Cloud Studio Proposal

Urban Paradox

Christopher Groesbeck / Monika Thadhani - VOA Associates Inc. Cloud Studio 2015 - 2016

“In both form and content the City is the most public manifestation of those aspects of culture, it embodies our cultural memory; at the same time it is a place of cultures continuous renewal.”

Matthias Sauerbruch

The “Urban Paradox” studio focuses on the relationship between “Urbanization” and “Urbanism”. It will study the convergence of technological, economic, cultural and environmental issues critical for the health of the metropolis today and the future. It will also address an approach of inclusivity that is non-existent in development today, but critical to the health and resilience of the metropolis of the future.

Convergence
Cities are hubs for ideas, commerce, culture, productivity and social development. They are evolving ecosystems, engines of innovation, science and education and at the same time producers of pollution and consumers of natural resources. The promise of jobs and prosperity, among other factors, brings people to the cities. Half of the global population already lives in cities, and by 2050 two-thirds of the world's people are expected to live in urban areas. Unfortunately, in cities two of the most pressing problems facing the world today also coexist together: poverty and environmental degradation. Poor air and water quality, insufficient water availability, waste-disposal problems, and high energy consumption are exacerbated by the increasing population density and demands of urban environments.

Intensive urban growth can lead to greater disharmony between the idea of the sound diversity and its long term impact on generations of productive, educated and socially aware society. There are many advantages of densification of urban areas, such as reduction of travel time and associated carbon footprint. However, reduction of these issues doesn’t necessary reflect an improvement in quality of life, neither deliver a form of organization of interaction of urban occupants.

“Urbanization”
In many cases becomes a paradox to “Urbanism”, the impartial intersection between engagement of life, culture and place. Although Urbanization is generally seen as a positive reinforcement of the Metropolis, especially in the last 20 years, much of the development around the world has not contributed to the sense of Urbanism, especially residential development even in a mixed use approach. In contrary urban dense development took a suburbanized approach of "gated communities" in a vertical form that offer economics of scale and richer market structures, however providing little insight into the relation between urban population and economic development. Many recent mixed–used developments offer little to no dialog between the person, city street and building. This homogeneity of the Urban Environment precludes growth and continuation of culture.

Can mixed-use urban development be more inclusive and provide the infrastructure for more diverse and active community? By creating a balanced pattern of development that responds to all aspects
of urban livability successful development within the city will attract further potential, generating increased demand for labor, triggering migration to the city as mechanism for urban growth. Current development still tends to exclude a certain economic layer of population creating the gap between the one who can afford to live within the cities and those who cannot. This in many cases can include creative and knowledge talent critical to the future economy.

A culture cannot be designed and it cannot be forced. It must have a strong foundation to grow upon and the institutions of the city especially the institutions of higher education and research are critical. Institutions are economic drivers of the future and they depend on creative industries and government support. As Alain Thierstein writes in Culture:City: “The knowledge economy is built upon qualified skilled and highly motivated people who interact with each other. And this is one of the magic issues: Knowledge is only created through personal interaction while information can be downloaded from the internet at any time and any place. Knowledge creation is thus always place-related, while information processing is ana-spatial process. Architects and planners have to provide options and potential for people to meet.”

Urbanism
This represents a natural and balanced coexistence, a “convergence” of habitation, industrialization, knowledge and creativity which is essential to the strength of the economic future. Aggregating educated and creative people in one place incubates new ideas and technologies leading to efficient growth of the city. Every component of the city has a responsibility to contribute to its culture and to the ethos of knowledge, provide places to work, learn, and live, encouraging interaction and exchange of social and cultural life.

Inclusivity
Cities globally also become a major attractor for underprivileged rural population which can lead to large urban unemployment, poverty, increase urban violence, congestion and environmental degradation and formation of rapidly growing slum populations in around many major cities. According to the UN, more than 1 billion people live in slum areas. This irregular self-constructed housing creates a huge contradiction to the idea of balanced and ecological urbanism. The studio will explore a more inclusive approach through providing the infrastructure for more diverse and active community. Current development still tends to exclude certain economic layers of population creating a gap between those who can afford to live within the cities and those who cannot and this in many cases can include creative and knowledge talent critical to the future economy.

Approach
This studio will recognize and suggest solutions, will develop meaningful improvement of cities through the creation of hybrids that look beyond traditional market offerings to exploratory and innovative approaches that would have relevance both on a local level and perhaps a global dialogue with a changing and challenging world environment. The hybrids create an intelligent density of “live, work and play” spaces, providing for both human needs and human potential. These solutions will also develop density, which challenges the paradox between “Urbanization” and “Urbanism” focusing on the economic drivers of the future metropolis, by developing a balanced and ecological urbanism. The Philosopher Abraham Maslow proposed a “Theory of Human Motivation.” Through the study of the lives of people who have made significant contributions to the world Maslow developed a hierarchy of human needs described by others as a “pyramid” with the
fundamental needs at the bottom, to security and employment, health, family, connection to friends and community, achievement and recognition and finally self-actualization. A current idea of Urbanism or rather development addresses the lower levels of this hierarchy with minimum regards to the upper levels of human needs. The studio will challenge all aspects described by Maslow in comprehensive Hybrids that create culture with an approach that is inclusive, socially active and adaptable to allow future uses and programs not yet defined.

The studio will look at sites that are adjacent to metropolitan universities and their evolving importance in the development of the metropolis for the future as "social condensers" where a new relationship between community and university collaborates to address the social and cultural issues. Studio will look at the conditions of Chicago, where there is a framework of a larger plan that is yet to be fully understood and interpreted into design. In contradiction, Sao Paulo is a city where everything grew suddenly and there was no larger plan to accommodate rapid growth of urban population. In both the cities of Chicago and Sao Paulo, a first world co-exists with a third world condition.

**Fall Semester - Chicago**
Today, Chicago is an incomplete work of art, with a preponderance of parking lots, undefined west and south boundaries and a collection of expressways that separate the city, creating edges of ambiguity. Although there has been great benefit to the magnificent lakefront plan, celebrating the critical role of this natural feature, the broad scope of a thoughtfully developed lakefront urban fabric decays to an undefined place towards the west and south with miles of asphalt and concrete, in many cases underutilized. The Cloud Studio Re-Foresters the City – Inverted Urbanism focused on a plan for the 2050 South Loop. It identified a site of 60 acres of vacant land along the Chicago River. The intent was that this land be used to focus on the issue of jobs and generating the industries of the future. This would become the new center of for the City of Chicago, merging technology, culture and ecological responsibility. This site will be the focus of the Fall Studio of Urban Paradox.

**Site - Chicago**
Chicago will be the focus of the Fall Semester. The site is strategically located between the area referred to as the South Wabash University Campus, which includes Roosevelt University, DePaul, Robert Morris and Columbia University and the University of Illinois Chicago Campus and is located on the Chicago River between Roosevelt Road to the North and Clark Street to the East and 18th Street to the South. The site will also include the parallel area west of the River reaching down to the University of Illinois Chicago Campus. The development area is approximately 120 acres, an open area with proposed roadway and transit connection improvements on the East side of the river and an equal area on the opposite West side over the air rights of the Amtrak and Metra tracks.

**Program**
The program will focus on a hybrid of industrial, technological and cultural impacts with support infrastructure of ecological technologies as well as residential, education and retail/commercial. A critical component of the ecological infrastructure will be public open space along the river and layer of dedicated open space to particular users. The program will express the convergence of economic, cultural and environmental influences in an authentic and meaningful way that creates a new history of place both manmade and natural.
The residential program will focus on an inclusionary demographic, adding an affordable residential component as the key to the principle of inclusion. In Chicago current mixed use developments seeking greater density are under obligation to provide or buy into the Affordable Housing Ordinance (AHO). The requirement from the City is 10% of the total residential must be affordable of which there are guidelines for those with specific income levels are eligible for both rental and sale. If there is city financial assistance in the development the requirement raises to 20% of the total. Up to now almost without exception developers have chosen to pay into a “fund”, nominally 100,000 USD per unit rather than include with their developments but as of October 15th, 2015 that rule the ordinance will change that will require development entities to include affordable residential within their project or pay significantly higher fees into the fund. Yet given the economic conditions of today many students, graduates and retirees might actually qualify for affordable housing also. The studio will look at the approach to the design of morphology of affordable housing units that would make these adaptable and appealing to the “market” so that there is a useful and livable unit that may be inclusionary as well as innovative. The additional programs of commercial, recreational, cultural and educational spaces will support this principle of inclusion and collaborate on many levels with the needs of the university as well as the community. One possibility is the ability to share the facilities of the surrounding universities for community out-reach, especially education. The new Wabash Building for Roosevelt University presents a similar hybrid approach.

**Spring Semester – Sao Paulo, Brazil**

Spring Semester will focus on Sao Paulo, the third largest city in the world with a population of over 20,000,000 inhabitants and the largest and wealthiest city in Brazil. The city is rapidly growing with a significant migration from rural areas as well as a highly educated and creative class seeking opportunity in this growing metropolis. Sao Paolo, a sea of nondescript high rises is plagued by traffic, lack of adequate public transportation, lack of open space, lack of residential offerings for the working class and environmental degradation, especially the waterways that run through the city.

The growth of this city is a mixture of gated high rise communities for the wealth and slums for the working class, a sharp contrast of third and first world conditions side by side. Much of the new development negates the urban street culture which is an issue now recognized by the government. Many of the workers from rural areas live in clandestine towns known as favelas and are not “enfranchised” as citizens. The Favelas populate the city and are adjacent to middle and upper class residential and although many attempts have been made either to remove or transition the residents into public housing the social issues remain the same.

**Site – Sao Paulo**

The site will be located adjacent to the University of Sao Paolo that will connect to both the river and the university in an area now inhabited by favelas and out dated industrial facilities. Located along the Pinheiros River is a site of 260 acres (118 hectares) and is defined by Avenue Jose Maria da Silva to the Northwest and Avenue Escola Politecnica to the Southeast. Avenue Jaguare subdivides the site and crosses the river and is one of the principal roadways that connect this site to the historic city core, this site will be connected by future Mass Transit.

**Program**

Studio will look to develop new hybrids of industrial, technological and cultural with support infrastructure of ecological technologies as well as residential, education and retail/commercial that
both anticipates future but also give identifiable form to this metropolis. The premise of this studio would be to develop mixed use residential in a similar manner to the programs in Chicago but in recognition of the local conditions and perhaps even looking at the social structure of a Favela as a starting point in developing new Hybrids. Through associating with metropolitan universities these hybrids can be tested within an environment that is essential to the economy and culture of Brazil.

The Chicago and Sao Paulo sites address the problem and opportunities of growth within areas that have a historical context and framework. Studio will create hybrids that allow a more livable and dense metropolis that will maintain and continue the historical context in a meaningful and authentic manner.

**Urban Paradox** is an extension of the Reforesting the City–Inverted Urbanism studio and will continue to look at both an Ecological Methodology of reshaping the city to promote a sustainable environment through the integration of natural systems to balance and shape growth for a sustainable and the metaphor in the transference of principles of nature to the built environment, designing the city like a natural ecosystem (see links: http://arch.iit.edu/study/cloud, https://vimeo.com/117009200).

The studio will encompass research to encourage students to critically investigate and assess complexity of issues necessary to transform urban life. The challenge of this studio will be to work between the limits of the disciplines of architecture, urban planning, and urban engineering as well as science, technology and ethics. This would be a practice based studio which will be held both at the offices of VOA and Crown Hall.

Students will be given an overview of the master framework plan developed by the Cloud studio of Professors Thadhani and Groesbeck in both the fall and spring semesters of 2014/2015. The intent of this studio is to take the principles developed in this framework plan and continue both research and application through planning and design further extending the study of possibilities and creating different approaches and perspectives that extend the possibilities of the course objectives.

**The principles developed from this coursework are:**
1. Re-Connect Natural Systems.
2. Re-Claim Existing divisive infrastructure and add new functions to connect and strengthen community.
4. Create new visions of adaptive re-use of Public Infrastructure to better serve and enhance the Community.
5. Expand and celebrate education and research and give it stronger visual presence in the Metropolis.

**Strategies to achieve these principles include the following:**
- Public transit
- Walkable cities
- Density following landscape development
- Low-Carbon planning and building
Studio will spend one to two weeks in Brazil at the beginning of Spring Semester, of which one week will be spent in the VOA Associates Inc. office in Sao Paulo, Brazil.

Selected Reading:
- “On Growth and Form” by D’Arcy Thompson
- “Anatomy of Reality” by Jonas Salk
- “Consilience: The Unity of Knowledge” by E.O. Wilson
- “The Structure of Scientific Revolutions” by Thomas Kuhn
- “The Idea of the Town” by Joseph Rykwert
- “Space Time and Architecture” by Siegfried Gideon
- “Culture:City – Edited by Wilfried Lang
- “Planning in Chicago” – D. Bradford Hunt and Jon B. Devries
- Tower and Office – From Modernist Theory to Contemporary Practice” – Inaki Abalos & Juan Herreros
- Design of the Land –The Development of Landscape Architecture – Norman T. Newton

Invited Speakers and Third Party Collaborators:
- Jeffrey Shriver, Director of Transportation, Planning and Programming, Chicago Department of Transportation, City of Chicago
- Jon DeVries – Director of the Marshal Bennett School of Real Estate, Roosevelt University and author of recently published book “Planning Chicago” will shed light on the efforts of planning in Chicago for the last 50 years.
- Tom Voltaggio and Craig Burton of PEP, Positive Energy Practice, one of the leading sustainable infrastructure practices in Chicago.
- Jennifer Massengarb – Director of Education, Chicago Architectural Foundation
- UI (Urban Initiative ) Labs of Chicago – John Tolnaar
- Professor Doctor Mario Figueroa, Founder Figueroa Architects and Director of FAAP (Fundacao Armando Alvares Penteadi) School of Architecture
- Marcos Leite Bastos – Director, VOA Associates Inc., Brazil

Knowledge and Expertise:
- Focus on structure and history of urban planning with concurrent development of architectural responses to principles developed for macro scale development.
- Understand the interdisciplinary interplay between planning, landscape and architecture.
- Develop new ecological prototypes of urban architecture that will partner with natural systems to shape, redefine the future city and to address global sociological, economical and ecological issues.
- Understand the relationship of the academic world and the global professional world and their interconnection in developing responsible and ecological approaches for the future of our cities.

Studio Competition:
Studio will end with the competition for the best and most comprehensive approach to innovative Urban Thinking. Student who demonstrates excellence in both working individually and
collaboratively will be awarded with a Summer Internship Position at VOA with possibilities of full time employment in the future.

Publications:
Students work will be published.

Students will all participate in developing sections of final report and book. Final grade will be dependent on finishing individual projects and section of final report. All submitted material will be in the form of PDF’s.

Cloud Studio – ARCH 420 / ARCH 546

Fall Semester Timeline activities and Deliverables:

Week 1 - Studio Introduction, Review of Fall Semester, Selection of individual projects, development of Master program, begin research of program, site and course objectives.
Week 2 - Continue research and develop program and planning concepts to individual projects.
Week 3 - Continue to develop planning concepts. Presentation and review will include both research and planning. Required drawings will be site plan, site sections, general area floor plans and 3D physical model. The presentations will be required to include diagrams showing area, circulation, environment, land use, public transportation, open space and sustainable strategies.
Week 4 - Presentation of research and planning to include all requirements of week 3 adjusted to comments and recommendations with Third Party Collaborators review.
Week 5 - Architectural Development of Individual projects
Week 6 - Mid-term Presentations
Week 7 - Review feedback from presentations
Week 8 - Continue development of architectural approach with focus on detail planning and incorporation of course principles in architectural approach.
Week 9 - Continuation of Architectural approach with pin up and reviews from 3rd Party collaborators
Week 10 - Finalize architectural approach incorporating comments from third party collaborators.
Week 11 - Fall break
Week 12, 13 - Prepare for Final Review to include research, planning, architectural plans, sections, elevations, concept statement, 3D models physical and digital, sustainability analysis.
Week 14 - Final Reviews and studio report compilation.

Spring Semester Timeline and Deliverables
The Spring Semester timeline and deliverables will be the same as the Fall Semester with the exception of a weeklong field trip to Sao Paolo for field work at the offices of VOA Associates Inc., Brazil. Final timeline will be published once field trip is organized

Students will all participate in developing sections of final report and book. Final grade will be dependent on finishing individual projects and section of final report. All submitted material will be in the form of PDF’s.

Schedule of Studio
Monday – 2:00 PM to 6:00 PM
Wednesday -2:00 PM to 6:00 PM
Friday – 12:00 AM to 4:00 PM
Please note that there are conflicts on Friday Mornings for some students and will adjust schedules accordingly to resolve class conflicts.

**Attendance**
Attendance is mandatory. Conflicts due to Academic Reasons will be handled on a student by student basis. More than three (3) absences not previous agreed upon by Professors will cause failure of class.

**Grading Policy**
Mid Term Presentation - 25% of Grade
Final Presentation - 25% of Grade
Section of Final Report - 25% of Grade
Attendance and contribution to overall group effort - 25% of Grade
Grading will be based on completeness and quality of work, timeliness of submittal of work which will be lowered a grade if not submitted within three days of due date.

*Americans with Disabilities Act (ADA) Policy Statement*
Reasonable accommodations will be made for students with documented disabilities. In order to receive accommodations, students must go through the Center for Disability Resources office. The Center for Disability Resources (CDR) is located in Life Sciences Room 218, telephone 312-567-5744 or disabilities@iit.edu.
FALL SEMESTER - CHICAGO SITE

Site Information | THE CORE
Overall: 20,014,287 SF or 459.46 ACRES

Selected Parcels: **4,835,000 SF or 111 ACRES**
- Parcel One: **2,483,000 SF or 57 ACRES**
- Parcel Two: **2,352,000 SF or 54 ACRES**
SPRING SEMESTER - SAO PAULO SITE

POLO TECNOLOGICO-SA O PAULO UNIVERSITY
LOCATION: SAO PAULO, BRAZIL