

Tackling corruption in urban development through open data and citizen empowerment: the case of “Visor Urbano” in Guadalajara

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Discretionary permits over territory and anachronistic planning opened doors for corruption and territorial management disorder in Guadalajara municipality. The city government is to create the first platform in Latin America to integrate user orientation, application of standards for the development of the city and citizen participation, encouraging them to participate in the management of their territory. The primary objective is to tackle corruption in the city’s urban development process, through citizen empowerment and the elimination of human discretion within the processes.

Keywords— Digital city construction permissions management, Digital Cadaster, GIS, Open Data, Smart Cities

I. INTRODUCTION

In the last six years, there has been an increase in the irregular construction of housing towers and offices in the municipality of Guadalajara. Many of them were the product of corruption among individuals, authorities, and courts, in addition to the regulatory incapacity of the state and municipalities in supervision and sanction. As an example, the builders have exceeded the levels of the building granted in the license, leaving aside the common interest. Currently, some 200 building permits have been identified with some uncertain legal status, representing an impact of more than 15 million dollars to mitigate environmental damage and mobility, without the negative externalities that have affected Irreversible to the neighbors.

Guadalajara is the second largest metropolis of Mexico and one of the tenth more populated in Latin America. According to the last census of the population of the National Institute of Statistics and Geography (INEGI) of the year 2010, Guadalajara has a total of 1.5 million inhabitants, in 151 Km², having a population density of 9,933 h / Km².

With an urban concentration of this magnitude, the development of the last decades has been chaotic having an adverse impact on the quality of life of its inhabitants. Corruption has traced this model of urban growth and null enforcement of the law, generating social inequality, insecurity of neighborhoods and colonies, lack of public spaces, high concentrations of vehicular traffic and poor atmospheric quality.

One of the main causes is that the procedures for obtaining permits, building permits, business authorization, and services are carried out using manual procedures susceptible to errors of interpretation of regulations, omissions, arbitrariness or corruption.

One of the main and most rooted causes of Guadalajara’s disordered urban growth is corruption. The fact that procedures for obtaining construction permits and business licenses are carried out face-to-face with government officials allows for inconsistency in the interpretation of regulations, discretionary, omissions, and arbitrariness. According to Desouza and A. Bhagwatwar [1], corruption exists at some level in all cities. However, there is an excellent opportunity to tackle this issue through citizen apps and web platforms.

The Municipality of Guadalajara, start to develop “Visor Urbano” in 2016. “Visor Urbano” is a web platform that curates the legal requirements for construction projects and publicly maps business names, plans, licenses and payments, speeding processing times and increasing transparency [2].

This project was recognized last year by Bloomberg Philanthropies as one of the five winners cities in their government innovation initiative “Mayors Challenge 2016”, where more than 250 Latin American cities participated with projects and ideas to improve their citizens quality of life [3].

II. DEFINING THE REQUIREMENTS FOR THE MANAGEMENT SYSTEM

A. Main Objectives of the new digital platform

The objectives of “Visor Urbano” are twofold. First, to provide a fast and transparent channel to tackle corruption in the process of obtaining construction permits and business licenses. Moreover, secondly, to ensure a sustainable and equitable urban development, by empowering citizens with open data, ensuring that public interest prevails over individualisms. By increasing citizen ownership and empowerment in urban development, a partnership between the city and the citizens will be created, with shared responsibilities of the outcomes [4]. “More specifically, the challenge is to redefine the smart city as an environment of innovation, empowerment, and participation of citizens, businesses, and other stakeholders in shaping their future, through the choices they have and decisions they make” [5].

With the correct implementation of this platform, the citizens of Guadalajara will live in a society that governs its urban development with legality, transparency and clear rules and norms. Opposite to what Ciborra [6] may argue “Visor Urbano” will help to avoid the common information asymmetries among different actors within society, preventing the privileged segment of the population to have easier access to information and services. By continuous information updates, the real needs of a dynamic and complex city like Guadalajara are satisfied. This platform will also return more business opportunities as for real estate investors, certainty on building legal framework is crucial.

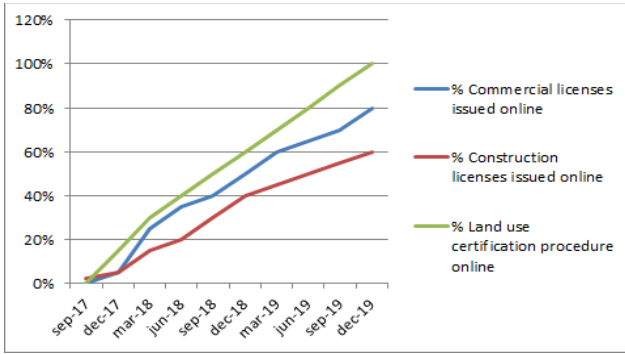


Fig. 1. Assumption: Once people has access to do the process online, they will be increasing and preferring using this way, which will be faster, safety and without any risk of corruption.

B. Metrics of success

So far, we have been working on the project, which consists of the homologation and preparation of the information; generating and adapting the inputs for the platform in coordination with the affected areas. At the same time, we have been working in the systematization and simplification of the procedures related to the urban development of the city. To measure how effective is the expected platform, we need to define metrics.

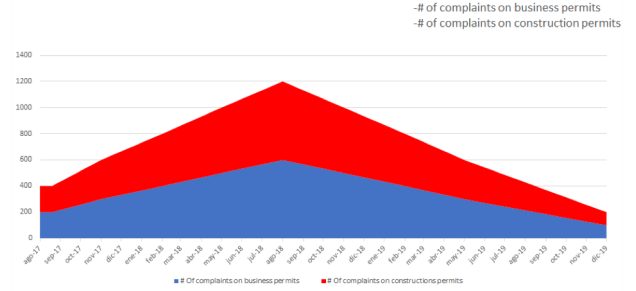


Fig. 2. Assumption: Both number of complaints on business permits and construction permits will increase after launching the platform, due to the immediate response of citizens having access to the information. Later on will both number will drop down when the system accomplishes its goals.

Figure 1 shows the expected indicators used as metrics for the new online platform ranked by their use. In figure 2, we can see how the permits will be related to less complaints in the service and management due to the new platform.

C. Implementation Roadmap

1) Homologation and preparation of the information:

Generation and adaptation of the necessary inputs for the platform in coordination with the affected areas as cadaster, business, and constructions licenses units, public infrastructure. This step is the basis of the project and will facilitate the systematization of the related procedures and will allow visualizing both the public officials and the citizen the most real face geographically of the structure of the city.

- The specific activities are:
- Unified cartographic base (July 2017)
- Partial plans digitized and adapted to the platform (Oct 2017)
- Update of the historical patrimonial inventory (August 2017)
- Generate the mechanisms of permanent updating (May 2018)
- Mapping of public works (Dec 2018)

2) Systematization of procedures:

Systematization and simplification of the processes related to the urban development of the city. This step will allow the correct execution and follow up of the processes, avoiding irregularities, corruption and delays in the times established in the law. The specific activities are:

- First phase building licenses online (August 2017)
- Systematization of business Licenses (Oct 2017)
- Systematization Dictamination Land use (Dec 2017)
- Certificate of Alignment and Official Number (April 2018)
- Certificate of Habitability (Jul 2018)

3) Socialization and citizen link-up:

- Training to social councils (Feb 2018)
- Implement the Plan of communication and media for the citizens (Jan 2018)
- Workshops and socialization (March 2018)

The platform will bring statistical analysis, cross-checks and periodic reviews through dependencies involved as mobility, inspection to regulations and security. The data obtained by the interactions in the platform will be able to cross with the commercial activities preferences, re-densification and even macro data on economic development. On the other hand, it will be possible to establish the relationship between the penalty fees generated by the Inspection and Surveillance area of the municipality and the complaints generated on the platform by the citizens. The type of consultation will help focus the efforts of other sectors, for a comprehensive and orderly management of the city. Also, the generated data by the platform will serve to have economic impact studies by areas, so that it can become a useful tool for the planning and promotion of development by sectors as well as the impetus for neighborhood development.

Fig. 4. Status of both business and building permits in real-time interface

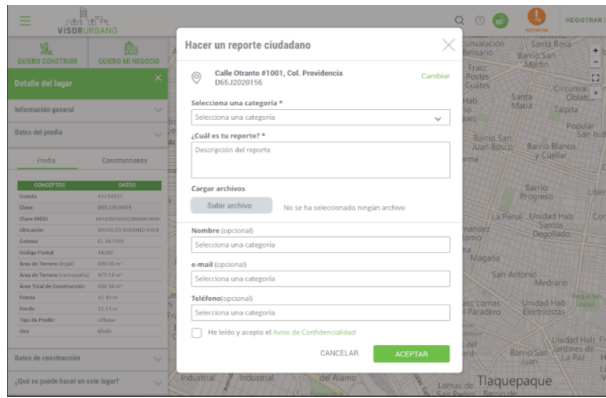


Fig. 5. Information about status of buildings permits



Fig. 6. 3D modeling for buildings

V. CONCLUDING REAMRKS

The nature of this project is to have the platform in a metropolitan scale, for this purpose one of the main partners of this idea is the Metropolitan Institute of Planning (IMEPLAN) institution that will lead the commitments and requirements of the other municipalities to be part of this platform. Guadalajara case will be taken as the point of reference to implement the platform on a metropolitan scale.

VI. OUR VISION AND PERSPECTIVES

A city that governs and bases its urban development on legality, through the transparency of modern standards and adhering to the needs of a dynamic and complex city, such as Guadalajara, will result in a clean, attractive city for investment

and in conditions to increase the quality of life of its inhabitants.

The city will have more informed and proactive citizens being part of a transparent and open government. Citizens will have greater control over government actions on surveillance issues and compliance with laws regarding complaints of irregular actions that may affect the social and urban dynamics of their environment, taking data as the main source of decision making.

It will be a city with more investments since it will be possible to make consultations for investment any part of the world and will establish a level flat for all.

In the long term, the data and information generated by this platform will allow actions and adjustments aligned to the needs of its inhabitants, allowing a more participative and inclusive city development.

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