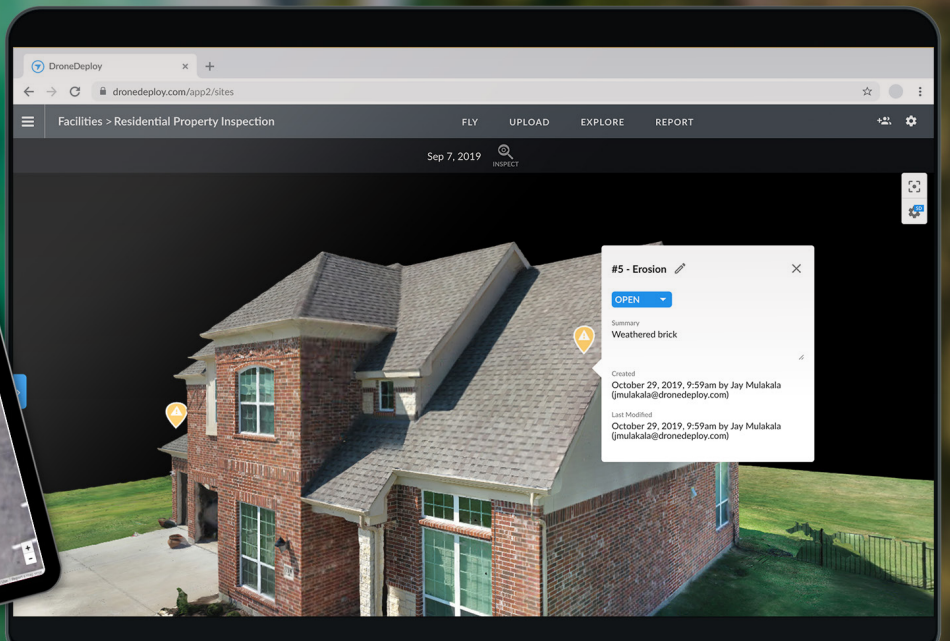





# How Property and Facility Management Teams Leverage Drone Data: A 360-Degree Perspective





For companies with numerous buildings, office campuses, warehouses, and brick and mortar stores, there are countless challenges facing the properties and facilities teams tasked with overseeing and managing these vital physical assets.

A restaurant or hotel chain, for example, has hundreds of properties it must maintain and ensure are safe for patrons 24 hours a day, 7 days a week. An office park or college campus has ever-changing weather and natural conditions that can cause unforeseen hazards for employees and buildings. And every building or structure requires ongoing maintenance or repairs on a regular basis.

Even a slight lapse on any of these fronts can endanger workers and customers, create a PR crisis, or cause long-term damage to a brand. Yet property and facility management teams like yourself, who oversee many properties and structures, face numerous challenges on a daily basis. You often have few resources that are stretched thin, and it can be difficult to communicate effectively with different teams and stakeholders in real-time. Plus, it's always hard to keep costs down while still prioritizing the most vital repairs.

These challenges are why many innovative companies across industries are turning to DroneDeploy to minimize costs and hazards while maximizing operational efficiencies, collaboration, and ROI when it comes to property and facility management.

In this whitepaper, we'll examine the different ways companies are using drone software to tackle the extensive challenges facing this industry. We'll specifically look at:

- Why Drone Data is Vital for Property and Facility Management Teams
- Best Practices for Building Maintenance
  - Roofs
  - Pavements
  - Landscape
- How to Use Drone Data in Portfolio Management
- Tomorrow's Use Cases

Let's dive in.

## Why Drone Data is Vital For Property and Facility Management Teams

While designing and constructing a new building is glamorous and exciting, the ongoing operations, maintenance, and management of a structure is the most expensive part of the journey. In fact, one [study](#) found that maintenance costs are usually 3X more than the design and construction expenses when measured over the lifecycle of a building. That's why it's important to make sure you're doing everything you can to optimize the oversight of the building, find cost savings, and ensure safety throughout a building's life.

While drone data has long been leveraged by construction companies, more property and facility management teams are turning to DroneDeploy to take a more proactive, collaborative, and cost-efficient approach when it comes to overseeing numerous buildings like office parks, construction sites, college campuses, and more.

## Drone data is increasingly becoming vital for property and facility management teams looking to save time and resources.

These companies are using drone data to build the foundation of a historical record and a single source of truth for all their physical assets. They're using drone software to make collaboration seamless, as drone technology enables team members to view the site globally in real-time, and provide direct comments in-app. These companies are leveraging DroneDeploy to view images over time, detect where problem areas may be developing, react to new challenges, and be proactive in addressing potential problems before they worsen.

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# Building Maintenance

## Roofs

No matter how old or new a building is, every structure is going to require ongoing maintenance. But determining which buildings need maintenance and when they need it is an entirely different matter. Because your teams are often stretched thin, it's important for you to be able to prioritize the most urgent repairs in an efficient manner. Drone software makes this process easy.

A Big 10 school, for example, uses **thermal imaging to monitor roofs** and see where weather damage has taken place. If there's a water leak, thermal imaging can help detect the source. Before using drone technology, the school had previously monitored roofs every 5 years via helicopter flights, costing around \$20,000 per flight. DroneDeploy allows the user to conduct these inspections much more regularly and for a fraction of the cost. By using these flights to check gutters for blockage, this school saved \$3,000 per building as compared to years past. Their facilities and management team also uses DroneDeploy to inspect hundreds of steam vents across campus, which can be hazardous for workers to examine.

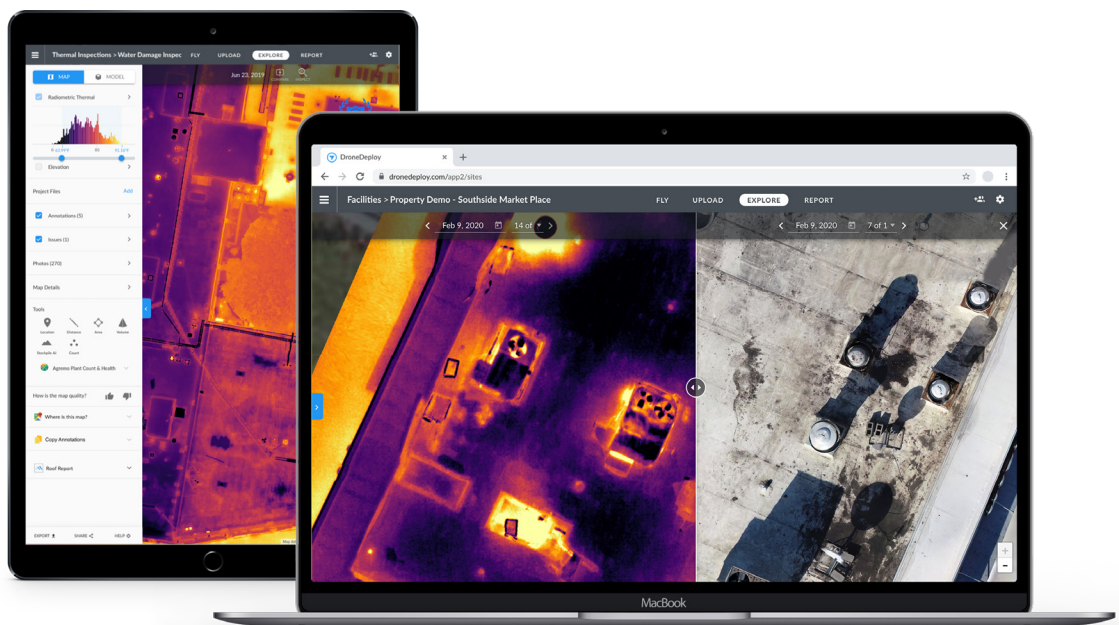


Figure 1. Users can inspect buildings and job sites using DroneDeploy and keep their employees safe.

In the past, many roof inspections were completed at night in order to spot temperature anomalies that signal the presence of a leak. For example, a commercial architecture and construction company used DroneDeploy to help a university client apply for funding for a roof repair. The university had previously used helicopters to gather thermal imaging from the roof, but found it provided only 20% of the detail level DroneDeploy had. Images from DroneDeploy helped the architecture and construction firm capture more accurate images, which led to them win a grant to repair the UT Dallas roof.

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And there was another benefit.

“Being on a roof at any time can be dangerous. But this is especially true at night,” said Grant Hagen, a virtual design and construction manager at The Beck Group. “Any time you can limit putting your staff in a dangerous situation, it’s a win.”



Figure 2. The Beck Group leveraged DroneDeploy to save analysis time and costs on each project.

# Pavement

Monitoring and repairing pavement is another area where drones data can help maintenance teams. Engineering and consulting firm **Bolton & Menk** realized the benefits when they needed to capture images of 26 miles of pavement in a Minnesotan town. Leveraging drones reduced the time in the field by 60% over traditional methods. The images also helped analyze which areas needed to be repaired first and inform future records. This approach could easily be implemented by the facility and property management departments.

For any company that's conducting building maintenance, drone solutions offer a less expensive, faster, more accurate, and safer way to gather information and prioritize repairs.

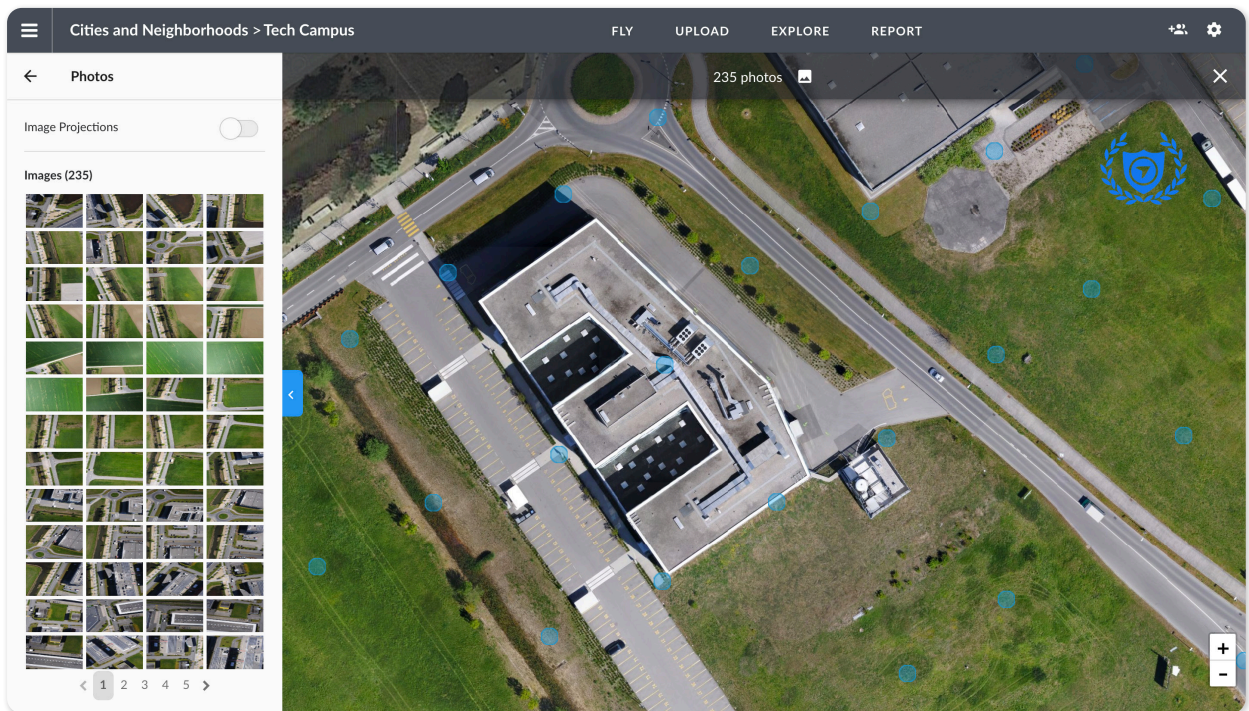


Figure 3. The images also helped analyze which areas needed to be repaired first and inform future records.

## Landscape

The same Big 10 university mentioned previously also uses DroneDeploy to survey its vast lawns and ensure that they are healthy. With 2,000 acres of property to manage, mow, and fertilize, DroneDeploy – with its deep roots in [agriculture](#) – can monitor plant health and help the university concentrate its efforts by dramatically reducing costs. While the school currently pays consultants to individually examine problem trees and areas, in the future they hope to use DroneDeploy to track year over year erosion, tree lean, and take preventative steps to reverse erosion. Additionally, this approach will allow campus security to be able to spot and address trees that could potentially fall and cause damage to campus buildings or students.

The end result of using drone technology by this Big 10 campus was that its property and facility management team was able to work smarter and more efficiently while keeping students and workers safer overall.



Figure 4. DroneDeploy can assist in monitoring and finding problem areas in a building.

# Portfolio Management For Big Box Retailers

Property inspections have been part of the facilities management role for decades. What's different by using drone data is that inspections become much less expensive, and individuals can seamlessly view all the properties in a company's portfolio. Drone imagery can then be used to triage issues for the entire portfolio.

By proactively monitoring each property, teams are able to objectively evaluate conditions and use maintenance budgets only where repairs are actually needed. By triaging their portfolio of properties, some DroneDeploy customers have saved upwards of 30% on their annual facilities budget by fixing what's important, not what's scheduled.

## Tomorrow's Use Cases

So how will aerial imagery be leveraged by facility and property management teams in the future? The possibilities are endless. It's not hard to imagine a building or campus that could be entirely proactive in its maintenance — relying on the latest images to prevent problems before they get worse. Ground teams will be able to leverage drone data to monitor for sinkholes, erosion, and problem trees. Construction teams will be able to see in real-time what issues arise, so they can prevent viral mishaps like the sinking [Millennium Tower](#) in San Francisco.

Whatever the use case, the end result will be the same: a future that's smarter and safer for companies, their employees, and their customers.

## Your Call to Action

Drones can provide a transformative advantage for property and facility management teams at every stage.

To learn more about DroneDeploy and how it can improve your operations, [talk with one of our experts.](#)





DroneDeploy is the leading drone software solution trusted by over 5,000 companies across a variety of industries, including construction, energy, agriculture, and mining. From drone fleet management to data analysis, DroneDeploy makes aerial data accessible and productive for everyone. Simple by design, DroneDeploy enables professional mapping, 3D modeling, and reporting from any drone on any device.