

## TERMS OF REFERENCE

### 1. Rationale

- 1.1. With advances in information and communication technology, online transaction over the Internet has become an integral part of day to day life. An online stock management, distribution and documentation automation is a web-based application which allows the Educational Publications Department to effectively execute the duties via the internet. Online stock management, distribution and documentation automation has been popular in developed countries and in developing countries such as Canada, Australia, USA, UK, and Singapore, India, Bangladesh, etc. The Educational Publications Department requires this new and innovative technique for stock management, distribution and documentation automation. The Educational Publications Department prints and distributes 44,724,100 copies of textbooks under 443 types to more than 10,000 schools, private, semi-government and international schools.
- 1.2. Online stock management, distribution and documentation automation of the activities of the Educational Publications Department would undoubtedly enhance the efficiency, effectiveness and productivity of the department while making sure that the textbooks reach the students in all corners of the country on time with minimum expense of time, money and labour.
- 1.3. EPD will hire an external consultant/Firm that will design and establish online system for stock management, distribution and documentation automation. The consultant will work closely with the Distribution Branch and Information Technology Branch of EPD under the guidance from the Steering Committee chaired by Commissioner General of Educational Publications. EPD will provide necessary documents guidance during the period of system development.
- 1.4. Consultant/Firm will complete the assignment within 15 weeks period and monthly work done report to be submitted to the EPD.

### 2. Background

- 2.1. Throughout the world, information and communications technologies (ICTs) are changing the face of education. It is believed that, fundamentally, there are two distinct factors propelling this change. ICTs are changing the nature of work and the workplace. The “knowledge revolution”, combined with economic globalization, has created conditions in which countries that have focused on knowledge-based industries have been able to reap significant rewards. Knowledge-based industries require an educated labour force of computer-literate individuals who themselves

understand and can harness the power of ICT. In response to the demands for producing such a labor force, many countries have changed the objectives of their education system and have directed much of their attention to the development of ICT skills in schools.

**2.2.**The Educational Publications Department, committed to implement the free textbook policy of the government, is entrusted with the prime responsibility of producing, printing and distributing free school textbooks from grade 1-11, printing and distributing teacher guides, produce supplementary reading materials and self-learning materials in audio and visual form. The department accomplishes its services to fulfill the needs of compulsory education which is one of the basic rights of the students and to offer equal opportunities in education.

### **3. OBJECTIVES**

The overall objective to operationalize, implement and maintain a user-friendly, interactive, web-based online stock management, distribution and documentation automation. This system should provide suitable flexible interactive user-friendly tools to allow enter data from identified sources produce standard reports and disseminate information to policy makers and stakeholders in a systematic way. More specifically this entails:

1. To establish an automated stock management, school textbook requisition updating, documentation and distribution system
2. To establish two-way communicate system (Top to bottom and bottom to top) for fast and efficient management
3. To make sure that the textbooks reach the students in all corners of the country on time with minimum expense of time, money and labour
4. To save millions of money that are spent for the stationaries (Paperless management) and establish paperless environment
5. To help institutions quality assure their data and make more accurate census returns

The proposed system must be portable and extendable to accommodate future changes in hardware, software and networking. Keeping in view these factors, the solution is based on two components: the server side and the enumerator side, which runs on the browser. The server is a set of applications that serve the requests made by an enumerator. Data server which is responsible for managing tabular data at the server side and sending the information to the client. This system is viewed in any standard web browser. The advantage of this approach that there is no need to download any plug-ins on the client side. The performance of the system is measured by the ability to respond to requests faster, and the reliability of the system. The

overall system performance is dependent on the combination of browser, server and networking performance, not the individual components, and is controlled by the weakest component within the total solution. In this phase of the project, one server machine is used for the functionality of the web server and data server, which are installed together. The diagram below illustrates a general view of the system design architecture.

Facility will be provided to collect direct online for National School and zonal level facility to be established for the provincial schools. If the schools are having internet facilities system will provide direct data entry facilities at the schools level wherever possible to enter data at collection point. Data which are entered directly to system to be validated at each level by the officers who are admin at each level. Approval for to submit main system will be done by the authorized level.

System design is the creative process of transforming a real-life problem into a solution. This is done through the description of the structure of the software to be implemented, data which is part of the system, and the interfaces between system components. For this system, the structure will be represented through its logical design and functional decomposition. The logical design specifies the methods of interaction of system components like the input and outputs, menu structures, procedures, controls and functions and command structures. For this stock management, distribution and automation system, it comprises of three essential modules, namely: the enumerator module, the system administration module and the stock management and distribution module,

User members: EPD Head Office, Book Stores of EPD, Sales Promotion Centers of EPD, Divisional and Zonal Education Offices, Schools

#### **4. SCOPE OF THE SERVICE & ACTIVITIES TO BE CARRIED OUT**

- 4.1 To compile a study document, based on the existing processes at Educational Publications Departments related to all internal services.
- 4.2 Conduct Brain Storming Sessions with project stakeholders to collect systems requirements to prepare to be document.
- 4.3 Provide a to be designs document based on the study document.
- 4.4 Provide necessary data templates for end users at EPD to provide master data and transactional data
- 4.5 Setup configure and customize the stock management, distribution and documentation automation System based on the to be design document signed off by the Educational Publications Department.
- 4.6 Take the system live on a phase by phase approach

- 4.7 The changes to existing processes as the results of the requirement verifications should be documented.
- 4.8 Study the functions and responsibilities of the Educational Publications Department and other organizations functioning under the Educational Publications Department. Understand their main functions and services. Conduct regular client site visits to study organizational requirements. Study the exiting application and identify the limitations of the application and implement the new application with the consultation of Proposed System Implementation team appointed by the Educational Publications Department.
- 4.9 Study the existing applications which are at Educational Publications Department and assess the need to integrate these systems with the proposed system.
- 4.10 Provide training and technical support to the staff of the Educational Publications Department or proposed by the EPD for Using the system and Administrating the system.
- 4.11 Migrate/ Upload or Link with existing database contents to the proposed Application/ Management System if necessary.
- 4.12 Manage and maintain the Application/ Management System for a 3 years' period from the date of sign off the project.
- 4.13 **The proposed System should support multiple databases such as MySql Database.**
- 4.14 The proposed system should adhere to the highest standards conforming to World Wide Web (W3C) standards and the latest version of ICTA web/ System Development standards for government organizations. Refer Annexure 1.
- 4.15 The proposed system should implement all necessary security measures and adhere to the security measures proposed by ICTA for ensuring the security of the proposed System.
- 4.16 The proposed system software, Database software, Backup software and any other software that depends on the functionality of the system needs to be provided by the consultant
- 4.17 **The required on premise hardware and operating systems to run the proposed system should be provided by the consultant.**
- 4.18 Vendor should impose the copyright and disclaimer notice in software applications specially developed for ministry of education under this assignment defined in Annexure 2
- 4.19 Maintenance of the Application/ Management System
  - Manage and maintain the Application/ Management System for a Three (3) years period (without any additional Payment) from the date of sign off. However, the maintenance period will be extended on signing off the maintenance agreement referred in section 2.4.

- Attend to all type of Corrective maintenances (Bug fixing). If user discovers any error/failure in the Application/ Management System, System implementer should response immediately. Meantime to Response (MTR) should not exceed one working day. Notification of errors/failures should be possible through email, telephone, fax or in letter format.

#### 4.20 Documentation

- 4.20.1 User Manuals should be drafted and finalized with the approval of Project team at the time of pilot implementation. [the User Manual should be in English and the other copy should be in local languages. The manuals should be also available in softcopy and eBook forms.]

#### 4.21 Ownership of the Application/ Management System

- 4.21.1 The System Implementer should provide soft and hard copies of all source codes, databases, Content Management tool, graphics, Database structures, Workflow diagrams, design documentations and other related documents used in the development of modules specific to the Ministry of Education.
- 4.21.2 The intellectual property rights relating to the graphics, photos (captured by the photographers), text, artwork, design, sound recordings, software, database, and any other components specially developed for this project by the Bidder shall be the property of the Educational Publications Department.
- 4.21.3 Any proprietary components belonging to the proposed system Implementation company or its partners shall be licensed to Bidder for petal use. The consultant shall require making appropriate arrangements to make available the source code of the said proprietary software to the client in the event of either bankruptcy or winding of merger of the consultant company or its partners.
- 4.21.4 System passwords (including super user / administrator password) should be handed over to the PMC after signing off the Project. The passwords can be obtained from PMC during maintenance period.
- 4.21.5 **The proposed System must be highly secured**
- 4.21.6 **proposed system application should support on the Linux and Microsoft platforms and mobile responsive.**

## 5. QUALIFICATION OF CONSULTANTS

The consulting firm should carry following position in this project with relevant experience.

| <b>Experts</b>                     | <b>Minimum Qualification</b>                     | <b>Minimum Experience</b>                                      |
|------------------------------------|--|--|
| <b>Project Manager</b>             | Degree from a recognize University               | Demonstrate at least 1-2 years experience in similar capacity. |
| <b>Proposed system consultants</b> | IT or related Degree from a recognize University | Demonstrate at least 1-2 years experience in similar capacity. |
| <b>Developer(s)</b>                | Diploma in IT or related subject                 | Demonstrate at least 2 years experience in similar capacity.   |
| <b>QA Engineers (s)</b>            | Diploma in IT or related subject                 | Demonstrate at least 2 years experience in similar capacity    |

Consultant must meet mandatory requirements stipulated as per the above table, if not the bid will be treated as non-responsive.

Marks will be given any qualification beyond the above the above mandatory qualifications stipulated in the table.

## 6. DELIVERABLES AND TIMELINE

Consultant should suggest project implementation plane based on Activity, activity flow and each divisions. It can implement several module as same time period without any delay.

|     | <b>Activity</b>   | <b>Deliverable</b>       | <b>Due date</b>              |
|-----|---|--------------------------|------------------------------|
| (a) | As Is study and Sign off. (study the existing processes specified in the Terms of Reference)    | As Is study Document     | Commencement Date + 1 Months |
| (b) | To Be Design document and Sign off. ( Mapping of the existing processes to the proposed system) | To be Design Document    | Commencement Date + 2 Months |
| (c) | Development of proposed system  | System                   | Commencement Date + 4 Months |
| (d) | Conducting UAT and Sign off.  | UAT Acceptance Document. | Commencement Date + 5 Months |
| (e) | Documentation   | Training manual          | Commencement Date + 6 Months |
| (f) | Pilot implementation  | Complete system          | Commencement Date + 7 Months |

|     |  |                         |                              |
|-----|--|-------------------------|------------------------------|
| (g) | Hosting and configuring of Fully functional System | Fully functional System | Commencement Date + 8 Months |
| (h) | Training clients and Sign off.                     | Attendance Record       | Commencement Date + 8 Months |
| (i) | <b>Total Duration</b>                              |                         | <b>08 Months</b>             |

## 7. CLIENTS INPUTS

1.1 The Educational Publications Department will provide the following facilities to the implementation team.

- Client will appoint a Project manager empowered to facilitate all project management activities.
- Client will appoint a core team of processes owners who will represent the end users and will be empowered to make decisions and sign off all documents related to the processes.
- Arrange meetings with relevant process owners and senior managers of the assigned organizations, if the need arises;
- Client will sign off study documents and to be design documents prior to beginning the next activity
- Issue an introductory letter, co-ordinate and arrange all appointments / meetings with respective stakeholders.
- Arrange discussion and demonstration of existing System and its application.
- Provide the facilities for meetings and training including multimedia projectors.
- Client will provide all necessary master data and opening balances needed for the system in the templates provided by the consultants.
- Client will enter data backlog between cut off and go live date
- Client will ensure that all of their key staff will attend the training

Other than above listed facilities, no facilities whatsoever will be provided to the successful bidder by the Client.

## 8. TRAINING

1.1 Provide Training for maximum of twenty (20) staff members per module and participants to be nominated and proposed by Educational Publications Department

- Provide training for all modules provided
- Providing training manuals to the users.

## **9. PROCEDURE FOR REVIEWING THE OUTPUT**

There shall be System Implementation committees

### **1. Proposed System Implementation Team (EIT)**

This will be setup by the Ministry of Education and will be the single point of contact for this project. EIT will review and request necessary changes and finally agree for the proposed Management System structure. EIT will appoint members from all units/divisions of the Ministry of Education for collecting and viewing the system. The Project Manager from Ministry of Education will sign off all documents on behalf of the Proposed System Implementation Team

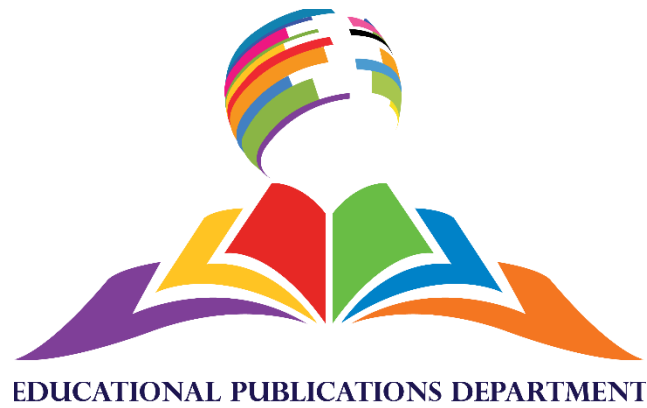
The Management System Administration manual and User manual will be reviewed at the signoff stage of the project.

Minutes of the System Implementation Team meetings will be provided within two days after each review. The service provider should incorporate the committee recommendations in the next version of the Management System and the final review comments should be incorporated before signoff of the project.

### **2. Submission of Proposal under this Tender Document**

Bidder should submit their proposal according to these tender guidelines with summarized User Requirement Analysis Report (URA). Evaluation criteria have defined with this tender condition and evaluation process will conducted based on URA. Bidder should get complete idea about requirement after interviewing main stakeholder.





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**EDUCATIONAL PUBLICATIONS  
DEPARTMENT**

**STOCK MANAGEMENT, DISTRIBUTION AND  
DOCUMENTATION AUTOMATION SYSTEM**

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# 1. Introduction

This Functional Requirement Specifications (FRS) provides an overview of the Book Compilations and Distributions System of the Educational Publications Department.

## 1.1 Purpose of the document

The purpose of this FRS document is to provide a detailed description of the scope, requirements, parameters and goals of the software product 'Book Compilations and Distributions System'

## 1.2 Project Scope

The System contains major modules as below

### **Book Compilation Process related events**

#### **Book Request Management**

A web based module, mainly use to request books from education publication department by the authorized persons of the schools, zonal / provincial education offices and shops.

#### **Book Stock Management**

This Module is mainly used by Clerks, store managers, publishing managers etc. to manage the book stock.

#### **Book Distribution Management**

This Module is used to generate book issuing orders on the requests which are made by the first module.

### 1.1. 1.3 Related documents

Data Flow Diagram of overall functions of Educational Publications department

<C:\Users\epd\Desktop\Distribution System\FLOW CHART>

## 2. System/ Solution Overview

### 2.1 Context Diagram/ Interface Diagram/ Data Flow Diagram, Application Screen Flow, Sitemap, Process Flow

Data Flow Diagram of overall functions of Educational Publications department

<C:\Users\epd\Desktop\Distribution System\FLOW CHART>

## **3. Functional Specifications**

**Book Compilation Process related events**

**Book Request Management**

**Book Stock Management**

**Book Distribution Management**

### **3.1 Book Stock Management**

#### **3.1.1 Book Registration**

Every book has to register to the system prior to subject to any process. Every book is assigned with a unique registration number. This ID represents the book for all processes in the system.

Following data are required for the registration of a new book:

- book ID (Auto Generated)
- Name of the book\*
- Serial No
- Barcode
- No of books in bundle, \*
- Category\*
- Medium\*

\* Required fields

#### **3.1.2 Search Book**

A book can be searched by inserting the part of the book name, book ID or barcode.

#### **3.1.2 Stock update**

System should allow updating the book stock by entering new stocks.

### **3.1.3 Stock Transfer**

System should allow transferring books to another location. But the stock should be update only after confirmation of the transaction.

### **3.1.4 Reports**

Current book stock can be viewed by book wise.

## **3.2 Book Request Management**

### **3.2.2 Create Book request form**

The module provides the facility of creating a book request form. This form should be created by the education publication department according to the issuing books for the current year. Individual book request form requests following information.

- Center/School
- Category
- Grade
- List of Books
- No of student who study the subject
- Extra requests
- Total Required Books

\*After create and confirm book request form it cannot be change

### **3.2.2 Create Centers and Center Groups**

System facilitates to create centers and center groups.

Center group contains following information.

- Center Name
- Province

- District
- Zone
- Division
- Center Address
- Center Manager Name
- Telephone no
- Mobile No
- Assistant Center Manager Name
- Telephone No
- Mobile no
- Username
- Password

Center Group may consist of one or more centers. Although the username is specific for a center group, default password can be changed by center managers.

### **3.2.3 Fill and submit book request forms**

System allows center managers to login remotely to the system, using username and password. Then they can submit the book request form after completion. Submitted forms should not be allowed to change. .

### **3.2.4 View and Edit submitted book request forms**

Authorized persons of the education publication department can review the submitted book request forms and also have the authority to change the request.

### **3.2.5 Reports**

Entire book requests can be viewed by category wise, center wise and also center group wise.

## **4. Non - Functional Requirements**

The system ensures the availability reliability and the security requirements of the system.

### **4.1 Security Requirements**

#### **User Access Control**

Book request management system contains two main user roles.

- Administrator
- Center Manager

Administrators have the access to all the functions such as create book request form, change submitted request form, view forms etc.

Center Managers can log on to their corresponding center/Group request form, to fill them and submit the completed request. They can't change the form after submitting or view other's request forms.

Stock management system has no specific user roles and that runs with windows integrated user security.

#### **Data Security**

Back-end reliability is supreme. No data should ever be lost as a result of software failure. To guard against hardware failure, the user may wish to create backups of their accounting data. Encryption is not necessary, as it can be handled on the file system level.

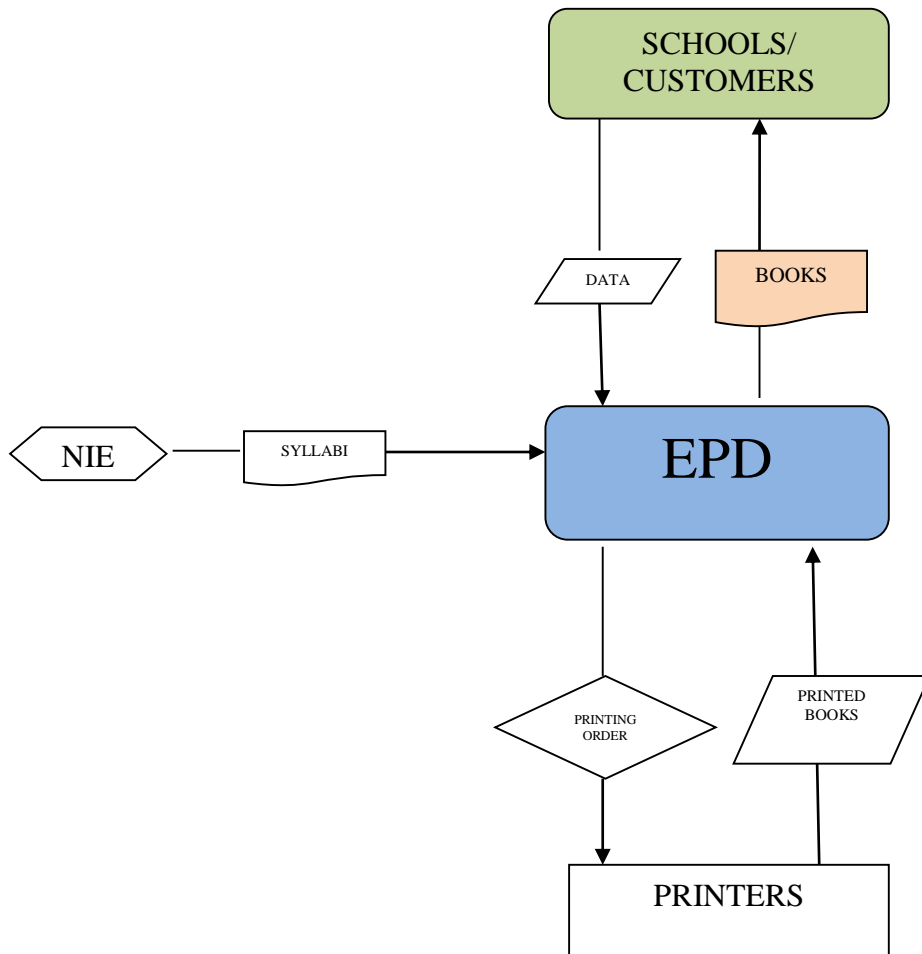
### **4.2 Software and Hardware Requirements**

Open Source database management and report generating software

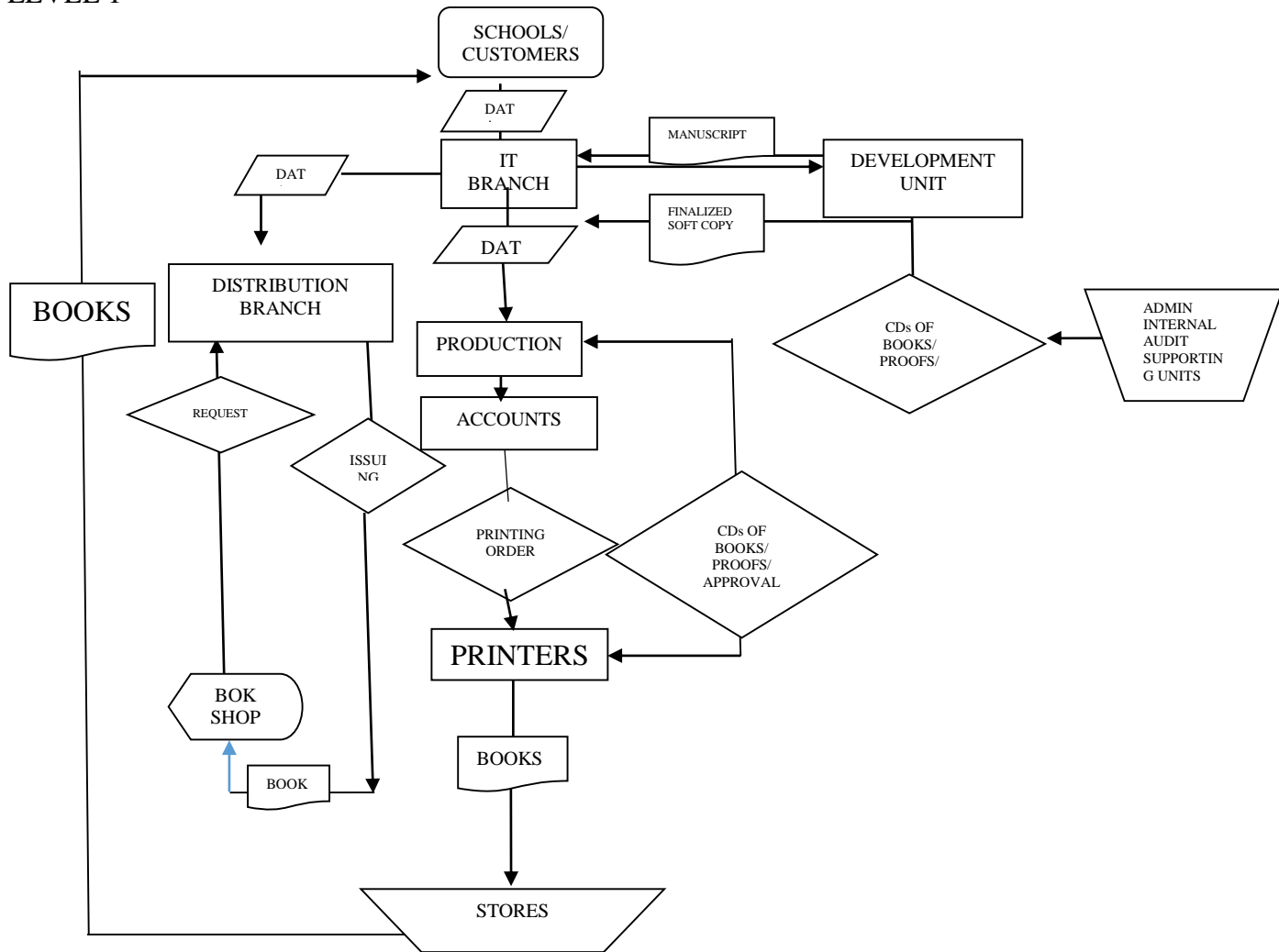
Web Server with IIS hosting

Computers and Printers (For EPD head office only)

## ABOUT EDUCATIONAL PUBLICATIONS DEPARTMENT

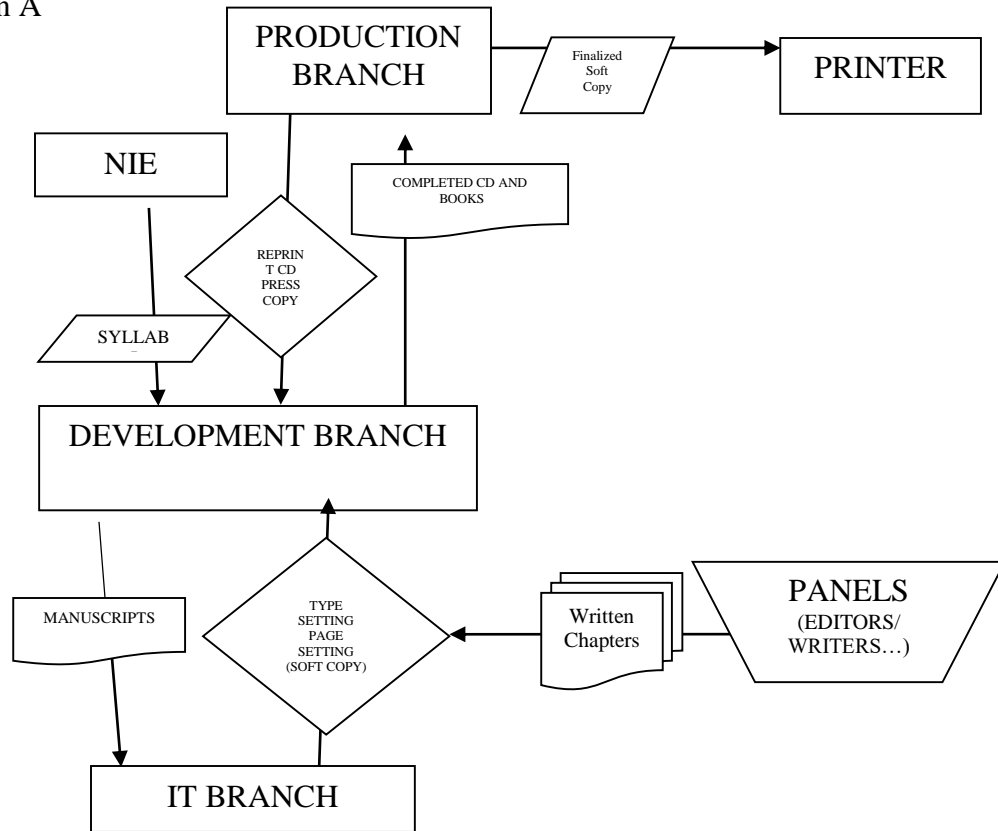


LEVEL 1

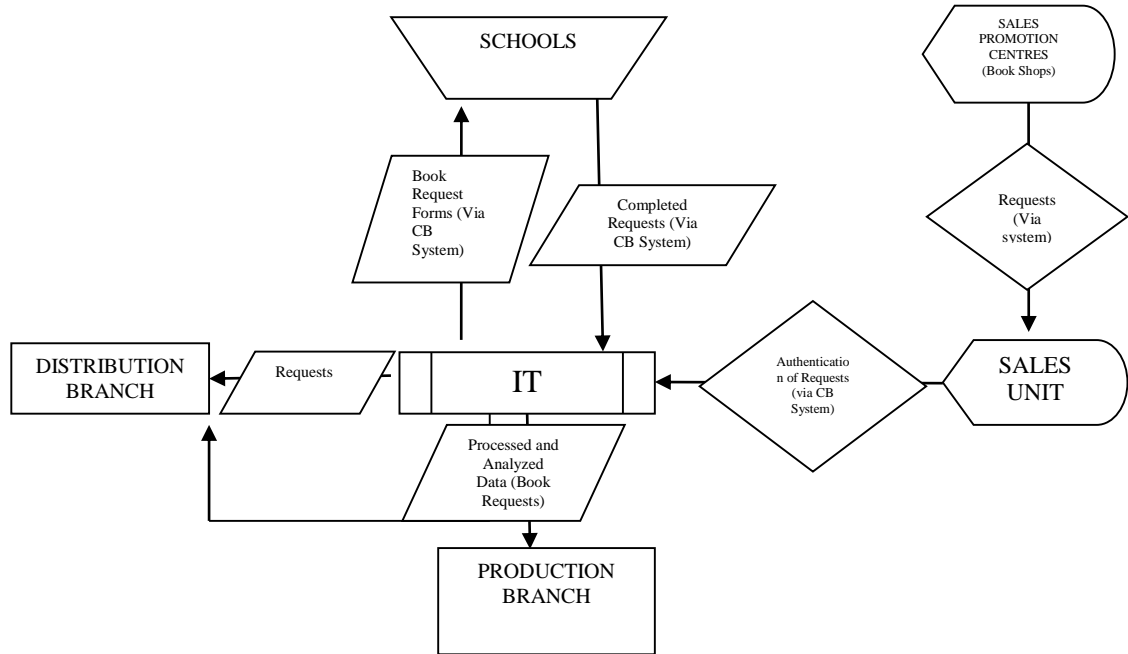




LEVEL 2  
Section A

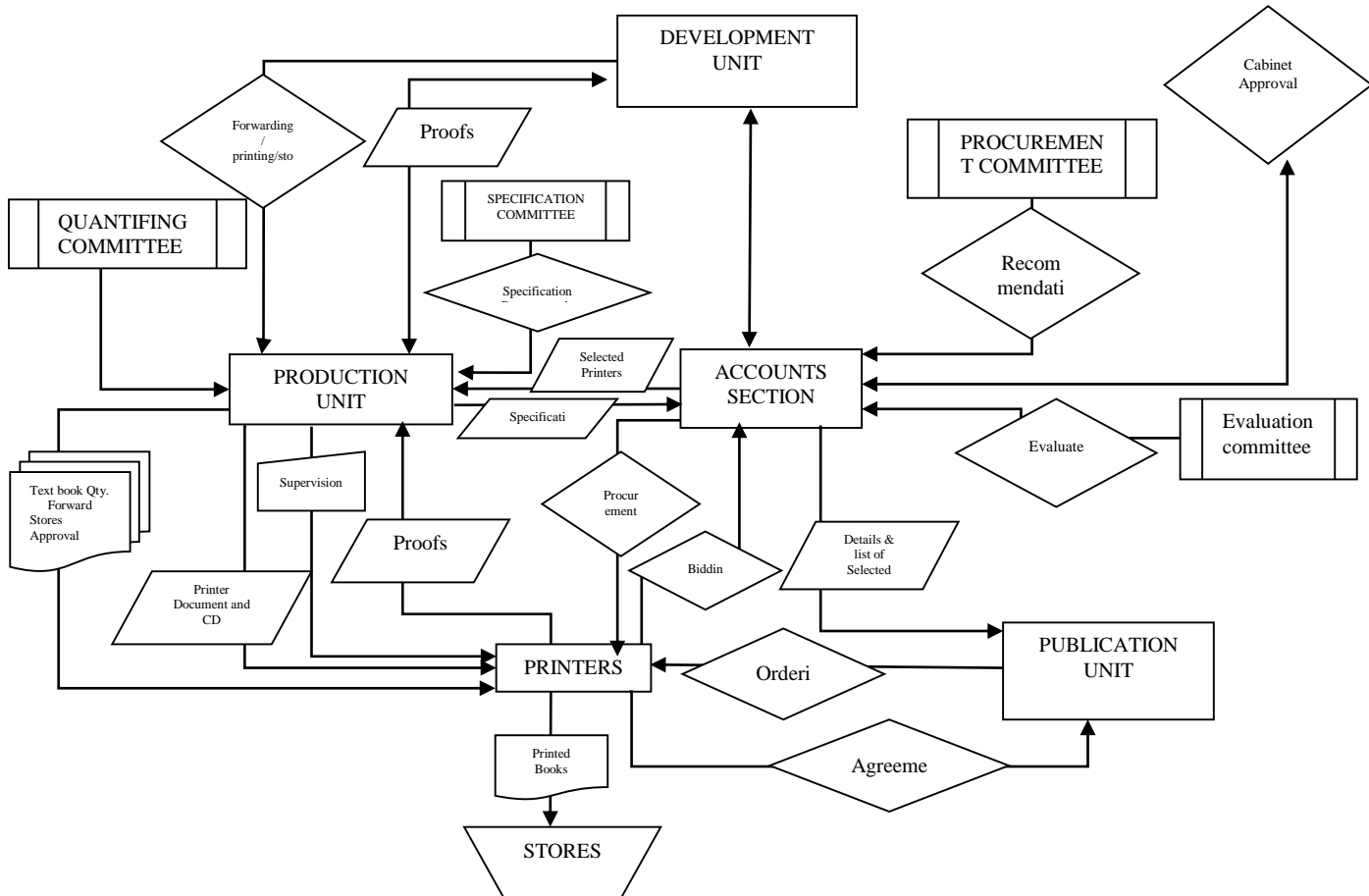


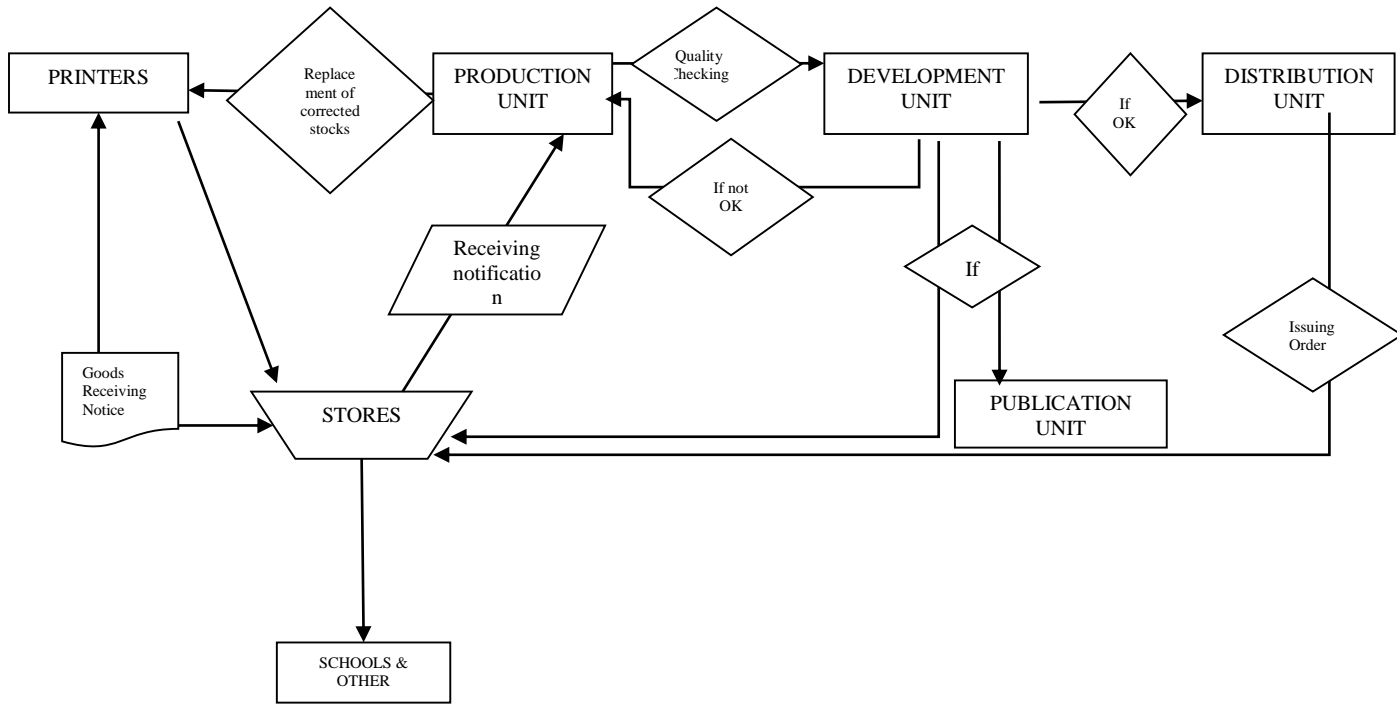
Section B

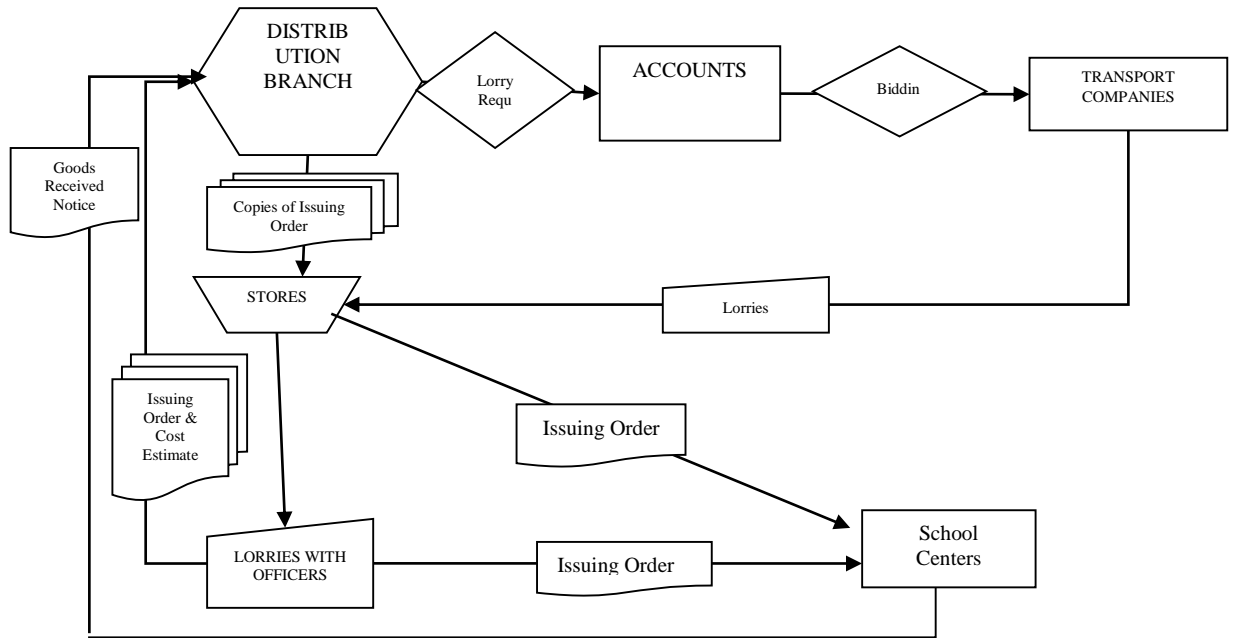


Section C

Specificatio → Procuremen → Printing → Receivin









**Educational Publications Department  
Request for Proposals (RFP)  
For  
Stock Management, Distribution and Documentation Automation System for  
Educational Publications Department, Sri Lanka**

**Contract No.**

1. The Chairman, Ministry Procurement Committee on behalf of Secretary, Ministry of Education now invites sealed bids from eligible and qualified bidders (service Providers) possessing a minimum 05 years' experience in similar services.
- 2.
3. Bidding will be conducted through National Competitive Bidding Procedure.
4. Interested eligible bidders may obtain further information from Accounts Branch of Educational publications Department, 6<sup>th</sup> Floor, "Isurupaya", Pelawatta, Battaramulla. (Contact –Tel- 011-)
5. A complete set of bidding Document in English may be purchased by interested bidders from the Accounts Branch, from ..... till ..... (including both days) on the submission of a written application to the **Accountant (Procurement) Division, 5<sup>th</sup> Floor, Ministry of Education**. "Isurupaya " Battaramulla. Upon payment of a non-refundable fee Rs. .... to the Shroff of this Ministry **from 9.00 a.m to 3.00 p.m** on working days.
6. All bidders must be accompanied by a Bid security of amount to Rs..... valid up to .....
7. Pre Bid date .....
8. Sealed Bids addressed to chairman, Procurement committee, Educational publications Department "Isurupaya" Battaramulla shall be deposited in the bid Box kept at the, Accounts Branch of Educational publications Department (6<sup>th</sup> Floor of the Ministry of Education building) on or before **2.00 p.m. .... May 2018**, late bids will be rejected unopened. Bids will be opened soon after closing in the presence of the bidder's representative who choose to attend.

Duly filled and sealed Bids marked **Stock Management, Distribution and Documentation Automation System for Educational Publications Department**

**RFP No: /.....** on top left hand corner of the envelop should be submitted.

**Commissioner General,  
Educational Publications Department.  
'Isurupaya', Pelawatta,  
Battaramulla  
Date.....**