MAMPU

OPEN SOURCE SOFTWARE IMPLEMENTATION INITIATIVE IN THE PUBLIC SECTOR

OSS POLICIES & VALIDATION

13th February 2004

DRB-HICOM Information Technologies Sdn Bhd
A Member of
DRB-HICOM

© DHIT 2004

Recap Strategic Thrusts 5

STRATEGIC THRUSTS 5
- CONTINUOUSLY DEVELOP SUFFICIENT POLICIES & LEGISLATION TO ENCOURAGE UTILISATION & PRODUCTION OF OSS

- Develop OSS policy and guidelines in the following areas and continue to review them :
  - Adoption
  - Procurement
  - Ownership
  - Technology
  - Implementation
  - Knowledge Sharing

© DHIT 2003

MAMPU

KEY INITIATIVES AND PROPOSED ACTION PLANS FOR OSS

INITIATIVES	AGENCIES	PROPOSED ACTION PLANS
▪ POLICY & TECHNICAL STANDARDS SETTING	▪ MAMPU ▪ SIRIM ▪ TREASURY ▪ SMIDEC ▪ MOSTE	▪ Set indiscriminate policy for OSS in all procurement policy (tender, grant, direct purchase) ▪ Establish the standards for OSS implementation ▪ Establish Public Sector initial OSS policy
▪ LEGAL DIRECTION SETTING	▪ MAMPU ▪ ATTORNEY GENERAL ▪ PERBADANAN HARTA INTELEK	▪ Set clear OSS legal guideline and resolve any potential conflict arise between IPR and GPL

© DHIT 2003

MAMPU

OSS Policy Adoption

Policy	1. All open source adoptions exercise in the public sector must be based on careful planning in accordance to the Malaysian Public Sector ICT Strategic Plan Guide.
Guideline	1. ICT Strategic Plan Guideline *(a template for OSS will be made available to facilitate OSS adoption)*
Highlights	1. Business alignment 2. Vision 3. Allocation and value 4. Enabling 5. Governing and capabilities 6. Action and measurement

DRB-HICOM Information Technologies Sdn Bhd
A Member of
DRB-HICOM

© DHIT 2003

MAMPU

OSS Policy Procurement

Policy	1. Procurement of open source software should be based *on value for money, transparency, security and interoperability factors* in accordance with GOM Procurement Policies and Procedures *and the Malaysian Public Sector ICT Strategic Plan Guide*.
Guideline	1. Surat Pekeliling Perbendaharaan *(if required a new circular will be made)*
Highlights	*1. Budgeting* *2. Application & approval (submission to JTIT)* *3. Acquisition process (centralised, order, tender, direct negotiation, preferential)*

© DHIT 2003

MAMPU

OSS Policy Ownership

Policy	1. Rights of Ownership of open source software are governed by the respective Open Source License as defined and accepted by the Open Source Initiative Organization. 2. Licensing for public sector initiated software development, depends on commercial viability, to use either the GNU General Public License or the BSD License. Alternatively, formulate a GOM Open Source License.
Guideline	*1. Pekeliling Am: Hakmilik dan Perlesenan bagi Inisiatif Open Source Software Sektor Awam (new - similar to Smart Partnership or something on the lines of software licensing)*
Highlights	*1. Ownership (covering intellectual property rights)* *2. Licensing (covering rights of use, modification, and redistribution)* *3. Transfer of Technology*

DRB-HICOM Information Technologies Sdn Bhd
A Member of
DRB-HICOM

© DHIT 2003

MAMPU

OSS Policy Technology

Policy	1. All open source technology that will be used in public sector will follow worldwide *open source standards* and *commonly used applications.* Technology must be chosen based on "fit for purpose" and interoperability. *Reference must also be made to the MyGIF except where use of proprietary standards are allowed, for example Microsoft Word, Excel, Powerpoint file formats.*
Guideline	*1. EGIT* *2. MyGIF*
Highlights	*1. IT Architecture Standards* *2. Interoperability Standards*

© DHIT 2003

MAMPU

OSS Policy Implementation

Policy	1. The implementation of open source software in public sector must follow common implementation *and technology standards and ensure interoperability of systems and support.*
Guideline	*1. Pekeliling Am: Perlaksanaan Inisiatif Open Source Software Sektor Awam (new – maybe a handbook is required)*
Highlights	*1. Planning & Assessment* *2. Study & Design* *3. Assessment & Evaluation* *4. Acquisition & Development (Packaged / Custom)* *5. Change Management* *6. Support* *7. Review*

© DHIT 2003

MAMPU

OSS Policy
Knowledge Sharing

Policy	1. OSS resources should be developed and managed based on requirements and common standards, and made available through an integrated delivery channel.
Guideline	*1. Pekeliling Am: Perkongsian Pintar bagi Inisiatif Open Source Software Sektor Awam (new – very similar to Smart Partnership)*
Highlights	*1. Acquisition* *2. Sharing* *3. Research and Development* *4. Collaboration*

DRB-HICOM Information Technologies Sdn Bhd
A Member of
DRB-HICOM
© DHIT 2003

MAMPU

STRATEGIC THRUST 5 – Proposed Initial OSS Policy

Adoption	OSS adoption must be based on careful planning in accordance to the Malaysian Public Sector ICT Strategic Plan Guide.
Procurement	OSS procurement should be based on value for money, transparency, security and interoperability factors, as well as in accordance with GOM procurement policies and procedures.
Ownership	Governed by the respective Open Source License as defined and accepted by the Open Source Initiative Organization.
Technology	OSS technology that will be used will follow worldwide open source standards and commonly used applications. Technology must be chosen based on "fit for purpose" and interoperability.
Implementation	The implementation of OSS must be based on requirements, follow common standards, ensure interoperability of systems and has adequate support.
Education and Knowledge Sharing	OSS resources should be developed and managed based on requirements and common standards, and made available through an integrated delivery channel.

© DHIT 2003

Key Focus Areas - Adoption

Overview - Adoption

Objective:- To provide guidelines for a successful Adoption exercise of OSS in the Public Sector

Reasons to adopt OSS:

- need to use open standards
- cost savings,
- eliminate monopoly by vendor
- increase security.

Key Implementation areas of OSS may include the following:

- Desktop Applications
- Server Applications
- Operating System
- Database
- Backup and Recovery
- Security
- Management of Users, Software and Hardware
- Enterprise Applications

Adoption exercise generally should consist:

- data gathering
- cost vs. benefit analysis
- pilot implementation
- monitoring of actual experience.

© DHIT 2003

MAMPU

Key Focus Areas - Adoption

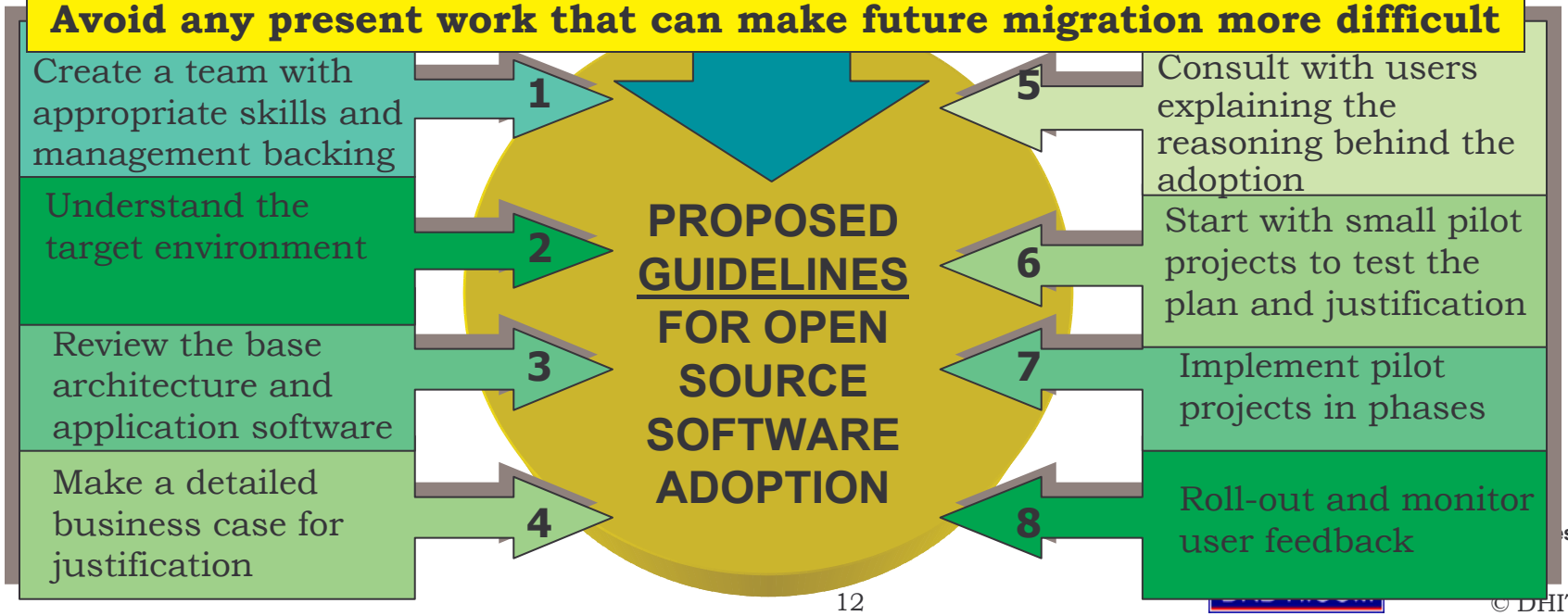
Policy and Guidelines For Adoption

POLICY STATEMENT

All open source adoptions exercise in the public sector must be based on careful planning in accordance to the Malaysian Public Sector ICT Strategic Plan Guide.

KEY CONSIDERATIONS FOR ADOPTION OF OSS

- **Introduce new OSS applications in a familiar environment**
- **Migrate applications that are least disruptive to users**
- **Plan for Human Issues (resistance to change)**
- **Avoid any present work that can make future migration more difficult**



s Sdn Bhd
© DHIT 2003

Overview - Procurement

Objective:- To provide guidelines for Procurement of OSS in the Public Sector

2 different views:

- **Free Software community:**
  - ban the procurement of commercial software
  - create barriers for the purchase of that software

- **Commercial Software companies:**
  - select software based on the merits
  - procurement not depend on licensing or development model

DRB-HICOM Information Technologies Sdn Bhd
A Member of
DRB-HICOM

© DHIT 2003

Key Focus Areas - OSS Procurement

Policy and Key Consideration For OSS Procurement

POLICY STATEMENT

Procurement of open source software should be based on value for money, transparency, security and interoperability factors in accordance with GOM Procurement Policies and Procedures and the Malaysian Public Sector ICT Strategic Plan Guide.

KEY CONSIDERATIONS FOR PROCUREMENT POLICY

Cost and Value

- Avoid unnecessary public spending
- Reduce reliance on imports
- Select solution based on best value
- Avoid potential vendor-lock-in
- Reduce dependency on proprietary software

Transparency

Obtain full rights to the software code wherever this achieves best value

Interoperability

Select applications that are compatible and interoperable with all existing hardware and software

Security

Choose software based on merits; reliability, security and ability to modify software

© DHIT 2003

Key Focus Areas - OSS Procurement

Procurement Policy (cont'd)

PROPOSED PROCUREMENT GUIDELINES
Software selection should be based on merits, giving OSS and Proprietary software equal opportunities to be chosen in procurement process.
Where direct and indirect advantages and disadvantages of OSS and Proprietary Software are equally the same, priority will be given to OSS.
Select software that support open standards and specifications in all applications .
Wherever possible, avoid acquisition of hardware that does not support OSS.
Ensure tenders and contracts are free of any specifications that pose discrimination against OSS.
When selecting OSS software, the security of OSS-based systems must be able to meet all requirements applicable to Government IT systems in general.
Expertise must be available and or developed to assist users to select the best option for OSS or otherwise.
Full rights to the source code must be attained whenever procuring OSS applications if given the best value for it.

© DHIT 2003

Key Focus Areas - Ownership and Licensing

Overview - Ownership and Licensing

Objective:- To provide guidelines in terms of OSS ownership via proper and clear intellectual property rights (IPR) and licensing scheme

- Ownership of software and associated IPR (copyright, trademark and patent) remains with the originator of the software.
- In the case where the software developed will only be used internally and/or non-commercially, the software can be licensed under the GNU General Public License (GPL).
- The GPL grants the users of the software the freedom to use, modify and redistribute the software with, among other things, the specific condition where the source code must the made available.
- If the software may be commercialized, a BSD license would be more appropriate, where it is more permissive in allowing the developer and/or the end-users to modify and redistribute the software in any way they see fit without the condition of redistributing the source code too.

© DHIT 2003

Key Focus Areas - Ownership and Licensing

Policy For Ownership and Licensing

POLICY STATEMENT – Rights of Ownership

Rights of Ownership of open source software are governed by the respective Open Source License as defined and accepted by the Open Source Initiative Organization.

POLICY STATEMENT – Licensing

Licensing for public sector initiated software development, depends on commercial viability, to use either the GNU General Public License or the BSD License. Alternatively, formulate a GOM Open Source License.

DRB-HICOM Information Technologies Sdn Bhd
A Member of
DRB-HICOM
© DHIT 2003

Key Focus Areas - Ownership and Licensing

OSS License Guidelines

40 License Types Approved by the Open Source Initiative Org. (OSI)

- **GNU General Public License (GPL)**
  - Free (Not free of charge) distribution and redistribution
  - Allow modifications
  - No restriction on rights to the receiver - modified codes must be made available on redistribution

- **IBM Public License (IPL)**
  - special requirements for contributor that commercialize the software disclaim responsibilities of other contributors

- **SUN Public License (SPL)**
  - combines most clauses of the other key licenses

- **BSD (Berkeley Software Distribution)**
  - no distribution restriction but must carry copyright notice from the University of California, Berkeley (It lets users modify it and distribute the modified version with or without source code)
  - Originated when AT&T stopped providing Unix with source code free to some academic institutions

- **Mozilla Public License (MPL)**
  - proper notice on contributors to be included

© DHIT 2003

Overview - Technology

Objective:- To provide guidelines on OSS technology standards

In normal proprietary environment most software and applications used by the Government are from common vendor such as :-

- Operating Systems - Microsoft, Macintosh, Unix
- Database – Oracle and IBM
- Applications – Oracle and IBM
- Web Server – MS IIS
- Browser – MS Explorer and Netscape
- Security - Checkpoint

DRB-HICOM Information Technologies Sdn Bhd
A Member of
DRB-HICOM

© DHIT 2003

OSS Technology Selection Policy and Guidelines

POLICY STATEMENT

All open source technology that will be used in public sector will follow worldwide open source standards and commonly used applications. Technology must be chosen based on "fit for purpose" and interoperability. Reference must also be made to the MyGIF except where use of proprietary standards are allowed, for example Microsoft Word, Excel, Powerpoint file formats.

OSS guidelines encompasses the entire IT Value Chain

Network	Database	Enterprise Applications	Developnt Tools	Operating System	Browser	Desktop Applications	Office Suites
•AOLServer •ftpproxy •Bind-dns •Snort - ids	•MySQL •mSQL •Dexter •PostgreSQL	• Apache • eZPublish • Smart CRM • Twiki • Amphora	• PHP • PERL • Netbeans • Aspire • Jflash • Freepascal	• Linux, • FreeBSD • OpenBSD • NetBSD • Minix	• Mozilla • Galeon • Netscape wrapper	• Jabber • Andromeda • Mplayer • Corel-Photo Paint	• OpenOffice • Abacus • Maxwell • PSSlides • abi2pdf • AbiWord

Back -end/ Server Base

Front-end/ Client Base

© DHIT 2003

Overview - Implementation

Objective:- To provide guidelines in terms of OSS implementation to ensure consistency of development, interoperability, implementation, and support standards.

- In a conventional proprietary environment, the government would normally rely on the technology vendor for the supply, delivery, installation, commissioning, customization, maintenance and support.
- This proprietary business model seeks to increase the level of dependence and reliance on the technology vendor to enhance repeat business.
- This creates an opportunity for technology transfer, i.e. technology is now non-proprietary. This provides an impetus for user led development and implementation.
- Good development and implementation practices still apply to both proprietary and open source projects.

DRB-HICOM Information Technologies Sdn Bhd
A Member of
DRB-HICOM

© DHIT 2003

Key Focus Areas - Implementation

Policy and Considerations on Implementation

POLICY STATEMENT

The implementation of open source software in public sector must follow common technology standards and ensure interoperability of systems and support.

Key Considerations:

Implementation Environment:

- **New Independent Implementation** (e.g. OpenOffice on the desktop): where system need not interact with other systems.
- **New Interdependent Implementation** - the new system is part of a larger system.
- **New Dependent Implementation** - where the new system relies on another system, but the other system do not rely on the new system.

Implementation Method:

- **Acquire and Install (shrink-wrap package):** where the system is ready for use out of the box but may require configuration, integration or migration.
- **Study, Design and Develop (custom solutions):** where the system is developed to specific user requirements.

© DHIT 2003

Key Focus Areas - Implementation

Implementation Guidelines

HIGH LEVEL IMPLEMENTATION CYCLE:

Planning

- Increase adoption of common technology standards
- Increase interoperability
- Reduce implementation cost

Management

- Increase adoption of common management standards
- Coordinate software development
- Enhance delivery of software updates

Implementation

- Increase usage of generic and common software
- Coordinate software development
- Enhance collaboration between user and industry

Maintenance

- Coordinate delivery of support

© DHIT 2003

Overview - Knowledge Sharing

Objective:- To provide guidelines in terms of OSS knowledge sharing to ensure consistency of development, interoperability, implementation, and support standards.

Background

Open source provides the opportunity for the users to enhance, update, upgrade, recycle and redistribute the computer program, therefore extending the value and life time of the program.

Open source could be developed under any or combination of the following models:

- Community Development Model
- Vendor Development Model (off the shelf)
- Internal Use Development Model (custom or in-house development)

Users can also acquire open source resources from a range of delivery channels:

- Web based developer or user community
- Web based vendor knowledgebase
- Physical vendor product and services
- Internal resources

The current open source environment with multiple development model and channels presents a challenge for a strategic adoption of open source in the public sector.

© DHIT 2003

Policy and Key Consideration on Knowledge Sharing and Support

POLICY STATEMENT

OSS resources should be developed and managed based on requirements and common standards, and made available through an integrated delivery channel.

- Availability for Use
  - Software should be available for internal use, including usage, review, modification, and distribution.
  - Software and services should use an integrated delivery channel combining virtual and physical methods.
- Intended Use
  - Privilege use software should be for internal use only
  - Generic use software should use vendor development
  - Community use software should be available to general community
  - The delivery channel should reflect the class of intended use
- Commercial Value
  - Commercial value software should balance between internal use and vendor development.

© DHIT 2003

Knowledge Sharing Guidelines

- Development model should be based on requirements.
- Software development and management should conform to common standards.
- Higher participation encourages innovation and quality.
- Software and resources should be made available based on requirements.
- Software and resources should be made available using an integrated delivery channel.
- Knowledge should be open to all without discrimination.

DRB-HICOM Information Technologies Sdn Bhd
A Member of
DRB-HICOM

© DHIT 2003