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MODERNIZATION OF PASB MANAGEMENT INFORMATION SYSTEM
(PMIS)

Introduction

1.   The Pan American Sanitary Bureau's (PASB) Management Information System (PMIS) Committee has been asked to evaluate various options for modernizing the multiple components of the Bureau's management information system. To this end, the PMIS Committee has elaborated the PMIS guiding principles and has reviewed the business processes of the PASB's enabling functions. Based on the review of these processes, the PMIS Committee analyzed several options.

2.   This report presents the results of this work, including the PMIS Guiding Principles, a summary of the analysis of business processes, and an analysis of options and their costs. These results also were presented to and discussed by the 146th Session of the Executive Committee in June 2010. As a consequence this report also addresses the resulting Line of Action which requested further analysis of the options the Executive Committee considered to be the most advantageous for PAHO.

Background

3.   PASB's Management Information System plays a critical role in effectively supporting the delivery of technical cooperation to Member States. In 2008, the 48th Directing Council (Resolution CD48.R1) authorized the use of funds from the Holding Account to conduct analyses, study options, and issue recommendations for modernizing the PASB Corporate Management System (further described in documents CD48/22 and CE144/25). This led to the creation of the Corporate Management System (CMS) Committee. Following the 2010 meeting of the Subcommittee on Program, Budget and Administration (SPBA), it became clear to all involved that the terminology

used in these reports can be quite confusing. Consequently, the name was changed to PASB Management Information System (PMIS).

4.   The World Health Organization's (WHO) implementation of the Global Management System (GSM) served to challenge PASB to reexamine its systems to determine the extent of modernization that is desirable and considered useful for the Organization. PASB is committed to respond to WHO's GSM requirements. To that end, all options presented to PAHO's Governing Bodies will respond to these requirements.

5.   To explore available modernization options, the PMIS Committee followed a broad consultative process that involved every level of the Organization. The Committee has prepared several documents for review by the Directing Council: PMIS Guiding Principles, including a crosswalk of PASB and WHO Guiding Principles; Summary of the Business Process Analysis; and Options and Cost Analysis. These documents are briefly described in the following subparagraphs and attached as Annexes.

(a)   *Guiding Principles*: These principles will guide future efforts to modernize the PMIS. Annex A presents those Guiding Principles. In addition, Annex B presents a table which shows the differences between the PASB and WHO Guiding Principles.

(b)   *Business Process Analysis*: This represents the first time that PASB has rigorously documented its business processes, which now serve as a foundation for further analysis and optimization of the Organization's processes and work. During the Business Process analysis, the PMIS Committee was able to highlight PASB-specific needs which must be accommodated in any PMIS modernization. These relate to (a) PAHO's legal status as an independent Organization; (b) mandates of the PAHO Governing Bodies which may differ from those of the World Health Assembly; (c) PASB-specific delegations of authority; and (d) unique business process needs. These are more fully described in Annex C, Summary of the Business Process Analysis.

(c)   *Option and Cost Analysis*: Five options were evaluated:

        (i) Three variations of WHO's GSM:
            - GSM using the same database instance and same operating unit as other WHO Regional Offices and similar to UNAIDS,
            - GSM using the same database instance, but a different operating unit and separate set of books, and
            - GSM as a separate instance, which essentially is a blank copy of GSM installed separately for PASB use.

(ii) Modernized Current Model – This represents an upgrade to existing PASB Management Information System modules, and

(iii) A baseline Enterprise Resource Planning (ERP) software product combined with PAHO-specific functionality. This option represents the opportunity to implement an ERP solution with the least possible number of modifications.

(d)   ***Annex D*** presents a summary of the analysis of options and costs, including various non-cost related advantages and disadvantages of the options, and estimates of the costs to implement and operate each option for a ten year period.

6.   In June 2010, after discussing item 4.2. Modernization of the PMIS, the Executive Committee approved the following line of action (Document CE146/FR):

- "Following the discussion, the Executive Committee endorsed the modernization of the PASB Management Information System and approved its guiding principles. Bearing in mind the separate legal status of PAHO and other factors, the Committee recommended options l(c) and 3 as the most advantageous for the modernization of the PMIS and requested a more detailed analysis of those two options, including the risks and costs involved in their implementation. The Executive Committee also called for a detailed dialogue with WHO and other entities involved with the GSM, as well as with other United Nations agencies using the SAP software, in order to obtain improved information on its operation.

- The Executive Committee requested that Member States stay engaged as the new document was prepared for the Directing Council and the results of the aforementioned dialogues were incorporated. It also called on the Director to present a financing plan that would include proposed sources of financing and resource mobilization efforts."

7.   While Annex D presents the analysis of all options, the recent discussions with WHO and the guidance of the PAHO Executive Committee mentioned above leads this main document to focus on Options 1a, 1c and 3.

8.   Option 1a: Under this option, PASB would share the same instance (for example, the same database and application code) of GSM and the same operating unit that currently is being used by WHO HQ, other WHO Regional Offices, and other organizations affiliated with WHO, such as UNAIDS.

9.   Option 1c: Under this option, PASB would have its own copy or "instance" of GSM, independent of WHO. This means that PASB would start with a copy of the GSM software and its own empty database. PASB could modify this to meet its needs and could implement any additional features to accommodate PAHO Governing Body

mandates, without the need of coordinating with the GSM system governance mechanism. Interfaces would be used to integrate information between both WHO and PASB GSM instances to achieve WHO's vision of global transparency.

10.   Option 3: This option was proposed to provide an ERP option that could be implemented as close to a baseline software product as possible, with minimum customization. This approach can significantly decrease both initial implementation and later upgrade costs.

Conclusions

11.   The modernization of the PMIS will benefit the Organization in the following aspects: (a) accountability for results, (b) improved collaboration, (c) availability of information and transparency, (d) adaptability, (e) coordination with WHO, (f) management of human resources, (g) support for emergency operations, and (h) gains in operational efficiency. Annex C, the Summary of Business Process Analysis, includes a detailed discussion of the overall benefits possible, which justify the investment in modernization.

12.   The detailed analysis of Option 1a in Annex D indicates that this option would be inappropriate for PAHO. The Bureau does not recommend Option 1a, even though it is the option preferred by WHO, for the following reasons: according to PAHO´s Legal Counsel, Option 1a carries the highest risk of interfering with PAHO's governance and legal independence, and is constitutionally inappropriate. Adoption of Option 1a presupposes sharing of important administrative functions with WHO that would change PASB´s business and operating model. Such action may imply ceding control on them in a way not compatible with PAHO´s legal status, including the risk of interfering with the Bureau´s fiduciary responsibilities. It also presupposes the use of the Global Service Center located in Kuala Lumpur, subject to negotiation with WHO, which may limit the Bureau's ability to emphasize quality of service to its Country Offices and Member States. Under the current structure of GSM, there will need to be separation of data to ensure that PASB information cannot be modified by anyone outside of PASB. In addition, the current version of GSM lacks some functionality that is needed by PAHO Country Offices which will require a modification to GSM and coordination with all other GSM users. While this option has the lowest implementation cost, the actual recurring costs of participating in GSM remains to be negotiated and clarified with WHO. There also is a risk that PASB will not have the necessary internal resources or organizational capacity to implement this option without additional outside expertise and cost. Given Oracle's near-term plans for software support, the Bureau, along with WHO, would need to upgrade the underlying Oracle software (used for GSM) from Release 11 to R12. This will represent additional organizational disruption and may incur additional cost.

13.   The detailed analysis of Option 1c in Annex D indicates that this option would be inappropriate for PASB for the following reasons: WHO indicated that it would be unable to support this option because of human resources constraints. WHO recommended not to choose this option because PASB would not have the capacity or knowledge to manage GSM; technicians would require a familiarity with the degree of complexity and level of customization and extensions incorporated in GSM, many of which are irreversible. The complexity of GSM will inhibit the ability of the Bureau to respond efficiently to changing needs and opportunities. In addition, like Option 1a, there will be a need to upgrade the underlying Oracle software from Release 11 to R12, which will incur additional cost and organizational disruption.

14.   PASB recommends Option 3 for the following reasons: Option 3 does not present any risk to the independence or governance of PAHO. It represents a successful approach to implementing ERP systems that has been demonstrated by other United Nations agencies, such as the International Telecommunications Union. This option will support the Member States by (a) facilitating the decentralization of business processes closer to those receiving services, thus improving the quality of service, (b) enabling system features and business process changes to better support timely responses in emergencies, and (c) providing improved quality and timeliness of information to support better and quicker decision making. Some ERP products available under this option offer baseline compatibility with United Nations rules and regulations which will simplify the software, business processes, and future upgrades. The implementation of a current version of software will eliminate the need for a major upgrade during the next ten years or more. By pursuing a baseline approach, this will provide an additional catalyst for simplifying and streamlining business processes. PASB would be able to report in a timely manner to WHO and respond to all GSM requirements through interfaces.

15.   The timetable below, which represents modernization under Option 3 will require a two year phased implementation project, preceded by a pre-project planning period. The Pre-Project planning period will include time for detailed implementation project elaboration, business processes simplification and refinement, data preparation, and a competitive procurement process to select the best ERP system available.   The implementation project will have two phases. Phase 1 will include the Human Resources and Program Management modules and will start on July 2012.   The software implementation for Phase 1 will end in June 2013, followed by support for data entry to support use of the Program Management module beginning with the 2014 planning period (new biennium and new PAHO strategic plan). Phase 2 will include Finance, Payroll and Procurement modules, and will begin in July 2013 and end June 2014. A portion of the total budget, approximately ($ 10 million) would be funded from the Holding Account to pay for Phase 1, with the balance of about ($10.3 million) for Phase 2 to be funded with the use of a Post Occupance Charge (POC) mechanism imposed to all PAHO funded posts and/or raised through mobilization of resources.

PROJECT PHASE	COST ($ million)	2011 Q1 Q2 Q3 Q4	2012 Q1 Q2 Q3 Q4	2013 Q1 Q2 Q3 Q4	2014 Q1 Q2 Q3 Q4
Pre-Project Activity Project Planning & Competive Procurement	**0.0**	0.0			
Phase 1 Human Resource & Program Management	**10.0**		5.0	5.0	
Program Management Preparation for 2014	**0.3**			0.3	
Phase 2 Finance, Procurement, Payroll	**10.0**			5.0	5.0
TOTAL Cost	**20.3**				

Budgetary Timeline		2011	2012	2013	2014
Funding Requirement ($ million)		**0.0**	**5.0**	**10.3**	**5.0**

Action by the Directing Council

16.   The Directing Council is invited to:

- Take note of the analysis contained in this report.

- Consider the options presented for modernization, along with their advantages, disadvantages and costs.

- Select one option for the modernization of the PMIS.

- Approve the timetable and budget for the PMIS modernization implementation project

Annexes

A – Guiding Principles for Modernizing PASB Management Information System (PMIS)
B – Crosswalk of PASB and WHO Management Information Systems Guiding Principles
C – Summary of Business Process Analysis supporting the modernization of PMIS
D – Options and Cost Analysis for the modernization of PMIS
E – Analytical form to link agenda item with organizational mandates
F – Draft Resolution
G – Report on the Financial and administrative Implications for the Secretariat of the proposed Resolution

Pan American Health Organization

Regional Office of the
World Health Organization

Guiding Principles

for Modernizing PASB

Management Information System (PMIS)

PMIS Committee
BPB.060.ALL.001
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A.   Introduction

The future Pan American Sanitary Bureau (PASB) Management Information System (PMIS) will consist of an automated information system that will support various core enabling functions of the Organization, including, but not limited to, Planning, Program Management, Budget, Finance, Human Resources, Payroll, Procurement, and Evaluation. PASB has decided to modernize its current system in order to respond to the requirements of the WHO Global Management System (GSM). The Director subsequently created the PMIS Committee to lead this process of modernization. The PMIS Committee led a broad consultative effort to develop the Guiding Principles of the future system. The results of that effort are presented in this document. These principles will guide the efforts to modernize the PMIS.

B.   Core Guiding Principles

B.1.   *Strengthen Management*

Strengthen management at all levels of the Pan American Sanitary Bureau.

B.1.1.   All components and activities related to the modernization of PASB Management Information System will support the mission of the Organization.

B.1.2.   PASB Management Information System will ensure that the corporate management needs of it's programmatic and administrative users in regional, subregional and country entities are adequately supported.

B.1.3.   All management and administrative rules, policies, and procedures will be reviewed and improved to enable more effective delivery of health technical program results. As a result, the burden of administration on technical managerial staff should be lightened.

B.1.4.   Electronic work flow and signature will be implemented where appropriate. Such efforts will be supported by manuals and guidance that are accessible, clearly articulated, easily understood and relevant to the needs of all user communities.

B.1.5.   Policies and procedures will be consistently applied to all levels of the Bureau. The implementation of business processes will be adaptable to change through an agreed governance process.

B.1.6.   Roles and responsibilities within each business process will be clearly defined so that the meaning will be the same irrespective of where the work is done or to whom it is assigned.

B.1.7.   Clear accountability, governance and application of the proper regulatory authority will be in line with the PAHO Accountability Framework. This will extend to all levels of the PASB.

B.1.8.   Standardized formal delegations of authority will align responsibility, accountability and authority.

B.1.9.   Information will be uniformly available to all staff throughout the region, according to established policies.

B.1.10.   Program management staff will have access to the PMIS information to make real time decisions required to implement and manage their biennial workplans (BWP), without having to become administrative specialists.

B.1.11.   The emphasis of the Bureau's internal control of transactions will shift from an ex-ante (before the event) to an ex-post (after the event) control. To ensure this shift, a major change in managerial behavior, skills, and competencies will be needed, supplemented by appropriate delegations of authority.

B.1.12.   Internal and external audit will maintain separation of duties and integrity of the Bureau's work through use of general controls and audit trails.

B.1.13.   Staff will be able to access PASB Management Information System according to their personal roles and responsibilities, irrespective of where staff are located at any given time.

B.1.14.   PASB will maintain compliance with the decisions of the Governing Bodies.

B.1.15.   PASB will establish a regional governance process to ensure that regional policies, processes and business rules are developed and managed to reflect requirements at all levels, coordinating with WHO where appropriate.

B.1.16.   Rules, policies and procedures will allow for scalable operations and be responsive to the demands placed by emergency operations.

B.1.17. Reports will be available to all stakeholders (member states, donors, and other partners) according to agreed upon standards.

B.1.18. Record retention and archiving policies will be reviewed and revised to ensure appropriate availably of information.

B.1.19. PASB Management Information System will respond to the requirements of the Global Management System (GSM) of WHO.

B.1.20. PASB Management Information System will permit differences from WHO in rules, policies and procedures, where appropriate.

B.1.21. 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.

B.1.22. Interoperability will be a major goal in the modernization of the PMIS.

B.2.   *Streamline Administrative Processes*

Streamline administrative processes for planning and program implementation, budget, finance, human resources, procurement and logistics enabling more efficient planning in the use of financial and human resources.

B.2.1.   Decentralization of administrative decision making will be encouraged so services are closer to those receiving the service.

B.2.2.   A service delivery model will be implemented that is cost effective and relevant to the needs of the Bureau.

B.2.3.   Performance indicators will be established to enable monitoring of administrative support tasks in relation to agreed service targets.

B.2.4.   Administrative services will be designed such that they are not bound to a geographic location, thereby allowing flexibility for geographic performance.

B.2.5.   A standard costing methodology will be developed and implemented for relevant aspects of planning and program implementation.

B.2.6.   Training and other guidance materials will be available in user-friendly formats to all staff according to their roles, responsibilities and learning needs.

B.2.7.   A fully integrated system will be established to ensure information flows from one process to another. These processes must support the elimination of silos of information and support enterprise compliance management objectives.

B.2.8.   The PASB will move toward Self Service where appropriate.

B.2.9.   Parts of administrative processes that do not require human intervention will be automated as much as practicable.

B.3.   *Operate as a Multilingual Organization*

Operate as a multilingual organization with 3 levels of representation: countries, sub-regional and regional entities.

B.3.1.   There will be a single description of the full scope of the Bureau's organizational structure that includes all their roles and responsibilities, and their relationship to each other, and their location.

B.3.2.   Support and coordination among entities will lead and co-ordinate the work of the Bureau at Country, subregional and regional level, respectively.

B.3.3.   While ensuring that the work of PAHO is responsive to, and reflects the broader agenda of the approved Country Cooperation Strategy (CCS), operational plans (biennial workplans) are developed by country entities within the overall Program and Budget, in coordination with the national authorities.

B.3.4.   While ensuring that the work of PAHO is responsive to, and reflects the broader agenda of the approved Subregional Cooperation Strategy (SCS), operational plans (biennial workplans) are developed by subregional entities within the overall Program and Budget, in coordination with subregional authorities.

B.3.5.   The PASB coordinates among its regional, sub-regional and country entities to develop policies and procedures which will inform the way the Bureau will work in each functional domain.

B.3.6.   Country entities provide input to the development of regional policies and procedures to ensure alignment with country needs and situations and act as an important link to the corporate work done at Headquarters.

B.3.7.   All information that is needed for global or regional reporting will be in English.

B.3.8.   Reporting will be available in any of the four official language of PAHO.

B.3.9.   User interfaces will be designed with the language needs of staff in mind, with English and Spanish as a priority, followed by Portuguese and French.

B.4.   Formal Partnership Arrangements

Formal partnership arrangements will operate within the programmatic and regulatory framework of PAHO to support the health mandate of the Organization.

B.4.1.   The relationship between partnerships or institutions and PAHO is managed according to defined PAHO policies and principles.

B.4.2.   Administrative services provided partners will be integrated into the business model for legal and administrative purposes as indicated by the respective Administrative Service Agreement, Terms of Reference or Memoranda of Understanding.

B.4.3.   Any partnership or entity that is hosted under an Administrative Service Agreement or its equivalent will use a reporting framework agreed to by both parties.

B.4.4.   The work of partnerships that contribute to the achievement of PAHO and WHO expected results will be reflected in PAHO's SP and PB with associated resources, and reported on by the PASB.

B.4.5.   The PAHO will support the UN reform agenda within the overall context of the needs of PAHO at all levels of the PASB.

C.   Program Management

C.1.   *Role of Results*

Put results at the core of PAHO's work

C.1.1.   PAHO plans and manages its work within a results-based management framework. In this framework, programs are developed in a logical and coherent results structure. Results are developed in a hierarchical structure to reflect a "results chain" in which each element has a clear cause-and-effect relationship to those above and below in the hierarchy. The hierarchy consists of: (a) Strategic Objectives to which the members states are committed and to which the PASB assists in achieving (b) Regional Expected Results (RER's) to which the PASB is committed and accountable, and (b) Office-Specific Expected Results (OSERs) to which the PASB´s entities are committed and accountable.

C.1.2.   Results form the basis for strategic and operational resource planning and mobilization, as well as allocation to AMPES entities. Resources are allocated to entities' products/services and OSERs that will contribute to the achievement of RERs and Strategic Objectives.

C.1.3.   An AMPES entity (Country, Sub-regional, or Regional entity) may contribute to the delivery of many RERs, through their OSERs; and a RER may be delivered by many entities. The two key management dimensions of the organization are therefore results and the RBM accountability framework (as reflected in the organizational structure), enabling analysis of "who" is accountable for "what". Within the results chain, one result is linked to one and only one higher level result.

C.2.   *The Agreed Work of the Organization*

The agreed work of the Organization is stated in the Strategic Plan (SP) and related Program and Budgets (PB). The SP and PB are aligned with the Health Agenda for the Americas. They are in turn informed by the Country and Subregional Cooperation Strategies, and are aligned with WHO's MTSP and the Global Health Agenda of the WHO General Program of Work.

C.2.1.   The PAHO Strategic Plan and its operational plans (BWPs) are informed by the Health Agenda for the Americas, Country and Subregional Cooperation Strategies, country, subregional and regional priorities, the WHO MTSP and the Global Health Agenda

of the WHO GPW, decisions of the PAHO Governing Bodies, and legal obligations of the Bureau.

C.2.2.   The five-year Strategic Plan (SP) and related two-year Program and Budget (PB) express the agreed programmatic work of PAHO, and represent the budget document of the Bureau. Assessed and voluntary contributions will be managed within the framework of the approved SP and PB, which may be subsequently revised under the delegated authority of the Governing Bodies. The PB is developed on the basis of Strategic Objectives and related Regional Expected Results (RERs) through a bottom up process. The budget is set for a two-year period, is approved by the Governing Bodies, and is expressed in US dollars. The RERs are grouped by Strategic Objective.

C.2.3.   The SP and PB are published and approved by the Governing Bodies, and show results budgeted by: (a) Regular Budget (assessed contributions), (b) Voluntary Contributions, and (c) country, sub-regional and regional entities. It also shows the breakdown, in dollar values or percentage terms, within country, sub-regional, and regional entities as a group.

C.2.4.   The development of the SP and the PB are based on: (a) the definition of results with indicators, baselines and targets for a five-year period (i.e. SP) and for a two-year period (i.e. PB), and (b) the determination of the resources required to deliver the results for two years (known as Program and Budget Costing). The definition of results leads the process.

C.2.5.   In the PB, budgets reflect the costs of achieving the Region-wide Expected Results (RERs). These costs are arrived at by aggregating upwards the resources required by the entities responsible, at various organizational levels, for delivering them or portions of them. The preparation of the PB is an iterative and consultative process. At the time of operational planning, allocation from the approved budgets is based on accountability for results and the contribution of each organizational level and AMPES entity.

C.2.6.   Human resources planning is based on the planned results of the Organization. Budgeting for results includes consideration of resource requirements both for staff and operations. At the time of operational planning, human resources are: (a) planned together with deliverables, (b) costed against the budget associated with results at the Products and Services level, and (c) reflected in the Biennial Workplan (BWP).

C.3.   *Biennial Workplans (BWPs)*

Ensure that biennial workplans (BWPs) developed through collaborative operational planning are coherent, consistent and harmonized.

C.3.1.   BWPs are developed by each AMPES entity. BWPs reflect accountability for results (OSERs) and represent commitments for achieving results that will contribute to achieve the results stated in the SP and PB (RERs).

C.3.2.   Managerial authority and accountability in PAHO are based on the RBM Accountability Framework. Entity managers are responsible for and have authority over funds allocated for the work of the organizational entity they manage. Entity managers are accountable for the achievement of results (OSERs).

C.3.3.   BWPs embody 100% of the work and the resources of the entity. BWPs are planned and approved based on the delivery of results. When it is necessary to revise or change OSERs, BWPs will be revised and submitted for approval by Executive Management (EXM). When it is necessary to revise or change RERs, the PAHO Strategic Plan will be revised and submitted for approval by PAHO´s Governing Bodies.

C.3.4.   While retaining ultimate responsibility, Entity Managers may delegate to other staff (AMPES project coordinators) the authority to incur obligations or expenditures against approved BWPs within applicable Delegation of Authority and Financial regulations.

C.3.5.   Allocations are established per RERs and OSERs. In accordance with applicable rules and regulations, (a) the Entity Manager has the authority to make changes and adjustments to allocations among approved AMPES projects; (b) the AMPES project coordinator has the authority to make changes in the products/services of his/her project, and adjustments within approved allocations for the project and across approved products and services; and (c) a responsible officer for approved products and services has the authority to adjust tasks related to those products and services.

C.4.   *Collaborative Planning*

Foster collaborative planning across programs and all levels of the Bureau

C.4.1.   Many programs cut across both organizational and technical boundaries. One of the goals of the PASB is to improve and facilitate the collaborative nature of planning, implementation and monitoring.

C.4.2.   The work of the Organization takes place at regional, subregional, and country levels under the authority of the entity manager at that level.

Level of Work	Authority
Country	Country Entity Manager (PAHO/WHO Representative-PWR)
Subregional	Subregional Entity Manager
Regional	Regional Entity Manager (Director, EXM members and chief of some EXM offices, and Area Managers)

C.4.3.   The country, subregional and regional BWPs represent all the work at a level that is to be delivered by PAHO as a whole at that level. The essential part of the work is planned and managed by the corresponding entity and may include inputs from other entities of the different levels, contributing to (or affected by) that plan. For this reason, each BWP at a particular level brings together all the work from all other relevant BWPs, enabling a view of all the work planned in relation to a given level or entity.

C.4.4.   PWRs are directly accountable for all in-country collaboration. Similarly, subregional entity managers are directly accountable for all the subregional collaboration. Regional entity managers are directly accountable for all regional collaboration that is related to the themes under their responsibility. Such activities shall be planned, budgeted, and managed through the entity's BWP, which is under the responsibility and authority of the respective entity manager.

C.4.5.   Work directly supporting an entity, which is planned and implemented by other entities of the different levels of the Organization, will be included in the relevant BWPs only after formal consultation and approval of the affected entity manager.

C.4.6.   The work of one entity that directly supports the work of another entity must be included in the BWP of both entities, one as a "contributor" and the other as the "owner" of the activity, respectively. However, the corresponding resources (human or financial) should be reflected only in the BWP of the entity incurring the cost. If more than one entity incurs a cost then each entity's BWP should reflect only the budget for its portion of the cost.

C.5.   *Usage of Financial Resources*

Financial resources are used to achieve the results agreed with Member States through the PAHO Strategic Plan and its Program and Budgets.

C.5.1.   Financial resources are managed according to PAHO priorities and resource requirements as expressed in the SP and PB, and approved by the Governing Bodies.

C.5.2.   All financial resources are managed in an integrated and consistent manner irrespective of their sources. Financial resources are all planned, budgeted and spent against approved biennial workplans in the same consistent manner.

C.5.3.   The Program and Budget is in essence a signed agreement with Member States which governs planned interventions and the respective budget, and which provides direction for allocation and implementation of Voluntary Contributions. Resource mobilization efforts are directed towards securing full funding for the Strategic Plan.

C.5.4.   Voluntary Contributions are recorded and managed in relation to the provisions in a formal agreement, including end-dates, reporting requirements and the purpose for which they were provided. Voluntary Contributions that require specific reporting to partners against specific budgets or plans or are controlled according to specific dates shall be accounted for individually as specified contributions (earmarked voluntary contributions).

C.5.5.   Voluntary Contributions that can be used flexibly for a given broad purpose, such as a Strategic Objective or RER, and do not require separate reporting from other funds for the same purpose, should be pooled with other funds for the same purpose to facilitate a higher level of allocation, planning and reporting. All Voluntary Contributions received will be recorded as unspecified unless there is a clear reason to do otherwise (un-earmarked voluntary contributions).

C.5.6.   When PASB manages funds purely on behalf of other parties (including funds for supplies, funds managed on behalf of partnerships, and funds managed on behalf of other UN agencies), these will be clearly accounted for outside the results framework. Clear criteria will ensure that such funds will be excluded from the budget for results and actual expenditures will not be shown against budgets for results.

C.6.   *Analytical Program and Financial Monitoring*

Facilitate analytical program and financial monitoring to increase organizational effectiveness, efficiency, and performance.

C.6.1.   The performance of PAHO is monitored and assessed against the expected results as stated in the SP and its PBs. Performance, Monitoring and Assessment (PMA) involves: (a) the review of delivery of products, and (b) judgment about whether expected results are on track or at risk. Achievements are systematically measured using performance indicators. Financial implementation is assessed against the approved PB as adjusted, if applicable. All costs must be linked to results.

C.6.2.   Technical progress towards achieving expected results, and indicators at the RER level, will be monitored on an ongoing basis and formally reported at the end of each biennium.

C.6.3.   Management will have an up-to-date and assemble overview of results at all levels, including financial information and the status of the delivery of products and services. Status of delivery is a management assessment of progress and risk in delivering products or results. To support this, management information on progress: (a) will be tracked on a regular basis, and (b) will be aggregated upwards from products and services and assessed along two dimensions which are linked to the accountability framework: the RBM (results chain) and results (product and service information).

C.6.4.   Periodic Performance, Monitoring and Assessment (PMA) reporting will allow a review of programmatic and financial implementation by expected result, entity and fund. Up-to-date programmatic and financial information on biennial workplans and budgets will be available to support decision-making and monitoring.

D.   Financing the Organization

D.1.   *Maintenance of Credibility and Trust*

Maintain credibility and trust with member states and donors through improved transparency on the financing of the Organization.

D.1.1.   Financial Policies: PAHO will prepare financial statements on an annual basis which comply to both the International Public Sector Accounting Standards (IPSAS) and the PASB Financial Regulations and Rules.

D.1.2.   Income is recognized based on a signed agreement to enable timely implementation of programmatic activities. In the case of multi-year agreements, the unexpended balance of the agreement will be treated as deferred income and made available for implementation in subsequent financial periods.

D.1.3.   Program Support Costs (PSC) will be earned based on voluntary contribution expenditures. The Program Support Cost fund (PX) will be increased with earnings generated from PSC.

D.1.4.   Allotments will not be issued in excess of the total amount available in the Program Support Cost fund (PX), based on actual earnings, not projections.

D.1.5.   Expenditures cannot exceed the amount allotted.

D.1.6.   The Expenditure Recognition policy will comply with IPSAS Requirements. Goods or services will be recorded as expenditures when delivered.

D.1.7.   Reimbursable Expenditures, amounts due to PAHO from third parties, should be treated as an account receivable pending receipt of funds.

D.1.8.   Fund Accounting – PASB must present financial statements by fund (Regular Budget (RB), Voluntary Contributions (VC), Other). Transactions between funds which result in duplication of income or expenditure need to be eliminated from the financial reports.

D.1.9.   Cash, investments, fixed assets, accruals and other liabilities will be separated by financial/accounting fund.

D.1.10. Fixed assets purchased over the materiality threshold need to be capitalized and depreciated. Project budgets should be charged the value of the asset upon purchase.

D.1.11. Each asset should be assigned to the responsible officer with an assigned location.

D.1.12. Contributions in-kind should be accounted for at fair value when available.

D.1.13. Financial instruments "available for trade" should be accounted for at Fair Value. Periodic review of assets for impairment will be carried out as required.

D.1.14. Strong internal controls and transparency are required to ensure that PAHO receives an unqualified audit opinion on its Financial Report.

D.1.15. Certified financial reports to donors will be prepared in accordance with the terms of the agreement, usually on a cash basis. However, the ability to report to donors on the accrual basis of income and expenditure should also be an option.

D.2. *Long Term Financial Stability*

Long term financial stability of the Organization

D.2.1. Financial planning and reporting will link financial information with the Program and Budget and organizational responsibility. Information for financial planning from all sources of funds will be available on an integrated basis. PASB needs to generate reports to meet statutory, management and operational needs.

D.2.2. Multicurrency financial transactions will be allowed. These transactions will be translated into the functional currency (USD). Assets and liabilities will be re-valued periodically.

D.2.3. In accordance with International Public Sector Accounting Standards, funds should be set aside for known future liabilities. Accruals should be segregated by accrued annual leave, education grant, home leave, staff health insurance, and repatriation costs.

D.2.4. A reserve for bad debt should be established for voluntary contributions. (For example, this reserve will be funded by Program Support Cost income and will be periodically adjusted based on outstanding accounts receivable balances. Write offs of

bad debts will also be charged against Program Support Cost income and will be disclosed in the financial report.)

D.2.5.   At the end of the biennial budgetary period, the unexpended balance of the funded portion of the Regular Budget Appropriation will be transferred to a budgetary surplus account. The disposition of these funds will be determined in accordance with the Financial Regulations.

D.2.6.   Upon the expiration of an agreement funded by voluntary contributions, any unexpended balance will be returned to the donor unless a written agreement exists, allowing PASB to transfer the unused funds to another project or financial period.

D.2.7.   The subsequent biennium's budget must be made available in the current financial period, when appropriate, to enable the commitment of funds for contracts/services to be delivered in the subsequent biennium.

D.2.8.   Investment income will be allocated to those funds or projects designated by the Director based on month-end cash balances.

D.3.   *Efficient Operations*

Efficient operations to mobilize / utilize funds

D.3.1.   Assessments, contributions, and special, non-project funds will be awarded to the appropriate entity using a harmonized, single process, irrespective of source.

D.3.2.   Biennial workplan funding will be initiated and managed by the respective entities.

D.3.3.   Expenditure data will be available throughout the PASB on a real-time basis for financial transactions. When appropriate, access to all expenditure details of the entities at regional, subregional and country levels will also be available. Drill down capability to research transactions will be available. Appropriate measures will be taken to protect confidential information.

D.3.4.   Integrated financial information will be available throughout the Bureau. This information will be made available in various dimensions, including groupings by regional, sub-regional and country levels, and others.

D.3.5.   Staff costs, including salaries, post adjustments, education grants, statutory travel, staff health insurance, and pension, will be charged to the appropriate project based on the full accrued costs associated with the respective posts. The salaries and benefits will reflect those prescribed by the United Nation's Common System of Salaries and Allowances, as well as the costs established by PASB's analysis of accrual requirements.

D.3.6.   Financial processes will be harmonized across the PASB. The Bureau will apply common "best practice" financial procedures to all locations.

D.3.7.   Invoices will be paid in the same currency as per the purchase order. Purchase orders will be paid in the same currency of the contract. In exceptional situations, flexibility to change currency will be allowed.

D.3.8.   Where costs can be clearly identified (e.g. supplies and printing), a direct charge should be made to the entity benefiting from the goods or services provided.

D.3.9.   All contracts or purchases of goods/services (including non-staff contracts) will be settled according to the expenditure recognition policy (delivery principle).

D.3.10. Reimbursement for expenses, including non-salary staff entitlements, will be processed using a single, harmonized process.

D.4.   *Cash Management and Treasury Operations*

Ensure efficient and safe cash management and treasury operations within agreed investment management principles.

D.4.1.   Cash flow and foreign currency exposure forecasts will be available. Online reporting will support cash concentration, thus reducing lost revenue through funds lying idle. Control of operational risks of investment and foreign exchange exposure will be facilitated through on-line position reporting for management review based upon detailed cash flow forecasting. Availability of comprehensive data on global banking operations will be available centrally and support more cost effective management of banking relationships.

D.4.2.   All payment files should go directly from the sub-ledgers such as Accounts Payable or Payroll to the banks, after approval from Treasury.

D.4.3.   All non-US dollar transactions will be converted on the transaction date using the prevailing UN exchange rate. Month-end balances of assets and liabilities will be revalued using the UN rate in effect on the first day of the following month.

D.4.4.   Exchange Rate Gains and Losses: 1. Purchases – Exchange gains and losses incurred from the time the Purchase Order was created until the time the invoice is received and entered into the corporate procurement and financial systems are to be charged directly to the project. Exchange gains and losses, from all sources of applicable exchange rates from the time the invoice is booked in accounts payable to the time the invoice is settled (paid), will be managed centrally. 2 Receivables – The constant dollar value of all funds outstanding will be charged directly.

E.   Staffing the Organization

E.1.   *Alignment of Human Resources*

Human resources aligned with the overall strategic and operational plans of the Organization.

E.1.1.   In order to deliver the expected results of their programs, managers must develop an HR Plan linked to and updated in the BWP, representing the position and personnel components of the biennial workplan.

E.1.2.   The HR Plan consists of positions and assignments, which will be defined by functions. There will be a clear outline of the role, nature, duration, funding, duties, and competencies required and relevant information linking the HR Plan to the results chain and workplans.

E.1.3.   The HR Plan will be budgeted based on standard costs and reconciled with approved budgets. Staff members will be appointed to positions or assignments subject to funding being available. Other personnel will only be budgeted against products and services costs.

E.1.4.   With the guidance and assistance of the HR Advisor, the manager will: 1) Define, through the HR Plan, actions related to recruitment priorities, reclassification activities, contract administration, and changes to staff status. 2) Monitor and revise the HR Plan in order to adapt to changes in programmatic priorities, funding and availability of workforce.

E.1.5.   Contractual arrangements for staff (e.g. continuing, fixed-term and temporary appointments) and non-staff (e.g. Ministry, SSAs, CLTs, Agency, etc.) will serve the Organization's programmatic and operational needs.

E.2.   *Skills and Competencies of Personnel and Teams*

Alignment between the skills and competencies of personnel and teams, and the skills and competencies required to produce expected results.

E.2.1.   Competencies will be integrated throughout HR processes to form an integral part of planning, recruitment, learning and development, personnel performance and reassignment activities.

E.2.2.   Candidate rosters will be created and maintained to allow easy selection and recruitment.

E.2.3.   With the guidance and assistance of an HR Advisor, the manager will ensure through the recruitment and selection process that all personnel have the necessary skills and competencies required by the Organization.

E.2.4.   Managers will ensure that the skills and competencies of existing personnel are continuously enhanced through performance management, learning and development.

E.2.5.   Both core and program learning needs will be aligned to support strategic and operational objectives of the Organization.

E.2.6.   Performance assessment will allow managers to evaluate personnel in relation to agreed objectives, competencies and development needs.

E.2.7.   Career management opportunities, including rotation and mobility, will empower personnel to plan, organize and pursue personal career development goals in an enabling environment.

E.2.8.   To facilitate the assignment of personnel, information on positions, staff eligibility for rotation and mobility, and staff competencies will be made available to decision makers.

E.3.   *Conditions of Service and Contractual Mechanisms*

Conditions of service and contractual mechanisms are consistently applied throughout the Organization.

E.3.1.   Contract types will be aligned with the nature and duration of the function.

E.3.2.   Conditions of service, entitlements and benefits will be based on the contract type, place and duration of the assignment and personal status vis à vis dependents, international eligibility.

E.3.3.   Exceptions to staff rules, regulations or policies in establishing conditions of service or contractual agreements will be captured and monitored.

E.4.   *Empowering Managers and Staff*

Empower managers and staff to be more effective through access to information, simplified processes and delegation of authority.

E.4.1.   Human Resources processes will be harmonized and streamlined to support both centralized and decentralized administration.

E.4.2.   Initiation and modification of HR actions will be decentralized to managers and personnel to the greatest extent possible while being consistent with efficient HR processing, the overall accountability framework, delegation of authority, and the authorized HR Plan.

E.4.3.   Personnel will be able to view and update their personal data and access information on their entitlements and benefits and assignment details. Personal data updated by personnel will be validated as appropriate.

E.4.4.   Managers will have access to relevant personnel and job-related information pertaining to the personnel they manage.

E.4.5.   Managers and staff will be held accountable for HR actions for which they are responsible and have authority.

E.4.6.   HRM will monitor HR actions initiated by managers and personnel to ensure that they are in line with the Staff Rules, Regulations, policies and procedures.

E.4.7.   Personnel in Country Offices and Centers responsible for administration of HR actions (PWR's, Administrators and HR Focal Points) will have the training and information necessary to effectively execute this role.

E.5.   *Human Resources Data Capture and Maintenance*

HR data capture and maintenance.

E.5.1.   Data necessary to implement entitlements, benefits and/or contract management and to identify the complete PASB workforce will be captured and maintained, as appropriate, for all persons working in a PASB workplace, regardless of duration or type of appointment.

E.5.2.   Emergency contact information for all personnel will be captured, maintained and available as needed.

E.5.3.   Personnel data will be treated in a confidential and respectful manner; access will be provided as authorized.

E.5.4.   Information will be captured and maintained to support reporting requirements from Governing Bodies, WHO and UN.

F.   Operational Support – Payroll

F.1.   *Timely Payment of Payroll and Benefits*

To pay all PASB Staff Members globally in a timely and accurate manner.

F.1.1.   Payroll will administer salary calculations and disbursements to staff members with continuing, fixed-term and temporary appointments, in accordance with UN and PASB Staff Regulations and Rules.

F.1.2.   The scope of persons to be paid by the payroll system will extend to the maximum number of types of persons, as appropriate.

F.1.3.   Payroll will have responsibility for the accurate payment of current, overtime and retroactive elements of salary, as well as voluntary and involuntary deductions and recoveries from salary. Common, global processing rules for entitlements will be used where applicable.

F.1.4.   Payroll will automatically process entitlements in multiple currencies, and will effect payment in multiple currencies, in accordance with the UN and ICSC policy.

F.1.5.   Staff members will have access to a salary advance facility, in accordance with Staff Rules and Regulations.

F.1.6.   Payroll will process scheduled payments to staff (i.e. monthly) on the agreed day, and will process payment of all ad hoc payments in a timely manner.

F.1.7.   Payroll will be able to independently process logical categories of staff, independent of, and irrespective of geographic location.

F.2.   *Efficient Management of Payroll Services*

To provide efficient management of payroll services.

F.2.1.   The effort of administering payroll will be reduced through the single entry (retro, overtime, current and future dated) and single storage of data, and by effecting payment on the basis of statutory conditions, except when otherwise notified or recorded.

F.2.2.   Data will be validated as close to its source as possible, to improve data quality.

F.2.3.   The effort of administering payroll will be reduced by automating standard processes (e.g. by using automatic calculations and automatic interfaces), when appropriate.

F.3.   *Responsiveness to Payroll Clients*

To be responsive to Staff Members and other payroll clients.

F.3.1.   Have a consolidated view of each staff member's financial transactions with the Organization.

G.   Operational Support – Procurement

G.1.   Provision of Procurement Services to Member States

Provide procurement technical cooperation and services to Member States so they can improve the health of their populations and maintain their populations' health at optimal levels.

G.1.1.   As an international, inter-governmental organization, PAHO provides services for the procurement of goods and services for its Member States.

G.1.2.   Procurement services will include the following mechanisms: Reimbursable Procurement Mechanism, the Revolving Fund for Vaccine Procurement (RF), and the Regional Revolving Fund for Strategic Public Health Supplies (SF).

G.2.   One Procurement Solution

One procurement solution throughout the Pan American Sanitary Bureau.

G.2.1.   Procurement will be viewed as a whole, including procurement of goods, services, provided internally or externally, and which can be procured at the regional, subregional or country levels.

G.2.2.   Service contracts will include services provided by institutions and individuals not entitled to any employee related benefits.

G.3.   A Proactive Procurement Approach

A proactive procurement approach will be based on forward planning to ensure professional buyers are focused on getting the 'best value' for PAHO and spending less time reacting to ad-hoc requests.

G.3.1.   Demand forecasting will be developed by entity managers, where appropriate, in conjunction with Procurement to take account of mission critical items, high volume products and consolidated global demand.

G.3.2.   Suppliers will be identified based on a technical evaluation of the quality of their products and services, the price they charge, and other procurement-relevant criteria (e.g. pre-qualification of vendors, delivery requirements, and prior history of vendors).

G.3.3.   Umbrella agreements will be established with selected approved suppliers when appropriate, to support the requirements of the demand forecasts.

G.3.4.   Capabilities will be established for end-users to initiate a procurement request and to enable Procurement to continue with the actions, thus streamlining the process.

G.3.5.   The Procurement function will negotiate, issue, and administer contracts, and will provide guidance on the procurement process and responsibilities.

G.4. *Enabling Efficient Procurement*

Efficient procurement will be enabled for (a) PASB regional entities (headquarters), (b) PASB subregional entities, (c) PASB country entities, and (d) member government health authorities and agencies or institutions under their jurisdiction.

G.4.1.   Harmonize and streamline the various procurement processes around a model that centralizes administration and support tasks for international procurement and fund-purchasing. Decentralize requisitioning and local procurement up to the corresponding delegations of authority.

G.4.2.   When emergencies are declared, special procurement procedures will apply.

G.4.3.   Procurement will respond to programmatic needs and comply with financial Rules and Regulations. Procurement processes will be fully integrated with financial processes, and where appropriate, inventory and fixed assets processes, recognizing that all procurement is initiated from a BWP.

G.4.4.   Provide a single "easy to use", self-service front end for users to perform requisitioning, approval, and tracking activities.

G.4.5.   Users will be provided with the ability to track the status of the transactions they have initiated and/or approved, and an efficient procedure for escalating or raising issues with such transactions will be developed.

G.4.6.   Shipping and expediting, while not a main business of the PASB, is a core requirement and a critical success factor in its ability to deliver health technical programs. Shipping will be administered

by suppliers where possible and managed by the procurement entity in all other instances.

H.   Operational Support – Inventory

H.1.   Inventory

Inventory Operations

H.1.1.   Business rules and processes relating to inventory will be developed in coordination with the General Services, Finance, and Procurement entities, as each of these entities has a significant role with respect to inventory.

H.1.2.   Inventory of physical assets will be used: (1) for physical control, as necessary and as specified by the General Services entity, (2) to track the values of assets to respond to the financial needs of the Organization, including depreciation, and (3) to assist in planning for the replacement cycle of some assets.

H.1.3.   Management Information System must accommodate the different rules associated with each purpose and use of the inventory function.

I.   Operational Support – Knowledge Management and Communications

I.1.   Knowledge Management and Communications

Knowledge Management and Communications

I.1.1.   Health information will be treated as a regional public good that is essential for economic and social development and for a just, equitable and healthy society. PASB will use an open access philosophy with respect to all electronic content produced by the Organization.

I.1.2.   Information that stimulates decision-makers in the Region will be given priority, and the transfer of appropriate technology into health care practice, which is suitable for adaptation and use by various levels of health workers in Member States, will be promoted.

I.1.3.   Knowledge and information intended to meet the needs of Member States will be shared and communicated in order to address priority problems and issues affecting their populations and supporting the goal of Health for All. This information will often

deal with topics or target audiences both covered and not covered by commercial channels. The information will aim to provide information to the neediest, especially in developing countries.

I.1.4.   Print, audiovisual and electronic media will be used for publishing and disseminating information. The Web will become a key tool for advancing knowledge sharing and continually adopting new methods and technologies.

I.1.5.   The decentralized production and operation of information sources, connected through networks with direct and universal access, and free from geographical or scheduling restrictions, will be promoted. This is the case with PAHO's Virtual Health Library.

I.1.6.   Information will be disseminated in PAHO's official languages, especially Spanish and English, and encourage translation by others into additional languages, when needed.

I.1.7.   Linkages and interoperability between information sources involved in public health within and outside the Bureau will be expanded and promoted, where appropriate.

I.1.8.   Decentralized production of scientific information products will be promoted when those products are proven to adhere to the highest quality standards and are also in accordance with cost-effective procedures.

I.1.9.   PASB technical staff will cooperate with countries in strengthening their knowledge management and communication policies, and capacity in support of Health for All.

I.1.10. Proposals for new technical publications will be screened by a publications committee at the PASB, in order to ensure that publications: are in line with PAHO's policies, reflect its priorities, meet the needs of Member States, have been properly peer-reviewed, and contain information that is likely to be of long-term relevance.

I.1.11. Manuscripts accepted for publication will undergo a rigorous editing process that adheres to industry standards to ensure that the final publication is of the highest quality, both technically and editorially.

I.1.12. Content published by PASB will be classified and indexed using a PAHO official taxonomy.

J.   Operational Support – Travel Management

J.1.   Planning of Travel and Meetings

Forward planning of travel and meetings.

J.1.1.   All staff travel plans will be registered by the staff member (normally three months in advance or as soon as planned), approved, linked to a workplan and, where appropriate, linked to a registered meeting.

J.1.2.   The Human Resources Management (HRM) entity establishes and administers the policies and procedures related to statutory travel, as a defined staff benefit. Statutory travel will be registered by the staff member or the initiating department, and will be approved and linked to a workplan. Statutory travel costs will be accrued monthly as a salary expense.

J.1.3.   The policies and procedures for non-statutory travel will be coordinated among those entities responsible for the different aspects of this travel.

J.2.   Tracking the Status of Travel

Staff members and managers will be able to track the status of their own, their staff's travel requests, and all travel to a specific location.

J.2.1.   A consolidated view of all duty travel will be available to all PASB entities.

J.2.2.   The processes for managing the various types of duty and statutory travel will be streamlined and harmonized.

J.2.3.   Automated systems supporting travel must enable individual service contractors travelling on behalf of the Bureau to have their travel plans and detailed costs included in their contract agreement, as required. Individual service contractors will be responsible for their own travel arrangements.

J.2.4.   Automated systems supporting travel must enable travel authorizations to be raised and approved by the entity manager to whom the traveler reports before travel can commence. Certification by the travel budget owner is required when this is not the same entity manager. Entity managers of country entities must be made aware of all travel to their country of responsibility before such travel commences.

J.2.5.   Staff members, temporary staff, and participants will have access to an advance or a PAHO credit card, depending on the status with the PASB, prior to travel commencing.

J.2.6.   Upon completion of travel, the staff member will submit an electronic travel report to a central repository which will identify any variances between planned and actual travel. Any additional payments or recoveries will be calculated and accounted for automatically. Entity managers (or equivalent) are responsible for ensuring that staff travel is completed as planned or amended and that travel reports are completed and recorded in a timely manner.

J.2.7.   Travel will be conducted based on pre-negotiated contracts (e.g. hotels and fares) when available.

J.2.8.   Travel will be fully integrated with the program management, procurement, financial, HR, medical services and security clearance processes recognizing that all travel is initiated from a biennial workplan.

K.   Operational Support – Meeting Management

K.1.   *Managing Meetings*

Meetings will be managed to ensure full organizational awareness of such meetings and that associated travel is coordinated.

K.1.1.   Part of the PASB's core activities is the management of technical meetings and associated travel.

K.1.2.   Technical meeting plans will be registered as soon as they are planned and will be linked to the relevant workplan.

K.1.3.   A consolidated list of registered technical meetings will be available to all PASB entities.

K.1.4.   Entities arranging meetings are responsible for coordinating all aspects of such meetings, including associated travel.

L.   Operational Support – Records Management

L.1.   Records Management

Records Management.

L.1.1.   Records will be managed according to documented policies, rules, and processes that will address the complete life cycle of documents, including retention, retrieval, long term preservation, and disposal.

L.1.2.   The overall objective of PASB's integrated records management is to: (a) manage and preserve the integrity of records and archives in an accessible, intelligible, and usable form for as long as they have continuing utility or value, consistent with the records retention schedule, and (b) make them available in the appropriate format, as required.

L.1.3.   Modernization of Pan American Sanitary Bureau Management Information System will include a Records Management component to enable records and documents to be managed, searchable and accessible throughout the PASB, and (as appropriate) by partners globally.

L.1.4.   Records management will ensure the integrity of documents and records sufficient to support the correct use of such information, oversight, accountability, and necessary audits.

L.1.5.   Records management within Pan American Sanitary Bureau Management Information System will ensure the accessibility of documents, while meeting all privacy and confidentiality requirements. Confidential records will be secured, and the degree of security will reflect the sensitivity and importance of the contents.

L.1.6.   Where records are migrated across changes in technology, the evidence preserved will remain authentic and accurate.

L.1.7.   To the maximum extent possible, records will be retained in electronic form to facilitate their management, verification, approval, and accessibility, and will be integrated with the various systems supporting administrative processes.

L.1.8.   The Bureau will develop and maintain the technical capability to capture, preserve, describe, access, and appropriately dispose of any electronic document or record.

L.1.9.   Redundant storage of documents will be minimized.

M.   Operational Support – Information Technology

M.1.   ICT as a Value Added Contributor

Manage Information and Communications Technology (ICT) in PASB as a value added contributor and global enabler of the agenda of the Organization.

M.1.1.   An Information Technology (IT) Governance function will provide guidance to ensure that information and technology services will deliver the value desired to support PASB programmatic and managerial needs in a sustainable and affordable manner. In accordance with service catalogues, agreed service level targets and sustained governance processes, stakeholders will have a clear understanding of: (a) what to expect from the information technology and services entity at the regional, subregional and country levels, (b) how costs are distributed and financed, and (c) what initiatives the information technology and services entity supports.

M.1.2.   Business units will be assisted by the information technology and services entity to fulfill their mission through innovative and cost effective application of ICT. Implementation of ICT services and products will be business driven in response to organizational needs and priorities established by business owners.

M.2.   Cost Effectiveness of ICT Services

Increase the cost effectiveness by which PASB ICT services are delivered

M.2.1.   The ICT infrastructure, application architecture, ICT management processes, and ICT shared services will be simplified and consolidated where it is technically, managerially and economically wise. The information technology and services entity will build a culture of agility and remain an effective and responsive provider whose active involvement is sought by the business.

M.2.2.   The use of self service for delivering ICT services will be promoted and increased where appropriate.

M.2.3.   Business processes will continue to be automated through the introduction of systems which reduce the need for human intervention, decrease transaction costs, increase speed or ensure consistency of execution.

M.2.4. The information technology and services entity will take advantage of low cost computing to reduce the costs of ICT operations, such as data center consolidation and operations in more economical locations, while meeting agreed levels of service.

M.3. *Continuity and Integrity of ICT Services*

M.3.1. The information technology and services entity will serve as a trustworthy custodian of PAHO information assets hosted by PASB by ensuring the confidentiality, integrity and availability of PAHO information, consistent with PAHO Information Security Policy.

M.3.2. PASB holders of agreements with outside agencies will be responsible for ensuring that systems not hosted by PASB meet the contractual conditions.

M.3.3. The information technology and services entity will establish an appropriate level of business continuity of IT service provisioning in line with the business' expectations, tolerance to risks, and the need for affordability.

N. Oversight and Accountability

N.1. *Information Security*

Information Security.

N.1.1. Information is an asset that has value to the Organization and must be suitably protected.

N.1.2. Information security must be integrated with the overall PASB business strategy.

N.1.3. The goal of information security is to ensure the confidentiality (accessible by only authorized users), integrity (not modifiable unintentionally or without authorization), and availability (accessible when required) of information.

N.1.4. The continuity of information systems and IT infrastructure supporting critical services must be ensured in the event of a disruption to the business of the Organization.

N.1.5.   A key component of information security is user and business owner awareness of the PAHO Electronic Information Security Policy, Procedures and Guidelines.

N.1.6.   The PASB will proactively secure the Organization's networks, systems, applications, and information assets, through risk management processes.

N.1.7.   Changes to systems and information will be auditable.

N.1.8.   User authorities in PASB information systems will ensure separation of duties.

N.1.9.   Business owners of information systems will have the authority to decide who has access to what information.

N.2.   Audit

N.2.1.   Accounting and operational information will be fully available to auditors to facilitate the oversight and auditing of the accounting functions.

N.2.2.   The system will enable identification and follow-up of audit trails for transactions and other information.

N.2.3.   A renewed focus on management and accountability will accompany the shift from pre-approval of transactions to after-the-fact review.

N.3   Independent Evaluation

N.3.1.   The Organization will provide the type of information required for appropriate independent evaluation.

N.3.2.   Evaluation must be independent from program implementation.

N.3.3.   Evaluation must be free of conflict of interest.

N.3.4.   Methodology of evaluation must be transparent.

O.   Glossary

American Region Planning and Evaluation System (AMPES)

The Pan American Health Organization (PAHO) uses AMPES *(American Region Planning and Evaluation System)* for planning, programming, monitoring, and evaluating its technical cooperation in health. AMPES feeds the implementation and monitoring and evaluation processes, creating a close link between policies and strategies established by PAHO governing bodies and the Secretariat work plan that identifies the necessary resources for budgeting.

Bad Debt

A bad debt is an amount owed to the organization for which there is a zero probability of collection. The bad debt represents the portion of receivables that can no longer be collected.

Biennial Workplan (BWP)

The BWP is the operational planning instrument of the PAHO. The BWP is the two-year detailed plan of work of an Entity. The expected results of a BWP are the OSERs. The entity manager is accountable for the achievement of the entity's OSERs. To implement the BWP, the entity manager creates AMPES projects. These projects implement the program through semester workplans.

Bureau

Bureau refers to the Pan American Sanitary Bureau (PASB).

Corporate Management System (CMS)

CHS is now known as the Pan American Sanitary Bureau Information Management System (PMIS). Please see PMIS for a complete definition.

Core Function

The PAHO Strategic Plan defines six core functions for the work of the Organization: (a) leaderships and partnerships, (b) research agenda and knowledge management, (c) Norms and standards, (d) ethical and evidence based policy, (e) technical cooperation, change and capacity, and (f) health monitoring and assessment.

Electronic Workflow

> An electronic workflow is a set of processes to guide a one or more users through a specific larger process. Workflows typically incorporate different sub-processes based on different conditions. When a document is involved, there is only one copy of the document (in electronic form, stored centrally), and when multiple approvals are required, each approver receives the document in the appropriate order. Electronic workflows typically streamline administrative processes and improve data integrity.

Enabling Function

> The Enabling Functions are the activities conducted by the PASB to provide essential support for all the Bureau's responsibilities under Strategic Objectives 1-14 to deliver their targeted outputs. The PASB enabling functions are those located in Strategic Objectives 15 and 16, such as planning, budget, coordination of resources, mobilization of resources, procurement, human resources management, finance management, etc.

Entity

> Entity is a generic term that designates a PASB managerial, programmatic and executing unit responsible for developing and implementing a Biennial Workplan and its associated budget.

Global Management System

> The Global Management System (GSM) is the system with which WHO manages and integrates core and enabling functions. The GSM is an automated information management system, based on Oracle E-Business Suite. The foundation of this system is a single integrated and shared database, with harmonized business processes between all levels of WHO in the areas of Human Resources, Payroll, Budget, Finance, Procurement, Travel and Program Management. A key objective of the Global Management System is to eliminate financial time-lags and information silos by enabling countries, regions and headquarters to collaborate in a single database.

Governing Bodies

> The Governing Bodies consist of the Pan American Sanitary Conference and the Directing Council (representing all Member States), the Executive Committee, and the Subcommittee on Program, Budget and Administration (SPBA).

Interoperability

Interoperability refers to the ability of diverse systems to work together, and usually is described using three components: syntactic, semantic, and technical. *Syntactic interoperability* in software refers to (a) the ability to exchange data, (b) the ability to read and write data using the same file formats, and (c) conformance to common standards, including interface standards, e.g. SQL. *Semantic interoperability* refers to (a) synergistic relationships and interactions among systems, (b) the ability to combine and/or reuse elements from one system in other systems, (c) the ability of information sent from one system to be easily understood in another system. *Technical interoperability* refers to the use of common operating system and communications platforms. One of the challenges of interoperability is that it can confuse ownership of systems and data.

Management

The activity used to accomplish organizational goals through the application of functions such as planning, organizing, directing, controlling, and monitoring performance.

Management System

In the generic sense, Management System refers to the leadership and control within an organization, comprised of people interacting with other people and systems that, together, set the goals and objectives, outline the strategies and tactics, and develop the plans, schedules and necessary controls to effectively run an organization. Management System also frequently is used to describe the information systems supporting management.

Management Information System

Management Information System is used to describe the automated information system supporting management.

Office-specific Result (OSER)

An OSER is a medium term outcome that a PASB Entity is committed to achieve, as stated in its Biennial Workplan. OSERs are outcomes expected from the products and services (outputs) delivered by an Entity, usually working together with a Member State.

Operational Support (in the context of PASB)

> Operational Support collectively describes the activities related to managing and directing enabling functions of the Organization which are administrative in nature. These functions include program planning and procurement, human resources management, finance management, evaluation and general services management.

Organization-wide Expected Result (OWER)

> An OWER is the global medium-term outcome that the WHO is committed to achieve as stated in its Medium-Term Strategic Plan. It is a desired outcome of the work of the WHO, in terms of change or achievement over a medium-term period.

Pan American Sanitary Bureau Management Information System (PMIS)

> Formerly the Corporate Management System (CMS), the Pan American Sanitary Bureau Information Management System (PMIS) will be the automated information system that will support the various core and enabling functions of the Organization. The system will include program planning and management, Budget, Finance, Human Resources, Payroll, Procurement, and Evaluation.

Project Coordinator (AMPES)

> An AMPES Project Coordinator is a person assigned to an AMPES Project. This person is responsible for the achievement of all the products and services of the assigned project. This coordinator has the authority to allocate resources and spend the budget associated with the assigned project.

Program Management

> Program Management refers to a process which provides support to the programmatic activities of the Organization, and which includes planning, budget, coordination and mobilization of resources, external relations and management of partnerships, and monitoring and assessment.

Purchases

> Purchases collectively describe the goods and services acquired by the Organization to support the achievement of its goals.

Records Management

Records Management is the discipline and organizational function of managing records to meet operational business needs, accountability requirements and community expectations, and is concerned with (a) managing the records continuum, from the design of a recordkeeping system to the end of the record's existence, (b) capturing complete, accurate, reliable and useable documentation of organizational activity to meet legal, evidential and accountability requirements, (c) managing records as an asset and information resource, and (d) promoting efficiency and economy for the management of records through sound recordkeeping practices. The definition of Records Management requires a distinction between records and non-records.

Records can be thought of as information that holds operational, legal, fiscal, vital or historical value. Records include material that (a) is created or received by PAHO in connection with its mandate or the transaction of its business, (b) is preserved or is appropriate for preservation by PAHO as evidence of the organization's functions, policies, decisions, procedures, operations, or other activities, or (c) is retained because of the information value of such records. Records may consist of books, papers, maps, photographs, machine readable material, or other documentary material, regardless of physical form or characteristics. A record may contain one or more documents and/or items of a supporting nature. For example, an obligation record would include the legal obligating document and its supporting material.

Information with no operational, legal, fiscal, or historical value, are not records. Non-records include private or non-official material or information that is preserved only for convenience of reference, such as duplicates and copies of existing information and documentation, routing slips and personal papers. Retaining non-records beyond their use is a liability to any organization and should be disposed of as soon as they are no longer of use or value.

Region-wide Expected Result (RER)

An RER is the regional medium-term outcome that the Pan American Health Organization is committed to achieve as stated in its Strategic Plan. It is a desired outcome of the work of the PAHO, in terms of change or achievement, over a medium-term period. RER's lead to the achievement of the PAHO Strategic Objectives. At the same time, the RERs contribute to achieving the OSERs that are stated in the WHO Medium-term Strategic Plan.

Regional Governance

Refers to the process established to ensure that PAHO's regional policies, processes and business rules are developed and managed to reflect requirements at all levels, coordinating with WHO where appropriate.

Self Service

Self service refers to the ability of an individual user of the system to enter select information directly into a system usually pertaining to that person. Examples include such things as personal details (such as address and other contact details), duty related travel information, and others. The primary benefits of self service are to improve the quality and timeliness of information.

Silo

A silo is a management information system that cannot exchange information with other related systems within its own organization. Silos make timely coordination and communication among internal offices and external partners difficult to achieve. Silo also describes a lack of communication and common goals between departments in an organization. Eliminating silos at a systems level will assist in addressing the problem at the organizational level.

Strategic Objective

Strategic Objectives are the long-term expected results of the PAHO/WHO strategic plan. PAHO/WHO as a whole (Member States and the Secretariat) are committed to the achievement of the Strategic Objectives.

P.   Acronyms

AMPES	American Region Planning and Evaluation System
BWP	Biennial Work Plan
CCS	Country Cooperation Strategy
CLT	National support staff hired under local conditions of employment
CMS	Corporate Management System
EXM	Executive Management
GPW	WHO General Program of Work
GSM	WHO's Global Management System
HQ	PAHO Headquarters in Washington, D.C.
HR	Human Resources
HRM	Human Resources Management
ICSC	International Civil Service Commission
ICT	Information and Communications Technology
IPSAS	International Public Sector Accounting Standards
IT	Information Technology
ITS	Information Technology Services
MTSP	WHO Mid-term Strategic Plan
OSER	Office Specific Expected Results
PAHO	Pan American Health Organization
PASB	Pan American Sanitary Bureau
PB	Program and Budget
PMA	Performance Monitoring and Assessment
PMIS	Pan American Sanitary Bureau Management Information System
PSC	Program Support Costs
PWR	PAHO/WHO Representative
PX	Fund code representing funds received from WHO
RBM	Results Based Management
RER	Regional Expected Results
RF	Revolving Fund for Vaccine Procurement
SCS	Subregional Country Strategy
SF	Strategic Fund for Public Health Supplies
SO	Strategic Objective
SP	Strategic Plan
SQL	Structured Query Language
SSA	Special Services Agreement
UN	United Nations
VHL	Virtual Health Library
WHO	World Health Organization

Crosswalk of PASB and WHO Management Information Systems Guiding Principles

Introduction

1.   In charting a course for modernizing the Pan American Sanitary Bureau Management Information System (PMIS), the PMIS Committee prepared a set of Guiding Principles (Annex A). These principles were presented to the Fourth Session of the Subcommittee on Program, Budget, and Administration (SPBA) of the Executive Committee in March 2010.

2.   During the session, the SPBA noted the similarities between the PASB and WHO Guiding Principles. Because PASB based its Guiding Principles on the previously published Guiding Principles of WHO, these similarities were expected. In the interest of clarity, the SPBA requested the Bureau to define more explicitly the differences between the two sets of principles. As a result, the Bureau produced the crosswalk presented in this Annex.

3.   Subsequently, this Annex has been jointly reviewed by PASB and WHO, with comments and observations from WHO annotated in a new column, "Impact on ERP Design – WHO Comments", which is column G.

4.   As can be seen in the following table, the crosswalk of PASB and WHO Guiding Principles is organized by functional area. An entry appears in this table only when there is a difference between the two sets of principles. For each entry, the table columns depict the following: (a) the area of the gap; (b) the Functional Area represented; (c) the PASB Guiding Principle referenced; (d) the WHO Guiding Principle referenced; (e) the description of the difference; (f) the interpretation of the business impact, if any, and (g) the comments from WHO in response to the differences and impact on ERP.

5.   The comprehensiveness of the crosswalk is intended to satisfy the request of the SPBA to define more clearly the differences between the two sets of principles. Because many of the differences are minor, this crosswalk should not be used to gauge the magnitude of the differences between PASB and WHO. Nonetheless, there are some important differences, as illustrated by the following:

- B.1.1   Support for the mission of PAHO (in addition to the mission of WHO)
- B.1.20   Ability to differ from WHO in rules, policies and procedures, where appropriate
- B.1.21   The goal of using the native capabilities of software whenever possible, in lieu of modifying and adding to the software
- B.3.9   Language needs, including languages in the Americas region not planned for GSM
- G.1.1   Provide procurement technical cooperation and services to Member States

6.   The most notorious result of this exercise reveals that the scope of the PASB Guiding Principles is broader than those produced by WHO. PASB has produced principles related to Inventory, Knowledge Management, Records Management, Information Security, Audit, and Independent Evaluation, which WHO did not. This reflects the fact that PASB's modernization efforts have taken stock of other ERP experiences and has adopted larger goals which are needed to ensure that value for investment are maximized.

PASB AND WHO GUIDING PRINCIPLES GAP ANALYSIS

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Strengthen Management	ALL	B.1.1: All components and activities related to the modernization of PASB Management Information System will support the mission of the Organization.	N/A	Unique to PASB's Guiding Principles	Maintaining PAHO's governance	**NONE:** General Principle which does not directly impact design of ERP
Strengthen Management	ALL	B.1.2: PASB Management Information System will ensure that the corporate manage-ment needs of it's programmatic and administrative users in regional, subregional and country entities are adequately supported.	N/A	Unique to PASB's Guiding Principles	AMRO/PAHO is the only of WHO regions that have a subregional level	**NONE:** General Principle which does not directly impact design of ERP
Strengthen Management	ALL	B.1.13: Staff will be able to access PASB Management Information System according to their personal roles and responsibilities, irrespective of where staff are located at any given time.	A.1.13: Confidential information, particularly in relation to staff personnel data, will be protected from unauthorized access.	System access and security configuration interpretation	Increased system security and data integrity	**NONE:** Same principle as WHO. No change to ERP. Secure access is controlled through user access approvals
Strengthen Management	ALL	B.1.15: PASB will establish a regional governance process to ensure that regional policies, processes and business rules are developed and managed to reflect requirements at all levels, coordinating with WHO where appropriate.	A.1.14: A global governance process will be implemented to ensure that global policies, processes and business rules are developed and managed to reflect requirements of all levels of the Organization.	Regional vs. Global	Related to PAHO's governance	**POSSIBLE:** If PAHO regional committees were to change business processes there could be need to amend ERP.
Strengthen Management	ALL	B.1.19: PASB Management Information System will respond to the requirements of the Global Management System (GSM) of WHO.	N/A	Unique to PASB's Guiding Principles. The planning, programming and evaluation system of PAHO was modified to respond to WHO GSM. Actually, PASB is already providing this information to WHO	PASB will continue to provide WHO with the necessary information, as requested by the GSM	**YES:** Mainly applies to ERP if PAHO do not use GSM.
Strengthen Management	ALL	B.1.20: PASB Management Information System will permit differences from WHO in rules, policies and procedures, where appropriate.	N/A	Unique to PASB's Guiding Principles. PAHO's Governing Bodies give mandates to the Director and the Pan American Sanitary Bureau (PASB)	Related to PAHO's governance	**YES:** If PAHO regional committees would like differences in processes then result would have impact on ERP.

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Strengthen Manage-ment	ALL	B.1.21: 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.	N/A	Unique to PASB's Guiding Principles	Native capabilities, or a "Vanilla" Enterprise Resource Planning implementa-tion, would benefit PASB, particularly when future upgrades are needed.	**YES:** Mainly applies to ERP if PAHO do not use GSM.
Strengthen Manage-ment	ALL	B.1.22: Interoperability will be a major goal in the modernization of the PMIS.	N/A	Unique to PASB's Guiding Principles	A single shared database and single source data entry will allow for maximum interopera-bility.	**NONE:** Same principle as in practice with WHO. No change to ERP.
Streamline Adminis-trative Processes	ALL	B.2.1: Decentralization of administrative decision making will be encouraged so services are closer to those receiving the service.	N/A	Unique to PASB's Guiding Principles	Greater decentralizati on in PASB is a key differentiation with WHO.	**NONE:** Same principle as in practice with WHO. WHO has already decentralized decision making to project managers to a greater extent.
Streamline Adminis-trative Processes	ALL	B.2.2: A service delivery model will be implemented that is cost effective and relevant to the needs of the Bureau.	A.2.1: A Service Delivery Model will be implemented that is cost efficient and relevant to the needs of the Organization. This model may include global and local shared service centers, with appropriate governance and funding mechanisms.	PASB has not yet adopted a decision about a shared service center. WHO has adopted a global service center in Kuala Lumpur	A Shared Service center will centralize transaction processing. In-house processing and administering of transactions is currently the norm at PASB.	**POSSIBLE:** If PAHO would like to have a separate processing center than changes would be needed in ERP.

PASB AND WHO GUIDING PRINCIPLES GAP ANALYSIS *(cont.)*

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Operate as a Multilingual Organization	ALL	B.3.9: User interfaces will be designed with the language needs of staff in mind, with English and Spanish as a priority, followed by Portuguese and French.	A.3.8: User interfaces will be designed with the language needs of staff in mind.	PAHO requirements specifically state English and Spanish as a priority, followed by Portuguese and French	Official languages are different between PAHO and WHO	**YES:** GSM currently only configured in English. Need to amend ERP.
Agreed Work of the Organization	ALL	C.2.1: The PAHO Strategic Plan and its operational plans (BWPs) are informed by the Health Agenda for the Americas, Country and Subregional Cooperation Strategies, country, subregional and regional priorities, the WHO MTSP and the Global Health Agenda of the WHO GPW, decisions of the PAHO Governing Bodies, and legal obligations of the Bureau.	N/A	Demonstrates PAHO's unique needs	Related with PAHO's governance	**NONE:** Other entities under GSM umbrella such as UNAIDS and UNITAID also have different structures which can be accomodated without any system changes.
BWPs	ALL	C.3.3: BWPs embody 100% of the work and the resources of the entity. BWPs are planned and approved based on the delivery of results. When it is necessary to revise or change OSERs, BWPs will be revised and submitted for approval by Executive Management (EXM). When it is necessary to revise or change RERs, the PAHO Strategic Plan will be revised and submitted for approval by PAHO´s Governing Bodies.	B.3.3: Work plans embody 100% of the work and the resources of the entity and are planned and approved based on the delivery of results . When it necessary to revise or change OWER, RER or HQ-ER, and related OSER, workplans are revised accordingly, and will be submitted for approval.	Minor differences. PAHO's operational planning is aligned with WHO	Minimal impact	**NONE:** Other entities under GSM umbrella such as UNAIDS and UNITAID also have different structures which can be accomodated without any system changes.
Collaborative Planning	ALL	C.4.1: Many programs cut across both organizational and technical boundaries. One of the goals of the PASB is to improve and facilitate the collaborative nature of planning, implementation and monitoring.	B.4.1: Many programmes cut across both organizational and technical boundaries. Strategic and operational plans, including at headquarters and regional level, are informed by Country Cooperation Strategies, country priorities, regional priorities, governing bodies decisions, legal obligation of the organization etc. Improving and facilitating the collaborative nature of planning, implementation and monitoring is one of the goals of WHO.	Minor differences. PAHO has also Subregional Cooperation Strategies	Improve Collaboration	**NONE:** Same principle as WHO. No change to ERP.

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Collaborative Planning	ALL	C.4.5: Work directly supporting an entity, which is planned and implemented by other entities of the different levels of the Organization, will be included in the relevant BWPs only after formal consultation and approval of the affected entity manager.	B.4.5: Multi-country work or work supporting directly a country planned and implemented by the regional office or headquarters, will be included in the relevant RO or HQ workplan after formal consultation with the WR or LO. This applies also to activities initiated by the regional office or headquarters which will take place in a country ("implementation site"). If the WR or country office has a role to play in implementing the work, that part which is under the WR's direct authority, including its budget, will be planned and managed in the country office plan.	Minor differences	Minimal impact	**NONE:** Same principle as WHO. No change to ERP.
Collaborative Planning	ALL	C.4.6: The work of one entity that directly supports the work of another entity must be included in the BWP of both entities, one as a "contributor" and the other as the "owner" of the activity, respectively. However, the corresponding resources (human or financial) should be reflected only in the BWP of the entity incurring the cost. If more than one entity incurs a cost then each entity's BWP should reflect only the budget for its portion of the cost.	N/A	Not found in WHO's guiding principles	Strengthen collaborative work among PASB entities	**NONE:** This may not have been in WHO principles but is in fact in place with GSM. There is a lot of work between UNAIDS, UNITAID and WHO which is in line with this principle.
Usage of Financial Resources	ALL	C.5.4: Voluntary Contributions	B.5.4: Funds	Greater specificity in the use of Funds vs. Voluntary Contributions Reflects different stages of IPSAS implementation.	Related with PAHO's governance	**NONE:** No system changes would be needed for tracking by fund or VC. Also both interpretations of IPSAS 23 could be accomodated.
Financing the Organization	FRM	D.1.7: Reimbursable Expenditures, amounts due to PAHO from third parties, should be treated as an account receivable pending receipt of funds.	C.1.4: Reimbursable Expenditure, amounts due to WHO from third parties (e.g. travel paid by CDC for WHO participation in conference), should be treated as an asset pending receipt of funds. **S**uch charges should not be charged against projects as expenditure.	WHO Guiding Principles indicates such charges should not be charged against projects as expenditure.		**NONE:** GSM allows both tracking by asset and by expenditure. If policy for PAHO was different no system changes would be necessary.

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
			(Pending IPSAS Review)			
Financing the Organization	FRM	D.1.15: Certified financial reports to donors will be prepared in accordance with the terms of the agreement, usually on a cash basis. However, the ability to report to donors on the accrual basis of income and expenditure should also be an option.	Certified financial reports to donors will be prepared based on the accrual concept of income and expenditure. However, ability to report by cash balances (receipts and disbursements) for certain donors (e.g. USAID) is an essential requirement.			**NONE:** WHO is currently leading ineteragency working group on this topic. Both cash and accrual are possible within GSM.
Long Term Financial Stability	FRM	D.2.2: Multicurrency financial transactions will be allowed. These transactions will be translated into the functional currency (USD). Assets and liabilities will be re-valued periodically.	C.2.2: Multi Currency Reporting - The organization will allow multicurrency transactions. These transactions will be translated into the functional currency (USD). Reporting is required in the donor currency. For example, EC contributions need to be tracked in EURO for both income and expenditure	PASB indicates Assets and liabilities will be re-valued periodically; WHO dictates the reporting is required in Donor currency.		**NONE:** WHO does revalue assets and liabilites at each month end. Principles seem to be same.
Long Term Financial Stability	FRM	N/A	C.2.5: Financial Controls will be enhanced to better manage donor funds and to ensure the total amount of an award or of an appropriation section/allocation is never exceeded	This language is not included in PASB's Guiding Principles		**NONE**
Long Term Financial Stability	FRM	D.2.8: Investment income will be allocated to those funds or projects designated by the Director based on month-end cash balances.	C.2.7: Interest will only be allocated to awards with specific provisions requiring interest on the basis of the month end cash balance of the award. These requirements must be in line with the WHO rules and regulations governing granting of interest to an award. All interest not allocated to specific awards will be maintained in corporate pool. Funds such as SHI, TPA, UNAIDS, IARC and Foundations should all still received interest based on cash balances. The corporate interest pool will be used to fund and currency fluctuations in AR and AP. Funds will not be charged negative interest.	WHO appears to be more stringent		**POSSIBLE:** Interest apportionment is for WHO and is currently managed offline. For those allocations done by UNITAID and UNAIDS different basis of allocation is allowed. If PAHO would like automatic programme some enhancement would be necessary.

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Efficient Operations	FRM	D.3.5: Staff costs, including salaries, post adjustments, education grants, statutory travel, staff health insurance, and pension will be charged to the appropriate project based on the full accrued costs associated with the respective posts. The salaries and benefits will reflect those prescribed by the United Nation's Common System of Salaries and Allowances, as well as the costs established by PASB's analysis of accrual requirements.	C.3.5: To improve planning, large variations in staff cost expenditure need to be reduced. Salaries and post adjustment should be charged to the project based on actual expenditures. However, expenses for non payroll costs such as Education Grant and Statutory Travel will be charged to projects at a fixed percentage (i.e. 1.5% of salaries) for all eligible staff. These charges will fund accruals which will be used to settle actual claims.			**NONE:** Entitlement deductions can be set by major office. For example if PAHO would like to deduct more or less for an accrual this could be done through configuration not customization.
Efficient Operations	FRM	D.3.8: Where costs can be clearly identified (e.g. supplies and printing), a direct charge should be made to the entity benefiting from the goods or services provided.	C.3.9: Where costs can be clearly identified (e.g. supplies, printing, etc), a direct charge should be made to the unit benefiting from the good or service provided. These costs will be recovered through an internal cross charging mechanism.	PASB is not committing to a charge back system		**NONE:** Both direct or indirect charging is possible with standard solution.
Efficient Operations	FRM	D.3.9: All contracts or purchases of goods/services (including non-staff contracts) will be settled according to the expenditure recognition policy (delivery principle).	C.3.10: All contracts or purchases of goods/services (including non staff contracts) will be initiated by a purchase order and settled according to expenditure policy (delivery principle). Such third parties will be considered as suppliers and will follow standard procedures for invoice approval and payments.	Minor differences		**NONE:** Same principle.
Efficient Operations	FRM	D.3.10: Reimbursement for expenses, including non-salary staff entitlements, will be processed using a single, harmonized process.	C.3.10: Non salary staff entitlements will be treated similar to claims made against the organization for expense reimbursement and will follow standard procedures for invoice approval and payments.	Minor differences		**NONE:** Same principle.
Efficient Operations	FRM	N/A	C.4.4: Currency fluctuations will be managed centrally to reduce risk. WHO will centrally hedge all non USD staff costs where appropriate. Accounts receivable and accounts payable will be hedged centrally to reduce foreign exchange exposure. Purchase orders in non USD currencies will not be hedged.	PASB does not commit to hedging currency.	Related with PAHO's governance	**NONE:** Hedging is a business decision not an ERP issue.

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Staffing the Organization	HRM	E.1.2: The HR Plan consists of positions and assignments, which will be defined by functions. There will be a clear outline of the role, nature, duration, funding, duties, and competencies required and relevant information linking the HR Plan to the results chain and workplans.	D.1.2: The HR Plan will consist of positions, which will be defined by the purpose of a function with a clear outline of the role, nature, duration, funding, duties, and competencies required and relevant information linking the HR Plan to the results chain and workplans.	PASB distinguishes between positions and assignments		**NONE:** Same principle as WHO. Person could be "assigned" to a position for temporary period as per PAHO requirements.
Staffing the Organization	HRM	E.3.1: Contract types will be aligned with the nature and duration of the function.	D.3.2: Contract types will be closely aligned with the approved resources foreseen in the HR Plan based on the nature and duration of the function.	Minor differences		**NONE:** Same principle as WHO.
Staffing the Organization	HRM	E.3.3: Exceptions to staff rules, regulations or policies in establishing conditions of service or contractual agreements will be captured and monitored.	N/A	Unique to PASB's Guiding Principles		**POSSIBLE:** ERP enforces standard processing. Reports may need to be developed to monitor exceptions. Manual intervention through professional forms is possible- no issues to date.
Staffing the Organization	HRM	E.4.2: Initiation and modification of HR actions will be decentralized to managers and personnel to the greatest extent possible while being consistent with efficient HR processing, the overall accountability framework, delegation of authority, and the authorized HR Plan.	D.4.2: Initiation and modification of HR actions will be decentralized to managers and staff to the greatest extent possible whilst being consistent with efficient HR processing, the overall accountability framework and delegation of authority.	PASB is more comprehensive with the addition of and the authorized HR Plan.		**NONE:** Same principle as WHO.
Staffing the Organization	HRM	E.4.6: HRM will monitor HR actions initiated by managers and personnel to ensure that they are in line with the Staff Rules, Regulations, policies and procedures.	D.4.6: HR services will certify HR actions initiated by managers and staff and ensure that the actions related to the conditions of service and the personnel practices are in line with the staff rules and regulations and procedures.	WHO: Certify implies approval process		**NONE:** Same principle as WHO.

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Staffing the Organization	HRM	E.5.1: Data necessary to implement entitlements, benefits and/or contract management and to identify the complete PASB workforce will be captured and maintained, as appropriate, for all persons working in a PASB workplace, regardless of duration or type of appointment.	N/A	PASB seeks to manage and pay all employees (regardless of contract type) from the CMS system	Contractors may continue to be paid from Accounts Payable.	**NONE:** Same principle as WHO. All staff should be paid through payroll and contractors through AP. Information is tracked by system.
Staffing the Organization	HRM	E.5.2: Emergency contact information for all personnel will be captured, maintained and available as needed.	N/A	Unique to PASB's Guiding Principles		**NONE:** Same principle as WHO and available in GSM.
Staffing the Organization	HRM	E.5.3: Personnel data will be treated in a confidential and respectful manner; access will be provided as authorized.	N/A	Unique to PASB's Guiding Principles		**NONE:** Same principle as WHO.
Staffing the Organization	HRM	E.5.4: Information will be captured and maintained to support reporting requirements from Governing Bodies, WHO and UN.	N/A	Unique to PASB's Guiding Principles		**NONE:** Same principle as WHO.
Operational Support	PAY	F.1.2: The scope of persons to be paid by the payroll system will extend to the maximum number of types of persons, as appropriate.	N/A	PASB seeks to manage and pay all employees (regardless of contract type) from the CMS system	Contractors may continue to be paid from Accounts Payable.	**YES:** If staff would like to be paid from AP this would require some changes.
Operational Support	PAY	F.1.4: Payroll will automatically process entitlements in multiple currencies, and will effect payment in multiple currencies, in accordance with the UN and ICSC policy.	E.1.3: Payroll will automatically process entitlements in multiple currencies, and effect payment in multiple currencies, in accordance with the UN and ICSC policy, ensuring that Staff Members do not gain or lose due to exchange rates variances particularly on retroactive adjustments.	Minor differences		**NONE:** Same principle.
Operational Support	PAY	F.1.6: Payroll will process scheduled payments to staff (i.e. monthly) on the agreed day, and will process payment of all ad hoc payments in a timely manner.	E.1.5: Payroll will process scheduled payment to staff (i.e. Monthly Staff) on the agreed day, and will process payment of all ad hoc payments in a timely manner, as per Service Level Agreements			**NONE:** Same principle.

CD50/7 (Eng.)
Annex B

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Operational Support	PAY	F.2.2: Data will be validated as close to its source as possible, to improve data quality.	E.2.2: Improve the quality of data, and reduce the administration of "error corrections", by validation of data as close to its source as possible			**NONE:** Same principle.
Operational Support	PAY	N/A	E.3.1: Provide a responsive and quality service to Staff Members.			**NONE:** Same principle.
Operational Support	PAY	N/A	E.3.2: Provide a responsive and quality service to WHO & External Organizations			**NONE:** Same principle.
Operational Support	PRO	G.1: Provide procurement technical cooperation and services to Member States so they can improve the health of their populations and maintain their populations' health at optimal levels.	N/A	Unique to PASB's Guiding Principles		**NONE:** WHO also has reimburseable procurement to Member States which are managed through GSM.
Operational Support	PRO	G.1.1: As an international, inter-governmental organization, PAHO provides services for the procurement of goods and services for its Member States.	N/A	Unique to PASB's Guiding Principles	Related with PAHO's governance	**NONE:** WHO also has reimburseable procurement to Member States which are managed through GSM.
Operational Support	PRO	G.1.2: Procurement services will include the following mechanisms: Reimbursable Procurement Mechanism, the Revolving Fund for Vaccine Procurement (RF), and the Regional Revolving Fund for Strategic Public Health Supplies (SF).	N/A	Unique to PASB's Guiding Principles	Related with PAHO's governance	**NONE:** WHO also has reimburseable procurement to Member States which are managed through GSM.

PASB AND WHO GUIDING PRINCIPLES GAP ANALYSIS *cont.)*

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Operational Support	Inventory	H.1.1: Business rules and processes relating to inventory will be developed in coordination with the General Services, Finance, and Procurement entities, as each of these entities has a significant role with respect to inventory.	N/A	Unique to PASB's Guiding Principles		**POSSIBLE:** PAHO principle also applies to WHO. As part of move to IPSAS WHO is required to improve inventory management. Originnal guiding principle out of date.
Operational Support	Inventory	H.1.2: Inventory of physical assets will be used (1) for physical control, as necessary and as specified by the General Services entity, (2) to track the values of assets to respond to the financial needs of the Organization, including depreciation, and (3) to assist in planning for the replacement cycle of some assets.	N/A	Unique to PASB's Guiding Principles		**POSSIBLE:** PAHO principle also applies to WHO. As part of move to IPSAS WHO is required to improve inventory management. Originnal guiding principle out of date.
Operational Support	Inventory	H.1.3: Corporate Management System must accommodate the different rules associated with each purpose and use of the inventory function.	N/A	Unique to PASB's Guiding Principles		**POSSIBLE:** PAHO principle also applies to WHO. As part of move to IPSAS WHO is required to improve inventory management. Originnal guiding principle out of date.
Operational Support	KMC	I.1: Knowledge Management and Communications.	N/A	Operational support for records management is not included in WHO's Guiding Principles	PASB has included KMC in its guiding principles	**POSSIBLE:** Original WHO guiding principle out of date. Needs review.
Operational Support	KMC	I.1.1: Health information will be treated as a regional public good that is essential for economic and social development and for a just, equitable and healthy society. PASB will use an open access philosophy with respect to all electronic content produced by the Organization.	N/A	Unique to PASB's Guiding Principles	PASB has included KMC in its guiding principles	**POSSIBLE:** Not clear on how this affects ERP design.

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Operational Support	KMC	I.1.2: Information that stimulates decision-makers in the Region will be given priority, and the transfer of appropriate technology into health care practice, which is suitable for adaptation and use by various levels of health workers in Member States, will be promoted.	N/A	Unique to PASB's Guiding Principles	PASB has included KMC in its guiding principles	**POSSIBLE:** Not clear on how this affects ERP design. Information sharing is normally not directly from ERP but though other tools (websites, reports, documents).
Operational Support	KMC	I.1.3: Knowledge and information intended to meet the needs of Member States will be shared and communicated in order to address priority problems and issues affecting their populations and supporting the goal of Health for All. This information will often deal with topics or target audiences both covered and not covered by commercial channels. The information will aim to provide information to the neediest, especially in developing countries.	N/A	Unique to PASB's Guiding Principles	PASB has included KMC in its guiding principles	**POSSIBLE:** Not clear on how this affects ERP design. Information sharing is normally not directly from ERP but though other tools (websites, reports, documents).
Operational Support	KMC	I.1.4: Print, audiovisual and electronic media will be used for publishing and disseminating information. The Web will become a key tool for advancing knowledge sharing and continually adopting new methods and technologies.	N/A	Unique to PASB's Guiding Principles	PASB has included KMC in its guiding principles	**POSSIBLE:** Not clear on how this affects ERP design. Information sharing is normally not directly from ERP but though other tools (websites, reports, documents).
Operational Support	KMC	I.1.5. The decentralized production and operation of information sources, connected through networks with direct and universal access, and free from geographical or scheduling restrictions, will be promoted. This is the case with PAHO's Virtual Health Library.	N/A	Unique to PASB's Guiding Principles	PASB has included KMC in its guiding principles	**POSSIBLE:** Not clear on how this affects ERP design. Information sharing is normally not directly from ERP but though other tools (websites, reports, documents).

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
	KMC	I.1.6: Information will be disseminated in PAHO's official languages, especially Spanish and English, and encourage translation by others into additional languages, when needed.	N/A	Unique to PASB's Guiding Principles	PASB has included KMC in its guiding principles	**POSSIBLE:** Not clear on how this affects ERP design. Information sharing is normally not directly from ERP but though other tools (websites, reports, documents).
	KMC	I.1.7: Linkages and interoperability between information sources involved in public health within and outside the Bureau will be expanded and promoted, where appropriate.	N/A	Unique to PASB's Guiding Principles	PASB has included KMC in its guiding principles	**POSSIBLE:** Not clear on how this affects ERP design. Information sharing is normally not directly from ERP but though other tools (websites, reports, documents).
	KMC	I.1.8: Decentralized production of scientific information products will be promoted when those products are proven to adhere to the highest quality standards and are also in accordance with cost-effective procedures.	N/A	Unique to PASB's Guiding Principles	PASB has included KMC in its guiding principles	**POSSIBLE:** Not clear on how this affects ERP design. Information sharing is normally not directly from ERP but though other tools (websites, reports, documents).
	KMC	I.1.9: PASB technical staff will cooperate with countries in strengthening their knowledge management and communication policies, and capacity in support of Health for All.	N/A	Unique to PASB's Guiding Principles	PASB has included KMC in its guiding principles	**POSSIBLE:** Not clear on how this affects ERP design. Information sharing is normally not directly from ERP but though other tools (websites, reports, documents).
	KMC	I.1.10: Proposals for new technical publications will be screened by a publications committee at the PASB, in order to ensure that publications are in line with PAHO's policies, reflect its priorities, meet the needs of Member States, have been properly peer-reviewed, and contain information that is likely to be of long-term relevance.	N/A	Unique to PASB's Guiding Principles	PASB has included KMC in its guiding principles	**POSSIBLE:** Not clear on how this affects ERP design. Information sharing is normally not directly from ERP but though other tools (websites, reports, documents).

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
	KMC	I.1.11: Manuscripts accepted for publication will undergo a rigorous editing process that adheres to industry standards to ensure that the final publication is of the highest quality, both technically and editorially.	N/A	Unique to PASB's Guiding Principles	PASB has included KMC in its guiding principles	**POSSIBLE:** Not clear on how this affects ERP design. Information sharing is normally not directly from ERP but though other tools (websites, reports, documents).
	KMC	I.1.12: Content published by PASB will be classified and indexed using a PAHO official taxonomy.	N/A	Unique to PASB's Guiding Principles	PASB has included KMC in its guiding principles	**POSSIBLE:** Not clear on how this affects ERP design. Information sharing is normally not directly from ERP but though other tools (websites, reports, documents).
Operational Support	Travel Management	J.1.2. The Human Resources Management (HRM) entity establishes and administers the policies and procedures related to statutory travel, as a defined staff benefit. Statutory travel will be registered by the staff member or the initiating department, and will be approved and linked to a workplan. Statutory travel costs will be accrued monthly as a salary expense.	G.1.2: All staff travel plans will be registered by the staff member (normally 3 months in advance or as soon as planned), approved, linked to a workplan and, where appropriate, linked to a registered meeting. A consolidated view of all duty travel will be available to all WHO offices.	WHO does not indicate which entity administers policies and procedures related to statutory travel		**NONE:** HR does administer benefits. No system issues for this principle.
	Travel Management	J.1.3: The policies and procedures for non-statutory travel will be coordinated among those entities responsible for the different aspects of this travel.	N/A	No corresponding entry is found in the WHO Guiding Principles.		**NONE:** WHO also coordinates these policies and procedures.
	Travel Management	J.2.3: Automated systems supporting travel must enable individual service contractors travelling on behalf of the Bureau to have their travel plans and detailed costs included in their contract agreement, as required. Individual service contractors will be responsible for their own travel arrangements.	G.2.3: Individual service contractors travelling to perform special services for WHO will have their travel plan and detailed costs included in the contract agreement as part of the service procurement and will be responsible for their own travel arrangements. WHO is not a travel agent.	PASB's Guiding principles state "Automated Systems supporting travel must enable…as required." WHO's Guiding Principles state "As part of the Procurement Process".		**NONE:** GSM allows for automatic process for Non Staff travel through travel module

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Operational Support	Records Management	L.1: Records Management	N/A	Unique to PASB's Guiding Principles	PASB has included Records Management in its guiding principles	**NONE:** WHO also has records management polcies.
Operational Support	Records Management	L.1.1: Records will be managed according to documented policies, rules, and processes that will address the complete life cycle of documents, including retention, retrieval, long term preservation, and disposal.	N/A	Unique to PASB's Guiding Principles	PASB has included Records Management in its guiding principles	**NONE:** WHO also has records management polcies.
Operational Support	Records Management	L.1.2: The overall objective of PAHO's integrated records management is to (a) manage and preserve the integrity of records and archives in an accessible, intelligible, and usable form for as long as they have continuing utility or value, consistent with the records retention schedule, and (b) make them available in the appropriate format, as required.	N/A	Unique to PASB's Guiding Principles	PASB has included Records Management in its guiding principles	**NONE:** WHO also has records management polcies.
Operational Support	Records Management	L.1.3: Modernization of Corporate Management System will include a Records Management component to enable records and documents to be managed, searchable and accessible throughout the PASB, and (as appropriate) by partners globally.	N/A	Unique to PASB's Guiding Principles	PASB has included Records Management in its guiding principles	**POSSIBLE:** WHO records management in ERP is only for internal use (i.e. staff) and not for partners. Need further information from PAHO about what info in ERP to shared externally.
Operational Support	Records Management	L.1.4: Records management will ensure the integrity of documents and records sufficient to support the correct use of such information, oversight, accountability, and necessary audits.	N/A	Unique to PASB's Guiding Principles	PASB has included Records Management in its guiding principles	**NONE:** WHO also has records management policies.

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Operational Support	Records Management	L.1.5: Records management within Corporate Management System will ensure the accessibility of documents, while meeting all privacy and confidentiality requirements. Confidential records will be secured, and the degree of security will reflect the sensitivity and importance of the contents.	N/A	Unique to PASB's Guiding Principles	PASB has included Records Management in its guiding principles	**NONE:** WHO also has records management policies. Security through access is assured.
Operational Support	Records Management	L.1.6: Where records are migrated across changes in technology, the evidence preserved will remain authentic and accurate.	N/A	Unique to PASB's Guiding Principles	PASB has included Records Management in its guiding principles	**NONE:** WHO also has records management policies.
Operational Support	Records Management	L.1.7: To the maximum extent possible, records will be retained in electronic form to facilitate their management, verification, approval, and accessibility, and will be integrated with the various systems supporting administrative processes.	N/A	Unique to PASB's Guiding Principles	PASB has included Records Management in its guiding principles	**NONE:** WHO also has records management policies.
Operational Support	Records Management	L.1.8: The Bureau will develop and maintain the technical capability to capture, preserve, describe, access, and appropriately dispose of any electronic document or record.	N/A	Unique to PASB's Guiding Principles	PASB has included Records Management in its guiding principles	**NONE:** WHO also has records management polcies.
Operational Support	Records Management	L.1.9: Redundant storage of documents will be minimized.	N/A	Unique to PASB's Guiding Principles	PASB has included Records Management in its guiding principles	**NONE:** WHO also has records management policies.

PASB AND WHO GUIDING PRINCIPLES GAP ANALYSIS *cont.)*

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Operational Support	Information Technology	M.1.1: An Information Technology (IT) Governance function will provide guidance to ensure that information and technology services will deliver the value desired to support PAHO programmatic and managerial needs in a sustainable and affordable manner. In accordance with service catalogues, agreed service level targets and sustained governance processes, stakeholders will have a clear understanding of (a) what to expect from the information technology and services entity at the regional, subregional and country levels, (b) how costs are distributed and financed, and (c) what initiatives the information technology and services entity supports.	N/A	Unique to PASB's Guiding Principles		**NONE:** This guiding principle is more about how IT department reports back to users rather than how ERP is managed.
Operational Support	Information Technology	M.1.2: Business units will be assisted by the information technology and services entity to fulfill their mission through innovative and cost effective application of ICT. Implementation of ICT services and products will be business driven in response to organizational needs and priorities established by business owners.	H.1.2: IT will build a culture of agility and remain an effective and responsive provider whose active involvement is sought by the business. IT will help business units to fulfill their mission through innovative and cost effective application of ICT. Rigid or dated service offerings will be eliminated.	Minor differences		**NONE:** Additional text does not impact on ERP design.

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Operational Support	Information Technology	M.2.1: The ICT infrastructure, application architecture, ICT management processes, and ICT shared services will be simplified and consolidated where it is technically, managerially and economically wise. The information technology and services entity will build a culture of agility and remain an effective and responsive provider whose active involvement is sought by the business.	.2.1: The ICT Infrastructure, application architecture and ICT management processes will be simplified and consolidated where it is technically, managerially and economically wise.	Text in bold not included in WHO's Guiding Principles		**NONE:** Additional text does not impact on ERP design.
Operational Support	Information Technology	N/A	H.2.2: A move to shared services will be pursued enabling the IT organization to deliver its specialist services to a wider community of users through a reduced number of service centers thereby reducing overall cost and/or improving the utilization of specialists.	PASB has not yet adopted a decision about a shared service center. WHO has adopted a global service center in Kuala Lumpur		**POSSIBLE:** Move to shared services is implied with current business model for GSM. Any deviation would have [an effect] on system design
Operational Support	Information Technology	M.3.2: PASB holders of agreements with outside agencies will be responsible for ensuring that systems not hosted by PASB meet the contractual conditions.	N/A	Unique to PASB's Guiding Principles		**NONE:** Not an ERP system issue.
Oversight and Accountabili-ty	Information Security	N.1 Information Security	N/A	Unique to PASB's Guiding Principles	PASB has included oversight and accountability in its guiding principles	**NONE:** Same principle in place with WHO.
Oversight and Accountabili-ty	Information Security	N.1.1: Information is an asset that has value to the Organization and must be suitably protected.	N/A	Unique to PASB's Guiding Principles	PASB has included oversight and accountability in its guiding principles	**NONE:** Same principle in place with WHO.
Oversight and Accountabili-ty	Information Security	N.1.2: Information security must be integrated with the overall PASB business strategy.	N/A	Unique to PASB's Guiding Principles	PASB has included oversight and accountability in its guiding principles	**NONE:** Same principle in place with WHO.

A) Area of Gap	B) Functional Area	C) PASB Reference	D) WHO Reference	E) GAP Description	F) Business Impact	G) Impact on ERP Design – WHO Comments
Oversight and Accountabili-ty	Audit	N.2.1: Accounting and operational information will be fully available to auditors to facilitate the oversight and auditing of the accounting functions.	N/A	Unique to PASB's Guiding Principles	PASB has included oversight and accountability in its guiding principles	**NONE:** Same principle in place with WHO. Audit information is readily available. WHO has already received clean opinion in GSM from External Auditors.
Oversight and Accountabili-ty	Audit	N.2.2: The system will enable identification and follow-up of audit trails for transactions and other information.	N/A	Unique to PASB's Guiding Principles	PASB has included oversight and accountability in its guiding principles	**NONE:** Same principle in place with WHO. Audit trail very much part of GSM structure.
Oversight and Accountabili-ty	Audit	N.2.3: A renewed focus on management and accountability will accompany the shift from pre-approval of transactions to after-the-fact review.	N/A	Unique to PASB's Guiding Principles	PASB has included oversight and accountability in its guiding principles	**NONE:** Same principle in place with WHO. Post facto checking is in place for contracts, travel and other expenditures.
Oversight and Accountabili-ty	Independent Evaluation	N.3.1: The Organization will provide the type of information required for appropriate independent evaluation.	N/A	Unique to PASB's Guiding Principles	PASB has included oversight and accountability in its guiding principles	**NONE:** Not a system issue.
Oversight and Accountabili-ty	Independent Evaluation	N.3.2: Evaluation must be independent from program implementation.	N/A	Unique to PASB's Guiding Principles	PASB has included oversight and accountability in its guiding principles	**NONE:** Not a system issue.
Oversight and Accountabili-ty	Independent Evaluation	N.3.3: Evaluation must be free of conflict of interest.	N/A	Unique to PASB's Guiding Principles	PASB has included oversight and accountability in its guiding principles	**NONE:** Not a system issue.
Oversight and Accountabili-ty	Independent Evaluation	N.3.4: Methodology of evaluation must be transparent.	N/A	Unique to PASB's Guiding Principles	PASB has included oversight and accountability in its guiding principles	**NONE:** Not a system issue.

**Pan American
Health
Organization**

Regional Office of the
World Health Organization

Summary of Business Process Analysis

Supporting the Modernization of the

PASB Management Information System (PMIS)

PMIS Committee

May 2010

Table of Contents

1.   Introduction

1.1.   Executive Summary

This document is an overview of the key lessons learned from the analysis of Pan American Sanitary Bureau (PASB) Business Processes, as conducted by the PASB Management Information System (PMIS) Committee between August 2009 and March 2010. The detailed business process model documents are found in 20 individual documents, which total approximately 700 pages. A list of these documents, which are available on the PMIS SharePoint site, appears in Appendix A.

The Business Process analysis was conducted to:
- Define the future process state of systems, while
  - Mirroring the PMIS Guiding Principles;
  - Defining opportunities for improvement;
  - Identifying deficiencies in processes; and
  - Remaining, as much as possible, within the constraints of an Enterprise Resource Planning (ERP) system such as WHO's Global Management System (GSM) as much as possible.
- Provide a foundation for future work.
- Identify latent issues dealing with process ownership and policy.
- Provide a means to:
  - Compare the functionality available under each option with the demands of the future state, and specifically facilitate a comparison of the differences between PASB's system needs and WHO's GSM.
  - Compare the level of effort and cost required to enhance each option to meet the demands of the future state.
- Begin the process of change management by engaging a cross section of the Bureau in a dialogue to determine what the future state should be and to prepare for the organizational changes that will be necessary to get there.

For the first time, PASB has documented its business processes in sufficient detail to enable a methodological approach to continue improving them in the future. At this level of detail, this work will be useful to any of the modernization options that are presented to the PAHO Governing Bodies. A key goal of this effort has been to define a future process state that will give the Organization significant advantages and that will go beyond marginal improvements in program and administrative efficiency. However, pursuit of this goal is tempered by having to stay within the constraints of an ERP system to the maximum extent possible, and to minimize the need for PASB-specific extensions or enhancements.

The Business Process analysis is one of several efforts (including development of Guiding Principles and cost analyses) that will provide the information necessary to make an informed recommendation on the modernization of the PMIS.

The Committee has learned that the process improvements identified by this analysis are feasible and can lead to substantial benefits, regardless of which option for modernization is selected. Many of these benefits come from non-transactional improvements, such as the introduction of robust Document Management and Customer Relationship Management (CRM) systems. However, the non-transactional improvements are optimized when overlaid on (and integrated with) an integrated transactional system, such as an ERP. This is discussed further in Section 1.3

Many of the process related issues that were identified during this analysis, both at Headquarters and at Country Offices, can be solved by moving toward a single instance, integrated system. In addition, this analysis also has identified a number of policy issues that should be resolved prior to an implementation project.

1.2. Background

The PASB Management Information System will facilitate the delivery of technical cooperation in health by the Organization. In 2008, the Directing Council authorized, through Resolution CD48.R1, the use of funds from the Holding Account to conduct analyses, study options, and formulate a recommendation for modernizing the PASB Corporate Management System (further described in CD48/22 and CE144/25). Subsequent to this, PASB changed the name to the PASB Management Information System (PMIS) Committee to limit confusion between the more general term, "management" and the more information technology-related term "Management Information System" that is the focus of the Committee's work.

WHO's implementation of GSM has been the catalyst that encouraged PASB to reexamine its systems and determine if a modernization effort is appropriate and how such modernization should be accomplished. PASB is committed to respond to WHO's GSM requirements; in fact, one option is participation in WHO's GSM.

The systems that comprise the PASB Management Information System (PMIS) represent the information systems necessary to enable and facilitate the work of the Organization, and are broadly organized into five major categories—all supporting Results Based Management—as shown in the diagram, below.

The principal information systems that currently support the above model are: Program Planning and Management (AMPES), Finance (FAMIS), Human Resources (PAS), Payroll (PAY), Country Office Management Information System (OMIS), Procurement (ADPICS), and Staff Health Insurance (SHI). Various smaller and peripheral systems are also included in this analysis.

1.3.   Scope

PMIS covers a broad area which encompasses more than just the functional areas served by WHO's GSM system (known as the "GSM footprint"). The GSM footprint covers most of the major system areas identified in the previous paragraph. The PASB modernization effort also addresses the needs of other systems and areas, including: Staff Health Insurance, Legal, Internal Oversight and Evaluation, and Resource Mobilization. To achieve the full desired benefits of modernization, and to understand the full costs, this analysis has examined these other systems and areas.

Determining the affordability of and prioritizing the investments for modernization requires a clear understanding of the scope of needs, benefits, and costs. For example, Staff Health Insurance (excluded from the GSM footprint) is an area currently served by an aging system and one that operates on a platform that is projected to become increasingly expensive. As such, it is part of the analysis done by the PMIS Committee.

One aspect of the scope that is important to bear in mind is the difference between transactional and non-transactional work and the supporting systems. The GSM footprint focuses on transactional activities, such as the awarding of funds, the processing of Human Resources (HR), or procurement actions. These transactions typically follow very linear processes and are well encapsulated.

Non-transactional work is best exemplified by the activities of the Legal and Resource Mobilization Entities. Non-transactional processes may be more loosely defined and the sequence of activities cannot always be predetermined. Nonetheless, this work is highly important to the Organization and the support needed is different than the support needed by the transactional offices. Non-transactional activities benefit significantly from being able to easily manage and share documents and manage relationships. These needs can be met through integration of Document Management and Customer Relationship Management (CRM) software support. While addressing the non-transactional needs is an important part of modernization and a key element in obtaining the business benefits of an investment in modernization, PASB considers this effort to be a second stage of modernization. It applies to any of the modernization options, but because the focus now is on the first stage, non-transactional needs are not analyzed in detail in the discussion of options in Annex D.

1.4.   Business Benefits

The process of developing PMIS Guiding Principles and analyzing its business processes has identified a number of important benefits to the Organization that will be enabled or facilitated by modernizing the PASB Management Information System.

- *Accountability for Results*—Modernization will facilitate improvements to PAHO's focus on results and accountability. Modernization will enable the establishment of a structured approach to track, measure, and monitor outcomes and to connect program impact to specific activities, fostering accountability and improving mission performance. Human resources planning and costs will be linked to results. Work will be planned and managed within a results based framework, and authority. Decision-making will be decentralized to occur closer to where technical cooperation is delivered, consistent with the accountability framework and delegations of authority.

- *Improved Collaboration*—A significant focus will be on interoperability, in order to facilitate programs that span organizational and technical boundaries. Information will be widely available and will flow smoothly

across business processes. Access to information systems and services will not be geographically dependent, enabling staff to better collaborate with one another regardless of their physical location at any given time. Travel and meetings are key enablers of the Organization's collaborative work, and information on these also will be tied to the workplan and freely available within PASB to facilitate coordination.

- *Availability of Information and Transparency*—Significant improvements in the visibility and availability of information across the Organization will further support improvements in collaboration and decision making. This will include access to integrated financial and budgetary information, and progress being made on technical programs and projects. Using an open access philosophy, priority will be given to sharing and communicating knowledge and information to meet the needs of decision makers and the Member States involved in public health within and outside the Bureau, as appropriate. Increased use and sharing of data, information, and knowledge will enhance PAHO's position as a trusted source of health information. As much as possible, records will be retained in electronic form within a Document Management system to facilitate their secure storage and accessibility.

- *Adaptability*—As PAHO's mission evolves, new systems must be able to adapt quickly and at reasonable cost, including the ability to accommodate an increased demand for services. Workflows will be overlaid on top of an integrated system that allows for flexibility without regard to organizational boundaries, thus better supporting PASB's horizontal organizational model. Greater responsiveness to changing needs of stakeholders will enable more rapid, efficient, and effective delivery of health-related technical cooperation.

- *Coordination with WHO*—Modernization of the PMIS will be done in coordination with WHO, ensuring that appropriate alignment and sharing of information with WHO is achieved. PASB will provide the necessary information to WHO GSM to have a complete global view of health. At the same time, differences between PASB and WHO´s secretariat business processes must be permitted when needed.

- *Management of Human Resources*—Improvements in the ability to recruit, train, equip, and retain a wide range of personnel to deliver current and future PAHO operations will further support the Organization's most important resource, which is its human capital.

- *Support for Emergency Operations*—During disasters and other emergency situations in the countries (and at Headquarters), special administrative processes will be provided to facilitate the delivery of needed services. This will also be supported by increases in decentralization, where appropriate. Another goal of modernization is to improve the fault tolerance of PASB's systems to ensure there is no disruption to the work of the Organization, whether during disasters or due to software deficiencies or failures.

- *Efficiency Gains*—Continued improvements in efficiency and quality of information will be accomplished through: additional automation of processes and services, increased self-service functionality, the placement of the control of some services closer to the recipient of those services, the introduction of electronic signature, improved workflows, elimination of manual intervention points, reductions in cycle times, and improvements to system usability. To further enhance efficiency, single-source data entry and single-source reference data will be employed to remove duplication of effort, improve data quality and timeliness, and facilitate maintenance of information.

Achieving these benefits has been a central goal in defining the future state of PASB Management Information System, while staying within the constraints of an ERP system.

1.5. Future Considerations

Policy—It is likely that changes in policy will be required to ease mapping to "standard" ERP functionality and to improve efficiencies for the Organization.

- There are some policy issues, already identified, that will need to be resolved.
- As the Organization evolves, future changes in policy will be required, and it is likely that some of these will have an impact on system processes.
- The ability to make timely decisions on policy changes will be critical to the success of a modernization project.

Mapping of Roles—A more integrated system will offer an opportunity to centralize skills for some process areas. Changes of this nature will affect the organizational structure. The PMIS business model has used roles which will need to be mapped to specific organizational elements. Adapting to these roles will require a strong change management effort.

Built-In Adaptability in the Solution Design—The ability to adapt to changing organizational requirements is a fundamental need of any future system. This premise has been built into the current business process definitions.

Change Management—The benefits from an investment in modernization are critically dependent upon the ability of that organization to adapt to using new tools to conduct work in often fundamentally different ways. Change management is the process by which the staff are enabled to make this transition, and external stakeholders are prepared for the new ways of doing business.

Governance Mechanism—It will be necessary to establish a transparent and inclusive governance mechanism to direct the life of the modernization project and ongoing operations. This is especially important due to the integrated nature of a modernized system. The governance process:

- Must be broadly inclusive, involving entities at all levels of the Organization: country, subregional and regional.
- Will be responsible for guiding changes, allocating and prioritizing resources, and coordinating with other internal and external stakeholders.
- Must establish and oversee escalation procedures for problems and issues identified during a modernization project and later ongoing operations.

1.6.   Methodology

The methodology used by the PMIS Committee capitalizes on the lessons learned by PASB and WHO. Teams were convened that represent a broad cross section of the Organization, including subregional and country perspectives. Over 60 people participated in detailed discussions during this analysis of business processes.

The Committee began by examining WHO's documentation and extrapolated this information to meet PASB requirements. The Committee identified over 40 Level 2 processes and over 200 Level 3 processes (a list of these processes appears in Appendix B). Analysis of Level 3 processes focused on ensuring that a comprehensive view of functionality was gathered. This analysis was carefully documented to ensure that it could be extended to greater levels of detail in support of any future modernization, regardless of the option chosen.

2.   Business Process Summaries

In this chapter, the Committee describes any level business processes and lessons learned, organized by each major functional area.

2.1.   Assumptions

The following assumptions were made to guide the business process analysis.

- There will be one integrated system for recording, storing, and reporting program, financial, and human resources information throughout the Region.
- Entity Managers will approve implementation actions and commit funds in the system within their delegation of authority.
- Actual personnel costs will be allocated to Results as part of the end-to-end payroll processing cycle.
- Procurement activities will be supported by requisitions and purchase orders approved by the relevant Entity Manager. Receipts of goods or services will be recorded in the system against approved purchase orders, and a supplier invoice will be matched with a receipt for an approved purchase order before payment is authorized (i.e. three-way matching).
- Reporting for programmatic and financial purposes will be possible for the current accounting period, as well as for past periods.
- An obligating document will be able to have more than one source of funding.
- There will be one set of reference tables.
- Information in the system will be date sensitive, where necessary.
- Workflows will include digital signatures or authorization, when appropriate.
- The modernized system will be deployable and usable over the Internet.

2.2.   Program Management and Planning

Program management and planning focuses on all levels of the Organization. It addresses the monitoring the implementation of endorsed plans, and assessment of achievements against planned targets. Management and Planning, in this context, includes:

- Strategic Planning: Strategic Plan, biennial Program and Budget, Country Cooperation Strategy and Subregional Cooperation Strategy.
- Operational Planning: Biennial Workplans including integration with Human Resource Planning; and Budget.

PMIS must accommodate the links and alignment with WHO, including expenditure-related data for the AMRO portion of the budget (both regular budget and voluntary contributions).

Effective monitoring will require reports that integrate both programmatic and financial information, drawing on elements of the Strategic Plan, the Program and Budget, the Country Cooperation Strategies, the Subregional Cooperation Strategies and the Biennial Workplans. PASB must be able to measure progress and identify risks and deficiencies which affect the Organization's ability to achieve planned results. Additionally, PMIS should provide measures of economic and operating performance of the Organization, helping to pinpoint problems, improve processes, and achieve organizational goals.

2.3.   Funding the Organization

Funding the Organization reviews resource mobilization activities, the management of relationships with external partners, and the management of awards and funding to enable the implementation of Biennial Workplans (BWPs). It also covers the management of the financial aspects concerning assessed contributions and voluntary contributions, and the management of investments, cash receipts and receivables.

2.4.   Staffing the Organization (Human Resources)

Staffing the Organization focuses on providing a single tool to execute Human Resources Management (HRM) functions in a manner that consistently delivers the highest quality of service and information to Governing Bodies, Member States, and PASB personnel. Additionally, PASB promotes an environment that actively encourages staff to learn, grow, and expand their abilities. It aims to promote an organizational culture in which staff are accountable, and encouraged to continue improving their capacities and skills to achieve high levels of performance.

All PASB personnel will be part of a single source employee record. The HR and payroll processes will be closely integrated. Recruitment will be more closely integrated with the HR system to avoid duplicate data entry. There will be extensive self-service functionality to have more timely updates of Personnel information.

2.5.   Operational Support: Payroll and Entitlements

The Operational Support: Payroll and Entitlements processes encompass the various activities required to calculate and remit Payroll and other entitlement payments to PASB personnel, including health insurance claims, termination, payments, and education grants. In the future, payroll and HR functions will be integrated much more tightly.

2.6.   Operational Support: Procurement

A comprehensive review of PASB's procurement function conducted in 2009−2010 by Pricewaterhouse Coopers (PwC) concluded the following points. This analysis took place at the same time as the PMIS Committee's work.

- The processing and approvals of price estimates, purchase authorizations, and purchase orders should be further automated and supported by workflows.
- Systematic consolidation of purchases across offices is required.
- Categorization of vendors and spending will support analysis for ongoing vendor relationship management.
- e-Sourcing and/or e-Tendering, demand forecasting and procurement planning must be supported.
- The number of formal templates and processes will be expanded, with the ability to amend documents by workflows that facilitate approval of changes by all necessary parties.
- Accommodation of a standard contract file, supported by a Document Management system integrated with the procurement processes, will be provided.
- Improvements will be made to logistical process elements to support the increase in the strategic procurement activities undertaken for Member States.

2.7.   Operational Support: Finance

The Operational Support: Finance process area focuses on the many back-office activities undertaken by the Finance and Administration units and teams at both the Regional and Country Office level. The activities include:

- The management of vendor records and payments;
- The recording and management of fixed assets and inventory;
- The management of cash reserves;

- The management of the financial aspects of the Strategic Procurement Funds; and
- The management of financial accounting, closure activities, and financial reporting.

Requirements for International Public Sector Accounting Standards (IPSAS) have been incorporated into the process design for all finance-related processes, and other relevant process areas, including specific procedures for the closure activities of the annual financial accounts.

2.8. Operational Support: Other

Letters of Agreement

Letters of Agreement (LOAs) will benefit from an integrated Document Management system that includes workflows for initiating and monitoring LOAs. Additionally, the LOA processes must support:

- Integration with a database of eligible beneficiaries, where eligibility is based on regular assessments,
- Definition and use of standard templates for LOA sections in accordance with the formats outlined in the PAHO Manual, and
- LOA-specific views of data to facilitate reporting.

Courses, Seminars and Meetings

In Country Offices, courses and seminars are key mechanisms for technical cooperation. Offices must better control the content of documents relating to seminars and meetings. There also is a need to streamline the management of travel associated with courses and seminars, particularly for non-staff participants.

Travel

A single process for travel of staff and non-staff should be implemented throughout the Organization, with all travel requests being supported by a Document Management system and approval workflow. Integration with a Document Management system will permit storage of travel itineraries for UN security management, and will provide documentation support for travel claims and trip reports.

Reference Data

An integrated system will provide a single source of reference data that would always be current, requiring only one upload or entry of the data. Examples include currency code changes, currency exchange rates, daily subsistence allowance or per diem rates, salary scales and post-adjustment multipliers.

Business Intelligence Reporting

PASB currently uses an in-house developed web portal program known as Specialized Online Search (SOS) to provide a real-time business intelligence query tool across several applications. This tool is run from outside the applications that contain the information and thus provides an important and well-used degree of integration. A future system must provide similar capability.

2.9.   Staff Health Insurance

The Staff Health Insurance system (SHI) is now 25 years old. After finance, payroll, and procurement processes undergo modernization, SHI will be PASB's sole remaining mainframe application and possibly the only mainframe application still running at the UN International Computing Center (UN ICC) where it currently is hosted. This likely will increase its operational costs and drives a need to consider possible options for replacement. Two such options are:

- Rewrite the SHI system and retain it as an in-house developed and maintained system.
- Outsource the processing of SHI functions to a commercial third party.

Additional analysis is required to determine the feasibility, cost, and impact of both options.   SHI is not included in the GSM footprint.

2.10.   Other Components: Non-Transactional

Improvements to the following non-transactional business processes are an important part of modernization and a key element in obtaining the business benefits of an investment in modernization. However, these improvements will be undertaken in a later stage after modernizing the transactional processes represented by the GSM footprint.

Legal

The principal benefit of modernization for the Legal Entity centers on workflow routing of documents and knowledge management. Often, documents prepared by Legal involve many entities, both within and outside PASB. Workflows will be helpful in identifying where document review processes stand and will assist in triggering timely action.

Emergency Preparedness and Disaster Relief

During emergencies, the Emergency Preparedness and Disaster Relief Entity often operates within existing administrative processes consistent with the special rules that exist for emergencies. However, there remain significant opportunities to streamline these processes, such as to enable administrative processes which support an emergency to operate in parallel rather than in a serial manner.

Country Focus Support

The Country Focus Support (CFS) Entity provides broad consultation and advisory services to Country Offices across many aspects of their operations. The consultation and advisory services include: coordination of the Country and Subregional Cooperation Strategies, assistance in the management of human resources, advice during operational planning, and support during a PWR transition process.

Additionally, CFS provides significant input to the operational planning peer review process and the semester monitoring and assessment process.

Much of the support for these business processes has been documented as part of the PMIS business process model. It should be noted that a Document Management system that supports workflow routing of documents will benefit the compilation of Country Cooperation Strategy and Subregional Cooperation Strategy documents.

Resource Mobilization

Document Management and Customer Relationship Management (CRM) systems can help track contacts involved with various partnerships, the relationships among partners, the different agreements and memoranda of understanding, and partner assessment forms. This work will enable improved sharing of knowledge of partner relationships among the different units within PASB. CRM may also be useful in tracking relationships concerning Collaborating Centers, fellowships, and secondments. Integration of Document Management and CRM with an integrated ERP system can facilitate the Organization's administrative processes, as well as support better intelligence gathering and reporting to external partners.

Governing Bodies

The Governing Bodies Entity prepares and organizes documents for the main Governing Body meetings. This process includes: the request for, and receipt of documents, review and revision cycles, coordination with translation and editorial services, and publishing. This office could benefit significantly from workflows integrated with a Document Management system. Improved workflows would enable Governing Bodies to better track the status of various documents and eliminate duplication of documents, leading to more efficient time management and quality of products.

Ethics

The Ethics Entity will benefit from improved workflows associated with an improved Document Management system. All efforts to improve workflows must be sensitive to the requirements for strict confidentiality of most of the activities of the Ethics Entity.

Internal Oversight and Evaluation Services

Internal oversight and evaluation of the Bureau will benefit from commercial software that includes best-practice workflows to enforce processes, as well as standard and ad hoc reporting capabilities and audit tools**.**

2.11. **The Role of a Document Management System**

On several occasions the analysis of the business processes revealed the need for—and the potential significant benefit from—an integrated Document Management system, particularly for non-transactional activities. Many PASB offices will benefit from an ability to draft, route for review, incorporate

feedback, route for approval, and publish documents through the use of a Document Management system that incorporates workflows that span organizational boundaries and that can tie into transactional systems where necessary.

2.12.   The Role of a Customer Relationship Management System

Improved Customer Relationship Management (CRM) software will support coordinations across a diverse range of stakeholders and their interactions. In PASB, such efforts cover managing the information surrounding our relationships with *all* external stakeholders. A single source of business intelligence on external stakeholder relationships would be beneficial to multiple entities across PASB, enabling a greater sharing of information to support external partner identification and relationship building, and to focus mobilization of resources.

3.   Differences Between PASB and WHO

There are several fundamental business model differences between PASB and WHO, and it is important to ensure that any future system will be able to address these PAHO-specific needs. These differences include:

General

- PAHO is a separate legal entity.
- PAHO has its own Governing Bodies.
- PAHO needs to support its four official languages (Spanish, English, Portuguese, and French).
- PAHO has special relationships with the Pan American Health Education Foundation (PAHEF) and the Expanded Textbook and Instructional Materials Program (PALTEX).

Mandates and Governing Body Decisions

- PAHO's Governing Bodies issue mandates to the Director and the Pan American Sanitary Bureau. PASB also responds to WHO's Governing Bodies mandates, because PAHO is the Regional Office for the Americas of the World Health Organization. The Region of the Americas has its own political health agenda (Health Agenda for the Americas) that is aligned with the WHO Global Health Agenda, and a Strategic Plan 2008−2012 that is aligned with the WHO mid-term Strategic Plan 2008−2013. Both respond to the specific health needs of the population of the region of the Americas.

- PAHO's Governing Bodies sometimes issue mandates to PASB that differ from those of the World Health Assembly, which may have a repercussion in the management information system. Some examples are:
  o PAHO Member States decided to adopt 16 Strategic Objectives, instead of WHO's 13.
  o PAHO Member States chose to only partially adopt UN Human Resources Reform, particularly with respect to continuing appointments.
  o PAHO fully adopted IPSAS (the International Public Sector Accounting Standards) effective on 1 January 2010 on an implementation schedule different from WHO.
  o PAHO has not adopted the National Execution modality and uses a large volume of Letters of Agreement as instruments of Technical Cooperation.

Delegation of Authority

- The delegations of authority from WHO to AMRO are different from other Regional Offices; for example, Contract Review Committee decisions for this Region do not go to WHO HQ (Geneva).
- PASB has a substantially greater decentralization of authority to Country Offices.

Policy Impact

- PASB strives to follow WHO's Manual whenever possible, yet variances sometimes exist.
- PASB's guiding principles include specific sections for knowledge management and communication, records management, and oversight and accountability.
- The Rules and Regulations which govern travel for PASB personnel are different from those governing WHO personnel travel.
- Staff rotation and mobility plans may be different and would require detailed analysis.

Programmatic

- Core functions are classified at the Product and Service level in PAHO. PAHO introduced the classification of Products/Services by cross cutting issues such as 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.

Funding

- PAHO receives assessed contributions directly from its Member States and voluntary contributions from donors and partners directly, unlike other WHO Regional Offices. It also receives a portion of WHO-AMRO assessed contributions and voluntary contributions, like other WHO Regional Offices.

Business Processes

- PASB must support complex procedures for procurement that include: the Advances from Governments and Institutions for Procurement, the Revolving Fund for the Expanded Program on Immunization (EPI), and the Regional Revolving Fund for Strategic Public Health Supplies. This includes tracking and monitoring shipments of goods and complex shipping terms and conditions.
- PASB's Country Entities print and issue checks in local currencies and local languages.
- PASB uses different entitlement rates, including severance packages.
- Purchases are made directly by each Country Office
- Processing associated with reimbursable accounts, vaccine programs, and the strategic funds that together constitute more than half of PASB's expenditures. Hence, EPI invoicing is a PASB-specific business process that must be provided.

4.   Summary

The detailed analysis conducted by PASB of its business processes is very extensive. The analysis covers more than 20 detailed documents spanning over 700 pages of detailed notes and process model diagrams. This is the first time that the PASB business processes have been rigorously documented. This endeavor provides the means to compare options with the desired future state and to forecast the level of effort required to get to the future state for each option. The rigor of this analysis provides a firm foundation for moving forward. This annex summarizes the major results.

Side benefits of this effort include the initiation of dialogue among staff and managers about how to conduct business differently, specifically within the framework of an ERP system. This dialogue now serves as an important

foundation to further simplify these business processes, adapting them to an ERP system.

5.   Appendixes

Appendix A – List of Business Process Model Documents

Appendix B – Detailed Listing of Business Processes

Appendix C – High Level Map of Level 2 Processes

Appendix A – List of Business Process Model Documents

Business Process Documents

Business Process documents define the desired future state of the PASB Management Information System, highlight opportunities for improvement, and provide a basis for future, more detailed analyses that will be necessary prior to any implementation of modernization efforts.

Below is a list of detailed business process documents produced by the PMIS Committee. These are working documents, but copies of these are available upon request.

Business Process Model Document	Document Reference
BPM 1.1: Manage Strategic Planning	BP.085.SPLN.001_V03
BPM 1.2: Manage the Program and Budget	BP.085.PBOPLN.001_V02
BPM 1.3: Manage Operational Planning	
BPM 1.4: Manage Implementation of Workplans	BP.085.MNGEPP.001_V02
BPM 1.5: Manage Monitoring and Assessment	BP.085.ASSESS.001_V02
BPM 2.1: Manage Mobilization of Resources	BP.085.MOBRES.001_V01
BPM 2.2: Manage Awards and Funding	BP.085.AWDMGT.001_V01
BPM 2.3: Manage Assessed Contributions	BP.085.ASC-INV.001_V01
BPM 2.6: Manage Investment Portfolio	
BPM 2.5: Manage Receipts and Receivables	BP.085.MNGREC.01_V02
BPM 3.1: Manage Human Resources Planning	BP.085.HRPLAN.001_V02
BPM 3.2 through 3.9: Manage Human Resources	BP.085.HRM.301_V04
BPM 4.1: Manage Payroll	BP.085.PAY.001_V01

BPM 4.2: Manage Staff Health Insurance   BP.085.STHLTH.001_V04

BPM 5.5: Manage Letters of Agreement   BP.085.LOA.001_V02

BPM 5.6: Manage Seminars and Meetings   BP.085.SEM-TVL.001_V01

BPM 5.7: Manage Staff Travel

BPM 6.1: Manage Vendor Payables   BP.085.VEND.001_V01

BPM 6.2: Manage Fixed Assets   BP.085.FAINV.001_V02

BPM 6.3: Manage Inventory

BPM 6.4: Manage Cash Reserves   BP.085.MNGCASH.001_V02

BPM 6.5: Manage Strategic Procurement Finances BP.085.ARF.001_V01

BPM 6.6: Manage Financial Accounting   BP.085.FINMGT.001_V02

BPM 6.7: Manage Financial Closure and Reporting

BPM 6.8: Manage Reference Data   BP.085.REFDATA.001_V01

BPM 3.9: Compensation and Entitlement Management

BPM 7.1: Manage Applications Administration   BP.085.AAD.001_V01

Appendix B – Detailed Listing of Business Processes

Level		**Process Name**
1		**PROGRAM MANAGEMENT**
1.1		***Manage Strategic Planning***
	1.1.1	SP: Align Goals and Policies
	1.1.2	SP: Develop SOs and RERs
	1.1.3	SP: Endorse and Publish (Strategic Plan)
	1.1.4	SP: Monitor and Assess (Strategic Plan)
	1.1.5	SP: Review Strategic Elements for PB
	1.1.6	CCS: Prepare and Develop (Country Cooperation Strategy)
	1.1.7	CCS: Endorse and Monitor (Country Cooperation Strategy)
	1.1.8	SCS: Prepare and Develop (Subregional Cooperation Strategy)
	1.1.9	SCS: Endorse and Monitor (Subregional Cooperation Strategy)
1.2		***Manage the Program and Budget***
	1.2.1	PB: Define the Program for the Biennium
	1.2.2	PB: Endorse Iteration 1 (SPBA)
	1.2.3	PB: Endorse Iteration 2 (Executive Committee)
	1.2.4	PB: Approve Final Version (Directing Council)
	1.2.5	PB: Map to WHO GSM
	1.2.6	PB: Report on Program and Budget
1.3		***Manage Operational Planning***
	1.3.1	Issue Planning Documentation
	1.3.2	Establish Personnel Standard Costs
	1.3.3	Develop Operational Plan (BWP)
	1.3.4	Finalize Operational Plan (BWP)
	1.3.5	Review Operational Plan (BWP)
	1.3.6	Approve Operational Plan (BWP)
	1.3.7	Amend and Approve Operational Plan (BWP)
1.4		***Manage Implementation of Workplans***
	1.4.1	Finalize a Semester Workplan
	1.4.2	Implement Workplan Products and Services
	1.4.3	Monitor Workplan Products and Services
	1.4.4	Monitor Workplan Funding
1.5		***Manage Monitoring and Assessment***
	1.5.1	Implement Biennial Monitoring Tools
	1.5.2	Prepare and Conduct Semester 1 Review
	1.5.3	Prepare and Conduct Semester 2 Review
	1.5.4	Prepare and Conduct Semester 3 Review
	1.5.5	Prepare and Conduct End of Biennium Review

2   **FUNDING THE ORGANIZATION**
2.1   *Manage Mobilization of Resources*
2.1.1   Agree WHO Contribution Ceilings
2.1.2   Develop a Technical Cooperation Document
2.1.3   Record a Partner Event or Contact
2.1.4   Initiate and Formalize a Partnership Agreement
2.1.5   Review and Assess a Partnership Agreement
2.1.6   Mobilize VC Funds
2.1.7   Finalize or Amend a VC Agreement
2.1.8   Review Voluntary Contribution Usage
2.2   *Manage Awards and Funding*
2.2.1   Request Award Funding
2.2.2   Record or Update an Award
2.2.3   Carry Forward Award Balances
2.2.4   Create and Maintain Personnel Encumbrances
2.2.5   Monitor and Report on Awards
2.3   *Manage Assessed Contributions*
2.3.1   Prepare and Issue Member State Assessments
2.3.2   Administer Center Assessed Contributions
2.2.3   Report on and Monitor Assessed Contributions
2.4   *Manage Voluntary Contribution Finances*
2.4.1   VC: Establish or Amend a Grant
2.4.2   VC: PSC and Revenue Recognition
2.4.3   VC: Monitor and Report (Interim) to Donors
2.4.4   VC: Final Reporting and Closure of Grant
2.4.5   VC: Prepare Refunds and Fund Transfers
2.4.6   VC: Trust Funds Financial Reporting
2.5   *Manage Receipts and Receivables*
2.5.1   Maintain Financial Stakeholder Information
2.5.2   Record Cash Receipts (HQ)
2.5.3   Record Cash Receipts (CO)
2.5.4   Recognize Other Revenue
2.5.5   Reimbursement of VAT/Sales Tax
2.5.6   Apply Cash Receipts
2.5.7   Monitor and Adjust Receivables
2.5.8   Report on Receivables
2.6   *Manage Investment Portfolio*
2.6.1   Monitor and Direct Investment Portfolio
2.6.2   Record Investment Portfolio Revenue
2.6.3   Report on Investment Portfolio

3   STAFFING THE ORGANIZATION

3.1   Manage HR Planning
3.1.1   Issue HR Planning Documentation
3.1.2   Develop HR Plan
3.1.3   Finalize HR Plan
3.1.4   Review and Approve HR Plan
3.1.5   Conduct Periodic HR Plan Implementation Review
3.1.6   Amend and Approve HR Plan

3.2   Position Management
3.2.1   Create/Update/Abolish Position
3.2.2   Classify/Reclassify Position

3.3   Recruitment and Selection
3.3.1   Initiate Vacancy Notice
3.3.2   Announce Vacancy
3.3.3   Solicit Applications
3.3.4   Short List Applicants, Conduct Review Panel
3.3.5   Test and Interview Applicants
3.3.6   Prepare Recommendation Report
3.3.7   Approve Selection

3.4   HR Contract Management
3.4.1   Appointment/Onboarding
3.4.2   Extend/Change Appointment
3.4.3   End Appointment (Separation)
3.4.4   Interface HR Data: Payables, SHI

3.5   HR Change in Status
3.5.1   Change in Step
3.5.2   Change of Grade - promotion/demotion
3.5.3   Reassignment
3.5.4   Change in Percentage of Employment
3.5.5   Acting to a higher level position

3.6   Self Service Management
3.6.1   Change in Personal Information
3.6.2   Initiate Education Grant - Traditional and Special Ed
3.6.3   Change in Bank Details / Salary Distribution
3.6.4   Salary Advance Initiation (Pay Day, Emergency)
3.6.5   Manage Leave Requests
3.6.6   Accrued Annual Leave Carryover Request
3.6.7   Employment Verification Request
3.6.8   Integration with other PASB Entities (Ethics, Legal, Travel, etc.)

3.7   Performance Management
3.7.1   Probation Appraisal
3.7.2   Annual Appraisal
3.7.3   Other Appraisals
3.7.4   Staff Development Plan

3.8   Learning Management
3.8.1   Program to Delivery

3.9   Compensation and Entitlement Management
3.9.1   Administer Automatic Staff Earnings
3.9.2   Leave Administration
3.9.3   Maintenance of Grades and Salary Scales
3.9.4   Maintenance of Post Adjustment Multipliers

Level		**Process Name**
3.10		***HRIT Application Administration***
	3.10.1	Administer Organizations, Locations, Duty Stations
	3.10.2	Administer Payroll Foundation Tables
	3.10.3	HRIT Reporting

4		**OPERATIONAL SUPPORT: PAYROLL AND ENTITLEMENTS**
4.1		***Manage Payroll***
	4.1.1	Administer Entitlements
	4.1.2	Execute Payroll Retro Process
	4.1.3	Process Preliminary Payroll Run
	4.1.4	Execute Final Payroll Run
	4.1.5	Complete and Approve Payroll Run - Generate PMT Files
	4.1.6	Payroll Costs Transferred to General Ledger (GL)
4.2		***Manage Staff Health Insurance***
	4.2.1	Record SHI Revenue
	4.2.2	Process SHI Advances
	4.2.3	Record SHI Expenses
	4.2.4	Report for the SHI Fund
4.3		***Manage Non-Payroll Staff Entitlements***
	4.3.1	Process Terminal Entitlement Payments
	4.3.2	Process Education Grant Payments
	4.3.3	Process Other Statutory Entitlements
	4.3.4	Monitor and Recover Advances
	4.3.5	Process Employee Taxes

5		**OPERATIONAL SUPPORT: LOA, SEMINARS, TRAVEL**
5.1		***Manage Letters of Agreement***
	5.1.1	Assess Institution Eligibility
	5.1.2	Execute a Letter of Agreement
	5.1.3	Monitor a Letter of Agreement
	5.1.4	Amend a Letter of Agreement
	5.1.5	Close a Letter of Agreement
	5.1.6	Review Letters of Agreement Usage
5.2		***Manage Seminars and Meetings***
	5.2.1	Approve a Seminar or Meeting
	5.2.2	Process Participant Payments
	5.2.3	Close a Seminar or Meeting
5.3		***Manage Staff Travel***
	5.3.1	Approve a Travel Authorization
	5.3.2	Process a Travel Advance
	5.3.3	Amend or Cancel Travel
	5.3.4	Approve and Process a Travel Claim
	5.3.5	Monitor Travel Advances and Missing Claims
	5.3.6	Monitor and Report for Travel

6   <u>**OPERATIONAL SUPPORT: PROCUREMENT**</u>
  6.1   ***Manage Vendor Relationships***
  6.2   ***Manage Procurement Planning***
  6.3   ***Manage Local Procurement***
  6.4   ***Manage International Procurement***
  6.5   ***Manage Strategic Procurement***

7   <u>**OPERATIONAL SUPPORT: FINANCE**</u>
  7.1   ***Manage Vendor Payables***
      7.1.1   Maintain Vendor Information
      7.1.2   Receipt and Certify Goods or Services
      7.1.3   Register and Approve Vendor Invoices
      7.1.4   Upload Travel Agency Invoices (Central)
      7.1.5   Process Purchasing Card Transactions
      7.1.6   Register and Approve Non-Invoice Payments
      7.1.7   Process Vendor Credit Memos
      7.1.8   Prepare Vendor Payments (Central)
      7.1.9   Prepare Vendor Payments (CO)
      7.1.10   Report on Vendor Payables
  7.2   ***Manage Fixed Assets***
      7.2.1   Define Classes, Conventions and Methods
      7.2.2   Record a Fixed Asset
      7.2.3   Dispose of or Write-off a Fixed Asset
      7.2.4   Transfer or Reassign a Fixed Asset
      7.2.5   Monitor and Report on Fixed Assets
      7.2.6   Change a Fixed Asset's Value or Useful Life
      7.2.7   Recognize Fixed Asset Depreciation
      7.2.8   Conduct Fixed Asset Physical Inventory
      7.2.9   Fixed Asset Annual Reporting
  7.3   ***Manage Inventory***
      7.3.1   Record an Inventory Receipt
      7.3.2   Record an Inventory Issue
      7.3.3   Conduct Inventory Physical Stocktake
      7.3.4   Value Inventory Balances
  7.4   ***Manage Cash Reserves***
      7.4.1   Maintain PAHO Bank Accounts
      7.4.2   Process Imprest Replenishment
      7.4.3   Transfer Payment Files to Paying Agents (Central)
      7.4.4   Transfer Payment Files to Banks (CO)
      7.4.5   Reconcile CO Imprests
      7.4.6   Reconcile HQ Bank Accounts
      7.4.7   Process a Stop Payment or Recall
      7.4.8   Forecast and Report on Cash Balances
      7.4.9   Manage Petty Cash Funds (CO)
      7.4.10   Manage Petty Cash Fund (HQ)
      7.4.11   Reimburse Petty Cash Claims

Level		Process Name
7.5		***Manage Strategic Procurement Finances***
	7.5.1	SPF: Record Advance Funds
	7.5.2	SPF: PSC and Activity Invoices
	7.5.3	SPF: Report to Participating Countries
	7.5.4	SPF: Prepare Refunds and Fund Transfers
	7.5.5	SPF: Financial Reporting
7.6		***Manage Financial Accounting***
	7.6.1	Maintain Chart of Accounts
	7.6.2	Process Expenditure Transfers
	7.6.3	Process Financial Adjustments
	7.6.4	Reconcile Clearing Accounts
	7.6.5	Process and Monitor WHO IOV Transactions
	7.6.6	Reconcile IOV Balances
	7.6.7	Implement Internal Borrowing
7.7		***Manage Financial Closure and Reporting***
	7.7.1	Complete Period Opening Procedures
	7.7.2	Process Expense Accruals and Transfer Encumbrances
	7.7.3	Recognize Revenue (Grants)
	7.7.3	Apportion Interest
	7.7.5	Reconcile Sub-Ledgers
	7.7.6	Complete Closure Adjustments
	7.7.7	Close General Ledger
	7.7.8	Interface Financial Data to WHO
	7.7.9	Prepare Financial Reports
7.8		***Manage Reference Data***
	7.8.1	Maintain Currency Codes
	7.8.2	Maintain Currency Exchange Rates
	7.8.3	Maintain DSA (Per Diem) Rates

8		**OPERATIONAL SUPPORT: OTHER**
8.1		***Manage Applications Administration***
	8.1.1	Maintain Security Profiles
	8.1.2	Maintain User IDs
	8.1.3	Schedule Batch Processing
	8.1.4	Monitor Work Flows

9		**KNOWLEDGE MANAGEMENT AND COMMUNICATIONS**
	9.1	Library and Information Services
	9.2	Corporate Learning and Best Practices
	9.3	Content Management
	9.4	Knowledge Sharing
	9.5	Organization of KMC Capability
	9.6	Public Affairs

Appendix C – High Level Map of Level 2 Processes

1.1 Manage Strategic Planning

1.2 Manage the Program and Budget

1.3 Manage Operational Planning

2.3 Manage Assessed Contributions

2.4 Manage Voluntary Contribution Finances

2.5 Manage Receipts and Receivables

2.6 Manage Investment Portfolio

7.4 Manage Cash Reserves

2.1 Manage Mobilization of Resources

7.5 Manage Strategic Procurement Finances

2.2 Manage Awards and Funding

5.1 Manage Letters of Agreement

5.2 Manage Seminars and Meetings

5.3 Manage Staff Travel

6.0 Manage Procurement

7.1 Manage Vendor Payables

7.2 Manage Fixed Assets

7.3 Manage Inventory

3.1 Manage HR Planning

3.2 Position Management

3.3 – 3.8 HR Contract Management

3.9 Compensation and Entitlement Management

4.1 Manage Payroll

4.2 Manage Staff Health Insurance

4.3 Manage Non Payroll Staff Entitlements

1.4 Manage Implementation of Workplans

1.5 Manage Monitoring and Assessment

7.6 Manage Financial Accounting

7.7 Manage Financial Closure and Reporting

8.1 Manage Applications Administration

THE COUNTRY OFFICE VIEW

CMS
COMMITTEE

1.1
Manage Strategic
Planning (CCS)

1.3
Manage
Operational
Planning

2.4
Manage Voluntary
Contribution
Finances

2.5
Manage Receipts
and Receivables

7.4
Manage Cash
Reserves

1.4
Manage
Implementation of
Workplans

2.1
Manage
Mobilization of
Resources

7.1
Manage Vendor
Payables

3.1
Manage HR
Planning

1.5
Manage
Monitoring and
Assessment

2.2
Manage Awards
and Funding

5.1
Manage Letters of
Agreements

5.2
Manage Seminars
and Meetings

3.3
Manage Recruiting

5.3
Manage Staff
Travel

6.0
Manage
Procurement

7.2
Manage Fixed
Assets

3.4
HR Contract
Management

3.7
Manage
Performance
Management

7.3
Manage Inventory

4.1
Manage Payroll

4.2
Manage Staff
Health Insurance

4.3
Manage Non-
Payroll Staff
Entitlements

7.6
Manage Financial
Accounting

7.7
Manage Financial
Closure and
Reporting

7.8 Manage Reference Data

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Pan American Health Organization

Regional Office of the
World Health Organization

Options and Costs Analysis

for the Modernization of

PASB's Management Information System

(PMIS)

PMIS Committee
July 2010

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1. Executive Summary

The delivery of technical cooperation to Member States is a vital mission of PAHO. The PASB Management Information System (PMIS) plays a critical role in providing a foundation for supporting that mission. The PMIS Committee was formed to analyze various options for modernizing the PASB Management Information System. Identifying suitable options to fulfill the modernization requirements and estimating project costs are two of several components of the Committee's project scope. Additionally, the Committee conducted a detailed analysis of internal Business Processes.. This analysis now serves as a foundation for further study and optimization of the Organization's work.

This document describes several viable options for modernization and an estimated cost for each, so that PAHO may consider all factors in determining the best course for modernizing the PASB Management Information System.

1.1. Purpose

The Pan American Sanitary Bureau (PASB) Management Information System Committee was tasked with charting a course for modernizing PASB Management Information System (PMIS). To this end, the Committee identified the following options for evaluation (see Table 1).

Table 1: Summary of Options		
1	The World Health Organization (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 and UNAIDS.
	b)	GSM using the same database instance but a different operating unit and separate set of books.
	c)	GSM as a separate instance.
2	A modernized current model that represents an upgrade to existing PASB Management Information System modules.	
3	A baseline Enterprise Resource Planning (ERP) software, combined with PAHO-specific functionality.	

These options are further described in Chapter 3; other rejected options are briefly described in Chapter 5.

This document presents an analysis of the modernization options—specifically, the evaluation of the advantages and disadvantages of various non-cost factors, and cost estimates.

1.2. Scope

The major current information systems supporting PASB are:

- Program Planning and Management (AMPES)
- Finance (FAMIS)
- Human Resources (PAS)
- Payroll (PAY)
- Country Office Management Information System (OMIS)
- Procurement (ADPICS)
- Staff Health Insurance (SHI)

The future PASB Management Information System attempts to encompass the functional scope of the current systems and the functional areas served by WHO's GSM (known as the GSM footprint), with additional enhancements and functionality. The detailed cost estimates presented here reflect only the first stage of modernization, specifically replacing the GSM footprint in PASB. The second stage will include replacing the Staff Health Insurance system and expanding Document Management and Customer Relationship Management capabilities. This second stage, which would be common to all options, could cost as much as $7.5 million. Scheduling and funding for this second stage is not planned at this time.

All but one of the options in this document represent an implementation of an Enterprise Resource Planning (ERP) system. An ERP system is a set of integrated software products that serve a broad spectrum of needs across an entire organization, including most of the systems listed above. The principal benefit of an ERP system is its interoperability across all functions of an organization. WHO's GSM is an implementation of an ERP product sold by Oracle, known as the Oracle E-Business Suite. Oracle also sells another major ERP product called PeopleSoft. The other major vendor of ERP products is SAP, a German company.

1.3. Background

The PASB Management Information System (PMIS) is an important enabler of the delivery of the health programs of the Organization. In 2008, Directing Council Resolution CD48.R1 authorized the use of funds from the Holding Account to conduct analyses, study options, and formulate recommendations for modernizing the PASB Corporate Management System (CMS) (further described in CD48/22 and CE144/25). Subsequently, PASB changed the name to the PASB Management Information System (PMIS) Committee to limit confusion between the more general term, "Management" and the more information technology related term "Management Information System" that is the focus of the Committee's work.

The PMIS Committee is presenting three products to the Directing Council. This Option and Cost Analysis is one of those three. Collectively, these products are designed to provide comprehensive information relevant to selecting the best course for modernizing the PASB Management Information System. The work products and their roles in the decision making process are:

- *Guiding Principles* — Using WHO as a model, PASB's own Guiding Principles provide the foundation for defining the desired future state for its PASB Management Information System (PMIS).

- *Analysis of Business Processes* — The definition of business processes establishes the baseline from which to define the future state of the PMIS. This future state was designed to limit the number of features that would need to be added to an ERP system to enable the Bureau to stay as close to the baseline software as possible. This also is referred to as using the software "out of the box".

- *Options and Cost Analysis* — This document (a) defines the scope and characteristics of each option to be evaluated, and (b) presents cost estimates for each viable option.

1.4.   **Benefits of PMIS Modernization**

The process of defining PMIS's Guiding Principles and analyzing its business processes identified a number of important benefits that the Organization will derive by modernizing the PASB Management Information System. *It is the achievement of these benefits that is the purpose of an investment in modernization.*

- *Accountability for Results* — Modernization supports PAHO's focus on results and accountability, enabling a structured approach to track, measure, and monitor outcomes and connect program impact to specific activities. This, in turn, will foster accountability and improve mission performance. Human resources planning and costs will be linked to results. Work will be planned and managed within a results-based framework, and authority and decision-making will be decentralized to occur closer to where technical cooperation is delivered, consistent with the accountability framework and delegations of authority.

- *Improved Collaboration* — A significant focus of modernization will be on interoperability. This will facilitate the implementation of programs that span organizational and technical boundaries, with information being widely available and flowing smoothly across business processes. Access to information systems and services will not be geographically dependent, enabling staff to better collaborate with one another, regardless of their physical location at any given time. Travel and meetings are key enablers of the Organization's collaborative work, and information on these also will be tied to the work plan and will be freely available within PASB to facilitate coordination.

- *Availability of Information and Transparency* — Significant improvements in the visibility and availability of information across the Organization will further support improvements in collaboration and decision making. This will include access to integrated financial and budgetary information and to information on progress being made on technical programs and projects. Using an open access philosophy, priority will be given to sharing and communicating knowledge and information to meet the needs of decision makers and the Member States involved in public health within and outside the Bureau, as appropriate. Increased use and sharing of data and knowledge will enhance PAHO's position as a trusted source of health information. As much as possible, records will be retained in

electronic form within a Document Management system to facilitate their secure storage and accessibility.

- *Adaptability* — As PAHO's mission evolves, new systems must be able to adapt quickly and at reasonable cost, and will include the ability to accommodate an increased demand for services. Workflows will be overlaid on top of an integrated system that allows for flexibility without regard to organizational boundaries, thus improving support to PASB's horizontal organizational model. Greater responsiveness to changing needs of stakeholders will enable a more rapid, efficient, and effective delivery of health-related technical cooperation.

- *Coordination with WHO* — Modernization of PMIS will be done in coordination with WHO, ensuring that appropriate alignment and sharing of information with WHO is achieved and supporting a global view of health. At the same time, differences between PASB and WHO business processes must be permitted when needed.

- *Management of Human Resources* — Improvements in the ability to recruit, train, equip and retain a wide range of personnel to deliver current and future PAHO operations will further support the Organization's most important resource, which is its human capital.

- *Support for Emergency Operations* — During disasters and other emergency situations in the countries and at Headquarters, special administrative processes will be provided to facilitate the delivery of needed services. This will further be supported by greater decentralization, as appropriate. Another goal of modernization is to improve the fault tolerance of PASB's systems to ensure there is no disruption to the Organization's work, whether through disasters or software deficiencies or failures.

- *Efficiency Gains* — Continued improvements in efficiency and quality of information will be accomplished through: additional automation of processes and services, increased self-service functionality, the placement of the control of some services closer to the recipient of those services, the introduction of electronic signature, additional and refined workflows, elimination of manual intervention points, reductions in cycle times, and improvements to system usability. To further enhance efficiency, single-source data entry and single-source reference data will be employed to remove

duplication of effort, improve data quality and timeliness, and facilitate the maintenance of information.

Achieving these benefits has been a critical goal in defining the future state of the PASB Management Information System and should guide the investment in modernization.

2. Methodology to Examine Advantages and Disadvantages

To evaluate the advantages and disadvantages of the options discussed here, the PMIS Committee sought a standard method that would facilitate a practical and fair comparison. To do this, the Committee selected a variety of factors that typically would be used in a classic Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis.. The factors were derived from a literature review of these types of analyses and discussions by the PMIS Committee. The Committee then evaluated and compared each option against each of these factors using a modified Delphi method. The result of this evaluation appears in a comparison table as Appendix A.

3. Methodology for Cost Analysis

Analyzing and estimating the costs of the various options for modernizing the PASB Management Information System is complex. Accordingly, Committee has examined many variables and sub-options. No single methodology was suitable for every situation; this chapter describes how the cost analysis was conducted, and includes key assumptions and the methodologies used for each option.

3.1. Assumptions

The following assumptions were used in developing the cost estimates.

- *Software Modifications* — It was assumed that each option would require some additional features or enhancements to move PASB to the desired future state defined bythe business process analysis. It was further assumed that the Bureau would make as few changes as possible.

- *Increased Functionality* — Modernization will achieve the functionality that is relevant to PAHO, aligning with existing ERP software.

- *Phased Modernization* — Modernization will occur in phases (to reduce project risk). The following order is used to present the

findings of Options 1c and 2, for example: (1) HR and Payroll, (2) Finance and Procurement, (3) Program Planning, and (4) Travel and other system efforts. This phasing is not a commitment, and the specific order will be determined during pre-project planning.

- *2012 Implementation* — For purposes of this document, the start of implementation is assumed to be January 2012, with some pre-project activities in 2011. Option 1a would be implemented over a period of 12 months or less according to WHO; Options 1b and 1c over a period of 48 months, as assumed by Pricewaterhouse Coopers (PwC); Option 2 over a period of 48 months; and Option 3 over a period of 24 months. (Option 3 would involve a preparatory phase to include, for example, competitive process and cleaning data.) The 10 year lifecycle begins with the start of the implementation project.This date is set only for cost estimating purposes. PASB must determine the actual start of implementation, which will be affected by availability of funding and the start of the new PAHO Strategic Plan in 2014.

- *Robust IT Infrastructure* — A strong and reliable network is assumed to be part of PASB's normal Information Technology (IT) infrastructure. To achieve thissome additional costs are required.

- *Current Labor Rates* — Washington, DC, labor rates are used. PAHO staff salaries are based on 2010−2011 averages; independent software developer contractors are based on 2010 market rates; and system integrator rates are based on 2010 GSA Schedule 70 (pre-negotiated rates paid by the US government).

3.2. Costing Methodology for the GSM Options (Options 1a, 1b, and 1c)

In the past, several major efforts were undertaken by different groups to estimate the costs of modernizing the PASB Management Information System. At different times, two management consulting companies were hired and independently estimated the cost to implement WHO's GSM in PASB. Those companies were Bearing Point in 2006 and Pricewaterhouse Coopers (PwC) in 2007−2008.

In its Terms of Reference, PwC was asked to develop a phased project plan and a timeline-based budget. PwC based its work on its own in-depth knowledge of Oracle E-Business Suite, an analysis of WHO's GSM implementation, and a survey of PASB requirements. PwC prepared a detailed, bottom-up analysis and provided estimates for two sub-options of

GSM: (1b) a Separate Operating Unit and Set of Books in the Same Instance and (1c) a Separate Instance. (In its earlier study, Bearing Point derived similar numbers.)

Although PwC did not explicitly produce an estimate for the GSM Option (1a)—same operating unit in the same database instance—the PMIS Committee was able to derive an estimate for this option based on the detailed work provided by PwC in its bottom-up analysis.

The PMIS Committee reviewed PwC's estimates and adjusted them for different functionality requirements identified during the current business process analysis. The largest adjustment was a decrease of US$ 3.0 million for telecommunications that is now part of PASB's normal IT infrastructure.

3.3.   Costing Methodology for the PASB Current Model (Option 2)

In 2008, a cross-functional team of 11 PASB staff and consultants estimated the cost to modernize the major management information system components using an in-house software development effort augmented by outside contractors. For the current analysis, the same team reconvened to review and update those estimates. Modifications were made to reflect changes in assumptions and new knowledge derived from the business process analysis. This team also added a 10-year lifecycle cost.
Two principal methodologies, heuristic and bottom-up, were used in arriving at estimates for in-house development and maintenance, as described below.

Heuristic Method

A heuristic estimate was done for several system areas because historical information on implementation of projects was available. In this method, it is assumed that the effort to rewrite an in-house system or to install a comparable commercial system will be roughly comparable to the historical project.

With this historical information in hand, adjustments were then made for: (1) additional (or reductions in) functionality, (2) differences in software development efficiency due to changes in methodology or tool sets (e.g. programming language), (3) current labor rates, and (4) current product costs.

Bottom-Up Method

For other system areas, a bottom-up estimate began with an inventory of functionality, processes, or other system "units," such as function points. These were defined at a fairly detailed level to enable an accurate estimate to be made of the effort required. The estimates were then summed to obtain a total effort and appropriate labor rates were applied to generate the final estimate.

3.4.   Costing Methodology for a Baseline ERP (Option 3)

The PMIS Committee sought the experience of other UN Agencies that have successfully implemented an ERP using a strict baseline approach. The International Telecommunications Union (ITU) was selected.The Committee readily recognized that ITU's recent experience could be used to gauge the costs that PAHO might incur with a similar project. ITU employs 1,000 staff and recently completed a reimplementation of its SAP ERP. Based on discussions with PASB's IT department, which took place over several weeks, ITU staff estimated what they thought it might cost PAHO to do a similar implementation. The PMIS Committee reviewed this estimate and added a few additional categories that had not been included by ITU.

3.5.   Use of Expert Opinion

In the course of its analysis, PASB has sought expert opinion from multiple sources, as shown below.

> Option 1a – World Health Organization (WHO)
> Option 1b – Pricewaterhouse Coopers (PwC)
> Option 1c – Pricewaterhouse Coopers (PwC)
> Option 2 – In-house staff
> Option 3 – International Telecommunications Union (ITU)

Each expert source is considered an expert in the option for which they supplied input. Based on the nature of each option, each expert proposed timelines, contractor rates, and splits of contract vs. in-house support, different from one another and specific to the option they analyzed. All of which are designed to ensure a successful project in their opinion. These differences make a significant difference in the final costs.

3.6.   Projection of Lifecycle Costs

The 10-year life cycle cost is based on a 10 year period or life cycle measured from the start of the modernization project. The Committee assumed a phased development and rollout period, during which current systems will be maintained to a minimal degree pending their replacement. The life cycle cost estimates for each option show the phase-out of current recurring operational costs, the timing of the implementation costs, the cost of upgrading GSM software when applicable, and the phase-in of the recurring operational costs of the new system.

Following deployment of a given phase, a two-year period of stabilization was assumed to correct any deficiencies. The first year of stabilization was assumed to require 30% of the annualized implementation costs; the second, 25%. Unless more specific numbers were available, long-term operating costs were generally assumed to be 20% of the annualized implementation cost, which is consistent with the 20% maintenance fees charged by most software providers.

3.7.   Cost Savings and Precision

ERP software generally is recognized to deliver substantial benefits to those organizations that implement them. However, ERP projects — regardless of whether they are done in the private or public sector — are often expensive and risky endeavors. Nonetheless, organizations continue to implement ERP systems because they believe the benefits outweigh the costs and risks.

As outlined in this document, the investment required for PASB to modernize and achieve the desired benefits under any option is substantial. For this reason, the control of cost and risk is an important element in the design of each option. The following are a few cost saving measures that will be pursued, but at this time, it is impossible to gauge the magnitude of possible savings.

- Negotiation of software license costs.

- Negotiation of labor rates and consideration of innovative labor sourcing strategies.

- Limitation of additional features (extensions and reports).

- Incorporation of external quality control and project monitoring.

Another avenue for cost savings is related to the implementation approach. All organizations undertaking ERP projects try to limit the number of additional features and stay as close to the baseline product as possible. This also is referred to as using the software "out of the box".

Implementing all functionality simultaneously, known as a big-bang approach, theoretically can reduce costs. However, a phased approach will reduce project risk by providing multiple opportunities to identify and correct project-related issues before starting the next phase and before such issues have a negative impact on the cost and schedule of the entire project. Recently, the US Government Office of Management and Budget (OMB, 28 June 2010) has recommended that the government not use a big bang approach for large projects such as ERP implementations.

Interpreting ERP cost estimates is difficult because of the many variables involved and because the costs of projects vary widely. Below are a few examples of ERP implementation costs:

- US$ 3 million
  World Meteorological Organization (WMO) (2006)
  WMO implemented Oracle E-Business Suite for a single location with 400 users.

- US$ 55 million
  World Health Organization (WHO) (2008)
  WHO implemented Oracle E-Business Suite, designed to serve up to 12,000 users globally. (While US$ 55 million is the implementation cost published by WHO, it generally is understood that this figure does not represent all costs incurred by WHO as a result of its GSM project, which led to internal borrowing against future savings).

- US$ 315 million
  United Nations (planned for 2014)
  The United Nations is implementing a large-scale ERP to serve multiple agencies and 50,000 users globally.

When examining the above figures, often it is not clear whether all project-related costs are included. The following are examples of other project-related costs that may appear elsewhere in these organizations' project budgets.

- Internal staff costs,

- IT infrastructure,

- Ancillary software projects,

- Shared service centers,

- Independent evaluations and quality control consultants, and

- Change management investments to realign the organization to new ways of working.

Other reasons for variations in cost are due to differences in implemented functionality. For example, the WMO implementation mentioned above does not have a results-based management approach as its foundation, which PAHO requires.

Clearly, estimating the cost of a new project is a challenge for most organizations. During this exercise, the PMIS Committee made every effort to learn from other organizations and strived for a high degree of precision. The most accurate way to estimate the cost of projects, such as the options analyzed here, is to conduct a Request for Proposal and let competing vendors determine the cost for which they will be willing to be held accountable. The Committee elected not to do this in favor of the methodologies described above.

Regarding the precision of the estimates in this document, it should be noted that ERP implementations are considered to be well-managed and successful if they are completed within 25% of their cost and schedule targets. Other UN agencies, such as the World Bank, typically require their project estimates to have a precision of between 20% and 25%. While the Committee has tried to be as precise as possible, it would be prudent not to assume a precision here greater than +/- 20%.

The PMIS Committee will continue investigating and looking for savings in order to reduce the costs that are presented in this document.

4. Consultations with WHO and other United Nations Agencies

In response to guidance from the Executive Committee, PMIS Committee members conducted a one-week mission to Geneva in July 2010 to meet face-to-face with WHO, the WHO Eastern Mediterranean Regional Office, the Egypt WHO Representative office, and other organizations using GSM (e.g. UNAIDS and the UN International Computing Center (UN ICC)). PMIS Committee members also met with two other United Nations Agencies: the International Telecommunications Union (ITU), and the United Nations High Commission on Refugees (UNHCR). ITU and UNHCR have implemented ERP systems from SAP and PeopleSoft, respectively.

The discussion with WHO permitted PAHO to clarify its position regarding the governance issue and the need to ensure that no Member State level mandate would ever be subject to constraints that could possibly be imposed by an administrative level, such as the GSM system governance mechanism.

WHO clarified the current status of GSM and this resulted in a slight redefinition of Option 1a. Specifically, under Option 1a, PAHO would be treated in GSM similarly to UNAIDS. WHO indicated that it would be able to support only Option 1a. Under this option, PAHO would join the WHO umbrella using the existing GSM configuration and in the same Operating Unit and Set of Books as other Regional Offices and UNAIDS.

PAHO would need to share some modules and functions if it adopts Option 1a, including Treasury and Cash Management, Accounts Payable, Accounts Receivable, and Fixed Assets. WHO recommended that other modules and functions also be shared, including Human Resources and Payroll, and also recommended that PAHO would need to use the Global Service Center (GSC) in Kuala Lumpur. A detailed fit-gap analysis would be required to determine whether and how functions and roles could be split and assigned to permit PAHO to retain control and to operate them independent of the GSC.

In promising its support for Option 1a, WHO suggested that almost all system adoption costs would be borne by both PAHO and WHO internal staff.Therefore, Option 1a would not need additional, external funding. Further, WHO shared its belief that no issues remained outstanding that would prevent PAHO from joining GSM which might cause any discernable drop in the level of service to Member States. WHO indicated that requested enhancements to GSM would be deferred and implemented with its move to Oracle R12.

UNAIDS indicated that GSM has significantly improved since it began operations. It cost UNAIDS between $2.0 and $4.0 million to implement GSM. However, a number of simple modifications to meet UNAIDS-specific needs required 18 months to obtain, and UNAIDS is still waiting to be able to include its own corporate identity on its contracts.

5.   Options and Costs

In the following sections, each option is presented with a description, key advantages and disadvantages, and a summary of the cost estimate. A comparison table of the advantages and disadvantages of the options appears in Appendix A, and a comparison of cost estimates is included in Appendix B.

One item that is not included in these options is the implementation of a regional Shared Services Center. As part of its GSM project, WHO opened a Global Shared Services Center (GSC) in Kuala Lumpur to relocate many routine tasks from its Headquarters offices in Geneva and from regional offices. It was assumed that this would generate cost savings. A Shared Services Center for PASB could be implemented for any option, but the risk of organizational disruption is high when simultaneously moving to an ERP based business model and a Shared Service Center. Therefore, a decision has not been taken on this issue. The PMIS Committee recommends that a decision about whether PASB should open a regional Shared Services Center be made following a separate analysis after the Directing Council has chosen the best option for the PASB Management Information System.

In the summary cost tables shown for each option, staff costs are not included.

5.1.   Option (1a): GSM — Same Instance and Same Operating Unit

Description of Option

Under this option, PASB would share the same database and application code of GSM that currently is being used by WHO HQ, other Regional Offices, and other agencies, such as UNAIDS.

In the future, it is possible that modifications to the PASB Management Information System could be required to respond to a mandate from the PAHO Governing Bodies. PASB must retain the ability to meet this requirement in a timely manner, as it does now. Under Option 1a, all significant changes to GSM would require the GSM system governance mechanism to examine the proposed change and decide its priority among

other GSM needs. This leads to the possibility that an administrative governance mechanism that is not under the authority of the PAHO Governing Bodies could inhibit the Bureau from implementing a mandate from the PAHO Governing Bodies.

This Option 1a carries the highest risk to PAHO's status as a legally constituted independent Organization, separate from WHO, with a distinct membership and governance structure. Implementation of this Option raises the real potential of having a management information system override or interfere with the Bureau's ability to carry out the Organization's mandates as directed by its Member States through its constitutionally established Governing Bodies.

Advantages

This option offers PASB the most opportunity to leverage the work already performed by WHO in support of GSM.

This option requires the least number of interfaces to make Americas Regional Office (AMRO) and PAHO information available to GSM and the rest of WHO.

Disadvantages

All modifications that must be made to GSM to accommodate PAHO, including modifications necessary to implement mandates from the PAHO Governing Bodies, will be subject to approval and prioritization by the GSM system governance mechanism. This will require a redefinition of the PAHO and WHO relationship at the constitutional and legal levels.

In addition, WHO's GSM may be unable to accommodate mandates from PAHO Member States in a timely or reasonably cost-effective way. Those reasons include: (1) WHO must serve the needs of multiple users of GSM; (2) the list of items in GSM which need to be addressed is likely to remain large for some time to come, increasing the competition for priority of changes; and (3) changes in software on behalf of PASB will need to be thoroughly tested to ensure proper integration with a much larger number of other requirements than the other options.

PASB's Management and Information System Guiding Principles and business rules will have to realign to those of WHO.

This option also requires PAHO data to be segregated and maintained separately from AMRO data.

PAHO information will be accessible and shared with WHO headquarters, Regional Offices, Countries, and other agencies using GSM. There is a risk that GSM super users could modify PAHO data.

GSM currently does not cover all PAHO country functionality. During a visit to the WHO Representation in Egypt (Eastern Mediterranean Regional Office), PAHO staff identified that PAHO country functionality would not be covered for specific contractual service agreements, letters of agreement, and courses and seminars.

PASB will be limited in its ability to further develop its business processes to facilitate growth in Organizational capacity beyond what is offered by WHO's GSM.

Use of the Global Service Center poses a risk that some transactions in country offices will require a minimum of 24 hours; this represents a reduction in the service level provided by PAHO today.

WHO is considering upgrading GSM from Oracle E-Business Suite Release 11 to Oracle R12. WHO is planning an initial study of options this year and does not have an estimated budget or timeframe for this upgrade. The reasons for this upgrade include (a) Oracle is planning to discontinue support for Release 11 in the near future, and (b) WHO plans to take this opportunity to revisit design issues, simplify business processes, and reduce the number of extensions. If PAHO adopts this option, PAHO would be faced with the uncertainty of costs and disruptions associated with the likelihood of an upgrade to Oracle R12 to stay aligned with GSM.

Summary of Cost

The implementation costs of this option are considerably lower than the other options for several reasons. First, PASB would capitalize on the work already done by WHO. Second, the implementation time period would be 12 months or less, as opposed to 48 months for Options 1c and 2. Third, WHO indicated that many categories of work would be done using in-house PAHO or WHO staff and therefore would incur no external cost. The categories of work which WHO suggested would cost zero included requirements analysis, reports, interfaces, data cleansing and conversion, final preparation and system rollout. PAHO insisted on WHO including funds for external assistance with configuration, extensions, language   support,   testing,   training,   and   project   and   change

management.WHO suggested that these activities would be done with in-house resources. The cost estimates presented in this document for Option 1a reflect this implied commitment by WHO. However, WHO has not provided specific estimates of the level of effort that would be required to perform these activities. PASB believes there is a significant risk that either PASB or WHO will not have the necessary in-house resources available and that outside assistance will be required at a cost in addition to the estimates presented here. In August 2010, WHO indicated that PAHO would not be charged for GSM software licenses, GSM operational support, or future upgrades to GSM. However, one other Regional Office later indicated that it supports GSM based on a percentage of salary costs, apart the WHO "Post Occupancy Charge". In addition, it is not clear if WHO's offer extends to support of the Global Service Center or how long the ongoing costs would be funded by WHO. As a result, the original estimate of PASB's share of GSM has been retained pending further negotiations and clarification with WHO.

An important element of the cost of this option is the sharing of GSM costs, including the Oracle software license. WHO negotiates this cost with each partner of GSM, such as UNAIDS, and no effort has yet been done to estimate what this cost would be for PASB. WHO also has indicated that it plans to upgrade GSM to a later release of Oracle software as soon as possible. WHO has indicated that PASB likely would have to share that cost, as well. Finally, any changes that PASB would request would be more expensive under this option than others, because of greater coordination and testing requirements.

As noted in the Disadvantages Section above, PASB would participate in the upgrade of Oracle software which WHO is planning. For presentation purposes, this upgrade cost appears in year four of the ten year life cycle.

Table 2: Estimate for Implementation Costs of Option 1a

Cost Category	Option 1a GSM as a Regional Office or like UNAIDS
Implementation	
General Implementation Costs	4.29
Subtotal	*4.29*
Infrastructure	
Initial Software License	0.50
General Infrastructure Costs	2.00
Subtotal	*2.50*
TOTAL	**6.79**

Table 3: Estimate of Annual Recurring Operational Costs of Option 1a

Cost Category	Option 1a
Recurring Costs	
Software Licenses	0.10
Hosting and Hardware Costs	0.00
Long Term Application Support	0.00
PAHO Share of GSM Operations	3.71
TOTAL	**3.81**

Table 4: Estimate of GSM Upgrade Costs - Option 1a

Cost Category	Option 1a
Upgrade of GSM to Oracle R12	
Upgrade costs or share of costs (Year 4 only)	3.14
TOTAL	3.14

Notes for above Tables 2 - 4:

o All figures are US$ million per year.

o The General Implementation Estimate includes values for: Planning, Due Diligence, Requirements, Configuration, Reports, Interfaces, Data Conversion, Extensions and Modifications, Language, Testing, Training, Rollout, Project Management, and Change Management.

o The estimate of PAHO's Share of GSM Operations currently is based on 1/6 of the estimated total costs of GSM and GSC support.

o WHO recently indicated it might be able to absorb the operational and upgrade costs for GSM (Options 1a and 1b). However, the original estimates have been retained pending further clarification from WHO.

Table 5: Life Cycle Cost Estimate for GSM Option (1a) - Same Operating Unit in the Same Instance

	1	2	3	4	5	6	7	8	9	10
Summary (Life Cycle)	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Current Costs	**3.10**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Implementation	**6.79**	0.00	0.00	**3.14**	0.00	0.00	0.00	0.00	0.00	0.00
Recurring Operations	0.00	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81	3.81
TOTAL	**9.89**	**3.81**	**3.81**	**6.95**	**3.81**	**3.81**	**3.81**	**3.81**	**3.81**	**3.81**

Note: Upgrade cost is included in Year 4.

5.2. Option (1b): GSM—Different Operating Unit in the Same Instance

Description of Option

NOTE: Based on recent discussions with WHO since the Executive Committee, WHO staff indicated that, while this option was technically possible, they do not have the human resource capacity to support it. Without the support of WHO, this option is not feasible.

Under this option, PASB would share the same instance as other WHO offices, but would exist as a separate operating unit with its own set of books. This means that PASB would operate in the same database as other users of GSM, but would retain its separate legal identity. This will enable PASB to address some concerns about PAHO's independence and governance. PASB would have the flexibility to determine much of its own configuration, and PASB financial and transactional data would not automatically be shared with WHO. Interfaces would be developed to help consolidate the AMRO data with WHO.

During implementation of this option, PASB could use the same business processes as WHO, but configure them to use slightly different rules.

The need for any additional features specific to PASB needs, however, still would need to be agreed to and prioritized by the GSM system governance mechanism, and then reviewed, tested, and validated by WHO's GSM team before deployment in the same instance. However, the additional flexibility available under this option relieves some (but not all) concerns about the ability to respond to mandates from the PAHO Governing Bodies.

Advantages

Under this option, PASB will gain the ability to control some system configuration parameters to support some of its business process differences.

PASB also will be able to re-use most of the work already performed by WHO in support of GSM and will require a minimal number of interfaces to make AMRO and PAHO information available to GSM and the rest of WHO.

Disadvantages

Under this option, PASB would still be subject to the GSM system governance mechanism for accommodating changes necessary to implement mandates from PAHO's Governing Bodies, as stated in Option (1a), previously.

The ability to quickly adapt the software to new requirements as the Organization evolves will be constrained by design choices WHO has already made and the GSM system governance mechanism. PASB will be highly dependent on WHO for deployment and support, which WHO has indicated it will be unable to provide.

This option also requires PAHO data to be segregated and maintained separately from AMRO data.

PAHO information will be accessible and shared with WHO headquarters, Regional Offices, Countries, and other agencies using GSM. There is a risk that GSM super users could modify PAHO data.

PASB will be limited in its ability to further develop its business processes to facilitate growth in Organizational capacity beyond what is offered by WHO's GSM.

WHO is considering upgrading GSM from Oracle E-Business Suite Release 11 to Oracle R12. WHO is planning an initial study of options this year and does not have an estimated budget or timeframe for this upgrade. The reasons for this upgrade include (a) Oracle is planning to discontinue support for Release 11 in the near future, and (b) WHO plans to take this opportunity to revisit design issues, simplify business processes, and reduce the number of extensions. If PAHO adopts this option, PAHO would be faced with the uncertainty of costs and disruptions associated with the likelihood of an upgrade to Oracle R12 to stay aligned with GSM.

Summary of Cost

As in the previous GSM Option (1a), PASB would share the costs of GSM, including the Oracle software license. WHO negotiates this cost with each partner of GSM, such as UNAIDS, and no effort has yet been done to estimate what this cost would be for PASB. WHO also has indicated that it intends to upgrade GSM to a later release of Oracle software as soon as possible and PASB would have to share that cost, as well. Finally, any changes that PASB would request would be more expensive under this option than others, due to greater coordination and testing requirements. In August 2010, WHO indicated that PAHO would not be charged for GSM software licenses, GSM operational support, or future upgrades to GSM. However, one other Regional Office later indicated that it supports GSM based on a percentage of salary costs, apart the WHO "Post Occupancy Charge". In addition, it is not clear if WHO's offer extends to support of the Global Service Center or how long the ongoing costs would be funded by WHO. As a result, the original estimate of PASB's share of GSM has been retained pending further negotiations and clarification with WHO.

As noted in the Disadvantages Section above, PASB would participate in the upgrade of Oracle software which WHO is planning. For presentation purposes, this upgrade cost appears in year four of the ten year life cycle.

Table 6: Estimate for Implementation Costs of Option 1b

Cost Category	Option 1b GSM in Same Instance but Different Operating Unit
Implementation	
General Implementation Costs	10.57
Subtotal	*10.57*
Infrastructure	
Initial Software License	0.50
General Infrastructure Costs	2.71
Subtotal	*3.21*
TOTAL	**13.78**

Table 7: Estimate of Annual Recurring Operational Costs of Option 1b

Cost Category	Option 1b
Recurring Costs	
Software Licenses	0.10
Hosting and Hardware Costs	0.00
Long Term Application Support	0.00
PAHO Share of GSM Operations	3.71
TOTAL	**3.81**

Table 8: Estimate of GSM Upgrade Costs - Option 1b

Cost Category	Option 1b
Upgrade of GSM to Oracle R12	
Upgrade costs or share of costs (Year 4 only)	3.14
TOTAL	3.14

Notes for above Tables 6 - 8:
o All figures are US$ million per year.
o The General Implementation Estimate includes values for: Planning, Due Diligence, Requirements, Configuration, Reports, Interfaces, Data Conversion, Extensions and Modifications, Language, Testing, Training, Rollout, Project Management, and Change Management.
o The estimate of PAHO's Share of GSM Operations currently is based on 1/6 of the estimated total costs of GSM and GSC support.
o WHO recently indicated it might be able to absorb the operational and upgrade costs for GSM (Options 1a and 1b). However, the original estimates have been retained pending further clarification from WHO.

Table 9: Life Cycle Cost Estimate for GSM Option (1b) - Different Operating Unit in the Same Instance

	1	2	3	4	5	6	7	8	9	10
Summary (Life Cycle)	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Current Costs	**3.10**	**2.33**	**1.55**	**0.78**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Implementation	**3.44**	**3.44**	**3.44**	**6.59**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Recurring Operations	0.00	0.95	1.90	2.85	3.81	3.81	3.81	3.81	3.81	3.81
TOTAL	**6.54**	**6.72**	**6.89**	**10.22**	**3.81**	**3.81**	**3.81**	**3.81**	**3.81**	**3.81**

Note: Upgrade cost is included in Year 4.

5.3. Option (1c): GSM — Separate Instance

Description of Option

NOTE: Based on recent discussions with WHO subsequent to the Executive Committee, WHO staff indicated that they will not have the human resource capacity to support this option. WHO recommended not to choose this option because of PASB's unfamiliarity with the degree of complexity and level of customization and extensions incorporated in GSM, many of which are irreversible.

Under this option, PASB would have its own copy or "instance" of GSM, independent of WHO. This means that PASB would start with a copy of the GSM software and its own empty database. PASB could modify this to meet its needs and could implement any additional features to accommodate PAHO Governing Body mandates, without depending upon coordination with the GSM system governance mechanism. Interfaces would be used to integrate information between the WHO and PASB GSM instances to achieve WHO's global transparency vision. The governance of the PASB Management Information System could be very streamlined, requiring little coordination with WHO.

Advantages

This offers significant freedom to configure or enhance a PASB copy of GSM to respond to mandates from PAHO Governing Bodies and to adjust that software to PAHO-specific requirements when necessary.
The interfaces necessary to exchange information between the WHO and PASB copies of GSM software will be supported by software tools contained within Oracle.

Disadvantages

The ability to upgrade this option at a reasonable cost remains hindered by the number of extensions and other modifications already contained in GSM.

PASB will want to maintain version consistency with WHO's GSM software. WHO is considering upgrading GSM from Oracle E-Business Suite Release 11 to Oracle R12. WHO is planning an initial study of options this year and does not have an estimated budget or timeframe for this upgrade. The reasons for this upgrade include (a) Oracle is planning to discontinue support for Release 11 in the near future, and (b) WHO plans to take this opportunity to revisit design issues, simplify business processes, and reduce the number of extensions. If PAHO adopts this option, PAHO would be faced with the uncertainty of costs and disruptions associated with the likelihood of an upgrade to Oracle R12 to stay aligned with GSM.

Summary of Cost

The portion of this estimate relating to the installation of a copy of GSM for PASB, and extending it to include a minimum amount of additional features needed in this region, was produced by Pricewaterhouse Coopers (PwC) in December 2008. This estimate was adjusted in 2010 based on discussions with WHO. WHOhighlighted new information and reflected the improved usability of GSM that has been achieved over the last two years.

The cost to update the GSM underlying software version from Oracle Release 11 to Oracle R12 is estimated to be US$ 22.0 million, because PAHO will need to assume the full cost. This upgrade appears in year four of the life cycle. As noted in the Disadvantages Section above, PASB will want to maintain version consistency with WHO's GSM software. Because PASB will be in a separate database instance, PASB will bear the full costs of upgrading the PMIS to use the latest Oracle software. For

presentation purposes, this upgrade cost appears in year four of the ten year life cycle.

Table 10: Estimate for Implementation Costs of Option 1c

Cost Category	Option 1c GSM in a Separate Instance
Implementation	
General Implementation Costs	17.04
Subtotal	*17.04*
Infrastructure	
Initial Software License	0.50
General Infrastructure Costs	2.71
Subtotal	*3.21*
TOTAL	**20.25**

Table 11: Estimate of Annual Recurring Operational Costs of Option 1c

Cost Category	Option 1c
Recurring Costs	
Software Licenses	0.10
Hosting and Hardware Costs	0.80
Long Term Application Support	3.41
PAHO Share of GSM Operations	N/A
TOTAL	**4.31**

Table 12: Estimate of GSM Upgrade Costs - Option 1c

Cost Category	Option 1c
Upgrade of GSM to Oracle R12	
Upgrade costs or share of costs (Year 4 only)	22.00
TOTAL	**22.00**

Table 13: Life Cycle Cost Estimate for GSM Option (1c) - Separate Instance

	1	2	3	4	5	6	7	8	9	10
Summary (Life Cycle)	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Current Costs	**3.10**	**2.33**	**1.55**	**0.78**	0.00	0.00	0.00	0.00	0.00	0.00
Implementation	**5.06**	**5.06**	**5.06**	**27.06**	0.00	0.00	0.00	0.00	0.00	0.00
Recurring Operations	0.00	**1.05**	**2.09**	**3.10**	**4.31**	**4.31**	**4.31**	**4.31**	**4.31**	**4.31**
TOTAL	**8.16**	**8.44**	**8.70**	**30.94**	**4.31**	**4.31**	**4.31**	**4.31**	**4.31**	**4.31**

Note: Upgrade cost is included in Year 4.

5.4.   Option (2): Modernized Current Model

Description of Option

NOTE: This option was not encouraged by the Executive Committee primarily because of the difficulty of achieving proper integration and interoperability with in-house developed software and the fact that software development is not a core competency of PAHO. However, the earlier analysis is retained and presented here for the sake of completeness, since it was part of the original scope of the PMIS Committee's Terms of Reference.

The Current Model option assumes that two systems (serving Finance and Procurement) would remain as commercial systems and that all other systems would remain in-house developed and maintained. This further assumes that the current commercial systems will be migrated to new and different commercial software, and that all other in-house systems will be significantly modernized.

The scope of the Current Model is defined as follows:

System Area	Implementation
Budget (AMPES)	In-house
Country Office Support (OMIS)	In-house
Finance (FAMIS)	Commercial
Human Resources (PAS)	In-house
Payroll (PAY)	In-house
Procurement (ADPICS)	Commercial
Program Planning and Management (AMPES)	In-house
Staff Health Insurance (SHI)	In-house

For the purpose of this analysis, the Committee assumed that the current commercial applications would be modernized using GSM modules as a Separate Instance.

Advantages

PASB would have the freedom to respond easily and quickly to mandates from the PAHO Governing Bodies, as PASB has been able to do before.

Disadvantages

It is a challenge for PASB to develop and maintain software applications to the same standard as commercial software. In-house developed systems are notorious for stagnating and not encouraging change. In fact, two major PASB systems (Payroll and Staff Health Insurance) have not been modernized in over 25 years.

The necessary integration and interoperability is not included as a standard functionality in this option.

Special interfaces will need to be prepared to share AMRO and PAHO information with WHO's GSM.

PASB will not be able to take full advantage of all the work performed by WHO in support of GSM.

Summary of Cost

An estimate of the cost to modernize all current in-house and commercial systems was prepared by PASB staff in 2006 and updated in March 2010 for this study. The cost of this option is high in part because it assumes that modernization will require complete replacement of most existing systems. Most of these systems are on aging hardware and software platforms, and have received only minimal maintenance over the past six years. Because this option involves installing the latest version of commercial software, PASB will be able to defer a major upgrade until after the 10 year life cycle. This is consistent with earlier PASB experience with its commercial software.

Table 14: Estimate for Implementation Costs of Option 2

Cost Category	Option 2 Current Model (In-house Software)
Implementation	
General Implementation Costs	25.04
Subtotal	*25.04*
Infrastructure	
Initial Software License	3.60
General Infrastructure Costs	0.00
Subtotal	*3.60*
TOTAL	**28.64**

Table 15: Estimate of Annual Recurring Operational Costs of Option 2

Cost Category	Option 2
Recurring Costs	
Software Licenses	0.72
Hosting and Hardware Costs	0.80
Long Term Application Support	5.00
PAHO Share of GSM Operations	N/A
TOTAL	**6.52**

Table 16: Estimate of GSM Upgrade Costs - Option 2

Cost Category	Option 2
Upgrade of GSM to Oracle R12	
Upgrade costs or share of costs (Year 4 only)	N/A
TOTAL	N/A

Notes for above tables:
o All figures are US$ million per year.
o The General Implementation Estimate includes values for: Planning,
   Due Diligence, Requirements, Configuration, Reports, Interfaces,
   Data Conversion, Extensions and Modifications, Language, Testing,
   Training, Rollout, Project Management, and Change Management.
o N/A = Not Applicable

Table 17: Life Cycle Cost Estimate for Option 2 - Modernized Current Model

	1	2	3	4	5	6	7	8	9	10
Summary (Life Cycle)	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Current Costs	**3.10**	**2.33**	**1.55**	**0.78**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Implementation	**7.84**	**7.84**	**7.84**	**7.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Recurring Operations	0.00	1.63	3.26	4.89	6.52	6.52	6.52	6.52	6.52	6.52
TOTAL	**10.94**	**11.80**	**12.65**	**13.51**	**6.52**	**6.52**	**6.52**	**6.52**	**6.52**	**6.52**

5.5. Option (3): Baseline ERP with PAHO functionality

Description of Option

This option was proposed to provide an ERP option that could be implemented as close to a baseline software product as possible, with minimum changes. This approach can significantly decrease both initial implementation and later upgrade costs.

Any ERP software could serve the purpose of this option, including Oracle E-Business Suite, Oracle Fusion, PeopleSoft, or SAP Business Suite. Generally speaking, all of these products offer comparable functionality. While one product may be more advanced than another at any point in time, the competitiveness of the market ensures that such functionality gaps do not exist for very long. SAP Business Suite was selected to illustrate this option because (1) the United Nations recently selected SAP as the software for its ERP project; (2) SAP illustrates the availability of some baseline features targeted for UN Agencies, such as a non-profit organization product line that was designed jointly with UNICEF that responds to UN human resources regulations; and (3) the International Telecommunications Union (ITU) was available to share its costs and experiences in detail.

The ultimate choice of software product to be used if this option is selected will be determined by an open competitive process, where PAHO will explore the availability of needed functionality in other ERP products.

Advantages

PASB will have the freedom to respond easily and quickly to mandates from the PAHO Governing Bodies, as PASB has been able to do before.

This offers the opportunity to implement an ERP solution as close to the baseline software product as possible. The flexibility to maximize native system capabilities can reduce upfront costs, improve the success of future upgrades and allow the Organization to realize the power of true integration and interoperability. This option enables the existing PASB

Program Management component, AMPES, to be re-used in conjunction with the baseline ERP software, if necessary.

By conforming to the baseline product as much as possible, PASB expects significant positive change by adjusting its business processes to align with the software.

The use of standard software will improve organizational core infrastructure to support and facilitate a timely response to Member State mandates. By being independent of WHO and the GSM system governance mechanism, there will be fewer stakeholders with whom changes would need to be coordinated, which will facilitate streamlined and agile software adaptability.

Disadvantages

Special interfaces will need to be prepared to share AMRO and PAHO information with WHO's GSM.

The ability to benefit from WHO's work on GSM will be limited to WHO's early analytic efforts.

Summary of Cost

As noted in the Cost Methodology section earlier, the core of this estimate was provided by the International Telecommunications Union (ITU), based on discussions with PMIS Committee staff and ITU's experience in re-implementing its own SAP software.

A major feature of this cost estimate that is different from the other options is that this will be a baseline, out-of-the-box implementation, with minimal additional features, also known as extensions. Because this option involves installing the latest version of commercial software, PASB will be able to defer a major upgrade until after the 10 year life cycle; this is consistent with earlier PASB experience with commercial software.

Table 18: Estimate for Implementation Costs of Option 3

Cost Category	Option 3 Baseline ERP
Implementation	
General Implementation Costs	15.45
Subtotal	*15.45*
Infrastructure	
Initial Software License	2.50
General Infrastructure Costs	2.38
Subtotal	*4.88*
TOTAL	**20.33**

Table 19: Estimate of Annual Recurring Operational Costs of Option 3

Cost Category	Option 3
Recurring Costs	
Software Licenses	0.50
Hosting and Hardware Costs	0.80
Long Term Application Support	3.16
PAHO Share of GSM Operations	N/A
TOTAL	**4.46**

Table 20: Estimate of GSM Upgrade Costs - Option 3

Cost Category	Option 3
Upgrade of GSM to Oracle R12	
Upgrade costs or share of costs (Year 4 only)	N/A
TOTAL	N/A

Notes for above tables:
o All figures are US$ million per year.
o The General Implementation Estimate includes values for: Planning,
   Due Diligence, Requirements, Configuration, Reports, Interfaces,
   Data Conversion, Extensions and Modifications, Language, Testing,
   Training, Rollout, Project Management, and Change Management.
o N/A = Not Applicable

Table 21: Life Cycle Cost Estimate for Option 3 - Baseline ERP

Summary (Life Cycle)	1 2012	2 2013	3 2014	4 2015	5 2016	6 2017	7 2018	8 2019	9 2020	10 2021
Current Costs	3.10	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Implementation	10.17	10.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recurring Operations	0.00	2.23	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46
TOTAL	**13.27**	**13.95**	**4.46**	**4.46**	**4.46**	**4.46**	**4.46**	**4.46**	**4.46**	**4.46**

6. Other Options

Other options for modernizing the PASB Management Information System exist and many of these were considered at a high level prior to the decision to focus on the options described in Chapter 5, above. These other options fall into four main categories and are described below.

- Software as a Service (SaaS)

- Small to mid-size enterprise software

- Other major ERP software products

- Partnering with other UN Agencies

6.1.   Software as a Service (SaaS)

Among the dominant companies in the ERP marketplace, both Oracle and SAP offer versions of their products in a model the industry calls "Software as a Service" (SaaS). According to this model, the software is offered "as is" and is hosted by the product's vendor. This means that the software runs on hardware provided and operated centrally by the software vendor and the underlying database is shared by many customers. To qualify as SaaS, the vendor supports a single codebase across all its customers. SaaS software typically is priced on a subscription basis. All clients essentially use the same product and are constrained in what can be configured. No additional features are permitted, and customers are limited in the changes that can be done to meet organization-specific needs. This enables the vendor to make regular upgrades with minimal impact on their customers and can be the least-cost solution for customers that can operate within these constraints.

The SaaS alternative was judged unsuitable for PASB for three major reasons:

- Both Oracle and SAP suggest that this alternative is only suitable for small clients with very simple needs, and PASB's corporate profile does not match the target audience for these products.

- The PMIS Committee's analysis revealed the need for non-negotiable additional features, not permitted under the SaaS model, including accommodation of UN compensation rules.

- Because PASB data would be commingled with other customers in a US data center, PASB data would be subject to court-ordered sequestering of records, rendering the system unavailable for use in such a situation. While PASB's privileges and immunities exempt the Bureau from such sequestering of records, the time required for the legal process to release PASB data is measured in months and is an unacceptable risk.

6.2.   Small to Mid-Size Enterprise Software

The major software products serving this market are Microsoft Dynamics, Lawson, and JD Edwards. While each of these have their merits and are significantly less expensive than the major products of Oracle and SAP, the robustness of their solutions were considered insufficient to meet PASB's organizational needs.

6.3.   Other Major ERP Software

The PMIS Committee considered using other ERP software that would not use GSM as a foundation. Recognizing that much of the analytic work supporting the GSM option is valid for and applicable to any option, the Committee sought to benefit from this.

The Committee chose to examine the following software from the two major ERP vendors (SAP and Oracle) and select one for more detailed analysis.

- *Oracle E-Business Suite Release 11.* This is the software upon which GSM is based. WHO already is planning to upgrade this software once GSM is functioning well in all Regional Offices, pending availability of funds.

- *Oracle E-Business Suite Release 12.* This is the latest version of Oracle's E-Business Suite.

- *Oracle Fusion.* This will be the first version of a new ERP product line from Oracle that will combine the best features of E-Business Suite with PeopleSoft (which Oracle acquired several years ago). Oracle Fusion is scheduled to be released later this biennium and this product will need some time to stabilize.

- *SAP Business Suite.* SAP software has been implemented in a number of other UN agencies and the United Nations is planning to use SAP software for its upcoming global implementation project. SAP offers a Non-Profit Organization (NPO) product line, from which PASB may be able to benefit.

As a result of its examination of these products, the Committee decided to include an analysis of a baseline ERP software product.

6.4.   Partnering with Other UN Agencies

The Committee considered partnering with one of two agencies—the United Nations (which is planning to implement SAP) and UNDP (which has implemented PeopleSoft). The attractiveness of these options is that, from the beginning, their implementations were designed to serve multiple agencies, with an ability and willingness to accommodate the organization-specific needs of those organizations.

A partnership with UNDP was judged inappropriate for the following reasons:

- UNDP is supporting a limited number of clients with its system known as ATLAS. UNDP shares close organizational relationships with those clients and all participating organizations' requirements are closely matched.
- Without considerable additional detailed analysis, it is unclear how closely the capabilities of UNDP's ATLAS system matches PASB's requirements, but it is known that the program planning and management area in ATLAS is not very strong, and this is a key requirement for PASB.
- UNDP is using an older version of PeopleSoft that will require a major upgrade (with an accompanying significant expense) in the next biennium.

The United Nations is in the early phases of its ERP project, known as "UMOJA" (see www.unumoja.org). Ultimately, this project will serve

50,000 users, including Peace Keeping Operations. Because of this project's size and scope, this must be considered a high-risk project. The current schedule calls for completion in 2014, but this already is in doubt, partly due to difficulty in fully staffing the project. It will be some time after that before the system stabilizes enough to permit additional UN agencies to participate. The Committee believes this timeframe is too long to satisfy PASB's needs.

7.   Risk Analysis

In performing risk analysis, the PMIS Committee identified the most critical risks to the PASB Management Information System modernization effort. Those risk factors and a description of each are below:

- PAHO Governance—The risk that PASB cannot implement a mandate received from PAHO's Governing Bodies.

- PAHO Independence—The risk that the option will limit the PASB managerial and administrative flexibility in implementing decisions to better achieve its mission.

- Simplification of Business Processes - The risk that an option will limit the PASB ability to simplify its current business processes.

- Innovation - The risk that an option will limit the PASB ability to innovate with respect to its Organizational business model (. PAHO's rules and regulations, management and organizational models, and strategic framework).

- Upgrades to Software - The risk that the software will need to be upgraded in the short term, leading to disruption of the Organization's day-to-day business activities and additional expense.

- Software with Minimal Extensions—Implementing a system with too many modifications will increase the risk of higher ongoing and future upgrade costs and efforts.

- UN Compatible baseline Software - The risk of adding customizations to accommodate United Nations-specific requirements.

- WHO Technical Support - The risk associated with lack of technical support from WHO.

- Leveraging of WHO work - The risk associated with not being able to capitalize on or leverage WHO's existing analyses and other work during implementation.

- Shared Common Functions - The risk that PAHO could lose control of key administrative processes in areas which WHO has recommended be shared in GSM, (Treasury/Cash Management, Accounts Receivable, Accounts Payable, Fixed Assets, Purchasing, Human Resources, and Payroll).

- Global Service Center - The risk that the work of PAHO could be adversely impacted as a result of a shift to a shared service delivery model at the same time as the introduction of a new system; and that using a shared service center outside of the Americas region could reduce the quality of service in PAHO and its country offices, due to workload, time zone, and language issues.

- Integrated System - The risk that PAHO would not achieve an optimal level of integration and interoperability among business functions to support its work.

- Maintenance of Current PAHO Operations - The risk that current key business functionality would not be adequately supported, particularly in Country Offices.

- Cost of Implementation - The risk of not being able to complete the modernization effort due to lack of sufficient resources. (The higher the price, the greater the risk.)

- Cost of Ongoing Operations - The risk that, because ongoing operations would become a mandatory expense, an unexpected overrun in recurring expenses might adversely impact Technical Cooperation.

- Cost of Upgrading Software in the next 10 years - The risk that PAHO will not be able to fund a required upgrade and be forced to continue using a system that has become obsolete.

These risk factors are evaluated for Options 1c and 3, as recommended by the Executive Committee, and Option 1a, as recommended by WHO. This analysis appears as a table in Appendix C and suggests that Option 3 poses the least risk to PAHO's system modernization goals.

8.   Summary

The PMIS Committee has presented five options with accompanying cost estimates and analyses. These options are:

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

- (1b) GSM using the same database instance, but different operating unit and separate set of books

- (1c) GSM as a separate instance

- (2) Modernized current model

- (3) Baseline ERP, combined with PAHO-specific functionality

In arriving at a recommendation, PASB has considered all the options, variables, risk factors, advantages, disadvantages and costs presented in this document and balanced these against the ability of the Organization to achieve its goals for systems modernization.

The advantages, disadvantages, and costs of all the options are summarized and presented in Appendixes A and B. The Organization should view the significant costs of these options as an investment to improve its ability to deliver technical programs and to achieve potential benefits. These benefits are summarized below:

- Improved focus on accountability for results.

- Improved collaboration across the Organization.

- Increased availability and transparency of information.

- Improved ability of the Organization to adapt systems to changing needs.
- Capability to support greater coordination with WHO.

- Improved management of the Organization's human resources.

- Improved support for emergency operations.

- Increased operational efficiency.

The following table summarizes the costs of the three main options available for consideration.

TABLE 22: Summary Tables of Viable Options

Cost Category	Option 1a GSM as a Regional Office or like UNAIDS	Option 1c GSM in a Separate Instance	Option 3 Baseline ERP
Implementation			
Configuration, Rollout, et al.	4.3	17.0	15.5
Infrastructure, including software license	2.5	3.2	4.9
TOTAL	6.8	20.2	20.3

Cost Category			
Recurring Costs (Annual)			
Software license and infrastructure	0.1	0.9	1.3
Application Support	0.0	3.4	3.2
PAHO Share of GSM	3.7	N/A	N/A
TOTAL	**3.8**	4.3	4.5

Cost Category			
Upgrade of GSM to Oracle R12			
Upgrade costs or share of costs (Year 4 only)	3.14	22.00	N/A
TOTAL	3.14	22.00	N/A

NOTE: The estimate of PAHO's Share of GSM Op   N/A = Not Applicable
costs of GSM and GSC support. WHO recently indicated it might be able to absorb the operational and upgrade costs for GSM (Option 1a). However, the original estimates have been retained pending further clarification from WHO.

These figures represent a reduction from figures presented earlier to the SPBA and Executive Committee. The reduction is due to a focus in this stage of modernization on the costs of transactional improvements represented by the GSM footprint and by recognition of the recent maturity level of GSM, which reduces the amount of additional unique needs the implementation project must accommodate.

The variances in costs among options are due to several factors. For example, Option 1a relies almost exclusively on in-house human resources and is projected to require 12 months or less. There is a risk, however, that if Organizational capacity is insufficient to make the right resources available at the appropriate time, then additional time and external resources will be needed and the cost will increase. Option 1c is based on a more traditionally organized project with four phases of about 12 months each, requiring a total of about 48 months. Option 3 is based on an accelerated schedule of 24 months which is made possible by the

reliance on baseline software and the availability of software that accommodates United Nations rules and regulations as part of the baseline.

Option 1b must be rejected because it depends on WHO support which WHO indicates will not be available, and Option 2 must be rejected because of the difficulties an Organization such as PASB has in developing and maintaining its own software to commercial standards.

Options 1c and 3 were recommended by the Executive Committee and option 1a was recommended recently by WHO. For these reasons, we have conducted the risk analysis shown in appendix C only to options 1a, 1c and 3.

PASB does not recommend Option 1a, in spite of its low cost, for the following reasons. Option 1a carries the highest risk to PAHO's status as a legally constituted independent Organization, separate from WHO, with a distinct membership and governance structure. Implementation of this Option raises the real potential of having a management information system override or interfere with the Bureaus ability to carry out the Organization's mandates as directed by its Member States through its constitutionally established Governing Bodies. This is supported by a description of the legal status of the Pan American Health Organization in Appendix D. This option has the highest degree of uncertainty regarding its cost because WHO has not estimated the level of internal effort required to implement this option and the actual recurring costs of participating in GSM remains to be negotiated and clarified with WHO. There is a risk that PAHO will not have the necessary internal resources or Organizational capacity to implement this option without additional outside expertise and cost. Under the current structure of GSM, there will need to be separation of data and "super-user" rights to ensure that PASB information cannot be modified by anyone outside of PASB. There will be a need to upgrade the underlying Oracle software from Release 11 to R12; this which will represent additional organizational disruption and may incur additional cost. Adoption of Option 1a implies using the Global Service Center located in Kuala Lumpur, which may limit the Bureau's ability to emphasize quality of service to its Country Offices and Member States. Finally, the need to coordinate all changes to software and business processes will stifle innovation and the opportunity for PASB to better ways of meeting its constituents' needs.

PASB does not recommend Option 1c for the following reasons. This is the most expensive option. WHO will not have the capacity to support PASB if this option is chosen. WHO recommended that PASB not choose this option because of PASB's unfamiliarity with the degree of complexity and level of customization and extensions incorporated in GSM, many of which are irreversible. The complexity inherent in GSM likely will inhibit the ability of the Bureau to

respond efficiently to changing needs and opportunities. Finally, like Option 1a, there will be a need to upgrade the underlying Oracle software from Release 11 to R12, which will incur additional cost and organizational disruption.

PASB recommends Option 3 for the following reasons. Option 3 carries the lowest risk to the independence or governance of PAHO. It represents a successful approach to implementing ERP systems that has been demonstrated by other United Nations agencies, such as the International Telecommunications Union. This option will support the Member States by (a) facilitating the decentralization of business processes closer to those receiving services, thus improving the quality of service, (b) enabling system features and business process changes to better support timely responses in times of emergencies, and (c) providing improved quality and timeliness of information to support better and quicker decision making. Some ERP products available under this option offer baseline compatibility with United Nations rules and regulations which will simplify the software, business processes, and future upgrades. The implementation of a current version of software will eliminate the need for a major upgrade during the next ten years or more. By pursuing a baseline approach, this will provide an additional catalyst for simplifying and streamlining business processes.

9.   Appendixes

Appendix A—Comparison of Advantages and Disadvantages
Appendix B—Cost Comparison
Appendix C—Factors and Risks (Analysis for options 1a, 1c and 3)
Appendix D—Legal Status of the Pan American Health Organization

Appendix A—Comparison of Advantages and Disadvantages

	Evaluation Factor	GSM - Same Instance, Same Operating Unit	GSM - Same Instance, Different Operating Unit	GSM - Separate Instance	Modernized Current Model	Baseline ERP
1	**PAHO Governance** Ability to respond to PAHO Governing Bodies' mandates. (The GSM Governance process, composed of a variety of entities within and associated with WHO, will prioritize all changes to GSM.)	**Fair** System modifications are determined by consensus among all other GSM users.	**Fair** System modifications are determined by consensus among all other GSM users.	**Very Good** System governance is by a PASB internal process.	**Very Good** System governance is by a PASB internal process.	**Very Good** System governance is by a PASB internal process.
2	**Ease of Addressing Unique Needs** Some options will be easier to adapt to PAHO requirements.	**Fair** Some ability to configure, but constrained by GSM	**Fair** Some ability to configure, but constrained by GSM	**Good** Freedom to configure and extend, but constrained by existing GSM modifications	**Very Good** Complete freedom to configure software	**Very Good** Complete freedom to configure software
3	**Capabilities** Even though the assumption is that all options will provide the set of capabilities that is necessary for PASB, GSM already is closer to what is needed by PASB.	**Good** Must incorporate various reports, data conversions and extensions	**Good** Must incorporate various reports, data conversions and extensions	**Good** There is greater freedom to add features.	**Fair** Some features already in GSM will need a greater effort to construct.	**Fair** Some features already in GSM will need a greater effort to construct.
4	**Support for Results Based Management** All options must have the same level of capability to support Results Based Management	**Very Good** All options will have the same level of RBM capability	**Very Good** All options will have the same level of RBM capability	**Very Good** All options will have the same level of RBM capability	**Very Good** All options will have the same level of RBM capability	**Very Good** All options will have the same level of RBM capability
5	**Interoperability** Interoperability focuses on the benefits to be achieved from integrating information, moving to end-to-end processes, and bridging organizational boundaries.	**Good** Interoperability facilitated by a common database and integrated processes	**Good** Interoperability facilitated by a common database and integrated processes	**Good** Interoperability facilitated by a common database and integrated processes	**Poor** In house systems are more challenging to integrate.	**Good** Interoperability facilitated by a common database and integrated processes
6	**Accountability** The availability of standard workflows, reports, and audit tools will permit timely examination of individual actions in the context of performance commitments.	**Good** GSM offers the basic functionality that is needed.	**Good** GSM offers the basic functionality that is needed.	**Very Good** GSM provides a sound basis which can be easily augmented.	**Poor** Appropriate tools must be designed and built from scratch.	**Very Good** SAP provides a sound basis which can be easily augmented.
7	**Best Practices** This refers to the ability to adopt best practices defined by the industry. These are incorporated into ERP solutions but could be built into the Current Model option.	**Very Good** All options offer the ability to adopt best practices	**Very Good** All options offer the ability to adopt best practices	**Very Good** All options offer the ability to adopt best practices	**Very Good** All options offer the ability to adopt best practices	**Very Good** All options offer the ability to adopt best practices

Appendix A—Comparison of Advantages and Disadvantages *cont.*

Evaluation Factor	GSM - Same Instance, Same Operating Unit	GSM - Same Instance, Different Operating Unit	GSM - Separate Instance	Modernized Current Model	Baseline ERP
8 Adaptability The ability of the option to deal with changes in needs and requirements.	**Fair** Changes must be coordinated with existing extensions and governance.	**Fair** Changes must be coordinated with existing extensions and governance.	**Fair** Changes must be coordinated with existing extensions and governance.	**Very Good** Freedom to respond quickly with little external coordination	**Very Good** Freedom to respond quickly with little external coordination
9 Catalyst for Business Change The modernization options offer an opportunity to be used as a catalyst for future positive change in the Organization.	**Fair** Some change will come with GSM	**Fair** Some change will come with GSM	**Fair** Some change will come with GSM	**Poor** There is too much opportunity to continue business as usual	**Very Good** PASB business processes will be adapted to software capabilities.
10 Ability to Meet the Requirements of GSM The ability to incorporate AMRO information into the global view is a prerequisite for all options.	**Very Good** All options will fully meet requirements	**Very Good** All options will fully meet requirements	**Very Good** All options will fully meet requirements	**Very Good** All options will fully meet requirements	**Very Good** All options will fully meet requirements
11 Upgradability The ability of the option to upgrade the application at a reasonable cost and minimal disruption. This is significantly impacted by the degree of customizations and enhancements.	**Fair** Hindered by number of extensions	**Fair** Hindered by number of extensions	**Fair** Hindered by number of extensions	**Good** Upgradability of in-house systems can be incremental	**Good** A focus on minimum extensions will facilitate upgrades
12 Document Management System Support A robust document management system will enable both transactional and non-transactional documents to be stored in conjunction with workflows, improving efficiency and buisness continuity.	**Fair** GSM stores only documents related to transactions	**Fair** GSM stores only documents related to transactions	**Fair** GSM stores only documents related to transactions	**Very Good** Possible to integrate a separate Document Management System	**Very Good** Easier to adopt a full featured and integrated product from ERP vendor
13 Disruptive Effect of Implementation ERP's require a major commitment from all parts of the Organization and post-implementation periods are frequently challenging with a short-term loss of productivity.	**Fair** Implementing any ERP can be very disruptive	**Fair** Implementing any ERP can be very disruptive	**Fair** Implementing any ERP can be very disruptive	**Good** Non-ERP's are still disruptive but more amenable to mitigation	**Fair** Implementing any ERP can be very disruptive
14 Support for IPSAS (& Credibility and Accreditation) The ability of a system to withstand auditor scrutiny and lead to confidence in the reported information. This is a pre-requisite for all options, but is contingent on implementation choices regarding segregation of duties and assignment of roles within the system.	**Very Good** Auditors are familiar with major commerical software packages.	**Very Good** Auditors are familiar with major commerical software packages.	**Very Good** Auditors are familiar with major commerical software packages.	**Very Good** In-house systems can pass audit scrutiny.	**Very Good** Auditors are familiar with major commerical software packages.
15 Availability of Institutional Knowledge The ability to leverage legacy system and institutional knowledge will impact the success of adopting the system	**Good** PASB knowledge of GSM is limited but can tap into WHO	**Good** PASB knowledge of GSM is limited but can tap into WHO	**Good** PASB knowledge of GSM is limited but can tap into WHO	**Very Good** Knowledge is available and critical to success	**Fair** Knowledge will help to configure SAP but there is limited knowledge of SAP

Appendix A—Comparison of Advantages and Disadvantages *cont.*

	Evaluation Factor	GSM - Same Instance, Same Operating Unit	GSM - Same Instance, Different Operating Unit	GSM - Separate Instance	Modernized Current Model	Baseline ERP
16	**Availability of Outside Support** Available support for ERP packages gives a wider pool of possible support and increases the likelihood of a successful outcome.	**Good** Many companies exist to support Oracle but not GSM or PAHO extensions	**Good** Many companies exist to support Oracle but not GSM or PAHO extensions	**Good** Many companies exist to support Oracle but not GSM or PAHO extensions	**Poor** No third party will be familiar with PAHO applications	**Very Good** Many companies exist to support SAP but not PAHO extensions
17	**Support for Business Continuity** All options will ensure availability of the system and its information.	**Very Good** Availability of the system and its information will be ensured.	**Very Good** Availability of the system and its information will be ensured.	**Very Good** Availability of the system and its information will be ensured.	**Very Good** Availability of the system and its information will be ensured.	**Very Good** Availability of the system and its information will be ensured.
18	**Geographic Limitations** integrated database and internet based aplication will allow access at any time	**Very Good** All applications will be web-enabled and meet this requirement	**Very Good** All applications will be web-enabled and meet this requirement	**Very Good** All applications will be web-enabled and meet this requirement	**Very Good** All applications will be web-enabled and meet this requirement	**Very Good** All applications will be web-enabled and meet this requirement
19	**Support for Country Office Applications** Ability to integrate country office applications with corporate management information system.	**Good** GSM "eImprest" supports basic Country office needs.	**Good** GSM "eImprest" supports basic Country office needs.	**Good** GSM "eImprest" supports basic Country office needs.	**Very Good** Provides full control to integrate other applications	**Very Good** Provides significant control to integrate other applications
20	**Technology Vulnerability** choosing a system that can be easily supported and progressive throughout the years	**Good** More resistant to technology risks due to large user base and vendor leadership	**Good** More resistant to technology risks due to large user base and vendor leadership	**Good** More resistant to technology risks due to large user base and vendor leadership	**Poor** In-house systems more easily stagnate	**Good** More resistant to technology risks due to large user base and vendor leadership

Appendix B—Cost Comparison

Table: Estimate for One-Tim Implementation Costs

Cost Category	Option 1a GSM as a Regional Office or like UNAIDS	Option 1b GSM in Same Instance but Different Operating Unit	Option 1c GSM in a Separate Instance	Option 2 Current Model (In-house Software)	Option 3 Baseline ERP
Implementation					
General Implementation Costs	4.29	10.57	17.04	25.04	15.45
Subtotal	*4.29*	*10.57*	*17.04*	*25.04*	*15.45*
Infrastructure					
Initial Software License	0.50	0.50	0.50	3.60	2.50
General Infrastructure Costs	2.00	2.71	2.71	2.71	2.38
Subtotal	*2.50*	*3.21*	*3.21*	*6.31*	*4.88*
TOTAL	**6.79**	**13.78**	**20.25**	**31.35**	**20.33**

NOTES: o All figures are US$ million per year.
     o The General Implementation Estimate includes values for: Planning, Due Diligence, Requirements, Configuration, Reports, Interfaces, Data Conversion, Extensions and Modifications, Language, Testing, Training, Rollout, Project Management, and Change Management.

Table: Estimate of Annual Recurring Operational Costs

Cost Category	Option 1a	Option 1b	Option 1c	Option 2	Option 3
Recurring Costs					
Software Licenses	0.10	0.10	0.10	0.72	0.50
Hosting and Hardware Costs	0.00	0.00	0.80	0.80	0.80
Long Term Application Support	0.00	0.00	3.41	5.00	3.16
PAHO Share of GSM Operations	3.71	3.71	N/A	N/A	N/A
TOTAL	**3.81**	**3.81**	**4.31**	**6.52**	**4.46**

NOTES: The estimate of PAHO's Share of GSM Operations is pending clarification with WHO, but for now is based on 1/6 of the estimated total costs of GSM and GSC support.

Table: Estimate of GSM Upgrade Costs

Cost Category	Option 1a	Option 1b	Option 1c	Option 2	Option 3
Upgrade of GSM to Oracle R12					
Upgrade costs or share of costs (Year 4 only)	3.14	3.14	22.00	N/A	N/A
TOTAL	**3.14**	**3.14**	**22.00**	**N/A**	**N/A**

NOTES: WHO indicates it might be able to absorb the upgrade costs for GSM (Options 1a and 1b). However, this is pending clarification with WHO.

Appendix C—Factors and Risks (Analysis for Options 1a, 1c and 3   [risk scale: 0-4]

Number	Weight (5 point scale)	PMIS Factors and Description of Risks	Options 1(a)	1(c)	3	5 Point Scale 1(a)	1(c)	3
1	5	**PAHO Governance** The risk that PASB cannot implement a mandate received from PAHO's Governing Bodies.	4	0	0	20	0	0
2	5	**PAHO Independence** The risk that the option will limit the PASB managerial and administrative flexibility in implementing decisions to achieve its mission better.	4	0	0	20	0	0
3	3	**Simplification of Business Processes** The risk that an option will limit the PASB ability to simplify its current business processes.	4	3	1	12	9	3
4	3	**Innovation** The risk that an option will limit the PASB ability to innovate with respect to its Organizational business model (e.g. rules and regulations, and management and strategic frameworks).	4	3	2	12	9	6
5	4	**Upgrades to Software** The risk that the software will need to be upgraded in the short term, leading to disruption of the Organization's day-to-day business activities and additional expense.	4	4	1	16	16	4
6	3	**Software with Minimal Extensions** The risk of implementing too many system modifications that will increase recurring and future upgrade costs and efforts.	4	4	2	12	12	6

Appendix C—Factors and Risks (Analysis for Options 1a, 1c and 3   **[risk scale: 0-4]**   *cont.*

		PMIS Factors and Description of Risks	Options			5 Point Scale		
7	4	**UN Compatible baseline Software** The risk associated with using non-baseline software to accommodate United Nations-specific requirements.	4	4	1	16	16	4
8	1	**WHO Technical Support** The risk associated with lack of technical support from WHO.	1	4	4	1	4	4
9	3	**Leveraging of WHO Work** The risk associated with not being able to capitalize on or leverage WHO's existing analyses and other work during implementation.	1	1	3	3	3	9
10	4	**Shared Common Functions** The risk to PAHO losing control of key administrative processes in areas using functions that are recommended to be shared with WHO, (e.g. Treasury/Cash Management, Accounts Receivable, Accounts Payable, Fixed Assets, Purchasing, Human Resources, and Payroll).	4	0	0	16	0	0
11	3	**Global Service Center** The risk that the work of the Organization could be adversely impacted as a result of a shift to a shared service delivery model at the same time as the introduction of a new system, and that using a shared service center outside of the Americas region could reduce the quality of service in PAHO and its country offices, due to workload, time zone, and language issues.	4	2	0	12	6	0
12	5	**Integrated System (ERP)** The risk that PAHO would not achieve an optimal level of integration among business functions to support its work.	1	1	1	5	5	5

Appendix C—Factors and Risks (Analysis for Options 1a, 1c and 3   [risk scale: 0-4] *cont.*

		PMIS Factors and Description of Risks	Options			5 Point Scale		
13	4	**Maintenance of Current PAHO Operations** The risk that current key business functionality would not be adequately supported, particularly in Country Offices.	4	2	1	16	8	4
14	4	**Cost of Implementation** The risk of not being able to complete the implementation due to lack of sufficient resources. (The higher the price, the greater the risk.)	1	3	3	4	12	12
15	3	**Cost of Recurring Operations** The risk that, because ongoing operations would become a mandatory expense, an unexpected overrun in recurring expenses might adversely impact Technical Cooperation.	2	3	3	6	9	9
16	4	**Cost of Upgrading in the next 10 years** The risk that the Organization will not be able to fund a required upgrade and be forced to continue using a system that has become obsolete.	1	4	0	4	16	0
		TOTAL	47	38	22	175	125	66
		Normalized Score (Scale 0 to 1)				0.75	0.54	0.28

Appendix D: Legal Status of the Pan American Health Organization

The Pan American Health organization ("PAHO" or "the Organization") is a public international organization whose roots date to the turn of the century. Created in 1902 as an international health surveillance and quarantine office within the Pan American Union, the Organization achieved independent status as the Pan American Sanitary Organization created pursuant to the Pan American Sanitary Code. (Treaty signed in Havana, 14 November 1924, entered into force 26 June 1925, 44 Stat. 2031; TS 714, 2 Bevans 483; 83 LNTS 43). Since that time, membership in the Organization has expanded to include all the independent countries of the Western Hemisphere, now thirty-five in number, as well as three European States with responsibilities for territories within the Hemisphere.

With the post-war emphasis on international organizations, the Pan American Union was transformed into the Organization of American States. ("OAS") (Charter of the Organization of American States, Signed at Bogota, 30 April 1948; entered into force, 13 December 1951, 2 UST 2394; TIAS 2361; 119 UNTS 3.)

After the creation of the United Nations ("UN"), the World Health Organization ("WHO"), was established as a Specialized Agency of the UN in 1948. (Constitution of the World Health Organization, done at New York, 22 July 1946; entered into force 7 April 1948, for the United States 21 June 1948, 62 Stat. 2679; TIAS 1808; 4 Bevans 119; 14 UNTS 185.) Article 54 of the WHO Constitution provides that the Pan American Sanitary Organization that had been in existence since 1924 (subsequently renamed as PAHO) would serve as the Regional Office of WHO in the Americas. Given PAHO's independent status, an Agreement with WHO was necessary in order to establish the terms of such an arrangement. (Signed 24 May 1949, approved by the Second World Health Assembly 24 May 1949, with effect from 1 July 1949.)

Simultaneously, the Organization of American States reconfirmed PAHO as its Specialized Organization for Health in the Inter-American System, under Chapter XV of the OAS Charter. PAHO and the OAS signed an agreement to this effect on 23 May 1950. PAHO itself adopted a new Constitution in 1947, and, in order to reflect the expanded needs of public health, changed its name from Sanitary Organization to Health Organization in 1958.

As a public international organization established by treaty and composed of Member States, the PAHO is an independent entity established pursuant international law, subject to international law. It enjoys international privileges, exemptions and immunities under customary international law, and as defined by treaty and in the national laws of its Member States. Such privileges, exemptions and immunities are accorded because of the exclusively public and international character of the Organization, its staff, its funds, its premises, and its activities.

In accordance with its Constitution, PAHO is comprised of the following Organs: (1) The Pan American Sanitary Conference ("Conference"); (2) the Directing Council; (3) the Executive Committee; and (4) the Pan American Sanitary Bureau ("Bureau" or "Secretariat"). The Conference is the <u>supreme governing authority of the Organization</u>. It meets every five years and delegates its authority to the Directing Council during the intervals of the meetings of the Conference. As a result, the Conference/Directing Council is solely responsible for establishing the Organizations policies, including financial and administrative, as well as its technical priorities and mandates. No other organ, entity, system or process may usurp the authority vested in the Conference/Directing Council by PAHO's Constitution. The Director of the Bureau is responsible for implementing such policies and mandates.

ANALYTICAL FORM TO LINK AGENDA ITEM WITH ORGANIZATIONAL MANDATES
1. Agenda item: 4.3: Modernization of the PASB Management Information System
2. Responsible unit: PBR **3. Preparing officer:** Tim Brown
4. List of collaborating centers and national institutions linked to this Agenda item: Not Applicable
5. Link between Agenda item and Health Agenda for the Americas 2008-2017: Modernization of the PASB Management Information System will facilitate the entire spectrum of Technical Cooperation in the Americas and thereby provide broad support to the Health Agenda for the Americas.
6. Link between Agenda item and Strategic Plan 2008-2012: Modernization of the PASB Management Information System will support all areas of the Strategic Plan including continued integration of strategic and operational planning, and in particular, will help develop and sustain PAHO/WHO as a flexible, learning organization, enabling it to carry out its mandate more efficiently and effectively.
7. Best practices in this area and examples from countries within the Region of the Americas: Best practices are exemplified by the International Telecommunications Union (ITU) headquartered in Geneva with Business conducted globally. The ITU successfully adopted a baseline ERP system using a minimum of extensions. Its pre-requisites for success were an accelerated schedule, and conforming to baseline capabilities.
8. Financial implications of this Agenda item: This will require funds from the Holding Account, as well as funds from a Post Occupancy Charge (POC) or resource mobilization effort. At this time, the total implementation cost is estimated to be just over $20 million for the recommended option. Recurring costs will be less than $1.0 million higher than today's system costs per year.

CD50/7 (Eng.)
Annex F
ORIGINAL: ENGLISH

PROPOSED RESOLUTION

MODERNIZATION OF THE PASB MANAGEMENT INFORMATION SYSTEM

THE 50th DIRECTING COUNCIL,

Having reviewed the report of the Director, *Modernization of the PASB Management Information System* (Document CD50/7);

Observing that the Pan American Sanitary Bureau (PASB) will benefit significantly from modernizing its management information system;

Taking into account the work of the PASB Management Information System (PMIS) Committee, which prepared the Guiding Principles that provide the context and goals of modernization; analyzed and rigorously documented for the first time the Organization's business processes that already have yielded a number of improvements; and identified, analyzed, and documented various options for modernization, including the advantages, disadvantages, and estimated costs;

Acknowledging the benefits the PASB already has derived from its business processes analysis and the efficiencies already implemented;

Bearing in mind that there are critical requirements that strongly influence the evaluation of options, and that these need to consider PAHO's separate legal status from WHO's in order to ensure that the authority of PAHO's Governing Bodies is not compromised by system modernization and that the levels of service to PAHO Member States are maintained or improved;

Recognizing that a baseline implementation of an Enterprise Resource Planning (ERP) software product will achieve the desired degree of modernization, will address PAHO's governance issues dealing with system modernization, will be relatively low cost, and will offer the best opportunity to match PASB business processes to the best practices available in the software, thus improving levels of service to PAHO Member States,

RESOLVES:

1.   To endorse the modernization of PASB's Management Information System.

2.   To approve the Guiding Principles for modernization.

3.   To approve modernization by means of commercial ERP software where PASB would incorporate a minimum of modifications and customizations, such as the baseline ERP solution presented by the Bureau as Option 3 in Document CD50/7.

4.   To approve using up to $10.0 million from the Holding Account to pay for this modernization.

5.   To request that the Director begin detailed project preparations, research additional sources of funding, and report on progress to the Directing Council in 2011.

PAN AMERICAN HEALTH ORGANIZATION
Pan American Sanitary Bureau, Regional Office of the
WORLD HEALTH ORGANIZATION

Report on the Financial and Administrative Implications for the Secretariat of the Proposed Resolution

1. Agenda item: 4.3 Modernization of the PASB Management Information System
2. Linkage to Program Budget 2010-2011: **(a) Area of work:** SO16.4 Information system management strategies, policies and practices. SO16.6 PASB strengthened through institutional and organizational development reforms **(b) Expected result:** SO16.4 Information system management strategies, policies and practices.
3. Financial implications **(a) Total estimated cost for implementation over the lifecycle of the resolution (estimated to the nearest US$ 10,000, including staff and activities):** External costs: $US 20.3 million Internal costs: $US 8.1 million **(b) Estimated cost for the biennium 2012-2013 (estimated to the nearest US$ 10,000, including staff and activities):** Approximately: $US 15.2 million Internal costs: $US 6.1 million **(c) Of the estimated cost noted in (*b*), what can be subsumed under existing programmed activities?** $ 0.0

4. Administrative implications

(a) Indicate the levels of the Organization at which the work will be undertaken:
All levels.

(b) Additional staffing requirements (indicate additional required staff full-time equivalents, noting necessary skills profile):
Additional staffing will be required and is included in the estimated costs above. The skill levels needed will focus on knowledge of business processes and the specific software tool selected.

(c) Time frames (indicate broad time frames for the implementation and evaluation):
Jan 2011 to Jun 2012 – Project pre-planning, competitive process and simplification of business processes
Jun 2012 to Jun 2013 – Implementation of new Human Resources and Program Management modules
Jun 2013 to Dec 2013 – Preparation for new planning period starting in January 2014
Jun 2013 to Jun 2014 – Implementation of new Finance, Payroll, and Procurement modules

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