



TECHNOLOGY & BUSINESS SOLUTIONS
"Define-Achieve-Maintain"

Innovative Software Solutions for the Pharmaceutical Industry

Quality Compliance
Sales Effectiveness Tool
Daily Call Report
Mobile Sales Order

Providing IT Solutions Since 2005

www.tecbsl.com
pharma.tecbsl.com

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Our Solutions:

Technology and Business Solutions Ltd. (TBS) have developed and implemented IT solutions in Quality Compliance, Marketing and Sales for the pharmaceutical industry since 2005. Our solution includes Design, Coding/Testing, Documentation, Training End-Users, Deployment and Maintenance Support.

Our rich experience in this sector has given us a unique insight and domain expertise not only to implement similar systems, but also confident we can provide world class solutions in other areas.

Our solutions include:

1. Quality Compliance
2. Sales Effectiveness Tool
3. Daily Call Report
4. Mobile Sales Order

PQC (Pharmaceutical Quality Compliance)

Pharmaceutical companies are regularly subjected to tremendous financial pressure to produce products. A delay in releasing a batch of drug is not only costly but also consumes additional resources in the company. It is therefore crucial that analytical data be collected, compiled, and submitted in a timely, accurate and reliable but secure manner.

The PQC application is a centralized web based information management system for Pharmaceutical QC / QA to store batch analytical result, manufacturing information, and to track, monitors analytical / manufacturing data in a secure manner. The system supports the management of analytical result data of raw material, packaging material, water, finished product and stability of products.

The main functionality of PQC is to track a batch life cycle from manufacturing to batch release. The system enables the printing of reports like Certificate of Analysis (COA), trend analysis and other reports.



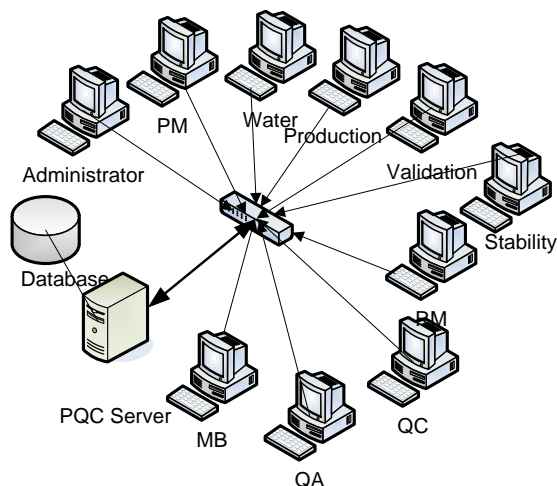
Benefits and Advantages

- ✓ Enhance Productivity and Efficiency
- ✓ Improve Reliability & Accuracy of QC Process
- ✓ Faster Report Generation including APR
- ✓ Comply with Regulatory Requirements
- ✓ Centralized Analytical Information Repository
- ✓ Faster Analysis of Analytical Data
- ✓ Secured and Consistent Approval Process
- ✓ Storage of QC, QA & Manufacturing Data
- ✓ Patient Risk Reduction

Guidelines and Standards

- ✓ GMP, EU GMP Annex 11, EU GMP Part 11, 21 CFR Part-11 and ICH Guideline
 - Computerized System
 - Electronic Record, Data & Data Storage
 - Accuracy Check
 - Audit Trails
 - Change and Configuration Management
 - Security
 - Electronic Signature
 - Print outs
 - Batch Release

System Overview



Modules

- ✓ Product
 - Solid & Liquid Product
- ✓ Raw Material (RM)
 - API & Excipients
- ✓ Packaging Material (PM)
 - Primary & Secondary PM
- ✓ Water
 - Boiler, Steel Mass, Purified, WFI, Tank, Feed, Softener etc
- ✓ Stability
 - Development, Marketed & New Product

Batch Processing Steps

- ✓ Batch Testing (Test & Specification) by QC & MB
- ✓ Batch Approval (Approve & Reject)
- ✓ Product Authorization
- ✓ COA for Every Step of a Batch

Product Stability

- ✓ Generate Schedule
- ✓ Frequency Testing
- ✓ Approval for Each Step
- ✓ Authorization for Final Step
- ✓ Storage Stability Result

Roles

- ✓ Super Administrator
- ✓ Administrator by Modules
- ✓ Analyst (QC & MB) by Modules
- ✓ Approver (QC & MB) by Modules
- ✓ Authorizer (QC & MB) by Modules
- ✓ Quality Assurance
- ✓ Production
- ✓ Data Entry Operator

Stakeholders

- ✓ Production
- ✓ Quality Assurance (QA)
- ✓ Quality Compliance (QC)
- ✓ Validation
- ✓ Stability
- ✓ Raw Material (RM)
- ✓ Packaging Material (PM)
- ✓ Microbiology (MB)
- ✓ Water

Features and Functionality

- ✓ Master Data
 - Items (Product, Raw Material, Packaging Material, Water) Management
 - Specification Management for All Items
 - Shelf Life, Equipment and Others
 - Analyst, Approver & Authorizer
- ✓ Batch Entry
- ✓ QC & MB Analytical Result Entry & Approval
- ✓ QA Observation Entry
- ✓ Validation of Products
- ✓ Authorization for Finished Products
- ✓ Raw Material Audit
- ✓ Email Notifications
- ✓ Alert for Out of Specification
- ✓ Certificate of Analysis (COA)
- ✓ Automatic Stability Schedule Generation
- ✓ Stability Analytical Data Entry and Approval
- ✓ Printing Facility
- ✓ Rich Searching Features / Advance Search
- ✓ Browser Compatibility: IE6+, Firefox 3.5+

Security

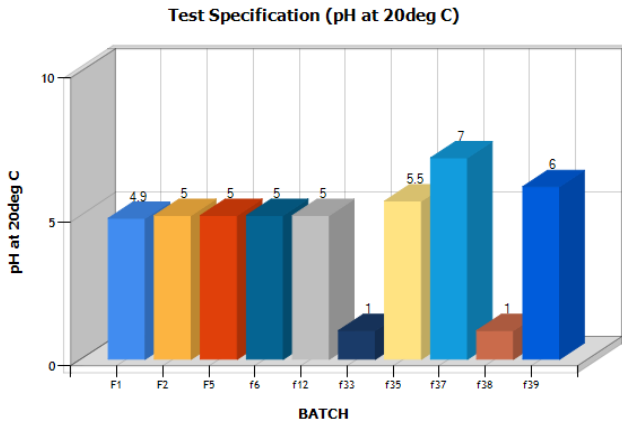
- ✓ User Management
- ✓ Active Directory Login
- ✓ Roles & Privilege Management
- ✓ Privilege for Edit & Update
- ✓ Track Login & Logout
- ✓ Audit Trail
- ✓ Session Timeout

Reports

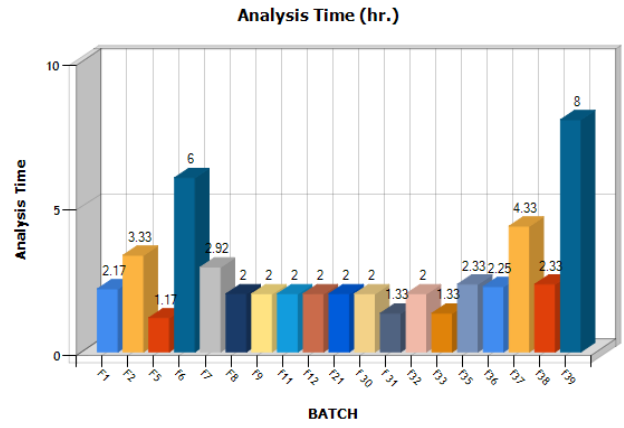
- ✓ In House Reports by Modules, Departments & Steps
- ✓ Basic Data Reports for Products (Manufacturing Data)
- ✓ Certificate of Analysis (COA)
- ✓ APR (Annual Product Review) for:
 - Analytical and Manufacturing Data
- ✓ APR by Modules
 - Products
 - Raw Material
 - Packaging Material
 - Water
- ✓ Graphical Reports of Trend Analysis
- ✓ Analysis Time for QC, MB
- ✓ Individual Specification by Items & Modules
- ✓ QO Cycle Time & Yield Percentage for Product

Graphical Reports

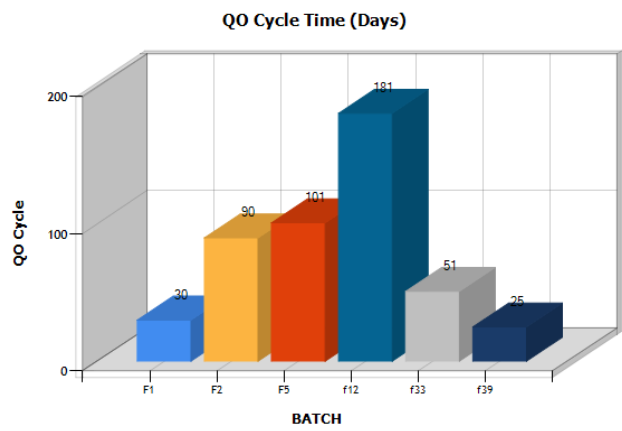
APR: Trend Analysis for pH



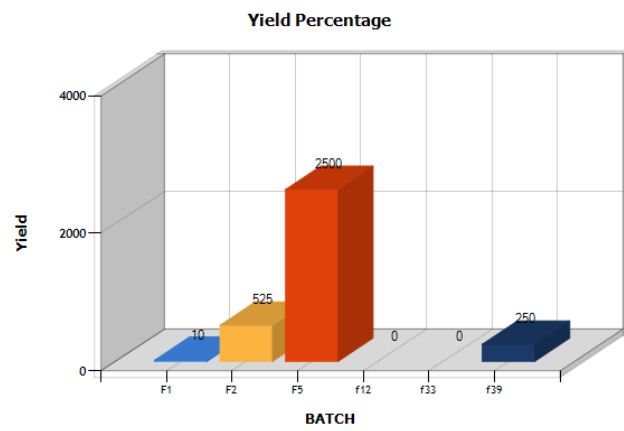
APR: Trend Analysis for Analysis Time



APR: Trend Analysis for QO Cycle Time



APR: Trend Analysis for Yield Percentage



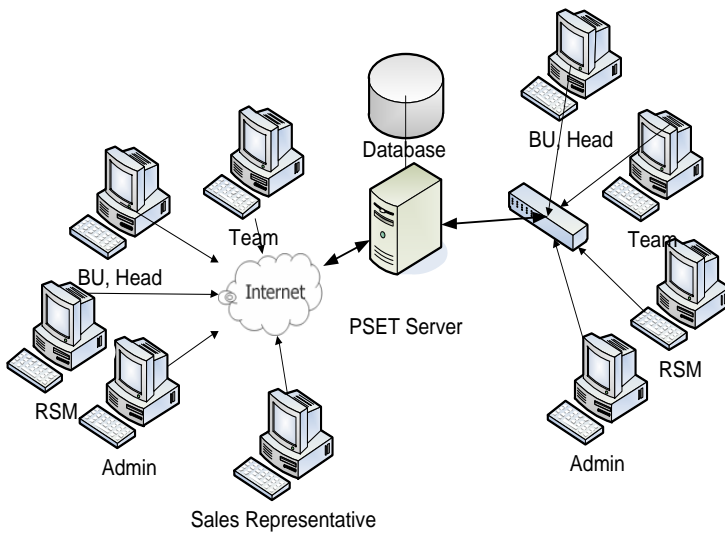
PSET (Pharmaceutical Sales Effectiveness Tool)

The PSET is a centralized web based application where sales team including management will be able to manage and monitor through sales target and achievement. PSET application is mainly reporting tool for sales, marketing and management team.

PSET Scope

- ✓ Monitor MIA and their Customer & product wise Sales
- ✓ Track employee's history
- ✓ Get Territory and Customer relationship history
- ✓ Compare Sales growth
- ✓ Compare Sales, Return & Deliver return
- ✓ Compare Target & Achievement
- ✓ Request for customer add, remove, share using new eSET application
- ✓ Approve requested customer using new application
- ✓ Alert sales team via SMS

System Overview



Roles

- ✓ Super Administrator
- ✓ Administrator
- ✓ Business Unit Head
- ✓ Sales Line Manager
- ✓ Regional Sales Manager
- ✓ Marketing Head
- ✓ Team Leader
- ✓ Sales Representative

Features and Functionality

- ✓ Master Data
 - Sales Structure
 - Geo Location
 - Customer Management
- ✓ Product Management
 - Product Family
 - Products
 - Incentive Products
- ✓ Customer
 - Customer
 - Customer Territory Relationship

PSET Advantages

- ✓ Centralized web based application
- ✓ Help Increase Sales Effectiveness
- ✓ Sales will be tracked by individual and also by
 - Own Sales
 - Customer Share
 - Product Share
- ✓ Sales will be tracked also by
 - Customer
 - Product & Product Family
 - Customer, Product and Product Family
 - Depot wise sales
 - Employee wise sales
- ✓ Return sales will be able to track by
 - Product & Product Family
 - Depot wise
- ✓ Dashboard by different roles and responsibilities for target and achievement
- ✓ Target will be tracked by individual by product
- ✓ Product will be management by sales line
- ✓ Notify sales personnel about sales target, achievement and remaining sales via SMS

Stakeholders

- ✓ Sales
- ✓ Marketing

Security

- ✓ User Management
- ✓ Active Directory Login
- ✓ Roles & Privilege Management
- ✓ Track Login & Logout
- ✓ Audit Trail
- ✓ Session Timeout

Reports

- ✓ Target
- ✓ Customer Share
- ✓ Total Company Sales
- ✓ MTD Wise Sales

- Customer Territory Share
- ✓ Share
 - Customer Share
 - Product Share
- ✓ Employee Management
- ✓ Time Management
 - Yearly Holiday
 - Weekly Holiday
 - Employee Leave
- ✓ Tools
 - Manage Duplicate Customers
 - Customers Not Tagged
- ✓ SMS Sending Facility for sales & management
- ✓ Printing Facility
- ✓ Rich Searching Features / Advance Search
- ✓ Browser Compatibility:
 - IE9+
 - Firefox 26.0+
 - Google Chrome
- ✓ Customer & Product Wise Sales
- ✓ Product Sales by Team & Territory
- ✓ Required Sales Per Day
- ✓ Depot Wise
 - Sales
 - Return
- ✓ Employee Wise
 - Sales
 - Return
 - Budget vs. Achievement

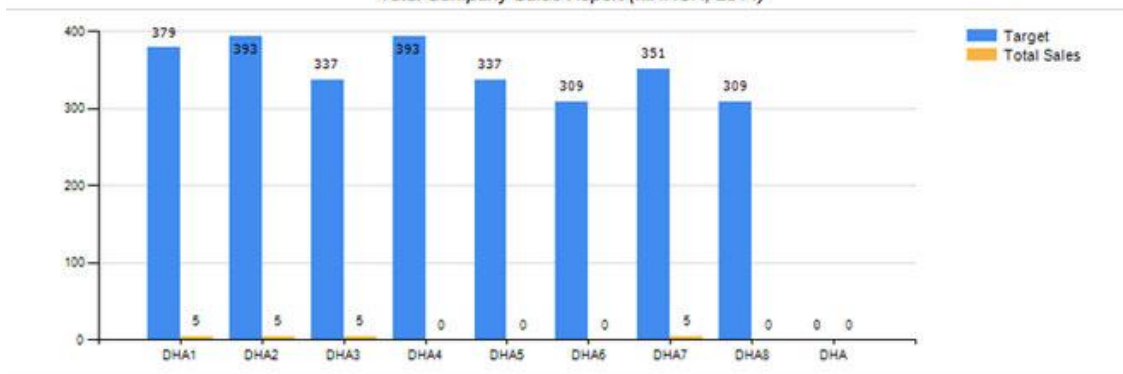
Upload

- ✓ Customer
- ✓ Product
- ✓ Sales Structure
- ✓ Customer Territory Relationship
- ✓ Customer Share
- ✓ Product Share
- ✓ Sales Invoice
- ✓ Sales Target
- ✓ Delivery Returns

Graphical Reports

Company Sales

Total Company Sales Report (MARCH, 2014)

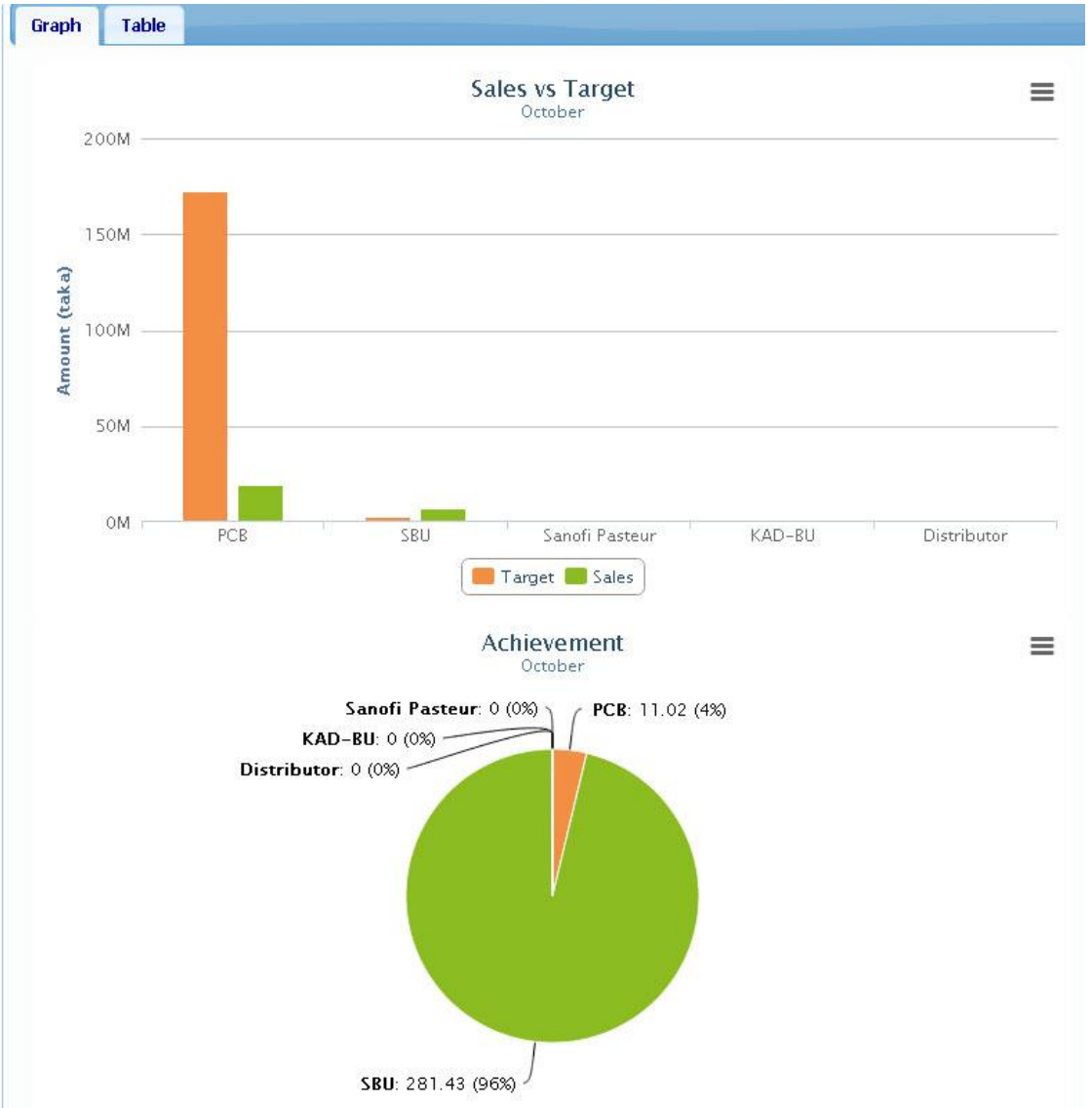


Territory	Own Sales	Share Sales	Product Share	Total Sales	Target	Achievement (%)
DHA1	0.00	5,481.11	0.00	5,481.11	379,406.00	1.44%
DHA2	0.00	5,481.11	0.00	5,481.11	393,459.00	1.39%
DHA3	0.00	5,481.11	0.00	5,481.11	337,250.00	1.63%
DHA4	0.00	0.00	0.00	0.00	393,458.00	0.00%
DHA5	0.00	0.00	0.00	0.00	337,249.00	0.00%
DHA6	0.00	0.00	0.00	0.00	309,145.00	0.00%
DHA7	0.00	5,481.11	0.00	5,481.11	351,305.00	1.56%
DHA8	0.00	0.00	0.00	0.00	309,145.00	0.00%
DHA	0.00	0.00	0.00	0.00	0.00	0.00%
Total	0.00	21,924.43	0.00	21,924.43	2,810,417.00	0.78%

Dashboard

Year:
 Month:

Column Chart
 Line Chart
 Bar Chart
 Area Chart



SMS

SMS.aspx

Mgt To Select ALL

TerritoryName	EmpId	EmpName	Mobile	Message
<input checked="" type="checkbox"/> DHA1	94	Mohammad Rehanul Islam	880197888416	April Target - 0 Achievement - 0(0%) Working Days Remaining -24 F
<input checked="" type="checkbox"/> DHA2	270	Md Al Mamun Mondol	880197888557	April Target - 0 Achievement - 0(0%) Working Days Remaining -24 F
<input type="checkbox"/> DHA3	271	Maham Akter	880197884288	April Target - 0 Achievement - 0(0%) Working Days Remaining -24 F
<input checked="" type="checkbox"/> DHA4	246	Shahinur Islam	880197884306	April Target - 0 Achievement - 0(0%) Working Days Remaining -24 F
<input type="checkbox"/> DHA5	272	Md Sarwar Jahan	880197888485	April Target - 0 Achievement - 0(0%) Working Days Remaining -24 F
<input checked="" type="checkbox"/> DHA6	95	Md Mehedul Islam Al Poyal	880197888776	April Target - 0 Achievement - 0(0%) Working Days Remaining -24 F
<input type="checkbox"/> DHA7	437	Md Faruk Hossain	880197882305	April Target - 0 Achievement - 0(0%) Working Days Remaining -24 F
<input checked="" type="checkbox"/> DHA8				April Target - 0 Achievement - 0(0%) Working Days Remaining -24 F
<input checked="" type="checkbox"/> DHA				April Target - 0 Achievement - 0(0%) Working Days Remaining -24 F

PDCR (Pharmaceutical Daily Call Report)

The PDCR application is a centralized web based application which allows sale representatives to enter their own activities like calls related information, call plans, and call reports in real time.

The application has built in business intelligence and some of the features are; region-team-territory relationship, call planning & reporting, mail merging, doctor customer relationship, potentiality (product, territory, global) roles and privileges, searching, audit trail, admin and many other. DCR can generate various reports, graphs, charts and dashboards instantly on field force activities.



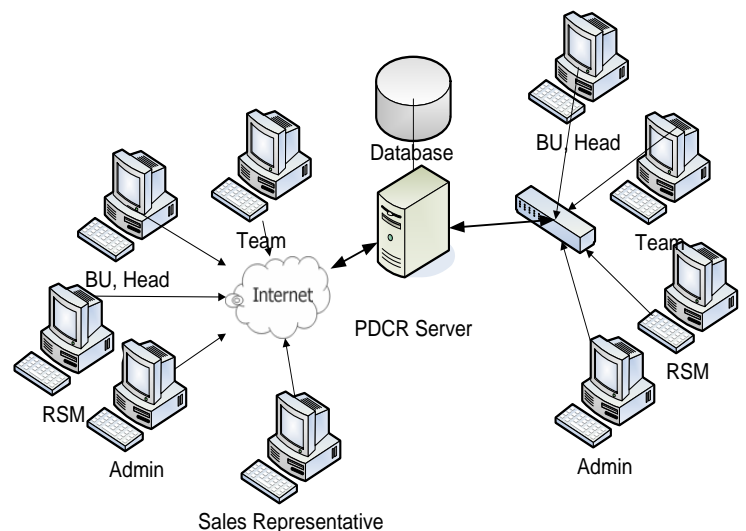
Benefits and Advantages

- ✓ Centralized and Consolidated Information System
- ✓ Help Increase Sales Effectiveness
- ✓ Get a Clear Picture of Various Doctors to be Visited or Call
- ✓ Sales Representative Scheduling
- ✓ Track Actual Visits and Calls (Daily, Weekly & Monthly)
- ✓ Track Customer using Potentiality and Geographical Area
- ✓ Manage Changes in Business like Sales Force Restructuring
- ✓ Promoted Product Management
- ✓ Customer Call Tracking and Schedule

Features and Functionality

- ✓ Master Data Management
 - Geographical Location
 - Sales Structure
 - Leave
 - Potentiality and Others
- ✓ Doctor Management
 - Profile
 - Specialty
 - Institution Information
 - Chambers
 - Chamber Potentiality
 - Chamber – Territory Relationships
- ✓ Frequency Management
- ✓ Chemist Management
- ✓ Product Management
- ✓ Institution Management
- ✓ Cycle Management
 - Manage Promoted Product
- ✓ Product Promotional Aid Management
- ✓ Coaching Criteria & Score Management
- ✓ Coaching by Team Leader
- ✓ Sales Representative to Customer / Doctor Relationship
- ✓ Call Planning

System Overview



Stakeholders

- ✓ Sales
- ✓ Marketing

Security

- ✓ User Management
- ✓ Roles and Privilege
- ✓ Login
- ✓ Audit Trail
- ✓ Track Login and Page View
- ✓ Time Limit to Enter Data for Sales Rep
- ✓ Active Directory Login
- ✓ Session Timeout

Reports

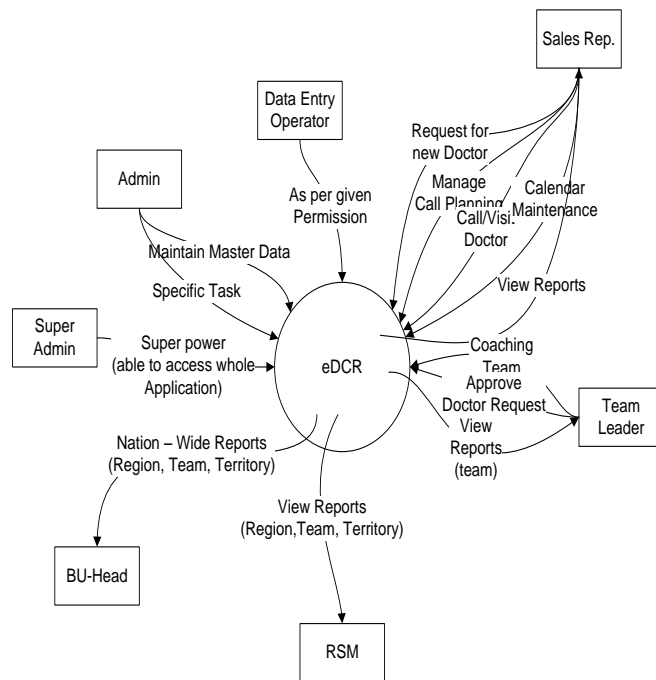
- ✓ Field Force Structure & Budgeting
- ✓ Call Objective
- ✓ Call Plan vs. Call Objective
- ✓ Call Budget vs. Call Objective
- ✓ Call Summary by Objective
- ✓ Call Summary by Budget
- ✓ Coaching

Roles

- ✓ Super Administrator
- ✓ Administrator by Modules
- ✓ Business Unit Head
- ✓ Regional Sales Manager

- ✓ Call Reporting
- ✓ Group Call
- ✓ Time Management
 - Weekly Holiday
 - Employee Weekly Holiday
 - Yearly Holiday
 - Employee Leave Management
 - Calendar
- ✓ Mail Merge System
- ✓ Territory Rearrangement
- ✓ Sales Force Interchange
- ✓ Entry Request to Approval for Doctor & Chemist
- ✓ Downloading: CSV, XML, Excel, PDF

- ✓ Marketing Head
- ✓ Team Leader
- ✓ Sales Representative
- ✓ Data Entry Operator



PMSO (Pharmaceutical Mobile Sales Order)

PMSO is combination of both web and mobile application where sales order comes from the mobile application using GPRS and mobile phone and then distributed through the application to the sales centers.

PMSO automates the sales order process by which medical sales representative takes order for pharmaceutical product from their customers, and through GPRS / EDGE sends the orders in real time to the head office. The system has two modules a mobile application and a web based desktop linked to a central server. The application also features the capability which can generate mass SMS to communicate and interact with organization's field sale force.

The system also provides rich reporting features (mobile and desktop) for both sales personnel and management. Other features are messaging via GPRS between server to hand held device (mobile phone) providing medical sales representative instant information on sales orders and account status.



Benefits and Advantages

- ✓ Faster Sales Order Processing and Delivery
- ✓ Increase Transparency & Sales
- ✓ Place Orders Electronically from the Field
- ✓ Reduce Administrative Overhead, Cost
- ✓ Reduce Invoicing Errors
- ✓ Ensure Accountability

Modules and Components

- ✓ Mobile Application used by Sales Rep to Submit Orders using GPRS Protocol
- ✓ Central Database where all Orders are Remotely Sent via Internet
- ✓ Web Application for Admin, Reporting and Compilation

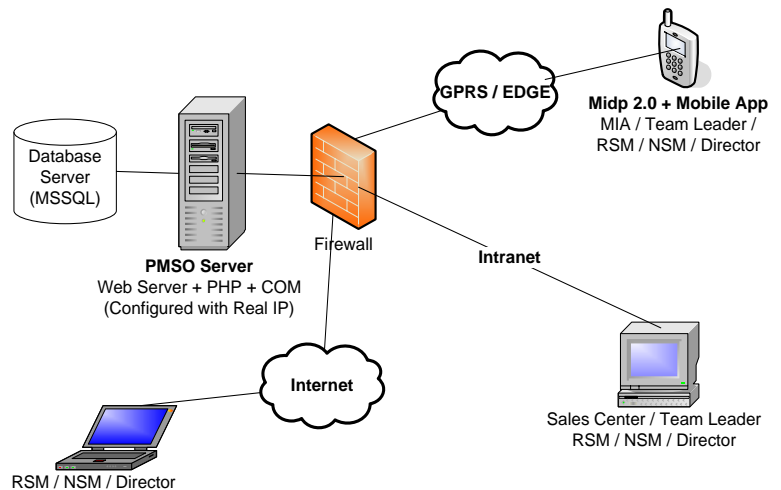
Features and Functionality

Mobile Application

- ✓ Access Control Login and PW
- ✓ Search & Wild Card Searching
- ✓ Order Management (Customer + Product)
 - New Orders via Mobile & Desktop
- ✓ Save Order
- ✓ Update Order
- ✓ Update Customers & Products
- ✓ View Messages
- ✓ Settings
 - MIA Personal Information
 - Change Password / Forgot Password
 - IP Change

Web Application

System Overview



Stakeholders

- ✓ Sales
- ✓ Marketing

Security

- ✓ User Management
- ✓ Roles and Privilege
- ✓ Login
- ✓ Track Login
- ✓ Session Timeout

Reports

- ✓ Order Detail
- ✓ Sales Target vs. Achievement
- ✓ Cancelled Order
- ✓ Sales Target vs. Achievement
- ✓ Incentive Products
- ✓ Cumulative Sales Summary

- ✓ Access Control Login and PW
- ✓ User Management
- ✓ Sales Force Management
- ✓ Sales Center Management
- ✓ Customize Sales Center – Territory Relationship
- ✓ Customer (Chemist) & Product Management
- ✓ Customize NSM, RSM, Team Leader , Sales Rep. Relationship
- ✓ Sales Rep. / Team Leader / RSM Interchange
- ✓ Message Sent to Users / Groups / Teams / RSMs
- ✓ Track Order using Order ID
- ✓ Order Status
- ✓ Data Processing for Sales Center
- ✓ Upload Sales Target

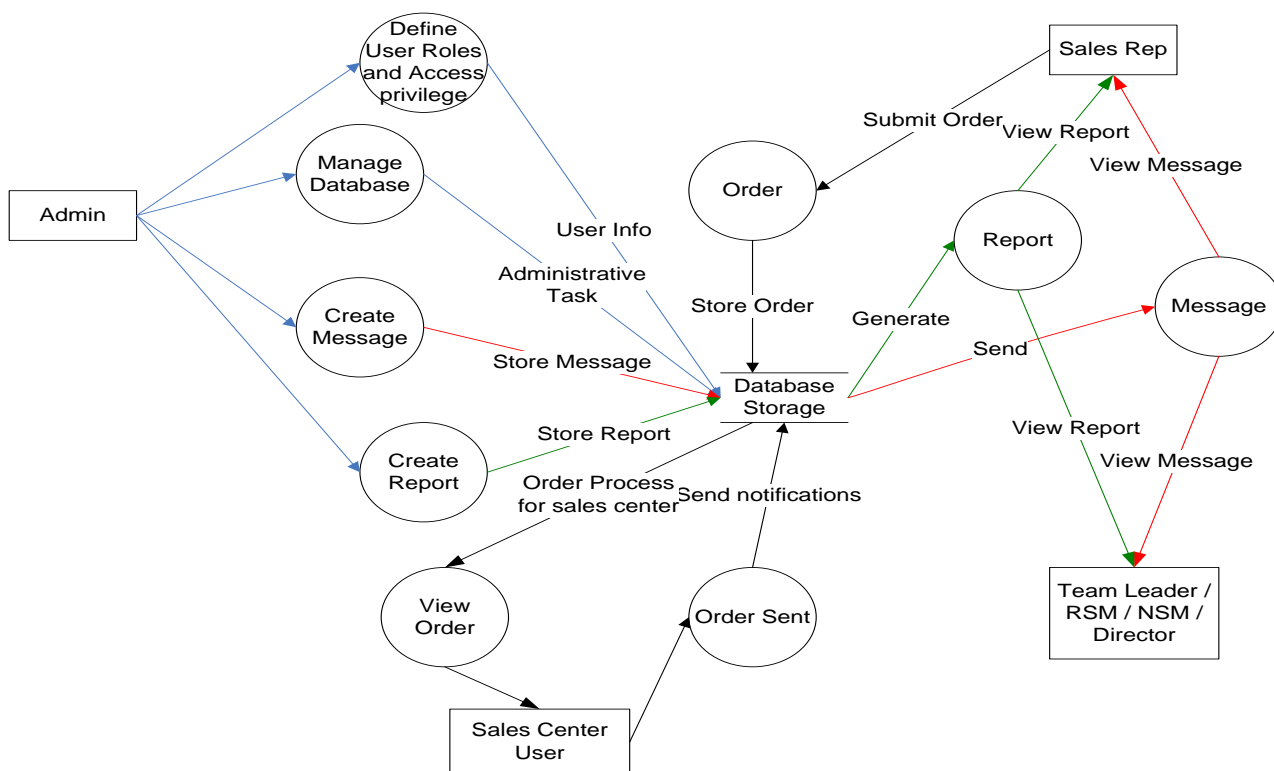
Roles

- ✓ Super Administrator
- ✓ Sales Center
- ✓ National Sales Manager
- ✓ Regional Sales Manager
- ✓ Marketing Head
- ✓ Team Leader
- ✓ Sales Representative

Information Stored in Mobile

- ✓ Customer & Product Information
- ✓ MIA/Team Leader Information
- ✓ Team Leaders Member Information
- ✓ Save Customer Order Form

Data Flow Diagram



Bulk SMS Application

SMS (Short Message Service) application is a web based application by which users can generate mass SMS to communicate and interact with organization’s field sale force. System will generate sales forces report and if user wants to send message to a single or to multiple person able to send. User will also able to send message using mobile number.

Some of Our Clients

Private Sector



Sanofi Aventis, Bangladesh



Unilever, Bangladesh

Note: All our Pharmaceutical Solutions has been developed for sanofi-aventis and currently operational

Public Sector, Donor Funded and Non-Governmental Organization (NGO)



Unicef



Save the Children

Save the Children International



RTM International



Government of Bangladesh (GOB)

Ministry of Social Welfare

Ministry of Primary & Mass Education

Ministry of Health and Family Welfare

Department of Social Service (DSS)

Bureau of Non Formal Education (BNFE)

National HIV / STD Programme (NASP)

Office of The Deputy Commissioner Bagerhat, Jhenaidah,
Madaripur, Rangpur, Barisal

Contact Us

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