Digital Cities: Open Data Developments in New York, London and Hong Kong

By Waltraut Ritter

Hong Kong likes to compare itself to New York and London, but when it comes to opening up public data for digital re-use, the city is a few years behind the open data movement in those cities, where Open Data is thriving and is recognized as one of the most promising ways to increase governance, civic participation, and innovation.

Open Data initiatives are thriving in cities because ideas for service innovation are often rooted in densely populated, diverse and shared urban spaces where people need just-in-time information to navigate the city, such as real-time public transport information, weather information, information about environment, energy, health, culture, as well as information about policy decisions with affect life in the city and future developments, such as information about housing policy, municipal budgeting, and demographics.

Three Cities and their Open Data portals

New York City's open data site http://nycopendata.socrata.com/ has hundreds of datasets from all public agencies from statistics to culture, education to business.

London's data store http://data.london.gov.uk/ offers several hundred datasets covering topics from overcrowded households to borough community patterns and live traffic disruptions.

Hong Kong's Data.one http://www.gov.hk/en/theme/psi/welcome/[1]
Currently has two sets of data – real time traffic information and geo-referenced public facility data.

Open Data Communities

In highly developed digital cities, Open Data initiatives often start by building a multi-stakeholder community through public events where officials, digital community, business and citizens meet and experiment with data in a way that was not possible in the times when public information was not readily accessible in open formats, not accessible at all, or only on request.

Building such a community is important because open data is still a new field for most stakeholders, and it also provides a space to negotiate and define the expectations and terms of using and re-using public data before a policy on public data becomes is developed. Questions around licensing, technical standards, and cost need to be agreed upon based on practical experiences in the new open data environment as well as on an analysis of the outcomes. All three cities have created such events to increase awareness and collaboration in the community, often combined with public competitions to stimulate ideas and business cases about how public data can be used for new services and products.

Such Open Data community meetings can also inspire unexpected, new uses of existing data. The most interesting developments happen when data originally created for a particular public function is used in a different context, for example, when commercial applications providing restaurant information in a city can be combined with latest public data from the Food and Environmental Hygiene department,

[1] Since PSI is a pilot running for 18-months only, no dedicated home page has been set up, making it a bit difficult to find the site.

making users think twice before choosing a place to eat.[2] A site which visualizes information about traffic accidents in New York starting from 1996 using mapping and statistical data, and the combination of these data sets gives new insights about which streets are danger zones for pedestrians http://crashstat.org/ and could influence traffic and planning departments to take pedestrian safety more seriously.

Another example of a new service through the combination of different, publicly available data sets is an app based on property information, mapping data and traffic data answering questions on where one can live given one's budget and time willing to commute http://www.where-can-i-live.com/londonproperty. This would probably be a useful app for Hong Kong and New York as well.

Open Data Community in Hong Kong

The Public Sector Information initiative in Hong Kong, called Data. one, is a pilot launched by the Hong Kong Government about a year ago which released a few selected data sets in open format to the public to encourage the creation of new services and citizen-centric applications. The Data.one site is currently under the main government website, and - with a picture of data servers on the welcome page - appears less user-centric than its London or New York counterparts. During this pilot phase, only real time traffic data and geo-referenced spatial data are available through the portal.

The Hong Kong Government also launched a competition for best applications and ideas using these data sets, and awarded the best among the 41 entries in February this year.

The winning app *FindDoc* is an iPhone app which helps users to search and locate doctors, and also tracks appointments. It was developed by a local software company and it will be interesting to see whether they can capitalize on their idea. Many of the apps were using the real time information on congested cross-harbour tunnel traffic, although one may wonder about the reach of these applications since the vast majority (around 90 %) of Hong Kong citizens is using public transport, and there is a real lack of customer friendly applications for bus transport. While citizens in New York and London can easily check on their smart phone or through a digital display at the bus stop when their next bus is coming, Hong Kong citizens never know exactly when their bus is coming because no real-time information is available.[3]

In the category of student awards, an app called *Find Tree Easy* allows users to input the identification number or scan the 2D barcode on a tree in Hong Kong to search for the relevant information, location and image. It is interesting to note that trees in Hong Kong can easily be digitally tracked while buses cannot.

The award for best concept was for an "Intelligent Emergency Reporter" app which can display crime rates, traffic black spots, traffic accidents, special traffic arrangements as well as the location and telephone numbers of nearby police stations, making it easier to contact the police through voice calls or SMS.

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[2] See Montreal's example http://resto-net.ca/en

[3] The private bus companies do not provide real-time data and are currently not GPS enabled. The buses are supposed to run following a fixed schedule, but the real bus timings are often rather unpredictable.

The best student concept was *My Own Gallery*, which can display present and historical information, images of local heritage and other scenic points of interest, and enable the users to plan their journeys by displaying real-time traffic information. The app can also record and share information submitted by other citizens about a specific point of interest.[4]

Despite the many interesting apps and ideas, probably few developers will be able to create a sustainable business model because it is not clear whether access to the data will continue after the pilot period.

Such competitions have been running in New York for three years now and through *Apps for New York* a dynamic and large community of local developers, civic group and business has been created; and there are now hundreds of apps which help citizens and visitors to navigate the city.[5]

Around 100 entries have been submitted in the most recent round of competition; one of the more interesting one is an app called *96 Acres* http://2011.nycbigapps.com/submissions/5760-596-acres which is a public education project aiming to increase the awareness of communities in Brooklyn about land resources around them and spotting city-owned vacant pieces of land. Users are then provided with contact details and can negotiate arrangements on getting access to the land for community purposes on a temporary basis. There are also several applications connecting volunteers with those who need help, such as *NYC Volunteers*, which helps users to find volunteer opportunities through the mobile phone, based on data sets which the city maintains.[6] In a recent article in the New York Times, Brustein argues that in this year's round of BigApps contest too many concepts were based on similar ideas, many apps would not be able to scale, and asked, whether the whole contest has led to greater transparency in New York.[7]

The results of the apps competitions in Hong Kong and New York should be analysed thoroughly to get a better understanding on how viable business can be built on open data, what kind of difficulties developers had in using public data, whether their apps reached an audience and were able to create a market with their products and services.

Innovation through Open Data

Overall, there are more apps focusing on immediate needs of urban dwellers, such as finding places, how to get around, public transport, learning more about the sights of the city; the main purpose of these apps is to make living in a city more convenient. There are still relatively few apps focusing on civic engagement, getting involved in policy-making, on how the city is run, or on bringing new insights into a social or environmental issue through the combination of non-related datasets.

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[4] More information about all entries can be found at http://www.publicsectorinfo.hk/home/?page_id=96&lang=en (summary in English, details only in Chinese)

[5] List of all entries retrieved from http://2011.nycbigapps.com/

[6] http://2011.nycbigapps.com/submissions/5831-nyc-volunteers

[7] Joshua Brustein.2012. Contest Whose Winners May not Succeed. New York Times, 2 March http://www.nytimes.com/2012/03/04/nyregion/new-yorks-bigapps-contest-has-mixed-results.html

Open data has a large potential for public and service innovation, because citizens are not only viewing the public data sets, but also "analyzing and repurposing the information in a very useful way"[8], inventing services that could not have been created by a public agency that originally collected the data. Along with recombination, repurposing of existing datasets may be one of the most interesting sources of innovation in this field.

Tim Davies argues that the open data community often sees "databases as collections of 'neutral facts', without recognizing the many political and practical judgements that go into the collection and modeling of that data."[9]

The London Data Store, managed by the Greater London Authority (GLA) has a more political stance in their Open Data strategy and mentions accountability of public authorities as one of the reasons to set up the portal: "We want everyone to be able to access the data that the GLA and other public sector organisations hold, and to use that data however they see fit – for free." London's mayor, Boris Johnson, is strongly supporting the Open Data movement and said in his 2008 manifesto *Making London's Mayor Accountable*: "I believe Londoners should have a greater say on how their city is run, more information on how decisions are made and details on how City Hall money is spent.[10]

Legal basis for Open Data

While the mayors of London and New York greatly help to promote and increase awareness about the socio-economic potential of open data, it needs to be based on sound policy which makes open data the default setting for government to be open, transparent, accountable and participatory.

A recent policy report in the UK recommends enshrining a right to public data in legislation.[11] In New York a new open data law called "Introductory Number 29-A" was passed earlier this month which is the basis for a comprehensive citywide open data policy: "The Department of Information Technology Telecommunications will be in charge of creating a technical standards manual and posting it online to begin, serving as guide for the city's agencies on how to handle and list any data that's considered public domain."[12] Mayor Michael Bloomberg sees this law as an important step to continue the country's

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[8] Vivek Kundra. 2012. Digital Fuel of the 21st Century: Innovation through Open Data and the Network Effect. Joan Shorenstein Center on the Press, Politics and Public Policy, Discussion Paper Series #D-70

[9] Tim Davies. 2012. Focussing on Open Data where it matters: Accountability and Action
http://govinthelab.com/focussing-on-open-data-where-it-matters-accountability-and-action/

[10] Boris Johnson.2008. Making London's mayor accountable
http://image.guardian.co.uk/sys-files/Guardian/documents/2009/04/27/complete_accountability.pdf

[11] Chris Yiu. 2012. A Right to Data: Fulfilling the Promise of Open Public Data in the UK, Research Note by Policy Exchange
http://www.policyexchange.org.uk/images/publications/a%20right%20to%20data%20-%20mar%2012.pdf

[12] Joe Pollicino. 2012. Bloomberg signs NYC 'Open Data Policy' into law, plans web portal for 2018
News Tech 24.com, 12 March
http://newstech24.com/2012/03/bloomberg-signs-nyc-open-data-policy-into-law-plans-web-portal-for-2018/

leadership in innovation and transparency, and as an effort to support the growth of the digital community in NYC.[13]

In contrast to New York and London, there is presently no legal basis for Public Information Re-use in Hong Kong. The experiences with the PSI pilot project, which ends in September 2012, shall serve as a basis for formulating a policy which would enable the development of new business products and services through Open Data and speed up innovation in the digital community, creative industries and beyond. Without a PSI policy, how can users develop sustainable business models?

How could Hong Kong get on track faster?

In Hong Kong, there is still a low awareness of the power of Open Data among the business community, and most of the recent public information campaign targeted the IT community rather than the general business community and the very active civil society in Hong Kong. The latter in particular needs up-to-date public data for their activities and services, information about social development, statistics, environment, heath and other areas.

Most of the public awareness campaign and the whole award ceremony of the public competition were conducted in Chinese only, and, as a result there was no English newspaper covering the event. This was a lost opportunity since English is (still) one of the official languages in the city and Hong Kong builds much of its image on being an international city in Asia.[14] For future campaigns a more inclusive and international focus may result in higher participation from across the whole community.

The website created for the campaign by a local internet association to build public awareness (www.publicsectorinfo.hk) is now outdated and doesn't seem to be maintained; the associated Facebook site has attracted few viewers and is only in Chinese.

To actively develop a PSI strategy, there should to be more support to build an Open Data community, including a bi-lingual, interactive collaboration platform; more data sets from different government agencies should be made available - but perhaps most importantly – somebody from the government who champions the Open Data idea and drives the necessary changes to develop Hong Kong into an open world city is needed.

New York has Michael Bloomberg, London has Boris Johnson, but who in the Hong Kong government is advocating Open Data?

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[13] By Elizabeth Montalbano. 2012. NYC Passes Data Transparency Law, InformationWeek, 8 March, http://www.informationweek.com/news/government/policy/232602252

[14] InvestHK created the brand "Asia's world city", thereby acknowledging that Hong Kong is not a world city like London and New York which don't need additional labels for their identity.