

Talent machine

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1. Introduction - research conclusions

Location

The North-Eastern part of Midtown Manhattan, in New York City, will henceforth be referred to as Midtown NE, is the subject of the site analysis and conducted research. The individual research of this area has been focused on the topics related to demography and real estate. On the subject of demography of Midtown NE, the analysis included educational attainment, fields of higher education, types of occupation, median annual household income, and the rent to income ratio. The research of the real estate topic focused mainly on the use of buildings, floor area ratio (FAR), available floor area ratio in regard to the zoning regulations, new developments, and median assessed land value per square foot. The knowledge obtained from these and related subjects allowed to draw several conclusions.

Demography

According to the American Community Survey conducted by Census Bureau in 2017, 16% of people living in Midtown Manhattan were not born in the United States, and 14% are not United States citizens. According to this information, a third of population living in Midtown Manhattan are not originally from New York City. Further research presented that people who live in this area are characterized by a very high level of education. According to the American Community Survey 2017 data, almost everyone achieved to complete high school education, and 79% graduated from Bachelor's studies. The rate is significantly higher than in other parts of Midtown. The highest percentage (45%) of people holding Bachelor's degree graduated from Science and Engineering courses, followed by Arts and Humanities (37%), and Business (17%), which gives an outlook on the main interests of young people who live in Midtown Manhattan.

The next subject of study referred to the types of occupation, which appeared to be strongly influenced by the field of studies completed. The ACS data shows that significant majority (75%) of people finds employment in management, business, science and arts. The type of the residents' jobs defines their income that is exceptionally high. The median annual household income in Midtown NE is twice as high as median income in New York, and slightly higher than median income in Manhattan. Also, the data pointed at the age group of people between 25 and 44 years old to receive the highest income of other age groups of Midtown. This data was used to find the ratio between the median rent for a single housing unit and the median income of its residents. As a result, it has been concluded that rent of a housing unit in Midtown NE equals about 30% of its residents' income.

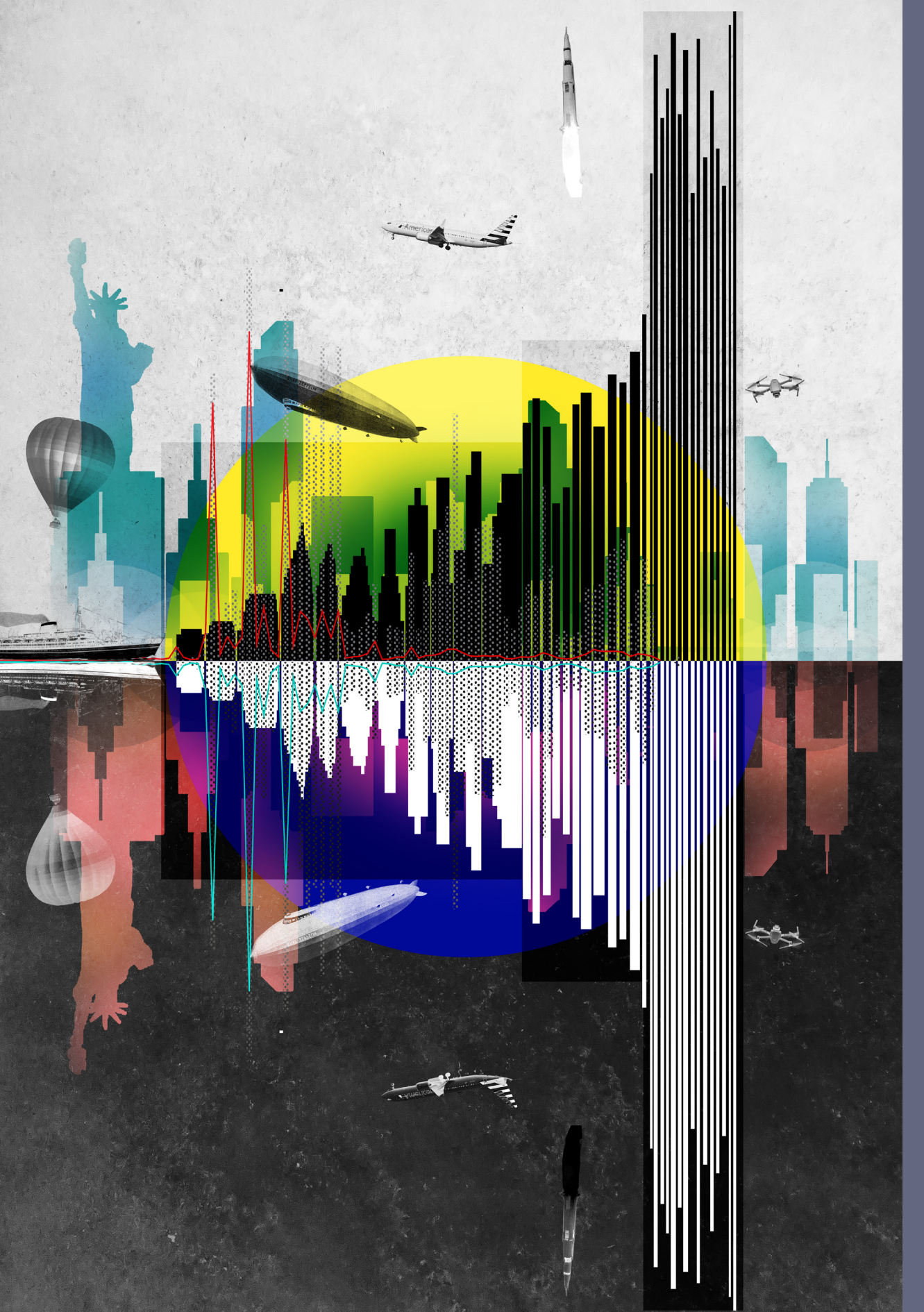
The conclusion of the demography research is the fact that the residents of Midtown NE between 25 and 44 years old can be considered one of the highest paid demographic group of Manhattan, which is related to their high professional qualifications. Their annual income equals approximately \$108k, which is comparable to the median annual income of other residents of Manhattan. As the median rent accounts for approximately 30% of the residents' income, they can afford living in this area. So, it is to conclude that they belong to one of the most financially secure demographic groups in New York City, potentially even in the entire country.

Real Estate

The map obtained by the use of data provided by the Department of City Planning presents the use of buildings in Midtown NE. It gives a deeper understanding of the built environment when compared with the map showing Floor Area Ratio values. The North-Eastern part of the area is dominated by residential low-rise buildings (26% of overall) and a few public institutions, such as United Nations headquarters by the East River bank. The residential area turns with a blurred gradient of mixed residential-commercial buildings (33% of overall) in the centre into the business area in the South-Western part of Midtown NE. This part is highly dominated (31% of overall) by mixed use of office and commercial high-rise buildings.

Both sources – FAR and use of buildings maps – point out that the higher FAR value applies to the buildings of commercial use, while lower FAR values refer mostly to the residential area of Midtown NE. The available FAR values have been obtained by subtracting the Built FAR values from the Maximum Allowable FAR. This calculation allowed to find building lots that still have available floor area ratio. Such information is crucial for the future developers who look for potential investment sites. Also, zoning regulations allow to buy air rights from the buildings that do not have their allowed FAR maximally used, which lets the new developments rise higher on neighbouring plots. As a result, it is most common that the new tallest investments are located next to low-rise buildings that sell their air rights to them (e.g. 53 West 53 next to MoMA, also known as the "MoMA Expansion Tower", under construction).

The last topic studied in the field of real estate is "Assessed Land value per square foot". The data was obtained by dividing the Assessed Land Value by the Lot Area value and mapping the result. The outcome of this operation showed that the assessed value of land of Midtown NE is rather high in comparison to the other parts of Midtown, especially for residential and retail. Also, according to the New York Real Estate News, land value in Midtown Manhattan



has been constantly rising since 2011. City Lab's research report refers this phenomenon to the rising employment rate in New York. Anyway, the residential land value in Midtown NE is about four times more expensive than in Manhattan in general, and the retail land value is more than twice as high as in Manhattan.

It is to conclude that despite the high price, the area of Midtown NE has a great potential for new investments, mostly because of relatively low-dense and not optimally used residential area, which stands as an attractive location next to the business district. This is the main reason that could possibly prompt development in Midtown NE despite the high land prices.

2. SWOT analysis

SWOT analysis is presented in the chart on the next page in order to summarize the conducted research and refer to other fields of study. In this way the main Strengths and Weaknesses of Midtown NE have been listed, which allowed to create Opportunities and Threats conclusions.

A few key issues have been selected from the chart, including main strengths;

- higher class of residents
- new zoning regulations 2016
- green areas close the water by the East River

Main weaknesses:

- no diversity among residents
- many out-dated residential buildings

Main opportunities;

- very high talent and skill potential
- connection to distant locations from Grand Central Terminal
- potential for renovation and new developments
- possible connection with the "green urban lungs"

Main threats;

- low interaction with other social groups
- air and noise pollution
- risk of people moving out / not moving in
- growing of the concrete jungle
- biggest companies increasing the competition on the market and in the city

The further research was based on these issues, and on personal fascination.

3. Personal fascination

The personal fascination of Northeast Midtown area: talent, knowledge and economic potential that Midtown NE attracts - as presented in the research conclusions above. These three factors sum up to "intellectual capital". The necessary foundations that must be satisfied are presented in an adapted Maslow's needs hierarchy on the right (1).

On this base, the research question has been formulated:

How can Northeast Midtown's intellectual capital be used in the era of technological development in a sustainable way?

The secondary questions are:

- How can a city founded in the 1st industrial revolution develop its intellectual capital in the 4th one?
- How is the development of digital technologies going to influence the future of Midtown NE?
- What is the role of the money-oriented city in providing fertile ground towards the constant development of science and technology in a

global scale?

- How will it affect the relations of people with the city and people with each other?
- What are the future needs of the high-tech centres, how are they going to evolve and reshape their surroundings/city?
- How can the implementation of new digital technologies be integrated with human factor?



1. Re-iterated Maslow's hierarchy.

The hypothesis might be that the outcome at the top of the Maslow's updated pyramid is innovation. Throughout the history New York has been growing on the cycle of innovation. This is strongly related to Industrial Revolutions, since the inventions of machines, steel and electric elevator that enabled construction of skyscrapers and the immediate rise of Manhattan. The Second Industrial Revolution brought mass production of cars and made the city adapt to the new means of transport. The Third Industrial Revolution introduced common use of computers, which has become a modern engineering tool in design and building technology. Nowadays, the Fourth Industrial Revolution has just arrived, having its origin in the deep economic crisis that took place in 2008. Michael Bloomberg made an immediate reaction to the market crisis announcing a partial shift of the city development plan from finance to technology. This was the turning point when the whole machine of innovation was triggered, as the political support was added to intellectual and economic capitals.

New York can be considered a perfect environment for growing this seed. As it is a crucial spot in a network of the best digitally linked cities in the world, it has allowed the development of Tech Valley. Since 2008, tech companies started relocating from Silicon Valley to Silicon "Alley". The name comes from the avenue crossing Flatiron District, where the first firms set their offices. According to study "New Tech City" by the Center for an Urban Future, "the technology is growing faster in New York City than anywhere else in the world". Since 2008 tech companies have been expanding rapidly along the Silicon Alley all around Manhattan. To put it into numbers, the number of start-ups was equal to 1650 in 2012, in 2015 it was 6k, in 2017 the number reached 9k, while the recent reports estimate nearly 40k start-ups registered in New York in 2019.

In the area of Midtown NE there are a couple of commonly known big tech companies' offices, such as IBM, at 590 Madison Ave, Amazon at 1350 Ave of Americas, and Facebook at 335 Madison Ave. Except for that, there is a Microsoft retail store, also one of Whole Foods, and two of Apple. There are about 13 main start-up companies located in the Western part of Midtown NE, as well as 2 tech investment firms. The newly built Cornell Tech Campus is an important educational facility located on the Roosevelt island, which is going to expand towards the South of the island.

	Strengths	Weaknesses	Opportunities	Threats
people	well educated residents	career- and money-oriented community	eagerness to use and share knowledge to benefit more	routine lifestyle
	wealthy community	busy lifestyle	higher available capital (investment and maintenance)	higher consumptionism
	area of "elite"	closed-off community	high quality of living and area development	no interaction with other social groups
	rather safe neighbourhood		sense of safety	
	homogeneous population	not much diversity	common sense of belonging	growing social differences
mobility	subway in the business part	no subway in the residential area	workplaces in the business area	setback for further development
	new subway line planned	long travel time	better accessibility; potential area for city development	risk of people moving out to better communicated districts
	Grand Terminal as an important transportation hub	huge traffic jams	better transportation, access from distant locations	risk of paralyzing the traffic while no alternative for transport is on hand
	Queensboro Bridge as a connection to Brooklyn	"industrial" area in the North	direct connection between Manhattan and suburbs in the East	not attractive area around the bridge
		buses ride more rarely, take much longer an not on time many many cars used		people use own cars instead of public transport air and noise pollution
built environment	high variety of buildings use	close neighbourhood of tall skyscrapers with low-built housing areas		increasing differences of big compammnies and smaller start-ups
	many traditional residential buildings	big number of outdated residential buildings	potential for renovation and new developments	
	new zoning regulations		building density is going to increase	the land prices are going to rise
		no affordable housing		risk of people movig out/ not moving in
	business district as a lively area			big companies overtaking the city market
natural environment	close to Central Park	low number of smaller public urban parks	possible connection with the "green urban lungs"	unhealthy concrete jungle
	green areas and parks along the East River	polluted water in the river	recreational green areas by the water	no accessibility to the river's bank, not useful
	recreational area on Roosevelt Island	huge heat island	healthy escape place to rest	low energy efficiency,, necessity for cooling
	very low flooding risk		possibility for developments close to the river	
	lower housing provides more sunlight in the residentail area	not much sunlight in the business area	healthier environment	need to use artificial light
	energy-inefficient old buildings	potential for improvement or replacement	higher energy consumption	
collective space	extraordinarily big number of POPS	public spaces mostly too small; no main plaza	more space accessible for the public	no place for interaction or rest within the city
	bonus floor area for public spaces in new buildings		more affordable prices	taller buildings allowed

2. SWOT analysis chart

Statistics obtained from the Endeavor Insight report say that “more than 85% of New York tech’s job were created in the last decade” (since 2008). It also reports that “venture funding for tech companies in New York City is currently twice as large as that of Silicon Valley”. The ranking made by the Savills Tech Cities in February 2019 points at New York as Tech City no.1. New York was followed by San Francisco, London and Amsterdam based on criteria of business and tech environments, city wellness, talent pool, real estate costs and mobility.

At this point New York reached the peak position as the world’s technology leading city, however there is a huge threat standing behind this fascinating perspective. The risk is the arrival of big tech empires to Midtown NE, which is going to affect the balance of economic and social bonds and fair chances for their healthy growth. Money-oriented companies that grow fastest would make the differences on the market even bigger, setting the prices even higher, which would deprive other entrepreneurs of their chances. This could cause the city to regress, as more and more companies would move out from Manhattan to look for luck in a less competitive and more friendly environment. Providing a sustainable solution in economic, social and environmental terms would be an antidote to this risk.

5. Proposal

Therefore, the proposed architectural solution to this issue is a sort of an integrating center for the exchange of information, skills and knowledge – the talent machine. The goal of this intervention is an injection of bonds between the city and the people who travel or live there, and also making links between these people. It would be an open source of information. Information is the today’s world currency and it is stored literally in the air. People of different backgrounds and interest could take part in the commonly accessible education carried out as lectures, seminars, workshops or meetings.

6. Location

There are multiple aspects taken into account in searching for the perfect location of the proposed project. First of all, an important spot of technological research is located on Roosevelt island, a part of the Cornell Tech University, which was initiated by mayor Bloomberg. The first phase of this development was completed in 2012. It might be useful for the proposed project to have a convenient connection with the campus, so that the students and professors would cooperate with the new centre. This might be satisfied by locating the future building in the close distance to the cable car station that is the only public means of transportation to the island.

Another important factor of the location of the project is the access to the public transport. There are plans for prolonging an existing subway line in the East of Midtown NE to the South. The centre should be therefore located next to one of the stations, either planned or existing.

Moreover, the zoning regulations play a crucial role in setting the location. According to the current urban planning, the Eastern part of Midtown NE is solely dedicated to residential function, while the Western part combines all the other buildings uses. Mapped data shows that there is still Floor Area Ratio available on a few plots, which would allow to build higher than in the current situation. A plot that would satisfy all these requirements is located at 149E 60th Street. The site is now empty, as the previous building has just

been demolished. It used to be a 5-storey apartment block from 1910.

Summary

An infinite flow of talent is the fascination for this project. Midtown Manhattan is a unique place with never-satisfied needs for constant growth. The recent turn of the city interest, supported by the economical and political backing, can be a unique opportunity that cannot be wasted. However, it poses a threat to the city’s well-being, which could affect its healthy balance. Therefore, a modern scientific centre of sustainable and integrative environment would provide a common chance to participate in the ongoing tech race.

