

# Building Efficiency in a Public Sector Investment Program

## *Finding Ways to Increase the Rate-of-Return*

### The Challenge

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Managing large-scale government pension funds with millions of beneficiaries relies on the organization maintaining a strategic investment strategy of its assets as well as the costs incurred in realizing the returns of those investments.

Returns are often realized from various private and public equity programs as well as real estate ventures all of which are transmitting investment data to the pension offices. Sometimes, however, the information is gathered and inserted into spreadsheets manually.

Or, disparate data sources may utilize similar people using different user names. And if the computation of the investments' business costs is done manually validation errors may regularly occur. Each of these processes require time consuming research to ensure accuracy.

These hurdles can result in the delayed generation of important investment reports sometimes by three to four weeks making it difficult for portfolio and fund managers to remain agile with their investment strategies and for the assets of the agency to remain robust.

Although the agency is updating its IT solutions, it still needs assistance in its Investments Cost Management area. To assist in the goal, management sought a collaborative effort between its IT Business Intelligence (BI) team, its Investments Cost Management team, and a vendor who understood the agency's business problems and had the expertise to automate the process.

### The TrinityTG Solution

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Trinity Technology Group (TrinityTG) had two goals in completing this cost management project.

First was to assist the organization in its ability to view the incoming data from its various accounts payable and general ledger spreadsheets so the agency could compute the information and determine if its investments, minus the expenses incurred, were worthwhile.

Second was to reduce the time to complete the required validations and the subsequent structure of a final report. Generating a report required more than three weeks. The objective was a finished product being produced in less than a day. This would obviously assist the organization to more quickly determine how it could improve its rate of returns on its investments.

The agency had been using a manual system of inputting data using a limited number of people with knowledge of its function. It desired the increased speed of an automated system, one incurring fewer

errors and allowing users to see an end product within hours instead of weeks. This would allow the data to become more valuable because the information can be evaluated in much less time.

Tackling the assignment required unique skill sets; understanding the agency's current technology; integration technology development; comprehending the agency's data, which comes from various sources including Excel spreadsheets, internal finance tools, and cloud services: being adept on interoperability, or the capability of connecting various technologies so programs can interact; expertise in transferring and storing data and then automating it.

These criteria require knowing programming language, database knowledge and the ability to use the Oracle Data Integrator tool (ODI), the Oracle Business Intelligence Enterprise Edition tool (OBEE) and the Oracle SQL Development tool. TrinityTG staff has this experience and an understanding of Business Intelligence (BI) where the automation of loading data, and creating data that offers acumen, is the norm.

Two facets in completing this project were included – data integration and data engineering.

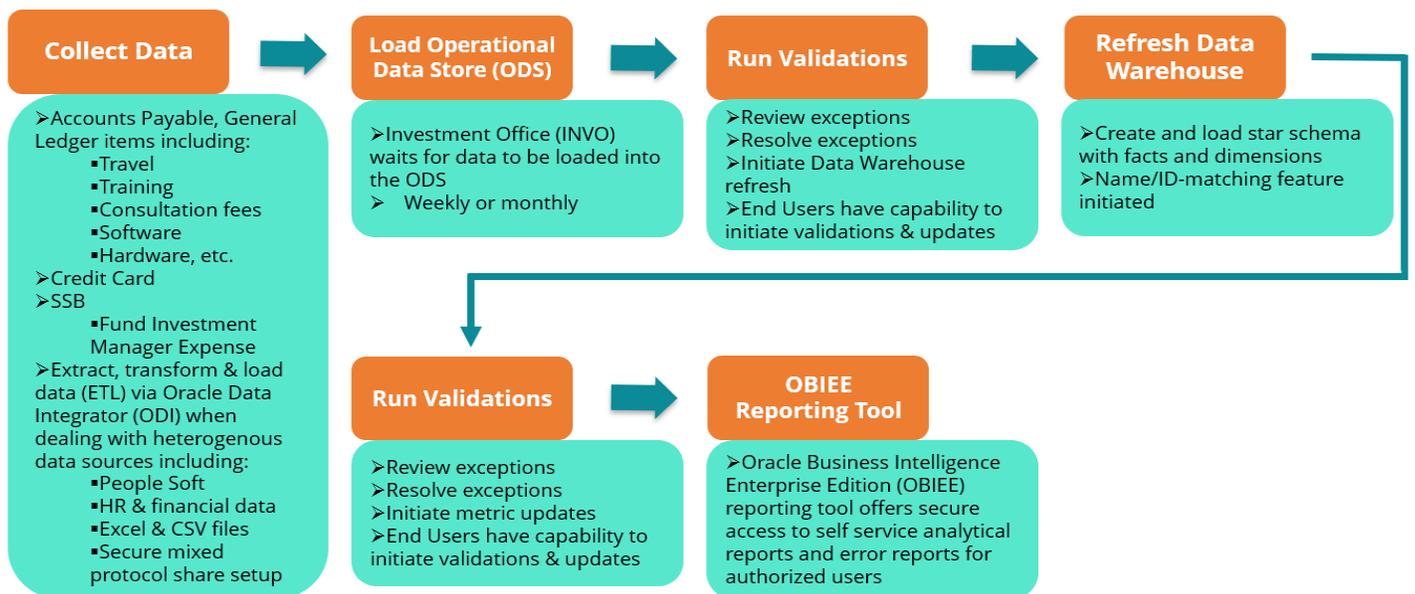
*Data integration* involves automating the collection of the data, transforming it, and preparing it within a data warehouse so the user validation tools can view the reports and run analytics on the investment expenditures of each portfolio. *Data engineering* involves quickly delivering ad hoc, or custom, reports. This allows business users immediate access to data so queries about the information, their consolidation, or the production of new spreadsheets can be accomplished rapidly.

#### KEY CONCEPTS

- ❖ **DATA INTEGRATION:** In this project, automating the collection of the data from their various sources and then transforming them for ready availability in the data warehouse.
- ❖ **DATA ENGINEERING:** In this project, creating software that make the data immediately available for an ad-hoc or custom report usually completed as an Excel spreadsheet.
- ❖ **BUSINESS INTELLIGENCE (BI):** The strategies and technologies used for the data analysis of business information by providing historical, current and predictive views of operations. BI can handle large amounts of both structured and unstructured data to identify, develop and create new strategic operations.
- ❖ **INTEROPERABILITY:** The movement of electronic data seamlessly between disparate facilities or different groups that may have unique ways of classifying the information.

Another issue requiring focus is that the management of investment portfolios often includes several people, all of whom will likely have different computer user names. Plus, these various people may have different nomenclatures for activities in other departments, their individual expense reports, and possibly other endeavors directly related to the investment portfolios.

Using a manual process to connect all these synonyms is a laborious, but necessary, exercise. In the new automated program, a “name-matching” component has been included. Tying one individual to a bevy of documents will now be automatic. And an enhanced security feature has also been established. These new controls will allow users to review the reports in a safe environment and only allow authorized personnel to have access to the data.



## THE COST MANAGEMENT PROJECT

- ❖ **COLLECT DATA:** Information from disparate sources will be automatically accumulated.
- ❖ **LOAD OPERATIONAL DATA STORE:** The information, accumulated from spreadsheets, will be loaded into a staging area called the Operational Data Store (ODS).
- ❖ **RUN VALIDATIONS:** Users will then initiate a validation process that will review and resolve exceptions or errors.
- ❖ **REFRESH DATA WAREHOUSE:** The automation creates data structures or elements known as star schema. These schemata are easily reportable, and allow users to initiate a second validation to ensure the data are correct.
- ❖ **RUN VALIDATIONS:** The second validation process compares new data to any existing data resolving exceptions or errors. After this second process, all metrics will be updated.
- ❖ **USE OF OBIEE REPORTING TOOL:** Authorized users can now have secured access to analytical and error reports via the Oracle Business Intelligence Enterprise Edition reporting tool.

## Key Client Benefits



**GREATER EFFICIENCY:** Data retrieval, integration, and validation will be automated reducing the compilation of information from several weeks to less than a day.



**HIGHER ACCURACY:** Automation of computations will virtually eliminate all mathematical errors.



**DATA HAS MORE VALUE:** Accuracy and speed of completed reports allows data to be more readily available for review and evaluation.



**FURTHER FOCUSED RESOURCES:** Old programming required operators with institutional knowledge of system. Now any properly trained person can operate the system.



**ID-MATCHING FEATURE:** Inbound data from different systems with disparate user names is no longer a problem as new system is programmed to match all user names



**DATA WAREHOUSE FEATURE:** Myriad data source venues will now be routing information to one central database location where it will be automatically housed for future use.



**SCALABLE:** Shared components allow for platform adjustments to meet future program needs.



**REDUCTION OF WASTE:** Information flow from data sources to the central warehouse will be seamless resulting in the elimination of paper reports



**IMPROVED SECURITY:** Security controls have been established allowing only authorized personnel access to any one individual report.

### DELIVERING SOLUTIONS FOR A FIXED-PRICE BASED ON MANY CAPABILITIES

- ❖ **HIGH EMPLOYEE RETENTION RATE:** Promotes a teamwork-driven repeatable approach.
- ❖ **DISCIPLINED AND COLLABORATIVE PROJECT MANAGEMENT:** Engages the client and controls the scope.
- ❖ **BUSINESS PROCESS-DRIVEN APPROACH:** Defines solutions that work across organizational boundaries.
- ❖ **SOFTWARE DEVELOPMENT PRACTICES:** Emphasizes component re-use, industry standards, and our own developer's workbench for faster delivery, lower cost of ownership, and greater future adaptability.
- ❖ **DEVELOPER'S WORKBENCH:** An organized repository of tools and techniques used by technical staff in the design, build, and test of applications and the installation and configuration of servers and licensed software products.



# Trinity Technology Group

Trinity Technology Group in Sacramento has been building IT solutions and solving real business challenges for almost two decades. Our team of talented professionals – from business and quality assurance analysts to seasoned developers and project managers – work hand-in-hand with you to create plans for each critical process, and then deliver solutions to meet the specific needs of your organization.