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Feasibility Study on a system for Registration of Albanian Emigrants

TO BE

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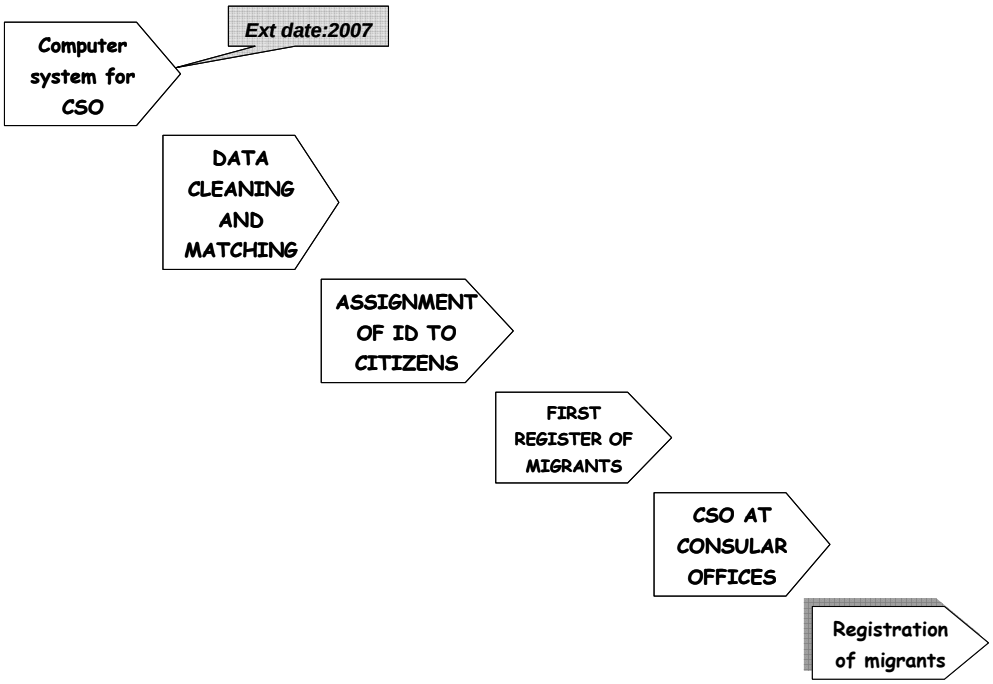
1 System's architecture

1.1 Introduction: a "two stages model"

As the development of this feasibility study proceeded, the consulting team realized the substantial impossibility to link the registration process to the implementation of full functionalities of CS at the CO.

The reason for this impossibility mainly comes from the need for the CS modernization to be completed, including the assignment of an ID code to each citizen, *BEFORE* CS role of the CO is enforced.[1]
Therefore, the sequence of events would look more or less like this:

SEQUENCE OF EVENTS (LINEAR APPROACH)



Since the modernization of the CS system is supposed to take not less than 2 years (in the best case), the question arises if and how to develop a registration system (and start a registration process) in the meanwhile.

An answer (a good and "feasible" one, in our opinion) was found in what is described in the following pages as a "short term approach": we concentrated back to the simple purpose of registration, trying to find a process (and then a system) that would collect the needed data while providing at the same time some added value to the CO, and at the same time leave all the back-office processes in Albania unchanged.

[1] This approach seems somehow to be a sort of "deviation" from the National Strategy and Action Plan, but it becomes mandatory if we do not want to wait two or more years before the registration begins

Therefore, in the following pages both scenarios are detailed in term of organization, business processes, gap analysis, and then the short term scenario only is developed in terms of technical solution, since the technical solution for the medium term will be part of the modernization of the civil status.

By all means, even in the short term model we will borrow the core of the data model from the CS project, in order to ensure full compatibility and an easy data upload.

This short term approach does not allow to build a real "civil status" register in the CO, (such target was necessarily postponed), but it will produce as an output the list of all people who interacted with the CO. The result will be obtained through the "interception" of a data flow: the "short term" system will simply replace the current process of paper based communication between the CO and the Ministry of Foreign Affairs. The system will provide to the CO staff the following macro-functionalities:

- Data entry
- Database management
- File transfer

1.2 Information-related issues

The Albanian emigrants living abroad will be registered by the Consular Offices of Civil Status in the "Albanian Abroad Register" (AAR).
This registration will necessarily have some impacts on the organization, the process and the working activity in the consular Office.
In order to allow the Civil Status Offices in Diplomatic Representations to deliver the full range of Civil Status services, we propose that in the medium term the Consular Officers assume the full responsibility of the data of Civil Status of Albanian Emigrants that fall under the jurisdiction of the Consulate[2]. Being fully responsible for the data means that certificates of Civil Status could be issued directly at the Consulate.
This change would generate some needs for change in terms of organization of the subjects involved in the Civil Status Service.
The activities related with the Civil Status performed by the Consular offices will be supported by an information system, which will allow to improve the processes and the services distributed to the Albanian Citizen, and to support the sharing of data with central bodies in Albania.
The system will also be able to support the process of passport issue and delivery, for which the Ministry of Public Order will be involved.
In the Short Term, the registration activity will be done electronically, but the responsibility of the Civil Status data of the Albanian residents abroad will be kept by the local Civil Status Office in the municipalities (where they have been originally registered). Therefore, the short term Architecture will have little or no impact on the organization and on the processes involved in delivering the services of Civil Status.
According to the to be model (in the medium term solution as well as in the short term one), the registration process is performed at the peripheral level, in other words by the Consular office, supported by an information system. In order to coordinate all these local collections of data, a

[2] This need already emerged in the national debate on migration and an amendment has been proposed within the article 11 of the law 8372

central supervision is needed. We named the subject[3] that will be in charge of this activity "Central AAR Unit", to underline its main function of managing the Albanian Abroad Register.

1.2.1 Medium Term Architecture

We provide a description of the medium term architecture in terms of Organization, Business Processes and Gap Analysis.[4]

1.2.1.1 *Medium Term Organization*

For the medium term architecture, the subjects directly involved in the solution proposed according to the main purposes of the system are: Consular Offices, "Central AAR Unit"[5], Civil Status Offices in the municipalities (CSO), Ministry of Public Order, other Albanian Institutions (such as Institute of Statistics, Social Security & Economic Assistance, Central Electoral Commission, etc.). These subjects will participate at different levels at the process of registration of Albanian residents and to the linked services distributed by the Consular Offices.

Entities	Main responsibilities related to the to be model (Medium Term)
Consular Office	Registration process for Albanian residents in the jurisdiction area Full responsibility of Civil Status Data Updating of the Fundamental Registers
Central AAR Unit	Coordination of the Albanian Abroad Registration Intermediation with other Albanian Institutions involved Attending to transfer of full responsibility of Civil Status data to the Consular Office
CSO - Civil Status Offices in the municipalities	Ultimate validation of Civil Status Data before transfer of responsibility
Ministry of Public Order	Giving authorization for passport issuing to qualified Consular Offices
Other Albanian Institutions	Receiving periodical data from the AAR

[3] We use here the term "subject" referring to the Central AAR Unit, while specific considerations about it are provided in the gap analysis section (please see below in the document).
[4] The reading of this chapter may be skipped if the reader is only interested in the registration system (see the "short term architecture"
[5] This subject is in charge of the function related to the management of AAR at a national level, as described below

Consular Office: it becomes a full Civil Status Office, delivering all services of civil Status, including the updating of the Fundamental Registers. Furthermore, it will be responsible of the Albanian Abroad Registers for the Albanian citizens living within its jurisdiction area. It will have relations with the Central AAR Unit, sending data and requests and receiving validated data.

Central AAR Unit The Central AAR Unit is the subject that – centrally – will be responsible for coordinating the peripheral registration made by the Consular Offices, and it will act as intermediary with the other Albanian Institutions involved in the process of registration, such as the Civil Status Office in the municipalities.
It will have function of "clearing house", checking the data sent by the Consulate Offices.

Civil Status Office in the municipalities: they attend to update the Fundamental Register with the status of expatriated of the Albanian emigrant, and they forward the ownership of the Civil Status data of the emigrant to the correspondent consulate office.

Ministry of Public Order: it is involved in the change of the passport delivery process, about the sending of the request from the consulate office.

Other Albanian Institutions: such as INSTAT, Ministry of Labor and Social Affairs etc. which are interested in receiving data about the emigrants.

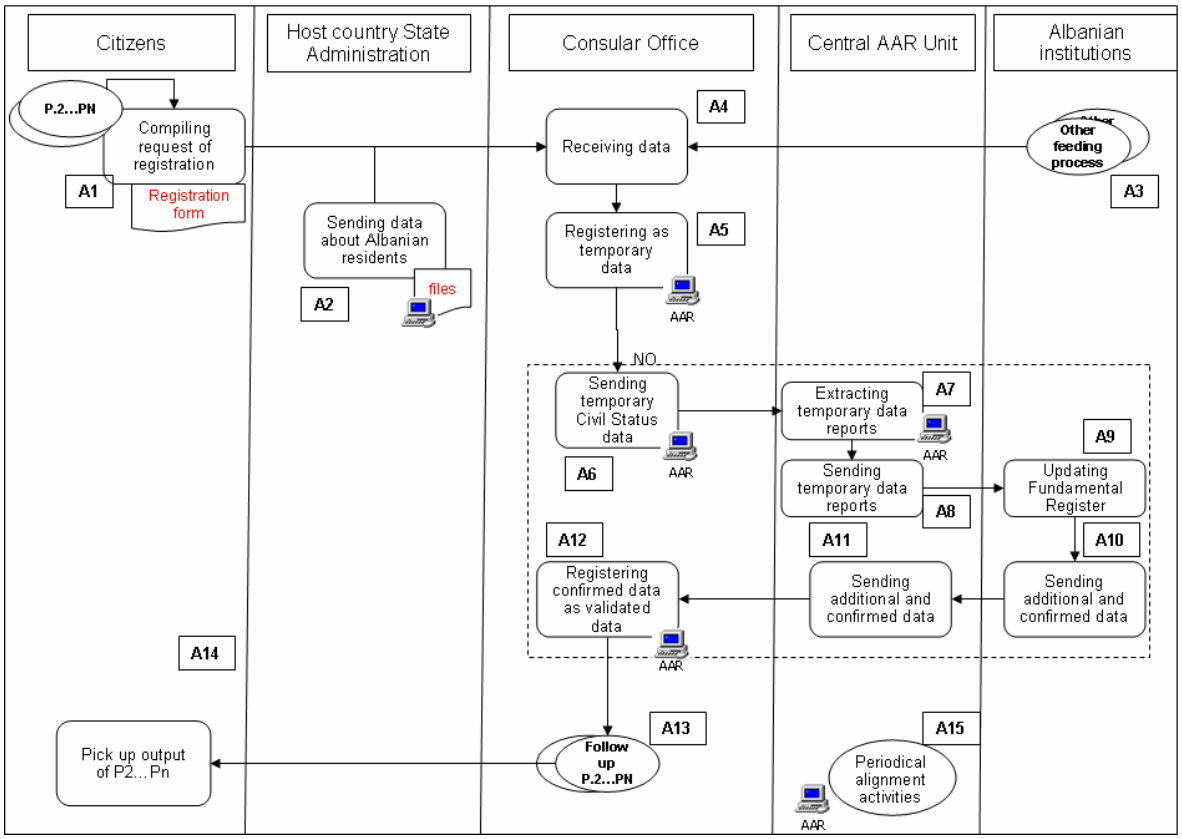
1.2.1.2 *Medium Term Business processes*

We have designed all main processes needed in order to achieve the system's goals, described in terms of workflows to be supported from the application.

Process n.1 Registration in the Albanian Abroad Register (AAR)

This process describes what happens when the citizen gives for the first time his / hers personal data to the Civil Status Office at Consulate.

The Medium Term process that we propose corresponds to the "final state" of the system.
The registration process is based mainly on "intercepting" some requests for consular services. In fact, the registration is, somehow, included in each process of the Civil Status services.



Code	*Actor*	*Action*	*Description*
A1	Albanian citizen	Compiling request of registration	The citizen fills a form and gives Civil Status data and Diaspora data
A2	Host Country State administration	Sending data about Albanian residents	Host country owns data in legal foreign residents and gives them electronically to the Consular Office
A3	Albanian institutions	Other feeding processes	Other Albanian institutions send data of citizens to the consular office
A4	Consular Office	Receiving data	The consular office receives data
A5	Consular Office	Registering as temporary data	The data collected are registered as temporary data in the system
Start validation process			
A6	Consular Office	Sending temporary Civil Status data	The consular office sends the Civil Status data thorough the system to the Central AAR Unit
A7	Central AAR Unit	Extracting temporary data reports	The Central AAR Unit extracts temporary data reports
A8	Central AAR Unit	Sending temporary data reports	The Central AAR Unit sends data to the correspondent Civil Status Offices in the municipalities
A9	Albanian Institutions	Updating Fundamental	The CSO in the municipalities updates the Fundamental Registers

		Registers	
A10	Albanian Institutions	Sending additional and confirmed data	The data integrated and confirmed by the CSO are sent to the Central AAR Unit
A11	Central AAR Unit	Sending additional and confirmed data	The Central AAR Unit sends the integrated and confirmed data to the Consulate Office
A12	Consular office	Registering confirmed data as validated data	The Consular office receives the confirmed data and stores them as validated data
End validation process			
A13	Consular office	Continuation of processes P2… Pn	The process (P2… Pn) that triggered the registration continues being carried out by the consular office.
A14	Albanian citizen	Pick up output of P2…Pn	The Albanian citizen picks up the output of the process he applied for
A15	Central AAR Unit	Periodical alignment activities	The Central AAR Unit periodically provides to check and align data in the AAR

We describe the registration process as a "cross process" for standard consular activities. This means that the trigger for the first step is generally the request of a service of the Civil Status Service (Processes described below, P2…Pn), when the citizen comes for the first time to the consular office. This kind of approach is consistent with the purpose of designing a system that will be a support to consular activities and not something unconnected with the standard consular processes.
In some cases it is possible that existing data can be imported directly into the system through massive uploading. Sources for this activity could be within the host country (such as Italian Civil Status) or in Albania (for example data owned by the Ministry of Public Order).
At the end of the "validation process" (actions A6-A12), the consular office receives the validated data of civil status and (A13) can continue to carry out the process of Civil Status (P2…Pn)[6] that got the registration starting (action A1). We will describe how these processes are carried out in the medium term below in this section.
It is important to underline that two main types of data will be registered in the Albanian Abroad Register (for more details see the Data Model description). The first type of data is the Civil Status data. The second type is the "Diaspora data", i.e. additional demographic information about the emigrant, such as his / her job or studies. The latter are used just for statistical and demographical study and use. Civil Status data need to pass through a "validation process" – as described in the table – in order to be used for official services by the Consulate Office.

The source of the personal data of the emigrants is mainly the citizen who comes to the consulate office applying for services. Nevertheless, other sources could be used for massive uploading of data, such as registers of civil status in the host countries or database owned by other Albanian institutions (i.e. the TIMS by the Ministry of Public Order).

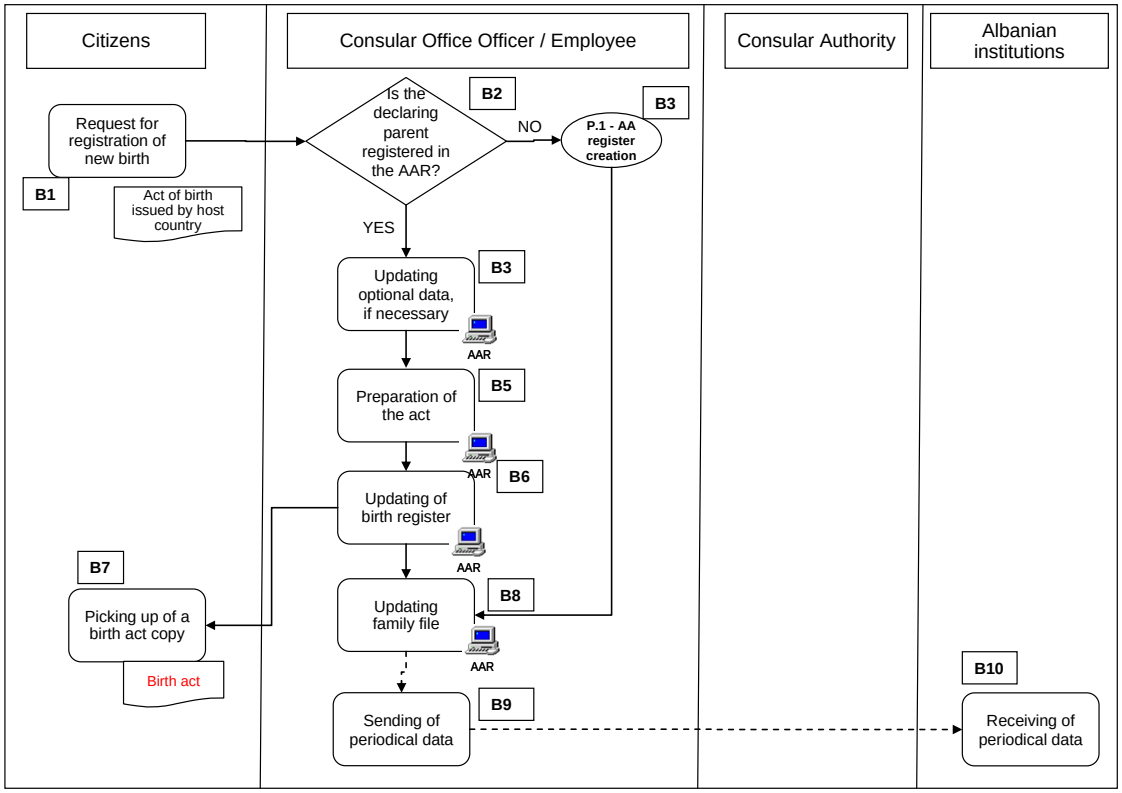
[6] In particular, see steps: B3 in Registration of Birth (P2); C3 in Registration of Marriage (P3); D3 in Registration of Death (P4); E3 in Issuing of certificates (P5); F4 in Delivery of passport (P6).

As it will be explained below in the section on the architecture of the system, we split the destination countries into three groups, depending on the number and size of the settled Albanian Diplomatic representations (and of the number of Albanian migrants, of course). For countries in group 3 (with smaller or less equipped representations), the passage from action A6 to A7, i.e. the sending of data from the representations to the Central AAR Unit, could be performed by saving data on a support and physically sending the support to Albania.

The processes that act as trigger for registration are all the processes related to the delivery of Civil Status services. In particular, we describe with some details the following ones:

Process of triggering	**Output for citizen**
P2 - *Registration of Birth of Albanian citizen abroad*	Copy of act of birth
P3 - *Registration of marriage of Albanian citizen resident abroad*	Copy of act of marriage
P4 - *Registration of death of Albanian citizens resident abroad*	Copy of act of death
P5 - *Issuing certificates for Albanian citizens abroad*	Certificate of birth, marriage, death…
P6 - *Delivering passport for Albanian citizens abroad*	Passport

Process n.2 Registration of birth of Albanian citizen abroad

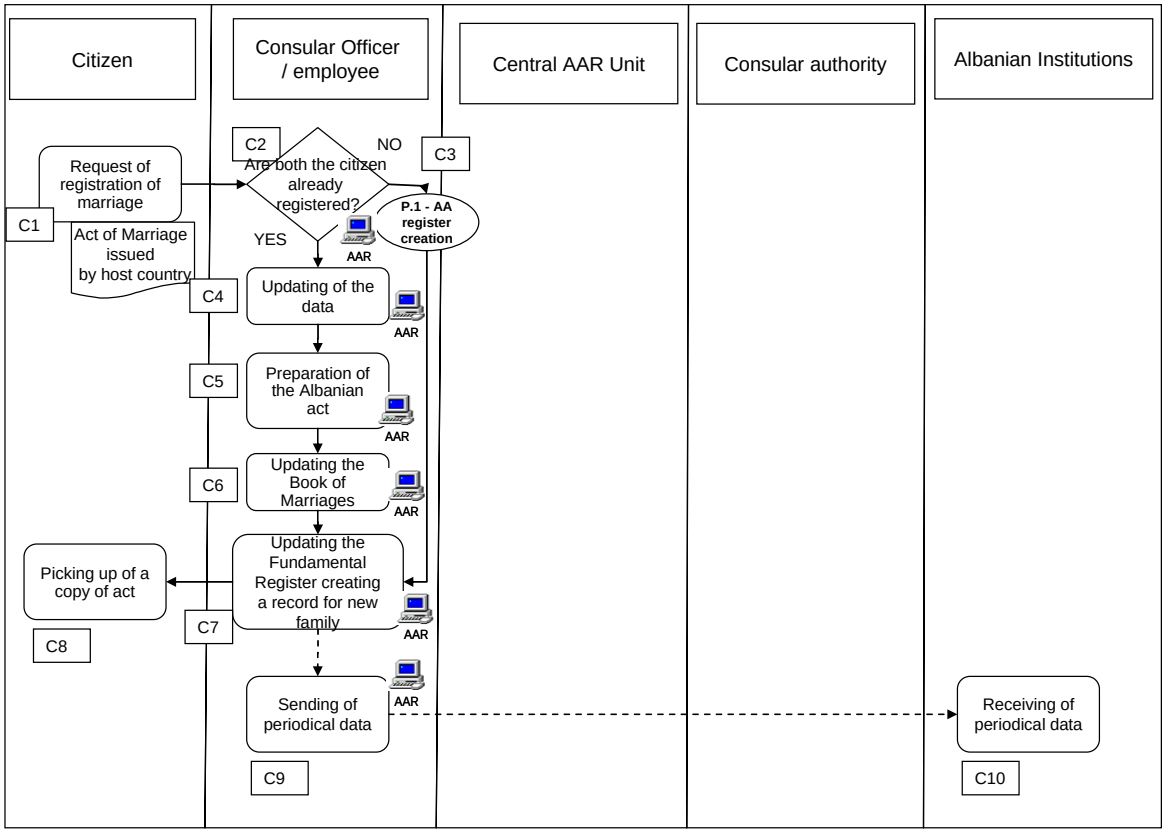


Code	*Actor*	*Action*	*Description*
B1	Albanian citizen	Request of registration of new birth	The citizen applies for registering a new birth the act of birth issued by the host country
B2	Consular Office	Is the declaring parent registered in the AAR?	The employee at civil status checks if the parent is already registered in the AAR
If No			
B3	Consular Office	Registration process	The process of registration in the AAR gets started
If Yes			
B4	Consular Office	Updating of the data	The consular office provides to update the optional data of the citizens
B5	Consular Office	Preparation of Albanian act	The consular office provides to prepare the Albanian act
B6	Consular Office	Updating of the birth registers	The consular office updates the birth register
B7	Albanian citizen	Pick up of birth act copy	The Albanian citizen picks up a copy of the act
B8	Consular Office	Updating the family file	The consular office update the family file adding the new born
B9	Consular Office	Sending of periodical	The Consular office sends periodical

		data	data to Albanian Institutions for statistical / consultation purposes
B10	Albanian Institutions	Receiving of periodical data	The Albanian Institutions receive periodical data for statistical / consultation purposes

We point out that activity B3 is the process of registration as described above (P1), and an outcome of this process is the updating of Fundamental Registers (activity B9), that can be performed by the Consular Office just after the validation process (that is part of Process of Registration), which shifts the full responsibility of Civil Status data from the original CSO in the municipality of Albania to the Consulate Office where the emigrant has been registered.

Process n.3 Registration of marriage of Albanian citizen resident abroad

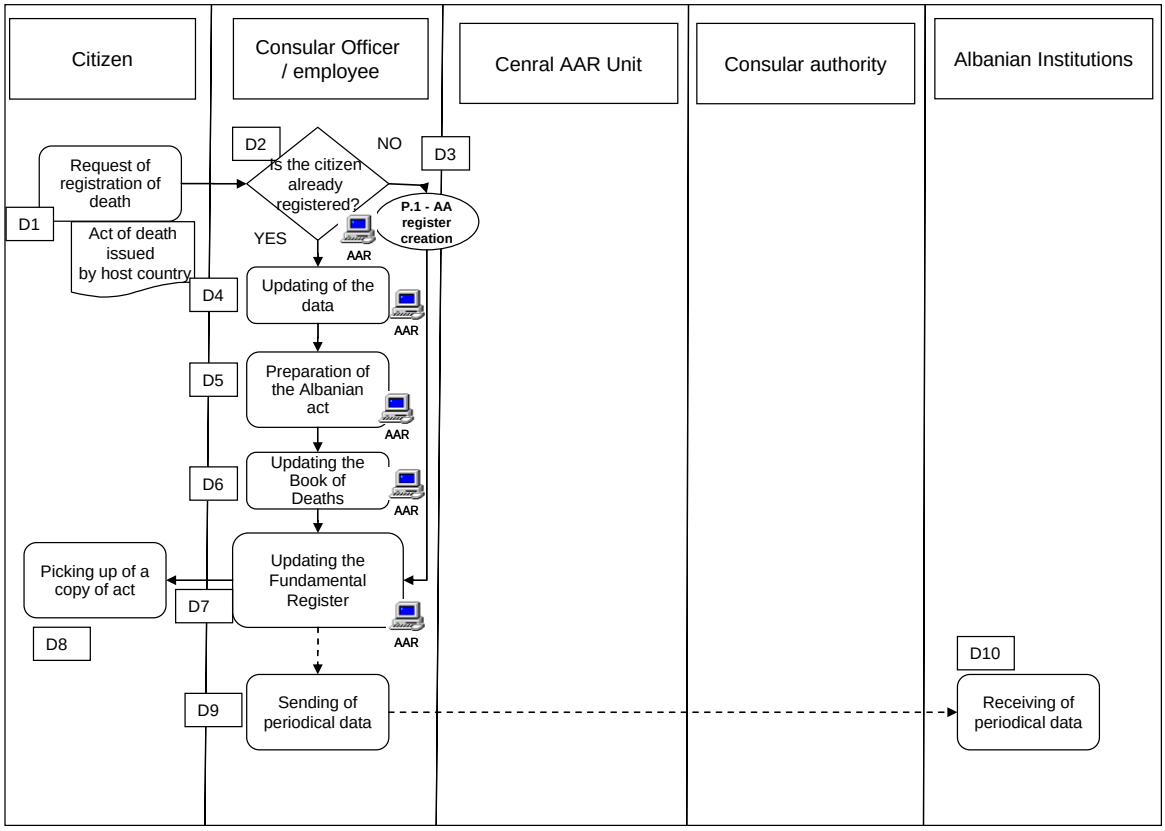


Code	*Actor*	*Action*	*Description*
C1	Albanian citizen	Request of registration marriage	The citizen applies for registering a marriage presenting the act of marriage issued by the host country
C2	Consular Office	Are both the citizens already registered?	The employee at civil status checks if both spouses are already registered in the AAR
If No			
C3	Consular Office	Registration process	The process of registration in the AAR gets started
If Yes			
C4	Consular Office	Updating of the data	The consular office provides to update the Civil Status data of the citizens
C5	Consular Office	Preparation of Albanian act	The consular office provides to prepare the Albanian act
C6	Consular authority	Authorizing of the act	Who is in charge of the Civil Status authority at the Consulate authorizes the act
C7	Consular Office	Updating of the Book of Marriages	The consular office updates the Book of Marriages

C8	Consular Office	Updating the Fundamental Register creating a record for new family	The consular office create a new record in the Fundamental Register for the new family and enter data of the two spouses
C9	Albanian citizen	Picking up of a copy of act	The Albanian citizen picks up a copy of act
C9	Consular Office	Sending periodical data	The Consular office sends periodical data to Albanian Institutions for statistical / consultation purposes
C10	Albanian Institutions	Receiving of periodical data	The Albanian Institutions receive periodical data for statistical / consultation purposes

The activity C3 is the Process of Registration (P1), which provide as outcome the transfer of responsibility of data to the Consular Office which can update the Fundamental Registers (activity C8)

Process n. 4 Registration of death of Albanian citizen resident abroad

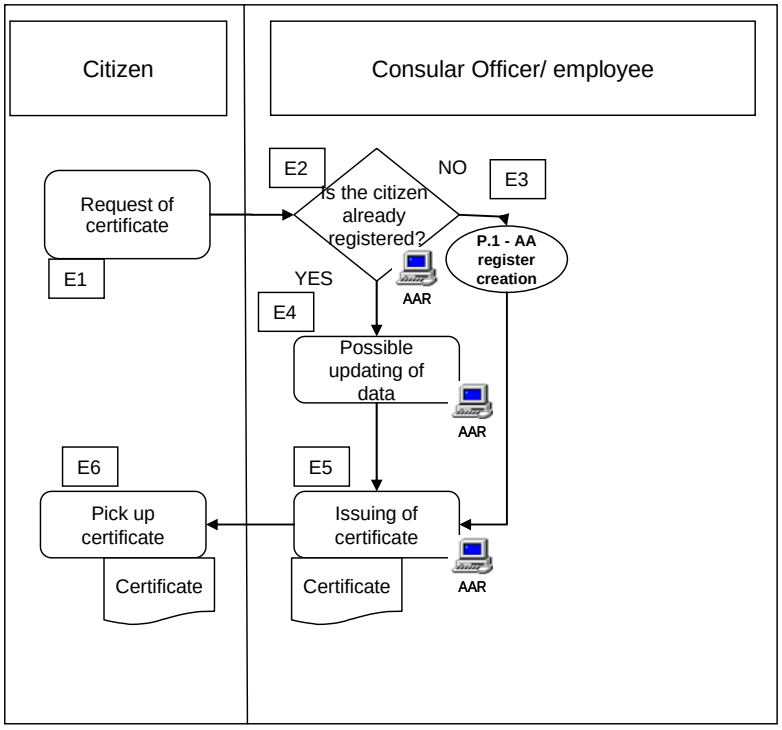


Code	*Actor*	*Action*	*Description*
D1	Albanian citizen	Request of registration of death	The citizen applies for registering a death presenting the act of death issued by the host country
D2	Consular Office	Is the citizen already registered?	The employee at civil status check if the citizen is already registered in the AAR
If No			
D3	Consular Office	Registration process	The process of registration in the AAR gets started
If Yes			
D4	Consular Office	Updating of the data	The consular office provides to update the data of the citizens
D5	Consular Office	Preparation of Albanian act	The consular office provides to prepare the Albanian act
D6	Consular Office	Updating of the Book of Deaths	The consular office updates the Book of Deaths
D7	Consular Office	Sending periodical data	The Consular office sends periodical data to Albanian Institutions for statistical / consultation purposes

D8	Consular Office	Updating the Fundamental Register	The consular office provides to update the Fundamental Registers
D9	Albanian citizen	Picking up of a copy of act	The Albanian citizen picks up a copy of act
D10	Albanian Institutions	Receiving of periodical data	The Albanian Institutions receive periodical data for statistical / consultation purposes

It is worth pointing out that like the other processes of Act Registering, also this one provides the possibility to open a registration process for the citizen (P1). Standing the particular nature of the process of death registering, it could be not mandatory to start a new registration.

Process n. 5 Issuing certificates for Albanian citizens abroad

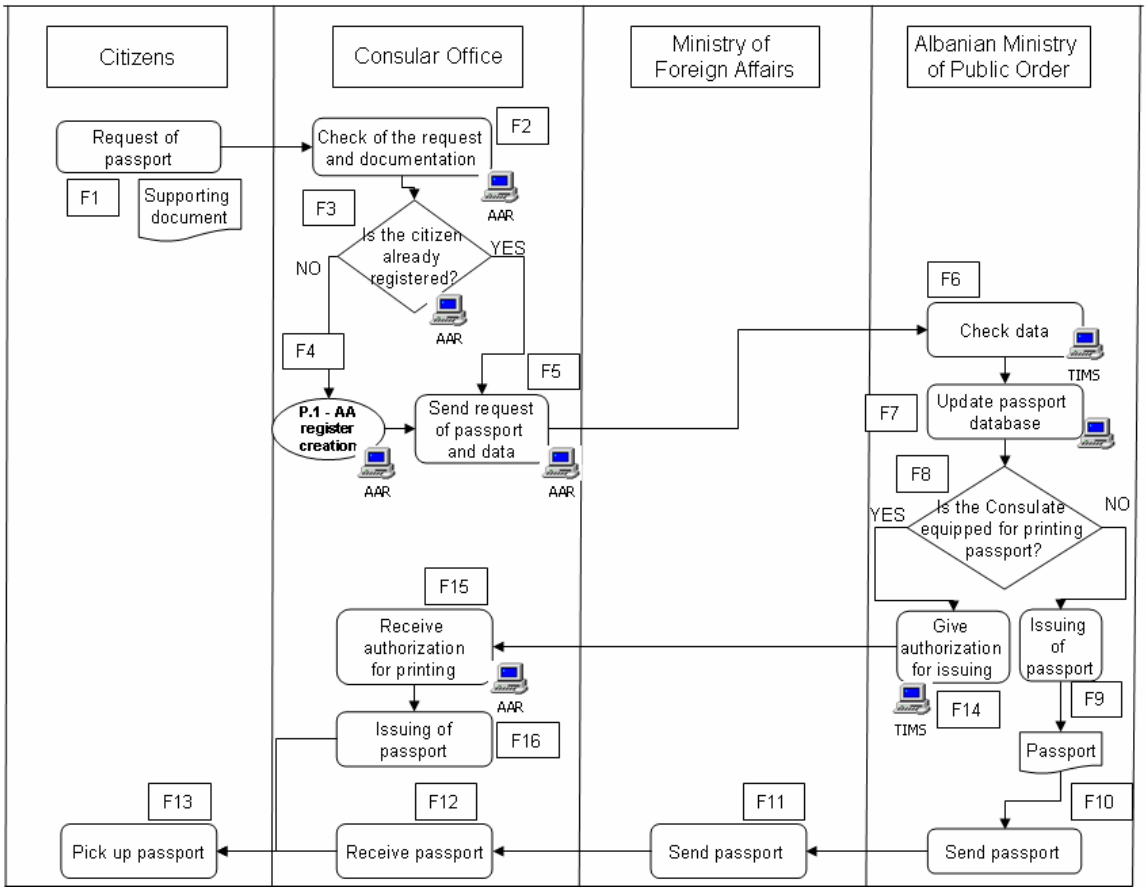


Code	*Actor*	*Action*	*Description*
E1	Albanian citizen	Request of certificate	The citizen applies for having a certificate (marriage, birth, death…)
E2	Consular Office	Is the citizen already registered?	The employee at civil status check if the citizen is already registered in the AAR
If No			
E3	Consular Office	Registration process	The process of registration in the AAR gets started
If Yes			
E4	Consular Office	Possible updating of the data	The consular office provides to update the data of the citizens (almost Diaspora data)
E5	Consular Office	Issuing of certificate	The consular office provides to issue the certificate
E6	Albanian citizens	Pick up certificate	The Albanian citizen picks up the certificate

Process P5 could be considered as a consultation process, in fact no modification of Civil Status is required, but just a certification of these data (marriage, birth, death, family etc.). So formally any updating of the Fundamental Register is performed: after the validation process (P1 triggered by activity E3), the data are just confirmed and not updated.

Process n. 6 Delivering passport for Albanian citizens abroad

This process describes how the Consular Offices deliver passport to citizens or even how they issue passport directly in the Consulate.



Code	*Actor*	*Action*	*Description*
F1	Albanian citizen	Request of passport	The citizen applies for a passport, presenting supporting documentation
F2	Consular Office	Check the request and documentation	The consular employee checks the application
F3	Consular Office	Is the citizen already registered?	The consular employee check if there are validated data of the citizen in the AAR
If No			
F4	Consular Office	Registration process	The process of registration in the AAR gets started
If Yes			
F5	Consular Office	Send request of passport and data	The consular office, through the system, send the data of the applicant and the request to the MOPO

F6	MOPO	Check data	The MOPO check the data of the applicant in its TIMS system
F7	MOPO	Update passport database	MOPO updates the passport database
F8	MOPO	Is the Consulate equipped for printing passport?	Check if the consular office can print on its own the passport
If No			
F9	MOPO	Issuing the passport	MOPO issues the passport
F10	MOPO	Send passport	MOPO sends passport to MOFA
F11	MOFA	Send passport	MOFA sends passport to the consular office
F12	Consular Office	Receive passport	The Consular Office receive passport
F13	Citizen	Pick up passport	Citizen pick up the passport
If Yes			
F14	MOPO	Give authorization for issuing	MOPO electronically gives the authorization for issuing the passport to the consular office
F15	Consular Office	Receive authorization for printing	The consular offices receive the authorization for issuing the passport, printing it directly in the consulate
F16	Consular office	Issuing of passport	The consular office issues the passport
F17	Citizen	Pick up passport	The citizen picks up the passport

We can imagine that, for small Consular offices, the issuing of passport is still completely in charge of the Ministry of Public Order. For the major diplomatic representations abroad, the process designed allows the passport to be issued directly at the Consulate (equipped with the proper printing machine). The key point in this process is that the responsibility for the issuing is still strictly owned by the Ministry of Public Order, which checks the data and give the authorization to the Consular Office for printing. In this way the "manufacturing" part of the process is split from the pure responsibility part. The first one is assigned to the periphery of the system, while the second is kept at the center. Such approach requires a real time link.

1.2.1.3 *Medium Term Gap Analysis*

In this section we point out the potential impacts of the "To be model" - in the Medium Term - on the main organizational features of the involved entities. For this purpose, we analyze – at a macro level – the organization, human resources, technology, and process requirements for the model implementation and the correlate gap with the current situation illustrated in the section 1 of AS IS study.

This gap analysis is the key, during the future implementation phase, to prepare a change plan (or action plan) including provisions for:

- legal framework amendments and/or new rules drawing and approval;
- organization alignments (covering new structures creation and launching, procedures preparation and issuing, personnel hiring and/or staffing...)
- a training plan for involved personnel within the consulates and other concerned administrations;
- a communication plan covering all the change issues and addressed to the appropriate targets;
- IT (infrastructures, software, interfaces) development plan.

Impact classification

In the following table, the major innovations introduced are described and classified under the levers impacted or kind of gap induced by them in the organization components. The considered clusters are:

- **Structure**: to optimize or simply perform the activities entailed by the new service model (the "To Be Vision"), is necessary to modify the current organization charts, by introducing working unit or assigning new functions/tasks to existing units;
- **Process:** it refers to the need of a partial or complete process redesign, addressed to the (new and/or current) processes affected by the new model (see the Purpose sections); the Business Process Reengineering (BPR) could further impact other components and results in transient negative effects (i.e. an initial slow down in the process completion).
- **Technology:** it refers to all the technology impacts induced by the model requirements, namely the functionalities to be developed, the network infrastructures, the systems to interface.
- **Human Resources**: it refers to the need of retraining, staffing, or resizing the affected human resources, essential and/or desirable to make the new model working;
- **Other levers**: it refers to external context, and includes impacts on legal framework, or third parties agreements, etc.; this kind of impacts could prevent, in some cases, the model implementation, because external entities are responsible for the actions required.

In some cases, as pointed out, the impacts are interrelated; therefore, in the action planning it is better to consider the global effect (i.e. not just the final users of the new applications must be trained but also the interfaced systems user).

In the table the principal impacts are highlighted. In some way we can say that other impacts depends on these principal impacts. Therefore we have three principal impacts:

1 Creation of the new process of registration of Albanian Abroad in the (AAR).

2 Revision of the current CS process (only for Albanian emigrants)

3 Revision of passport deliverance process (only for Albanian emigrants)

		Requirements (or gap classification)				
Impact code	**Description**	**Structure**	**Process**	**Technologies**	**Human Resources**	**Others**
IMP-01	**Introduction of a new process aimed to register the Albanian Abroad Emigrants**	✓	✓	✓	✓	✓
IMP-01/1	New role and new functions for the Albanian Consulates, acting as civil status office (CSO): they will keep the Albanian Abroad Register and become their official CSO. The consulate becomes owner of the process	✓	✓		✓	✓
IMP-01/2	Introducing of a new function at national level, aiming to intermediate between consulates and other Albanian institutions (mainly local CSO) and to act as a "clearing house", by checking and supervising at central level the data registered by the consulate	✓			✓	
IMP-01/3	New ways to manage relationship with users of consulates services, and Albanian or foreign institutions keeping Albanian emigrants data. Namely, it concerns the acquisition and exchanging of reliable data, in order to feed the AAR; this entails, for example		✓			✓
IMP-01/4	A specific system designed in order to support the registration process		✓	✓	✓	

IMP-02	**Revising of the current CS process (only for Abroad Emigrants) - fulfillment of registration process is a requirement for using revised traditional processes**	✓	✓	✓	✓	✓
IMP-02/1	New role for the consulate office - which becomes autonomous in the whole process	✓	✓			
IMP-02/2	Process supported by the new designed system (the same that supports the AAR)			✓		
IMP-02/3	Process life-cycle optimization	✓	✓	✓	✓	✓
IMP-02/4	Direct access to Civil Status data by other subjects (In the new model, the consulate offices directly give data to other Albanian Institutions for statistic aims)		✓	✓		✓
IMP-03	**Revising of the current passport deliverance process (only for Abroad Emigrants) - fulfillment of registration process is a requirement for using revised passport process**	✓	✓	✓	✓	✓
IMP-03/1	New functions of the consular office (printing of passports)		✓	✓	✓	
IMP-03/2	Electronic sending of requests and data to the MOPO		✓	✓		
IMP-03/3	New equipment for consular offices	✓	✓	✓	✓	
IMP-03/4	Process life-cycle optimization	✓	✓	✓	✓	✓
IMP-03/5	Interactions between the new system and other existing systems			✓		✓
IMP-03/6	Process supported by the new designed system (the same that supports the AAR)		✓	✓	✓	

Solution guidelines

In the table below we provide some guidelines about intervention in the different considered clusters: structures, rules and procedure, technologies, Human Resources development, other issues.

		Solutions and further enhancements				
Impact code	**Description**	**Structure**	**Rules and procedures**	**Technologies**	**HR development**	**Other**
IMP-01	**Introduction of a new process aimed to register the Albanian Abroad Emigrants**	Assignment of new function to the existing structure and / or creation of new structure (i.e. to GDCS, within the Ministry of Local Government and decentralization) (Albanian Ministries and Consulates) Organization and function chart updating	Civil Status Law updating Drafting of new procedures for AA registration	Integration of the consulate offices in the computerized Civil Status system	Personnel sizing, competence and workload evaluation Training and staffing alignment plan Study tours in foreign Public Administration performing similar process (for Consulate officers/employees) Communication actions to all targets (end users, others).	Formal agreement with host countries institutions detaining Albanian resident data Future upgrading possible by introduction of an computerized CS system Communication actions to all interested institutions; preliminary feeding of the AAR database
IMP-02	**Revising of the current CS process (only for Abroad Emigrants)**	Organization and function chart updating	Alignment and / or re-writing of consular manual procedures	Interaction with Central AAR Unit in Albania (for coordination and data communication)	Training and staffing plan; Communication actions to all targets (particularly end user)	Assignment of full responsibility of the data to Consular office (i.e. through updating of related laws)
IMP-03	**Revising of the current passport deliverance process (only for Abroad Emigrants)**	Organization and function chart updating	Alignment and / or re-writing of consular manual procedures and of Ministry of Public Order	Possible interaction with system of MOPO; agreement for technologies standard; ways for interconnection…	Training and staffing plan; Communication actions to all targets	Agreement with Albanian Institutions (i.e. MOPO for revision of the passport deliverance process);

As pointed out in the table, the introduction of the registration process implies the introduction of a specific function to the existing structure of the creation of a new structure. So far, we have referred to the subject in charge of the activities of central coordination of the AAR as the "Central AAR Unit". Which structure will effectively take charge of this function is something that needs to be

considered and discussed at (by the General Directorate of Civil Status and / or the Ministry of Foreign Affairs).

Highlights of the Medium Term Model

- The Consular Office could work like any other Civil Status Office in the municipalities
- No more paper travels between countries
- The system supports the full processes

1.2.2 Short Term Architecture

We provide a description of the Short Term Architecture in terms of Organization, Business Processes and Gap Analysis.

1.2.2.1 *Short Term Organization*

For the Short Term Architecture, the subjects directly involved in the solution proposed according to the main purposes of the system are: Consular Offices, "Central AAR Unit"[7], and Ministry of Public Order. These subjects participate at different levels at the process of registration of Albanian residents and to the linked services distributed by the Consular Offices.

Entities	Main responsibilities related to the to be model (Short Term)
Consular Office	Registration process for Albanian residents in the jurisdiction area
Central AAR Unit	Coordination of the Albanian Abroad Registration Intermediation with other Albanian Institutions involved
CSO - Civil Status Offices in the municipalities	Unchanged: no difference with to the AS IS process
Ministry of Public Order	Giving authorization for passport issuing to qualified Consular Offices
Other Albanian Institutions	Unchanged: no difference with to the AS IS process

There are some significant differences between the roles of the involved subjects in the Medium Term architecture and in the Short Term Architecture.

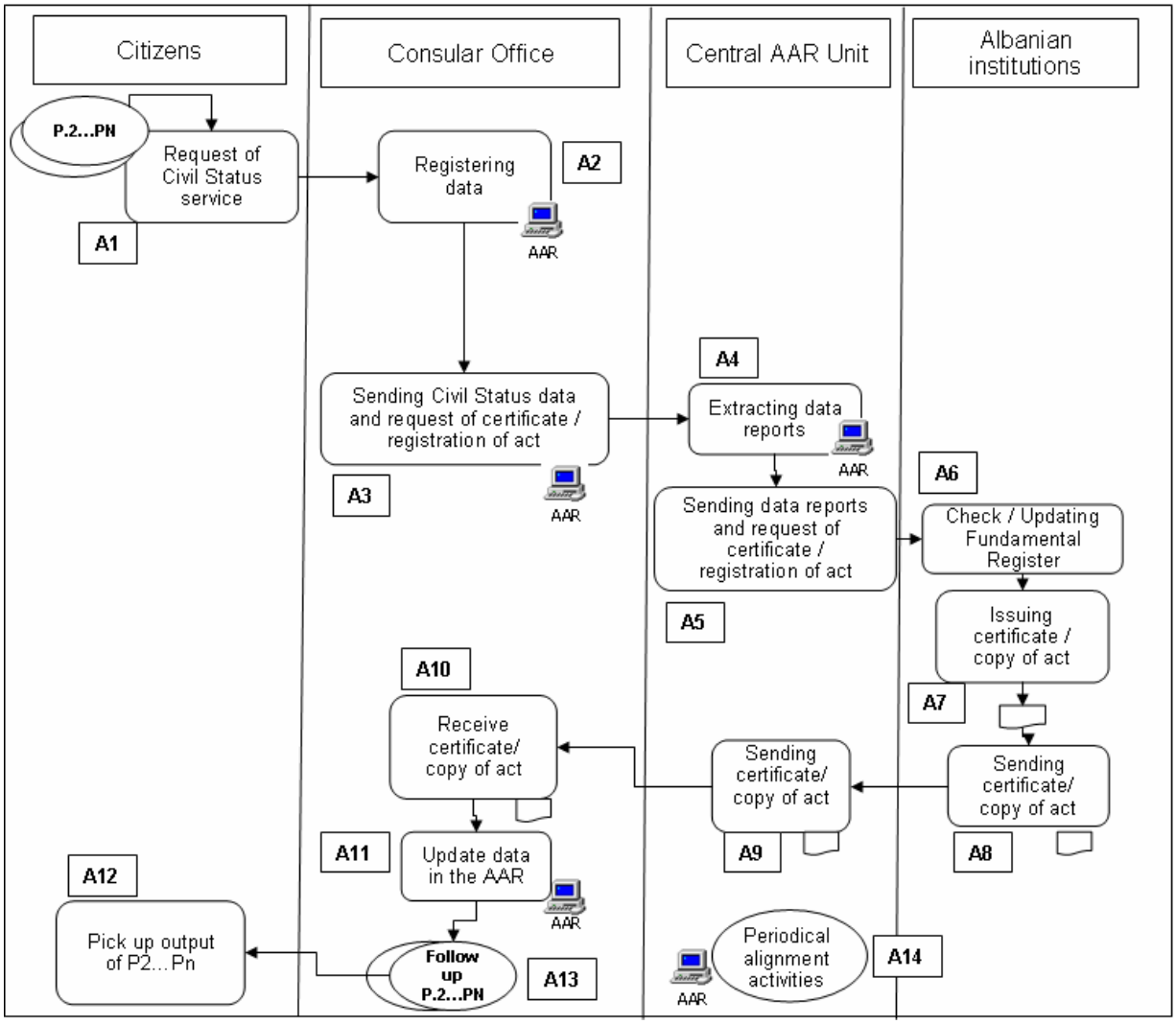
In the Short Term Organization, the Consular Office is not responsible for Civil Status Data yet, neither for updating Fundamental Registers.
The Central AAR Unit does not attend to the transfer of responsibility of data to the Consular Office.
The MOPO could give the authorization for printing passports already in the Short Time phase (that does not depend on the ownership of the data).

[7] This is a structure that will carry up the function related to the AAR, as described below

1.2.2.2 *Short Term Business processes*

Process n.1 Registration in the Albanian Abroad Register (AAR)

This is the Short Term design we propose for the registration process. It is intended to work in a transition phase, before the full computerization of Civil Status System in Albania will be completed.
This proposal represents the first step to begin registering data in a reliable way, replacing paper communication with file transfer.
Until computerization of Civil Status in Albania is not yet done, there is little or no chance to provide the Consular Offices with full CSO functions, but in the meanwhile we can start building our register by "intercepting" some requests for consular services.



Code	*Actor*	*Action*	*Description*
A1	Albanian citizen	Request of Civil Status Service	The citizen applies for a service of Civil Status at consulate office (P2…Pn)

A2	Consular Office	Registering data	The consular office registers data (including Diaspora data) in the system
A3	Consular Office	Sending Civil Status data and request of certificate / registration of act	The consular office sends the Civil Status data thorough the system to the Central AAR Unit and the request that the citizen applied for
A4	Central AAR Unit	Extracting data reports	The Central AAR Unit extracts data reports
A5	Central AAR Unit	Sending data reports and request of certificate / registration of act	The Central AAR Unit sends data and request to the correspondent Civil Status Offices in the municipalities
A6	Albanian Institutions	Check / Updating Fundamental Registers	The CSO in the municipalities check and / or update the Fundamental Registers
A7	Albanian Institutions	Issuing certificate / copy of act	The CSO issues the certificate or copy of act that the citizen initially applied for
A8	Albanian Institutions	Sending certificate / copy of act	The CSO sends the certificate or copy of act that the citizen initially applied for, to the Central AAR Unit
A9	Central AAR Unit	Sending certificate / copy of act	The Central AAR Unit sends the certificate / copy of act data to the Consulate Office
A10	Consular office	Receive certificate / copy of act	The Consular office receives certificate / copy of act
A11	Consular office	Update data in the AAR	Employees at the Consulate Office update the data in the AAR, using the data contained in the certificate / act received
A12	Consular office	Follow up of processes P2 . Pn	The consular office follows up the processes activities of the process trigger of the registration
A13	Albanian citizen	Pick up output of P2…Pn	The Albanian citizen picks up the output of the process he applied for
A14	Central AAR Unit	Periodical alignment activities	The Central AAR Unit periodically provides to check and align data in AAR

As mentioned above, in the Short Term Organization the Consular Office is not responsible for Civil Status Data yet, neither for updating Fundamental Registers. Anyway, an action is introduced in the process in order to allow the future updating of the AAR with official data. This is what happens in the action A14: at this phase of the process, the employees of Consular Office use the certificates sent by Albania for updating the AAR with official data. The main aim of this action is to engage a continuous work of improvement of the AAR, headed in the direction of improving the quality and the validity of the database.

P2…Pn Processes

One of the main features of the Short Term Architecture is that the registration process does not impact the "back office process" in Albania. In fact just the sending of data and request is performed electronically, while the rest of the process is still paper-based, just alike in the AS IS process.

So, basically the workflow is like the one designed in the description of the registration process (P1, see above).We provide in the scheme below a list of the changes of the nature of the relations among the subject involved in the processes of Civil Status.

The nature of relations among subjects

The table below points out the nature of relations among the subjects involved in the processes of Civil Status, as implied by the Short Term Architecture

Actor	*Action*	*Kind*	*Method*	*Description*
Albanian citizen	Request of service	E	A	Citizens make request at Consulate Office or through consulate web site
Consulate	Register data	E	A	Employee at consulate Office insert data in the system / receive them from the web site
Consulate	Send request	E	A	Request of Civil Status are electronically sent
Central AAR Unit	Receive request	E	A	Request are received electronically
Central AAR Unit	Send request	P	M	Request are printed and sent to the local CSO
CSO	Make variation / compiling	P	M	CSO update the registers
CSO	Issue document	P	M	CSO issue act or certificate
CSO	Send document	P	M	Documents are physically sent
Central AAR Unit	Send notification / document	P	M	Forms are physically sorted and sent to Consulate
Consulate	Receive notification / document	P	M	Keep notification / act
Albanian citizen	Pick up of document	P	M	Citizens at Consulate Office pick up document

Paper: information is managed on paper
Electronic: the information is managed on an electronic support (database, file…)
Automatic: information transfer is computerized
Manual: information is transported not in electronic way

1.2.2.3 *Short Term Gap analysis*

In this section we point out the potential impacts of the "To be model" - in the Short Term - on the main organizational features of the involved entities.

For the details on the method of the Gap analysis, please see the paragraph 1.2.1.3 above.

In the next table we represent the main impacts rising from the Short Term Architecture.

		Requirements (or gap classification)				
Impact code	**Description**	**Structure**	**Process**	**Technologies**	**Human Resources**	**Others**
IMP-01	**Introduction of a new process aimed to register the Albanian Abroad Emigrants**	✓	✓	✓	✓	✓
IMP-01/2	Introducing of a new function at national level, aiming to intermediate between consulates and other Albanian institutions (mainly local CSO), supervising at central level the data registered by the consulates	✓			✓	
IMP-01/3	New ways to manage relationship with users of consulates services.		✓			✓
IMP-01/4	A system supports the registration process		✓	✓	✓	
IMP-02	**Revising of the current CS process (only for Abroad Emigrants) – Registration is a requirement for using traditional processes**	✓	✓	✓	✓	✓
IMP-02/2	The system used for the registration process supports also the traditional Civil Status services			✓		
IMP-02/3	Process life-cycle **partial** optimization	✓	✓	✓	✓	✓

IMP-03	**Revising of the current passport deliverance process (only for Abroad Emigrants) - Registration is a requirement for using traditional processes**	✓	✓	✓	✓	✓
IMP-03/2	New functions of the consular office (printing of passports)		✓	✓	✓	
IMP-03/3	Electronic sending of requests and data to the MOPO		✓	✓		
IMP-03/4	New equipment for consular offices	✓	✓	✓	✓	
IMP-03/4	Process life-cycle optimization	✓	✓	✓	✓	✓
IMP-03/5	Interactions between the new system and other existing systems			✓		✓
IMP-03/8	The system used for the registration process supports also the passport process		✓	✓	✓	

The electronic registration of data of applicants for Civil Status Service is mandatory to proceed with the process.

There is just a partial optimization of the life-cycle process. Indeed, just the part of the processes “form the Consulate Office to the Central AAR Unit” gets improved, since it will be performed electronically. On the other hand, the back- flow from the Central AAR Unit to the Consular Offices will keep on being paper based.

As far as the passport process is concerned, in the Short Time Architecture it will be affected by almost all the impacts expected also for the Medium Term. In fact, one of the main points of differences between the two solutions, i.e. the full role of Civil Status Office taken on charge by the consulate, has not substantial consequences on the passport delivery process.

No new interactions are needed between the Consulate Office and the other Albanian Institutions (i.e. for sending data for statistical use)

Solution guidelines

In the table below we provide some guidelines about intervention in the different considered clusters: structures, rules and procedure, technologies, Human Resources development, other issues.

		Solutions and further enhancements				
Impact code	**Description**	**Structure**	**Rules and procedures**	**Technologies**	**HR development**	**Other**
IMP-01	**Introduction of a new process aimed to register the Albanian Abroad Emigrants**	Assignment of new function[8] to the existing structure (i.e. to GDCS, within the Ministry of Local Government and decentralization) (Albanian Ministries and Consulates) Organization and function chart updating	Civil Status Law updating (registration process must be performed only electronically, see paragraph 0 below) Drafting of new procedures for AA registration	Development and implementation of a new application supporting the process of registration (see paragraph 0 for further details); possibility of on-line registration	Training and staffing alignment plan Communication actions to all targets (end users, others)	
IMP-02	**Revising of the current CS process (only for Abroad Emigrants)**	Organization and function chart updating	Alignment and / or partial re-writing of consular manual procedures	Interaction with Central AAR Unit in Albania (for coordination and data communication)	Training and staffing plan; Communication actions to all targets (particularly end user)	
IMP-03	**Revising of the current passport deliverance process (only for Abroad Emigrants)**	Organization and function chart updating	Alignment and / or re-writing of consular manual procedures and of Ministry of Public Order	Possible electronic interaction with MOPO (i.e. electronically sending of requests)	Training and staffing plan; Communication actions to all targets	Agreement with Albanian Institutions (i.e. MOPO for revision of the passport deliverance process);

Since the registration is electronic, the Co may in the future use their web site to allow Albanian citizens to apply on – line for services and send a pre-registration through the web. This would significantly reduce the workload of the CO and, in the medium term, may even replace the need for

[8] Central AAR Unit

any physical interaction at the moment of requesting, for instance, a certificate. A future "virtual Consular Office" would be feasible with a reasonable amount of effort and resources.

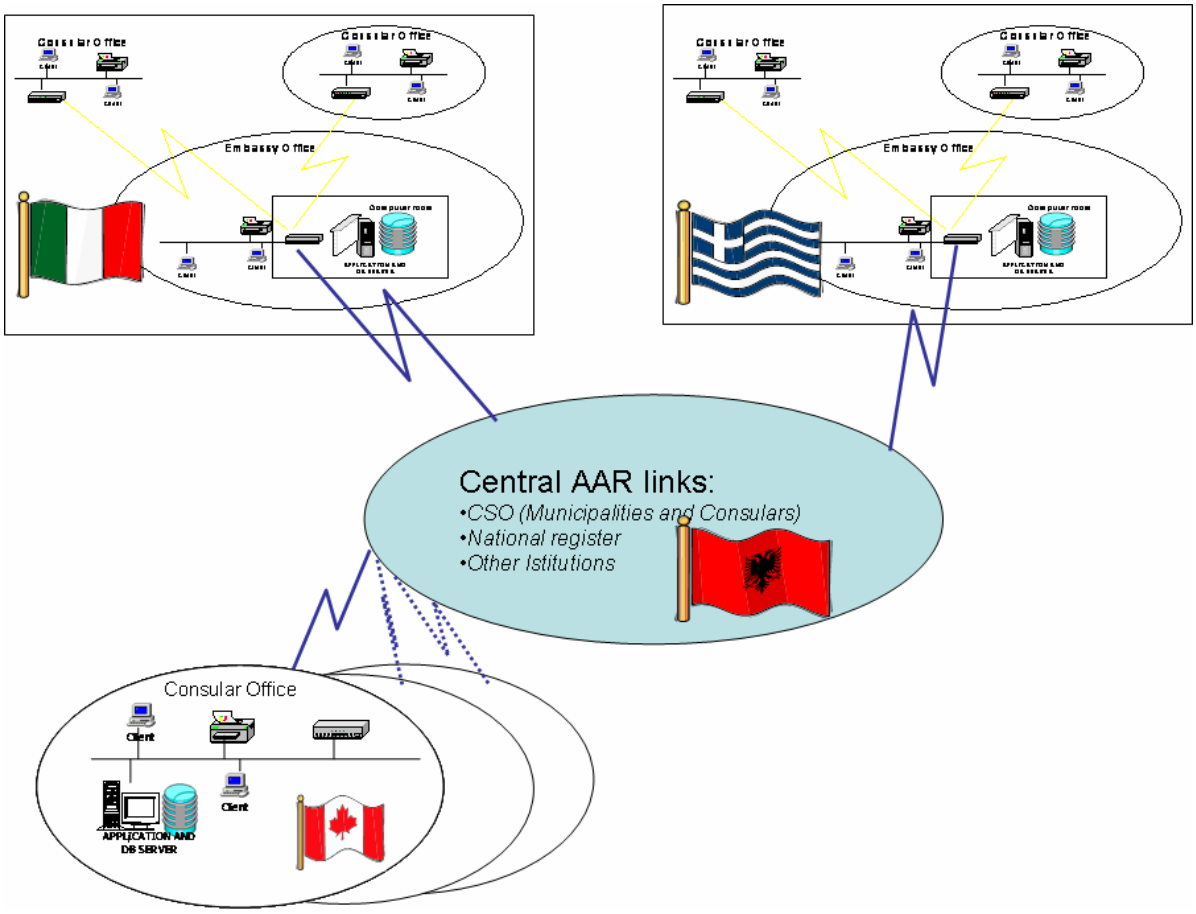
Highlights of the Short Term Model

- The **registration is performed electronically**
- The **transfer of request** from consular offices to Albania **is performed electronically**
- A **new function (Central AAR Unit)** centrally receives request from the system
- **No changes needed** in the back office process in Albania
- A data base on migrants starts being built, through a process ensuring **quality and consistency** with Fundamental Registers
- **More new functions are postponed** after modernization of Civil Status will be completed

1.3 Technical architecture (Short Term)

As established in the description of businesses processes (see paragraph 1.2.1.2 above), the main objective for the AAR system is to maintain the updating of the register of the requests of documents and certificates, in order to collect and store informational data about abroad citizens.

Technically, the Central AAR Unit acts as the hub for routing the data from Albania to other countries and vice versa. The consular office sends periodically its requests, the Central AAR routes them to other offices. This allows having a focal point for every communications, to sort the requests for CSO or institutions, to have a single international telephonic link from Albania to embassies. Until the computerization of Civil Status in Albania will be completed, the Central AAR Unit will communicate with the local CSO by mail, courier or fax; when the computerization will be completed, the Central AAR could be connected electronically to the CSO.



There are 43 Albanian diplomatic representations worldwide to be provided with an "AAR System", but considering that the most part of the Albanian emigrants have been settled in Greece and Italy, we can divide them in three categories:

- Group 1 countries (G1): Greece and Italy have about 270.000-660.000 people to manage, there are 3 consular offices for each country. They need a resilient solution, easy to access from every consular office, and a unique database.

- Group 2 countries (G2): The Diplomatic Representations are small; they need a cheap solution to provide documents, easy to use. Every representations shall have a data base with few thousands records.

- Group 3 countries (G3): The Diplomatic Representations are very small; they need an economic solution to provide documents. These embassies will continue to send request via mail or fax, using the actual channel to communicate with Central AAR (for this group only, the employees of Central AAR Unit are considered the only users of the system).

The development objectives of the "AAR System" are.

- to create a reliable registration (without duplicates or voids) that will support a secure voting process for abroad citizens, so contributing to fair elections,

- To grant the maintenance of the possible evolutions, such as the ID number or ID card.

- To provide bi-lingual output document to facilitate the employee of the Consular Office, minimizing translation costs and reducing the production time of documents.

- To provide the same functionalities for all the diplomatic representations, independently from the environment where the application runs

- To realize user friendly capabilities to extract data from local data base to XML or xls format,

- To grant the access only to authorized employees and to use secure protocol in the link connection from client to server and in the geographical links

- To support local and remote clients with Albanian and Consular Office country key-boards

- To provide functionalities to import data from other data bases and to facilitate the controls for the massive uploading of data.

- To align the Central AAR with the Consular AAR periodically (at least monthly).

- To provide the list of the outstanding requests to Central AAR.

- To store informational data about emigrants (such as job, school degree, etc) spontaneously provided from citizens.

There are objectives to realize in order to grant the up-time of the application, avoiding the introduction of complex and expensive procedural routines just for the international environment:

- to provide a central help desk, contactable via web, e-mail or phone during the opening hours of the consular offices

- to realize a thin client without application code

- to distribute patches through auto-installed procedures

- to manage the computer room running without specific IT personnel

- to provide running code on MS-Win platform to upgrade the application code to the new releases of the operating system

- to provide back and restore routines for the data and the server configuration that does not involve local IT personnel. The backup copies will be used to rebuild the data base and the server and to store a monthly configuration backup into a safe- box or strong-room

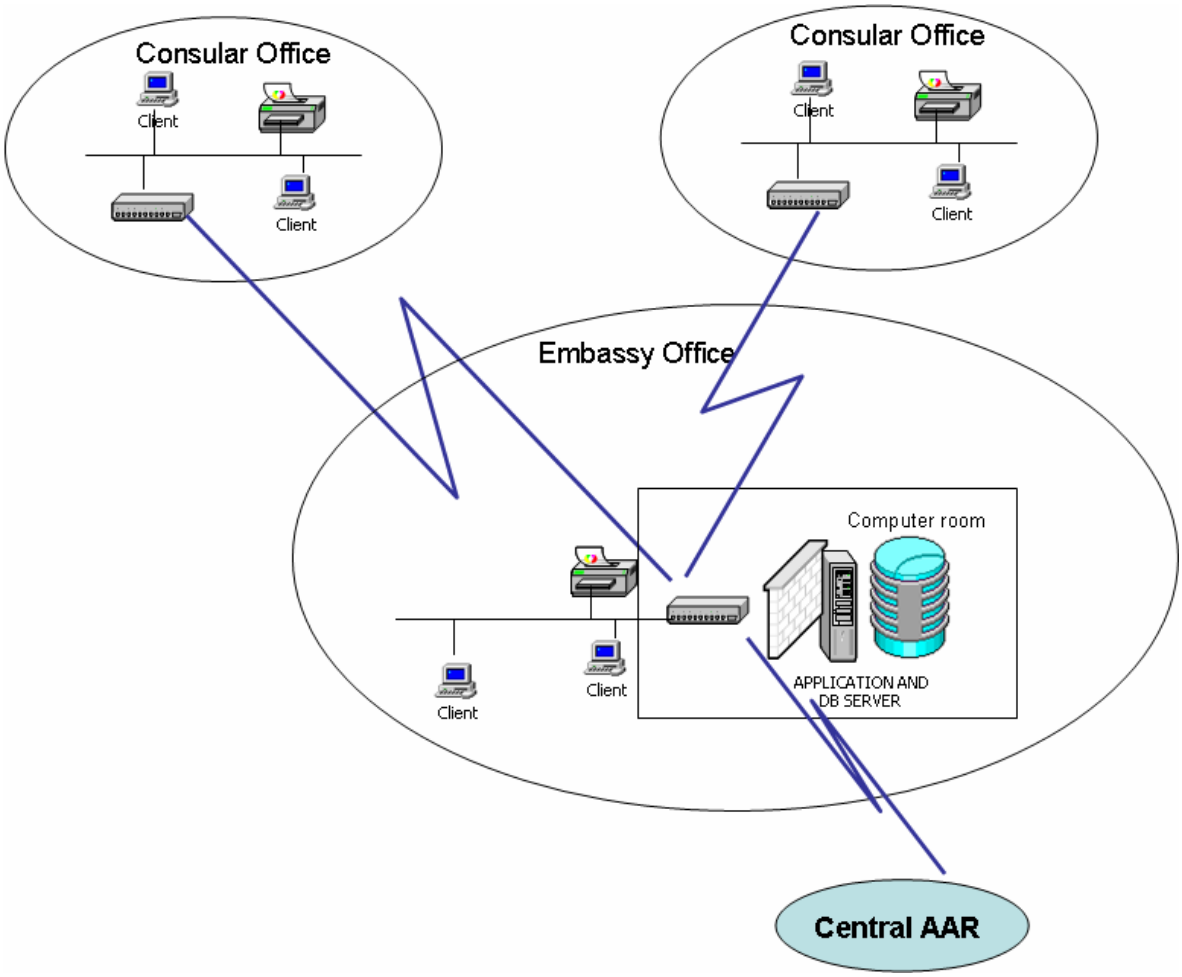
We analyzed the Intech+ CSO package and systems of Ministry of Public Order (TIMS and passport issuing system), these solutions support the digitalization of Civil Status Offices at pilot locations, and the management of passports and border checks; some functionalities are similar to AAR systems, as the registration of personal data and district where resident.

Some forthcoming events (i.e. the effective introduction of ID number and ID card and most of all the computerization of Civil Status in Albania) could generate some need for changes on the Intech+ CSO application, in terms of data model and client / server architecture. Our final evaluation and recommendation is that it is not worth to use this existing CSO application in the short term as well, also because just a few of its functionalities would be used in the AAR system.

Due the objectives of AAR system, the time and resources needed for developing the package are quite limited, so we suggest developing a specific package based on customizing of standard packages for small medium business, rather than adapting an existing solution.

Beyond the focus of this study, the infrastructures that support the AAR system could be used also for the automation of other activities of the Consular Office, which will be performed in a secure environment.

1.3.1 **Characteristics of the environment for diplomatic representations for Group 1**



As shown in the figure above, this architecture requires to install only an imagine of the application into a computer room in the Embassy, and to connect through secure link the computer room with the CO within the same country.

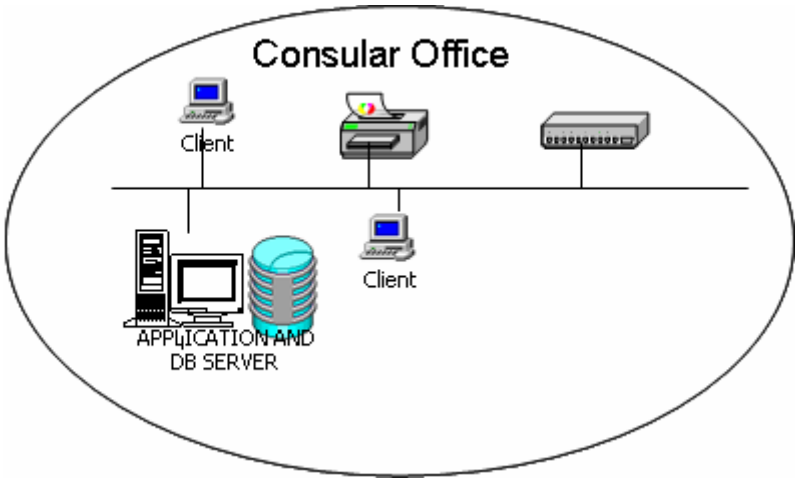
The sensible data managed by the application have to be protected from intrusions and viruses; therefore the data will not be shared with other applications.

The clients are located in the CO or Embassy Offices, are connected through a LAN, they share printers and must have antivirus and personal firewall installed.

This solution features the use of a virtual private network (as VPN); the capacity of the link will be evaluated based on the data throughput of the I/O of the application.

The computer room will be connected to Albania (Central AAR) with secure links that will be activated at scheduled time or at employee's request for sending and receiving data. During the detailed analysis options for cryptography and electronic signature could be evaluated.

1.3.2 Characteristics of the environment for diplomatic representations for Group 2



As shown in the figure, this architecture requires to install an imagine of the application on a computer of the office, that will act as server.

The clients of the application are the desktops located within the CO or Embassy office in the same LAN, they share the same printers and must have antivirus and personal firewall installed.

The office will be connected to Albania (Central AAR) with secure links that will be activated at scheduled time or by the employee's request for sending and receiving data.

1.3.3 Characteristics of the environment for diplomatic representations for Group 3

For the smaller consular offices, where the daily number of request is low or the connection link is very expensive, the requests will be sent to Central AAR through mail, fax or couriers. When the request will be received in Albania, the Central AAR will insert data into the Central AAR systems to trace the send/receive requests.

1.3.4 Data model (hints)

Due to the lack of input from our counterparts on the exact expected content of the AAR, we cannot specify precisely the list of citizen data that need to be included in the AAR.

Nevertheless, for the future detailed analysis, we recommend two alternative options:

a) the use of a unique entity: the citizens

b) the use of the same data model that will be used in the modernization of Civil Status, in order to grant full future compatibility

It is also recommendable to split the attributes in three types:

- **Data about civil status** of the citizen
- **"Diaspora data",** containing social "non status-related" info
- **"Contact data",** to manage the request (as address, telephone number, e-mail of petitioner).

The Diaspora data (in details or in terms of indicators), depurated from personal data, can be easily given to any public or private entity who is entitled to have such an access. It lies beyond the purpose of this study to decide who will own such right and who will not.

2 Collateral issues

In this section we would normally outline briefly the items that deal with inputs to the implementation and design process, but that are not strictly related to technology only.
Regarding this registration system, as designed in the short term architecture, there is just one main issue that goes beyond the technical side of the matter, and it basically has to do with **regulations.**

From the beginning we have refused to take an authoritative approach versus the use of the system and the change management within the involved organizations, and especially within the CO, where the main users of the system will be. As stated openly in the previous chapters, we aimed to design a system providing some added value in a "win-win" approach with the users; nevertheless, in order to make the Short Term Architecture actually "alive and kicking", **the transfer of requests of civil status services from the Consulate Office to Albania should be performed only electronically.** This need implies that the possibility to make **paper transfers should be forbidden**. **Our registration system should, in other words, become the only way for the personnel employed at CO to record personnel data for asking documents from Albania.**

For this reason, we strongly recommend that an **explicit regulatory intervention** is carried out before the system goes online. Since the Diplomatic Representations – on matters of Civil Status – depend on both Ministry of Foreign Office and General Directorate of Civil Status (Ministry of Local Government), a good coordination and agreement on this issue must be assured. This is the only regulatory intervention of legal kind needed.

By all means, it may even sound obvious that a specific **training** is given to CO and future central AAR unit in order to share the purposes and the benefits of the system with the users.

Last but not least, some sort of **marketing effort** is highly recommended to share with the migrants the purpose of registration, and promote the need for data quality and update.

3 Risk analysis

The limited complexity of the "Short Term" system (at least if compared with the medium term and the modernization of Civil Status) may make the use of a formal and "standard" methodology redundant. Nevertheless, we preferred to use a systematic approach, for the benefit of future program management activities.
It is also worth pointing out that the Short Term System is a transition system, and many theoretical risks will be exceeded just by passing to the Medium Term System.

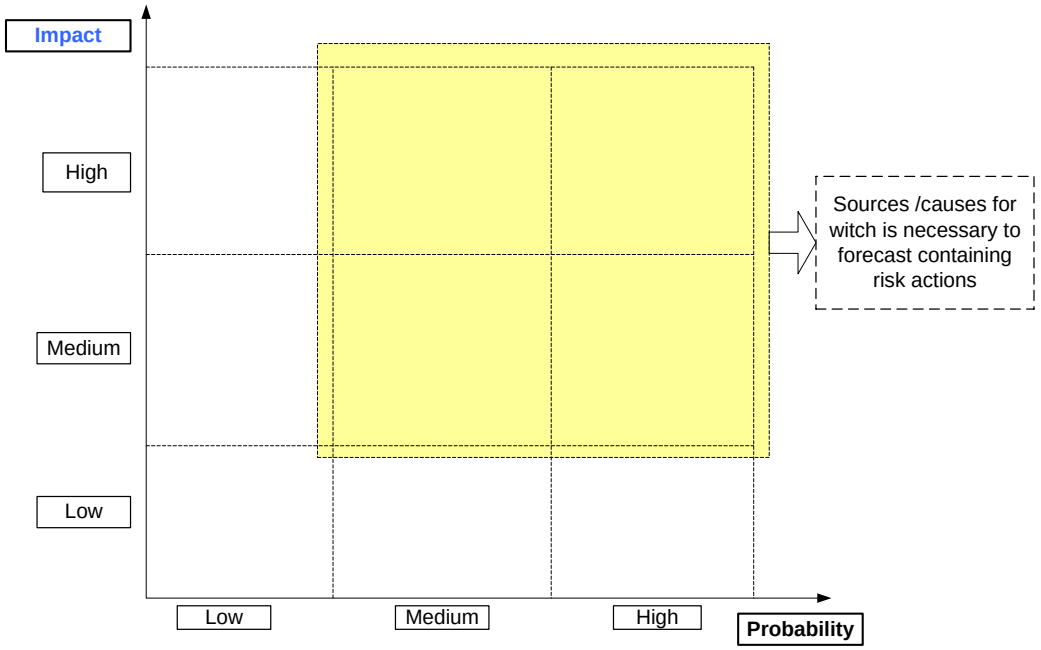
3.1 Methodology

Our effort has been directed to identify the specific risks linked to the prospected Short Term Solution and to analyze them, after the classification in two main categories:

A. Risks that may prevent the application from achieving its goals;

B. Risks that may compromise the success of the development project and the implementation of the application

For each category we have identified and mapped the possible risk sources in term of impact (importance of negative consequence) and in term of probability.



Sources that are enclosed in the highlighted inset in the map above are those for which we identified a specific countermeasure.

To define the most adequate countermeasure, we classify the risk sources as follows:

- **Technological** sources;

- **Project management** sources;
- **Human resources organization** sources;
- Project and realization solution **quality** sources**;**
- Sources related to the **context** in witch is implemented the solution.

One of the main features of the design of the system has been to take into consideration the user needs and issues like access and usability. Mindful of past experiences, we know that one of the greatest risks is a paradoxical and simple one, i.e. the users that do not use the new system at all.
Another important factor that we have taken into account is the context of implementation. As shown in the section on the Technical Architecture, we have classified the host countries into 3 different groups, in order to itemize specific features (and consequently specific risks) typical of the conditions of work of the Diplomatic Representations.
As shown in the tables below, these kind of risks would have a “high” impact on the system, but the probability that they will happen effectively is “low”, just thanks to the way the system has been designed.

3.2 Application to the Short Term System

We present below a detailed analysis of risk for each category evidenced above.

A – Risks that may prevent the application from achieving its goals

In this category the risk sources are lead back to two possible negative effects:

- Incompleteness of database;
- Unreliability of database.

Effect - Incompleteness of Database				
ID	**Type of source**	**Description of risk source**	**Impact**	**Probability**
ORG01A	Organization	Impossible recovery of historical data	**M**	L
ORG02A	Organization	Low comprehension of advantages related to the use of the system	**H**	L
QUA01A	Quality	Application accessibility	**H**	L
QUA02A	Quality	Usability of application	**H**	L
QUA03A	Quality	Misunderstanding of user needs	**H**	L
QUA04A	Quality	Incompleteness in the functionalities description	**M**	L
CON01A	Context	Change due to user needs	**H**	L
CON02A	Context	Delay in the data restoring	**H**	L
TEC01A	Technology	Technological infrastructure inadequate	L	**M**
TEC02A	Technology	Limited capability of the system to adapt itself to new needs	**M**	L

The recovery of historical data (such as tracking the different places of residence an emigrant has been registered to) is quite important for the aim of monitoring the migration phenomenon.

The low comprehension of advantages related to the use of the system could even prevent the users from using it effectively. The system has been designed to support and facilitate some steps of the processes of the Civil Status services, so lowering the likelihood of this eventuality. Specific training to the users could also diminish this risk.

About the technical infrastructure, (as already mentioned) the system provides different solutions for different level of equipment of the Diplomatic Representations, so the impact is, after all, low.

Effect - Unreliability of database				
ID	**Type of source**	**Description of risk source**	**Impact**	**Probability**
CON03A	Context	Incorrect feeding of the Civil Status Master Data	**M**	L
CON04A	Context	Insufficient timeliness of data updating due to variations made by the citizen	**H**	**M**
CON05A	Context	Insufficient timeliness in the receiving of validation from CSO	**H**	L
ORG03A	Organization	Insufficient timeliness in the in the communication of data to related counterparts	**H**	L
TEC03A	Technology	Systems linked not yet in use	L	**H**

TEC04A	Technology	Lack of integration with other systems	L	H

About the timeliness of data updating due to variations related to the citizen and in the receiving of validation from CSO, it is worth pointing out that a definitive improvement on that will be possible only when official data will be managed through a completely electronically supported "validation process" (i.e. after the computerization of Civil Status). Therefore we can consider these risks somehow "virtual" for the Short Term System. Nevertheless, we still propose countermeasures for that.

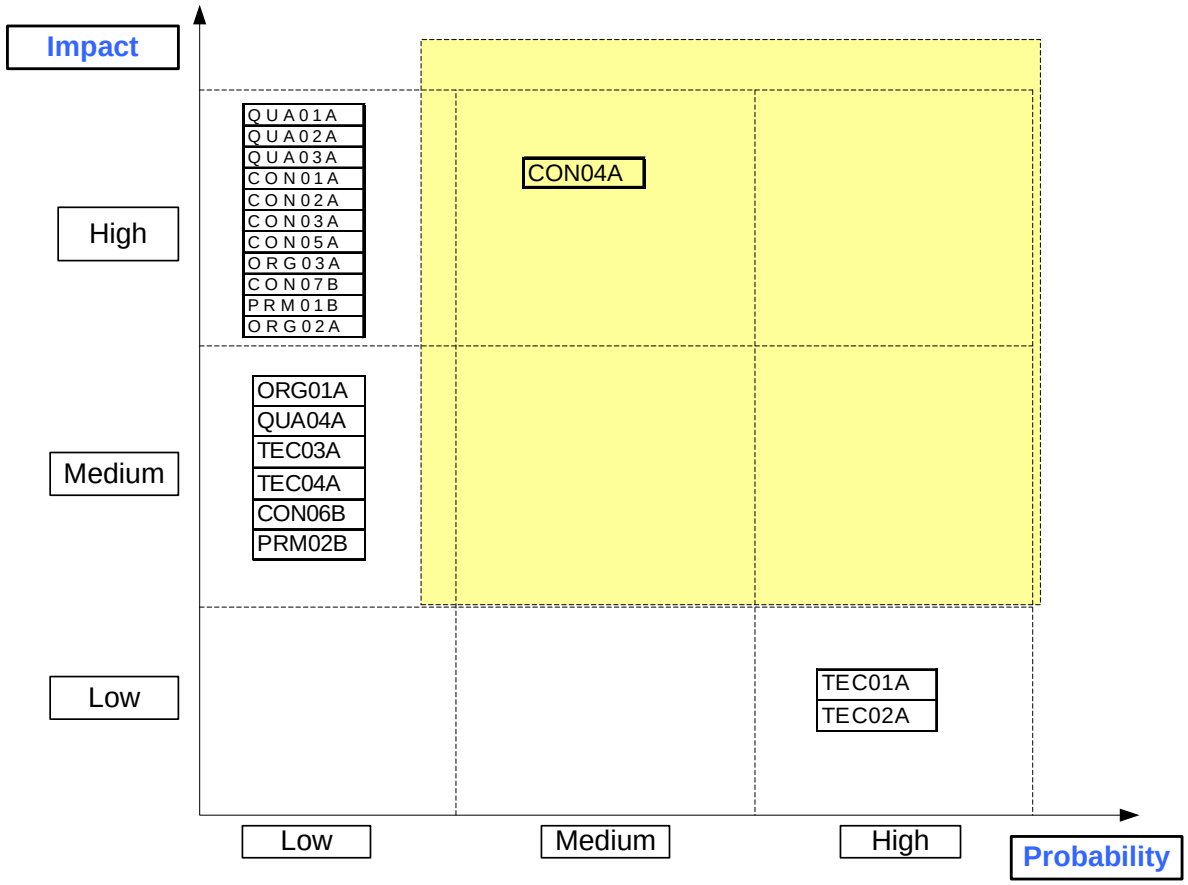
B – Risks that may prevent the success of the development project and the implementation of the application

In this case the negative effect is that the project fails to achieve the programmed goals in term of solution quality, times and costs.
In the scheme below we report this specific risk sources:

Effect - Unreliability of database				
ID	**Type of source**	**Description of risk source**	**Impact**	**Probability**
CON06B	Context	Change of relating legislation	**M**	L
CON07B	Context	Change on the relative organization	**H**	L
PRM01B	Project management	Insufficient financial resources	**H**	L
PRM02B	Project management	System errors	**M**	L

As mentioned in the Gap Analysis and also in the Collateral issues (see section 0 above), the legal framework is quite critical for the effective use of the system (particularly about the introduction of a rule for using just electronic method for the transfer of requests between the consulate offices and Albania).

Below we report the mapping of the risk sources analyzed above, in function of to their dimension.



From the mapping emerges that the only risk source with a high impact and a medium probability is:

CON04A – Insufficient timeliness of data updating due to variations made by the citizen

Variations such as in the address data are hardly intercepted by the system. The probability is medium because the update of the address data is foreseen to be done most likely when the citizen goes to the consulate asking for a service, but if the citizen changes address and does not ask for consular services for quite some time, the data will not be updated.

Countermeasures

The identification of countermeasures is referred to the risk sources identified as critics in order of the impact and probability and in order to the category.

We report a scheme of the countermeasure typologies to implement in order to manage the risk and to attenuate the negative effects.

Type of source	ID	Description of risk source	Countermeasures
Context	CON04A	Insufficient timeliness of data updating due to variations from citizen	Sensitize citizens that these data will be used for the electoral lists building and that the address data will be used to contact people to reply of their requests. See also

			the collateral issues section where need for a marketing effort is mentioned

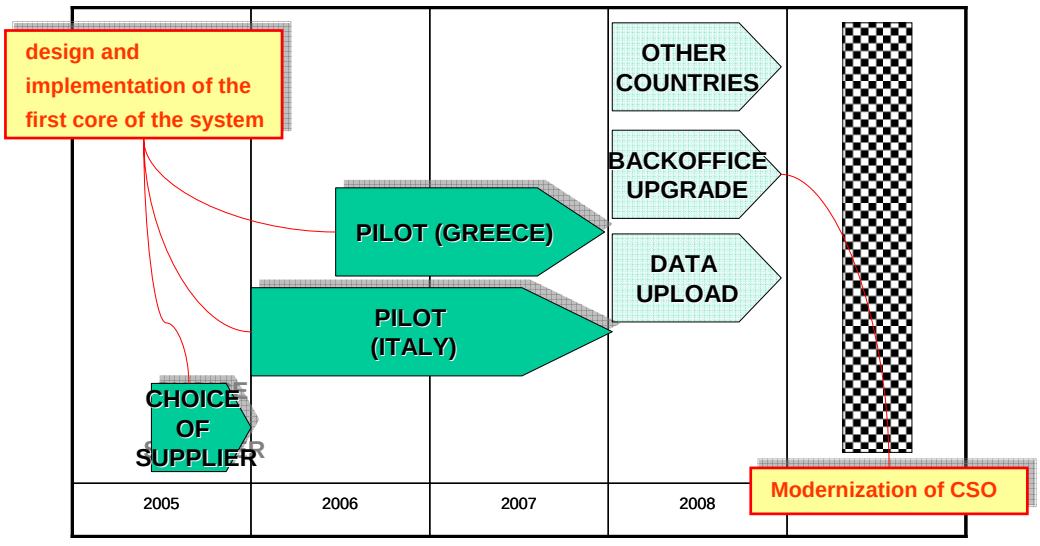
4 Proposed project

We have seen in the "purpose of the system" section that our long-term goal has to do with the right to vote abroad, but also that in the meanwhile we need to start building a database with a "reasonable" degree of accuracy and reliability. The two perspectives induced us to foresee a project plan that keeps the general elections in 2009 as the "final milestone" of our registration process, although we are well aware that such final milestone won't be met unless the process of modernization of the Civil Status gives a huge contribution to "close the loop" in the process of cleaning of data and development of systems.

Although the technical complexity of this project is not overwhelming, (especially since we narrowed the scope of the project to the "simple registration", rather than a full CSO functionality), the times are over when ICT projects where handled with a "big bang" linear approach. Nowadays, it is well know as beneficial and widely accepted the general rule that **a prototype oriented approach must be used as widely as possible**. The distributed nature of our project encourages such an approach: it would be hardy conceivable a development of a "one size fits all" system, followed by a simultaneous roll-out in many countries at a time.

To summarize, we have seen in paragraph 1.3 that our system features a flexible and modular architecture, with different "sizes" depending on the country of deployment: what we recommend is **a modular and iterative approach**, allowing to keep feet firmly on the ground and to keep track of intermediate objectives and milestones.

An outline roadmap for implementation can be represented as follows:



ROADMAP 2005-2009

In the following paragraphs each step is described through its main tasks, deliverables, focus issues. The description suffers a current **lack of information about which Albanian or international entity will be in charge of project management.**

Our recommendation on the matter is that **the management of this registration project is kept within the same responsibility of the modernization of Civil Status**; such recommendation originated from the numerous links and dependencies between the two projects, as well as from the many shared objectives and subjects involved.

Nevertheless, our proposed plan is - as far as possible - independent from the issue above.

4.1 The Tendering and Development stage

The first stage of the project is due to have the system available in its first release, and it consists in the "natural" continuation of this feasibility study. Activities and owners are the following:

- **Tender planning and execution (owner: TBD)**
  At the beginning of this step, the appropriate tender strategy must be decided, in terms of legal/formal procedure, time and budget, owner of the procedure. At this stage, a decision should also be taken in terms of focus of the project: for instance, the tender could cover all stages within this project plan, or the supplier could be in charge just for some steps (Italy and Greece?), leaving the rest to following moments of decision.
  Then, a tender package must be prepared based on this feasibility study, adding the needed administrative information, and in case updating the technical details with new pieces of information. The tendering procedure will give as output the choice of the contractor, the price, and the contract itself.

- **System development (owner: contractor)**
  The contractor will first develop the detailed user specifications and the first release of the software. The first test to pass this stage may take place "in vitro" in Tirana. The main focus of this test will be the correspondence of the system with the user's specifications, with a special attention to the ease of use.

Depending on the procedure chosen, **this first stage may take a total of a quarter of a year**, most of which will be dedicated to the administrative process: **the technical development of the software may take a month**. With such schedule, **we expect this first stage to be completed by the beginning of 2006.**

4.2 The Italian pilot

In the segmentation of the countries of destination, we have targeted Italy and Greece for the deployment of the "type 1" architecture. We have seen in the "as is" stage that these two countries host respectively about 30% and 65% of the Albanian migrants. Therefore, the flow of data

eventually coming from there – once the system is in place - is greatly significant, and even determinant for the success of our project.

So, the choice about where to start our first pilot is between Italy and Greece. Our recommended project plan includes the choice of **Italy as the first country of deployment**, for the following reasons:

- **Smaller figures:** the daily flow of people at Consulates is still significant, but lower than Greece, and the number of employees involved is slightly lower as well
- **Stable legislative framework**
- **Very low level of friction** with local authorities: relationships between the two States are excellent, and we foresee real chances of cooperation (for instance, the registers available at Italian Municipalities already include all legal Albanian migrants, with a very good quality).

Being the system developed on a web-based architecture, the infrastructure server-side (data and application) will be installed at one location only: probably the choice of **Milan** is the most recommendable, since right there we have the highest volumes.

The other topics to deal with, at all three locations, will be:

- Client infrastructure (personal computers to be checked for any need of sw or hw update)
- Communications: all three consular locations in Italy are covered by broadband operators (for instance, Fastweb and Telecom Italia). Therefore, it will be quite easy and fast (a few days) to get flat broadband connection 24h.
- Training and change management: the system, being basically a tool for data entry, won't probably need more that a few hours of training. More important will be to provide the employees with precise directions from the competent Ministries, in order to replace the paper requests with the use of the system.

Once put in place the system and trained the users, the real daily use of the system can begin.

The timing for this second stage is as follows:

- in one month the hardware ad software installation can be completed
- in two weeks the training can be accomplished, keeping in parallel the electronic process and the paper process as a backup.
- the daily use of the system for the following 4-6 months will provide some feedbacks for both the fine tuning of the system and for the roll-out in Greece.

4.3 The Greek roll out

The agenda and timing for the roll out of the system in Greece does not need to be significantly different from the one in Italy, except for the fact that the project team, both on the side of the supplier and on the side of the buyer, will have some "lessons learned" available from the previous pilot.

On the other hand, such advantage will probably be more than balanced from the heavier workload and the more complex environment.

During this roll out, **the development of a specific procedure for handling the cases of mismatch of the names between Greece and Albania can be considered**. Anyway, the budget for such development is not included in this study, and the "real solution" to this problem necessarily passes through some political, diplomatic, legislative and technical clarifications.

Both pilots in the "type 1" countries will keep working until end 2007, and they will provide a stable flow of data targeted on a potential 90% of Albanian migrants.

4.4 Serial roll-out (optional)

Once completed the two pilots, assuming that the data output will be worth the effort, the project team will consider **if and how to extend the coverage** to other countries where the presence of Albanian migrants is significant.

Such extension can be accomplished by picking up case by case the best choice among the three possible architectures. Per each country, a quick cost-benefits evaluation must be done to choose how to implement the system.

Nevertheless, another critical issue must be considered: by 2008, the modernization of CS system in Albania will probably reach a certain maturity. Therefore, the "short term approach" may become obsolete and useless by that time, if the new system will be available.

Somehow, the final stage of the registration project and the pilot stage of the CS modernization may overlap, raising a need for a monitoring activity aimed to decide when ad how to "jump" from one project to the other.

4.5 Total coverage (optional)

During our study we have figured out **how to reach 100% coverage** of Albanian migrants worldwide, even in those countries where an Albanian representation does not exist.

A good feasible solution was found with the system mentioned as "Group 3". in such option we imagine to centralize the data entry activities (for some countries who do not have our registration system locally) in Tirana: in a dedicated unit, that we have named "Central AAR", all paper requests

for any kind of certificate coming from abroad are entered in a database through our system. This solution offers some interesting features:

- any migrant can be traced and registered, no matter which is his/hers country of residence
- just one installation of the system, located in Tirana, can cover many countries, with maximum payback through economy of scale and workload peak management.
- process control is also optimised, being concentrated on one central team only

What is most likely to happen with the registration project is that, after a limited number of installation with architectures "Group 1" and "Group 2", the cost/benefit ratio of installing new distributed systems for registration begins to deteriorate, and the total (or at least great) coverage is then reached through the appointing of the Central AAR unit with its own "Group 3" system.

5 Cost Analysis

In this section, we provide the "shopping list" for all the items needed both for the realization and for the management of the system, including a cost estimation based on our experience with comparable projects, and on our proprietary benchmarks.

Within the global market there are sensible differences in the cost of manpower, equipments and communication. Our hypotheses are:

- The developing and maintenance of application is centralized, and we have considered a low-medium rate for the Italian market, that should be a reasonable proxy of the Albanian market.
- The purchase of hardware and package software is based on typical medium rate of UE countries for small medium business.
- We have divided the connections rate and labor cost (for cabling and installation) in two bands, since the rates are remarkably different between highly computerized countries and others
- The cost involved in day by day management and maintenance (annual maintenance costs) depends on the period of warranty.
- The configuration of the proposed infrastructure will be sufficient also for medium term architecture, i.e. when consular offices will become a full "CSO".

In the following tables we have estimated the realization budget for five types of country: Italy (Solution Group 1), Greece (Group 1), central AAR in Albania (for countries in Group 3), group 2 highly computerized countries and others.
In the Annual maintenance cost we have included the cost involved in day by day management and maintenance.

5.1 Budget for Italian solution

Item	# Item	Investiments	Annual Maintenance Cost	Comments
Computer Room				
Hardware Server	1	€ 10.000	€ 2.000	Generally, 3 year warranty is included in the price of HW
Autoloader DAT	1	€ 3.000	€ 600	Generally, 3 year warranty is included in the price of HW
Package Software	1	€ 2.500	€ 1.000	We have estimated 5 CALL for year.
Application Software	1	€ 2.700	€ 750	The cost of developing and maintenance has been shared for all consular offices and we have chosen a price based on numbers of users. The maintenance cost includes also remote help desk.
Partial Total		*€ 18.200*	*€ 4.350*	
Connetcions				
Consular-Computer Room	3	€ 780	€ 3.960	We have estimated 3 subscriptions that include voice and Internet traffic.
Computer Room - Central AAR	1			This cost is included in the previous item.
Secure link	2	€ 200	€ 10	We have supposed to sign files for sending them to Central AAR (two clients for country)
Partial Total		*€ 980*	*€ 3.970*	
Consular Office				
LAN Connection	15	€ 3.750		Installation desktop and cabling of office. We have supposed a "light" cabling.
Thin client	15	€ 12.000	€ 1.800	Generally, 3 year warranty is included in the price of HW
Laser Color Printer	6	€ 3.600	€ 540	Generally, 3 year warranty is included in the price of HW
Partial Total		*€ 19.350*	*€ 2.340*	
Total		***€ 38.530***	***€ 10.660***	

In our hypothesis **only 30% of the cost of developing and maintaining the application is loaded into the Italian budget**: we have supposed that the same code of AAR system will be distributed to all consular offices, so the cost of application in the country budget depends on the number of users of AAR system.
In this solution there are 15 clients - with a printer shared every 2-3 users - in the offices in Rome, Milan and Bari. The three consular offices are connected through high speed links (fiber channel or ADSL) with Internet Entry Point (POP server). The connections could be used also for voice traffic.
For the communication with Central AAR, we propose to use signature of the files before sending.
The maintenance of software package is estimated with a rate for CALL, in our solution the maintenance of package is managed from the developer of the software.

5.2 Budget for Greek solution

Item	# Item	Investiments	Annual Maintenance Cost	Comments
Computer Room				
Hardware Server	1	€ 10.000	€ 2.000	Generally, 3 year warranty is included in the price of HW
Autoloader DAT	1	€ 3.000	€ 600	Generally, 3 year warranty is included in the price of HW
Package Software	1	€ 2.500	€ 1.000	We have estimated 5 CALL for year.
Application Software	1	€ 5.400	€ 1.500	The cost of developing and maintenance has been shared for all consular offices and we have chosen a price based on numbers of users. The maintenance cost includes also remote help desk.
Partial Total		*€ 20.900*	*€ 5.100*	
Connetcions				
Consular-Computer Room	3	€ 1.000	€ 5.000	We have estimated 3 subscriptions that include voice and Internet traffic.
Computer Room - Central AAR	1			This cost in included in the previus item.
Secure link	2	€ 200	€ 10	We have supposed to sign files to send to Centrall AAR (one for country)
Partial Total		*€ 1.200*	*€ 5.010*	
Consular Office				
LAN Connection	30	€ 15.000		Installation desktop and cabling of office. We have supposed a new complete cabling.
Thin client	30	€ 24.000	€ 3.600	Generally, 3 year warranty is included in the price of HW
Laser Color Printer	10	€ 6.000	€ 900	Generally, 3 year warranty is included in the price of HW
Partial Total		*€ 45.000*	*€ 4.500*	
Total		***€ 67.100***	***€ 14.610***	

The Greek solution is the same as the Italian one; the main difference is the number of users of AAR system. We have also estimated a higher cost for cabling the offices, for the number of users and for the actual number of PC installed in the offices.

5.3 **Budget for Group 3 solution**

Item	# Item	Investiments	Annual Maintenance Cost	Comments
Computer Room				
Package Software	1	€ 2.500	€ 1.000	We have estimated 5 CALLS for year.
Application Software	1	€ 900	€ 250	The cost of developing and maintenance has been shared for all consular offices and we have chosen a price based on numbers of users. The maintenance cost includes also remote help desk.
Partial Total		*€ 3.400*	*€ 1.250*	
Consular Office				
LAN Connection	5	€ 1.250		Installation desktop and cabling of office. We have supposed a "light" cabling.
Thin client	5	€ 4.000	€ 600	Generally, 3 year warranty is included in the price of HW
Laser Color Printer	3	€ 1.800	€ 270	Generally, 3 year warranty is included in the price of HW
Partial Total		*€ 7.050*	*€ 870*	
Total		***€ 10.450***	***€ 2.120***	

The users of the Group 3 solution are the employees of the Central AAR unit in Albania, who take care of the data entry of the paper requests sent from small Consular Office.
We have supposed that the office is located in Central AAR building, so the users will use the same server, the same cabling system of the Central AAR system and there will be not connection costs.

5.4 **Budget for Group 2 solution**

Item	# Item	Investiments with highly computerized country	Investiments with other countries	Annual Maint. Cost with highly computerized country	Annual Maintenance Cost with other countries	Comments
PC where application run						
HW PC where application run	1	€ 5.000	€ 10.000	€ 1.000	€ 2.000	Generally, 3 year warranty is included in the price of HW
Package Software	1	€ 1.500	€ 1.700	€ 600	€ 1.000	We have estimated 5 CALLS for year.
Application Software	1	€ 360	€ 360	€ 100	€ 100	The cost of developing and maintenance has been shared for all consular offices and we have chosen a price based on numbers of users. The maintenance cost includes also remote help desk.
Partial Total		*€ 6.860*	*€ 12.060*	*€ 1.700*	*€ 3.100*	
Connetcions						
Computer Room - Central AAR	1	€ 500	€ 2.000	€ 1.500	€ 5.000	Internet connection
Secure link	2	€ 100	€ 200	€ 5	€ 10	We have supposed to sign files to send to Centrall AAR (one for country)
Partial Total		*€ 600*	*€ 2.200*	*€ 1.505*	*€ 5.010*	
Consular Office						
LAN Connection	2	€ 1.000	€ 300			Installation desktop and cabling of office.
Thin client	2	€ 1.400	€ 1.800	€ 210	€ 270	generally, 3 year warranty is included in the price of HW
Laser Color Printer	1	€ 500	€ 700	€ 75	€ 105	generally, 3 year warranty is included in the price of HW
Partial Total		*€ 2.900*	*€ 2.800*	*€ 285*	*€ 375*	
Total		***€ 10.360***	***€ 17.060***	***€ 3.490***	***€ 8.485***	

In the table we remark the costs of a solution for Consular Offices of countries in Group 2, both when the office is in a highly computerized country or not.

The main difference between the two types of countries is the cost of telecommunications (the communications are the most expensive item of the list).
Depending on this cost and on the daily number of requests we can evaluate if implementing the solution as Group 2 or Group 3 (using traditional ways for transferring data and requests).

5.5 The total budget for solution

Item	Investiments	Annual Maintenance Cost
Computer room		
Hardware Server	€ 180.000	€ 36.000
Autoloader DAT	€ 6.000	€ 1.200
Package Software	€ 39.900	€ 19.800
Application Software	€ 16.200	€ 4.500
Partial Total	*€ 242.100*	*€ 61.500*
Connetcions		
Consular-Computer Room	€ 1.780	€ 8.960
Computer Room - Central AAR	€ 28.000	€ 72.000
Secure link	€ 3.600	€ 180
Partial Total	*€ 33.380*	*€ 81.140*
Consular Office		
LAN Connection	€ 31.600	€ 0
Thin client	€ 72.800	€ 10.920
Laser Color Printer	€ 23.800	€ 3.570
Partial Total	*€ 128.200*	*€ 14.490*
Total	***€ 403.680***	***€ 157.130***

We have simulated the total budget for AAR system in Consular Office. We have considered: this mix of solutions.

- 5% Group 1 solution
- 20% Group 2 highly computerized countries solution
- 30% other Group 2 countries
- 45% Group 3 solution

The weigh of the solution for Greek and Italy is:

- 26% of investments
- 16% of annual maintenance cost,

With this computerized AAR system it is possible to manage 90% of abroad residents.

In the total budget the cost of the Central AAR system has not been evaluated because the scope of the Central system will be much wider than this feasibility study.

6 Table of abbreviations

Abbreviation	Meaning
AAR	Albanian Abroad Register
CSO	Civil Status Office in the Albanian municipalities
G1, G2, G3	Group 1, 2, 3 (see paragraph on Technical architecture)
GDCS	General Directorate of Civil Status
MLGD	Ministry of Local Government and Decentralization
MOFA	Ministry of Foreign Affairs
MOPO	Ministry of Public Order
P2… Pn	Process of Civil Status (see section on System's architecture)
SW / HW	Software / Hardware