



AI AND CITY PLANNING

Artificial Intelligence expands into every field of society and business, where work and decision making could be more based on data. So far, smart cities have become just as smart as their creators. But based on an interview of Natalia Rincón from CHAOS architects, this may change.

Interview by Ari Laitala

A Finnish translation of the article is published in the printed version of Maankäyttö and is also available on Maankäyttö's web site

Natalia, you are CEO and founding partner at CHAOS architects. What else should we know about you?

I am an architect and computer science engineer, and currently working on my doctoral dissertation at Aalto University in Urban Planning. I am also a Business Tampere ambassador and an advisor for foreign talent at TEM (The Ministry of Economic Affairs and Employment of Finland), and a deputy councillor in Tampere and member in several urban planning committees.

Throughout my career, I have been a frequent speaker at conferences, on topics such as the future of smart cities, citizen engagement, Artificial Intelligence and open data.

Main interface and the analytics of Chaos AI.

It has been said that startups should have a good story to tell. What is yours?

The idea appeared a bit more than two years ago. Working for many years as an architect and talking to my network in the industry, it became clear that there was a demand for a solution that would provide both the private and public sectors with data analytics and forecasting. Eventually, I joined Ultrahack, a tech hackathon in Helsinki, then Slush, where the idea got further shaped and conceptualised.

Name of your startup is CHAOS.

What is the message in the name?

There are many ways how we can interpret the name. First of all, founding members of the company are architects by profession. It made sense to have this word in the name. Since, we are in hightech, we should mention that the word "architecture" is also used in such fixed expressions like "IT architecture", "Software architecture". So, we can say that this is how we connected our primary expertise in architecture and urban planning and highlighted our techy side. (Note: Now we are transitioning into being called just "CHAOS")

Our motto is "From chaos to resilient cities". Our cities consist of so many elements and the balance is fragile. So our goal is to make sense out of the "data chaos" and build resilient cities of the future.

It seems that your company could be located in many places in the planet so why Helsinki and Finland?

Helsinki is one of the leading cities with the biggest amount of open data. The other example would be New York, and one of our co-founders is based there. Helsinki also has a supportive ecosystem that cultivates innovation.

Jamie Donovan



CHAOS architects – an international team.

Jamie Donovan



Natalia Rincón giving her presentation “Ethical AI for Smart Cities” in MyData conference last August in Helsinki.

How would you describe your team as a team?

Motivated, Determined and Bold. In the past half a year, we have doubled up in size. Now we are 12 and represent 8 nationalities: Finland, Mexico, Spain, Japan, Nepal, United States, Russia, and Hungary, and we do not want the list to stop there. In CHAOS, we cherish the diversity of opinions and expertise put into everything we do.

How do you see the city planning process in Finland? At least it is believed to be really slow.

Urban planning is a complex industry that involves many stakeholders at every chain of its operations, in general and worldwide. Finland and Helsinki particularly is a unique place because, here city planning is harmoniously being aligned with nature and landscape. In case of Helsinki, it can be said that it is quite a young city in the sense that it started its rapid urbanization only in the 1970s. This means that urban planners and architects are still learning about the best practices for Helsinki. Helsinki is also the example of a city that is actively following the sustainable trends in urban planning, and successfully embracing its islands and building an infrastructure around it. When we talk about Finland as a whole, some aspects of urban planning can be taking longer due to a unique geographical location and weather conditions.

You have a product called CHAOS crowd but let’s focus on CHAOS AI platform. What it actually does?

CHAOS AI is the only smart city expert that combines data with human intelligence. It empowers your organisation with urban insights and forecasting for making more sustainable decisions and managing growth with resilience. We do it with the best-in-market expertise, open data interfaces, and our machine learning platform. Our data and foresight are easy to access and comprehend.

What we are providing is CHAOS livability index that will allow you to understand how sustainably and well built an area is and what it is missing and in which location. We provide indexes for four main uses: commercial, governmental, consultancy use – to reduce time and resources in manual reporting for consultancy firms, and increasing their competitive advantage, academic use.

What is special task/role/capability of AI there?

Our AI combines different layers of licensed and open data on real estate, sustainability, and transportation, and human intelligence (demographics, citizens’ opinions and creative urban ideas). Based on historical data, it is able to run forecasts to identify the most sustainable solutions in urban planning. A city is a complex and interconnected system. With the power of AI, we will be able to see how this or that element in built environment can affect the rest.

There is lot of data already now but probably there could be more. What kind of new data would be useful for you?

Our cities are being tracked through extensive networks of IoT and sensors. Our buildings are becoming smart.

At CHAOS, we are currently focusing on four types of data: real estate, sustainability, human intelligence, and mobility. Since we are building, a holistic smart city platform, our potential of integrating different types of data is not limited to these 4 categories. It all depends on a project and needs.

City planning has been argued to be a creative process.

Can AI really be helpful there?

Yes, it can. AI can help us better understand our cities and uncover information that was previously too laborious to quantify. AI delivers an informed urban planning, and together with citizens' input, it helps us better determine the needs of the public, what means making more sustainable decisions.

How would you describe opinions and attitudes of the city planners in discussions you have had with them?

They are excited. Construction industry is known to be conservative, but innovative mindset starts to be prevailing. Digitalisation of current urban planning practices can unleash so many new opportunities and optimise current processes. There are definitely positive changes in the industry.

It is believed that AI will steal huge amount of jobs. Should someone be worried about this?

There is this opinion, but also AI opens up new types of professions, like machine learning & AI specialists, developers, or data scientists. The focus is just shifting. AI might be taking some professions away, but it also brings new ones into the spotlight.

What is the next big challenge for your company to be tackled?

We are a growth company. Now we have been actively working and partnering with Helsinki City and YIT, and launched together a development project in November. For the upcoming years, we plan to scale to other regions and countries.

There are really lot of expectations towards AI in general.

Are we too optimistic at the moment?

At the end of the day, what is AI? It is coding, combination of inputs and conditions, and algorithms. It has a great potential and variety of applications. Already today, modern artificial intelligence techniques are making great things, for example, in healthcare. Now it is time to expand the AI capabilities into the construction and urban planning. One day, it will just become our new normal.

Maybe the world's most famous robot Sophia has said that she will help with "Like design smarter homes, build better cities of the future." Do you have a competitor? 😊

The smart city industry is booming with all kinds of solutions. This means only one thing, that there is a clear demand, and the market is ready to adopt new technologies. It is a good sign. In case of CHAOS, we work with all kinds of data produced within the smart city ecosystem and are able to visualise it and produce forecasts. We are not limited to only one particular sector, and this is our advantage.

Kalastama area and its livability index based on different types of data and indicators.

