

CommunityViz[®] Scenario 360[™] is dynamic GIS software that supports geodesign and scenario planning through quantitative analysis and 2D visualization. It works as an extension to ESRI's ArcGIS[®].

ANALYSIS FEATURES

Dynamic Analysis and Geodesign

<i>Interactive Analysis</i>	Create, modify, and compare land-use and planning scenarios.
<i>Dynamic Attributes</i>	Formula-driven feature attributes that update automatically as analysis is performed via map edits, attribute changes, assumptions, changes, etc.
<i>Dynamic Indicators</i>	Formula-driven analysis results that update automatically as analysis is performed.
<i>Dynamic Layers</i>	Layers whose data can be formula-driven for real-time updates stored in an analysis geodatabase.
<i>Assumptions</i>	Slider bars or tables let you change assumptions during analysis.
<i>Attributes</i>	Change the attribute values of features on the map as part of the analysis process.
<i>External table interface</i>	Interact with tools like Microsoft Excel [®] and external fiscal or impact models in real-time. Automatically detect changes made to external tables and recalculate results accordingly.
<i>Scenario Sketch Tools</i>	"Paint" your map with proposed land uses, then get complete analysis updates in real time. Includes Style Manager, Sketch Monitor, Painter Tool and Clone Tool.
<i>Selection Analysis</i>	Apply analysis formulas to interactively selected features

Scenario Planning

<i>Side-by-Side Scenario Analysis</i>	Create multiple scenarios within one analysis, and use a simple drop-down box to switch between displays. Lock analysis component values together for comparison, or change them independently.
<i>Scenario Comparison Window</i>	Separate window displays maps, data, charts and images from different scenarios in side-by-side frames. 8 layout options with resizable frames; zoom, pan and identify tools; lock together scenario extents, drag and drop dynamic charts into display.
<i>Cross-Scenario Analysis</i>	Compare indicators and assumptions quantitatively from one scenario to another.

Dynamic Charts

<i>Dynamic Charts</i>	Charts of assumption or indicator values update automatically as analysis is performed. Single scenario or scenario comparison. Display previous values of bar and line charts.
<i>Chart Displays</i>	Dockable charts window, individual charts window, and embedded chart elements

Dynamic Alerts and Media

<i>Dynamic Alerts</i>	Visual notifications of when user-set thresholds are crossed. Map features highlighted, icons displayed on charts and assumptions, alert notification window display.
<i>Multimedia</i>	Play audio or video clips and launch applications automatically when specified analysis events occur

Analysis Diagrams

<i>Dynamic Analysis Diagrams</i>	Flow chart displays logical relationships among analysis components. Zoom, pan, find, magnify, organize. Components are right-clickable for more information.
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Intuitive Interface

<i>Tools and Icons</i>	Clear, colorful icons available via dockable toolbars or unique "task pane", set up and analysis clearly separated.
<i>ArcGIS Integration</i>	Works seamlessly with ArcGIS, yet makes its unique functions clear.

DECISION TOOLS

Build-Out

<i>Build-Out Wizard</i>	Step-by-step procedure for setting up numeric, spatial, and/or visual build-out analysis for residential, commercial, and mixed-use. Standard and advanced versions. Accepts constraint layers and existing buildings. Import land-use tables, or create your own. Spatial layout can be grid, random, or follow roads. FAR calculator for estimating floor-area ratios from other data.
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Common Impacts

Common Impacts Wizard

Simple, highly automated creation of over a dozen commonly used impact analyses of economic, social, and environmental indicators.
Creates assumptions, attributes, indicators, charts and reports as needed.
Includes default values and starting points.
Optional impacts: distance to places of interest, sensitive lands, taxes.

Custom Impacts

Custom Impacts Wizard

Quickly creates all components needed for 5 different types of impact models.
Count features based on their location or items in features
Add amounts per attribute
Classify and count features by attribute value or proximity to other features

Land-Use Designer

Land-Use Designer Wizard

Creates a palette of typical land-use styles and associated impacts with a few clicks of the mouse.
Use Scenario Sketch Tools to paint land-use polygons with those special styles, and a wide variety of customized impact calculations are automatically displayed as indicators and charts.
Calculations update automatically as polygons are re-painted with different land-use styles.

Suitability

Suitability Wizard

Highly automated creation of simple site suitability analyses.
Includes optional variable weighting of suitability factors.
Creates assumptions, attributes, indicators, charts and reports as needed.
Allows multiple suitability measures within a layer and multiple layers.
Supports proximity, vector and grid overlap, and attribute-driven analysis.

TimeScope™

TimeScope Wizard

Step-by-step procedure for setting up rate and order in which features appear over time.
Features not yet built are hidden on the map.

TimeScope Animator

Create and play animations of growth over time.

Allocator (Professional version only)

Allocator Wizard

Sets up supply/demand allocation based on capacity and desirability of features.
Statistical or standard allocation.

Landscape Fragmentation (Professional version only)

LandFrag Wizard

Helps calculate and classify the fragmentation of an existing land cover raster, based on the pattern of land cover in surrounding cells.

Optimizer (Professional version only)

Optimizer Wizard

Sets up optimization analysis that chooses best combination of features to meet goals and constraints provided.
Uses very fast modified Simplex algorithm.

3D VISUALIZATION

Scenario 3D™

Integrated 3D Visualization

Complete desktop 3D visualization tool for GIS.
Included with CommunityViz package, see insert for details.

ArcScene

ArcScene Compatible
Dynamic Analysis
TimeScope™

Use Scenario 360 within ArcScene
Dynamic analysis updated in a 3D environment
Watch buildings appear over time in TimeScope
ArcScene not included

Google Earth™

Export to KMZ
Extrude Buildings
SketchUp® Buildings
KMZ model library
Timeline

Export Scenario 360 analysis layers and charts to Google Earth .kmz format.
Extrude polygons such as building footprints for 3D viewing.
Google Earth not included
Populate Google Earth scenes with 3D models built in SketchUp.
Earth-compatible 3D library provides easy access to a starter-set of models.
Watch buildings appear over time using the Google Earth Timeline slider for TimeScope time

SETUP FEATURES

Data

Make data layers dynamic
ArcSDE compatible
Supported feature classes
Geodatabase types

Create new or add existing layers to the Scenario 360 analysis geodatabase.
Use with desktop database or file formats or in ArcSDE environments
Supports points, multi-points, lines, polygons, and tables. Analysis can be performed using raster and/or network reference layers (Spatial Analyst or Network Analyst required)
Use personal or file geodatabases.

Data services Can use any ArcGIS-support data as reference (non-dynamic) layers in an analysis, including ArcGIS Server (AGS) map services, ArcIMS map and feature services, and Web Map Services (WMS)

Assumptions

Assumption Types Numeric, yes/no, or select from drop-down list. Optional text (.csv) import.

Scenarios

Creation Options Create all new scenarios or base them on existing ones

Formulas

Formula Wizard Logic-tree-driven, step-by-step formula creation

Formula Editor Smart formula-writing editor with result previews.

Formula Functions Over 60 analysis functions including numeric, spatial, conditional, statistical, user input, and network categories.

Formula Types Indicator and attribute

Alerts

Alert Types Attribute, indicator, and assumption

Charts

Chart Options Bar, line, pie, or doughnut format. Customizable appearance and format.

Templates

Scenario Templates Save and share analysis formulas, charts, assumptions for reapplying to other data sets.

PRESENTATION

Organize and Present

Organize Sort and display analysis components by category.

Saved Views Store particular screen lay-outs and displays for quick access.

Symbology Saver Store particular symbologies for one or more layers, and quickly switch between them.

Reports

Report Types Summary, detailed, and lists of files needed. Custom reports for build-out and common impacts wizards.

TimeScope Animations

TimeScope Animation Use ArcMap animation features to create animations based on TimeScope build-dates.

Web-Ready Reports and WebShots

Scenario WebShots Snapshots of your analysis, created with an easy-to-use wizard, which allows you to display your results website as a slideshow, or in a partly interactive format.

Report Wizard Create reports using step-by-step Wizard

Report Content Choices Include data, charts, maps and images, web links provide definitions and explanations, HTML format for viewing in web browser, or choose "printer friendly" format.

Export Export indicator and assumption values to Excel.

Analysis Publisher (Professional versions only)

Publisher Create freely sharable versions of your Scenario 360 analyses to share with clients and members of the public, whether or not they have CommunityViz.

HELP AND UTILITIES

Help

Searchable Context-Sensitive Help Complete built-in documentation fully searchable and cross-referenced
Tool tips that describe toolbar buttons

Documentation

Quick Reference Guide 60-page printed guide available for download

Additional Resources Additional documentation, tutorials, sample data, and guides available for download

Web Resources

Self-Support Site Searchable technical support questions

Resource Library Additional documentation, tutorials, sample data, and guides.

Licensing

Licensing Tools Easy online license registration
Single seat or network licensing
Separate licensing available for decision tools

