A telecommunications company often needs to build telecommunications towers near scenic, low density residential areas and needs to find suitable sites for its towers while minimizing costly land surveying expenditures and opposition from local residents. The sites need to be located at a high enough elevation to allow for good signal transmission but in such a way that they will not be visual eyesores to current residents in the area.

A telecommunications company has hired a GIS consultant to develop web applications that will assist in determining possible locations for proposed telecommunications towers. The GIS consultant is tasked with creating a web application that will allow the end-userto choose a point/location for the tower and input a visibility buffer distance. The web application will then return a viewshedand a distance buffer, indicating the locationswithin the study area, from which,the tower will be visible,and a circle with a user defined radius will be created, depicting the designated distance from the chosen tower location.

The GIS consultant is also tasked with producing a line of sight web application that will help determine which surface areas between the proposed tower location and the individual homes in the area are visible. Together, these applications will be used by the telecommunications company to determine the best preliminary locations and sizes of their telecommunications towers while reducing the amount of ground survey work that would normally be required.