

## Modernising a mission-critical application

# HSE

### The Challenge

- Upgrade an existing geospatial solution for managing consultation zones

### The Benefits

- Enterprise-wide productivity improvements
- 80% time saving in planning team
- 100% increase in application usage
- Value-adding new capabilities

A mapping tool that had been in use by Great Britain's Health and Safety Executive (HSE) for over 15 years had become so critical to users that the organisation was nervous about updating it. However, with support from Esri UK's Professional Services team, HSE built a modern cloud-based version of the application, installed it with no business disruption and completely transformed the productivity of multiple teams.

### The Challenge

HSE has a statutory obligation to provide advice to planning authorities across Great Britain for proposed new developments close to major hazard industrial facilities, pipelines, explosives factories and other facilities that represent a possible safety hazard. To fulfil this role, the organisation defines distance-based Consultation Zones around specific sites and along pipeline routes, which vary in size depending on the assessed level of risk.

For more than fifteen years, HSE had been using a geographic information system (GIS) viewer, known internally as the Consultation Zone Mapper, to visualise these nationwide Consultation Zones. Built using Esri GIS technology, this solution had been state-of-the-art when it was first introduced. However, resource and technology limitations prevented HSE from developing it further and, consequently, this critical system had become out-of-date.

### The Solution

Recognising that an upgrade was well overdue, the GIS team at HSE discussed the challenge with Esri UK's Professional Services team. HSE already had an Enterprise License Agreement with Esri UK and was able to access several days' consulting services and all the technology it needed for this project, at no additional cost to the organisation.

First, the Esri UK Professional Services team developed a proof-of-concept solution for HSE that precisely replicated the functionality in the existing system. HSE demonstrated the proof-of-concept with key users in its Land Use Planning Team and showed them just how much quicker and more efficient a new solution could be.

Whereas the existing Consultation Zone Mapper solution operated on hardware on HSE's premises, the new solution was designed to be hosted in the cloud. Esri's cloud service was thoroughly vetted by HSE's IT department and met the government's strict data security standards. ArcGIS Online is constantly being updated and enhanced by Esri UK, so HSE will not have the problem of depending on aging and out-of-date technology.

Having secured buy-in throughout the organisation, the GIS team refined and customised the proof-of-concept solution, configured it with live data and created secure access using HSE log-ins. Because it was a completely new system, rather than an upgrade to the existing system, HSE was able to keep the legacy software running in parallel. This helped to dispel employees' nervousness about replacing the existing system and removed the risk of disruption to ongoing operations.

With positive feedback from early users, the GIS team rolled out the new Consultation Zone Mapper rapidly across the organisation and began to introduce additional features that had not been available in the previous version, such as the inclusion of aerial photography data.

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### The Benefits

#### Enterprise-wide productivity improvements

The next-generation Consultation Zone Mapper is a more responsive, cloud-based solution that enables employees across HSE to work more productively. With the previous version, it used to take up to five minutes for data to load, due to the age of the on-premise hardware; now, however, the data is there instantly. In addition, the GIS team can now update data within a couple of hours, whereas it used to take a whole day.

#### 80% time saving in planning team

In the Land Use Planning Team, planning queries that used to take up to thirty minutes can now be completed in around five. This 80% time saving means that the team can respond to enquiries from local authorities far more quickly, and HSE can perform its statutory role as a planning consultee significantly more efficiently. The Land Use Planning Team is also less dependent on the GIS team for advice, as it can run more queries itself within ArcGIS Online.

#### 100% increase in application usage

Positive feedback on the new solution has led to the number of users increasing from around 50 to over 100. Several new groups of employees, including the risk assessment team and the explosives team, are now using the Consultation Zone Mapper to see their data spatially for the first time. HSE attributes this success to the ease-of-use of the new solution.

#### Value-adding new capabilities

Through this project, HSE has delivered a host of new features, which are adding value in many different ways. Users can, for example, edit features and annotate maps for reports for the first time, as well as access the solution from mobile devices, which wasn't possible before. Pipeline inspectors can now use it to assess hazards in the field, removing the need to print paper maps, and senior managers can illustrate solutions in planning meetings to inform decision making.