





## The Implementation of Integrated Financial Information Management Systems (IFMIS)

#### Query:

"The implementation of the Integrated Financial Management System (IFMIS) has proved a real challenge. Are there any cases of successful implementation? And what factors contributed to this success? Did the success lead to reduced corruption and improved PFM?"

#### **Purpose:**

We are currently working with a partner government to develop an IFMIS Programme and are facing a number of challenges which are delaying implementation.

#### Content:

Part 1: Benefits and Challenges of

IFMIS Experience

Part 2: Experience with IFMIS Implementation

Part 3: Issues to Consider in

Designing and Implementing

**IFMIS** 

Part 4: Further Reading

Appendix: What can be learnt from Failed Implementation Processes?

#### **Summary:**

Emerging Information and Communication Technology (ICT) can play an important role in fighting corruption in public finance systems by promoting greater comprehensiveness and transparency of information across government institutions. As a result, the introduction of Integrated Financial Management Systems (IFMIS) has been promoted as a core component – and in many cases a driver- of public financial reforms in many developing countries<sup>1</sup>. Yet, experience shows that in spite of the considerable amount of resources allocated to such schemes, IFMIS projects tend to stall in developing countries, as they face major challenges of institutional, political, technical

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<sup>&</sup>lt;sup>1</sup> Although this approach has also been implemented in developed countries, this Expert Answer focuses more specifically on the implementation challenges arising in developing countries.

and operational nature. Case studies of more successful countries such as Kosovo, the Slovak Republic, Tanzania and Ethiopia indicate that factors supporting successful implementation of IFMIS include a clear commitment of the relevant authorities to financial reform objectives, ICT-readiness, a sound project design, a phased approach to implementation, a project management capability, as well as adequate resources and human resource capacity allocated to the project.

### Part 1: Benefits and Challenges of IFMIS

#### What is an IFMIS?

The introduction of Integrated Financial Management Systems (IFMIS) has become a core component of financial reforms to promote efficiency, security of data management and comprehensive financial reporting.

IFMIS provide an integrated computerised financial package to enhance the effectiveness transparency of public resource management by computerising the budget management and accounting system for a government. It consists of several core sub-systems which plan, process and report on the use of public resources. The scope and functionality of IFMIS can vary across countries, but sub-systems normally include accounting, budgeting, management, debt management and related core treasury systems. In addition to these core subsystems, some countries have chosen to expand their IFMIS with non core sub-systems such as tax administration, procurement management, asset management, human resource and pay roll systems, pension and social security systems and other possible areas seen as supporting the core modules.

The scale of IFMIS may also vary and be limited to specific country-level institutions such as the Ministry of Finance. However, IFMIS is generally meant to be used as a common system across government institutions, including in the more ambitious schemes for federal, state and local governments. The integration of IFMIS across the board ensures that all users adhere to common standards, rules and procedures, with the view to reducing risks of mismanagement of public resources.

#### What are the Benefits of IFMIS?

#### **Expected Benefits**

There are a number of ways in which IFMIS can improve public finance management, but generally IFMIS seek to enhance confidence and credibility of the budget through greater comprehensiveness and transparency of information.

They seek to improve budget planning and execution by providing timely and accurate data for budget management and decision making. IFMIS allow a more standardised and realistic budget formulation across government, while promoting better control over budget execution through the full integration of budget execution data. They also allow for the decentralisation of financial functions and processes under the overall control of the Ministry of Finance, force financial discipline, decrease operating costs by reducing administrative tasks and civil servants' workload.

In addition, IFMIS also seek to strengthen the efficiency of financial controls by making comprehensive, reliable and timely financial information available to the Auditor General, parliament, investigative and prosecutorial agencies, etc., as they improve accounting, recording and reporting practices through the provision of timely and accurate financial data, a standardised integrated financial management reporting system and an upgraded computerised accounting system. When they work well, they make bank reconciliation automatic and allow a closer monitoring of outstanding bills and cash in bank accounts.

#### **Impact on Corruption**

There are no systematic assessments of the impact of IFMIS impact on corruption. However, the literature considers that IFMIS can have a deterrent function on corruption by increasing the risks of detection. A well designed IFMIS can provide a number of features that may help detect excessive payments, fraud and theft. These include, for example, automated identification of exceptions to normal operations, patterns of suspicious activities, automated cross-referencing of personal identification numbers for fraud, cross-reference of asset inventories with equipment purchase to detect theft, automated cash disbursement rules, identification of ghost workers, etc.

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In Sierra Leone, for example, the introduction of IFMIS and subsequent improvement of record management helped uncover anomalies in personnel records of 2000 civil servants, leading to 16% of the subset employees being immediately suspended from the payroll as a result of the exercise. (Please see: http://www.irmt.org/documents/building\_integrity/case\_studies/IRMT\_Case\_Study\_Sierra%20Leone.pdf).

In addition, high speed comparisons of data can help identify promptly weaknesses and exceptions and alert managers to suspicious patterns of activities.

However, some authors are relatively cautious about the impact IFMIS can have on reducing corruption, as many corrupt transactions and cases of abuse of office never enter the system. A paper by Bill Dorotinsky suggests that, although it can be a very powerful tool against corruption, one should be aware of its limitations. (Please see: <a href="http://siteresources.worldbank.org/INTEGOVERNMENT/Resources/702478">http://siteresources.worldbank.org/INTEGOVERNMENT/Resources/702478</a> -1129947625190/billTransprencyandIFMS.doc).

Although it may facilitate ex post detection and prosecution, it is unlikely that IFMIS will prevent high-level corruption. Furthermore, while IFMIS can expedite the production of reports and transmission of data, it does not provide a guarantee that data is complete and reliable if incentives for data recording are not present or the human systems and capacities surrounding the technology are not supportive. In addition, for IFMIS to have a remedial impact on corruption, the justice system must have the capacity to follow up on cases of fraud and abuse, which is not always the case in developing countries.

The paper further underscores that IFMIS may even be associated with new corruption opportunities through the monopolisation of information access and control. Computerisation provides more access and control for those with required IT (Information Technology) skills. The integrated nature of IFMIS means that all information from sub-systems are stored and managed in a single database, with only a few specialists having control over accounting, budgeting, cash management and debt management data (often including payroll and procurement system information).

### What Are the Implementation Challenges Involved?

Implementing and maintaining IFMIS is a complex task that involves the Ministry of Finance and all line ministries. There are many risks involved that go far

beyond mere technological risks of failure and deficient functionality. A 2005 IMF working paper on introducing Financial Management Information Systems more specifically highlights a number of challenges that explain why IFMIS projects tend to stall in developing countries. (Please see: <a href="http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=888065">http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=888065</a>).

#### **Institutional Challenges**

The introduction of IFMIS involves more than the "simple" automation of public finance tasks and processes. IFMIS imply both efficiency reforms and reforms that change existing procedures. They should therefore be seen as an organisational reform which deeply affects work processes and institutional arrangements governing the management of public finance. Failure to undertake parallel reforms required by IFMIS is one of the reasons that often impede successful implementation. A USAID practical guide on IFMIS implementation published in 2008 identifies a series of issues that commonly accompany IFMIS reforms (Please see: http://pdf.usaid.gov/pdf\_docs/PNADK595.pdf):

- Legal framework IFMIS must be underpinned by a coherent legal framework governing the overall public finance system.
- Business processes IFMIS generally imply fundamental changes in operating procedures and should be preceded by a detailed functional analysis of processes, procedures, user profiles and requirement that the system will support.
- Budget and account structure Implementing IFMIS requires that many government structures start working with common tools. For the information to be coherent, all administrative units at national, regional and local level need to adopt a common language in the form of unified budget classifications and charts of account. This can be a very lengthy and cumbersome process, which for example took more than five years in Vietnam.
- Centralised treasury operations IFMIS
  reform is often accompanied by the
  consolidation of all government financial
  resources in a single treasury account or a set
  of linked accounts.

#### **Political Challenges**

IT reforms are perceived as complex, risky, resource intensive and requiring major procedural changes, often involving high-level officials lacking incentives for reform. Decision makers must be sold the idea that benefits exceed risks, while the incentive structure that may undermine political will for reform has to be adequately assessed from the early stage of the project. Similarly, at the agency level, it is of crucial importance for successful implementation that agencies recognise the need for a new system. Change management is therefore a critical and often neglected aspect of IFMIS reform for overcoming resistance to change from those, who benefited from the "old" way of doing business, all the way to end users, whose work might be profoundly altered by the new system. It is important to "sell" the reform through communication, education and training, using various channels such as the media, workshops, seminars, conferences, etc.

Many IFMIS projects have also failed due to the lack of clarity in ownership of the system and unclear authority to implement. Due to the institutional segmentation of public expenditure management, it is not always immediately clear who, from the Ministry of Finance or Accountant General Department, should be in charge of an IFMIS project. Joint ownership may result in a loss of accountability and real ownership of the project.

#### **Technical Challenges**

Many IFMIS projects have also failed because the basic system functionality had not been clearly specified from the onset of the intervention. IFMIS must be carefully designed to meet agency's needs and functional requirements, including the accounting and financial management tasks the system should perform. In some cases, interfaces with existing IT systems have to be created to fit the country's specific circumstances. As documents on the functional requirements – which will often serve as a blueprint for later phases of the system – are difficult to rectify at a later stage, it is of crucial importance to spend enough time on the design phase of the project.

As IFMIS core systems need to be adapted to the local context and environment, a key issue to consider is whether to use Off-The-Shelf (OTS) systems and customise them to fit the local conditions or whether to invest in an own "custom-build" system, with major costs and resource implications. (This particular issue

is discussed at more length in the appendix on lessons learnt from IFMIS implementation).

IFMIS implementation also involves major hardware requirements. In Malawi for example, IFMIS requires 50 servers, one central server and a local IFMIS sever in each line ministry. Power shortage and interruptions mean that in some countries, generators and power supply units are needed as well. (Please see: http://www.sida.org/shared/jsp/download.jsp?f=SIDA44 83en\_CER+2005-1+web.pdf&a=3406)

### Human Resources Requirement and Capacity

IFMIS implementation involves considerable human resources requirements and capacity building needs throughout the entire government. The low level of computer literacy in developing countries must first be adequately addressed before such projects can be truly viable.

The lack of staff with required IT-knowledge can not be easily remedied by training and hiring. The current salary structure and terms of employment in the public sector are usually not attractive enough to compete with private sector employment conditions and to incentivise candidates with required IT-skills. There is also a risk that trained staff leaves for better job opportunities.

### Part 2: Experience with IFMIS implementation

In spite of their complexity and implementation challenges, IFMIS have become a core component and driver of public finance reform in many developing countries. As of 2005, the World Bank had funded IFMIS projects in 27 countries at a cost of USD 1,1 billion. However, the implementation of IFMIS has proven very demanding, especially for developing countries and according to the Bank's own account, has not always been successful.

Yet, in spite of challenges involved and many failed implementation attempts across the world, there are a number of countries where IFMIS implementation is viewed as having been a relatively smooth and successful process:

#### The Slovak Republic

The Slovak Republic is often cited for the rapid success of its IFMIS implementation. The project was backed by a strong political will, while the parliament's commitment to a new system played a driving force in the time of government change. The political backing of the initiative was rooted in the willingness of the country to make the required changes to comply with EU accession conditions.

A well designed implementation strategy based on a clear understanding of the needs of the users and tools that were to be used further contributed to the relatively smooth reform process. A detailed needs assessment was conducted as a first step, establishing the core functions of the IFMIS and basic requirements for the new system. After careful evaluation of software packages and their comparative advantage in meeting these requirements, three basic "off-the-shelf" (as opposed to "custom") softwares were identified as appropriate for the country. A firm was then identified through a turbulent tendering process to integrate the system. The integration team established a steering committee to oversee the entire process, while basic system architecture was developed to link all the information the system needed into one structure.

The system was launched in 2004 and has been gradually moving forward ever since, becoming what some consider being one of the most effective IFMIS in the European Union. (Please see: http://pdf.usaid.gov/pdf\_docs/PNADK595.pdf).

#### Kosovo

Kosovo offers another example of successful implementation in a very different and specific postconflict context. As the country didn't have central government institutions, there was no budget process or treasury system to manage the huge inflows of foreign assistance flowing into the country for reconstruction. IFMIS implementation was largely donor driven, jointly undertaken by CIDA, SIDA and USAID, and included a Canadian E-government software system, which can run on notebooks as well as on a large scale network, as a result of which a pilot system could be run within 26 days. A further advantage of this system was that each installation could run independently and still enable data to be collected into a central unit. The IFMIS implementation team then set out to install and configure the basic system architecture that would work for the entire future administrative structure, based on an assessment process identifying available human resources and system requirements. Since many Kosovar had worked under the old Yugoslav system, it was decided to prioritise procedures and practices in line with the old system.

The roll-out programme for Kosovo included system demonstration to present the functionality to future users, training workshops for senior administrators, managers and general staff and change management workshops. The system was gradually expanded as the different municipalities were brought in line. The project faced major political challenges when addressing three municipalities that are in majority Serb. A non-partisan was adopted by configuring approach disseminating all document and information in Albanian, Serbian and English. The core system was operational and running in all three languages in 2003 and has been expanded ever since. (Please see: http://pdf.usaid.gov/pdf\_docs/PNADK595.pdf).

#### **Tanzania**

According to the above mentioned 2005 IMF working paper, the IFMIS in Tanzania appears to be the most successfully implemented system in an anglophone African country. Within the framework of an ambitious public finance management reform initiated in 1994, Tanzania decided to introduce IFMIS in 10 ministries, departments and agencies in 1998. The IT-solution selected was a medium-sized management and accounting package, significantly less complex than the ones used in other countries like Ghana. The roll-out plan was based on an incremental approach and focussed initially on the Accountant General's Department and 10 pilot ministries. After a consolidation phase, the system was rolled out to all 43 ministries and departments in the capital, then progressively to the entire central government and progressively introduced at the local level. The implementation was distinguished by:

- An initial review of the public expenditure management processes affecting budget execution and the introduction of an improved expenditure control framework and chart of accounts;
- Embedding the reform process in the Ministry of Finance with an emphasis on capacity building;

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- Revising and developing an enabling legislation, accounting principles, systems and necessary organisational arrangements;
- Selecting a midrange commercial software package supported by a high quality local consultancy company;
- Availability of adequate donor resources;
- A solid political backing which trickled down to the management level.

Both the authorities and the international community perceive the IFMIS as a critical tool for achieving public sector accountability. (Please see: http://pdf.usaid.gov/pdf\_docs/PNADK595.pdf and http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=88 8065).

#### **Ethiopia**

A 2006 paper by the Kennedy School of Government presents a case study of Ethiopia as an illustration of a successful and to some extent unconventional approach to automating public financial systems.. This case study is especially interesting as it challenges the traditional wisdom usually associated with such schemes.

In Ethiopia, the automation process faced major challenges of resource, capacity, infrastructure, changes in government and dependency on foreign aid policies. Therefore, the reform strategy prioritised a pragmatic sequential approach based on the logic to ensure that the "basics" are in place before moving to more complex systems. A strategic choice was made to drive the automation process from the procedural requirements which were defined by the users, through an incremental and iterative approach, with government staff extensively being involved. The reform process first focused on bringing existing system up to date through simplification, elimination of backlogs and sequential procedural change before introducing new systems. Constant consideration was given to limit the burden imposed on scarce staff throughout the whole process. This strategy was justified by low level of skills, evolving fiscal decentralisation and the general degradation of the financial system that had taken place over the previous years.

The information systems were developed in a phased approach based on user demand and resource availability. This approach necessitated an iterative

customised approach to automation instead of a more comprehensive and standardised "off-the-shelf" approach that would have exceeded the local capacity to absorb it. This prudent and pragmatic approach to automation ensured that information systems were successfully and promptly delivered at relatively low cost, then gradually upgraded to evolve into technically robust and sophisticated systems meeting international standards.

The Ethiopian case demonstrates:

- The role of automation as a support but not a driver of public financial reform. Ethiopia prioritised a process change approach driven by procedural reform and supported by information technology instead of viewing ITrequirements as a driver of procedural reforms.
- The fact that OTS solutions are not necessarily always the most appropriate and cost effective solution to automation.
- The value of an incremental strategy of frequent operational upgrade of information systems;
- That the lack of high level political will does not necessarily hamper successful implementation.

(Please see: http://www.hks.harvard.edu/m-rcbg/papers/peterson\_oct\_2006.pdf)

## Part 3: Issues to Consider in Designing and Implementing IFMIS

#### **Political Commitment**

Institutional factors determine the outcome of automating public financial management. Experience shows that the best designed project will fail without firm commitment. It is therefore important to adequately assess commitment to reform. In Malawi for example, the lack of political will led to major implementation delays: 10 years after the start of the project, the system was still not running. Such examples demonstrate that in many cases, the role of individual incentives and political will were not taken sufficiently into account when introducing IFMIS. For example, the initial World Bank appraisal assumed the political risk

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for such projects to be low due to the technical nature of the intervention.

However, some authors argue that there need not necessarily be high-level commitment to reform for successful implementation. The Ethiopian case study shows that what matters most in the process is the midlevel management's commitment to reform, as the changes ultimately have to be implemented at this level. The above mentioned paper concludes that projects that are to some extent "obscure" evade high expectations, scrutiny and micro-management which tend to impede technical proceedings. In Ethiopia, senior management contribution to the reform was limited to securing funding at critical phases of the project, accepting the advice of the chief technical assistance advisor and monitoring the project's progress.

### Process Change vs Process Innovation

In many cases, IFMIS reforms have been introduced as a process innovation involving a radical and comprehensive restructuring of procedures to jumpstart and improve the financial management system. In such an approach, IT is being used as the driver of change rather than in support of the financial management reform process.

Some authors challenge this approach by arguing that financial procedures set out in most countries' statutory and regulatory frameworks are generally likely to be sound, and it is both possible and desirable to pursue a strategy of process change focused on improving what exists rather than replacing it. Experience shows that improvements are best made through gradual strengthening of processes and skills. This strategy is more likely to mitigate the risks associated with IFMIS reforms, as it works with existing requirements, developed knowledge and user capacity which are usually relatively limited in developing countries.

Taking Ethiopia as an example, the above mentioned Kennedy School of Government paper argues that IT should support and not drive financial management reform, using a process change approach where IT is used in a supportive role to evolve rather than replace existing procedures. In other words, here a strategy of improvement has been favoured over a strategy of replacement with a successful outcome, while more radical attempts such as in Ghana or Uganda have failed to deliver the expected changes.

The paper concludes that since the basic designs of public financial systems are reasonably sound in Africa, there is a strong base and potential from which to evolve using a process change approach.

#### A Step by Step Approach

Although the process should be made flexible to fit the local context, an USAID practical guide on implementing IFMIS details the various steps involved in such schemes, drawing from the lessons learnt from experience (Please see: <a href="http://pdf.usaid.gov/pdf\_docs/PNADK595.pdf">http://pdf.usaid.gov/pdf\_docs/PNADK595.pdf</a>). The guide covers issues relating to the preparatory phase including concept design with organisational and institutional assessment and feasibility study, followed by the design phase of the project that outlines the functional specification and information technology related issues, as well as procurement and implementation. The guide identifies key implementation steps, including:

- The preparation of the initial need assessment;
- Requirement gathering and delivery of system specifications;
- The design and delivery of a uniform chart of accounts across the public service;
- The preparation and delivery of accepted rules and procedures for the new system;
- The evaluation, selection and procurement of software and hardware applications;
- The system integration, testing and implementation;
- The audit/evaluation of project progress and results.

#### **Appropriate Technological Choices**

Another key condition of success is the need to make the right technical choices for the automation process. Ultimately, the effectiveness of IFMIS depends on the robustness and flexibility of the technological solution. The technology chosen must be flexible to adapt to evolving conditions and allow the system to be smoothly extended to other parts of government.

To support the decision-making, IFMS design phases typically start with an in-depth analysis of the existing budget and expenditure management processes. User

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requirements must be thoroughly identified as the basis for soft and hardware development. An assessment of capacity and needs of IT-personal is also an important element to consider at this phase of the project.

All studies recommend choosing simple IT-solutions. Complex large-scale IT-platforms increase the risk of failure and under-performance of that platform and by extension, the system as a whole. Experience indicates that systems which started small and progressively expanded are less likely to fail because associated risks can be better managed.

As mentioned before, a key issue to consider is whether to purchase Off-The-Shelf (OTS) systems and customise them or to develop own "custom-build" systems. Most studies recommend OTS solutions as an international best practice. The process of developing tailor-made systems is demanding, complex and costly, including writing specifications for all the programmes required to support government functions and operations, testing and maintaining the platform. Upgrading the old system also requires major knowledge and resources, often resulting in systems that are too complex and fragmented.

However, the Ethiopian experience challenges this assumption, by showing that in some cases it is more appropriate to use tailor-made IT solutions. OTS IFMIS usually impose standardised procedures, often originated from developed countries and from commercial instead of public applications, implying even higher customisation costs. By contrast, custombuild IT-solutions seek to fit the information system to the local conditions rather than the opposite, where rigid and standardised approaches force the public sector to adapt to the system.

Appropriate ICT-solutions must also be identified in countries facing specific logistical challenges such as unreliable power supplies, telecommunications and capacity. A case study conducted in post-conflict countries such as Rwanda or Sierra Leone suggests that simpler, web-based financial management systems with easy interface may be considered. The study recommends piloting a web-based IFMIS supported by a simpler software package installed in stand-alone machines and building up an incremental network. (Please see: http://www1.worldbank.org/publicsector/decentralization/March2005Seminar/3Carvalho/Carvalho%20Draft%20-%20Sequencing%20ICT%20in%20 Post-Conflict%20Countries%20Undergoing% 20Decentralization.pdf)

In any case, it is important to allocate enough time to assess and identify the most suitable and cost - effective IT-solution to meet the needs of the country.

### Adequate Project Management and Oversight

Project management goes beyond managing the technical aspects of implementation. An adequate project implementation team should be set up, ideally comprising a project manager, a public finance economist, a qualified accountant, a change management/training expert, IT-system experts and logistic experts. It is recommended to set up a steering committee to oversee the process at the highest level, chaired by a high-level figure, such as the Minister of Finance, that meets regularly and produces minutes on issues and milestones.

### Sequencing the Implementation Process

There are high risks involved in implementing too many components of the reform at once and practitioners believe that risks can be mitigated with a phased approach that rolls out across government institutions in a gradual and flexible process. Large IT-projects require substantial investments in equipment, training and infrastructure, and involve high risks of delays and failure, because of interdependency of the various project components. It is recommended to favour a pragmatic step-by-step approach to reform, based on a detailed assessment of existing conditions and needs.

The process should therefore start by a comprehensive assessment of the current institutional conditions (what is needed and can be reasonably achieved?), including an analysis of the current governance system, ICT-infrastructure, incentives structure, legal framework in place, and human resources available. The analysis should also cover the training needs and potential implementation challenges.

The system should only be rolled out once it has been pre-tested with real data, to assess the way the chart of accounts, the software and integration processes, recording of real transaction and producing report work in practice.

The roll-out strategies should ensure that: 1) reform is built around clear benchmarks and milestones; 2) reform is divided into self-contained modules and 3)

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IFMIS implementation is broken down into definite steps.

The phasing of implementation can occur at two different levels:

- It is recommended that the intervention identifies functional reform priorities based on an assessment of the weaknesses of the public financial system. All functions of the system need not be acquired all at once. The reform can start with core modules before introducing additional module such as human resources, debts and audits management. Experience has shown that the most important area to be addressed is often the system of budget execution and expenditure management which tends to be complicated, non-transparent and labour-intensive. Tanzania for example has used a selective approach focusing on these priority areas.
- It is also recommended to start small at a realistic level and progressively expand the programme through the various layers of government. The first step consists of identifying an experimental entry level system limited to a pilot site, such as the Ministry of Finance, and to gradually consolidate and expand it to other institutions and levels of government. The system can then be successfully rolled out in phases once it has been tested and proven in this initial controlled environment. Change management and training of end users are important components of the roll-out strategy.

#### **Capacity Building**

Capacity building is a major factor affecting the success of IFMIS implementation, especially in developing countries where IT-capacity is limited and the public sector's salary structure and terms of employment usually can not attract and retain well trained staff. Capacity building and training need to be scoped during the early stage of the need assessment process. The process should allow for the identification of various user groups, assess the level of knowledge, recruiting needs, and define the scope of the training curricula, targeting the various key audiences. Training should begin from the beginning of the reform, starting by those who will be most immediately affected by IFMIS

reform. A broader and permanent training programme should also be developed and implemented.

#### Part 4: Further Reading

#### **USAID** practical guide (2008)

This paper discusses the subject of "best practices" for designing and implementing Integrated Financial Management Information Systems (IFMIS) and how to put them into place in specific environments: namely, in developing and transitional countries as well as in conflict and post-conflict situations. It provides cases studies of several IFMIS implementation. processes. (Please see: http://pdf.usaid.gov/pdf\_docs/PNADK595.pdf)

#### Automating PFM in developing countries (2006)

This paper presents two frameworks and a case study from Ethiopia which illustrates an approach to automating financial systems that has worked. The first framework distinguishes between business process innovation (reengineering) and process change. Process innovation is a comprehensive change of procedures and organization driven by information technology. Process change is an incremental strategy driven by procedural reform and supported by information technology. It is argued that process change is far less risky than process innovation and is a more appropriate approach because the financial systems in most developing countries are relatively sound and thus provide a basis for improvement. http://www.hks.harvard.edu/msee: rcbg/papers/peterson\_oct\_2006.pdf)

#### Introducing IFMIS in developing countries (2005)

This paper investigates the reason for almost universal failure to implement and sustain IFMISs in developing countries. It starts with a review of the "received wisdom" in implementing these projects, and then analyses problems in its application in the developing countries' context to identify key factors to explain why IFMIS projects have been so problematic. Based on the identified negative factors, suggestions for addressing them are offered in the hope of improving success rates. (Please see: http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=888065)

#### **Appendix**

### What Can be learnt from Failed Implementation Processes?

#### Ghana

Ghana launched an ambitious multi-facetted Public Financial Management Reform Program (PUFMARP) in 1996, aiming at introducing comprehensive reforms to the budget and expenditure management processes, including a computerised financial information system, referred to as the Budget and Public Expenditure Management system (BPEMS). The pilot phase (1996-2001) has focussed on reforming budget preparation processes, reviewing the regulatory framework for expenditure management and introducing an integrated budget and expenditure management system in the Ministry of Finance and six key ministries.

In the early years of the reform programme, there was a gap between the fast rate of progress with the Medium-Term Expenditure Framework and the slow BPEMS development, causing significant accounting and reporting problems. The design, development and pilot implementation of BPEMS has not progressed well, resulting in major implementation delays. The roll-out of the system, originally planned for the end of 2001, was not achieved and the system was finally installed as a pilot at the Ministry of Finance and the Controller and Accountant General's Department in 2003. They were not satisfied with the BPEMS reporting system leading to major disputes between the government and the software team.

In addition to the significant implementation delays, an overarching concern has been the limited involvement and ownership of the stakeholders in the design and development of the BPEMS. The project was mainly driven by consultants and donors in the formative phase of the project. The project implementation team was restructured several times, while major challenges of local capacity and know-how further impeded the smooth implementation of this ambition project. (Please see: <a href="http://papers.ssrn.com/sol3/papers.cfm?">http://papers.ssrn.com/sol3/papers.cfm?</a> abstract\_id=888065).

#### Malawi

In 1995, the government of Malawi embarked on a project to computerise government accounting and financial processes. The IFMIS conceptual framework

(including technical specification) was completed in time, and the governance structure of the project (including a steering committee and a management team) was adequately set. The design and procurement process were completed in 2000 and the pilot run of the customised software started in 2001. The system was implemented in five pilot ministries and thereafter supposed to be rolled out to all ministries and departments.

The project encountered numerous difficulties and the implementation phase did not progress according to plans. The implementation team was not well resourced and was dismantled before implementation was completed. Change management and communication activities did not receive adequate attention. Other factors were overall limited stakeholder involvement and some neglect of the system by the main players, including the Ministry of Finance, the Auditor General and pilot ministries. A peer review conducted in 2004 identified 21 issues that needed to be resolved if the system was to function properly, however, which were never resolved. Following a study tour to Tanzania in March 2005, the government decided to adopt and implement an IFMIS similar to the Tanzanian solution.

Beyond technical and implementation challenges, some observers argue that there was weak political commitment to the objectives of budgetary reform, because in certain line ministries distorted individual incentives undermined the efforts to promote sound financial management. (Please see: http://www.sida.org/shared/jsp/download.jsp?f=SIDA44 83en\_CER+2005-1+web.pdf&a=3406)

#### Uganda

Uganda chose to implement a comprehensive financial management reform programme to improve budget and expenditure processes both at the central and decentralised levels. The design and development phase of the IFMIS got considerably delayed and only in 2003 was a company awarded the contract for the provision of a turnkey solution including hardware, software, a Wide Area Network (WAN) and supporting training/change management. This constituted the second attempt to set up a government-wide IFMIS with World Bank financing.

The project encountered key design problems and the pilot – run in six line ministries and four local governments – brought out a number of issues in the system's functionality as well as treasury procedures.

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The main design problem was associated with the chart of accounts that the government has approved, and the costs involved to rebuild the system were considerable. The system was put into operation with the defects unaltered. As a result, the Uganda IFMIS is performing under its potential with piecemeal, ad-hoc solutions that decrease the efficiency of the system.

Further problems encountered are common to the implementation of most IFMIS projects, including:

- Inadequate planning;
- Poor communication between implementers, donors and government;
- Shortage of management capacity and resources;
- Changes in system design without full agreement of all;
- Poorly implemented trainings.

These examples illustrate the numerous challenges involved in implementing IFMIS. Lack of high level commitment, ineffective project coordination, loose project design and planning, institutional resistance to change, inadequate technology and lack of human resource capacity are some of the factors often cited for the failure of such schemes.