



Whitemarsh
Information Systems Corporation

Value Proposition

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1.0 Overview

Whitemarsh Information Systems Corporation, founded in 1981, is a State of Maryland Corporation located in Bowie, a suburb of Washington, D.C. Whitemarsh's product line serves the database needs of both industry and government.

Whitemarsh's clients come from a wide variety of industries, including both federal and state governments.

Michael M. Gorman is Whitemarsh's founder and has been involved in database full-time since 1969. Gorman, is a 1978 charter member and officer of DM32, the American National Standards Institute (ANSI) International Committee on Information Technology Standards (INCITS) Technical Committee on Database Languages.

The Whitemarsh product line, Knowledge-Ware and software, is designed to help organizations achieve enterprise database. From 1981 till the present, every Whitemarsh Database project has been a success.

Whitemarsh's product line consists of the following:

- Papers
- Books
- Software
- Practice

While Whitemarsh is a product sales and support company, it has provided consulting services throughout its history to organizations as they apply both its concepts and products. The remainder of this short paper describes the various products offered through Whitemarsh.

Whitemarsh papers are generally free and are identified in two sites on the Whitemarsh website. The papers appearing on The Data Administrator News letter are located at:

<https://www.wiscorp.com/tdan.html>

In addition to the TDAN published papers, Whitemarsh maintains a selection of "Short Papers." Note that some of these papers are far from short, some even are close to 100 pages.

<https://www.wiscorp.com/shortpaperseries.html>



Whitemarsh books can be purchased either from Amazon or purchasable from the Whitemarsh Store at the following link:

<https://www.wiscorp.com/printedbooks.html>

The cornerstone product to Whitemarsh's database practice is its Metabase System. This software system is a metadata management system that, in conjunction with the user's Metabase System databases represent the specifications of the work products that define, describe, and support the existence and operations of their Enterprise. *Fully created, enterprises are independent from "brain drain" because the enterprise knowledge about itself is contained in its Metabase System databases.*

In order to understand where Whitemarsh's products fit within an enterprise, the following paper sets out scenarios of use in terms of need characteristics and then solutions.

<https://www.wiscorp.com/metabase/EnterpriseNeedsAndMetabaseSolutionCharacteristics.pdf>

A key Metabase System paper is Metabase System and Database Overview. It describes the rationale for the Metabase System. At the end of this paper there are data model diagrams of the captured work products that are stored in Metabase System databases.

<https://www.wiscorp.com/metabase/MetabaseSystemAndDatabaseOverview.pdf>

This same paper defines Metabase System's setting and role within the Knowledge Worker Framework.

<https://www.wiscorp.com/KnowledgeWorkerFramework.pdf>

While shocking, 41% of all IT system failures occur from insufficient work product specifications in the first two rows of the Knowledge Worker Framework. Another 50% of IT system failures occur after the IT system is complete and deployed. These 50% of failures occur because the enterprise has not been recast to maximize the behavior model contained within the business information systems.

Additionally, this paper sets out the business knowledge provided by each of the Metabase System functional modules. Finally, the *Metabase System And Database Overview* paper provides a cross-reference between the rows of the Knowledge worker Framework and the Metabase System functional Modules.

A common term is Return On Investment (ROI). The Whitemarsh Metabase System, coupled with other Whitemarsh products, enables a significant increase in productivity and quality, while



at the same time reduces cost and risk. These achievements are described in the paper, Metabase System Return on Investment.

<https://www.wiscorp.com/metabase/MetabaseSystemReturnOnInvestment.pdf>

Finally, Whitemarsh has been delivering its evolving product line to many clients over the years through:

- Methodology or Database Project Consulting
- Metadata Management System (i.e, Metabase System)
- DBMS or Metadata Management System Selection & Evaluation
- Training

https://www.wiscorp.com/past_clients_project_descriptions.html

2.0 Training

Whitemarsh conveys its Database Knowledge-Ware to clients through training. Through training, Whitemarsh products are deployed in the quickest and most effective manner. For training there are two classes:

- Software
- Practice

For each class of training there are multiple delivery methods, which are:

- On-site,
- Internet
- On-Demand Computer-Driven

3.0 Software Training

Software training is centered around the Whitemarsh flagship product, the Metabase System. The purpose of the Software Training is installation and operation. These courses teach, and as appropriate, show how to install and operate the Metabase System Software. The material foundation for Metabase System usage are the User Guides. The delivery mode for these (see Section 5) is On-site, Internet, or On-Demand Computer-Driven.

The Metabase System consists of 23 functional modules that cover the expanse of the business. All but four are operational. All the functional modules. along with a “not yet implemented” marker on the four that are not operational are:



- Administrative Management
- Business Event Management
- Business Information Systems
- Database Objects
- Data Elements
- Data Integrity Rule: Specification (not yet implemented)
- Data Integrity Rules: Binding (not yet implemented)
- Document and Form
- Enterprise Architecture Management
- Enterprise Governance
- Implemented Data Model
- Information Needs Analysis
- Mission Organization, Function, and Position
- Operational Data Model
- Project Management
- Reports Management
- Requirements Management
- Resource Life Cycle Analysis
- Specified Data Model
- Use Cases
- User Acceptance Tests (not yet implemented)
- View Data Model
- Screens (not yet implemented)

The complete set of user guides for all the operational Metabase System modules can be downloaded in a 60 meg zip file format from:

<https://www.wiscorp.com/MetabaseUserGuides.zip>

Each user guide contains a description of the module's functionality, a definition of all the work product components that the functional module enables users to create, and the screen-by-screen actions to create, update or delete the work product.

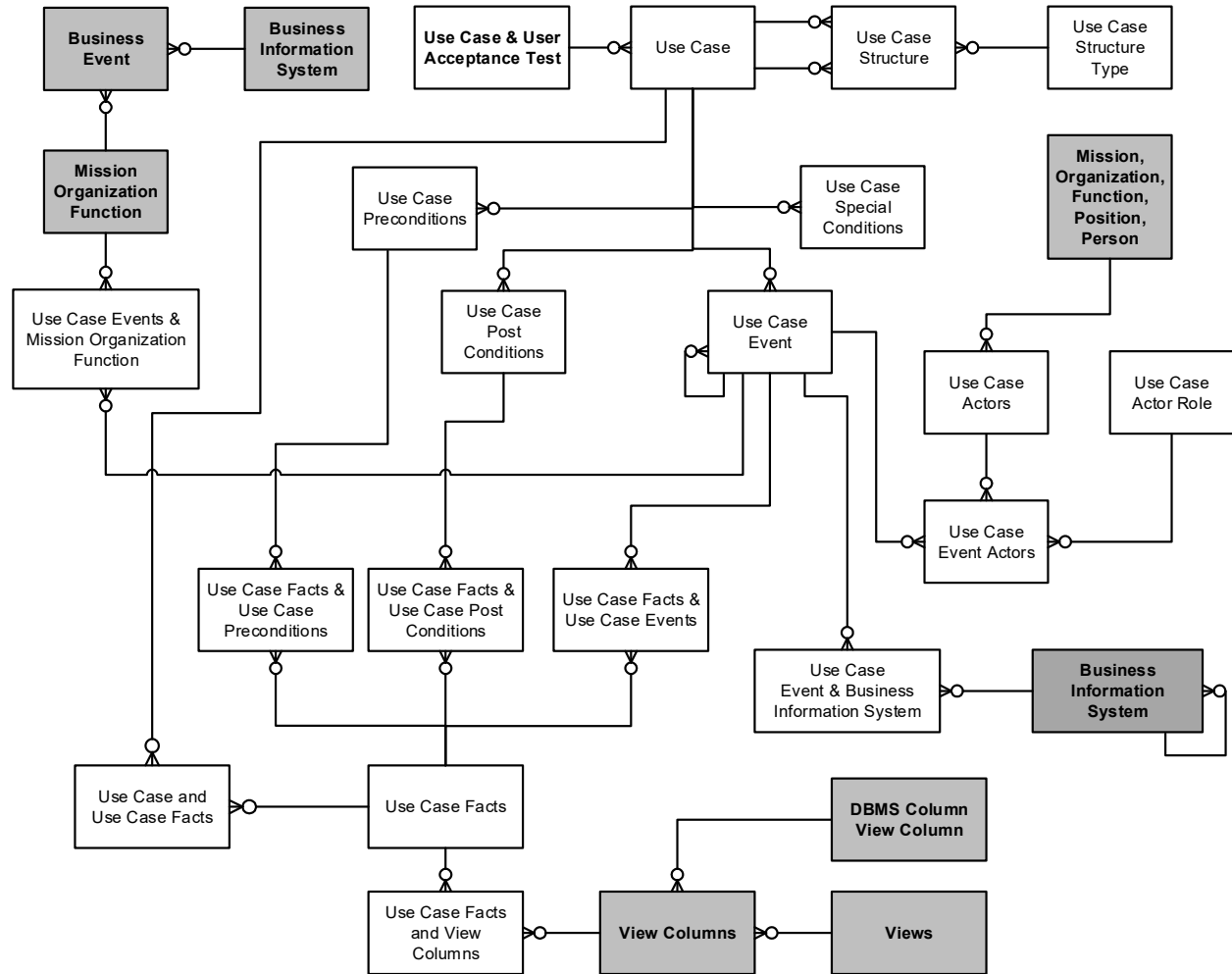
Virtually all of the work products are not simple and thus require a number of screens and actions. For example, the metadata model below for Use Cases illustrates the metadata that must be entered in order to create a complete use case.

Every "rectangle" in the Metabase System metadata model diagrams is a SQL third normal form table. Because of this strategy, third party products such as SAP's Crystal Reports can be directly interfaced with the Metabase System.

Note in the diagram that some of the tables are "grey." That means that its data is entered through a different Metabase System functional module. In this case, it's through the Business Events, Business Information Systems, Mission Organization Function, Operational Data Model,



and View Data Model Metabase System functional modules. This strategy guarantees single-source of data entry, update, and deletion and also ensures both interoperability and non-redundancy across the entire set of Enterprise Metadata.



The data-based specification diagram above for a Use Case instance shows that it requires:

- Simple table structure data as in Use Case Preconditions.
- Network structured data as in Use Case & Use Case Structure & Use Case Structure Type
- Hierarchical structured data as in Use Case Event.

The Metabase System software processes handle all the data structures.



The user guides define each involved database table. Described as well are the processes that accomplish use case creation, screen by screen.

4.0 Practice Training

While functional module user guides are essential, they are not sufficient for complete use of the Metabase System within enterprises as they create, interrelate, and deal with enterprise success, failure avoidance, and operations at the strategic, tactical and operational levels. To accomplish that, Practice Training is needed. Here the term “practice” is employed in the same way associated with an accounting practice or engineering practice.

The training associated with practices came about through the natural deployment of the Metabase System during consulting projects starting in the early 1980s. The first such project was when a U.S. Federal Agency contracted Whitemarsh to develop an overall methodology for accomplishing database projects. This ended up as several hundred pages of Data Flow Diagrams that ultimately were transformed into a 150 page Work Breakdown Structure.

As Whitemarsh projects continued over the next 30 years, more and more needs arose for the specification and “Metabase-ization” of work products. Underlying all these data-centric work products was the data-centric business information system focus.

As business information system development became more and more enterprise-wide, the need for having data architectures across business units became imperative. That caused the need to recognize that a “Schema” and its contained tables, columns and millions of rows of data was ultimately a “data stove pipe.”

Since business enterprises were much broader than a few stove-pipes, there then grew a need to have data modeling as broad as the enterprise as a whole. This caused the need for being able to have enterprise wide integration of data across all the schema-based data model stove pipes.

At the same time this was occurring, the solution to “it all” became enterprise resource planning (ERP) packages. While important, ERP ultimately required enterprises to transform its design to that of the ERP system rather than the ERP system transform its design to the needs of the Enterprise.

Massive ERP project overruns, blown schedules, and outright failures became regrettably common. When enterprises demanded ERP changes, the ERP vendors gladly complied knowing that their consulting fees for the initial changes would be in the millions of dollars and that for each subsequent release of the ERP system, many additional dollars would have to be spent by ERP clients to conform to the new versions.

Ultimately in the face of all this, enterprise budgets and resources became more scarce due to dramatic cost overruns and blown schedules. Simply put, there were no extra resources available even when solutions to cost overruns and blown schedules were available. It’s simply the story



of barely having enough resources to maintain and evolve existing systems but not having sufficient resources to build replacement systems.

As expressed by a retired CIO of a large financial services organization, “If I don’t have enough time to do what I need to do now, how do I have more time for you?” And, “If I don’t have enough money for what I need to spend now, how do I have enough money for you?”

The result was to search for the IT processes that were eating up project resources and schedules; then to determine whether process changes would dramatically reduce resources; that, in turn, would free up the necessary resources that could be targeted to subsequent. The introspective search resulted in the identification of the seven areas that consumed resources. These were:

- Grossly inefficient creation and maintenance of project schedules.
- Very costly and time consuming information systems planning.
- A lack of ability to leverage the data-centric approach to reduce costs in developing and maintaining large quantities of extract-transform-loading systems caused by low interoperability of data.
- Inability to transform costly data modeling design efforts into efficient data model manufacturing efforts.
- Inability to have business system development environments that guaranteed the first production system version correct and able to be deployed.
- Inability to remove “programming” from the critical path of business information system projects.
- Inability to formulate enterprise-wide architectures that were able to be evolved and maintained.

These seven killers of enterprise budgets and blown schedules led to two full years of solution research and formulation. The seven areas and the resources saved due to their deployment are set out in the following link:

<https://www.wiscorp.com/immediatereturnoninvestment.html>

Consequently, the seven Whitemarsh practice areas completely supported by training are:

- Enterprise-wide Project Management
- Information Systems Planning
- Data-Centered Development and Management
- Data Model Manufacturing



- Business Information Systems Environments
- Business Information System Manufacturing
- Enterprise Architecture Development

While there is not a specific practice area for Governance, each of the practice areas has its own governance component. Consequently, that's not just data governance but enterprise-governance.

4.1 Enterprise-Wide Project Management

The Whitemarsh approach begins with the realization that Project Management “data” is just another form of metadata. When project management data is stored in the Metabase System’s database, individual project plans, set within the context of the enterprise, are able to be manufactured.

The Whitemarsh approach is based on project, deliverable and task templates that enable the automatic generation of project plans. Once staff, by skill and work performance, are assigned, and once work environment factors are allocated, project plan resources are automatically generated.

Project accomplishment status can be recorded as work is accomplished. In addition, the actual created or modified work products can be directly accessed through the project management's entered data such as Deliverables or Tasks.

Whitemarsh’s project management creates and manages its data in an integrated database in common with all the other IT work products. The Whitemarsh project management approach is dramatically easier, faster, and more effective than traditional approaches and products.

4.2 Information Systems Planning

Information System Plans (ISP) are essential to a well-ordered multi-year IT strategy for the enterprise. That said, the traditional strategies for developing ISPs are a profound disappointment.

Traditional techniques and strategies to develop and evolve enterprise-wide Information Systems Plans take 16 to 25 staff years. Additionally, the traditionally developed ISPs do not exhibit the critical characteristics of timeliness, usability, maintainability, quality, and reproducibility.

Whitemarsh strategies and techniques along with the development of Information Systems Plans can be efficiently and effectively created such that not only exhibit the characteristics cited above, but also can be created almost six times faster than through the traditional approach.



4.3 Data-Centered Development and Management

Traditionally developed business information systems developed through process-driven techniques cost significantly more than those created through data-driven techniques. The conservative estimate is that process-driven business information systems take 4.6 times longer to develop because the quantity of work products is 4.6 times larger.

Increased costs are not the sole problem. Process-driven business information system creations greatly increase maintenance time and cost, as well as reduce efficiency. Because the bloat can be up to 4.6 times more work products, the ability to easily and effectively integrate, interoperate, and have consistent semantics is compromised.

The Whitemarsh data-driven techniques not only greatly reduce Business Information System bloat and maintenance, but also increase integration, interoperability and consistency.

4.4 Data Model Manufacturing

Enterprise data models are not only at the very center of all Enterprise Business Information System environments but also enable the interrelationship among all the IT work products. Data Models are key in enabling the scope of business information systems to be restricted to just what is necessary.

Despite all the worth of Enterprise Data Models, their cost through traditional techniques has not only been excessive, they have been cited as a reason for over budget and late business information systems.

Whitemarsh's Enterprise Data Model development techniques have resolved these common complaints and also have dramatically increased the velocity through which data models are created.

4.5 Business Information Systems Environments

While data models are essential for business information system development, business information systems are where “the rubber meets the road.” It is through business information systems that enterprise-policies are executed and the data resulting from those policy executions is captured, stored, analyzed and reported.

Like enterprise data models, the traditional processes for business information system creation are both expensive and fraught with error. Whitemarsh, over the years, has participated in IT projects where business information system development techniques have been dramatically improved and made cheaper.



4.6 Business Information System Manufacturing

From the very beginning of IT, there has been a dramatic year-over-year decrease in the cost of computer hardware, even in the face of significant increases in capacity and performance. Sadly, the same cannot be said about business information systems. Over the years, even in the face of increased computer software sophistication, the cost of business information system software has continuously increased.

Starting, however, in the middle 1980s, there has been a steady growth in the ability to actually manufacture business information systems. Whitemarsh has been a continuous supporter and user of business information system generators. For example, the Whitemarsh Metabase System has 279 database tables. Under traditional business information system development techniques, the Metabase System should have cost \$4.5 million. In fact, it has cost greater than four times less than that amount.

In another example, an association membership management system for an international standards organization had a database of about 90 database tables. The traditional cost for this system should have been \$1.5 million. The actual invoices were for less than \$300K. The key strategy for a very dramatic cost savings is to have an environment within which business information systems are manufactured rather than created through highly-skilled, hand-crafting artisans.

Under this approach, well in excess of 90% of every business information system function can be generated through business information system generators.

4.7 Enterprise Architecture Development

It is very important for an enterprise to have an overarching enterprise architecture. Creating such an architecture through traditional techniques has been very expensive, time consuming, and almost always has not exhibited the following information systems plan characteristics: timeliness, usability, maintainability, quality, and reproducibility.

To achieve these characteristics, an enterprise architecture cannot just be a large document containing a myriad of diagrams. Rather, an enterprise architecture must be an overarching layer to the overall collection of IT work products that form the implementing mechanisms for the enterprise architecture.

Because of this construction strategy, that is, bottom up and through complete integration with other IT work products, the ROI for this approach is the average of the four directly related ROI's.



4.8 Practice Training

The practice training is in several types:

- Management training of the seven practice areas
- Overview of all seven areas in one two-hour session
- Each of the seven areas in 30 to 60 minute training sessions
- Full multi-day lectures based training
- Full multi-day workshops wherein work products et al are accomplished.

4.8.1 Several Hour Practice Training

The following are links to the one-hour or less 7 ROI courses.

- www.wiscorp.com/ROIMaterials/ROI00IntroductionToROIPresentations.pdf
- www.wiscorp.com/ROIMaterials/ROI00IntroductionToROIPresentations.pdf
- www.wiscorp.com/ROIMaterials/ROI01EnterpriseWideProjectManagement.pdf
- www.wiscorp.com/ROIMaterials/ROI02InformationSystemsPlanning.pdf
- www.wiscorp.com/ROIMaterials/ROI03DataCenteredDevelopmentAndManagement.pdf
- www.wiscorp.com/ROIMaterials/ROI04DataModelManufacturing.pdf
- www.wiscorp.com/ROIMaterials/ROI05BusinessInformationSystemEnvironments.pdf
- www.wiscorp.com/ROIMaterials/ROI06BusinessInformationSystemManufacturing.pdf
- www.wiscorp.com/ROIMaterials/ROI07EnterpriseArchitectureDevelopment.pdf

4.8.2 Workshop Based Practice Training

The following are links to the full 7 ROI Workshops

- www.wiscorp.com/WhitemarshCourses/BusinessInformationSystemsEnvironmentThreeDays.pdf
- www.wiscorp.com/WhitemarshCourses/BusinessInformationSystemsManufacturing.pdf
- www.wiscorp.com/WhitemarshCourses/DataCenteredDevelopmentAndManagementTwoDays.pdf



- www.wiscorp.com/WhitemarshCourses/DataModelManufacturingThreeDays.pdf
- www.wiscorp.com/WhitemarshCourses/EnterpriseArchitecture.pdf
- www.wiscorp.com/WhitemarshCourses/EnterpriseInformationSystemsPlanningOneDay.pdf
- www.wiscorp.com/WhitemarshCourses/EnterpriseProjectManagementTwoDays.pdf

5.0 Training Delivery

The lectures are generally half day, full day, multi-day and do not involve the Metabase System other than through screen-capture slides.

The **Workshops** are two-, three- and four-days and consist of lecture and involve use of the Metabase System, wherein students form three-person groups to accomplish exercises and make presentations of resulting work.

For both **Lectures and Workshops** there are three delivery types: On-site, Internet, and On-Demand Computer-Driven. All Workshops are a combination of Lectures and Hands-on exercises

For **On-site delivery**, these are both Lectures and Workshops. All on-site training is through Power-Point slide decks for the lectures, and an Intranet Metabase System setup for the workshops that involve three-student team work product collaborations.

For **Internet delivery**, these too are already available for both Lectures and Workshops and are delivered via GoToMeeting to a set of on-line students who can ask questions via an electronic "Hold up your hand." These are scheduled and run for a stated start time to an expected end-time.

For **On-Demand Computer-Driven**, the material for all these already exist for the 7-ROIs and "merely" need to be transformed into 20-minute Learning Units across an entire course outline. The Learning Units can be selected and "run." All these will be delivered via Adobe Captivate. While the material for all these already exists, none have yet been recorded.

