communityviz®

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® platform.

Scenario 360 Version 5.2

ANALYSIS FEATURES

Dynamic Analysis and Geodesign

Interactive Analysis	Create, modify, and compare land-use and planning scenarios
Dynamic Attributes	Formula-driven feature attributes that update automatically as analysis is performed via map edits, sketching, attribute changes, assumptions, changes, etc.
Dynamic Indicators	Formula-driven analysis results that update automatically as analysis is performed
Dynamic Layers	Layers whose data can be formula-driven for real-time updates stored in an analysis geodatabase.
Assumptions	Slider bars or tables let you change assumptions during analysis
Attributes	Change the attribute values of features on the map as part of the analysis process
External table interface	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.
Scenario Sketch Tools	"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.
Selection Analysis	Apply analysis formulas to interactively selected features
ArcGIS Custom Toolbox Integration	Include ArcGIS Python-based custom scripts, tools, and models in Scenario 360 formulas

Scenario Planning

Side-by-Side Scenario Analysis	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.
Scenario Comparison Window	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.
Cross-Scenario Analysis	Compare indicators and assumptions quantitatively from one scenario to another.

Dynamic Charts

Dynamic Charts	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.
Chart Displays	Dockable charts window, individual charts window, and embedded chart elements

Dynamic Alerts and Media

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

Intuitive Interface

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

DECISION TOOLS

Build-Out

Build-Out Wizard
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.

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.

360 Indicators *(Professional version only)*

360 Indicators Wizard
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.

Allocation *(Professional version only)*

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

Allocator 5
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

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

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

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

SETUP FEATURES

Data
Make data layers dynamic	Create new or add existing layers to the Scenario 360 analysis geodatabase.
ArcSDE compatible	Use with desktop database or file formats or in ArcSDE environments
Supported feature classes	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)
Geodatabase types	Use personal or file geodatabases
Load Data Wizard	Optional wizard for appending or overwriting existing data without disturbing analysis logic
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 90 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, stacked, range, or doughnut format. Customizable appearance and format.

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

PRESENTATION

Organize and Present

Organize　　　Sort and display analysis components by category.

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

Saved Views Browser　Step through Saved Views using back, forward, and refresh buttons on a simple toolbar.

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

Display Mode　　Switch to a clean, presentation-ready screen with the click of a single button

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
Available in-system and online

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

Video Tutorials　　Library of 5-10 minute videos on a variety of topics, plus video demos of applications

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

Configuration Settings

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

For more information about CommunityViz, please visit www.communityviz.com.