

Digital towers land in the UK

Current Situation – The Tower Building

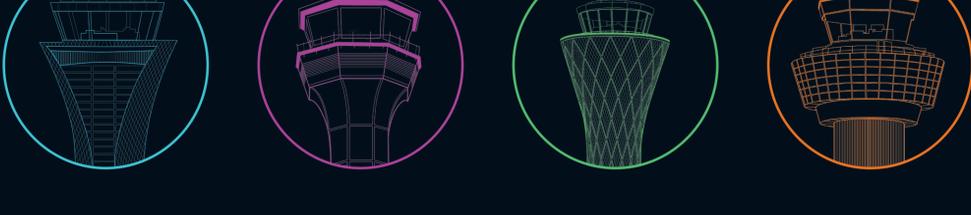


Traditionally every airport has a conventional air traffic control tower, but they don't come cheap. They cost millions to build and not all parts of the airfield are always visible.



In comparison, going digital is more cost effective and offers real operational benefits.

The air traffic control tower is often an **iconic airport landmark**.



A Digital Alternative



Controllers use **high definition cameras** and remote sensing technology to **safely and securely** manage air traffic from a location away from the airport

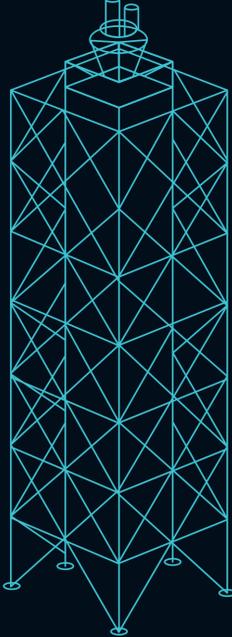


All operational data is transferred via a **secure super-fast network** to a custom built digital tower operations room at NATS' Swanwick air traffic control centre



Wrap around screens give the controllers an **unparalleled view** of the entire airport

The Technology



High definition cameras provide a full 360 degree view of the airport



Laser range finder for measuring distances to pin point accuracy



Pan, tilt and zoom cameras to view any part of the airfield in unprecedented detail



Displays enhanced with **augmented reality style maps** and aircraft data for increased controller awareness

Benefits

For the Airport



Potential for more flexible staffing for control services

Reduced cost

No need to build and maintain bricks and mortar control towers

Camera feed can be shared with the rest of the airport operation - from passenger terminals to the fire service

System detects and tracks possible airfield trespassers

Drones can be tracked once identified

For Air traffic Controllers



Every controller has an identical view to the entire airport

Radar and weather data shown on a single Head-Up Display

Aircraft call signs displayed over aircraft as they move on screen for extra clarity

On-screen labels can be added to show taxiway boundaries

Airfield can be geofenced to show operational restrictions such as closed taxiways

Tried, Tested, and Trusted

Digital tower trials are underway all over the world.



The **world's first digital tower** went live in Ornskoldsvik, Sweden, in April 2015, linking to a control centre 150kms away in Sundsvall.



Mitigating Risks

What if a camera fails?



Other cameras like the pan/tilt/zoom cameras can compensate and fill gaps

It would be no different to the low visibility (bad weather) procedures used today

What if a the communications link fails?

There are two totally separate and independent data feeds running that enter at different parts of the building

Both feeds can carry image and voice communications data

A third feed can also carry communications if required



Digital towers: the future is here. To keep up to date with the latest news subscribe and follow NATS on social media