Venture Valuation AG: The Genedata Assignment

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What is BIG DATA?

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Why is BIG DATA useful for solving civic problems?

The World's growing population is accompanied by big sets of data that gives us insight on a multitude of arenas, from human behavior to economic trends. Paul Waddell, a professor at UC Berkeley, created a program (UrbanSim) that organizes and spatially locates large amounts of data from various data (as well as other sources) in order to inform planners of the effectiveness their policies will be in both the present and the future.

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Social Context of the need for Big Data in City & Regional Planning

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Shift in World's Economy

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Rural to Migration: The Great Divide

As of three years ago, for the first time ever, the world's population living in urban areas exceeded that of those living in rural areas.

Paul Waddell and UrbanSim

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UrbanSim and Beyond

Waddell's program UrbanSim has earned so much distinction that it is now used in a multitude of private and public planning agencies.

Waddell has continued his research using Big Data and has created two more programs that are popularly used among architects, landscape architects and planners, alike. The two programs include GeoCanvas and UrbanCanvas.

UrbanSim and beyond

Example of UrbanSim in Action: Modeling Income Segregation in Oakland and San Francisco

Results of Rural to Urban Migration

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Why is this information useful?

This census data once quantified and spatially located over an area begins to tell a story of where people live and why they do. These are surging elements of the valuation that will change over time.

Seeing the change of these processes give us insight on urban pressures, gentrification and investment of real estate. This information to planners predict what will happen in the future with scientific backing.

Further Extrapolation of Example:

The vast amounts of data that was used to create this map includes:

- the overall regional job accessibility of an area
- the income of the individual living in the neighborhood compared to the average income of the neighborhood itself
- The price of housing
- The availability of unoccupied residential lots in the area

Conclusion

- Big Data is in the process of transforming the fields of city and regional planning by giving planners insight onto whether their proposals will reach success in a multitude of arenas.
- Buildings and interventions will now become more well-thought out ideas due to the data that can predict either trauma or triumph.
- In addition, Big Data will be used to assess how to reduce the negative externalities of the city without comprising the lives of city dwellers.
- In doing so, our cities will become more sustainable and as a result more livable places for all walks of life.

design by Dirk Snely for Prezi

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<http://www.synthicity.com/blog/>

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What is BIG DATA?

Big data refers to a vast library of data that cannot be analyzed using simple statistical quantification tools. Instead, it requires computer algorithms with fast processing speeds and programs to go through the data. These large amounts of data can tell us a lot about the behavior of humans in the environment, this in turn makes it very useful in predicting the impact of various city planning policies will on the people living in the environments and the overall economy.
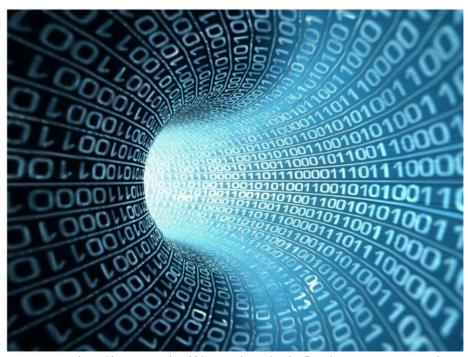
Image Source: http://www.greenbookblog.org/2012/03/21/big-data-opportunity-or-threat-

Shift in World's Economy

Image Source: http://www.data.align7a.net.com/the-assignedon.t-of-bering.hm

Image Source: http://www.gettyimages.com/detail/photo/japan-tokyo-ginza-street-pedestrians-high-res-stock-photography/200109002-001

This is a result of our economy transitioning from one based on agricultural industry to an economy based on the transactions of goods and services.

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Image Source: http://www.greenbookblog.org/2012/03/21/big-data-opportunity-or-threat-for-market-research/

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Rural to Migration:
The Great Divide

World population distribution

As of three years ago, for the first time ever, the worlds population living in urban areas exceeded that of those living in rural areas.
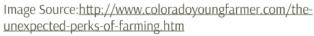
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Shift in World's Economy

Image Source:http://www.coloradoyoungfarmer.com/the-unexpected-perks-of-farming.htm

Image Source:http://www.gettyimages.com/detail/photo/japan-tokyo-ginza-street-pedestrians-high-res-stock-photography/200499092-001

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Results of Rural to Urban Migration

Favelas in Rio de Janeiro
Image Source: http://en.wikipedia.org/wiki/Favela

Pollution in LA
Image Source: http://themindbodymoderate.com/2012/02/08/is-running-in-los-angeles-bad-for-your-health/

This migration from rural to urban landscapes has put a huge strain on cities around the world, which in turn has caused city officials to implement more planning policies to accommodate for this growth.
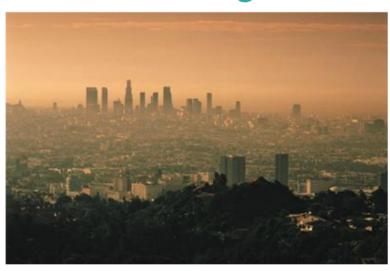
Negative Externalities resulting from Population Growth:

Pollution
Traffic Congestion
Slum Development
Unsatisfactory Infrastructure

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Paul Wadell and UrbanSim

UrbanSim v1.01

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