DODGE DATA & ANALYTICS | THE BLUE BOOK NETWORK

SmartMarket Brief

Bentley Advancing Infrastructure
Premier Partner

Going Digital

Modeling, Scheduling and Field/Project Management for Civil Construction

Contents

ABOUT THIS SMARTMARKET BRIEF

This *Going Digital SmartMarket Brief* is the first of a two-part series exploring digital capabilities in civil construction. This report takes a deep dive into the use and benefits of two tools that can provide a critical foundation for wider development of other digital capabilities.

- **Model-based technologies** provide key workflows, and they can also be critically important for integrating the data from other digital tools to provide a full, data-driven approach to the construction of civil assets.
- **Field and project management tools** bring together the fundamental data that contractors need to improve key project outcomes like budget control, schedule management and productivity.

The findings for each reveal the powerful capability for technology to improve project processes and outcomes in civil construction, especially for schedule management and reducing risk. They also identify what results will help attract wider use of these tools, and ultimately improve project performance across the entire civil sector.

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MESSAGE FROM BENTLEY

For those that follow the construction software and technology market, there is a noticeable uptake in technology among construction firms. More and more construction firms are going digital to automate workflow and, in some cases, transform their workflows to drive greater efficiencies and collaboration. Most of the investment in digital technologies has been focused on solving the complexity associated with delivering vertical/building projects and not as much on the linear projects.

This report looks to bring to light how the civil construction industry is using construction technology and its capabilities. For horizontal projects, owners and construction firms have the same issues related to cost, budget and risk, and also follow roughly the same process flows as buildings. The difference is the context in which the projects are completed – the linear and/or spatial context in which workflows occur. This context is also the source of complexity in which resource planning and management is the key to success. How are these differences being addressed and what is the outlook for the global construction technology? We hope to help shed light on this situation as we strive to help construction cross the chasm to digital construction.

Introduction

INTRODUCTION

Contractors are increasingly relying on digital tools for their projects, but as several previous studies by Dodge Data & Analytics have revealed, civil contractors in the US often lag behind those in the vertical building sector in their efforts to go digital.

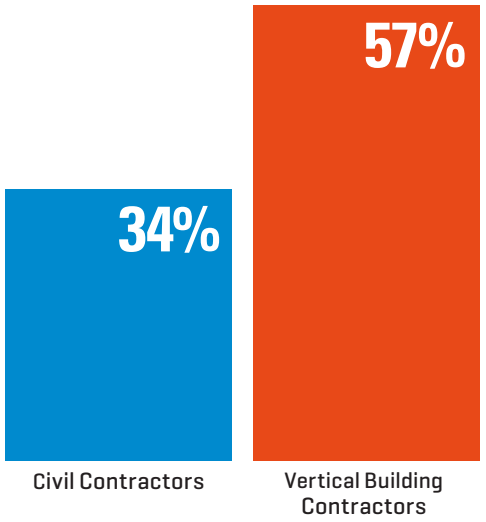
This study does a deep dive into the use of two broad categories of digital tools in civil construction: model-based technologies and digital tools for field management and project management. While the study focuses on contractors who engage in horizontal/infrastructure projects, a small sample of vertical building contractors were also surveyed, and their responses are referenced throughout the findings for comparison.

USE OF MODEL-BASED TECHNOLOGY

While becoming well established among vertical building contractors, with 57% reporting that they use these tools, it is still gaining hold among civil contractors, with only 34% using this technology. The first section of this report explores the responses of those civil contractors, including how they use this technology, the top benefits they experience from its use—including a specific examination of how they help to reduce schedule delays—and how to improve those benefits in the future.

The final section provides insights into civil contractors who do not use this technology, including their interest in doing so and the top benefits that would encourage them to actively consider adopting it.

Currently Use Model-Based Technology on Projects



Introduction

USE OF FIELD MANAGEMENT AND PROJECT MANAGEMENT TOOLS

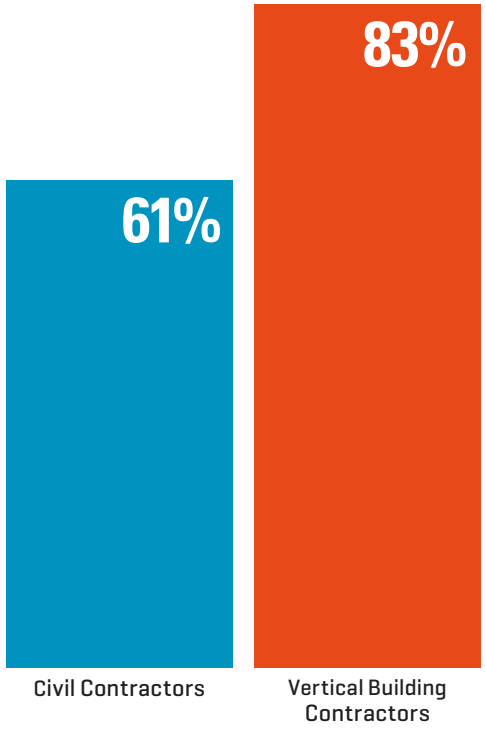
The second section of this report provides a similar examination of field/project management tools, with a greater focus on the benefits provided by these tools and how they help civil contractors get more value out of their project data.

The final section offers the perspective of the 39% of civil contractors who still have not engaged with these tools, again revealing their interest in doing so and the top benefits that would encourage adoption.

DIGITAL TRANSFORMATION OF CONSTRUCTION

As these digital technologies become more suitable for the unique aspects of civil construction and more public works owners contemplate the use of digital twins, reliable data will become increasingly important. Having a better understanding of how these tools are used on civil projects and the benefits they generate, along with what is needed to encourage use among civil contractors who have resisted it thus far, is essential to continuing the successful digital transformation of the industry.

Currently Use Field Management and Project Management Tools



Model-Based Technology

MODEL-BASED WORKFLOW ACTIVITIES

Civil contractors who use model-based technologies were asked to select the activities they conduct with model-based workflows on any of their projects from a list of 10 options, shown in the charts at right and on the next page. Those using each activity were asked on what percentage of their projects they use them, and those percentages are referenced in the analysis below.

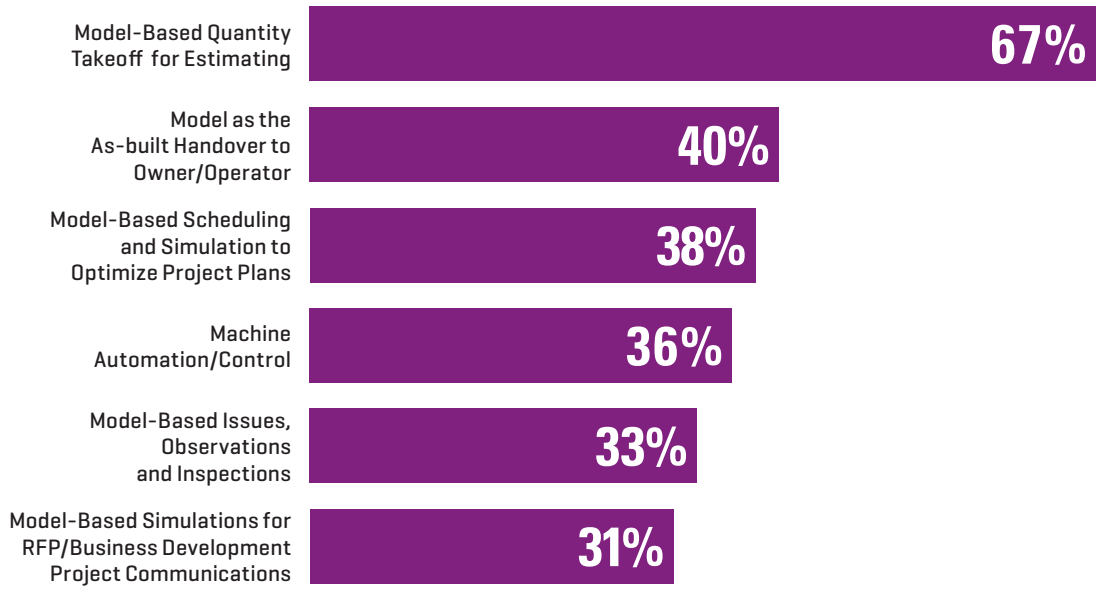
MOST COMMON ACTIVITIES

By far, the most common activity is model-based quantity takeoff for estimating, which is used by 67% of these civil contractors, with most (82%) doing so on half or more of their projects. Though over half of vertical contractors also conduct this workflow, far fewer do so on most of their projects.

The other common workflows studied are used by 31% to 40% of the civil contractors who employ model-based technologies. An encouraging sign is that half to three quarters do so on 50% or more of their projects, clearly demonstrating the value they are receiving.

Common Model-Based Workflows

Share of Civil Contractors Using Model-Based Technology Who Employ Each



Model-Based Technology

Further reinforcing that point, when the contractors using these model-based workflows were asked to rate their value for improving project outcomes, 80% or more rated them to be of high/very high value. This no doubt contributes to users' extensive implementation of these workflows.

These findings are particularly important for those who use model-based technology but who have not engaged in these workflows yet, since it demonstrates a compelling argument for investing the time and resources to start doing so.

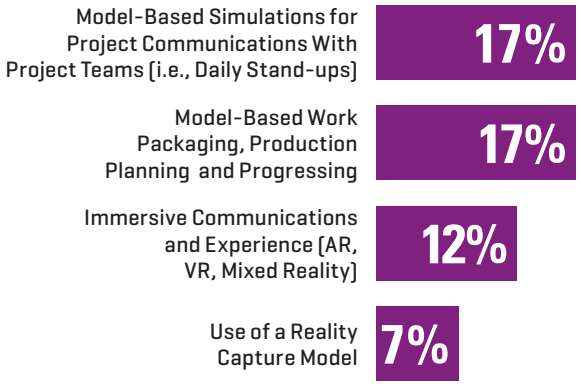
EMERGING ACTIVITIES

Because only a small share of civil contractors currently use the four activities in the chart at right, they are classified as emerging. However, the few who do so also nearly unanimously report experiencing high/very high value from their use, which suggests that these may also be more widely adopted in the future.

80%+ of civil contractors who use model-based workflows rate each as having high/very high value

Emerging Model-Based Workflows

Share of Civil Contractors Using Model-Based Technology Who Employ Each



Model-Based Technology

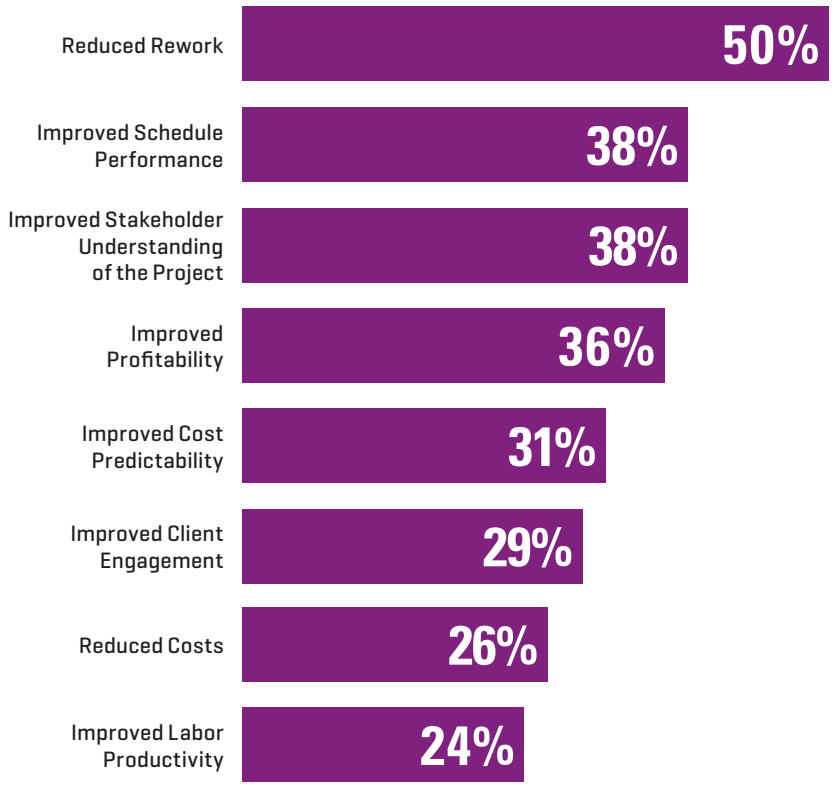
TOP PROJECT OUTCOME BENEFITS OF USING MODEL-BASED TECHNOLOGY

Civil contractors who use model-based technology were asked to identify the top three project outcome improvements they experience due to its use from a list of nine options, eight of which are listed in the chart at right.

- Half of the contractors select reduced rework in their top three, the only option to be selected by half or more. Rework impacts schedule, budget and profitability, so strategies that help prevent it can have a broad impact on project outcomes.
- About one third of contractors place several benefits—such as improved schedule performance, better stakeholder understanding of the project, improved profitability and improved cost predictability—among their top choices. This suggests that all these benefits are widely experienced and nearly equally valued.
- Notably, more civil contractors (36%) report improved profitability than do the vertical contractors (11%) included in the study.
- Unfortunately, improved safety performance is only cited by 2%, so it is not included in the chart. Perhaps as the use of model-based technologies advances, more contractors will report positive safety impacts.
- Civil contractors were also asked if there are other benefits than those included in the chart that they achieve, and over one quarter mentioned visualization.

Top Project Outcome Benefits of Using Model-Based Technology

Selected in the Top Three by Civil Contractors Who Use Model-Based Technology



Model-Based Technology

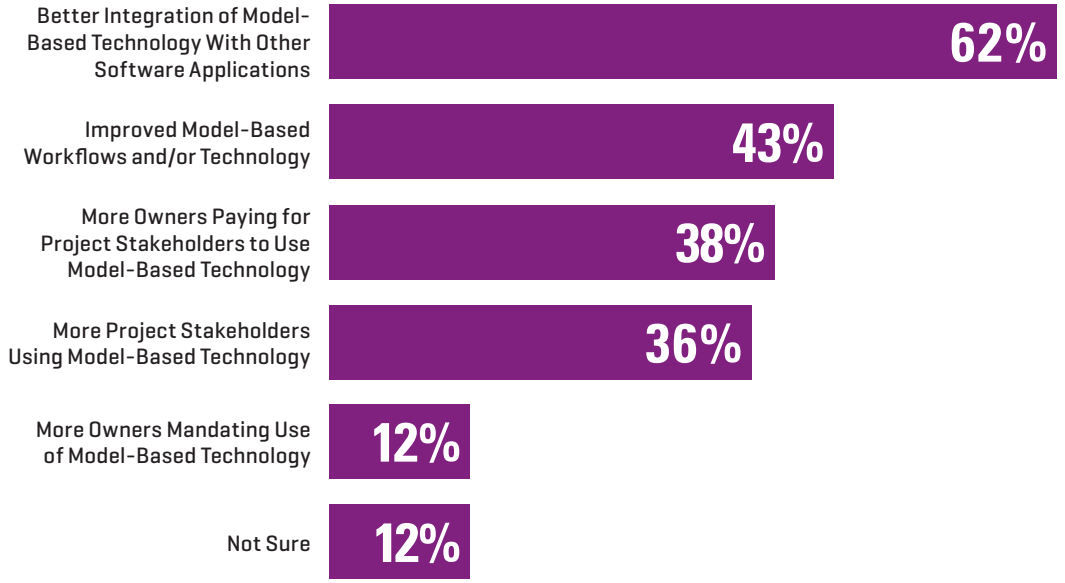
FACTORS THAT INCREASE THE VALUE OF MODEL-BASED TECHNOLOGY FOR CIVIL CONTRACTORS

Civil contractors were asked to select the top three factors that would increase the value of model-based technology to their company from the list of five options at right.

- Most (62%) agree that better integration of model-based technology with other software applications would increase its value. Contractors are deploying an increasing number of digital solutions and are often required to adopt different tools on different projects. Model-based technologies that can work with an array of software applications are therefore quite valuable for them.
- Nearly half (43%) also find improved model-based workflows and/or technology to be a top factor to increase value.
- Use by other stakeholders is also important, with 38% selecting owners paying for project stakeholders to use model-based technology and 36% looking for wider stakeholder use.
- Many more vertical contractors than civil ones find that owners paying for project stakeholders to use model-based technology (67%) or mandating use of it (37%) would increase its value.

Factors Most Likely to Increase the Value of Model-Based Technology

Selected in the Top Three by Civil Contractors Who Use Model-Based Technology



Model-Based Technology

MOST IMPORTANT IMPROVEMENTS TO MODEL-BASED TECHNOLOGY

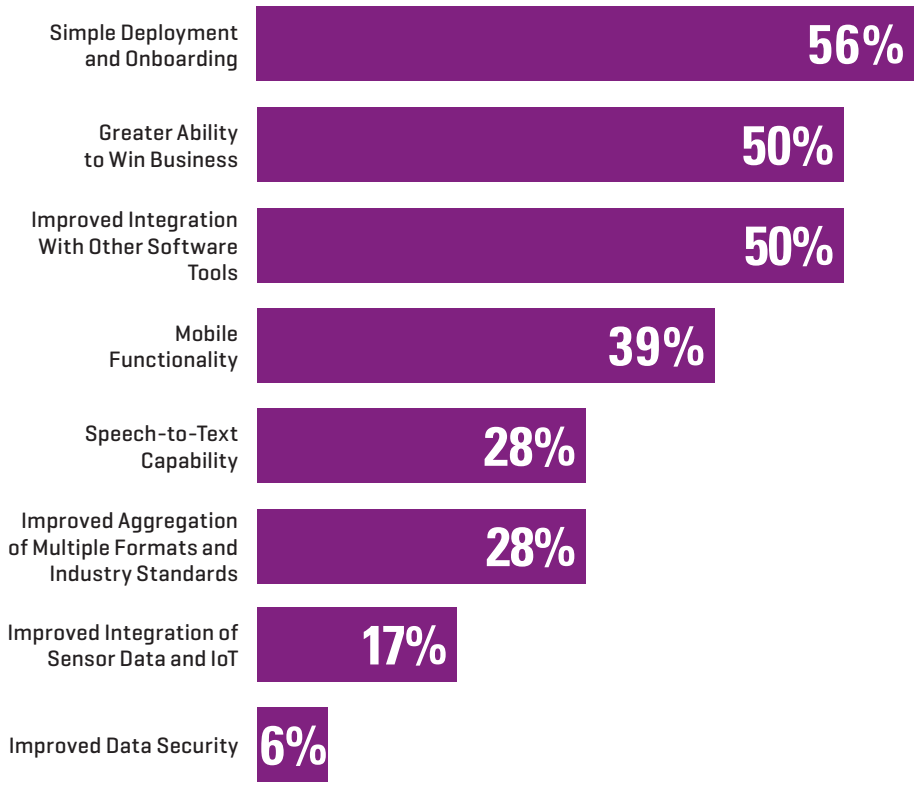
Civil contractors were asked to select the top three improvements that would most increase the value of model-based technology for their company from the list of eight options in the chart at right. Many of the top findings fall into two larger categories.

- **Ease of use:** Ease of use is clearly of great importance to civil contractors as they consider improvements to model-based technologies. Simple deployment and onboarding (56%) is the top improvement, but better integration with other software tools (50%) and mobile functionality (30%) also contribute to greater ease of use. This is important since the software needs to function as effectively in the field as it does in the office and contributes best to productivity onsite if it is easy to use on mobile devices.
- **Increased functionality:** They also value improvements that allow model-based technologies to do more, including increasing their ability to win business, speech-to-text capabilities and improved aggregation of multiple formats and industry standards.

Interestingly, few contractors consider improved data security a needed improvement. Breaches in data security at construction companies are occurring more frequently, so this issue is likely to become increasingly important.

Most Important Model-Based Technology Improvements

Selected in the Top Three by Civil Contractors Who Use Model-Based Technology



Model-Based Technology

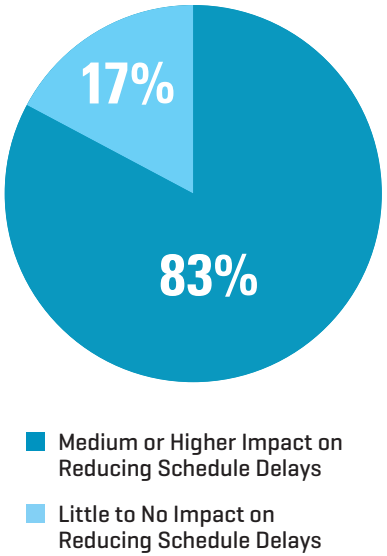
IMPACT OF MODEL-BASED SOFTWARE ON REDUCING SCHEDULE DELAYS

Civil contractors who use model-based technology were asked to rate its impact on reducing schedule delays using a five-point scale from no impact to very high impact. As the pie chart at right reveals, most contractors (83%) believe that this software has a medium to very high impact on reducing delays.

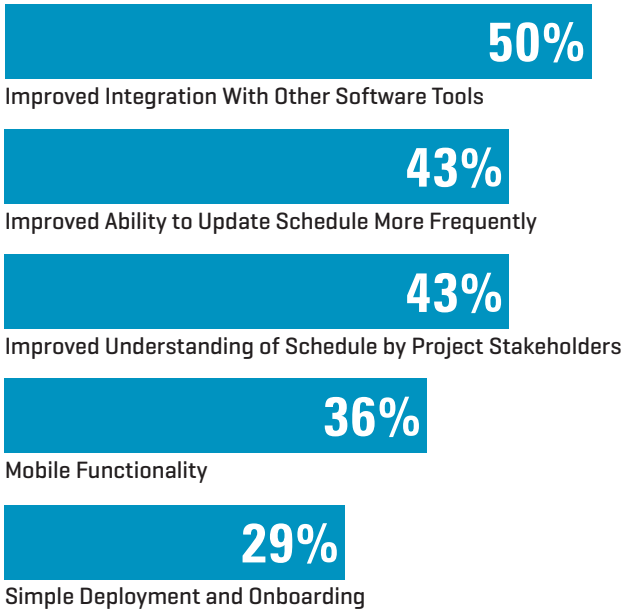
Contractors were also asked what improvements to the software would be most effective in reducing schedule delays. This question was asked of all using model-based software, but since most users report a reduction in schedule delays, it is likely that many are asking for more of what has already worked most effectively for them.

- The top factor again—similar to previous findings on pages 7 and 8—is improved integration with other software tools, reinforcing the value placed on this functionality by civil contractors.
- Tied for second place is improved ability to update the schedule more frequently and improved stakeholder understanding of the schedule. In combination, these clearly demonstrate the importance of model-based tools to help create a single, reliable, up-to-date resource for all team members to understand the project schedule.

Impact of Model-Based Software on Reducing Schedule Delays



What Improvements to Model-Based Software Would Most Effectively Reduce Schedule Delays



Field and Project Management Tools

GETTING VALUE FROM PROJECT DATA THROUGH FIELD/PROJECT MANAGEMENT TOOLS

DEGREE TO WHICH TOOLS HELP CIVIL CONTRACTORS TO GET VALUE FROM PROJECT DATA

Civil contractors who use field/project management tools were asked about the degree to which those tools allow them to get the most value from their project data. As the pie chart at right shows, nearly all (97%) report getting value at a medium or higher level from their data through the use of these tools, and the majority (61%) experience high/very high value.

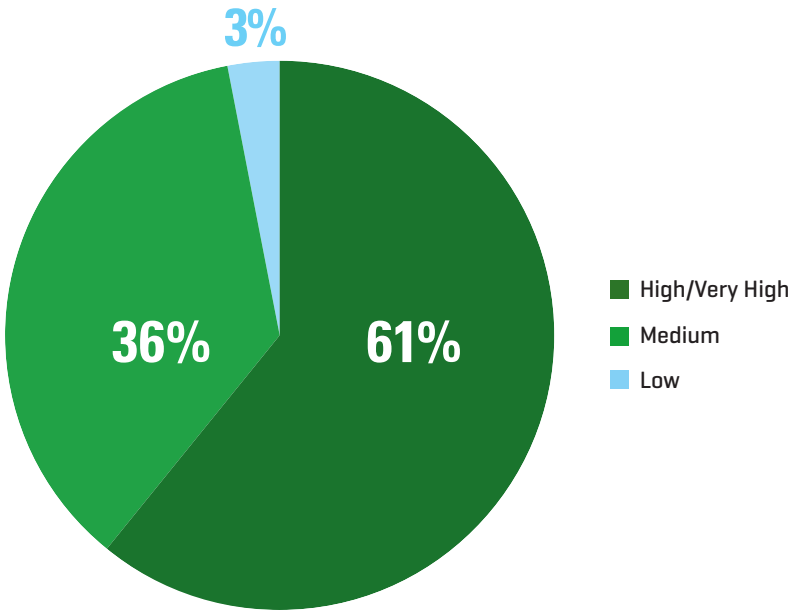
This result not only shows that the tools are essential to many of the contractors who use them, but it also suggests how important utilizing project data is for civil contractors.

MOST IMPORTANT WAYS THAT FIELD/PROJECT MANAGEMENT TOOLS HELP CONTRACTORS GET VALUE FROM PROJECT DATA

The civil contractors who reported a medium or higher level of value from their project data due to the use of field/project management tools were asked how those tools helped them to get greater value. They could select the top three most important ways from the list of nine options in the chart on the next page.

Degree to Which Field/Project Management Tools Help Civil Contractors to Get the Most Value Out of Their Project Data

According to Civil Contractors Who Use These Tools

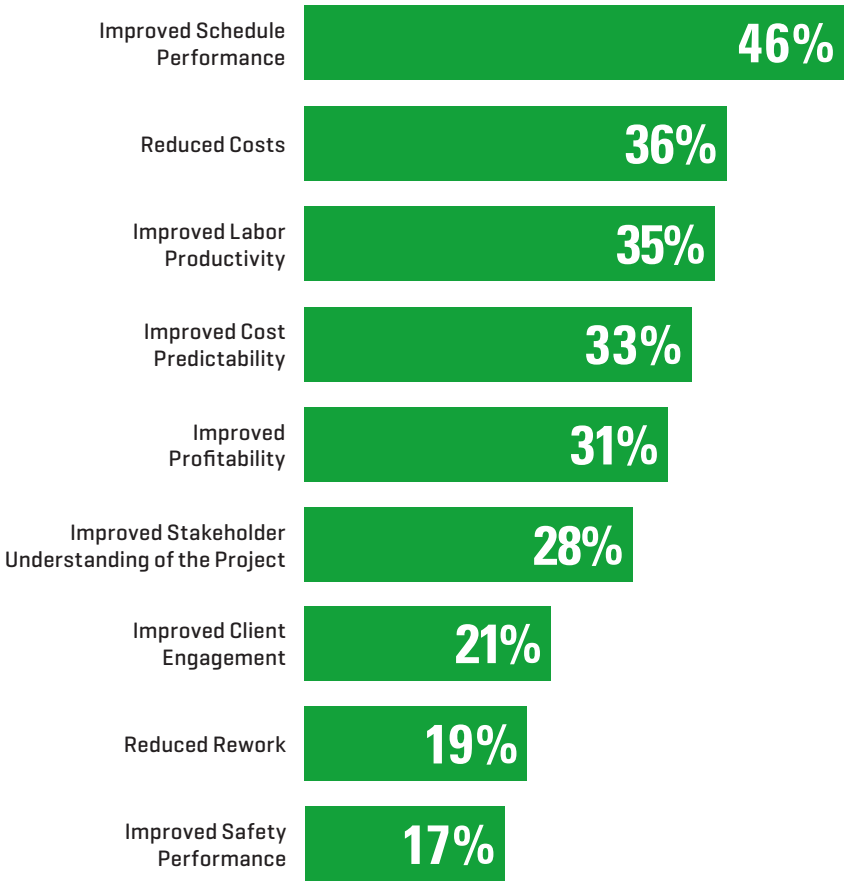


Field and Project Management Tools

- Improved schedule performance is the top way that field/project management tools help civil contractors get the most value out of their project data. Effective schedule management is key not only to the success of a project but to contractors' ability to manage work across their portfolios.
- Cost and profitability impacts are also widely noted as important by about one third of civil contractors. Interestingly, only 11% of vertical contractors select reduced costs among their top three options, and only 13% select improved profitability.
- Improved labor productivity is also selected among the top three factors by about one third of civil contractors. Clearly, this can have a positive impact on both schedule and budget/profitability, so it is not surprising to see the value placed on it by civil contractors, especially since many self-perform much of the work on their projects.
- Improved stakeholder understanding of the project is another important way that civil contractors believe that they get value from project data through use of these tools, but it is not selected by as large a share of civil contractors (28%) as vertical building ones (58%). This is likely due to the fact that civil contractors frequently self-perform a larger share of their work than most vertical building contractors, but even so, it still is selected by a notable percentage as a top factor.
- Once again, only a small share (17%) currently report that improved safety performance is one of the most important ways that these tools help them get the most value from their project data, despite the fact that schedule (the highest performing factor) and safety can be closely interrelated on a civil project site.

Most Important Ways Field/Project Management Tools Are Used to Get the Most Out of Project Data

Selected in Top Three by Civil Contractors Who Get Medium or Higher Value From These Tools



Field and Project Management Tools

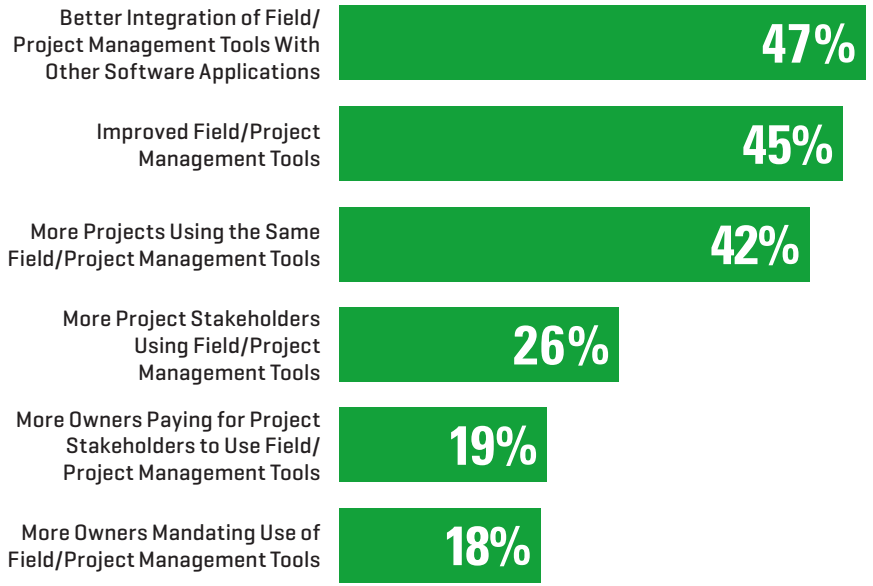
FACTORS THAT WOULD INCREASE THE ABILITY OF FIELD AND PROJECT MANAGEMENT TOOLS TO HELP CIVIL CONTRACTORS GET VALUE FROM PROJECT DATA

Regardless of the degree to which they currently find that field/project management tools help them get value from project data, all civil contractors who use these tools were asked what factors would increase their ability to get more value. They were asked to select up to three from the six options shown in the chart at right. Three factors clearly top the list:

- Civil contractors find that better integration of these tools with other software applications would improve their ability to benefit more from project data. Given the growing number of software tools available for the jobsite, it is not surprising that this is a priority.
- Nearly as important to them is the ability to use the same tools on multiple projects. As stated previously, contractors are often forced to shift tools based on owner requirements, and this creates challenges for them to work with data across projects at their companies.
- As with the modeling tools, few believe owner mandates or even owners paying for tools would directly increase their value.

Factors That Would Increase the Ability of Field/Project Management Tools to Improve the Value of Project Data

Selected in the Top Three by Civil Contractors Who Use Field/Project Management Tools



Field and Project Management Tools

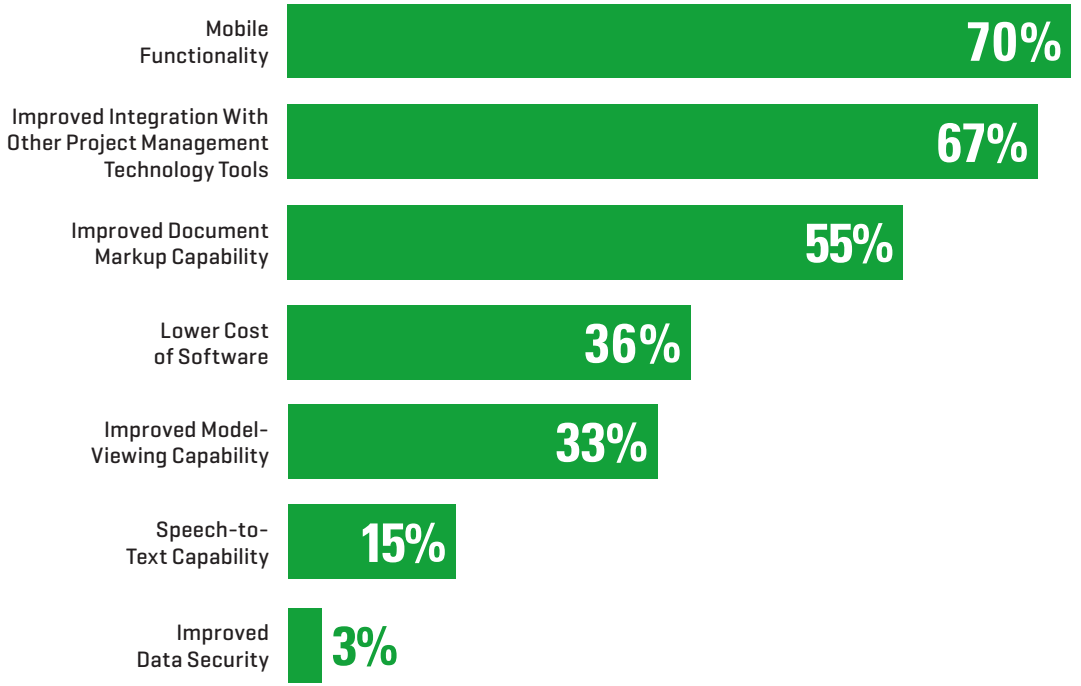
MOST IMPORTANT IMPROVEMENTS TO FIELD/PROJECT MANAGEMENT TOOLS

Civil contractors who use field/project management tools were asked to select the top three improvements to those tools that would be most important to their company. They could select from the seven options shown in the chart at right.

- Mobile functionality is included in the top three by 70%. Notably, this functionality is of particular importance to civil contractors, as only 33% of the vertical building contractors using field/project management tools list it in their top three. This makes sense because a civil project is typically more spread out than a vertical one, making mobile functionality more essential.
- Similar to modeling tools (see page 8), civil contractors also find improved integration with other project management tools to be important, probably because they are often required to use a variety of tools on different projects.
- Improved document markup capability is more important to civil contractors than improving their model-viewing capability, which shows that the industry is still in transition to widespread use of modeling.
- Consistent with an earlier findings (see page 8), data security is not yet a priority for civil contractors.

Most Important Improvements to Field/Project Management Tools

Selected in the Top Three by Civil Contractors Who Use Field/Project Management Tools



Field and Project Management Tools

IMPACT OF FIELD/PROJECT MANAGEMENT TOOLS ON PROJECT SCHEDULE

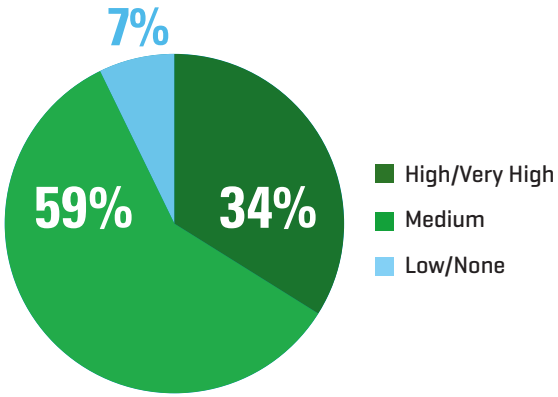
When asked the degree to which their field/project management tools reduce schedule delays, nearly all civil contractors (93%) using these tools find they have a medium or higher impact, with most falling in the medium range, as shown below at left. This is in contrast to vertical building contractors, who more frequently report high/very high impact on reducing schedule delays (52%) but also have a higher percentage who find little to no impact on delays (16%).

Civil contractors using these tools were also asked what factors would most effectively reduce schedule delays, from a list of six options. The top four are shown in the chart below.

Fewer than 20% of civil contractors believe that owner mandates for stakeholders to use these tools would help them reduce schedule delays, consistent with the previous findings about the value of owner mandates to improve these tools more generally (see page 12).

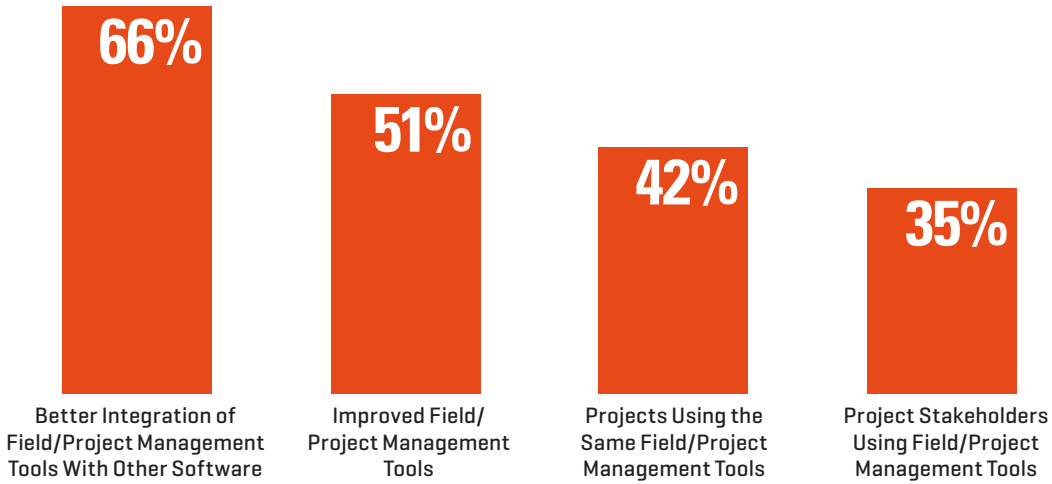
Impact of Field/Project Management Tools on Reducing Schedule Delays

According to Civil Contractors Using These Tools



Improvements Related to Field/Project Management Tool That Would Most Effectively Reduce Schedule Delays

According to Civil Contractors Using These Tools



Field and Project Management Tools

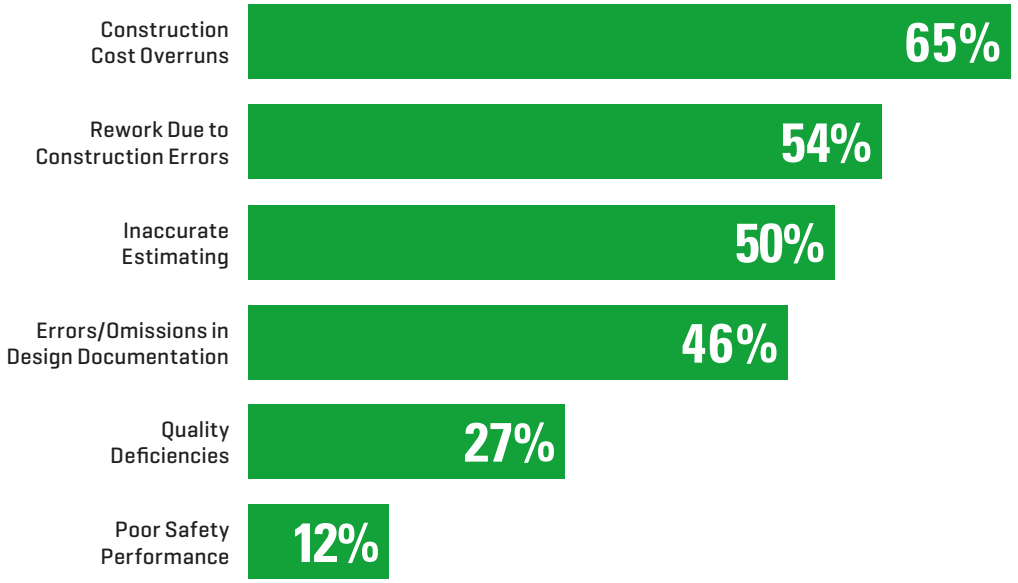
PROJECT RISKS MOST LIKELY TO BE REDUCED FROM USE OF FIELD/ PROJECT MANAGEMENT TOOLS

Civil contractors who use field/project management tools were asked which project risks are most likely to be reduced through the use of those tools.

- A reduction in construction cost overruns is most frequently identified, which could help those who have not yet made the investment to realize that they are likely to quickly see returns when they do.
- Over half also report reduced risk of rework due to construction errors and of inaccurate estimating. These also have a direct impact on contractors' profitability on projects. Interestingly, only 23% of vertical contractors report that these tools reduce inaccurate estimating.
- Nearly half report lower risk related to errors or omissions in design documentation. This suggests that civil contractors are leveraging these tools actively to identify and resolve issues in documents before they generate negative impacts.
- As with other aspects of technology use studied in this report, only a few contractors report direct impacts on safety. But as usage expands, they may begin to see the positive influence of factors such as reduced rework on their safety performance.

Project Risks Most Likely to Be Reduced Through the Use of Field/Project Management Tools

According to Civil Contractors Who Use Field/Project Management Tools



Non-Users

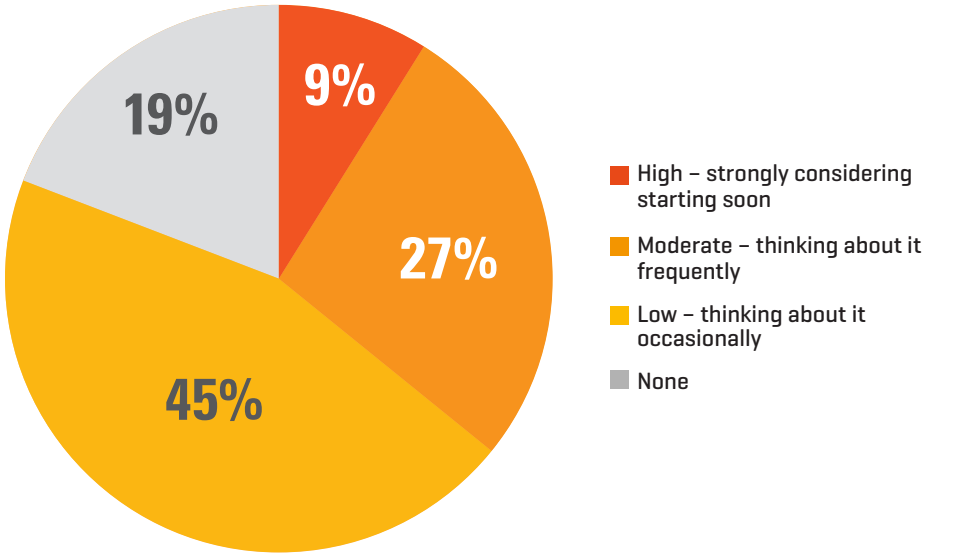
LEVEL OF INTEREST IN USING MODEL-BASED TECHNOLOGY AMONG NON-USERS

Construction is definitely going digital. But the transformation is still working its way through this famously change-resistant industry. To better understand this process, the 66% of respondents who report not currently using model-based technology (see page 2) were asked about their current level of interest in doing so.

The good news is that 81% of them are thinking about using it. This is important because it suggests that most civil contractors may be open to the use of these tools should they find that the business case to do so is convincing enough.

However, only 9% say they are ready to begin using this technology soon ,and 19% express no interest at all. In addition, the 45% of civil contractors who only think about it occasionally may still need to be convinced of the value. Hopefully, the compelling benefits shown in this study (see pages 6 and 9) will help drive greater consideration of these tools in the near future.

Level of Interest in Using Model-Based Technology Among Civil Contractors Who Do Not Use It



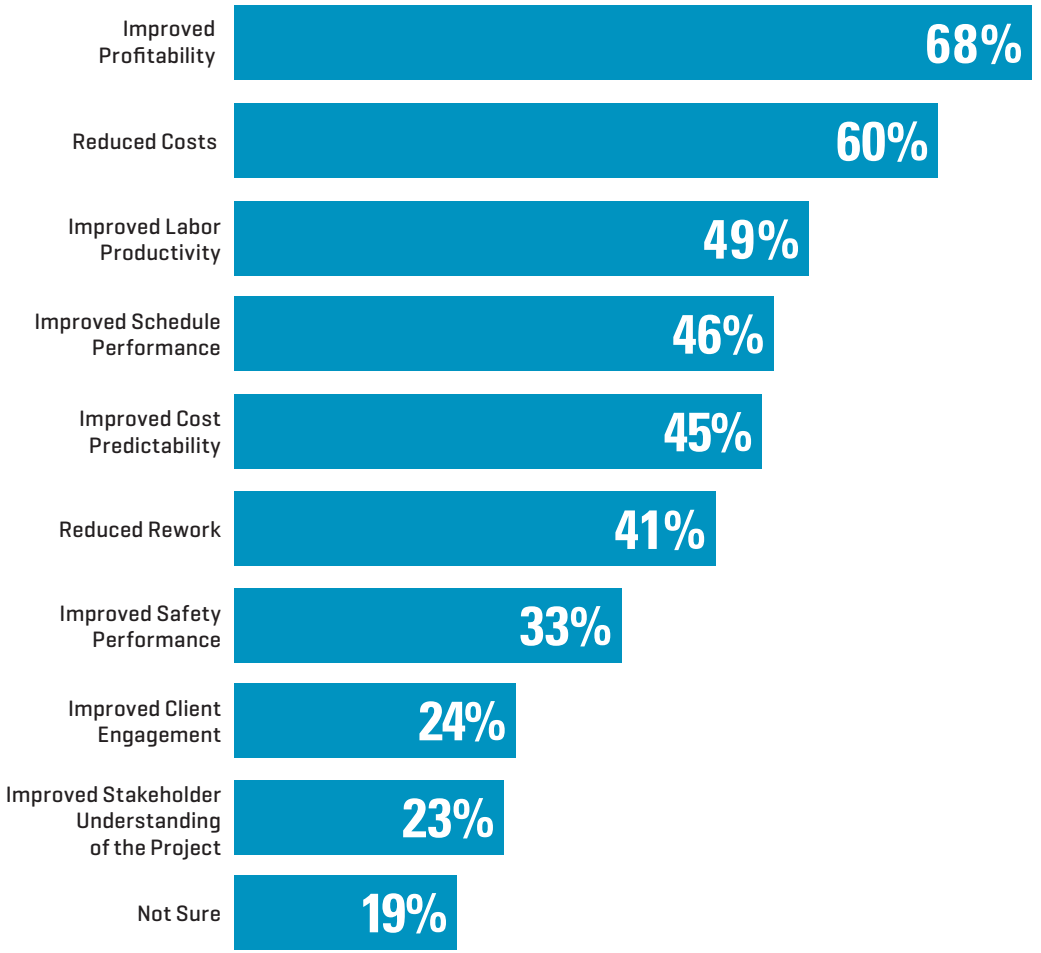
Non-Users

BENEFITS MOST LIKELY TO INFLUENCE NON-USERS

Civil contractors who do not currently use model-based technology were asked to select the benefits that would most effectively influence them to try it from a list of nine potential ones shown in the chart at right.

- Profitability and cost are the top two most influential factors, suggesting that making a strong business case could create interest among civil contractors in model-based technology. Interestingly, while the same percentage of civil and vertical building contractors regard reduced costs as influential, far more civil contractors (68%) select improved profitability than do vertical contractors (35%).
- Labor productivity is also influential according to almost half (49%), and again more influential for civil than vertical building contractors (20%). However, labor productivity is only selected among the top benefits by about one quarter (24%) of users.
- Over 40% of civil contractors also cite improved schedule performance, improved cost predictability and reduced rework as influential benefits.

Benefits Most Likely to Influence Civil Contractors to Try Using Model-Based Technology Who Do Not Currently Do So



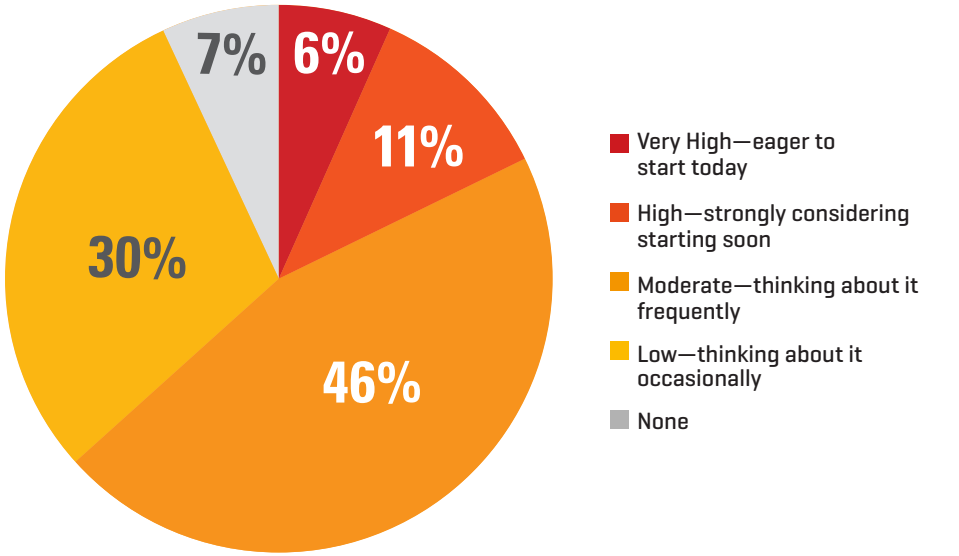
Non-Users

LEVEL OF INTEREST IN USING FIELD/PROJECT MANAGEMENT TOOLS AMONG NON-USERS

39% of civil contractors surveyed said that they do not use field/project management tools (see page 3). To better understand the potential for increased use of these tools in civil construction, the non-users were asked about their level of interest in doing so in the future.

Similar to the non-users of modeling technologies, 93% of these non-users have at least some interest in using these tools. Encouragingly, in this case, nearly three quarters of the non-users (63%) report at least moderate interest, suggesting greater likelihood of near-term growth in the use of these tools than in modeling technologies. Therefore, it is particularly important for the business case for using field/project management tools to help achieve the business outcomes they prioritize most.

Level of Interest Among Civil Contractors Not Using Field/Project Management Tools in Doing So



Non-Users

BENEFITS MOST LIKELY TO INFLUENCE NON-USERS

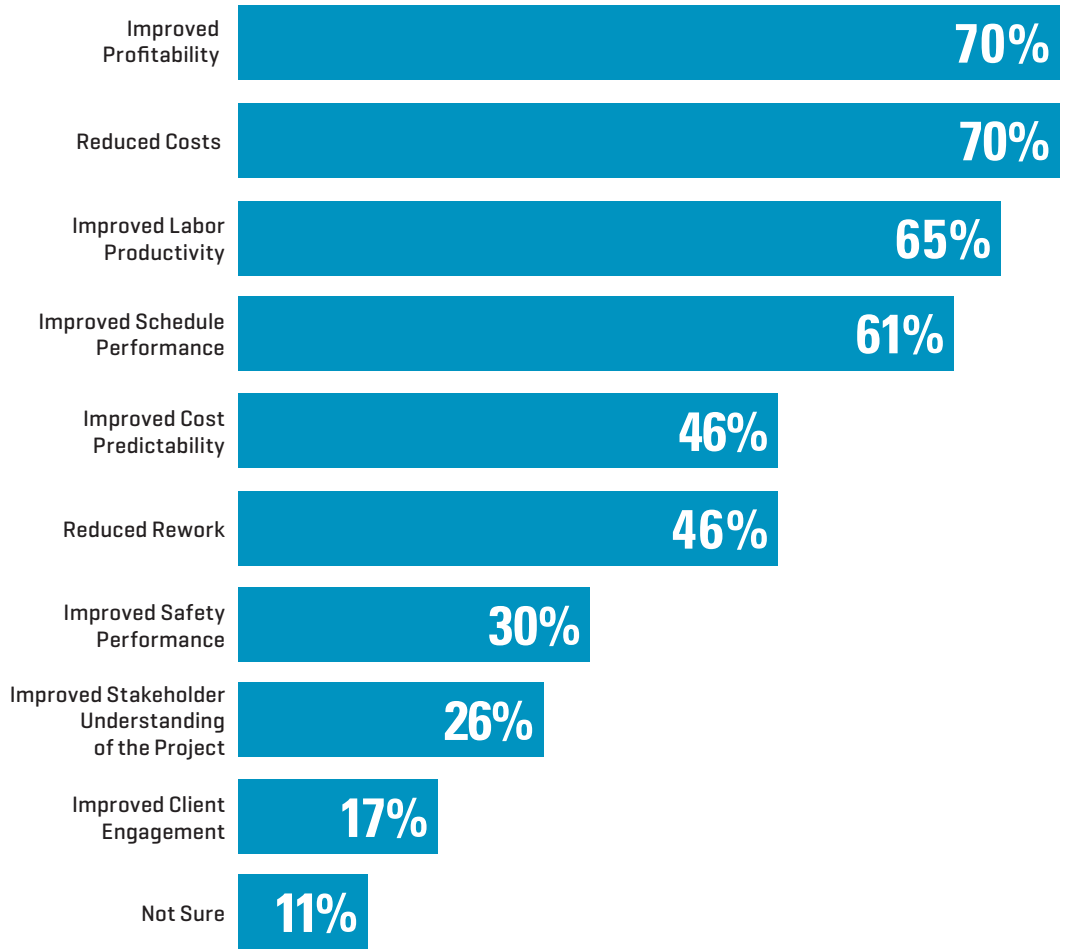
Civil contractors who do not currently use field/project management tools were asked to select the benefits most likely to encourage them to do so from the list of nine options shown in the chart at right.

Notably, their responses closely mirror the benefits that would encourage non-users of modeling technology to adopt those tools (see page 17). This suggests that a focus on technology benefits related to profitability, costs, productivity and schedule will be most effective in accelerating the digital transformation of the civil construction industry.

The good news in these findings is that most of the top influences for non-users align well with the top benefits being reported by users [see page 11].

- Reduced costs, improved labor productivity and improved schedule performance are not only among the top drivers for non-users but are also the top three benefits reported by users.
- Improved profitability ranks fifth among the top ways users get the most out of project data, but it is still selected by nearly a third (31%) of users in their top three, which suggests it is also a potential benefit non-users can anticipate.

Benefits Most Likely to Influence Civil Contractor Non-Users to Try Field/Project Management Tools



Key Findings

INTRODUCTION

Civil construction is poised to benefit from wider adoption of digital technology. This study examines two specific types of software: model-based technology and field/project management software. While only part of a civil contractor's digital capabilities, they are particularly important because they provide the foundation on which other digital tools can be integrated, to create a digital ecosystem that helps civil contractors improve performance.

MODEL-BASED TECHNOLOGY

Civil construction has only just begun to tap the potential for improved project outcomes offered by model-based technology. Only 34% of civil contractors are currently using these technologies, and even among those users, many workflows are still not widely utilized.

- The only truly widespread workflow is model-based quantity takeoff for estimating—two thirds of those using this technology employ it in this way and on the majority of their projects.
- Between 31% and 40% of civil contractors who use model-based technologies are employing various model-driven workflows across the project lifecycle, from simulations for RFP/business development to models as the as-built handover to clients.

34%

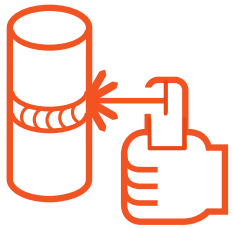
Percentage of civil contractors who use model-based technology

Model-based quantity takeoff for estimating is the top model-based workflow for civil contractors, and the only one employed by a majority of them

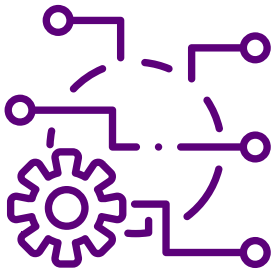
- A very encouraging finding is that the civil contractors using these workflows are deploying them on 50% or more of their projects, and over 80% report that they are valuable for improving their project outcomes.

The findings about the value of individual workflows align with the overall value that civil contractors receive by using model-based technology.

- In addition to the top project outcome of reduced rework, many civil contractors also experience improved schedule performance, stakeholder understanding of the project, profitability and cost predictability.
- 83% also report a measurable impact from their use of model-based software on reducing schedule delays.
- The top factor to help them experience more general benefits and improve its impact on schedule delays is better integration with other software applications.



Top project outcome improvement is reduced rework, and 83% also report reducing schedule delays



Top means of getting more from model-based technology is better integration with other software applications

Key Findings

FIELD AND PROJECT MANAGEMENT SOFTWARE

Although field/project management software (61%) is more widely adopted than modeling tools (34%), even wider usage would benefit civil construction as a whole.

97% of civil contractors using these tools agree that this software helps them get the most out of their project data through the following means.

- Improved schedule performance is the most important benefit, with 46% selecting it in their top three. It is also a frequent benefit, with 93% of those using these tools reporting reduced schedule delays.
- In addition, many also find that the tools are important to maximize their use of data to reduce costs, improve labor productivity, improve cost predictability and improve profitability.

61%

Percentage of civil contractors using field/project management software

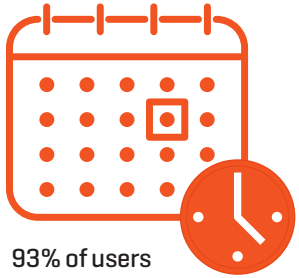
Users get more value from their project data by using this software due to improved schedule performance, reduced costs and improved labor productivity, cost predictability and profitability

As with the model-based technology, they believe that better integration with other software applications would increase the value of these tools. Nearly as many also cite improvements to the field/project management tools themselves and more projects that use the same tools as important to improving their value.

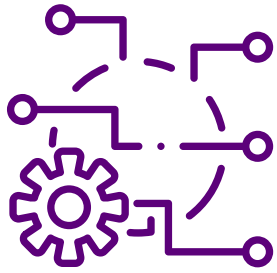
NON-USERS

In order to see wider adoption, it is also important to understand the resistance of non-users.

- For both model-based technology and field/project management software, non-users would be most likely to consider trying these tools if they can help improve profitability and reduce costs.
- For field/project management tools, the ability to improve labor productivity and schedule performance would also be influential. This bodes well, given the benefits that users of these tools report.



93% of users report that these tools help reduce schedule delays



Better integration with other software applications is the top means that will improve the value of these tools for users

OVERALL SUMMARY

This research demonstrates that while these tools can help manage schedule, reduce rework and improve profitability, model-based technology is not yet widely used by civil contractors, and many also have not adopted field/project management software. Users of both types of technology agree that integration of these tools with other software they use would help them get even more benefit from them than they already have.

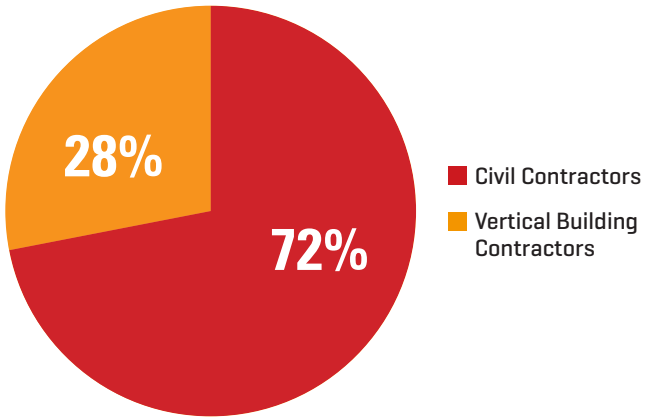
Methodology

Dodge Data & Analytics conducted the *2021 Digital Transformation Study* to examine the use of digital workflow processes in the construction industry and the value realized through the use of those processes for civil contractors.

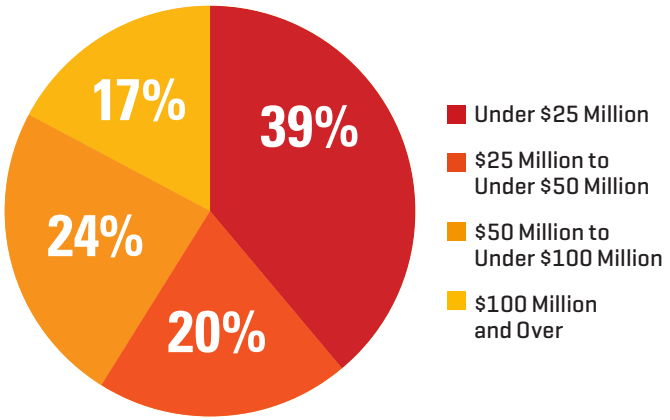
The research was conducted online from February 22 to March 22, 2021.

- The survey sample was provided by the Dodge Data & Analytics Contractor Panel and an additional list of contractors drawn from the Dodge Data & Analytics database of contractor contacts.
- 169 construction professionals responded to the survey. While the focus was on civil contractors, approximately one third of responses were obtained from vertical building contractors. These responses were sought to provide a context for the findings of the civil contractors. In total, the analysis is based on the responses of 122 civil contractors and 47 vertical building contractors.
- To participate in the survey, contractors had to be employed at a general contractor, construction management or design-build company.

Types of Respondents



Annual Revenue of Civil Contractors

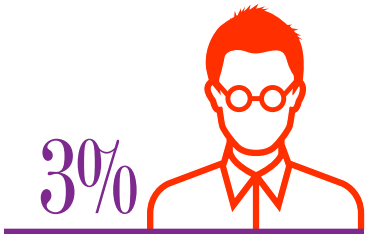


Methodology

Company Types for Civil Contractors

General Contractor

Construction Manager



Design/Builder

Types of Projects Reported by Civil Contractors

74%

Heavy Civil Transportation & Energy (e.g., roads, highways, rail and transit,ports and airports)

51%

Water (e.g., supply and sewer, water resources)

36%

Industrial Plant (e.g., water treatment, power generation, O&G refineries)

34%

Nonresidential Buildings (e.g., commercial buildings, institutional buildings)

9%

Residential Buildings (other than single-family homes)

Contacts

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ADDITIONAL RESOURCES

Bentley Advancing Infrastructure

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Dodge Data & Analytics is North America's leading provider of analytics and software-based workflow integration solutions for the construction industry. Building product manufacturers, architects, engineers, contractors, and service providers leverage Dodge to identify and pursue unseen growth opportunities and execute on those opportunities for enhanced business performance. Whether it's on a local, regional or national level, Dodge makes the hidden obvious, empowering its clients to better understand their markets, uncover key relationships, size growth opportunities, and pursue those opportunities with success. The company's construction project information is the most comprehensive and verified in the industry. Dodge is leveraging its 100-year-old legacy of continuous innovation to help the industry meet the building challenges of the future. To learn more, visit www.construction.com.