BLUEBEAM® **APPLIED** SOFTWARE GRAITEC GROUP

Scaling Up for the Digital Future

The next steps on your digital journey can enhance your firm's way of working and results.

By James Chambers

Architecture, engineering and construction (AEC) firms made an unprecedented dive into digital technology in response to the COVID-19 pandemic. Before that, the industry had a reputation for lagging adoption when it came to embracing new technology. However, the Centre for Economics and Business Research shows that the pandemic accelerated digital progress and adoption in the construction industry by three years.

What's more, the rise and stickiness of remote work forced a switch from previously analog processes to new and innovative digital ones. Now 60% of the workers who went remote at the start of the pandemic want to remain flexible and nearly 80% of businesses don't expect the same level of office attendance moving forward.

The Shift to Remote, Hybrid Work

60% Employees who went remote and want to continue a flexible work approach

79% Businesses that don't expect the same level of office attendance

Source: yougov.co.uk

These trends are welcome. Removing the daily commute at least some of the time promotes a healthy work-life balance, inspiring creativity and self-learning. This shift, moreover, can help construction industry firms deal with the shortage of skilled workers by retaining and attracting top talent who know they won't be tethered to a project site or office. The care and well-being of employees must be a primary consideration.

To support business continuity during the pandemic, many construction firms immediately bought digital technologies, allowing them to work primarily online. But often businesses made these purchases on a reactive basis—and some need a second look as they continue their digital journey. Firms are performing post-COVID risk assessments to better understand the positive impacts of digital and see where it can lead.

The digital way forward doesn't require overturning current operations or investing untold sums. Instead, firms can start with easily implementable intuitive tools and internal changes to culture. A simple approach can deliver significant improvement to the way of working.

Keeping the end goal in mind provides the best direction for construction firms' technology journey. Do you want to drive standards and quality, improve margin or pursue sustainability? Pinpointing what you hope to achieve will help as you assess skills and processes to ensure you're ready for digital. Then you can make the changes to culture and choose the optimal solutions to move your firm into the digital future.

Let's take a closer look at each step toward making digital scalable for your organization:

Start with Digital Principles

To move forward, construction firms need to become familiar with available technologies and engage the workforce and supply chain in implementing new solutions. The digital principles lay the foundation for this digital transformation.

1. Build your understanding of the tools.

Before you make decisions on your journey, learnabout digital tools and match them to internal skill sets and desired outcomes. Many firms are reevaluating their existing technology stack, auditing workflows and processes, and assessing how advanced tools will make a difference in the way they work.

2. Focus on internal skill sets.

You need to gauge the skill sets available in your firm, as well as the aversion to change. This will inform how you plan, deliver and roll out technology adoption.

Get your supply chain's input on how they've solved these issues for other companies—and how they've benefitted from advanced software and processes as well. Review project histories to identify where you can achieve the most value.

Then, target both your internal audience and supply chain with robust communications to ensure smooth adoption and positive results. This initial analysis and internal education are essential to lay the groundwork for new approaches.

3. Embed the right culture.

When you introduce new technology, you need to consider how you're going to manage change. If popular enough, a digital journey could be driven from the bottom-up, but most typically change comes from a top-down strategic goal. That requires helping your teams understand the value of digital to the firm and themselves. Gaining buy-in will feed wider adoption within your organization, supporting faster testing and evaluation of technologies and encouraging innovation.

4. Invest in training.

Your budget should extend beyond the software purchase and include training for your staff. Whether your teams learn better working hands-on or watching videos, make sure training is available to support them as they embark on digital adoption.

Find the Right Technology

You can choose among many different technologies —but here are some must-have attributes that ensure your digital investment produces the best results.

Flexibility: The technology must be flexible enough to change with your business demands. Set a roadmap from the start and outline when you'll need to adapt solutions. As your organization grows and you gain digital maturity, this process should become more advanced. A critical factor in technology choice is how it can scale—by working for your business now and in the future.

Support: Your choice should also factor in the support of a technology partner you trust and can work with closely. They should understand your business and be able tohelp you tackle issues in a systematic and logical way. You'll need their input to assure quick wins to gain buy-in and deliver fast return on investment (ROI) in the early stages of digital adoption and also to guide you as your digital journey continues.

Common data environment (CDE): A CDE is a means to store information that staff can access as a single source of truth to ensure efficiency. Ask your entire team for their take on information requirements and get buy-in from all project stakeholders to ensure optimal outcomes.

Interoperability: Before you select a platform or software, confirm that it's flexible enough to let stakeholders who need access share data and files. Avoid proprietary programs that don't play well with your existing systems.

Seamless integration: Your infrastructure and supporting teams will be the ones installing and maintaining whatever applications you choose. Work with them to ensure that the solution will interface smoothly with other business-critical applications your firm uses.

Upgraded processes and experience: Technology is not the be-all and end-all. How you can use it to improve quality of information, streamline processes and enhance user experience is the most critical aspect of all.

Tap the Power of the Cloud

Your choice of technology should also take into account the many advantages of cloud-based solutions over in-house programs:

Connect teams in different environments: Whether a worker is on site, at home or in the office, they can instantly access your system from any device they're using. You can also ensure all authorized individuals tap into the same data, files and information.

Gain peace of mind: Encryption of data transmitted over networks and stored in databases makes it less accessible to anyone not authorized. Your IT department can set security settings based on each user.

Audit usage: To determine how effective technology adoption is, you need to translate key workflows into digital processes. Then use the cloud's reporting capabilities to track who's doing what when, so you have an analytical audit trail of productivity and efficiency.

Reduce cost of ownership: Scaling up and managing and maintaining growth requires an investment in hardware and infrastructure within your organization and behind your firewalls, plus space for a rack or server room and dedicated IT support. Cloud-based solutions require far less hardware and can add storage as needed.

Collaborate easily: You gain the true benefits of teams if the members can view, share and discuss information easily and securely. Standardization across teams supports collaboration and moves projects along more smoothly.

Link geographies: As teams become increasingly fragmented and more people work remotely, you can connect jobsites with the main office and the client. That's critical if your offices span several locations and your team works around the globe.

Achieve a Return on Investment

Digital transformation requires a financial investment that your organization undoubtedly hopes to recoup and profit from. Start by identifying what positive ROI looks like at a project and organizational level. That way, you can have multiple wins.

Set a budget and establish key performance indicators (KPIs) to measure ROI. Your solution provider can help you identify the most relevant KPIs. Then ask yourself some pointed questions to set and track ROI:

- What are the long-term business needs for the solution you're planning to implement?

- If you document those needs, can you regularly assess how you've advanced?

- Were your needs and desired outcomes six months ago the same as they are now?

- Have there been shifts in the way you need to deliver projects or business?

- What quick wins could you achieve in terms of productivity gains, cost and risk reduction, or quality control?

- Does the solution's value continue as you reach digital maturity or will you need new tools?

- Is there ongoing training and communication in place to ensure you gain the most from the solution?

The right technology can help you build audit trails, spot managed risks, ensure compliance and ultimately drive learning to make projects more efficient. The ROI will come from greater value and a higher-quality deliverable and outcome.

Hilson Moran Compares Analog vs. Digital Side by Side

Hilson Moran is a large, UK-based mechanical, electrical and plumbing (MEP) firm that wanted to move from paper to digital delivery of projects and track the results of software usage. It had a unique and ideal situation for making a comparison — two similar projects and teams working for the same client.

The analog-based team drew from their experience, sketched out plans on their existing systems and merged the results. The digital team used Bluebeam's Studio Sessions to complete the project within a cloud-based collaborative environment.

Bluebeam Studio was almost 60% more efficient based on the side-by-side comparison. Using Studio Sessions will reduce Hilson Moran's paper costs a projected 50% in a five-year period.

The Analog vs. Digital Faceoff

60% Efficiency gain from using Bluebeam Studio Sessions

50% Projected savings over five years

Working within a real-time secure environment and subscription to Studio Prime also helped accelerate the company's cross-office collaboration. Hilson Moran coordinated design, review and collaboration across multiple offices in the United Kingdom—London, Farnborough and Manchester—and with the Qatar and Abu Dhabi offices, allowing for a chase-the-sun workflow.

The IT department set administrative controls over user access to Studio Sessions to ensure only authorized staff could use the tool. Within 18 months, Hilson Moran deployed Bluebeam as the standard project software within the organization.

Spot and Act on Easy Wins

If you develop a strategy designed to produce easy wins from the get go, you can start with small steps and investments and get buy-in from your team as they see results. Here's how to create the environment for easy wins and make them happen.

Plan both internal and external communications:
Bring your organization on the digital journey with you. Openly share and track your goals so everyone can see the progress you're making toward achieving them.

Show how digital makes your team's work life better:
Share case studies that quantify benefits and milestones reached toward tangible efficiency or financial gains, and do so using non-technical language. Makeprogress visual by sharing an internal webpage with digital progress and a ticker or crawler tracking projects being delivered in fewer hours or at lower cost.

Highlight the workers leading the digital charge:
Showcase the success of technology champions and digital adopters to encourage other team members to get onboard. Create internal opportunities for reward and recognition for eaching digital objectives.

Make digital adoption fun: If your team has an aversion to change, you may need to help them along. One large general contractor used Bluebeam to share a pizza menu every month. Before staff could select the pizza they wanted, each person had to create a login. They could then collaborate with their co-workers on pizza types and toppings. Not only did the staff ultimately get pizza, but they bought into a digital strategy.

Scale for Your Digital Future

You can drive digital transformation by setting standards from the outset, including data requirements and KPIs. Choose technology that's flexible, easily scalable and suited for your business needs and supply chain. Outline the process for collaboration in the cloud, ensuring everyone can view the latest information and understand the technology as your digital maturity advances.

In the end, the digital journey does not need to be a large, expensive, frightening adventure. By starting small and identifying quick wins, you can ease the path, gain buy-in from your workforce and reap the benefits of making digital scalable.

About the writer

James Chambers is the director of global industry development at Nemetschek Group, where he focuses on growing and advancing the construction industry through digital adoption. James is also an active member and participant with numerous industry affiliations and strategy advisory boards. He holds a Bachelor of Science degree in 3D Design with Applied Mechanical Engineering from Sheffield Hallam University, UK.

About Bluebeam Inc.

Trusted by over 2.4 million individuals in more than 165 countries, Bluebeam's smart, intuitive solutions advance the way technical professionals work, manage and collaborate on projects digitally. Founded in 2002 in Pasadena, CA, Bluebeam has grown to include additional offices in California, Texas, Illinois, Germany, England, Denmark, Sweden and Australia. Bluebeam is part of the Nemetschek Group.

About Applied Software, Graitec Group

Founded in 1982, Applied Software has remained dedicated to providing our customers with the technology and innovation needed to move their business and industry forward. With a broad range of world-class solutions, services, and training we help you leverage your competitive advantage. For more information visit asti.com.

APPLIED SOFTWARE GRAITEC GROUP   BLUEBEAM Platinum Partner