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# Iraq Governance Strengthening Project

The Status of GAPTIS and Its Usage  
Level Across Governors' Offices and Provincial  
Councils in Iraq

August 2012



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# **IRAQ GOVERNANCE STRENGTHENING PROJECT**

## **The Status of GAPTIS and Its Usage Level across Governors' Offices and Provincial Councils in Iraq**

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## Abbreviations and Acronyms

ARDP	Accelerated Reconstruction and Development Program
CoA	Chart of Accounts
ERP	Enterprise Resource Planning
GAPTIS	Governorate Accounting and Project Tracking information System
GL	General Ledger
GO	Governor's Office
GUI	Graphical User Interface
IDMS	Iraq Development Management System
LGP	Local Governance Program
LGP II	Local Governance Program – Phase II
LGP III	Local Governance Program – Phase III
MoF	Ministry of Finance
MoP	Ministry of Planning
PC	Provincial Council
PDP	Provincial Development Plan
PDS	Provincial Development Strategy
SQL	Structured Query Language
VB	Visual Basic

## 1. Executive Summary

GSP team conducted an Iraq-wide assessment of the Governorate Accounting and Project Tracking Information System (GAPTIS) in the July - August 2012 interval in 15 Governors' Offices and Provincial Councils. The purpose of the GAPTIS assessment is to identify the status of GAPTIS system and the extent to which it is being used in each governor's office and provincial council. The assessment findings show that the system was never used in Wasit Governor's Office. Ten Governors' Offices reported that they had previously used the system but now completely stopped using it; namely: Baghdad, Babil, Diwaniyah, Basrah, Dhi Qar, Maysan, Muthanna, Salah ad Din, Diyala, and Kirkuk.

Two Governors' Offices, Anbar and Ninawa, reported that they were still using some of the system's interfaces. At this time, Najaf and Karbala are the only two Governors' Offices that reported using the entire system. Three PCs, Anbar, Karbala and Ninawa, reported that they receive GAPTIS generated reports due to the availability of the system in these provinces.

Technical design limitations, lack of collaboration and data sharing between departments and ineffectual official commitment to the adoption of the system were among the reported factors which influenced the decisions to stop the use of GAPTIS in 10 provinces. According to the assessment findings, the elimination of vital access to programming and troubleshooting assistance as a result of the end of the Local Governance Program (LGP) contract adversely affected the sustainability of the system in most of the provinces.

Nevertheless, despite the reported weaknesses which have not allowed the use of GAPTIS to continue in most of the provinces, there are provinces where it has continue to operate despite withdrawal of LGP technical support or any other outside agency. This points toward certain positive elements that the system seem to have offered to these provinces. Such discrepancies may cast doubt whether there were fundamental system design issues.

It was not clear, however, to what extent the budget execution process and other related human capacity and organizational development considerations were studied and analyzed to determine the right solutions to the underlying problems in the provincial budgeting system prior to the adoption of GAPTIS as an automated accounting and tracking tool for capital projects. Improvements to the existing manual budgeting system combined with adequate resources and organizational development should be addressed prior to automation adoption to ensure maximum benefit and success.

The current status of GAPTIS should offer an opportunity for the decision makers at the central and provincial levels to consider a number of alternative solutions once the underlying problems in the provincial budgeting and financial management system have been addressed. Examples of such solution options are:

- Introducing improvements to GAPTIS using more advanced development tools and a database management system compatible with a Client Server Architecture such as Structured Query Language (SQL). Based on the assessment of the study, going forward the system can continue to be utilized with certain improvement and modification to cover the reported weaknesses.
- Exploring the possibility of rolling out Ministry of Planning (MoP) Iraq Development Management System (IDMS) to the provinces after modifications to support Accelerated reconstruction and Development Program (ARDP) funded projects. This option requires a close coordination among the policy makers at central and provincial levels as well as technical input from IDMS software developers.
- Designing a new system based on open source technology to reduce the cost of investment. The availability of qualified local developers with hands-on experience in developing similar systems with a proven track record of success using open source software must be carefully assessed before considering this option. Additionally, the solution developer will need to transfer skills and knowledge to the provincial staff to be able to provide on-going support and system development.
- Considering Enterprise Resource Planning (ERP) solutions like Oracle or FreeBalance which come at a high acquisition cost. This option will require significant parallel reforms and reengineering of business processes as well as adequate resources and organizational development.

Each one of these solution options has advantages and disadvantages. Selecting one over another is really a case of weighing the advantages and disadvantages for the situation in each province.

## **2. Introduction**

The Local Governance Strengthening Project (GSP) was required to obtain the most up to date information on the operational status of the Governorate Accounting and Project Tracking Information System (GAPTIS) and its current levels of usage across the Governors' Offices (GOs) and Provincial Councils (PCs) in 15 provinces in Iraq.

Accordingly, a set of assessment tools, that are commonly applied in rapid assessment of the local government's capacity development, were developed by the GSP team. The assessment questionnaires were introduced to GSP Provincial and Regional Coordinators for discussion and feedback through two assessment orientation workshops. The workshops offered detailed explanations of the assessment objectives, methodology, structure and procedures. The first workshop was held in Hilla on Sunday July 15th, 2012 for the provincial and regional coordinators representing the South and South Central regions. The second workshop was held in Bagdad on Tuesday July 17th for the provincial teams representing the North and Central regions.

The assessment tools were also tested in Babil GO's Office before they were made available for country-wide circulation. Appropriate inputs received from the government officials in Babil and Najaf provinces were also reflected in the final design of the tools prior to the execution phase.

### **Objectives of the Assessment**

The overall objectives of the GAPTIS assessment were as follows:

- Develop clear understanding of the status of the Governorate Accounting and Project Tracking Information System (GAPTIS) and its current levels of usage as the primary tool for provincial governments to track their capital investment projects.
- Determine if the Provincial Councils (PCs) are benefiting from the GAPTIS system in performing their monitoring role over the execution of the ARDP projects.
- Explore the possibility to interface GAPTIS with Iraq Development Management System (IDMS).
- Promote the ownership of the respective levels of governance over the activities supported through the GSP program by way of informing them on the findings of the assessment and using them in future programming.

### **Methodology**

The assessment involved the use of tools and techniques for collection and analysis of information including:

1. desk study of the necessary relevant documents
2. individual interviews with the related officials
3. group consultation as per need and practicality
4. cross-verification of information
5. observation

### **Conducting the Assessment**

The assessment was conducted by Iraq GSP team with technical support from GSP Senior Budgeting and Public Finance Specialist. The assessment team was comprised of GSP Regional Managers, Provincial Coordinators and Project Specialists. The assessment was carried out in the following 15 provinces targeting both the GOs and PCs; Anbar, Babil, Baghdad, Basrah, Dhi Qar, Diwaniyah, Diyala, Karbala, Kirkuk, Maysan, Muthanna, Najaf, Ninawa, Salah ad Din and Wasit.

The assessment execution phase started on July 22nd and was concluded on August 16th, 2012. The assessment started with seeking proper approval from the targeted GOs and PCs to carry out the assessment.

Different sets of participants were interviewed during the course of the assessment from the GOs and PCs ranging from officials responsible for making related decisions, department managers, committee heads, and heads of financial, planning and budgeting departments to provincial staff members involved in the operation of the GAPTIS system.

This include participants from the GPATIS units, department associated with GAPTIS such as Planning & Follow-Up, Legal & Contracts, Technical & Engineering and Finance & Accounting.

### **Scope of the Assessment**

The three provinces of Duhok, Erbil and Sulaymaniyah in the Kurdistan Region are outside the scope of this assessment because they are not included in the year 1 GSP work plan. These three provinces will be included in the GSP scope of work after provincial council elections in these provinces.

Assessing the IT infrastructure at the GOs and PCs and introducing technical solutions to system design issues were beyond the scope of the assessment.

## **3. Overview**

The development of the GAPTIS system was initiated by requests from the Iraqi provinces to the USAID-funded Local Governance Program (LGP), implemented by RTI International, for support in monitoring the execution of capital investment projects. A large numbers of these projects were behind schedule because of their scale and magnitude making the decision-maker in urgent need for a computerized system capable of managing and tracking progress of these projects and the money spent on implementation.

Some of the provinces provided suggestions for the development of the system. GAPTIS was intended to help the provinces in the production of accurate and timely reports to be submitted to the concerned ministries to expedite the release of project fund allocations and in turn accelerate the reconstruction efforts. Additionally, the provinces were seeking to take advantage of the information presented by the system in the preparation of capital investment budgets for the coming years.

LGP technical team started working on the development of the system in 2008 using Microsoft Access database and Visual Basic programming tools. The work on the system started in Baghdad province and it was implemented next in Najaf, Karbala and Babil. The system was rolled out to all Iraqi provinces during the life of LGP II and LGP III.

The system went through a number of stages of development. GAPTIS version 2 was intended to solve problems encountered in the first version to better serve the functional requirements of the provinces.

Overall, the system was designed to achieve the following objectives:

- support provincial governments in effectively managing the execution of their capital investment budgets

- serve as a reliable source of information on the provincial level for more informed decision making
- enhance the transparency of provincial government finances.
- offers an additional support for storing information collected from the manual records in case of damage or loss.

#### 4. GAPTIS Architecture

There are essentially four main functional parts in GAPTIS architecture. Each part is mapped to a specific department in the GO through a primary interface. GAPTIS interface application was developed using Microsoft Visual Basic as an application development tool. The interface application was designed to store and retrieve data from MS Access database running on Microsoft Windows operating system. These interfaces run on client computers connected to a server computer running the main MS Access database. All computers are configured as members of a windows workgroup in a peer-to-peer network environment. Please see figure 1 for a simplified overview of GAPTIS architecture and data flow.

Documents from various department are physically brought into the GAPTIS room for data entry through each department corresponding interface. The target audience for GAPTIS generated reports are the GO, PC, MoP, MoF and other provincial agencies (See figure 1).

Each interface has its own password. These interfaces are:

- **Planning and Follow-Up Interface**

This section of the system holds information on all the projects that are implemented through ARDP fund and managed by the province. The following are examples of the type of information contained in this interface.

- The name of the project
- Year
- Source of funding
- Project classification based on the Chart of Accounts (CoA)
- Project sequence code assigned by the ministry of planning
- Sector where projects are divided by sectors such as water, education, health, etc.,
- Beneficiary shows the name of the ministerial or service directorate in the province as the beneficiary of the project
- District and Sub-district to show the administrative distribution of projects
- Project code in the Strategic Development Plan (PDS) of the province
- Contract duration
- Project start date
- Project allocation shows how much fund allocated to the project according to the investment budget
- Award amount obtained from the contract documents
- Project reserve amount

- Monitoring and supervision cost
- Project total cost shows award amount plus supervision cost and reserve fund
- Cumulative expenses shows the financial status of the project at present and what has been agreed upon so far showing the sum of payments or advances for the project
- Project planned completion rate
- Project actual completion rate

- **Legal and Contracting Interface**

Provides procurement related information on the projects. It includes bids and contracts details. This interface consists of nine sub-interfaces:

- ad announcement
- bids opening
- bids analysis
- selection
- withdrawal
- contract details
- warnings
- dispute resolutions
- contractor or company information

- **Technical and Engineering Interface**

This section or interface is used to provide information on overall progress of the project, progress on the contracts, and the factors that may be delaying the project implementation. This interface consists of eleven sub-interfaces:

- committees
- tests
- project status
- project information
- field reports
- statements
- discounts
- extensions
- installments
- withdrawal
- stops or temporary halt

- **Finance and Accounting Interface**

This section is used to enter information related to the total project cost, payments, and expenses. All financial details and type of expense should also be recorded here. This interface consists of six sub-interfaces:

- monitoring and supervision
- project reserve
- project expenses
- balance
- operational advances
- financial completion rate

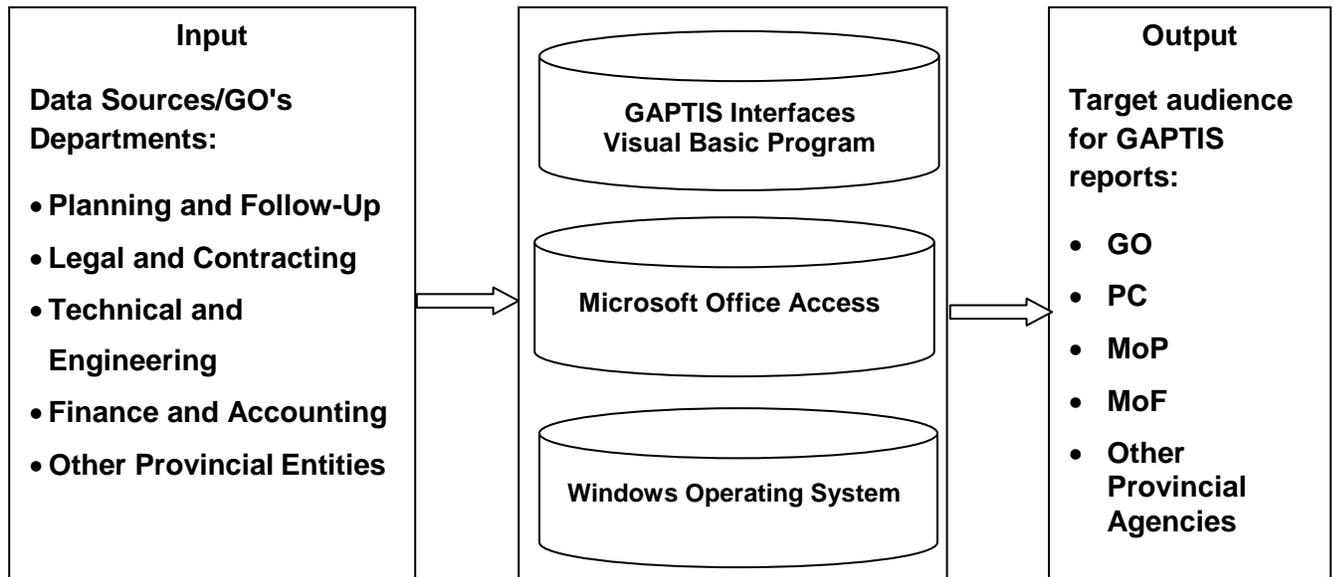


Figure 1: Simplified Overview of GAPTIS Architecture and Data Flow

## 5. Overview of the Current Status and Usage Level of GAPTIS within the GOs

The assessment results show that most of the Iraqi governors' offices stopped using the GAPTIS system and the system is currently in use in only a few GOs. The following table presents an overview of the current status and usage level of GAPTIS within the GOs.

Region	Governor's Office	GO never used GAPTIS	GO completely stopped using GAPTIS	GO is still using all four interfaces of the GAPTIS system	GO is currently using a few interfaces of the GAPTIS system	GO currently has access to IDMS****
Central	Baghdad		√			
	Anbar				√**	
South	Babil		√			
	Wasit	√				

Central	Najaf			√*		
	Karbala			√*		
	Diwaniyah		√			
South	Basrah		√			
	Dhi Qar		√			
	Maysan		√			
	Muthanna		√			
North	Ninawa				√***	√
	Salah ad Din		√			
	Diyala		√			
	Kirkuk		√			

Table 1: The table shows the current status and usage of GAPTIS at governors' offices

\* These interfaces are: Planning & Follow-Up, Legal & Contracts, Technical & Engineering, and Finance & Accounting

\*\* These interfaces are: Planning & Follow-Up, Legal & Contracts, and Technical & Engineering

\*\*\* These interfaces are: Planning & Follow-Up, Technical & Engineering, and Finance & Accounting

\*\*\*\* All GOs, with the exception of Ninawa GO, reported that they do not have access to Iraq Data Management Information System (IDMS).

## 6. Detailed Descriptions of the Current Status and Usage Level of GAPTIS within the GOs

The following is a detailed descriptions of the status of system and the extent to which it is being used in each province.

### **First: The GOs which completely stopped using GAPTIS**

Ten Governors' Offices reported that they had previously used the system but now completely stopped using it for different reasons. These GOs are: Baghdad, Babil, Diwaniyah, Basrah, Dhi Qar, Maysan, Muthanna, Salah ad Din, Diyala, and Kirkuk.

#### **Baghdad:**

Baghdad GO used the system from mid 2010 until the beginning of 2012. All main interfaces of the system (Planning & Follow-Up, Legal & Contracts, Technical & Engineering, Finance & Accounting) were used.

The GO completely stopped using the system for the following reasons:

- System design issues and the needs for system modification to better accommodate their functional requirements.
- Lack of collaboration and sharing of information between departments.

- Concerned department did not assign enough staff member to perform the required data entry tasks.
- The large numbers of projects at Baghdad GO demanded considerable time and efforts for data entry which the departments' employees were not able to provide.

**Babil:**

GAPTIS was used for the period from 1/2010 to 12/2011. All main interfaces of the system were used. The GO completely stopped using the system for the following reasons:

The GO was never able to repair a malfunction in the program causing loss of information. Babil GO was relying on LGP for programming and maintenance support. This support was not available to address this issue after the end of LGP contract.

The malfunction was described as a bug in the database preventing proper linking of database tables and fields which in turn prevented updates to information from accurately getting synchronized across system's screens.

Two interfaces were used (Legal & Contracts and Finance & Accounting) from 1/2012 to 6/2012 but the GO stopped using them for the same problem with the database. Now the system is completely halted. Meantime, the GO is relying now on in-house customized MS Access programs for tracking investment projects.

**Wasit:**

GAPTIS was never installed in Wasit's GO due to an objection from the Director of the Office of the former Governor sighting political reasons. The current Governor has a positive attitude towards the installation of the system but the end of LGP contract and lack of space and equipment put stop to all GAPTIS plans in Wasit.

Currently, Wasit GO is relying on MS Excel to track investment projects.

**Diwaniyah:**

GAPTIS was used in Diwaniyah GO from 2009 up to 12/2011. All main interfaces of the system were used to a certain extent. The GO completely stopped using the system for the following reasons:

- The system does not meet the business requirements for the GO.
- LGP team fixed some of the system design problems but some still exist.
- The program stops working intermittently
- Encountering problems with propagation of updates when making changes. This made it difficult to update information across system's screens.
- Lack of shared information or inaccuracies in information provided by related departments or committees.
- Many screens with details not needed by the GO adding unnecessary load to the system.
- Inadequate reporting system.
- System errors.

The system is not used now in Diwaniyah GO.

**Basrah:**

GAPTIS was used in Basrah GO from 12/2010 to 2/2011. All main interfaces of the system were used. The GO decided to entirely stop using the system after about two months of operation for the following reasons:

- System interfaces stopped working properly.
- Lack of built-in error checking capabilities. System was accepting illogical numbers and these invalid numbers were appearing in critical reports.
- The credibility of the system produced reports was affected due to lack of built-in error checking capabilities.
- Departments did not perform required data entry tasks.
- Lack of adequate functional and technical training.
- Historical data from previous years required for proper operation of the system was not loaded into the system and the committee overseeing the project was not able to collect the required data.

Currently, Basrah GO is relying on an alternative program to track investment projects but this program also does not satisfy the GO's needs in this area.

**Maysan:**

GAPTIS was used for the period from 2008 to 11/2011. All main interfaces of the system were used.

The GO completely stopped using the system after a virus infection to the server database. The system stopped functioning properly after formatting the hard disk.

An attempt was made to restore the system but only the Planning & Follow-Up interface was recovered but not used. The system is not used now in Maysan GO.

**Dhi Qar:**

The Governor did not authorize GSP team to conduct GAPTIS assessment because the system was not operational in the GO and the GAPTIS unit team members were reassigned to work in other units.

**Muthanna:**

GAPTIS was used from 1/2010 to 7/2011. All main interfaces of the system were used.

The GO decided to totally stop using the system after the emergence of technical problems that prevented the continuing use of the system and for lack of technical expertise to solve them.

**Salah ad Din:**

GAPTIS was used for three months from 3/2010 to 12/2010. All main interfaces of the system were used.

The GO decided to stop using the system for lack of follow-up from the senior management level which originally adopted the system and the emergence of technical problems.

Attempts were made to solve some of the technical issues but the problems continued to build up without solutions. There were some delays in entering the required data into the system. All these factors caused the GO to abandon the use of the system.

**Diyala:**

Diyala GO used the system from 9/2009 to 1/2012. All main interfaces of the system were used.

The GO entirely stopped using the system for the following reasons:

- New government leadership
- Lack of commitment to adopt the system
- Lack of departmental collaboration in sharing data and required reports

**Kirkuk:**

The system was partially used in Kirkuk GO from 2010 until 2011. Only one interface was used; the Finance and Accounting interface. The reported reason for discontinuing the use of the system is system failure and malfunctions.

**Second: The GOs which are partially using GAPTIS**

Despite reported weaknesses which have not allowed the use of GAPTIS to continue in most of the provinces, there are provinces where it has continued to operate. Two Governors' Offices in Anbar and Ninawa reported that they were still using some of the system's interfaces. One of the two GOs, Ninawa, made significant modification to the system changing the system database from MS Access to FileMaker.

**Ninawa:**

GAPTIS is partially used in the GO since 3/2010. Three interfaces are being used now: Planning & Follow-Up, Technical & Engineering, and Finance & Accounting.

Ninawa GO was satisfied by the performance of these interfacing after the modifications to the system. The following reported comments may explain why:

- The system meet the GO requirements for the investment projects.
- After moving to the new database management system (FileMaker), the system is now fast and allows for adding new screens and new fields whenever needed.
- The system contributed to raising the level of completion rate of investment projects credit to certain project tracking reports indenting projects behind schedule which allowed for timely corrective measures.
- The system generated reports helped in improve the monitoring and supervision activities of the projects where project engineers rely on GAPTIS reports to do their jobs

All projects data in Ninawa province, in particular technical and financial data is available in detail to all related directorates and departments in the province. The system interfaces were customized in Ninawa province to meet the needs and work requirements of the various ministerial service directorates as well.

GAPTIS was installed in all Ninawa ministerial service departments in addition to the project management directorates in the Governor's Office. The various directorates directly enter their technical and financial data into the system.

Information is sent out to the project management department in the Governor's Office via email on a weekly basis where information is examined and combined and presented in the form of projects reports for the province. The final project reports are printed out for circulation across the province. With the exception of the financial reports, the GAPTIS produced reports are accepted as a good source of information.

It should be pointed out the GAPTIS system in Ninawa uses a different database called (FileMaker) instead of MS Access allowing for more possibilities and high degree of information security and data sharing through computer networks as well as ease of use.

**Anbar:**

Anbar GO started to use GAPTIS in 9/2009. Three interfaces are being used at this time: Planning & Follow-Up, Legal & Contracts, and Technical & Engineering.

Anbar GO was satisfied by the performance of these interfaces. The following reported comments explain why:

- The system capabilities and features meet the GO requirements for the investment projects.
- The system contributed to raising the level of completion rate of investment projects. The realization on the part of contractors and companies implementing projects that their performance was being closely monitored and status reports about projects behind schedule were being generated and circulated triggered improved levels of performance.
- The system contributed to the improvement in the decision-making process with regard to investment projects by allowing the GO to issue warning and sometimes withdraw contract awards based on GAPTIS reports.

In contrast, the GO stopped using the Finance & Accounting interface in 8/2011. The reported reasons for stopping using the Finance & Accounting interface are:

- End of LGP contract. LGP support and presence of LGP team members on the ground was contributing to the continuity of the full operation of GAPTIS. Anbar's LGP team leader and few team members were playing a key role in coordinating and following up with the finance and accounts department in the GO to obtain the financial data required for GAPTIS operation.
- GAPTIS financial reports like trail balance and analysis reports were generated late and only after being generated from the manual system because the financial data was entered into the manual systems first.

- The absence of any assigned employees from the finance and accounts department to work with the GAPTIS unit made it difficult to obtain information.
- Lack of an accountant to work in the GAPTIS unit.

It should be pointed out that the GO leadership issued formal instruction for the adoption of the system. Data entry procedures were performed under the direct supervision of the GAPTIS unit manager. GAPTIS unit team members were dedicated for GAPTIS related work alone.

### **Third: The GOs which are using all parts of GAPTIS**

At this time, Najaf and Karbala are the only two Governors' Offices that are using the entire system. This should reflect certain positive elements that the system seem to have offered to these provinces.

#### **Najaf:**

GAPTIS has been used in Najaf GO since 7/2009. It is hosted by the Reconstruction Commission which is part of Najaf GO.

All main interfaces of the system (Planning & Follow-Up, Legal & Contracts, Technical & Engineering, Finance & Accounting) are being used now.

The following remarks provided by Najaf GO should offer explanations for the continued use of the system there:

- The system meets the GO requirements for the investment projects.
- The system tracks projects implemented by the GO and produces status reports about projects completion rate.
- The produced reports are distributed to relevant decision makers and departments.
- The produced reports offer actual versus planned project completion rates.

There were some problems reported with the legal and contracting interface along with expression of the need to move from MS Access database to SQL and from VB to Java or other advanced programming tools. The assessment also revealed variations between the reports produced by the GAPTIS system and the reports produced by the manual system.

#### **Karbala:**

GAPTIS has been used since 1/2010. All main interfaces of the system (Planning & Follow-Up, Legal & Contracts, Technical & Engineering, Finance & Accounting) are being used now.

The assessment revealed a strong satisfaction by Karbala GO with the performance of the system as follows:

- The system meets the requirements for investment projects
- GAPTIS unit distributes GAPTIS generated reports to relevant department to keep them informed about projects progress

- The system helps the Planning and Follow-Up department with in the preparation of capital investment budgets for the coming years.
- GAPTIS reports were helpful in overseeing investment projects

The assessment also revealed that there was an active leadership involvement in the adoption of the system. Data entry procedures were more organized compared to other GOs. Some of the sub-interfaces or screens under the Legal & Contracts and Technical & Engineering were not fully used for lack of information.

## **7. The Current Status and Usage Level of GAPTIS within the PCs**

The provincial councils have an active role in approving the capital investment budget or the project list referred to them by the Governors and in monitoring the implementation of these projects. It is critical for the councils to have an effective electronic reporting system in place to help them fulfill their mandate.

One of the objectives of the assessment is to determine to what extent the provincial councils are benefiting from the use of GAPTIS reports in performing their roles in monitoring the execution of ARDP-funded projects.

The assessment results show that the system was not installed in any of the provincial councils. The PCs relied on the GOs to provide them with GAPTIS generated reports.

One of the implications for stopping the use of GAPTIS system in most of the provinces is that the PCs in these provinces would not be able to receive GAPTIS reports making the system of no benefit to them in carrying out their mandate in monitoring the execution of the capital investment budget. This situation compelled the PCs to continue to rely on the existing manual reporting channels to monitor projects performance.

The assessment results indicate that the following PCs do not receive GAPTIS reports at this time: Wasit, Baghdad, Babil, Diwaniyah, Basrah, Dhi Qar, Maysan, Muthanna, Salah ad Din, Diyala, and Kirkuk.

Three PCs reported that they receive GAPTIS generated reports namely Anbar, Karbala and Ninawa. The GOs in these provinces still use some or all of the four interfaces of the system. Interestingly, Najaf PC reported that the PC does not receive GAPTIS reports while respondents at the Najaf GO reported that the GO sends GAPTIS reports to the PC. The three PCs indicated that they receive reports on companies that are implementing projects and the percentage of projects completion.

All PCs, with the exception of Ninawa PC, reported that they do not have access to Iraq Development management System (IDMS).

The following table summarizes the findings on the current status and usage of GAPTIS at target provincial councils.

Region	Provincial Councils	PC is receiving GAPTIS generated reports from the GO	PC is benefiting from GAPTIS generated reports in performing its role in monitoring the execution of ARDP-funded projects	PC currently has access to IDMS
Central	Baghdad			
	Anbar	√		
South Central	Babil			
	Wasit			
	Najaf			
	Karbala	√	√*	
	Diwaniyah			
South	Basrah			
	Dhi Qar			
	Maysan			
	Muthanna			
North	Ninawa	√	√**	√
	Salah ad Din			
	Diyala			
	Kirkuk			

Table 2: The table shows the current status and usage of GAPTIS at provincial councils

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\* Karbala PC receives reports on contracted companies and projects completion rate

\*\* Ninawa PC indicated limited benefit due to lack of fully integrated information management system

## 8. Summary of the Assessment Key Findings

The following is a summary of the assessment main findings:

### Inter-Agency Collaboration

GAPTIS adopts the notion of sharing of tasks and responsibilities among departments in the Governor's Office giving each department a special interface to ensure coordination and sharing of information.

Yet, the assessment revealed lack of collaboration and sharing of information between departments. The information did not flow as it was intended which adversely affected the ability to obtain required information about the projects in order for the system to function properly.

The system did not have data integration capabilities where data can be electronically accessed from different type of systems or departments. The departments' employees were required to physically hand in or carry the documents to GAPTIS computers. There were a number of reported concerns about the possibility of losing some important contractual or financial documents.

Others justified lack of cooperation between departments on lack of time or the absence of assigned employees to perform the required tasks.

Eventually, this situation forced senior managers to continue to rely on the manual system in the various departments for information to monitor projects performance.

#### Leadership and Commitment

Implementing automated solutions is about change, and requires strong leadership and commitment to succeed.

The assessment results did not reveal sufficient commitment on the part of the provincial leadership to deal with disruptive change, to persevere when benefits take time to emerge, to respond when things go wrong, and to establish visions and plans for the future.

Some GOs approved the adoption of the system but there was little or no evidence for creating incentives to encourage inter-agency collaboration or making the enforcement mechanism more rigorous.

#### Data Entry Procedures

At the beginning of each year, the approved projects list by MoP is entered into the system. Contractors or company information is entered after contract awards.

GAPTIS units were established in most GOs to facilitate the process of obtaining the required information to enter into the system. Some GOs however did not establish such units for lack of available staff members to work in the GAPTIS unit as was the case in Babil's GO.

In general, the approved investment plan or capital project list, projects contractual documents, projects feasibility studies, expense vouchers and journal vouchers are largely the main source documents used with data entry procedures.

With the exception of the GAPTIS system in Ninawa, no ministries investment project data is entered into the GAPTIS system. Only ARDP-funded project data is entered.

Some of the GOs reported missing necessary fields or expressed the need to add certain screens to the system to accommodate additional information about projects starting from the feasibility studies to handing over of the project to the beneficiary.

The assessment showed that the data entry team was not dedicated solely for this tasks. members of the data entry team were attending to other duties and tasks. This resulted in significant interruptions to the operation of the system.

GAPTIS client computers were occasionally used for other activities they were not intended for.

Sometimes, after completing data entry tasks, information records go through changes or updates in the manual system. Such changes may never get reflected into GAPTUS creating mismatch of information between GAPTIS and the manual records.

### System Performance

On the functional or procedural side, lack of the availability of complete, appropriate, relevant and timely data was one of the key factors that influenced the performance of the system.

On the technical side, design problems and lack of technical supports were among the factors that affected the performance of the system. The assessment results show that most of the GOs relied on LGP technical staff to keep the system running. Significant number of provinces reported frustration or dissatisfaction with the performance of the system. Some provinces were satisfied with the performance of the system like Karbala GO.

The system was eventually abandoned in most of the provinces for mainly functional design issues and lack of technical support to respond in a timely manners to the reported technical problems.

GAPTIS relied in its design on MS Access database. This is a very inexpensive package which is easy to use and it is part of MS Office products. Most of the work in Access is done through wizards and GUI tools. One can quickly develop a small, single user database with this one. In fact, MS Access faces the following shortcomings:

- It is not made for a Client Server Architecture as it lacks data integrity tools to ensure that data is being transferred properly
- It is not built for a multitude of users accessing it, as errors can occur if two users access the same record simultaneously
- It cannot handle large amounts of data. All of the data in the database is stored in a single file and that has its limitations

MS Access while good for small businesses is not suited for public sector enterprise level. Even Microsoft acknowledges this as they have their own enterprise solutions.

This should explain some of the reported users' complaints about system errors and technical problems.

There were a number of positive remarks from the assessment's participants about the speed of the system. The system's interfaces were easy to use and to navigate through them. Errors messages were helpful in guiding users to solving data entry errors.

### Business Continuity

Of major concern to national governments and certainly to provincial governments is the ability to implement a failsafe information management systems that can cope with threats or unforeseen circumstances based on a well thought-out business continuance plan.

In GAPTIS case, the results of the assessment revealed that most of the GOs heavily relied on LGP technical staff for programming and troubleshooting assistance.

Responsibility arrangements should have been clarified and agreed upon to ensure that it is clear who is responsible for the sustainability of the system's operation based on a mutually agreed upon business continuance plan after the end of LGP contract.

### System Recovery

The assessment results did not capture sufficient measures in place for system backup and recovery. It appears that not enough considerations were given to the consequences for loss of data. In Maysan, for example, the GO completely stopped using the system after a virus infection to the server database. After formatting the hard disk drive, the GO was not able to fully restore the system and stopped using it.

### System Maintenance

The provinces enjoyed uninterrupted access to programming and troubleshooting assistance during the life time of LGP project. After that, most of the provinces reported frustration for lack of qualified technical support to keep the system running.

The GOs depended on their provincial IT staff for system maintenance and occasionally on external local support from IT experts familiar with GAPTIS design and operations. The results were mostly unsatisfactory.

### System Reports

The production of informative and accurate reporting should be viewed as the cornerstone of a well functioning computerized system. GAPTIS generates different types of automated reports. Some of these reports were customized to meet individual needs of provinces. Generally the target audience for GAPTIS reports are the GO, PC, MoP, MoF, and other provincial agencies.

The following are examples of reports generated by GAPTIS:

- Trial Balance
- Expenditures, revenues, advances
- Projects monthly expense report
- Bank cash certificate
- Un-cashed checks list

- Analysis of finance and projects
- Projects expenditure and completion tracking report
- Closing Accounts Report
- Budget execution by sector and district
- Planning information report
- Contractual information report
- Technical information report
- Distribution of projects by sector
- Distribution of projects by administrative units
- Projects Extension Report

The assessment results show that in a number of provinces there was no clear instruction to adopt reports generated by GAPTIS. Some provinces reported that senior management and concerned authorities do not normally make request for GAPTIS produced reports.

### General Ledger

The General Ledger (GL) module in computerized accounting systems normally serves as the central repository for all transactions that have been entered into the system, whether they are expenses, revenues, purchasing accruals, or others. In other words, every transaction entered into the system is posted to the General Ledger, allowing the organization to create periodic financial statements to see where it stands financially up to a given date.

GAPTIS design however does not include a general ledger module. The system was never intended to be used as an accounting system. It was primarily designed as projects tracking tool. The trial balance report is produced based on "Expense Vouchers" data that is entered directly into the system. A trial balance should be a summary of balances of all accounts recorded in the GL to check for arithmetic errors in the ledger accounts; help in locating errors; and provide a basis for the production of informative and accurate financial reports.

### System Documentation

There is a User Guide documentation (Functional Support Manual) available for system operations. One set of Admin Guide documentation (Technical Support Manual) for each interface of the system should be available at all sites in soft and hard copies.

### Training and Requisite Competencies

Lack of adequate functional and technical training and requisite competencies were among the key noted findings of the assessment.

For example, lack of IT knowledge and skills among officials and users/clients/operators; lack of awareness among clients; high turnover among staff who received GAPTIS training all impacted the operation and sustainability of the system.

The assessment results show continued needs for three types of trainings:

*Functional Training:* This includes training the users on how to use the system software. It should include the development of a comprehensive user-training materials for all relevant staff in the provinces. It should also include a clear definition of the methodology for long term sustainability in training and capacity.

*Admin Training:* This includes a comprehensive admin training program for the IT staff within the provinces and the designated technical team members responsible for the operations and maintenance of the system.

*Programming Training:* This includes a comprehensive software development training program to transfer necessary skills and knowledge to the provincial IT staff to be able to provide on-going support and system development to meet current and future functional requirements in each province. This may include training in the area of database development, database management and visual basic programming or other more advanced development tools.

#### Opportunities for system improvement

The experience of Ninawa GO in introducing significant improvement to the system using FileMaker and the experience of Karbala GO in generating new reports which were not in the original design of the system confirm that the system could be developed further to improve its performance. The following are a few suggestions offered by some of the GAPTIS IT team members:

- Change the database management system from Access to SQL.
- Change the programming tools from Visual Basic to Visual Studio .NET or Java or other more advanced development tools.

#### Opportunities to Link GAPTIS with IDMS

The current situation of GAPTIS creates significant constraints on exploring the possibility of interfacing GAPTIS to IDMS. The assessment results show that GAPTIS is not used in 10 GOs and only used partially in 2 GOs and one GO never used it. Only two GOs, Najaf and Karbala, reported using all 4 main interfaces of the system.

Nonetheless, the possibility of interfacing GAPTIS with IDMS should be evaluated by system software developers. After obtaining the necessary technical inputs from software developers and the required support from policy makers at the central and provincial levels, it would be rational to explore the possibility of rolling out MoP IDMS to the provinces to support the execution of ARDP-funded projects.

#### IT Infrastructure

Assessing the provincial IT infrastructure was not part of the scope of this assessment. It is therefore highly recommended to conduct such assessment for future programming activities and technical support.

In the process of assessing the status of GAPTIS, it was observed however that the need for improvements in the overall conditions of the IT infrastructure in the provinces as a prerequisite for future automation of the existing manual systems in each province. This should include the installation of client/server computer networks to allow for improved sharing of resources and enhanced overall productivity and efficiency.

## **9. Conclusions and Recommendations**

The GAPTIS experience in Iraq confirms the assertion that introducing a new financial management system to manage the execution of the provincial investment budget is a complicated task, labor intensive and high risk. Elements of risks include: political environment, understanding and commitment of senior level policy makers, human capacity, skills and knowledge, funding, donors' resources and support, hardware/software, organization/people, and business processes.

Nevertheless, it is a task that needs to be taken as part of a long process of provincial budgeting system reform at the provincial and local levels. This process could take years to fully implement, typically costs millions of dollars, and has substantial long term upgrades and maintenance cost. The process should start with reforming the existing manual budgeting system first. Business processes and procedures should be fully functional in a manual system before attempts are made to automate them. Automating an inefficient process will not transform it into an effective one.

There are however profound benefits to be gained from introducing a computerized provincial planning and budgeting system such as: better budget planning, better control over budget execution, improved recording and processing of financial transactions, up-to-date and timely financial reports, better decision making and strategic planning, more effective transparency and accountability mechanisms, and overall enhanced efficiency.

While GAPTIS may have been the most practical answer to the needs and circumstances that existed at the time it was developed and deployed, the reality today is that most of the provinces have abandoned it for different reasons.

This should create an opportunity for the decision makers at the central and provincial levels to consider an alternative solution that truly meet the functional requirements of the GOs in the planning and execution of provincial capital investment budget. Keeping in mind that before considering alternative technology based solutions, underlying challenges of human capacity, technical knowledge, and financial management system effectiveness need to be fully considered. If the necessary skill sets are lacking, if financial management systems are deficient, software and hardware cannot guarantee success.

International experience and best practices suggest that implementing technological solutions will require significant parallel reforms and reengineering of business processes as well as adequate resources and organizational development.

If, on the other hand, there is an urgent demand for an immediate computerized solution to manage the execution of ARDP-funded projects, there are a number of solution options available to choose from keeping in mind that each solution has advantages and disadvantages depending on the specific functional requirement of each province.

Examples of such solution options are:

- Exploring the possibility of rolling out MoP IDMS to the provinces after the necessary modifications to the IDMS to support the execution of ARDP-funded projects. This option requires technical input from IDMS software developers as well as support and a close coordination among the policy makers at the central and provincial levels.
- Introducing improvements to GAPTIS using more advanced development tools and database management system compatible with a Client Server Architecture such as SQL. Ninawa GO made a reasonable attempt in this direction using FileMaker as a database engine with a GUI-based interface.
- Designing a new system based on an open source solution to reduce the cost of investment. Open source software is especially attractive to developers, since the source code is freely and easily available. Additionally, open source software is increasingly popular with small systems integrators.

However, open source software should not be thought of as simply free software. Even though individual software components are available for free, most open source vendors sell add-on products that tie all components into a more fully functional application. Licenses and support costs are low (but not free). Do not be lured by these advantages lightly — open source software projects have risks and issues that are very different from closed source vendors.

The availability of qualified local developers with hands-on experience in developing similar systems with a proven track record of success using open source software must be carefully assessed before considering this option. Additionally, the solution developer will need to transfer skills and knowledge to the provincial staff to be able to provide on-going support and system development.

- Considering ERP solutions like Oracle or FreeBalance which come at a high acquisition cost. It is highly recommended that such options should be considered only after reforming the existing manual planning and budgeting systems. Please see Annex 3 for a high level framework for implementing a computerized provincial budgeting and accounting system.

Architecting and implementing enterprise planning and budgeting solution is still a complex and costly endeavor, and the goal of plug-and-play, or out-of-the-box, solutions remains elusive. Still, given the high visibility of ERP solutions and the high profile of its users, Iraq is better off with a mature and stable solution from a leading ERP vendor.

One fact remains clear and undisputed: Iraq provinces need a strategic framework for reforming the existing planning and budgeting system prior to automation. Eventually, the provinces will need to have a computerized budgeting and accounting system with on-line access and real time updated centralized database for all provincial and local government spending units. Such system usually allows for computerization of public expenditure management processes including budget formulation, budget execution, and accounting. Local governments around the world have increasingly started to use these computerized systems as tools for managing their budgets and accounting operations.

**Annexes**

**Annex 1 - GAPTIS Assessment Tool for the GOs**

**Current Situation Assessment Tools**

**GAPTIS Status in the Governor's Office**

*Final Version, 17 July, 2012*

Date: \_\_\_\_\_

<b>Province:</b>	<b>Department/Section:</b>
<b>Participants Names, Titles, Departments/ Sections:</b> 1. 2. 3.	<b>Contact Information:</b> 1. 2. 3.
<b>Interview Date:</b>	<b>Interview Location:</b>
<b>Provincial Coordinator:</b>	<b>Contact Information of Provincial Coordinator:</b>
<b>GSP Regional Manager:</b>	<b>Contact information of GSP Regional Manager:</b>

**First: Questions about the current status and usage level of GAPTIS in the GO**

1. What is GAPTIS current status and usage level in the GO? Please, select one of the following options:

GAPTIS has never been used in the GO for the following reasons?

.....  
.....

In the past, GAPTIS was fully used for the period from ..... to ..... All main interfaces of the system (Planning & Follow-up, Legal & Contracting, Technical & Engineering, Finance & Accounting) were used. Then the GO completely stopped using the system for the following reasons:

.....  
.....

In the past, GAPTIS was partially used for the period from ..... to ..... The interfaces which were used are:

Planning and Follow-up                       Legal and Contracting  
 Technical and Engineering                       Finance & Accounting

Why were only these interfaces used? Why did the GO stop using them?

.....  
.....

Currently, GAPTIS is fully operational in the GO since -----(date). All interfaces are currently being used for the following reasons:

.....  
.....

Currently, GAPTIS is being partially used in the GO since .....(date) and only the following interfaces are being used:

Planning and Follow-up                       Legal and Contracting  
 Technical and Engineering                       Finance & Accounting

When did the GO stop using these interfaces? Why?

.....  
.....

2. If GAPTIS is not used in the GO, is there another system used for tracking investment projects? If Yes, what is that system and does it meet your needs?

.....  
.....

3. If there is no system used for project management, are there plans for using specific system in the near future? If yes, can you give us more information on your plans?

.....  
.....  
**Second: Questions about the departments associated with GAPTIS operations**

1. Have any official instructions been issued requiring the use of GAPTIS in the GO? If Yes, who issued such instructions?

.....  
.....

2. Which version of GAPTIS is being currently used by the GO?

.....  
.....

3. Who is responsible for the operation and maintenance of GAPTIS in the GO? What is their role?

.....  
.....

4. Which are the GO's departments/sections/units associated with GAPTIS operations? What is the role and responsibility of each department or unit?

.....  
.....

5. Can you assign representatives from these sections to work in a single structure or unit devoted for GAPTIS functions?

.....  
.....

6. Is there a unit specifically established for GAPTIS activities? If No, please specify why.

.....  
.....

7. Is there a room specially designated for GAPTIS staff and equipment? If No, please specify why.

.....  
.....

8. If the GO has a GAPTIS unit, is there a manager for the unit?

.....  
.....

9. Does the manager of the GAPTIS unit coordinate with other related departments or sections to make sure that information is accessible to GAPTIS unit staff members?

.....  
.....

10. If there are problems of getting information from related sections/units, will the manager contact managers of these sections/units to solve such problems? If No, please specify why.

.....  
.....

11. Does the GAPTIS unit manager supervise the data entry process to ensure completion on time and correctly?

.....  
.....

12. How many employees are working in the GAPTIS unit?

.....  
.....

13. Is the number of staff responsible for the data entry process enough?

.....  
.....

14. Are there other tasks assigned to employees working on the data entry process?

.....  
.....

15. What is the status of the IT infrastructure and communications in the GO? Does the GO have a computer network? If there is, what is the operating system used? How many servers and clients (users) does the GO's computer network have?

.....  
.....

16. Are the GAPTIS master database ( server) and the GAPTIS clients (user computers) in one location?

.....  
.....

17. Are the GAPTIS client computer stations linked to the same source of information (ie GAPTIS master database server)?

.....  
.....

18. What applications and hardware and software that were used in system design? Does the system support further development and improvement? Who provides system technical training, programming training and functional training the use of the system? Who provides system maintenance?

.....  
.....

19. Do you use GAPTIS computers for other uses?

.....  
.....

20. Have you assigned one employee to work with only one designated system interface of the GAPTIS such as Planning and Follow-up, Legal and Contracting, Technical and Engineering or Finance and Accounting?

.....  
.....

**Third: Questions about data entry procedures**

1. What are the procedures used in collecting data for data entry into the system?

.....  
.....

2. Is there collaboration between the GAPTIS team and the relevant departments to ensure that all the required data has been entered?

.....  
.....

3. Do you think that the interfaces of the system are easy to use?

.....  
.....

4. Is it easy to move from one interface to another?

.....  
.....

5. What additional information you would like have added to the interfaces currently in use?

- |    |    |    |
|----|----|----|
| A- | B- | C- |
| D- | E- | F- |

6. Have you done any modifications or updates to GAPTIS in your GO for further development and enhancement? If Yes, what are these updates?

.....  
.....

7. Are these updates done by the GO's staff members?

.....  
.....

8. Have you been using external experts or firms for upgrade or updates to the program? If Yes, who are these experts?

.....  
.....

9. How easy is it to correct errors in case of data entry errors?

.....  
.....

10. In case of input error, do you find alert messages useful for identifying the errors and how to handle them?

.....  
.....

11. In the event of a malfunction in one of the system's devices, is maintenance done in a timely manner to avoid down time at work? if the answer is no, please explain why.

.....  
.....

12. What are the years of the investment projects which were into the GAPTIS system? what is the number of projects for each year? Which department is responsible for entering the data into the system?

.....  
.....

**Fourth: Questions about GAPTIS generated reports**

1. Please indicate the types of reports generated by GAPTIS system? List the headings for each report and briefly describe its purpose?

.....  
.....

2. Does the GAPTIS system meet the Ministry of Finance (MoF) financial reporting requirements?

.....  
.....

3. If not, what are the financial reports required to meet the requirements of the Ministry of Finance?

- |    |    |    |
|----|----|----|
| A- | B- | C- |
| D- | E- | F- |

4- Are the reports generated by the GAPTIS sent to the MoF in a timely manner? If the answer is no, please explain why?

.....  
.....

5- Does GAPTIS meet the financial reporting requirements of the GO?

.....  
.....

6- If the answer is no, what are the required reports that should be generated by the GAPTIS to meet the MoF requirements?

- |    |    |    |
|----|----|----|
| A- | B- | C- |
| D- | E- | F- |

7- To whom in the GO are these reports submitted? Please attach a blank form of the report, if possible.

.....  
.....

8- Are the reports generated and submitted to the GO in a timely manner? If No please explain why.

.....  
.....



3. Do you face any challenges or difficulties in the technical operation of the system? If the answer is yes, please explain the nature of these difficulties and any suggestions to overcome them?

.....  
.....

4. Are ministerial investment projects entered into GAPTIS? If No, please explain why.

.....  
.....

5. Can new interfaces be added to accommodate investment projects for ministries?

.....  
.....

6. How flexible is the system in absorbing all investment project types whether projects from provincial investment budget or ministerial investment projects? Can the system accommodate the size of the data to be entered?

.....  
.....

7. How do you evaluate the system in terms of speed during data entry or reports production?

.....  
.....

8. Who is responsible for following-up on ministerial investment projects and how is that done?

.....  
.....

9. Are there projects or projects related information necessary for the GO but it is not possible to enter into the GAPTIS system?

.....  
.....

**Sixth: Questions about training and skills development for GAPTIS team**

1. Who is responsible for following-up on the technical needs of the staff members working on GAPTIS and provide them with additional training to meet their needs?

.....  
.....

2. What kind of capacity-building training does the GO offer to its GAPTIS team members? Who conducts such training and what are the training topics?

.....  
.....

3. Do you think GAPTIS team members need more training on the use of the system?

.....  
.....  
**Seventh: Questions about the opportunities to link the GAPTIS system with other systems**

1. Is Iraq Development Management System (IDMS) operational and used within the GO?  
.....  
.....

2. If the GO is using IDMS, have the target employees been trained on how to use IDMS?  
.....  
.....

3. If the GO uses IDMS, what department/sections/units use this system? What are the areas in which this system is used?  
.....  
.....

4. Do you think the IDMS at the MoP can provide the GO with the same information provided by GAPTIS?

Yes                      No                       I don't know                     

5. If the answer is no, what information the GAPTIS can provide and the IDMS cannot?  
.....  
.....

6. If the answer is no, what information provided by IDMS and are not available through the GAPTIS system?  
.....  
.....

7. Is there a possibility to link GAPTIS to IDMS in your province? If Yes, what is the benefit of this to the province?  
.....  
.....

8. Is there an opportunity to connect GAPTIS to GIS? What other systems can be linked to GAPTIS?  
.....  
.....

**Eight: Questions about GAPTIS role in projects monitoring and control**

1. Has the GAPTIS system contributed to raising the level of completion rate of investment projects?  
.....  
.....

2. Has GAPTIS contributed to the improvement in the decision-making process with regard to investment projects? If Yes please explain through some examples?

.....  
.....

3. Are you using GAPTIS reports in overseeing investment projects? Has the system contributed to an increased in the level of accountability and transparency?

.....  
.....

4. Are the financial reports generated by the GAPTIS audited?

.....  
.....

5. Who are the people or sections or units in the GO which conducted the audit and what is the role of each one?

.....  
.....

6. Do you send GAPTIS reports to the Audit and Internal Control Unit? Does this Unit make use of these reports?

.....  
.....

7. Is there any monitoring agency from outside the GO that monitor or oversee the investment projects currently under way in the province through the use of GAPTIS reports? If Yes, what are these monitoring agencies?

.....  
.....

## Annex 2 - GAPTIS Assessment Tool for the PCs

The objective of this survey is to determine whether the Provincial Council (PC) is benefiting from the GAPTIS system in performing its monitoring role over the execution of the ARDP projects.

1- Is GAPTIS currently installed in the PC to monitor the implementation of the investment projects?

Yes

No

2- If the answer is NO, does the PC use another system (manual or electronic) to monitor the implementation of investment projects? If yes, what is that system?

.....  
.....

3- Does the PC receive copies of GAPTIS generated reports from the GO? What kind of reports?

.....  
.....

4- Who receives such GAPTIS reports at the PC? To which committees the reports are delivered? How do the committees use and benefit from these reports?

.....  
.....

5- Are these reports accessible to citizens?

.....  
.....

6- Are these reports submitted to the PC in a timely manner on specific dates? If NO, please explain why not?

.....  
.....

7- Please attach blank templates of these reports

.....  
.....

8- How does the PC make use of the reports generated by GAPTIS in performing its monitoring role and in making decisions over the capital investment budget?

.....  
.....

9- Are there reports needed by the PC that GAPTIS cannot generate at this time? Can the PC obtain such reports from other systems?

.....  
.....

10- Can the PC access the IDMS currently used by MoP? If Yes, how does the PC benefit from the IDMS?

.....  
.....

11- Does GAPTIS generate reports and provide information which the IDMS cannot? If YES, what are these reports?

.....  
.....

12- If IDMS is used by the PC? What is the information it can provide that GAPTIS cannot?

.....  
.....

## **Annex 3 - Framework for Implementing Computerized Provincial Budgeting System**

This quick note intends to offer technical clarifications and brief comments involving introducing a computerized provincial budgeting system.

The implementation of a computerized provincial budgeting and accounting system is carried out in phases over extended period of time and guided by well established international standards and best practices. Generally, there are four main phases that can be identified in the process of implementing these types of automated systems that would need to be managed structurally on a component basis: preparation, design, procurement, and implementation. These phase should be regarded as part of a long process of reform. They will require significant parallel reforms and reengineering of business processes as well as adequate resources and organizational development.

Examples of some of the activities that take place in each phase are as follows:

### **Phase 1: Preparation**

- Initial meetings with stakeholders.
- Comprehensive review of existing legal and regulatory framework. Examination of existing financial accounting policies and requirements established for provinces by national and provincial laws and regulations.
- Investigation of the availability of a provincial unified and approved chart of accounts (CoA) and assessment of its compliance with international standards.
- Detailed study of current manual system and identification of provincial functional requirements, priorities, and constraints.
- Detailed analysis of existing financial processes and procedures. Examination of financial forms and reporting requirements.
- Introduce improvements in procedures and practices supported by a suitable legal and regulatory framework and taken into account modern principles of public finance.
- Amended laws and regulations are drafted and presented to appropriate authorities for adoption.
- Analysis of business models and functional requirements
- Prepare a financial management and accounting procedures manual
- Preliminary concept design including an institutional and organizational assessment

- Secure government adoption and approval of the implementation of the system.

### **Phase 2: Design**

- Functional specifications and detailed systems architecture are developed
- Conceptual specifications translated to logical design
- Network and communication architecture is developed
- System security plan is developed
- Disaster recovery plan is developed
- Coding block for the CoA is confirmed
- Organizational and staffing issues are worked out
- Develop full implementation plan
- Prepare tender documents / requests for proposal (RFP).

### **Phase 3: Procurement**

- Issue tenders for hardware and software and associated requirements
- Evaluation of bids and award contract
- Hardware and software are procured

### **Phase 4: Customization, Pilot and Implementation**

- Detailed action plan for phased implementation is developed.
- Hardware environment with operating systems is setup
- Configuration analysis and specification of any additional IT, infrastructure, and communication requirements completed
- The software applications are installed and configured
- Agreed customization and configuration of the system
- Chart of Account is loaded
- Financial data loaded
- New business processes implemented. Gap analysis mapping. Customization and procedural changes are specified.

- Training of provincial staff
- Change management processes completed
- System and user acceptance tests conducted
- Pilot run - parallel run of the system, resolve initial problems and evaluate system performance for roll-out
- New system audited and certified
- Budget and final accounts audited and certified
- Roll-out system to other provinces
- Phased implementation of additional modules
- Help desk implemented and system documentation and user manuals produced
- New systems fully operational. Discontinue old systems
- Strengthening of internal system support and phasing out consultant/contractor support
- Handover processes completed.

These steps should serve only as a necessary management tool to create a direction and guide the entire implementation process from start to finish. Yet, international experience suggests that there is a risk of failure if not managed properly.

Successful implementation would require government commitment and management support at the highest levels to ensure that the change process is completed smoothly. It would require the development of project management and technical support units at the central and provincial levels for implementation and sustainability of new systems. It would require building institutional capacity and technical skills starting from the preparation phase. The absence of a wide range of parallel reforms and improvements in business processes and practices required by the computerized provincial planning and budgeting system or insufficient resources or lack of organizational development all can jeopardize the implementation efforts. In short, implementing computerized provincial budgeting system is a complex task and the participants need to be fully aware of the magnitude of this undertaking.