



**Rubber Industry Smallholders  
Development Authority (RISDA)**

# ICT Strategic Plan

2013 - 2017

**EXECUTIVE SUMMARY**

Version 1.0



ICT STRATEGIC PLAN  
(ISP)  
(2013 – 2017)  
RUBBER INDUSTRY  
SMALLHOLDERS  
DEVELOPMENT  
AUTHORITY  
(RISDA)

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Executive Summary



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## Executive Summary

### 1 Introduction

The Malaysian Government has launched the Public Sector Information and Communication Technology (ICT) Strategic Plan in August 2003 with the aim to establish a blueprint to achieve the government's ICT vision and mission. In July 2011, the latest Public Sector ISP (PSISP) was released, with emphasis on delivering innovative, efficient and quality citizen and business-centric services by leveraging on the pervasive use of ICT. With ICT already used extensively in the Public Sector to improve the electronic service delivery, this document serves as a guide for the future development and implementation of ICT in all agencies towards enabling pervasive use of ICT for citizen centric and whole of government service delivery. The whole of government concept urges the Public Sector agencies to work together to address the economic, social and environmental challenges of globalization. The quantum leap in the plan will see the ICT sector expand from being a vertical sector to include the horizontal as well, as it cuts across all spheres of the economy and the lives of all Malaysians. To achieve this, a systematic approach in ICT strategic planning is emphasized to ensure its implementation is aligned with business strategy and to the Government's vision. All these initiatives are expected to support Malaysian aspiration to become a high income economy and an advanced nation by the year 2020.

A high degree of coordination with all government agencies is required to ensure the successful implementation of the ISP at the operational level. Following this initiative by Malaysian Administrative Modernization and Management Planning Unit (MAMPU), all government agencies have been requested to develop their ISPs, aligning with the overall organizational directions and goals as well as to be guided by the strategic directions and framework of the Public Sector ISP. At the same time, the plan needs to support the Public Sector's ICT vision.



A strategic ICT plan  
can support the  
business direction  
of RISDA



In responding to this call, Rubber Industry Smallholders Development Authority (RISDA) has undertaken to develop its ISP to support the alignment of business strategy and ICT strategy of RISDA. The ISP is an ICT master plan that forms the basis for the initiation and development of ICT systems in the organization. The plan identifies ICT applications, infrastructure and the implementation strategies based on the requirements, goals, objectives and priorities established by the organization. RISDA had developed its previous ISP Report (2008 - 2012) comprising of the “To-Be” design of RISDA’s ICT framework. The objective of RISDA ISP (2008 - 2012) was to provide a detailed design of the future ICT architecture of RISDA, including laying out the foundation for the 5 year ICT roadmap.

### 1.1 Objective

The objective of RISDA’s ISP is to prepare a comprehensive framework for RISDA to produce an ICT environment through the development and use of ICT for the next five (5) years.

This document contains proposed approaches for utilizing information technology operations to create a robust and effective information technology environment to meet the needs of RISDA.



RISDA ISP aims to  
provide a  
comprehensive ICT  
framework for next five  
(5) years



## 2 ICT Strategic Direction and Initiatives

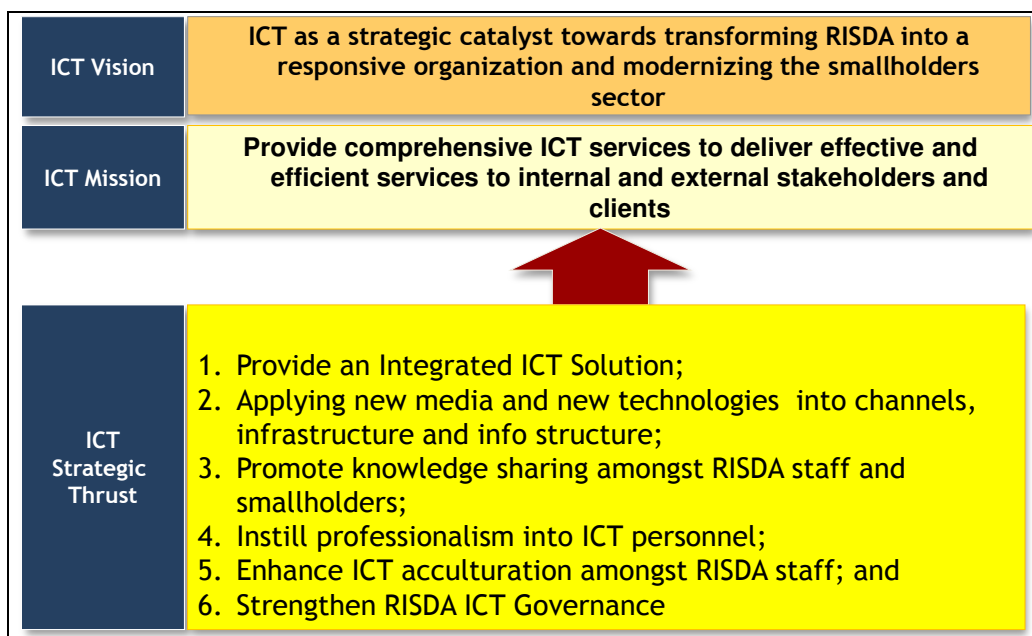
### 2.1 ICT Strategic Direction



ISDA ICT strategic direction comprises of its ICT vision, mission, and strategic thrusts as summarized in Diagram ES 2-1.

Diagram ES 2-1

RISDA ICT Strategic Direction



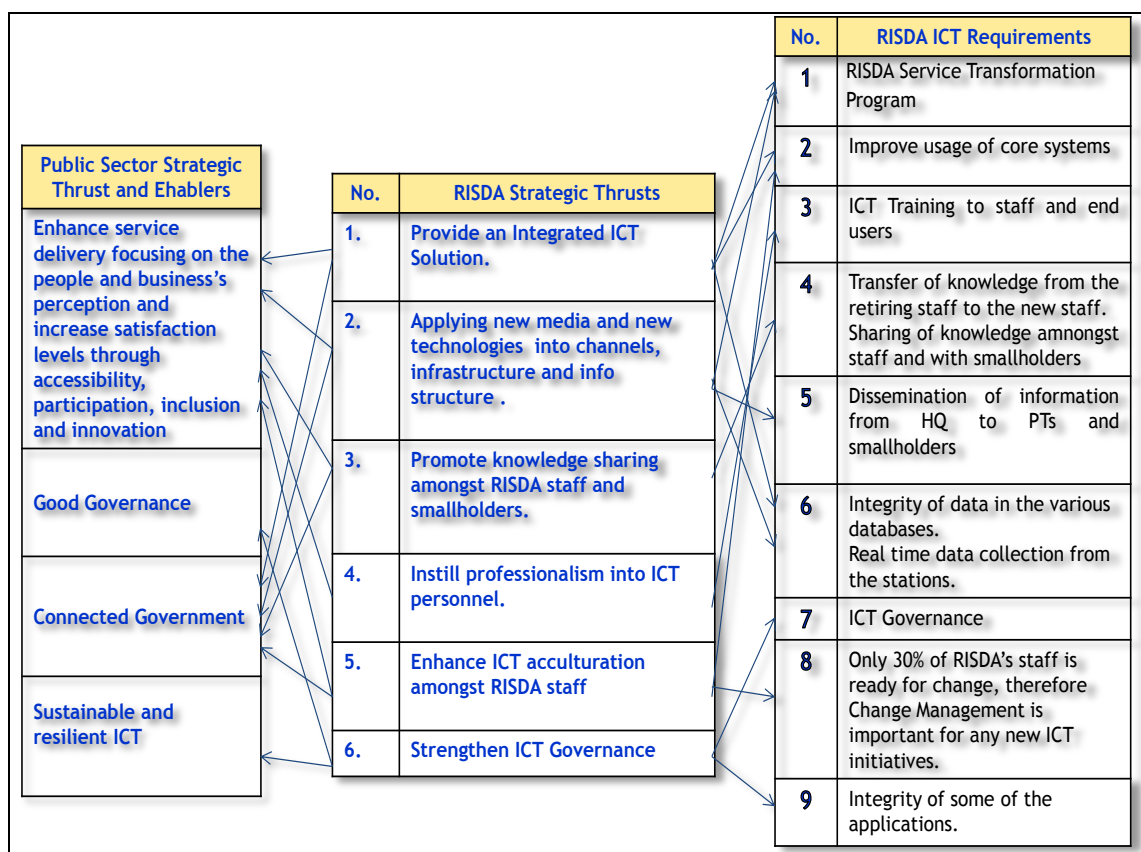
The ICT strategic thrusts are formulated to ensure an effective ICT environment and usage, to support RISDA's requirements and address the Public Sector ICT strategic thrust and enablers. This alignment is shown in Diagram ES 2-2.



ICT strategic direction  
comprises of ICT vision,  
mission and strategic  
thrusts



**Diagram ES 2-2**  
**RISDA ICT Strategic Thrust Alignment**

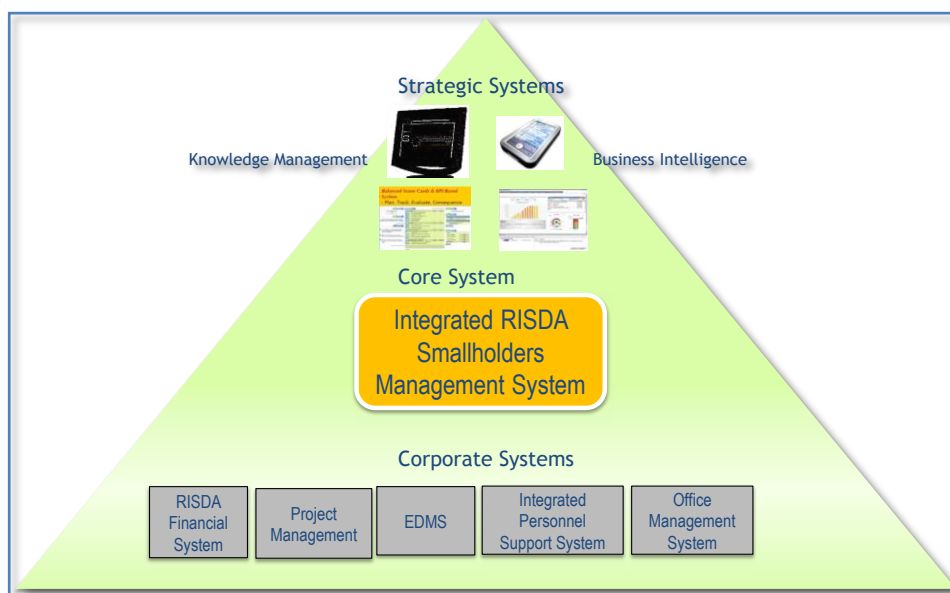


## 2.2 "To-be" ICT Strategic Initiatives

RISDA has identified the ICT initiatives that are necessary to achieve its vision and strategic thrusts. Diagram ES 2-3 shows the overview of ICT initiatives in RISDA environment. The application initiatives can be grouped into 3 groups which are Strategic Systems, Core System, and Corporate Systems. Corporate Systems are made up of applications to be used by RISDA's supporting functions. Core System comprise of modules that will be used by the core business. Strategic Systems help with decision making and dissemination of knowledge.

Diagram ES 2-3

### Overview of ICT Initiatives (Applications) in RISDA



The list of ICT initiatives are shown in Table ES 2-1.

Table ES 2-1

### Overall Proposed ICT Initiatives

NO.	ICT INITIATIVES
APPLICATION	
STRATEGIC SYSTEMS	
1	Business Intelligence Enhancement
2	Knowledge Management System
CORE SYSTEMS	
1	Integrated RISDA Smallholders Management System: <ul style="list-style-type: none"> <li>a. Integration among RISDA's core systems               <ul style="list-style-type: none"> <li>• SMB</li> <li>• SMPK</li> <li>• eP3</li> <li>• e-Usahawan</li> <li>• StaTSGL</li> <li>• SisSTS</li> <li>• RTBB</li> <li>• SPB</li> <li>• TS Online</li> </ul> </li> </ul>

NO.	ICT INITIATIVES
	<ul style="list-style-type: none"> <li>• e-Banci</li> <li>• Skim Khairat Berkelompok RISDA (new)</li> <li>• Sara Hidup Pekebun Kecil (new)</li> <li>• Rancangan Pemulihan Kebun (new)</li> <li>• Sistem Pemantauan Bekalan (new)</li> <li>• e-SPeK</li> <li>• GeMPeK</li> </ul> <p>b. Centralized Smallholders Database</p>
2	Planning & Development Information System
CORPORATE SYSTEMS	
1	<p>Integrated Personnel Support System</p> <p>a. Application Rationalization among RISDA's Personnel support systems and new systems:</p> <ul style="list-style-type: none"> <li>• e-Jawatan</li> <li>• e-Latihan</li> <li>• e-Medik</li> <li>• e-Kaunseling</li> <li>• Sistem Peperiksaan RISDA</li> <li>• MyPOST (new)</li> </ul>
2	RISDA Financial System
3	<p>Project Management System</p> <ul style="list-style-type: none"> <li>• e-Pembinaan</li> <li>• e-Maintenance</li> </ul>
4	Electronic Document Management System
5	RISDA Portal Enhancement
6	Office Management System
7	Ministry Special Program Management System
CENTRAL GOVERNMENT ICT INITIATIVE	
1	MyID
ICT TECHNOLOGY	
1	Unified Communication with VoIP features
2	Mobility Solutions



NO.	ICT INITIATIVES
3	Application Development Environment
4	Source Code Management and Versioning System
5	ICT Enterprise Refresh
6	Server Consolidation and Virtualization
7	Disaster Recovery Center
8	Dynamic VLAN
9	RISDA*Net migration to 1Gov*Net
10	Total IPv6 Transition
11	Wi-Fi LAN Management
12	Desktop Management System
13	Enhancement of ICT Helpdesk System
14	Storage Management System (File Server Resource Manager)
15	Database Monitoring System
<b>ICT SECURITY</b>	
1	ISMS Certification
2	ISMS Audit
3	Business Continuity Management (BCM)
4	Log Management System
5	Security Posture Assessment (SPA) - Recurring
6	Directory Services
7	VPN/SSL VPN
<b>FRAMEWORK</b>	
1	Enterprise Architecture Framework and Blueprint
2	Knowledge Management Framework and Blueprint
<b>GOVERNANCE</b>	
1	ICT Change Management
2	ICT Training

NO.	ICT INITIATIVES
3	ISP Review (Midterm & New)
4	Documentation and compliance to standards and policies

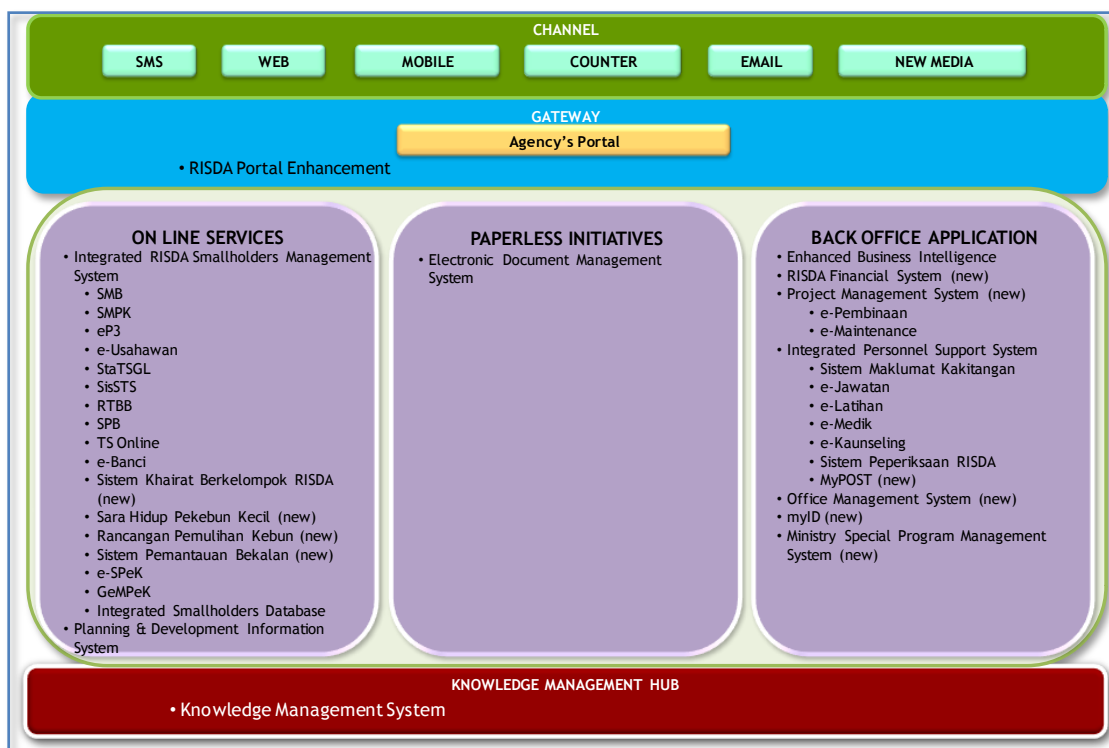
These initiatives are described in more detail in Chapter 6 of the Main Report.

### 2.2.1 Mapping ICT Initiatives to Public Sector ICT Framework

The mapping of ICT initiatives (application) against the Public Sector ICT framework is illustrated in Diagram ES 2-4.

Diagram ES 2-4

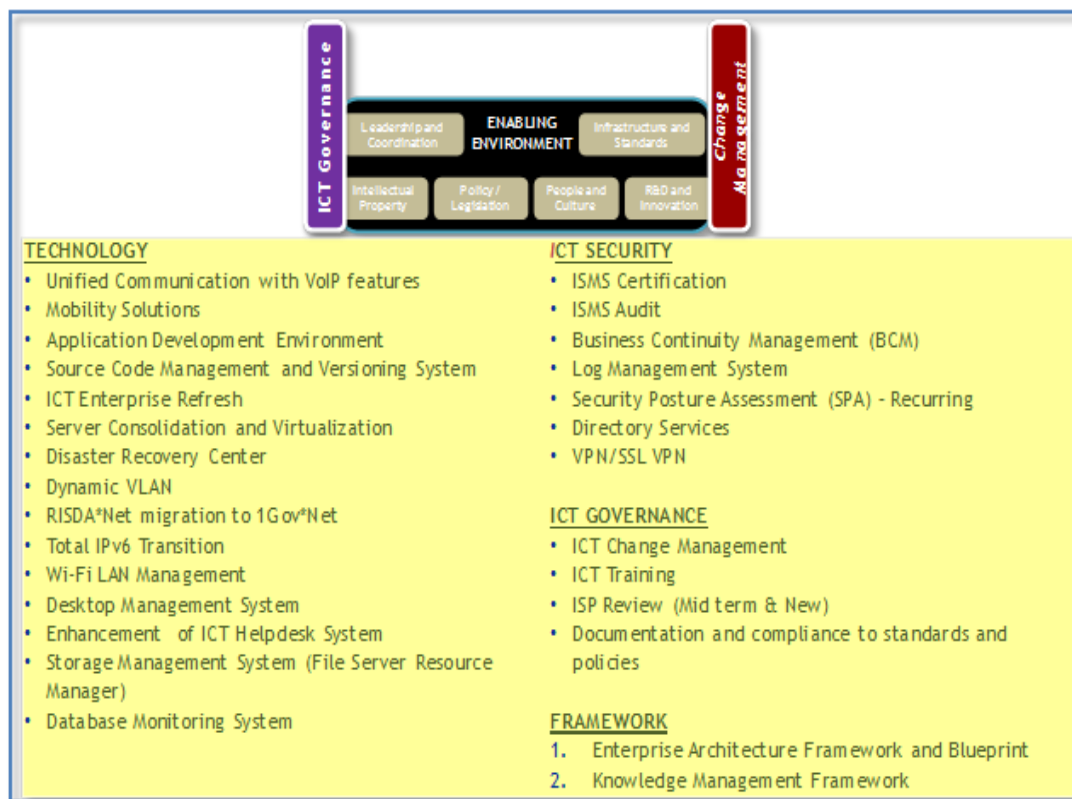
#### Mapping ICT Initiatives (Application) to Public Sector ICT Framework



The mapping of ICT initiatives (enabling environment) against the Public Sector ICT framework is illustrated in Diagram ES 2-5.

Diagram ES 2-5

### Mapping ICT Initiatives (Enabling Environment) to Public Sector ICT Framework



### 2.2.2 Mapping Existing Applications to ICT Initiatives (Application)

The proposed ICT application initiatives are either enhancement to the current systems, or replacement of the current systems. Diagram ES 2-6 and Diagram ES 2-7 show the mapping of current ICT applications to the proposed ICT application initiatives.

Diagram ES 2-6

## Mapping Existing Applications to Proposed ICT Initiatives (Applications)

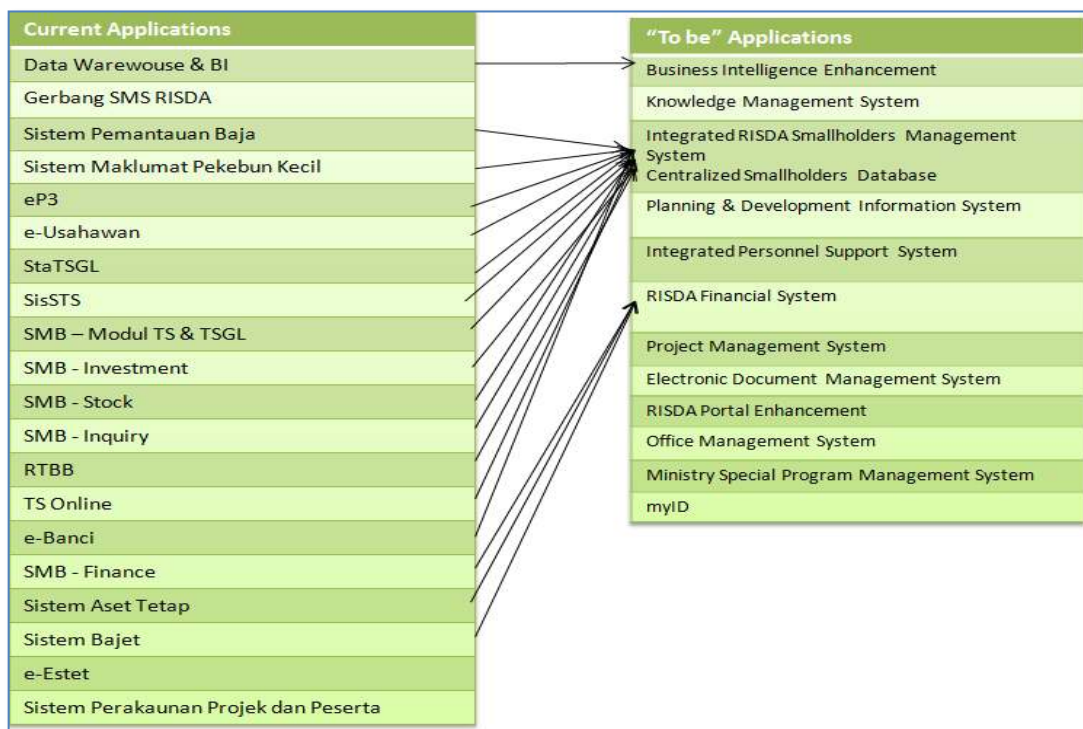
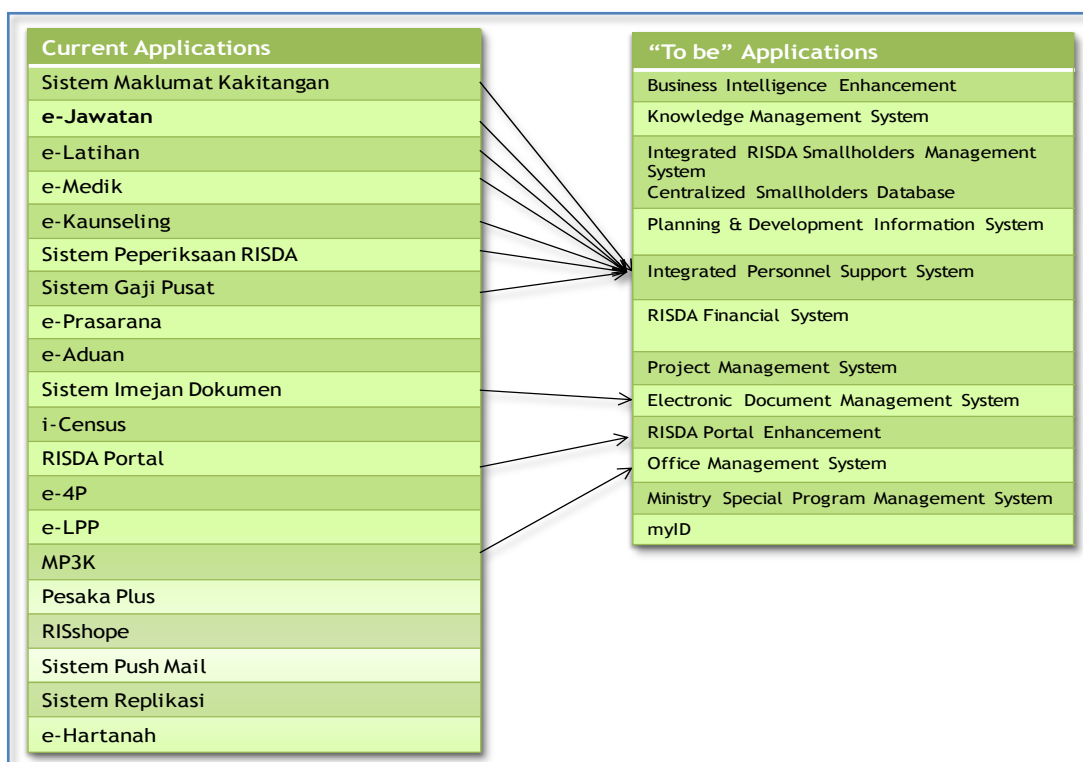


Diagram ES 2-7

## Mapping Existing Applications to Proposed ICT Initiatives (Applications) (Cont.)



Note: These initiatives are described in more detail in Chapter 6 of the Main Report.

### 2.2.3 ICT Application Initiatives Prioritization

The prioritization of ICT application initiatives will help determine the importance, impact of each initiative to the business of the organization and sequence of implementation, in order to develop the ICT implementation roadmap for the next five (5) years.

The priority of each initiative is evaluated based on the following criteria:

- a. Benefit/Importance to RISDA Business - impact of the opportunity from the business point of view whether it will bring major benefits to the organization
- b. Urgency - whether the opportunity is urgently required
- c. Dependency - whether the project is dependent on completion of other projects.

Table ES 2-2 shows the prioritization of the ICT application initiatives based on the criteria mentioned above. This prioritization was set during the ICT Strategy and Initiatives lab.

**Table ES 2-2**  
**Prioritization of Proposed ICT Initiatives**

HIGH	MEDIUM	LOW
Integrated RISDA Smallholders Management System	Business Intelligence Enhancement	RISDA Portal Enhancement
Planning & Development Information System	Knowledge Management System	
Integrated Personnel Support System	Ministry Special Program Management System	
RISDA Financial System	Electronic Document Management System	
Project Management System		
Office Management System		

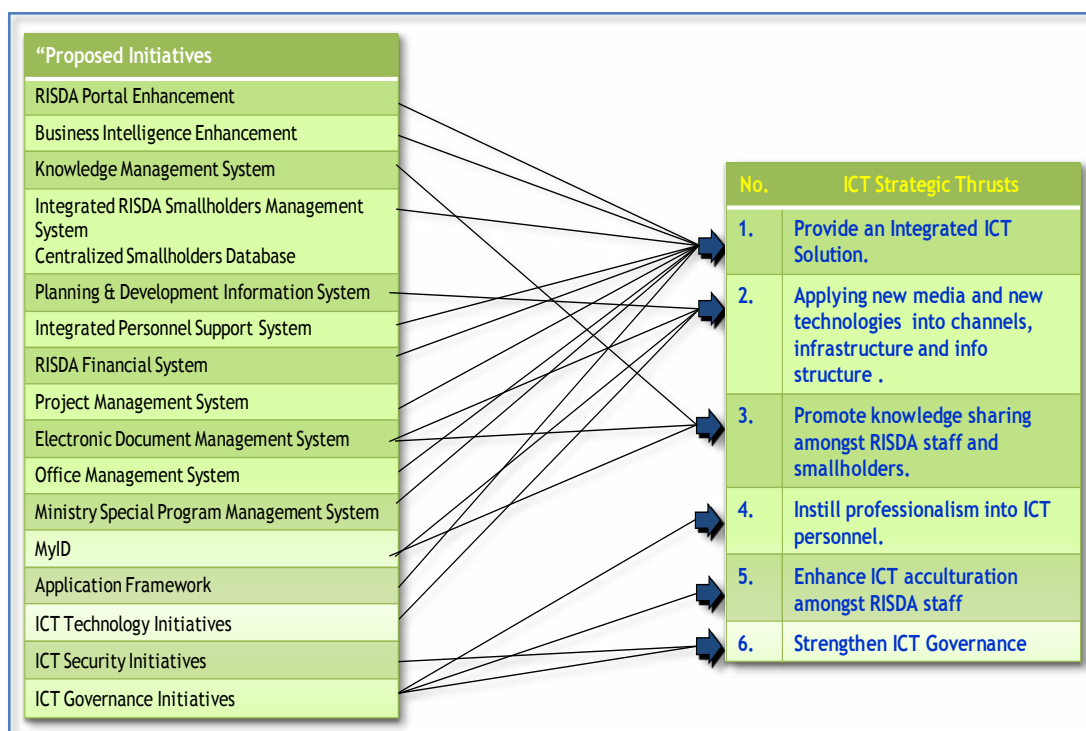
#### 2.2.4 Mapping of Overall ICT Initiatives against ICT Strategic Thrusts

Diagram ES 2-8 show the mapping of the overall ICT Initiatives (both application systems and enabling environment) against RISDA's ICT strategic thrusts.

Mapping the proposed ICT initiatives against the RISDA ICT Strategic Thrusts show that all the initiatives fulfil at least one strategic thrust. Therefore the implementation of all these initiatives will ensure RISDA meets its ICT vision and mission.

**Diagram ES 2-8**

**Mapping the Overall ICT Initiatives against RISDA ICT Strategic Thrusts**



#### 2.2.5 ICT Programs

The initiatives which share common features or functions are grouped to become a program. Eight (8) programs have been identified for implementation within the next five (5)-year period (2013-2017) is listed in Table ES 2-3.

Table ES 2-3

## ICT Programs

NO.	ICT INITIATIVES	ICT PROGRAM
1.	<ul style="list-style-type: none"> <li>Integrated Smallholders Management System</li> <li>Planning and Development Information System</li> </ul>	Replanting & Smallholders
2.	<ul style="list-style-type: none"> <li>Business Intelligence Enhancement</li> <li>Knowledge Management Framework</li> <li>Knowledge Management System</li> </ul>	Strategic
3.	<ul style="list-style-type: none"> <li>Integrated Personnel Support System</li> <li>RISDA Financial System</li> <li>Project Management System</li> <li>RISDA Portal Enhancement</li> <li>Office Management System</li> <li>Electronic Document Management System</li> </ul>	Corporate Support
4.	<ul style="list-style-type: none"> <li>Unified Communication with VoIP features</li> <li>Mobility Solutions</li> <li>Application Development Environment</li> <li>Source Code Management and Versioning System</li> <li>ICT Enterprise Refresh</li> <li>Server Consolidation and Virtualization</li> <li>Disaster Recovery Center</li> <li>Dynamic VLAN</li> <li>RISDA*Net migration to 1Gov*Net</li> <li>Total IPv6 Transition</li> <li>Wi-Fi LAN Management</li> <li>Desktop Management System</li> <li>Enhancement of ICT Helpdesk System</li> <li>Storage Management System (File Server Resource Manager)</li> <li>Database Monitoring System</li> </ul>	ICT Technology

NO.	ICT INITIATIVES	ICT PROGRAM
5.	<ul style="list-style-type: none"><li>• ISMS Certification</li><li>• ISMS Audit</li><li>• Business Continuity Management (BCM)</li><li>• Log Management System</li><li>• Security Posture Assessment (SPA) - Recurring</li><li>• Directory Services</li><li>• VPN/SSL VPN</li></ul>	ICT Security
6.	<ul style="list-style-type: none"><li>• Enterprise Architecture Framework</li><li>• ICT Change Management</li><li>• ICT Training</li><li>• ISP Review (Mid term &amp; New)</li><li>• Documentation and compliance to standards and policies</li></ul>	ICT Governance



### 3 ICT Governance

**I**CT Governance is a subset discipline of Corporate Governance on ICT systems and their performance and risk management. It is a process of how ICT policy, resources and systems are established, deployed, managed, amended and enforced to support ICT implementation in RISDA. In summary, ICT governance encompasses the following:

- a. **The Framework** that determines the way decisions are made and ensure operational issues/conflicts are resolved at all levels. This includes the set of rules, agreements, and standards that define the basis for interaction between all parties involved in ICT management, and the principle that defines the distribution of accountabilities and responsibilities within the organization; and
- b. **The Change Management programs** that facilitate the process of transformation from current environment to envisioned environment.

#### 3.1 Organization and People

As more and more sophisticated applications are introduced to accommodate the complex business needs of RISDA, it is imperative that the organization and people components in RISDA need to be strengthened to ensure the five (5)-year ICT Strategic Plan is executed as planned.

##### 3.1.1 Chief Information Officer (CIO)

The role of the Chief Information Officer (CIO) is to ensure the implementation of the ICT initiatives is according to plan. The CIO will also steer the technology direction, procedures, and standards that support effective business solution and better service delivery in RISDA. This is achieved by performing the following functions:

- a. Change driver through the alignment of the Agency's ICT Strategic Plan (ISP) and the ISP requirements of Ministry / State,



ICT governance is part of corporate governance of ICT systems and the performance and risk management



the National Development Plan, Agency's Strategic Plan and Public Sector ISP;

- b. Implement the use of Policies, Standards and ICT Best Practices;
- c. Adopt and implement the use of IT in Whole-of-Government Service Delivery System; and
- d. Implement Innovation through Applications, Infrastructure and ICT Security.

### 3.1.2 Proposed Enhancement to RISDA Governance Structure

It is recommended that RISDA performs the following:

- a. Set up the RISDA CIO Office to assist RISDA CIO. The CIO office will use existing resources which are assigned to perform the following functions:

- i. ICT Strategic Planning;
- ii. Enterprise Architect;
- iii. Knowledge Management;
- iv. ICT Security Officer (ICTSO);
- v. ISP Program Owners;
- vi. ICT Acculturation and Change Management; and
- vii. ICT Operations.



Organizational structure  
and ICT governance  
should be established to  
ensure the  
implementation  
proceeds as planned



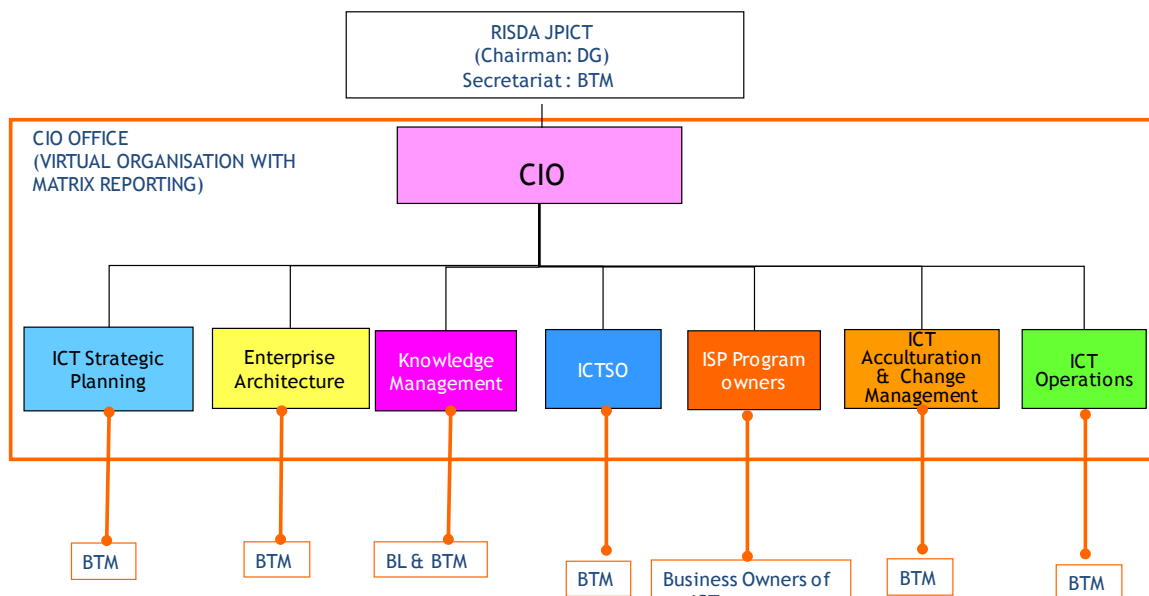
- b. To reorganise BTM to focus on strengthening customer service delivery and strengthening applications support.

### 3.1.3 Proposed RISDA Virtual CIO Office Structure

It is the responsibility of the CIO Office to ensure that the implementations of ICT programs are in line with RISDA's business strategy and to oversee that the overall ICT implementation is within the stipulated timeframe. The proposed RISDA Virtual CIO Office is shown in Diagram ES 3-1.

Diagram ES 3-1

## Proposed RISDA Virtual CIO Office



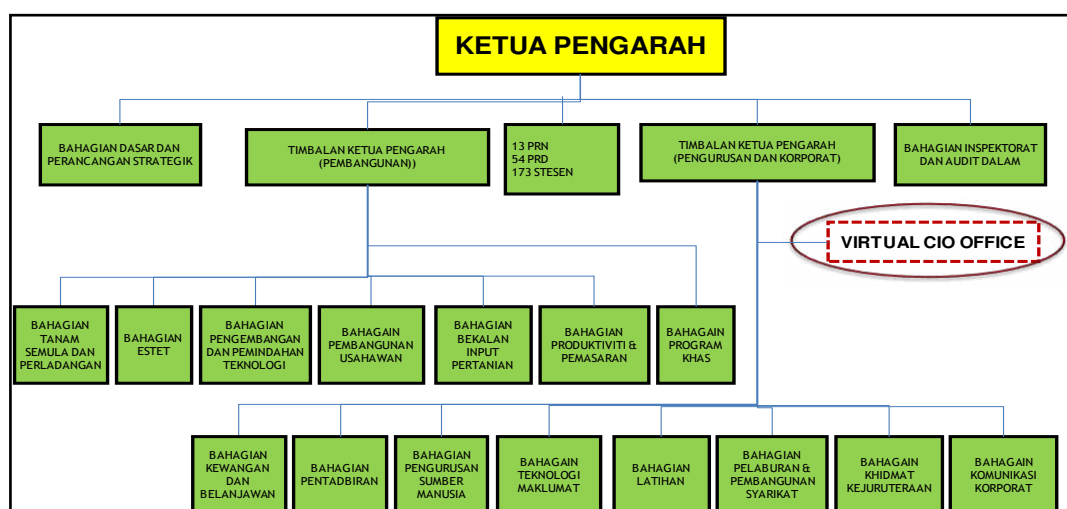
These roles are described in more detail in Chapter 7 of the Main Report.

### 3.1.4 Virtual CIO Office Placement

The virtual placement of the CIO Office in RISDA is as shown in Diagram ES 3-2.

Diagram ES 3-2

## Virtual CIO Office Placement



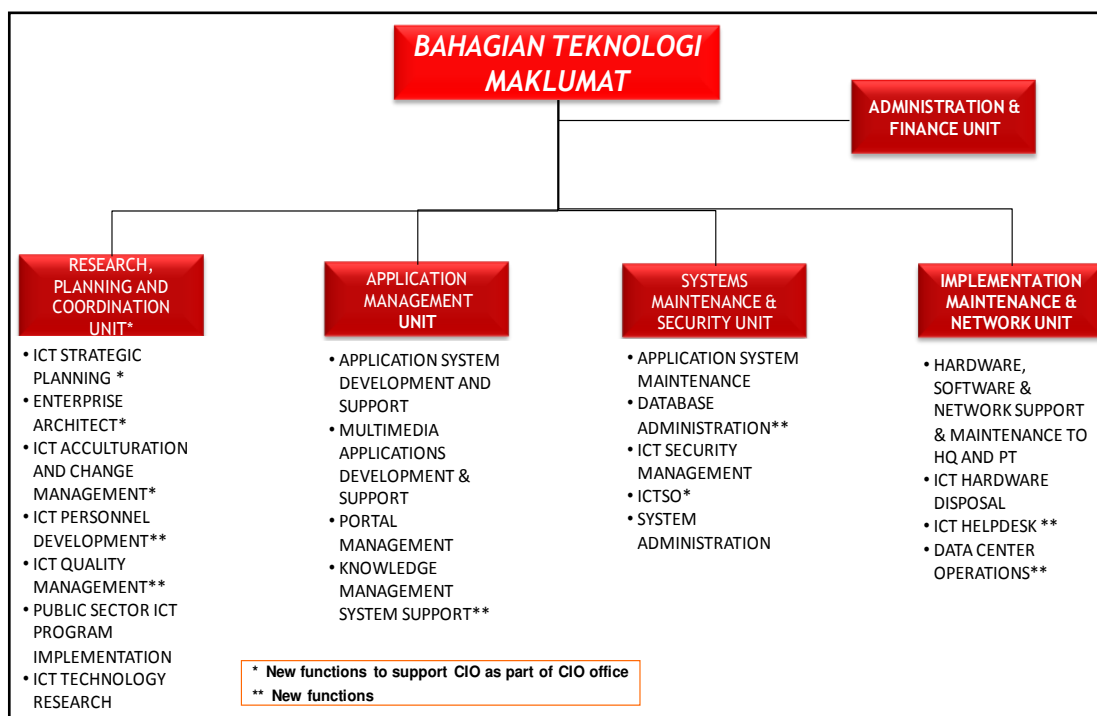
### 3.1.5 Proposed Enhancement to BTM Structure

The initiatives proposed in this ISP will require that BTM perform additional functions to plan, coordinate, monitor, implement, and support the initiatives. Implementation of the initiatives also includes training, change management, and business process reengineering, and innovation. These can be achieved through the enhancement of the current BTM organizational structure by:

- Establishing new roles and functions in BTM to enhance and strengthen service delivery to its clients; and
- Creating a more efficient service management function in providing subject matter expertise to support the CIO Office in implementing all the ICT programs.

The proposed enhancement to RISDA BTM organizational structure has four (4) main units for a more efficient service delivery, as shown in Diagram ES 3-3.

**Diagram ES 3-3**  
**Proposed RISDA BTM Structure**



The main functions of these sections are described in more detail in Chapter 7 of the Main Report.

### **3.1.6 ICT Training**

Continuous ICT training is an important component of ICT acculturation in RISDA. It is also a component in the change management programs that will be part of the ICT initiatives implementation which will be discussed at the end of chapter 7 of the Main Report.

As part of ICT acculturation in RISDA, there is a need for a structured training plan for RISDA staff and RISDA ICT personnel. The proposed training plan is as follows:

#### **a. ICT Training Plan for RISDA staff**

To ensure effective ICT training for RISDA staff, training need analysis must be done. The training must emphasize on understanding of the application systems that have been developed. Among the activities that can be implemented are as follows:

- i. Briefing on the application systems used in RISDA;
- ii. ICT skills training to RISDA staff on the application system available in RISDA;
- iii. Knowledge Management System awareness program, and
- iv. Awareness programs on ICT security policies and procedures.

#### **b. ICT Training Plan for ICT Personnel**

To ensure effective training for ICT personnel, training needs analysis must be done. The training should focus on:

- i. Increasing knowledge and skills on technologies or platform that will be used in future applications systems development.
- ii. Obtaining professional certification in areas currently used in RISDA, such as MCITP (Microsoft Certified IT Professional), PMP (Project Management Professional), Information Technology Service Management (ITSM) certification, etc.

### 3.2 RISDA Enterprise Architecture Framework

The Enterprise Architecture model is a visualization of how ICT components support an organization's overall business. It is determined by business need and direction, encompassing business vision, mission, thrusts and functions. The objective of the Enterprise Architecture is to create an integrated ICT environment to support the business needs of RISDA, and is a result of:



- a. current and future technology trends that can enhance the overall service delivery;

Enterprise architecture provides an integrated ICT environment to support the business needs of RISDA

- b. ICT requirements that resulted from business strategy;

- c. technology architecture which will meet the business needs; and



- d. transformation plan from current architecture to future architecture model.

Diagram ES 3-4 and Diagram ES 3-5 depicts RISDA's Enterprise Architecture Model comprising of service architecture, information architecture and technology architecture. RISDA will use this model for overall ICT development for the next five (5) years.

Diagram ES 3-4

RISDA Enterprise Architecture Model

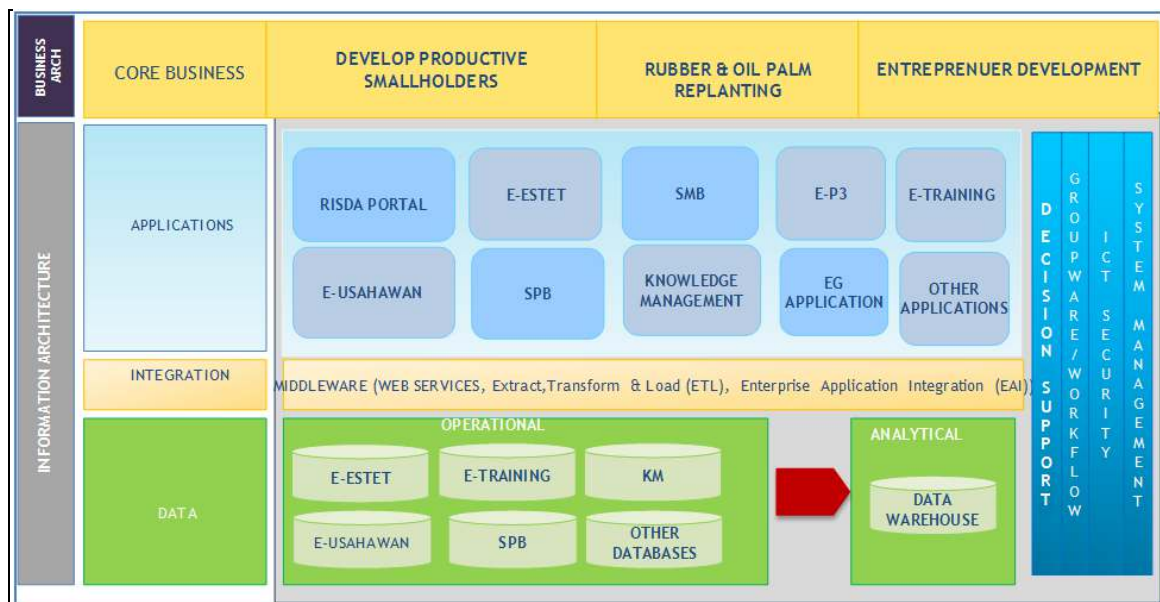


Diagram ES 3-5

RISDA Technology Architecture Model



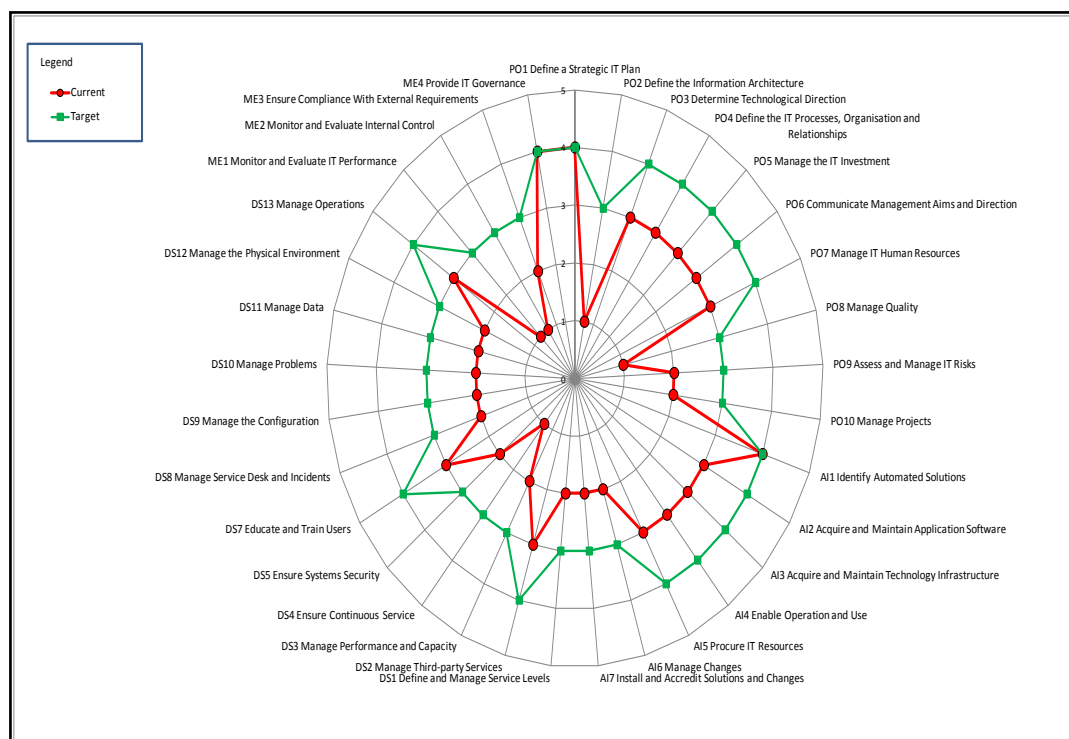
### 3.3 RISDA Process Management Model

The processes that must be taken into consideration when managing ICT services and adopting best practices are the ICT service providers, standards, policies, and guidelines, Service Level Agreement (SLA) and sourcing processes.

### 3.3.1 Process Maturity Level

During the assessment phase, the organization's effectiveness in managing key activities was assessed using the Control Objectives for Information and related Technology (COBIT®) IT governance best practices framework. Diagram ES 3-6 shows the current effectiveness level of these major ICT processes (as discussed in Chapter 3) and the target for this ISP period.

**Diagram ES 3-6**  
**RISDA Current and Target Process Maturity Level**



Chapter 7 of the Main Report contains a description of how these key processes can be improved to achieve the target.

### 3.3.2 Establishment and Conformance to Standards and Policies

Standards and policies should be established before project implementation to ensure standardization of interoperability and look and feel. RISDA has to conform to MAMPU's guidelines, such as:

- interoperability technical specifications based on Malaysian Government Interoperability Framework (MyGIF), which covers five (5) areas:



- i. **data integration** - technical specifications and components requirements for identifying data including data modelling and default schema definition;
  - ii. **interconnection** - technical component specification requirements for enabling systems interface in a networked environment;
  - iii. **information access** - technical specifications and components for enabling users to access public sector information and electronic services through available channels such as World Wide Web (WWW) and devices such as computers, hand phones and PDA;
  - iv. **security** - specifications technical component specification requirements for enabling information exchange and accessibility of public sector services information such as Management of Information & Communications Technology Security Handbook (myMIS) developed by MAMPU; and
  - v. **metadata** - set of core elements containing data required for effective official information accessibility and management such as in Malaysian Data Dictionary Sektor Awam (DDSA) developed by MAMPU.
- b. adapt MyGIF standards and policies to enable communications amongst applications internally or amongst different agencies effectively and efficiently. It is aligned with Internet adoption and general Internet specifications usage Electronic Government Systems. Adoption of open specifications and standards in the market will help reduce the total cost of ownership.
- c. Public Sector Data Dictionary (DDSA);
- d. Management of Information & Communications Technology Security Handbook (MyMIS);
- e. Malaysian Government Interoperability Framework For Open Source Software (MyGIFOSS);



The process of setting standards and policies, outsourcing and Service Level Agreement (SLA) ensuring service delivery at optimum levels and in accordance with best practices.



- f. Garis Panduan IT Outsourcing Agensi-agensi Sektor Awam;*
- g. Panduan Pelaksanaan Pengurusan Projek ICT Sektor Awam;*
- h. Garis Panduan Penggunaan ICT Ke Arah ICT Hijau Dalam Perkhidmatan Awam;*
- i. preparation of framework and technical specifications for access channels and RISDA Portal based on Channel and Portal Guidelines. This is to ensure systems developed by RISDA are not isolated and have difficulties interacting with external systems; and

RISDA has to document and review ICT policies, procedures and processes as one of the steps to increase the ICT Process Maturity Level to at least 3 - DEFINED.

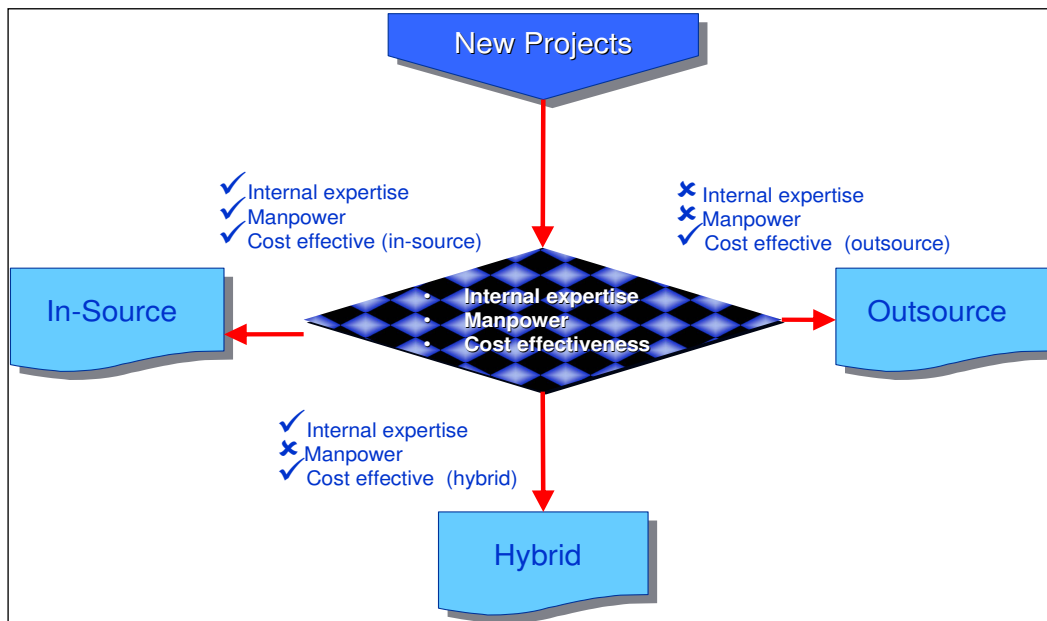
### **3.3.3 Sourcing**

Among the important components in ICT governance is sourcing. Sourcing is a process where the required resources to implement a project is acquired. RISDA needs a practical sourcing strategy to assist in its ICT service delivery. This section will explain on the choices of sourcing strategies, sourcing model and recommended sourcing strategies for RISDA.

There are three (3) types of sourcing strategies that can be used in RISDA namely outsource, in-source and hybrid.

The sourcing model shown in Diagram 7-17 can be used by RISDA to decide on the appropriate sourcing strategy for an ICT project.

**Diagram ES 3-7**  
**Sourcing Strategy for RISDA**

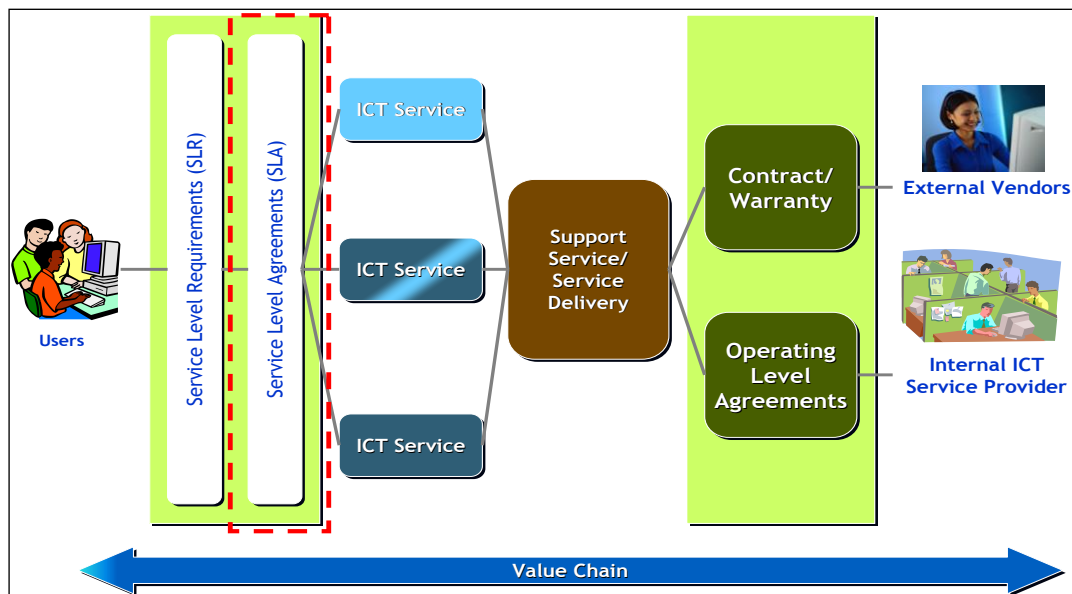


The proposed sourcing strategy for RISDA ICT initiatives are described in more detail in Chapter 7 of the Main Report.

### 3.3.4 Service Level Agreement (SLA)

Service Level Agreement (SLA) establishes an expectation between RISDA and the service provider, and between RISDA BTM with its internal users. It explains the relationship between the two parties. The service provider outlines and manages its commitment to RISDA; and BTM outlines and manages its commitment to its internal users. It must be highlighted that besides having the SLA with the service provider, RISDA must also ensure that there is a similar SLA between the service provider and the principal (application systems developer, hardware, or service). Diagram 7-19 shows the SLA relationship.

Diagram ES 3-8  
SLA Relationship



SLA appropriate recommendations for RISDA are described in more detail in Chapter 7 of the Main Report.

## 4 Implementation Plan

**T**he implementation plan explains the order in which actions must be taken to ensure that the identified ICT initiatives are implemented within the stipulated time frame. It serves as a guide for RISDA to realize the strategic value for each of the ICT initiative in enhancing performance and service delivery to RISDA's clients and stakeholders. The high-level implementation plan includes implementation strategy, implementation schedule and estimated cost for all the identified ICT initiatives for the next five (5) years (2014 - 2017).

### 4.1 Implementation Strategy

Implementation of the identified ICT initiatives involves many aspects such as human resource requirements, work process, system and infrastructure, the Key Performance Indicators (KPI) and critical success factors. An implementation strategy is required to coordinate the interaction between components and becomes a guide to the ICT project implementation in RISDA. Among the strategies that can be adopted/ implemented are as follows:

- a. **Establishment of RISDA Enterprise Architecture** is to steer the development of business applications in RISDA. This is to facilitate the process of standardization of application designs for easier application integration;
- b. **Phased or staged Implementation approach.** When implementing a new ICT project such as application system development, begin with a basic system that is simple. The system is then enhanced to manage transactional processing and following that, provide integrated services to various agencies through integration of shared systems;
- c. **Implementation of Quick Wins.** Whenever possible, give priority to 'quick



Implementation strategy coordinates the interaction between the components and guide the implementation of ICT projects.



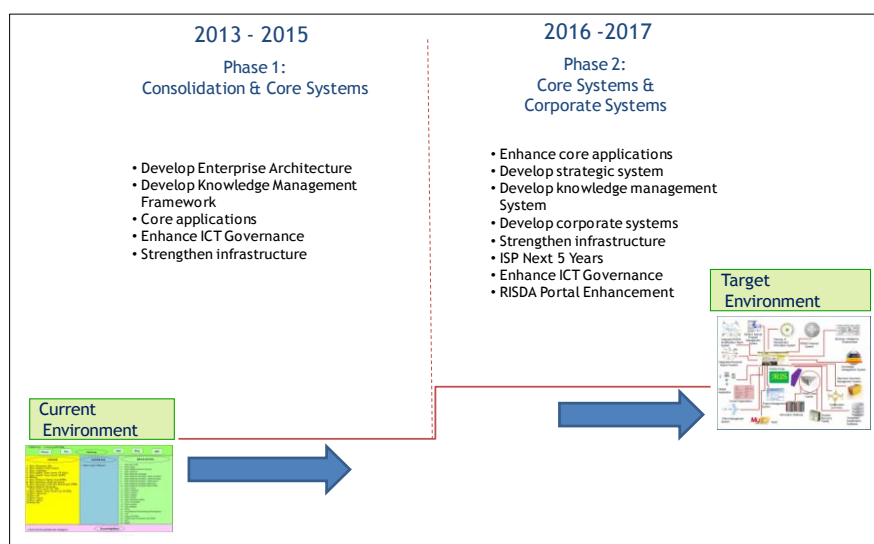
wins' projects that can be implemented quickly and easily thus bringing immediate impact to RISDA's service delivery

- d. **Leveraging on the existing initiatives or services to ensure quick deployment.** Where appropriate, RISDA can obtain an off-the-shelf system and customize according to its requirements, rather than developing from scratch. However, the implementation must conform to RISDA Enterprise and Information Architecture;
- e. **Effective and strong governance to drive and manage the ICT implementation.** This is to ensure that ICT personnel are equipped with the necessary skills and competencies to implement/support the ICT initiatives. The strong governance ensure that everyone is clear on his/her roles and responsibilities and ensure effective execution of ICT project management during the ICT initiatives implementation; and
- f. **Leverage on existing data** by migrating relevant data into the new systems as part of the deployment activity. However, the data migration must conform to RISDA Enterprise and Information Architecture.

#### 4.1.1 Roadmap to Transformational Change

The five (5) years implementation plan is divided into two (2) phases as shown in Diagram ES 4-1.

**Diagram ES 4-1**  
**Roadmap to Transformational Change**



**a. Phase 1 (2013 - 2015)**

The emphasis is to prepare RISDA with a strong architectural platform to transform into a more strategic organization and to work on the preparation for future programs (request for budget, tender specifications, tender process, etc.) and initial stage of the development of core system. During this stage, RISDA has to update ICT policies and standards to RISDA's system environment. These ICT policies and standards must be referenced, adhered to, and enforced in any ICT related implementation. Frameworks and blueprints are also developed to guide the implementation of various ICT initiatives. The enterprise architecture will help to facilitate the process of integration among applications in RISDA. The knowledge management framework will facilitate optimal usage of the Knowledge Management System. This phase also involves the crucial activity where RISDA needs to get its ISMS certification, strengthen ICT infrastructure and enhance ICT governance.

This is the busiest phase where the core system and corporate systems will be developed and implemented. The emphasis is on the enhancement of RISDA's core system, the harmonization of processes and the centralization of database. The corporate systems must also be developed to improve the efficiency of RISDA's non-core functions. This phase will position RISDA towards an integrated system environment, where emphasis is on the effort to enhance collaboration and automation of main work processes by creating shared applications within RISDA. The integration effort will have to use the frameworks or blueprints developed during Phase 1. This phase will enable RISDA to fulfill its mission, "Creating a Progressive and Prosperous Smallholder Community through Agricultural and Commercial Activities". The development of the ISP for the next five (5) years must also be executed in this phase to ensure it can provide input into the planning for RMK-11.

**b. Phase 2 (2016 - 2017)**

The emphasis is on the continued development and enhancement of RISDA Core Systems and Corporate Support Systems, implementation of the Strategic System, the enhancement of RISDA Portal and to strengthen the ICT infrastructure. There will also be more

enhancements to ICT governance, in the form of BTM restructuring and improvement to service delivery.

Throughout these two (2) phases, acculturation and change management program together with continuous training are essential to ensure that all the applications and ICT facilities and services developed and implemented are fully utilized. Effective usage will result in the creation of knowledge and subsequent expansion and improved service delivery.

## 4.2 Implementation Approach

To facilitate the implementation of the initiatives several approaches are recommended to better manage the initiatives, namely:

- a. **Appointment of Project Management Office - PMO.** The PMO will assist in managing the implementation of the initiatives. The appointment of the PMO will reduce some of the workload carried out by BTM personnel, who are also responsible for other daily tasks;
- b. **Ownership of the ICT Program.** The assignment of an owner to each of the ICT programs will allow the owner to be in control of the development and implementation of the ICT initiatives under the owner's programs.
- c. **Prioritizing of ICT Initiatives according to RISDA's core business need.** Which initiatives are to be given higher priority should be based on which initiatives will give significant impact to the improvement of RISDA core business service delivery; and
- d. **Coordination and acculturation programs.** This program will assist the users' transformational process from current ICT environment to new ICT environment. The program is to motivate, promote and encourage users to maximize the use of new ICT applications in performing their job functions. In addition, the program will also provide necessary assistance that would facilitate the familiarization and acceptance of users towards the new ICT application.



### 4.3 Ownership of the ICT Programs

The assignment of an owner to each of the ICT program will let the owner be in control of the development and implementation of the ICT initiatives in the program. The owners who are also the subject matter experts of the business should be able to steer the direction of ICT initiative implementation. The owners for each of the ICT programs are as shown in Table ES 4-1.

**Table ES 4-1**  
**ICT Program Ownership**

NO.	ICT PROGRAM NAME	ICT INITIATIVES	OWNERSHIP
1.	Replanting & Smallholders	<ul style="list-style-type: none"> <li>Integrated Smallholders Management System</li> <li>Planning and Development Information System</li> </ul>	<ul style="list-style-type: none"> <li>TKP (Pembangunan)</li> <li>BDPS</li> </ul>
2.	Strategic	<ul style="list-style-type: none"> <li>Business Intelligence Enhancement</li> <li>Knowledge Management Framework</li> <li>Knowledge Management System</li> </ul>	<ul style="list-style-type: none"> <li>BDPS</li> <li>BL (Knowledge Leader)</li> </ul>
3.	Corporate Support	<ul style="list-style-type: none"> <li>Integrated Personnel Support System</li> <li>RISDA Financial System</li> <li>Project Management System</li> <li>RISDA Portal Enhancement</li> <li>Office Management System</li> <li>Electronic Document Management System</li> </ul>	<ul style="list-style-type: none"> <li>TKP (Pengurusan)</li> <li>BPSM</li> <li>BKB</li> <li>BP</li> </ul>
4.	ICT Technology	<ul style="list-style-type: none"> <li>Unified Communication with VoIP features</li> <li>Mobility Solutions</li> <li>Application Development Environment</li> <li>Source Code Management and Versioning System</li> <li>ICT Enterprise Refresh</li> <li>Server Consolidation and Virtualization</li> <li>Disaster Recovery Center</li> <li>Dynamic VLAN</li> </ul>	<ul style="list-style-type: none"> <li>BTM</li> </ul>

NO.	ICT PROGRAM NAME	ICT INITIATIVES	OWNERSHIP
		<ul style="list-style-type: none"> <li>RISDA*Net migration to 1Gov*Net</li> <li>Total IPv6 Transition</li> <li>Wi-Fi LAN Management</li> <li>Desktop Management System</li> <li>Enhancement of ICT Helpdesk System</li> <li>Storage Management System (File Server Resource Manager)</li> <li>Database Monitoring System</li> </ul>	
5.	ICT Security	<ul style="list-style-type: none"> <li>ISMS Certification</li> <li>ISMS Audit</li> <li>Business Continuity Management (BCM)</li> <li>Log Management System</li> <li>Security Posture Assessment (SPA)</li> <li>Directory Services</li> <li>VPN/SSL VPN</li> </ul>	<ul style="list-style-type: none"> <li>BTM</li> </ul>
6.	ICT Governance	<ul style="list-style-type: none"> <li>ICT Change Management</li> <li>ICT Training</li> <li>ISP Review (Mid term &amp; New)</li> <li>Documentation and compliance to standards and policies</li> <li>Enterprise Architecture Framework</li> </ul>	<ul style="list-style-type: none"> <li>CIO</li> </ul>

#### 4.4 High Level Implementation Roadmap

A high-level implementation schedule for all programs for the next five (5) years (2013 - 2017) is as depicted in Table ES 4-1.

**Table ES 4-2**  
**High Level Implementation Schedule**

No.	Program/ Initiative	Period (month)																				
			PHASE 1										PHASE 2									
			2013		2014				2015				2016				2017					
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
REPLANTING & SMALLHOLDERS																						
1	Integrated Smallholders Management System	24																				
2	Planning and Development Information System	9																				
STRATEGIC																						
3	Business Intelligence Enhancement	9																				
4	Knowledge Management Framework	6																				
5	Knowledge Management System	9																				
CORPORATE SUPPORT																						
6	Integrated Personnel Support System	12																				
7	RISDA Financial System	18																				
8	Project Management System	9																				
9	RISDA Portal Enhancement	6																				
10	Office Management System	12																				
11	Electronic Document Management System	9																				
ICT TECHNOLOGY																						
12	ICT Technology	54																				
ICT SECURITY																						
13	ICT Security	24																				
ICT GOVERNANCE																						
14	Enterprise Architecture Framework	6																				
15	ICT Training	45																				
16	Change Management Program	45																				
17	ISP Review	6																				
18	Documentation and Compliance to standards and policies	12																				

PreparationImplementation

## 4.5 Financial Consideration

In order to facilitate deployment of identified RISDA initiatives, RISDA needs to ensure that is sufficient financial resources available to develop deploy and maintain introduced initiatives.

### 4.5.1 Basis of Financial Consideration

RISDA financial estimates are based on an assessment of RISDA likely duration of RISDA project, complexity of RISDA project and past expenditures on similar projects deployed.

Some of considerations to derive RISDA financial estimates are listed below:

- Software** -Takes into account options such as open source software, in line with Malaysian Government's efforts to encourage the use of Open Source Software (OSS)

- b. **Hardware** - Cost of server is included in the total cost of the application. This server cost can be reduced by implementing server consolidation and virtualization with other applications
- c. **Customisation** - Cost to customise system to meet RISDA's requirements
- d. **Integration** - Cost included in integration work and RISDA integration cost magnitude depends on RISDA required level of integration
- e. **Project Management Office** - Cost to manage RISDA implementation of a project from RISDA ICT program inception stage until completion of RISDA ICT programs. RISDA estimated cost is around 5 % of RISDA project cost.
- f. **Consultation** - Cost of professional consultancy fees
- g. **Training** - Cost to train users and technical training to system administrators
- h. **Maintenance and support** - Warranty period for each ICT project is one (1) year from sign off date. RISDA estimated maintenance cost provided is RISDA annual cost. As a basis, annual maintenance cost is estimated to be twenty percent (20%) of application development cost plus fifteen percent (15%) of hardware cost

The estimated costs provided are indicative amount of investment required and are for budgetary purposes only. These cost are calculated based on Malaysian government rates (for software development) and cost of similar products in the market (if available). The actual cost of hardware and software will change from time to time due to the dynamic and rapidly changing ICT industry. A more accurate costing can be derived after detailed requirement studies are conducted for the various initiatives.

#### 4.5.2 Estimated Overall ICT Project Cost

RISDA estimated overall cost for RISDA identified ICT programs are shown in Table ES 4-2.

**Table ES 4-3**  
**Estimated Overall ICT Project Cost**

Overall Cost
<b>RM 55,800,000</b>

#### 4.6 Key Performance Indicators (KPI)

One of RISDA strategic factors contributing towards the success of RISDA's ICT strategic planning is the ability of its personnel to compete, become enablers for supporting and implementing change, customization, recreation and reengineering of systems and administration processes. Many factors contribute to RISDA success of an ICT project. Therefore, emphasis must be given to RISDA factors that have impact on its implementation.

Table ES 4-4 lists RISDA key performance indicators (KPI) that support each ICT strategic thrust. Please refer to Chapter 5 for more information on RISDA's ICT strategic thrusts.

**Table ES 4-4**  
**ISP Key Performance Indicators**

NO.	ICT STRATEGIC THRUST	OBJECTIVES	KEY PERFORMANCE INDICATORS	TARGET
1	Provide an Integrated ICT Solution.	<ul style="list-style-type: none"> <li>Develop applications and supporting infrastructure for an integrated ICT solution</li> </ul>	<ul style="list-style-type: none"> <li>% completion of Integrated RISDA Smallholders Management System</li> </ul>	<ul style="list-style-type: none"> <li>100% completion by 2017</li> </ul>
			<ul style="list-style-type: none"> <li>% completion of Integrated Personnel Support System</li> </ul>	<ul style="list-style-type: none"> <li>100% completion by 2016</li> </ul>
			<ul style="list-style-type: none"> <li>% completion of Smallholders Centralized Database</li> </ul>	<ul style="list-style-type: none"> <li>100% completion by 2015</li> </ul>
2.	Applying new media and new technologies into	<ul style="list-style-type: none"> <li>Improved service delivery to customers and</li> </ul>	<ul style="list-style-type: none"> <li>% increase in number of users accessing systems</li> </ul>	<ul style="list-style-type: none"> <li>10% increase annually</li> </ul>

NO.	ICT STRATEGIC THRUST	OBJECTIVES	KEY PERFORMANCE INDICATORS	TARGET
	channels, infrastructure and info structure.	stakeholders.	• % increase in number of mobile applications	• 10% increase annually
3	Promote knowledge sharing amongst RISDA staff and smallholders	• Conducive knowledge sharing and collaborative working environment amongst RISDA personnel	• % of material added or updated in RISDA knowledge bank	• 10 % increase from previous year
			• % of access to RISDA knowledge management system	• 10 % increase from previous year
4	Instil professionalism into ICT personnel	• ICT personnel to provide better services to users	• % number of ICT personnel with ICT certification	• 2 ICT personnel every year
5	Enhance ICT acculturation amongst RISDA staff	• ICT facilities provided are utilized by RISDA staff	• % increase in number of users of application systems	• 10% increase annually
			• % compliance to Change Management plan	• 100% by 2017
6	Strengthen RISDA ICT Governance	Deliver a coordinated approach to all RISDA ICT initiatives.	• % compliance to Public Sector ICT policies and guidelines	• 100% compliance
			• % ICT projects completed on time and within budget	• >70% by 2016
			• % compliance to internal Service Level Agreement (SLA)	• 99% compliance by 2016

#### 4.7 Critical Success Factors (CSF)

In any ICT project implementation, several critical success factors are identified and must be paid attention to. The identified RISDA CSFs are as listed in Table ES 4-5.

**Table ES 4-5**  
**ISP Critical Success Factors**

DIMENSION	ELEMENT
Governance	<ul style="list-style-type: none"> <li>• <b>Support and commitment</b> from RISDA Management to ensure that the initiatives described in this ISP are implemented. This also includes commitment and active participation from users to ensure that the developed application systems are fully utilized.</li> <li>• Clear, effective and continuous communication to and from all parties involved.</li> <li>• Preparation of standards and policies to create an enabling environment that supports the implementation of these ICT initiatives.</li> <li>• Performance measurement that is clear and realistic must be developed.</li> <li>• ICT Acculturation (through change management programs) to ensure that any changes will get the buy-in and support from RISDA staff, especially for usage of current and future application systems.</li> </ul>
Resources	<ul style="list-style-type: none"> <li>• Sufficient number of skilled, knowledgeable and experienced resources for the development, deployment, and maintenance of RISDA ICT projects.</li> <li>• Adequate financial resources to support continuous efforts on the development, enhancement, and maintenance of ICT system environment.</li> </ul>
Processes	<ul style="list-style-type: none"> <li>• Conduct Business Process Improvement (BPI) to evaluate and enhance current business processes to be more efficient and effective.</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Proper maintenance for all hardware and software components of ICT projects.</li> <li>• Rapid changes in technology may have significant impact on RISDA ICT environment.</li> </ul>

With a structured implementation approach, clear objectives with key performance measurements for milestones and critical success factors being clearly identified, RISDA can confidently embark on implementing all identified RISDA ICT initiatives.

## 5 Conclusion

**A**s the Federal Statutory Body responsible for rubber industry smallholders development, RISDA is continuously exploring and searching for new ICT initiatives that would enable it to further develop the rubber industry smallholders economically and socially. RISDA has taken a proactive step to formulate and develop its ISP 2013 - 2017, which will help to steer the implementation of ICT programs, in line with its business requirements. The ISP 2003 - 2017 will enabled RISDA to realize its integrated system environment, which will help to improve quality of services delivery to RISDA's stakeholders, beneficiaries, customers and target groups.

Diagram ES 4-1 shows the mapping of RISDA's future ICT environment, comprising of current application systems and new ICT initiatives to Public Sector ICT framework. To ensure that all application systems operate effectively and functions as planned, all application system implementations must be supported by suitable and sufficient infrastructure and also by ICT acculturation program that will assist with user acceptance to the developed application system.



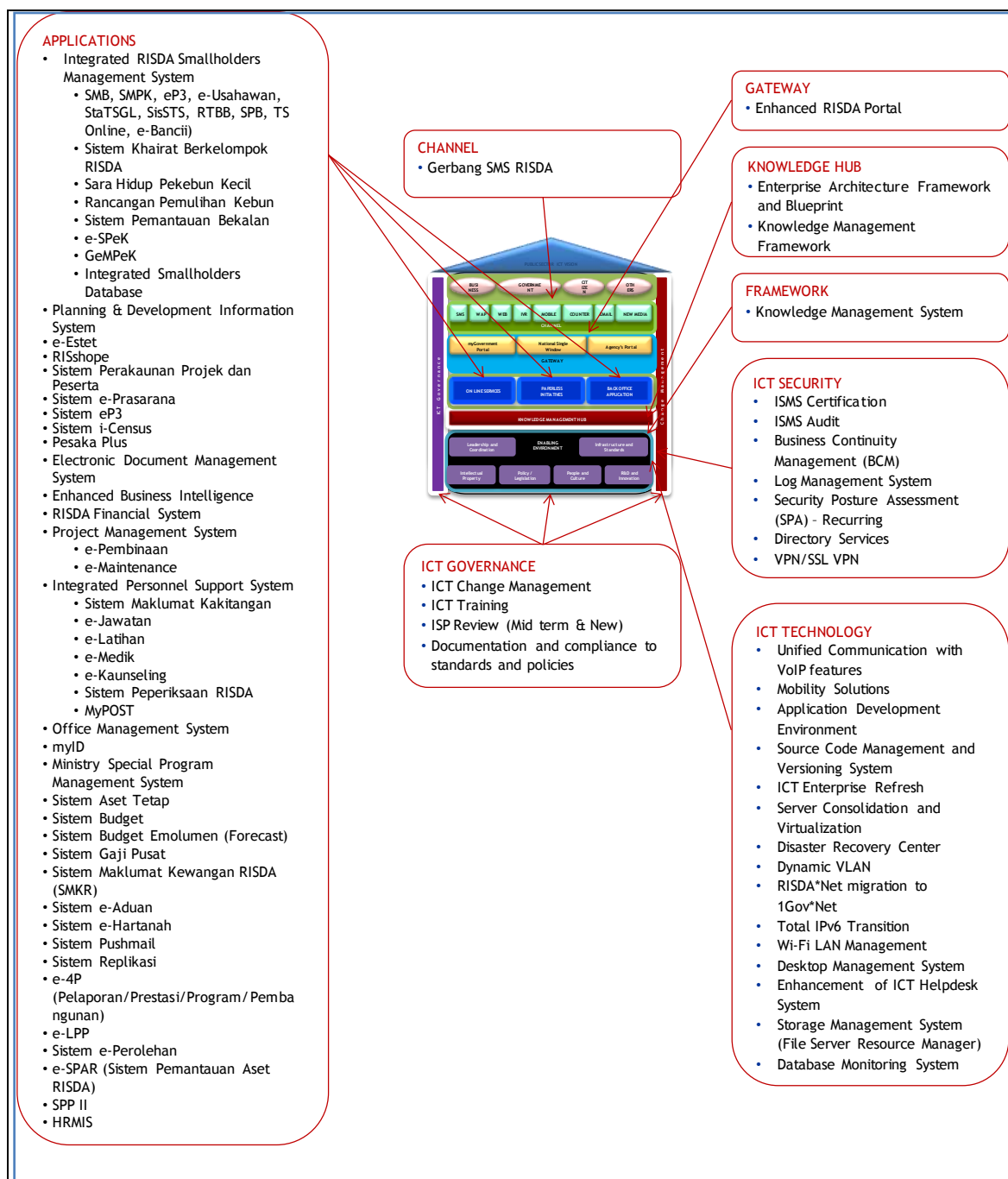
An integrated delivery system with a holistic ICT acculturation are capable to improve the service delivery quality of RISDA.





Diagram ES 5-1

## Mapping of Future RISDA ICT Environment to Public Sector ICT Framework



The successful and effective implementation of this ISP will enable RISDA to achieve the following outcome:

- A comprehensive and integrated ICT environment that will enable RISDA to increase its ability to perform its functions;

- b. An ICT system environment that will centralize the management of data and services;
- c. A conducive knowledge management system that will benefit not only RISDA personnel, but also the clients and stakeholders;
- d. A computerized, paperless working environment that utilizes workflow and automation; and
- e. ICT infrastructure that is aligned with current technology for fulfilling RISDA's ICT requirements, aligned with the stakeholders' and customers' requirements, where ICT is a part of their daily practice.

This RISDA ISP 2013 -2017 is a living document, which outlines the implementation of ICT programs for the next five (5) years. It serves as a reference for any future ICT related implementation at RISDA. From time to time, the document should be reviewed and updated accordingly to reflect any business changes that can occur throughout its implementation period. This is necessary so as to ensure that the ISP will remain relevant, thus assuring that ICT in RISDA will continue to become the strategic enabler in realizing RISDA's business vision - ***“Leader Of Smallholders’ Development”***.

At the same time, with ICT as a strategic enabler will help RISDA to enhance its image as an organization which is receptive to new technologies and responsive to the growing demand for improved service delivery. The conceptual view of this new environment, called **iRIS** (Integrated RISDA Information System) is shown in Diagram ES 5-2.

Diagram ES 5-2  
RISDA's To-be Integrated Systems Environment

