USING GIS TO HELP US MAKE BETTER DECISIONS - MOUNTAIN DESTINATIONS -

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Abstract:

In this paper we aime to show the benefits of presenting and analyzing a certain topic using GIS , presentation which provides a good help for the people in charge of deciding something important. In our case , a company wants to offer the employees a small trip somewhere in a mountain resort where they can improve their skills of working as a team and create a closer connection between them . The company has a few options but it's hard to make a choice for a certain destination, so someone decides to make a StoryMap which can be shown to the employees and to the people responsible for deciding the destination in order for them to choose the best option. The same method can be used for choosing an adecvate location when a company wants to expand or someone wants to open a new store. GIS can be used for any study or observation related to the location of something , having a large field of application . In our paper we will analyze a few possible mountain destinations in terms of which one has the most ski slopes, which one offers the best possibilities for accommodation and which one has the best location from a geographical point of view. There will also be a short presentation of each mountain resort containing some pictures from the resort and possibly even some live images from the ski slopes , so the people in charge of making the decision will be very well informed about each possible destination. In parallel with this StoryMap we will also locate the respective places in a 3D scene, wich will increase the understanding of the geographical location for that area. As a conclusion, this paper aims to show the benefits of using GIS in order to make the best decisions.

Key words: analysis, application, GIS, resort, StoryMap.

INTRODUCTION

Deciding the location of an event or the location for building something has always been a major problem for the people in charge of making that call. There is a lot of pressure because for example if someone decides to send some people in a certain resort (in our case) and when they get there they find out that is not what they needed ,it will be very hard to repair the mistake and also more money will be spent. So, for any problem that relates to the location of something it is recommended to make a GIS analysis first. In this paper we show a simple example of how to use an ArcGis Online application to help us make better decisions and we also highlight some of the latest technology in the field of spatial analysis.

MATERIALS AND METHODS

In order to make this application we used ArcGis Online platform. At first we needed a basemap to start with and the easiest place to do that is by going to www.arcgis.com and selecting Map from the top part of the screen.
 After doing that we were able to choose from a variety of basemaps, as seen bellow(Figure 1):
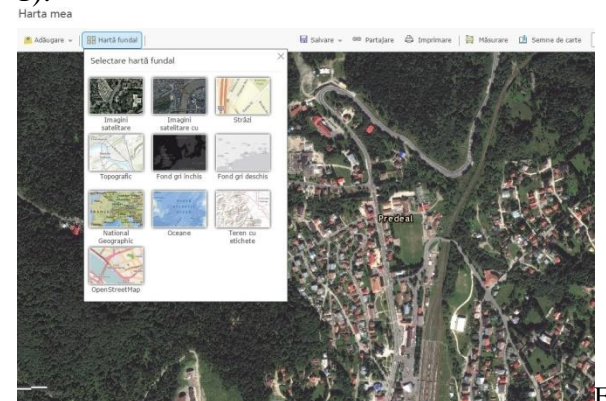

Figure 1. Choosing a basemap in ArcGis Online

After we decided what basemap we want to use , we can go and edit the map , add different locations that we want to see on the map and also for each location we can add detailes , informations or just something that we want to apear when we will clik that point

on the map. After adding all the points that we wanted on the map , we need to save the map. The map can now be seen from any device (Figure 2):

Figure 2. ArcGis Online. Map seen from IOS mobile device

We can also use the mobile devices to collect points from a certain area, for example if we want to have a map with the places where a certain flower grows in the park nearby we can go there with any mobile device and use Collector for ArcGIS aplication to put them on a map.
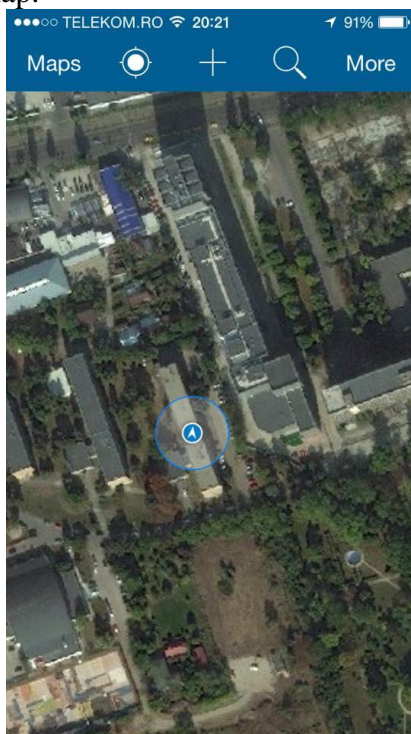

Figure 3. Collector for ArcGIS aplication on IOS device

The map can be shared with everyone , so it's also very usefull as a way of transmiting information. After we added all the points and informations on the map and also saved it , we need to find a way to present it. A simple way is to create a StoryMap.We can do this by going to www.storymaps.arcgis.comand follow some simple steps.A StoryMap combines maps created using ArcGis Online with any multimedia content like videos , photos , text etc. So a StoryMap lets us present all kind of informations about places while seeing those places on an interactive map. There are many StoryMap templates and we can even create a custom template wich suits our needs. A basic template consists of a side pannel and a main scene. In the side pannel we can put any kind of information like text , videos , photos , links to different sites . The side pannel has a few sections , each one providing informations about a certain place on the map. In the main scene we can import the map that we created using ArcGis Online or a map created by anyone with an ArcGis acount so this is very helpful if you want to use different maps for different locations.
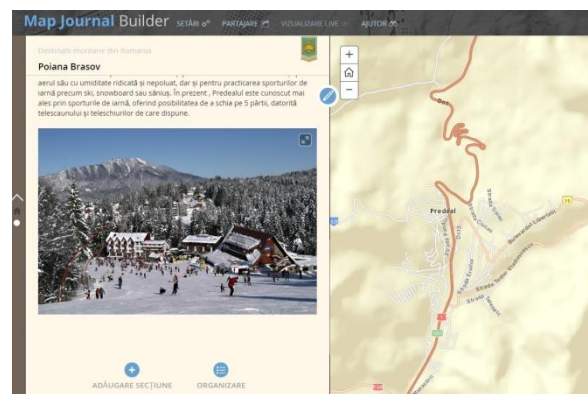

Figure 4. StoryMap

After creating all the sections for each location in our map , we saved and shared the StoryMap. It can be accesed from any device connected to the internet , and that is a very usefull feature in case we need to present it to someone and we were not prepared for that.

RESULTS AND DISCUTIONS

Although we would initially think that sending some people in a small trip it is not

that difficult , there are some things to consider before making a decision. We need to think about the cost , about the accommodation , about the distance between where they live and where they need to go and about what activities they can do once they get there. The cost of the trip is obviously one of the most important things to consider , so in the analysis of each possibility that will be the main criterion.After we collect all the informations that we need and take into consideration what we want to obtain , we will have a StoryMap that can be easily understood by anyone , that can be presented in just a few seconds anywhere and from any device.
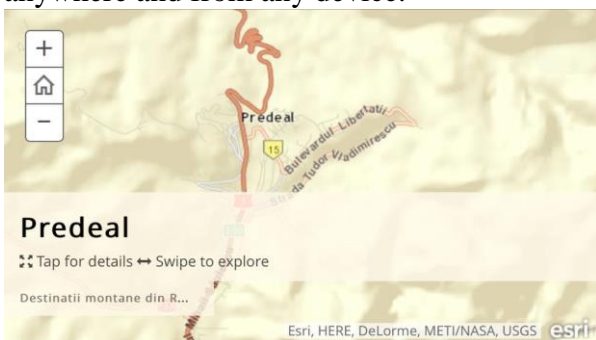

Figure 5. StoryMap seen from IOS device

Also the technology is rapidly evolving , so very soon the map used to identify our interest points will not be just a 2D map , it will be a 3D map containing possibly even a rough representation of the buildings in the area. That will make a huge difference in the perception of the space around our interest point and will definitelyimprove the understanding of the geographical location for a certain place.
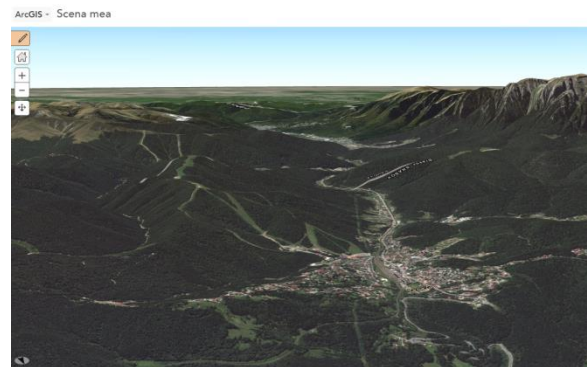

Figure 6. 3D scene in ArcGis Online

CONCLUSIONS

The paper aims to reveal how any person, without any training in GIS can use www.arcgis.com website in order to create and share spatial information with anyone in the world and how GIS is used to help us make better and more efficient decisions in our daily activities.
Also , GIS technology will be more and more present in our daily life as the cities evolve and the need for efficiency will rise.

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