# To define Interoperability Data Standards in the Development Project Coordination Domain.

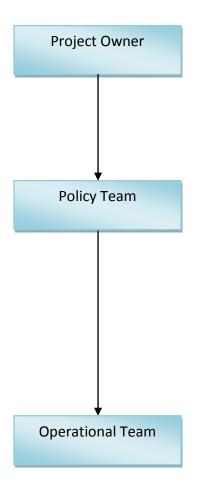
#### 1. OBJECTIVE OF THE PROJECT:

The Objective of the assignment was to define the Data Elements which are shared among the various stakeholders within the above mentioned domain – in a manner the data could be exchanged and used without ambiguity among different systems within the given domain.

### 2. PROJECT OWNER:

Secretary to the Ministry of Plan Implementation

### 3. STRUCTURE OF THE PROJECT



### Responsibilities

#### **Project Owner:**

- To define the scope and boundaries of the domain
- To define the purpose of the domain
- To identify all the players within the domain
- To identify the prospective owners of data in the domain.
- To facilitate the setting up of the Policy Team, including 'Data Owners' and 'Players' within the domain.

### **Policy Team**

- To validate the scope and boundaries of the domain.
- To validate & confirm the purpose of the domain
- To validate the completeness of the players within the domain
- To validate the prospective owners of data within the domain and obtain their concurrence.
- To set-up the Technical Team.
- To define policy and process to manage the domain.
- To engage at all levels (including the political hierarchy) to ensure the effectiveness of the Interoperability.

### **Operational Team**

- Based on the defined scope & purpose, to identify the data elements that are required to ensure the interoperability.
- To identify entities that may not currently be in a position to accept ownership and define alternatives.
- To draft the process to ensure the effectiveness of Interoperability of data within the domain.
- To map the data elements to the Stakeholder Data Category Matrix and Data Category Life Cycle Matrix.

### 4. SCOPE OF THE ASSIGNMENT

Interoperability of Information within the Development Project Co-ordination (Foreign Funded) Domain.

### 5. BOUNDARIES OF THE DOMAIN

All information on the project from the point the Project Agreement is signed between the GOSL and Development Partner/s, through its implementation, until the project is completed or terminated.

#### 6. Purpose Statement for the Assignment

The information within Development Project Implementation (Foreign Funded) domain has a major impact on the overall development activities of the country as well as the focus of the Development Partners. The data within this domain is shared among many stakeholders. Since data that is being shared are in different formats, seamless exchange of electronic data is not possible. Hence, it is important to develop an interoperability framework for this domain.

### 7. THE POLICY INTEROPERABILITY TEAM COMPOSITION:

Institution	Position	Name	
Ministry of Plan Implementation	Secretary (Chairperson of the committee)	Ms. Dhara Wijethilake	
Ministry of Plan Implementation	Director, FABM	Mr. Sunil De Seram	
Ministry of Internal Administration			Mr. ISHJ Illukpitiya, DD(Development)
Ministry of Water Supply and Drainage			Mr. MKJB Gunarathne, Assistant Director
Department of External Resources	Director	Mr. SM Piyatissa	
Department of National Planning			
Department of National Budget	Director	Mr. AK Senevirathne	
World Bank	Development Partner/ Donor Group	Mr. Patric Vandenbruane	
Japan International Coorperation Agency			
Asian Development Bank			Mr. K M Thilakarathne, Senior Project

			Specialist
United Nations Development Programme			Dr. Frederick Abeyratne – Program Director Mr. SCMB Attanayaka, ICT Analyst & Mr. MDS Salgado, ICT Assistant
Embassy of People Republic of China	Not Represented		
Information & Communication Technology Agency of sri Lanka	Director, Re- engineering Government	Mr. Wasantha Deshapriya	
Information & Communication Technology Agency of sri Lanka	Chief Software Architect	Mr. Sanjaya Karunasena	
Information & Communication Technology Agency of sri Lanka	Programme Specialist	Mr. Thushara Suraweera	

Table 1: Interoperability Policy Team

### 8. THE OPERATIONAL INTEROPERABILITY TEAM COMPOSITION:

Institution	Position	Name
Ministry of Internal Affairs	DD(Development)	Mr. ISHJ Illukpitiya
Department of Foreign Aid Budget Monitoring	Director	Mr. Sunil De Seram
Department of Foreign Aid Budget Monitoring		Nalaka Wimalarathne
Ministry of Plan Implementation, e-DIM unit		Mr. Dushyantha De Vass
National Secretariat for NGO		Mr. PSS Wijerathne
Dept. of External Resources	Director	Mr. SM Piyatissa
Dept. National Budget	Asst. Director	Mr. BAKW Mahendra

National Water Supply and Drainage Board			
National Water Supply and Drainage Board		Mr. LS Kariyawasam & Ms. P Sivasothy	
World Bank	Development Partner/ Donor Group	Mr. Patric Vandenbruane	
Asian Development Bank		Mr. Munawar Alam & Mr. Amila Salgado	
United Nations Development Programme		Dr. Feedrick Abeyratne and Mr. Clement Adams	

Table 1: Interoperability Operational Team

### 9. METHODOLOGY ADOPTED

### **Stage 1: Project Initiation**

- a. Identify the appropriate Project Owner for a proposed domain.
- b. Discuss and ensure the Project Owner appreciates the advantages of defining interoperability standards for the proposed domain.
- c. Obtaining the agreement of the Project Owner to lead the interoperability initiative within the proposed domain.

### Stage 2: Setting-up Policy Team and Agreeing on the Domain Parameters

- a. Under the leadership of the Project Owner, identify the various stakeholders involved within the proposed domain.
- b. Identify a Policy Team from among the identified stakeholders.

### Stage 3: Briefing the Policy Team and Agreeing on the Domain Parameters

- a. At the initial meeting of the Policy Team brief the members on the concepts and objectives of interoperability on what it is and what it is NOT.
- b. At a subsequent meeting, the Policy Team is required to define the scope of the domain, including the boundaries of the domain.
- c. Based on the stakeholders within the domain the Policy team will identify the members to the Operational Team to define the required data elements. (**Note:** The members to the Operational Team should be those fully aware of the operations of the organization and not those only involved with the IT section of the relevant institution).

### Stage 4: Detailed Action by the Operational Team

- a. At the initial meeting of the Operational Team; briefing the members on the concepts and objectives of interoperability on what it is and what it is NOT.
- b. Brief the Operational Team on the Scope of the Assignment and the Boundaries of the Domain, so as to ensure focus on the domain is maintained at all times.
- c. Identify the various stakeholders within the domain.

- d. Define the Major Data Categories of the domain by the Operational Team. (**Note:** The breaking-up of the domain into logical data categories is a crucial step). The following factors should be considered when breaking the domain into Data Categories;
  - i. The Time the data is created.
  - ii. The Entity creating the data.
  - iii. The Logical Point for capturing the data.
- e. Define the boundaries for each Data Category.
- f. Develop the 'Stakeholder Data Category Matrix'. (**Note:** This step will validate the completeness of the identified Data Categories).
- g. Develop the 'Data Category Life Cycle Matrix'. (**Note:** This step will identify the Life Cycle of the information and different stakeholders affecting the Data Category).
- h. Identify the 'Data Elements' that is required to be shared with other stakeholders. (**Note:** This step will only identify data elements that are shared with other stakeholders).
- i. Define the High Level Data Flow Diagram.

# Stage 5: Define the Pseudo Technical Standards & Interoperability Standards for each Data Element.

### Stage 6: To receive the acceptance of the Policy Team and publish information on the Web.

In case of disagreements by the Policy Team on data sharing standards, go back to Stage 4 where the operational team will revisit the relevant areas and present the amended framework if necessary to the expert group and then to the Policy Team.

**Note**: As this was the first occasion this methodology was followed: The Interoperability Framework was presented to an expert group and their view point/concurrence was obtained prior to finalizing the report.

### 10. CONCLUSION

The actions with regards to stages 1 - 4 have been completed and this report is being handed over to ICTA to finalize the XML standards for each data element.

### 11. ANNEXURE LISTING

Annexure 1 - Data Categories and their Boundaries

Annexure 2 - Stakeholder Data Category Matrix

Annexure 3 - Data Category Life Cycle Matrix

Annexure 4 - Data Elements

Annexure 5 - High Level Data Flow Diagram for the Domain

Annexure 6 - Information Sharing Methodology

Annexure 7 - Modification of Information

Annexure 8 - Web Layout Suggetions

# **Annexure 1 - Data Categories and their Boundaries**

nn(	exure 1 - Data Categories and their boundaries
	Commitment Information:
	<ul> <li>All information and data pertaining to the project that was created until the point of signing the agreement with the GOSL.</li> </ul>
	Setting-up Information:
	<ul> <li>All information and data pertaining from the Point of Signing the Agreement until the project commences operations.</li> </ul>
	Progress Information:
	<ul> <li>All information and data pertaining to the project from the point the operations of the project commences until the Project is closed.</li> </ul>
	Conclusion or Termination Information:
	<ul> <li>All information and data pertaining to the project that was created after the project has been closed.</li> </ul>

# **Annexure 2 - Stakeholder Data Category Matrix**

Stakeholders/Data Category	Commitment Information	Setting-up Information	Progress Information	Conclusion or Termination Information
ERD	✓	✓		
Project Executing Organization (Relevant Ministry)	✓	✓	✓	✓
Project Implementing Organization (Project Office)	✓	✓	✓	✓
Supporting Development Partner	✓	✓	✓	✓
Ministry of Plan Implementation	✓	✓	✓	✓
Development Partner Community	✓		✓	✓
Treasury Operations Department		✓	✓	
National Planning Department		✓	✓	
National Budgets Department		✓	✓	
Central Bank of Sri Lanka				
Local Government Authorities	✓		✓	

Table 3: Stakeholder Data Category Matrix

# **Annexure 4.1-Data Elements (Commitment Information)**

Data Element	Remarks	Data Type	Sample Information
Name of Project		String	Distance Education Modernization Project
Development Partner		String	ADB
Agreement Number		String	1999-SRI (SF)
Agreement Sign Date		Date	18/08/2003
Agreement Type	Please provide list	String (Pre-defined Values)	Loan
Thematic Area (ERD)	Please provide list	String (Pre-defined Values)	Poverty Reduction
Sector (Pre defined by National Planning)	Please provide list	String (pre-defined Values)	Education and Vocational Training
Sub-Sectors (Pre defined by National Planning)	Please provide list	String (Pre-defined Values)	Vocational Training
Original Total Project Value		Currency Array (Project value in multiple currencies)	US \$ 54,881,470 SLR Donor Currency
Original Loan Component		Currency Array (Project value in multiple currencies)	US\$ 44,000,000
Original Grant Component		Currency Array (Project value in multiple currencies)	US\$ 15,000,000
Original GOSL Component		Currency (in Rs)	LKR 1,232,000,000
Original TA Component		Currency Array (Project value in multiple currencies)	US\$ 10,000,000
Loan Installment		Currency Array (Project value in multiple currencies)	US\$ 10,000

Data Element	Remarks	Data Type	Sample Information
Enhancement Number+ Description		{String, String} Array	This will indicate the number of the enhancement and the reason for the enhancement.
Cancellation Number+ Description		{String, String} Array	This will indicate the number of the cancelled component within the original agreement and the reason for the cancellation.
Enhancement Number + Value		{String, Currency Array} Array	This will indicate the number of the enhancement and the value of the enhancement in multiple currencies.
Cancellation number + Value		{String, Currency Array} Array	This will indicate the number of the cancellation and the value of the cancelled component within the original agreement in multiple currencies.
Executing Agency	Please provide list	String	Ministry of Education
Implementing Agency	Please provide list	String	Vocational Training Institute
Project Period		Duration	05/11/2003 – 31/12/2009
Interest Rate		String, Value	US \$ 2%
Grace Period		[Duration]	05/11/2003 – 01/09/2011
Debt Repayment Strategy		String	This will indicate how the project intends to repay the debt.
Agreement Signing Date		Date	18/08/2003
Loan Effective Date		Date	05/11/2003
Disbursement Closing Date		Date	31/12/2009

Data Element	Remarks	Data Type	Sample Information
Loan Covenants (multiple)		String Array	Major Loan Covenant At The completion of the project highway, the proposed expressway authority to be established, subject to relevant approvals of Parliament to ensure that suitable arrangements are made for operation and maintenance of all expressway.
Province	Please provide list	String (Pre-defined Values)	Island wide
District	Please provide list	String (Pre-defined Values)	All Districts
DS Division	Please provide list	String (Pre-defined Values)	All Divisional Secretariats

# **Annexure 4.2-Data Elements (Setting-up Information)**

Data Element	Remarks	Data Type	Sample Information
Project Objectives		String Array	A secondary education system that is equitable and responsive to labour market requirements.
Covenant + Status	Status: Please provide list	{String, String (Predefined Value)} Array	The Government has established an Expressway Management Unit (EMU) under the General Manager of RDA. The draft bill for establishing the Expressway Authority is with the legal division of the MOHRD
Budget Holder (name & position)		String, String Array	Mr Resident Representative ADB
Budget Holder (Address 1, Address 2, City, Telephone 1, Telephone 2)		String, String Array	ADB Country Office ABC Road Colombo 1 Tel No:
Project Office Contact Details		String Array	Ground Floor, Ministry of Education, Isurupaya, Battaramulla
Project Director and Contact Details		String, String Array	Mr. Anura Dissanayake 011-2784868 semped@sltnet.lk
Package Number + Details		{String, String} Array	1 / 1.2 / 1.3 2 / 2.1 / 2.2 3 / 3.1 / 3.2
Implementation Schedule		{String, Date, Date, Date, Date, String, String} Array	Activities / Plan Start Date / End Date / Actual Start Date / End Date/ Time over run under run/ Status
Implementation Cash Flow		[Standard Accounting Format]	Quarter1 , 2, 3, 4 Amount Requested Amount Received Amount Spent
Risk Number & Project Risks		{Number, String} Array	1:Government allocates sufficient funds for recurrent costs, 2:Partnerships between MOE, provincial ministries of education, and the schools 3:Political interference in school and teacher selection. 4:Teacher assessment of student performance is recognized and accepted as an integral part of the teaching learning process.

Data Element	Remarks	Data Type	Sample Information
Project Indicator Number and Project Indicators		{ Value, String} Array	1. Un employment rates of educated youth reduced by 5% from 2008 to 2012, Employment of educated youth in the private sector increased by 4% from 2008 to 2012 Pass rates of general certificate O-level and A-level increased by 8% from 2008 to 2012, especially in Science, Mathematics and English, Number of A- level graduates enrolled in nonconventional tertiary education increased by 4% by 2012.
Base Line Information by Indicator		{String, String} Array	Net enrolment ratio in Primary Education Primary Completion Rate
Sector Indicator		String Array	Net enrolment ratio in Primary Education Primary Completion Rate
Project Output Indicators (to be developed)		{String, String} Array	School buildings & facilities upgraded in 150 schools by the end of the project in accordance with the EEF,By the end of project 18,000 teachers are trained in (i) CBE methods for teaching and evaluation (ii). The use of ICT in all subjects,Secondary school curriculum includes HIV/AIDS and public health readings,examples and assignments across the curriculam.
Output by Sector Indicators (to be developed)	Sector Ind: Please provide list	{String, String} Array	Increasing the primary completion rate Provide all the required text books
Risk Number & Risk		{Number, String} Array	1:Government allocates sufficient funds for recurrent costs, 2: Partnerships between MOE, provincial ministries of education, and the schools remain strong, 3:Political interference in school and teacher selection. 4:Teacher assessment of student performance is recognized and accepted as an integral part of the teaching learning process

# **Annexure 4.3-Data Elements (Progress Information)**

Data Element	Remarks	Data Type	Sample Information
Annual Program Implementation Plan - Physical		{String, Date, Date, Date, Date, String, String} Array	Activities / Plan Start Date/Plan end Date/ Actual Start Date / Actual end Date/ Targets/ Achievements/
Annual Program Implementation Plan - Financial		{String, Currency, Currency, Currency, Currency, String} Array	ADB — Total Amount /Cumulative Utilization Allocation for the Year/ Expenditure / Target/ Achievements GOSL — Total Amount Cumulative Utilization Allocation for the Year/ Expenditure / Target/ Achievements
Quarterly Target Financial (multiple)		{String, {Currency}Array} Array	Quarter 1: US\$ 2.80m, Rs, Other
Quarterly Target Physical (multiple)		{String, String} Array	Activities 1 Target  Activities 2 Target  Activities 3 Target
Annual Allocations (GOSL)		{Currency} Array	LKR 175.00 Mn
Annual Allocation (Foreign Fund)		{Currency} Array	US\$ 995.00 Mn
Expenditure Y-to-D Foreign		Currency	LKR 913.50 Mn
Expenditure Y-to-D GOSL		Currency	LKR 175.00 Mn
Cumulative Expenditure – Foreign		Currency	US \$ 8,540,000
Cumulative Expenditure - GOSL		Currency	US \$ 1,545,663
Cumulative claims submitted - Foreign		Currency	LKR 676.00 Mn

Data Element	Remarks	Data Type	Sample Information
Fund Disbursement – Actual - Foreign		Currency	LKR 397.00Mn
Revisions – Financial (multiple)		{String. Currency Array} Array	This will indicate the number of the revision and the value by which the agreement was revised in multiple currencies.
Revision – Time (multiple)		{String, String} Array	This will indicate the number of the revision and the timing by which the agreement was revised.
Progress on Project Indicators		{String, String} Array	Increased enrollment rates in secondary schools in the 150 poorest DSDs by 8% from 2008 to 2012, Increased completion rates for grades 6-11 students in the 150 DSDs by 8% from 2008 to 2012,Icreased enrollment and completion rates of SLIATE by 25% and 12% respectively from 2008 to 2012
Progress on Sector Indicators		{String, String} Array	The Net enrolment ratio in primary education. Increase the primary completion rate
Risk Number and Status of Risks		{Number, String} Array	<ol> <li>Government has allocated sufficient funds for recurrent costs.</li> <li>Teacher assessment of student performance is recognized and accepted as an integral part of the teaching learning process.</li> </ol>
Project Rating (from multi- lateral DP)	Project Rating: Provide a List	{String, String} Array	Partly Successful

# Annexure 4.4 - Data Elements (Conclusion/Termination Information)

Data Element	Remarks	Data Type	Sample Information
Cost at Completion		{Currency} Array	US \$ 60,000,000
Actual Closing Date		Date	15/08/2011
Actual Project Period		Duration	05/11/2003 – 15/08/2011
Project Deliverables and Status	Status: Please provide list	{String, String} Array	6,000 schlorships provided for female & male student in the poorest DSDs.  * 100 Isuru Schools Selected and programms in progress.  * 24 Health and Nutritional Centers were improved  * Furniture and Equipment have been provided for 37 Teachers Centers  * 980 are provided with computer facilities
Overall Assessment	Please provide list	{String} Array	The Project catered to a national-level employment market demand arising from a growing private sector and an increasingly open economy to improve the performance ability and on-the job trainability of potential middle level employees. The market demand prescribed the possession of a prior versatility among potential employees in areas such as mathematics, sciences, computer skills and English language which in turn required a directed investment in upgrading secondary education facilities in the country. Realizing the centrality of upgrading secondary educational facilities as a means of rural poverty alleviation and inter-regional disparity reduction the Project emphasized improving educational facilities outside of urban areas. It sought to improve access of rural population such facilities and thereby promote their competitiveness in employment markets.

curriculum with learner centered education linked to examination reform, teacher education and training, provision of appropriate physical infrastructure and facilities and overall school management skills the Project sought to improve the generic ability of school graduates, including their trainability and potential preparedness for better on-the job performance demanded by a growing private sector based employment market. It also implied that concomitant pressure will eventually be brought by the entry of more appropriately trained tertiary school graduates into the public sector to induce it to seek change its employment policies to improve its own performance.

The Project design consisted of four components: (a) curriculum development, (b) Teacher education and training, (c) Examinations and testing, and (d) Development and upgrading of schools. It provided for an institutional mechanism under the Ministry of Education and Higher Education (MEHE), in the form of a Project Steering Committee (PSC) and a Project Management Office (PMO) to plan, steer and ma

# Key Issues (multiple) and Future Actions

### {String, String} Array

### **Implementation Issues**

Innovative interventions in establishing a Self-Employment Promotion Initiative (SEPI) Fund to support trainees from poor families with loans for starting selfemployment proved to be financially viable, with a high recovery rate creating a significant return on capital in creating new employment and raising incomes. In this context the establishment of a revolving fund with the accrued interest and additional capital after project completion was expected to provide positive dividends in increasing the number of beneficiaries. Similarly, pilot interventions in conversion of Kandy and Maradana Technical Colleges into autonomous institutions (Companies) with the approval of the Ministry of Finance were rated successful.

### **Design & formulation**

The concept of introducing policies and effective mechanisms to engage community support for establishing private institutions and managing rural vocational training centers through a performance contracting scheme with NGOs and the private sector was found to be unrealistic in the context of public education in Sri Lanka, with resistance received from instructors and students and the general public, highlighting the need for more public awareness creation programs by the project.

Lessons Learned	{String, String} Array	Design & formulation  Adding a new component to a completed loan design requires thorough analysis to ensure congruence with the project goals, objectives, and methods, and the new requirements should be integrated into existing components in the original project design.  Implementation  Complex projects involving multiple funding agencies, government agencies, institutions, and stakeholders require more time at initial implementation to establish operational policies and procedures as well as a broader awareness creation and agreement.
Follow-up Action	{String, String} Array	Institutional A systematic review process for revising existing occupational standards and preparing new Ones must be established and administered by TVEC in cooperation with the National Apprentice & Industrial Training Authority (NAITA) with adequate fund support.  Other Since the Vocational Training Authority (VTA) is responsible youth selfemployment promotion initiative (SEPI) and disbursement of loan funds to eligible trainees it should ensure that all legal requirements, policies, and procedures are in place to immediately continue the program on a revolving fund basis through placing in an interest-bearing account the recovered loan funds held by the Central Bank.

# Annexure 3.1-Data Category Life Cycle Matrix ...... (1/4)

# **Commitment Information**

Creator	Owner
• ERD	• ERD
User	Keepers & sharers
Executing Agencies	• MPI
<ul> <li>National Budget</li> </ul>	• CBSL
• DP/Donor	• TOD
	Project Offices
	Multi Lateral Agencies
Modifiers	Authorized to Delete
• ERD	• ERD

Table 4.1: Data Category Life Cycle Matrix – Commitment Information

# Annexure 3.2-Data Category Life Cycle Matrix ...... (2/4)

# **Setting-up Information**

Creator	Owner
Executing Agency	Executing Agency
User	Keepers & sharers
• ERD	• MPI
• TOD	Project Office
Local Authorities	<ul> <li>Multi Lateral Agencies</li> </ul>
• DP/Donor	
Modifiers	Authorized to Delete
Executing Agency	
Project Office	

Table 4.2: Data Category Life Cycle Matrix – Setting-up Information

# Annexure 3.3-Data Category Life Cycle Matrix ...... (3/4)

# **Progress Information**

Creator	Owner
Project Office	Executing Agency
• ERD	
Multi Lateral Agencies	
User	Keepers & sharers
• ERD	• MPI
National Budgets	Multi Lateral Agency
National Planning	• ERD
DP/Donor	
• TOD	
Modifiers	Authorized to Delete
Project Office	
• ERD	
Multi Lateral Agencies	

Table 4.3: Data Category Life Cycle Matrix – Progress Information

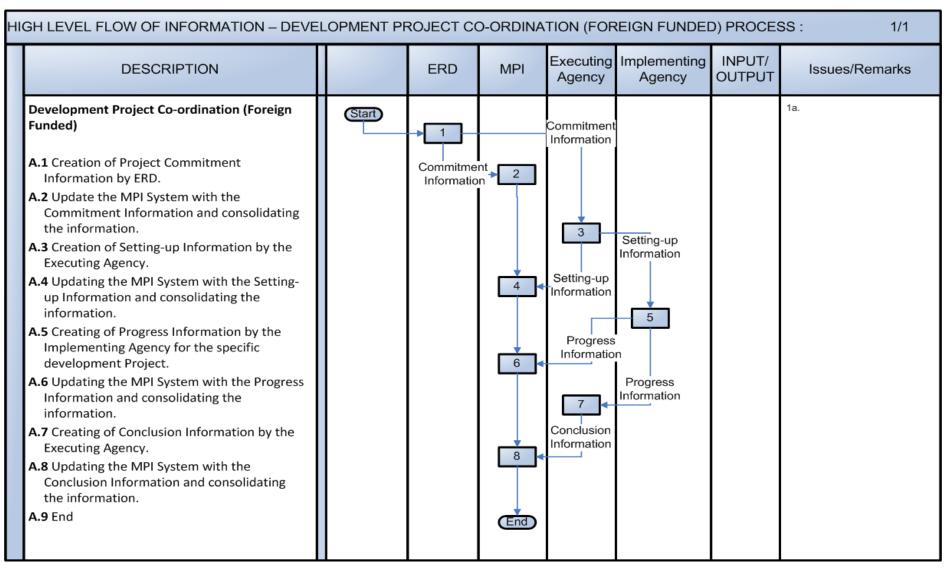
# Annexure 3.4-Data Category Life Cycle Matrix ...... (4/4)

# **Conclusion or Termination Information**

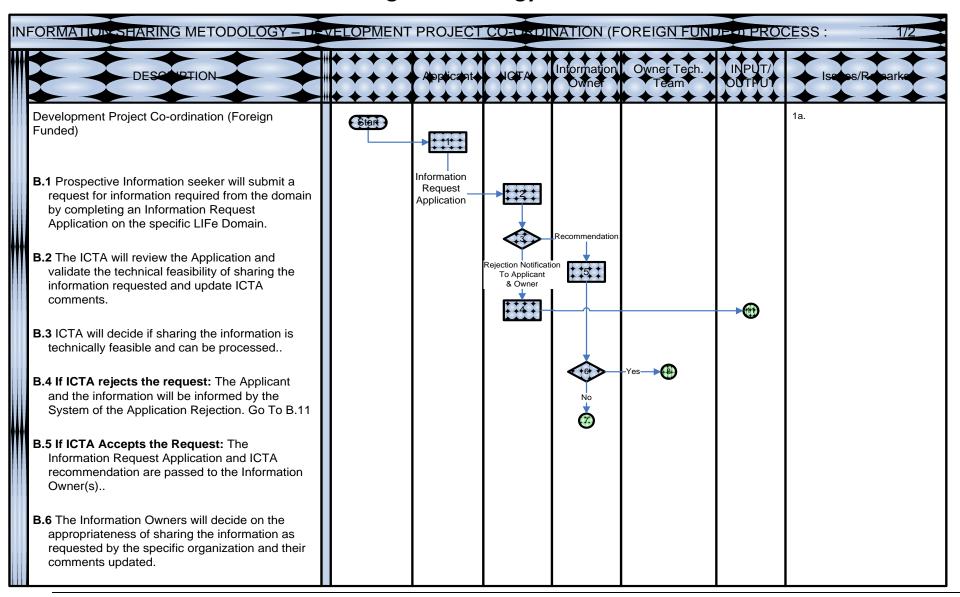
Creator	Owner
Executing Agency	Executing Agency
User	Keepers & sharers
National Budget	• MPI
National Planning	Multi Lateral Agencies
• TOD	• ERD
• DP/Donor	
Modifiers	Authorized to Delete
Executing Agency	

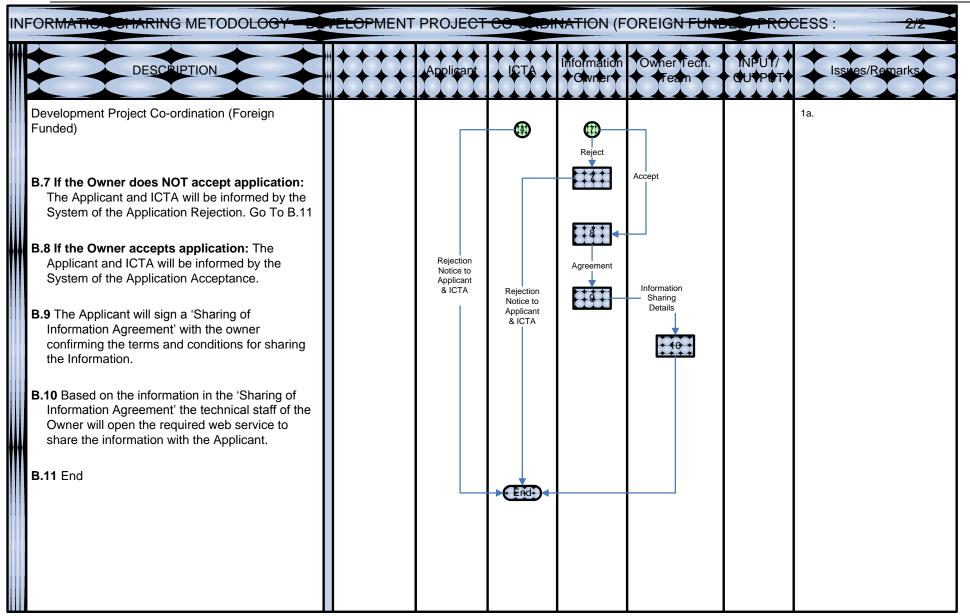
Table 4.4: Data Category Life Cycle Matrix – Conclusion or Termination Information

### **Annexure 5 - High Level Data Flow Diagram for the Domain**



# **Annexure 6 - Information Sharing Methodology**





### Annexure 6(a) - Sample Request for Information:

- 1. Domain Name from which the data is being requested.
- 2. Name & Contact details of the Organization requesting for the data.
- 3. Contact Person and Details responsible for this initiative. (Name, Designation, Telephone (multiple), e-Mail).
- 4. Purpose for which the data is requested.
- 5. Listing of the Specific Data elements that are required.
- 6. Confirmation by the applicant that he will abide by the following:
  - a. That he will not store the information in either hard or soft format
  - b. That he will not modify the data in any manner.
  - c. That the data will be used only for the purpose specified.
  - d. The data will not be shared with any other party (unless as specified in the 5)
  - e. Willingness to make a payment for the data received.
- 7. Signature of the Applicant certifying the above information.
- 8. Date of Request.

# Annexure 6(b) - Areas to be Addressed in the Agreement:

- 1. The purpose for which the data is being requested.
- 2. The responsibility of the organization to protect the data received.
- 3. Not to use the data for any other purpose.
- 4. Not to share the data with any other person or entity.
- 5. Not to use the data for any other purpose than that agreed.
- 6. The payment mechanism for the data.
- 7. Exit clause how the agreement could be cancelled for breach of the above or by notice without any damages.
- 8. No warranty for the accuracy of the data and any consequential loss.

### **Annexure 7 - Information Modification Methodology:**

- **Step 1:** All Modifiers of information (who are not the owners of information) are required to open a Web Service to share any information modified within the information owner. (**Note:** Until the Web Services are adequately developed the Modifier should implement a process that ensures the modified information is informed to the Information Owner).
- **Step 2:** The Owner of the Information should have the systems developed to accept the modified information and update the date base. (**Note:** Until the updating of the modified information is automated the Information Owner a process that ensures the modified information is updated on the data base of the Information Owner should also be implemented).

# Annexure 8 - Areas to be addressed in the Laying out of the Web Page for Life:

### **Objective:**

- 1. To enable any software development company to identify the data elements within this domain that could be shared.
- 2. To enable the implementers of a system to identify who should be approached to obtain the Specific information.
- 3. The XML standards that would be adopted by the different organizations when sharing the information.
- 4. In order to ensure interoperability it is important that specific information elements need to be standardised (e.g., Names of Ministries, Sectors, Sub-Sectors, Names of Locations, etc.). Such information should be maintained within the same web page that defines the interoperability standards. (**Note:** The standard information that should be shared with the public have been identified as 'List to be Provided' within Annexure 4.

### **Representation of Information**

The above information could be represented using the following tables within this report:

- a. Annexure 1 Data Categories and their Boundaries
- b. Annexure 2 Stakeholder Data Category Matrix
- c. Annexure 3 Data Category Life Cycle Matrix
- d. Annexure 4 Data Elements
- e. Annexure 5 High Level Data Flow Diagram for the Domain
- f. Annexure 6 Information Sharing Methodology
- g. Annexure 7 Information Modification Methodology