

CommunityViz® at Work in Australia

Five projects from Down Under

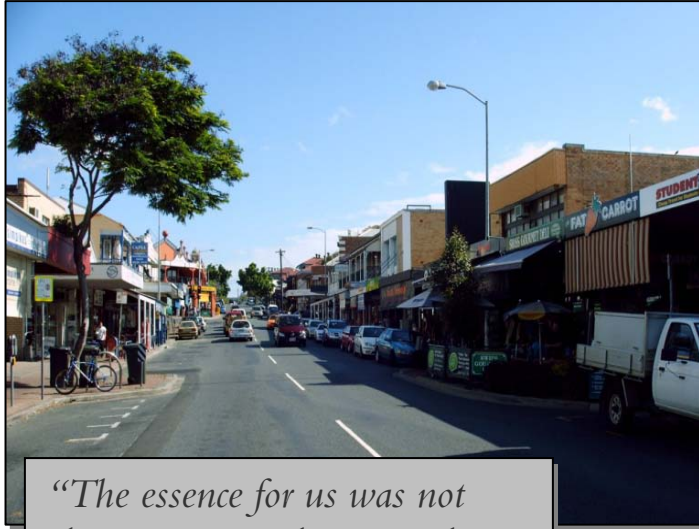
Location: Australia

Partners: In Australia: Spatial Information Services Pty Ltd.; University of the Sunshine Coast
In the USA: University of Wyoming; Geodata Services, Inc. Montana

Context: Planners in Australia are finding innovative ways to deal with the same kinds of issues common throughout North America: growth pressures; how to evaluate and visualize proposed change; where best to invest natural resource funding; and how best to engage the public. Collaborations among U.S. and Australian consultants and universities have led to the ongoing use of CommunityViz in projects ranging from site specific to regional, and from urban to rural. Here are five examples.



Site development planning—Palmwoods, South East Queensland: A new Regional Plan created urban footprints (UFP) to constrain urban growth. Palmwoods, a small village with a UFP, is surrounded by lands which cannot be subdivided. The Palmwoods project is the first known use of CommunityViz in Australia and was a small proof of concept to see if CommunityViz is applicable to Australia's planning needs. Anticipated impacts of a proposed large Palmwoods subdivision were contrasted with those of a more compact, mixed used development, close to a rail station. A range of impacts, including numbers of dwelling units, population, vehicle miles traveled, traffic volumes at peak hours, and the need for new public facilities were determined. The project demonstrated the applicability of CommunityViz to Australia, and created considerable interest and discussion among members of the Palmwoods Community Association and of local government officials.



“The essence for us was not about opposing change to the area but using the illustrations of CommunityViz to discuss the most deserving changes from a number of perspectives and possible criteria.”

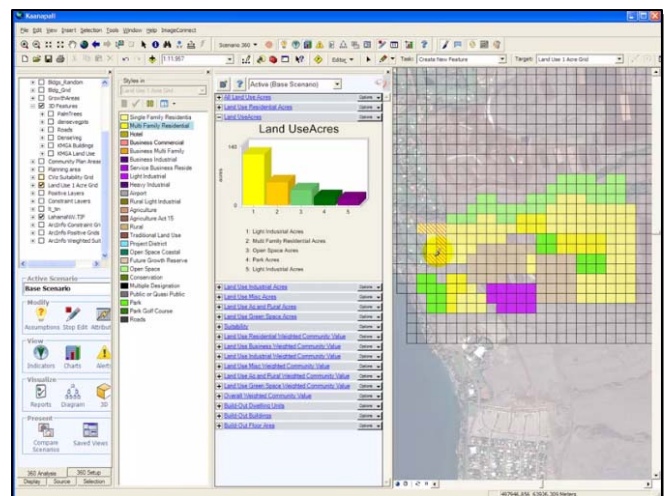
— Mary Maher,
Professional Planner and immediate
Past President, West End Community
Association

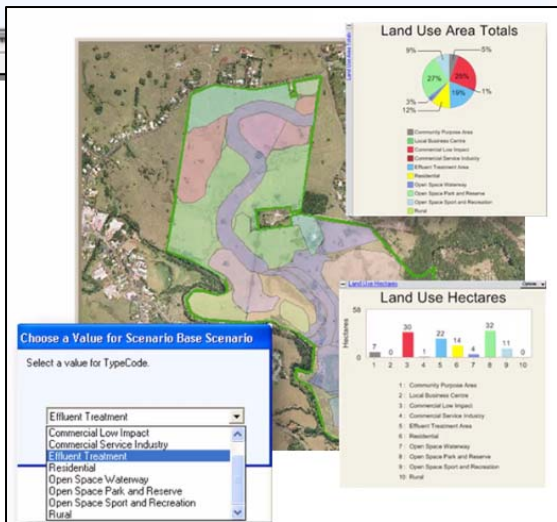
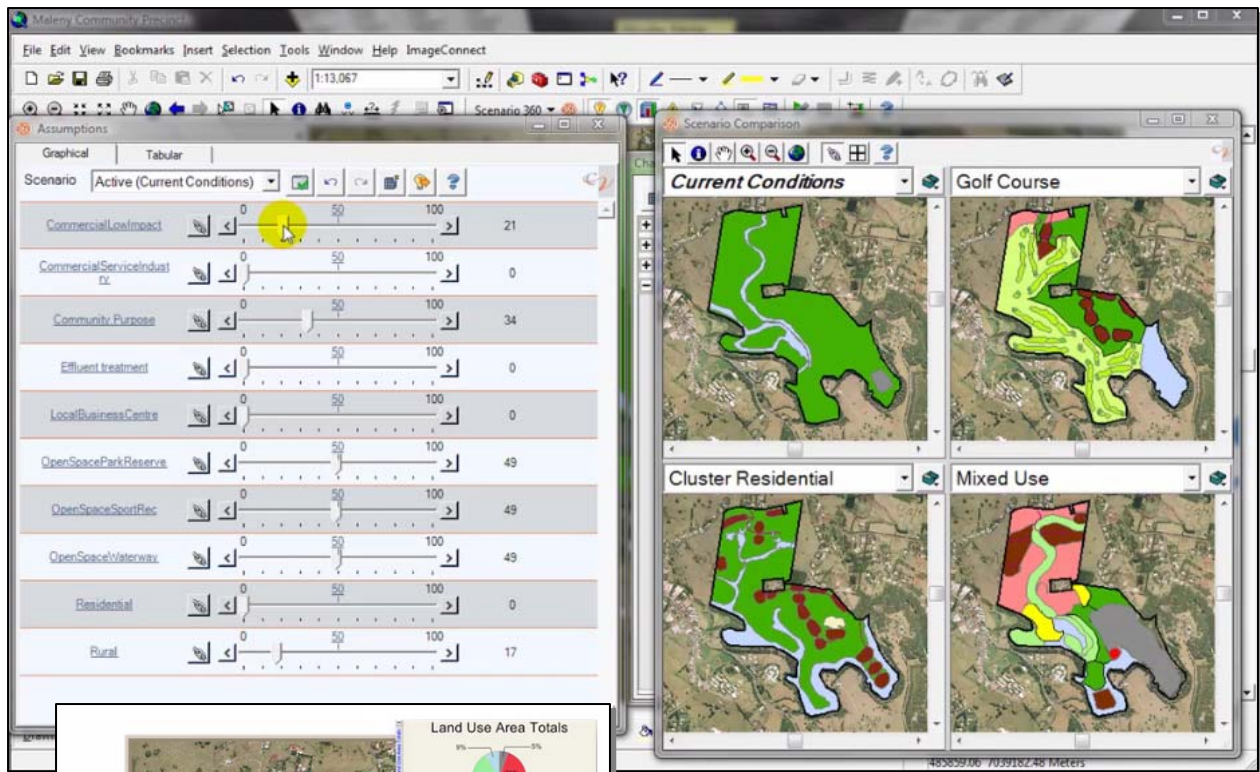
Urban planning—West End, City of Brisbane, South East Queensland:

The West End of Brisbane is an older, cosmopolitan, mixed-use, low-density area across the river from Brisbane’s Central Business District. In 2006, the City Council released a plan for part of the West End, proposing its transformation into a high-rise mixed-use area. The West End Community Association, concerned about the magnitude of change, sought assistance from the Australian/American CommunityViz collaboration team. The team created a flexible CommunityViz model to evaluate the proposal, explore “what ifs,” and objectively determine impacts. Variable

assumptions were used to measure indicators such as day-time and nighttime population, number of different types of dwelling units, square meters of each land-use type, jobs created, public transit opportunities, and open space. Changes in building heights and the ratios of mixed use were incorporated and illustrated. Some impacts were illustrated in 3D as building polygon extrusions and 3D models displayed in ArcGIS® ArcScene or Google® Earth. The project used indicators, assumptions, and 3D visualizations to facilitate intelligent dialogue among community groups and the City Council. The City Council decided not to pursue its original proposal, and now alternatives are being considered.

Economic options for rural areas—Hunchy, South East Queensland: A new Regional Plan has effectively halted the subdivision of rural land, and land uses in the area are also affected by vegetation laws and compliance codes. Given these constraints, a group of rural landowners wanted to examine options for generating economic returns from their lands. The Australian/American CommunityViz collaboration team worked with the Hunchy Community Association and the Sunshine Coast Hinterland Rural Livelihoods Project. They used CommunityViz to evaluate economic options, taking into consideration the regulatory environment as well as numerous physical and economic factors. The team evaluated three scenarios: current conditions, build-out of vacant parcels, and build-out as cluster development. They used CommunityViz SiteBuilder 3D™ to develop 3D scenes showing areas of individual properties affected by regulations and development control codes. Results were viewed as 3D flythroughs that illustrated regulatory impacts on individual properties. This engaged the landowners and provided insight to government officials on the implications of the regulations on economic development.



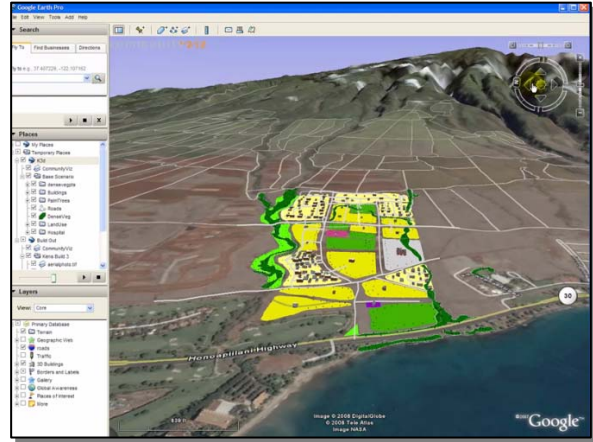


Greenfields site—Sunshine Coast Hinterland, South East Queensland:

A local government obtained a large former dairy farm on the edge of a medium sized town. Local opinion was divided on the appropriate uses of this land; proposals ranged from no development, to botanical gardens, to a golf course with residential development. The Australian/American CommunityViz collaboration team used CommunityViz to evaluate four scenarios: current conditions; open space and gardens; mixed use; and golf with compact residential clusters and open space. The Common Impacts wizard was used with a wide range of assumptions. A site suitability analysis measured buildable lands and highlighted constraints; costs for water and sewer infrastructure were also evaluated. A 3D flythrough created with CommunityViz SiteBuilder 3D for each scenario created considerable interest. The final use of the land is still under consideration.

Conservation planning for Wet Tropics World Heritage Area—Mission Beach, Far North Queensland:

The Wet Tropics World Heritage Area lies between Townsville and Cooktown on the northeast coast of Queensland. It is a biodiversity hotspot. The greater Mission Beach area is an important but fragmented habitat for the endangered cassowary, a person-size flightless bird. Australia’s Commonwealth Scientific and Industrial Research Organization (CSIRO) has a project examining strategies to protect at-risk habitat in the area and to spend associated investment funds effectively. The project is also supported by the Australian Government’s Marine and Tropical Research Facility. The Australian/American CommunityViz collaboration team worked with CSIRO and used CommunityViz to develop models related to biodiversity sensitivity, habitat condition, habitat level of protection, habitat at risk, and investment opportunities. They identified suites of properties with high biodiversity value, low protection, and at high risk, leading to the identification of high priority places for investment in protection and restoration. Slider bars enabled examination of “what ifs,” and 3D flythroughs provided visualizations. As of July 2009, the project was ongoing.



KEY LINKS

CommunityViz

<http://www.communityviz.com>

Spatial Information Services Pty Ltd.

<http://www.spatialinfoservices.com.au>

University of the Sunshine Coast:

<http://www.usc.edu.au>

University of Wyoming, Wyoming Geographic Information Sciences Center

<http://www.sdvc.uwyo.edu>

Geodata Services, Inc.

<http://geodatawiki.com>

Technology and Tools: CommunityViz 2.x and 3.x, with Scenario 360™ and SiteBuilder 3D; ArcGIS Desktop functionality including Model Builder and ArcScene; Google Earth and Google Sketch-Up.

Outcomes: These projects were conducted over a period of more than 3 years and have demonstrated the breadth of CommunityViz applications and the tool’s effectiveness in Australian conditions and planning environments. In addition to local, project-specific outcomes, there is also growing interest and discussion throughout the country as results are presented in papers and at conferences. CommunityViz training in Australia has been conducted in small venues so far, and more is planned.

Sources: Spatial Information Services Pty Ltd., University of Wyoming; Geodata Services, Inc. Montana. CommunityViz is a registered trademark of Placeways LLC.

Papers:

Lieske S, Lyons K, Wall K, Wall R, (2008), Planning Decision Support – Australian Examples, Paper presented to the Queensland Spatial Sciences Institute Conference, Gold Coast Queensland, August 2008
http://www.spatialinfoservices.com.au/files/aus_examples_6_sm.pdf

Lieske S, Lyons K, Hammerlinck J, Vock N, (2008), GIS Based Evaluation of Rural Economic Opportunity in Hunchy, Queensland, Paper presented to the Queensland Spatial Sciences Institute Conference, Gold Coast Queensland, August 2008 http://www.spatialinfoservices.com.au/files/hunchy_v12.pdf