

Construction Case Study

Q & D Construction



Q&D Construction Uses Prolog® Software to Reduce Operating Costs, Increase Efficiencies and Help Grow Company Revenues by Nearly 600%

Q&D Construction, Inc. is a general contractor located in Sparks, NV. With three divisions (building, general engineering and special projects) and a millwork manufacturing facility, the firm is able to handle a wide range of construction projects including roads, bridges, parks, subdivisions, schools, hospitals, shopping centers, industrial facilities and estate homes. Since 1964, Q&D has tailored project delivery to its clients needs by offering design-build, design-bid-build, design assist, construction management and development management services. Q&D is ranked #184 on ENR's 2007 Top 400 Contractors List and has been named Contractor of the Year nine out of the last thirteen years by the Northern Nevada chapter of the Associated General Contractors (AGC).

Ten years ago, Q&D Construction, Inc. was a \$55M a year contractor on the edge of explosive growth. "We were using Microsoft Word and Excel to do a lot of our project tracking," explains Kathy Crutchley, Senior Project Administrator, "which was very time consuming and not very accurate."

Project Manager, Robert Herron, concurs. "The system was very inconsistent from user to user," he says. "We were going through a growth mode and everything was scattered. We needed to get our processes reeled in and streamlined to make things more efficient."

That's when the company purchased Prolog® Manager from Meridian Systems®. Prolog provided a centralized database for all of Q&D's project data along with standardized templates and forms to automate its processes. Although many of the staff were initially resistant to change, over time, Prolog became the foundation for the company's project management processes.

Building Best Practices

Today, Q&D generates annual revenues of more than \$325M and continues to grow at a steady pace. Prolog, which runs on a Citrix platform and is accessible from any Internet connection, is used extensively for cost control, document control and field administration. The company has standardized all of its project documents, including contracts, RFIs and potential change orders (PCOs) and has developed procedures around Prolog that optimize staffing.

"Every project document that we generate is standard now," says Crutchley, "which allows us to move employees around from project to project. If one project administrator (PA) goes on vacation, for example, another PA can step in on their behalf. We all know where the database is and what forms are being used." As a result, Q&D has been able to accommodate growth while taking its operations to a higher level.

"Over the last 10 years, we have grown our revenues almost 600 percent and we continue to grow at an average rate of 20-25 percent each year. Prolog contributes to that growth by reducing our operating costs through increased efficiencies. At this point, it's hard for us to imagine working without it."

*Robert Herron
Project Manager
Q&D Construction*

In fact, Prolog has become such an integral part of Q&D's programs that the company has built project management best practices and new-employee training around the software's capabilities. "Prolog is such an ingrained part of our company culture that it might as well have its own office," jokes Herron. "Seriously," he adds, "Prolog is so highly regarded at Q&D for its usefulness and value that we are never asked to quantify its return on investment."



Measurable Productivity Gains

Measurable gains in productivity are one reason why. "On the administrative side," explains Crutchley, "Prolog allows us to hire fewer people while doing a lot more work. Because of its standardized database platform, the PAs can process a lot of paperwork in a single day. I know of other companies with the same number of employees as Q&D that have much lower revenues because they are still using Word and Excel for project management."

Herron agrees. On the project management side, Prolog allows Q&D to work with a larger employee pool, an important factor to a large construction company in a competitive hiring market. "Some people are very organized and, while they don't need Prolog to stay on top of their jobs, it does make their jobs easier. Then there's the other spectrum of people who wouldn't be able to handle the work without it," he says. "Prolog helps us be more organized and goal-oriented so that we can build projects better, faster and on schedule."

Meeting Unique Needs

The customizable nature of Prolog provides the flexibility Q&D needs to take on unique projects. One example is a current joint venture with another large organization. To accommodate the other company's business practices, Herron

and Crutchley were able to modify the Prolog nomenclature, data fields and reports to make them more intuitive for that company's project team.

Many custom reports have also been built for in-house use, including a variety of deficiency reports from data gathered in the Prolog Issues module.

"The Issues module is so comprehensive that we've tailored reports by types and groups," says Herron. Weather delays, observational reports and results from consultant or engineering data are just some examples.

"We also scale back reports that have too much information for some project owners," adds Crutchley. "Take the PCO log. In some cases, we remove fields and columns so we can present a report to the owner that just shows how many days he

has had each PCO in his hands." This flexibility is invaluable to Q&D because of the wide variety of work that the company does.

Reducing Risk

Although Q&D's primary purpose for implementing Prolog was to better manage project documentation and paper flow, the software has been instrumental in reducing the company's risk.

"We had a court case where, because of our Prolog documentation, we won," states Crutchley. "We had identified a concrete issue in the beginning of the project and documented our concerns through multiple RFIs and the submittal process. When the concrete failed, we had the documentation to support our case."

This was a project that had been closed out two years earlier and Q&D was able to go into its Prolog database and easily search for the documentation needed. "Prolog probably saved us thousands of dollars on this one incident alone," adds Herron. "And the judge was impressed by how organized we were."

Authorized Meridian Reseller Partner Profile:

PCI Group

Location: Las Vegas, NV

Phone: 702-693-6560

Web: www.pcigrp.com

PCI Group also has regional offices in Arizona, California, Washington and Texas.

Staying Ahead of the Learning Curve

As the senior PA and primary Prolog administrator, Crutchley trains new PA's on how to use Prolog. She is consistently amazed at how quickly these new employees are able to learn the software. "We spend about six weeks training a PA to run a project, which is pretty fast. I think Prolog shortens the learning curve for most people," she says.

To keep herself up-to-speed on the latest Prolog changes so that she can train the Q&D staff on new features, Crutchley turns to authorized Meridian reseller, PCI Group. "PCI is the best," she says. "They offer structured Prolog classes and provide outstanding technical support."

Increased Efficiencies Reduce Costs

"Over the last 10 years," Herron concludes, "we have grown our revenues almost 600 percent and we continue to grow at an average rate of 20-25 percent each year. Prolog contributes to that growth by reducing our operating costs through increased efficiencies. At this point, it's hard for us to imagine working without it."

Q&D Construction Project Profile



The Mathewson-IGT Knowledge Center Located at the University of Nevada, Reno Campus

When complete, the Mathewson-IGT Knowledge Center will be one of the most technologically advanced libraries in the country. Computing and information technologies and support will be combined with the latest in multimedia tools and library resources in a physical environment designed for comfort, efficiency and collaboration.

Constructed in a mid-campus greenbelt, the Knowledge Center will have entries on three levels, ample seating on a covered porch and balconies off the conference and reading rooms. The project groundbreaking was September 9, 2005 and construction began March 20, 2006.

Key Project Elements

- › 300,000 square-foot, five-story building with red brick exterior
- › Entries at three different levels
- › 200-seat auditorium on the lower level
- › Special Tower Reading Room on level five
- › Covered porch with plenty of seating
- › Conference and reading rooms with covered balconies
- › Over 100 staff offices



Project Challenges

- › Document intensive
- › Schedule with liquidated damages
- › Coordination with another, directly-adjacent project

Estimated Project Cost: \$74,513,447

Estimated completion date: May 22, 2008

Anticipated Results: At 56% complete, the project was on schedule and on budget. With a "Hats off to the folks at Q&D Construction" from the University of Nevada, Reno, the project is projected to be completed as scheduled.



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