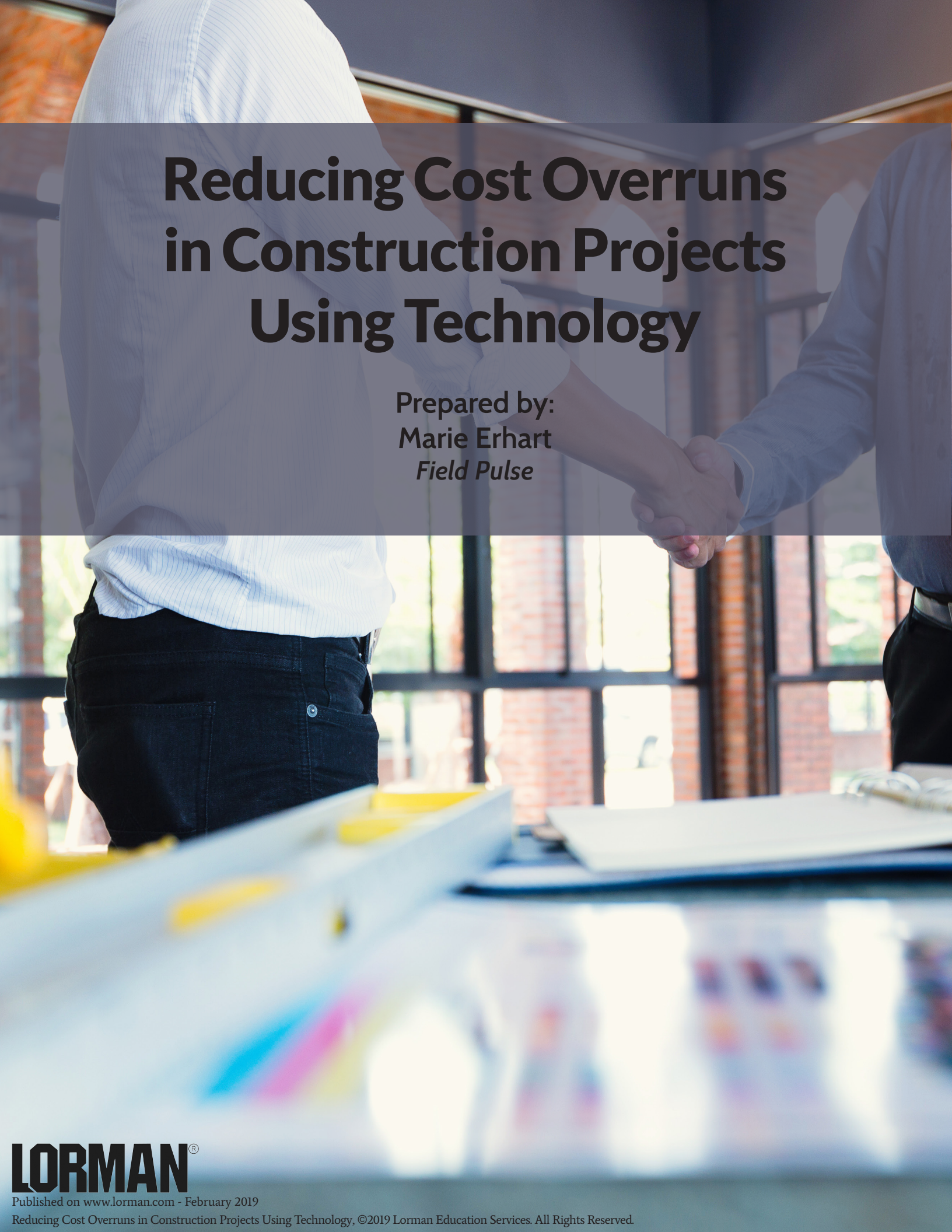

Reducing Cost Overruns in Construction Projects Using Technology

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Reducing Cost Overruns in Construction Projects Using Technology

Cost overruns are basically expected in construction projects. Research in the Journal of Construction Engineering showed that where public projects were concerned, the bid cost and the final cost typically differed by 0.15% on jobs under $25, 000 and 3.24% on projects over $1 million. However, projects don't just end up over-budget.

Although natural disasters and other unexpected events can impact building work, cost overruns are often caused by inaccurate estimates, overly ambitious timelines or poor project management. To ensure that your work stays within budget, you need to understand the common causes of cost overruns so you can take steps to prevent them even before you break ground. While there are non-technological steps you could take to help the situation, modern tech makes it a lot easier to manage projects.

This article looks at some of the common causes of cost overruns and how they can be managed through technology.

Inaccurate Estimates

One of the most likely reasons for cost overruns occurs during the bidding process. This means many projects are in trouble from day one. Bidding is competitive by nature and often, the lowest bid is the one accepted. Some companies submit a low bid to get the job then raise costs along the way in an effort to make a profit. In addition, many bids are rushed or bidders take a one-size-fits-all approach.

The estimate, therefore, doesn't take the full scope of the project into consideration and it doesn't accurately reflect the time the project will take or how much it will cost. However, it is important to analyze all aspects of a building project and get feedback from architects and contractors so you can create accurate schedules and budgets. Taking the time to get the estimate right before actually starting the project can bring savings in the long run.

Beyond this, contracting estimation software like ProContractor Estimating can help you to accurately cost projects. Some solutions offer current material and labor costs for your area so you don't use outdated information. You can also get templates for common projects like garages, kitchen or bathroom and then tweak them to suit your specific construction project. This helps to reduce the potential for human error and if changes need to be made, they can easily be plugged in. This is just one way in which technology can help with keeping projects within budget.

Design Errors

One study found that 38% of construction project disputes are due to design-related issues, especially subsurface conditions. Some of these disputes turn into legal battles which delay projects. Project delays almost always lead to increased costs. One way to prevent design errors is to ensure project owners and contractors agree on the scope of work and their duties during the contracting phase. Specific mention should be made of both design documents and the process to be followed in the event of disputes.

Certain types of construction software and 3D modeling including BIM360 can be used to lower the risk of errors or incomplete designs. If real-time changes are made available to everyone digitally, it helps to ensure everyone is on the same page. If the scope of the project changes or a part of the design needs to be completely reworked, it is easier to make changes to a virtual model than to redraw the design on paper.

While 3D modeling has been around for a long time, it is not yet mainstream in the construction industry. However, it could go a long way in keeping projects on track. Giving all stakeholders a 360-degree look at the project while they're on location makes it easier to see potential problems and undesired outcomes. It prevents errors and the resulting tearing down and rebuilding which adds to costs.

Inadequate Site Management

Large projects, poor communication, and lack of collaboration can cause things to go awry on job sites. Moreover, owners are usually suspicious of contractors and workers and their supervisors often have personality clashes. If the project is large, information often simply doesn't get to everyone involved at the same time. If no one has a firm grip on the project, errors are more likely to occur and delays become par for the course. As a natural consequence, costs increase beyond what was originally budgeted.

Communication and collaboration software like FieldPulse can make all the difference in managing projects. All the relevant job information can be stored in a central location for easy access. With mobile apps, everyone can have access to the same information in real-time. When changes need to be made, alerts can be sent. When queries arise, they can be quickly directed to the appropriate person even if they are not physically on site. If personnel need to be switched from one task to another, this also becomes easier. When communication is given priority, better outcomes are likely since problems can be addressed much more quickly.

Administration Errors

Not all cost overruns are due directly to the things which take place on the construction site. Some problems are mainly administrative in nature. If those in charge of the project aren't sure about its progress or who is responsible for what, this can filter out to the job. Sometimes project managers get information too late or there is a misunderstanding about who is carrying out a particular task. These types of hitches can result in a project going over-budget. The solution is usually not to hire more managers, although this can be tempting. Instead, the most likely solution is to give existing administrators the tools to track the project and collaborate with each other.

There are many options for project management software including Procore. They allow managers to assign tasks, track their progress and make notes of revisions. This means anyone with access can see exactly what is happening with the project with a single glance, provided that the software is used correctly. When the owner asks for an update on deliverables, the information should be right at hand. This is much easier to manage than trying to locate files in a filing cabinet.

On the topic of files, document management tools also important. They can pull together 3D models, building plans and all the other relevant information in a location where they are accessible to the people who need them. Different levels of access can be given so users only see what managers deem relevant to their jobs. The document management system should

allow mobile access so skilled workers and subcontractors have the latest information they need at their fingertips.

The Bottomline

The construction industry has become infamous for cost overruns. It is a surprise if a project comes in on time and within budget. Of course, major changes to designs and catastrophic weather events will result in delays and higher costs. However, there is enough evidence to show that most cost overruns are due to similar factors which are well within human controls. These include inaccurate estimates, design flaws, poor site management, and administrative errors. Inadequate or unclear communication is also broadly responsible. When these challenges are addressed, it is much easier to keep costs within budget. In the 21st century, there are several technological solutions which can be employed to keep costs under control.

Marie Erhart is a Success Manager at FieldPulse, creators of field service software that lets you run your entire contracting business from a single app. She works with contractors to help them grow their business using best practices.