Project idea: Creating an App to register complaints about noise and other environmental irregularities/nuisances in the nightlife in the city of Copenhagen

Background: Over the last 5-10 years, Copenhagen has experienced an increasing number of music events, an increase in the "party scene" associated with nightlife, and an increase in other noisy activities in the city.   The noise level experienced during evening and night hours is a major cause of annoyance for the people living in the city. Many residents in the affected areas are tired of the reckless behavior of the young "guests of the night", especially since this behavior continues into the early hours of the morning when numerous bars close at 5 a.m. or later. During the night, young people settle down on stairs etc. in front of city houses to smoke and drink, while shouting and laughing at the top of their lungs.

Studies of noise levels in the affected resident homes in Copenhagen show that the noise experienced at night is at such a high level that can be harmful to health (WHO). Other studies concerning both sources of noise in general and what local residents perceive as annoying noise have also been conducted. People-related noise nuisances -- combined with a disagreeable local environment due to large amounts of garbage left scattered in the streets by the "guests of the night" -- prompted a large number of private citizens to join together to form a noise-network that works in alliance with Miljøpunkt. The noise problem is associated with the large concentration of bars, clubs and restaurants in the city that have mushroomed during the last decade. During the past year individual citizens as well as citizen-based networks have worked hard to create a political focus on noise and refuse nuisances in the city. The network has managed to persuade the municipality to put a stop to allowing establishment of more bars, clubs etc., but it is not possible to change young people's behavior, and since there is still a large concentration of bars, clubs and restaurants in the city, the problem continues.

The group of students from WPI who worked on a project from September through October 2017 have come up with several suggestions for solving the problems – 'The Good Night Plan'. One element in the plan is the suggestion that better regulation is needed. In order for the municipality and the police to better regulate, reliable quantitative and qualitative data concerning the problems themselves and nature and extent of the citizen complaints is needed.

Main objective: To create an App that will enable citizens of major cities to report data, thereby constructively contributing to improving the local environment. The focus is on noise pollution and other inevitable noise that occurs in any populous city.

Requirement for the App: In the first phase of development of the app, it is probably advisable that data is collected using a single device and should be stored locally on this device. If time permits, a more complete version may be developed, where the previously locally stored data is now stored centrally on a server from which the data

can also be easily retrieved. We suggest using a REST-exchange as a method of data-transfer, the 'Extra' section below expands on this, opening the possibility of discovering more effective methods to the working team. Once the app has been demonstrated to work appropriately, data collection and registration needs to be expanded to multiple and simultaneous users.

Extra: Are there other or smarter solutions than using REST for data exchange? Consider expanding the task to registering other types of environmental complaints

Problem: An app-based complaint system (for municipality, police, permit-boards, etc.) where complaints are reported and registered is desired. The app needs to allow others to see whether a specific complaint has already been registered, is in the process of being handled, the follow-up as the problem is under resolution, and once it is finally resolved.

Such an app will relieve resources of many city employees concerning registration and dealing with complaints about noise, operating hours, etc. Actual limits for permissions that are publicly available can be incorporated into the system so they are assessible to the citizen. The app can be designed to check on the most frequently encountered conditions that cause complaints, information about a potential need for increased checks, etc. As a complainant / reviewer, it should be possible to "check in" at the location of the problem via Google maps. Similarly, sound and/or images can be recorded for documentation. Such a system will be able to assist noise guards, police, etc. in their work. When such officials arrive at the problem location, it should be possible to report back to the person who reported the problem. At the same time, the system can be used to inform other citizens in the area about the status of measures and/or interventions. The problem with the described app is that it requires significant effort from those who are the victims of the nuisances – especially since this will often be at night. While there are many additional possible opportunities in the proposed technology, we believe it should initially be perceived of as a support for proactive authority control so that it is not the individual citizen that is responsible for public compliance with rules and laws.

Several studies have already been executed in collaboration between;

- WPI students in the fall of 2017 at Miljøpunktet, Copenhagen:

http://a21.dk/wp-content/uploads/2017/10/cp17-noise_FinalPresentation.pdf

cp17-noise_FinalRep
ort.pdf

- Between DTU, the Technical University of Denmark, Lyngby, and Miljøpunktet:

Study of noise in the North Quarter: http://a21.dk/wp-content/uploads/2016/07/Støjprojekt_DTU-studerende.pdf

Report on nuisances: http://a21.dk/wp-content/uploads/2016/07/Project-final-report_Daniel.pdf

Input from the noise-network:

App til indberetning
af støj i Copenhagen

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