MPHASIS
an HP company

MAALBS
BO-Clarity Integration

Spotlight On Client Success

CLIENT PROFILE

Name:

Leading manufacturers of Blue chips, work stations, PC's and embedded systems and applications

Industry:

Hi-tech

Need:

Manage the day to day operations with the help of various portfolios like Project, Resource, Timesheet, and Financials. Henceforth managing the Reports Jobs and Dashboards for the Business users with the above portfolio data.

Results:

Provided a Reporting Data and a Business Objects Edge BI system that greatly improved information delivery and us- ability throughout the enterprise.

BACKGROUND

Client embarked on an initiative to improve the amount and quality of data available to the business for strategically, tactical and operational, financial analysis, resource utilization and optimization and customer relations. A major implementation and integration of Clarity and Business Objects was undertaken, with modules installed for PPM requirements. It soon became clear that although a large quantity of data was being collected for many of these functions, the usability and presentation of this data needed to be addressed.

Another initiative was begun to improve and streamline the Project, Process & Technology, People and Partners of this engagement. Client decision makers put forth a request on a light weight execution methodology which should be effective in execution on rendering quality service right from Discover to Deployment and support throughout the lifecycle of the project. MphasiS private Ltd came up with a robust solution which blends the AGILE, ITIL and Lean methodologies to implement the system and assist Client in planning for their expected future growth.

BUSINESS CHALLENGE

MphasiS worked closely with Client to define and execute objectives that included providing better Business Intelligence, making it easier to access clarity data, create a reusable reporting framework and maintainable reports, reduce or eliminate time-consuming manual processes, automated the release and deployment process and en-able Client staff to easily maintain and extend the BI system.

Provide better Business Intelligence

Meetings were held with key stakeholders, and several items identified as needing improvement in the current BI/Reporting environment:

- **Provide Performance and Scalability:** To support projected growth, Client determined that a robust, scalable and maintainable BI system was necessary.
- **Improve Appearance**: Client documents, emails, Web site and other communications are based on a very specific corporate identity. This involves the use of specific logos, colors and fonts. Any BI system must enable the use of these items in a quick and easy manner.
- **Simplify Development**: SAP Business Objects provides a reporting environment that is comfortable only for long-term. Client expressed a desire to have existing developers; power users and other business users use applications that enable rapid report development and deployment.

Make it easier to access Clarity Data

Clarity native data stores data in a much normalized data structure, which is typical among PPM systems. To get at data quickly, a developer must be familiar with the numerous tables, views and objects that store this data, along with the names of columns for the actual data necessary. Client desired to make this data available to a wider audience, in a more user-friendly format.

Create reusable and maintainable reports

Client management expressed several needs regarding report design and development. These included:

- **Make reports reusable**—Report components and templates should be used to reduce report design time and to enable a more collaborative environment.

Leverage existing knowledge—Some Client staff had preexisting experience with Crystal Reports. Leveraging that Knowledge would reduce training costs.

Make reports maintainable—Client expressed interest in creating development standards that can be applied to all report development projects. This will make sure that reports are easily maintained by future developers.

Reduce time-consuming manual processes

Currently, Client staff produces daily, weekly and monthly reporting packages using Microsoft Excel, while retrieving source data from stock Clarity reports, various on-screen displays, or even by word-of-mouth. Any automation of the data retrieval or creation of presentation materials would greatly improve productivity.

Allow for easy maintenance and modification

Any new BI system and implementation must be easy to maintain, easy to modify and monitor, and easy to extend. Impact to Client staff must be minimized—workload must not be substantially increased for existing system administrators.

Our Approach

MAALBS – MphasiS AGIL Application Life Cycle Business Services

Every IT organization wants to accelerate innovation, lower costs, and ensure the high quality of its services. Yet, each of these goals presents challenges.

Companies need to discover and evaluate the implications that business innovations may have on their system landscapes — and IT must work to minimize any system downtime these innovations may require. Companies need to ensure ongoing quality in terms of functionality, performance, availability, and security; the business simply depends on it.

The system development and support process is complicated and complex. Therefore maximum flexibility and appropriate control is required. Evolution favors those that operate with maximum exposure to environmental change and have optimized for flexible adaptation to change. Evolution deselects those who have insulated themselves from environmental change and have minimized chaos and complexity in their environment.

An approach is needed that enables development teams to operate adaptively within a complex environment using imprecise processes. Complex system development occurs under rapidly changing circumstances. To overcome these challenges, MphasiS an HP company's Business Intelligence team has come up with a robust methodology for their reporting project and can be adopted to all other applications called **MAALBS** process which tailors the combination of Agile SCRUM, ITIL framework and Lean to efficiently manage and support the entire life cycle of their applications right from DISCOVER, DESIGN, DEVELOP.DEPLOY & SUPPORT. (4DS).

Vision and Mission of MAALBS

Vision:

Building successful projects through empowering people and lightweight process.

Mission:

MAALBS mission is to create transparent and collaborative organizations where employees are empowered to make their own decisions and take ownership for their work. This environment will improve the overall morale of the company and boost productivity. It starts with coaching the managers to become better leaders and reducing the noise that causes competing priorities and distractions to allow these leaders to set clear goals that can easily be followed by the team.

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Objective of MAALBS

To enable the effective , efficient and adaptable IT services to the Business , MAALBS focus on 4P's – People, Project, Partners and Process blended with Technology

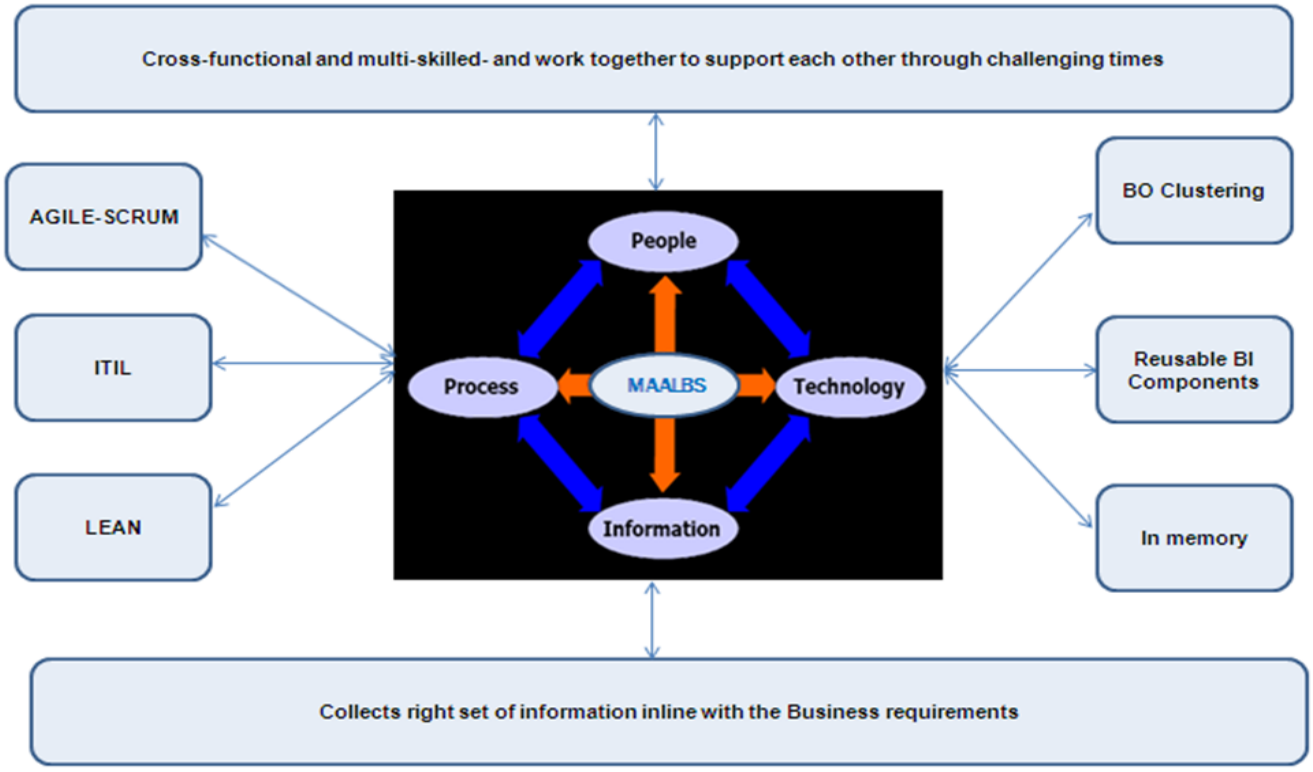

Fig 1 MAALBS Dimensions

- Cooperation coordination communication and commitment
- Phased planned implementation with minimal disruption to business
- Agreed to and realistic objectives that can achieved
- Utilizes effective project and knowledge management

People with appropriate subject matter expertise, using right information, executing technology enabled processes that are well defined in order to deliver high quality services that satisfy business requirements.

Focus of MAALBS

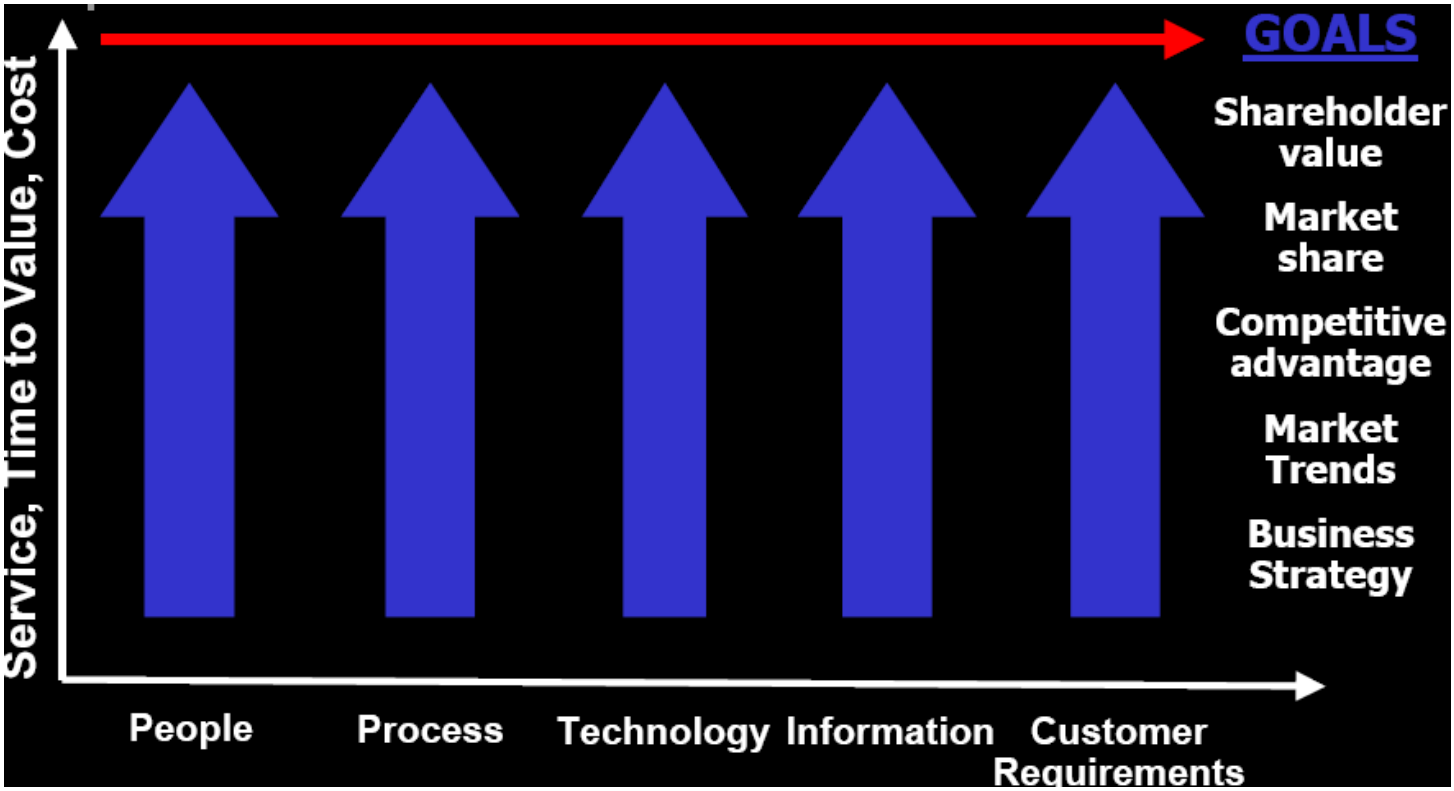

Fig 2 MAALBS Focus

People:

How people are grouped with organization, what is their expertise and where do they fit into that group

Process:

How are activities performed? Are they done effectively and efficiently?

Technology:

What technology and tools are used to manage the business application and infrastructure?

Information:

What measurements, metrics and reports are required collected and managed. Is there success criteria

Customer:

What is the level of service cost and perceived value of the services provided? How does this help satisfy business requirements measurements, metrics and reports are required collected and managed. Is there success criteria?

MAALBS Life cycle process

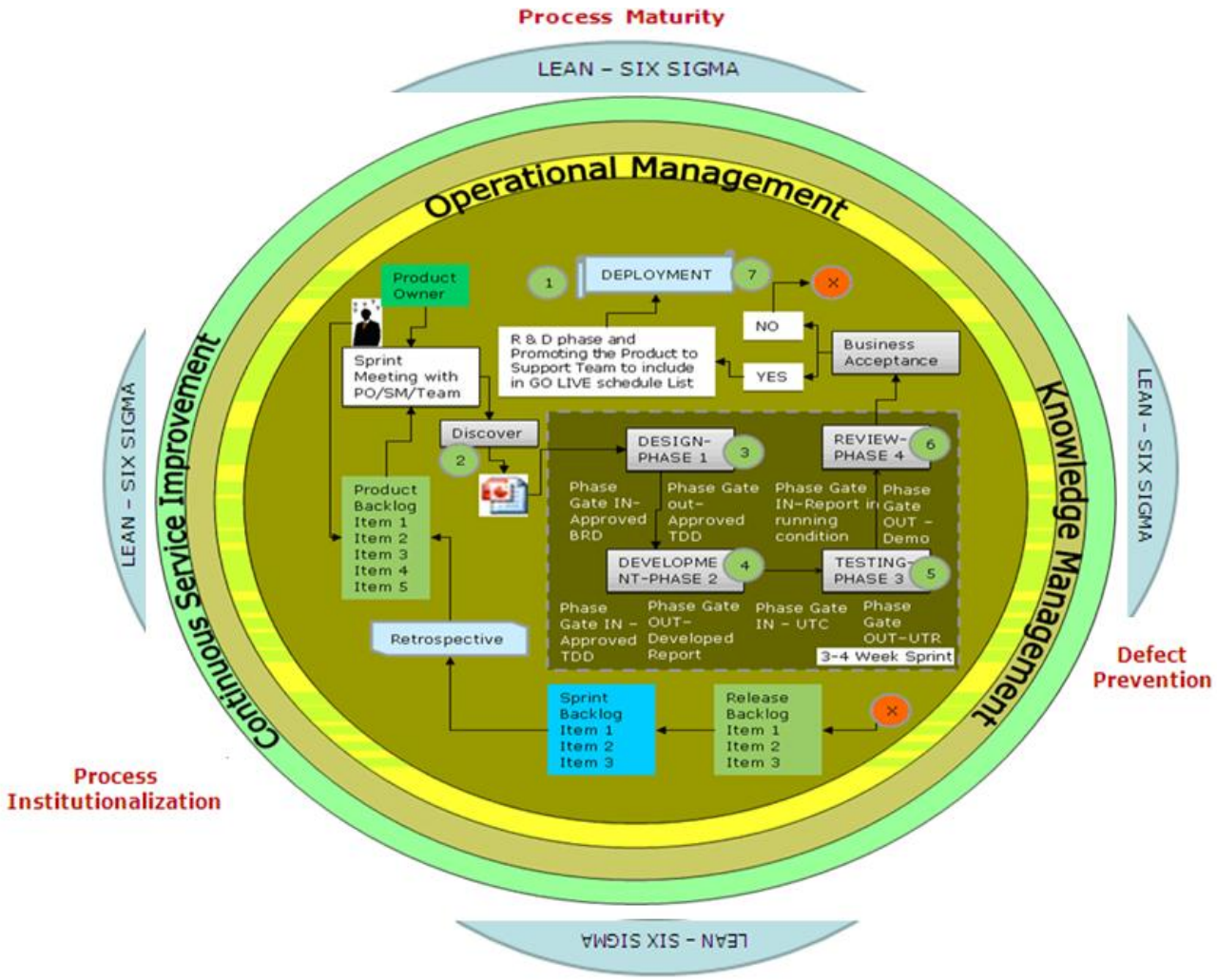

Fig 3 MAALBS Life cycle process

MAALBS Life cycle process is the blend of Agile SCRUM, ITIL process framework and LEAN, it helps to manage the phase in a controlled manner. From the development perspective the MAALBS starts from Discover till Deployment phase where each and every phase is subjected to Verification, Validation and Review process. Then comes the Support phase where the ITIL framework is adopted to provide Continuous service improvement in line with the client expectation for better Service delivery.

MAALBS Phases

MAALBS has the following group of phases

Pre-game: Story Gathering and Design

Discover:

This phase involves "what to do", it's a story or the requirement gathering phase on a currently known Product backlogs which will be shared by the Product owner holds high level information. Each and every member of the team individually interacts with the Product owner, get the confirmed requirements or approved requirements by continuous interactions by verification validations and review process. Once the requirement gets frozen it is estimated in terms of 8 hours chunks on each activity, which gives a consolidated effort estimate for a particular Product Backlog. For a new story board i.e. the requirement this discovery consists of both conceptualization and analysis and for an existing story or requirement is being enhanced this phase consist of limited analysis.

The Discover phase includes the Design, on how the backlogs items will be implemented. This phase includes the architectural design of a particular backlog which is subjected to documentation, verification validation and review of the design document.

Game: Code/Interface development, Testing and Deployment

Development Sprints:

This phase is followed on the approval of the Design document where the team starts developing the Interface. Once the code development of the product backlog has been completed it will be subjected to verification, validation and review process with stakeholders from the client side. This code development is accomplished by thorough unit test by individuals responsible for that Product/Interface. The Deployment of Product backlog will be executed based on documentation of an appropriate build case followed by the manual verification of the entries in the document constructed by the individual. There are multiple, iterative development sprints/cycles that are used to evolve the system.

Post-Game: Supporting Functions

Post-Game activity of Development & Deployment phase is supporting functions where the MAALBS employs the ITIL process which comprises of Operations, Knowledge & Continuous service improvement.

MAALBS Phases

Discover – Story Gathering

Phase Gate IN	Process	Phase Gate OUT
High level requirements will be shared in brief through PowerPoint, Excel or Documents.	The product owner will prioritize the product from the product backlog and provide the details to the MAALBS team. In sprint planning meeting the team will analyze the requirements like business requirement document, functional requirement document for all the prioritize product and scope it for the upcoming Sprint. The products which cannot be agreed to complete in the sprint will be directly pushed back to the product backlog with proper justification provided to the product owner like requirements (BR/FR) not signed-off, huge estimates due to report complexity, resource capacity, etc.	Approved Business/Functional requirement Document

Design

Phase Gate IN	Process	Phase Gate OUT
Approved Business/Functional requirement document	MAALBS team starts work toward the initial design of the product/Interface if more than one approach has been suggested to Design the interface ,all the approach options are properly documented in Technical design document (TDD) and the approach which will be followed get it singed-off in order to avoid the confusion at later stage	Approved Technical design document

Development

Phase Gate IN	Process	Phase Gate OUT
Approved Technical design document	The development activities are sub-categorized into multiple task/steps as per the level of estimates (LOE) shared to the product owner and each task/steps are carried out sequentially like Code development, Report development, application/interface development etc. Each task/step will have to go through verification, validation and review before the start of the next task. Develop → verify → validate → review → Develop The product owner get a frequent update on the progress of development activities in "Daily breakfast meeting" from the Scrum master. The status on every day's development activities are discussed in "Daily SCRUM meeting" among the team members and Scrum master	Workable Product

Testing

Phase Gate IN	Process	Phase Gate OUT
Workable Product	MAALBS team takes the sole responsibility of constructing the test cases and test plan in line with business requirements. The product is tested for each and every functional clauses the expected and actual results are captured	Test Case Results

Deployment

Phase Gate IN	Process	Phase Gate OUT
Deployable document	The Deployment phase bridges the gap between the MAALBS Development team and MAALBS support. The MAALBS Development team construct the deployable document pertains to the particular product / Interface and checks manually checks all the entries in the Deployable document with respect to the particular environment. The Support uses the Deployable document shared by the MAALBS and deploys to the respective environment say PRODUCTION	Workable Product

MAALBS Service operation

MAALBS service operation related activities is carried out by the MAALBS support team. The MAALBS support team is responsible le for following service operation

Service Desk Function

The MAALBS team is responsible for the following Service operations

- Serves as a First Point of contact
- Owns the logged request and ensure it is getting in line with user acceptance
- Do a First level fix and First level Diagnosis
- Serve as liaison between the end user and IT service provision teams
- Support other IT provisions activities on need basis
- Escalate to the appropriate team when things goes out of control
- Plays a vital role in achieving the customer satisfaction

Incident Management

- The MAALBS support team is responsible for restoring the service of the application in line with agreed SLA on the Interrupted services.
- The Incident is acknowledged and the events of the incidents are recorded on a timely basis in the Incident Management tool used by the MAALBS team.
- The MAALBS team tracks and updates the progress of the incident until it gets closed in line with the user acceptance.

Problem Management

- The MAALBS team executes a professional approach on identifying root cause of the incident.
- The MAALBS support team ensures that problems are identified and resolved.
- The MAALBS support team eliminates the recurring incidents.
- The MAALBS support team minimizes impact of incidents or problems that cannot be prevented.
- The MAALBS team employs a strategic approach to execute a permanent fix or a work around.
- These records are documented in the Knowledge management records.

MAALBS Knowledge management

- The MAALBS team adopts a professional approach by Gathering, Analyzing Storing and sharing the knowledge throughout the MAALBS life cycle approach.
- The MAALBS support as well as MAALBS development team cross trains themselves across Process, Project. Technology to build a strong team.

MAALBS Continual Service improvement

MAALBS team adopts the continual service improvement model to efficiently manage their development as well as Service related activities.

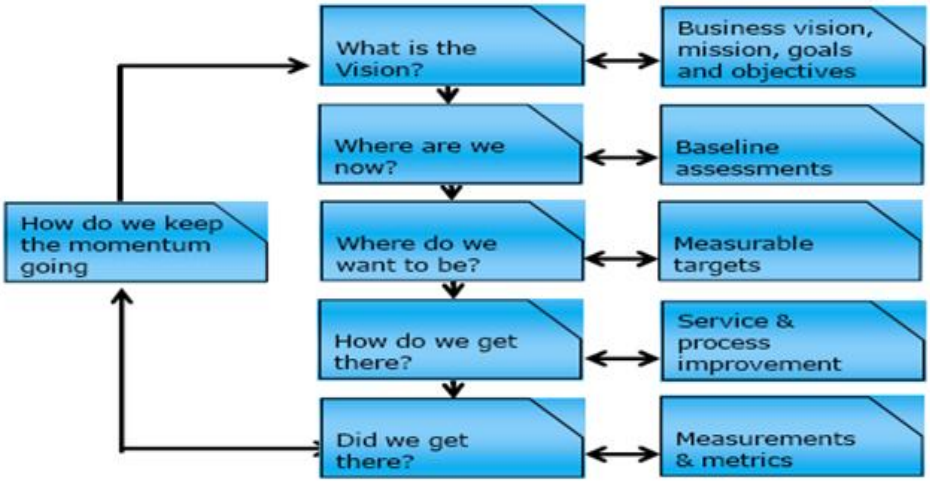

Fig 4 MAALBS Continual Service improvement

MAALBS Meetings

MAALBS team meeting can be classified as

1. Daily Breakfast meeting – Between Client and offshore manager and it is time boxed to 15 minutes

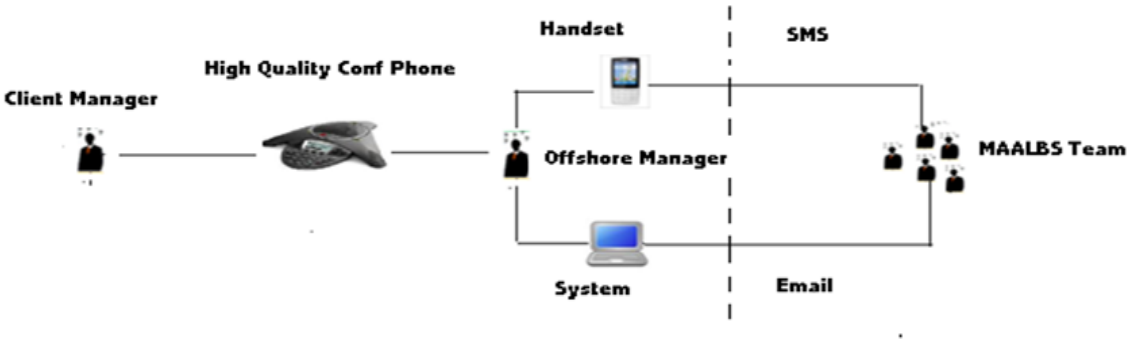

Fig 5 Daily breakfast meeting – Offshore manager - Client

The client manager and the offshore manager log in to a bridge and tracks on the task assigned to the team and new and adhoc tasks to be assigned. The meeting updates of the breakfast discussion will be shared effectively through SMS as well as via email to the corresponding recipient.

2. Daily Standup meeting – Between the Client Manager, onsite team and the offshore team. It is time boxed to 15 minutes

In this meeting following information will be discussed

Tasks to be assigned , to be completed, Updates on the task, Adhoc activities to be carried out, Any impediments identified in tasks assigned and What is the next level of tasks to be planned?

3. Weekly Functional review meeting-Scheduled on every Thursday's. Time boxed to 60 minutes

4. Weekly Technical review meeting-Schedule on every Wednesday's. Time boxed to 60 minutes

Fig 6 Functional and technical review meeting

Both the Functional and technical review meeting involves demo through WebEx or through Video conferencing, where the product owner, the team, the onsite client manager, offshore manager everybody gathers and comes to a conclusion on the functional and technical aspect of the work product.

MAALBS Retrospective

The Scrum master along with the client and tem join MAALBS Retrospective meeting to discuss with the team on the just passed Sprint and what can be done to make the next sprint more effective and efficient. As the sprint review looks what team is building retrospective look how the team is building. Retrospective make sure it is collaborative, some process improvement happens at end of each sprint

MAALBS Burn down chart

The MAALBS burn down chart is a publicly displayed chart showing remaining work in the sprint backlog. Updated every day, it gives a simple view of the sprint progress. It also provides quick visualizations for reference.

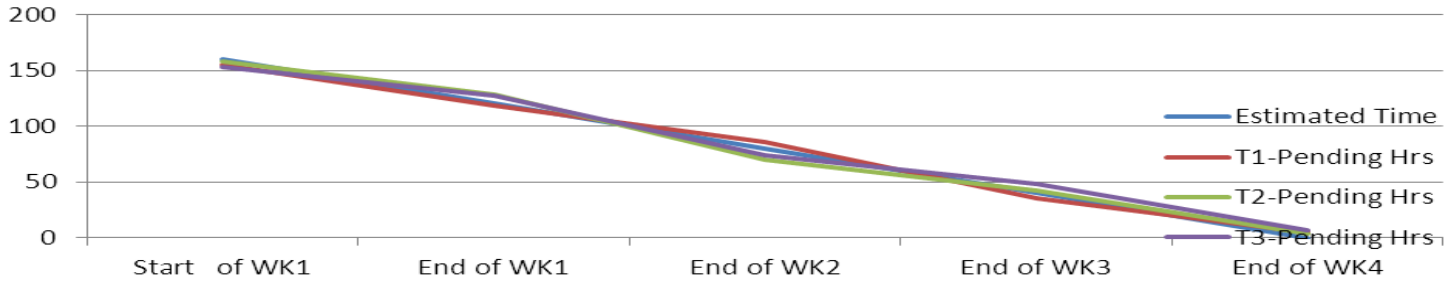

Fig 6 MAALBS Burn down chart

MAALBS Technical Challenges

MAALBS team has faced potential technical challenges during the course of BO Clarity Integration assignment. Some of the key challenges have been listed below

Clustering BO CMS servers — MAALBS team innovated the process of Clustering by grouping multiple Business Objects XI Central Management Servers that work together by sharing a common system, or CMS, database. Each CMS is typically on its own physical device, known as a node. [We have come up with 4 such nodes]. Clustering them allows for greater capacity management (each Central Management Server can generally support about 500 to 600 concurrent users, based on usage) and fail-over capability. At any point of time the report will try to execute from the next readily available server.

RUBIC: Reusable Business Intelligence Components

MAALBS team has classified the RUBIC's at Database level and GUI level.

RUBIC @ DB level

- Stored Procedures
- Functions
- Metadata at System level tables

RUBIC @ GUI level

Create reusable and maintainable reports

MAALBS created reusable report templates based on Client's common report designs that are used as the basis for creating new reports. Common components were created that enforced layout constraints, such as fonts, logos and colors. MAALBS consultants also mentored Client staff in advanced report design techniques.

Provide better Performance using in-memory

Traditional BI technology loads data onto disk as modeled tables and multidimensional cubes, queries are then made against the tables and cubes on disk. Limitations of disk based (RDBMS or OLAP) techniques include performance limitations requiring intermediate aggregation tables, low flexibility to adapt to changing business needs, limited scope of analysis and long implementation cycles.

MAALBS team has brainstormed and implemented the In-memory technique where the data is loaded into RAM and queried in the application or database itself. This greatly increases query speed and lessens the amount of data modeling needed. Memory prices keep dropping which makes it economically viable to increase capacity for in memory processing.

Faster performance on larger data sets with less data management seems like a win-win situation for the organizations. While data warehouses guarantee integrity and provide a stable server environment for managing data, in-memory can make information accessible at the time it is needed and available to anyone who requires it.

The biggest performance bottleneck in typical BI applications is slow disk or even slower database access, which is hundreds of times slower than RAM access. In-memory BI eliminates the traditional disk input/output bottleneck, so to gain yet more speed attention must switch to the next bottleneck: overloaded CPUs.

Allow for easy maintenance and modification

MphasiS provided mentoring, training and documentation to enable Client staff to easily administer and maintain the Business Objects system. User and group maintenance is handled through an existing Active Directory interface, while report folders and metadata is handled through Business Objects Web interface. Documentation and training was supplied to make it easy to replicate installation of the system, for future expansion.

MAALBS LEAN Adoption

MAALBS team has effectively adopted the practice of Lean in the BO-Clarity project by

- Eliminate Waste
- Amplify Learning (Create Knowledge)
- Decide as Late as Possible (Defer Commitment)
- Deliver as Fast as Possible (Deliver Fast)
- Empower Teams (Respect People)
- Build Integrity In (Build Quality In)
- See the Whole (Optimize the Whole)

MAALBS Team

The "MAALBS Team", is a cross-functional group of about 5 people who do the actual analysis, design, development implementation, testing, etc.

Fig 7 MAALBS team

During each "sprint", typically a three to four week period (with the length being decided by the team), the team creates a potentially shippable product increment .The set of features that go into a sprint come from the product "backlog", which is a prioritized set of high level requirements of work to be done. Which backlog items go into the sprint is determined during the sprint planning meeting. During this meeting, the Product Owner informs the team of the items in the product backlog that he or she wants completed. The team then determines how much of this they can commit to complete during the next sprint, and records this in the sprint backlog. Development is time boxed such that the sprint must end on time; if requirements are not completed for any reason they are left out and returned to the product backlog.

THE RESULTS

In coordination with Client and Internal stakeholders MphasiS MAALBS team has created a comprehensive plan which was executed with success. Client has a high-capacity Business Intelligence platform in place, and has several custom reports running on a scheduled basis and consumed by the Business.

The correct level of coordination, planning and testing achieved Client staff and MAALBS consultants created the environment for the success achieved by this effort. Together, these improvements provided for greatly increased quantity and quality of data, and the ease of access provided to business users. Client is excited to have a new BI platform in place and is looking forward to continued use and expansion of its capabilities.

Authors

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He is certified in the following disciplines

- Certified PMP from PMI, USA [PMI Member id : 728277]
- Certified PRINCE2 [practitioner] from APMG UK
- Certified AGILE SCRUM Master from SCRUM Alliance
- Certified ITILV3 [F] from APMG UK
- Certified ETL Power center Informatica 8 Designer.
- Certified Six Sigma Green Belt
- Post Graduate Diploma in Data Mining

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Ganesh Jegannathan likes to be called "Ganesh" has got 6 years of experience in the IT sector. He is currently engaged with MphasiS an HP company as a Module Lead Business Intelligence and Data warehousing practices. He has a BE degree from Anna University. He is the author for LETZ LEARN DW Concepts. He has got range of expertise in diversified fields of information technology services includes Data warehousing and Business intelligence, Software development, Maintenance and Testing, and Operations and Implemented AGILE-SCRUM methodology in his recent BI assignment. He is the contributor for MAALBS framework. He has taken lot of sessions on BIDW Concepts and Business Objects

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