

community*viz*[®]

Exploring Your
CommunityViz
Version 5.0 Upgrade



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Document version 1.0

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Introduction to CommunityViz Version 5.0

CommunityViz® Version 5.0, including Scenario 360™ and Scenario 3D™, is the next generation of Placeways' award-winning CommunityViz software for planners. Version 5 takes advantage of new web sharing platforms and advanced computing algorithms to give planners more power and reach than ever before. The exciting new capabilities include

- **CommunityViz Web App** – publish your work to the web via ArcGIS Online
- **Allocator 5** – a new level of sophistication for regional growth modeling
- Plus, **improvements and updates** to make CommunityViz faster, more reliable, and more versatile

This short guide, intended for people who are already using CommunityViz 4.4, provides a tour of the major new features available in Version 5.0.

As always, **up-to-date Help documentation** can be found online and throughout the CommunityViz 5.0 interface.

We hope you enjoy the new CommunityViz Version 5.0!

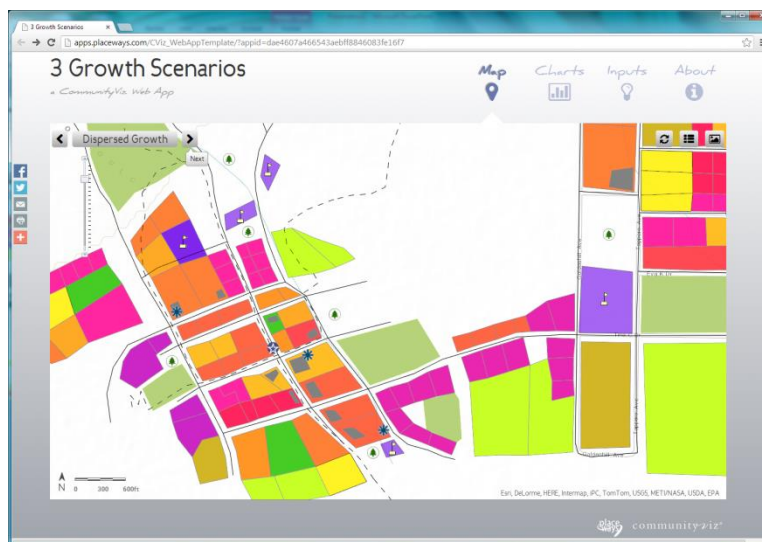
Publish your work to the web via ArcGIS Online

CommunityViz is constantly improving and new features appear in a steady stream. And every now and then there is a fundamental, structural leap forward. The 1st generation of CommunityViz brought an entirely new concept to life. The 2nd generation made it understandable by wide audiences. The 3rd generation introduced easy-to-use wizards for set up. The 4th generation brought new 3D technology to the fore and installed new analytical power under the hood. And now Version 5, the 5th generation of CommunityViz, embraces the web and all it can offer.

Version 5.0 introduces our first web-based tool, the CommunityViz Web Viewer, and with it the remarkably powerful and useful Web App Publisher. Working together, these two new features let you share your CommunityViz work with hundreds or thousands of people in online, interactive form. They create the fundamental underpinnings for a constellation of cloud-based CommunityViz capabilities in years to come.

How It Looks

The Web App Publisher and Web App Viewer work together, making it remarkably easy for you to create an attractive, interactive online presentation of the CommunityViz analyses you have created on your desktop. Here is a sample screenshot. You can find a live sample here: <http://bit.ly/cvizwebapp>

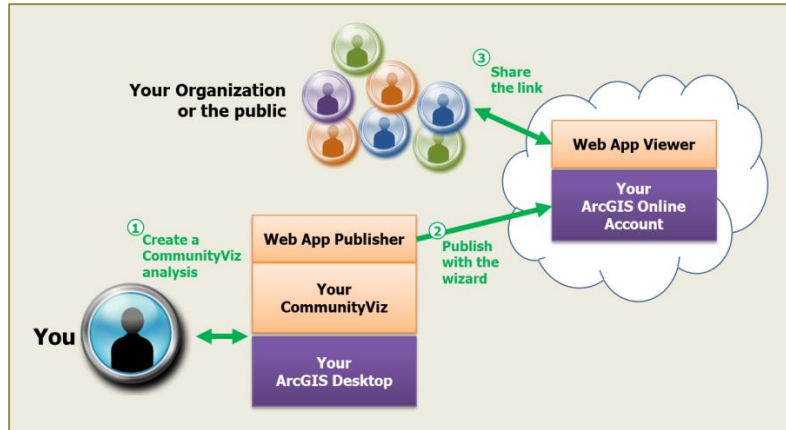


How It Works

There is a one-time setup for the online components (see the separate Web App **Licensing and Setup Instructions**), and after that it's easy to use the new tools. The diagram and steps below describe the basic flow. Read the Help for more details. If you'd like a sample analysis to practice on, download **WebAppDemoAnalysis.zip** from the CommunityViz website.

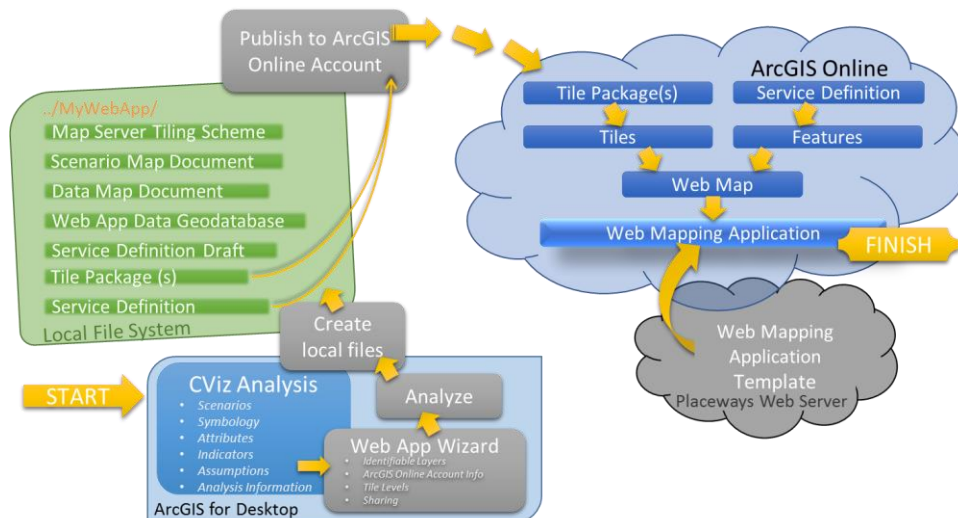
1. **Create a CommunityViz analysis** normally, on your desktop. Start with any analysis you want to share. We suggest paying extra attention to presentation details like colors, labels, and descriptions, because in a few minutes it will be on the web. It's easiest to set your display details before starting the Web App Publisher (which you may want to save in a Saved View for later reference).
2. When ready, open the new **Web App Publisher** decision tool available on the Scenario 360 Decision Tools toolbar. Step through the easy 3 or 4 screens, reading directions. You'll be asked to login to your ArcGIS Online account as well. When you click Publish on the last screen, CommunityViz performs over a dozen background processing steps that ultimately generate a ready-to-use online application. It's easy, though it may take some processing time as map tiles are created.

- The website address (url) for your new app, which is using the CommunityViz **Web Viewer**, appears in a status window when the Publisher finishes. You can go straight there and bookmark it. Give yourself a tour and see how it looks! Feel free to make changes and rerun the Publisher as much as you like. In our experience tuning the ArcGIS Tile settings to create a nice balance between close-in detail and fast performance sometimes takes a few tries. When ready, share the url with your organization or the world.



Nuts and Bolts

For the technically inclined, the diagram below identifies the many useful web mapping and analysis components the Web App provides. Most of these are available for you to edit, add, and reuse as needed. It is also notable that the Web App Publisher creates tile packages using your own desktop computer's processors, saving the sometimes substantial cost (measured in "credits") of creating tiles online.



A new level of sophistication for regional growth modeling

CommunityViz Version 5.0 provides a powerful new companion to the existing Allocator Wizard. **Allocator 5** moves from the previous “lightweight” model to a new “medium weight” land use allocator that models the spatial pattern of future development by land use type. If you do regional land use and transportation modeling, Allocator 5 is about to transform the way you work.

Allocation models the location of new development over time by looking at a set of features such as parcels that are candidates for future growth. Given both the development **desirability** of each parcel (often modeled using the Suitability Wizard) and the **capacity** of each parcel (from the Build-Out Wizard, for example), the Allocator calculates which features will receive new growth over time, up to a **total growth amount** you specify. Allocation, sometimes known by the acronym **LUAM** (Land Use Allocation Model), is a key tool in many long-range transportation and land use planning processes.

The original Allocator Wizard, which will still be supported, provides a popular and straightforward allocation model. Allocator 5 adds tremendous new capabilities designed based on the real-world needs and experiences of regional planners across the country.

Multiple Land Uses

- **Multiple simultaneous land uses.** If your allocation layer already has designated land uses, you can allocate growth for all of them in a single run of Allocator.
- **Competing land uses.** If your allocation layer does *not* already have designated land uses but several are possible for each feature, Allocator 5 can determine which land use types will go where.
- **Competing land uses mixing** within a given large feature such as a TAZ. Allocator 5 can determine the mix ratio for each TAZ using its model.

Growth Over Time

- **Allocation cycles**, which allow *incremental time snapshots* and allow modeling of *growth attracted by growth*. For example, you might run allocations in 5-year increments and record the development pattern at each step. Between cycles, you can manually or automatically update desirability scores to reflect the recent changes, so that for example an intersection near a newly allocated subdivision becomes a more desirable location for retail in subsequent allocation cycles.

Regional Subareas

- **Separate subarea allocations** are often used in large regional studies where counties, municipalities, or even TAZs each have their own pre-specified growth targets within the regional totals. Allocator 5 allows you to process all your subregions or subareas in a single run.
- **Aggregated growth targets** for residential and/or commercial uses. This means that you can set a target of, say, 10,000 new dwelling units without specifying exactly how many will be single family or multifamily. Allocator 5 will model the distribution of types for you.

Smoothly Variable Randomization

- **Smoothly variable degrees of randomization.** Randomness in Allocator 5 is a simple slider bar variable assumption that moves from 0 to 10. 0 means strict-order allocation, in which growth order exactly follows desirability scores, and 10 means almost completely random, in which desirability scores are mostly ignored.

Plus...

In addition, look for these great upgrades and improvements

- **Custom Scripts** are upgraded to make it easier to call external Python scripts from Scenario 360 functions
- **Saved Views** now support floating charts and zoon-to-layer-extent
- **Templates** now include attribute descriptions and Alerts
- **Statistical functions** (Sum, Median, etc.) can now be adjusted for use on analyses with a large number of indicators
- **International number formats** are now better supported to allow the use of regional number conventions regarding digits, dots, and commas for decimal places and grouping.
 - **TIP:** If your computer is using number conventions that differ from US settings, you will need to perform a Forced Update on any existing analyses the first time you open them in Version 5.0.
- **External Table Links** are now more stable
- **Suspend/Resume Dynamic Updates** button now has a more intuitive display behavior
- **Clone tool** is now supported as a default edit template setting

As always, up-to-date Help documentation can be found online and throughout the CommunityViz 5.0 interface.

We hope you enjoy the new CommunityViz Version 5.0!