The Client

Mallot Creek Group specializes in designing agricultural, food and beverage manufacturing facilities and support systems. Food processing plant design requires special knowledge of health and safety requirements, as well as environmental regulations. Collectively, Mallot Creek Group principals and staff have decades of experience in the agri-food industry assisting public and private sector clients and government agencies. The company integrates concept development and strategic planning services with complete food safety Hazard Analysis Critical Control Points (HACCP), engineering and building expertise.

The Challenge

Existing CAD engineering staff at Mallot Creek Group were designing using Autodesk® AutoCAD®. After experiencing the benefits of Autodesk® Revit® MEP during a vendor’s “crash” online course, Mallot Creek Group’s Brian Harvey, Project Technologist and Revit Coordinator saw the potential to increase design productivity by adopting BIM across their entire practice. While Mallot Creek Group intended to improve productivity, they also wanted to adopt 3D so they could provide more detailed renderings to clients and potential clients at an earlier stage in plant design. The senior engineers at Mallot Creek Group, put their trust in their internal CAD team, deciding to once and for all break away from 2D AutoCAD and move to Autodesk Revit Architecture and Revit MEP.

The Solution

Adopting the new technology and determining how to implement it was the first step in this evolution. At first, a small group of CAD users took IMAGINiT’s robust, multi-day online training for Revit MEP. While this training was beneficial in helping attendees understand the software features, when they returned to their desks and tried to implement Revit on a real project, they realized that they still required some additional help.

Not everyone collaborating on a project understood what building information modeling (BIM) was and how Revit would change their workflows to support a BIM methodology. This created a knowledge gap in the organization. Since the senior process engineers were not familiar with BIM, the transition was a challenge. Harvey, who had taken the MEP training, along with his colleagues, convinced senior management at the company to train everyone on Revit.

“I knew that BIM was the way to go, but our initial attempt was less successful than we had hoped,” said Harvey. “We felt that getting IMAGINiT to come in and really work with us to understand BIM workflows would be beneficial. Because our MEP staff and architects work so closely together in our industry, taking the time and resources to train the whole team was essential.”
To get the entire company up to speed and running with the tools that enable BIM workflows, they contracted IMAGINiT Technologies to provide onsite, custom, project-based training. The Mallot Creek Group worked with IMAGINiT to use a smaller project as the basis for the custom training engagement – the addition of a retail outlet at an existing plant – in order to apply the BIM skills they would learn in a real world situation. Dedicated IMAGINiT training experts worked onsite for a week to get the team up to speed.

"Because we trained all 15 staff involved in the design process and we used an actual live project, our collective understanding of Revit and BIM grew exponentially," said Harvey. "As we were learning, we redesigned our workflow to take advantage of Revit's many efficiencies."

In addition to engineers, project managers were also trained for one day on the benefits and uses of Revit for project management. A key benefit of this training was that it led to a widespread buy-in for BIM across the company.

**Long Term Results**

**Live Design**

Now, once Mallot Creek creates a basic building envelope, they can take the mechanical and electrical components they've designed and link them in to the building model. They then use the combined model for coordination, clash detection and live design. "Live design is a huge help, in particular for complex facilities. We get into a boardroom with the designers and the client and show the client where we are and how the process will flow," said Harvey. "We can now create walkthroughs and our clients can experience how the plant will look and operate."

When dealing with food-processing and agribusiness, live design is extremely important because plants have to run efficiently – whether it's a poultry processing plant or a bakery. The building owner has to understand how the product, machines and people are going to move through the process in a safe and efficient way to optimize plant productivity.

**Winning Strategy Wins New Business**

The training provided by IMAGINiT continues to help Mallot Creek deliver 3D drawings and win new business. One client came to Mallot Creek Group with a rough CAD layout. In two days, Mallot Creek was able to create a basic Revit model including floor plans, elevations, cross sections and material take-offs. Previously, it would have taken a week or more to create this using traditional AutoCAD.

In another instance, a client was looking for a consultant to help them design a plant that they would manage and run for a third-party owner. Mallot Creek designers created a speculative 3D plant rendering. The consultant took the model to the future owner, who was very impressed with the design. This helped the consultant win the job of running the plant and in turn Mallot Creek won the business designing the plant.

"Making our clients look good to their clients is a huge benefit of working in 3D with Revit, said Harvey. "We believe that by converting into a full BIM shop, we have taken a giant leap over our competitors."

**About IMAGINiT Technologies**

IMAGINiT Technologies (imaginit.com), a division of Rand Worldwide, advances the way architects and engineers design, develop, and manage projects. Customers of this leading professional services and technology company include organizations in the building, infrastructure, manufacturing and facilities management industries. Fortune 500 and Engineering News Record's Top 100 organizations work with IMAGINiT Technologies to gain competitive advantages through expert technology consulting, implementation, training, and support services. As one of the world's largest integrators of Autodesk 3D design and engineering software, the team leverages unrivaled industry experience to design systems that accelerate innovation while improving project quality and profitability. For more information visit imaginit.com or rand.com.

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