The Synchronous City

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Olivera, Patricia, "The Synchronous City" (2016). Architecture Senior Theses. 343.
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ABSTRACT

Architects’ conceptualizations of cities reference and reflect trends in contemporary culture. During the early 1900’s, architects such as Ebenezer Howard, and Tony Garnier speculated on modernist visions of cities, while in the mid-late 1900’s radical visions of cities by Archigram, and Archizoom emerged. This project will operate along the framework of previous visions of cities by architects and envision a city rooted on the use of digital information and communication technologies (ICTs).

In order to best engage the provocation of a city based on ICTs as the primary means of exchange and interaction between citizens (as opposed to cars, pedestrians, ships, etc.), this thesis explores the use of third-generation mobile technologies (such as the iPhone) as the key interface between the physical and digital realms. A city that is distributed, controlled by its citizens, composed of both kinetic and static elements, that redefines notions of public/private, and is part of a larger network of ICT-based cities that extend through vast landscapes emerges and provokes new theories on urban life.

Hypothetical cities are of relevance to the general public, not exclusively to the trained architect; they sell ideas and ideals of a better society and a change of the existing urban principles in order to provoke thoughts of the future of city life. As a result, architecture and experiments in representation collide in order to reference popular culture, engage and interact with it. In this thesis, unconventional architectural representation methods such as coding, GIF drawings, and projection on drawings and models are explored in order to reference the digital nature of ICTs.
It was a summer morning in the city of New York when after a pre-work run left me “stranded” on the streets. As I made my way back home I noticed that I had forgotten my keys, I look at my iPhone to check the time and realize that my roommate should be about to leave for work. In a moment of panic, I call her to see if she is still home: she doesn’t pick up. I send her an iMessage and wait...

I begin to picture the worst case scenario: she is below ground on the subway with no cell reception and with no way to respond to my messages...

With my smartphone [and earphones] as my only means, I realize: there is no need to panic. With this device, I could simply request an Uber to my roommate’s workplace and wait for her to get out of the black hole that is the NY subway system. By then she would have responded to my messages, set up a meeting point, make the exchange and I would be on my way back home on another Uber with her set of keys while conveniently doing my grocery shopping using the Fresh Direct App. Another scenario is: I take an Uber to work and showed up in my gym clothes and even though I didn’t have my wallet, I could still order lunch through Seamless or Grubhub.

...My iPhone vibrates to a message from my roommate “Still home, wait for you here” and, at that, all “crisis” is averted.
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INTRODUCTION

The work presented here concerns the idea of a new city, the Synchronous City. A city that is based on digital information and communications technologies (ICTs) as the primary means of exchange and interaction among citizens. Ithiel De Sola Pool discusses in his essay “The Structure of Cities” how in the late nineteenth century the telephone had started to displace the telegraph as the main means of electronic interpersonal and inter-business communication. Telephones allowed consumption at a distance and the dispersal and suburbanization of US cities began. Neighborhoods and districts no longer needed to be in close physical proximity in order to be efficient and the skyscraper emerges. A similar phenomenon is now emerging with digital information and communications technologies. The developing ICTs are prompting new asynchronous and synchronous forms of communication\(^1\) that impact the ways in which we interact not only as individuals but also society. ICTs have become tools for transportation and have allowed us to engage in a society where “without necessarily leaving, everything ‘arrives’.”\(^2\) Our lives are saturated with information; ubiquitous technologies surround us, facilitate and make our urban performance more efficient.

The world is living a digital revolution in which all aspects of city life are shifting towards higher connectivity and efficiency. Through the use of ICTs, perceptions of time and space are blurred almost to the point of eradication and new forms of social and physical interaction and transportation are emerging. Digital information and communication technologies (ICTs) and the third-generation mobile are facilitating relations via the World Wide Web. New meanings to urban concepts such as streets, community, place, and space are being created while concurrently adding ubiquitous virtual layers to the built environment.

While 40% of the World’s population is connected to the web, 86.75% of the United States has accessible internet connection. Statistics also show that about 1.91 billion people around the World currently use third-generation mobile and it is projected that that number will reach 2.56 by 2018. Comparatively, 64% of the United States’ total population uses third generation mobile, and there are projections of third-generation mobile usage increasing to 79.7% by 2017. With advances in technology, specifically the internet, boundaries and perceptions in the city are challenged. The World Wide Web has become an extension of the physical domain; it is a virtual realm where geographical, cultural, and social perceptions are dissolved. Our virtual presence is becoming increasingly more relevant than our physical one. In the past, people went to the streets to voice their opinions, now we turn to social media; we post, share, tweet, re-tweet, and “go viral.” Could it be that social media platforms are the “streets” of the twenty-first century? How can we bridge the digital and physical to define the city of the XXI Century?

The Synchronous City is not real, nor is it intended to be read through the critical lens of urbanists and planners, rather the project provokes an alternate lifestyle that is coherent with contemporary trends in technology that have become crucial to our lives, and question and provoke ideas of urban life. It is a speculative metropolis that challenges our current understanding of urbanity in order to generate new forms, relationships, concepts, and meanings of an architecture that is linked to contemporary trends and advancements in technology. The Synchronous City engages in conversation with other architects’ visions of cities and positions itself among other speculative cities such as Yona Friedman’s Ville Spatiale, Archigram’s Plug-In City, and Tony Garnier’s Cité Industrielle. This project references our technologically-driven society both in its conception and its representation by borrowing elements from the tech industry in order to best represent a city based on those same principals: a city based on digital information and communications technologies.

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THE DISCOURSE

From my research, I have categorized the discourse into three main arguments:

Simultaneity: the cybercity as a parallel universe distinct from the physical realm

Substitution: the cybercity erradicating the physical city, an apocalyptic view on technology and urbanity

Addition: the cybercity and the physical city are merging and some aspects are changing

Figure 1. Simultaneity: the physical city viewed as a parallel city to the cybercity

Figure 2. Substitution: the digital city erradicating the physical city and leaving just the virtual domain

Figure 3. Addition: the physical city adapts and merges with the digital city to create a new city that is neither physical nor digital exclusively but rather a hybrid of the two.
PRIMARY AREAS OF INQUIRY

I. THEORIES

MANUEL CASTELLS - THIEL DE SOLA POOL - JANE JACOBS - TIMO KOPOMAA - WILLIAM MITCHELL - PAUL VIRILIO - MARTIJN DE WAAL - MELVYN WEBBER

II. CASE STUDIES

III. ICTs
This timeline shows how the visions of cities by architects relate to world events and significant advances in technology in order to best understand the circumstances under which they were conceived.
RADICAL VISIONS OF CITIES:

1956: VILLE SPATIALE
YONA FRIEDMAN

1959: NEW BABYLON
CONSTANT NIEUWENHUYS

1960: PLUG-IN CITY
ARCHIGRAM

1966: POTTERIES
THINKBELT
CEDRIC PRICE

1968: NO STOP CITY
ARCHIZOOM

1969: MONUMENTO
CONTINUO
SUPERSTUDIO

1954: FIRST COMPUTER OPERATING SYSTEM

1962: INVENTION OF VIDEO GAMES

1966: INVENTION OF THE JUMBO JET

1970: INVENTION OF THE INTERNET

1980: INTRODUCTION OF MOBILE 3G NETWORKS

1983: INVENTION OF THE WORLD WIDE WEB

1987: INVENTION OF VIRTUAL REALITY

1990: INTRODUCTION OF MOBILE 2G NETWORKS

1992: INVENTION OF THE MOBILE 2G NETWORKS

1995: INTRODUCTION OF MOBILE 2.5G NETWORKS

1999: INVENTION OF MOBILE 3G NETWORKS

2000: INTRODUCTION OF MOBILE 3G NETWORKS

2003: INVENTION OF MOBILE 4G NETWORKS

2008: INVENTION OF MOBILE 4.5G NETWORKS

2010: INTRODUCTION OF MOBILE 4G NETWORKS

2015: INVENTION OF MOBILE 5G NETWORKS

2020: INTRODUCTION OF MOBILE 5G NETWORKS

1954: first computer operating system
1962: invention of video games
1966: introduction of the e-mail
1970: invention of the jumbo jet
1983: invention of virtual reality
1992: invention of the world wide web
1999: invention of mobile 2G networks
2003: invention of mobile 4G networks
2008: invention of mobile 4.5G networks
2010: introduction of mobile 4G networks
2015: invention of mobile 5G networks
2020: introduction of mobile 5G networks
THEORIES AND THEORISTS

1961: Jane Jacobs
“The Death and Life of Great American Cities”

1964: Melvyn Webber
“The Urban Place and the Non-Place Urban Realm”

1970: Ithiel de Sola Pool
“The Structure of Cities”

1980: Manuel Castells
“Space of Flows, Space of Places: Materials for a Theory of Urbanism in the Information Age”

1985:  

1990: 

1995: 

2002: Paul Virilio
“The Overexposed City”

2004: Timo Kopomaa
“Speaking Mobile: Intensified Everyday Life, Condensed City”

2009: William Mitchell
“The City of Bits Hypothesis”

2010: 

2014: Martijn de Waal
“The City as Interface: How Digital Media Are Changing the City”
CASE STUDIES

VISIONS OF CITIES BY ARCHITECTS

The importance of these case studies is grounded on the idea that “imagining a more equitable and sustainable future involves an implicit critique of the spatial and societal conditions produced by prevailing urban logics.”¹ The following visions of cities by architects were studied not for of their socio-political and historic propositions but rather for their provocative representation techniques and their success in communicating the architects’ visions. These architectural provocations challenged normative thinking of the time in which they were conceived and their representation techniques were game-changing agents used to explore and express those new assumptions of urban life. Not inventing any new practices, architects took from other fields existing representational techniques such as collage, perspective, and photography and employed them in the field of architecture.

MODERNIST VISIONS
speculative projects that could be developed with existing technologies and that have directly influenced the ways in which we conceived cities and the built environment

RADICAL VISIONS
highly speculative projects that could have not been developed with the technologies of the time in which they were conceived

A NEW VISION


VISIONS OF CITIES BY ARCHITECTS

Project: Garden City

Architect: Ebenezer Howard

Date: 1898

Notes: Ebenezer Howard developed the Garden City model as a way of dealing with over-population and decentralization in English towns. The Garden City would be a new community of manageable size, in which urban and rural worlds would be brought together in happy synthesis. The Garden City was intended to be like the English village but with railways and small scale industry. Six satellite cities are connected to the Central City by three different transportation systems: canals, railways, and underground transportation. The Garden City model is conceptualized as a “slumless and smokeless” city surrounded by countryside.

Key Concepts: a central city connected to satellite towns surrounded by greenery and connected by three different transportation systems: canals, railways, and underground transport; reconnecting with nature

Tony Garnier, Une Cité industrielle, Paris 1917, © Architekturmuseum der TU München.


VISIONS OF CITIES BY ARCHITECTS

Project: Citté Industrielle

Architect: Tony Garnier

Date: 1901-1917

Notes: Tony Garnier conceptualizes the Citté Industrielle as a city programmatically segregated where industry and home are distinct. The two primary districts are linked by railways at trade centers, and a large sanitary establishment is incorporated into the master plan as a separate element. Ebenezer Howard’s Garden City principles are taken and transformed in order to create a city in which, according to Garnier “the land and the city, taken overall, is like a big park, without any fences, to delimit the various sections.”¹

Key Concepts: programmatic separation of industry and home connected by a railway system; cleaning the environment and reconnecting with nature

VISIONS OF CITIES BY ARCHITECTS

Project: Contemporary City for Three Million Inhabitants

Architect: Le Corbusier

Date: 1922

Notes: Like Garnier, Le Corbusier was content with nothing less than a total theorem for an industrial society. The Contemporary City for Three Million Inhabitants has a regular geometry cut across by a main axis of road circulation. All roads lead to a transportation center on multiple levels, the topmost being an airplane landing strip. Twenty-five glass skyscrapers, 600 ft high are positioned surrounding the central transportation core and are reserved for theocrats, managers, and bankers, highlighting a distinction between the managerial élite and the lower orders. The city is conceptualized on the principles of a high density and maximizing open space by incorporating steel and concrete construction and lifting all buildings up on pilotis. The distinction between the mechanized traffic and pedestrian traffic (on the greenery) is made clear by the use of pilotis. The traditional street is demolished and the city becomes in essence a vast park.

Key Concepts: the city as a park; central transportation hub on different levels; no streets; central élite


VISIONS OF CITIES BY ARCHITECTS

Project: Broadacre City
Architect: Frank Lloyd Wright
Date: 1936

Notes: Frank Lloyd Wright conceptualized Broadacre City as “an ideal state with individual liberty in a mechanized society.” It is argued to “not really be a ‘city’”1 but rather a decentralized community. In this strategy, the individual family home (sonian house) is the basic unit and central bond of the community, and the only tall buildings are miles apart, separated by the countryside. The usonian houses were located within the Midwestern Grid in sites of one or more acres. Frank Lloyd Wright argued that the telephone and automobile were making the centralized city obsolete and that the city should evolve to become “a society of free individuals living in a rural democracy”1. In an attempt to reintegrate man and nature, Frank Lloyd Wright also incorporated co-operative markets, theaters, and community centers to stimulate community and social interactions.

Key Concepts: reintegrate man and nature; single family dwellings; countryside; private transport


VISIONS OF CITIES BY ARCHITECTS

Project: New Babylon
Architect: Constant Nieuwenhuyys
Date: 1959

Notes: Constant conceptualized New Babylon for the “playful man” (Homo Ludens) as its central element and as a “city” which would facilitate a nomadic life. This stems from his belief that the man of the future will be free from physical labor and could be devoted to playing and creativity. With the mechanization of society, Constant believed that eventually every aspect of the city will be controlled by machines, thus liberating the human from the ties of work and society. The project reacted to the current technological developments at the time of its conception such as mechanized farming. Constant was inspired by Yona Friedmen’s Ville Spatiale, especially the concept of a mobile architecture however he translated these to megastructures. Constant did not see New Babylon as a city but rather as a “design of a new culture” which could stretch through the landscapes of a country and not limit itself to the confines of a city. In New Babylon, every inhabitant is able to adjust light, sound, temperature or atmosphere, creating an ambiance that is distinct from the natural phenomenon on the exterior.

Key Concepts: emancipation; playfulness; mechanization of society

VISIONS OF CITIES BY ARCHITECTS

Project: Ville Spatiale

Architect: Yona Friedman

Date: 1959

Notes: Yona Friedman explored the concept of mobile architecture in his conceptualization of the Ville Spatiale, an elevated city space where people could live and work in housing of their own design. The Ville Spatiale was thought out as a method to enable the growth of cities while limiting the use of land. The Garden City principles are evident in that it aimed to preserve the natural land and maximize the uses of the land. Friedman designed “methods of choice” for future inhabitants of the Ville Spatiale, therefore the modular system seemed adequate. “He opened a wide field of discussion on the fundamental right to self expression of individuals, on the inclination to build more and more, and on ways to be self sufficient in a modern society. These topics implicated subjects as the role of the state, the role of capitalism in urbanism, the use for architects and the matter of respect for the natural environment”.

Key Concepts: modular; city in the air; city as a machine; vertical expansion of a city


VISIONS OF CITIES BY ARCHITECTS

Project: Plug-In City
Architect: Archigram
Date: 1960-1974

Notes: Archigram conceptualizes Plug-In City as pods and capsules plugged flexibly into a frame\(^1\). In this model for a city, there are no buildings in the traditional sense, rather “frameworks” into which standardized components could be slotted. Archigram welcomed the hedonistic possibilities of modern consumerism rather than opposing and reacting to them. Archigram took from Sant’ Elia’s descriptions of future cities as a dynamic machines, and designed Plug-In City as just that, an ever-changing machine where the only fixed elements are the framework in which the elements are plugged in to. The intersecting tubes that make up the frame are used half for service and the other half as escalators.

Key Concepts: the city as a machine; modularity; transformation

VISIONS OF CITIES BY ARCHITECTS

Project: Potteries Thinkbelt

Architect: Cedric Price

Date: 1966

Notes: Though it is not a design for a “city” but rather for a university campus, Cedric Price’s Potteries Thinkbelt project uses infrastructure from a city, an existing railway system to design a non-architectural source of knowledge\(^1\). Standardized modules are moved up and down the region to service different parts of it with “information” but without cities.

Key Concepts: non-architectural; moveable; modular; the “city” as a machine

Visions of Cities by Architects

Project: No Stop City
Architect: Archizoom
Date: 1968

Notes: Archizoom conceptualizes No-stop City as an “instrument of emancipation.” Branzi explains: “The idea of an inexpressive, catatonic architecture, outcome of the expansive forms of logic of the system and its class antagonists, was the only form of modern architecture of interest to us... A society freed from its own alienation, emancipated from the rhetorical forms of humanitarian socialism and rhetorical progressivism: an architecture which took a fearless look at the logic of grey, atheistic and de-dramatized industrialism, where mass production produced infinite urban decors.”¹ No Stop City therefore frees us and allows us to be anyone anywhere.

Key Concepts: an instrument of emancipation; infinite; autonomous city

http://architizer.com/blog/archizoom-retrospective/.
VISIONS OF CITIES BY ARCHITECTS

Project: Monumento Continuo

Architect: Superstudio

Date: 1969

Notes: For Superstudio, the moral struggle for “deeper values” of the modern movement was put aside, and culture was reduced to a sort of consumer pluralism delighting in technology\textsuperscript{1}. Monumento Continuo is conceptualized as a “thin glass viaduct of total monotony” that traverses different locations around the globe. The style of the structure recalls the stripped, Classical buildings of the Fascist period and the images were meant to critique the cluttered world of modern materialism. Though it is not a city per se, Superstudio’s concept of a “continuous monument” can be understood as model for a “global city.”

Key Concepts: infinite; modular; invasive; autonomous

The following images were produced to study the previously mentioned visions of cities by architects through the lens of ICTs. Each city was reimagined as an ICT-based society by maintaining their fundamental formal features such as zoning, grids, verticality, horizontality, etc. and applying features such as drones and data centers. These drawings also served as a testing ground for some fundamental elements of The Synchronous City such as kinetic and static relationships, geographic positioning, public/private relationships, etc.
ICT’S IN THE BUILT ENVIRONMENT

Ithiel De Sola Pool discusses in his essay “The Structure of Cities” how in the late nineteenth century the telephone had started to displace the telegraph as the main means of electronic interpersonal and inter-business communication, today, a similar phenomenon is occurring with digital information and communication technologies (ICTs). Telephones allowed consumption at a distance and the dispersal and suburbanization of US cities began. Neighborhoods and districts no longer needed to be specific to a field or in close physical proximity in order to be more efficient and the skyscraper emerges. Developing telecommunication technologies have prompted new asynchronous and synchronous communication methodologies that impact the ways in which we interact not only as individuals but also at the urban scale.

Some implications of ICTs are:
1. Create new forms of communication
2. Mobile applications interface between the built and digital domains at an urban scale
3. Challenge public/private relationships
4. Redefine urban terms

Diagram by Carlo Ratti Associati that explains how through the use of third generation mobile, we are able to be in close communication with others and “be” in multiple places at once.

THE PUBLIC/PRIVATE PARADOX

Kopomaa argues that the mobile phone is a “third place” distinct from the private (home) and public (workplace in the city). The author claims that “the use of the mobile phone implies a privatization of public space”\(^1\) and that it is both substitutive and supplementary.

THE PUBLIC/PRIVATE PARADOX

With the introduction of the third generation mobile devices and applications, new publics emerge. The physical public space is no longer the only public and the third generation mobile device mediates between the physical public and the digital public.

APPLICATIONS AND URBAN IMPLICATIONS

In our daily lives we use and interact with ICTs almost instantly since the moment we wake up. And found in these devices are endless possibilities for physical and digital engagement: with the click of a button we can request transportation, order food, do our banking, and talk and share information with friends anywhere in the globe.

From this realization that one can carry out a normal day with the exclusive use of a third generation mobile device, comes the provocation of The Synchronous City.

As ICTs evolve, we are beginning to see some of the urban implications created by these technologies, more specifically the third generation mobile device and the multiple applications it hosts. As seen in this diagram, these applications are changing and redefining the urban fabric and urban living conditions. From infrastructure, to social relationships, to economic inferences, aspects of city life are evolving and transforming. These mobile phone applications were collected because of their urban qualities. These applications redefine and challenge urban traits and generate new forms of interaction at the urban and human scale.

THIRD GENERATION MOBILE APPLICATIONS

Digital acts that lead to asynchronous digital acts:
- Facebook
- Instagram
- Twitter
- Snapchat
- LinkedIn
- Vine
- YouTube
- WhatsApp
- Facebook Messenger
- Flickr
- Foursquare
- Venmo

Digital acts that lead to asynchronous physical acts:
- Uber
- Lyft
- FreshDirect
- Instacart
- Amazon
- Ebay
- Grubhub
- Seamless
- Tinder
- OkCupid
- Bank Specific Apps i.e. Chase

Digital acts that lead to synchronous physical acts:
- Companion

Digital acts that lead to synchronous digital acts:
- Skype
- FaceTime
- Snapchat
- WhatsApp
- Facebook Messenger
APPLICATIONS AND URBAN IMPLICATIONS

1. URBAN SCALE

2. PROGRAM

3. APPLICATIONS

3rd GENERATION MOBILE

ECONOMIC

SOCIAL

INFRASTRUCTURAL

ECOMONOMIC

RETAIL DINING BANKING COMMUNITY

VISUAL WRITTEN VIDEO MESSAGING

GROCERIES

REAL

DOING

VISING

COMMUNITY

EXCHANGE

Grocery

Fresh Direct

eBay

Amazon

GrubHub

personal banking

Venmo

YouTube

Instagram

Snapchat

Vine

Facebook

Twitter

Tinder

OkCupid

Skype

FaceTime

WhatsApp

Uber

Lyft

Facebook Messenger

Instacart

Uber

Lyft
Types of connectivity & communication

At the human scale, we see the new relationships that emerge which have been categorized according to William Mitchell’s types of connectivity and communication (synchronous and asynchronous) in order to create a distinction between the varying implications of each type of application.

Types of connectivity/communication:

1. Synchronous: in real time
   a. Synchronous Presence: face-to-face
   b. Synchronous Telepresence: talk by telephone

2. Asynchronous: with a delay between the sending and receiving of a message
   a. Asynchronous Presence: leave note on desk
   b. Asynchronous Telepresence: send e-mail or leave voice mail
**Actions That Lead to Asynchronous Digital Acts**

- A person in a public setting messaging someone in a distant location through the use of mobile applications such as WhatsApp and/or Facebook Messenger.
- A person in a public setting receiving a message from someone in a distant location through the use of mobile applications such as WhatsApp and/or Facebook Messenger but not reading the message instantaneously, rather with a delay.

**Actions That Lead to Asynchronous Physical Acts**

- A person in a public setting ordering groceries/goods from an online retailer such as FreshDirect that will be delivered later during the day or the next day.
- A person physically receiving their order from the retailer hours later.
**Actions That Lead to Synchronous Digital Acts**

A person video chatting with someone at a different location, in real time.

A person video chatting with someone at a different location, and engaging in different physical activities as the other caller, all in real time.

**Actions That Lead to Synchronous Physical Acts**

A person physically present in one location and virtually “physically” present in a different location through the use of the mobile application Companion.

A person seemingly alone is being accompanied by a friend virtually and in real time through the mobile application Companion.
In order to best engage the provocation of a city based on digital information and communication technologies (ICTs) as the primary means of exchange and interaction (as opposed to cars, pedestrians, ships, etc.), I propose to explore the use of third generation mobile technologies to enable and define the built environment. Drawing from my research, I believe that this city will need to be distributed, controlled by its citizens, composed of both kinetic and static elements, will redefine notions of public/private, and will be part of a larger network of cities that extend through vast landscapes connecting ICT based societies.

I will begin by implementing these parameters to the design of the city using the third generation mobile as interface between the physical and digital domains. Simultaneously I will speculate on parallel representational techniques that could relate to an ICT based society, for example, GIF as architecture drawing, projection on drawings and models, and interactive programming.
Concept models produced to study the design parameters for The Synchronous City.
DESIGN PARAMETERS

In an attempt to give physical form to the design parameters drawn from this research, the seven parameters were modeled and evaluated through the use of a matrix their success in operating within multiple of the parameters.

Drawing from this research, The Synchronous City will be:

- Based on digital information and communication technologies (ICTs)
- Centered on the use of third generation mobile technology
- Distributed
- Controlled by its citizens
- Composed of kinetic and static elements
- Redefines public and private relationships
- Is part of a larger network of cities
<table>
<thead>
<tr>
<th>PARAMETERS</th>
<th>CONCEPT MODELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT’s</td>
<td><img src="image1" alt="Image" /></td>
</tr>
<tr>
<td>3rd Generation Mobile</td>
<td><img src="image2" alt="Image" /></td>
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<tr>
<td>Distributed</td>
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<tr>
<td>Controlled by Citizens</td>
<td><img src="image4" alt="Image" /></td>
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<td>Kinetic/Static</td>
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<tr>
<td>Public/Private</td>
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<tr>
<td>Network of Cities</td>
<td><img src="image7" alt="Image" /></td>
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</tbody>
</table>
A TYPICAL DAY WITH ICT’S...

By diagraming a typical day with ICTs today, opportunities for the design of this hypothetical city are revealed.

Opportunities such as residential, and the idea of a person being linked to a place emerge. The transportation method of these residential units is defined through the use of drones which allow for a dynamic, and fluid environment that allows these units to plug into the media lab workplace for an interactive and creative work environment. They are also modular and allow for private physical encounters by connecting to each other while private digital encounters are produced through holographic projection in meeting rooms. The façade system facilitate public digital encounters by operating like a social media network, and platforms for public physical encounters are introduced below the media labs. An underground distribution center supplies for the community and the delivery of the products is facilitated by GPS tracking technology.

Scan this QR code to view an animation of the drawing on the next page.
This diagram explains how ICTs and third generation mobile applications affect our way of living and their translation to The Synchronous City.

A TYPICAL DAY WITH ICT'S

This diagram explains how ICTs and third generation mobile applications affect our way of living and their translation to The Synchronous City.
DESIGN ELEMENTS

1. Residential
2. Transportation
3. Workplace
4. Physical Encounters
   4A. Private Physical Encounters
   4B. Public Physical Encounters
5. Digital Encounters
   5A. Private Digital Encounters
   6B. Public Digital Encounters
6. Distribution Centers
7. Delivery System
The Synchronous City is not an isolated condition, it is a network of cities all rooted on ICTs and focused on different aspects of development and life on Earth. Physically connected through the Hyperloop, different Synchronous Cities communicate through ICTs, share, and crowd-source their research. All aspects of physical and digital life are explored through the possibilities offered by ICTs: agriculture, health, fabrication methods, robotics, entertainment, communications technologies, consumer goods, and responsive environments. Separated for efficiency, each city revolves around their expertise and have underground distribution centers.

Scan this QR code to view a video explaining the network of synchronous cities.

Image showing the network of cities, their location in the ocean and the different focuses of each city.
The Synchronous City offers a new urban lifestyle. Here, person and place are not two distinct aspects of a city but rather a united entity which is in constant motion. Much like with the emergence of third-generation mobile technology, a person is no longer linked to a place but rather an environment. In the Synchronous City, place becomes a dynamic concept that does not physically tie-down the individual but rather merges with them in order to facilitates and promote new synchronous interactions where movement is facilitated by drones.

The façade system of these living units consists of a digital screen on which each individual can share images, videos, text, and articles and will operate under the terms and conditions of a social media network.

Scan this QR code to learn more about The Synchronous City and its social aspects.

Model showing the elements of The Synchronous City. In this model, an iPad is integrated to a physical model in order to show the movement of these flying units through a simulated hologram projection.
Within The Synchronous City there are two main ways of engaging in social acts: physical and digital.

1. The Digital Encounters are classified as private and public.
   a. Private: Through these virtual meeting spaces, where one is able to communicate and interact with people in yours or a different synchronous city through holographic technology. Simply by “plugging yourself in” to one of these floating units you can engage in communication with people who are also connected to this unit.
   b. Public: and the public digital encounter is through the façade system of these units which transform the city into a live social media network.

2. Physical Encounters: Two different forms of physical communication and exchange occur in the Synchronous City: a private and public one.
   a. Private: The individual pods become interactive and allow for internal connectivity and a more private and personal setting.
   b. Public: Public platforms allow for open-sourced physical collaboration at an urban scale.

The two ways of interacting in The Synchronous City are represented in this model by the physical, 3D printed model and the digitally projected 3D model. The 3D model overlay was generated through the use of the Augment app.
Workplace: In the Synchronous City, the workplace is re-envisioned as media labs. All inhabitants of this experimental community will be able to work in this dynamic and collaborative environment geared specifically towards each city’s specific industry. Through these media labs the individual is contributing to a creative and innovative environment by exploring through ICTs and emerging technologies the possibilities of future cities.

These images illustrate different views of the workplace and how these units plug into the media labs.
Scan this QR code to experience The Synchronous City with your Google Cardboard Glasses.
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