

## View Point



### Business Information Services

#### Agile BIS Technology and Governance Highlights

---

Alex Farcasiu

The July 2010 Forrester study 'Agile BI: It is Time To Make The Move?' mentioned the following key findings:

- Sixty-six percent of BI requirements change on between a daily and a monthly basis
- Forty-five percent of respondents said that their current BI applications are between "somehow difficult to learn and navigate" and "very difficult to learn and navigate"
- Seventy-one percent of the respondents said that they have to ask data analysts to create custom reports for them, and a whopping 36% of custom reports requests require a custom cube or data mart to answer the request. Further 77%, of respondents cited that it takes between days and months to get their BI requests fulfilled

The rift between business requirements for on demand information/real time decisions and the ability of BI applications and IT staff to support them continues to widen.

The Agile BI strategy is reviewing the traditional approach on business intelligence technologies, methodologies and governance in order to ensure this growing gap is eliminated and IT becomes a driving factor in the generation of valuable business insight.

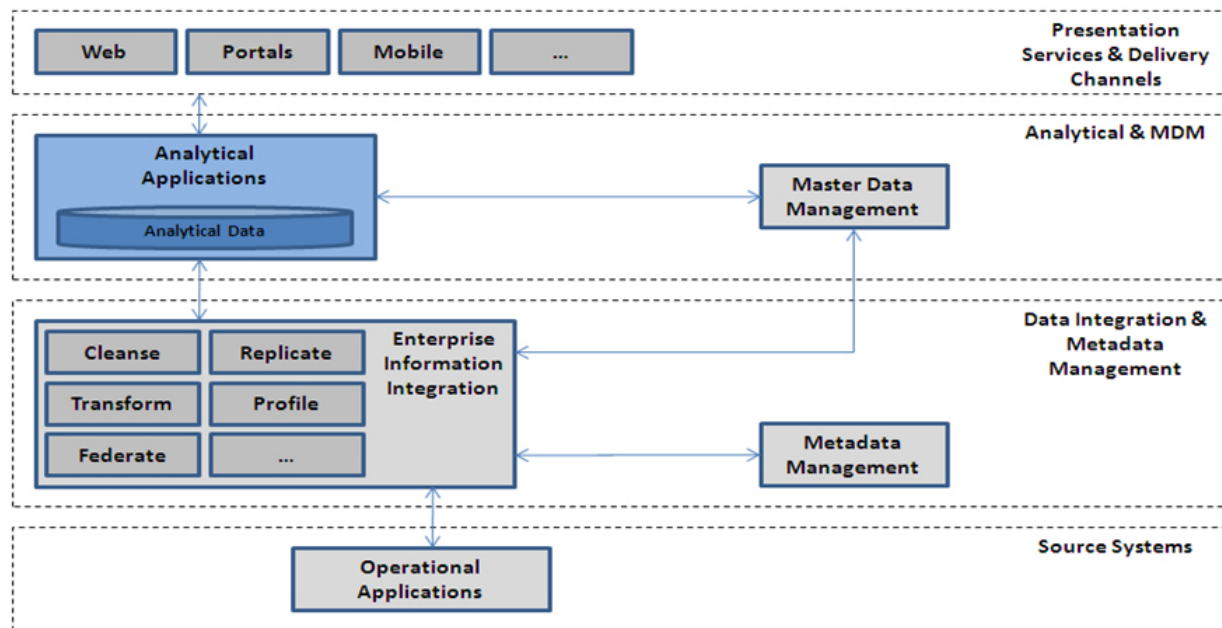
---

[This paper is covering aspects related to the Agile BI technology and governance.](#)

---

## Traditional BI Limitations

The following diagram describes the key components of a traditional BI landscape:



The traditional BI development approach tends to follow a waterfall process that often makes collaboration between end users and developers difficult, resulting in long development time and missed insight opportunities.

Projects start with business and IT efforts to define requirements. The lack of proper tools, methodologies and common background, makes the communication and understanding between parties difficult. This may reverberate during implementation and have a negative impact for the final outcome. Requirements are often continuously evolving and insight has to be extracted from non-structured data.

As it becomes apparent from the previous diagram, the rigid architecture, while appropriate for highly scalable, stable solution limits the ability of organizations to rapidly adapt and prove the solution viability before committing to long duration, expensive implementations.

Following are some of the key challenges faced by the traditional BI approach:

- Efficiently react to constant changing requirements
- Address new requirements without affecting multiple existing components/programs
- Leverage partial data model in the absence of a completely define enterprise model
- Support for disparate, complex data objects
- Support for dynamic business areas that incur regular transformation (marketing, sales...)
- Provide friendly business interfaces that can be leveraged directly by business
- Enable on the fly prototyping development to analyze a scenario not previously envisioned.
- Provide consistent reports across similar data sets
- Reduce/eliminate the need for BI users training
- Reduced implementation time
- Integration of unstructured and structured data
- Support for dynamic requirements changes during development
- Adequate master data management
- Business, logical and physical data models synchronization
- Provide a promotion path to traditional EDW/DW/DM once the business value is demonstrated and justifies the additional investment

## Agile BI – Technology Enhancements

There are a number of technologies strategies that can be used either by themselves or in combination as agile BI catalysts:

### Business Driven Data Management

Enhanced communication and information transfer between IT and business users; it offers a business friendly data modeling and process design interface that allows business to see the result of requirements gathering as they are captured. All future logical, physical warehouse models as well as required BI models generation is automated.

### Search Driven Data Management

Databases optimized for exploration, integration to unstructured content, advanced search and visualization capabilities. This approach is leveraging enterprise search engine capabilities to generate analytical insight

### Dynamic Warehousing

New DW framework including rapid provisioning capabilities that leverage existing DW content as well as new data feeds. Extends the EDW to enable the generation of DM combining data from multiple sources.

The third strategy acts frequently as an overall framework that can include the other two in order to provide the most efficient agile environment.

Following table lists some of the benefits as well as key players for each technology strategy:

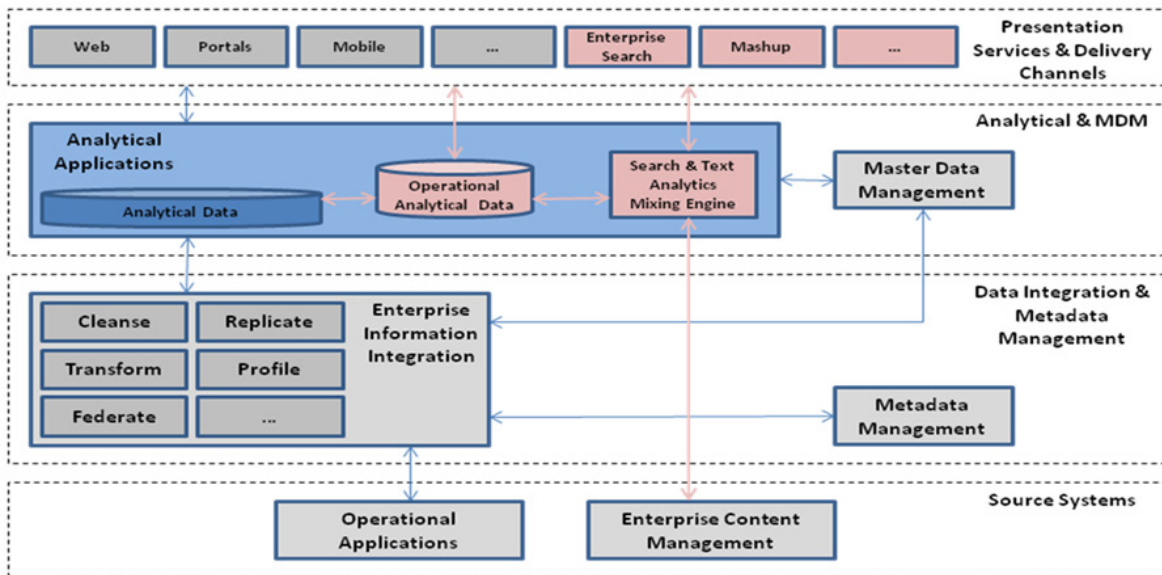
	Business Driven Data Management	Search Driven Data Management	Dynamic Warehousing
Key benefits	<ul style="list-style-type: none"> <li>Improved communication with business people as discussions can center around objects they understand rather than technical constructs of the IT world.</li> <li>Iterative and rapid creation of production data warehouses</li> <li>Rapid responsiveness to changing business requirements and conditions.</li> <li>Reduced annual manpower ownership costs of data warehouses</li> <li>Automatic preservation of historic context for trend analysis and audit reporting.</li> <li>Ability to implement even very complex types of tabular business rules, like business segmentation to support management and measurement of highly matrixed organizations.</li> <li>Ability to define corporate standards while enabling local business unit autonomy</li> <li>Ability to view information from different perspectives based upon the same underlying data: A single version of the truth presented in many different contexts</li> </ul>	<ul style="list-style-type: none"> <li>Ability to analyze any type of information including structured and un-structured content. This can be provided by deriving the data model as the data is presented and not relying on a pre-defined data model</li> <li>Accommodate additions, subtractions and changes in the data sources with minimal rework</li> <li>Extraction of information from unstructured content and present it as searchable data</li> <li>User friendly, advanced search capabilities</li> <li>Multiple visualization options</li> <li>Rapid data integration and presentation provisioning environment</li> </ul>	<ul style="list-style-type: none"> <li>Low latency (seconds) response to ad-hock queries</li> <li>Scalability to service multiple requests and to support increased # of users for some requests</li> <li>Flexibility to support a variety of schemas and queries to meet the business needs</li> <li>Simplified reuse of identified schemas, data dictionaries and data quality rules if the identified models have to be promoted to traditional EDW/DW/DM</li> </ul>
Key limitations	<ul style="list-style-type: none"> <li>Lack of promotion path to traditional EDW/DW/DM</li> <li>Limited performance and scalability</li> </ul>	<ul style="list-style-type: none"> <li>Lack of promotion path to traditional EDW/DW/DM</li> <li>Limited performance and scalability</li> </ul>	<ul style="list-style-type: none"> <li>Management of unstructured content – Can be eliminated by leveraging the ‘Search Driven Data Management’ solution</li> <li>Business driven modeling – Can be partially eliminated through the use of advanced modeling tools and appropriate governance</li> </ul>
Vendors	Kalido, Business Objects, Cognos...	Endeca, Microsoft FAST...	Teradata, Microsoft, IBM, Oracle, Informatica...

By inserting the highlighted capabilities in the traditional BI architecture landscape, enterprises can enhance a robust scalable architecture with rapid development capabilities ensuring better resource utilization and a higher rate of customer satisfaction. The following diagram is showcasing a possible mixed mode BI architecture:

## Agile BI – Governance Best Practices

Only enhancing the technology is typically not sufficient to overcome traditional BI limitations. Following are a selected set of governance best practices that, if applied consistently, can lead to increase ROI in BI:

- Iterative Development – validates requirements are properly understood and ensures risk reduction
- Scenario-Driven Development – defines how people will use the system not only what kind of data is required. Traditionally data is too narrow focus to drive things and it doesn’t reflect the need of the overall initiative.



- Business-Driven Project Objectives – IT activities should be well aligned to the business direction, return definable value, and match well with the enterprise priorities
- Include data professionals as active participants in the development teams
- Risk-Based Milestones – Identified risks, especially business risks, have to be identified early in the lifecycle
- Ensure proper alignment:
  - a. Team Structure to Architectural Landscape
  - b. Stakeholders Policies to IT Objectives/Values
  - c. HR Policies to IT Objectives/Values

## About the Author

Alex Farcasiu is a Principal Architect with the Retail, CPG and Logistics practice at Infosys. For more than 15 years he focused on enterprise integration and data management solutions.

For additional information please contact him at: [alex\\_farcasiu@infosys.com](mailto:alex_farcasiu@infosys.com)



For more information, contact [askus@infosys.com](mailto:askus@infosys.com)

## About Infosys

Many of the world's most successful organizations rely on Infosys to deliver measurable business value. Infosys provides business consulting, technology, engineering and outsourcing services to help clients in over 30 countries build tomorrow's enterprise.

For more information about Infosys (NASDAQ:INFY), visit [www.infosys.com](http://www.infosys.com).