

## Client Profile



The client acquires, manages, expands, and develops office and laboratory space properties. The company leases its properties to pharmaceutical, biotechnology, diagnostic and personal care products companies, research institutions, and related government agencies. It is a publicly traded real estate investment trust (REIT) listed on the NYSE.



The portfolio of almost 300 properties are mostly in North America with some investments in Asia and Europe. In addition to almost 40 million square feet of property, the company also has a venture capital arm which invests in life sciences firms. Net operating income is \$1.1 billion.

## Business Problem

The business lacked visibility because of the lack of information. The legacy ERP system provided some raw transactional reporting but this was backward looking and had to be manually manipulated in Excel to produce usable information. At the root of this problem was the lack of a data foundation and applications to deliver the right information to the right people at the right time.

## Solution Approach

Rather than attempting a major data warehouse initiative, we applied an agile approach. We still utilized good project management practices and developed a program charter which obtained buy-in from senior leaders across the enterprise.

## Data Warehouse Pilot

The first project in the program delivered analytical capabilities for finance. As a publicly-traded REIT it was essential that financial reporting be both accurate and timely. SEC required filings involved increasing numbers of people to produce because of the manual effort, errors in processing and data quality issues. Naturally, the ability to perform analysis and modeling was not possible.

## Scope Control

The data warehouse pilot was targeted at this analysis and reporting problem. Scope was pragmatically controlled:

- ◆ Finance domain and deliverables
- ◆ Master data limited to the project scope but fully governed and managed for quality
- ◆ Production Oracle data warehouse
- ◆ Production Essbase analytical platform
- ◆ Agile development inside the project

## Agile and Project Management

Applying expertise in semantic data modeling, Agile data warehouse development, project management and data analytics enabled us to deliver a successful project in under 6 months. The team used popular commercial Agile software development tools to run the iterations, track progress and collaborate. While the team was all based in the U.S., they worked from different locations and across time zones. Once we established the process and supporting software, the client could inherit a mature lifecycle.

Program Charter	Purpose	Improve the flexibility, timeliness and accuracy of the Data Analytics and Business Intelligence needs of all relevant departments. This program (sequence of multiple, related projects) meets [client] need for continuous improvement and increased efficiency by allowing timelier and more flexible access to all databases and data input by various other means.
	Deliverables	The initial project deliverables shall include an Excel plugin and connection to the first Data Cube – raw data selected from the live systems and held in the multidimensional Essbase matrix. The final project result will be a Hyperion/Essbase combination, customized to fit the [client] data sources, together with adequate training and guidance.  The program contains multiple projects. Subsequent project deliverables will be defined at the inception of each project.
	Objectives	The objectives of the Data Analytics Project are to allow more departments more direct access to the Analytics environment and to prevent staff turn-over due to deadline stress. High level risks for this project include selecting the correct set of sponsors and stakeholders and ensuring the roll-out includes all areas of quickest ROI

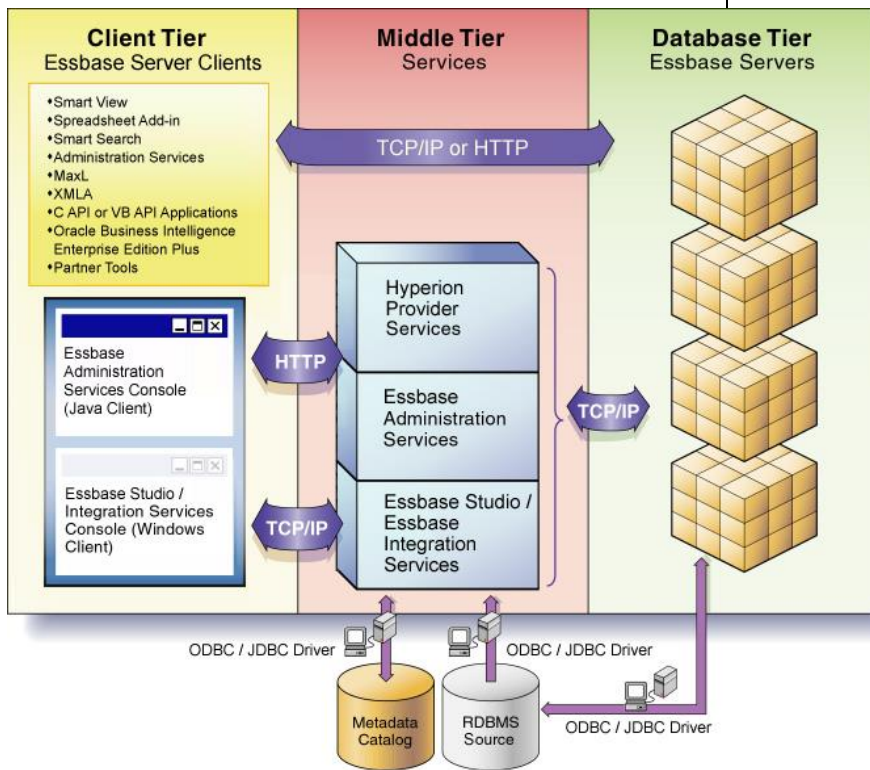
While Agile techniques accelerated technical delivery, strong project management ensured that the effort was well governed. This included formal but lightweight process to maintain alignment with stakeholders. Weekly stakeholder meetings that included deliverable reviews were new to the client but well received. They became standard practice.

Project partum / after action reports were recorded and summaries used to guide the next projects in the program.

client was concerned about results rather than the Agile techniques used, they were critical to rapid success.

## Evolutionary Program

Continuing with the Agile approach, the next steps in the program were defined. Once again, we applied solid program management practices and actively engaged both stakeholders and detractors to maintain alignment and reduce resistance.



The next detailed part of the roadmap delivered high value analytics that were achievable. We balanced stakeholder needs, project risks, data sources available, data quality, vendor capabilities and inter-project dependencies. The roadmap for the next phases sought to develop a cadence of successful and continuous delivery. For long running programs, our objective is to establish a steady state that can be brought in-house and managed by the client.

## Key Challenges

The program was faced with a number of key challenges. While data modeling was difficult, it was completed in a timely fashion. The relative immaturity of the organization with respect to data and analytics posed several constraints.

## Alternative Scenario

Oracle's Essbase architecture diagram illustrates the top-level technical solution except that we built a data warehouse. An alternative approach would have been connecting Essbase directly to the ERP and other tables that contained client data as shown in the diagram. While this proof-of-concept would have yielded the same results, a re-implementation would be required when the data warehouse was deployed. Given that we delivered a data warehouse and Essbase implementation in 6 months, building a durable solution was clearly more cost effective in the long run which did not take additional time.

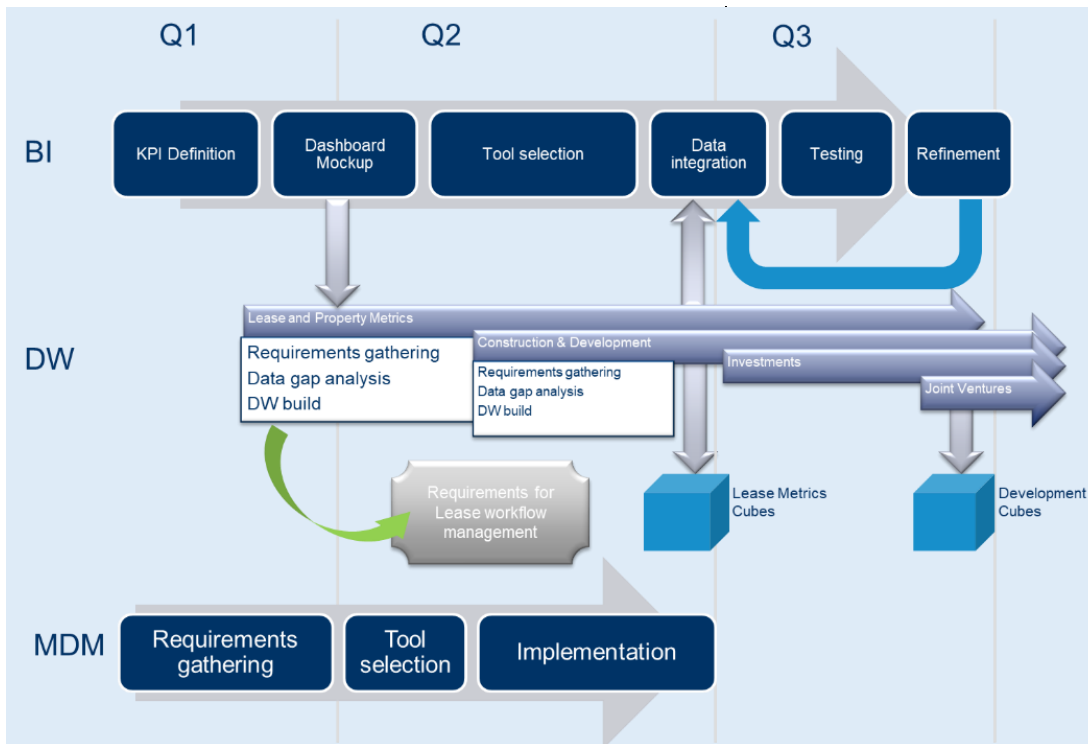
## Successful Project

Once the pilot garnered excitement, our mandate to drive the program forward was solidified. While the

## Master Data Management

Initially, the client assumed that master data was uniformly represented across the organization. Actionable Strategies helped stakeholders understand that each of their views was fit for their purposes. However, the enterprise had to coordinate and manage how master data was produced, consumed and changed. For example, how properties were represented varied significantly and meaningfully depending on the function in the organization.

As we mapped the data and developed the use cases, the client realized the large disparity between their initial assumptions and the emerging requirements. Combined with their new understanding of the data lifecycle, the client agreed to initiation of a formal project for master data management to run concurrently with the sequence of analytics projects.



Technical constraints included the integration of security infrastructure. The introduction of Oracle technology drove additional efforts to integrate with the Microsoft ActiveDirectory environment. Roles and permissions from the entitlement model had to be incorporated into existing HR processes. (Incidentally, these were paper processes that we subsequently automated in Sharepoint.)

## Requirements

## Data Quality

Similarly, the client had initially believed that all their data was clean. As we produced prototypes, anticipated data quality issues were highlighted. This prompted an immediate data remediation effort.

In addition, we provided advice on establishing good data quality management practices. This included eliminating manual processes where possible and maintaining an approval process for changes to data outside of systems such as ERP platform.

## Entitlements

As a publicly traded REIT, the client dealt with large amounts of sensitive data. A flexible entitlements approach was required to ensure that security did not prevent people from doing their jobs while also ensuring that proprietary information stay protected. This included financial results that could impact the stock price, potential property acquisitions, lease details, and investments in other companies.

The prior lack of access to data meant that an entitlement model had to be built from the ground up. This included the definition of a roles-based model that supported hierarchies. In addition, the model had to provide access to aggregates for some roles without the ability to drill into detailed transactions.

Building consensus on requirements was not contentious but led to a proliferation of metrics that were generally specific to each business function. C-level executives were accustomed to individual reports from the senior vice presidents. Without a consolidated set of requirements, initial KPIs were delivered. Oracle BI tools enabled the client to arrange KPIs into dashboards that met evolving requirements.



## Business Results

Applying Agile techniques combined with pragmatic program and project management discipline quickly delivered tangible business results. This established the foundation for a data analytics program that grew in functionality and footprint to include Oracle Business Intelligence. Subsequent business projects began delivering value based on a solid and expanding foundation. Knowledge transfer, documented and automated processes, and extensive collaboration enabled the client to move rapidly up the maturity curve. This facilitated an eventual transition to in-house teams.