**INTEGRATED MANUSCRIPT, DIGITIZATION, CATALOGUING & MANAGEMENT SYSTEM**

**Submitted by**

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**Indven Technologies Pvt. Ltd.**

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**23rd December 2013**

**RE: Proposal for Integrated Manuscript, Digitization, Cataloguing & Management System**

**Dear Sir,**

Indven Technologies Pvt. Ltd. is a 1 year-old, self-funded start-up based in Bangalore India. We are a 40 member team and specialize in developing state-of-the-art solutions for various Indian and foreign customers.

We are glad to put forth our proposal for comprehensive, web-based software for Manuscript Digitization and Integrated Content Management System for FRLHT.

We estimate that implementing software of this nature will take about 2.5 months, including training of your staff.

The software will be delivered with full source code and comprehensive support and maintenance for 1 year.

Please feel free to revert for any queries.

Assuring you the best services always.

**Thanking you,**

**Yours sincerely,**

**With warm regards,**

**Yusuf Pasha | Director | Indven Technologies Pvt. Ltd.**

# Glossary

|  |  |
| --- | --- |
| FRLHT | Foundation for Revitalisation of Local Health Traditions |
| iMD-CMS | Integrated Manuscript, Digitization, Cataloguing & Management System |
| MDR | Manuscript Digitized Repository |
| DM | Digital Manuscript |
| Annexure 1 | Project Schedule |
| Annexure 2 | Project Plan |

# Management Summary

Indven Technologies is a Bangalore based, software product company that specializes in developing state of the art software solutions for the Indian and overseas markets. The company offers FRLHT it’s small but highly efficient and easy to learn Manuscript Digitization and Content Management Software that handles uploading of digitized manuscript, tagging, searching and allowing various users to transcribe and annotate using multi-lingual abilities.

We bring in an enormous amount of domain expertise to FRLHT and the Manuscript Digitization and Integrated Content Management project. Most of our team members have been involved in developing Information Management solutions for the past several years and have worked in countries as diverse as the United States; South Africa and India.

## The Offering – Integrated Manuscript, Digitization, Cataloguing & Management System (iMD-CMS)

iMD-CMS is a very cost effective solution that provides end-to-end automation for uploading, tagging, searching and transcribing digitized manuscripts. The system is offered as part of this tender. The offer includes installation on a test and production (live) site; installation of hardware and software; training of users; and data take-on. Supply of hardware is not in scope.

## Team

The team members we propose for you are experts in Enterprise software solution like Enterprise Content Management, identity management systems and business computing. They are experts in the technologies proposed and have excellent written and communications skills. All our engineers are graduate or post-graduate engineers with between 2 - 21 years experience. A core team will work on this project from start to finish and hand over to the support team once the system is accepted by FRLHT.

## Methodology

We use an international standard, called the Agile Unified Process (AUP) to execute projects, with well defined product backlogs (plans) and delivery milestones. To summarize:

1. Once we get the detailed requirements, we identify the people best suited to execute your project
2. We prefer making the decision ourselves (since we know the caliber and aptitude of each of our resources, but the ultimate choice is left to the customer. (Customers may choose to interview our engineers directly).
3. The work is broken up into blocks called sprints.
4. Sprints are usually 3-4 weeks each. Prioritizing the backlog is done along with the Client Project / Program managers. Within every scrum, there are smaller releases to Quality Assurance, that take place every 1-2 weeks.
5. We provide end - to - end services including design, coding, testing and remote installation and training; UI design; documentation and maintenance / support.
6. Test plans are created along with the Software Requirements and test cases drawn up at the time of design of the system. These are reviewed and finalized with the customer at design and made available to the developers in order to reduce the test-debug-test cycle.

## Scope of Work

A detailed list of features and functionality of the software proposed is presented in the next section.

## An alternate custom built system to Alfresco

Alfresco, no doubt is a very popular choice among java open source enterprise content management systems. Enterprise Alfresco is really great for a quick functional prototype in order to display the features of a Document Management System out of the box. It has several other features which require attention to perfectly configure and to make an enterprise portal if the need be. These features sometimes are so overwhelming that it takes a lot of effort to customize them all.

The main aim to develop any good system is to fit in the proposed solution perfectly, that it benefits the user and their operations, rather making the users absorbed and lost in the maze of all the overhead features. With Alfresco’s rich feature functionality, it sometimes becomes a big overhead to customize any module to the user level satisfaction. Although it’s possible, but time takes a hit. The question next comes, is Alfresco the right choice to implement a system which does not need all the features of Alfresco ?

What features of Alfresco is really needed in this project

|  |  |
| --- | --- |
| **Alfresco Features** | **Needed ?** |
| Content Management | ✓ |
| Document Management | ✓ |
| Workflow Management | ✓ |
| Team Collaboration | ✓ |
| Wiki, Blogs, Social Media | ✓ |
| Governance Records Management | × |
| Case Management | × |
| Contract Management | × |
| Business Process Management | × |
| Workdesk process | × |
| Hybrid ECM | × |
| Secure File Sharing | × |
| Mobile Content Management | × |
| Web Publishing | × |
| Partner Solutions | **×** |
| Online previews of files | × |
| Google Docs Integration | **×** |
| Task management with email | × |
| Custom user sites within the portal | **×** |
| Pluggable Authentication support(LDAP) | × |
| Cluster Support | **×** |
| Dynamic storage of business policies | × |
| Updates for components | **×** |
| Others |  |

With above observations, we may think that then why do we need to deal with other features of Alfresco.

Development Overhead

1. Although Alfresco, comes with integration with all various UI technologies, care should be taken to completely build a new UI experience for the perfect look and feel.
2. Huge efforts go into housing resources with specific Alfresco UI expertise.
3. A committed team would be necessary in order to also maintain the code later for maintenance.
4. In total effect the development time and cost go very high.

Maintenance Overhead

1. Once the system is into place, the most important thing is to keep the system functional and to evolve the system with new requirements and enhancements
2. Evolving to new enhancements will become a challenge if we were to maintain an Alfresco system because of maintenance cost involved for Alfresco expertise.
3. If we are using the community edition of Alfresco, the only support which the maintenance team would get is the forum support. If we go for Enterprise commercial license the cost would be around 50K USD + Customization cost
4. Technical answers and solutions may not be available instantly to the maintenance developers and thereby causing the company a heavy SLA breach.

## Advantages of custom solution over Alfresco

Although indeed there are number of advantages of using Alfresco over any custom built system, however there are advantages of custom built system over Alfresco too. Below are a few benefits of using a custom built solution for Manuscript Digitization.

1. Faster development time and product evolution
2. Quick turnaround time for change requests during development cycle
3. Developer has complete control on the code, hence no dependency on any 3rd person for support
4. Custom built User Interface can be exactly matched to the user expectation
5. With exact required features developed, there is no overhead to maintain additional modules or components which will not be of much use.
6. Maintenance cost becomes comparatively less
7. Maintenance becomes very easy, as anybody with basic technical skill can maintain the system
8. New enhancements can be easily added since developers will know the complete source code
9. Content Management – User only deals with relevant content
10. The modifications which go to the source code need not be submitted to the community, while otherwise would be required. Thereby our IP can be kept to ourselves.

## Rates

Our services are very cost effective and are aimed at delivering the best value for money. For this project, our charges will be:

|  |  |
| --- | --- |
| **Item** | **Amount** |
| Integrated Manuscript, Digitization, Cataloguing & Management System (iMD-CMS) | 4,50,000 |
| **Total: Indian Rupees Four Lakh and Fifty thousand only** | 4,50,000 |

## Conclusion

We bring to FRLHT an innovative, enterprising, ethical and highly dedicated team of skilled professionals with over 100 person-years experience. We have unbeatable domain knowledge of Content and Document Management and wish to usher in new levels of IT expertise into the sector. We sincerely believe that we could add immense value to FRLHTs iMD-CMS like no other vendor could and look forward to a long, mutually rewarding relationship with FRLHT.

# Offering

## Scope of Work

1. User Management**:** There will be a user maintenance module to create, update and delete system users. Only these users can login and access the content management system and to transcribe and annotate the manuscripts. The following operations will be supported
   1. User Add: Admin can create a user with First Name, Last Name, Gender and other basic information with email confirmation.
   2. User Search/Update/Delete: Admin can search for any user and either updates them or delete them from the system.
2. User Role Management: The system will provide the ability to add various roles performing various required operations and form User type roles to which the users can be assigned independently. Various roles could be Digitizer, Librarian, Scholar, Reviewer, Publisher, Manager, Meta-data Manager.

|  |  |
| --- | --- |
| Digitizer | The person with this role can only scan and digitize the manuscripts |
| Librarian | Can upload documents, index and catalog them |
| Scholar | Can search and browse library, view digital manuscript and transcribe them and proof read transcription |
| Reviewer | Can search and browse library, annotate transcriptions, comment on transcriptions and approve digital manuscript |
| Publisher | Can publish approved digital manuscripts |
| Manager | Can allocate and monitor work to scholars, reviewers and publishers. Will have access to various workflow in the system |
| Meta-data Manager | Can create and index tags, which other will use to tag their documents |
| Admin | Is the super user of the system, can assign and revoke permissions for any role above. |

1. Workflow Management: Various workflows will be configured, which will facilitate the life cycle of a Manuscript.
   1. A Manuscript collector collects physical manuscripts and delivers them to a Digitizer.
   2. The Digitizer scans and digitizes the physical manuscript and stores an image file in standard formats specified by the National Manuscripts Mission (NMM) as a Digital Manuscript (DM).
   3. Librarian then files, catalogs and indexes the Digital Manuscript into the Library (Manuscript Digital Repository).
   4. Scholars can browse Library, proof-read and transcribe the individual Digital Manuscript.
   5. A Reviewer then does a Review/ Annotate/ Approve process for the DM and the Transcript.
   6. Publisher after the approval publishes the DM in the MDR and makes sure that it is available to other stakeholders.
2. Document Management: One stop solution for integrated document uploading, without any duplication of data. The below following operations can be configured in document management.
   1. Categorization of documents
   2. Versioning and Indexing of documents
   3. Meta - Data Definition and Tagging. Assessing document attributes (detail, tone, color)
   4. Access Control Specification
   5. Basic and Advanced Search (multilingual search, archiving, executive summary search, key word search and other search options)
3. Customizing User Interface: There is no overhead to separately develop a UI wrapper around the system in this custom built solution, since UI will be getting developed from day 1 along with other features, thereby saving time. A very user friendly and customer satisfactory UI will be provided in order to facilitate daily operations in the system. Various Dashboards for different user types will be provided for easy alerts, document management and reports.
4. Collaboration: Content management features will be provided for team collaboration in order to use features like Wiki, Newsletters, events and discussion boards.
5. Multilingual Transcription: The system will provide users to view/transcribe in various languages provided the end user has required keyboard languages pre-installed. The system will seek the help of translators in order to check the authenticity of multilingual translations and will not provide any auto-intelligence for automatic transcribing/translation of manuscripts.
6. Rights Management Program: A facility will be provided to the users to encourage the scholars or reviewers to perform the tasks based on monitory incentives or attractive fees.
7. Reports: Various kinds of reports will be generated to give users and stake holders a clear picture of the system statistics with visual graphs and data.
8. Migration of existing data: All the data that is available on the existing system will be migrated onto the new system without any loss of data. The following care will be taken during migration.
   1. Available fields of data for manuscript and tags from the existing system will be migrated to respective fields of the same record in the new system.
   2. All the documents which have been uploaded so far by the staff of FRLHT will be migrated on to the new system without losing any images, their corresponding annotations and transcriptions.
9. System set up: Setting up of server and PC in FRLHT premises.
   1. Installation of the iMD-CMS system.
10. User training: One week of user training will be given to FRLHT’s staff and stakeholders.
11. Support: One year support will be provided.
12. Maintenance: AMC charges will be extra after one year @ 15% per annum

## Out of Scope

1. E-commerce for fee collection
2. Text to speech or vice-versa software
3. Scanning and digitization software
4. Scanning of all the existing manuscripts into the system
5. OCR System

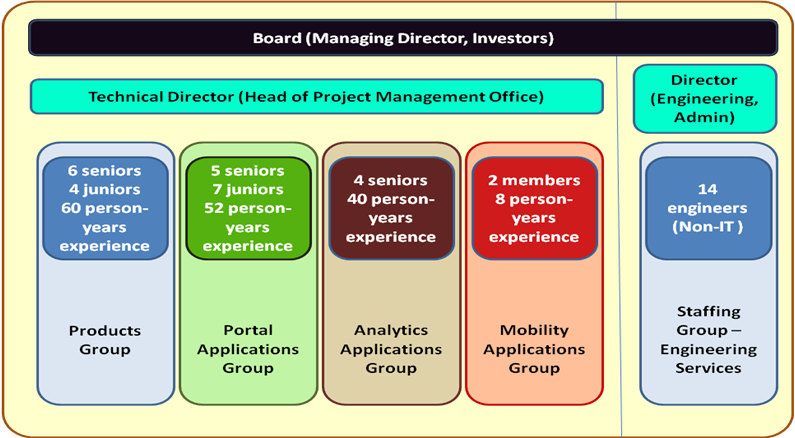
## Project Schedule – ANNEXURE 1

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Begin date** | **Duration** | **End date** |
|  |  |  |  |
| Knowledge Management For Manuscripts | 12/23/2013 | 63 | 3/19/2014 |
| Existing System Study | 12/23/2013 | 2 | 12/24/2013 |
| Gap Analysis Study | 12/25/2013 | 3 | 12/27/2013 |
| User and Role Management Module (Web browser capabilities) | 12/30/2013 | 5 | 1/3/2014 |
| WORFLOW | 12/30/2013 | 22 | 1/28/2014 |
| Database Design and modifications for Workflow | 12/30/2013 | 5 | 1/3/2014 |
| UI Wireframes for Workflow | 1/6/2014 | 3 | 1/8/2014 |
| Identifying the required workflows | 12/30/2013 | 4 | 1/2/2014 |
| Identifying individual steps under workflow | 12/30/2013 | 4 | 1/2/2014 |
| Identifying the Organization Hierarchy | 12/30/2013 | 4 | 1/2/2014 |
| Identifying the Actors and Roles for the Workflow (Defining the needs of current and future users) | 12/30/2013 | 4 | 1/2/2014 |
| Identifying the required use cases | 12/30/2013 | 4 | 1/2/2014 |
| Defining Workflow routes | 1/3/2014 | 3 | 1/7/2014 |
| Mapping the process to the workflow engine | 1/6/2014 | 5 | 1/10/2014 |
| Designing custom UI for workflow | 1/9/2014 | 5 | 1/15/2014 |
| Integrating UI with workflow Engine | 1/16/2014 | 3 | 1/20/2014 |
| Dashboard for users | 1/21/2014 | 3 | 1/23/2014 |
| Queued Individual tasks | 1/21/2014 | 1 | 1/21/2014 |
| Queued group level tasks | 1/21/2014 | 1 | 1/21/2014 |
| Alert Module | 1/13/2014 | 6 | 1/20/2014 |
| Unit Testing | 1/24/2014 | 3 | 1/28/2014 |
| DMS | 12/30/2013 | 22 | 1/28/2014 |
| Database Design and modification for DMS | 12/30/2013 | 5 | 1/3/2014 |
| Database Design for Manuscript System | 12/30/2013 | 3 | 1/1/2014 |
| UI Wireframes for DMS | 1/2/2014 | 3 | 1/6/2014 |
| INTEGRATION WITH EXISTING MDR ( A database and Enterprise Web Application ) | 1/2/2014 | 4 | 1/7/2014 |
| Defining Templates for Document Categories | 1/7/2014 | 3 | 1/9/2014 |
| Document Category definition | 1/10/2014 | 3 | 1/14/2014 |
| Versioning and Indexing of Documents | 1/15/2014 | 4 | 1/20/2014 |
| (Meta Data Manager) Meta - Data Definition and Tagging. Assessing document attributes (detail, tone, color) | 1/15/2014 | 4 | 1/20/2014 |
| Access Control Specification | 1/21/2014 | 3 | 1/23/2014 |
| Transcript Editing | 1/24/2014 | 3 | 1/28/2014 |
| Transcript review and collaboration | 1/24/2014 | 3 | 1/28/2014 |
| Basic and Advanced Search (multilingual search, archiving, executive summary search, key word search and other search options) | 1/24/2014 | 3 | 1/28/2014 |
| Archival (accompanying metadata, scripts, and programs) | 1/24/2014 | 3 | 1/28/2014 |
| RELEASE 1 with Integration of DMS and Workflow | 1/29/2014 | 6 | 2/5/2014 |
| Integration Of DMS with Workflow | 1/29/2014 | 3 | 1/31/2014 |
| Uploading document through the integrated system | 1/29/2014 | 2 | 1/30/2014 |
| Integration testing | 2/3/2014 | 2 | 2/4/2014 |
| RELEASE 1 | 2/5/2014 | 1 | 2/5/2014 |
| RELEASE 2 with Final UI of Manuscript System and collaboration functionality | 2/6/2014 | 17 | 2/28/2014 |
| Discussion boards | 2/6/2014 | 3 | 2/10/2014 |
| Comments on articles | 2/11/2014 | 2 | 2/12/2014 |
| Wiki for manuscript | 2/13/2014 | 3 | 2/17/2014 |
| Manuscript Newsletter | 2/18/2014 | 3 | 2/20/2014 |
| News and Events | 2/21/2014 | 3 | 2/25/2014 |
| Testing and Release 2 | 2/26/2014 | 3 | 2/28/2014 |
| UI Screen for Manuscript Life Cycle ( Wizard taking through the complete browse, tagging, Scaling routines and programs, preserving and publishing to an e format ) | 2/6/2014 | 3 | 2/10/2014 |
| Validation of Business rules | 2/11/2014 | 3 | 2/13/2014 |
| Multilingual transcription | 2/14/2014 | 4 | 2/19/2014 |
| Rights Management program for fee-based services | 2/20/2014 | 4 | 2/25/2014 |
| Testing and RELEASE 3 | 2/26/2014 | 3 | 2/28/2014 |
| FINAL RELEASE | 3/3/2014 | 11 | 3/17/2014 |
| Manuscript Reports | 3/3/2014 | 5 | 3/7/2014 |
| Finalizing the UI Screens look and feel | 3/3/2014 | 4 | 3/6/2014 |
| System Testing and Bug Fixing | 3/7/2014 | 1 | 3/7/2014 |
| UAT Tests | 3/10/2014 | 2 | 3/11/2014 |
| UAT Review and changes | 3/12/2014 | 3 | 3/14/2014 |
| Deployment | 3/17/2014 | 1 | 3/17/2014 |
| Training | 3/18/2014 | 2 | 3/19/2014 |
| User Training | 3/18/2014 | 1 | 3/18/2014 |
| Administrator Training | 3/19/2014 | 1 | 3/19/2014 |

# Company Information

## Organization and Capacity

Indven Technologies IT is a 40 person company and organized into two groups - Projects and Products. The Products group focuses on Construction Industry solutions. The Projects group is organized into 3 verticals – Portal Development; Analytics; and an exploratory (2 member) Mobility solutions group. A non-IT division focuses on providing Engineering and staffing services to the Construction Vertical.



### Facilities

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Office | Location | Seat | Servers | Workstations | Infrastructure |
| Product Group | Queens Road, Bangalore | 14 | 4 | 14 Graphic workstations, 24” monitors | SVN server; proxy cum firewall; 4 Mbps Internet;  1 TB SAN box; hosted email |
| Projects Group | Kamanahalli, Bangalore | 38 | 6 | 40 workstations | SVN server; proxy cum firewall; 4 Mbps Internet;  1 TB SAN box; hosted email |
| Engineering Services | Customer locations | - | - | - | - |

### Software

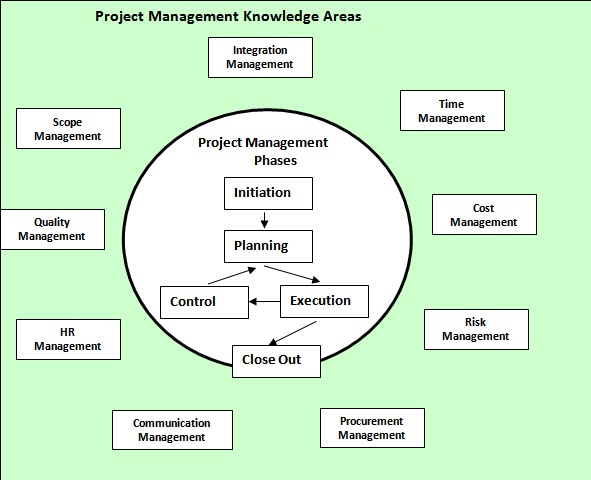
|  |  |  |  |
| --- | --- | --- | --- |
| Office | Partnerships | Closed Source | Open Source |
| IT Services (Product / Project Groups) | Autodesk Development Partner  Microsoft BizSpark | Visual Studio .NET 2012 (Professional and Express Editions)  MS SQL Server 2008 Developer  Oracle 11g Developer  Autodesk Developer products  ArchiCAD Developer pack  Trimble SketchUp C++ SDK | LifeRay Community Edition / Ektron / EPiServer Community Edition  MySQL 5.5.29  Eclipse / NetBeans  Jasper Server; Jasper Reports 5.0  Flex 3.0 / 4.0  JDK 1.5 / 1.6  SVN / Bugzilla / JMeter |
| Several, Customer provided licenses |  |
| Engineering Services | Customer provided | CATIA V5 / Unigraphics / ABAQUS / Nastran / Patran / Hypermesh  Autodesk Revit various / Civil 3D / ArchiCAD | - |

### Staffing

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Experience | Proposed Team | % of total staff | % of Web Development team | % of .NET resources |
| Seniors (>6y) | 3 | 2/19 = 10.5% | 2/6 = 33.3% | 2/3 = 66.7% |
| Juniors (2-5y) | 3 | 3/17 = 17.6% | 3/10 = 30.0% | 3/3 = 100.0% |
| Total | 6 | 5/36 = 13.9% | 5/16 = 31.3% | 5/6 = 83.3% |

## Project Management

Indven Technologies follows the PMI Project Management methodology and PMBOK to deliver projects in order to deliver projects within time and budget. We use tools such as Open Project and Indven Technologies’s fledgling Project Management product that encompasses workflows and automation of several internal processes (e.g. timesheet preparation; meeting minutes; etc). An adaptation of Agile and Rational Unified process is used to manage the development team. The following diagram depicts the management processes and knowledge areas that will be applied to the project in accordance with the above mentioned international standard methodology.



**Project Management Phases**

1. Initiation Phase

This phase of the project essentially involves all those processes that are required to be carried out to get the project started. FRLHT must have already carried out most of these processes. These basic processes are given below:

* Determining project objectives
* Determining business needs
* Collection of Historical data
* Determining High level deliverables and estimates
* Identifying the qualifications and competencies of the project manager
* Determining high level resource requirements

2. Planning Phase

It is the most important phase of Project Management (this is distinct from the Planning phase in the development methodology). Soon after the award of the project to Indven Technologies, it will identify and document the detailed scope of the project, tasks, schedules, costs, risks, quality measures and staffing needs of the project in the Planning Phase. The “Project Initiation Document or Project Charter (PID)” which is one of the deliverables of the project will contain all these elements. Indven Technologies proposes formation of a “Project Implementation Committee (PIC)” comprising of Project Manager(s) / Program Manager(s) from FRLHT and an Indven Technologies Project Manager. The PID will be reviewed and approved by the PIC prior to the commencement of project work.

3. Execution Phase

The Project Manager of Indven Technologies will primarily perform the following with the assistance of the FRLHT Project Manager where necessary.

* Conduct, coordinate and manage the ongoing project activities
* Perform Quality assurance activities continuously to ensure that the project objectives are met
* Monitor identified risks for all triggering events and implement mitigation / containment measures.
* Manage changes

In a nut shell Indven Technologies will manage and coordinate project resources while performing the planned project activities ensuring efficient completion of these planned activities.

4. Control Phase

PMBOK defines Project Control as a management function that involves comparing actual performance with the planned performance and taking corrective action to yield the desired outcome. In line with this definition Indven Technologies regularly reviews the actual performance matrices and reports project status identifying the variances from the planed baselines agreed during the Planning Phase. Appropriate corrective actions are immediately suggested / taken.

5. Close-out Phase

It is a standard practice at Indven Technologies to carry out the following towards the completion of the project:

* Resolution of any outstanding contractual issues
* Formalization of acceptance of deliverables and project sign off by FRLHT
* Close out of any financial matters
* Documentation of any lessons learnt
* Completion and archival of project records
* Celebration of project success with all stakeholders

## Development Process (broadly reproduced from Wikipedia)

We use an adapted Scrum methodology called Agile Unified Process (AUP) to execute projects. It has well defined product backlogs and delivery milestones. The AUP is based on the fact that project staff knows what they're doing; people do not read detailed process documentation and only need some high-level guidance and/or training from time to time. The **philosophy** of AUP is based on:

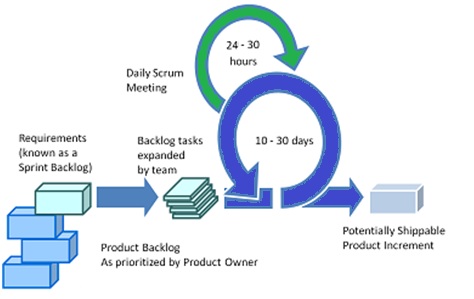
|  |  |
| --- | --- |
| Simplicity | Everything is described concisely using a handful of pages, not thousands of them. |
| Agility | The Agile UP conforms to the values and principles of the agile software development and the Agile Alliance. |
| Focus on high-value activities | The focus is on the activities which actually count, not every possible thing that could happen to you on a project. |
| Tool independence | You can use any toolset that you want with the Agile UP. The recommendation is that you use the tools which are best suited for the job, which are often simple tools. |

AUP has seven **disciplines**:

|  |  |
| --- | --- |
| Model | Understand the business and domain; we cannot over-emphasize this |
| Implementation | Transform model(s) into executable code and perform a basic level of testing, in particular unit testing |
| Test | Perform an objective evaluation to ensure quality. This includes finding defects, validating that the system works as designed, and verifying that the requirements are met. |
| Deployment | Plan for the delivery of the system and to execute the plan to make the system available to end users. |
| Configuration Management | Manage access to project artifacts; control and monitor changes to them |
| Project Management | Direct the activities that take place within the project. This includes managing risks, directing people (assigning tasks, tracking progress, etc.), and coordinating with people and systems outside the scope of the project to be sure that it is delivered on time and within budget. |
| Environment | Support the rest of the effort by ensuring that the proper process, guidance (standards and guidelines), and tools (hardware, software, etc.) are available for the team as needed. |

**Releases**

The Agile Unified Process distinguishes between two types of iterations. A development release iteration results in a deployment to the quality-assurance and/or demo area. This is the testing release and takes place every 1 to 3 days. A production release iteration results in a deployment to the production area, which is equivalent to a traditional sprint. Indven Technologies usually suggests sprints that last between 3 to 4 weeks.



### Service Level Agreement Structure

Our SLA covers the following main points:

* Service standards
* Definitions of bugs, changes and ‘nice to have’ features
* Baselines – dates, timelines and milestones
* SLA monitoring and verification
* Collection of metrics e.g. Defect rates, performance, availability, etc
* Indemnification
* Reviews

## Responsibilities of FRLHT resources

* Provide access and documentation of any existing database; documents, process information and functional requirements of all activities that need to be automated
* Provide Indven Technologies with requirements; clarification on various queries that may arise; raw and test data
* Ensure timely procurement of hardware & Database Software
* Ensure timely contracts with Hosting provider
* Provide sample data and reports and report formats
* Provide access to the source code / documented APIs of all the systems from where data is to be automatically fetched (data integration with third party systems)
* Monitor project progress with Indven Technologies project manager
* Monitor FRLHT Infrastructure requirements
* Finalize Project Scope
* Monitoring configuration and test scope
* Review Authorizations
* Manage issue resolution
* Manage transition to ongoing support plan
* Support users at Go-live

# Team

If signed on before 1 Jan 2014, we commit that the resources will be made available for this project within this following week.

We have bid for 1 project manager, 1 solution architect, 2 seniors and 2 testers for this project.

# Development Process

## Phase 1 (Months 2.5) Deliverable Specification

As part of phase 1, we will deliver the following:

Project Inception document, at the start of the phase (within a week) and then deliver the complete system functionality in 2.5 months.

## Delivery Methods

* Phase I deliverables will be shared over e-mail as soft copies. 1 printed set of the Project Inception Report and Requirements document will be provided
* Deliverables will be hosted on a testing environment for FRLHT to login and check. A server will be made available at FRLHT with a remote login for Indven Technologies, for installing the demo.
* Indven Technologies will create 2 demo instances; a prototype system for reviews and a “known good” demo site on FRLHT’s server.
* A production deployment will be created on the FRLHT server to carry out a final User Acceptance Test. It will then be released for live use.

## Deployment

Installation of hardware and deployment of software will be carried out by Indven Technologies’s Engineers

## Technical Approach

### Technology stack

Open source technologies have been proposed for this system. The entire source code will be handed over to FRLHT at the end of the project.

### Database schema

The final schema will be arrived at during Phase 1.

The core production database will be inaccessible to any external user. Data would enter and be exported from this highly secure database by automated scripts that would keep it immune to SQL injection and other such dangers.

The test-bed at FRLHT would have the development and testing schemas. These will be used while new features are being implemented and a means provided to automatically port the accepted changes or enhancements to production.

### Application performance

The application will be scalable to a great extent. The use of internationally accepted coding standards will eliminate non-scalable constructs such as machine context memory caching and the like.

### User interface

The UI development philosophy will be to provide Rich UI designed to render well on laptops as well as smaller devices.

### Administration interface

The admin module will be integrated into the admin login of the MMS system.

It will provide all routine admin tasks such as creation of users and maintenance of users.

### 

### Code documentation

Basic code documentation will be provided along with the source code at the end of the project. Technical documentation such as a high level design will be provided as part of the deliverables of the project.

### Testing and Quality Control

Indven Technologies possesses a small testing team that carries out Quality assurance work. Unit testing and code walk-throughs are carried out team members, who also carry out peer group reviews. UI and server-side validations will be defined during phase 1.

FRLHT is expected to create test cases apart from those created by Indven Technologies and carry out the functionality and User acceptance tests for the software.

## Terms and Conditions

* Graphic design is not part of this proposal
* The quotation is for the scope defined in the Request for Proposal
* Indven Technologies will require 1 week after award to mobilise the team; deliverables will get correspondingly shifted out by a week. The final delivery dates will be worked out with approval from FRLHT
* FRLHT will provide the required (online) access to its offices, officials and documents
* FRLHT will provide a technical contact for clarifications of technical issues. The contact person can be reached through e-mail, teleconference or other means.
* FRLHT will provide necessary communication links to this official to enable information transfer between FRLHT offices and Indven Technologies’s office in Bangalore.
* FRLHT will ensure a remote login facility is available to Indven Technologies for accessing the sandbox environment at FRLHT
* The schedules given in this proposal assume that the clarifications to queries are made available as promised by FRLHT.
* Indven Technologies will not be responsible for any delay due to non-availability of personnel, documents, test data & results, resources and computer system time from FRLHT.
* FRLHT must deploy servers and software in time for various project activities and make these available to Indven Technologies for the entire duration of the project
* It is expected that any software or documents submitted will be reviewed within a three working days of submission. A written review document will be prepared to give feedback on the same.
* Indven Technologies undertakes to sign any required non-disclosure and confidentiality agreements with FRLHT and with Indven Technologies’s personnel involved in the project.
* Indven Technologies agrees that the copyright to the software developed as a part of the contract belongs to FRLHT. Indven Technologies undertakes to provide all the project documents to FRLHT.
* Indven Technologies retains its right to pursue development work in the business applications area, whether for its own products or for other customized development projects.
* FRLHT agrees to provide copies of third party software products (if required by the project specifications) on loan basis to Indven Technologies for carrying out tests.
* FRLHT undertakes that it will not hire / engage Indven Technologies’s personnel.

# Cost Proposal

|  |  |
| --- | --- |
| **Item** | **Amount** |
| Integrated Manuscript, Digitization, Cataloguing & Management System (iMD-CMS) | 4,50,000 |
| **Total: Indian Rupees Four Lakh and Fifty thousand only** | 4,50,000 |

Indven Technologies will charge 15% of this value as annual maintenance charges for telephonic / remote support from the second year onwards.

The quote does not include any taxes or duties.

## Recommended Hardware Specifications (Server)

# **Form factor**

• 4U Tower

# **Processor**

• Intel Xeon Dual Core X3065 Processor 2.33 GHz 1333 FSB

# **Cache**

• Intel Xeon Sequence: 4MB

# **Server Memory**

• 1 GB DDR2 Ram 667 Mhz   
• 4 DIMM Slot DDR2 8GB Max

# **RAID controller**

• Integrated RAID Controller

# **Server Drive bays**

• 160 GB Available Non Hot Swap  
• 2 Serial ATA (SATA)  
• DVD Rom

# **Network interface card**

• Integrated Gigabit Ethernet

# **Port**

• Front: two USB, Rear: four USB, one Ethernet, one serial, one parallel, one video

# **Power supply**

• AC configuration with standard universal 110/220V AC power supplies