

CommunityViz<sup>®</sup> Scenario 360<sup>™</sup> 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<sup>®</sup> platform.

Scenario 360 Version 5.1

## 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, sketching, 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 <sup>®</sup> 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
<i>ArcGIS Custom Toolbox Integration</i>	Include ArcGIS Python-based custom scripts, tools, and models in Scenario 360 formulas

### 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. Eight 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, indicator, or attribute 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

### 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

<i>Common Impacts Wizard</i>	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.
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### Custom Impacts

<i>Custom Impacts Wizard</i>	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.
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### Land-Use Designer

<i>Land-Use Designer Wizard</i>	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.
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### Suitability

<i>Suitability Wizard</i>	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.
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### TimeScope™

<i>TimeScope Wizard</i>	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.
<i>TimeScope Animator</i>	Create and play animations of growth over time.

### 360 Indicators

*(Professional version only)*

<i>360 Indicators Wizard</i>	Creates up to 101 indicators and dozens of analysis components (formulas, indicators, attributes, charts, etc.) to give you a comprehensive, well rounded set of standard planning measurements (indicators) related to your study area. Topic areas cover demographics, employment, environment, housing, land use, recreation, and transportation.
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### Allocation

*(Professional version only)*

<i>Allocator Wizard</i>	Sets up supply/demand allocation based on capacity and desirability of features. Statistical or standard allocation.
<i>Allocator 5</i>	Allocates future growth based on user-specified parameters. Up to 10 multiple, competing land uses with user-specified statistical variance. Iterative allocation so that growth attracts growth. Smart wizard input.

### Hazus Risk Assessment

*(Professional version only)*

<i>Hazus Risk Assessment Wizard</i>	Imports data from US Federal Emergency Management Agency's (FEMA) standardized loss estimation methodology (Hazus) into a Scenario 360 analysis. Automatically generates numerous indicators and charts to quickly assess overall risk.
<i>Hazus Risk Assessment Exporter</i>	Export data from a Scenario 360 point layer to Hazus user-defined facilities (UDF) datasets for use in a Hazus analysis to test possible hazard mitigation strategies applied to buildings in a Scenario 360 analysis.

### Optimizer

*(Professional version only)*

<i>Optimizer Wizard</i>	Sets up optimization analysis that chooses best combination of features to meet goals and constraints provided. Uses very fast modified Simplex algorithm.
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## 3D VISUALIZATION

### Scenario 3D™

<i>Integrated 3D Visualization</i>	Complete desktop 3D visualization tool for GIS. Included with CommunityViz package, see insert for details.
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### ArcScene

<i>ArcScene Compatible</i>	Use Scenario 360 within ArcScene
<i>Dynamic Analysis</i>	Dynamic analysis updated in a 3D environment
<i>TimeScope™</i>	Watch buildings appear over time in TimeScope ArcScene not included

### Google Earth™

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

## SETUP FEATURES

### Data

<i>Make data layers dynamic</i>	Create new or add existing layers to the Scenario 360 analysis geodatabase.
<i>ArcSDE compatible</i>	Use with desktop database or file formats or in ArcSDE environments
<i>Supported feature classes</i>	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)
<i>Geodatabase types</i>	Use personal or file geodatabases
<i>Load Data Wizard</i>	Optional wizard for appending or overwriting existing data without disturbing analysis logic
<i>Data services</i>	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

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

<i>Creation Options</i>	Create all new scenarios or base them on existing ones
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### Formulas

<i>Formula Wizard</i>	Logic-tree-driven, step-by-step formula creation
<i>Formula Editor</i>	Smart formula-writing editor with result previews
<i>Formula Functions</i>	Over 90 analysis functions including numeric, spatial, conditional, statistical, user input, and network categories.
<i>Formula Types</i>	Indicator and attribute

### Alerts

<i>Alert Types</i>	Attribute, indicator, and assumption
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### Charts

<i>Chart Options</i>	Bar, line, pie, stacked, range, or doughnut format. Customizable appearance and format.
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### Templates

<i>Scenario Templates</i>	Save and share analysis formulas, charts, assumptions for reapplying to other data sets.
<i>Super Templates</i>	Save an entire analysis, including logic and presentation, except for data so it can be reused in other locations

## PRESENTATION

### Organize and Present

<i>Organize</i>	Sort and display analysis components by category.
<i>Saved Views</i>	Store particular screen lay-outs and displays for quick access.
<i>Saved Views Browser</i>	Step through Saved Views using back, forward, and refresh buttons on a simple toolbar.
<i>Symbology Saver</i>	Store particular symbologies for one or more layers, and quickly switch between them.
<i>Display Mode</i>	Switch to a clean, presentation-ready screen with the click of a single button

### Reports

<i>Report Types</i>	Summary, detailed, and lists of files needed. Custom reports for build-out and common impacts wizards.
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### TimeScope Animations

<i>TimeScope Animation</i>	Use ArcMap animation features to create animations based on TimeScope build-dates.
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### Web Apps

*(Professional version only)*

<i>Web App Publisher</i>	Processes and exports desktop analysis for viewing in ArcGIS Online CommunityViz Web Viewer app Creates tile packages, map documents, service definitions, and web app data geodatabase Logs in to ArcGIS Online account and creates web map and web mapping application
<i>Web App Viewer</i>	Web viewing template for use with ArcGIS Online, available through ArcGIS Marketplace Displays map, scenarios, attribute data, legend, indicator and assumption values, and descriptions

### Web-Ready Reports and WebShots

<i>Scenario WebShots</i>	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.
<i>Report Wizard</i>	Create reports using step-by-step Wizard
<i>Report Content Choices</i>	Include data, charts, maps and images, web links provide definitions and explanations, HTML format for viewing in web browser, or choose "printer friendly" format.
<i>Export</i>	Export indicator and assumption values to Excel.

### Analysis Publisher

*(Professional versions only)*

<i>Publisher</i>	Create freely sharable versions of your Scenario 360 analyses to share with clients and members of the public, whether or not they have CommunityViz.
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## HELP AND UTILITIES

### Help

<i>Searchable Context-Sensitive Help</i>	Complete built-in documentation fully searchable and cross-referenced Tool tips that describe toolbar buttons Available in-system and online
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### Documentation

<i>Quick Reference Guide</i>	60-page printed guide available for download
<i>Additional Resources</i>	Additional documentation, tutorials, sample data, and guides available for download

### Web Resources

<i>Self-Support Site</i>	Searchable technical support questions
<i>Video Tutorials</i>	Library of 5-10 minute videos on a variety of topics, plus video demos of applications
<i>Resource Library</i>	Additional documentation, tutorials, sample data, and guides.

### Licensing

<i>Licensing Tools</i>	Easy online license registration Single seat or network licensing Separate licensing available for decision tools
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### Configuration Settings

<i>Customizable Settings</i>	Set user-specific default values, unit types, display types, and environment settings.
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