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1. Vision

A unique identifier is implemented for Timor-Leste citizens, businesses and government everyday life. This makes it possible to link different registries and create unambiguous connection between a person and state. Unique identifier is the key factor in implementation of e-governance. The government of Timor-Leste and stakeholders are prepared for and have better understanding of the introduction of the harmonized registry/ID system in the country

2. Disclaimer

All the standpoints in this document are the personal understanding of the authors based on information collected during the inception visits to Timor-Leste and meetings with the authorities. All the existing functionalities provided in the report were communicated to the authors at the meetings with authorities. The authors do not have no doubts that it doesn't have proper reasoning and outside of decision making mechanism.

The authors do not imply that the implementation of the unique identifier SHALL take place as described in this document. This document contains recommendations and action logic plus foreseeable threats and opportunities.

The authors have intentionally refrained from making any indications to IT or electronic data exchange or e-governance except where this is clearly expressed.

The authors have intentionally refrained to use the term "database" as to not give the readers false understanding that a unique identifier has anything to do with the format of a registry i.e. electronic database.

The authors have not used the abbreviation of the term "unique identifier" as the abbreviation corresponds to several different terms and therefore every person using the abbreviated form had as evident from experience different understanding of the ongoing discussion. This was clearly evident during discussions with different agencies and authorities until the abbreviations were no longer used.

The term "unique identifier" is synonymous with "personal identity code".

3. List of Abbreviations & Terminology

Abbreviations

ANC – National Communications Authority of Timor-Leste

BiC – Birth Certificate

BaC – Baptism Certificate

DB – Database

DMIS - Demography Information Management System Information System

HR – Human Resources

GDS – General Directorate of Statistics

GIS – Geographical Information System

IS – Information System

MIS – Management Information System

MoE – Ministry of Education

MoH – Ministry of Health

MoJ – Ministry of Justice

MRLAP – Ministry of Legislative Reform and Parliamentary Affairs
MSSI – Ministry of Social Solidarity and Inclusion
MTC – Ministry of Transport & Communication
NCIS - National Criminal Investigation Service
NCBTL – National Commercial Bank Timor-Leste
PR – Public Relations
RDTL – República Democrática de Timor-Leste
SDG – Sustainable Development Goal
SDP – Strategic Development Plan
STAE – Secretariado Técnico de Administração Eleitoral
TL – Timor-Leste
UID – Unique Identification, Unique Identifier
UK – Great Britain
UNDP – United Nations Development Programme
UNICEF – United Nations International Children's Emergency Fund;
UNRCO – United Nations Resident Coordinator Office

Terminology

Requirements, as defined in this document, can be mandatory, recommended or optional.
MUST, SHALL, REQUIRED, NORMATIVE - The implementation is an absolute requirement of the specification and must be used/included to obtain the results to consider the mission accomplished.

RECOMMENDED, NOT RECOMMENDED, SHOULD, SHOULD NOT - The requirements are recommendations, this means that there may exist valid reasons in particular circumstances to ignore a particular item or requirement, but the full implications must be understood and carefully weighed before choosing a different course.

MAY, OPTIONAL- The requirements are not binding. One operator or vendor may choose to include it, another may omit it.

MUST NOT, SHALL NOT - A so-called requirement is an absolute prohibition of the feature.

4. Initial Background Information

The situation in Timor-Leste in connection to the unique identifier implementation initiative is as follows:

- There are operative identity management and information systems in place in all agencies and at least key private companies but they lack integration, therefore every authority has different registry system that corresponds to their needs. Unique identification concept cannot be implemented without linking these registries and information systems, **therefore first of all tasks is to implement unique identifier in the registries** in Timor Leste. Only after this has been started development of unique identification environment and e-governance can be taken off.
- Most of the **ministries and agencies are using their own identifiers in their databases for the citizens**. The result of this is that there is no single comprehensive system in the country that can enable the Government of Timor-Leste to keep on overview of government to citizens' interactions, namely transactions, entitlements, and receivables.

- A unique identifier **is not in use**.
- **As identification documents, national identity cards and voter cards are broadly used, but voter cards are only mandatory for persons over 16 years old.** None of them carries a unique identifier. There are many doubts about the issuing procedures of those cards and a strong likelihood of duplicated identities of citizens.
- The civic registration and population data management system exist, but **the procedures are either poorly implemented or not enforced**. For example, the birth registration process is in place and, in principle, every birth should be registered but there are some challenges in the implementation, mainly low availability of the service (for example, the registrar official might be out of the office during certain periods) and low demand.
- **The institutional leadership for the unique identifier implementation process** is not fully defined.
- **Whatever the reasons are for the existing situation, there is currently no clear overview of the population and related vital events, there are both gaps and duplications in the registries, “ghosts” and duplications are likely to be existing in the ministries’ payrolls, pensions, veterans and social allowances payments. The exact level of duplication is not known but based on evidence from other countries, one can estimate that this may be around 5-10%.**
- This situation is not sustainable for Timor-Leste, as it results in fraud, financial losses of the government and motivates dishonest behaviour.
- Also, the future perspective must be considered (i.e. if not dealt with now, the situation will be compounded over time).
- The unique identifier can serve as the basis for the development of the unique, government trusted identity system of the citizens, which is necessary for the e-governance implementation in the future.

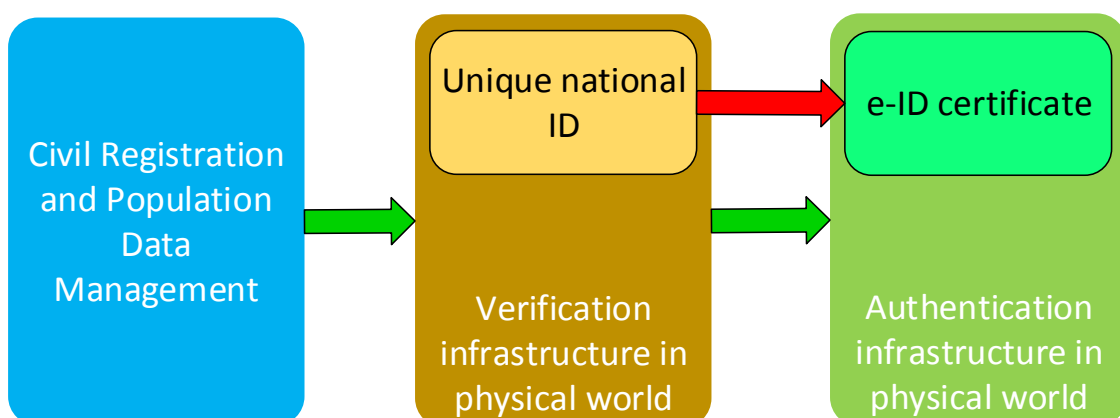


Figure 1. The relations between sequential steps towards modern society.

5. Mission Goals

The scope of the mission was to analyse the current situation in Timor-Leste and propose the optimal solution for the unique identifier implementation. The key questions are:

- How to define Unique Identification Number (UIN) for Timor-Leste?
- For what purposes to use it?
- How to implement it?
- What legal changes are needed?
- What consequences will the implementation of UIN bring about?

It should be emphasized that the unique identifier is not only for the citizens to use it in public sector institutions but also while acquiring services and in communication with private sector enterprises. How to use a unique identifier in physical or virtual carriers (cards, chips, mobile phone-based solutions) will be the next step, when the registries will be ready to use unique identifiers and able to clean data using comparison their records to the root identity source registry and between themselves.

The scope is divided into two main topics:

- creating a unique identifier concept and obtain a clear understanding of the infrastructure to enable implementation of the unique identifier; and
- technical activities making changes in departmental registries to implement unique identifiers in their information systems and databases.

There are three main issues though:

- initial data gathering and enrolment;
- disarrangement due to internal regulations; and
- lack of coordination between authorities.

All these issues must be addressed with a serious attitude and understanding that the unique identifier is not a panacea but only a tool to accomplish a healthy and operating state.

Upon initializing any project, a line of discrimination must always be drawn – what will be the measurable outcome and what will not be done. From the project management methodology point of view, a measurable outcome will be usually quite easy to define. But most of the time ‘what will not be done’ will become a rather serious challenge as so much would be wanted to achieve. Furthermore, usually, each stakeholder has its own agenda and goals.

Therefore, we have defined those two as specified hereunder:

- Scope of the project: To analyse the current situation and propose the optimal solution (incl. structural roadmap) for unique identifier implementation in Timor-Leste.
- Outside the scope of this project (will be handled in future steps of next projects):
 - Data enrolment and gathering processes (partly discussed);
 - Birth registration processes;
 - Online data exchange between different authorities;
 - Digital identity creation;

- Fraud elimination.

We do not deal with specific details in this section, they will be addressed hereunder in this document.

The following reading will assist to get a better overview of unique identifier implementation in Timor-Leste.

6. Project Implementation

6.1. Methodology

The course of the project included several stages - intertwined desk and fieldwork periods. The first two stages comprised of data analysis available from previous contacts with Timor-Leste officials and also data available on the Internet. The fieldwork period followed the desk period. From July 1st till 10th 2019 the authors of the report visited the Democratic Republic of Timor-Leste. The inception mission was coordinated with UNDP and also the partners from UNICEF were involved during organizing meetings with various institutions and private companies and helping in gathering relevant information from the domain of their activities. Based on the data collected, the draft solution to the unique identifier implementation was developed and communicated to the institutions participating in the process at a workshop during the last day of the mission.

Following the mission, the next period of desk work took place. Information gathered from the meetings held during the first inception mission was analysed, conclusions summarized and draft roadmap created. This draft roadmap was sent to Timor-Leste for inspection by the participating institutions for making corrections.

After getting feedback the next mission took place when the roadmap matters were discussed mainly with the participants of the Task Force - MoJ, MRLAP, TIC Timor, UNDP, UNICEF, UN Resident Coordinator Office, GDS. The results of the discussions and final understanding of the unique identifier concept were presented at the workshop on the last day of the mission.

This report has been finalized after making the conclusion and presented to the UNDP and Task Force to lay the path in the creation of the Identity ecosystem in Timor-Leste for the next, 2020 year.

6.2. Performed readiness assessment of all the relevant stakeholders through consultation meetings

Meetings with many authorities took place that helped to get an overview of the situation in Timor-Leste, finding the joint part of their needs and suggesting a solution to take the next steps.

During the visits the consultants had 13 meetings with various stakeholders from public and private sector - MRLAP, TIC Timor, Ministry of Justice, Telemor, Ministry of Social Solidarity and Inclusion, Sinarmas (insurance), Ministry of Education, BNCTL, STAE, Ministry of Transport and Communication, GDS, NCIS (police).

6.2.1. MRLAP

The government tasked MRLAP to carry out the Unique Identity (not unique identifier) initiative which has become one of the key themes. They are very enthusiastic to get it running and they see there is a need to have consensus in the government. MRLAP gave a general overview of the documents in Timor-Leste and data collection in registries based on the document numbers. MRLAP has an understanding that they must be the authority to prepare and make proposals to politicians to reach consensus at the political level. The issue of a unique identifier is the privilege of the Government and MRLAP's role is to ease this government service to the people. When talking about plain or encrypted unique identifier format a clear understanding about whether it would be a problem for the people to have their birth date openly in their unique identifier structure or would they consider this as an invasion of personal identity security. The answers gave the feeling that this is not a central issue for the Timor-Leste society yet.

6.2.2. TIC Timor

TIC Timor is a separate institution under the area of administration of the Prime Minister. TIC is by Decree law not only responsible technically for e-government, TIC is also drafting policy on e-government including ICT policies and other related laws and regulation in ICT domain. All the functionalities provided in the paragraph were communicated to us at the meetings with TIC Timor. To implement e-governance they have at first to implement ICT infrastructure. According to the ICT policy, e-governance projects cannot run on the private sector owned network. They offer data connectivity to line ministries and 6 embassies. TIC Timor provide integrated ICT approach from infrastructure, application down to standardisation of hardware and software including ICT workforce qualification and standardisation. TIC provided connectivity (internet only) to Ministry of Public Works, Ministry of Health (internet, DC, mail servers). TIC provided connectivity, application design and hosting including data centralisation for MoF, Connectivity and application design and hosting for MRLAP, PNDS (integrated), MOFA (Connectivity, Domain Controller, emails, file server including secured connection to 6 Timor Leste foreign representations), MECAE, SECOMS, SNI, TATOLI and Prime Minister Office. TIC also designed and hosted websites for PM office, Chega, SERVE, Single Sign on Portal, Government Dashboard, Government Jobs website, HR System website and Municipalities portal. Once all line ministries and other organizations have been connected to TIC Timor network – this is needed for data exchange to ensure all registries are correct and updated from the Core Registry – the network will be ready to offer service using their network. The main service that will be offered via the fibre-optic network is data exchange between authorities to enable distributed data model. The first data exchange services available should enable provision of cross-checks that all registries are correct and updated from the Core Registry. Also data/registry hierarchy can be introduced in the personal data structure.

The next step will be to connect municipalities to government agencies, then it will be to connect police offices. The last step will be to connect all schools. TIC Timor will be responsible for e-governance application, for drafting policy on e-government including ICT policies and other related laws and regulation in ICT domain, E-Governance Portal, SSO portal and Data warehouse (acts as data backup for other databases) also. They are worried that changes in business requirements (political level) can bring huge changes to the IT side also.

6.2.3. Ministry of Social Solidarity and Inclusion

They are responsible for social benefits. If a beneficiary comes with different documents (identities), they do not know about that and a person may get paid several times. When a person moves to another location a new 'social security' number will be issued and new allowances will be paid out. The unique identifier would help here a lot. They need data from other authorities also, but all requests and replies are made manually and paper-based. The issue of the unique identifier is basically technical but the decision for implementation must come from a very high political level.

6.2.4. Telemor

They are very interested in the implementation of electronic government and electronic ID and are looking for a ministry to discuss about it. They are seeking cooperation on e-ID with TIC Timor, Ministry of Transport and Communication and MoJ. To open an account with Telemor, foreigners must present a passport, locals may present an ID card or even a driver's license. A company can use a business license to register in their system.

This example shows that private companies use whatever identity documents to get customers registered. The more different documents a person is able to present the bigger probability of fraud as the customers are registered on the basis of document numbers and therefore one physical person can have several accounts in systems. This is direct risk. Customer identity management is also the reason of excessive customer management costs. As identity management is business of the state anyway private companies can offer better service and keep service costs lower. This explains why they are interested in unique identifier implementation.

Telemor is interested in participating in the unique identifier business, but the only benefit they see from the strong governmental unique identifier is that it simplifies their customer management, helps to lower operational costs. There can be multiple accounts in their system as it is possible that if a person comes with an ID card to the office for example in Baucau and with driver's license in Aileu they cannot recognize this fraud.

6.2.5. Insurance company Sinar Mas Insurance, S. A.

They see huge benefits from a unique identifier as it simplifies their customer management and helps to lower operational costs.

6.2.6. Ministry of Transport & Communication, Technical Regulatory Department

Unique identifier and data exchange are the most important parts of the e-governance for this institution. They are ready to implement data exchange because it is their responsibility, but they can do it only with other ministries. They have to create a legal framework and it has to work together with the technical framework. Ministry of Transport and Communication can make the legal framework and then specify how to implement it in the ICT infrastructure.

They see their role primarily in data exchange regulations creation and could lay legal/regulatory foundation to data exchange, activities are planned for 2020. The unique identifier would simplify those tasks.

6.2.7. Ministry of Justice (MoJ)

MoJ is the owner of the primary database - local DMIS - where citizens of Timor-Leste are registered. This information system has eight modules that are dealing with citizen registration. There are several identifying numbers in use having different syntaxes and usage because the numbers are issued by different modules of this information system. The numbers are unique at one specific moment but can be changed depending on circumstances for example when changing the place of residence.

At present work is ongoing to visualize relations between different ID numbers in the MoJ system. In the new (demo) system, the relations can be visualized but not in the present system that can lead to the result of one person considered as separate for separate modules. Maybe the history of changes can keep the issued ID numbers linked within a module, but the link between modules is hard to establish.

There are Birth Certificates and Baptism Certificates in use and these documents are accepted by various authorities but for the issue of the ID card, only Birth Certificate is eligible as a breeder document. At the same time, Baptism Certificates can be used for the issuance of Birth Certificates. After the implementation of a unique identifier, this procedure can be reversed and either Birth Certificate, Baptism Certificate and/or ID card can be issued based on a unique identifier in the MoJ DMIS.

Getting data in the registry and setting it against a unique identifier helps to solve one of the worries of the ministry to interface various IT systems in Timor-Leste. Detailed investigations must be conducted here to find the most feasible methods to do this in the future.

A three-year project to strengthen birth registration systems in Timor-Leste is ongoing. At present, there is no obligation for the parents to register a new-born child within a specific timeframe. The requirement for establishing such a timeframe is included in the draft version of the Civil Registry Code.

Another important matter is data protection. Data protection has been discussed with MRLAP because so far, there isn't a law that really protects data in the country. When looking at the legal aspects, how can regular provisions be implemented to protect the systems and the privacy?

In Timor-Leste, the system may be more advanced than the laws. So that's why the system wants to address the issues but looking at the legal aspect it is not allowed. This obstacle must be removed.

6.2.8. STAE

They are issuing their own card - electoral card. It is possible to get an electoral card from the age of 16 and this card is accepted as an identity document to get access to the services (health sector, banking, social benefits, etc.). The electoral card has lifetime validity, but it has to be replaced if some personal data is changed. The card has a photo and fingerprint image. STAE would like to have technical integration with Civil Registry (MoJ) to verify citizenship. But there are no technical solutions for that yet and it is almost impossible to link persons in the STAE database and Civil Registry. There are relatively less possibilities that one person can have more than one electoral card with different identities, STAE has several data about the persons and internal controls are on a good level. In the future, they would like to set a rule that ID card is needed to get an electoral card. The electoral card also has a unique ID number and it remains the same until the end of the person's life. Linking of the registries and

maintaining the decentralized personal data management would be easier if these numbers remain unique per person and will never be reused.

They are ready for the changes related to implementation of unique identifier in their registry, but this cannot instantly happen, there should be some duplication for some time anyway. And they see that there is a need for very high-level political decision to implement unique identifier in Timor Leste.

6.2.9. Ministry of Education

MoE has a database where all students have their identification numbers and the records contain student identifiers and school identifiers. When children move from one school to another, the school identifier changes but the student identifier remains the same. They have data about pre-school and students from grades 1-12 as well as data about the teachers. The idea about the unique identifier is very interesting for MoE and they support it very much but like others, they also see that very high-level political support is needed.

6.2.10. NCBTL (National Bank)

NCBTL sees that a unique identifier will help to save a lot of time and provide better services for the customers. The latter get annoyed if much information and documents are required. The bank's interest is to get the possibility to send automated requests to the government databases, for example about criminal history, etc. That helps to lower the risks similar to the risks listed in Telemor paragraph - multiple accounts etc. Creation of accounts with different documents, in different locations and not establishing connections between those accounts. See p. 6.2.4.

6.2.11. General Directorate of Statistics

They are very interested in unique identifier projects; it would make their work much easier. The General Directorate of Statistics collects data from several databases and shares their own information with other authorities as well. They are responsible for census, whose next edition will be in 2020. They are looking forward to seeing how they can be useful to a unique identifier project with next year's census. How to use census for personal data gathering and unique identifier distribution to the citizens? They are planning to use Android devices connected to central servers for the census.

6.2.12. NCIS (police)

They own a criminal database and every criminal case is stored in the database. They have a unique number for every criminal case (criminal case No). They collect a lot of information to link separate criminal cases to a specific person. For this, they collect even information that is not related to this criminal case. For instance, grandparents' information would be connected to their grandchild's crime issues, which is not accurate from the privacy protection point of view.

The unique identifier would help to decrease the amount of information to be collected at present. They also collect fingerprints and if there is some complications with unique identifier implementation, they can rely on these as well. Data exchange between other ministries is paper based.

6.3. Facilitated government partners on strategic decisions to be made.

The key findings and recommendations were presented at the workshop on September 13th, 2019. A more thorough description can be found hereunder.

6.3.1. Key Findings and messages

The work that has been done so far in establishing the operative functionality of authority-centred registries is very welcome. This work must be appreciated as best accomplished till the present day. This has been hard work and has been done with all the value and devotion.

Only a small step for the decision-makers remains to make a big leap for the society of Timor-Leste.

What we know by now? Our main findings:

- There is not yet a political decision to implement unique identifier;
- There is no all-embracing identity ecosystem concept;
- There are several personal identity documents and several personal identity document numbering systems in use in Timor-Leste;
- There are possibilities to have duplicated identities and possibilities to get multiple unjustified benefits;
- Not all citizens have identity documents (even birth certificate), only 30% of children under five years old have a birth certificate;
- There is a lot of existing information about personal data, but it is unknown whether it can be trusted;
- There is a relation between one Birth Certificate - one ID card, but it is possible to have several Birth Certificates and therefore several ID cards and several identities;
- A document is considered to be the ultimate target for personal information collection;
- No legal infrastructure for unique identifier implementation, no data privacy and protection legislation, no cybersecurity legislation exist yet;
- Civil Registry Code is not officially approved yet;
- All ministries and authorities have good IT solutions and existing databases;
- There are no connections between different databases and automated data exchange processes (only paper-based requests and manual responses) allowing to enhance the trustworthiness of personal data;
- All ministries and authorities are collecting personal data and there are huge overlaps, which helps unique identifier implementation together with the possibility of successful data cleaning within/across different databases (see Annex 4)
- All stakeholders participating in the meetings are very interested in unique identifier, considering it as a means of easing their work but high-level political support is needed;

- Most of the existing IT solutions can remain as they are today;
- There is very good potential (starting point) to implement a unique identifier in Timor-Leste without big investments.

Main messages delivered:

- Everyone the authors had discussions with is eager to implement e-governance and digital identity. In the current stage, the implementation of a unique identifier can be implemented without any links to the digital identity or e-governance. The unique identifier does not need e-governance to be implemented;
- The unique identifier is part of a person's identity data set (like name or date of birth);
- Implementation of e-governance inevitably needs a unique identifier to be implemented beforehand;
- It is absolutely not important what form a registry takes - a paper card library, electronic database, ledger book or any other form one can think of;
- Implementation of a unique identifier is not the implementation of e-governance in Timor-Leste;
- Data must be enrolled, processed and stored where it originates. Copying is not acceptable but regulated and limited data exchange is;
- A document is only a certificate of legal identity.
- A unique identifier is primarily related to the legal identity of a person. It is not uniquely related to any kind of document but it **MUST** be printed to all different documents (like name and surname). The unique identifier **MUST NOT** be considered as document number;
- The unique identifier **MUST** never be used as a password to access services;
- The main objective of data enrolment **MUST NOT** be the issue of a document. The main objective of data enrolment is to get a person recorded in a registry. A document can be issued based on the data in the registry whenever needed;
- A root authority (potentially the Ministry of Justice) **SHOULD** generate unique identifiers to all persons and link them to existing personal data in their Core Identity Registry through all the modules of DMIS;
- This Core Identity Registry **MUST** be the only and unique source of trusted legal identities;
- Other authorities will have to change their registry structure to enable adding additional data field of a unique identifier (if they do not have the Birth Registration Number field at present);
- A standard procedure of unique identifier-based data exchange and distribution of unique identifiers to different databases **MUST** be established to start data cleaning in various registries.

6.3.2. Benefits of a unique identifier

- Enables to relate personal data between different registries. At present, all registries use their own models of personal identity record structure that makes it hard to formulate requests to other registries. If the unique identifier becomes part of the data request, its processing will be streamlined and results will be delivered at a quicker pace.
- Enables to relate different identity documents to one person. Without the unique identifier on an identity document, a person can use them declaring being a different person. With a unique identifier, this will no longer be possible. In the course of discussions with various stakeholders, the question of multiple legal identities was mentioned several times. There have been cases when these multiple legal identities have been used for identity fraud. Some stakeholders, especially banks and the Ministry of Social Solidarity and Inclusion consider these frauds a big issue as people get unjustified benefits or even perform criminal acts. No difference must be made between a birth certificate, baptism certificate, school registration records, ID cards, passport, etc. - all those documents should have a unique identifier printed on the document.
- Enables to discover duplicate identities (in social benefits, healthcare, etc.). The unique identifier is a valuable tool to fight against identity fraud. For example, it helps to expose the misuse of social support allowances either based on multiple identity documents or on getting the same allowance in several geographical/municipal locations.
- Enables to avoid data duplication in the same and different registries in addition to mismatch of data. The term 'data duplication' in case of the same registry stands mainly for identity duplication. In the same registry there can be separate records about the same person that cannot be matched due lack of linking component of identity. Unique identifier is the linking component that enables elimination of identity duplication and link all records of the same person within a registry. World practice shows that in the case where every authority collects all the data they need for their own purposes this leads to unreasonably high costs for the authority. When considering different registries unique identifier eliminates need to collect the same data in different registries - if an information is collected in one registry it can be accessed from another registry. The data structure will be less complicated and registry management becomes cheaper and clearer. This is also linked to the collection of redundant data that is not needed for this concrete data procedure but to increase the trustworthiness of the data itself. The authors were introduced to a registry where information like grandparents' identity data or elementary school name were recorded together with the primary data and this way became unnecessarily related. The only reason for this is to link different records of the same person in the same registry but at the same time brings along high personal data leak probability.

Also, there are high risks of accidental creation of duplicate identity due to human error. Usually those records will be different over time. In case unique identifier is not in use those duplications tend to remain unnoticed and will increase the rate of

uncertainty. In case of unique identifier these duplications are easy to discover and corrections can be made.

- Enables personal data matching between different authorities/ministries/service providers/registries. When personal data in different registries is considered those records can be understood as duplications and all problems with duplicate records are applicable here. Every registry collects personal data in excessive amounts enabling their independent operating from other registries. This way persons are giving the same information again and again and the same person can be presented in different registries with a different set of personal data depending on feeder documents and data. Distributed decentralised data model will enable to implement the principle that data is collected, processed, stored and made accessible in the same place. If the same data is collected in different times in different places there will be differences in the composition of data resulting in loss of authenticity. Therefore, it is inevitable that there must be one definite place for a definite set of data and no copies are allowed. This way identity of a person is distributed over different registries and is always kept fresh and authentic as changes that will be introduced will be made only in one registry. As all this data in different registries will be linked together by means of the unique identifier possibility of having different identities of the same person in different registries will be minimized. By using the unique identifier, it becomes possible to start data cleaning activities, comparing personal data sets (records) between different registries of (the same and different) authorities. Another benefit here is making the bureaucratic burden lighter for persons as duplicated data will not need to be collected anymore. Thus the principle “state collects information only once to obtain trustworthiness” can be introduced.
- It is possible to provide better services to citizens. This is related to the decreasing amount of data collected from persons and, in the future, to the decreasing time of service contact due to pre-filled data enrolment forms. That will lead to an increase in throughput in customer service bureaus and overall customer satisfaction.
- Every authority has been developing their systems according their needs as best as possible and have achieved very good results. Implementation of the unique identifier will not disrupt planned development activities in the registers but will add only one aspect. The personal data management scene in Timor Leste has been diverse and while keeping in mind the expressed intentions to move towards e-governance as it had been expressed during the meetings the differences in level of readiness for this will be needed to be balanced. The decentralized model leaves the development of business processes to the business owners as it had been planned previously. Every authority can continue with their development plans without major changes that greatly promote the right decisions having been made in planning and development up to present time and supports seamless integration for every authority and every registry in the future.
- During the implementation of the unique identifier, a mechanism of adding this to the already issued non-replaceable identity documents like birth certificates or baptism certificates must be established.

- As the unique identifier is part of a person's legal identity, usage of it in everyday business must be established either with a legal action or as a national standard. The usage of the unique identifier must become a mandatory central feature in interactions with the public sector. The private sector will follow. Of course, analysis to find out the exact influence shall be conducted but it must be kept in mind that a unique identifier can and must be considered to be the third component of a person's name, nothing else.

6.3.3. Concept (Description of 'One Additional Field' approach)

A unique identifier is nothing material, it is a principle, it is not a document, it is not a document number, it is a string of numbers (and letters) unique to a person from birth till the end of ages. It can be issued to any person having a legal connection to the Democratic Republic of Timor-Leste and will be archived (but not re-issued to some other person) after the death or after the permanent leaving of this person from the Democratic Republic of Timor-Leste.

A unique identifier is like a part of the subject's name, it should not be considered as sensitive personal data and in no case can be used as a password to access services.

A unique identifier is not only for citizens of Timor-Leste Democratic Republic but also for all other persons having the right to live in Timor-Leste. This covers also persons to whom Work and Residence visas are issued as the unique identifier is needed for legal residents to get e-services in the future. As a visa is the right of a person to cross a country border and a visa sticker Zone II does not have unique identifiers listed as optional elements in ICAO Doc 9303 Part 7 unique identifiers for foreigners must be stored in corresponding registries.

The global identity of a person consists of lesser departmental identities stored in registries of different authorities and having the sole unique common component - the unique identifier.

The main recommendation consists of acknowledging the concept of identity collected, processed and made available for data users according to specifications and procedures established by law and considered as a national standard. Implementation of a unique identifier will not create one more system in parallel to existing ones, but the creation of aggregative means for the existing systems allowing to operate in a coordinated way. This concept has been proposed while being mindful of keeping the fiscal impact as low as possible.

A unique identifier can be established based on Birth Registration Number (at present named Birth Certificate number) and managed by the Ministry of Justice. Reason for proposal to position management of unique identifiers in Ministry of Justice is that birth registration takes place in the Ministry of Justice anyway. This can be done by modification of the birth registration module in the DMIS of the Ministry of Justice (see here under.) To keep the terminology clear, the authors recommend renaming this root registry module 'Core Identity Registry'. Every authority in the future MUST check a person's data linked with the presented unique identifier only against the Core Identity Registry while making customer contact or offering a service. This check is a part of personal data cleaning process as it helps to find errors in personal data records.

It SHOULD be the root anchor of a limited amount of personal data - a very highly protected, back upped and managed registry that MUST be the root source of governmentally warranted personal data. It is like the tip of a pyramid and all the changes in this information system/database MUST be reflected in lower-tier information systems/databases in the first

opportunity. Reverse SHALL BE possible only in the form of requests to the root registry when there will be data sameness conflict and error has slipped into the root registry.

Timor-Leste has had a unique identifier for many years, the Birth Certificate number, but it is not recognizable as unique identifier.

There are two options for the creation of the Core Identity Registry containing the unique identifier. Option one is to introduce unique identifier in the Birth Registration Module and make it superior to all other DMIS modules and registries containing personal data in Timor-Leste. See Figure 2 here under. The schematics do not have all the modules provided to diminish surplus information and making the drawings easier to follow.

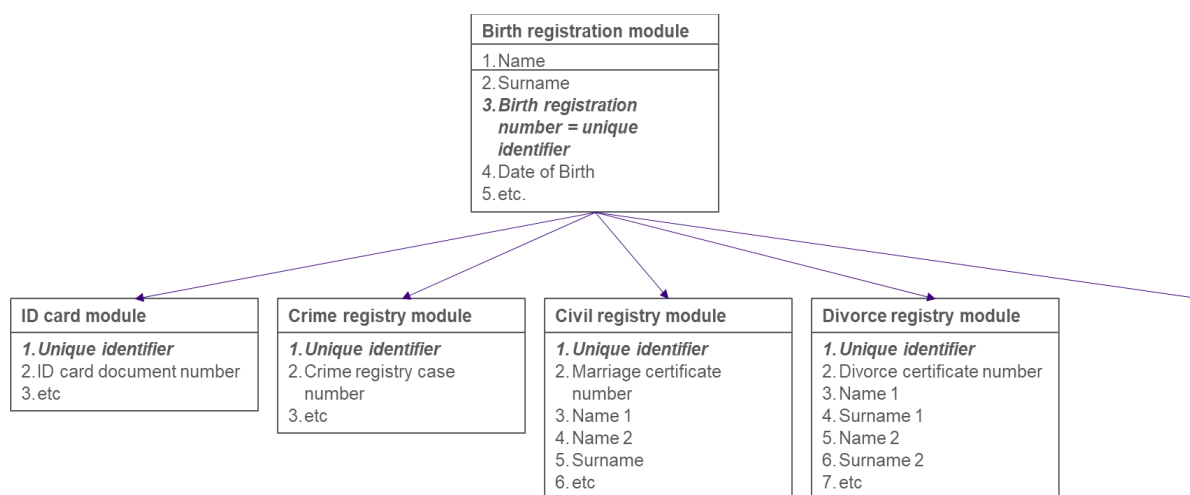


Figure 2. Modification of the Birth Registration Module as Core Identity Registry.

This option needs to rebuild the data model of the MIS as new links and dependencies shall be added to the existing system. Registration of birth will remain where it has been done till the present time. The authors strongly recommend not to use the birth registration number as a Birth Certificate number due to security reasons. As Birth Certificate is considered to belong to the same group of identity documents as ID cards, passports, driver's licenses, it should have numbering that is related to the document blanks, not to the document holder. For example, in the case when a document is claimed to be missing but has actually been sold – this is a very common crime in the world, the replacement MUST have different blank number to prevent the existence of two seemingly valid documents at the same time. It is highly recommended that Birth Certificate blanks already be numbered with secure printing technology in the print house to prevent fraud during birth registration.

The second option is to create a separate Core Identity Registry. This will open the opportunity to optimize the data model and all the connections, links and dependencies to other modules and registries as it doesn't need legacy dependencies to be retained.

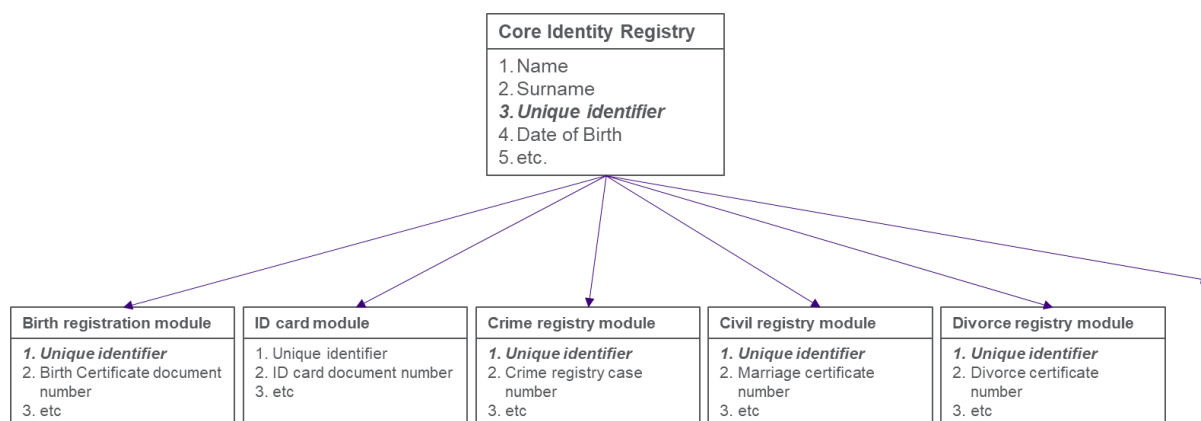


Figure 3. Adding a separate Core Identity Registry module.

In this option, all the modules will remain to work as they have been until now. No major internal changes must be made except adding the unique identifier field of data to the data structure of the module. In the future when data matching check requests from other registries will start to appear, the Core Identity Registry will have its own connections to the outside world that can easily be added just as the need arises.

Birth Certificates will be issued as previously, and parents’ data will be derived from the respective records in the Core Identity Registry.

These two can be recommended as the most straightforward solutions between which the choice must be made.

6.3.4. Data matching and cleaning

It is very important to compare and match electors' data and ID card register data to the Core Identity Register in the first place as both registers are comprehensive and due to data collection methodology percentage of errors should be relatively low. Then the GDS registries should follow.

6.3.5. Recommendations

The recommendations are grouped into the following logical blocks. Some of the recommendations are repeated at convenient places:

6.3.5.1. Legal domain:

The adoption of a unique identifier would have legal implications: some laws would need to be passed or updated upfront to enable the Government to move ahead with a unique identifier, and other legal adjustments would need to be made during implementation. A preliminary legal analysis is available in Annex 4 and in a separate document.

Some aspects of the unique identifier can be implemented in parallel with the creating of necessary laws and regulations, on the other hand there are (will be) regulations to be in place ahead of full scale implementation of unique identifier. Here legal analysis must provide complete clarity. This will speed the implementation if agreed.

6.3.5.2. Partners and roles on unique identifier initiative:

- Task Force consists of MRLAP, MoJ, TIC, UNDP, UNICEF, UNRCO. During the meetings proposals to add among the stakeholders were expressed about Ministry for Social and Solidarity and Inclusion and Ministry of Finance.
- Clear division of tasks and roles have been defined. But a deeper analysis of the impact of the implementation of a unique identifier brings up tasks and responsibilities that cross the borders of separate authorities and agencies. It will be very important to ensure that none of those will be left unattended because of the borders of responsibility. There will need to be agreed procedures in place how to act and clear escalations if roadblocks are encountered.
- Information collection and data management/authorized processing must be kept separate. Data collection should be legally possible to be delegated, for example, if there is a point of collection where data is concentrated and consequently forwarded. This model should not only apply to MoJ and initial personal data collection, but also everywhere where personal data emerges. All the participants in the identity system know where data can be acquired and do not copy it for themselves for future use.

6.3.5.3. Structure of unique identifier and generation of unique identifiers:

- The unique identifier MUST remain the same throughout the life of the person and in any registry/database/information system operating with personal data of the subjects. Therefore, this MUST be as simple as possible to be usable everywhere and be related only to a concrete person and no other ever.
- After the discussion about various schemes of unique identifier, common conclusion that unique identifier MUST be implemented as a topmost identifier was reached at the meetings. It only needs the addition of one data field to all records in all registries of all authorities to achieve initial mutual correspondence and interoperability. This solution would be a clear message to allay initial fears expressed during the first meetings that if this unique identifier system is implemented, the whole identity data infrastructure system will be dismantled to zero and rebuilt from scratch. Disruptions will not happen, and the message about a minimal upgrade can help to clarify this. The numbers the authorities are using at present in their systems for persons can be continued to use but on top of them there will be a linking unique identifier.

6.3.5.4. Birth Registration and new identity creation

- Most important is to get data to the registry. A document is not an objective by itself but only a certificate to an identity.
- Efforts must be made to enforce data collection procedures that ensure the collection of reliable identity data and ensure registration of all births.
- Procedures registering new solid identities wherever and whenever they become evident should be designed and put into practice.

- Data collection and consolidation procedures in *sucos*, including cooperation between MoJ and STAE representatives, *suco* chiefs, church priests, school managers among others, MUST be created, agreed upon and put into practice.

6.3.5.5. Distribution of unique identifiers to the citizens (via identity documents, 2020 census, etc.) and data collection processes

- Cooperation between STAE, MoJ / birth registration, census organizers, church should be fostered to join forces and save costs/share activities in 2020 (data collection)
- Data collection procedures should include also communicating a unique identifier to the subjects in the first opportunity, for instance during census or similar activities. It is important to distribute unique identifiers even without physical documents.
- Within 2020 census data collection activities, it would possible to use offline data enrolment pads. This is the information delivered at the meeting with the STAE personnel. The time is running quickly out but this is only the first suggestion among other possibilities to distribute the unique identifiers.

6.3.5.6. Distribution of unique identifier into different registries

- Procedures for data distribution must be designed and established. This MUST be a hierarchical system updating lower-tier registries' contents as quickly and as automatically as possible. It can be done without electronic data exchange operational yet but electronic data exchange will make it much quicker and decrease level of errors. Identity data processing operations in lower-tier registries should include corresponding data check in the Core Identity Registry and other interconnected registries.

6.3.5.7. Data quality control (cross-check):

- The next step should be interagency data quality control to the limits local data redundancy allows to do so.
- In parallel personal data can be compared with data in different registries. As stated here above it can be started without electronic data exchange operational yet as to reach an agreement between two bodies can be accomplished quicker than to develop electronic data exchange protocols and standards.
- Every case of identity mismatch MUST be analysed separately.
- It takes a long time.

6.3.5.8. Public relations and public communication to the partners and citizens:

- Messages to people, to politicians, to the private sector must be communicated to explain the purpose of implementation of a unique identifier in the Timorese identity ecosystem.

- The messages must be directed to different target groups differently and consequently have different contents.
- The main message for everybody should be how the unique identifier makes this person's life easier and this person must feel that the message was communicated to him/her personally.
- Success stories of the implementation of the unique identifier must be communicated as soon as possible.
- PR team must be ready to withstand the threat coming from self-appointed minority groups calling themselves "democratic majority". This is (and has been) an issue in every country in the world. So-called "democratic majority" is considered as threat in SWOT analysis and speed of its forming is inversely proportional to overall development level of a society. The worst cases are USA and UK where small but loud and influential groups of society are considering unique identifier breach of privacy.
- Benefits to the citizens if they come and register themselves.
- Intra-government communication to motivate different authorities to work for the same target and to follow the long-term political agreement.
- On the other hand, it **MUST** be communicated to the people that apart from all the benefits derived from implementation of the unique identifier there **WILL** exist also constraint measures like bank transfer amount limitations without using unique identifier. The reason for this is that relying only on voluntary acceptance and goodwill will not ensure penetration big enough. In course of time the constraints must become more effective step by step.

6.3.5.9. Training/promotions:

- All new procedures and processes bring along need for training;
- Acting together (cooperation) also requires training;
- Change in management must include tasks of creation and performance of training activities.

6.3.5.10. Deadlines:

- Deadlines will be evident after the project plan will be finalized by the Task Force. At present PERT chart has been provided describing internal dependencies of the tasks.

6.3.6. Process Management:

- As the implementation of the unique identifier concept involves almost all governmental authorities and agencies, it can be considered as an initiative, not a project.
- A qualified program manager has to be hired to steer the initiative activities especially after the first registries are ready to start identity data exchange. The program

manager will be responsible before the steering committee or Task Force depending on decisions made about the program organization.

6.3.7. The objectives for the first year of implementation

The objectives for the first year of implementation are:

- To incorporate the unique identifier into personal identity data that enables to create unique links to persons' identity documents and records in different registries and information systems;
- To reach a common understanding of the content and syntax of the unique identifier;
- To agree how to implement the unique identifier in different registries and information systems; and
- To ensure the Core Identity Registry has linked personal data records with issued unique identifiers. The unique identifiers have been spread to other registries and are used in the public sector.

6.3.8. The scope of the first stage

The scope of the first stage is to:

- define the unique identifier;
- sift out errors, duplicated identities, mismatches, etc. in different registries; and
- implement the unique identifier in the 10 most critical registries. The number here is ambitious but it is fully dependent on initiative the authorities will show up. The length of the first stage is very dependent on the quantity of the first set of registries. Again, this is recommendation, not requirement. Steering Committee has its say here. The final No. will be specified in the actual project plan.

6.3.9. Stakeholders, roles and responsibilities

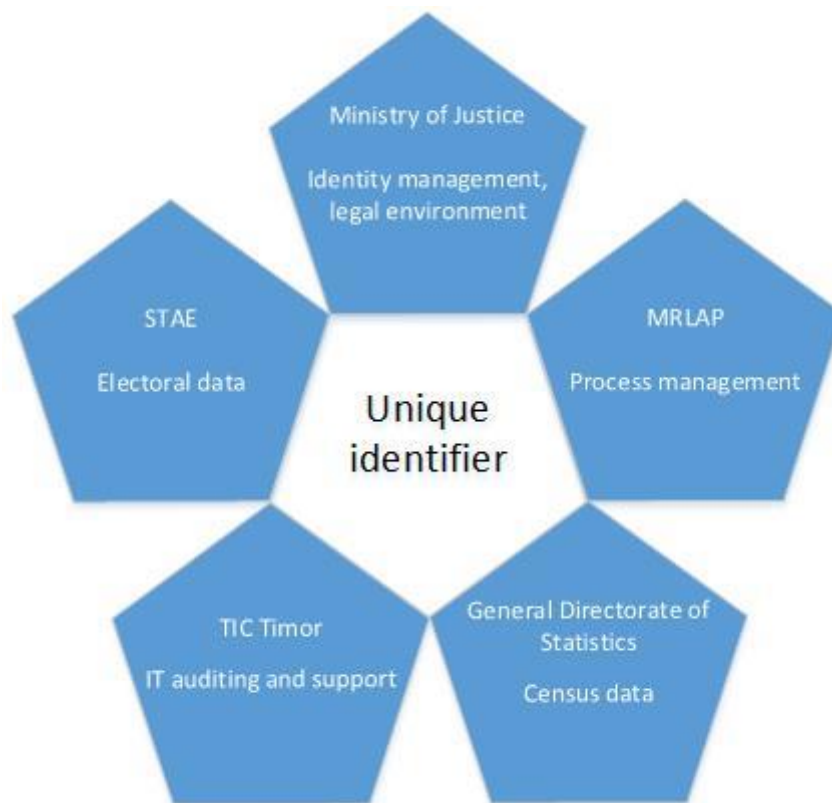


Figure 4. The main stakeholders and their responsibilities

The list of the stakeholders here corresponds to the list provided in initial ToR.

6.3.10. Organizational structure

The unique identifier implementation initiative has the following organizational structure:

For the ultimate guidance and coordination of the initiative, the **Steering Committee** and the rest of program organization will be established as soon as possible after the Government decision to start the unique identifier initiative. The Steering committee could consist of high-level decision-makers (Secretaries-General) of MRLAP, MoJ, TIC Timor, supported by UNDP, and UNICEF if deemed appropriate. Steering Committee will have regular meetings once a month but if necessary additional meetings should be held. Steering Committee will approve the implementation plan provided by the Task Force and monitor the progress of the implementation.

Task Force will consist of the responsible managers of the same authorities. These persons can make decisions and conduct daily activities in their institutions. Task Force members will be responsible for all activities that are implemented according to the plans. Also, Task Force members will solve daily problems that may arise in their institutions and also in inter-authority communication. Task Force will draft the detailed implementation plan and will report to the Steering Committee. In the composition of the detailed implementation plan, the Task Force will consider the results of the technical audits. These results will be the basis for the calculation of scope and resources and costs to make changes in every separate registry. The Task Force will submit regular reports to the Steering Committee.

Working Level resource – representatives of the institutions which conduct changes related to the implementation in everyday life. A team leader will manage the team in his/her

authority and will report to the local Task Force member. Direct communication between team leaders of different authorities is highly recommended but the higher person in the chain of command MUST be involved to react as soon as possible if a problem must be escalated to the Task Force level.

Joint Teams – if needed, inter authority work teams will be established. These teams will focus on the topics of the unique identifier initiative for short term periods. The common workspace will be generated when the need arises. For example, such a situation arises when specialists from two authorities need to agree upon the details of data exchange - in what form this will be done, which media should be used, how to prevent data from leaking, etc.

Program Manager – a person responsible for composing unique identifier initiative implementation (project) plan and implementation. Decision of hiring and positioning of this person in the organization depends on decisions either Steering Committee or Task Force. Program Manager will be responsible to Task Force.

Independent auditor – an institution which has the technical knowledge to assess various registers. The audit must be:

- independent;
- professional;
- provided by an external evaluator; and
- transparent.

This institution providing audit can, in cooperation with the registry owner, define the exact amount of development work, organize the upgrade and clarify the financial matters. The latter is recommended because it helps to keep the costs reasonable as, in this way, non-related costs will not be included, and the financing will be clear and transparent. This role suits most to TIC Timor as they report to the Government, they have the knowledge, they can get the “big picture” for the future development of the governmental environment and give support to MRLAP in future developments.

6.3.11. Analyses and assessments

- TIC Timor should first conduct a thorough assessment of the authorities' readiness to implement unique identifier in their registries in terms of technical capacity and physical infrastructure. They must be sure that one more component of personal data does not disrupt their procedures. In conducting these assessments, it must be understood that data exchange does not mean only electronic data exchange, but must/can involve other channels like a public postal service, governmental courier postal exchange, phone or fax calls, other courier services. Here human interface is equal to the electronic interface between two information systems, it's important to get data entered to the right place in the right format. The data carrier itself is not important, what is important is to get a datagram from sender to addressee without errors and based on the same profile. The result(s) of these assessments and evaluations SHALL constitute inevitable prerequisites to tasks to develop secure data exchange procedures depending on the form of data forwarding.
- Document issuers should evaluate changes to be made in document formats. This concerns ICAO Doc 9303 compliant travel documents and other passports, Timor-Leste ID cards, voter's cards, Birth Certificates, Baptism Certificates, Driver's Licenses,

government official's cards, etc. Usually making changes in document formats takes place concurrently with producing a new batch of blanks. Together with the format change, new legal acts describing a new format will be introduced and in case of travel documents, other countries in the world must be informed. There will be changes in the personalization of documents and other adjoining IT developments.

- Procedures for personal data collection through birth registration have been assessed and require strengthening so that various actors at the local level, including *suco* chiefs, Catholic Church priests and school officials, play a greater role.
- The state must establish control where and when needed over local government representatives to fulfil their obligations. Indifference and negligence causes data to be unreliable and this will cause kickbacks even far in the future.
- Legal environment assessment will cover finding out changes to be made in legal acts to enable new procedures.

6.3.12. Quality plan

A meter to define the level of trustworthiness of a personal data set in a registry must be established centrally to guarantee the same data quality level over all the registries containing personal data in Timor-Leste.

6.3.13. Work breakdown structure and scheduling

Based on the initial chopper view work breakdown structure more detailed implementation plan will be composed (See Task Force / Program Manager's role as implementation plan composer in section 6.3.10). The initial plan can be found in Annex 2.

6.3.14. Disagreement solving

In case of disagreements, the problem should be solved at the Joint Teams level. If a disagreement cannot be solved due to a kind of mismatch or especially if the disagreement originates from the higher tier of an institution, solving the problem will be escalated to a higher level (and to the next if needed) and the higher level must have the authority to act to ensure that the disagreement is resolved.

6.3.15. Success factors, risks, and constraints

Success factors:

- Processes of implementation follow the initiation plan;
- Existence of political support;
- Cooperation between authorities;
- Understanding that the implementation of a unique identifier is a joint effort.
- At technical level, the tasks can be started, especially in the situation where the decision to establish unique identifier to be based directly on the Birth Registration Number has not been made yet.

Risks:

- Implementation of a unique identifier will be obstructed or even stopped by missing legislation, even if it does not have a direct connection to a unique identifier.
- Cleaning of the records in the registries in some cases will fail and it must be taken into account that errors in registries will become evident for a very long time period. Failure of cleaning means usually that comparison of a person's data originating from several registries does not give unambiguous result.
- Error in linking - data sets of different persons will be linked to one unique identifier due to substandard background check and comparison of personal data through registries. Any data linking error is very dangerous, especially in healthcare.
- Political resistance - one of the most severe obstacles to implement the unique identifier.
- Social resistance - people do not accept the unique identifier.
- Different interest groups who work against the unique identifier.
- Technological steps will not be supported by the legal initiative.
- In the case of political non-interest Constitution Section 38 can be used against the unique identifier.

Constraints:

- Not all persons are presented in the Core Identity Registry. Methods of transferring identity data from lower-tier registries to the Core Identity Registry and regulations of data cleaning, registry record, and unique identifier creation MUST be established.
- Identity data enrolment in rural areas is very time-consuming and costly.
- Constitution Section 38 may set the constraint to the implementation process through the legal act referred to in Clause 2.

7. Timeline and plan for unique identifier implementation

7.1. Preparation of a detailed plan for the first year of implementation together with the task force and Project Management Unit based on the strategic decisions made

Though the implementation of the unique identifier has some features of a project, there are many factors that make it complicated to execute it in a time lined project form. Here is a short list of the biggest challenges:

- There is no certainty of whether and when a decision to start the implementation of a unique identifier will be made.
- There is a lack of knowledge about multiple identities of the same person either in the same registry or in different registries. The process of cleaning of personal data and linking it to a unique identifier also depend on the data record structure of a registry.

In well-structured and straightforward registries with few internal dependencies it takes less time than in some internally complicated registry. There are no similar registries and in the end all those MUST be developed to the level that makes it possible to integrate them. Cleaning data in a registry is not only checking authenticity of records but also leaving aside redundant data that will not be needed in the future for operating the registry. At least on the Task Force level the country-wide data model must be created in a way that no data will be duplicated and no data will be left unattended.

- Every task can have a distinctive start but most of them lack a clear finish date. As an example, the procedure of cleaning personal data and reconciliation with a unique identifier can take years. Some mismatches between different registries can surface even twenty years later. These mismatches cannot be amended in project form, but everyday desk work will do well.
- The registries have not been audited to clarify the need for development work to enable the implementation of a unique identifier.

Of course, it is possible to follow the progression of the processes in different registries by defining measurable outcomes (milestones) for every registry. Therefore, the work breakdown structure can be based not on dates but achieved milestones. For example, a measurable outcome can be a percentage of identity records linked to unique identifiers and these can be agreed upon when the process of data cleaning will be started in a particular registry.

During the present stage of implementation of the initiative of a unique identifier, it is more reasonable to define tasks to be fulfilled, measurable outcomes to be obtained and inevitable prerequisites to be fulfilled. Usually, this approach in visual form is called PERT chart. To add a timeline dimension to a PERT chart, the duration of tasks as well as resources must be negotiated, agreed upon and added to the PERT chart. Adding a timeline dimension to a project is the last stage of project planning before kick-off. This will be the task of the project organization and the Program Manager.

As data cleaning in different registries can take place in parallel and is basically the same for all registries, the sequence of tasks contains data cleaning tasks for only one registry. The preliminary requirements and measurable outcomes are provided in Annex 1.

7.2. Proposed implementation budget

At present, no major costs related to the implementation of a unique identifier can be foreseen for 2020. Depending on the course of activities at the political level, the amount of additional costs may be very different but presumably not high.

All the registries are different and changes in them depend very much on the data model and internal architecture of the registries, but also on the terms of maintenance and development in the case when such works have been outsourced, especially in vendor locked-in registries. To ascertain concrete costs related to the accommodation of the unique identifier functionality into the registries, technical and functional audits will have to be carried out in every registry to define the scope of changes to be made and their cost. During the in-country missions, the authors didn't get an understanding that the relevant stakeholders have an idea of the cost range though some estimates have been mentioned. Based on experience, these may be initially the biggest costs spread over a relatively short timeframe. The question of

financing of these audits could be decided together with the unique identifier implementation as a participating topic therefore the idea of involving Ministry of Finance among the Steering Group is good from this point of view. Collecting these technical audits under one independent institution can help prevent unrelated costs as otherwise, institutions in the public sector tend to endeavour funds for activities that are not related to the main objective. Moreover, attention should be paid to the concept of central audit and change implementation (see the organizational structure of the implementation initiative here above).

All tasks can be performed during daily work. As the implementation of a unique identifier is an additional burden for the authorities there are several ways to overcome this. The decision for making the choice depends on concrete authority. One can separate the workforce to deal with data cleaning, the other can hire additional workforce, etc. Here additional costs may need to be covered as data cleaning in the registries is precise and difficult and additional payroll will be needed to pay extra salary to the personnel or to hire additional workforce from outside.

There have been discussions about adding a unique identifier to identity documents. As the process of implementation of a unique identifier will take years, there is no hurry. Over time, every identity document becomes invalid after a specific period of time established by the law. There will be a moment when all the blanks of an identity document have been depleted from the stores of the issuer and a new set will be ordered - either under an existing contract or via new tender. This is the most suitable moment to make changes in the document form and add a unique identifier to this document. Due to security matters, changes in security design must be introduced with every print batch and adding one field to the data in a document does not cost anything, especially when such a request for making changes in security design has been included in the Contract with the document blank producer.

NB! Every document blank MUST have its own number, preferably numbered during the document blank production using a secure technology. This is one of many key methods of fighting against document fraud. At present it contradicts to the Article 8 of the Decree Law 2/2004 of February 4, but this presents a real security breach. A person should be identified by the unique identifier, not by a document number. Again, a document is only a state guaranteed certificate of identity, a secure communication channel.

Making changes in document security layout is related to making changes to the personalization process and whether this is related to additional costs will depend on the respective contract, whether cost-free changes of personalization process have been included in the contract or not.

Costs for Public Relations activities may be associated but their range will depend very much on what will be wanted to achieve, what must be done and how widespread the campaigns will be. Exact costs can be clarified during the 1st year of implementation and frame agreements can be signed with PR companies.

7.3. Detailed and identify technical sub-contracts

Exact tasks and the need for technical sub-contracts will be defined during the technical audit round of the registries. As mentioned earlier, different registries have different maintenance contracts and some of them are vendor locked-in cases. Accomplishing the audits, a clear understanding of the situation with the status of the registries will be obtained.

It is possible that a PR company must be hired if PR departments of the authorities consider it necessary but the need will be clearer after the first feedback from the society.

At present, no more technical sub-contracts can be foreseen except those related to the enhancement of registries to accommodate unique identifiers, which are due to be outsourced according to the existing contracts.

7.4. Proposed Governance of unique identifier (necessary regulatory changes)

Primary governance of a unique identifier should stay with MoJ as this is purely identity matter. As there are no legal acts that apply to a unique identifier, legal initiative can be both MoJ's and MRLAP's tasks. The quicker they divide responsibility in preparations of the new legal acts, the earlier identity and data protection environment in Timor-Leste can start to be established.

Several legal acts are directly related to the unique identifier and its implementation, such as Section 38 (Protection of personal data) in the Timor-Leste Constitution. Clause 2 of Section 38 states: "The law shall determine the concept of personal data, as well as the conditions applicable to the processing thereof." The legal act referred here may become crucial in the implementation of a unique identifier.

One of the legal acts that can be directly applied is data registry regulation. Every data registry, especially containing personal identity data, MUST have such a regulation created and approved by an authority responsible for data protection in Timor-Leste as soon as possible.

The easiest way to legalize the unique identifier will be together with the implementation of the Civil Registry Code.

A more thorough legal analysis is available in a separate document by UNDP 'Unique ID for All as a Gateway to Social Inclusion and E-Government', also provided in this report in Annex 4.

7.5. Created Project monitoring and evaluation framework

MRLAP could be the coordinator of all the unique identifier implementation initiative as managing of changes in Timor-Leste public sector has been one of their objectives.

MRLAP will coordinate other authorities and institutions on what must be done and will not do the work itself.

MRLAP will support the Task Force in creating the plan of implementation of the unique identifier and presenting it to the Steering Committee.

MRLAP, in close cooperation with the Steering Committee, will monitor the overall progress of the unique identifier implementation initiative and will be ready to help in removing obstacles.

MRLAP will be enforced to help in clarifying issues and contradictions between different institutions from different ministries.

MRLAP will be responsible for secure data handling and processing guidelines as the legal framework of data protection is missing in Timor-Leste.

MRLAP will show initiative in composing and preparing draft bills and getting them approved by the Parliament.

8. Reviewed and refined project management arrangement

8.1. Worked along with the inter-ministerial working group (Task Force) on the services reengineering around the unique identifier as services

As a unique identifier is only a part of a person's legal identity, offering services must shift primarily to a unique identifier. There is no need for central guidance or management of services. The service providers must be informed about the implementation of a unique identifier and they will decide themselves what must be done to continue the business.

During the meetings with the Task Force and its members as well as during the workshops on July 9th and September 13th. 2019, the following overall consensus has been reached:

- The unique identifier does not need e-governance to be implemented beforehand;
- At the same time the unique identifier **MUST** be one of the inevitable inputs for these projects. These projects **MUST** have unique identifier as one of their mandatory core attribute components.
- A unique identifier could be based on birth registration number;
- Start discussions with the Catholic Church and other religious institutions to involve them in the unique identifier accreditation processes, to find a solution to add a unique identifier to the Baptism Certificates or analogous documents;
- The Census 2020 organized by the General Directorate of Statistics can be used as a communication channel to spread unique identifiers among people of Timor-Leste.

8.2. Revised existing TORs of all project personnel in the Project Document, if necessary

As there isn't understanding among the authorities as to when or even whether this initiative of implementation of the unique identifier will get positive political decision, it is too early to deal with TORs of all personnel included in the implementation of the unique identifier initiative. In principle, the participants in the unique identifier implementation process will continue their everyday work according to their work instructions. Assuming that normal day to day work of the resources consumes the majority of their time, reorganization of tasks (if needed) is to be solved by the resource managers together with Program Manager to deal with task priorities or to hire additional workforce. The biggest work during the 1st stage will be data cleaning in the registries and this is nothing that needs any specific experience or knowledge, apart from some training.

As far as it can be seen from the present time, there will be a need for persons who will organize the comparison of personal data, who know their systems and will be able to agree upon how the data comparison must proceed as effectively as possible.

8.3. Developed a detailed TOR for the Project Steering Committee

The role of the Steering Committee is to take responsibility for procedural issues associated with the implementation of a unique identifier. For example, the Steering Committee is responsible for approving the budgetary strategy, defining and realizing benefits, and monitoring risks, quality, and timeliness.

The Role of the Steering Committee is to:

- take on responsibility for the initiative's feasibility, implementation plan, and achievement of outcomes;
- provide those directly involved in the unique identifier implementation process with guidance on project business issues;
- ensure effort and expenditure are appropriate to stakeholder expectations - especially during the period of technical audits of the registers;
- address any issue that has major implications for the process;
- keep the scope under control as emergent issues force changes to be considered;
- reconcile differences in opinion and approach, and resolve disputes arising from them;
- report on project progress to those responsible at a high level, such as Cabinet.

Individual Steering Committee members will have the following responsibilities:

- Understand the goals, objectives, and desired outcomes of the unique identifier implementation initiative;
- Understand and represent the interests of stakeholders;
- Take a genuine interest in the outcomes and overall success;
- Act on opportunities to communicate positively about the progress of the implementation process;
- Check that sensible financial decision is made – especially in the procurement of upgrade works of the registries and in responding to issues, risks, and proposed process changes;
- Check that the process is aligned with the organizational strategy as well as policies and directions across government as a whole;
- Actively participate in meetings through attendance, discussion, and review of minutes, papers and other Steering Committee documents;
- Support open discussion and debate, and encourage fellow Steering Committee members to voice their insights.

Membership:

As provided here above the Steering Committee will consist of the high-level decision-makers of MRLAP, MoJ, TIC Timor, with support from UNDP and UNICEF local representations if deemed appropriate. Also Ministry of Finance and Ministry of Social and Solidarity and Inclusions had been supposed to be included in the Steering Committee by the participants in the meetings.

Frequency of meetings:

The meetings of the Steering Committee will take place regularly once a month. In urgent cases, especially when problem-solving will have escalated to the Steering Committee level the meetings take place according to necessity.

Reporting:

Steering Committee will collect regular reports from the Task Force and present monthly and yearly reports to the Cabinet.

8.4. Clarify the role and functions of (and relationships between) the Project Steering Committee and the Annual Project Review

See Paragraph 8.3 'TOR for the Project Steering Committee' sub-paragraph 'Reporting'.

8.5. Clarified the role and responsibility of partners

The roles and responsibilities of the partners are described in the sub-paragraph '6.3.10. Organizational structure'

8.6. Reviewed and finalize the project management arrangement diagram

At present, it is too early to specify anything concrete - circumstances and conditions will change, people will be replaced, and agreements will not hold. The implementation management arrangement diagram will be composed when preparations for actual activities will start. This will be concurrent to adding time dimension to the implementation plan (see Annex 2).

8.7. Final Government Strategy Plan for the implementation of Unique ID in Timor-Leste

This is a separate file called 'Final Government Strategy Plan' which can be found in Annex 3.

8.8. Provide support in organizing e-government and digital age.

As far as a unique identifier is not dependent on e-governance and digital age but is a component of a person's identity, no indications to e-governance concerning a unique identifier were made during conversations and meetings.

On the other hand, in almost every meeting, opportunities for the implementation of e-governance in Timor-Leste were discussed. During these discussions, the inevitable role of the unique identifier was explained - why e-governance implementation **cannot** be started before the unique identifier has been implemented, what the role of the unique identifier is in e-governance and how it must be used to gain maximum benefit from cooperation between different agencies and authorities.

Therefore, the seminar held on September 13th, 2019 was concentrated on the unique identifier, digital matters were not discussed. E-governance and digital age are objectives of other projects that can be initiated and accomplished independently of the unique identifier. As explained here above in p. 8.1 these matters will have to wait until unique identifier will be implemented and electronic data exchange up and running. Proprietary or free solutions both are used by different countries and are available for implementation. The latter are gaining more and more popularity being more feasible and having more flexible support available. Therefore, quick start in this matter is highly welcome.

There is big work ahead to implement unique identifier concept.

9. Final Recommendations

9.1. Creation of new identities

Identity is considered a new one if it hasn't been registered previously for some reason. With the Core Identity Registry established and unique identifier implemented in MoJ MIS, data collected after birth, baptism, attending school, while applying for a document or some other governmental service, will be sent to the Core Identity Register for registration, multiplicity check and generation of unique identifier.

9.2. Registration of new identities

Apart from the persons having got the unique identifier together with birth certificate or the unique identifier has been issued to this person during cleaning the Core Identity Registry there is possibility that a person without unique identifier will contact an authority to get some service. Information about this person may be even missing from the Core Identity Registry. This applies Timor Leste nationals and also foreign persons who are subject to unique identifiers according to corresponding legal regulation. In such cases registering a unique identifier can be initiated from aside.

If a person applies for some service to an authority and doesn't present a unique identifier, a background check request to the Core Identity Registry **MUST** be made. If the person does not have issued unique identifier yet the proceedings to generate the unique identifier **SHALL** be started. The unique identifier will be generated and stored in the Core Identity Registry. The unique identifier will be delivered to the service provider then as at this moment this exists in any case. The service provider will store this together with the customer account data and also inform the customer about it, preferably in written form.

If the unique identifier has been printed on an identity document, no background check is needed.

It is conceivable that for some period of time, a private company can register a customer based on some other attribute(s) but private companies too **MUST** be obliged to inform Core Identity Registry authorised processor about this and forward the customer's data to issue a unique identifier. In case of evident cases of applying for multiple identities, serious consequences **MUST** follow. Starting from a determined moment in the future having a unique identifier will be a critical aspect of access to services and the first step in a person's life will be the application for a unique identifier by the parents. School officials and Catholic priests could forward registered personal data to local *suco* chiefs who will as an official duty forward them to the Core Identity Registry. Detailed analysis and description of the issue of identity documents is out of the scope of this project.

9.3. Tasks for the next stages outside the scope of this project

- Specify how to make information systems to communicate with other information systems.
- Explain that the term 'data exchange' does not mean that all data will be shared with all authorities. Merely what is needed can be requested and should be based on laws and regulations. Any excessive data flow must be monitored and restricted. The need-to-know principle **MUST** be followed very strictly.

- Data entry principles. A form should be characterized by a set of data, not by the format of a paper-based document defined by some legal act.
- It is not important how data is transferred - either by digital means or by courier or by satellite phone. It is important is to agree on how the requests and replies are defined.
- A standard for data exchange protocols must be agreed.

1. ANNEX 1 – ROADMAP FOR DEVELOPMENT OF UNIQUE IDENTIFIER SYSTEM FOR TIMOR-LESTE

Next steps for implementation of the unique identifier

At present it is too early to bring in time dimension to the Roadmap and to the implementation plan as there is no clear understanding of the start date and duration of different procedures in Cabinet, preparation of draft bills for the Parliament, the number of parallel tasks to be initiated during technical audit and data cleaning in the registries, the number of registries concurrently process data cleaning without mutually becoming obstacles for other registries as data cleaning must involve all cross-connections between registries.

The Roadmap has three major components:

- Development and implementation/enforcement of the structure of the unique identifier;
- Identification and preparation of legal acts necessary for implementation of the unique identifier concept and identity ecosystem implementation; and
- Implementation of the unique identifier concept and identity ecosystem itself.

These can be further divided into smaller components. The introduction of a legal framework is the prerequisite for the start of the implementation of the unique identifier. This will not prevent the start of activities, but the official launch cannot take place without a legal act in force.

The implementation process of the unique identifier can be divided into several phases:

- Phase 1 – Minimal inevitable legal framework is established.
 - See the preliminary legal analysis in a separate document or Annex 4.
- Phase 2 – IT technical analyses are accomplished;
 - The architecture of the Core Identity Registry;
 - Structure of unique identifier;
 - Data cleaning process:
 - Deciding the sequence of registries involved in the comparison of personal data and starting the cleaning process by importing data to the Core Identity Registry;
 - Generation of unique identifiers for all registered persons;
 - Unique identifier generation processes for newly registered persons, rules of access to personal data.

Phase 2 works can be done without a legal act, such as Technical Audit, Structure of the unique identifier, identifying the Central ID Register, creating data exchange methodologies between registers if decided so by the Task Group. But anyway a formal decision must exist before as in public sector nothing can be started without.

- Phase 3 – at least 10 important and/or critical registries are supporting unique identifier
 - The registries are technically able to process unique identifiers.
 - The personal data records in the registries have unique identifiers attached.
- Phase 4 - distribution of unique identifiers to the persons;
- Phase 5 – more and more registries start to support a unique identifier (never-ending process). Data cleaning in those registries can start.

Comment to Phase 3: Mandatory prerequisite – registry record structure models have been specified and implemented.

Figure 5 provides the approximate positioning of the tasks from the start of the unique identifier initiative implementation is provided.

There is no need for coordinated development between authorities except those 10 selected for Phase 3. Those 10 registries SHOULD have cleaned their databases and contain trustful and mutually confirmed data at the end of Phase 3 - this is the measurable outcome of Phase 3. Other authorities can start the next phases without waiting for others to start or finish. This approach enables us to spread the workload more evenly.

In Figure 5 some temporal dependencies can be seen. Some tasks have decaying endings. These tasks may last for years, even more. Some errors will surface maybe 25 years later and issuing unique identifiers will never stop.



Figure 5. Approximate positioning of the tasks from the start of the unique identifier initiative implementation.

2. ANNEX 2 – PERT CHART: DETAILED SET OF TASKS FOR THE FIRST IMPLEMENTATION YEAR

At present, the status of the unique identifier implementation initiative is unclear. The authorities have expressed their interest to move on, technically it should be possible, and costs will not be significant. But there is no way to create a time-based plan.

Nevertheless, an approach of internal links and dependencies can be used because the logic of the implementation order does not depend on the duration of the tasks. This is called a PERT chart.

The time dimension is very easy to add to the PERT chart. Every project management software is capable of calculating the project timeline when durations of the tasks are added to the PERT chart. PERT chart is very similar to Work Breakdown Structure. In our approach, they can be taken as synonyms.

The chart does not contain the decisions of which model is used in the creation of the Core Identity Registry, political decision to start implementing the unique identifier and decision to appoint a governmental body to provide a technical audit of the registries

The objective for the first year of implementation is that different registries will be able to reciprocally check data and find out mismatches and that this work will be going on at full speed. One more objective – if everything succeeds – can be the introduction of a unique identifier to the registry of General Directorate of Statistics and the next census personalized questionnaires.

The most important task after getting positive political decisions will be the creation of the Core Identity Registry in the information system of the Ministry of Justice. This will be one of the first two tasks that are prerequisites for the data cleaning process that will start after the Ministry of Justice gets the Core Identity Registry in working order. The second prerequisite task will be cleaning the data in the existing system and discovering multiple identities.

According to the Pareto principle, 80 percent of records can be processed within a relatively short timeframe after starting the process but to get the whole registry cleaned may take years and this can be accomplished only when comparing the data in the Core Identity Registry with data in other registries.

One big problem here that can be the reason for multiple legal identities is that a person can be registered at least twice - i) after birth and ii) after baptism. Whatever the nature of the error, it must be corrected.

All this is desk work that can be done during everyday activities. Resource planning here is the task of the Ministry of Justice.

After the Core Identity Registry has been established and personal data linked to a unique identifier considered trustworthy enough, data exchange between different registries can start.

The description of the content of the tasks can be found in the following Figure 6 and Table 1.

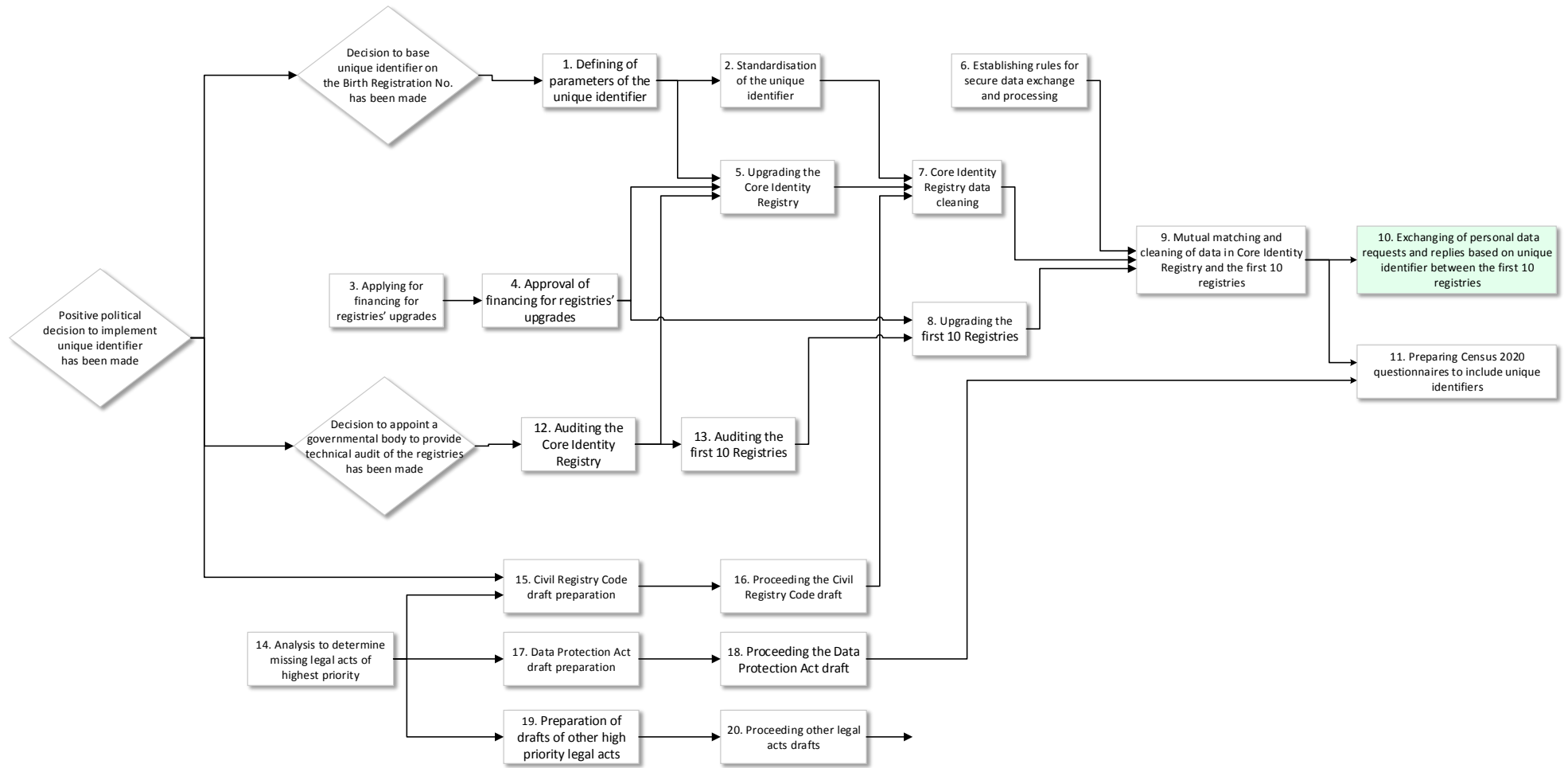


Figure 6. Sequence and dependencies between the tasks of the 1st stage of implementation of the unique identifier initiative.

No.	Task Name	Inevitable prerequisite(s)	Measurable outcome
1	Defining of parameters of the unique identifier	The decision to use Birth Registration No as the basis of the unique identifier has been made	Structure and syntax of the unique identifier have been defined.
2	Standardization of the unique identifier	Structure and syntax of the unique identifier have been defined.	Unique identifier structure has been legitimated
3	Applying for financing ¹ for registries' upgrades.	-	The need for financing has been defined and forwarded to MoF.
4	Approval of financing for registries' upgrades.	The need for financing has been defined and forwarded to Ministry of Finance.	Financing the registries' upgrading has been opened.
5	Upgrading the Core Identity Registry	Structure and syntax of the unique identifier has been defined; Financing of the upgrade has been opened; The Core Identity Registry technical audit has been accomplished.	The Core Identity Registry is ready for data cleaning and generating unique identifiers.
6	Establishing rules for secure data exchange and processing	Responsible authority has been appointed.	A set of data protection rules has been introduced.
7	Core Identity Registry data cleaning	Core Identity Registry has been upgraded; Unique identifier structure has been legitimated; Core identity Registry has been legitimated.	Unique identifiers have been generated and attached to the records.
8	Upgrading the first 10 Registries	Technical audits of the first 10 registries have been accomplished. Financing of the upgrade has been opened	The registries are ready for data match check with the Core Identity Registry.
9	Mutual matching and cleaning of data in Core Identity Registry and the first 10 registries	Rules for secure data exchange and processing have been established; The first round of data cleaning in the Core Identity Registry has been finished; Upgrades for implementation of a unique identifier in the first 10 registries have been accomplished.	Matching records in the first 10 registries have unique identifiers attached.

¹ The content of this task is to define the changes in the registries needed for implementation of the unique identifier, calculate the costs and to apply for funding.

10	Exchanging of personal data requests and replies based on a unique identifier between the first 10 registries	The first round of data matching between the Core Identity Registry and concrete registries has been accomplished.	Mismatches and errors in identity data will surface for many years. Task has no concrete meter of reaching the measurable outcome.
11	Preparing Census 2020 questionnaires to include unique identifiers	Trusted unique identifiers have been transferred to the census personal data registry General Directorate of Statistics	Unique identifiers have been added to the personal questionnaires of the Census 2020.
12	Auditing the Core Identity Registry	-	The need for upgrades has been defined.
13	Auditing the first 10 Registries	The Core Identity Registry audit has been accomplished	The need for an upgrade for the first 10 registries has been defined.
14	Analysis to determine missing legal acts of the highest priority	-	The list of missing legal acts of highest priority has been composed.
15	Civil Registry Code draft preparation	The list of missing legal acts of highest priority has been composed.	Civil Registry Code has been presented to the Cabinet.
16	Proceeding the Civil Registry Code draft	Civil Registry Code draft has been presented to the Cabinet.	Civil Registry Code has come into force.
17	Data Protection Act draft preparation	The list of missing legal acts of highest priority has been composed.	Data Protection Act has been presented to the Cabinet.
18	Proceeding the Data Protection Act	Data Protection Act draft has been presented to the Cabinet.	Data Protection Act has come into force.
19	Preparation of drafts of other high priority legal acts	The list of missing legal acts of highest priority has been composed.	Other high priority legal acts have come into force.

Table 1. Inevitable prerequisites and measurable outcomes of the tasks from Figure 6.

3. ANNEX 3 – FINAL GOVERNMENT STRATEGY PLAN

In Timor-Leste, very good work has been done to get state identity infrastructure running smoothly. All ministries and agencies have good solutions and registries corresponding to their specific needs. They have done very good work and this approach must continue in the future.

The state must know who is located within the borders of a country. Ignorance in this matter leads to various misuses of identities, identity and document fraud, misuse of government funds and allowances and even criminal fraud. Moreover, the probability of multiple legal identities undermines international trust towards the travel document issuance process and the country as a whole.

- Unique identifier is part of a person's legal identity.
- The unique identifier does not need e-governance to be implemented.
- E-governance inevitably needs a unique identifier to be implemented beforehand.
- It is absolutely not important in any way in what form is a registry² - a paper card library or electronic database or a ledger book or whatever one can imagine.
- Implementation of a unique identifier is not the implementation of e-governance in Timor-Leste.
- Data must be collected, processed and stored where it originates. Copying is not acceptable but regulated and limited data exchange is.
- A document is a certificate of identity.

Every person in a country **MUST** have **only one legal identity** and its trustworthiness must be guaranteed by the government. It **MUST** be uniform, and no difference **MUST** be made between Timor-Leste nationals and persons of foreign nationality. All other identities must be considered as derivative and issued certificates **MUST** be based on this topmost legal identity.

One of the components of the legal identity is the **unique identifier** - a string of (letters and) numbers that is unique for every person in the Core Identity Registry. Implementation of the unique identifier will need some work to be done to modify the registries to accept one more component of personal data.

The legal identity must be not any more exhaustive than sufficient to determine a person. This primary data set usually includes the **name, surname, date of birth, unique identifier and some biometrical data** - facial image, fingerprint images, and in some countries eye iris image too.

The Government must define a Core Identity Registry as the trusted root source of legal identities. All lower level identities must be considered as derivative identities.

² The authors have intentionally refrained to use the term "database" as not to give the readers false understanding that a unique identifier has anything to do with the format of a registry i.e. electronic database.

Benefits of unique identifier:

- Enables to relate personal data between different registries. At present all the registries are using their models of personal identity record structure that makes it hard to formulate requests to other registries. If the unique identifier will be a part of the data request its processing becomes much more straightforward and results will be delivered at a quicker pace.
- Enables to relate different identity documents to one person. Without the unique identifier in an identity document, a person can use them to declare being a different person. With a unique identifier, this will not be possible anymore. In the course of discussions with various stakeholders, the question of multiple legal identities was mentioned several times. There have been cases when these multiple legal identities had been used for identity fraud. Some stakeholders, especially banks and the Ministry of Social Solidarity and Inclusion consider this fraud an important issue as people get unjustified benefits or even perform criminal acts.
- Enables to discover duplicate identities (in social benefits, healthcare, etc.). The unique identifier is an invaluable tool to fight against identity fraud. For example, it helps to expose the misuse of social support allowances either based on multiple identity documents or getting the same allowance in several different geographical/municipal locations.
- Enables to avoid data duplication in the same and different registries and mismatch of data. World practice shows that in the case where every authority itself collects all the data they need, this will lead to data hoarding and unreasonably high costs of personal data management. Usually, this is also linked to collecting redundant data that is not needed for the concrete case of personal data processing procedure but to increase the trustworthiness of the data itself. Also, the high risk of accidental creation of duplicate identity due to human error is present. And there are registries in Timor-Leste where intra-register linking of a person's records is done indirectly by collecting much highly redundant data that is absolutely not related to the main purpose of this registry.
- Enables personal data matching between different authorities/ministries/service providers/registries. The same person can be presented in different registries with a different set of personal data. Using the unique identifier, it becomes possible to start data cleaning comparing personal data sets between authorities. The other benefit here is making the bureaucracy burden lighter for the citizens as duplicate data will not be needed to collect anymore.
- It is possible to provide better services to citizens. This is related to the decreasing of data amount collected from the persons and in the future to the decreasing of service contact time due to pre-filled data enrolment forms that will lead to the increase of throughput in the customer service bureaus and overall customer satisfaction.
- The decentralized model leaves the development of business processes to the business owners. Every authority can continue with their development plans without major changes that greatly promote the right decisions made previously and supports seamless development for every authority and every registry.

The unique identifier as a component of a person's legal identity MUST be introduced to everyday usage in everyday business either by law or as a national standard. The choice depends on the legal system of Timor Leste. Usage of the unique identifier will be a critical aspect of access to services. The private sector will follow. Of course, legal analysis to find out the exact influence shall be conducted but it has to be kept in mind that a unique identifier can and must be considered to be the third component of a person's name, nothing else.

In the course of discussions with various stakeholders, the question of multiple legal identities was mentioned several times. There have been cases when these legal identities have been used for identity fraud. Some stakeholders, especially banks and the Ministry of Social Solidarity and Inclusion consider this fraud concerning as people get unjustified benefits or even perform criminal acts due to holes in the identity system.

A unique identifier makes it possible to link all the documents issued to a person. No difference must be made between a birth certificate, baptism certificate, school registration records, ID card, passport, etc. – all those documents should have a unique identifier printed on the document.

NB! The unique identifier is not a document number. It is the identifier of the document holder. The unique identifier must be the same on every identity document.

Very frequently, the issuance of a document is considered the primary goal of identity registration. This is a very severe misunderstanding. A document cannot be issued if there is no legal identity in the primary registry. During the implementation of the unique identifier, a mechanism of adding this to the already issued non-replaceable identity documents like birth certificates or baptism certificates must be established.

Responsibility

There are five major players in the unique identifier implementation process.

Ministry of Justice (MoJ) is responsible for legal identities by the law. They have a very comprehensive and extensive registry of personal data that has been gathered via the process of birth registration. As the birth registration numbers are already components of legal identities, this makes the Ministry of Justice the best authority to become the topmost authorised processor of personal identification data. The changes in the Ministry of Justice registry would be minimal and establishing the Core Identity Registry as the root source of legal identities and unique identifiers would be quick and simple.

To get the unique identifier to be implemented it must not be done in the form of a campaign but a supervising body must be determined under whose management the process will be conducted to the final objectives for several years. The reason for this is that all the authorities have their systems in full functionality. These systems have been created in very specific ways and working well, but as every system is different it is hard to say how much time is needed for every registry/authority. Every step here must be calculated and inevitably pre-audited.

Ministry of Legislative Reform and Parliament Matters (MRLAP) has full capacity to coordinate all the processes of introducing unique identifier into the registries of other ministries and authorities. They can supervise composing, coordinating and monitoring progress of the project plans and roadmaps, organize interdepartmental cooperation, have a major overview of the implementation process.

Though the implementation of a unique identifier is not very complicated, every participant in this initiative will have its own specific IT issues. It is recommended to have a central body that will assess the concrete needs and scope for development, assists in formulating the requests for development works and keeps costs under control to prevent the ordering of works that are unrelated with unique identifier implementation. Based on our experience from the public sector, agencies sometimes try to increase dedicated financing to obtain additional, non-related objectives.

TIC Timor has a central role for state IT projects and development, it has needed IT competencies and capability of assessment and auditing of IT budgets. Being most closely related to IT systems development they have the best knowledge and experience to audit the IT systems of the authorities, to specify works to be done and define the amount of additional financing needed, supervise the development works and keep all this under control. To further increase transparency, the financing of these developments could take place via TIC Timor budget. All payments would be made from their budget line. Also, they can be of help in defining data matching algorithms for data cleaning procedures.

Technical Secretariat for Electoral Administration (STAE) has another very comprehensive registry of personal data. This database can be used as the first and most important database for data matching and cleaning. When comparing the registries of the Ministry of Justice and STAE, there are differences in data composition and records. Not all persons in the registry of the Ministry of Justice are present in the electoral registry, and vice versa. These differences will give a great opportunity to get the two biggest registries updated and checked against errors very quickly. This will help to increase the trustworthiness of the identity information in Timor-Leste to a new level.

Census is one of the most important and thorough methods of collecting adequate data about persons living in a country. The next census will be conducted by the General Directorate of Statistics in 2020 and it has an objective to reach every person in Timor-Leste. Due to this aspect, the census can be used as a two-way communication channel. The field for the unique identifier for the interviewees can be included in the questionnaires already during the design stage. If STAE is aware of the unique identifiers before the census the unique identifiers could be added to the personal questionnaires and forwarded to the interviewees in case they do not know them yet. This way unique identifiers can be distributed among the population. On the other hand, the questionnaire can include questions about issued identity documents. If a person states that he or she misses an identity document, then attention can be paid to eliminate this situation in a more feasible way. This information from another point of view will give big benefits for data comparison between registries. And the biggest benefit of census information is that personal data in the root registry can be checked against the biggest possible personal data registry.

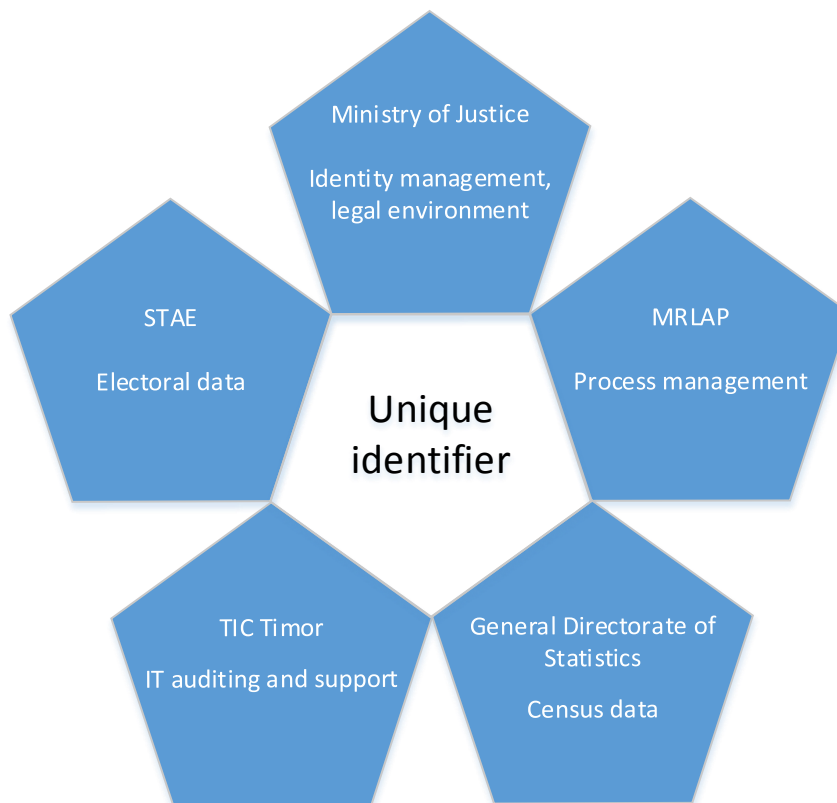


Figure 1. Major stakeholders and their responsibilities

In Figure 1, the main stakeholders involved in the implementation of the unique identifier implementation organization are shown. For example, the Ministry of Justice is responsible for personal identities, authenticity, trustworthiness, lack of multiple identities and creation and implementation of all legal acts.

After making changes in the registries, the next stage of implementation of the unique identifier - cleaning data in the registries - can start. Without a primary source of governmentally guaranteed identity data, errors in the registries tend to grow. This is nothing extraordinary and it happens everywhere in the world. There are many reasons for this, including input errors, errors in linking different records in some registries but also intentional identity fraud.

To clean the identity errors out of the registries, tight cooperation between ministries and other agencies is needed. Of course, the source of the unique identifiers must only be the root registry. From this registry, unique identifiers will be distributed throughout other registries. All mismatches will be clarified case by case.

Establishment of an electronic data exchange system should not be waited for. There is no difference as to in which form the data will be exchanged. This may be done using a postal exchange or phone calls or DVDs etc. However, electronic exchange is the most efficient way to do this. Electronic exchange should not be the ONLY way to data match, but it should be the default way to match. It is important that data matching can be performed.

As far as these changes in the registries are concerned, the introduction of a unique identifier will not bring along significant costs, especially in 2019 and at the beginning of 2020. The changes are administrative matters - personnel training, data exchange rules establishment

and management, some added communication costs. Mostly, it will be a thorough desk job. The first steps should have minimal financial impact and therefore suitable to take under present conditions. **There will be no major renovation of the registries, the registries will continue working on as they have done until the present time.**

Conclusion

Timor-Leste has had the unique identifier - the birth registration number for years already along with other components of unique identification infrastructure. However, it hasn't been used in all its might to bring benefits to Timor-Leste. At first it must be given functionality of linking attribute and when this task has been finished the creation of harmonized identity infrastructure can be started. The process will take off slowly, but on the other hand it should in no way to take the form of a campaign. There have been campaigns of introducing unique identifier (and ID cards) in other countries. These campaigns have been failed, in some countries repeatedly. It will take years until all the data in the registries will be matched and cleaned and all systems will work smoothly.

Implementation of a unique identifier is not a project or a program. It is more like a governmental initiative to be taken step by step into everyday use.

Implementation of the unique identifier does not need major additional costs.

The critical steps for 2020

- Gaining political support. Without a political decision, it is not possible to perform technical, administrative and legal preparation but for the official start, the decision by the Government and/or Prime Minister should be made.
- Ministry of Justice can prepare draft laws concerning adding one component to persons' data and - if needed - specify the syntax of the unique identifier.
- A kick-off meeting must be held between the most active stakeholders to clarify initial matters and agree upon data exchange methods between the agencies.
- Efforts to implement electronic data exchange should be started.

Strategic milestones for the 1st year of implementation:

- Political decision to start the implementation of a unique identifier in Timor-Leste.
- Core Identity Registry is established.
- The first legal acts of high priority are prepared and approved.
- Unique identifiers are generated in the Core Identity Registry.
- Data matching between the Core Identity Registry and other registries are done.
- Unique identifiers' benefits and implementation procedures are communicated to the people of Timor-Leste.

4. ANNEX 4 – CURRENT SITUATION OF E-GOV IN TIMOR-LESTE

(E-government questionnaire fulfilled before the first inception mission)

Personal data collected by different authorities and an example of data matching and cleaning.

	Name and surname	Date of Birth	Address	ID-card no	Passport no	Voters card no	Birth Cert no	Baptism cert no	Driving license no	Parents' names	Grandparents' names	Photo
MRLAP												
TIC Timor												
MoJ	Y	Y	Y	Y	Y		Y			Y	Y	Y
Telemor	Y	Y	Y	Y	Y	Y			Y			
MoSSI	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	
Sinarmas												
MoE	Y	Y	Y							Y		
BNCTL												
STAE	Y	Y	Y	Y		Y	Y	Y		Y	Y	Y
MoTC												
GDoS	Y	Y	Y									
NCIS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	

Table 2. Personal data collected by different authorities and an example of data matching and cleaning.

5. ANNEX 5 - UNIQUE ID FOR ALL AS A GATEWAY TO SOCIAL INCLUSION AND E-GOVERNMENT

See a separate document “Legal Framework Preliminary Gap Analysis” prepared by UNICEF consultant.