Busysoft Systems Private Limited

Labmate.net ERP LIMS

Labmate®.net ERP LIMS

Product Introduction

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<u>Product introduction</u>

Labmate.net ERP LIMS

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Key Words

ERP	Enterprise Resource Planning
HL7	Health Level 7
LIMS	Laboratory information Management System
LIS	Laboratory Information System: same as LIMS
LMS	Laboratory Management System: same as LIMS
ETL	Extract, Transform and Load data
OLAP	Online Analytical Processing
OLTP	Online Transaction Processing
RDBMS	Relational Database Management System (Software)
DB	Data Base
DBMS	Database management System
DSS	Decision Support system
DW	Data warehouse
SQL	Structured Query Language

Contents

Management Overview

The medical diagnostic laboratories and centres are the most important part of today's health care industry. The diagnostics centres process large number of lab specimen samples, x-rays, ultrasounds, CT scans, MRI investigations for the patients sent by several independent physicians, hospitals and referring laboratories. The centres have to perform the investigations and give the reports to the patients and other physicians in time. The record of patients and their investigation reports also have to be kept in accurately for MIS reports, future reference and client billing.

The critical issue faced by these centres is to seek a cutting-edge solution to automate its fundamental work process, patient records management, account receivables and payables. Assessment and quality control is another area of importance. Inventory control for management of different type of reagents and other chemicals to conduct tests. The chemical quality and expiry along with the human errors can cause havoc with the results. Costing,

This document outlines the issues faced by laboratory directors, mangers in the competitive field of medical diagnostic services and the use of enterprise resource planning and its needs and benefits.

This is a product introduction document of **Labmate.net ERP LIMS** software by Busysoft Systems Private Limited. The **Labmate.net ERP LIMS** software is a Laboratory Information Management System and is an Enterprise Resource Planning (ERP) solution for management of medical diagnostic laboratories and centres. The document also showcases the Labmate.net ERP LIMS software Key modules and features, complete implementation, resources required, Architecture and implementation scenarios depending upon the type of laboratory.

The **Labmate.net ERP LIMS** has been implemented in all type of medical diagnostic laboratories namely:
1. Reference Laboratory
2. Private Laboratory
3. Clinical Research Laboratory
4. Clinical Trial and Research Laboratory Ba/Be studies
5. Hospital Laboratory
6. Clinician laboratories
7. B to B laboratories
8. Laboratory Aggregator
9. Laboratory Market place
10. Franchise Laboratory

It covers all type of laboratory diagnostic centre workload such as:

- Clinical Pathology
  - Clinical Microbiology: Bacteriology, Mycobacteriology, Virology, Mycology, Parasitology, Immunology, Serology.
  - Clinical chemistry laboratories: Analysis of blood components, enzymology, toxicology and endocrinology.
  - Haematology: Analysis of blood cells
  - Genetics: Cytogenetics
  - Reproductive biology: Semen analysis
- Anatomic Pathology: Histopathology, cytopathology etc.
- Radiological Imaging: RIS module for linking with radiology modalities, workload management, dicom server, viewer with reporting tool.

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Labmate.net ERP LIMS Introduction

What is ERP?

ERP is the acronym of Enterprise Resource Planning. ERP utilizes ERP software applications to improve the performance of organizations' resource planning, management control and operational control. ERP software is multi-module application software that integrates activities across functional departments, from product planning, purchasing, inventory control, sales, and product distribution, to order tracking. ERP software may include application modules for the finance, accounting and human resources aspects of a business.

Why ERP in LIMS?

Traditionally LIMS systems concentrate on actions related to sample and laboratory test production, feeding of lab reports and delivering of reports. In today's competitive environment Laboratories have to perform well to maintain profit margins to survive. As management you have to focus on four P's of any business activity namely Product, Price, Promotion and Place. In the Laboratory management context management has to concentrate on:

- **Good laboratory practice** or **GLP** specifically refers to a quality system of management controls for research laboratories and organizations to try to ensure the uniformity, consistency, reliability, reproducibility, quality, and integrity of all kind of tests.
  This is all done to ensure Good Customer Services, timely delivery of zero error reports without fail to all type of clients namely patients, consultants, referring doctors, companies.
- Maintain ISO Standards and Accreditations
- Keep Non-conformance (NC) in check and keep its record
- Keep audit trail
- Keep record of corrective actions and preventive actions (CAPA)
- Lowest level of inventory without expiry
- Lowest level of accounts receivables and payables
- Proper training to Employees for competency
- Proper instrument planning, load management and maintenance
- Instrument calibration, standardization and QC
- Maintain turnover and profits for the principles by processing samples from various market segments as per the production capacity.
- Reduce cost per test by proper production planning

This can be achieved only by integrated planned software covering all aspects of Laboratory Management. Labmate.net ERP LIMS integrates all data and processes of an organization into one system and creates a unified database. It serves the functions of all different departments such as patient management, services, sales, marketing, finance, human resource including training and competency management, inventory and materials management, QC, Asset management, Payroll, Data warehouse and Business intelligence.

Traditionally, each department would have its own computer system that is designed to achieve its specific work needs doing work on several software systems and excel sheets. Now Labmate.net ERP LIMS system integrates all the separate systems of all the departments into itself. It runs off a unified database thus enabling the different departments to share information, communicate and standardize work processes.

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In a company that doesn't implement an ERP, a patient places an order which is usually done manually and then the data is entered by an employee in one department. The order travels as a hard document from one department to the other, and the data are re-entered manually in every step of the way.

The Labmate takes care of:

1. Operations Management
   - Front Desk operations
   - Sample collection
   - Sample transportation
   - Sample segregation and distribution
   - Sample receiving
   - Workload Management
   - Analyzer Interface
   - Patient reporting
   - Report checking, authentication and release
   - Report delivery and dispatch
   - Sample storage and discard
2. Customer Services
3. Third party insurance records
4. Outsourcing Management
5. QC
6. TAT Management
7. NC/CAPA
8. Back end operations
9. MIS and reporting
10. Administrative functions
11. Inventory control
12. Purchasing and Supplier Management
13. Accounts payable & Receivables
14. Accounting
15. Payroll & HR
16. Employee Training & Competency Management
17. Marketing and Communication Management
18. Asset Management
19. Data management functions
20. Data warehousing (DW) and Business intelligence (BI)
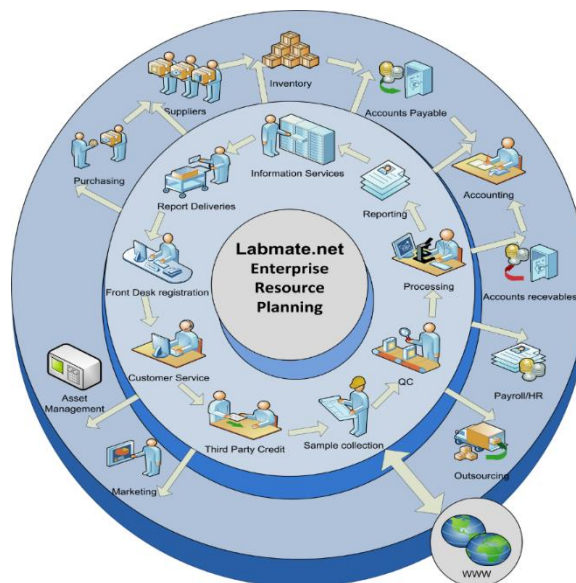
Labmate.net ERP LIMS

Product Versions

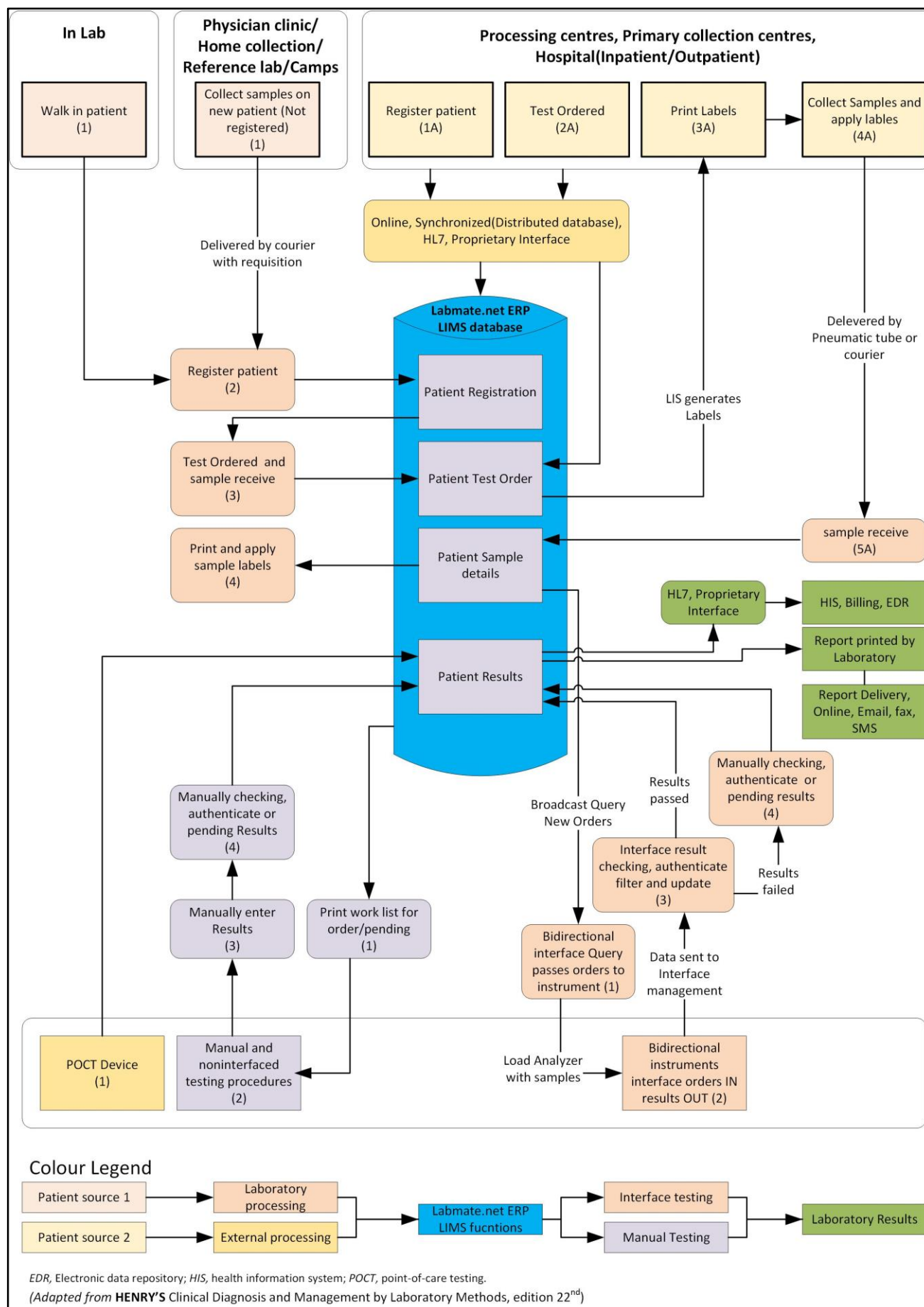The **Labmate** product is available in three versions:

Version	Work load per day patients and tests	Users and systems required
Labmate.net **Standard version**	Small and medium labs with patients up to 300 about 1500 tests	10
Labmate.net **Professional version**	medium and large labs with patients up to 750 about 3750 tests	15
Labmate.net **Enterprise version**	Large labs with patients > 750 more than 5000 tests	30

The product version has been designed to include additional functions and users to accommodate the workflow as per patient and sample volume and test volume.

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Labmate.net ERP LIMS Functions

Pre-analysis	■ Patient registration (if not received from external system) ■ Test ordering ■ Customized requisitions (e.g., outreach clients) ■ Sample/Phlebotomy draw lists ■ Bar-coded collection labels and aliquot labels
Analysis	■ Specimen tracking/racking system ■ Instrument work list (via interface and automatic download) ■ Manual work list ■ Manual results entry ■ Automated results entry via interface ■ Results validation and manual or automatic release ■ Quality control
Post analysis	■ Requisition-based patient reports (final, partial) ■ Cumulative patient reports delta check and history ■ Corrected report with audit of previous run ■ Results inquiry ■ Electronic reporting to external interfaced systems (e.g., HIS, billing) ■ Report delivery by hand, courier, email, SMS etc. ■ Report download by outreach clients
Management	■ Pending (incomplete) list ■ Turnaround time reports ■ Workload statistics ■ Ad hoc report writer ■ HIS and instrument integrity monitoring tools ■ Summary reports ■ Command centre dashboard

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Labmate.net ERP LIMS workflow

In Lab

Walk in patient
(1)

Physician clinic/ Home collection/ Reference lab/Camps

Collect samples on new patient (Not registered)
(1)

Processing centres, Primary collection centres, Hospital(Inpatient/Outpatient)

Register patient
(1A)

Test Ordered
(2A)

Print Labels
(3A)

Collect Samples and apply lables
(4A)

Delivered by courier with requisition

Online, Synchronized(Distributed database), HL7, Proprietary Interface

Labmate.net ERP LIMS database

Delevered by Pneumatic tube or courier

Register patient
(2)

Patient Registration

LIS generates Labels

Test Ordered and sample receive
(3)

Patient Test Order

Print and apply sample labels
(4)

Patient Sample details

sample receive
(5A)

HL7, Proprietary Interface

HIS, Billing, EDR

Patient Results

Report printed by Laboratory

Report Delivery, Online, Email, fax, SMS

Manually checking, authenticate or pending Results
(4)

Manually checking, authenticate or pending results
(4)

Broadcast Query New Orders

Results passed

Manually enter Results
(3)

Print work list for order/pending
(1)

Interface result checking, authenticate filter and update
(3)

Results failed

Bidirectional interface Query passes orders to instrument (1)

Data sent to Interface management

POCT Device
(1)

Manual and noninterfaced testing procedures
(2)

Load Analyzer with samples

Bidirectional instruments interface orders IN results OUT (2)

Colour Legend

Patient source 1

Laboratory processing

Interface testing

Patient source 2

External processing

Labmate.net ERP LIMS fucntions

Manual Testing

Laboratory Results

EDR, Electronic data repository; *HIS,* health information system; *POCT,* point-of-care testing.
(Adapted from **HENRY'S** Clinical Diagnosis and Management by Laboratory Methods, edition 22nd*)*

Software Modules & features chart

Available in this version ⬤   Available as optional Module ⊕

Sr. No.	Labmate Functions, Feature, Module	Usage	Platform	Standard	Professional	Enterprise
	Basic functions					
1.	Front Desk Operations Test Ordering Patient management	Main Patient registration and Test request option, Slip, TRF, receipt, bill, discount, refund, Document and patient information management.	Windows/ Web	⬤	⬤	⬤
2.	Sample collection	Specimen collect, specimen status, barcode label printing	Windows/ Web	⬤	⬤	⬤
3.	Sample Transportation	Keeping record of batch wise transportation and segregation from various locations to processing centers	Windows/ Web	⬤	⬤	⬤
4.	Sample Receiving	Specimen receive, repeat, specimen status	Windows/ Web	⬤	⬤	⬤
5.	Workload list Management	Patient department, workstation, analyzer wise workload and management	Windows/ Web	⬤	⬤	⬤
6.	Laboratory Analyzer interface	Analyzer wise interface, result approval, repeat and result upload in patient results	Windows/ Web	⬤	⬤	⬤
7.	Report Entry and Printing Function	Patient report entry thru interface or manual, interpretation, comment entry, checking, provisional authentication, final authentication and printing. Result abnormal, panic, repeats control, TNP	Windows/ Web	⬤	⬤	⬤
8.	Report Release management	Automatic release of reports for printing, SMS, email, web download for all the stake holders	Windows/ Web	⬤	⬤	⬤
9.	Patient Report Delivery	Report delivery via Direct, courier, fax, emails, SMS etc. Details of each mode with control on duplicate printing and paper used.	Windows/ Web	⬤	⬤	⬤
10.	Sample Storage and discard Management with Tracking	Storage of sample trays in barcoded locations such as fridges and discard management after processing	Windows/ Web	⊕	⬤	⬤
	Patient Record Management/Services					
11.	Patient Home Sample Collection Management	Patient area wise Home collection of samples by collection executives, SMS alert, summary reports.	Windows	⬤	⬤	⬤
12.	Patient Reminder management	Patient reminder on appointments, retest, reschedules via SMS, emails	Windows	⬤	⬤	⬤
13.	Patient Appointment management	Patient appointment with SMS alerts emails.	Windows	⬤	⬤	⬤
14.	Estimate Management	Record of estimate given to patients at reception along with slips	Windows/ Web	⬤	⬤	⬤
15.	Patient discount Management	Various type of discounts with reason, along control on authority (with limits) giving discounts. Discount alerts via SMS	Windows/ Web	⬤	⬤	⬤

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Sr. No.	Labmate Functions, Feature, Module	Usage	Platform	Standard	Professional	Enterprise
16.	Patient refunds	Patient refunds due to cancellations of patient or test with reason. Refund alerts via SMS, Refund registers	Windows/ Web	●	●	●
17.	Patient Document Management System	Patient documents such as prescription slips, requisition slips, old reports, history, and other required documents such as ID's scanning and attachments. Option of scanning, importing and filling the forms.	Windows	●	●	●
18.	Patient Clinical History Management	Patient visit history record, patient permanent history record and accession while working	Windows	●	●	●
19.	Patient forms Management System	Required patients forms on basis of tests, panel companies. It includes consent forms, Requisition forms etc. Option of scanning, importing and filling the forms.	Windows	●	●	●
20.	Medical Aid/insurance management	Details of medical aid provider, entitlement claim details	Windows	●	●	●
21.	Patient additional information management	Additional information required on the basis of test and panel companies. Automatic display of required information form for filling. For Example, LMP for triple test markers.	Windows	●	●	●
22.	Patient Report Attachment	Attachment of earlier reports of patient. Option of scanning, importing and printing of reports. Reports visible during result reporting.	Windows	●	●	●
23.	Reflex Testing	Option for defining reflex test against any laboratory test performed (with or without charge). Reflex conditions can be defined. The system checks for reflex tests and blinks with a warning.	Windows/ Web	●	●	●
24.	Automatic processes	Auto release of reports, printing of reports, sending of SMS, emails, reminders	Windows/ Web	●	●	●
25.	Loyalty Card Management	Issuing of loyalty card to permanent along with barcode printing. Booking of patient using loyalty card.	Windows	●	●	●
26.	Discount coupon management	Create discount coupons and apply on any patient on the basis of cash coupon or discount coupon.	Windows	⊞	⊞	●
27.	Membership card management	Member ship card to permanent patients along with list of all member with facility of maintaining personal and report records of members.	Windows/ Web	⊞	⊞	●
28.	Reward points management	Reward and redeem points recording	Windows/ Web	⊞	⊞	●
	Additional functions					
29.	Slide Image capture and printing	Image capture module attached with Microscope and other equipment. The images captured are stored and printed in patient reports	Windows	●	●	●

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Sr. No.	Labmate Functions, Feature, Module	Usage	Platform	Standard	Professional	Enterprise
30.	Ultrasound/Echo/CD image capture and printing	Image capture module attached with Ultrasound, Echo, Color Doppler and other equipment. The images captured are stored and printed in patient reports.	Windows	●	●	●
31.	Slide Control function	Slide number allotment, barcode printing for slide labels, slide details for histopathology, cytology slide with slide registers	Windows	●	●	●
32.	Bar Code Printing	Print sample barcodes, print barcodes on various patient documents	Windows/ Web	●	●	●
33.	Patient Envelope Printing	Printing of predesigned envelope stickers for pasting on report delivery envelopes depending on workstation	Windows/ Web	●	●	●
34.	Radiography film control function	Radiology film number allotment, barcode printing for labels, and size wise film usage for each patient in radiology. Film size wise registers and other summaries.	Windows	●	●	●
35.	PNDT management	Prenatal Diagnostic Test record and lists as per Govt. of India Act.	Windows	●	●	●
36.	Results graphs printing	Graphs from cell counters (or other analyzers) are captured, stored and printed in patient reports.	Windows	⊞	⊞	●
37.	Barcode labeler	Tools for printing preprinted barcodes by defining separate series	Windows	●	●	●
	Management control and functional tools					
38.	Command Center	Single button command control with centre wise query display of -collection, amount wise, charge wise, mode wise, area wise -Workload scheduled and pending -reporting schedules and pending	Windows	●	●	●
39.	Process time management (Turnaround time) TAT	Automatic department, workstation, test, user wise process time recording for routine, emergency and stat tests. Reports on delays and process time summaries.	Windows	●	●	●
40.	Audit Trail	Audit trail of all the activities carried by the users along with time stamp. Tool to monitor these activities	Windows/ Web	●	●	●
41.	User Dashboard	User dashboard shows events, information, messages relevant to the users at the time of login.	Windows/ Web	●	●	●
42.	Non conformance (NC) and CAPA Management	Recording of issues and nonconformance of activities department, workstation, and user wise. Summaries and reports on problems and solutions.	Windows	⊞	⊞	●

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Sr. No.	Labmate Functions, Feature, Module	Usage	Platform	Standard	Professional	Enterprise
	Business Intelligence and MIS					
43.	MIS, Summary Reports and registers	Comprehensive multifaceted reports with export facility to RTF, DOC, and excel	Windows/ Web	●	●	●
44.	Patient result analysis management	List of patients on basis of test results, normal range etc. with graphs	Windows	●	●	●
	Analyzer Interface					
45.	Analyzer Interface Unidirectional or Bidirectional	Number of analyzer to be interfaced	Windows	3	5	8
46.	Analyzer Interface additional	Analyzers interface with web or windows application for processing centers	Web/ Windows	Analyzer wise	Analyzer wise	Analyzer wise
	Inventory control and purchase management					
47.	Inventory Control	Store wise Stock maintenance, reorder level, expiry, usage, department, workstation analyzers wise details	Windows	▦	●	●
48.	Indent/PO/Supply management	Stock indent, Purchase order, Supplier management	Windows	▦	▦	●
	Account Receivables, Payables and Accounting					
49.	Third Party Assurance (TPA) Management	Record of TPA forms and data. Filling and printing of required forms as per TPA. Keeps record of required forms, additional information	Windows/ Web	●	●	●
50.	Panel company Accounting	Referencing panel company record management, SMS alert, email alert, report delivery, accounting and Credit limits alerts.	Windows/ Web	●	●	●
51.	Franchise Accounting	Franchise record management, rates, accounting and Credit limits alerts.	Windows/ Web	●	●	●
52.	Collection boy accounting	Collection executive record management, SMS email alert, incentives and accounting of money collected by executive. Credit limits alerts.	Windows/ Web	●	●	●
53.	Referencing lab management	Referencing lab record management, SMS alert, email alert, report delivery, accounting and Credit limits alerts.	Windows/ Web	●	●	●
54.	Referring doctor Management	Referencing doctor record management, SMS alert, email alert, report delivery, accounting and Credit limits alerts.	Windows/ Web	●	●	●
55.	Reporting Doctors and performing technician management	Reporting doctor record, performing technician record management, performance and accounting	Windows/ Web	●	●	●
56.	Facilitator management	Facilitator record management, along with rates and collection details	Windows/ Web	●	●	●

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Sr. No.	Labmate Functions, Feature, Module	Usage	Platform	Standard	Professional	Enterprise
57.	Outsourcing Management	Referred to lab record management, Test outsourcing, sample delivery, TRF print, report receipt, account management.	Windows/ Web	●	●	●
58.	Accounting General	General ledger, cash, bank books, P&L, Trial balance, Balance Sheet	Windows	⊕	⊕	⊕
59.	Claim Management and outstanding accounting	Claim management with third party such as CGHS, ECHS	Windows/ Web	⊕	⊕	⊕
	Payroll, HR and Employee Training Management					
60.	Payroll and Attendance Management	Employee record, attendance, leave, income, deductions, loan, appraisal, pay-slips, registers and reports etc.	Windows	⊕	⊕	⊕
61.	Employee Training management (ETM)	Training item, Training program, Training schedule, improvement plan along with employee grades assessment and certificates.	Windows/ Web	⊕	⊕	⊕
62.	Employee competency Management (ECM)	Employee competency measurement with competency item, competency program, competency measurement schedule, improvement plan with employee assessment grades.	Windows/ Web	⊕	⊕	⊕
	Marketing and communications					
63.	Marketing/communication Management	Recording of marketing executive daily call sheets, visits to clients with details of expense, purpose, complaints, future appointments and actions. Summaries on visit vs. client wise turnover.	Windows/ Web	⊕	●	●
64.	Letter Writing and Mail Merge	Define Letter Templates and use as mail merge, email sending	Windows	●	●	●
65.	SMS Management	SMS Server with SMS automatic sending and receiving option. Send via SIM or Web Push. Predefined templates.	Windows/ Web	●	●	●
66.	Email Management	Automatic Email send using predefined template for emails.	Windows/ Web	●	●	●
67.	Kiosk software	Kiosk software for patients at reception, lobby area or on web for details on lab services and functions along with patient education, services, requests and reports.	Web	⊕	⊕	⊕

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Sr. No.	Labmate Functions, Feature, Module	Usage	Platform	Standard	Professional	Enterprise
	Advance softwares and Modules					
68.	Histopathology Module	Specialized histopathology module with fixation, grossing, block preparation in sample management. Embedding, Staining and section cutting along with slide barcoding and synoptic reporting. Patient record with ICD 9/10 coding. Result analysis and information search modules.	Windows/ Web	⊕	⊕	⊕
69.	Microbiology module	Specialized microbiology module with details of observation, organism isolated, antibiotic sensitivity analysis. Linking with Vitek analyzers.	Windows/ Web	⊕	⊕	⊕
70.	Internal Chat Program	Instant messages to all or specific user, with record of messages sent for seeing later on.	Windows	⊕	⊕	⊕
71.	Queue Management	Reception Queue management for each counter, video, picture display	Windows	⊕	⊕	⊕
72.	Workstation Floor Management	Workstation Floor management for each workstation as per schedule	Windows	⊕	⊕	⊕
73.	Workstation appointment management	Advance module of appointment on the basis of Workstation, doctor, slot wise with SMS alerts	Windows/ Web	⊕	⊕	⊕
74.	Customer care and relationship management (CCRM)	Keeping records of customers call, enquiries, requests, complaints, recommendations. Linking with EPABX systems for automatic details of each call.	Windows	⊕	⊕	⊕
75.	Statistics	Statistical analysis of patient test results on the period, sex, age, age group, result value and analyzer, with various type of graphs and statistical parameters.	Windows/ Web	⊕	⊕	⊕
76.	Document Management System	Keep all the laboratory documents, SOP, and record along with security on document create, read, print.	Windows	⊕	⊕	⊕
77.	Asset Management System	Record of all Assets such as analyzers etc. Keeps purchase, supplier, maintenance schedules, AMC, repair summaries, QC details barcode, reports and summaries printing	Windows	⊕	⊕	⊕
78.	Quality Control (QC)	Internal QC record of analyzers with LJ curves West Guard rules for different level of controls	Windows	⊕	⊕	⊕
79.	Appointment Tracking System	Use for TPA appointment management	Windows	⊕	⊕	⊕
80.	Patient data archive system	Patient data and reports archival in PDF format with XML data for Electronic record keeping and retrieval	Windows	⊕	⊕	⊕
81.	Patient Satisfaction Survey	Patient satisfaction survey forms filling and saving record of each details with summary, analysis and reports printing.	Windows/ Web	⊕	⊕	⊕
82.	Clinical Research Organization (CRO)	CRO software for bulk patient registration and bulk sample collection, result reporting and printing	Windows	⊕	⊕	⊕

Sr. No.	Labmate Functions, Feature, Module	Usage	Platform	Standard	Professional	Enterprise
83.	Volunteer Management System with Clinical Trial Management System (CTMS)	VMS for Clinical trial management system keeping volunteer biometrics, photo, documents, x-rays, history with selection, rejection criteria. Record of study history with lab results. Clinical Trial management with study, stages(Phase) with events, CRF, lab results, interfacing the LIMS	Windows	⊞	⊞	⊞
84.	Enviroment data recording	24 hours recording of temperature, pressure, humidity etc. (Software application only) The hardware and other infrastructure required are separate	Windows	⊞	⊞	⊞
85.	Data Warehouse and Business intellegence	ETL, Data warehouse and OLAP BI software to drillup, drill down, slice, dice, pivoting.	Windows	⊞	⊞	⊞
86.	Hospital Management System link (HIS Link)	Linking with Hospital Management System using HL7, Proprietary Direct Link, Files based, View based	Windows	⊞	⊞	⊞
	Radiological Information System	**(RIS) Dimager® DICOM Application)**				
87.	Dimager® Server	DICOM PACS server for image storage with mulltimodality option.	Server	⊞	⊞	⊞
88.	Dimager® Workstation	DICOM workstation with view, Image processing, Attributes setup, Annotation Labels, Measurement Labels, PS, Slide Show, Dicom filmer printing, Dicom CD write, Image transfer and retrieve using C-get, C-move. Reporting function built in	Windows Each workstation	⊞	⊞	⊞
89.	Dimager® Viewer Windows/Web	DICOM viewer with view, Image processing for remote viewing	Windows/ Web	⊞	⊞	⊞
90.	Dimager® Labmate Viewer	DICOM viewer with view, Image processing linked in Labmate software	Windows	⊞	⊞	⊞
91.	Dimager® MWL and MPPS	DICOM workload list management along with Modality performed procedure set linked with Labmate Registration procedures	Windows	⊞	⊞	⊞
	Labmate Web applications					
92.	Labmate Web download reports only	Download of reports thru web. for patient, referencing doctors referencing labs, panel companies	Web	●	●	●
93.	Web Online Booking	Patient online booking by Centers, Franchises, and report downloading	Web	●	●	●
94.	Web Online Processing Centers	Processing Centers online booking, result entry, interface, authentication and report download etc.	Web	⊞	⊞	⊞
95.	Patient Portal Website	Responsive website for patients with online payment gateway option	Web	⊞	⊞	⊞

Sr. No.	Labmate Functions, Feature, Module	Usage	Platform	Standard	Professional	Enterprise
	Labmate Synchronization with processing centres					
96.	Web Online Processing Centers Synchornization Client Software only	Off line Processing Centers **local data base** booking, reporting, interface, authentication, report download etc. real-time data synchronization with the main center using Internet using Web application	Web	⊕	⊕	⊕
97.	Windows Online Processing Centers Synchornization Client software only	Off-line Processing Centers with **local data base** Patient Booking, reporting, interface, authentication, and report download etc. real-time data synchronization with the main center using Internet using Windows application. (3 users)	Windows	⊕	⊕	⊕
98.	Analyzer Interface on synchornized clients	Interface of analyzers at processing centers	Web/ Windows	Analyzer Wise	Analyzer wise	Analyzer wise
99.	Database duplication with synchozniation	Complete database synchronization for database duplication for real time backup	SQL server	⊕	⊕	⊕
	Concurrent Licensed Users in Windows and Web Apps					
100.	Windows LAN Users	Number of concurrent users in LAN environment for windows application used in LIMS	Windows	10	15	25
101.	Web User clients unlimited Reports Downloading clients Patients, Franchises, doctors	Number of concurrent users in Web application for downloading the reports	Web	No Limit	No Limit	No Limit
102.	Web Online Booking Centers, Franchises Online booking, report downloding	Numbers of Maximum centers in web application for online booking. The centers may be own centers, Franchises, Companies, Doctors, referring labs etc.	Web	No Limit	No Limit	No Limit
103.	Web Online on webserver (or cloud)	Processsing Centers online booking, reporting, interface, report download etc.	Web	/Center wise	/Center wise	/Center Wise
104.	Web Online Synchornization for processing centers	Processsing Centers **offline** booking, reporting, interface, report download etc. realtime sybchonization with the main centre	Web	/Center wise	/Center wise	/Center wise
105.	Windows Online Synchornization for processing centers	Processsing Centers **offline** booking reporting, interface, report download etc. realtime sybchonization with the main centre	Windows	/Center wise	/Center wise	/Center wise

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Sr. No.	Labmate Functions, Feature, Module	Usage	Platform	Standard	Professional	Enterprise
	Mobile Applications					
106.	My lab app • Lab-on-Mobile • Know the tests • Appointment and Home collection • Reports-on-Mobile	▪ Details about the Laboratory, instruments, tests, rate lists, locations, sample collection facilities ▪ Details about each test, normal values, interpretation, meaning and usefulness of test, disease vs test, test vs disease list ▪ Ask for appointment and home collection ▪ Patient can download all the reports on Tab/Mobile and can see the reports in tabular or PDF Format	Android	⊕	⊕	⊕
107.	Collection on Mobile	Collection executive can record all the details about patient, test request and can submit the details thru Wifi or Mobile internet connection	Android	⊕	⊕	⊕
108.	Marketing on Mobile	Marketing executive can record all the details about marketing and meeting clients and can submit the details thru Wifi or Mobile internet connection	Android	⊕	⊕	⊕
109.	Patient App	▪ Details about the Laboratory locations ▪ Download reports ▪ Request for appointment and home collection ▪ Test search ▪ Online payment gateway	Android	⊕	⊕	⊕
	API linking Applications					
110.	Patient booking API from third party applications such as CRM, HIS	▪ Direct booking of patient using API into Labmate. Patient demographics and test requests	Web services	⊕	⊕	⊕
111.	Reports download API	▪ Direct download of reports from mobile, web sites, applications or HIS application	Web Services	⊕	⊕	⊕

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Hardware and software Requirements List

Sr.	Item	Specifications	Nos	Usage
		Data Server		
1.	Server	64 Bit Xeon Processor Quad core processor 32GB RAM Minimum Raid 1 Hard Disk 500 Gb High speed SAS	1	Data server
2.	Operating System	Windows 2008 R2 or higher	1	Operating system for server
3.	Database Server	MS-SQL Express 2008 R2 or MS SQL 2008 R2 Standard or higher	1	Data Base Management System for storing and managing data
		Web Server		
4.	Server	64 Bit Xeon Processor Quad core processor 16-32 GB RAM Hard Disk 1x500 Gb High speed SATA	1	Web server
5.	Operating System	Windows 8 or Windows 7 or Windows 2008 R2 or higher	1	Operating system for server
		Application Server		
6.	Server	64 Bit Xeon Processor Quad core processor 16 GB RAM Hard Disk 1x500 Gb High speed SATA	1	Application server
7.	Operating System	Windows 8 or Windows 7 or Windows 2008 R2 or higher	1	Operating system for server
		File Server		
8.	Server	64 Bit Xeon Processor Quad core processor 16 GB RAM Hard Disk 2x1Tb High speed SATA	1	File server
9.	Operating System	Windows 8 or Windows 7 or Windows 2008 R2 or higher	1	Operating system for server
		PC for Windows/Web Clients		
10.	Windows/Web Clients	Core 2 duo, I3, I5 32 Bit/64 Bit 2-4 GB RAM Hard Disk SATA	21	PC for working at Reception 1 Reception 2 Sample collection 1 Sample receiving 1 Reporting Terminal 1 Reporting Terminal 2 Pathologist Marketing
11.	Windows Web Clients	Core 2 duo, I3, I5 32 Bit/64 Bit 2-4 GB RAM Hard Disk SATA Serial ports 9 pin 2 Nos.	4	PC for working at Interface 1 Interface 2 Interface 3 Interface 4
		Other Peripherals and software requirements		
12.	Printers	• Standard Laser printer	4	Printer for receipts and slips 1. Reception 1 2. Reception 2 Printer for report printing 3. Reporting 1 4. Reporting 2
13.	Flat bed or feeder scanner	• Standard Scanner	2	Scanner for scanning patient prescription slips, documents etc. 1. Reception 1

				2. Reception 2
14.	Barcode scanners	Hand held barcode laser scanners	4	Hand held barcode scanners 1. Reception 1 2. Reception 2 3. Sample collection 1 4. Sample receiving 2
15.	Barcode printer	Standard Thermal transfer barcode printer width 4.25" resolution 203	2	For printing barcode 1. Sample collection 1 2. Sample Receiving 2
16.	Hardware Firewall	Standard Hardware firewall with security features	1	At the Router level to protect network
17.	Internet Access	High speed internet broad band service minimum 2 Mbps for online booking or Internet Lease port 512 Kbps for online booking and reporting	1	For internet booking and reporting
18.	LAN requirements	10/100 or 1000 Mbps LAN connections with 16 port Switch (Do not recommend Wi/Fi network because of slow speed of 54Mbps 802.11g standards and low reliability due to distance and obstructions.	1	LAN and 16 port Switch
19.	Antivirus	Good Antivirus at server and clients	1	1 at each PC
20.	Adobe Acrobat Reader	Adobe acrobat reader 9.x or above	1	1 at each PC
21.	MS Office Excel	Microsoft MS-Excel to view excel report formats	1	1 at each MS office 7 excel or above
22.	MS Word	Microsoft MS-Word to edit reports in word formats	1	1 at each MS office 7 word or above
23.	Web browser	IE 9 or Google chrome or Mozilla Firefox	1	1 at each PC

All the above items are to be procured by the user. None of the above items are part of Labmate.net ERP LIMS software. Busysoft does not supply these items along with the software.

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General Network Diagram
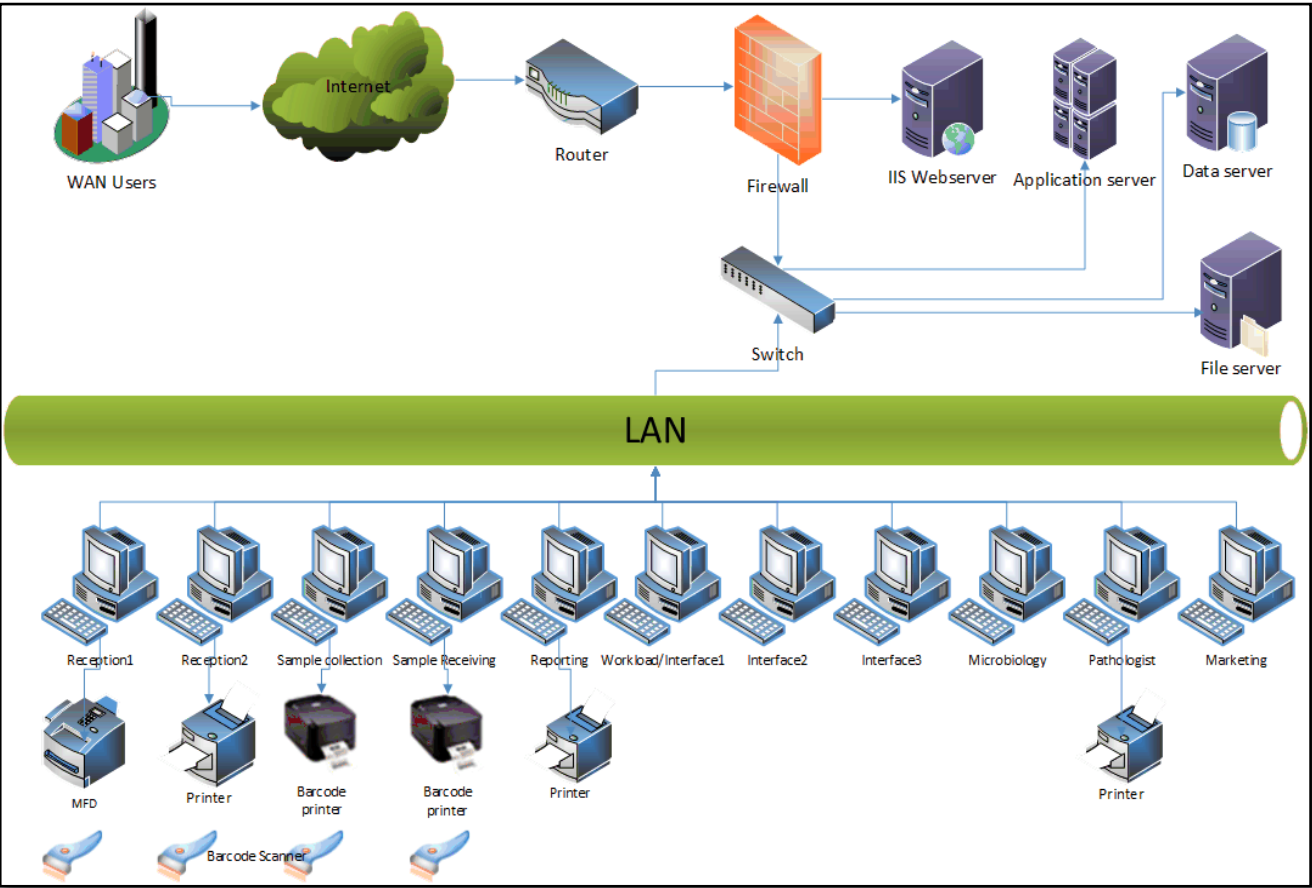
Labmate.net System Architecture

The implementation architecture is a hybrid application with use of both desktop and web application. Both the applications are installed and the plan is shown in the figure.
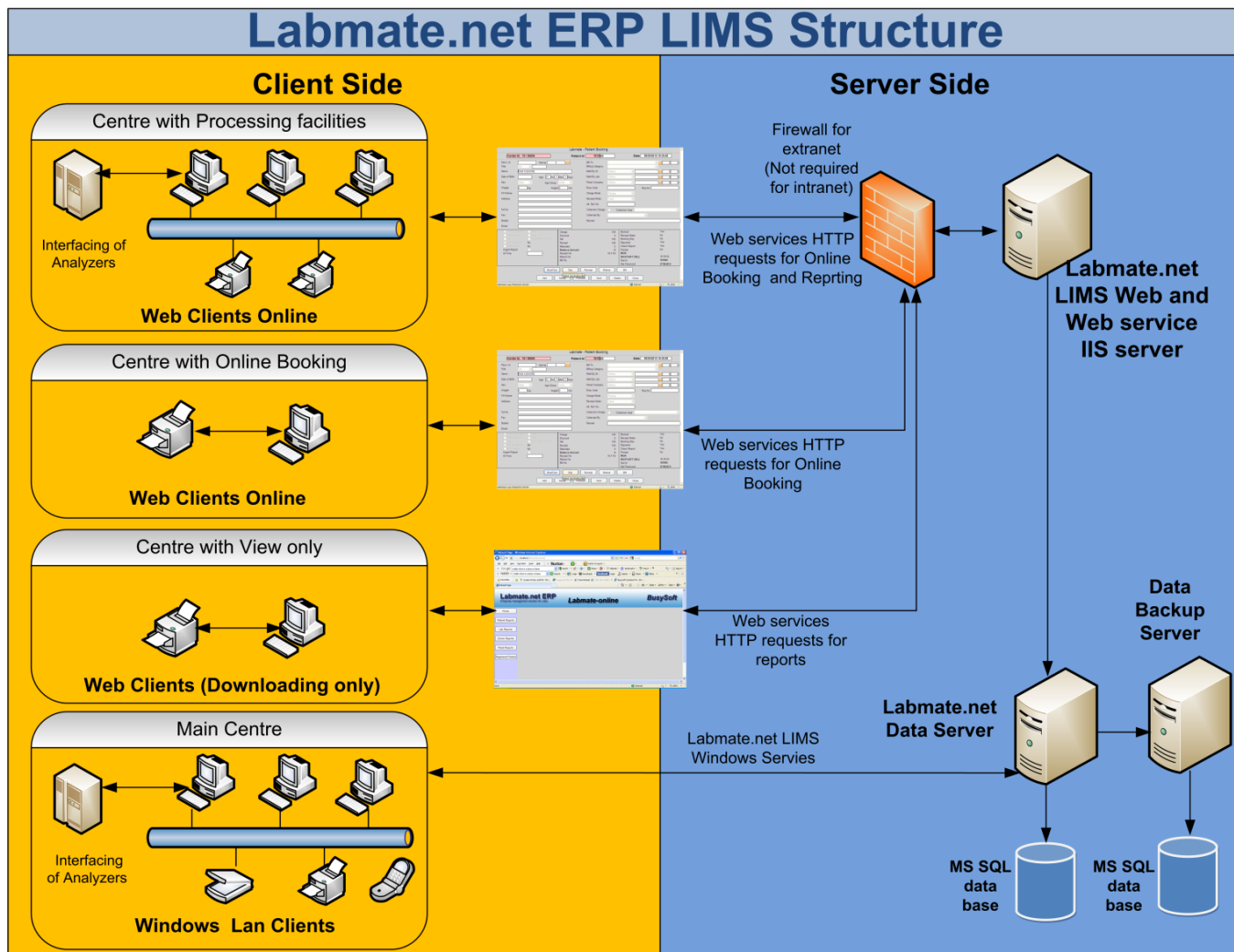
Enterprise wise implementation network diagram
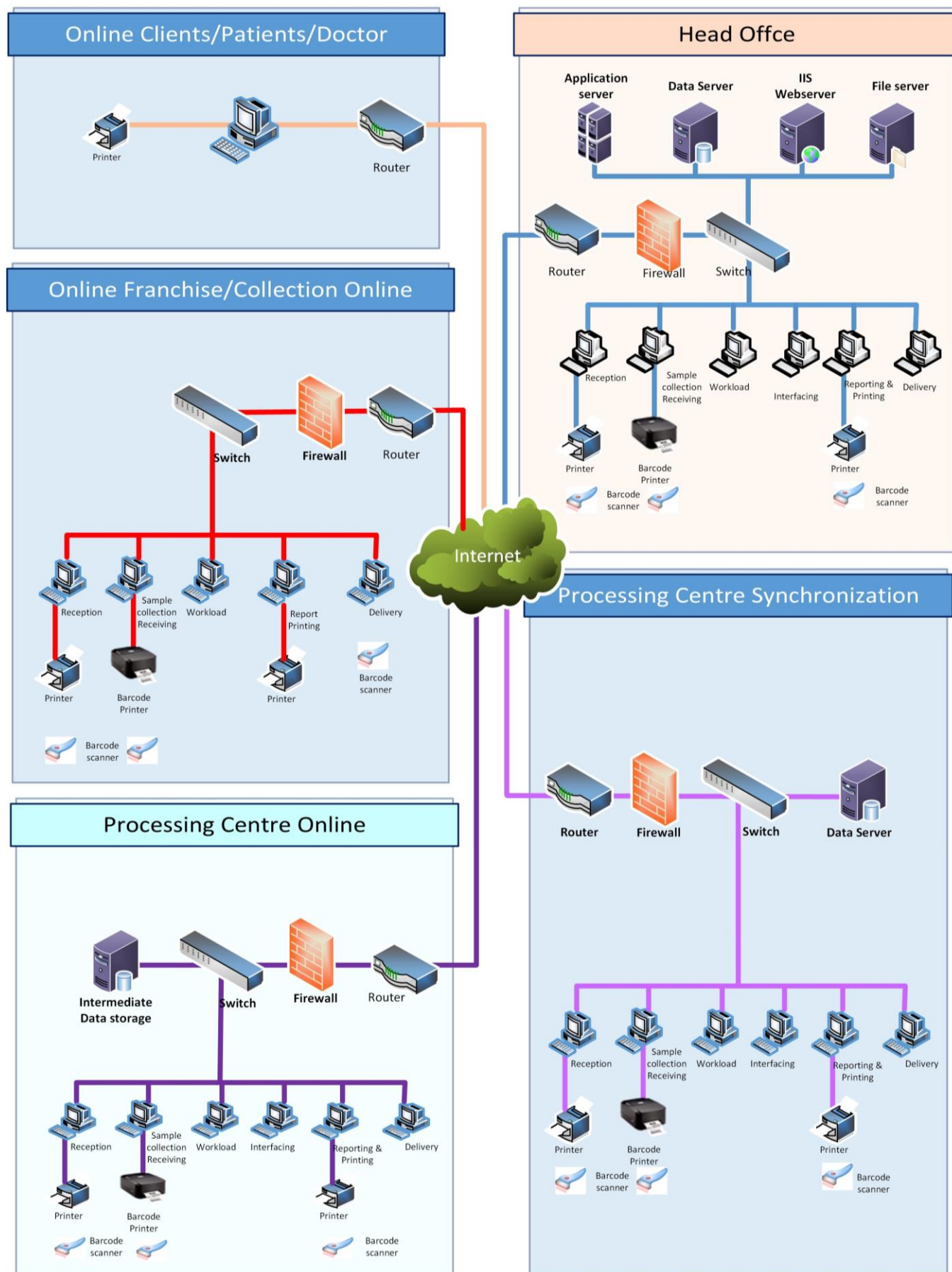
The Labmate.net ERP System implementation

Centre Type and Processing functions	Use for	Data Storage	Requirements	Data Accessing Method	Labmate Application
Main Centre • Booking • Sample collect • Sample Receive • Sample Processing • Equipment Interfacing • Result entry • Report Delivery • Printing	Use in • Main Centre	Data Server at main Centre	• Data Server • Web server • Antivirus & Firewall • Internet connection	**Local** • Local Area Network (LAN) • **Windows LAN Clients**	Labmate ERP Win/web
Centre Type and Processing functions	**Use for**	**Data Storage**	**Requirements**	**Data Accessing Method**	**Labmate Application**
Centre with Processing facilities • Booking • Sample collect • Sample Receive • Part Sample Processing • Sample sent to Main Centre • Equipment Interfacing • Result entry • Report Delivery • Printing	Use in • Processing Ceters	Data Server at main Centre	• Intranet • PC on Web accessing Main server • Antivirus • Internet connection	**Local** Local Area Network (LAN) **Remote** Internet Web clients online	Labmate ERP Web Online
Centre with Online booking • Booking • Sample collect • Sample Receive • Sample Send to main Centre • Report Printing	Use in • Collection centers • Patients • Referring Doctors • Referring Panels	Data Server at main Centre	• Intranet • PC on Web accessing Main server • Antivirus Internet connection	**Local** Local Area Network (LAN) **Remote** Internet Web clients online	Labmate ERP Web Online
Centre with view only (Web Client (downloading only) • Booking • Sample collects • Sample Receive • Sample Send to main Centre • Report Printing	Use in • Collection centers • Patients • Referring Doctors • Referring Panels	Data Server at main Centre	• Intranet • PC on Web accessing Main server • Antivirus Internet connection	**Local** Local Area Network (LAN) **Remote** Internet Web clients download	Labmate ERP Web Online

The implementation Scenarios

Scenario 1:

Application Type	Client/Server Windows/web hosted application Thick, Thin, Web based, Web enabled Hybrid application
Laboratory Location	Multi-center Laboratory
Processing Location	Processing at one location
Database Storage	Central database at one location
Data Synchronization	No Synchronization
Cloud Hosting	cloud hosting as well

Labmate.net ERP LIMS Scenario 1 Online Centers
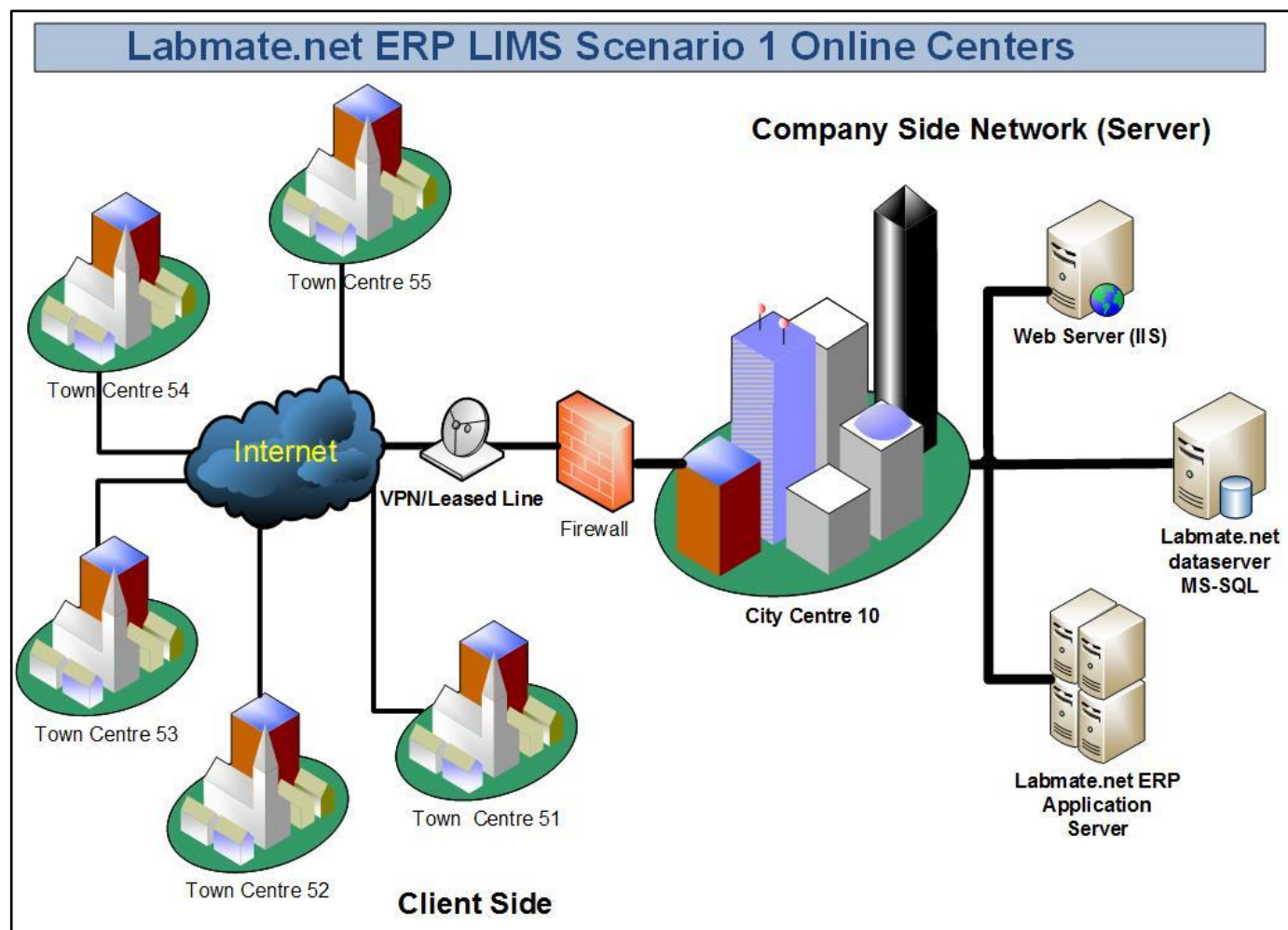
Scenario 2:

Application Type	Client/Server Windows/web hosted application Thick, Thin, Web based, Web enabled Hybrid application
Laboratory Location	Multi-center Laboratory
Processing Location	Processing at many locations
Database Storage	Distributed database at each centres
Data Synchronization	Data synchronization with main database
Cloud Hosting	cloud hosting as well
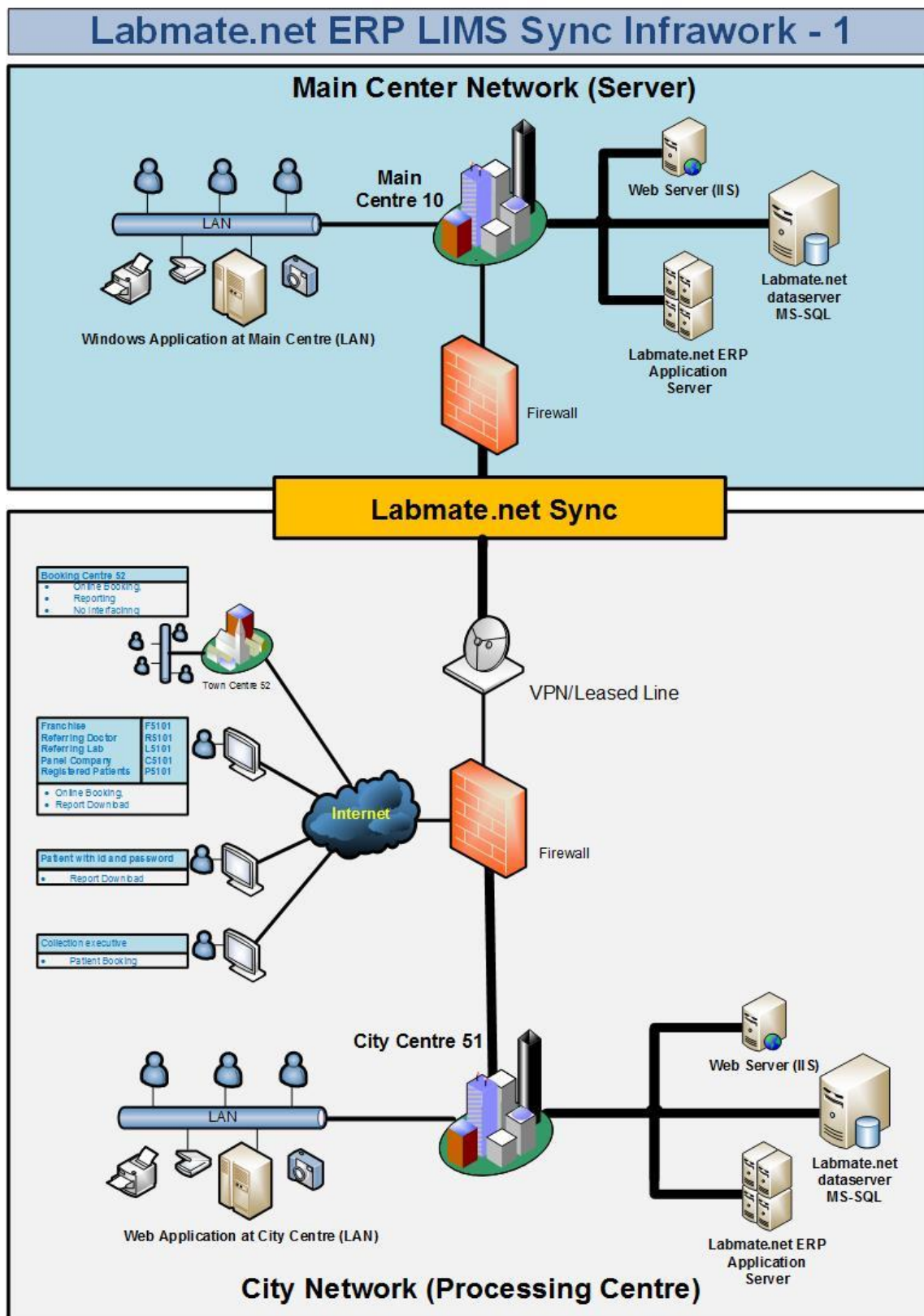
Scenario 3:

Application Type	Client/Server Windows/web hosted application Thick, Thin, Web based, Web enabled Hybrid application
Laboratory Location	Multi-center Laboratory
Processing Location	Processing at many locations
Database Storage	Distributed database at each centres
Data Synchronization	Data synchronization with sub and main database
Cloud Hosting	cloud hosting as well
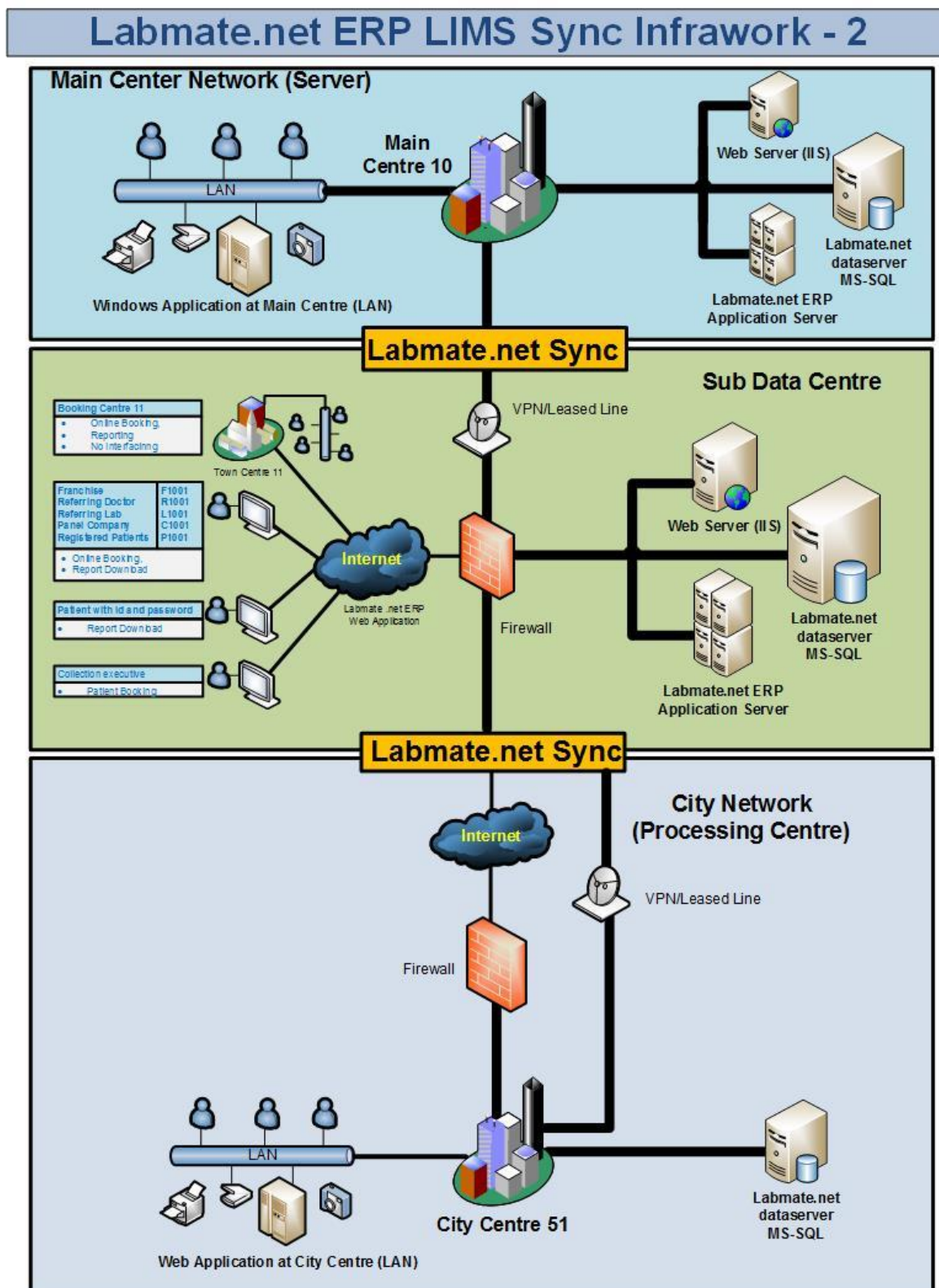
Interfacing with Analyzers

Interfacing is available for many analyzers. The analyzers are interfaced in both Unidirectional and bidirectional mode depending upon the instruments. The bar coding facility is also available depending upon instruments bar coding capabilities. Two modes of interfacing is available. The design is shown below.

Bidirectional Interface

Prerqusite

- The labmate software is upated to include the interface software
- A interface PC is required near Analyzer (10-12 meters depending upon interface type)
- The interface PC requires serial ports or a additional LAN Cards depending upon number of analyzers to be linked
- This PC should be linked with Labmate server

Procedure

1. Patient arrives at counter and patient registration and test request is done
2. Patient moves to Sample collection, Sample is collected as per requisition, Bar code is printed for each sample and is pasted on tubes
3. The Bar coded sample goes to Preprocess
4. The barcoded sample is put into Analyzer Rack
5. The analyzer send test order enquiry to Labmate
6. The Labmate sends Test order to analyzer
7. As the test is done the results will be transmitted to interface PC
8. These results will be updated in labmate server PC
9. Results are checked and authenticated by users
10. The results can be viewed at any of the connected PC 1, PC2, or Interface PC. The results can be checked at these locations
11. The results can be modified and then updated in patient results in labmate server. The patient result report can be printed by any of the labmate user

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Unidirectional Interface

Labmate.net ERP Unidirectional Interface

Prerqusite
- The labmate software is upated to include the interface software
- A interface PC is required near Analyzer (10-12 meters depending upon interface type)
- The interface PC requires serial ports or a additional LAN Cards depending upon number of analyzers to be linked
- This PC should be linked with Labmate server

Procedure
1. Patient arrives at counter and patient registration and test request is done
2. Patient moves to Sample collection, Sample is collected as per requisition Bar code is printed for each sample and is pasted on tubes
3. The Bar coded sample goes to Preprocess
4. The barcoded sample is put into Analyzer Rack
5. The technician reads worksheets on Labmate terminal or paper
6. Technician feeds Test order in analyzer workload for each patient id
7. As the test is done the results will be transmitted to interface PC
8. These results will be updated in labmate server PC
9. Results are checked and authenticated by users
10. The results can be viewed at any of the connected PC 1, PC 2, or Interface PC, The results can be checked at these locations
11 The results can be modified and then updated in patient results in labmate server. The patient result report can be printed by any of the labmate user

Interface protocols used:

1. ASTM
2. HL7
3. Proprietary depending upon each instrument
4. File import/export

Interface methods:
1. Rs232 serial port
2. TCP/IP Client/server
3. Wi-Fi
4. USB

Following analyzers have already been added in interfacing. We are adding new instruments as per user requirements.

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List of analyzers interfaced

Biochemistry Analyzers	
Producer	**Type/Model**
Beckman Coulter, Inc	▪ Synchron CX 9 ▪ CX 9 pro ▪ AU 480 ▪ AU 5800 ▪ DxH 500
Hitachi	▪ Hitachi 902 ▪ Hitachi 911 ▪ Hitachi 912 ▪ Hitachi 917 ▪ Hitachi 704 ▪ Hitachi MSWA
Dade/Siemens	▪ Dimension AR ▪ Dimension SMS ES ▪ Dimension XL ▪ XPAND ▪ VersaCell
Siemens	▪ ADVIA 1650 ▪ ADVIA 1800 Chemistry systems
Roche	▪ Cobas integra 400, 460 ▪ 700 ▪ 800 ▪ Cobas c311 ▪ Cobas c111 ▪ Modular 6000 ▪ Modular P800 ▪ Cobas Mira
Johnson & Johnson	▪ Vitros 250/350/250AT ▪ Vitros 500 ▪ 950 ▪ 700 Series ▪ Other Series ▪ Vitros DT 60 ▪ Vitros 5.1 FS ▪ Vitros 4600 ▪ VITROS 5600 Integrated System
Kone	▪ Konelab 30 l ▪ Konelab 60 I ▪ Konelab 20 I
Randox	▪ Daytona ▪ Immola CA400
Olympus	▪ AU 400 ▪ AU 480 ▪ AU 680 ▪ AU 640 ▪ AU2700/5400
Erba Manneheim	▪ Erba Chem 5 plus,

	▪ Erba chem7 ▪ Erba Chem pro ▪ EM 360 (XL 600)
Transasia	▪ XL 300, 360 ▪ XL 600, 640 ▪ EM 200
Mindray	▪ BS-200 ▪ BS-300 ▪ BS-400 ▪ BS-420 ▪ BA-88A Semi-auto Chemistry Analyzer
Diatron Group	▪ Pictus 700/500 ▪ Metrolab 2300 GL
Auto Lab	▪ Autolab
Smartlab	▪ Smartlab
Biotechnica Intru. Italy	▪ BT 2000 Plus ▪ BT 1000 Plus ▪ BT 3000 Plus
ISE SRL Italy (Logotech)	▪ Miura ▪ Echo
Vital Scientific	▪ Selectra ▪ Selectra/Flexor Junior ▪ Sclavolab 100 ▪ Spinlab 100 ▪ Pro ▪ EL Series
Wiener Lab (Merck)	▪ Microlab 200 ▪ Microlab 300
Awareness Tech	▪ Chemwell 2910
Abimed	▪ EOS 890
Tokio Boeki Ltd	▪ Prestige 24i, bioLis 24i
Abbott	▪ Architect ves ▪ Architect C4000
Toshiba	▪ Accute TBA 40FR ▪ TBA 25 FR
CGA Strumenti Scientifici	▪ ML-2300
Bio systems	▪ Bio system A25 ▪ Bio system A15 ▪ BA 400
Biochemical systems int.	▪ Fully chemistry
Diasys	▪ Response 910
Robonik	▪ Autora
Ark Diagnostics	▪ CKK 200
MERIL DIAGNOSTICS PVT LTD	▪ AutoQuant 100
FURUNO ELECTRIC CO., LTD.	▪ BX-3010 Host Interface
Human	▪ HumaStar 100/200
ROBONIK INDIA PVT LTD	▪ Autora ▪ prietest eXP
Diamond Diagnostics	▪ Ellipse

Immunology Analyzers

Minividas	▪ Minividas ▪ Vidas PC
Abbott	▪ Axsym ▪ Architect ▪ Architect C4000 ▪ Architect 8200 ▪ Architect 1000
Bayer	▪ Advia Centaur XP ▪ Advia Centaur CP ▪ Advia Centaur XPT
Roche	▪ Cobas e 411
Beckman Coulter, Inc.	▪ Access ▪ Access2 ▪ DxI ▪ LXi ▪ DxCi ▪ Immage 800
Boehringer(Roche)	▪ Elecsys 1010 ▪ Elecsys 2010
Siemens	▪ Immulite ▪ Immulite 1000 ▪ Immulite 2000 ▪ Immulite 2500 ▪ Immulite 2000 XPi ▪ Advia Centaur XP ▪ Advia Centaur CP ▪ Advia Centaur XPT
DiaForin	▪ AIA 600
Tosch Bio	▪ AIA 360
Eurogenetics Tosch	▪ AIA 21
Monobind INC	▪ Neo eldex Elisa
Shenzhen	▪ MAGLUMI Chemiluminescence Analyzer
Beckman coulter	▪ IMMAGE Immunochemistry
Snibe Diagnostics	▪ MAGLUMI 600 ▪ MAGLUMI 800 ▪ MAGLUMI 1000 ▪ MAGLUMI 2000 ▪ MAGLUMI 2000 Plus ▪ MAGLUMI 4000
Johnson & Johnson	▪ Vitros ECiQ/ECi ▪ VITROS 3600 Immunodiagnostic System
Diasorin	▪ LIAISON
Thermo Fisher Scientific	▪ Phadia 100
CPC Medical Systemz Pvt Ltd.	▪ PlexMat Automated Line Immuno Assay Processor

Blood Picture Analyzers/Haematology Cell Counters

Abott	- Celldyne 1200 - Celldyne 1600 - Celldyne 1700 - Celldyne 1800 - Celldyne 3000 - Celldyne 3200 to 4000 series
Bayer/Siemens	- Advia 60 - Advia 120 - Advia 70 - Advia 2120/2120i - Advia 360
Beckman Coulter	- LH 500 - LH 750 - LH 780 - Coulter Act 5 Diff CP, AL - COULTER® HmX Hematology Analyzer - COULTER® HmX Hematology Analyzer with Autoloader
Lablife	- Lablife 3D - Lablife 5D
Swelab	- Swelab - Swelab Alpha
Nihon Kohden	- Celltac alfa (MEK 6318 K) - MEK 6400 - MEK 6410 - MEK 6420 - MEK 7300 K
Horiba ABX Diagnostics	- ABX Pentra 60 - ABX Pentra 60C+ - Pentra 80\XL80 - Pentra 120 DX/DF - Micros Care ST - Pentra ES 60 - Pentra MS 60
Sysmex corporation	- Sysmex KX 21 (3P diff) - Sysmex KX 1000 - Sysmex XS Series - Sysmex SF 3000 - Sysmex XS 800 i - Sysmex XS 1000 i - Sysmex XT1800 i - Sysmex XT 2000i - Sysmex XN20 - Sysmex XN 350/550 - Sysmex XNL 450 - Sysmex pocH-100i - Sysmex XP series - Sysmex XT-4000*i* - Sysmex UF-1000i/UF-500i - Sysmex UX-2000

Sysmex	▪ CA 500
Drew Scientific	▪ Excell 22/2280
Melet Schloesing	▪ MS 95
	▪ MS-95 SE
	▪ MS 9
Boule	▪ Swelab
	▪ Swelab Alpha
	▪ MEDONICA CELLANALYZER CA 530
	▪ MEDONICA CELLANALYZER CA 620
	▪ BM850-instrument
Mindray	▪ BC 2800
	▪ BC 3200
	▪ BC 3600
	▪ BC 1800
	▪ BC 5180
	▪ BC 5300
	▪ BC 5380
	▪ BC 5500
	▪ BC 5800
	▪ BC 6800
Mindray	▪ Cellenium 19
	▪ Cellenium 19 Plus
	▪ Cellenium junior
Diatron	▪ Abacus 380
	▪ Abacus 3
	▪ Abacus
	▪ Arcus
	▪ ABJ/ABJV/ABJ5/ABJV5/ABP/ABJB/ ABJ30-60-80/A3A3CP/A4/A5
Procan	▪ PE-6300
	▪ ERMA PCE 210E
Diesse	▪ Vesmatic 20
	▪ Vesmatic 30 ESR
	▪ Vesmatic 80 ESR
	▪ Vesmatic Cube 200
Immucor, Inc.	▪ Galileo ECHO Blood Bank Analyzer
Unique Diagnostics	▪ Sedy 12

Automated Elisa Readers

Dade/Siemens	▪ BEP 2000
Phoenix Airmid biomedical	▪ Alegria
ORGENTEC Diagnostika GmbH	▪ Alegria
Aventor	▪ BeneSphera E21

Immunocytometry Systems

Becton Dickinson	▪ FACS Calibur

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Microbiology Analyzers

Biomerieux	- Vitek 2 - Vitek - Vitek 2 Compact

Integrated Analyzers Advance Robotic Solution

Siemens	Versacell
Cpc diagnostic	ATL-60

Urine Analyzers

Bayer	- Clinitek 50 - Clinitek 500 - Uriscreen 100
Siemens	- Clinitek Advantus - Clinitek Status
Roche	- Cobas U 411 - Urisys 1100 - Urisys 1800
Sysmex	UX 2000
YD Diagnostics	- Uriscan Optima - Uriscan ProII - Uriscan Super
Human	Combilyzer13
Diasys	QDX Urilyzer 100 and series
Erba Lachema	Laura M
Standard Diagnostics	Urometer 720, 120
Aspen diagnostics	Uriplus 600
Dirui	- FUS-100/H-100 - FUS 200 - H-800
Shenzhen Genius Electronics	BA 600
Acon Laboratories	Mission U120 Urine Analyzer
Dutch Diagnostics	Uri screen 100

Electrolytes

Roche	- EA 9180 - Cobas b 221
MEDICA	Easylyte
Sensa Core	ST 200 Plus
IRIS Healthcare	IONS IRIS
SHENZHEN GENIUS ELECTRONICS CO., LTD	GE 300
JS Medicina	DIESTRO 103 AP
Diamond Diagnostics	Prolyte

Other Analyzers Blood gas, Coagulation, Minerals etc.

Biorad	▪ D-10 Hemoglobin Testing System ▪ Variant ▪ Variant II ▪ Plate Reader 680
Tosoh Automated	▪ HLC-723 G8 Glycohemoglobin Analyzer
AVL	▪ AVL
Nova	▪ Nova pHOx Plus ▪ BIOPROFILE 100/400/Basic
Siemens	▪ Rapidlab 348 ▪ Rapid lab 1200
SIRE Analytical Systems	▪ ROLLER 20 ▪ ROLLER 10/10PN ▪ ROLLER 20PN
Tecan	▪ Sunrise absorbance reader (Microplate reader EIA analyzer)
Transasia	▪ Elan30s
Dade Behring	▪ BN ProSpec System
Gonotec	▪ Osmomat 3000 Freezing point osmometer
SHENZHEN GENIUS ELECTRONICS CO., LTD	▪ PA54 Specific Protein Analyzer
	▪ Alegria
Diagnostica	▪ Stago STart 4 Hemostasis Analyzer
Sysmex	▪ CA 50, 500 Coagulation ▪ CS-2400/CS-2500 Automated Blood Coagulation
CDR Global C.	▪ Tritek (Clotting, Chromogenic, and Immunologic Assays)
Behnk Elektronik	▪ Thrombolyzer Compact X
Stago	▪ STA COMPACT
Stago/Tcoag	▪ Amax Destiny Plus
Agappe	▪ Mispa i2
Allergy Testing	▪ CLA1
Sebia	▪ Minicap Electrophoresis
Nova	▪ Nova STP CCX
Roche	▪ Cobas Taqman 48 ▪ Cobas Taqman 96
Cepheid	▪ Genexpert
	▪ ACL 6000 & 7000
Sigma Diagnostics	▪ KC 4 Coagulation
Shenzhen Lifotronic Technology	▪ H9 Hemoglobin Analyzer A1C
ARKRAY, Inc.	▪ ADAMS A1c Lite
Erba Diagnostics	▪ ECL 412
AB Sciex Pte. Ltd.	▪ AB SCIEX 3200 Series of Instruments

Alere	- epoc Blood Analysis System - Helena C-4 - Biosite Triage
Radio meter	- ABL 90 - ABL 900 - ABL700 Series - ABL70 - ABL77 - ABL800 FLEX - ABL800 Basic - ABL80 FLEX

Few Screen Shots of the software
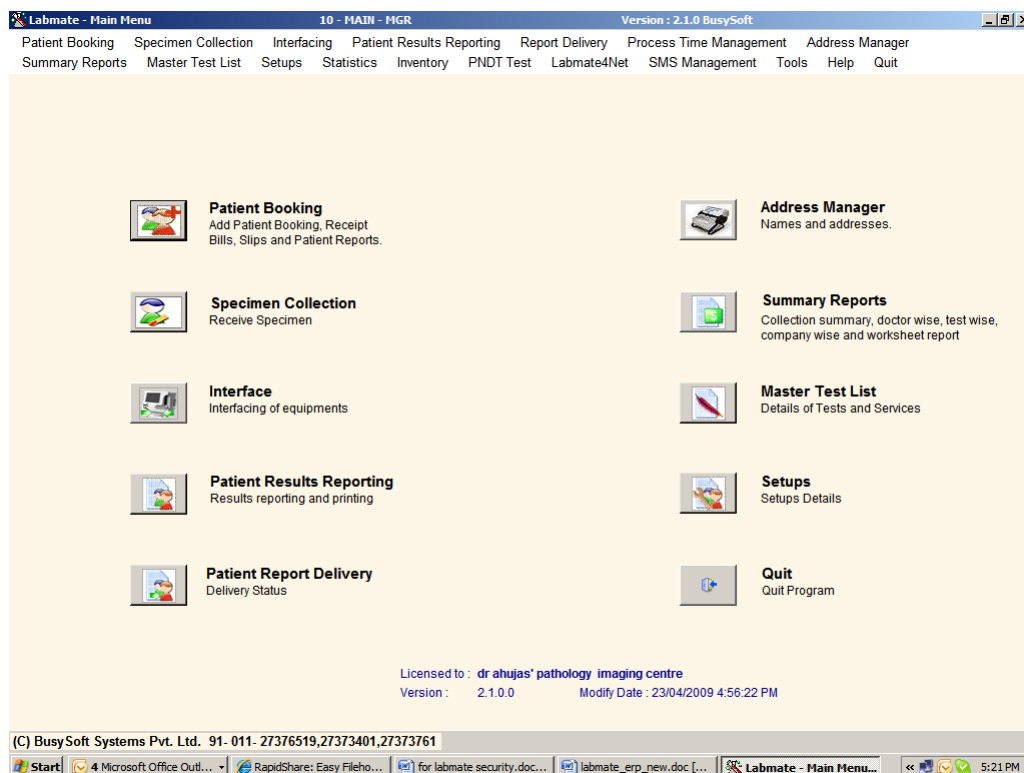
Labmate.net Main Menu

Labmate Patient Booking

Patient Specimen collection

Laboratory Equipment interface

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Patient Result Reporting

MIS and Summary Reporting

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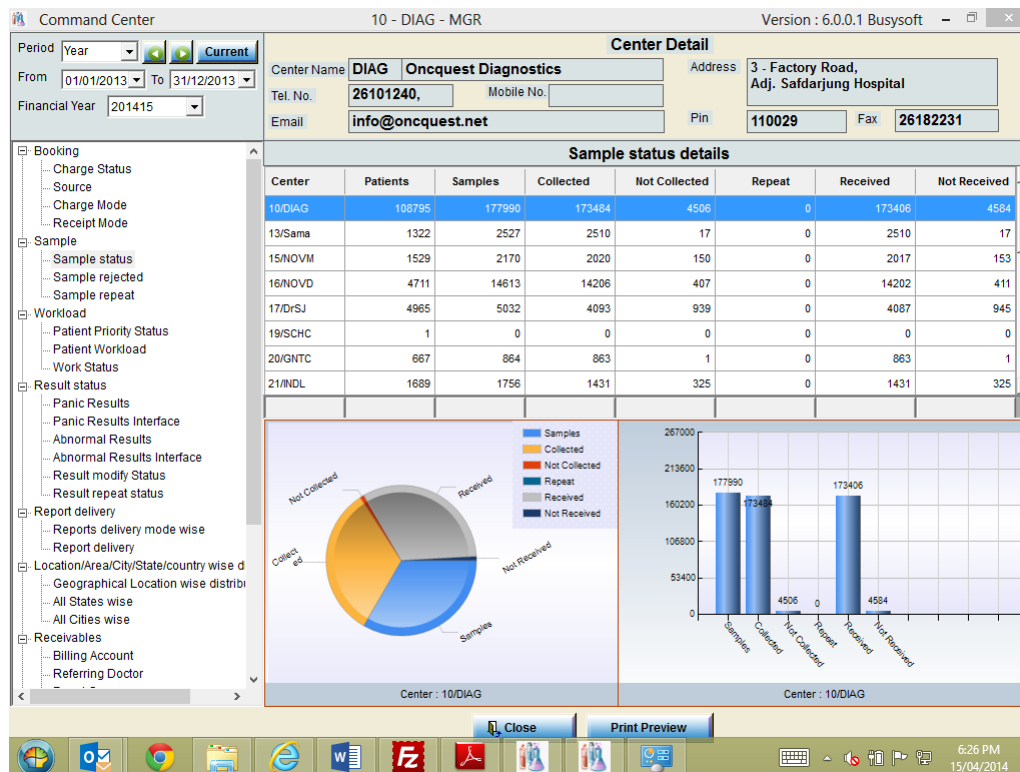
Command Centre with charting

Labmate.net Web Main Menu

Labmate.net Web Patient booking

Labmate.net Web Sample collection

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Labmate.net Web Result reporting

Labmate®.net ERP LIMS

Product Introduction

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