Customer Case Study

HDR, Inc.

Prolog® Software Powers HDR's Innovation Center by Delivering Standardization, Flexible Dashboard Reporting and Interoperability with Other Project Tools

Headquartered in Omaha, Nebraska, HDR, Inc. was founded in 1917 as the Henningson Engineering Company. Today, HDR is an architectural, engineering and consulting firm with more than 7,800 employees in 185 locations worldwide and annual revenues approaching $1.5B. HDR has taken a leading role in landmark projects such as the Hoover Dam Bypass, design upgrades for the Pentagon and the Comprehensive Everglades Restoration Plan, which is the world's largest ecosystem restoration effort. Thousands of smaller HDR projects have improved the quality of life in communities across the nation.

HDR is consistently ranked among the top architecture and engineering firms by leading industry publications, including Engineering News-Record (ENR), Modern Healthcare, Environmental Business Journal and Building Design and Construction. For example, Modern Healthcare has ranked HDR among the top four healthcare design firms every year since 1978, and ENR has ranked HDR among the top 50 design firms since 1967. While HDR's services have evolved to manage increasingly complex projects, one thing hasn't changed: their commitment to their founding values of respect, integrity, empowerment, innovation, teamwork and responsibility. HDR's mission is to be a superior professional firm known for vision, value and service to their clients, communities and employees.

HDR Design-Build, Inc. (DBI) is a wholly owned subsidiary of HDR, Inc. that was created to provide integrated design and construction services to private and public sector clients through a single point of responsibility. DBI is a fully bonded and insured construction management firm capable of working throughout the United States. DBI's staff of more than 50 construction specialists, including project managers, construction managers, superintendents, contract managers, estimators, cost engineers, schedulers and safety professionals, execute projects in the healthcare, civic, justice, science and technology, water, transportation, energy, power and Federal/environmental/resource management business sectors.

HDR's DBI team was using disparate technology tools to manage their projects, including Oracle's Primavera scheduling/project management software and Bentley's ProjectWise engineering collaboration tool. This meant that project and scheduling documents were managed in one system, drawings in another system and cost information in a third system. "We wanted the ability to use one system to track and store everything, from bidding through project closeout and the warranty phase," recalls Christy Eddington, DBI's project controls manager. In 2004, the company started looking for a new way to manage information.

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> *Christy Eddington*
> *Project Controls Manager*
> *HDR Design-Build, Inc.*

When evaluating project management systems, Meridian Systems was invited to demonstrate their Prolog software to the DBI management team. "Meridian's presentation really impressed the executives of our design-build group," Eddington states, "and the team selected Prolog as our project management tool of choice." One reason for this was Prolog's ability to integrate with ProjectWise, which would allow DBI's construction staff to easily collaborate and share information with their engineers and architects. Another reason was Prolog's ability to be implemented in phases. "Prolog was the perfect product for us because it offered the ideal blend of comprehensive functionality and superior flexibility," Eddington says, "and we could gradually implement the system over time."

A ProjectTalk® Solution Deployment

Since DBI manages projects all across the U.S., they chose to deploy Prolog via ProjectTalk, Meridian's hosted Software as a Service (SaaS) environment. They also purchased Prolog® WebSite to support Web-based sharing of information such as contracts, invoices and meeting minutes with the extended project team. DBI began their rollout of Prolog with just one user, Eddington, who implemented the Cost Control module first, followed by Field Administration and Document Management.

Over time, Eddington trained other DBI staff to use Prolog, using tactics like individual job-based training and group lunch-and-learn presentations. She credits Meridian's annual User Conferences for giving her the knowledge to handle most of DBI's training needs in-house. "I get a lot of training ideas from other users at the Meridian conferences," she says. "Each year, I try to take the best ideas and implement them within my company. Without attending those conferences, I wouldn't have been able to achieve such a successful implementation of Prolog at DBI."

Although implementing Prolog took time, 50 people within HDR's design-build group were eventually trained to use the software. At the design-build group's Kansas City headquarters, Prolog users manage contracts, costs and billing. In the field, job site personnel enter daily reports, inspections, meeting minutes and testing results, which allows the home office to monitor project activity in real-time. "It's taken us a while," Eddington says, "but we are now utilizing nearly 100 percent of Prolog's modules and features."

HDR Innovation Center

As DBI's use of Prolog expanded, HDR's corporate IT group was working on a bigger, organization-wide initiative called the HDR Innovation Center. As an initial goal, the Innovation Center will be a centralized toolbox containing all of HDR's project controls applications. By using Citrix to deploy Innovation Center desktop tools, such as Prolog, applications can be made available to employees across the country. "One of HDR's strategic goals is to provide all the tools needed by our project and design teams to meet the diversified requirements of our clients," Eddington says. "With the Innovation Center in place, no matter what the requirements are, a project team can simply pull the necessary tools from the toolbox and they'll be ready to roll."

When Eddington heard that HDR was adding Prolog to the Innovation Center, she championed the idea of installing Prolog first. When that idea got the go-ahead, Eddington migrated the company from ProjectTalk to the self-hosted Prolog Manager. In March of 2009, the Innovation Center went live with Prolog and Eddington has begun adding the company's other project tools, which include scheduling, estimating, ProjectWise and a homegrown project tracking tool used by HDR's water division.

"It was quite an accomplishment to have Prolog selected as the first tool within the Innovation Center," Eddington says. "Since that happened, there's been an increased interest in the software throughout the company. Prolog is now available and people want to learn how to use it." For example, various HDR engineering offices have stated that Prolog will be their tool of choice and the software is currently being used on one of HDR's high-profile transportation projects. And Eddington says that the interest in Prolog continues to grow. "We have teams of expert Prolog users popping up all across the country who can now help other teams adopt Prolog."

The Benefits of Flexibility

The flexibility of Prolog and the program's built-in controls have delivered many benefits to the entire HDR organization. "Overall," Eddington states, "Prolog helps us better manage our projects, resolve problems sooner, stay on schedule and bring jobs in on budget."

Standardization: The standardization of processes and reporting across all projects and business groups ensures that HDR management is presented with information in a consistent format. This reduces corporate risk by making it possible to recognize and correct problems early, and supports consistent project comparisons.

Powerful reporting: By applying filters and simple changes, HDR has modified standard Prolog reports to create custom data views. More advanced reports have been created with help from Meridian partners. "The key," says Eddington, "is having the flexibility to track information the same way across all projects while creating reports one way for this client and another way for that one. Prolog has a very powerful reporting system."

Forecasting: HDR has also leveraged Prolog's flexibility to create a forecasting tool that can accurately and reliably predict the financial outcome of a project early in its lifecycle. "We get high quality information from Prolog," Eddington says.

Real-time project status: The real-time dynamic of Prolog gives HDR greater insight into project status. "Before, we had so many versions of a document or drawing that it was really time-consuming to ensure that we had the latest revision," Eddington explains. "That issue has been eliminated. By tracking everything in Prolog, we quickly know, with certainty, which document or drawing is the most current."

Increased efficiency: Eddington reports that once Prolog was in place, DBI realized significant efficiency gains. These gains have become more widespread now that Prolog is part of the Innovation Center. "Prolog helps us operate smarter and accomplish more with the same number of people, which is important in the current economic climate," she states.

Switching to Prolog Converge

When Meridian unveiled Prolog Converge in late 2009, Eddington took notice. This new Prolog-driven application, which uses a rich Web-based user interface on a powerful Web services platform, offered HDR greater collaboration capabilities and the ability to create flexible data views using dashboards. The Prolog Converge architecture also supported interoperability between HDR's other Innovation Center tools. "We are now switching over to Prolog Converge so we can provide dashboard reports for our management and clients that combine information from all the tools within the Innovation Center," Eddington states.

For HDR, Prolog Converge will simplify training and make it faster – and less expensive – for project teams to implement Prolog. "With the Prolog Converge Web services capabilities, we will be able to achieve interoperability and provide higher quality information to our management and clients. The Web platform will allow us to tie our scheduling system to our Prolog costing system," Eddington explains. "We will also be able to share information easier, especially during the submittal process with our designers, and better manage our change orders."

Prolog: The Right Choice

Whether HDR was implementing ProjectTalk, migrating to the self-hosted platform or discussing the move to Prolog Converge, the Meridian support group has been there to help ease the way. "I've converted numerous systems at numerous companies and our Prolog implementation has been the most smooth, well-handled conversion I've been through," Eddington states. "Meridian and their partners have been excellent and there hasn't been a single issue they couldn't resolve."

Eddington's overall experience has been so positive that she is eagerly anticipating future Prolog capabilities. "Meridian is constantly updating Prolog, so there are always new 'bells and whistles' to discover," she says. "Everyone from our estimators and field staff to our upper management agrees: Prolog is the right tool for keeping our competitive advantage while growing HDR's programs."

HDR, Inc. Project Profile
Cancer Institute of Dallas in Duncanville, Texas

Esintex Properties, LLC selected HDR to design and build the Cancer Institute of Dallas, where patients can receive the types of cancer treatment and support that were previously available only at hospitals. The state of-the-art facility is specifically designed to comfort patients and their families and friends during a very difficult time.

The Institute incorporates strong geometric forms and volumes to designated spaces that offer solitude for the patient, provide a healing environment and create a place of hope. Planned, designed and constructed in just 17 months, the Institute is comprised of a structural steel frame, masonry, stucco and exterior brick veneer. The foundation was constructed of CIP concrete drilled piers. The portion of the building that contained the Linear Accelerator and CT scanner equipment was constructed of thick reinforced concrete walls and roof.

Project Cost: $4.5M
Completion Date: April 2008
Results: In November of 2009, the project was voted Best Private Sector Project Under $25M by the Design-Build Institute of America (DBIA), Mid-America Region.

Key Project Elements

❯ The design and construction teams worked closely together to assure that the facility would have efficient use of space for staff and patients, was easy to navigate and provided provide form and finishes that aid healing by providing a calming atmosphere.

❯ The design team was faced with the challenge of having to incorporate medical and radiation oncology care as well as services for patients who participate in clinical trials. Spaces specifically programmed into the project were designed to not only provide state-of-the-art care to the patient, but also to the family and/or friend that accompanies them.

❯ A multi-purpose room directly off of the main waiting space allows staff to provide educational services and holistic patient care. Yoga, acupuncture, nutritional guidance and counseling are just some of the functional spaces in the area of the facility.

❯ Solitude or interaction, whichever the patient chooses, was the versatile spatial requirement demanded of the design-build team. The patient's perception was key in creating a workable flow. Empathy for the patient's journey as they approach the facility, and as they make their way through the treatment process, was always the standout goal of the design-build team.