

Towards a Strategy for Open-Source Adoption and its Impact in Sudan.

نحو إستراتيجية لتبنى برمجيات المصادر المفتوحة وأثارها فى السودان.

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1. Introduction.

It is mistakenly assumed that the main driver for the adoption of “OPEN SOURCE SOFTWARE” (OSS) is the reduced cost of the license. Cost of license for a software package represents only a fraction of the total cost for ownership of a software package, which includes the cost of training, configuration/adaptation, and maintenance.

So, what is the real driver to adopt OSS?

It is vital for all nations to be self-reliant when it comes to software applications. A software package is no longer a direct imitation of a manual system that is daily practiced and used. The automation of a business encompasses, in addition to other benefits, development of the embedded processes related to the business. This development of the business is becoming unique being combined with software and usage of computers. In this respect, the software is embedding business processes and is a reflection of the development of a business. For example, a core banking application can embed all banking practices and advancement of the core banking application shall determine how advanced and developed the process of serving customers. Hence, it is the interest of a nation to work hard to be self-reliant and contribute in the development of their software for various applications, particularly if we realize that software applications are interactive and influence its users to further develop and extend business processes and services. Thus, the development and progress of a business is no longer pure business logic; it is a combination of the interactive phenomenon of software and business logic.

A second reason is that the software industry is comprised of two parts: the development of the software application itself and the associated services with the software. With closed source software industry, it is almost certain that developed nations with strong industry foundations for software development will dominate the software industry including services related to software. On the other side,

developing nations are certain to remain unable to support any software development without putting effort to change and, at the same time, receive appropriate help and assistance. Otherwise, they will continue to be dependable on developed nations to supply them with software applications and its associated services. The digital gap between them will continue to widen and digital divide is unavoidable. The reason for this escalation in widening the digital gap is the increasing inability of developing nations to strive and grasp the keys for leading the development.

The OSS main attraction is the embedded business logic that can be made use-of to gear our daily business to suit and follow well-tried standardized methodologies and become ready to be automated by carrying out a Business Process Re-engineering of the current business processes.

2. Vision and Mission of a Strategy for OSS Adoption.

The main vision of a strategy for adopting OSS might be:

“A self-reliant software development nation contributing to OSS community by acquiring best practices in developing local application software”

The mission should state that:

“To become a software developing nation that can actively share its contributions with others’ contributions and extending services to help those who are in need; by organizing ourselves and acquiring skills to use all development tools that allow us to professionally contribute in the development of Software.”

The mission statement is clear in that it emphasizes the necessity of each member of the OSS community to contribute to the development of software. It also emphasizes that each should be willing to contribute in areas where the contributor has advantage over others. Most important, the collaboration should be based on using same professional tools.

Each member of the OSS community should recognize its strength and weaknesses. Strength of a member is needed to have contributions in areas where it shall be most supportive to other members of the community. As we have explained before that the challenge is not in coding and writing software, but it is the business logic that is most important and where the effort of the community members should be exerted to make business process re-engineering transitions of those behind fast and smooth. For example, it is known that Sudan was among the first countries which advocated Islamic banking and we expect the practice of Islamic Banking to be strictly practiced and be a good environment for automating Islamic banking practices.

3. Practical Steps in the Adoption.

The early steps in the adoption of OSS are to lay the foundation of the OSS in the educational system as well as to attract IT professionals in areas where the strength of the nation is visible. The adoption of OSS by the educational sector seems to be natural since the basic concepts and ideas of OSS can be traced to have flourished in the educational environment and most of the contributing members are coming from educational sectors.

However, in Sudan, it is needed to have a strong commitment from leaders and advocates to promote and popularize OSS concepts and usage. Ministry of Education, Ministry of Higher Education and the National Information Centre (NIC) should assume the lead in this issue. Ministry of Education need to include the basic understanding of OSS and lay the moral seeds to accept OSS and promote it.

Ministry of High Education can start to use and spread the usage of OSS among students in secondary schools.

On the practical side, a clear strategic statement is needed from NIC with regard to the adoption of OSS in the educational sector and should be a good starting point for a large scale campaign that will flood the education sector. Before such a this to happen, a preparatory step is needed to avail OSS software that shall be in great demand in the education sector once the concept has been accepted and practical steps for the adoption are taken. The Nile Centre for research has already taken the responsibility of fostering a research group concerned with OSS. A suitable fund should be allocated to the preparatory step to cover all storage media needed to distribute such software. In addition short duration training classes are needed to start the wave to exit or co-exist usage of the Microsoft brand software. Directives from NIC to gradually increase the move towards the usage of OSS are needed such as "All new imported computers should have Linux as an operating system with standard office software". Such a policy will have a significant impact on all imported systems, whether for business or education.

Once the adoption of OSS in the education field becomes rooted, specialized dedicated research groups should be formed under the Nile research centre to focus on different areas with priority given to each application in the education field.

NIC again will take the lead to prepare for the transition to the usage of OSS in Governments applications. A specialized research group should be assigned the task of searching for suitable OSS Government Resource Planning software (GRP). The early adoption of OSS for this application will leave no doubt to private sectors on the commitment of the Government to support OSS usage.

Security is an important issue in OSS and a specialized task research group is needed to look at all OSS applications from a security perspective and avoid pitfalls from early stages.

Once we get the private sector interested and motivated especially from a commercial side related to the services associated with the OSS. Training, documentation, and support are the major activities that will attract the attention of the private sector. The role of NIC is to create the initial interest by creating the demand in these two areas. We should be assured that with the early adoption of OSS by the Education sector, candidates to work and support the development in the OSS applications will be ready to support all implementation and training of users on different applications.

4. Where Do We Go from Here?

Two entities are delegated to take the lead in drafting a clear strategy and executing a clear plan: the National Information Centre and the Nile Research centre. Scholars in education institutions have a prominent role to do, especially the young generation. They are expected to move