PLANNING TAKES WING

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HOW BIG DATA CAN HELP BIG PLANNING
AND TRANSPORTATION IDEAS TAKE OFF

THE DATA TO SUPPORT TRANSPORTATION PLANNING AND MUNICIPAL DECISIONS

THIS IS HOW YOUR IDEAS TAKE FLIGHT.

DATA TAKES OFF

So what do transportation planning and cellular data have to do with paper airplanes? We could go on about the frontiers of transportation and some highly technical stuff, but the reality is we love creating things and making them work.

We also love playing with data, and cellular data is some of the richest, most timely and cost-effective data out there. With our tools, you can build accurate models that show the effect of a new airport, hospital or subdivision; model and project usage of an HOV or HOT lane; look at the effectiveness of transit options; calibrate your travel demand model; predict traffic flow at a special event; support a risk mitigation plan or even analyze how fans will travel to and from a proposed stadium.

Where does our data come from? More than 100 million mobile devices, including cell phones, PDAs and tablets throughout the United States. They all travel with their owners — to work, to school, to the store, on vacation — and, collectively, they tell some big stories, including:

- The who, when, where of weekday commuting
- Travel to and from specific venues or events – where people come from before and go after
- Info that supports and expands previous studies (or points out corrections)
- Insights into where tourists come from, where they go and how long they stay
- Projections about the effects of toll roads, subdivisions and other projects

How do we use them to tell these stories? We leverage U.S. Census data to expand our sample of 100 million devices to accurately simulate the full population of the United States.

How accurate is accurate?

AirSage data has an average accuracy of 300 meters, often with accuracy of 100 meters in urban areas.

TAKE OFF WITH NEW LOCAL AND REGIONAL PLANNING DATA

Locations and movement data from 100 million devices — a full one-third of the country — is more than a sample. It's a comprehensive, detailed look at people movement. Not simply vehicle movement. People movement. Which means people in cars, people using mass transit, people carpooling, people going on vacation or attending events. In short, anyone who's on the move.

What is that movement? Work commuting, tourist travel, weekend errands, road use and mass transit use.

Want to take a longer view? Historic records going back to 2009 allow models that account for time of day and time of year. You can also look at data for multiple days and weeks to determine average travel patterns, or analyze seasonal differences and compare the travel of residents and visitors.

Here's the real benefit. Travel surveys report the data weeks or months later. Setting up equipment, such as license plate readers, takes time (and sometimes the equipment doesn't cooperate). AirSage? No late surveys, no equipment failures, no unrealiable data.

Six types of commuters
For more precise analysis, AirSage provides data on six types of people on the move:

- **Resident Worker**. Lives and works are in the study area

- **Home Worker**. Lives and works at the same location in the study area
- **Inbound Commuter**. Works in the study area but lives outside of it
- **Outbound Commuter**. Lives in the study area but works outside of it
- **Long-term Visitor**. A non-resident present in the study area 2-14 days
- **Short-term Visitor**. A non-resident present in the study area less than two days

That data includes travel and movement virtually everywhere: urban, suburban and rural areas, highways and local roads, and travel within and between a county, state or region of any size and geography.

## Products for long-range planning

Trip Matrix The number of people and types of trips between two specific locations

Home-Work Matrix The number and demographics of people who live and work in specific locations

Select Zone Analysis The number of people and types of trips that go to, or come from, a specific location and where those trips began or ended

Home Location Report The geography (zip code, county or state) of the home location for mobile devices included in the study
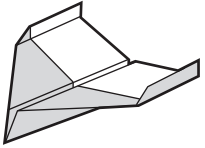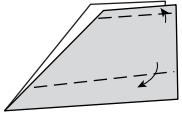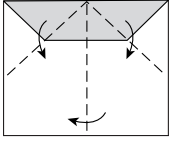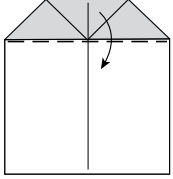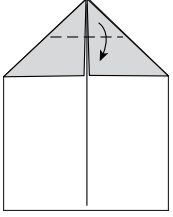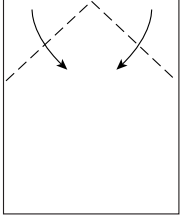
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The power of where and when

WHERE SHOULD A TOLLBOOTH LAND?

Forget politics for a minute. (If only!) Building a case for a toll road, HOV roadway or HOT lane can only be done accurately with large amounts of data. Understanding the travel patterns and projecting the effect of a tollbooth or HOV lane add credibility to a recommendation. And unlike preference surveys, where people can over or underestimate their own behavior, this is data that's accurate and complete.

AirSage can help you:

- Understand current travel patterns
- Model and project usage of an HOV or HOT lane
- Build revenue models based on likely travel pattern changes
- Update or validate previous surveys, studies and models
- Compare real-world behaviors to surveys

Expand your horizons

We've all had to reduce the scope or time of a traffic study due to budget limitations. We've all worked to project the behavior of large groups of people using information from a much smaller group.

Unlike travel surveys or equipment-based travel data collection, the area covered by AirSage is limited only by cell tower locations. Surveys don't have to be mailed and collected, drivers don't have to be stopped, sensing equipment doesn't have to be transported and set up. And residents and visitors can be identified and analyzed separately. With AirSage, data is passively collected, with no need for driver or surveyor involvement.

Products for toll, HOV and HOT planning

Trip Matrix
The number of people and types of trips between two specific locations

Home Location Report
The geography (zip code, county or state) of the home location for mobile devices included in the study

EVENT AND FACILITY PLANNING AT JET SPEED

AirSage is particularly helpful in creating transportation and risk mitigation plans for a special event; predicting the effect of an airport, a stadium, a subdivision or a hospital; or preparing for seasonal tourism.

It's really helpful on Halloween. We analyzed some mobile signaling data from the zip code 90210 on Halloween night. At 8 p.m. in Beverly Hills the activity was peaking. No doubt trick-or-treaters hoping to feast on full-size 3 Musketeers bars from Cameron Diaz's house. Analyzing the data showed where the most people, and presumably the best candy, were clustered. Guess where we're going next year?

For annual events held in the same location, such as the Indy 500, or special events, such as the 2013 America's Cup races, AirSage can provide information on:

- The number of visitors and vehicles
- Mass transit usage
- Starting and ending points for travelers
- Time and day of travel

Sophisticated models help community/ urban planners, developers and retailers gain deep insights into the impact of an airport expansion or a new stadium. They can help tourism bureaus predict travel to a facility, an event or a region by day and time.

Not just where and when, but who

AirSage data can also identify who's attending an event or visiting a facility – visitors, local residents, or both. It can also show how long people stayed at an event or a facility, and even offer demographic information on the attendees. And, yes, we can even see locations from cell phones tucked in tourists' fanny packs.

Products for events/facilities planning

Select Zone Analysis
The number of people and types of trips that go to, or come from, a specific location and where those trips began or ended

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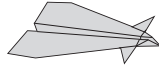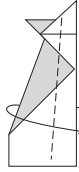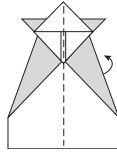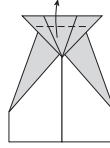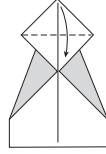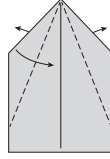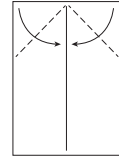
Activity Density
Insights into mobile device activity in a given location, including U.S. Census demographics

Arrivals and Departures
Statistics on how many people arrive in a given area and when, as well as when they depart.

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The power of where and when

GETTING A BIRD'S EYE VIEW OF MASS TRANSIT

How effective is the current local or regional mass transit system? How will adding a bus route or a park-and-ride lot affect traffic and mass transit usage? Are commuting patterns changing over time? Do they vary at different times of the year? Can you correlate travel patterns with the weather?

Assigning transit resources starts with having the data to illuminate and support those decisions. Who uses each road, each park-and-ride lot, each mass transit option? Are they traveling for work or leisure? How often do they make that trip? Two people who used to travel together every day, almost certainly for work, now travel separately? Someone got a new job.

24/7 data to support decisions

Knowing who travels when and where can support many decisions, from air-quality initiatives to mass-transit planning. By knowing both the demographics and the transit patterns of various areas, you can formulate "what if" projections that compare different strategies, such as ride-sharing programs vs. other forms of mass transit.

For additional insights, transportation data can be overlaid with U.S. Census data to predict transit patterns and needs years in advance.

Products for mass-transit planning

Trip Matrix
The number of people and types of trips between two specific locations
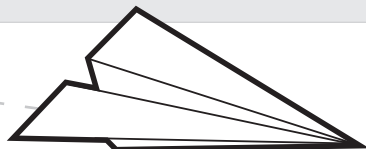
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THIS IS YOUR PILOT SPEAKING

When we're not playing with paper airplanes, we're busy being the largest provider of consumer locations and population movement intelligence in the United States. Each day, AirSage uses patented technology to capture and analyze more than 15 billion anonymous, real-time, cellular-signal data points to identify travel patterns and transportation trends.

Partnerships with some of the nation's largest wireless carriers give AirSage exclusive access to data from more than 100 million mobile devices. Analyzed and aggregated, AirSage data provides actionable insights into where and when people travel and is transforming the transportation industry, commercial enterprises and a diverse range of industries.

www.airsage.com