

Tabletop GeoDesign for Public Planning—Invisible Yet?

Doug Walker of Placeways gives an overview of CommunityViz planning software.

http://video.esri.com/watch/1000/tabletop-geodesign-for-public-planninginvisible-yet_question_

Video Transcription

00:01 The thing I like about CommunityViz, it's software for planners.

00:03 It's built as an ArcGIS extension and it's been around promoting informed collaborative decisions...

00:10 ...in the sort of public planning arena since 2001.

00:13 It's built by our company, Placeways, in partnership with the Orton Family Foundation...

00:18 ...and Esri's been a great partner all the way through the years.

00:22 Thank you very much folks for the nice award they gave us last year.

00:26 On the other hand, I hate going right after these guys, 'cause we're always working on what they built...

00:32 ...and demoed a year ago, so we always look like a year out of date.

00:35 But I loved what I'm seeing coming next, and if you come here next year, I'll show you what we're doing with that.

00:43 Obviously what I want to emphasize today is CommunityViz as a geodesign tool for planners.

00:49 And my main themes are geospatial analysis, which is so, so wonderful...

00:56 ...flexibility, and accessibility. CommunityViz is meant to be widely used. It is...it's not expensive.

01:04 It's used by governments and people in all 50 states, 40 countries around the world.

01:09 Last year the American Planning Association published a book about it.

01:15 So what I thought I'd do is just show a few examples. I'll start with sort of a classic GIS example of suitability analysis.

01:24 Ours is just a little different. This starts with a park placement.

01:27 This is in downtown Boston, and with CommunityViz you can pick any factories you want.

01:35 If you have data about where schools are or where parks are, you can include that in your

analysis.

01:42 We actually do our math in vector rather than raster, which has some advantages for us.

01:47 And when you do it, you've got a map; the darker colors mean a better place for a park...

01:51 ...but then you can adjust the weighting factors on each factor and get new results, all in practically real time.

01:59 It's a little update that happens but it's fast and you get new results.

02:03 Another thing we see in sort of real-world planning is just a lot of informal data.

02:08 So for instance, if you go into Boston, you say, We're going to put a park, they say...

02:11 ...Whatever you do don't put it on the boundary of the turf between two gangs. That's not a safe part of the city.

02:18 So, you say, Well, where is that boundary? And they'll draw it for you and you can have a discussion...

02:22 ...about how close you should be to the boundary, again in real time, what is safe.

02:27 Somebody else may say, Wait. That line's in the wrong place. I want to edit it. I want to adjust it.

02:32 And this is geodesign. You edit, you adjust it, and in real time you get new results. So, that's one example.

02:43 Next, I wanted to go a little bit into the formulas that CommunityViz uses. We have a way of doing calculations.

02:51 It's kind of like ModelBuilder, looks a little bit like Excel, looks a little bit like Python...

02:56 ...but what it allows us to do is create a huge number of impact calculations.

03:01 So, here for example, we were calculating the impact of some redevelopment.

03:04 One of those many, many impacts was schoolchildren that would be generated put into the community schools.

03:11 If you want to see how we got that, you can. In about three clicks you can drill down and look at the formula that's being used.

03:18 Again, these formulas may look a little foreign when you first look at them but they're not hard and they're very powerful.

03:25 They are full of different functions that are geospatial functions, statistical functions, text functions...

03:31 ...that allow you to create kind of any model that you can imagine writing a formula for pretty easily and pretty quickly.

03:38 So you can take these formulas, you can edit them, you can share them with your friends...

03:42 ...you can make up new ones, or you can let the computer build them for you.

03:46 Nevertheless, if you feel like all that formula writing is too scary, you may just want to use a wizard.

03:53 And CommunityViz, over time, has built a lot of wizards that make this stuff really easy...

03:57 ...even for people who aren't that technically inclined.

04:00 So, here this is a very flexible wizard. A new question comes up. Where exactly are those schoolchildren going to go?

04:08 Which schools in the community? And within a few clicks, you can create that new analysis.

04:14 You don't have to do a new module. You can create it yourself and in very little time it'll make all the formulas for you.

04:21 It'll make you a nice chart and it'll solve that problem as it arises as part of your conversation...

04:27 ...which is getting to the invisibility point.

04:31 Finally, I want to talk about table-top sketching. This next drawing I'm going to show is at a different scale.

04:36 It's at a regional scale and it...it's made to be used in a table-top environment.

04:43 This one we did with Texas A&M down in the Houston/Galveston area.

04:47 So this is now a huge region, I don't know how many hectares, but it's a lot.

04:51 And the idea here, you've all seen this, you pick a place on the map, you select it, and you say...

04:56 ...I want this to be a commercial park and you click on it; all the impacts that go with that get updated right then.

05:07 So you learn about social impacts, you learn about economic impacts, you learn about environment impacts...

05:13 ...through some simple and some perhaps very sophisticated models, but it's presented in a nice, consistent way.

05:21 This is construction tools. This is a painter tool.

05:25 There's actually lots of different ways we try and give people to work with the map...

05:29 ...whether it's selecting, or painting, or cloning. All of those, a lot of which we've seen this morning, are helpful for us.

05:36 If you want, you can look at a couple of different scenarios side by side, or five or six...

05:42 ...and talk about different ways to treating a particular place on the landscape.

05:45 What benefits or disbenefits that may have.

05:49 If you want, you can drill down much more deeply on any particular result.

05:54 So here, it's just a hurricane-prone area, so construction...hurricane-proof construction and damage is important...

06:03 ...and you can adjust the inputs that go into that, find out a lot more about it if that becomes a topic of particular interest.

06:10 Even more interesting is the hurricanes themselves, and in this particular example we connected to SLOSH...

06:16 ...and actually I got some historic hurricane paths, so people had their nice plans laid out...

06:22 ...and then we let them put a hurricane across it and see how many houses would flood and what kind of damage it might sustain.

06:30 Sort of high-impact scenario planning I guess you could say.

06:36 So the point about invisibility is, all of this technology doesn't really matter in a public planning environment.

06:43 Nobody really cares whether you have the greatest, coolest new button.

06:46 What people care about is, Can they make good decisions?

06:50 So this kind of application comes together in environments like this.

06:55 This is people standing around a table having a conversation person to person about different plans.

07:02 And this is different stakeholders, different points of view, but they're working together as people...

07:07 ...with the information they need literally at their fingertips.

07:10 And after about 5 or 10 minutes, if we're doing this right, they stop thinking about how cool this technology is...

07:16 ...and they start thinking about the plans they actually want to make.

07:20 And that, I think, is a goal we should all have, is making geodesign invisible...

07:27 ...making people visible, let us make better decisions together.