

Customer Case Study: **Enthalpy**



Enthalpy Uses the Flexibility of Prolog® Software to Develop Custom Cost Control Tools that add Significant Value to their Service Delivery

Enthalpy is an international project management firm based in Brisbane, Australia. Founded in 1988, the company has a second office in Chile and has managed projects in both developed and developing countries, including Argentina, Australia, Chile, China, Colombia, Congo, Iceland, India, Jamaica, Mexico, Papua New Guinea, Peru and Sweden. Enthalpy's primary markets are the mining and resources industries, although they also work on other types of projects, such as infrastructure and government jobs.

Enthalpy provides project owners with highly-qualified embedded teams that perform a variety of services on projects that can cost over \$1B AUD, including project management, schedule control, cost trending and forecasting, risk management, contract management support and scope definition. The company also offers high-level consulting services focused on capital investment systems. Enthalpy's continued growth can be attributed to rigorous project delivery methodologies that consistently demonstrate the company's dedication to success.

There's nothing typical about the projects Enthalpy takes on. From coal development feasibility studies and wind farm project management to geo-sequestration of carbon and route infrastructure planning for a rail line, the company's projects are as diverse as the clients they serve. Microsoft tools, like Excel spreadsheets and Access databases, got the job done, but each project was managed differently. A system designed for one client was not transferable to another project.

As a service provider, Enthalpy realized that clients expect more than a collection of homegrown Excel spreadsheets. In order to increase the value of the Enthalpy service, the decision was made to implement a proprietary system to standardize the company's project management processes across their wide range of clients and projects.

In 2004, Enthalpy was working for a client that used Prolog software from Meridian Systems. After a short assessment, the company purchased Prolog Manager via CADStation Solutions, a Meridian Value Added Reseller (VAR) in Queensland, Australia. Over the next several years Enthalpy successfully used Prolog, primarily for cost control purposes. The next challenge was to expand the standardization of their project management processes to incorporate additional Enthalpy teams and project functions.

Since Prolog didn't fit Enthalpy's unique needs directly out-of-the-box, due diligence needed to be done to confirm that it was the best solution for managing their clients' projects. During 2008, Enthalpy searched for the next generation in project management software. After many months of investigation, the company's internal team concluded that Prolog truly was the best fit for the Enthalpy model. The extreme flexibility and ease of customization ensured that Prolog could be configured to fit Enthalpy's requirements. And the transactional nature of the Prolog cost system ultimately set it apart from the other contenders. With reinforced confidence in Prolog, Enthalpy embarked on a major technology initiative to customize the software for their needs.

Innovations Provide a Competitive Advantage

After meeting with Meridian to develop a customization strategy, Enthalpy decided to keep Prolog's core database intact. To enhance the software to better suit their business, they built custom data groups and user forms, and developed new ways of interacting with Prolog data.

One of Enthalpy's best innovations to-date is what they call the Master Cost Transactions Data Group. This unique cost control tool, which is an extension of Prolog's existing Transactions Data Group, consolidates every transaction that impacts cost into a single data table. Each transaction is date stamped, which allows Enthalpy to run complex reports and queries to calculate things like curves on invoice costs and incurred costs or commitments, and plot projected cost on a month-by month basis.

The compilation of extensive cost data into one data group extends the reporting capabilities of Prolog and allows the Enthalpy teams to produce the same output - but with only 25 percent of the effort. On large, complex projects, producing equally complex reports with little effort means the Enthalpy teams can focus on their primary objective of managing projects, rather than manipulating data. This exciting ability gave Enthalpy the competitive advantage they were searching for!

Custom Tools add Value to Service Delivery

Another Enthalpy customization is the Hierarchical Budget Code Tool, which expands the number of budget codes available in each of Prolog's six Budget Lookup Groups. A four-level work breakdown structure (WBS), for example, can now be added within a single Budget Lookup Group. Enthalpy also designed an Incurred Cost module that adds incurred costs to the standard Prolog cost report. This report variation expedites monthly client progress billings based on incurred costs.

Using their in-house programmer, Enthalpy makes small Prolog modifications every week, such as writing custom reports and tweaking the user interface. Since the core Prolog database has not been modified, their customizations are not version specific. This is an important distinction since most of Enthalpy's clients purchase their own Prolog software, which is then enhanced by these custom tools. Enthalpy is currently running their innovative Prolog extensions on three different versions of Prolog for four different clients.

Although the Incurred Cost module fills a specific Enthalpy need, the company feels that many of their Prolog customizations would benefit other Meridian customers. Because of this, Enthalpy regularly engages with Meridian to keep the software development firm informed about their Prolog innovations. Ultimately, Enthalpy hopes to see some of their changes incorporated into future versions of Prolog.



A Best-in-Class Technology Strategy

The re-implementation of Prolog is part of a larger best-in-class technology strategy that Enthalpy is promoting to their client base. With Prolog as the foundation, the company is building a suite of best-in-class applications that handle everything from project management and scheduling to electronic workflow with signature capture and e-mail archiving. Enthalpy's technology strategy is solidified by the addition of the Enthalpy Integration Layer, which consists of tools and processes that enable the different applications to work together as a coherent, integrated system.

Enthalpy's business model requires the project teams to be nimble and provide different things to different clients. They can't make one set of standards and force every client to do things their way. Since each client is different, Enthalpy mixes and matches various systems to meet an individual client's needs.

Sometimes, Enthalpy must find creative ways to connect Prolog, and their other recommended solutions, to a client's existing software, such as their accounting or document management program. Although this can be challenging, the company has become adept at integrating different systems into the way they work.

Although Enthalpy doesn't see their best-in-class technology strategy as ever being "finished," they do feel that their initial plan is about 30 percent complete. Perhaps what is most impressive is that Enthalpy has done all the work in-house. "We don't have a team of software developers doing these things for us," states Project Systems Engineer, David Shacklady. "We're doing them ourselves in conjunction with our projects. Because of this, we don't take any software change lightly."

Client Development Benefits from Prolog

Since Enthalpy is still learning how to best utilize Prolog and is working toward process standardization, many benefits are still being anticipated. But the company's teams are on a continuous learning curve and aim to be "best-in-class" at using Prolog.

Yet Prolog has already delivered value to Enthalpy and their clients because project cost data is far more accessible, visible and available for analysis. Before, when Enthalpy used a range of spreadsheets, project problems were not always apparent before it was too late to act. Now, with quality data available through Prolog, the Enthalpy teams can identify issues early enough to take meaningful action.

Having the ability to recommend a strong project management system, and help their clients implement that system, has definitely benefited Enthalpy's client development efforts. The company's clients recognize the value of leveraging Enthalpy's experience to implement an effective project management system

in a timely and cost effective manner. And when the pressure is on to deliver results, Prolog has assisted Enthalpy in meeting – and exceeding – client expectations, especially when managing vast amounts of project data.

Flexibility Fits a Unique Business Model

Since Enthalpy has a fairly unique business model, it's not surprising that Prolog wasn't a perfect fit out-of-the-box. But the combination of Enthalpy's in-house skills and the inherent flexibility of Prolog allow the project management firm to address each client's requirements with custom solutions.

After Enthalpy's 2008 software research, their opinion of Prolog has strengthened. In the broadest possible context, Prolog has proven to be a fantastic project management system choice. "It covers everything," states, Shacklady. "And for the price, it's the most comprehensive, capable system Enthalpy could find in the market."



1720 Prairie City Road
Suite 120
Folsom, CA 95630
(800) 850 2660
www.meridiansystems.com

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