

# Lands Node: A Successful Experience of Interoperability in Favor of the Victims of Colombia

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## Abstract

The following is a case study regarding an interoperability experience implemented in Colombia for the development of the land restitution public policy. After an academic review of the concept of interoperability, this document contrasts the different postulates it encompasses with a concrete case implemented in Colombia since 2014. With the help of 12 Colombian State entities, the direct support of the Ministry of Information Technology and Communications and the leadership of the Land Restitution Unit, this experience reflects the complexity,

## *Index terms—*

## 1 Introduction

Information and Communication Technologies, ICT's, play a fundamental role in governments around the world and this cannot be ignored. This is the understanding of Criado and Gil-García (2013) who see them as a means to increase the effectiveness, efficiency, productivity, and quality of public services. They are a fundamental component of what academic literature has called e-government, understood as the use of these technologies in public administrations in order to improve service provision and public governance itself (Criado, Gascó & Jiménez, 2011).

A key feature of this type of governance is the importance of intra-and inter-governmental collaboration as a means of reducing redundancy in operations and saving time in processes (Abu-Shanab, 2015). And this is where the concept of interoperability comes into play, as that ability, typical of e-governments, to cooperate between agencies to achieve precise goals and/or services -although we will go into more detail on this conceptual issue later.

Researchers Lee & Hoon Kwak (2012) classify these 2.0 governments according to the level at which they make use of these technologies to carry out their functions and interact with citizens. Thus, on a sliding scale, they understand level 4 agencies as those where governments collaborate with other agencies by using government data, as well as their inputs and feedback, therefore giving added value to the public services provided. This is, according to the authors, a level where governments, through open collaboration, develop data analysis and new capabilities to obtain new insights, and thus improve their decision making, by being able to rely on a significant volume of official information. They conclude that this produces synergistic effects through the collaboration of many parties and leads to time savings, better quality and greater innovation for the services and policies implemented by the government (ibid.).

Within this context the Lands Node project comes into place, led by the Land Restitution Unit (hereinafter LRU), a public entity of the Colombian government whose main objective is: '(...) to serve as an administrative body of the National Government for the restitution of land to the dispossessed' (Bill 1448 of 2011) by the internal armed conflict. This is a project that, using interoperability practices, seeks to bring together various national government entities to share information related to the land restitution process.

This case study seeks to reflect how, through this recent experience, Colombia's government managed to materialize interoperability, with the use of ICTs, in the implementation of a public policy. The present document will start with a brief overview of the concept and its main characteristics to continue with a description of the Lands Node project and how, in its application and results, the various components of interoperability can be

seen in play as well as how the government, through the leadership of the LRU, has managed to address its multiple challenges.

## 2 II.

### 3 Interoperability: Definitions and Characteristics

This is a concept that has been recently explored by the academy and that, despite its relative novelty, has had a wide and varied development. Perhaps one of the most complete and concise definitions is provided by Criado, Gascó and Jiménez (2010) who summarize it as follows:

Interoperability is the ability of disparate and diverse organizations and systems to interact with common and agreed upon objectives and to obtain mutual benefits. Interaction implies that the organizations involved share information and knowledge through their business processes, by exchanging data between their respective information and communication technology systems'. ??Criado, Gascó & Jiménez, 2010: 5) Gil-García and Criado (2017) also understand it as an ability of the systems that, by means of ICTs, manage to exchange data, information and knowledge within the framework of standards and action guidelines that describe, in turn, the way in which organizations have agreed to interact with each other.

For the Australian Government, in its e-Government initiative, interoperability is the 'Ability to transfer and use information in a uniform and sufficient manner between various organizations and information systems' (Australian Government, 2006). Similarly, for the European Commission's IDABC it is the 'ability of ICT-based systems and the business or government processes they are based on to exchange data and enable the sharing of information and knowledge' ??IDABC, 2004: 5).

According to the Bases for an Ibero-American Interoperability Strategy (2010), quoted by Criado, Gascó and Jiménez (2011), it is also an ability of different organizations to interact, based on agreed objectives and with the ultimate goal of obtaining mutual benefits.

Complementing the above, for Pardo, Gil-García and Burke (2008) quoted by Luna Reyes (2017), interoperability is not an end in itself, but a means that seeks to create public value from the coordination allowed by ICTs to improve public decisions, as well as the design or implementation of a public policy. In the Latin American context, ECLAC (2007) lies on the European Commission's definition who sees it as: 'the ability of ICT systems, and the business processes they support, to exchange data and enable the sharing of information and knowledge' ??Cepal, 2007: 13).

Finally, the Colombian government defines the concept in its most recent legislation on the matter, Decree 1413 of 2017, which establishes a regulatory framework with which it, and in particular the Ministry of Information Technology and Communications, leads and works together with the various government entities in the area of e-government. On the one hand, they define an Interoperability Framework as a:

'(?)set of principles, policies and recommendations that seeks to facilitate and optimize the collaboration between private organizations and state entities to exchange information and knowledge, within the framework of business processes, in order to facilitate the delivery of services to citizens, businesses and other entities to exchange information, documents and data online' (Article 2.2.17.1.3).

On the other hand, they refer to the Interoperability Service as:

'(?) one that provides the necessary capacities to guarantee the adequate flow of information and interaction between the information systems of the State entities, allowing the exchange, integration and sharing of information, with the purpose of facilitating the exercise of their constitutional and legal functions (?)'(Article 2.2.17.2.1.1.). Academic research has advanced and classified the concept according to how it operates. Thus, a first technical interoperability is understood as the one related to the technological components of the systems of the entities participating together, in the sense that these components must be able to work together providing data transfer mechanisms through the existing computer systems (Criado et al. 2010). For Cepal (2007) this type of interoperability deals with technical issues, such as hardware and software, which are fundamental to the interconnection of systems. These issues make use of tools such as open interfaces, interconnection services, data integration and, what they call, middleware; all depending on the exchange of data, but also guaranteeing security in the handling of information.

The other type is called semantic interoperability and Criado et al. (ibid.) define it as that which is responsible for ensuring the precise meaning of the information exchanged so that it can be understood by any application. This form of interoperability is, thus, the one that allows the tools that enable this exchange to combine the information shared by different sources and to integrate it in order to be understood by all those who feed on it. Similarly, for Cepal (ibid.) this type of interoperability ensures that the shared information is understood by the applications involved in this transactional exercise, allowing the systems to combine the information received with their own means and tools so that it can be properly processed for their purposes.

Finally, we have the organizational interoperability, understood as the indispensable collaboration between the organizations that are going to exchange information, by means of internal structures of government created for this purpose ??Criado et al. ibid.). This type of interoperability is what allows coordination to materialize by aligning the administrative processes of the different entities that are part of the exchange (ibid.). For Cepal (ibid.), this part is concerned with defining objectives and processes that facilitate collaboration between entities that seek this exchange, despite the fact that each has its own administrative structure and internal

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process. According to Cepal, this interoperability also defines what services will be available and how they will be affordable.

Other has been said about the characteristics of interoperability that make it such a complex process, going beyond the merely technological. For Criado et al. (ibid.) it is a process that requires the removal of many barriers, not only technological but also semantic, organizational, legal-normative and even cultural. To this end, it refers to a necessary governance of interoperability, understood as the agreements -and the spaces for dialogue where these agreements are defined-between governments and actors participating in these processes, in order to define how it will be carried out (ibid.).

For Criado, Gascó and Jiménez (2011), interoperability does not refer only to technology; although it seeks to use different products from multiple agents, the way in which it is achieved leads us to a necessary definition of policies, norms and standards to achieve this cooperation between different public organizations. Similarly, for Gil-García, Criado and Téllez (2017), technology alone does not solve all the challenges involved in interoperability since it is a complex process that stems from the necessary interdependence of technical aspects, but also organizational and public policy itself.

According to Dawes (2009) interoperability points to three main themes: cyber-infrastructure, ontologies and knowledge management, and the need to work within a semantic and cultural diversity. For the author, these issues represent the structures and tools that will be needed to ensure the required trust and innovation, as well as equitable treatment within the diversity of these inter-and intra-governmental relations.

Finally, Cepal (ibid.), when referring to the technological infrastructure necessary for interoperability, emphasizes that it should only function as an element that facilitates the mobilization and access to information, but its function should not be to store or process this information, thus seeking to respect the autonomy of the integrated parties.

Through this brief review we can begin to understand what is meant by interoperability, what are its main components, as well as the fact that there are different types of interoperability, all necessary to ensure proper, harmonious and efficient operation. Also, that the challenges are varied and emanate, in large part, from the fact that we are talking about relationships between entities with their own structures, collective functioning and work culture. Despite all its complexities, reality has shown that it is a process that has brought and will continue to bring numerous benefits, such as allowing cooperation between different agencies and levels of government regardless of their level of technological development; and, above all, a simplification of administrative activity and processes, resulting in greater efficiency in the work of public administrations (Criado et al. 2010).

For all the above reasons, interoperability is a reality "for the long run" in different regions of the world; and Latin America will be no exception. Or, as Cepal states it very clearly: 'Numerous political leaders in Latin America and the Caribbean have already discovered that their nations will not progress without a serious e-government effort. They need to understand now that there is no e-government without interoperability and no interoperability without political will' (Cepal, 2007:12).

We will now look at how this political will has been understood and put in practice in the Colombian government in recent years in order to materialize the Lands Node project, where, to date, 12 government entities are converging to share information based on the application of the land restitution public policy.

## 4 III.

## 5 Lands Node Project

The Special Administrative Unit for the Restitution of Stripped and Forcibly Abandoned Lands -LRU-, created by Bill 1448 of 2011, is an entity whose main objective is to serve as the administrative body of the National Government for the restitution of land to those dispossessed by the internal armed conflict. This is, to be the entity in charge of receiving the requests for land restitution throughout the country and, after carrying out a detailed study of them, to decide whether to take them to court so that the restitution judges or magistrates can finally decide whether these requests are worthy of land restitution, with the complementary measures that they decide in each case.

To this end, it uses an instrument created by the law called the Registry of Stripped and/or Forced Abandoned Lands; a registry that serves as a filter through which the LRU decides whether or not the application enters the restitution process.

In this register, in addition to the property, the persons subject to restitution -the claimants-, their legal relationship with the requested property and that of their family nucleus are registered. To this end, in its Article 76 this law states that public entities must provide information in real time to the LRU in order to advance the process. This is done with the ultimate purpose of ensuring that it is not the victim applicants who must bear the burden of gathering all the required information, but rather that the LRU, with the connivance of the State entities, is the entity in charge of gathering such information, which will become part of the evidence in each case.

According to the main promoter of the Node project, the Information Technology Office of the LRU hereinafter ITO-, at the time it was not possible to fully comply with the administrative stage of the restitution procedure established by law, 60 days, since the necessary information was not available from the competent entities in due time, which caused delays in the restoration of victims' rights, to the detriment of compliance with the main

mandate of Bill 1448 (LRU, 2017). Now, given that this law established a 10-year period for its implementation -from 2011 to 2021-, the obstacles to advancing restitution-in this case, the information access barriers-were putting at risk the possibility of repairing and reinstating the victims, guaranteeing their true rights as land owners.

According to the ITO itself, as established by law, the LRU must:

‘(?) prove a person’s link to their land, identify and individualize the property and collect evidence of dispossession in the context of the armed conflict (...) culminating in an administrative decision supporting the investigation, terms that are difficult to comply without automatic interoperability between entities’ (URT, 2017. P: 2).

In the first years of the law’s implementation, the estimated time for the reception of official documents, necessary to advance the evidentiary stage, could be up to 120 days in relation to information regarding the location of the property, and up to 80 days in relation to information on the identification of potential restitution beneficiaries. In general, through official channels -by means of ordinary correspondence or database crossings-, any document requested could take between 20 and 25 days on average to be received. These times could even increase in some regions of the country, such as the offices in Medellín and Pasto, with maximum times of 100 and 120 days in the reception of any information sent by external entities (LRU, 2017).

## 6 IV.

## 7 Lands node Structuring

Once the problem described above was identified, in 2014 the Lands Node project was agreed, structured, and set up with the direct participation of the main institutions with competence in the restitution process. Its main objective: to constitute a virtual platform to advance, in real time, in the exchange of information produced by these entities. Thus, this project was promoted to implement automatic information exchange services between entities, according to the needs of the land restitution process in its administrative and judicial stages -when specialized justice studies the cases-; and post-judgment-moment after the ruling is issued that seeks compliance with the orders contained in it-, in order to: ‘(?) reduce the time of the restitution process in general’ (LRU, 2017: 16). Based on the reviewed literature, this case is an applied exercise of horizontal interoperability, understood as that which is developed between different administrations within the same level of government (Criado et al. 2010). This is how the Unit’s officials defined and understood the project at its beginning:

‘To solve the problems associated with interoperability through electronic means that allow the automation of services, it was necessary to identify the technological maturity of each institution, as well as the state of availability of data, the available resources, the mobilization of cooperators to finance specific developments in the institutions and a permanent technical dialogue to promote the overcoming of the difficulties encountered’ (Application for the DAFP Senior Management Award, 2018: 16).

From the beginning, the project was designed using an integration and orchestration logic, understood as the definition of data validation rules, service access security, execution time management, the management of a certain number of calls to the services of each entity, reliability in the call and consumption of services of each entity and, in general, a series of guidelines supported and defined in the interoperability specifications of the Ministry of Information Technology and Communications 1 As was defined by common agreement by the entities that participated in the first Technical Committee of the Lands Node -others would eventually join, (hereinafter, Min Tic). To begin with, in each of the entities an information and services provided survey was made, as well as an analysis of the pre-existing architecture. Based on this identification, a proposal was formulated to make feasible the interoperability of these services. Parallel to this process, and in order to provide a solution to the legal requirements needed to make an inter-administrative project of these characteristics viable, a series of inter-administrative agreements were managed and signed with the entities that had the information required for the restitution process and would, therefore, be part of the project. As recognized by the LRU at the time, it is important to note that without the signing of these agreements, which sought to determine the form of exchange, the type of information to be exchanged and provided for express confidentiality and data protection clauses, it would not have been legally possible to continue with this project of exchange between State entities (LRU, 2015). This is in line with one of Cepal’s recommendations (2007) regarding national interoperability and its necessary legal and regulatory support.

In concrete terms, the methodology for the operation of the Node relies on the fact that each of the 12 entities that are part of it and that access the data of another entity must adopt the methodology written in a guide specifically designed for this project. With this in mind, the aim is to standardize the supply of information. At the same time, new organizational structures were created within each entity to support the provision of these automated services. Finally, the entities that receive the information deployed in the Node must develop new methods of integrating this information (Application for the DAFP Senior Management Award, 2018: 7).

according to the identified needs-, five basic points ensured proper coordination and articulation among the entities: 1. To have permanent technical links (legal, functional, and responsible for information systems), for the development of interoperability, within the framework of the land restitution process. 2. To participate in the meetings scheduled between the entities responsible for the Lands Node and in the technical meetings programmed for its development, and to comply with the commitments resulting from them. 3. To offer to the professionals in

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charge of the development of the Lands Node, the necessary information to advance in the information services that will make part of the project. 4. To comply with the established times for the development of the products and the agreed and approved schedule. 5. Once the Node is in operation, to maintain the services that correspond to the entity, according to their legal responsibilities. (Committee Minutes of the first Lands Node Technical Committee, 2015: 4).

Therefore, the Lands Node provided a service, an inter-administrative platform called information bus, in which all these entities could upload their information according to initially defined requirements. In sum, since 2014 this experience has been implemented with the identification, design, and development of interoperability services. In 2017, the installation of the interoperability platform began, and since May 2018 more than 128,000 transactions have been consumed for the restitution process. It was established that this experience should continue until the end of the restitution policy in 2021 (Application for the DAFP Senior Management Award, 2018).

At this step it is important to take a pause to analyze the privacy measures around the information shared in the Node. According to Bill 1448, information provided by victims of dispossession or abandonment of land must be reserved. Consequently, the data transiting through this platform could not be open to the public or to society in general but could only be used for consultation by officials authorized for that purpose. This was established from the beginning of the project and it continues to operate this way.

Regarding the control of the information provided through the Node, it should be noted that each transaction is audited in such a way as to identify who is consulting the data, at what time and for what purpose, among other information displayed for control purposes (Application for the DAFP Senior Management Award, 2018). According to Criado et al. (2010) it is essential to guarantee the confidentiality and traceability of data, so it is important to provide security systems to these platforms so the entities could be able to take part in this interoperability exercise. The above is a clear example of this.

Another aspect to highlight has been the support and accompaniment by MinTic throughout the process. According to the LRU, this ministry has supported the experience since the first day and has financed the technological platform of interoperability, as well as the integration of three procedures to the Node: Restitution, Repair and Formalization. This ministry, in turn, has been certifying the services provided in the project. No less important, based on the needs presented in "Del Nudo al Nudo de Tierras" (From the Knot to the Lands Node)-a document for the application of funding from the national government-, the Min Tic approved the funding of the business services bus to leverage the entry into production of the interoperability platform (Red Nacional de Información, 2017). This interoperability platform defined in the Project aims to implement an Enterprise Service Bus (ESB) and its corresponding infrastructure in a Tier (3) data center that integrates, orchestrates and operates the information exchange services between the Special Administrative Unit for the Management of Stripped Land Restitution (UAEGRTD) and the institutions with competence in the process of land restitution in its three administrative, judicial and post-judicial stages' (ibid.: 4).

In general terms, the Lands Node project has had the following phases throughout its design, structuring and implementation.

Phase 0 (2012-2013) -Formulation. The LRU led the efforts to achieve a concerted formulation of the Lands Node project. One of the main results was the production of a document that obtained support from the directors of the institutions that initially integrated the Node, as well as from MinTic and the international cooperation agencies (USAID and Swiss Cooperation) who were its initial funders.

Phase 1 (2014-2015) -Identification of services. A work team was defined and the processes of each of the institutions were modeled according to the restitution process.

Phase 2 (2016 -2017) -Development. A set of 60 services was identified and prioritized for development.

Phase 3 (November 2017 -2018)-Implementation. Through the Program Co. Meta 2018, MinTic has financed the technological platform of interoperability. 48 services from 12 institutions have been offered, and by 2018 more than 128,000 transactions have been carried out, providing evidence for the restitution process (Application for the DAFP Senior Management Award, 2018).

## 8 a) Services and Achievements

The Lands Node allows the exchange of information through three modules. First, the security module that seeks to ensure that each message is transported from one entity to the other in a secure manner. Within this module the entity that seeks to consume information from the Node must request authorization from the entity that exposes its information. On the other hand, it has an audit module which keeps a record of each message transported through the platform, such as the origin address, destination address, date and time of the query and data contained in the message. Finally, there is the service quality module, whose function is to guarantee that the quality of the information exposed by the entities through this platform is maintained (Red Nacional de Información, 2018).

It is important to stress that each entity member of the Lands Node manages its own information services, so each of them has the possibility to register their services so that the interoperability platform designed for this project can replicate their data regardless of the infrastructure that supports each entity. For this purpose, the project uses a specific software to reduce the risks of compatibility between the technological platforms used by each entity (LRU, 2017).

It is also relevant to specify that the services of the Lands Node start from the Registration System of Stripped and Forced Abandoned Lands, which is the main tool that supports within the LRU the administrative process (LRU's main mission). In addition, the information contained in this registry allows it to interact with the judicial branch, which facilitates monitoring actions after the decision of the judges or restitution magistrates -what is known as the post judicial decision stage.

An essential aspect to understand the usefulness of this tool is what the LRU calls "Data Virtualization" understood as the agility in the access to information, which facilitates the data access from the entities in a unified, simplified and integrated way -in real time or close to real time. 'Data virtualization integrates data from disparate entity sources and formats, without replicating the data, to build a virtual data layer that facilitates the provision of interoperable services with unified data to support multiple information consumers' (LRU, 2017: 13). The result is faster access to all data, less replication, greater agility amid change and progress in building an optimal information management strategy (ibid.).

The main achievement of this has been a faster process, as reflected in the fact that, thanks to the Lands Node, officials involved in the land restitution process can obtain information in real time (10 seconds per response). As of 2018 almost 50 interoperability services took place; services that, in the near future, are expected to be applicable to other procedures, for example: formalization of property, cadastre-registration interrelationship, and reparations for victims, among others (Application for the DAFP High Management Award, 2018).

It must be added also the economic benefits, measured in the resources saved in the request and reception of information (\$5,700 Colombian pesos corresponding to just over 1.3 euros-, for each document required); and the positive benefits for the environment, due to the savings in the considerable volume of printed documents among the entities that need the information; documents now accessible through this interoperability platform (LRU, 2017).

In addition, other entities are already benefiting from the tools provided by the Node. To date, the VIVANTO information system (used by the Victims' Unit) has been adapted so that, from this system, information related to the Registry of Stripped Lands can be accessed, which has allowed officials of the Victims' Unit to identify whether a victim is registered in the LRU database without having to request the information. Also, the judicial Post Ruling module is allowing the judiciary administrative branch (Consejo Superior de la Judicatura) to follow up on compliance with the restitution policy regarding the enforcement of restitution rulings issued by judges and magistrates (Application for the DAFP High Management Award, 2018).

### 9 b) Resources and Challenges

For the design and implementation of this platform of interoperability between state entities, it was first necessary to have the support of U.S. government cooperation through USAID and, later, the cooperation of MinTic through the program "Co. 2018" as a means to promote technological initiatives. For the purposes of the transactions related to the restitution process, the LRU has been reserving its own resources in order to guarantee the continuity of the interoperability bus. However, now that these two sources have been finalized, the main challenge for the Lands Node is to maintain an investment that will allow it to continue its operations: and not only by the LRU. This was the understanding of Luis Alberto Clavijo, former head of the Information Technology Office of the entity and head coordinator of the project, who has pointed out that the maintenance, administration and disposition of the services is a matter under the responsibility of each institution, since, without it, there is no project that can sustain that operation. In his words: '(?) it is necessary that the institutions formally start the next stage, which is the sustainability of the project, generating the corresponding actions in terms of human-technical resources that support and maintain the stability of the services, as well as the allocation of budgetary resources for future contracts of the interoperability service in order to automate or rationalize their mission procedures, taking advantage of the existing experience and infrastructure' (Red Nacional de Información, 2018:17).

The LRU has committed that, from now on, in each fiscal period it will get the necessary funds from the resources of the national budget, to maintain the interoperability of its information exchange services through this project (ibid.). However, the challenge is to achieve the same commitment from the other entities participating in the Node. This is in line with what was expressed by Lee and Hoon Kwak (2012) for whom the assignment of staff for specific activities is necessary to ensure continuous monitoring and maintenance of this type of system, so agencies should not take these issues lightly, ensuring the availability of resources in their government plans.

There is also a challenge of organizational character. Currently, the Lands Node has an organizational structure, defined since the project was launched, which has allowed it to organize its work and carry out a periodic follow-up based on the functions of each agent working in it. This, according to Luna Reyes (2017), for whom choosing an architecture helps to define the way these tools are built, how the components and services will be developed, how they will be able to interact with all the other information systems that will be part of these platforms. The following graph illustrates the organization of the Node:

Source: Red Nacional de Información (2017) As it can be seen, the project has a coordinating head that also gives guidelines with direct support from MinTic managers, together with those responsible for the technology area and the service area of each participating entity. There is also a stakeholder, which varies according to the phase and specific needs of the project, and below is the manager -in charge of operations-, a series of technical users of the LRU who process and consume the information according to their needs, and below is the architect

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of the platform, together with the person who coordinates the different processes that are part of the Node and the information that is recorded from each of them.

It is worth noting that until the first months of 2019 this architecture worked, obviously with its ups and downs typical of any collaborative process. However, now with a new head of the LRU's information technology area, added to new heads of these areas in the other entities that are part of the Node, there is a growing concern that this level of coordination will be maintained, with the necessary follow-up committees and specific meetings that this implies. In sum, the administrative-organizational challenge is to achieve the same level of commitment and work of the teams that structured and started implementing the Node. All this, by new human resources that must ensure that the project continues to flow. This is not only related to the person in charge of the technology area of the LRU, but also to the other people in charge of the other entities and the new officials that are part of the Ministry of Information Technology and Communications-MinTic.

V.

## 10 Conclusions

The Lands Node is a clear interoperability project of the Colombian government. It meets all the characteristics noted in the specialized literature: use of 2.0 technology, information exchange, inter-institutional coordination, regulatory compliance, allocated resources, monitoring and defined objectives, among others. The challenges involved in this project are also in line with those pointed out by the academy: availability of economic and human resources, together with a permanent monitoring exercise under a defined yield more than interesting results in terms of time and resources savings, in compliance with the time frames established in the land restitution public policy.

It has been a huge challenge in terms of time and resources, and without the support of external entities -through international cooperation at first and then with the support of MinTic -the Lands Node would not have been a reality. Nor without the leadership of the Information Technology area of the LRU, the main beneficiary of the project, and the concurrence of its counterparts from the different participating entities. As mentioned above, the challenge is to maintain this momentum and coordination between entities, coupled with the necessary investment resources needed for the platform to continue operating. Notwithstanding the latter-which should not be neglected-, this project has been an example to be shown by the previous government (during which it was born and started operations). Proof of this is that at last year's Node Committee meeting, it was pointed out that the National Information Network Systems Subcommittee had been discussing the possibility of building other nodes for different sectors -victims, health, education, among others-, that would use the experience of this project and the services already designed for its operation; new projects that would seek, as the Lands Node has sought, to speed up institutional procedures through virtual coordination with the different government sectors (Red Nacional de Información, 2018).<sup>1 2</sup>

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<sup>1</sup>These specifications are within the concept of self-sustaining interoperability understood by Min Tíc as: '(?) that service that provides the necessary capabilities to State entities to exchange, integrate and/or share information with other public entities within the framework of their processes, which will facilitate the integration of procedures and services, facilitating the exchange, publication and consumption of information services' (LRU, 2017: 12).

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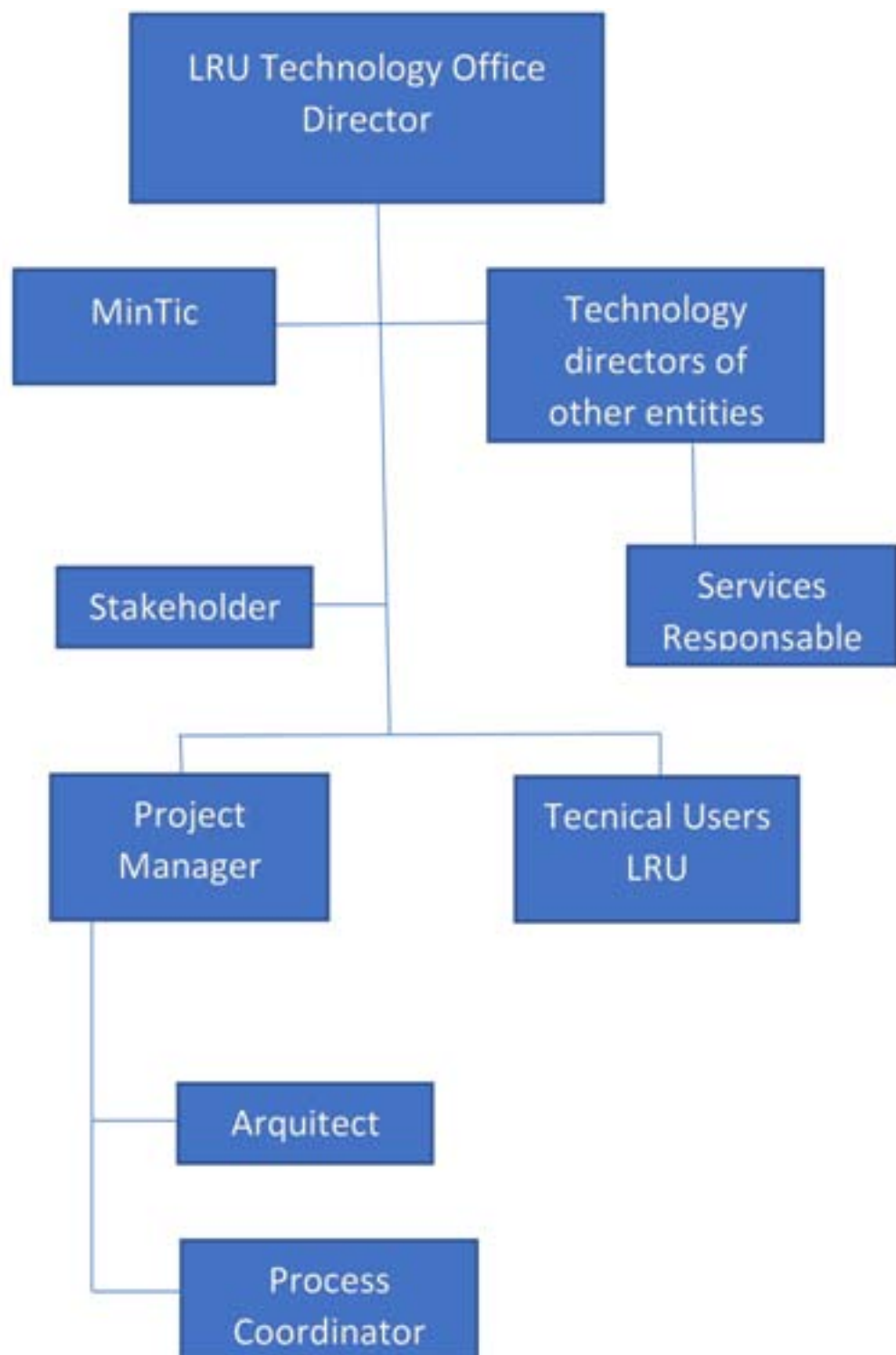


Figure 1:



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