

Albatros-D: A systemic method for participatory urban diagnosis

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ABSTRACT: The project Albatros-D aims at developing a structured method of urban diagnosis that integrates sustainable development stakes at the beginning of the planning stage of public infrastructures projects building, renovation or abandon. The method is innovating by providing decision based on qualitative multicriteria and systemic modelling; this, in a stage of the project where information level is at a minimum and action margin at a maximum. Albatros *D* emphasizes two crucial aspects of the diagnosis: the definition and justification of the needs and the formalization of the stakes of the project. It is intended to be participative, by trying to integrate most of concerned stakeholders: building owner, residents, policy makers and experts. We particularly distinguish two components of the diagnosis: the use of indicators for the current state assessment of an urban system in regard to evaluation objectives (appraisal) and the identification of causal relations between indicators for the comprehension of how the system is working.

The article presents the case of a real property foundation having several sets totalizing about 500 residences. They are spatially located close to each other at the periphery of the city of Geneva. The social and urban context is ill-defined and complex. The housing is degraded, but nevertheless it shows some architectural qualities. We will try to demonstrate how the method Albatros-D, by providing an overview of current issues helps to identify potential actions.

Keywords: Diagnosis, Urban planning, Systemic modelling, Decision making, Participatory approach

1. PROBLEMATICS

Decision making is not a matter of only choosing the best alternative, but it is above all a process through which it is arrived at progressively (Isla 2000). In this way, Simon (1977) proposed a model of decision making which is made up of four phases: intelligence, design, choice and review. The motivation for changing or acting is built during the first phase, which corresponds to the *problem setting* (Fareri 2000, Söderström 2001), whereas the decision is made during the next three phases, corresponding to the problem solution process.

Land use and building projects generally "jump to solutions" without defining adequately the problem to solve (Stave, 2002). Yet several authors agree that the phase of problem definition or intelligence is crucial for the decision process (Vennix 1999, Stave 2002; Antunes 2006); this, particularly in messy cases, i.e. a situation in which opinions among stakeholders involved in a decision process differ considerably on the issues (Vennix, 1999).

More precisely, such a lack is due on the one hand to the insufficient definition of the public interest,

represented by the stakeholders concerned by the decision, the stakes or aspects of the problem that need the most attention and the goals. Indeed, projects are elaborated and definitive options are taken by experts that focus on technical or architectural issues behind the scene (Söderström 2001). Whereas other stakeholders sharing other stakes (cultural, ecological, social, etc.) are excluded or only belatedly integrated, so that they cannot appropriate the project. To prevent such conflicts, it is important to enable the participation of all concerned stakeholders in all discussions throughout the deliberation process. This produces a common understanding of the issues by sharing experiences, opinions, stakes and values (Renn 2006, Hove 2006).

On the other hand, decision is not often based on relevant and synthetic information to measure key parameters associated to the stakes. If the chosen strategies in the intelligence phase are crucial in regards with the decision, paradoxically the action margin is still high (Figure 1). The increase of information availability contributes to inform the final decision better and thus to decrease its uncertainty (Wittmer et al. 2006).

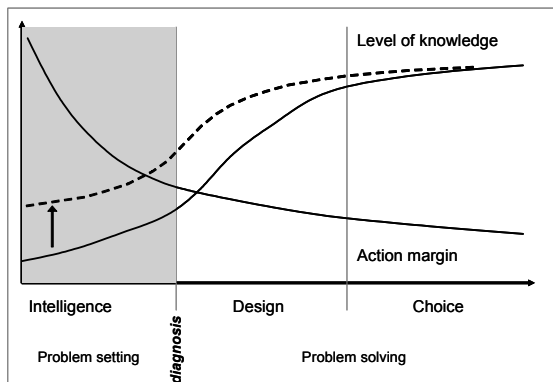


Figure 1: Evolution of the level of knowledge and action margin during the decision-making process.

A good definition of the public interest and the availability of relevant information make sure that the right problem is addressed (Antunes 2006). It contributes to justify the needs of a project. Indeed, some projects involving important means are abandoned later as they do not address real needs. People do not ever understand why actions or changes are necessary (Stave 2002). For this reason, Söderström et al. (2001) and Joerin et al. (2001) noted in Geneva in the 1990s that a lot of important land use and building projects were rejected by referendum. (I'd put "This is one of the reasons...")

Finally, the question is how to select adequate methods and instruments for the structuring of the problem setting and for the resolution of conflicts that already occur in this phase. Such instruments should combine analytical and participatory approaches to consider different values and interest (Wittmer et al. 2006). In this way, the project *Albatros D* (D as Diagnosis) proposes a method of urban diagnosis with information tools. It aims at developing the comprehension of some issues in their globality and complexity in decision making processes.

We present above the Albatros methodology. At each step, we shortly describe how the method is being validated and applied in the mandate of social housing rehabilitation in Geneva.

2. OBJECTIVES

Albatros D results from cooperation between the academic world and industry and is intended to support public administrations in their planning tasks. It consists of a structured method of diagnosis that aims at justifying and reinforcing the utility of building and land use projects from the planning stage on. This method enables stakeholders (participants, actors) to discuss and formalize goals and stakes better. Thus it provides a more solid basis for the implementation of decisions and actions.

Albatros D emphasizes two crucial aspects of diagnosis:

- definition and justification of the needs or motivation of a project;
- formalization of the stakes of the project.

Albatros D is being used on mandates of infrastructures projects (building, renovation or abandon), accorded by Swiss governmental offices.

3. OVERVIEW OF THE METHOD

The overall method is presented in Figure 2. First, stakeholders are invited to define their specific needs and stakes. We then distinguish two components of the diagnosis: the assessment of the current state of an urban system in regards with evaluation objectives (appraisal) and the comprehension of the system process. Particular attention will be devoted to the latter form of diagnosis, as it is not well developed in practice. The combination of these two components enables in the end the justification of the needs, the identification of priority stakes and strategies.

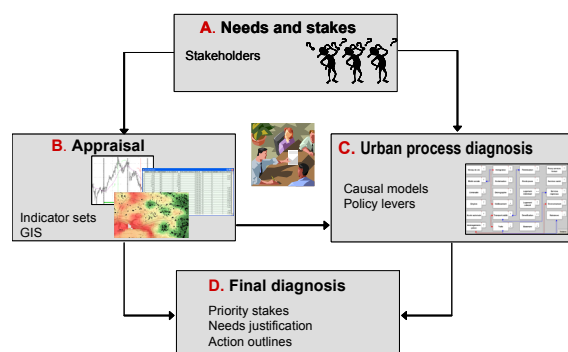


Figure 2: Method Albatros-D.

4 INTRODUCTION TO THE CASE STUDY: REHABILITATION OF SOCIAL HOUSINGS IN GENEVA

The method Albatros D is being partly or fully used on Swiss public mandates of infrastructures projects. Among them, one concerns the **rehabilitation of an area of social housings in Geneva**. This mandate comes from a property foundation and is currently in process.

The foundation owns five plots of about five hundred social housing units that need short and long term interventions. The main issues are the decrepitude of the buildings and the very low use of the site in terms of building density. The plots are located in the outskirts of Geneva and are very close to each other, which allow the possibility of global solutions to the overall area. The mandate aims at better understanding the urban context of the project, and then at defining a global strategy and a programmed planning of interventions to the housing areas in a participatory approach. The final goal is to give some recommendations that help the foundation to decide in terms of possible options of renovation, rebuilding and densification.

5. STEPS OF ALBATROS-D AND APPLICATIONS

We detail in this section each step of the method in the light of the case study.

5.1 Definition of stakes and needs

This preliminary step consists in collecting all the documents and former studies concerning the project in order to understand the context better. From that point, it is possible to define the components of the diagnosis, which are the phenomena to assess and the relevant information (indicators) to collect in the next step (appraisal). At the same time, interviews are undertaken with stakeholders taking part to an urban project, like representatives of institutions, citizens and associations. The interviews enable to set a shared vision of the problem, to highlight various concerns and interests in terms of needs and stakes.

In the case of Geneva, we are interviewing several residents to understand the strengths and weaknesses of the neighborhood from their point of view and the use they make of it. They are asked to qualitatively gauge various aspects of the neighbourhood and the housing and to appreciate the relevance and priority of some potential actions, taking into account they may increase the rents. We can then deduce the needs and stakes by considering the phenomena where the current situation is seen as worrying and priority actions are desired.

5.2 Appraisal

The **appraisal** form of diagnosis is currently practiced to gauge whether a project has achieved its goals (Bell and Morse 2000). It is facilitated by providing relevant information such as spatial (land-use), architectural, social and environmental indicators. These are evaluated by using GIS tools, audits, technical assessments on built structures, or socioeconomic assessment. Spatial information enables us to describe the urban environment of the social housing. Assessment criteria would include such factors as, accessibility to services, mobility, connections inside a neighborhood and between neighborhoods, physical barriers, green spaces, and nuisances. One of the authors took part to a participatory diagnosis process in Geneva, focusing on the use of similar spatial indicators (Nembrini et al. 2005). At the building scale, we collated existing technical diagnoses or made new ones in order to assess the degree of decrepitude.

5.3 Systemic diagnosis: to understand how the urban system is working

In the appraisal form of diagnosis indicators are simply juxtaposed and gathered in catalogues. This does not give an idea about complex dynamics of the urban area, on which actions generally rely (Desthieux et al. 2004). If one indicator shows a poor performance, the manager has no information on how and where to intervene in the system to make it evolve to the desired final state. In other words, if one indicator is improving, will the others improve or worsen? Therefore, we propose to go further by

structuring and organizing indicators into a system and to establish, in the end, a **diagnosis of urban system process**. Such a diagnosis is based on the identification of causal relationships between indicators. Consequently, we propose to develop a systemic framework that helps stakeholders showing perceived or supposed relationships between indicators and eliciting their comprehension of the urban complexity and possible action levers to achieve the desired goals.

It is generally admitted that socioeconomic issues are partly due to the bad quality of urban environment and housing, and to the insufficiency of adequate and appropriated collective equipments (OCDE, 1996). In a prospective view, it is matter of choosing relevant policy levers to improve socioeconomic conditions of housing.

5.4 Final diagnosis

The combination of appraisal and systemic diagnosis enables the justification of the needs to be met for any given project, the organization of these stakes into a hierarchy and the definition of action outlines.

In the appraisal, the interpretation of the indicators enables us to highlight the strengths and weaknesses of a situation with regard to an urban project. In particular, it is possible to identify the components of the problem and the areas where interventions are justified. For instance, a map of traffic noise shows which housing necessitates protection. Or the assessment of the degradation of buildings gives ideas if they need to be renovated or rather rebuilt. In the end, indicators should make participants revise their initial perspectives and attitudes (Stagl 2006) and find a perspective on the relative importance of stakes by showing which are potentially the most worrying.

The system model assessment gives another light on priority stakes by considering the policy levers. It shows the possible consequences of actions by putting in relation the components of the problem: an action could have positive repercussion in one area and negative in another. For instance, the road network development leads to more opportunities in the region, but, in the same time it encourages the use of private transport at the expense of public transport, which would imply a contradiction to other policy goals.

Finally, the diagnosis should enable us to define strategies that answer questions in the case of social housings rehabilitation such as:

- Where to demolish, to rebuild or keep existing buildings?
- What are the priorities, how to organize actions in a given time and space framework?
- What social diversity to propose?
- What complementary infrastructures (like social assistance) to bring to the housings?
- What is the infrastructure and equipment requirement for the buildings as a whole?
- How to preserve and improve the quality of housing and environment?
- How to promote a homogenous urbanization and densification process?

6. CONCLUSIONS

Albatros D is innovating by combining two complementary types of diagnosis – the appraisal and the diagnosis of urban process – and by implementing the concept of integration of information coming from the perceptions of stakeholders (social and politic legitimacy) and from indicators (scientific legitimacy) (Meadows 1998). Therefore, Albatros D contributes better to consolidate and structure the problem. It enables savings in time, energy and financial resources by targeting the decision scope and facilitating conflict resolution (early involvement of stakeholders). As several public offices appendar interested in this strategy, it seems that we are addressing real needs in terms of missing methodology.

Some questions remain about the applicability and acceptance of the method. Among them, the diagnosis of urban processes is still difficult to implement and its use in a participatory approach for the understanding of complexity is quite ambitious. In a review perspective, the systematic validation of the method in the process of public mandates should certainly allow some fine tuning of the method. *We should point out that there will be surely variations in the manner in which the method will be applied, depending on the political and neighborhood factors, as well as on the scale at which the policy is applied.*

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