



MAINTAINING QUALITY with a Remote Workforce

BY BRUCE BURT

As it turns out, engineering firms were in a much better position than many businesses to weather the restrictions on mobility and personal contact in place during the pandemic. Several industry polls suggest that staff utilization and efficiency at engineering firms actually increased with the shift to a remote workforce.

The proliferation of collaborative software and other software tools that facilitate remote teaming no doubt contributed to this productivity increase. Our firm already had many of the necessary hardware, software and infrastructural tools in place, so transitioning to a completely remote workplace was a surprisingly seamless process.

One aspect of the transition, however, that gave us concern was maintaining project quality. How can a firm ensure the same level of oversight and review with a process that evolved through a culture of daily interactions? After some brainstorming and a review of our existing resources, we adapted our communication and quality assurance processes to meet the challenges of our remote work environment, while keeping the high

standards of quality essential to retaining clients and maintaining our strong corporate brand.

When faced with the sudden closure of our office due to the pandemic, it certainly helped to already have in place a quality process that was adaptable to the challenges of remote teaming and oversight. The basics of our quality process involve a Go/No Go review, Project Kickoff, Project Executive oversight, development of a project specific review process, and establishment of regular check-ins, with the client as well as the internal team. Fundamental project execution did not change, but new tools were necessary to facilitate the implementation of some elements.

One key component for transitioning to remote teams was a greater reliance on collaboration software. There are many products available, but Ruby had already begun a transition to Microsoft Teams, and the sudden conversion to a remote workforce rapidly accelerated its firm-wide adoption. We transitioned not only project-specific teams, but our management team and other initiative-focused teams to this collaborative software.

For instance, we converted our Quality Team and Technology Team to MS Teams and created a “COVID-19

“THE CHANGES HAVE STRENGTHENED OUR FIRM AND ITS QUALITY PRACTICES.”

Return to Office Team.” Our weekly manpower allocation meeting was held via videoconference, and we found that it functioned better than when we all huddled together in a conference room. In addition to these prosaic uses, our social chat channel addressed important water cooler conversations like the NFL draft and Netflix viewing recommendations. Maintaining the social aspects of our corporate culture was important to maintaining a semblance of normalcy and social interaction in uncertain times. We even managed to maintain our corporate Happy Hour, which we conducted weekly through a Zoom video conference (BYOB). What do these things have to do with quality? A lot, actually. An engaged, dedicated and cohesive workforce is critical to the long-term success of any organization. When there is trust, transparency and friendship among team members, there is often a shared sense of belonging and drive to excel.

We also looked for ways to understand how the varying personalities and communication styles of our staff affected remote work. Each staff member had already taken a personality assessment, and with their permission the results were shared with other staff members. Those that like getting straight to the point became aware of co-workers who might be off-put with that approach and who appreciated a more informal initiation in dialogue—like a chat or text versus a video call. Most successful teams consist of varying personality types and understanding these personality types, absent of verbal cues lacking in a remote setting, is important in minimizing conflict and maximizing teamwork.

Other software was also critical to our remote transition. We increased our reliance on Bluebeam Revu. Far from being merely a PDF converter, Bluebeam Revu possesses powerful collaboration capabilities. Rather than relying on marking up large format paper drawings (difficult to produce in a home office), we more fully utilized the markup tools within Bluebeam Revu. Bluebeam Studio Sessions allowed multiple users to concurrently mark up a cloud-based set of drawings. The resulting “check prints” were easily saved in an electronic project folder, more readily retrievable than a hard copy set. (For most users, two or more wide format monitors and the use of multiple on-screen windows made the review process even more efficient.)

We also more fully adopted features in Tekla Structures, a structural BIM software for developing data-rich 3D models and 2D design and construction documents. Trimble Connect allows real-time Tekla model sharing between team members and other project stakeholders.

And despite some recent hilarious online parodies highlighting their shortcomings, web-based meetings



became a vital tool for maintaining effective team communications. The number of platforms seems endless, and based on recent usage, each have distinctive features. Microsoft Teams is a great way to share screens between individuals or small teams, to discuss an immediate issue or to walk through an analysis model with a reviewer. GoToMeeting is a popular platform, and Zoom is great for large group chats. For Ruby, given the sheer number of different platforms, proficiency with several platforms was essential.

In the long run, the changes forced on us due to the coronavirus pandemic has strengthened our firm and its quality practices. Though maintaining a fully remote workforce is not in our plans, a number of changes we've made to manage this crisis remain part of our standard process. Going forward our staff will have more freedom to work from home using the same teaming systems we've put in place and refined over the last few months. One-on-one and small team meetings to quickly address issues are often more efficiently done remotely than a huddle at a conference table.

We've all become more adept at using tools we already possessed to create remote meetings, and to review computer models, drawings and calculations. With the confidence that comes with overcoming adversity, our team has an even keener focus on quality, and is armed with a new arsenal of supportive technology, collaboration and communication tools.



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