

# LIS Manager



## Developed By

HARATI Computer Services Pvt Ltd. Ukti Marg,  
Maitighar Height, BabarMahal,  
P.O.Box # 10376  
Hunting Line: +977-1-4260622  
Fax : +977-1-4267810  
Email: [info@harati.com.np](mailto:info@harati.com.np)  
Web: [www.harati.com.np](http://www.harati.com.np)

## Introduction

LIS Manager is a WEB based suite of components that addresses the needs of a comprehensive insurance software solution. All the components can be used together as an integrated product or can be used individually to suit specific organizational needs.

LIS Manager allows the users to easily and rapidly define new insurance products, make changes to existing products and establish rules that govern the products' behavior. The greatest strength of the solution lies in its flexibility and scalability.

LIS Manager components can be easily ported to platforms of choice and / or customized to suit the specific business practices and rules of an insurance organization. The application can integrate seamlessly with any back office system regardless of platform (e.g. UNIX, Linux, and Windows) for a more efficient comprehensive business process. It comprises of components, which interact among themselves through well-defined interfaces.

The functional modules, product lines, functional and product components of GENISYS Configurator are described here:

## Functional Modules

- Product Designer
- Underwriting (Policy Administration)
- Cover Note Management
- Claims Management
- Reinsurance
- Channel Management
- Accounts
- Reports / Queries
- Business Intelligence
- Workflow Management
- Document Management
- Customer Management
- Portal
- Mobile
- Security and Business Administration

## Insurance Products Non Life and Life

Non Life products can be configured for any line of business (LOB), e.g.

- Fire
- Automobile
- Aviation
- Marine cargo
- Marine Hull
- Health
- Engineering
- Liability
- Rural and Miscellaneous

Products under these LOBs have been created using the LIS Manager framework based on industry standard and regulatory compliance. The user can easily and rapidly create new products to suit business requirements, using the product designer.

Similarly LIS Manager includes a product definition framework that allows the business analyst to define any Life Insurance product of any category and specifications like:

- Term Assurance and Whole Life Plans
- Endowment Assurance Plans
- Anticipated Endowment Plans
- Education Plans
- Pension and Annuity Plans
- Investment Linked Plans
- Special Event Plans

## Functional Components

Following are the major functional components and the key functionality of LIS Manager

FUNCTIONAL COMPONENTS AND KEY FUNCTIONALITY	
<b>Underwriting (Policy Administration)</b>	<ul style="list-style-type: none"> <li>• New Policy</li> <li>• Endorsement</li> <li>• Renewal Notice Generation</li> <li>• Quotation Management</li> <li>• Cover Note Management</li> <li>• Policy Administration</li> <li>• Workflow based approval mechanism</li> <li>• Renewal</li> <li>• Policy Schedule/Certificate</li> <li>• MIS/Statutory Returns</li> <li>• Tariff Management</li> </ul> <p>Available across lines of business</p> <p>The underwriting system can be easily integrated with solutions related to e-mail, SMS (e.g., for renewal pending cases), e-Payment solutions etc., using the product's WEB Services</p>
<b>Policy Servicing (For Life)</b>	<ul style="list-style-type: none"> <li>• Free Look Up Availability and Cancellation</li> <li>• Renewal / Grace notice generation</li> <li>• Renewal / In Force Maintenance</li> <li>• Policy Surrender</li> <li>• Policy Lapse and Revival</li> <li>• Fund Calculation for Investment Linked Policies</li> <li>• Fund Statement Generation</li> </ul>

**FUNCTIONAL COMPONENTS AND KEY FUNCTIONALITY****Cover Note Management**

- Cover Note Book Requisition
- New Cover Note Book Entry
- Cover Notes Assignment to Location
- Cover Note Book Receipt
- Cover note Assignment to Intermediary
- Update Cover Note Book Status
- Cover note Query
- Cover note Stock Management

**Business Channel Management**

- Creation of intermediary
- Categorization of intermediary
- Defining business domain for intermediaries
- Associating business development executives to the intermediary
- Defining payment mode for intermediary
- Defining validity of intermediary contract
- Renewing validity of intermediary contract
- Commission calculation for intermediaries
- Intermediary performance analysis

## FUNCTIONAL COMPONENTS AND KEY FUNCTIONALITY

<b>Claims Management</b>	<ul style="list-style-type: none"> <li>• Claim Configuration</li> <li>• Claim Intimation / Registration</li> <li>• Claim Provisioning</li> <li>• Claim Notes</li> <li>• Surveyor/Doctor/Investigator appointment etc.</li> <li>• Surveyor/Doctor/Investigator etc. report receipt</li> <li>• Claim Settlement</li> <li>• Claim Disbursement</li> <li>• Claim Reinstatement</li> <li>• Claim Tracker</li> <li>• Claim Approval</li> <li>• Claim reopening</li> <li>• Claim recovery</li> <li>• Claim History</li> <li>• Surveyor/Doctor/Investigator etc performance evaluation</li> <li>• MIS / Statutory Returns</li> </ul> <p>An imaging solution can be integrated which stores scanned documents such as photographs, driving license, death certificate etc. and attaches the same to claim records for retrieval and processing</p>
<b>Claim Servicing (Pertaining to Life)</b>	<ul style="list-style-type: none"> <li>• Servicing of Death Claims</li> <li>• Servicing of Maturity Claim</li> <li>• Servicing of Partial Maturity Claim</li> <li>• Fund Withdrawal</li> <li>• Servicing of Annuity Claim</li> </ul>
<b>Reinsurance</b>	<ul style="list-style-type: none"> <li>• Reinsurance grouping</li> <li>• Reinsurance program setup</li> <li>• Treaty setup</li> <li>• Facultative arrangement</li> <li>• Overriding automatic cession</li> <li>• Accumulation</li> <li>• Acceptance</li> </ul>

FUNCTIONAL COMPONENTS AND KEY FUNCTIONALITY	
	<ul style="list-style-type: none"> <li>• Graded retention</li> <li>• SI /PML based reinsurance</li> <li>• Transactional Accounting</li> <li>• Periodic Accounting</li> <li>• Reports and Returns</li> <li>• Inward Reinsurance including retrocession</li> </ul>
<b>Accounts</b>	<ul style="list-style-type: none"> <li>• Chart Of Accounts Maintenance</li> <li>• Bank Accounts Maintenance</li> <li>• Cheque Master Maintenance</li> <li>• Premium and Non Premium Collection</li> <li>• Cash / Cheque Deposit</li> <li>• Bank Reconciliation</li> <li>• Trial balance generation</li> <li>• Claims provisioning</li> <li>• Disbursement</li> <li>• Intermediary Commission calculation and bill generation</li> <li>• Manual Journal Vouchers</li> <li>• Inter office transactions</li> <li>• Payables and Receivables Management</li> <li>• Accounts Settlement</li> <li>• Unearned Premium calculation and reporting</li> <li>• Multi currency accounting</li> <li>• Accounts consolidation</li> <li>• Budgeting</li> <li>• Period closing and reopening</li> </ul> <p>The Accounts module comprehensively covers the accounts functionality relating to underwriting and, Claims. It can also be easily integrated with an Enterprise Accounting application that caters to the non-Insurance financial transactions, too.</p>
<b>Portal</b>	<p>LIS Manager Portal: provides the external world a window to the insurance company's offerings and operations. Salient</p>

## FUNCTIONAL COMPONENTS AND KEY FUNCTIONALITY

	<p>functionality include:</p> <ul style="list-style-type: none"> <li>• Insured self servicing <ul style="list-style-type: none"> <li>• User registration</li> <li>• Customer registration</li> <li>• Quick quote</li> <li>• Policy issuance on the Internet upon direct payment by debit / credit card</li> <li>• Claim lodging and tracking</li> <li>• Grievance lodging and tracking</li> <li>• Portfolio viewing</li> </ul> </li> <li>• Agent self servicing <ul style="list-style-type: none"> <li>• Policy issuance</li> <li>• Portfolio viewing</li> <li>• Commission bill viewing</li> </ul> </li> </ul>
<b>Mobile</b>	<ul style="list-style-type: none"> <li>• Customer Self Service</li> <li>• New policy</li> <li>• Renewal</li> <li>• Claim Intimation</li> <li>• Claim Status Enquiry</li> <li>• Available on Android, Blackberry, Windows Phone</li> </ul>
<b>MIS</b>	<p>The MIS consists of two types of queries: a set of pre defined queries optimized for performance and a capability for the end user to execute ad hoc queries of any type without any consideration for performance. Even the canned queries are mix of short, medium and long running queries. However, the architectural objective is to optimize the turnaround time for the canned queries as well as minimize the turnaround time for the ad hoc queries, to the extent possible.</p> <p>The data stored in the ODS are exposed for end user, through a meta data layer. This layer is based on Eclipse BIRT.</p>

## FUNCTIONAL COMPONENTS AND KEY FUNCTIONALITY

	<p>LIS Manager includes pre defined reports like regulatory compliance reports, in addition to host of other canned reports. It also allows the end user to define and execute queries on ad hoc basis.</p> <p>LIS Manager also supports statistical analysis and graphical reports.</p> <p>Following are the major highlights of the MIS and query functionality of LIS Manager :</p> <ul style="list-style-type: none"> <li>• Ability to generate reports locally and centrally</li> <li>• Ability to generate consolidated reports</li> <li>• Printing of reports as per pre determined periodicity</li> <li>• Printing of reports for statutory bodies as per pre determined periodicity</li> <li>• Parameter based generation of reports</li> <li>• Ability to view, export and e-mail reports</li> <li>• Export report with ability to pick and choose and sequence the fields before export</li> <li>• Ability to print reports on different types of printers</li> <li>• Ability to print documents using normal and continuous stationery</li> <li>• Ability to meet reporting requirements of the company, business partners and third parties</li> <li>• Rich set of canned reports</li> <li>• Ad-hoc reporting by end user</li> </ul>
<p><b>Workflow Management</b></p>	<ul style="list-style-type: none"> <li>• The Workflow Management in LIS Manager provide exposed and Embedded Workflow interfaces to define underwriting workflow, approval hierarchy and escalation mechanism at the time of Product Definition.</li> </ul>

## FUNCTIONAL COMPONENTS AND KEY FUNCTIONALITY

	<ul style="list-style-type: none"> <li>A windows workflow is already defined in the system. Using visual interface of which user can develop their own custom rules to drive the workflow and for that it is not required to hamper the main application.</li> </ul> <p>The windows workflow is basically implemented for two different purposes.</p> <ul style="list-style-type: none"> <li>Approval mechanism of Underwriting and Claim.</li> <li>Process Flow Implementation across Lines of Business for underwriting, claims, RI etc.</li> </ul>
<b>Insurance Document Management System</b>	<p>Caters to document management requirement specifically for insurance business functions</p> <ul style="list-style-type: none"> <li>Document type definition</li> <li>Association of documents and images to quotations, proposals and policies, e.g., property ownership proof, copy of Car Registration smart card etc.</li> <li>Association of documents and images to claims, e.g., Driving License, Photo of Accident, Hospital Discharge Voucher copy etc.</li> </ul>
<b>Customer Call Management</b>	<ul style="list-style-type: none"> <li>Customer Call Registration</li> <li>Prospect Follow up</li> <li>Customer Call Servicing</li> <li>Customer Call Allocation/Assignment</li> <li>Linking policies and claims</li> </ul>

## **Security Features of LIS Manager**

LIS Manager Configurator maintains audit trails and logs at application level, database level and OS level. Whenever a user logs in the system his/her user id is available to the system and when user completes the transaction is also tracked. System date and time is also recorded along with user Id, transaction type, IP address etc. for each login and transaction, which can be monitored, tracked and analyzed in the future. Access to the system is fully role right based and system track and prompts any security breaches.

The audit trails and logs are maintained extensively at application level. The audit trail can also be maintained at database level using auditing feature of Oracle Database. Application server level log is also maintained. Application level audit trails keeps track of each access to the application and transactions with detail like User ID, Transaction ID, Type of Transaction, and Date & Time logged in the application etc.

Users are authorized by user id and password. System restricts any unauthorized users from system access. Once a user is logged in the application, system allows him/her to access only authorized transacti

- Password is encrypted and nobody can see the actual password including administrator.
- Password and user validity period as parameter, which can be administered by administrator. This forces user to change the password frequently.
- Password setting rule like it should have at least eight characters, mixture of alpha, numeric & special characters, it should not be similar to name, user ID, it should not be similar to last few passwords etc.
- Locking of the user Id if any unauthorized attempt for logging to the application for certain number of times (which is configurable).
- Communicating the password to the user only through mail with a system generated activation key.

LIS Manager can easily be integrated with third party security solutions providing features like LDAP and single sign on. It can also be seamlessly integrated with other security software solution like PKI solution, Biometric solution, Bar Coding solution etc.

## Product Components

LIS Manager Product Designer is a multi component tool for the business analysts of an insurance company, catering to the entire specification of an insurance product and its operation. It is Line of Business agnostic; any product pertaining to any line of business as well as Package/Multi section products spanning lines of business can be configured using the Product Designer. It comprises of:

- **Product definition engine:** using the product definition engine the user defines the structure of an insurance product including Risks, Covers, Loadings, Discounts, Insured information, Subject of insurance information etc. and relationship among the components
- **Rule engine:** enables the user to define the business rules pertaining to a line of business/ product, including validation rules, computation rules etc.
- **Workflow definition engine:** the user configures the workflow for the product's operation, for different levels of users. Entire workflow around the product including cover note generation process, Claims management process and proposal approval requirements are defined using the Workflow definition engine.
- **Rate engine:** the rate engine supports multi dimension tariff structure including loading and discount rates. Rates can be uploaded from and downloaded to external files.
- **Transactional document Configurator:** enables the user to design templates of transactional documents like Quotation, Policy Schedule etc. and associate dynamic information like Insured name, Policy number, Premium amount to data sources
- **User interface designer:** enables the user to design the user interfaces, including multiple interfaces for the same product, for different delivery channels

## Reports from LIS Manager

Following are some of the major reports generated by LIS Manager :

### Underwriting

- Policy Schedule
- Quotation
- Endorsement Schedule
- Renewal Notice
- Certificate of Insurance (Product Specific)
- Cover Note
- Policy Cancellation Letter
- NCB Confirmation Letter
- Premium Register
- Refund Register

### Claims

- Incurred Claim Report
- Cash Deposit Statement
- Claim Intimation Register
- Claim Paid Register
- Claim Outstanding Register

### Reinsurance

- Cession List
- Placement Chart
- Statement of Accounts
- Profit Commission Statement
- Profit and Loss Statement
- Cash Loss Advice
- MDP Chart
- Premium Bordereaux
- Claim Bordereaux

### Accounts

- General Ledger Details
- General Ledger Extract Report
- Trial Balance
- Service Tax Collection Register
- Agent wise Ledger details
- Pay-in-slip
- Money Receipt / Payment Receipt
- Collection Register

- Daily Ledger Report

### **Agents**

- Agent Commission Register
- Agent Receivable Limit Details

### **Reports to Regulatory Authorities**

- TAC Statistical Claim Reports
- TAC Statistical Premium Reports
- IRDA Reports

### **Other Reports**

- Deal Details – Agent wise, Sales Manager wise, Office wise, Product wise
- Customer Wise Policy Details
- User Details
- List of Blacklisted Customer / VIP Customer

### **Note:**

- The above is a representative list of available canned reports
- The reports can be generated based on user specified parameters
- An end user can generate ad hoc reports

## Technology

LIS Manager is based on four-tier architecture. The system architecture allows creation of the business rules as well as the data structure on the basis of specific requirement without disturbing the code. The system architecture also enables easy integration with third party applications like CRM Solutions, Document Management System, and Workflow Manager, Enterprise Financial Accounting system etc using interfacing software like Oracle adaptors, SAP adaptors, MS Share point portal and MS Biztalk Server. In addition inter application integration is also available using WEB services and XML data exchange.

The application also includes comprehensive solutions in the areas of Insurance Data Warehouse and Business Intelligence. It also comprises of native Document Management and customer management.

### **Integration Capability of LIS Manager**

LIS Manager has a strong integration capability. The major highlight of LIS Manager technology framework is its Service Oriented architecture (SOA), available primarily in the form of a rich set of WEB services.

LIS Manager utilizes the full power of WEB services to harness its seamless integration capability. The LIS Manager WEB services are published on WEB/ Application Server for the external world to be able to access them. Thus an authorized external user can build its application or sub-application around the published WEB services of LIS Manager, irrespective of any differences in the respective operating environments.

LIS Manager offers two types of WEB services – static and dynamic. Static WEB services are those which are independent of product or line of business and cater to broad level user requirements. Examples of such WEB services are those related to proposal status query, claim status query, grievance lodging etc. These WEB services are defined on case to case basis and, upon definition, become available over a wide spectrum. Dynamic WEB services are related to product. Whenever a product is defined in LIS Manager a large number of related WEB services are also created at the same time. These WEB services cater to the specific product, e.g., premium calculation for the new product. Thus, whenever a product is created it becomes available for integration using

the WEB services automatically created by the product administration process. In this way the repertoire of WEB services is never limited; rather it grows with the product base of the Insurance Company; as the company comes up with more and more product offerings, its WEB services base also expands accordingly.

The ever increasing array of WEB services allows the kind of inorganic and rapid growth desired by the insurance company, by enabling its business partners' applications to seamlessly integrate with LIS Manager in a heterogeneous platform environment. The business partners can feed data into and from LIS Manager without any disruption in their own applications.

- Communication will be made through standard SOAP protocol and will follow WSDL format.
- Flexible and standard interfaces will provide a consistent path to get same result as with Configurator application.
- Transfer of data between intermediate layers takes place through a Lightweight serializable object. As the objects are serializable it can communicate with any external application.

## Architecture

LIS Manager is a WEB based centralized application. However, a distributed solution is also available as a fall back mechanism.

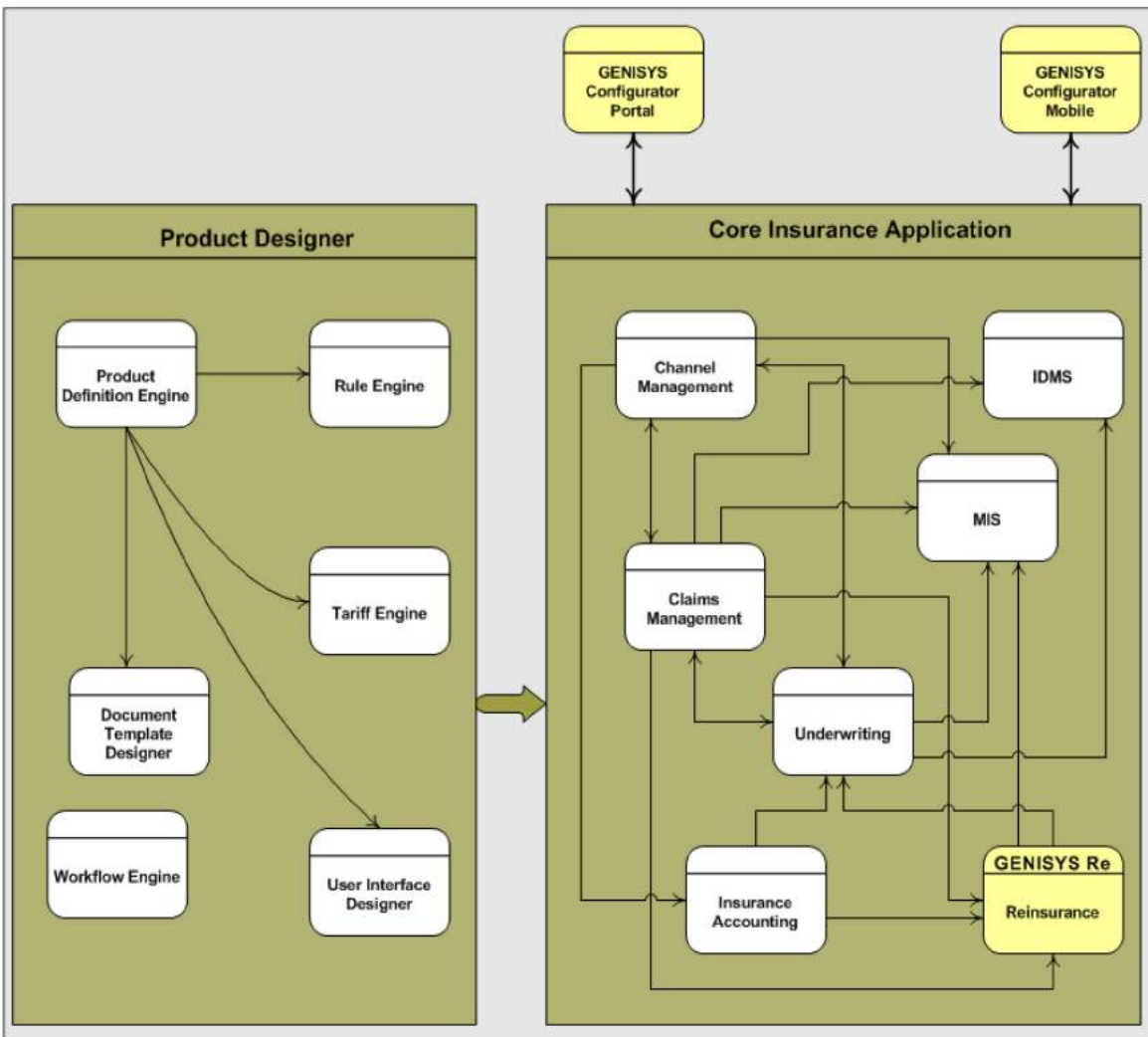
The architecture is highly

- Scalable
- Reliable
- Portable
- Maintainable

The following are the list of technologies used in development and deployment of the LIS Manager application.

Items	Remarks
Database	MSSQL, MySQL and Oracle
Development Language	Java, Grails
Scripting Languages	Java Script, JQuery, Ajax, T-SQL, PL/SQL, HTML, CSS, Batch Scripting, SOAP, REST
Web Server	Internet Information Services, Apache, Apache Tomcat
Content Management System	Joomla, Wordpress, Opencart
Project Management and Bug tracking	Redmine, Project Pier

The application architecture is illustrated in the following diagram.



## Service Support

CMC's Insurance Competency Center is located in Kolkata. ICC covers a wide spectrum of activities covering the following:

- Product Architecting
- Product Designing
- Product Development and Testing
- Product Implementation
- Benchmarking
- Third Party Product Integration
- Proof of Concept
- Product Related Training
- Technology enhancement
- Platform Migration and Conversion
- Version Management
- Quality Assurance

Apart from the Insurance Competency Centers, there is application support centers located in Mumbai, Chennai, Kolkata and Hyderabad housed in the CMC offices in those locations with appropriate infrastructure. The activities in those support centers are in place to co-ordinate primarily in the areas of operations support.

## Benefits

### Benefits to Insurance Customers

- Top-of-the-line customer service
- Quick Claim Settlement
- Automatic generation of renewal notices
- Anywhere Service: Policy, Endorsement, Renewals, Claims across geographical locations
- Direct from home service on Quotes, buying Policies, intimating claims, status tracking

### Benefits to Broker / Agents

- Prompt posting of commission / brokerage
- Quick access to information
- Immediate Policy issuance
- Quick Claim Settlement

### Benefits to the Users

- Easy handling and availability of timely and relevant data

### Benefits for Management Team

- Ready availability of information:
  - Operating results
  - Premium income
  - Claims paid
  - Claims outstanding
  - Intermediary wise business analysis
- Aggressive marketing augmented by availability of relevant data
- Reports for external regulatory bodies
- Improved quality of decision making through better Decision Support Mechanism
- Opening up of new business channels with intermediaries and business partners
- Enables customer focused business orientation