase, display, present their products and services. These spaces, Information kiosk as they are commonly known, are becoming more and more sophisticated but generally cost effective channels. Again keeping a calendar or regularly scanning the press for such events especially conferences relating to ICT in general helps you stay in close touch but more importantly allows you decided and make all necessary preparations.

### 3.1.5 Community Media

Community radio and television stations present the best alternative for channeling information for local communities. Over the last ten years, there has been a sharp rise in the establishment of community media in Africa. The fast growth is often attributed to the fact that community media's physical proximity, local programming and targeted coverage, is highly accessible to local people. The concept of community media is that it is owned my local people, and both content and programming is done with the involvement of community thereby reflecting the aspirations of the community. Given the comparatively low charges and flexible terms SMEs are better poised to use them to greater effect.

## Module 3.1: ASSESSMENT

•**Discussion 1:** Which is better for you to promote your FOSS business in your country, Advocacy or Public relations?

•**Assignment 1:** Public relations (PR) is defined as "*the practice of managing the flow of information between an organization and its publics*". Name **three** organizations in your country with which you can establish PR to run a successful FOSS business. For each organization state what kind of information will your company share?

•**Assignment 2:** *Your FOSS business partner is coming from abroad for few days. During the visit he/she is scheduled to meet with the media in your country*. Using

the media strategies just studied, write him a brief email explaining how he needs to approach the media

•**Round table discussion:** Discuss how you can promote FOSS in your country using each of the following media outlets

- News papers,
- Radio
- Internet
- Television
- Other local media channels

**Round table discussion 2:**

- "***Governments are top-spenders on IT in most countries***". In your group discussion list and discuss

(i) Your government's ICT procurement policies as they relate to FOSS

(i)Do you see governments and ministries as you possible FOSS customers? What are some of the problems ICT businesses face when dealing with governments as clients? What are your proposed solutions?

## Module 3.2 Advocating FOSS

**Duration: 1:45hrs**

**Delivery method:**

For instructional purpose, it is advised that trainers/lectures use lectures, punctuated with short debates as a major means of delivering this module. In addition presentations and exercises are also suitable method of delivery for this module.

### 3.2.1 Implementing FOSS Advocacy Initiative

Advocacy is the pursuit of influencing outcomes — including public-policy and resource allocation decisions within political, economic, and social systems and institutions — that directly affect people's current lives. Therefore, advocacy can be seen as a deliberate process of speaking out on issues of concern in order to exert some influence on behalf of ideas or persons.

**Types of Advocacy**
There are many kinds of advocacy: public education, voter and candidate education, issue research and analysis, policy education, organizing and mobilizing, judicial advocacy, executive advocacy (also known as administrative advocacy), and legislative lobbying (including both direct lobbying and grass roots lobbying).

**Why Advocacy is Important**

Advocacy helps to shape public opinion and public policy and in doing so can lead to systemic, long-lasting change. Advocacy can also lead to innovation and/or efficiencies, new resources, stronger community voices, increased community participation, and desirably the achievement of FOSS goals.

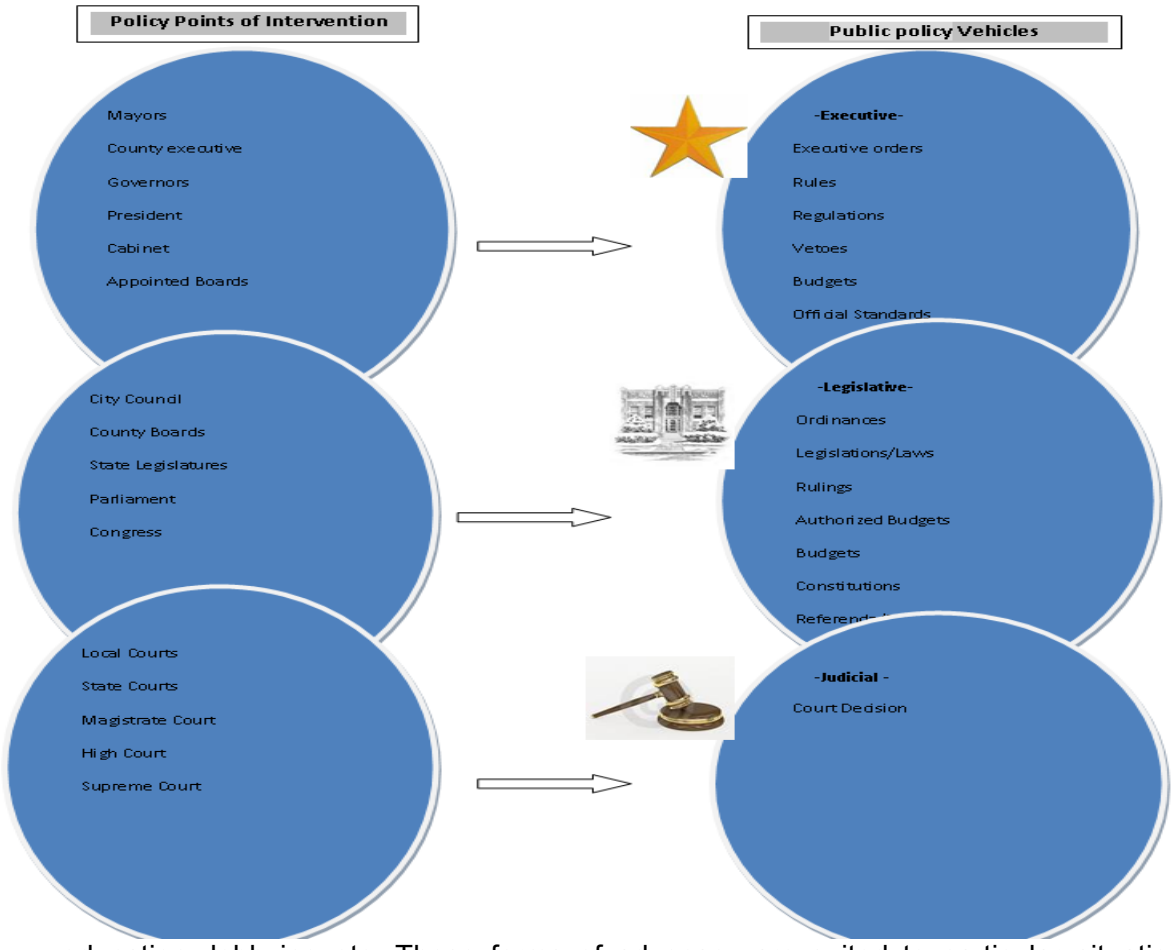
Defining Public Policy:

- *Public policy* is a set of agreements among official stakeholders about how government shall address social needs and problems and spend public funds.
- Elected and appointed leaders articulate public policy and embed it in many different policy instruments such as laws, regulations, and judicial findings.

How Advocacy Relates to Public Policy

- Advocacy encompasses a broad range of activities that identify, embrace, and promote needed social changes.
- These changes often require alterations in public perceptions and public policy.
- To advance change in public perceptions and public policy effectively, advocacy efforts must focus on particular arenas of policy influence.

- Advocacy for public policy change involves a set of activities all designed to influence decisions. These decisions are embedded into various policies, laws, regulations, budgets etc. The are many ways to achieve this for instance through protest, media, public




education, lobbying etc. These forms of advocacy are suited to particular situation and have own advantages and disadvantages. Below is a diagram showing typical intervention points in advocacy and the associated policy vehicles they seek to influence.

In general, as can be seen, both PR and advocacy campaigns need to piggyback on larger current public campaigns.

For instance in Zambia, when School Management Board issued a statement to the Education Minister on the prohibitive cost of rolling out e-Learning in public schools due to high software costs, and the call to explore alternative Open solutions, this suddenly raised the public awareness of FOSS and the potential for government adoption, this gives an opportunity for local advocates to garner greater media attention.

For advocacy to be successful and realize its objectives two things needs to be considered;

### 3.2.1.1 Think broader

When embarking on advocacy campaign its useful to recognize that government has much larger public interest to protect. This in itself presents some difficulties because while you as a promoter could be justified and motivated by very clear and indisputable evidence of benefits adopting a particular FOSS related policy, government on the other hand may not because their interest are justifiably or not, much broader and complex.

Usually its advisable to consult with organizations that have undertaken advocacy before or better still speak to your local parliamentarians for advice. In general, like all other software, adoption of FOSS in Government must address issues that concerns a government such as:

1) National Security
2) Developing Local Capacity
3) Reducing of Import and foreign exchange
4) Avoid penalties on Piracy and International Intellectual Property rights
5) It could be easily localized in a minimal cost
6) Reducing Total Cost of Ownership

One of the very interesting resources on FOSS adoption in Government is published by the United Nations Development Programme's – International Open Source Network or IOSN.net. The "FOSS Government and Policy Primer[i]" is of relevance to this module.

### 3.2.1.2 Be clear about what you selling

Often advocates of FOSS try to sell the FOSS solutions by focusing on the advantages of FOSS rather that to focus on the functionality of FOSS. Of course this is not particularly a bad idea but as experience as shown, this is never a winnable argument, because soon you find yourself embroiled in a unwarranted argument with your audience about how short or long the list of advantage/disadvantages is. Take an example of a person whose job function involve capturing sensitive patience medical records and safely store them in pdf format. If for a small fee, labor charge for installing and basic training in OpenOffice, he or she is perfectly happy, and no questions asked, why labor the discourse on Acrobat and MS Word.

So if you can avoid it, please avoid it.

Yes admittedly, FOSS major selling point has historically been that there are no software license fees payable for FOSS or what is recently been but the biggest advantage surely is the freedom to choose whatever software the user needs, without being "locked" in by a vendor - provided that the software chosen adhere to interoperability standards.

## 3.2.2 Developing Advocacy Tactics

Once you have an advocacy strategy in place, you can start to make more detailed decisions about how to achieve your policy goals. Some of the most important decisions you will make when implementing an advocacy strategy are:

1. Is it media advocacy, public education, protest, lobbying etc?
2. What messages you will send to your target audience?
3. What language (cultural and group sensitive messages) will you use in your advocacy message?

4. Timing: Which days, seasons, national and international days, local events are most suitable for 'pulling the advocacy trigger'?
5. How you will work with others in advocacy?

### 3.2.2.1 Developing and Delivering Messages

Delivering messages persuasively to your primary target audience lies at the heart of any advocacy initiative. The key to good message delivery is to know, as much as possible, about your target audience.

Messages are a critical element of any advocacy strategy. Even with convincing facts and political trends on your side, most advocacy efforts will likely fail without clear, simple messages that appeal to target audiences.

Crafting a message for an advocacy initiative must always fit into the advocacy planning process. But, developing messages is also a continuous part of an advocacy initiative. Messages inevitably need to be revised as you learn more about your policy issue and what appeals to your target audiences. In addition, advocacy may require multiple messages when there is more than one target audience. This section covers some methods to follow to create and use messages effectively.

*Develop clear and compelling messages*.

A message explains what you are proposing, why it is worth doing, and the positive impacts of your policy proposal. A few rules can help you choose the content of your message wisely.

*Deliver messages effectively.*

When you deliver a message, you want your target audience to agree with it and then take action on your proposal. For this to happen, you must ensure they will understand your message and believe your message. You also need to think about how to ensure they receive your message.

*Reinforce messages.*

Usually, delivering a message once is not enough. Always have a strategy to reinforce your message, either yourself, or through others. When you re-send your message, you can also use the opportunity to respond to any concerns expressed by your target audience.

### 3.2.2.2 Examples of Advocacy Messages

Advocacy messages can be written or spoken, and can be delivered in many formats. The following are formats that could be used as part of the advocacy campaign to adopt FOSS in Educational and Training.

| Target Audiences | Key Message | Format of Advocacy Message |
|---|---|---|
| Local Representative | Enacting an Open Content policy for all education and training initiatives will raise government the chances of achieving universal access and improve political | Send a letter to the local member of parliament documenting the restrictions inherent in proprietary software and show how this limit |

| | | |
|---|---|---|
| | popularity of the Representative | access to useful educational content to many school going children |
| School or educational Boards and Parent Teachers Associations | Universal Education is a right of every Child | Propose a Meeting to discuss school performances and inform them about the possibilities and potential benefits of FOSS |
| Fellow FOSS businesses | A potential market for educational FOSS solutions | Set up a website and start an online discussion to exchange information about the key issues to present to your representative |

### 3.2.2.3 What goes into an Advocacy message?

Advocacy messages should capture the essence of what you are trying to say to a target audience. In just a few sentences, a message should communicate why your issue is important and what you want others to do on behalf of your cause.

It should also give the target audience a clear choice of actions and suggest the consequences of those actions. Your message should be clear, whether verbal or in writing, and it should be appropriate to the social and cultural context where you work. Your message should suggest what will happen if your target audience takes no action – or chooses a different policy option.

The goal is for your message to explain why your idea is best.

As you develop the content of your advocacy messages, there are two rules to keep in mind.

1. *Know your audience.* Good messages sometimes require a little research. Try to learn how you can best influence each of your target audiences. Each message should take into account the interests, ideas, and knowledge of those receiving the message.
2. *Keep it simple*. Messages should be short, just a few sentences or less. If you deliver too many messages, your audience might forget them. Limit it to one, and focus on your best supporting arguments, rather than a long list of reasons to support your proposal.

### 3.2.2.4 What you need to know about your target audience

What does it mean to "know your audience"? Of course, this isn't always possible, but you can take time to learn about the interests, attitudes, and positions of your target audience, even without meeting them. For example, here are some things that you can try to learn before you develop your message:

| About your Target audience... | Specifically... |
|---|---|
| •What are their political interests?<br>•What are their self-interests in relation to the issue?<br>•How much information do they already have about your issue?<br>•Do they already have an opinion?<br>•What objections might they have to your position? | •What group of people do they represent?<br>•Do you need to clear up any miss-perceptions, or counter opposing arguments?<br>•Are you telling them something they already know? What NEW information are you offering?<br>•What is it, how strongly held? |

| | |
|---|---|
| What could they lose as a result of your proposal?<br>•What are their personal interests?<br>•Do their backgrounds (personal, educational or professional) suggest a bias or position? | •Have they already voted or taken a public position on your issue?<br>•What are their hobbies or “passions” outside of work? What do they do in their spare time?<br>•Can you link your issue to something you know they do support? |

### 3.2.2.5 Networking for information

When gathering the information you need about your target audience, two effective approaches to try are internal and external networking.

The most immediately available source of information you have is your own colleagues. Internal networking is the process of using resources within your own Organization to get the information you need.

In addition to your sources within the organization, there is a whole world of information out there. External networking is the process of asking people you know outside your organization for information about your target audience.

**Internal networking** - Often, your colleagues can help you make contact with others who know something about your target audience. For example, if you are working on a educational issue, someone you know may have a contact within the Ministry of Education who can tell you what you need to know.

The clearer you are about what information you are seeking about your target audience (and why), the easier it will be for people to help you.

**External networking** - Even when your goal is to get information from outside your organization, it may be best to start with those closest to you. Do you or your colleagues have personal contacts within other partner organizations that have information about your target audience? Are there people you could approach at NGO coordination meetings who might have some information? If your own contacts have limited information, do they have ideas about who you could call to learn more?

If your target audience is someone in the community, keep an eye out for announcements of public meetings that may be held in your area. Attending these kinds of meetings also may help you to identify other groups who are involved in your issue.

**Being clear**

A message is only effective if the targets of your advocacy can understand what you are asking them to do – exactly. Once you have developed the content of your messages, there are at least two things to ask yourself.

- First, have you chosen language your audience can understand? For example, have you used jargon, technical terminology, or “NGO-speak”? Sometimes, it can be helpful to try out your message on someone who isn’t in your line of work (like a family member, or a friend).
- Second, will your audience know what action to take if they agree with you? For example, is your goal for them to make a decision, call someone, vote a certain way, change a corporate practice, or convince others to support your proposal?

### 3.2.2.6 Deliver messages strategically

Credibility means that other people trust and value what you have to say. We have already discussed credibility as a prerequisite for advocacy. It is also something you need to consider when you are deciding how to deliver a message and who delivers it. Some things you can do to establish your credibility when delivering a message are:

Know the facts- Conducting analysis, learning from organizations that do have credibility, or initiating programming that helps you gain expertise are three ways to build up credibility.

Document the problem- Either yourself or your partner organizations can offer valuable information about problems concerning discriminatory software procurement procedures in public institutions. In some cases, it may be appropriate to document and share this information in ways that are useful to policy makers (the expert informant role). When sharing evidence of a problem, the information must be accurate and reliable. This is vital for the maintenance of ones credibility.

Choose the best messenger- Just like your target audience is a person, so is the messenger. When delivering an advocacy message, you need to determine who will be the most credible source in the eyes of the target audience. Sometimes policy skills are important, but other times first-hand knowledge of the problem, technical expertise, or seniority within an organization matter more. Also, it can be effective to have two messengers who complement each another: one knowledgeable about the subject matter and the other knowledgeable about the target audience.

### 3.2.2.7 Employing Advocacy Tactics

Communicating ideas and negotiating with others are things we do in the course of our professional and personal lives, sometimes deliberately, sometimes not. Working with the media can be highly effective in advocacy, especially when you need to reach a large audience with your message.

Successful advocacy often rests on the ability to communicate effectively, either verbally or in writing. This below are some useful tips on how to use two common advocacy formats: letters and group presentations.

**Advocacy Letters**

A letter is a good way to deliver your message, especially if you do not have a personal relationship with your target audience. An advantage of a letter is that it creates a record of your position. But, keep in mind; it is quite possible that others will see what you have written, such as your opponents, members of the public, or the media. These are factors you need to balance.

When sending a letter, try to find out how to ensure your audience is most likely to read it (i.e. should you use mail, fax, or e-mail)? If others support your position, consider asking them to sign the letter along with you. Before writing a letter, be clear whether you are writing in order to receive a response, or mainly to register your opinion.

**An advocacy letter should contain the following elements:**

1. Proper salutation. Always address your audience appropriately, and according to their proper title.

2. Leading paragraph. State your purpose for writing the letter and deliver your message immediately. Don't be afraid to put your request for action up-front.

3. Information about yourself. Explain who you are and who you are representing (CARE, a member of a coalition, yourself as a private citizen, etc.). If your audience does not know you well, make it clear how you are connected to the issue you are raising.

4. Supporting arguments. Make a few supporting arguments for your request (typically no more than three). Refer to established facts and positions taken by respected groups. Use statistics strategically, but sparingly. Provide evidence that others support your views.

5. Request for action. Be very specific about what you are asking the reader to do. If requesting a meeting, offer to follow up soon to arrange a time.

6. Acknowledgment of your audience. Recognize your reader as someone whose opinion matters. Thank him or her for taking time to read your letter and show your appreciation for any past support. Offer to provide additional information or assistance in the future.

7. Attachments (optional). In some cases, if you have particularly compelling information that supports your request, you can include it as an attachment. However, try to keep attachments short, recognizing that most policy-makers are too busy to read lengthy reports.

## Module 3.2: ASSESSMENT

**Discussion 1:** Discuss some of the advocacy tactics mentioned above taking views and arguments from the group about when a particular tactic might be appropriate in achieving an advocacy goal.

**Assignment 1** Working in small groups, identify an issue within your business area of interest that affects you and potentially reduce your chances of meeting your mission. Briefly and concisely state what the issue is on a piece of paper and present them to the class.

**Assignment 2:** Based on the issue identified in Discussion 1 above, identify existing statutes/policy/policies, regulations etc. in your individual countries which need to be reviewed, formulated or enacted. Discuss within the group the affected statutes, policy, regulations clearly identifying the weakness, omissions etc that need to be addressed (Note that policy formulation is highly specialized areas of work and any actual drafting, interpretations etc require involvement of specialists).

At the end of the discussion, one member of the group must present the outcome of the group discussion in a class plenary session. Allow for discussion and comments.

**Assignment 3.** Write a letter to your local parliamentarian clearly and concisely advocating for FOSS. In your letter, make it clear what you are requesting the reader to do.

# Module 3.3 Online Advocacy tools

## Duration:

0:45hrs

## Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures, punctuated with short debates as a major means of delivering this module. In addition presentations and exercises are also suitable method of delivery for this module.

## Introduction

Now more than ever, people are coming together—in coalitions or organizations—to harness the power of technology for policy change. This new Internet-based approach to advocacy—electronic advocacy (e-advocacy)—is a multifaceted process that uses an array of technology tools, tailored to specific campaign goals. More fittingly, "Your Guide to the E-Advocacy Revolution[ii]", published by the PolicyLink project (http://www.policylink.org) cites examples of organizations that have used e-advocacy to reach "hard to reach" communities; organize for mass mobilization; strengthen their offline tactics (such as tabling, rallying, and protest marches); reach out to media; connect to more supporters for online donations; and target decision-makers, rapidly and forcefully, to pass or defeat proposed legislation.

In addition to case studies, this report is loaded with technology tips to create an advocacy website, format emails and newsletters for maximum effectiveness, and connect to audiences and enable supporter action. It also examines barriers and opportunities for organizations that want to integrate technology into their communications strategies, and a detailed list of technology vendors.

**Definition: E-advocacy** is a revolutionizing force for advocates to increase pressure for policy change. And it is happening, one click at a time.

### 3.3.1 Technology tools

A core set of technology tools are at the heart of successful e-advocacy campaigns. These include databases for storing contact information and data about audiences and supporters; websites and content management systems for presenting information and updating it on a regular basis; email tools for conducting outreach communications to online audiences; and a variety of supplementary technology tools that facilitate different ways of engaging supporters to put pressure on decision-makers.

We want to help you quickly retrieve some helpful technology tips, with just a couple of clicks. Section three describes the technological tools that can be used in e-Advocacy, Technology Tools: What They Are, What They Do, Where to Get Them, to help you get started in the e-advocacy revolution. The chapter describes each of these components:

**Website:** Provides suggestions for content sections on an advocacy website and tools to create an effective online presence.

**Email**: Gives pointers for contacting audiences through email newsletters and action alerts and for designing email messages.

**Creating content for a Website:** Describes blogs, online video and Flash™ animation, and Pod casting.

**Tools to Connect to Audiences and Enable Supporter Action:** Details the many technology tools that are used to inform supporters and mobilize action.

**Technology Tools and Strategic Service Providers:** Describes various industry providers of technology tools and services and highlights some of their key differences

### 3.3.2 Networking building coalition

**Definition**: Networking is the art of making and utilizing contacts.

The goal of networking is to create a pool of people and information that can directly increase the quality of your product or service, decrease customer attrition, and, most importantly, leave your competition wondering how you won a job they never knew was available.

Many small business owners don't want to network because they think its about shoving your business card in someone's hand and boasting about what you do. In fact, networking is actually about getting to know people whom you can help and who can help you. If anything, the first natural instinct any business, big and small should learn is how to establish and sustain good business contacts, nationally and internationally.

The SME tool kit for Kenya [1] reported the work of Steven M. Krauser, President of Network Associates, Hicksville, N.Y., who contends that most business people don't know how to make networking an effective business tool. "If the result of your networking is a stack of business cards in your top right hand desk drawer and not a lot of additional business, then it may be time for you to re-evaluate your methods", he notes.

Krauser says small business owners should approach meeting people using two goals: get to know as many people as possible, and get them to know you. He then recommends the following four steps to make your networking work:

#### 3.3.2.1 Give and get information

Networking is a two-way street. When you meet someone, you want to ask them about their business and tell them about yours. Start with the basics - name, company, affiliation, position, nature of business, etc. You next want to find out if you can benefit each other. Try covering these topics:

I. What does your company do?
II. What types of clients do you serve?
III. Who makes the buying decision within a firm for each of your services and/or products?
IV. What sets you apart from your competition?

#### 3.3.2.2 Evaluate the value of the contact

You can't network thoroughly with everyone. Once you have the preliminary information, you need to decide if this person is worth meeting again and creating a relationship with. Can you help them and can they help you? The answer should be "yes" to both.

Another criterion is to look for people who are truly interested in helping others solve a problem, no strings attached. In other words, don't think of yourself as a net-worker but as a problem solver, and look for those same characteristics in someone you will consider adding to your personal network.

### 3.3.2.3 Form a strategic alliance

A network is not a collection of business cards, but of people. Take the time to understand the business of those in your network. If you've chosen members wisely, this should be a pleasure. And make sure that you educate them completely about what you do and whom you do it with. Give each other updates and encouragement. In effect, you become each others' sales people.

Remember that the purpose of networking is not to get your contact's business; instead, you're trying to get business from everyone this person knows.

You should also be able to turn to those in your network for management ideas, advice, leads, even vendor recommendations. You will learn from each other and contribute to each others growth, both in terms of profit and performance.

### 3.3.2.4 Maintenance

As your contact base grows, you have to re-evaluate the people in your information loop. Practice effective time management skills and prioritize your contacts. You will want to get in touch most often with those that can be most useful to you. They will become your inner circle.

Be careful never to burn bridges; you never know when someone will be able to help you, or when you will be able to help them. If you feel as though someone is not useful to you right now, you still will want to check in with them now and again, because they may become important down the road. In other words, be nice to everybody because you never know where they'll show up.

## Module 3.3: ASSESSMENT

•**Assignment 1:** Visit the websites for each of the case studies in **Module 2** and comment on how well they have presented their companies online.

•**Assignment 2:** Use the table below to provide a contact list which may be useful for operating a FOSS business in your country

| FOSS contact list | | | |
|---|---|---|---|
| Country:..... | | Region:..... | |
| Name of organization | Type/Function | Contact person | Comments |
| | | | |
| | | | |

• **Assignment 3:** List as many (1) FOSS organization, including Linux User Groups (LUGs) and (2) Companies in your country. For each category state the website where applicable.

# Module 3.4 Creating a FOSS market and brand in Africa

## Duration:

1:45hrs

## Delivery method:

For instructional purpose, it is advised that trainers/lectures use Lecture, Demonstrations, and Group Discussion. In addition presentations and exercises are also suitable method of delivery for this module.

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## Introduction

The FOSS Branding message emphasizes the virtue of Free/Libre software tapping into the inherent national pride, local ownership and capacity development. This message seems to resonate with all customers who adhere to the idea of localism and national patriotism. However, in total juxtaposition is the lack of confidence of anything Free, which believes that FOSS is inferior and that local products do not measure up to the quality of first world software which are assumed to be better. A strange reverse discrimination against a Made in Africa solution goes beyond just software but it includes training and certification.

An effective branding campaign should be nation-wide multi-stakeholder effort of an aggressive strategy to educate the public on the merits of FOSS business which would in turn raise the acceptance and awareness rates amongst the general public which in turn raises the business opportunities for the FOSS business community

### 3.4.1 What is Brand?

Brand is the proprietary visual, emotional, rational, and cultural image that you associate with a company or a product. For instance when you think Volvo, you might think safety. When you think Nike, you might think of Michael Jordan or "Just Do It." When you think IBM, you might think "Big Blue." The fact that you remember the brand name and have positive associations with that brand makes your product selection easier and enhances the value and satisfaction you get from the product. Brand associations are the attributes that customers think of when they hear or see the brand name. Ideally, you want customers to think of what they want from the brand (e.g., reliability and the benefits of reliability) and then associate that attribute with your brand name.

### 3.4.2 Open Source and Branding

Branding is an increasingly important issue in FOSS, both for individual contributors to FOSS projects and to the projects themselves. The term ‘branding’ to encapsulate the personal and the corporate:

- Named individuals. If your software is popular, you will become well known and respected in the software community. You acquire this tech-fame because of attribution – your name is on and associated with the software.

- Software brands. One thing that the most popular free/open source software often has in common with its proprietary cousins is a great brand name. This is true whether the FOSS is supported by an independent developer community or by a benevolent business

### Protecting the Individual's Brand

Whilst businesses make a significant contribution to FOSS, individual programmers still contribute the majority of FOSS code. Whilst the reasons that those individuals contribute are diverse, one reason for doing so is the resulting recognition and respect from releasing a popular piece of software into the FOSS community and of course the likely hood of increased prospects of securing a business deal. For these reasons to be realistic, mechanisms have been devised to protect the 'personal brand'. In FOSS, these mechanisms take the form of licences and the law such as GPL2 and GPL3, the most commonly used FOSS licences which contain provisions designed to help protect the copyright holder's personal brand.

### Protecting the software/corporate brand

In the FOSS world, the brand name of the software and the organisation/project behind it is just as important as it would be if the software was 'proprietary'.

Trade marks are a potentially powerful way of protecting the brands given to free software. Trade marks are a registered right, meaning that you need to successfully register your brand as a trade mark in order to receive protection. They apply to the services and/or goods covered by the particular registration. A mark is infringed if it (or something similar) is used for services/goods identical to or similar to the services/goods covered by the mark.

## 3.4.3 FOSS trademark policies

Control of software brands might seem at odds with FOSS' free and open nature, but trade mark schemes are common for the major FOSS project. There is even a scheme for the LINUX name. FOSS projects aim (at least in theory) to get as many programmers on board as possible, to get the software developed.

•This being the case, why would a project seek to control usage of the name of the software?

•Well same reasons for seeking protection and control apply as apply to brands in the 'corporate' world:

•Distinctiveness- As a project team, why spend a lot of (your own) time and effort successfully developing a piece of software, only to give it a generic name?

•Without a unique brand, how can potential users find the software?

Quality control- PR agencies and branding consultants tend to consider a brand in the widest sense – not just the name and logo, but also the values, message, and even ethos and philosophy of a brand (I'll call these 'the message'). If your brand doesn't have a consistent and defined message, or has a confusing mix of messages, even the best trade mark in the world will be commercially weak.

With a business, control of the message is achieved through marketing and communications policies and the internal culture. With FOSS projects, brand control isn't that simple. Such projects,

by their nature, involve an international, broad church of people, and the licences give anyone the freedom to take the software, modify it, and even use it as the basis for entirely new software. In an attempt to avoid a situation where multiple people circulate multiple different varieties of a particular piece of software, all with the same name, the major projects have sought trade mark protection for their brands and have issued trade mark policies setting out how the brands may (or may not) be used.

### CASE STUDY - Mozilla

The Mozilla Organization was launched by Netscape a decade ago to create the Mozilla internet suit, including a cut-down website browser. Over many years, this website browser developed into Firefox. Firefox is currently the world's second most popular browser, just behind Internet Explorer.[7] Firefox is a big-name browser and is FOSS-licensed.[8]

With a big name brand comes the need for brand protection, and this is something that the Mozilla Foundation (as the Organization is now known) has borne in mind since the browser was renamed from Firebird in 2004.[9] Other software supported by the Foundation, while not having the massive profile of Firefox, shows the same understanding of what makes a great brand; Thunderbird for email, Sunbird for calendar, and Seamonkey is now the name of that internet suite.

The Mozilla Trademark Policy is a lengthy document, covering a range of scenarios and types of trade mark usage. It has an 'overarching requirement' that 'your use of Mozilla's trademarks be non-confusing and non-disparaging'. Non-confusing is defined as 'people should always know who they are dealing with, and where the software they are downloading came from. Websites and software that are not produced by the Mozilla Foundation shouldn't imply, either directly or by omission that they are'. Non-disparaging is defined as 'outside the bounds of fair use, you can't use our trademarks as vehicles for defaming us or sullying our reputation'.

One such Policy which seeks to define levels of permitted Mozilla trade mark usage stipulate; *with 'significant functional changes': the software may be described as 'based on Mozilla technology', or 'incorporating Mozilla source code.' Other than that, no permission is given to use Mozilla trade marks.*

Hence, when Mozilla required the Debian Linus distribution to rename its adaptations of Firefox, Thunderbird and Seamonkey. Firefox was rebranded 'Iceweasel' (as Rolf Harris would say, can you see what they did there?). The other two were also given 'Ice' brands.

### 3.4.4 Cost effective branding for the small business

Many people think branding is really just for big companies – not for us at all. This is not true. While the 'display' of brand values, the breadth of your brand reach and how much your spend on brand identity may be very different if you are a small business – you can still learn and take ideas from the biggest and the 'best' brand advocates. The most important thing is not to limit your thoughts when it comes to deciding how you will develop and exploit the power of your brand.

## The 5 P's of Brand

- **Proposition**
  For any business, getting the proposition right is important but for a small business it's absolutely critical. As a Small Business you need to develop a clear and compelling message about yourself and use this consistently in all business communications. And this proposition must help you stand out from the crowd – maybe for the niche markets that you serve or the nature of the product or service that you deliver.

- **Presence and Presentation**
  Presence and Presentation are the more familiar manifestations of the brand. This is all about how you convey, visually what your brand (for a small firm your business) is all about. Everything from your location and signage to company letterhead, brochure ware, website and even the type of paper you use for business correspondence can all help reinforce, or destroy the image of your brand.

Location and signage – if your business has a fixed abode make sure the signs directing people to your offices are professionally produced and use the correct corporate font and colours, to be consistent with your logo and design of other business stationery.

- **People**
  Do not, at all costs, underestimate the benefit (and damage) that your staff and fellow directors can bring to your business brand. This is why, in small businesses recruitment is such an important process. Make sure you bringing in the right people, especially those dealing directly with clients
- Perfection

  Perfection in business: Not sure – but certainly providing good customer service and having effective complaint handling processes is absolutely essential. If you have to deliver high levels of customer service, equip your staff with sufficient knowledge so that they can answer questions and solve problems themselves.
- Persistence

  This is where a small business can really win but only if elements of your brand are used consistently.

Use your logo as a branding device – to appear on vehicle livery, signage and even products where appropriate, as well as the obvious places – in adverts, on your company website, on business cards and so on. Any small business can use the 5Ps to plan and manage a cost effective branding strategy for their business – Follow this approach and you can benefit from the experience of much bigger brand names.

### 3.4.5 Potential FOSS Market

A separate FOSS market is a deliberate and targeted branding exercise in stark contract to the established IT Business market which implies existing commercial IT forms of Business.

### Persuading Existing IT users

> **Definition:** Persuasion in its simplest form means giving users the information they need to make an informed choice, helping them to trust you and allaying any concerns they have. It's not about manipulation. Always remember, these persuasive tactics will only get you so far.

How many psychologists does it take to change a light bulb? None, the light bulb has to want to change. So the joke goes. However, it's possible that the light bulb could be persuaded to change. Persuading people to buy online (from TVs to groceries, holidays to services) can be achieved with techniques that marketers and psychologists have known for years.
Persuasion isn't rocket science; it involves understanding aspects of human nature that are often

automatic and work at a subconscious level. Here are 7 ethical ways to persuade people. Online persuasion - 7 ways to persuade

### 3.4.6 Creating Critical Mass

**Definition:**
According to Wikipedia, Critical mass is a socio-dynamic term to describe the existence of sufficient momentum in a social system such that the momentum becomes self-sustaining and fuels further growth.

As a simple example, consider a big city. If a person stops and looks up at the sky, nothing will happen. People nearby will go on about their business. If three people stop and look up at the sky, perhaps some people will momentarily turn around, but then continue on their way. But only a small number of people is required— say, 5 to 7 (depending on such factors as the culture, time of day, width of the street, etc) — to cause others to stop and look up at the sky, too. This number is called the "critical mass" or tipping point.

Social factors influencing critical mass may involve the size, interrelatedness and level of communication in a society or one of its subcultures. Another is social stigma, or the possibility of public advocacy due to such a factor. Critical mass may be closer to majority consensus in political circles, where the most effective position is more often that held by the majority of people in society. In this sense, small changes in public consensus can bring about swift changes in political consensus, due to the majority-dependent effectiveness of certain ideas.

Many organizations particularly those working on new products and services wittingly or unwittingly attempted to create such social conditions by way of achieving a consumer base sufficient to grow and sustain demand. A typical example is a FOSS software development organization offering fee paying training in a FOSS school management system to teachers in public schools that are receiving free second hand computers. The idea behind this approach is that, a stage is reached when the number of schools with such a system provide them with sufficient teachers for their training services, but also big enough to influence the educational ministry to roll out the free computers to other schools resulting in demand sufficient enough to sustain the training and with growth coming alongside this steady rise in public schools receiving computers.

### Module 3.4: ASSESSMENT

•**Assignment 1:** Describe the status of the FOSS market in your country; stating (I) the advantages, and (ii) the obstacles for doing FOSS business in your country.

•**Assignment 2:** Write slogans in English and in your ***local language*** for promoting 5 FOSS brands in your country.

• **Discussion:** Using what you have learnt in **Module 3.4.3**, discuss a strategy on how you can create a brand for your product.

[1]http://kenya.smetoolkit.org/kenya/en/content/en/894/How-to-Network-Effectively

[i]http://www.iosn.net/government/foss-government-primer
[ii]http://www.policylink.org/Projects/eAdvocacy/documents/final_report.pdf

## Assignments and Answers

### TASK

Question 1. Do a quick investigation in your country of residence to determine the following;

a) Which government ministry or department leads in the use of Open Solutions

b) State the name of the most widely used open source software within government as a whole

c) The highest certified qualification offered by an training institutions in your country of residence

Some examples from participants

a) Government ministries are:

- MINISTRY OF EDUCATION- Makerere university, Uganda martyrs university, and Ndejje university. Also among technical institutions
- PARLIAMENT OF UGANDA
- Uganda Chambers of commerce
- MNISTRY OF HEALTY- Mulago medical training
- MINISRTY OF ICT- POLICY AND IMPLIMENTATION DEPARTMENT.

b) State the name of the most widely used open source software within government as a whole

-The most widely used are:

-Open source and Red hat Linux, MYSQL also for databases

c) The highest certified qualification offered by an training institutions in your country of residence

-MICROSOFT IS STILL DOMINATING

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a) State Information Technology Agency (SITA) www.sita.co.za

b) Ubuntu Linux is widely used especially at Council for Scientific and Industrial Research (CSIR) where desktops were migrated to the desktop version of Ubuntu.

c) RedHat Certified Engineer (RHCE) and Ubuntu Certified Professional (UCP) are widely known as de facto certifications for server and desktop versions of their respective linux distributions.

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a) Ministry of Science and Technology

b) The most widely used FOSS is Linux

c) Advanced Level Linux Professional (LPIC - 2)

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a) Ministry of education: because FOSS will be much more applicable in schools and Universities. Some of the universities has already started using FOSS solutions like Fedora, ubuntu

b) No specific Open source software is in use right now widely. All offices use different solutions based on their specific need

c) If the question is about Open source certification, there is no institute that gives open source certification some have tried but failed. But there are vendor specific certifications CCNP, MSCE

**Question 2.** Mention at least one best known active online community in your country whose objectives and activities are exclusively focused on the promotion and development of Business or ICTs in the country.
i) Its membership
ii) State its objectives and Activities
iii) Brief outline of its major achievements

Some examples from participants

The Business Place is a capacity building community assisting start up South African entrepreneurs launch their businesses. The Business Place combines powerful online presence with a network of walk-in centres for entrepreneurs furnished with relevant support and information services clustered under one roof. The website has a feature called *Business on the Move* which features success stories of entrepreneurs assisted by the community. The Business Place is also expanding and intends to spread its branches across the Southern African region.

Membership
The Business Place's focus is strong on South African youth particularly the previously disadvantaged people of colour. However membership is not exclusive. Anyone who wants to start or grow a small business or micro enterprise can be served.

Objectives and Activities
The Business Place assist with the "know how" for anyone intending to start, improve or expand a business. The following are the primary objectives:
- to make life easier for entrepreneurs and encourage entrepreneurship
- stimulate local business, keep people in their communities and
- assist local communities to reduce dependency on the government

Major Achievements
A study among 247 of entrepreneurs on the database in Johannesburg alone indicated the positive impact The Business Place has made since its establishment;
- the Johannesburg Branch sees an average of 5 000 visitors a month
- 79% felt that the Information Centre is friendly, accessible and helpful of the sample, 30 new businesses were started in the last year, and 103 existing businesses were assisted
- These businesses generated 311 full-time jobs and 159 part-time jobs
- Other branches report similar successes. The minimum estimated total turnover for businesses assisted is R17 784 000.

## TEST Module 3

**Question 1 : Why is it advisable that when embarking on any advocacy campaign you recognize and take into account government interest?**

(a) Because government is generally against all forms of advocacy
(b) Because government has larger public interest to protect
(c) Because government takes delight in being consulted
(d) To avoid being seen as partisan

**Question 2 : Why would a FOSS business want to brand its products or services?**

(a)In order to compete favorably with proprietary software
(b)To be uniquely identified
(c)To increase FOSS visibility
(d)In order to demystify the notion that FOSS is often of poor

**Question 3 : Which one of the following points within the executive level of Government is last point of intervention for advocacy mattes relating to halting the enactment of unwanted legislation?**

(a) President
(b) Governors
(c) Cabinet
(d) Mayor

**Question 4 : What is the most important lesson from the Mozilla brand protection case study discussed in the manual?**

(a) Brand protection is costly
(b) Branding is for big business
(c) Branding keeps others out of business
(d) Protecting brands through trademarks protects you from fake or inferior imitations

**Question 5 : Which of the following possible FOSS advocacy issues presents a good argument and has a potential of attracting larger public interest and why?**

(a) Compulsory FOSS applications in all public schools because it lowers costs of managing school IT by simply installing cost free software
(b) Compulsory FOSS applications in all public schools because FOSS is freely and readily available for download from the net
(c) Compulsory FOSS applications in all public schools because universal education for all depends on access to affordable learning opportunities
(d) Compulsory FOSS applications in all public schools because global trends suggest a movement towards FOSS use in public school.

**Question 6 : Which of the following represents a major difference between community media and public broadcaster?**

(a) Unlike Public Broadcaster, community media doesn't charge or levy local people wishing to promote their services
(b) Unlike public broadcaster, community media is managed by people who are ill qualified
(c) Community media uses local language in a community led programming while public broadcaster uses official language in a centrally controlled programming

(d) Community media's is more commitment to local development than public broadcaster

**Question 7 : What is meant by Critical Mass?**

**Question 8 : Why is it so important to choose an individual or organization of good repute to lead an advocacy campaign?**

(a) To give your cause more credibility
(b) To justify your actions
(c) To fend off opposing views
(d) To show you serious about your campaign

**Question 9 : What is Branding?**

**Question 10 : If your advocacy strategy is to send a letter to a partner asking them to sign it along with you, why would you possibly do that?**

(a)To see if they support your position
(b)To receive guarantees they will take account of their actions
(c)To promote transparency during campaign
(d)To improve information flow

**Question 11 : What is attribution with regard to individual branding?**

(a) The act of obtaining written permission by the trademark owner
(b) The requirement by copyright law to share proceeding with the developer of software
(c) The surrender of commercial rights by the developer of software
(d) A term in copyright law requiring one to acknowledge or credit the author of a work which is used or appears in another work

**Question 12 : How is FOSS brand names protected?**

(a) Through licenses such as GPL3
(b) By an online community surveillance scheme
(c) By placing product keys on application
(d) FOSS brands are never protected and are open for use by anyone

**Question 13 : Why is creating Critical Mass seen as a particularly good strategy in creating FLOSS market?**

(a) Because of the need to sustain and grow the FLOSS business
(b) To stem any attempts to isolate your business by rivals
(c) When you have a critical mass it means your business eventually stops advertising
(d) To force reluctant users to switch to your services/products

**Question 14 : When building a network of partners for advocacy work it is advisable to first think about Internal Networking. Why is that important for small businesses?**

(a) Internal networking always leads to credible contacts
(b) Internal networking depends on resource readily available to you to get information you need
(c) Because internal contacts are more royal and dependable
(d) Small business networks are restricted to people you already know

**Question 15 : Internet based advocacy is becoming more and more popular, why?**

(a) Communicating online is always cheaper than face to face communication or other forms of communication
(b) Important and educated audiences needed for advocacy has moved online
(c) Its more credible and fashionable
(d) Because of the availability of wide array of technology tools suited for advocacy work

**Question 16 : Which one of the following reasons makes government a less likely target for FLOSS marketers**

(a) Because Governments are less accountable
(b) Because of Governments struggle for transparency and wider access to services
(c) Because of governments sensitivity to piracy
(d) Because Governments are often the biggest ICT consumers

**Question 17 : One way to create FLOSS market is by persuading existing ICT users. Which one of the following statements misrepresents the act of persuasion?**

(a)Showing what others are doing
(b)Showing user generated views
(c)Showing frightening accounts of users of rival products, services
(d)Showing scarcity of goods or services

**Question 18 : What do legislative advocacy initiatives ultimately try to achieve?**

(a)Agitate public resentment against government
(b)Influence customer choices
(c)Resolve political differences
(d)Public policy change

**Question 19 : What important function will a database serve in an online based advocacy campaign?**

(a) Store partners contact addresses
(b) Store graphic posters of your messages
(c) Budgets of your advocacy campaign
(d) Letters and petitions of your campaign

**Question 20 : When is sending letters most effective as a form of conveying your advocacy message**

(a) When you want to inform and discuss advocacy issues with community members
(b) Whenever the issue is most sensitive
(c) When informing and inviting local representative or parliamentarians to a meeting
(d) When communicating with people you know very well

**Question 21 : Which of the following statements is incorrect?**

(a) Public Relations is the act of managing information flow between an organization and the public
(b) Appreciate the significance of PR in raising public awareness
(c) Learn how to use cost effective media campaigns
(d) Show disapproval for commercial and proprietary software

**Question 23 : With regard to Advocacy work, what is external networking?**

(a) Networking with partners outside your country for purpose of gaining support for your work
(b) Process of asking people you know outside your organization for information about your target audience
(c) Not involving your own staff in the expensive work of getting information
(d) Asking people you don't know for information about your target audience

**Question 24 : Which of the following statement could be said to be untrue about Public Relations**

(a) You have creative control on what goes into the advert in the paper
(b) The PR exposure you receive is only circulated once
(c) An editor won't publish your same press release three or four times in their papers.

**Question 25 : What does Trademark in copyright law intended to protect?**

(a) Software Piracy
(b) Product Abuse
(c) Rights of Trademark owner
(d) Product consumers/users

**Question 26 : Which one of the following is true?**

(a) National events such as World Telecommunication day is reserved specifically for ICT Advocacy
(b) For FLOSS Advocacy to succeed it must emphasize the issue of costs
(c) Media Relations is same as Media Advocacy
(d) There is a fairly good level of FLOSS knowledge among ICT techs

**Question 27 : What is Advocacy?**

**Question 28 : In which of the following situation would issuing a Press Statement be most appropriate**

(a) When announcing promotion for a staff member
(b) Receiving a prestigious award for your products
(c) When announcing dates for company annual general meeting
(d) When there has been theft in the organization

**Question 29 : According to the 5Ps of Branding, People (ie. your own staff) could harm your brand. Mention one way in which they could do so?**

**Question 30 : As advocacy organizers we are advised to learn more about what our target audiences know about the issue(s). Specifically, why is this so important?**

(a) In order to know if they support you
(b) To know what new additional information they may need
(c) In order to segregate the target audience
(d) To establish their capacity to comprehend your issues

**Question 31 : What policy vehicle at the discretion of an executive arm of government is used to halt unwanted legislation?**

(a) Vetoes
(b) Budgets
(c) Rules
(d) Regulation

**Question 32 : FOSS projects aim (at least in theory) to get as many programmers on board as possible, to get the software developed. This being the case, why would a project seek to control usage of the name of the**

(a) To protect Interest of the Community of Developers
(b) To avoid abuse of software by users
(c) To protect interest of users
(d) To encourage innovation

**Question 33 : Why are special events such as Software Freedom Day an important occasion for small FLOSS business to promote their services, products?**

(a) Its when the worlds' leading companies clinch big software contracts
(b) That is when world and national attention is focused on issues relating to software development
(c) That is when Government feels obliged to support software developers
(d) That is when Government feels obliged to support software developers

**Question 34 : Which of the following statements is NOT true?**

(a) Legislative advocacy is illegal
(b) Protest is a form of advocacy
(c) Simple and clear advocacy messages render themselves to less misinterpretation
(d) Lobbying as a form of advocacy is usually effective when soliciting individual or a small group influence.

**Question 35 : Mention one social factor that could influence Critical Mass positively or negatively**

**Question 36 : What is product branding?**

(a) Garnishing company logo on your products and services
(b) Is the proprietary visual, emotional, rational, and cultural image that you associate with a Company or a product
(c) Constantly displaying and associating your products with other popular products
(d) An appealing slogan often used to accompany your product advertisement

**Question 37 : Emails are effective tools in an online advocacy campaign. Which one of the arguments in the context of a typical African society, is of least concern to any one planning to undertake online advocacy.**

(a) High levels of computer illiteracy
(b) Postal mail and not email is still by far the most used form of communication by majority of rural poor.
(c) Not many people access email on regular basis
(d) Advocacy emails from unknown senders may be treated as unsolicited mail or spam

**Question 38 : External Networking posses a number of challenges for small business, which one of the following is a small FLOSS business likely to face?**

(a) Building sufficient confidence among big and existing partners in a network
(b) Keep up with the maintenance of partner database
(c) Printing and distributing enough business cards at meetings
(d) Finding right reasons for joining and remaining in a network

**Question 39 : Which is the most important first step in an advocacy campaign?**

(a) Good understanding of your issue(s) and its potential benefits to a larger community
(b) Knowledge of the legislative process
(c) Knowledge of your sector
(d) Knowledge of potential advocacy partners

**Question 40 : Which one of the following is not a necessary task in a typical media advocacy campaign?**

(a) Data gathering
(b) Lobbying
(c) Picketing
(d) Information Sharing

# MODULE 4: INTRODUCTION TO GENERAL BUSINESS SKILLS

## Introduction

In a fast changing business environment, many business managers often seek to have a more "generalist" knowledge of business and business principles. This module aims to introducing some general business skills which learners can use to help them establish solid business foundations and understand the various leadership styles they may cultivate to ensure a cooperative structure within their business entities. The module also highlights organizational structuring and concludes with the significance of tenders, contracts and procurement. Components of business management skills, *financing ICT/FOSS-SMEs*, business skills and service provision, writing a FOSS business plan, and FOSS proposal contracts are the major modules covered in this module.

The module builds on already established FOSS concepts covered in Module 1. It makes use of the relevant FOSS business experiences covered in the case studies in Module 2, and the communicating FOSS skills and knowledge developed in Module 3. Equipped with introductory business skills in these modules, participants will then be able the have specific FOSS business skills (in Module 5) which may be appropriate for establishing FOSS business in their specific countries or regions.

## Learning Objectives

1.To understand how to establish a solid business foundation.
2.To know the various leadership styles of an effective businesses.
3.To develop knowledge in key areas such as management, sales, and accounting.
4.To understand the significance of tenders, contracts and procurement.

## Authors and Trainers:

**Pool of African ict@innovation expert trainers**

| | Name Module | Name |
|---|---|---|
| **Module 4** | Introduction to General Business Skills | Kofi Kwarko<br>Derek Lakudzala<br>**More Trainers per country in full Pool of Trainers**<br>http://www.ict-innovation.fossfa.net/wiki/public-wiki/course-advanced-african-foss-business-models/FBMTrainers |

**Main contributors**

| | |
|---|---|
| **Module 4** | Sulayman K. Sowe (**Facilitator**), Arnold Pietersen, James Wire Lunghabo, Foibe Kalipi, Kim Tucker, Glenn McKnight, Derek Lakudzala, Alex Gakuru |

Additional material for **Module 4: INTRODUCTION TO GENERAL BUSINESS SKILLS** (presentations, tests, evaluation forms, pool of trainers, derived material) is available online at:
**http://www.ict-innovation.fossfa.net/node/4252**

### Sessions and Timetable

The entire content in this module is estimated to be delivered in 1 day, with some variations within the modules. For instructional purpose, the content of this module can be delivered as proposed in the summarized table below.

| Time[2] | Session |
|---|---|
| 9:00 – 10:30 | • Starting a business |
| 10:30 - 10:45 | Coffee Break |
| 10:45 - 12:15 | • Business Plan |
| 12:15- 13:30 | Lunch |
| 13:30 - 15:00 | • SWOT Analysis<br>• Market |
| 15:00 - 15:15 | Coffee Break |
| 15:15 - 17:00 | • Leadership<br>• Organizational Structuring |
| ***Next day*** | |
| 9:00 – 10:30 | • FLOSS Proposals Contracts<br>• Corporate Profile<br>• End of Module Evaluation |
| 10:30 - 10:45 | Coffee Break |
| 10:45 - 12:15 | • ***Start Module 5, where appropriate*** |

## Module 4.1 Starting a Business

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### Duration:

1:00hrs

### Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures and group and individual exercises as a major means of delivering this module.

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[2] **Note**: ***Depending on the spead of delivery and response from participants, delivery of the content of this module may extend into the next day. In that case, the lecturer/presenter may deliver this module in conjuction with Module 5***.

## Introduction

Business is both context and product specific. While one kind of business may work in one region or country, the same business may not prosper in another region. The type of product defining ones business also plays an important part in determining whether the business will succeed or not. Thus, when starting a new business, there are many factors to consider, important decisions to be made, rules and procedures to be followed. In simple terms, there is no golden rule one can follow when starting a business. However, this module addresses some new business requirements by identifying some business opportunities one can explore, it discusses how one can set up a business, develop a plan and some business strategies that one can adopt to help set up a FOSS-based business in the African context. The module draws on experiences and practical issues discussed in some of the case studies in Module 2.

### 4.1.1 Identifying Business Opportunities

Most successful businesses start with a good idea. This idea may be your own or may be drawn from any one of a number of available resources, including the following:

- Business contacts and acquaintances. These are people you are known to either by virtue of your current professional activities or through informal interactions.
- Business magazines and newspapers: these often contain business success stories, how-to information for would-be small business owners, and lists of start-up opportunities.
- Special interest publications: sector-related publications keep entrepreneurs informed of developments in their area of interest.
- Trade shows. During such events, there are exhibitors from all walks of life and one could chance upon a brilliant idea by simply interacting with them.
- Radio, television and the Internet. *With the wealth of information at our finger tips through the various media at our disposal, it is now possible to tap ideas from across the globe without ever setting foot outside your country.*
- Import goods list: Reviewing a list of the goods imported into an area might provide clues on a wide variety of business opportunities in import replacement and supplier development. If products are not manufactured locally, find out why not.
- Trend Analysis: Watch for trends in population, consumer or corporate buying behavior, government legislation, and other trends related to your business sector.
- Existing inventions and innovations: Inquire at universities, trade schools and other research centers for opportunities to acquire technologies already developed.
- Government departments, agencies and programs: governments departments and agencies are often committed to increasing the volume of federal government purchasing in their area of operation.
- Departments and agencies offer studies and reports on business trends and opportunities. Boards of Trade and Chambers of Commerce also compile a number of business and investment opportunities.
- Internet and personal blogs where you can search and read about what businesses others are doing, considering or commenting on other FOSS businesses in your region.

### 4.1.2 Components of Business Management Skills

The following resources have been identified as essential components for building an effective business.

**Finance and Accounting:** The lifeblood of a business is money and a concrete understanding how the finances keep a business afloat is critical to the success of a business. Another concept which is closely associated with finance and accounting is bookkeeping.

Bookkeeping is the recording of financial transactions. Transactions include sales, purchases, income, and payments by an individual or organization. Bookkeeping is usually performed by a bookkeeper. Bookkeeping should not be confused with accounting.

Accountancy or accounting can be simply defined as the systematic recording, verifying, and reporting of your company's assets, income, expenses, etc. Accounting has been defined by the *American Institute of Certified Public Accountants (AICPA)* as "The art of recording, classifying, and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of financial character, and interpreting the results thereof."

The role and responsibility of book-keepers are appropriately summerized by Biswaroop Todi (2007) thus;

- Keep complete, up-to-date, and accurate records of accounts and financial arrangements.
- Bookkeepers verify and enter information into journals and ledgers or into a computer.
- They periodically balance the books and compile reports and financial statements.
- They also receive, record, bank and pay out cash.
- They balance checkbooks with monthly bank statements.
- They may calculate employee wages from plant records or time cards and issue payroll checks.
- Posting accounts receivable and payable, prepare and make bank deposits, record payrolls, maintain inventory records, purchase supplies, prepare purchase orders and do expense reports.
- Bookkeepers may also make schedules, sort documents, and file bills.

**Role and responsibility of accountants and controller**

The role and responsibilities of accountants may very from one company to another. However, there are some standard practices which must be adopted. For instance, your company accountant will evaluate your business records drawn up by the bookkeeper . Accountants must also be able to draw up a set of financial records and prescribe the system of accounts that will most easily give the desired information (M. Chatfield; 1977 and A. J. Briloff; 1972).

They must be capable of arriving at a comprehensive view of the economic and the legal aspects of a business, envisaging the effect of every sort of transaction on the profit-and-loss statement.

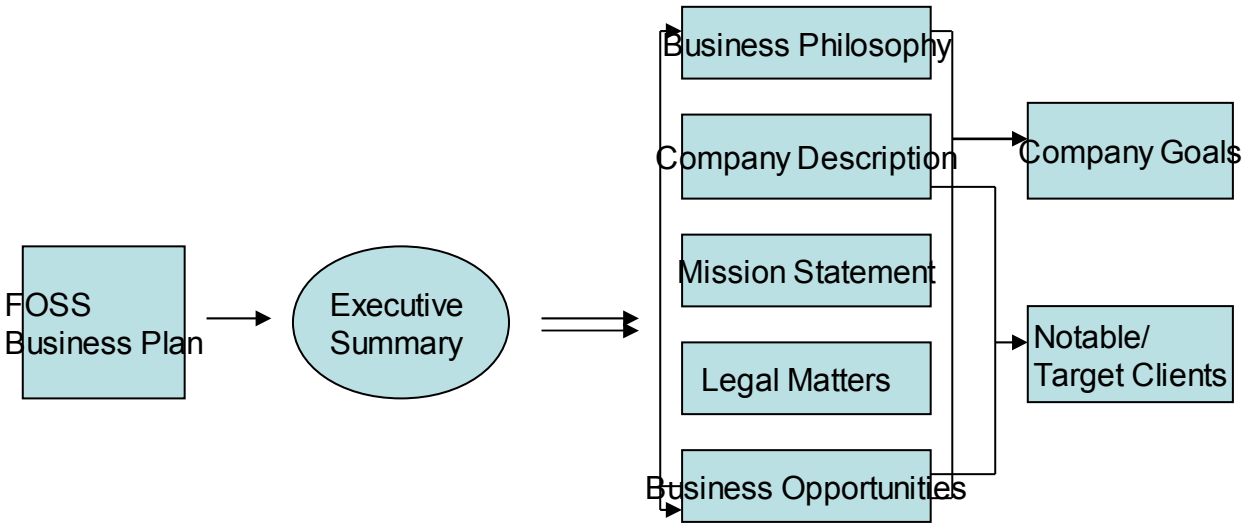
They must recognize and classify all other factors that enter into the determination of the true condition of the business (e.g., statistics relating to production; properties and financial records representing investments, expenditures, receipts, fiscal changes, and present standing). In addition, it is important that the accountant possesses the following skills and is able to carryout the following;

- knowledge and skills necessary for the implementation of sound accounting and financial protocols and procedures
- know and carry out basic bookkeeping and accounting terminology, such as financial statements, positive cash flow, bridge financing, liquidity, etc

- be able to assess project performance based on financial evaluations ie: general valuation concepts, project viability evaluations
- carry out cost accounting principles and local pricing strategy
- manage accounts receivables
- Again the topic and content under it does do justice to components of business skills

### 4.1.3 Business Plan

**Definition:** A business plan is a generic model suitable for all types of businesses.
However, you should modify it to suit your particular circumstances. In this case it should accommodate your plan of action; which should aim at sustainability and strategic actions detailing how you should generate revenue from FOSS. Paul Young (2008) listed components which you may consider incorporating into your business plan. The components of a business plan are schematically illustrated in the figure below:




#### 4.1.3.1 Components of a business plan

As shown in the figure above, Young (2008) described a business plan as consisting of an executive summary, general company descripion, mission ststement, company goals and objectives, the legal form of ownership of your company, and describing the business opportunities which may exist for your company. In addition to these, you may also want to state or list some of your notable or target clients and consider them as part of your business plan. Young's categorization of the components of a business plan are discussed below:

- Executive Summary:
  Write this section last and make it two pages or fewer. Include everything that you would cover in a five-minute interview. Explain the fundamentals of the proposed business: What

will your business be? Who will your customers be? Who are the owners? What do you think the future holds for your business and your industry? Make it enthusiastic, professional, complete, and concise. If applying for a loan, state clearly how much you want, precisely how you are going to use it, and how the money will make your business more profitable, thereby ensuring repayment. The table below shows examples of executive summaries from some companies

- General Company Description:

  What business will you be in? The work you are planning to do is not necessarily the business you are in. As an example, if you are planning to setup a hotel, you are actually going into the business of Hospitality i.e. looking after people. That is the actual business and once you understand that, then all your efforts will be on making sure that the hotel 'looks after people' very well.
- Mission Statement:

  **Definition:** A mission statement is a brief description of a company's fundamental purpose. A mission statement answers the question, "Why do we exist?" Many companies have a brief mission statement, usually in 30 words or fewer, explaining their reason for being and their guiding principles.

- Company Goals and Objectives:
  Goals are destinations—where you want your business to be. Objectives are progress markers along the way to goal achievement. For example, a goal might be to have a healthy, successful company that is a leader in customer service and that has a loyal customer following. Objectives might be an annual growth in your customer base and some specific measures of customer satisfaction.

- Business Philosophy:
  Defining this helps you know what is important to you in business, to whom will you market your products, a brief description of your industry etc. However most of the information here is found in detail in the strategic plan, marketing plan and other sections of the business plan.
- Legal form of ownership:
  Determine what form you want your business to take, that is
    - Sole proprietorship: is a type of business entity which legally has no separate existence from its owner.
    - Partnership: is a type of business entity in which partners (owners) share with each other the profits or losses of the business undertaking in which all have invested.
    - Limited Company: is a corporation whose liability is limited by shares (Ltd), which is the most common form of privately held companies.
- Describing the opportunity:
  Describe the gap that exists in the market. What has given rise to this gap and how can it be filled? One way of finding out what the market or your customers need is to use surveys, as demonstrated by the Linux Holding (Pty) Ltd. Case study in Module 2.4.

- **Describing the industry and the market:**
  A deeper understanding of an opportunity involves systematic research. Paul Young (2008) argued that "It is very dangerous to assume that you already know about your intended

local market". Thus, a form of SWOT analysis (Section 4.1.6) or market research must be undertaken to make sure you're on track; you know what the business climate is in your region, who your potential customers (e.g. government, private sectors, etc) and competitors are. Use the business planning process as your opportunity to uncover data and ensure that there is a realistic gap in the market for your product or service and that you can be competitive in providing that product or service. "Your time will be well spent" (Young, 2008).

- **Market research / competitive analysis:**
  There are two types of market research. Namely, primary research and secondary research.
  Primary research involves gathering new information, that are directly from the potential customer. It means collecting new relevant information by interviews or surveys. By this you can learn about the preferences and tendencies of consumers.
  As you have to address many people for a professional market research, this type can be very expensive. Therefore you should seek advice from examples and market research success stories in publications.
  Secondary research means desk research and involves compiling already existing information, e.g. information and research results in newspapers, magazines, statistical data or demographic profiles from government agencies.
  If you want to analyze the market, you have to show sources, statistics, and numbers as exactly as possible. Efficiency of market analysis plays a major role, because it will result into a marketing plan and later into the all-important sales projection.

- **Industry Analysis and Analysis of barriers to entry:**

  Young (2008) also listed barriers you may face when entering to a new and emerging market, especially FOSS markets. Some of these barriers may be relevant to your market or region while others may not:

  1. High capital costs
  2. High production costs
  3. High marketing costs
  4. Consumer acceptance and brand recognition
  5. Training and skills
  6. Unique technology and patents
  7. Tariff barriers and quotas

- Analysis of buyer power:

  Young (2008) posits that an important factor of your business is whether you customers have the buying power of/over the products you are offering. You must look at your market and ask your self; Do my potential customers have significant choice when buying my product or service? Are there substitute offerings for the product or service that I have?

What is the likelihood that customers will switch to the substitute? What products and companies will compete with you?

- List your major competitors:

  Will they compete with you across the board, or just for certain products, certain customers, or in certain locations? How will your products or services compare with the competition?

### 4.1.4 What is a Product

In their “Marketing Tutorials”, KnowThis. Com argued that, the term “product” is often used as a catch-all word to identify solutions a marketer provides to its target market. In essence, a product can be categorized as goods, services, or even an idea. You may find some of the definition of a product may extend beyond your FOSS business: :

- Goods – Something is considered a good if it is a tangible item. That is, it is something that is felt, tasted, heard, smelled or seen. Is you FOSS business offering tangible goods? Are you using non-tangible (software) as an 'enhancer' to the tangible goods in your business? For example, you can install Ubuntu as a dual boot in all the PCs or Laptops you are selling
- Services – according to KnowThis.com, something is considered a service if it is an offering a customer obtains through the work or labor of someone else. Services can result in the creation of tangible goods (e.g., a publisher of business magazines hires a freelance writer to write an article) but the main solution being purchased is the service. Unlike goods, services are not stored, they are only available at the time of use (e.g., hair salon) and the consistency of the benefit offered can vary from one purchaser to another (e.g., not exactly the same hair styling each time).
- Ideas – Something falls into the category of an idea if the marketer attempts to convince the customer to alter their behavior or their perception in some way (see FOSS advocacy in Module 3.1). Marketing ideas is often a solution put forth by non-profit groups or governments in order to get targeted groups to avoid or change certain behavior. This is seen with public service announcements directed toward such activity as youth smoking, automobile safety, and illegal drug use.

While in some cases a marketer offers solutions that provide both tangible and intangible attributes, for most organizations their primary offering -- the thing that is the main focus of the marketing effort -- is concentrated in one area. So while a manufacturer may offer intangible services or a service firm provides certain tangible equipment, these are often used as add-ons that augment the organization’s main product.

### 4.1.5 Business Financing

Capital requirements are all the assets needed to begin a business. An astute entrepreneur is able to identify what those assets are and how to pay for them.
Forms of Capital;

- Debt Financing - Through banks, micro finance institutions, leasing or trade credit.
- Equity Financing - Through lenders, personal funds, family and friends or Partners

These two forms of financing are the most readily available capital financing modes in Africa. Ranging from private money lenders to the mushrooming micro finance institutions, there is now a big source of financing for small business people with big plans. The need for extra income has also spurred many gainfully employed people to invest in other people's business ideas as a way of earning a side income and this helps then ends up either as equity financing or debt financing.

The challenge with financing in Africa lies in:

1.The demand for security tends to be outrageous. Some banks require security in form of land titles or buildings owned before they can extend a grant of as low as US$ 2000. This makes it hard for the small businesses to raise cheap money to do business because when you look at the rates of the bank Vs those of the money lenders, the difference is more than 5 times. The only advantage of the money lender is that they do not usually have very stringent terms before lending you.

2.The lack of documentation makes it hard for one to get credit from the formal sector. A bank for example may require that you have certain documentation before it can lend you money.

### 4.1.6 SWOT Analysis

When you setup a business plan, often this plan does not operate in a vacuum. There are other external/internal factors which may impact your business. The key elements you identified as part of your business' s internal resources and key capabilities or issues must be matched or assessed against the external environment in which you business operates. The technique which helps you in this endeavour is a process called SWOT analysis. SWOT which stands for Strength, Weakness, opportunities and threats is, according to David and Robert (1998) the most familiar of all [business] performance assessment techniques. A scan of the internal and external environment is an important part of the strategic planning process.

***Definition***: Environmental factors internal to the firm usually can be classified as strengths (S) or weaknesses (W), and those external to the firm can be classified as opportunities (O) or threats (T). Such an analysis of the strategic environment is referred to as a SWOT analysis.

The online QuickMBA.com course on “Strategic Management” provides a SWOT analysis framework, shown below, and discusses what you may consider for your business in of the elements in the framework:

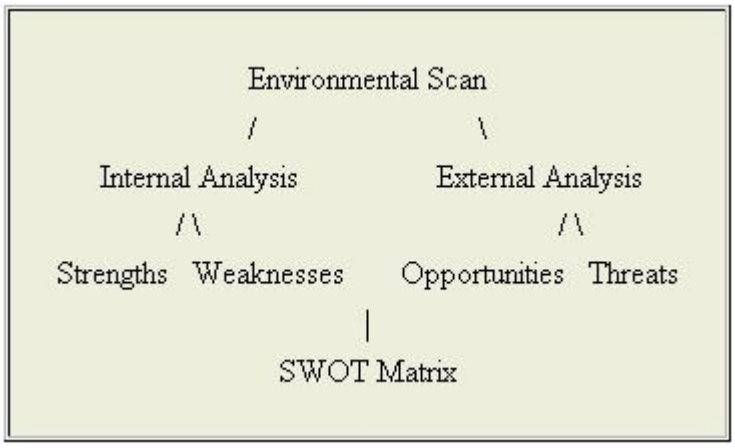



*Figure 1:compare with s.91, Kahraman, Grengiz: Fuzzy Multi-Criteria Decision-Making, Theory and Application, NY 2008.*

**Strengths**
A firm's strengths are its resources and capabilities that can be used as a basis for developing a competitive advantage. Examples of such strengths include:

- strong brand names
- good reputation among customers
- cost advantages from proprietary know-how
- exclusive access to high grade natural resources
- favorable access to distribution networks

**Weaknesses**
The absence of certain strengths may be viewed as a weakness. For example, each of the following may be considered weaknesses:

- lack of patent protection
- a weak brand name
- poor reputation among customers
- high cost structure
- lack of access to the best natural resources
- lack of access to key distribution channels

In some cases, a weakness may be the flip side of strength. Take the case in which a firm has a large amount of manufacturing capacity. While this capacity may be considered a strength that competitors do not share, it also may be a considered a weakness if the large investment in manufacturing capacity prevents the firm from reacting quickly to changes in the strategic environment.

**Opportunities**
The external environmental analysis may reveal certain new opportunities for profit and growth. Some examples of such opportunities include:

- an unfulfilled customer need

- arrival of new technologies
- loosening of regulations
- removal of international trade barriers

**Threats**
Changes in the external environmental also may present threats to the firm. Some examples of such threats include:

- shifts in consumer tastes away from the firm's products
- emergence of substitute products
- new regulations
- increased trade barriers

**The SWOT Matrix**
According to QuickMBA.com, a firm should not necessarily pursue the more lucrative opportunities. Rather, it may have a better chance at developing a competitive advantage by identifying a fit between the firm's strengths and upcoming opportunities. In some cases, the firm can overcome a weakness in order to prepare itself to pursue a compelling opportunity.
To develop strategies that take into account the SWOT profile, a matrix of these factors can be constructed.

- ***S-O*** strategies pursue opportunities that are a good fit to the company's strengths.
- ***W-O*** strategies overcome weaknesses to pursue opportunities.
- ***S-T*** strategies identify ways that the firm can use its strengths to reduce its vulnerability to external threats.
- ***W-T*** strategies establish a defensive plan to prevent the firm's weaknesses from making it highly susceptible to external threats.

State your competitive advantages and disadvantages with respect to the following:

- Change in technology
- Change in government regulations
- Change in the economy
- Change in your industry

### 4.1.7 Sales and Marketing

The sales and marketing divisions of a business have a very important role in securing cash through sales to keep the business vibrant.

- Role and responsibility of sales and marketing personnel
- Sales strategy and targets
- Role of sales personnel
- Market research of FOSS business potential, competition and self-assessment
- Distribution Channels
- Development of a “Preliminary” Marketing Mix

### 4.1.8 Operations Management

The operation of a company is the glue that pulls all the company divisions together for a common purpose.

- Role and responsibility of Operations
- Setting targets and building capacity
- Setting personnel and sales call scheduling
- Manage Inventory controls
- Compliance to ISO or other standards
- Compliance to privacy and other regulatory controls

### 4.1.9 Human Capital

The HR or personnel department is essential in building the necessary talent pool to perform all the functions of the business.

- Role and responsibility of HR professionals
- Recruitment strategy of suitable candidates
- Hiring and firing methodologies
- Specifications of job descriptions and salary levels
- Compliance rules for Labour Law, Fair Recruitment & Selection process
- Personnel professional development
- Personnel performance appraisal and organisational effectiveness mapped to business goals and strategy

## Module 4.1: ASSESSMENT

•**Assignment 1:** List and describe resources (business magazines, ministries, trade shows, Association etc.) in your country which are vital for establishing FOSS business in your country.
•**Assignment 2:** Using your knowledge in Module 4.1.2 identify and list accounting procedures in 3 companies you may know in your country.
•**Assignment 3:** Identify and describe the FOSS opportunities which exist in the market in your country.
•**Assignment 4:** Using the table below, describe the support structures in place in your country which support or finance ICT or any kind of enterprenural[3] initiative.

| Country | Support structures for finance | Example/Case |
|---|---|---|
| *eg. Republic of Gambia* | *Commercial bank, Chamber of commerce, '**Asusu**'[4]* | *Kumba enterprise obtained a loan of 2000$ to start Linux training in the Gambia* |
| ..... | ..... | ..... |

[3] Find some reference tor “Technology Incubators“ here: http://www.infodev.org/

[4] *Asusu* is a 'Fula' word describing a local form of banking where a group of closely knit friends contribute a fix amount every month and give it to a member of the group to start a business.

| | | |
|---|---|---|
| …… | …… | …… |
| …… | …… | …… |

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• **Exercise 1:** Using your knowledge in Module 4.1.3 and the case studies in **Modules 2.1 -2.7**, complete the table below by ticking where you think the complete information is complete.

| **Business Plan Score Sheet for Case Studies** | | | | | |
|---|---|---|---|---|---|
| Company | Executive Summary | Company Description | Mission Statement | Company goals & objectives | FOSS market opportunities |
| OpenWorld | | | | | |
| GIS GlobalImage | | | | | |
| FutureSoft Resources | | | | | |
| Linux Holding | | | | | |
| Linux Solution | | | | | |
| Amest Santim | | | | | |
| CenFOSS | | | | | |
| | | | | | |

(a)**Exercise 2:** List and identify 5 FOSS services and 5 FOSS products commonly used in your country or region
(b)**Exercise 3:** Based on your knowledge of SWOT analysis in Module 4.1.7 develop a matrix for a FOSS company you may know in your country.
(a)**Exercise 4:** Develop sales and marketing plan for a particular FOSS solution (database system, CMS, etc) using your local market as the target for business.
(b)**Discussion:** Possible means of overcoming the barriers to entry to market listed in Module 4.1.3?

## Module 4.2 Defining Target Market

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### Duration:

0:45hrs

### Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures and group and individual exercises as a major means of delivering this module.

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## Introduction

The current market downturn demonstrates that one of the most fluid aspects of the world's economy and indeed the economies of individual nations is the market. Defining a target market is like defining a moving target. As Module 4.1 established some basic foundations necessary to start a business, this module builds on those concepts to list some steps, based on expert experience, to help news businesses define a niche for their markets and products.

## 4.2.1 Five Steps to Defining Your Target Market

Is your target market "anyone who will pay you for your product or services?" or are you focusing your efforts on a tightly defined market niche with an identified need for your business' offerings? If it's the former, you will do well to define your target market.

- Briefly state your target market and the needs you will be fulfilling: Ask yourself why you choose this particular business, which your products/services are meant for, who you want to do business with, and what is unique about your product. Let's say you are planning to sell products used in automotive detailing. You decide that vehicle owners are your broad target market. Your business will help them keep their vehicles clean and shiny.
- Next, break this large market down into smaller sections (segmentation): There are people who restore classic automobiles. There are people who drive an old clunker and run it through the car wash occasionally. There are people who own "status" automobiles. There are truck owners, motorcycle owners. Your job is to consider various subgroups and decide upon your niche market. Remember, there are auto owner who don't care about keeping the vehicle clean and shiny. Then there are those who care, but lack the time and the interest to do the work themselves. They take their vehicle to a shop. Others only worry about auto detailing when it is time for a trade in. You reject these segments as unsuitable for your niche market. After consideration, you decide that your market segment will be automobile owners who have both the time and the interest to do their own detailing work -- people who enjoy puttering with their vehicles, who have the time to spend, and who take pride in their vehicle's appearance. Do you think that there are enough potential customers in that group to support your business? Are you supplying a service that is not readily available to them from other sources? If yes, move to step three.
- Develop your customer profile: Describe your potential customers as fully as you can. What do you know about them? Where are they situated geographically? What do they spend on car detailing? What are they likely to spend? Where do they shop? What is their annual income? What languages do they speak? What kind of automobiles do they drive? If you are selling online, what methods do they prefer for online payment? What type of web sites do they visit? How do they want their product delivered? Identify your customer profile before you do your market planning.
- Now that you have fully identified your target market, do your research to verify that there will be enough business in this group to support your company in its growth. This is where you verify that the need actually exists, and was not "wishful thinking" on your part. Use both primary and secondary sources in your research. You might consult business directories, obtain statistics regarding automobile owners and their car care practices, locate newspaper articles and magazine stories written on the subject, or conduct your own research using market research techniques such as surveys, focus groups, online searches, etc.
- Lastly, do research to determine the market size and your potential market share.

In other words, use primary and secondary sources to find out how many potential customers there are in the geographic area you have defined, and how many businesses are directly or indirectly competing with you. Your market share will be the number of customers that are likely to buy from you rather than your competition.

Having defining your target market as described by (Campbell, 2000), you are now better positioned develop a marketing plan that will reach your potential customers and perhaps your sales will start to rocket immediately.

### Module 4.2: ASSIGNMENT

(a)**Assignment**: Write an essay of 200-350 words describing the status of the FOSS market in your country.

## Module 4.3 Leadership

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### Duration:

0:45hrs

### Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures and group and individual exercises as a major means of delivering this module.

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### Introduction

### Definition

Leadership is the ability to lead a group of followers effectively, make them and the organization successful, and still maintain valid principles and ideals.

Leadership plays a vital role in business. The character and approach of people holding responsibility in any business can make an immense impact on the success of the business. A lot of discussions on effective leadership in business is the subject of may business analysists (Adair (1988), Kotte (1991), Authenticity Consulting) . In this module we'll reflect on what leadership is all about and how good leadership is vital for the success of any FOSS business.

Leaders must have followers to be successful, and they must know how to treat the followers to ensure their success. They should have values that are consistent with high moral and ethical standards, and they should know how to motivate others effectively.

In a leadership without management situation, the leader or manager sets the direction or vision that the company or other employees should follow, without considering too much how the new direction is going to be achieved. Other people then have to work hard in the trail that is left behind, picking up the pieces and making it work. In a management without leadership situation, on the other hand, the leader controls resources to maintain the *status quo* or ensure things happen according to already-established plans. For example, a referee manages a sports game, but does not usually provide "leadership" because there is no new change, no new direction - the referee is controlling resources to ensure that the laws of the game are followed and *status quo* is

maintained. In an ideal company situation a good managing director or CEO will combine leadership with management. However, the company's organizational structures can be setup in such a way that the manager can dedicate duties and responsibilities to various individuals in the company.

### 4.3.1 Leadership and management:

All businesses require professional leadership setting the vision and targets of the business. The personality style of the company management directly impacts the bottom line of all businesses. Key components include:

- Setting and managing specific and measurable business and personal goals
- Consultative process of creating the business and marketing plans
- Employ time management systems
- Prioritizing the needs of the company and measure the strategic goals to milestones and targets
- Establishing effective leadership communication style
- Motivating staff for business success
- Setting sales targets and performance benchmarks
- Building effective relationships
- Establish work plan and task delegation
- Create proactive conflict resolution styles and coping mechanisms to deal with difficult employees and customers
- Fostering a productive and positive work environment

### 4.3.2 Types of leadership styles

One dimension of has to do with control and one's perception of how much control one should give to people. The laissez-faire style implies low control, the autocratic style high control and the participative lies somewhere in between.

The Laissez-faire Leadership Style

- The style is largely a "hands off" view that tends to minimize the amount of direction and face time required. Works well if you have highly trained and highly motivated direct reports.
- The Autocratic Leadership Style
- The style has its advocates, but it is falling out of favor in many countries. Some people have argued that the style is popular with today's CEO's, who have much in common with feudal lords in Medieval Europe.
- The Participative Leadership Style
- It's hard to order and demand someone to be creative, perform as a team, solve complex problems, improve quality, and provide outstanding customer service. The style presents a happy medium between over controlling (micromanaging) and not being engaged and tends to be seen in organizations that must innovate to prosper.

### Module 4.3: ASSESSMENT

(a)**Assignment:** Sketch the organizational structure of a known FOSS company in your country. Clearly state the roles (directors, managers, sales, developers, customer relations officer, etc)
(b)**Discussion 1**: Does a FOSS-based company require a different leadership style than a traditional manufacturing company?
(c)**Discussion 2**: Using your knowledge of the Linux community structure in Module 1.3.1 is Linus Torvalds' role as a benevolent dictator of he Linux kernel community a suitable role to replicate in a FOSS company in Africa.

## Module 4.4 Organizational Structuring

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### Duration:

1:00hrs

### Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures, role play and group and individual exercises as a major means of delivering this module.

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### Introduction

Management sciences and organizational theories websites (e.g. Learn management2.com and Orchart.co.uk) posits that the structure of an organization, business or otherwise, plays a vital role for the success of any business. Organisations are structured in a variety of ways, depending on their objectives and culture. The structure of an organisation will determine the manner in which it operates and it's performance. Structure allows the responsibilities for different functions and processes to be clearly allocated to different departments and employees.
The wrong organisation structure will hinder the success of the business. Organisational structures should aim to maximize the efficiency and success of the organisation. An effective organisational structure will facilitate working relationships between various sections of the organisation. It will retain order and command whilst promoting flexibility and creativity.
Internal factors such as size, product and skills of the workforce influence the organizational structure. As a business expands the chain of command will lengthen and the spans of control will widen. The higher the level of skill each employee has the more the business will make use of the matrix structure to maximize these skills across the organization.

***Definition***: The term ***Span of Control*** is used to describe the number of employees that each manager/supervisor is responsible for. The span of control is said to be wide if a superior is in charge of many employees and narrow if the superior is in charge of a few employees.

### 4.4.1 Types of Organizations

The most common organisation structures as described by learn management2 are:

#### 4.4.1.1 Tall Structure Organisation

As discussed in Learn Management2,a tall organisation has many levels of management and supervision. There is a “long chain of command” running from the top of the organisation down to the bottom of the organisation (eg Chief Executive to shop floor worker). However, tall structures rarely exceed 8 levels of management. This is firstly because the number of layers (i.e. management levels) decreases the span of control. Secondly the disadvantages of the tall structure begin to outweigh the advantages of a tall structure. However, tall organizations have their own advantages and disadvantages, according to Innovative Business Resource (page 4).

| Advantages of tall Organizations | Disadvantages of tall Organizations |
|---|---|
| There is a narrow span of control i.e. each manager has a small number of employees under their control. This means that employees can be closely supervised. | The freedom and responsibility of employees (subordinates) is restricted. |
| There is a clear management structure. | Decision making could be slowed down as approval may be needed by each of the layers of authority. |
| The function of each layer will be clear and distinct. There will be clear lines of responsibility and control. | Communication has to take place through many layers of management. |
| Clear progression and promotion ladder. | High management costs because managers are generally paid more than subordinates. Each layer will tend to pay it’s managers more money than the layer below it. |

#### 4.4.1.2 Flat Structure Organisation

In contrast to a tall organisation, a flat organisation will have relatively few layers or just one layer of management (Innovative Business Resource). This means that the “Chain of Command” from top to bottom is short and the “span of control is wide”. Due to the small number of management layers, flat organisations are often small organisations.

| **Advantages of flat Organisations** | **Disadvantages of flat Organisations** |
|---|---|
| More/Greater communication between management and workers. | Workers may have more than one manager/boss. |
| Better team spirit. | May limit/hinder the growth of the organisation. |
| Less bureaucracy and easier decision making. | Structure limited to small organisations such as partnerships, co-operatives and some private limited companies. |
| Fewer levels of management which includes benefits such as lower costs as managers are generally paid more than worker. | Function of each department/person could be blurred and merge into the job roles of others. |

### 4.4.1.3 Hierarchical Organisation

In a hierarchical organisation employees are ranked at various levels within the organisation, each level is one above the other. At each stage in the chain, one person has a number of workers directly under them, within their span of control. A tall hierarchical organisation has many levels and a flat hierarchical organisation will only have a few.
The chain of command (ie the way authority is organized) is a typical pyramid shape. A traditional hierarchical structure clearly defines each employee's role within the organisation and defines the nature of their relationship with other employees. Hierarchical organisations are often tall with narrow spans of control, which gets wider as we move down the structure. They are often centralised with the most important decisions being taken by senior management. In the twentieth century as organisations grow bigger, hierarchical organisations were popular because they could ensure command and control of the organisation. However with the advent of globalisation and widespread use of technology, in the 1990's tall hierarchical organisations began to downsize and reduce their workforce. Technology was able to carry out many of the functions previously carried out by humans.

| Advantages of Hierarchical Organisations | Disadvantages of Hierarchical Organisations |
|---|---|
| Authority and responsibility and clearly defined. | The organisation can be bureaucratic and respond slowly to changing customer needs and the market within which the organisation operates. |
| Clearly defined promotion path. | Communication across various sections can be poor especially horizontal communication. |
| There are specialists managers and the hierarchical environment encourages the effective use of specialist managers. | Departments can make decisions which benefit them rather than the business as a whole especially if there is Inter-departmental rivalry. |
| Employees very loyal to their department within the organisation. | |

### 4.4.1.4 Centralised and Decentralised Organisation

Learn management2.com noted that, in a centralised organisation head office (or a few senior managers) will retain the major responsibilities and powers. Conversely decentralised organisations will spread responsibility for specific decisions across various outlets and lower level managers, including branches or units located away from head office/head quarters. An example of a decentralised structure is Tesco the supermarket chain. Each store of Tesco has a store manager who can make certain decisions concerning their store. The store manager is responsible to a regional manager.
Organisations may also decide that a combination of centralisation and decentralisation is more effective. For example functions such as accounting and purchasing may be centralised to save costs. Whilst tasks such as recruitment may be decentralised as units away from head office may have staffing needs specific only to them. Certain organisations implement vertical decentralisation which means that they have handed the power to make certain decisions, down the hierarchy of their organisation. Vertical decentralisation increases the input, people at the bottom of the organisation chart have in decision making.
Horizontal decentralisation spreads responsibility across the organisation. A good example of this is the implementation of new technology across the whole business. This implementation will be the sole responsibility of technology specialists

| Advantages of Centralised Structure For Organisations | Advantages of Decentralised Structure For Organisations |
|---|---|
| Senior managers enjoy greater control over the organisation. | Senior managers have time to concentrate on the most important decisions (as the other decisions can be undertaken by other people down the organisation structure. |
| The use of standardised procedures can results in cost savings. | Decision making is a form of empowerment. Empowerment can increase motivation and therefore mean that staff output increases. |
| Decisions can be made to benefit the organisations as a whole. Whereas a decision made by a department manager may benefit their department, but disadvantage other departments. | People lower down the chain have a greater understanding of the environment they work in and the people (customers and colleagues) that they interact with. This knowledge skills and experience may enable them to make more effective decisions than senior managers. |
| The organisation can benefit from the decision making of experienced senior managers. | Empowerment will enable departments and their employees to respond faster to changes and new challenges. Whereas it may take senior managers longer to appreciate that business needs have changed. |
| In uncertain times the organisation will need strong leadership and pull in the same direction. It is believed that strong leadership is often best given from above. | Empowerment makes it easier for people to accept and make a success of more responsibility. |

### Module 4.4: ASSESSMENT

(c)**Assignment:** Present and discuss the organizational structure of a know FOSS company in your country
(d)**Discussion**: From you understanding of the organizational structures described in this module, list and discuss the ones you think are applicable to your company or the African context

## Module 4.5 FOSS Proposals and Contracts

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### Duration:

1:00hrs

### Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures, role play and group and individual exercises as a major means of delivering this module.

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## Introduction

The terms and conditions of standard Bid Proposals for IT services can be a serious barrier for FOSS business. Most IT bid documents are prepared by the commercial software sales; which provide commercial only software solutions into the bid documents. The procurement departments of large companies and governments do not have the in-house expertise or access to alternative specifications which results in a very queued set of tender documents. Contract bidding on tenders need to be scrutinized as any blatant bias against FOSS specifications. Businesses and managers need to be alert and develop understanding of the processes and procedures (laws, guidelines, obligations, compliance etc.) governing business in their respective countries. Thus, there is an urgent need for FOSS-SMEs to have the knowledge needed to help them understand contract proposals, what elements/clauses/terms of reference are in most proposals which may inhibits FOSS based SMEs for successfully bidding for contracts. Furthermore, as most bid proposals are not aimed at companies offering FOSS products and services, this module leverages knowledge and skills in previous modules (Module 1 and 2, in particular) to help FOSS based SMEs to push forth and negotiated with contractors to consider including clauses and terms in bids which do not discriminate against FOSS products and services.

However, in the African context, most ICT oriented bids come from outside the continent, albeit with a low success rate in winning such contracts. Outsourcing from IT intensive countries provide opportunities to lower cost countries to bid on contracts. In some cases preferred purchasing policies from the EU and elsewhere provide windows of opportunities for developing countries to bid on IT contracts to *help these countries diversify their economic base away from low technology hinterlands*[5]. A wide gulf exists between first world and third world IT services, in fact, most of the IT services offered in the world have their origin in Africa and the bulk are from South Africa.

A concerted effort needs to be made to position local FOSS companies so they can compete for calls for proposals with other companies both within their respective countries and with companies abroad.

The challenge remains for very small companies to provide the proof of talent, management, capital, bid bonds and ability to prepare the bid proposals and the lobby capacity to secure contracts.

### 4.5.1 Knowledge on Proposals Writing

A business proposal in essence is a written document produced for a prospective client who wants to procure services. According to the Wikipedia, proposals can take one of three formats, namely:

- Formally requested proposals - these are written responses to published requirements
- Informally requested proposals - these are the interactions between a client and a service provider
- Unrequested proposals - these are like marketing brochures

For the purpose of this subsection, we will consider informally requested proposals in relation to providing FOSS training. You, the prospective service provider should ask as many questions as possible, to ensure that your proposal meets the requirements. Some pointers to keep in mind when drawing up a proposal:

- Study the market for similar services by either visiting websites of competitors and/or requesting them to provide you with information/quotes.

[5] A case study with examples of outsourcing can be found in **Module 2.3**

- Ask around and solicit information from friends and colleagues who might have undertaken similar work.
- Ask as many questions as possible from the prospective client as pointed out above; make a list of questions to be answered.
- Circulate a draft of the proposal amongst colleagues or even friends to provide comments

The following could be some of the headings for a training proposal.

**Preamble**

The preamble sets who the parties are. Each party could be described in one or two sentences.

**Your Capabilities**

Indicate in this section what you are capable of. Indicate whether you have done similar work before and expand on your experience. This might also be an opportunity to provide some testimonials or indicating clients you have worked with.

**Training Objectives**

The training objectives will be formulated on the basis of information provided by the client; why they want to do the training. This will ensure that there is an agreement on what should be achieved.

**Training Content Outline**

Provide in detail what will be covered on the course. You might also want to indicate whether or not there are any prerequisites for the courses.

**Training Schedule**

Outline when what will be covered, where the breaks are located in the training, starting and finishing time.

**Certification/Accreditation**

Indicate whether the course is accredited and what type of certificate participants will receive. This might also be the place to discuss:

- Whether there will any assessments and if so, is it internal or external
- Whether or not participants might be able to sit for international examinations

**Training Cost**

The training cost will take in consideration, the following:

- The cost of using a training venue.
- Travelling to and from the training venue.
- The production of course material; if it should be developed then the cost will naturally be higher.
- The cutting and labeling of CDs.
- Preparation of the training.
- Support and monitoring.
- Refreshments.
- Any examination fees.

- Do you have to hire equipment?
- Accommodation if the training is out of town.
- Inclusion of Value Added Tax (VAT in the case of SA)

Also, indicate whether there should be a minimum or maximum number of participants.

**Payments**

Provide the prospective client with a payment schedule. Generally, the idea is to request 50% up front of the total training cost; 25% half way through the training and 25% when you deliver the report. Also, include the validity period of the training proposal. Include pertinently the period of notice you require before training could commence.

**Responsibilities**

Outline any responsibilities between the client and you.

These could include items such as that the client will be responsible for:

- Recruiting the participants and ensuring that they meet the requirements.
- Arranging accommodation for participants.
- Arranging transport for participants.
- Your responsibilities could include responsibilities such as:
- Facilitating sessions in a professional way.
- Producing an interim report after a training session

**Appendix**

This is the place where you could provide a profile of your company.

### 4.5.2 Company Profiling

A company profile presents a concise outline about a company, its mission, objectives and goals, and a highlight of its achievements to date. The company profile identifies the best qualities of your company. For instance, the quality of your products and, or services and a few unique features. It should be written in a fashion that gives the reader an idea of the company's personality. For a FOSS company it will have to emphasise the specific value to the customer and distinguish itself from commercial products. As many FOSS companies in Africa may be relatively new compared to their commercial product counterparts, the profile may have to be beefed up using the business plan or strategic plan. In other words where the past performance history is short; the statement of intention would be used instead.
An eye-catching and refined professional profile will provide the reader with a thorough understanding of your company's vision and mission, the products and services you offer, your USP (Unique Selling Proposition), your credibility and your history.

A sample online company profile of Sabinet Online Ltd based in South Africa (http://www.sabinet.co.za/)

| Company Profile : Sabinet Online Ltd - http://www.sabinet.co.za/ |
| --- |
| With a sound track record of 25 years, Sabinet Online Ltd, trading as Sabinet, has pioneered and become an established leader in the facilitation of high-level access to trusted electronic information. Our clients include public and private organisations, as well as academic institutions in South Africa, the USA and the |

rest of Africa. Our offerings are characterised by global partnerships and information best practices that straddle the physical and electronic worlds.
Our offerings are characterised by global partnerships and information best practices that straddle the physical and electronic worlds.
To meet the unique information needs of our diverse client base in this rapidly growing market, we combine specific elements from our broad portfolio of products to create a total solution, so aiding research and decision making, and assisting organisations to improve services, save costs and increase productivity.
Bringing it all together!
**The focus for Sabinet:**

- Information Access by obtaining the full-text of the best or most frequently requested local content.
- Access to online references, abstracts, and full-text documents, supported by electronic document procurement, and an alerting service.
- Library Support through library acquisitions and cataloguing, interlending, and retrospective conversion.
- Information Management with specialist consultation, support, electronic publishing, and software.

International alliances
Sabinet is well placed in the global online information market, and maintains good relationships with a number of partners.

The company also holds a number of distributorships, which it manages to the benefit of its users, including:

- A number of products from Online Computer Library Center, Inc. (OCLC) a worldwide library cooperative for the location, acquisition, cataloguing, lending and preservation of library materials;
- IngentaConnect a company renowned for its publishing services and collection of scholarly research materials;
- Nielsen BookData a provider of bibliographic data; and
- Infotrieve's Ariel transmission software

FOSS is still a new concept and model in most places. It is therefore important that the company profile of a FOSS company is kept free from technical or obscure terminology. Specialised terminology or jargon poses serious communication barriers. The company profile seeks to disseminate information aimed at attracting potential FOSS customers and supporters. Avoiding jargon is vital in facilitating comprehension and retention of interest of the reader. The highlights in the profile should reflect company values. For example inclusion of comments from existing client shows commitment to customer service and value. On the other hand mentioning the employees who have made special contributions or achieved outstanding results shows your commitment to employee satisfaction and motivation as well as dedication to client satisfaction.

### 4.5.2.1 Why make a company profile?

Important as it is, many companies have invested a lot of effort in making a good profile. But why devote a lot of time and effort in writing a company profile? The basic idea in creating a company profile is to briefly and concisely introduce a company to a target customer audience or stakeholder group. Important stakeholder groups include potential investors, customers, and new employees. The goal may be to make the company attractive to potential investors, to market the products and services of the company by showcasing past performance and track record or new employees to aid growth and expansion of the company. The flavour of the company profile you make and send out to interested parties provides them with a bird's-eye view of information relevant to their interest in your company, creates expectations and provides a glimpse as to how these expectations will be fulfilled by the company.

### 4.5.2.2 What should you put in a company profile?

There are a few basic elements of content that every company profile must contain (See HowToDoThings in the reference section). While you can make specific profiles aimed at a specific group of people, say investors, for example, the information contained in such a profile may not have much relevance to other segments or groups such as customers or employees. A better alternative is to make a general company profile that includes sections highlighting relevant information specific to a certain segment, but also providing an overall view of the company's ethos and principles. Such a company profile should include an introduction, brief history on the origins of the company, relevant data on the company in terms of income, revenue, structure, infrastructure and resources, products, professional experience, capacity, future plans, both in the short and long terms, testimonials from existing customers, employees and major investors and a mission statement or a 'guiding philosophy' for the company.

### 4.5.2.3 Presentation and length of a company profile

As an indicator about the healthy prospects and future of your company, a profile should be professionally created. A good profile must be built on a professional layout, *must have no errors and if it is designed as a brochure,* it is preferable to get it professionally made using quality paper, printing and structuring. As a page on the website, it should be attractive in appearance, immediately catching a reader's eye, interspersed with relevant pictures and sub-headings. The length of the profile will depend upon the information you wish to provide, but a good rule of thumb relating to the length is about 10-15 pages. Any more might actually bore the reader and become a waste of efforts and any profile shorter might indicate a weak position and make the reader question the company's potential.

### 4.5.2.4 When to use the company profile?

The answer to this question is any time. Don't make a company profile only because you want to woo potential investors or customers. Rather, once you have been in business for more than a couple of years, prepare the company profile and keep upgrading it at least once a year and make sure to keep adding achievements and growth prospects as and when they happen.

Making a company profile is a simple and easy task for anyone who has been in the business for some time. If it is a ***new business***, you would have made a business plan (as discussed in module 4.1.3) to begin with, a company profile is just an extension of that business plan, the only difference being that you are presenting actual facts of achievements rather than projections for success as you would in a business plan.

A company profile can be a slick and colourful brochure detailing information or it can be a web page on the company's website, usually referred in sections titled "About Us" or "Who are we", etc. Follow the guidelines listed below to prepare your own company profile and how to use it to promote your company.

### 4.5.2.5 What do you need to include in your professional profile?

What you need to include in your professional profile is exactly what you need to accomplish in your business. The following pointers are useful in this regard.

- It needs to tell your company's story in a way that effectively engages your audience.
- It needs to be creatively crafted, well written and professionally polished.
- It needs to be about the heart and soul of your company. Your professional profile needs to tell your readers what your business is all about.

- It needs to tell the story of your company's vision and mission. What are the dreams you have for your company? What is the purpose of your company?
- It needs to be about how your company began, how it grew and what it is today. Why did you start your business? How did it begin?
- It needs to include key personnel. If you are not the only key player in your company, include a few tidbits about the others. Who are your managers or other key players? What roles do they play?
- It needs to include product and service descriptions. What types of products and services do you offer and how do these help your visitors solve their problems?
- It needs to include a sense of the culture surrounding the business
- It needs to be honest. You need to be honest to establish credibility.
- It needs to be attention-grabbing

### 4.5.2.6 The Professional Profile Writing Tips

1. Before you begin to write your profile, write down a short outline showing your personal qualifications and your business accomplishments. Be precise and specific towards in this process. Include everything that shows off the professionalism of your company and your staff. It is useful at times to use brainstorming or mind mapping software to organise your thoughts. FreeMind is a good piece to use for this task and can be downloaded at http://sourceforge.net/projects/freemind/. In her “Writing Your Professional Profile - 7 Tips to Creating a Polished Professional Profile”, Anita Aspen enumerated these tips on writing a good profile, which can be useful both from a company and individual perspective:
2. Use strong, descriptive words. You want the final profile to be short yet powerful. You are looking to grab the readers’ attention so make it strong and definitive.
3. As you sit and write your profile, you will want to include a brief mention of the type of clients you work with, as many clients like to know who else they may be dealing as well as you.
4. Include any awards or recognitions you or your business may have received. Credential such as these signify to others the high quality of your work. You will also want to make sure you include any associations you may belong to for these connections can go a long way in establishing credibility.
5. Writing a company profile is similar to writing a personal profile in that you have to make sure you spell out the facts for the readers. If you hold a certification in a particular field, don't assume that the reader will know what that acronym stands for. Spell it out so your readers are clear as to what you are qualified in. The whole purpose in writing a professional profile is to gain more contact, associations and clients so be clear and precise.
6. It is best to write a company profile in your own words, coming from your heart. You know your business better than anyone else and no one is going to describe it better than you.
7. Once you have the rough draft done, take a second look at it. Take out anything you feel is not imperative for your reader to know, spice up any parts that are lacking and read it one more time. Once you are at this point, it's a perfect time to have it proofread and edited either by a reliable friend or colleague or a professional writer.

## Module 4.5: ASSESSMENT

(a)**Exercise 1:** Write down and present to the class 5 Tips for doing FOSS business in your country
(b)**Exercise 2:** Write down and present to the class 7 tips for wining FOSS contracts in your country
(c)**Exercise 3:** In the introduction to this module, there is a call for **"***a concerted effort to be made to position local (African) FOSS companies so they can compete for calls for proposals with other companies both within their respective countries and with companies abroad.* List at least 5-10 efforts African IT-Based SMEs need to do in this regard
(d)**Exercise 4:** Answer and Discuss the following questions

1. What are the pre-requisites to establishing a business?
2. What are the various business start-up options?
3. What are the major obstacles to service provision?
4. What are the key components of a business plan?
5. What are the challenges in securing government business?

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## Assignments and Answers

### TASK

•Develop an organizational profile indicating your capacity to deliver FOSS Training and Consultancy services to your target market.

•Explain at least one way a cash flow statement can be deceptive

# MODULE 5: FOSS BUSINESS KNOWLEDGE AND SKILLS

## Introduction

In essence, operating a FOSS business does not differ from operating any other business. The same basic principles do apply in terms of understanding user needs; project and product implementation; service delivery and support. There are however differences. It is often experienced by FOSS service providers, that potential clients are so used to (or locked in) to proprietary solutions, that challenges exist convincing potential clients of the value and merits of FOSS solutions. Furthermore, FOSS development harnesses the volunteer contributions of geographically distributed community of developers and users. This may mean that companies doing business in FOSS have to rethink and develop specific skills to deal with FOSS communities.
However, many FOSS users and potential clients are not technical savvies and simply want a complete solution. As demonstrated in Module 2.2.3.3, there is a need for business not to focus on the solution alone, but also educate their clients. Educating the client is more than just training [Module 6] or delivering/displaying documentation, but education in what the FOSS concept [Module 1] is all about. Thus, beyond community involvement, specific skills are also required by FOSS service providers to engage with potential and existing clients (some potential FOSS clients (eg. NGO, Governments) are discussed in Module 3), in order to be able to service these clients. This module leverages (your - the trainee) general business skills covered in Module 4 and applies them to discuss how FOSS business may be different from other types of businesses, community building and networking (as an extension of Module 1.3 on “Evolution of FOSS Communities and Software Markets”), strategies employed by FOSS businesses, and FOSS based innovation.

## Learning Objectives

1.To understand the main differences between running a FOSS business and running a proprietary software business, as well as non-software types of service businesses.
2.Be familiar with the strategies of cooperation and coopetition that are typical for FOSS.
3.Know the specific challenges in marketing FOSS, and how to overcome them.
4.Have a basic understanding of the role of innovation in FOSS business.

## Authors and Trainers:

**Pool of African ict@innovation expert trainers**

| | Name Module | Name |
|---|---|---|
| **Module 5** | FOSS Specific Business Knowledge and Skills | Arnold Pietersen,<br>Derek Lakudzala,<br>Frederick Yeboah,<br>Kofi Kwarko,<br>Shirley Akasreku<br>**More Trainers per country in full Pool of Trainers**<br>http://www.ict-innovation.fossfa.net/wiki/public-wiki/course-advanced-african-foss-business-models/FBMTrainers |

**Main contributors**

| | |
|---|---|
| **Module 5** | Sulayman K. Sowe (**Facilitator**), Foibe Kalipi, Thomas Jonas, Glenn McKnight, Nico Elema, Derek Lakudzala, Alex Gakuru |

Additional material for **Module 5: FOSS BUSINESS KNOWLEDGE AND SKILLS** (presentations, tests, evaluation forms, pool of trainers, derived material) is available online at:
**http://www.ict-innovation.fossfa.net/node/4252**

## Sessions and Timetable

The entire content in this module is estimated to be delivered in 1 day, with some variations within the modules. For instructional purpose, the content of this module can be delivered as proposed in the summarized table below.

| | |
|---|---|
| 9:00 – 10:30 | ***Completion of Module 4*** |
| 10:30 - 10:45 | Coffee Break |
| 10:45 - 12:15 | • How is FOSS business different |
| 12:15- 13:30 | Lunch |
| 13:30 - 15:00 | • FOSS Communities<br>• Competition, Cooperation Coopetion |
| 15:00 - 15:15 | Coffee Break |
| 15:15 - 17:00 | • Marketing FOSS<br>• Service Management |
| | ***Next day, where necessary*** |
| 9:00 – 10:30 | • Innovation in FOSS Business<br>• End of Module Evaluation |
| 10:30 - 10:45 | Coffee Break and start of Module 6 |

# Module 5.1 How FOSS business is different from other types of business

## Duration:

0:45hrs

## Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures, role play and group and individual exercises as a major means of delivering this module.

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## Introduction

For a company, revenue streams may mean the range of services or products which brings income for the company. Wikipedia defines a revenue stream as 'methods' a company uses to collect money from the users of its product. Thus, revenue streaming can be viewed as and a combination of methodologies, techniques, or means a company uses to get income from selling goods and services to its customers. Therefore, it is not just sufficient that a company produces or customizes FOSS solutions, but appropriate and innovative techniques needs to be developed to market those services so that the company is able to generate income to support continuous developments and improvement of those services. This module harnesses business experiences in module 4, combined with some basic understanding of the FOSS environment (Module 1) to introduce revenue streams and the activities a company may follow which have an added value. In order to get high returns and generate revenue, a company needs to establish a healthy working relationship with its clients. This module ends by addressing vendor-client relationship which is so vital in developing and improving revenue streaming.

## 5.1.1 Revenue streams

The most obvious difference between doing business with proprietary software and doing business with FOSS is that a FOSS company will usually not make money by selling licenses. Business models based on dual licensing are an exception in this case. However, this difference is not as significant by far as it would appear. For example, proprietary packaged software in the United States accounts for less than 10% of software developers employed (FLOSSImpact, 2006).

According to findings from the FLOSSImpact study, when re-selling licenses for proprietary software, most businesses only make single-figure profits (i.e. below 10% of the license price). The rest of the client's money ends up with the original seller of the software, quite frequently leaving the country and the continent for the US or Europe. The buying power of this money will effectively be lost for your business.

The absence of licensing costs has various effects:

- Your business is able to draw on a large supply of high quality software components free of charge. You will be adding value by configuring those components and making them work together, rather than by developing them from scratch.

- when your client's choice is between a solution based on proprietary software and a solution based on FOSS, the lack of license fees means that almost all of your client's budget can go towards paying the services you provide. This is money which your business will keep, as opposed to spending a substantial share of it abroad to cover license fees.

### 5.1.2 Targeting activities to add value

When working with FOSS, you can focus all of your business' resources on those activities that add value to your product or service. If you are putting together a FOSS solution, you will usually be able to draw upon a large number of ready-made libraries and software packages. You will put your expertise to work in at least some of the following fields:

- designing the solution
- selecting the appropriate software packages
- making them work together
- customise them for your client's needs
- setting up the new solution
- managing the client's migration to the new solution
- training users and system administrators to work with the new solution
- ongoing maintenance and support contracts
- These activities translate into at least the following business models. For further discussions on these models, see Module 2.9.
- Training
- Customisation
- Technical support
- Maintenance
- Customization

All of these services can be provided on a one-off basis, or can be sold to the client as a subscription. The need for FOSS-related services is an important business opportunity for you. It is also an important opportunity for local economic development.

### 5.1.3 Vendor-client relationship

In FOSS, all important components of a program - executable code, source code and documentation - are usually publicly available. This means that clients have the possibility to inform themselves about the software they might need, and gives them the opportunity to better judge the solutions that your business is offering. This allows for a much more equitable relationship between vendor and client. This relationship in turn means that the client is more likely to get exactly the solution she is asking for. Ideally, this leads to greater satisfaction on the client's part, laying the basis for a long-term business relationship. In sum, it might be helpful to consider yourself not as a software provider, but as a service business. Much like a car mechanic or a

hairdresser, you are selling your time rather than any particular product, and you get paid at the level of your skills.

## Module 5.1: ASSESSMENT

•**Exercise 1:** Spend five minutes browsing the following websites:

1. http://support.novell.com/linux
2. http://www.arimaan.com/technology/opensource.html
3. http://www.siriusit.co.uk/
4. http://www.lomboz.org/web/guest/support

For each website list down the main business activities

1. Identify the clients/customers and
2. organizations using the products

•**Exercise 2:** Look at the case studies in **Module 2.1 – 2.7** and identify the different revenue streams of each company described there.

Add those revenue streams to this module as "***information"***.

•**Exercise 3:** A client asks you to build a mail system for his enterprise, which employs ten people, including a mail server and desktop clients. He wants to be able to administer the easier aspects of this system himself. Go online to identify which existing FOSS components you can use to build the system.

•**Discussion and Assignment:** Discuss Canonical as the commercial sponsor of Ubuntu.

- List as many revenue streams of Canonical as possible
- In "***Beyond Ubuntu: Canonical Pursues New Revenue Streams***" Joe Panettieri discussed how Ubuntu is using grid computing as a new form of revenue stream. Does this mean that Canonical will generate less money in providing support services for the Ubuntu GNU/Linux operating system?

Write down your answer

…….
.....
.....
.....

# Module 5.2 FOSS Communities

## Duration:

1:00hrs

## Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures, role play and group and individual exercises as a major means of delivering this module.

## Introduction

Perhaps the most important aspect of a FOSS community is that it is a reservoir of knowledge and skills, which community members are usually happy to pass on to others. FOSS communities are partners-in-business, a place to turn to when you company runs into problems in developing or customizing a particular product, a place where you can promote your company (See the case of "Future Software Resources Nigeria Ltd." in Module 2.3), and Bazaars of learning (Sowe, et. al., 2008) where you (the company) will learn in proportion to the degree to which you get involved in a community. Doing business in FOSS context means learning to forge a symbiotic relationship with a host of FOSS communities, Linux user groups (LUGs), FOSS advocacy groups (Module 3.2), and other partners in the business. So vital are these sectors to any FOSS business, this module builds on one of the objectives of Module 1 - "Understand and appreciate how FOSS projects and communities work" - to give a synergistic review of FOSS communities which may be vital for operating a successful FOSS business in the African context.

### 5.2.1 This learning takes place on different levels.

On the technical level, communities function as informal apprenticeships. New entrants choose their field of interest, and make their best efforts to contribute. More experienced community members typically provide feedback and advice to the new entrants on how to improve their contributions. But people who are active in FOSS communities also find that they are excellent places to learn about teamwork and cooperation. Since community participants are usually bound together by little else beyond a shared interest, it is essential that every voice is heard and conflicts are resolved amicably, while keeping everyone's eyes firmly on the overall goal. These are practices that a good manager will also carry over into her business, making it a more agreeable place to work. This in turn makes it easier to retain qualified staff.

### 5.2.2 FOSS communities and your business

Most businesses will probably get the greatest advantage out of their participation in FOSS communities when this participation revolves around technology that is important, *but non-differentiating, i.e. not something that sets their business apart from everyone else's. Where is the basis of this?*

There are two advantages for you here.

1. If your business is in offering services for the Plone CMS, you have an interest in seeing that system improved. Of course, this will also benefit your direct competitors (i.e. other people offering services for Plone). But it will increase the overall size of your market, since a better CMS will attract more clients.

2.The other advantage becomes effective if you are offering an add-on to the community's technology, and generate revenue from providing this add-on to your customers. Again, with a better CMS (to stick with the Plone example), the size of your market will increase. In addition to bringing in more revenue for services related to the basic CMS, you will also more frequently be able to charge for distributing the add-on.

For this to work, the add-on does not have to be proprietary. Even if it is licensed as FOSS, you may simply choose not to distribute it to anyone else than paying customers. While those customers are in theory free to pass your add-on to other people, they will probably not do so because it would require them to make an extra effort. Also, the recipients would probably need your services to fully benefit from that add-on -- so even if your customers do pass it on, this means more business for you.

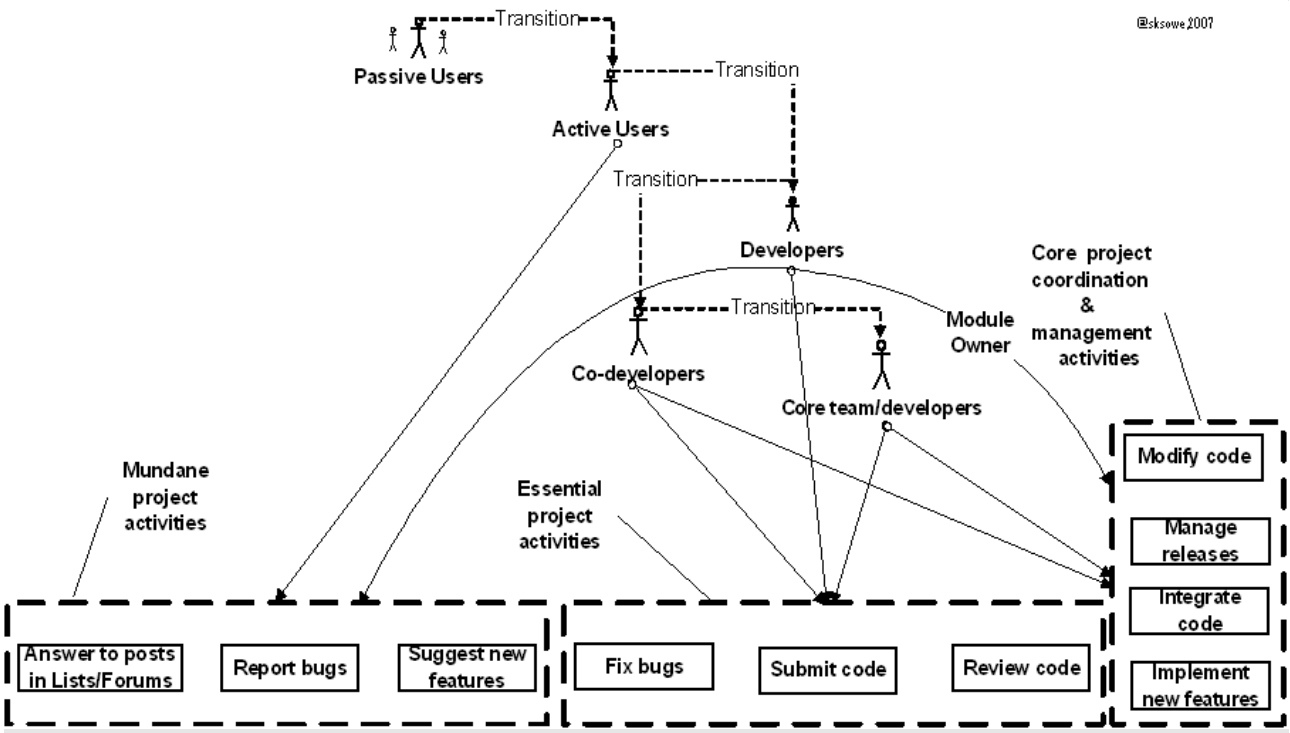
If you provide a FOSS solution to a customer, that customer can also be considered a part of the community around the software involved. This means that there is a good chance that your customers can become relatively well informed about the capabilities and benefits of a solution - if they choose to invest the necessary time and effort. If they do so, they might of course start relying less on your services and more on their own work, in combination with support from the community. But experience shows that this is not usually the case. Rather, most of your customers will choose to focus on their own core business, and continue to ask for your services in supporting the solution.

## Module 5.2: ASSESSMENT

**•Exercise 1: Use the table below to list down FOSS communities and their associated activities in your country**

| Country | Type of community (eg. LUG, educational, advocacy, Association, Foundation | Website /URL | Known contact (person, email, etc) | Possible benefits for FOSS business |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**•Discussion: Use your knowledge of how FOSS communities work to discuss role transitions of FOSS community members in the figure below.**




## Module 5.3 Competition, cooperation – coopetition

### Duration:

0:45hrs

### Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures, role play and group and individual exercises as a major means of delivering this module.

### Introduction

This module introduces terms and concepts around which businesses need to build skills.

### 5.3.1 Competing in a FOSS business environment

When you base your business on proprietary software, your options will be limited. There will be other companies providing similar products and services, and you will be competing with them. When you base your business around FOSS, the situation is different. *There still will be*

*businesses offering products and services similar to your own*. But you will be able to choose from a much broader spectrum your ways of dealing with these other companies.

Your attitude towards other FOSS companies which are active in your region will fall somewhere between the poles of competition and cooperation. This middle ground is sometimes called "coopetition" - competition and cooperation at the same time. Coopetition can take many forms. One of these forms is outsourcing inside a network of partners. At least at the beginning, your business will be small. When faced with a large and complex task, you will often not be able to do everything yourself. The solution is to share the work with other firms with different specialisations. You will be letting others do things that you can't (profitably) do yourself . This gives you the ability to take on larger tasks and deals by sharing them with trusted partners from the network

Another (and often related) form of coopetition is sharing costs among members of the network . This can mean sharing marketing expenses and costs for PR work, and building a common image for the network [see www.zeapartners.org]. Taken together, higher revenue (from larger deals) and shared costs lead to higher profits for all partners.

### 5.3.2 Working in FOSS business netwroks

A business network will also be vital given that many potential clients remain under informed about FOSS and may be skeptical towards this type of software. This means that FOSS businesses must generally make an effort to increase the general acceptance of FOSS. If they succeed in this endeavour, they clearly stand to profit. FOSS business networks take different shapes. Some are centered on a certain piece of software. Others are associations of businesses with a general interest in FOSS. Some associations such as FOSSFA [http://fossfa.net] are engaging in broad FOSS advocacy. This latter type of association is important because it helps to create a climate that is more welcoming towards FOSS. Such advocacy will prepare the ground for your business, and make your clients more receptive to the FOSS solutions you propose. This includes potential customers from both the public and the private sector.

## Module 5.3: ASSESSMENT

•Exercise 1: List the companies doing business in FOSS in your country and complete the table below

| Country | FOSS company | Services offered |
|---|---|---|
| | | |
| | | |

•Exercise 2: For each country in Exercise 1, state in which service sector competition or cooperation may exist.

# Module 5.4 Marketing FOSS

## Duration:

0:45hrs

## Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures, role play and group and individual exercises as a major means of delivering this module.

## Introduction

To a large extent, the software market is still dominated by proprietary software. Business specializing in commercial software have, over time, developed and implemented strategies to market their products and services. There is a wealth of other well-established companies from which new entrants can learn. Marketing FOSS products, on the other hand, is relatively new and marketing strategies which may have worked well prior to the Internet boom in the 90's may need to be revisited and improvements made where necessary. This module discusses, among other issues, strategies to be adopted, barriers to overcome, and knowledge and skills needed to successfully market FOSS products.

### 5.4.1 Clients and markets to target

Choosing which clients and markets to target is a strategic decision for your company. Your choices include:

- other firms, both large and small
- public bodies
- local representations of international organisations
- educational institutions: schools and universities
- individual users

Each of these groups of client will have different specific requirements. Of course, these requirements also vary with the country, region and city or town your clients are based in. The better you get to know the requirements of your clients, the greater your chance of satisfying them. For this reason, many FOSS companies specialize in serving only one or two of these groups.

### 5.4.2 Overcoming barriers to adopting FOSS

Below, we discuss oft-cited barriers to adopting FOSS, along with their respective solutions.

#### 5.4.2.1 Availability of support:

YOU are the solution. You can build a business on providing support to FOSS users, especially larger organisations. The fact that FOSS is often well documented, with vibrant communities around many programs, means that you will find it relatively easy to build up the necessary skills.

### 5.4.2.2 Availability of applications:

There is an enormous bandwidth of FOSS applications, serving almost every purpose. There are very few areas where there is no adequate FOSS application available to perform a certain job.
However, many people have grown attached to proprietary applications they have long been using. When preparing a migration, it is therefore essential to reassure them that they will have available the applications they need, and that they will be able to use those applications. The former may be accomplished by showing clients in detail which FOSS application will replace which proprietary program. The latter is a matter both of selecting user-friendly applications, and of offering adequate training to users.
In larger organisations, there usually are three approaches to replacing proprietary applications. These can be combined as necessary:

1. find and deploy a sufficiently functional FOSS replacement.
2. for applications where there is no FOSS equivalent, one option is to make them available on the internal network via a terminal server.
3. continue to run the proprietary application in a virtual machine.

### 5.4.2.3 Software quality:

FOSS very frequently is very good, since in theory everyone is able to inspect the software, find errors, and report or fix them. Yet quality may vary, especially for projects with small communities. The overall variation in quality is not greater than for proprietary software.

### 5.4.2.4 Legal concerns:

Some clients may worry about becoming exposed to legal claims by using FOSS. In fact, the legal risk associated with FOSS is no greater than in the case of proprietary software. Usually, it is even smaller, because your client does not have to worry about acquiring software licenses.
It is your task to ensure that you adhere to the licenses of the FOSS packages you are using when integrating a solution. This should be a standard item in your contract with your client.
These legal worries also represent a business opportunity. You can offer, for a fee, to indemnify your client against legal claims made in relation to the solution you're selling. *If all legal issues sound complicated for your business undertaking, please consult a legal expert.*

### 5.4.2.5 Untold fears:

A client's CIO may fear that his importance in the company will shrink in line with IT costs, as budgets are adapted. This will usually not be the case. On the contrary, when costs do shrink significantly, the CIO will be able to claim the managerial merits for the savings.
Users may sometimes believe that the absence of a license fee for the software means that this software is low-end, and by extension that their work is not taken seriously. Here, it is very important for all those involved in the deployment of a FOSS application or solution to work with the users rather than against them. A good way is to talk to as many users as possible to hear about their IT needs. Your time will be well invested, since users feel that they are being listened to. Accordingly, they will be much more open to the changes you bring to their work environment.

### 5.4.3 The TCO debate

TCO stands for "total cost of ownership". In its simplest form TCO refers to all the costs associated with acquiring, installing and using a piece of software. This loosely defined concept covers a wide range of items, such as license fees, installation costs, and maintenance costs.
There is an argument about whether TCO is lower for proprietary software or for FOSS. While TCO varies from case to case, FOSS will generally have an advantage when long-term costs are figured in.
Somewhat counter intuitively, the fact that FOSS is available free of license costs does not greatly influence its position in the TCO debate. Even for proprietary software, license fees make up only a small proportion of total costs over time. This is especially true when your FOSS business is working in an environment where much of the proprietary software that is being used is unlicensed, and has been acquired at a price near zero. For large deployments, it is also quite common for large proprietary vendors to use a loss-leader strategy, giving away software licenses e.g. for the operating system for (nearly) no money in order to gain customers for applications building on that operating system. For these reasons, license fees often fail to work as a convincing argument for FOSS.
It is common for customers to move to new applications, be it because they offer better functionality, or because a proprietary supplier has disappeared from the market. Since most proprietary applications store data in their own proprietary format, it is usually very difficult for the customer to convert his data to a new format.
FOSS avoids this problem by using open standards - ways of sending, receiving and storing data that are publicly documented, and can be implemented by anyone. This has two important consequences:

- it is easy to replace one component of a FOSS solution with another. The customer is not bound to specific applications, but can simply choose the ones that work best.
- the customer avoids being locked into a particular software or file format, giving him greater flexibility in choosing suppliers.

This usually means substantially lower costs over the long term. Critically, it also means that the customer does not depend on a particular application from a particular supplier to access and manage his data. The customer effectively gains control of his own IT infrastructure.
The TCO argument is often used by proprietary vendors, using questionable data to argue that while FOSS may be cheap in the beginning, it costs more over the long term. In reality, the opposite is usually the case: E.g. a migration to FOSS will carry about the same costs as a migration to the next generation of proprietary software, but once the migration is over, IT costs tend to become substantially lower.

### 5.4.4 Making the case for your FOSS solution

There are a few steps you should follow when working with a client, in order to come up with a solution that meets the client's needs:
Identify the client's needs. Don't just rely on his explanations; try to observe first-hand how his company or organisation works, so you will get a better idea of the problem you're trying to solve.

- Find FOSS products that meet your client's needs.
- Compare them to proprietary alternatives, on functionality quality and cost.
- Select the best products, and reject the others.
- Try to find unbiased data to balance the marketing hype.

- Be comfortable with your decisions, and be ready to present them to your client in a convincing manner.
- Module 5.4: ASSESSMENT

**Exercise 1:** For an illustration of the independence afforded by FOSS, read through the case study on the German city of Munich's migration to GNU/Linux [Available at[6]]. Identify and list down Munich's reasons for migrating, and the benefits the city hopes to obtain.

***Reason 1:.....***

***Reason 2:.....***

***Reason 3:.....***

***Benefits of migration to the city council.....***.....
.....
.....
.....

**Exercise 2:** Read through Mark Taylor's article on "The true cost of migrating to open source"[Available at[7]]. Imagine yourself in discussion with a skeptical client: how do you convince him that a migration to FOSS will be the better option in the long run? Among other things, your client will confront you with the view that "FOSS has a higher TCO"

## Module 5.5 FOSS Strategies

### Duration:

1:00hrs

### Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures, role play and group and individual exercises as a major means of delivering this module.

### Introduction

FOSS business is seen as supporting fair competition between companies, benefiting customers by not having them locked-in to one and only one vendor, and reducing software development cost. However, FOSS business will not operate in a vacuum. FOSS businesses should be cognizant of competition and/or cooperation (Module 5.3), develop novel means of dealing with communities of diverse interests (Module 5.2), and cultivate the skills necessary to successfully market their products. This module explores strategies to adopted, contemporary business activities as they relate to FOSS and the software industry, and managerial decisions which may

[6] http://www.osor.eu/case_studies/declaration-of-independence-the-limux-project-in-munich

[7] http://www.zdnetasia.com/insight/software/0,39044822,62054142,00.htm

hinder or support the wide spread acceptance of FOSS. However, there might not be the “FOSS strategy“, as each business environment and market is different, but this module provides exemplars from which FOSS businesses can draw lessons for the implementation of effective FOSS business strategies.

### 5.5.1 FOSS Strategies

What is interesting for the IT business industry in the past years is that companies (e.g. Sybase, Oracle, Sun, IBM) are increasingly implementing open source strategies - porting programs and applications into the Linux environment while at the same time realizing that they can charge complementary services such as post-sale services. Companies are increasingly relying on the open source LAMP (Linux/ Apache/ MySQL/ PHP or Perl) stack as an alternative to proprietary software because of the inherent cost savings available. Thus, FOSS is redefining the way the software industry and businesses develop, maintain, support and deploy software (Hawkins, 2004; Sowe, et. al., 2009). In addition, FOSS has changed the intellectual property landscape of the software industry (Samuelson, 2004). There is gradual shift in focus from protecting software knowledge to maximizing gain from FOSS development, use, and distribution. Software enterprises are realizing that there is the need to move from being in-house software developers and distributors to that of service industries where software products are judged by quality, reliability, and performance by the people who develop and use the software. Beyond the promise of a reduced total cost of ownership of the software and potentially better support, there is an added dimension of freedom from vendor lock-in, where an entire software application becomes dependent on a single vendor (Sowe, et. al., 2009). As the FOSS development paradigm grants ’free’ access to the source code, companies using open source are not forced into a perpetual upgrade cycle. Free access to the source code gives companies using a particular solution a lot of choice to modify and improve the software. However, form many businesses; it may not be viable to focus on FOSS solutions alone. A common approach is to target a FOSS business model employing innovative strategies and doing business by combining FOSS products with proprietary software. See Modules 2.2 and 2.5 as an example. Furthermore, Michael Coté, *et. al.*, 2007 presented a fitting note which discusses open sourcing strategies in use by organizations and companies – with the goal of providing background for companies considering open sourcing parts of their portfolio.

### 5.5.2 Business Activities

Even though FOSS applications have made a giant leap in the server sector (e.g. Apache) and operating system and network environment (e.g. Linux), there are certain areas (for example open source databases, Word-Processing software, Learning Management Systems or LMS, Content Management Systems or CMS) where proprietary software still plays a dominant role. For many organizations facing rising software cost, FOSS is a possible alternative. This phase-shift is in recognition of the attractive nature of FOSS in terms of

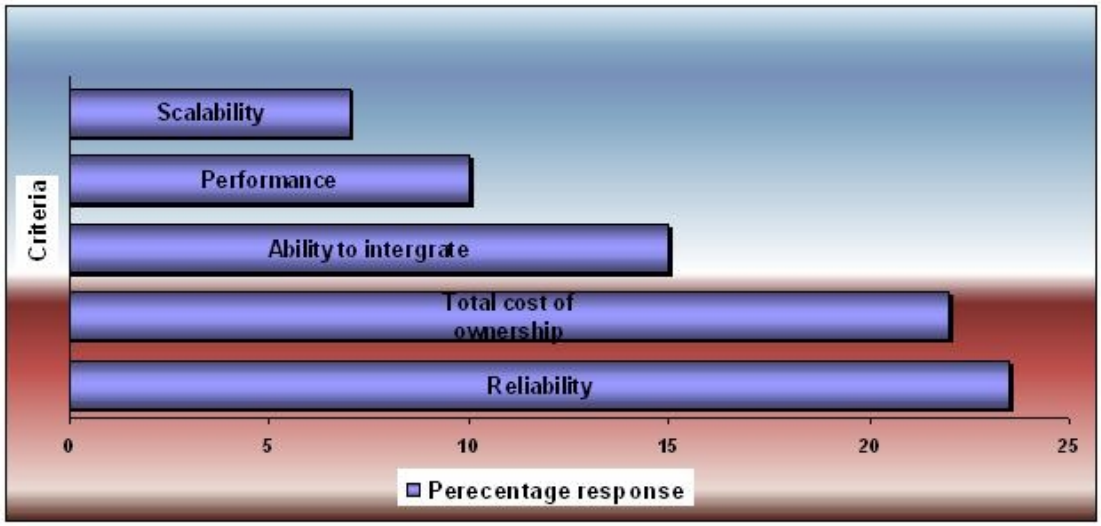
- ease of obtaining upgrades and new application,
- and should a business consider buying FOSS, attractive pricing of major FOSS applications such as MySql,
- viable developer and support community, and
- ability to be easily integrated with other FOSS tools and systems.

However, a growing number of companies adopt a cautionary approach towards FOSS full utilization. The apprehensive trend is expected to continue, albeit, FOSS solutions are continually improved upon. The main challenges faced by large enterprises in adopting FOSS in mission-

critical application have constantly been scalability and third-party support. Despite success with the lower-end and mid-sized markets, it may take a while for the low-cost attraction of some FOSS applications to make a real impact in certain industrial areas (medical, navigation, military, and other essential government services) the way Linux has in the operating system. However, releasing the source code and pricing are two separate decisions. What is encouraging in this sense is that releasing the source code of a given system or application only improves the innovation base of the system. Understandably, one can reinstall a crashing operating system, or restore a network server malfunction with little damage to a company's valuable data, but when a database application fails, a lot is at stake- because databases contain information that is vital for the success of any industry in the information age. This can also be extended to applications which hold other critical or security information.

### 5.5.3 Managerial Decisions

In a survey of 500 of Australia's top firms, G. Sigi, 2005 reported that managers reject FOSS in general because they could not see that it had any relevance to their operations, perceived a lack of reliable ongoing technical support of it, and the substantial learning costs associated with FOSS. However, for many company executives, vendors, and users there are some urgent issues to consider when it comes to FOSS solution. The figure below[8] shows that reliability and total cost of ownership are high on the agenda. Other factors include readiness by many managing directors, employees, and some sectors of the public to accept the open source development paradigm [Module 1]. The factors are used to measure the most important criteria managers cited when selecting a FOSS solution**.** The data is based on a survey of 150 companies implementing FOSS strategies and have, as a policy, to migrate to FOSS.




Nonetheless, software development firms continue to implement FOSS strategies and make business by selling their commercial versions and offer support and other services (the '3-zations'; customization, localization, and internalization). At the same time, firms will embrace FOSS in order to tap into 'the vast global community of developers and reduce their cost of production by not having to [re]invent the wheel' (Sowe, 2009).

[8] Source: *Sowe, et. al., 2009; page 10*

### Module 5.5: ASSESSMENT

- Discussion 1: What do you understand by a FOSS strategy?
- Discussion 2: Present and discuss the FOSS strategy of a company you may know in your region.
- Role play 1: Assume the position of a consultant. If someone wanting to start a FOSS business comes to you and asks for a strategy for establishing a business, what is the outline strategy will you present to the customer?

## Module 5.6 Innovation in FOSS Business

### Duration:

1:00hrs

### Delivery method:

For instructional purpose, it is advised that trainers/lectures use lectures, role play and group and individual exercises as a major means of delivering this module.

### Introduction

The debate on how FOSS spins ICT and business innovation is well documented. Special reference is made to the innovative capacity of FOSS (Sanjiva and Jivaka, 2003) and factors which hinder and support technology innovation in developing countries (Jean-Eric Aubert, 2004). This module addresses the structural nature of FOSS, that is, commoditisation which increases the innovative base of developing, customizing, and marketing FOSS products. Strategies for innovation in a FOSS context, the concept of open innovation, and where innovation happens in FOSS are the sub-modules addressed.

### 5.6.1 Innovation vs Commoditisation

In IT, commoditisation happens constantly - a program which used to be special in some way will attract competitors, both FOSS and proprietary, until there are a number of programs functioning in near-identical ways. Customers are easily able to replace one commodity program with another.

But software is developed in a modular way. At any point in time, parts of the value stack (the operating system, middleware, applications, and services) are commoditised, while others are not.

For businesses, the problem of commoditisation is that there usually is strong competition to sell near-identical products. This means that whatever profits can be made they will be relatively small. The opportunities for attractive profit margins move up market, meaning that companies need to keep innovating in order to preserve their profits.

It could be argued that for most purposes, operating systems have become a commodity, since most users will be able to satisfy their needs using any end user-oriented operating system.

While prices of operating systems vary slightly, these are not the items that usually generate profits for the company selling the system. It is the programs that run on top of the operating system which bring in the money, such as office software.

Much more relevant for FOSS companies, users also require professional services, which are also far from being commoditised in most regions, meaning that a good service provider can expect relatively high profit margins.

### 5.6.2 Use of FOSS in an innovation strategy

> ***"Innovation is a driver of economic growth, productivity, job creation and rising living standards."***
>
> ***"Innovation also promotes ICT competitiveness; in turn, competition leads to better products, improved consumer choice and, ideally, greater ICT uptake."***[9]

Most products and programs - FOSS or otherwise - are not innovative, in the sense of bringing about a new way of doing something. Radical innovation is also extremely rare.

Most innovation happens in an incremental fashion, by taking something that already exists and making it slightly better.

In proprietary software, this is something that can only be done by the person or company holding the copyright in that particular piece of software.

In FOSS, the possibilities are far greater. Here, anyone can take the software and improve it. While this does not mean that there is more radical innovation in FOSS, it means that there are huge opportunities to build small improvements on top of strong, existing foundations. This sort of innovation is well within reach of individuals and SMEs without big R&D budgets. It also means that if the idea fails, the innovator's lost investment is usually small enough to not do substantial damage to her business.

### 5.6.3 Open innovation

"Open innovation" means that individuals or firms work together to come up with an improved program or product. This is not exclusive to FOSS, but it does represent a clear departure from the usual practice, where each firm tries to keep its innovations secret from its competitors.

#### 5.6.3.1 Where Innovation happens in FOSS

- within FOSS projects
- on products based on FOSS
- through percolation from proprietary development processes
- and in the process itself: open innovation

Open innovation works particularly well in software, since source code can easily be shared, and the necessary tools (computers, compilers etc) are widely available. Beyond this merely practical point, there are clear incentives to work together in many situations:

---

[9] Source: European Task-Force on ICT Sector competitiveness & ICT uptake, WG on innovation in R&D, manufacturing and services http://ec.europa.eu/enterprise/ict/policy/taskforce/wg/wg3_report.pdf

- sooner or later, a proprietary offering will be re-implemented in FOSS
- the costs of software production can be reduced through collaborative engineering
- opening the source code is the best way to maximise the potential for collaboration
- when competition becomes pointless, collaboration is a good way to keep innovating, thereby improving the software upon which all competitors base their business

FOSS provides a ready-made legal framework for cooperation. If you develop something, you can share it with others, using a copyleft license to keep competitors from appropriating your work.

The basic rules for developers in FOSS are:

- reuse instead of "***reinventing the wheel"***
- contribute patches and enhancements - don't try replacing the program you're contributing to with something of your own invention
- communicate with your peers
- session has no exercise

## Module 5.6: ASSESSMENT

- **Discuss**: How do you think FOSS will contribute to the ICT innovative capacity of your country?
- **Assignment**: How does the open nature of FOSS code improve the innovative base of the software?
- **Exercise**: Which of the following play a vital role in propagating innovation in FOSS?
    - The license
    - The core software development team
    - Large number of users
    - The programming language-language in which the software is written

## REFERENCES

1.Significant parts of this topic are based on Francois Letellier's teaching materials for FOSSBridge Vietnam. © Francois Letellier 2008, published under Creative Commons Attribution Share Alike License 2.0. For more information;

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## Assignments

**Task:**

Read through Mark Taylor's article on "The true cost of migrating to open source"

**[**http://www.zdnetasia.com/insight/software/0,39044822,62054142,00.htm **].**

# TEST Module 5

**Question 1. What is one of the key disadvantages of proprietary software?**

**Question 2. When you sell proprietary software, what happens to the money generated.**

**Question 3. Which of the following component is not necessarily available in FLOSS**
Please, contribute to the material! Click here "How to contribute"

**Question 4. Doing business in a FLOSS context means**

**Question 5. Why are FLOSS business networks important?**

**Question 6. Which of the following is not a way of making money in FLOSS**
Please, contribute to the material! Click here "How to contribute"

**Question 7. You're scheduled to meet a FLOSS business associate for working lunch and you arrive a few minutes early to find a suitable table. 30 minutes later your associate still has not arrived. Do you order your lunch and eat?**
**continue waiting and fuming that your associate isn't there?**
**tell the head waiter you're not staying and give him our card with instructions to present it to your associate to prove you were there?**

**Question 8 : .....measures how much work was produced or completed in a certain period of time.**

(a) motivation
(b) production
(c) money invested

# MODULE 6: FOSS TRAINING

## Introduction

FOSS Training has become a novel business opportunity for new and existing businesses as FOSS is becoming more and more mainstream. As more and more mature FOSS applications emerge, businesses who want to use them require training. Growing investment in FOSS applications are expected to continue in following years leading to growing training needs and opportunities. The Open World Forum road-map for 2020[10] predicts that 40% of jobs in IT will be FOSS related and highlight the challenges associated with the shortage of skilled FOSS professionals. The authors assume a 2% growth rate of IT employment annually, which translates directly into 1.5 million jobs in Europe i.e. the creation of 1.2 million completely new jobs (Open World Forum Roadmap, p 69). Thus, the modules in this topic will build on previous topics on basic FOSS concepts in Module 1, African FOSS business experiences as demonstrated by the case studies in Module 2 and some FOSS business skills and management skills (Modules 3 - 5) to addresses the skills and knowledge required to organise FOSS training in the African context.

## Learning Objectives

1. Understand some of the requirements for becoming a FOSS trainer.
2. Be able to identify and seize the opportunities that exist for FOSS training as a business.
3. Gain the knowledge and skills required to organise and provide FOSS training.
4. Appreciate the benefits of peer production of Open Educational Resources and Open Content.
5. Understand the crucial role of communication.

## Authors and Trainers:

**Pool of African ict@innovation expert trainers**

| | **Name Module** | **Name** |
|---|---|---|
| **Module 6** | FLOSS Training | Arnold Pietersen,<br>Celso Timana,<br>Paschalia Ouma,<br>Shirley Akasreku,<br>Frederick Yeboah,<br>Kofi Kwarko<br>**More Trainers per country in full Pool of Trainers**<br>http://www.ict-innovation.fossfa.net/wiki/public-wiki/course-advanced-african-foss-business-models/FBMTrainers |

**Main contributors**

| | |
|---|---|
| **Module 6** | Sulayman K. Sowe (**Facilitator**), Arnold Pietersen, Glenn McKnight, Paschalia Ndungwa Ouma, Derek Lakudzala |

Additional material for **Module 6:FOSS TRAINING** (presentations, tests, evaluation forms, pool of trainers, derived material) is available online at: ***http://www.ict-innovation.fossfa.net/node/4252***

[10] http://www.2020flossroadmap.org/

### Sessions and Timetable

The entire content in this topic is estimated to be delivered in **2** days, with some variations within the modules. For instructional purposes, the content of this module can be delivered as proposed in the summarized table below.

| Time | Session |
|---|---|
| 9:00 – 10:30 | *Completion of Module 5* |
| 10:30 - 10:45 | Coffee Break |
| 10:45 - 12:15 | • How to be a FOSS Trainer |
| 12:15- 13:30 | Lunch |
| 13:30 – 15:00 | • FOSS Training as a Business |
| 15:00 – 15.15 | Coffee Break |
| 15:15-17:00 | Invited talks: Discussion of FOSS training Experience, FOSS Business in Africa, FOSS in Government, FOSS in Education |
| | *Next day* |
| 9:00 – 10:30 | • Organising Training |
| 10:30 - 10:45 | Coffee Break |
| 10:45 - 12:15 | • Training Material Development |
| 12:15- 13:30 | Lunch |
| 13:30 - 15:00 | • Open Educational Resources and Open Content |
| 15:00 - 15:15 | Coffee Break |
| 15:15 - 17:00 | • Training Communication Skills<br>• Training Communication Skills<br>• End of Module |

## Module 6.1: How to be a FOSS Trainer

### Duration:

**1 hour**

### 6.1.1 FOSS Trainer Characteristics

Any good trainer is natural communicator with strong technical skills to provide his/her students with the right tools to work in the industry. The winning combination of the 'ideal' FOSS instructor includes:

- Winning personality and ability to communicate.

- Practical experience in FOSS applications.
- IT training experience.
- Ability to engage participants and relate content to their situation.
- Be inquisitive and have a passion for training.
- They should have the ability to teach themselves a program and then use their skills, knowledge and attitude to facilitate the transfer of that knowledge.
- Have an understanding of the philosophical underpinnings of the FOSS movement.

Currently, no specific certification roadmap exists for a FOSS trainer.

Trainers should continuously act and reflect. They should always look back on how to improve delivery of the training, learn from course evaluations and aspire to have a better understanding of the applications they teach. FOSS trainers should not see the software as different from proprietary software.

It is also important that trainers use the software they are training, in one way or another. In so doing, they become conversant with features and functionalities that the software provides and can transmit this knowledge to their trainees. It also provides the trainer with a sense of authority and confidence.

Trainers should see training as a stage production:

- There is the audience (participants).
- There is a stage (training room).
- The performance by the actor (trainer conducting the course).
- The applause (the feedback).

### 6.1.2 Types of Training Interventions

Potential trainers may need their skills to be upgraded in different ways. We can broadly distinguish between three types of training interventions for FOSS trainers:

- There are those who have the technical knowledge of FOSS packages and have been using certain packages, but have not conducted any training of any nature. This type of person needs to acquire the knowledge and skills on how to conduct FOSS training for adults.
- There are those who have the knowledge and skills on how to conduct ICT training for adults which they might have acquired through self-learning or having had attended a course, but have not conducted any FOSS training. Instead, they have conducted training in proprietary software. This type of trainer will need to be trained on FOSS packages.
- There are those who have conducted FOSS training courses and have the knowledge and skills on how to conduct training, but have not trained other trainers. This type will have to be trained on how to train other trainers.

Ideally, a new trainer should follow a trainer development program that may include delivering the content to a colleague and/or to a group of peers.

Part of the training curriculum for a train-the-trainer course may include topics of the CompTIA's Certified Technical Trainer (CTT+) curriculum or a similar programme.

### Questions

1.List the winning combination of an "ideal" FOSS trainer
2.Name a certificate which exists for trainers
3.Discuss the three types of training interventions
4.Why is it important that trainers use the software they will be training?
5.Is there is difference between a FOSS trainer and proprietary software trainer?

### Exercise

*Trainers are going to brainstorm the qualities a trainer should possess. The trainer will write the contributions on a flipchart.*

## Module 6.2: FOSS Training as a Business

### Duration:

**2 hours**

### 6.2.1 Identifying FOSS Business Opportunities

FOSS training can be undertaken as part of an existing business function, academic pursuit in educational institutions or as a sponsored group activity. The type of training method chosen will influence the revenue, steps to be taken, facilities and content.

If FOSS training is undertaken as part of an existing business function, then it could:

- leverage the company's competitive position in the industry.
- access a ready pool of participants from the company.
- co-share facilities with other courses, thus the investment is low.

If academic institutions are involved in FOSS training, then

- it could target students who might not yet have loyalty to proprietary software.
- it could be incorporated in Computer Science courses.
- cost might be reduced in the acquisition of licenses for proprietary software

If FOSS training is pursued as sponsored group activities, then

- it could include workshops, seminars, exhibitions
- it should be targeted
- the training duration should be short
- cost should be undertaken by the sponsor

Selection of candidates for FOSS training can be done using

- role/function in organisation
- educational background
- identified need

FOSS training curriculum should be comprehensive and detailed. It should include all topics covered for the equivalent proprietary software.

### 6.2.2 Case Study

Arnold Pietersen (CECS) provides some practical examples of FOSS training he conducted or intend to conduct, below.

In 2006, Arnold came across Open Workbench (which is the same type of programme as MS Project). He started using it for CECS' project and was impressed by the programme. It dawned upon him that this might be a useful tool for NGOs. Arnold visited the websites of some of the major training companies in South Africa to see what they offer with regard to MS Project 2003 Level 1. He then modelled the Open Workbench course based on the MS Project 2003 course outline. This he thought would provide for benchmarking or comparability. Since then he has conducted numerous courses by sending e-mails to NGOs and CBOs to announce course dates. Participants are now requesting for the Level 2 course. The last course was conducted with 16 participants. With improved marketing he surmise more course and regular courses could be conducted. Participants attending are from across the board: NGOs, CBOs, government, individuals, schools. The course is being charged at about 80% of what a MS Project course would cost. CECS now want to target students at universities who studies project management.

CECS received some money from OSISA to develop an open source course for entrepreneurs and latched onto TurboCASH. CECS have been conducting numerous courses for the past three years. A contracted trainer is conducting the course who install, train, supports TurboCASH as a business. The organisation have had requests from individuals and organisations especially Cape Town and Durban to attend the training course. There are very few companies offering TurboCASH courses, let one NGOs.

Last year July CECS started conducting Web Design Training Using Joomla courses which proves to be very popular. The courses are well-attended. CECS also derive other opportunities from conducting this course such as organisations wanting to contract the organisation to migrate their websites, to conduct on-site training, individuals and organisations wanting to purchase manuals. The manual is still very much work in progress. It was a question of do we spend a year or two trying to develop a "perfect" manual or do we start with some material and then built upon that as we gain experience. A scan was undertaken regarding the Joomla training environment in South Africa before CECS embarked on the training.

Arnold is now in the process of putting together a course for Ubuntu Linux for absolute beginners. Participants will bring their laptops to the course. The course will map to a certain extent to say a Windows XP Level 1/Beginners. He thinks that critical for the course is showing people how to install Ubuntu. When people go wrong at the partition stage, they then blame Ubuntu Linux for all their woes. Thus, we need to give them a solid understanding regarding installing Ubuntu Linux. This will be a pure end-user course.

It is difficult to estimate the demand for FOSS training. FOSS training can attract learners if the application has been widely adopted in the industry. As an example FREEBSD has been promoted by AfNOG over the years thus FREEBSD training is likely to attract more users. People are prepared to pay for courses, whether it is FOSS or proprietary, provided that these courses address their real business needs.

### 6.2.3 Identifying Training Opportunities

Training opportunities can be identified in the following ways:

- Surveys should be done to identify training needs.
- Identifying popular applications (e.g. by looking at downloads from sourceforge.net and freshmeat.net).
- Subscribing to newsletters, mailing lists and participating in relevant forums.
- Attending (either actively or passively) ICT conferences, workshops and other events such as Software Freedom Day.
- Accessing market reports, e.g. Gartner, Government, etc.
- Identify FOSS applications that may satisfy market needs.
- Participating in relevant tenders, request for proposals, requested for interest, pre-qualification exercises, etc.

### 6.2.4 Marketing of Training Courses

- Direct advertising through local press, magazines and professional publications.
- Register and contribute in forums, mailing lists, blogs, etc.
- Taking advantage of ICT conferences, workshops and other events such as Software Freedom Day as a marketing opportunity.
- Contributing articles to the local press and other media houses.
- Maintaining a presence on website portals that bring together trainers and potential trainees (e.g. http://www.flosslit.org.za/).
- Organise computer literacy events in schools, educational institutions, etc.

### 6.2.5 FOSS Certifications

What follows below are courses with an international repute. We provide a brief description of the courses.

## OpenICDL

http://www.icdl.org.za

OpenICDL refers to the International Computer Driving Licence based on open source software.

OpenICDL is a test of practical skills and competencies and consists of seven separate modules covering computer theory and practice. To achieve OpenICDL certification, a Candidate must successfully pass a test in all seven modules.

OpenICDL Module 1 is a theoretical test of computing knowledge at a general level and modules 2-7 are practical skills tests. The following are the modules:

- Concepts of Information Technology
- Using the Computer and Managing Files (Ubuntu Linux)
- Word Processing (OpenOffice.org Writer)
- Spreadsheets (OpenOfice.org Calc)
- Database (OpenOffice.org Base)
- Presentation (OpenOffice.org Impress)
- Information and Communication (Mozilla Firefox & Mozilla Thunderbird)

You must be registered with the ICDL Foundation in order to offer the OpenICDL.

## Linux Professional Institute Certification (LPIC)

http://www.lpi.org

The Linux Professional Institute Certification (LPIC) program is designed to certify the competency of IT professionals using the Linux operating system and its associated tools. It is designed to be distribution neutral, following the Linux Standard Base and other relevant standards and conventions.

The LPIC program is designed in multiple levels. Determining which tasks were suitable to each level was done using a "Job Task Analysis" (JTA) survey. As with all of the LPIC exam development processes, the JTA was developed and executed using recognized psychometric processes, to ensure its relevance and high quality.

The LPIC program consists of three levels of certification: LPIC-1, LPIC-2 and LPIC-3.

Junior Level Linux Professional (LPIC-1)


- Pre-Requisites: None
- Requirements: Passing Exams 101 and 102
- Overview of Tasks: To pass Level 1 someone should be able to:
- Work at the Linux command line
- Perform easy maintenance tasks: help out users, add users to a larger system, backup & restore, shutdown & reboot
- Install and configure a workstation (including X) and connect it to a LAN, or a stand-alone PC via modem to the Internet.

Advanced Level Linux Professional (LPIC-2)


- Pre-Requisites: You must have an active LPIC-1 certification to receive LPIC-2 certification, but the LPIC-1 and LPIC-2 exams may be taken in any order.
- Requirements: Passing Exams 201 and 202
- Overview of Tasks: To pass Level 2 someone should be able to:

- Administer a small to medium-sized site
- Plan, implement, maintain, keep consistent, secure, and troubleshoot a small mixed (MS, Linux) network, including a:
    - LAN server (samba)
    - Internet Gateway (firewall, proxy, mail, news)
    - Internet Server (webserver, FTP server)
    - Supervise assistants
    - Advise management on automation and purchases

Senior Level Linux Professional (LPIC-3)

The LPIC-3 Certification program represents the culmination of LPI's Certification Program.

LPIC-3 is designed for the "enterprise-level" Linux professional. The program has been developed with the input of hundreds of Linux professionals from around the globe and with input from some of the world's leading technology companies. It also represents the highest level of professional, distribution-neutral Linux certification within the industry.

The LPIC-3 program consists of a single exam for LPIC-3 "Core" designation.

## Ubuntu Certifications

http://www.ubuntu.com

The following are the Ubuntu Certifications:

- Ubuntu Certified Professional
- Deploying Ubuntu Server in an Enterprise Environment
- Ubuntu Desktop Training

Ubuntu Certified Professional

The Ubuntu Certified Professional (UCP) is a training certification based on the LPI level 1 certification. To earn the UCP, candidates are required to pass the LPI 101, LPI 102 and the Ubuntu 199 exams. Exams can be taken in any order. Two, five day courses, Ubuntu Professional Courses 1 & 2, will assist System Administrators to pass the required exams and achieve the Ubuntu Certified Professional certification.

The certification tests student's ability to:

- Install and configure Ubuntu systems
- Perform routine administration tasks: boot and shut down the system, manage user accounts and file systems, and maintain system security
- Configure network connectivity and key network services

- Work productively at the Linux command line

Deploying Ubuntu Server in an Enterprise

This hands-on course will provide participants with the skills they need to deploy, configure and maintain secure Ubuntu Server Edition within the enterprise infrastructure. The course is based on Ubuntu 8.04 LTS and will help system administrators to implement services at an advanced level. Extensive lab exercises in a multi-server virtual machine environment will help attendees put their new skills into practice.

If you are an experienced Linux or Unix system administrator working in an organisation, which is about to, or has already, deployed Ubuntu desktop and servers in the office, this course is for you!

After completing this course, you will be able to:

- Install and deploy an Ubuntu Server in an enterprise environment
- Use Debian package management tools to:
- Install, configure, update and upgrade packages
- Set up a repository
- Manage a mirror service
- Automate updates
- Monitor server status remotely
- Define and implement a Backup strategy
- Create and deploy virtual Machines using KVM and libvirt
- Manage directory services and authentication using OpenLDAP and Kerberos
- Keep servers as secure as possible

Ubuntu Desktop Training

This course provides both home and office users with hands on training on Ubuntu. No prior knowledge of Ubuntu is required, although computer literacy is assumed and is a pre-requisite. Ubuntu 8.04 LTS must be installed on the computer hard disk before starting this course. The Ubuntu desktop course is designed to be modular. If all lessons are studied in a classroom, it should be completed within two full days. However, topics and lessons can be selected as required and a day's content designed to suit the key learning objectives.

## Questions

1.List companies, organisations or schools who is conducting FOSS education and training in your country
2.Critique or support the case study in 6.2.2
3.Make a list of other FOSS certifications which might be available
4.What are the obstacles, if any, you might perceive in people not wanting to attend FOSS training courses?
5.Which FOSS certification is more recognisable in your country?

## Exercise 1

*Participants will engage in an individual exercise the list the benefits of training. Their responses will result in a plenary/discussion.*

**Exercise 2**

*Participants will list their knowledge of FOSS certifications/training. Participants with similar lists will be grouped to discuss and present the benefits of each certification/training.*

# Module 6.3: Organising Trainings

**Duration:**

**2 hours**

## 6.3.1 Course Design and Curriculum Development

- Explore curricula for equivalent software (e.g. Open Workbench, OpenProj and MS Project) and use these as a benchmark (aim higher)
- Provide a benchmark for comparability
- Tailor the curriculum to what is termed as the unit standards (smallest element of learning – a case of South Africa)
- Develop lesson plans
- Curricula should have clear learning objectives
- Adapt where feasible from existing commercial curriculum

## 6.3.2 Course Material Development

Professionally designed and pedagogically sound course material will be important. Some of the issues that should be considered are:

- The course material should be peer-reviewed by placing it on a wiki for comments and input.
- Exercises should be relevant
- The course materials should be graphically-rich and be of a step-by-step nature
- The layout of the course material should be done in FOSS desktop publishing (DTP) or graphic design program
- The licensing of the course material depending on the available types of licenses
- The continuous updating of the material in relation to new versions of the software being released
- The course material should be translated in the mainstream languages in Africa.
- A facilitators guide should also be developed
- The development of the course material should take lessons from existing courseware for similar types of software.

## 6.3.3 Licensing of Course Material

## Creative Commons [http://www.creativecommons.com]

The Creative Commons licenses provide everyone from individual authors and artists to large companies and institutions a simple, standardised way to grant copyright permissions to their

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|---|---|---|
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| 1) | | |
| 2) | | |
| 3) | | |

### 6.3.4 Preparing Yourself for Class

Preparations can be the most important part of your instructional day. Time spent before trainees arrive often has a direct effect on all aspects of the day.

As a trainer, you should prepare in three keys areas:

- yourself
- the classroom, and
- the trainees

As you prepare yourself for a class, consider the following areas for preparation:

1. Materials

   Checklists are an excellent way to guarantee that you have all of the necessary materials for the day. A checklist contains two types of items: The first category includes obvious items that you'll never forget, such as your trainer's manual. The second category includes unique supplies, like extra kokis. When preparing to teach, trainers often forget materials from the second category.

2. Instruction

   There are two areas in which you should be prepared: knowledge of the content and presenting the materials effectively. The most common challenge that you will face is trying to learn the content fluently of the course is to focus on the material that must be learned.

To prepare yourself for a teaching a new course:

1. Work through the course as many times as needed. Write any questions you may have about the content, but do not look for answers yet. Many of your questions may be answered later in the course.
2. Networking with another trainer(s). Set up a time to meet with another trainer(s) who also teaches the course and bring the unanswered questions you have.
3. Research. Even after meeting with another trainer(s), you might not feel comfortable with all the areas. Now it's time to research those areas.

### Work on Your Presentation

The following are four approaches to preparing your presentation. Unlike the steps mentioned above, these are not sequential order, but rather in order of effectiveness from least to most:

- Mirroring - Alone, observe yourself in a mirror.
- Verbal - Informally, with a friend or co-worker (preferably someone who is not familiar with the course content) as an audience.
- Desert Run - Alone, in an empty classroom.
- Dry Run - In a classroom with friends or co-workers acting as trainee.

## Rehearsal

You need to know your materials thoroughly before you start to train. A problem might arise where you focus on the training materials but not on how you are going to present it or how the trainees are going to use them. By looking at aims, objectives and purpose you will avoid this trap.

## Timing

Timing is one of the main problems with new or inexperienced trainers. How long does it take? To some extent it takes as long as you have got - but this is an unsatisfactory answer. How then do you plan a day's training?

Start with a page of A4 paper and put the start time at the top and the end time at the bottom.

Then you need to work on the following estimates; depending on the size of the group:

- Allow 15 - 30 minutes at the start for introductions and housekeeping
- Allow 15 - 20 minutes for expectations and fears
- Allow 15 - 30 minutes at end for final review (and evaluation).
- Slot in TEA, LUNCH and COFFEE BREAKS.
- Examine AIMS and OBJECTIVES.
- Write these exercises and allocate approximate timings. Do this by doing the exercise yourself and multiplying the time you took by 5 to get to a realistic time for your trainees
- Prepare a spare exercise for every session (for those who go faster than everyone else)
- Fit exercises and handouts (including reading time) into plan.
- Fit topic/content explanations into "missing" gaps!!
- Set one exercise per objective.

Tip: For training sessions of less than one day use the same technique but reduce the introduction and review times. Obviously you may not lose so much time with breaks, but remember that everyone needs to have a break every 90 minutes!

With a carefully written aim, objective and purpose for every session you will be able to rehearse your sessions in advance.

## Notes

Ensure that you have brief notes on pages or card that you can refer to where necessary. Do not write out a total script: unlike an actor you are in control of what you say, not merely repeating someone else's words.

## Materials and Props

Just as an actor has materials and props, you too need these as a trainer. Ensure that you specify what equipment you need in advance and that you have back-up if something fails.

Always get to the room 30 minutes before the trainees arrive. You will need to set out the training manuals, check if the equipment works, write up some flip charts, find out where the toilets are and about fire drills and emergency exits, lunch and break times and to settle yourself before your 'performance'.

Additional props that most trainers carry are such things as:

- Flip chart pens
- White board pens
- Spare exercises
- Tent card with the trainees names on it
- Pair of scissors

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### 6.3.5 Preparing Your Training Room

#### Physical Setup

How you arrange the furniture in your classroom can effect both the learning environment, and the type of interaction that can take place among the trainees. Seating can affect the availability of an instructor to a trainee, and can also influence the effectiveness of media, such as overheads or trainer screen. Instruction can be facilitated or hindered depending on the amount of interaction allowed between trainees.

An effective classroom setup and tear down checklist helps guarantees a successful classroom for the next class. Trainees and instructors expect occasional hardware problems, but a trainer should do everything possible to control the classroom environment.

### 6.3.6 Beginning the Training Session

#### Addressing Trainees Expectations

It's important that you address trainees' expectations as early in the day as possible. What you do in those first few moments of the day can have significant impact on the rest of the day. The following are sum of examples on how you can begin your day.

- Discuss the facilities - This lowers trainees anxiety about the new environment bar outside pressure (phone for outside calls, rest room and so forth). Be sure to discuss the environment both outside and inside the classroom.
- Write your schedule on board - This allows trainees to see a direction for a day and to get feel that they are in the right place.
- Preview training manual - This shows trainees the backup support materials for the information about to be taught and can lower anxiety. Be sure to review the topics to be covered as well as the way in which the training manual is to be used.
- Introduction - These help to create an open environment. Encourage the trainees to introduce themselves by sharing such information as their names, the schools they from, the grades they are teaching, their computer experience and their expectations. This will also help them to relate to their peers who come to class with similar abilities.
- Take this opportunity to encourage questions and to establish a friendly, relaxed atmosphere. Indicate whether they should take notes or move ahead in the course manual, and hat their primary focus for the day should be.

- You might also suggest your preference about how the equipment is treated and whether it's appropriate to bring refreshment to the workstation. Indicate when it is appropriate to interact with another trainee.

### 6.3.7 Ending Your Training Session

Your training day should not just stop; it should be end with closure. Just as your initial statements set the tune for the day, your closing statement should complete the impression of the successful day of training. In addition to exiting from the software, answering final questions, and complementing the evaluation form you can:

- Discuss "What's next". Encourage trainee to arrange practice time and recommend that they find a job-relevant task to practice with. Review outlines for advanced-level courses.
- Advertise continuing support service, if available. Encourage learners by reinforcing the use of books and online services as effective help system.

### Questions

1.List some of the steps involved in the design of a course/curriculum
2.List and discuss two licenses available for course material
3.Why should the development of FOSS training content take cognisance of the commercial world for proprietary software
4.Why is it important to have course material in indigenous languages?
5.Discuss how you should prepare yourself for class.

### Exercise

*Participants will brainstorm in groups of 4 preparing a checklist for organising training. The responses of the participants will be captured on a flipcart, which they will put on the wall.*

# Module 6.4: Open Educational Resources and Open Content

**Duration:**

**2 hours**

## 6.4.1 Open Educational Resources

http://en.wikipedia.org/wiki/Open_educational_resources

Open educational resources (OER) are an Internet empowered worldwide community effort to create an education commons.

The term "open educational resources" was first adopted at UNESCO's 2002 Forum on the Impact of Open Courseware for Higher Education in Developing Countries funded by the William and Flora Hewlett Foundation. Open educational resources are educational materials and resources offered freely and openly for anyone to use and under some licenses to re-mix, improve and redistribute. Open educational resources include:

- Learning content: full courses, course materials, content modules, learning objects, collections, and journals.
- Tools: Software to support the creation, delivery, use and improvement of open learning content including searching and organisation of content, content and learning management systems, content development tools, and on-line learning communities.
- Implementation resources: Intellectual property licenses to promote open publishing of materials, design-principles, and localisation of content.

## History

From 24 October to 2 December 2005 the UNESCO on-line Forum Open course content for higher education took place.

In September 2006, the Third Annual Open Education Conference (Community, Culture and Content) was held in Logan, Utah. The last conference was held on September 24-27, 2007 in Logan, Utah.

In June 2007, educators at the iCommons iSummit in Dubrovnik joined the open movement worldwide to showcase emerging open education initiatives and to explore ways to better create, share and evolve open educational materials.

In January 2008 The Cape Town Open Education Declaration was published.

## OER and Open Source

Since 2005 there has been a marked increase in the Open Educational Resource (OER) movement and in Open Educational Licenses (like Creative Commons). Many of the projects on OER were funded by the William and Flora Hewlett Foundation, and partly also by the Shuttleworth Foundation that focuses on projects concerning collaborative content creation. There has been a strong international debate on how to apply OER in practice and the UNESCO chaired a vivid discussion on this through its International Institute of Educational Planning (IIEP).

## Alignment With Open Source Software Community

By the second half of 2006 it also became clear to some of the forerunners that OER and Free/Libre Open Source Software (FLOSS) do somehow belong together. As a result, the discussion groups of IIEP on OER and FOSS were merged and forces were further joined through mergers with a related OECD campaign.

What has still not become clear by now to most actors in the OER domain is that there are further links between the OER and the Free / Libre Open Source Software (FLOSS) movements, beyond the principles of “FREE” and “OPEN”. The FOSS model stands for more than this and, like e.g. Wikipedia, shows how users can become active “resource” creators and how those resources can be re-used and freely maintained. In OER on the other hand a focus is still on the traditional way of resource creation and participant roles.

## Best Practices and Communities for OER Contributors

FOSS communities are today known for producing good quality software using a different development approach than proprietary software producers. FOSS is built by a community of volunteers and might be backed by companies that generate their revenues by providing services related to the software. In more recent years FOSS communities also gained attention for their community production and support models and regarding their way of knowledge creation and learning. FOSS communities possess many characteristics that educational communities could benefit by adopting:

1. Open and inclusive ethos: everyone can participate, no charges, no deadlines, life long participation
2. Up to date content; everyone can add, edit and update the content
3. Materials are usually the product of many authors with many contributions from people other than authors
4. Frequent releases and updates where product features and community structures are the result of a continuous re-negotiation / reflection process within a continuous development cycle
5. Prior learning outcomes and processes are systematically available through mailing lists, forums, commented code and further instructional materials (re-use)
6. A large support network; provided voluntarily by the community member in a collaborative manner nearly 24/7
7. Free Riders (lurker) welcome paradox – the more the better
8. New ICT solutions are adapted early by the community

Education professionals may be aware that FOSS-like principles can benefit education, but there has been no systematic and comprehensive approach to map and transfer those principles, or to develop new educational models and scenarios around them. The European Union funded FLOSSCom project is likely to be the first attempt to map the open source landscape from an educational point of view, but further research and work still remains to be done.

However, Teachers Without Borders, a non-profit based in Seattle, is currently developing a new OER website where members can take courses, discuss their findings with people around the world, and publish their work, all on the same website. Their goal is to connect educators and learners from around the world and give free access to a wide variety of courses, thus helping to close the education divide.

### 6.4.2 Open Content

http://www.wikipedia.org

Open content, a neologism coined by analogy with "open source", describes any kind of creative work published in a format that explicitly allows copying and modifying of its information by anyone, not exclusively by a closed organization, firm or individual. The largest open content project is Wikipedia.

## Technical Definition

Work on a technical definition for open content has been undertaken by the Open Knowledge Foundation. The Open Knowledge Definition (OKD) gives a set of conditions for openness in knowledge - much as the Open Source Definition does for open-source software. Content can be either in the public domain or under a license which allows re-distribution and re-use, such as Creative Commons Attribution and Attribution-Sharealike licenses or the GFDL. It is worth noting that the OKD covers open data as well as open content.

## History

It is possible that the first documented case of open content was the Royal Society, which aspired to share information across the globe as a public enterprise. The term "open content" was first used in the modern context by David Wiley, then a graduate student at Brigham Young University, who founded the Open Content Project and put together the first content-specific (non-software) license in 1998, with input from Eric Raymond, Tim O'Reilly, and others.

### Questions

1.Define Open Educational Resources.
2.Define Open Content.
3.What does Open Educational Resources include?
4.What can educational communities learn from FOSS communities?
5.Contrast Open Educational Resources with Open Content.

### Exercise

*Participants should brainstorm in groups of 5 the importance of open educational resources open content for the advancement of free/libre and open source software. A rapporteur will provide feedback in a plenary.*

# Module 6.5: Communication Skills

**Duration:**

**4 hours**

### 6.5.1 The Four Learning Styles

As a trainer, you will be working with trainees of a variety of learning styles different from your own. Knowing your learning style means you can work with it to deliver a training program that uses your strengths and meets the needs of your trainees.

## If you are the Divergent Learning Style…

You are best at using the Concrete Experience (CE) and Reflective Observation (RO) steps in learning. If this is your style, you probably have the ability to view specific situations from many perspectives. For example, you may enjoy brainstorming and small group discussions. You also like to gather information and probably have broad interests. Your tendency may be to watch events rather than participate in them.

To increase your learning power you also need to place emphasis on the Abstract Conceptualization (AC) and Active Experimentation (AE) steps in the learning process. This means forming conclusions from your information, planning the application of these conclusions and actually implementing them.

For example, after watching a role play or listening to a discussion, summarise your observations into clear conclusions. Then decide how and when to test these conclusions in your own situations. Establish criteria to evaluate if the new idea really worked. Do this at the end of every activity in which you are an observer.

To further increase your learning power, take a more active role in the workshop than you might normally choose. Volunteer to be in the role plays, or to lead group discussions. This may be uncomfortable at first but it will give you an opportunity to experiment with your conclusions. It will also give you more experience with trial-and-error learning, something you may tend to avoid in real-life situations.

You may find it useful to discuss workshop topics with someone who has a Converger learning style. This person will help you see possible conclusions and applications you might overlook. You in turn may help them see information they might overlook, and develop more perspective.

You may have a tendency to concentrate on the human side of problems or topics or exercises. This reflects your ability to understand or to sympathise with others' feelings or points of view, but you may also have a tendency to avoid drawing conclusions about the quantitative or technical aspects of the situation.

Try to develop these skills:

- Collecting and analyzing numerical data.
- Looking for overall patterns in any feedback you get.
- Putting your own feelings aside for a moment and taking a more objective look.

## If you are the Assimilative Style …

You are best at using the Reflective Observation (RO) and Abstract Conceptualization (AC) steps in the learning process. If this is your style, you have the ability to create theoretical models (ideas that predict outcomes and descriptions of how different factors interact).You most likely enjoy inductive reasoning and distilling disparate observations into logical explanations. To increase your learning power, you also need to place more emphasis on the Active Experimentation (AE) and Concrete Experience (CE) steps in the learning process. This involves speeding up your learning cycle by moving into action sooner.

For example, after watching a role play or listening to a discussion, think about ways to immediately apply your conclusions. Look for opportunities to test your new idea during the workshop and personally experience the results. This may require you to conceptualize smaller scale experiments, not the large scale efforts you may prefer. To further increase your learning, be more aware of the feelings and reactions of individuals (including yourself). You may have a tendency to discount intuitive or emotional information. However, much can be learned from a person's tone of voice, facial expressions, and other body language. Much of this data is preliminary in nature and hard to analyse in a logical fashion, but it provides an early warning about how things are going or if an idea has been understood.

You may have a preference for examining the quantitative or "thing" aspects of a situation. Your conclusions may be based primarily on policies, official relations, or formulas developed in other situations. This can cause you to be over-cautious about experimenting and miss opportunities for learning. No two situations are exactly alike. Put more effort into trying ideas, skills, or concepts. Then pay attention to the way things actually happen. It is often different than the way things are "supposed" to happen. Your ability to deal with non-quantitative data will increase if you get involved in interpersonal activities (role plays, simulations, discussions) more frequently. Take an active role and express your feelings. Others will do the same and this will give you experience handling this data.

Enter into discussions with people whose primary learning style is Accommodative. Note the value they place on intuition as a decision- making device. Research shows that in many situations intuition is more effective than logic. Try to implement their suggestions even if they can't provide a supporting rationale, or perhaps you can help them think through the rationale.

Try to add these learning skills:

- Seeking and exploring possibilities
- Influencing others
- Being personally involved
- Dealing with the people side of issues you work on, particularly how to get the support of key individuals whose help you will need

## If you are the Convergent Style…

You are best at using the Abstract Conceptualization and Active Experimentation steps in the learning process. If this is your style, you have the ability to find practical application for ideas, concepts, and theories. In particular, you enjoy situations in which there is a single of best answer to a question or problem. You may usually assume there is one best answer and use technical analysis to reveal it. You too may prefer to deal with technical issues rather than people issues.

To increase your learning power you need to place even more emphasis on the Concrete Experience and Reflective Observation steps in the learning process. This means placing a higher value on gathering and understanding non-quantitative information by looking at a situation from different perspectives. The result may seem to slow your learning process. In fact, it will speed the long-term accuracy by ensuring you are learning the most important things.

For example, while watching a role play or listening to a lecture, you may be thinking about how the topic or technique applies to your situation. Before making a decision, however, try to get other people's perspectives. Listen to their ideas, comments, and questions. You may discover the situation has elements you weren't considering. This may influence how you apply your learning.

To further increase your learning, try to take a less active role in the workshop than you might usually take. Spend some time really listening to others' ideas. Try to see the world as they see it, to understand their feelings and values. Play an observer role from time to time and avoid making judgments or decisions about how well others are doing. Instead, try to understand why they are saying or doing something. This may lead you to new and eventually useful information.

You will find it important to discuss workshop topics with someone who has a Divergent learning style. This person will see both questions and possibilities you might tend to ignore or avoid. You may help them see how to apply some of their ideas.

You may have a tendency to concentrate on the "things" side of problems, topics, or exercises. You may underestimate the impact people's values and emotions have on the way systems actually work. Avoid coming to quick conclusions.

Try to add these skills:

- Listening with an open mind
- Gathering information
- Imagining the implications of situations

## If you are the Accommodative Style …

You are best at using the Active Experimentation (AE) and Concrete Learning (CL) steps in the learning process. If this is your style, you have the ability to learn primarily from hands-on experience. You probably enjoy carrying out plans and involving yourself in new and challenging experiences.

Your tendency may be to act on intuition and gut feel rather than careful analysis. When a thoughtful approach does not seem to be working out, you will be quick to discard it and improvise.

To increase your learning power, you need to place even more emphasis on the Reflective Observation (RO) and Abstract Conceptualization (AC) steps in the learning process. This means collecting and analyzing more information about the results of your efforts. Your batting average in the trial and error method of learning will increase if you learn more than you currently do from each of your trials.

When watching a role play, you may feel frustrated and prefer to be doing the plan yourself. Your tendency might be to think of how you would do the same activity. However, to develop your Reflective and Abstract skills, you should examine other, less personal aspects of the situation. Here are questions you might ask: What basic point does the exercise prove or disprove? What

other information aside from your personal experience do you have that relates to the same topic? Does this exercise help you understand why certain techniques work (not just what the techniques are or how to use them)? To further increase your learning power try to take a less physically active part in the workshop than you might normally choose. Be more mentally active. Volunteer to be an observer in some exercises, not a doer. This will give you an opportunity to reflect on other people's experiences and learn from their trial and error.

You will find it useful to discuss workshop topics with someone who has an Assimilative learning style. This person will help you see information you might otherwise miss. They will also help you see the hidden logic and patterns in situations. You can often use this perspective to guide your intuition. You in turn can help them see new possibilities and opportunities to try out their ideas.

You may have a tendency to concentrate on the urgent aspects of a situation, favouring immediate utility over long-term understanding. To increase your learning, keep notes on your experiences, analyze them, and look for patterns. In other words, look for the forest as well as the trees. Take more time to get other people's perspective on what has happened (or what you are about to do) during the workshop.

The particular skills you want to add are:

1. Organizing information
2. Building conceptual models
3. Testing theories and ideas

**Similarities and Preference Patterns in your Group**

| Group | Ways to include this group in training |
|---|---|
| Accommodative Style | |
| | |
| | |
| | |
| | |
| Convergent Style | |
| | |
| | |
| | |
| | |
| Divergent Style | |
| | |
| | |
| | |
| | |
| Assimilative Style | |
| | |

| | |
|---|---|
| | |
| | |
| | |

**My Training Style**

Look at what you plan to do in your 15-minute workshop. Have you chosen something that fits in well with your own learning style?

Here is a review of each style.

## The Converger (AC / AE)

- Practical application of ideas
- Good at closed-ended, “thing” problems
- Can focus on specific problems
- Can apply concepts
- Relatively unemotional (engineers/accountants)

## The Diverger (CE / RO)

- Imaginative ability
- Views concrete situations from many points of view
- Brainstormer
- People-oriented
- Emotional (personnel managers)

## The Assimilator (AC / RO)

- Creator of theoretical models
- Inductive reasoner
- Likes abstract concepts
- Can assimilate separate observations into an integrated
- Explanation (research and planning departments)

## The Accommodator (CE / AE)

- Doer
- Carries out plans and experiments
- Risk-taker
- Adapter
- Likes to go by the seat of the pants (marketing and sales)

## Individual Exercise

As I reflect on my most successful experience as a trainer, I remember…

What I like best about being a trainer is…

My favourite instructional technique is…

What I find most difficult about being a trainer is…

## About The Trainer Type Inventory

Each of us is influenced not just by our own learning style, but also by our training type.

As agents of change, most trainers are continually aware of changes in themselves. As you facilitate growth and development in others, you struggle to improve yourself, and to become a more effective leader, planner, presenter, and facilitator.

Once you have recognized that learners have preferences for the way they learn, you become more motivated to help them:

- Learn even better in their own preference, where they are comfortable.
- Become more willing to expand their comfort level.
- Try other new techniques and new behaviours to enhance their own learning. The Trainer Type Inventory

The Trainer Type Inventory (TTI) is designed to help you as a trainer identify your preferred training methods in order to:

- Identify the areas in which you have the greatest skill and expertise, so you can share this expertise with other trainers in this workshop.
- Identify the areas where you will want to increase your skills, thereby increasing your ability to address all aspects of the learning cycle.
- Change and growth can become more meaningful, more useful, and more exciting for everyone involved when we grow as trainers, right along with the people we are training.

Malcolm Knowles (1984) says that adults will learn “no matter what.” Learning is as natural as rest or play. With or without workbooks, visual aids, inspiring trainers or classrooms, adults will manage to learn. Trainers can however make a difference in what people learn and how well they learn. If adults (and, many believe, children as well) know when they are learning and if the reason fits their needs as they perceive them (the “So what?”) they will learn quickly and deeply.

There have been other attempts to categorize how trainers train. At first it was thought that trainers would prefer to train others in the style they preferred for learning. However, research has since discovered that there is very little significant relationship between a trainer’s own learning style and training–style preferences.

## Introduction to the TTI

The Trainer Type Inventory identifies four different training types: a Listener, a Director, an Interpreter, and a Coach. Generally we have a preference for one type or another, even though we need all four types to be a successful trainer.

The Training Type Inventory (TTI) has often been administered in conjunction with Kolb’s Learning Style Inventory. It has been used often enough to have some validity for trainers. It is not a psychological tool, but an exercise to help us recognize our own specific trainer development needs.

## Completing Trainer Type Inventory

There are twelve sets of four words or phrases listed below. Rank order the words or phrases in each set by assigning a 4 to the word or phrase that most closely applies to or reflects your personal training style, a 3 to the word or phrase that next best applies to your training style, a 2 to the one that next applies to your training style, and a 1 to the word or phrase that is least descriptive of your training style.

You may find it difficult to rank the items. Be assured that there is no right or wrong answers; the purpose of the inventory is to describe the style in which you train most often, not how effectively you train.

| Question | Choices | Your Ranking |
|---|---|---|
| 1. | a) Subgroups | |
| | b) Lectures | |
| | c) Readings | |
| | d) Lecture discussions | |
| | | |
| 2. | a) Showing | |
| | b) Perceiving | |
| | c) Helping | |
| | d) Hearing | |
| | | |
| 3. | a) Symbols | |
| | b) Actions | |
| | c) People | |
| | d) Instructions | |
| | | |
| 4. | a) Small group discussions | |
| | b) Free expression | |
| | c) Little participation | |
| | d) Time to think | |
| | | |
| 5. | a) Immediate personal feedback | |
| | b) Objective tests | |
| | c) Subjective tests | |
| | d) Personal evaluation | |
| | | |

| | | |
|---|---|---|
| 6. | a) Expert | |
| | b) Scholar | |
| | c) Advisor | |
| | d) Friend | |
| | | |
| 7. | a) Theory | |
| | b) Practical skills | |
| | c) Application to real life | |
| | d) New ways of seeing things | |
| | | |
| 8. | a) Coach | |
| | b) Listener | |
| | c) Directory | |
| | d) Interpreter | |
| | | |
| 9. | a) Seeing “who” | |
| | b) Telling “how” | |
| | c) Finding “why” | |
| | d) Asking “what” | |
| | | |
| 10. | a) Processing | |
| | b) Generalizing | |
| | c) Doing | |
| | d) Publishing | |
| | | |
| 11. | a) Lead them to understand it | |
| | b) Leave them to do it | |
| | c) Let them enjoy it | |
| | d) Get them to think about it | |
| | | |
| 12. | a) It’s yours | |
| | b) It’s ours | |
| | c) It’s mine | |
| | d) It’s theirs | |

## Scoring

Each word or phrase in each of the twelve sets on the TTI corresponds to one of four training styles, which will be described on the TTI Interpretation Sheet. To compute your scale scores for each type, transfer your numerical ranking for each item on the inventory to the appropriate space in the columns below. Then add up the numbers in each column and enter the totals in the spaces below the columns. The totals are your scores for the four training types.

| TOTALS: | L | D | I | C |
|---|---|---|---|---|
| | 1a: | 1b: | 1c: | 1d: |
| | 2b: | 2a: | 2b: | 2c: |
| | 3c: | 3d: | 3a: | 3b: |
| | 4b: | 4c: | 4d: | 4a: |
| | 5a: | 5b: | 5c: | 5d: |
| | 6d: | 6a: | 6b: | 6c: |
| | 7c: | 7d: | 7a: | 7b: |
| | 8b: | 8c: | 8d: | 8a: |
| | 9a: | 9b: | 9c: | 9d: |
| | 10d: | 10a: | 10b: | 10c: |
| | 11c: | 11d: | 11a: | 11b: |
| | 12b: | 12c: | 12d: | 12a: |
| | | | | |

## Interpreting Trainer Type Inventory

Your lowest score is your least preferred training type, and offers you the greatest opportunity for growth and development. Your highest score is your most preferred type. On possible implication here, if this score is too high, is that you may be using your preferred style to excess. You may need to develop your skill in the other training styles in order to present information in ways that make sense to a greater range of participants.

The Trainer Type Inventory describes four training approaches: Listener, Director, Interpreter, or Coach. Each of the four training styles identified by the TTI is characterized by a certain training approach, way of presenting content, and relationship between the trainer and the trainees. The following are the primary characteristics of the trainer for each of the four training types.

| Listener (L) | Director (D) |
|---|---|
| • Creates an effective learning environment<br>• Trains the Concrete Experiencer most effectively<br>• Encourages learners to express personal needs freely | • Creates a perceptual learning environment<br>• Trains the Reflective Observer most effectively<br>• Takes charge<br>• Gives directions |

| | |
|---|---|
| • Assures that everyone is heard<br>• Shows awareness of individual group members<br>• Reads nonverbal behaviour<br>• Prefers that trainees talk more than the trainer<br>• Wants learners to be self-directed and autonomous<br>• Exposes own emotions and experiences<br>• Shows empathy<br>• Feels comfortable with all types of expression (words, gestures, hugs, music, art etc.)<br>• Does not seem to worry about the training<br>• Stays in the here-and-now<br>• Is practical (goes with the flow)<br>• Appears relaxed and unhurried | • Prepares notes and outlines<br>• Appears self-confident<br>• Is well organized<br>• Evaluates with objective criteria<br>• Is the final judge of what is learned<br>• Uses lectures<br>• Is conscientious (sticks to the announced agenda)<br>• Concentrates on a single item at a time<br>• Tells participants what to do<br>• Is conscious of time<br>• Develops contingency plans<br>• Provides examples<br>• Limits and controls participation |
| Interpreter (I) | Coach (C) |
| • Creates a symbolic leaning environment<br>• Trains the Abstract Conceptualiser most effectively<br>• Encourages learners to memorize and master terms and rules<br>• Makes connections (ties past to the present, is concerned with the flow of the training design)<br>• Integrates theories and events<br>• Shares ideas but not feelings<br>• Acknowledges others' interpretations as well as own<br>• Uses theory as a foundation<br>• Encourages generalizations<br>• Presents well-constructed interpretations<br>• Listens for thoughts; often overlooks emotions<br>• Wants trainees to have a thorough understanding of facts, terminology | • Creates a behavioural learning environment<br>• Trains the Active Experimenter most effectively<br>• Allows learners to evaluate their own progress<br>• Involves trainees in activities, discussions<br>• Encourages experimentation with practical applications<br>• Puts trainees in touch with one another<br>• Draws on the strengths of the group<br>• Uses trainees as resources<br>• Helps trainees to verbalize what they already know<br>• Acts as facilitator to make the experience more comfortable and meaningful<br>• Is clearly in charge<br>• Uses activities, projects and |

| | |
|---|---|
| • Uses case studies, lectures, readings<br>• Encourages learners to think independently<br>• Provides information based on objective data | problems based on real life<br>• Encourages active participation |

Each type also trains in a different way.

- The Listener trains the Concrete Experiencer most effectively, and is very comfortable in the activity and publishing steps of the Experiential Learning Cycle.
- The Director obtains the best results from the Reflective Observer, and is usually very comfortable during Step 3, which is processing (particularly in helping trainees make the transition from “How do I feel about this?” to “Now what?”).
- The Interpreter trains in the style favoured by the Abstract Conceptualiser (Step 4, generalizing).
- The Coach trains in the style favoured by the Active Experimenter (Step 5, applying)

These relationships are indicated in the table below.

| | L<br>Listener | D<br>Director | I<br>Interpreter | C<br>Coach |
|---|---|---|---|---|
| Learning Environment | Affective | Perceptual | Symbolic | Behavioural |
| Dominant Learning Style | Concrete Experiencer | Reflective Observer | Abstract conceptualiser | Active Experimenter |
| Means of evaluation | Immediate personal feedback | Discipline based; External criteria | Objective criteria | Learner's own judgment |
| Means of Learning | Free expression of personal needs | New ways of seeing things | Memorization; knowing terms and rules | Discussion with peers |
| Instructional Techniques | Real-life applications | Lectures | Case studies, theory, reading | Activities, homework, problems |
| Contact with Learners | Self-directed Autonomous | Little participation | Opportunity to think alone | Active participation |
| Focus | "Here and now" | "How and why" | "There/then" | "What/How" |
| Transfer of Learning | People | Images | Symbols | Actions |
| Sensory Perception | Touching | Seeing and hearing | Perceiving | Motor Skills |

### 6.5.2 Presenting Information

## Coaching

In most technical training situations, the objective is to train the trainees to use a particular software program or computer system. This typically involves hands-on practise. The trainer can be more effective in these situations if he/she acts like a “coach” rather than a “trainer” in the traditional sense.

Following are some tips:

1. Think like a coach

   Be committed to everyone’s success; don’t think about “bell curves”. You are a successful trainer only if the trainees have a successful experience.

2. Prepare the trainees

   Let them know the “rules of the game”. Tell them what they will be doing and point out the “pitfalls” – ahead of time.

3. Focus on the basics

   Reinforce basic skills such as reading the screen, knowing the keyboard and using the mouse, understanding the general concepts and context

4. Don’t give away answers

   Make trainees think. Forward the action by asking “show me what you did”. Try taking different approaches. Let them experience the solution.

5. Don’t press the keys!

   Never press the keys. This is one of the biggest sins a trainer can commit. Let them do the driving, except when it distracts from the training

6. Reinforce strengths and build on success

Point out to the things that they already know and what is being done correctly, than encourage and help them move the ball down the field.

## Interactive Lecturing

Interactive lecturing is the use of questioning, discussion and lecturing to stimulate understanding, direct discussions, and provide information. Its purpose is to change the roles of both trainer and the trainee from passive to active.

Following are some tips:

1. Have a plan

   Have a plan or information flow in mind is, of course the most important first step. This serves as a “road map” to help keep the trainer focused. This plan also has the information divided into manageable units.

2. Use your eyes

Look at the trainees. Use eye contact to create involvement. Check understanding and "control" the room

3. Use your voice

   Speak clearly and strongly. Don't use "filler" language. It indicates that you are not sure what you are talking about. Use inflection in the voice to keep interest and emphasise key pieces of information. Remember to breathe.

4. Use your presence

   Move around the room. Use the back as well as the sides and front. Use your presence to promote involvement and discouraged distractions

5. Use questioning

   Questions are the most important tool. They are used to stimulate the trainees thinking and involvement in the content, moving them from passive to an active role.

6. Build on what they already know

   Use analogies, metaphors, stories, graphics and "real world" examples to illustrate both verbally and visually the information you are providing.

7. Set a context

   Make sure that you present the "big picture" and point out where the trainees are focused at the moment. Also be sure to let them know what is coming.

8. Stay conscious

   Read the trainees' body language. Make eye contact, breathe; move around. Use variety and humour. Keep to the timing. Don't get off track. Keep in mind whose needs are being met.

### 6.5.3 Using Your Body Effectively

Effective communication involves more than talking to your audience. Your body language plays an important role in communication. Research shows that what you say accounts for only 7% of the effectiveness of a presentation, while 93% are based on non-verbal communication. Body language, proximity, and eye contact are three main areas of focus in non-verbal communication. Remember it's not what you say, but how you say it that often matters the most in communication.

Some areas to consider while presenting include:

1. Facial expressions

   Smiling is a powerful cue that transmits friendliness, warmth, and approachability. Smiling is often contagious and others will react favourably. They will be more comfortable around you and more open to the information you are offering.

2. Posture

You communicate numerous messages by the way you hold yourself while presenting. A person who is slouching or leaning with arms across their chest may be perceived as being uninterested or unapproachable. Standing erect, facing the audience with an open stance, and leaning forward communicates that you are receptive and friendly. Speaking with your back turned or looking at the floor or ceiling should be avoided as it communicates disinterest.

3. Gestures

A lively speaking style captures attention, makes the material more interesting, and facilitates understanding. Use natural movements to emphasise topics and free, easy arm and hand movements to add personality to your presentation. If you fail to gesture while speaking, you may be perceived as boring and stiff. Gesturing too often can also be distracting for some learners.

4. Movement

Moving naturally around the classroom increases interaction, adds interest, and draws attention to the presentation. Staying frozen in the front of the room can be distracting and boring for people to watch. Shuffling feet and pacing can convey nervousness and lack of confidence.

5. Proximity

Cultural norms dictate a comfortable distance for interaction with others. When interacting with adults in the classroom, a presenter needs to be aware of people's defined levels of personal space. Signals of discomfort caused by invading other's space may include rocking, leg swinging, tapping, and gaze aversion. Do not invade a student's intimate space. Most adults will feel uncomfortable, even if rapport has been established.

### 6.5.4 Building Rapport with Eye Contact

Steady eye contact helps to regulate the flow of communication, encourages participation, and can be used to develop rapport with the audience. When students feel that you see them as individuals, they are more likely to trust you as a trainer and be more open to the learning experience.

Some tips for using eye contact to build rapport include:

1. Length of eye contact

Try to maintain eye contact with one person at a time for at least 3 – 5 seconds or until you complete a thought. This helps to establish a connection with people and helps you to avoid darting eyes, which can be distracting and communicate nervousness.

2. Movement of eyes

Try to establish direct eye contact towards different parts of the audience throughout the course of your presentation. Staring too long in one direction may cause you to miss important information and can make certain audience members feel less important.

3. Search for friendly eyes

If you are nervous, look for a friendly trainee and establish eye contact with that trainee. Gradually, work to establish eye contact with everyone.

Some habits to avoid include:

1. Talking to the ceiling

Don't lecture to a spot over the top of the trainee's heads. They may think you don't care or they may feel that you are "above them." Adults learn better with colleagues.

2. Talking to the board

Don't talk to your desk, to the whiteboard, or to your visuals. Trainees may not be able to hear you and may become disinterested.

3. Clutching your training manual

Be familiar with your training material. Being tied to your notes or a manual keeps you from establishing eye contact and may cause trainees to question your knowledge, preparedness, and confidence.

### 6.5.5 Enhancing Voice Quality

Voice is another area of communication that can affect the quality of learning in a classroom. An interesting and audible voice will engage trainees, while a soft or monotone voice can cause boredom or disinterest among trainees. While it may be difficult to listen to and change our own voice, with awareness and practice, it is possible to use one's voice effectively. The first step to refining your voice is to understand the components of voice and identify common voice problems. Once identified, most voice problems can be improved by being aware of the problem, altering some habits, and practicing new behaviours on a regular basis.

1. Pace

How long a sound lasts. Talking too fast causes words and syllables to be short, while talking slowly may lengthens them. Varying pace helps to maintain the audience's interest.

Suggestions for improvement:

- Be aware of your normal conversational pace and keep in mind how tension affects the speed in which you talk.
- Use breathing and natural pauses to slow down your pace
- Constantly vary your pace in order to maintain audience interest.

2. Projection

The direction of the voice so that it can be plainly heard at a distance is considered effective. Problems with projection are often the result of tension and breathing from your throat.

Suggestions for improvement:

- Avoid projecting from your throat which can lead to sore throats, coughing, and loss of your voice.
- Take slow, deep breaths, initiated from your abdomen

- Open your mouth fully and speak to the people in the back of the room.

3. Articulation

The ability to pronounce words distinctly. It often reflects our attitude towards the words we are speaking. Clear enunciation reflects self-confidence and interest, while slurred or mumbled speech indicates insecurity or indifference.

Suggestions for improvement:

- Speak at a slower pace than your normal conversational tone.
- Take the time to pronounce each letter or sound within a word.
- Listen for common articulation problems, such as dropping the “g” at the end of words such as finding or going.

4. Pitch

Pitch describes the normal range of the voice – its highness or lowness. Everyone is capable of a wide voice range. Stress and poor breathing can greatly alter the pitch of your voice.

Suggestions for improvements:

- Adjust pitch to convey different meanings throughout a presentation.
- To alter pitch, control your breathing; breathe from your abdomen and slow your rate of speech.
- Take pauses to relax between pitch changes

5. Inflection

Inflection refers to the manner in which pitch varies as we speak. Inflection serves as verbal punctuation and involves changing pitch to convey meaning. Upward inflections ask a question, suggest uncertainty or doubt, and communicate hesitancy. Downward inflections give information and convey strength and authority to the audience.

Suggestions for improvement:

- Use upward and downward inflections appropriately.
- Avoid constant middle inflection where the voice neither rises nor falls but just drones on and on.

## Module 6.5.6 Questioning Techniques

Questioning is the power tool to use in training. It has many uses, from testing trainees on their knowledge of the subject matter, to get information to helping a trainer maintaining classroom control. Trainers often state concept when the class could be actively involve if more questioning were used.

## Types of Questions

1. Whole group

   This type of question is directed to the entire group.

2. Individual

   This type of question is directed to a trainee. You should use this questioning method carefully. You can start by asking a whole-group question. Then, and only after evaluating the group and identifying a trainee who will clearly be able to answer, redirect the question to particular trainee.

3. Pass

   This technique is used to direct a question asked by a trainee, to the group. It can also be used get a trainee “off the hook” if he or she is unable to answer an individual question.

4. Reword and ask again

   This technique can be used when you have a poorly worded question and you need to restate for better understanding, or when you’ve receive an answer that is “close” but not quite correct.

5. Rhetorical

   A rhetorical question is usually asked solely for thought-provoking purposes. An answer is not expected.

6. Testing Questions

   A testing question is asked by a trainer to test knowledge, something that a trainee already knows or can be reasonably expected to know. It is also used to:

## Handling Responses to Question

How you handle responses from trainees can be equated with doctors “bedside manner.” The ways in which question are addressed can either encourage interaction or end it for the rest of the day.

Giving trainees nine second to respond may seem long and at first quite uncomfortable. However, it takes the average adult about three second to process the questions; another three second to see if someone else will answer the question for them, and an additional three seconds to find the courage to respond.

- Accept at any time, but take one at a time
- Deal with those which are relevant now and others later
- Indicate degree of correctness
- Build on trainee's words
- If you do not know the answer - let them know; note questions and find the answer
- Do not bluff; you will be caught out
- Tell the group as well as the individual

## Level of Questioning

1. Low level

   Low-level questions are the most commonly used questions in a classroom (50%-90%). These questions are highly convergent, and they typical check for concrete knowledge learned. These questions often start with words like, what, when, where, and who. They work well early in the day because they are safe questions with clear right and wrong answers.

2. High level

   High level questions involve some type of personal value judgement on the part of person answers. High-level questions tend to promote divergent thought. They typically start with words like who and why. Typical, a low-level understanding of situation is needed to give an answer to the high-level questions.

### Questions

1.List and briefly describe the four learning styles.
2.List and briefly describe the four different training types.
3.Discuss coaching and interactive lecturing as techniques to present information
4.What are the areas you should consider when presenting information
5.List some tips for using eye contact to build rapport.
6.List and briefly describe the components of voice.
7.Why is questioning important?
8.How should one handle responses to questions?

### Exercise

*Design a programme for (a) business people; (b) trainers; and (c) graduates in a group. The outcomes should be presented by a group.*

## Assignments and Answers

### TASK

It is required that you design a national roll **plan**. The content of the plan should include:

- strategies and ideas on how to achieve this plan
- how you intend to get your participants
- qualifying participants assessment criteria
- duration of the program
- cost of training or participation fee
- number of trainers needed and their cost
- number of modules to be included in your training
- any sponsorship opportunities
- how you intend to sustain further trainings

Discuss the Case study based on the core questions discussed under FLOSS training business opportunities.
**Rules**: Please state **(3 maximum)** points briefly how you would have approached the same training opportunities and any two training opportunities you would like to explore as a group of trainers.

Some examples from participants

**1 Objectives and vision statement**
The basic objectives of the national roll-out training are:
•To raise FOSS awareness in the Tanzanian Community
•To develop sustainable FOSS-based IT business
•To strengthen FOSS communities in Tanzania
The vision is to builds capacities in African small and medium IT enterprises to make FOSS based business. It aims to encourage the growth of African IT industries.

**2 Participants**
As the objective of the training is focusing on FOSS business models, the training will call for participants from IT companies wishing to diversify their business, start-up IT entrepreneurs, local FOSS communities, educators and graduates in IT related subjects as well as other participants interested in FOSS business models in Tanzania.

A call for participants will therefore be advertised through different marketing strategies. Different media through which this course can get very good publicity in Tanzania, are: the newspapers, e-mail to target groups and other prospective IT companies. Other strategies will be development of promotional materials such as posters and place them in high traffic areas.

The Training will be delivered in a Workshop style to allow maximum interaction and discussions. The target is to train 20 participants each quarter (three months) and therefore about 80 participants per year. Initial trainings will be concentrated in regional towns and cities where IT infrastructure is well established

It is expected that all participants will be selected from those who have at least knowledge of basic computers, experience in FOSS or potential FOSS collaborator to allow uniform workshop interactions.

## 3. Output

The target is to achieve the set objectives; so we can expect the Training outcome to be:

(e)Awareness on FOSS causes more people to demand for FOSS applications and solutions and as such provide opportunities for any FOSS businesses to flourish

(f)Growth of a FOSS Community, which comes with it, more FOSS minds, students, trainers, and advocacy and so on.

(g)With these and more benefits, it is possible to plan an annual FOSS event, such as FOSS Clinics, Free FOSS Training, FOSS certification and so on.

## 4 The Training Content

The training shall consider the local conditions and environment. It will comprise three modules, namely Module 1, Module 2 and any one of the other modules as listed below:

- Module 1: Introduction to emerging FOSS business models
- Module 2: African business models: Case studies
- Module 3: Communicating FOSS
- Module 4: Introduction to General business skills
- Module 5: FOSS specific business knowledge and skills
- Module 6: FOSS Training
- Module 7: E-learning Platform

The selection of the modules will depend on the mission of the target groups and their levels of understanding. The content materials will be availed to the participants at least one week before the workshop.

## 5 Resource persons (Trainers)

As a FOSS ToT member I will be the principal trainer. Supporting trainers will be sourced from within FOSS related institutions and FOSS - ToT Alumni. Shortfall of trainers will be requested from InWent and FOSSFA. Qualified trainers will need to have knowledge of FOSS, proven training Experience and proven excellence in their field of profession

## 6 Time Schedules and Venues

A workshop session will be done for a period of 5 days (not less than 40 hours). This time is just long enough for participants to understand the materials content and practices of the FOSS modules without being bored.

Information on the workshop venue, schedules for starting and end times and dates for the workshop sessions will be set and communicated to participants at least four weeks in advance. Arrangements for hotel accommodation will arranged for participants in need. The workshop organization will establish a support through help desk for post training questions, accommodations reservations, training registrations etc.

## 7 Fees and Costs

Participants shall contribute an TSH. xxx for the workshop. Trainers would be paid TSH xxx per day.

## 8 Sponsorship & Marketing

InWent and FOSSFA have promised funding and support, It is possible to look for Local Support for this Training workshop, especially from Companies and institutions that will likely benefit from adding their name and profile to such an event. So a workshop prospectus together with a call for support and sponsorship would go a long way in acquiring some support. This needs to be done in time.

## 9 Media

Media Coverage is crucial for such a workshop and this would help to inform a larger group of people about the Workshop. A Newspaper article, a phone in Radio announcement, a community announcement could all add to the buzz.

## 10 Course ware evaluation

Evaluation forms for the course ware and trainers will be prepared and availed to the participants after every module. At closing of the workshop there will be general discussion on the evaluation results and process to ways for improvement. This will also give opportunity to discuss issues that are of interest or were omitted for future improvements.

## 11 Budget

| # | Activity | No | Rate/day | Tsh/day | TOTAL / 5 days |
|---|---|---|---|---|---|
| 1 | INCOME | | | | |
| 1.1 | Participation fee | 20 | | | |
| **1.2** | **Total Income** | | | | |
| 2 | EXPENDITURE | | | | |
| 2.1 | Venue with computers | 1 | | | |
| 2.2 | Refreshments | 23 | | | |
| 2.3 | Lunch | 23 | | | |
| 2.4 | Transport for ppts | 20 | | | |
| 2.5 | Stationary | 20 | | | |
| **2.6** | Trainers fees | 3 | | | |
| **2.7** | Advertising and marketing | 1 | | | |
| 2.7 | **Total Expenditure** | | | | |
| | Contingencies / accidentals 10% | | | | |
| **2.8** | **TOTAL** | | | | |

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Aflent's national roll out plan will focus on providing training initially to university students, BEE entrepreneurs and other established black businesses in South Africa. The aim is to empower these groups with FLOSS for two major reasons:

. Impart skills to use FLOSS applications to enable and capacitate internal business processes in order to gain competitive advantage

To train the groups on how to move into FLOSS-based businesses (FLOSS consultancy and training)

**Strategies**

The key to achieving successful trainings lie in the ability to attract attention of participants, offering a highly accredited and internationally recognised African FOSS Business Model course establish and maintain continuous online learning and networking platform for trainees. The trainings will take the form of a strategy-driven process.

Conduct a preliminary FLOSS workshop to market the concept and the training.

Pitch for short course raining deals with local institutions and universities.

Clear the issue of certification and accreditation of the course.

Develop a solid sustainability model.

**Getting participants**

Participants will be sourced from the corporate industry, universities, NGOs and the public sector including technologists in government departments.

- Marketing the FOSS concept
- Marketing the FOSS training
- Networking with colleagues, former workmates and clients interested in Open

**Participants' assessment criteria**

(h)Attitude

(i)Eagerness to learn

(j)Reasons why participants want to get the training

(k)Skills

- A qualification in IT and/ or business
- Training skills
- Previous advocacy work
- Knowledge
- Basic understanding of FOSS and/or IT's role in business

**Duration of the program**

2 weeks for 2 months

**Cost of training or participation fee**

**Trainers needed and their cost**

As a certified trainer I will choose a number of modules 2 and 4. The remainder of the modules will be delivered by local and regional trainers subject to their availability. In total four trainers are required for the course. Cost of the trainers will be determined by FOSSFA and InWent.

Estimated rate per trainer per module will be obtained from the FOSSFA/InWent.

**Modules to be included in your training**

Provisionally all modules are to be included:

1. Introduction to emerging FLOSS Business Models
2. African Business Models Case Studies
3. Communicating FLOSS
4. Business Skills
5. FLOSS Business Knowledge and Skills
6. FLOSS Training Business

**Sponsorship**

- Established FLOSS companies (Sun Microsystems)
- First National Bank
- IT companies
- Government departments (DST, SITA, Local Councils)

**Sustainability Model**

The training will be offered as a short course through The Business Place and Monash and North West University.

# TEST Module 6

**1. Below are some of the winning combinations of an "ideal" FLOSS trainer. Which one is not? Ability to engage participants and relate content to their situation.**

(a) Winning personality and ability to communicate.

(b) Practical experience in FLOSS applications.

(c) Ability to program in Java and Visual Basics

**2. Which one of the following is not one of the three types of training interventions for FLOSS Trainers discussed in module 6.1?**

(a) Those who have the technical knowledge of FLOSS packages and have been using certain packages, but have not conducted any training of any nature.

(b) Those who have the knowledge and skills on how to conduct ICT training for adults which they might have acquired through self-learning or having had attended a course, but have not conducted any FLOSS training. Instead, they have conducted training in proprietary software.

(c) Those who have no jobs and they want to occupy themselves

(d) Those who have conducted FLOSS training courses and have the knowledge and skill on how to conduct training, but have not trained other trainers

**3. Why is it important that trainers use the software they will be training?**

(a) Helps them become conversant with features and functionalities that the software provides and can transmit this knowledge to their trainees.

(b) Helps them boast of the knowledge they have about the software

(c) Helps them deliver the training within the shortest time possible

(d) Helps them be liked by the trainees

**4. Trainers should see training as a stage production: which of the following is not part of the stage production aspects?**

(a) There is the audience (participants).

(b) There is a stage (training room).

(c) The performance by the actor (trainer conducting the course).

(d) The performance by the audience (Shouting)

**5. Selection of candidates for FLOSS training can be done using the following criteria exceptelection of candidates for FLOSS training can be done using the following criteria except.....**

Please, contribute to the material! Click here “How to contribute”

**6. Below are some of FLOSS certification recognisable in many countries. Which one is not very recognizable when it comes to FLOSS training?**

Please, contribute to the material! Click here “How to contribute”

**7. Below is a list of some of the steps involved in the design of a course/curriculum. Which one is weak compared to the others in the list?**

Please, contribute to the material! Click here “How to contribute”

**8. Why should the development of FLOSS training content take cognisance of the commercial world for proprietary software?**

**9. The Diverger is described by the following except:**

Please, contribute to the material! Click here “How to contribute”

**10. The Converger is described by the following except:**

Please, contribute to the material! Click here “How to contribute”

# Final Quiz For all the Modules

## Question 1 : Who is termed "father of the GNU Project"

(a) Andrew S. Tanenbaum

(b) Richard Stallman
(c) Linus Torvalds
(d) Bill Gates

## Question 2 : Why is it important that trainers use the software they will be training?

(a) Helps them be liked by the trainees.
(b) Helps them become conversant with features and functionalities that the software provides and can transmit this knowledge to their trainees.
(c) Helps them boast of the knowledge they have about the software
(d) Helps them deliver the training within the shortest time possible

## Question 3 : Which benefit/limitation applies to Open standards?

(a) Inefficient use of existing resources

(b) Lack Flexibility

(c) Fewer options and thus less opportunities to optimise

(d) Lower and manageable risk

## Question 4 : Which of the following definition best describe Open Content ?

(a) Describes content that has been put at a pool for all to access just for reading but not for any modification
(b) Describes any kind of creative work published in a format that explicitly does not allow copying and modifying of its information by anyone, exclusively by a closed organization, firm or individual
(c) Describes any kind of creative work published in a format that explicitly allows copying and modifying of its information by anyone, not exclusively by a closed organization, firm or individual
(d) Describes open content for only business community

## Question 5 : How are FOSS brand names protected?

(a) Through licenses such as GPL3
(b) By an online community surveillance scheme
(c) By placing product keys on application
(d) FOSS brands are never protected and are open for use by anyone

## Question 6 : How effectively do you manage your leads?

(a) I contact every lead and stay in contact until they are mine or I discard them.
(b) I am following up on enough leads to achieve the level of production I want but there are always more leads that are not followed up on.
(c) There are many leads that I don't follow up on or lose after the first contact
(d) Only responds to their calls

### Question 7 : How strong is your service to your clients?

(a) I will ask for their request only
(b) I maintain good contact with my clients until an offer is accepted and then I lose touch.
(c) My sellers call me before I call them, my buyers often leave me, and I am embarrassed to call after closing because I've lost touch.
(d) I speak to my listed sellers, my pending clients, and my motivated buyers at least weekly on schedule.

### Question 8 : Which of the following is an important strategic decision a company needs to make

(a) Business Location
(b) Which staff to employ
(c) Name of the Comapany
(d) Choosing your clients and market

### Question 9 : What are the obstacles, if any, you might perceive in people not wanting to attend FLOSS training courses?

(d)Lack of knowledge on open source software
(e)Poor marketing by FLOSS trainers
(f)Most enterprises still do not use FLOSS tools and services
(g)Over pricing of training fees

### Question 10 : Given that your cash flow projection of your FOSS business indicates a negative cash flow six months down the line, the FIRST remedy would be to:

(d)Bring your cash flow projection back into "positive" by increasing sales, cutting costs and obtaining financing.
(e)Attempt to sell the business.
(f)Begin looking for alterative business opportunities.
(g)Create a new cash flow statement

### Question 11 : In doing business branding is considered a very important undertaking. What is brand names are primarily used to achieve

(e)Show consumers you own the product.
(f)Spice up the image of a product.
(g)To help identify your product.
(h)To help consumers select a product/service.

### Question 12 : Which of the following statements is incorrect?

(g)Public Relations is the act of managing information flow between an organization and the public
(h)Media Relations refers to way the media manages its relationships with the general public in order to safe guard its reputati
(i)Public Relation may consist of activities an organization may involve itself in with the intention of promoting a positive relationship or image with its customers or indeed any members of the public
(j)Public Relation could lend organization important media publicity at low or no costs at all

### Question 13 : Some of the major problems encountered by many FOSS companies in Africa are

1. Finding Free and Open Source Software that fit for their businesses
2. Skilled work force that is willing to work for a low salary
3. Aquisition of capital for investment
4. Finding clients for their products

(a)4
(b)2 and 3

(c)2,3 and 4
(d)4

### Question 14 : Selection of candidates for FLOSS training can be done using the following criteria except

(c)Role/function in organization
(d)Educational background
(e)Identified need
(f)Nepotism

### Question 15 : When you are providing FOSS/FLOSS soultions, you are paid for ...

(c)Business goodwill
(d)Qualification
(e)Service
(f)Product

### Question 16 : Initiating a new business involves considerable risk, as well as an effort to overcome all the ..... against innovative ideas.

(b)Inertia
(c)Pressure
(d)Attitude
(e)Protest

### Question 17 : Defining a revenue model for your FOSS business will help you to do the following except

(d)Stay focused on a niche and a target audience
(e)Give you a foundation for your product or service development plans
(f)Give you a good basis for accounting
(g)Provide a foundation for your marketing plans

### Question 18 : Why is it important to have course materials developed using indigenous languages?

(e)To attract more audience/participation from local communities
(f)To compete with course materials in foreign languages
(g)To raise money during translation processes
(h)To adhere to government policies

### Question 19 : As a trainer, one should prepare in three key areas, which ones are they?

*Hint: This is a multiple answer question!*
(e)Youeself
(f)The classroom
(g)Fighting
(h)The content

### Question 20 : One way to create FLOSS market is by persuading existing ICT users. Which one of the following statements misrepresents the act of persuasion?

(a)Showing what others are doing
(b)Showing frightening accounts of users of rival products, services
(c)Showing user generated views
(d)Showing scarcity of goods or services

## Question 21 : What do advocacy initiatives ultimately try to achieve?

(a)Agitate public resentment against government
(b)Influence customer choices
(c)Resolve political differences
(d)Policy change

## Question 22 : What is Network effects?

(a)The phenomenon that describes how Products in a network increase in value to users as the number of users decreases
(b)The phenomenon that describes how Products in a network increase in value to users as the number of users increases
(c)The phenomenon that describes how Products in a network decrease in value to users as the number of users increases

## Question 23 : In business a Marketing Mix consists of:

(a) Product, Price, Place, Promotion
(b) People, Products, Price, Place
(c) Price, Promotion, Advertising, Place
(d) Process, People, Physical Evidence, Product

## Question 24 : All free software is freeware and all freeware is free software.

(a) True
(b) False

## Question 25 : S.W.O.T analysis is predominantly used to:

(a) Determine the sales of an organisation.
(b) Determine the capabilities of the organisation.
(c) Assess whether an organisation should
(d) Determine whether new products work or not.

## Question 26 : For this question please match the software to the appropriate group

| | |
|---|---|
| 1. Internet Browser | A. Open Office - Impress |
| 2. Apache | B. World Processor |
| 3. Open Office – Writer | C. Firefox |
| 4. Presentation | |

## Question 27 : Which of the following is not a commnon FOSS business model in Africa?

(a)FOSS Training
(b)Consultancy
(c)System Software Development
(d)Web Solution Providers

## Question 28 : In Business, the term Total Cost of Ownership (TCO) refer to

(a)License fees,installation cost and maintenance cost.
(b)Training cost
(c)Operation cost
(d)Cost of your fixed Assets

## Question 29 : GPL compatible free software license is

(e)A permissive non-copyleft free software license
(f)A free software license, and a copyright license
(g)A free software license, and a copyleft license
(h)None of the above

## Question 30 : Who solves bugs/errors in open source software

(a)Users
(b)Developers
(c)All of the above
(d)None of the above

## Question 31 : The business planning process sometimes fails because

1. The planning process is poorly managed
2. Plans are impractical
3. Planners lack the appropriate skills
4. Lack of government support

(e)1 only
(f)1 and 2 only
(g)1,2 and 3 only
(h)1,2,3 and 4
(i)

## Question 32 : What is product branding?

(a)Garnishing company logo on your products and services
(b)Is the proprietary visual, emotional, rational, and cultural image that you associate with a Company or a product
(c)Constantly displaying and associating your products with other popular products
(d)An appealing slogan often used to accompany your product advertisement

## Question 33 : What are the two licenses available for course material licensing?

(a)CISCO License and Ubuntu License
(b)OpenICDL license and Linux Professional Institute Certification License
(c)Creative Commons and GNU Free Documentation License
(d)Junior Level Linux Professional and GNU Free Documentation License

## Question 34 : In undertaking a FOSS business one of your source of information is secondary data. What is secondary datat?

(a)Data collected from personal interviews.
(b)Data taken from questionnaires.
(c)Data collected from published materials.
(d)Data collected from suppliers.

## Question 35 : Join different FLOSS/FOSS communities both physical and online has a basic advantage. Which of the following is true

(a)It is place where you can showoff your skill
(b)There is a wealth of skills and knowledge
(c)Only those who are knowledgeable join
(d)The community in only online

### Question 36 : The following are revenue streams for most FOSS Businesses in Africa except

(a)Training
(b)After Sale Support
(c)Conducting Research
(d)Adverting

### Question 37 : What is the most common reason why people start new businesses?

(a)To get rich d. To work fewer hours
(b)Because they don't want to work for someone else
(c)Because they have no other alternative
(d)To work fewer hours

### Question 38 : As part of the social responsibility of most open source business discussed in Africa do the following except

(a)Create websites for SME free of charges
(b)Donate money to Open Source Software projects and communities
(c)Send back modifications of a source code to foss communities
(d)Undertake seminars to show people how to copy any software

### Question 39 : The concept of innovation and newness is now an ..... part of entrepreneurship.

(a)Intangible
(b)Integral
(c)Integrated
(d)Intelligible

### Question 40 : Which of the following are normally included in Open Educational Resources

1. Learning content: full courses, course materials, content modules, learning objects, collections, and journals.
2. Tools: Software to support the creation, delivery, use and improvement of open learning content including searching and organisation of content, content and learning management systems, content development tools, and on-line learning communities.
3. Implementation resources: Intellectual property licenses to promote open publishing of materials, design-principles, and localisation of content.

4. Instructors: Teachers, Lecturers, professors.

(a)2,3 and 4
(b)1 and 2
(c)1,2 and 3
(d)None

### Question 41 : Which of the following statements below best represents reasons why community media may be more useful media channel for SME wanting to promote their goods and services?

(a)Community media doesn't charge or levy local people wishing to promote their services
(b)Community media is much more trusted than national broadcasters
(c)Customers tend to view SMEs that work with community much more favorably
(d)Community media's commitment to local development tend to lend support to local businesses

### Question 42 : When you lease a space for an office, technical support shop or warehouse, how do you protect yourself from being tied into a lease even if you have outgrown the space?

(a)Become personal friends with your landlord.
(b)Plan to add space if necessary at a remote location.
(c)Provide for this contingency in your lease.
(d)Plan to sublease your premises and relocate to larger quarters.

### Question 43 : Which statement best describes FOSS/FLOSS?

(a)FOSS applications are not owned by anyone.
(b)FOSS has the freedom to use, understand, modify and distribute software.
(c)FOSS is anti-copyright.
(d)FOSS is just a software or a software development method.

### Question 44 : Trainers should see training as a stage production: which of the following is not part of the stage production aspects?

(a)There is the audience (participants)
(b)There is a stage (training room)
(c)The performance by the audience (Shouting)
(d)The performance by the actor(trainer conducting the course)

### Question 45 : Which of the following is not true about doing business in FLOSS

(e) Help promote economic development
(f) Help create jobs
(g) Competing with Proprietary software
(h) Generating money using FOSS tools and services

### Question 46 : Which key stakeholders will probably ask to view the business plan for a new venture

1. Bank
2. Tax Revenue agency
3. Suppliers
4. Investors

(a)1 only
(b)1 and 4 only
(c)2 and 3 only
(d)1,2,3 and 4

### Question 47 : Sula is interested in FLOSS training. A friend advised him on how to identify opportunities using the any of the strategies below. According to your judgement, which one of the listed ways is the weak

(a)Identifying popular applications (e.g. by looking at downloads from sourceforge.net and freshmeat.net) used by people and create a training for it
(b)Waiting for friends to bring news about some training opportunities
(c)Attending (either actively or passively) ICT conferences, workshops and other events such as Software Freedom Day to learn about the needs for training
(d)Subscribing to newsletters, mailing lists and participating in relevant forums to learning about their training needs

### Question 48 : Most FOSS Businesses provide web-based soultion using

(a)SAJO-Sun Microsystem, Apache, Java and Oracle
(b)LNMP–Linux Ngix MySQL Perl
(c)LAMP-Linux Apache MySQL PHP
(d)ASP.NET, IIS and SQL Server

### Question 49 : Why are small businesses important to a countrys economy

1. They provide employment
2. They can provide specialist support to larger companies
3. They can be innovators of new products
4. They provide competition to large companies

(a)1,2 and 3 only
(b)1 only
(c)1,2,3 and 4
(d)1 and 3 only

### Question 50 : Below are some of the winning combinations of an "ideal" FLOSS trainer. Which one is not?

(a)Winning personality and ability to communicate.
(b)Practical experience in FLOSS applications
(c)Ability to program in Java and Visual Basics
(d)Should be a Certified Technical Trainer (CTT+) certified

# Partners

## Implementing Partners

### FOSSFA - The Free Software and Open Source Foundation for Africa (FOSSFA)

FOSSFA partners with InWEnt to implement the ict@innovation programme. FOSSFA is the premier African FOSS organization. The vision of FOSSFA is to promote the use of FOSS and the FOSS model in African development, and the organization supports the integration of FOSS in national policies. FOSSFA also coordinates, promotes, and adds value to African FOSS initiatives, creativity, industry, expertise, efforts and activities at all levels.

**http://www.fossfa.net**

Capacity Building International Germany

### InWEnt – Capacity Building International, Germany

InWEnt – Capacity Building International, Germany, is a non-profit organisation with worldwide operations dedicated to human resource development, advanced training, and dialogue. Our capacity building programmes are directed at experts and executives from politics, administration, the business community, and civil society. We are commissioned by the German federal government to assist with the implementation of the Millennium Development Goals of the United Nations. In addition, we provide the German business sector with support for public private partnership projects. Through exchange programmes, InWEnt also offers young people from Germany the opportunity to gain professional experience abroad. **http://www.inwent.org/index.php.en**

InWEnt's it@inwent programms strengthen IT sectors in Africa and Asia, fosters key innovations in Information and Communication Technologies (ICTs) for economic development, and support its partners to use ICTs as enabling tools for poverty reduction. **http://www.it-inwent.org**

## Funding / Strategic Partners


### German Federal Ministry for Economic Cooperation and Development (BMZ)

The BMZ is the main funder of ict@innovation and shareholder of InWEnt, representing the Federal Republic of Germany. All it@inwent activities are integral part of the German development strategy, including the action plan 2015. The BMZ develops the guidelines and the fundamental concepts on which German development policy is based. It lays down the long-term strategies for cooperation with the various actors involved, and defines the rules by which these are translated into practice. Official development assistance (ODA) embraces all technical and financial cooperation projects which are agreed on in contracts entered into with the governments of partner countries. The BMZ commissions “implementing organisations” ( such as GTZ, DED, KfW Development Bank, and InWEnt) to realise these these projects.

More information is online here: **http://www.bmz.de/en/**


### Open Society Initiative for Southern Africa (OSISA)

OSISA supports ict@innovation on a strategic level. The Open Society Initiative for Southern Africa (OSISA) is a leading Johannesburg-based foundation established in 1997, working in ten Southern Africa countries: Angola, Botswana, DRC, Lesotho, Malawi, Mozambique, Namibia, Swaziland, Zambia and Zimbabwe. As a foundation, OSISA provides African leadership in the definition and development, within the specificities of Southern African realities, of the concept and ideals of an open society.

http://www.osisa.org

## Training Partners


UNU-MERIT is a joint research and training centre of United Nations University (UNU) and Maastricht University, The Netherlands. As the United Nation's University's Maastricht Economic and social Research and Training Center on Innovation and Technology, UNU-MERIT provides insights into the social, political and economic factors that drive technological change and innovation.
http://www.merit.unu.edu/


### AITI-KACE

The Ghana-India Kofi Annan Centre of Excellence in ICT (AITI-KACE), Ghana's first Advanced Information Technology Institute works to stimulate the growth of the ICT Sector in ECOWAS. Established in 2003, through a partnership between the Government of Ghana and the Government of India, this state-of the-art facility provides a dynamic environment for innovation, teaching and learning as well as practical research on the application of ICT4D in Africa.
http://www.aiti-kace.com.gh

# Introducing ict@innovation

## Creating Business and Learning Opportunities with Free and Open Source Software

### What is Free and Open Source Software?

Free and Open Source Software (FOSS) is software which can be freely used, modified and distributed. FOSS offers a number of different opportunities. Developers are able to customize, change or add to open source software and join in global open production processes. This can help stimulate local innovation and growth in the IT sector. With FOSS, small and medium-sized IT businesses can create locally adapted IT solutions, independent of foreign software vendors. FOSS allows local value chains to be tapped, instead of forcing customers to rely on foreign software vendors. Free and Open Source Software technologies are used all over the world. FOSS is often the technology of choice to run servers, networks, or content management systems, but also operating systems such as Linux, or business and office applications such as OpenOffice. As FOSS is adaptable and does not entail license fees, it is particularly useful when applications need to be adapted to a specific context.
The use of FOSS is spreading – governments and businesses are increasingly employing FOSS. This means that the business market around FOSS solutions is growing. Local businesses, in particular IT-SME can benefit from FOSS as users, but more importantly they can generate business models around FOSS such as offering high-value IT services, software development, training and qualification.

### Free and Open Source Software creates business opportunities!

FOSS technologies offer opportunities particularly for small and medium sized IT enterprises to provide IT services for local IT markets.

What do small and medium-sized enterprises (SME) in Southern and East Africa need to work with FOSS? Many IT-SME are not yet aware of how they can use FOSS in their business models – knowledge sharing and training is needed to qualify employees. In addition, trust in FOSS needs to be improved, for instance by spreading quality standards. ict@innovation addresses these topics by:

- Sharing knowledge on African Business Models and Skills in FOSS
- Building trust and business through FOSS Certification
- Developing innovative local FOSS Applications

ict@innovation is an international capacity building programme, implemented in partnership by **FOSSFA** - The Free Software and Open Source Foundation for Africa and **InWEnt** - Capacity Building International, Germany.

The **ict@innovation** programme offers **advanced training courses** for training institutions and trainers on:

- business models and business development for IT SME – how to integrate FOSS services in your training portfolio
- how to get certified in basic FOSS technical skills

**Main objective of ict@innovation** is to foster small and medium-sized enterprises (SME) in the field of Free and Open Source Software in Southern and East Africa. Through advanced training and networking in FOSS skills, the programme contributes to qualify African IT SME in providing localized and adapted FOSS applications and services to public administration and private sector.

The programme focuses on Free and Open Source Software (FOSS) as a key technology to drive innovation, add local value and create sustainable and affordable ICT-solutions.

| | |
|---|---|
| **Region of Implementation** | Southern and East Africa, particularly Ethiopia, Kenya, Malawi, Mozambique, Namibia, Rwanda, South Africa, Tanzania, Uganda, and Zambia |
| **Duration** | 2008 – 2010 (first phase) |
| **Main Funding Partners** | German Federal Ministry for Economic Cooperation and Development (BMZ) & the Open Society Initiative for Southern Africa (OSISA) |
| **Website** | **www.ict-innovation.fossfa.net** |

## www.ict-innovation.fossfa.net

## the community webportal

### Site Features:

**Profiles** – Create your own profile, advertise your FOSS skills and share your interests in FOSS and the ict@innovation programme

**Forums and Wiki** – Read and contribute to discussions and work processes by engaging in online discussions in the forum and collaborative text editing using the wikis

**Blogs** – read and discuss about current news and developments on FOSS related topics and the ict@innovation programme in the blogs

**Groups** – Join in online organizational activities by engaging in topic specific groups

### Online Community Membership

*Do you have a FOSS project or initiative you wish to interest others in? Do you want to contribute to the ict@innovation programme in a specific way?*

The ict@innovation portal offers functions for those of you, who want to engage more actively in the community or programme – The blog is open for all community members to share relevant news and views. Also, all community members can create groups to share files, manage events, and engage in private discussions on relevant topics. The different training programmes will later on all have their own group to collaborate online.

All services of this site are free of charge.

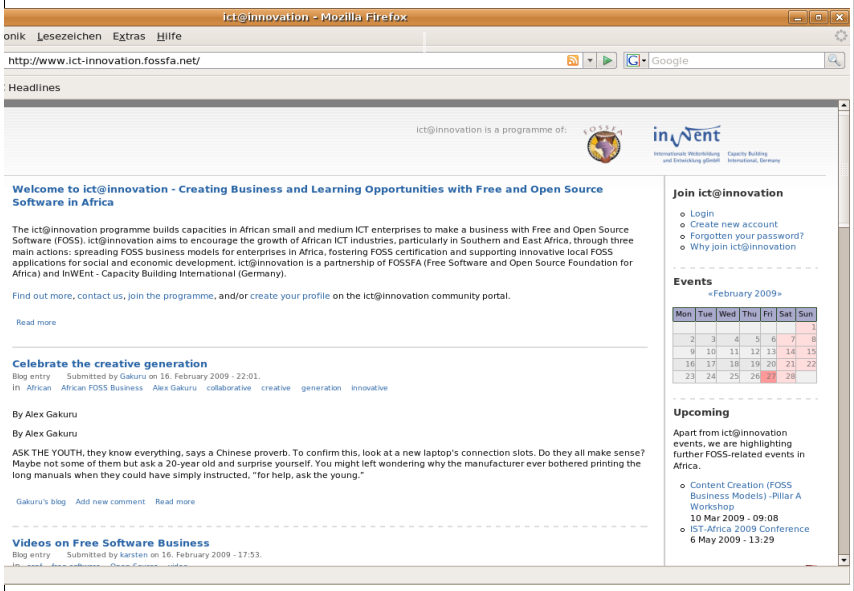
The web portal is designed to keep its members in touch with current developments of the ict@innovation programme and other FOSS projects in Africa. It is also designed to host a community of persons interested in or working in the area of FOSS in Africa and to enable participatory management of the ict@innovation programme. We invite you to become a community member!

### Joining the ict@innovation Web Community

**The Benefits:** Why join? This website offers you the opportunity to get to know a range of persons working in related areas, as well as to advertise your skills and interests, to share and learn from other experts using the range of tools that enable active knowledge exchange for community members.

**Becoming a Member:** You can become a member of this community by registering on the site and creating a profile, indicating your interests and skills in FOSS. This will enable you to contribute to the website fora and wikis, to join in knowledge exchange with other persons interested in FOSS and/ or involved in the ict@innovation programme.

**Staying Informed:** Receive all blog posts and other website updates by email or RSS feed! In order for everyone to stay in touch with the programme and community activities, we offer an email-subscription and RSS feed service on all website services and news items (including blog posts, events, forum messages etc.). You find RSS icons to subscribe to feeds at the bottom of the sections that offer subscriptions. You can manage email subscriptions as a registered user under "My account" > "Subscriptions".




Sign up on ict@innovation to join the community and stay updated: http://www.ict-innovation.fossfa.net/

# About this guide: "ict@innovation: Free your IT-Business in Africa!"

"Free your IT-Business in Africa! - Advanced Training Material on African Free and Open Source Software (FOSS) Business Models for IT-SMEs" supports the building of knowledge and capacities in African small and medium ICT enterprises to make a business with Free and Open Source Software (FOSS). It aims to contribute to the growth of African ICT industries through spreading FOSS business models for enterprises in Africa. The open training material is part of the initiative ict@innovation, a partnership of FOSSFA (Free Software and Open Source Foundation for Africa) and InWEnt - Capacity Building International of Germany, funded by the German Federal Ministry for Economic Cooperation and Development (BMZ).

Eight indepth case studies of African IT-businesses and organizations who successfully make a business around FOSS give concrete avenues for FOSS business models that work in Africa and are condensed in an African taxonomy of FOSS Business Models. The material has been collaboratively developed by FOSS experts from Africa and Europe for use as training material for experts and executive staff from IT businesses in Africa, ICT-associations, their member organisations, ICT-training institutions as well as universities and their trainers.

The Advanced African FOSS Business Models syllabus consists of 6 modules, spread along three thematic parts. The first part - African FOSS Business Models - introduces basic FOSS concepts and provides practical case studies across the African continent. Two modules are covered in this part of the syllabus;

(i) **Module 1: Introduction to Emerging FOSS Business Models**
(ii) **Module 2: African Business Models: Case Studies** – including an African taxonomy of business models such as Software Selection, Software Installation, FOSS Training, Maintenance and Support, Software / Systems Migration, Consultancy, Software Localization and Internalization, FOSS Customization as well as Technical / Legal Certification.

The second part - Knowledge and Skills for FOSS Entrepreneurs - brings into focus FOSS communication and business skills which are deemed vital for businesses and may contribute immensely in help young entrepreneurs leverage FOSS to gain a competitive advantage. Innovative and cost effective tools and techniques, community building and networking, and FOSS strategies which are vital for starting and sustaining a viable FOSS business in Africa are also covered in this part of the syllabus. Three modules are covered in part two;

(iii) **Module 3: Communicating FOSS**
(iv) **Module 4: Introduction to General Business Skills**
(v) **Module 5: FOSS Specific Business Knowledge and Skills**

Part three of the training material - FOSS Training as a Business – consists of one module which aims to foster understanding of some of the requirements for becoming an FOSS trainer, and identifying the opportunities that exist for FOSS training as a business in African as well as a global look at Linux training worldwide.

(vi) **Module 6: FOSS Training**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|---|---|
| **ict@innovation contact Africa**<br>George G. Nyambuya<br><br>Phone +27 (0)12 423 6313<br>Fax +27 (0)12 342 8594<br>Fax-Email: +27 (0) 866280917<br>E-mail: george.nyambuya@inwent.co.za<br><br>Website: www.ict-innovation.fossfa.net | Postal address:<br>P.O. Box 13630<br>Hatfield 0028<br>South Africa<br>Physical address:<br>InWEnt - Capacity Building International, Germany<br>SADC Regional Office<br>Hatfield Gardens Block E, Ground Floor<br>333 Grosvenor Street / Hatfield, Pretoria |
| **ict@innovation contacts Europe**<br>Petra Hagemann & Balthas Seibold<br><br>Phone +49 228 4460-1382<br>Fax +49 228 4460-2382<br>Email: petra.hagemann@inwent.org | Internationale Weiterbildung und Entwicklung gGmbH<br>Capacity Building International, Germany<br>Friedrich-Ebert-Allee 40<br>53113 Bonn, Germany<br>Phone +49 228 4460-0<br>Fax +49 228 4460-1766<br>www.inwent.org |


**Cover page:** Map of Africa with percent of population per country that downloaded the new version of the Open Source Browser Firefox in June 2008. Colours = downloads. / Source and credits: David Eaves, see http://eaves.ca/2008/06/22/the-firefox-download-map-remixed/