

PLANNING & TECHNOLOGY TODAY

APA

American Planning Association
Technology Division

Making Great Communities Happen

A Publication of the Technology Division of the American Planning Association

Innovations in Outreach Techniques: Helping Build and Rebuild Communities

ISSUE 99 · Fall/Winter 2010

Message From The
Chair 2

Upcoming
Conferences 3

Connecticut
VMT Tool 4

Water Quality Data
Mapping Tool 5

MyDelaware 6

TOD Database 7

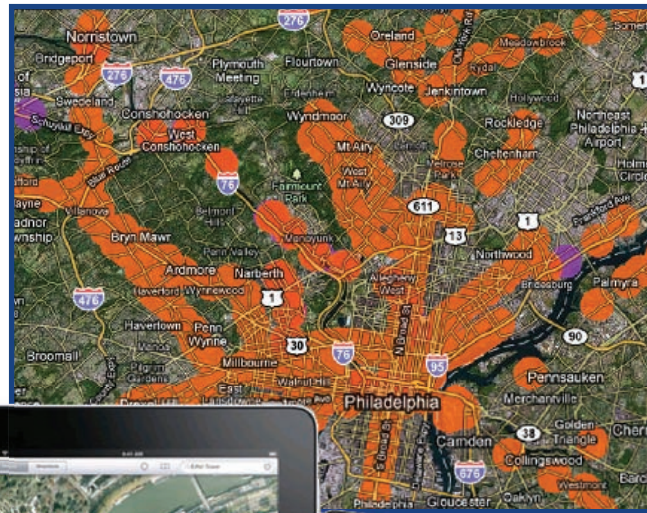
Where Are The
People? 8

All Our Ideas 10

Which
Crowdsourcing? 11

Call for Submissions 13

Division Information 13



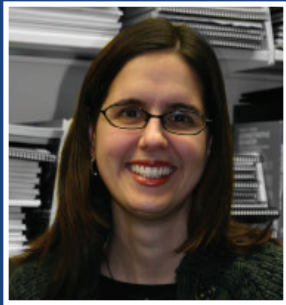
① Low Impact Off-Road Trail



② Diverse Tree Canopy & Bird Habitat

MESSAGE FROM THE CHAIR

Jennifer Evans-Cowley, PhD, AICP



*Jennifer Evans-Cowley,
PhD, AICP*

*Chair of APA Technology
Division*

Election season is right around the corner. If you are interested in holding an office with the Technology Division we would welcome your participation. Our Elections Chair this year is Andy Taylor. You can express your interest or learn more about leadership opportunities by contacting Andy at ataylor@morpc.org.

In this issue we highlight a variety of planning organizations that are using technology. For example, this issue highlights stories of planners using technology to measure vehicle miles traveled, to map water quality, to measure street livability, to visualize transit oriented development, and to engage the public. One of the articles in this issue highlights a smartphone application for tracking code enforcement violations.

With a growing number of the public using Smartphones, there is an opportunity for planners to engage the public via their mobile telephone. Planning departments have created mobile versions of their existing website that are specifically designed to display on a mobile device. Others are developing mobile device applications that can be downloaded and contained on the mobile device. A number of cities, including Boston, Massachusetts, through their Citizens Connect app, have developed applications that connect residents with their 311 system.

There are a variety of other applications that can prove useful for planners. For example, Widenoise lets users upload sounds of places, organizing them by how noisy they area. Metaio is an app that allows users to leave messages, web pages, and 3D models of a real space for other users to view when they are in the vicinity.

As part of the response to the Deepwater Horizon oil spill, there was a desire to have a mobile web app that would collect geotagged data to be

used by many parties as part of the OilReporter.org website. Users can submit a report on oil conditions, including photos, text describing what they see, how much oil they see, whether wildlife is present, and impacts to wetlands. The mapping data, provided by NOAA, allows for a map to be mashed up with user reports.

Apps are becoming common as part of transit systems. For example, Portland, Oregon's transit system (TriMet) offers the PDX Bus application that displays arrival times for buses throughout the system. PDX Bus won Best in Show at the CivicApps.org awards. The application uses the Internet to track transit systems data to display arrival times. The user can bookmark frequently used stops and gives details for buses in route. The app also includes a nighttime visibility flasher that creates a flashing screen that can be used at night so that the bus driver can see the passenger when they hold their cell phone up. This particular app was developed by a volunteer rather than by the TriMet system. The Central Ohio Transit Authority's app, BusTracker, identifies the nearest stops to the users current location, provides information on routes, and expected arrival times.

The State of Louisiana developed Louisiana EQ, a mobile application that provides updates on economic development news in Louisiana. The application provides useful facts and figures about the state and includes its magazine that shares positive news about development in the state.

These apps are part of a growing field of tools that help us better understand the real world. As this technology grows and there are an increasing number of applications, planners can expect to see increased tools to help visualize our cities and regions better.

UPCOMING CONFERENCES: WINTER/SPRING 2011

**TRANSPORTATION RESEARCH BOARD
ANNUAL MEETING**
January 23-27, 2011
Washington, DC
www.trb.org/AnnualMeeting2011

WHERE 2.0
April 19-21, 2011
Santa Clara, CA
<http://where2conf.com/where2011>

**NEW PARTNERS FOR SMART GROWTH AND
LIVABLE COMMUNITIES: BUILDING SAFE,
HEALTHY AND LIVABLE COMMUNITIES**
February 3-5, 2011
Charlotte, NC
www.newpartners.org

REAL CORP 2011: CHANGE FOR STABILITY
May 18 - 20, 2011
Essen, Germany
www.corp.at

**ROCKY MOUNTAIN LAND USE INSTITUTE
CONFERENCE**
March 3 - 4, 2011
Denver, CO
www.law.du.edu/index.php/rmlui

**AMERICAN INSTITUTE OF ARCHITECTS
2011 NATIONAL CONVENTION AND
DESIGN EXPOSITION**
May 12-14, 2011
New Orleans, LA
www.aia.org/conferences

WEB 2.0 EXPO
March 28-31, 2011
San Francisco, CA
www.web2expo.com/webexsf2011

GIS IN PUBLIC HEALTH CONFERENCE
June 27-30, 2011
Atlanta, GA
www.urisa.org/conferences/health

**AMERICAN PLANNING ASSOCIATION
NATIONAL CONFERENCE**
April 9-13, 2011
Boston, MA
www.planning.org/conference

If you have an upcoming event/conference/webinar you would like us to include in a future newsletter, please email Stephen Chiamonte at chiamonte@pbworld.com



**web 2.0
EXPO**



For More Information:

Connecticut Vehicle Commute Estimator
<http://bit.ly/VMTTool>

Interactive Map of Average Commutes in Connecticut
<http://tinyurl.com/CTVMTTool>

U.S. Census Journey To Work and Place Of Work Data
<http://www.census.gov/population/www/socdemo/journey.html>

Regional Plan Association
<http://www.rpa.org>

Lincoln Institute of Land Policy
<http://www.lincolnst.edu>

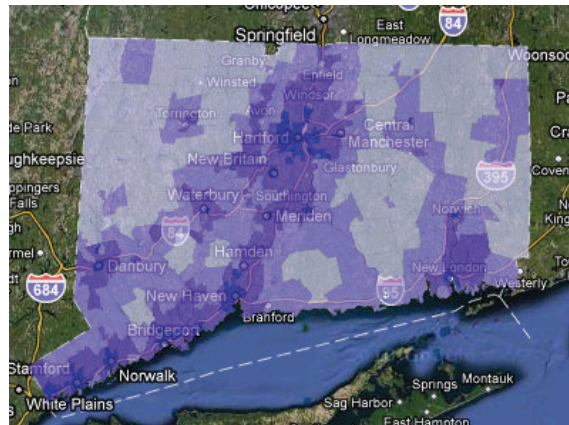
MEASURING THE VMT IMPACTS OF DEVELOPMENT: A TOOL FOR CONNECTICUT

Amanda Kennedy, Regional Plan Association

Imagine a common scenario encountered by planners: a new office building. In this scenario, a company decides to relocate workers from downtown office space to a new headquarters building near a highway interchange. Local officials support the development because of the additional property tax revenue it will produce, and state subsidies help the company build their new facility. However, the consequence for the environment may not be so positive. A move like this may result in a dramatic shift in the miles traveled by employees each day as they adjust to a location farther from transit facilities and their homes.

What if there were ways for planners and developers to predict a crucial impact of siting decisions: the miles that workers and customers will drive to get there? Some existing tools, such as the Center for Neighborhood Technology's Housing and Transportation Index, illustrate the transportation benefits of living in urban areas. A new tool, enabling planners to quickly and easily estimate the vehicle miles traveled (VMT) generated by a new development would, amongst other things, enable users to measure the project's carbon emissions footprint and explore greener alternatives. Such a tool has been especially needed in Connecticut, since the state's existing traffic models weren't designed to quantify overall VMT impacts of individual projects. Reaching the state's goal of reducing carbon emissions 80 percent from 2001 levels by 2050 will require planners to encourage development that reduces both our dependence on personal vehicles and the distances that car owners drive. How do we make sure new development will get us there?

With funding support from the Lincoln Institute of Land Policy, the Regional Plan Association has created a tool for Connecticut municipalities that estimates VMT based on neighborhood characteristics such as density, proximity to transit, and nearby jobs and housing. Our base VMT dataset was generated from Census Journey-to-Work data, available



RPA's Interactive Map illustrates average commutes in Connecticut

at the tract level for everywhere in the United States. Through a combination of GIS and statistical analysis we developed a model that predicts worker commutes based on where they live or work. The result is a spreadsheet-based VMT tool that enables us to quickly estimate the

amount of vehicle travel and carbon emissions generated by various development scenarios. California's SB 375 is the first state planning initiative to require integrating housing and transportation planning specifically to reduce carbon emissions. As other states follow California's example, tools like this one will be essential to evaluate the emissions generated by our land use patterns so that state and local investments minimize environmental impact while achieving economic development.

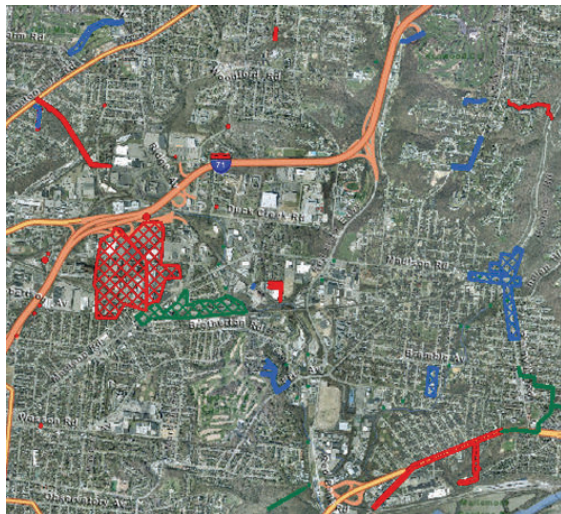
Several examples illustrate how useful the tool is in real-world planning situations. The State of Connecticut needs to rebuild a 1970s-era medical school complex, located along a highway in the exurbs of Hartford. If the State were to build the new facility in downtown Meriden instead, it would be at a junction of rail and bus services and central to an existing labor force. The tool estimates that hospital employees would drive 20 percent less to the

Continued on Page 12

MAKING WATER QUALITY DATA UNDERSTANDABLE THROUGH ONLINE MAPPING

Sam McKinley, RA Consultants, LLC

The Metropolitan Sewer District of Greater Cincinnati (MSDGC) has taken on the challenge of making over 4,700 annual water quality data points understandable and accessible to the general public. The data are collected several times a month at 40 testing sites throughout Hamilton County, and track 11 variables that characterize surface water quality. This huge mass of data is difficult for even water quality professionals to put into any meaningful order. Through a new initiative now underway, MSDGC plans to make this data available and understandable to everyone through a new tool that will be launched next year.



MSDGC's Interactive Map shows Active (red), Complete (blue), and Future (green) projects in the Cincinnati Metro Area

MSDGC is under a Clean Water Act consent decree to nearly eliminate the negative effects of the sewer system, combined sewer overflows, and sanitary sewer overflows on water quality. Meeting the requirements of the consent decree is expected to cost over \$2 billion and take two decades. The ability to communicate not only the water quality of rivers and streams, but especially the associated improvements to the general public is therefore very important to track improvements to regional water quality.

The planners on the project, not themselves water experts, quickly found that the data must be interpreted in the context of both space and time. For example, water quality can vary significantly as a result of rainfall and seasonal variation. Furthermore, many of the variables must be interpreted in combination. A wide variety of complex data are required

to answer the question “how clean is the water in our rivers and streams?”

As a result of the ongoing development of internet mapping applications, the public increasingly accepts, understands, and expects to have access to rich spatial information through the Internet. Planners called on GIS experts to code a custom JavaScript application to give the project a web interface. First, monitoring locations are shown on a county map as clickable icons. Clicking one pulls up both a table of the data at that site and a choice of time-graphs for the individual variables, all from a

database on a secure server. The data become available in some form relatively quickly, but water quality professionals on the project can keep working to interpret the data, perhaps to fewer variables or even a single water quality index score. Meanwhile, work can proceed on additional watershed variables, such as rainfall, slope, and imperviousness that help explain the measurements. Finally, planners help determine both what data are technically meaningful and what is meaningful to the general public.

When it launches next year, this powerful tool will help planners work to improve water quality by putting complex data in the hands of planners, policymakers, and average citizens alike.

The author can be reached at sam_mckinley@yahoo.com

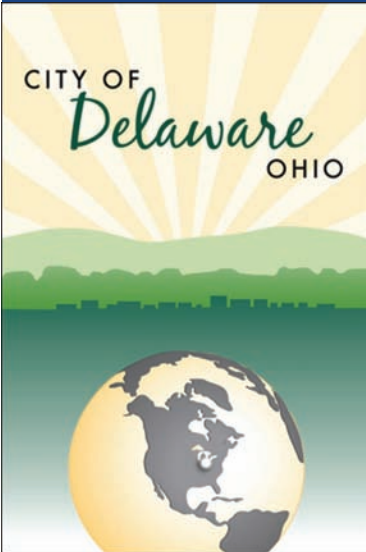


For more information:

Metropolitan Sewer District of Greater Cincinnati
<http://msdgc.org/>

NEW APP EMPOWERS CITIZENS TO REPORT CODE VIOLATIONS

Shawn Leininger, AICP, City of Delaware, Ohio



The City of Delaware, Ohio recently launched “MyDelaware,” a free smartphone application that gives residents a new and more efficient way to notify the City about code violation and other issues.

Once installed on a compatible smartphone, users open the application and follow prompts to document and take a picture of the issue and then tap “submit.” Using built-in global positioning system technology, the application will attach a location to the report and send it to the City, where it will be routed to the appropriate department. At the request of the user, the City can also provide status updates directly with either a text message, email, or both.

“This is an exciting new program that takes advantage of and puts to use the technology that many people carry with them most of the day,” said Planning and Community Development Director David Efland. “Creating a reporting

tool for residents that provides us with additional eyes on the street will help us keep our community an even better place to live.”

The initial list of reportable items includes: tall grass/weeds (12 inches or more), junk/trash, property maintenance, inoperable or abandoned vehicles, sign in right-of-way/off-site, temporary sign/attraction device, indoor furniture stored outside, and graffiti.

The “MyDelaware” application was created by App-Order.com at no cost to the City and is free to download from the Android market and soon will be available on the iPhone market. App-Order.com provides a standard format for reporting an issue that the City is able to customize. These customizations generally include the list of reportable items, how reportable items are communicated to City staff, and any outgoing messages and audio.

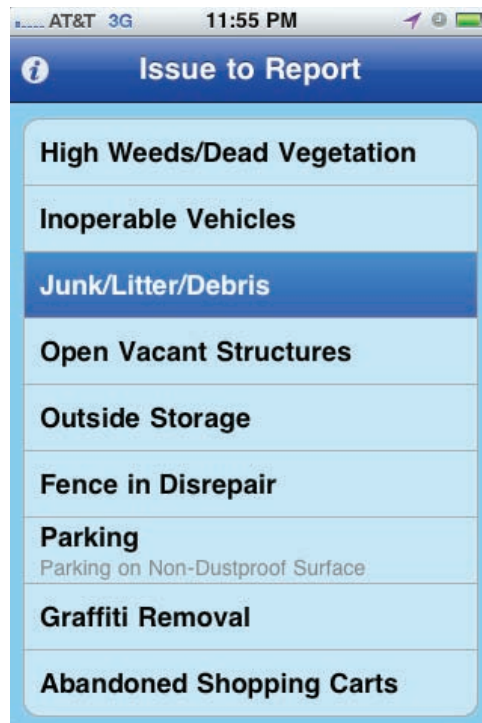
The author can be reached at sleininger@delawareohio.net

For more information:

City of Delaware, Ohio
<http://www.delawareohio.net>

myDelaware and other city apps created by App-Order
http://www.androidzoom.com/android_developer/appordercom_ivti.html

App-Order.com
<http://app-order.com>



The MyDelaware smartphone app allows citizens to report numerous quality of life issues directly to City officials

NEW NATIONAL DATABASE WILL FACILITATE TRANSIT-ORIENTED DEVELOPMENT PROJECTS

Sofia Becker, Center for Neighborhood Technology

This fall, the Center for Transit Oriented Development (CTOD) launched the TOD Database, a map-based website that provides comprehensive information on 4,610 transit stations across the country. The TOD Database is a first-of-its-kind tool for planners, developers, academics and government officials. It is designed to help stakeholders understand and take advantage of development opportunities around transit nodes.

Available at <http://toddata.cnt.org>, the TOD Database contains 3,775 existing and 835 proposed fixed-route transit stations in 47 regions, including commuter rail, subway, light rail, streetcars, bus rapid transit (with a dedicated right-of-way) and ferries.

The website is a one-stop-shop for over 40,000 data fields synthesized from nationally available data sets that provide information on demographics, workforce characteristics, density, and affordability. Data sources include the 2000 Decennial Census, 2000 Census Transportation Planning Package, 2002-2008 Local Employment Dynamics, and the Center for Neighborhood Technology's Housing and Transportation Affordability Index. Users have access to a series of standard data reports or can query the data to create custom reports. Reports can be downloaded as a Microsoft Word table or Excel spreadsheet.

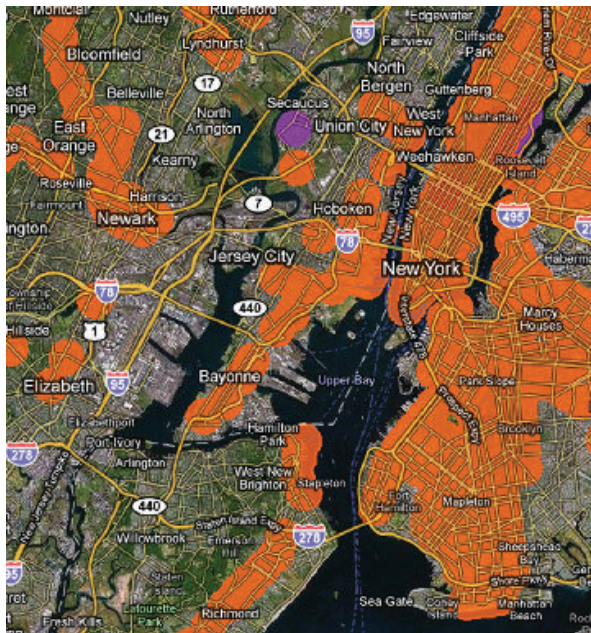
Data is available at three geographic levels: the transit zone (the 1/2 mile or 1/4 mile buffer around an individual station), transit shed (the aggregate of transit zones), and transit region (aligns with the Metropolitan Statistical Area boundary). Transit sheds can be calculated for selected stations, an

entire line, an entire agency, or all transit zones in a region. An important feature of the transit shed statistics is that when two transit zones overlap the transit shed does not double count the data. Data is aggregated on the fly so users can view data for any combination of geographies.

Funded by the Federal Transit Administration, the TOD Da-

tabase was originally developed as a GIS platform for CTOD to analyze conditions around the nation's existing and potential rail stations and identify TOD markets. The three organizations that comprise CTOD — Reconnecting America, the Center for Neighborhood Technology, and Strategic Economics — understood the numerous applications this information could have and opted to make the data publicly available in a user-friendly mapping website. In the coming year, CTOD plans to incorporate newly released American Community Survey data and additional national datasets, as well as evaluate the potential to include local datasets.

The author can be reached at sbecker@cnt.org



The TOD database shows available transit coverage in 47 major metropolitan regions

CTOD CENTER FOR
TRANSIT-ORIENTED
DEVELOPMENT

For more information:

TOD Database
<http://toddata.cnt.org>

**Center for Transit-
Oriented Development**
<http://reconnectingamerica.org/public/tod>



For more information:

Arterial Streets, LLC
www.arterialstreets.com

Bloomfield, New Jersey
www.bloomfieldwpnj.com

WHERE ARE THE PEOPLE? USING TECHNOLOGY TO BRING LIFE BACK TO OUR STREETS

David Lustberg, Arterial LLC

A downtown street without pedestrians and cyclists is like a playground without children: something essential is missing. Streets that are full of life and activity — where commerce, nature, and recreation converge — are the foundation of a successful urban setting. Despite this understanding, many once-vital commercial cores across the United States fail to draw the people and activity required to ensure their success. These towns exist as car-centric locales lacking in one fundamental concept: A street’s overall performance and “livability” directly impacts the success of the neighborhood. The Crosswalk system facilitates gathering data and creating recommendations to revitalize downtown streets.

Bloomfield, New Jersey, a historic urban center 10-miles west of mid-town Manhattan, stopped living up to its potential decades ago. The town’s 44,000 residents (an approximation based on 2008 figures) live in an area measuring 5.3 square miles, in one of the nation’s most densely populated regions, with 8,961.5 people per square mile. Downtown Bloomfield, a New Jersey Department of Transportation designated “Transit Village,” has all of the “bones” inherent to a great downtown: Bloomfield College, a small four-year institution on 11-acres borders the downtown; The Garden State Parkway, provides excellent vehicular access into Bloomfield’s downtown; and Bloomfield Train Station anchors the downtown providing 30-minute access into midtown Manhattan.

STREETScape IMPROVEMENTS AS A CATALYST FOR REDEVELOPMENT

With all these people and this incredible infrastructure, one would think that the town’s center would be bustling. Instead, it’s missing some of the most important elements of “Livable

Streets.” For most of the last decade, a large part of Bloomfield’s business district has been embroiled in a series of complex legal battles, causing delays in the town’s plans for redevelopment. These delays disenfranchised residents and business owners, deterred investment in the downtown and sent the area even further into decline. Immediate action was needed to inject downtown with life. Even though the redevelopment project was still on hold, the publicly owned streets were not part of the dispute — and they were primed for a makeover.



A typical pedestrian environment in Bloomfield, New Jersey

As Principal at Arterial LLC - Street Design Studio, I led a collaborative team of consultants to transform these streets. Our first step in any street transformation is to clearly identify its greatest assets and deficiencies. Like most capital improvement projects, Bloomfield’s would need to be cost effective.

We began by conducting a field audit using Crosswalk, a proprietary system that allows real-time collaboration, data collection and analysis. Using iPads and netbooks we documented and photographed all aspects of each street, from land use to street section. We then completed a “Street Livability Analysis”. This analysis consists of 120-questions derived from the leading rating systems and documentation available including but not limited to LEED-ND, Complete Streets, and Sustainable Sites Initiative. This data is fed into a central web-based “Field Report” which allows instantaneous communications between Arterial’s team members and our clients.

MEASURING “STREET LIVABILITY”

The foundation of Crosswalk’s matrix is its “5 Measures of Livability”: Functionality, Economic Vitality, Health and the Environment, Arts and

Continued on Page 9

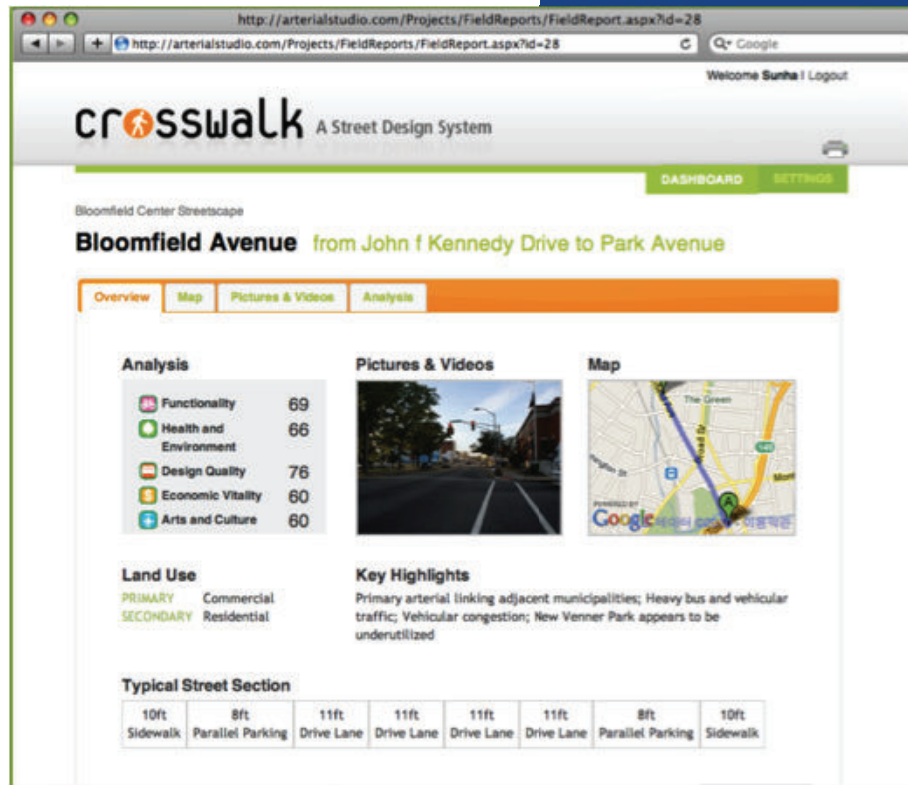
WHERE ARE THE PEOPLE? (CONTINUED)

Culture, and Design Quality. Questions from the “Street Livability Analysis” are applied to these categories to gauge the performance of each element of the street, and subsequently used to evaluate the areas where the street’s livability is deficient. We use these results as a way to prioritize improvements and allow our clients to make well-informed decisions about their streets.

In Bloomfield, it became evident from the data that the streets in the downtown were underperforming in almost every measure of livability. Heavy vehicular and bus traffic made the streets feel congested. A lack of street trees combined with little or no pedestrian amenities made the sidewalk zones uninviting. Wide traffic lanes made pedestrian crossings unwelcoming at best and dangerous at worst. Additionally, an irregular street grid combined with a lack of wayfinding signage made the downtown difficult to navigate. With this firm understanding of the issues, the next step was to review the budget and identify the solutions that would do the best job at addressing multiple issues.

Crosswalk helped us identify the improvements which solve multiple issues and have a higher “Cost-Benefit.” For example, introducing street trees will improve “Health and the Environment” by reducing heat island effect; it will improve “Functionality” by shading the sidewalks and creating a more walkable downtown, and it will even improve “Economic Vitality” by encouraging pedestrians to hang around for longer periods of time. Using a simple interface, we can adjust a street’s “score” based on various proposed improvement schemes and can instantly see how these different schemes will impact the street’s overall livability rating. We then identify the highest impact improvements that provide the most cost/benefit, and prioritize them, ensuring that the township is getting the most out of their investment.

In Bloomfield, like in most municipalities, we were working with a limited budget. We used Crosswalk to ensure that the highest impact improvements were not eliminated when budgetary restrictions mandated scaling down the project. Improvements that will be



The Crosswalk system measures “Street Livability” and provides key data about a given area, including mapping and relevant pictures

implemented include: narrowing roads in areas of high pedestrian activity, realignment of several intersections, creating a new pedestrian plaza, new street trees, enhanced crosswalks, and a new wayfinding system.

Based on our findings, the township opted to begin with the area of the downtown that would have the highest overall impact – the historic intersection known as “Six Points”. The Six Points Improvements have been funded with an estimated construction cost of \$1.4 million. Construction was bid in Fall 2010 with an anticipated start time of Spring 2011. Bloomfield’s residents — as well as people from neighboring Glen Ridge and East Orange — are hungry for a vital downtown within walking distance of their homes. We anticipate that this initial step will bring life back to the streets of the downtown, and be the beginning of an effective revitalization of this once vibrant town core.

The author can be contacted at dave@arterialstreets.com

ENGAGING COMMUNITIES ONLINE TO FIND THE BEST IDEAS

Karen Levy, Princeton University Department of Sociology



For more information:

All Our Ideas

www.allourideas.org

New York Department of Parks and Recreation Northern Manhattan Parks Master Plan

www.nyc.gov/parks/

Participatory planning techniques recognize that the best ideas can often arise directly from local community members. However, in practice it can be challenging to collect and measure community input in a meaningful way. Public meetings and design charrettes are often held to create a forum for participation in the planning process. While these events can provide an opportunity for dialogue, they are resource-intensive, attendees may not represent all opinions in the community, and it can be difficult to quantify and prioritize community input. Surveys and opinion polls, on the other hand, are faster, reach a more diverse pool of people, and are more easily quantifiable – but they don’t easily allow new ideas to “bubble up” from the community.

New York’s citywide sustainability initiative. They “seeded” the site with a set of ideas to create “a greener, greater New York City” (e.g., “implement congestion pricing in lower Manhattan”). Visitors to the site are presented with two ideas from the pool and asked to select their favorite. After a visitor votes, another pair of ideas is presented. This process continues for as long as the visitor wishes. At any time, a visitor can submit a new idea, which becomes part of the pool of ideas to be voted on by others. Thus, the idea marketplace allows the community to both contribute and prioritize new ideas. The process is completely transparent, and users can view the results of the idea marketplace at any time.

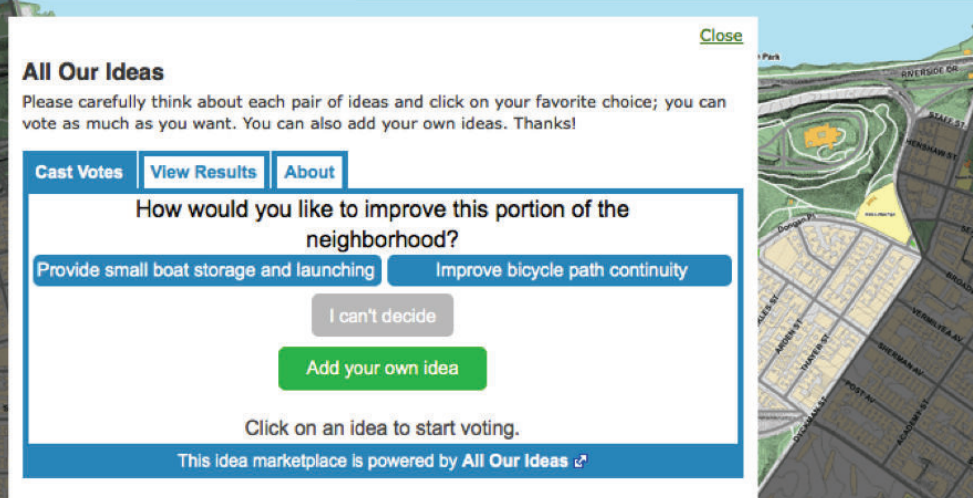
Using All Our Ideas, New York City residents have contributed more than 21,000 votes and more than 200 new ideas for PlaNYC 2030, in less than three months. Currently, nine of the ten top-scoring ideas were submitted by users. For example, these include: “keep NYC’s drinking water clean by banning fracking in NYC’s watershed” and “create more year-round Greenmarkets in under-served communities.”

New York’s Department of Parks and Recreation is also using All Our Ideas to prioritize residents’ ideas for the new Northern Manhattan Parks Master Plan. They have created twenty-one

idea marketplaces for different areas of the parks, asking residents what improvements they would most like to see there. For example, these include “improve directional signage and maps,” “provide more park lighting.” Each idea marketplace is integrated into an interactive planning map available at the city website.

Via these idea marketplaces, Parks and Recreation is able to collect and prioritize general resident ideas about Northern Manhattan’s parks, as well as local concerns unique to particular park regions. The All Our Ideas platform is free and open-source, and always interested in new partnerships for the technology.

The author can be reached at kelevy@princeton.edu



All Our Ideas Widget in Interactive Map

With support from Google and Princeton University’s Center for Information Technology Policy, a team based at Princeton University has created a new tool designed to combine the speed, scale, and quantifiability of a survey with the open, bottom-up quality of a public meeting. All Our Ideas is a free, open-source platform that enables communities to collect and prioritize ideas in a way that is democratic, transparent, and open.

Two branches of New York City government are currently using All Our Ideas for planning purposes. The Mayor’s Office of Long-Term Planning and Sustainability created an “idea marketplace” (www.allourideas.org/planyc) to integrate residents’ ideas into PlaNYC 2030,

WHICH CROWDSOURCING?

Rob Goodspeed, MIT Department of Urban Studies and Planning

The expansion of the Internet has made possible amazing examples of the collaboration of large groups of people, a phenomenon often called crowdsourcing. Projects like Wikipedia and OpenStreetMap have created new types of encyclopedias and maps. Other projects have coordinated thousands of volunteers to perform major outreach events, such as cleaning up garbage in Estonia or coordinating relief efforts for disasters such as the earthquake in Haiti.

As examples have proliferated, city planners have begun to explore whether the web can be used to tackle urban planning problems. Reviewing some well-known crowdsourcing examples with a focus on urban planning, I will describe four distinct models of crowdsourcing. Understanding these different models and their relative merits is required to integrate successful models of public sector crowdsourcing. The four types are crowdsourcing are:

- Soliciting solutions to problems
- Coordinating many individuals to achieve “collective intelligence”
- Novel combinations of incentives, processes, and staffing to achieve organizational goals
- Peer production of public goods

Some projects have used crowdsourcing as a way of soliciting innovative designs to a problem online. In Salt Lake City’s Next Stop Design project, Thomas Sanchez and Daren Brahbam led a team which held an online design competition for a bus stop in Salt Lake City. In a recent article for the journal *Planning Theory*, Brahbam argues crowdsourcing should be viewed as a new type of public participation. He cites as an example the company InnoCentive, which operates a website where corporations post technical problems and “solvers” compete to win cash prizes for the best solution. “In essence, any urban planning project is predicated on a problem.” Brahbam writes, “Typically that problem is how best to accommodate changing populations with

different infrastructure, all while considering the interests of residents, developers, business owners, and the environment. If a problem can be framed clearly, and if all the data pertaining to a problem can be made available, then that problem can be crowdsourced.”

In Melbourne, Australia, Mark Elliott and a team of collaborators took quite a different approach to crowdsourcing for a project completed in 2008. Partnering with an official city planning process, Elliott’s group created a wiki so the plan could be written in the same way as Wikipedia is – through the contributions of hundreds of different authors. In his doctoral dissertation, Elliott proposed a theory of “stigmergic collaboration.” Stigmergy is a theory developed in the natural sciences for a “mechanism of indirect coordination between agents,” such as the ways ant colonies can work in highly coordinated ways without a central authority. Elliott argues this type of cooperation and collaboration is made possible through technologies that create a “localized site of individualistic engagement” that reduces demands placed on participants.

A recent paper by MIT researchers argued crowdsourcing projects should be viewed as innovative arrangements of components, what they call a genome. Through a detailed analysis of the organizations Linux, Wikipedia, InnoCentive, and Threadless, the authors conclude each share a common set of ingredients which fall into four categories: the goal to be achieved, the structure or process of achieving the goal, incentives, and staffing. They observe these projects combine the components in different ways. For example, in the case of Linux, the crowd contributes new software code through collaboration for recognition, but only a small group decides which modules are included in each release through a hierarchy. In the case of Wikipedia,

Continued on Page 12

For more information:

Future Melbourne

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

Next Stop Design

<http://www.nextstopdesign.com/>

**Harnessing Crowds:
Mapping the Genome of
Collective Intelligence**

<http://ssrn.com/abstract=1381502>

WHICH CROWDSOURCING? (CONTINUED)

although the crowd creates articles, but the website uses voting and administrators for other decisions, such as whether to delete an article.

Finally, many have speculated that crowdsourcing should move beyond the realm of ideas. Citing examples of massive cleanups and emergency relief efforts, they argue city governments should use technology to crowdsource the production of public services. Instead of the government being the sole provider of certain public services, such as filling potholes or cleaning graffiti, could they simply coordinate citizens to help each other? I am skeptical of such claims for a number of reasons. Governments are subject to unique political and institutional arrangements which make collaborating with citizens difficult. Even if these barriers can be overcome, the flexibility of purely private organizations may be required for a successful project. However,

even if governments can't crowdsource their core functions, there may still be a need for a different approach in this new world. Bas Kotterink, a researcher in the Netherlands, argued in a lecture last summer that the expansion of private crowdsourcing may mean governments should take on expanded roles facilitating innovation, monitoring, and enforcing basic values such as privacy.

Although sharing similarities, each of these models contains distinct assumptions and approaches. Successfully using crowdsourcing for urban planning may require another approach entirely, taking into account the unique characteristics of each city and project. By describing some of the diverse approaches used thus far, I hope this article will help provoke ideas and innovation.

The author can be reached at rob.goodspeed@gmail.com

RPA'S VMT MEASUREMENT TOOL (CONTINUED)

downtown location than to the current facility. In another example, planners expect that new housing near an existing highway-oriented corporate office park north of Hartford would reduce vehicle travel by allowing more workers to live near their jobs. New housing in Hartford, the state's largest employment center, is estimated to produce about half the emissions from transportation than new housing located in subdivisions in the region's outer suburbs.

Vehicle use has been growing faster than the population for years, reflecting the growth of sprawling development and two-income households that must choose housing between two far-flung jobs. The transportation sector (mostly cars and trucks) generates roughly 40 percent of Connecticut's carbon emissions today. The best estimates indicate that better fuel efficiency and a transition to alternative fuels will

not be enough to reduce transportation-related emissions. Connecticut's Climate Action Plan asks for a very modest improvement in VMT – to reduce growth in VMT from the expected 22 percent by 2020 to 19 percent. This seems simple enough, but in a slow-growing state like Connecticut, infill development and new transit services that could enable transit and pedestrian commute options for residents of every community will come slowly. In order to meet the state's VMT reduction goals, planners must look beyond measures promoting alternatives to driving. Measures that reduce the miles we drive, such as smarter locations for new employment and housing, are necessary first steps towards meeting our carbon emissions reduction goals.

The author can be reached at amanda@rpa.org.

DIVISION LEADERSHIP

CHAIR

Jennifer Evans-Cowley PhD AICP
THE OHIO STATE UNIVERSITY
cowley.11@osu.edu

VICE CHAIR

Harsh Prakash
IT/GIS Consultant
harsh@planningnewsvote.com

SECRETARY/TREASURER

Amiy Varma, PhD, AICP, PTOE
NORTH DAKOTA STATE UNIVERSITY
amiy.varma@ndsu.edu

COMMUNICATIONS CHAIR

Milton Ospina
NAVTEQ
Milton.ospina@navteq.com

DIVISION COORDINATOR

VACANT

MEMBERSHIP CHAIR

Peter Conrad
MARYLAND DEPARTMENT OF PLANNING
pconrad@mdp.state.md.us

EDUCATION CHAIR

Karen Rutberg
klrutberg@aol.com

NEWSLETTER EDITORS

Stephen Chiaramonte, AICP
PB AMERICAS
chiaramonte@pbworld.com

Rob Goodspeed
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
rob.goodspeed@gmail.com

POLICY CHAIR

VACANT

TELECOMMUNICATIONS CHAIR

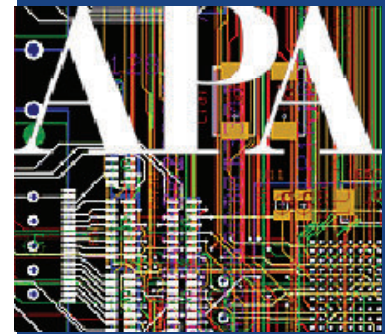
Robert Smith
CROWN CASTLE
robert.smith@crowncastle.com

WEBSITE CHAIR

Steve Kokotas
MIG CONSULTING
stevek@migcom.com

CONFERENCE CHAIR

VACANT



The Technology Division is charting the new technologies for the American Planning Association.

Planners everywhere need to understand the use and planning implications of new systems: computer simulation, GIS, telecommunications, and computer-based information resources.

www.planning.org/tech

Planning & Technology Today is the Division's newsletter, bringing you current information that is useful for making decisions on how to use the new technologies.

If you are presently a member of APA, it costs only \$25 to join the Division; students \$10; non-members \$40.

To Join: Send your name, address, and payment to:

AMERICAN PLANNING ASSOCIATION
LOCK BOX 97774
CHICAGO IL, 60678

You may also join at
www.planning.org/joinapa

CALL FOR SUBMISSIONS: *PLANNING & TECHNOLOGY TODAY*

A reminder that the updated format of the Technology Division newsletter will include one or two feature length articles in each issue. We will also be including one page "spotlights" on various technologies and tools of interest. Our regular one page spotlights will cover Public Participation, GIS, Online Tools, Visualization, and Scenario Planning.

Division Leadership will be writing the spotlights. But we still need submissions for our feature length articles. For these articles, we are looking for case studies that demonstrate how planners and/or communities have used technology in

planning. What are the innovative tools and techniques applied; what worked well and what did not?

In particular we are soliciting articles and sidebars that focus on: Case studies directly from communities; Lessons learned (both positive and negative) regarding the use technology in public participation.

Please submit your abstract ideas to: Rob Goodspeed, via email at rob.goodspeed@gmail.com.