CASE STUDY

ONE OF THE **MOST POPULAR NATIONAL PARKS** IN THE COUNTRY **AUTOMATES PARKING COUNTING** WITH **PARKING LOGIX** TO **STREAMLINE** THE PARKING PROCESS AND **IMPROVE THE VISITOR EXPERIENCE** FOR ITS 4.5 MILLION ANNUAL VISITORS.

THE CLIENT

Zion National Park is home to towering rock formations, narrow canyons, and breathtaking trails. Four and a half million people from around the world head to Zion each year to witness its beauty and explore its wonder. Access to Zion roads is by shuttle only during the busy season with vehicle parking lots located at the park entrance adjacent to the visitor center. Parking is usually full by mid-morning and visitors who can't find parking in the Park's lots have to head back to town to find somewhere to park.

THE CHALLENGE

During the busy season, which is as much as 8 months of the year, there are often long lines to get into Zion National Park and limited parking available. People wait in long lines to enter the park, only to find there isn't any more parking available. They then must drive back to the town of Springdale to park and wait for the Zion shuttle to bring them back to the park entrance. Waiting to get into Zion, looking for parking, and then heading back to town to park and take the shuttle can cost people upwards of an hour in wasted time.

Zion was attempting to avoid people waiting for parking when there was none by conducting manual parking counts. Park rangers were keeping manual count of parking spots and would radio rangers at the entrance to let people know when parking lots were full. But this system is labor intensive, requiring rangers to constantly monitor lots for parking availability. It also leaves too much room for human error as well as long hot hours spent on monotonous counting.

While an automated parking counting system would help streamline parking and improve the visitor experience at Zion, traditional parking counting systems require substantial modification to Park infrastructure.

Power, communications, trenching, and new asphalt all could require extensive compliance delays. In addition, implementation would traditionally take place during the winter months only, despite frigid temperatures, since the autumn, spring, and summer all see upwards of 15,000 visitors a day and parking lots could not be closed.

THE SOLUTION

Zion National Park knew they needed to automate their parking but were limited to solutions that didn't require extensive modifications to existing Park infrastructure. The OpenSpace platform provided the ideal solution, with highly accurate parking counts and no need for trenching, power, communications or to replace asphalt to cover sensors. The OpenSpace systems were installed as a cooperative project with Dixie State University and Zion National Park through CESU (Cooperative Ecosystem Studies Unit), a national consortium of federal agencies, tribes, and academic institutions.

OpenSpace gave the national park the solution they needed to automate the labor intensive practice of manual parking counting- with no need to install sensors underground. The system was installed at each of the three parking entrances to the Zion visitor lots. Unlike an underground project that might require years for approval, the OpenSpace project was approved in a matter of weeks and installed in one morning.

OpenSpace gives the park automated instant access to parking data, without the need to install sensors into federal land. The simple, intuitive parking counter works with sensors embedded in speed humps at entrance and exit points. Data can then be shared with personnel and drivers in a variety of ways, which was finetuned to meet the national park's unique needs. Data is shared on signage at the park and in the local town as well as through integrated apps.

THE BENEFITS

With OpenSpace up and running at Zion National Park, visitors no longer have to rely on difficult to access and sometimes inaccurate parking data, and park personnel no longer have to spend time in the hot sun manually counting cars. When parking lots are full, visitors can see that info on 65" signs at the visitor center, as well as outside the park, and in the city of Springdale. An app gives instant parking updates to park personnel so they can answer questions from visitors about parking from wherever they are. Parking data is also integrated with the tourism department website and app so that visitors can see parking availability right from their phones.

"We're really enjoying the ability to grab the data using API and share it in a whole bunch of different venues," commented Jason Pitts, the Director of Park Data and research fellow at Dixie State who spearheaded the parking automation project. "We have a lot of different sensor networks at Zion counting people at bridges and shuttles and OpenSpace is really the simplest to work with."

Park rangers at Zion are becoming accustomed to the convenience of automated parking counting with OpenSpace and eager to close the door on any manual counting procedures. A recently renovated park entrance, a multimillion-dollar project, didn't even integrate the loop sensors the park had previously been using to help with manual counting.

"They love how the automated system works," remarked Mr. Pitts. "They hate the idea of going back to anything manual. [OpenSpace has made them] totally reliant on automation. And it's been a great way to improve the visitor experience."

1 Detection

2 Communication

3 Direction