

## Top Benefits of Using Drones for Small Construction Firms

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If you're a small construction business owner, perhaps you struggle to manage and monitor remote sites. You might have even considered investing in drone technology to help with this, but you want to make sure it will pay off before you invest.

Many construction business owners are hesitant to take the plunge with this emerging technology. In fact, our recent survey shows that almost 60% of construction businesses are still not leveraging the potential of drones, while those that have already invested in drone tech report enjoying numerous benefits. You could be enjoying these benefits too.

In this article, we outline the top benefits of drones in the construction industry to help you decide if drone technology is right for your business.

### Five Advantages of Drones in the Construction Industry (And Their Use Cases)

Our 2023 Construction Feedback Survey reveals that while most construction business owners are not investing in drone tech, the ones that have invested in it see its value.

In a nutshell, drone technology is about gaining a new perspective. Monitoring and managing construction zones on the ground are one thing, but what if you



could zoom out and up to get a birds-eye view of what's happening at your sites?

Let's talk about the five top benefits of drone technology construction business owners report experiencing. We've also included the specific use cases of these benefits so you can see how they might look in action.

#### **Benefit #1: Construction site inspections**

Construction site inspections are an obligatory and essential part of any construction project. They ensure construction sites are up to code and safe for workers, provide quality control, and can detect issues before they get a chance to become larger problems that threaten the project as a whole. [1]

Even though they are critical, inspections can also feel like an inconvenience. They require someone to conduct a visual assessment of the site, looking for a list of criteria that can differ depending on the purpose of the inspection. Some inspections, such as ones conducted by site managers, occur daily, while others, such as health and safety, building regulation, and fire safety occur less frequently. These inspections take time and can mean pausing work until they are complete. Drone technology not only speeds up the inspection process, but they can also gather more detailed and accurate information than a human can.

As a result, more than half (51%) of small construction business owners reported that construction site inspection was a top benefit of drone technology.

#### **Use case: See this benefit in action**

You have a remote job site. Even though it is remote, it still needs to be inspected to make sure everything is up to code — the workers are safe, the site itself is set up the way it needs to be, and there are no potential hazards lurking.

But getting an inspector there in-person is logistically challenging and takes more time than you'd like to spend waiting for them to get there, do the inspection, and then share their assessment.

This is where a drone would come in.

An experienced drone pilot can maneuver a drone in a fraction of the time a manual inspection would take and can gather data on every nook and cranny of the job site — even places that may be inaccessible or dangerous for a human inspector. [2]

#### **Benefit #2: Visual recording of work's progress**

Of course, it's easy to see all of the work your team has done once the construction project is a finished product. But when you're in the thick of a jobsite, it can be really hard to notice gradual progress.

More than one-third (36%) of construction business owners who invest in drones report the ability to visually record progress as a top benefit of drone tech.

Drones allow you to zoom out and see the construction

site as a whole. This data may give construction crews a sense of accomplishment and can give your company useful information that could inform future projects, such as common bottlenecks and how long certain parts of the project take. For example, if a specific part of a construction project took longer than expected, the data gathered by the drone may show what caused it.

#### **Use case: See this benefit in action**

Let's say you're working with clients on a project, and they request regular progress reports. These reports could be time-consuming, and you may not know what to say on weeks where the progress is more nuanced.

Instead of written reports, you could offer them progress visuals on a weekly or bi-weekly basis. By using drones, you can capture high-quality images and videos that show gradual progress. You can also easily share the visuals the drone captures with multiple stakeholders, as well as your own employees.

#### **Benefit #3: Fast tracking survey**

Fast tracking a construction project means beginning some parts of the project before the design is fully complete. [3] This means that the parts of the design that are often determined earliest, such as foundation plans, can be constructed as the rest of the project is being designed.

This approach can enable an expedited timeline and reduce costs, but only when approached methodically and by leaders who know how to mitigate potential challenges.

One way to ensure fast-tracking success is by conducting thorough surveys and inspections of the job site before and during construction with drone technology. This may be why 35% of small construction business owners report fast tracking surveys a top advantage of drones.

#### **Use case: See this benefit in action**

When fast tracking a project, it's important to mitigate potential challenges throughout the construction process. By conducting a thorough pre-construction survey of the job site, you and your crew can plan for challenges that exist from the outset, such as landscape challenges (e.g.,

weather patterns, topography, existence of accessible routes).

Since you and your crew may not know the details of the entire design, it's important to check progress on a regular basis. Drones can help identify and correct mistakes before too much time passes, and they become larger issues that will take more time and money to rework.

When mistakes go unnoticed, they can create much bigger problems later on. When fast tracking a project, it's critical that each part is done correctly to ensure success of future parts of the design. With drones, you can more easily conduct fast tracking surveys to set you and your crew up for success.

#### **Benefit #4: Increased safety**

Even with the use of ladders to gain height, humans' perspective of an area is inherently limited. With drones, views that were previously inaccessible suddenly become accessible, such as a zoomed-out birds-eye view in addition to views into the nooks and crannies of the building project.

This allows you to collect more in-depth data that can be used to ensure the overall safety of construction crews. Drones' ability to offer increased safety was cited by 34% of small construction businesses as a top benefit of drone tech.

The safety of your crew is always your top priority, and drones can help protect the people who make construction projects possible.

#### **Use case: See this benefit in action**

Construction site inspections are critical for ensuring your job site is safe for your crew, but sometimes the humans can miss small details or simply cannot access certain spaces.

Drones can capture more than the human eye. Drones that are equipped with thermal cameras could reveal leaks, but even by themselves, the high-resolution images and videos they take can reveal damage invisible to the naked eye. Detecting hazards early is key to preventing injury and death on the job.

Drones can also access spaces on the jobsite that may be too dangerous for people, such as those that are too small for a person to fit or too high for a person to reach safely.

#### **Benefit #5: Cost and time saving**

Drone technology can help streamline inspections, making them faster but also more accurate and safer. They can provide on-demand progress visuals, and can gather data that can inform future project planning. All of these benefits work to save your business time and money, without cutting corners.

This is why 31% of small construction businesses report saved costs and time as a top benefit of drone technology.

#### **Use case: See this benefit in action**

You're starting a series of construction projects, and drone tech can help save time and money at every stage. Before you even start your first project, drones can help you survey the area where construction will take place, create 3D topography models, and mitigate potential challenges in the landscape.

During the project, using drones can help you detect potential mistakes and dangers before they become hazards to the crew or require future rework, which costs both time and money.

Although these immediate savings of using drone technology are easy to imagine, the long-term savings drone technology can offer can seem a bit more abstract.

The long-term value of drone tech is in the data it collects and how you apply it to your upcoming projects.

If you've never conducted post-project analysis of construction projects, drone tech can help make it easier to start. By using the data drones collect on your first construction project — progress visuals, topography maps, 3D elevation models, hazards that were mitigated from the outset, and hazards that were detected later — you can optimize for future jobs. It's not a stretch to assume that knowing how to use this data long term can help you win bids for projects later on. [4]

To maximize your drone tech investment, be sure to

invest in drone technology that is compatible with your construction management platform.

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## Investing in Drone Tech Can Give Your Construction Company an Edge


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Drone technology can help your construction business streamline inspection processes, improve the quality of inspections, collect data on jobsites to inform short-term and long-term decisions, ensure the safety of crew members, and save everyone time and money.

Overall, drone technology can give your construction company an edge and set you up for success.

Like with any new tool, drone technology does typically require an investment, and most small businesses don't have the budget for a whole fleet of drones. But you have options. You can consider:

- » Outsourcing drone services to a service provider, who would pilot the drone and supply your firm with the files, data, and analysis compiled from the flight.
- » Owning your own drone and renting a licensed pilot using drone software compatible with your construction software.
- » Owning your own drone and hiring an in-house licensed pilot, also using drone software compatible with your existing software.

Like you would before investing in any tool, you'll need to consider which option would work best for your business. If you do decide to invest in drone tech, you will find the benefits of this technology were worth it. 

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## Sources

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- [1] "[A Guide to Construction Site Inspection And Why It Matters](#)," Safety Culture
- [2] "[7 Ways Drones Make Building Inspections Faster, Cheaper, and Safer](#)," CTL Engineering
- [3] "[What Is Fast-Track Construction?](#)" HR Construction
- [4] "[Why and how to use drones in construction and infrastructure](#)," Wingtra



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### About the Author

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Toby Cox is a freelance writer for Software Advice, covering software trends and stories of small business resilience. Her research on business trends and corporate social responsibility has been featured on Clutch.co, The Manifest, and PR.co Blog. Currently, Toby is based in Boston, MA, where she is a graduate student at Harvard Divinity School.

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### About the Article

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