

Case Study

## SACRAMENTO REGION, CALIFORNIA: BLUEPRINT PROJECT

Using I-PLACE3S to  
Create a Regional Vision

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The Transportation for Communities website provides a systematic approach for reaching collaborative decisions about adding highway capacity that enhance the environment, the economy, and the community and improve transportation. It identifies key decision points in four phases of transportation decision making: long-range transportation planning, corridor planning, programming, and environmental review and permitting.

The case studies for Capacity Project C01 were prepared by ICF International, Research Triangle Park, North Carolina; URS Corporation, Morrisville, North Carolina; and Marie Venner Consulting, Lakewood, Colorado.

This work was sponsored by the Federal Highway Administration in cooperation with the American Association of State Highway and Transportation Officials. It was conducted in the second Strategic Highway Research Program (SHRP 2), which is administered by the Transportation Research Board of the National Academies.

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## **Using I-PLACE3S to Create a Regional Vision**

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# OVERVIEW

## Project Overview

The Sacramento Area Council of Governments (SACOG) spearheaded an effort to create a blueprint for growth in the Sacramento region over the next 50 years ([www.sacregionblueprint.org](http://www.sacregionblueprint.org)). SACOG, which is responsible for the Metropolitan Transportation Plan (MTP), recognized the need to link its transportation planning with land use. Creating a vision for future land use in the region would allow SACOG to create and fund a transportation plan that would serve the transportation needs of the region. The Blueprint Project was designed and developed under the acknowledgment that SACOG did not have land use authority over local jurisdictions. Therefore, working with local jurisdictions throughout the process would be vital to having their buy-in and support of the preferred blueprint scenario that would be the end product of the visioning process.

## Screening Process Overview

The Blueprint Project is based on seven smart-growth principles: housing diversity, building on existing assets, mixed-use development, protecting farmland and natural resources, providing transportation choices, encouraging pedestrian-friendly communities, and compact development.

Performance measures (e.g., vehicle miles traveled per household, agricultural land converted to urban uses) based on these principles were created to analyze and compare the impacts that different growth scenarios would have on the region.

The starting point for the blueprint process was a base case scenario, which was a projection of how the area would grow if current local government land use plans and zoning guidelines were followed through to 2050. The next phase of the project was to use a projection visualization tool for land use, I-PLACE3S, to develop different growth scenarios that could happen if changes were made to the existing land use plans and zoning ordinances. The different scenarios that were developed were then compared with one another on the basis of how well they met the smart-growth principles. Individual

communities evaluated the different growth scenarios through public workshops. Following the visioning process at the community level, regional workshops were held that ultimately led to the creation of the preferred blueprint scenario for the Sacramento region.

After selection of the preferred blueprint scenario, SACOG was able to use this plan to develop an MTP that will be able to serve the populations and land uses as envisioned in the preferred scenario.

## KEY ASPECTS OF THE SCREENING PROCESS

### Scope

The Blueprint Project took place before development of the MTP. Completing the land use visioning process before creation of the transportation plan was necessary to meet the needs of the population projected by the preferred scenario.

The Blueprint Project integrates transportation planning with land use planning. Factors that were evaluated during the creation of the preferred scenario included parks, open space, air quality, economic growth, natural resources, cultural resources, housing, and employment. These factors were used to assess how well different land use scenarios performed according to the smart-growth principles.

### Communications

#### *Agency Involvement*

The Blueprint Project was a multiagency effort led by the SACOG. SACOG spearheaded the process, but involved local jurisdictions (municipalities and counties), public utilities, government agencies, and interest groups. Individual communities assisted SACOG with the visioning process to create land use scenarios. The local jurisdictions were a vital part of the public workshops that led to the selection of a final preferred scenario for their community. Other government agencies and organizations helped to provide technical support and data. The data provided by these agencies were an essential part of the modeling

effort and use of I-PLACE3S. When conflicts arose during the process, SACOG used it as an opportunity to learn more about the disputed issues through further research and analysis. Having more information at hand often helped to diffuse the differences in understanding between participating groups.

### ***Public Involvement***

Public involvement was a key component of the Blueprint Project. A series of public workshops was held in each community and area in the Sacramento region. At these workshops, citizens were invited to participate based on their interests and background to bring together a mix of viewpoints and interests (e.g., businesses, environmentalists, developers, and elderly people). SACOG worked with a public consulting firm, Valley Vision, to reach out to the different interest groups. In addition to the invited participants, there were accommodations for citizens who walked in.

At the workshops, the participants were separated into small groups so that diverse viewpoints were represented in each group. The small groups then worked with a facilitator to develop and discuss different land use scenarios for their community. Using the I-PLACE3S modeling software, the small groups were able to visualize how the different land use scenarios would affect various quality-of-life indicators. By providing extensive maps and graphs, the I-PLACE3S modeling tool allowed for interactive workshops where the attendees could see firsthand how changes they proposed to land use would affect the various quality-of-life indicators. The outcome of the workshops was that each small group voted on a preferred scenario. The results of the small groups were then totaled to determine the overall preference of the community for its scenario.

### **Technology**

Use of I-PLACE3S was a key component of the Blueprint Project that helped demonstrate how changes to land use in one area would affect land use in other areas, as well as how such changes would affect quality-of-life issues, such as air quality and open space. I-PLACE3S enables users to apply a

variety of zoning or land use designations to potential development areas. These different classifications have different characteristics, such as the number of dwelling units per acre, how many employees commercial areas can handle, and how many parking spaces will be needed. As the users make changes to the zoning, I-PLACE3S shows the users how quality-of-life indicators, such as traffic congestion, open space, and housing availability, will be affected. The changes are shown to the users in the forms of maps, graphs, and charts. Additionally, the models can be manipulated and changed in an interactive format at public workshops. This allows workshop participants to see and realize the impacts of the suggested changes firsthand.

### **Metrics and Data**

I-PLACE3S, the visioning tool used in the Blueprint Project, required the use of an extensive level of data from several sources. The categories of data inputs used in the process included land use, zoning, demographics, housing, employment, traffic, natural resources, cultural resources, and air quality. Each local jurisdiction provided land use data that were compiled with other data sources, such as natural resources. The data received from the individual jurisdictions were not in a uniform format and therefore had to be compiled into a common center-line file. In some instances, the land use plans or environmental features were not available in any sort of digital format and therefore had to be digitized or created for this project. The data were all “pushed” back to the parcel level, meaning in some instances that the data had to be manipulated so that it was compatible with I-PLACE3S.

Performance measures that were used to produce the land use scenarios were based on smart-growth indicators, including housing type, growth near transit, per capita carbon dioxide and small-particulates emissions, agricultural land converted to urban uses, vehicle miles traveled per household, and people living in areas with a good mix of jobs and housing. Using the I-PLACE3S visioning tool, participants in the public workshops were then able to compare the outcomes of the land use scenarios on the basis of different performance measures.

## LESSONS LEARNED

### Success Factors

Overall, the Blueprint Project has been considered a success because it created a preferred scenario, or regional vision, for how the citizens and communities want the Sacramento region to grow over the next 50 years. Through the use of technology (I-PLACE3S) and extensive public workshops, SACOG was able to build community consensus and support for the regional planning exercise. The Blueprint Project, along with the preferred scenario it generated, was an essential component of SACOG's subsequent development of the MTP. In development of the MTP, SACOG selected transportation improvements projects that will meet the needs of the changes in land use and growth projections that are proposed in the preferred scenario.

### Key Innovations

The ability of SACOG to use a modeling and simulation tool at its public workshops during the Blueprint Project helped to make the planning process interactive. The approach of using I-PLACE3S helped the citizens, stakeholders, and participating agencies see the consequences of changes in land use first-hand. The use of technology with an in-depth public involvement process helped to create grassroots support and a sustainable level of credibility for the final preferred scenario.

Additionally, the Blueprint Project was able to complete a regional land use vision that had the support of the local jurisdictions. SACOG could then use that vision in the development of its MTP. Having an established future land use vision for the region will be vital in helping SACOG accomplish its goals for meeting the transportation needs of the region over the next 50 years.

## BARRIERS AND SOLUTIONS

### Institutional

The Blueprint Project required bringing numerous stakeholders together to create the preferred scenario

for the Sacramento region. Implementation of the preferred scenario would have been hindered if all the stakeholders and agencies had not (or could not have) supported it. SACOG found that bringing each of these organizations and agencies into the process as early as possible helped to streamline the project and build support for the final product.

Given the 50-year horizon of the Blueprint Project and the preferred scenario, SACOG faces a long and arduous task of implementing the preferred scenario. Although SACOG currently has the support from local communities and the general public for the preferred scenario, maintaining this support and keeping it relevant as the years go on will be vital to its successful implementation. This will most likely require a continued public outreach effort to keep stakeholders aware of the Blueprint Project and the preferred scenario.

### Technical

The Blueprint Project required an initial investment in compiling the needed data from various sources and streamlining it into a format that would work with I-PLACE3S, the modeling and visualization software used to create and analyze the land use scenarios. In addition, SACOG worked with EcoInteractive to ensure that I-PLACE3S had the capabilities needed to make the visualization tool useful at the public workshops. This required an initial investment up front to obtain the needed level of data and staff to support the technology needs of the Blueprint Project.

Overall, the Blueprint Project is a common-sense approach to developing a vision for growth and a transportation plan that build on each other. Other regions considering use of the blueprint process have the benefit of being able to model their efforts on what SACOG accomplished and to use the modeling tool, I-PLACE3S, that was developed for this project. However, the regions will still have to bring together all data from the local jurisdictions to input into the modeling software. Depending on how the existing data are compiled and managed, this process could be time-consuming and costly.

## RECOMMENDATIONS

The Blueprint Project was an ambitious effort that brought together the land use and transportation planning processes of a region. One key factor in the success of the Blueprint Project was having leadership support for it from SACOG to keep its momentum and funding moving forward. Without the dedication of sufficient staff and resources, the project would not have had the success it has had.

Another key factor in the success of this project was bringing all the stakeholders together to create a unified visioning process. This helped individual communities and agencies realize the effects that their decisions had on other communities or resources. And, most importantly, it helped build buy-in and support for the final preferred scenario from the individual communities and agencies. This was essential because SACOG does not have land use regulatory power in the Sacramento region; therefore, putting the ultimate implementation of the preferred scenario in the hands of local jurisdictions and agencies was important.

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