



COLLEGE OF ENGINEERING
DEPARTMENT OF ARCHITECTURE AND URBAN PLANNING
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NETWORKED URBANISM

ARCT 421 – Introduction to Urban Design and Planning

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WHAT IS NETWORKED URBANISM?

DEFINITION – BREAKING DOWN THE TERMS

- **Urbanism is defined as the:**
 - movement of the population to the urban areas (Urbanization)
 - lifestyle of city dwellers
- **Networked is defined as the:**
 - linked or to operate interactively
 - interaction with other people to exchange information and develop contacts

DEFINITION

According to the break down, **networked urbanism** is the:

- linked urbanization
- interaction of different people involved in designing the cities to exchange information to improve the lifestyle of the city dwellers

According to sources:

- It is the reuniting of the existing public realm with the evolving needs of the people within the city
- It is the approach to urban design with an open and collaborative web of creative professionals, technical experts, citizens and other people involved

DIAGRAM OF NETWORKED URBANISM

USING DATA TO ALIGN LIBRARIES WITH PRESSING CITY NEEDS

HOUSING OPPORTUNITY

low growth  high growth

Growth Trends

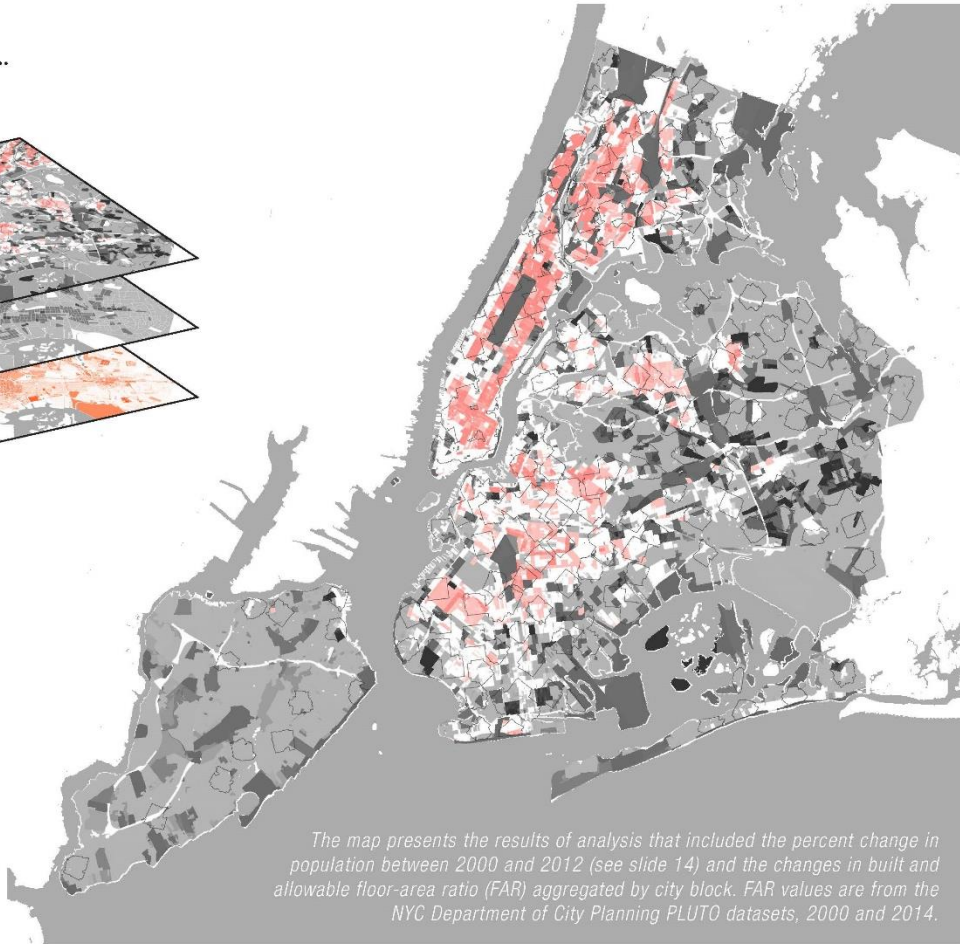
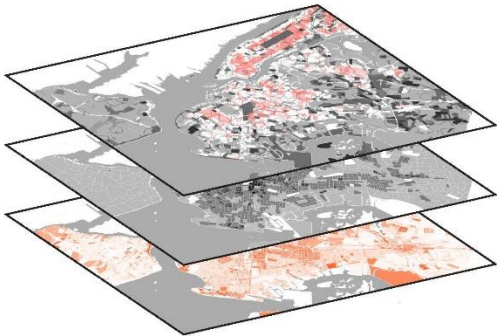
x3

Population Density

x2

Development Potential

x1



The map presents the results of analysis that included the percent change in population between 2000 and 2012 (see slide 14) and the changes in built and allowable floor-area ratio (FAR) aggregated by city block. FAR values are from the NYC Department of City Planning PLUTO datasets, 2000 and 2014.

HISTORY

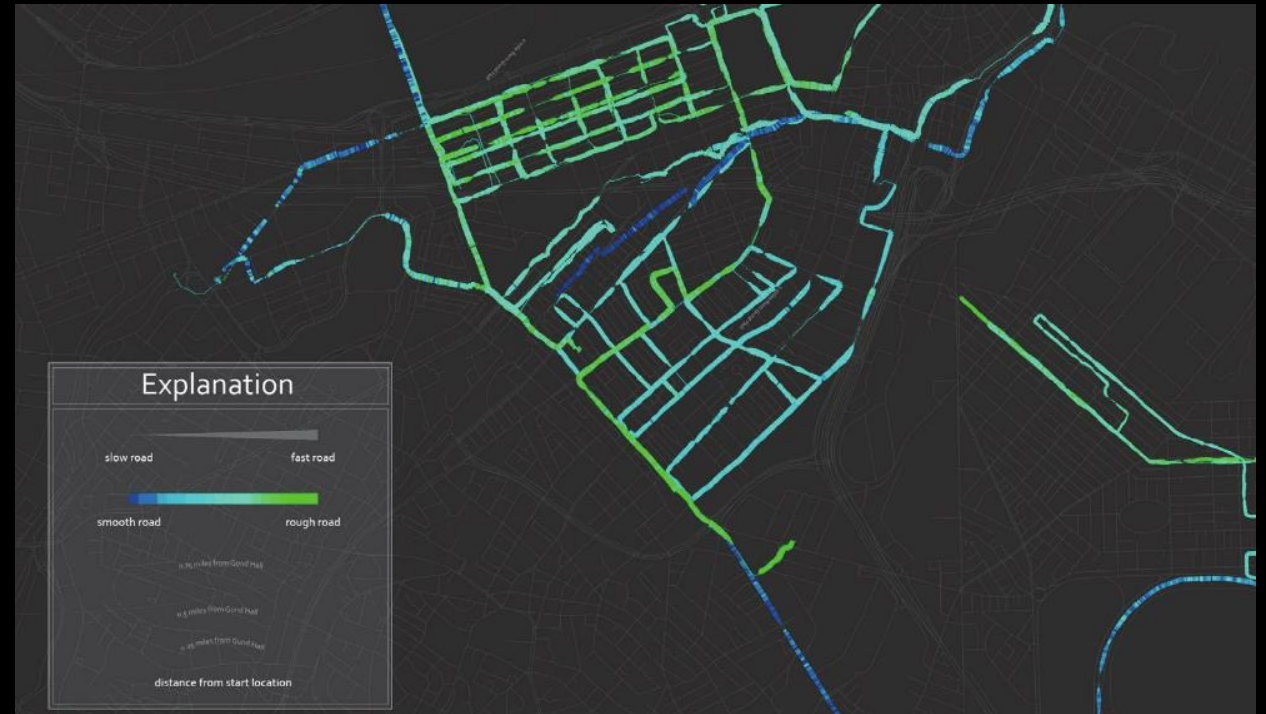
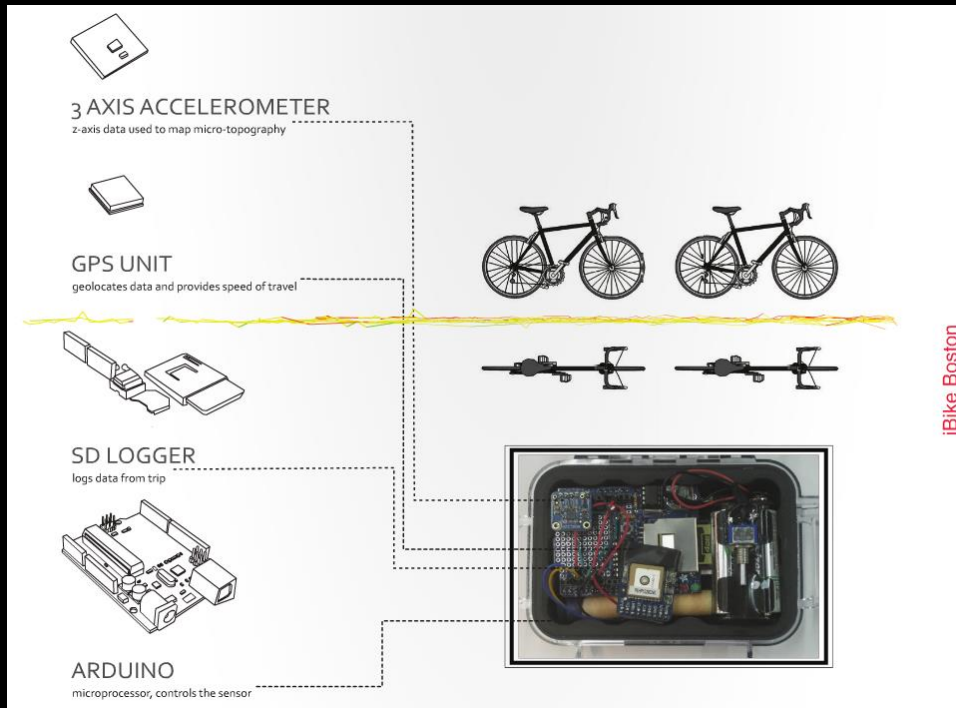
According to Gabriel Dupuy, the use of networks was used since the 18th century through biological, physical and even military aspects. He believes that networked urbanism is comparative to aspects mentioned before. For example, how the internet and its similarities to the routes, lines and pipes within the urban fabric.

Gabriel Dupuy defines **networked urbanism** through **3 principal criteria**:

- *Topological Criterion* – the **research** of direct relations without intermediary and desire for **continuity**
- *Kinetic Criterion* – **Instantaneous** interest for rapid transfers and transits without losing time
- *Adaptive Criterion* – networks based on a choice of connections that can necessitate a **permanent support**

PURPOSE OF NETWORKED URBANISM

To encourage the search for **new tools** which can then **facilitate the increase of interaction and connection between people** and also create innovative solutions that may lead to a **healthier and more sustainable societies**



Use of GPS tracker installed on a bicycle to analyze the personal experience of a biker and provide a redrawn version of city that is accommodating the bikers needs (Proposal by Andrew P. Leonard, Harvard Graduate)

ELEMENTS OF NETWORKED URBANISM

There are 14 essential transformations to achieve networked urbanism:

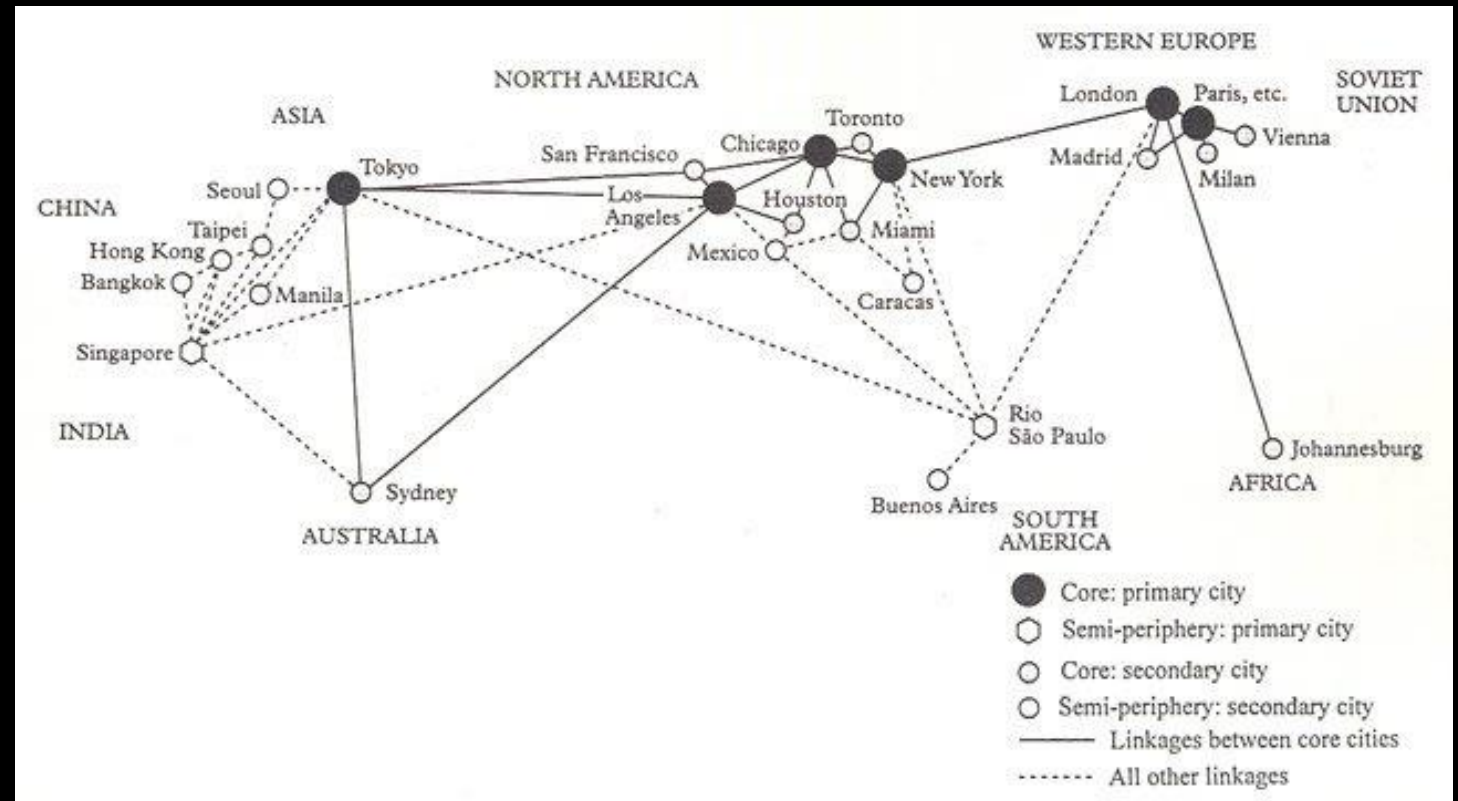
- From unapparent to clearly demonstrated
- From glanced to explored
- From detained to distributed
- From terminated to continued
- From delayed to instantaneous
- From passive to interactive
- From component to resource
- From constant to variable
- From way finding to way showing
- From object to service
- From vehicle to mobility
- From community to social network
- From ownership to use
- From consumer to constituent

WHAT IS A NETWORKED CITY?

DEFINITION

A **networked city** is defined as a collection of urban nucleus which acts as nodes of a world economic network. The connections within the city in the **physical form** are generated through the **electrical components, plumbing, streets and railways**. On the other hand, **virtually** the city is linked through the **combination of computers and wireless telecommunications technologies**.

Networked cities are connected through the virtual tools and also through the physical tools which are mainly **airports and ports**.



CASE STUDIES

FLENSBURG, GERMANY

As soon as an alarm from a remote building is reported, one telephone call is sufficient to send someone round.



At the end of courses and events in school premises, the school can be locked from a remote location. There is no need for a janitor to be present.



The city of Flensburg has been a consistent supporter of networking its buildings. The integrated real estate administration is the basis of cost and energy savings as well as increasing security.



If a window, a skylight or an exterior door is opened at night, GAMMA *instabus* reports it immediately to a control center. In next to no time a police patrol can be there to check on things.



RELATION TO CONCEPTS OF SUSTAINABILITY



We invited 500 people in Seattle to tag their trash

CONCLUSION

CONCLUSION

- **Networked urbanism** and **networked city** are, in many ways, similar. However, networked urbanism looks at the **larger scale** while networked city concentrates on the **smaller scale**.
- The **use of networks**, both systems and design simultaneously, helps to create a **better urban fabric** for its dwellers
- The **3 principal criteria** that Gabriel Dupuy used to define networked urbanism relates to the **elements** of networked urbanism
- Gabriel Dupuy titled his section the the journal 'Networked Urbanism' as *A Revised History of Networked Urbanism* as we believes that the authors who have started networked urbanism was not given enough recognition in the development of this type of urbanism

APPLICATION TO SITE DESIGN

PROPOSAL

WITHIN THE QU CAMPUS

- Use of public spaces and buildings within the QU campus as nodes for the existing landscapes that will be turned into edible landscaping
- Use of connections between buildings as the physical networking branches linking each component of the site design for QU campus which can adapt to the future master plan of QU
- Using technology to analyze where students tend to spend their leisure time (especially in winter) to see if they stay around the existing landscape
- Using technology to find out which fruits being sold in the food court is the most bought fruit so that it will be the one implemented for the edible landscaping

EXTENSION TO THE SURROUNDINGS OF QU CAMPUS

- Identifying the main nodes for the network outside the campus through exploring what is already existing and what is being developed within the surroundings of QU

RELEVANCE TO THE URBAN PLANNING AND DESIGN IN DOHA

RELEVANCE & PROPOSALS

RELEVANCE

- Majority of Doha's population has access to telecommunication networks which can be useful in future plans for the city (e.g. locating appropriate stops for the railway stations according to data collected from people's activities)

PROPOSALS

- Creating an application which is mapping attractions and landmarks for certain areas in Doha (e.g. an interactive map for public art found around Doha)

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