

Customer Success Story

Workflow Simulation Services

Advanced Solutions was able to show a decrease of 40% in the average number of submittal and RFI process steps and provide a 48% decrease in administrative overhead.



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Creating Innovation through Process Improvement with Workflow Simulation

Kohrs Lonnemann Heil (KLH) Engineers, PSC, embarked upon an internal process improvement by partnering with Advanced Solutions, Inc. (ASI) to provide Workflow Simulation services.



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Company Overview

KLH Engineers is one of the largest engineering firms in Kentucky and Ohio offering mechanical, electrical, plumbing, communication and information technology, lighting design services, commissioning, and energy solutions. Since 1955, KLH has had the vision and drive to continually redefine engineering by stepping outside the box, taking chances, and developing to meet their clients' aspirations.

KLH is a forward thinking firm, striving to improve quality through process innovation and the adoption of technology. They are constantly looking at ways to automate "busy" work, so their engineers can focus on being engineers. Executive Director of Engineering, Joseph Kohrs, PE, said, "We're not afraid to take chances with the technology." He went on to say, "We don't want to be the guy who waits for the technology to mature before we utilize it. We feel that is a failed response in terms of being innovative and staying ahead of the competition."

Business Problem/Compelling Event

Advanced Solutions Workflow Simulation services were the perfect solution to demonstrate, predict, and measure workflow strategies for optimal performance at KLH through internal innovation. KLH has historically enjoyed an advantage over its competition, but has seen, with rapid changes in technology, the gap shrink from a 3-5 year advantage to 0-6 months. With the industry quickly adopting Building Information Modeling (BIM), the need to stay ahead of the game is crucial.

Two things make KLH the company that it is: the people and the technology. Leveraging technology to allow engineers to design more quickly and accurately, allows more time to service clients. This is where the collaboration with a process consulting firm became necessary. KLH needed a partner who recognized the challenges in the AEC industry, evolving technologies, and road blocks in integrating new data with current resources. Advanced Solutions (ASI) presented an ideal solution with Workflow Simulation.

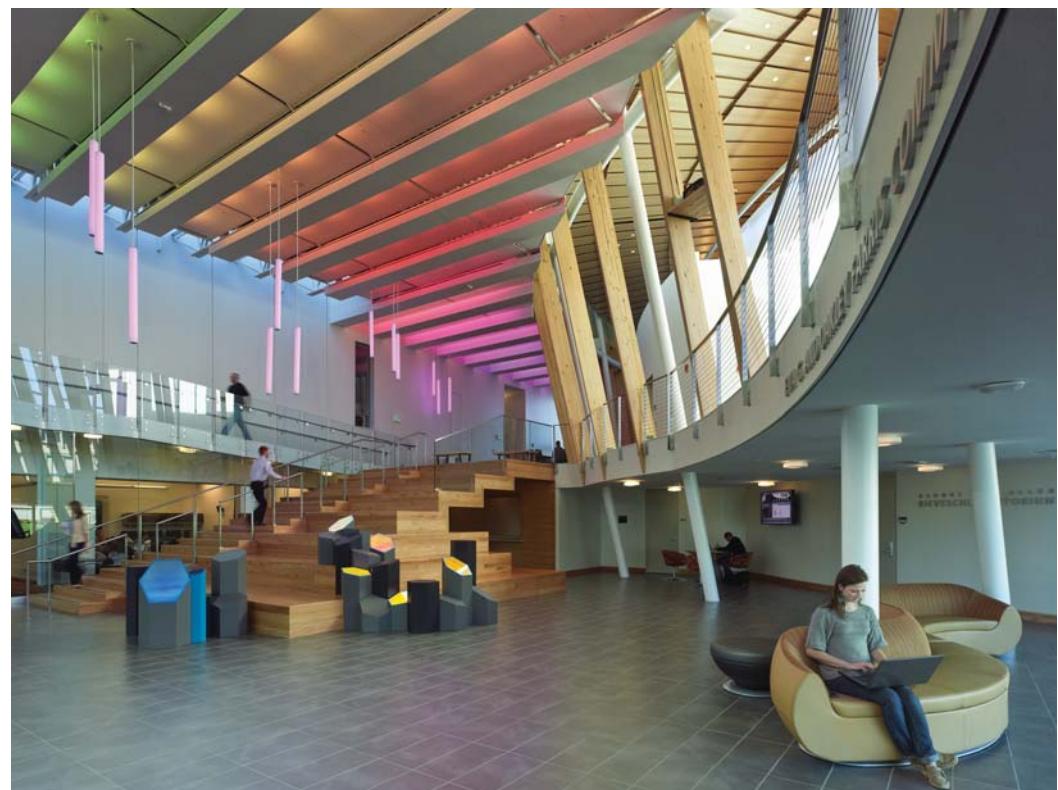
Advanced Solutions approached KLH Engineers to be a Workflow Simulation partner, just as the KLH team was looking to examine their RFI and submittals process to validate weak points and identify opportunities for improvement. Joseph explained, "We were more than willing to open up our doors, our thought process, and our systems flow, so they could do a deeper dive and understand what we were doing right and what we were doing wrong within our systems and help us."

The Solution

Industrial engineers from Advanced Solutions embarked on an intense study of the RFI and construction submittal process by interviewing employees throughout KLH. They gathered measureable data, evaluated current strategies, and looked into all aspects of their diverse service offerings.

The ASI team observed the submittal review process by shadowing members of the KLH Innovation Team to evaluate each step of the workflow. The KLH Customer Relationship Management (CRM) platform allowed for extraction of time management data related to the submittal process. Once the data collection phase was complete, the ASI team modeled the existing workflow using simulation software. They worked with the KLH team to validate the workflow model, making sure it was an accurate representation of the process. KLH Innovation Team Lead and Process Innovation Manager, Michael Brun, CTS-D, suggested ways to improve the existing process and provided guidance on modeling new scenarios to test changes and evaluate improvements.

Advanced Solutions was able to model the existing submittal process, validate current workflows, identify inefficiencies, explore alternatives, and simulate several new workflows for KLH to evaluate. Michael shared, "Advanced Solutions was able to compare the data from the existing process... with the new process, putting real time elements behind it, to help us understand



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whether that new process, in fact, would end up yielding the time savings that we were hopeful it would."

Performance

The Advanced Solutions industrial engineering team was able to present KLH with several automation options to evaluate, during the decision making process. The assessment allowed them to see the simulated outcome of each process improvement, instead of making large capital expenditures upfront on changes that may or may not work. KLH could clearly evaluate a successful process improvement against one destined to fail.

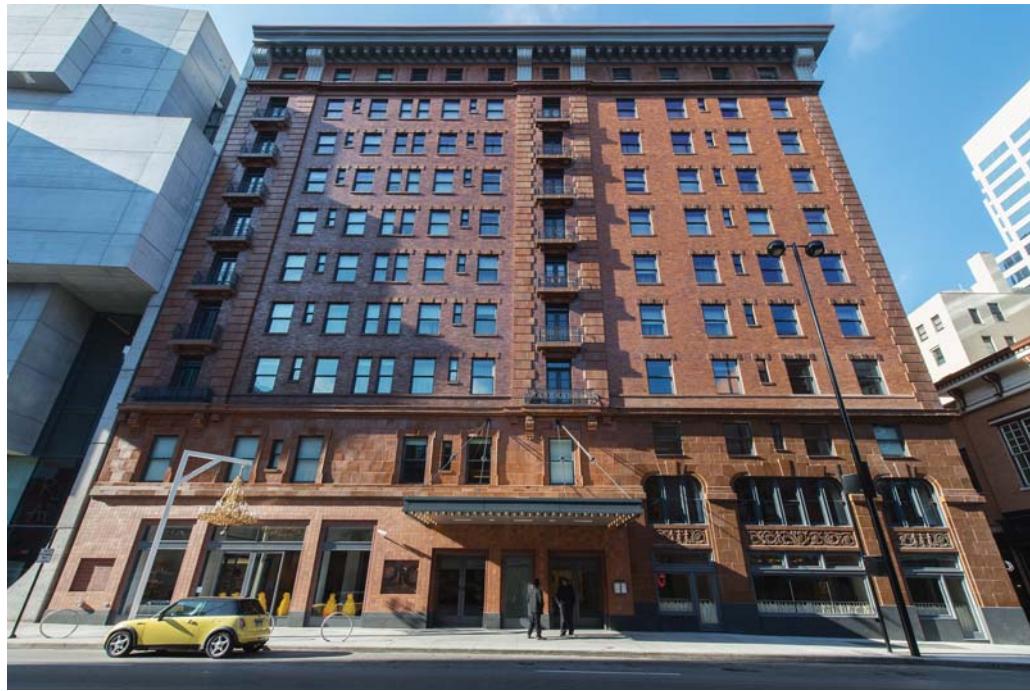
In the simulation environment, conclusions can be drawn without disrupting the current workflow or creating costly mistakes. The information gathered throughout the interview process allowed KLH to make informed decisions, in order to improve efficiency, eliminate waste and increase profit. Advanced Solutions was able to provide a knowledgeable team, with aligned industry experience, who were

personable, patient, flexible and focused on achieving success for KLH. Joseph stated, "They want to make a difference in this field of work and it shows." He went on to say, "Whether you are the CEO, programmer or director of IT, they present the data in a way that makes sense to you, no matter what your role is."

The Results and Benefits

Through the application of Workflow Simulation services, Advanced Solutions was able to look internally at process strengths vs. weaknesses and collaborate with KLH on the road map to improve their RFI and submittal process. ASI was able to separate itself from individual agendas and perceptions to objectively focus efforts towards KLH's organizational goals. Not only did ASI provide a prioritized strategy, but they validated when the process was working and eliminated unneeded changes.

Once KLH embarked on the RFI and submittal assessment, Joseph said, "We knew that we were going to save time and money with a change to the process.



21c Museum Hotel, Cincinnati, OH

What Advanced Solutions was able to give us was a forecast of those potential savings." Advanced Solutions was able to show a decrease of 40% in the average number of submittal and RFI process steps, provide a 48% decrease in administrative overhead, and confirm required workflow changes between the receipt of the RFI and processing by the engineer to meet the targeted turnaround time.

Furthermore, before implementing the changes suggested through the Workflow Simulation assessment, KLH experienced a 50% failure rate in meeting their targeted turnaround time. After 2 ½ weeks of implementation, having processed 190 units from receipt to completion, KLH was able to confirm an average reduction in turnaround time of 61%, showing drastic improvements in efficiency.

Final Thoughts

KLH sees the use of Workflow Simulation services as an investment in the company. They were able to simulate, validate, and even avoid unintended consequences by modeling their existing workflow process. Gaining knowledge about internal processes is an important part of continuous improvement and business growth.

Advanced Solutions is proud to have developed a lasting partnership with KLH. Joseph mentioned, "They have always been a partner of ours." He went on to say, "Whether they are providing us new services, such as the workflow simulation or Revit health checks to help audit our existing design process within Revit, we will continue to gain great information from this long partnership."