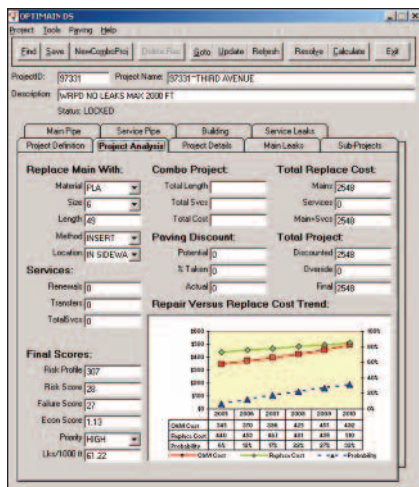




Optimain DS

DIMP Compliance Solutions: Decision Support and Risk Analysis Software



Optimain DS is a comprehensive distribution integrity decision-support solution architected to fit into a typical LDC IT environment, align with your business processes, and support all facets of the recently enacted federal **DIMP** regulations.

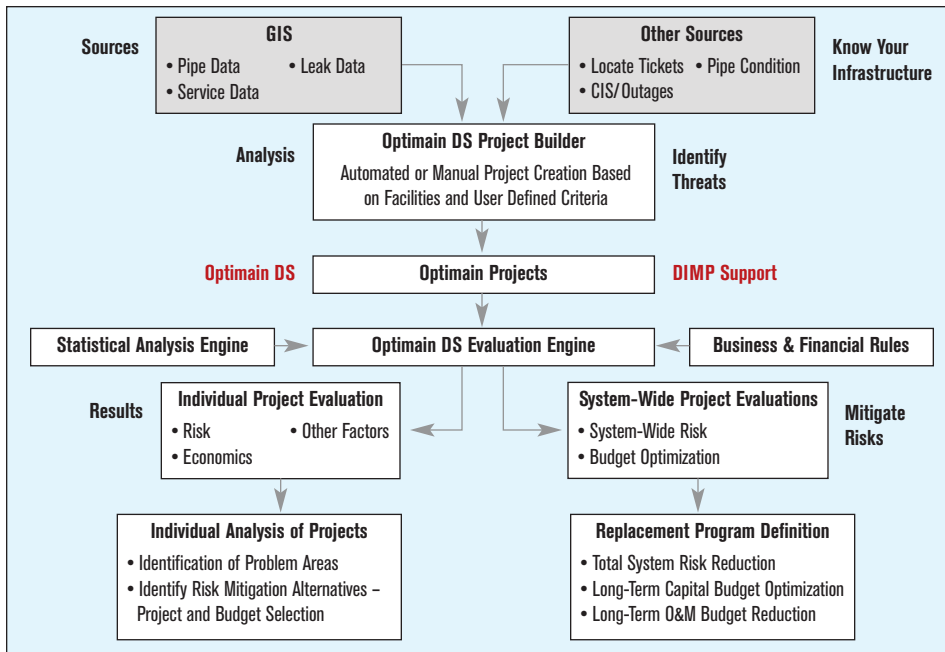
Optimain DS enables operators to meet DIMP regulations by:

- Continuously monitoring all mains and assessing risk of any threat.
- Adding service lines to the risk model with the optional SPIP program.
- Providing a knowledge-based framework to evaluate and rank pipes system-wide against a range of threats, environmental conditions, failure, risk, and economic factors.
- Dynamically collecting incoming leak, pipe inspection, and environmental data to incorporate into failure prediction, risk assessment, and economic evaluations.
- Enabling periodic and on-demand system-wide risk assessment and trending.
- Targeting capital, resources, and alternative actions on the riskiest pipes.
- Optimizing development of tactical and strategic risk mitigation plans for all pipe material types, including protected steel and plastic pipe.

Business value regardless of regulatory requirements

Features

- Configurable failure, risk, and economic factors to adapt to your dynamic business and regulatory environments
- Table-driven algorithms to identify, associate, analyze and resolve critical factors about pipe segments
- Automatic refresh and recalculation of pipe projects to see the impact of new leak or inspection information on project scores and relative priorities
- Powerful query, filtering, and sorting tools to report and prioritize candidate projects using criteria such as risk, economics, geographic area, and pipe type
- Management reports to assess the latest performance of capital replacement and O&M repair programs



leak survey intervals. All project information is retained in the Optimain DS database. Individual projects can be viewed or updated in the Optimain DS Project Editor or the Multiple-Project Analyzer.

Statistical Analysis Engine

The Statistical Analysis Engine reads all leak reports as well as pipe attribute information associated with the projects and develops various statistical likelihood values with respect to each project. This engine uses Failure Factors developed through statistical analysis combined with pipe leak and condition data to predict failure likelihood. As new information becomes available, the engine refines the failure likelihood estimates. The values determined are used to estimate future repair costs, and to calculate the risk score for each project.

Flexibility and Integration

The Optimain DS database can be configured on either an Oracle or MS SQL Server RDBMS platform. The desktop application runs on Windows XP (or higher) workstations.

Optimain DS can be implemented as a stand-alone application (integrated with your existing enterprise applications) or can be fully integrated with other modules in the Optimain™ Product Suite. Either way, you can expect superior performance.

Optimain GIS

This optional interface provides automated facilities to create projects based on geographic attributes and network connectivity models. It also captures spatial risk factors like building proximity, service density, soil type, or ground cover from your enterprise GIS. Optimain DS is architected to interface with all leading GIS platforms, including GE Smallworld, ESRI, Intergraph, and Autodesk. OpvanteK also offers off-the-shelf integration with industry standard data models like ArcFM and Smallworld Gas Distribution Office.

Optimain DS Web Service

External applications (such as a leak management system or a work management system) can send information about leaks and pipe conditions to Optimain DS via a standard web service.

Product Architecture

Optimain DS is a client-server application that uses a number of data access tools to acquire pipe attribute, condition, and O&M information from existing company data systems and associate it with specific main segments and candidate projects. Optimain DS then uses the source data (“factors”) associated with each project to perform failure and economic analysis, risk assessment, and repair vs. replace evaluations. Listed are some of the components that comprise the Optimain DS solution.

Optimain DS Project Builder

To Optimain DS, a project is simply a way of establishing a “scope” or envelope of pipe segments and all related source records that may impact failures or consequences. The Optimain DS Project Builder provides several methods to create projects either automatically or manually. After a project is created, Optimain DS continuously monitors and refreshes source data as changes occur, such as new leak records, environmental data, or increased leak survey intervals. All project information is retained in the Optimain DS database. Individual projects can be viewed or updated in the Optimain DS Project Editor or the Multiple-Project Analyzer.

Risk Mitigation Planning

On a project by project basis, Optimain DS enables users to model risk mitigation alternatives from pipe replacement to increased

Optimain DS Evaluation Engine

Due to the flexibility of sorting, selecting and filtering projects by virtually any criteria, Optimain DS provides almost unlimited approaches for developing system-wide risk, economic, and optimal budgeting strategies. This engine, fed by the Statistical Analysis Engine as well as Business and Financial Rules, enables operators to prioritize projects to systematically reduce system-wide risk at the lowest economic cost.

Business and Financial Rules

Decisions that result in the replacement of a company’s existing assets are influenced by a number of financial factors and business rules. Optimain DS performs a discounted cash flow analysis of various alternatives (e.g. repair, replace, seal, increase surveys, etc.) and reflects the optimal program based on company business rules.

OpvanteK, Inc. also offers strategic consulting services to help our customers develop the factors and business rules that influence pipe replacement.

Service Pipe Integrity Program (SPIP) Module

Optional extension to the base Optimain DS product. SPIP extends Optimain DS to assess service pipe risk and support decision-making for the entire distribution network.