

# Drone Ready Cities

Roadmap to a Regulatory Framework for  
Commercial Drones in Urban Environments



## Case Studies





# Somerset Council building condition assessment

## Task

To assess the condition of a car park building including the roof and leased areas

## Challenge

Gaining access would normally require access equipment, take considerable staff time and create disruption to users

## Solution

Aerial drone survey to create orthomosaic model

## Potential annual benefits



£800k in staff  
and equipment  
costs saved



1,600 hours  
working at risk  
avoided







# Coventry City Council asset roof survey

## Task

Understand a building's exterior conditions including roof to check feasibility of solar panel installation and wall cladding to understand heat losses for funded development

## Challenge

The cost of access equipment, actually accessing all areas and the dangers of working at height

## Solution

Dimensional model and thermal images created by drone survey



## Potential annual benefits



**£100k-£300k in staff  
and equipment costs  
saved**



**1,200-2,000 hours  
working at risk  
avoided**



**No road or building  
closures**



# Canal & River Trust Roof Survey

## Task

Perform roof top inspection of a canal side building clearly in need of repair

## Challenge

Gaining access would normally require access equipment and disruption to visiting public

## Solution

Still images of points all over the roof top

Potential annual benefits just in the region



**£160k in staff  
and equipment  
costs saved**



**720 hours working  
at risk avoided**



**Less disruption, faster,  
data easy to  
understand and share**







# Canal & River Trust Embankment Survey

## Task

Maintenance inspection of embankments at risk of subsidence from historic mining

## Challenge

Gaining access was difficult and much of the area was covered in thick vegetation

## Solution

LiDAR survey of the area by drone

Potential annual benefits just in the region



£33k in staff and  
equipment costs  
saved



480 hours working  
at risk avoided



Faster with access to  
difficult areas and no  
vegetation clearance



# Coventry City Council footbridge inspection

## Task

Maintenance inspection of a footbridge at height and over carriageway

## Challenge

Accessing the bridge would require access equipment, working at height and traffic management

## Solution

Aerial drone survey highlighting any areas of issue

## Potential annual benefits



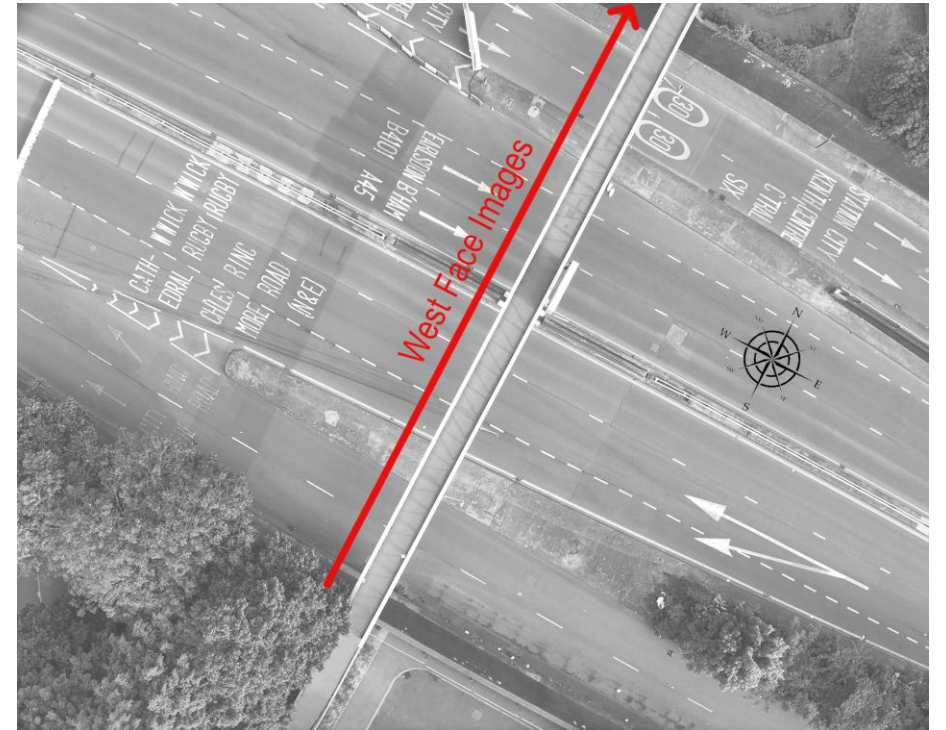
£58k in staff and equipment costs saved



60 hours working at risk avoided



No road traffic management required







# Coventry Arena visitor safety

## Task

Monitor and support a closure of the A444 to enable the safe egress of pedestrians at the end of the Stoke City vs Coventry City football match

## Challenge

Insufficient fixed camera coverage to establish whether the closure should be brought into use more regularly and to monitor and respond to emerging issues whilst the closure was in place

## Solution

Live video streamed to control centre

## Annual benefits



£23k in staff costs saved



Enhanced understanding of traffic flow



Response to incidents





# Cornwall County Council planning enforcement

## Task

Evidence of non-compliance was required to issue a planning enforcement notice on a non-cooperative landowner

## Challenge

Access was not possible without police attendance and warrant

## Solution

Aerial drone survey from a distance

## Potential annual benefits



**20 hours working at  
risk avoided**



**Avoided confrontation  
with landowner**





# Warwickshire County Council junction development justification

## Task

Survey of queue lengths during peak periods to support development plans

## Challenge

To capture the full length of dynamic queues and journey time data

## Solution

Video capture and vehicle count

## Potential annual benefits



£1k in staff and equipment costs saved



Noticing other congestion issues and rat running





# Solihull Metropolitan Borough Council traffic survey for autonomous bus

## Task

Assess traffic movements at key interchanges for autonomous bus integration

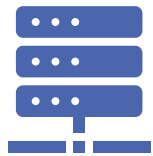
## Challenge

Temporary CCTV would be expensive and compromise data capture

## Solution

Video capture and vehicle count

## Potential benefits



Data only available  
from aerial view







# Coventry City Council school patrols

## Task

Security patrols of schools

## Challenge

Patrols by security personnel are expensive

## Solution

Video and infrared capture

## Potential benefits



Large area view and  
infrared





# Are you drone ready?

The background of the slide is an aerial photograph of Coventry, showing the city's skyline with the Spire prominently in the center. A drone is shown in flight in the upper left portion of the image, hovering over the city.

# Download the regulatory framework

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