

BIS-XTech Capabilities and Experience in Inventory Management Systems Development

Experience and some Unique Accomplishments

Our company, Business Intelligence Services (BIS), has substantial experience in Analytics, Web-Portal Development for variety of purposes, especially in Inventory Management Business Process Re-Engineering systems developments in Corporate America, which we can easily leveraged to the Government. Our corporate clients, with multiple projects, include very large companies in the Pharmaceutical, Media, Retail, and Telecommunications industries. Some noteworthy accomplishments are as follows: Tools available from our Internet portals on Business process

- lead to enhance the Productivity, Efficiency, and Accuracy of work performed by Clients' employees,
- eliminated or minimized the manual work done by such employees,
- produced automated and customized Excel based pivot tables and dashboards on-demand when needed,
- allowed managers to view key metrics and information, both in graphical and tabular form, at a high level, and then drill down to any level granularity,
- won awards from Insightful, and Computer world, and corporate presidents

Although main benefit of automation and re-engineering is Increased Accuracy of Information and Productivity and Efficiency of client's employees, in some cases they lead to substantial savings/profits. Some examples are

- Optimization and Re-Engineering of Pharmaceutical (i) Medicine Sample Allocation to doctors, a complex Inventory Management system, by Field Reps in an optimum manner lifted one client's profits by hundreds of millions of dollars,
- Centralized Order and Regulation Operation of magazine inventory (hundreds of magazines) management at retail level and wholesaler level lead to increased saving of tens of millions of dollars at a Media Retail division.

In fact, only a few IT vendors can make such claims and demonstrate quality of products and deliverables, as evident from examples given below.

Prior Experience: Manual Vs Re-Engineered Process

In some of our projects, illustrated below is the Manual Process client had before re-engineering the inventory mangemnt process:

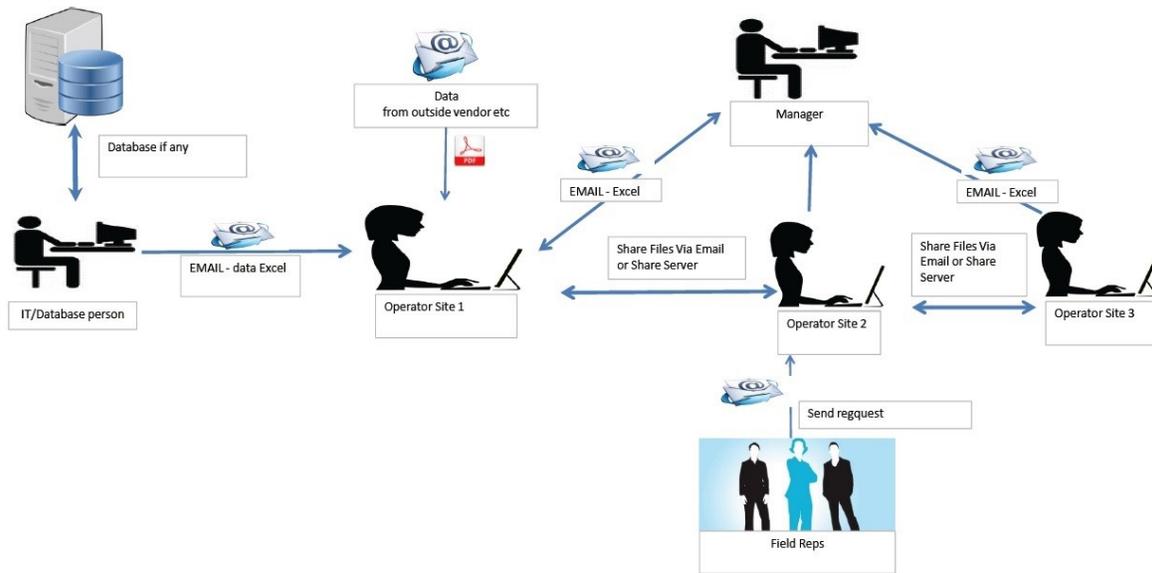
- Clients had multiple employees placed in different locations and work manually on Excel files
- Managers receive reports from individuals via Email attachments, and most of them were Excel files

Not only, such process took a lot of human time, but also the process was

- Prone to errors as its very manual intense work done in Excel sheets
- different operators in different sites do similar or same work but in different formats etc.

That situation is illustrated in the Diagram below.

Manual Process

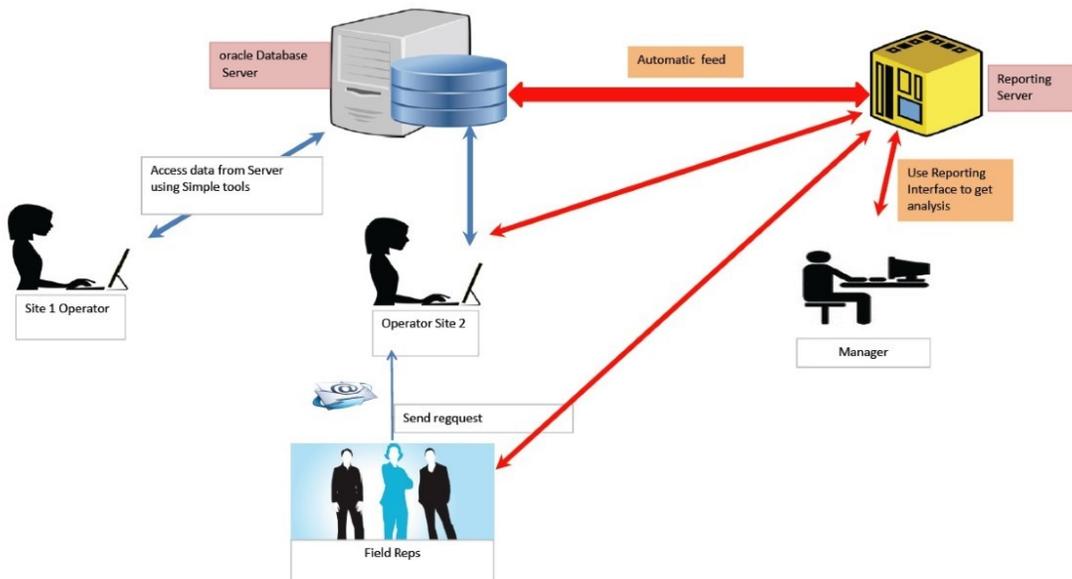


The system that substantially improved upon the old system was

- database and Server driven,
- automated many Excel tasks either using scripting language or Macros,
- built database so that data is stored centrally,
- centralized instead of multiple people doing similar task in different locations,
- consolidated in one location and more database driven,
- built reporting and analytical engine on top of databases helps to give reports across organization in a more standardized and improved way.

The substantially improved process after re-engineering is illustrated by the diagram below.

Improved Process



Prior Experience: Examples of Web-Portal Interface and Output

Example 1: User Interface with [Tabular Output](#) from an Optimized Inventory Management System

One of our projects on Medicine Sample (Starter) Allocation operation of major pharmaceutical company was first implemented in the US. Due to its immense success in enhancing the Productivity and Efficiency of users, later the system was leveraged to a number of international markets.

The users get their information by accessing a web-portal. Due to its simplicity (US interface had more input parameters), shown below is the user-interface of one tool in Brazil market, in which a user specifies what information they need, first through portal links and then individual need:

Automated Analytics for Brazil Market

Brazil Trend Analysis
Primary Care Product Trend Analysis:
[Brazil Trend Report](#)

Analysis of Promotional Tactics
Starter Optimization:
[Brazil Starter Pivot Tool](#) [Brazil Starter Optimization Graphical View](#)

[Click Here For Technical Support & Questions](#)

Brazil Starter Optimization by Brick

Brand: ▾

Type: ▾

Max Starters Allowed: % of current Starters (i.e double if too much under-sampled)

Min Starters Allowed: % of current Starters

Cost per Starter:

Uncheck if previous results NOT available (Runs fast if available)

[Home](#)

When a user of the portal request certain information by clicking a button (Run Analysis) the portal tool provides the desired information in graphical form or tabular form as illustrated by (i) on-demand Excel pivot table customized with input parameters for the above example in Brazil Market, (ii) appropriate graphical tool illustrated below by an Application in US market

(i) An Example with Automatically Formatted and Customized Excel Pivot Output

Brick	(All)																			
Territory	(All)																			
Pos StarterInd	(All)																			
District	(All)																			
Segment	(All)																			
Data																				
vol. quintile	City	Curr Starters	Opt Starters	Curr Sales Lift	Opt Sales Lift	Monthly Profit Lift	Annualized Profit Lift	Curr Sale	Curr Cost	Opt Cost										
1	AMERICANA	5	5	114	157	45	536	473	16	14										
	AMPARO	0	0	18	35	17	205	200	1	1										
	ANAPOLIS	1	3	67	93	22	261	431	4	8										
	ANDRADINA	5	5	132	155	22	259	548	14	16										
	APUCARANA	3	4	115	175	55	666	350	8	13										
	ARACAJU	24	17	201	313	134	1,603	842	72	51										
	ARACATUBA	42	24	294	346	103	1,239	1,092	125	73										
	ARAGUARI	0	1	23	46	22	259	115	1	3										
	ARAPONGAS	3	1	-1	7	12	140	13	9	4										
	ARARAQUARA	26	14	263	268	39	465	537	76	43										
	ARARAS	10	9	169	189	24	286	378	31	27										
	ARAUCARIA	0	0	6	12	5	65	300	0	1										
	ASSIS	3	6	77	131	46	551	262	9	17										

Example 2: User Interface and Graphical Output from a Inventory Management system

A number of our Inventory Management Process Re-Engineering projects involved obtaining user desired scenarios, and various parameters, including region/state/county and then providing the requested in the form of graphical form as well as tabular form. In order to provide the desired information, the user is presented with an input form like the one shown below:

User-Interface Specifying the Desired Information

Desired Product: Phone XYZ or Item #:

Pre-Cut Date Range (yyyymm):

Post-cut Date Range (yyyymm):

Control/Test Distributor Thresholds: % Inventory change for grouping (e.g. 1- for control, 15+ for test)

Distributire Store Change Tolerance: ± Maximum % store change allowed

Filter by Region Group(s):

- NO FILTER
- WestRegion
- South Region
- North EastRegion
- East

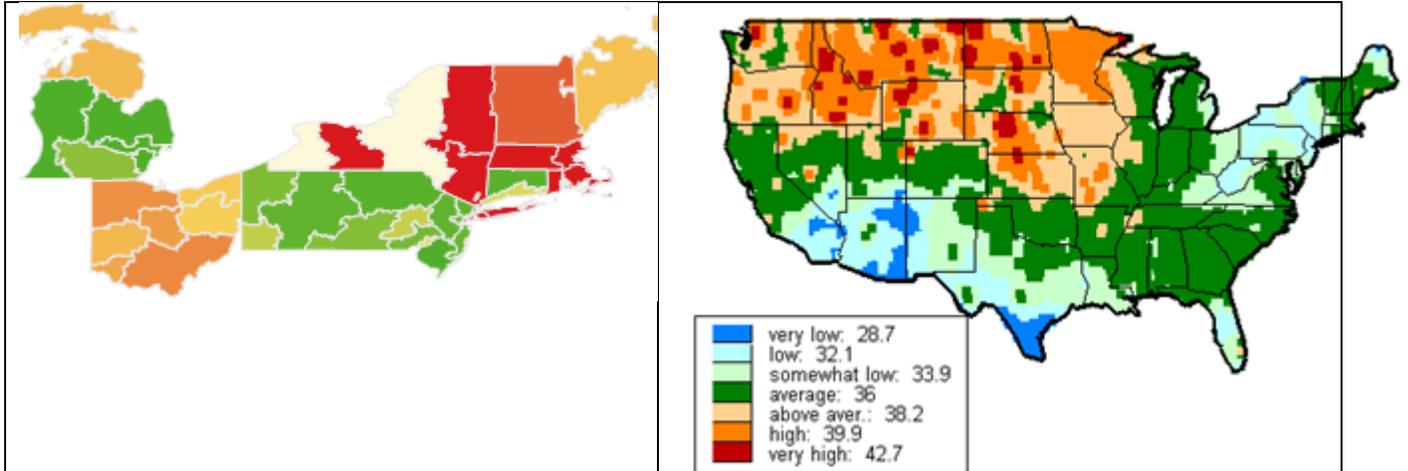
Filter by Chain(s)/COT(s):

- ====Class of Trades=====
- Misc/Unidentified-99
- College Bookstore-BC
- Bookstore-BS
- Cash&Carry-CC

When the requested information involves two period comparisons by region, or market share impact due to such change then the output is provided in the form of a heat map color coded with the impact due to proposed change.

Graphical Output (i) by District, (ii) as Heat Map

(Note: Graphic Tiles and Certain Metric information are removed in Charts below, which are only for illustrative purposes)



This type of output along with automatically created Excel Pivot tables have allowed managers of our client companies to obtain what is happening over-time and across the geography. The graphical output helped them get much insight into what is happening at a high level so that they can drilldown deeper to root causes of the impact.

Our systems were one of top quality products with exceptional performance. The system required minimum maintenance and outages due to network issues rather than system issues. It had own data backup systems to tapped into even when some data is lost due to faults in other components in the network, including databases.