

New Data Warehouse Capability Helps Company Improve and Expand its Services



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Introduction

Data warehouses are only as good to users as the data that goes into them – and the quality and immediacy of the business intelligence (BI) they can deliver. The challenge is striking an optimal balance between users' BI needs and interests and the up-front and ongoing costs of enhanced data warehouse capabilities.

A national provider of physician services wished to enhance its BI capabilities to improve staffing and clinical services at its client locations. The goal was to improve clinical capabilities, including patient throughput and satisfaction, by using better, more immediate and accessible data to predict likely staffing bottlenecks in departments and suggest remediation actions. This would help the company meet the goals of its clients, improve patient care and provide a competitive advantage.

Before embarking on an enterprise-wide upgrade of its data warehouse capabilities, the company first sought to test improvements at a pilot site. Having already selected a highly regarded data warehouse and clinical integration vendor, the company engaged Freed Associates (Freed) to coordinate the entirety of the pilot site implementation. Freed was chosen based on its prior working experience with this company, its deep understanding of data warehousing and clinical data flow, and its strong project management capabilities.

Strategy and Goals

Time, budget and collaborative interests were the most critical factors in the company's pilot site engagement. The project needed to be ready to use production data for analytics within 16 weeks, within budget, and include input and deliverables from four primary participants: the client company, its data warehouse vendor, the hospital that was the first pilot location, and Freed. Furthermore, the pilot also needed to establish the client's capability to rapidly and consistently deploy data warehouse resources with other organizations.

Based on input from the client and data warehouse vendor, Freed identified the following project goals:

- **Implement the pilot site** – rapidly and accurately implement the first pilot site to allow the organization to assess results and determine next steps for wider implementations
- **Oversee and develop a strong vendor relationship** – ensure the quality and consistency of deliverables from the data warehouse and analytics vendors
- **Determine a real-time analytics vendor** – vet and select a quality vendor that met the client's criteria
- **Create a repeatable process** – design, create, and implement the necessary tools and processes to use with other medical centers served by this company
- **Standardize documentation** – ensure that all parties agree on an improved set of documentation standards and expectations

Tactics

With input and feedback from end-users, managers, and related departments, Freed developed customized tools for collaborative use by the BI team and its business clients. These tools were then used with the first implementation to confirm their usefulness and enable staff members to identify any changes needed. Key tools included:

- **Implementation playbook and templates** – Designed as an implementation guide for future sites, and for use by both the project manager and the implementation team. The playbook walks team members through the process and identifies key considerations and questions to cover for a diverse set of implementation factors. The additional templates, such as a starter work plan, enables the project manager and other team members to rapidly begin planning for implementation at additional sites.
- **Requirements gathering tool** – Designed to be shared by both the business user and the developer/analyst, this tool helps all parties quickly and easily document requirements and record design to those requirements. The IT analyst or developer will use this information as a springboard to clarify and begin to design the report. This includes a tip sheet to help business users more efficiently and effectively communicate with developers, and vice-

versa, by knowing what requirements to specify and the kinds of questions to ask about each requirement.

- **Technical specifications template** – The specifications template was designed to translate the business requirements into the technical implementation. This allows the developer and the design review team to have a common understanding of the implementation approach and requirements. It also serves as a key artifact for identifying impacts through change management efforts.

- **Test planning and execution toolset** – Designed to be shared by the implementation team, including business users, the test execution toolset allows the business user to plan the approach for testing, document the appropriate test scenarios, and manage the execution, along with defect remediation.

Freed provided group and individual training on these tools for the BI team as well as other stakeholders, such as the business owners responsible for requirements. The owners of the documentation and tools were also trained to make ongoing changes to fit the organization's future needs.

Results

The BI team work flow processes significantly improved – a huge benefit to the BI team's leader and staff members. While these tools were initially developed for a specific project, the entire BI team, including staff members handling requirements, design, development, and testing, began to adapt and roll out these tools to other initiatives. The BI team is now using a set of customized tools that integrate into their processes. These tools help the department execute consistently, document its work more efficiently and thoroughly, and reduce testing errors and sign-off delays.

The BI team's organizational business clients were pleased with these work flow enhancements and the results that they helped obtain.

Conclusion

The support and strategy that Freed provided to BI team members enabled them to accelerate their understanding of the new implementation approach, as well as of clinical data and work flow. In a short time frame, the company solved problems at the pilot site, began to use clinical data in new ways and established sustainable procedural changes. The custom tools that Freed provided helped induce and enable analytical thinking and design among the business and BI teams for more successful and timely reporting structures.

Additionally, the BI team gained from Freed a foundational guide to more effectively provide business services. This will help the BI team produce critical deliverables more quickly and efficiently, improving the company's ability to execute additional strategic initiatives.