



Pan American Health Organization



Regional Office of the
World Health Organization

Modernization of the PASB Management Information System (PMIS)

***146th Session of the Executive Committee
Washington DC, 21-25 June 2010***

Context and Background

PASB Approach to GSM

- **Benefits of the Modernization of the PMIS (Annex C)**
- **Products of the PMIS Committee to be presented to PAHO's GB**
 - **PMIS Guiding Principles**
 - **Business Processes Analysis**
 - **Options and costs**
- **PASB is committed to respond to GSM requirements**
 - All the options to be presented to PAHO Governing Bodies will respond to GSM requirements
- **PASB is currently responding to GSM requirements through programmatic alignment and sharing of information**

PMIS Guiding Principles Overview

- Guide future efforts to modernize the PMIS (Annex A)
- Derived from WHO Principles, and an assessment of PAHO's needs and uniqueness
- Developed by the PMIS Committee with the participation of PASB staff at all levels
- Incorporated SPBA recommendations
- Elaborated differences between WHO and PAHO Guiding Principles (Annex B)

Business Processes

Overview

- First time that the PASB has documented its Business Processes (Annex C).
- PASB staff throughout different levels of the Organization participated in the elaboration of the business processes.
- The business process have been simplified and improved; and some efficiencies have already been implemented.
- However, there is room to further simplify the business processes, and this effort will continue.

PAHO's Governance

- **PAHO and WHO are separate legal institutions**
- **PAHO has its own Governing Bodies**
- **PAHO's Governing Bodies mandates to the Bureau may differ from WHO's mandates. Examples include:**
 - Health Agenda for the Americas, set autonomously by the Member States of PAHO
 - Strategic Plan 2008-2012, set autonomously by PAHO's Governing Bodies; PAHO has 16 strategic objectives vs. 13 in WHO's Mid-term Strategic Plan
 - PAHO fully adopted IPSAS (the International Public Sector Accounting Standards) effective 1st January 2010 on schedule different from WHO
- **Sometimes the Bureau needs to change its management information system in order to execute a mandate of PAHO's Governing Bodies**

Options

Summary of Options	
1	WHO Global Management System (GSM) , in one of three variations:
a)	GSM using the same database instance and same operating unit as other WHO Regional Offices.
b)	GSM using the same database instance, but a different operating unit and separate set of books.
c)	GSM as a separate instance.
2	Modernized Current Model representing an upgrade to existing systems
3	Baseline Enterprise Resource Planning (ERP) software product, combined with PAHO-specific functionality, using SAP to evaluate.

Option 1(a): GSM using the same database instance and same operating unit *as other WHO Regional Offices*

Advantages:

- Leverages existing WHO work performed for GSM
- Minimal need for interfaces

Disadvantages:

- System modifications, including those required to implement PAHO's *Governing Bodies mandates, will be subject to approval by the WHO's GSM Governance Board*
 - Not compatible with constitutional and legal status of PAHO
- Requires additional effort to ensure that PAHO data be segregated and maintained separately
- Limits PAHO's capability for further business process expansion and growth

Cost

- Implementation: \$34.3 million
- Net Annual Operating Costs: \$3.9 million
- Cost to upgrade software during the 10 year lifecycle: \$4.6 million

Option 1(b): GSM using the same database instance but a different operating unit and separate set of books

Advantages:

- Ability to configure GSM to suit some of the needs of PAHO

Disadvantages

- PAHO's governance affected
- PAHO constrained by parameters of WHO's specific implementation
- Inability to quickly adapt the software to new PAHO-specific requirements
 - Master data dependency – data management coordination would be required between WHO and PAHO
 - High dependency on WHO HQ IT for deployment

Cost

- Implementation: \$51.2 million
- Net Annual Operating Costs : \$3.9 million
- Cost to upgrade software during the 10 year lifecycle: \$4.6 million

* Cost of upgrade would be shared with WHO.

Option 1(c): GSM as a Separate Instance

Advantages:

- Offers ability to adjust PMIS to mandates from PAHO Governing Bodies, without delays imposed by the GSM governance process
- Offers significant freedom to configure a PASB copy of GSM to PAHO-specific requirements, but constrained by existing GSM modifications

Disadvantages:

- The ability to upgrade the application at a reasonable cost is hindered by the number of extensions
- WHO is in planning stages of upgrading GSM to Oracle 12. After installing GSM, PAHO would have to upgrade the system almost immediately, with additional cost

Cost

- Implementation: \$49.6 million
- Net Annual Operating Costs: \$7.8 million
- Cost to upgrade software during the 10 year lifecycle: \$27.5 million *

* Cost of upgrade not shared with WHO

Option 2: Modernized Current Model representing an upgrade to existing systems

Advantages:

- PASB would have the freedom to respond easily and quickly to mandates from the PAHO Governing Bodies

Disadvantages

- Challenge exists for PASB to develop and maintain software applications to same standard as commercial software
- Necessary integration and interoperability is not included as standard functionality
- Cannot take full advantage of work performed by WHO
- Interfaces with WHO's GSM will be required

Cost

- Implementation: \$41.8 million
- Annual Operations: \$6.1 million
- Cost to upgrade software during the 10 year lifecycle: N/A*

* By starting with the latest version of software, PASB will not need to do a major upgrade during the first 10 year period of operations; this is consistent with PAHO's previous experience with commercial software.

Option 3: Baseline ERP software, with PAHO-specific functionality, using SAP to evaluate

Advantages:

- PASB will have the freedom to respond easily and quickly to mandates from the PAHO Governing Bodies
- Allows PASB to implement ERP solution as close to baseline software product as possible; this will reduce upfront costs and facilitate future upgrades
- Enables use of AMPES as a bolt-on for the Program Management component
- SAP has been selected by the United Nations

Disadvantages:

- The need for interfaces with WHO's GSM
- Cannot take full advantage of work performed by WHO

Cost

- Implementation: \$35.5 million
- Annual Operations: \$5.0 million
- Cost to upgrade software during the 10 year lifecycle: N/A*

* By starting with the latest version of software, PASB will not need to do a major upgrade during the first 10 year period of operations; this is consistent with PAHO's previous experience with commercial software.

Summary

Options		Rating	Cost to Implement	Annual Operating Cost	Upgrade Cost
1	WHO Global Management System (GSM):				
	a) GSM using same database instance and same operating unit	52	\$34.3M	\$3.9M	\$4.6M
	b) GSM using same database instance, different operating unit/books.	53	\$51.2M	\$3.9M	\$4.6M
	c) GSM as a separate instance.	59	\$49.6M	\$7.8M	\$27.5M
2	Modernized Current Model representing an upgrade to existing systems	60	\$41.8M	\$6.1M	N/A
3	Baseline Enterprise Resource Planning (ERP) software product combined with PAHO-specific functionality.	67	\$35.5M	\$5.0M	N/A

Summary

- Guiding Principles and Business Process review have revealed some key differences between PAHO and WHO
- Sometimes these differences, including mandates of the PAHO Governing Bodies, will require changes in the system
 - In options 1a and 1b, PASB will need to ask permission to the GSM Governance Board to make the required changes in the system
 - PAHO's governance would then be subordinated to the GSM Governance Board
 - This is incompatible with the legal status of PAHO

Action by the Executive Committee

- Approve the PMIS Guiding Principles
- Acknowledge the benefits the Bureau already has gained as a result of its Business Processes Analysis and the efficiencies already implemented.
- Consider the options presented for modernization along with their advantages, disadvantages and costs
- Recommend one of the options to the Directing Council

Prepare a resolution to be presented to the Directing Council with the above contents

Thank you!

Additional Slides (if required)

Benefits of Modernizing the PMIS

- Improved efficiency of technical cooperation
- Accountability for results
- Facilitate collaboration and coordination with WHO
- Improved interoperability
- Availability, adaptability and transparency of information
- Improvement in the management of human resources
- Support for emergency operations

Context and Background

PASB Approach to GSM

- **PASB is committed to respond to GSM requirements through programmatic alignment and sharing of information**
 - The proposed options to be presented to the PAHO Governing Bodies will respond to GSM requirements
- **Current PASB-specific Efforts to Respond to GSM Requirements**
 - AMPES-OMIS systems redesigned to align with WHO
 - PAHO Award Management System developed to align with WHO (replaced 25-year-old mainframe budget system)
 - Interfaces developed to exchange data between PAHO systems and WHO's GSM
 - Local data hub established for sharing of data

PMIS Guiding Principles

Comparisons with WHO

- Many Guiding Principles are the same
- The delegations of authority from WHO to AMRO are different from other Regional Offices
- PAHO has greater decentralization of authority to country and subregional entities
- PAHO receives assessed contributions directly from its Member States and voluntary contributions from donors and partners through direct agreements, *unlike other WHO Regional Offices*.
- PAHO (AMRO) receives a portion of WHO assessed contributions and voluntary contributions and is required to report separately on these from PAHO-direct resources.
- PAHO needs to support its four official languages: English, French, Portuguese, and Spanish

PMIS Guiding Principles

Comparison with WHO

- PAHO's guiding principles include specific sections for knowledge management and communication, records management, and oversight and accountability; WHO's Guiding Principles do not
- Core functions are classified at the Product/Service level in PAHO. In addition, PAHO introduced the classification of Products/Services by cross cutting issues (health promotion, gender, ethnicity, primary health care, social protection and human rights)
- PAHO has a sub regional level fully operative with entities that implement a Biennial Workplan that has human and financial resources
- PAHO Business processes will be adapted to commercial software as much as possible.
 - *“When implementing commercial software, PASB will strive to modify its business processes to use the native capabilities and limit customizations to better facilitate vendor support and upgrade paths”* - Guiding Principle B.1.21

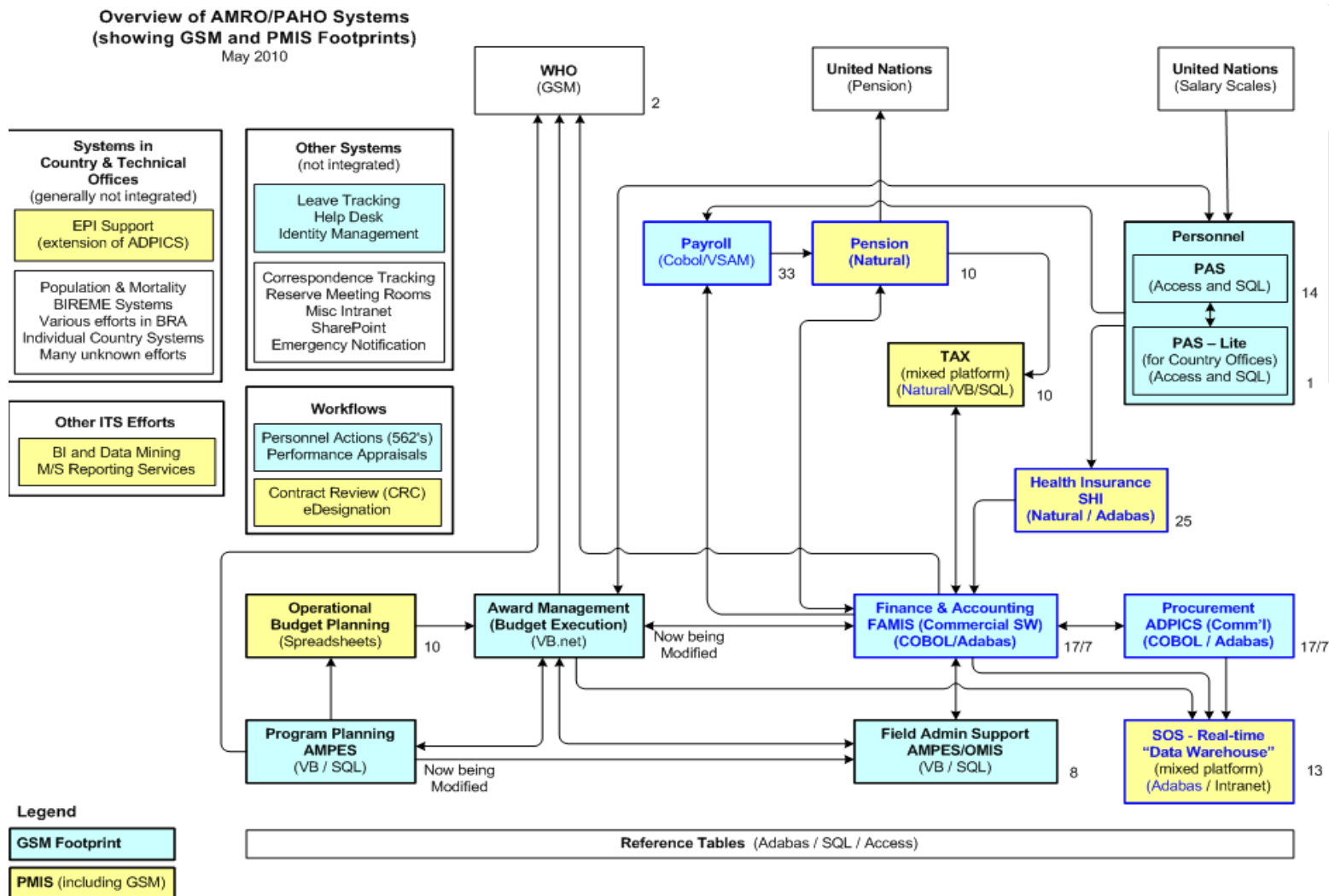
Business Processes

Comparisons with WHO

- PASB supports complex procedures for procurement, including tracking and monitoring shipments of goods and complex shipping terms and conditions as part of:
 - The Regional Revolving Fund for Strategic Public Health Supplies, and
 - The Revolving Fund for the Expanded Program on Immunization (EPI)
 - The Reimbursable Procurement Mechanism for Governments and institutions
- Purchases are made directly by each country or subregional entity, unlike WHO, where purchases are largely centralized

Business Processes – Comparisons with WHO

- PAHO Modernization is broader than just GSM, adding to cost
 - GSM scope (yellow)
 - Additional PASB Modernization requirements (blue)



Notes: Mainframe applications are: FAMIS, ADPICS, Payroll, Pension, SOS, and some Tax.
System ages (and last major upgrade) appear to lower right of each box.

Business Processes

Differences with WHO

- Transactional (merits a description, not obvious to laymen)
- Routine administrative functionality,
 - Such as processing invoices, personnel actions and other back office functions
 - This was a focus of WHO and GSM to obtain administrative efficiencies
- Non-Transactional
 - Supports non-routine knowledge worker activities
 - Tracking of grants over the complete life cycle
 - Resource mobilization
 - Technical program activities
 - PAHO value model for modernization focuses on an increase in Organizational capacity
 - This drives the need for system modernization to support non-transactional activities
 - Support for non-transactional functionality produces need for additional software over and above the “GSM footprint” that is integrated with ERP
 - Document Management
 - Customer Relationship Management
 - This is a significant cost driver

Evaluation of Options

- **20 Common Factors Selected to Evaluate**
 - Based on literature review and full Committee discussions
 - All options evaluated on a five point scale from Poor to Excellent using a modified Delphi process
- **Narrative Comparison in annex D**
 - Results when converted to a numeric grade:
 - GSM (1a) – Same operating unit 52
 - GSM (1b) – Different operating unit 53
 - GSM (1c) – Separate Instance 59
 - (2) Modernized Current Model 60
 - (3) Hybrid SAP with PAHO functionality 67
 - Scores not weighted by importance

Summary of Cost Differentiators

- The cost of all GSM options are higher due to the extensions and required upgrades
- GSM (1c) is high because
 - PAHO will shoulder all upgrade costs sometime within the 10 year life cycle (shift from Oracle 11 to Oracle 12).
 - Recurring costs will not be shared with WHO
 - Existing problems with GSM must be corrected prior to PAHO's use
 - Critical items
 - Items aged more than 250 days
- Baseline ERP (SAP) option cost is lower because of the premise that there will be a minimum of extensions and the business processes will conform to the software

Components of Costs

- Implementation
 - Initial software license
 - Baseline software installation and configuration
 - Includes defining and configuring business processes
 - Testing and training
 - Data conversion, interfaces, reports, extensions
 - Requirements, Design, Build, Test
 - Hardware costs
 - Change Management
- Recurring Costs
 - Minimal software maintenance
 - Software licenses
 - Hardware costs

Methodology Used to Estimate Costs

- GSM Options
 - Based on extensive study by Pricewaterhouse Coopers (PwC) in 2008
 - Derived from PwC experience, and a review of WHO's GSM and PASB requirements.
 - PwC estimated GSM Options (1b) and (1c) using a bottom up method
 - PASB staff estimated GSM Option (1a) using detail provided by PwC
 - Adjusted for changes in assumptions, e.g. telecommunications infrastructure already in place
 - Assumes a major upgrade to software is required (Oracle 11 to R12)
 - Revised with current labor rates
- Current Model
 - Based on an estimate by 11 in-house staff and contractors
 - Heuristic method when historical data was available
 - Bottom up method for other areas
 - Will use latest commercial software, eliminating need to update in first ten years (consistent with our current experience with commercial software)

(Revised) Methodology Used to Estimate Costs

- **Baseline** ERP (SAP) with PASB-specific Functionality
 - Developed by in-house staff
 - Assumes
 - **SAP used as the vehicle for evaluating the Baseline ERP option**
 - Oracle and SAP are comparable in capability
 - Oracle and SAP are comparable in effort to implement
 - PASB will reuse basic business analysis done by WHO for GSM
(but not configuration details or software)
 - Based on the premise that PASB will conform its business processes to the capabilities of the software and limit changes and enhancements to an absolute minimum
 - Using latest software eliminates need to upgrade in first ten **years**