

**Public Sector Modernisation
Through The Treasury Accounting
and Financial Information System
(TAFIS) Project**

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TECHNICAL PAPER

1.0 Objectives

This paper focuses upon the tenets of the Government of His Majesty the Sultan and Yang Di-Pertuan of Brunei Darussalam in tending towards a “paperless system” by modernisation of its public sector through the Treasury Accounting and Information Systems or known as the TAFIS project¹. It discusses the Government’s aims to enhance the present accounting and financial system, the benefits accrued by this shift and the steps to be taken by all parties involved.

The information underlined and discussed in this technical paper involve the need for development, providing a background to the TAFIS project and an overview of the steps taken to date. It further analyses the results of integration of the financial systems, the benefits of modernisation and impact of change to Ministries and their departments, as well as noting challenges to be faced.

The information relied upon and given in this report is borne from an analysis of work having been carried out to date in the TAFIS project.

¹ Borneo Bulletin article dated 23rd December 2002: “Paperless Ministries-TAFIS brings e-Government closer to people.

2.0 Introduction

The ability of the public sector to respond to, and at the same time, take advantage of the opportunities brought about by the process of globalisation is one of the emerging issues which is seen to have gained considerable amount of attention worldwide², resulting in an enormous amount of pressure to modernise the public sector.

Modernisation is seen to be inevitable if any public sector is to survive in this new era where information is power. The major challenge lies in the need for the public sector to transform itself from its traditional role to be more supportive and catalytic in the wake of the growing regional as well as international competition and emerging domestic resource constraints. Modern public sectors will have to be more result-oriented, cost-effective, efficient, transparent, accountable and more importantly to have increased ability to respond to the needs of its citizens³.

E-Government has emerged as a key element in any policy of modernising government and other institutions of public governance and service provision⁴. It utilises information and communication technologies (ICT's) to promote more efficient government⁵ by allowing better delivery of public services, improved access to information and increased accountability of government to its citizens.

² Compendium of ASEAN Civil Service Systems, Office of the Civil Service Commission (Bangkok, Thailand).1995. 'ASEAN Public Administration in the 21st Century'; pg 275-293

³ *ibid.* at pg 279

⁴ UBD Project Paper, Department of FBEPs.2001

⁵ For benefits of ICT's, see <http://www.fgtk.informatik.uni-bremen.de/cost/workprog.html>

3.0 Development and the 21st Century

The Government of His Majesty the Sultan and Yang Di-Pertuan of Brunei Darussalam, like other ASEAN and developing world countries, aims to bring its public sector services in line with the 21st century vision. The key message which the Government seeks to deliver and follow is “**EG21 Governance and Services Online**” with its vision of the public sector services being “**an e-smart Government in line with the 21st century Service vision.**”⁶

Brunei’s Government has made significant progress in drawing up its own e-government vision and implementing action plans through the use of Information and Technology Communication (ICT) to catalyse and improve both internal operation and public service delivery. Brunei itself has embarked on an Electronic Government initiative forecasting the year 2005 as a deadline for full implementation.

The Government of His Majesty, inline with its vision, has allocated \$1 billion to be spent on the development of its e-Government projects and initiatives under the 8th National Development Plan. To date, the e-Government Program Executive Committee (EGPEC), the e-Government Policy, Strategy and Coordinating Working Group (EgSPEC) and Brunei Darussalam Information Technology Council (BIT Council), are leading parties in coordinating and implementing Brunei’s National IT Master Plan, focusing on e-Government and e-Commerce projects⁷. The overall goal is to move Brunei into a paperless governance through the use of multimedia technologies for information/data exchange, with the public sector drive towards e-government and private sector drive towards e-business programmes. Table 1 illustrates the e-Government organisation structure.

⁶ Extracted from <http://www.e-government.gov.bn>

⁷ Taken from the speech of Dato Paduka Hj Abdullah. Permanent Secretary of Communication. “ICT Development in Brunei Darussalam”; <http://www.e-aseantf.org>.

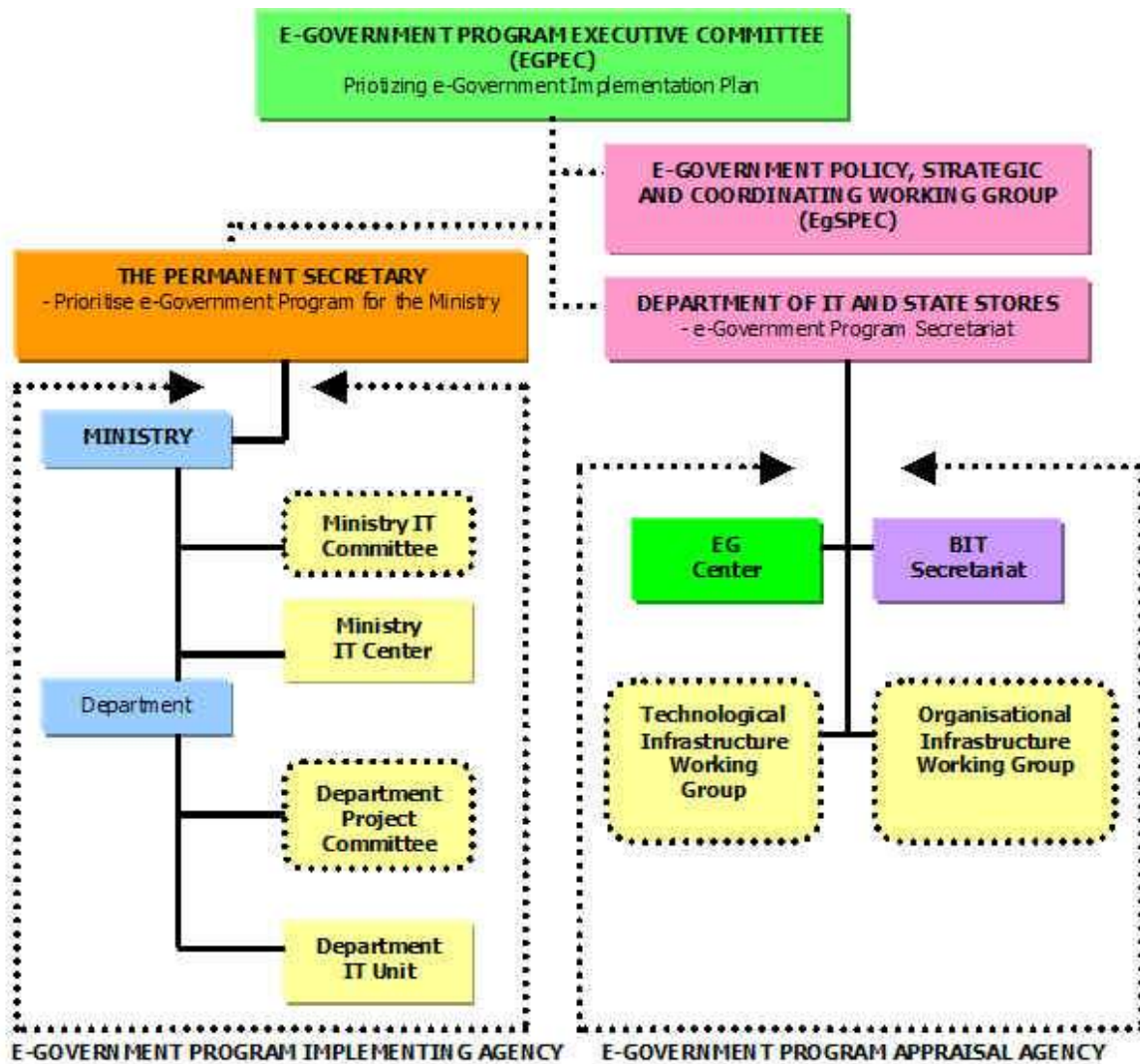


Table:1 E-Government Organisation Structure

Currently, the Government of His Majesty has several projects at various stages of development to be fully implemented by year 2005, namely PMONet, Human Resource Management (HRMIS), Multipurpose Smart Card, EG Centre Services, EG Bandwidth Services, e-Health, e-Education, Mukim.Net, and Brunei Darussalam Eco-Cyber Park. For the purpose of this technical paper, we will focus on public sector modernisation through the TAFIS project.

4.0 TAFIS Project Background

The Treasury Accounting and Financial Information Systems Project (TAFIS) is one of the initiatives of His Majesty's Government in implementing the e-Government strategy in Brunei's public sector administration. The TAFIS Project is in line with His Majesty's aspiration to move the country toward an information technology-based nation.

"In pursuit of Information Technology Communication development, Our Government has approved the implementation of the 'Integrated Computerised Electronic Government Accounting and Information Financial System' or TAFIS through the Ministry of Finance.

Through the implementation of this project, Our Government aims to further enhance the Government accounting and finance system, and also to increase the level of ICT awareness and cooperation between the public and private sector. The long term objectives are to transfer skill, technical knowledge and create employment opportunities for citizens and residence of this country"

His Majesty 55th birthday speech, 15 July 2001⁹

During the mid 90's, the Ministry of Finance recognised the need for a new system to help re-engineer the Government financial processes and provide automation¹⁰. As a result, a team was set up to conduct Request for Information (RFI) and Invitation for Tender (IFT) in 1998. The selection process was long, but careful and very stringent selection criteria were imposed. Site visits were made in August 1999 to Singapore, Malaysia and Australia to obtain a better understanding of the short listed systems. Various rounds of tender clarification were conducted between 1999 and 2001 before awarded to BAG Networks Sendirian Berhad, a joint venture company between Khazanah Satu Sendirian Berhad, a wholly Government owned company and Accenture.

TAFIS project kicked off soon after on the 26th September 2001. This marked the start of the TAFIS journey towards a paperless government.

⁹ Extracted and translated from Pelita Brunei of 20th July 2001

¹⁰ TAFIS Newsletter article, 1st edition

5.0 Implementing Timeline

Implementing the TAFIS is a Government-wide exercise, which will affect all the departments, sections and units in all the 12 Ministries. By dividing the entire implementation into smaller yet clearly defined milestones provides focus for the TAFIS project team to succeed. As shown in the table below, there are 4 milestones to be achieved before TAFIS is completely rolled out to the entire Brunei Government¹¹.

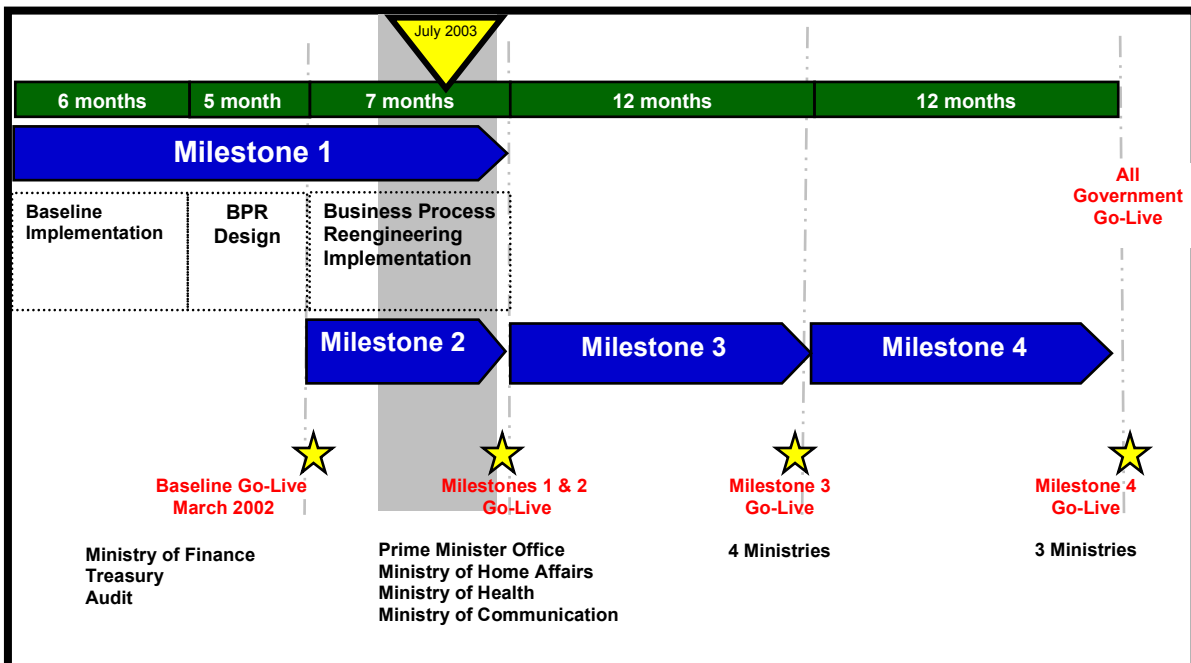


Table 2: TAFIS Implementation Plan

¹¹ TAFIS Newsletter, 1st edition. Also used in TAFIS presentations to Government Departmental Briefings.

Milestone 1

The 1st Milestone comprises firstly, Baseline implementation of selected functionality without customisation – *Accounts Payable, Receivable, Commitment Control, General Ledger, and Budget* -- to MOF, Treasury and Audit, secondly, TAFIS Business Process Re-engineering (BPR) for all functional areas, and lastly, Business Process Reengineering study (BPR) and BPR Implementation phases.

First Phase – Baseline Implementation

TAFIS was implemented to provide core functionality to the Treasury Department and some departments within the Ministry of Finance to manage funds, make payments and perform bookkeeping. The TAFIS system was also linked to Audit for audit functions. At the same time, the Helpdesk and Operations was put in place to provide support.

Second Phase – TAFIS Business Process Re-engineering (BPR)

Business functions from Purchasing, Accounts Payable, Accounts Receivable, General Ledger, Commitment Control, Asset Management, Financial Services to Management Reporting were re-designed and TAFIS was enhanced to support the re-engineered business processes.

Third Phase – TAFIS BPR Implementation

To roll out TAFIS together with the new business processes to all departments in the Ministry of Finance.

Milestone 2

Milestone 2 runs concurrently with Milestone 1 BPR Implementation and involves the rollout of TAFIS to 4 selected Ministries.

Milestone 3 and 4

Milestone 3 and 4 involves other rollouts to the rest of the Ministries.

The full implementation of TAFIS is marked by four milestones:

Milestone 1:
Baseline Implementation, TAFIS Business Process Re-engineering (BPR), TAFIS BPR Implementation

Milestone 2:
First Rollout of TAFIS to selected Ministries other than the Ministry of Finance

Milestones 3 and 4:
Rollout to the rest of the Ministries

6.0 Integration of System

Many of the existing business rules and systems processes at MOF were implemented over an extended period of time and have been invaluable in ensuring financial order within Brunei and maintaining the efficiency of the civil service.

From 1984 till 2001, MOF has established a number of standalone PC based systems catered to manage the various financial departments such as gratuity and pensions, house rent maintenance, ledger control, budgetary control and cheque management.

The drawback of such standalone systems is a duplication of data. As a result, the TAFIS project aims to reengineer the end-to-end financial business processes and practices within the Government of Brunei Darussalam. It integrates information from both the Financial Accounting and Financial Services areas, thereby making processing more efficient, streamlined and customer-focused.

Financial Accounting will implement new processes and IT systems to support activities including payment, collections, keeping of the general ledger, reconciliation of bank accounts and budget tracking and checking. It also includes a number of related processes such as purchasing, inventory and fixed assets management and management reporting. The MOF administered employee benefits have been grouped for convenience under the umbrella term “Financial Services”. Financial Services include housing rent maintenance, daily rated payroll, loan management, allowance processing, gratuity and pension and HR administration records.

Figure 1 illustrates the move from having standalone system to an integrated TAFIS application.

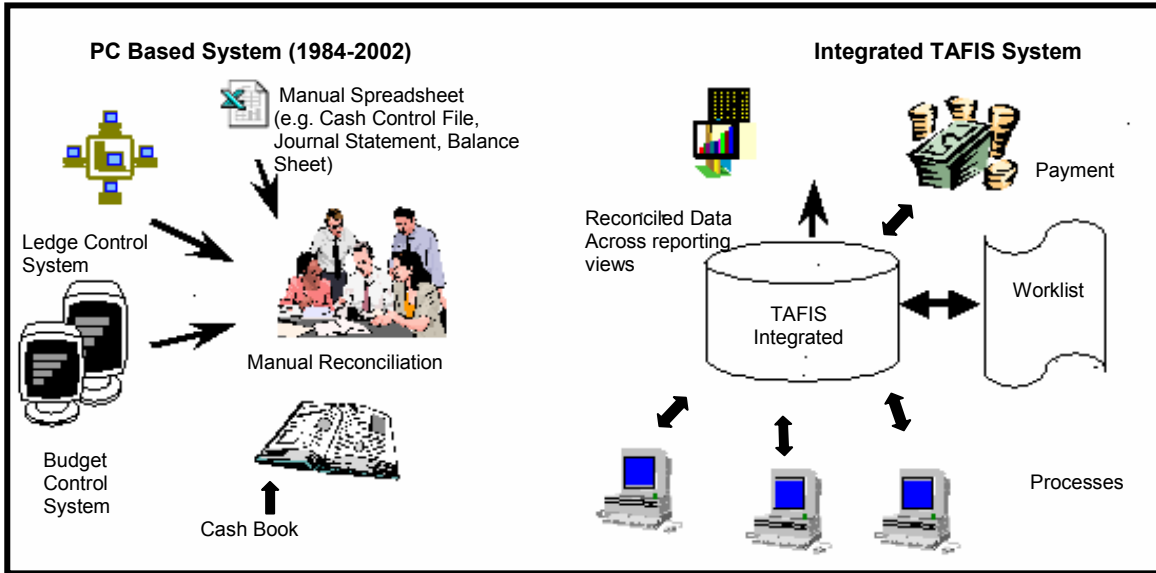


Figure1: Transition from PC Based Systems towards an Integrated TAFIS System

The TAFIS application is built using application software rather than developing from scratch. The package software was configured and customised to meet the requirements of the Government of Brunei.

Configuration allows the Government to choose between options built into the package by BAG while customisation involves modifying the programs for additional features. TAFIS application covers the functional areas as depicted below.

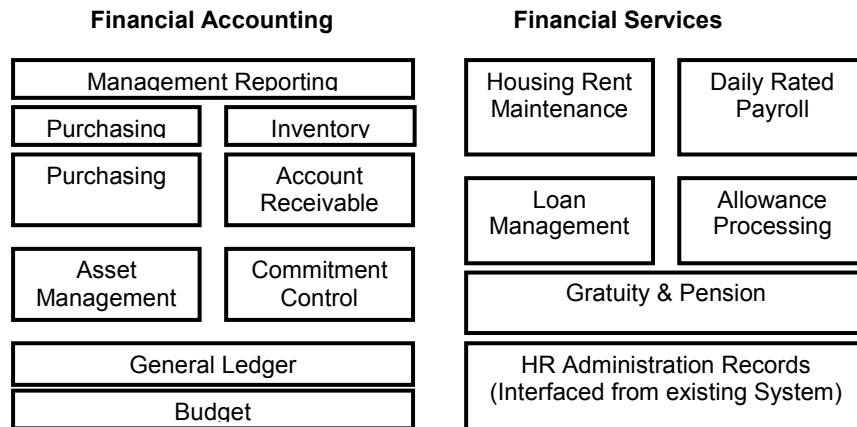


Figure 2: Functionality of Financial Accounting and Financial Services

TAFIS application uses Internet Explorer for system navigation, data input, queries and report generation. This results in low investment in software licenses and optimise users familiarity with using web browser.

7.0 Modernisation Benefits

The TAFIS Implementation comes with key benefits and improvements to the Government's financial processes. The improvements would help to expedite the operational processes through the reduction of repetitive administrative and manual tasks, thus enhancing the processing efficiency and allowing government officers to spend more time on exception-handling and analysis. Key benefits are described below:

No	Modernisation Benefits	Description
1	Reduction of Data Entry Errors	TAFIS emphasis on a single point of online entry. This means that all information will be entered at source and online directly into TAFIS. Subsequent processes, for example approval, will also be carried out online and based on the information entered. This will help to ensure no duplication of data entry, minimal data entry errors, increases accuracy and at the same time preservation of data integrity.
2	Integrated and Real-time Information	A central repository of information and online entry of information into TAFIS ensure real-time and up-to-date data at all times. In addition, information is integrated, cutting down on the need to reconcile information across various modules within the application.
3	Timely Online Approval of Financial Services Applications and Payments	With TAFIS, approval for payment and Financial Services applications are done online. Access to TAFIS panels and functions is based on the role to which a user is assigned.
4	Quick Retrieval and Reporting	The online reporting capability allows TAFIS users to have quick and easy access to information at point of need. Some of the reports are Excel fronted and this allow users to utilise Excel features to generate graphs or sort information to suit their reporting needs. TAFIS users can also easily retrieve information using the comprehensive search facility. For example, Ministries can now find out the status of their payment to their supplier online using only one unique tracking number or the name of the supplier.
5	User friendly Interface	Designed to effectively meets today's demanding needs as well as to align with global eCommerce and internet trends, TAFIS utilised a web user interface which essentially allows users to interface with the system via a web browser, Therefore TAFIS users, especially those who have surfed the internet, will find it easy and intuitive to use the system.

No	Modernisation Benefits	Description
6	Paperless Workflow	<p>With TAFIS, most of the processes and approval for transactions are done online, minimising paper flow. This will ensure that paper flow is minimised and is also an important step towards achieving a paperless government. Moreover, this feature will help to promote proactive decision-making and management of approvals.</p> <p>With TAFIS, Directors and Section Heads would not have to sign on paper documents to approve applications and payments. All that would be required would be for them to login to the system and check their Worklist, which is equivalent to their manual in-tray, to check on work that needs to be done.</p>
7	Tighter Security	<p>Departments are able to ensure that user access to TAFIS is kept up-to-date upon staff members leaving a Department, transferred or when work function changes. Such a process requires implementation within each Department.</p> <p>With TAFIS, the segregation of duties (roles) within a Department/Unit is controlled by the User ID and Password and can be changed on a temporary basis to take account of and handle temporary covering of duties (roles).</p>
8	Reporting / Inquiring Online	<p>Users will now receive reports online within TAFIS. At present, some Units prepare reports manually while others use a DOS-based system such that reports can be printed out but not viewed online. There will be online reporting capability for users to generate, view and print reports online as and when needed, as well as other capabilities to facilitate data analysis.</p>
9	Consistent and Standardised Forms	<p>All 'As-Is' business processes within the functional areas of Financial Accounting and Financial Services have been re-designed as a result of the re-engineered business processes done in the TAFIS BPR phase. As such, to support the new "To-Be" business processes, some considerable changes have been introduced in regards to forms. For example, the simplification of Financial Services application forms, the introduction of the new Departmental Warrant form, the revision of the Collectors' Statement form and the obsolescing of the Payment Voucher form. This is a cultural and procedural impact, which must be, and is being, taken into account both in terms of communication and training.</p>

8.0 TAFIS Change Impacts

With TAFIS implementation, impact changes are categorised in three areas.

Impacts on People

- **Online approval**
- Acquisition of new skills, namely PC literacy
- Results in higher productivity with less duplication of work

Impacts on Working Processes

- **Paperless**
- Driven by workflow and worklist
- Online data entry and retrieval
- Automated Reconciliation
- Single point of data entry ensuring no duplication of data entry

Impacts on Technology Infrastructure

- **Reduction in training user interface**
- Establish network for connectivity
- Building additional interfacing to other application systems
- Greater focus on network and information security

9.0 Challenges in implementing TAFIS

The challenges of implementation¹² of the TAFIS project require well-planned coordination and essentially, good project management. The need for Ministries cooperation and willingness to accept the changes brought about by TAFIS was an important element in the success story of TAFIS, and as such required the Ministries and staff of their departments to have the same vision of being and having an e-smart Government.

Throughout this process it was crucial for all parties involved to be open, adaptive, creative and innovative in their approach to meeting new challenges brought about by the project. As an example of one of the challenges, Milestone 2 rollout alone consumed more than 70,000 work hours to prepare the system and procedures (about 60 people over a period of 7 months), approximately 12,000 work hours of training time and more than 600 pieces of equipment rolled out to offices to give User access to TAFIS. However, the challenges facing TAFIS implementation although numerous are not insurmountable.

One of the key challenges in the development of TAFIS was integration of the work activities from the various teams organized along skills disciplines. The effort was coordinated such that interdependencies between the various TAFIS teams – *change management, technical* and *application* – were clearly identified and impact of any changes in the work schedule and completion date were accounted for and minimised to ensure that the project was completed on schedule and within specific set time frames.

¹² Taken from “Information Integration Process and Development in Implementing TAFIS” by Azhar Hj Ahmad, BAG Networks Sdn BHD, 2002

In order to facilitate the development of TAFIS and resolution of issues, two technical Working Groups, Financial Regulations and Procedures, and Information Technology, have been established respectively headed by the Director of Finance Services and Director of Information Technology and State Stores. The *TAFIS Implementation Working Group* (TIWG) meets regularly to provide key direction and decision on resolution of TAFIS implementation issues raised by the project team. All policy recommendation are subsequently endorsed by the Steering Committee chaired by the Permanent Secretary of Ministry of Finance. Figure 3 illustrates the organisation structure of the TAFIS Project.

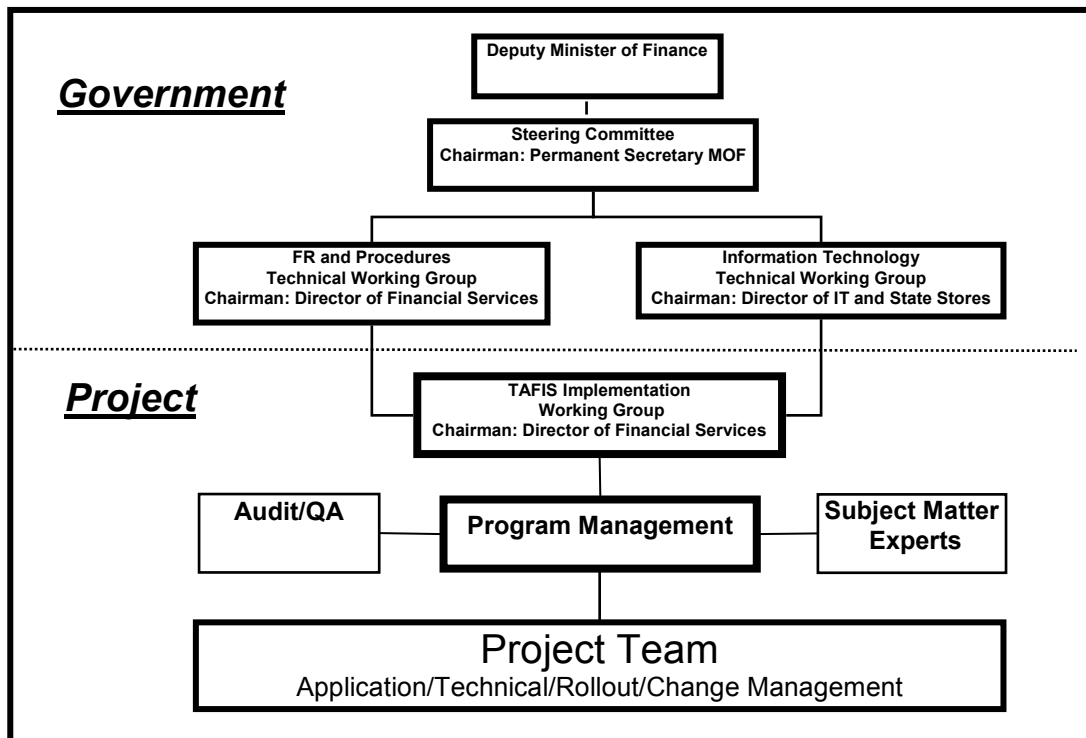


Figure 3: TAFIS Project Organisation Structure

The aspect of information security was dealt by both the 1) *Information Security Policy* and 2) *TAFIS Security Standard and Procedures Manual* and implemented to all government employees, business partners, and to all business assets within Brunei Government. The policies were based on a set of security guiding principles with references to the General Accepted System Security Principles (GASSP) developed by the International Information Security Foundation (I²SF). The documents covers the roles and responsibilities of the various parties to ensure that the security and integrity of the system are not compromised.

Figure 4 provides the breakdown of the security features available within the TAFIS system, ranging from user identification to authentication. The aim of which is prevent unauthorised access to the system. In addition, all new users will receive an initial security briefing by their respective departments, to ensure that they fully understand the implications of security on protection methods and controls used while performing their jobs.

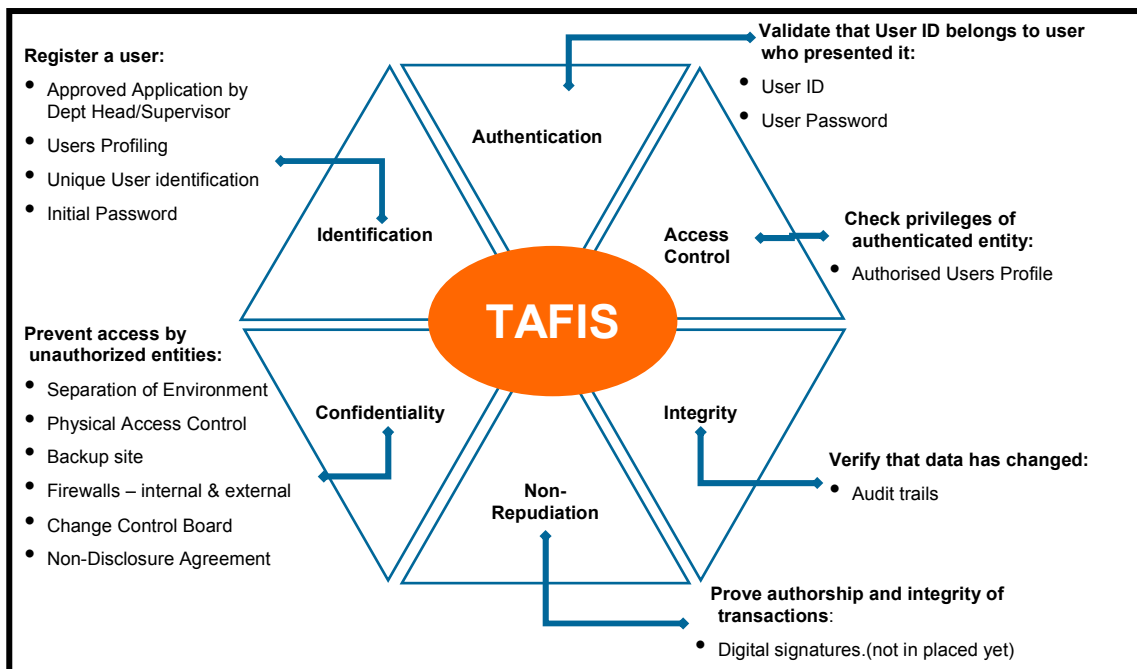


Figure 4: Security Features of the TAFIS System

10. Conclusion

Once fully rolled out, TAFIS will enable the sharing of information consistently across all ministries and departments of His Majesty's Government. The result of this would be that work currently performed manually can be done online, there would be online verification and approvals for applications and payments could be handled electronically through Electronic Funds Transfers, thus saving time and costs of manual correspondences. There would be no longer a need for time consuming manual checks of documentation, use carbon copies of forms and cumbersome note-taking of payments.

The introduction of the new TAFIS system and business processes will significantly impact financial administration practices within the Brunei Government as well as causing significant change in the day-to-day work practices of staff within the Brunei Government. TAFIS will introduce new financial business processes and system procedures, which will be communicated to staff within every Department. The direct impact of TAFIS and the changes in work practices and procedures will affect each of us individually – and that is the greatest challenge we face.

In short, strong sponsorship, holistic approach, dedicated team and commitment to change irrelevant past practices were the key success factors.

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