

# ROMANIAN ADMINISTRATION CHALLENGES: THE IMPLEMEN- TATION OF ONLINE PAYMENT FOR UTILITY BILLS

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## Abstract

Romania is currently facing a lot of challenges in the e-government field. In this paper, due to the fact that we identified little or no efforts from the Romanian public administration in order to simplify all the activities conducted by Romanian citizens in order to pay their utility bills, we are proposing a model for a new e-service that aims to correct this state of facts. We started this quest by identifying and conducting an analysis of the existing administrative framework within a Romanian AOA (Apartment Owners Association), as this is the most common form of association that deals with the payments of utility bills (UBs) in Romania. We developed a model for the AOA's administrative process. Subsequent to our analysis, our findings suggest that in Romania, although progress has been made in order to simplify the payment of utility bills, there are still several drawbacks associated with the administrative process, within the Romanian AOA. Thus we proposed an improved model for the Romanian AOA administrative process.

**Keywords:** e-government, e-services, AOA's administrative process, online payments for UBs.



## 1. E-government in Romania

According to the World Bank, '*E-Government*' refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform the relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different goals: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions (World Bank, undated).

There are three main domains of e-government: (1) improving government processes: e-administration; (2) connecting citizens: e-citizens and e-services; (3) and building external interactions: e-society. Respectively, these particularly address the problems that government is too costly, too inefficient and too ineffective (e-administration); too self-serving and too inconvenient (e-citizens and e-services); and too insular (e-society) (Heeks, 2008).

The e-services term describes the use of electronic delivery for government information, programs, strategies and services. These are available on-line '24h/7days'. It also refers to Electronic Service Delivery (ESD) and such expression as 'one-stop service centers'. The latter describes the situation in which citizens' needs are met through a single contact with the government. In many cases it assumes a modernized front office but not necessarily redesigned back office capacity. At the same time, e-services emphasize innovative forms of citizen involvement and offer services that demonstrate serious valuation of citizens as customer of administration. The strategic challenge is to deliver services to members of public along with dimensions such as quality, convenience and cost (Sakowicz, 2003, p. 1).

Several advantages of the e-services are (Filip, 2002, p. 2):

1. Diminishing the citizen's feedback time;
2. Significant contribution to the reduction of bureaucracy and corruption;
3. Significant cost reductions from both public institutions and citizen's perspective;
4. Significantly improved accessibility; and
5. Security and confidentiality for all the online operations.

Today, powerful new technologies can be used to advance sustainable development for all people across the world while including them in the process. In particular, e-government can be an engine of development for the people. In delivering e-government for the people, public services are designed to be responsive, citizen centric and socially inclusive. Governments also engage citizens through participatory service delivery processes. The evidence base for the latter is strengthened by recent progress in e-government in a growing number of countries where citizens are both users and co-producers of public services (United Nations E-Government Survey 2012, p. III).

According to the United Nations 2012 e-government survey (United Nations E-Government Survey 2012, p. 30), Romania comes under mid-range countries with

regard to utilization of e-government. According to the world e-government ranking, Romania has evolved from 47<sup>th</sup> place in 2010 to the 62<sup>nd</sup> place in 2012, while the Romanian index for e-government has increased from 0,5479 in 2010 to 0.6060 in 2012.

Since the development of the e-Government portal - [www.e-guvernare.ro](http://www.e-guvernare.ro) in 2003, the Romanian government has delivered certain services online, such as VAT declaration, a fully operational e-procurement platform, submission of statistical information, electronic payment of social security contributions and of local taxes, advanced job search facility, civil service recruitment platform (Colesca, 2008, p. 206) and a business registration platform (Mina, 2009).

However, a new administration requires not only an innovative solution, but 'intelligent citizens' to make use of it. There is an empirical study that analyzed the Romanian e-administration through the perspective of both digital government (public services through internet) and digital democracy (citizens' participation to the governing process through internet). This study concluded that '...eleven years after the birth of the first city webpage in Romania ... in terms of usability the performance is somehow acceptable... and there is practically no concern for security and personal data protection... The provided services are sparse, mainly because there is no city where the utility bills can be paid using the City Hall official webpage as a portal. The citizens do not have many opportunities to voice their opinion regarding the way the community is run. Less than 10% of the city halls' websites have online opinion polls, and none of them offers the possibility of organizing a digital referendum or to adhere to online petition' (Stoica, 2009, p. 180).

This level of e-government usage suggests that more efforts are needed to encourage potential users to use the available online e-government services as well as to expand the range of public services available online.

## **2. Research methodology**

In this paper we are focused on a project for a new e-service that aims to implement online payments for utility bills. The project will have two phases, creating a model and implementing it by developing a prototype. This paper addresses the results of the first phase of the project.

In Romania, this endeavour has been taken before by a private organization, but unfortunately the results are available only to several apartment buildings in Bucharest (Negraru, 2011). Also, several apartment owners have stated that this e-service involves additional costs of 2.5% of the actual amount of the utility bills that the apartment owner has to pay (Cocioaba, 2011).

Other private organizations have created websites that help the administrators of AOA to compute the utility bills and post them online to ease the access of the citizen to the information ([www.aviziero.ro](http://www.aviziero.ro), 2012). These kinds of e-services involve a signed contract between the private organization and the administrator and thus additional costs for the latter.

We have also encountered a different situation, when the administrator of several AOA's is trying to simplify his/her activities by implementing an integrated system

that automatically prints all the utility bills, which are then sent by mail to all the apartment owners enlisted in the AOA. The printed bills have barcodes that enable an easy bank payment procedure. In this case all the costs are supported by the apartment owners.

In the first phase of this project, we aim to document and create a model for an e-service that is free and usable by all citizens who live in apartment blocks in Romania.

The initial work took place at a Romanian AOA premise, which is the most common form of association that deals with the payments of utility bills in Romania.

According to the law no. 230/2007, the AOA is an intermediate between the providers of public services and the owners/consumers of the public utility services. This relation is established through a legal agreement. This service of intermediation provided by the AOA consists of (Law no. 230/2007):

1. Bills repartition to all apartment owners by computing a monthly list that contains a distribution of expenditures sent by the providers of public services, among all apartment owners enlisted in the AOA;
2. Collection and payment of the billed expenditures; and
3. Announcing the providers of the public utility services about their debtors.

Here we have documented, on-site, all the aspects of the AOA administrative processes, front office and back office. We gathered valuable information which was used to develop the use cases and to deliver the process model.

The AOA administrative process was modeled using UML (Unified Modeling Language) as we have developed use-cases, activity and state diagrams for both the front office and back office processes. While conducting the requirements analysis and modeling phase we noticed several issues regarding the AOA administrative process and in the following we will suggest optimizations and improvements in order to increase the efficiency and to reduce redundancy.

### **3. The Romanian AOA administrative process modeling phase**

In the process of documentation we focused our efforts on understanding all the AOA's documents flows from the case of enrolling a new apartment owner into the association, until the case of the debt recovery.

The results of this entire intercession were delivered under the form of UML diagrams. Thus the modeling phase implied the application of some successive steps:

1. Actor identification; for this target, we start from the assumption that an actor implies a role played in the process by an individual, private/public organization or system within the studied administrative environment, thus we identified more than ten actors for the analyzed AOA's administrative process (the apartment owner, the AOA, the AOA's executive committee, the AOA's president, the AOA's administrator, Apaterm S.A., GDF Suez S.A., ECOSAL S.A., RADET SA, Electrica S.A, etc.).

2. Building the use case model; this step mainly aims to describe the manner in which the above-specified actors interact. We identified the following use cases for

the subsequent processes:

- a. The enlisting of a new apartment owner in the AOA;
- b. The maintenance or replacing of common parts of the building and the regulation of common expenditures of the AOA. We also have identified two sub-cases, the drafting and termination of AOA contracts case and the employment and dismissal of AOA personnel case.
- c. The computing of the utility bills by the AOA's administrator and the subsequent payments made by the apartment owners;
- d. Establishing a penalties system for the apartment owners who have accumulated AOA debts;
- e. Reporting the payment situation to the utility service providers;
- f. Creating the AOA's balance sheet and several other reports for the AOA's executive committee; and
- g. Debt recovery by the provider of the utility services.

3. Provide detailed description of each use case identified; for all the identified use cases associated to the AOA's administrative process, we provided a detailed description, according to a predefined template, which included: goal, actors, main phases and decision nodes; and

4. Provide a description of the entire AOA's administrative process by means of UML activity diagrams; due to the complexity of the processes encapsulated in each use case, but most of all to the existence of decision points identified in all use cases, it was necessary to graphically represent the flow of activities for every use case.

In Figure 1 we present a simplified view of the utility bill payment process. As shown, the AOA's administrators' tasks are not automated as well as all the other interactions with the utility service providers or the apartment owners.

This activity diagram shows there is little transparency of the AOA administrative process, that the utility bill payment is time restrictive (the apartment owner depends on the administration staff schedule) and costly (several commissions have to be paid during the actual utility bill payment process), it implies that there are several risk management issues that emerge during the utility service providers payment.

#### **4. Analysis of the Romanian AOA administrative process**

By studying the progresses that have been made so far, in order to simplify the administrative procedures required for computing and paying the utility bills in Romania, we can state that although several efforts have been made in this direction, we identified further improvements for the administrative processes conducted in the Romanian AOA.

After analyzing all the identified use-cases, we computed the following drawbacks for the entire AOA administrative process:

1. Several identified procedures are complex because they involve too many actors, too many documents (thus creating bureaucracy) and have too many loop-backs.

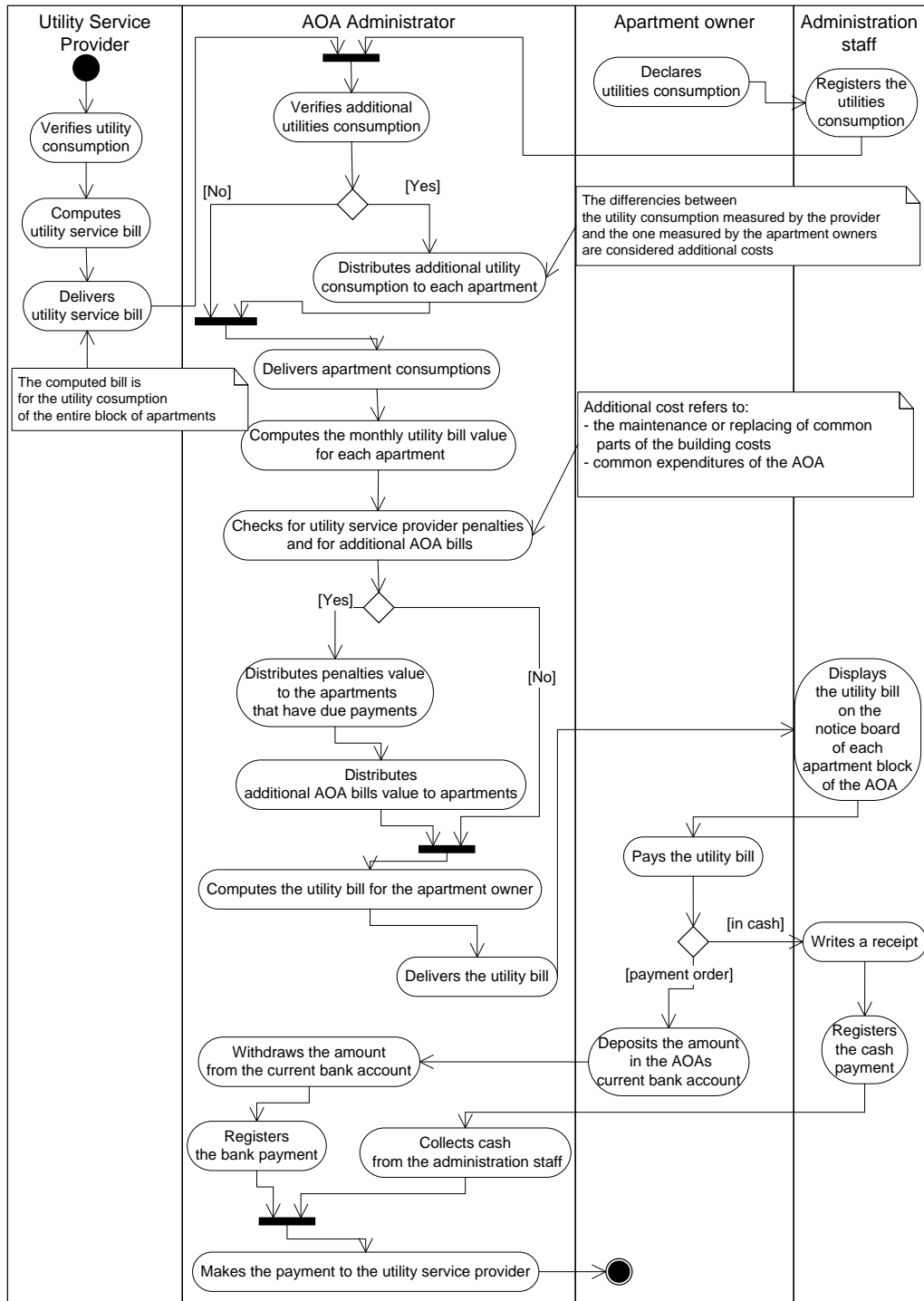


Figure 1: A simplified view of the AOA's utility bill payment process

2. The front office processes are partially automated; we identified an application (this application needs furthermore improvements) that helps the apartment owner to have easy access to his utility bill.

3. Both the back office and front office procedures are not automated; in consequence, the lack of an integrated system leads to time consuming activities which cause significant delays in the whole process.

4. Several procedures of the AOA's administrative process involve other institutions beside AOA, for example, all the utility service providers; these kinds of interactions are characterized by slow inter-institutional feedback.

5. The legislation and the methodology that establishes the AOA's implementing rules are confusing to most apartment owners and create a degree of distrust regarding the administration in general and more specific about the way the administrator is computing the utility bills and penalties for each apartment owner.

6. The degree of redundancy and time consuming tasks are very high.

7. High degree of reluctance from all the actors involved in the entire administrative AOA processes concerning the implementation of an online system (especially the AOA administrators).

8. The cash payment of the utility bill is the most common form of payment and thus there are many documented cases in which the administrator has exposed large amounts of money collected from the apartment owners to theft.

9. There are many documented cases in which the administrators have stolen money collected from the apartment owners of the AOA, and because there is no institutional feedback between the utility service providers and the actual apartment owner that pays the bill, these thefts have been discovered too late and thus forcing the apartment owners to make the payments again with the afferent penalties and

10. In the current status, the AOA administrative process involves additional costs due to the payment of several unnecessary commissions (by the apartment owner or the administrator) or generated by the necessity of employing additional administration staff.

After the analysis of the administrative processes conducted in the AOA we came to the conclusion that we should propose a model that should integrate the front office and back office processes that take place in the AOA and which in consequence will simplify the AOA's administrative process as it shows in Figure 2.

This model is based on the assumption that the subsequent improvements for a future state of the art AOA e-service will be implemented:

1. Online submission of all the documents required for registering an apartment owner in the AOA; this means that the applicant should not submit any papers at the AOA desk (for the moment the current Romanian legislation states that the dossier submission on paper is mandatory) and the documents must be digitally signed;

2. Online document management for all the papers submitted by an apartment owner;

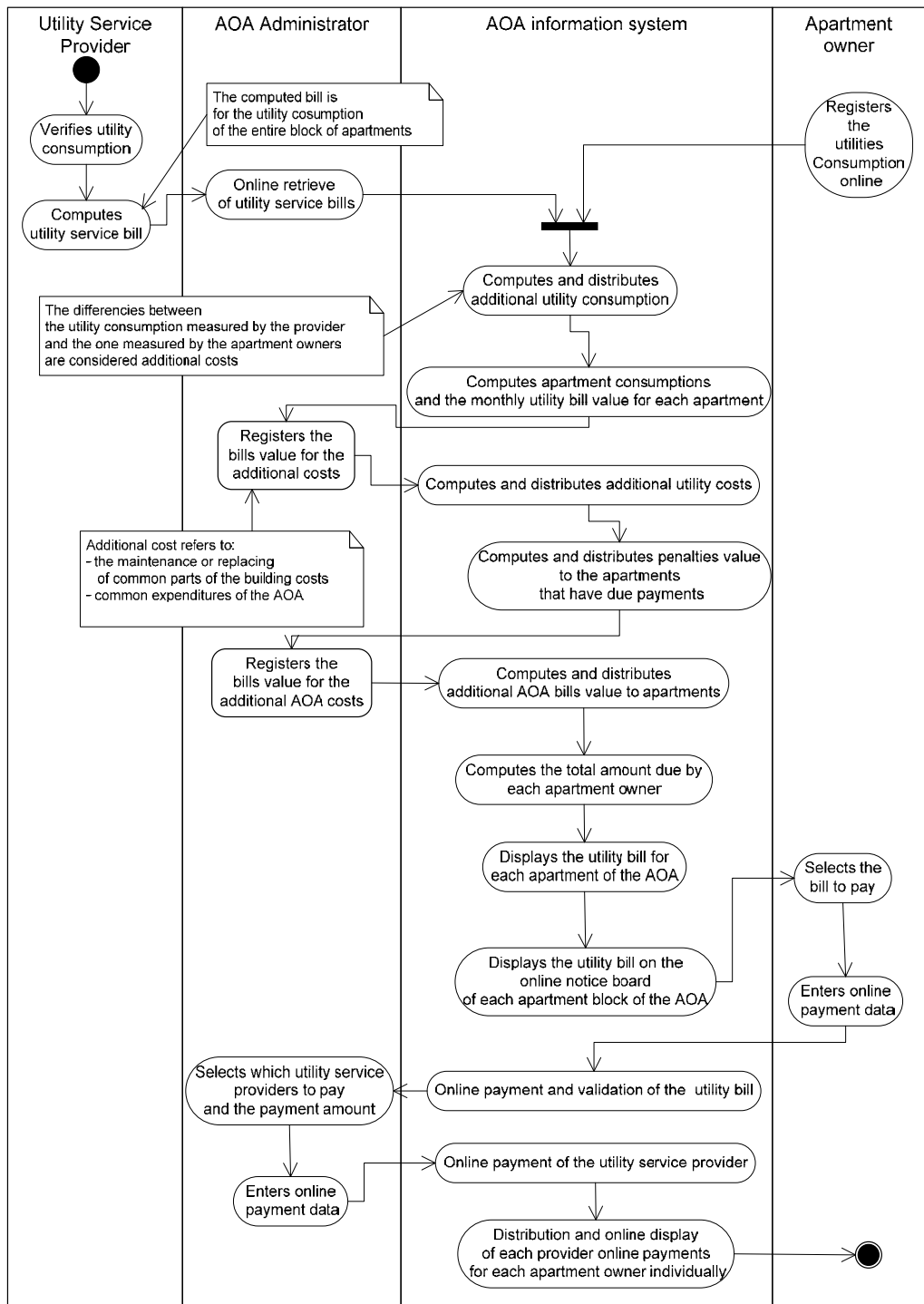


Figure 2: A simplified view of the AOA's utility bill payment process after the implementation of the proposed model

3. Online document validation for all the papers submitted by an apartment owner;
4. Multilingual features; this system must address to foreign apartment owners too, not just Romanian ones;
5. Online payment of all utility bills;
6. Online free assistance for Romanian and foreign apartment owners in order to understand the AOA administrative process, to complete the necessary documents, to submit the dossier and to follow its course of action;
7. The tasks that the administrator or other administration staff performs in the back office to be automated; and
8. Integration with utility service provider's information systems in order to diminish the time consumed for inter-institutional feedback.

## 5. Conclusions

The implementation of the proposed model of the AOA's administrative process will guarantee the transparency of the administration act to all apartment owners, it will provide better risk management (especially if the apartment owners will no longer make cash payments for their utility bills), it will significantly reduce the administration costs (because there will be no need of additional administration staff and also no more commissions to be paid), it will simplify the AOA's administrator tasks, it will help the utility service providers to have a better and faster access to the AOA's reports on utility bills payments, and most of all, the utility payment process will no longer be time consuming and bureaucratic.

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