

Dronedesk case study

UTILITY COMPANY

How Matthew uses Dronedesk to save 200 hours a day for **National Grid**



7 min read

A whole day.

That's how long it was taking Matthew Ward, National Grid's Unmanned Aerial Systems Lead, to plan a drone flight. And with responsibility for inspecting the UK's overland electricity network, there were a lot of flights that needed planning.



"We've got over 22,000 towers or pylons to inspect, and 500 substations across about 350 sites."

National Grid is responsible for supplying the entire UK with its electricity, so ensuring the overland network is in good condition is amongst its most important work. From examining the integrity of structures and pylons to checking the fittings, wiring and insulation, each inspection is also vital from a safety perspective. The National Grid prefers to send helicopters to conduct inspections, but sometimes this isn't practical or permitted. That means 25% of the network needs to be inspected by Matthew and his team using drones.

But Matthew just didn't have enough time.

So much work, so little time

Planning an inspection flight was a manual process that took an entire day.

A National Grid pilot needed to compare their internal mapping system with Ordnance Survey maps, aviation charts, drawing a flight radius of different sizes, manually adding a fly-away radius and documenting all the different sites that

might need notifying if the drone went in their direction. And then referring back to the maps and doing it all over again if changes needed to be made.



And it wasn't just flight planning that was taking up Matthew's time. This laborious process resulted in questions and concerns, and Matthew's team of eight pilots would turn to him for help. He would naturally support his team, but plans to hire more drone pilots meant he'd be fielding even more questions. And he also had to manage the equipment and oversee the team's activities, as well as maintain the necessary processes and compliance documentation.

To top it off, Matthew was also responsible for handling any defects found on an inspection.



"Any defects on the overhead line network would all come in to me, so I spent a lot of my time prioritising and arranging rectification. That was a full-time job in itself."

With flight planning, team support and management, equipment management, compliance and regulation requirements as well as defect management, Matthew had plenty of work and not enough time to do it. So he decided to find a way to make it easier to plan the team's drone flights.

The search for a solution

With so many manual processes involved in flight planning, finding a system that could automate things seemed the best way to do it. But Matthew struggled to find a system that did everything he needed it to do.

The biggest challenge was importing National Grid's internal data. If Matthew couldn't overlay the locations of, and information for, each of his 22,000+ towers and 500 substations over a system's maps, he would still have to do a huge amount of his flight planning manually.

There was also the matter of security. With responsibility for the UK's electricity supply, any drone flight planning software had to comply with the strictest security requirements.



"Importing software has been extremely difficult. Mainly because of who we are and the potential risks involved. So we have really strong security. Quite often, we'll have standalone machines that don't even connect to our network, so that we can run whatever software we want. But you have to justify that."

And, of course, with so many flights to undertake each year, Matthew needed a platform that would make it easier to manage his team and his equipment too.

So we were happy to show Matthew how Dronedesk can handle all of his needs and more!



"The main reason I went with Dronedesk was because it was so feature rich. The others were good, but there was always one or two things that they all fell down on."

Providing the service others wouldn't

When Matthew first spoke to us, we naturally didn't have information about the National Grid's network of towers and stations in our mapping software. But while Matthew had encountered resistance from other providers, we knew how important this was to him. So we got to work importing all of the data he gave us.



"Over 22,000 towers, and they've all got a what3words address, they've all got a latitude and longitude, and they've all got a six-figure grid reference. Some of the other companies didn't seem sure their database could cope with that much data. But I spoke to Dorian about it and he said, 'Yeah, we can do that. Send it over.'"

As for Matthew's security concerns, we built Dronedesk as a web application not just so it would work quickly and on any device, but also so that it wouldn't need a complicated installation process. Matthew and his team wouldn't need a standalone machine to use our platform; they can access it from any device, confident that their data security is assured.



"Having Dronedesk available via a web portal, rather than a local application installed on your machine, makes it a lot easier to meet our high security standards."

And, because we designed Dronedesk to be an all-in-one drone management platform, it already includes team and equipment management tools.



"I demoed this to my manager, and then to his manager and her manager, and they asked, 'How much do you say this was? It looks expensive.' And I said, 'Well, actually the alternatives cost more and weren't as good.' And then they relaxed!"

Giving Matthew the gift of time

It was taking Matthew and his team of eight pilots an entire day to plan a single flight. By implementing Dronedesk into the flight planning, he dramatically reduced that.



"Dronedesk has had a huge impact on our planning. It really has been good. I can have a job planned within a quarter of an hour instead of a day! Even the new guys can plan a job that quickly. And I can get them trained to use the basic functions of Dronedesk within about an hour and a half."

That's right. Matthew is **saving seven hours and 45 minutes per flight plan** without any detrimental effect on regulatory compliance. And National Grid's increasing need for drone inspections means that Matthew has been able to grow his team to a total of 26 pilots (something Dronedesk handled seamlessly). Meaning that, even if each pilot only plans one flight per day, **we've been able to save National Grid over 200 hours per day.**

And the time savings don't end there.



"Because Dronedesk is easy to use and understand, I'm not getting as many calls from the team asking for support and advice. I can just take a step back from the day-to-day planning."

Of course, Matthew still plans the flights he undertakes himself. But the fact that he can do so in 15 minutes means he has time for his other responsibilities without sacrificing the flights he needs to make or vice versa.

And our team and equipment management tools means Matthew can easily oversee his team and the jobs they have planned.



"Within a couple of clicks, I can easily see who's flown within the last three months, what's on the calendar, what jobs we've got coming up, when our operator IDs are due for renewal. And it's really helped in terms of aircraft management and what equipment is due any maintenance."

Saving time

It's been an absolute delight to work with Matthew and see how he's been able to claim back so much time for National Grid. With less time spent on manual flight planning, he now has the time to attend to his other tasks, confident that his

team are operating in compliance with the regulations and have the tools they need to do their jobs effectively and efficiently. And we're very proud that Matthew has been so happy with Dronedesk and the support we provide.



"The support from Dorian is outstanding. I've never known such dedicated support from anyone else."

If you'd like to manage your drone operations more efficiently, save time and money and help your pilots operate safely and compliantly, get in touch with us today about implementing Dronedesk.

☞ All quotes are from Matthew Ward - Unmanned Aerial Systems Lead at National Grid



Matthew Ward [in](#)

Try Dronedesk FREE with a 90-day 100% money back guarantee that you'll save time with your flight planning.