



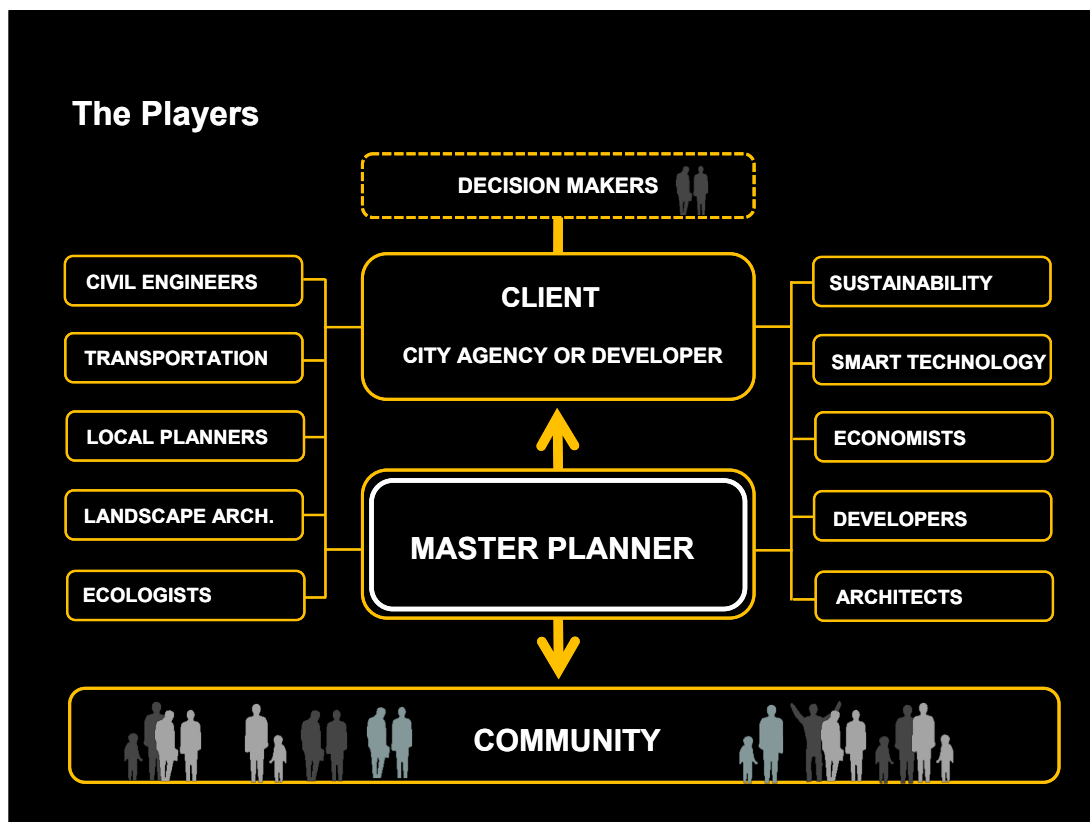
Urban Systems

Monthly Newsletter N. 8 – 05/2012 edited by [colin Harrison](#)

This is the monthly newsletter of the [Urban Systems Collaborative \(USC\)](#). To receive the newsletters simply join the [USC mailing list](#).

[The Chicago Seminar: Urban Information Flow-Mapping](#)

A central concept of Urban Systems relates to the roles that the flows of information play in the design, construction, management, and operation of urban infrastructures and services. Yet in all but the simplest cases, we have little understanding of what these flows are and what roles they play in enabling the many stakeholders in, for example a planning exercise, to make better decisions. In the 2012 the core team of the Urban Systems Collaborative set ourselves the goals of developing methods to elucidate these flows and their roles.



A first step along this path took place at the offices of the Metropolitan Planning Council in Chicago, Illinois with a one day workshop that looked at the flows involved in a specific planning project, the [Lake Shore East](#) development project. The participants in this workshop covered an unusually wide range of stakeholders (see the graphic above) – from

the urban designers and real estate developers to community groups, academic researchers, the IT community, and urban data “hacktivists”.

Distinguished guests included John Tolva, the CTO for City of Chicago, Prof. Ethan Seltzer of Portland State University, Frank Hebbert of Open Plans, Sean Linnane, Vice President for the Magellan Development Group, and Doug Voigt of Skidmore, Owings, and Merrill.

John Tolva spoke about the interdependence of actions and systems in a city and the need for design tools that can bring citizens closer to understanding the planning of a community around a common set of facts. Ethan Seltzer reported on recent research into the role of crowd-sourcing and other social media innovations in developing citizen engagement in planning. Frank Hebbert made the important point that we are bad at communicating what is going on in urban planning and in helping the community understand what the data are telling us. Sean Linnane began the main part of the day with an overview of the Lake shore East project and the role that community engagement played in the planning process. Lastly among the short presentation sessions was Doug Voigt who spoke about the urban development process and the desire to leverage technology to involve as many stakeholders as possible.

Video recordings of these presentations are posted on the USC Website on the [Chicago Seminar](#).

The rest of the day was devoted to a series of exercises to document how information flows had been used in the Lake Shore East project, where they came from, who used the information, and how this process could have been improved. Some of these flows were captured on the white board and others were captured in [Microsoft PowerPoint slides](#).

Several lessons emerged from this first “information-flow mapping exercise”:

- This approach was novel to (almost) everyone in the workshop and some participants had difficulty in thinking about their work in term of information flows. We should have spent more time individually with the participants to help them develop their thinking.
- There will no be a generic flow map for planning events. These will be very much specific to the circumstances of the planning exercise. So extensive research will be need to determine what patterns – if any – may exist in these exercises. We hope that this work might be taken up by academic researchers or through local “USC Flow Mapping Exercises” that the USC can sponsor and support in cities around the world.
- The most successful citizen engagements begin with conversations about citizen’s goals and preferences for the proposed project at the level of a set of principles rather than beginning with specific programmatic requirements.
- Citizenship visibility into planning exercises is currently *ad hoc* and many citizens may be surprised or feel that their concerns were not adequately considered. These information flows can document the decision-making process and provide a rationale for the event outcomes.

There is much to be harvested from the workshop and it is my hope that through repetition of this exercise in a variety of cities and situations we will begin to understand the roles that information flows play in a successful planning exercises. It is my goal to try to develop out of this work a “USC Method” for collaborative planning exercises based on the point of view of information flows. This workshop was also an excellent trail run for a similar exercise we have in mind for the UC Berkeley symposium (see below) in September 2012.

We offer deep thanks to Peter Skosey, Marisa Novara, and others at the Metropolitan Planning Council for their dedicated support and participation and for the use of their facilities. We are also most grateful to Skidmore, Owings, and Merrill for the generous reception held at their impressive premises on Michigan Avenue, Chicago.

Center for Urban Science and Progress – New York University

The [Center for Urban Science and Progress \(CUSP\)](#) is a research partnership that was constructed in response to Mayor Michael Bloomberg's request to establish a new applied science in New York City. CUSP is a consortium between some of the great research universities in the world (NYU, NYU-Poly, Carnegie Mellon, University of Toronto, City University of New York, Warwick University, and India Institute of Technology - Bombay), and some of the world's foremost technology companies: IBM, Cisco, Siemens, Xerox, Consolidated Edison., National Grid, IDEO, ARUP and AECOM.

In early April 2012 there was a partnership workshop in which a vision and academic plan for CUSP was drafted. This vision states that:

The Center for Urban Science and Progress (CUSP) is a world class public-private research center that uses New York City as its laboratory and classroom to help cities around around the world become more productive, livable and resilient. CUSP observes, analyzes, and models cities in order to deliver optimal outcomes, prototype new solutions, formalize new tools and processes, and develop new expertise/experts. In doing this, CUSP will become the world's leading authority in the emerging field of "Urban Systems".

The CUSP team is hopeful that they will be awarded a site in downtown Brooklyn by the Bloomberg administration in the not too distant future.

As USC members will see this vision is exactly aligned with our own and it lends significant credibility to the directions that we are driving. This is not too surprising since some of the members of the USC are strong founding contributors to this effort. We should work hard to integrate our work and thinking with CUSP. Please contact [Jurij Paraszczak](#) if you have specific interests in CUSP.

World Bank Meeting on Smart Cities

The World Bank sponsored a meeting of a wide number of governmental, NGO's companies and academic groups on the topic of Smart Cities in Washington, DC . The group of companies, government and non-government entities and academe is shown in the graphic below.



The focus of this [meeting](#) was to develop a more detailed view of Smart Cities and how cities could use a sustainable approach to improving their quality of life. What struck me as a participant is [the scope of the problem and the variegated approaches](#) and groups which are addressing the issue. In addition, I was struck by the number of groups actually working in Brazil - from the World Bank to the US's HUD. A lot of the focus was on acquiring and rationalising city data - its origins and potential uses. This was focused around the way in which cities can better manage their resources and create a sustainable and liveable city. (Reported by Jurij Paraszczak, IBM Research).

IDEO Connect

While helping the NYU team to develop a narrative and business plan for CUSP, I was invited in February to visit the New York City offices of [IDEO](#). IDEO is one of those amazingly creative and relaxed places in lower Manhattan where I would love to work if I were about forty years younger and had better hair. Amazing people and what looks like a truly fun place to work on real world problems. Mike Wittenstein had sent me a link to their new initiative – IDEAO Connect – that is sponsored by the Gates Foundation. This is a community “where optimists take on our world’s challenges by sharing stories, questions, and resources”. We should have a Webinar on this!

Geo-Spatial Analytics

The Bartlett Centre for Advanced Spatial Analysis ([CASA](#)) During April 2012 I had a chance to visit CASA at University College, London, where Prof. Michael Batty is the director. It is a pleasant working space dominated by workstation with massive, dual flat panel displays that are usually showing some complex analytics on transportation or other geo-spatial data. The lab gets a weekly feed, for example, of anonymised “taps” from the Oyster card contactless payment system that is usable throughout London Transport and also on some regional train services. From it is possible to extract good insights on how people are using the Transport for London networks, including detecting some probably fraudulent behaviours. Other areas that interested me greatly were concerned with the transitions among modalities and with understanding the historical evolution of the UK road system in

terms of scaling laws for intersection densities. London faces severe challenges to its transportation systems this summer during the Summer Olympics and I think that CASA will have years of fun making sense of the resulting data.

[Skybox Imaging](#) is betting that satellite imagery circa 2012 is like GPS location circa 1998. The market for detailed pictures of the earth's surface is growing, but satellite imagery's public-sector legacy makes it impractical many potential uses. For some purposes, it is not timely enough: [Google Earth's](#) display can be several years out of date. For others, it is too costly: Commercial users can pay exorbitant sums for crucial intelligence — \$2000-\$3000 per task plus \$5-\$30 per square kilometer of coverage — only to be preempted by government priorities. Upshot: Satellite photo applications that could revolutionize existing industries and create new ones never even reach the paper napkin stage..... (See [Forbes, February 29, 2012](#))

Open Data and Open Source for Geo-Spatial [Socrata](#), arguably the market leader in open data platforms, recently launched their "[Mondara](#)" offering built atop [GeoServer](#) and [OpenLayers](#). Socrate writes: "GIS experts have plenty of software. We invented Mondara for the other 99% who just want to make online maps." [GeoCommons](#), the playground for [GeoIQ](#), has a similar platform focused on geospatial data correlation and visualisation of data sets.

Odds and Ends

New Cities Foundation The New Cities Summit, to be held on May 14 -16, 2012 in Paris, will unite global thought leaders, mayors and city managers, leading CEOs and representatives of civil society to discuss one of the most important topics of our time: the future of cities in the 21st century. The theme of the 2012 New Cities Summit, **Thinking Ahead, Building Together**, reflects the New Cities Foundation's belief that understanding and contributing to our urban future requires new partnerships built on bold, audacious thinking and analysis.

High-level plenaries featuring some of the world's greatest urban thinkers will focus on the vision of tomorrow's urban world, and detailed workshops deal with topics including mobility, the creative and connected city, the annotated city, the just city, water, building greener districts and infrastructure financing for the urban boom. Regional sessions will explore Urban China, Latin America and India as well as Greater Paris. "Navigating the Meta City" a highly-interactive session led by frog, a leading design and innovation firm, offers a glimpse into a future city in which various layers of software constitute a powerful computing platform for hybrid digital-physical environments.

"We are only at the early stages of understanding the impact of global urbanization," says John Rossant, Chairman of the New Cities Foundation. "This is a phenomenon of unprecedented scale that will affect all of our lives. The New Cities Summit is essential as it is the sole venue which brings together great urban thinkers and builders from a range of disciplines which focuses the global conversation on the city. From the big picture vision to the hands on solutions, we want this Summit to be a watershed event." To find out more about the Summit, please visit www.newcitiessummit2012.org

Scoopt.It! This is a web site devoted to “informational landscapes” and offering “a collection of tools and projects on urban sensing and depicting data-scapes”. (Contributed by Michael Batty.)

Eduardo Paes Eduardo Paes is the mayor of the City of Rio de Janeiro and something of a rock star in the urban systems space at present. Here is a [talk](#) that Mayor Paes gave at the TED conference on February 29, 2012. He mentions Rio's Operations Center and wows the crowd for a few minutes talking live to the ops center via his tablet while seeing various information screens. He also goes into detail on their new Bus Rapid Transit (BRT) and give us finally The Four Commandments:

- 1) The city of the future has to be environmentally friendly.
- 2) The city of the future has to deal with mobility and integration of its population.
- 3) The city of the future has to be socially integrated.
- 4) The city of the future has to use technology to be present. [He doesn't need to be there to govern.]

Wired article Finally, not everyone loves us. There are those who see Urban Systems as an attempt to intrude and control the lives of citizens. Here is [an article by Usman Haque](#), the founder of Pachube – certainly an organization I respect - in a recent edition of Wired magazine that challenges our thinking (which is good). There is much in his point of view with which I can strongly agree.

Webinar Series for May 2012

May 11	Lela Prashad, Arizona State University, 100 Cities Project
May 25	Terri Matthews, NYC Dept. of Design & Construction

Continuing the Webinar Series

We are looking for speakers in the Urban Systems space for continuing the popular Webinar series through the summer. Please send suggestions to [me](#), preferably of people whom you know and who know you, together with their likely topics.

2012 Urban Systems Symposium

The major USC annual event will be held on September 11-12, 2012 at the University of California, Berkeley. Now that the “mini-event” in Chicago has been completed, we need to make some good progress on planning the Berkeley event before the summer vacation period. We are beginning to hold a weekly planning call on Friday afternoon at 3:00-3:20 pm EDT. If you would like to help in planning this event please let Jurij Paraszczak or me (colin Harrison) know and we will send you the invitation information.

Calls for Papers and Proposals

The [International Workshop on Urban Computing \(UrbComp 2012\)](#) will be held in Beijing in August 2012. Topics of interest include, but are not limited to, the follows:

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- Urban sensing and city dynamics sensing
 - City-wide traffic modeling, visualization, analysis, and prediction
 - City-wide human mobility modeling, visualization, and understanding
 - Urban computing for urban planning and city configuration evaluation
 - Urban environment/pollution/energy consumption monitoring and data analysis
 - City-wide intelligent transportation systems
 - Anomaly detection and event discovery in a city
 - Discover regions of interests and regions of different functions
 - Mining public transportation data, such as ticketing data in bus and subway systems, road pricing data, and taxi data
 - Social behavior modeling, understanding, and patterns mining in urban spaces
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- City-wide mobile social applications in urban areas
 - Location-based social networks enabling urban computing scenarios
 - Smart recommendations in urban spaces
 - Intelligent delivery services in cities
 - Mining data from the Internet of Things
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Submission date for complete papers is May 27, 2012.

[Gerald Midgley](#) has forwarded a major funding opportunity from the [UK EPSRC](#) for [a cross-institutional center on “systems of systems” research](#).

The [FT/Citi Ingenuity Awards: Urban Ideas in Action](#) will recognise ingenious individuals or organisations that have developed solutions to urban challenges in the fields of education, healthcare, energy and infrastructure.

The [IBM Journal of Research and Development](#) is calling for papers for a special edition on “Disaster Recovery and Resilient Computing”. The growing complexity and interconnection of systems has caused business, physical, and information technology (IT) infrastructures to become vulnerable to large-scale and cascading failures in an often unpredictable manner. These failures can be triggered by natural disasters -- such as floods, earthquakes, tsunamis, and wildfires -- and also failures associated with IT infrastructures, cyber-attacks, human errors, and combinations of these challenges. The guest editors of this special edition are [Peter Williams](#), [Hideo Watanabe](#), and [Jurij Paraszczak](#). [Cliff Pickover](#) is the journal editor. Abstracts are invited by June 5, 2012. See the journal web site for details on [manuscript preparation](#).

Useful Information about the Urban Systems Collaborative

1. The USC grew out of the [Urban Systems Symposium](#) that was held on May 2011 in New York City
2. The Collaborative holds a biweekly Webinar. See the [cWebinar meeting details](#)
3. USC [Web site](#). Links in this newsletter generally refer to the Collaborative's Web site
4. To join the Urban systems Collaborative follow these links
 - a. Webinar announcement and general mailing list: join [here](#).
 - b. [Add our public Calendar](#) to keep track of upcoming events. Please see additional info for non Google users [here](#).
 - c. [Flyer](#): please forward it and/or print it out for distribution.
5. USC [Blog](#)
6. If you wish to unsubscribe from this newsletter and all other email from the Urban Systems Collaborative, please reply to this email with the word "unsubscribe" in the Subject line.

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