



# Data Abstraction Reduces Application Modernization Complexity

## ABOUT PFIZER

Pfizer is the world's largest research-based pharmaceutical company. The company discovers, develops, manufactures, and markets leading prescription medicines for humans and animals and owns many of the world's best-known consumer brands.

## CASE STUDY BACKGROUND

The research and development (R&D) effort for a new product spans many years and many departments around the world. Researchers start the process with exploratory development – delivering materials for safety and clinical studies, producing dosages, etc. Then, they move on to testing and initial manufacturing. The Business Information Systems (BIS) group is responsible for project and portfolio management. This team's role is to answer project-related questions such as:

- How many people work on what?
- How much money is being spent?
- What is the budget?
- What is the health of the portfolio?
- Is there anything we should focus on?

These questions change every week because the R&D process is so dynamic.

## THE PROBLEM

It was important to maintain the progress of R&D efforts. The ability to quickly obtain answers to business and project questions was a key enabler. At the same time, on-going modifications to data and applications architectures were needed to keep pace with changing requirements. System downtime was needed to make the necessary upgrades but it interrupted the progress of R&D and was unwelcome.

A critical data source, the Microsoft Enterprise Project Management (EPM) system, contained core planning and status data for R&D projects. The EPM included information on tasks and milestones, key resources and loads, event signals, and more. Pfizer needed to upgrade EPM to take advantage of new features and improve scalability.

Several additional factors complicated the EPM application upgrade:

- 6000+ live projects used the old version of EPM
- A complex software version migration process resulted in much downtime in the past
- The new version introduces a completely new data model

*"To keep our Microsoft Project data flowing to the business, we inserted the Composite Information Server as an abstraction layer. This provided a legacy view of the data, allowing the old reporting systems to continue to deliver the information the business required. Meanwhile, unknown to the business users, we swapped out the old version of the software for the new."*

Mike Linhares,  
 Manager of Business Information Systems,  
 Portfolio Management,  
 Pfizer Pharmaceutical Sciences

## AT-A-GLANCE

### Industry

Pharmaceutical

### Business Problem Solved

R&D operations no longer interrupted by system upgrade cycles.

### Data Integration Patterns

Pfizer successfully completed an application modernization initiative, which facilitated application software upgrades and version migrations. The key to success was a data abstraction layer Pfizer implemented to simplify and standardize data access and modeling of enterprise project management information.

### Composite Software Products

Composite Information Server 5.1

### Data Sources

Microsoft Enterprise Project Management 2007;  
 Microsoft Enterprise Project Management 2010

### Data Consumers

Project Portfolio Management teams and other IT and business groups that use project management tools

### Platform

Linux

**ALTERNATIVES CONSIDERED**

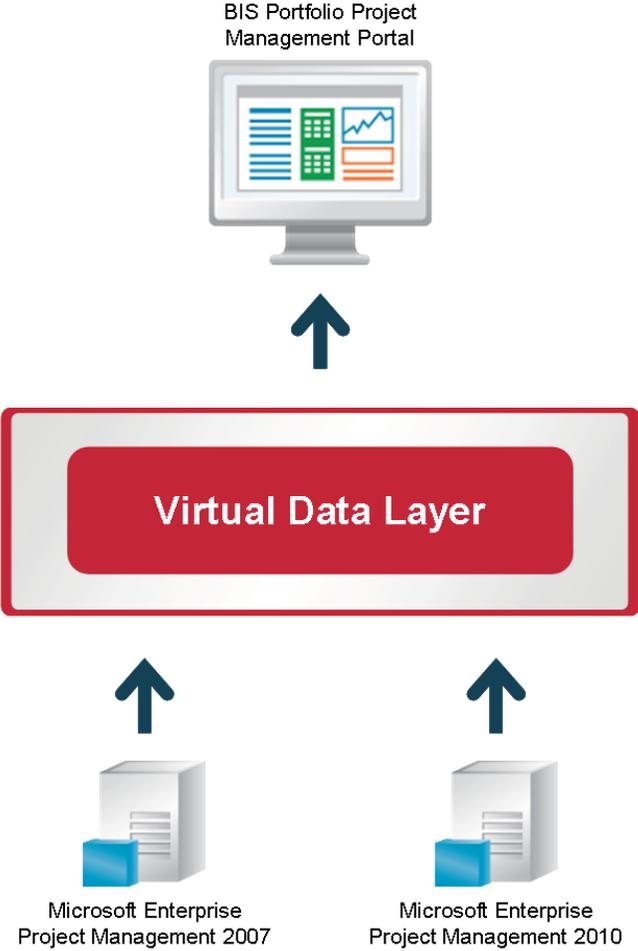
The only other alternative was to shut down the system and then upgrade the EPM. This option would have halted R&D progress and cost the business much time and money.

**THE SOLUTION**

To keep EPM project data flowing to the business, Pfizer inserted the Composite Information Server as an abstraction layer. Consuming applications, such as the BIS team’s Project Portfolio Management Portal, obtained data from the legacy EPM system through views in the Composite Information Server that mimicked familiar EPM views. Consuming applications continued to run unmodified.

From an enterprise architecture point of view, Composite data virtualization was implemented as a semantic abstraction or data services layer in support of multiple consuming applications. Sometimes called Information-As-A-Service by Forrester Research or SOA Data Services by Gartner, this middle layer of reusable services decoupled the underlying source data and consuming solution layers. This provided the flexibility required to deal with each layer in the most effective manner, as well as the agility to work quickly across layers as applications, schemas or underlying data sources changed.

As the new version of EPM was implemented, Pfizer continued to use the legacy views in Composite, gradually mapping the views to the new source. Consuming applications accessed the project data through Composite without interruption. At cutover time, Pfizer decommissioned the old EPM system and used only the new version. Consuming applications continued to run without interruption, seamlessly using data from a new EPM system. New EPM features are now in use and Composite views evolve as needed to provide enhancements the business needs.



A virtual data layer based on the Composite Information Server.

**THE RESULT**

- 95% reduction in down-time during the application migration process
- 100% reduction in intermediate storage infrastructure