##### [00:00:00.310] - Speaker 1

Welcome to this Community Viz video tutorial. In this tutorial, we'll show you how to use the 360 Indicators Wizard. We'll step through the wizard using an example Community Viz analysis and show you some results. This is the second video relating to 360 Indicators. In part one, we introduced you to 360 Indicators.

##### [00:00:17.010] - Speaker 1

The data that you'll need showed you how to use indicator categories and how to take advantage of the integrated help in this community analysis. We're focused on an urban neighborhood in the eastern United States. We have a lot of data jurisdictional boundaries, public facilities, transportation, and natural features. We also have a Parcels layer. You can access the 360 Indicators Wizard by going to the Scenario 360 Toolbar, going to Tools and activating the wizard here.

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Or you can activate the Decision Tools toolbar by going to View, Activating the Toolbar and clicking on this icon here. The wizard contains four screens. The first is this welcome screen? In the second, I'll choose which indicators I'd like to run, and in the third screen, I'll provide the data needed to run the indicators. And in the fourth screen, I'll set up my land use and choose additional options.

##### [00:01:08.520] - Speaker 1

In this first screen, I have these three options. I can create a new set of indicators, I can modify a set of 360 indicators that I've already created, and finally, I can delete a set of 360 indicators that I no longer need. I'll create a new set of indicators and leave the default name. In the second screen, I'll select which indicators I'd like to run. I can pick and choose from all the indicators, or I can use a filter that will select just a subset of indicators based on a topic.

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Notice that as I click on the indicators, the data layers required to create them will begin to populate the window on the right. This will let me know what types of data I'll need to create the indicators that I've chosen. If you have the ArcGIS Network Analyst extension enabled, you are presented with two ways to measure distance between features using straight line or network distance. If you have that extension enabled, you can choose to measure distance using an existing network data set. I don't have this extension enabled, so by default I'll use straight line distance.

##### [00:02:07.730] - Speaker 1

These data layers are required to run indicators that I've selected. Optional data is also displayed in the talecs. Even though this data is necessary to create the indicators that I've chosen, I can still finish the wizard even if I don't have all of the required data. The wizard will simply remove the indicators that I don't have data for and proceed with the indicators that I do have data for. You'll see an example of this later.

##### [00:02:28.910] - Speaker 1

Because I have a lot of data available, I'll select all of the indicators to run. I'll click next to go to the next screen of the wizard. In the third screen, the wizard will show me what data is needed to run the indicators I've chosen, and I'll provide the data. I'll step through the first nine data sources so that you can get an idea of what you'll need. All data is optional except for the Parcels layer.

##### [00:02:50.120] - Speaker 1

The number of indicators produce will depend on what data I have available, and the wizard will let me know what indicators are unavailable due to missing data. The first additional constraints ask for a polygon feature representing some constraints to development, such as open water areas. The next amenities ask for a point or polygon feature that makes an area attractive to its residents. I'll choose libraries as my amenity.

##### [00:03:13.350] - Speaker 1

Bicycle routes are line features representing bike trails or lanes. The city center asks for a point feature representing the geographic CenterPoint, such as a downtown or city center, to create a distance indicator. Floodplain asks for a polygon feature representing floodplain areas. Notice that on the right I can create additional attribute sources. This includes the FEMA codes, standardized codes used by the Federal Emergency Management Agency to classify different floodplain types.

##### [00:03:43.430] - Speaker 1

Also, I can specify whether a feature is a floodplain or not using a zero or one attribute code. One meaning floodplain and zero meaning not a floodplain. These are optional attribute sources. In this case, I don't have them, so I'll leave them blank and proceed to the next data source. Hazards and Risks are point or polygon features representing places that are hazardous or dangerous for people.

##### [00:04:06.020] - Speaker 1

Example include landslide, risk areas, floodplains, or toxic sites. In this case, I have hazardous sites identified by the state government. Intersections these are point features representing street intersections. This doesn't include other types of interceptions that you might think of. Open Space asks for polygon features that represent areas that are used for parks, agriculture, or other green spaces that aren't extensively built upon.

##### [00:04:31.290] - Speaker 1

Next is Parcels. Parcels is the only required layer for the 360 Indicators Wizard. The layer will serve as the main analysis layer on which most calculations are performed. Parcels don't necessarily have to be land ownership parcels. They can be any polygon data set that contain employment, housing, and land use information.

##### [00:04:49.770] - Speaker 1

This includes land use, zoning, or traffic analysis zones.

##### [00:04:56.290] - Speaker 1

The wizard asks for up to eight attributes in the Parcels layer. Most of these attributes are required for the indicators that I've chosen, but I'll leave a few of them blank so that you can see how the wizard handles missing data. Base Dwelling Units and base employment are attributes asking for dwelling units or employment numbers for the base or current scenario. By providing base levels, I'm better prepared to add scenarios representing future or alternative states. By providing base numbers, I can take advantage of growth and change comparisons using 360 indicators.

##### [00:05:25.930] - Speaker 1

I currently only have one scenario, so by leaving these blank, I'll only be able to take advantage of this one point in time. Next Dwelling Unit type asks if the dwelling units in the parcel are single, family, or multifamily, the values in the attribute must be single for single family and multi for multifamily dwelling units. Dwellings ask for the number of dwelling units in each parcel. Employees asked for the number of persons working in each parcel. This doesn't refer to the number of employees living in the parcel.

##### [00:05:57.580] - Speaker 1

If you're missing scenario attributes such as based employees or base dwelling units, notice that at any time I can save and exit the wizard. Go and create new scenario 360 attributes that you're missing, and then return to the wizard and continue where you left off. Next. We have land use. Land Use ask for the land use designation of each parcel.

##### [00:06:15.850] - Speaker 1

Next is non residential floor area. We tend to think of this as commercial, industrial, or institutional floor area. In the US. We measure this in square feet and in Canada in square meters. Finally, we have population.

##### [00:06:28.780] - Speaker 1

Population refers to the number of people living in each parcel. You probably noticed that as I've added layers, the red X indicating missing data becomes a green checkmark indicating the data has been successfully added with parcels. I've input all the data that I have, and it still retains the red X. This is okay. You don't have to have all possible data in order to run the wizard.

##### [00:06:48.870] - Speaker 1

We could always return to the wizard and add the missing data at a later time. I'll click next to go to the final screen of the wizard. Here the 360 indicators. Wizard is letting me know that some indicators depend on the data that is missing. That is, the data with the Rag X mark.

##### [00:07:05.100] - Speaker 1

I'm okay with removing these indicators from the analysis, so I'll click yes. I could return and add the missing data if I think I overlooked something by clicking no. In the final screen of the wizard, we'll cross block of land use classification in my parcels layer to standardize land use types used by the 360 indicators wizard. It's important that my parcels layer have land use, and in the previous screen of the Wizard, I told it which attribute field represented land use. It's okay if your land use doesn't fit perfectly.

##### [00:07:33.640] - Speaker 1

The wizard uses generalized types that will fit most situations. I'll step through and crosswalk the first nine land uses from my parcels layer to its closest type in the pulldown list so that you can get an idea of how I assign these. A stands for Apartments. I'll classify that as residential high density. C stands for Commercial.

##### [00:07:56.230] - Speaker 1

CL has another commercial land designation. CM stands for Condominium. I'll designate that as residential high density. EDUC is Education. I'll classify that as school.

##### [00:08:10.690] - Speaker 1

Next is Gov. This is Government Lands. I stands for Industrial. OS is Open Space. Parks are my Parks and Recreation land.

##### [00:08:24.310] - Speaker 1

Notice that I have a couple of output options. I'll leave both of the defaults clicked on if I've already run the wizard previously and I've customized some of the variable assumptions in my project. I would probably want to clear this one reset assumptions to default values so that my assumptions are not overwritten by the wizard. I'll leave my units as English I'll run now to begin the process. Once the wizard has finished, I can take a look at the results.

##### [00:08:48.590] - Speaker 1

The wizard has created a lot of new indicators and displayed them in these charts. You can see them on the right. We can also take a look at the assumptions which are important for some of the indicators. We can change the assumptions to reflect local realities or preferences. You can also open the formulas for the attributes and indicators and modify them if you wish.

##### [00:09:08.620] - Speaker 1

But remember, if you rerun this wizard, you'll reset these to their defaults. To avoid this, you can change the indicator name. This should give you a basic idea of how the 360 Indicators wizard is used to quickly and easily see impacts. If you're interested in creating more indicators, please check out the tutorial videos on common and custom impacts. Thank you for watching this Community Viz video Tutorial.

##### [00:09:29.950] - Speaker 1

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