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Documents Management System, E-Services Provided From Tirana Municipality

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ABSTRACT

Document Management System and e-services delivery is a system that enables management of documents, archiving, workflow processing, online application forms, and response return in digital format [1]. This system is implemented to assist the Municipality of Tirana in planning and managing of its service delivery and strengthening accountability in relation to citizens, interested in obtaining these services. The system is built according to specific needs of each department. In the context of the transparency delivered by the Municipality of Tirana, citizens are able to apply online and also to check the status of their application.

E-services platform is an Internet portal dedicated to help the citizens. E-services is based on system identification that enables citizens to use a range of services, such as access to personal information, administrative practices, payment of fines, etc. For all these services is necessary a secure recognition of the user, in order to enable the latter access to personal data.

INTRODUCTION

Nowadays the public institutions are constantly emerging in electronic "governance". In every region of the globe - from developing countries to industrialized ones - central and local authorities are publishing online important information and are interacting electronically with their citizens. This orientation is based on the belief that technology can minimize bureaucracy and speed up procedures for services.

E-services platform is using Information and Communication Technology (ICT) to promote effective governance, to facilitate access to services offered by the institution and to make government more accessible for citizens [2]. E-services platform includes services provided by the Municipality of Tirana, via internet, telephony, wireless devices and other communication systems.

CONCEPTUAL OVERVIEW

Giving the functional environment in which Tirana Municipality was operation, using hard copy communication, it was necessary to build a new system.

Finally, the documentation management system was able to make this environment paperless. This system is build to perform:

- Increase of the quality in decision making
- Prompt, accurate service
- Better monitoring of the operational process
- Effective application of investment
- Cost reduction
- Improved control of internal planning
- Standardization of information and increasing accountability of employees
- Improved communication with the citizens and internal departments
- Comfortable working conditions of employees.

For the system implementation are taken into consideration a range of functions and processes as:

1. Segregation of duties according to working procedures of Tirana Municipality
2. Specific applications for each request, containing the following information:
    - Authentication data of the applicant, as the name, last name, birthday, phone number, address etc.
    - The legal basis upon the request operation.
    - Reception confirmation of materials and protocol submission of the application
    - Deadline receiving response
    - Confirmation of electronic payment.

The design of this system requires integration between application components, including an operational database and unique determination of the data structure. The user interface should be the same for all modules. The system established should not be seen as an isolated system, but must interact with other existing systems of Tirana Municipality, as well as communicate with third parties concerned. In order to provide this, is necessary to be created an Application Program Interface (API), which allows communication between this system and other existing ones. This system must be reliable and able to provide information in real time to potential users, fulfilling the intensive demands of the municipality administration.

The proposed system should provide maximum integrity and coherence control between its modules, in order to avoid the possibility of the duplicated data. The required system should provide a high level of security, because handles sensitive and important data. User authentication will be carried through the security module, which is able to recognize digital certificates standard X.509v3 [3] according to national guidelines. The portal is based on three main components:

registration, identification, use of services with single sign method -a password for all, (illustrated in Fig 1).

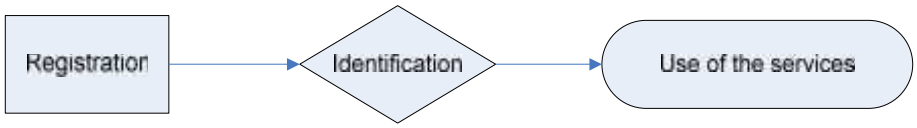


Figure 1. The portal Components

Also, this portal uses a system of transmitting digital certificates standard X.509v3 [3].

SYSTEM ARCHITECTURE

The above system enables the management, organization, storage and digital processing of the documents. Figure 2 shows the application structure, divided into two layers: application and infrastructure.

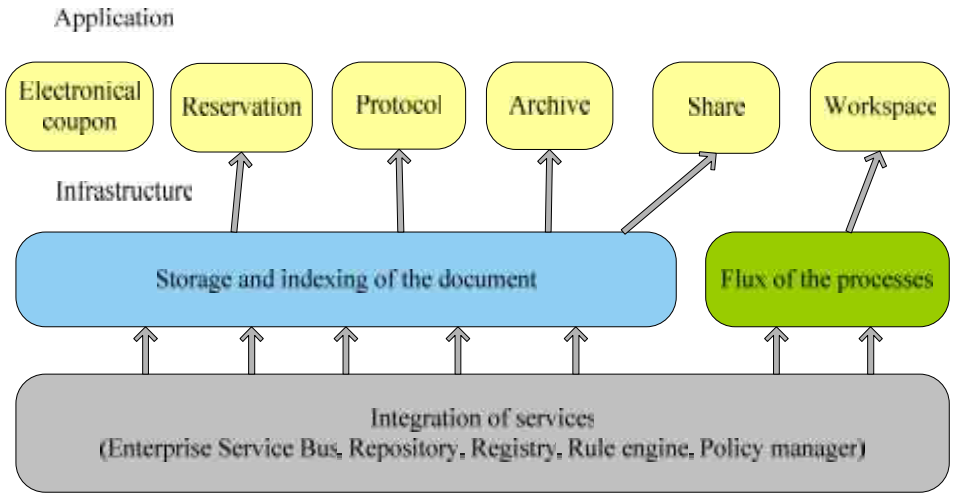


Figure 2. System Architecture 1

Electronic coupon - is a service that allows creating and managing electronic coupons, and relevant connection with the user.

Reservation - is a service that enables connection to external services for electronic storage, in accordance with legal provisions.

Process flow of documents - is a service that allows managing and sharing digital documents in the context of cooperative nature (Figure 3).

Storage and indexing of the document - is an engine of digital content management, a model based on SOA infrastructure (Service Oriented Architecture) [4].

Integration of services - is a system for managing the cycle of processes, which carries the definition, optimization, monitoring and integration of working practices of the municipality.

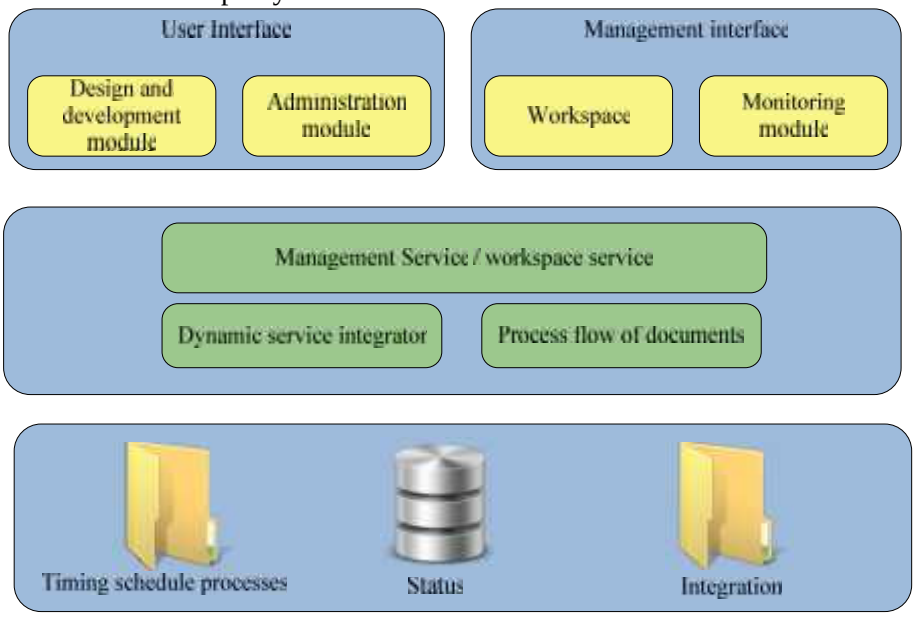


Figure 3. Documentation flow process

E-SERVICES

E-Services platform is a dedicated online service system to help citizens [5]. E-services is based on system identification that enables citizens to use a range of services, such as access to personal information, administrative practices, payment of fines, etc [6]. For all these services is necessary a secure recognition of the user, in order to enable the latter access to personal data [7].

The introduction of e-Service solutions for the first time within the Tirana Municipality has primarily been concerned with moving away from traditional information procedures and hierarchies. What's more, e- Service (through digital local government) has fundamentally transformed the ways in which the logistic processes and supply chain dynamics are managed within the municipality. However, e-Service remains a challenge to both citizens and public sector. Municipality must not only maximize the benefits that are offered (through the application of digital government and e-Service) but must also avoid the many pitfalls (economical, social and cultural) associated with rapid technological change. That is to say, despite advancements in technology solution, the challenges to effective government within today's knowledge society are profound.

Municipality of Tirana is the first government institution that has implemented the e-services platform in Local access points. Based on our study (Municipality of Tirana Transparency 2010), up to 20% of citizens queries cannot be addressed immediately. Citizens often need to meet with a "professional."

Municipality of Tirana has set up community access points (internet kiosks) to let clients meet 'professionals' and fill online their applications.

Figure 4. shows the complete workflow followed by an online service request. The citizen visits the official webpage of the Municipality of Tirana and fills the online form, containing and collecting all the necessary information to submit the request, which in addition to the paper form must:

- collect citizen's email address and/or other online contact information,
- check automatically for completeness of information and correctness of data types
- employ some mechanism that ensures there is a person submitting the form and that prevents automatic submission of requests (such is presenting skewed characters and requesting the citizen to recognize and to fill-up the characters in a check-field).

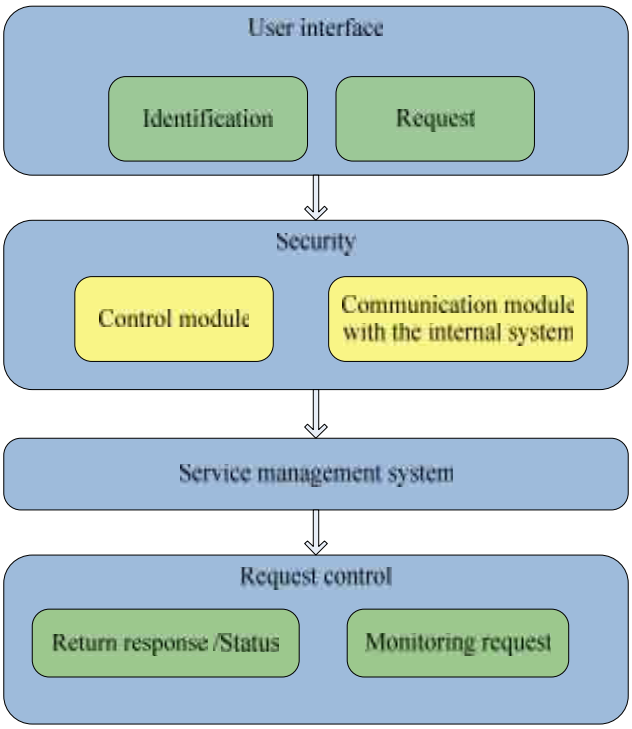


Figure 4. Request workflow

Integrated with other internal municipality systems, the e-services platform enables citizens to apply online for certain service, check the status of their request in the website of the municipality and receive the service online. E-services platform will act as secure, efficient and appropriate interface to give citizens online access to the services, provided by the Municipality of Tirana. The citizen completes the request form and submits it online through the municipality's web

site. The request is saved in the system in the queue "unconfirmed & pending confirmation online requests" for a period until the request is confirmed, or until the pre-set time expires, whichever occurs first. An automatic confirmation e-mail is sent to the requestor on the email address he/she has provided while completing the online request form. The citizen must confirm his/her request by following/clicking on the link sent in the confirmation e-mail in order to validate the request. If, following the instructions received in the email, the citizen does not confirm the request until the pre-set time expires; the request is purged from the system. The application process ends and the citizen must undertake the application procedure from the beginning. If, following the instructions received in the email, the citizen confirms the request, then: the request's status changes to "confirmed & pending support documents online requests". The request is saved in the system in the queue of "confirmed & pending support documents online requests" for a shorter of the two: until the citizen submits the supporting documents, or until the pre-set time expires. The system generates the request serial number and sends it back to the citizen for future reference via second email. This email contains instructions on the requested supporting documents and the pre-set time within which the citizen must submit the supporting documents in person or by other means. Citizen visits the "Citizens Information Office" in the Municipality of Tirana and submits the necessary supporting/required documents and proof of fee payment as per his/her request. The civil servant checks for completeness of supporting documents, sets the request's status in the system to "registered & all supporting documents received" and saves the changes to the request. The system appends the request to the queue of "registered & all supporting documents received" requests and generates a serial number of the request. The request becomes accessible to the department in charge for processing the request. The employee scans the relevant application form and all accompanying documents and stores them in the system. All the workflow is managed by the Document Management System (DMS). Each new request is appended to the queue of "registered & all supporting documents received". The status of the request changes to "request in progress". The system should be able to identify any action taken on this system and check its status. Once the application is processed, the status of the request will be changed to "complete". This status can have the values: "request approved" or "request rejected". After the citizen receives the service, the status of the request changes to "completed and delivered". The system automatically removes the request form the "completed & undelivered requests list" to "completed request list".

Figure 5. Documentation Management System

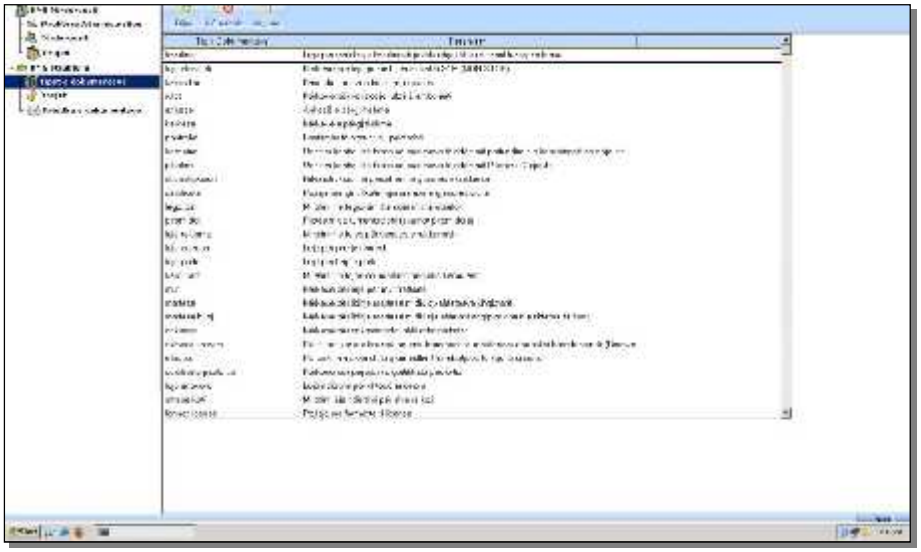
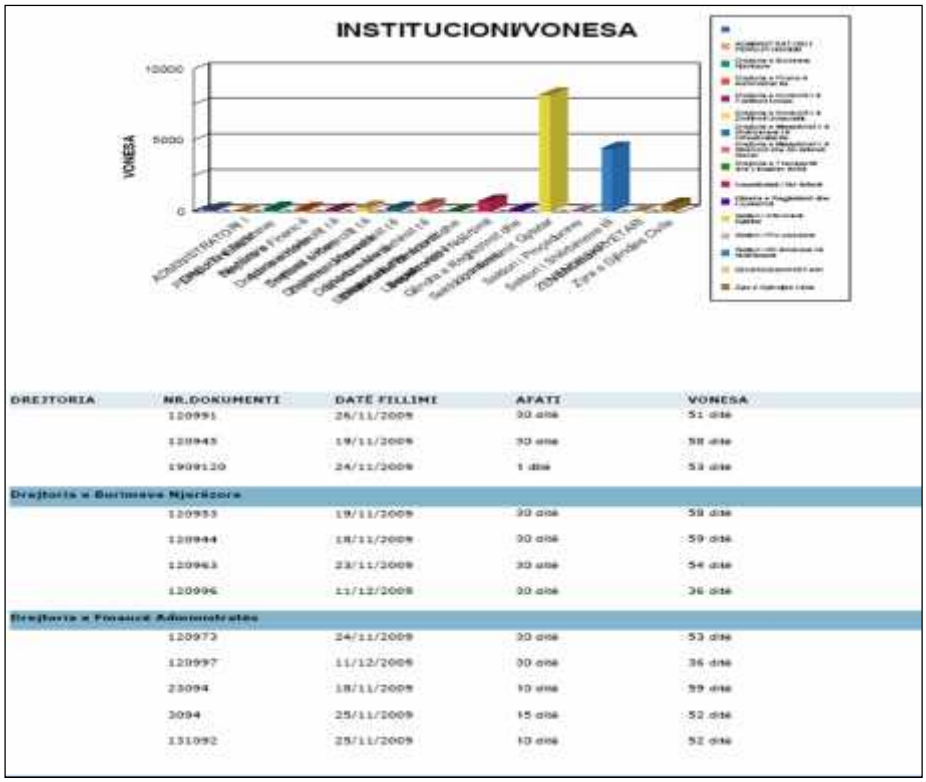


Figure 6. DMS – Administration Panel



DREJTORIA	NR.DOKUMENTI	DATE FILLIMI	AFATI	VONESA
	120991	26/11/2009	30 dite	51 dite
	120945	19/11/2009	30 dite	58 dite
	1909120	24/11/2009	1 dite	53 dite
Drejtoria e Burimeve Njerëzore				
	120933	19/11/2009	30 dite	58 dite
	120944	18/11/2009	30 dite	59 dite
	120963	23/11/2009	30 dite	54 dite
	120996	11/12/2009	30 dite	36 dite
Drejtoria e Financë Administratës				
	120973	24/11/2009	30 dite	53 dite
	120997	11/12/2009	30 dite	36 dite
	23094	18/11/2009	10 dite	59 dite
	3094	25/11/2009	15 dite	52 dite
	131092	25/11/2009	10 dite	52 dite

Figure 7. Generated reports

Part from the Source code, illustrating the registration of a new document in the Documentation Management System:

```
head id="Head1" runat="server">
   <link rel="stylesheet" type="text/css" href="Style.css" />
   <title>Sistemi i Manaxhimit te Dokumentave - Regjistrimi i Dokumentit</title>
   <meta content="JavaScript" name="vs_defaultClientScript" />
   name="vs_targetSchema">
</head>
<%--<script type="text/javascript" language="javascript" runat="server" >

      var docId='<%= Session("DocId").ToString() %>'
      function delete1() {
      if (confirm('Fshirja e dokumentit është e pakthyeshme. Doni ta fshini dokumentin?')){
      form1.action="frmDelete.aspx?DocId=" & docId.toString ;
            }
      }
</script>--%>
<body topmargin="0" bottommargin="15" leftmargin="0" rightmargin="0">
   <form id="Form1" method="post" runat="server">
   <!-- #include file="HeaderText.inc" -->
   <table id="Table1" height="100%" cellspacing="0" cellpadding="0" width="100%" bgcolor="White"
      border="1px" bordercolor="white" align="center">
      <tr id="kot">
         <td colspan="0" rowspan="0" valign="top">
            <telerik:RadSplitter ID="Radsplitter5" runat="server"  Width="100%" Height="100%"
              Orientation="Vertical" Skin="Sunset" BorderSize="0">
```

```
                    <telerik:RadPane ID="Radpane7" runat="server" Height="100%" Width="250">
                    <telerik:RadPanelBar ID="RadPanelBar2" runat="server" Skin="Sunset"
            Width="100%"
                dir="rtl">
                <CollapseAnimation Duration="100" Type="None" />
                <Items>
                    <telerik:RadPanelItem Text="Dokumenta" ImageUrl="image/doku.gif"
            Expanded="false" PostBack=false >
                    <Items>
                        <telerik:RadPanelItem Text="Që unë zotëroj"
                     ImageUrl="image/owned.gif"
      PostBack="False">
     <Items>
     <telerik:RadPanelItem runat="server" ImageUrl="image/fromPP.gif"
          Text="Pa përgjigje" Value="6">
      </telerik:RadPanelItem>
                    <telerik:RadPanelItem runat="server" ImageUrl="image/fromOthers.gif"
                Text="Me përgjigje" Value="7">
              </telerik:RadPanelItem>
              </Items>
              </telerik:RadPanelItem>
                    <telerik:RadPanelItem Text="Të cilëve u ka kaluar afati"
            ImageUrl="image/deadline.gif" Value="2">
             </telerik:RadPanelItem>
                    <telerik:RadPanelItem Text="Ku unë kam qënë aktiv" ImageUrl="image/doc.gif"
            Value="3">
              </telerik:RadPanelItem>
              </Items>
               </telerik:RadPanelItem>
                    <telerik:RadPanelItem Text="Njoftime" ImageUrl="image/notifications.gif"
            Expanded="false" PostBack=false>
              <Items>
                    <telerik:RadPanelItem ImageUrl="image/todo.gif" Text="Të reja" Value="4">
              </telerik:RadPanelItem>
                    <telerik:RadPanelItem ImageUrl="image/done.gif" Text="Të lexuara" Value="5">
                  </telerik:RadPanelItem>
                   </Items>
                   </telerik:RadPanelItem>
  </td>
 </tr>
```

This implemented system is up and running in the intranet of Tirana Municipality and in the community access points (internet kiosks). All the departments and the municipality Information Data Center are operating on it. This platform will be soon accessible also online, in the new official website of Tirana Municipality (currently under construction).

CONCLUSION

In this article is analyzed the document management system and e-services platform implemented in the Municipality of Tirana, providing services to citizens in digital format.

The implementation of this system offers greater efficiency of municipal service operations, increased accessibility to municipal services, uniformity of service delivery, enhanced transparency in providing municipal services, increased capabilities and new services.

This system enables the standardization of information, increases employee accountability, improves communication with citizens and creates more comfortable working conditions for employees of the municipality.

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