THE CONCEPT OF STATE REGISTER OF ADMINISTRATIVE ACTS FOR LOCAL AUTHORITIES

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This paper addresses the conceptual aspects of the development and operation of management information system for administrative acts of local government. The research is based on the identification and formalization of the basic characteristics, information technology, architecture, conceptual and data flows, which will be the basis implementation of the State Register of Local Acts.

Key words*: State Register, regulation, access to information, decision transparency.*

I.   General aspects

With the approval of the National Decentralization Strategy and Action Plan for implementation of National Decentralization Strategy [1], the Moldovan government has committed to ensure a genuine local autonomy for local public authorities (LPA). Unlike the central public administration (CPA), which has jurisdiction throughout the country, LPA has jurisdiction only within the territorial-administrative unit in which it operates. The legislative framework in Moldova under the law on administrative decentralization [2] defines local autonomy as a right and effective capacity of local governments to regulate and manage under the law, under their own responsibility and in the interest of the local population, an important part of public affairs. Also, under this law LPA has the right to adopt decisions freely under the law.

The primary concern of the State under the legal framework adopted in Moldova and international Declaration of Human Rights [3] LPA activity is transparent and it supposed to involve the needs and values of citizens in making and implementing decisions at all levels of government. Equally important is to ensure the supreme law in the process of decision-making at local level and carrying out administrative control over the legality of administrative and approved acts.

Legislation in force establishes a series of requirements on transparency and insurance of access to decision-making acts of LPA. Art. 68 par. (1) of Law No. 317-XV of 18.07.2003 on normative acts of the Government and other authorities of the central government and local [4] lays down that all legislative acts are made public through publications or by displaying them in authorized locations. The Law No. 436-XVI of 28.12.2006 on local government [5] and Law. 239 of 13.11.2008 on transparency in decision making [6] contain rules regarding the mandatory public consultations.

In these circumstances, LPA has no information mechanisms that would allow ensuring enforcement of the transparency and publication of the issued documents. As a result, the general public and businesses have no access to the documents issued by LPA. Some LPA place issued acts on their own website, publishes them in local newspapers or displays them in public places. Despite this, access to the acts in this case is problematic and documents are not systematized and updated. Also, with existing arrangements of publishing or public displaying acts, LPA allows abuses (non-publishing /displaying its acts, the subsequent amendment of the text, substituting documents etc.). Here, there is a lot of work with a great number of documents and records on paper, great documentation circuit, which is not managed efficiently, that

consumes resources of time for the whole workflow. Implementation of IT solutions will improve the management of the entire workflow and will permit the recording of documents issued locally, which would significantly increase the effectiveness and the speed of processing.

According to the advance towards electronic government, the transparent decision-making process at the local level can be successfully achieved only by building a modern information infrastructure and by using of effective methods and information technologies. Promoting and implementing modern information technologies at all levels of the government and democratic rule of law must be carried out jointly with a systemic analysis of the mechanisms of operation and interaction between state authorities. Usage of information and communication technologies at all stages of interaction of the society with the authorities ensures a level of quality achievement of governance and have a good reaction to possible irregularities [7].

After studying the legal framework and analysing the information space application it has been justified the idea of designing a concept system titled the State Registry of Local Acts (RAL) with the purpose of transparency in the decision-making process in LPA and reviewed by the State Chancellery (SC) the documents issued by LPA. Underlying the conceptual analysis of the state-legal legislation regulating the activity of LPA in Moldova, information infrastructure and mechanisms for access to existing information is the general experience gained from implementing the first version of RAL.

II.   Objectives and principles of design

RAL will be an information resource for government and will operate according to the legal provisions in force. The primary destination of information system is to achieve inventory and to ensure record-keeping of all official documents issued at the local level in Republic of Moldova (such as decisions and orders) and providing the citizens with information on local acts and updating this information. The system must meet the operational requirements that assess the quantity and quality parameters of the platform in general, also the components and features that ensure user requirements. Information system objectives are reflected in the rational development of all functions to raise the level of operative awareness for organizational structures and citizens.

The main objectives of the informatics system are:

▪ providing evidence of documents locally issued by LPA through collecting, processing, storing and dissemination of information;

▪ ensuring transparency of decision-making at the local level;

▪ automation of workflow related to registration, modification and abrogation of normative acts of LPA;

▪ improving the work process in the Republic of Moldova LPA and between CPA involved in the information objects registration of the Registry and achieving the administrative control of documents issued by LPA;

▪ recording insurance task management on normative acts of LPA and controlling their fulfilment;

▪ providing easy, guaranteed access to data and information regardless of location.

Based on the study of critical activities in the field of strategic management, requirements analysis submitted to the system and stated objectives were outlined general principles for designing, development and implementation of Web solutions:

▪ *The principle of the architecture levels division*: is to design independently Web solution components in accordance with interface standards between levels.

▪ *The platform independence principle*: the user interface of the information system will not require a certain software and hardware platform for user computer.

▪ *The principle of reliable data*: provides data input and management in the information system only through authorized and authenticated channels.

▪ *The principle of information security*: means to ensure and to appropriate the level of integrity, selectivity, accessibility and effectiveness of information security in order to reduce losses, deterioration, damage and unauthorized access.

▪ *The principle of accessibility of public information*: which involves the implementation of procedures which ensure the citizens' access to public information provided by the information system and providing feedback functionality?

▪ *The Scalability Principle*: involves ensuring consistent performance of computing solution to the increasing data and application system.

Compliance with these principles in the design and development will help to enhance the efficiency and the processing of information, will ensure the high level of accuracy, and also will present information in a more suitable form for the end user, ensuring a high level of security.

III.   The System Architecture

After the analysis of system components and highlighting a range of approaches, the general architecture was developed. Conceptual orientation was chosen to achieve reliable and scalable solutions to increase the number of concurrent users using the computer system resources, and with increasing the volume of information managed by it. RAL will support integration with other information subsystems and applications using Web services - technology method aligned to current trends to cooperate procedures for examination of applications or for dissemination of information.

As a result of the nature of the information processed and stored in the Database Information System with public and limited accessibility, RAL will allow secure connections between client stations and the application server using SSL or TLS protocol. RAL will be developed based on a client-server architecture with 3 levels that will ensure the independence of platform at the client level. Dependence on platform installed will disappear on the client computer (so users can work on UNIX stations and stations on Windows or MAC OSX).

As shown in Figure 1, to achieve RAL, is proposed the adoption of an architecture of MVC [8], or Model-View-Controller architectural pattern that is used in the industry for developing systems. This way of working is successful in isolating logical interface part of the project, resulting in enhanced development facility applications, maintenance and modification. In MVC organizing, the model represents the information needed by the application. The view corresponds to interface elements and the controller is communicative and decision-making layer that processes data information, linking model and view.
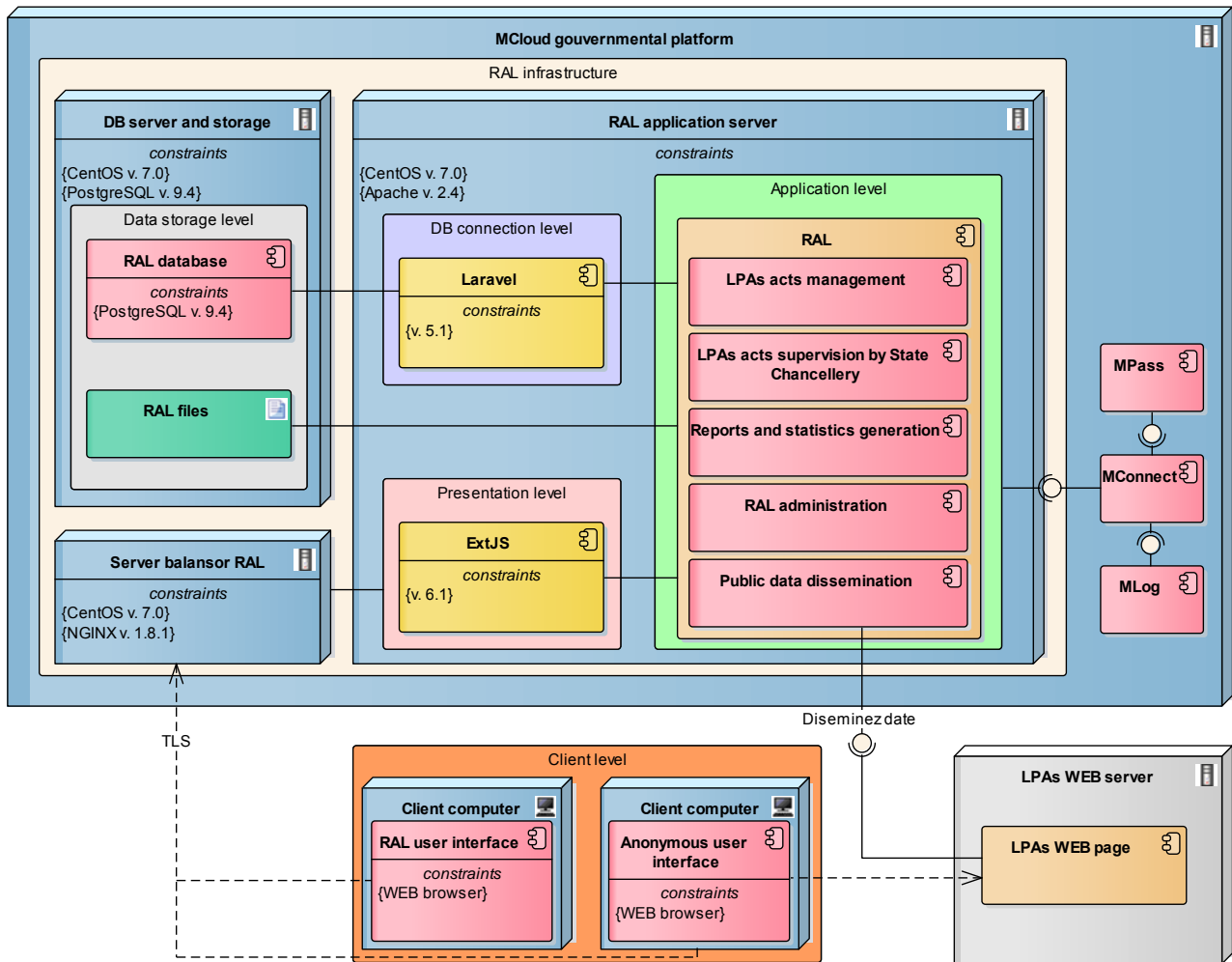
Figure1. RAL components and

Due to the chosen architecture, in perspective it will facilitate the continuous development of the information system as a result of the division RAL computer system on different levels with relatively independent functionality. Thus the presentation level (which is the part of view of the application) must not know the mechanisms of implementation of connections to the database and algorithms for processing data but sets a series of templates that other levels must use to present properly interface and data. On the other hand, splitting the application from data creates a relative independence to the technology used for the storage and data management (system management databases), thus being possible to change if necessary management system database without affecting the application level. Taking into count the principle of ensuring transparency of local governments and the State Chancellery, the IT solution will provide a mechanism for publishing reports via the Web interface of RAL (http://www.actelocale.md).

IV.   Use cases, actors and information flows of RAL

By analysing the modelled area objects, there could be defined all of the information objects that must be taken into account in system development. There are at least 12 categories of information objects: administrative act, record of the administrative act; request for rectification of administrative act, request for reviewing the legality of the administrative act, request correction of data concerning the control of legality, requests for user access to workflows, electronic forms of the documents, templates for documents, statistical reports and KPIs, report templates, nomenclatures and classifiers, log events.

According to "Regulation on the State Register of acts of local authorities" and "Regulations on the Register of documents subject to judicial review by the territorial offices of the State Chancellery" in Figure 2 have been identified and shown key players witch interact with RAL. Authorized staff of LPA and APC

authorities has access to the database of RAL, as users in order to provide and view data in accordance with this Regulation. Depending on the functions and access rights they hold, users are classified in some categories as following:

■ *Administrator Level*. State Chancellery (SC), a user with exclusive rights of system setup and adjustment workflows, user management and access rights to system functions.

■ *Internet User Level*. The general public, citizens, non-governmental organizations, business units with the purpose of consultation documents issued by LPA.

■ *Level A*. Local authorities:

o *a user of the A1 level* - LPA staff, with rights of supplying and data visualization on documents issued by LPA;

o *a user of the A2 level* - the mayor, the district chairman, with rights of visualizing data on documents issued by the local government authority concerned.

■ *Level B*. State Chancellery (SC):

o *a user level B1* - SC staff (Department Administrative Control) function of providing the acts rectification; LPA acts data viewing; data visualization on the administrative acts issued by the LPA;

o *a user level B2* - offices of SC with data visualization function on LPA acts in the area of activity of the Territorial Office; providing administrative control and data visualization on documents issued by LPA, in the area of activity of the Territorial Office.

■ *Level C*. Subjects of the opportunity control, with the function of supplying and data visualization on the control of opportunity, within the limits of authority.

■ *Web Services Level*. Systems that exchange data with RAL:

o *the Web page* www.actelocale.md - to interact with the public, RAL will expose Web services to be consumed by the official Web page of the Register of local acts;

o *M-Sign Service* - service provided by M-Cloud platform for electronic signature application on normative documents published in RAL;

o *M-Pass service* - service provided by M-Cloud Platform to authenticate users of RAL based on certificates and authorization data.
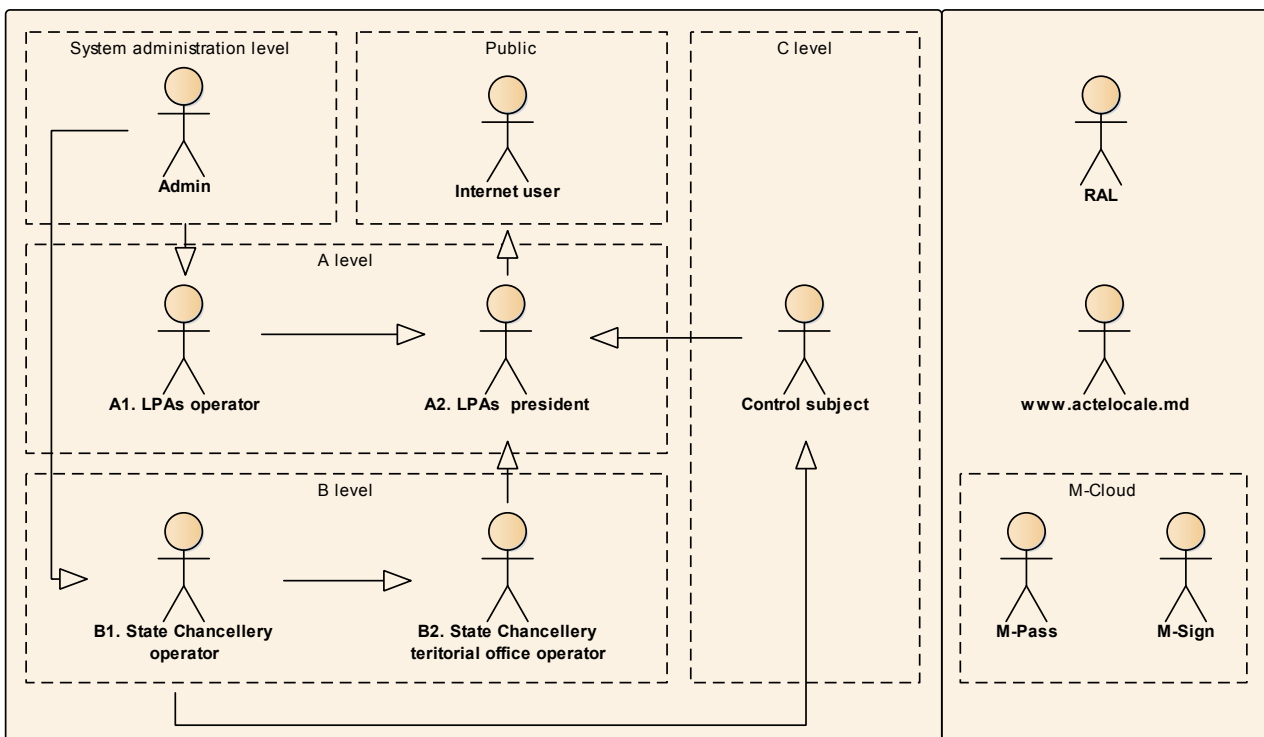

Figure 2. Actors and roles in RAL

Based on existing information system and requirements for improvement, they were identified components which should provide the main cases of using implemented in RAL:

■ Component registration and publication of an administrative act that will provide all functionalities used by the operator of LPA needed to initiate the enrollment process and publication in the RAL. At this stage the sheet of normative act attached as PDF document and other relevant documents it will be populated with data;

■ Component amending, supplementing or repealing an administrative act that will provide all functionalities used by the operator of LPA needed to initiate the process of amending, supplementing or repealing an act. To change the normative act in the RAL, it must be published an act that notes amendments. In the act of amendments, witch acknowledges the modifications will be referenced normative acts to be amended, supplemented or repealed;

■ Acts search component will provide a modern search mechanism of acts in RAL based on search criteria. Filtering documents will be made by documents metadata, document type, date of publication, territorial administrative region which published the documents, the state of acts (published, legal, review, contesting, illegal) and other criteria that groups or takes part of the acts published in the RAL;

■ Visualization component of the sheet of act evidence and related files download that will provide all necessary functionalities for accessing a document published in RAL and work process monitoring, from the publication in the register up to and including the stage of reviewing the legality;

■ Component of administrative control initiation for an administrative act that will provide all functionalities used by the operator of the territorial office of the State Chancellery and LPA needed to initiate the process of legality control for an act. At this stage it will be completed with data the evidence file of control and monitoring on all stages of examination and judicial process.

Based on the use cases and identifying all the functionalities required to achieve from the RAL the above objectives, were documented the main information flows of the system:

■ Registration and processing of the request for registration in RAL;
■ Registration and publication of an administrative act (normative, or individual character);
■ The rectification of an administrative act published in RAL;
■ Amending, supplementing or repealing a normative act published in RAL;
■ Initiating an administrative control for examination the legality of an act published in RAL;
■ Running the trial process to examine the legality of an act published in RAL.

Using workflows, the main target is to increase participation in consistent activity processes and to improve organizational efficiency and productivity. This allows people performing activities to focus mostly on achieving proper work than to be concerned with workflow management.

V. The lifecycle of an administrative act published in RAL

Business events that occur in the management of RAL produce a number of cases treatment acts published in RAL. Life cycle of the administrative act starts with its registration in the RAL until the repealing as a result of the examination process or as a result of the issuance of another act stating repealing (Figure 3). In the lifecycle of an administrative act at different stages of management changes may occur with multiple users at different levels of access.

During the lifecycle of an administrative act it may occur the following business events:

■ Registration and publication of the administrative act in RAL;
■ Rectification of the administrative act;
■ Changing of the administrative act;
■ Completion of the administrative act;
■ The repeal of the administrative act;
■ Examination of the legality of the administrative act.

Local authorities and public records in the Registry of Local Acts provisions established by Law no.436-XVI of 28 December 2006 on local government. While recording act in RAL, the local government authority completes form to record the act. Upon registration, for each act of LPA is given a registration number (out) by computer system RAL. RAL text documents published by the LPA must be an exact reproduction of the document issued by the local government authority.

Amending and / or repealing the act published in the Register of Local Acts done by the RAL registration and publication of a new act on, as appropriate, modification, or abrogation of the act previously published, issued by LPA. RAL computer system will ensure access and viewing at any stage act amending and / or supplementing it, even after repealing.

If, after publication of the measure in RAL issuing authority finds errors or inconsistencies, it shall rectify the act. Correction act is done by the territorial office of the State Chancellery at the written request of the licensing authority, duly motivated rectification note, which will include the corrected text. RAL computer system will ensure access and view the document at any stage (before the correction and after correction), even after its repealing. RAL computer system will allow to authorized people of LPA operations to rectify the data previously included in the database of the Register only with the approval of the territorial office of the State Chancellery.
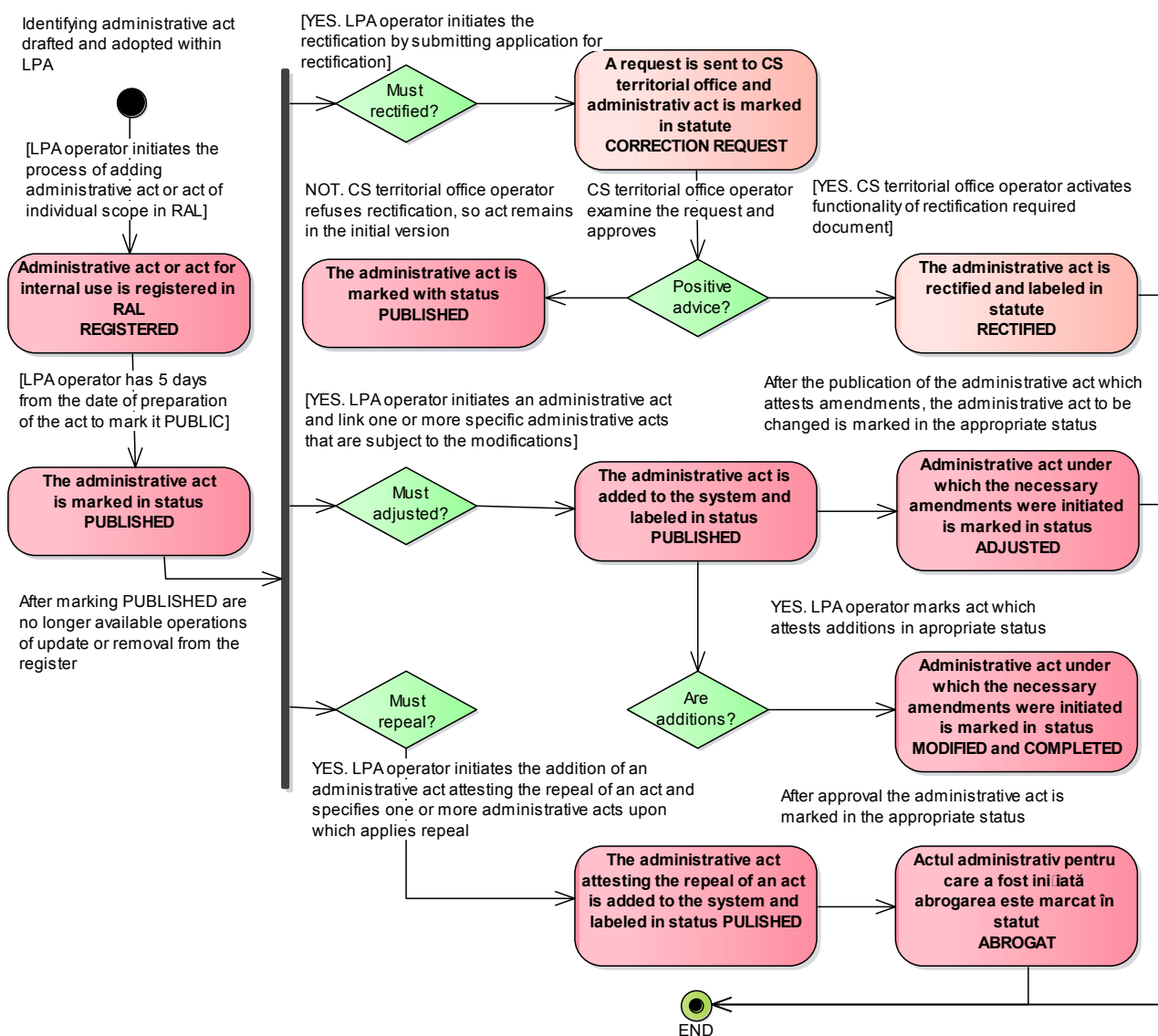
Figure 3. An administrative act lifecycle

Act published in RAL is registered to carry out administrative control after publication thereof in RAL from the LPA. The application for the legality, filed by the injured parties, the LPA or other interested person is registered in RAL of the territorial office of the State Chancellery.

Mandatory control involves the following steps:
1. upstart recording act to control or request for verification;
2. initiating administrative control;
3. performing administrative control;
4. issuing administrative control results;
5. initiating action contesting the act if they act contrary to the law subject to review.

VI. Ensuring information security

Information security measures will include all legal, organizational, economic and technological resources for preventing security threats and information infrastructure. All measures to ensure the information security will be carried out in accordance with ISO 27001 [9].

The following information security assurance problems that computer system will face can be separated:

■ Ensuring confidentiality of information (preventing to the information by people who have no rights and powers in question);

■ Ensuring the logical integrity of data (preventing unauthorized entering, updating and deleting of information or distorted data input);

■ Ensuring information infrastructure security, preventing attempts to damage or alter its functionality.

The main information security mechanisms will be used:
■ authentication and authorization of information;
■ managing access to information;
■ recording user actions on computer system;
■ encryption of information;
■ IT audit;
■ restore procedures in case of disaster.

In order to ensure an adequate level of information security of the computer system should be developed and implemented an information security policy. This policy will detail all security aspects, roles, rights and obligations of each user of information system.

VII. Conclusion

Based on analysis of architecture, components, information objects, information flows, actors and primordial activities in the studied area, and highlighting a range of approaches, has been developed the general concept of the State Register of local acts coming to support operational activity and transparent decisions approved by LPA. RAL implementation will help to develop the institutional capacity of LPA in Moldova, but also will help to achieve the goal of long-term strategic objectives promoting. However, RAL aims to support the strategic objectives of the State Chancellery in a comprehensive, pragmatic and innovative way. RAL implementation has the purpose of ensuring transparency in the activity of LPA by ensuring free access of representatives of business, civil society and the general public to acts made by mayors and local councils and the Local Government Act as a whole.

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